MEAGER CREEK DEVELOPMENT CORPORATION
(A subsidiary of Western GeoPower Corp.)

South Meager Geothermal Project, British Columbia

WELL MC-6

a-92-A / 92-J-12 (MC-6)

(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

Table of Contents

Section 1: General Well Data; MC-6

- *Summary of Well Data: MC-6*
- *Project Location Map*
- *Well Site Location Map*
- *Borehole Schematic*
- *Days Vs Depth Graph*

WELL DATA SUMMARY: MC-6

Government Well I.D.: a-92-A 92-J-12 (MC-6)

Province: B.C. District: Squamish - Lillooet Field: South Meager Geothermal Project

Operator: Meager Creek Development Corporation

Contractor: Precision Drilling Rig No: Rig #620TE Well Classification: Geothermal

Location: NTS Coords. 463,229.50mE; 5,603,038.90mN (NAD83-UTM-Zone 10)

Geographic Location: LAT: N50° 34' 41.1745" LONG: W123° 31' 09.5849"

Elevation: 1,365 meters ASL RKB to GL: 7.32m

Date Spudded: 25 September, 2004; (01:00hrs.)

Date Completed (TD): 14 November, 2004; (17:00hrs.) Rig Released: 23 November, 2004; (24:00hrs.)

Total Drilled Depth (TD): 2,662.6m RKB

True Vertical Depth (TVD): 2,487.0m RKB Top of Liner: 815.0mRKB Static Water Level: ~ 580mRKB

Directional Drilling Information: -

KOP: 472m
Azimuth: 030°
Inclination: 25°

Build up rate: 2.5° per 30 meters
End of Build: 901mRKB / 889.64mTVD
Max. Inclination: 29.3° @ 1,071.0mRKB

Bottom hole position: E 376.58m; N 698.16m, (extrapolated to TD)
Vertical Section: 793.25m on azimuth 28.34m, (from wellhead)

Days Drilling: 51 days
Days to Rig Release: 60 days

Hole Sizes:

Size		Depth
*711.2mm	/ 28"	to 30m (G.L.)
609.0mm	/ 24"	to 127m RKB
444.5mm	/ 17-1/2"	to 876m RKB
311.2mm	/ 12-1/4"	to 2,662m RKB

Casing:

Size		Weight	Grade	Thread	Rnge	Type	Depth	Comment
jnts. x 711.2m*	/ 28"	172.0kg/m	L-80	Weld		Smls	to 32m (G.L.)	Installed by ODEX system*; (uncemented)
10 jnts. x 473.0mm	/ 18-5/8"	130.21kg/m	K-55	BTC	Rg3	Smls	to 125m RKB	Cemented by: Halliburton, (ref. report Dec. 31/04)
68 jnts. x 339.7mm	/ 13-3/8"	107.15kg/m	L-80	BTC	Rg3	Smls	to 857m RKB	Cemented by: Halliburton, (ref. report Dec. 31/04)
137 jnts. x 244.5mm	/ 9-5/8"	59.53kg/m	N-80	BTC	Rg3	Smls	to 2,662m RKB	6 jnts. blank (815-901m); 131 jnts. slotted (901-2,662mTD); set on bottom

(*: Top hole; pre-drilled by Midnight Sun Drilling Co., using Schramm T685WS air rotary rig w/ODEX system; set 711.2mm csg. to 30m; drilled 609mm hole w/air hammer to 89m; Aug. 18-31, 2004)

Cement Plugs:

#1: Hole size 444.5mm open hole; set balanced plug at 205m to cure LC; 3.1m³ Class G + 40% SSA-1 at 1860kg/m³; Cemented by: Halliburton; unsuccessful.
#2: Hole size 444.5mm open hole; set balanced plug at 205m to cure LC; 3.1m³ Class G + 40% SSA-1 + 1.0% $CaCl_2$ at 1860kg/m³; Cemented by: Halliburton; successful.
#3: Hole size 444.5mm open hole; set balanced plug at 845-867m to cure LC; 3m³ Class G + 40% SSA-1 + 1.0% CFR-3 at 1860kg/m³; Cemented by: Halliburton; successful.

Losses of Circulation: (*311.2mm production hole; depths RKB*)
(Ref. Daily Geol. Reports - GeothermEx, Inc.)

1,167m: PLC; minor loss, 2 m³/hr; healed w/LCM
1,177m: PLC: minor loss, 4 m3/hr; healed w/LCM
1,182m: PLC; minor loss, 4.5 m3/hr; healed w/LCM
1,965m: PLC; fluid loss check; 6 m3/hr (not healed w/LCM)
2,043m: PLC; fluid loss check; 12 m3/hr (not healed w/LCM)
2,132m: PLC; fluid loss check; 12 m3/hr (not healed w/LCM)
2,226m: PLC; drlg break; losses incrs. to 18-19 m³/hr
2,290m: PLC; minor incrs. in losses to ~ 17 m³/hr
2,308m: PLC; minor drlg. break; losses ~ 15 m³/hr.
2,380m: PLC; losses incrs. fr. 15 m³/hr. to 19 m³/hr.
2,498m: PLC; minor drlg. break; losses ~ 19 m³/hr.
Note: PLC of ~ 19 m³/hr cont to TD; (last signif. loss at 2,380m)

General Summary of Lithologies: (*Depths, mRKB*)
(Ref. Daily Geol. Rpts/GeothermEx; mud log/Tecton)

0 - 355m: Volcanics, (tuff breccia)
355 - 480m: Quartz diorite
480 - 530m: Felsite / volc. dyke
530 - 820m: Quartz diorite
820 - 1,060m: Altered volcanics
1,060 - 1,550m: Quartz diorite
1,550 - 2,420m: Metasediments
2,420 - 2,662mTD: Hb. Bio. Quartz diorite

Geology Notes: (Ref. Daily Geol Reports - GeothermEx, Inc.)

> Significant drilling break & change in lithology at 351.5m (intersection of Qtz. Diorite)
> Abundant anhydrite(?) below aprox. 830m, w/sericite, quartz, pyrite and mod. Carbonates
> Euhedral calcite at 931m, anhydrite at 934m, and quartz + anhydrite at 1,012-1,018m
> Fine grained, weakly altered lava at 1,180-1,192m; minor fluid losses
> Below approx. 1,192m anhydrite alteration decreases; propylitic alteration more apparent
> Metasediments: dk-brown quartzite w/locally abund. magnetite; occas. fracts.w/qtz + py; minor ep; clasts and gen. textures well preserved, (i.e. limited strain; strong recrystallization)
> Metasediments becvome more foliated below approx. 1,850m; poss. calcareous schist at 1,900-1,918m
> Abundant vein filling at 2,005-2,015m; 2,025-2,030m; and below 2,050m
> PLC at 2,226m coincident w/intense alteration; 2,251-2,263m abunt ct + clays
> Intense alteration at 2,182m; 2,224-2,227m; 2,251-2,263m; 2,293-2,296m; and 2,359-2,371m; some PLC
> Gradual transtn to wkly altered, coarse-grnd hb + bio intrusives below approx. 2,390m.
> Little evidence of alteration / permeability in Hb. Bio qtz. diorite below approx. 2,380mRKB.

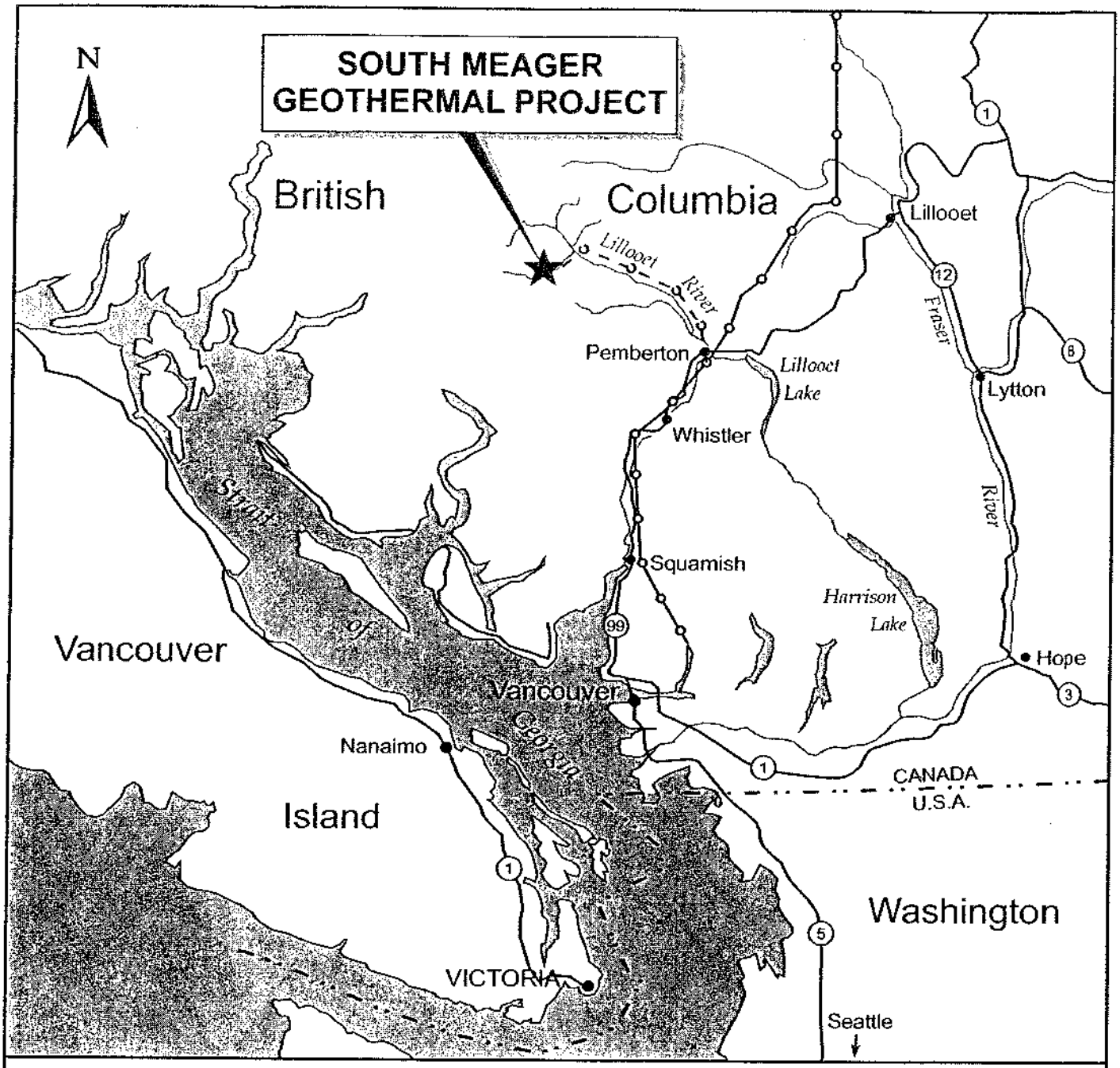
Completion Tests:
(Ref. GeothermEx, Inc. report 15 Dec./04)

> Displaced drilling mud w/water (16 Nov./04)
> Six d/h Kuster surveys of temp. & pres. under various well conditions (static; flowing; injection)
> Air-lift well for 20 hrs. through DP from 593m to 2,641m, followed by 7 hrs. self-flow
> Step-rate (45m³/hr.; 200gpm; and 90m³/hr.; 400gpm) injection test, (11 hrs.)
> Monitor pressure fall-off, w/pres. tool at 2,000m; (unsuccessful; chart did not advance)

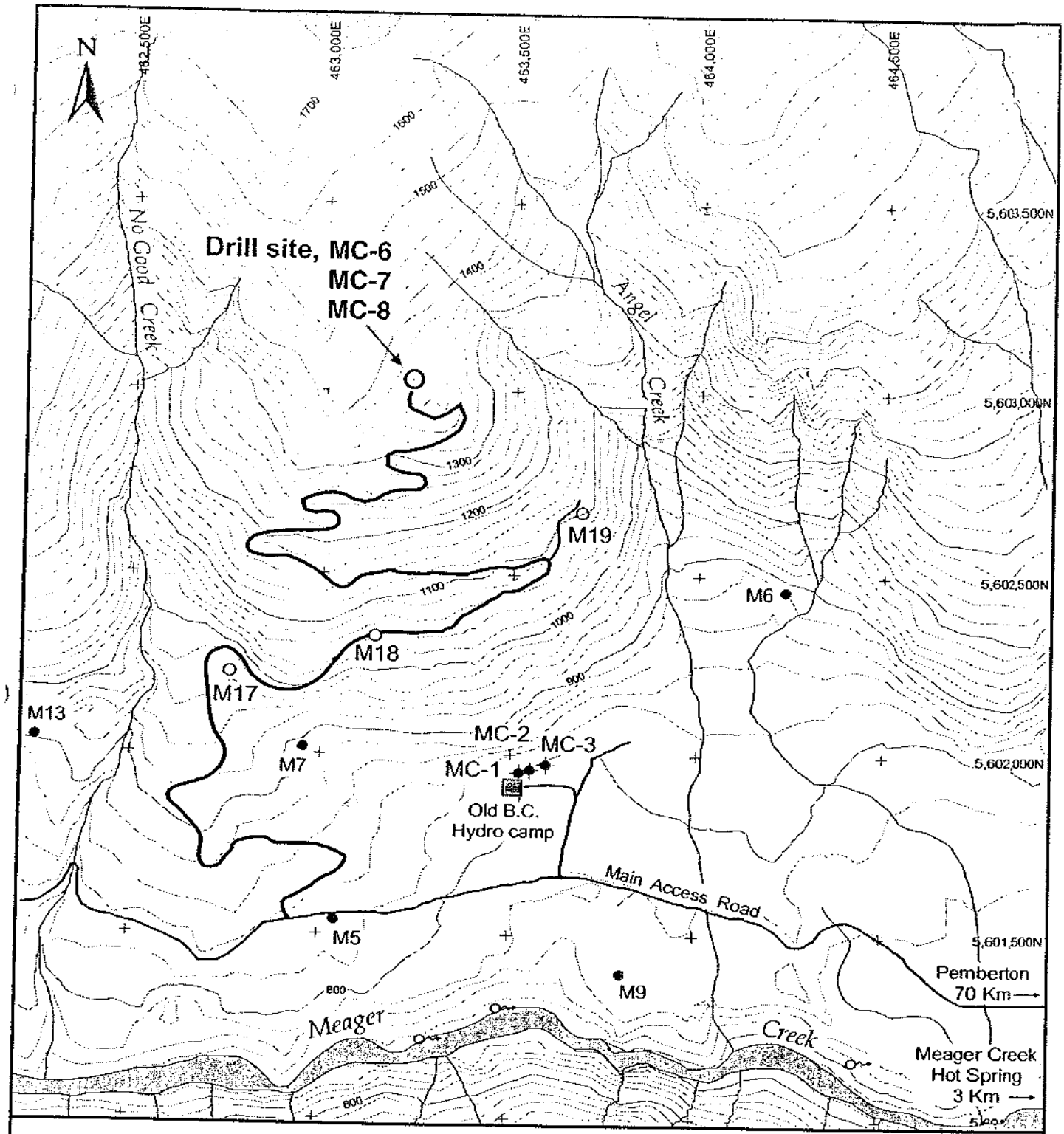
Other Well Testing Activities:

> Attempted to air-lift well to flow w/air cap, (10 attempts, 17-27 May/05)
> Installed 73mm, 9.67kg/m, J-55, EUE tubing to 1,700m, (June/05)
> Attempted to air-lift well to flow w/air injection (1800cfm) thru' 73 mm tubing, (June 15-20/05)
> Gravity feed stream water to MC-6, 07 July to 23 Aug./05; (approx. 15 million gals injected)
> Repeated step-rate injection test + PFO; 25 Aug./05
> Conducted interference test of MC-6 and MC-8; 04 - 15 Sept./05
> Removed/retrieved 73 mm EUE tubing, 05-06 Oct./05
> Latest Kuster KT survey (by MCDC), 21 Nov./05

Prepared by: AJDR (Dec. 06, 2005)



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

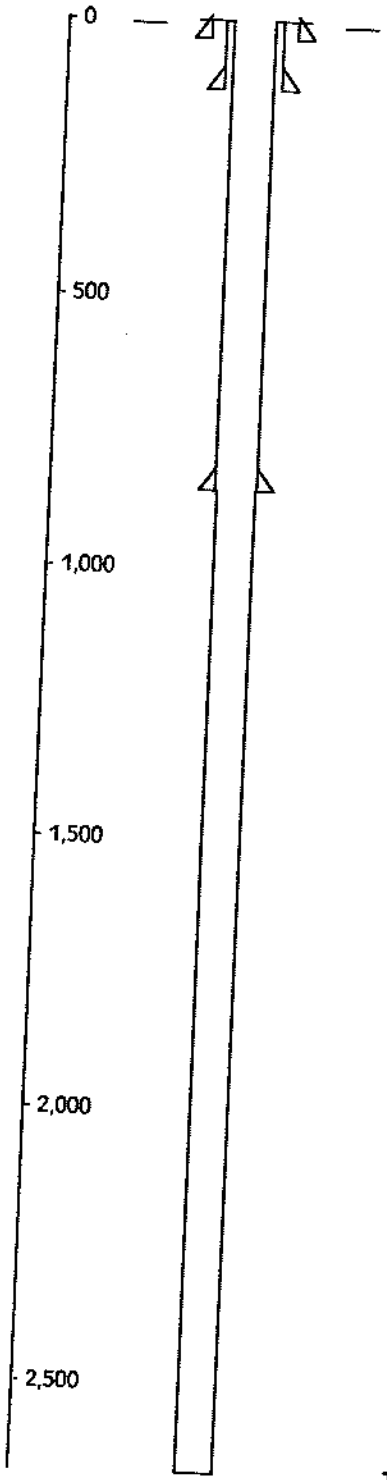
Borehole Schematic

Well ID: MC-6

Well Bore: MC-6

Meager Creek Development Corp.

Well Name: Meager Creek 6



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 32 on 22-Aug-04
47.3 Casing set at 125 on 27-Sep-04

33.97 Casing set at 857 on 12-Oct-04
Open Hole Diameter 31.12

(NOTE: Hole completed w/244.5mm slotted liner, sat on bottom; TOL 815m; slotted interval fr. 901m to 2,662mTD.

Total Depth 2,662

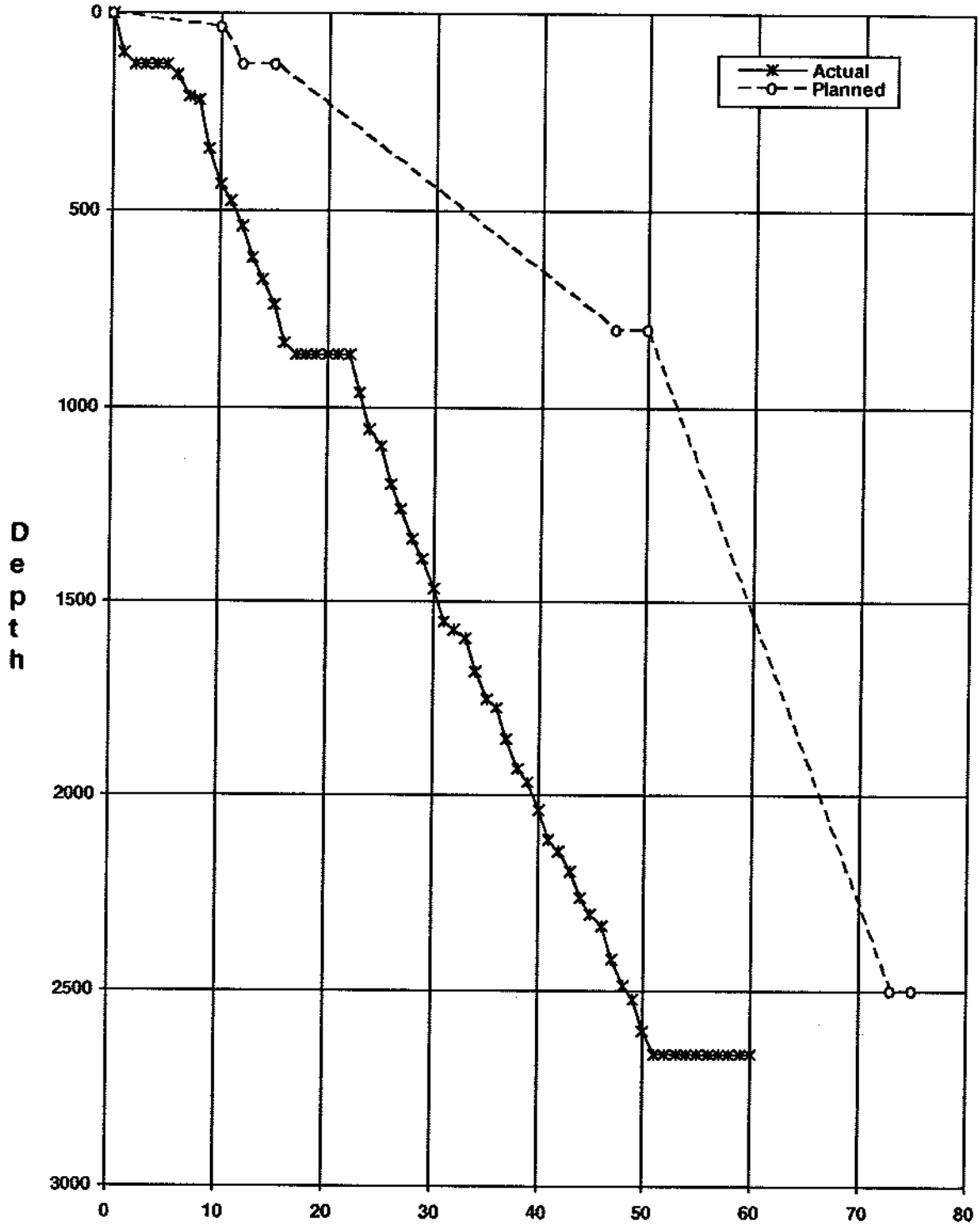
Printed 11:24 15-Dec-05

Days Vs Depth Graph

MC-6

Meager Creek Development Corp.

