MEAGER CREEK DEVELOPMENT CORPORATION
(A subsidiary of WESTERN GEOPOWER CORP.)

South Meager Geothermal Project, British Columbia

WELL MC-7

a-92-A / 92-J-12 (MC-7)

(Daily Drilling Reports And Other Well Data)

Program Name: WGP2004

411-837 West Hastings Street
Vancouver, BC V6C 3N6 Canada
Ph: 604- 662 3338 Fax: 604 646 6603

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SUMMARY OF WELL DATA: MC-7

Program Name:	WGP2004	Well Authorization No.:	MC-7
Well I.D.:	a-92-A / 92-J-12 (MC-7)	Well Classification:	**GEOTHERMAL**
Province:	British Columbia — District: Squamish - Lillooet	Field:	South Meager Geothermal Project
Operator:	Meager Creek Development Corporation	Contractor: Precision Drilling	Rig No: Rig #620TE
Coords. (*NAD83-UTM-10U*):	463,229.46mE 5,603,032.90mN	Geographic Location:	LAT: N 50° 34' 40.9803" LONG: W 123° 31' 09.9584"
Site Elevation:	1,365 m (Above MSL)	RKB to Ground Level (GL):	7.32 m
Date Spudded:	01 December, 2004; (16:00 hrs.)	Days Drilling:	64 days
Date Completed (TD):	02 February, 2005; (21:00 hrs.)	Days to Rig Release:	69 days
Rig Released:	08 February, 2005; (00:00 hrs.)		
Total Drilled Depth (TD):	3,291 m RKB	True Vertical Depth (TVD):	2,984.27 m RKB
Top of Liner:	(No liner installed)	Static Water Level:	~ 550 m RKB

Directional Information:	KOP:	880 m RKB *	Build Up Rate:	2.0° per 30 meters
	Azimuth:	330°	End of Build:	1,196.72 m RKB; (1,172.74m TVD)
	Inclination:	30°	Max. inclination:	31.9° @ 3,033.0 m RKB

Note: Tied on to survey at 607.2 mRKB (Inc. 7.65°/Az 334.98°); built to Inc 9° ; EOB at 630.1 mRKB (Inc 9.0°/AZ 330.0°); held Inc 9.0° to KOP at 880.0 mRKB; resumed BUR 2°/30 m to EOB at 1,196.72 mRKB (Inc. 30.1°/Az 329.8°)*

Bottom hole position: (*Extrapolated to TD*)	W 562.19 m; N 1,073.87 m	Vertical Section:	1,212.12 m, (Azimuth 332.37°)

Hole Sizes:

Size	*Depth*	*Comment*
711.2 mm* / (28")	to 52.4 m (G.L.)	(Top-holed; Schramm T685WS air rotary rig, w/ODEX casing system)
609.0 mm / (24")	to 134.0 m RKB	(Pre-drilled 609 mm hole w/air hammer to 83.8 mGL; Schramm T685WS rig)
444.5 mm / (17-1/2")	to 874.0 m RKB	
311.2 mm / (12-1/4")	to 3,291.0m RKB	

(: Top-holing completed by Midnight Sun Drilling Co. Ltd., Sept. 02-11, 2004, prior to arrival of Precision Drilling, Rig # 620TE)*

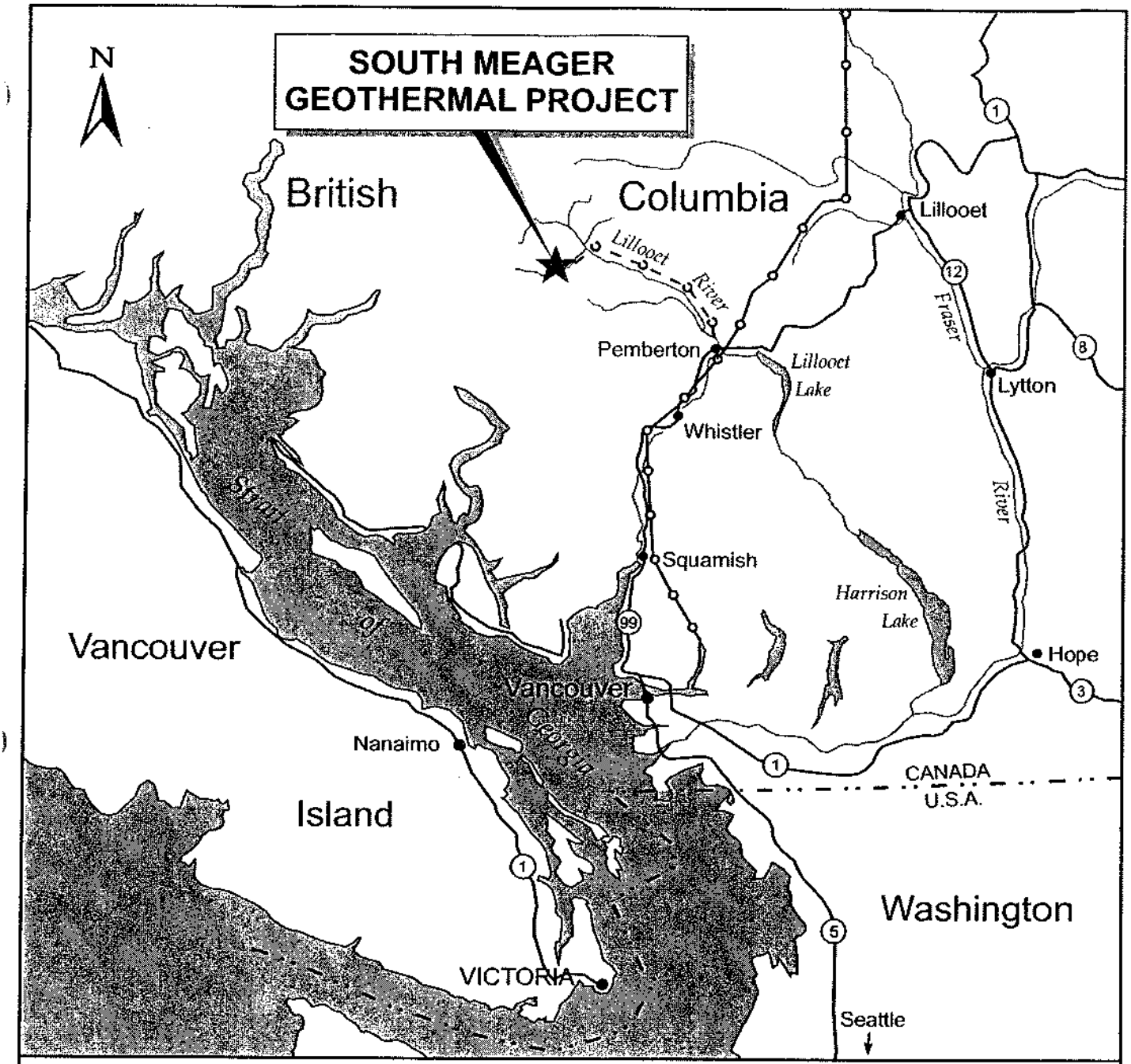
Casing:

Size	*Weight*	*Grade*	*Thread*	*Range / Type*	*Depth*	*Comment*
9 jnts. x 711.2 mm / (28")	172.00 kg/m	L-80	Weld	/ Smls	to 52.4 m (G.L.)	(Pre-installed)
10 jnts. x 473.0 mm / (18-5/8")	130.21 kg/m	K-55	BTC	Rg3 / Smls	to 129.0 m RKB	Cemented to surface
68 jnts. x 339.7 mm / (13-3/8")	107.14 kg/m	L-80	BTC	Rg3 / Smls	to 870.0 m RKB	Cemented to surface

Cement Plugs: None

General Summary of Lithologies: (*All depths measured depth, mRKB*)

0 - 310m:	Volcanics, (tuff breccia)
310 - 840m:	Quartz diorite
840 - 1,160m:	Propylitic Quartz Diorite, w/minor volcanics
1,160 - 1,250m:	Metasedimentary sequence
1,250 - 1,370m:	Altered volcanics
1,370 - 2,050m:	Metasedimentary sequence
2,050 - 2,410m:	Quartz Diorite
2,410 - 3,060m:	Metasedimentary sequence
3,060 - 3,291mTD:	Hornblende Biotite Quartz Diorite



LEGEND

Existing main transmission line

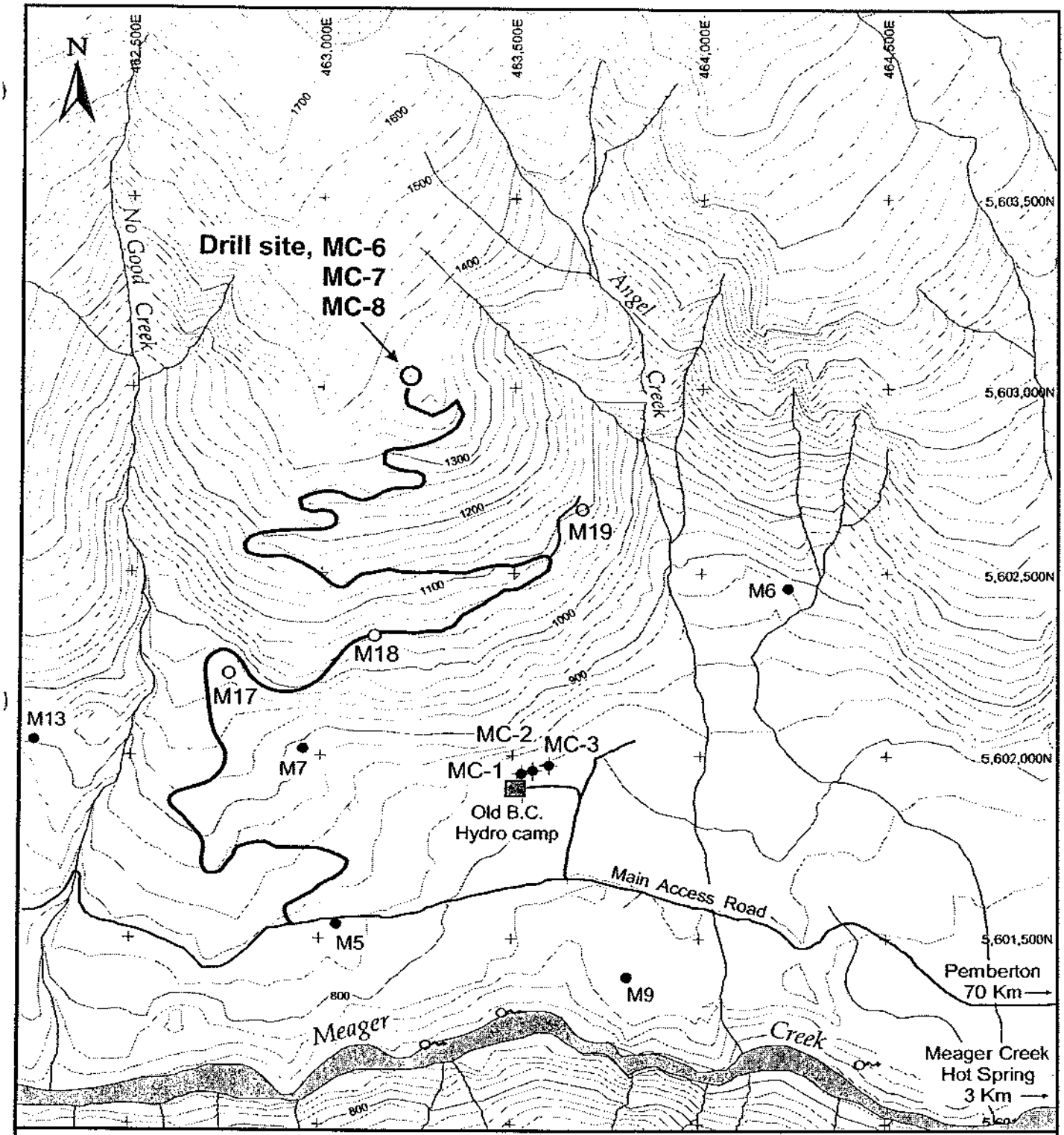
Meager transmission intertie

Highway

Kilometres

0 50

Location: South Meager Geothermal Project



Drill hole locations, South Meager Geothermal Project

LEGEND

- Diamond drill hole (B.C. Hydro)
- Test hole (Meager Creek Dev. Corporation)
- Deep rotary drill hole (B.C. Hydro)
- Planned deep rotary drill hole (Meager Creek Dev. Corporation)
- Warm spring
- Moraine

Metres

0 100 200 300 400 500

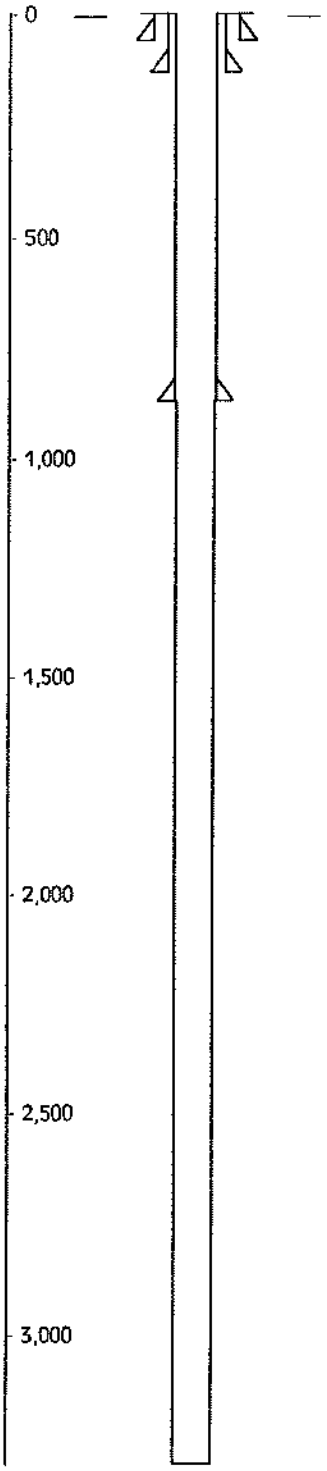
Borehole Schematic

Meager Creek Development Corp.

Well ID: MC-7

Well Name: South Meager MC-7

Well Bore: MC-7



All Depths are relative to the Original RKB Elevation.
Original RKB Elevation at 7.32 above Ground Level
Ground Level
71.12 Casing set at 59.3 on 08-Sep-04
47.3 Casing set at 129 on 02-Dec-04

33.97 Casing set at 870 on 14-Dec-04
Open Hole Diameter 31.12

(NOTE: No Liner; 311.2mm open hole fr. 33.97 csg. shoe to 3,291mTD.)

Total Depth 3,291

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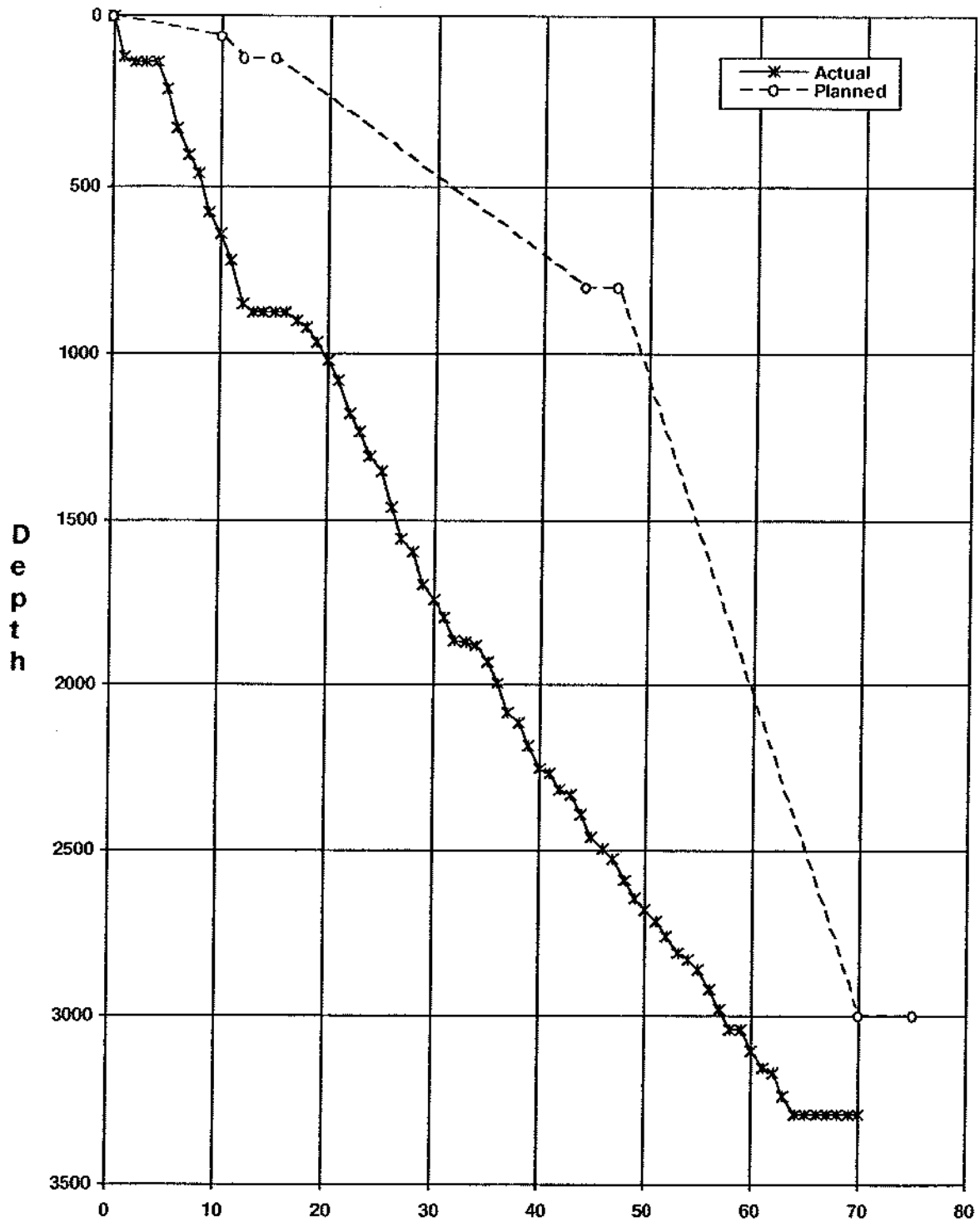
Days Vs Depth Graph

MC-7

Meager Creek Development Corp.

Well Name: South Meager MC-7



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Section 2: Daily Drilling Reports; CAODC Tour Sheets

CAODC / Chimo Equipment — A Varco Company

Based on the CAODC ETS file standard

Field	Value
Date / time	2004-11-30 20:00
Job No	22
Licence No	[illegible]-7
Well Name and No.	a-92-A / 92-J-12 MC-7
Operator	Western Geopower Corp
Contractor	Precision Drilling
Unique ID	b-1-H / 92-J-12
Signature of Operators Representative	[illegible] Silva
Signature of Contractors Representative	Kevin Vig
Date	30-Nov-2004
Rig No	620 E
Fuel @ 6:00 / Rig	29269
Temperature	-3
Current Condition	Clear
Wind Direction	Calm
Road	Fair
Well Type	Geothermal
Re-Entry	No
Rig Manager	Kevin Vig
Province	BC
Camp	Yes
Rig Safety Days	1.00

Pumps

Linear Size	Stroke	Rod Dia.	Tool Jt O.D.	Thread Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke Lth (mm)
20.00	SS-85	83.00	168.00	5"XH	170	F-1600	BPMMP	306
30.00	SS-85	87.00	168.00	5"XH	180	F-1600	BPMMP	306

Time summary by code

Oper	1	3	7	21	22
Morn	7.50		0.25	0.25	
Day	7.50		0.25	0.25	
Evt	4.00	2.50	0.25	0.25	1.00
Total	19.00	2.50	0.75	0.75	1.00

Shale Shaker(s)

No 2, Type Derrick; Screens changed: No. Top 100 / 100; Middle 100 / 100; Bottom 100 / 100.

MORNING TOUR 0:00 to 8:00

Time Log

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
0:00	0:15	0.25	7	Rig Service
0:15	0:30	0.25	21	Safety Meeting
0:30	8:00	7.50	1	Rig Up MudTank's, Pump's, Top Drive, Move and Organize Mud Products, Cut/Dress and Weld Conductor

Pump No. 1: 162; Pump No. 2: 152

Driller Signature: Wade Goddard

Safety Topic: Rigging Up

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	633-628-706	Wade Goddard	8.00	WG	No
Derrickman	642-872-840	Murray McBain	8.00	MM	No
Motorman	651-366-064	Jesse Goddard	8.00	JG	No
Floorman	505-422-253	Rory Mitchell	8.00	RM	No
Floorman	730-040-896	Nathan Schwandt	8.00	NS	No
Leaseman	729-975-003	Daniel Sampson	8.00	DS	No
Rig Manager	719-409-484	Kevin Vig		KV	No
Top Drive	638-977-702	Sheldon Langley		SL	No

Rate Schedule: Regular

DAY TOUR 8:00 to

Time Log

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
8:00	8:15	0.25	7	Rig Service
8:15	15:45	7.50	1	Cut, dress & weld conductor, build volume & mud, Prepare to spud.
15:45	16:00	0.25	21	Safety Meeting

Mud Material Added: Caustic Soda 2sks.; Milgel 105sks.

Driller Signature: Barry Verheist

Safety Topic: Prespud

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	642-389-910	Barry Verheist	12.00	BV	No
Derrickman	647-452-803	Dave Makowsky	12.00	DM	No
Motorman	735-714-230	Chantry Vig	12.00	CV	No
Floorman	272-845-816	Brent Sullivan	12.00	BS	No
Floorman	118-983-287	James R. Sullivan	12.00	JS	No
Leaseman	713-858-481	Gary Kennedy	12.00	GK	No

EVENING TOUR

Drilling Assembly

Item	O.D.	Length
Bit	311	0.64
Bit Sub	229	1.01
Drill Collars	220	26.45
Bell Sub	224	1.17
[illegible]	127	19.10
D.P. stands		0.00
D.P. singles		0.00
Kelly down		0.00
Total		60.28

Wt. of string: 39000.00

Bit Record: Bit No. 1A; Mfg. H.C.; Type GTX-CO3; Serial No. 6027140; Depth In 0.00; Total Meters Drilled 49.00; Total Hours Run 2.50; Hole Drag 0

Mud Record: Mud Type: Water Based

Time	21:00	23:00
Density	1020	1035
Funnel Vis	48	54

Mud Material Added: Gel 117 sacks. Solids Control: Centrifuge, 4.00 hours.

Meters Drilled: From 0.00 To 49.00, R, 95, 1-3. Circulation Pressure 2450; Pump No. 1: 162 / 95; Pump No. 2: 162 / 95

Time Log

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
16:00	20:00	4.00	1	Hang & weld conductor BBL, Install flowline, build volume & mix mud.
20:00	20:15	0.25	7	Rig Service
20:15	21:15	1.00	22	Rig to and Drill MouseHole
21:15	21:30	0.25	21	Safety Meeting
21:30	24:00	2.50	3	M/U Bit#1A, BHA, RIH, Tag Sand @ 39m, Wash and Ream Sand fr/39m-49m

Notes: Sodium Citrate Sand

Max Exp Hookload: 41000.00; Safety Topic: Pre-Spud

Driller Signature: Wade Goddard

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	633-628-706	Wade Goddard	4.00	WG	No
Derrickman	642-872-840	Murray McBain	4.00	MM	No
Motorman	651-366-064	Jesse Goddard	4.00	JG	No
Floorman	505-422-253	Rory Mitchell	4.00	RM	No
Floorman	730-040-896	Nathan Schwandt	4.00	NS	No
Leaseman	729-975-003	Daniel Sampson	4.00	DS	No

Rate Schedule: Regular

ETS SERIAL NUMBER: PREC620 _20041030_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD 2004-11-30 20:00 | RIG RELEASE | JOB NO 22 | AFE

LICENCE NO MC-7 | WELL NAME AND NO a-92-A / 92-J-12 MC-7

OPERATOR Western Geopower Corp | CONTRACTOR Precision Drilling

SURFACE LOCATION a-92-A / 92-J-12 | UNIQUE ID. b-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE Kevin Vig

DAILY CHECKS (OPR. / TOUR)
(1) Daily Rig Inspection (Driller)
(2) Derrick Inspection Weekly (every weekend)
(3) H2S Alarm Tested (Driller)
(4) Weekly Derrick & Crown Inspection
(5) Monthly Drills
(6) BOP Drills Performed
(7) Monthly Derrick BOP / Function & Diagnostic Tests
(8) Rig Site Health and Safety Meeting (one every month)
(9) C.A.O.D.C. Rig Safety Inspection Checklist (once every month)
(10) Man Instruction Before Running or Tripping
(11) Crown Alarm (Operator)
(12) Man Hole Checked

DATE 01-Dec-2004 | RIG NO 620 E | FUEL @ 8:00 | RIG 39170 BOILER | TEMPERATURE

WEATHER: CURRENT CONDITION Cloudy | WIND DIRECTION Calm | ROAD Good

LAST CASING TUBING OR LINER

	O.D. (mm)	WT / D (kg/m)	GRADE	NO OF JOINTS	TOTAL LENGTH	KB TO CSG HEAD (m)	SET AT (m)

	DEPTH (m)	LINER LENGTH (m)	GRADE	NO. OF JOINTS	THREAD TYPE	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH. (mm)
		29.00	SS-95	83.00	166.00	5"XH	170 F-1600	BPMMP 305
		38.00	SS-95	67.00	168.00	5"XH	168 F-1600	BPMMP 305

WELL TYPE Geothermal | RE-ENTRY ☐YES ☑NO | KB TO GROUND ELEV.

WELL NAME & NO. a-92-A / 92-J-12 MC-7 | DATE 01-Dec-2004

OPERATOR Western Geopower Corp | CONTRACTOR Precision Drilling

RIG MANAGER Kevin Vig | RIG NO 620 E

PROVINCE BC | CAMP ☑YES ☐NO | RIG SAFETY DAYS 2.00

TIME - HRS

	CREW	LOC. MOVE	RIG UP/DOWN	DRILLING	CORING	REAMING	TRIPS	SURVEYS	CIRC.	REPAIRS	SERVICE RIG	SLIP CUT DRL LINE	WAIT ON CEMENT	WAIT ON WEATHER	JAR HRS	WOW
WORK	4.50		6.50	3.75	9.25											
DAY	1.00			2.50	6.25											
EVE	7.75				9.25											
TOTAL	7.75	0.00	6.50	6.25	0.75										9.25	

SHALE SHAKER(S)

NO.	TYPE	NEW
	Derrick	☑YES ☐NO

	SCREENS CHANGED	NEW
6.00		☐YES ☑NO
6.00	TOP	50 TOP 50
6.00	MIDDLE	50 MIDDLE 50
24.00	BOTTOM	50 BOTTOM 50

RENTALS/SERVICES

	NOW	OUT

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH
7	DR	311	0.54
1	BH Sub	229	1.91
3	8" Drill Collars	229	28.46
1	Bell Sub	224	1.17
9	Hydraulic Jars	127	56.49
0	O.P.	STABIL	0.00
0	O.P.	SHOULD	0.00
	Allow. Rotary		0.00
	TOTAL		85.00
	WT. OF PIPE		
	WT. OF KELLY		43000.00

BIT NO. 1A | SIZE 609 | IADC CODE | MFG. H.C. | TYPE GTX-CO3 | SERIAL NO. 9027140 | JETS 22 | 22 | 22 | DEPTH OUT (m) | DEPTH IN (m) 0.00 | TOTAL HR'S ON DRILLING (hr) 85.00 | TOTAL HOURS Run 7.00

CUTTING STRUCTURE: T | B | GAUGE | S | Degr. | CDC | BEARING / SEALS | Inner | Outer

HOLE CONDITION | HOLE DRAG 0 | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☐WATER BASED ☑GEL BASED

TIME	02:00	04:00	
DENSITY (kg/m3)	1040	1045	
FUNNEL VIS. (sec)	58	57	
W.L. (cm3)			
pH	10.0	9.5	
PV/YP	104.3 m3	94.8 m3	

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	DESILTER CONES	DESANDER CONES	MUDCLEANER CONES
		5.00			

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)
48.00	86.00	R	55	1-3

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.

3480 | 152 | 100 | 152 | 100

REDUCED PUMP SPEED: @ | @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (0)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE
0:00	4:30	4.50	3
4:30	5:00	0.50	5
5:00	5:15	0.25	7
5:15	6:00	1.00	6
6:15	8:00	1.75	6

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Wash and Ream Sand fr/49m-86m
Circulate Hole Clean and Work Pipe
Rig Service
Flow Check @ 60m,P.O.O.H. to Change B.H.A.,Flow Check Out
M/U New B.H.A.

NOTES

DRILLER SIGNATURE: Wade Goddard | OPERATOR FUEL | MAX BIT HOOKLOAD: 48000.00 | SAFETY TOPIC: Handling BHA | M.A.C.P.

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	8.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	8.00	MM	☐	☑
Motorman	851-386-064	Jesse Goddard	8.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☐	☑
Floorman	730-040-896	Nathan Schwandt	8.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☐	☑
Rig Manager	719-486-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE ☑MANUAL ☐REPAIR ☐INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH
1	Bit	311	0.64
1	Near Bit Stab	590	2.18
1	8" Drill Collars	229	9.46
1	Shock Sub	240	2.06
1	String Stab	590	2.13
7	8" Drill Collars	229	65.43
1	Bell Sub	224	1.17
0	O.P.	STABIL	0.00
0	O.P.	SHOULD	0.00
	MDLLDOWN		6.14
	TOTAL		90.00
	WT. OF PIPE		48000.00
	WT. OF KELLY		48000.00

BIT NO. 1A | SIZE 609 | IADC CODE | MFG. H.C. | TYPE GTX-CO3 | SERIAL NO. 9027140 | JETS 22 | 22 | 22 | DEPTH OUT (m) | DEPTH IN (m) 0.00 | TOTAL HR'S ON DRILLING (hr) 86.00 | TOTAL HOURS Run 7.00

CUTTING STRUCTURE: T | B | GAUGE | S | Degr. | CDC | BEARING / SEALS | Inner | Outer

HOLE CONDITION | HOLE DRAG 0 | TORQUE AT BOTTOM 2017 | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☐WATER BASED ☑GEL BASED

TIME	11:30	01:00	03:30
DENSITY (kg/m3)	1030	1040	1040
FUNNEL VIS. (sec)	62	56	58
W.L. (cm3)			
pH	9.5	10.0	9.5
PV/YP	83.2m3	101.8m3	101.8m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	DESILTER CONES	DESANDER CONES	MUDCLEANER CONES
Caustic Soda	16/L.				
Milgel	45sks.	7.00	1040	1030	1045

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)
86.00	90.00	R	30-60	1-3

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 | PUMP NO. 2

2800 | 152 | 100 | 152 | 100

REDUCED PUMP SPEED: @ | @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (0)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE
8:00	8:15	0.25	21
8:15	10:45	2.50	6
10:45	15:45	5.00	3
15:45	16:00	0.25	7

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Safety Meeting
Make up new B.H.A. & R.I.H. to 60m
Reaming fr. 60m - 90m(Sand, gravel, rocks, & rubble)
Rig Service

NOTES

DRILLER SIGNATURE: Barry Verhelst | OPERATOR FUEL | MAX BIT HOOKLOAD: 55000.00 | SAFETY TOPIC: recent fatality's | M.A.C.P.

DAY TOUR 8:00 TO

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-810	Barry Verhelst	12.00	BV	☐	☑
Derrickman	647-452-993	Dave Makowsky	12.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☐	☑
Floorman	272-945-916	Brent Sullivan	12.00	BS	☐	☑
Floorman	118-983-287	James R. Sullivan	12.00	JS	☐	☑
Leaseman	713-959-481	Gary Kennedy	12.00	GK	☐	☑

RATE SCHEDULE ☑MANUAL ☐REPAIR ☐INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH
1	Bit	311	0.64
1	Near Bit Stab	590	2.18
1	8" Drill Collars	229	9.46
1	Shock Sub	240	2.06
1	String Stab	590	2.13
7	8" Drill Collars	229	65.43
1	Bell Sub	224	1.17
2	146mm D.C.	180	26.55
0	O.P.	STABIL	0.00
0	O.P.	SHOULD	0.00
	MDLLDOWN		0.00
	TOTAL		110.41
	WT. OF PIPE		21000.00
	WT. OF KELLY		54000.00

BIT NO. 1A | SIZE 609 | IADC CODE | MFG. H.C. | TYPE GTX-CO3 | SERIAL NO. 9027140 | JETS 22 | 22 | 22 | DEPTH OUT (m) | DEPTH IN (m) 0.00 | TOTAL HR'S ON DRILLING (hr) 119.00 | TOTAL HOURS Run 14.75

CUTTING STRUCTURE: T | B | GAUGE | S | Degr. | CDC | BEARING / SEALS | Inner | Outer

HOLE CONDITION | HOLE DRAG 0 | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☐WATER BASED ☑GEL BASED

TIME	21:00	23:00	
DENSITY (kg/m3)	1060	1065	
FUNNEL VIS. (sec)	56	53	
W.L. (cm3)			
pH	10.0	10.0	
PV/YP	99.7 m3	98.7 m3	

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	DESILTER CONES	DESANDER CONES	MUDCLEANER CONES
Milgel	20 sacks				

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)
90.00	119.00	D	55	2-8

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 | PUMP NO. 2

3600 | 152 | 100 | 152 | 100

REDUCED PUMP SPEED: 1200 @ 100 @ 110.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (0)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE
16:00	22:00	6.00	2
22:00	22:15	0.25	7
22:15	24:00	1.75	2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill fr/90m-110m
Rig Service
Drill fr/110m-119m

NOTES

DRILLER SIGNATURE: Wade Goddard | OPERATOR FUEL | MAX BIT HOOKLOAD: 55000.00 | SAFETY TOPIC | M.A.C.P.

EVENING TOUR TO

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	4.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	4.00	MM	☐	☑
Motorman	851-386-064	Jesse Goddard	4.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☐	☑
Floorman	730-040-896	Nathan Schwandt	4.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	4.00	DS	☐	☑

RATE SCHEDULE ☑MANUAL ☐REPAIR ☐INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20041101_1A

CHIMO ETS SOFTWARE VERSION:

CAODC — Chimo Equipment — A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00	RIG RELEASE:	JOB NO.: 22	AFE:
LICENCE NO: MC-7	WELL NAME AND NO: a-92-A / 92-J-12 MC-7		
OPERATOR: Western Geopower Corp		CONTRACTOR: Precision Drilling	
SURFACE LOCATION: a-92-A / 92-J-12		UNIQUE ID: b-1-H / 92-J-12	
SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva		SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig	

DATE: 02-Dec-2004 — RIG NO.: 820 E — FUEL @ 6:00: RIG 47482, BOILER

WEATHER: TEMPERATURE -3 — CURRENT CONDITION: Cloudy — WIND DIRECTION: Calm — ROAD: Good

LAST CASING / TUBING OR LINER; drill pipe:

29.90	SS-95	83.00	165.00	5"XH	178	F-1600	BPMMP	305
29.90	SS-95	87.00	168.00	5"XH	150	F-1600	BPMMP	305

WELL TYPE: Geothermal — RE-ENTRY: No
WELL NAME & No.: a-92-A / 92-J-12 MC-7 — DATE: 02-Dec-2004
OPERATOR: Western Geopower Corp — CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig — RIG NO.: 820 E
PROVINCE: BC — CAMP: Yes — RIG SAFETY DAYS: 3.00

SHALE SHAKER(S): NO 2 — TYPE Derrick — SCREENS CHANGED: No — TOP 50 / 50 — MIDDLE 50 / 50 — BOTTOM 50 / 50

TIME – HRS (partial reading only; values whose column headings cannot be read are given as they appear on the line):
- MORN: 3.25, 1.25, 1.75, 1.25, 0.25, 0.25
- DAY: 2.00, 4.50, 0.20, 1.50, 0.25
- EVE: 1.25, 0.50, 0.25, 0.75, 0.25
- TOTAL: 3.25, 1.25, 5.00, 6.75, 0.75, 0.25, 7.25, 0.50

MORNING TOUR (0:00 to 8:00)

BHA:

No.	Item	O.D. (mm)	Length
1	bit	311	0.84
1	Near Bit Stab	590	2.18
1	8" Drill Collars	220	9.46
1	Shock Sub	240	2.95
1	String Stab	680	2.13
7	8" Drill Collars	220	65.43
1	Bell Sub	224	1.17
3	140mm D.C.	180	26.66
3		127	28.10
0	D.P.	Stands	0.00
0	D.P.	Singles	0.00
	Kelly down		0.00
	Total		134.00
	Wt. of DC		22000.00
	Wt. of string		58000.00

BIT RECORD: BIT NO. 1A — SIZE 609 — MFG H.C. — TYPE GTX-CO3 — SERIAL NO. 6027140 — DEPTH OUT (m) 134.00 — DEPTH IN (m) 0.00 — TOTAL METERS DRILLED 134.00 — TOTAL HOURS RUN 18.00

HOLE CONDITION: HOLE DRAG 0 — TORQUE AT BOTTOM — FILL ON BOTTOM (m) 0.50

MUD RECORD: MUD TYPE: Water based

TIME	02:00	04:00
DENSITY	1085	1085
FUNNEL VIS	83	83
pH	9.5	9.5
PVT	96.1 m3	84.4 m3

METERS DRILLED: FROM 119.00 TO 134.00 — 0 — 55 — 4-8

CIRCULATION PRESSURE (kPa) 4850 — PUMP NO. 1: 152, 100 — PUMP NO. 2: 152, 100
REDUCED PUMP SPEED: 1450 @ 100 @ 134.00
DEVIATION SURVEY: DEPTH 128.00 — DEVIATION 1

From	To	Hrs	Code	Details of operations in sequence and remarks
0:00	3:15	3.25	2	Drill f/119m-134m
3:15	4:00	0.75	5	Circulate Hole Clean and Work Pipe
4:00	4:15	0.25	10	Deviation Survey @ 128m = 1 Deg.
4:15	4:30	0.25	7	Rig Service
4:30	5:00	0.50	6	Flow Check @ 128m, P.O.O.H. to 70m,
5:00	6:00	1.00	3	RIH, Picking Up 6 Jts.D.P.,Wash/Ream and Work Ledge @88m
6:00	6:15	0.25	6	Rack Back D.P.(Tight Coming Thru 88m)
6:15	6:45	0.50	6	RIH,Picking Up 6 Jts. D.P.(Work Pipe Thru 88m,No Tight Spots)
6:45	7:00	0.25	3	Wash f/129m to Btm., .5m Fill
7:00	8:00	1.00	5	Circulate Hole Clean and Work Pipe

NOTES

DRILLER SIGNATURE: Wade Goddard — 8.00 — 8.5 — MAX EXP HOOKLOAD 79000.00 — SAFETY TOPIC: WireLine Survey's

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	633-628-706	Wade Goddard	8.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	8.00	MM	☐	☑
Motorman	651-386-064	Jesse Goddard	8.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☐	☑
Floorman	730-040-898	Nathan Schwandt	8.00	NS	☐	☑
Leaseman	729-675-003	Daniel Sampson	8.00	DS	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: Regular — DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR (8:00 to)

BHA:

No.	Item	O.D. (mm)	Length
1	bit	311	0.84
1	Near Bit Stab	590	2.18
1	8" Drill Collars	220	9.46
1	Shock Sub	240	2.95
1	String Stab	880	2.13
7	8" Drill Collars	220	66.43
1	Bell Sub	224	1.17
3	140mm D.C.	180	26.66
3		127	28.10
0	D.P.	Stands	0.00
0	D.P.	Singles	0.00
	Kelly down		0.00
	Total		134.00
	Wt. of DC		22000.00
	Wt. of string		64000.00

BIT RECORD: BIT NO. 1A — SIZE 609 — MFG. H.C. — TYPE GTX-CO3 — SERIAL NO 6027140 — DEPTH OUT (m) 134.00 — DEPTH IN (m) 0.00 — TOTAL METERS DRILLED 134.00 — TOTAL HOURS RUN 18.00

HOLE CONDITION: HOLE DRAG 0 — TORQUE AT BOTTOM — FILL ON BOTTOM (m)

MUD RECORD: TIME 09:30 — DENSITY 1090 — FUNNEL VIS 48 — pH 8.0 — PVT 86.4m3
MUD MATERIAL ADDED: Milgel — 3 sacks

METERS DRILLED: FROM 134.00
CIRCULATION PRESSURE (kPa) 3700 — PUMP NO. 1: 152, 100 — PUMP NO. 2: 152, 100

From	To	Hrs	Code	Details of operations in sequence and remarks
8:00	9:00	1.00	5	Wiper trip to 74m, flow check @ 133m
9:00	10:00	1.00	5	Condition Mud & Circ.
10:00	12:30	2.50	6	Hoist bit to run csg. Flow check @ 133m, 77m & out.(Strap out)
12:30	14:00	1.50	6	Lay down stabs, shock tool, & bit.
14:00	14:15	0.25	7	Rig Service
14:15	14:30	0.25	21	Safety Meeting
14:30	16:00	1.50	12	Rig up to, & run casing

NOTES

DRILLER SIGNATURE: Barry Verheist — 8.00 — 8.5 — MAX EXP HOOKLOAD 54000.00 — SAFETY TOPIC: Handling B.H.A.

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	642-389-910	Barry Verheist	12.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☐	☑
Floorman	272-945-918	Brent Sullivan	12.00	BS	☐	☑
Floorman	119-983-287	James R. Sullivan	12.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	12.00	GK	☐	☑

RATE SCHEDULE: Regular — DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR

BIT RECORD / MUD RECORD: (blank)

METERS DRILLED: FROM 134.00
PUMP NO. 1: 152 — PUMP NO. 2: 152

From	To	Hrs	Code	Details of operations in sequence and remarks
16:00	19:15	3.25	12	Run Casing (Weld on shoe, float collar & joints #3 & #4)
19:15	19:30	0.25	21	Safety Meeting
19:30	22:00	2.50	12	Run Casing
22:00	22:15	0.25	7	Rig Service
22:15	23:15	1.00	5	Circulate Casing
23:15	23:45	0.50	6	RIH w/Drill Pipe
23:45	24:00	0.25	5	Circulate and Condition Mud

NOTES

DRILLER SIGNATURE: Wade Goddard — 8.00 — 8.5 — SAFETY TOPIC: Running Casing

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	633-628-706	Wade Goddard	4.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	4.00	MM	☐	☑
Motorman	651-386-064	Jesse Goddard	4.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☐	☑
Floorman	730-040-898	Nathan Schwandt	4.00	NS	☐	☑
Leaseman	729-675-003	Daniel Sampson	4.00	DS	☐	☑

RATE SCHEDULE: Regular — DRIVER A — CREW SAFETY DAYS — DRIVER B

ETS SERIAL NUMBER: PREC820_20041102_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | RIG NO.: 620 E

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Rues Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 03-Dec-2004 | RIG NO.: 620 E | FUEL: 45.00 | RIG: 43838 BOILER

WEATHER: TEMPERATURE: CURRENT CONDITION: Snow; WIND DIRECTION: Calm; ROAD: Good

LAST CASING TUBING OR LINER

	LINEAR MASS (kg/m)	GRADE	WALL THICK (mm)	PORE JT O.D. (mm)	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN (mm)
			28.00	88-95	83.00	166.00	5"XH	129 F-1600	BPMMP 305
			38.00	88-95	67.00	165.00	5"XH	150 F-1600	BPMMP 305

TIME - HRS

CREW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Cut conductor
MORN									0.75	0.50	0.25					1.50	4.75								9.25
DAY											0.25						5.75								7.00
EVE											0.25														6.00
TOTAL									0.75	0.50	0.75					1.50	10.50								22.25

SHALE SHAKER(S) — RENTALS/SERVICES

NO	TYPE	Derrick	New
1	SCREENS CHANGED	☐ YES	☑ NO
2	TOP	50	TOP 50
3	MIDDLE	50	MIDDLE 50
4	BOTTOM	50	BOTTOM 50

WELL TYPE: Geothermal | RE-ENTRY: ☐ YES ☑ NO | KB TO GROUND ELEV.

WELL NAME AND NO.: a-92-A / 92-J-12 MC-7 | DATE: 03-Dec-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 620 E

PROVINCE: BC | CAMP: ☑ YES ☐ NO | RIG SAFETY DAYS: 4.00

MORNING TOUR

BIT RECORD

BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | DULL CONDITION | HOLE CONDITION | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED

TIME | DENSITY (kg/m³) | FUNNEL VIS. (s/L) | W.L. (cm³) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

HOURS RUN	MAKE	SCREEN SIZE	CONDITION

METERS DRILLED

FROM	TO	IN + OUT = TOTAL	ROTARY HRS	WT. ON BIT (kN)
134.00				

CIRCULATION PRESSURE (kPa): PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.: 152 | 152

REDUCED PUMP SPEED: ☐ | ☐

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
	0:00	0:45	0.75	5 Circulate and Condition Mud
	0:45	1:00	0.25	7 Rig Service
	1:00	1:15	0.25	21 Safety Meeting
	1:15	2:45	1.50	12 Rig to and Cement w/Halliburton and Rig Out
	2:45	3:15	0.50	9 Hoist Drill Pipe and Rack in Derrick
	3:15	8:00	4.75	13 Wait on Cement

NOTES

DRILLER SIGNATURE: Wade Goddard

DRLG HRS	BOILER FUEL AT	BOILER WATER AT	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5				H.S.A. on Commuting	

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ DIVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	8.00	WG	☑
Derrickman	642-872-840	Murray McBain	8.00	MM	☑
Motorman	651-366-064	Jesse Goddard	8.00	JG	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☑
Floorman	730-040-896	Nathan Schwandt	8.00	NS	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☑
Rig Manager	719-409-484	Kevin Vig		KV	☑
Top Drive	938-977-702	Sheldon Langley		SL	☑

DAY TOUR

BIT RECORD

BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | DULL CONDITION | HOLE CONDITION | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: ☐ WATER BASED ☐ OIL BASED

TIME | DENSITY (kg/m³) | FUNNEL VIS. (s/L) | W.L. (cm³) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

HOURS RUN	MAKE	SCREEN SIZE	CONDITION

METERS DRILLED

FROM	TO	IN + OUT = TOTAL	ROTARY HRS	WT. ON BIT (kN)
134.00				

CIRCULATION PRESSURE (kPa): PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.: 152 | 152

REDUCED PUMP SPEED: ☐ | ☐

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
	8:00	8:15	0.25	7 Rig Service
	8:15	14:00	5.75	13 Wait on Cement
	14:00	16:00	2.00	22 (Cut conductor) & casing

NOTES

DRILLER SIGNATURE: Barry Verheist

DRLG HRS	BOILER FUEL AT	BOILER WATER AT	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5				Nipple up	

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ DIVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

DAY TOUR 8:00 TO

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	842-389-910	Barry Verheist	12.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	272-945-916	Brent Sullivan	12.00	BS	☑
Floorman	118-883-287	James R. Sullivan	12.00	JS	☑
Leaseman	713-956-481	Gary Kennedy	12.00	GK	☑

EVENING TOUR

BIT RECORD

BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | DULL CONDITION | HOLE CONDITION | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED

TIME | DENSITY (kg/m³) | FUNNEL VIS. (s/L) | W.L. (cm³) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

HOURS RUN	MAKE	SCREEN SIZE	CONDITION

METERS DRILLED

FROM	TO	IN + OUT = TOTAL	ROTARY HRS	WT. ON BIT (kN)
134.00				

CIRCULATION PRESSURE (kPa): PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.: 152 | 152

REDUCED PUMP SPEED: ☐ | ☐

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	22:00	6.00	22	(Cut conductor) and Weld on Casing Flange and Let Cool for 90 Min.
22:00	22:15	0.25	7	Rig Service
22:15	22:30	0.25	21	Safety Meeting
22:30	24:00	1.50	14	Nipple Up B.O.P.'s

NOTES

DRILLER SIGNATURE: Wade Goddard

DRLG HRS	BOILER FUEL AT	BOILER WATER AT	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5				Nipple Up B.O.P.'s	

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ DIVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

EVENING TOUR TO

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	4.00	WG	☑
Derrickman	642-872-840	Murray McBain	4.00	MM	☑
Motorman	651-366-064	Jesse Goddard	4.00	JG	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☑
Floorman	730-040-896	Nathan Schwandt	4.00	NS	☑
Leaseman	729-975-003	Daniel Sampson	4.00	DS	☑

TS SERIAL NUMBER: PREC620_20041103_1A

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | MODULE ID.: b-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 04-Dec-2004 | RIG NO.: 820 E | FUEL @ 8:00 | RIG: 75286 | BOILER

WEATHER: TEMPERATURE -2 | CURRENT CONDITION: Snow | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TUBING OR LINER

OD (mm)	WEIGHT (kg/m)	GRADE	NO OF JOINTS	TOTAL (m)	SET AT (m)

DCPP SIZE (mm)	LENGTH MAX (kg)	GRADE	MIN ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE (LENGTH)
	29.00	SS-95	83.00	166.00	5"XH	170	F-1600	BPMMP	305
	36.00	SS-95	67.00	166.00	5"XH	160	F-1600	BPMMP	305

WELL TYPE: Geothermal | RE-ENTRY ☐YES ☑NO | KB TO GROUND ELEV.

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 04-Dec-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | AFE NO.: 620 E

PROVINCE: BC | CAMP ☑YES ☐NO | RIG SAFETY DAYS: 5.00

TIME - HRS

CREW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
MORN																					Drill Out		Rig Service	
DAY																								
EVE																								
TOTAL																								

SHALE SHAKER(S)

NO.	TYPE	NEW
	Derrick	

SCREENS CHANGED ☐YES ☑NO

0.00	TOP	60	TOP 60
0.00	MIDDLE	60	MIDDLE 60
24.00	BOTTOM	60	BOTTOM 60

RENTALS/SERVICES

	MORN	DAY	EVE

BIT RECORD

NO.	BIT	O.D. (mm)	MFG	TYPE	SERIAL NO	JETS	DEPTH OUT (m)	DEPTH IN (m)	TOTAL METRES DRILLED (m)	TOTAL HOURS RUN	CUTTING STRUCTURE								HOURS RUN	BEARING/SEAL CONDITION	GAUGE CONDITION	DULL CHARACTERISTICS
	D/P																					
	D/P	SINGLES																				
	WELLTOWN																					
	TOTAL																					

HOLE CONDITION

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

WT. OF DC

WT. OF STRING

MUD RECORD

MUD TYPE ☐WATER BASED ☐OIL BASED

TIME

DENSITY (kg/m³)

FUNNEL VIS. (s)

W.L. (cm3)

pH

MUD MATERIAL ADDED

SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT

HOURS RUN

METERS DRILLED

FROM	TO	DIST. DRLD (m)	ROTATING HRS	ROP (m/hr)
134.00				

CIRCULATION PRESSURE (KPa)

PUMP NO. 1			PUMP NO. 2		
LINER SIZE (mm)	S.P.M.		LINER SIZE (mm)	S.P.M.	
152			152		

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (m)	DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

JAR HRS	JAR WT.	STAND PIPE	STAND TORQUE
0.00	0.0		

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC: Weekend Anesthesia | M.A.C.P.

TIME LOG

FROM	TO	HRS	CODE	DESCRIPTION
0:00	7:45	7.75	14	Nipple Up B.O.P.'s,Catch Pans,Flow Nipple and FlowLine
7:45	8:00	0.25	7	Rig Service

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	833-626-706	Wade Goddard	8.00	WG	☐	☑
Derrickman	842-372-840	Murray McBain	8.00	MM	☐	☑
Motorman	851-366-064	Jesse Goddard	8.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☐	☑
Floorman	730-040-896	Nathan Schwandt	8.00	NS	☐	☑
Leaseman	729-975-903	Daniel Simpson	8.00	DS	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	536-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: ☑REGULAR ☐REPAIR ☐STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	MFG	TYPE	SERIAL NO	JETS	DEPTH OUT (m)	DEPTH IN (m)	TOTAL METRES DRILLED (m)	TOTAL HOURS RUN	CUTTING STRUCTURE								HOURS RUN	BEARING/SEAL CONDITION	GAUGE CONDITION	DULL CHARACTERISTICS
1	Bit	311	H.C.	GTX CG1	K29DA		129.00	2	127.00	5.25	1	1	WT	A	E	I	NO	TD	5.25			
	D/P																					
	D/P	SINGLES																				
	WELLTOWN																					
	TOTAL																					

HOLE CONDITION

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

WT. OF DC

WT. OF STRING

MUD RECORD

MUD TYPE ☐WATER BASED ☐OIL BASED

TIME

DENSITY (kg/m³)

FUNNEL VIS. (s)

W.L. (cm3)

pH

MUD MATERIAL ADDED

SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Gel	77 sacks
Caustic Soda	2 sacks

HOURS RUN

METERS DRILLED

FROM	TO	DIST. DRLD (m)	ROTATING HRS	ROP (m/hr)
134.00				

CIRCULATION PRESSURE (KPa)

PUMP NO. 1			PUMP NO. 2		
LINER SIZE (mm)	S.P.M.		LINER SIZE (mm)	S.P.M.	
152			152		

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (m)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verheist

JAR HRS	JAR WT.	STAND PIPE	STAND TORQUE
0.00	0.0		

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC: Nipple up | M.A.C.P.

TIME LOG

FROM	TO	HRS	CODE	DESCRIPTION
0:00	9:15	9.25	21	Safety Meeting
9:15	13:30	5.25	14	Nipple Up B.O.P.
13:30	14:00	0.50	18	Pressure test B.O.P. to 5000 KPa. for 10 min. Tested blind rams, Outer H.C.R., kill line, bowl, & casing.
14:00	14:15	0.25	7	Rig Service, Fit pipe rams(8 secs)
14:15	16:00	1.75	8	Prepare & Make up B.H.A.

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

DAY TOUR 8:00 TO

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	842-389-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	847-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	272-945-818	Brent Sullivan	8.00	BS	☐	☑
Floorman	118-983-267	James R. Sullivan	8.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑

RATE SCHEDULE: ☑REGULAR ☐REPAIR ☐STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	MFG	TYPE	SERIAL NO	JETS	DEPTH OUT (m)	DEPTH IN (m)	TOTAL METRES DRILLED (m)	TOTAL HOURS RUN	CUTTING STRUCTURE								HOURS RUN	BEARING/SEAL CONDITION	GAUGE CONDITION	DULL CHARACTERISTICS
1	Bit	311	H.C.	GTX CG1	K29DA		129.00	2	127.00	5.25	1	1	WT	A	E	I	NO	TD	5.25			
1	Bit Sub	229	1.03																			
1	Shock Sub	240	2.06																			
10	8" Drill Collars	220	93.13																			
1	8" Jars	234	8.77																			
1	8" Foxy D.C.	228	3.83																			
1	Bull Sub	224	1.17																			
1	D/P	SINGLES	28.13																			
0	D/P		0.00																			
	WELLTOWN		-1.00																			
	TOTAL		136.54																			

HOLE CONDITION

HOLE DRAG

TORQUE AT BOTTOM: 24000.00

FILL ON BOTTOM (m): 57000.00

WT. OF DC

WT. OF STRING

MUD RECORD

MUD TYPE ☐WATER BASED ☐OIL BASED

TIME	20:00	23:00
DENSITY (kg/m³)	1060	1040
FUNNEL VIS. (s)	58	39
W.L. (cm3)		
pH	10.5	10.0
Cl (mg/L)	126,4m3	

MUD MATERIAL ADDED

SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Bentonite Manufactured	10 sks

HOURS RUN

METERS DRILLED

FROM	TO	DIST. DRLD (m)	ROTATING HRS	ROP (m/hr)
134.00	136.00	2	60	10

CIRCULATION PRESSURE (KPa)

PUMP NO. 1			PUMP NO. 2		
LINER SIZE (mm)	S.P.M.		LINER SIZE (mm)	S.P.M.	
2200	153	90	152	90	

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (m)	DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills

JAR HRS	JAR WT.	STAND PIPE	STAND TORQUE
0.00	0.0		

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

TIME LOG

FROM	TO	HRS	CODE	DESCRIPTION
14:00	18:15	0.25	21	Safety Meeting (New Employee)
18:15	19:15	3.00	6	Run In Hole (P/U 9" collars, Shock sub, Jars, Short Collar
19:15	19:30	0.25	7	Rig Service & Function Pipe Rams
19:30	20:30	1.00	22	(Drill Out) Cement & Float
20:30	22:15	1.75	18	Pressure Test B.O.P.(Pipe Rams, Annular 5000 kpa 10 min each
22:15	22:45	0.50	22	(Drill Out) Cement & Shoe
22:45	23:00	0.25	2	Drill Fr 134-135m
23:00	24:00	1.00	5	Condition Mud & Circ.

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

EVENING TOUR TO

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-151	Bill Mills	8.00	BM	☐	☑
Derrickman	829-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-751	Dwayne Fry	8.00	DF	☐	☑
Floorman	120-036-422	Pierre Gallant	8.00	PG	☐	☑
Floorman	552-342-416	Jonathan Greeve	8.00	JG	☐	☑
Leaseman	736-371-550	Shawn Hanlon	8.00	SH	☐	☑

RATE SCHEDULE: ☑REGULAR ☐REPAIR ☐STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

CAODC

Chimo Equipment A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00	RIG RELEASE	JOB NO. 22	AFE
LICENCE NO. C-7	WELL NAME AND NO. a-92-A / 92-J-12 MC-7		
OPERATOR: Western Geopower Corp		CONTRACTOR: Precision Drilling	
SURFACE LOCATION: 92-A / 92-J-12		UNIQUE ID: b-1-H / 92-J-12	
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva		SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig	

DAILY CHECKS (OPR / R.M.)

DATE	05-Dec-2004
RIG NO	820 E
FUEL @ 8:00 — RIG	70218
BOILER	
TEMPERATURE	-2
CURRENT CONDITION	Cloudy
WIND DIRECTION	Calm
ROAD	Good

LAST CASING, TUBING OR LINER

	29.00	SS-95	83.00	156.00	5"XH	170	F-1600	BPMMP	305
	38.00	SS-95	87.00	168.00	5"XH	160	F-1600	BPMMP	305

WELL TYPE	Geothermal	RE-ENTRY	☐ YES ☑ NO	KB TO GROUND ELEV						
WELL NAME & NO.	a-92-A / 92-J-12 MC-7	DATE	05-Dec-2004							
OPERATOR	Western Geopower Corp	CONTRACTOR	Precision Drilling							
RIG MANAGER	Kevin Vig	RIG NO.	820 E							
PROVINCE	BC	CAMP	☑ YES ☐ NO	RIG SAFETY DAYS	6.00					

TIME SUMMARY

CODE	2	3	5	6	7	10	21	22 mousehole	23 Top Drive
MORN	1.00		0.75	4.25	0.25		0.25	1.50	
DAY	6.00	1.25		1.25	0.25	0.25			
EVE	7.25				0.25	0.25			0.25
TOTAL	13.25	1.25	0.75	5.50	0.75	0.50	0.25	1.50	0.25

SHALE SHAKER(S): NO 2, TYPE Derrick; SCREENS CHANGED ☐ YES ☑ NO; TOP 80 / TOP 50; MIDDLE 80 / MIDDLE 50; BOTTOM 80 / BOTTOM 80. TOTALS: 3.00, 6.50, 8.00, 24.00

RENTALS/SERVICES

MORNING TOUR

Drill String Assembly

NO.	ITEM	O.D. (mm)	LENGTH
1	bit	311	0.43
1	Bit Sub	229	1.03
1	Shock Sub	240	2.95
10	8" Drill Collars	220	93.13
1	8" Jars	234	8.77
1	9" Pony D.C.	228	3.93
1	Bell Sub	224	1.17
3	7" Drill Collars	167	26.65
0	D.P. (stands)		0.00
0	D.P. (singles)		0.00
	KELLY DOWN		0.00
	TOTAL		150.00
	WT. OF DC		22000.00
	WT. OF STRING		58000.00

Bit Record

BIT NO.	2	3
SIZE	444	444
MFG	H.C.	H.C.
TYPE	GTX CG1	GTX 40C
SERIAL NO.	K29DA	6020912
JETS	22 / 22 / 22	
DEPTH OUT (m)	145.00	
DEPTH IN (m)	134.00	145.00
TOTAL METERS DRILLED	11.00	
TOTAL HOURS RUN	1.25	
DULL GRADE	2 / 2 / WT / ALL / E / I / WT / BHA / 8.80	
HOLE DRAG	0	
TORQUE AT BOTTOM		
FILL ON BOTTOM (m)		

Mud Record

MUD TYPE ☐ WATER BASED ☐ OIL BASED

PRODUCT	AMOUNT & UNIT
Gel	20sks.
Sodium Bicarbonate	8sks.

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
135.00	145.00	D	55	2-15

CIRCULATION PRESSURE (KPa): 4200; PUMP NO. 1: 152 / 100; PUMP NO. 2: 152 / 100

REDUCED PUMP SPEED: 1500 @ 100 @ 135.00

DEVIATION SURVEY: DEPTH (m) / DEVIATION / DIRECTION

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
0:00	1:30	1.50	22	Drill out collapsed (mousehole)
1:30	1:45	0.25	21	B.O.P. drill w/crew, well secure in 57 secs
1:45	2:45	1.00	2	Drill fr. 135m - 145m
2:45	3:30	0.75	5	Condition Mud & Circ.
3:30	5:00	1.50	6	Hoist bit for B.H.A. change, flow check @ 144, 116, & out
5:00	5:15	0.25	7	Rig Service, F/T Blind rams(9 secs)
5:15	8:00	2.75	6	Pick & make up new B.H.A. & R.I.H., flow check @0m

NOTES

DRILLER SIGNATURE: Barry Verhelst

BOILER: 5.00, 6.6 | MAX EXP HOOKLOAD: 69000.00

Crew — MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	642-389-910	Barry Verhelst	8.00	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	☐	☑
Floorman	272-945-918	Brent Sullivan	8.00	☐	☑
Floorman	118-983-287	James R. Sullivan	8.00	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	☐	☑
Rig Manager	719-409-484	Kevin Vig		☐	☑
Top Drive	836-877-702	Sheldon Langley		☐	☑

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ OTHER — DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR

Drill String Assembly

NO.	ITEM	O.D. (mm)	LENGTH
1	bit	311	0.43
1	[illegible]	227	11.15
1	String stab	236	1.87
1	Shock Sub	240	2.95
1	8" Drill Collars	220	9.48
1	String stab	236	1.19
8	8" Drill Collars	220	83.67
1	8" Jars / Pony D.C.	234	9.70
1	Bell Sub	224	1.17
3	7" Drill Collars	167	26.85
3	[illegible]	127	28.10
0	D.P. (stands)		0.00
0	D.P. (singles)		0.00
	KELLY DOWN		-1.21
	TOTAL		175.00
	WT. OF DC		30000.00
	WT. OF STRING		67000.00

Bit Record

BIT NO.	3
SIZE	444
MFG	H.C.
TYPE	GTX 40C
SERIAL NO.	6020912
DEPTH IN (m)	145.00
TOTAL METERS DRILLED	30.00
TOTAL HOURS RUN	5.00
HOLE DRAG	0

Mud Record

MUD TYPE ☑ WATER BASED ☐ OIL BASED

TIME	10:00	12:00	16:00
DENSITY	1035	1045	1050
FUNNEL VIS	35	40	43
pH	11.5	11.5	11.5
PVT@	138.9m3	139.7m3	140.6m3

PRODUCT	AMOUNT & UNIT
Gel	180 sks

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
145.00	175.00	D	80	18-22

CIRCULATION PRESSURE (KPa): 6000; PUMP NO. 1: 152 / 100; PUMP NO. 2: 152 / 100

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
8:00	9:15	1.25	6	Run In Hole
9:15	10:00	0.75	3	Ream Fr/129m-145m
10:00	10:30	0.50	2	Drill Fr/145-149m
10:30	11:00	0.50	3	Ream Tight spots 129m & 144m
11:00	13:30	2.50	2	Drill Fr/149m-165m
13:30	13:45	0.25	7	Rig Service
13:45	15:45	2.00	2	Drill Fr/165m-175m
15:45	16:00	0.25	10	Circulate & Deviation Survey

NOTES

DRILLER SIGNATURE: Bill Mills

BOILER: 4.00, 8.5 | MAX EXP HOOKLOAD: 75000.00

Crew — DAY TOUR 8:00 TO

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	12.00	BM	☐	☑
Derrickman	829-926-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-372-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	120-838-422	Pierre Gallant	12.00	PG	☐	☑
Floorman	852-342-418	Jonathan Greeve	12.00	JG	☐	☑
Leaseman	736-371-550	Shawn Hanlon	12.00	SH	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ OTHER — DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR

Drill String Assembly

NO.	ITEM	O.D. (mm)	LENGTH
1	bit	311	0.43
1	[illegible]	227	11.18
1	String stab	236	1.87
1	Shock Sub	240	2.95
1	8" Drill Collars	220	9.49
1	String stab	236	1.16
9	8" Drill Collars	220	63.87
1	8" Jars / Pony D.C.	234	9.70
1	Bell Sub	224	1.17
3	7" Drill Collars	167	26.55
6	[illegible]	127	56.40
1	D.P. (stands)		28.09
0	D.P. (singles)		8.00
	KELLY DOWN		-17.80
	TOTAL		215.00
	WT. OF DC		30000.00
	WT. OF STRING		58000.00

Bit Record

BIT NO.	3	75
SIZE	444	
MFG	H.C.	
TYPE	GTX 40C	
SERIAL NO.	6020912	
DEPTH IN (m)	145.00	
TOTAL METERS DRILLED	70.00	
TOTAL HOURS RUN	12.25	
HOLE DRAG	0	
TORQUE AT BOTTOM	5458 ft-lbs	

Mud Record

MUD TYPE ☐ WATER BASED ☐ OIL BASED

TIME	18:00	21:00	23:00
DENSITY	1070	1070	1068
FUNNEL VIS	51	58	58
pH	11.6	11.5	11.5
PVT@	145.1m3	147.9m3	148m3

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
175.00	215.00	D	85	18-22

CIRCULATION PRESSURE (KPa): 6700; PUMP NO. 1: 152 / 100; PUMP NO. 2: 152 / 100

REDUCED PUMP SPEED: 1700 @ 100 @ 202.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION	DIRECTION
168.30	1	44.00

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
16:00	16:15	0.25	10	Deviation Survey
16:15	21:00	4.75	2	Drill fr. 175m - 204m
21:00	21:15	0.25	7	Rig Service, F/T Annular(20 secs)
21:15	21:30	0.25	23	(Top Drive) Service
21:30	24:00	2.50	2	Drill fr. 204m - 215m

NOTES

DRILLER SIGNATURE: Barry Verhelst

BOILER: 4.00, 6.5 | MAX EXP HOOKLOAD: 70000.00

Crew — EVENING TOUR

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verhelst	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	272-945-918	Brent Sullivan	4.00	BS	☐	☑
Floorman	118-983-287	James R. Sullivan	4.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ OTHER — DRIVER A — CREW SAFETY DAYS — DRIVER B

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

UD: 04-11-30 20:00	RIG RELEASE
SERVICE NO.: D-7	WELL NAME AND NO.: a-92-A / 92-J-12 MC-7
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling
SURFACE LOCATION: 92-A / 92-J-12	UNIQUE ID: a-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE: Less Silva	SIGNATURE OF CONTRACTOR REPRESENTATIVE: Kevin Vig

DAILY CHECKS — OPR. / RM

(a) Daily Visual Inspection
(b) Crown-o-matic/Anti-two-blocking device(s)
(c) H2S Alarm Panel (if required)
(d) Mud Logging & Gas Detector Alarms
(e) Fire/Low Sensor
(f) BOP Drills Performed
(g) Weekly around BOP / Function & Crossover Lines
(h) Pre-Job Health and Safety Meeting (tour commencing)
(i) C.A.O.D.C. Rig Safety Inspection Checklist (one rig month)
(j) Non-Destructive Safety Fencing or Covering
(k) Crown Block Checked
(l) Water Hole Covered

DATE	05-Dec-2004
RIG NO	820 E
FUEL @ 0:00	
RIG	92627 BOILER
TEMPERATURE	-8
CURRENT CONDITION	Cloudy
WIND DIRECTION	Calm
ROAD	Good

LAST CASING TUB VS ON / UNDER

O.D. (mm)	WT/FT (kg/m)	HGR	GRADE	NO. OF JOINTS	TOTAL WT. (kg)	PU TO CSG WT (kg)	PIT AT (m)
							6.31
							129.00

LINEAR MASS (kg/m)	GRADE	MIN. ID (mm)	TOOL JT O.D. (mm)	PREMIUM (%)	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH. (mm)
29.06	S-95	63.00	166.00	5"XH	170	F-1600	BPMMP	305
38.09	S-95	57.00	168.00	5"XH	160	F-1600	BPMMP	305

SHALE SHAKER(S) — RENTAL/SERVICES

NO.	TYPE	MFR
1	Derrick	

SCREENS CHANGED	YES	NO	
6.00	TOP	50	TOP $0
6.00	MIDDLE	50	MIDDLE $0
24.00	BOTTOM	50	BOTTOM $0

WELL TYPE	RE-ENTRY	NS TO GROUND ELEV.
Geothermal	YES NO	
WELL NAME & NO. a-92-A / 92-J-12 MC-7		DATE 05-Dec-2004
OPERATOR Western Geopower Corp	CONTRACTOR Precision Drilling	
RIG MANAGER Kevin Vig		RIG NO. 820 E
PROVINCE BC	CAMP YES NO	RIG SAFETY DAYS 7.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

	O.D. (mm)	LENGTH (m)	
1 bit	311	0.43	BIT NO. 3
1	227	11.15	SIZE 444
1 String stab	236	1.87	IADC CODE
1 Shock Sub	240	2.86	MFG N.C.
1 8" Drill Collars	220	9.46	TYPE GTX 40C
1 String stab	236	1.16	SERIAL NO 6020912
9 8" Drill Collars	220	83.67	JETS
1 8" Jars / Pony D.C.	234	9.70	DEPTH OUT (m)
1 Bell Sub	224	1.17	DEPTH IN (m) 145.00
3 8" Drill Collars	167	28.86	TOTAL METERS DRILLED (m) 112.00
8 Intermediate Drill Pipe	127	56.40	TOTAL HOURS RUN 20.00
3 D.P.	127	86.23	CUTTING STRUCTURE: I 1 / O 1 / DC WT / LOC / B / Gage / OC / Reason Pulled
1 D.P.	SINGLES	9.38	
WELL FLOWN		-13.12	HOLE CONDITION
TOTAL		257.00	HOLE DRAG 0
WT. OF DC		30000.00	TORQUE AT BOTTOM 5455 ft-lbs
WT. OF STRING		68000.00	FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED

TIME	02:00	04:00	08:00
DENSITY (kg/m3)	1068	1055	1056
FUNNEL VIS. (sec/L)	52	52	52
W.L. (cm3)			
pH	11.0	11.0	11.0
PV/YP	146.7m3	146.2m3	147.3m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Natural Gel	160sks.

SOLIDS CONTROL

HOURS RUN	MUD LOST TO HOLE	MUD LOST TO SURFACE	DISPOSITION
6.00	1065	1056	1676

METERS DRILLED

FROM	TO	BIT	ROTARY R.P.M.	WT. ON BIT (kN)
216.00	257.00	D	60-65	17-19

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	2:45	2.75	2	Drill fr. 215m - 231m
2:45	3:00	0.25	7	Rig Service, F/T Annular(20 secs)
3:00	8:00	5.00	2	Drill fr. 231m - 257m

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
5900	152	100	152	100

REDUCED PUMP SPEED

1700	@	100	@	231.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verheist

HOURS RUN	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	0.0	59000.00	Steam	

CREW

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	272-945-916	Brent Sullivan	8.00	BS	☐	☑
Floorman	118-983-287	James R. Sullivan	8.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	639-977-702	Sheldon Langley		SL	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

RATE SCHEDULE: ☑ MORNING ☐ REPAIR ☐ STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO

BIT RECORD

	O.D. (mm)	LENGTH (m)	
1 bit	311	0.43	BIT NO. 3
1	227	11.15	SIZE 444
1 String stab	236	1.87	IADC CODE
1 Shock Sub	240	2.95	MFG. H.C.
1 8" Drill Collars	220	9.46	TYPE GTX 40C
1 String stab	236	1.16	SERIAL #/O 6020912
9 8" Drill Collars	220	83.67	JETS
1 8" Jars / Pony D.C.	234	9.70	DEPTH OUT (m)
1 Bell Sub	224	1.17	DEPTH IN (m) 145.00
3 8" Drill Collars	167	28.86	TOTAL METERS DRILLED (m) 144.00
8 Intermediate Drill Pipe	127	56.40	TOTAL HOURS RUN 27.00
3 D.P.	5" HWDP	84.35	CUTTING STRUCTURE: I 1 / O 1 / DC WT / LOC / B / Gage / OC / Reason Pulled
1 D.P.	SINGLES	9.38	
WELL FLOWN		9.00	HOLE CONDITION
TOTAL		298.25	HOLE DRAG 0
WT. OF DC		30000.00	TORQUE AT BOTTOM 3774 ft/lbs
WT. OF STRING		69000.00	FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED

TIME	08:00	12:00	16:00
DENSITY (kg/m3)	1070	1080	1085
FUNNEL VIS. (sec/L)	52	53	59
W.L. (cm3)			
pH	10.5	10.0	10.5
PV/YP	145.6m3	143.0m3	142.3m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Gel	80 sks
Caustic Soda	2 sks

SOLIDS CONTROL

HOURS RUN	MUD LOST TO HOLE	MUD LOST TO SURFACE	DISPOSITION
8.00	1080	1060	1830

METERS DRILLED

FROM	TO	BIT	ROTARY R.P.M.	WT. ON BIT (kN)
257.00	289.00	D	60	22

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	11:00	3.00	2	Drill Fr257m-289m
11:00	11:30	0.50	16	Circulate & Deviation Survey
11:30	15:30	4.00	2	Drill Fr289m-289m
15:30	15:45	0.25	23	(Held B.O.P.Drill) With Crewmembers
15:45	16:00	0.25	7	Rig Service & Function H.C.R. 4/4 Secs

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
7200	152	100	152	100

REDUCED PUMP SPEED

1600	@	57	@	288.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
252.80	1.5	63.00

NOTES

DRILLER SIGNATURE: Bill Mills

HOURS RUN	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	0.0	75000.00	B.O.P. positions	

CREW

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-191	Bill Mills	12.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	120-936-422	Pierre Gallant	12.00	PG	☐	☑
Floorman	852-342-415	Jonathan Greeve	12.00	JG	☐	☑
Leaseman	736-371-550	Shawn Hanlon	12.00	SH	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

RATE SCHEDULE: ☑ MORNING ☐ REPAIR ☐ STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR TO

BIT RECORD

	O.D. (mm)	LENGTH (m)	
1 bit	311	0.43	BIT NO. 3
1	227	11.15	SIZE 444
1 String stab	236	1.87	IADC CODE
1 Shock Sub	240	2.95	MFG. H.C.
1 8" Drill Collars	220	9.46	TYPE GTX 40C 78KV
1 String stab	236	1.16	SERIAL NO. 6020912
9 8" Drill Collars	220	83.67	JETS
1 8" Jars / Pony D.C.	234	9.70	DEPTH OUT (m)
1 Bell Sub	224	1.17	DEPTH IN (m) 145.00
3 8" Drill Collars	167	28.86	TOTAL METERS DRILLED (m) 182.00
8 Intermediate Drill Pipe	127	56.40	TOTAL HOURS RUN 34.75
6 D.P.	5" HWDP	140.73	CUTTING STRUCTURE: I 1 / O 1 / DC WT / LOC / B / Gage / OC / Reason Pulled
0 D.P.	SINGLES	0.00	
WELL FLOWN		-18.24	HOLE CONDITION
TOTAL		327.00	HOLE DRAG 0
WT. OF DC		30000.00	TORQUE AT BOTTOM 5455 ft-lbs
WT. OF STRING		71000.00	FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED

TIME	18:00	21:00	23:00
DENSITY (kg/m3)	1060	1075	1078
FUNNEL VIS. (sec/L)	53	53	52
W.L. (cm3)			
pH	10.5	10.5	10.5
PV/YP	143.7m3	146.6m3	147.8m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	MUD LOST TO HOLE	MUD LOST TO SURFACE	DISPOSITION
8.00	1075	1055	1735

METERS DRILLED

FROM	TO	BIT	ROTARY R.P.M.	WT. ON BIT (kN)
289.00	327.00	D	60	22

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	23:15	7.25	2	Drill Fr289m - 325m
23:15	23:30	0.25	7	Rig Service, F/T pipe rams(8 secs)
23:30	24:00	0.50	2	Drill fr. 325m - 327m

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
7100	152	100	152	100

REDUCED PUMP SPEED

1600	@	100	@	326.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verheist

HOURS RUN	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	0.0	73000.00		

CREW

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	272-945-916	Brent Sullivan	4.00	BS	☐	☑
Floorman	118-983-287	James R. Sullivan	4.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

RATE SCHEDULE: ☑ MORNING ☐ REPAIR ☐ STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC820_20041106_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO.	22
AFE	
LICENCE NO	MC-7
WELL NAME AND NO.	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE	Kevin Vig

DATE	07-Dec-2004
RIG NO.	620 E
FUEL @ 0:00	
RIG	86082 BOILER
TEMPERATURE	-8
CURRENT CONDITION	Snow
WIND DIRECTION	Calm
ROAD	Good

LINER SIZE (mm)	GRADE	WT. (kg/m)	TOOL JT O.D.	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
28.00	SS-95	83.00	186.00	5"XH	170	F-1600	BPMMP	305
34.00	SS-95	47.00	186.00	5"XH	150	F-1600	BPMMP	305

Last casing: 9.31 / 129.00

WELL TYPE	Geothermal
RE-ENTRY	☐ Yes ☑ No
KB TO GROUND ELEV	
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	07-Dec-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ Yes ☐ No
RIG SAFETY DAYS	8.00

TIME - HRS

OPER	1	2	3	4	5	6	7	8	9	10	...	22	23
MORN		7.40					0.25						0.74
DAY		5.60			0.30	0.75	0.26			0.90		0.25	
EVE		6.50					0.25						1.25
TOTAL		19.50			0.26	0.75	0.75			0.60		0.25	2.00

Shale shakers: No. 3, Type Derrick, New. Screens changed ☐ Yes ☑ No. Top 50 / 50, Middle 50 / 50, Bottom 50 / 50. Totals: 2.00, 0.50, 0.40, 24.00

MORNING TOUR 0:00 TO 8:00

Drilling Assembly

NO.	ITEM	O.D. (mm)	LENGTH
1	bit	311	0.43
1		227	11.16
1	String stab	236	1.87
1	Shock Sub	240	2.85
1	Drill Collars	220	9.46
1	String stab	236	1.16
9	Drill Collars	220	83.67
1	Jars / Pony DC	234	9.70
1	Bell Sub	224	1.17
3	Drill Collars	167	26.55
9		127	86.40
6	DP	Stands	140.73
2	DP	Singles	18.81
	KELLY DOWN		-2.65
	TOTAL		361.50
	WT. OF DC		30000.00
	WT. OF STRING		72000.00

Bit Record

BIT NO	3
SIZE	444
IADC CODE	
MFG	H.C.
TYPE	GTX 40C
SERIAL NO	6020912
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	145.00
TOTAL METERS DRILLED	216.00
TOTAL HOURS RUN	41.75
HOLE DRAG	0
TORQUE AT BOTTOM	4618 ft-lbs
FILL ON BOTTOM (m)	

Mud Record

TIME	02:00	04:00	08:00
DENSITY	1075	1080	1080
FUNNEL VIS	52	54	54
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT@	144.7m3	138m3	136.7m3

PRODUCT	AMOUNT & UNIT
Natural Gel	40sks.
Milgel	35sks.
Caustic Soda	3sks.

Solids control: 8.00 / 1080 / 1070 / 1730

Meters Drilled

FROM	TO	D	ROTARY RPM	WT ON BIT
327.00	361.00	D	60-65	18-22

Circulation pressure (kPa): 7300; Pump No. 1: 152 / 100; Pump No. 2: 152 / 100
Reduced pump speed: 2000 @ 100 @ 342.00

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
0:00	3:30	3.50	2	Drill fr. 327m - 344m
3:30	3:45	0.25	7	Rig Service, F/T Annular(20 secs)
3:45	6:45	3.00	2	Drill fr. 344m - 359m
6:45	7:30	0.75	23	(Maintenance) on #1 mud pump
7:30	8:00	0.50	2	Drill fr. 359m - 361m

NOTES
[illegible]

Driller signature: Barry Verhelst
Max exp hookload: 72000.00 · Safety topic: Using mud can

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-810	Barry Verhelst	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	272-945-916	Brent Sullivan	8.00	BS	☐	☑
Floorman	118-983-287	James R. Sullivan	4.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	6.00	GK	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-677-702	Sheldon Langley		SL	☐	☑

Rate schedule: ☑ Regular

DAY TOUR 8:00 to

Drilling Assembly

NO.	ITEM	O.D. (mm)	LENGTH
1	bit	311	0.43
1		227	11.15
1	String stab	236	1.87
1	Shock Sub	240	2.85
1	Drill Collars	220	9.46
1	String stab	236	1.15
9	Drill Collars	220	83.67
1	Jars / Pony DC	234	9.70
1	Bell Sub	224	1.17
3	Drill Collars	167	26.56
9		127	86.40
7	DP	Stands	197.09
0	DP	Singles	0.00
	KELLY DOWN		-15.60
	TOTAL		396.00
	WT. OF DC		30000.00
	WT. OF STRING		72000.00

Bit Record

BIT NO.	3
SIZE	444
IADC CODE	
MFG	H.C.
TYPE	GTX 40C
SERIAL NO	6020912
JETS	
DEPTH OUT (m)	386.00
DEPTH IN (m)	145.00
TOTAL METERS DRILLED	241.00
TOTAL HOURS RUN	47.75
HOLE DRAG	0
TORQUE AT BOTTOM	4618 ft/lbs
FILL ON BOTTOM (m)	

Mud Record

TIME	10:30	12:00	16:00
DENSITY	1060	1080	1080
FUNNEL VIS	65	49	65
W.L. (cm3)			
pH	10.9	10.5	10.5
PVT@	137.8m3	141.2m3	143.7m3

PRODUCT	AMOUNT & UNIT
Gel	50 sks
Caustic Soda	3 sks

Solids control: 6.00 / 1080 / 1060 / 1760

Meters Drilled

FROM	TO	D	ROTARY RPM	WT ON BIT
361.00	389.00	D	65	22

Circulation pressure (kPa): 7800; Pump No. 1: 152 / 100; Pump No. 2: 152 / 100

Deviation survey:

DEPTH (m)	DEVIATION (o)	DIRECTION
365.28	1.26	84.00

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
8:00	8:30	0.50	2	Drill Fr/361m-363m
8:30	8:45	0.25	5	Circulate
8:45	9:00	0.25	7	Rig Service & Function Pipe Rams 5/5 Secs
9:00	9:15	0.25	22	(Accumulator Function Test)
9:15	10:00	0.75	9	Wiper Trip
10:00	13:30	3.50	2	Drill Fr/363m-381m
13:30	14:00	0.50	10	Deviation Survey
14:00	16:00	2.00	2	Drill Fr/ 381m - 386m
				Travel From Home To Rig 620 Pat Trottier

NOTES
[illegible]

Driller signature: Bill Mills
Safety topic: Handeling Tubulars

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	12.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	120-936-422	Pierre Gallant	12.00	PG	☐	☑
Floorman	652-342-416	Jonathan Greeve	12.00	JG	☐	☑
Leaseman	738-371-550	Shawn Hanlon	12.00	SH	☐	☑
Rig Manager	611-451-261	Pat Trottier			☐	☑

Rate schedule: ☑ Regular

EVENING TOUR

Drilling Assembly

NO.	ITEM	O.D. (mm)	LENGTH
1	bit	311	0.43
1		227	11.15
1	String stab	236	1.87
1	Shock Sub	240	2.95
1	Drill Collars	220	9.46
1	String stab	236	1.15
9	Drill Collars	220	83.67
1	Jars / Pony DC	234	9.70
1	Bell Sub	224	1.17
3	Drill Collars	167	26.65
9		127	86.40
7	DP	Stands	187.09
2	DP	Singles	18.65
	KELLY DOWN		-10.65
	TOTAL		409.60
	WT. OF DC		30000.00
	WT. OF STRING		73000.00

Bit Record

BIT NO.	3
SIZE	444
IADC CODE	
MFG	H.C.
TYPE	GTX 40C
SERIAL NO.	6020912
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	145.00
TOTAL METERS DRILLED	264.00
TOTAL HOURS RUN	54.25
HOLE DRAG	0
TORQUE AT BOTTOM	7143 ft-lbs
FILL ON BOTTOM (m)	

Mud Record

TIME	18:00	21:00	22:00
DENSITY	1080	1076	1070
FUNNEL VIS	83	51	51
W.L. (cm3)			
pH	11.5	10.6	10.0
PVT@	146.1m3	144.4m3	146.3m3

Solids control: 8.00 / 1076 / 1065 / 1740

Meters Drilled

FROM	TO	D	ROTARY RPM	WT ON BIT
386.00	409.00	D	65	22

Circulation pressure (kPa): 7500; Pump No. 1: 152 / 100; Pump No. 2: 152 / 100
Reduced pump speed: 2000 @ 100 @ 408.00

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
16:00	20:15	4.25	2	Drill Fr/386m- 401m
20:15	20:30	0.25	7	Rig Service, F/T H.C.R.(2 secs)
20:30	21:45	1.25	23	Pump #2 maintenance
21:45	24:00	2.25	2	Drill fr. 401m - 409m

NOTES
[illegible]

Driller signature: Barry Verhelst
Max exp hookload: 75000.00 · Safety topic: Danger zone

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-810	Barry Verhelst	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	272-945-916	Brent Sullivan	4.00	BS	☐	☑
Floorman	118-983-287	James R. Sullivan	4.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☐	☑

Rate schedule: ☑ Regular

ETS SERIAL NUMBER: PREC620_20041107_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | LOG NO: 22 | AFE

LICENCE NO: MC-7 | WELL NAME AND NO: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | LAHOLE ID: 5-1-H / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Pat Trottier

DAILY CHECKS

DATE: 06-Dec-2004 | RIG NO: 620 E | FUEL @ RIG: 47462 BOILER

LAST CASING TUBING OR LINER

	GRADE	NO OF JOINTS	TOTAL JOINTS LENGTH	PUMP HOURS HRS/DAYS	HRS PUMP HRS
				6.31	129.00

TEMPERATURE	DRILLING FLUID TYPE	GRADE	MW @ mm	TUBE IN @ mm	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN (mm)
CURRENT CONDITION			29.00	93-95	83.00	168.00	5"XH	170 F-1600	BPUMP	305
WIND DIRECTION			38.00	93-95	67.00	168.00	5"XH	150 F-1600	BPMMP	305
ROAD										

WELL TYPE	RE-ENTRY	NO TO GROUND ELEV
Geothermal	☐Yes ☑No	

WELL NAME & NO.: a-92-A / 92-J-12 MC-7 | DATE: 06-Dec-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Pat Trottier | RIG NO.: 620 E

PROVINCE: ab | CAMP ☑Yes ☐No | RIG SAFETY DAYS: 9.00

TIME HRS

CONN NO	OPER	MOVE RIG	RIG REPAIR	CIRC	SURV	DRLG	REAM	CORE	CUT DRLG LINE	LOG	RUN CSG	CMT	WOC	RIG SERV	TEST BOPE	TRIP	OTHER	TOTAL HRS	WOB	Survey Top TVD Lengths	Top dr/ss
MORN		5.25			0.50	5.00	0.25														
DAY					4.00	0.25												3.00		9.72	
EVE		0.25	0.25			0.25												1.00			
TOTAL		11.50	0.25		0.50	5.50	0.25											3.00		9.72	

DAILY COSTS

DC	TC	SCR	DIR	MUD	SHALE SHAKER(S)	RENTAL/SERVICE	MISC	DAY	$/$

DETAILS

9.00	SCREENS CHANGED	☐Yes ☑No	
5.00	TOP	50	TOP 50
5.00	MIDDLE	50	MIDDLE 50
24.00	BOTTOM	50	BOTTOM 50

MORNING TOUR

BIT RECORD

NO	BIT	SIZE (mm)	HRS/DAYS
1	DH	311	0.43
1		227	11.16
1	String stab	230	1.87
1	Shock Sub	240	2.95
1	8" Drill Collars	220	9.48
1	String stab	236	1.15
9	8" Drill Collars	220	83.67
1	6" Jars / Hyds Dr	234	9.70
1	Bell Sub	224	1.17
3	8" Drill Collars	197	26.55
6	Heavyweight Dp	127	56.40
8	D.P.	STANDS	225.11
0	D.P.	SINGLES	0.00
	HELL-DOWN		-4.91
	TOTAL		424.81
WT. OF DC			39000.00
WT. OF STRING			73000.00

BIT NO: 3 | SIZE: 444 | IADC CODE: | MFG: H.C. | TYPE: GTX 40C | SERIAL NO: 6020912 | JETS: | DEPTH OUT (m): 424.00 | DEPTH IN (m): 146.00 | TOTAL METERS DRILLED (m): 278.00 | TOTAL HOURS RUN: 59.60

CUTTING STRUCTURE: T: 1 | B: 1 | G: WT | A: 1 | O: BT | R: A | LOC: | B: | G: | OC: | PEARING / SEALING: NO | GAUGE: 4.59

HOLE CONDITION

HOLE DRAG: 0 | TORQUE AT BOTTOM: 5458 ft-lbs | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: ☑ Water based ☐ Oil based

	06:00	06:00
TIME	02:00	06:00
DEPTH (m)	1070	1070
FUNNEL VIS (Sec)	53	53
WL (cm3)		
pH	10.0	10.0
PV/YP	144.6m3	143.8m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	2sks.
Hydrated Lime	2sks.
Natural Gel	80sks.
Sodium Bicarbonate	10sks.

SOLIDS CONTROL

HOLE SIZE	HOURS RUN	SCREEN SIZE	SCREEN CONDITION

METERS DRILLED

FROM	TO	BIT RUN	ROTARY R.P.M	WOB
409.00	424.00	D	60-65	22-24

CIRCULATION PRESSURE (KPa): 7300 | PUMP NO.1: LINER 152 mm, S.P.M 182 | PUMP NO.2: LINER 152 mm, S.P.M 190 | 182 | 190

REDUCED PUMP SPEED: 2900 @ 100 @ 419.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	NPT	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
409.00	424.00	3.50	2		Drill fr. 409m - 419m
		0.25	7		Rig Service, F/T Annular(20 secs)
		1.75	2		Drill fr. 419m - 424m
		0.50	5		Condition Mud & Circ.
		2.00	5		Hoist bit #2, flow check @ 400, 204m & out

NOTES

DRILLER SIGNATURE: Barry Verheist

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
5.00	75000.00	Fire drill @ camp	

RATE SCHEDULE: ☑REGULAR ☐SEMI ☐EVENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

MORNING TOUR 0:00 TO 6:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	842-389-910	Barry Verheist	6.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	6.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	6.00	CV	☐	☑
Floorman	272-945-916	Brent Sullivan	6.00	BS	☐	☑
Floorman	118-583-287	James R. Sullivan	6.00	JS	☐	☑
Leaseman	713-958-461	Gary Kennedy	6.00	GK	☐	☑
Rig Manager	719-909-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

DAY TOUR

BIT RECORD

NO	BIT	SIZE (mm)	HRS/DAYS
1	DH	311	0.43
1	Motor/ Bell	311	11.52
1		241	10.80
1	IBO / H.M.Collar	227	19.49
1	8" Drill Collars	220	9.48
1	Shock Sub	240	2.95
9	8" Drill Collars	220	83.67
1	6" Jars / Hyds Dr	234	8.53
1	Bell Sub	224	1.17
3	8" Drill Collars	197	26.55
6	Heavyweight Dp	127	56.40
8	D.P.	STANDS	225.11
0	D.P.	SINGLES	0.00
	HELL-DOWN		0.00
	TOTAL		456.38
WT. OF DC			36900.00
WT. OF STRING			77000.00

BIT NO: 3 | 4 | SIZE: 444 | 444.5 | IADC CODE: | 5 3 5 | MFG: H.C. | H.C. | TYPE: GTX 40C | MX30H | SERIAL NO: 6020912 | 6017990 | JETS: | DEPTH OUT (m): 424.00 | DEPTH IN (m): 424.00 | TOTAL METERS DRILLED (m): 279.00 | TOTAL HOURS RUN: 59.60

CUTTING STRUCTURE: 3 | 3 | fc | e | 1 | ct | bHA

HOLE CONDITION

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: ☐ Water based ☐ Oil based

TIME		
DEPTH (m)		
FUNNEL VIS (Sec)		
WL (cm3)		
pH		
PV/YP		

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

METERS DRILLED

FROM	TO	BIT RUN	ROTARY R.P.M	WOB
424.00		D		

CIRCULATION PRESSURE (KPa): | PUMP NO.1: LINER 152 mm, S.P.M 152 | PUMP NO.2: LINER 152 mm, S.P.M 152

REDUCED PUMP SPEED: @ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	NPT	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
	9:45	1.75	6		Pull Out Of Hole/ Function Blind Rams
9:45	10:30	0.75	22		(Monitor Well For Losses)
10:30	13:30	3.00	28		Dir. Work Pick Up Tools
13:30	13:45	0.25	7		Rig Service & Function H.C.R. 4 Secs
13:45	19:00	5.25	6		Run In Hole / Flow Checks

NOTES

DRILLER SIGNATURE: Bill Mills

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
5.00	74000.00		

RATE SCHEDULE: ☑REGULAR ☐SEMI ☐EVENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

DAY TOUR 6:00 TO

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	12.00		☐	☑
Derrickman	629-826-262	Rob Roth	12.00		☐	☑
Motorman	722-572-781	Dwayne Fry	12.00		☐	☑
Floorman	120-836-422	Pierre Gallant	12.00		☐	☑
Floorman	852-342-416	Jonathan Greeve	12.00		☐	☑
Leaseman	736-371-550	Shawn Hanton	12.00		☐	☑
Rig Manager	611-461-261	Pat Trottier			☐	☑

EVENING TOUR

BIT RECORD

NO	BIT	SIZE (mm)	HRS/DAYS
1	Bit	311	0.43
1	Motor/ Bell	311	11.52
1		241	10.80
1	IBO / H.M.Collar	227	19.49
1	8" Drill Collars	220	9.48
1	Shock Sub	240	2.95
9	8" Drill Collars	220	83.67
1	6" Jars / Hyds Dr	234	8.53
1	Bell Sub	224	1.17
3	8" Drill Collars	197	26.55
6	Heavyweight Dp	127	56.40
8	D.P.	STANDS	225.11
2	D.P.	SINGLES	18.74
	HELL-DOWN		-13.12
	TOTAL		462.00
WT. OF DC			38400.00
WT. OF STRING			79000.00

BIT NO: 4 | SIZE: 444.5 | IADC CODE: 5 3 5 | MFG: H.C. | TYPE: MX30H | SERIAL NO: 6017990 | JETS: | DEPTH OUT (m): 424.00 | DEPTH IN (m): 424.00 | TOTAL METERS DRILLED (m): 38.60 | TOTAL HOURS RUN: 6.25

CUTTING STRUCTURE: T: | B: | G: | A: 1 | O: | R: | LOC: | B: | G: | OC: | PEARING / SEALING: | GAUGE:

HOLE CONDITION

HOLE DRAG: 0 | TORQUE AT BOTTOM: 5612 ft-lbs | FILL ON BOTTOM (m): 0.50

MUD RECORD

MUD TYPE: ☑ Water based ☐ Oil based

	17:00	21:00	23:00
TIME			
DEPTH (m)	1060	1065	1065
FUNNEL VIS (Sec)	46	47	50
WL (cm3)			
pH	10.0	10.0	10.0
PV/YP	130.6m3	134.1m3	133.3m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Natural Gel	46 sks
Caustic Soda	1 sk

SOLIDS CONTROL

HOLE SIZE	HOURS RUN	SCREEN SIZE	SCREEN CONDITION
8.90	1060	1050	1746

METERS DRILLED

FROM	TO	BIT RUN	ROTARY R.P.M	WOB
424.00	462.00	D	20-25	19

CIRCULATION PRESSURE (KPa): 10300 | PUMP NO.1: LINER 152 mm, S.P.M 190 | PUMP NO.2: LINER 152 mm, S.P.M 182 | 190

REDUCED PUMP SPEED: 4700 @ 100 @ 465.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
413.40	1.05	79.00
423.70	1.1	79.00
438.00	0.9	78.70
442.30	0.4	36.80

TIME LOG

FROM	TO	HRS	CODE	NPT	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
424.00	462.00	0.25	3		Wash To Bottom Fr/400m-424m
		6.25	2		Pattern Bit & Drill Fr/424m- 462
		0.25	7		Rig Service, F/T pipe rams(5 secs)
		0.25	13		(Top drive) service
		1.00	18		Deviation Surveys(Accum.)

NOTES

DRILLER SIGNATURE: Barry Verheist

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
5.00	83000.00		

RATE SCHEDULE: ☑REGULAR ☐SEMI ☐EVENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

EVENING TOUR TO

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	842-389-910	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	272-945-916	Brent Sullivan	4.00	BS	☐	☑
Floorman	118-583-287	James R. Sullivan	4.00	JS	☐	☑
Leaseman	713-958-461	Gary Kennedy	4.00	GK	☐	☑

ETS SERIAL NUMBER: PREC620_20041108_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

PUD: 0804-11-30 20:00	RIG RELEASE	JOB NO.: 22	AFE
LICENCE NO.: MC-7	WELL NAME AND NO.: a-92-A / 92-J-12 MC-7		
OPERATOR: Western Geopower Corp		CONTRACTOR: Precision Drilling	
UNIT AGE LOCATION: a-92-A / 92-J-12		RUNOUS ID: a-1-44 / 92-J-12	
SIGNATURE OF OPERATORS REPRESENTATIVE: Luas Silva		SIGNATURE OF CONTRACTORS REPRESENTATIVE: Pat Trottier	

DAILY CHECKS — OPR / R.M

(1) Daily Visit, Hazard Inspection
(2) Derrick Inspection (Periodic spring checking)
(3) H2S Sign Posted (if required)
(4) Fuel Levels & Shut Gauges Posted
(5) Fire Line Bleed
(6) BOP Drills Performed
(7) Weekly Manual BOP's Functions & Equipment Test
(11) Pre-Job Hazards and Safety Meeting (emergency procedures)
(12) C.A.O.D.C. Rig Safety Inspection (Periodic planning meeting)
(13) Hazard Assessment Before Rotating or Derricking
(14) Crown Saver Checked
(15) Hook Latch Checked

WEATHER & ROAD: DATE 09-Dec-2004 | RIG NO 820 E | FUEL @ 8:00 | RIG 58670 BOILER | TEMPERATURE | CURRENT CONDITION | WIND DIRECTION | ROAD

LAST CASING TUBING ON LINER

OD (mm)	WEIGHT (kg/m)	TYPE	GRADE	NO. OF JOINTS	TOTAL DW LENGTH	KB TO CASE HEAD (m)	SET AT (m)
						6.31	126.00

	CODE SIZE (mm)	LINER MAKE (type)	GRADE	WT. PER (kg/m)	TOOL JT. O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE (LTR./min)
CURRENT CONDITION		29.00	S3-95	53.00	168.00	5"XH	170	FB-1600	BPMWP X 152mm	305
WIND DIRECTION		38.00	S3-95	67.00	168.00	5"XH	150	FB 1600	BPMWP X152mm	305

TIME ANALYSIS

OPER	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	TOTAL
MORN	0.75																					0.25			1.00
DAY	0.75																					0.25			1.00
EVE	0.50																					0.25			0.75
TOTAL	2.00																					0.75			2.50

SHALE SHAKER(S) / RENTALS/SERVICES

NO.	TYPE
1	Derrick
2	

1.00	SCREENS CHANGED	☑ YES	☐ NO
1.00	TOP	60	TOP 60
1.00	MIDDLE	50	MIDDLE 60
24.00	BOTTOM	80	BOTTOM 80

WELL TYPE	RE-ENTRY	RIG TO GROUND ELEV.
Geothermal	☐ YES ☑ NO	
WELL NAME & No. a-92-A / 92-J-12 MC-7	DATE 09-Dec-2004	
OPERATOR Western Geopower Corp	CONTRACTOR Precision Drilling	
RIG MANAGER Pat Trottier	RIG NO 820 E	
PROVINCE BC	CAMP ☑ YES ☐ NO	RIG SAFETY DAYS 10.00

MORNING TOUR — 0:00 TO 8:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.43
1	Motor/ Bell	311	11.52
1		241	10.80
1		227	19.49
1	8" Drill Collars	220	9.46
1	Shock Sub	240	2.95
9	8" Drill Collars	220	83.87
1	7" Jars / Pony D.C.	234	8.63
1	Bell Sub	224	1.17
3	7" Drill Collars	197	26.86
6		127	56.40
10	D/P	STANDS	281.39
0	D/P	SINGLES	0.00
	+PULLDOWN		-1.56
	TOTAL		511.00
T. OF DC			38000.00
T. OF STRING			79000.00

BIT NO. 4 | SIZE 444.5 | IADC CODE 5 3 5 | MFG H.C. | TYPE MX30H | SERIAL NO 6017960 | JETS 33 | 33 | 33 | DEPTH OUT (m) | DEPTH IN (m) 424.00 | TOTAL METERS DRILLED (m) 87.00 | TOTAL HOURS RUN 13.00 | CUTTING STRUCTURE T1 T2 | DC | LOC | B | Gage | ODC | REASON PULLED | TIME

HOLE CONDITION — HOLE DRAG 0 | TORQUE AT BOTTOM 5612 ft-lbs | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE (☑ WATER BASED ☐ OIL BASED)			
TIME	02:00	04:00	06:00
DENSITY (kg/m³)	1060	1060	1060
FUNNEL VIS. (s/L)	54	56	57
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT@	137.5m3	139.5m3	140.8m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	3sks.
Natural Gel	134sks.

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	SOLIDS REMOVED (m3)	SOLIDS DISCARDED (m3)
8.00	1060	1050	1746

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kN)
462.00	511.00	D	25	18-20

TIME LOG

START	END	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	2:30	2.50	2	Drill fr. 462m - 474m
2:30	2:48	0.25	7	Rig Service, F/T Annular(20 secs)
2:48	7:00	4.20	2	Drill fr. 474m - 511m
7:00	8:00	1.00	10	Deviation Surveys(Accum.)

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 (LINER SIZE mm, S.P.M., kPa) | PUMP NO. 2 (LINER SIZE mm, S.P.M., kPa)

13690	152	100	152	100

REDUCED PUMP SPEED

4650	@	100	@	473.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
451.80	0.3	4.80
461.40	0.8	312.80
468.60	1.3	306.80
480.60	1.6	304.00
489.60	2.2	305.50

NOTES

DRILLER SIGNATURE: Barry Verheist

HOURS RUN	BIT HRS	BEARING WEAR	GAUGE	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5		400		85000.00		

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVEST

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	272-945-916	Brent Sullivan	8.00	BS	☐	☑
Floorman	116-983-287	James R. Sullivan	8.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	611-451-261	Pat Trottier		PT	☐	☑
Top Drive	638-677-702	Sheldon Langley		SL	☐	☑

DAY TOUR — 8:00 TO 16:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.43
1	Motor/ Bell	311	11.52
1		241	10.80
1		227	19.49
1	8" Drill Collars	220	9.46
1	Shock Sub	240	2.95
9	8" Drill Collars	220	83.87
1	7" Jars / Pony D.C.	234	8.63
1	Bell Sub	224	1.17
3	7" Drill Collars	167	29.55
5		127	56.40
11	D/P	STANDS	309.96
1	D/P	SINGLES	9.38
	+PULLDOWN		-0.61
	TOTAL		550.00
T. OF DC			38000.00
T. OF STRING			91000.00

BIT NO. 4 | SIZE 444.5 | IADC CODE 5 3 5 | MFG H.C. | TYPE MX30H | SERIAL NO 6017960 | JETS 33 | 33 | 33 | DEPTH OUT (m) | DEPTH IN (m) 424.00 | TOTAL METERS DRILLED (m) 126.00 | TOTAL HOURS RUN 19.75 | CUTTING STRUCTURE T1 T2 | DC | LOC | B | Gage | ODC | REASON PULLED | TIME

HOLE CONDITION — HOLE DRAG 0 | TORQUE AT BOTTOM 6175 ft/lbs | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE (☑ WATER BASED ☐ OIL BASED)			
TIME	08:00	12:00	16:00
DENSITY (kg/m³)	1060	1080	1060
FUNNEL VIS. (s/L)	60	65	61
W.L. (cm3)			
pH	10.0	10.0	9.5
PVT@	142.3m3	142.7m3	144.8m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	2 sks

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	SOLIDS REMOVED (m3)	SOLIDS DISCARDED (m3)
8.00	1060	1050	1750

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kN)
511.00	550.00	D	25	22

TIME LOG

START	END	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	14:48	6.75	2	Drill Fr/511m-550m
14:48	15:48	1.00	10	Accumulated M.W.D. Surveys
15:48	16:00	0.25	7	Rig Service & Function Pipe Rams 5/5 Secs

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 (LINER SIZE mm, S.P.M., kPa) | PUMP NO. 2 (LINER SIZE mm, S.P.M., kPa)

11800	152	100	152	100

REDUCED PUMP SPEED

	@		@	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
498.60	2.8	317.40
507.90	3.7	319.50
517.60	4.6	318.30
527.10	5.6	319.30

NOTES

DRILLER SIGNATURE: Bill Mills

HOURS RUN	BIT HRS	BEARING WEAR	GAUGE	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.5		400		162000.00		

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVEST

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	12.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	120-936-422	Pierre Gallant	12.00	PG	☐	☑
Floorman	652-342-416	Jonathan Greeve	12.00	JG	☐	☑
Leaseman	736-371-650	Shawn Hanlon	12.00	SH	☐	☑

EVENING TOUR — 16:00 TO 24:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.43
1	Motor/ Bell	311	11.52
1		241	10.80
1		227	19.49
1	8" Drill Collars	220	9.46
1	Shock Sub	240	2.95
9	8" Drill Collars	220	83.87
1	7" Jars / Pony D.C.	234	8.63
1	Bell Sub	224	1.17
2	7" Drill Collars	167	26.86
6		127	56.40
12	D/P	STANDS	336.08
2	D/P	SINGLES	18.85
	+PULLDOWN		-11.44
	TOTAL		576.60
T. OF DC			38000.00
T. OF STRING			93000.00

BIT NO. 4 | SIZE 444.5 | IADC CODE 5 3 5 | MFG H.C. | TYPE MX30H | SERIAL NO 6017960 | JETS 33 | 33 | 33 | DEPTH OUT (m) | DEPTH IN (m) 424.00 | TOTAL METERS DRILLED (m) 152.00 | TOTAL HOURS RUN 28.25 | CUTTING STRUCTURE T1 T2 | DC | LOC | B | Gage | ODC | REASON PULLED | TIME

HOLE CONDITION — HOLE DRAG 2000 up/1000 dwn | TORQUE AT BOTTOM 4769 ft-lbs | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE (☑ WATER BASED ☐ OIL BASED)			
TIME	16:00	21:00	23:00
DENSITY (kg/m³)	1060	1060	1060
FUNNEL VIS. (s/L)	61	60	60
W.L. (cm3)			
pH	9.0	9.5	9.5
PVT@	144.4m3	147.4m3	144.7m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Humasite	20 pks

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	SOLIDS REMOVED (m3)	SOLIDS DISCARDED (m3)
6.00	1060	1050	1726

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kN)
550.00	576.60	D	25	18-22

TIME LOG

START	END	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	16:18	0.25	22	(Service F-1600 Mud Pump) Changed Head & Liner Pump #2
16:18	19:00	2.75	2	Drill Fr/550m-576m
19:00	19:30	0.50	22	(Service F-1600 Mud Pump) Change Head # 1 Pump
19:30	21:45	2.25	2	Drill fr. 560m - 568m
21:45	22:00	0.25	7	Rig Service, F/T H.C.R.(2 secs)
22:00	23:30	1.50	2	Drill fr. 568m - 576m
23:30	24:00	0.50	10	Deviation Surveys(Accum.)

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 (LINER SIZE mm, S.P.M., kPa) | PUMP NO. 2 (LINER SIZE mm, S.P.M., kPa)

12500	152	100	152	100

REDUCED PUMP SPEED

4650	@	100	@	567.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
548.00	6.3	311.40
555.40	6.4	312.40

NOTES

DRILLER SIGNATURE: Barry Verheist

HOURS RUN	BIT HRS	BEARING WEAR	GAUGE	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	10.5		400		93000.00		

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVEST

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	272-945-916	Brent Sullivan	4.00	BS	☐	☑
Floorman	116-983-287	James R. Sullivan	4.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☐	☑

E 'S SERIAL NUMBER: PREC620 _20041109_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

PUD: 2004-11-30 20:00	Rig RELEASE	JOB NO.: 22	AFE
LOCATION NO.: MC-7	WELL NAME AND NO.: a-92-A / 92-J-12 MC-7		
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling		
SURFACE LOCATION: -92-A / 92-J-12	RIG/CUE ID: 6-1-H / 92-J-12		
SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva	SIGNATURE OF CONTRACTORS REPRESENTATIVE: Pat Trottier		

DAILY CHECKS (OPR / R.M)
(1) Daily Visit Around Inspection
(2) Derrick/Mast/Crown/Floor/Racking Checklist
(3) H2S Drills Planned (if required)
(4) Weekly Inspection & Shut Down Checklist
(5) Pason Line Status
(6) BOP Drills Performed
(7) Weekly Derrick BOP / Function & Diagnostic Test
(8) Rig Site Health and Safety Meeting (pre-spud meeting)
(9) C.A.O.D.C Rig Safety Inspection Checklist (one per month)
(10) Kelly/Swivel Service Checklist
(11) Safety Valve Checklist

DATE: 10-Dec-2004
RIG NO.: 620 E
FUEL @ 8.00
RIG: 58927 BOILER

LAST CASING TUBING OR LINER

										6.31	125.00

WEATHER

TEMPERATURE											
CURRENT CONDITION			28.00	SS-95	83.00	198.00	5"XH	170	FB-1600	6PMMP X 152mm	305
WIND DIRECTION			38.00	SS-95	67.00	198.00	5"XH	150	FB 1600	6PMMP X152mm	305
ROAD											

WELL TYPE: Geothermal	RE-ENTRY: YES / NO	KB TO GROUND ELEV.: 7.20
WELL NAME & NO.: a-92-A / 92-J-12 MC-7		DATE: 10-Dec-2004
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling	
RIG MANAGER: Pat Trottier		RIG NO.: 620 E
PROVINCE: BC	CAMP: YES / NO	RIG SAFETY DAYS: 285.00

TIME HRS

OPER.	MORN	DAY	EVE	TOTAL
	6.50	7.00	3.25	16.75
	0.50			0.50
		0.25		0.25
		0.25		0.25
			0.25	0.25
		0.25		0.25
			0.25	0.25
			0.25	0.25
			0.25	0.25
			0.25	0.25
TOTAL	7.00	0.75	1.25	9.00

SHALE SHAKER(S) / MISC. SERVICES

Service F-1600	0.50		
		Derrick	MDW
NORESAN ENGAGED	YES / NO		
TOP	50	TOP	50
MIDDLE	50	MIDDLE	50
BOTTOM	50	BOTTOM	50
TOTAL	0.50		

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH
1	bit	311	0.43
1	Motor/ Bell	311	11.52
1		241	10.80
1		227	19.48
1		220	9.46
1	Shock Sub	240	2.95
9		220	83.67
1		234	0.63
1	Bell Sub	224	1.17
3		167	26.55
6		127	56.40
14	DP		384.29
2	DP		18.78
	KELLY DOWN		-16.34
	TOTAL		628.00

BIT RECORD		
BIT NO.		4
SIZE		444.5
IADC CODE	6	3 5
MFG		H.C.
TYPE		MX30H
SERIAL NO		6017960
JETS	22	22 22
DEPTH OUT (m)		628.00
DEPTH IN (m)		424.00
TOTAL METERS DRILLED (m)		204.00
TOTAL HOURS RUN		39.75
CUTTING STRUCTURE: T1 / T2 / BC / LOC		

HOLE CONDITION	
HOLE DRAG	1-2 KdaN
TORQUE AT BOTTOM	6175 ft/lbs
FILL ON BOTTOM (m)	

MUD RECORD			
MUD TYPE: WATER BASED / OIL BASED		Flowline Temp 58.3 C.	
TIME	09:00	12:00	16:00
DENSITY kg/m3	1050	1060	1060
FUNNEL VIS. (s/L)	42	53	75
W.L. (cm3)			
pH	9.5	10.0	10.0
PV/YP	143.4m3	141.6m3	144.4m3

MUD MATERIAL ADDED	
PRODUCT	AMOUNT + UNIT
Gel	46 sks
Caustic Soda	2 sks
Humalite	20 sks
Hydrated Lime	3 sks
Defoamer LO-4	1 pl

SOLIDS CONTROL

	HOURS RUN	MUD ADDED	DISCARDED
	8.00	1060	1060

	1790		

METERS DRILLED											
FROM	TO										
591.00	628.00	D	25	18-22	09:00	12:00	7.00	2	Drill Fr/601m-		
					12:00	15:45	0.75	10	Accumulated M.W.D. Survey		
					15:45	16:00	0.25	7	Rig Service & Function Pipe Rams 5/5 Secs		

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.
12000	152	100	152	100

REDUCED PUMP SPEED

@		@		

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
592.80	7.5	330.60
602.20	7.6	334.60
611.50	7.7	337.80

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	9:00	9.00	2	Drill fr. 576m - 587m
9:00	9:30	0.50	2	Rig Service, F/T Annular(24 secs)
9:30	11:15	1.75	2	Drill fr. 587m - 596m
11:15	11:45	0.50	22	(Service F-1600) pump #2
11:45	12:30	0.75	2	Drill fr. 596m - 601m
12:30	13:00	0.50	10	Deviation Surveys(Accum.)

NOTES
Function Drivers Below

DRILLER SIGNATURE	HRS RUN	HOURS SINCE BOP TEST	STACK TIME	OPERATOR FUEL	MAX BIT HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Sellis	8.00	10.5	480		702000.00		

MORNING TOUR

576.00	591.00	D	25	20-22	0:00	3:00	3.00	2	Drill fr. 576m - 587m		
					3:00	3:15	0.25	7	Rig Service, F/T Annular(24 secs)		
					3:15	6:00	2.75	2	Drill fr. 587m - 596m		
					6:00	6:30	0.50	22	(Service F-1600) pump #2		
					6:30	7:15	0.75	2	Drill fr. 596m - 601m		
					7:15	8:00	0.75	10	Deviation Surveys(Accum.)		

DEPTH (m)	DEVIATION (d)	DIRECTION
564.60	6.3	321.20
573.90	7	325.50
583.30	6.9	328.30

DRILLER SIGNATURE	HRS RUN	HOURS SINCE BOP TEST	STACK TIME	OPERATOR FUEL	MAX BIT HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verheist	8.00	9.5			94000.00		

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	842-389-910	Barry Verheist	8.00	BV	☑
Derrickman	647-452-993	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	272-945-916	Brent Sullivan	8.00	BS	☑
Floorman	118-983-287	James R. Sullivan	8.00	JS	☑
Leaseman	713-659-461	Gary Kennedy	8.00	GK	☑
Rig Manager	611-451-261	Pat Trottier		PT	☑
Top Drive	638-977-702	Sheldon Langley		SL	☑

RATE SCHEDULE: REGULAR / REPAIR / STANDBY
DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

591.00	628.00	D	25	18-22	9:00	16:00	7.00	2	Drill Fr/601m-		
					16:00	16:45	0.75	10	Accumulated M.W.D. Survey		
					16:45	17:00	0.25	7	Rig Service & Function Pipe Rams 5/5 Secs		

DEPTH (m)	DEVIATION (d)	DIRECTION
592.80	7.5	330.60
602.20	7.6	334.60
611.50	7.7	337.80

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	12.00	BM	☑
Derrickman	828-926-262	Rob Roth	12.00	RR	☑
Motorman	722-572-791	Dwayne Fry	12.00	DF	☑
Floorman	120-936-422	Pierre Gallant	12.00	PG	☑
Floorman	852-342-416	Jonathan Greeve	12.00	JG	☑
Leaseman	736-371-550	Shawn Hanlon	12.00	SH	☑

RATE SCHEDULE: REGULAR / REPAIR / STANDBY
DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

628.00	642.00	D	25	18-22	16:00	19:30	3.50	2	Drill Fr/628m- 637m		
638.00	637.00	R	36	1	19:30	20:00	0.50	3	Back reams & work tight build section fr. 638m - 637m		
					20:00	21:45	1.75	2	Drill fr. 637m - 642m		
					21:45	22:15	0.50	5	Condition Mud & Circ.		
					22:15	22:30	0.25	7	Rig Service, F/T H.C.R.(2 secs)		
					22:30	23:45	1.25	6	Hoist bit #4, flow check @ 633, 409, 240m		
					23:45	24:00	0.25	10	Deviation Surveys(Accum.)		

DEPTH (m)	DEVIATION (d)	DIRECTION
620.80	7.8	336.00

DRILLER SIGNATURE	HRS RUN	HOURS SINCE BOP TEST	STACK TIME	OPERATOR FUEL	MAX BIT HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verheist	8.00	10.5	480		103000.00		

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	842-389-910	Barry Verheist	4.00	BV	☑
Derrickman	647-452-993	Dave Makowsky	4.00	DM	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☑
Floorman	272-945-916	Brent Sullivan	4.00	BS	☑
Floorman	118-983-287	James R. Sullivan	4.00	JS	☑
Leaseman	713-659-461	Gary Kennedy	4.00	GK	☑

RATE SCHEDULE: REGULAR / REPAIR / STANDBY
DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC520_20041110_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

MUD: 0804-11-30 20:00
RIG RELEASE:
JOB NO.: 22
AFE:
CENDE NO.: 1C-7
WELL NAME AND NO.: a-92-A / 92-J-12 MC-7
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
SURFACE LOCATION: -92-A / 92-J-12
UNIQUE ID: b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE: Mike Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE: Pat Trottier

DAILY CHECKS — CREW / RM

DATE: 11-Dec-2004
RIG NO.: 920 E
FUEL @ 8:00
RIG: 61321 BOILER
USED:

WEATHER
TEMPERATURE: -6
CURRENT CONDITION: Overcast
WIND DIRECTION: Nil
ROAD: Ice

LAST CASING TUBING OR LINER

	O.D. (mm)	Wall T. (mm)	kg/m	GRADE	NO. OF JOINTS	TOTAL LENGTH	KB TO CSG HNGR (m)	SET AT (m)
							8.31	129.00

	CSG/TUB SIZE (mm)	LINER/CASE WEIGHT	GRADE	MIN. ID (mm)	DRIFT ID (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
		29.90	S3-95	83.00	168.00	5"XH	170	FB-1600	BPMMP X 152mm	305
		38.00	S3-95	97.00	168.00	5"XH	150	FB-1600	BPMMP X152mm	305

WELL TYPE: Geothermal
RE-ENTRY: YES / NO
KB TO GROUND ELEV.: 7.20
WELL NAME & No.: a-92-A / 92-J-12 MC-7
DATE: 11-Dec-2004
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
RIG MANAGER: Pat Trottier
RIG NO.: 920 E
PROVINCE: BC
CAMP: YES / NO
RIG SAFETY DAYS: 286.00

HRS

	TOUR	TRIP	DRLG	CIRC	SURV	REAM	CUT/SLIP	RIG SERV	REPAIR	DEVIA	JAR	DLOG	RIG UP/DN	WAIT	SAFETY MTG
MIDNIGHT			6.75	0.25				0.75							0.25
DAY	5.50	1.25		0.25											1.00
EVE	6.75			0.25											1.00
TOTAL	12.25	1.25	6.75	0.75	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	2.25

SHALE SHAKER(S) / RENTALS/SERVICES

	NO.	TYPE	MFR	MODEL	DAY
	2	Derrick			

SCREENS CHANGED: YES / NO

5.08	TOP	80	TOP
5.08	MIDDLE	80	MIDDLE
5.08	BOTTOM	80	BOTTOM

BIT RECORD

	BIT	P.R. (m/hr)	LENGTH
1	BIT	311	0.43
1	Motor/ Bell	311	11.52
1		241	10.80
1		227	19.49
1	8" Drill Collars	220	9.46
1	Shock Sub	240	2.96
9	8" Drill Collars	220	83.67
1	7" Jars / Pony D.C.	234	8.83
1	Bell Sub	224	1.17
3	7" Drill Collars	167	26.65
8		127	56.40
14	D.P.	STANDS	394.29
2	D.P.	SINGLES	18.78
	WELL TOOTH		-2.34
	TOTAL		642.00
	TOP DRIVE		38000.00
	TOP STRING		84000.00

BIT RECORD	4	5
BIT NO.		
SIZE	444.5	444.5
IADC CODE	8 3 6	8 2 7
MFG	H.C.	H.C.
TYPE	9AX30H	GTX-40C
SERIAL NO.	6017950	6025924
JETS		
DEPTH OUT (m)	642.00	
DEPTH IN (m)	424.00	642.00
TOTAL METERS DRILLED (m)	218.00	
TOTAL HOURS RUN	45.00	
CUTTING STRUCTURE	4 7 FC AN F	TQ 4.64

HOLE CONDITION

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: Fresh / Salt / Oil Based

	TIME	DEPTH (m)	FUNNEL VIS. (sec)	WT. (cm3)	pH	PV@	YP@
DEADLY							
	06:00	642.00	52	1.06	10.0	14	7

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	SHALE SHAKER	DESILTER	DESANDER

METERS DRILLED / TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	BIT	ROTARY RPM	WOB	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
644.00	642.00	R			8:00	1:30	1.50	6	Hoist B.H.A., flow check out of hole.
642.00	642.00	D			1:30	1:45	0.25	7	Rig Service, F/T Bling rams(8 secs)
642.00	642.00	D			1:45	3:15	1.50	8	Pick & make up new bit, Make up B.H.A. & RIH to 139m
642.00	642.00	D			3:15	4:00	0.75	9	Cut Off Drill Line(Monitor hole)
642.00	642.00	D			4:00	4:15	0.25	20	Test M.W.D. tool
642.00	642.00	D			4:15	6:00	1.75	6	RIH to 544m
642.00	642.00	D			6:00	6:00	3.00	6	Wash & ream fr. 544m - 642m

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (LINER SIZE / S.P.M.): 11300 | 152 | 100 | PUMP NO. 2 (LINER SIZE / S.P.M.): 152 | 100

REDUCED PUMP SPEED: @ 100 @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verheist

HRS RUN	BIT HRS	STRING HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5	480		84000.00	Slip & cut	

RATE SCHEDULE: REGULAR / REPAIR / INVERT
DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	272-945-816	Brent Sullivan	8.00	BS	☐	☑
Floorman	118-983-287	James R. Sullivan	8.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	611-451-261	Pat Trottier		PT	☐	☑
Top Drive	838-977-702	Sheldon Langley		SL	☐	☐

BIT RECORD

	BIT	P.R. (m/hr)	LENGTH
1	bit	311	0.43
1	Motor/ Bell	311	11.52
1		241	10.80
1		227	19.49
1	8" Drill Collars	220	9.46
1	Shock Sub	240	2.96
9	8" Drill Collars	220	83.67
1	7" Jars / Pony D.C.	234	8.83
1	Bell Sub	224	1.17
3	7" Drill Collars	167	26.65
9		127	56.40
16	D.P.	STANDS	650.50
2	D.P.	SINGLES	18.76
	WELL TOOTH		-18.59
	TOTAL		692.00
	TOP DRIVE		38000.00
	TOP STRING		84000.00

BIT RECORD	5
BIT NO.	
SIZE	444.5
IADC CODE	8 2 7
MFG	H.C.
TYPE	GTX-40C
SERIAL NO.	6025924
JETS	
DEPTH OUT (m)	692.00
DEPTH IN (m)	642.00
TOTAL METERS DRILLED (m)	50.00
TOTAL HOURS RUN	5.50
CUTTING STRUCTURE	1 1 WT A E I NO TD

HOLE CONDITION: 3-4 KdaN

HOLE DRAG
TORQUE AT BOTTOM: 4788 ft/lbs
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: Fresh / Salt / Oil Based

	TIME	DEPTH (m)	FUNNEL VIS. (sec)	WT. (cm3)	pH	PV@	YP@
	08:00	642.00	52	1.06	10.5	14	7
	12:00	1060	70	1.06	10.5	16.0	8
	16:00	1068	65	1.06	10.0	18.0	9

Flowline Temp = 66.5 C

	08:00	12:00	16:00
	642.00	1060	1068
	52	70	65
	10.5	10.5	10.0
PV@	140.7m3	137.9m3	1249.3m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Soda Ash	6 sks
Humalite	20 sks
Hydrated Lime	3 sks
Caustic Soda	2 sks
Gel	42 sks

SOLIDS CONTROL

HOURS RUN	SHALE SHAKER	DESILTER	DESANDER
8.00	1060	1060	1740

METERS DRILLED / TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	BIT	ROTARY RPM	WOB	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
642.00	692.00	D	25	18-22	8:00	9:15	1.25	3	Wash & ream fr. 544m - 642m
					9:15	14:45	5.50	2	Pattern Bit & Drill Fr 642m-692m
					14:45	15:00	0.25	7	Rig Service & function Pipe Rams 5/5 Secs
					15:00	16:00	1.00	10	Accumulated M.W.D.Surveys

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (LINER SIZE / S.P.M.): 10300 | 152 | 100 | PUMP NO. 2 (LINER SIZE / S.P.M.): 152 | 100

REDUCED PUMP SPEED: 3312 @ 100 @ 680.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
630.00	8	337.10
640.90	8.2	337.90
658.80	8.2	338.60

NOTES

DRILLER SIGNATURE: Bill Mills

HRS RUN	BIT HRS	STRING HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5			129000.00		

RATE SCHEDULE: REGULAR / REPAIR / INVERT
DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	718-324-181	Bill Mills	12.00	BM	☐	☑
Derrickman	629-928-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	120-936-422	Pierre Gallant	12.00	PG	☐	☑
Floorman	652-342-416	Jonathan Greeve	12.00	JG	☐	☑

BIT RECORD

	BIT	P.R. (m/hr)	LENGTH
1	bit	311	0.43
1	Motor/ Bell	311	11.52
1		241	10.80
1		227	19.49
1	8" Drill Collars	220	9.46
1	Shock Sub	240	2.96
9	8" Drill Collars	220	83.67
1	7" Jars / Pony D.C.	234	8.83
1	Bell Sub	224	1.17
3	7" Drill Collars	167	26.65
8		127	56.40
8	D.P.	STANDS	506.81
0	D.P.	SINGLES	0.00
	WELL TOOTH		-15.06
	TOTAL		723.00
	TOP DRIVE		38000.00
	TOP STRING		84000.00

BIT RECORD	5
BIT NO.	
SIZE	444.5
IADC CODE	8 2 7
MFG	H.C.
TYPE	GTX-40C
SERIAL NO.	6025924
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	642.00
TOTAL METERS DRILLED (m)	81.00
TOTAL HOURS RUN	12.25
CUTTING STRUCTURE	

HOLE CONDITION: 3000 up/3000 dwn

HOLE DRAG
TORQUE AT BOTTOM: 4768 ft-lbs
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: Fresh / Salt / Oil Based

	TIME	DEPTH (m)	FUNNEL VIS. (sec)	WT. (cm3)	pH	PV@	YP@
	16:00	1060	79	1.06	9.5	13	6
	21:00	1068	45	1.06	9.5	9.0	4
	23:00	1065	49	1.06	9.5	9.0	4
PV@	134.1m3	140.4m3	138.9m3				

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	SHALE SHAKER	DESILTER	DESANDER
5.00	1060	1040	1740

METERS DRILLED / TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	BIT	ROTARY RPM	WOB	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
642.00	723.00	D	25	18-22	16:00	22:30	6.50	2	Drill Fr642m- 718m
					22:30	22:45	0.25	7	Rig Service, F/T Annular(24 secs)
					22:45	23:00	0.25	2	Drill fr. 718m - 723m
					23:00	24:00	1.00	10	Deviation Surveys(Accum.)

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (LINER SIZE / S.P.M.): 11700 | 152 | 100 | PUMP NO. 2 (LINER SIZE / S.P.M.): 152 | 100

REDUCED PUMP SPEED: 3300 @ 100 @ 717.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
667.80	9.5	338.80
677.40	10.1	337.40
686.40	10.2	338.80
696.80	10.6	334.20
706.20	10.6	332.10

NOTES

DRILLER SIGNATURE: Barry Verheist

HRS RUN	BIT HRS	STRING HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5			106000.00		

RATE SCHEDULE: REGULAR / REPAIR / INVERT
DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	272-945-816	Brent Sullivan	4.00	BS	☐	☑
Floorman	118-983-287	James R. Sullivan	4.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☐	☑

ET SERIAL NUMBER: PREC020 _20041111_1A

CHIMO ETS SOFTWARE VERSION:

CAODC — **Chimo Equipment** — A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO.	22
AFE	
LICENCE NO.	MC-7
WELL NAME AND NO.	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Pat Trottier
DATE	12-Dec-2004
RIG NO.	620 E
FUEL @ 8:00	RIG 43671 / BOILER

DAILY CHECKS (OPR / RIG): [illegible]

WEATHER: TEMPERATURE / CURRENT CONDITION / WIND DIRECTION / ROAD

LAST CASING, TUBING OR LINER									
								6.31	129.00

	29.00	SS-95	83.00	168.00	5"XH	170	FB-1600	BPMMP X 162mm	306
	38.00	SS-95	67.00	168.00	5"XH	180	FB 1600	BPMMP X162mm	306

WELL TYPE	Geothermal	RE-ENTRY	☐ YES ☑ NO	KB TO GROUND ELEV.	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7			DATE	12-Dec-2004
OPERATOR	Western Geopower Corp	CONTRACTOR	Precision Drilling		
RIG MANAGER	Pat Trottier			RIG NO.	620 E
PROVINCE	BC	CAMP	☑ YES ☐ NO	RIG SAFETY DAYS	287.00

TIME - HRS

OPER												Service Top Drive		
MORN		6.75					0.25			1.00				
DAY		6.50					0.25			1.00		0.25		
EVE		6.75					0.25			1.00				
TOTAL		20.00					0.75			3.00		0.25		

SHALE SHAKER(S)

NO. 2	TYPE Derrick	NEW	
5.50	SCREENS CHANGED	☑ YES	☐ NO
5.50	TOP 50	TOP	50
4.00	MIDDLE 80	MIDDLE	80
24.00	BOTTOM 80	BOTTOM	80

RENTALS/SERVICES

MORNING TOUR (0:00 to 8:00)

Drill String / Bit Record

NO.		O.D. (mm)	LENGTH	BIT RECORD	
1	bit	311	0.43	BIT NO	5
1	Motor/ Bent	311	11.52	SIZE	444.5
1	[illegible]	241	10.80	IADC CODE	6 2 7
1	[illegible]	227	19.49	MFG	H.C.
1	[illegible]	220	9.46	TYPE	GTX-40C
1	Shock Sub	240	2.95	SERIAL NO	6025924
9	[illegible]	220	83.87	JETS	[illegible]
1	[illegible]	234	8.83	DEPTH OUT (m)	
1	Bell Sub	224	1.17	DEPTH IN (m)	642.00
3	[illegible]	167	26.56	TOTAL METERS DRILLED (m)	119.00
6	[illegible]	127	56.40	TOTAL HOURS RUN	19.00
19	DP	STANDS	535.05		
1	DP	SINGLES	9.38		
	KELLY/DOWN		-14.70	HOLE CONDITION	
	TOTAL		761.00	HOLE DRAG	3000 up/3000 dwn
	WT. OF DC		38000.00	TORQUE AT BOTTOM	5612 ft-lbs
	WT. OF STRING		87000.00	FILL ON BOTTOM (m)	

Mud Record

MUD TYPE: ☑ water based ☐ oil based

TIME	02:00	04:00	06:00
DENSITY	1056	1060	1060
FUNNEL VIS	49	48	52
W.L. (cm3)			
pH	9.5	9.6	10.0
PVT@	136.4m3	141.4m3	146m3

MUD MATERIAL ADDED — PRODUCT	AMOUNT & UNIT
Caustic Soda	2sks.
Humalite	50sks.
Hydrated Lime	2sks.
Natural Gel	22sks.
Soda Ash	4sks.

SOLIDS CONTROL: HOURS RUN 8.00 | 1060 | 1040 | 1736

Meters Drilled

FROM	TO		ROTARY RPM	
723.00	761.00	D	25	20-22

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
12400	152	100	152	100

REDUCED PUMP SPEED: 3200 @ 100 @ 735.00

DEPTH (m)	DEVIATION (o)	DIRECTION
714.60	10.6	339.30
724.20	10.2	329.00
733.60	10.2	330.00
742.70	10.3	326.60

DRILLER SIGNATURE: Barry Verheist

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
0:00	2:30	2.50	2	Drill fr. 723m - 737m
2:30	2:45	0.25	7	Rig Service, F/T Annular(24 secs)
2:45	7:00	4.25	2	Drill fr. 737m - 761m
7:00	8:00	1.00	10	Deviation Surveys(Accum.)

NOTES: [illegible]

			OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
4.00	10.6	400		100000.00	Tubulars	

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	272-945-916	Brent Sullivan	8.00	BS	☐	☑
Floorman	118-993-287	James R. Sullivan	8.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	611-451-261	Pat Trottier		PT	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: ☑ [illegible] ☐ [illegible] ☐ [illegible] — DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR (8:00 to 16:00)

Drill String / Bit Record

NO.		O.D. (mm)	LENGTH	BIT RECORD	
1	bit	311	0.43	BIT NO	5
1	Motor/ Bent	311	11.52	SIZE	444.5
1	[illegible]	241	10.80	IADC CODE	6 2 7
1	[illegible]	227	19.49	MFG	H.C.
1	[illegible]	220	9.46	TYPE	GTX-40C
1	Shock Sub	240	2.95	SERIAL NO.	6025924
9	[illegible]	220	83.87	JETS	[illegible]
1	[illegible]	234	8.83	DEPTH OUT (m)	
1	Bell Sub	224	1.17	DEPTH IN (m)	642.00
3	[illegible]	167	26.56	TOTAL METERS DRILLED (m)	163.00
6	[illegible]	127	56.40	TOTAL HOURS RUN	26.50
20	DP	STANDS	563.21		
2	DP	SINGLES	18.75		
	KELLY/DOWN		-8.23	HOLE CONDITION	
	TOTAL		805.00	HOLE DRAG	4 - 6 KdaN
	WT. OF DC		38000.00	TORQUE AT BOTTOM	5612 ft/lbs
	WT. OF STRING		89000.00	FILL ON BOTTOM (m)	

Mud Record

MUD TYPE: ☑ water based ☐ oil based

TIME	09:00	12:00	15:00
DENSITY	1060	1066	1060
FUNNEL VIS	45	50	49
W.L. (cm3)			
pH	9.0	9.5	10.0
PVT@	141.8m3	141.5m3	143.8m3

MUD MATERIAL ADDED — PRODUCT	AMOUNT & UNIT
Defoamer LD-8	1 pl
Gel	52 sks
Caustic Soda	3 sks
Hydrated Lime	2 sks
Soda Ash	6 sks
Humalite	25 sks

SOLIDS CONTROL: HOURS RUN 8.00 | 1060 | 1060 | 1760

Meters Drilled

FROM	TO		ROTARY RPM	
761.00	805.00	D	25	18-22

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
11300	152	100	152	100

REDUCED PUMP SPEED: 2962 @ 100 @ 782.00

DEPTH (m)	DEVIATION (o)	DIRECTION
752.40	9.6	327.90
761.70	9.9	326.60
771.30	10	327.60
780.88	10.1	328.60
790.00	9.9	338.40

DRILLER SIGNATURE: Bill Mills

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
8:00	9:30	1.50	2	Drill Fr/761m-774m
9:30	9:45	0.25	22	(Service Top Drive)
9:45	13:30	3.75	2	Drill Fr/774m-793m
13:30	13:45	0.25	7	Rig Service & Function H.C.R. 4/4 Secs
13:45	15:00	1.25	2	Drill Fr/793m-805m
15:00	16:00	1.00	10	Accumulated M.W.D. Surveys

NOTES: [illegible]

			OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
5.00	9.6			104000.00		

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	12.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-761	Dwayne Fry	12.00	DF	☐	☑
Floorman	120-936-422	Pierre Gallant	12.00	PG	☐	☑
Floorman	652-342-416	Jonathan Greeve	12.00	JG	☐	☑

RATE SCHEDULE: ☑ [illegible] ☐ [illegible] ☐ [illegible] — DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR (16:00 to 24:00)

Drill String / Bit Record

NO.		O.D. (mm)	LENGTH	BIT RECORD	
1	bit	311	0.43	BIT NO	5
1	Motor/ Bent	311	11.52	SIZE	444.5
1	[illegible]	241	10.80	IADC CODE	6 2 7
1	[illegible]	227	19.49	MFG	H.C.
1	[illegible]	220	9.46	TYPE	GTX-40C
1	Shock Sub	240	2.85	SERIAL NO	6025924
9	[illegible]	220	83.87	JETS	[illegible]
1	[illegible]	234	8.83	DEPTH OUT (m)	
1	Bell Sub	224	1.17	DEPTH IN (m)	642.00
3	[illegible]	167	26.56	TOTAL METERS DRILLED (m)	208.00
6	[illegible]	127	56.40	TOTAL HOURS RUN	32.25
22	DP	STANDS	619.44		
2	DP	SINGLES	18.79		
	KELLY/DOWN		-18.81	HOLE CONDITION	
	TOTAL		850.45	HOLE DRAG	5000 up/5000 dwn
	WT. OF DC		38000.00	TORQUE AT BOTTOM	8454
	WT. OF STRING		89000.00	FILL ON BOTTOM (m)	

Mud Record

MUD TYPE: ☑ water based ☐ oil based

TIME	18:00	21:00	23:00
DENSITY	1060	1050	1060
FUNNEL VIS	49	48	51
W.L. (cm3)			
pH	9.6	9.6	10.0
PVT@	138.8m3	139.2m3	144.6m3

MUD MATERIAL ADDED: —

SOLIDS CONTROL: HOURS RUN 8.00 | 1050 | 1040 | 1730

Meters Drilled

FROM	TO		ROTARY RPM	
805.00	850.00	D	25	18-22

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
12600	152	100	152	100

REDUCED PUMP SPEED: 3400 @ 100 @ 849.00

DEPTH (m)	DEVIATION (o)	DIRECTION
799.30	10	328.30
808.40	10.1	331.00
818.50	10.5	332.80
827.30	10.6	331.80

DRILLER SIGNATURE: Barry Verheist

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
16:00	22:45	6.75	2	Drill Fr/805m- 850m
22:45	23:00	0.25	7	Rig Service, F/T pipe rams(9 secs)
23:00	24:00	1.00	10	Deviation Surveys(Accum.)

NOTES: [illegible]

			OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
1.00	9.1			103000.00		

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	272-945-916	Brent Sullivan	4.00	BS	☐	☑
Floorman	118-983-287	James R. Sullivan	4.00	JS	☐	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☐	☑

RATE SCHEDULE: ☑ [illegible] ☐ [illegible] ☐ [illegible] — DRIVER A — CREW SAFETY DAYS — DRIVER B

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00
RIG RELEASE
JOB NO: 22
AFE
LICENCE NO.: MC-7
WELL NAME AND NO.: a-92-A / 92-J-12 MC-7
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
SURFACE LOCATION: i-92-A / 92-J-12
UNIQUE ID: r6
SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Sieva
SIGNATURE OF CONTRACTORS REPRESENTATIVE: Pat Trottier

DAILY CHECKS — DRILL / P/M

(1) Daily Visual Around Rig (engine...)
(2) Checked Hydraulic Fluid Levels
(3) H2S Alarm Tested (if required)
(4) Weekly Inspection Checklist Completed
(5) Crown Lock Checked
(6) BOP Drills Performed
(7) Weekly Inspection BOP's Functioned, If Operated Daily
(8) Rig Dry Inspection and Safety Inspection Checklist Completed (monthly)
(9) C.A.O.D.C. Rig Safety Inspection Checklist Completed (monthly)
(10) Mast Inspection Before Raising or Lowering
(11) Crown Block Checked
(12) Lines / Sheaves Checked

DATE: 13-Dec-2004
RIG NO: 620 E
FUEL @ 8:00
RIG: 32454 BOILER
TEMPERATURE
CURRENT CONDITION
ROAD DIRECTION
ROAD

LAST CASING TUBING OR LINER

O.D. (mm)	WT. I.D. (mm)	Lgth	NAME	GRADE	NO. OF JOINTS	TOTAL PIPE LENGTH	KB TO CAS. HEAD (KBCH)	WT. of Jnt
							6.31	125.60

DRILL STRING

	O.D. (mm)	Lbs/m (kg/m)	GRADE	Jnt ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP SERIAL NUMBER	LENGTH (m)
CURRENT CONDITION		29.00	SS-95	63.00	165.00	5"XH	170	FB-1600	BPMMP X 152mm	306
ROAD DIRECTION		36.00	SS-95	47.00	165.00	5"XH	150	FB 1600	BPMMP X152mm	305

TIME HRS

OPER	DRILL (ACTUAL)	DRILL (CUMUL)	REAMING	CIRC	TRIPS	SURVEYS	RIG SERVICE	WIRELINE LOGS	CASING RUN	CEMENTING	WAIT ON CEMENT	NIPPLE UP BOP	TEST BOP	PRESS TEST CSG	DRILL STEM TEST	CORING	CUT OFF DRLG LINE	DEVIATION	SLIP DRLG LINE	OTHER	TOTAL	ACCUM
MORN	3.50			1.00	2.50	0.25								0.75								
DAY					1.50	0.25																
EVE					5.00	0.25			2.00													
TOTAL	3.50			1.00	9.00	0.75			2.00					0.75								

SHALE SHAKER(S) — RENTALS/SERVICES

NO.	TYPE	NEW
1	Derrick	
2		

DRILLING DIRECTIONAL: YES / NO

8.00	TOP	50
8.00	MIDDLE	50
24.00	BOTTOM	90

TOP	50	50
MIDDLE	50	50
BOTTOM	90	90

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	YES / NO	7.20

WELL NAME & No.: a-92-A / 92-J-12 MC-7
DATE: 13-Dec-2004
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
RIG MANAGER: Pat Trottier
RIG NO.: 620 E
PROVINCE: BC
CAMP: YES / NO
RIG SAFETY DAYS: 288.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

No.	BIT	A/B (mm)	Lgth/Cum (m)
1	BIT	311	0.43
1	Motor/ Bell	311	11.82
1		241	10.80
1		227	19.49
1	7" Drill Collars	220	9.46
1	Shock Sub	240	2.95
9	8" Drill Collars	220	83.67
1	7" Jars / Pony D.C.	234	8.83
1	Bell Sub	224	1.17
3	7" Drill Collars	167	28.65
6		127	55.40
23	D.P.	S-135	647.57
0	D.P.	Grade Ex	0.00
	KELLY/Swivel		-4.84
	TOTAL		874.00
	WT. ON BIT		35000.00
	WT. ON STRING		95000.00

BIT NO	5
SIZE	444.5
IADC CODE	6 2 7
MFG	H.C.
TYPE	GTX-40C
SERIAL NO	6025924
JETS	20 20 20
DEPTH OUT (m)	874.00
DEPTH IN (m)	642.00
TOTAL METRES DRILLED (m)	232.00
TOTAL HOURS RUN	35.75
CUTTING STRUCTURE	1 1 WT A E I NO TD
	8 Gage ODC Reason Pulled

HOLE CONDITION

HOLE DRAG	6000 up/5000 dwn
TORQUE AT BOTTOM	3612 ft-lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Water Based / Oil Based / Air

Time	02:00	04:00	08:00
Depth (m)	1050	1050	1050
Temp. (°C)	76	46	46
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	134.4m3	142.8m3	141.9m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Caustic Soda	7sks.
Hi-Vis	50sks.
Hydrated Lime	1sks.
Milpac	8sks.
Desco	8sks.
Natural Gel	54sks.

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	SCREEN TYPE	VOLUME PUMPED
8.00	1050	1040	1740

METERS DRILLED

FROM	TO	BIT NO.	ROTARY S.P.M.	ROTARY R.P.M.
850.00	874.00	D	25	20-22

CIRCULATION PRESSURE (kPa)

PUMP NO. 1 LINER (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER (mm)	PUMP NO. 2 S.P.M.
152	100	152	100

REDUCED PUMP SPEED

3400 kPa @ 160 S.P.M. @ 857.00 m

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
836.70	10.3	332.60
846.10	10.3	332.60
869.00	10.1	330.70

DRILLER SIGNATURE: Barry Verheist

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
0:00	3:00	3.00	2	Drill fr. 850m - 866m
3:00	3:15	0.25	7	Rig Service, F/T Annular(24 secs)
3:15	3:45	0.50	2	Drill fr. 866m - 874m
3:45	4:30	0.75	19	Deviation Surveys(Accum.)
4:30	5:30	1.00	5	Condition Mud & Circ.
5:30	8:00	2.50	6	Wiper trip to 129m, flow check @ 49, 822, 238 & 129m

NOTES

OPERATOR FUEL: 8.00 | MAX EXP HOOKLOAD: 9.5 | SAFETY TOPIC: 195000.00 Tripping | M.A.C.P.:

RATE SCHEDULE: REGULAR / REPAIR / STANDBY
DRIVER A | CREW SAFETY DAYS | DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verheist	8.00	BV		
Derrickman	947-452-903	Dave Makowsky	8.00	DM		
Motorman	735-714-230	Chantry Vig	8.00	CV		
Floorman	272-945-816	Brent Sullivan	8.00	BS		
Floorman	118-883-287	James R. Sullivan	8.00	JS		
Leaseman	713-959-461	Gary Kennedy	8.00	GK		
Rig Manager	611-451-281	Pat Trottier		PT		
Top Drive	536-977-792	Sheldon Langley		SL		

DAY TOUR 8:00 TO 16:00

BIT RECORD

No.	BIT	A/B (mm)	Lgth/Cum (m)
1	Bit	311	0.43
1	Motor/ Bell	311	11.82
1		241	10.80
1		227	19.49
1	7" Drill Collars	220	9.46
1	Shock Sub	240	2.95
9	8" Drill Collars	220	83.67
1	7" Jars / Pony D.C.	234	8.83
1	Bell Sub	224	1.17
3	7" Drill Collars	167	28.65
6		127	55.40
23	D.P.	S-135	647.57
0	D.P.	Grade Ex	0.00
	KELLY/Swivel		-4.84
	TOTAL		874.00
	WT. ON BIT		35000.00
	WT. ON STRING		95000.00

BIT NO	5
SIZE	444.5
IADC CODE	6 2 7
MFG	H.C.
TYPE	GTX-40C
SERIAL NO	6025924
JETS	20 20 20
DEPTH OUT (m)	874.00
DEPTH IN (m)	642.00
TOTAL METRES DRILLED (m)	232.00
TOTAL HOURS RUN	35.75
CUTTING STRUCTURE	1 1 WT A E I NO TD
	8 Gage ODC Reason Pulled

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Water Based / Oil Based / Air

Time	01:30	03:30	
Depth (m)	1050	1050	
Temp. (°C)	46	46	
W.L. (cm3)			
pH	9.0	10.0	
PV/YP	134.3m3	143.5m3	

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Caustic Soda	2 sks

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	SCREEN TYPE	VOLUME PUMPED

METERS DRILLED

FROM	TO	BIT NO.	ROTARY S.P.M.	ROTARY R.P.M.
874.00				

CIRCULATION PRESSURE (kPa)

PUMP NO. 1 LINER (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER (mm)	PUMP NO. 2 S.P.M.
152	100	152	100

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE: Bill Mills

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
8:00	11:00	3.00	23	(Handle Casing) Unload & Strap Casing
11:00	12:30	1.50	6	Trip in Hole(P/U 12 Singles)
12:30	15:45	3.25	23	(Handle Casing) Unload, Strap, & Drift Casing
15:45	16:00	0.25	7	Rig Service & Function Pipe Rams 5/5 Secs

Kevin Vic Travel To Rig Dec 13

NOTES

OPERATOR FUEL: 8.00 | MAX EXP HOOKLOAD: 9.5 | SAFETY TOPIC: | M.A.C.P.:

RATE SCHEDULE: REGULAR / REPAIR / STANDBY
DRIVER A | CREW SAFETY DAYS | DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	718-324-181	Bill Mills	12.00	BM		
Derrickman	829-928-262	Rob Roth	12.00	RR		
Motorman	722-572-781	Dwayne Fry	12.00	DF		
Floorman	120-938-422	Pierre Gallant	12.00	PG		
Floorman	652-342-415	Jonathan Greeve	12.00	JG		
Rig Manager	719-409-484	Kevin Vig		KV		
		Travel Day Kevin Vig				

EVENING TOUR 16:00 TO 24:00

BIT RECORD

No.	BIT	A/B (mm)	Lgth/Cum (m)
1	Bit	311	0.43
1	Motor/ Bell	311	11.82
1		241	10.80
1		227	19.49
1	7" Drill Collars	220	9.46
1	Shock Sub	240	2.95
9	8" Drill Collars	220	83.67
1	7" Jars / Pony D.C.	234	8.83
1	Bell Sub	224	1.17
3	7" Drill Collars	167	28.65
6		127	55.40
23	D.P.	S-135	647.57
0	D.P.	Grade Ex	0.00
	KELLY/Swivel		-4.84
	TOTAL		874.00
	WT. ON BIT		35000.00
	WT. ON STRING		90000.00

BIT NO	5
SIZE	444.5
IADC CODE	6 2 7
MFG	H.C.
TYPE	GTX-40C
SERIAL NO	6025924
JETS	20 20 20
DEPTH OUT (m)	874.00
DEPTH IN (m)	642.00
TOTAL METRES DRILLED (m)	232.00
TOTAL HOURS RUN	35.75
CUTTING STRUCTURE	1 1 WT A E I NO TD
	8 Gage ODC Reason Pulled

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Water Based / Oil Based / Air

Time			
Depth (m)			
Temp. (°C)			
W.L. (cm3)			
pH			
PV/YP			

MUD MATERIAL ADDED

PRODUCT	AMOUNT + Unit

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	SCREEN TYPE	VOLUME PUMPED

METERS DRILLED

FROM	TO	BIT NO.	ROTARY S.P.M.	ROTARY R.P.M.
874.00				

CIRCULATION PRESSURE (kPa)

PUMP NO. 1 LINER (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER (mm)	PUMP NO. 2 S.P.M.
152		152	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE: Barry Verheist

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
16:00	16:30	0.50	23	(Handle Casing) Strap Casing
16:30	21:30	5.00	6	Pull Out Of Hole & Flow Checks @ 858m, 640m, 254m,0
21:30	21:45	0.25	7	Rig Service, F/T Blind rams(9 secs)
21:45	22:00	0.25	21	Safety Meeting
22:00	24:00	2.00	12	Run 13 3/8 casing, weld on shoe, float collar & next 2 jts csg.

NOTES

OPERATOR FUEL: 48.00 | MAX EXP HOOKLOAD: 9.5 | SAFETY TOPIC: Running casing | M.A.C.P.:

RATE SCHEDULE: REGULAR / REPAIR / STANDBY
DRIVER A | CREW SAFETY DAYS | DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verheist	4.00	BV		
Derrickman	647-452-903	Dave Makowsky	4.00	DM		
Motorman	735-714-230	Chantry Vig	4.00	CV		
Floorman	272-945-816	Brent Sullivan	4.00	BS		
Floorman	118-883-287	James R. Sullivan	4.00	JS		
Leaseman	713-959-461	Gary Kennedy	4.00	GK		

ETS SERIAL NUMBER: PREC620 _20041113_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

PUD: 1004-11-30 20:00	RIG RELEASE	JOB NO: 22	AFE
LICENCE NO: RC-7	WELL NAME AND NO: b-92-A / 92-J-12 MC-7		
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling		
SURFACE LOCATION: -92-A / 92-J-12	UNIQUE ID: b-1-H / 92-J-12		
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Luis Silva	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig		

DAILY CHECKS — DFR / SM

(1) Daily Tests Around Wellbore
(2) Unlatched Inspection Windows during Blackout
(3) H2S Alarm Visited at Intervals
(4) Well Locked & Shut Down in Panic
(5) Crown Saver Checked
(6) Man Rider Checked
(7) Manually Worked BOP's Hydraulics & Drilled on Lines
(8) Rig Site Hazard and Safety Meeting documented
(9) C.A.O.D.C. Rig Safety Inspection Checklist completed this month
(10) Mast Inspection Before Raising or Lowering
(11) Crown Saver Checked
(12) Man rider Checked

DATE: 14-Dec-2004 | RIG NO: 620 E | FUEL: 8.00 | Rig: 2735 | BOILER

LAST CASING / TUBING ON LICER

												6.31	129.00

DRILLSTRING

TEMPERATURE													
CURRENT CONDITION			29.00	SS-95	63.00	165.00	5"XH	170	FB-1600	SPMMP X 152mm	365
WIND DIRECTION			36.00	SS-95	67.00	165.00	5"XH	150	FB 1600	SPMMP X152mm	305
ROAD											

TIME - HRS

OPER.	RIG UP/DOWN	DRILL	REPAIR	SERVICE	DRILL CMT	SURVEY	CORING	CIRC & COND	TRIPS	REAM	DEVIATION	WASH TO BTM	SLIP & CUT DRLG LINE	RIG REPAIR	DRILL STEM TEST	FISH	SQUEEZE CMT	WAIT ON CMT	OTHER	SAFETY MEETING	TOTAL
MORN		0.25						7.75													
DAY		5.00	3.75	0.25					1.00												
EVE			0.50	0.25				3.25													
TOTAL		5.00	4.25	0.75				11.00				0.25	1.00	3.75							

STAGE SHAKER(S) — RENTALS/SERVICES

NO.	TYPE	Derrick	NEW
1	SCREENS CHANGED	Yes	No
2	TOP	60	TOP 60
3	MIDDLE	60	MIDDLE 60
4	BOTTOM	60	BOTTOM 60

WELL TYPE: Geothermal | RE-ENTRY: YES / NO | KB TO GROUND ELEV.: 7.20
WELL NAME & No.: b-92-A / 92-J-12 MC-7 | DATE: 14-Dec-2004
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig | RIG NO: 620 E
PROVINCE: BC | CAMP: YES / NO | RIG SAFETY DAYS: 289.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

BIT NO.			
SIZE			
IADC CODE			
MFG.			
TYPE			
SERIAL NO.			
JETS			
DEPTH OUT (m)			
DEPTH IN (m)			
TOTAL METRES DRILLED (m)			
TOTAL HOURS RUN			

CUTTING STRUCTURE: T / B / IADC / LOC / B / Gage / ODC / Reason Pulled / Other

D.P.											
D.P.	SHOULDER										
KELLYDOWN											
TOTAL											

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Water Based / Oil Based

TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (sec)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

	HOURS RUN	MFG	MODEL	SCREEN SIZE

METERS DRILLED

FROM	TO	BIT WT.	ROTARY R.P.M.	BIT HRS
674.00	676.00			

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.
	152		152	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verheist

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	5:15	5.25	12	Run 13 3/8 casing(welded cag shoe, float collar, & jnts #3 & #4
5:15	5:30	0.25	7	Rig Service, F/T H.C.R.(2 secs)
5:30	8:00	2.50	12	Run 13 3/8 casing

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
5.06	10.5	400	
	92000.00	Handing casing	

MORNING TOUR

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	8.00	BV	☑
Derrickman	647-452-803	Dave Makowsky	8.00	DM	☑
Motorman	733-714-230	Chantry Vig	8.00	CV	☑
Floorman	272-945-916	Brent Sullivan	8.00	BS	☑
Floorman	118-983-287	James R. Sullivan	8.00	JS	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☑
Rig Manager	611-451-261	Pat Trantier		PT	☑
Top Drive	638-977-702	Sheldon Langley		SL	☑
Rig Manager	719-409-484	Kevin Vig			☑

RATE SCHEDULE: Regular / Alpine / Invert | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

BIT RECORD

1	Stab In	155	0.31
29	Stands D.P.		816.71
1	Single D.P.		9.39
1	Pup Joint		4.43
1	D.P.	STANDS	28.15
	D.P.	SINGLES	
	KELLYDOWN		0.00
	TOTAL		858.99

BIT NO.
SIZE
IADC CODE
MFG.
TYPE
SERIAL NO.
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL METRES DRILLED (m)
TOTAL HOURS RUN

CUTTING STRUCTURE: T / B / IADC / LOC / B / Gage / ODC / Reason Pulled / Other

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	55000.00

MUD RECORD

MUD TYPE: Water Based / Oil Based

TIME	08:30	16:00
DENSITY (kg/m³)	1050	1050
FUNNEL VIS. (sec)	45	39
W.L. (cm3)		
pH		

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Desco	5 SKS

SOLIDS CONTROL

	HOURS RUN	MFG	MODEL	SCREEN SIZE

METERS DRILLED

FROM	TO	BIT WT.	ROTARY R.P.M.	BIT HRS
674.00				

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES
Junction Cross Bore

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	9:00	1.00	23	(Rig Out Tongs & Laydown Truck)
9:00	9:15	0.25	7	Rig Service & Function Annular 29/25 Secs
9:15	13:00	3.75	6	Run 339.7 mm Casing
13:00	16:00	3.00	5	Circulate Casing

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
5.06	10.5	400	
	115000.00		

DAY TOUR

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-161	Bill Mills	8.00	BM	☑
Derrickman	629-626-282	Rob Roth	8.00	RR	☑
Motorman	652-342-415	Jonathan Greeve	8.00	JG	☑
Floorman	120-936-422	Pierre Gallant	8.00	PG	☑

RATE SCHEDULE: Regular / Alpine / Invert | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

BIT RECORD

1	Stab In	155	0.31
29	Stands D.P.		816.71
1	Single D.P.		9.39
1	Pup Joint		4.43
1	D.P.	STANDS	28.15
	D.P.	SINGLES	
	KELLYDOWN		0.00
	TOTAL		858.99

BIT NO.
SIZE
IADC CODE
MFG.
TYPE
SERIAL NO.
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL METRES DRILLED (m)
TOTAL HOURS RUN

CUTTING STRUCTURE: T / B / IADC / LOC / B / Gage / ODC / Reason Pulled / Other

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	55000.00

MUD RECORD

MUD TYPE: Water Based / Oil Based

TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (sec)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

	HOURS RUN	MFG	MODEL	SCREEN SIZE

METERS DRILLED

FROM	TO	BIT WT.	ROTARY R.P.M.	BIT HRS
674.00				

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE	PUMP NO. 2 S.P.M.
	152		152	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	16:15	0.25	21	Safety Meeting
16:15	19:30	3.25	12	Rig to and Cement w/Halliburton
19:30	20:00	0.50	6	Hoist 5 Stands D.P. and LayOut Pup Joint
20:00	20:15	0.25	7	Rig Service
20:15	24:00	3.75	23	Rig Out Cementers,Clean Catch Pans,Open Ram Doors,Remove FlowLine and Flush

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
5.06	10.5	400	
		Cementing	

EVENING TOUR

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-828-706	Wade Goddard	8.00	WG	☑
Derrickman	642-972-840	Murray McBain	8.00	MM	☑
Motorman	851-368-064	Jesse Goddard	8.00	JG	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☑
Floorman	730-040-896	Nathan Schwandt	8.00	NS	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☑

RATE SCHEDULE: Regular / Alpine / Invert | DRIVER A | CREW SAFETY DAYS | DRIVER B

Chimo Equipment
A Varco Company

CAODC

Based on the CAODC ETS file standard

SPUD	04-11-30 20:00
RIG RELEASE	
JOB NO	22
AFE	
LICENCE NO	C-7
WELL NAME AND NO.	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Jose Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig

DATE	15-Dec-2004
RIG NO.	620 E
FUEL @ 8:00	
RIG	22351
BOILER	
TEMPERATURE	0
CURRENT CONDITION	Snow
WIND DIRECTION	Calm
ROAD	Fair

LAST CASING TUBING OR LINER

										6.31	129.00

PUMP	LINER SIZE	GRADE				NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH
	29.00	SS-95	83.00	186.00	5"XH	170	FB-1600	BPMMP X 152mm	305
	38.00	SS-95	67.00	186.00	5"XH	150	FB 1600	BPMMP X 152mm	305

OPER	6	7	11	14	21	22	TOTALS
MORN	6.50	0.25		0.75	0.50		
DAY	1.25	0.25		8.25	0.25		
EVE		0.25	0.50	3.50		2.75	
TOTAL	7.75	0.75	0.50	12.50	0.75	2.75	

SHALE SHAKER(S): NO. 2, TYPE Derrick; SCREENS CHANGED: YES

8.00	TOP 50	TOP 80	
8.00	MIDDLE 50	MIDDLE 80	
24.00	BOTTOM 80	BOTTOM 80	

RENTALS/SERVICES

WELL TYPE	Geothermal
RE-ENTRY	NO
KB TO GROUND ELEV.	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	15-Dec-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	YES
RIG SAFETY DAYS	290.00

MORNING TOUR 0:00 TO 8:00

METERS DRILLED: FROM 874.00

CIRCULATION PRESSURE: PUMP NO. 1 152; PUMP NO. 2 152

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	0:30	0.50	21	Safety Meeting(Avalanches, Nipple Down B.O.P.s)
0:30	1:15	0.75	14	Nipple Up B.O.P. (Clean Rams & Hammer up doors)
1:15	1:30	0.25	7	Rig Service
1:30	8:00	6.50	6	Pull D.P. out of casing (Lay Down 10 Singles Full of cement)

NOTES

DRILLER SIGNATURE: Bill Mills

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	829-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	652-342-416	Jonathan Greeve	8.00	JG	☐	☑
Floorman	736-771-544	Matt Fudurick	8.00	MF	☐	☑
Floorman	120-936-422	Pierre Gallant	8.00	PG	☐	☑
Leaseman	734-555-212	Adam Clift	8.00	AC	☐	☑
Rig Manager	719-409-484	Kevin Vig			☐	☑
Top Drive	638-877-702	Sheldon Langley			☐	☑
Rig Manager	611-451-261	Pat Trottier Travel Day			☐	☑

RATE SCHEDULE: ☑ REGULAR

DAY TOUR 8:00 TO 16:00

METERS DRILLED: FROM 874.00

CIRCULATION PRESSURE: PUMP NO. 1 152; PUMP NO. 2 152

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	9:15	1.25	6	LayOut D.P., and Rig Out Handling Equipment
9:15	9:30	0.25	7	Rig Service
9:30	9:45	0.25	21	Safety Meeting
9:45	14:00	4.25	14	Rig Out Catch Pan's,Flow Nipple,Rig to and Lift Stack and Cut Casing
14:00	16:00	2.00	14	Remove V-Door,Catwalk and Nipple Down B.O.P.'s
				Travel Home Pat Trottier Dec. 15

NOTES

DRILLER SIGNATURE: Wade Goddard

SAFETY TOPIC: Nipple Down

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-628-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	842-872-840	Murray McBain	12.00	MM	☐	☑
Motorman	851-366-064	Jesse Goddard	12.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	12.00	RM	☐	☑
Floorman	730-040-896	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	12.00	DS	☐	☑
Rig Manager	611-451-261	Pat Trottier			☐	☐

RATE SCHEDULE: ☑ REGULAR

EVENING TOUR 16:00 TO 24:00

METERS DRILLED: FROM 874.00

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	19:30	3.50	14	Nipple Down B.O.P.'s
19:30	19:45	0.25	7	Rig Service
19:45	22:30	2.75	23	Make Up 1" Pipe For Top Cement Job
22:30	23:30	1.00	5	Circulate
23:30	24:00	0.50	12	Top Cement casing Fr/ 0 - 150 Feet

NOTES

DRILLER SIGNATURE: Bill Mills

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	4.00	BM	☐	☑
Derrickman	829-926-262	Rob Roth	4.00	RR	☐	☑
Motorman	652-342-419	Jonathan Greeve	4.00	JG	☐	☑
Floorman	736-771-544	Matt Fudurick	4.00	MF	☐	☑
Floorman	120-936-422	Pierre Gallant	4.00	PG	☐	☑
Leaseman	734-555-212	Adam Clift	4.00	AC	☐	☑

RATE SCHEDULE: ☑ REGULAR

ETS SERIAL NUMBER: PREC620_20041115_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

WELL TYPE	Geothermal
RE-ENTRY	☐ YES ☑ NO
KB TO GROUND ELEV.	7.20
WELL NAME & No.	8-92-A / 92-J-12 MC-7
DATE	16-Dec-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	291.00

FLUID: 004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE

CENCE NO: 1C-7 | WELL NAME AND NO.: 8-92-A / 92-J-12 MC-7

PERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RFACE LOCATION: -92-A / 92-J-12 | RIGNUE ID: 8-1-H / 92-J-12

GNATURE OF OPERATORS REPRESENTATIVE: Luss Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS — OPR. | RM

(1) Daily Walk Around Inspection
(2) Derrickman Inspection of rotary pump manifold
(3) H2S Signs Posted (if required)
(4) Wind Cones & Sock Diagram Posted
(5) Fire Line Tested
(6) BOP Drill Performed
(7) Visually Inspect BOPs Hydraulic & Diesel Air Lines
(8) Rig Site Health and Safety Meeting (one per month)
(9) C A O D C Rig Safety Inspection Checklist (once per month)
(10) Mud Monitoring Below Floor is Learning
(11) Crown Saver Checked
(12) Hard Line Checked

DATE: 16-Dec-2004 | RIG NO: 620 E | FUEL @ 6:00 | AVG: 38468 | BOILER

WEATHER: TEMPERATURE: 0 | CURRENT CONDITION: Cloudy | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TURNING OR LINER

										6.31	129.00

			22.00	SS-95	83.00	166.00	5"XH	170	FB-1600	BPMMP X 152mm	395
			38.00	SS-95	67.00	166.00	5"XH	150	FB 1600	BPMMP X152mm	395

TIME TERMS

OPER	RIG MOVE	RIG REPAIR	REPAIRS	CUTTING SLIP DRILL LINE	DRILLING	REAMING	CIRC & COND	TRIPPING	SURVEY	DEV	LOG	RUN CSG	CEMENT	WOC	NU BOP	TEST BOP	OTHER
MORN					0.25		6.25	1.25									
DAY					0.25		4.50					0.25					
EVE					0.25		7.75										
TOTAL					0.75		18.50	1.25	12.25			0.25					

SHALE SHAKER(S)

NO.	TYPE	SCREEN SIZE
1	Derrick	new
2		
3		
4		

SCREENS STANDARD: ☑ YES ☐ NO

4.00	TOP	80	TOP 80
6.00	MIDDLE	80	MIDDLE 80
6.00	BOTTOM	80	BOTTOM 80
24.00			

RENTALS/SERVICES

	SOURCE	DAYS	$/DAY

MORNING TOUR

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MFG	
TYPE	
SERIAL NO.	
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
CUTTING STRUCTURE: T	B	G	OC	N	Gage	ODC	Reason Pulled	Tooth wear
D.P.	STANDS							
D.P.	SINGLES							
HELL'S/DRAG								
TOTAL								

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED	
TIME	
DENSITY (kg/m3)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT / UNIT

SOLIDS CONTROL

HOURS RUN	MUD LOST DOWN HOLE	MUD LOST ON SURFACE	DISCARDED VOLUME

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY HOURS	WOB (kN)
874.00				

CIRCULATION PRESSURE (KPa) | PUMP NO.1: liner size (mm) | S.P.M. | PUMP NO.2: liner size (mm) | S.P.M.

	152		152

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE
0:00	0:15	0.25	12
0:15	0:30	0.25	7
0:30	1:45	1.25	13
1:45	6:00	6.25	23

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Top Cement Casing Frf 0 - 180 Feet
Rig Service
Wait on Cement
Cut Casing & Conductor Pipe & (Weld On Bowl)

NOTES

DRILLER SIGNATURE: Bill Mills

DRILL TIME	SLIDE TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.S.P.
6.00	0.5				

MORNING TOUR 0:00 TO 6:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	6.00	BM	☐	☑
Derrickman	629-926-282	Rob Roth	6.00	RR	☐	☑
Motorman	652-342-419	Jonathan Greeve	6.00	JG	☐	☑
Floorman	736-771-544	Matt Fudurick	6.00	MF	☐	☑
Floorman	120-936-422	Pierre Gallant	6.00	PG	☐	☑
Leaseman	734-555-212	Adam Clift	6.00	AC	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MFG.	
TYPE	
SERIAL NO.	
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
CUTTING STRUCTURE: T	B	G	OC	N	Gage	ODC	Reason Pulled	Tooth wear
D.P.	STANDS							
D.P.	SINGLES							
HELL'S/DRAG								
TOTAL								

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED	
TIME	
DENSITY (kg/m3)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT / UNIT

SOLIDS CONTROL

HOURS RUN	MUD LOST DOWN HOLE	MUD LOST ON SURFACE	DISCARDED VOLUME

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY HOURS	WOB (kN)
874.00				

CIRCULATION PRESSURE (KPa) | PUMP NO.1: liner size (mm) | S.P.M. | PUMP NO.2: liner size (mm) | S.P.M.

	152		152

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE
6:00	11:00	3.00	24
11:00	11:15	0.25	7
11:15	11:30	0.25	21
11:30	16:00	4.50	14

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Lst Casing Bowl Cool
Rig Service
Safety Meeting
Nipple Up B.O.P.'s

NOTES

DRILLER SIGNATURE: Wade Goddard

DRILL TIME	SLIDE TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.S.P.
8.00	9.5			Nipple Up B.O.P.'s	

DAY TOUR 6:00 TO 18:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-826-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	12.00	MM	☐	☑
Motorman	651-388-664	Jesse Goddard	12.00	JG	☐	☑
Floorman	505-422-753	Rory Mitchell	12.00	RM	☐	☑
Floorman	736-040-896	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-063	Daniel Sampson	12.00	DS	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MFG	
TYPE	
SERIAL NO	
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
CUTTING STRUCTURE: T	B	G	OC	N	Gage	ODC	Reason Pulled	Tooth wear
D.P.	STANDS							
D.P.	SINGLES							
HELL'S/DRAG								
TOTAL								

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED	
TIME	
DENSITY (kg/m3)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT / UNIT

SOLIDS CONTROL

HOURS RUN	MUD LOST DOWN HOLE	MUD LOST ON SURFACE	DISCARDED VOLUME

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY HOURS	WOB (kN)
874.00				

CIRCULATION PRESSURE (KPa) | PUMP NO.1: liner size (mm) | S.P.M. | PUMP NO.2: liner size (mm) | S.P.M.

	152		152

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE
16:00	23:45	7.75	14
23:45	24:00	0.25	7

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Nipple Up B.O.P.'s
Rig Service

NOTES

DRILLER SIGNATURE: Bill Mills

DRILL TIME	SLIDE TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.S.P.
8.00	9.5				

EVENING TOUR 18:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	4.00	BM	☐	☑
Derrickman	629-926-282	Rob Roth	4.00	RR	☐	☑
Motorman	652-342-416	Jonathan Greeve	4.00	JG	☐	☑
Floorman	736-771-544	Matt Fudurick	4.00	MF	☐	☑
Floorman	120-936-422	Pierre Gallant	4.00	PG	☐	☑
Leaseman	734-555-212	Adam Clift	4.00	AC	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

E S SERIAL NUMBER: PREC620_20041116_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

WELL TYPE: Geothermal	RE-ENTRY: ☐ YES ☑ NO	KB TO GROUND ELEV.: 7.20	
WELL NAME & No.: a-92-A / 92-J-12 MC-7		DATE: 17-Dec-2004	
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling		
RIG MANAGER: Kevin Vig		RIG NO.: 620 E	
PROVINCE: BC	CAMP: ☑ YES ☐ NO	RIG SAFETY DAYS: 282.00	

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	652-342-416	Jonathan Greeve	8.00	JG	☐	☑
Floorman	736-771-544	Matt Fudurick	8.00	MF	☐	☑
Floorman	120-636-422	Pierre Gallant	8.00	PG	☐	☑
Leaseman	734-555-212	Adam Clin	8.00	AC	☐	☑
Rig Manager	718-409-484	Kevin Vig		KV	☐	☑
Top Drive	639-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY — DRIVER A — CREW SAFETY DAYS — DRIVER B

BIT RECORD

No.	Bit Size (mm)	Serial No.	Make	Type	IADC Code	Nozzles (32nds)	Depth Out (m)	Total Hours Run	Cum. Hours	Dull Grade
1	311	6013660	HC	HR-S35	5 4 7		674.00	9.46	9.46	

MUD RECORD

MUD TYPE	Water based
TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

METERS DRILLED

FROM	TO	Bit #	Rotary R.P.M.	W.O.B. (kDaN)
674.00				

CIRCULATION PRESSURE (kPa): PUMP NO.1 (Liner Size mm, S.P.M.) / PUMP NO.2 (Liner Size mm, S.P.M.)

182

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills

TIME LOG

From	To	Hours	Code	Operation
0:00	3:00	3.00	14	Nipple Up B.O.P.s
3:00	3:30	0.50	15	Test B.O.P. Blind Rams
3:30	3:45	0.25	7	Rig Service
3:45	7:00	3.25	20	P/U & Make Up B.H.A.
7:00	8:00	1.00	24	P/U Assembly to Drill Out Cement On Inside Of Casing From Top Cemen
				Job
				Drill Cement fr/15m-19m,Wash Down fr/19m-41m

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	842-872-840	Murrey McBain	12.00	MM	☐	☑
Motorman	651-366-084	Jesse Goddard	12.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	12.00	RM	☐	☑
Floorman	730-640-896	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	726-975-003	Daniel Sampson	12.00	DS	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY — DRIVER A — CREW SAFETY DAYS — DRIVER B

BIT RECORD

No.	Bit Size (mm)	Serial No.	Make	Type	IADC Code	Nozzles (32nds)	Depth Out (m)	Total Hours Run	Cum. Hours	Dull Grade
1	311	6013660	HC	HR-S35	5 4 7		674.00	9.46	9.46	

MUD RECORD

MUD TYPE	Water based
TIME	11:30
DENSITY (kg/m³)	1055
FUNNEL VIS. (s/L)	39
W.L. (cm3)	
pH	11.0

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Sodium Bicarbonate	24 sacks
Hydrated Lime	1 sacks
Lignco	4 sacks

SOLIDS CONTROL

METERS DRILLED

FROM	TO	Bit #	Rotary R.P.M.	W.O.B. (kDaN)
674.00				

CIRCULATION PRESSURE (kPa): PUMP NO.1 (Liner Size mm, S.P.M.) / PUMP NO.2 (Liner Size mm, S.P.M.)

6400 | 162 | 76 | 183 | 75

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

TIME LOG

From	To	Hours	Code	Operation
8:00	10:00	2.00	6	M/U B.H.A.,and R.I.H. w/Bit#6
10:00	10:15	0.25	5	Break Circulation and Circulate @ 402m
10:15	11:00	0.75	6	R.I.H. w/Bit#6
11:00	12:45	1.75	3	Wash in fr/780m-850.50m,Tag Cement and Drill fr/850.5m-865m,(Tagged Float @ 856.4m)
12:45	13:15	0.50	5	Circulate Hole Clean
13:15	13:30	0.25	7	Rig Service and Function Annular 15/15
13:30	14:15	0.75	15	Pressure Test Annular,Pipe Rams,and Outside Kill Line and HCR Valves, 7000 KpA for 10 Min.
14:15	14:40	0.50	22	Install GrantHead
14:45	16:00	1.25	3	Drill Cement (r/865m-874m(Tagged Shoe @ 865.7m)

OPERATOR FUEL | MAX EXP HOOKLOAD: 92000.00 | SAFETY TOPIC: Camp Fire Drill | M.A.C.P.

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	4.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	4.00	RR	☐	☑
Motorman	652-342-416	Jonathan Greeve	4.00	JG	☐	☑
Floorman	736-771-544	Matt Fudurick	4.00	MF	☐	☑
Floorman	120-636-422	Pierre Gallant	4.00	PG	☐	☑
Leaseman	734-555-212	Adam Clin	4.00	AC	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY — DRIVER A — CREW SAFETY DAYS — DRIVER B

BIT RECORD

No.	Bit Size (mm)	Serial No.	Make	Type	IADC Code	Nozzles (32nds)	Depth Out (m)	Total Hours Run	Cum. Hours	Dull Grade
1	311	6013660	HC	HR-S35	5 4 7		674.00	9.46	9.46	

MUD RECORD

MUD TYPE	Water based		
TIME	18:00	21:00	23:00
DENSITY (kg/m³)	1045	1060	1070
FUNNEL VIS. (s/L)	47	49	61
W.L. (cm3)			
pH	10.0	10.0	9.5
PVT @	149.2 m3	151.6m3	163.4m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Milgel NT	96 sacks
Milpac	6 sacks
Xan Plex D	3 sacks

SOLIDS CONTROL

METERS DRILLED

FROM	TO	Bit #	Rotary R.P.M.	W.O.B. (kDaN)
874.00	901.00	D	15	15-20

CIRCULATION PRESSURE (kPa): PUMP NO.1 (Liner Size mm, S.P.M.) / PUMP NO.2 (Liner Size mm, S.P.M.)

11300 | 162 | 90 | 152 | 90

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
873.60	0.8	329.90

NOTES

DRILLER SIGNATURE: Bill Mills

TIME LOG

From	To	Hours	Code	Operation
16:00	18:15	2.25	6	Condition Mud & Circ.
18:15	22:45	4.50	2	Drill fr/874m-901m
22:45	23:00	0.25	7	Rig Service & Function Pipe Rams 4/4 Secs
23:00	24:00	1.00	15	accumulated M.w.d. Surveys & Orienting Toolface

OPERATOR FUEL | MAX EXP HOOKLOAD: 111000.00 | SAFETY TOPIC | M.A.C.P.

ETS SERIAL NUMBER: PREC620_20041117_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Vance Company

Based on the CAODC ETS file standard

WELL TYPE	Geothermal
RE-ENTRY	☐YES ☑NO
KB TO GROUND ELEV.	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	18-Dec-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
ROG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑YES ☐NO
RIG SAFETY DAYS	293.00

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	718-324-181	Bill Mills	8.00	BM	☐ ☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☐ ☑
Motorman	652-342-416	Jonathan Greeve	8.00	JG	☐ ☑
Floorman	736-771-544	Matt Fudurick	8.00	MF	☐ ☑
Floorman	120-936-422	Pierre Gallant	8.00	PG	☐ ☑
Leaseman	736-585-212	Adam Clift	8.00	AC	☐ ☑
Rig Manager	719-409-464	Kevin Vig		KV	☐ ☐
Top Drive	638-977-702	Sheldon Langley		SL	☐ ☑

RATE SCHEDULE ☑REGULAR ☐ ☐REPAIR ☐WAIT
DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	633-628-708	Wade Goddard	12.00	WG	☐ ☑
Derrickman	642-872-840	Murray McBain	12.00	MM	☐ ☑
Motorman	651-399-084	Jesse Goddard	12.00	JG	☐ ☑
Floorman	505-422-253	Rory Mitchell	12.00	RM	☐ ☑
Floorman	730-040-866	Nathan Schwandt	12.00	NS	☐ ☑
Leaseman	729-975-003	Daniel Sampson	12.00	DS	☐ ☑

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐WAIT
DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	718-324-181	Bill Mills	4.00	BM	☐ ☑
Derrickman	629-926-262	Rob Roth	4.00	RR	☐ ☑
Motorman	652-342-416	Jonathan Greeve	4.00	JG	☐ ☑
Floorman	736-771-544	Matt Fudurick	4.00	MF	☐ ☑
Floorman	120-936-422	Pierre Gallant	4.00	PG	☐ ☑
Leaseman	736-585-212	Adam Clift	4.00	AC	☐ ☑

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐WAIT
DRIVER A | CREW SAFETY DAYS | DRIVER B

ET: SERIAL NUMBER: PREC620_20041118_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

AUD 604-11-30 20:00 | RIG RELEASE | JOB NO 22 | AFE
DENCE NO IC-7 | WELL NAME AND NO. a-92-A / 92-J-12 MC-7
PERATOR Western Geopower Corp | CONTRACTOR Precision Drilling
RFACE LOCATION 92-A / 92-J-12 | UNIQUE ID: b-1-H / 92-J-12
GNATURE OF OPERATOR'S REPRESENTATIVE Russ Sivo | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE Kevin Vig

DAILY CHECKS
(1) Daily Walk Around Inspection
(2) Derrick Inspection (Weekly Safety Checklist)
(3) H2S Sensor Tested By (Initials)
(4) Anti-Collision & Deck Diagram Posted
(5) Fire Line Tested
(6) BOP Drills Performed
(7) Weekly Inspect BOP's, Rotaflex & Degasser Line
(8) Rig Site Health and Safety Meeting (minimum weekly)
(9) CAODC Rig Safety Inspection Checklist (one rig monthly)
(10) Man Instruction Station, Pipeway to Lowering
(11) Crown Saver Checked
(12) Derrick Checked

DATE 19-Dec-2004 | RIG NO 620 E | FUEL @ 8:00 | RIG 36466 BOILER | TEMPERATURE

FAST CASING TUBING OR LINER

	D.S. (mm)	WT/ft (kg/m)	GRADE	COUPLING	No. OF JOINTS	TOTAL WT. STRING (kg)	KB TO CSG HEAD (m)	SET AT (m)
							8.31	129.00
			L-80				8.23	870.00

	LINEAR MASS (kg/m)	GRADE	MIN. ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH. (mm)
CURRENT CONDITION	29.00	S5-95	62.00	168.00	6"XH	170	FB-1600	GPMMP X 192mm	305
WIND DIRECTION	36.00	S5-95	87.00	168.00	6"XH	180	FB -1600	GPMMP X192mm	305
ROAD									

SHALE SHAKER(S) | RENTAL/SERVICES

SCR'S	TYPE	Derrick	John
	SCREEN CHANGED	YES	NO
8.00	TOP	50	TOP 50
8.00	MIDDLE	60	MIDDLE 60
24.00	BOTTOM	80	BOTTOM 80

WELL TYPE Geothermal | RE-ENTRY ☐YES ☑NO | KB TO GROUND ELEV 7.20
WELL NAME & No. a-92-A / 92-J-12 MC-7 | DATE 19-Dec-2004
OPERATOR Western Geopower Corp | CONTRACTOR Precision Drilling
RIG MANAGER Kevin Vig | RIG NO. 620 E
PROVINCE BC | CAMP ☑YES ☐NO | RIG SAFETY DAYS: 284.00

MORNING TOUR

BIT RECORD

	O.D. (mm)	LENGTH (m)
bit	311	0.30
	241	14.92
	241	10.80
	227	19.49
	220	9.46
Shock Sub	240	2.95
	229	83.67
	234	6.83
Bell Sub	224	1.17
	167	26.55
	127	56.40
D.P.		704.20
D.P.		0.00
		-18.74
TOTAL		920.00

BIT NO. 7 | SIZE 311 | IADC CODE 6 1 7 | MFG H.C. | TYPE HR-S44 | SERIAL NO 6026393 | JETS 22.2 22.2 22.2 | DEPTH OUT (m) 917.00 | TOTAL HOURS RUN 3.00 | TOTAL HOURS DRILLED ON 1.00 | OUTER STRUCTURE 1 | B | GAUGE | LOC | BEARING SEALS | GAUGE PROTECT | OTHER CONDITION

HOLE CONDITION
HOLE DRAG
TORQUE AT BOTTOM 36000.00
FILL ON BOTTOM (m) 90400.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flowline Temp =
TIME			
DEPTH (m)			
DENSITY (kg/m³)			
FUNNEL VIS. (s/L)			
W.L. (cm3)			
pH			
P.V.T.			

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	SLIDE R.P.M.
920.00				

CIRCULATION PRESSURE (KPA) | PUMP NO. 1 LINER SIZE (mm) | S.P.M. | PUMP NO. 2 LINER SIZE (mm) | S.P.M.
152 | 152

REDUCED PUMP SPEED @ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	7:45	7.75	22	(Wait on M.W.D. Surface Equipment)
7:45	8:00	0.25	7	Rig Service & Function Annular 24/24 Secs

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	100000.00		

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	718-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	629-926-282	Rob Roth	8.00	RR	☐	☑
Motorman	852-342-416	Jonathan Greeve	8.00	JG	☐	☑
Floorman	736-771-544	Matt Fudurick	8.00	MF	☐	☑
Floorman	120-936-422	Pierre Gallant	8.00	PG	☐	☑
Leaseman	734-555-212	Adam Clift	8.00	AC	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☐
Top Drive	838-977-702	Sheldon Langley		SL	☐	☑

DAY TOUR

BIT RECORD

	O.D. (mm)	LENGTH (m)
bit	311	0.30
	241	14.92
	241	10.80
	227	19.49
	220	9.46
Shock Sub	240	2.95
	229	83.67
	234	6.83
Bell Sub	224	1.17
	167	26.55
	127	56.40
D.P.		704.20
D.P.		0.00
TOTAL		924.00

BIT NO. 7 | SIZE 311 | IADC CODE 6 1 7 | MFG H.C. | TYPE HR-S44 | SERIAL NO 6026393 | JETS 22.2 22.2 22.2 | DEPTH OUT (m) 917.00 | TOTAL HOURS RUN 7.00 | TOTAL HOURS DRILLED ON 1.00 | OUTER STRUCTURE 1 | B | GAUGE | LOC | BEARING SEALS | GAUGE PROTECT | OTHER CONDITION

HOLE CONDITION
HOLE DRAG 4-6 Dan Up/Down
TORQUE AT BOTTOM 36000.00
FILL ON BOTTOM (m) 91000.00 | 0.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flowline Temp = 37.2 C
TIME	15:45		
DEPTH (m)	1059		
DENSITY (kg/m³)	42		
FUNNEL VIS. (s/L)			
W.L. (cm3)			
pH	9.5		
P.V.T.	146.0 m3		

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Caustic Soda	1 sack
Milpac	1 sack
Humgilite	10 sacks
Milgel	25 sacks

SOLIDS CONTROL

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	SLIDE R.P.M.
920.00	924.00	D	15/130	15-20

CIRCULATION PRESSURE (KPA) 12100 | PUMP NO. 1 LINER SIZE (mm) 152 | S.P.M. 90 | PUMP NO. 2 LINER SIZE (mm) 152 | S.P.M. 80

REDUCED PUMP SPEED 3060 @ 95 @ 924.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
890.64	11	327.60

DRILLER SIGNATURE: Wade Goddard

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	13:15	5.25	22	Wait on M.W.D. Surface Equipment
13:15	14:45	1.50	20	Dir. Work/Install New M.W.D. Surface Equipment and Test
14:45	15:00	0.25	6	R.I.H. Wash fr/910m to Stm., 0m Fill
15:00	15:15	0.25	7	Rig Service and Function HCR 3/5
15:15	16:15	0.25	10	M.W.D. Survey
15:30	16:00	0.50	2	Drill fr920m-924m

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	97000.00		

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-629-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-649	Murray McBain	12.00	MM	☐	☑
Motorman	851-388-664	Jesse Goddard	12.00	JG	☐	☑
Floorman	365-422-253	Rory Mitchell	12.00	RM	☐	☑
Floorman	730-040-896	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	12.00	DS	☐	☑

EVENING TOUR

BIT RECORD

	O.D. (mm)	LENGTH (m)
bit	311	0.30
	241	14.92
	241	10.80
	227	19.49
	220	9.46
Shock Sub	240	2.96
	229	83.67
	234	6.83
Bell Sub	224	1.17
	167	26.55
	127	56.40
D.P.		732.32
D.P.		0.00
		-3.86
TOTAL		963.00

BIT NO. 7 | SIZE 311 | IADC CODE 6 1 7 | MFG H.C. | TYPE HR-S44 | SERIAL NO 6026393 | JETS 22.2 22.2 22.2 | DEPTH OUT (m) 963.00 | TOTAL HOURS RUN 46.00 | TOTAL HOURS DRILLED ON 8.25 | OUTER STRUCTURE 2 | B | GAUGE | LOC | BEARING SEALS | GAUGE PROTECT | OTHER CONDITION

HOLE CONDITION
HOLE DRAG 3-4 Kdan
TORQUE AT BOTTOM 36000.00
FILL ON BOTTOM (m) 90000.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	
TIME	16:00	21:00	23:00
DEPTH (m)	1059	1056	1056
DENSITY (kg/m³)	46	50	55
FUNNEL VIS. (s/L)			
W.L. (cm3)			
pH	10.0	10.0	10.0
P.V.T. @	139 m3	146.5m3	137.3m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Caustic Soda	2 sacks
Milgel	10 sacks

SOLIDS CONTROL

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	SLIDE R.P.M.
924.00	963.00	D	15/130	15-20

CIRCULATION PRESSURE (KPA) 10500 | PUMP NO. 1 LINER SIZE (mm) 152 | S.P.M. 90 | PUMP NO. 2 LINER SIZE (mm) 152 | S.P.M. 90

REDUCED PUMP SPEED 3116 @ 90 @ 947.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
911.00	11.4	330.40
930.29	13.4	328.00

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	22:45	6.75	2	Drill fr924m- 963m
22:45	23:45	1.00	10	Accumulated M.W.D. Survey
23:45	24:00	0.25	7	Rig Service & Function Pipe Rams 5/5 Secs

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	101000.00		

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	718-324-181	Bill Mills	4.00	BM	☐	☑
Derrickman	629-926-282	Rob Roth	4.00	RR	☐	☑
Motorman	852-342-416	Jonathan Greeve	4.00	JG	☐	☑
Floorman	736-771-544	Matt Fudurick	4.00	MF	☐	☑
Floorman	120-936-422	Pierre Gallant	4.00	PG	☐	☑
Leaseman	734-555-212	Adam Clift	4.00	AC	☐	☑

ETS SERIAL NUMBER: PREC620_20041119_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

CAODC

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO.	22
AFE	
LICENCE NO	MC-7
WELL NAME AND NO	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig
DATE	20-Dec-2004
RIG NO	620 E
FUEL @ 8:00 – RIG	29289
TEMPERATURE	-4
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Good

WELL TYPE	Geothermal
RE-ENTRY	☐ Yes ☑ No
KB TO GROUND ELEV	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	20-Dec-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO	620 E
PROVINCE	BC
CAMP	☑ Yes ☐ No
RIG SAFETY DAYS	265.00

LAST CASING, TUBING OR LINER

GRADE	KB TO CSG HEAD (m)	SET AT (m)
	6.31	129.00
L-80	8.23	870.00

Drill pipe size	Nominal mass	Grade	Min ID	Tool jt O.D.	Thread type	No. of joints	Pump type	Pump manufactured	Stroke
	29.00	SS-95	83.00	166.00	5"XH	170	PB-1600	BPMMP X 152mm	305
	38.00	SS-95	67.00	165.00	6"XH	160	PB-1600	BPMMP X152mm	305

SHALE SHAKER(S): No. 2, Type Derrick. Screens changed ☐ Yes ☑ No. Top 60 / 60; Middle 80 / 60; Bottom 80 / 60.

TIME – HRS

OPER	2	5	6	7	10	22	23	24
MORN	7.00			0.25	0.75			
DAY	4.00	0.50	3.25	0.25				
EVE			3.00	0.25		3.00	0.25	1.50
TOTAL	11.00	0.50	6.25	0.75	0.75	3.00	0.25	1.50

MORNING TOUR (0:00 to 8:00)

Drill string

No.	Item	O.D. (mm)	Length
1	bit	311	0.30
1		241	14.92
1		241	10.60
1		227	19.49
1		228	9.46
1	Shock Sub	240	2.95
9		220	83.87
1		234	8.83
1	Bell Sub	224	1.17
3		167	26.86
6		127	56.40
27	D.P. Stands		760.47
2	D.P. Singles		18.76
	Kelly down		0.00
	Total		1013.76
	Wt of DC		36000.00
	Wt of string		101080.00

BIT RECORD: Bit No 7; Size 311; IADC code 6 1 7; Mfg. H.C.; Type HR-S44; Serial No. 6026393; Depth out 997.00; Depth in 917.00; Total metres drilled 80.00; Total hours run 15.25.

HOLE CONDITION: Hole drag 4-5 kdan; Torque at bottom 5836 ft/lbs; Fill on bottom (m).

MUD RECORD: Mud type ☑ Oil based; Flowline Temp = 48c

Time	02:00	04:00	08:00
Density	1086	1080	1085
Funnel vis	53	51	45
W.L. (cm3)			
pH	10.0	10.5	10.0
PVT	140.5m3	143.5m3	142.5m3

Mud material added: Caustic Soda 5 sks; Hydrated Lime 3 sks; Milpac 2 sks; Gel 28 sks; Humalite 40 sks; Defoamer LD-8 1 pl; Milgel 35 sks; Desco 5 sks.

METERS DRILLED: From 983.00 To 997.00 D 15/130 18-20

Circulation pressure 11500; Pump No. 1: 152 / 90; Pump No. 2: 152 / 90. Reduced pump speed: 3116 @ 90 @ 994.00.

Deviation survey

Depth (m)	Deviation (o)	Direction
948.90	16	327.90
958.30	18	328.30
967.70	16.7	329.70
977.10	17.4	330.70

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Hrs	Code	Details
0:00	7:00	7.00	2	Drill Fr/983m-997m
7:00	7:15	0.25	7	Rig Service & Function Annular 23/23 Secs
7:15	8:00	0.75	10	Accumulated M.W.D Deviation Surveys

Driller signature: Bill Mills. Max exp hookload 102000.00.

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	716-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	829-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	652-342-418	Jonathan Greeve	8.00	JG	☐	☑
Floorman	736-771-544	Matt Fudurick	8.00	MF	☐	☑
Floorman	120-936-422	Pierre Gallant	8.00	PG	☐	☑
Leaseman	734-555-212	Adam Clift	8.00	AC	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	636-877-702	Sheldon Langley		SL	☐	☑

Rate schedule: ☑ Regular

DAY TOUR (8:00 to 16:00)

Drill string

No.	Item	O.D. (mm)	Length
1	bit	311	0.30
1		241	14.92
1		241	10.60
1		227	19.49
1		220	9.46
1	Shock Sub	240	2.95
8		220	83.87
1		234	8.83
1	Bell Sub	224	1.17
3		167	26.65
9		127	58.40
28	D.P. Stands		788.59
1	D.P. Singles		9.33
	Kelly down		0.00
	Total		1017.00
	Wt of DC		38000.00
	Wt of string		93000.00

BIT RECORD: Bit No. 7; Size 311; IADC code 6 1 7; Mfg. H.C.; Type HR-S44; Serial No 6026393; Depth out 1017.00; Depth in 917.00; Total metres drilled 100.00; Total hours run 19.25.

HOLE CONDITION: Hole drag 4-6 Dan up/Down(Rotate); Torque at bottom 6903 ft/lbs.

MUD RECORD: Mud type ☑ Water based; Flowline Temp = 44.5

Time	09:00	12:00
Density	1060	1066
Funnel vis	44	45
W.L. (cm3)		
pH	10.0	10.0
PVT	130 m3	133.8 m3

Mud material added: Milgel 57 sacks; Hydrated Lime 3 sacks; Humalite 40 sacks; Milpac 3 sacks; Caustic Soda 3 sacks; Defoamer LD-8 1 pail.

METERS DRILLED: From 997.00 To 1017.00 D 15/130 18-20

Circulation pressure 12200; Pump No. 1: 152 / 90; Pump No. 2: 152 / 90. Reduced pump speed: 3044 @ 91 @ 1012.00.

Depth (m)	Deviation (o)	Direction
986.39	18	330.40
995.64	18.3	329.30

From	To	Hrs	Code	Details
8:00	10:45	2.75	2	Drill fr/997m-1013m
10:45	11:00	0.25	7	Rig Service and Function Pipe Ram's 7/7
11:00	12:15	1.25	2	Drill fr/1013m-1017m
12:15	12:45	0.50	5	Circulate Hole Clean
12:45	16:00	3.25	6	Flow Check @ 1004m,P.O.O.H., Flow Check's @ 845m,263m,Out

Driller signature: Wade Goddard. Max exp hookload 104000.00.

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	633-628-708	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	12.00	MM	☐	☑
Motorman	551-366-064	Jesse Goddard	12.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	12.00	RM	☐	☑
Floorman	730-040-898	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	12.00	DS	☐	☑

Rate schedule: ☑ Regular

EVENING TOUR (16:00 to 24:00)

Drill string: 4 | 127 | 37.68

BIT RECORD: Bit No. 7; Size 311; IADC code 6 1 7; Mfg H.C.; Type HR-S44; Serial No 6026393; Depth out 1017.00; Depth in 917.00; Total metres drilled 100.00; Total hours run 19.25.

Drill string: 4 D.P. Stands 957.48; 2 D.P. Singles 18.75; Kelly down 0.00; Total 1013.91. Wt of string 50000.00.

MUD RECORD: Mud type ☑ Water based. Mud material added: Milgel 20 sacks.

METERS DRILLED: From 1017.00. Pump No. 1: 152; Pump No. 2: 152.

From	To	Hrs	Code	Details
16:00	18:45	2.75	6	P/U 17 Jts. D.P.,and R.I.H. Open Ended to 960m
18:45	21:45	3.00	22	(Build 30 m3 CottonSeed Hull Pill)
21:45	22:00	0.25	6	Finish In Hole To 1013m
22:00	22:15	0.25	23	(Pump CottonSeed Hull Pill)
22:15	23:45	1.50	24	(Wait For LCM Pill To Soak)
23:45	24:00	0.25	7	Rig Service & Function H.C.R. 5/5 Secs

Driller signature: Bill Mills

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	716-324-181	Bill Mills	4.00	BM	☐	☑
Derrickman	829-926-262	Rob Roth	4.00	RR	☐	☑
Motorman	652-342-416	Jonathan Greeve	4.00	JG	☐	☑
Floorman	736-771-544	Matt Fudurick	4.00	MF	☐	☑
Floorman	120-936-422	Pierre Gallant	4.00	PG	☐	☑
Leaseman	734-558-212	Adam Clift	4.00	AC	☐	☑

Rate schedule: ☑ Regular

ETS SERIAL NUMBER: PREC620_20041120_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

WELL TYPE: Geothermal	RE-ENTRY: ☐ YES ☑ NO	KB TO GROUND ELEV: 7.20	
WELL NAME & No.: a-92-A / 92-J-12 MC-7		DATE: 21-DEC-2004	
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling		
RIG MANAGER: Kevin Vig		RIG NO: 620 E	
PROVINCE: BC	CAMP: ☑ YES ☐ NO	RIG SAFETY DAYS: 296.00	

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	652-342-416	Jonathan Greeve	8.00	JG	☐	☑
Floorman	738-771-544	Matt Fudurick	8.00	MF	☐	☑
Floorman	120-936-422	Pierre Gallant	8.00	PG	☐	☑
Leaseman	734-555-212	Adam Clift	8.00	AC	☐	☑
Rig Manager	719-489-484	Kevin Vig		KV	☐	☐
Top Drive	638-977-702	Sheldon Langley		SL	☐	☐

RATE SCHEDULE: ☑ MANUAL ☐ REPEAT ☐ INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-628-708	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-472-849	Murray McBain	12.00	MM	☐	☑
Motorman	651-366-084	Jesse Goddard	12.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	12.00	RM	☐	☑
Floorman	730-040-996	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	12.00	DS	☐	☑

RATE SCHEDULE: ☑ MANUAL ☐ REPEAT ☐ INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	4.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	4.00	RR	☐	☑
Motorman	652-342-416	Jonathan Greeve	4.00	JG	☐	☑
Floorman	738-771-544	Matt Fudurick	4.00	MF	☐	☑
Floorman	120-936-422	Pierre Gallant	4.00	PG	☐	☑
Leaseman	734-555-212	Adam Clift	4.00	AC	☐	☑

RATE SCHEDULE: ☑ MANUAL ☐ REPEAT ☐ INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

E* S SERIAL NUMBER: PREC620_20041121_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

2004-11-30 20:00	RIG RELEASE	JOB NO. 22	AFE
LICENCE NO. AC-7	WELL NAME AND NO. 8-92-A / 92-J-12 MC-7		
OPERATOR Western Geopower Corp		CONTRACTOR Precision Drilling	
SURFACE LOCATION 8-92-A / 92-J-12		UNIQUE ID 8-1-H / 92-J-12	
SIGNATURE OF OPERATOR'S REPRESENTATIVE Kevin Sirvs		SIGNATURE OF CONTRACTOR'S REPRESENTATIVE Kevin Vig	

DAILY CHECKS

DATE 22-Dec-2004 | RIG NO 620 E | FUEL 68 m³ | Rig 31800 BOILER

WEATHER: TEMPERATURE -6 | CURRENT CONDITION Clear | WIND DIRECTION Calm | ROAD Good

CASING TUBING OR LINER	O.D. in/mm	WEIGHT kg/m	GRADE	NAME	BRAND	NO. OF JOINTS	TOTAL JNT LENGTH	RE-TO CAS THERMO	SET AT (m)
								6.31	129.00
					L-80			8.23	870.00

HOOK PKG	LIMITED RANGE (kg/m)	GRADE	MIN. ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP Make/Model/Type	STROKE LTH. (mm)
	29.00	SS-95	63.00	168.00	5"XH	170	FB-1800	BPM6P X 152mm	305
	38.00	SS-95	57.00	168.00	5"XH	160	FB -1800	BPM6P X152mm	305

TIME HRS

	OPER	REPAIR	RIG SERV	REAMING	CIRC	TRIPS	SURVEY	DRILL ACT	OTHER	TOTAL
MIDNIGHT										
DAY	7.25					0.75				8.00
EVE	7.25					0.25				8.00
TOTAL	21.75					0.75				1.50

SHALE SHAKER(S) | RENTAL SERVICES

	NO.	TYPE	MFR
	1	Derrick	

SCREENING CHANGED	YES / NO
TOP	50
MIDDLE	50
BOTTOM	50

BIT RECORD

	BIT	O.D. (mm)	METERS
1	bit	311	0.30
1		241	14.92
1		241	10.60
1		227	19.49
1		220	9.46
1	Shock Sub	240	2.95
9		220	83.67
1		234	8.83
1	Bell Sub	224	1.17
3		167	26.65
6		127	56.40
35	D/P	114mm/dp	972.66
1	D/P	89mm/dp	9.46
			-5.75
	TOTAL		1111.00
	DP DC		36000.00
	DP STRING		95000.00

BIT NO. 7 | SIZE 311 | IADC CODE 6 1 7 | MFG H.C. | TYPE HR-S44 | SERIAL NO. 9026393 | JETS 22 | DEPTH IN (m) 917.00 | TOTAL METERS DRILLED (m) 194.00 | TOTAL HOURS RUN 39.00 | OUTER WEAR | INNER WEAR | T | B | GAUGE | LOC | BEARING / SEAL | GAUGE

HOLE CONDITION

HOLE DRAG	5-6 KdaN (Sliding)
TORQUE AT BOTTOM	7521 ft/lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Water Based | Oil Based | Gas Based | Flowline Temp = 46 C

TIME	02:00	04:00	08:00
Density (kg/m³)	1050	1060	1060
Funnel vis. (s/L)	48	48	48
W.L. (cm3)			
pH	9.5	9.5	10.0
PV/YP	133.2m3	136.3m3	141.m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Gel	120 sks
Ligco	30 sks
Humalite	5 sks
Milpac	3 sks
Hydrated Lime	3 sks
Caustic Soda	5 sks
Defoamer LD-8	1 pl

SOLIDS CONTROL

	HOURS RUN	MFR	MODEL	SCREEN SIZE

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	WT. (kN)
1078.00	1111.00	D	15/130	19-20

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 SPM | PUMP NO. 2 SPM

11590	152	90	152	90

REDUCED PUMP SPEED

3458		90		1094.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1081.30	23.6	330.40
1050.90	23.9	328.60
1089.40	24.3	329.90

TIME LOG

		HOURS	CODE
0:00	4:00	4.00	2
4:00	4:15	0.25	7
4:15	7:30	3.25	2
7:30	8:00	0.50	10

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill Frt 1079m-1086m
Rig Service & Function Annular 24/24 Secs
Drill Fr/1086m-1111m
Accumulated M.W.D. Deviation Surveys

NOTES

DRILLER SIGNATURE: Bill Mills

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	108000.00		

MORNING TOUR 0:00 TO 8:00

RATE SCHEDULE: REGULAR | REPAIR | PROJECT

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	8.00	BM		
Derrickman	629-926-282	Rob Roth	8.00	RR		
Motorman	852-342-416	Jonathan Greave	8.00	JG		
Floorman	738-771-544	Matt Fudurick	8.00	MF		
Floorman	120-838-422	Pierre Gallant	8.00	PG		
Leaseman	734-555-212	Adam Clift	8.00	AC		
Rig Manager	719-408-484	Kevin Vig		KV		
Top Drive	638-977-702	Sheldon Langley		SL		

DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

	BIT	O.D. (mm)	METERS
1	bit	311	0.30
1		241	14.92
1		241	10.60
1		227	19.49
1		220	9.46
1	Shock Sub	240	2.95
9		220	83.67
1		234	8.83
1	Bell Sub	224	1.17
3		167	26.65
6		127	56.40
32	D/P	114mm/dp	900.91
2	D/P	89mm/dp	18.74
			0.00
	TOTAL		1154.23
	DP DC		36000.00
	DP STRING		95000.00

BIT NO. 7 | SIZE 311 | IADC CODE 6 1 7 | MFG H.C. | TYPE HR-S44 | SERIAL NO. 9026393 | JETS 22 | DEPTH IN (m) 917.00 | TOTAL METERS DRILLED (m) 237.00 | TOTAL HOURS RUN 46.25 | OUTER WEAR | INNER WEAR | T | B | GAUGE | LOC | BEARING / SEAL | GAUGE

HOLE CONDITION

HOLE DRAG	6-7 Cats Up/Down (Rotate)
TORQUE AT BOTTOM	7745 ft/lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Water Based | Oil Based | Gas Based | Flowline Temp = 61.6

TIME	09:00	12:00	16:00
Density (kg/m³)	1055	1055	1050
Funnel vis. (s/L)	44	40	46
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	145 m3	148.5 m3	141.4 m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Caustic Soda	2 sacks
Defoamer LD-8	1 pail
Humalite	40 sacks
Hydrated Lime	5 sacks
Milgel	25 sacks
Milpac	3 sacks

SOLIDS CONTROL

	HOURS RUN	MFR	MODEL	SCREEN SIZE

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	WT. (kN)
1111.00	1147.00	D	15/130	19-20

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 SPM | PUMP NO. 2 SPM

12360	152	90	152	90

REDUCED PUMP SPEED

5310		90		1134.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1098.50	24.8	329.50
1107.30	25	329.00
1117.40	26.2	327.90
1128.90	26.6	328.30

TIME LOG

		HOURS	CODE
8:00	12:45	4.75	2
12:45	13:00	0.25	7
13:00	15:30	2.50	2
15:30	16:00	0.50	10

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill f/1111m-1135m
Rig Service and Function Pipe Ram's 3/6
Drill f/1135m-1147m
Accumulated M.W.D. Survey's

NOTES

DRILLER SIGNATURE: Wade Goddard

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	110000.00		

DAY TOUR 8:00 TO 16:00

RATE SCHEDULE: REGULAR | REPAIR | PROJECT

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-626-708	Wade Goddard	12.00	WG		
Derrickman	842-872-949	Murray McBain	12.00	MM		
Motorman	651-396-954	Jesse Goddard	12.00	JG		
Floorman	505-422-283	Rory Mitchell	12.00	RM		
Floorman	730-046-898	Nathan Schwandt	12.00	NS		
Leaseman	729-975-003	Daniel Sampson	12.00	DS		

DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

	BIT	O.D. (mm)	METERS
1	bit	311	0.30
1		241	14.92
1		241	10.60
1		227	19.49
1		220	9.46
1	Shock Sub	240	2.95
9		220	83.67
1		234	8.83
1	Bell Sub	224	1.17
3		167	26.58
6		127	68.40
34	D/P	STANDS	967.08
0	D/P	SINGLES	0.00
			-14.62
	TOTAL		1177.00
	DP DC		36000.00
	DP STRING		95000.00

BIT NO. 7 | SIZE 311 | IADC CODE 6 1 7 | MFG H.C. | TYPE HR-S44 | SERIAL NO. 9026393 | JETS 22 | DEPTH IN (m) 917.00 | TOTAL METERS DRILLED (m) 260.00 | TOTAL HOURS RUN 53.50 | OUTER WEAR | INNER WEAR | T | B | GAUGE | LOC | BEARING / SEAL | GAUGE

HOLE CONDITION

HOLE DRAG	5-6 KdaN (Sliding)
TORQUE AT BOTTOM	7745 ft/lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Water Based | Oil Based | Gas Based | Flowline Temp =

TIME	18:00	21:00	23:00
Density (kg/m³)	1050	1060	1060
Funnel vis. (s/L)	48	46	53
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	136.3 m3	132.8m3	133.6m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Milgel	15 sacks

SOLIDS CONTROL

	HOURS RUN	MFR	MODEL	SCREEN SIZE

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	WT. (kN)
1147.00	1177.00	D	15/130	19-20

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 SPM | PUMP NO. 2 SPM

11600	152	90	152	90

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1136.10	26.5	328.30
1154.90	27.3	328.30

TIME LOG

		HOURS	CODE
16:00	23:15	7.25	2
23:15	23:30	0.25	7
23:30	24:00	0.50	10

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill frt 1147m-1177m
Rig Service & Function H.C.R. 4/4 Secs
Accumulated M.W.D. Deviation Surveys

NOTES

DRILLER SIGNATURE: Bill Mills

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.

EVENING TOUR 16:00 TO 24:00

RATE SCHEDULE: REGULAR | REPAIR | PROJECT

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	4.00	BM		
Derrickman	629-926-282	Rob Roth	4.00	RR		
Motorman	852-342-416	Jonathan Greave	4.00	JG		
Floorman	738-771-544	Matt Fudurick	4.00	MF		
Floorman	120-838-422	Pierre Gallant	4.00	PG		
Leaseman	734-555-212	Adam Clift	4.00	AC		

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20041122_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | TOOL NO.: 22 | AFE

LICENCE NO: MC-7 | WELL NAME AND NO: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 23-Dec-2004 | RIG NO.: 620 E | FUEL (@ 6:00): RIG 37984 BOILER

WEATHER: TEMPERATURE: CURRENT Cloudy | WIND DIRECTION Calm | ROAD Good

LAST CASING TUBING OR LINER

O.D. (mm)	WEIGHT (kg/m)	GRADE	NO OF JOINTS	TOTAL PIPE LENGTH	KB TO CSG HEADING
				6.31	128.00
		L-80		6.23	879.00

TIME LOG

CREW	00:00	06:00	12:00	18:00	24:00	TOTAL
WORK	2.50		6.50	4.75	0.25	
DRL	3.75	9.25		4.00	9.25	0.25
EVE	7.00				4.25	0.50
TOTAL	12.25	9.25	6.50	8.75	9.00	1.00

SHALE SHAKER(S) | RENTAL S/S SERVICES

NO.	TYPE	MESH
1	Derrick	
2		

SCREENS CHANGED: YES / NO

	TOP	MIDDLE	BOTTOM
8.60	80	80	80
8.60	80	80	80
8.60	80	80	80
24.00	80	80	80

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1		241	14.92
1		241	10.66
1		227	19.49
1		220	9.46
1	Shock Sub	240	2.98
9		220	83.67
1		234	0.83
1	Bell Sub	224	1.17
3		187	28.56
6		127	56.40
34	D.P.		967.04
0	D.P.		0.00
	HELL TOOWN		-3.12
	TOTAL		1186.50
	# OF DC		36000.00
	# OF STRING		95000.00

	7	8
BIT NO.	7	8
SIZE	311	311
IADC CODE	6 1 7	6 1 7
MFG	H.C.	H.C.
TYPE	HR-S44	HR-S44
SERIAL NO	9026393	6027135
JETS	15 15 15	
DEPTH OUT (m)	1186.00	
TOTAL METERS DRILLED (m)	271.90	
TOTAL HOURS RUN	56.00	
DULL CONDITION	C	
LOC	A	
BEARING/SEAL CONDITION	E	
GAUGE	2	
OTHER	NO	
REASON PULLED	Hrs.	4.83

HOLE CONDITION

HOLE DRAG	5-7 Kdan(55klbs)
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flowline Temp = 82 C
TIME	03:00		03:00
Density kg/m3	1060		1050
Funnel Vis. (s)	61		62
W.L. (cm3)			
pH	10.0		10.0
PV/YP	137.7m3		133.4m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT
Gel	80 sks
Caustic Soda	3 sks
Defoamer LD-9	1 pl
Hydrated Lime	8 sks
Humalite	50 sks
Milpac	4 sks

METERS DRILLED

FROM	TO	M	BIT	ROTARY R.P.M.	WT. ON BIT
1177.00	1186.00	D	1R/1G	15-20	

CIRCULATION PRESSURE | PUMP NO.1 | PUMP NO.2

LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
11500	152	90	152

REDUCED PUMP SPEED

3134	@	90	@ 1187.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (m)	DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HRS	CODE	CUM. HRS	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	2:30	2.50	2	2.50	Drill f/1177-1186m
2:30	3:00	0.50	6	3.00	Circulate Hole Clean
3:00	3:15	0.25	10	3.25	M.W.D. Deviation Survey
3:15	8:00	4.75	5	8.00	Pull Out Of Hole & Flow Checks @ 1187m, 1107m, 824m, 237m, 0

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.S.P.

8.00 | 9.5 | 120000.00

MORNING TOUR 0:00 to 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	8.00	BM	☑
Derrickman	629-825-262	Rob Roth	8.00	RR	☑
Motorman	852-342-416	Jonathan Greave	8.00	JG	☑
Floorman	736-771-544	Matt Fudurick	8.00	MF	☑
Floorman	720-936-422	Pierre Gallant	8.00	PG	☑
Leaseman	734-555-212	Adam Cliff	8.00	AC	☑
Rig Manager	719-409-484	Kevin Vig		KV	
Top Drive	638-977-702	Sheldon Langley	0.50	SL	☑

RATE SCHEDULE: ☑ MORNING | EVENING | NIGHT

DRIVER A: | CREW SAFETY DAYS | DRIVER B:

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit/Motor	311	11.18
1		220	5.61
1		241	10.85
1		227	19.49
1		220	9.46
1	Shock Sub	240	3.09
9		220	83.67
1		234	0.83
1	Bell Sub	224	1.17
3		187	28.56
6		127	56.40
34	D.P.		967.04
2	D.P.		16.65
	HELL TOOWN		0.00
	TOTAL		1211.98
	# OF DC		36000.00
	# OF STRING		95000.00

	8
BIT NO.	8
SIZE	311
IADC CODE	6 1 7
MFG	H.C.
TYPE	HR-S44
SERIAL NO	6027135
JETS	
DEPTH OUT (m)	
TOTAL METERS DRILLED (m)	14.60
TOTAL HOURS RUN	2.75
DULL CONDITION	
LOC	
BEARING/SEAL CONDITION	
GAUGE	
OTHER	
REASON PULLED	

HOLE CONDITION

HOLE DRAG	8-11Up/8-9Down(Rotate)
TORQUE AT BOTTOM	9429 ft/lbs.
FILL ON BOTTOM (m)	1.50

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flowline Temp = 46.7 C
TIME	13:00		15:00
Density kg/m3	1050		1050
Funnel Vis. (s)	53		43
W.L. (cm3)			
pH	10.0		10.0
PV/YP			137.3m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT
Gel	37 sks
Caustic Soda	3 sks
Milpac	2 sks
Humalite	20 sks

METERS DRILLED

FROM	TO	M	BIT	ROTARY R.P.M.	WT. ON BIT
1158.00	1202.00	D	1R/1G	18-20	

CIRCULATION PRESSURE | PUMP NO.1 | PUMP NO.2

LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
12250	152	90	152

REDUCED PUMP SPEED

3150	@	90	@ 1202.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (m)	DIRECTION
1173.20	28.3	329.60

NOTES

DRILLER SIGNATURE: Wade Goddard

TIME LOG

FROM	TO	HRS	CODE	CUM. HRS	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	0.25	6	0.25	P.O.O.H., Flow Check Out
8:15	8:30	0.25	7	0.50	Rig Service and Function Blind Ram's 8/8
8:30	9:00	0.50	20	1.00	Install Stab on Motor,P/U NorTrak Stab,Set Angle to 1.1 Deg.
9:00	12:45	3.75	5	4.75	M/U Bit#8,B.H.A.,P/U New Shock Sub,R.I.H.,Fill Pipe,Flow Check,Test M.W.D. @ 881m
12:45	13:00	0.25	3	5.00	Wash f/1163m to Btm., 1.5m Fill
13:00	14:15	1.25	2	6.25	Pattern Bit and Drill f/1186m-1194m
14:15	14:30	0.25	10	6.50	M.W.D. Survey
14:30	16:00	1.50	2	8.00	Drill f/1194m-1202m

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.S.P.

8.00 | 9.5 | 119000.00

DAY TOUR 8:00 to 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	833-628-708	Wade Goddard	8.00	WG	☑
Derrickman	842-872-840	Murray McBain	8.00	MM	☑
Motorman	851-356-064	Jesse Goddard	8.00	JG	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☑
Floorman	730-040-896	Nathan Schwandt	8.00	NS	☑
Leaseman	729-975-093	Daniel Sampson	8.00	DS	☑
Floorman	852-342-416	Jonathan Greave	8.00	JG	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☑

RATE SCHEDULE: ☑ MORNING | EVENING | NIGHT

DRIVER A: | CREW SAFETY DAYS: | DRIVER B:

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit/Motor	311	11.18
1		226	5.61
1		241	10.80
1		227	19.49
1		220	9.46
1	Shock Sub	240	3.09
9		220	83.67
1		234	0.83
1	Bell Sub	224	1.17
3		187	26.56
6		127	56.40
36	D.P.		1013.23
0	D.P.		0.00
	HELL TOOWN		-15.48
	TOTAL		1232.00
	# OF DC		36000.00
	# OF STRING		97000.00

	8
BIT NO.	8
SIZE	311
IADC CODE	6 1 7
MFG	H.C.
TYPE	HR-S44
SERIAL NO	6027135
JETS	
DEPTH OUT (m)	1186.00
TOTAL METERS DRILLED (m)	44.00
TOTAL HOURS RUN	9.76
DULL CONDITION	
LOC	
BEARING/SEAL CONDITION	
GAUGE	
OTHER	
REASON PULLED	

HOLE CONDITION

HOLE DRAG	13000 up/10000 dwn
TORQUE AT BOTTOM	9822 ft-lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flowline Temp = 52.8
TIME	15:00	21:00	23:00
Density kg/m3	1045	1040	1040
Funnel Vis. (s)	43	44	46
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	137.8m3	140.3m3	141.8m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT
Caustic Soda	5sks.
Defoamer LD-9	1 pail
Humalite	50sks.
Hydrated Lime	6sks.
Natural Gel	33sks.
Milpac	4sks.

HOURS RUN	5.00	1040	1030

METERS DRILLED

FROM	TO	M	BIT	ROTARY R.P.M.	WT. ON BIT
1202.00	1232.00	D	1R	18-20	

CIRCULATION PRESSURE | PUMP NO.1 | PUMP NO.2

LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
11300	152	90	152

REDUCED PUMP SPEED

3900	@	90	@ 1210.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (m)	DIRECTION
1188.70	28.9	326.60
1208.60	29.1	327.90

NOTES

DRILLER SIGNATURE: Barry Verheist

TIME LOG

FROM	TO	HRS	CODE	CUM. HRS	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	16:15	0.25	2	0.25	Drill fr. 1202m - 1211m
16:15	16:30	0.25	7	0.50	Rig Service, F/T Annular(22 secs)
16:30	16:45	0.25	21	0.75	B.O.P. drill w/crew, well secure & diverted in 56 secs
16:45	23:30	4.75	2	5.50	Drill fr. 1211m - 1232m
23:30	24:00	0.50	10	6.00	Deviation Surveys(Accum.)