Well Name: Meager Creek 6



Printed: 14:33 08-Dec-05

Section 2: Daily Drilling Reports; CAODC Tour Sheets

CAODC — Chimo Equipment, A Veroo Company

Based on the CAODC ETS file standard

SPUD	2004-09-22 22:49
LICENCE NO	a-92-A / 92-J-12
OPERATOR	Western Geopower Corp
SURFACE LOCATION	
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
RIG RELEASE	
JOB NO.	
AFE	
WELL NAME AND NO.	MC6 South Meager
CONTRACTOR	Precision Drilling
UNIQUE ID:	b-1-N / 92-J-12
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig

DAILY CHECKS — OPR. / RIG

(1) Daily Walk Around Inspection
(2) Derrick Inspection Monthly (using check list)
(3) No 3 Valve Packet (if required)
(4) Weekly Lubrication Sheet Diagram Posted
(5) Fresh Line Ballast
(6) BOP Daily Pressures
(7) Weekly Inspect BOP's Flowlines & Degasser Lines
(8) Rig Site Hazard and Safety Meeting (emphasized)
(9) Q & D/D Rig Safety Inspection Checklist (emphasized)
(10) Mud Inspection Before Placing In Laundry
(11) Crown Saver Checked
(12) Motion Sick Observed

DATE 22-Sep-2004 | RIG NO 629 E | RIG | BOILER

CASING / TUBING OR LINER

	O.D. (mm)	WEIGHT (kg/m)	GRADE	NO. OF JOINTS	TOTAL (m) LENGTH	KB to CSG HEAD (m)	KB to GL (m)

TEMPERATURE	LINER (CASING) SIZE (mm)	LINER (CASING) WEIGHT (kg/m)	GRADE	INT. ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN. (mm)
CURRENT CONDITION										
WIND DIRECTION										
ROAD										

CREW TIME

CREW	TRAVEL TO LOC.	TRAVEL FROM LOC.	LOCAL	REMARKS	CUMUL.	RIG UP	DRILL	CIRC.	WIPER TRIP	SURVEY	REAM	CORE	CUT OFF DRLG. LINE	SLIP DRLG. LINE	RIG SERVICE	TEST BOPE	TRIP	REAM	SAFETY MTG.
MORN																			
DAY	8.00																		
EVE.	8.00																		
TOTAL	16.00																		

SHALE SHAKER(S) / RENTALS/SERVICES

SHALE SHAKER(S)		RENTALS/SERVICES	WORK	DAY	EVE.
NO. 2	TYPE Derrick	NEW			
SCREENS CHANGED	☐ YES ☐ NO				
8.00	TOP	TOP			
8.00	MIDDLE	MIDDLE			
16.00	BOTTOM	BOTTOM			

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

WELL NAME & NO. MC6 South Meager | DATE 22-Sep-2004

OPERATOR Western Geopower Corp | CONTRACTOR Precision Drilling

RIG MANAGER Kevin Vig | RIG NO. 629 E

PROVINCE BC | CAMP ☑ YES ☐ NO | RIG SAFETY DAYS: 0.00

BIT RECORD

NO.	BIT	BIT HRS	MONTH

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: T1 | T2 | WEAR | LOC | B | GAGE | ODC | REASON PULLED | Inner row | Outer row

D.P. | BHA | D.P. | SHOE/JT | ROLLYBORN | TOTAL | WT. OF BC | WT. OF STRING

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 x UNIT

SOLIDS CONTROL: HOURS RUN | SHALE SHAKER(S) | CENTRIFUGE(S) | DESILTER(S) | DESANDER(S) | HOURS RUN | MUD CLEANER(S) | CENTRIFUGE(S) | AGITATOR(S)

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

FROM	TO	BIT O.D. (mm)	ROTARY R.P.M.	WEIGHT ON BIT	Hours	No.	Mud Type	Mud Wt.	Vis.

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

NOTES

DRILLER SIGNATURE

SOLIDS (%): SAND | MBT | STUCK TEMP | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

MORNING TOUR 0:00 TO 6:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	716-324-181	Bill Mills	10.00	BM	☑
Derrickman	629-926-262	Rob Roth	10.00	RR	☑
Motorman	722-572-781	Dredyne Fry	10.00	DF	☑
Floorman	660-713-324	Jaime Collins	10.00	JC	☑
Floorman	652-342-416	Jonathan Greeve	10.00	JG	☐
Leaseman	652-690-757	Kyle Hryniw	10.00	KH	☐
Rig manager	719-409-484	Kevin Vig			☑
Toolpusher	638-977-702	Sheldon Langley			☑

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

DRILLER SIGNATURE: Bill Mills

DAY TOUR 6:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	633-626-706	Wade Goddard	8.00	☐	☑
Derrickman	642-872-840	Murray McBain	8.00	☐	☑
Motorman	651-366-064	Jesse Goddard	8.00	☐	☑
Floorman	647-462-803	Dave Makowsky	8.00	☐	☑
Floorman	735-714-230	Chantry Vig	8.00	☐	☑
Leaseman	647-247-006	Chris Thompson	8.00	☐	☑

FROM	TO	BIT O.D. (mm)	ROTARY R.P.M.	WEIGHT ON BIT	Hours	No.	Mud Type	Mud Wt.	Vis.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
6:00	16:00	8.00	1							Run Water and Air Lines, Run Power to Wellsite Trailer's, Rig to and String Block's

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

REDUCED PUMP SPEED

DEVIATION SURVEY: DEPTH (m) | DEVIATION (o) | DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

SOLIDS (%): SAND | MBT | STUCK TEMP | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC: String Block's | M.A.C.P.

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

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	633-626-706	Wade Goddard	8.00	☐	☑
Derrickman	642-872-840	Murray McBain	8.00	☐	☑
Floorman	647-462-803	Dave Makowsky	8.00	☐	☑
Floorman	735-714-230	Chantry Vig	8.00	☐	☑
Leaseman	647-247-006	Chris Thompson	8.00	☐	☑

FROM	TO	BIT O.D. (mm)	ROTARY R.P.M.	WEIGHT ON BIT	Hours	No.	Mud Type	Mud Wt.	Vis.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	24:00	8.00	1							Rig to and Raise Derrick, Rig Up Drill Floor

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

REDUCED PUMP SPEED

DEVIATION SURVEY: DEPTH (m) | DEVIATION (o) | DIRECTION

NOTES: Weekly Inspect Derrick, all Safety Pins, Bridal Lines and Brake Pads and Linkage Prior to Raising Derrick

DRILLER SIGNATURE: Wade Goddard

SOLIDS (%): SAND | MBT | STUCK TEMP | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

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

ETS SERIAL NUMBER: PREC629_20040822_1A

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-09-22 22:49
RIG RELEASE:
JOB NO.:
AFE:
LICENCE NO.: a-92-A / 92-J-12
WELL NAME AND NO.: MC6 South Meager
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
SURFACE LOCATION:
UNIQUE ID: lp-1-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS — OPR. / R.M.
(1) Daily Visual Inspection
(2) Derrick Inspection (Weekly during Operation)
(3) Hard Hats, Footwear (if required)
(4) Fire Lockers & Shut Dowmen Posted
(5) Flare Line Secured
(6) BOP Drill Performed
(7) Derrick Inspection BOP's (Functional & Pressure Tests)
(8) Rig Site Health and Safety Meeting
(9) 2 4 H2S (if Rig Safety Assistance Consultant)
(10) Hoist Inspection Before Raising of Derrick
(11) Crown Saver Checked
(12) Hoist Line Checked

DATE: 23-Sep-2004
RIG NO.: 620 E
FUEL: 0 litres
RIG: 22967 BOILER

LAST CASING TALLY OF PIPE

	DRILL STRING	CASING	LINER	TUBING
SIZE				
GRADE				
WEIGHT				
THREAD				
NO. OF JOINTS				
TOTAL PIPE LENGTH				
PIPE TALLIED TO DRILL DEPTH (m)				
SET AT (m)				

WEATHER: CLEAR (A) CONDITION; WIND DIRECTION; ADNO

	DRILL STRING	CASING	LINER	TUBING
DRILL PIPE SIZE (mm)				
LINEAR MASS (kg/m)				
GRADE				
WALL THICKNESS (mm)				
TOOL JOINT O.D. (mm)				
THREAD TYPE				
NO. OF JOINTS				
PUMP TYPE				
PUMP MANUFACTURER				
STROKE LENGTH (mm)				

TIME - HRS

	DRLG	TRIPS	REAM	CORING	CIRC	WOR	SURVEY	WAIT ON CEMENT	RIG REPAIR	CUT DRLG LINE	SLIP DRLG LINE	RIG SERVICE	DRILL STEM TEST	FISHING	OTHER	NPT
MORN	8.00											0.25				0.25
DAY	7.75											0.25				0.25
EVE												0.25				0.25
TOTAL	15.75											0.75				0.75

SHALE SHAKER(S) — RENTALS/SERVICES

NO.	TYPE	MFGR
1	Derrick	
2		

SCREENS CHANGED: YES / NO

	TOP	MIDDLE	BOTTOM

TOTAL

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH

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: I | O | DC | LOC | B | Gage | OC | REASON PULLED | T.F. (hrs)

D.P. | STANDS
D.P. | SINGLES
KELLY/SWIVEL
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. (sec/L); W.L. (cm3); pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN | MUD WT. IN (kg/m³) | MUD WT. OUT (kg/m³) | VISCOSITY OUT (sec/L)

HOURS RUN | SAND CONTENT (%) | CHLORIDES (mg/L) | TEMPERATURE OUT (°C)

HOURS RUN | SOLIDS CONTENT (%) | OIL CONTENT (%) | WATER CONTENT (%)

METERS DRILLED

FROM	TO	M DRLD	ROTATING R.P.M.	WOB (kN)

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

FROM	TO	HRS	ACTIVITY CODE
0:00	0:15	0.25	7
0:15	6:30	6.25	21
6:30	6:00	6.00	1

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

0:00	Rig Service
0:15	Safety Meeting (Installing Prefabs)
6:30	Rig Up Floor Prefabs

NOTES: Engine # 3 22 hrs. Cold start 2 hrs

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
Driller	716-324-181	Bill Mills	8.00	BM	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☑
Floorman	650-713-324	Jaime Collins	8.00	JC	☑
Floorman	652-342-416	Jonathan Greave	8.00	JG	☑
Leaseman	652-860-757	Kyle Hrynw	8.00	KH	☑
Rig Manager	719-408-484	Kevin Vig			☑
Top Drive	838-977-702	Sheldon Langley			☑

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

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH

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: I | O | DC | LOC | B | Gage | OC | REASON PULLED | T.F. (hrs)

D.P. | STANDS
D.P. | SINGLES
KELLY/SWIVEL
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. (sec/L); W.L. (cm3); pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN | MUD WT. IN (kg/m³) | MUD WT. OUT (kg/m³) | VISCOSITY OUT (sec/L)

HOURS RUN | SAND CONTENT (%) | CHLORIDES (mg/L) | TEMPERATURE OUT (°C)

HOURS RUN | SOLIDS CONTENT (%) | OIL CONTENT (%) | WATER CONTENT (%)

METERS DRILLED

FROM	TO	M DRLD	ROTATING R.P.M.	WOB (kN)

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: Wade Goddard

TIME LOG

FROM	TO	HRS	ACTIVITY CODE
6:00	8:15	0.25	7
8:15	11:00	2.76	1
11:00	11:15	0.25	21
11:15	16:00	4.76	22

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

6:00	Rig Service
8:15	Rig Up Drill Floor and Mud Tanks, Spot Cement Bins
11:00	Safety Meeting on Rig Up TopDrive
11:15	Rig Up TopDrive

NOTES: Rig Up TopDrive

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	642-872-848	Murray McBain	12.00	MM	☑
Motorman	730-040-896	Nathan Schwandt	12.00	NS	☑
Floorman	647-452-903	Dave Makowsky	12.00	DM	☑
Floorman	735-714-230	Chanty Vig	12.00	CV	☑
Leaseman	647-247-906	Chris Thompson	12.00	CT	☑
					☐
					☐
					☐
					☐
					☐
					☐

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

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH

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: I | O | DC | LOC | B | Gage | OC | REASON PULLED | T.F. (hrs)

D.P. | STANDS
D.P. | SINGLES
KELLY/SWIVEL
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. (sec/L); W.L. (cm3); pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN | MUD WT. IN (kg/m³) | MUD WT. OUT (kg/m³) | VISCOSITY OUT (sec/L)

HOURS RUN | SAND CONTENT (%) | CHLORIDES (mg/L) | TEMPERATURE OUT (°C)

HOURS RUN | SOLIDS CONTENT (%) | OIL CONTENT (%) | WATER CONTENT (%)

METERS DRILLED

FROM	TO	M DRLD	ROTATING R.P.M.	WOB (kN)

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

FROM	TO	HRS	ACTIVITY CODE
16:00	16:15	0.25	7
16:15	24:00	7.76	22

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

16:00	Rig Service
16:15	Rig Up TopDrive

NOTES

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
Driller	716-324-181	Bill Mills	4.00		☑
Derrickman	629-926-262	Rob Roth	4.00		☑
Motorman	722-572-781	Dwayne Fry	4.00		☑
Floorman	650-713-324	Jaime Collins	4.00		☑
Floorman	652-342-416	Jonathan Greave	4.00		☑
Leaseman	652-860-757	Kyle Hrynw	4.00		☑
					☐
					☐
					☐
					☐
					☐
					☐

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

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

WELL TYPE | RE-ENTRY: YES / NO | KB TO GROUND ELEV
WELL NAME & No.: MC6 South Meager
DATE: 23-Sep-2004
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig
RIG NO.: 620 E
PROVINCE
CAMP: YES / NO
RIG SAFETY DAYS: 1.00

ETS SERIAL NUMBER: PREC620_20040823_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49
LICENCE NO: 3-92-A / 92-J-12
OPERATOR: Western Geopower Corp
SURFACE LOCATION:
SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva
MUD RELEASE:
JOB NO:
AFE:
WELL NAME AND NO.: MCS South Meager
CONTRACTOR: Precision Drilling
UNIQUE ID: 6-1-H / 92-J-12
SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS — DEPT. | S.M.
(1) Daily Visual Ground Inspection
(2) Ground Inspection Weekly (prog. checklist)
(3) H2S Signs Present (if required)
(4) Muffler Lines & Exh. Diverter Pointed
(5) Pole Line Staked
(6) Drill Site Approved
(7) Bi-weekly Inspect BOP, Flowlines & Degasser Lines
(8) Rig Service Hoses and Spools showing completed tests
(9) CA DOC Rig Safety Inspection Checklist (once a year)
(10) Man Instruction Before Raising M / Lowering
(11) Crown Saver Checked
(12) Brake Safe Checked

DATE: 24-Sep-2004
RIG NO: 620 E
FUEL @ ROC: RIG 35096 BOILER

LAST CASING TUBING OR LINER: O.D. (mm) | Wall I.D. (mm) | Weight | Grade | Grade | API BIT DRIFT ? | TOTAL LIN LENGTH | KB TO CSG HEAD (m) | SET AT (m)

WEATHER: TEMPERATURE | DEGREE DIVE | LINEAR MASS (kg/m) | GAUGE | MIN I.D. (mm) | TOOL JT O.D. (mm) | THREAD TYPE | NO. OF JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LTH. (mm)
CURRENT CONDITION
WIND DIRECTION
ROAD

TIME - HRS

	DRLG	RIG SERV	RIG ACTIVITY	REAMING	CORING	CIRC COND	TRIPS	TOT ROTATE	WASH / REAM	SURV	DEV SURV	SAFETY MTG	JAR HRS	PUMP PRESS	PUMP SPM	PUMP NO.	LINER SIZE	HOLE SIZE	ROP	WOB	RPM	DRILL HRS	CUM DRILL HRS	Rig To Spud
WORK								0.25																7.76
DAY	6.00							0.25																7.76
EVE	6.26							0.25															0.25	7.76
TOTAL	0.26							0.75															0.25	13.76

SHALE SHAKER(S) | RENTAL/SERVICES

	TYPE		FROM	INV.	EXT.
NO. 2	Derrick	NEW			
SCREENS CHANGED	YES	NO			
TOP	TOP				
MIDDLE	MIDDLE				
BOTTOM	BOTTOM				

BIT RECORD

NO.	BIT	BIT RUN	LENGTH
1	1A	1	909.6

BIT NO: 1A
SIZE: 909.6
IADC CODE: 4 1 5
MFG: H.C
TYPE: GTX-C03
SERIAL NO.: 6027140
JETS:
DEPTH OUT (m):
DEPTH IN (m):
TOTAL METERS DRILLED (m):
TOTAL HOURS RUN:
CUTTING RECORD: T1 | T2 | WEAR | LOC | B | Gage | ODC | REASON PULLED | TFA (sq. cm)
D.P. | STANDS
D.P. | SINGLES
KELLY DOWN
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. (SEC):
W.L. (cm3):
pH:

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	2 sks
Supercol	56 sks
Soda Ash	2 sks
Milgel	70 sks
Milgel	35 sacks
Supercol	49 sacks

SOLIDS CONTROL: HOURS RUN | MUD CLEANER | CENTRIFUGE | DESANDER | DESILTER | SHALE SHAKER

METERS DRILLED

FROM	TO	BIT RUN	ROTARY HRS	ROTARY R.P.M.	WEIGHT ON BIT (kN)

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (LINER SIZE / SPM) | PUMP NO. 2 (LINER SIZE / SPM)
REDUCED PUMP SPEED:
DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HRS	CODE	Rig To Spud
0:00	0:15	0.25	7	Rig Service
0:15	8:00	7.76	22	(Rig Up Topdrive)

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILL HRS	SLIDE HRS	CIRC HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.D.P.
8.00						

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	629-826-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	650-713-324	Jaime Collins	8.00	JC	☐	☑
Floorman	652-342-416	Jonathan Greeve	8.00	JG	☐	
Leaseman	652-890-757	Kyle Hryniw	8.00	KH	☐	
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑

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	633-626-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-849	Murray McBain	12.00	MM	☐	☑
Motorman	730-040-896	Nathan Schwandt	12.00	NS	☐	☑
Floorman	647-452-903	Dave Makowsky	12.00	DM	☐	☑
Floorman	735-714-230	Chantry Vig	12.00	CV	☐	☑
Leaseman	647-247-006	Chris Thompson	12.00	CT	☐	☑

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	629-826-262	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	650-713-324	Jaime Collins	4.00	JC	☐	☑
Floorman	652-342-416	Jonathan Greeve	4.00	JG	☐	☑
Leaseman	652-890-757	Kyle Hryniw	4.00	KH	☐	☑

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

FROM	TO	BIT RUN	ROTARY HRS	ROTARY R.P.M.	WEIGHT ON BIT (kN)	TIME	CODE	HRS	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
						16:00	16:15	0.26	7 Rig Service
						16:15	20:30	4.25	1 Rig Up Conductor,FlowLine
						20:30	23:45	3.26	22 (Rig To Spud) Strap,OD,ID, D.C. & Subs
						23:45	24:00	0.25	21 Safety Meeting (Rotary Table Danger Zone)

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (LINER SIZE / SPM): 162 | PUMP NO. 2 (LINER SIZE / SPM): 162
REDUCED PUMP SPEED:
DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

NOTES

DRILLER SIGNATURE: Bill Mills

DRILL HRS	SLIDE HRS	CIRC HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.D.P.
4.00						

ETS SERIAL NUMBER: PREC620_20040824_1A

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-09-22 22:49 | RIG RELEASE | JOB NO. | AFE

LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION | 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.)
(1) Daily Walk Around Inspection
(2) Unlocked Inspection (Weekly Survey checklist)
(3) H2S Plans Posted (if required)
(4) Hard Hammer & Black Dragon Posted
(5) Pressure Gauges
(6) BOP Drills Recorded
(7) Visually Inspect BOP / Flowlines & Degasser Lines
(1) Rig Site (Hazard Safety Meeting conversation)
(2) E.R.C.B. Crew Safety Inspection Check (All compliance)
(3) Hard Hammer Before Raising or Lowering
(4) Crown Saver Checked
(5) Weld Kits Checked

DATE: 25-Sep-2004 | RIG NO.: 620 E | FUEL @ 8:00 | RIG: 45641 | BOILER

LAST CASING / TURNS / LINER

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

PREVIOUS BOP TEST: TEMPERATURE | CURRENT CONDITION | WIND DIRECTION | ROAD

DRILL PIPE	LINEAR MASS (kg/m)	GRADE	WALL (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	HOIST TYPE	PUMP MANUFACTURER	LENGTH (m)
							F-1600		
							F-1600		

Chimo Equipment — A Varco Company

Based on the CAODC ETS file standard

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

WELL NAME & No.: MC6 South Meager | DATE: 25-Sep-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

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

PROVINCE: BC | CAMP ☑YES ☐NO | NO. SAFETY DAYS: 3.00

TIME HRS

CREW	NOON TOUR ACTUAL	NOON TOUR CUMM	MIDNIGHT TOUR ACTUAL	MIDNIGHT TOUR CUMM	TRIPS	RIG SERVICE	REAMING TIME	DEV. SURVEY (DRLG)	DRLG. TIME	SLIDE TIME	SLIDE %	REAM (DRLG)	CIRC.	TIME MUD	TIME LOG
MORNING		4.00			1.00	0.25									0.00
DAY		7.00	0.50	0.25											0.25
EVE		0.75	0.75	0.25	0.00	0.25									0.25
TOTAL		0.75	11.00	1.25	0.00	0.75									0.75

SHALE SHAKERS: NO. 3 | TYPE Derrick | NEW ☐YES ☐NO | SCREENS CHANGED | TOP | MIDDLE | BOTTOM

RENTALS/SERVICES: 3.00 | 8.00 | 8.00 | 24.00

BIT RECORD

NO.	RUN	BIT SIZE (mm)	METERS DRILLED	HRS
1	Drl	609.6	0.55	
1	Bit Sub	229	1.01	
1	Crossover Sub	224	1.17	
5	9" Drill Collars	220	46.29	