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.S.P.

8.00 | 9.1 | 114000.00 | New Hires

EVENING TOUR 16:00 to 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	842-389-916	Barry Verheist	8.00	BV	☑
Derrickman	847-452-903	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	713-659-461	Gary Kennedy	8.00	GK	☑
Floorman	726-807-799	Cory Kube	8.00	CK	☑
Leaseman	739-300-048	Justin Craigen	8.00	JC	☑
Top Drive	639-191-542	Dwayne Dixon	0.50	DD	☑

RATE SCHEDULE: ☑ MORNING | EVENING | NIGHT

DRIVER A: | CREW SAFETY DAYS: | DRIVER B:

E 'S SERIAL NUMBER: PREC620_20041123_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 22 | AFE

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-1-M / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 24-Dec-2004 | RIG NO: 620 E | FUEL ON RIG: 62827 BOILER

WEATHER: TEMPERATURE: Clear | WIND DIRECTION: Calm | ROAD: Good

LAST CASING / TUBING / IN LINER

O.D. (mm)	WALL TH.	GRADE	NAME	CONN.	NO. OF JOINTS	TOTAL LENGTH	KB TO END HEAD (m)	SET AT (m)
							6.31	129.00
				L-80			9.23	870.00

LINER SIZE (mm)	GRADE	WALL TH. (mm)	TOOL J.T.O.D. (mm)	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP MAKE/ MANUFACTURER	STROKE LTH (mm)
29.00	SS-95	53.00	168.00	5"XH	170	FB-1600	BPMMP X 152mm	305
36.00	SS-95	57.08	168.00	5"XH	150	FB -1900	BPMMP X152mm	305

SHALE SHAKER(S): No. 2 | TYPE: Derrick | NEW: No

SCREENS CHANGED	TOP	BOTTOM
6.00	60	80
6.00	70	90
6.00	60	80
24.00	80	90

RENTALS/SERVICES

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	Yes / No	7.20

WELL NAME & NO.: a-92-A / 92-J-12 MC-7 | DATE: 24-Dec-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO: 620 E

PROVINCE: BC | CAMP: Yes / No | RIG SAFETY DAYS: 299.00

TIME / HRS

CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
OPER	7.50					0.25																				
MORN						0.25																				
DAY	7.25					0.25																				
EVE	7.50					0.25																				
TOTAL	22.25					0.75																				

Top Drive: 0.25 | 0.25 | 0.25

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	BH/Motor	311	11.18
1		228	6.61
1		241	10.80
1		227	19.49
1		220	9.46
1	Shock Sub	240	3.09
9		220	83.67
1		234	8.83
1	Bell Sub	224	1.17
3		167	26.66
6		127	56.40
36	D/P	XT-NC50	1013.33
2	D/P	S-135	18.77
			0.00
	TOTAL		1258.00

BIT NO: 8 | SIZE: 311 | IADC CODE: 6 1 7 | MFG: H.C. | TYPE: HR-S44 | SERIAL NO.: 6027135 | JETS: 20 | 20 | 20 | DEPTH OUT (m): | DEPTH IN (m): 1168.00 | TOTAL METERS DRILLED (m): 66.00 | TOTAL HOURS RUN: 17.25

CUTTING STRUCTURE: I: 1 | O: 1 | DC: WT | LOC: S | B: | G: | OC: | REASON PULLED: TD

TOTAL HOURS RUN: 24.77 | HOLE CONDITION: 0.00

HOLE DRAG: 7-12Up/6-9Down(Rotate) | TORQUE AT BOTTOM: 9,822-17,402 ft/lbs. | FILL ON BOTTOM (m): 98000.00

MUD RECORD

MUD TYPE: Water Based | Oil Based | Flowline Temp = 52.6

TIME	02:00	04:00	06:00
DENSITY (kg/m3)	1050	1045	1040
FUNNEL VIS. (s)	51	47	48
W.L. (cm3)			
pH	10.5	10.5	10.5
PV/YP	136.1m3	136.5m3	137.2m3

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Defoamer/ Lo-s	1 pl
Milgel	35 pk's
Hydrated Lime	2 sks
Milpac	2 sks
Caustic Soda	1 pk
Nut Plug	10 sks
Humalite	40 sks

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (klbs)	HOURS
1232.00	1264.00	D	15-20	15-20	0:00
					4:15
					4:30
					4:45
					5:00

CIRCULATION PRESSURE | PUMP NO. 1: L/min (GPM) | S.P.M. | PUMP NO. 2: L/min (GPM) | S.P.M.

10750	152	90	152	90

REDUCED PUMP SPEED

4187	@	90	@	1264.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1237.10	29.3	327.20

TIME LOG

HOURS	FROM	TO	CODE	DURATION (hrs)
0:00	4:15	4.25	2	Drill fr/1232m-1248m
4:15	4:30	0.25	7	Rig Service and Function Annular 24/24
4:30	4:45	0.25	10	M.W.D. Survey
4:45	5:00	3.25	2	Drill fr/1248m-1254m

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS. ON BIT	HRS. ON JARS	STACK HRS.	OPERATOR FUEL	MAX BIT HOOKLOAD	SAFETY TOPIC	M.A.C.P.
9.00	9.5			116000.00		

MORNING TOUR 6:00 TO 18:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	8.00	WG	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☑
Motorman	651-366-064	Jesse Goddard	8.00	JG	☑
Floorman	682-342-415	Jonathan Greeve	8.00	JG	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐
Top Drive	639-191-842	Dwayne Dixon		DD	☑

RATE SCHEDULE: Regular / Repair | DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	BH/Motor	311	11.18
1		228	6.61
1		241	10.80
1		227	19.49
1		220	9.46
1	Shock Sub	240	3.09
9		220	83.67
1		234	8.83
1	Bell Sub	224	1.17
3		167	26.66
6		127	56.40
38	D/P	S135	1068.48
0	D/P	S-135	0.00
			-19.74
	TOTAL		1288.00

BIT NO: 8 | SIZE: 311 | IADC CODE: 6 1 7 | MFG: H.C. | TYPE: HR-S44 | SERIAL NO.: 6027135 | JETS: 20 | 20 | 20 | DEPTH OUT (m): | DEPTH IN (m): 1168.00 | TOTAL METERS DRILLED (m): 98.00 | TOTAL HOURS RUN: 24.50

CUTTING STRUCTURE: I: 1 | O: 1 | DC: WT | LOC: S | B: | G: | OC: | REASON PULLED: TD

HOLE CONDITION: 0.00

HOLE DRAG: 13000 up/10000dwn | TORQUE AT BOTTOM: 9822 -17402 ft-lbs | FILL ON BOTTOM (m): 98000.80

MUD RECORD

MUD TYPE: Water Based | Oil Based | Flowline Temp = 52.6

TIME	09:00	12:00	02:00
DENSITY (kg/m3)	1035	1040	1040
FUNNEL VIS. (s)	48	49	50
W.L. (cm3)			
pH	10.5	10.5	10.5
PV/YP	141m3	144m3	134.7m3

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Caustic Soda	1sks
Humalite	10sks.
Hydrated Lime	8sks.
Milpac	2sks.
Natural Gel	80sks.
Nut Plug	2sks.
Milgel	35sks.

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (klbs)	HOURS
1264.00	1286.00	D	20-30	10-18	8:00
					11:30
					12:00
					15:45
					16:45

CIRCULATION PRESSURE | PUMP NO. 1: L/min (GPM) | S.P.M. | PUMP NO. 2: L/min (GPM) | S.P.M.

10300	152	90	152	90

REDUCED PUMP SPEED

4100	@	90	@	1264.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1248.90	29.4	327.20

TIME LOG

HOURS	FROM	TO	CODE	DURATION (hrs)
8:00	11:30	3.50	2	Drill fr. 1254m - 1267m
11:30	11:45	0.25	22	Service (Top Drive)
11:45	12:00	0.25	10	Deviation Survey
12:00	15:45	3.75	2	Drill fr. 1267m - 1286m
15:45	16:00	0.25	7	Rig Service, F/T pipe rams(7 secs)

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE: Barry Verhelst

HRS. ON BIT	HRS. ON JARS	STACK HRS.	OPERATOR FUEL	MAX BIT HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.5			116000.00	Winter operations	

DAY TOUR 6:00 TO 18:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-010	Barry Verhelst	12.00	BV	☑
Derrickman	647-452-493	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	713-956-461	Gary Kennedy	12.00	GK	☑
Floorman	726-907-769	Cory Kube	12.00	CK	☑
Leaseman	739-300-089	Justin Craigen	12.00	JC	☑

RATE SCHEDULE: Regular / Repair | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	BH/Motor	311	11.18
1		228	6.61
1		241	10.80
1		227	19.49
1		220	9.46
1	Shock Sub	240	3.09
9		220	83.67
1		234	8.83
1	Bell Sub	224	1.17
3		167	26.66
6		127	56.40
38	D/P	S135	1068.48
2	D/P	S-135	18.77
			0.00
	TOTAL		1306.00

BIT NO: 8 | SIZE: 311 | IADC CODE: 6 1 7 | MFG: H.C. | TYPE: HR-S44 | SERIAL NO.: 6027135 | JETS: 20 | 20 | 20 | DEPTH OUT (m): | DEPTH IN (m): 1168.00 | TOTAL METERS DRILLED (m): 116.00 | TOTAL HOURS RUN: 32.00

CUTTING STRUCTURE: I: 1 | O: 1 | DC: WT | LOC: S | B: | G: | OC: | REASON PULLED: TD

HOLE CONDITION: 0.00

HOLE DRAG: 7-12Up/6-9Down(Rotate) | TORQUE AT BOTTOM: 9,822-21,613 ft/lbs. | FILL ON BOTTOM (m): 98000.00

MUD RECORD

MUD TYPE: Water Based | Oil Based | Flowline Temp = 52.6

TIME		21:00	23:00
DENSITY (kg/m3)		1060	1045
FUNNEL VIS. (s)		46	46
W.L. (cm3)			
pH		10.5	10.0
PV/YP		135.0m3	141.3m3

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (klbs)	HOURS
1286.00	1306.00	D	15-25	13-20	16:00
					16:15
					23:15
					23:30
					24:00

CIRCULATION PRESSURE | PUMP NO. 1: L/min (GPM) | S.P.M. | PUMP NO. 2: L/min (GPM) | S.P.M.

12450	152	109	152	109

REDUCED PUMP SPEED

3929	@	109	@	1306.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

HOURS	FROM	TO	CODE	DURATION (hrs)
16:00	16:15	0.25	10	Attempt to survey, MWD failure
16:15	23:15	7.00	2	Drill fr/1288m-1305m
23:15	23:30	0.25	7	Rig Service and Function HCR 3/3
23:30	24:00	0.50	2	Drill fr/1305m-1306m

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS. ON BIT	HRS. ON JARS	STACK HRS.	OPERATOR FUEL	MAX BIT HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.5			120000.00		

EVENING TOUR 18:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	4.00	WG	☑
Derrickman	629-926-262	Rob Roth	4.00	RR	☑
Motorman	651-366-064	Jesse Goddard	4.00	JG	☑
Floorman	682-342-415	Jonathan Greeve	4.00	JG	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☑
Leaseman	729-975-003	Daniel Sampson	4.00	DS	☑

RATE SCHEDULE: Regular / Repair | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

E 'S SERIAL NUMBER: PREC620_20041124_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00	RIG RELEASE:	JOB NO.: 22	AFE:
LICENCE NO.: MC-7	WELL NAME AND NO.: a-92-A / 92-J-12 MC-7		
OPERATOR: Western Geopower Corp		CONTRACTOR: Precision Drilling	
SURFACE LOCATION: a-92-A / 92-J-12		UNIQUE ID: b-1-H / 92-J-12	
SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva		SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig	

DATE	25-Dec-2004
RIG NO.	620 E
FUEL	RIG 17722
TEMPERATURE	-3
CURRENT CONDITION	Snow
WIND DIRECTION	Calm
ROAD	Slick

Last casing, tubing or liner								KB to CSG head (m)	Set at (m)
					L-80			6.31	129.00
								6.23	670.00

Liner size (mm)	Grade	Rod Ø (mm)	Tool Jt O.D. (mm)	Thread type	No. of joints	Pump type	Pump manufacturer	Stroke
29.00	SS-95	63.00	166.00	5"XH	170	FB-1600	BPMMP X 152mm	365
36.00	SS-95	67.00	168.00	5"XH	150	FB-1600	BPMMP X152mm	368

WELL TYPE	Geothermal
RE-ENTRY	☐ Yes ☑ No
KB TO GROUND ELEV	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	25-Dec-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ Yes ☐ No
RIG SAFETY DAYS	300.00

TIME - HRS

	Open	1	2	3	4	5	6	7	8	9	10	...	20	21	22
MORN			3.50			0.25	4.00	0.25							
DAY							4.25	0.25			0.25		3.00		0.25
EVE			7.25					0.25			0.50				
TOTAL			10.75			0.25	8.25	0.75			0.75		3.00		0.25

Shale Shaker(s)		
No. 2	Type: Derrick	New
Screens changed	☐ Yes	☑ No
Top	50	50
Middle	60	50
Bottom	80	80

RENTALS/SERVICES

Total: 8.00 / 8.00 / 8.00 / 24.00

MORNING TOUR (0:00 to 8:00)

Drill String Assembly / Bit Record / Mud Record

No.	Item	O.D. (mm)	Length (m)
1	Bit/Motor	311	11.16
1	[illegible]	228	8.61
1	[illegible]	241	10.80
1	MD / [illegible]	227	19.49
1	[illegible] Drill Collars	220	9.46
1	Shock Sub	240	3.09
9	Drill Collars	220	83.67
1	[illegible]	234	8.63
1	Bell Sub	224	1.17
3	Drill Collars	167	26.65
6	[illegible]	127	56.40
38	D.P.	Stands	1069.49
2	D.P.	Singles	18.77
	Kellydown		0.00
	Total		1314.00
	Wt. of DC		36000.00
	Wt. of String		98000.00

Bit Record	
BIT NO	8
SIZE	311
IADC CODE	5 1 7
MFG	H.C.
TYPE	HR-S44
SERIAL NO	6027135
JETS	28.5 / 28.5 / 28.5
DEPTH OUT (m)	1314.00
DEPTH IN (m)	1188.00
TOTAL METERS DRILLED (m)	126.00
TOTAL HOURS RUN	38.50
Dull grading	5 / 6 / FC / A / E / 3 / NO / TQ / 3.84
HOLE DRAG	1-13Up/6-10Down(Rotate)
TORQUE AT BOTTOM	10,949-20,213 ft/lbs.
FILL ON BOTTOM (m)	

Mud Record		
MUD TYPE	☑ Water based ☐ Oil based	Flowline Temp = 52.6
TIME	02:00	05:30
DENSITY	1060	1045
FUNNEL VIS	63	49
W.L. (cm3)		
pH	11.0	10.6
P.V.T. @	139.3m3	143.4m3

Mud Material Added: Product	Amount / Unit
Gel	50 sks
Defoamer LD-8	1 sk
Humalite	40 sks
Caustic Soda	2 sks
Nut Plug	30 sks
Milpac	4 sks
Hydrated Lime	6 sks

Solids control: Hours run 0.00

Meters Drilled

From	To	Rotary RPM	W.O.B.
1306.00	1314.00	D	13-18

Circulation pressure (kPa): 12150; Pump No. 1: 152, 100; Pump No. 2: 152, 100

Reduced pump speed: 3750 @ 100 @ 1314.00

Deviation survey: Depth (m) / Deviation / Direction — none

Time Log — Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
0:00	3:30	3.50	2	Drill fr/1306m-1314m
3:30	3:45	0.25	5	Circulate
3:45	4:00	0.25	7	Rig Service and Function Annular 24/24
4:00	8:00	4.00	6	Flow Check @ 1296m,Hoist Bit#8,Flow Check's @ 1182m,255m,Out

NOTES: [illegible]

Driller signature: Wade Goddard

Max. EDP hookload: 123000.00 — Safety topic: Weekend Awareness

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	633-628-706	Wade Goddard	8.00	WG	No
Derrickman	629-626-262	Rob Roth	8.00	RR	No
Motorman	651-368-064	Jesse Goddard	8.00	JG	No
Floorman	652-342-416	Jonathan Greeve	8.00	JG	No
Floorman	505-422-253	Rory Mitchell	8.00	RM	No
Leaseman	729-675-003	Daniel Sampson	8.00	DS	No
Rig Manager	719-409-484	Kevin Vig		KV	No
Top Drive	639-191-642	Dwayne Dixon		DD	No

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invert — DRIVER A / CREW SAFETY DAYS / DRIVER B

DAY TOUR (8:00 to 18:00)

No.	Item	O.D. (mm)	Length (m)
1	Bit/Motor	311	11.18
1	[illegible]	228	5.61
1	[illegible]	241	10.80
1	MD / [illegible]	227	19.49
1	Drill Collars	220	9.46
1	Shock Sub	240	3.09
9	Drill Collars	220	83.67
1	[illegible]	234	8.63
1	Bell Sub	224	1.17
3	Drill Collars	167	26.55
6	[illegible]	127	56.40
38	D.P.	Stands	1069.49
2	D.P.	Singles	18.77
	Kellydown		0.00
	Total		1324.61
	Wt. of DC		36000.00
	Wt. of String		98000.00

Bit Record	
BIT NO.	9
SIZE	311
IADC CODE	6 2 7
MFG	H.C.
TYPE	HR-S44C
SERIAL NO	6029768
JETS	22.2 / 22.2 / 22.2
DEPTH OUT (m)	
DEPTH IN (m)	1314.00
HOLE DRAG	13000 up/11000 dwn
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

Mud Record: MUD TYPE ☑ Water based ☐ Oil based — Flowline Temp = 52.6

From	To
1314.00	

Circulation pressure (kPa): 12400; Pump No. 1: 152, 90; Pump No. 2: 152, 90

Deviation survey: Depth (m)	Deviation	Direction
1284.60	29.5	327.90

From	To	Hrs	Code	Details
8:00	10:45	2.75	20	Change out MWD collar, Change bit, Move Nortrak stab, set M. Motor to 1 deg. & scibe.
10:45	13:45	3.00	6	R.I.H. to 874m
13:45	14:00	0.25	20	Shallow pulse test M.W.D.
14:00	14:15	0.25	22	Replace saver sub & Grabber die keepers
14:15	14:30	0.25	7	Rig Service F/T Annular(24 secs)
14:30	15:00	0.50	6	R.I.H. to 1243m
15:00	15:45	0.75	6	Break circ, wash & ream fr. 1243m - 1314m
15:45	16:00	0.25	10	Deviation Survey

NOTES: [illegible]

Driller signature: Barry Verheist

Max. EDP hookload: 113000.00 — Safety topic: Handling B.H.A.

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	642-389-910	Barry Verheist	12.00	BV	No
Derrickman	647-462-903	Dave Makowsky	12.00	DM	No
Motorman	735-714-230	Chantry Vig	12.00	CV	No
Floorman	713-958-461	Gary Kennedy	12.00	GK	No
Floorman	726-907-769	Cory Kube	12.00	CK	No
Leaseman	739-300-069	Justin Craigen	12.00	JC	No

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invert — DRIVER A / CREW SAFETY DAYS / DRIVER B

EVENING TOUR (18:00 to 24:00)

No.	Item	O.D. (mm)	Length (m)
1	Bit/Motor	311	11.18
1	[illegible]	228	5.61
1	[illegible]	241	10.80
1	MD / [illegible]	227	19.49
1	Drill Collars	220	9.46
1	Shock Sub	240	3.09
9	Drill Collars	220	83.87
1	[illegible]	224	8.83
1	Bell Sub	224	1.17
3	Drill Collars	167	26.56
6	[illegible]	127	56.40
40	D.P.	Stands	1126.76
0	D.P.	Singles	0.00
	Kellydown		0.00
	Total		1362.01
	Wt. of DC		35000.00
	Wt. of String		98000.00

Bit Record	
BIT NO	9
SIZE	311
IADC CODE	6 2 7
MFG.	H.C.
TYPE	HR-S44C
SERIAL NO	6029768
JETS	22.2 / 22.2 / 22.2
DEPTH OUT (m)	
DEPTH IN (m)	1314.00
TOTAL METERS DRILLED (m)	39.00
TOTAL HOURS RUN	7.25
HOLE DRAG	13-17Up/9-11Down(Rotate)
TORQUE AT BOTTOM	10,665-21,613 ft/lbs.
FILL ON BOTTOM (m)	

Mud Record			
MUD TYPE	☑ Water based ☐ Oil based	Flowline Temp = 52.6	
TIME	04:30	21:00	23:00
DENSITY	1040	1040	1045
FUNNEL VIS	48	46	48
W.L. (cm3)			
pH	10.6	10.6	10.6
PVT @	140.5m3	135.5m3	137.5m3

Mud Material Added: Product	Amount / Unit
Caustic Soda	3sks.
Humalite	5Ssks.
Hydrated Lime	6sks.
Milgel	29sks.
Milpac	5sks.
Natural Gel	40sks.

From	To	Rotary RPM	W.O.B.
1314.00	1353.00	D	15-20

Circulation pressure (kPa): 12780; Pump No. 1: 152, 90; Pump No. 2: 152, 90

Reduced pump speed: 3020 @ 90 @ 1340.00

Deviation survey: Depth (m)	Deviation	Direction
1302.20	29.8	326.30
1321.00	30.1	327.90

From	To	Hrs	Code	Details
16:00	17:45	1.75	2	Pattern bit & drill fr. 1314m - 1323m
17:45	18:00	0.25	10	Deviation Survey
18:00	21:00	3.00	2	Drill fr/1323m-1342m
21:00	21:15	0.25	7	Rig Service and Function Pipe Ram's 8/8
21:15	21:30	0.25	10	Deviation Survey
21:30	24:00	2.50	2	Drill fr/1342m-1353m

NOTES: [illegible]

Driller signature: Wade Goddard

Max. EDP hookload: 118800.00

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	633-628-706	Wade Goddard	4.00	WG	No
Derrickman	629-626-262	Rob Roth	4.00	RR	No
Motorman	651-368-064	Jesse Goddard	4.00	JG	No
Floorman	652-342-416	Jonathan Greeve	4.00	JG	No
Floorman	505-422-253	Rory Mitchell	4.00	RM	No
Leaseman	729-675-003	Daniel Sampson	4.00	DS	No

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invert — DRIVER A / CREW SAFETY DAYS / DRIVER B

ETS SERIAL NUMBER: PREC620_20041125_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
DOD NO.	22
AFE	
LICENCE NO	MC-7
WELL NAME AND NO.	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig
DATE	26-Dec-2004
RIG NO	620 E
FUEL ON RIG	39927
TEMPERATURE	
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Good

WELL TYPE	Geothermal
RE-ENTRY	☐ YES ☑ NO
KB TO GROUND ELEV.	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	26-Dec-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	301.00

Last Casing / Tubing or Liner

			L-80				8.31	129.00
							8.23	870.00
29.00	SS-95	83.00	168.00	5"XH	170	FB-1600	8PMMP X 152mm	305
35.00	SS-95	67.00	168.00	5"XH	180	FB-1600	8PMMP X162mm	305

Time – Hrs

OPER	2	3	7	10	22	21
MORN	6.74		0.25	0.50	0.50	
DAY	7.00	0.25	0.25	0.50		
EVE	7.00		0.25	0.50		0.25
TOTAL	20.76	0.25	0.75	1.50	0.50	0.25

Shale Shaker(s)

NO.	2
TYPE	Derrick
SCREENS CHANGED	☐ YES ☑ NO
TOP	50 / 50
MIDDLE	50 / 50
BOTTOM	80 / 80

Totals: 5.00, 8.00, 2.00, 24.00

Morning Tour 0:00 to 8:00

Drill String Assembly / Bit Record

No	Item	O.D. (mm)	Length (m)
1	Bit/Motor	311	11.18
1		228	6.61
1		241	10.80
1	MWD / N.M.Collar	227	18.49
1	Drill Collars	220	9.43
1	Shock Sub	240	3.09
9	Drill Collars	220	83.67
1	Jars / Pony DC	234	8.63
1	Bell Sub	224	1.17
3	Drill Collars	167	26.55
6		127	56.40
40	DP	STANDS	1126.76
2	DP	SINGLES	18.74
	KELLY DOWN		0.00
	TOTAL		1380.00
	Wt. of DC		35000.00
	Wt. of String		99000.00

BIT NO	9
SIZE	311
IADC CODE	5 2 7
MFG	H.C.
TYPE	HR-S44C
SERIAL NO	6029788
JETS	22 / 22 / 22
DEPTH OUT (m)	
DEPTH IN (m)	1314.00
TOTAL METERS DRILLED	66.00
TOTAL HOURS RUN	14.00
HOLE DRAG	13-18Up/7-12Down(Rotate)
TORQUE AT BOTTOM	11,507-19,928 ft/lbs.
FILL ON BOTTOM (m)	

Mud Record

Mud Type: ☑ Water based ☐ Oil based — Flowline Temp = 56.8

TIME	02:00	04:00	06:00
DENSITY kg/m3	1045	1040	1045
FUNNEL VIS	55	46	47
W.L. (cm3)			
pH	11.0	11.5	11.5
P.V.T.	140.3m3	139.7m3	139.5m3

Product	Amount & Unit
Gel	40 sks
Hydrated Lime	6 sks
Milpac	4 sks
Defoamer LD-8	1 pl

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
1353.00	1380.00	D		15-18

Circulation pressure (kPa): 12150; Pump No. 1: liner 152, S.P.M. 90; Pump No. 2: liner 152, S.P.M. 90

Reduced pump speed: 3350, 90, 1370.00

DEPTH (m)	DEVIATION (o)	DIRECTION
1338.80	30.7	327.80
1348.50	30.8	329.00

Driller signature: Wade Goddard

Time Log

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
0:00	0:15	0.25	7	Rig Service and Function Annular 24/24
0:15	0:30	0.25	22	Change Head and Liner in #1 Pump
0:30	2:30	2.00	2	Drill fr/1353m-1360m
2:30	2:45	0.25	10	M.W.D. Survey
2:45	5:15	2.50	2	Drill fr/1360m-1370m
5:15	5:30	0.25	10	M.W.D. Survey
5:30	5:45	0.25	22	Change Head and Liner in #2 Pump
5:45	8:00	2.25	2	Drill fr/1370m-1380m

NOTES

			Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
0.00	9.5			124000.00	Lock-Out Procedures	

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	8.00	WG	☐	☑
Derrickman	629-626-282	Rob Roth	8.00	RR	☐	☑
Motorman	651-366-064	Jesse Goddard	8.00	JG	☐	☑
Floorman	652-342-416	Jonathan Greeve	8.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☐	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	639-191-842	Dwayne Dixon		DD	☐	☑

RATE SCHEDULE ☑ Regular ☐ Repair ☐ Invert — DRIVER A — CREW SAFETY DAYS — DRIVER B

Day Tour 8:00 to 16:00

Drill String Assembly / Bit Record

No	Item	O.D. (mm)	Length (m)
1	Bit/Motor	311	11.18
1		228	6.61
1		241	10.80
1	MWD / N.M.Collar	227	18.49
1	Drill Collars	220	9.46
1	Shock Sub	240	3.09
9	Drill Collars	220	83.67
1	Jars / Pony DC	234	8.83
1	Bell Sub	224	1.17
3	Drill Collars	167	26.55
6		127	56.40
42	DP	STANDS	1182.34
2	DP	SINGLES	18.73
	KELLY DOWN		-20.32
	TOTAL		1417.00
	Wt. of DC		35000.00
	Wt. of String		98000.00

BIT NO.	9
SIZE	311
IADC CODE	5 2 7
MFG.	H.C.
TYPE	HR-S44C
SERIAL NO	6029788
JETS	22 / 22 / 22
DEPTH OUT (m)	
DEPTH IN (m)	1314.00
TOTAL METERS DRILLED	103.00
TOTAL HOURS RUN	21.00
HOLE DRAG	19000 up/13000dwn
TORQUE AT BOTTOM	11507 ft-lbs
FILL ON BOTTOM (m)	

Mud Record

Mud Type: ☑ Water based ☐ Oil based — Flowline Temp = 52.6

TIME	10:00	01:00	03:00
DENSITY kg/m3	1040	1040	1040
FUNNEL VIS	50	52	53
W.L. (cm3)			
pH	11.0	10.8	10.5
PVT	142m3	147.5m3	141.1m3

Product	Amount & Unit
Humalite	40sks.
Hydrated Lime	4sks.
Milgel	70sks.
Milpac	4sks.
Natural Gel	40sks.

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
1380.00	1417.00	D	15-30	18-26

Circulation pressure (kPa): 12600; Pump No. 1: liner 152, S.P.M. 90; Pump No. 2: liner 152, S.P.M. 90

Reduced pump speed: 3300, 90, 1418.00

DEPTH (m)	DEVIATION (o)	DIRECTION
1368.40	31	327.90
1388.30	31.6	328.00

Driller signature: Barry Verhelst

Time Log

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
8:00	8:15	0.25	10	Deviation Survey
8:15	10:15	2.00	2	Drill fr. 1380m - 1390m
10:15	10:30	0.25	3	Ream build section fr. 1389m - 1390m
10:30	13:30	3.00	2	Drill fr. 1390m - 1407m
13:30	13:45	0.25	10	Deviation Survey
13:45	15:45	2.00	2	Drill fr. 1407m - 1417m
15:45	16:00	0.25	7	Rig Service, F/T pipe rams(7 secs)

NOTES

			Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
0.00	9.5			123000.00	Fire drill @ camp	

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verhelst	12.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☐	☑
Motorman	736-714-230	Chanley Vig	12.00	CV	☐	☑
Floorman	713-959-481	Gary Kennedy	12.00	GK	☐	☑
Floorman	726-907-768	Cory Kube	12.00	CK	☐	☑
Leaseman	739-300-069	Justin Craigen	12.00	JC	☐	☑

RATE SCHEDULE ☑ Regular ☐ Repair ☐ Invert — DRIVER A — CREW SAFETY DAYS — DRIVER B

Evening Tour 16:00 to 24:00

Drill String Assembly / Bit Record

No	Item	O.D. (mm)	Length (m)
1	Bit/Motor	311	11.18
1		228	6.61
1		241	10.80
1	MWD / N.M.Collar	227	19.49
1	Drill Collars	220	9.46
1	Shock Sub	240	3.09
9	Drill Collars	220	83.67
1	Jars / Pony DC	234	8.83
1	Bell Sub	224	1.17
3	Drill Collars	167	26.55
6		127	56.40
43	DP	STANDS	1210.46
2	DP	SINGLES	18.76
	KELLY DOWN		0.00
	TOTAL		1461.00
	Wt. of DC		35000.00
	Wt. of String		105000.00

BIT NO.	9
SIZE	311
IADC CODE	5 2 7
MFG	H.C.
TYPE	HR-S44C
SERIAL NO	6029788
JETS	22 / 22 / 22
DEPTH OUT (m)	
DEPTH IN (m)	1314.00
TOTAL METERS DRILLED	147.00
TOTAL HOURS RUN	28.00
HOLE DRAG	13-19Up/7-10Down(Rotate)
TORQUE AT BOTTOM	11,507-13,191ft/lbs.
FILL ON BOTTOM (m)	

Mud Record

Mud Type: ☑ Water based ☐ Oil based — Flowline Temp = 60.8

TIME	18:00	21:00	23:00
DENSITY kg/m3	1040	1050	1055
FUNNEL VIS	55	54	48
W.L. (cm3)			
pH	11.0	10.0	10.0
PVT	146.9m3	139.7m3	143.6m3

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
1417.00	1461.00	D	15/130	17-20

Circulation pressure (kPa): 12250; Pump No. 1: liner 152, S.P.M. 90; Pump No. 2: liner 152, S.P.M. 90

Reduced pump speed: 3164, 90, 1441.00

DEPTH (m)	DEVIATION (o)	DIRECTION
1396.50	31.8	329.00
1415.07	31.4	329.00
1424.00	31.5	329.00

Driller signature: Wade Goddard

Time Log

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
16:00	20:45	4.75	2	Drill fr/1417m-1445m
20:45	21:00	0.25	23	B.O.P. Drill w/Crewmember's, Well Secure in 90 sec.
21:00	21:15	0.25	7	Rig Service and Function HCR 4/4
21:15	23:30	2.25	2	Drill fr/1445m-1461m
23:30	24:00	0.50	10	Accumulated M.W.D. Survey's

NOTES

			Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
0.00	8.5			125000.00	B.O.P. Drills	

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	4.00	WG	☐	☑
Derrickman	629-926-282	Rob Roth	4.00	RR	☐	☑
Motorman	851-366-064	Jesse Goddard	4.00	JG	☐	☑
Floorman	852-342-416	Jonathan Greeve	4.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☐	☑
Leaseman	729-975-003	Daniel Sampson	4.00	DS	☐	☑

RATE SCHEDULE ☑ Regular ☐ Repair ☐ Invert — DRIVER A — CREW SAFETY DAYS — DRIVER B

ETS SERIAL NUMBER: PREC620_20041126_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

CAODC

Based on the CAODC ETS file standard

WELL TYPE	Geothermal
RE-ENTRY	☐ Yes ☑ No
KB TO GROUND ELEV	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	27-Dec-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG No.	620 E
PROVINCE / BC	CAMP ☑ Yes ☐ No
RIG SAFETY DAYS	302.00

MORNING TOUR 0:00 To 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	633-828-706	Wade Goddard	8.00	WG	☑
Derrickman	828-926-262	Rob Roth	8.00	RR	☑
Motorman	651-366-064	Jesse Goddard	8.00	JG	☑
Floorman	652-342-416	Jonathan Greeve	8.00	JG	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☑
Leaseman	729-875-003	Daniel Sampson	8.00	DS	☑
Rig Manager	719-409-484	Kevin Vig		KV	☑
Top Drive	639-191-642	Dwayne Dixon		DD	☐

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Service
DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 To 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	842-388-810	Barry Verhelst	13.00	BV	☑
Derrickman	847-452-901	Dave Makowsky	12.00	DM	☑
Motorman	735-714-236	Chantry Vig	12.00	CV	☐
Floorman	713-959-461	Gary Kennedy	12.00	GK	☑
Floorman	729-987-769	Cory Kulba	12.00	CK	☑
Leaseman	739-300-069	Justin Craigen	12.00	JC	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Service
DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 To 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	633-828-706	Wade Goddard	4.00	WG	☑
Derrickman	828-926-262	Rob Roth	4.00	RR	☑
Motorman	651-366-064	Jesse Goddard	4.00	JG	☑
Floorman	652-342-416	Jonathan Greeve	4.00	JG	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☑
Leaseman	729-875-003	Daniel Sampson	4.00	DS	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Service
DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620 _20041127_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

AFE/UWI	084-11-30 20:00
RIG RELEASE	
JOB NO	22
AFE	
DAILY CHECKS	
DATE	28-Dec-2004
RIG NO	620 E
FUEL @ 8 RD	
RIG	40839
BOILER	
TEMPERATURE	-4
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Good
LAST CASING FIRING OR LINER	
WELL NAME AND NO.	9-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
SURFACE LOCATION	9-92-A / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE	Jose Silva
CONTRACTOR	Precision Drilling
RIG NO.	tb-1-91 / 92-J-12
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE	Kevin Vig

WELL TYPE	Geothermal
RE-ENTRY	☐ YES ☑ NO
K.B. TO GROUND ELEV.	T. 20
WELL NAME & No.	9-92-A / 92-J-12 MC-7
DATE	28-Dec-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO	620 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	303.00

TIME / HRS

CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
OPER																									
MOVE																									
DAY																									
EVE																									
TOTAL																									

BIT RECORD

No.	Make	Size	Type	Serial No.	Jets	Depth Out (m)	Total Meters Drilled (m)	Total Hours Run	Cutting Structure In	Cutting Structure Out	Bearings	Gauge	Other	Reason Pulled
1	Bit/Motor	311	11.18	BIT NO.		9								
1		228	5.61	SIZE		311								
1		241	10.86	IADC CODE		6 2 7								
1		227	19.49	MFG		H.C.								
1		220	9.46	TYPE		HR-S44C								
1	Shock Sub	240	3.99	SERIAL NO.		6029768								
9		220	83.67	JETS										
1		234	0.83	DEPTH OUT (m)		1567.00								
1	Bell Sub	224	1.17	DEPTH IN (m)		1314.00								
3		187	29.55	TOTAL METERS DRILLED		253.00								
6		127	56.40	TOTAL HOURS RUN		53.25								
47	DP	S135	1322.97	CUTTING STRUCTURE										
2	DP	S-135	18.71											
	KELLY DOWN		0.00	HOLE CONDITION										
	TOTAL		1567.00	HOLE DRAG		14-23klb/8-15Down(Rotate)								
	OP DC		36000.00	TORQUE AT BOTTOM		13,191-20,771 ft/lbs.								
	OP STRING		102000.00	FILL ON BOTTOM (m)										

MUD RECORD

MUD TYPE	☑ WATER BASED ☐ OIL BASED	Flowline Temp = 62.1	
TIME	02:00	06:00	
DEPTH (m)	1048	1050	
PUMP NO. (L)	80	47	
W.L. (cm3)			
pH	10.0	10.0	
P.V.T. @	143.6m3	139.6m3	

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Milgel	38 sks
Caustic Soda	5 sks
Betamer LD-6	1 pl
Hydrated Lime	2 sks
Humalite	40 sks
Milpac	4 sks

METERS DRILLED

FROM	TO	Bit No.	Rotary Hrs	Pump SPM	Cum. Hrs
1552.00	1567.00	D	15-20	18-21	

CIRCULATION PRESSURE (kPa) — PUMP NO. 1: Liner 6" SPM 152, 90 — PUMP NO. 2: Liner 6" SPM 182, 90

REDUCED PUMP SPEED: 3250 @ 90 @ 1567.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1567.20	30.4	328.60

TIME LOG

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
0:00	3:45	3.75	2	Drill f/1552m-1567m
3:45	4:00	0.25	7	Rig Service and Function Annular 24/24
4:00	4:15	0.25	10	Accumulated M.W.D. Survey's
4:15	8:00	3.75	5	Flow Check @ 1548m,Hoist Bit#9,Flow Check's @ 1425m,594m,

NOTES: Function Collard Done; Engine #1,#2 + #3 Hrs/ Engine #1 HR Hrs/ Pump #1, and #2 at 46,33 Hrs.

DRILLER SIGNATURE: Wade Goddard

Last Run	Next Run	Stack Time	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
6.00	5.5			137000.00	Number 4 B.O.P. on Tripping	

MORNING TOUR 8:00 TO 16:00

Crew	Soc. Ins. No.	Name	Hrs	Injuries Yes	Injuries No
Driller	833-928-706	Wade Goddard	8.00	WG	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☑
Motorman	651-368-064	Jesse Goddard	8.00	JG	☑
Floorman	652-342-416	Jonathan Greave	8.00	JG	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☑
Rig Manager	719-409-484	Kevin Vig		KV	☑
Top Drive	639-191-642	Dwayne Dixon		DD	☑

RATE SCHEDULE ☑ REGULAR ☐ REPAIR — DRIVER A — CREW SAFETY DAYS — DRIVER B

MORNING TOUR

BIT RECORD

No.	Make	Size	Type	Serial No.	Jets	Depth Out (m)	Total Meters Drilled (m)	Total Hours Run	Cutting Structure In	Cutting Structure Out	Bearings	Gauge	Other	Reason Pulled
1	Bit/Motor	311	11.18	BIT NO.		9								
1		228	5.61	SIZE		311								
1		241	10.60	IADC CODE		6 2 7								
1		227	19.49	MFG		H.C.								
1		220	9.46	TYPE		HR-S44C								
1	Shock Sub	240	3.99	SERIAL NO.		6029768								
9		220	83.67	JETS										
1		234	0.83	DEPTH OUT (m)		1567.00								
1	Bell Sub	224	1.17	DEPTH IN (m)		1314.00								
3		187	25.55	TOTAL METERS DRILLED		253.00								
6		127	56.40	TOTAL HOURS RUN		53.25								
47	DP	S135	1322.97	CUTTING STRUCTURE										
2	DP	S-135	18.71	7	8	FC	A	E	3	WT	HR	4.75		
	KELLY DOWN		0.00	HOLE CONDITION										
	TOTAL		1577.97	HOLE DRAG										
	OP DC		36000.00	TORQUE AT BOTTOM										
	OP STRING		102000.00	FILL ON BOTTOM (m)										

MUD RECORD

MUD TYPE	☑ WATER BASED ☐ OIL BASED	Flowline Temp = 52.8	
TIME			
DEPTH (m)			
PUMP NO. (L)			
W.L. (cm3)			
pH			
P.V.T. @			

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT

METERS DRILLED

FROM	TO	Bit No.	Rotary Hrs	Pump SPM	Cum. Hrs
1567.00					

CIRCULATION PRESSURE (kPa) — PUMP NO. 1: Liner 6" SPM 152, 90 — PUMP NO. 2: Liner 6" SPM 182, 90

REDUCED PUMP SPEED: @ 90 @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
6:00	8:30	1.50	6	P.O.O.H., changed out jars & moved Nortrak stab, flow check @ 0m
8:30	10:00	0.50	20	Scribe M.W.D & motor
10:00	13:00	3.00	6	Make up B.H.A. & R.I.H. to 890m
13:00	13:15	0.25	10	Shallow pulse test M.W.D.
13:15	14:00	0.75	9	Slip & cut 33m drill line(monitor hole)
14:00	14:15	0.25	7	Rig Service, F/T pipe rams(9 secs)
14:15	15:00	0.75	6	R.I.H. to 1290m
15:00	15:15	0.25	5	Circulate & cool M.W.D. tool.
15:15	16:00	0.75	6	R.I.H. to 1567m

NOTES: A/T sheave cover, discovery inspected stabbing room, inside B.O.P., is secured. A/T Blind ram(2" insert), drilled 15 block in hole during slip.

DRILLER SIGNATURE: Barry Verhelst

Last Run	Next Run	Stack Time	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
6.00	5.5			132000.00	Slip & cut	

DAY TOUR 8:00 TO 16:00

Crew	Soc. Ins. No.	Name	Hrs	Injuries Yes	Injuries No
Driller	842-388-910	Barry Verhelst	12.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	713-959-481	Gary Kennedy	12.00	GK	☑
Floorman	726-907-769	Cory Kube	12.00	CK	☑
Leaseman	739-300-056	Justin Craigen	12.00	JC	☑

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ INVOICE — DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR

BIT RECORD

No.	Make	Size	Type	Serial No.	Jets	Depth Out (m)	Total Meters Drilled (m)	Total Hours Run	Cutting Structure In	Cutting Structure Out	Bearings	Gauge	Other	Reason Pulled
1	Bit/Motor	311	11.18	BIT NO.		10								
1		228	5.61	SIZE		311								
1		241	10.86	IADC CODE		6 3 7								
1		227	19.49	MFG		H.C.								
1		220	9.46	TYPE		HR555R								
1	Shock Sub	240	3.99	SERIAL NO.		6020403								
9		220	83.67	JETS										
1		234	0.83	DEPTH OUT (m)		1567.00								
1	Bell Sub	224	1.17	DEPTH IN (m)		1314.00								
3		187	26.55	TOTAL METERS DRILLED		30.00								
6		127	56.40	TOTAL HOURS RUN		6.75								
46	DP	S135	1351.26	CUTTING STRUCTURE										
5	DP	S-135	9.82											
	KELLY DOWN		0.00	HOLE CONDITION										
	TOTAL		1567.00	HOLE DRAG		14-23klb/8-15Down(Rotate)								
	OP DC		36000.00	TORQUE AT BOTTOM		12,349-13,191 ft/lbs.								
	OP STRING		102000.00	FILL ON BOTTOM (m)										

MUD RECORD

MUD TYPE	☑ WATER BASED ☐ OIL BASED	Flowline Temp = 56.7 C	
TIME	06:00	21:00	23:00
DEPTH (m)	1048	1045	1045
PUMP NO. (L)	46	80	49
W.L. (cm3)			
pH	10.5	10.0	9.5
P.V.T. @	139.5m3	138.7m3	134.6m3

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN
Caustic Soda	2sks.	
Humalite	35	0.00
Hydrated Lime	2sks.	
Milgel	256sks.	
Milpac	4sks.	

METERS DRILLED

FROM	TO	Bit No.	Rotary Hrs	Pump SPM	Cum. Hrs
1567.00	1597.00	D	15-20	20	

CIRCULATION PRESSURE (kPa) — PUMP NO. 1: Liner 6" SPM 152, 90 — PUMP NO. 2: Liner 6" SPM 152, 90

REDUCED PUMP SPEED: 3200 @ 90 @ 1567.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1868.60	30.4	328.30

TIME LOG

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
16:00	16:45	0.75	6	Wash & ream fr. 1490m -1567m
16:45	18:30	1.75	2	Drill fr/1567m-1577m
18:30	18:44	0.25	10	M.W.D. Survey
18:45	23:45	5.00	2	Drill fr/1577m-1597m
23:45	24:00	0.25	7	Rig Service and Function HCR 4/4

NOTES: A/T sheave cover

DRILLER SIGNATURE: Wade Goddard

Last Run	Next Run	Stack Time	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
6.00	6.0			133000.00		

EVENING TOUR 16:00 TO 24:00

Crew	Soc. Ins. No.	Name	Hrs	Injuries Yes	Injuries No
Driller	833-928-706	Wade Goddard	4.00	WG	☑
Derrickman	629-926-262	Rob Roth	4.00	RR	☑
Motorman	651-368-064	Jesse Goddard	4.00	JG	☑
Floorman	652-342-416	Jonathan Greave	4.00	JG	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☑
Leaseman	729-975-003	Daniel Sampson	4.00	DS	☑

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ INVOICE — DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR

ETS SERIAL NUMBER: PREC620_20041128_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO.	22
AFE	
LICENCE NO.	MC-7
WELL NAME AND NO.	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID.	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig

WELL TYPE	Geothermal
RE-ENTRY	No
KB TO GROUND ELEV.	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	29-Dec-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	Yes
RIG SAFETY DAYS	304.00

DATE	29-Dec-2004
RIG NO	620 E
FUEL @ 8:00	
Rig	32494
BOILER	
TEMPERATURE	-1
CURRENT CONDITIONS	Snow
WIND DIRECTION	Calm
ROAD	Good

LAST CASING TUBING OR LINER

						KB TO CSG HEAD (m)	SET AT (m)
						6.31	129.00
			L-80			6.23	670.00

LINER SIZE	STROKE LENGTH	MAKE	BORE	SPM	MAKE	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE
	29.00	BS-95	83.00	168.00	5"XH	170	FB-1600	BPMMP X 152mm	305
	36.00	BS-95	67.00	154.80	5"XH	150	FB-1600	BPMMP X152mm	305

DAILY CHECKS

SHALE SHAKER(S): No 2, Type Derrick; Screens changed: Yes; Top 50 / 50; Middle 50 / 50; Bottom 80 / 80

TOTALS: 4.00, 4.00, 4.00, 24.00

RENTALS/SERVICES

TIME-HRS

CODE	1	2		7		10
MORN		7.25		0.25		0.50
DAY		7.00		0.25		0.75
EVE		7.25		0.25		0.50
TOTAL		21.50		0.75		1.75

MORNING TOUR

BIT RECORD / BHA

No.	Item	O.D.	Length		
1	Bit/Motor	311	11.18	BIT NO.	10
1		228	5.61	SIZE	311
1		241	10.80	IADC CODE	6 3 7
1		227	19.48	MFG.	H.C.
1		220	9.46	TYPE	HRS55R
1	Shock Sub	240	3.09	SERIAL NO.	6020403
9		220	83.67	JETS	
1		234	8.87	DEPTH OUT (m)	
1	Bell Sub	224	1.17	DEPTH IN (m)	1567.00
3		167	26.85	TOTAL METERS DRILLED	68.00
6		127	56.40	TOTAL HOURS Run	14.00
49			1380.16		
2			19.08		
			0.00	HOLE CONDITION	
	TOTAL		1638.00	HOLE DRAG	15-25Up/5-15Down(Rotating)
			36000.00	TORQUE AT BOTTOM	12,349-13,191 ft/lbs.
			105000.00	FILL ON BOTTOM (m)	

MUD RECORD

Mud Type: Water based — Flowline Temp = 68.4 C

TIME	02:00	04:00	06:00
DENSITY	1040	1040	1045
FUNNEL VIS	49	48	51
W.L.			
pH	9.5	10.0	10.0
P.V.T.	141.4m3	137.5m3	130.8m3

PRODUCT	AMOUNT + UNIT
Gel	35 sks
Caustic Soda	8 sks
Defoamer LD-8	2 pls
Milpac	3 sks
Volclay Gel	40 sks
Humalite	35 sks

SOLIDS CONTROL — Hours run: 0.00

METERS DRILLED

FROM	TO		ROTARY RPM	WT ON BIT
1597.00	1635.00	D	16/130	19-22

CIRCULATION PRESSURE	PUMP NO. 1 LINER / S.P.M	PUMP NO. 2 LINER / S.P.M
14150	152 / 90	152 / 90

REDUCED PUMP SPEED: 3628 @ 90 @ 1811.60

DEPTH (m)	DEVIATION	DIRECTION
1574.90	29.7	328.30
1594.30	28.8	330.40

Driller signature: Wade Goddard

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
0:00	3:15	3.25	2	Drill f/r1597m-1616m
3:15	3:30	0.25	7	Rig Service and Function Annular 24/24
3:30	7:30	4.00	2	Drill fr/1616m-1635m
7:30	8:00	0.50	10	Accumulated M.W.D. Survey's

NOTES

			MAX EXP HOOKLOAD
8.60	9.5		133000.00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES
Driller	633-628-706	Wade Goddard	8.00	WG	No
Derrickman	628-926-282	Rob Roth	8.00	RR	No
Motorman	651-366-064	Jesse Goddard	8.00	JG	No
Floorman	652-342-416	Jonathan Greeve	8.00	JG	No
Floorman	505-422-253	Rory Mitchell	8.00	RM	No
Leaseman	729-875-003	Daniel Sampson	8.00	DS	No
Rig Manager	719-406-484	Kevin Vig		KV	No
Top Drive	639-191-642	Dwayne Dixon		DD	No

RATE SCHEDULE: Regular — DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR

BIT RECORD / BHA

No.	Item	O.D.	Length		
1	Bit/Motor	311	11.18	BIT NO	10
1		228	5.61	SIZE	311
1		241	10.80	IADC CODE	6 3 7
1		227	19.49	MFG	H.C.
1		220	9.46	TYPE	HRS55R
1	Shock Sub	240	3.09	SERIAL NO	6020403
9		220	83.67	JETS	
1		234	8.87	DEPTH OUT (m)	
1	Bell Sub	224	1.17	DEPTH IN (m)	1567.00
3		167	26.65	TOTAL METERS DRILLED	101.00
6		127	56.40	TOTAL HOURS Run	21.00
51			1437.41		
0			0.00		
			-6.70	HOLE CONDITION	
	TOTAL		1648.00	HOLE DRAG	36000 up/(100down)(sliding)
			36000.00	TORQUE AT BOTTOM	12349 ft-lbs
			108000.00	FILL ON BOTTOM (m)	

MUD RECORD

Mud Type: Water based — Flowline Temp = 52.8

TIME	08:00	12:00	02:00
DENSITY	1040	1040	1045
FUNNEL VIS	50	45	47
W.L.			
pH	10.0	10.0	10.0
PVT	143.2m3	135.6m3	139.7m3

PRODUCT	AMOUNT + UNIT
Caustic Soda	6sks.
Humalite	50sks.
Hydrated Lime	2sks.
Milpac	4sks.
Volclay Gel	40sks.

METERS DRILLED

FROM	TO		ROTARY RPM	WT ON BIT
1635.00	1668.00	D	16/130	20-22

CIRCULATION PRESSURE	PUMP NO. 1 LINER / S.P.M	PUMP NO. 2 LINER / S.P.M
13500	152 / 90	152 / 90

REDUCED PUMP SPEED: 3650 @ 90 @ 1633.80

DEPTH (m)	DEVIATION	DIRECTION
1613.30	28.5	330.40
1633.60	28	331.10
1643.80	28.2	331.40

Driller signature: Barry Verhelst

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
8:00	15:00	7.00	2	Drill fr. 1635m - 1668m
15:00	15:15	0.25	7	Rig Service, F/T pipe rams(7 secs)
15:15	16:00	0.75	10	Deviation Surveys(Accum.)

NOTES

			MAX EXP HOOKLOAD
8.60	9.5		136000.00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES
Driller	642-309-010	Barry Verhelst	12.00	BV	No
Derrickman	647-452-803	Dave Makowsky	12.00	DM	No
Motorman	735-714-230	Chantry Vig	12.00	CV	No
Floorman	713-959-461	Gary Kennedy	12.00	GK	No
Floorman	726-907-798	Cory Kube	12.00	CK	No
Leaseman	739-300-089	Justin Craigen	12.00	JC	No

RATE SCHEDULE: Regular — DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR

BIT RECORD / BHA

No.	Item	O.D.	Length		
1	Bit/Motor	311	11.18	BIT NO	10
1		228	5.61	SIZE	311
1		241	10.80	IADC CODE	6 3 7
1		227	19.49	MFG	H.C.
1		220	9.46	TYPE	HRS55R
1	Shock Sub	240	3.09	SERIAL NO	6020403
9		220	83.67	JETS	
1		234	6.67	DEPTH OUT (m)	
1	Bell Sub	224	1.17	DEPTH IN (m)	1567.00
3		167	26.56	TOTAL METERS DRILLED	127.00
6		127	68.40	TOTAL HOURS Run	28.25
62			1465.84		
1			9.64		
			0.00	HOLE CONDITION	
	TOTAL		1711.67	HOLE DRAG	15-27Up/4-16Down(Rotate)
			36000.00	TORQUE AT BOTTOM	12,349-13,191 ft/lbs.
			109000.00	FILL ON BOTTOM (m)	

MUD RECORD

Mud Type: Water based — Flowline Temp = 69.8 C

TIME	08:00	21:00	23:00
DENSITY	1046	1050	1050
FUNNEL VIS	49	56	52
W.L.			
pH	10.0	10.0	10.0
PVT	147.1m3	138.9m3	141.6m3

SOLIDS CONTROL — Hours run: 3.00; 1050; 1040; 1740

METERS DRILLED

FROM	TO		ROTARY RPM	WT ON BIT
1668.00	16944.00	D	16/130	20-24

CIRCULATION PRESSURE	PUMP NO. 1 LINER / S.P.M	PUMP NO. 2 LINER / S.P.M
14250	152 / 90	82 / 90

REDUCED PUMP SPEED: 3690 @ 90 @ 1694.00

DEPTH (m)	DEVIATION	DIRECTION
1651.50	28.2	331.10
1662.30	28.5	330.70
1670.47	28.2	331.60

Driller signature: Wade Goddard

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
16:00	22:15	6.25	2	Drill fr/1668m-1692m
22:15	22:30	0.25	7	Rig Service and Function HCR 4/4
22:30	23:30	1.00	2	Drill fr/1692m-1694m
23:30	24:00	0.50	10	Accumulated M.W.D. Survey's

NOTES

			MAX EXP HOOKLOAD
8.60	8.5		140000.00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES
Driller	633-628-706	Wade Goddard	4.00	WG	No
Derrickman	628-926-282	Rob Roth	4.00	RR	No
Motorman	651-366-064	Jesse Goddard	4.00	JG	No
Floorman	652-342-416	Jonathan Greeve	4.00	JG	No
Floorman	505-422-253	Rory Mitchell	4.00	RM	No
Leaseman	729-875-003	Daniel Sampson	4.00	DS	No

RATE SCHEDULE: Regular — DRIVER A — CREW SAFETY DAYS — DRIVER B

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO.	22
AFE	
LICENCE NO.	MC-7
WELL NAME AND NO	a-92-A / 92-J-12 MC-7
OPERATION	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID.	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig

DAILY CHECKS (OPR / S.M)
(1) Daily Visual Rig-up Inspection
(2) Derrick/Substructure Weekly Inspection (Monthly if applicable)
(3) H2S Equip Present (if required)
(4) Well Licensee & Rig Diagram Posted
(5) Fire Extinguisher
(6) Spill Cloth Present
(7) Biweekly Inspection BOP's, Flowlines & Diagram Lines
(8) Rig Site Health and Safety Meeting (pre-spud meeting)
(9) C.A.O.D.C. Rig Safety Inspection Checklist (drilling rigs only)
(10) Weekly Inspection Before Raising or Lowering
(11) Crown Saver Checked
(12) Safety Talks Completed

DATE: 30-Dec-2004
RIG NO: 620 E
FUEL @ 8:00
RIG: 40364 BOILER

WEATHER: TEMPERATURE -3; CURRENT CONDITION: Cloudy; WIND DIRECTION: Calm; ROAD: Good

LAST CASING TUBING OR LINER

	O.D. (mm)	WT / ft	Type	Grade	No. of Joints	Total no. Length	Set At (m)
							6.31
				L-80			8.23

	Boot Size (mm)	Liner Hanger	Grade	Min. ID (mm)	Tool Jt O.D. (mm)	Thread Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke (m)
		29.00	SS-95	93.00	168.00	5"XH	170	FB-1600	BPMMP_X 152mm	305
		38.00	SS-95	57.00	168.00	5"XH	160	FB-1600	BPMMP X152mm	305

SHALE SHAKER(S) — RENTAL SERVICES

	No.	Type	Derrick	New	Model	Dist	Cost
			Yes / No				
5.00	SCREENS CHANGED						
6.00	TOP	50	TOP	50			
6.00	MIDDLE	50	MIDDLE	50			
34.00	BOTTOM	50	BOTTOM	50			

	WELL TYPE	RE-ENTRY	KB TO GROUND ELEV
	Geothermal	Yes / No	7.20
	WELL NAME & No.		DATE
	a-92-A / 92-J-12 MC-7		30-Dec-2004
	OPERATION: Western Geopower Corp	CONTRACTOR: Precision Drilling	
	RIG MANAGER: Kevin Vig	RIG NO.: 620 E	
	PROVINCE: BC	CAMP: Yes / No	RIG SAFETY DAYS: 305.00

TIME - HRS

	OPEN	TRIP TIME	DRILL ACTUAL	REAMING	CIRC	TRIPS	NO. OF STANDS	RECOVERY	WEIGHT ON BIT	RPM	PUMP PRESS	SPM	JET	DUMP	ROTARY TORQUE	SAFETY UNITS	SAFETY UNITS	Maintenance
MORN	7.25					0.25												0.50
DAY	8.00					0.25												0.50
EVE	8.75					0.25												0.25
TOTAL	24.00					0.75												1.25

BIT RECORD

No.	Bit	O.D. (mm)	Length (m)
1	Bit/Motor	311	11.18
1	Stabilizer/Sub/Float Sub	228	5.61
1	NMDC/Sub/Float Sub	241	10.80
1	MWD / NM Stabilizer	227	19.48
1	8" Drill Collars	220	9.46
1	Shock Sub	240	3.09
9	8" Drill Collars	220	83.67
1	8" Jars / Pony D.C.	234	8.87
1	Bell Sub	224	1.17
3	7" Drill Collars	167	26.56
6	Heavyweight Drill Pipe	127	56.40
53	D.P.	STANDS	1494.49
0	D.P.	SINGLES	0.00
	HOLE DOWN		0.00
	TOTAL		1736.00
WT OF DC			36000.00
WT OF STRING			110000.00

BIT RECORD

No.	Bit	O.D. (mm)	Length (m)
1	Bit/Motor	311	11.18
1	Stabilizer/Sub/Float Sub	228	5.61
1	NMDC/Sub/Float Sub	241	10.80
1	MWD / NM Stabilizer	227	19.48
1	8" Drill Collars	220	9.46
1	Shock Sub	240	3.09
9	8" Drill Collars	220	83.67
1	8" Jars / Pony D.C.	234	8.87
1	Bell Sub	224	1.17
3	7" Drill Collars	167	26.56
6	Heavyweight Drill Pipe	127	56.40
53	D.P.	STANDS	1494.49
2	D.P.	SINGLES	19.08
	HOLE DOWN		-11.54
	TOTAL		1736.90
WT OF DC			34000.00
WT OF STRING			111000.00

BIT RECORD

No.	Bit	O.D. (mm)	Length (m)							
1	Bit/Motor	311	11.18	BIT NO.	10	11				
1	Stabilizer/Sub/Float Sub	228	5.61	SIZE	311	311				
1	NMDC/Sub/Float Sub	241	10.80	IADC CODE	6 3 7	6 4 7				
1	MWD / NM Stabilizer	227	19.49	MFG.	H.C.	H.C.				
1	8" Drill Collars	220	9.46	TYPE	HRS55R	HR-P560X				
1	Shock Sub	240	3.09	SERIAL NO.	6020403	5007107				
9	8" Drill Collars	220	83.67	JETS	18 18 18	0 P E 8				
1	8" Jars / Pony D.C.	234	8.87	DEPTH OUT (m)	1740.00					
1	Bell Sub	224	1.17	DEPTH IN (m)	1667.00	1740.00				
3	7" Drill Collars	167	26.56	TOTAL METERS DRILLED (m)	173.00					
6	Heavyweight Drill Pipe	127	56.40	TOTAL HOURS RUN	42.25					
53	D.P.	STANDS	1494.49	DRILLING STRUCTURE						
2	D.P.	SINGLES	19.08	7	8	FC	A	E	4	WT
	HOLE DOWN		-8.24							
	TOTAL		1740.50	HOLE DRAG						
WT OF DC			36000.00	TORQUE AT BOTTOM						
WT OF STRING			111000.00	FILL ON BOTTOM (m)						

MUD RECORD

MUD TYPE	Hydrate Inhibitor	Oil Based	Flowline Temp = 46.8 C
TIME	02:00	04:00	06:00
DENSITY (kg/m3)	1050	1050	1045
FUNNEL VIS. (s/L)	48	47	49
W.L. (cm3)			
pH	10.0	10.5	10.5
P.V.T. @	135.9m3	140.3m3	129.7m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	Drilling Fluid Used (m3)	Discarded Fluid (m3)	Cumulative Discarded Fluid (m3)
Humalite	50 sks				
Milpac	4 sks	6.25	1050	1040	1730
Hydrated Lime	2 sks				
Milgel	70 sks				
Caustic Soda	5 sks				
Defoamer LD-8	1 pl				

METERS DRILLED

FROM	TO	Bit No.	Bit Type	Rotary R.P.M.	WT on Bit (kN)	Drilling Time (hrs)	Drilling Rate (m/hr)	Cum. Hours
1694.60	1716.90	D	15/139	20-24	0:00	2:15	2.25	2
					2:15	2:30	0.25	7
					2:30	7:30	5.00	2
					7:30	8:00	0.50	10

CIRCULATION PRESSURE (kPa) — PUMP NO. 1 — PUMP NO. 2

Liner (mm)	S.P.M.	Liner (mm)	S.P.M.
141BD	152	90	152
		90	

REDUCED PUMP SPEED

3600	@	90	@	1702.00	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1681.90	26.3	332.50
1688.50	24.5	331.60

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

0:00	2:15	2.25	2	Drill f/1694m-1702m	
2:15	2:30	0.25	7	Rig Service and Function Annular 24/24	
2:30	7:30	5.00	2	Drill f/1702m-1716m	
7:30	8:00	0.50	10	Accumulated M.W.D. Survey's	

NOTES

DRILLER SIGNATURE: Wade Goddard

WOB (kN)	RPM	STACK WEIGHT	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	0.0			146000.00		

MORNING TOUR 0:00 to 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	8.00	WG	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☑
Motorman	651-366-064	Jesse Goddard	8.00	JG	☑
Floorman	652-342-416	Jonathan Greeve	8.00	JG	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☑
Leaseman	729-875-003	Daniel Sampson	8.00	DS	☑
Rig Manager	719-406-484	Kevin Vig		KV	☐
Top Drive	636-191-642	Dwayne Dixon		DD	☐

RATE SCHEDULE: Yes / No — DRIVER A — CREW SAFETY DAYS — DRIVER B

MUD RECORD

MUD TYPE	Hydrate Inhibitor	Oil Based	Flowline Temp =
TIME	08:00	11:00	02:00
DENSITY (kg/m3)	1040	1045	1045
FUNNEL VIS. (s/L)	49	51	50
W.L. (cm3)			
pH	10.5	10.0	10.0
PVT@	137.6m3	140.4m3	146.6m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	Drilling Fluid Used (m3)	Discarded Fluid (m3)	Cumulative Discarded Fluid (m3)
Caustic Soda	4sks.				
Humalite	50sks.	7.00	1050	1040	1730
Hydrated Lime	2sks.				
Milpac	4sks.				
Volclay Gel	40sks.				

METERS DRILLED

FROM	TO	Bit No.	Bit Type	Rotary R.P.M.	WT on Bit (kN)	Drilling Time (hrs)	Drilling Rate (m/hr)	Cum. Hours
1716.90	1736.00	D		20-26	8:00	11:15	3.25	2
					11:15	12:30	1.25	22
					12:30	13:30	1.00	2
					13:30	13:43	0.26	7
					13:46	15:30	1.75	2
					15:30	16:00	0.50	10

CIRCULATION PRESSURE (kPa) — PUMP NO. 1 — PUMP NO. 2

Liner (mm)	S.P.M.	Liner (mm)	S.P.M.
13190	152	90	152
		90	

REDUCED PUMP SPEED

3700	@	90	@	1729.60	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1700.10	28.4	331.80
1708.40	28	332.80

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

8:00	11:15	3.25	2	Drill fr. 1716m - 1736m
11:15	12:30	1.25	22	Maintenance on #2 F-1600 mud pump
12:30	13:30	1.00	2	Drill fr. 1736m - 1736m
13:30	13:43	0.26	7	Rig Service, F/T pipe rams(7 secs)
13:46	15:30	1.75	2	Drill fr. 1736m - 1736m
15:30	16:00	0.50	10	Deviation Surveys(Accum.)

NOTES

DRILLER SIGNATURE: Barry Verheist

WOB (kN)	RPM	STACK WEIGHT	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	0.0			138000.00	Lockout board	

DAY TOUR 8:00 to 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	12.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	713-959-481	Gary Kennedy	12.00	GK	☑
Floorman	725-807-769	Cory Kube	12.00	CK	☑
Leaseman	736-300-069	Justin Craigen	12.00	JC	☑

RATE SCHEDULE: Yes / No — DRIVER A — CREW SAFETY DAYS — DRIVER B

MUD RECORD

MUD TYPE	Hydrate Inhibitor	Oil Based	Flowline Temp = 52.8
TIME	08:00		
DENSITY (kg/m3)	1060		
FUNNEL VIS. (s/L)	53		
W.L. (cm3)			
pH	10.0		
PVT@	148.6m3		

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	Drilling Fluid Used (m3)	Discarded Fluid (m3)	Cumulative Discarded Fluid (m3)

METERS DRILLED

FROM	TO	Bit No.	Bit Type	Rotary R.P.M.	WT on Bit (kN)	Drilling Time (hrs)	Drilling Rate (m/hr)	Cum. Hours
1736.00	1740.00	D	15-25	20-26	16:00	16:45	0.75	2
					16:45	17:15	0.50	22
					17:15	17:30	0.25	10
					17:30	17:45	0.25	7
					17:45	24:00	6.25	8

CIRCULATION PRESSURE (kPa) — PUMP NO. 1 — PUMP NO. 2

Liner (mm)	S.P.M.	Liner (mm)	S.P.M.
152		152	

REDUCED PUMP SPEED

	@		@		

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1719.30	27.4	331.80

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

16:00	16:45	0.75	2	Drill fr. 1736m - 1740m
16:45	17:15	0.50	22	(Maintenance) on #2 F-1600 mud pump
17:15	17:30	0.25	10	Deviation Survey
17:30	17:45	0.25	7	Rig Service, F/T H.C.R.(2 secs)
17:45	24:00	6.25	8	Hoist bit #10, flow check @1720m,1674m,1561m,298m,Out,LayOut 3 - 228mm D.C.'s

NOTES

DRILLER SIGNATURE: Wade Goddard

WOB (kN)	RPM	STACK WEIGHT	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	0.0			144000.00		

EVENING TOUR 16:00 to 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	4.00	WG	☑
Derrickman	629-926-262	Rob Roth	4.00	RR	☑
Motorman	651-366-064	Jesse Goddard	4.00	JG	☑
Floorman	652-342-416	Jonathan Greeve	4.00	JG	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☑
Leaseman	729-875-003	Daniel Sampson	4.00	DS	☑

RATE SCHEDULE: Yes / No — DRIVER A — CREW SAFETY DAYS — DRIVER B

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CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO.	22
AFE	
LICENCE NO	MC-7
WELL NAME AND NO	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig

DAILY CHECKS	OPR.	RM
(1)	☑	☑
(2)	☐	☑
(3)	☑	☑
(4)	☑	☑
(5)	☑	☑
(6)	☑	☑
(7)	☑	☑

DATE	31-Dec-2004
RIG NO.	620 E
FUEL @ 8:00 RIG	48126
BOILER	
WEATHER TEMPERATURE	-8
CURRENT CONDITION	Snow
WIND DIRECTION	North
ROAD	Slick

LAST CASING TUBING OR LINER

GRADE	KB TO CSG HEAD	SET AT (m)
	5.31	129.00
L-80	6.23	370.00

LINEAR MASS	GRADE		TOOL JT O.D.	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE
29.00	SS-95	83.00	166.00	5"XH	170	FB-1600	BPMMP X 152mm	305
36.00	SS-95	67.00	168.00	5"XH	160	FB-1600	BPMMP X152mm	305

WELL TYPE	Geothermal
RE-ENTRY	☐ YES ☑ NO
KB TO GROUND ELEV.	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	31-Dec-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	306.00

TIME - HRS

OPER		2	3			6	7			10										20		22
MORN			2.25			3.00	0.25													1.75		0.25
DAY		4.75				2.25	0.25			0.75												
EVE		7.25					0.25			0.50												
TOTAL		12.00	2.25			5.75	0.75			1.25										1.75		0.25

TOTAL	SHALE SHAKER(S)		
	NO 2	TYPE Derrick	NEW
0.00	SCREENS CHANGED	☐ YES	☑ NO
0.00	TOP 50	TOP 60	
0.00	MIDDLE 50	MIDDLE 60	
24.00	BOTTOM 80	BOTTOM 80	

RENTALS/SERVICES

MORNING TOUR 0:00 TO 8:00

Drilling Assembly / Bit Record

NO.	BIT	O.D. (mm)	LENGTH
1	Bit/Motor	311	11.25
1	[illegible]	228	6.61
1	[illegible]	241	10.80
1	[illegible]	227	19.45
1	8" Drill Collars	220	9.46
1	Shock Sub	240	3.09
5	8" Drill Collars	220	45.94
1	[illegible]	234	8.87
1	Bell Sub	224	1.17
3	7" Drill Collars	167	26.56
6	[illegible]	127	56.40
54	D.P. STANDS		1523.07
0	D.P. SINGLES		0.00
	KELLYDOWN		0.00
	TOTAL		1721.70
	WT. OF DC		30000.00
	WT. OF STRING		

BIT RECORD	
BIT NO	11
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P56DX
SERIAL NO	5007107
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	1740.00
TOTAL METERS DRILLED	
TOTAL HOURS RUN	
HOLE CONDITION	
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE ☑ water based ☐ oil based — Flowline Temp = 57.8

Meters Drilled

FROM	TO
1740.00	

CIRCULATION PRESSURE (KPA)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
11600	152	90	152	90

DRILLER SIGNATURE: Wade Goddard

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
0:00	1:45	1.75	20	Dir. Work/Break Off Stab,LayOut Motor,P/U New Motor,Install Stab,
1:45	2:00	0.25	7	Rig Service and Function Blind Ram's 6/8
2:00	4:30	2.50	6	M/U Bit#11,B.H.A.,LayOut 1 - 228mm D.C.,R.I.H.,Install New GrantHead,Flow Check/Fill Pipe and Test M.W.D. @ 901m
4:30	4:45	0.25	22	Set Up Connection Torque on Top Drive
4:45	5:30	0.75	6	R.I.H. w/Bit#11
5:30	6:30	1.00	5	Break Circulation and Work Tight Hole @ 1294m-1302m
6:30	6:45	0.25	6	R.I.H.
6:45	8:00	1.25	3	Wash and Ream fr/1347m-1407m

NOTES

HRS		OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.6		160000.00	Working Tight Hole	

Crew

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-626-706	Wade Goddard	8.00	WG	☐	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	651-366-064	Jesse Goddard	8.00	JG	☐	☑
Floorman	652-342-416	Jonathan Greeve	8.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☐	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	639-191-642	Dwayne Dixon		DD	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ OTHER

DRIVER A	CREW SAFETY DAYS	DRIVER B

DAY TOUR 8:00 TO 16:00

Drilling Assembly / Bit Record

NO.	BIT	O.D. (mm)	LENGTH
1	Bit/Motor	311	11.25
1	[illegible]	228	5.61
1	[illegible]	241	10.80
1	[illegible]	227	19.49
1	8" Drill Collars	220	9.46
1	Shock Sub	240	3.09
5	8" Drill Collars	220	45.94
1	[illegible]	234	8.87
1	Bell Sub	224	1.17
3	7" Drill Collars	167	26.65
6	[illegible]	127	56.40
55	D.P. STANDS		1551.98
2	D.P. SINGLES		18.11
	KELLYDOWN		-4.72
	TOTAL		1763.00
	WT. OF DC		30000.00
	WT. OF STRING		184000.00

BIT RECORD	
BIT NO	11
SIZE	311
IADC CODE	6 4 7
MFG.	H.C.
TYPE	HR-P56DX
SERIAL NO	5007107
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	1740.00
TOTAL METERS DRILLED	23.00
TOTAL HOURS RUN	4.75
HOLE CONDITION	
HOLE DRAG	23000 up/18000 dwn
TORQUE AT BOTTOM	10665 ft-lbs
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE ☑ water based ☐ oil based — Flowline Temp = 72.1

TIME	10:30	12:00	02:00
DENSITY	1040	1045	1048
FUNNEL VIS	62	64	62
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT@	148m3	147.1m3	134.9m3

MUD MATERIAL ADDED PRODUCT	AMOUNT & UNIT
Caustic Soda	6sks.
Humalite	44sks.
Hydrated Lime	2sks.
Milpac	4sks.
Volclay Gel	40sks.
Ligco	6sks.
Defoamer LD-8	1pail
Desco	3sks.

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
1740.00	1763.00	D	16/130	20-24

CIRCULATION PRESSURE (KPA)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
13300	152	90	152	90

REDUCED PUMP SPEED: 4200 @ 90 @ 1740.00

DEVIATION SURVEY DEPTH (m)	DEVIATION (o)	DIRECTION
1722.10	27.8	331.50
1730.70	28.1	332.10
1740.10	26.5	331.10

DRILLER SIGNATURE: Barry Verhelst

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
8:00	8:30	0.50	6	R.I.H. to 1677m
8:30	10:15	1.75	6	Wash & ream fr. 1677m - 1740m
10:15	12:30	2.25	2	Pattern bit & drill ahead fr. 1740m - 1749m
12:30	12:45	0.25	7	Rig Service, F/T Annular(24 secs)
12:45	15:15	2.50	2	Drill fr. 1749m - 1763m
15:15	16:00	0.75	10	Deviation Surveys(Accum.)

NOTES

HRS		OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.6		149000.00	Mud motor	

Crew

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verhelst	12.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☐	☑
Floorman	713-859-461	Gary Kennedy	12.00	GK	☐	☑
Floorman	726-807-769	Cory Kube	12.00	CK	☐	☑
Leaseman	739-300-089	Justin Craigen	12.00	JC	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ OTHER

DRIVER A	CREW SAFETY DAYS	DRIVER B

EVENING TOUR 16:00 TO 24:00

Drilling Assembly / Bit Record

NO.	BIT	O.D. (mm)	LENGTH
1	Bit/Motor	311	11.25
1	[illegible]	228	5.61
1	[illegible]	241	10.80
1	[illegible]	227	19.49
1	8" Drill Collars	220	9.46
1	Shock Sub	240	3.09
5	8" Drill Collars	220	45.94
1	[illegible]	234	8.87
1	Bell Sub	224	1.17
3	7" Drill Collars	167	26.55
6	[illegible]	127	56.40
57	D.P. STANDS		1609.69
0	D.P. SINGLES		0.00
	KELLYDOWN		0.00
	TOTAL		1806.19
	WT. OF DC		30000.00
	WT. OF STRING		104000.00

BIT RECORD	
BIT NO.	11
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P56DX
SERIAL NO	5007107
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	1740.00
TOTAL METERS DRILLED	54.00
TOTAL HOURS RUN	12.00
HOLE CONDITION	
HOLE DRAG	14-23 Up / 8-18 Down (Rotate)
TORQUE AT BOTTOM	10,685-11,507 ft/lbs.
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE ☑ water based ☐ oil based — Flowline Temp = 70.2 C

TIME	18:00	21:00	23:00
DENSITY	1045	1050	1050
FUNNEL VIS	59	61	62
W.L. (cm3)			
pH	10.6	10.5	11.0
PVT@	139.4m3	140.5m3	140.2m3

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
1763.00	1794.00	D	16/130	20-24

CIRCULATION PRESSURE (KPA)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
14250	152	90	152	90

REDUCED PUMP SPEED: 3850 @ 90 @ 1784.00

DEVIATION SURVEY DEPTH (m)	DEVIATION (o)	DIRECTION
1749.70	29	331.40
1766.70	29.4	331.40

DRILLER SIGNATURE: Wade Goddard

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
16:00	21:45	5.75	2	Drill fr/1763m-1787m
21:45	22:00	0.25	7	Rig Service and Function Pipe Ram's 8/8
22:00	23:30	1.50	2	Drill fr/1787m-1794m
23:30	24:00	0.50	10	Accumulated M.W.D. Survey's

NOTES

HRS		OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.3		132000.00		

Crew

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-626-706	Wade Goddard	4.00	WG	☐	☑
Derrickman	629-926-262	Rob Roth	4.00	RR	☐	☑
Motorman	651-366-064	Jesse Goddard	4.00	JG	☐	☑
Floorman	652-342-416	Jonathan Greeve	4.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☐	☑
Leaseman	729-975-003	Daniel Sampson	4.00	DS	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ OTHER

DRIVER A	CREW SAFETY DAYS	DRIVER B

ETS SERIAL NUMBER: PREC620_20041131_1A

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-11-30 20:00 | RIG RELEASE: | JOB NO: 22 | AFE:

LICENCE NO: MC-7 | WELL NAME AND NO: a-92-A / 92-J-12 MC-7

OPERATION: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | LINSLIE ID: b-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS
(1) Daily Pre-Tour Inspection
(2) Derrick Inspection Monthly (using checklist)
(3) H2S Signs Present (if required)
(4) Well Licence & Well Progress Poster
(5) Hard Hat Stickers
(6) BOP Drills Performed
(7) Monthly Inspect BOPs (Function & Pressure Tests)
(8) Rig Site Health and Safety Meeting (pre-spud/monthly)
(9) C.A.O.D.C. Rig Safety Inspection Checklist (pre-spud/monthly)
(10) Safe Operation Before Passing or Lowering
(11) Check Derrick Crown
(12) Inner Tub Cleaned

OPR. RM

DATE: 01-Jan-2005 | RIG NO.: 620 E | FUEL @ 8:00 | RIG: 51964 BOILER

WEATHER: TEMPERATURE: -12 | CURRENT CONDITION: Cloudy | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TUBING OR LINER

GRADE	NO. OF JOINTS	TOTAL WT. LENGTH	KB TO CSG HEAD/JNT	SET AT (m)
			6.31	125.00
L-80			6.23	870.00

DROP SIZE	LINER & LINE PIPE SIZE	GRADE	WT. LB/FT	FACE TO FACE	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	PUMP LINER SIZE
	29.00	S5-95	53.00	166.00	5"XH	170	FB-1600	BPMMP X 152mm	305
	39.00	S5-95	67.00	169.00	5"XH	169	FB -1600	BPMMP X152mm	305

CAODC

Chimo Equipment
A Vance Company

Based on the CAODC ETS file standard

WELL TYPE: Geothermal | RE-ENTRY: YES NO | KB TO GROUND ELEV: 7.20

WELL NAME & NO.: a-92-A / 92-J-12 MC-7 | DATE: 01-Jan-2005

OPERATION: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO: 620 E

PROVINCE: BC | CAMP: YES NO | AUD SAFETY DAYS: 307.00

SHALE SHAKER(S): NO. 1 TYPE: Derrick NEW: YES NO | SCREENS CHANGED: YES NO

	TOP	BOTTOM
5.60	100	100
5.60	100	100
24.00	100	100

RENTALS/SERVICES: BOW | DAT | K.D.

TIME / HRS

OPER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	21	22	23	24	25	26	TOTAL HRS
NOWAC	1.00	0.25															0.25							6.25
DAY	7.50																0.25							0.33
EVE	7.25																0.25							
TOTAL	22.25	0.25															0.75							0.58

MORNING TOUR

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	BitMotor	311	11.28
1		228	5.61
1		241	10.60
1		227	19.49
1		220	9.46
1	Shock Sub	240	3.09
5		220	46.94
1		234	8.87
1	Bell Sub	224	1.17
3		167	28.56
6		127	56.40
57	DP	STANDS	1809.66
3	DP	SINGLES	18.37
	HOLE OPENER		0.00
	TOTAL		1817.00
WT. OF DC			30000.00
WT. OF STRING			105400.00

BIT NO	11
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P86DX
SERIAL NO	5007107
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	1740.00
TOTAL METERS DRILLED	77.00
TOTAL HOURS RUN	19.00

CUTTING STRUCTURE: I | O | D | L | B | G | OC | RP | PP | WT

HOLE CONDITION

HOLE DRAG	15-25klbs-180down(Rotate)
TORQUE AT BOTTOM	10,965-11,507 ft/lbs.
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED			Flowline Temp = 79.2 C
TIME	02:00	04:00	06:00
DENSITY kg/m3	1060	1045	1040
FUNNEL VIS. (sec)	60	48	47
W.L. (cm3)			
pH	11.0	10.5	10.0
P.V.T. @	142.6m3	136.6m3	130.3m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Ligco	57 sks
Mipac	4 sks
Hydrated Lime	2 sks
Caustic Soda	5 sks
Defoamer LD-8	1 pl
Volclay Gel	80 sks

SOLIDS CONTROL

	HOURS RUN	SCREEN SIZE	VOLUME PROCESSED	VOLUME DISCARDED
	8.00	1050	1045	1780

METERS DRILLED

FROM	TO	METERS DRILLED	BIT HRS	ROTARY R.P.M.	WT. ON BIT kDaN
1794.00	1817.00	D	16/130	20-24	

CIRCULATION PRESSURE: KPA | PUMP NO. 1: LINER SIZE mm | S.P.M. | PUMP NO. 2: LINER SIZE mm | S.P.M.

KPA	PUMP NO. 1 LINER SIZE mm	S.P.M.	PUMP NO. 2 LINER SIZE mm	S.P.M.
14250	152	90	152	90

REDUCED PUMP SPEED: KPA @ S.P.M.

KPA	@	S.P.M.
2673	@ 90	1850.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1786.00	331.1	25.48

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS. RUN	HRS. STAND-BY	STAND-BY TEMP.
8.00	8.5	

OPERATOR FUEL	MAX BHP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	138000.00		

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	3:30	3.50	2	Drill f/r1794m-1807
3:30	3:45	0.25	3	Work Pipe/Wash and Ream f/r1779m-1807m
3:45	4:00	0.25	7	Rig Service and Function Annular 24/24
4:00	4:15	0.25	10	M.W.D. Survey
4:15	4:30	0.25	20	Dir. Work/Re-Cycle Survey and Orient ToolFace
4:30	8:00	3.50	2	Drill f/r1807m-1817m

RATE SCHEDULE	MEDIUM	REPAIR	IDLE
DRIVER A	CREW SAFETY DAYS	DRIVER B	

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	833-626-706	Wade Goddard	8.00	WG		
Derrickman	629-926-262	Rob Roth	8.00	RR		
Motorman	851-366-084	Jesse Goddard	8.00	JG		
Floorman	652-342-416	Jonathan Greeve	8.00	JG		
Floorman	505-422-253	Rory Mitchell	8.00	RM		
Leaseman	729-975-003	Daniel Sampson	6.00	DS		
Rig Manager	719-409-484	Kevin Vig		KV		
Top Drive	620-191-842	Dwayne Dixon		DD		

DAY TOUR

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	BitMotor	311	11.28
1		228	5.61
1		241	10.60
1		227	19.49
1		220	9.46
1	Shock Sub	240	3.09
5		220	46.94
1		234	8.87
1	Bell Sub	224	1.17
3		167	28.56
5		127	56.40
58	DP	STANDS	1638.78
1	DP	SINGLES	9.59
	HOLE OPENER		-7.16
	TOTAL		1839.80
WT. OF DC			30000.00
WT. OF STRING			107000.00

BIT NO	11
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P86DX
SERIAL NO	5007107
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	1740.00
TOTAL METERS DRILLED	99.00
TOTAL HOURS RUN	26.59

CUTTING STRUCTURE: I | O | D | L | B | G | OC | RP | PP | WT

HOLE CONDITION

HOLE DRAG	15000 up/15000 dwn
TORQUE AT BOTTOM	12349 ft-lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED			Flowline Temp = 69.2 C
TIME	06:00	12:00	02:00
DENSITY kg/m3	1040	1045	1045
FUNNEL VIS. (sec)	52	82	83
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT@	134.4m3	133.3m3	131.6m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	8sks.
Defoamer LD-8	2pails
Desco	6sks.
Hydrated Lime	2sks.
Ligco	45sks.
Mipac	4sks.
Volclay Gel	40sks.

SOLIDS CONTROL

	HOURS RUN	SCREEN SIZE	VOLUME PROCESSED	VOLUME DISCARDED
	1.00	1045	1035	1730

METERS DRILLED

FROM	TO	METERS DRILLED	BIT HRS	ROTARY R.P.M.	WT. ON BIT kDaN
1817.00	1839.00	D	16/130	20-24	

CIRCULATION PRESSURE: KPA | PUMP NO. 1: LINER SIZE mm | S.P.M. | PUMP NO. 2: LINER SIZE mm | S.P.M.

KPA	PUMP NO. 1 LINER SIZE mm	S.P.M.	PUMP NO. 2 LINER SIZE mm	S.P.M.
12200	152	90	152	90

REDUCED PUMP SPEED: KPA @ S.P.M.

KPA	@	S.P.M.
4000	@ 90	1824.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES
PVT comes same
Performed top drive Derrick Inspection

DRILLER SIGNATURE: Barry Verhelst

HRS. RUN	HRS. STAND-BY	STAND-BY TEMP.
8.00	8.5	

OPERATOR FUEL	MAX BHP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	124000.00	Overhead equipment	

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	11:00	3.00	2	Drill fr. 1817m - 1828m
11:00	11:15	0.25	7	Rig Service, F/T pipe rams(7 secs)
11:15	11:30	0.25	10	Attempt to survey M.W.D. failure
11:30	16:00	4.50	2	Drill fr. 1828m - 1839m

RATE SCHEDULE	MEDIUM	REPAIR	IDLE
DRIVER A	CREW SAFETY DAYS	DRIVER B	

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	842-386-910	Barry Verhelst	12.00	BV		
Derrickman	847-452-993	Dave Makowsky	12.00	DM		
Motorman	735-714-230	Chantry Vig	12.00	CV		
Floorman	713-958-461	Gary Kennedy	12.00	GK		
Floorman	728-807-769	Cory Kube	12.00	CK		
Leaseman	739-360-069	Justin Craigen	12.00	JC		

EVENING TOUR

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	BitMotor	311	11.28
1		228	5.61
1		241	10.60
1		227	19.49
1		220	9.46
1	Shock Sub	240	3.09
5		220	46.94
1		234	8.87
1	Bell Sub	224	1.17
3		167	28.56
6		127	56.40
59	DP	STANDS	1667.62
0	DP	SINGLES	0.00
	HOLE OPENER		0.00
	TOTAL		1886.15
WT. OF DC			30000.00
WT. OF STRING			107000.00

BIT NO	11
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P86DX
SERIAL NO	5007107
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	1740.00
TOTAL METERS DRILLED	123.00
TOTAL HOURS RUN	34.25

CUTTING STRUCTURE: I | O | D | L | B | G | OC | RP | PP | WT

HOLE CONDITION

HOLE DRAG	15-20klbs-180down(Rotate)
TORQUE AT BOTTOM	12,349-13,191 ft/lbs.
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED			Flowline Temp = 69.2 C
TIME	06:30	21:00	23:00
DENSITY kg/m3	1060	1055	1055
FUNNEL VIS. (sec)	48	47	53
W.L. (cm3)			
pH	10.5	10.5	10.5
PVT@	131.6m3	138.7m3	132.7m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

	HOURS RUN	SCREEN SIZE	VOLUME PROCESSED	VOLUME DISCARDED

METERS DRILLED

FROM	TO	METERS DRILLED	BIT HRS	ROTARY R.P.M.	WT. ON BIT kDaN
1828.00	1853.00	D	20/130	20-22	

CIRCULATION PRESSURE: KPA | PUMP NO. 1: LINER SIZE mm | S.P.M. | PUMP NO. 2: LINER SIZE mm | S.P.M.

KPA	PUMP NO. 1 LINER SIZE mm	S.P.M.	PUMP NO. 2 LINER SIZE mm	S.P.M.
13750	152	90	152	90

REDUCED PUMP SPEED: KPA @ S.P.M.

KPA	@	S.P.M.
4000	@ 90	1825.90

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES
PVT comes same

DRILLER SIGNATURE: Wade Goddard

HRS. RUN	HRS. STAND-BY	STAND-BY TEMP.
8.00	8.5	

OPERATOR FUEL	MAX BHP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	128000.00		

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	23:45	7.75	2	Drill fr/1839m-1853m
23:45	24:00	0.25	7	Rig Service and Function H.C.R. 4/4

RATE SCHEDULE	MEDIUM	REPAIR	IDLE
DRIVER A	CREW SAFETY DAYS	DRIVER B	

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	833-626-706	Wade Goddard	4.00	WG		
Derrickman	629-926-262	Rob Roth	4.00	RR		
Motorman	851-366-084	Jesse Goddard	4.00	JG		
Floorman	652-342-416	Jonathan Greeve	4.00	JG		
Floorman	505-422-253	Rory Mitchell	4.00	RM		
Leaseman	729-975-003	Daniel Sampson	4.00	DS		

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD 2004-11-30 20:00	RIG RELEASE
JOB NO 22	AFE
LICENCE NO. MC-7	WELL NAME AND NO. a-92-A / 92-J-12 MC-7
OPERATOR Western Geopower Corp	CONTRACTOR Precision Drilling
SURFACE LOCATION a-92-A / 92-J-12	UNIQUE ID b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE Russ Silva	SIGNATURE OF CONTRACTORS REPRESENTATIVE Kevin Vig

DAILY CHECKS

DATE 02-Jan-2005 | RIG NO 620 E | FUEL @ 8 AM | RIG 41621 BOILER

TEMPERATURE	-12
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Good

LAST CASING TUBING OR LINER

										6.31	129.69
									L-80	8.33	870.00

			29.00	S5-95	53.00	168.00	8"XH	170	FB-1600	BPMMP X 152mm	306
			38.00	S5-95	87.00	168.00	8"XH	150	FB-1600	BPMMP X152mm	305

WELL TYPE Geothermal	RE-ENTRY ☐YES ☑NO
WELL NAME & NO. a-92-A / 92-J-12 MC-7	DATE 02-Jan-2005
OPERATOR Western Geopower Corp	CONTRACTOR Precision Drilling
RIG MANAGER Kevin Vig	RIG NO 620 E
PROVINCE BC	CAMP ☑YES ☐NO
RIG TO GROUND ELEV. 7.20	RIG SAFETY DATE 308.60

TIME - HRS

CREW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
MORN	3.00																							6.25	4.50
DAY																									7.75
EVE																									8.00
TOTAL	3.00																							6.25	20.25

SHALE SHAKER(S) — RENTALS/SERVICES

NO.	TYPE	Derrick
	DOUBLE CYLINDER	☐YES ☑NO
5.00	TOP	100
5.00	MIDDLE	100
24.00	BOTTOM	100

	TOP	MIDDLE	BOTTOM
DAY	100	100	100
EVE	100	100	100

MORNING TOUR

BIT RECORD

NO.	BIT	SIZE	LENGTH
1	Bit/Motor	311	11.25
1		228	5.81
1		241	10.85
1	NO. 1 Air Cooler	227	19.49
1	9" Drill Collars	220	9.46
1	Shock Sub	240	3.09
5	9" Drill Collars	220	48.94
1	9" Jars / Hyd. B.C.	234	9.87
1	Bell Sub	224	1.17
3	7" Drill Collars	167	28.58
6		127	56.40
59	D.P.	STands	1667.52
2	D.P.	SINGLES	19.13
	WELL FLOWN		0.00
	TOTAL		1871.00
WT. OF PC			30000.00
WT. OF STRING			107000.00

BIT NO	11
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P66DX
SERIAL NO	5007107
JETS	
DEPTH OUT (m)	1871.00
DEPTH IN (m)	1749.00
TOTAL METERS DRILLED (m)	131.00
TOTAL HOURS RUN	37.25
CUTTING STRUCTURE	
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED			Flowline Temp = 89.5 C
TIME	02:00	03:00	
DENSITY kg/m3	1060	1060	
FUNNEL VIS. (s/L)	62	49	
W.L. (cm3)			
pH	10.6	10.6	
P.V./T. @	122.3m3	122.6m3	

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT
Lignco	45 sks
Hydrazed Lime	3 sks
Defoamer LD-8	1 pl
Caustic Soda	5 sks
Volclay Gel	40 sks
Milpac	4 sks

HOURS RUN			
5.00	1055	1045	1748

HOLE CONDITION

TIME LOG

FROM	TO	HOLE SIZE	BIT NO.	ROTARY R.P.M.	WT. ON BIT	HOURS	CUM. HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1863.00	1871.00	D	16/132	20-22		0:00	3:00	3.00	2
						3:00	3:15	0.25	7
						3:15	3:30	0.25	23
						3:30	8:00	4.50	6

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill f/1863m-1871m
Rig Service and Function Annular 24/24
Blow Pop Valves,Repair Pop Valves, Attempt to Circulate,Unable to Circulate
Flow Check @ 1855m,Hoist Bit#11,Flow Check's @ 1741m,1600m,1182m,

CIRCULATION PRESSURE (KPA) — PUMP NO. 1 / PUMP NO. 2 — LINER SIZE (mm) — R.P.M. — MAX PRESS (kPa) — R.P.M.

13500	152	90	152	90

REDUCED PUMP SPEED

3674	@	90	1864.06

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

HOURS RUN				OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
5.00	3.5				135000.00	Weekend Awareness	

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐MOVE — DRIVER A — CREW SAFETY DAYS — DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-828-708	Wade Goddard	8.00	WG	☐	☑
Derrickman	629-926-282	Rob Roth	8.00	RR	☐	☑
Motorman	651-366-064	Jesse Goddard	8.00	JG	☐	☑
Floorman	552-342-416	Jonathan Greeve	8.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☐	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☐	☑
Rig Manager	719-499-484	Kevin Vig		KV	☐	☑
Top Drive	539-191-642	Dwayne Dixon		DD	☐	☑

DAY TOUR

BIT RECORD

NO.	BIT	SIZE	LENGTH
1	Bit/Motor	311	11.25
1		228	5.81
1		241	10.85
1	NO. 1 Air Cooler	227	19.49
1	9" Drill Collars	220	9.46
1	Shock Sub	240	3.09
4	9" Drill Collars	220	36.81
1	9" Jars / Hyd. B.C.	234	9.87
1	Bell Sub	224	1.17
3	7" Drill Collars	167	28.63
6		127	56.40
59	D.P.	STands	1667.52
2	D.P.	SINGLES	19.13
	WELL FLOWN		0.00
	TOTAL		1876.20
WT. OF PC			29000.00
WT. OF STRING			

BIT NO	11	12
SIZE	311	311
IADC CODE	6 4 7	5 4 7
MFG	H.C.	H.C.
TYPE	HR-P66DX	HR-P66DX
SERIAL NO	5007107	6027057
JETS		
DEPTH OUT (m)	1871.00	
DEPTH IN (m)	1749.00	1871.00
TOTAL METERS DRILLED (m)	131.00	
TOTAL HOURS RUN	37.25	
CUTTING STRUCTURE		
HOLE DRAG		
TORQUE AT BOTTOM		
FILL ON BOTTOM (m)		

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED			Flowline Temp = 52.6
TIME			
DENSITY kg/m3			
FUNNEL VIS. (s/L)			
W.L. (cm3)			
pH			

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT

HOLE CONDITION

TIME LOG

FROM	TO	HOLE SIZE	BIT NO.	ROTARY R.P.M.	WT. ON BIT	HOURS	CUM. HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1871.00						8:00	11:45	3.75	5
						11:45	12:00	0.25	7
						12:00	15:30	3.50	6
						15:30	16:00	0.50	6

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

P.O.O.H., flow check @ 6m
Rig Service, F/T blind rams(7 secs)
Change out bit, switch out M.W.D., & lay down 228mm D.C. w/seal damage.
R.I.H. to 290m

CIRCULATION PRESSURE (KPA) — PUMP NO. 1 / PUMP NO. 2 — LINER SIZE (mm) — R.P.M. — MAX PRESS (kPa) — R.P.M.

	152		153	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verhelst

HOURS RUN				OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5				75000.00	tripping	

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐MOVE — DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verhelst	12.00	BV	☐	☑
Derrickman	647-452-993	Dave Makowsky	12.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☐	☑
Floorman	713-899-461	Gary Kennedy	12.00	GK	☐	☑
Floorman	726-807-799	Cory Kube	12.00	CK	☐	☑
Leaseman	739-300-049	Justin Craigen	12.00	JC	☐	☑

EVENING TOUR

BIT RECORD

NO.	BIT	SIZE	LENGTH
1	Bit/Motor	311	11.25
1		228	5.81
1		241	10.85
1	NO. 1 Air Cooler	227	19.49
1	9" Drill Collars	220	9.46
1	Shock Sub	240	3.09
4	9" Drill Collars	220	36.81
1	9" Jars / Hyd. B.C.	234	9.87
1	Bell Sub	224	1.17
3	7" Drill Collars	167	28.58
6		127	56.40
59	D.P.	STands	1667.52
2	D.P.	SINGLES	19.13
	WELL FLOWN		0.00
	TOTAL		1876.20
WT. OF PC			29000.00
WT. OF STRING			

BIT NO.	12
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P66DX
SERIAL NO.	6027057
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	1871.00
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
CUTTING STRUCTURE	
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED			Flowline Temp = 81.5 C
TIME			
DENSITY kg/m3			
FUNNEL VIS. (s/L)			
W.L. (cm3)			
pH			

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT

HOLE CONDITION

TIME LOG

FROM	TO	HOLE SIZE	BIT NO.	ROTARY R.P.M.	WT. ON BIT	HOURS	CUM. HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
1871.00						16:00	17:15	1.25	5
						17:15	18:45	1.50	20
						18:45	21:15	2.50	5
						21:15	21:30	0.25	21
						21:30	23:45	2.25	6
						23:45	24:00	0.25	7

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Trips
M.W.D. failure @ shallow test. Attempt to get signal.
P.O.O.H.
Safety Meeting
LayOut 226mm D.C.'s,B.H.A. and Directional Tools
Rig Serviceand Function HCR 4/4

CIRCULATION PRESSURE (KPA) — PUMP NO. 1 / PUMP NO. 2 — LINER SIZE (mm) — R.P.M. — MAX PRESS (kPa) — R.P.M.

	152		152	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

HOURS RUN				OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	6.5					LayOut 226mm D.C.'s	

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐MOVE — DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-828-708	Wade Goddard	4.00	WG	☐	☑
Derrickman	629-926-282	Rob Roth	4.00	RR	☐	☑
Motorman	651-366-064	Jesse Goddard	4.00	JG	☐	☑
Floorman	552-342-416	Jonathan Greeve	4.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☐	☑
Leaseman	729-975-003	Daniel Sampson	4.00	DS	☐	☑

ETS SERIAL NUMBER: PR6C620 _20050002_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

RIG RELEASE	
JOB NO.	22
AFE	
WELL NAME AND NO	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
MARQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Rusti Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig

DAILY CHECKS — OPR — A.M. — P.M.

DATE 03-Jan-2005
RIG NO. 620 E
FUEL ON HAND
RIG 37054 BOILER

WEATHER: TEMPERATURE -12; CURRENT CONDITION Clear; WIND DIRECTION Calm; ROAD Good

CASING TUBING OR LINER

											6.31	129.00
								L-80			8.33	570.00

		29.00	SS-65	63.00	164.00	5"XH	170	FB-1600	SPM/MP X 152mm	305		
		35.00	SS-95	67.00	168.00	5"XH	160	FB -1600	SPM/MP X152mm	305		

SHALE SHAKER(S) — RENTALS/SERVICES

NO.	TYPE	Derrick	Mast
3	SCREENS CHANGED	YES	NO
3	TOP	100	100
3	MIDDLE	100	100
3	BOTTOM	100	100

WELL TYPE: Geothermal — RE-ENTRY ☐YES ☑NO — KB TO GROUND LEVEL: 7.20
WELL NAME & NO: a-92-A / 92-J-12 MC-7 — DATE: 03-Jan-2005
OPERATOR: Western Geopower Corp — CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig — RIG NO: 620 E
PROVINCE: BC — CAMP ☑YES ☐NO — RIG SAFETY DAYS: 309.00

TIME - HRS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	TOTALS
OPER																											
MOVE																											
DAY																											
EVE																											
TOTAL																											

BIT RECORD

NO.	BIT	O.D. (mm)	METRES
1	bit	311	0.30
1	Motor	197	9.25
1	NorTrak Stab	228	1.95
1	Monels	203	9.33
1	Hang Off Sub	200	1.00
1	Monels	203	9.28
1	X/O Sub	202	0.77
6	140mm D.C.	180	74.90
1	Jars	178	4.89
5	140mm D.C.	180	75.36
6		127	56.40
58	DP	114mm	1587.62
1	SUB	SHOULDER	19.13
	HOLE FILL/OTHER		0.00
	TOTAL		1939.08

BIT NO 12 — SIZE 311 — IADC CODE 6 4 7 — MFG H.C. — TYPE HR-P86DX — SERIAL NO 6027057 — JETS — DEPTH OUT (m) — DEPTH IN (m) 1871.00 — TOTAL METERS DRILLED (m) — TOTAL HOURS RUN — CUTTING STRUCTURE: T B Dags LOC BEARINGS/SEALS GAUGE OTHER

HOLE CONDITION
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☑Normal Sample ☐Oil Based — Flowline Temp = 52.6

TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT

HOURS RUN | MUD WEIGHT | VISCOSITY | SAND %

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kN)
1871.00				

CIRCULATION PRESSURE (kPa) — PUMP NO. 1: LINER SIZE (mm) 152, S.P.M. — PUMP NO. 2: LINER SIZE (mm) 152, S.P.M.

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Wade Goddard

TIME LOG

FROM	TO	HRS	CODE
0:00	1:45	1.75	6
1:45	2:00	0.25	7
2:00	2:30	0.50	22
2:30	5:00	2.50	20
5:00	8:00	3.00	6

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

0:00 - 1:45	LayOut Directional Tools
1:45 - 2:00	Rig Service and Function Blind Ram's &/S
2:00 - 2:30	Measure and I.D. and O.D. New B.H.A.
2:30 - 5:00	P/U Directional Tools,Set Angle on Motor to 1.15 Deg.,Install M.W.D. and Shallow Test
5:00 - 8:00	M/U Bit#12,P/U 16 - 178mm D.C.'s,R.I.H.

NOTES

OPERATOR FUELS | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
P/U Drill Collars

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	533-628-706	Wade Goddard	8.00	WG	☑
Derrickman	529-926-262	Rob Roth	8.00	RR	☑
Motorman	651-366-064	Jesse Goddard	8.00	JG	☑
Floorman	652-342-416	Jonathan Greeve	8.00	JG	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☑
Leaseman	720-975-003	Daniel Sampson	8.00	DS	☑
Rig Manager	719-406-484	Kevin Vig		KV	
Top Drive	639-191-642	Dwayne Dixon		DD	☑

RATE SCHEDULE ☑REGULAR ☐ESTIMATE ☐SPOT — DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	METRES
1	Bit	311	0.30
1	Motor	199	9.25
1	NorTrak Stab	228	1.95
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
6	140mm D.C.	180	74.90
1	Jars	178	4.88
5	140mm D.C.	180	75.35
6		127	56.40
58	DP	114mm	1638.74
1	SUB	SHOULDER	9.89
	HOLE FILL/OTHER		-13.38
	TOTAL		1877.50

BIT NO. 12 — SIZE 311 — IADC CODE 6 4 7 — MFG H.C. — TYPE HR-P86DX — SERIAL NO 6027057 — JETS — DEPTH OUT (m) — DEPTH IN (m) 1871.00 — TOTAL METERS DRILLED (m) 6.90 — TOTAL HOURS RUN 2.00 — CUTTING STRUCTURE: T 1 B 1 Dags LOC BEARINGS/SEALS GAUGE OTHER

HOLE CONDITION
HOLE DRAG 17000 up/13000 dwn
TORQUE AT BOTTOM 9822 ft-lbs
FILL ON BOTTOM (m) 106000.00

MUD RECORD

MUD TYPE ☑Normal Sample ☐Oil Based — Flowline Temp = 52.8

TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT

HOURS RUN | MUD WEIGHT | VISCOSITY | SAND %

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kN)
1870.00	1877.50	D	15/120	19

CIRCULATION PRESSURE (kPa) — PUMP NO. 1: LINER SIZE (mm) 152, S.P.M. 90 — PUMP NO. 2: LINER SIZE (mm) 152, S.P.M. 90

14500 — REDUCED PUMP SPEED — 4500 — 1449.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Barry Verhelst

TIME LOG

FROM	TO	HRS	CODE
4:00	9:00	1.00	6
9:00	9:30	0.50	20
9:30	10:15	0.75	6
10:15	10:30	0.25	5
10:30	12:15	1.75	6
12:15	12:45	0.50	6
12:45	13:30	0.75	20
13:30	13:45	0.25	6
13:45	14:00	0.25	7
14:00	16:00	2.00	2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

4:00 - 9:00	R.I.H. to 880m, Install Grant head @ 245m
9:00 - 9:30	Shallow test MWD tool
9:30 - 10:15	R.I.H. to 1178m
10:15 - 10:30	Cool M.W.D. @ 1178m
10:30 - 12:15	Wash & ream fr. 1178m - 1481m
12:15 - 12:45	R.I.H. fr. 1481m - 1800m
12:45 - 13:30	Attempt to revive M.W.D., M.W.D. not sending signal
13:30 - 13:45	Wash & ream fr. 1800m - 1870m
13:45 - 14:00	Rig Service, F/T pipe rams(7 secs)
14:00 - 16:00	Pattern bit & drill ahead fr. 1870m - 1877m

NOTES

OPERATOR FUELS | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
130000.00 | Tripping

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	642-389-810	Barry Verhelst	8.00	BV	☑
Derrickman	547-462-903	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	713-659-481	Gary Kennedy	8.00	GK	☑
Floorman	726-807-769	Cory Kube	8.00	CK	☑
Leaseman	739-309-089	Justin Craigen	8.00	JC	☑
Top Drive	638-977-702	Sheldon Langley		SL	☑

RATE SCHEDULE ☑REGULAR ☐ESTIMATE ☐SPOT — DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	METRES
1	bit	311	0.30
1	Motor	196	9.25
1	NorTrak Stab	228	1.95
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
6	140mm D.C.	180	74.90
1	Jars	178	4.89
5	140mm D.C.	180	75.36
6		127	56.40
58	DP	114mm	1638.74
1	SUB	SHOULDER	9.53
	HOLE FILL/OTHER		-11.00
	TOTAL		1879.78

BIT NO 12 — SIZE 311 — IADC CODE 6 4 7 — MFG H.C. — TYPE HR-P86DX — SERIAL NO 6027057 — JETS — DEPTH OUT (m) 1879.00 — DEPTH IN (m) 1871.00 — TOTAL METERS DRILLED (m) 8.00 — TOTAL HOURS RUN 3.00 — CUTTING STRUCTURE: T 1 B 1 Dags LOC BEARINGS/SEALS GAUGE OTHER

HOLE CONDITION
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☑Normal Sample ☐Oil Based		Flowline Temp = 75
TIME	16:00	17:00
DENSITY (kg/m³)	1048	1050
FUNNEL VIS. (s/L)	43	46
W.L. (cm3)		
pH	10.5	10.5
PVT@	130.5m3	131.5m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Hydrosed Lime	2 sks
LIGCO	18 sks
Milgac	4 sks
Caustic Soda	1 sk
Viscosifier Gel	32 sks
Detergent	1 pl

HOURS RUN | MUD WEIGHT | VISCOSITY | SAND %

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kN)
1877.00	1879.00	d	15/120	19

CIRCULATION PRESSURE (kPa) — PUMP NO. 1: LINER SIZE (mm) 152, S.P.M. 90 — PUMP NO. 2: LINER SIZE (mm) 152, S.P.M. 90

14500 — REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HRS	CODE
16:00	17:00	1.00	2
17:00	17:45	0.75	5
17:45	18:00	0.25	7
18:00	23:00	5.00	6
23:00	24:00	1.00	20

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

16:00 - 17:00	Drill Fr/1877m-1879m
17:00 - 17:45	Circulate Hole Clean
17:45 - 18:00	Rig Service & Function Annular 22/22 Secs
18:00 - 23:00	Pull out Of Hole & Flow Checks @ 1878m, 1775m, 1418m, 251m, 0m
23:00 - 24:00	Dir. Work (Change out M.W.D & Pulse Test)

NOTES

OPERATOR FUELS | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
Orientations

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	716-324-181	Bill Mills	8.00	BM	☑
Derrickman	529-926-262	Rob Roth	8.00	RR	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☑
Floorman	123-836-179	Terry Dobson	8.00	TD	☑
Floorman	734-815-045	Lyle Todhunter	8.00	LT	☑
Leaseman	730-	Robert Howells	8.00	RH	☑

RATE SCHEDULE ☑REGULAR ☐ESTIMATE ☐SPOT — DRIVER A — CREW SAFETY DAYS — DRIVER B

ETS SERIAL NUMBER: PREC620 _20056003_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-1-H / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 04-Jan-2005 | RIG NO.: 620 E | FUEL @ 8:00: | RIG: 42256 BOILER

WEATHER: TEMPERATURE -14 | CURRENT CONDITION: Clear | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TUBING OR LINER

O.D. (mm)	WEIGHT (kg/m)	NOM.	MAKE	GRADE	NO. OF JOINTS	TOTAL WT. LENGTH	KB TO CSG HEADING	SET AT (m)
							5.31	128.00
				L-80			5.83	870.00

LINER SIZE (mm)	LINER WEIGHT (kg/m)	GRADE	MIN ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN. (mm)
	29.00	S5-95	83.00	168.00	5"XH	170	FB-1600	GPMMP X 152mm	305
	35.00	S5-95	67.00	168.00	5"XH	150	FB -1600	GPMMP X152mm	305

TIME SHEETS

CREW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
MORN	1.50			0.50	4.25	0.25				0.50																
DAY	6.50					0.25				0.75																
EVE	7.00					0.25				0.75																
TOTAL	15.00			0.50	4.25	0.75				2.00																

SHALE SHAKER(S) | RENTALS/SERVICES

NO.	SCREENS CHANGED	TYPE	MESH
	YES / NO		

	DERRICK	MUDPUMP
8.00	TOP 100	TOP 100
8.00	MIDDLE 100	MIDDLE 100
24.50	BOTTOM 100	BOTTOM 100

WELL TYPE: Geothermal | RE-ENTRY: YES / NO | KB TO GROUND ELEV.: 7.20

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 04-Jan-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 620 E

PROVINCE: BC | CAMP: YES / NO | RIG SAFETY DATE: 310.09

BIT RECORD

NO.	BIT	SUB (mm)	LENGTH (m)
1	Bit	311	0.30
1	Motor	195	8.25
1	NorTrak Stab	228	1.96
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	146mm D.C.	180	74.90
1	Jars	178	4.88
6	159mm D.C.	180	56.58
	Crossover Sub	127	66.40
59	D.P.	127mm	1649.15
1	D.P.	SH/BLE	9.63
	NEAL'DOWN		0.00
	TOTAL		1890.74

HOLE CONDITION

HOLE DRAG	18000 up/15000 dwn
TORQUE AT BOTTOM	6822 ft-lbs
FILL ON BOTTOM (m)	0.30

WT OF DC: 24000.00 | WT OF STRING: 106000.00

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED	Flowline Temp = 75
TIME	06:30
DENSITY (kg/m3)	1046
FUNNEL VIS. (s/L)	48
W.L. (cm3)	
pH	10.0
PV/YP @	126.8m3

MUD MATERIAL ADDED

SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT

METERS DRILLED

FROM	TO	BIT NO.	WOB (1000 kg)	ROTARY R.P.M.	LINER SIZE (mm)	LINER RATE S.P.M.
1879.00	1884.00	D	15/110	18		

CIRCULATION PRESSURE (KPa): PUMP NO. 1 LINER SIZE (mm) 152 S.P.M. 90 | PUMP NO. 2 LINER SIZE (mm) 152 S.P.M. 90 | 16300

REDUCED PUMP SPEED: 4700 @ 90 @ 1666.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1844.90	29.4	330.00

TIME LOG

0:00	0:15	0.25	20	Install MWD & scribe
0:15	0:45	0.50	20	Remove bit fr. M. motor & test MWD @ 50m
0:45	3:30	2.75	6	Install bit Make up B.H.A. & R.I.H., Install Grant head @ 283m & flow check.
3:30	3:45	0.25	20	Test M.W.D. @ 596m
3:45	4:05	0.25	7	Rig Service, F/T Annular(24 secs)
4:05	4:30	0.50	6	R.I.H. to 1230m
4:30	4:45	0.25	5	Cool & test M.W.D.
4:45	5:15	0.50	6	R.I.H. to 1540m
5:15	5:30	0.25	5	Cool & test M.W.D.
5:30	6:00	0.50	6	R.I.H. to 1860m
6:00	7:30	1.50	2	Drill fr. 1879m - 1884m
7:30	8:00	0.50	19	Deviation Survey & check shot

NOTES

DRILLER SIGNATURE: Barry Verheist | OPERATOR FUEL: | MAX EXP HOOKLOAD: 123000.00 | SAFETY TOPIC: Mud motor | M.A.C.P.:

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	642-389-910	Barry Verheist	8.00	BV	
Derrickman	647-452-903	Dave Makowsky	8.00	DM	
Motorman	735-714-230	Chantry Vig	8.00	CV	
Floorman	713-959-461	Gary Kennedy	8.00	GK	
Floorman	726-807-769	Cory Kube	8.00	CK	
Leaseman	739-300-089	Justin Craigen	8.00	JC	
Rig Manager	719-409-484	Kevin Vig	8.00	KV	
Top Drive	638-977-702	Sheldon Langley	8.00	SL	

RATE SCHEDULE: REGULAR / MINOR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

NO.	BIT	SUB (mm)	LENGTH (m)
1	Bit	311	0.30
1	Motor	195	8.25
1	NorTrak Stab	228	1.96
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	146mm D.C.	180	74.90
1	Jars	178	4.88
6	159mm D.C.	180	76.35
		127	56.40
59	D.P.	127mm	1667.52
0	D.P.	SH/BLE	0.00
	NEAL'DOWN		-8.98
	TOTAL		1903.90

HOLE CONDITION

HOLE DRAG	10-15 Klbs
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

WT OF DC: 24000.00 | WT OF STRING: 107000.00

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED	Flowline Temp = 73.1		
TIME	09:00	12:00	16:00
DENSITY (kg/m3)	1050	1050	1050
FUNNEL VIS. (s/L)	43	44	46
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP @	130.3m3	135.4m3	141.2m3

MUD MATERIAL ADDED

SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	09:00	12:00	16:00
Caustic Soda	6 sks				
Defoamer LD-8	2 pls	8.00	1050	1049	1750
Hydrated Lime	2 sks				
Milpac	4 sks	HOURS RUN			
Ligco	30 sks				
Milgel	35 sks				
Volclay Gel	40 sks	HOURS RUN			

METERS DRILLED

FROM	TO	BIT NO.	WOB (1000 kg)	ROTARY R.P.M.	LINER SIZE (mm)	LINER RATE S.P.M.
1884.00	1903.00	d	15/110	18/24		

CIRCULATION PRESSURE (KPa): PUMP NO. 1 LINER SIZE (mm) 152 S.P.M. 90 | PUMP NO. 2 LINER SIZE (mm) 152 S.P.M. 90 | 16000

REDUCED PUMP SPEED: @ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1873.60	28.4	332.10
1886.40	28.5	334.20

TIME LOG

8:00	14:30	6.50	2	Drill Fr/1884m-1903m
14:30	14:48	0.25	7	Rig Service & Function H.C.R. 3/3 Secs
14:48	16:15	0.80	22	(Service F-1600 Mud Pump)
16:15	16:00	0.75	19	Accumulated M.W.D. Deviation Surveys

NOTES

DRILLER SIGNATURE: Bill Mills | OPERATOR FUEL: | MAX EXP HOOKLOAD: 127000.00 | SAFETY TOPIC: | M.A.C.P.:

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	716-324-191	Bill Mills	12.00	BM	
Derrickman	629-926-282	Rob Roth	12.00	RR	
Motorman	723-572-761	Dwayne Fry	12.00	DF	
Floorman	123-635-179	Terry Dobson	12.00	TD	
Floorman	734-615-065	Lyle Todhunter	12.00	LT	
Leaseman	736-508-105	Robert Howells	12.00	RH	

RATE SCHEDULE: REGULAR / MINOR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

NO.	BIT	SUB (mm)	LENGTH (m)
1	Bit	311	0.30
1	Motor	195	8.25
1	NorTrak Stab	228	1.96
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	146mm D.C.	180	74.90
1	Jars	178	4.88
8	159mm D.C.	180	75.35
6		127	56.40
59	D.P.	127mm	1698.21
0	D.P.	SH/BLE	0.00
	NEAL'DOWN		-11.64
	TOTAL		1927.00

HOLE CONDITION

HOLE DRAG	18000 up/15000 dwn
TORQUE AT BOTTOM	6822 ft-lbs
FILL ON BOTTOM (m)	

WT OF DC: 24000.00 | WT OF STRING: 108000.00

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED			
TIME	16:00	20:00	22:00
DENSITY (kg/m3)	1045	1046	1046
FUNNEL VIS. (s/L)	45	47	48
W.L. (cm3)			
pH	9.5	9.6	9.7
PV/YP @	133.6m3	138.2m3	143m3

MUD MATERIAL ADDED

SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	16:00	20:00	22:00
		8.00	1045	1035	1725
		HOURS RUN			

METERS DRILLED

FROM	TO	BIT NO.	WOB (1000 kg)	ROTARY R.P.M.	LINER SIZE (mm)	LINER RATE S.P.M.
1903.00	1927.00	D	15/110	18-24		

CIRCULATION PRESSURE (KPa): PUMP NO. 1 LINER SIZE (mm) 152 S.P.M. 90 | PUMP NO. 2 LINER SIZE (mm) 152 S.P.M. 90 | 15600

REDUCED PUMP SPEED: 4747 @ 90 @ 1901.99

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1894.80	28.7	332.50

TIME LOG

16:00	20:15	4.25	2	Drill Fr/1903m- 1917m
20:15	20:30	0.25	7	Rig Service, F/T H.C.R.(2 secs)
20:30	23:15	2.75	2	Drill fr. 1917m - 1927m
23:15	24:00	0.75	19	Deviation Survey/Check shots/Resynchronize MWD

NOTES

DRILLER SIGNATURE: Barry Verheist | OPERATOR FUEL: | MAX EXP HOOKLOAD: 130000.00 | SAFETY TOPIC: | M.A.C.P.:

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	642-389-910	Barry Verheist	8.00	BV	
Derrickman	647-452-903	Dave Makowsky	8.00	DM	
Motorman	735-714-230	Chantry Vig	8.00	CV	
Floorman	713-959-461	Gary Kennedy	8.00	GK	
Floorman	726-807-769	Cory Kube	8.00	CK	
Leaseman	739-300-089	Justin Craigen	8.00	JC	

RATE SCHEDULE: REGULAR / MINOR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR | DAY TOUR | EVENING TOUR

ETS SERIAL NUMBER: PREC620_20050004_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

CAODC

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO.	22
AFE	
LICENCE NO.	MC-7
WELL NAME AND NO.	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID:	b-1-H / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE	Kevin Vig

DAILY CHECKS — CDR / RM

(1) Daily Walk-Around Inspection
(2) Emergency Shutdown (ESD) System
(3) H2S Alarm System
(4) Fire Extinguisher & Blast Diverter Pressure
(5) Kelly Cock
(6) Safety Valve(s)
(7) Annually Inspected BOP's (Functioned & Diagnostic Tests)
(8) Weekly Inspection Before Tripping or Laundry
(9) Crown Saver Checked
(10) Visible Safety Signage

DATE	05-Jan-2005
RIG NO.	820 E
FUEL @ 0:00	
PID	52565
BOILER	

LAST CASING TUBING OR LINER

	OD (mm)	WALL (mm)	GRADE	WEIGHT (kg/m)	CONN.	TOP (m)	SET AT (m)
							6.31
							8.23

	BIT	SIZE	MAKE	TYPE	SERIAL NO.	JETS	DEPTH OUT	METRES	HOURS	ROP
	1	311								
	2	311								
	3	311								

	DRILL PIPE	SIZE	GRADE	NO. OF JOINTS	TOTAL LENGTH (m)	KB TO END HEAD (m)	SET AT (m)
	L-80					6.31	129.90
	L-80					8.23	570.00

	TEMPERATURE	°C
CURRENT CONDITION	Clear	
WIND DIRECTION	Calm	
ROAD	Good	

	DRAWN BHP (kW)	LINER HOLE SIZE (mm)	GRADE	MIN. ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MAKE/SERIES	STROKE LEN. (mm)
		29.00	S-95	83.00	165.08	5"XH	170	FB-1600	BPM/MP_X 152mm	305
		28.00	S-95	97.00	165.00	5"XH	160	FB -1600	BPM/MP X152mm	305

SHALE SHAKER(S) — RENTALS/SERVICES

NO.	TYPE	NEW
2	Derrick	

8.00	SCREENS CHANGED	YES	NO
8.00	TOP	100	TOP 100
8.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

WELL TYPE	Geothermal
RE-ENTRY	YES NO
KB TO GROUND ELEV	7.20
WELL NAME & NO.	a-92-A / 92-J-12 MC-7
DATE	05-Jan-2005
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	820 E
PROVINCE	BC
CAMP	YES NO
RIG SAFETY DAYS:	311.00

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	METRES	BIT NO.	12RR
1	bit	311	0.30		
1	Motor	196	8.26	SIZE	311
1	NorTrak Stab	228	1.96	IADC CODE	6 4 7
1	Monels	204	9.33	MFG	H.C.
1	Hang Off Sub	200	1.00	TYPE	HR-P66DX
1	Monels	204	9.28	SERIAL NO.	6027057
1	X/O Sub	202	0.77	JETS	
8	190mm D.C.	190	74.90	DEPTH OUT (m)	
1	Jars	178	4.88	DEPTH IN (m)	1879.00
8	190mm D.C.	190	75.35	TOTAL METERS DRILLED (m)	72.00
6		127	56.40	TOTAL HOURS RUN	22.00
60	D.P.	5"HWDP	1699.21	CUTTING STRUCTURE	
2	D.P.	SINGLES	19.13		
	KELLYDOWN		-6.77		
	TOTAL		1951.09	HOLE DRAG	19000 up/15000 dwn
WT. OF DC			24000.00	TORQUE AT BOTTOM	9822 ft-lbs
WT. OF STRING			103000.00	FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED
TIME	02:00	04:00
DENSITY kg/m³	1045	1046
FUNNEL VIS. (sec)	47	49
W.L. (cm3)		
pH	9.5	10.0
PV/YP	136.2m3	140m3

MUD MATERIAL ADDED		SOLIDS CONTROL	HOURS RUN	ACTUAL RPM	CIRCULATING PRESSURE
PRODUCT	AMOUNT + UNIT				
Caustic Soda	8sks.				
Defoamer LD-8	2pails		6.00	1045	1035
Hydrated Lime	25sks.				
Ligco	35sks.				
Milgel	70sks.				
Milpac	3sks.				
Volclay Gel	40sks.				

	08:00
	1046
	49
	10.4
	144m3

METERS DRILLED

FROM	TO	METRES	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kg)
1927.00	1951.00	D	15	20-26	

CIRCULATION PRESSURE	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
18700	152	80	152	90

REDUCED PUMP SPEED

4890	@	80	@ 1934.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1913.10	28.2	332.60
1921.60	29.6	331.40
1932.10	30.3	331.60

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	DETAILS
6:00	4:00	6.00	2	Drill fr. 1927m - 1937m
4:00	4:15	0.25	7	Rig Service, F/T Annular(24 secs)
4:15	7:15	3.00	2	Drill fr. 1937m - 1951m
7:15	8:00	0.75	10	Deviation Surveys(Accum.)

NOTES

DRILLER SIGNATURE	HOURS ON JAR	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verheist	8.00		125000.00	Hazard ID program	

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-399-910	Barry Verheist	8.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	713-959-461	Gary Kennedy	8.00	GK	☑
Floorman	726-907-769	Cory Kube	8.00	CK	☑
Leaseman	739-300-069	Justin Craigen	8.00	JC	☑
Rig Manager	719-409-464	Kevin Vig		KV	☐
Top Drive	828-877-792	Sheldon Langley		SL	☐

RATE SCHEDULE: ☑ MINIMUM ☐ REPAIR ☐ STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	METRES	BIT NO.	12RR
1	Bit	311	9.30		
1	Motor	196	8.26	SIZE	311
1	NorTrak Stab	228	1.96	IADC CODE	6 4 7
1	Monels	204	9.33	MFG	H.C.
1	Hang Off Sub	200	1.00	TYPE	HR-P66DX
1	Monels	204	9.28	SERIAL NO.	6027057
1	X/O Sub	202	0.77	JETS	
8	190mm D.C.	190	74.90	DEPTH OUT (m)	
1	Jars	178	4.88	DEPTH IN (m)	1879.00
8	190mm D.C.	190	75.35	TOTAL METERS DRILLED (m)	97.00
8		127	56.40	TOTAL HOURS RUN	28.28
61	D.P.	5"HWDP	1724.91	CUTTING STRUCTURE	
1	D.P.	SINGLES	9.54		
	KELLYDOWN		0.00		
	TOTAL		1976.88	HOLE DRAG	13-15 Kdan
WT. OF DC			24000.00	TORQUE AT BOTTOM	
WT. OF STRING			108900.00	FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flowline Temp °
TIME	09:00	12:00	15:00
DENSITY kg/m³	1060	1065	1080
FUNNEL VIS. (sec)	53	64	61
W.L. (cm3)			
pH	10.0	9.8	9.8
PV/YP	131.6m3	138.2m3	141.6m3

MUD MATERIAL ADDED		SOLIDS CONTROL	HOURS RUN	ACTUAL RPM	CIRCULATING PRESSURE
PRODUCT	AMOUNT + UNIT				
Ligco	40 sks				
Milpac	4 sks		6.00	1054	1045
Hydrated Lime	2 sks				
Caustic Soda	6 sks				
Defoamer LD-8	1 pl				
Volclay Gel	40 sks				
Desco	3 sks				

	15:00
	1080
	61
	9.8
	141.6m3

METERS DRILLED

FROM	TO	METRES	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kg)
1951.60	1976.00	D	15/110	18-26	

CIRCULATION PRESSURE	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
15000	152	80	152	80

REDUCED PUMP SPEED

4890	@	80	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1962.00	31.2	332.60

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	DETAILS
6:00	15:15	7.25	2	Drill Frf1951m- 1976m
15:15	15:45	0.50	10	Accumulated Deviation Survey
15:45	16:00	0.25	7	Rig Service & Function pipe Rams 6/6 Secs

NOTES

DRILLER SIGNATURE	HOURS ON JAR	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Mills	9.00		125000.00		

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	12.00	BM	☑
Derrickman	820-926-282	Rob Roth	12.00	RR	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☑
Floorman	123-835-179	Terry Dobson	12.00	TD	☑
Floorman	734-815-065	Lyle Todhunter	12.00	LT	☑
Leaseman	735-505-106	Robert Howells	12.00	RH	☑

RATE SCHEDULE: ☑ MINIMUM ☐ REPAIR ☐ STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	METRES	BIT NO.	12RR
1	bit	311	0.30		
1	Motor	196	8.26	SIZE	311
1	NorTrak Stab	228	1.96	IADC CODE	6 4 7
1	Monels	204	9.33	MFG	H.C.
1	Hang Off Sub	200	1.00	TYPE	HR-P66DX
1	Monels	204	9.28	SERIAL NO.	6027057
1	X/O Sub	202	0.77	JETS	
8	190mm D.C.	190	74.90	DEPTH OUT (m)	
1	Jars	178	4.88	DEPTH IN (m)	1879.00
8	190mm D.C.	190	75.35	TOTAL METERS DRILLED (m)	127.00
8		127	56.40	TOTAL HOURS RUN	35.25
62	D.P.	5"HWDP	1753.59	CUTTING STRUCTURE	
2	D.P.	SINGLES	19.07		
	KELLYDOWN		-6.68		
	TOTAL		2006.80	HOLE DRAG	19000 up/15000 dwn
WT. OF DC			24000.00	TORQUE AT BOTTOM	9822 ft-lbs
WT. OF STRING			109900.00	FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED
TIME	18:00	20:00
DENSITY kg/m³	1050	1045
FUNNEL VIS. (sec)	52	50
W.L. (cm3)		
pH	10.0	10.0
PV/YP	130.8m3	136.4m3

MUD MATERIAL ADDED		SOLIDS CONTROL	HOURS RUN	ACTUAL RPM	CIRCULATING PRESSURE
PRODUCT	AMOUNT + UNIT				
			6.00	1050	1040

	22:00
	1050
	51
	10.0
	136.4m3

METERS DRILLED

FROM	TO	METRES	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kg)
1976.00	2006.00	D	15/110	20-26	

CIRCULATION PRESSURE	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
15000	152	80	152	80

REDUCED PUMP SPEED

4890	@	80	@ 1994.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1961.50	31.2	332.60
1971.50	30.8	332.60
1979.10	30.5	332.10

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	DETAILS
18:00	21:00	3.00	2	Drill Frf1976m- 1995m
21:00	21:15	0.25	7	Rig Service, F/T H.C.R.(2 secs)
21:15	23:15	2.00	2	Drill fr. 1995m - 2006
23:15	24:00	0.75	10	Deviation Surveys(Accum.)

NOTES

DRILLER SIGNATURE	HOURS ON JAR	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verheist	8.00		125000.00		

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-399-910	Barry Verheist	8.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	713-959-461	Gary Kennedy	8.00	GK	☑
Floorman	726-907-769	Cory Kube	8.00	CK	☑
Leaseman	739-300-069	Justin Craigen	8.00	JC	☑

RATE SCHEDULE: ☑ MINIMUM ☐ REPAIR ☐ STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20050005_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO	22
AFE	
LICENCE NO	MC-7
WELL NAME AND NO.	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID.	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig

DATE	06-Jan-2005
RIG NO.	620 E
FUEL @ 8:00	60616 BOILER
TEMPERATURE	-7
CURRENT CONDITION	Snow
WIND DIRECTION	East
ROAD	Good

WELL TYPE	Geothermal
RE-ENTRY	☐ YES ☑ NO
KB TO GROUND ELEV.	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	06-Jan-2005
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	312.00

LAST CASING, TUBING OR LINER

GRADE	L-80			KB TO CSG HEAD	8.31	129.00
					8.23	470.00

WEIGHT (kg/m)	GRADE			TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP LINER ACTUATOR	STROKE LTH. (mm)
29.00	SS-95	53.00	156.00	5"XH		170	FB-1600	BPMMP X 152mm	305
38.00	SS-95	87.00	168.00	5"XH		150	FB-1600	BPMMP X152mm	305

TIME - HRS

MORN	7.00		0.25		0.75	
DAY	7.00		0.25		0.75	
EVE	7.00		0.25		0.75	
TOTAL	21.00		0.75		2.25	

SHALE SHAKER(S): NO. 1 — Type: Derrick — SCREEN CHANGED ☑ YES ☐ NO

Hrs				
6.00				
8.00	TOP	100	TOP	100
8.00	MIDDLE	100	MIDDLE	100
24.00	BOTTOM	100	BOTTOM	100

RENTALS/SERVICES

MORNING TOUR

Drill string / Bit record

No.	Item	O.D. (mm)	Length		
1	bit	311	0.30	BIT NO.	12RR
1	Motor	196	8.25	SIZE	311
1	NorTrak Stab	228	1.96	IADC CODE	6 4 7
1	Monels	204	9.33	MFG	H.C.
1	Hang Off Sub	200	1.00	TYPE	HR-P66DX
1	Monels	204	9.28	SERIAL NO.	6027057
1	X/O Sub	202	0.77	JETS	
8	180mm D.C.	180	74.90	DEPTH OUT (m)	
1	Jars	178	4.89	DEPTH IN (m)	1879.00
8	180mm D.C.	180	75.36	TOTAL METERS DRILLED	157.00
6		127	56.40	TOTAL HOURS RUN	43.25
64	D.P.	STANDS	1811.16	DULL GRADING	
	D.P.	SINGLES			
	KELLY DOWN		-17.89	HOLE CONDITION	
	TOTAL		2036.00	HOLE DRAG	17000 up/15000 dwn
WT. OF DC			24000.00	TORQUE AT BOTTOM	10665 ft-lbs
WT. OF STRING			109000.00	FILL ON BOTTOM (m)	

Mud record

MUD TYPE: ☐ WATER BASED ☐ OIL BASED — Flow line temp=71.6c

TIME	02:00	04:00	06:00
DENSITY	1045	1045	1048
FUNNEL VIS	50	48	47
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT@	144.8m3	129.2m3	132.7m3

PRODUCT	AMOUNT x UNIT
Caustic Soda	6sks.
Defoamer LD-8	1 pail
Hydrated Lime	2sks.
Ligco	35sks.
Milpac	3sks.
Desco	3sks.

SOLIDS CONTROL: HOURS RUN 8.00 — 1046 — 1036 — 1730

Meters drilled

FROM	TO		ROTARY RPM	W.O.B.
2006.00	2036.00	D	15/110	20-25

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
15600	152	90	152	90

REDUCED PUMP SPEED: 4400 @ 90 @ 2033.00

DEPTH (m)	DEVIATION (o)	DIRECTION
1998.20	29.8	330.70
2008.60	29.3	330.40

DRILLER SIGNATURE: Barry Verhelst

Time log / Details of operations in sequence and remarks

FROM	TO	HRS	CODE	DETAILS
0:00	7:00	7.00	2	Drill fr. 2006m - 2036
7:00	7:15	0.25	7	Rig Service, F/T Annular(24 secs)
7:15	8:00	0.75	10	Deviation Surveys(Accum.)

NOTES: F/T crown-o-matic. Visually inspected B.O.P., [illegible]. Engines [illegible]

				OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
6.00		8.5			131000.00	slip & falls	

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verhelst	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	713-659-481	Gary Kennedy	8.00	GK	☐	☑
Floorman	726-907-769	Cory Kube	8.00	CK	☐	☑
Leaseman	739-300-089	Justin Craigen	8.00	JC	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	838-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY — DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR

Drill string / Bit record

No.	Item	O.D. (mm)	Length		
1	bit	311	0.30	BIT NO	12RR
1	Motor	196	8.25	SIZE	311
1	NorTrak Stab	228	1.96	IADC CODE	6 4 7
1	Monels	204	9.33	MFG	H.C.
1	Hang Off Sub	200	1.00	TYPE	HR-P66DX
1	Monels	204	9.28	SERIAL NO	6027057
1	X/O Sub	202	0.77	JETS	
8	180mm D.C.	180	74.90	DEPTH OUT (m)	
1	Jars	178	4.89	DEPTH IN (m)	1879.00
8	180mm D.C.	180	75.35	TOTAL METERS DRILLED	157.00
6		127	56.40	TOTAL HOURS RUN	50.25
64	D.P.	STANDS	1811.16	DULL GRADING	
2	D.P.	SINGLES	19.12		
	KELLY DOWN		-12.71	HOLE CONDITION	
	TOTAL		2060.00	HOLE DRAG	12-18 Kdan Sliding
WT. OF DC			24000.00	TORQUE AT BOTTOM	
WT. OF STRING			112000.00	FILL ON BOTTOM (m)	

Mud record

MUD TYPE: ☑ WATER BASED ☐ OIL BASED — Flowline Temp = 72.6

TIME	08:00	12:00	15:00
DENSITY	1066	1060	1065
FUNNEL VIS	49	47	48
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT@	136.7m3	138.6m3	142.8m3

PRODUCT	AMOUNT x UNIT
Ligco	30 sks
Hydrated Lime	2 sks
Milpac	3 sks
Caustic Soda	6 sks
Defoamer LD-8	1 pl
Desco	3 sks
Volclay Gel	10 sks

SOLIDS CONTROL: HOURS RUN 8.00 — 1050 — 1040 — 1750

Meters drilled

FROM	TO		ROTARY RPM	W.O.B.
2036.00	2060.00	D	15/110	20/25

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
15700	152	90	152	90

DEPTH (m)	DEVIATION (o)	DIRECTION
2020.60	29.2	330.70
2036.60	30.2	329.70

DRILLER SIGNATURE: Bill Mills

Time log / Details of operations in sequence and remarks

FROM	TO	HRS	CODE	DETAILS
8:00	15:00	7.00	2	Drill Fr/2036m- 2060m
15:00	15:15	0.25	7	Rig Service & Function Pipe Rams 4/4 Secs
15:15	16:00	0.75	10	Accumulated M.W.D.Deviation Survey

NOTES: Function Crown Saver. [illegible]

				OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
1.00		8.5			137000.00		

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-161	Bill Mills	12.00	BM	☐	☑
Derrickman	629-929-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	123-633-179	Terry Dobson	12.00	TD	☐	☑
Floorman	734-615-065	Lyle Todhunter	12.00	LT	☐	☑
Leaseman	730-508-108	Robert Howells	12.00	RH	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY — DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR

Drill string / Bit record

No.	Item	O.D. (mm)	Length		
1	bit	311	0.30	BIT NO.	12RR
1	Motor	196	8.25	SIZE	311
1	NorTrak Stab	228	1.96	IADC CODE	6 4 7
1	Monels	204	9.33	MFG	H.C.
1	Hang Off Sub	200	1.00	TYPE	HR-P86DX
1	Monels	204	9.28	SERIAL NO	6027057
1	X/O Sub	202	0.77	JETS	
8	180mm D.C.	180	74.90	DEPTH OUT (m)	
1	Jars	178	4.89	DEPTH IN (m)	1879.00
8	180mm D.C.	180	75.36	TOTAL METERS DRILLED	205.00
6		127	56.40	TOTAL HOURS RUN	67.25
65	D.P.	STANDS	1839.87	DULL GRADING	
1	D.P.	SINGLES	9.58		
	KELLY DOWN		-7.28	HOLE CONDITION	
	TOTAL		2084.60	HOLE DRAG	18000 up/15000 dwn
WT. OF DC			24000.00	TORQUE AT BOTTOM	10665 ft-lbs
WT. OF STRING			112000.00	FILL ON BOTTOM (m)	

Mud record

MUD TYPE: ☐ WATER BASED ☐ OIL BASED — Flow line Temp.: 70.2

TIME	18:00	20:00	22:00
DENSITY	1056	1045	1045
FUNNEL VIS	51	48	47
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT@	133.4m3	138m3	136.7m3

Meters drilled

FROM	TO		ROTARY RPM	W.O.B.
2060.00	2084.00	D	15/110	19-25

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
15900	152	90	152	90

REDUCED PUMP SPEED: 4600 @ 90 @ 2070.00

DEPTH (m)	DEVIATION (o)	DIRECTION
2048.60	30.2	330.70
2056.70	30	330.70

DRILLER SIGNATURE: Barry Verhelst

Time log / Details of operations in sequence and remarks

FROM	TO	HRS	CODE	DETAILS
16:00	19:00	3.00	2	Drill Fr/2160m-2071m
19:00	19:15	0.25	7	Rig Service, F/T H.C.R.(2 secs)
19:15	23:15	4.00	2	Drill fr. 2071m - 2084m
23:15	24:00	0.75	10	Deviation Surveys(Accum.) & toolface orientation

NOTES: F/T crown-o-matic

				OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00		8.5			137000.00		

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verhelst	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	713-659-481	Gary Kennedy	4.00	GK	☐	☑
Floorman	726-907-769	Cory Kube	4.00	CK	☐	☑
Leaseman	739-300-089	Justin Craigen	4.00	JC	☐	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY — DRIVER A — CREW SAFETY DAYS — DRIVER B

CAODC

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Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO	22
AFE	
LICENCE NO.	MC-7
WELL NAME AND NO	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig
DATE	07-Jan-2005
RIG NO	820 E
FUEL @ 8:00 — RIG	50585
WEATHER — TEMPERATURE	-13
CURRENT CONDITION	Cloudy
WIND DIRECTION	Calm
ROAD	Good

DAILY CHECKS (OPR / R.M.)

LAST CASING TUBING OR LINER	O.D.				GRADE			KB TO CSG HEAD	SET AT
								6.31	128.00
					L-80			8.23	470.00

DROP RET	LINEAR MASS	GRADE		TOOL JT O.D.	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH
	29.00	SS-95	83.00	168.00	5"XH	170	FB-1600	BPMMP X 162mm	306
	38.00	SS-95	67.00	168.00	5"XH	160	FB-1600	BPMMP X162mm	306

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	☐ Yes ☑ No	7.20

WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	07-Jan-2005
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	820 E
PROVINCE	BC
CAMP	☑ Yes ☐ No
RIG SAFETY DAYS	313.00

TIME - HRS

	1	2	3	4	5	6	7	8	9	10	…	20	21	22 Service Top Drive
MORN		1.00			0.50	5.75	0.25			0.25		0.25		
DAY						4.75	0.25		0.75			1.00		0.25
EVE		5.50	1.00			0.75	0.25			0.50				
TOTAL		6.50	1.00		0.50	11.25	0.75		0.75	0.75		1.25		0.25

SHALE SHAKER(S)

NO.	2
TYPE	Derrick
SCREENS CHANGED	☐ Yes ☑ No
TOP	100 / 100
MIDDLE	100 / 100
BOTTOM	100 / 100

TOTAL: 8.00 / 8.00 / 8.00 / 24.00

RENTALS/SERVICES

MORNING TOUR 0:00 TO 8:00

Drilling Assembly / Bit Record

No.	Item	O.D. (mm)	Length
1	bit	311	0.30
1	Motor	196	8.25
1	NorTrak Stab	228	1.96
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	160mm D.C.	160	74.96
1	Jars	178	4.89
8	160mm D.C.	160	78.35
6		127	56.40
55	D.P. STANDS		1839.87
1	D.P. SINGLES		9.68
	KELLY DOWN		-3.98
	TOTAL		2087.90
	WT. OF DC		24000.00
	WT. OF STRING		112000.00

BIT NO	12RR
SIZE	311
IADC CODE	6 4 7
MFG.	H.C.
TYPE	HR-P66DX
SERIAL NO	6027067
JETS	
DEPTH OUT (m)	2087.00
DEPTH IN (m)	1879.00
TOTAL METERS DRILLED	208.00
TOTAL HOURS RUN	58.25
DULL GRADING	HR 3.67
HOLE CONDITION — HOLE DRAG	21000 up/15000 dwn
TORQUE AT BOTTOM	10665 ft-lbs
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE	☐ Water based ☐ Oil based
TIME	01:00
DENSITY	1045
FUNNEL VIS.	46
W.L. (cm3)	
pH	10.6
PVT@	140.6m3

MUD MATERIAL ADDED — PRODUCT	AMOUNT + UNIT
Caustic Soda	4sks.
Defoamer LD-8	2pails
Hydrated Lime	2sks.
Ligco	30sks.
Milpac	3sks.
Volclay Gel	22sks.

SOLIDS CONTROL: 1.00 / 1045 / 1035 / 1725

Meters Drilled

FROM	TO		ROTARY RPM	
2084.00		D	15/110	21

CIRCULATION PRESSURE (kPa): 14700 — PUMP NO. 1: 152 / 90 — PUMP NO. 2: 152 / 90

REDUCED PUMP SPEED: 4000 @ 10 @ 2086.00

DEVIATION SURVEY — DEPTH (m)	DEVIATION (°)	DIRECTION
2071.90	30.1	331.60

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
0:00	1:00	1.00	2	Drill fr. 2084m - 2087m
1:00	1:30	0.50	5	Condition Mud & Circ.
1:30	1:45	0.25	10	Deviation Survey
1:45	7:30	5.75	6	Hoist bit #12RR, flow check @ 2082, 1996, 1181, 250 & out
7:30	7:45	0.25	7	Rig Service, F/T Blind rams(7 secs)
7:45	8:00	0.25	20	Dir. Work

NOTES

DRILLER SIGNATURE: Barry Verhelst — 8.00 / 9.0 — MAX EXP HOOKLOAD: 141000.00 — SAFETY TOPIC: Tripping

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verhelst	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Floorman	726-907-789	Cory Kube	8.00	CK	☐	☑
Leaseman	739-300-069	Justin Craigen	8.00	JC	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	836-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Standby — DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR 8:00 TO 16:00

Drilling Assembly / Bit Record

No.	Item	O.D. (mm)	Length
1	bit	311	0.30
1	Motor	196	8.26
1	NorTrak Stab	226	1.96
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	160mm D.C.	160	74.90
1	Jars	178	4.89
8	160mm D.C.	160	76.38
6		127	56.40
55	D.P. STANDS		1839.87
1	D.P. SINGLES		9.68
	KELLY DOWN		-3.98
	TOTAL		2087.90
	WT. OF DC		24000.00
	WT. OF STRING		112000.00

BIT NO.	13
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR P66DX
SERIAL NO	6027056
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2087.00
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE: ☑ Water based ☐ Oil based

Meters Drilled

FROM	TO		ROTARY RPM	
2087.00		D		

CIRCULATION PRESSURE — PUMP NO. 1: 152 — PUMP NO. 2: 152

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
8:00	9:00	1.00	20	Dir. Work
9:00	10:15	1.25	6	Run In Hole W/Bit # 13
10:15	10:30	0.25	7	Rig Service
10:30	10:45	0.25	22	(Service Top Drive)
10:45	11:30	0.75	9	Slip & Cut Off Drill Line
11:30	16:00	4.50	6	Run In Hole W/Bit # 13 (Ream Tight Spots Fr 1070m-1281m)

NOTES

DRILLER SIGNATURE: Bill Mills — 8.00 / 9.2

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	718-324-181	Bill Mills	12.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	123-635-179	Terry Dobson	12.00	TD	☐	☑
Floorman	734-615-065	Lyle Todhunter	12.00	LT	☐	☑
Leaseman	730-506-106	Robert Howells	12.00	RH	☐	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Standby — DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR 16:00 TO 24:00

Drilling Assembly / Bit Record

No.	Item	O.D. (mm)	Length
1	bit	311	0.30
1	Motor	196	8.25
1	NorTrak Stab	228	1.96
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	160mm D.C.	160	74.90
1	Jars	178	4.89
8	160mm D.C.	160	76.35
6		127	56.40
56	D.P. STANDS		1866.66
2	D.P. SINGLES		18.99
	KELLY DOWN		-16.38
	TOTAL		2113.00
	WT. OF DC		24000.00
	WT. OF STRING		113000.00

BIT NO	13
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR P66DX
SERIAL NO.	6027056
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2087.00
TOTAL METERS DRILLED	26.00
TOTAL HOURS RUN	5.50
HOLE DRAG	21000 up/17000 dwn
TORQUE AT BOTTOM	10665 ft-lbs
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE: ☑ Water based ☐ Oil based — Flowline temp=73.3

TIME	18:00	20:00	22:00
DENSITY	1050	1048	1060
FUNNEL VIS.	47	46	46
W.L. (cm3)			
pH	9.5	10.0	10.0
PVT@	134.5m3	137.8m3	138m3

SOLIDS CONTROL: 4.50 / 1050 / 1040 / 1730

Meters Drilled

FROM	TO		ROTARY RPM	
2087.00	2113.00	D	15/110	16- 26

CIRCULATION PRESSURE (kPa): 15600 — PUMP NO. 1: 152 / 90 — PUMP NO. 2: 152 / 90

REDUCED PUMP SPEED: 8000 @ 90 @ 2109.00

DEVIATION SURVEY — DEPTH (m)	DEVIATION (°)	DIRECTION
2075.60	30.1	332.10
2094.05	30	332.10

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
16:00	16:45	0.75	6	Finish In Hole
16:45	17:45	1.00	3	Wash To Bottom Fr1996m-2087m
17:45	22:30	4.75	2	Pattern Bit & Drill Fr/2087 - 2110m
22:30	22:45	0.25	7	Rig Service, F/T Annular(24 secs)
22:45	23:30	0.75	2	Drill fr. 2110m - 2113m
23:30	24:00	0.50	10	Deviation Surveys(Accum.)

NOTES

DRILLER SIGNATURE: Barry Verhelst — 8.00 / 9.5 — MAX EXP HOOKLOAD: 134000.00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verhelst	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	713-959-461	Gary Kennedy	4.00	GK	☐	☑
Floorman	726-907-769	Cory Kube	4.00	CK	☐	☑
Leaseman	739-300-069	Justin Craigen	4.00	JC	☐	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Standby — DRIVER A — CREW SAFETY DAYS — DRIVER B

CAODC

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Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00	RIG RELEASE:	JOB NO: 22	AFE:
LICENCE NO: MC-7	WELL NAME AND NO: a-92-A / 92-J-12 MC-7		
OPERATOR: Western Geopower Corp		CONTRACTOR: Precision Drilling	
AUTHORIZATION: a-92-A / 92-J-12		LOCATION: 9-14 / 92-J-12	
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva		SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig	

DAILY CHECKS: (a) Daily Visit Around Installation; (b) Detailed Inspection of Safety Gear (monthly); (c) H2S Alarm Present (if required); (d) Fluid Line Tested; (e) BOP Drill Performed; (f) Visually Inspect BOP's Pressure & Function Tested; (g) Rig Site Health and Safety Meeting (once each tour); (h) C & D (C Pull Safety Inspection Checklist (once per month)); (i) Total Lockout/Tag Out Training (as required); (j) Check Bolts Tightened; (k) Hours Job Exempted

DPR: R.M

WEATHER: TEMPERATURE -12; CURRENT CONDITION: Cloudy; WIND DIRECTION: Calm; ROAD: Good

DATE: 08-Jan-2005; RIG NO: 620 E; FUEL @ 8:00: Rig 42838 BOILER

LAST CASING TUBING OR LINER

O.D. (mm)	WT / I.D. (mm)	GRADE	NO. OF JOINTS	TOTAL (m) LENGTH	KB TO CSG HEAD (m)	SET AT (m)
					5.31	128.00
		L-80			5.23	870.00

DEPTH (m)	LINER HGR (m)	GRADE	WT. (kg/m)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH. (mm)
29.00		SS-95	53.00	168.00	5"XH	170	FB-1600	BPMMP X 152mm	305
36.00		SS-95	67.00	168.00	5"XH	150	FB -1600	BPMMP X152mm	305

Page 1 of 1

WELL TYPE: Geothermal; RE-ENTRY: YES / NO; KB TO GROUND ELEV: T.20

WELL NAME & NO: a-92-A / 92-J-12 MC-7; DATE: 08-Jan-2005

OPERATION: Western Geopower Corp; CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig; RIG NO: 620 E

PROVINCE: BC; CAMP: YES / NO; RIG SAFETY DAYS: 314.00

TIME - HRS

	OPER	REPAIR (rig)	SERVICE (rig)	REPAIR (other)	CIRC & COND	TRIPS	REAM	SURVEY	DRILL ACT	DRILL SLIDE	WASH	CEMENT	WAIT ON CMT	SLIP & CUT DRLG LINE	RIG UP & TEAR DOWN	RIG MOVE	WAIT ON WTHR	OTHER
MORN	7.86				0.25													0.39
DAY	7.00				0.25													0.25
EVE	8.90				0.25													0.85
TOTAL	23.00				0.75													1.50

SHALE SHAKER(S) — **RENTAL SERVICES**

TOTAL	NO	TYPE	Centrifuge
6.00	SCREENS CHANGED		YES / NO
6.00	TOP	100	TOP 100
6.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	MAKE	BIT NO.	13
1	Bit	311	0.30	SIZE	311
1	Motor	196	8.25	IADC CODE	6 4 7
1	NonTrak Stab	228	1.96	MFG	H.C.
1	Monels	204	9.33	TYPE	HR P86DX
1	Hang Off Sub	200	1.00	SERIAL NO	6027056
1	Monels	204	9.26	JETS	
1	X/O Sub	202	0.77	DEPTH OUT (m)	
8	180mm D.C.	180	74.50	DEPTH IN (m)	2067.00
1	Jars	178	4.89	TOTAL METERS DRILLED (m)	52.00
8	180mm D.C.	180	76.35	TOTAL HOURS RUN	13.00
6		127	56.40	DRILLING STRUCTURE T1 T2 MFG LOC	B Gage OC PULLED FOR
67	D.P.	114x09	1957.08		
1	D.P.	140x09.35	9.74		
	KELLY/DRIVE		-10.26	HOLE CONDITION	
	TOTAL		2139.00	HOLE DRAG	22000 up/16000 dwn
WT. OF DC			24000.00	TORQUE AT BOTTOM	11507 ft-lbs
WT. OF STRING			113000.00	FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Gauge Grade: / OIL BASED		Flowline temp=74.5
TIME	02:00	04:00 / 08:00
DENSITY kg/m3		1045 / 1045
FUNNEL VIS. (sec)		46 / 47 / 46
W.L. (cm3)		
pH	10.0	10.0 / 10.0
PV/YP	137.9m3	137.5m3 / 134.9m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	DRILLED (tonnes)	DISCARDED (m3)	DISCARDED (tonnes)
Caustic Soda	7sks.				
Defoamer LO-8	2pails	8.00	1045	1035	1730
Hydrated Lime	2sks.				
Ligco	41sks.				
Milpac	3sks.				
Milgel	35sks.				
Volclay Gel	46sks.				

METERS DRILLED

FROM	TO	METERS DRILLED	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)
2113.60	2139.00	D	18/1/19	20-26	

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) 152, S.P.M. 90; PUMP NO. 2 LINER SIZE (mm) 152, S.P.M. 90

REDUCED PUMP SPEED: 4800 @ 90 S.P.M. @ 2127.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
2112.60	30.1	331.40

TIME LOG

FROM	TO	HRS	CODE	CUM. HRS	LOST TIME
0:00	4:15	4.25	2		
4:15	4:30	0.25	7		
4:30	4:45	0.25	19		
4:45	8:00	3.25	2		

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	DETAILS
0:00	4:15	Drill fr. 2113m - 2129m
4:15	4:30	Rig Service, F/T Annular(24 secs)
4:30	4:45	Deviation Survey
4:45	8:00	Drill fr. 2129m - 2139m

NOTES: PT Crown saver. Changed blades, clearance accepted by tour hand & crew pusher. Engine #1 & #2 hrs. #1=12 hrs. Pump #1 & #2=8 hrs.

DRILLER SIGNATURE: Barry Verheist

DRILL HRS	TOUR HRS	TRIP TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.0			149000.00	Steam & equipment	

RATE SCHEDULE: REGULAR / REPAIR / INVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	842-388-910	Barry Verheist	8.00	BV	☑
Derrickman	847-452-993	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	713-958-461	Gary Kennedy	8.00	GK	☑
Floorman	726-907-759	Cory Kube	8.00	CK	☑
Lasseman	739-300-099	Justin Craigen	8.00	JC	☑
Rig Manager	719-409-464	Kevin Vig		KV	☑
Top Drive	638-977-702	Sheldon Langley		SL	☑

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	MAKE	BIT NO.	13
1	Bit	311	0.30	SIZE	311
1	Motor	196	8.25	IADC CODE	6 4 7
1	NonTrak Stab	228	1.96	MFG	H.C.
1	Monels	204	9.33	TYPE	HR P86DX
1	Hang Off Sub	200	1.00	SERIAL NO	6027056
1	Monels	204	9.26	JETS	
1	X/O Sub	202	0.77	DEPTH OUT (m)	
8	180mm D.C.	180	74.50	DEPTH IN (m)	2067.00
1	Jars	178	4.89	TOTAL METERS DRILLED (m)	75.00
8	180mm D.C.	180	76.35	TOTAL HOURS RUN	20.00
6		127	56.40	DRILLING STRUCTURE T1 T2 MFG LOC	B Gage OC PULLED FOR
68	D.P.	114x09	1926.61		
0	D.P.	140x09.35	0.00		
	KELLY/DRIVE		-5.94	HOLE CONDITION	15-20 Kdan (Sliding)
	TOTAL		2162.00	HOLE DRAG	
WT. OF DC			24000.00	TORQUE AT BOTTOM	11956 ft/lbs
WT. OF STRING			114000.00	FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Gauge Grade: / OIL BASED		Flowline temp = 67.8
TIME	08:00	12:00 / 15:00
DENSITY kg/m3	1045	1040 / 1040
FUNNEL VIS. (sec)	50	51 / 49
W.L. (cm3)		
pH	10.0	9.5 / 10.0
PV/YP	124.9m3	114.3m3 / 122.0m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	DRILLED (tonnes)	DISCARDED (m3)	DISCARDED (tonnes)
Ligco	30 sks				
Caustic Soda	7 sks	4.50	1045	1040	1751
Hydrated Lime	2 sks				
Milpac	3 sks				
Volclay Gel	120 sks				
Milgel	35 sks				
Defoamer LO-8	1 pl				

METERS DRILLED

FROM	TO	METERS DRILLED	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)
2139.00	2162.00	D	18/1/19	19-26	

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) 152, S.P.M. 90; PUMP NO. 2 LINER SIZE (mm) 152, S.P.M. 90

REDUCED PUMP SPEED: @ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
2132.10	29.9	331.10

TIME LOG

FROM	TO	HRS	CODE	CUM. HRS	LOST TIME
8:00	10:15	2.25	2		
10:15	10:30	0.25	7		
10:30	10:45	0.25	19		
10:45	11:15	0.50	2		
11:15	11:45	0.50	22		
11:45	16:00	4.25	2		

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	DETAILS
8:00	10:15	Drill Fr/2139m-2148m
10:15	10:30	Rig Service & Function Pipe Rams 6/6 Secs
10:30	10:45	M.W.D. Deviation Survey
10:45	11:15	Drill Fr/2148m-2149m
11:15	11:45	(Service F-1600 Mud Pump) # 1 ,Changed Head
11:45	16:00	Drill 2148m-2162m

NOTES: Function Drawn Saver

DRILLER SIGNATURE: Bill Mills

DRILL HRS	TOUR HRS	TRIP TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.0			137000.00	Storm Burns	

RATE SCHEDULE: REGULAR / REPAIR / INVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	718-324-181	Bill Mills	12.00	BM	☑
Derrickman	829-926-262	Rob Roth	12.00	RR	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☑
Floorman	123-635-179	Terry Dobson	12.00	TD	☑
Floorman	734-615-065	Lyle Todlunder	12.00	LT	☑
Lasseman	739-508-106	Robert Howells	12.00	RH	☑

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	MAKE	BIT NO.	13
1	Bit	311	0.30	SIZE	311
1	Motor	196	8.25	IADC CODE	6 4 7
1	NonTrak Stab	228	1.96	MFG	H.C.
1	Monels	204	9.33	TYPE	HR P86DX
1	Hang Off Sub	200	1.00	SERIAL NO	6027056
1	Monels	204	9.26	JETS	
1	X/O Sub	202	0.77	DEPTH OUT (m)	
8	180mm D.C.	180	74.50	DEPTH IN (m)	2067.00
1	Jars	178	4.89	TOTAL METERS DRILLED (m)	96.00
8	180mm D.C.	180	76.35	TOTAL HOURS RUN	25.50
6		127	56.40	DRILLING STRUCTURE T1 T2 MFG LOC	B Gage OC PULLED FOR
68	D.P.	114x09	1926.61		
2	D.P.	140x09.35	19.35		
	KELLY/DRIVE		-2.29	HOLE CONDITION	
	TOTAL		2185.00	HOLE DRAG	21000 up/15000 dwn
WT. OF DC			24000.00	TORQUE AT BOTTOM	11507ft-lbs
WT. OF STRING			115000.00	FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Gauge Grade: / OIL BASED		Flowline temp = 66.6
TIME	16:00	20:00 / 22:00
DENSITY kg/m3	1040	1035 / 1040
FUNNEL VIS. (sec)	55	46 / 44
W.L. (cm3)		
pH	10.0	10.0 / 10.0
PV/YP	133.4m3	135.9m3 / 137.9m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	DRILLED (tonnes)	DISCARDED (m3)	DISCARDED (tonnes)

METERS DRILLED

FROM	TO	METERS DRILLED	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)
2162.00	2185.00	D	18/1/19	19-26	

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) 152, S.P.M. 90; PUMP NO. 2 LINER SIZE (mm) 152, S.P.M. 90

REDUCED PUMP SPEED: 4800 @ 90 S.P.M. @ 2164.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
2161.00	29.6	333.20
2161.80	29.4	333.20

TIME LOG

FROM	TO	HRS	CODE	CUM. HRS	LOST TIME
16:00	16:30	0.50	2		
16:30	17:15	0.75	22		
17:15	23:15	6.00	2		
23:15	23:30	0.25	7		
23:30	24:00	0.50	19		

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	DETAILS
16:00	16:30	Drill Fr/2162m-2163m
16:30	17:15	(Service F-1600 Mud Pump) # 2 , Changed Head & Liner
17:15	23:15	Drill Fr/2163m-2185m
23:15	23:30	Rig Service, F/T H.C.R.(2 secs)
23:30	24:00	Devistion Surveys(Accum.)

NOTES: Function Drawn Saver; Estimated mud losses @ 4.5m3/hour @ 24:00 hrs

DRILLER SIGNATURE: Barry Verheist

DRILL HRS	TOUR HRS	TRIP TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.0			139000.00		

RATE SCHEDULE: REGULAR / REPAIR / INVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	842-388-910	Barry Verheist	8.00	BV	☑
Derrickman	847-452-993	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	713-958-461	Gary Kennedy	8.00	GK	☑
Floorman	726-907-759	Cory Kube	8.00	CK	☑
Lasseman	739-300-099	Justin Craigen	8.00	JC	☑

ETS SERIAL NUMBER: PREC620 _20050006_1A

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 22 | AFE

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: a-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS (OPR / RM)
(1) Daily Rig Inspection
(2) Derrick Inspection (Weekly Sling Inspection)
(3) H2S Signs Posted (if required)
(4) Well Sketch & Well Diagram Posted
(5) Flare Line Staked
(6) Safety Shower Functional
(7) Weekly Mr. Lee BOP's Recorded & Operated Daily
(8) Rig Site Hazard and Safety Meeting Conducted (Monthly)
(9) C.A.O.D.C. Rig Safety Inspection Checklist (one rig monthly)
(10) Hazardous position Before Arriving at Location
(11) Crown Saver Checked
(12) Safety Kits Checked

WEATHER: DATE 09-Jan-2005 | RIG NO. 920 E | TIME @ 8:00 | RIG 32494 BOILER | TEMPERATURE -15 | CURRENT CONDITION Clear | WIND DIRECTION Calm | ROAD Good

LAST CASING / TUBING OR LINER

O.D. (mm)	Wall (mm)	Type	Make	Grade	No. of Joints	Total Wt. (kg)	KB to Csg Head (m)	Set at (m)
							6.31	129.00
				L-80			8.23	670.00

Drill String Components	Length (m)	Grade	Tool Joint O.D. (mm)	Tool Joint I.D. (mm)	Thread Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke (cm) (in)
	29.00	SS-95	63.60	168.00	5"XH	170	FB-1600	BPMMP X 152mm	305
	26.00	SS-95	57.00	168.00	5"XH	150	FB-1600	BPMMP X152mm	305

TIME-HRS

	Code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
OPER.																											
MORN	7.25								0.25																		
DAY	7.00								0.25																		
EVE	7.25								0.25																		
TOTAL	21.50								0.75																		

TOTALS: 3.25 | 5.50 | 24.50

STABLE SHAKER(S) — RENTALS/SERVICES

No.	Type	Derrick
		New
	Screens Changed	☐ YES ☑ NO
	Top	100
	Middle	100
	Bottom	100

No.	Type	Top	Middle	Bottom
		New	New	New

WELL TYPE: Geothermal | RE-ENTRY ☐ YES ☑ NO | KB TO GROUND ELEV.: 7.20

WELL NAME & NO.: a-92-A / 92-J-12 MC-7 | DATE: 09-Jan-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 920 E

PROVINCE: BC | CAMP ☑ YES ☐ NO | RIG SAFETY DAYS: 315.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

No.	Bit	O.D. (mm)	Length (m)
1	bit	311	0.30
1	Motor	196	8.28
1	NorTrak Stab	228	1.96
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.89
9	180mm D.C.	180	75.36
5		127	56.40
70	D.P.	STANDS	1983.02
0	D.P.	SINGLES	0.00
			-15.45
		TOTAL	2219.00

BIT NO.: 13 | SIZE: 311 | IADC CODE: 5 4 7 | MFG: H.C. | TYPE: HR P86DX | SERIAL NO.: 6027058 | JETS | DEPTH OUT (m) | DEPTH IN (m): 2087.00 | TOTAL METERS DRILLED (m): 123.00 | TOTAL HOURS RUN: 33.75 | DULL CONDITION: T B G OC LOC: | GAUGE | SEALED BEARINGS | PULLED OUT FOR

HOLE CONDITION

HOLE DRAG	26000 up/15000dwn
TORQUE AT BOTTOM	11507 ft-lbs
FILL ON BOTTOM (m)	

WT. OF DC	24000.00
WT. OF STRING	115000.00

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED | Flowline temp = 68.6

Time	02:00	04:00	08:00
Depth (m)	1046	1065	1960
Pump Liner Size (mm)	46	46	46
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	142.4m3	144.6m3	142.6m3

MUD MATERIAL ADDED — SOLIDS CONTROL

Product	Amount x Unit	Hours Run	Total Circ. Hours	Total Hours Used	Total Amount Used
Caustic Soda	5sks.				
Defoamer LD-8	2-Pail				
Hydrated Lime	2sks.				
Ligco	40sks.				
Milpac	4sks.				
Milgel	35sks.				
Tec Detergent	1pail				
Volclay Gel	160sks.				

METERS DRILLED

From	To	Meters	Rotary Hrs	Total Hrs
2165.00	2210.00	DD	16/110	20-25

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 | PUMP NO. 2

Liner Size (mm)	S.P.M.	Liner Size (mm)	S.P.M.
16800	152	90	152	90

REDUCED PUMP SPEED

4490	@	80	@	2243.00

DEVIATION SURVEY

Depth (m)	Deviation (m)	Direction
2179.40	29.4	332.20
2185.40	29.4	332.20

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Hrs	Code	Activity
0:00	6:45	6.75	2	Drill fr. 2165m - 2205m
6:45	7:00	0.25	7	Rig Service, F/T Annular(24 secs)
7:00	7:30	1.50	2	Drill fr. 2205m - 2210m
7:30	8:00	0.50	10	Deviation Surveys(Accum.)

NOTES
10 crown savers - Checked all B.O.P., kill line & choke line pulls w/booster wrench. Kelbuzie tested @ 5.0m/sec.
Daylight #1, #2 & #3 kit. Pump #1 kit #2 Pump #1 #2 #3

Driller Signature	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
Barry Verheist		140000.00	Fall protection	

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVENT

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-388-810	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	713-958-461	Gary Kennedy	8.00	GK	☐	☑
Floorman	726-907-788	Cory Kube	8.00	CK	☐	☑
Leaseman	738-300-089	Justin Craigen	8.00	JC	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-477-702	Sheldon Langley		SL	☐	☑

DAY TOUR 8:00 TO 16:00

BIT RECORD

No.	Bit	O.D. (mm)	Length (m)
1	bit	311	0.30
1	Motor	196	8.28
1	NorTrak Stab	228	1.96
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.89
9	180mm D.C.	180	75.36
6		127	56.40
70	D.P.	STANDS	1983.02
2	D.P.	SINGLES	19.11
			-15.56
		TOTAL	2229.00

BIT NO.: 13 | SIZE: 311 | IADC CODE: 5 4 7 | MFG: H.C. | TYPE: HR P86DX | SERIAL NO.: 6027058 | JETS | DEPTH OUT (m): 2229.00 | DEPTH IN (m): 2087.00 | TOTAL METERS DRILLED (m): 142.00 | TOTAL HOURS RUN: 40.75 | DULL CONDITION: T B G OC LOC: | GAUGE | SEALED BEARINGS | PULLED OUT FOR

HOLE CONDITION

HOLE DRAG	15-25 KdaN (Sliding)
TORQUE AT BOTTOM	11507 ft/lbs
FILL ON BOTTOM (m)	

WT. OF DC	24000.00
WT. OF STRING	116000.00

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED | Flowline temp = 71.6

Time	09:00	12:00	16:00
Depth (m)	1960	1960	1046
Pump Liner Size (mm)	46	46	46
W.L. (cm3)			
pH	9.6	9.6	9.6
PV/YP	141.8m3	143.6m3	148.6m3

MUD MATERIAL ADDED — SOLIDS CONTROL

Product	Amount x Unit	Hours Run	Total Circ. Hours	Total Hours Used	Total Amount Used
Ligco	30 sks				
Caustic Soda	6 sks	0.00			
Hydrated Lime	2 sks				
Milpac	3 sks				
Milgel	35 sks				
Volclay Gel	40 sks				
Defoamer LD-8	1pl				

METERS DRILLED

From	To	Meters	Rotary Hrs	Total Hrs
2210.00	2229.00	D	16/110	19-25

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 | PUMP NO. 2

Liner Size (mm)	S.P.M.	Liner Size (mm)	S.P.M.
15700	152	90	152	90

REDUCED PUMP SPEED

	@		@	

DEVIATION SURVEY

Depth (m)	Deviation (m)	Direction
2200.90	29	333.60
2208.20	29.4	332.80

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Hrs	Code	Activity
8:00	15:00	7.00	2	Drill Fr/2210m-2229m
15:00	15:15	0.25	7	Rig Service & Function pipe Rams 8/6 Secs
15:15	16:00	0.75	10	Accumulated M.W.D. Deviation Surveys

NOTES
Function Crown Saver
Visually Inspect Tongs & Tong Lines (All Appear Ok)

Driller Signature	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
Bill Mills		161000.00		

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVENT

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-161	Bill Mills	12.00	BM	☐	☑
Derrickman	629-926-282	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	123-635-179	Terry Dobson	12.00	TD	☐	☑
Floorman	734-615-065	Lyle Todhunter	12.00	LT	☐	☑
Leaseman	730-508-106	Robert Howells	2.00	RH	☐	☑

EVENING TOUR 16:00 TO 24:00

BIT RECORD

No.	Bit	O.D. (mm)	Length (m)
1	bit	311	0.30
1	Motor	196	8.28
1	NorTrak Stab	228	1.96
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.89
9	180mm D.C.	180	75.36
5		127	56.40
71	D.P.	STANDS	2011.71
1	D.P.	SINGLES	9.34
			-12.68
		TOTAL	2280.80

BIT NO.: 13 | SIZE: 311 | IADC CODE: 5 4 7 | MFG: H.C. | TYPE: HR P86DX | SERIAL NO.: 6027058 | JETS | DEPTH OUT (m) | DEPTH IN (m): 2087.00 | TOTAL METERS DRILLED (m): 193.00 | TOTAL HOURS RUN: 46.40 | DULL CONDITION: T B G OC LOC: | GAUGE | SEALED BEARINGS | PULLED OUT FOR

HOLE CONDITION

HOLE DRAG	26000 up/15000 dwn
TORQUE AT BOTTOM	12346 ft-lbs
FILL ON BOTTOM (m)	

WT. OF DC	24000.00
WT. OF STRING	118000.00

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED | Flowline temp = 69.8

Time	16:00	20:00	23:00
Depth (m)	1046	1046	1046
Pump Liner Size (mm)	46	46	46
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	141.8m3	144.6m3	144.6m3

MUD MATERIAL ADDED — SOLIDS CONTROL

Product	Amount x Unit	Hours Run	Total Circ. Hours	Total Hours Used	Total Amount Used

METERS DRILLED

From	To	Meters	Rotary Hrs	Total Hrs
2229.00	2250.00	D	16/110	19-25

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 | PUMP NO. 2

Liner Size (mm)	S.P.M.	Liner Size (mm)	S.P.M.
15700	152	90	152	90

REDUCED PUMP SPEED

4700	@	80	@	2143.00

DEVIATION SURVEY

Depth (m)	Deviation (m)	Direction
2219.90	29.4	331.40
2227.60	29.3	331.70

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Hrs	Code	Activity
16:00	21:00	5.00	2	Drill fr. 2229m - 2243m
21:00	21:15	0.25	7	Rig Service, F/T H.C.R.(2 secs)
21:15	23:30	2.25	2	Drill fr. 2243m - 2250m
23:30	24:00	0.50	10	Deviation Surveys(Accum.)

NOTES
Function Crown Saver
Kelbuzie tested @ 5.0m/sec

Driller Signature	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
Barry Verheist		145000.00		

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVENT

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-388-810	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	713-958-461	Gary Kennedy	4.00	GK	☐	☑
Floorman	726-907-788	Cory Kube	4.00	CK	☐	☑
Leaseman	738-300-089	Justin Craigen	4.00	JC	☐	☑

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

ETS SERIAL NUMBER: PREC620 _20050009_1A

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE

LICENSE NO: MC-7 | WELL NAME AND NO: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | ANSCHE ID: ts-141 / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Ruas Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 10-Jan-2005 | RIG NO.: 620 E | FUEL @ 8:00 | RIG: 21738 BOILER

WEATHER: TEMPERATURE -14 | CURRENT CONDITION: Clear | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TUBING OR LINER

									L-80		6.23	570.00

		78.00	SS-95	63.00	160.00	5"XH	170	FB-1600		BPMMP X 152mm		305
		38.00	SS-95	87.00	168.00	5"XH	150	FB-1600		BPMMP X152mm		305

TIME - HRS

CODE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	TOTAL
CREW	TRAVEL TO/FROM LOCATION	RIG UP/DOWN	DRILLING	CIRC & COND	TRIPS	RIG SERVICE	SURVEY	DRILL STEM TEST	FISHING	REAMING	CORING	CEMENTING	WAIT ON CEMENT	SQUEEZE CEMENT	PLUG BACK	DEVIATION	SAFETY MEETING	WELDING	OTHER	LOST TIME		Maintenance	Top drive				
MORN	6.00					0.25				0.25											0.75		0.75				7.25
DAY	1.50					0.25	0.25																				2.00
EVE			9.25	4.50	0.25																3.25			6.25			23.50
TOTAL	1.50		9.25	10.50	0.75	0.25	0.25			0.25											4.00		0.75	6.25			32.75

SHALE SHAKER(S) | RENTALS/SERVICES

NO.	TYPE	Derrick	New
2	SWACO		
2	SWACO		
2	SWACO		
2	SWACO		

5.00	SWACO Centrifuge		yes	☑	no
5.00	TOP	105	TOP	100	
5.00	MIDDLE	105	MIDDLE	100	
14.00	BOTTOM	100	BOTTOM	100	

	WORK	DEV	EVE

WELL TYPE: Geothermal | RE-ENTRY: ☐ yes ☑ no | KB TO GROUND ELEV.: 7.20

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 10-Jan-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 620 E

PROVINCE: BC | CAMP: ☑ yes ☐ no | RIG SAFETY DAYS: 316.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.25
1	NonTrek Stab	226	1.96
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	184mm D.C.	180	74.90
1	Jars	178	4.69
8	184mm D.C.	180	76.35
5	Downhole BHA	127	56.40
72	D.P.	STANDS	2040.19
0	D.P.	SINGLES	0.00
			-17.62
	TOTAL		2265.00
WT. OF DC			24000.00
WT. OF STRING			119000.00

BIT NO: 13 | SIZE: 311 | MADC CODE: 6 4 7 | MFG.: H.C. | TYPE: HR P86DX | SERIAL NO: 6027058 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 2087.00 | TOTAL METERS DRILLED (m): 178.00 | TOTAL HOURS RUN: 54.00 | CUTTING STRUCTURE: | BHA: | Gage: | ODC: | NUMBER PULLED: | TOOTH WEAR: | DEPTH IN: | DEPTH OUT: | HOURS RUN: | DRILLING HOURS: | CIRCULATING HOURS: | DRILLING HOURS: | HOLE CONDITION | HOLE DRAG: 27000 up/17000 dwn | TORQUE AT BOTTOM: 12349 ft-lbs | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Water Based ☐ Oil Based ☐ | Flowline temp = 88.6

TIME	02:00	04:00	06:00
DENSITY kg/m3	1040	1040	1040
FUNNEL VIS. (sec)	47	47	48
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	144cm3	144.6m3	143.8m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Caustic Soda	6pkg.
Defoamer / LD-8	1 Pail
Hydrated Lime	2sks.
Lignco	30sks.
Milgel	70sks.
Milpac	3sks.
Volclay Gel	40sks.

SOLIDS CONTROL

	HOURS RUN	SCREEN SIZE	SCREEN CONDITION

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kg)	HOURS	METERS
2260.00	2265.00	D	15/110	20-27	0:00	5:30
					5:30	5:45
					5:45	6:00
					6:00	6:30
					6:30	7:15
					7:15	8:00

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) 152 | S.P.M. 90 | PUMP NO. 2: LINER SIZE (mm) 152 | S.P.M. 90

15700

REDUCED PUMP SPEED: 4000 @ 90 @ 2260.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
2248.50	28.9	332.50

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	5:30	5.50	2	Drill fr. 2260m - 2262m
5:30	5:45	0.25	7	Rig Service, F/T Annular(24 secs)
5:45	6:00	0.25	10	Deviation Survey
6:00	6:30	0.50	2	Drill fr. 2262m - 2265m
6:30	7:15	0.75	23	(Maintenance) on F-1600 mud pump #1
7:15	8:00	0.75	20	Orient toolface & work drill string for slide(Accum.)

NOTES: BIT across sonic | Engine #1, #2 & #3 idle | Pump #1: 15.24cm x 45cm (6 x 18") liners

DRILLER SIGNATURE	HRS RUN	KM	STICK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verhelst	8.00	9.6		145000.00	Rig service		

RATE SCHEDULE: ☑ regular ☐ repair ☐ invert

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-810	Barry Verhelst	8.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	713-959-461	Gary Kennedy	8.00	GK	☑
Floorman	726-907-769	Cory Kube	8.00	CK	☑
Leaseman	739-300-086	Justin Craigen	8.00	JC	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐
Top Drive	838-977-702	Sheldon Langley		SL	☑

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE
2260.00	2265.00	5.50	2
		0.25	7
		0.25	10
		0.50	2
		0.75	23
		0.75	20

DAY TOUR 8:00 TO 18:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.25
1	NonTrek Stab	226	1.96
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	184mm D.C.	180	74.90
1	Jars	178	4.69
8	184mm D.C.	180	76.35
5	Downhole BHA	127	56.40
72	D.P.	STANDS	2040.19
0	D.P.	SINGLES	0.00
			-16.62
	TOTAL		2265.00
WT. OF DC			24000.00
WT. OF STRING			120000.00

BIT NO: 13 | SIZE: 311 | MADC CODE: 6 4 7 | MFG.: H.C. | TYPE: HR P86DX | SERIAL NO: 6027058 | JETS: | DEPTH OUT (m): 2265.00 | DEPTH IN (m): 2087.00 | TOTAL METERS DRILLED (m): 179.00 | TOTAL HOURS RUN: 55.60 | CUTTING STRUCTURE: | BHA: | Gage: | ODC: | NUMBER PULLED: | TOOTH WEAR: | DEPTH IN: | DEPTH OUT: | HOURS RUN: | DRILLING HOURS: | CIRCULATING HOURS: | DRILLING HOURS: | HOLE CONDITION | HOLE DRAG: | TORQUE AT BOTTOM: | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Water Based ☐ Oil Based ☐ | Flowline temp = 88.6

TIME	09:00	10:00	
DENSITY kg/m3	1045	1045	
FUNNEL VIS. (sec)	48	47	
W.L. (cm3)			
pH	10.0	10.0	
PV/YP	145.1m3	144.7m3	

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Lignco	17 sks
Caustic Soda	1 sk
Hydrated Lime	1 sk
Milpac	3 sks
Nut Plug	10 sks

SOLIDS CONTROL

	HOURS RUN	SCREEN SIZE	SCREEN CONDITION

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kg)	HOURS	METERS
2265.00	2266.00	D	15	1961	8:00	9:30
					9:30	10:45
					10:45	10:00

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) 152 | S.P.M. 90 | PUMP NO. 2: LINER SIZE (mm) 152 | S.P.M. 90

15700

REDUCED PUMP SPEED: @ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
2265.00	2266.00	1.50	2	Drill Fr/2265m-2266m
9:30	10:45	0.25	6	Pull Out Of Hole & Flowchecks @ 2253m, 2130m, 700m.
10:45	10:00	0.25	7	Rig Service & Function Pipe Rams 6/6 Secs

NOTES: Function Crown Saver

DRILLER SIGNATURE	HRS RUN	KM	STICK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Mills	8.00	9.6		145000.00			

RATE SCHEDULE: ☑ regular ☐ repair ☐ invert

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	718-324-181	Bill Mills	12.00	BM	☑
Derrickman	628-626-282	Rob Roth	12.00	RR	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☑
Floorman	123-635-179	Terry Dobson	12.00	TD	☑
Floorman	734-615-065	Lyle Todhunter	12.00	LT	☑

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE
2265.00	2266.00	1.50	2
9:30	10:45	0.25	6
10:45	10:00	0.25	7

EVENING TOUR 16:00 TO 24:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.25
1	Float Sub	196	0.29
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	184mm D.C.	180	74.90
1	Jars	178	4.69
8	184mm D.C.	180	76.35
5	Downhole BHA	127	56.40
72	D.P.	STANDS	2021.36
0	D.P.	SINGLES	0.00
			0.00
	TOTAL		2262.42
WT. OF DC			24000.00
WT. OF STRING			120000.00

BIT NO: 13 / 14 | SIZE: 311 / 311 | MADC CODE: 6 4 7 / 6 4 7 | MFG.: H.C. / H.C. | TYPE: HR P86DX / HR-P86DX | SERIAL NO: 6027058 / 6032137 | JETS: | DEPTH OUT (m): 2266.00 | DEPTH IN (m): 2087.00 / 2266.00 | TOTAL METERS DRILLED (m): 179.00 | TOTAL HOURS RUN: 56.60 | CUTTING STRUCTURE: 5 5 lc a e 1 pr | BHA: | Gage: | ODC: | NUMBER PULLED: | TOOTH WEAR: | DEPTH IN: | DEPTH OUT: | HOURS RUN: | DRILLING HOURS: | CIRCULATING HOURS: | DRILLING HOURS: | HOLE CONDITION | HOLE DRAG: | TORQUE AT BOTTOM: | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Water Based ☐ Oil Based ☐ | Flowline temp = 88.6

TIME			
DENSITY kg/m3			
FUNNEL VIS. (sec)			
W.L. (cm3)			
pH			
PV/YP			

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

	HOURS RUN	SCREEN SIZE	SCREEN CONDITION

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kg)	HOURS	METERS
2266.00					16:00	17:00
					17:00	20:15
					20:15	20:30
					20:30	22:30
					22:30	22:45
					22:45	23:30
					23:30	23:45
					23:45	24:00

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) 152 | S.P.M. | PUMP NO. 2: LINER SIZE (mm) 152 | S.P.M.

REDUCED PUMP SPEED: @ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	17:00	1.00	6	Pull Ouyt Of Hole & Flow Checks @ 261m, 0m
17:00	20:15	3.25	29	Dir. Work(Change Out M.W.D., Set Motor Up to 1-5, Scribe motor, Lay Down Stabs & test M.W.D.
20:15	20:30	0.25	7	Rig Service, F/T Blind rams(7 secs)
20:30	22:30	2.00	6	Make up bit #14 & R.I.H. to 261m, Install Grant head @ 261m
22:30	22:45	0.25	23	Service (Top drive)
22:45	23:30	0.75	6	R.I.H. to 903m
23:30	23:45	0.25	5	Shallow test MWD, Tool temp. of 107 deg C.
23:45	24:00	0.25	6	R.I.H. to 1077m

NOTES: Function Crown Saver / Closed Inlet Rams, High Set Of Rots 30 Seat | Trip Record (Mass = 11.36 mT / 11.36 mLt / Diff = 0)

DRILLER SIGNATURE	HRS RUN	KM	STICK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verhelst	8.00	9.6			83900.00		

RATE SCHEDULE: ☑ regular ☐ repair ☐ invert

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-810	Barry Verhelst	4.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☑
Floorman	713-959-461	Gary Kennedy	4.00	GK	☑
Floorman	726-907-769	Cory Kube	4.00	CK	☑
Leaseman	739-300-086	Justin Craigen	4.00	JC	☑

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE
16:00	17:00	1.00	6
17:00	20:15	3.25	29
20:15	20:30	0.25	7
20:30	22:30	2.00	6
22:30	22:45	0.25	23
22:45	23:30	0.75	6
23:30	23:45	0.25	5
23:45	24:00	0.25	6

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

ETS SERIAL NUMBER: PREC620_20050010_1A

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 22 | AFE

LICENCE NO: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS

CORR. | P.U.

DATE: 11-Jan-2005 | RIG NO.: 820 E | FUEL @ 6:00: | RIG: 26721 BOILER

WEATHER: TEMPERATURE -8 | CURRENT CONDITION: Clear | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TUBING OR LINER

	O.D. (mm)	Min I.D. (mm)	lb/m	NAME	GRADE	NO. OF JOINTS	TOTAL (m) LENGTH	NO. TO CSG HEAD (m)	WT. AT (m)
								6.31	129.00
					L-80			6.23	670.00

	CASING SIZE	CASING WEIGHT	GRADE	MIN. ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN. (mm)
		29.00	S5-95	83.09	186.90	5"XH	179	FB-1600	BPM/MP X 152mm	305
		38.00	S5-95	97.09	188.90	5"XH	180	FB-1600	BPM/MP X152mm	305

SHALE SHAKER(S) | RENTAL SERVICES

	NO.	TYPE
3.00		Derrick
3.00	SCREENS CLEAN	YES / NO
3.00	TOP	180
3.00	MIDDLE	180
24.00	BOTTOM	180

TOP 180 | MIDDLE 180 | BOTTOM 180 | DEW

	HRS	CODE FROM	CODE TO	1	2	3	4	5A	5B	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
MORN	5.75					1.25	0.25																					
DAY	6.50						0.25																					
EVE	7.00						0.25																					
TOTAL	19.25					1.25	0.75																					

BIT RECORD

NO.	BIT	O.D. (mm)	L. (m)
1	bit	311	0.30
1	Motor	196	8.26
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.26
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.89
6	180mm D.C.	180	76.35
6		127	55.40
72	DP	STANDS	2040.19
0	DP	SINGLES	0.00
	HELLDOWN		-6.25
	TOTAL		2276.00
WT. OF DC			24000.00
WT. OF STRING			117000.00

BIT NO.: 14 | SIZE: 311 | IADC CODE: 6 4 7 | MFG: H.C. | TYPE: HR-P86DX | SERIAL NO.: 6032137 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 2269.00 | TOTAL METERS DRILLED (m): 9.00 | TOTAL HOURS RUN: 3.75 | CUTTING STRUCTURE: I: 1 | L: WT | LOC: 4 | B: Gage | G: OC | RP: | PR: | HOLE CONDITION | HOLE DRAG: 23000 up/16000 dwn | TORQUE AT BOTTOM: 12348 ft-lbs | FILL ON BOTTOM (m): 0.19

MUD RECORD

MUD TYPE: WATER BASED | OIL BASED | Flowline temp = 69.8

TIME	04:00	05:30	07:00
DENSITY (kg/m³)	1040	1040	1040
FUNNEL VIS. (sec)	48	46	47
W.L. (cm3)			
pH	9.5	9.5	10.0
PV/YP	130.7m3	140.9m3	145.3m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	DESILTER CONE SIZE	DESILTER PRESSURE	DESILTER CONE NO.
Caustic Soda	4sks.				
Defoamex LD-8	1 Pail				
Hydrated Lime	2sks.				
Ligco	36sks.				
Milpac	3sks.				
Milgel	5sks.				
Volclay Gel	26sks.				

METERS DRILLED

FROM	TO	HRS	ROTARY R.P.M.	WT. ON BIT (klbs)
2265.00	2275.00	D	15/110	19-26

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.

17200	152	90	152	90

REDUCED PUMP SPEED

5003	@	90	@	2268.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
2268.40	28.7	333.50

TIME LOG

FROM	TO	HRS	CODE
0:00	2:00	2.00	6
2:00	2:15	0.25	6
2:15	3:30	1.25	5
3:30	6:00	2.50	2
6:00	6:15	0.25	7
6:15	7:30	1.25	2
7:30	8:00	0.50	10

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

R.I.H. to 2251m
Wash & ream fr. 2251m - 2268m
Cool M.W.D. & Test.(Accum.)
Pattern bit & drill fr. 2268m - 2272m
Rig Service, F/T Annular(24 secs)
Drill fr. 2272m - 2275m
Deviation Survey & check shot
MWD Temp. vs Depth: 903m=107C, 1172m=102C, 1469m=90C, 1748m =80C, 2030m=102C, 2251m=141C

NOTES

DRILLER SIGNATURE: Barry Verheist | TIME SUP. | TIME OFF | TIME ON | TIME TOUR | OPERATOR FUEL | MAX EXP HOOKLOAD: 143000.00 | SAFETY TOPIC: Mixing chemicals | M.A.C.P.

RATE SCHEDULE: REGULAR | OVERTIME | PAYOUT

DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Floorman	726-907-786	Cory Kube	8.00	CK	☐	☑
Leaseman	739-300-069	Justin Craigen	8.00	JC	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-877-702	Sheldon Langley		SL	☐	☑

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	L. (m)
1	bit	311	0.30
1	Motor	196	8.26
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.26
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.89
8	180mm D.C.	180	76.35
6		127	55.40
72	DP	STANDS	2040.19
2	DP	SINGLES	19.57
	HELLDOWN		-2.62
	TOTAL		2298.00
WT. OF DC			24000.00
WT. OF STRING			117000.00

BIT NO.: 14 | SIZE: 311 | IADC CODE: 6 4 7 | MFG: H.C. | TYPE: HR-P86DX | SERIAL NO.: 6032137 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 2268.00 | TOTAL METERS DRILLED (m): 32.00 | TOTAL HOURS RUN: 10.25 | CUTTING STRUCTURE: I: 1 | L: WT | LOC: 8 | B: Gage | G: OC | RP: | PR: | HOLE CONDITION | HOLE DRAG: 16 Down/28-26 Up sliding | TORQUE AT BOTTOM: 11956 Ft/lbs | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: WATER BASED | OIL BASED | Flowline temp = 69.8

TIME	08:00	12:00	16:00
DENSITY (kg/m³)	1045	1045	1065
FUNNEL VIS. (sec)	59	48	61
W.L. (cm3)			
pH	10.0	9.5	9.5
PV/YP	150.2m3	146.1m3	141.7m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	DESILTER CONE SIZE	DESILTER PRESSURE	DESILTER CONE NO.
Caustic Soda	7 sks				
Hydrated Lime	2 sks	1.50	1960	1040	1750
Milpac	3 sks				
Nut Plug	14 sks				
Volclay Gel	20 sks				
Milgel	22 sks				
Gel	40 sks				
Ligco	6 sks				

METERS DRILLED

FROM	TO	HRS	ROTARY R.P.M.	WT. ON BIT (klbs)
2275.00	2298.00	D	15/110	19-28

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.

12400	152	75	152	75

REDUCED PUMP SPEED

5158	@	90	@	2280.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
2284.70	28.3	332.80
2274.80	28.5	332.50

TIME LOG

FROM	TO	HRS	CODE
0:00	14:30	6.50	2
14:30	14:45	0.25	7
14:45	16:00	1.25	10

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill Fr2275m-2298m
Rig Service
M.W.D. Deviation Surveys & Orient Tool face

NOTES

DRILLER SIGNATURE: Bill Mills | TIME SUP. | TIME OFF | TIME ON | TIME TOUR | OPERATOR FUEL | MAX EXP HOOKLOAD: 147000.00 | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR | OVERTIME | PAYOUT

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	718-324-161	Bill Mills	12.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	123-835-179	Terry Dobson	12.00	TD	☐	☑
Floorman	734-615-065	Lyle Todhunter	12.00	LT	☐	☑

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	L. (m)
1	bit	311	0.30
1	Motor	196	8.26
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.26
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.89
8	180mm D.C.	180	76.35
6		127	55.40
72	DP	STANDS	2040.19
0	DP	SINGLES	0.00
	HELLDOWN		-19.64
	TOTAL		2315.00
WT. OF DC			24000.00
WT. OF STRING			118000.00

BIT NO.: 14 | SIZE: 311 | IADC CODE: 6 4 7 | MFG: H.C. | TYPE: HR-P86DX | SERIAL NO.: 6032137 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 2268.00 | TOTAL METERS DRILLED (m): 53.00 | TOTAL HOURS RUN: 17.25 | CUTTING STRUCTURE: I: 1 | L: WT | LOC: 8 | B: Gage | G: OC | RP: | PR: | HOLE CONDITION | HOLE DRAG: 27000 up/16000dwn | TORQUE AT BOTTOM: 12349 ft-lbs | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: WATER BASED | OIL BASED | Flowline temp = 74.2

TIME	16:00	20:00	22:00
DENSITY (kg/m³)	1045	1045	1045
FUNNEL VIS. (sec)	52	52	53
W.L. (cm3)			
pH	9.5	10.0	10.0
PV/YP	142.7m3	133.6m3	135.3m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	DESILTER CONE SIZE	DESILTER PRESSURE	DESILTER CONE NO.
		6.00	1045	1035	1720

METERS DRILLED

FROM	TO	HRS	ROTARY R.P.M.	WT. ON BIT (klbs)
2298.00	2315.00	D	15/110	21-30

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.

12150	152	76	152	76

REDUCED PUMP SPEED

3906	@	75	@	2314.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
2283.20	28.7	332.80
2293.80	28.7	332.80
2301.50	29.1	333.20

TIME LOG

FROM	TO	HRS	CODE
16:00	23:00	7.00	2
23:00	23:15	0.25	7
23:15	24:00	0.75	10

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill Fr2298m- 2315m
Rig Service, F/T H.C.R.(2 secs)
Deviation Surveys(Accum.)

NOTES

DRILLER SIGNATURE: Barry Verheist | TIME SUP. | TIME OFF | TIME ON | TIME TOUR | OPERATOR FUEL | MAX EXP HOOKLOAD: 147000.00 | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR | OVERTIME | PAYOUT

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	713-959-461	Gary Kennedy	4.00	GK	☐	☑
Floorman	726-907-786	Cory Kube	4.00	CK	☐	☑
Leaseman	739-300-069	Justin Craigen	4.00	JC	☐	☑

EVENING TOUR

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

WELL TYPE: Geothermal | RE-ENTRY: YES / NO | KB TO GROUND ELEV.: 7.20

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 11-Jan-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 820 E

PROVINCE: BC | CAMP: YES / NO | RIG SAFETY DAYS: 317.00

ETS SERIAL NUMBER: PREC620 _20050011_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

WELL TYPE	Geothermal
RE-ENTRY	☐ YES ☒ NO
KB TO GROUND ELEV.	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	12-Jan-2005
OPERATION	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	520 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	318.00

DAILY CHECKS — DPR: R.M — DATE: 12-Jan-2005 — RIG NO: 520 E

FUEL @ 5:00
RIG: 16390 BOILER

WEATHER
TEMPERATURE: -6
CURRENT CONDITION: Snow
WIND DIRECTION: East
ROAD: Slick

LAST CASING TUBING ON LIDER

OD (mm)	WT/FT (kg/m)	GRADE	NAME	CPLG	NO OF JOINTS	TOTAL PIPE LENGTH	KB TO CSG HEAD (m)	SET AT (m)
							8.33	123.00
				L-80			8.23	870.00

DRIFT MIN	LINEAR MASS (kg/m)	GRADE	MIN ID (mm)	PEAK JT STD (mm)	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN (mm)
	29.00	S5-95	53.00	168.60	5"XH	170	FB-1600	BPMMP X 152mm	305
	34.60	S5-95	57.00	168.60	5"XH	150	FB -1600	BPMMP X152mm	305

SHALE SHAKER(S) — RENTALS/SERVICES

NO.	TYPE	Derrick	New
2		☐ YES	☒ NO

SCREENS CHANGED			
5:00	TOP	100	100
9:00	MIDDLE	100	100
24:00	BOTTOM	100	100

CREW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	TOTALS
MORN	4.75				0.25	2.50	0.25				0.25															8.00
DAY						5.50	0.25																			5.75
EVE						1.75	5.25																			7.00
TOTAL	4.75				0.25	9.75	5.75				0.25															20.75

BIT RECORD

	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.25
1	Float Sub	195	0.59
1	Monels	204	9.33
1	Hang Off Sub	209	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	190mm D.C.	190	74.90
1	Jars	178	4.89
5	180mm D.C.	180	75.35
6		127	56.40
74	D.P.	STANDS	2097.58
0	D.P.	SINGLES	0.00
	KELLY/SWIVEL		7.64
	TOTAL		2331.00

WT OF DC	24000.00
WT OF STRING	118000.00

	15	16	17	18	19	20	21	22	23	24	25
CREW											
MORN											
DAY											
EVE											
TOTAL											

BIT RECORD		
BIT NO.	14	
SIZE	311	
IADC CODE	6 4 7	
MFG	H.C.	
TYPE	HR-P66DX	
SERIAL NO.	6032137	
JETS		
DEPTH OUT (m)	2331.00	
DEPTH IN (m)	2264.00	
TOTAL METERS DRILLED (m)	66.00	
TOTAL HOURS RUN	22.00	
CUTTING STRUCTURE: T / B / MED / LOC		
DULL CHARACTER: G / Dags / ODC / BEARING/SEAL / GAUGE		
REASON PULLED		

MUD RECORD			
MUD TYPE: ☑ WATER BASED ☐ OIL BASED			Flowline temp = 72.7
TIME	02:00	04:00	05:00
DENSITY kg/m³	1045	1045	1040
FUNNEL VIS (Sec/L)	53	52	51
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	138.9/m3	141.6/m3	132.3/m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Caustic Soda	4sks.
Defloxypol LD-4	1Pail
Hydroseal Lime	2sks.
Lignco	25sks.
Milgel	12sks.
Milpac	3sks.

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN	DESILTER CONE	DESANDER CONE
5.00	1045	1035	1720

HOLE CONDITION	
HOLE DRAG	28000 up/17000 dwn
TORQUE AT BOTTOM	12348 ft-lbs
FILL ON BOTTOM (m)	

METERS DRILLED

FROM	TO	M	ROTARY R.P.M	WOB
2319.50	2331.00	D	15/110	21-30

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 R.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 R.P.M.
13900	152	75	152	75

REDUCED PUMP SPEED

3500	@	75	SPM

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
2312.20	29.6	331.40

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	4:45	4.75	2	Drill fr. 2319m - 2331m
4:45	5:00	0.25	10	Deviation Surveys(Accum.)
5:00	5:45	1.75	6	Hoist Bit #14, flow check @ 2321m
5:45	7:00	0.25	6	Cool MWD tool
7:00	7:15	0.25	7	Rig Service, F/T Annular(24 secs)
7:15	9:00	0.75	6	P.O.O.H, flow check @ 2005m

NOTES

DRILLER SIGNATURE: Barry Verheist

HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
9.00		165000.00	Hand tools	

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

MORNING TOUR 9:00 TO 5:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	713-959-481	Gary Kennedy	8.00	GK	☐	☑
Floorman	726-907-709	Cory Kube	8.00	CK	☐	☑
Leaseman	739-309-069	Justin Craigen	8.00	JC	☐	☑
Rig Manager	719-409-464	Kevin Vig		KV	☐	☐
Top Drive	639-977-702	Sheldon Langley		SL	☐	☑

DAY TOUR 5:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-161	Bill Mills	12.00	BM	☐	☑
Derrickman	629-928-282	Rob Rob	12.00	RR	☐	☑
Motorman	722-572-761	Dwayne Fry	12.00	DF	☐	☑
Floorman	123-635-179	Terry Dobson	12.00	TD	☐	☑
Floorman	734-615-065	Lyle Todhunter	12.00	LT	☐	☑

BIT RECORD		
BIT NO.	14	15
SIZE	311	311
IADC CODE	6 4 7	6 4 7
MFG	H.C.	H.C.
TYPE	HR-P66DX	HR - P66DX
SERIAL NO.	6032137	6032138
JETS		
DEPTH OUT (m)	2331.00	
DEPTH IN (m)	2256.00	2331.00
TOTAL METERS DRILLED (m)	66.00	
TOTAL HOURS RUN	22.00	
CUTTING STRUCTURE: T / B / MED / LOC	3 3 FC A E	I BHA
DULL CHARACTER: G / Dags / ODC / BEARING/SEAL / GAUGE		
REASON PULLED		

MUD RECORD			
MUD TYPE: ☑ WATER BASED ☐ OIL BASED			Flowline temp =
TIME			
DENSITY kg/m³			
FUNNEL VIS (Sec/L)			
W.L. (cm3)			
pH			

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN	DESILTER CONE	DESANDER CONE

HOLE CONDITION	
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

METERS DRILLED

FROM	TO	M	ROTARY R.P.M	WOB
2331.00				

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 R.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 R.P.M.
	152	75	152	75

REDUCED PUMP SPEED

	@		SPM

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
5:00	13:30	8.50	6	Pull Out Of Hole & Flow Checks @1580m,391m, 0m Tight Spots @1918m, 1713m-1718m, 1384m-1400m, 1284m
13:30	15:45	2.25	20	Directional Work Change Out Motor, Scribe Motor, Service M.W.D., Set U
15:45	16:00	0.25	7	Motor To 1.5 Rig Service & Function Blind Rams 6/6 Secs

NOTES

DRILLER SIGNATURE: Bill Mills

HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.4	147000.00		

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	713-959-481	Gary Kennedy	4.00	GK	☐	☑
Floorman	726-907-709	Cory Kube	4.00	CK	☐	☑
Leaseman	739-309-069	Justin Craigen	4.00	JC	☐	☑

BIT RECORD		
BIT NO.	15	
SIZE	311	
IADC CODE	6 4 7	
MFG	H.C.	
TYPE	HR - P66DX	
SERIAL NO.	6032136	
JETS		
DEPTH OUT (m)		
DEPTH IN (m)	2331.00	
TOTAL METERS DRILLED (m)		
TOTAL HOURS RUN		
CUTTING STRUCTURE: T / B / MED / LOC		
DULL CHARACTER: G / Dags / ODC / BEARING/SEAL / GAUGE		
REASON PULLED		

MUD RECORD			
MUD TYPE: ☑ WATER BASED ☐ OIL BASED			Flowline temp =
TIME			
DENSITY kg/m³			
FUNNEL VIS (Sec/L)			
W.L. (cm3)			
pH			

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN	DESILTER CONE	DESANDER CONE

HOLE CONDITION	
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	0.10

METERS DRILLED

FROM	TO	M	ROTARY R.P.M	WOB
2331.00				

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 R.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 R.P.M.
13100	152	78	152	76

REDUCED PUMP SPEED

	@		SPM

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	21:15	5.25	6	Run In Hole W/Bit # 14
21:15	23:00	1.75	5	Cool MWD tool & circulate every 250m(Accum.)
23:00	24:00	1.00	6	Wash & ream fr. 2132m - 2331m Depth vrs Temp: 897m=111C, 1144m=118.9C, 1402m=98C, 1652m=131C, 1905m=121C, 2132m=121C

NOTES

DRILLER SIGNATURE: Barry Verheist

HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
9.00	9.3	151000.00		

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

CHIMO ETS SOFTWARE VERSION:

ETS SERIAL NUMBER: PREC820_20050012_1A

Chimo Equipment
A Varco Company

CAODC

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE
LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
SURFACE LOCATION: a-92-A / 92-J-12 | MARQUEE ID: b-1-H / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 13-Jan-2005 | RIG NO.: 620 E | FUEL @ 6:00: RIG 26721 BOILER
WEATHER: TEMPERATURE -14 | CURRENT CONDITION: Cloudy | WIND DIRECTION: Calm | ROAD: Good

CASING TORQUE OR LINER

	O.D. (mm)	Wall (mm)	Type	Grade	No. of Joints	Total Ins. Length	Hrs to Circ. Mud Temp	Set at (m)
							5.31	128.00
				L-80			8.23	870.00

	Depth Size (mm)	Annular Vel. (m/min)	Grade	Min. ID (mm)	Pipe Cap. (l/m)	Thread Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke Len. (mm)
		25.00	S5-95	83.00	166.00	5"XH	179	FB-1600	BPMMP X 152mm	305
		38.00	S5-95	97.00	198.00	5"XH	169	FB-1600	BPMMP X152mm	305

SHALE SHAKER(S) — RENTALS/SERVICES

No.	Type	Derrick	Screens Changed	Hours	Day	Est.
1	Derrick	100	Yes / No			
2	Top	100	Top 100			
3	Middle	100	Middle 100			
4	Bottom	100	Bottom 100			

TIME - HRS

	Oper.	Circ.	Drill	Ream	Survey	Trip	Rig Service	Wait on Cement	Repair	Slip & Cut	Rig Up/Down	Test BOP	Wait on Orders	Other	Total	Hours Last 24 Hrs
MORN.	7.21				0.25		0.80								8.25	
DAY	7.90				0.25		0.75								8.90	
EVE.	7.90				0.25		0.75								8.90	
TOTAL	21.26				0.75		2.30								26.05	

DRILLING ASSEMBLY

No.	Description	O.D. (mm)	Length (m)
1	Bit	311	0.30
1	Motor	196	8.15
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	146mm D.C.	160	74.90
1	Jars	178	4.89
5	159mm D.C.	180	75.35
6		127	56.40
75	D.P.	STANDS	2126.08
0	D.P.	SINGLES	0.00
	HELL HOPPER		13.04
	TOTAL		2354.00
WT. OF DC			24000.00
WT. OF STRING			120000.00

BIT RECORD

No.	Bit	O.D. (mm)	Length (m)
1	Bit	311	0.30
1	Motor	196	8.15
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	146mm D.C.	160	74.90
1	Jars	178	4.89
5	159mm D.C.	180	75.35
6		127	56.40
75	D.P.	STANDS	2126.08
0	D.P.	SINGLES	0.00
	HELL HOPPER		6.95
	TOTAL		2374.00
WT. OF DC			24000.00
WT. OF STRING			120000.00

BIT RECORD

No.	Bit	O.D. (mm)	Length (m)
1	Bit	311	0.30
1	Motor	196	8.15
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	146mm D.C.	160	74.90
1	Jars	178	4.89
5	159mm D.C.	180	76.35
6		127	56.40
75	D.P.	STANDS	2154.31
1	D.P.	SINGLES	9.53
	HELL HOPPER		0.00
	TOTAL		2404.80
WT. OF DC			24000.00
WT. OF STRING			120000.00

BIT RECORD

No.	Bit	O.D. (mm)	Length (m)
1	Bit	311	0.30
1	Motor	196	8.15
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	146mm D.C.	160	74.90
1	Jars	178	4.89
5	159mm D.C.	180	76.35
6		127	56.40
75	D.P.	STANDS	2154.31
1	D.P.	SINGLES	9.53
	HELL HOPPER		0.00
	TOTAL		2404.80
WT. OF DC			24000.00
WT. OF STRING			120000.00

MUD RECORD

Mud Type	Water Based	Oil Based	Flowline temp = 78.6
Time	02:00	04:00	06:00
Density (kg/m³)	1045	1045	1045
Funnel Vis. (sec/L)	48	50	52
W.L. (cm3)			
pH	9.0	10.0	10.0
PV/YP @	135.3m3	139m3	140.1m3

MUD MATERIAL ADDED — SOLIDS CONTROL

Product	Amount x Unit	Hours Run	Solids Control	Dilution
Caustic Soda	5sks.			
Defoamer LD-8	1Pail	8.00	1045	1035
Hydrated Lime	2sks.			
Ligco	20sks.			
Milgel	18sks.			
Milpac	2sks.			
Natural Gel	5sks.			

HOLE CONDITION

HOLE DRAG	27000 up/17000 dwn
TORQUE AT BOTTOM	13191 ft-lbs
FILL ON BOTTOM (m)	

METERS DRILLED — TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Met. Drld.	Type	Rotary RPM	WOB (1000 lbs)	Hours	Code	Activity
2331.00	2354.00	D	15/110	20-30	0:00	5:00	5.00	2 Pattern bit & drill fr. 2331m - 2346m
					5:00	6:15	0.25	7 Rig Service, F/T Annulars(24 secs)
					6:15	7:30	2.25	2 Drill fr. 2346m - 2354m
					7:30	8:00	0.50	10 Deviation Surveys(Accum.)

Circulation Pressure (KPa)	Pump No. 1 SPM	Pump No. 1 S.P.M.	Pump No. 2 SPM	Pump No. 2 S.P.M.
13100	152	75	152	75

REDUCED PUMP SPEED: 4000 @ 75 = 2346.80

DEVIATION SURVEY

Depth (m)	Deviation (o)	Direction
2282.29	30.1	331.40
2330.00	29.8	331.10

NOTES: F/T seems loose; Flow line temp pre-test @ 46.4 deg C, Bottoms up 80.6m3 and was during trip.

DRILLER SIGNATURE: Barry Verhelst

Drill Hours	Slide Hours	Circ. Time	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
8.00	0.5			155000.00		

RATE SCHEDULE: Regular | DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 TO 8:00

Crew	SOC. INS. NO.	Name	Hrs	Injuries Yes	Injuries No
Driller	842-389-910	Barry Verhelst	8.00	BV	
Derrickman	847-452-903	Dave Makowsky	8.00	DM	
Motorman	735-714-230	Chantry Vig	8.00	CV	
Floorman	713-959-461	Gary Kennedy	8.00	GK	
Floorman	726-907-769	Cory Kube	8.00	CK	
Leaseman	739-300-059	Justin Craigen	8.00	JC	
Rig Manager	718-909-484	Kevin Vig		KV	
Top Drive	638-977-702	Sheldon Langley		SL	

MUD RECORD

Mud Type	Water Based	Oil Based	Flowline temp = 75.6
Time	08:00	12:00	16:00
Density (kg/m³)	1040	1045	1045
Funnel Vis. (sec/L)	51	55	52
W.L. (cm3)			
pH	10.0	10.0	10.5
PV/YP @	132.6m3	136.8m3	141.3m3

MUD MATERIAL ADDED — SOLIDS CONTROL

Product	Amount x Unit	Hours Run	Solids Control	Dilution
Ligco	15 sks			
Caustic Soda	4 sks	8.00	1045	1040
Hydrated Lime	2 sks			
Milpac	2 sks			

HOLE CONDITION

HOLE DRAG	16-18 DN/24-36Up Sliding
TORQUE AT BOTTOM	13191 ft/lbs
FILL ON BOTTOM (m)	

METERS DRILLED — TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Met. Drld.	Type	Rotary RPM	WOB (1000 lbs)	Hours	Code	Activity
2354.00	2374.00	D	15/110	19-25	8:00	12:30	4.50	2 Drill Fr/2354m-2365m
					12:30	12:45	0.25	7 Rig Service & Function K.C.R. 4/4 Secs
					12:45	15:15	2.50	2 Drill Fr/2365m-2374m
					15:15	16:00	0.75	15 Accumulated M.W.D. Deviation Survey & Directional Work

Circulation Pressure (KPa)	Pump No. 1 SPM	Pump No. 1 S.P.M.	Pump No. 2 SPM	Pump No. 2 S.P.M.
13000	152	75	152	75

REDUCED PUMP SPEED: 5362 @ 90 = 2362.80

DEVIATION SURVEY

Depth (m)	Deviation (o)	Direction

NOTES: Function Check Sheet

DRILLER SIGNATURE: Bill Mills

Drill Hours	Slide Hours	Circ. Time	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
8.00	0.5			154000.00		

RATE SCHEDULE: Regular | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

Crew	SOC. INS. NO.	Name	Hrs	Injuries Yes	Injuries No
Driller	718-324-181	Bill Mills	8.00	BM	
Derrickman	829-928-262	Rob Roth	8.00	RR	
Motorman	722-572-781	Dwayne Fry	8.00	DF	
Floorman	123-635-179	Terry Dobson	8.00	TD	
Floorman	734-815-055	Lyle Todhunter	8.00	LT	

MUD RECORD

Mud Type	Water Based	Oil Based	Flowline temp = 74.9
Time	16:00	21:00	23:00
Density (kg/m³)	1045	1040	1040
Funnel Vis. (sec/L)	62	54	54
W.L. (cm3)			
pH	10.5	10.5	10.5
PV/YP @	138.0m3	141.3m3	141.6 m3

MUD MATERIAL ADDED — SOLIDS CONTROL

Product	Amount x Unit	Hours Run	Solids Control	Dilution
	2 sks			
Hydrated Lime	2 sks	8.00	1040	1035
Milpac	3 sks			
Ligco	15 sks			
Gel	22 sks			

HOLE CONDITION

HOLE DRAG	13-17 Down/19-22Up(Rotate)
TORQUE AT BOTTOM	14,033 ft/lbs.
FILL ON BOTTOM (m)	

METERS DRILLED — TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Met. Drld.	Type	Rotary RPM	WOB (1000 lbs)	Hours	Code	Activity
2374.00	2393.00	D	15/110	19/33	16:00	18:00	2.00	2 Drill fr/2374m-2379m
					18:00	18:30	0.50	22 Service F-1600 Pump(Head and Liner #2 Pump)
					18:30	20:15	1.75	2 Drill fr/2379m-2384m
					20:15	20:30	0.25	7 Rig Service and Function Pipe Ram's 8/8
					20:30	20:45	0.25	10 M.W.D. Survey
					20:45	24:00	3.25	2 Drill fr/2384m-2393m

Circulation Pressure (KPa)	Pump No. 1 SPM	Pump No. 1 S.P.M.	Pump No. 2 SPM	Pump No. 2 S.P.M.
13150	152	75	152	75

REDUCED PUMP SPEED: 3779 @ 75 = 2379.09

DEVIATION SURVEY

Depth (m)	Deviation (o)	Direction
2368.70	30	331.10

NOTES: Function Check Sheet

DRILLER SIGNATURE: Wade Goddard

Drill Hours	Slide Hours	Circ. Time	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
8.00	0.5			153000.00	New Employee Orientation	

RATE SCHEDULE: Regular | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

Crew	SOC. INS. NO.	Name	Hrs	Injuries Yes	Injuries No
Driller	833-628-706	Wade Goddard	8.00	WG	
Derrickman	851-386-084	Jesse Goddard	8.00	JG	
Motorman	852-342-416	Jonathan Greave	8.00	JG	
Floorman	638-016-237	Robert Cramer	8.00	RC	
Floorman	729-975-093	Daniel Sampson	8.00	DS	

TOUR: MORNING TOUR | DAY TOUR | EVENING TOUR

TS SERIAL NUMBER: PREC620 _20050013_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO	22
AFE	
LICENCE NO	MC-7
WELL NAME AND NO	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
PURPOSE	Geothermal
RE-ENTRY	☐YES ☑NO
SURFACE LOCATION	a-92-A / 92-J-12
LINEUP ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Siva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig
WELL NAME & NO.	a-92-A / 92-J-12 MC-7
DATE	14-Jan-2005
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑YES ☐NO
RIG SAFETY DAYS	320.00
RIG TO GROUND ELEV.	7.20

DAILY CHECKS

DATE 14-Jan-2005 | RIG NO 620 E | FUEL @ 0.00 | BIR 36747 BOILER

LAST CASING TUBING OR LINER

								6.31	129.00
						L-80		8.23	870.00

WEATHER: TEMPERATURE -18 | CURRENT CONDITION Clear | WIND DIRECTION Calm | ROAD Good

	LINEAR MASS (kg/m)	GRADE	WALL TH (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
	29.06	SS-95	63.09	166.00	5"XH	179	FB-1600	BPMMP X 152mm	305
	36.00	SS-95	57.00	165.00	5"XH	169	FB -1600	BPMMP X152mm	305

SHALE SHAKER(S) — SCR's: TYPE: Derrick; NEW: ☐YES ☑NO; MUDGUNS CHANGED: ☐YES ☑NO

	TOP	MIDDLE	BOTTOM
8.00	100	100	100
8.00	100	100	100
34.00	100	100	100

RENTAL/SERVICES

TIME BREAKDOWN

CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
OPER	RTG UP/DWN (hrs)	SPUD (hrs)	REAMING (hrs)	TRIPPING (hrs)	DRLG (hrs)	CIRC (hrs)	SURVEY (hrs)	WIPER TRIP (hrs)	SER RIG/SLIP CUT (hrs)	WAIT ON EQUIP (hrs)	CSG RUN/CMT (hrs)	BOP TEST (hrs)	DST (hrs)	CORING (hrs)	EVAL (hrs)	DIR WORK (hrs)	REPAIR (hrs)	CUT OFF DRLG LINE (hrs)	SLIP DRLG LINE (hrs)	SAFETY MTG (hrs)				
MORN	7.00				9.25				9.75															
DAY	7.00				9.25				6.50						0.25									
EVE	7.00				9.25				7.75															
TOTAL	21.00				27.75				24.00						0.25									

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.15
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.06
1	Monels	204	9.28
1	XO Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	176	4.89
8	180mm D.C.	180	76.35
6		127	58.40
78	D.P.	STANDS	2184.31
1	D.P.	SINGLES	9.63
	KELLYDOWN		9.20
	TOTAL		2414.00
WT. OF DC			24000.00
WT. OF STRING			121000.00

BIT NO 15 | SIZE 311 | IADC CODE 5 4 7 | MFG H.C. | TYPE HR - P86DX | SERIAL NO 6032136 | JETS | DEPTH OUT (m) | DEPTH IN (m) 2331.00 | TOTAL METERS DRILLED (m) 83.00 | TOTAL HOURS RUN 28.25 | CUTTING STRUCTURE: T | B | Gage | OC | BEARING/SEALS | Wear on Seals

HOLE CONDITION

HOLE DRAG 15-18 Down-23-27 Up Sticking

TORQUE AT BOTTOM 13191 ft/lbs

FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	Water Based	Oil Based	Flowline temp = 72.8
TIME	02:00	04:30	08:00
DENSITY kg/m3	1040	1040	1040
FUNNEL VIS. (sec)	80	48	49
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	93.8m3	126.9m3	130.1m3

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT
Defoamer LD-3	1 pl
Caustic Soda	3sks
Gel	10 sks
Milgel	10 sks

METERS DRILLED

FROM	TO	BIT NO.	TYPE	ROTARY R.P.M.	WOB (1000 kg)
2393.00	2414.00	D	16/110	19-32	

CIRCULATION PRESSURE (KPA) — PUMP NO. 1: LINER SIZE (mm) 152, S.P.M. 75 — PUMP NO. 2: LINER SIZE (mm) 152, S.P.M. 75

13200 | 152 | 75 | 152 | 75

REDUCED PUMP SPEED

5287 @ 75 & 90 @ 2401.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
2376.90	29.6	331.80
2397.80	29.7	331.80
2398.20	29.6	333.60

TIME LOG

START	END	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	3:30	3.50	2	Drill fr/2393m-2403m
3:30	3:45	0.25	7	Rig Service & Function Annular 23/23 Secs
3:45	7:15	3.50	2	Drill Fr/2403m-2414m
7:15	8:00	0.75	10	Accumulated M.W.D. Deviation Surveys

NOTES

DRILLER SIGNATURE: Bill Mills | TIME: 8.00 | 8.0 | OPERATOR FUEL | MAX EXP HOOKLOAD 164000.00 | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐STANDBY | DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	8.00	BM	☑
Derrickman	529-926-262	Rob Roth	8.00	RR	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☑
Floorman	123-635-178	Terry Dobson	8.00	TD	☑
Floorman	734-816-065	Lyle Todhunter	8.00	LT	☑
Leaseman	127-391-365	Murray Bungay	8.00	MB	☑
Rig Manager	719-409-484	Kevin Vig		KV	☑
Top Drive	838-977-702	Sheldon Langley		SL	☑

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.15
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.06
1	Monels	204	9.28
1	XO Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	176	4.89
8	180mm D.C.	180	76.35
6		127	58.40
77	D.P.	STANDS	2182.95
2	D.P.	SINGLES	19.08
	KELLYDOWN		0.00
	TOTAL		2438.00
WT. OF DC			24000.00
WT. OF STRING			122000.00

BIT NO 15 | SIZE 311 | IADC CODE 5 4 7 | MFG H.C. | TYPE HR - P86DX | SERIAL NO 6032136 | JETS | DEPTH OUT (m) | DEPTH IN (m) 2331.00 | TOTAL METERS DRILLED (m) 107.00 | TOTAL HOURS RUN 35.25 | CUTTING STRUCTURE: T | B | Gage | OC | BEARING/SEALS | Wear on Seals

HOLE CONDITION

HOLE DRAG 20-23Up/15-18Down(Rotating)

TORQUE AT BOTTOM 14,033 ft/lbs.

FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	Water Based	Oil Based	Flowline temp = 74.8 C		
TIME	08:00	12:00	16:00		
DENSITY kg/m3	1040	1040	1040		
FUNNEL VIS. (sec)	84	84	53		
W.L. (cm3)					
pH	10.5	10.5	10.3		
P.V.T. @	137.0m3	146.0 m3	138.8 m3		

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN			
	2 sks				
Milpac	3 sks	8.00	1040	1030	1750
Gel	15 sks				
Lignco	15 sks				

METERS DRILLED

FROM	TO	BIT NO.	TYPE	ROTARY R.P.M.	WOB (1000 kg)
2414.00	2438.00	D	16/110	19-32	

CIRCULATION PRESSURE (KPA) — PUMP NO. 1: LINER SIZE (mm) 152, S.P.M. 75 — PUMP NO. 2: LINER SIZE (mm) 152, S.P.M. 75

13250 | 152 | 75 | 152 | 75

REDUCED PUMP SPEED

3524 @ 75 & 2402.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
2407.00	29.8	333.80
2417.10	29.8	332.60

TIME LOG

START	END	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	10:15	2.25	2	Drill fr/2414m-2422m
10:15	10:30	0.25	22	B.O.P. Drill w/Crewmember's, Well Secured and Diverted in 90 sec.
10:30	10:45	0.25	7	Rig Service and Function Pipe Ram's 4/5
10:45	11:00	0.25	10	M.W.D. Survey
11:00	14:00	3.00	2	Drill fr/2422m-2433m
14:00	14:15	0.25	10	M.W.D. Survey
14:15	16:00	1.75	2	Drill fr/2433m-2438m

NOTES

DRILLER SIGNATURE: Wade Goddard | TIME: 8.00 | 8.0 | OPERATOR FUEL | MAX EXP HOOKLOAD 165000.00 | SAFETY TOPIC: B.O.P. Drills | M.A.C.P.

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐STANDBY | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	533-926-796	Wade Goddard	12.00	WG	☑
Derrickman	851-388-064	Jesse Goddard	12.00	JG	☑
Motorman	852-342-416	Jonathan Greeve	12.00	JG	☑
Floorman	639-016-237	Robert Cramer	12.00	RC	☑
Floorman	729-976-003	Daniel Sampson	12.00	DS	☑

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.15
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.06
1	Monels	204	9.28
1	XO Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	176	4.89
8	180mm D.C.	180	76.35
6		127	58.40
76	D.P.	STANDS	2211.58
1	D.P.	SINGLES	8.57
	KELLYDOWN		-3.09
	TOTAL		2465.00
WT. OF DC			24000.00
WT. OF STRING			125000.00

BIT NO 15 | SIZE 311 | IADC CODE 5 4 7 | MFG H.C. | TYPE HR - P86DX | SERIAL NO 6032136 | JETS | DEPTH OUT (m) | DEPTH IN (m) 2331.00 | TOTAL METERS DRILLED (m) 128.00 | TOTAL HOURS RUN 42.25 | CUTTING STRUCTURE: T | B | Gage | OC | BEARING/SEALS | Wear on Seals

HOLE CONDITION

HOLE DRAG 15-18 Down/30-35Up Sticking

TORQUE AT BOTTOM 14033 Ft/lbs

FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	Water Based	Oil Based	Flowline temp = 75.9		
TIME	16:00	21:00	23:00		
DENSITY kg/m3	1040	1040	1040		
FUNNEL VIS. (sec)	62	48	36		
W.L. (cm3)					
pH	10.3	10.2	10.6		
P.V.T. @	143.1m3	138.4m3	144.6m3		

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN			
Caustic Soda	2 sks				
Gel	10 sks	8.00	1040	1035	1730

METERS DRILLED

FROM	TO	BIT NO.	TYPE	ROTARY R.P.M.	WOB (1000 kg)
2438.00	2459.00	D	16/110	19/35	

CIRCULATION PRESSURE (KPA) — PUMP NO. 1: LINER SIZE (mm) 152, S.P.M. 75 — PUMP NO. 2: LINER SIZE (mm) 152, S.P.M. 75

13300 | 152 | 75 | 152 | 75

REDUCED PUMP SPEED

@ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
2428.40	29.9	333.20
2436.60	29.7	332.10

TIME LOG

START	END	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	23:00	7.00	2	Drill fr/2438m-2459m
23:00	23:15	0.25	7	Rig Service & Function H.C.R. 4/4 Secs
23:15	24:00	0.75	10	Accumulated M.W.D. Deviation Survey

NOTES

DRILLER SIGNATURE: Bill Mills | TIME: 8.00 | 8.0 | OPERATOR FUEL | MAX EXP HOOKLOAD 158000.00 | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐STANDBY | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	8.00	BM	☑
Derrickman	529-926-262	Rob Roth	8.00	RR	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☑
Floorman	123-635-178	Terry Dobson	8.00	TD	☑
Floorman	734-816-065	Lyle Todhunter	8.00	LT	☑
Leaseman	127-391-365	Murray Bungay	8.00	MB	☑

ETS SERIAL NUMBER: PREC620_20050914_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | MD RELEASE | JOB NO.: 22 | AFE:

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATION: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: D-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS
(1) Daily Well Status Inspection
(2) Derrick inspection visually using mirrors
(3) H2S Alarm Tested (if required)
(4) Well Control & Shut Diagram Posted
(5) Tool Line Stuck-off
(6) BOP Drills Performed
(7) Visually inspect BOP's, Function & Diagnostic Units
(8) Rig Gas Monitor and Safety Systems (Gas Watch Alarm)
(9) CAODC Rig Safety Inspection Checklist (once/month)
(10) Alarm Hydrogen Battery Room(s) or Locker(s)
(11) Crown Saver Checked
(12) Kelly Valve Checked

DATE: 15-Jan-2005 | RIG NO.: 620 E | FUEL @ 8.00 | RIG: 37054 | BOILER

WEATHER: TEMPERATURE: -16 | CURRENT CONDITION: Clear | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TURNED OR LOWER

O.D. (mm)	WT/FT (kg/m)	GRADE	No. OF JOINTS	TOTAL (m) LENGTH	KB TO CSG HEAD (m)	JTS AT (m)
					6.31	129.00
		L-80			6.31	570.00

DEPTH SET (mm)	Last Bulk Density (kg/m³)	GRADE	SHOE ID (mm)	FLOAT ID (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP ACTION RATE/MIN	STROKE (LINK mm)
	29.00	S5-95	82.90	158.60	5"XH	170	FB-1600	BPMMP X 152mm	305
	28.00	S5-95	67.00	158.60	5"XH	160	FB-1600	BPMMP X152mm	305

Page 1 of 1

WELL TYPE: Geothermal | RE-ENTRY: ☐YES ☑NO | KB TO GROUND ELEV: 7.20

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 15-Jan-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 620 E

PROVINCE: BC | CAMP: ☑YES ☐NO | RIG SAFETY DAYS: 321.00

TIME - HRS

OPER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
NORM	7.25						6.25																	6.00
DRT	7.50						6.25																	6.25
EVE	1.00				1.50	6.25	6.25																	
TOTAL	15.75				1.50	6.25	0.75																	6.75

SHALE SHAKER(S) | RENTALS/SERVICES

NO.	Type	Derrick	Mfr#
1			
2			

6.00	DRAWORKS COMPOUND	☐YES	☑NO
6.00	TOP	100	TOP 100
6.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.16
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.69
8	180mm D.C.	180	75.35
6		127	55.40
79	DP	114.30	2240.26
0	DP	SPIRALS	0.00
	HELLTOWN		-1.22
	TOTAL		2480.09
wt of bit:			24000.00
wt. of string:			125000.00

BIT RECORD: BIT NO. 15 | SIZE 311 | IADC CODE 5 4 7 | MFG. H.C. | TYPE HR - P56DX | SERIAL NO. 6032136 | JETS | DEPTH OUT (m) | DEPTH IN (m) 2331.00 | TOTAL METERS DRILLED (m) 149.00 | TOTAL HOURS RUN 49.50 | CUTTING STRUCTURE | HOLE CONDITION | HOLE DRAG 18-19 (down)/25-28 Up Sliding | TORQUE AT BOTTOM 14033 ft/lbs | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flowline temp = 75.9
TIME	03:00	05:00	09:00
DENSITY (kg/m³)	1040	1040	1040
FUNNEL VIS. (s/L)	50	51	51
W.L. (cm3)			
pH	10.4	10.3	10.1
PV/YP	126.4m3	129.5m3	133.8m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Ligco	30 sks
Caustic Soda	5 sks
Defoamer LD-8	1 pl
Hydrated Lime	2 sks
Milpac	3 sks
Milgel	50 sks

METERS DRILLED

FROM	TO	BIT NO.	WOB (kN)	ROTARY R.P.M.	HRS. ON BOTTOM
2459.00	2480.00	D	15/110	19/35	6.00

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
14300	152	75	152	76

REDUCED PUMP SPEED

5400	@	80	@	2480.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
2446.20	29.6	333.50
2458.40	29.9	333.50
2463.20	30.1	333.90

TIME LOG

FROM	TO	HRS	CODE	PHASE
0:00	7:15	7.25	2	Drill fr/2459m-2480
7:15	7:30	0.25	7	Rig Service & Function Annular 23/23 Secs
7:30	8:00	0.50	10	Accumulated M.W.D. Deviation Survey.

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE: Bill Mills

HRS. Rotating	HRS. Sliding	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
6.00	0.0		170000.00		

RATE SCHEDULE	☑REGULAR	☐REPAIR	☐INVERT
DRIVER A	CREW SAFETY DAYS		DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	719-324-181	Bill Mills	8.00	BM	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☑
Floorman	123-835-179	Terry Dobson	8.00	TD	☑
Floorman	734-815-065	Lyle Todhunter	8.00	LT	☑
Lasseman	127-391-365	Murray Bungay	8.00	MB	☑
Rig Manager	719-409-484	Kevin Vig		KV	☑
Top Drive	638-977-792	Sheldon Langley		SL	☑

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.16
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.69
6	180mm D.C.	180	75.35
5		127	58.40
79	DP	114.30	2240.26
2	DP	SPIRALS	16.07
	HELLTOWN		0.00
	TOTAL		2496.09
wt of bit:			24000.00
wt. of string:			125000.00

BIT RECORD: BIT NO. 15 | SIZE 311 | IADC CODE 5 4 7 | MFG. H.C. | TYPE HR - P56DX | SERIAL NO. 6032136 | JETS | DEPTH OUT (m) | DEPTH IN (m) 2331.00 | TOTAL METERS DRILLED (m) 164.60 | TOTAL HOURS RUN 57.90 | CUTTING STRUCTURE | HOLE CONDITION | HOLE DRAG A-1(Down)/26-28(Up)(Rotate) | TORQUE AT BOTTOM 14,875 ft/lbs. | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flowline temp = 74.4
TIME	08:00	12:00	16:00
DENSITY (kg/m³)	1040	1040	1040
FUNNEL VIS. (s/L)	82	64	68
W.L. (cm3)			
pH	10.2	10.5	10.3
P.V.T. @	136.8m3	142.7m3	139.0m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Hydrated Lime	2 sks
Milpac	3 sks
Caustic Soda	4 sks
Gel	20 sks
Defoamer LD-8	1 Pail
Ligco	30 sks

METERS DRILLED

FROM	TO	BIT NO.	WOB (kN)	ROTARY R.P.M.	HRS. ON BOTTOM
2480.00	2495.00	D	15/110	19/35	8.00

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
13760	152	75	152	75

REDUCED PUMP SPEED

3850	@	75	@	2480.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
2474.60	30.2	333.50

TIME LOG

FROM	TO	HRS	CODE	PHASE
12:15	12:30	0.25	10	M.W.D. Survey
12:30	14:45	2.25	2	Drill fr/2480m-2483m
14:45	15:00	0.25	7	Rig Service and Function Pipe Rams a/s
15:00	16:00	1.00	2	Drill fr/2483m-2495m

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS. Rotating	HRS. Sliding	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	0.0		173000.00	Weekend Awareness	

RATE SCHEDULE	☑REGULAR	☐REPAIR	☐INVERT
DRIVER A	CREW SAFETY DAYS		DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	833-628-706	Wade Goddard	12.00	WG	☑
Derrickman	631-366-064	Jesse Goddard	12.00	JG	☑
Motorman	652-342-415	Jonathan Greeve	12.00	JG	☑
Floorman	639-015-237	Robert Cramer	12.00	RC	☑
Floorman	729-875-003	Daniel Sampson	12.00	DS	☑

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.16
1	Float Sub	195	0.69
1	Monels	204	9.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.69
8	180mm D.C.	180	75.35
6		127	55.40
79	DP	114.30	2240.26
2	DP	SPIRALS	16.07
	HELLTOWN		0.00
	TOTAL		2496.09
wt of bit:			24000.00
wt. of string:			125000.00

BIT RECORD: BIT NO. 15 | SIZE 311 | IADC CODE 5 4 7 | MFG. H.C. | TYPE HR - P56DX | SERIAL NO. 6032136 | JETS | DEPTH OUT (m) 2496.09 | DEPTH IN (m) 2331.00 | TOTAL METERS DRILLED (m) 165.09 | TOTAL HOURS RUN 58.90 | CUTTING STRUCTURE | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flowline temp =
TIME			
DENSITY (kg/m³)			
FUNNEL VIS. (s/L)			
W.L. (cm3)			
pH			
P.V.T. @			

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT

METERS DRILLED

FROM	TO	BIT NO.	WOB (kN)	ROTARY R.P.M.	HRS. ON BOTTOM
2495.00	2496.00	D	15/110	19/34	16:00

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
13550	152	75	152	75

REDUCED PUMP SPEED

	@		@	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	PHASE
16:00	17:00	1.00	2	Drill fr/2495m-2496m
17:00	18:00	1.00	5	Circulate Btms. Up and Work Pipe
18:00	18:30	0.50	6	Flow Check @ 2479m,Hoist Btm#15,Flow Check's @ 2355m
18:30	18:45	0.25	5	Circulate and Cool M.W.D. @ 2355m
18:45	19:15	0.50	6	Hoist Btm#15
19:15	19:30	0.25	5	Circulate and Cool M.W.D. @ 2222m
19:30	23:45	4.25	6	Hoist Btm#15
23:45	24:00	0.25	7	Rig Service & Function Pipe Rams a/s Secs

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE: Bill Mills

HRS. Rotating	HRS. Sliding	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	0.0		180000.00		

RATE SCHEDULE	☑REGULAR	☐REPAIR	☐INVERT
DRIVER A	CREW SAFETY DAYS		DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	719-324-181	Bill Mills	4.00	BM	☑
Derrickman	629-926-262	Rob Roth	4.00	RR	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☑
Floorman	123-835-179	Terry Dobson	4.00	TD	☑
Floorman	734-815-065	Lyle Todhunter	4.00	LT	☑
Lasseman	127-391-365	Murray Bungay	4.00	MB	☑

ETS SERIAL NUMBER: PREC620_20050015_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 22 | AFE

LICENCE NO: MC-7 | WELL NAME AND NO: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Slivs | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS (OPR / RPM)
(1) Daily Well Control Inspection
(2) Derrick Inspection (Monthly Entry Required)
(3) H2S Equipment (if required)
(4) Well Control & Shut Down Practice
(5) Fire Line Buried
(6) BOP Drills Performed
(7) Monthly Inspection (BOP's, Flowlines & Choke Manifold)
(1) Rig Site Hazard and Safety Meeting (minimum monthly)
(2) CAODC Rig Safety Inspection Checklist (minimum monthly)
(3) Hard Hazard Inspection (Before Raising or Lowering)
(4) Crown Saver Checked
(5) Derrick Checked

DATE: 16-Jan-2005 | RIG NO.: 820 E | FUEL ON RIG: 29911 BOILER | RIG: 820 E

WEATHER: TEMPERATURE -4 | CURRENT CONDITION: Snow | WIND DIRECTION: Calm | ROAD: Good

LAST CASING SURVEY OR LOGS

	DATE	NAME	GRADE	NO OF JOINTS	TOTAL WT (daN)	TOP TO CSG HEAD (m)	WT AT SURF (daN)
						6.31	129.00
			L-80			6.33	870.00

	DEPTH (m)	UNDER-REAM (cm)	GRADE	WALL TH (mm)	TOOL JT OD (mm)	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP LINER ACTIVITIES	STROKE LTH (mm)
		29.00	S5-95	83.00	168.00	5"XH	170	FB-1600	BPMMP X 152mm	305
		38.00	S5-95	67.00	168.00	5"XH	160	FB -1600	BPMMP X152mm	305

SHALE SHAKER(S): NO. 2 | TYPE: Derrick | SCREENS CHANGED: YES / NO | TOP: 100 | MIDDLE: 100 | BOTTOM: 100

RENTALS/SERVICES

WELL TYPE: Geothermal | RE-ENTRY: YES / NO | KB TO GROUND ELEV.: 7.20
WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 16-Jan-2005
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig | RIG NO.: 820 E
PROVINCE: BC | CAMP: YES / NO | RIG SAFETY DAYS: 322.00

TIME - HRS

OPER	DAYS FROM SPUD	MOVING	RIG UP/ DOWN	DRILLING	REAMING	CORING	CIRC	COND MUD & CIRC	TRIPS	RIG SERVICE	DEVIATION SURVEYS	WIRELINE LOGS	RUN CASING & CEMENT	WAIT ON CEMENT	SQUEEZE CEMENT	DRILL STEM TEST	FISHING	REPAIR RIG	CUT OFF DRILL LINE	DEVIATION	OTHER	SAFETY MEETINGS	NPT	TOTAL HRS
MORN				4.25	0.25																			2.50
DAY	3.50	1.00		2.00	0.25																			
EVE	7.00				0.25																			
TOTAL	10.50	1.00		6.25	0.75																			2.50

MORNING TOUR 0:00 to 8:00

BIT RECORD

NO	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.30
1	Motor	196	8.15
1	Float Sub	195	0.89
1	Monels	204	8.33
1	Hang Off Sub	200	1.00
1	Monels	204	9.28
1	X/O Sub	202	0.77
6	180mm D.C.	180	74.90
1	Jars	178	4.85
3	180mm D.C.	180	75.36
5		127	86.40
79	D.P.	STANDS	2240.24
2	D.P.	SINGLES	18.07
	KELLY DOWN		0.00
	TOTAL		2580.25
NO. OF BC			24000.00
WT. OF STRING			126000.00

BIT RECORD: BIT NO 15 | 16 | 311 | 311 | IADC CODE 6 4 7 | 6 4 7 | MFG H.C. | H.C. | TYPE HR - P66DX | HR-P66DX | SERIAL NO 6032136 | 6032134 | JETS | DEPTH OUT (m) 2496.00 | DEPTH IN (m) 2331.00 | 2496.00 | TOTAL HOURS DRILLED 165.00 | TOTAL HOURS RUN 58.00 | CUTTING STRUCTURE I 1 | O 8 | D | NO. | LOC | B | G | OC | GAUGE | OTHER | ROP (m/hr)

HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD: MUD TYPE: Native | Gel Chem | Flowline temp = | TIME | DEPTH (m) | FUNNEL VIS. (sec) | W.L. (cm3) | pH | P.V.T. @ | MUD MATERIAL ADDED | PRODUCT | AMOUNT x UNIT | HOURS RUN | SOLIDS CONTROL

METERS DRILLED / TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	M	ROTARY R.P.M.	WOB	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
2496.00					0:00	2:30	2.50	6	Pull Out Of Hole & Flow Checks @ 259m, 0m
					2:30	5:00	2.50	20	Dir. Work Change Out M.W.D., Scribe Motor,Surface Test M.W.D.
CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER SIZE mm	S.P.M.	PUMP NO. 2 LINER SIZE mm	S.P.M.	5:00	5:15	0.25	7	Rig Service & Function Annular 24/24 Secs
					5:15	8:00	2.75	5	Run In Hole W/Bit # 16, Circulate & Cool Tools @ 505 m & 915m 15 min each
	152		152						
REDUCED PUMP SPEED									
	@		@						
DEVIATION SURVEY									
DEPTH (m)	DEVIATION (o)	DIRECTION							

NOTES: Junction Sliding Sleeve Tool Opened @ 1844m = 12.53 m3 / Csg = 44.62 m3 / Drill = 21 m3. Bright Wtr @ 21 = 14.32 = 20.00 = 24 bbls. 1 B-2000 mud pumps @ 91.51 bbl. 2.3 = 71.58 bbls.

DRILLER SIGNATURE: Bill Mills | 8.00 | 8.5 | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR / REPAIR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 to 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	828-928-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	123-535-179	Terry Dobson	8.00	TD	☐	☑
Floorman	734-815-065	Lyle Todhunter	8.00	LT	☐	☑
Leaseman	127-391-365	Murray Bungay	8.00	MB	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	838-977-792	Sheldon Langley		SL	☐	☑

DAY TOUR 8:00 to 16:00

BIT RECORD

NO	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.30
1	Motor	196	8.15
1	UBHO	197	0.89
1	Float Sub	195	0.89
2	Monels	204	18.61
1	X/O Sub	202	0.77
6	180mm D.C.	180	74.90
1	Jars	178	4.76
6	180mm D.C.	180	75.36
6		127	86.40
40	D.P.	STANDS	2268.84
0	D.P.	SINGLES	0.00
	KELLY DOWN		0.00
	TOTAL		2598.00
NO. OF BC			24000.00
WT. OF STRING			124060.00

BIT RECORD: BIT NO 16 | 311 | IADC CODE 6 4 7 | MFG H.C. | TYPE HR-P66DX | SERIAL NO 6032134 | JETS | DEPTH OUT (m) 2496.00 | DEPTH IN (m) 2496.00 | TOTAL HOURS DRILLED 3.50 | TOTAL HOURS RUN 12.00 | CUTTING STRUCTURE I 1 | O 8 | D | NO. | LOC | B | G | OC | GAUGE | OTHER | ROP (m/hr)

HOLE CONDITION | HOLE DRAG 25-28klb/15-20Dnm@68rpm | TORQUE AT BOTTOM | FILL ON BOTTOM (m) 1.00

MUD RECORD: MUD TYPE: Native | Gel Chem | Flowline temp = 78.3 C | TIME | DEPTH (m) | FUNNEL VIS. (sec) | W.L. (cm3) | pH 10.0 | P.V.T. @ 132.3 m3 | 134.4m3

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN			
Caustic Soda	4 sks				
Milpac	3sks	6.00	1045	1040	1785
Hydrated Lime	2 sks				
Gel	40 sks				

METERS DRILLED / TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	M	ROTARY R.P.M.	WOB	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
2496.00	2598.00	D	16/115	19/32	8:00	11:00	3.00	5	R.I.H. w/Bit#16,Circulate/Test M.W.D. and Cool Tools for 15 Mins. @ 914m,1196m,1478m,1762m,2050m,
CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER SIZE mm	S.P.M.	PUMP NO. 2 LINER SIZE mm	S.P.M.	11:00	12:00	1.00	3	Wash In f/2280m to B/m., 1m FIll
					12:00	12:45	0.75	2	Pattern Bit and Drill f/2496m-2499m
14750	152	75	152	75	12:45	13:00	0.25	10	M.W.D. Survey
REDUCED PUMP SPEED					13:00	16:45	3.75	2	Drill f/2499m-2598m
4650	@	75	@	500.00	16:45	18:00	0.25	7	Rig Service and Function Pipe Ram's 6/6
DEVIATION SURVEY									
DEPTH (m)	DEVIATION (o)	DIRECTION							
2483.00	30.4	334.40							

NOTES: Function Crown Saver. Mix Temps. @ 91m = 40 C / 183m = 44 C / 457m = 51 C / 2598m = 68 C

DRILLER SIGNATURE: Wade Goddard | 8.00 | 9.5 | OPERATOR FUEL | MAX EXP HOOKLOAD: 173000.00 | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR / REPAIR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 to 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-628-708	Wade Goddard	12.00	WG	☐	☑
Derrickman	651-368-064	Jesse Goddard	12.00	JG	☐	☑
Motorman	652-342-418	Jonathan Greave	12.00	JG	☐	☑
Floorman	639-018-237	Robert Cramer	12.00	RC	☐	☑
Floorman	729-975-003	Daniel Sampson	12.00	DS	☐	☑

EVENING TOUR 16:00 to 24:00

BIT RECORD

NO	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.30
1	Motor	196	8.15
1	UBHO	197	0.89
1	Float Sub	195	0.89
2	Monels	204	18.61
1	X/O Sub	202	0.77
6	180mm D.C.	180	74.90
1	Jars	178	4.76
6	180mm D.C.	180	75.36
6		127	86.40
60	D.P.	STANDS	2268.84
2	D.P.	SINGLES	18.75
	KELLY DOWN		-1.13
	TOTAL		2527.00
NO. OF BC			24000.00
WT. OF STRING			127000.00

BIT RECORD: BIT NO 16 | 311 | IADC CODE 6 4 7 | MFG H.C. | TYPE HR-P66DX | SERIAL NO 6032134 | JETS | DEPTH OUT (m) 2496.00 | DEPTH IN (m) 2496.00 | TOTAL HOURS DRILLED 31.00 | TOTAL HOURS RUN 10.50 | CUTTING STRUCTURE I 1 | O 8 | D | NO. | LOC | B | G | OC | GAUGE | OTHER | ROP (m/hr)

HOLE CONDITION | HOLE DRAG 18-20 Dklb/22-26 Up Sliding | TORQUE AT BOTTOM 14033 ft/lbs | FILL ON BOTTOM (m)

MUD RECORD: MUD TYPE: Native | Gel Chem | Flowline temp = 78.6 | TIME | DEPTH (m) | FUNNEL VIS. (sec) | W.L. (cm3) | pH 9.9 | P.V.T. @ 97.5 m3 | 105.1m3 | 110.4m3

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN			
Caustic Soda	1 sk				
Lignco	30 sks				

METERS DRILLED / TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	M	ROTARY R.P.M.	WOB	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
2508.00	2527.00	D	15/110	19-35	16:00	23:00	7.00	2	Drill f/2508m-2527m
					23:00	23:15	0.25	7	Rig Service & Function H.C.R. 4/4 Secs
CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER SIZE mm	S.P.M.	PUMP NO. 2 LINER SIZE mm	S.P.M.	23:15	24:00	0.75	10	Accumulated M.W.D Deviation Survey
14800	152	75	152	75					
REDUCED PUMP SPEED									
6064	@	90	@	3837.00					
DEVIATION SURVEY									
DEPTH (m)	DEVIATION (o)	DIRECTION							
2492.10	30.6	332.80							
2502.30	30.6	332.40							

NOTES: Function Crown Saver. Mix Temps. @ 91m = 40 C / 183m = 44 C / 457m = 51 C / 2598m = 68 C

DRILLER SIGNATURE: Bill Mills | 8.00 | 9.5 | OPERATOR FUEL | MAX EXP HOOKLOAD: 195000.00 | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR / REPAIR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 to 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	4.00	BM	☐	☑
Derrickman	828-928-262	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	123-535-179	Terry Dobson	4.00	TD	☐	☑
Floorman	734-815-065	Lyle Todhunter	4.00	LT	☐	☑
Leaseman	127-391-365	Murray Bungay	4.00	MB	☐	☑

CAODC

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SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO	22
AFE	
LICENCE NO.	MC-7
WELL NAME AND NO.	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE	Kevin Vig
DATE	17-Jan-2005
RIG NO	620 E
FUEL (LITRES) – RIG	21130
BOILER	
WEATHER – TEMPERATURE	0
CURRENT CONDITION	Snow
WIND DIRECTION	Calm
ROAD	Good

Well type	Re-entry	KB to ground elev.
Geothermal	☐ Yes ☒ No	7.20

WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	17-Jan-2005
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO	620 E
PROVINCE	BC
CAMP	☒ Yes ☐ No
RIG SAFETY DAYS	323.00

DAILY CHECKS (A.M. / P.M.) – items checked

Last Casing, Tubing or Liner

Grade	KB to CSG flange	Set at (m)
	5.31	128.00
L-80	6.23	870.00

Pumps / Drill Pipe

Linear mass	Grade	Nom ID	Tool jt OD	Thread type	No. of joints	Pump type	Pump manufacturer	Stroke Lth (mm)
29.00	SS-95	83.00	168.00	5"XH	170	FB-1600	BPMMP X 152mm	306
38.00	SS-65	67.00	168.00	5"XH	160	FB-1600	BPMMP X152mm	306

Shale Shaker(s)

No. 2	Type: Derrick		
4.00	Screens changed	☐ Yes	☒ No
8.00	Top 160	Top 100	
4.00	Middle 190	Middle 100	
24.00	Bottom 100	Bottom 100	

RENTALS/SERVICES

Time – Hrs

Crew	2	7	10
Morn	7.25	0.25	0.50
Day	7.25	0.25	0.50
Eve	7.00	0.25	0.75
Total	21.50	0.75	1.75

MORNING TOUR 0:00 TO 8:00

Drill string

No.	Item	OD (mm)	Length
1	bit	311	0.30
1	Motor	196	8.16
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	160mm D.C.	160	74.90
1	Jars	178	4.75
8	160mm D.C.	160	75.36
6		127	68.40
81	D.P. (stands)		2297.35
1	D.P. (singles)		9.56
	Kellydown		0.00
	Total		2547.42
	Wt. of DC		24000.00
	Wt. of string		127000.00

Bit Record

BIT NO	16
SIZE	311
IADC CODE	6 4 7
MFG.	H.C.
TYPE	HR-P86DX
SERIAL NO	6032134
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2496.00
TOTAL METERS DRILLED (m)	51.00
TOTAL HOURS RUN	17.75
HOLE DRAG	18-20 Dn / 22-28 Up Sliding
TORQUE AT BOTTOM	14033 ft/lbs
FILL ON BOTTOM (m)	

Mud Record

Mud type: ☒ Water based ☐ Oil based — Flowline temp =

TIME	02:00	08:00	06:00
DENSITY	1040	1040	1040
FUNNEL VIS	80	64	87
W.L. (cm3)			
pH	10.0	9.7	9.6
PVT	117.4m3	117.2m2	117.6m3

Mud material added – Product	Amount & Unit
Ligco	30 sks
Caustic Soda	6 sks
Defoamer LD-8	1 pl
Milpac	3 sks
Hydrated Lime	2 sks
Pyrotrol	25 sks
Milgel	39 sks

Solids control: Hours run 6.50 — 1040 — 1036 — 1730

Meters Drilled

From	To		Rotary RPM	
2527.00	2547.00	D	14/118	10/32

Circulation pressure (kPa)	Pump No. 1 liner	SPM	Pump No. 2 liner	SPM
14600	152	75	152	75

Reduced pump speed: 6084 @ 90 @ 2537.00

Deviation survey – Depth (m)	Deviation	Direction
2511.10	30.8	333.30
2521.80	30.9	331.80

Driller signature: Bill Mills

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
0:00	7:15	7.25	2	Drill Fm/2527m-2547m
7:15	7:30	0.25	7	Rig Service & Function Annular 24/24 Secs
7:30	8:00	0.50	10	Accumulated M.W.D. Deviation Survey

NOTES

Boiler: 4.00 — 4.5 | Max exp hookload: 160000.00

Crew

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	718-324-181	Bill Mills	8.00	BM	☐	☒
Derrickman	829-926-262	Rob Roth	8.00	RR	☐	☒
Motorman	722-572-761	Dwayne Fry	8.00	DF	☐	☒
Floorman	123-635-179	Terry Dobson	8.00	TD	☐	☒
Floorman	734-615-065	Lyle Todhunter	8.00	LT	☐	☒
Leaseman	127-391-365	Murray Bungay	8.00	MB	☐	☒
Rig Manager	718-409-484	Kevin Vig		KV	☐	☒
Top Drive	638-677-702	Sheldon Langley		SL	☐	☒

Rate schedule: ☒ Regular ☐ Repair ☐ Invert — Driver A — Crew safety days — Driver B

DAY TOUR 8:00 TO 16:00

Drill string

No.	Item	OD (mm)	Length
1	bit	311	0.30
1	Motor	196	8.16
1	UBHO	197	0.69
1	Float Sub	196	0.69
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	160mm D.C.	160	74.90
1	Jars	178	4.76
8	160mm D.C.	160	75.35
6		127	56.40
82	D.P. (stands)		2326.13
2	D.P. (singles)		18.86
	Kellydown		0.00
	Total		2570.00
	Wt. of DC		24000.00
	Wt. of string		127000.00

Bit Record

BIT NO.	16
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P86DX
SERIAL NO.	6032134
JETS	
DEPTH OUT (m)	2547.00
DEPTH IN (m)	2496.00
TOTAL METERS DRILLED (m)	51.00
TOTAL HOURS RUN	26.00
HOLE DRAG	15-20Dwn/22-26UpSliding
TORQUE AT BOTTOM	14,033-14,875 ft/lbs.
FILL ON BOTTOM (m)	

Mud Record

Mud type: ☒ Water based ☐ Oil based — Flowline temp = 79.6

TIME	09:00	12:00	15:00
DENSITY	1045	1040	1045
FUNNEL VIS	62	66	62
W.L. (cm3)			
pH	10.0	10.6	10.0
PVT	121.0m3	124.8m3	130.3m3

Mud material added – Product	Amount & Unit
Hydrated Lime	2 sks
Milpac	3 sks
Defoamer LD-8	1 Pail
Caustic Soda	6 sks
Pyrotrol	2 sks
Ligco	30 sks

Solids control: Hours run 8.00 — 1045 — 1040 — 1760

Meters Drilled

From	To		Rotary RPM	
2547.00	2570.00	D	16/110	19/34

Circulation pressure (kPa)	Pump No. 1 liner	SPM	Pump No. 2 liner	SPM
14600	152	76	152	76

Reduced pump speed: 4493 @ 76 @ 2565.00

Deviation survey – Depth (m)	Deviation	Direction
2529.90	30.6	331.50
2549.40	30.3	331.00

Driller signature: Wade Goddard

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
8:00	14:15	6.25	2	Drill fr/2547m-2565m
14:15	14:30	0.25	7	Rig Service and Function Pipe Ram's 6/6
14:30	15:30	1.00	2	Drill fr/2565m-2570m
15:30	16:00	0.50	10	Accumulated M.W.D. Survey's

NOTES

Boiler: 4.00 — 8.6 | Max exp hookload: 175000.00

Crew

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	633-628-706	Wade Goddard	12.00	WG	☐	☒
Derrickman	661-366-064	Jesse Goddard	12.00	JG	☐	☒
Motorman	652-342-416	Jonathan Greeve	12.00	JG	☐	☒
Floorman	639-019-237	Robert Cramer	12.00	RC	☐	☒
Floorman	729-975-003	Daniel Sampson	12.00	DS	☐	☒

Rate schedule: ☒ Regular ☐ Repair ☐ Invert — Driver A — Crew safety days — Driver B

EVENING TOUR 16:00 TO 24:00

Drill string

No.	Item	OD (mm)	Length
1	bit	311	0.30
1	Motor	196	8.16
1	UBHO	197	0.69
1	Float Sub	196	0.69
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	160mm D.C.	160	74.90
1	Jars	178	4.75
8	160mm D.C.	160	75.36
6		127	56.40
82	D.P. (stands)		2326.13
2	D.P. (singles)		18.86
	Kellydown		6.40
	Total		2592.00
	Wt. of DC		24000.00
	Wt. of string		128000.00

Bit Record

BIT NO	16
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P86DX
SERIAL NO	6032134
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2496.00
TOTAL METERS DRILLED (m)	96.00
TOTAL HOURS RUN	32.00
HOLE DRAG	18-20 Dn / 22-28 Up Sliding
TORQUE AT BOTTOM	14033 ft/lbs
FILL ON BOTTOM (m)	

Mud Record

Mud type: ☒ Water based ☐ Oil based — Flowline temp = 81.1

TIME	18:00	21:00
DENSITY	1045	1040
FUNNEL VIS	64	49
W.L. (cm3)		
pH	10.0	9.9
PVT	134.2m3	148.4m3

Meters Drilled

From	To		Rotary RPM	
2570.00	2592.00	D	16/110	19/35

Circulation pressure (kPa)	Pump No. 1 liner	SPM	Pump No. 2 liner	SPM
14300	152	75	152	75

Reduced pump speed: 5906 @ 90 @ 2592.00

Deviation survey – Depth (m)	Deviation	Direction
2560.00	30.1	331.50

Driller signature: Bill Mills

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
16:00	21:30	5.50	2	Drill fr/2570m-2584m
21:30	21:45	0.25	7	Rig Service & Function H.C.R. 4/4 Secs
21:45	23:15	1.50	2	Drill Fr/2584m-2592m
23:15	24:00	0.75	10	Accumulated M.W.D. Deviation Survey & Directional Work

NOTES

Boiler: 5.00 — 9.1 | Max exp hookload: 160000.00

Crew

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	716-324-181	Bill Mills	4.00	BM	☐	☒
Derrickman	829-926-262	Rob Roth	4.00	RR	☐	☒
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☒
Floorman	123-635-179	Terry Dobson	4.00	TD	☐	☒
Floorman	734-615-065	Lyle Todhunter	4.00	LT	☐	☒
Leaseman	127-391-366	Murray Bungay	4.00	MB	☐	☒

Rate schedule: ☒ Regular ☐ Repair ☐ Invert — Driver A — Crew safety days — Driver B

ETS SERIAL NUMBER: PREC620 _20050017_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 22 | AFE
LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-14H / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 18-Jan-2005 | RIG NO.: 820 E | FUEL @ 6:00: | RIG: 16390 | BOILER:
TEMPERATURE: 4 | CURRENT CONDITION: Rain | WIND DIRECTION: Calm | ROAD: Slippery

LAST CASING TUBING OR LINER

	O.D. (mm)	WT/FT (kg/m)	Grade	Range	No. of Joints	Total Pipe Length	KB to Csg. Head (m)	Set at (m)
							6.31	129.00
				L-80			6.23	870.00

	Linear Mass (kg/m)	Grade	Hrs to Drill	Tool Jt O.D. (mm)	Thread Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke Length (mm)
	29.00	S5-95	83.00	166.00	5"XH	170	FB-1600	BPMMP X 152mm	305
	38.00	S5-95	67.00	166.00	5"XH	150	FB -1600	BPMMP X152mm	305

SHALE SHAKER(S)

	No.	Type	Derrick	New
5.50	SCREEN CONDITION		YES	NO
5.50	TOP		100	100
5.50	MIDDLE		100	100
24.00	BOTTOM		100	100

RENTALS/SERVICES

	Work	Dat	Eqp

MORNING TOUR

TIME-HRS

	Oper	Rig Rpr (Unsch)	Rig Rpr (Total)	Rig Rpr (Sched)	Trips	Rig Svc	Drlg Fluid Rpr	Drlg Fluid Rpr (Sched)	Wait on Wthr	Wait on Equip	Wait on Matl	Wait on Daylight	Safety Mtg	Rig Move	Rig Up/Down	Testing	Cond Mud & Circ	Cut Drlg Line	Reaming	Coring	Other
MORN	7.50				0.25																
DAY	7.25				0.25																
EVE	7.25				0.25																
TOTAL	21.50				0.75																

BIT RECORD

No.	Run	O.D. (mm)	Length (m)
1	bit	311	0.30
1	Motor	196	8.16
1	UBHO	197	0.89
1	Float Sub	195	0.69
2	Monels	204	18.61
1	X/O Sub	202	0.77
6	159mm D.C.	160	74.99
1	Jars	178	4.75
6	159mm D.C.	160	75.35
6		127	56.40
84	DP	STANDS	2383.32
0	DP	SINGLES	0.00
	KELLY/SWIVEL		-12.83
	TOTAL		2611.00
WT. on BC			24000.00
WT. on BRAKE			128000.00

BIT NO: 16 | SIZE: 311 | IADC CODE: 6 4 7 | MFG: H.C. | TYPE: HR-P66DX | SERIAL NO: 6032134 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 2496.00 | TOTAL METERS DRILLED (m): 115.00 | TOTAL HOURS RUN: 39.00
CUTTING STRUCTURE: I1 | O2 | DC | LOC | B | Gage | OBC | Reason Pulled | Tooth Dull Char
HOLE CONDITION
HOLE DRAG: 18-20 Dwn22-30 Up Sticking
TORQUE AT BOTTOM: 14033 ft/lbs
FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Water Based | Oil Based | Flowline temp = 81.3

TIME	02:00	04:00	06:00
DENSITY kg/m³	1040	1040	1040
FUNNEL VIS. (sec)	61	55	55
W.L. (cm3)			
pH	9.5	9.7	10.0
P.V.T.	122 m3	133.5 m3	137.5m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT
Ligco	30 sx
Defoamex LO-8	2 pls
Caustic Soda	5 sk
Hydrated Lime	2 sk
Milpac	3 sx
Pyrotrol	3 sk
Milgel	31 sx
Volclay Gel	10 sks

	Hours Run	Solids Control	Centrifuge	Desander
	8.00	1040	1035	1740

METERS DRILLED

From	To	Cum. Hrs	Bit Run	Rotary R.P.M.	Cum. Rotary R.P.M.
2592.00	2611.00	D	16/116	19/35	

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: Liner 152.4mm, S.P.M. 182, Liner 165.1mm, S.P.M. 76 | PUMP NO. 2: Liner 152.4mm, S.P.M. 152, Liner 165.1mm, S.P.M. 76

REDUCED PUMP SPEED

4379	@	76	SPM

DEVIATION SURVEY

Depth (m)	Deviation (d)	Direction
2578.00	30	331.40
2564.40	30	331.20

TIME LOG

From	To	Hours	Code	Activity Code
0:00	4:00	4.00	2	Drill 2592m-2604m
4:00	4:15	0.25	7	Rig Service & Function Annular 24/24 Secs
4:15	7:15	3.00	2	Drill Fr/2604m-2611m
7:15	8:00	0.75	19	Accumulated M.W.D. Deviation Surveys & Directional Work

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE: Bill Mills

Hours Run	Cum. Hrs	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
8.00	8.0		180065.00		

MORNING TOUR 0:00 TO 8:00

Crew	SOC. INS. NO.	Name	Hrs	Injuries: Yes	No
Driller	716-324-181	Bill Mills	8.00	BM	☑
Derrickman	828-926-262	Rob Roth	8.00	RR	☑
Motorman	722-572-761	Dwayne Fry	8.00	DF	☑
Floorman	123-635-179	Terry Dobson	8.00	TD	☑
Floorman	734-815-065	Lyle Todhunter	8.00	LT	☑
Leaseman	127-391-365	Murray Bungay	8.00	MB	☑
Rig Manager	719-409-484	Kevin Vig		KV	☑
Top Drive	838-977-702	Sheldon Langley		SL	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invoice | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

TIME-HRS

	Oper	Rig Rpr (Unsch)	Rig Rpr (Total)	Rig Rpr (Sched)	Trips	Rig Svc	Drlg Fluid Rpr	Drlg Fluid Rpr (Sched)	Wait on Wthr	Wait on Equip	Wait on Matl	Wait on Daylight	Safety Mtg	Rig Move	Rig Up/Down	Testing	Cond Mud & Circ	Cut Drlg Line	Reaming	Coring	Other
MORN	7.50				0.25																
DAY	7.25				0.25																
EVE	7.25				0.25																
TOTAL	21.50				0.75																

BIT RECORD

No.	Run	O.D. (mm)	Length (m)
1	bit	311	0.30
1	Motor	196	8.16
1	UBHO	197	0.89
1	Float Sub	195	0.69
2	Monels	204	18.61
1	X/O Sub	202	0.77
6	159mm D.C.	160	74.99
1	Jars	178	4.75
6	159mm D.C.	160	75.35
6		127	56.40
84	DP	STANDS	2383.32
2	DP	SINGLES	15.15
	KELLY/SWIVEL		8.00
	TOTAL		2642.96
WT. on BC			24000.00
WT. on BRAKE			128000.00

BIT NO: 16 | SIZE: 311 | IADC CODE: 6 4 7 | MFG: H.C. | TYPE: HR-P66DX | SERIAL NO: 6032134 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 2496.00 | TOTAL METERS DRILLED (m): 134.00 | TOTAL HOURS RUN: 46.25
CUTTING STRUCTURE: I1 | O2 | DC | LOC | B | Gage | OBC | Reason Pulled | Tooth Dull Char
HOLE CONDITION
HOLE DRAG: 18-20Dwn/20-30Up(Sticking)
TORQUE AT BOTTOM: 14,033-14,875 ft/lbs.
FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Water Based | Oil Based | Flowline temp = 78.6 C

TIME	09:00	12:00	15:00
DENSITY kg/m³	1040	1040	1040
FUNNEL VIS. (sec)	64	55	55
W.L. (cm3)			
pH	10.1	10.0	10.3
P.V.T. @	146.6m3	138.9 m3	144.2m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT
Hydrated Lime	2 sks
Milpac	4 sks
Caustic Soda	5 sks
Pyrotrol	3 sks
Ligco	20 sks
Gel	30 sks

	Hours Run	Solids Control	Centrifuge	Desander
	8.00	1045	1040	1750

METERS DRILLED

From	To	Cum. Hrs	Bit Run	Rotary R.P.M.	Cum. Rotary R.P.M.
2611.00	2639.00	D	16/116	19/35	

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: Liner 152.4mm, S.P.M. 182, Liner 165.1mm, S.P.M. 76 | PUMP NO. 2: Liner 152.4mm, S.P.M. 152, Liner 165.1mm, S.P.M. 76

REDUCED PUMP SPEED

4400	@	76	SPM

DEVIATION SURVEY

Depth (m)	Deviation (d)	Direction
2598.30	30	332.10
2987.00	30	332.20

TIME LOG

From	To	Hours	Code	Activity Code
8:00	12:15	4.25	2	Drill fr/2611m-2623m
12:15	12:30	0.25	7	Rig Service and Function Pipe Ram's 8/8
12:30	16:30	3.00	2	Drill fr/2623m-2639m
16:30	16:00	0.50	19	Accumulated M.W.D. Survey's

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE: Wade Goddard

Hours Run	Cum. Hrs	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
8.00	8.0		168000.00	Snow Removal	

DAY TOUR 8:00 TO 16:00

Crew	SOC. INS. NO.	Name	Hrs	Injuries: Yes	No
Driller	833-628-706	Wade Goddard	12.00	WG	☑
Derrickman	651-396-084	Jesse Goddard	12.00	JG	☑
Motorman	852-342-416	Jonathan Greeve	12.00	JG	☑
Floorman	839-016-237	Robert Cramer	12.00	RC	☑
Floorman	729-975-003	Daniel Sampson	12.00	DS	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invoice | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

TIME-HRS

	Oper	Rig Rpr (Unsch)	Rig Rpr (Total)	Rig Rpr (Sched)	Trips	Rig Svc	Drlg Fluid Rpr	Drlg Fluid Rpr (Sched)	Wait on Wthr	Wait on Equip	Wait on Matl	Wait on Daylight	Safety Mtg	Rig Move	Rig Up/Down	Testing	Cond Mud & Circ	Cut Drlg Line	Reaming	Coring	Other
MORN	7.50				0.25																
DAY	7.25				0.25																
EVE	7.25				0.25																
TOTAL	21.50				0.75																

BIT RECORD

No.	Run	O.D. (mm)	Length (m)
1	bit	311	0.30
1	Motor	196	8.16
1	UBHO	197	0.89
1	Float Sub	195	0.69
2	Monels	204	18.61
1	X/O Sub	202	0.77
6	159mm D.C.	160	74.99
1	Jars	178	4.75
6	159mm D.C.	160	75.35
6		127	56.40
84	DP	STANDS	2383.32
2	DP	SINGLES	16.15
	KELLY/SWIVEL		4.02
	TOTAL		2647.00
WT. on BC			24000.00
WT. on BRAKE			128000.00

BIT NO: 16 | SIZE: 311 | IADC CODE: 6 4 7 | MFG: H.C. | TYPE: HR-P66DX | SERIAL NO: 6032134 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 2496.00 | TOTAL METERS DRILLED (m): 151.00 | TOTAL HOURS RUN: 53.50
CUTTING STRUCTURE: I1 | O2 | DC | LOC | B | Gage | OBC | Reason Pulled | Tooth Dull Char
HOLE CONDITION
HOLE DRAG: 18-20 Dwn / 22-32 UP Sticking
TORQUE AT BOTTOM: 14875 ft/lbs
FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Water Based | Oil Based | Flowline temp = 81.5

TIME	18:00	21:00	23:00
DENSITY kg/m³	1040	1040	1040
FUNNEL VIS. (sec)	62	51	50
W.L. (cm3)			
pH	10.2	10.1	10.2
P.V.T. @	139.6m3	146.6m3	123.5m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT

	Hours Run	Solids Control	Centrifuge	Desander
	7.00	1045	1035	1750

METERS DRILLED

From	To	Cum. Hrs	Bit Run	Rotary R.P.M.	Cum. Rotary R.P.M.
2630.00	2647.00	D	16/116	19/35	

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: Liner 152.4mm, S.P.M. 182, Liner 165.1mm, S.P.M. 76 | PUMP NO. 2: Liner 152.4mm, S.P.M. 152, Liner 165.1mm, S.P.M. 76

REDUCED PUMP SPEED

6331	@	50	SPM

DEVIATION SURVEY

Depth (m)	Deviation (d)	Direction
2617.10	30	333.30
2626.00	29.8	332.90

TIME LOG

From	To	Hours	Code	Activity Code
16:00	21:15	5.25	2	Drill fr/2630m-2641m
21:15	21:30	0.25	7	Rig Service & Function H.C.R. 4/4 Secs
21:30	23:30	2.00	2	Drill Fr/2641m-2647m
23:30	24:00	0.50	19	Accumulated M.W.D. Deviation Surveys & Directional Work

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE: Bill Mills

Hours Run	Cum. Hrs	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
8.00	8.0		182000.00		

EVENING TOUR 16:00 TO 24:00

Crew	SOC. INS. NO.	Name	Hrs	Injuries: Yes	No
Driller	716-324-181	Bill Mills	8.00	BM	☑
Derrickman	828-926-262	Rob Roth	8.00	RR	☑
Motorman	722-572-761	Dwayne Fry	8.00	DF	☑
Floorman	123-635-179	Terry Dobson	8.00	TD	☑
Floorman	734-815-065	Lyle Todhunter	8.00	LT	☑
Leaseman	127-391-365	Murray Bungay	8.00	MB	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invoice | DRIVER A | CREW SAFETY DAYS | DRIVER B

CAODC

Chimo Equipment
FA Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | DATE
LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-144 / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 19-Jan-2005 | ROB IND: 620 E | FUEL @ 0:00 | RIG: 9550 BOILER
WEATHER: TEMPERATURE | CURRENT CONDITION: Rain | WIND DIRECTION: Calm | ROAD: Wet

CASING TUBING OR LINER

	O.D. (mm)	WEIGHT (kg/m)	GRADE	NAME	GRADE	NO. OF JOINTS	TOTAL PIPE LENGTH (m)	KB TO CSG HEAD (m)	SET AT (m)
								6.31	129.00
					L-80			6.23	870.00

	LINER MAKE (Name)	GRADE	NO. ID (mm)	TOOL O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE (Liner pump)
	23.00	S9-95	83.00	166.00	5"XH	176	FB-1900	BPMMP X 152mm	305
	38.00	S9-95	67.00	168.00	5"XH	166	FB -1600	BPMMP X152mm	305

TIME - HRS

CREW	DRLG	RIG REPAIR (Repair)	TRIPS	REAMING	CIRC	RIG SERVICE	SURVEY	CORING	CUT & SLIP DRLG LINE	DRILL STEM TEST	FISHING	RUN CASING	CEMENTING	WAIT ON CEMENT	NIPPLE UP BOP	TEST BOP	PRESS TEST CSG	MOVING	RIG UP/ TEAR DOWN	SLIP JOINT	OTHER (Specify)	TOTAL
MORN	5.75				0.25																0.75	6.75
DAY	6.75			0.50	0.25																	7.50
EVE			7.75	0.25																		8.00
TOTAL	12.50		7.75	0.75	0.50																0.75	22.25

BOILER SHAKER(S) | RENTALS/SERVICES

NO.	TYPE	Derrick	New
3	SCREENS CHANGED	☐ YES	☑ NO
3.00	TOP	100	TOP 100
3.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

	WORK	DAY

WELL TYPE: Geothermal | RE-ENTRY ☐ YES ☑ NO | KB TO GROUND ELEV.: T. 29
WELL NAME & NO.: a-92-A / 92-J-12 MC-7 | DATE: 19-Jan-2005
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig | RIG NO.: 620 E
PROVINCE: BC | CAMP ☑ YES ☐ NO | RIG SAFETY DAYS: 324.00

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.15
1	UBHO	197	0.65
1	Float Sub	195	0.65
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	159mm D.C.	160	74.90
1	Jars	178	4.75
8	159mm D.C.	160	75.35
6	Accelerator	127	56.40
			59.25
86	D.P.	STANDS	2411.85
1	D.P.	SINGLES	9.67
	KELLY/SWIVEL		1.87
	TOTAL		2664.00
WT. OF DC			24000.00
WT. OF STRING			130000.00

BIT NO.: 16 | SIZE: 311 | IADC CODE: 6 4 7 | MFG.: H.C. | TYPE: HR-P66DX | SERIAL NO.: 6032134 | JETS | DEPTH OUT (m) | DEPTH IN (m): 2496.00 | TOTAL METRES DRILLED (m): 168.00 | TOTAL HOURS RUN: 59.25
OUTER STRUCTURE | INNER STRUCTURE | LOC. | B | Gage | OC | REASON PULLED | Other Ch.
HOLE CONDITION
HOLE DRAG | TORQUE AT BOTTOM: 14875 ft/lbs | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	Water Based	Oil Based	Flowline temp = 81.2
TIME	02:00	04:00	08:00
DENSITY (kg/m3)	1040	1040	1040
FUNNEL VIS. (s/L)	53	56	57
W.L. (cm3)			
pH	9.5	10.1	10.2
PV/YP	129.5m3	133.4m3	136.6m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Ligco	20 sks
Defoamer LD-9	2 pls
Caustic Soda	6 sks
Hydrated Lime	2 sks
Milpac	4 sks
Pyrotrol	3 skls
Gel	35 sks

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	W.O.B. (kg)	HOURS	METRES
2647.00	2664.00	D	15/110	19/35	0:00	0:45
					0:45	0:45
CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	STROKES P.M.	PUMP NO. 2 LINER SIZE (mm)	STROKES P.M.	0:45	6:15
					6:15	7:00
14200	152	75	152	75	7:00	7:15
REDUCED PUMP SPEED					7:15	8:00
4835 @		75	@			

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
2636.90	29.5	334.39
2648.10	29.4	334.49

NOTES

TIME LOG

HOURS RUN	CUMULATIVE HOURS	CUMULATIVE METRES	OPERATION CODE
0.75	22		(Service F-1600 Mud Pump) #1 Changed Head & Liner
4.00	2		Drill Fr/ 2647m-2641m
0.50	22		(Service F-1600 Mud Pump) #2 Changed Head
1.75	2		Drill Fr/2641m-2664m
0.25	7		Rig Service & Function Annular 24/24 Secs
0.75	19		Accumulated M.W.D. Deviation Survey

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	8.00	BM	☑
Derrickman	629-828-282	Rob Roth	8.00	RR	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☑
Floorman	123-635-179	Terry Dobson	8.00	TD	☑
Floorman	734-618-065	Lyle Todhunter	8.00	LT	☑
Leaseman	127-391-365	Murray Bungay	8.00	MB	☑
Rig Manager	719-499-484	Kevin Vig		KV	☐
Top Drive	638-977-702	Sheldon Langley		SL	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ SHORT | DRIVER A | CREW SAFETY DAYS | DRIVER B

DRILLER SIGNATURE | OPERATOR FUEL | MAX BOP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
Bill Mills | 8.00 | 8.5 | 185000.00

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.15
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	159mm D.C.	160	74.90
1	Jars	178	4.75
8	159mm D.C.	160	75.35
6	Accelerator	127	56.40
			66.00
86	D.P.	STANDS	2440.93
0	D.P.	SINGLES	0.00
	KELLY/SWIVEL		8.90
	TOTAL		2679.00
WT. OF DC			24000.00
WT. OF STRING			130000.00

BIT NO.: 16 | SIZE: 311 | IADC CODE: 6 4 7 | MFG.: H.C. | TYPE: HR-P66DX | SERIAL NO.: 6032134 | JETS | DEPTH OUT (m): 2679.00 | DEPTH IN (m): 2496.00 | TOTAL METRES DRILLED (m): 183.00 | TOTAL HOURS RUN: 66.00
OUTER STRUCTURE | INNER STRUCTURE | LOC. | B | Gage | OC | REASON PULLED | Other Ch.
HOLE CONDITION
HOLE DRAG: 10-20 Dom/25-30 Up/Sliding | TORQUE AT BOTTOM: 14,875-15,218 ft/lbs. | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	Water Based	Oil Based	Flowline temp = 79.4 C
TIME	08:00	12:00	16:00
DENSITY (kg/m3)	1040	1040	1040
FUNNEL VIS. (s/L)	54	52	52
W.L. (cm3)			
pH	10.3	10.0	10.1
P.V./YP @	140.4 m3	126.1m3	132.3m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Milpac	4 sks
Hydrated Lime	2 sks
Ligco	21 sks
Caustic Soda	3 sks
Defoamer LD-9	1 Pail
Pyrotrol	2 sks
Gel	18 sks

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	W.O.B. (kg)	HOURS	METRES
2664.00	2679.00	D	15/110	19-35	8:00	13:15
					13:15	13:30
CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	STROKES P.M.	PUMP NO. 2 LINER SIZE (mm)	STROKES P.M.	13:30	14:00
					14:00	15:30
15150	152	75	152	75	15:30	16:00
REDUCED PUMP SPEED						
4875 @		75	@			

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
2665.80	29.3	334.70

NOTES

TIME LOG

HOURS RUN	CUMULATIVE HOURS	CUMULATIVE METRES	OPERATION CODE
5.00	13:15	6.25	2 Drill fr/2664m-2679m
0.25	7		Rig Service and Function Pipe Ram's 5/6
0.50	23		Trouble Shoot Chimo Electronic Drilling Recorder
1.50	2		Drill fr/2676m-2679m
0.50	5		Circulate and Work Pipe

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-625-708	Wade Goddard	12.00	WG	☑
Derrickman	651-366-084	Jesse Goddard	12.00	JG	☑
Motorman	832-342-416	Jonathan Greave	12.00	JG	☑
Floorman	828-616-237	Robert Cramer	12.00	RC	☑
Floorman	729-975-003	Daniel Sampson	12.00	DS	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ SHORT | DRIVER A | CREW SAFETY DAYS | DRIVER B

DRILLER SIGNATURE | OPERATOR FUEL | MAX BOP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
Wade Goddard | 8.00 | 0.6 | 168000.00

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.15
1	UBHO	197	0.65
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	159mm D.C.	160	74.90
1	Jars	178	4.78
8	159mm D.C.	160	75.35
6	Accelerator	127	56.40
			66.00
86	D.P.	STANDS	2440.93
0	D.P.	SINGLES	0.00
	KELLY/SWIVEL		0.00
	TOTAL		2681.44
WT. OF DC			24000.00
WT. OF STRING			130000.00

BIT NO.: 16 | SIZE: 311 | IADC CODE: 6 4 7 | MFG.: H.C. | TYPE: HR-P66DX | SERIAL NO.: 6032134 | JETS | DEPTH OUT (m): 2679.00 | DEPTH IN (m): 2496.00 | TOTAL METRES DRILLED (m): 183.00 | TOTAL HOURS RUN: 66.00
OUTER STRUCTURE | INNER STRUCTURE | LOC. | B | Gage | OC | REASON PULLED | Other Ch.
HOLE CONDITION
HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	Water Based	Oil Based	Flowline temp = 81.1
TIME			
DENSITY (kg/m3)			
FUNNEL VIS. (s/L)			
W.L. (cm3)			
pH			

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	W.O.B. (kg)	HOURS	METRES
2679.00					16:00	23:45
					23:45	24:00
CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	STROKES P.M.	PUMP NO. 2 LINER SIZE (mm)	STROKES P.M.		
	152		152			
REDUCED PUMP SPEED						
	@		@			

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION

NOTES

TIME LOG

HOURS RUN	CUMULATIVE HOURS	CUMULATIVE METRES	OPERATION CODE
7.75	6		Flow Check @ 2671m,Hoist 6it#16,Circulate/Cool Tools @ 2515m,2243m,1961m,1790m,
0.25	7		Rig Service & Function H.C.R. 5/6 Secs

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	4.00	BM	☑
Derrickman	629-828-282	Rob Roth	8.00	RR	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☑
Floorman	123-635-179	Terry Dobson	4.00	TD	☑
Floorman	734-618-065	Lyle Todhunter	4.00	LT	☑
Leaseman	127-391-365	Murray Bungay	4.00	MB	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ SHORT | DRIVER A | CREW SAFETY DAYS | DRIVER B

DRILLER SIGNATURE | OPERATOR FUEL | MAX BOP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
Bill Mills | 8.00 | 1.5

ETS SERIAL NUMBER: PREC620 _20050019_1A

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 23 | AFE

LICENCE NO: MC-7 | WELL NAME AND NO: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | SUBSOIL ID: b-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS
(1) Daily Visual Accurate Inspection
(2) Complete Preventative Weekly Lubing (Checklist)
(3) H2S Alarm Tested (if required)
(4) Weekly Lubing & Belt Alignment Performed
(5) Fluid Line Status
(6) BOP Drills Performed
(7) Monthly Preventative BOP's Pressures & Diagnostic Tested
(8) Rig Site Monthly and Safety Meeting Items (Documented)
(9) C.A.O.D.C. Rig Safety Inspection Checklist Completed
(10) Mast Inspection Report Posted in Dog House
(11) Crown Saver Checked
(12) Motor Info Checked

OPR. | R.M.

DATE: 20-Jan-2005 | RIG NO: 620 E | FUEL @ 8:00: RIG 10968 BOILER

WEATHER: TEMPERATURE: 2 | CURRENT CONDITION: Snow | WIND DIRECTION: Calm | ROAD: Slick

LAST CASING: O.D. (mm) | WEIGHT (kg/m) | GRADE | BRAND | CONNECT | NO. OF JOINTS | TOTAL CSG LENGTH (m) | SETTING DEPTH (m)

						6.31	129.00
				L-80		8.23	870.00

TURN-OVER: DRILLER:

DRPT SIZE (mm)	LINEAR MASS (kg/m)	GRADE	MIN. ID (mm)	TENS. AT G.S. (daN)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE L.TH (mm)
	29.00	S5-95	53.00	168.00	5"XH	170	FB-1600	BRMMP X 152mm	305
	30.00	S5-95	57.00	168.00	5"XH	150	FB -1600	BRMMP X152mm	305

Page 1 of 5

CAODC

Chimo Equipment — A Varco Company

Based on the CAODC ETS file standard

WELL TYPE: Geothermal | RE-ENTRY: ☐YES ☑NO | KB TO GROUND ELEV.: T. 20

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 20-Jan-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 620 E

PROVINCE: BC | CAMP: ☑YES ☐NO | RIG SAFETY DAYS: 325.00

TIME - HRS

	OPER	RIG SERV	REPAIR	REAMING	CIRC	TRIPS	DRLG ACTUAL	SURV	WOW	WOR	WOM	SLIP	CUT	RIG UP	RIG DOWN	WEATHER DELAY	REM	SAFETY MTG	Service Top Drive												
MIDN							3.75	0.25											5.00		6.25										
DAY	3.50	1.00					3.00	0.25																							
EVE	7.00							0.25																							
TOTAL	10.50	1.00					6.75	0.75											5.00		6.25										

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)	BIT NO	16	17
1	bit	311	0.30	SIZE	311	311
1	Motor	195	8.06	IADC CODE	6 4 7	6 4 7
1	UBHO	197	0.69	MFG	H.C.	H.C.
1	Float Sub	195	0.59	TYPE	HR-P6DX	HR-P6DX
2	Monels	204	18.61	SERIAL NO	6032134	6032135
1	X/O Sub	202	0.77	JETS		
9	159mm D.C.	160	74.90	DEPTH OUT (m)	2679.00	
1	Jars	178	4.75	DEPTH IN (m)	2496.00	2679.00
8	159mm D.C.	160	75.35	TOTAL HRS DRILLED	183.00	
5		127	96.40	TOTAL HOURS RUN	66.00	
55	DP	STANDS	2440.93	CUTTING STRUCTURE		
0	DP	SINGLES	0.00		5 8 FC A E 1 NO PR	2.77
		KELLY/SWIVEL	-2.36	HOLE CONDITION		
		TOTAL	2679.00	HOLE DRAG		
WT. OF DC			24000.00	TORQUE AT BOTTOM		
WT. OF STRING			130000.00	FILL ON BOTTOM (m)		

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flowline temp = 81.1
TIME			
DENSITY (kg/m³)			
FUNNEL VIS. (sec)			
W.L. (cm3)			
pH			
P.V.T. @			

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN	DESILTER CONE	DESANDER CONE

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (daN)
2679.00				

CIRCULATION PRESSURE (kPa) | PUMP NO.1 (Liner size mm, S.P.M.) | PUMP NO.2 (Liner size mm, S.P.M.)

	152		152	

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (deg)	DIRECTION

DRILLER SIGNATURE: Bill Mills

TIME LOG

		HRS	BIT NO.	ROTARY R.P.M.	WOB (daN)
0:00	3:00	3.00	20		
3:00	3:45	0.75	9		
3:45	4:00	0.25	7		
4:00	4:15	0.25	22		
4:15	8:00	3.75	5		

NOTES: Function Crown Saver. Checked Wind Boom While Out of Hole 80 Secs. Weights On 5 1/2 16 , 45 in 24 , 5 3/4 24 Secs. 7 5/8 MWD Mud Motors #1 = 1.25 Iso Pump F.2 = 0.40 Acc

OPERATION FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P

RATE SCHEDULE: ☑REGULAR ☐REPAIR ☐STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

		HRS	CODE
0:00	3:00	3.00	20
3:00	3:45	0.75	9
3:45	4:00	0.25	7
4:00	4:15	0.25	22
4:15	8:00	3.75	5

Dir. Work Service M.W.D, Change Out Motor, Scribe Motor
Slip & Cut Off Drill Line
Rig Service & Function Annular 24/24 Secs
(Service Top Drive)
Run in Hole

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	629-826-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	123-635-179	Terry Dobson	8.00	TD	☐	☑
Floorman	734-615-065	Lyle Todhunter	8.00	LT	☐	☑
Leaseman	127-391-385	Murray Bungay	8.00	MB	☐	☑
Rig Manager	719-606-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)	BIT NO	17
1	bit	311	0.30	SIZE	311
1	Motor	195	8.06	IADC CODE	6 4 7
1	UBHO	197	0.69	MFG	H.C.
1	Float Sub	195	0.59	TYPE	HR-P6DX
2	Monels	204	18.61	SERIAL NO	6032135
1	X/O Sub	202	0.77	JETS	
9	159mm D.C.	160	74.90	DEPTH OUT (m)	
1	Jars	178	4.75	DEPTH IN (m)	2679.00
8	159mm D.C.	160	75.35	TOTAL HRS DRILLED	11.00
5		127	96.40	TOTAL HOURS RUN	3.50
55	DP	STANDS	2440.93	CUTTING STRUCTURE	
2	DP	SINGLES	19.17		
		KELLY/SWIVEL	0.00	HOLE CONDITION	
		TOTAL	2799.52	HOLE DRAG	15-24 Up/ 15-22 Down(Sliding)
WT. OF DC			24000.00	TORQUE AT BOTTOM	14,875-15,716 ft/lbs.
WT. OF STRING			130000.00	FILL ON BOTTOM (m)	1.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flowline temp = 81.1
TIME			15:00
DENSITY (kg/m³)			1046
FUNNEL VIS. (sec)			56
W.L. (cm3)			
pH			9.5
P.V.T. @			128.1m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Hydraseal Lime	2 skk
Milpac	4 skk
Pyrotrol	2 skk
Caustic Soda	5 skk
Lignco	20 skk
Gel	22 skk

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN	DESILTER CONE	DESANDER CONE
5.00	1045	1046	1750

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (daN)
2679.00	2690.60	D	16/119	19-35

CIRCULATION PRESSURE (kPa) | PUMP NO.1 (Liner size mm, S.P.M.) | PUMP NO.2 (Liner size mm, S.P.M.)

14150	152	75	152	75

REDUCED PUMP SPEED

@	@
4345	76 @ 2679.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (deg)	DIRECTION
2684.50	29.4	334.20

DRILLER SIGNATURE: Wade Goddard

TIME LOG

		HRS	BIT NO.	ROTARY R.P.M.	WOB (daN)
8:00	11:00	3.00	6		
11:00	12:00	1.00	3		
12:00	12:45	0.75	2		
12:45	13:00	0.25	7		
13:00	13:15	0.25	10		
13:15	16:00	2.75	2		

NOTES: Function Crown Saver. Checked Wind Boom Warning.

OPERATION FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P

5.00 | 8.5 | 173000.00

RATE SCHEDULE: ☑REGULAR ☐REPAIR ☐STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

		HRS	CODE
8:00	11:00	3.00	6
11:00	12:00	1.00	3
12:00	12:45	0.75	2
12:45	13:00	0.25	7
13:00	13:15	0.25	10
13:15	16:00	2.75	2

R.I.H. w/Bit#17,Circulate and Cool Tools @ 898m,1197m,1468m,1759m,2051m,2260m,
Wash/Ream fr2490m-2679m,1m Fill
Pattern Bit and Drill fr2679m-2690m
Rig Service and Function Pipe Ram's 6/8
M.W.D. Survey
Drill fr2690m-2690m

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-828-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	651-388-664	Jesse Goddard	12.00	JG	☐	☑
Motorman	652-342-416	Jonathan Greave	12.00	JG	☐	☑
Floorman	638-018-237	Robert Cramer	12.00	RC	☐	☑
Floorman	729-975-003	Daniel Sampson	12.00	DS	☐	☑

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)	BIT NO	17		
1	bit	311	0.30	SIZE	311		
1	Motor	195	8.06	IADC CODE	6 4 7		
1	UBHO	197	0.69	MFG	H.C.		
1	Float Sub	195	0.59	TYPE	HR-P6DX		
2	Monels	204	18.61	SERIAL NO	6032135		
1	X/O Sub	202	0.77	JETS			
9	159mm D.C.	160	74.90	DEPTH OUT (m)			
1	Jars	178	4.75	DEPTH IN (m)	2679.00		
8	159mm D.C.	160	75.35	TOTAL HRS DRILLED	11.00		
5		127	96.40	TOTAL HOURS RUN	10.50		
55	DP	STANDS	2440.93	CUTTING STRUCTURE			
2	DP	SINGLES	19.17				
		KELLY/SWIVEL	14.48	HOLE CONDITION			
		TOTAL	2715.00	HOLE DRAG	19-21 On / 23-32 Up Sliding		
WT. OF DC			24000.00	TORQUE AT BOTTOM	14875 ft/lbs		
WT. OF STRING			133000.00	FILL ON BOTTOM (m)			

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Max Flowline temp = 84.5		
TIME			16:00	21:00	23:00
DENSITY (kg/m³)			1046	1040	1040
FUNNEL VIS. (sec)			62	60	63
W.L. (cm3)					
pH			9.5	9.9	9.7
P.V.T. @			135.8m3	134.1m3	122.6m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN	DESILTER CONE	DESANDER CONE

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (daN)
2690.00	2718.00	D	16/119	19-35

CIRCULATION PRESSURE (kPa) | PUMP NO.1 (Liner size mm, S.P.M.) | PUMP NO.2 (Liner size mm, S.P.M.)

14200	152	75	152	75

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (deg)	DIRECTION
2674.60	29.7	334.00
2682.30	29.7	334.00
2694.10	29.5	334.00

DRILLER SIGNATURE: Bill Mills

TIME LOG

		HRS	BIT NO.	ROTARY R.P.M.	WOB (daN)
16:00	19:00	3.00	2		
19:00	19:15	0.25	7		
19:15	23:15	4.00	2		
23:15	24:00	0.75	10		

NOTES: Function Crown Saver.

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P

8.00 | 8.5 | 170000.00

RATE SCHEDULE: ☑REGULAR ☐REPAIR ☐STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

		HRS	CODE
16:00	19:00	3.00	2
19:00	19:15	0.25	7
19:15	23:15	4.00	2
23:15	24:00	0.75	10

Drill fr2690m-2698m
Rig Service & Function H.C.R. 4/4 Secs
Drill Fr2698m-2715m
Accumulated M.W.D. Deviation Survey & Directional Work

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	4.00	BM	☐	☑
Derrickman	629-826-262	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	123-635-179	Terry Dobson	4.00	TD	☐	☑
Floorman	734-615-065	Lyle Todhunter	4.00	LT	☐	☑
Leaseman	127-391-385	Murray Bungay	4.00	MB	☐	☑

EVENING TOUR

ETS SERIAL NUMBER: PREC620 _20050220_1A

CHIMO ETS SOFTWARE VERSION:

CAODC Chimo Equipment — A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
LICENCE NO.	MC-7
OPERATOR	Western Geopower Corp
SURFACE LOCATION	a-92-A / 82-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE	Russ Silva
WELL NAME AND NO.	a-92-A / 82-J-12 MC-7
JOB NO.	22
CONTRACTOR	Precision Drilling
UNIQUE ID	b-1-H / 82-J-12
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE	Kevin Vig
DATE	21-Jan-2005
RIG NO.	820 E
FUEL @ 8:00	23686
WEATHER — TEMPERATURE	
CURRENT CONDITION	Cloudy
WIND DIRECTION	Calm
ROAD	Slick
LAST CASING/TUBING ON LINER	L-80
KB TO CSG HEAD	6.31 / 6.23
M.T. AT (m)	129.00 / 670.00
WELL TYPE	Geothermal
KB TO GROUND ELEV.	7.20
RIG MANAGER	Kevin Vig
PROVINCE	BC
IOD SAFETY DAYS	326.00

Pumps

Liner size	Stroke	Grade	Pump type	Pump manufacturer	Stroke length
29.00	SS-95	83.00 / 166.00 5"XH	170 FB-1600	BPMMP X 152mm	305
38.00	SS-95	67.00 / 166.00 5"XH	180 FB-1600	BPMMP X152mm	305

Time (hrs)

MORN	7.25	0.25	0.50
DAY	7.05	0.25	0.75
EVE	7.00	0.26	0.75
TOTAL	21.21	0.73	2.00

Shale Shaker(s)

No. 2	Type: Derrick	New
Screens changed	Yes	☑ No
Top	100	100
Middle	100	100
Bottom	100	100

MORNING TOUR (0:00 to 8:00)

BHA

No.	Item	O.D.	Length
1	Bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	176	4.75
8	180mm D.C.	180	75.35
6		127	56.40
88	D.P. (stands)		2496.47
0	D.P. (singles)		0.00
	Kelly down		-4.89
	Total		2723.00
	Wt. of DC		24000.00
	Wt. of string		134000.00

Bit Record

Bit No.	17
Size	311
IADC code	6 4 7
Mfg.	H.C.
Type	HR-P66DX
Serial No.	6032135
Depth in (m)	2679.00
Total meters drilled	54.00
Total hours run	17.75
Hole drag	28-32 Dn / 28-32 Up Sliding
Torque at bottom	14875 ft/lbs

Mud Record

Max Flowline Temp = 43.4 C

Time	02:00	04:00	06:00
Density	1040	1040	1040
Funnel vis	53	61	53
pH	9.7	9.6	10.0
PVT @	124.7m3	126.9m3	128.9m3

Product (Mud material added)	Amount
Ligco	20 sks
Caustic Soda	6 sks
Gel	40 sks
Milpac	4 sks
Hydrated Lime	2 sks
Defoamer LD-8	2 pls
Pyrotrol	3 sks

Solids control: 8.00 / 1040 / 1035 / 1750

Meters Drilled

From	To	Rotary RPM
2715.00	2733.00	15/110 19/35

Circulation pressure: 14200 — Pump 1: 162 / 75 — Pump 2: 162 / 75

Reduced pump speed: 4377 — 30 — 2715.00

Depth (m)	Deviation	Direction
2713.10	28.9	333.80

Driller signature: Bill Mills

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
0:00	1:30	1.50	2	Drill Fr/2715m-2718m
1:30	1:45	0.25	7	Rig Service & Function Annular 24/24 Secs
1:45	7:30	5.75	2	Drill Fr/2718m-2733m
7:30	8:00	0.50	10	Accumulated M.W.D. Deviation Survey & Directional Work

NOTES

Operator fuel: 171000.00

Crew

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	716-324-161	Bill Mills	8.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	123-635-179	Terry Dobson	8.00	TD	☐	☑
Floorman	734-615-065	Lyle Todhunter	8.00	LT	☐	☑
Leaseman	127-391-365	Murray Bungay	8.00	MB	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

Rate schedule: ☑ Regular

DAY TOUR (8:00 to 16:00)

BHA

No.	Item	O.D.	Length
1	Bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.75
8	180mm D.C.	180	75.35
6		127	56.40
88	D.P. (stands)		2498.47
2	D.P. (singles)		19.15
	Kelly down		0.00
	Total		2746.00
	Wt. of DC		24000.00
	Wt. of string		134000.00

Bit Record

Bit No.	17
Size	311
IADC code	6 4 7
Mfg.	H.C.
Type	HR-P66DX
Serial No.	6032135
Depth in (m)	2679.00
Total meters drilled	67.00
Total hours run	24.75
Hole drag	20-25Down/25-35Up(Sliding)
Torque at bottom	15,718-16,580 ft/lbs.

Mud Record

Max Flowline Temp = 43.7 C

Time	09:00	12:00	15:00
Density	1046	1040	1040
Funnel vis	64	54	58
pH	10.3	10.1	10.3
P.V.T. @	134.3m3	138.3m3	143.7m3

Product	Amount
Hydrated Lime	2 sks
Milpac	4 sks
Pyrotrol	3 sks
Ligco	30 sks
Gel	23 sks
Caustic Soda	4 sks
Walnut Shells	38 sks
Defoamer LD-8	1 Pail

Solids control: 8.00 / 1045 / 1040 / 1750

Meters Drilled

From	To	Rotary RPM
2733.00	2746.00	16/110 19-35

Circulation pressure: 14600 — Pump 1: 152 / 76 — Pump 2: 152 / 76

Reduced pump speed: 4575 — 76 — 2737.00

Depth (m)	Deviation	Direction
2721.80	29.1	334.80

Driller signature: Wade Goddard

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
8:00	11:15	3.25	2	Drill fr/2733m-2737m
11:15	11:30	0.25	7	Rig Service and Function Pipe Ram's 8/8
11:30	15:15	3.75	2	Drill fr/2737m-2746m
15:15	16:00	0.75	10	Accumulated M.W.D. Survey's and Directional Work

NOTES

Operator fuel: 174000.00

Crew

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	833-628-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	851-366-064	Jesse Goddard	12.00	JG	☐	☑
Motorman	652-342-416	Jonathan Greeve	12.00	JG	☐	☑
Floorman	639-016-237	Robert Cramer	12.00	RC	☐	☑
Floorman	729-675-003	Daniel Sampson	12.00	DS	☐	☑

Rate schedule: ☑ Regular

EVENING TOUR (16:00 to 24:00)

BHA

No.	Item	O.D.	Length
1	Bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	176	4.76
8	180mm D.C.	180	75.35
6		127	56.40
89	D.P. (stands)		2526.79
1	D.P. (singles)		9.82
	Kelly down		-18.73
	Total		2761.00
	Wt. of DC		24000.00
	Wt. of string		134000.00

Bit Record

Bit No.	17
Size	311
IADC code	6 4 7
Mfg.	H.C.
Type	HR-P66DX
Serial No.	6032135
Depth in (m)	2679.00
Total meters drilled	82.00
Total hours run	31.75
Hole drag	20-22 Dn / 25-32 Up Sliding
Torque at bottom	15719 ft/lbs

Mud Record

Max Flowline Temp = 52.6

Time	18:00	21:00	23:00
Density	1040	1040	1040
Funnel vis	60	51	56
pH	10.0	9.5	9.3
P.V.T. @	129.4m3	132.6m3	131.8m3

Solids control: 6.00 / 1840 / 1035 / 1750

Meters Drilled

From	To	Rotary RPM
2746.00	2761.00	15/110 16-35

Circulation pressure: 14200 — Pump 1: 162 / 75 — Pump 2: 162 / 75

Reduced pump speed: 4441 — 76 — 2746.00

Depth (m)	Deviation	Direction
2732.30	29.3	335.80
2741.20	29.5	335.60

Driller signature: Bill Mills

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
16:00	21:30	5.50	2	Drill fr/2746m-2757m
21:30	21:45	0.25	7	Rig Service & Function H.C.R. 5/5 Secs
21:45	23:15	1.50	2	Drill Fr/2757m-2761m
23:15	24:00	0.75	10	Accumulated M.W.D. Deviation Survey & Directional Work

NOTES

Operator fuel: 171000.00 — Safety topic: Inspections

Crew

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	716-324-161	Bill Mills	4.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	123-635-179	Terry Dobson	4.00	TD	☐	☑
Floorman	734-615-065	Lyle Todhunter	4.00	LT	☐	☑
Leaseman	127-391-365	Murray Bungay	4.00	MB	☐	☑

Rate schedule: ☑ Regular

ETS SERIAL NUMBER: PREC820_20050021_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD 2004-11-30 20:00	RIG RELEASE	JOB NO 22	AFE
LICENCE NO. MC-7	WELL NAME AND NO a-92-A / 92-J-12 MC-7		
OPERATOR Western Geopower Corp		CONTRACTOR Precision Drilling	
SURFACE LOCATION a-92-A / 92-J-12		UNIQUE ID: b-1-H / 82-J-12	
SIGNATURE OF OPERATOR'S REPRESENTATIVE Russ Silva		SIGNATURE OF CONTRACTOR'S REPRESENTATIVE Kevin Vig	

DAILY CHECKS (OPR / RM)
(1) Daily Rig Inspection
(2) Derrick Inspection-Weekly (every 4 hrs max)
(3) H2S Gear Posted (if required)
(4) Fire Hoses & Gun Diagram Posted
(5) Fire Line Posted
(6) BOP Gas Detection
(7) Weekly (every 800°) Flarelines & Degasser Line
(8) Rig Site Health and Safety Meeting (one per week)
(9) C.A.O.D.C. Rig Safety Inspection Checklist (every 4 weeks)
(10) Hard Hat/Safety Boots/Eyewear (continuously)
(11) Other Areas Checked
(12) Derrick Man Checked

DATE	22-Jan-2005	LAST CASING TUBING OR LINER										8.31	129.00
RIG NO	620 E												
RIG	42936 SCR/DP	FUEL @ 8:00								L-80		8.23	670.00
WEATHER	TEMPERATURE -2	CURRENT CONDITION Snow	WIND DIRECTION Calm	ROAD Slick		29.08	SS-95	63.00	168.00	S"XH	170	FB-1600	BPMMP X 152mm 305
						38.00	SS-95	57.00	168.00	S"XH	150	FB -1600	BPMMP X152mm 305

TIME - HRS

CREW	REPORT TIME	DRILL ROTATE	REAMING	CORING	CIRC	TRIPS	SURVEY	WIPER TRIP	CUT DRLG LINE	SLIP DRLG LINE	RIG SERVICE	RIG REPAIR	RIG UP/DOWN	TEST BOPE	WAIT ON EQUIP	WAIT ON ORDERS	OTHER
MORN	6.25				1.00	0.25					0.50						
DAY	7.25					0.25					0.50						
EVE	7.00					0.25					0.75						
TOTAL	20.50				1.00	0.75					1.75						

SHALE SHAKER(S) — RENTALS/SERVICES

NO	TYPE	Derrick	New
2			

SCREENS CHANGED ☐ YES ☑ NO

6.00	TOP	100	TOP 100
6.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

WELL TYPE Geothermal | RE-ENTRY ☐YES ☑NO | NO FD GROUND ELEV. 7.36
WELL NAME & NO. a-92-A / 92-J-12 MC-7 | DATE 22-Jan-2005
OPERATOR Western Geopower Corp | CONTRACTOR Precision Drilling
RIG MANAGER Kevin Vig | RIG NO 620 E
PROVINCE BC | CAMP ☑YES ☐NO | RIG SAFETY DAYS 327.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.69
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	159mm D.C.	160	74.90
1	Jars	178	4.75
9	159mm D.C.	160	75.35
6	Accelerator	127	56.40
99	D.P.	5"HWDP	2526.79
4	D.P.	S-135	9.62
	KELLYDOWN		0.00
	TOTAL		2776.73
WT. OF DC			24000.00
WT. OF STRING			134000.00

BIT NO.	17
SIZE	311
IADC CODE	S 4 7
MFG	H.C.
TYPE	HR-P86DX
SERIAL NO.	6032135
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2679.00
TOTAL METERS DRILLED (m)	97.00
TOTAL HOURS RUN	38.00
OUTER	1
INNER	1
DULL	WT
LOC	A
BRG	E
GAUGE	1/16
OTHER	NO
ROP	2526.79
HOLE CONDITION	
HOLE DRAG	20-22 On /28-35 Up Sliding
TORQUE AT BOTTOM	15718 ft/lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE	Water Based
TIME	02:00
DENSITY kg/m3	1040
FUNNEL VIS. (sec)	58
W.L. (cm3)	
pH	10.0
P.V.T. @	132.0m3

Max Flowline Temp = 82.7

	02:00	04:00	08:00
DENSITY kg/m3	1040	1040	1040
FUNNEL VIS. (sec)	58	57	58
W.L. (cm3)			
pH	10.0	9.7	9.9
P.V.T. @	132.0m3	134.2m3	135.6m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT / UNIT
Ligco	25 sks
Caustic Soda	6 sks
Defoamer LD-9	2 pls
Gel	22 sks
Milpac	4 sks
Hydrated Lime	4 sks
Pyrotrol	3 sks

	HOURS RUN	DESILTER	DESANDER	MUDCLEANER
	8.00	1040	1035	1740

METERS DRILLED

FROM	TO	BIT	ROTARY R.P.M.	WOB	HOURS	CUM. HRS	DAILY METERS	CUM. METERS	ROP
2761.00	2778.00	D	15/110	19/35	0:00	0:30	0.50	2	34.00
					0:30	1:30	1.00	6	17.00
					1:30	1:45	0.25	7	68.00
					1:45	7:30	5.75	2	2.78
					7:30	8:00	0.50	10	34.00

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 | PUMP NO. 2

	LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
14200	152	75	152	75

REDUCED PUMP SPEED

4530	@	75	@	2774.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2751.59	29.4	334.90

NOTES
Function Check Done

TIME LOG

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

0:00	0:30	0.50	2	Drill Fr/2761m/2762m	
0:30	1:30	1.00	6	Wiper Trips 5 stands to 2633 m	
1:30	1:45	0.25	7	Rig Service & Function Annular 23/23 Secs	
1:45	7:30	5.75	2	Drill Fr/2762m-2776m	
7:30	8:00	0.50	10	Accumulated M.W.D. Deviation Survey & Directional Work	

DRILLER SIGNATURE: Bill Mills

HRS. SINCE LAST BOP TEST	BOP PRESS. TEST	STACK TEMP.	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	3.0			174000.00		

MORNING TOUR 0:00 TO 8:00

CREW	BOC. ING. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-1161	Bill Mills	8.00	BM	☐	☑
Derrickman	629-928-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	123-635-179	Terry Dobson	8.00	TD	☐	☑
Floorman	734-615-065	Lyle Todhunter	8.00	LT	☐	☑
Leaseman	127-391-365	Murray Bungay	8.00	MB	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☐
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ RATE1 ☐ RATE2
DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.69
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	159mm D.C.	160	74.90
1	Jars	178	4.75
8	159mm D.C.	160	75.35
6	Accelerator	127	56.40
90	D.P.	5"HWDP	2553.66
0	D.P.	S-135	0.00
	KELLYDOWN		0.00
	TOTAL		2794.69
WT. OF DC			24000.00
WT. OF STRING			134000.00

BIT NO.	17
SIZE	311
IADC CODE	S 4 7
MFG	H.C.
TYPE	HR-P86DX
SERIAL NO.	6032135
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2679.00
TOTAL METERS DRILLED (m)	115.00
TOTAL HOURS RUN	46.25
OUTER	1
INNER	1
DULL	WT
LOC	A
BRG	E
GAUGE	1/16
OTHER	NO
ROP	2553.66
HOLE CONDITION	
HOLE DRAG	19-44Down/27-32Up(Sliding)
TORQUE AT BOTTOM	15,718-16,560 ft/lbs.
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE	Water Based
TIME	09:00
DENSITY kg/m3	1040
FUNNEL VIS. (sec)	58
W.L. (cm3)	
pH	10.1
P.V.T. @	140.3 m3

Max Flowline Temp = 81.4

	09:00	12:00	16:00
DENSITY kg/m3	1040	1045	1040
FUNNEL VIS. (sec)	58	64	60
W.L. (cm3)			
pH	10.1	10.0	10.2
P.V.T. @	140.3 m3	121.2m3	123.1m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT / UNIT
Hydrated Lime	4 sks
Milpac	4 sks
Defoamer LD-9	1 Pail
Ligco	25 sks
Caustic Soda	3 sks
Pyrotrol	14 sks
Walnut Shells	20 sks

	HOURS RUN	DESILTER	DESANDER	MUDCLEANER
	8.00	1045	1040	1750

METERS DRILLED

FROM	TO	BIT	ROTARY R.P.M.	WOB	HOURS	CUM. HRS	DAILY METERS	CUM. METERS	ROP
2776.00	2794.00	D	15/110	19-35	8:00	16:15	7.25	2	2.48
					16:15	15:30	0.25	7	72.00
					15:30	16:00	9.50	19	1.89

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 | PUMP NO. 2

	LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
14750	152	75	152	75

REDUCED PUMP SPEED

4964	@	75	@	2794.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2759.70	29.8	338.60
2770.20	30	338.10

NOTES
Function Check Done

TIME LOG

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

8:00	16:15	7.25	2	Drill fr/2776m-2794m	
16:15	15:30	0.25	7	Rig Service and Function Pipe Ram's B/B	
15:30	16:00	9.50	19	Accumulated M.W.D. Survey's and Directional Work	

DRILLER SIGNATURE: Wade Goddard

HRS. SINCE LAST BOP TEST	BOP PRESS. TEST	STACK TEMP.	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.4			177000.00	Weekend Awareness	

DAY TOUR 8:00 TO 16:00

CREW	BOC. ING. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	651-356-064	Jesse Goddard	12.00	JG	☐	☑
Motorman	652-342-416	Jonathan Greave	12.00	JG	☐	☑
Floorman	638-016-237	Robert Cramer	12.00	RC	☐	☑
Floorman	729-975-063	Daniel Sampson	12.00	DS	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ RATE1 ☐ RATE2
DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.69
2	Monels	204	18.61
1	X/O Sub	202	0.77
8	159mm D.C.	160	74.90
1	Jars	178	4.75
8	159mm D.C.	160	75.35
6	Accelerator	127	56.40
			52.26
90	D.P.	5"HWDP	2553.66
2	D.P.	S-135	15.10
	KELLYDOWN		-6.17
	TOTAL		2869.00
WT. OF DC			24000.00
WT. OF STRING			134000.00

BIT NO.	17
SIZE	311
IADC CODE	S 4 7
MFG	H.C.
TYPE	HR-P86DX
SERIAL NO.	6032135
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2679.00
TOTAL METERS DRILLED (m)	139.00
TOTAL HOURS RUN	52.26
OUTER	1
INNER	1
DULL	WT
LOC	A
BRG	E
GAUGE	1/16
OTHER	NO
ROP	2553.66
HOLE CONDITION	
HOLE DRAG	21-23 On / 27-34 Up Sliding
TORQUE AT BOTTOM	16356 ft/lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE	Water Based
TIME	16:00
DENSITY kg/m3	1040
FUNNEL VIS. (sec)	65
W.L. (cm3)	
pH	10.0
P.V.T. @	124.6m3

Max Flowline Temp = 82.4

	16:00	21:00	23:00
DENSITY kg/m3	1040	1040	1040
FUNNEL VIS. (sec)	65	59	60
W.L. (cm3)			
pH	10.0	9.8	9.9
P.V.T. @	124.6m3	128.8m3	132.6m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT / UNIT

	HOURS RUN	DESILTER	DESANDER	MUDCLEANER
	8.00	1040	1035	1750

METERS DRILLED

FROM	TO	BIT	ROTARY R.P.M.	WOB	HOURS	CUM. HRS	DAILY METERS	CUM. METERS	ROP
2794.00	2805.60	D	15/110	19-35	16:00	16:15	0.25	7	Rig Service & Function H.C.R. 4/4 Secs
					16:15	23:15	7.00	2	Drill fr/2794m-2809m
					23:15	24:00	0.75	10	Accumulated M.W.D. Deviation Survey & Directional Work

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 | PUMP NO. 2

	LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
14200	152	75	152	75

REDUCED PUMP SPEED

	@		@	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2776.90	30.3	337.50

NOTES
Function Check Done

TIME LOG

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

DRILLER SIGNATURE: Bill Mills

HRS. SINCE LAST BOP TEST	BOP PRESS. TEST	STACK TEMP.	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.1			175000.00		

EVENING TOUR 16:00 TO 24:00

CREW	BOC. ING. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-161	Bill Mills	4.00	BM	☐	☑
Derrickman	629-928-262	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	123-635-179	Terry Dobson	4.00	TD	☐	☑
Floorman	734-615-065	Lyle Todhunter	4.00	LT	☐	☑
Leaseman	127-391-365	Murray Bungay	4.00	MB	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ RATE1 ☐ RATE2
DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20050022_1A

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE

LICENCE NO: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS (OPR. / R.M.)
(1) Daily Well Activity Information
(2) Detailed Inclination, Weekly Summary (Int.)
(3) H2S Signs Posted (if required)
(4) Well Licence & Plot Diagram Posted
(5) Rig Log Sections
(6) BOP Daily Performance
(7) Monthly Inclined BOP / Hydrostat & Diagnostic Lines
(8) Rig Site Health and Safety Meeting Documented
(9) C.A.O.D.C. Rig Safety Inspection Checklist (Morning Tours)
(10) Spill Reporting Procedure Established
(11) Critical Service Checklist
(12) Weekly Safety Checklist

DATE: 23-Jan-2005 | RIG NO: 620 E | FUEL: 8.62 | RIG: 59734 BOKER

WEATHER: TEMPERATURE: -4 | CURRENT CONDITION: Rain | WIND DIRECTION: West | ROAD: Good

LAST CASING / TUBING OR LINER

	O.D. (mm)	Wt/Ft (kg/m)	Grade	Thread	Depth (m)
					6.31
			L-80		6.23

	No. of Joints	Total Joint Length	Kb to csg. head (m)	Set at (m)
			6.31	129.00
			6.23	879.00

	Underreamer Depth	Grade	Bit ID (mm)	Tool Jt O.D. (mm)	Conn. Type	No. of Joints	Pump Type	Pump Number Nominal	Stroke Length (mm)
	29.00	S5-95	83.00	165.00	5"XH	170	FB-1600	BPMMP X 162mm	305
	36.00	S5-95	67.00	158.80	5"XH	159	FB -1600	BPMMP X162mm	305

Chimo Equipment — A Varco Company

Based on the CAODC ETS file standard

WELL TYPE: Geothermal | RE-ENTRY: ☐YES ☑NO | KB TO GROUND LEV: 7.20

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 23-Jan-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO: 620 E

PROVINCE: BC | CAMP: ☑YES ☐NO | RIG SAFETY DAYS: 328.00

TIME / HRS

	OPER	RIG REPAIR	RIG SERVICE	CUTTING SLIP / CUT	TRIPS	SURV	DRILL ACT	REAM	CIRC	COND MUD	WOW	OTHER	TOTAL
MORN	7.00			0.25			0.50						
DAY	2.75		1.25	3.50	0.25		9.25						
EVE				7.25	0.25							9.50	
TOTAL	9.75		1.25	10.75	0.75		9.75					9.50	

Hold B.O.P. Drill

SHALE SHAKER(S)

NO.	TYPE	SCREEN
2	Derrick	API

SCREENS CHANGED: ☐YES ☑NO

8.00	TOP	190	TOP 190
8.00	MIDDLE	190	MIDDLE 190
24.00	BOTTOM	190	BOTTOM 190

RENTAL SERVICES

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	195	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.81
1	XO Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.76
8	180mm D.C.	180	75.35
6		127	56.40
	TOTAL HOURS RUN		85.25
90	DP	STANDS	2556.65
2	DP	SINGLES	19.10
	KELLY DOWN		9.83
	TOTAL		2225.60
WT. OF DC			24000.00
WT. OF STRING			135000.00

BIT NO.: 17 | SIZE: 311 | IADC CODE: S 4 7 | MFG: H.C. | TYPE: HR-P66DX | SERIAL NO.: 6032135 | JETS: | DEPTH OUT (m): 146.00 | DEPTH IN (m): 2679.00 | TOTAL METERS DRILLED (m): 146.00 | TOTAL HOURS RUN: 85.25

Cutting Structure: T | B | G | IADC | L | A | Chqs | DOC | Bearing / Seal | Gauge | Other Char. | Reason Pulled

HOLE DRAG | TORQUE AT BOTTOM: 16580 ft/lbs | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: ☑WATER BASED ☐OIL BASED | Max Flowline Temp = 84.4

TIME	02:00	04:00	06:00
DENSITY kg/m3	1040	1040	1040
FUNNEL VIS. (s/L)	63	60	59
W.L. (cm3)			
pH	9.9	10.0	11.2
PV/YP	135.9m3	132.6m3	136.8m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Lignite	25 sks
Caustic Soda	4 sks
Defoamer LD-8	2 pls
Milpac	4 sks
Hydrosol Lime	4 sks
Gel	3 sks
Pyrotrol	2 sks

HOURS RUN | SOLIDS REMOVED | DISCARDED VOLUME

METERS DRILLED

FROM	TO	BIT No.	ROTARY R.P.M.	WOB (kN)	HOURS ON BOTTOM	CUMULATIVE HOURS ON BOTTOM
2679.00	2825.00	D	15/110	19/35	9.50	85.25

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) | S.P.M. | PUMP NO. 2 LINER SIZE (mm) | S.P.M.

14500 | 152 | 75 | 152 | 75

REDUCED PUMP SPEED

4803 @ 75 @ 2813.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
2698.20	30.4	338.80
2806.60	30.3	338.00

NOTES: Operation Down Survey; Weights on BIT = 20 - 25 k lbs , @ 3 x 34 hrs. / Pump #1 was pumping 91 x 25.88 hrs. Pump #2 x 64.25 hrs

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	0:15	0.25	22	(Held B.O.P. Drill) W/Crewmembers
0:15	2:00	1.75	2	Drill Fr/2780m-2814m
2:00	2:15	0.25	7	Rig Service & Function Annular 23/23 Secs
2:15	7:30	5.25	2	Drill Fr 2814m-2825m
7:30	8:00	0.50	10	Accumulated M.W.D. Deviation Survey & Directional Work

DRILLER SIGNATURE: Bill Mills | HRS SINCE LAST BOP TEST: 9.5 | HRS SINCE LAST BOP DRILL: 9.5 | OPERATOR FUEL: | MAX EXP HOOKLOAD: 178000.00 | SAFETY TOPIC: | M.A.C.P.

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	829-626-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	123-635-179	Terry Dobson	8.00	TD	☐	☑
Floorman	734-615-085	Lyle Todhunter	8.00	LT	☐	☑
Leaseman	127-391-345	Murray Bungay	8.00	MB	☐	☑
Rig Manager	719-406-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: ☑MORNING ☐REPAIR ☐NIGHT | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	195	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.81
1	XO Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.76
8	180mm D.C.	180	75.35
6		127	56.40
	TOTAL HOURS RUN		82.00
91	DP	STANDS	2684.32
1	DP	SINGLES	9.53
	KELLY DOWN		0.00
	TOTAL		2831.00
WT. OF DC			24000.00
WT. OF STRING			135000.00

BIT NO.: 17 | SIZE: 311 | IADC CODE: S 4 7 | MFG: H.C. | TYPE: HR-P66DX | SERIAL NO.: 6032135 | JETS: | DEPTH OUT (m): 2831.00 | DEPTH IN (m): 2679.00 | TOTAL METERS DRILLED (m): 152.00 | TOTAL HOURS RUN: 82.00

HOLE DRAG: 22-210klbs(30-37Up/Rotating) | TORQUE AT BOTTOM: 15,718-16,560 ft/lbs. | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: ☑WATER BASED ☐OIL BASED | Max Flowline Temp = 83.1 C

TIME	09:00		
DENSITY kg/m3	1045		
FUNNEL VIS. (s/L)	58		
W.L. (cm3)			
pH	8.8		
p.v./ @	149.0m3		

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	SOLIDS REMOVED	DISCARDED VOLUME
Hydrated Lime	3 sks			
Milpac	4 sks	6.00	1945	1040
Caustic Soda	2 sks			
Defoamer LD-8	1 Pail			
Lignite	11 sks			
Pyrotrol	1 sk			

METERS DRILLED

FROM	TO	BIT No.	ROTARY R.P.M.	WOB (kN)	HOURS ON BOTTOM	CUMULATIVE HOURS ON BOTTOM
2825.00	2831.00	D	15/110	19-35	6.00	91.25

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) | S.P.M. | PUMP NO. 2 LINER SIZE (mm) | S.P.M.

14650 | 152 | 75 | 152 | 75

REDUCED PUMP SPEED

4660 @ 75 @ 2831.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
2816.00	30.3	337.70

NOTES: Operation Down Survey; Wireline Tangent Temp and Temp Lines

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	10:45	2.75	2	Drill fr/2825m-2831m
10:45	11:00	0.25	18	M.W.D. Survey
11:00	12:15	1.25	5	Circulate Btms. Up and Work Pipe
12:15	12:30	0.25	7	Rig Service and Function Pipe Ram's B/S
12:30	16:00	3.50	6	Flow Check @ 2823m,Hoist Bit#17,Circulate and Cool Tools @ 2673m,2199m,1468m

DRILLER SIGNATURE: Wade Goddard | HRS SINCE LAST BOP TEST: 9.5 | HRS SINCE LAST BOP DRILL: 9.5 | OPERATOR FUEL: | MAX EXP HOOKLOAD: 183000.00 | SAFETY TOPIC: Review J.S.A. on Tripping | M.A.C.P.

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-628-708	Wade Goddard	8.00	WG	☐	☑
Derrickman	651-386-084	Jesse Goddard	8.00	JG	☐	☑
Motorman	652-342-416	Jonathan Greeve	8.00	JG	☐	☑
Floorman	639-016-237	Robert Cramer	8.00	RC	☐	☑
Floorman	729-975-003	Daniel Sampson	8.00	DS	☐	☑

RATE SCHEDULE: ☑MORNING ☐REPAIR ☐NIGHT | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.05
1	UBHO	197	0.68
1	Float Sub	195	0.59
2	Monels	204	18.63
1	XO Sub	202	0.77
8	180mm D.C.	180	74.90
1	Jars	178	4.75
8	180mm D.C.	180	75.38
6		127	56.40
	TOTAL HOURS RUN		62.00
91	DP	STANDS	2684.32
1	DP	SINGLES	9.53
	KELLY DOWN		0.00
	TOTAL		2834.37
WT. OF DC			24000.00
WT. OF STRING			135000.00

	BIT NO.	SIZE	IADC CODE	MFG	TYPE	SERIAL NO.	JETS	DEPTH OUT (m)	DEPTH IN (m)	TOTAL METERS DRILLED (m)	TOTAL HOURS RUN
	17	311	S 4 7	H.C.	HR-P66DX	6032135		2831.00	2679.00	152.00	62.00
	18	311	S 4 7	H.C.	HR-P66DX	6027056			2831.00		

Cutting Structure: T 8 | B 4 | G IFC | IADC | L | A 1 | Chqs E | DOC 01 | Bearing / Seal HC | Gauge | Other Char. 2.45 | Reason Pulled

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: ☑WATER BASED ☐OIL BASED | Max Flowline Temp =

TIME		
DENSITY kg/m3		
FUNNEL VIS. (s/L)		
W.L. (cm3)		
pH		

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	SOLIDS REMOVED	DISCARDED VOLUME

METERS DRILLED

FROM	TO	BIT No.	ROTARY R.P.M.	WOB (kN)	HOURS ON BOTTOM	CUMULATIVE HOURS ON BOTTOM
2831.00					15:00	23:15
					23:15	23:30
					23:30	24:00

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) | S.P.M. | PUMP NO. 2 LINER SIZE (mm) | S.P.M.

152 | 152

REDUCED PUMP SPEED

@ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION

NOTES: Operation Down Survey; Weights on BIT = 20 - 25 k lbs , @ 3 x 34 hrs. / Pump #1 was pumping 91 x 25.88 hrs. Pump #2 x 64.25 hrs

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	23:15	7.25	6	Hoist Bit#17, cool Tools @ 1974m, flow check @ 268m & 0m. Layed down 15 178mm D.C. & Jars.
23:15	23:30	0.25	7	Rig Service, F/T Blind rams(5 secs)
23:30	24:00	0.50	20	Remove bit, change out MWD & test.

DRILLER SIGNATURE: Barry Verheist | HRS SINCE LAST BOP TEST: 9.5 | HRS SINCE LAST BOP DRILL: 9.5 | OPERATOR FUEL: | MAX EXP HOOKLOAD: 67000.00 | SAFETY TOPIC: Laying down DC's | M.A.C.P.

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-388-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-603	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantey Vig	8.00	CV	☐	☑
Floorman	713-958-461	Gary Kennedy	8.00	GK	☐	☑
Floorman	726-907-769	Cory Kube	8.00	CK	☐	☑
Leaseman	739-300-069	Justin Craigen	8.00	JC	☐	☑

RATE SCHEDULE: ☑MORNING ☐REPAIR ☐NIGHT | DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20050023_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO.	22
AFE	
LICENCE NO	MC-7
WELL NAME AND NO	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE	Kevin Vig

DAILY CHECKS

DATE 24-Jan-2005 | RIG NO 620 E | FUEL @ 6:00 | Rig 65095 BOILER

LAST CASING TUBING OR OPEN

										6.31	123.00
									L-80	6.23	370.00

WEATHER

TEMPERATURE	
CURRENT CONDITION	Rain
WIND DIRECTION	Calm
ROAD	Slick

		29.00	S$-95	83.00	166.00	5"XH	170	FB-1600	BPMMP X 152mm	385	
		38.00	S$-95	67.00	166.00	5"XH	156	FB-1600	BPMMP X152mm	385	

TIME - HRS

OPER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
MORN						0.75	0.25													0.50			0.50	
DAY	4.00					2.50	0.25			4.25														
EVE	7.25						0.25			6.50														
TOTAL	11.25				0.00	3.25	0.75			9.75										0.50			0.50	

SHALE SHAKER(S) | RENTALS/SERVICES

NO.	TYPE	SCREEN
1	Derrick	
2		
3		

SCREENS CHANGED ☐ YES ☑ NO

	TOP	MIDDLE	BOTTOM
8.00	100	100	100
8.00	100	100	100
8.00	100	100	100
24.00	100	100	100

TOTALS

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	☐ YES ☑ NO	7.20

WELL NAME & NO. a-92-A / 92-J-12 MC-7 | DATE 24-Jan-2005

OPERATOR Western Geopower Corp | CONTRACTOR Precision Drilling

RIG MANAGER Kevin Vig | RIG NO 620 E

PROVINCE BC | CAMP ☑ YES ☐ NO | RIG SAFETY DAYS 329.00

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.89
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.84
19		127	172.70
66	D.P.	S/HOLE	2440.92
0	D.P.	S/HOLE	0.00
	HEVI WEIGHT		0.00
	TOTAL		2831.00
WT. OF DC			28000.00
WT. OF STRING			

BIT NO.	18
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P66DX
SERIAL NO.	6027056
JETS	O P E N
DEPTH OUT (m)	
DEPTH IN (m)	2831.00
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
OUTER	INNER	DULL	LOC	B	Gage	OC	REASON PULLED	T.I.	Other

HOLE CONDITION
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	Native Mud	Gel Chem	Oil Emul.	Max Flowline Temp =
TIME				
DENSITY (kg/m³)				
FUNNEL VIS. (s/L)				
W.L. (cm3)				
pH				
P.V.T. @				

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	SCREEN CONDITION

METERS DRILLED

FROM	TO	M	D	ROP m/hr	WOB kN
2831.00					

CIRCULATION PRESSURE (kPa)	PUMP NO. 1		PUMP NO. 2	
	LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
	152		152	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

TIME LOG

FROM	TO	HOURS	CODE
0:00	0:30	0.50	25
0:30	0:45	0.25	7
0:45	1:30	0.75	5
1:30	2:00	0.50	21
2:00	8:00	6.00	5

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

0:00	Dir. Work/Surface Test M.W.D.
0:30	Rig Service and Function Blind Ram's 6/8
0:45	M/U BHA#5,R.I.H.
1:30	Service Top Drive/Change Out Saver Sub and Grabber Dies
2:00	P/U 33 Jts. H.W.D.P.,New Jar's,R.I.H.w/Bit#16,Circulate and Cool Tools @ 389m,897m,1150m,1403m,1655m
8:00	

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.S.P.