BIT NO: 1A | SIZE: 609.6 | IADC CODE: 4 1 5 | MFG: H.C | TYPE: GTX-C03 | SERIAL NO: 6027140 | JETS: 28 28 28

DEPTH OUT (m) | DEPTH IN (m): 25.00 | TOTAL METERS DRILLED (m): 28.00 | TOTAL HOURS RUN: 4.00

CUTTING STRUCTURE: 0 | DP | STANDS: 0.00 | 0 | DP | SINGLES: 0.00 | KELLY/SWIVEL: 3.98 | TOTAL: 53.55

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

wt. of DC: 16000.00 | wt. of strings: 40000.00

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED

TIME	04:00	08:30
DENSITY (g/cm3)	1060	1030
FUNNEL VIS. (SEC)	51	57
W.L. (cm3)		
pH	9.5	9.5

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL | HOURS RUN | SHALE SHAKER | CENTRIFUGE | DESANDER / DESILTER

METERS DRILLED

FROM	TO	BIT NO.	WOB (kN)	ROTARY R.P.M.	MOTOR R.P.M.	METERS
25.00	53.00	d	45	3		

CIRCULATION PRESSURE (KPa): 2580

PUMP NO. 1	LINER (MM)	S.P.M.	PUMP NO. 2	LINER (MM)	S.P.M.
	152	80		152	80

REDUCED PUMP SPEED: d | e

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	CREW
0:00	0:15	0.25	21	
0:15	0:30	0.25	7	
0:30	2:30	2.00	23	
2:30	4:00	1.50	6	
4:00	8:00	4.00	3	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Safety Meeting (Prespud)
Rig Service
(Drill Mouse Hole)
Trips (Tagged Sand @ 25m)
Drill Actual

NOTES

DRILLER SIGNATURE: Bill Mills | ROUTE & LEG | OPERATOR FUEL | MAX EXP HOOKLOAD: 45000.00 | 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	☐	☑
Derrickman	629-926-262	Rob Roth	8.00	☐	☑
Motorman	723-572-781	Dwayne Fry	8.00	☐	☑
Floorman	650-713-324	Jaime Collins	8.00	☐	☑
Floorman	652-342-415	Jonathan Greere	8.00	☐	☑
Leaseman	652-890-757	Kyle Hrynie	8.00	☐	☑
Rig Manager	719-409-484	Kevin Vig		☐	☑
Top Drive	638-977-792	Sheldon Langley		☐	☑

RATE SCHEDULE: ☑ROAM,etc ☐Alpha ☐Imperial | DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR

BIT RECORD

NO.	RUN	BIT SIZE (mm)	METERS DRILLED	HRS
1	bit	609.6	0.55	
1	Bit Sub	229	1.01	
1	Crossover Sub	224	1.17	
10	9" Drill Collars	220	93.14	

BIT NO: 1A | SIZE: 609.6 | IADC CODE: 4 1 5 | MFG: H.C | TYPE: GTX-C03 | SERIAL NO: 6027140 | JETS: 28 28 28

DEPTH OUT (m) | DEPTH IN (m): 25.00 | TOTAL METERS DRILLED (m): 71.60 | TOTAL HOURS RUN: 11.00

CUTTING STRUCTURE: 0 | DP | STANDS: 0.00 | 0 | DP | SINGLES: 0.00 | KELLY/SWIVEL: 0.00 | TOTAL: 96.60

HOLE CONDITION: HOLE DRAG: 0-2 Dan Up/Down | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

wt. of DC: 28000.00 | wt. of strings: 52000.00

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED

TIME	09:00	12:00	15:00
DENSITY (g/cm3)	1056	1080	1090
FUNNEL VIS. (SEC)	56	59	62
W.L. (cm3)			
pH	9.5	9.5	9.5
PVT@			56.3m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Milgel	15 sacks
Supercol	15 sacks
Sawdust	4 sacks

SOLIDS CONTROL | HOURS RUN | SHALE SHAKER | CENTRIFUGE | DESANDER / DESILTER

METERS DRILLED

FROM	TO	BIT NO.	WOB (kN)	ROTARY R.P.M.	MOTOR R.P.M.	METERS
53.00	96.00	R	60	3		

CIRCULATION PRESSURE (KPa): 4500

PUMP NO. 1	LINER (MM)	S.P.M.	PUMP NO. 2	LINER (MM)	S.P.M.
	152	105		152	105

REDUCED PUMP SPEED: a | e

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	CREW
8:00	8:15	0.25	21	
8:15	12:30	4.25	3	
12:30	13:00	0.50	5	
13:00	14:15	1.25	3	
14:15	14:30	0.25	7	
14:30	16:00	1.50	3	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Safety Meeting(Pre-Spud)
Ream fr/53m-84m,and Monitor For Losses
Circulate Hole Clean/Work Pips and Monitor For Losses
Ream fr/84m-90m,and Monitor For Losses
Rig Service
Ream fr/90m-96m

NOTES

DRILLER SIGNATURE: Wade Goddard | ROUTE & LEG | OPERATOR FUEL | MAX EXP HOOKLOAD: 50000.00 Pre-Spud | 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	10.00	WG	☑
Derrickman	642-872-840	Murray McBain	10.00	MM	☑
Motorman	730-040-895	Nathan Schwendt	10.00	NS	☑
Floorman	647-452-903	Dave Makowsky	10.00	DM	☑
Floorman	735-714-230	Chantry Vig	10.00	CV	☑
Leaseman	647-247-006	Chris Thompson	10.00	CT	☑

RATE SCHEDULE: ☑ROAM,etc ☐Alpha ☐Imperial | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

NO.	RUN	BIT SIZE (mm)	METERS DRILLED	HRS
1	bit	609.6	0.55	
1	Bit Sub	229	1.01	
1	Crossover Sub	224	1.17	
10	9" Drill Collars	220	93.14	

BIT NO: 1A | SIZE: 609.6 | IADC CODE: 4 1 5 | MFG: H.C | TYPE: GTX-C03 | SERIAL NO: 6027140 | JETS: 28 28 28

DEPTH OUT (m) | DEPTH IN (m): 25.00 | TOTAL METERS DRILLED (m): 71.60 | TOTAL HOURS RUN: 11.00

CUTTING STRUCTURE: 0 | DP | STANDS: 0.00 | 0 | DP | SINGLES: 0.00 | KELLY/SWIVEL: 0.00 | TOTAL: 96.60

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

wt. of DC: 28000.00 | wt. of strings: 52000.00

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED

TIME		
DENSITY (g/cm3)		
FUNNEL VIS. (SEC)		
W.L. (cm3)		
pH		

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL | HOURS RUN | SHALE SHAKER | CENTRIFUGE | DESANDER / DESILTER

METERS DRILLED

FROM	TO	BIT NO.	WOB (kN)	ROTARY R.P.M.	MOTOR R.P.M.	METERS
96.00	109.00	D	60	4-9		

CIRCULATION PRESSURE (KPa): 4750

PUMP NO. 1	LINER (MM)	S.P.M.	PUMP NO. 2	LINER (MM)	S.P.M.
	152	105		152	105

REDUCED PUMP SPEED: a | e

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	CREW
16:00	16:45	0.75	2	
16:45	17:30	0.75	5	
17:30	19:45	2.25	6	
19:45	20:00	0.25	7	
20:00	20:15	0.25	21	
20:15	21:15	1.00	22	
21:15	24:00	2.75	6	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill fr/96m-109m
Circulate Hole Clean and Work Pipe
Flow Check @ 96m,P.O.O.H.,
Rig Service
Safety Meeting RE. rotary table fatality
Spool excess drill line from drum back to spool
organize tubulars on location & prepare to pick up D.P.

NOTES

DRILLER SIGNATURE: Barry Verheist | ROUTE & LEG | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC: rotary table | M.A.C.P.

EVENING TOUR 16:00 to 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-368-918	Barry Verheist	8.00	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	☐	☑
Floorman	651288474	Chad Buckingham	8.00	☐	☑
Floorman	650-713-324	Jaime Collins	8.00	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	☐	☑

RATE SCHEDULE: ☑ROAM,etc ☐Alpha ☐Imperial | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

ETS SERIAL NUMBER: PREC620_20040825_1A

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-09-22 22:49 | JOB RELEASE | JOB NO.: 21 | AFE

LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager

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) Cycle High Amperd Interlocks
(2) Drills and Inspection Records Being Checked
(3) Hole Begins Posted (if required)
(4) Wash Screens & Shale Shakers Checked
(5) Flare Line Secured
(6) BOP Drills Performed
(7) Weekly Inspect BOP's Flarestack & Diagnostic Lines
(8) Rig Site Hazard and Safety Meeting (Documented)
(9) C.A.O.D.C. Rig Safety Inspection Checklist (Completed)
(10) Fire Inspection Before Raising or Lowering
(11) Crown Saver Checked
(12) Derrick Checked

DATE: 26-Sep-2004 | RIG NO: 620 E | FUEL ON RIG: 41631 BOILER | TEMPERATURE: 10 | CURRENT CONDITION: Cloudy | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TUBING OR LINER

OD (mm)	Unit ID (mm)	wgt.	GRADE	NO. OF JOINTS	TOTAL csg LENGTH	KB TO CSG HEAD (m)	SET AT (m)
						7.32	

DCP SIZE (mm)	HOSE ID (mm)	LENGTH (mm)	LINER	SWAB	TOOL JOINT OD (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH. (mm)
								F-1600	BPMMP	305
								F-1600	BPMMP	305

Chimo Equipment — A Varco Company

CAODC

Based on the CAODC ETS file standard

WELL TYPE: Geothermal | RE-ENTRY: ☐YES ☑NO | KB TO GROUND ELEV.: 7.31

WELL NAME & No.: MC6 South Meager | DATE: 26-Sep-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

TIME - HRS

	OPER	SURV	DRILL	REAMING	CORING	CIRC	TRIPS	BOP DRILL	WASH TO BTM	WASH OUT	LOG	CSG	CMT	WAIT ON CMT	DST	REPAIR	DAILY SERV	RIG UP/ DOWN	TEST BOPE	DIR WORK	WAIT ON WEATHER	OTHER
MORN			2.90	1.60			4.00	0.25														
DAY			2.25	3.00	0.25					0.25												
EVE			0.50	5.75	0.25							1.50										
TOTAL		4.25	1.50		2.75	12.75	0.75			0.25		1.50										0.25

SHALE SHAKER(S)

NO.	TYPE	Derrick / NEW
	SCREEN MESH CHANGED	☐YES ☑NO
8.00	TOP	50 TOP 50
8.00	MIDDLE	50 MIDDLE 50
24.00	BOTTOM	50 BOTTOM 50

RENTAL SERVICES

BIT RECORD

	BIT	SIZE (mm)	DEPTH OUT (m)	METRES DRILLED	HOURS ON BIT
1	bit	609.6		0.55	
1	Rotary Hole Opener	240		2.15	
1	9" Drill Collars	220		9.27	
1	String Stabilizer	240		2.13	
1	Shock Sub	240		2.91	
9	9" Drill Collars	220		83.87	
1	Crossover Sub	224		1.17	
0	D/P	STANDS	0.00		
0	D/P	SINGLES	0.00		
	KELLY DOWN		0.00		
	TOTAL		102.00		

BIT RECORD

	BIT	SIZE (mm)	DEPTH OUT (m)	METRES DRILLED	HOURS ON BIT
1	bit	609.6		0.55	
1	Rotary Hole Opener	240		2.15	
1	9" Drill Collars	220		9.27	
1	String Stabilizer	240		2.13	
1	Shock Sub	240		2.91	
10	9" Drill Collars	220		93.18	
1	Crossover Sub	224		1.17	
1	7" Drill Collars	171		8.81	
0	D/P	STANDS	0.00		
0	D/P	SINGLES	0.00		
	KELLY DOWN		0.00		
	TOTAL		127.00		

BIT RECORD

	BIT	SIZE (mm)	DEPTH OUT (m)	METRES DRILLED	HOURS ON BIT
1	bit	609.6		0.55	
1	BK Sub	229		1.01	
11	7" Drill Collars	220		102.45	
1	Crossover Sub	224		1.17	
1	7" Drill Collars	171		8.81	
0	D/P	STANDS	0.00		
0	D/P	SINGLES	0.00		
	KELLY DOWN		0.00		
	TOTAL		127.00		

MUD RECORD

BIT NO	1A
SIZE	609.6
IADC CODE	4 1 5
MFG	H.C
TYPE	GTX-C03
SERIAL NO	6027140
JETS	222 | 222 | 222
DEPTH OUT (m)	
DEPTH IN (m)	26.00
TOTAL METERS DRILLED (m)	85.00
TOTAL HOURS RUN	13.00
CUTTING STRUCTURE	T1 | T2 | WEAR | LOC
	B | Gage | OTHER | REASON PULLED

HOLE CONDITION: HOLE DRAG: 0-3 Dan Up/Down | TORQUE AT BOTTOM | FILL ON BOTTOM (m): 3.00

WT. OF DC | WT. OF STRING: 52000.00

MUD RECORD

MUD TYPE: ☑WATER BASED ☐OIL BASED	
TIME	08:00
DENSITY (kg/m3)	1060
FUNNEL VIS. (sec)	73
W.L. (cm3)	
pH	
PV/YP	62.8/m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Milgel	35 sacks
Superdrl	35 sacks

SOLIDS CONTROL: HOURS RUN | SHALE SHAKER | DESANDER | DESILTER

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)
100.00	110.00	D	50	6-12

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

4750 | 152 | 105 | 152 | 105

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

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
0:15	0:30	0.25	21	Safety Meeting
0:30	4:30	4.00	6	P/U and Install Split Master Bushings,P/U and M/U New B.H.A. and R.I.H.,LayOut 2 - 9 " D.C.'s
4:30	5:00	1.50	3	Wash and Ream fr81m to Btm., 3m Hard Fill
5:00	6:00	2.80	2	Drill fr190m-110m

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
0.00	58000.00	Handling B.H.A.	

MORNING TOUR 0:00 TO 8:00

CREW	BOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	8.00	WG	☐	☑
Derrickman	642-672-840	Murray McBain	8.00	MM	☐	☑
Motorman	730-040-896	Nathan Schwandt	8.00	NS	☐	☑
Floorman	647-089-432	Jamie Joyce (Des. Driller)	8.00		☐	☑
Floorman	732-808-483	Dune Malmberg	8.00	DM	☐	☑
Leaseman	647-247-006	Chris Thompson	8.00	CT	☐	☑
Rig Manager	719-409-464	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

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

MUD RECORD

MUD TYPE: ☑WATER BASED ☐OIL BASED	
TIME	08:00 / 12:00
DENSITY (kg/m3)	1075 / 1080
FUNNEL VIS. (sec)	60 / 57
W.L. (cm3)	
pH	9.0 / 9.0
PV/YP	101.5m3 / 97.4m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Causticsoda	1 sx.
Milgel	16 sx.
Superdrl	16 sx.

SOLIDS CONTROL: HOURS RUN | SHALE SHAKER | DESANDER | DESILTER

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)
110.00	127.00	d	50/60	1-15

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

1700 | 152 | 105 | 152 | 105

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
117.00	1	

DRILLER SIGNATURE: Barry Verheist

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	0.25	2	Drill fr. 110m - 111m
8:15	8:45	0.50	5	Condition Mud & Circ.
8:45	10:15	1.50	2	Drill fr. 111m - 126m
10:15	10:45	0.50	5	Condition Mud & Circ.
10:45	11:15	0.50	2	Drill fr. 126m - 127m
11:15	12:30	1.25	5	Condition Mud & Circ.
12:30	12:45	0.25	7	Rig Service
12:45	13:00	0.25	10	Deviation Survey
13:00	16:00	3.00	6	Hoist bit, lay down stabs & 8. sub, flow check @ 117, 60 & 0m

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
0.00	64.00	W/L surveys	

DAY TOUR 8:00 TO 16:00

CREW	BOC. 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	651288474	Chad Buckingham	12.00	CB	☐	☑
Floorman	650-713-324	Jaime Collins	12.00	JC	☐	☑
Leaseman	713-959-461	Gary Kennedy	12.00	GK	☐	☑

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

MUD RECORD

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

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL: HOURS RUN | SHALE SHAKER | DESANDER | DESILTER

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)
127.00				

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

4600 | 152 | 105 | 152 | 105

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE: Wade Goddard

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	20:00	4.00	6	Handle B.H.A. equipment, R.I.H., 0m Fill
20:00	20:30	0.50	5	Circulate Hole Clean and Work Pipe
20:30	20:45	0.25	7	Rig Service
20:45	22:30	1.75	6	Flow Check,P.O.O.H. to Run Casing
22:30	24:00	1.50	12	Rig to Run Casing

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
0.00	58000.00		

EVENING TOUR 16:00 TO 24:00

CREW	BOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	4.00	WG	☐	☑
Derrickman	642-672-840	Murray McBain	4.00	MM	☐	☑
Motorman	730-040-896	Nathan Schwandt	4.00	NS	☐	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	4.00		☐	☑
Floorman	732-808-483	Dune Malmberg	4.00	DM	☐	☑
Leaseman	647-247-006	Chris Thompson	4.00	CT	☐	☑

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

ETS SERIAL NUMBER: PREC620_20040826_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49	SPD RELEASE	JOB NO.	AFE
LICENCE NO.: a-92-A / 92-J-12	WELL NAME AND NO.: MC6 South Meager		
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 — OVR / S.M.

(1) Daily Walk Around/Inspection
(2) Detailed Inspection-Monthly Lsg (Indicate)
(3) BOP Drills Performed (if required)
(4) Well Latched & Slack Adjuster Pinned
(5) Fast-Line Sheave
(6) BOP Drills Performed
(7) Tri-weekly Inspect BOP's Flowlines & Degasser Lines
(8) Rig Site Health and Safety Meeting (Log Entry/Handout)
(9) C.A.O.D.C. Rig Weekly Inspection (Checklist Completed)
(10) Weekly Inspection Safety Equip. (Logging)
(11) Crown Board Checked
(12) Water Hole Checked

DATE	27-Sep-2004
RIG NO.	520 E
RIG	38461 BOILER
TEMPERATURE	8
CURRENT CONDITION	Clear
DIRECTION	Calm
ROAD	Good

LAST CASING TUB SIZE ON JOB: 7.32

	O.D. (mm)	Wall Th (mm)	Lgth	Wt/Ft	Grade	No. of Joints	Total Lng Length	KB To Csg Head (m)	Ref. at (m)			
								7.32				

WEATHER	Description (mm)	Unique Name (type)	Grade	Min. ID (mm)	Hole/Csg O.D. (mm)	Thread (Typ)	No. Of Joints	Pump Type	Pump Manufacturer	Stroke Length (mm)
								F-1600		
								F-1600		

TIME BREAKDOWN

TOUR	DRLG ACTUAL	REAMING	CORING	CIRC	COND MUD & CIRC	TRIPS	RIG SERVICE	SURVEY	WAIT ON CEMENT	TEST BOP	TEST CSG	SLIP CUT DRLG LINE	REPAIR RIG	OTHER	SAFETY MTG
MORN				1.25		6.00									0.50
DAY						1.25	0.50								
EVE							0.25								
TOTAL				1.25		7.25	0.75								0.50

SHALE SHAKER(S) / RENTALS / SERVICES

					QTY	SIZE	SVC
	NO. 2	TYPE Derrick	HRS				
SCREENS CHANGED		YES / NO					
TOP	80	TOP	80				
MIDDLE	80	MIDDLE	80				
BOTTOM	80	BOTTOM	80				

WELL TYPE	RE-ENTRY ☐ YES ☑ NO
WELL NAME & No.	MC6 South Meager
DATE	27-Sep-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	520 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	5.00

BIT RECORD / MUD RECORD

BIT NO. | SIZE | IADC CODE | MFG. | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METRES DRILLED (m) | TOTAL HOURS RUN | D.C. STANDS | D.P. STANDS | KELLY DOWN | TOTAL | No.1 DC | WT. OF STRING

CUTTING STRUCTURE: I1 | I2 | MDC | LOC | B | Gage | ODC | REASON PULLED | T.D. Date | Time

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

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

MUD MATERIAL ADDED: PRODUCT | AMOUNT x UNIT

SOLIDS CONTROL: HOURS RUN | DRILLING (hours) | CIRCULATING (hours) | TRIPPING (hours)

MORNING TOUR

METERS DRILLED

FROM	TO	No. 1 Pump SPM	No. 2 Pump SPM	ROTARY RPM	Off Bottom RPM
127.00					

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

276	152	60	152

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Time (hrs)	Time (dec)	Code	Activity
0:00	1:00	1.00	12		Rig to Run Casing
1:00	1:15	0.25	7		Rig Service
1:15	1:30	0.25	21		Safety Meeting
1:30	6:00	4.50	12		Run Casing
6:00	7:15	1.25	5		Circulate and Work Casing
7:15	7:30	0.25	21		Safety Meeting
7:30	8:00	0.50	12		Rig to and Cement w/Halliburton

NOTES

DRILLER SIGNATURE: Wade Goddard

MUD WT. (kg/m³)	VIS (s/L)	BOTTOM TEMP	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
0.00					Running Casing	

NORNING TOUR 8:00 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	730-040-896	Nathan Schwandt	8.00	NS	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	8.00	JJ	☑
Floorman	732-908-483	Dune Malmberg	8.00	DM	☑
Leaseman	647-247-006	Chris Thompson	8.00	CT	☑
Rig Manager	719-469-484	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

METERS DRILLED

FROM	TO	No. 1 Pump SPM	No. 2 Pump SPM	ROTARY RPM	Off Bottom RPM
127.00					

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

152		162	

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Time (hrs)	Time (dec)	Code	Activity
8:00	9:15	1.25	12		Cement casing
9:15	15:45	6.50	13		Wait on Cement
15:45	16:00	0.25	7		Rig Service

NOTES

DRILLER SIGNATURE: Barry Verheist

MUD WT. (kg/m³)	VIS (s/L)	BOTTOM TEMP	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
0.00					cementing	

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	647-452-993	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	651288474	Chad Buckingham	12.00	CB	☑
Floorman	650-713-324	Jaime Collins	12.00	JC	☑
Leaseman	713-868-461	Gary Kennedy	12.00	GK	☑

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

EVENING TOUR

METERS DRILLED

FROM	TO	No. 1 Pump SPM	No. 2 Pump SPM	ROTARY RPM	Off Bottom RPM
127.00					

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

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Time (hrs)	Time (dec)	Code	Activity
16:00	23:45	7.75	13		Wait on Cement
23:45	24:00	0.25	7		Rig Service

NOTES

DRILLER SIGNATURE: Wade Goddard

MUD WT. (kg/m³)	VIS (s/L)	BOTTOM TEMP	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
0.00						

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	642-872-840	Murray McBain	4.00	MM	☑
Motorman	730-040-896	Nathan Schwandt	4.00	NS	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	4.00	JJ	☑
Floorman	732-908-483	Dune Malmberg	4.00	DM	☑
Leaseman	647-247-006	Chris Thompson	4.00	CT	☑

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

ETS SERIAL NUMBER: PREC620 _20040927_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
(A Varco Company)

Based on the CAODC ETS file standard

AFE/D: 2004-09-22 22:49	RIG RELEASE	JOB NO.	AFE
LICENCE NO.: a-92-A / 92-J-12	WELL NAME AND NO.: MC6 South Meager		
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 (O/R, B.M.)
(1) Daily/Web Antura Inspection
(2) Derrick Inspection (Weekly/Monthly certificate)
(3) H2S Equip Tested (if required)
(4) Well Licence & BOP Diagram Posted
(5) Kelly Cock Checked
(6) BOP Drills Performed
(7) Visually Inspect BOP's Flowback, & Diagram Lines
(8) Rig Site Health and Safety Meeting (documentation)
(9) CAODC Rig Safety Inspector Checklist (posting/record)
(10) Pre-Inspection Before Rigging-up (servicing)
(11) Crown Block Checked
(12) Water Tank Checked

DATE: 28-Sep-2004
RIG NO.: 620 E
FUEL: 22.0
RIG: 53213 | BOILER

SURVEYS: TEMPERATURE; CURRENT CONDITION; DIRECTION; ROAD

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	CONN	TOP	BOTTOM
SURFACE CASING						
OTHER CASING						
OTHER CASING OR LINER						

	OUT (mm)	WEAR	NOZZLES	GRADE	NO. OF JOINTS	TOTAL BHA LENGTH	RB TO CSG FLANGE	WT AT RB
							7.92	
							5.31	

	HOOK LOAD	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN. (mm)
				F-1600	BPMMP	305
				F-1600	BPMMP	305

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.P.	D.P.	KELLY/DRM	TOTAL	WT. OF DC	WT. OF STRING
											STANDS	SINGLES				

CUTTING STRUCTURE: T1 | T2 | WEAR | LOC | B | Gage | OTHER | REASON PULLED | TOTAL TFA

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/L	W.L. (cm3)	pH

MUD MATERIAL ADDED: PRODUCT | AMOUNT + UNIT

SOLIDS CONTROL: HOURS RUN | SHAKER SCREEN SIZE | DESANDER CONES (qty) | DESILTER CONES (qty)

METERS DRILLED

FROM	TO	BIT WT. (kN)	ROTARY R.P.M.	MTR WT. (kN)	MTR R.P.M.
127.00					

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (LINER SIZE mm / SPM) | PUMP NO. 2 (LINER SIZE mm / SPM)

REDUCED PUMP SPEED

DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

DRILLER SIGNATURE

TIME LOG

FROM	TO	HRS	CODE
6:00	7:45	1.75	13
7:45	8:00	0.25	7

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
6:00	7:45	1.75	13	Wait on Cement
7:45	8:00	0.25	7	Rig Service

NOTES

DRILLING TIME (hrs)	ROTATING (hrs)	ATTEMPTED TRIPPING (hrs)	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
0.00						

SHALE SHAKER(S)

NO.	TYPE	NEW
1	Derrick	YES / NO

SCREENING CHANGED: TIER / TOP / MIDDLE / BOTTOM

RENTALS/SERVICES

	MONTH	DAY	EVE

MORNING TOUR 0:00 TO 6:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	6.00	WG	☑
Derrickman	642-872-840	Murray McBain	6.00	MM	☑
Motorman	736-040-896	Nathan Schwandt	6.00	NS	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	6.00	JJ	☑
Floorman	732-808-483	Dune Malmberg	6.00	DM	☑
Leaseman	647-247-006	Chris Thompson	6.00	CT	☑
Rig Manager	719-409-464	Kevin Vig		KV	☑
Top Drive	638-977-732	Sheldon Langley		SL	☑

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

DAY TOUR 6:00 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	736-714-230	Chantry Vig	12.00	CV	☑
Floorman	651288474	Chad Buckingham	12.00	CB	☑
Floorman	650-713-324	Jaime Collins	12.00	JC	☑
Leaseman	713-959-461	Gary Kennedy	12.00	GK	☑

FROM	TO	BIT WT. (kN)	ROTARY R.P.M.	MTR WT. (kN)	MTR R.P.M.
127.00					

FROM	TO	HRS	CODE	DETAILS
6:00	9:30	3.50	22	Cut conductor barrel & casing
9:30	10:45	1.25	12	Tag cement w/1" steel pipe in annulus @ 25.6m
10:45	15:45	5.00	23	(weld cag bwl)prepare & weld cag bowl to casing
15:45	16:00	0.25	7	Rig Service

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (LINER SIZE 152 mm / SPM) | PUMP NO. 2 (LINER SIZE 152 mm / SPM)

REDUCED PUMP SPEED

DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verheist

DRILLING TIME (hrs)	ROTATING (hrs)	ATTEMPTED TRIPPING (hrs)	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
0.00					nipple up	

RATE SCHEDULE: REGULAR / REPAIR / MAINT.
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	642-872-840	Murray McBain	4.00	MM	☑
Motorman	736-040-896	Nathan Schwandt	4.00	NS	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	4.00	JJ	☑
Floorman	732-808-483	Dune Malmberg	4.00	DM	☑
Leaseman	647-247-006	Chris Thompson	4.00	CT	☑

FROM	TO	BIT WT. (kN)	ROTARY R.P.M.	MTR WT. (kN)	MTR R.P.M.
127.00					

FROM	TO	HRS	CODE	DETAILS
16:00	19:30	3.50	23	Weld casing bowl on casing
19:30	19:45	0.25	7	Rig Service
19:45	20:00	0.25	21	Safety Meeting
20:00	24:00	4.00	14	Nipple Up B.O.P.'s

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (LINER SIZE 152 mm / SPM) | PUMP NO. 2 (LINER SIZE 152 mm / SPM)

REDUCED PUMP SPEED

DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

DRILLING TIME (hrs)	ROTATING (hrs)	ATTEMPTED TRIPPING (hrs)	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
0.00					Nipple Up B.O.P.'s	

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

WELL TYPE	RE-ENTRY	RIG TO GROUND ELEV.
	YES / NO	

WELL NAME & NO.	DATE
MC6 South Meager	28-Sep-2004

OPERATOR	CONTRACTOR
Western Geopower Corp	Precision Drilling

RIG MANAGER	RIG NO.
Kevin Vig	620 E

PROVINCE	CAMP	RIG SAFETY DAYS
BC	YES / NO	6.00

ETS SERIAL NUMBER: PREC620 _20040828_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49	RIG RELEASE	JOB NO.: 21	AFE
LICENCE NO.: a-92-A / 92-J-12	WELL NAME AND NO.: MC6 South Meager		
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		SIGNATURE OF CONTRACTOR'S REPRESENTATIVE	

DAILY CHECKS — OPR / S.M.

DATE: 29-Sep-2004
RIG NO.: 620 E
FUEL ON HAND
RIG: 51554 BOILER
TEMPERATURE: ?
WEATHER — CURRENT CONDITION: Clear; WIND DIRECTION: Calm; ROAD: Good

HOLE	CASING TUBING OR LINER	O.D. (mm)	SPK I.D. (mm)	wgt/m	GRADE	GR/CPL	NO. OF JOINTS	RATED TOP THREAD (m)	KB TO CSG HEAD (m)	SET AT (m)
									7.32	
									6.31	

PUMP	PUMP TYPE	PUMP MANUFACTURER	LINER (LN) (mm)
1	F-1600	BPMMP	305
2	F-1600	BPMMP	308

TIME - HRS

TOUR	DRILL	CIRC	REAMING	CUT DRLG	TRIPS	SURV	RIG SERV	WOC	REPAIR	DEV	OTHER	TOTAL HRS
MORN					0.85						7.15	8.00
DAY					0.25						9.75	10.00
EVE					1.25	0.25					3.00	3.50
TOTAL					1.25	0.75					14.90	21.50

SHALE SHAKER(S) — RENTALS SERVICES

NO.	TYPE	NEW
1	Derrick	YES / NO

	SCREEN SIZE (mesh)	NEW	USED	HRS
1	84			8.00
2	80			8.00
3	80			8.00
4	80			24.00

	MESH	BRT	EFF
TOP	80		
MIDDLE	80		
BOTTOM	80		

WELL TYPE: Geothermal — RE-ENTRY: YES / NO — KB TO GROUND ELEV.: 7.32
WELL NAME & NO.: MC6 South Meager — DATE: 29-Sep-2004
OPERATOR: Western Geopower Corp — CONTRACTOR: Precision Drilling
RIG MANAGER — RIG NO.: 620 E
PROVINCE: BC — CAMP: YES / NO — RIG SAFETY DAYS: 7.00

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

MUD RECORD — MUD TYPE: WATER BASED / OIL BASED

TIME	DENSITY (g/cm³)	FUNNEL VIS. (SEC.)	W.L. (cm3)	pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT / UNIT

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN SIZE	DESANDER CONE SIZE	DESILTER CONE SIZE

METERS DRILLED

FROM	TO	BIT WT. (kN)	ROTARY R.P.M.	HRS	M/HR
				0.00	7.46	7.78	14
				7.46	8.00	0.26	7

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

PUMP NO. 1	S.P.M.	PUMP NO. 2	S.P.M.
152		152	

REDUCED PUMP SPEED: @ / @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG — DETAILS OF OPERATIONS, SEQUENCE AND REMARKS

HRS	M/HR	CODE	DETAILS
0.00	7.46	7.78	14	Nipple Up B.O.P.'s
7.46	8.00	0.26	7	Rig Service

NOTES: Engine #2 + 34 hrs.

DRILLER SIGNATURE: Wade Goddard — BOILER CLOCK: HRS RUN 0.00 — OPERATOR FUEL — MAX EXP HOOKLOAD — SAFETY TOPIC — M.A.C.P.

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	8.00	WG	☑
Derrickman	642-872-648	Murray McBain	8.00	MM	☑
Motorman	730-040-896	Nathan Schwandt	8.00	NS	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	8.00	JJ	☑
Floorman	732-868-483	Dune Malmberg	8.00	DM	☑
Leaseman	647-247-096	Chris Thompson	8.00	CT	☑
Rig Manager	719-409-464	Kevin Vig		KV	☑
Top Drive	638-877-702	Sheldon Langley		SL	☑

RATE SCHEDULE: STANDARD / METHOD / MANUAL — 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

MUD RECORD — MUD TYPE: WATER BASED / OIL BASED

TIME	DENSITY (g/cm³)	FUNNEL VIS. (SEC.)	W.L. (cm3)	pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT / UNIT

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN SIZE	DESANDER CONE SIZE	DESILTER CONE SIZE

METERS DRILLED

FROM	TO	BIT WT. (kN)	ROTARY R.P.M.	HRS	M/HR
127.90				8.00	11.48	3.76	16
				11.48	12.00	0.25	7
				12.00	12.15	0.25	21
				12.15	16.00	3.75	15

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

PUMP NO. 1	S.P.M.	PUMP NO. 2	S.P.M.
152		152	

REDUCED PUMP SPEED: @ / @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG — DETAILS OF OPERATIONS, SEQUENCE AND REMARKS

HRS	M/HR	CODE	DETAILS
8.00	11.48	3.76	16	Nipple Up B.O.P.
11.48	12.00	0.25	7	Rig Service
12.00	12.15	0.25	21	Safety Meeting
12.15	16.00	3.75	15	Test B.O.P., All tests @ 5500 KPa for 10 min. Tested manifold valves, blind rams, pipe rams, inner & outer kill lines, upper kelly cock, bowl & casing.

NOTES: FIT 0.000 g/cm³

DRILLER SIGNATURE: Barry Verheist — BOILER CLOCK: HRS RUN 0.00 — OPERATOR FUEL — MAX EXP HOOKLOAD — SAFETY TOPIC: pressure test — M.A.C.P.

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verheist	12.00	BV	☑
Derrickman	647-452-993	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	851288474	Chad Buckingham	12.00	CB	☑
Floorman	650-713-324	Jaime Collins	12.00	JC	☑
Leaseman	713-858-461	Gary Kennedy	12.00	GK	☑

RATE SCHEDULE: STANDARD / METHOD / MANUAL — 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
2	444.5		H.C.	GTX-CG1	T746155	0 P E N				

MUD RECORD — MUD TYPE: WATER BASED / OIL BASED

TIME	DENSITY (g/cm³)	FUNNEL VIS. (SEC.)	W.L. (cm3)	pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT / UNIT

SOLIDS CONTROL

HOURS RUN	SHAKER SCREEN SIZE	DESANDER CONE SIZE	DESILTER CONE SIZE

METERS DRILLED

FROM	TO	BIT WT. (kN)	ROTARY R.P.M.	HRS	M/HR
127.90				16:00	19:30	3.50	16
				19:30	19:45	0.25	7
				19:45	22:45	3.00	14
				22:45	24:00	1.25	6

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

PUMP NO. 1	S.P.M.	PUMP NO. 2	S.P.M.
152		152	

REDUCED PUMP SPEED: @ / @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG — DETAILS OF OPERATIONS, SEQUENCE AND REMARKS

HRS	M/HR	CODE	DETAILS
16:00	19:30	3.50	16	Continue testing B.O.P. All tests 5500 KPa for 10 min.. Tested pipe rams, upper kelly cock & annuler.
19:30	19:45	0.25	7	Rig Service
19:45	22:45	3.00	14	Rig Up Flow Nipple, Flow Line and Catch Pans
22:45	24:00	1.25	6	M/U Bit#2,B.H.A., RIH

NOTES

DRILLER SIGNATURE: Wade Goddard — BOILER CLOCK: HRS RUN 0.00 — OPERATOR FUEL — MAX EXP HOOKLOAD — SAFETY TOPIC — M.A.C.P.

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	4.00	WG	☑
Derrickman	642-872-648	Murray McBain	4.00	MM	☑
Motorman	730-040-896	Nathan Schwandt	4.00	NS	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	4.00	JJ	☑
Floorman	732-868-483	Dune Malmberg	4.00	DM	☑
Leaseman	647-247-096	Chris Thompson	4.00	CT	☑

RATE SCHEDULE: STANDARD / METHOD / MANUAL — DRIVER A — CREW SAFETY DAYS — DRIVER B

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49	RIG RELEASE:	JOB NO: 21	AFE:
LICENCE NO: a-92-A / 92-J-12	WELL NAME AND NO: MC6 South Meager		
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:		SIGNATURE OF CONTRACTORS REPRESENTATIVE:	

WELL TYPE	Geothermal
RE-ENTRY	☐ YES ☑ NO
KB TO GROUND ELEV.	7.32
WELL NAME & NO.	MC6 South Meager
DATE	30-Sep-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	8.00

DATE	30-Sep-2004
RIG NO	620 E
FUEL (L) RIG	49410
BOILER	
TEMPERATURE	6
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Good

Daily checks: OPR ☑, R.M ☑ (items 1–12 checked)

KB to CF	
	7.32
	6.31

Pump type	Pump manufacturer	Stroke
F-1600	BPMMP	305
F-1600	BPMMP	305

Time - Hrs

MORN	1.00	3.75		0.75	0.75	0.25	1.25	0.25
DAY	1.00			2.75	2.75	0.25	0.25	
EVE	2.00	1.00			4.75	0.25		
TOTAL	4.00	4.75		4.50	5.25	0.75	1.25	0.25

Shale Shaker(s)

NO.	2	TYPE	Derrick	NEW
SCREENS CHANGED	☐ YES ☑ NO			
TOP	80	TOP	80	8.00
MIDDLE	80	MIDDLE	80	8.00
BOTTOM	80	BOTTOM	80	8.00
TOTALS				24.00

MORNING TOUR 0:00 TO 8:00

Drill string

NO.	ITEM	O.D. (mm)	LENGTH
1	Bit	444.5	0.40
1	Bit Sub	229	1.01
1	Shock Sub	240	2.91
8	8" Drill Collars	220	74.46
1	Crossover Sub	224	1.17
1	7" Drill Collars	171	8.81
1	D.P.	stands	26.10
2	D.P.	singles	18.96
	KELLYDOWN		0.90
	TOTAL		135.00
	WT. OF BC		
	WT. OF STRING		48000.00

Bit Record

BIT NO	2
SIZE	444.5
IADC CODE	
MFG	H.C.
TYPE	GTX-CG1
SERIAL NO.	T74G155
JETS	O P E N
DEPTH OUT (m)	
DEPTH IN (m)	127.00
TOTAL METERS DRILLED	8.00
TOTAL HOURS RUN	1.00
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE	☑ Water Based ☐ Oil Based
TIME	05:00
DENSITY	1070
FUNNEL VIS.	45
W.L. (cm3)	
pH	11.0
PVT@	94.8 m3

MUD MATERIAL ADDED: PRODUCT	AMOUNT x UNIT
Sodium Bicarbonate	20 sacks
Citric Acid	9 sacks

Meters Drilled

FROM	TO	WOB	ROTARY R.P.M.	
127.00	135.00	D	60	4

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.
2600	152	80	152	80

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
0:00	0:45	0.75	6	RIH w/Bit #2
0:45	1:00	0.25	5	Circulate and Displace to Mud @ 90m
1:00	3:45	2.75	3	Tag Cement and Drill fr/99m-110m,Tag Float @ 110.25m,Drill Cement fr/110m-122m,Tag Shoe @ 122.75m
3:45	4:15	0.50	5	Circulate Hole Clean and Work Pipe
4:15	4:30	0.25	7	Rig Service
4:30	5:45	1.25	24	Pressure Test Casing to 5000 KpA w/Halliburton for 15 Min.
5:45	6:00	0.25	25	Held B.O.P. Drill w/Crewmember's, Well secure in 110 sec.
6:00	6:30	0.50	3	Drill Shoe @ 122.75m
6:30	7:00	0.50	3	Drill Cement fr/123m-127m
7:00	8:00	1.00	2	Drill fr/127m-135m

NOTES: Function Crown Saver

DRILLER SIGNATURE	BOILER HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	0.00		50000.00	Pressure Test	

Crew

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-626-706	Wade Goddard	8.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	8.00	MM	☐	☑
Motorman	730-040-896	Nathan Schwandt	8.00	NS	☐	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	8.00	JJ	☐	☑
Floorman	732-808-483	Dune Malmberg	8.00	DM	☐	☑
Leaseman	647-247-006	Chris Thompson	8.00	CT	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Down

DAY TOUR 8:00 TO 16:00

Drill string

WT. OF STRING		48000.00

Bit Record

BIT NO	2	3
SIZE	444.5	444.5
IADC CODE		
MFG	H.C.	H.C.
TYPE	GTX-CG1	GTX-28
SERIAL NO.	T74G155	6023875
JETS	O P E N	3 x 24
DEPTH OUT (m)	137.00	
DEPTH IN (m)	127.00	137.00
TOTAL METERS DRILLED	10.00	
TOTAL HOURS RUN	2.00	

Mud Record

MUD TYPE	☑ Water Based ☐ Oil Based	
TIME	09:00	12:00
DENSITY	1070	1070
FUNNEL VIS.	44	55
W.L. (cm3)		
pH	10.8	10.0
PVT@	83.5m3	100.6m3

Meters Drilled

FROM	TO	WOB	ROTARY R.P.M.	
135.00	137.00	D	60	4

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.
700	152	80	152	80

REDUCED PUMP SPEED: 210 @ 80 @ 136.00

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
8:00	9:00	1.00	2	Drill fr. 135m - 137m
9:00	12:45	3.75	5	Condition Mud & Circ.
12:45	13:00	0.25	21	B.O.P. drill w/crew, well secure in 115 sec.
13:00	13:15	0.25	7	Rig Service, F/T pipe rams(10 secs)
13:15	14:45	1.50	6	Hoist bit #2 for B.H.A. change, flow check @ 134,96 & 9m
14:45	16:00	1.25	6	Pick & make up new B.H.A.