6.06 | 8.4 | P/U H.W.D.P.

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	833-828-706	Wade Goddard	8.00	WG	☑
Derrickman	851-366-084	Jesse Goddard	8.00	JG	☑
Motorman	852-342-416	Jonathan Greeve	8.00	JG	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☑
Floorman	728-975-003	Daniel Sampson	8.00	DS	☑
Leaseman	838-016-237	Robert Cramer	8.00	RC	☑
Rig Manager	719-406-484	Kevin Vig	8.00	KV	☑
Top Drive	638-877-702	Sheldon Langley	8.00	SL	☑

RATE SCHEDULE ☑ REGULAR ☐ NIGHT ☐ SHORT

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.89
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.84
19		127	172.70
67	D.P.	S/HOLE	2489.52
0	D.P.	S/HOLE	0.00
	HEVI WEIGHT		-18.43
	TOTAL		2842.00
WT. OF DC			28000.00
WT. OF STRING			130000.00

BIT NO.	18
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P66DX
SERIAL NO.	6027056
JETS	O P E N
DEPTH OUT (m)	2831.00
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	11.00
TOTAL HOURS RUN	4.00
OUTER	INNER	DULL	LOC	B	Gage	OC	REASON PULLED	T.I.	Other

HOLE CONDITION
HOLE DRAG 31000 up/23000dwn
TORQUE AT BOTTOM 14675 ft-lbs
FILL ON BOTTOM (m) 0.10

MUD RECORD

MUD TYPE	Native Mud	Gel Chem	Oil Emul.	Max Flowline Temp = 87.8 C
TIME	12:30	14:00	16:30	
DENSITY (kg/m³)	1035	1035	1035	
FUNNEL VIS. (s/L)	44	44	44	
W.L. (cm3)				
pH	9.0	9.5	9.0	
P.V.T. @	131.0m3	132.0m3	135.0m3	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	6sks.
Hydrated Lime	3sks.
Ligco	25sks.
Natural Gel	55sks.
Pyrotrol	2sks.
Milpac	4sks.
Walnut Shells	2sks.

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	SCREEN CONDITION

METERS DRILLED

FROM	TO	M	D	ROP m/hr	WOB kN
2831.00	2842.00	D	15	20-30	

CIRCULATION PRESSURE (kPa)	PUMP NO. 1		PUMP NO. 2	
	LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
14700	152	70	152	70

REDUCED PUMP SPEED

4600	@ 70	@ 2831.00	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION
2825.00	30.4	337.00

NOTES

DRILLER SIGNATURE: Barry Verhaist

TIME LOG

FROM	TO	HOURS	CODE
8:00	9:15	1.25	6
9:15	9:45	0.50	5
9:45	11:30	1.75	6
11:30	11:45	0.25	7
11:45	15:45	4.00	2
15:45	16:00	0.25	10

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

8:00	R.I.H. to 2458m
9:15	Cool MWD & circulate(Accum.)
9:45	Wash fr. 2458m - 2831m
11:30	Rig Service, F/T pipe rams(7 secs)
11:45	Pattern bit & Drill fr. 2831m - 2842m
15:45	Deviation Survey
16:00	

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.S.P.

3.00 | 8.5 | 170000.00

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	12.00	BV	☑
Derrickman	647-452-903	Dave Mekowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	713-958-461	Gary Kennedy	12.00	GK	☑
Floorman	726-907-769	Cory Kube	12.00	CK	☑
Leaseman	739-300-069	Justin Craigen	12.00	JC	☑

RATE SCHEDULE ☑ REGULAR ☐ NIGHT ☐ SHORT

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.89
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.84
19		127	172.70
67	D.P.	S/HOLE	2489.52
2	D.P.	S/HOLE	19.27
	HEVI WEIGHT		0.00
	TOTAL		2679.70
WT. OF DC			25000.00
WT. OF STRING			134000.00

BIT NO.	18
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P66DX
SERIAL NO.	6027056
JETS	O P E N
DEPTH OUT (m)	
DEPTH IN (m)	2831.00
TOTAL METERS DRILLED (m)	29.00
TOTAL HOURS RUN	11.25
OUTER	INNER	DULL	LOC	B	Gage	OC	REASON PULLED	T.I.	Other

HOLE CONDITION
HOLE DRAG 28-22up/12-22down(Sliding)
TORQUE AT BOTTOM 14,875-15,719 ft/lbs.
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	Native Mud	Gel Chem	Oil Emul.	Max Flowline Temp = 87.8 C
TIME	21:00	00:00		
DENSITY (kg/m³)	1040	1040		
FUNNEL VIS. (s/L)	58	58		
W.L. (cm3)				
pH	9.3	9.3		
P.V.T. @	146.3m3	132.2m3		

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Hydrated Lime	3 sks.
Milpac	4 sks.

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	SCREEN CONDITION
4.00	1040	1035 1750

METERS DRILLED

FROM	TO	M	D	ROP m/hr	WOB kN
2842.00	2860.00	D	15/19	19-34	

CIRCULATION PRESSURE (kPa)	PUMP NO. 1		PUMP NO. 2	
	LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
16860	152	75	152	75

REDUCED PUMP SPEED

5375	@ 75	@ 2845.00	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION
2834.90	30.8	337.76
2843.30	31.1	337.60

NOTES

DRILLER SIGNATURE: Wade Goddard

TIME LOG

FROM	TO	HOURS	CODE
16:00	23:00	7.00	2
23:00	23:15	0.25	7
23:15	23:30	0.25	2
23:30	24:00	0.50	10

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

16:00	Drill fr/2842m-2859m
23:00	Rig Service and Function HCR 4/4
23:15	Drill fr/2859m-2860m
23:30	Accumulated M.W.D. Survey's and Directional Work
24:00	

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.S.P.

6.06 | 8.5 | 168000.00 | Review Accidents

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	833-828-706	Wade Goddard	4.00	WG	☑
Derrickman	851-366-084	Jesse Goddard	4.00	JG	☑
Motorman	852-342-416	Jonathan Greeve	4.00	JG	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☑
Floorman	728-975-003	Daniel Sampson	4.00	DS	☑
Leaseman	838-016-237	Robert Cramer	4.00	RC	☑

RATE SCHEDULE ☑ REGULAR ☐ NIGHT ☐ SHORT

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20050024_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO.	22
AFE	
LICENCE NO	MC-7
WELL NAME AND NO	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig
DATE	25-Jan-2005
RIG NO	620 E
FUEL @ 0:00 RIG	56025
WEATHER: TEMPERATURE	0
CURRENT CONDITION	Overcast
WIND DIRECTION	Calm
ROAD	Slick

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	No	7.20

WELL NAME & NO.	a-92-A / 92-J-12 MC-7
DATE	25-Jan-2005
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	Yes
RIG SAFETY DAYS	330.00

Last Casing, Tubing or Liner

GRADE	KB TO CSG HEAD (m)	SET AT (m)
	6.31	129.00
L-80	8.23	870.00

Drill pipe / pumps

LINEAR MASS (kg/m)	GRADE	ID (mm)	TOOL JT OD (mm)	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
29.00	SS-95	63.90	165.00	5"XH	170	F-1600	BPMMP	305
38.00	SS-95	57.00	168.00	5"XH	160	F-1600	BPMMP	305

Time - Hrs

OPER	2	7	10	25	26
MORN	7.25	0.25	0.50		
DAY	6.00	0.25	0.50	0.25	1.50
EVE	7.25	0.25	0.50		
TOTAL	20.00	0.75	1.50	0.25	1.50

Shale Shaker(s)

NO	1
TYPE	Derrick
SCREENS CHANGED	No
TOP	100 / 100
MIDDLE	100 / 100
BOTTOM	100 / 100

Totals: 8.00, 8.00, 8.00, 24.00

MORNING TOUR (0:00 to 8:00)

Bit Record / Drill String

NO.	ITEM	O.D. (mm)	LENGTH
1	bit	311	0.30
1	Motor	198	8.06
1	UBHO	197	0.69
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.94
19		127	172.70
86	D.P. stands		2496.47
1	D.P. singles		9.52
	Kelly down		0.00
	TOTAL		2898.79
	Wt. of DC		25000.00
	Wt. of string		134000.00

BIT NO	18
SIZE	311
IADC CODE	5 4 7
MFG	H.C.
TYPE	HR-P86DX
SERIAL NO	6027056
DEPTH IN (m)	2831.00
TOTAL METERS DRILLED	51.00
TOTAL HOURS RUN	18.50
HOLE DRAG	27-33Up/17-33Down(Sliding)
TORQUE AT BOTTOM	14,875-15,718 ft/lbs.

Mud Record

Mud type: Water based. Max Flowline Temp = 56.7 C

TIME	02:00	04:00	06:00
Density	1040	1040	1040
Funnel Vis	62	65	66
pH	8.3	9.5	8.6
P.V.T. @	130.2m3	128.6m3	130.9m3

PRODUCT	AMOUNT x UNIT
Pyrolrol	2 sks
Ligco	25 sks
Defoamer LD-8	1 Pail
Caustic Soda	9 sks

Solids control: 8.00 | 1040 | 1035 | 1750

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
2860.00	2882.00	D	16/110	19-35

Circulation pressure: 17100; Pump No. 1: 152, 76; Pump No. 2: 152, 76

Reduced pump speed: 6150 @ 76 @ 2878.00

DEPTH (m)	DEVIATION	DIRECTION
2854.20	31.3	339.10
2862.30	31.3	339.10

Driller signature: Wade Goddard

Time Log / Details of Operations

FROM	TO	HRS	CODE	DETAILS
0:00	6:15	6.25	2	Drill fr/2860m-2878m
6:15	6:30	0.25	7	Rig Service and Function Annular 26/28
6:30	7:30	1.00	2	Drill fr/2878m-2882m
7:30	8:00	0.50	10	Accumulated M.W.D. Survey's and Directional Work

NOTES: Function Crown Saver

Max exp hookload: 178000.00

Crew

CREW	SOC. INS. NO.	NAME	HRS		INJURIES
Driller	633-628-706	Wade Goddard	8.00	WG	No
Derrickman	651-366-064	Jesse Goddard	8.00	JG	No
Motorman	662-342-418	Jonathan Greeve	8.00	JG	No
Floorman	505-422-253	Rory Mitchell	8.00	RM	No
Floorman	729-975-003	Daniel Sampson	8.00	DS	No
Leaseman	638-016-237	Robert Cramer	8.00	RC	No
Rig Manager	719-409-484	Kevin Vig		KV	No
Top Drive	638-977-702	Sheldon Langley		SL	No

Rate schedule: Regular

DAY TOUR (8:00 to 16:00)

Bit Record / Drill String

NO.	ITEM	O.D. (mm)	LENGTH
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	196	0.69
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.94
19		127	172.70
89	D.P. stands		2626.95
0	D.P. singles		0.00
	Kelly down		-20.85
	TOTAL		2897.00
	Wt. of DC		25000.00
	Wt. of string		134000.00

BIT NO	18
SIZE	311
IADC CODE	5 4 7
MFG	H.C.
TYPE	HR-P86DX
SERIAL NO.	6027056
DEPTH IN (m)	2831.00
TOTAL METERS DRILLED	66.00
TOTAL HOURS RUN	24.50
HOLE DRAG	36000 up/23000 dwn
TORQUE AT BOTTOM	14875 ft-lbs

Mud Record

Mud type: Water based. Max Flowline Temp =

TIME	09:00	12:00	15:00
Density	1040	1040	1040
Funnel Vis	69	60	69
pH	9.6	9.6	10.0
PVT @	130.1m3	132.7m3	137.7m3

PRODUCT	AMOUNT x UNIT
Caustic Soda	6sks.
Hydrated Lime	8sks.
Ligco	25sks.
Milpac	4sks.
Defoamer LD-8	1 Pail
Pyrotrol	3sks.

Solids control: 8.00 | 1040 | 1030 | 1720

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
2882.00	2897.00	D	16/110	20-35

Circulation pressure: 18800; Pump No. 1: 152, 76; Pump No. 2: 152, 76

Reduced pump speed: 5160 @ 76 @ 2896.00

DEPTH (m)	DEVIATION	DIRECTION
2872.90	31.2	340.00

Driller signature: Barry Verhelst

Time Log / Details of Operations

FROM	TO	HRS	CODE	DETAILS
8:00	13:30	5.50	2	Drill fr. 2878 - 2897m
13:30	13:45	0.25	7	Rig Service, F/T pipe rams(7 secs)
13:45	14:00	0.25	31	B.O.P. drill w/crew, well secure & diverted in 67 secs
14:00	15:30	1.50	22	(Service F-1600) mud pump #2. Replace seats in module.
15:30	16:00	0.50	10	Deviation Surveys(Accum.) & Toolface orientation
				visual inspection of topdrive overhead equipment S.L.

Max exp hookload: 172000.00. Safety topic: B.O.P. drill

Crew

CREW	SOC. INS. NO.	NAME	HRS		INJURIES
Driller	642-389-910	Barry Verhelst	12.00	BV	No
Derrickman	647-452-903	Dave Makowsky	12.00	DM	No
Motorman	735-714-230	Chantry Vig	12.00	CV	No
Floorman	713-959-461	Gary Kennedy	12.00	GK	No
Floorman	726-907-769	Cory Kube	12.00	CK	No
Leaseman	739-300-069	Justin Craigen	12.00	JC	No

Rate schedule: Regular

EVENING TOUR (16:00 to 24:00)

Bit Record / Drill String

NO.	ITEM	O.D. (mm)	LENGTH
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.94
19		127	172.70
89	D.P. stands		2526.65
0	D.P. singles		0.00
	Kelly down		0.00
	TOTAL		2917.65
	Wt. of DC		25000.00
	Wt. of string		134000.00

BIT NO.	18
SIZE	311
IADC CODE	5 4 7
MFG	H.C.
TYPE	HR-P86DX
SERIAL NO	6027056
DEPTH IN (m)	2831.00
TOTAL METERS DRILLED	85.00
TOTAL HOURS RUN	31.25
HOLE DRAG	36-35Up/18-23Down(Sliding)
TORQUE AT BOTTOM	14,875-15,718 ft/lbs.

Mud Record

Mud type: Water based. Max Flowline Temp = 55.5 C

TIME	21:00	23:30
Density	1040	1040
Funnel Vis	56	56
pH	10.0	10.0
P.V.T. @	144.2m3	104.0m3

Solids control: 8.00 | 1040 | 1035 | 1700

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
2897.00	2916.00	D	16/110	20-35

Circulation pressure: 16450; Pump No. 1: 152, 75; Pump No. 2: 152, 75

Reduced pump speed: 6069 @ 76 @ 2915.00

DEPTH (m)	DEVIATION	DIRECTION
2881.10	31.6	338.70
2893.20	31.9	339.60
2900.50	32.3	340.00

Driller signature: Wade Goddard

Time Log / Details of Operations

FROM	TO	HRS	CODE	DETAILS
16:00	23:15	7.25	2	Drill fr/2897m-2916m
23:15	23:30	0.25	7	Rig Service and Function HCR 4/4
23:30	24:00	0.50	10	Accumulated M.W.D. Survey's and Directional Work

NOTES: Function Crown Saver

Max exp hookload: 173000.00

Crew

CREW	SOC. INS. NO.	NAME	HRS		INJURIES
Driller	633-628-706	Wade Goddard	4.00	WG	No
Derrickman	651-366-064	Jesse Goddard	4.00	JG	No
Motorman	662-342-418	Jonathan Greeve	4.00	JG	No
Floorman	505-422-253	Rory Mitchell	4.00	RM	No
Floorman	729-975-003	Daniel Sampson	4.00	DS	No
Leaseman	638-016-237	Robert Cramer	4.00	RC	No

Rate schedule: Regular

ETS SERIAL NUMBER: PREC620_20050025_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE:

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | ANNULUS ID: b-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS (OPR / RM)
(1) Daily Pre-Tour Meeting
(2) Completed Inspection/Weekly Log(s) completed
(3) H2S Alarm Present (if required)
(4) Well Control & Shut-Down Practice
(5) Flare Line(s) Secure
(6) BOP Daily Pressure
(7) Visually inspect BOP's, Flowlines & Diverter Line
(8) Rig Site Health and Safety Meeting (pre-spud/spud)
(9) C + G D/C Rig Safety Inspection Checklist (pre-spud)
(10) Mast Inspection Before Raising or Lowering
(11) Crown Saver Checked
(12) Hook Nut Checked

DATE: 26-Jan-2005 | RIG NO.: 620 E | FUEL @ 0:00: RIG 481.26 BOILER

LAST CASING TUBING OR LINER

O.D. (mm)	WEIGHT (kg/m)	GRADE	NO. OF JOINTS	TOTAL (m)	TIE TO GRD (m)	WT. (T on)
				6.31		129.90
		L-80		6.27		870.00

WEATHER: TEMPERATURE | CURRENT CONDITION: Cloudy | WIND DIRECTION: Calm | ROAD: Good.

PUMP SIZE (mm)	LINER MASS (kg/m)	GRADE	LINER ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN. (mm)
	26.00	S3-95	53.00	168.00	5"XH	179	F-1600	BPMMP	305
	38.00	S3-95	67.00	168.00	5"XH	169	F-1600	BPMMP	305

TIME HRS

OPER	DAY	EVE	TOTAL
MOBIL	7.25		7.25
DAY	7.25	0.25	8.50
EVE	7.25	0.25	8.50
TOTAL	21.75	0.75	5.00

SHALE SHAKER(S) | RENTALS/SERVICES

MESH	TYPE
80	Derrick
SCREENS CHANGED	YES / NO
80 TOP	100 TOP 100
80 MIDDLE	100 MIDDLE 100
80 BOTTOM	100 BOTTOM 100

WELL TYPE: Geothermal | RE-ENTRY: YES / NO | KB TO GROUND ELEV.: 7.20

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 26-Jan-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 620 E

PROVINCE: BC | CAMP: YES / NO | AVG SAFETY DAYS: 331.00

BIT RECORD

No.	ITEM	O.D. (mm)	LENGTH (m)
1	bit	311	0.39
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.89
2	Monels	204	18.61
1	XO Sub	202	0.77
20		127	184.14
1	Jars	178	4.94
19		127	172.70
90	D.P.	4"XH(HW)	2655.51
1	D.P.	SINGLES	9.72
	HOLE FLOWN		0.00
	TOTAL		2840.06
WT. OF BIT			25000.00
WT. OF STRING			134000.00

BIT NO.: 18 | SIZE: 311 | IADC CODE: 5 4 7 | MFG.: H.C. | TYPE: HR-P86DX | SERIAL NO.: 6027056 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 2831.00 | TOTAL METERS DRILLED (m): 109.06 | TOTAL HOURS RUN: 38.50

CUTTING STRUCTURE: T1 | D | LOC | B | GAUGE | ODC | REASON PULLED | TYPE OF WEAR

HOLE CONDITION

HOLE GRAD: 30-37up/18-3xDown(Sliding)

TORQUE AT BOTTOM: 14,675-15,718 ft/lbs.

FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Fresh Water | OIL BASED: | Max Flowline Temp = 93.8 C

TIME	02:00	04:00	05:00
DENSITY kg/m3	1040	1040	1040
FUNNEL VIS. (s/L)	62	62	60
W.L. (cm3)			
pH	10.1	10.2	10.0
P.V.T. @	121.3m3	114.4m3	114.9m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	CUMULATIVE	DAILY
Hydrated Lime	8 sks			
Milpac	4 sks	8.00	1040	1030
Ligco	20 sks			
Pyrotrol	3 sks			
Caustic Soda	4 sks			

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	WT. ON BIT
2916.00	2940.00	D	15/110	20-35

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 | PUMP NO. 2

LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
16500	162	76	182
5027 @ 1		76 @ 1	2934.00

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2931.30	32.3	340.10
2919.30	32.4	337.70

TIME LOG

FROM	TO	HRS	CODE	CUM. HRS
0:00	6:00	6.00	2	
6:00	6:15	0.25	7	
6:15	7:30	1.25	2	
7:30	8:00	0.50	10	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill fr/2916m-2936m

Rig Service and Function Annular 24/24

Drill fr/2936m-2940m

Accumulated M.W.D. Survey's and Directional Work

NOTES

DRILLER SIGNATURE: Wade Goddard

RIG UP	RIG DOWN	STACK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
6.00	9.5			174000.00	Handling Tubular's	

RATE SCHEDULE: MANUAL / ARMP / PAYMENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	8.00	WG	☑
Derrickman	851-368-064	Jesse Goddard	8.00	JG	☑
Motorman	852-342-416	Jonathan Greeve	8.00	JG	☑
Floorman	905-422-253	Rory Mitchell	8.00	RM	☑
Floorman	729-975-003	Daniel Sampson	8.00	DS	☑
Leaseman	639-016-237	Robert Cramer	8.00	RC	☑
Rig Manager	718-409-484	Kevin Vig		KV	☑
Top Drive	638-477-702	Sheldon Langley		SL	☑

BIT RECORD

No.	ITEM	O.D. (mm)	LENGTH (m)
1	bit	311	0.39
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.89
2	Monels	204	18.61
1	XO Sub	202	0.77
20		127	184.14
1	Jars	178	4.94
19		127	172.70
91	D.P.	4"XH(HW)	2584.43
0	D.P.	SINGLES	0.00
	HOLE + DOWN		-17.62
	TOTAL		2957.96
WT. OF BIT			25000.00
WT. OF STRING			134000.00

BIT NO.: 18 | SIZE: 311 | IADC CODE: 5 4 7 | MFG.: H.C. | TYPE: HR-P86DX | SERIAL NO.: 6027056 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 2831.00 | TOTAL METERS DRILLED (m): 126.00 | TOTAL HOURS RUN: 46.75

CUTTING STRUCTURE: T1 | D | LOC | B | GAUGE | ODC | REASON PULLED | TYPE OF WEAR

HOLE CONDITION

HOLE GRAD: 38000 up/23000 dwn

TORQUE AT BOTTOM: 15715 ft-lbs

FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Fresh Water | OIL BASED: | Max Flowline Temp =

TIME	10:00	12:00	14:00
DENSITY kg/m3	1040	1040	1040
FUNNEL VIS. (s/L)	62	62	62
W.L. (cm3)			
pH	10.0	10.0	10.0
P.V.T. @	119.7m3	122.3m3	124.4m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	CUMULATIVE	DAILY
Caustic Soda	2sks			
Defoamex LD-8	1pail	8.00	1040	1030
Hydrated Lime	6sks.			
Ligco	20sks.			
Milpac	4sks.			
Pyrotrol	3sks.			

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	WT. ON BIT
2940.00	2957.00	D	15/110	20-34

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 | PUMP NO. 2

LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
16500	162	76	162
4800 @ 1		76 @ 1	2951.00

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2939.56	32	337.70
2936.40	32.2	337.20

TIME LOG

FROM	TO	HRS	CODE	CUM. HRS
8:00	14:00	6.00	2	
14:00	14:15	0.25	7	
14:15	15:30	1.25	2	
15:30	16:00	0.50	10	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill fr. 2940m - 2954m

Rig Service, F/T pipe rams(7 secs)

Drill fr. 2954m - 2957

Deviation Surveys(Accum.)

NOTES

DRILLER SIGNATURE: Barry Verhelst

RIG UP	RIG DOWN	STACK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5			175000.00	Fire drill @ camp	

RATE SCHEDULE: MANUAL / ARMP / PAYMENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	847-389-819	Barry Verhelst	12.00	BV	☑
Derrickman	847-452-803	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	713-996-491	Gary Kennedy	12.00	GK	☑
Floorman	728-807-769	Cory Kuba	12.00	CK	☑
Leaseman	736-300-069	Justin Creigen	12.00	JC	☑

BIT RECORD

No.	ITEM	O.D. (mm)	LENGTH (m)
1	bit	311	0.39
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	195	0.89
2	Monels	204	18.61
1	XO Sub	202	0.77
20		127	184.14
1	Jars	178	4.94
19		127	172.70
91	D.P.	4"XH(HW)	2584.43
2	D.P.	SINGLES	19.50
	HOLE + DOWN		0.00
	TOTAL		2994.32
WT. OF BIT			25000.00
WT. OF STRING			135000.00

BIT NO.: 18 | SIZE: 311 | IADC CODE: 5 4 7 | MFG.: H.C. | TYPE: HR-P86DX | SERIAL NO.: 6027056 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 2831.00 | TOTAL METERS DRILLED (m): 145.00 | TOTAL HOURS RUN: 53.00

CUTTING STRUCTURE: T1 | D | LOC | B | GAUGE | ODC | REASON PULLED | TYPE OF WEAR

HOLE CONDITION

HOLE GRAD: 33-38up/20-3xDown(Sliding)

TORQUE AT BOTTOM: 14,675-15,718 ft/lbs.

FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Fresh Water | OIL BASED: | Max Flowline Temp = 93.3 C

TIME	21:00	23:00	
DENSITY kg/m3	1040	1040	
FUNNEL VIS. (s/L)	60	60	
W.L. (cm3)			
pH	10.0	10.1	
P.V.T. @	128.3 m3	128.4 m3	

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT	HOURS RUN	CUMULATIVE	DAILY
Hydrated Lime	6 sks			
Milpac	3 sks	8.00	1040	1030

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	WT. ON BIT
2957.00	2976.00	D	15/110	15-34

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 | PUMP NO. 2

LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
16500	152	76	152
4935 @ 1		76 @ 1	2973.00

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2949.70	32.3	336.40
2957.90	33.2	334.50

TIME LOG

FROM	TO	HRS	CODE	CUM. HRS
16:00	22:30	6.50	2	
22:30	22:45	0.25	7	
22:45	23:30	0.75	2	
23:30	24:00	0.50	10	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill fr/2957m-2974m

Rig Service and Function HCR 4/4

Drill fr/2974m-2976m

Accumulated M.W.D. Survey's and Directional Work

NOTES

DRILLER SIGNATURE: Wade Goddard

RIG UP	RIG DOWN	STACK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5			175000.00	LockOut Procedures	

RATE SCHEDULE: MANUAL / ARMP / PAYMENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	4.00	WG	☑
Derrickman	851-368-064	Jesse Goddard	4.00	JG	☑
Motorman	852-342-416	Jonathan Greeve	4.00	JG	☑
Floorman	905-422-253	Rory Mitchell	4.00	RM	☑
Floorman	729-975-003	Daniel Sampson	4.00	DS	☑
Leaseman	639-016-237	Robert Cramer	4.00	RC	☑

ETS SERIAL NUMBER: PREC620_20050026_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

RIG RELEASE | JOB NO. 22 | AFE

SPUD 2004-11-30 20:00

LICENCE NO. MC-7 | WELL NAME AND NO. a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-1-H / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS (CPR / S.M.)

(1) Daily Visual Accident Inspection
(2) Derrick/Mast/Substructure (Yearly Load Test)
(3) H2S Equip. Present (if required)
(4) Well Control & Shut Down Drills
(5) Fire Line Tested
(6) BOP Daily Performed
(7) Manually Operated BOP's (Functioned & Diagnosed Daily)
(8) Rig Site Hazard Assessment Complete (pre-spud/monthly)
(9) C.T.D.G. Rig Safety Inspection Checklist (pre-rig in/monthly)
(10) Weekly Inspection Safety Meeting or Training
(11) Crown Saver Checked
(12) Kelly Cock Checked

DATE 27-Jan-2005 | RIG NO. 620 E | FUEL on Hand | RIG 78695 BOILER

LAST CASING TUBING OR LINER

	O.D. (mm)	WEIGHT (kg/m)	GRADE	NO. OF JOINTS	TOTAL PIPE LENGTH	KB TO CSG HEAD (m)	SET AT (m)
						5.31	128.00
			L-80			5.23	870.00

WEATHER: TEMPERATURE 0 | CURRENT CONDITION Snow | WIND DIRECTION Calm | ROAD Good

	SCRAP SIZE (mm)	LINEAR MASS (kg/m)	GRADE	MAX ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH. (mm)
		28.00	SS-95	83.00	166.00	5"XH	170	F-1600	BPMMP	356
		38.00	SS-95	67.00	166.00	5"XH	150	F-1600	BPMMP	356

TIME - HRS

CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
OPER	DRLG	CIRC	REAMING	CORING	COND MUD	TRIPS	RIG SERVICE	DEVIATION SURVEY	BOP DRILL	SAFETY MEETING	RIG REPAIR	SLIP & CUT DRLG LINE	RIG UP & TEAR DOWN	WAIT ON EQUIP.	DIRECTIONAL WORK	FISHING	CEMENTING	LOGGING	TESTING	Reserved	Other	WAIT ON WEATHER	Maintenance				
MORN	7.25						0.25																0.50			
DAY	5.75						0.25																0.50			
EVE	7.25						0.25																6.00			
TOTAL	21.25						0.75																1.50			

SHALE SHAKER(S) | RENTAL SERVICES

	NO.	TYPE	Derrick	HYD

	SCREEN CHANGED	YES	NO
5.00			
5.00	TOP	100	TOP 100
5.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20	Drill Collars	127	184.14
1	Jars	178	4.94
19	Drill Collars	127	172.79

BIT NO. 18 | SIZE 311 | MFG. H.C. | TYPE HR-P56DX | SERIAL NO. 8027056 | JETS | DEPTH OUT (m) | DEPTH IN (m) 2831.00 | TOTAL METERS DRILLED 166.00 | TOTAL HOURS RUN 50.25

92	D/P	2813.03											
1	D/P	9.59											
	WELL DOWN	0.00											
	TOTAL	2997.00											

OUTER STRUCTURE | DULL CHARACTERISTICS | LOC | B | Gage | OTHER | REASON PULLED

HOLE CONDITION

HOLE DRAG 33-38 Up/32-36 Down(Sliding)
TORQUE AT BOTTOM 14,875-15,715 ft/lbs.
FILL ON BOTTOM (m)

No. OF DC	25000.00
No. OF STANDS	135000.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Max Flowline Temp = M.S.C
TIME	02:00	04:00	09:00
DENSITY (kg/m³)	1040	1040	1040
FUNNEL VIS. (s/L)	62	64	64
W.L. (cm3)			
pH	9.8	10.0	9.7
P.V.T. @	119.9 m3	121.2m3	124.2m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	SHALE SHAKER	DESILTER	DESANDER
Ligco	20 sks				
Pyrotrol	3 sks.	8.00	1040	1035	1700
Caustic Soda	2 sks.				
Gel	35 sks				

METERS DRILLED

FROM	TO		BIT NO.	ROTARY R.P.M.	
2978.00	2997.00	D	18/110	19-35	

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 (Liner Size / S.P.M.) | PUMP NO. 2 (Liner Size / S.P.M.)

16100	152	75	152	75

REDUCED PUMP SPEED

4300	@	75	@	2842.00

DEVIATION SURVEYS

DEPTH (m)	DEVIATION (°)	DIRECTION
2968.80	32.4	332.60
2978.80	32.1	333.80

TIME LOG

FROM	TO	HRS	CODE	PHASE
0:00	6:15	6.25	2	Drill fr/2978m-2993m
6:15	6:30	0.25	7	Rig Service and Function Annular 24/24
6:30	7:30	1.00	2	Drill fr/2993m-2997m
7:30	8:00	0.50	10	Accumulated M.W.D. Survey's and Directional Work

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES
Precision Crown Spray
Equipment (ADR) in 24 hrs. / Pump #1 and #2 in 25.26 Hrs.

DRILLER SIGNATURE	TOUR HRS	SOLID % A/T	SOLID % ST	OPERATOR FUEL	MAX BIT HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	0.5			175000.00	BOP # 112-06, BOP #7	

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	833-828-706	Wade Goddard	8.00	WG	☑
Derrickman	651-388-084	Jesse Goddard	8.00	JG	☑
Motorman	852-342-416	Jonathan Greeve	8.00	JG	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☑
Floorman	728-975-003	Daniel Sampson	8.00	DS	☑
Leaseman	839-016-237	Robert Cramer	8.00	RC	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐
Top Drive	836-977-792	Sheldon Langley		SL	☐

RATE SCHEDULE: ☑ MORNING ☐ DAY ☐ EVENING

DRIVER A	CREW SAFETY DAYS	DRIVER B

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20	Drill Collars	127	184.14
1	Jars	178	4.94
19	Drill Collars	127	172.79

BIT NO. 18 | SIZE 311 | MFG. H.C. | TYPE HR-P56DX | SERIAL NO. 8027056 | JETS | DEPTH OUT (m) | DEPTH IN (m) 2831.00 | TOTAL METERS DRILLED 186.00 | TOTAL HOURS RUN 67.00

92	D/P	2841.65											
0	D/P	0.00											
	WELL DOWN	-15.46											
	TOTAL	3017.00											

OUTER STRUCTURE | DULL CHARACTERISTICS | LOC | B | Gage | OTHER | REASON PULLED

HOLE CONDITION

HOLE DRAG 60000 up/25000 dwn
TORQUE AT BOTTOM 15718 ft-lbs
FILL ON BOTTOM (m)

No. OF DC	25000.00
No. OF STANDS	135000.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Max Flowline Temp = 88.3
TIME	10:00	12:00	14:00
DENSITY (kg/m³)	1040	1040	1040
FUNNEL VIS. (s/L)	63	63	64
W.L. (cm3)			
pH	10.0	10.0	10.0
P.V.T. @	129m3	129.5m3	129.3m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	SHALE SHAKER	DESILTER	DESANDER
Caustic Soda	2sks.				
Hydrated Lime	84sks.	8.00	1040	1035	1725
Ligco	20sks.				
Milpac	4sks.				

METERS DRILLED

FROM	TO		BIT NO.	ROTARY R.P.M.	
2997.00	3017.00	D	18/110	19-34	

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 (Liner Size / S.P.M.) | PUMP NO. 2 (Liner Size / S.P.M.)

16000	152	75	152	75

REDUCED PUMP SPEED

5400	@	75	@	3018.00

DEVIATION SURVEYS

DEPTH (m)	DEVIATION (°)	DIRECTION
2997.70	31.9	333.80
2998.50	31.1	334.50

TIME LOG

FROM	TO	HRS	CODE	PHASE
8:00	12:30	4.50	2	Drill fr. 2997m - 3011m
12:30	12:45	0.25	7	Rig Service, F/T pipe rams(7 secs)
12:45	13:15	0.50	22	(Maintenance) on F-1600 mud pump #1
13:15	16:30	3.25	2	Drill fr. 3011m - 3017m
16:30	16:00	0.50	10	Deviation Surveys(Accum.)

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES
Directional crews, visually inspected derrick, pins, blocks, stump flange, camps line & anchor.

DRILLER SIGNATURE	TOUR HRS	SOLID % A/T	SOLID % ST	OPERATOR FUEL	MAX BIT HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verheist	8.00	0.5			174000.00	BOP#112-06, BOP #7	

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	942-388-913	Barry Verheist	12.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	713-559-481	Gary Kennedy	12.00	GK	☑
Floorman	728-807-789	Cory Kube	12.00	CK	☑
Leaseman	739-300-099	Justin Craigen	12.00	JC	☑

RATE SCHEDULE: ☑ MORNING ☐ DAY ☐ EVENING

DRIVER A	CREW SAFETY DAYS	DRIVER B

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.69
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20	Drill Collars	127	184.14
1	Jars	178	4.94
19	Drill Collars	127	172.79

BIT NO. 18 | SIZE 311 | MFG. H.C. | TYPE HR-P56DX | SERIAL NO. 8027056 | JETS | DEPTH OUT (m) | DEPTH IN (m) 2831.00 | TOTAL METERS DRILLED 206.00 | TOTAL HOURS RUN 74.25

93	D/P	2841.65											
2	D/P	18.82											
	WELL DOWN	0.00											
	TOTAL	3061.37											

OUTER STRUCTURE | DULL CHARACTERISTICS | LOC | B | Gage | OTHER | REASON PULLED

HOLE CONDITION

HOLE DRAG 14-38Up/32-36Down(Sliding)
TORQUE AT BOTTOM 15,718-16,560 ft/lbs.
FILL ON BOTTOM (m)

No. OF DC	25000.00
No. OF STANDS	135000.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Max Flowline Temp =
TIME	18:00	21:00	23:00
DENSITY (kg/m³)	1040	1040	1040
FUNNEL VIS. (s/L)	63	63	62
W.L. (cm3)			
pH	9.8	10.0	9.8
P.V.T. @	128.9m3	129.6m3	127.4m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	SHALE SHAKER	DESILTER	DESANDER
Hydrated Lime	9 sks				
Milpac	3 sks	8.00	1040	1035	1700

METERS DRILLED

FROM	TO		BIT NO.	ROTARY R.P.M.	
3017.00	3036.00	D	18/110	19-34	

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 (Liner Size / S.P.M.) | PUMP NO. 2 (Liner Size / S.P.M.)

16100	152	75	152	75

REDUCED PUMP SPEED

4775	@	75	@	3037.00

DEVIATION SURVEYS

DEPTH (m)	DEVIATION (°)	DIRECTION
3008.10	31.4	335.40
3018.50	31.7	337.20

TIME LOG

FROM	TO	HRS	CODE	PHASE
16:00	20:45	4.75	2	Drill fr/3017m-3031m
20:45	21:00	0.25	7	Rig Service and Function HCR 4/4
21:00	23:30	2.50	2	Drill fr/3031m-3036m
23:30	24:00	0.50	10	Accumulated M.W.D. Survey's and Directional Work

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES
Precision Crown Spray

DRILLER SIGNATURE	TOUR HRS	SOLID % A/T	SOLID % ST	OPERATOR FUEL	MAX BIT HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	0.5			181000.00	Rig Inspection and Fire Drills	

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	833-828-706	Wade Goddard	4.00	WG	☑
Derrickman	651-388-084	Jesse Goddard	4.00	JG	☑
Motorman	852-342-416	Jonathan Greeve	4.00	JG	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☑
Floorman	728-975-003	Daniel Sampson	4.00	DS	☑
Leaseman	839-016-237	Robert Cramer	4.00	RC	☑

RATE SCHEDULE: ☑ MORNING ☐ DAY ☐ EVENING

DRIVER A	CREW SAFETY DAYS	DRIVER B

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE: | JOB NO: 22 | AFE:

LICENCE NO: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-1-H / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS (DPR / RM)
(i) Daily Work Permit completed
(ii) Derrick/mast inspection/Weekly pinning check done
(iii) H2S Drills Practiced (if required)
(iv) Weekly Derrick & Sub Structure Checked
(v) Fluids Level Checked
(vi) BOP Drills Performed
(vii) Weekly manned BOP's Pressure & Diagnostic Tests
(viii) Rig Site Health and Safety Meeting (pre-spud meeting)
(ix) C.A.O.D.C. Rig Safety Inspection Checklist (pre-rig-in work)
(x) Man Trip Inspection Before Rigging-in Commences
(xi) Crown Saver Checked
(xii) Hoist Line Checked

DATE: 28-Jan-2005 | RIG NO.: 620 E | FUEL @ 8:00: | RIG: 62256 BOILER

WEATHER: TEMPERATURE 0 | CURRENT CONDITION: Cloudy | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TUBING OR LINER	O.D. (mm)	WALL TH. (mm)	MFR.	NAME	GRADE	NO. OF JOINTS	TOTAL PIPE LENGTH	SET TO (mKB)	SET AT (m)
								5.31	129.00
						1-80		5.23	570.00

	DEPTH (m)	LENGTH/RUN (m)	GRADE	MAX ID (mm)	FORM. (+) O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN. (mm)
		29.00	S5-95	83.00	168.00	5"XH	170	F-1600	BPMMP	305
		38.00	S5-95	57.00	168.00	5"XH	165	F-1600	BPMMP	305

WELL TYPE: Geothermal | RE-ENTRY: ☐ YES ☑ NO | KB TO GROUND ELEV.: 7.20

WELL NAME & NO.: a-92-A / 92-J-12 MC-7 | DATE: 28-Jan-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 620 E

PROVINCE: BC | CAMP: ☑ YES ☐ NO | RIG SAFETY DAYS: 333.00

TIME + HRS

CREW	CREW CHANGE	TRAVEL	MOVING	DRILLING	CIRC. COND. MUD	TRIPS	REAMING	CUT OFF DRLG. LINE	SURVEY	WAIT ON DAYLIGHT	WAIT ON WEATHER	RIG REPAIR	RIG SERVICE	SLIP DRLG. LINE	TEST BOPE	SAFETY MEETING	OTHER	WORK HOURS (DAY)	DAY	EVE
MORN	1.25			8.25	6.00	0.75			0.25											
DAY					2.75	0.25												4.50	9.50	
EVE				0.25	7.50	0.25														
TOTAL	1.25			8.50	16.25	0.75			0.25									4.50	9.50	

SMALE SHAKER(S)

	No.	Type
Derrick	2	
New		

SCREENS CHANGED: ☐ YES ☑ NO

	Today	Total	SCREENS	Today	Total
	1.00	1.00	TOP	100	100
	8.00	8.00	MIDDLE	100	100
	24.00	24.00	BOTTOM	100	100

RENTALS/SERVICES

	UNITS	OUT	IN

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	8.06
1	UBHO	197	0.68
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.94
19		127	172.70
93	D.P.		2641.65
2	D.P.		18.92
	KELLY DOWN		0.00
	TOTAL		3040.00
WT. ON BIT			25000.00
WT. OF STRING			138000.00

MUD RECORD

BIT NO.: 19 | MUD TYPE: ☑ WATER BASED ☐ OIL BASED | Max Flowline Temp = 64.2 C

WEIGHT (kg/m³): | TIME: 01:00 | FUNNEL VIS. (sec): 68 | W.L. (cm3): | pH: 9.0 | P.V.T. @ : 127.3m3

HOLE DRAG: 34-36t/p/32-21Down(Sliding) | TORQUE AT BOTTOM: 15,718-16,526 ft/lbs. | FILL ON BOTTOM (m):

BIT NO.	19
SIZE	311
IADC CODE	5 4 7
MFG.	H.C.
TYPE	HR-P86DX
SERIAL NO.	6027956
JETS	
DEPTH OUT (m)	3040.00
DEPTH IN (m)	2831.00
TOTAL METERS DRILLED (m)	209.00
TOTAL HOURS RUN	75.50

DULL CHARACTERISTICS: T1 | T2 | WEAR | LOC | B | GAUGE | OC | REASON PULLED | TOOTH / BEARING

SOLIDS CONTROL

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT	HOURS RUN	DRILLING (m)	CIRCULATING (m)	CUMULATIVE (m)
Polydrill	2 sks				
Gel	17 sks	8.00	1045	1035	1720
Lignco	17 sks				
Caustic Soda	1 pk				

HOLE CONDITION

METERS DRILLED

FROM	TO	BIT NO.	HOURS R.T.	HOURS P.U.	METERS DRILLED
3035.00	3040.00	19	16/110	19-35	

CIRCULATION PRESSURE (kPa): PUMP NO. 1 | PUMP NO. 2

	LINER (mm)	S.P.M.	LINER (mm)	S.P.M.
	152	75	152	75

REDUCED PUMP SPEED

	LINER (mm)	S.P.M.
@		

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
3034.20	31.5	337.70

TIME LOG

FROM	TO	HOURS	CUM. HOURS	CODE
0:00	1:15	1.25	1.25	2
1:15	1:30	0.25	1.50	10
1:30	1:45	0.25	1.75	5
1:45	2:00	0.25	2.00	7
2:00	8:00	6.00	8.00	6

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill f/3035m-3040m

M.W.D. Survey

Circulate and Work Pipe

Rig Service and Function Annular 24/24

Flow Check @ 3022m,Hoist BHA#18,Circulate and Cool Tools @ 2886m,2501m,1877m,957m

NOTES

DRILLER SIGNATURE	HRS TOUR	HRS CUM.	START TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	8.00			184000.00		

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	8.00	WG	☑
Derrickman	651-366-054	Jesse Goddard	8.00	JG	☑
Motorman	652-342-416	Jonathan Greeve	8.00	JG	☑
Floorman	509-422-253	Rory Mitchell	8.00	RM	☑
Floorman	726-975-003	Daniel Sampson	8.00	DS	☑
Leaseman	639-018-237	Robert Cramer	8.00	RC	☑
Rig Manager	719-409-484	Kevin Vig		KV	☑
Top Drive	638-077-702	Sheldon Langley		SL	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY

DRIVER A: | CREW SAFETY DAYS: | DRIVER B:

MORNING TOUR

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	7.95
1	UBHO	197	0.69
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	0.00
19		127	172.70
93	D.P.		2639.52
1	D.P.		9.60
	KELLY DOWN		0.00
	TOTAL		3034.91
WT. ON BIT			25000.00
WT. OF STRING			138000.00

MUD RECORD

BIT NO.: 19 | 19 | MUD TYPE: ☑ WATER BASED ☐ OIL BASED | Max Flowline Temp =

TIME: | FUNNEL VIS. (sec): | W.L. (cm3): | pH: | P.V.T. @ :

HOLE DRAG: | TORQUE AT BOTTOM: | FILL ON BOTTOM (m):

BIT NO.	19	19
SIZE	311	311
IADC CODE	5 4 7	
MFG.	H.C.	H.C.
TYPE	HR-P86DX	HR-P86
SERIAL NO.	6027956	6225465
JETS		
DEPTH OUT (m)	3040.00	
DEPTH IN (m)	2831.00	3040.00
TOTAL METERS DRILLED (m)	209.00	
TOTAL HOURS RUN	75.50	

DULL CHARACTERISTICS: T1 | T2 | WEAR | LOC | B | GAUGE | OC | REASON PULLED | TOOTH / BEARING

93	D.P.		2639.52					
1	D.P.	9.60	7	8	fc	All	e	001		TQ	2.77
	KELLY DOWN	0.00						
	TOTAL	3034.91						

SOLIDS CONTROL

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT	HOURS RUN	DRILLING (m)	CIRCULATING (m)	CUMULATIVE (m)

HOLE CONDITION

METERS DRILLED

FROM	TO	BIT NO.	HOURS R.T.	HOURS P.U.	METERS DRILLED
3040.00					

CIRCULATION PRESSURE (kPa): PUMP NO. 1 | PUMP NO. 2

	LINER (mm)	S.P.M.	LINER (mm)	S.P.M.
	137		152	

REDUCED PUMP SPEED

	LINER (mm)	S.P.M.
@		

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HOURS	CUM. HOURS	CODE
0:00	10:45	2.75	8	6
10:45	11:15	0.50	22	22
11:15	11:30	0.25	7	7
11:30	16:00	4.50	20	20

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Hoist bit #19, flow check @ 433m, & out

Service top drive(Change out grabber cylinder)

Rig Service, FIT Blind rams(7 secs)

Change out mud motor & bit, Set motor to 1.5 deg., Change out float, Replace MWD Mule shoe, Retrieve MWD, service & reinstall.

NOTES

DRILLER SIGNATURE	HRS TOUR	HRS CUM.	START TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verhelst	4.00	8.0			85000.00	Handling B.H.A.	

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verhelst	12.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chenry Vig	12.00	CV	☑
Floorman	713-959-481	Gary Kennedy	12.00	GK	☑
Floorman	726-907-769	Cory Kube	12.00	CK	☑
Leaseman	739-300-089	Justin Craigen	12.00	JC	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY

DRIVER A: | CREW SAFETY DAYS: | DRIVER B:

DAY TOUR

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	7.95
1	UBHO	197	0.69
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.94
19		127	172.70
93	D.P.		2639.52
1	D.P.	9.60	
	KELLY DOWN	0.00	
	TOTAL	3039.65	
WT. ON BIT		25000.00	
WT. OF STRING			

MUD RECORD

BIT NO.: 19 | MUD TYPE: ☑ WATER BASED ☐ OIL BASED | Max Flowline Temp =

TIME: | FUNNEL VIS. (sec): | W.L. (cm3): | pH: | P.V.T. @ :

HOLE DRAG: | TORQUE AT BOTTOM: | FILL ON BOTTOM (m):

BIT NO.	19
SIZE	311
IADC CODE	
MFG.	H.C.
TYPE	HR-P86
SERIAL NO.	6225465
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	3040.00
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	

DULL CHARACTERISTICS: T1 | T2 | WEAR | LOC | B | GAUGE | OC | REASON PULLED | TOOTH / BEARING

SOLIDS CONTROL

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT	HOURS RUN	DRILLING (m)	CIRCULATING (m)	CUMULATIVE (m)

HOLE CONDITION

METERS DRILLED

FROM	TO	BIT NO.	HOURS R.T.	HOURS P.U.	METERS DRILLED
3040.00					

CIRCULATION PRESSURE (kPa): PUMP NO. 1 | PUMP NO. 2

	LINER (mm)	S.P.M.	LINER (mm)	S.P.M.
	152		152	

REDUCED PUMP SPEED

	LINER (mm)	S.P.M.
@		

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HOURS	CUM. HOURS	CODE
16:00	18:00	2.00	6	6
18:00	18:15	0.25	5	5
18:15	23:45	5.50	6	6
23:45	24:00	0.25	7	7

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Make up bit #19, & B.H.A., flow check @ 0m & 390m

Condition Mud & Circ.

Pick up 20 singles of 29KG D.P.,and R.I.H. w/Bit#19,Circulate and Cool Tools @ 893m,1175m,1456m,1737m,2028m,

Rig Service and Function H.C.R. 4/4

NOTES

DRILLER SIGNATURE	HRS TOUR	HRS CUM.	START TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	8.0					

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	4.00	WG	☑
Derrickman	651-366-054	Jesse Goddard	4.00	JG	☑
Motorman	652-342-416	Jonathan Greeve	4.00	JG	☑
Floorman	509-422-253	Rory Mitchell	4.00	RM	☑
Floorman	726-975-003	Daniel Sampson	4.00	DS	☑
Leaseman	639-018-237	Robert Cramer	4.00	RC	☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STANDBY

DRIVER A: | CREW SAFETY DAYS: | DRIVER B:

EVENING TOUR

ETS SERIAL NUMBER: PREC620_20050028_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

CAODC

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00	RIG RELEASE	JOB NO: 22	AFE
LICENCE NO: MC-7	WELL NAME AND NO: a-92-A / 92-J-12 MC-7		
OPERATION: Western Geopower Corp	CONTRACTOR: Precision Drilling		
SURFACE LOCATION: a-92-A / 92-J-12	UNIQUE ID: a-1-H / 92-J-12		
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig		

DAILY CHECKS
(1) Daily Work Tailgate Meeting
(2) Derrick/Mast Inspection (every tour)
(3) H2S Equipment/Warning Devices
(4) Well Control & Blow Out Prevention Practice
(5) Flare Line Status
(6) BOP Drills Performed
(7) Visually Inspect BOP's, Functions & Diagram Lines
(8) Rig Equipment and Safety Meeting (prior to operations)
(9) C & D&C Rig Safety Inspection Checklist (once rig moved)
(10) Man Protection Barrier Raising or Lowering
(11) Crown Saver Checked
(12) Others (fully Checked)

DFR: P/M

WEATHER

DATE	29-Jan-2005
RIG NO.	620 E
FUEL @ 0:00	
RIG	56925 BOILER
TEMPERATURE	-1
CURRENT CONDITION	Cloudy
WIND DIRECTION	Calm
ROAD	Goodrs

LAST CASING TUBING OR LINER

	O.D. (mm)	Inner I.D. (mm)	Depth	Grade	No. of Joints	Total Joint Length (m)	KB to Csg Head (m)	KB to Csg Shoe (m)
							5.31	129.00
				L-80			5.33	570.00

	Depth (m)	Length (m)	Grade	Inner I.D. (mm)	Tool O.D. (mm)	Thread Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke Length (mm)
		29.00	S5-95	83.00	156.00	6"XH	179	F-1600	BPMMP	305
		38.00	S5-95	67.00	156.00	5"XH	180	F-1600	BPMMP	305

TIME - HRS

OPER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	TOTAL
MORN	4.00			1.50	1.75	0.25				0.50													
DAY	7.00					0.25				0.75													
EVE	7.25					0.25				0.50													
TOTAL	18.25			1.50	1.75	0.75				1.75													

SHALE SHAKER(S)

	No.	Type	Derrick	Crew
SCREENS CHANGED		YES	NO	
TOP	100	TOP	100	
MIDDLE	100	MIDDLE	100	
BOTTOM	100	BOTTOM	100	

RENTALS/SERVICES

9.00						
4.00						
3.00						
54.00						

WELL TYPE: Geothermal | RE-ENTRY: YES NO | KB TO GROUND ELEV.: T.20
WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 29-Jan-2005
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig | RIG NO.: 620 E
PROVINCE: BC | CAMP: YES NO | RIG SAFETY DAYS: 334.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

No.	Qty	Make	Size (mm)	Type	IADC Code	Serial No.	Nozzles	TFA	Depth Out (m)	Cum. Hrs	Cum. Rot. Hrs	Cum. Dist. (km)	Dull Grade	Bit Wt. (kN)	RPM	Pump Press. (kPa)	Flow Rate (L/min)	Hydraulic HP	Bit HP/cm²	Ann. Vel. (m/min)	Jet Vel. (m/s)	Impact Force (kN)
1	bit		311	0.30	BIT NO		19															
1	Motor		196	7.99	SIZE		311															
1	UBHO		197	0.69	IADC CODE	6	4	7														
1	Float Sub		196	0.59	MFG		H.C.															
2	Monels		204	18.61	TYPE		HR-P68															
1	XO Sub		202	0.77	SERIAL NO		6225465															
20			127	184.14	JETS	6	4	7														
1	Jars		178	4.84	DEPTH OUT (m)																	
19			127	172.70	DEPTH IN (m)		3049.00															
					TOTAL METERS DRILLED (m)		14.90															
					TOTAL HOURS RUN		4.00															
96	D/F	STANDS	2568.23		CUTTING STRUCTURE: I1	O2	B	Gage	ODC	BEARING / SEALS	OTHER											
0	D/F	SINGLES	0.00																			
	MISC. FOOTAGE		0.00		HOLE CONDITION																	
	TOTAL		3064.00		HOLE DRAG		35-37klb/23-25klb Down(Sliding)															
WT. OF DC			26000.00		TORQUE AT BOTTOM		15,718-16,560 ft/lbs.															
WT. OF STRING			134000.00		FILL ON BOTTOM (m)		1.00															

MUD RECORD

MUD TYPE: Water Based / Oil Based	Max Flowline Temp = 97.2 C
TIME	02:00	04:00	06:00
DENSITY (kg/m³)			
FUNNEL VIS. (s)			
W.L. (cm3)			
pH		9.0	9.0
P.V.T. @		108.9 m3	109.1

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT / UNIT	HOURS RUN	Initial Cost	Daily Cost	Cumulative Cost
Hydrated Lime	2 Sks				
Milpac	3 sks	6.00	1045	1840	1720
Caustic Soda	2sks				
Polydrill	1 sk				
Ligco	10sks				
Gel	6sks				

METERS DRILLED

FROM	TO	No. of Bits	Rotary R.P.M.	WOB (kN)	Cum. Hrs	Cum. Rot. Hrs	Cum. Dist. (km)
3040.00	3054.00	D	15/110	10-35	6:00	1145	1.75

CIRCULATION PRESSURE

	PUMP NO. 1		PUMP NO. 2	
	Liner Size (mm)	R.P.M.	Liner Size (mm)	R.P.M.
16250	152	75	152	76

REDUCED PUMP SPEED

4775	@	75	@ 3040.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
3049.90	31.8	334.60
3033.20	31.9	336.20

TIME LOG

FROM	TO	No. of Bits	Rotary R.P.M.	WOB (kN)	Cum. Hrs	Cum. Rot. Hrs	Cum. Dist. (km)	Code
6:00	11:45	1.75	6	R.I.H. w/BRP19,Circulate and Cool Tools @ 2313m,2514m,2715m
11:45	13:15	1.50	5	Wash fr/2715m to Stm., 1m Fill
13:15	13:30	0.25	7	Rig Service and Function Annular 24/24
13:30	17:30	4.00	2	Pattern Bit and Drill fr/3040m-3054m
17:30	18:00	0.50	10	Accumulated M.W.D. Survey's and Directional Work

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Losses On Trip = 17 m3
Stms. Up Mud Out Temp. = 97.2 C

NOTES
Hourdon Gobar Survey. Circulating temperatures @ 2313m = 100 C / 2514m = 110 C / 2715m = 120 C
Engines #1 and #2 = 24 litres / hr2 = 2 hrs. | Pump #1 and #2 = 1.5 hrs.

DRILLER SIGNATURE	MIN. RAT.	MW	STAND TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	8.5			175000.00	High-Temp. Drilling Fluid	

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-828-708	Wade Goddard	8.00	WG	☐	☑
Derrickman	651-366-064	Jesse Goddard	8.00	JG	☐	☑
Motorman	652-342-416	Jonathan Greeve	8.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☐	☑
Floorman	729-975-903	Daniel Sampson	8.00	DS	☐	☑
Leaseman	639-016-237	Robert Cramer	8.00	RC	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-792	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: REGULAR / MINIMUM / DAYRATE | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

BIT RECORD

No.	Qty	Make	Size (mm)	Type	IADC Code	Serial No.	Nozzles	TFA	Depth Out (m)	Cum. Hrs	Cum. Rot. Hrs	Cum. Dist. (km)	Dull Grade	Bit Wt. (kN)	RPM	Pump Press. (kPa)	Flow Rate (L/min)	Hydraulic HP	Bit HP/cm²	Ann. Vel. (m/min)	Jet Vel. (m/s)	Impact Force (kN)
1	bit		311	0.30	BIT NO		19															
1	Motor		196	7.99	SIZE		311															
1	UBHO		197	0.69	IADC CODE	6	4	7														
1	Float Sub		196	0.59	MFG		H.C.															
2	Monels		204	18.61	TYPE		HR-P68															
1	XO Sub		202	0.77	SERIAL NO		6225465															
20			127	184.14	JETS																	
1	Jars		178	4.84	DEPTH OUT (m)																	
19			127	172.70	DEPTH IN (m)		3060.00															
					TOTAL METERS DRILLED (m)		38.00															
					TOTAL HOURS RUN		11.00															
96	D/F	STANDS	2687.01		CUTTING STRUCTURE: I1	O2	B	Gage	ODC	BEARING / SEALS	OTHER											
0	D/F	SINGLES	0.00																			
	MISC. FOOTAGE		-9.34		HOLE CONDITION																	
	TOTAL		3078.40		HOLE DRAG		42000 up/24000 down															
WT. OF DC			26000.00		TORQUE AT BOTTOM		15718 ft-lbs															
WT. OF STRING			135000.00		FILL ON BOTTOM (m)																	

MUD RECORD

MUD TYPE: Water Based / Oil Based	Max Flowline Temp = 91.7
TIME	10:00	12:00	14:00
DENSITY (kg/m³)	1040	1040	1040
FUNNEL VIS. (s)	64	64	53
W.L. (cm3)			
pH	9.5	9.5	10.0
P.V.T. @	116.3m3	122.5m3	127m3

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT / UNIT	HOURS RUN	Initial Cost	Daily Cost	Cumulative Cost
Caustic Soda	6sks.				
Defoamer LD-8	1Pail	8.00	1040	1035	1720
Hydrated Lime	6sks.				
Ligco	20sks.				
Milpac	4sks.				
Polydrill	3sks.				
Milgel					

METERS DRILLED

FROM	TO	No. of Bits	Rotary R.P.M.	WOB (kN)	Cum. Hrs	Cum. Rot. Hrs	Cum. Dist. (km)
3054.00	3078.00	D	15/110	20-32	8:00	15:00	7.60

CIRCULATION PRESSURE

	PUMP NO. 1		PUMP NO. 2	
	Liner Size (mm)	R.P.M.	Liner Size (mm)	R.P.M.
16000	152	75	152	76

REDUCED PUMP SPEED

5200	@	75	@ 3060.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
3041.90	31.6	336.20
3062.70	31.3	336.60
3060.70	30.7	336.60

TIME LOG

FROM	TO	No. of Bits	Rotary R.P.M.	WOB (kN)	Cum. Hrs	Cum. Rot. Hrs	Cum. Dist. (km)	Code
8:00	15:00	7.60	2	Drill fr. 3054m - 3078m
15:00	15:15	0.25	7	Rig Service, F/T pipe rams(7 secs)
15:15	16:00	0.75	10	Deviation Surveys(Accum.)

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES
MT shown some. Visually inspected tongs, hose, plus, scissors & slips.

DRILLER SIGNATURE	MIN. RAT.	MW	STAND TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verhelst	8.00	8.5			182000.00	Loader operation	

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-810	Barry Verhelst	12.00	BV	☐	☑
Derrickman	647-452-893	Dave Makowsky	12.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☐	☑
Floorman	713-956-461	Gary Kennedy	12.00	GK	☐	☑
Floorman	729-907-769	Cory Kube	12.00	CK	☐	☑
Leaseman	739-300-069	Justin Craigen	12.00	JC	☐	☑

RATE SCHEDULE: REGULAR / MINIMUM / DAYRATE | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

BIT RECORD

No.	Qty	Make	Size (mm)	Type	IADC Code	Serial No.	Nozzles	TFA	Depth Out (m)	Cum. Hrs	Cum. Rot. Hrs	Cum. Dist. (km)	Dull Grade	Bit Wt. (kN)	RPM	Pump Press. (kPa)	Flow Rate (L/min)	Hydraulic HP	Bit HP/cm²	Ann. Vel. (m/min)	Jet Vel. (m/s)	Impact Force (kN)
1	bit		311	0.30	BIT NO		19															
1	Motor		196	7.99	SIZE		311															
1	UBHO		197	0.69	IADC CODE	6	4	7														
1	Float Sub		196	0.59	MFG		H.C.															
2	Monels		204	18.61	TYPE		HR-P68															
1	XO Sub		202	0.77	SERIAL NO		6225465															
20			127	184.14	JETS																	
1	Jars		178	4.84	DEPTH OUT (m)																	
19			127	172.70	DEPTH IN (m)		3049.90															
					TOTAL METERS DRILLED (m)		41.80															
					TOTAL HOURS RUN		16.25															
96	D/F	STANDS	2687.01		CUTTING STRUCTURE: I1	O2	B	Gage	ODC	BEARING / SEALS	OTHER											
2	D/F	SINGLES	18.95																			
	MISC. FOOTAGE		0.00		HOLE CONDITION																	
	TOTAL		3191.00		HOLE DRAG		35-41klb/21-25klb Down(Sliding)															
WT. OF DC			26000.00		TORQUE AT BOTTOM		15,718-16,560 ft/lbs.															
WT. OF STRING			135000.00		FILL ON BOTTOM (m)																	

MUD RECORD

MUD TYPE: Water Based / Oil Based	Max Flowline Temp = 83.9 C
TIME	18:00	21:00	23:00
DENSITY (kg/m³)	1035	1040	1040
FUNNEL VIS. (s)	61	59	60
W.L. (cm3)			
pH	10.0	9.8	9.8
P.V.T. @	124.7m3	129.2m3	129.1m3

MUD MATERIAL ADDED / SOLIDS CONTROL

PRODUCT	AMOUNT / UNIT	HOURS RUN	Initial Cost	Daily Cost	Cumulative Cost
Hydrated Lime	5 sks				
Milpac	6 sks	8.00	1040	1035	1720

METERS DRILLED

FROM	TO	No. of Bits	Rotary R.P.M.	WOB (kN)	Cum. Hrs	Cum. Rot. Hrs	Cum. Dist. (km)
3078.00	3191.00	D	15/110	20-34	14:00	23:15	7.75

CIRCULATION PRESSURE

	PUMP NO. 1		PUMP NO. 2	
	Liner Size (mm)	R.P.M.	Liner Size (mm)	R.P.M.
16150	152	75	152	75

REDUCED PUMP SPEED

5000	@	75	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
3070.10	29.9	336.80
3081.10	29.8	337.20

TIME LOG

FROM	TO	No. of Bits	Rotary R.P.M.	WOB (kN)	Cum. Hrs	Cum. Rot. Hrs	Cum. Dist. (km)	Code
16:00	23:15	7.25	2	Drill fr/3076m-3191m
23:15	23:30	0.25	7	Rig Service and Function H.C.R. 4/4
23:30	24:00	0.50	10	Accumulate M.W.D. Survey's and Directional Work

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES
Gearbox Cross Saver

DRILLER SIGNATURE	MIN. RAT.	MW	STAND TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	8.5			182000.00		

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-828-708	Wade Goddard	4.00	WG	☐	☑
Derrickman	651-366-064	Jesse Goddard	4.00	JG	☐	☑
Motorman	652-342-416	Jonathan Greeve	4.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☐	☑
Floorman	729-975-903	Daniel Sampson	4.00	DS	☐	☑
Leaseman	639-016-237	Robert Cramer	4.00	RC	☐	☑

RATE SCHEDULE: REGULAR / MINIMUM / DAYRATE | DRIVER A | CREW SAFETY DAYS | DRIVER B

CAODC

Chimo Equipment
A Vanzo Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | LSD/LOME ID: b-1-H / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 30-Jan-2005 | RIG NO.: 629 E | FUEL: 518.00 | RIG: 47482 BOILER

WEATHER: TEMPERATURE: 0 | CURRENT CONDITION: Overcast | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TUBING OR LINER

	O.D. (mm)	WEIGHT (kg/m)	GRADE	CONN.	DEPTH (m)	HOLE SIZE (mm)	TOTAL CEMENT (m³)	TOP OF CEMENT (m)	METHOD
								6.31	129.00
					L-80			8.23	670.00

	HOLE SIZE (mm)	LINEAR MASS (kg/m)	GRADE	TOP TO (m)	TOOL JT O.D. (mm)	SHRINK FIT	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
		29.00	SS-95	83.00	166.00	6"XH	179	F-1600	BPMMP	356
		35.00	SS-95	67.00	168.00	6"XH	180	F-1600	BPMMP	305

TIME - HRS

OPER	RIG SERVICE	DRILL ACTUAL	REAMING	CIRCULATE	TRIPS	DIR. SURVEY	WASH & REAM	WAIT ON DIR. SVY	WAIT ON CEMENT	TEST BOPE	SAFETY MEETING	SLIP & CUT DRLG. LINE	DRILL STEM TEST	CORING	OTHER	REPAIR RIG	JAR HRS	Make/Type/Size
MORN		7.25				0.25										9.50		
DAY		4.50				0.25										9.50		0.75
EVE.		4.50			0.75	1.50	0.25											
TOTAL		16.25			0.75	1.50	0.75									1.00		0.75

SHALE SHAKER(S) | RENTAL SERVICES

NO.	TYPE	NEW
	Derrick	

SCR'S OR CHARGERS: YES / NO

8.00	TOP	100
8.00	MIDDLE	100
8.00	BOTTOM	100

	MODEL	DAY	EST
TOTAL			

BIT RECORD

NO.	BIT	I.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20	Drill Collars	127	184.14
1	Jars	178	4.94
19	Drill Collars	127	172.70
96	D.P.	114mm	2726.85
2	D.P.	Monels	19.29
		WELL TOTAL	0.00
		TOTAL	3125.00

BIT NO.	19
SIZE	311
IADC CODE	6 4 7
MFG.	H.C.
TYPE	HR-P88
SERIAL NO.	6225465
JETS	6 P E N
DEPTH OUT (m)	
DEPTH IN (m)	3040.00
TOTAL METRES DRILLED (m)	85.00
TOTAL HOURS RUN	26.50
CUTTING RING UNIT	I O B G L

HOLE CONDITION: 77

HOLE DRAG	
TORQUE AT BOTTOM	15,718-16,560 ft/lbs.
FILL ON BOTTOM (m)	
WT. OF DC	25000.00
WT. OF STRING	137000.00

MUD RECORD

MUD TYPE: Water Based / Oil Based		Max Flowline Temp = 81.0 C
Time	02:00	04:00
Density (kg/m³)	1040	1045
Viscosity (sec/qt)	50	51
W.L. (cm3)		
pH	9.8	9.9
P.V.T. @	128.6m3	131.2 m3

MUD MATERIAL ADDED		SOLIDS CONTROL
PRODUCT	AMOUNT x UNIT	
Caustic Soda	2 sks	
Lignite	40 sks	
Gel	90 sks	
Defoamer LD-8	1 Pail	

	HOURS RUN	MUD WT. (kg/m³)	VISCOSITY (sec/qt)	PLASTIC VISC. (mPa·s)
	8.00	1040	1035	1720

METERS DRILLED

FROM	TO	M. DRLD	ROTARY R.P.M.	W.O.B. (kN)
3101.00	3135.00	D	15/110	20-35

CIRCULATION PRESSURE (kPa)	PUMP NO. 1: LINER SIZE (mm)	S.P.M.	PUMP NO. 2: LINER SIZE (mm)	S.P.M.
15000	152	75	152	75

REDUCED PUMP SPEED: 4800 kPa @ 75 S.P.M.

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
3089.80	29.5	336.50
3089.00	29.2	336.30

TIME LOG

6:00	1:00	1.00	2	Drill fr/3101m-3106m	
1:00	1:15	0.25	7	Rig Service and Function Annular 24/24	
1:15	7:30	6.25	2	Drill fr/3106m-3125m	
7:30	8:00	0.50	16	Accumulated M.W.D. Survey's and Directional Work	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE	MAN HRS	CREW HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.S.P.
Wade Goddard	8.00	9.5		186000.00	Weekend Awareness	

RATE SCHEDULE: REGULAR / REPAIR / INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	8.00	WG		
Derrickman	651-368-064	Jesse Goddard	8.00	JG		
Motorman	652-342-416	Jonathan Greeve	8.00	JG		
Floorman	505-422-253	Rory Mitchell	8.00	RM		
Floorman	729-975-003	Daniel Sampson	8.00	DS		
Leaseman	639-016-237	Robert Cramer	8.00	RC		
Rig Manager	719-408-484	Kevin Vig		KV		
Top Drive	638-977-702	Sheldon Langley		SL		

BIT RECORD

NO.	BIT	I.D. (mm)	LENGTH (m)
1	Bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20	Drill Collars	127	184.14
1	Jars	178	4.94
19	Drill Collars	127	172.70
97	D.P.	114mm	2754.42
2	D.P.	Monels	19.05
		WELL TOTAL	-29.80
		TOTAL	3143.40

BIT NO.	19
SIZE	311
IADC CODE	6 4 7
MFG.	H.C.
TYPE	HR-P88
SERIAL NO.	6225465
JETS	6 P E N
DEPTH OUT (m)	
DEPTH IN (m)	3040.00
TOTAL METRES DRILLED (m)	103.00
TOTAL HOURS RUN	32.00
CUTTING RING UNIT	I O B G L

HOLE CONDITION

HOLE DRAG	45000 up/25000 dwn
TORQUE AT BOTTOM	16580 ft-lbs
FILL ON BOTTOM (m)	
WT. OF DC	25000.00
WT. OF STRING	137000.00

MUD RECORD

MUD TYPE: Water Based / Oil Based		Max Flowline Temp =
Time	10:00	12:00
Density (kg/m³)	1040	1040
Viscosity (sec/qt)	49	50
W.L. (cm3)		
pH	9.5	10.0
P.V.T. @	118m3	137.6m3

MUD MATERIAL ADDED		SOLIDS CONTROL
PRODUCT	AMOUNT x UNIT	
Caustic Soda	10sks.	
Defoamer LD-8	1Pail	
Hydrated Lime	6sks.	
Lignite	20sks.	
Milgel	70sks.	
Milpac	3sks.	
Natural Gel	80sks.	
Polydrill	2sks.	

	HOURS RUN	MUD WT. (kg/m³)	VISCOSITY (sec/qt)	PLASTIC VISC. (mPa·s)
	8.00	1040	1035	1720

METERS DRILLED

FROM	TO	M. DRLD	ROTARY R.P.M.	W.O.B. (kN)
3125.00	3143.00	D	15/110	19-35

CIRCULATION PRESSURE (kPa)	PUMP NO. 1: LINER SIZE (mm)	S.P.M.	PUMP NO. 2: LINER SIZE (mm)	S.P.M.
15200	152	75	152	75

REDUCED PUMP SPEED: 5900 kPa @ 75 S.P.M.

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
3106.90	28.7	336.20
3117.80	28.5	336.40

TIME LOG

8:00	10:30	2.50	2	Drill fr. 3125m - 3131m	
10:30	11:15	0.75	23	(Maintenance) Change head & liner on F-1600 mud pump #2	
11:15	11:45	0.50	2	Drill fr. 3131m - 3134m	
11:45	12:00	0.25	7	Rig Service, PIT pipe rams(7 secs)	
12:00	16:30	3.50	2	Drill fr. 3134m - 3143m	
16:30	16:00	0.50	10	Deviation Surveys(Accum.)	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE	MAN HRS	CREW HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.S.P.
Barry Verheist	8.00	9.5		184000.00	Slip & Falls	

RATE SCHEDULE: REGULAR / REPAIR / INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-369-910	Barry Verheist	12.00	BV		
Derrickman	647-462-403	Dave Makowsky	12.00	DM		
Motorman	735-714-230	Chantry Vig	12.00	CV		
Floorman	713-956-481	Gary Kennedy	12.00	GK		
Floorman	726-907-788	Cory Kube	12.00	CK		
Leaseman	739-300-069	Justin Craigen	12.00	JC		

BIT RECORD

NO.	BIT	I.D. (mm)	LENGTH (m)
1	Bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20	Drill Collars	127	184.14
1	Jars	178	4.94
19	Drill Collars	127	172.70
97	D.P.	114mm	2754.42
2	D.P.	Monels	19.05
		WELL TOTAL	
		TOTAL	3184.00

BIT NO.	19
SIZE	311
IADC CODE	6 4 7
MFG.	H.C.
TYPE	HR-P88
SERIAL NO.	6225465
JETS	6 P E N
DEPTH OUT (m)	3184.00
DEPTH IN (m)	3040.00
TOTAL METRES DRILLED (m)	114.00
TOTAL HOURS RUN	36.50
CUTTING RING UNIT	I O B G L

HOLE CONDITION

HOLE DRAG	45000 up/29000 dwn
TORQUE AT BOTTOM	16580 ft-lbs
FILL ON BOTTOM (m)	
WT. OF DC	25000.00
WT. OF STRING	137000.00

MUD RECORD

MUD TYPE: Water Based / Oil Based		Max Flowline Temp = 88.0 C
Time	16:00	21:00
Density (kg/m³)	1040	1040
Viscosity (sec/qt)	51	53
W.L. (cm3)		
pH	10.0	10.1
P.V.T. @	132.8 m3	127.1m3

MUD MATERIAL ADDED		SOLIDS CONTROL
PRODUCT	AMOUNT x UNIT	
Milgel	28 sks	

	HOURS RUN	MUD WT. (kg/m³)	VISCOSITY (sec/qt)	PLASTIC VISC. (mPa·s)
	8.00	1040	1035	1700

METERS DRILLED

FROM	TO	M. DRLD	ROTARY R.P.M.	W.O.B. (kN)
3143.00	3184.00	D	15/110	20-35

CIRCULATION PRESSURE (kPa)	PUMP NO. 1: LINER SIZE (mm)	S.P.M.	PUMP NO. 2: LINER SIZE (mm)	S.P.M.
16300	152	75	152	75

REDUCED PUMP SPEED: 5100 kPa @ 75 S.P.M.

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
3127.30	28	336.00

TIME LOG

16:00	19:00	3.00	2	Drill fr/3143m- 3148m	
19:00	19:45	0.75	29	Dir. Work/M.W.D. Failure,No Pulses	
19:45	21:15	1.50	2	Drill fr/3148m-3184m	
21:15	21:30	0.25	29	Dir. Work/Attempt To Get M.W.D. Pulses.	
21:30	22:15	0.75	5	Circulate Up Sample and Work Pipe	
22:15	22:30	0.25	7	Rig Service and Function H.C.R. 4/4	
22:30	24:00	1.50	5	Hoist For M.W.D.Failure, Flow Check/Circulate and Cool Tools @ 3020m,2595m	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE	MAN HRS	CREW HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.S.P.
Wade Goddard	8.00	9.5		190000.00		

RATE SCHEDULE: REGULAR / REPAIR / INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	4.00	WG		
Derrickman	651-368-064	Jesse Goddard	4.00	JG		
Motorman	652-342-416	Jonathan Greeve	4.00	JG		
Floorman	505-422-253	Rory Mitchell	4.00	RM		
Floorman	729-975-003	Daniel Sampson	4.00	DS		
Leaseman	639-016-237	Robert Cramer	4.00	RC		

ETS SERIAL NUMBER: PREC629 _20050030_1A

CHIMO ETS SOFTWARE VERSION:

CAODC | **Chimo Equipment** — A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00	RIG RELEASE:	JOB NO.: 22	AFE:
LICENCE NO: MC-7	WELL NAME AND NO.: a-92-A / 92-J-12 MC-7		
OPERATOR: Western Geopower Corp		CONTRACTOR: Precision Drilling	
SURFACE LOCATION: a-92-A / 82-J-12		UNIQUE ID: b-1-H / 82-J-12	
SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva		SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig	

DATE	31-Jan-2005
RIG NO.	620 E
FUEL @ 8:00 — RIG	39170
WEATHER — TEMPERATURE	
CURRENT CONDITION	Snowing
WIND DIRECTION	Calm
ROAD	Slick

Last casing / tubing or liner: L-80; 6.31 / 129.00; 8.23 / 870.00

Liner size	Grade	Pump type	No.	Pump	Manufacturer	
29.00	SS-95	63.00 / 196.00 / 5"XH	170	F-1600	BPMMP	305
38.00	SS-95	87.08 / 168.00 / 6"XH	180	F-1600	BPMMP	305

WELL TYPE	Geothermal
RE-ENTRY	☐ Yes ☑ No
KB TO GROUND ELEV.	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	31-Jan-2005
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ Yes ☐ No
RIG SAFETY DAYS	336.00

Shale shaker(s): Type Derrick; screens changed ☐ Yes ☑ No; Top 100 / 100; Middle 100 / 100; Bottom 100 / 100. Totals: 8.00, 8.00, 8.00, 24.00

Time – Hrs

Oper	3	4	5	6	7	9	10	20	22
Morn				7.00	0.25			0.75	
Day			1.50	3.25	0.25	0.75			0.25
Eve	4.25		0.75	2.25	0.25		0.50		
Total	4.25		2.25	14.50	0.75	0.75	0.50	0.75	0.25

MORNING TOUR (0:00 to 8:00)

Drilling assembly

No.	Item	O.D. (mm)	Length (m)
1	bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	176	4.94
19		127	172.70
97	D.P.		2764.42
2	D.P.		19.06
	Kelly down		
	Total		3164.00
	Wt. of DC		25000.00
	Wt. of string		137000.00

Bit record

Bit No.	19	20
Size	311	311
IADC code	6 4 7	6 4 7
Mfg.	H.C.	H.C.
Type	HR-P66	HR-P66
Serial No.	6225465	5019611
Jets	O P E N	O P E N
Depth out (m)	3154.00	
Depth in (m)	3040.00	3154.00
Total meters drilled	114.00	
Total hours run	38.50	
Dull grading	4 5 FC H E 1 NO DTF 3.12	

Hole condition — Hole drag: ; Torque at bottom: ; Fill on bottom (m):

Mud record — Mud type: ☑ Water based ☐ Oil based; Max Flowline Temp =

Meters drilled: From 3164.00

Circulation: Pump No. 1 liner 162; Pump No. 2 liner 162

Time log From	To	Hrs	Code	Details of operations in sequence and remarks
0:00	6:15	6.25	6	Hoist For M.W.D. Failure, Flow Check and Circulate/Cool Tools @ 2113m, 1442m, 912m
6:15	7:00	0.75	20	Dir. Work/Retrieve M.W.D. and Install New and Surface Test
7:00	7:45	0.75	6	M/U Bit#20, R.I.H.
7:45	8:00	0.25	7	Rig Service and Function Annular 24/24

Driller signature: Wade Goddard. Max exp hookload: 160000.00. Safety topic: Handling B.H.A.

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	633-628-706	Wade Goddard	8.00	WG	☐	☑
Derrickman	651-368-064	Jesse Goddard	8.00	JG	☐	☑
Motorman	652-342-416	Jonathan Greeve	8.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☐	☑
Floorman	729-975-003	Daniel Sampson	8.00	DS	☐	☑
Leaseman	639-016-237	Robert Cramer	2.00	RC	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-877-702	Sheldon Langley		SL	☐	☑

Rate schedule: ☑ Regular

DAY TOUR (8:00 to 16:00)

No.	Item	O.D. (mm)	Length (m)
1	bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	173	4.94
19		127	172.70
97	D.P.		2754.42
2	D.P.		19.05
	Kelly down		
	Total		3164.20
	Wt. of DC		25000.00
	Wt. of string		137000.00

Bit record: Bit No. 20; Size 311; IADC code 6 4 7; Mfg. H.C.; Type HR-P66; Serial No. 5019611; Jets O P E N; Depth in (m) 3154.00

Mud record — Mud type: ☑ Water based ☐ Oil based; Max Flowline Temp =

Mud material added — Product	Amount & unit
Caustic Soda	2sks.
Ligco	5sks.
Milgel	77sks.
Milpac	3sks.
Polydrill	1sks.

Meters drilled: From 3164.00. Circulation pressure 14200; Pump No. 1: 162 / 75; Pump No. 2: 162 / 75. Reduced pump speed: 75

From	To	Hrs	Code	Details of operations in sequence and remarks
8:00	8:45	0.75	9	Cut Off Drill Line(monitor hole)
8:45	9:00	0.25	22	Service (Top Drive)
9:00	14:15	5.25	6	R.I.H., flow check @ 0m, 400, 910m
14:15	15:45	1.50	5	Cool MWD(Accum.), Temp. vrs Depth: 71 @ 916m, 86 @ 1165m, 80 @ 1413m, 89 @ 1661m, 97 @ 1956m, 99 @ 2244m, 107 @ 2496m.
15:45	16:00	0.25	7	Rig Service, F/T pipe rams(7 secs)

Driller signature: Barry Verhelst. Max exp hookload: 118000.00. Safety topic: Slip & cut

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	642-389-910	Barry Verhelst	12.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☐	☑
Floorman	713-959-461	Gary Kennedy	12.00	GK	☐	☑
Floorman	726-907-769	Cory Kube	12.00	CK	☐	☑
Leaseman	739-300-069	Justin Craigen	12.00	JC	☐	☑

Rate schedule: ☑ Regular

EVENING TOUR (16:00 to 24:00)

No.	Item	O.D. (mm)	Length (m)
1	bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	176	4.85
19		127	172.70
98	D.P.		2783.03
0	D.P.		0.00
	Kelly down		0.00
	Total		3173.64
	Wt. of DC		25000.00
	Wt. of string		137000.00

Bit record: Bit No. 20; Size 311; IADC code 6 4 7; Mfg. H.C.; Type HR-P66; Serial No. 5019611; Jets O P E N; Depth in (m) 3154.00; Total meters drilled 12.00; Total hours run 4.25

Hole condition — Hole drag: 37-44Up/21-25Down(Sliding); Torque at bottom: 16,560-17,402 ft/lbs.

Mud record — Mud type: ☑ Water based ☐ Oil based; Max Flowline Temp = 67.4 C

Time	18:00	21:00	23:00
Density	1036	1040	1045
Funnel vis.	53	54	53
pH	9.1	9.4	9.4
PVT	124.7m3	133.6m3	136.3m3

Mud material added — Product	Amount & unit
Hydrated Lime	6 sks
Monpac	3 sks

Solids control: hours run 6.00; 1040; 1036; 1725

Meters drilled: From 3164.00 To 3166.00 (D); Rotary RPM 15/110; 20-35. Circulation pressure 16400; Pump No. 1: 152 / 75; Pump No. 2: 152 / 75. Reduced pump speed: 6232 @ 75 @ 3169.00

Deviation survey — Depth (m)	Deviation	Direction
3139.50	28.2	334.90
3147.20	28.7	334.90

From	To	Hrs	Code	Details of operations in sequence and remarks
16:00	17:15	1.25	6	R.I.H. fr. 2500m - 2932m
17:15	18:00	0.75	5	Cool MWD(Accum.), Temp vrs Depth: 109 @ 2761m, 107 @ 2932m, 100 @ 3104m.
18:00	19:00	1.00	6	Wash fr. 2932m - 3154m
19:00	22:00	3.00	2	Pattern bit & drill fr/3154m-3163m
22:00	22:15	0.25	7	Rig Service and Function H.C.R. 4/4
22:15	23:30	1.25	2	Drill fr/3163m-3166m
23:30	24:00	0.50	10	Accumulated M.W.D. Survey's and Directional Work

Driller signature: Wade Goddard. Max exp hookload: 164000.00

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	633-628-706	Wade Goddard	4.00	WG	☐	☑
Derrickman	651-368-064	Jesse Goddard	4.00	JG	☐	☑
Motorman	652-342-416	Jonathan Greeve	4.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☐	☑
Floorman	729-975-003	Daniel Sampson	4.00	DS	☐	☑
Leaseman	639-016-237	Robert Cramer	4.00	RC	☐	☑

Rate schedule: ☑ Regular

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE

LICENCE NO: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | RANGE 20: b-1-H / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 01-Feb-2005 | RIG NO.: 620 E | FUEL @ 8:00 | RIG: 3143 BOILER

TEMPERATURE: CURRENT CONDITION: Cloudy | WIND DIRECTION: Calm | ROAD: Slick

LAST CASING TUBING SIZE | DRILL

SURVEYOR

LINEAR MASS (kg/m)	GRADE	WALL (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE (m)
								6.31 / 129.60
					L-80			6.23 / 870.00
26.06	SS-95	53.60	168.00	5"XH	170	F-1600	BPMMP	305
35.00	SS-95	67.00	168.00	5"XH	159	F-1600	BPMMP	305

TIME - HRS

OPER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maintenance	
MORN	7.75						0.25																		8.50	
DAY	9.75						0.25																		0.75	1.25
EVE	6.75						0.25																		8.50	0.50
TOTAL	16.75						0.75																		1.75	1.75

SHALE SHAKER(S) | RENTALS/SERVICES

TOTALS	SCREENS (Optional)	Derrick	Yes	No
8.00				
8.00	TOP	100	TOP	100
8.00	MIDDLE	100	MIDDLE	100
24.00	BOTTOM	100	BOTTOM	100

WELL TYPE: Geothermal | RE-ENTRY: ☐ YES ☑ NO | KB TO GROUND ELEV.: 7.20

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 01-Feb-20-05

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 620 E

PROVINCE: BC | CAMP: ☑ YES ☐ NO | RIG SAFETY DAYS: 337.00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20	Stabilizer/String Bit Rubber	127	184.14
1	Jars	178	4.86
19	Drillpipe/Heavyweight Drillpipe	127	172.70
			0.00
	TOTAL		3189.60
WT. OF DC			25400.00
WT. OF STRING			136000.00

BIT NO.	20
SIZE	311
IADC CODE	6 4 7
MFG.	H.C.
TYPE	HR-P56
SERIAL NO.	5019611
JETS	O P E N
DEPTH OUT (m)	
DEPTH IN (m)	3154.00
TOTAL METERS DRILLED (m)	35.00
TOTAL HOURS RUN	11.50
DULL CHARACTERISTICS: T / B / IADC / LOC / S / Gage / OBC / Reason Pulled / DP or BHA	2 / 2 / WT / A / E / I / NO / TD
BIT #99 P.P. STANDS	2783.03
BIT #2 DP SINGLES	19.10
HOLE CONDITION	
HOLE DRAG	37-46klx21-25Dowms(Sticking)
TORQUE AT BOTTOM	17,402-18,244 ft/lbs.
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: ☑ Native solids ☐ Gel/Chem ☐ Salt Water	Max Flowline Temp = 68.4 C		
TIME	02:00	04:00	06:00
DENSITY (kg/m³)	1045	1035	1040
FUNNEL VIS. (sec)	56	54	55
W.L. (cm3)			
pH	9.4	9.8	9.7
P.V.T. @	149.3m3	139.8m3	133.4m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	TOTAL DISCARDED	TOTAL RETAINED	DESILTER HOURS
Ligco	20 sks				
Polydrill	2 sks	8.00	1040	1035	1720
Defoamer LD-8	1 Pail				
Caustic Soda	4 sks				
Milgel	105 sks				
Natural Gel	40 sks				

METERS DRILLED

FROM	TO		ROTARY R.P.M.	WT. ON BIT (kN)
3156.90	3189.60	D	15/110	20-35

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER (mm) | S.P.M. | PUMP NO. 2: LINER (mm) | S.P.M.

17100 | 152 | 75 | 152 | 75

REDUCED PUMP SPEED

6403 | @ | 75 | @ | 3171.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
3155.40	28.9	333.30
3167.20	29.0	332.80

DRILLER SIGNATURE: Wade Goddard | HRS. RUN: 8.00 | BOILER PSI: 9.5 | OPERATOR FUEL: 1620.00 | MAX EXP HOOKLOAD: 186000.00 | SAFETY TOPIC: | M.A.C.P.:

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

0:00	3:00	3.00	2	Drill fr/3156m-3172m	
2:00	2:15	0.25	7	Rig Service and Function Annuler 24/24	
2:15	7:30	5.25	2	Drill fr/3172m-3189m	
7:30	8:00	0.50	10	Accumulated M.W.D. Survey's and Directional Work	
				Completed P.D.'s PreSpud/Monthly Rig and Enviromental Inspection For Feb./2005	

NOTES: Precision Crews, Upon Monthly Inspection Of Fire Extinguisher Labs Were Mutters and S.C.B.A.'s Regulator was 82 x 2a Min. / 83 x 17 Min. / Pressure was 4p x 18.3 Min.

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	8.00	WG	☐ ☑
Derrickman	651-366-084	Jesse Goddard	8.00	JG	☐ ☑
Motorman	652-342-416	Jonathan Greave	8.00	JG	☐ ☑
Floorman	505-422-253	Rory Mitchell	8.00	RM	☐ ☑
Floorman	729-975-003	Daniel Sampson	8.00	DS	☐ ☑
Lasseman	639-016-237	Robert Cramer	8.00	RC	☐ ☑
Rig Manager	719-409-484	Kevin Vig		KV	☐ ☐
Top Drive	639-977-702	Sheldon Langley		SL	☐ ☑

RATE SCHEDULE: ☑ Individual ☐ Hourly ☐ Incentive | CREW A: DRIVER A | CREW B: DRIVER B | CREW SAFETY DAYS:

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20	Stabilizer/String Bit Rubber	127	184.14
1	Jars	178	4.86
19	Drillpipe/Heavyweight Drillpipe	127	172.70
			-4.96
	TOTAL		3214.28
WT. OF DC			25000.00
WT. OF STRING			136000.00

BIT NO.	20
SIZE	311
IADC CODE	6 4 7
MFG.	H.C.
TYPE	HR-P56
SERIAL NO.	5019611
JETS	O P E N
DEPTH OUT (m)	
DEPTH IN (m)	3154.00
TOTAL METERS DRILLED (m)	60.00
TOTAL HOURS RUN	17.25
DULL CHARACTERISTICS: T / B / IADC / LOC / S / Gage / OBC / Reason Pulled / DP or BHA	
BIT #99 P.P. STANDS	2611.71
BIT #2 DP SINGLES	15.50
HOLE CONDITION	
HOLE DRAG	45000 up/25000 dwn
TORQUE AT BOTTOM	18244 ft-lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: ☑ Native solids ☐ Gel/Chem ☐ Salt Water	Max Flowline Temp = 68.6		
TIME	10:00	12:30	14:00
DENSITY (kg/m³)	1040	1040	1040
FUNNEL VIS. (sec)	50	51	53
W.L. (cm3)			
pH	9.5	9.5	10.0
P.V.T. @	139.6m3	146.6m3	131.3m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	TOTAL DISCARDED	TOTAL RETAINED	DESILTER HOURS
Caustic Soda	6sks.				
Defoamer LD-8	1Pail	8.00	1040	1035	1720
Hydrated Lime	4sks.				
Ligco	8sks.				
Milgel	140sks.				
Black Earth	22sks.				
Monpac	3sks.				
Polydrill	2sks.				

METERS DRILLED

FROM	TO		ROTARY R.P.M.	WT. ON BIT (kN)
3189.60	3214.00	D	15/110	20-35

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER (mm) | S.P.M. | PUMP NO. 2: LINER (mm) | S.P.M.

15500 | 152 | 75 | 152 | 75

REDUCED PUMP SPEED

6200 | @ | 75 | @ | 3190.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
3178.60	29.8	333.10
3184.90	30.7	332.80
3196.30	30.7	333.80

DRILLER SIGNATURE: Barry Vorheist | HRS. RUN: 9.00 | BOILER PSI: 9.5 | OPERATOR FUEL: 1620.00 | MAX EXP HOOKLOAD: 186000.00 | SAFETY TOPIC: | M.A.C.P.:

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

8:00	8:30	0.50	2	Drill fr. 3189m - 3192m	
8:30	9:48	1.25	22	(Maintenance) on F-1900 pump #1	
9:45	12:00	2.25	2	Drill fr. 3192m - 3201m	
12:00	12:15	0.25	7	Rig Service, F/T pipe rams(7 secs)	
12:15	16:15	3.00	2	Drill fr. 3201m - 3214m	
16:15	16:00	0.75	10	Deviation Surveys(Accum.)	

NOTES: Precision Crews, Standard deadline tests, back up crews A-4/Min. Completed monthly CAODC rig checklist, Brobed crown, NT Engine Hills.

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-810	Barry Vorheist	12.00	BV	☐ ☑
Derrickman	647-452-993	Dave Makowsky	12.00	DM	☐ ☑
Motorman	735-714-236	Chantry Vig	12.00	CV	☐ ☑
Floorman	713-959-461	Gary Kennedy	12.00	GK	☐ ☑
Floorman	726-907-769	Cory Kube	12.00	CK	☐ ☑
Lasseman	739-300-069	Justin Creigan	12.00	JC	☐ ☑

RATE SCHEDULE: ☑ Individual ☐ Hourly ☐ Incentive | CREW A: DRIVER A | CREW B: DRIVER B | CREW SAFETY DAYS:

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	196	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20	Stabilizer/String Bit Rubber	127	184.14
1	Jars	178	4.86
19	Drillpipe/Heavyweight Drillpipe	127	172.70
			0.00
	TOTAL		3235.00
WT. OF DC			25000.00
WT. OF STRING			136000.00

BIT NO.	20
SIZE	311
IADC CODE	6 4 7
MFG.	H.C.
TYPE	HR-P56
SERIAL NO.	5019611
JETS	O P E N
DEPTH OUT (m)	
DEPTH IN (m)	3154.00
TOTAL METERS DRILLED (m)	82.00
TOTAL HOURS RUN	26.00
DULL CHARACTERISTICS: T / B / IADC / LOC / S / Gage / OBC / Reason Pulled / DP or BHA	
BIT #99 P.P. STANDS	2640.94
BIT #2 DP SINGLES	19.15
HOLE CONDITION	
HOLE DRAG	38-46klx21-25Dowms(Sticking)
TORQUE AT BOTTOM	18,244-19,065 ft/lbs.
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: ☑ Native solids ☐ Gel/Chem ☐ Salt Water	Max Flowline Temp = 64.8 C		
TIME	18:00	21:00	23:00
DENSITY (kg/m³)	1040	1045	1045
FUNNEL VIS. (sec)	53	53	58
W.L. (cm3)			
pH	10.0	9.8	9.7
P.V.T. @	136.1m3	138.3m3	140.6m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	TOTAL DISCARDED	TOTAL RETAINED	DESILTER HOURS
Monpac	4 sks				
Hydrated Lime	4 sks	8.00	1040	1035	1720

METERS DRILLED

FROM	TO		ROTARY R.P.M.	WT. ON BIT (kN)
3214.00	3236.90	D	15/110	20-35

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER (mm) | S.P.M. | PUMP NO. 2: LINER (mm) | S.P.M.

17900 | 152 | 75 | 152 | 75

REDUCED PUMP SPEED

6264 | @ | 75 | @ | 3236.90

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
3203.84	31.4	333.80
3213.30	31.4	335.80

DRILLER SIGNATURE: Wade Goddard | HRS. RUN: 8.00 | BOILER PSI: 9.5 | OPERATOR FUEL: | MAX EXP HOOKLOAD: 186000.00 | SAFETY TOPIC: | M.A.C.P.:

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

16:00	20:30	4.50	2	Drill fr/3214m-3229m	
20:30	20:45	0.25	7	Rig Servicesand Function H.C.R. 4/4	
20:45	21:15	0.50	22	(Maintenance) on F-1900 Pump#1	
21:15	23:30	2.25	2	Drill fr/3229m-3236m	
23:30	24:00	0.50	10	Accumulated M.W.D. Survey's and Directional Work	

NOTES: Precision Crews Bonus

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	4.00	WG	☐ ☑
Derrickman	651-366-084	Jesse Goddard	4.00	JG	☐ ☑
Motorman	652-342-416	Jonathan Greave	4.00	JG	☐ ☑
Floorman	505-422-253	Rory Mitchell	4.00	RM	☐ ☑
Floorman	729-975-003	Daniel Sampson	4.00	DS	☐ ☑
Lasseman	639-016-237	Robert Cramer	4.00	RC	☐ ☑

RATE SCHEDULE: ☑ Individual ☐ Hourly ☐ Incentive | CREW A: DRIVER A | CREW B: DRIVER B | CREW SAFETY DAYS:

ETS SERIAL NUMBER: PREC620_20050101_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Vance Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | LOG NO: 22 | A/E

LICENCE NO: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: a-92-A / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 02-Feb-2005 | RIG NO: 620 E | FUEL @ 24:00: 22967 BOILER

WEATHER: TEMPERATURE: CURRENT -28 | CONDITION: Snow | WIND DIRECTION: Calm | ROAD: Good

LAST CASING / TUBING OR LINER

										6.31	129.90
						L-80			5.23	670.00

		29.00	S3-95	83.09	198.00	5"XH	170	F-1600	BPM/MP	305		
		38.00	S3-95	67.00	148.00	5"XH	150	F-1600	BPM/MP	395		

TIME + HRS

	OPER	ACTUAL	W.ORDER	COMMIS	DRILL	WORK	SECTION	TRIP	TOTAL	CIRC	CIRC	COND	REAM	WASH	SURV	OTHER	MUD WT. IN	MUD WT. OUT	FVT
MORN	5.50			1.25	0.50	0.25			0.50										
DAY	7.50					0.25			0.50								9.25		
EVE	4.75			1.25	1.25	0.25			0.25										
TOTAL	17.25			2.50	2.50	0.75			1.25								9.25		

SHALE SHAKER(S) | RENTALS/SERVICES

	TYPE	Derrick	NEW
8.00	SCREENS CHANGED		YES / NO
8.00	TOP	100	TOP 100
8.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.86
19		127	172.79
101	DP	5 INCH S	2858.40
0	DP	SINGLES	0.00
	HWDP/DCM		0.00
	TOTAL		3264.00

BIT NO. 20 | SIZE 311 | IADC CODE G 4 7 | MFG H.C. | TYPE HR-P66 | SERIAL NO 5019611 | JETS O P E N | DEPTH OUT (m) 3264.00 | TOTAL METERS DRILLED (m) 100.00 | TOTAL HOURS RUN 29.50

CUTTING STRUCTURE: IN | OUT | DULL | LOC | B | GAUGE | OC | RANDOM | PULL / TORQ | REASON

HOLE CONDITION: HOLE DRAG 28-44 Up/21-25 Down(Sliding) | TORQUE AT BOTTOM 18,244-19,086 ft/lbs. | FILL ON BOTTOM (m) 0.00

WT. OF DC	26000.00	
WT. OF STRING	139000.00	

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED | Max Flowline Temp = 58.0 C

TIME	02:00	04:00	08:00
DENSITY kg/m³	1040	1040	1040
FUNNEL VIS. (sec)	64	64	66
W.L. (cm3)			
pH	9.7	9.6	9.6
PV/YP	144.9m3	139.4m3	138.4m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Milgel	140 sks
Polydrill	3 sks
Caustic Soda	1 sk
Walnut Shells	15 sks

SOLIDS CONTROL

HOURS RUN			
	8.00	1040	1038	1720

METERS DRILLED

FROM	TO	BIT NO.	ROTARY HRS	ROTARY RPM
3236.00	3264.00	D	16/116	20-35

CIRCULATION (TYPES 1, 2, 3) | PUMP NO. 1 | PUMP NO. 2

PRESS (kPa)	SPM	LINER SIZE (mm)	PRESS (kPa)	SPM	LINER SIZE (mm)
17000	152	76	152	76	

REDUCED PUMP SPEED

PRESS (kPa)	SPM	LINER SIZE (mm)
5364.00	76	2348.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
3224.30	31.2	337.06
3223.00	31	337.20

TIME LOG

FROM	TO	HRS	CODE
0:00	4:00	4.00	2
4:00	4:48	0.75	9
4:45	5:15	0.50	8
5:15	5:45	0.50	5
5:45	6:00	0.25	7
6:00	7:30	1.50	2
7:30	8:00	0.50	10

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	DETAILS
0:00	4:00	Drill fr3236m-3249m
4:00	4:48	Circulate and Work Pipe
4:45	5:15	Pull 5 Stands to 3106m
5:15	5:45	Wash in fr3106m to 8m.
5:45	6:00	Rig Service and Function Annular 24/24
6:00	7:30	Drill fr3249m-3264m
7:30	8:00	Accumulated M.W.D. Survey's and Directional Work

NOTES

DRILLER SIGNATURE: Wade Goddard | OPERATOR FUEL | MAX EXP HOOKLOAD: 191000.00 | SAFETY TOPIC: Review Hazard I.D.'s | M.A.C.P.

RATE SCHEDULE: REGULAR / SENIOR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	833-628-705	Wade Goddard	8.00	WG	☐ ☑
Derrickman	651-396-084	Jesse Goddard	8.00	JG	☐ ☑
Motorman	852-342-416	Jonathan Greeve	8.00	JG	☐ ☑
Floorman	908-422-253	Rory Mitchell	8.00	RM	☐ ☑
Floorman	729-975-003	Daniel Sampson	8.00	DS	☐ ☑
Leaseman	639-015-237	Robert Cramer	8.00	RC	☐ ☑
Rig Manager	715-408-484	Kevin Vig		KV	☐ ☑
Top Drive	639-977-702	Sheldon Langley		SL	☐ ☑

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.86
19		127	172.79
101	DP	5 INCH S	2858.40
2	DP	SINGLES	19.30
	HWDP/DCM		-2.36
	TOTAL		3275.00

BIT NO. 20 | SIZE 311 | IADC CODE G 4 7 | MFG H.C. | TYPE HR-P66 | SERIAL NO 5019611 | JETS O P E N | DEPTH OUT (m) 3264.00 | TOTAL METERS DRILLED (m) 122.00 | TOTAL HOURS RUN 36.50

CUTTING STRUCTURE: IN | OUT | DULL | LOC | B | GAUGE | OC | RANDOM | PULL / TORQ | REASON

HOLE CONDITION: HOLE DRAG 49000 up/26000 dwn | TORQUE AT BOTTOM 19535 ft-lbs | FILL ON BOTTOM (m) 139000.00

WT. OF DC	26000.00	
WT. OF STRING	139000.00	

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED | Max Flowline Temp = [illegible]

TIME	10:00	12:00	14:00
DENSITY kg/m³	1040	1040	1040
FUNNEL VIS. (sec)	62	63	64
W.L. (cm3)			
pH	9.6	10.0	10.0
PV/YP	146.9m3	147.2m3	137.4m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	9sks.
Defoamer LD-8	1pail
Hydrated Lime	4sks.
Lignco	20sks.
Milgel	35sks.
Monpac	4sks.
Natural Gel	70sks.
Polydrill	2sks.

SOLIDS CONTROL

HOURS RUN			
	8.00	1040	1038	1720

METERS DRILLED

FROM	TO	BIT NO.	ROTARY HRS	ROTARY RPM
3264.00	3275.00	D	16/116	20-35

CIRCULATION (TYPES 1, 2, 3) | PUMP NO. 1 | PUMP NO. 2

PRESS (kPa)	SPM	LINER SIZE (mm)	PRESS (kPa)	SPM	LINER SIZE (mm)
17100	152	76	152	76	

REDUCED PUMP SPEED

PRESS (kPa)	SPM	LINER SIZE (mm)
6300	76	2387.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
3241.70	31	337.30
3262.50	30.2	336.90

TIME LOG

FROM	TO	HRS	CODE
8:00	9:30	1.50	2
9:30	9:45	0.25	21
9:45	10:00	0.25	7
10:00	10:30	0.50	2
10:30	11:00	0.50	10

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	DETAILS
8:00	9:30	Drill fr. 3264m - 3288m
9:30	9:45	B.O.P. drill w/crew, well secure & diverted in 56 secs
9:45	10:00	Rig Service, F/T pipe rams(7 secs)
10:00	10:30	Drill fr. 3288m - 3278m
10:30	11:00	Deviation Surveys(Accum.)

NOTES

DRILLER SIGNATURE: Barry Verheist | OPERATOR FUEL | MAX EXP HOOKLOAD: 189000.00 B.O.P. drill | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR / SENIOR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	642-386-810	Barry Verheist	8.00	BV	☐ ☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐ ☑
Motorman	735-714-230	Chantcy Vig	8.00	CV	☐ ☑
Floorman	713-958-961	Gary Kennedy	8.00	GK	☐ ☑
Floorman	726-907-769	Cory Kube	8.00	CK	☐ ☑
Leaseman	739-300-089	Justin Craigen	8.00	JC	☐ ☑

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.30
1	Motor	196	7.99
1	UBHO	197	0.69
1	Float Sub	195	0.59
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.86
19		127	172.79
102	DP	5 INCH S	2887.26
1	DP	SINGLES	9.69
	HWDP/DCM		-6.00
	TOTAL		3291.00

BIT NO. 20 | SIZE 311 | IADC CODE G 4 7 | MFG H.C. | TYPE HR-P66 | SERIAL NO 5019611 | JETS O P E N | DEPTH OUT (m) 3291.00 | TOTAL METERS DRILLED (m) 137.00 | TOTAL HOURS RUN 41.25

CUTTING STRUCTURE: IN | OUT | DULL | LOC | B | GAUGE | OC | RANDOM | PULL / TORQ | REASON

HOLE CONDITION: HOLE DRAG 44 up / 23 dn (Sliding) | TORQUE AT BOTTOM 19535 ft/lbs | FILL ON BOTTOM (m) 141000.00

WT. OF DC	26000.00	
WT. OF STRING	141000.00	

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED | Max Flowline Temp = 58.0

TIME	17:30	20:00	22:00
DENSITY kg/m³	1040	1040	1040
FUNNEL VIS. (sec)	67	63	63
W.L. (cm3)			
pH	9.8	9.7	9.6
PV/YP	138.7m3	137.5m3	139.1m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Lignco	18 sks
Milpac	2 sks
Caustic Soda	3 sks
Hydrated Lime	1 sk
Nut Plug	35 sks
Milgel	25 sks

SOLIDS CONTROL

HOURS RUN			
	8.00	1040	1038	1720

METERS DRILLED

FROM	TO	BIT NO.	ROTARY HRS	ROTARY RPM
3275.00	3291.00	D	16/116	20/35

CIRCULATION (TYPES 1, 2, 3) | PUMP NO. 1 | PUMP NO. 2

PRESS (kPa)	SPM	LINER SIZE (mm)	PRESS (kPa)	SPM	LINER SIZE (mm)
14500	152	76	152	76	

REDUCED PUMP SPEED

PRESS (kPa)	SPM	LINER SIZE (mm)

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
3261.40	29.7	336.60
3278.00	28.9	336.30

TIME LOG

FROM	TO	HRS	CODE
16:00	20:45	4.75	2
20:45	21:00	0.25	10
21:00	21:15	0.25	7
21:15	22:30	1.25	5
22:30	24:00	1.50	8

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	DETAILS
16:00	20:45	Drill Fr3278m - 3291m
20:45	21:00	Deviation Survey
21:00	21:15	Rig Service & Function H.C.R. 4/4 secs
21:15	22:30	Condition Mud & Circ.
22:30	24:00	Pull Out Of Hole & Flow Checks @3280m, 3144m,

NOTES

DRILLER SIGNATURE: Bill Mills | OPERATOR FUEL | MAX EXP HOOKLOAD: 191000.00 | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR / SENIOR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	716-324-181	Bill Mills	8.00	BM	☐ ☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☐ ☑
Motorman	722-872-781	Dwayne Fry	8.00	DF	☐ ☑
Floorman	734-615-095	Lyle Todhunter	8.00	LT	☐ ☑
Leaseman	738-300-089	Justin Craigen	8.00	JC	☐ ☑
Leaseman	731-865-071	Ben Lumb	8.00	BL	☐ ☑

1 TS SERIAL NUMBER: PREC620_20050102_1A

CHIMO ETS SOFTWARE VERSION:

Based on the CAODC ETS file standard

Chimo Equipment — A Vanco Company

EFFECTIVE	RIG RELEASE	JOB NO	AFE
2004-11-30 20:00		22	
LICENCE NO.	WELL NAME AND NO.		
MC-7	a-92-A / 92-J-12 MC-7		
OPERATOR		CONTRACTOR	
Western Geopower Corp		Precision Drilling	
SURFACE LOCATION		UNIQUE ID.	
a-92-A / 92-J-12		b-1-H / 92-J-12	
SIGNATURE OF OPERATOR'S REPRESENTATIVE		SIGNATURE OF CONTRACTOR'S REPRESENTATIVE	
Russ Silva		Kevin Vig	

DAILY CHECKS — OPR / RM

DATE 03-Feb-2005 | RIG NO 620 E | FUEL @ 8:00 | RD 29289 BOILER

TEMPERATURE 2 | CURRENT CONDITION Rain | WIND DIRECTION Calm | ROAD Good

LAST CASING TUBING OR LINER

												5.31	128.00
										L-80		5.23	670.50
					29.00	SS-95	53.00	166.00	5"XH	170	F-1600	BPM/MP	305
					30.00	SS-95	67.00	166.00	5"XH	150	F-1600	BPM/MP	305

TIME HRS

	OPER	TRIP	SERVICE	REPAIR	SURVEY	DRLG	RIG MOVE	RIG UP/DOWN	CUT DRLG LINE	LOST TIME	TEST BOPE	TEST CSG	DEV SURVEY	FISHING	SAFETY MTG	Hold B.O.P. Drill
MORN						7.75	0.25									
DAY						7.50	0.25									
EVE						4.50	1.25	0.25								0.25
TOTAL						19.75	1.75	0.25								0.25

SHALE SHAKER(S) — RENTAL S/E/SERVICES

	NO. 2	TYPE Derrick	NEW ☐ YES ☑ NO
6.00	SCREEN CHANGES	☐ YES	☑ NO
6.00	TOP	100	TOP 100
6.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	☐ YES ☑ NO	7.29
WELL NAME & NO.		DATE
a-92-A / 92-J-12 MC-7		03-Feb-2005
OPERATOR	CONTRACTOR	
Western Geopower Corp	Precision Drilling	
RIG MANAGER		RIG NO
Kevin Vig		620 E
PROVINCE	CAMP ☑ YES ☐ NO	RIG SAFETY DAYS
BC		339.00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	BH	311	0.30
1	Motor	156	7.99
1	UBHO	197	0.69
1	Float Sub	195	0.69
2	Monels	204	18.61
1	X/O Sub	202	0.77
20		127	184.14
1	Jars	178	4.66
19		127	172.70
102	DP	STANDS	2897.26
1	DP	SINGLES	9.89
	HWDP/DCMs	TOTAL	-6.50
			3291.00

BIT NO.	20
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P66
SERIAL NO.	5019611
JETS	
DEPTH OUT (m)	3291.00
DEPTH IN (m)	3154.00
TOTAL METERS DRILLED (m)	137.00
TOTAL HOURS RUN	41.25
CUTTING STRUCTURE	8 Gage: OC: TD

HOLE CONDITION

WT. OF DC	25000.00
WT. OF STRING	141000.00
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE ☑ WATER BASED ☐ OIL BASED ☐ SYN BASED — Max Flowline Temp =

TIME	
DENSITY (g/cc)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY R.P.M.	WOB (kN)
3291.00				

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) | SPM | PUMP NO. 2 LINER SIZE (mm) | SPM

15300 | 152 | 76 | 152 | 76

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verhelst

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

HOUR FROM	HOUR TO	HOURS	CODE	DETAILS
0:00	7:00	7.00	6	Hoist Bit #20, Circulate to cool (note & flow check @ 2927, 2521, 2279, 2010, 1990, 895, & 400m.
7:00	7:15	0.25	7	Rig Service, F/T Annular(24 secs)
7:15	8:00	0.75	6	Lay down 7 singles of HWT D.P., & hoist B.H.A.

OPERATOR FUEL | MAX BOP HOOKLOAD: 175000.00 | SAFETY TOPIC: L.D. HWT D.P. | M.A.C.P.

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	842-389-910	Barry Verhelst	8.00	BV	☑
Derrickman	647-452-803	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	713-959-461	Gary Kennedy	8.00	GK	☑
Floorman	726-907-789	Cory Kube	8.00	CK	☑
Leaseman	850-130-180	Troy Slater	8.00	TS	☑
Rig Manager	719-408-484	Kevin Vig		KV	☐
Top Drive	839-191-842	Dwayne Dixon		DD	☐

RATE SCHEDULE ☑ REGULAR ☐ ALBERTA ☐ OVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	178	4.65
9		127	81.90
109	DP	STANDS	3095.41
0	DP	SINGLES	0.00
	HWDP/DCMs	TOTAL	3255.76

BIT NO.	20
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HR-P66
SERIAL NO.	5019611
JETS	
DEPTH OUT (m)	3291.00
DEPTH IN (m)	3154.00
TOTAL METERS DRILLED (m)	137.00
TOTAL HOURS RUN	41.25
CUTTING STRUCTURE	4 5 fc a 0 Z TD

	Clean Out	222	Reed	HP 51 a	lr2249	3291.00	3291.00

HOLE CONDITION

WT. OF DC	25000.00
WT. OF STRING	141000.00
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE ☑ WATER BASED ☐ OIL BASED ☐ SYN BASED — Max Flowline Temp =

TIME	
DENSITY (g/cc)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY R.P.M.	WOB (kN)
3291.00				

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) | SPM | PUMP NO. 2 LINER SIZE (mm) | SPM

8:00	13:30	5.50	6	Pull Out Of Hole & Flow Checks @ 0 m (Lay Down Directional Tools)
13:30	13:45	0.25	7	Rig Service & Function Blind Rams 4/4 Secs
13:45	14:00	0.25	22	(Held B.O.P. Drill) W/ crewmembers well secure in 55 Secs
14:00	16:00	2.00	6	Make Up Bit & Run In Hole

152 | 152

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills

OPERATOR FUEL | MAX BOP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	718-324-181	Bill Mills	12.00	BM	☑
Derrickman	629-925-262	Rob Roth	12.00	RR	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☑
Floorman	734-615-063	Lyle Todhunter	12.00	LT	☑
Leaseman	739-306-059	Justin Craigen	12.00	JC	☑
Leaseman	731-565-071	Ben Lomb	12.00	BL	☑

RATE SCHEDULE ☑ REGULAR ☐ ALBERTA ☐ OVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	BH	311	0.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	178	4.66
9		127	81.93
109	DP	STANDS	3095.41
0	DP	SINGLES	0.00
	HWDP/DCMs	TOTAL	3255.76

BIT NO.	Clean Out
SIZE	222
IADC CODE	
MFG	Reed
TYPE	HP 51 a
SERIAL NO.	lr2249
JETS	
DEPTH OUT (m)	3291.00
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
CUTTING STRUCTURE	

HOLE CONDITION

WT. OF DC	11000.00
WT. OF STRING	95000.00
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE ☑ WATER BASED ☐ OIL BASED ☐ SYN BASED — Max Flowline Temp =

TIME	
DENSITY (g/cc)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY R.P.M.	WOB (kN)
3291.00				

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) | SPM | PUMP NO. 2 LINER SIZE (mm) | SPM

19:00	19:00	3.00	6	Run In Hole & PU 20 Singles
19:00	19:15	0.25	7	Rig Service, F/T pipe rams(7 secs)
19:15	23:45	4.50	5	Transfer drilling mud to storage & displace hole to sump water @ 1952m
23:45	24:00	0.25	6	R.I.H.

8600 | 152 | 76 | 151 | 75

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verhelst

OPERATOR FUEL | MAX BOP HOOKLOAD: 95000.00 | SAFETY TOPIC: Tripping | M.A.C.P.

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	842-389-910	Barry Verhelst	8.00	BV	☑
Derrickman	647-452-803	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	713-959-461	Gary Kennedy	8.00	GK	☑
Floorman	726-907-789	Cory Kube	8.00	CK	☑

RATE SCHEDULE ☑ REGULAR ☐ ALBERTA ☐ OVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20050103_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | TOURSHEET NO.: b-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS

OPR. | ALT

DATE: 04-Feb-2006 | RIG NO.: 620 E | FUEL @ RIG: 30656 BOILER

WEATHER: TEMPERATURE -1 | CURRENT CONDITION: Snow | WIND DIRECTION: Calm | ROAD: Slick

	O.D. (mm)	WALL (mm)	MPA	GRADE	NO. OF JOINTS	TOTAL (m) LENGTH	KB TO DSF HEAD (m)	SET AT (m)
LAST CASING							6.31	128.00
TUBING OR LINER				L-80			6.23	870.00

	DRILL PIPE SIZE (mm)	LINEAR MASS (kg/m)	GRADE	min. ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN (mm)
		29.00	S5-95	83.00	168.00	5"XH	170	F-1600	BPMMP	305
		29.00	S5-95	67.00	168.00	5"XH	160	F-1600	BPMMP	305

TIME - HRS

OPER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
MORN																									4.00
DAY																									6.00
EVE																									4.00
TOTAL																									9.00

Maintenance: 1.00 | 0.25 | 1.50

SHALE SHAKER(S) / RENTALS/SERVICES

NO.	TYPE	MFW	SCREENS CHANGED	SIZE	QTY
2	Derrick		[ ] YES [X] NO		
				TOP	100
				MIDDLE	100
				BOTTOM	100

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.54
1	Jars	178	4.86
9		127	81.93
110	D/F	STANDS	3124.00
2	D/F	SINGLES	18.27
	HELL'DOWN		0.00
	TOTAL		3393.84
WT. OF DC			11900.00
WT. OF STRING			133000.00

BIT NO: Clean Out | SIZE: 222 | IADC CODE: | MFG: Reed | TYPE: HP 51 a | SERIAL NO: lr2249 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 3291.00 | TOTAL METERS DRILLED (m): | TOTAL HOURS RUN: | CUTTING STRUCTURE: | HOLE CONDITION | HOLE DRAG: 42000 up/27000 dwn | TORQUE AT BOTTOM: 19000 ft-lbs | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: [X] WATER BASED [ ] OIL BASED | Max Flowline Temp =

TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (sec/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT	HOURS RUN	SOLIDS CONTROL

METERS DRILLED

FROM	TO	ROTARY HRS	ROTARY R.P.M.	WT. ON BIT (kDaN)
3291.00				

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (liner size mm, S.P.M.) | PUMP NO. 2 (liner size mm, S.P.M.)

11100 | 152 | 50 | 152 | 50

REDUCED PUMP SPEED: # | #

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	0:45	0.75	6	R.I.H. to 1812m
0:45	2:15	1.50	5	Displace hole to sump water @ 1812m
2:15	3:00	0.75	6	R.I.H. to 2526m
3:00	4:15	1.25	5	Displace hole to sump water @ 2526m
4:15	5:15	1.00	22	(Maintenance) on F-1600 mud pump #2
5:15	6:45	1.50	6	R.I.H. to 3291m
6:45	8:00	1.25	5	Displace hole to sump water @ 3291m

NOTES

DRILLER SIGNATURE: Barry Verheist | TOUR HRS: 8.00 | BREAK (HRS): 0.5 | STACK TEMP | OPERATOR FUEL | MAX EXP HOOKLOAD: 175000.00 | SAFETY TOPIC: Handling caustic | M.A.C.P.

MORNING TOUR 0:00 to 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	942-395-910	Barry Verheist	8.00	BV	[ ]	[X]
Derrickman	647-452-903	Dave Makowsky	8.00	DM	[ ]	[X]
Motorman	735-714-230	Chantry Vig	8.00	CV	[ ]	[X]
Floorman	713-958-461	Gary Kennedy	8.00	GK	[ ]	[X]
Floorman	726-907-769	Cory Kube	8.00	CK	[ ]	[X]
Rig Manager	719-409-484	Kevin Vig		KV	[ ]	[X]
Top Drive	639-191-842	Dwayne Dixon		DD	[ ]	[X]

RATE SCHEDULE: [X] REGULAR [ ] REPAIR [ ] STANDBY | DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.54
1	Jars	178	4.86
9		127	81.93
110	D/F	STANDS	3124.00
2	D/F	SINGLES	18.27
	HELL'DOWN		-12.64
	TOTAL		3291.00
WT. OF DC			11900.00
WT. OF STRING			135000.00

BIT NO: Clean Out | SIZE: 222 | IADC CODE: | MFG: Reed | TYPE: HP 51 a | SERIAL NO: lr2249 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 3291.00 | TOTAL METERS DRILLED (m): | TOTAL HOURS RUN: | CUTTING STRUCTURE: | HOLE CONDITION | HOLE DRAG: | TORQUE AT BOTTOM: | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: [X] WATER BASED [ ] OIL BASED | Max Flowline Temp =

TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (sec/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT	HOURS RUN	SOLIDS CONTROL
Caustic Soda	5 sks		
Milpac	1 sk		

METERS DRILLED

FROM	TO	ROTARY HRS	ROTARY R.P.M.	WT. ON BIT (kDaN)
3291.00				

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (liner size mm, S.P.M.) | PUMP NO. 2 (liner size mm, S.P.M.)

10600 | 152 | 50 | 152 | 50

REDUCED PUMP SPEED: # | #

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	13:00	5.00	5	Circulate & Pump Caustic & Hi-Vis Sweep
13:00	13:15	0.25	7	Rig Service & Function Pipe Rams/5 Secs
13:15	16:00	2.75	6	Pull Out Of Hole & Flow Checks @ 3290m, 3120m, 2130m,

NOTES

DRILLER SIGNATURE: Bill Mills | TOUR HRS: 8.00 | BREAK (HRS): 0.5 | STACK TEMP | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

DAY TOUR 8:00 to 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	12.00	BM	[ ]	[X]
Derrickman	529-928-262	Rob Roth	12.00	RR	[ ]	[X]
Motorman	722-572-781	Dwayne Fry	12.00	DF	[ ]	[X]
Floorman	734-815-065	Lyle Todhunter	12.00	LT	[ ]	[X]
Leaseman	739-308-089	Justin Craigen	12.00	JC	[ ]	[X]
Leaseman	731-685-071	Ben Lumb	12.00	BL	[ ]	[X]

RATE SCHEDULE: [X] REGULAR [ ] REPAIR [ ] STANDBY | DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.54
1	Jars	178	4.86
9		127	81.93
110	D/F	STANDS	3124.00
2	D/F	SINGLES	18.27
	HELL'DOWN		-12.64
	TOTAL		3291.00
WT. OF DC			11900.00
WT. OF STRING			135000.00

BIT NO: Clean Out | SIZE: 222 | IADC CODE: | MFG: Reed | TYPE: HP 51 a | SERIAL NO: lr2249 | JETS: | DEPTH OUT (m): | DEPTH IN (m): 3291.00 | TOTAL METERS DRILLED (m): | TOTAL HOURS RUN: | CUTTING STRUCTURE: | HOLE CONDITION | HOLE DRAG: | TORQUE AT BOTTOM: | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: [X] WATER BASED [ ] OIL BASED | Max Flowline Temp =

TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (sec/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT	HOURS RUN	SOLIDS CONTROL

METERS DRILLED

FROM	TO	ROTARY HRS	ROTARY R.P.M.	WT. ON BIT (kDaN)
3291.00				

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (liner size mm, S.P.M.) | PUMP NO. 2 (liner size mm, S.P.M.)

152 | 152

REDUCED PUMP SPEED: # | #

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	20:30	4.50	5	Pull Out Of Hole & Flow Checks @ 1237m, 180m & 0m
20:30	20:45	0.25	7	Rig Service, F/T Blind rams(6 secs) & NCR(2 secs)
20:45	21:00	0.25	21	Safety Meeting
21:00	24:00	3.00	11	Rig in wireline & log.(Monitor hole while logging)
				Drillers depth: 3291.00m Loggers depth: 3290.00m

NOTES

DRILLER SIGNATURE: Barry Verheist | TOUR HRS: 8.00 | BREAK (HRS): 0.5 | STACK TEMP | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC: W/L logging | M.A.C.P.

EVENING TOUR 16:00 to 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	942-395-910	Barry Verheist	4.00	BV	[ ]	[X]
Derrickman	647-452-903	Dave Makowsky	4.00	DM	[ ]	[X]
Motorman	735-714-230	Chantry Vig	4.00	CV	[ ]	[X]
Floorman	713-958-461	Gary Kennedy	4.00	GK	[ ]	[X]
Floorman	726-907-769	Cory Kube	4.00	CK	[ ]	[X]

RATE SCHEDULE: [X] REGULAR [ ] REPAIR [ ] STANDBY | DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20050104_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 22 | AFE

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-144 / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS — DPR / B.M.

DATE: 05-Feb-2005 | RIG NO: 620 E | FUEL @ 8.00 | RIG: 38461 BOILER | TEMPERATURE: -8 | CURRENT CONDITION: Snow | WIND DIRECTION: East | ROAD: Good

LAST CASING TURNING ON DRLR

GRADE	NO. OF JOINTS	TOTAL WT. (1000 LBS)	KB TO CSG HEAD (m)	SET AT (m)
			8.31	129.00
L-80			8.23	670.00

GRADE	SIZE	LINEAR MASS (kg/m)	GRADE	TOP (m)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	LENGTH (JTS)
	29.00	38-05	23.00	168.00	5"XH	170	F-1600	BPMMP	305
	38.00	38-95	67.00	168.00	5"XH	160	F-1600	BPMMP	305

TIME - HRS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
OPER							9.25										7.75																																	
MORN							6.25										7.75																																	
DAY							6.25										7.75																																	
EVE							6.25										7.75																																	
TOTAL							0.75										23.25																																	

SHALE SHAKER(S) — RENTALS/SERVICES

NO.	TYPE	
1	Derrick	new

5.00	SCREEN CHANGED	YES	NO
5.50	TOP	100	TOP 100
5.06	MIDDLE	100	MIDDLE 100
24.56	BOTTOM	100	BOTTOM 100

WELL TYPE: Geothermal | RE-ENTRY: YES NO | KB TO GROUND ELEV: 7.20

WELL NAME & NO.: a-92-A / 92-J-12 MC-7 | DATE: 05-Feb-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 620 E

PROVINCE: BC | CAMP: YES NO | NO SAFETY DAYS: 341.00

MORNING TOUR

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	Bit	311	9.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	178	4.66
9		127	81.93
110	DP	S135	3124.00
2	DP	S135	19.27
	HWDP		-12.64
	TOTAL		3291.00

BIT NO.	
SIZE	
IADC CODE	
MFG.	
TYPE	
SERIAL NO.	
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
OUTER STRUCTURE	
HOLE CONDITION	
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

WT. OF DC: 11000.00 | WT. OF STRING: 136000.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Max Flowline Temp =
TIME			
DENSITY kg/m3			
FUNNEL VIS. (s/L)			
W.L. (cm3)			
pH			
REDUCED PUMP SPEED			

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

	HOURS RUN	MFG	SCREEN SIZE	CONDITION

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Barry Vertheist

METERS DRILLED — TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	METERS DRILLED	ROTARY HRS	INSTANT ROP (m/hr)	AVG ROP (m/hr)	CODE	DETAILS
3291.00					0:00	5:15	5.25 11 Run temperature log
					5:15	5:30	0.25 7 Rig Service, F/T Blind rams(5 secs)
					5:30	8:00	2.50 11 Pump through kill line & pressure log

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) S.P.M. | PUMP NO. 2: LINER SIZE (mm) S.P.M.

	152		152	

NOTES

DRILLER SIGNATURE: Barry Vertheist | HRS RUN: 8.00 | BIT HRS: 8.5 | STACK TIME | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC: W/L logging | M.A.C.P.

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Vertheist	8.00	BV		☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM		☑
Motorman	735-714-230	Chantry Vig	8.00	CV		☑
Floorman	713-959-481	Gary Kennedy	8.00	GK		☑
Floorman	726-907-769	Cory Kube	8.00	CK		☑
Rig Manager	719-409-484	Kevin Vig		KV		☑
Top Drive	639-191-842	Dwayne Dixon		DD		☑

RATE SCHEDULE: ☑ REGULAR | REPAIR | INVERT

DRIVER A: | CREW SAFETY DAYS: | DRIVER B:

DAY TOUR

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	Bit	311	9.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	178	4.66
9		127	81.93
110	DP	S135	3124.00
2	DP	S135	19.27
	HWDP		-12.64
	TOTAL		3291.00

BIT NO.	
SIZE	12.30 / 04:00
IADC CODE	1020 / 1010
MFG.	29 / 30
TYPE	
SERIAL NO.	
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
OUTER STRUCTURE	
HOLE CONDITION	
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

WT. OF DC: 11000.00 | WT. OF STRING: 136000.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Max Flowline Temp =
TIME			12:30 / 04:00
DENSITY kg/m3			1020 / 1010
FUNNEL VIS. (s/L)			29 / 30
W.L. (cm3)			
pH			9.0 / 9.0
REDUCED PUMP SPEED			

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

	HOURS RUN	MFG	SCREEN SIZE	CONDITION

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Bill Mills

METERS DRILLED — TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	METERS DRILLED	ROTARY HRS	INSTANT ROP (m/hr)	AVG ROP (m/hr)	CODE	DETAILS
3291.00					8:00	15:45	7.75 11 Ran Temperature Log While Injecting Water to Well @ .7 m3/Min & 1.25 m3/min
					15:45	16:00	0.25 7 Rig Service & Function Annular 25/25 Secs

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) S.P.M. | PUMP NO. 2: LINER SIZE (mm) S.P.M.

2000	152	75	152		

NOTES: Function Annular Secs

DRILLER SIGNATURE: Bill Mills | HRS RUN: 8.00 | BIT HRS: 8.5 | STACK TIME | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC: Falls | M.A.C.P.

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	12.00	BM		☑
Derrickman	629-926-292	Rob Roth	12.00	RR		☑
Motorman	722-572-781	Dwayne Fry	12.00	DF		☑
Floorman	734-615-065	Lyle Todhunter	12.00	LT		☑
Leaseman	736-390-089	Justin Craigen	12.00	JC		☑
Leaseman	731-665-071	Ben Lumb	12.00	BL		☑

RATE SCHEDULE: ☑ REGULAR | REPAIR | INVERT

DRIVER A: | CREW SAFETY DAYS: | DRIVER B:

EVENING TOUR

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	Bit	311	9.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	178	4.66
9		127	81.93
110	DP	S135	3124.00
2	DP	S135	19.27
	HWDP		-12.64
	TOTAL		3291.00

BIT NO.	
SIZE	21:00
IADC CODE	1020
MFG.	29
TYPE	
SERIAL NO.	
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
OUTER STRUCTURE	
HOLE CONDITION	
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

WT. OF DC: 11000.00 | WT. OF STRING: 136000.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Max Flowline Temp =
TIME			21:00
DENSITY kg/m3			1020
FUNNEL VIS. (s/L)			29
W.L. (cm3)			
pH			9.0
REDUCED PUMP SPEED			

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

	HOURS RUN	MFG	SCREEN SIZE	CONDITION

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Barry Vertheist

METERS DRILLED — TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	METERS DRILLED	ROTARY HRS	INSTANT ROP (m/hr)	AVG ROP (m/hr)	CODE	DETAILS
3291.00					16:00	19:30	3.50 11 Ran Temperature Log While Injecting Water to Well @ 1.25 m3/min, 1.67m3/min, 2.08 m3/min
					19:30	22:00	2.50 11 Run temperature log/pressure log & increase injection rate to 2.068m3/min
					22:00	22:15	0.25 7 Rig Service
					22:15	24:00	1.75 11 Stop injection & monitor leak off

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) S.P.M. | PUMP NO. 2: LINER SIZE (mm) S.P.M.

2400	152	62	152	63	

NOTES

DRILLER SIGNATURE: Barry Vertheist | HRS RUN: 8.00 | BIT HRS: 8.5 | STACK TIME | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Vertheist	8.00	BV		☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM		☑
Motorman	735-714-230	Chantry Vig	8.00	CV		☑
Floorman	713-959-481	Gary Kennedy	8.00	GK		☑
Floorman	726-907-769	Cory Kube	8.00	CK		☑

RATE SCHEDULE: ☑ REGULAR | REPAIR | INVERT

DRIVER A: | CREW SAFETY DAYS: | DRIVER B:

ETS SERIAL NUMBER: PREC620_20050105_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Vance Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO	22
AFE	
LICENCE NO	MC-7
WELL NAME AND NO	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig

DAILY CHECKS

DATE 06-Feb-2005 | RIG NO 620 E | FUEL @ 8:00 | RIG 32494 BOILER

WEATHER: TEMPERATURE -5 | CURRENT CONDITION Snow | WIND DIRECTION West | ROAD Slick

LAST CASING TUBING OR LINER

	OD (mm)	WEIGHT (kg/m)	GRADE	MAKE	NO OF JOINTS	TOTAL STRING WEIGHT	KB TO CSG HEAD (m)	SET AT (m)
							8.31	129.00
			L-80				8.23	870.00

	PUMP SIZE (mm)	LINER MAKE (type)	LINER (mm)	MW TD (mm)	TUBE JT O.D. (mm)	THREAD (type)	NO OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
			29.00	SS-95	83.00	168.00	5"XH	170 F-1600	BPMMP	305
			35.00	SS-95	57.00	168.00	5"XH	150 F-1600	BPMMP	305

SHALE SHAKER(S) — NO 2 | TYPE Derrick | SCREEN SIZES | Y/N

8.00	TOP	100	TOP 100
8.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

RENTAL SERVICES — MONI | SAT | CHI

Monitor MC7

TIME - HRS

	DRLG	TRIPS	REAM	CIRC	SURV	RIG SERVICE	WAIT ON WEATHER	WAIT ON EQUIP	WAIT ON CEMENT	WAIT ON DAYLIGHT	WELD	RIG REPAIR	CUT DRLG LINE	SLIP DRLG LINE	SAFETY MTG	WIRE LINE	DST	CORING	OTHER
MORN				9.25															7.75
DAY				8.25															7.75
EVE				6.25															4.75
TOTAL				23.75															20.25

MORNING TOUR 0:00 TO 8:00

BIT RECORD

NO	BIT	O.D. (mm)	LENGTH
1	bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.54
1	Jars	178	4.86
9		127	61.93
110	DP	114.3mm	3124.00
2	DP	127mm	19.27
	ADJUSTMENT		-12.64
	TOTAL		3291.00

BIT NO.
SIZE
IADC CODE
MFG.
TYPE
SERIAL NO.
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL HOURS RUN
OUTER STRUCTURE | T | B | GAUGE | OC | R | CHARACTER | LOCATION | BEARINGS | GAUGE | OTHER
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE | WATER BASED | OIL BASED | Max Flowline Temp =
TIME
DENSITY kg/m³
FUNNEL VIS (s)
W.L. (cm3)
pH
MUD MATERIAL ADDED | PRODUCT | AMOUNT x UNIT
SOLIDS CONTROL | HOURS RUN | SHAKER SCREEN SIZE | DESILTER CONES | DESANDER CONES | CENTRIFUGE RATE

METERS DRILLED

FROM	TO	BIT HRS	ROTARY HRS
3291.00			

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) S.P.M. | PUMP NO. 2 LINER SIZE (mm) S.P.M.
162 | 162
REDUCED PUMP SPEED
DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE
Barry Verheist

TIME LOG

HRS FROM	HRS TO	HRS	CODE	STACK TIME
0:00	7:45	7.75	11	
7:45	8:00	0.25	7	
8.00	9.6			

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

0:00	7:45	Monitor leak off, log well MC7
7:45	8:00	Rig Service, F/T H.C.R.(2 secs)

NOTES
Engine #1: 6.5 ltr, 12.5 ltr; Lt Inc. Pump #1 140 bbl Pump#2 Lt Inc.
Weekly Inspection to sdec, plow, & Belights

OPERATOR FUEL | MAX BIT HOOKLOAD | SAFETY TOPIC | M.A.C.P
B.O.P. lockout

RATE SCHEDULE: ☑ REGULAR ☐ ASRAM ☐ INVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	8.00	BV	☑
Derrickman	847-452-903	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	713-959-461	Gary Kennedy	8.00	GK	☑
Floorman	726-907-769	Cory Kube	8.00	CK	☑
Rig Manager	719-409-484	Kevin Vig		KV	☑
Top Drive	639-191-642	Dwayne Dixon		DD	☑

DAY TOUR 8:00 TO 16:00

BIT RECORD

NO	BIT	O.D. (mm)	LENGTH
1	bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.54
1	Jars	178	4.86
9		127	61.93
110	DP	114.3mm	3124.00
2	DP	127mm	19.27
	ADJUSTMENT		-12.64
	TOTAL		3291.00

BIT NO.
SIZE
IADC CODE
MFG.
TYPE
SERIAL NO
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL HOURS RUN
OUTER STRUCTURE | T | B | GAUGE | OC | R | CHARACTER | LOCATION | BEARINGS | GAUGE | OTHER
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE | WATER BASED | OIL BASED | Max Flowline Temp =
TIME
DENSITY kg/m³
FUNNEL VIS (s)
W.L. (cm3)
pH
MUD MATERIAL ADDED | PRODUCT | AMOUNT x UNIT
SOLIDS CONTROL | HOURS RUN | SHAKER SCREEN SIZE | DESILTER CONES | DESANDER CONES | CENTRIFUGE RATE

METERS DRILLED

FROM	TO	BIT HRS	ROTARY HRS
3291.00			

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) S.P.M. | PUMP NO. 2 LINER SIZE (mm) S.P.M.
REDUCED PUMP SPEED
DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE
Bill Mills

TIME LOG

HRS FROM	HRS TO	HRS	CODE	STACK TIME
8:00	11:00	3.00	11	
11:00	11:15	0.25	7	
11:15	16:00	4.75	11	
8.00	9.6			

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

8:00	11:00	Run Temperature Log On Well MC-7
11:00	11:15	Rig Service & Function Pipe Rams 8/S Secs
11:15	16:00	Rig Up & Run Temperature Log On Well MC-8

NOTES
Function Crown Saver

OPERATOR FUEL | MAX BIT HOOKLOAD | SAFETY TOPIC | M.A.C.P

RATE SCHEDULE: ☑ REGULAR ☐ ASRAM ☐ INVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	12.00	BM	☑
Derrickman	828-826-282	Rob Roth	12.00	RR	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☑
Floorman	734-615-086	Lyle Todhunter	12.00	LT	☑
Leaseman	739-300-089	Justin Craigen	12.00	JC	☑
Leaseman	731-695-071	Ben Lumb	12.00	BL	☑

EVENING TOUR 16:00 TO 24:00

BIT RECORD

NO	BIT	O.D. (mm)	LENGTH
1	bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.54
1	Jars	178	4.86
9		127	61.93
110	DP	114.3mm	3124.00
2	DP	127mm	19.27
	ADJUSTMENT		-12.64
	TOTAL		3291.00

BIT NO.
SIZE
IADC CODE
MFG.
TYPE
SERIAL NO
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL HOURS RUN
OUTER STRUCTURE | T | B | GAUGE | OC | R | CHARACTER | LOCATION | BEARINGS | GAUGE | OTHER
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE | WATER BASED | OIL BASED | Max Flowline Temp =
TIME
DENSITY kg/m³
FUNNEL VIS (s)
W.L. (cm3)
pH
MUD MATERIAL ADDED | PRODUCT | AMOUNT x UNIT
SOLIDS CONTROL | HOURS RUN | SHAKER SCREEN SIZE | DESILTER CONES | DESANDER CONES | CENTRIFUGE RATE

METERS DRILLED

FROM	TO	BIT HRS	ROTARY HRS
3291.00			

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) S.P.M. | PUMP NO. 2 LINER SIZE (mm) S.P.M.
183 | 152
REDUCED PUMP SPEED
DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE
Barry Verheist

TIME LOG

HRS FROM	HRS TO	HRS	CODE	STACK TIME
16:00	19:45	3.75	11	
19:45	20:00	0.25	7	
20:00	21:00	1.00	11	
21:00	24:00	3.00	22	
8.00	9.6			

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

16:00	19:45	Rig Up & Run Temperature Log On Well MC-8
19:45	20:00	Rig Service, F/T Annular(24 secs)
20:00	21:00	Rig up WL log on MC7 & perform gauge run to bottom.
21:00	24:00	(Monitor MC7)

NOTES
PA system survey

OPERATOR FUEL | MAX BIT HOOKLOAD | SAFETY TOPIC | M.A.C.P

RATE SCHEDULE: ☑ REGULAR ☐ ASRAM ☐ INVERT

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	4.00	BV	☑
Derrickman	847-452-903	Dave Makowsky	4.00	DM	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☑
Floorman	713-959-461	Gary Kennedy	4.00	GK	☑
Floorman	726-907-769	Cory Kube	4.00	CK	☑

WELL TYPE: Geothermal | RE ENTRY ☐ YES ☑ NO | KB TO GROUND ELEV: 7.20
WELL NAME & No: a-92-A / 92-J-12 MC-7 | DATE: 06-Feb-2005
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig | JOB NO: 520 E
PROVINCE: BC | CAMP ☑ YES ☐ NO | RIG SAFETY DAYS: 342.00

ETS SERIAL NUMBER: PREC620_20050106_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Vareo Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 22 | AFE

LICENCE NO: MC-7 | WELL NAME AND NO: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE NO.: b-1-H / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE: 07-Feb-2005 | RIG NO.: 920 E | FUEL @ 8:00: | RIG: 28929 BOILER

TEMPERATURE: +10 | CLOUDINESS: Clear | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TUBING OR LINER

	OD (mm)	Inner ID (mm)	Depth m	GRADE	WEIGHT (kg/m)	No. OF JOINTS	TOTAL PIPE LENGTH	NO. TO GROUND HEADING	WT. AT bot
								5.31	129.00
				L-80				6.23	670.00

	Length (m)	GRADE	Min ID (mm)	Tool. Jt O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH. (mm)
CLOSEST CONCENTRIC	29.60	SS-95	93.00	186.00	5"XH	170	F-1600	BPMMP	305
CLOSEST DIRECTIONAL	38.90	SS-95	67.00	168.00	5"XH	160	F-1600	BPMMP	305

TIME BREAKDOWN

	DRLG	TRIPS	REAM	CIRC	SURV	TEST	RIG SERV	RIG REPAIR	DEVIATION	WAIT ON DIR	WAIT ON MUD	WAIT ON CEMENT	WAIT ON WEATHER	WAIT ON CASING	WAIT ON FISH	WAIT ON ORDERS	OTHER	TOTAL
MORN		0.25		1.50													6.75	8.50
DAY		0.25		7.75														8.00
EVE		0.25						3.00									4.75	8.00
TOTAL		0.75		3.25				3.00									4.75	24.00

Monitor MC7 | top drive

SHALE SHAKER(S) | REMARKS-SERVICES

NO.	TYPE	Derrick	MFR
3	SCREENS CHANGED	YES	NO
3	TOP	100	TOP 100
3	MIDDLE	150	MIDDLE 150
3	BOTTOM	100	BOTTOM 100

WELL TYPE: Geothermal | RE-ENTRY: YES NO | KB TO GROUND ELEV.: 7.20

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 07-Feb-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 620 E

PROVINCE: BC | CAMP: YES NO | RIG SAFETY DAYS: 343.00

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.54
1	Jars	178	4.86
9		127	81.93
110	DP	127	3124.00
2	DP	127	19.27
	PULLDOWN		-12.64
	TOTAL		3291.00
WT. OF BC			11000.00
WT. OF STRING			136000.00

BIT NO. | SIZE | IADC CODE | MFG. | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE | B | Gage | OC | Reason Pulled | Other

HOLE CONDITION: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE | WATER BASED | OIL BASED | Max Flowline Temp =

TIME | DENSITY (kg/m³) | FUNNEL VIS. (sec) | W.L. (cm3) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL | HOURS RUN | Manufacturer | Model | Screen Size

METERS DRILLED

FROM	TO	TOTAL METERS DRILLED (m)	INTERVAL HOURS	ROTARY HOURS
3291.00				

CIRCULATION PRESSURE (KPa) | PUMP NO. 1 LINER SIZE (mm) | S.P.M. | PUMP NO. 2 LINER SIZE (mm) | S.P.M.

162 | 162

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Barry Verheist

TIME LOG

FROM	TO	HOURS	CODE	Hrs. Ahead/Behind
0:00	6:45	6.75	22	(Monitor MC7)
6:45	7:00	0.25	7	Rig Service, F/T Annuler(24 secs)
7:00	8:00	1.00	11	Run temperature & pressure log(MC7)

NOTES

HRS. RUN	HOURS TO LOG	STATIC TEMP.
8.00	8.0	

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC: Proper Lifting | M.A.C.P.

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-369-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-462-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	713-959-481	Gary Kennedy	8.00	GK	☐	☑
Floorman	726-907-789	Cory Kube	8.00	CK	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	639-181-842	Dwayne Dixon		DD	☐	☑

RATE SCHEDULE: REGULAR | REPAIR | INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.54
1	Jars	178	4.86
9		127	81.93
110	DP	127	3124.00
2	DP	127	19.27
	PULLDOWN		-12.64
	TOTAL		3291.00
WT. OF BC			11000.00
WT. OF STRING			136000.00

BIT NO. | SIZE | IADC CODE | MFG. | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE | B | Gage | OC | Reason Pulled | Other

HOLE CONDITION: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE | WATER BASED | OIL BASED | Max Flowline Temp =

TIME | DENSITY (kg/m³) | FUNNEL VIS. (sec) | W.L. (cm3) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL | HOURS RUN | Manufacturer | Model | Screen Size

METERS DRILLED

FROM	TO	TOTAL METERS DRILLED (m)	INTERVAL HOURS	ROTARY HOURS
3291.00				

CIRCULATION PRESSURE (KPa) | PUMP NO. 1 LINER SIZE (mm) | S.P.M. | PUMP NO. 2 LINER SIZE (mm) | S.P.M.

162 | 162

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HOURS	CODE	Hrs. Ahead/Behind
8:00	15:45	7.75	11	Run Temperature & Pressure Log On Well MC-7
15:45	16:00	0.25	7	Rig Service & Function Pipe Rams 5/5 Secs

NOTES

HRS. RUN	HOURS TO LOG	STATIC TEMP.
8.00	8.0	

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	12.00	BM	☐	☑
Derrickman	629-926-252	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	734-815-085	Lyle Todhunter	12.00	LT	☐	☑
Leaseman	739-300-068	Justin Craigen	12.00	JC	☐	☑
Leaseman	731-865-071	Ben Lumb	12.00	BL	☐	☑

RATE SCHEDULE: REGULAR | REPAIR | INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.54
1	Jars	178	4.86
9		127	81.93
110	DP	127	3124.00
2	DP	127	19.27
	PULLDOWN		-12.64
	TOTAL		3291.00
WT. OF BC			11000.00
WT. OF STRING			136000.00

BIT NO. | SIZE | IADC CODE | MFG. | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE | B | Gage | OC | Reason Pulled | Other

HOLE CONDITION: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE | WATER BASED | OIL BASED | Max Flowline Temp =

TIME | DENSITY (kg/m³) | FUNNEL VIS. (sec) | W.L. (cm3) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL | HOURS RUN | Manufacturer | Model | Screen Size

METERS DRILLED

FROM	TO	TOTAL METERS DRILLED (m)	INTERVAL HOURS	ROTARY HOURS
3291.00				

CIRCULATION PRESSURE (KPa) | PUMP NO. 1 LINER SIZE (mm) | S.P.M. | PUMP NO. 2 LINER SIZE (mm) | S.P.M.

162 | 162

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Barry Verheist

TIME LOG

FROM	TO	HOURS	CODE	Hrs. Ahead/Behind
16:00	19:00	3.00	14	Nipple Down B.O.P. (Rotating Head, Flow Line)
19:00	19:15	0.25	7	Rig Service, F/T Blind rams(6 secs)
19:15	24:00	4.75	23	Break down (top drive), inspect & reassemble (Loadpath inspection)

NOTES

HRS. RUN	HOURS TO LOG	STATIC TEMP.
8.00	8.5	

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-369-910	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-462-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	713-959-481	Gary Kennedy	4.00	GK	☐	☑
Floorman	726-907-789	Cory Kube	4.00	CK	☐	☑

RATE SCHEDULE: REGULAR | REPAIR | INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20050107_1A

CHIMO ETS SOFTWARE VERSION:

AFE# 2004-11-30 20:00	RIG RELEASE	JOB NO 22	AFE
LICENCE NO. MC-7	WELL NAME AND NO. a-92-A / 92-J-12 MC-7		
OPERATOR Western Geopower Corp		CONTRACTOR Precision Drilling	
SURFACE LOCATION a-92-A / 92-J-12		LSD/LOC #: b-1-H / 92-J-12	
SIGNATURE OF OPERATOR'S REPRESENTATIVE Russ Silva		SIGNATURE OF CONTRACTOR'S REPRESENTATIVE Bill Mills	

DAILY CHECKS — OPR / R.P.

(1) Daily rig inspection
(2) Weekly rig inspection (weekly spring checks)
(3) H2S Equip Posted (if required)
(4) BOP Locks & Lines Pressure Tested
(5) Fire Line Status
(6) BOP Drill Performed
(7) Weekly Formal BOP / Flarestack & Equipment Test
(8) Rig Site Health and Safety Meeting (minutes posted)
(9) C.A.O.D.C Rig Safety Inspection Checklist (one rig review)
(10) Visual Inspection Before Raising or Lowering
(11) Crown Board Checked
(12) Utility Kit Checked

DATE 08-Feb-2005 | JOB NO. 620 E | FUEL (@ $.80) | AVG 22967 | BOILER | TEMPERATURE -1 | WIND CONDITION clear | WIND DIRECTION calm | ROAD Good

WELL TYPE

LAST CASING TUBING OR LINER	O.D. (mm)	WEIGHT (kg/m)	HOLE	GRADE	NO. OF JOINTS	TOTAL PIPE LENGTH	KB TO CSG HEADING	SET AT (m)
							6.21	129.00
				L-80			6.23	870.00

WELL TYPE	LINER SIZE (mm)	GRADE	WALL THICK. (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
	29.00	S5-95	83.00	166.00	5"XH	170	F-1600	BPMMP	305
	38.00	S5-95	67.00	166.00	5"XH	160	F-1600	BPMMP	305

Geothermal | RE-ENTRY ☐YES ☑NO | KB TO GROUND ELEV 7.29
WELL NAME & No. a-92-A / 92-J-12 MC-7 | DATE 08-Feb-2005
OPERATOR Western Geopower Corp | CONTRACTOR Precision Drilling
RIG MANAGER Bill Mills | RIG NO 620 E
PROVINCE BC | CAMP ☑YES ☐NO | RIG SAFETY DAYS: 344.00

TIME - HRS

CREW	TRAVEL TO LOCATION	RIG UP	DRILLING	REAMING	CIRC	TRIPS	SURVEY	CUT OFF DRLG LINE	SLIP DRLG LINE	RIG SERVICE	WAIT ON CEMENT	DRILL STEM TEST	CORING	FISHING	RUN CASING	CEMENTING	NIPPLE UP BOP	TEST BOP	REPAIR RIG	OTHER WORK	TOTAL HOURS	Standby
MORN										0.25												7.75
DAY										0.25												7.75
EVE										0.25												7.75
TOTAL										0.75												23.25

SHALE SHAKER(S) — RENTALS/SERVICES

	NO.	TYPE	Derrick	New
6.00	SCREENS CHANGED		☐YES	☑NO
6.00	TOP	100	TOP	100
6.00	MIDDLE	100	MIDDLE	100
24.00	BOTTOM	100	BOTTOM	100

MORNING TOUR

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	DR	311	0.27
1	Bit Sub	165	0.77
8		127	72.54
1	Jars	178	4.86
3		127	81.53

310	D.P.	114mm	3124.00								
2	H.W.	5INCH	19.27								
			-12.64								
		TOTAL	3291.00								

BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED — Max Flowline Temp =

TIME | DENSITY (kg/m³) | FUNNEL VIS. (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	MUD LOST TO HOLE (m³)	SOLIDS REMOVED (m³)	DISCARDED VOLUME (m³)

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	METERS DRILLED	HOURS ON BOTTOM	ROP (m/hr)
3291.00				0.00	7.45	7.75
				7.45	8.00	0.25

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	P.P.M.	PUMP NO. 2 LINER SIZE (mm)	P.P.M.
	162		162	

REDUCED PUMP SPEED

@	P.P.M.
	0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	ROP (m/hr)	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	7:45	7.75	22		Wait On Orders & Monitor MC7 (Standby)
7:45	8:00	0.25	7		Rig Service, F/T Blind rams(6 secs)

NOTES
Engine #2: 24 hrs. Continuously monitor temp.

DRILLER SIGNATURE | CREW SAFETY DAYS | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
Barry Verheist | 4.00 | 8.5 | | Top drive inspection |

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-619	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Rig manager	716-324-181	Bill Mills		BM	☐	☑
Top Drive	836-191-642	Dwayne Dixon		DD	☐	☑

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐INVERT
DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)

BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED — Max Flowline Temp =

TIME | DENSITY (kg/m³) | FUNNEL VIS. (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	MUD LOST TO HOLE (m³)	SOLIDS REMOVED (m³)	DISCARDED VOLUME (m³)

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	METERS DRILLED	HOURS ON BOTTOM	ROP (m/hr)
3291.00				0.00	10:45	7.75
				10:45	10:00	0.25

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	P.P.M.	PUMP NO. 2 LINER SIZE (mm)	P.P.M.
	162		162	

REDUCED PUMP SPEED

@	P.P.M.
	0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	ROP (m/hr)	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	10:45	7.75	22		Wait On Orders & Monitor MC7 (Standby)
10:45	10:00	0.25	7		Rig Service & Function Pipe Rams 5/5 Secs

NOTES
Function Crown Saver

DRILLER SIGNATURE | CREW SAFETY DAYS | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
Bill Mills | 4.00 | 8.5 | | |

DAY TOUR 8:00 TO 18:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Derrickman	629-926-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐INVERT
DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)

BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED — Max Flowline Temp =

TIME | DENSITY (kg/m³) | FUNNEL VIS. (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	MUD LOST TO HOLE (m³)	SOLIDS REMOVED (m³)	DISCARDED VOLUME (m³)

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	METERS DRILLED	HOURS ON BOTTOM	ROP (m/hr)
3291.00				0.00	18:00	7.75
				18:00	24:00	0.25

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE (mm)	P.P.M.	PUMP NO. 2 LINER SIZE (mm)	P.P.M.
	162		162	

REDUCED PUMP SPEED

@	P.P.M.
	0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	ROP (m/hr)	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
18:00	23:45	7.75	22		Wait On Orders & Monitor MC7 (Standby)
23:45	24:00	0.25	7		Rig Service, F/T H.C.R.(2 secs)

NOTES
Function Crown Saver

DRILLER SIGNATURE | CREW SAFETY DAYS | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
Barry Verheist | 8.00 | 8.5 | | | | |

EVENING TOUR 18:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-619	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐INVERT
DRIVER A | CREW SAFETY DAYS | DRIVER B

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

ETS SERIAL NUMBER: PREC620_20050108_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 22 | AFE

LICENSE NO: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-1-H / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Bill Mills

DAILY CHECKS

DATE: 09-Feb-2005 | RIG NO.: 620 E | FUEL: 06:00 | RIG: 16700 BOILER

WEATHER: TEMPERATURE -4 | CURRENT CONDITION: clear | WIND DIRECTION: calm | ROAD: good

LAST CASING / TUBING / D.S. / LINER

O.D. (mm)	WT / ID (mm)	Hgt/m	Grade	No. of Joints	Total Un. Length	Pip To Grd Headroom	KB To Grd
						6.31	129.00
			L-80			8.23	570.00

Depth MD (m)	Liner/Casing Size (mm)	Grade	Min. ID (mm)	Top/Btm. MD (m)	Thread Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke (mm)
	29.00	SS-95	83.00	168.00	5"XH	170	F-1600	BPMMP	305
	38.00	SS-95	87.00	168.00	5"XH	160	F-1600	BPMMP	305

SHALE SHAKER(S) | RENTAL SERVICES

No.	Type	Hrs
2	Derrick	

6.90	SCREENS CHANGED	☐ YES	☑ NO
6.60	TOP	100	TOP 100
6.20	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

WELL TYPE: Geothermal | RE-ENTRY ☐ YES ☑ NO | KB TO GROUND ELEV.: 7.20

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 09-Feb-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Bill Mills | RIG NO.: 620 E

PROVINCE: BC | CAMP ☑ YES ☐ NO | RIG SAFETY DAYS: 345.00

TIME HRS

	Over	Drlg Actual	Drlg Planned	Logging	Coring	Trips	Wiper Trips	Circ	Surveys	Ream	Rig Service	Test BOP	Test Csg	Wait on Cement	Fishing	Lost Time	Repair	Standby
MORN											0.25							7.75
DAY											0.25							7.75
EVE											0.25							7.75
TOTAL											0.75							23.25

MORNING TOUR

BIT RECORD

No.	Bit	O.D. (mm)	Length
1	DN	311	0.27
1	Bit Sub	163	0.77
8	[illegible]	127	72.54
1	Jars	178	4.86
9	[illegible]	127	81.93
110	D.P.	[illegible]	3124.00
2	D.P.	[illegible]	19.27
	HELL/Down		0.00
	TOTAL		3393.65

BIT NO. | SIZE | IADC CODE | MFG. | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | OUTER STRUCTURE | DULL CHAR. | LOC. | B | GAUGE | OTHER | PRESENT CONDITION | REASON PULLED

HOLE CONDITION

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED | Max Flowline Temp =

TIME | DENSITY (kg/m³) | FUNNEL VIS. (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

HOURS RUN	SHALE SHAKER	DESILTER	DESANDER	CENTRIFUGE

METERS DRILLED

FROM	TO	M. DRILLED	ROTARY R.P.M.	SLIDE R.P.M.
3291.00				

CIRCULATION PRESSURE (KPa) | PUMP NO. 1 | PUMP NO. 2

	LINER SIZE (mm)	R.P.M.	LINER SIZE (mm)	R.P.M.
	152		152	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HRS	ROTARY HRS	SLIDE HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	7:45	7.75	22			(Standby) Wait on orders & monitor MC7
7:45	8:00	0.25	7			Rig Service, F/T Blind rams(6 secs)

NOTES

DRILLER SIGNATURE: Barry Verhelst

MAN HRS	RIG HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.0			Equipment, lockout	

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-810	Barry Verhelst	8.00	BV	☐	☑
Derrickman	647-462-903	Dave Makowsky	8.00	DM	☐	☑
Rig Manager	716-324-181	Bill Mills		BM	☐	☑

RATE SCHEDULE: ☑ ANNUAL ☐ REPAIR ☐ MOVE

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

No.	Bit	O.D. (mm)	Length
1	bit	311	0.27
1	Bit Sub	163	0.77
8	[illegible]	127	72.54
1	Jars	178	4.86
9	[illegible]	127	81.93
110	D.P.	STANDS	3124.00
2	D.P.	SINGLES	19.27
	HELL/Down		-12.64
	TOTAL		3291.00
			13000.00

BIT NO. | SIZE | IADC CODE | MFG. | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | OUTER STRUCTURE | DULL CHAR. | LOC. | B | GAUGE | OTHER | PRESENT CONDITION | REASON PULLED

HOLE CONDITION

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED | Max Flowline Temp =

TIME | DENSITY (kg/m³) | FUNNEL VIS. (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

HOURS RUN	SHALE SHAKER	DESILTER	DESANDER	CENTRIFUGE

METERS DRILLED

FROM	TO	M. DRILLED	ROTARY R.P.M.	SLIDE R.P.M.
3291.00				

CIRCULATION PRESSURE (KPa) | PUMP NO. 1 | PUMP NO. 2

	LINER SIZE (mm)	R.P.M.	LINER SIZE (mm)	R.P.M.
	152		152	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HRS	ROTARY HRS	SLIDE HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	15:45	7.75	22			(Standby) Wait on orders & monitor MC7
15:45	16:00	0.25	7			Rig Service & Function Annular 24/24 Secs

NOTES

DRILLER SIGNATURE: Bill Mills

MAN HRS	RIG HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.0				

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Derrickman	629-926-282	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑

RATE SCHEDULE: ☑ ANNUAL ☐ REPAIR ☐ MOVE

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

BIT RECORD

BIT NO. | SIZE | IADC CODE | MFG. | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | OUTER STRUCTURE | DULL CHAR. | LOC. | B | GAUGE | OTHER | PRESENT CONDITION | REASON PULLED

HOLE CONDITION

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED | Max Flowline Temp =

TIME | DENSITY (kg/m³) | FUNNEL VIS. (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

HOURS RUN	SHALE SHAKER	DESILTER	DESANDER	CENTRIFUGE

METERS DRILLED

FROM	TO	M. DRILLED	ROTARY R.P.M.	SLIDE R.P.M.
3291.00				

CIRCULATION PRESSURE (KPa) | PUMP NO. 1 | PUMP NO. 2

	LINER SIZE (mm)	R.P.M.	LINER SIZE (mm)	R.P.M.
	152		152	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HRS	ROTARY HRS	SLIDE HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	23:45	7.75	22			(Standby) Wait on orders & monitor MC7
23:45	24:00	0.25	7			Rig Service, F/T pipe rams(6 secs)

NOTES

DRILLER SIGNATURES: Barry Verhelst

MAN HRS	RIG HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.5				

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-810	Barry Verhelst	4.00	BV	☐	☑
Derrickman	647-462-903	Dave Makowsky	4.00	DM	☐	☑

RATE SCHEDULE: ☑ ANNUAL ☐ REPAIR ☐ MOVE

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20050109_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
FA Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00	NO RELEASE	JOB NO: 22	AFE
LICENCE NO: MC-7	WELL NAME AND NO: a-92-A / 92-J-12 MC-7		
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling		
SURFACE LOCATION: a-92-A / 92-J-12	UNIQUE ID: b-1-H / 92-J-12		
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Bill Mills		

DAILY CHECKS

DATE: 10-Feb-2005 | RIG NO.: 620 E | FUEL: 8.00 | RIG: 22967 BOILER

WEATHER: TEMPERATURE -5 | CURRENT CONDITION clear | WIND DIRECTION calm | ROAD good

LAST CASING / TUBING / LINER

	O.D. (mm)	WGT (kg/m)	GRADE	NO. OF JOINTS	TOTAL LNG LENGTH	KB TO GRD HEAD (m)	SET AT (m)
						6.31	123.00
			L-80			8.23	670.00

	LINER SIZE (mm)	LINER WALL (mm)	GRADE	INN. DIA. (mm)	TORQ. AT O.D. (kg/m)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP SWAB ACTUATED	STROKE LEN. (mm)
		29.00	SS-95	83.00	168.00	5"XH	170	F-1600	BPMMP	305
		38.00	SS-95	67.00	168.00	5"XH	150	F-1600	BPMMP	305

TIME-HRS

OPER	SURV	DRLG	REAM	CIRC	COND	TRIPS	RIG SERV	RIG REPR	DEVIA SURV	WIRE LINE	WAIT ON ORDERS	SAFETY MTG	CUT DRLG LINE	PUMP REPR	OTHER	Standby
MORN							0.25									7.75
DAY							0.25									7.75
EVE							0.25									7.75
TOTAL							0.75									23.25

SHALE SHAKER(S) | RENTALS/SERVICES

	NO. 2	NO. 1
TYPE	Derrick	
SCREENS CHANGED	YES / NO	
TOP	100	100
MIDDLE	100	100
BOTTOM	100	100

WELL TYPE: Geothermal | RE-ENTRY: YES / NO | KB TO GROUND ELEV.: 7.20

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 10-Feb-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Bill Mills | RIG NO.: 620 E

PROVINCE: BC | CAMP: YES / NO | RIG SAFETY DAYS: 346.00

MORNING TOUR

BIT RECORD: BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD: MUD TYPE (WATER BASED / OIL BASED) | Max Flowline Temp # | TIME | DENSITY (kg/m³) | FUNNEL VIS. (s/L) | W.L. (cm3) | pH | MUD MATERIAL ADDED: PRODUCT / AMOUNT x UNIT | SOLIDS CONTROL: HOURS RUN / SHAKER SCREEN SIZE / CONDITION OF SCREENS

METERS DRILLED: FROM 3291.00 | TO

TRIP LOG

FROM	TO	HOURS	ROTARY R.P.M.	W.O.B. (kN)	CUM. HRS	CUM. MTRS
0.00	7.45	7.75	22			
7.45	8.00	0.25	7			

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	DETAILS
0:00	7:45	(Standby) Wait on orders & monitor MC-7
7:45	8:00	Rig Service, F/T Blind rams(5 secs) & F/T Master valve

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) 162 R.P.M. | PUMP NO. 2 LINER SIZE (mm) 162 R.P.M.

REDUCED PUMP SPEED

DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

NOTES: Slightly 91.24 Rm

DRILLER SIGNATURE: Barry Verheist

HRS RUN	CUM HRS	BLOCK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.0					

INJURIES

CREW	SOC. INS. NO.	NAME	HRS		YES	NO
Driller	642-389-919	Barry Verheist	8.00	BV		☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM		☑
Rig Manager	719-324-181	Bill Mills		BM		☑

RATE SCHEDULE: ☑ MANUAL / ☐ HAND | ☐ HYDRIL

DRIVER A: | CREW SAFETY DAYS: | DRIVER B:

DAY TOUR

BIT RECORD / MUD RECORD / METERS DRILLED / TRIP LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

METERS DRILLED: FROM 3291.00 | TO

TRIP LOG

FROM	TO	HOURS	ROTARY R.P.M.	W.O.B. (kN)	CUM. HRS	CUM. MTRS
8:00	15:45	7.75	22			
15:45	16:00	0.25	7			

FROM	TO	DETAILS
8:00	15:45	(Standby) Wait on orders & monitor MC-7
15:45	16:00	Rig Service, F/T pipe rams(6 secs)

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) 152 R.P.M. | PUMP NO. 2 LINER SIZE (mm) 152 R.P.M.

DRILLER SIGNATURE: Bill Mills

HRS RUN	CUM HRS	BLOCK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	16.0					

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		YES	NO
Derrickman	629-928-262	Rob Roth	12.00	RR		☑
Motorman	722-572-781	Dwayne Fry	12.00	DF		☑

RATE SCHEDULE: ☑ MANUAL / ☐ HAND | ☐ HYDRIL

DRIVER A: | CREW SAFETY DAYS: | DRIVER B:

EVENING TOUR

BIT RECORD / MUD RECORD / METERS DRILLED / TRIP LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

METERS DRILLED: FROM 3291.00 | TO

TRIP LOG

FROM	TO	HOURS	ROTARY R.P.M.	W.O.B. (kN)	CUM. HRS	CUM. MTRS
16:00	23:45	7.75	22			
23:45	24:00	0.25	7			

FROM	TO	DETAILS
16:00	23:45	(Standby) Wait on orders & monitor MC-7
23:45	24:00	Rig Service, F/T H.C.R.(2 secs)

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) 162 R.P.M. | PUMP NO. 2 LINER SIZE (mm) 152 R.P.M.

DRILLER SIGNATURE: Barry Verheist

HRS RUN	CUM HRS	BLOCK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.0					

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		YES	NO
Driller	642-389-919	Barry Verheist	4.00	BV		☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM		☑

RATE SCHEDULE: ☑ MANUAL / ☐ HAND | ☐ HYDRIL

DRIVER A: | CREW SAFETY DAYS: | DRIVER B:

ETS SERIAL NUMBER: PREC620 _20050110_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Verco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 22 | AFE
LICENCE NO.: MC-7 | WELL NAME AND NO: a-92-A / 92-J-12 MC-7
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
SURFACE LOCATION: a-92-A / 92-J-12 | ENGINE NO.: 1-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Bill Mills

DAILY CHECKS
(1) Daily Pre-Tour Meeting
(2) Derrick Inspection - Prior to raising derrick
(3) H2S Alarm Tested (if necessary)
(4) Flare Line Secured
(5) Flare Line Cleared
(6) BOP Drills Performed
(7) Weekly Testing BOP / Personnel & Equipment Lines
(8) Fire Extinguishers Checked
(9) Daily Safety Inspection Checklist completed
(10) Weekly Inspection Before Rigging up Underway
(11) Diesel Spill Checklist
(12) Motor Vehicle Checked

DATE: 11-Feb-2005 | RIG NO.: 620 E | FUEL @ 8.00 | RIG: 18728 BOILER

WEATHER: TEMPERATURE -6 | CURRENT CONDITION: Clear | WIND DIRECTION: calm | ROAD: good

LAST CASING TUBING OR LINER

O.D. (mm)	WEIGHT (kg/m)	GRADE	NO. OF JOINTS	TOTAL PIPE LENGTH	SET AT (m)
				6.31	128.00
		L-80		5.23	870.00

	CASING SIZE (mm)	UNCUT WEIGHT (kg/m)	GRADE	NO. ID (mm)	TOTAL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
		29.00	S5-95	83.00	166.00	5"XH	170	F-1600	BPMMP	305
		38.00	S5-95	67.00	196.00	5"XH	150	F-1600	BPMMP	305

WELL TYPE: Geothermal | RE-ENTRY: ☐ YES ☑ NO | RIG TO GROUND ELEV.: 7.20
WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 11-Feb-20-05
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Bill Mills | RIG NO.: 620 E
PROVINCE: BC | CAMP: ☑ YES ☐ NO | RIG SAFETY DAYS: 347.00

TIME - HRS

TOUR	OPER	STAND UP TIME	SPUD TIME	REPAIR	COMM	OTHER	TRIPS	RIG SERVICE	SURVEY	WIRE LINE	CIRC & CONDITION	REAM	DRILL	SLIDE	ROTARY	CORE	EQUIP	NORMA	DEV. WORK	Standby
NIGHT																				9.25
DAY																				8.25
EVE																				9.25
TOTAL																				26.75

SINGLE SHAKER(S) - RENTALS/SERVICES

No.	Type	Centrifuge	Mud Cleaner
	SCREEN CHANGED	☐ YES	☑ NO
5.80	TOP	100	100
5.80	MIDDLE	100	100
24.20	BOTTOM	100	100

MORNING TOUR

BIT RECORD

BIT NO.	SIZE	IADC CODE	MFG	TYPE	SERIAL NO.	JETS	DEPTH OUT (m)	DEPTH IN (m)	TOTAL METERS DRILLED (m)	TOTAL HOURS RUN

DRILLING STRUCTURE: No. | Dir. | Dull | Loc. | B | Gage | ODC | Reason Pulled | Pull Wt. (daN)

DP | STANDS | DP | SINGLES | HELLTOWN | TOTAL

HOLE CONDITION

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

wt. on bit | wt. of string

MUD RECORD

MUD TYPE: ☑ Water Based ☐ Oil Based | Max Flowline Temp =

TIME	DENSITY (kg/m³)	FUNNEL VIS. (s/L)	W.L. (cm3)	pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

SHAKER SCREEN	HOURS RUN	CENTRIFUGE	HOURS RUN	MUD CLEANER	HOURS RUN

METERS DRILLED

FROM	TO	BIT RUN	ROTARY R.P.M.	SLIDE R.P.M.	HOURS	ROP (m/hr)	TOUR (m)
3291.00					0:00	7.46	7.75
					7:46	8:00	0.25

TIME LOG

FROM	TO	HRS	CODE	DEPTH (m)
0:00	7:46	7.75	22	(Standby) Wait on orders & monitor MC-7
7:46	8:00	0.25	7	Rig Service, F/T Blind rams(6 secs)

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

CIRCULATION PRESSURE (KPa) | PUMP NO. 1 (LINER SIZE (mm) | S.P.M) | PUMP NO. 2 (LINER SIZE (mm) | S.P.M)
152 | 152

REDUCED PUMP SPEED: 0 | 0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verheist

TIME BOARD (hrs) RUN	OFF	STAND UP	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5					

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Rig Manager	716-324-181	Bill Mills		BM	☐	☑

DAY TOUR

BIT RECORD

BIT NO.	SIZE	IADC CODE	MFG	TYPE	SERIAL NO.	JETS	DEPTH OUT (m)	DEPTH IN (m)	TOTAL METERS DRILLED (m)	TOTAL HOURS RUN

DRILLING STRUCTURE: No. | Dir. | Dull | Loc. | B | Gage | ODC | Reason Pulled | Pull Wt. (daN)

DP | STANDS | DP | SINGLES | HELLTOWN | TOTAL

HOLE CONDITION

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

wt. on bit | wt. of string

MUD RECORD

MUD TYPE: ☑ Water Based ☐ Oil Based | Max Flowline Temp =

TIME	DENSITY (kg/m³)	FUNNEL VIS. (s/L)	W.L. (cm3)	pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

SHAKER SCREEN	HOURS RUN	CENTRIFUGE	HOURS RUN	MUD CLEANER	HOURS RUN

METERS DRILLED

FROM	TO	BIT RUN	ROTARY R.P.M.	SLIDE R.P.M.	HOURS	ROP (m/hr)	TOUR (m)
3291.00					8:00	16:46	7.76
					16:46	16:00	0.25

TIME LOG

FROM	TO	HRS	CODE	DEPTH (m)
8:00	16:46	7.76	22	(Standby) Wait on orders & monitor MC-7
16:46	16:00	0.25	7	Rig Service, F/T pipe rams(6 secs)

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

CIRCULATION PRESSURE (KPa) | PUMP NO. 1 (LINER SIZE (mm) | S.P.M) | PUMP NO. 2 (LINER SIZE (mm) | S.P.M)
152 | 152

REDUCED PUMP SPEED: 0 | 0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills

TIME BOARD (hrs) RUN	OFF	STAND UP	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5					

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 15:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Derrickman	629-926-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑

EVENING TOUR

BIT RECORD

BIT NO.	SIZE	IADC CODE	MFG	TYPE	SERIAL NO.	JETS	DEPTH OUT (m)	DEPTH IN (m)	TOTAL METERS DRILLED (m)	TOTAL HOURS RUN

DRILLING STRUCTURE: No. | Dir. | Dull | Loc. | B | Gage | ODC | Reason Pulled | Pull Wt. (daN)

DP | STANDS | DP | SINGLES | HELLTOWN | TOTAL

HOLE CONDITION

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

wt. on bit | wt. of string

MUD RECORD

MUD TYPE: ☑ Water Based ☐ Oil Based | Max Flowline Temp =

TIME	DENSITY (kg/m³)	FUNNEL VIS. (s/L)	W.L. (cm3)	pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL

SHAKER SCREEN	HOURS RUN	CENTRIFUGE	HOURS RUN	MUD CLEANER	HOURS RUN

METERS DRILLED

FROM	TO	BIT RUN	ROTARY R.P.M.	SLIDE R.P.M.	HOURS	ROP (m/hr)	TOUR (m)
3291.00					16:00	23:46	7.75
					23:46	24:00	0.25

TIME LOG

FROM	TO	HRS	CODE	DEPTH (m)
16:00	23:46	7.75	22	(Standby) Wait on orders & monitor MC-7
23:46	24:00	0.25	7	Rig Service, F/T H.C.R.(2 secs)

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

CIRCULATION PRESSURE (KPa) | PUMP NO. 1 (LINER SIZE (mm) | S.P.M) | PUMP NO. 2 (LINER SIZE (mm) | S.P.M)
152 | 152

REDUCED PUMP SPEED: 0 | 0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verheist

TIME BOARD (hrs) RUN	OFF	STAND UP	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5					

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE:

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-1-H / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Bill Mills

DAILY CHECKS

DATE: 12-Feb-2005 | RIG NO.: 620 E | FUEL @ 8:00: | RIG: 16000 BOILER

WEATHER: TEMPERATURE -1 | CURRENT CONDITION: Light snow | WIND DIRECTION: south | ROAD: good

LAST CASING THIS STRING OR LINER

										6.31	129.00
						L-80				8.23	370.00

	29.00	SS-95	83.00	168.00	6"XH	170	F-1600	BPM8P	385
	38.00	SS-95	67.00	168.00	5"XH	150	F-1600	BPM8P	205

SHALE SHAKER(S) | RENTALS/SERVICES

5.80	SCREENS COVERED	TYPE	Derrick	NEW			
5.80	TOP	100	TOP	100			
5.80	MIDDLE	100	MIDDLE	100			
24.80	BOTTOM	100	BOTTOM	100			

Chimo Equipment
A Veraco Company

Based on the CAODC ETS file standard

WELL TYPE: Geothermal | RE-ENTRY: ☐ YES ☑ NO | KB TO GROUND ELEV.: 7.10

WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 12-Feb-20-05

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Bill Mills | RIG NO.: 620 E

PROVINCE: BC | CAMP: ☑ YES ☐ NO | RIG SAFETY DAYS: 346.00

TIME - HRS

	Standby
MORN	7.75
DAY	7.75
EVE	7.75
TOTAL	23.25

MORNING TOUR

BIT RECORD: BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | OUTER | INNER | DULL | LOC | B | GAUGE | OTHER | RUN | HOURS RUN | METERS DRILLED | ROP

MUD RECORD: MUD TYPE ☑ WATER BASED ☐ OIL BASED | Max Flowline Temp = | TIME | DENSITY kg/m³ | FUNNEL VIS - (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED: PRODUCT | AMOUNT + UNIT

SOLIDS CONTROL: HOURS RUN | SHAKER SCREEN SIZE | DESILTER CONE SIZE | DESANDER CONE SIZE

HOLE CONDITION: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

WT. OF DC	WT. OF STRING

METERS DRILLED

FROM	TO	TOTAL METERS DRILLED (m)	ROTARY HOURS	ROP (m/hr)
3291.00				

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	7:45	7.75	22	(Standby) Wait on orders & monitor MC-7
7:45	8:00	0.25	7	Rig Service, F/T Blind ram(8 secs)

CIRCULATION PRESSURE (KPa) | PUMP NO. 1: LINER SIZE (mm) S.P.M. | PUMP NO. 2: LINER SIZE (mm) S.P.M.

	PUMP NO. 1	PUMP NO. 2
	152	152

REDUCED PUMP SPEED: @ | @

DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

NOTES: Engine 27.34 hrs.

DRILLER SIGNATURE: Barry Verheist | MIN. RUN | MAX. RUN | STACK TEMP | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC: Defensive driving | M.A.C.P.

RATE SCHEDULE: ☑ REGULAR ☐ REMAR ☐ INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	842-389-819	Barry Verheist	8.00	BV	☐	☑
Derrickman	847-452-803	Dave Makowsky	8.00	DM	☐	☑
Rig Manager	716-324-151	Bill Mills		BM	☐	☑

DAY TOUR

BIT RECORD

NO.	BIT	SUB (mm)	LENGTH
1	BH	311	0.27
1	Bit Sub	183	0.77
8		127	72.54
1	Jars	178	4.66
9		127	81.83
110	DP	STANDS	3124.00
2	DP	SINGLES	15.27
	HELLTHERM		-12.64
	TOTAL		3291.00
WT. OF DC			11000.00
WT. OF STRING			

BIT RECORD: BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | OUTER | INNER | DULL | LOC | B | GAUGE | OTHER | RUN | HOURS RUN | METERS DRILLED | ROP

MUD RECORD: MUD TYPE ☑ WATER BASED ☐ OIL BASED | Max Flowline Temp = | TIME | DENSITY kg/m³ | FUNNEL VIS - (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED: PRODUCT | AMOUNT + UNIT

SOLIDS CONTROL: HOURS RUN | SHAKER SCREEN SIZE | DESILTER CONE SIZE | DESANDER CONE SIZE

HOLE CONDITION: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

METERS DRILLED

FROM	TO	TOTAL METERS DRILLED (m)	ROTARY HOURS	ROP (m/hr)
3291.00				

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	15:45	7.75	22	(Standby) Wait on orders & monitor MC-7
15:45	16:00	0.25	7	Rig Service & Function Annular 24/24 Secs

CIRCULATION PRESSURE (KPa) | PUMP NO. 1: LINER SIZE (mm) S.P.M. | PUMP NO. 2: LINER SIZE (mm) S.P.M.

	PUMP NO. 1	PUMP NO. 2
	152	152

REDUCED PUMP SPEED: @ | @

DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills | MIN. RUN | MAX. RUN | STACK TEMP | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: ☑ REGULAR ☐ REMAR ☐ INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Derrickman	629-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑

EVENING TOUR

BIT RECORD: BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | OUTER | INNER | DULL | LOC | B | GAUGE | OTHER | RUN | HOURS RUN | METERS DRILLED | ROP

MUD RECORD: MUD TYPE ☑ WATER BASED ☐ OIL BASED | Max Flowline Temp = | TIME | DENSITY kg/m³ | FUNNEL VIS - (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED: PRODUCT | AMOUNT + UNIT

SOLIDS CONTROL: HOURS RUN | SHAKER SCREEN SIZE | DESILTER CONE SIZE | DESANDER CONE SIZE

HOLE CONDITION: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

METERS DRILLED

FROM	TO	TOTAL METERS DRILLED (m)	ROTARY HOURS	ROP (m/hr)
3291.00				

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	23:45	7.75	22	(Standby) Wait on orders & monitor MC-7
23:45	24:00	0.25	7	Rig Service and Function H.C.R. 2/2

CIRCULATION PRESSURE (KPa) | PUMP NO. 1: LINER SIZE (mm) S.P.M. | PUMP NO. 2: LINER SIZE (mm) S.P.M.

	PUMP NO. 1	PUMP NO. 2
	152	152

REDUCED PUMP SPEED: @ | @

DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard | MIN. RUN | MAX. RUN | STACK TEMP | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: ☑ REGULAR ☐ REMAR ☐ INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-626-705	Wade Goddard	8.00	WG	☐	☑
Derrickman	651-366-064	Jesse Goddard	8.00	JG	☐	☑

ETS SERIAL NUMBER: PREC620 _20050112_1A

CHIMO ETS SOFTWARE VERSION:

CAODC | **Chimo Equipment** (A Varco Company)

Based on the CAODC ETS file standard

Field	Value
SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO.	22
AFE	
LICENCE NO	MC-7
WELL NAME AND NO.	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE	Bill Mills
DATE	13-Feb-2005
RIG NO.	620 E
FUEL @ 8:00 – RIG	14986
BOILER	

Weather: Temperature -7; Current condition: partly clouds; Wind direction: calm; Road: compact snow

Last casing, tubing or liner

Grade	KB to CSG head (m)	Set at (m)
	8.31	129.00
L-80	8.23	870.00

Pumps

Liner size (mm)	Grade	SPM	Vol. (L)	Rod size	No. of joints	Pump type	Pump manufacturer	Stroke length (mm)
20.00	SS-95	83.00	166.00	5"XH	170	F-1600	BPMMP	306
38.00	SS-95	67.00	166.00	6"XH	160	F-1600	BPMMP	306

Time – Hrs

	Rig service (code 7)	StandBy (code 22)
MORN	0.25	7.75
DAY	0.25	7.75
EVE	0.25	7.75
TOTAL	0.75	23.25

Shale shaker(s): No. 1, Type: Derrick; Screens changed: No. Total: 8.00 / 8.00 / 8.00 / 24.00. Top 100 / 100; Middle 100 / 100; Bottom 100 / 100.

Rentals-Services: (none)

Field	Value
WELL TYPE	Geothermal
RE-ENTRY	No
KB TO GROUND ELEV	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	13-Feb-2005
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Bill Mills
RIG NO.	620 E
PROVINCE	BC
CAMP	Yes
RIG SAFETY DAYS	349.00

MORNING TOUR 0:00 TO 8:00

Meters drilled: From 3291.00. Pump No. 1 liner 152; Pump No. 2 liner 152. Mud type: water based.

Time log / Details of operations in sequence and remarks

From	To	Hrs	Code	Details
0:00	7:45	7.75	22	(StandBy) Wait on Orders and Monitor MC-7
7:45	8:00	0.25	7	Rig Service and Function Annular 24/24

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Derrickman	629-926-262	Rob Roth	8.00	RR	No
Motorman	722-672-781	Dwayne Fry	8.00	DF	No
Rig Manager	718-324-181	Bill Mills		BM	No

Rate schedule: Regular. Driller signature: Bill Mills

DAY TOUR 8:00 TO 16:00

Meters drilled: From 3291.00. Pump No. 1 liner 152; Pump No. 2 liner 152. Mud type: water based.

From	To	Hrs	Code	Details
8:00	15:45	7.75	22	(StandBy) Wait On Orders and Monitor MC-7
15:45	16:00	0.25	7	Rig Service and Function Blind Rams 6/6

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	633-628-706	Wade Goddard	12.00	WG	No
Derrickman	651-366-064	Jesse Goddard	12.00	JG	No

Rate schedule: Regular. Driller signature: Wade Goddard

EVENING TOUR 16:00 TO 24:00

Meters drilled: From 3291.00. Pump No. 1 liner 152; Pump No. 2 liner 152. Mud type: water based.

From	To	Hrs	Code	Details
16:00	23:45	7.75	22	(StandBy) Wait On Orders and Monitor MC-7
23:45	24:00	0.25	7	Rig Service and Function H.C.R. 2/2

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Derrickman	629-926-262	Rob Roth	4.00	RR	No
Motorman	722-672-781	Dwayne Fry	4.00	DF	No

Drill string assembly

No.	Item	O.D. (mm)	Length (m)
1	Bit	311	0.27
1	Bit Sub	163	0.77
6	[illegible]	127	72.54
1	Jars	178	4.66
8	[illegible]	127	81.93
110	DP – Stands		3124.00
2	DP – Singles		19.27
	Kelly down		-12.64
	Total		3291.00
	Wt. of DC		11000.00

Rate schedule: Regular. Driller signature: Bill Mills

ETS SERIAL NUMBER: PREC620 _20050113_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

CAODC

Based on the CAODC ETS file standard

Field	Value
SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO	22
AFE	
LICENCE NO.	MC-7
WELL NAME AND NO	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-K / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Bill Mills
DATE	14-Feb-2005
RIG NO.	620 E
FUEL @ 8:00 RIG	12216
BOILER	
TEMPERATURE	-9
CURRENT CONDITION	clear
WIND DIRECTION	northwest
ROAD	Compact snow
WELL TYPE	Geothermal
RE-ENTRY	☐ YES ☑ NO
KB TO GROUND ELEV.	7.20
DATE	14-Feb-2005
RIG MANAGER	Bill Mills
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	350.00

DAILY CHECKS (OPR / RM): all checked.

Last Casing / Tubing or Liner

OD	Grade	KB to CSG head	Set at (m)
		5.31	128.00
	L-80	8.23	870.00

Drill pipe / Pumps

Nominal weight (kg/m)	Grade	Tool joint OD (mm)	Tool joint ID	Thread type	No. of joints	Pump type	Pump manufacturer	Stroke length (mm)
29.80	SS-95	83.00	164.00	5"XH	170	F-1600	BPMMP	305
36.00	SS-95	67.00	168.00	5"XH	160	F-1600	BPMMP	305

Time – Hrs

	7	22	23 (Held B.O.P. Drill)
MORN	0.25	7.75	
DAY	0.25	7.75	
EVE	0.25	7.50	0.25
TOTAL	0.75	23.00	0.25

Shale Shaker(s)

No. 2, Type Derrick. Screens changed: ☐ YES ☑ NO. Top 100 / 100; Middle 100 / 100; Bottom 100 / 100. Hours: 8.00, 8.00, 8.00, 24.00.

Drill string / BHA

No.	Item	O.D. (mm)	Length (m)
1	bit	311	0.27
1	Bit Sub	163	0.77
8	[illegible]	127	72.54
1	Jars	178	4.86
9	[illegible]	127	81.93
110	D.P.		3124.00
2	D.P.		19.27
	Kelly down		-12.64
	Total		3291.00
	Wt of DC		11000.00

Mud type: ☑ Water based (all tours). Pump No. 1 / No. 2 S.P.M.: 152 / 152 (all tours).

MORNING TOUR 0:00 to 8:00

Meters drilled — From: 3291.00

From	To	Hrs	Code	Details of operations in sequence and remarks
0:00	7:46	7.75	22	(Standby) Wait On Orders & Monitor Well MC - 7
7:46	8:00	0.25	7	Rig Service & Function Annular 24/24 Secs

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Derrickman	629-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Rig Manager	716-324-181	Bill Mills		BM	☐	☑

Rate schedule: ☑ Regular. Driller signature: Bill Mills. 8.00 / 9.4

DAY TOUR 8:00 to 16:00

Meters drilled — From: 3291.00

From	To	Hrs	Code	Details of operations in sequence and remarks
8:00	15:45	7.75	22	(Standby) Wait On Orders & Monitor Well MC - 7
15:45	16:00	0.25	7	Rig Service and Function Blind Ram's 6/6

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	633-626-708	Wade Goddard	12.00	WG	☐	☑
Derrickman	651-366-064	Jesse Goddard	12.00	JG	☐	☑

Rate schedule: ☑ Regular. Driller signature: Wade Goddard. 8.00 / 9.5

EVENING TOUR 16:00 to 24:00

Meters drilled — From: 3291.00

From	To	Hrs	Code	Details of operations in sequence and remarks
16:00	23:30	7.50	22	(Standby) Wait On Orders & Monitor Well MC - 7
23:30	23:45	0.25	23	(Held B.O.P. Drill) W /Crewmembers well diverted 58 Secs
23:45	24:00	0.25	7	Rig Service and Function H.C.R. 2/2

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Derrickman	629-926-262	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑

Rate schedule: ☑ Regular. Driller signature: Bill Mills. 8.00 / 9.4

ETS SERIAL NUMBER: PREC620_20050114_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment — A Varco Company

CAODC

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO	22
AFE	
LICENCE NO.	MC-7
WELL NAME AND NO.	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Bill Mills
DATE	15-Feb-2006
RIG NO.	820 E
FUEL @ 6:00 — RIG	21130
FUEL @ 6:00 — BOILER	
WEATHER — TEMPERATURE	-8
WEATHER — CURRENT CONDITION	Clear
WEATHER — WIND DIRECTION	Calm
WEATHER — ROAD	Compact Snow

WELL TYPE	Geothermal
RE-ENTRY	No
KB TO GROUND ELEV	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	16-Feb-2005
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Bill Mills
RIG NO.	620 E
PROVINCE	BC
CAMP	Yes
RIG SAFETY DATE	351.00

Last Casing, Tubing or Liner

KB to CSG head (m)	Set at (m)	Grade
5.31	129.00	
8.23	870.00	L-80

Pumps

Linear Mass	Grade	Nom ID	Tool Jt O.D.	Thread Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke Length
29.00	SS-95	83.00	165.00	6"XH	170	F-1600	BPMMP	305
36.00	SS-95	87.00	168.00	5"XH	150	F-1600	BPMMP	305

Time – Hrs

	7 (Rig Service)	22	Held B.O.P. Drill
MORN	0.25	7.75	
DAY	0.25	7.75	
EVE	0.25	7.75	
TOTAL	0.75	23.25	

Shale Shaker(s)

No 2	Type Derrick		
6.00	Screens Changed	Yes ☐	No ☑
8.00	Top 100	Top 100	
8.00	Middle 100	Middle 100	
24.00	Bottom 100	Bottom 100	

Drill String (each tour)

No.	BHA	O.D.	Length
1	Bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.84
1	Jars	178	4.86
9		127	81.93
110	DP		3124.00
2	DP		19.27
	Kelly Down		-12.64
	Total		3291.00
	Wt of DC		11000.00

Mud Type: Oil Based. Max Flowline Temp.

Morning Tour (0:00 to 6:00)

Meters Drilled: From 3291.00

Pump No. 1 Liner 152; Pump No. 2 Liner 162

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
0:00	7:45	7.75	22	(Standby) Wait on Orders & Monitor Well MC - 7
7:45	8:00	0.25	7	Rig Service & Function Annular 24/24 Secs

Driller Signature: Bill Mills

NOTES

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Derrickman	629-928-262	Rob Roth	8.00	RR	No
Motorman	722-572-781	Dwayne Fry	8.00	DF	No
Rig Manager	716-124-181	Bill Mills		BM	No

Rate Schedule: Regular

Day Tour (8:00 to 16:00)

Meters Drilled: From 3291.00

Pump No. 1 Liner 152; Pump No. 2 Liner 162

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
8:00	15:45	7.75	22	(Standby) Wait on Orders & Monitor Well MC - 7
15:45	16:00	0.25	7	Rig Serviceand Function Blind Ram's 6/6

Driller Signature: Wade Goddard

NOTES

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	633-628-706	Wade Goddard	12.00	WG	No
Derrickman	651-356-064	Jesse Goddard	12.00	JG	No

Rate Schedule: Regular

Evening Tour (16:00 to 24:00)

Meters Drilled: From 3291.00

Pump No. 1 Liner 162; Pump No. 2 Liner 162

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
16:00	23:45	7.75	22	(Standby) Wait on Orders & Monitor Well MC - 7
23:45	24:00	0.25	7	Rig Service and Function H.C.R. 2/2

Driller Signature: Bill Mills

NOTES

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Derrickman	629-928-282	Rob Roth	4.00	RR	No
Motorman	722-572-781	Dwayne Fry	4.00	DF	No

Rate Schedule: Regular

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | MUD RELEASE | JOB NO.: 22 | AFE
LICENCE NO: MC-7 | WELL NAME AND NO: a-92-A / 92-J-12 MC-7
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
SURFACE LOCATION: a-92-A / 92-J-12 | RIG/UE ID: b-14-I / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Bill Mills

DAILY CHECKS (CFR / RJM)
(A) Daily slips inspection
(C) Derrick inspection (every tubing installation)
(E) 1/2 Kelly Pressed (if required)
(G) Hoist Lowered & Brake Chained Down
(I) Fire Line Marked
(K) BOP Ram Preventers
(M) Accumulator Volume BOP's Function & Degasser Line
(O) Annular Hoses and Safety Clamps (one clamp only)
(Q) CAODC Rig Saver Inspection Check(s) (where applicable)
(S) Hoist Inspection Before Raising a Derrick
(U) Crown Saver Check(s)
(W) Hoist Line Checked

DATE: 16-Feb-2005 | BID NO: 620 E | FUEL @ 6:00 | RIG: 16132 BOILER

WEATHER: TEMPERATURE -8 | CURRENT CONDITION: clear | WIND DIRECTION: calm | ROAD: Good

LAST CASING: SIZE 9 5/8 | OR LINER

O.D. (mm)	WALL (mm)	lg/m	GRADE	CONN.	DRIFT	THREAD TYPE	NO. OF JOINTS	TOTAL (m) LENGTH	RIG KB TO CSG HEAD (m)	SET AT (m)
									6.31	129.00
						L-80			6.23	670.00

SCOP ACE (mm)	HANGER WEIGHT (kg/mm)	GRADE	WALL TH (mm)	BODY JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
	29.00	SS-95	93.00	144.00	5"XH	170	F-1600	BPMMP	305
	35.00	SS-95	97.00	144.00	5"XH	150	F-1600	BPMMP	305

TIME - HRS

OPER	STAND BY	DRLG	REAMING	CORING	CIRC & COND	TRIPS	RIG SERVICE	SURVEY	DEV. WORK	WIRE LINE	FISHING	LAY DOWN	PICK UP	CUT OFF DRLG LINE	SLIP DRLG LINE	DRLG CEMENT	PLUGS	SQUEEZE	WAIT ON CEMENT	TEST BOP	TEST CASING	NU/ND BOP	REPAIR RIG	OTHER	TOTAL
MORN		0.25																							7.75
DAY		0.25																							7.75
EVE		0.25																							7.75
TOTAL		0.75																							23.25

SHALE SHAKER(S) | RENTALS/SERVICES

NO.	TYPE	MFW
2	Derrick	

5.00	SCREENS CHANGED	☐ YES	☑ NO
6.00	TOP	100	TOP 100
6.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

WELL TYPE: Geothermal | RE-ENTRY ☐ YES ☑ NO | KB TO GROUND ELEV: 7.30
WELL NAME & NO.: a-92-A / 92-J-12 MC-7 | DATE: 16-Feb-2005
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Bill Mills | RIG NO: 620 E
PROVINCE: BC | CAMP ☑ YES ☐ NO | RIG SAFETY DATE: 352.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.27
1	Bit Sub	163	0.77
6		127	72.64
1	Jars	178	4.66
9		127	81.93
110	D.P.	STANDS	3124.00
2	D.P.	SINGLES	19.27
	KELLY DOWN		-12.64
	TOTAL		3291.00
WT. OF DC			11000.00
WT. OF STRING			

BIT NO.
SIZE
IADC CODE
MFG.
TYPE
SERIAL NO.
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL METERS DRILLED (m)
TOTAL HOURS RUN
CUTTING STRUCTURE: T | B | G | OC | R | Gage | OC | REASON PULLED | Inner | Outer

HOLE CONDITION
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☐ WATER BASED ☑ OIL BASED | Max Flowline Temp =
TIME
DENSITY (kg/m3)
FUNNEL VIS. (sec/L)
W.L. (cm3)
pH

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT & UNIT	HOURS RUN	MUD MATERIAL COST	SOLIDS CONTROL COST	DOWNHOLE COST

METERS DRILLED

FROM	TO	BIT HRS	ROTARY R.P.M.	SLIDE DRILLING R.P.M.
3291.00				

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	7:45	7.75	22	(Standby) Wait on Orders & Monitor Well MC - 7
7:45	8:00	0.25	7	Rig Service & Function Annular 24/24 Secs

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) 152 | S.P.M. | PUMP NO. 2: LINER SIZE (mm) 152 | S.P.M.
REDUCED PUMP SPEED
DEVIATION SURVEY: DEPTH (m) | DEVIATION (o) | DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills | DRILL TIME (hrs) 8.00 | JAR HRS 9.0 | STACK TIME | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Derrickman	629-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Rig Manager	716-324-181	Bill Mills		BM	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ SPRAY ☐ WASH
DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.27
1	Bit Sub	163	0.77
6		127	72.64
1	Jars	178	4.66
9		127	81.93
110	D.P.	STANDS	3124.00
2	D.P.	SINGLES	19.27
	KELLY DOWN		-12.64
	TOTAL		3291.00
WT. OF DC			11000.00
WT. OF STRING			

BIT NO.
SIZE
IADC CODE
MFG.
TYPE
SERIAL NO.
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL METERS DRILLED (m)
TOTAL HOURS RUN
CUTTING STRUCTURE: T | B | G | OC | R | Gage | OC | REASON PULLED | Inner | Outer

HOLE CONDITION
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☐ WATER BASED ☑ OIL BASED | Max Flowline Temp =
TIME
DENSITY (kg/m3)
FUNNEL VIS. (sec/L)
W.L. (cm3)
pH

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT & UNIT	HOURS RUN	MUD MATERIAL COST	SOLIDS CONTROL COST	DOWNHOLE COST

METERS DRILLED

FROM	TO	BIT HRS	ROTARY R.P.M.	SLIDE DRILLING R.P.M.
3291.00				

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	15:45	7.75	22	(Standby) Wait on Orders & Monitor Well MC - 7
15:45	16:00	0.25	7	Rig Service and Function Blind Ram's 6/6

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) 152 | S.P.M. | PUMP NO. 2: LINER SIZE (mm) 152 | S.P.M.
REDUCED PUMP SPEED
DEVIATION SURVEY: DEPTH (m) | DEVIATION (o) | DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard | DRILL TIME (hrs) 8.00 | JAR HRS 9.0 | STACK TIME | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	933-828-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	651-366-064	Jesse Goddard	12.00	JG	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ SPRAY ☐ WASH
DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.27
1	Bit Sub	163	0.77
6		127	72.64
1	Jars	178	4.66
9		127	81.93
110	D.P.	STANDS	3124.00
2	D.P.	SINGLES	19.27
	KELLY DOWN		-12.64
	TOTAL		3291.00
WT. OF DC			11000.00
WT. OF STRING			

BIT NO.
SIZE
IADC CODE
MFG.
TYPE
SERIAL NO.
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL METERS DRILLED (m)
TOTAL HOURS RUN
CUTTING STRUCTURE: T | B | G | OC | R | Gage | OC | REASON PULLED | Inner | Outer

HOLE CONDITION
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☐ WATER BASED ☑ OIL BASED | Max Flowline Temp =
TIME
DENSITY (kg/m3)
FUNNEL VIS. (sec/L)
W.L. (cm3)
pH

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT & UNIT	HOURS RUN	MUD MATERIAL COST	SOLIDS CONTROL COST	DOWNHOLE COST

METERS DRILLED

FROM	TO	BIT HRS	ROTARY R.P.M.	SLIDE DRILLING R.P.M.
3291.00				

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	23:45	7.75	22	(Standby) Wait on Orders & Monitor Well MC - 7
23:45	24:00	0.25	7	Rig Service and Function H.C.R. 2/2

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) 152 | S.P.M. | PUMP NO. 2: LINER SIZE (mm) 152 | S.P.M.
REDUCED PUMP SPEED
DEVIATION SURVEY: DEPTH (m) | DEVIATION (o) | DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills | DRILL TIME (hrs) 8.00 | JAR HRS 9.0 | STACK TIME | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Derrickman	629-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ SPRAY ☐ WASH
DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20030116_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Vanoo Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 22 | AFE

LICENCE NO: MC-7 | WELL NAME AND NO: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | ENGINE ID: 3-149 / 92-J-12

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Bill Mills

DAILY CHECKS

DATE: 17-Feb-2005 | RIG NO.: 620 E | FUEL on Hand | RIG: 15632 | BOILER

WEATHER: TEMPERATURE -6 | CURRENT CONDITION: clear | WIND DIRECTION: Northwest | ROAD: Good

LAST CASING TUBING OR LINER

										6.31	129.00
						L-80				8.23	870.00
		28.00	55-95	83.00	186.00	5"XH	179	F-1600	BPMMP		305
		38.00	55-95	67.00	188.00	5"XH	180	F-1600	BPMMP		306

TIME BREAKDOWN

	Standby
MORN	7.75
DAY	7.75
EVE	7.75
TOTAL	23.25

SHALE SHAKER(S) | RENTALS/SERVICES

NO.	TYPE	Derrick	NEW
1	SCREENS CHANGED	YES	NO
2	TOP	100	100
3	MIDDLE	100	100
4	BOTTOM	100	100

BIT RECORD

NO.	BIT	O.D. (mm)	MFG/SN
1	bit	311	0.27
1	Bit Sub	163	0.77
8	[illegible]	127	72.64
1	Jars	178	4.86
9	[illegible]	127	81.93
110	D.P.	STANDS	3124.00
2	DP	SINGLES	19.27
	KELLY DOWN		-12.64
	TOTAL		3291.00
AT BIT DC			11000.00
AT BIT STRING			

BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METRES DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE | WATER BASED | OIL BASED | Max Flowline Temp =

TIME | DENSITY (kg/m³) | FUNNEL VIS. (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED: PRODUCT | AMOUNT x UNIT

SOLIDS CONTROL: HOURS RUN | [illegible]

METERS DRILLED

FROM	TO	[illegible]	ROTARY R.P.M.	[illegible]
3291.00				

CIRCULATION PRESSURE (KPa) | PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.

152 | 152

REDUCED PUMP SPEED

DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

TIME LOG

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

0:00	7:45	7.75	22	(Standby) Wait On Orders & Monitor Well MC - 7
7:45	8:00	0.25	7	Rig Service & Function Annular 24/24 Secs

NOTES

DRILLER SIGNATURE: Bill Mills

[illegible]	HRS RUN	[illegible]	BLOCK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	8.00	4.5					

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Derrickman	629-826-262	Rob Roth	8.00	RR	☒
Motorman	722-572-781	Dwayne Fry	8.00	DF	☒
Rig Manager	716-324-161	Bill Mills		BM	☒

RATE SCHEDULE: ☑ REGULAR | ☐ REPAIR | ☐ INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-626-705	Wade Goddard	12.00	WG	☒
Derrickman	951-366-084	Jesse Goddard	12.00	JG	☒

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Derrickman	629-826-262	Rob Roth	4.00	RR	☒
Motorman	722-572-781	Dwayne Fry	4.00	DF	☒

E 'S SERIAL NUMBER: PREC620_20050117_1A

CHIMO ETS SOFTWARE VERSION:

AFE# 2004-11-30 20:00	AUD RELEASE	JOB NO. 22	AFE
LICENCE NO. MC-7	WELL NAME AND NO. a-92-A / 92-J-12 MC-7		
OPERATOR Western Geopower Corp	CONTRACTOR Precision Drilling		
SURFACE LOCATION a-92-A / 92-J-12	SPUD/E TD b-1-H / 92-J-12		
SIGNATURE OF OPERATORS REPRESENTATIVE Andrew Ryder	SIGNATURE OF CONTRACTORS REPRESENTATIVE Bill Mills		

DAILY CHECKS

OPR B.M.

DATE 18-Feb-2005
RIG NO. 620 E
FUEL @ RIG
RIG 13560 BOILER

LAST CASING TURING OR LINER

O.D. pipe	WEIGHT lbs/ft	GRADE	NO. OF JOINTS	TOTAL PIPE WEIGHT	HEIGHT CASING HEAD FLANGE	SET AT mKB
					6.31	128.00
		L-80			8.23	870.00

OPERATING

TEMPERATURE -4
CURRENT CONDITION clear
WIND DIRECTION calm
ROAD Good

DRILL PIPE O.D. pipe	LINEAR MASS lbs/m	GRADE	JOINTS (pipe)	TOOL JT O.D. (comp)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LENGTH (pump)
	29.00	S5-95	63.00	166.00	5"XH	170	F-1600	BPMMP	305
	38.00	S5-95	57.00	168.00	5"XH	150	F-1600	BPMMP	305

TIME - HRS

OPER	TRIPS	REAMING	DRLG	CIRC HOLE COND	Standby
MORN				0.25	7.75
DAY				0.25	7.75
EVE				0.25	7.75
TOTAL				0.75	23.25

SHALE SHAKER(S) — RENTALS/SERVICES

NO. 2	TYPE Derrick	MFG
SCREENS CHANGED	YES	NO
TOP	100	TOP 100
MIDDLE	100	MIDDLE 100
BOTTOM	100	BOTTOM 100

WELL TYPE Geothermal — RE-ENTRY YES NO — KB TO GROUND ELEV. 7.20
WELL NAME & No. a-92-A / 92-J-12 MC-7 — DATE 18-Feb-2005
OPERATOR Western Geopower Corp — CONTRACTOR Precision Drilling
RIG MANAGER Bill Mills — RIG NO. 620 E
PROVINCE BC — CAMP YES NO — RIG SAFETY DAYS 354.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

No.	Qty	Size	Serial No.	Depth Out (m)	Depth In (m)	Total Meters Drilled (m)	Total Hours Run	Cum. Hours	Bit Condition
1	Bit	311		0.27					
1	Bit Sub	163		0.77					
8		127		72.64					
1	Jars	178		4.86					
9		127		81.93					
110	D.P.	STANDS		3124.00					
2	D.P.	SINGLES		19.27					
	FALL DOWN			-12.64					
	TOTAL			3291.00					
WT. OF DC				11000.00					
WT. OF STRING									

MUD RECORD

MUD TYPE — WATER BASED — OIL BASED — Max Flowline Temp =
TIME
DENSITY (g/cm³)
FUNNEL VIS. (Sec)
W.L. (cm3)
pH
MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	SHAKER SCREEN (mesh)	DESILTER CONE (mm)	DESANDER CONE (mm)	CENTRIFUGE (rpm)

METERS DRILLED

FROM	TO	Meters Drilled	Rotary Hours	ROP (m/hr)
3291.00				

CIRCULATION PRESSURE (kPa) — PUMP NO. 1 (Liner size / Stroke length) S.P.M. — PUMP NO. 2 (Liner size / Stroke length) S.P.M.
152 152
REDUCED PUMP SPEED
0 0
DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	Hours	Code	Activity
0:00	7:45	7.75	22	(Standby) Wait On Orders & Monitor Well MC - 7
7:45	8:00	0.25	7	Rig Service & Function Annular 24/24 secs

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE — Bill Mills — Hrs Drlg 8.00 — Hrs Circ 0.5 — Wash / Ream — OPERATOR FUEL — MAX EXP HOOKLOAD — SAFETY TOPIC — M.A.C.P.

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Derrickman	529-828-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Rig Manager	718-324-181	Bill Mills		BM	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ INVERT
DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR 8:00 TO 16:00

BIT RECORD

No.	Qty	Size	Serial No.	Depth Out (m)	Depth In (m)	Total Meters Drilled (m)	Total Hours Run	Cum. Hours	Bit Condition
1	Bit	311		0.27					
1	Bit Sub	163		0.77					
8		127		72.64					
1	Jars	178		4.86					
9		127		81.93					
110	D.P.	STANDS		3124.00					
2	D.P.	SINGLES		19.27					
	FALL DOWN			-12.64					
	TOTAL			3291.00					
WT. OF DC				11000.00					
WT. OF STRING									

MUD RECORD

MUD TYPE — WATER BASED — OIL BASED — Max Flowline Temp =
TIME
DENSITY (g/cm³)
FUNNEL VIS. (Sec)
W.L. (cm3)
pH
MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	SHAKER SCREEN (mesh)	DESILTER CONE (mm)	DESANDER CONE (mm)	CENTRIFUGE (rpm)

METERS DRILLED

FROM	TO	Meters Drilled	Rotary Hours	ROP (m/hr)
3291.00				

CIRCULATION PRESSURE (kPa) — PUMP NO. 1 (Liner size / Stroke length) S.P.M. — PUMP NO. 2 (Liner size / Stroke length) S.P.M.
152 152
REDUCED PUMP SPEED
0 0
DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	Hours	Code	Activity
8:00	16:45	7.75	22	(Standby) Wait On Orders & Monitor Well MC-7
16:45	16:00	0.35	7	Rig Service and Function Blind Ram's 8/8

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE — Wade Goddard — Hrs Drlg 8.00 — Hrs Circ 0.5 — Wash / Ream — OPERATOR FUEL — MAX EXP HOOKLOAD — SAFETY TOPIC — M.A.C.P.

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	833-828-796	Wade Goddard	12.00	WG	☐	☑
Derrickman	651-366-964	Jesse Goddard	12.00	JG	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ INVERT
DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR 16:00 TO 24:00

BIT RECORD

No.	Qty	Size	Serial No.	Depth Out (m)	Depth In (m)	Total Meters Drilled (m)	Total Hours Run	Cum. Hours	Bit Condition
1	Bit	311		0.27					
1	Bit Sub	163		0.77					
8		127		72.64					
1	Jars	178		4.86					
9		127		81.93					
110	D.P.	STANDS		3124.00					
2	D.P.	SINGLES		19.27					
	FALL DOWN			-12.64					
	TOTAL			3291.00					
WT. OF DC				11000.00					
WT. OF STRING									

MUD RECORD

MUD TYPE — WATER BASED — OIL BASED — Max Flowline Temp =
TIME
DENSITY (g/cm³)
FUNNEL VIS. (Sec)
W.L. (cm3)
pH
MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	SHAKER SCREEN (mesh)	DESILTER CONE (mm)	DESANDER CONE (mm)	CENTRIFUGE (rpm)

METERS DRILLED

FROM	TO	Meters Drilled	Rotary Hours	ROP (m/hr)
3291.00				

CIRCULATION PRESSURE (kPa) — PUMP NO. 1 (Liner size / Stroke length) S.P.M. — PUMP NO. 2 (Liner size / Stroke length) S.P.M.
152 152
REDUCED PUMP SPEED
0 0
DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	Hours	Code	Activity
16:00	23:45	7.75	22	(Standby) Wait On Orders & Monitor Well MC-7
23:45	24:00	0.35	7	Rig Service and Function H.C.R. 2/2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE — Bill Mills — Hrs Drlg 8.00 — Hrs Circ 0.5 — Wash / Ream — OPERATOR FUEL — MAX EXP HOOKLOAD — SAFETY TOPIC — M.A.C.P.

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Derrickman	529-828-262	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ INVERT
DRIVER A — CREW SAFETY DAYS — DRIVER B

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

ETS SERIAL NUMBER: PREC620_20050118_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD 2004-11-30 20:00	RIG RELEASE	JOB NO. 22	AFE
LICENCE NO. MC-7	WELL NAME AND NO a-92-A / 92-J-12 MC-7		
OPERATOR Western Geopower Corp		CONTRACTOR Precision Drilling	
SURFACE LOCATION a-92-A / 92-J-12		UNIQUE ID: a-1A / 92-J-12	
SIGNATURE OF OPERATOR'S REPRESENTATIVE Andrew Ryder		SIGNATURE OF CONTRACTOR'S REPRESENTATIVE Bill Mills	

DAILY CHECKS

DATE 19-Feb-2005 | RIG NO 620 E | FUEL @ 8:00 | AIR 11683 | 90LBR

WEATHER: CURRENT CONDITION Clear | WIND DIRECTION Cost | ROAD Good | TEMPERATURE -4

LAST CASING TUBING OR LINER

							L-80			6.37	129.00
							L-80			6.23	379.00
	28.00	SS-95	83.00	166.00	5"XH	170	F-1800	BPMMP			305
	38.00	SS-95	87.00	168.00	5"XH	160	F-1800	BPMMP			305

TIME - HRS

	Standby
MORN	7.75
DAY	7.75
EVE	7.75
TOTAL	23.25

SNUBE SHAKERS | RENTALS-SERVICES

				Derrick	
5.00	SURFACE CASING		YES		NO
4.06	TOP	100	TOP	100	
5.06	MIDDLE	100	MIDDLE	100	
24.06	BOTTOM	100	BOTTOM	100	

WELL TYPE	Geothermal
RE-ENTRY	YES NO
KB TO GROUND ELEV.	7.20
WELL NAME & No.	a-92-A / 92-J-12 MC-7
DATE	19-Feb-2005
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Bill Mills
RIG NO	620 E
PROVINCE	BC
CAMP	YES NO
RIG SAFE FY DAYS	355.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

JOB	BIT	O.D. (mm)	LENGTH
1	Bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	178	4.86
9		127	81.93
110	DP	STANDS	3124.00
2	DP	SINGLES	19.27
	HELL+DOWN		-12.64
	TOTAL		3291.00
wt. of DC			11000.00
wt. of string			

MUD RECORD

MUD TYPE: WATER BASED: YES NO; OIL BASED: YES NO — Max Flowline Temp =

TIME
DENSITY (kg/m³)
FUNNEL VIS. (s)
W.L. (cm3)
pH
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL METERS DRILLED (m)
TOTAL HOURS RUN
CUTTING STRUCTURE
HOLE CONDITION
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN	HYDROCYCLONE CONES	CENTRIFUGE RATE

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY R.P.M.	HOURS ON BIT
3291.00				

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) S.P.M. | PUMP NO. 2 LINER SIZE (mm) S.P.M.

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	7:45	7.75	22	(Standby) Wait On Orders & Monitor Well MC-7
7:45	8:00	0.25	7	Rig service & function annular 24/24 sec.

NOTES

DRILLER SIGNATURE	DRILLING HRS	STAND HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Mills	8.00	0.5				

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Derrickman	629-626-262	Rob Roth	8.00	RR		
Motorman	722-572-781	Dwayne Fry	8.00	DF		
Rig manager	716-324-181	Bill Mills		BM		

RATE SCHEDULE: REGULAR REPAIR WEEKS

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

BIT RECORD

JOB	BIT	O.D. (mm)	LENGTH
1	Bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	178	4.86
9		127	81.93
110	DP	STANDS	3124.00
2	DP	SINGLES	19.27
	HELL+DOWN		-12.64
	TOTAL		3291.00
wt. of DC			11000.00
wt. of string			

MUD RECORD

MUD TYPE: WATER BASED: YES NO; OIL BASED: YES NO — Max Flowline Temp =

TIME
DENSITY (kg/m³)
FUNNEL VIS. (s)
W.L. (cm3)
pH
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL METERS DRILLED (m)
TOTAL HOURS RUN
CUTTING STRUCTURE
HOLE CONDITION
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN	HYDROCYCLONE CONES	CENTRIFUGE RATE

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY R.P.M.	HOURS ON BIT
3291.00				

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) S.P.M. 152 | PUMP NO. 2 LINER SIZE (mm) S.P.M. 152

REDUCED PUMP SPEED 0 0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
3291.00				
8:00	15:45	7.75	22	(Standby) Wait On Orders & Monitor Well MC-7
15:45	16:00	0.25	7	Rig Service and Function Blind Ram's 6/6

NOTES

DRILLER SIGNATURE	DRILLING HRS	STAND HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	0.5				

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-628-706	Wade Goddard	12.00	WG		
Derrickman	651-388-964	Jesse Goddard	12.00	JG		

RATE SCHEDULE: REGULAR REPAIR DIVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

BIT RECORD

JOB	BIT	O.D. (mm)	LENGTH
1	Bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	178	4.86
9		127	81.93
110	DP	STANDS	3124.00
2	DP	SINGLES	19.27
	HELL+DOWN		-12.64
	TOTAL		3291.00
wt. of DC			11000.00
wt. of string			

MUD RECORD

MUD TYPE: WATER BASED: YES NO; OIL BASED: YES NO — Max Flowline Temp =

TIME
DENSITY (kg/m³)
FUNNEL VIS. (s)
W.L. (cm3)
pH
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL METERS DRILLED (m)
TOTAL HOURS RUN
CUTTING STRUCTURE
HOLE CONDITION
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN	HYDROCYCLONE CONES	CENTRIFUGE RATE

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY R.P.M.	HOURS ON BIT
3291.00				

CIRCULATION PRESSURE (kPa) | PUMP NO. 1 LINER SIZE (mm) S.P.M. 152 | PUMP NO. 2 LINER SIZE (mm) S.P.M. 152

REDUCED PUMP SPEED 0 0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
3291.00				
16:00	23:45	7.75	22	(Standby) Wait On Order and Monitor Well MC-7
23:45	24:00	0.25	7	Rig Service and Function H.C.R. 2/2

NOTES

DRILLER SIGNATURE	DRILLING HRS	STAND HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Mills	8.00	0.5				

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Derrickman	629-626-262	Rob Roth	4.00	RR		
Motorman	722-572-781	Dwayne Fry	4.00	DF		

RATE SCHEDULE: REGULAR REPAIR WEEKS

DRIVER A | CREW SAFETY DAYS | DRIVER B

CAODC

Chimo Equipment
A Vanco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO.: 22 | AFE

LICENCE NO.: MC-7 | WELL NAME AND NO.: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-1-H / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Andrew Ryder | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Bill Mills

DAILY CHECKS

DATE: 20-Feb-2005 | RIG NO.: 620 E | FUEL: 8.00 | RIG: 8625 | BOILER:

TEMPERATURE: -9 | CURRENT CONDITION: Clear | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TIE TO: | DR: | USER:

	O.D. (mm)	Inst I.D. (mm)	Type	Make	Grade	No. of Joints	Pin or Box Connection	Unit Wt. (kg/m)	Wt. at Bot. (kN)
								6.31	129.99
					L-80			8.23	870.00

TIME - HRS

OPER	RIG SERVICE	DRILL ACTUAL	REAMING	CORING	COND MUD & CIRC	TRIPS	DRILL (NO. OF BITS)	SURVEY	DRILL MUD	WASH / CUT SLIP	NIPPLE UP B.O.P.	TEST B.O.P.	RIG REPAIR	DLG OFF LOC	WAIT ON WEATHER	OTHER	TOTAL HRS
MDNT						9.25											7.74
DAY						8.25											7.75
EVE						8.25											7.75
TOTAL						9.75											23.25

SHALE SHAKER(S)

NO.	TYPE	Derrick	New
1	BRANDT CHANGED	Yes	No
2	TOP	180	180
3	MIDDLE	180	180
4	BOTTOM	180	180

RENTALS/SERVICES

BIT RECORD

NO.	SIZE	O.D. (mm)	LENGTH (m)
1	Bit	311	0.27
1	Bit Sub	163	0.77
8	[illegible]	127	72.54
1	Jars	178	4.86
9	[illegible]	127	81.83
110	D.P.	STANDS	3124.00
2	D.P.	SINGLES	19.27
		HELLDOWN	-12.64
		TOTAL	3291.00
WT. OF DC			11000.00
WT. OF STRING			

OUTER STRUCTURE: T1 | T2 | MISC | LOC | B | Gage | ODC | REASON PULLED | Loss wear rate

MUD RECORD

MUD TYPE	Water Based / Oil Based / Air Based
Max Flowline Temp =	
BIT NO.	
SIZE	
IADC CODE	
MFG.	
TYPE	
SERIAL NO.	
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	MFG.	SCREEN SIZE	DESCRIPTION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

METERS DRILLED

FROM	TO	DIFF.	ROTARY HRS
3291.00			

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.