DRILLER SIGNATURE	BOILER HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verheist	0.00		50000.00	B.O.P. drill	

Crew

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-388-918	Barry Verheist	12.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☐	☑
Floorman	651288474	Chad Buckingham	12.00	CB	☐	☑
Floorman	650-713-324	Jaime Collins	12.00	JC	☐	☑
Leaseman	713-959-461	Gary Kennedy	12.00	GK	☐	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Down

EVENING TOUR 16:00 TO 24:00

Drill string

NO.	ITEM	O.D. (mm)	LENGTH
1	bit	444.5	0.40
1	Near bit stab	230	1.90
1		230	9.34
1	String stab	236	1.59
1	Shock Sub	240	2.91
1	8" Drill Collars	220	9.27
1	String stab	236	1.61
9	8" Drill Collars	220	83.68
1	9" Jars	234	4.94
1	Crossover Sub	224	1.17
3	7" Drill Collars	171	26.59
0	D.P.	stands	0.00
0	D.P.	singles	0.00
	KELLYDOWN		0.00
	TOTAL		143.67
	WT. OF BC		
	WT. OF STRING		68000.00

Bit Record

BIT NO	3
SIZE	444.5
IADC CODE	
MFG.	H.C.
TYPE	GTX-28
SERIAL NO.	6023875
JETS	3 x 24
DEPTH OUT (m)	
DEPTH IN (m)	137.00
TOTAL METERS DRILLED	15.00
TOTAL HOURS RUN	2.00
HOLE DRAG	0-2 Dan up/down
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE	☑ Water Based ☐ Oil Based
TIME	22:00
DENSITY	1085
FUNNEL VIS.	68
W.L. (cm3)	
pH	10.5
PVT@	100 m3

Solids control: Hours run 2.00, 1085

Meters Drilled

FROM	TO	WOB	ROTARY R.P.M.	
136.00	152.00	D	60	18-22

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.
5000	152	80	152	80

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
16:00	20:45	4.75	6	Pick & make up new B.H.A., RIH
20:45	21:45	1.00	3	Wash and Ream fr/125m to Btm.
21:45	23:45	2.00	2	Drill fr/137m-152m
23:45	24:00	0.25	7	Rig Service

NOTES: Function Crown Saver

DRILLER SIGNATURE	BOILER HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	0.00		60000.00		

Crew

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-626-706	Wade Goddard	4.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	4.00	MM	☐	☑
Motorman	730-040-896	Nathan Schwandt	4.00	NS	☐	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	4.00	JJ	☐	☑
Floorman	732-808-483	Dune Malmberg	4.00	DM	☐	☑
Leaseman	647-247-006	Chris Thompson	4.00	CT	☐	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Down

ETS SERIAL NUMBER: PREC620 _20040930_1A

CHIMO ETS SOFTWARE VERSION:

CAODC | Chimo Equipment | A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-09-22 22:49
LICENCE NO	a-82-A / 92-J-12
OPERATOR	Western Geopower Corp.
SURFACE LOCATION	a-82-A / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
RIG RELEASE	
WELL NAME AND NO.	MC6 South Meager
JOB NO.	21
AFE	
CONTRACTOR	Precision Drilling
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig

DATE	01-Oct-2004
RIG NO.	620 E
FUEL @ 6:00	59737
TEMPERATURE	5
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Good

KB TO GRD HEAD (m)	
7.32	
6.31	

PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
F-1600	BPMMP	305
F-1600	BPMMP	305

WELL TYPE	Geothermal
RE-ENTRY	☐ YES ☑ NO
KB TO GROUND ELEV	7.32
WELL NAME & No	MC6 South Meager
DATE	01-Oct-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	9.00

TIME - HRS

OPER																				
MORN		7.06			0.50		0.25				0.25									
DAY		1.74			0.25	4.75	0.25													
EVE						1.25	0.25						5.75			6.60			0.25	
TOTAL		8.75			0.75	7.00	0.76				0.25		6.75			0.58			0.25	

SHALE SHAKER(S)

NO 2	TYPE Derrick	NEW		
8.00	SCREENS CHANGED	☐ YES	☑ NO	
8.00	TOP	80	TOP	80
8.00	MIDDLE	80	MIDDLE	80
24.00	BOTTOM	80	BOTTOM	80

RENTALS/SERVICES

MORNING TOUR (0:00 TO 8:00)

BHA

NO.		LENGTH	
1	bit	444.5	0.40
1	Near bit stab	230	1.90
1		230	9.34
1	String stab	238	1.59
1	Shock Sub	240	2.91
1	Drill Collars	220	9.27
1	String stab	236	1.81
9	Drill Collars	220	83.66
1	9" Jars	234	4.94
1	Crossover Sub	224	1.17
3	Drill Collars	171	26.68
0	D.P.	STANDS	0.00
0	D.P.	SINGLES	0.00
	KELLY DOWN		0.00
	TOTAL		159.00
WT. OF DC			
WT. OF STRING			80000.00

BIT RECORD

BIT NO.	3
SIZE	444.5
IADC CODE	5 1 5
MFG	H.C.
TYPE	GTX-20
SERIAL NO.	6023675
JETS	3 x 1
DEPTH OUT (m)	
DEPTH IN (m)	137.00
TOTAL METERS DRILLED	62.00
TOTAL HOURS RUN	9.00
HOLE DRAG	0-2 dan Up/Down
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

TIME	02:00	04:00	06:00
DENSITY	1075	1070	1080
FUNNEL VIS	60	48	50
W.L. (cm3)			
pH	9.0	9.0	9.5
PVT@	111.4 m3	113.0 m3	110.5 m3

PRODUCT	AMOUNT x UNIT
Citric Acid	10 sacks
Sodium Bicarbonate	12 sacks
Milgel	91 sacks
Supercol	58 sacks
Ligco	5 sacks
Newdrill	2 sacks

METERS DRILLED

FROM	TO		ROTARY RPM	WT ON BIT
152.00	199.00	D	60	22-26

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.
5000	152	90	152	90

DEPTH (m)	DEVIATION (o)	DIRECTION
166.00	0.5	217.00

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
0:00	2:45	2.75	2	Drill fr/152m-171m
2:45	3:00	0.25	5	Circulate Hole Clean
3:00	3:15	0.25	10	Deviation Survey @ 155m = 1/2 Deg., 217 Azm.
3:15	6:00	2.75	2	Drill fr/171m-189m
6:00	6:15	0.25	7	Rig Service and Function Annular
6:15	6:30	0.25	5	Circulate and Change Head in #1 Pump
6:30	8:00	1.50	2	Drill fr/189m-199m

NOTES

DRILLER SIGNATURE: Wade Goddard

	MAX EXP HOOKLOAD	SAFETY TOPIC
0.00	84000.00	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	730-040-896	Nathan Schwandt	8.00	NS	☐	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	8.00	JJ	☐	☑
Floorman	732-808-483	Dune Malmberg	8.00	DM	☐	☑
Leaseman	647-247-006	Chris Thompson	8.00	CT	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	938-077-702	Sheldon Langley		SL	☐	☑

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

DAY TOUR (8:00 TO 16:00)

BHA

NO.		LENGTH	
1	bit	444.5	0.40
1	Near bit stab	230	1.90
1		230	9.34
1	String stab	238	1.59
1	Shock Sub	240	2.91
1	Drill Collars	220	9.27
1	String stab	236	1.81
9	Drill Collars	220	83.65
1	9" Jars	234	4.94
1	Crossover Sub	224	1.17
3	Drill Collars	171	26.59
6	D.P.	STANDS	56.31
0	D.P.	SINGLES	0.00
	KELLY DOWN		5.12
	TOTAL		208.00
WT. OF DC			
WT. OF STRING			68000.00

BIT RECORD

BIT NO.	3
SIZE	444.5
IADC CODE	5 1 5
MFG.	H.C.
TYPE	GTX-20
SERIAL NO.	6023675
JETS	3 x 1
DEPTH OUT (m)	208.00
DEPTH IN (m)	137.00
TOTAL METERS DRILLED	71.00
TOTAL HOURS RUN	10.75
HOLE DRAG	1000 up/1000dwn
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

TIME	09:00
DENSITY	1085
FUNNEL VIS	60
W.L. (cm3)	
pH	9.9
PVT@	113.7m3

PRODUCT	AMOUNT x UNIT
Milgel	30sks.
Supercol	30sks.
Sawdust	1sks.

METERS DRILLED

FROM	TO		ROTARY RPM	WT ON BIT
199.00	208.00	D	56-65	15-24

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.
2000	152	90	152	90

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
8:00	9:45	1.75	2	Drill fr. 199m - 208m
9:45	10:00	0.25	5	Pick up drill string & monitor hole seepage(Approx 30m3/hr)
10:00	14:00	4.00	6	Hoist B.H.A. to run seepage plug, Flow check @
14:00	14:15	0.25	7	Rig Service, F/T Blind rams(9 secs)
14:15	16:00	1.75	6	R.I.H. w/ drill pipe to 205m, flow check @ 0m & 205m

NOTES

DRILLER SIGNATURE: Barry Verhelst

	MAX EXP HOOKLOAD	SAFETY TOPIC
0.00	67000.00	picking up D.P.

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	642-389-910	Barry Verhelst	12.00	☐	☑
Derrickman	647-452-903	Dave Makowsky	12.00	☐	☑
Motorman	735-714-230	Chantry Vig	12.00	☐	☑
Floorman	650-713-324	Jaime Collins	12.00	☐	☑
Leaseman	713-859-481	Gary Kennedy	12.00	☐	☑
modified duty	651288474	Chad Buckingham	12.00	☐	☑

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

EVENING TOUR (16:00 TO 24:00)

BHA

NO.		LENGTH	
1	bit	444.5	0.40
1	Near bit stab	230	1.90
1		230	9.34
1	String stab	238	1.59
1	Shock Sub	240	2.91
1	Drill Collars	220	9.27
1	String stab	236	1.81
9	Drill Collars	220	83.66
1	9" Jars	234	4.94
1	Crossover Sub	224	1.17
3	Drill Collars	171	17.56
0	D.P.	STANDS	0.00
0	D.P.	SINGLES	0.00
	KELLY DOWN		0.00
	TOTAL		134.64
WT. OF DC			
WT. OF STRING			

BIT RECORD

BIT NO.	3
SIZE	444.5
IADC CODE	5 1 5
MFG.	H.C.
TYPE	GTX-20
SERIAL NO.	6023675
JETS	3 x 1
DEPTH OUT (m)	208.00
DEPTH IN (m)	137.00
TOTAL METERS DRILLED	71.00
TOTAL HOURS RUN	10.75
HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

METERS DRILLED

FROM	TO
208.00	

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

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
16:00	16:15	0.25	6	R.I.H. w/D.P. to 205m
16:15	16:30	0.25	21	Safety Meeting
16:30	17:00	0.50	17	Plug Back fr. 205m - 185m
17:00	18:00	1.00	6	Hoist drill pipe, flow check @
18:00	18:15	0.25	7	Rig Service
18:15	24:00	5.75	13	Wait on Cement(Monitor hole)

NOTES

DRILLER SIGNATURE: Wade Goddard

	MAX EXP HOOKLOAD	SAFETY TOPIC
0.00		Weekend Awareness

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	730-040-896	Nathan Schwandt	4.00	NS	☐	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	4.00	JJ	☐	☑
Floorman	732-808-483	Dune Malmberg	4.00	DM	☐	☑
Leaseman	647-247-006	Chris Thompson	4.00	CT	☐	☑

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

ETS SERIAL NUMBER: PREC620_20040901_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

RIG I/D: 2004-09-22 22:49	MUD RELEASE	JOB NO.: 21	AFE
LICENCE NO.: a-92-A / 92-J-12	WELL NAME AND NO.: MCS South Meager		
OPERATOR: Western Geopower Corp		CONTRACTOR: Precision Drilling	
SURFACE LOCATION: a-92-A / 92-J-12		RIGNUM: ib-1-H / 92-J-12	
SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva		SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig	

DAILY CHECKS — OPR / R.M.

(1) Daily Visual Safety Inspection
(2) Operator Inspection Weekly (using check list)
(3) H2S Signs (Posted & Legible)
(4) Well Control & Boat Diagram Posted
(5) Flare Line Staked
(6) BOP Daily Pressured
(7) Weekly Manual BOP / Diverter & Degasser Drills
(8) Rig Site Assessment Safety Meeting (once per month)
(9) C.A.O.D.C Rig Safety Inspection Checklist (Monthly/Semi)
(10) Hard Inspection Before Rotating or Lowering
(11) Crown Saver Checked
(12) Lease Kits Checked

DATE	02-Oct-2004		
RIG NO.	520 E		
FUEL @ 8:00			
RIG	70695	BOILER	
TEMPERATURE	8		
CURRENT CONDITION	Clear		
WIND DIRECTION	Calm		
ROAD	Good		

BIT NO.	SIZE	MAKE	GRADE	NO. OF JETS	TOTAL I.H. LENGTH	BIT TO CAS. HEAD I.H.	BIT AT TD
						7.32	
						6.31	

EQUIPMENT

	MAKE	MODEL	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN. (mm)
		F-1600	BPMMP		305
		F-1600	BPMMP		305

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	☐ YES ☑ NO	7.32
WELL NAME & NO.		DATE
MCS South Meager		02-Oct-2004
OPERATOR	CONTRACTOR	
Western Geopower Corp	Precision Drilling	
RIG MANAGER		RIG NO.
Kevin Vig		520 E
PROVINCE	CAMP ☑ YES ☐ NO	RIG SAFETY DAYS
BC		10.00

TIME - HRS

	DRLG	CIRC	REAMING	CORING	CASING / CEMENT	TRIPS	RIG SERVICE	SURVEY	DEVIATION	WIRELINE	WAIT ON CEMENT	OTHER	TOTAL
MORN			0.75	1.75	3.00	0.25					3.00		
DAY					2.25	0.25				0.50	4.75		0.25
EVE	1.00	0.75		3.00	2.00	0.25					1.00		
TOTAL	1.00	1.50		3.75	7.25	0.75				0.50	8.25		0.25

SHALE SHAKER(S) — RENTALS/SERVICES

	TYPE	NEW
NO. 2	Derrick	NEW
SCREENS CHANGED	☐ YES	☑ NO
TOP	88	TOP 80
MIDDLE	88	MIDDLE 80
BOTTOM	88	BOTTOM 80

	HOURS	$/HR	$/JOB
8.00			
8.00			
8.00			
24.00			

BIT RECORD

NO.	BIT	O.D. (mm)	REMARKS
1	bit	444.5	
1	Near bit stab	230	
1	Float Sub/Valve	230	
1	String stab	236	
1	Shock Sub	240	
1	8" Drill Collars	228	
1	String stab	236	
9	8" Drill Collars	228	
1	9" Jars	234	
1	Crossover Sub	224	
3	7" Drill Collars	171	
0	D.P.	STANDS	
0	D.P.	SINGLES	
	KELLY/DRIVE		
	TOTAL		
WT. OF DC			
WT. OF STRING		50900.00	

BIT NO.	3	
SIZE	444.5	
IADC CODE	5 1 6	
MFG.	H.C.	
TYPE	GTX-20	
SERIAL NO.	6023875	
JETS	3 3 3	
DEPTH OUT (m)	208.00	
DEPTH IN (m)	137.00	
TOTAL METERS DRILLED (m)	71.00	
TOTAL HOURS RUN	10.75	
CUTTING STRUCTURE	T0 B0 GC	

MUD RECORD

MUD TYPE	WATER BASED ☐ OIL BASED ☐
TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (sec)	
PV	
YP	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Mikgel	75 sacks
Supercol	20 sacks
Sodium Bicarbonate	8 sacks
Citric Acid	7 sacks

SOLIDS CONTROL

	HOURS RUN	MFG.	MODEL	SCREEN SIZE
SHALE SHAKER				
DESILTER				
DESANDER				
MUD CLEANER				
CENTRIFUGE				

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

METERS DRILLED

FROM	TO	NO. 1 (m)	ROTARY R.P.M.	NO. 2 (m)
208.00				

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

REDUCED PUMP SPEED: @ / @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Verheist

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	DETAILS
6:00	9:15	3.25	6	Hoist B.H.A. to run cement plug #2, flow check @ 144.86m
9:15	9:45	0.50	6	R.I.H. w/open end D.P. to 205m, flow check @ 0m & 205m
9:45	10:00	0.25	21	Safety Meeting
10:00	10:30	0.50	17	Plug Back fr. 205m - 185m
10:30	11:00	0.50	6	Hoist drill pipe, flow check @ 205, & 0m
11:00	11:15	0.25	7	Rig Service, F/T Blind rams(9 secs)
11:15	16:00	4.75	13	Wait on Cement(Build volume & condition mud)

NOTES

DRILLER SIGNATURE	HOURS AT RIG	HOURS AT STACK	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verheist	0.00			32.00	cementing	

RATE SCHEDULE: ☑ MINIMUM ☐ STAND-BY ☐ DAYWORK

DRIVER A	CREW SAFETY DAYS	DRIVER B

MORNING TOUR 6:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-628-706	Wade Goddard	6.00	WG	☑
Derrickman	642-872-840	Murray McBain	6.00	MM	☑
Motorman	730-640-896	Nathan Schwandt	8.00	NS	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	8.00	JJ	☑
Floorman	732-606-483	Dune Malmberg	8.00	DM	☑
Leaseman	847-247-006	Chris Thompson	8.00	CT	☑
Rig Manager	719-409-484	Kevin Vig		KV	☑
Top Drive	638-977-702	Sheldon Langley		SL	☑

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-329-919	Barry Verheist	12.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☑
Motorman	735-774-230	Chantry Vig	12.00	CV	☑
Floorman	650-713-324	Jaime Collins	12.00	JC	☑
Leaseman	713-858-491	Gary Kennedy	12.00	GK	☑
Modified duty	651285474	Chad Buckingham	12.00	CB	☑

RATE SCHEDULE: ☑ MINIMUM ☐ STAND-BY ☐ DAYWORK

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	642-872-840	Murray McBain	4.00	MM	☑
Motorman	730-640-896	Nathan Schwandt	4.00	NS	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	4.00	JJ	☑
Floorman	732-606-483	Dune Malmberg	4.00	DM	☑
Leaseman	647-247-006	Chris Thompson	4.00	CT	☑

RATE SCHEDULE: ☑ MINIMUM ☐ STAND-BY ☐ DAYWORK

DRIVER A	CREW SAFETY DAYS	DRIVER B

MORNING TOUR

NO.	BIT	O.D. (mm)	REMARKS
1	bit	444.5	
1	Near bit stab	230	
1	Float Sub/Valve	230	
1	String stab	236	
1	Shock Sub	240	
1	8" Drill Collars	228	
1	String stab	236	
9	8" Drill Collars	228	
1	9" Jars	234	
1	Crossover Sub	224	
3	7" Drill Collars	171	
0	D.P.	STANDS	
0	D.P.	SINGLES	
	KELLY/DRIVE		
	TOTAL		
WT. OF DC			
WT. OF STRING		50900.00	

BIT NO.	3	
SIZE	444.5	
IADC CODE	5 1 6	
MFG.	H.C.	
TYPE	GTX-20	
SERIAL NO.	6023875	
JETS	3 3 3	
DEPTH OUT (m)	208.00	
DEPTH IN (m)	137.00	
TOTAL METERS DRILLED (m)	71.00	
TOTAL HOURS RUN	10.75	
CUTTING STRUCTURE	T0 B0 GC	

MUD RECORD

MUD TYPE	WATER BASED ☐ OIL BASED ☐
TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (sec)	
PV	
YP	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Mikgel	75 sacks
Supercol	20 sacks
Sodium Bicarbonate	8 sacks
Citric Acid	7 sacks

SOLIDS CONTROL

	HOURS RUN	MFG.	MODEL	SCREEN SIZE
SHALE SHAKER				
DESILTER				
DESANDER				
MUD CLEANER				
CENTRIFUGE				

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

METERS DRILLED

FROM	TO	NO. 1 (m)	ROTARY R.P.M.	NO. 2 (m)
208.00				

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

REDUCED PUMP SPEED: @ / @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	DETAILS
0:00	2:00	2.00	13	Wait on Cement
2:00	2:15	0.25	22	Fill Annulus w/Mud and Monitor for Losses
2:15	2:30	0.25	7	Rig Service and Function Blind Ram's 7/7
2:30	4:00	1.50	6	M/U Bit #3, B.H.A., RIH
4:00	4:15	0.25	3	Tag Cement and Drill fr/190m-199m
4:15	5:15	1.00	5	Circulate @ 199m and Monitor For Losses, (Sump 30 m3 of Contaminated Mud)
5:15	5:45	0.50	3	Drill Cement fr/199m-208m
5:45	6:30	0.75	5	Circulate @ 208m and Monitor Losses, Est. @ 35 m3/Hr.
6:30	8:00	1.50	6	Flow Check @ 198m, P.O.O.H. to Run Cement Plug #2

NOTES

DRILLER SIGNATURE	HOURS AT RIG	HOURS AT STACK	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	0.00			62000.00		

DAY TOUR

NO.	BIT	O.D. (mm)	REMARKS
1	bit	444.5	
1	Near bit stab	230	
1	Float Sub/Valve	230	
1	String stab	236	
1	Shock Sub	240	
1	8" Drill Collars	228	
1	String stab	236	
9	8" Drill Collars	228	
1	9" Jars	234	
1	Crossover Sub	224	
3	7" Drill Collars	171	
0	D.P.	STANDS	
0	D.P.	SINGLES	
	KELLY/DRIVE		
	TOTAL		
WT. OF DC			
WT. OF STRING		50900.00	

BIT NO.	3	
SIZE	444.5	
IADC CODE	5 1 6	
MFG.	H.C.	
TYPE	GTX-20	
SERIAL NO.	6023875	
JETS	3 3 3	
DEPTH OUT (m)	208.00	
DEPTH IN (m)	137.00	
TOTAL METERS DRILLED (m)	71.00	
TOTAL HOURS RUN	19.75	
CUTTING STRUCTURE	T0 B0 GC	

MUD RECORD

MUD TYPE	WATER BASED ☐ OIL BASED ☐
TIME	
DENSITY (kg/m³)	
FUNNEL VIS. (sec)	
PV	
YP	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Citric Acid	2sks.
Sodium Bicarbonate	3sks.
Mikgel	55sks.