152 | 152

REDUCED PUMP SPEED:

0 | 0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION

TIME LOG

FROM	TO	HRS	DEPTH	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	7:45	7.75	22		(Standby) Wait On Orders & Monitor Well MC-7
7:45	8:00	0.25	7		Rig Service & Function Annular 24/24 Secs

NOTES

DRILLER SIGNATURE	MUD WT.	VIS	STUCK TEMP	OPERATOR FUEL	MAX BHP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Mills	0.00	0.0					

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Derrickman	629-928-262	Rob Roth	8.00	RR	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☑
Rig Manager	718-324-181	Bill Mills		BM	☑

RATE SCHEDULE: ☑ REGULAR ☐ REMOTE ☐ SHORT

DRIVER A | CREW SAFETY DAYS | DRIVER B

WELL TYPE: Geothermal | RE-ENTRY: ☐ YES ☑ NO | RIG TO GROUND ELEV: 7.20

WELL NAME & NO.: a-92-A / 92-J-12 MC-7 | DATE: 20-Feb-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Bill Mills | RIG NO.: 620 E

PROVINCE: BC | CAMP: ☑ YES ☐ NO | RIG SAFETY DAYS: 356.00

DAY TOUR

	BIT RECORD			MUD RECORD		METERS DRILLED				TIME LOG				DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
	NO.	SIZE	O.D. (mm)	LENGTH (m)		FROM	TO	DIFF.	ROTARY HRS	FROM	TO	HRS	DEPTH	
	1	Bit	311	0.27	BIT NO.	3291.00				8:00	16:45	7.76	22	(Standby) Wait On Orders & Monitor Well MC-7
	1	Bit Sub	163	0.77	SIZE					16:45	16:00	0.25	7	Rig Service and Function Blind Ram's 6/6
	8	[illegible]	127	72.54	IADC CODE									
	1	Jars	178	4.86	MFG.									
	9	[illegible]	127	81.93	TYPE									
					SERIAL NO.									
					JETS									
					DEPTH OUT (m)									
					DEPTH IN (m)									
					TOTAL METERS DRILLED (m)									
					TOTAL HOURS RUN									
	110	D.P.	STANDS	3124.00	OUTER STRUCTURE: T1 / T2 / MISC / LOC / B / Gage / ODC / REASON PULLED / Loss wear rate									
	2	D.P.	SINGLES	19.27										
			HELLDOWN	-12.64	HOLE CONDITION									
			TOTAL	3291.00	HOLE DRAG									
	WT. OF DC			11000.00	TORQUE AT BOTTOM									
	WT. OF STRING				FILL ON BOTTOM (m)									

MUD RECORD: MUD TYPE ☐ Water Based / ☐ Oil Based / ☑ Air Based | Max Flowline Temp =

TIME | DENSITY kg/m³ | FUNNEL VIS. (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	MFG.	SCREEN SIZE	DESCRIPTION

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.

152 | 152

REDUCED PUMP SPEED:

0 | 0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION

NOTES

DRILLER SIGNATURE	MUD WT.	VIS	STUCK TEMP	OPERATOR FUEL	MAX BHP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	0.00	0.0				Weekend Awareness	

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	633-628-706	Wade Goddard	12.00	WG	☑
Derrickman	951-386-954	Jesse Goddard	12.00	JG	☑

RATE SCHEDULE: ☑ REGULAR ☐ REMOTE ☐ SHORT

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

	BIT RECORD			MUD RECORD		METERS DRILLED				TIME LOG				DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
	NO.	SIZE	O.D. (mm)	LENGTH (m)		FROM	TO	DIFF.	ROTARY HRS	FROM	TO	HRS	DEPTH	
	1	Bit	311	0.27	BIT NO.	3291.00				16:00	23:45	7.76	22	(Standby) Wait On Orders & Monitor Well MC-7
	1	Bit Sub	163	0.77	SIZE					23:45	24:00	0.25	7	Rig Service and Function Pipe Rams 4/4 Secs
	8	[illegible]	127	72.54	IADC CODE									
	1	Jars	178	4.86	MFG.									
	9	[illegible]	127	81.93	TYPE									
					SERIAL NO.									
					JETS									
					DEPTH OUT (m)									
					DEPTH IN (m)									
					TOTAL METERS DRILLED (m)									
					TOTAL HOURS RUN									
	110	D.P.	STANDS	3124.00	OUTER STRUCTURE: T1 / T2 / MISC / LOC / B / Gage / ODC / REASON PULLED / Loss wear rate									
	2	D.P.	SINGLES	19.27										
			HELLDOWN	-12.64	HOLE CONDITION									
			TOTAL	3291.00	HOLE DRAG									
	WT. OF DC			11000.00	TORQUE AT BOTTOM									
	WT. OF STRING				FILL ON BOTTOM (m)									

MUD RECORD: MUD TYPE ☐ Water Based / ☐ Oil Based / ☑ Air Based | Max Flowline Temp =

TIME | DENSITY kg/m³ | FUNNEL VIS. (s/L) | W.L. (cm3) | pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	MFG.	SCREEN SIZE	DESCRIPTION

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.

152 | 152

REDUCED PUMP SPEED:

0 | 0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION

NOTES

DRILLER SIGNATURE	MUD WT.	VIS	STUCK TEMP	OPERATOR FUEL	MAX BHP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Mills	0.00	0.0					

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Derrickman	629-928-262	Rob Roth	4.00	RR	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☑

RATE SCHEDULE: ☑ REGULAR ☐ REMOTE ☐ SHORT

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20050120_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-11-30 20:00 | RIG RELEASE | JOB NO: 22 | SAFE

LICENCE NO: MC-7 | WELL NAME AND NO: a-92-A / 92-J-12 MC-7

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | MODULE NO: b-1-H / 92-J-12

SIGNATURE OF OPERATOR'S REPRESENTATIVE: Andrew Ryder | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Bill Mills

DAILY CHECKS (OPR / RM)
(1) Daily Visual Rotating Inspection
(2) Pre-Spud Inspection-All Safety Items Checked
(3) 100 Hour Pre-Use of Derrick
(4) Well Servicing & Rig Diagram Posted
(5) Pason Log Started
(6) Spill Drills Performed
(7) Weekly Manual BOP Functions & Crossover Test
(8) Rig Site Hazard and Safety Meeting (Mid-Crew Interval)
(9) C.A.O.D.C. Rig Safety Inspection Checklist (Monthly Audits)
(10) Man-to-person Drills Rotating or Operating
(11) Crown Saver Checked
(12) Weekly Log Checked

DATE: 21-Feb-2005 | RIG NO: 620 E | FUEL @ 8:00: R/D 6285 BOILER

WEATHER: TEMPERATURE -5 | CURRENT CONDITION: Clear | WIND DIRECTION: Calm | ROAD: Good

LAST CASING, TUBING OR LINER

SIZE	WEIGHT	GRADE	NO. OF JOINTS	TOTAL JNT LENGTH	KB TO CSG HEAD (m)	SET AT (m)
					6.31	129.00
		L-80			8.23	670.00

DEPTH SET (m)	LINER/CASING WEIGHT (kg/m)	GRADE	INN.ID (mm)	DRIFT ID (mm)	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH. (mm)
	29.00	SS-95	63.00	166.40	S"XH	170	F-1600	BPMMP	305
	38.00	SS-95	57.00	168.00	S"XH	150	F-1600	BPMMP	305

TIME / HRS

CREW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	TOTALS
MORN								0.25													7.75					
DAY								0.25													7.75					
EVE								0.25													7.75					
TOTAL								0.75													7.75					16.00

SHALE SHAKER(S) | RENTALS/SERVICES

NO	TYPE	MESH
2	Derrick	

DOGHOUSE CHANGED: YES / NO

	MUD	MESH
TOP	100	100
MIDDLE	100	100
BOTTOM	100	100

WELL TYPE: Geothermal | RE-ENTRY: YES / NO | KB TO GROUND ELEV.: 7.26

WELL NAME & NO.: a-92-A / 92-J-12 MC-7 | DATE: 21-Feb-2005

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Bill Mills | RIG NO: 620 E

PROVINCE: BC | CAMP: YES / NO | RIG SAFETY DAYS: 357.00

MORNING TOUR 0:00 to 8:00

BIT RECORD

NO	BIT	SIZE (mm)	METERAGE (m)
1	bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	178	4.86
9		127	81.93
110	D.P.	STANDS	3124.00
2	D.P.	SINGLES	19.27
			-12.64
	TOTAL		3291.00
WT. OF DC			11000.00
WT. OF STRING			

BIT RECORD: BIT NO. | SIZE | IADC CODE | MFG. | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE: T / B / MOC / LOC / B / Gage / ODC / SEALED PARTS / WAS run | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED | Max Flowline Temp =

TIME	
DENSITY (kg/m3)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	SHAKER SCREEN SIZE	DESANDER CONE SIZE	DESILTER CONE SIZE

METERS DRILLED

FROM	TO	HOURS RUN	ROTARY R.P.M.	WEIGHT ON BIT
3291.00				

CIRCULATION PRESSURE (kPa)

	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
	152		152	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills

TIME LOG

HOURS RUN	HOURS AT RIG	STAGE TIME
8.00	8.0	

FROM	TO	HOURS	CODE	DESCRIPTION
0:00	7:45	7.75	21	(Standby) Wait On Orders & Monitor Well MC-7
7:45	8:00	0.25	7	Rig Service & Function Annular 24/24 Secs

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR / REPAIR / STANDBY | DRIVER A | CREW SAFETY DAYS | DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Derrickman	629-926-282	Rob Roth	8.00	RR		☑
Motorman	722-572-781	Dwayne Fry	8.00	DF		☑
Rig Manager	716-324-191	Bill Mills		BM		☑

DAY TOUR 8:00 to 16:00

BIT RECORD

NO	BIT	SIZE (mm)	METERAGE (m)
1	BR	311	0.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	178	4.86
9		127	81.93
110	D.P.	STANDS	3124.00
2	D.P.	SINGLES	19.27
			-12.64
	TOTAL		3291.00
WT. OF DC			11000.00
WT. OF STRING			

BIT RECORD: BIT NO. | SIZE | IADC CODE | MFG. | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE: T / B / MOC / LOC / B / Gage / ODC / SEALED PARTS / WAS run | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED | Max Flowline Temp =

TIME	
DENSITY (kg/m3)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	SHAKER SCREEN SIZE	DESANDER CONE SIZE	DESILTER CONE SIZE

METERS DRILLED

FROM	TO	HOURS RUN	ROTARY R.P.M.	WEIGHT ON BIT
3291.00				

CIRCULATION PRESSURE (kPa)

	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
	152		152	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

TIME LOG

HOURS RUN	HOURS AT RIG	STAGE TIME
8.00	8.0	

FROM	TO	HOURS	CODE	DESCRIPTION
8:00	16:45	7.75	22	(Standby) Wait On Orders & Monitor Well MC-7
16:45	16:00	0.25	7	Rig Service and Function Blind Ram's 8/8

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR / REPAIR / STANDBY | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 16:00 to 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-828-706	Wade Goddard	12.00	WG		☑
Derrickman	651-366-064	Jesse Goddard	12.00	JG		☑

EVENING TOUR 16:00 to 24:00

BIT RECORD

NO	BIT	SIZE (mm)	METERAGE (m)
1	BR	311	0.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	178	4.86
9		127	81.93
110	D.P.	STANDS	3124.00
2	D.P.	SINGLES	19.27
			-12.64
	TOTAL		3291.00
WT. OF DC			11000.00
WT. OF STRING			

BIT RECORD: BIT NO. | SIZE | IADC CODE | MFG. | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE: T / B / MOC / LOC / B / Gage / ODC / SEALED PARTS / WAS run | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED | Max Flowline Temp =

TIME	
DENSITY (kg/m3)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	SHAKER SCREEN SIZE	DESANDER CONE SIZE	DESILTER CONE SIZE

METERS DRILLED

FROM	TO	HOURS RUN	ROTARY R.P.M.	WEIGHT ON BIT
3291.00				

CIRCULATION PRESSURE (kPa)

	PUMP NO. 1 LINER SIZE (mm)	PUMP NO. 1 S.P.M.	PUMP NO. 2 LINER SIZE (mm)	PUMP NO. 2 S.P.M.
	152		152	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills

TIME LOG

HOURS RUN	HOURS AT RIG	STAGE TIME
8.00	8.0	

FROM	TO	HOURS	CODE	DESCRIPTION
16:00	23:45	7.75	22	(Standby) Wait On Orders & Monitor Well MC-7
23:45	24:00	0.25	7	Rig Service and Function H.C.R. 2/2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR / REPAIR / STANDBY | DRIVER A | CREW SAFETY DAYS | DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Derrickman	629-926-282	Rob Roth	4.00	RR		☑
Motorman	722-572-781	Dwayne Fry	4.00	DF		☑

ETS SERIAL NUMBER: PREC620_20050121_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD 2004-11-30 20:00	RIG RELEASE	JOB NO. 22	DATE
LICENCE NO. MC-7	WELL NAME AND NO. a-92-A / 92-J-12 MC-7		
OPERATOR Western Geopower Corp	CONTRACTOR Precision Drilling		
SURFACE LOCATION a-92-A / 92-J-12	UNIQUE ID: b-1-H / 92-J-12		
SIGNATURE OF OPERATORS REPRESENTATIVE Andrew Ryder	SIGNATURE OF CONTRACTORS REPRESENTATIVE Bill Mills		

DAILY CHECKS
(1) Daily Tests Around Rig (Initial)
(2) Derrick Inspection (Weekly Spring Inspection)
(3) H2S Signs Posted (If Required)
(4) Fire Extinguisher & Stab Diagram Posted
(5) Flare Line Buried
(6) BOP Drills Performed
(7) Weekly Inspect BOPs / Flowlines & Separator Lines
(8) Rig Site Health and Safety Meeting (Write Below Details)
(9) C.A.O.D.C. Rig Safety Inspection (Year Due Date MM-DD-YYYY)
(10) Visit Inspection Before Running or Lowering
(11) Crown Saver Checked
(12) Motor Fully Charged

DAILY COSTS

DATE	22-Feb-2005
RIG NO.	620 E
FUEL @ 8:00	
Rig	19232 ROGER
TEMPERATURE	-3
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Good

LAST CASING TUBING OR LINER											6.31	173.00
					L-80						6.23	670.00

	38.00	S5-95	53.00	186.00	5"XH	170	F-1600	BPMMP	385
	38.00	S5-95	47.00	168.00	5"XH	150	F-1600	BPMMP	385

TIME - HRS

CREW	RIG MOVE	TRVL	REPAIRS	OPERAT	DRLG	TRIPS	REAM	CIRC	SURV	CORE	CSG	CMT	WOC	RIG SERV	DST	FISH	OTHER	SAFETY MTG	DAY	EVE
MORN				0.25																
DAY				0.25																
EVE				0.25																
TOTAL				0.75																

	7.50	Held B.O.P. Drill	0.25
	7.66		0.25
	7.50		0.25
	22.50		0.75

SHALE SHAKER(S)

NO. 2	TYPE	Derrick	MFR
SCREENS CHANGED		☐ YES	☑ NO
TOP	150	TOP	150
MIDDLE	150	MIDDLE	150
BOTTOM	150	BOTTOM	150

RENTALS/SERVICES

	DAY	EVE

WELL TYPE: Geothermal | RE-ENTRY: ☐ YES ☑ NO | KB TO GROUND ELEV.: 7.20
WELL NAME & No.: a-92-A / 92-J-12 MC-7 | DATE: 22-Feb-2005
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Bill Mills | RIG NO.: 620 E
PROVINCE: BC | CAMP: ☑ YES ☐ NO | RIG SAFETY DAYS: 356.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

No.	BIT	SIZE (mm)	LENGTH (m)
1	Bit	311	0.27
1	Bit Sub	163	0.77
8		127	72.64
1	Jars	176	4.86
9		127	81.93
110	B.P.	STANDS	3124.00
2	B.P.	SINGLES	19.27
	KELLY DOWN		-12.64
	TOTAL		3291.00
	1 DP DC		11000.00
	# DP STRING		

BIT NO.
SIZE
IADC CODE
MFG.
TYPE
SERIAL NO.
JETS
DEPTH OUT (m)
DEPTH IN (m)
TOTAL HOURS RUN
CUTTING STRUCTURE: TI | TB | WEAR | LOC | B | Gage | ODC | REASON PULLED | T1 | WEAR
HOLE CONDITION
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☐ WATER BASED ☑ OIL BASED — Max Flowline Temp =
TIME
DENSITY kg/m³
FUNNEL VIS. (s/L)
W.L. (cm³)
pH
MUD MATERIAL ADDED | SOLIDS CONTROL
PRODUCT | AMOUNT x UNIT | HOURS RUN | MFG. | DESIGNATION | SCREEN SIZE

METERS DRILLED

FROM	TO	FTG. m	ROTARY R.P.M.	WT. ON BIT kN
3291.00				

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.
152 | 152
REDUCED PUMP SPEED
DEVIATION SURVEY
DEPTH (m) | DEVIATION (o) | DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	7:30	7.50	22	(Standby) Wait On Orders & Monitor Well MC-7
7:30	7:45	0.25	23	(Held B.O.P. Drill) W/Crewmembers Well diverted 45 Secs
7:45	8:00	0.25	7	Rig Service & Function Annular 24/24 Secs

NOTES

DRILLER SIGNATURE: Bill Mills

HRS. last 24 hrs	HRS. since last BOP test	OPERATOR FUEL	MAX ESP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5				

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

	7.50	(Standby) Wait On Orders & Monitor Well MC-7	22
	0.25	(Held B.O.P. Drill) W/Crewmembers, Well Diverted in 45 sec.	23
	0.25	Rig Service and Function Pipe Ram's 6/6	7

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS. last 24 hrs	HRS. since last BOP test	OPERATOR FUEL	MAX ESP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5				

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

	0.25	B.O.P. drill w/crew, well secure & diverted in 45 secs	23
	7.50	(Standby) Wait On Orders & Monitor Well MC-7	22
	0.25	Rig Service, F/T H.C.R.(3 secs)	7

NOTES

DRILLER SIGNATURE: Barry Verhelst

HRS. last 24 hrs	HRS. since last BOP test	OPERATOR FUEL	MAX ESP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5			B.O.P. drill	

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Derrickman	629-926-252	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Rig Manager	716-324-181	Bill Mills		BM	☐	☑

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-828-706	Wade Goddard	8.00	WG	☐	☑
Derrickmen	651-386-064	Jesse Goddard	8.00	JG	☐	☑

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verhelst	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑

E S SERIAL NUMBER: PREC620_20050122_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Vertex Company

Based on the CAODC ETS file standard

RIG RELEASE	JOB NO. 22	AFE	
SCIENCE NO MC-7	WELL NAME AND NO. a-92-A / 92-J-12 MC-7		
OPERATOR Western Geopower Corp	CONTRACTOR Precision Drilling		
SURFACE LOCATION a-92-A / 92-J-12	UNIQUE ID b-1-41 / 92-J-12		
SIGNATURE OF OPERATOR'S REPRESENTATIVE Russ Silva	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE Kevin Vig		

DAILY CHECKS — DRL / RM

DATE 20-Mar-2005 | RIG NO 620 E | FUEL @ 8.00 | RIG 9417 BOILER

LAST CASING TUBING OR LINER

	O.D. (mm)	MIN I.D. (mm)	mm/m	GRADE	NO. OF JOINTS	TOTAL LNG MEASD	KB TO END CSNG (m)	SET AT (m)
							5.31	129.00
				L-80			5.23	870.00

WEATHER — TEMPERATURE -3 | CURRENT CONDITION Snow | WIND DIRECTION North | ROAD Good

	LINEAR MASS (kg/m)	GRADE	MIN I.D. (mm)	TUBE / P.D.O. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN (mm)
	29.00	SS-95	83.00	156.00	6"XH	179	F-1600	BPMMP	305
	36.00	SS-95	87.00	168.00	5"XH	180	F-1600	BPMMP	305

TIME / HRS

CODE (IADC)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	OPER	TRIPS (Circ)	DRLG ACTUAL	REAM	CORED	CIRC COND MUD	TRIPS	SURVEY	DRLG SERVICE	RIG REPAIR	RIG UP / DOWN	DEVIATION	SAFETY MTG	DRILL STEM TEST	FISH	CEMENT	DIRECT WORK	PERFORATE	OTHER	SUSPEND OPS	Standby					
MORN																					7.75					
DAY																					7.74					
EVE																					9.50					
TOTAL			2.25	6.25																	24.00					

SHALE SHAKER(S)

	NO.	TYPE	MANUF.
SCREENS CHANGED		DESILTER	YES / NO
TOP	100	TOP	100
MIDDLE	100	MIDDLE	100
BOTTOM	100	BOTTOM	100

RENTALS/SERVICES — MONTH | DAY | TYD

MORNING TOUR

BIT RECORD: BIT NO. | SIZE | IADC CODE | MFG | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METRES DRILLED (m) | TOTAL HOURS RUN | DULL BIT STRUCTURE | HOLE CONDITION: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD: MUD TYPE (WATER BASED / OIL BASED) | Max Flowline Temp = | TIME | DENSITY kg/m³ | FUNNEL VIS - (s/L) | W.L. (cm3) | pH | MUD MATERIAL ADDED: PRODUCT / AMOUNT x UNIT | SOLIDS CONTROL: HOURS RUN / METRES DRILLED / DRILLING RATE (m/hr) / DRILLING MUD LOST (m³)

METERS DRILLED: FROM 3291.00 | TO | METRES DRILLED | ROTARY R.P.M. | WT. ON BIT (kDaN)

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	7:45	7.75	22	(Standby) Wait On Orders & Monitor Well MC-7
7:45	8:00	0.25	7	Rig Service and Function Annular 24/24

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) 152 S.P.M. | PUMP NO. 2 LINER SIZE (mm) 152 S.P.M.

REDUCED PUMP SPEED: 0 | 0

DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

NOTES

DRILLER SIGNATURE: Kevin Vig | HRS RUN 8.00 | BOILER HRS 8.5 | OPERATOR FUEL | MAX DIP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR / REPAIR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Derrickman	629-926-262	Rob Roth	8.00	RR		☒
Motorman	722-572-781	Dwayne Fry	8.00	DF		☒
Rig Manager	719-409-484	Kevin Vig		KV		☒

DAY TOUR

BIT RECORD / MUD RECORD / METERS DRILLED: FROM 3291.00 | TO | METRES DRILLED | ROTARY R.P.M. | WT. ON BIT (kDaN)

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	15:45	7.75	22	(Standby) Wait On Orders & Monitor Well MC-7
15:45	16:00	0.25	7	Rig Service and Function Blind Ram's , 7/7

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) 152 S.P.M. | PUMP NO. 2 LINER SIZE (mm) 152 S.P.M.

REDUCED PUMP SPEED: 0 | 0

DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard | HRS RUN 6.00 | BOILER HRS 8.5 | OPERATOR FUEL | MAX DIP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR / REPAIR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-628-708	Wade Goddard	12.00	WG		☒
Derrickman	651-366-064	Jesse Goddard	12.00	JG		☒
Motorman	652-342-418	Jonathan Greave	8.00	JG		☒
Floorman	505-422-253	Rory Mitchell	8.00	RM		☒
Floorman	726-907-789	Cory Kube	8.00	CK		☒
Lasserman	727-721-017	Aaron Ransom	8.00	AR		☒

EVENING TOUR

BIT RECORD / MUD RECORD / METERS DRILLED: FROM 3291.00 | TO | METRES DRILLED | ROTARY R.P.M. | WT. ON BIT (kDaN)

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	21:30	5.50	22	(Standby) Wait On Orders & Monitor Well MC-7
21:30	23:45	2.25	6	Run In Hole To Lay Down Drill Pipe
23:45	24:00	0.25	7	Rig Service & Function H.C.R.4/4 Secs

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) 152 S.P.M. | PUMP NO. 2 LINER SIZE (mm) 152 S.P.M.

REDUCED PUMP SPEED: 0 | 0

DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

NOTES: Tumbleweed Snowy Snow

DRILLER SIGNATURE: Bill Mills | HRS RUN 8.00 | BOILER HRS 8.5 | OPERATOR FUEL | MAX DIP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: REGULAR / REPAIR / INVERT | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	4.00	BM		☒
Derrickman	629-926-262	Rob Roth	4.00	RR		☒
Motorman	722-572-781	Dwayne Fry	4.00	DF		☒
Floorman	739-300-069	Justin Craigen	4.00	JC		☒
Floorman	735-714-230	Chantry Vig	4.00	CV		☒

WELL DETAILS

WELL TYPE Geothermal	RE-ENTRY YES / NO	KB TO GROUND ELEV	7.20
WELL NAME & No a-92-A / 92-J-12 MC-7		DATE	20-Mar-2005
OPERATOR Western Geopower Corp	CONTRACTOR Precision Drilling		
RIG MANAGER Kevin Vig		RIG NO.	620 E
PROVINCE BC	CAMP YES / NO	RIG SAFETY DAYS	384.00

CAODC **Chimo Equipment** — A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-11-30 20:00
RIG RELEASE	
JOB NO.	22
AFE	
LICENCE NO	MC-7
WELL NAME AND NO	a-92-A / 92-J-12 MC-7
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig
DATE	21-Mar-2005
RIG NO.	620 E
FUEL @ 8:00	
RIG	17660
TEMPERATURE	-4
CURRENT CONDITION	Snow
WIND DIRECTION	North
ROAD	Snow

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	☐ YES ☑ NO	7.20

WELL NAME & NO.	DATE
a-92-A / 92-J-12 MC-7	21-Mar-2005

OPERATOR	CONTRACTOR
Western Geopower Corp	Precision Drilling

RIG MANAGER	RIG NO
Kevin Vig	620 E

PROVINCE	CAMP	RIG SAFETY DAYS
BC	☑ YES ☐ NO	385.00

Last Casing / Tubing or Liner

L-80				8.31	129.00
				8.23	370.00

Pumps

Liner	Grade			Thread Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke
29.00	SS-85	83.00	168.00	5"XH	170	F-1600	BPMMP	305
38.00	SS-85	87.00	168.00	5"XH	160	F-1600	BPMMP	306

Time – Hrs

OPER	6 Trips	7 Rig Service	21 Safety	14	23 Rig Out Laydown Truck	24 Rig Up Laydown Truck
MORN	6.75		0.25			1.00
DAY	7.25	0.25	0.25			0.25
EVE	3.50	0.25	0.25	3.00	1.00	
TOTAL	17.50	0.50	0.75	3.00	1.00	1.25

Shale Shaker(s)

NO. 2	TYPE Derrick	NEW	
SCREENS CHANGED	☐ YES	☑ NO	
TOP	100	TOP	100
MIDDLE	100	MIDDLE	100
BOTTOM	100	BOTTOM	100

MORNING TOUR 0:00 to 8:00

Meters Drilled — From: 3291.00

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
0:00	0:15	0.25	21	Safety Meeting
0:15	1:15	1.00	24	(Rig Up Laydown Truck)
1:15	8:00	6.75	6	Laydown 127mm Drill Pipe

Driller signature: Bill Mills

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	718-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	739-300-069	Justin Craigen	8.00	JC	☐	☑
Floorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
				GH	☐	☐

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invert

DAY TOUR 8:00 to 16:00

Meters Drilled — From: 3291.00

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
8:00	8:15	0.25	21	Safety Meeting
8:15	12:00	3.75	6	LayDown 127 mm D.P.
12:00	12:15	0.25	24	B.O.P. Drill w/Crewmember's, Well Diverted in 53 Sec.
12:15	12:30	0.25	7	Rig Service and Function Pipe Ram's 7/7
12:30	16:00	3.50	6	LayDown 127 mm D.P.

Safety topic: LayDown 127 mm D.P.

Driller signature: Wade Goddard

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	633-628-708	Wade Goddard	12.00	WG	☐	☑
Derrickman	651-366-064	Jesse Goddard	12.00	JG	☐	☑
Motorman	652-342-418	Jonathan Greeve	12.00	JG	☐	☑
Floorman	728-907-769	Cory Kube	12.00	CK	☐	☑
Floorman	505-422-253	Rory Mitchell	12.00	RM	☐	☑
Leaseman	127-721-017	Aaron Ransom	12.00	AR	☐	☑
Top Drive	625-924-469	George Hnatiuk		GH	☐	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invert

EVENING TOUR 16:00 to 24:00

Meters Drilled — From: 3291.00

From	To	Hrs	Code	Details of Operations in Sequence and Remarks
16:00	19:30	3.50	6	LayDown 127 mm D.P.
19:30	20:30	1.00	23	(Rig Out Laydown Truck)
20:30	20:45	0.25	7	Rig Service & Function Blind Rams 8/5 Secs
20:45	21:00	0.25	21	Safety Meeting " Nipple Down B.O.P. s "
21:00	24:00	3.00	14	Nipple Down B.O.P.s

Driller signature: Bill Mills

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	718-324-181	Bill Mills	4.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	739-300-069	Justin Craigen	4.00	JC	☐	☑
Floorman	735-714-230	Chantry Vig	4.00	CV	☐	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invert

ETS SERIAL NUMBER: PREC620_20050221_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Vance Company

Based on the CAODC ETS file standard

FUD: 2004-11-30 20:00	RIG RELEASE	JOB NO: 22	AFE
LICENCE NO: MC-7	WELL NAME AND NO: a-92-A / 92-J-12 MC-7		
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling		
SURFACE LOCATION: -92-A / 92-J-12	LSD/LUC ID: b-1-H / 92-J-12		
SIGNATURE OF OPERATORS REPRESENTATIVE: luse Silva	SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig		

DAILY CHECKS

(1) Daily Visit Around Inspection
(2) Detailed Inspection Monthly (Quarterly)
(3) BOP Drills Recorded in Logbook
(4) Visit Location & Walk Around Pipe Inv
(5) Flare Line Secure
(6) BOP Drills Performed
(7) Review Hydrogen Sulphide (H2S) Awareness & Operation Limits
(8) Rig Site Hydrogen Sulphide (H2S) Warning Equipment Working
(9) C.A.O.D.C. Rig Safety Inspection Conducted (once per month)
(10) Crown Saver Checked
(11) Crown Saver Operational
(12) Weekly Inspection Before Raising or Lowering Derrick
(13) Derrick Board Checked
(14) Weekly Visit Around Inspection

DATE	22-Mar-2005	LAST CASING TURBO OR LINER	O.D. (mm)	WEIGHT (kg/m)	GRADE	NO. OF JOINTS	TOTAL LENGTH	SET TO DEPTH (MEASURED)	WT. BELOW
RIG NO	620 E							6.31	129.00
FUEL	8.00				L-80			8.23	870.00
RIG	15502 BOILER								

WEATHER		°C
TEMPERATURE		
CURRENT CONDITION	Cloudy	
WIND DIRECTION	Calm	
ROAD	Good	

DRILL STRING	BOOM SIZE (mm)	LINEAR MASS (kg/m)	GRADE	WALL TH (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
		29.00	S5-95	83.00	186.00	5"XH	170	F-1600	GPMMP	305
		36.00	S5-95	67.00	168.00	5"XH	180	F-1600	GPMMP	305

TIME - HRS	COST CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	TOTALS
OPER																												
MORN								6.25																				7.75
DAY								8.25																		0.50	2.00	1.75
EVE		1.75						9.25																				6.00
TOTAL		1.75						9.75																		0.50	2.00	7.75

SHALE SHAKER(S)						
NO.	2	TYPE	Derrick	NEW		
SCREENS CHANGED		YES		NO		
TOP	100	TOP	100			
MIDDLE	100	MIDDLE	100			
BOTTOM	100	BOTTOM	100			

RENTALS/SERVICES	WORK	DIT	EVE

WELL TYPE	Geothermal
RE-ENTRY	YES NO
WELL NAME & NO.	a-92-A / 92-J-12 MC-7
DATE	22-Mar-2005
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	YES NO
RIG SAFETY DAYS	386.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MFG	
TYPE	
SERIAL NO.	
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
B.F.	
D.F.	
HOLE ROOM	
TOTAL	
# OF BC	
# OF STRING	

OUTPUT STRUCTURE: 1 | 2 | WEAR | LOC | B | Gage | OC | REASON PULLED | L.I.H. wear

MUD RECORD

MUD TYPE	WATER BASED OIL BASED
TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	
MUD MATERIAL ADDED	
PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL: HOURS RUN | SHAKER SCREEN | DESILTER CONES | DESANDER CONES

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

Max Flowline Temp °

METERS DRILLED

FROM	TO	BIT WT. (kkg)	ROTARY R.P.M.	PUMP PRESS. (kPa)	HOURS	CUM. HRS	ROP (m/hr)	TOUR
3291.00					0:00	0:15	0.25	7
					0:15	8:00	7.75	14

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) B.P.M. | PUMP NO. 2 LINER SIZE (mm) B.P.M.

REDUCED PUMP SPEED: 0 | 0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills

TIME LOG

HOURS (start)	HOURS (end)	HRS	CODE	OPERATIONS IN SEQUENCE AND REMARKS
0:00	0:15	0.25	7	Rig Service
0:15	8:00	7.75	14	Nipple Down 13 5/8 B.O.P.s

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	8.00	BM		☑
Derrickman	629-626-262	Rob Roth	8.00	RR		☑
Motorman	722-572-781	Dwayne Fry	8.00	DF		☑
Floorman	739-309-069	Justin Craigen	8.00	JC		☑
Floorman	735-714-230	Chantry Vig	8.00	CV		☑
Rig Manager	718-409-484	Kevin Vig		KV		☑
Top Drive	825-924-469	George Hnatiuk		GH		☑

RATE SCHEDULE: REGULAR REPAIR INVENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MFG	
TYPE	
SERIAL NO.	
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
B.F.	
D.F.	
HOLE ROOM	
TOTAL	
# OF BC	
# OF STRING	

OUTPUT STRUCTURE: 1 | 2 | WEAR | LOC | B | Gage | OC | REASON PULLED | L.I.H. wear

MUD RECORD

MUD TYPE	WATER BASED OIL BASED
TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	
MUD MATERIAL ADDED	
PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL: HOURS RUN | SHAKER SCREEN | DESILTER CONES | DESANDER CONES

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

Max Flowline Temp °

METERS DRILLED

FROM	TO	BIT WT. (kkg)	ROTARY R.P.M.	PUMP PRESS. (kPa)	HOURS	CUM. HRS	ROP (m/hr)	TOUR
3291.00					8:00	8:15	0.25	21
					8:15	10:00	1.75	14
					10:00	12:00	2.00	22
					12:00	12:15	0.25	7
					12:15	12:30	0.25	21
					12:30	16:00	3.50	23

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) 152 B.P.M. | PUMP NO. 2 LINER SIZE (mm) 152 B.P.M.

REDUCED PUMP SPEED: 0 | 0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

TIME LOG

HOURS (start)	HOURS (end)	HRS	CODE	OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	0.25	21	Safety Meeting(Nipple Down B.O.P.'s)
8:15	10:00	1.75	14	Nipple Down 13 5/8 B.O.P.'s
10:00	12:00	2.00	22	(Remove Master Valve) and Install Cap & 3" Valve On WellHead. Rig Released @ 12:00 Hrs. from MC-7
12:00	12:15	0.25	7	Rig Service
12:15	12:30	0.25	21	Safety Meeting(Rig Out Top Drive)
12:30	16:00	3.50	23	(Rig Out Top Drive)

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC: Rig Out Top Drive | M.A.C.P.

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	533-628-708	Wade Goddard	12.00	WG		☑
Derrickman	651-366-064	Jesse Goddard	12.00	JG		☑
Motorman	652-342-416	Jonathan Greeve	12.00	JG		☑
Floorman	728-807-769	Cory Kube	12.00	CK		☑
Floorman	505-422-253	Rory Mitchell	12.00	RM		☑
Leaseman	127-721-017	Aaron Ransom	12.00	AR		☑

RATE SCHEDULE: REGULAR REPAIR INVENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MFG	
TYPE	
SERIAL NO.	
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	
D.F.	
D.F.	
HOLE ROOM	
TOTAL	
# OF BC	
# OF STRING	

OUTPUT STRUCTURE: 1 | 2 | WEAR | LOC | B | Gage | OC | REASON PULLED | L.I.H. wear

MUD RECORD

MUD TYPE	WATER BASED OIL BASED
TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (s/L)	
W.L. (cm3)	
pH	
MUD MATERIAL ADDED	
PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL: HOURS RUN | SHAKER SCREEN | DESILTER CONES | DESANDER CONES

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

Max Flowline Temp °

METERS DRILLED

FROM	TO	BIT WT. (kkg)	ROTARY R.P.M.	PUMP PRESS. (kPa)	HOURS	CUM. HRS	ROP (m/hr)	TOUR
3291.00					16:00	20:00	4.00	23
					20:00	20:15	0.25	7
					20:15	24:00	3.75	1

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER SIZE (mm) 152 B.P.M. | PUMP NO. 2 LINER SIZE (mm) 152 B.P.M.

REDUCED PUMP SPEED: 0 | 0

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills

TIME LOG

HOURS (start)	HOURS (end)	HRS	CODE	OPERATIONS IN SEQUENCE AND REMARKS
16:00	20:00	4.00	23	(Rig Out Top Drive)
20:00	20:15	0.25	7	Rig Service
20:15	24:00	3.75	1	Rig Out Rig Floor

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	4.00	BM		☑
Derrickman	629-926-262	Rob Roth	4.00	RR		☑
Motorman	722-572-781	Dwayne Fry	4.00	DF		☑
Floorman	739-309-069	Justin Craigen	4.00	JC		☑
Floorman	735-714-230	Chantry Vig	4.00	CV		☑

RATE SCHEDULE: REGULAR REPAIR INVENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

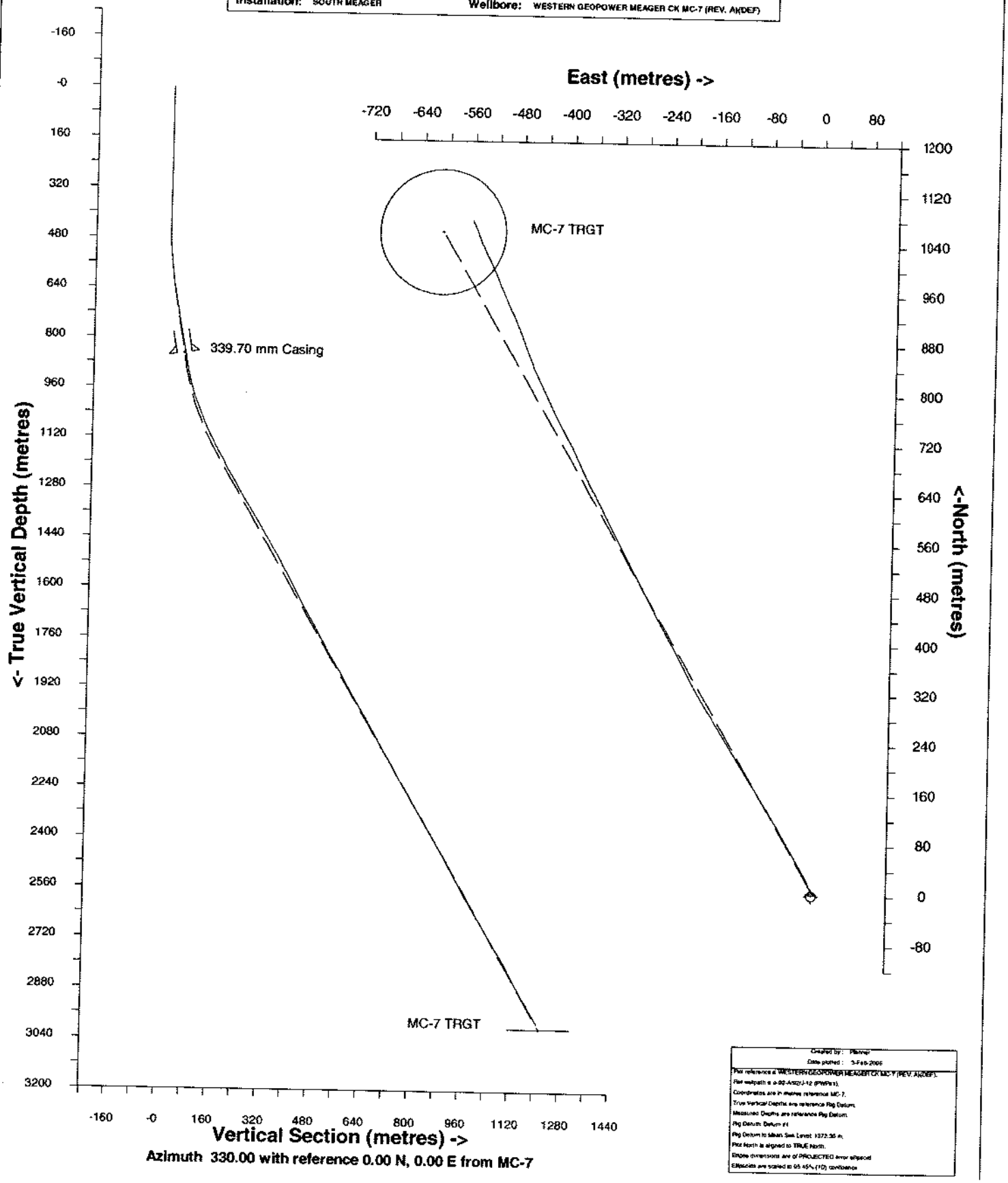
Section 3: Directional Survey Data, (Baker Hughes INTEQ)

WESTERN GEOPOWER CORP.

Location:	BRITISH COLUMBIA, CANADA	Slot:	MC-7
Field:	MEAGER	Well:	a-92-A/92J-12
Installation:	SOUTH MEAGER	Wellbore:	WESTERN GEOPOWER MEAGER CK MC-7 (REV. A)(DEF)

BAKER HUGHES INTEQ

Western GeoPower Corp.



Created by : Planner
Date plotted : 3-Feb-2006
Plot reference is WESTERN GEOPOWER MEAGER CK MC-7 (REV. A)(DEF).
Plot wellpath is a-92-A/92J-12 (PWPlan).
Coordinates are in metres reference MC-7.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Datum #1
Rig Datum is 'Mean Sea Level' 1372.36 m.
Plot North is aligned to TRUE North.
Ellipse dimensions are of PROJECTED error ellipsoid
Ellipsoids are scaled to 95.45% (2D) confidence

Western GeoPower Corp.

WESTERN GEOPOWER CORP.,MC-7
SOUTH MEAGER,
MEAGER ,BRITISH COLUMBIA, CANADA

Wellbore: WESTERN GEOPOWER MEAGER CK MC-7
Wellpath: (SVY) MC-7
Date Printed: 3-Feb-2005

BAKER HUGHES INTEQ

Wellbore

Name	Created	Last Revised	Wellbore Unique Identifier	Planned/Actual
WESTERN GEOPOWER MEAGER CK MC-7	6-Dec-2004	3-Feb-2005		Actual

Well

Well Local Position	Government ID	Last Revised
a-92-A/92/J-12		6-Dec-2004

Slot

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East	Rig K.B. Height	K.B. Elevation (above sea level)
MC-7	5603032.9024	463229.4580	N50 34 40.9803	W123 319.5844	6.00S	0.00E	7.30	1372.30

Installation

Name	Easting	Northing	Coord System Name	North Alignment
SOUTH MEAGER	463229.5000	5603038.9000	NAD83-UTM-10N on NORTH AMERICAN DATUM 1983 datum	True

Field

Name	Easting	Northing	Coord System Name	North Alignment
MEAGER	463229.5000	5603038.9000	NAD83-UTM-10N on NORTH AMERICAN DATUM 1983 datum	True

Created By

Comments

All data is in Metres unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 1372.3m above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 330.00 degrees
Bottom hole distance is 1212.12 Metres on azimuth 332.37 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes Incorporated

Western GeoPower Corp.

WESTERN GEOPOWER CORP.,MC-7
SOUTH MEAGER,
MEAGER ,BRITISH COLUMBIA, CANADA

Wellbore: WESTERN GEOPOWER
MEAGER CK MC-7
Wellpath: (SVY) MC-7
Date Printed: 3-Feb-2005

BAKER HUGHES
INTEQ

Wellpath Report

MD[m]	Inc[deg]	Azi[deg]	TVD[m]	North[m]	East[m]	Dogleg [deg/30m]	Vertical Section[m]	Station Comment
0.00	0.00	0.00	0.00	0.00N	0.00E	0.00	0.00	
129.00	0.00	0.00	129.00	0.00N	0.00E	0.00	0.00	
158.30	1.00	44.00	158.30	0.18N	0.18E	1.02	0.07	
252.80	1.50	83.00	252.78	0.93N	1.98E	0.30	-0.19	
365.30	1.25	84.00	365.25	1.24N	4.66E	0.07	-1.26	
413.40	1.00	79.00	413.34	1.37N	5.59E	0.17	-1.61	
433.00	0.90	72.70	432.93	1.45N	5.91E	0.22	-1.70	
451.80	0.26	4.80	451.73	1.53N	6.05E	1.34	-1.70	
470.60	1.30	306.80	470.53	1.71N	5.89E	1.89	-1.47	
489.80	2.40	309.80	489.72	2.09N	5.40E	1.72	-0.89	
507.90	3.70	310.30	507.79	2.71N	4.67E	2.16	0.02	
527.10	5.60	310.30	526.93	3.72N	3.48E	2.97	1.48	
546.00	6.30	311.40	545.73	5.00N	2.00E	1.13	3.33	
564.60	6.30	321.20	564.22	6.47N	0.59E	1.73	5.31	
583.30	6.90	328.30	582.79	8.23N	0.64W	1.62	7.45	
602.20	7.60	334.60	601.54	10.32N	1.77W	1.68	9.83	
620.80	7.80	336.00	619.97	12.59N	2.81W	0.44	12.31	
640.00	8.30	337.80	638.98	15.06N	3.87W	0.87	14.98	
658.50	9.20	338.80	657.27	17.68N	4.91W	1.48	17.76	
677.40	10.10	337.40	675.90	20.61N	6.09W	1.48	20.90	
696.00	10.50	334.20	694.20	23.65N	7.46W	1.13	24.21	
714.60	10.60	329.30	712.49	26.64N	9.07W	1.46	27.61	
733.50	10.20	330.20	731.08	29.59N	10.79W	0.69	31.02	
752.40	9.90	327.90	749.69	32.42N	12.48W	0.80	34.32	
771.30	10.00	327.60	768.30	35.18N	14.22W	0.18	37.58	
790.00	9.90	330.40	786.72	37.95N	15.89W	0.79	40.81	
808.40	10.10	331.00	804.84	40.73N	17.45W	0.37	44.00	
827.20	10.50	331.80	823.34	43.69N	19.06W	0.68	47.36	
846.10	10.30	332.50	841.93	46.70N	20.65W	0.38	50.77	
859.00	10.10	330.70	854.63	48.71N	21.74W	0.88	53.06	
873.60	9.90	328.60	869.00	50.90N	23.02W	0.85	55.59	
892.30	10.50	329.30	887.41	53.74N	24.73W	0.98	58.90	
911.00	11.80	330.40	905.75	56.87N	26.54W	2.11	62.52	
930.20	13.40	329.00	924.49	60.48N	28.66W	2.54	66.71	
948.90	15.00	329.90	942.62	64.43N	30.99W	2.59	71.29	
967.70	16.70	329.70	960.70	68.87N	33.57W	2.71	76.43	
986.40	18.00	330.40	978.55	73.70N	36.35W	2.11	82.00	
1004.90	19.00	330.00	996.10	78.79N	39.27W	1.63	87.87	
1023.60	20.20	330.40	1013.71	84.24N	42.39W	1.94	94.15	
1042.40	21.70	330.40	1031.27	90.08N	45.71W	2.39	100.87	
1061.30	22.60	330.40	1048.77	96.28N	49.23W	1.43	107.99	
1080.00	23.90	328.60	1065.95	102.64N	52.98W	2.38	115.37	
1098.50	24.80	329.00	1082.81	109.16N	56.93W	1.48	123.00	
1117.40	25.20	327.90	1099.94	115.97N	61.11W	0.97	130.98	
1136.10	26.50	328.30	1116.77	122.89N	65.41W	2.10	139.13	
1154.90	27.30	328.30	1133.53	130.13N	69.88W	1.28	147.63	
1173.20	28.30	329.00	1149.72	137.41N	74.32W	1.72	156.17	
1189.70	28.90	328.60	1164.21	144.17N	78.42W	1.15	164.06	
1208.50	29.10	327.90	1180.65	151.92N	83.21W	0.63	173.17	
1227.10	29.30	327.20	1196.89	159.58N	88.08W	0.64	182.24	
1245.90	29.40	327.20	1213.27	167.32N	93.07W	0.16	191.44	

All data is in Metres unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 1372.3m above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 330.00 degrees
Bottom hole distance is 1212.12 Metres on azimuth 332.37 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes Incorporated

Western GeoPower Corp.

WESTERN GEOPOWER CORP.,MC-7
SOUTH MEAGER,
MEAGER ,BRITISH COLUMBIA, CANADA

Wellbore: WESTERN GEOPOWER
MEAGER CK MC-7
Wellpath: (SVY) MC-7
Date Printed: 3-Feb-2005

BAKER HUGHES
INTEQ

Wellpath Report

MD[m]	Inc[deg]	Azi[deg]	TVD[m]	North[m]	East[m]	Dogleg [deg/30m]	Vertical Section[m]	Station Comment
1284.60	29.50	327.90	1246.97	183.38N	103.28W	0.28	210.45	
1302.20	29.90	328.30	1262.26	190.78N	107.89W	0.76	219.17	
1321.00	30.10	327.90	1278.54	198.76N	112.86W	0.45	228.56	
1339.90	30.70	327.90	1294.84	206.87N	117.94W	0.95	238.12	
1358.40	31.00	327.90	1310.73	214.90N	122.98W	0.49	247.60	
1368.10	31.20	328.30	1319.03	219.16N	125.63W	0.89	252.61	
1386.30	31.60	329.00	1334.57	227.25N	130.56W	0.89	262.09	
1415.10	31.40	329.00	1359.12	240.15N	138.31W	0.21	277.13	
1424.70	31.60	329.00	1367.31	244.45N	140.89W	0.63	282.15	
1442.80	31.50	327.60	1382.73	252.51N	145.87W	1.23	291.61	
1452.70	31.60	327.60	1391.17	256.88N	148.65W	0.30	296.79	
1471.60	30.90	327.90	1407.33	265.17N	153.88W	1.14	306.59	
1480.70	30.70	328.30	1415.14	269.13N	156.34W	0.94	311.24	
1499.50	30.00	328.00	1431.37	277.20N	161.35W	1.14	320.74	
1518.50	30.10	327.90	1447.81	285.26N	166.40W	0.18	330.25	
1537.20	30.40	328.60	1463.97	293.27N	171.36W	0.74	339.66	
1555.60	30.40	328.30	1479.84	301.21N	176.23W	0.25	348.97	
1574.90	29.70	328.30	1496.54	309.43N	181.31W	1.09	358.63	
1594.30	28.80	330.30	1513.47	317.58N	186.15W	2.05	368.11	
1613.30	28.50	330.30	1530.14	325.49N	190.66W	0.47	377.22	
1633.60	28.00	331.10	1548.03	333.87N	195.37W	0.93	386.82	
1651.50	28.20	331.10	1563.82	341.25N	199.44W	0.34	395.25	
1670.70	28.20	331.80	1580.74	349.22N	203.78W	0.52	404.32	
1688.60	28.50	331.80	1596.49	356.71N	207.79W	0.50	412.82	
1708.40	28.00	332.80	1613.93	365.01N	212.15W	1.04	422.18	
1730.70	28.10	332.10	1633.61	374.31N	217.00W	0.46	432.66	
1749.70	29.00	331.40	1650.30	382.31N	221.30W	1.52	441.74	
1766.70	29.40	331.40	1665.14	389.59N	225.27W	0.71	450.03	
1786.00	29.40	331.10	1681.96	397.89N	229.83W	0.23	459.50	
1844.90	29.40	330.00	1733.27	423.07N	244.04W	0.28	488.41	
1873.60	28.40	332.10	1758.40	435.20N	250.76W	1.49	502.28	
1894.50	28.70	333.50	1776.76	444.09N	255.32W	1.05	512.25	
1913.10	29.20	332.50	1793.03	452.11N	259.41W	1.12	521.24	
1932.10	30.30	331.80	1809.53	460.44N	263.82W	1.82	530.66	
1952.00	31.20	332.80	1826.63	469.45N	268.54W	1.56	540.83	
1961.60	31.20	332.50	1834.84	473.87N	270.83W	0.49	545.80	
1979.10	30.50	332.10	1849.86	481.82N	275.00W	1.25	554.77	
1998.20	29.90	330.70	1866.37	490.25N	279.60W	1.45	564.37	
2020.60	29.20	330.70	1885.86	499.89N	285.00W	0.94	575.42	
2038.50	30.20	329.70	1901.41	507.58N	289.41W	1.87	584.28	
2056.70	30.00	330.70	1917.15	515.50N	293.95W	0.89	593.41	
2075.80	30.10	332.10	1933.68	523.90N	298.53W	1.11	602.97	
2094.00	30.00	332.10	1949.44	531.95N	302.79W	0.16	612.08	
2112.60	30.10	331.40	1965.54	540.16N	307.20W	0.59	621.39	
2132.10	29.90	331.10	1982.43	548.71N	311.89W	0.38	631.14	
2151.00	29.60	333.20	1998.84	557.00N	316.27W	1.72	640.51	
2170.40	29.40	333.20	2015.72	565.52N	320.58W	0.31	650.05	
2189.40	29.40	333.20	2032.27	573.85N	324.78W	0.00	659.36	
2208.20	29.40	332.80	2048.65	582.07N	328.97W	0.31	668.57	
2227.60	29.30	331.70	2065.56	590.49N	333.40W	0.85	678.08	
2246.50	28.90	332.50	2082.08	598.61N	337.70W	0.89	687.26	

All data is in Metres unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 1372.3m above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 330.00 degrees
Bottom hole distance is 1212.12 Metres on azimuth 332.37 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes Incorporated

Western GeoPower Corp.

WESTERN GEOPOWER CORP.,MC-7
SOUTH MEAGER,
MEAGER ,BRITISH COLUMBIA, CANADA

Wellbore: WESTERN GEOPOWER
MEAGER CK MC-7
Wellpath: (SVY) MC-7
Date Printed: 3-Feb-2005

BAKER HUGHES
INTEQ

Wellpath Report

MD[m]	Inc[deg]	Azi[deg]	TVD[m]	North[m]	East[m]	Dogleg [deg/30m]	Vertical Section[m]	Station Comment
2264.70	28.30	332.80	2098.06	606.35N	341.70W	1.02	695.96	
2283.20	28.70	332.80	2114.31	614.20N	345.74W	0.65	704.78	
2301.50	29.10	332.20	2130.34	622.04N	349.82W	0.81	713.62	
2322.20	30.00	331.40	2148.34	631.04N	354.65W	1.42	723.82	
2330.90	29.90	331.10	2155.88	634.85N	356.74W	0.62	728.16	
2349.80	29.80	332.00	2172.27	643.12N	361.22W	0.73	737.57	
2368.70	30.00	331.10	2188.66	651.40N	365.71W	0.78	746.98	
2387.80	29.70	333.20	2205.22	659.80N	370.15W	1.71	756.48	
2407.00	29.80	333.50	2221.89	668.32N	374.42W	0.28	765.99	
2425.40	29.90	333.20	2237.85	676.51N	378.53W	0.29	775.14	
2445.20	29.80	333.50	2255.03	685.31N	382.95W	0.27	784.97	
2463.30	30.20	333.90	2270.70	693.43N	386.96W	0.74	794.01	
2483.00	30.40	334.40	2287.71	702.37N	391.29W	0.49	803.92	
2502.30	30.60	332.40	2304.34	711.13N	395.68W	1.61	813.70	
2521.80	30.90	331.50	2321.10	719.93N	400.37W	0.85	823.66	
2539.90	30.50	331.50	2336.66	728.05N	404.78W	0.66	832.90	
2560.00	30.10	331.50	2354.02	736.96N	409.62W	0.60	843.03	
2579.00	30.00	331.40	2370.46	745.32N	414.16W	0.18	852.55	
2598.30	30.00	332.10	2387.18	753.82N	418.73W	0.54	862.19	
2617.10	30.00	333.30	2403.46	762.17N	423.04W	0.96	871.58	
2636.90	29.50	334.20	2420.65	770.98N	427.39W	1.02	881.38	
2655.60	29.30	334.70	2436.94	779.26N	431.35W	0.51	890.54	
2674.60	29.70	334.00	2453.48	787.70N	435.40W	0.83	899.87	
2694.10	29.50	334.00	2470.43	796.36N	439.62W	0.31	909.47	
2713.10	28.90	333.80	2487.02	804.68N	443.70W	0.96	918.72	
2732.30	29.30	335.80	2503.79	813.13N	447.67W	1.64	928.02	
2751.60	29.40	334.90	2520.62	821.73N	451.62W	0.70	937.44	
2770.20	30.00	336.10	2536.77	830.11N	455.44W	1.36	946.62	
2789.60	30.30	336.80	2553.55	839.04N	459.33W	0.71	956.30	
2808.80	30.30	338.00	2570.13	847.99N	463.05W	0.95	965.90	
2825.00	30.40	337.90	2584.11	855.57N	466.13W	0.21	974.01	
2843.30	31.10	337.70	2599.83	864.24N	469.66W	1.16	983.28	
2862.30	31.30	339.10	2616.09	873.39N	473.28W	1.19	993.02	
2881.10	31.50	338.70	2632.13	882.52N	476.81W	0.46	1002.69	
2900.50	32.30	340.00	2648.60	892.12N	480.42W	1.63	1012.81	
2919.30	32.40	337.70	2664.49	901.50N	484.05W	1.97	1022.75	
2938.40	32.20	337.20	2680.63	910.92N	487.97W	0.52	1032.87	
2957.90	32.20	334.50	2697.13	920.40N	492.22W	2.21	1043.20	
2976.80	32.10	333.60	2713.13	929.45N	496.62W	0.78	1053.23	
2995.50	31.10	334.50	2729.06	938.26N	500.91W	1.77	1063.01	
3015.50	31.70	337.20	2746.13	947.76N	505.17W	2.29	1073.37	
3033.20	31.90	335.20	2761.18	956.30N	508.93W	1.82	1082.64	
3052.70	31.30	336.80	2777.78	965.63N	513.09W	1.59	1092.80	
3070.10	29.90	336.80	2792.76	973.77N	516.58W	2.41	1101.60	
3089.80	29.50	336.50	2809.87	982.73N	520.45W	0.65	1111.29	
3109.80	28.70	335.20	2827.35	991.61N	524.42W	1.53	1120.97	
3127.30	28.00	335.00	2842.75	999.14N	527.92W	1.21	1129.25	
3147.20	28.70	334.90	2860.26	1007.71N	531.92W	1.06	1138.66	
3167.20	29.90	333.80	2877.70	1016.53N	536.16W	1.97	1148.42	
3184.90	30.70	332.60	2892.99	1024.50N	540.19W	1.70	1157.33	
3203.80	31.40	333.50	2909.18	1033.19N	544.61W	1.33	1167.07	

All data is in Metres unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 1372.3m above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 330.00 degrees
Bottom hole distance is 1212.12 Metres on azimuth 332.37 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes Incorporated

Western GeoPower Corp.

WESTERN GEOPOWER CORP.,MC-7
SOUTH MEAGER,
MEAGER ,BRITISH COLUMBIA, CANADA

Wellbore: WESTERN GEOPOWER
MEAGER CK MC-7
Wellpath: (SVY) MC-7
Date Printed: 3-Feb-2005

BAKER HUGHES
INTEQ

Wellpath Report

MD[m]	Inc[deg]	Azi[deg]	TVD[m]	North[m]	East[m]	Dogleg [deg/30m]	Vertical Section[m]	Station Comment
3224.30	31.20	337.90	2926.70	1042.89N	548.99W	3.36	1177.66	
3241.70	31.00	337.30	2941.60	1051.20N	552.41W	0.64	1186.57	
3261.40	29.70	336.80	2958.60	1060.36N	556.29W	2.02	1196.45	
3275.00	29.90	336.30	2970.40	1066.56N	558.98W	0.70	1203.16	
3291.00	29.90	336.30	2984.27	1073.87N	562.19W	0.00	1211.09	EXTRAPOLATION

All data is in Metres unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 1372.3m above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 330.00 degrees
Bottom hole distance is 1212.12 Metres on azimuth 332.37 degrees from Wellhead
Calculation method uses Minimum Curvature method
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Western GeoPower Corp.

WESTERN GEOPOWER CORP.,MC-7
SOUTH MEAGER,
MEAGER ,BRITISH COLUMBIA, CANADA

Wellbore: WESTERN GEOPOWER
MEAGER CK MC-7
Wellpath: (SVY) MC-7
Date Printed: 3-Feb-2005

BAKER HUGHES
INTEQ

Comments

MD[m]	TVD[m]	North[m]	East[m]	Comment
3291.00	2984.27	1073.87N	562.19W	EXTRAPOLATION

Survey Tool Program

Reference	Survey Name	MD[m]	TVD[m]	Survey Tool	Error Model
606132	VERTICAL ASUMPTION	129.00	129.00	No Tool	No Model
606131	MWD SVY	3291.00	2984.27	Navi Trak	Standard

All data is in Metres unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 1372.3m above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 330.00 degrees
Bottom hole distance is 1212.12 Metres on azimuth 332.37 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes Incorporated

Section 4: Casing Reports, (RIMBase Files)

Casing Report

Meager Creek Development Corp.

Well ID: MC-7 **Well Name: South Meager MC-7**

Run Date/Time:	08-Sep-04 12:00		
Well Section:	COND	**String Type:**	FULL
String Top MD:	0.0 m	**String Top TVD:**	m
Casing Shoe MD:	59.3 m	**Casing Shoe TVD:**	m
String Nominal OD:	71.12 cm	**String Nominal ID:**	cm
Bit Diameter:	71.12 cm	**Avg. Open Hole Diam.:**	cm
Centralizers: No:	**Manufacturer:**	**Type:**	
Depths:			
Hanger: Type:		**Manufacturer:**	

Comments:

Conductor Hole drilled prior to rig move. Conductor pipe driven in with ODEX system, using Midnight Sun Drilling, Inc. Schramm 680 Rig

Casing Report

Meager Creek Development Corp.

Well ID: MC-7 **Well Name: South Meager MC-7**

Run Date/Time:	02-Dec-04 16:00		
Well Section:	SURF	**String Type:**	FULL
String Top MD:	0.0 m	**String Top TVD:**	m
Casing Shoe MD:	129.0 m	**Casing Shoe TVD:**	m
String Nominal OD:	47.30 cm	**String Nominal ID:**	cm
Bit Diameter:	60.90 cm	**Avg. Open Hole Diam.:**	cm
Centralizers: No:	**Manufacturer:**	**Type:**	
Depths:			
Hanger: Type:		**Manufacturer:**	

Comments:

Drilled with Precision Drilling Rig 620 on 2 Dec. 04

Casing Tally Run Report

Meager Creek Development Corp.

Well ID: MC-7 **Well Name: South Meager MC-7**

String Nominal OD 47.30 **Type:** FULL

Top Depth: 0.0 **Bottom:** 130.6 **Cut Off Length:** 0.000

Good Joints: 12 **Excluded Joints:** 0 **Total Joints:** 12

Total Length Good Joints: 130.590 **Other Items:** **Total Length:** 130.590

Run No.	Joint No	Item	Length	Top	Bottom	Description	Comments	Cnt Scr
1	1	JOINT	0.530	130.060	130.590	47.3 x 40, 130 K-55 BUTT	Float shoe	
2	2	JOINT	12.930	117.130	130.060	47.3 x 40, 130 K-55 BUTT		
3	3	JOINT	0.590	116.540	117.130	47.3 x 40, 130 K-55 BUTT	Float collar	
4	4	JOINT	12.830	103.710	116.540	47.3 x 40, 130 K-55 BUTT		
5	5	JOINT	12.900	90.810	103.710	47.3 x 40, 130 K-55 BUTT		
6	6	JOINT	12.820	77.990	90.810	47.3 x 40, 130 K-55 BUTT		
7	7	JOINT	13.140	64.850	77.990	47.3 x 40, 130 K-55 BUTT		
8	8	JOINT	12.910	51.940	64.850	47.3 x 40, 130 K-55 BUTT		
9	9	JOINT	13.170	38.770	51.940	47.3 x 40, 130 K-55 BUTT		
10	10	JOINT	12.830	25.940	38.770	47.3 x 40, 130 K-55 BUTT		
11	11	JOINT	13.020	12.920	25.940	47.3 x 40, 130 K-55 BUTT		
12	12	JOINT	12.920	0.000	12.920	47.3 x 40, 130 K-55 BUTT		

Printed: 16:49 28-Mar-06

End of Report

Casing Report

Meager Creek Development Corp.

Well ID: MC-7 **Well Name: South Meager MC-7**

Run Date/Time:	14-Dec-04 0:00				
Well Section:	INT1		**String Type:**	FULL	
String Top MD:	0.0	m	**String Top TVD:**		m
Casing Shoe MD:	870.0	m	**Casing Shoe TVD:**		m
String Nominal OD:	33.97	cm	**String Nominal ID:**		cm
Bit Diameter:	44.45	cm	**Avg. Open Hole Diam.:**		cm
Centralizers: No:	15	**Manufacturer:** BAKER	**Type:**	Flex-Bow	
Depths:	766m, 744m,731m 706m,681m,657m,633m,609m,584m,560m,535m,511m,487m,120m,107m.				
Hanger: Type:			**Manufacturer:**		

Comments:

Cemented by Halliburton on 12-14-04

Casing Tally Run Report

Meager Creek Development Corp.

Well ID: MC-7 **Well Name: South Meager MC-7**

String Nominal OD 33.97 **Type:** FULL

Top Depth: 0.0 **Bottom:** 870.8 **Cut Off Length:** 0.000

Good Joints: 70 **Excluded Joints:** 0 **Total Joints:** 70

Total Length Good Joints: 870.790 **Other Items:** **Total Length:** 870.790

Run No.	Joint No	Item	Length	Top	Bottom	Description	Comments	Cnt Scr
1	1	JOINT	0.550	870.240	870.790	33.97 x 31.361, 107.15 K-55 BUT	Shoe	
2	2	JOINT	11.920	858.320	870.240	33.97 x 31.361, 107.15 K-55 BUT		
3	3	JOINT	0.550	857.770	858.320	33.97 x 31.361, 107.15 K-55 BUT	Stab-in float collar	
4	4	JOINT	12.880	844.890	857.770	33.97 x 31.361, 107.15 K-55 BUT		
5	5	JOINT	12.790	832.100	844.890	33.97 x 31.361, 107.15 K-55 BUT		
6	6	JOINT	12.090	820.010	832.100	33.97 x 31.361, 107.15 K-55 BUT		
7	7	JOINT	12.860	807.150	820.010	33.97 x 31.361, 107.15 K-55 BUT		
8	8	JOINT	12.750	794.400	807.150	33.97 x 31.361, 107.15 K-55 BUT		
9	9	JOINT	12.350	782.050	794.400	33.97 x 31.36, 107.2 K-55 BUTT		
10	10	JOINT	12.450	769.600	782.050	33.97 x 31.36, 107.2 K-55 BUTT		
11	11	JOINT	13.440	756.160	769.600	33.97 x 31.36, 107.2 K-55 BUTT		
12	12	JOINT	13.080	743.080	756.160	33.97 x 31.36, 107.2 K-55 BUTT		
13	13	JOINT	13.670	729.410	743.080	33.97 x 31.36, 107.2 K-55 BUTT		
14	14	JOINT	12.410	717.000	729.410	33.97 x 31.36, 107.2 K-55 BUTT		
15	15	JOINT	12.920	704.080	717.000	33.97 x 31.36, 107.2 K-55 BUTT		
16	16	JOINT	13.110	690.970	704.080	33.97 x 31.36, 107.2 K-55 BUTT		
17	17	JOINT	12.880	678.090	690.970	33.97 x 31.36, 107.2 K-55 BUTT		
18	18	JOINT	13.080	665.010	678.090	33.97 x 31.36, 107.2 K-55 BUTT		
19	19	JOINT	12.960	652.050	665.010	33.97 x 31.36, 107.2 K-55 BUTT		
20	20	JOINT	12.830	639.220	652.050	33.97 x 31.36, 107.2 K-55 BUTT		
21	21	JOINT	12.930	626.290	639.220	33.97 x 31.36, 107.2 K-55 BUTT		
22	22	JOINT	12.730	613.560	626.290	33.97 x 31.36, 107.2 K-55 BUTT		
23	23	JOINT	13.350	600.210	613.560	33.97 x 31.36, 107.2 K-55 BUTT		
24	24	JOINT	12.780	587.430	600.210	33.97 x 31.36, 107.2 K-55 BUTT		
25	25	JOINT	10.450	576.980	587.430	33.97 x 31.36, 107.2 K-55 BUTT		
26	26	JOINT	13.000	563.980	576.980	33.97 x 31.36, 107.2 K-55 BUTT		
27	27	JOINT	13.100	550.880	563.980	33.97 x 31.36, 107.2 K-55 BUTT		
28	28	JOINT	12.740	538.140	550.880	33.97 x 31.36, 107.2 K-55 BUTT		
29	29	JOINT	13.160	524.980	538.140	33.97 x 31.36, 107.2 K-55 BUTT		
30	30	JOINT	13.140	511.840	524.980	33.97 x 31.36, 107.2 K-55 BUTT		

Joint Details - (Cont)

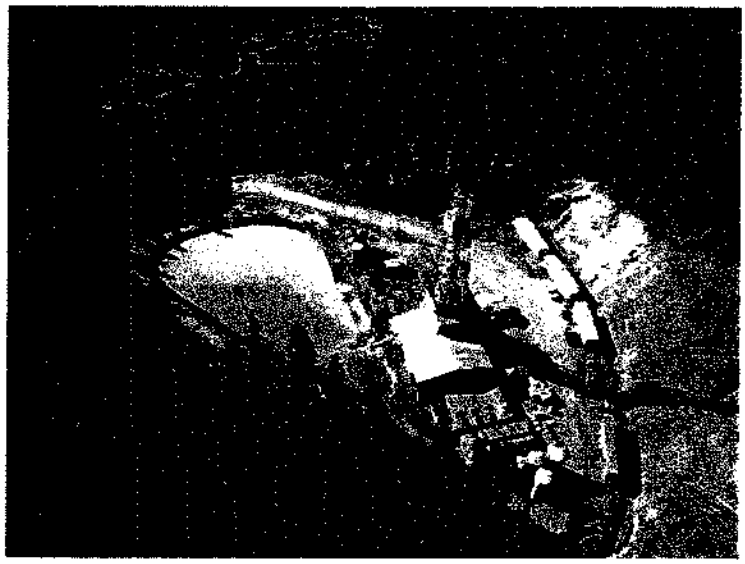
Run No.	Joint No	Item	Length	Top	Bottom	Description	Comments	Cnt Scr
31	31	JOINT	12.510	499.330	511.840	33.97 x 31.36, 107.2 K-55 BUTT		
32	32	JOINT	12.940	486.390	499.330	33.97 x 31.36, 107.2 K-55 BUTT		
33	33	JOINT	12.930	473.460	486.390	33.97 x 31.36, 107.2 K-55 BUTT		
34	34	JOINT	13.770	459.690	473.460	33.97 x 31.36, 107.2 K-55 BUTT		
35	35	JOINT	14.000	445.690	459.690	33.97 x 31.36, 107.2 K-55 BUTT		
36	36	JOINT	13.000	432.690	445.690	33.97 x 31.36, 107.2 K-55 BUTT		
37	37	JOINT	13.150	419.540	432.690	33.97 x 31.36, 107.2 K-55 BUTT		
38	38	JOINT	12.940	406.600	419.540	33.97 x 31.36, 107.2 K-55 BUTT		
39	39	JOINT	11.280	395.320	406.600	33.97 x 31.36, 107.2 K-55 BUTT		
40	40	JOINT	12.780	382.540	395.320	33.97 x 31.36, 107.2 K-55 BUTT		
41	41	JOINT	12.640	369.900	382.540	33.97 x 31.36, 107.2 K-55 BUTT		
42	42	JOINT	12.670	357.230	369.900	33.97 x 31.36, 107.2 K-55 BUTT		
43	43	JOINT	12.980	344.250	357.230	33.97 x 31.36, 107.2 K-55 BUTT		
44	44	JOINT	13.180	331.070	344.250	33.97 x 31.36, 107.2 K-55 BUTT		
45	45	JOINT	13.120	317.950	331.070	33.97 x 31.36, 107.2 K-55 BUTT		
46	46	JOINT	13.000	304.950	317.950	33.97 x 31.36, 107.2 K-55 BUTT		
47	47	JOINT	12.970	291.980	304.950	33.97 x 31.36, 107.2 K-55 BUTT		
48	48	JOINT	12.950	279.030	291.980	33.97 x 31.36, 107.2 K-55 BUTT		
49	49	JOINT	12.900	266.130	279.030	33.97 x 31.36, 107.2 K-55 BUTT		
50	50	JOINT	12.940	253.190	266.130	33.97 x 31.36, 107.2 K-55 BUTT		
51	51	JOINT	11.080	242.110	253.190	33.97 x 31.36, 107.2 K-55 BUTT		
52	52	JOINT	11.500	230.610	242.110	33.97 x 31.36, 107.2 K-55 BUTT		
53	53	JOINT	12.690	217.920	230.610	33.97 x 31.36, 107.2 K-55 BUTT		
54	54	JOINT	12.840	205.080	217.920	33.97 x 31.36, 107.2 K-55 BUTT		
55	55	JOINT	13.100	191.980	205.080	33.97 x 31.36, 107.2 K-55 BUTT		
56	56	JOINT	14.400	177.580	191.980	33.97 x 31.36, 107.2 K-55 BUTT		
57	57	JOINT	12.400	165.180	177.580	33.97 x 31.36, 107.2 K-55 BUTT		
58	58	JOINT	11.810	153.370	165.180	33.97 x 31.36, 107.2 K-55 BUTT		
59	59	JOINT	11.850	141.520	153.370	33.97 x 31.36, 107.2 K-55 BUTT		
60	60	JOINT	12.860	128.660	141.520	33.97 x 31.36, 107.2 K-55 BUTT		
61	61	JOINT	11.900	116.760	128.660	33.97 x 31.36, 107.2 K-55 BUTT		
62	62	JOINT	13.130	103.630	116.760	33.97 x 31.36, 107.2 K-55 BUTT		
63	63	JOINT	12.910	90.720	103.630	33.97 x 31.36, 107.2 K-55 BUTT		
64	64	JOINT	13.160	77.560	90.720	33.97 x 31.36, 107.2 K-55 BUTT		

Joint Details - (Cont)

Run No.	Joint No	Item	Length	Top	Bottom	Description	Comments	Cnt Scr
65	65	JOINT	13.040	64.520	77.560	33.97 X 31.36, 107.2 K-55 BUTT		
66	66	JOINT	12.790	51.730	64.520	33.97 X 31.36, 107.2 K-55 BUTT		
67	67	JOINT	12.840	38.890	51.730	33.97 X 31.36, 107.2 K-55 BUTT		
68	68	JOINT	13.150	25.740	38.890	33.97 X 31.36, 107.2 K-55 BUTT		
69	69	JOINT	12.950	12.790	25.740	33.97 X 31.36, 107.2 K-55 BUTT		
70	70	JOINT	12.790	0.000	12.790	33.97 X 31.36, 107.2 K-55 BUTT		

Section 5: Cementing Report, (Halliburton)

Meager Creek Development Corporation
Ste. 411 – 837 West Hasting St.
Vancouver, British Columbia
V6C 3N6



SOUTH MEAGER GEOTHERMAL PROJECT
ZONAL ISOALTION

MC-6 & MC-7
POST JOB REPORT

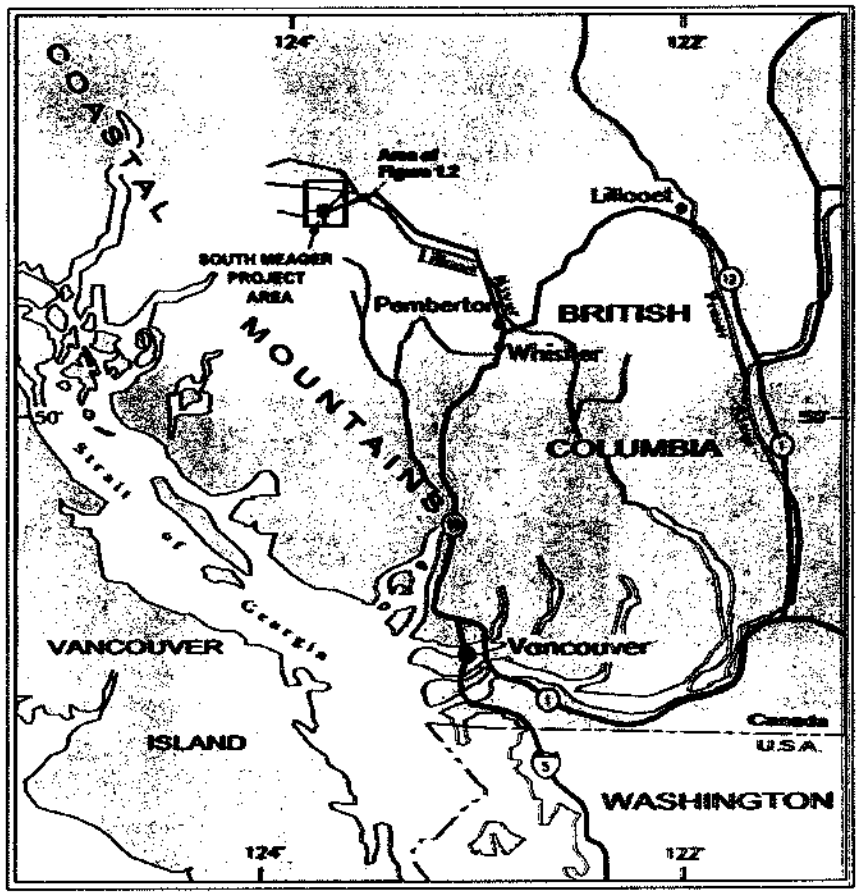
Prepared for: Mr. Andrew Ryder & Mr. Russ Silva
December 31, 2004
Version: 1

Prepared by:
Chris Quinton
Halliburton Energy Services
Grande Prairie, AB
(780) 402-4215

HALLIBURTON

1 PROJECT SUMMARY:

Meager Creek Development Corporation's objective of this project was to drill and complete two wells and evaluate their potential heat for geothermal energy. The estimated minimum potential for energy in this project is between 100 MW with the potential for 200 - 250 MW of power. These two wells are located approximately 170 km West of Vancouver, British Columbia. For this project Western Geo Power hired GeothermEx Inc. out of California to consult the work being done for this project. GeothermEx Inc. is the largest and most experience geothermal energy consulting company in the world and they have been consulting geothermal work in California and Hawaii for years with great success. Halliburton was hired to complete the zonal isolation for each well. This included two surface cement jobs, two intermediate cement jobs, plus any additional lost of circulation cement plugs.

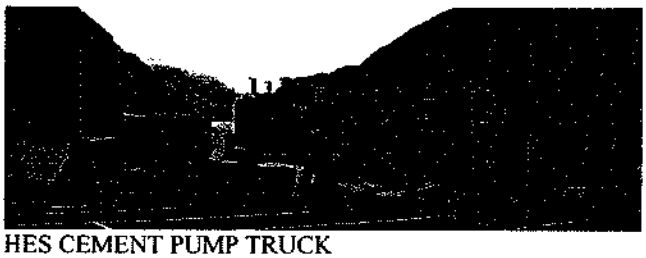


2 HES MOBILIZATION

Halliburton began mobilizing for this project early in 2004. The initial zonal isolation programs and proposals were completed in Calgary by Colin Witt. The cement chosen for these jobs was Class G + 40% Silica Flour. The purpose of the Silica Flour is to prevent strength retrogression at the high temperatures. The chemicals needed for each job were to be added to the mix water at the predetermined concentrations as indicated through lab testing and field conditions. These programs were sent to the Halliburton office in California for review and subsequently forwarded on to Ms. Rupi Khanuja at Western Geo Power for final approval. The Cementing Pump Unit and crew were to come out of Grande Prairie and the bulk material was to be delivered by Caron transport out of Red Deer. FI Canada supplied all casing accessories and float equipment. Four Halliburton cement bins were delivered to location and spotted by the HES crew. A chemical van was rented and delivered to location with all the chemicals needed for the two wells. These chemicals included high temperature cement retarders, fluid loss additives, accelerators, and dispersants. The chemicals used for the spacers and flushes were also included. The chemical van was spotted at the lower camp on the Meager Road. In addition a batch mixer was also mobilized out of Grande Prairie to mix the spacer on the second intermediate well.

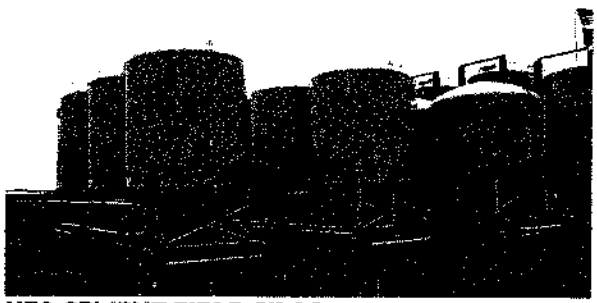
3 ZONAL ISOLATION PROJECT REVIEW

For the entire project, two surface cement jobs and two intermediate cement jobs were completed. During the drilling operation of the first well, three - 3 ton lost circulation plugs were needed, plus a casing-casing squeeze and a cement top-up. A small top-up job was also required for the second well. During the drilling of the production hole on the first well it was decided that a cemented production liner was not needed and the crew was released. After the completion of the second well, the cement crew was released with their pump truck; however, the cement silos and chemical van remained on location. There is still a slight possibility that a cemented liner will be needed for this well.



HES CEMENT PUMP TRUCK

HES BATCH MIXER



HES CEMENT FIELD SILOS

5 MC-7

5.1 SURFACE CEMENT JOB

5.1.1 JOB DATA

DATE: November 28, 2004

HOLE: 609.0 mm

CASING: 473.08 mm, 130.21 kg/m, L-80 landed at 132 m

BHST: 40°C (est)

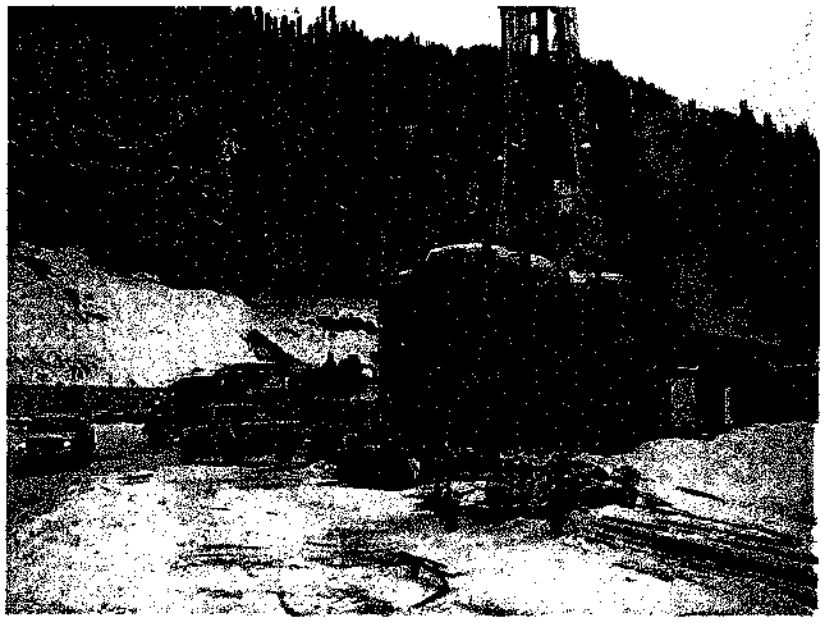
OBJECTIVE: Perform a surface cement job

SPACER: Super Flush 102

CEMENT: Class G + 40% SSA-1 + 2% $CaCl_2$ + 0.1% CFR-3 @ 1860 kg/m^3
($CaCl_2$ and CFR-3 were prehydrated in the mix water)

PERSONNEL: Ron Beeston (Service Supervisor III)
Bill Burnett (Service Supervisor I)
Steve Marsten (Service Operator I)
Richard LeBlond (Operator Assistant I)
Chris Quinton (Technical Professional)

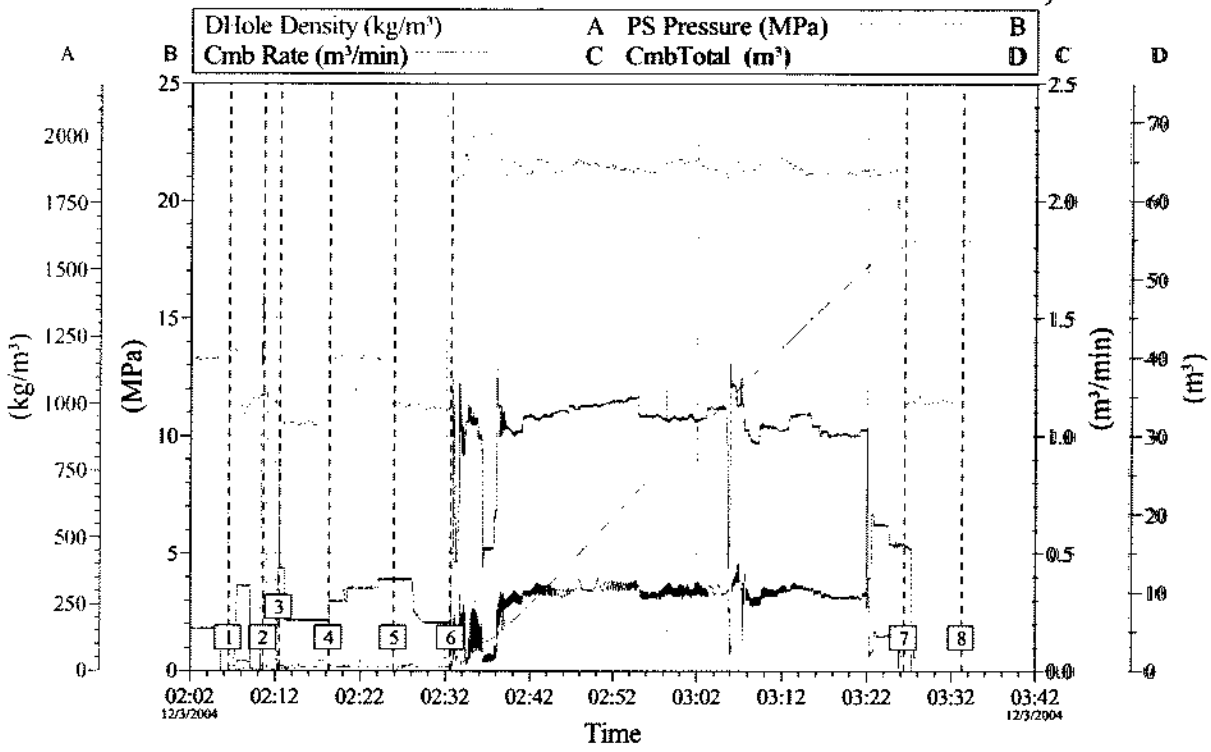
EQUIPMENT: 75TC4 Cement Pumper (10086606)
609 mm Stab-In Super Seal Float Collar
609 mm Float Shoe



5.1.2 JOB OUTLINE

1. Pump 0.5 m^3 Water ahead
2. Pressure Test 20 MPa
3. Pump 1.5 m^3 Water
4. Pump 3 m^3 of Super Flush 102
5. Pump 2 m^3 Water
6. Pump cement until we have returns
7. Displace with 850 L of water
8. Rig-out HES

SOUTH MEAGER GEOTHERMAL PROJECT WELL #2, SURFACE



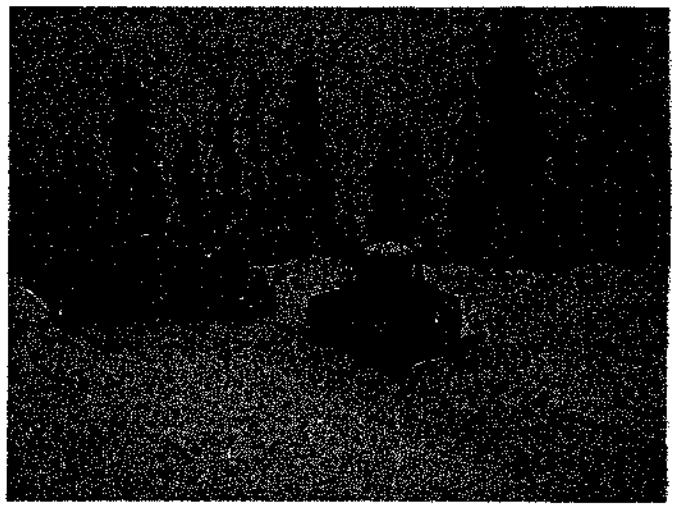
5.1.3 JOB SUMMARY

For this job a 473 mm stab-in float collar was available and therefore we were able to perform an inner sting cement job, which allowed us to pump until we achieved good cement returns to surface. We started seeing cement returns at about 150% excess but the cement was still contaminated with the superflush. It wasn't until about 250% excess when we started seeing full density cement returns. We slowed the rate down to insure the returns were steady and than began to displace. Once we finished displacing, the cement did not fall back so we shut-in and rigged out HES equipment.

5.2 INTERMEDIATE CEMENT JOB

5.2.1 JOB DATA

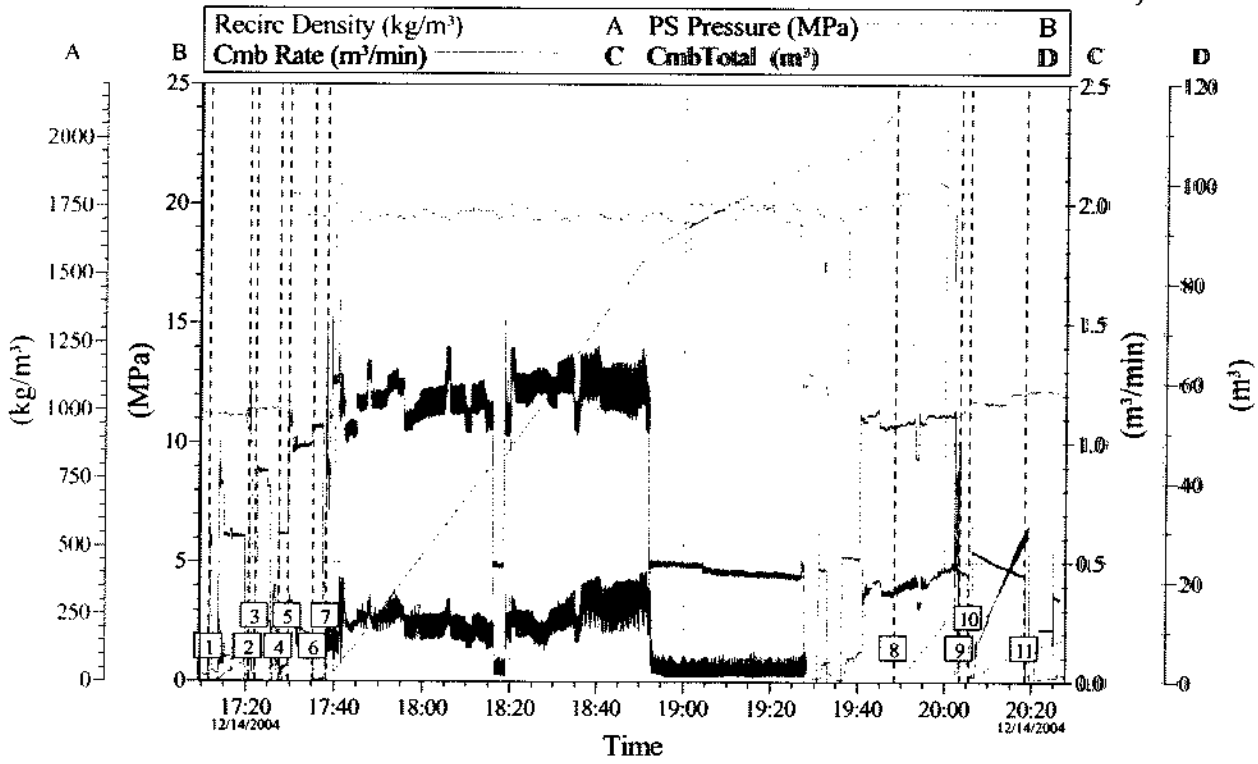
DATE:	December 14, 2004
HOLE:	444.5 mm
CASING:	339.73 mm, 107.15 kg/m, L-80 landed at 860 m
BHST:	50°C (est)
OBJECTIVE:	Perform an inner string intermediate cement job
SPACER:	Super Flush 101
LEAD CEMENT:	Class G + 35% SSA-1 + 5% Silicalite + 0.3% Halad-413 + 0.225% FWCA + Optimum Bridging Package Density at 1680 kg/m^3
TAIL CEMENT:	Class G + 35% SSA-1 + 5% Silicalite + 0.3% Halad-413 + 0.225% FWCA + Optimum Bridging Package Density at 1825 kg/m^3
PERSONNEL:	Bill Burnett (Service Supervisor I) Steve Marsten (Service Operator I) Richard LeBlond (Operator Assistant) Lloyd Diamond (Service Operator II) Edmund Hempler (Operator Assistant I) Bob Valentine (Service Quality Leader) Ray Mildenberger (Senior Field Sales Representative)
EQUIPMENT:	75TC4 Cement Pumper (10086606) 339.73 mm Stab-in Super Seal II Float Collar 339.73 mm Standard Super Seal II Float Shoe



5.2.2 JOB OUTLINE

1. Pump 4.5 m^3 Water ahead
2. Pressure Test
3. Pump 3 m^3 10% $CaCl_2$ Water
4. Pump 1.5 m^3 Water
5. Pump 5 m3 Super Flush 101
6. Pump 1 m^3 of Water
7. Pump 100 m^3 of Lead Cement @ 1680 kg/m^3
8. Pump 15 m^3 of Tail Cement @ 1825 kg/m^3
9. Pump 1 m^3 Water
10. Displace with 6.5 m^3 of Mud
11. Bleed back check if floats hold & Rig out HES

SOUTH MEAGER GEOTHERMAL PROJECT WELL #2, INTER

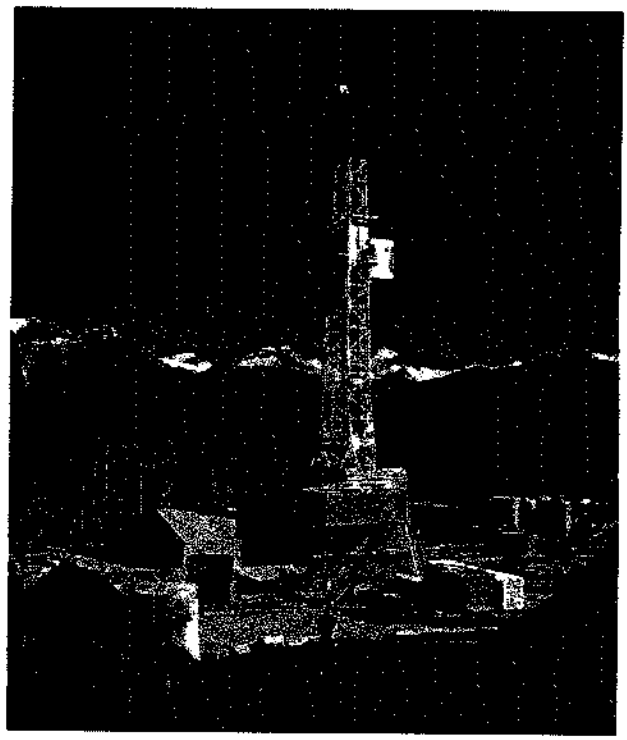


5.2.3 JOB SUMMARY

For this well the weight of the cement column was changed slightly to try and increase our chances of getting cement returns. We started pumping cement at 5:30 pm and we got flush back to surface, but then lost returns. The pump rate was slowed to 0.5 m^3/min, we did some hesitation and got returns back. There was good cement to surface but we lost circulation again during displacement. Though a small top-up job was needed on the morning of December 15th, the job was deemed a success.

6 CONCLUSION

Halliburton appreciates the opportunity for work on such a high profile project. It was a pleasure working with your representative Russ Silva and the Precision 620 Drilling crew in Pemberton. We hope our quality of work meets your expectations. Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton Energy Services again thanks you for the opportunity to perform services on your wells. We hope to be your solutions provider for future projects



Section 6: Operations Time Analysis, (RIMBase Files);

- *Operations Time Analysis Data*
- *Operations Time Chart*

Operations Time Analysis — Meager Creek Development Corp.

Well ID: MC-7 **Well Name:** South Meager MC-7

Rig: Precision #620

	Total Hrs	% of Total
Drill		
Drilling Ahead w/ Connections	777.50	47.2
Directional Work	145.50	8.8
Circulate/Condition Mud	54.50	3.3
Reaming/Underreaming	32.50	2.0
Running Survey Tools	1.50	0.1
Total for Drill:	1011.50	61.4
Trip		
Tripping Out	184.50	11.2
Tripping in	125.00	7.6
BHA Operations	48.00	2.9
Wiper Trip	8.50	0.5
Total for Trip:	366.00	22.2
BOP Ops		
BOP Nipple Down	35.00	2.1
BOP Nipple Up	28.00	1.7
Other BOP Operations	5.00	0.3
BOP Testing	2.50	0.2
Total for BOP Ops:	70.50	4.3
Evaluate		
Well Evaluation	67.50	4.1
Testing Operations, DST etc	0.50	0.0
Total for Evaluate:	68.00	4.1
Misc Other		
Other Activity	21.50	1.3
Rig Service	11.00	0.7
Welding Operations	10.25	0.6
Cut and Slip Drill Line	5.50	0.3
Safety Meetings	1.00	0.1
Total for Misc Other:	49.25	3.0
Cementing		
Waiting On Cement	21.25	1.3
Primary Cement Operations	5.00	0.3
Secondary Cement Operations	3.50	0.2
Total for Cementing:	29.75	1.8
Problem Time		

Operations Time Analysis

Meager Creek Development Corp.

Well ID: MC-7 **Well Name:** South Meager MC-7

Rig: Precision #620

	Total Hrs	% of Total
Waiting on Equipment	18.50	1.1
Losing Circ./Pumping LCM	6.50	0.4
Rig Repairs	4.00	0.2
Total for Problem Time:	29.00	1.8
Casing		
Running Casing	24.50	1.5
Total for Casing:	24.50	1.5
Total Elapsed Time for Well:	1648.50 hrs.	
Total Non-Productive Time for Well:	29.00 hrs.	1.8%
Total Productive Time for Well:	1619.50 hrs.	98.2%

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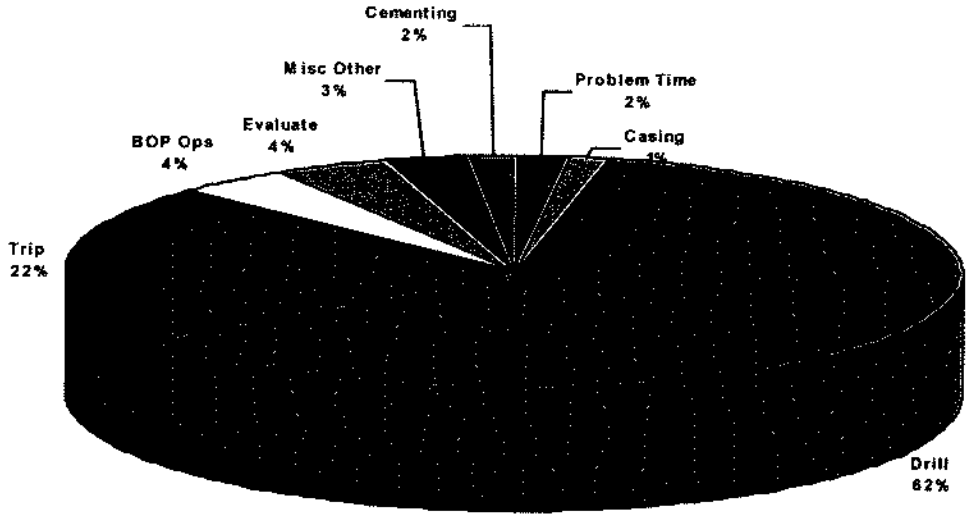
End of Report

Operations Time Graph

Meager Creek Development Corp.

Well ID: MC-7

Analysis by Operations Group



Description	Time - hrs	%
Drill	1,011.50	61.36%
Trip	366.00	22.20%
BOP Ops	70.50	4.28%
Evaluate	68.00	4.12%
Misc Other	49.25	2.99%
Cementing	29.75	1.80%
Problem Time	29.00	1.76%
Casing	24.50	1.49%
Total Time	1,648.50 hrs.	

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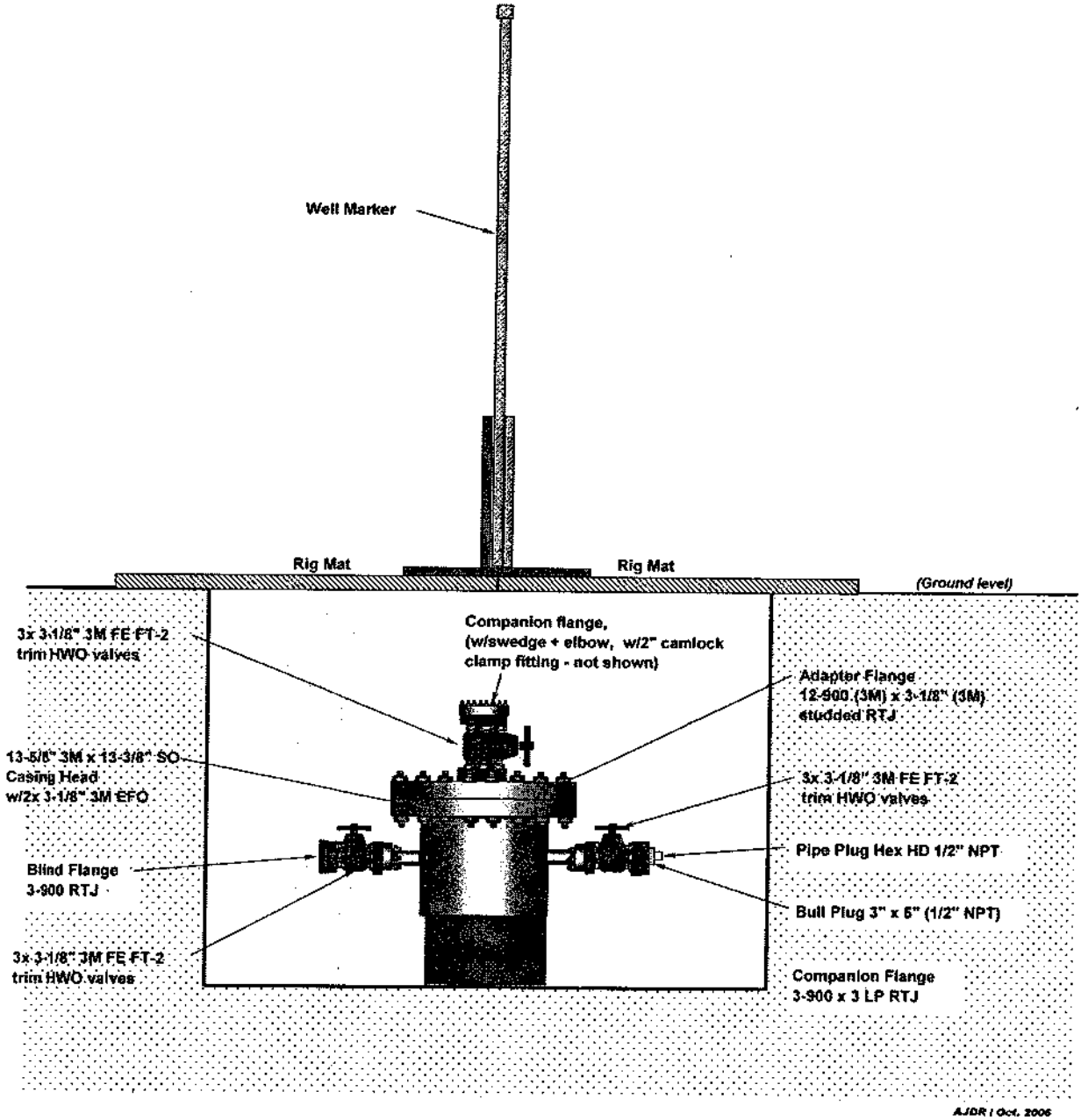
Section 7: MC-7 Wellhead

(*Shut-in; October, 2005*)

MC-7 Wellhead

(Shut-in October, 2006)

Note: Wellhead & cellar covered with 2x rig mats, (16ft x 8ft x 6")



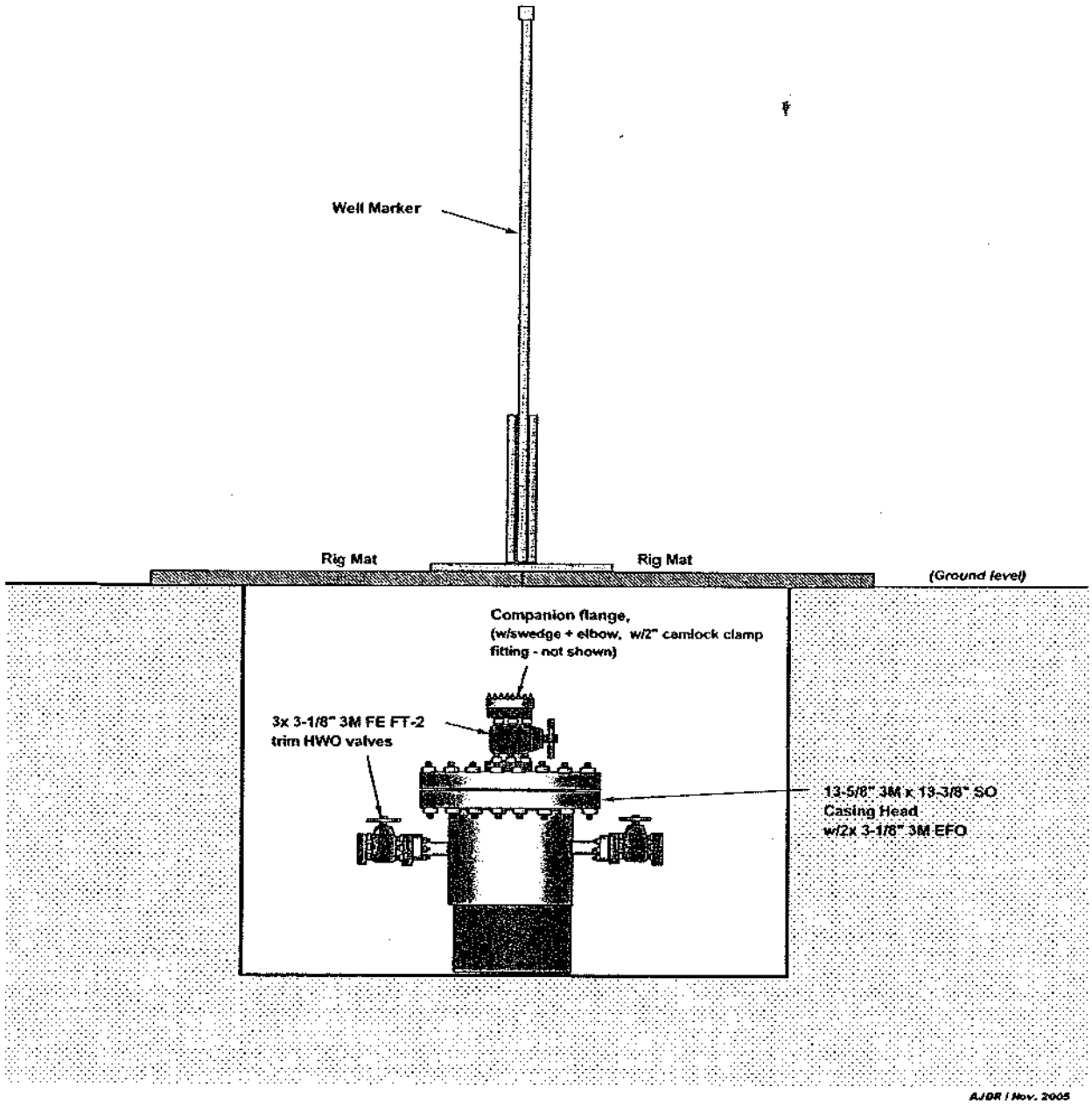
AJDR / Oct. 2006

MC-7 Wellhead

(Shut-in October, 2005)

Superseded

Note: *Wellhead & cellar covered with 2x rig mats, (16ft x 8ft x 6")*



MC-7 Wellhead

(Shut-in October, 2005)

Note *: Wellhead & cellar covered with 2x rig mats, (16ft x 8ft x 6")*