SOLIDS CONTROL

	HOURS RUN	MFG.	MODEL	SCREEN SIZE
SHALE SHAKER				
DESILTER				
DESANDER				
MUD CLEANER				
CENTRIFUGE				

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

METERS DRILLED

FROM	TO	NO. 1 (m)	ROTARY R.P.M.	NO. 2 (m)
208.00	217.00	D	60	24-26

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 (d)	DIRECTION

NOTES

DRILLER SIGNATURE: Wade Goddard

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	DETAILS
16:00	17:30	1.50	13	Wait on Cement(Build & condition mud)
17:30	19:30	2.00	6	R.I.H. w/drilling assembly, flow check @ 0m & 180m
19:30	21:00	1.50	5	Circulate and Condition Mud @ 170m
21:00	21:30	0.50	3	Wash in fr/170m-206m
21:30	21:45	0.25	3	Tag Cement and Drill fr/206m-208m
21:45	22:15	0.50	5	Circulate @ 208m and Monitor For Losses, Est. Losses @ 3 m3/Hr.
22:15	22:30	0.25	7	Rig Service and Function Pipe Rams 7/7
22:30	24:00	1.50	2	Drill fr/208m-217m

NOTES

DRILLER SIGNATURE	HOURS AT RIG	HOURS AT STACK	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	0.00			64000.00		

EVENING TOUR

NO.	BIT	O.D. (mm)	REMARKS
1	bit	444.5	
1	Near bit stab	230	
1	Float Sub/Valve	230	
1	String stab	236	
1	Shock Sub	240	
1	8" Drill Collars	228	
1	String stab	236	
9	8" Drill Collars	228	
1	9" Jars	234	
1	Crossover Sub	224	
3	7" Drill Collars	171	
0	D.P.	STANDS	
0	D.P.	SINGLES	
	KELLY/DRIVE		
	TOTAL	247.00	
WT. OF DC			
WT. OF STRING		63000.00	

BIT NO.	3	
SIZE	444.5	
IADC CODE	5 1 6	
MFG.	H.C.	
TYPE	GTX-20	
SERIAL NO.	6023875	
JETS	3 3 3	
DEPTH OUT (m)	208.00	
DEPTH IN (m)	137.00	
TOTAL METERS DRILLED (m)	71.00	
TOTAL HOURS RUN	12.25	
CUTTING STRUCTURE	T0 B0 GC	

MUD RECORD

MUD TYPE	WATER BASED ☑	OIL BASED ☐	
TIME	21:00	23:30	
DENSITY (kg/m³)	1070	1070	
FUNNEL VIS. (sec)	46	46	
PV			
YP			
W.L. (cm3)			
pH	11.0	10.5	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

	HOURS RUN	MFG.	MODEL	SCREEN SIZE
SHALE SHAKER				
DESILTER				
DESANDER				
MUD CLEANER				
CENTRIFUGE				

HOLE CONDITION

HOLE DRAG	0-2 Dan Up/Down
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | RIG RELEASE | JOB NO.: 21 | AFE
LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager
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 Seva | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS
1) Daily Visual Rotating Equipment Inspection
2) Derrick Inspection (Monthly during shift/Trip)
3) H2S Alarm System (if required)
4) Hoist Machine & Block Emergency Brake
5) Flare Line Anchor
6) BOP Drills Performed
7) Monthly Inspection BOP's, Accumulator & Choke Manifold
8) Daily Safe Health and Safety Meeting (pre-tour meeting)
9) CAODC Rig Safety Inspection Checklist (see rig checklist)
10) Daily Inspection Before, During or Following
11) Diesel Spray Checkout
12) Motor Vehicle Checklist

DATE: 03-Oct-2004 | RIG NO: 620 E
FUEL @ 6 A.M.: RIG: 56875 | BOILER
TEMPERATURE: CURRENT CONDITION: Clear | WIND DIRECTION: Calm | ROAD: Good

AST CASING TUBING OK UNLOAD

O.D. (mm)	WALL (mm)	API	GRADE	NO. OF JOINTS	TOTAL LENGTH	KB TO CSG HEADING
						7.32
						9.31

LOOP SIZE (mm)	LINER MAKE (type)	GRADE	MIN ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
							F-1600	BPMMP	305
							F-1600	BPMMP	305

TIME - HRS

	DRLG	RIG SERVICE	TRIPS	REAMING	CIRC & COND	SURVEYS	WIRELINE LOGS	CORING	CUT & SLIP DRLG LINE	DRLG CEMENT	DRLG PLUGS	DEVIATION	FISHING	RIG REPAIR	TESTING BOPE	TESTING CASING	CEMENTING	WAIT ON CEMENT	WAIT ON WEATHER	WAIT ON ORDERS	RIG MOVE	OTHER
MIDNIGHT	7.25			0.25		0.25																
DAY	6.50			0.75		0.25																0.25
EVE	6.75			0.25																		0.25
TOTAL	20.50			1.25		0.75																0.50

BIT	SIZE	O.D. (mm)	LENGTH (m)
1	bit	444.5	0.40
1	Near bit stab	230	1.90
1	Motor	230	9.34
1	String stab	236	1.59
1	Shock Sub	240	2.91
1	9" Drill Collars	220	9.27
1	String stab	236	1.81
9	9" Drill Collars	220	83.65
1	9" Jars	234	4.94
1	Crossover Sub	224	1.17
3	7" Drill Collars	171	26.59
2	D.P.	STANDS	56.32
0	D.P.	SINGLES	0.00
	HOLE TOTAL		285.80
WT. OF DC			
WT. OF STRING			64000.00

BIT RECORD

BIT NO.	3
SIZE	444.5
IADC CODE	5 1 5
MFG	H.C.
TYPE	GTX-20
SERIAL NO.	6023875
JETS	14 / 14 / 14
DEPTH OUT (m)	
DEPTH IN (m)	137.00
TOTAL METERS DRILLED (m)	128.99
TOTAL HOURS RUN	19.50
CUTTING STRUCTURE: T1	
CUTTING STRUCTURE: T0	
CUTTING STRUCTURE: MDC	
CUTTING STRUCTURE: LOC	
CUTTING STRUCTURE: B	
CUTTING STRUCTURE: Gage	
CUTTING STRUCTURE: ODC	
REASON PULLED	

HOLE CONDITION

HOLE DRAG	1-3 Dan Up/Down
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE			
TIME	02:00	04:00	05:00
DENSITY (kg/m³)	1075	1075	1056
FUNNEL VIS. (sec)	48	48	50
W.L. (cm3)			
pH	10.5	10.0	9.0

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Milgel	105 sacks
Citric Acid	30 sacks
Sodium Bicarbonate	30 sacks
Sawdust	50 sacks
Lignco	12 sacks
Mompac	4 sacks
Soda Ash	9 sacks

SOLIDS CONTROL: HOURS RUN | VOLUME DISCARDED | VOLUME DILUTED

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)	METERS DRILLED
217.00	285.00	D	60	24-26	

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

5900	152	90	152	90

REDUCED PUMP SPEED

1500	@	90	@	236.00	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
212.00	0.25	132.00

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	3:15	3.25	2	Drill f/217m-227m
3:15	3:30	0.25	5	Circulate Hole Clean and Work Pipe
3:30	3:45	0.25	10	Deviation Survey @ 212m = 1/4 Deg. / 132 Azm.
3:45	5:15	1.50	2	Drill f/227m-236m
5:15	5:30	0.25	7	Rig Service and Function Annular
5:30	6:00	4.50	2	Drill f/236m-285m

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS RUN	HRS OFF	BLOCK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
6.00				64000.00		

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	833-628-708	Wade Goddard	8.00	WG	☑
Derrickman	642-872-840	Murray McBain	8.00	MM	☑
Motorman	730-040-896	Nathan Schwandt	8.00	NS	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	8.00	JJ	☑
Floorman	732-808-483	Dune Malmberg	8.00	DM	☑
Leaseman	647-247-006	Chris Thompson	8.00	CT	☑
Rig Manager	719-469-464	Kevin Vig		KV	☑
Top Drive	638-677-702	Sheldon Langley		SL	☑

RATE SCHEDULE: ☑ REGULAR ☐ SHARE ☐ OTHER | DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

BIT NO.	3
SIZE	444.5
IADC CODE	5 1 5
MFG	H.C.
TYPE	GTX-20
SERIAL NO.	6023875
JETS	14 / 14 / 14
DEPTH OUT (m)	
DEPTH IN (m)	137.00
TOTAL METERS DRILLED (m)	156.00
TOTAL HOURS RUN	25.50
CUTTING STRUCTURE: T1	
CUTTING STRUCTURE: T0	
CUTTING STRUCTURE: MDC	
CUTTING STRUCTURE: LOC	
CUTTING STRUCTURE: B	
CUTTING STRUCTURE: Gage	
CUTTING STRUCTURE: ODC	
REASON PULLED	

BIT	SIZE	O.D. (mm)	LENGTH (m)
1	bit	444.5	0.40
1	Near bit stab	230	1.90
1	Motor	230	9.34
1	String stab	236	1.59
1	Shock Sub	240	2.91
1	9" Drill Collars	220	9.27
1	String stab	236	1.81
9	9" Drill Collars	220	83.65
1	9" Jars	234	4.94
1	Crossover Sub	224	1.17
3	7" Drill Collars	171	26.59
2	D.P.	STANDS	56.32
9	D.P.	SINGLES	84.43
	KELLY DOWN		9.34
	TOTAL		293.65
WT. OF DC			
WT. OF STRING			68000.00

HOLE CONDITION

HOLE DRAG	1000 up/1000down
TORQUE AT BOTTOM	7100 ft-lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE			
TIME	09:00	12:00	15:00
DENSITY (kg/m³)	1060	1060	1056
FUNNEL VIS. (sec)	51	53	55
W.L. (cm3)			
pH	9.0	9.0	9.0
PV@	126.3m3	126m3	124.5m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Milgel	123sks.
Soda Ash	2sks.
Caustic Soda	2sks.
Cotton Hulls	4sks.
Sawdust	9sks.

SOLIDS CONTROL: HOURS RUN | VOLUME DISCARDED | VOLUME DILUTED

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)	METERS DRILLED
256.00	293.00	D	55-65	24-26	

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

5700	152	90	152	90

REDUCED PUMP SPEED

1500	@	90	@	293.00	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
277.00	0.25	277.00

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
6:00	8:15	8.25	5	Circulate & clean hole
8:15	10:00	1.75	2	Drill fr. 256m - 273m
10:00	10:15	0.25	5	Condition Mud & Circ.
10:15	14:30	4.25	2	Drill fr. 273m - 293m
14:30	14:45	0.25	5	Cond. Mud & Circ.(Spot L.C.M. pill in annulus prior to survey)
14:45	15:00	0.25	7	Rig Service, F/T pipe rams(10 secs)
15:00	15:15	0.25	10	Deviation Survey @ 277m 0.25 degree
15:15	16:00	0.75	22	Change out #3 (#1 pump) head & liner

NOTES

DRILLER SIGNATURE: Barry Vertielst

HRS RUN	HRS OFF	BLOCK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00				71000.00	Weekend Maintenance	

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	642-389-910	Barry Vertielst	12.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	650-713-324	Jaime Collins	12.00	JC	☑
Modified duty	651288474	Chad Buckingham	12.00	CB	☑
Leaseman	713-959-481	Gary Kennedy	12.00	GK	☑

RATE SCHEDULE: ☑ REGULAR ☐ SHARE ☐ OTHER | DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

BIT NO.	3
SIZE	444.5
IADC CODE	5 1 5
MFG	H.C.
TYPE	GTX-20
SERIAL NO.	6023875
JETS	14 / 14 / 14
DEPTH OUT (m)	
DEPTH IN (m)	137.00
TOTAL METERS DRILLED (m)	204.00
TOTAL HOURS RUN	32.25
CUTTING STRUCTURE: T1	
CUTTING STRUCTURE: T0	
CUTTING STRUCTURE: MDC	
CUTTING STRUCTURE: LOC	
CUTTING STRUCTURE: B	
CUTTING STRUCTURE: Gage	
CUTTING STRUCTURE: ODC	
REASON PULLED	

BIT	SIZE	O.D. (mm)	LENGTH (m)
1	bit	444.5	0.40
1	Near bit stab	230	1.90
1	Motor	230	9.34
1	String stab	236	1.59
1	Shock Sub	240	2.91
1	9" Drill Collars	220	9.27
1	String stab	236	1.81
9	9" Drill Collars	220	83.65
1	9" Jars	234	4.94
1	Crossover Sub	224	1.17
3	7" Drill Collars	171	26.59
5	D.P.	STANDS	140.58
0	D.P.	SINGLES	0.00
	KELLY DOWN		0.00
	TOTAL		284.25
WT. OF DC			
WT. OF STRING			67000.00

HOLE CONDITION

HOLE DRAG	1-3 Dan Up/Down
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE			
TIME	18:00	21:00	23:30
DENSITY (kg/m³)	1085	1095	1110
FUNNEL VIS. (sec)	55	62	60
W.L. (cm3)			
pH	9.0	9.0	9.0
PV@	140.1m3	139 m3	136.4 m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL: HOURS RUN | VOLUME DISCARDED | VOLUME DILUTED

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kN)	METERS DRILLED
293.00	341.00	D	55-65	24-26	

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

5700	152	90	152	90

REDUCED PUMP SPEED

1900	@	90	@	336.00	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
15:00	16:45	0.75	22	Change out #3 (#1 pump) head & liner
16:45	19:45	3.00	2	Drill fr293m-311m
19:45	20:00	0.25	7	Rig Service
20:00	22:30	2.50	2	Drill fr311m-330m
22:30	22:45	0.25	5	Circulate and Clean Hole
22:45	24:00	1.25	2	Drill fr330m-341m

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS RUN	HRS OFF	BLOCK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00				72000.00		

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	833-628-708	Wade Goddard	4.00	WG	☑
Derrickman	642-872-840	Murray McBain	4.00	MM	☑
Motorman	730-040-896	Nathan Schwandt	4.00	NS	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	4.00	JJ	☑
Floorman	732-808-483	Dune Malmberg	4.00	DM	☑
Leaseman	647-247-006	Chris Thompson	4.00	CT	☑

RATE SCHEDULE: ☑ REGULAR ☐ SHARE ☐ OTHER | DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20040903_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

CAODC

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49
RIG RELEASE:
JOB NO.: 21
AFE:
LICENCE NO.: a-92-A / 92-J-12
WELL NAME AND NO.: MCS South Meager
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
SIGNATURE OF CONTRACTORS REPRESENTATIVE

DAILY CHECKS
(h) Daily Walk Around Inspection
(i) Chaindrive Inspection/Weekly Safety Meeting
(j) H2S Alarm Posted (if required)
(k) Work Location & Muster Diagram Posted
(l) Flare Line Staked
(m) BOP Drills Performed
(n) Verbally Inspect BOP's Flowlines & Bypass Lines
(o) Rig Emergency Response Plan Posted
(p) Rig Key Health and Safety Meeting (pre-spud meeting)
(q) C.A.O.D.C. Rig Safety Inspection Checklist (ensure following month)
(r) Visit Hazardous Substances Storage w/ Supervisor
(s) Crown Saver Checked
(t) Motor Vehicle Checked

DATE: 04-Oct-2004
RIG NO.: 620 E
FUEL @ 8:00
Rig: 64100 BOILER

LAST CASING TUBING OR LINER

O.D. (mm)	WEIGHT (kg/m)	NAME	GRADE	NO. OF JOINTS	TOTAL PIPE LENGTH	KB TO END (ROAD) (m)	SET AT (m)
						7.32	
						6.31	

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

DRILL STRING	LENGTH/NAME (metres)	GRADE	WEIGHT (kg/m)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS

PUMP TYPE	PUMP MANUFACTURER	STROKE (L/str)
F-1600	BPMMP	385
F-1600	BPMMP	396

DETAILS

SHALE SHAKER(S) — RENTALS/SERVICES

NO.	TYPE	NEW
2	Derrick	

SCREENS CHANGED: YES / NO

5.00	TOP	180	TOP 180
5.00	MIDDLE	180	MIDDLE 180
24.00	BOTTOM	180	BOTTOM 180

WELL TYPE: Geothermal
RE-ENTRY: YES / NO
WELL NAME & No.: MCS South Meager
GROUND ELEV.: 7.32
DATE: 04-Oct-2004
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig
RIG NO.: 620 E
PROVINCE: BC
CAMP: YES / NO
RIG SAFETY DAYS: 12.00

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	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
CODE	DRILLING	CIRCULATING	WIPER TRIP	REAMING	CORING	CONDITIONING MUD & CIRC	TRIPPING	RIG REPAIR	RIG SERVICE	DEVIATION	WAITING ON DAYLIGHT	WAITING ON CEMENT	WAITING ON WEATHER	WAITING ON ORDERS	SAFETY MEETING	SURVEY	WELL CONTROL	FISHING	SLIP & CUT DRILL LINE	CEMENTING	SQUEEZE CEMENT	PLUG BACK	LOGGING	RUNNING CASING	RUNNING TUBING	NIPPLE UP B.O.P.	TEST B.O.P.	SCRAPE CASING	PERFORATING	WELL STIMULATION	EQUIPMENT FAILURE	SAFETY STAND DOWN	RIG MOVE	RIG UP/TEAR DOWN	DIRECTIONAL WORK	MISC.	MISC.	MISC.	MISC.	MISC.	MISC.	MISC.	MISC.	MISC.	MISC.	MISC.	MISC.
MORN	7.00					0.50				0.25																																						
DAY	7.25					0.50				0.25																																						
EVE	7.50					0.25				0.25																																						
TOTAL	21.75					1.25				0.75																																						

BIT RECORD

#	ITEM	O.D. (mm)	LENGTH (m)
1	Bit	444.5	0.40
1	Near bit stab	230	1.90
1	Float Sub/Valve	230	0.34
1	String stab	236	1.59
1	Shock Sub	240	2.91
1	9" Drill Collars	230	9.27
1	String stab	236	1.81
9	9" Drill Collars	228	83.85
1	9" Jars	234	4.84
1	Crossover Sub	224	1.17
3	7" Drill Collars	171	28.55
6	D.P.	127	168.81
1	D.P.	114.3	9.40
	MISC ITEMS		0.00
	TOTAL		386.00

BIT NO.: 3
SIZE: 444.5
IADC CODE: S 1 5
MFG: H.C.
TYPE: GTX-20
SERIAL NO.: 6023875
JETS: 20 | 20 | 20
DEPTH OUT (m):
DEPTH IN (m): 137.00
TOTAL METRES DRILLED: 249.00
TOTAL HOURS RUN: 38.25
CUTTING STRUCTURE: T: 8 | B: 8 | MSC: | LOC: | 9 | Gage | ODC | BEARING FAILURE | PULLED
HOLE CONDITION
HOLE DRAG: 1-3 Dan Up/Down
TORQUE AT BOTTOM: 4616 ft/lbs.
FILL ON BOTTOM (m): 67900.00
WT. OF DC
WT. OF STRING

MUD RECORD

MUD TYPE: Gel Chem | Gel Chem | Gel Chem

	02:00	04:00	09:00
TIME			
DENSITY (kg/m3)	1120	1125	1120
FUNNEL VIS - (s/L)	59	58	56
W.L. (cm3)			
pH	9.0	9.0	9.0
PV/YP	138.7 mPa	136.9 mPa	136 mPa

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Sawdust	40 sacks
Milgel	11 sacks

METERS DRILLED

FROM	TO	BIT #	ROTARY R.P.M.	W.O.B. (tonnes)
341.90	386.00	D	80	24-26

CIRCULATING PRESSURE (kPa) | PUMP NO.1: LINER SIZE (mm) x STROKE (mm) | SPM | PUMP NO.2: LINER SIZE (mm) x STROKE (mm) | SPM
6900 | 152 | 90 | 152 | 90

REDUCED PUMP RATES
1900 @ 90 @ 367.00

DEVIATION SURVEYS

DEPTH (m)	DEVIATION (o)	DIRECTION
352.90	0.25	172.90

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	0:45	0.75	2	Drill fr341m-349m
0:45	1:00	0.25	5	Circulate/Work Pipe and Clean Hole
1:00	4:15	3.25	2	Drill fr349m-367m
4:15	4:30	0.25	7	Rig Service and Function Annular
4:30	4:45	0.25	5	Circulate/Work Pipe and Clean Hole
4:45	5:00	0.25	10	Deviation Survey @ 352m = 1/4 Deg. and 172 Azm.
5:00	8:00	3.00	2	Drill fr367m-386m

NOTES

DRILLER SIGNATURE: Wade Goddard
OPERATOR FUEL:
MAX ENT HOOKLOAD: 76000.00
SAFETY TOPIC: WireLine Survey's
M.A.C.P.:

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	642-872-840	Murray McBain	8.00	MM	☑
Motorman	730-040-898	Nathan Schwandt	8.00	NS	☑
Floorman	647-069-432	Jamie Joyce(Des. Driller)	8.00	JJ	☑
Floorman	732-808-483	Duke Malmberg	8.00	DM	☑
Leaseman	647-247-006	Chris Thompson	8.00	CT	☑
Rig Manager	719-409-464	Kevin Vig		KV	☑
Top Drive	638-877-702	Sheldon Langley		SL	☑

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

DAY TOUR 8:00 TO 16:00

BIT RECORD

#	ITEM	O.D. (mm)	LENGTH (m)
1	Bit	444.5	0.40
1	Near bit stab	230	1.90
1	Float Sub/Valve	230	0.34
1	String stab	236	1.59
1	Shock Sub	240	2.91
1	9" Drill Collars	230	9.27
1	String stab	236	1.81
9	9" Drill Collars	228	83.85
1	9" Jars	234	4.84
1	Crossover Sub	224	1.17
3	7" Drill Collars	171	28.55
7	D.P.	127	196.99
1	D.P.	114.3	9.34
	MISC ITEMS		
	TOTAL		408.00

BIT NO.: 3
SIZE: 444.5
IADC CODE: S 1 5
MFG: H.C.
TYPE: GTX-20
SERIAL NO.: 6023875
JETS: 20 | 20 | 20
DEPTH OUT (m):
DEPTH IN (m): 137.00
TOTAL METRES DRILLED: 271.00
TOTAL HOURS RUN: 46.50
CUTTING STRUCTURE: T: 8 | B: 8 | MSC: | LOC: | 9 | Gage | ODC | BEARING FAILURE | PULLED
HOLE CONDITION
HOLE DRAG: 2000 up/2000 dwn
TORQUE AT BOTTOM: 6300 ft-lbs
FILL ON BOTTOM (m): 68000.00
WT. OF DC
WT. OF STRING

MUD RECORD

MUD TYPE: Gel Chem | Gel Chem | Gel Chem

	09:00	12:00	15:00
TIME			
DENSITY (kg/m3)	1116	1118	1099
FUNNEL VIS - (s/L)	56	53	54
W.L. (cm3)			
pH	9.0	9.0	9.0
PV/YP	136.2mPa	137.9mPa	141.9mPa

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Caustic Soda	2sks.
Milgel	36sks.
Sawdust	25sks.
Supercol	41sks.

METERS DRILLED

FROM	TO	BIT #	ROTARY R.P.M.	W.O.B. (tonnes)
386.00	408.00	D	80	18-25

CIRCULATING PRESSURE (kPa) | PUMP NO.1: LINER SIZE (mm) x STROKE (mm) | SPM | PUMP NO.2: LINER SIZE (mm) x STROKE (mm) | SPM
6700 | 152 | 90 | 152 | 90

REDUCED PUMP RATES
1900 @ 90 @ 408.00

DEVIATION SURVEYS

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:30	0.50	2	Drill fr. 386m - 387m
8:30	8:45	0.25	5	Circulate & clean hole
8:45	14:45	6.00	2	Drill fr. 387m - 408m
14:45	15:00	0.25	7	Rig Service, R/T pipe rams(9 secs)
15:00	15:15	0.25	5	Circulate & clean hole
15:15	15:00	0.75	2	Drill fr. 408m - 408m

NOTES

DRILLER SIGNATURE: Barry Verhelst
OPERATOR FUEL:
MAX ENT HOOKLOAD: 73000.00
SAFETY TOPIC: Handling tubulars
M.A.C.P.:

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-810	Barry Verhelst	12.00	BV	☑
Derrickman	647-452-803	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	650-713-324	Jaime Collins	12.00	JC	☑
Leaseman	713-999-461	Gary Kennedy	12.00	GK	☑
Modified duty	851288474	Chad Buckingham	12.00	CB	☑

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

BIT RECORD

#	ITEM	O.D. (mm)	LENGTH (m)
1	Bit	444.5	0.40
1	Near bit stab	230	1.90
1	Float Sub/Valve	230	0.34
1	String stab	236	1.59
1	Shock Sub	240	2.91
1	9" Drill Collars	230	9.27
1	String stab	236	1.81
9	9" Drill Collars	228	83.85
1	9" Jars	234	4.84
1	Crossover Sub	224	1.17
3	7" Drill Collars	171	28.55
8	D.P.	127	226.84
6	D.P.	114.3	0.00
	MISC ITEMS		0.00
	TOTAL		429.00

BIT NO.: 3
SIZE: 444.5
IADC CODE: S 1 5
MFG: H.C.
TYPE: GTX-20
SERIAL NO.: 6023875
JETS: 20 | 20 | 20
DEPTH OUT (m):
DEPTH IN (m): 137.00
TOTAL METRES DRILLED: 292.00
TOTAL HOURS RUN: 54.00
CUTTING STRUCTURE: T: 8 | B: 8 | MSC: | LOC: | 9 | Gage | ODC | BEARING FAILURE | PULLED
HOLE CONDITION
HOLE DRAG: 1-3 Dan Up/Down
TORQUE AT BOTTOM:
FILL ON BOTTOM (m): 68000.00
WT. OF DC
WT. OF STRING

MUD RECORD

MUD TYPE: Gel Chem | Gel Chem | Gel Chem

	12:00	21:00	23:30
TIME			
DENSITY (kg/m3)	1099	1096	1096
FUNNEL VIS - (s/L)	49	53	53
W.L. (cm3)			
pH	9.0	9.0	9.5
PV/YP	146.5mPa	140.5 mPa	134.4 mPa

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Hydrated Lime	2 sacks
Supercol	15 sacks
Sawdust	29 sacks

METERS DRILLED

FROM	TO	BIT #	ROTARY R.P.M.	W.O.B. (tonnes)
408.00	429.00	D	60	22

CIRCULATING PRESSURE (kPa) | PUMP NO.1: LINER SIZE (mm) x STROKE (mm) | SPM | PUMP NO.2: LINER SIZE (mm) x STROKE (mm) | SPM
6600 | 152 | 90 | 152 | 90

REDUCED PUMP RATES
1890 @ 90 @ 405.00

DEVIATION SURVEYS

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	18:30	2.50	2	Drill fr. 408m - 415m
18:30	18:45	0.25	5	Circulate & clean hole
18:45	23:45	5.00	2	Drill fr415m-429m
23:45	24:00	0.25	7	Rig Service

NOTES

DRILLER SIGNATURE: Wade Goddard
OPERATOR FUEL:
MAX ENT HOOKLOAD: 73000.00
SAFETY TOPIC:
M.A.C.P.:

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	642-872-840	Murray McBain	4.00	MM	☑
Motorman	730-040-898	Nathan Schwandt	4.00	NS	☑
Floorman	647-069-432	Jamie Joyce(Des. Driller)	4.00	JJ	☑
Floorman	732-808-483	Duke Malmberg	4.00	DM	☑
Leaseman	647-247-006	Chris Thompson	4.00	CT	☑

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

ETS SERIAL NUMBER: PREC620 _20040904_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-09-22 22:48
RIG RELEASE	
JOB NO.	21
AFE	
LICENCE NO.	a-92-A / 92-J-12
WELL NAME AND NO.	MC6 South Meager
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
(1) Daily Walk Around Inspection
(2) Detailed Inspection (Weekly / Lubing checklist)
(3) H2S Signs Present (if required)
(4) Well Licence & Site Diagram Posted
(5) Flare Line Broken
(6) BOP Drills Performed
(7) Visually Inspect BOP's, Flowlines & Degasser Lines
(8) Rig Site Health and Safety Meeting (once per month)
(9) CAODC Rig Safety Inspection Checklist (once per month)
(10) Weld Inspection (Before Raising or Lowering)
(11) Derrick Board Checked
(12) Motor Kills Checked

DPR: AM / PM

DATE	05-Oct-2004
RIG NO.	620 E
FUEL @ 8:00	
RIG	56082 BOILER
TEMPERATURE	8
CURRENT CONDITION	Cloudy
WIND DIRECTION	Calm
ROAD	Good

LAST CASING STRING OR LINER

							7.32	
							6.31	

						F-1600	6PM/MP	305	
						F-1600	6PM/MP	305	

TIME - HRS

	OPEN	CIRC	OPEN HOLE	REAMING	CASED HOLE	TRIPS	SURVEYS	CUT DRLG LINE	SLIP DRLG LINE	DRLG MUD	RIG REPAIR	RIG SERVICE	DRLG CEMENT	DRLG PLUGS	DRLG OTHER	WAITING ON CEMENT	WAITING ON OTHER	SAFETY MEET	TOTAL HOURS
MORN		2.34				0.25													0.25
DAY		7.25				0.50						0.25							0.25
EVE		1.00				0.50	3.50	0.25											9.25
TOTAL		10.59				1.25	3.50	0.25				0.25							9.50

SHALE SHAKER(S)

	TYPE	Derrick	Mud
5.00	SCREENS CHANGED	YES	NO
5.00	TOP	100	TOP 100
5.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

RENTALS/SERVICES

WELL TYPE: Geothermal | RE-ENTRY: YES NO | KB TO GROUND ELEV.: 7.32
WELL NAME & No.: MC6 South Meager | DATE: 05-Oct-2004
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig | RIG NO.: 620 E
PROVINCE: BC | CAMP: YES NO | RIG SAFETY DAYS: 13.00

BIT RECORD

NO.	BIT	SIZE	IADC CODE	SERIAL NO	JETS	DEPTH OUT	TOTAL METERS DRILLED	TOTAL HOURS RUN	DULL GRADING	LOC	BEAR	GAGE	OTHER	RUN
1	bit	444.5	0.40	3										
1	Near bit stab	230	1.90	444.5										
1	String stab	238	9.34	6 1 5										
1	Shock Sub	240	2.91	N.C.										
1	Sr Drill Collars	220	9.27	GTX-20										
1	String stab	236	1.81	6023875										
9	Jr Drill Collars	220	83.65	20 4 4										
1	9" Jars	234	4.94	137.00										
1	Crossover Sub	224	1.17	316.00										
3	Hvy Drill Collars	171	26.59	91.25										
9	D.P.		253.39	CUTTING STRUCTURE										
6	D.P.	Stabilizer	0.00											
	HOLE OPENER		0.00	HOLE CONDITION										
	TOTAL		452.00	HOLE DRAG	1-3 Dn Up/Down									
WT. OF RIG				TORQUE AT BOTTOM	5300 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	1096	1089	1095
FUNNEL VIS - (SEC)	54	86	92
W.L. (cm3)			
pH	9.8	9.6	9.8
PVT@	142.7 m3	148.1 m3	143.8 m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Sawdust	76 sacks
Milgel	76 sacks

SOLIDS CONTROL

HOURS RUN	SHALE SHAKER	MUD CLEANER	CENTRIFUGE

METERS DRILLED

FROM	TO	DIR	ROTARY R.P.M	WT. ON BIT
428.00	452.00	D	60	24-28

CIRCULATION PRESSURE (KPa)

PUMP NO. 1 LINER SIZE (mm)	S.P.M.	PUMP NO. 2 LINER SIZE (mm)	S.P.M.
5850	162	90	152	90

REDUCED PUMP SPEED

1900	@	90	@ 433.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
418.00	0.75	127.00

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	1:15	1.25	2	Drill f/428m-433m
1:15	1:30	0.25	7	Rig Service and Function Annular
1:30	1:45	0.25	10	Deviation Survey @ 418m = 3/4 Deg. and 127 Azm.
1:45	4:30	2.75	2	Drill f/433m-443m
4:30	4:45	0.25	5	Circulate/Work Pipe and Clean Hole
4:45	5:00	3.25	2	Drill f/443m-452m

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS RUN	STACK TIME	OPERATOR FUEL	MAX EXP ROADLOAD	SAFETY TOPIC	M.A.C.P.
8.00			73000.00		

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	642-872-840	Murray McBain	8.00	MM	☑
Motorman	730-040-896	Nathan Schwandt	8.00	NS	☑
Floorman	647-089-432	Jamie Joyce(Des. Driller)	8.00	JJ	☑
Floorman	732-608-483	Dune Malmberg	8.00	DM	☑
Leaseman	647-247-006	Chris Thompson	8.00	CT	☑
Rig Manager	719-469-484	Kevin Vig		KV	☑
Top Drive	638-677-702	Sheldon Langley		SL	☑

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

BIT RECORD

NO.	BIT	SIZE	IADC CODE	SERIAL NO	JETS	DEPTH OUT	TOTAL METERS DRILLED	TOTAL HOURS RUN	DULL GRADING	LOC	BEAR	GAGE	OTHER	RUN
1	bit	444.5	8.40	3										
1	Near bit stab	230	1.90	444.5										
1	String stab	238	9.34	6 1 5										
1	Shock Sub	240	1.89	N.C.										
1	Sr Drill Collars	220	9.27	GTX-20										
1	String stab	236	1.81	6023875										
9	Jr Drill Collars	220	83.65	20 4 4										
1	9" Jars	234	4.94	137.00										
1	Crossover Sub	224	1.17	334.00										
3	Hvy Drill Collars	171	26.59	68.50										
9	D.P.		253.39	CUTTING STRUCTURE										
1	D.P.	Stabilizer	9.33											
	HOLE OPENER		0.00	HOLE CONDITION										
	TOTAL		496.29	HOLE DRAG	2000 up/2000 dwn									
WT. OF RIG				TORQUE AT BOTTOM	6300 ft-lbs									
WT. OF STRING			69000.00	FILL ON BOTTOM (m)										

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	
TIME	09:00	12:00	16:00
DENSITY kg/m³	1090	1090	1085
FUNNEL VIS - (SEC)	62	68	64
W.L. (cm3)			
pH	9.6	9.6	9.6
PVT@	141.3m3	135.3m3	139.4m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	2sks.
Sawdust	33sks.
Milgel	36sks.

SOLIDS CONTROL

HOURS RUN	SHALE SHAKER	MUD CLEANER	CENTRIFUGE

METERS DRILLED

FROM	TO	DIR	ROTARY R.P.M	WT. ON BIT
452.00	471.00	D	60	15-25

CIRCULATION PRESSURE (KPa)

PUMP NO. 1 LINER SIZE (mm)	S.P.M.	PUMP NO. 2 LINER SIZE (mm)	S.P.M.
5700	162	90	152	90

REDUCED PUMP SPEED

1900	@	90	@ 461.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	11:15	3.25	2	Drill fr. 452m - 462m
11:15	11:30	0.25	5	Circulate & clean hole
11:30	11:45	0.25	7	Rig Service, F/T pipe rams(8 secs)
11:45	15:45	4.00	2	Drill fr. 462m - 471m
15:45	16:00	0.25	5	Condition Mud & Circ.

NOTES

DRILLER SIGNATURE: Barry Verheist

HRS RUN	STACK TIME	OPERATOR FUEL	MAX EXP ROADLOAD	SAFETY TOPIC	M.A.C.P.
8.00			71000.00	Lease traffic	

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-919	Barry Verheist	8.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	650-713-324	Jaime Collins	8.00	JC	☑
Leaseman	713-958-481	Gary Kennedy	8.00	GK	☑

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

BIT RECORD

NO.	BIT	SIZE	IADC CODE	SERIAL NO	JETS	DEPTH OUT	TOTAL METERS DRILLED	TOTAL HOURS RUN	DULL GRADING	LOC	BEAR	GAGE	OTHER	RUN
1	bit	444.5	0.40	3										
1	Bell Sub	224	0.55	444.5										
1	Motor	241	10.55	6 1 5										
1	Double Pin	246	0.75	N.C.										
1	MWD Collar	241	10.86	GTX-20										
1	X/O	245	0.78	6023875										
2	Long Monel	230	18.71	20 4 4										
1	Shock Sub	240	2.91	137.00										
10	Jr Drill Collars	220	92.92	137.00										
1	9" Jars	234	4.94	334.00										
1	Crossover Sub	224	1.17	68.50										
9	D.P.		253.39	CUTTING STRUCTURE										
1	D.P.	Stabilizer	9.33	2 2 fc a e 1 lg										
	HOLE OPENER		0.00	HOLE CONDITION										
	TOTAL		469.89	HOLE DRAG										
WT. OF RIG				TORQUE AT BOTTOM										
WT. OF STRING				FILL ON BOTTOM (m)										

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	
TIME	17:00		
DENSITY kg/m³	1095		
FUNNEL VIS - (SEC)	62		
W.L. (cm3)			
pH	8.0		
PVT	146m3		

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

HOURS RUN	SHALE SHAKER	MUD CLEANER	CENTRIFUGE

METERS DRILLED

FROM	TO	DIR	ROTARY R.P.M	WT. ON BIT
471.00	472.00	d	60	21

CIRCULATION PRESSURE (KPa)

PUMP NO. 1 LINER SIZE (mm)	S.P.M.	PUMP NO. 2 LINER SIZE (mm)	S.P.M.
5900	162	90	152	90

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	2	Drill Fr/471m-472m
17:00	17:15	0.25	21	Safety Meeting (Trucks Hauling Around Lease)
17:15	17:18	0.05	5	Condition Mud & Circ.
17:18	17:45	3.50	6	Pull Out Of Hole & Flow Checks @461m,198m
17:45	21:15	0.25	7	Rig Service & Function Pipe Rams
21:15	21:30	0.25	21	Safety Meeting (Picking up tools)
21:30	21:45	0.25	20	Dir. Work (Make Up New S.H.A.)
21:45	24:00	2.25		

NOTES

DRILLER SIGNATURE: Bill Mills

HRS RUN	STACK TIME	OPERATOR FUEL	MAX EXP ROADLOAD	SAFETY TOPIC	M.A.C.P.
8.00			75000.00		

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-161	Bill Mills	8.00	BM	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☑
Motorman	722-572-791	Dwayne Fry	8.00	DF	☑
Floorman	734-598-469	Andy Gray	8.00	AG	☑
Floorman	652-342-416	Jonathan Greeve	8.00	JG	☑
Leaseman	652-880-757	Kyle Hrynkw	8.00	KH	☑
Top Drive	640-563-323	Dan Nicholson		DN	☑

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

ETS SERIAL NUMBER: PREC620_20040905_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

EPUD: 2004-09-22 22:49
LICENCE NO.: 8-92-A / 92-J-12
OPERATOR: Western Geopower Corp
SURFACE LOCATION: 8-92-A / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva

RIG RELEASE
WELL NAME AND NO.: MCS South Meager
CONTRACTOR: Precision Drilling
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

JOB NO.: 21
AFE

DAILY CHECKS
(1) Daily Visual Accident Inspection
(2) Personal Inspection (using checklist)
(3) H2S Alarm Placed (if required)
(4) Wind Indicator & Sock Displayed
(5) Flare Line Ignited
(6) BOP Drills Performed
(7) Monthly Inspection (BOP's, Flarelines & Degasser Lines)
(8) Pre-Tour Inspection and Start-up Meeting (information meeting)
(9) C.A.O.D.C. Rig Safety Inspection Conducted (spot check)
(10) Main Locations Safety Meeting or Lunch-and
(11) Crown Saver Checked
(12) Hydro-Fully Checked

DATE: 06-Oct-2004
RIG NO.: 620 E
FUEL @ 8:00
Rec: 64509 BOILER
TEMPERATURE: 4
CURRENT CONDITION: Cloudy
WIND DIRECTION: Calm
ROAD: Good

	O.D. (mm)	WALL THK. (mm)	WT. (kg/m)	GRADE	NO. OF JOINTS	TOTAL LENGTH	HEIGHT ON HEADBOARD
DRILL PIPE				K-55	10	126.00	6.35
DRILL COLLARS						7.32	
							124.00

	BODY WGT (kg/m)	LINEAR WGT (kg/m)	GRADE	Nom. ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	ENGINE LINER (mm)
								F-1600	BPMMP	305
								F-1600	BPMMP	308

TIME - HRS

OPER	DRILL	CIRC	REAMING	COND	TRIPS	SURV	WIPER TRIP	CUT DRLG LINE	SER. RIG	REPAIR RIG	DEV. WORK	WAIT ON CMT	MUD LOGGING	WELD	WAIT ON DAY	SAFETY MTG
MORN	1.50	1.25			2.75	0.25										
DAY	6.75					0.25										1.00
EVE	7.25					0.25										0.50
TOTAL	15.50	1.25			2.75	0.75										1.50

2.25

SHALE SHAKER(S)

	TYPE	HOLE
1	Derrick	
2		

SCREENS CHANGED: ☐ YES ☑ NO

	TOP	MIDDLE	BOTTOM
8.00	180	180	
8.00	180	180	
8.00	180	180	
24.00	180	180	

RENTALS/SERVICES

ITEM	DAY	EVE

BIT RECORD

NO.	QTY	ITEM	O.D. (mm)	LENGTH (m)
1	1	Bit	444.5	0.48
2	1	Bell Sub	224	0.58
3	1	Motor	241	10.96
4	1	Double Pin	246	0.76
5	1	MWD Collar	241	10.06
6	1	X/O	245	0.78
7	2	Flex Collars	230	18.71
8	1	Shock Sub	240	2.91
9	10	8" Drill Collars	220	92.92
10	1	8" Jars	234	6.94
11	1	Crossover Sub	224	1.17
12	9	D.P.	5"HWDP	253.39
13	1	D.P.	5"DP	9.33
		KELLY DOWN		0.00
		TOTAL		480.00

WT. OF DC
WT. OF STRING: 75000.00

BIT NO.: 4
SIZE: 444.5
IADC CODE: 5 3 5
MFG.: H.C.
TYPE: GTX-33
SERIAL NO.: 9021289
JETS: 18 | 18 | 18
DEPTH OUT (m)
DEPTH IN (m): 472.00
TOTAL METERS DRILLED (m): 8.00
TOTAL HOURS DRILLED: 1.50
DULL CONDITION: T | B | G | OC | BEARING/SEAL | GAUGE | OTHER
HOLE CONDITION
HOLE DRAG: 2000 up/2000 dwn
TORQUE AT BOTTOM
FILL ON BOTTOM (m): 0.10

MUD RECORD

MUD TYPE: Water Based

TIME	07:00
DENSITY kg/m3	1099
FUNNEL VIS. (sec)	64
W.L. (cm3)	
pH	8.5
PV/YP	135.6m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	1sks.
Sawdust	8sks.

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	VOLUME PROCESSED	VOLUME DISCARDED

METERS DRILLED

FROM	TO	METERS	HOURS	ROTARY R.P.M.	WT. ON BIT (kN)
410.00	472.00	R	25/125	1	
472.00	480.00	D	125	17	

CIRCULATION PRESSURE (kPa): PUMP NO.1 (SPM / S.P.M. / LINER SIZE (mm)): PUMP NO.2 (SPM / S.P.M. / LINER SIZE (mm))
9600: 152 | 90 | 152 | 90

REDUCED PUMP SPEED
3100: @ 90 @ 472.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

NOTES

DRILLER SIGNATURE: Barry Yerheist

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	2:00	2.00	20	Pick & make up directional tools(monitor hole)
2:00	4:15	2.25	6	R.I.H., flow check @ 0, & 230m
4:15	4:30	0.25	20	Dir. Work(Test M.W.D.)
4:30	5:00	0.50	6	R.I.H. to 410M, flow check @ 230 & 410m
5:00	8:15	1.25	3	Wash & ream fr. 410m - 472m
8:15	8:30	0.25	7	Rig Service, F/T Annular
8:30	8:00	1.50	2	Drill fr. 472m - 480m

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
78000.00 | Handling B.H.A.

MORNING TOUR 0:00 to 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-810	Barry Yerheist	8.00	BY	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	650-713-324	Jaime Collins	8.00	JC	☑
Floorman	122-830-839	Chris Eddy	8.00	CE	☑
Leaseman	713-989-461	Gary Kennedy	8.00	GK	☑
Rig Manager	719-408-484	Kevin Vig		KV	☑
Top Drive	640-599-323	Dan Nicholson		DN	☑

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

BIT RECORD

NO.	QTY	ITEM	O.D. (mm)	LENGTH (m)
1	1	Bit	444.5	0.48
2	1	Bell Sub	224	0.58
3	1	Motor	241	10.96
4	1	Double Pin	246	0.76
5	1	MWD Collar	241	10.06
6	1	X/O	245	0.78
7	2	Flex Collars	230	18.71
8	1	Shock Sub	240	2.91
9	10	8" Drill Collars	220	92.92
10	1	8" Jars	234	6.94
11	1	Crossover Sub	224	1.17
12	9	D.P.	5"HWDP	281.48
13	1	D.P.	5"DP	9.40
		KELLY DOWN		
		TOTAL		435.05

WT. OF DC
WT. OF STRING: 77000.00

BIT NO.: 4
SIZE: 444.5
IADC CODE: 5 3 5
MFG.: H.C.
TYPE: GTX-33
SERIAL NO.: 9021289
JETS: 18 | 18 | 18
DEPTH OUT (m)
DEPTH IN (m): 472.00
TOTAL METERS DRILLED (m): 38.00
TOTAL HOURS DRILLED: 8.25
DULL CONDITION: T | B | G | OC | BEARING/SEAL | GAUGE | OTHER
HOLE CONDITION
HOLE DRAG: 0-1 Klbs
TORQUE AT BOTTOM: 4211 ft-lbs
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: Water Based

TIME	09:00	12:00	16:00
DENSITY kg/m3	1095	1098	1090
FUNNEL VIS. (sec)	53	52	56
W.L. (cm3)			
pH	8.0	8.5	8.6
PV/YP	141.6m3	146.8m3	153.9m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	5 sks
Milgel	7 sks
Sawdust	22 sks
Lime	4 sks
Lignco	4 sks

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	VOLUME PROCESSED	VOLUME DISCARDED
6.00	1095	1080	1740

METERS DRILLED

FROM	TO	METERS	HOURS	ROTARY R.P.M.	WT. ON BIT (kN)
480.00	518.00	d	25/130	18	

CIRCULATION PRESSURE (kPa): PUMP NO.1 (SPM / S.P.M. / LINER SIZE (mm)): PUMP NO.2 (SPM / S.P.M. / LINER SIZE (mm))
11000: 162 | 98 | 152 | 90

REDUCED PUMP SPEED
3405: @ 95 @ 486.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
486.50	0.6	153.00
478.36	0.9	144.70
485.00	1.1	126.70
492.90	1.6	109.90

NOTES

DRILLER SIGNATURE: Barry Yerheist

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	9.25	7	Rig Service, F/T pipe rams(10 secs)
8:15	16:00	6.75	2	Drill Fr/480m- 510m
16:00	16:00	1.00	10	Accumulated M.W.D. Surveys

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
175000.00

DAY TOUR 8:00 to 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-151	Bill Mills	12.00	BM	☑
Derrickman	629-926-262	Rob Roth	12.00	RR	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☑
Floorman	734-586-488	Andy Grey	12.00	AG	☑
Floorman	652-342-418	Jonathan Greeve	12.00	JG	☑
Leaseman	652-990-757	Kyle Hrynhw	12.00	KH	☑

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

BIT RECORD

NO.	QTY	ITEM	O.D. (mm)	LENGTH (m)
1	1	Bit	444.5	0.48
2	1	Bell Sub	224	0.58
3	1	Motor	241	10.96
4	1	Double Pin	246	0.76
5	1	MWD Collar	241	10.06
6	1	X/O	245	0.78
7	2	Flex Collars	230	18.71
8	1	Shock Sub	240	2.91
9	10	8" Drill Collars	220	92.92
10	1	8" Jars	234	4.94
11	1	Crossover Sub	224	1.17
12	9	D.P.	5"HWDP	309.63
13	1	D.P.	5"DP	9.36
		KELLY DOWN		
		TOTAL		539.00

WT. OF DC
WT. OF STRING: 77000.00

BIT NO.: 4
SIZE: 444.5
IADC CODE: 5 3 5
MFG.: H.C.
TYPE: GTX-33
SERIAL NO.: 9021289
JETS: 18 | 18 | 18
DEPTH OUT (m)
DEPTH IN (m): 472.00
TOTAL METERS DRILLED (m): 67.00
TOTAL HOURS DRILLED: 15.50
DULL CONDITION: T | B | G | OC | BEARING/SEAL | GAUGE | OTHER
HOLE CONDITION
HOLE DRAG: 1000 up/1000 dwn
TORQUE AT BOTTOM: 4211 ft-lbs
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: Water Based

TIME	18:00	21:00	23:00
DENSITY kg/m3	1080	1075	1070
FUNNEL VIS. (sec)	44	46	51
W.L. (cm3)			
pH	10.0	8.6	9.0
PV/YP	153.4m3	160.1m3	148.7m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	1
Sawdust	19sks.
Milgel	36sks.

SOLIDS CONTROL

HOURS RUN	SCREEN SIZE	VOLUME PROCESSED	VOLUME DISCARDED
5.00	1075	1060	1680

METERS DRILLED

FROM	TO	METERS	HOURS	ROTARY R.P.M.	WT. ON BIT (kN)
510.00	539.00	D	30/126	18	

CIRCULATION PRESSURE (kPa): PUMP NO.1 (SPM / S.P.M. / LINER SIZE (mm)): PUMP NO.2 (SPM / S.P.M. / LINER SIZE (mm))
10500: 152 | 98 | 152 | 90

REDUCED PUMP SPEED
3200: @ 90 @ 535.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
513.50	3.8	99.40
522.80	4.7	95.20

NOTES

DRILLER SIGNATURE: Barry Yerheist

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	22:45	6.75	2	Drill Fr510m - 539m
22:45	23:00	0.25	7	Rig Service, F/T H.C.R.(2 secs)
23:00	23:30	0.50	2	Drill fr. 539m - 539m
23:30	24:00	0.50	10	Deviation Surveys(Accum.)

OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.
79000.00

EVENING TOUR 16:00 to 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-810	Barry Yerheist	4.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☑
Floorman	650-713-324	Jaime Collins	4.00	JC	☑
Floorman	122-830-839	Chris Eddy	4.00	CE	☑
Leaseman	713-989-461	Gary Kennedy	4.00	GK	☑

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

MORNING TOUR | DAY TOUR | EVENING TOUR

ETS SERIAL NUMBER: PREC620_20040906_1A

CHIMO ETS SOFTWARE VERSION:

CAODC — Chimo Equipment, A Varco Company

Based on the CAODC ETS file standard

Well Type	Geothermal
Re-Entry	No
KB to Ground Elev.	7.32
Well Name & No.	MC6 South Meager
Date	07-Oct-2004
Operator	Western Geopower Corp
Contractor	Precision Drilling
Rig Manager	Kevin Vig
Rig No.	520 E
Province	BC
Camp	Yes
Rig Safety Days	15.00

Spud	2004-09-22 22:49
Rig Release	
Job No	21
AFE	
Licence No.	a-92-A / 92-J-12
Well Name and No.	MC6 South Meager
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-Oct-2004
Rig No.	520 E
Fuel	67832 Boiler
Temperature	4
Current Condition	Cloudy
Wind Direction	Calm
Road	Muddy

Last Casing, Tubing or Liner

Grade	No. of Joints	Total Length	KB to Cas Head	Set At
K-55	10	126.00	7.32 / 6.31	124.00

Pumps

Liner Size	Grade	SPM	Tool/Rod	Pump Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke
29.90	SS-95	83.00	186.00	5"XH	179	F-1600	BPMMP	305
38.60	SS-95	87.00	168.00	5"XH	159	F-1600	BPMMP	305

Shale Shaker(s): Type Derrick; Screens Changed: No

Hours			
8.00	Top 100	Top 100	
8.00	Middle 100	Middle 100	
8.00	Bottom 100	Bottom 100	
24.00			

Time – Hrs

	Drill	Rig Service	Surveys
Morn	7.25	0.25	0.50
Day	6.75	0.25	1.00
Eve	6.75	0.25	1.00
Total	20.74	0.75	2.50

MORNING TOUR 0:00 to 8:00

No.	Drill String	O.D.	Length
1	Bit	444.5	0.40
1	Bell Sub	224	0.56
1	Motor	241	10.96
1	Double Pin	246	0.78
1	MWD Collar	241	10.06
1	X/O	245	0.78
2		230	18.71
1	Shock Sub	240	2.91
10	Drill Collars	220	92.92
1	9" Jars	234	4.94
1		224	1.17
12	D.P. Stands		337.65
	Kellydown		0.80
	Total		481.62
	Wt. of String		78000.00

Bit Record

Bit No.	4
Size	444.5
IADC Code	5 3 5
Mfg	H.C.
Type	GTX-33
Serial No.	6021289
Jets	20 / 20 / 20
Depth Out (m)	
Depth In (m)	472.00
Total Meters Drilled	92.80
Total Hours Run	22.78
Hole Drag	1000 up/2000dwn
Torque at Bottom	4211 ft-lbs
Fill on Bottom (m)	

Mud Record

Time	02:00	04:00	06:00
Density	1070	1075	1075
Funnel Vis	60	59	58
pH	9.0	9.0	9.0
PVT	148.6m3	148.5m3	149.4m3

Product	Amount
Caustic Soda	1sks.
Ligco	4sks.
Milgel	29sks.
Sawdust	16sks.

Solids Control: Centrifuge — Hours 8.00; 1070; 1060; 1675

Meters Drilled

From	To		Rotary RPM	WOB
539.00	564.00	D	25/125	15

Circulation Pressure 16100; Pump No. 1: 152 / 90; Pump No. 2: 152 / 90

Reduced Pump Speed: 3300 @ 90 @ 555.90

Deviation Survey

Depth (m)	Deviation	Direction
532.30	5.2	93.80
541.70	4.8	90.90

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
0:00	7:15	7.25	2	Drill fr. 539m - 564m
7:15	7:30	0.25	7	Rig Service, F/T annular
7:30	8:00	0.50	10	Deviation Surveys(Accum.)

Driller Signature: Barry Verhelst — Operator Fuel 0.00 — Max Exp Hookload 82000.00 — Safety Topic: Fall protection

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	642-389-910	Barry Verhelst	8.00	BV	No
Derrickman	647-452-903	Dave Makowsky	8.00	DM	No
Motorman	735-714-230	Chantry Vig	8.00	CV	No
Floorman	650-713-324	Jaime Collins	8.00	JC	No
Floorman	122-830-839	Chris Eddy	8.00	CE	No
Leaseman	713-659-461	Gary Kennedy	8.00	GK	No
Rig Manager	719-409-484	Kevin Vig		KV	No
Top Drive	640-569-323	Dan Nicholson		DN	No

DAY TOUR 8:00 to 16:00

No.	Drill String	O.D.	Length
1	Bit	444.5	0.40
1	Bell Sub	224	0.56
1	Motor	241	10.96
1	Double Pin	246	0.78
1		241	10.84
2		230	18.71
1	Shock Sub	240	2.91
10		220	92.92
1		234	6.11
3		171	26.59
6		127	56.46
13	D.P. Stands		365.73
	Kellydown		-1.97
	Total		591.00
	Wt. of String		60000.00

Bit Record: Bit No. 4; Size 444.5; IADC Code 5 3 5; Mfg H.C.; Type GTX-33; Serial No. 6021289; Depth In 472.00; Total Meters Drilled 119.00; Total Hours Run 29.50

Mud Record

Time	08:00	12:00	16:00
Density	1090	1095	1068
Funnel Vis	60	62	60
pH	9.0	9.0	8.5
PVT	150.2m3	121.5m3	126.3m3

Product	Amount
Milgel	10 sks
Caustic Soda	6 sks
Hydrated Lime	2 sks
Ligco	40 sks

Solids Control: Hours 3.80; 1080; 1080; 1750

Meters Drilled

From	To		Rotary RPM	WOB
564.00	591.00	d	25/125	15

Circulation Pressure 11600; Pump No. 1: 152 / 90; Pump No. 2: 152 / 90

Reduced Pump Speed: 3589 @ 90 @ 891.00

Depth (m)	Deviation	Direction
562.00	4.5	88.60
556.40	4.7	85.30
569.50	5.1	79.00

From	To	Hrs	Code	Details
8:00	14:45	6.75	2	Drill Fr/564m-591m
14:45	15:45	1.00	10	Deviation Surveys & Orient toolface
15:45	16:00	0.25	7	Rig Service & Function Pipe rams 9/9 Secs

Driller Signature: Bill Mills — Max Exp Hookload 83000.00

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	716-324-181	Bill Mills	12.00	BM	No
Derrickman	629-926-262	Rob Roth	12.00	RR	No
Motorman	722-572-761	Dwayne Fry	12.00	DF	No
Floorman	734-588-469	Andy Gray	12.00	AG	No
Floorman	662-342-416	Jonathan Greeve	12.00	JG	No
Leaseman	652-890-757	Kyle Hryniw	12.00	KH	No

EVENING TOUR 16:00 to 24:00

No.	Drill String	O.D.	Length
1	Bit	444.5	0.40
1	Bell Sub	224	0.56
1	Motor	241	10.96
1	Double Pin	246	0.76
1		241	10.84
2		230	18.71
1	Shock Sub	240	2.91
10		220	92.92
1		234	6.11
3		171	26.59
6		127	56.48
14	D.P. Stands		393.83
1	D.P. Singles		9.36
	Kellydown		-10.43
	Total		620.00
	Wt. of String		89000.00

Bit Record: Bit No. 4; Size 444.5; IADC Code 5 3 5; Mfg H.C.; Type GTX-33; Serial No. 6021289; Depth In 472.00; Total Meters Drilled 148.00; Total Hours Run 36.25; Hole Drag 2000 up/2000 dwn; Torque at Bottom 4211 ft-lbs

Mud Record

Time	18:00	21:00	23:00
Density	1085	1080	1075
Funnel Vis	49	49	50
pH	9.0	9.0	8.5
PVT	129.2m3	129.6m3	132m3

Product	Amount
Caustic Soda	3sks.
Milgel	16sks.
Sawdust	10sks.

Solids Control: Centrifuge — Hours 6.00; 1076; 1065; 1830

Meters Drilled

From	To		Rotary RPM	WOB
591.00	620.00	D	25/125	15-20

Circulation Pressure 10900; Pump No. 1: 152 / 90; Pump No. 2: 152 / 90

Reduced Pump Speed: 3200 @ 90 @ 619.00

Depth (m)	Deviation	Direction
575.10	6.8	76.90
587.60	6.3	74.40
598.00	6.9	73.60

From	To	Hrs	Code	Details
16:00	20:30	4.50	2	Drill Fr/591m- 611m
20:30	20:45	0.25	7	Rig Service, F/T H.C.R.(2 secs)
20:45	23:00	2.25	2	Drill fr. 611m - 620m
23:00	24:00	1.00	10	Deviation Surveys(Accum.)

Driller Signature: Barry Verhelst — Operator Fuel 0.00 — Max Exp Hookload 87000.00

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	642-389-910	Barry Verhelst	4.00	BV	No
Derrickman	647-452-903	Dave Makowsky	4.00	DM	No
Motorman	735-714-230	Chantry Vig	4.00	CV	No
Floorman	650-713-324	Jaime Collins	4.00	JC	No
Floorman	122-830-839	Chris Eddy	4.00	CE	No
Leaseman	713-659-461	Gary Kennedy	4.00	GK	No

ETS SERIAL NUMBER: PREC620_20040907_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

UWI	2004-09-22 22:49
RIG RELEASE	
JOB NO.	21
AFE	
LICENCE NO.	a-92-A / 92-J-12
WELL NAME AND NO.	MC6 South Meager
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-Oct-2004
RIG NO.	620 E
FUEL @ 6:00 R/S	67202
BOILER	
TEMPERATURE	6
CURRENT CONDITION	Rain
WIND DIRECTION	Calm
ROAD	Good

LAST CASING / TUBING / CR LINER	GRADE	NO. OF JOINTS	TOTAL LENGTH	KB TO CSG HEAD	SET AT
				7.32	
	K-55	10	125.00	6.31	124.00

LINER SIZE	DRAG	PIN ID	BOX OD	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE
29.50	SS-95	83.00	166.00	5"XH	170	F-1600	BPMMP	305
38.90	SS-85	67.00	168.00	5"XH	150	F-1600	BPMMP	305

WELL TYPE	Geothermal
RE-ENTRY	☐ Yes ☑ No
KB TO GROUND ELEV.	7.32
WELL NAME & No.	MC6 South Meager
DATE	06-Oct-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ Yes ☐ No
RIG SAFETY DAYS	16.00

DAILY CHECKS: OPR ☑ / R.M. ☑ (all items checked)

Time Summary (Hrs)

MORN		4.75			0.50	2.00	0.25			0.50
DAY		9.25	1.00			4.25	0.25	0.75		
EVE		6.75					0.25			1.00
TOTAL		11.75	1.00		0.50	5.25	0.75	0.75		1.50

SHALE SHAKER(S): NO. 3, TYPE Derrick, NEW; SCREENS CHANGED ☐ Yes ☑ No; TOP 100 / 100; MIDDLE 100 / 100; BOTTOM 100 / 100; TOTAL 24.00

RENTALS/SERVICES

MORNING TOUR (0:00 to 8:00)

No.	BHA	O.D.	Length
1	Bit	444.5	0.40
1	Bell Sub	224	0.56
1	Motor	241	10.96
1	Double Pin	246	0.76
1	[illegible]	241	10.84
2	[illegible]	230	18.71
1	Shock Sub	240	2.91
10	[illegible]	228	92.92
1	[illegible]	234	6.11
3	[illegible]	171	26.59
6	[illegible]	127	66.48
15	D.P. Stands		421.92
	D.P. Singles		
	Kellydown		-13.16
	Total		636.08
	Wt. of DC		
	Wt. of String		80000.00

BIT RECORD	
BIT NO.	4
SIZE	444.5
IADC CODE	5 3 6
MFG.	H.C.
TYPE	GTX-33
SERIAL NO.	6021289
JETS	
DEPTH OUT (m)	636.00
DEPTH IN (m)	472.00
TOTAL METERS DRILLED	164.00
TOTAL HOURS RUN	41.00
HOLE DRAG	2000 up/2000 dwn
TORQUE AT BOTTOM	4211 ft-lbs
FILL ON BOTTOM (m)	

MUD RECORD			
TIME	02:00	04:00	06:00
DENSITY	1076	1066	1066
FUNNEL VIS.	63	66	65
W.L. (cm3)			
pH	9.0	9.0	9.0
PVT	133.8m3	136.6m3	136.6m3

MUD MATERIAL ADDED – PRODUCT	AMOUNT x UNIT
Caustic Soda	4sks.
Ligco	20sks.
Lime	1sks.
Milgel	41sks.
Sawdust	17sks.

SOLIDS CONTROL: Centrifuge — Hours run 6.00; 1065; 1060; 1065

METERS DRILLED FROM	TO		ROTARY RPM	WT ON BIT
620.00	636.00	D	25/126	18-25

Circulation pressure (KPa): 10290; Pump No. 1: liner 152, S.P.M. 90; Pump No. 2: liner 152, S.P.M. 90
Reduced pump speed: 3300 @ 90 @ 629.00

DEPTH (m)	DEVIATION (o)	DIRECTION
607.20	7.6	72.70
614.50	8.1	73.40

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	3:30	3.50	2	Drill fr. 620m - 630m
3:30	3:45	0.25	7	Rig Service, F/T Annular
3:45	5:00	1.25	2	Drill fr. 630m - 636m
5:00	5:30	0.50	10	Deviation Surveys(Accum.)
5:30	6:00	0.50	5	Condition Mud & Circ.
6:00	8:00	2.00	6	Hoist bit #4, flow check @ 620, 610 439, & 230M

NOTES: [illegible]

DRILLER SIGNATURE: Barry Verhelst — 0.00 — MAX EXP HOOKLOAD: 86000.00 — SAFETY TOPIC: Fire drill @ camp — M.A.C.P.:

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	736-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	650-713-324	Jaime Collins	8.00	JC	☐	☑
Floorman	122-830-839	Chris Eddy	8.00	CE	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	640-569-323	Dan Nicholson		DN	☐	☑

RATE SCHEDULE: ☑ Manual ☐ Manual ☐ — DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR (8:00 to 16:00)

No.	BHA	O.D.	Length
1	Bit / Bell sub	444.5	0.96
1	Motor	241	10.96
1	Double Pin	246	0.76
1	[illegible]	241	10.84
2	[illegible]	230	18.71
1	Shock Sub	240	2.91
10	[illegible]	220	92.92
1	[illegible]	234	5.11
1	8" Pony D.C.	228	3.93
3	[illegible]	171	26.59
6	[illegible]	127	66.48
14	D.P. Stands		393.83
2	D.P. Singles		18.71
	Kellydown		-6.71
	Total		637.00
	Wt. of DC		49900.00
	Wt. of String		80900.00

BIT RECORD		
BIT NO.	4	5
SIZE	444.5	444.5
IADC CODE	5 3 6	
MFG.	H.C.	H.C.
TYPE	GTX-33	GTX-40
SERIAL NO.	6021289	602092
JETS		
DEPTH OUT (m)	635.00	
DEPTH IN (m)	472.00	636.00
TOTAL METERS DRILLED	164.00	1.00
TOTAL HOURS RUN	41.00	0.25
CUTTING STRUCTURE	2 / 5 / bt / 0 / a / 5 / Ic	
HOLE DRAG	0-1	
TORQUE AT BOTTOM		
FILL ON BOTTOM (m)		

MUD MATERIAL ADDED – PRODUCT	AMOUNT x UNIT
Caustic Soda	3 sks
Hydrated Lime	4 sks

SOLIDS CONTROL: Centrifuge

METERS DRILLED FROM	TO		ROTARY RPM	WT ON BIT
636.00	637.00	d	25/126	21

Circulation pressure (KPa): 11600; Pump No. 1: 152, 90; Pump No. 2: 152, 90

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	10:00	2.00	6	Pull out of hole & flow checks @620m, 610m, 439m, 236m, 0m
10:00	11:30	1.50	20	Dir. Work Change motor angle, Scribe motor, Change bit.
11:30	12:00	0.50	6	Run in hole W/Bit #5
12:00	12:15	0.25	7	Rig Service & Function pipe rams 9/9 Secs
12:15	13:00	0.75	9	Cut Off Drill Line
13:00	14:45	1.75	6	Run in hole
14:45	15:45	1.00	3	Wash to bottom Fr/531 m
15:45	16:00	0.25	2	Pattern bit and Drill fr/636-637m

NOTES: [illegible]

DRILLER SIGNATURE: Bill Mills

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	734-595-469	Andy Gray	12.00	AO	☐	☑
Floorman	652-342-418	Jonathan Greeve	12.00	JG	☐	☑
Leaseman	652-890-757	Kyle Hrynkiw	12.00	KH	☐	☑

RATE SCHEDULE: ☑ Manual — DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR (16:00 to 24:00)

No.	BHA	O.D.	Length
1	Bit / Bell sub	444.5	0.96
1	Motor	241	10.96
1	Double Pin	246	0.76
1	[illegible]	241	10.84
2	[illegible]	230	18.71
1	Shock Sub	240	2.91
10	[illegible]	220	92.92
1	[illegible]	234	6.11
1	8" Pony D.C.	228	3.93
3	[illegible]	171	26.68
6	[illegible]	127	66.48
16	D.P. Stands		450.08
	D.P. Singles		
	Kellydown		-7.76
	Total		673.60
	Wt. of DC		49900.00
	Wt. of String		82000.00

BIT RECORD	
BIT NO.	5
SIZE	444.5
IADC CODE	
MFG.	H.C.
TYPE	GTX-40
SERIAL NO.	602092
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	636.00
TOTAL METERS DRILLED	37.00
TOTAL HOURS RUN	7.60
HOLE DRAG	3000 up/3000 dwn
TORQUE AT BOTTOM	4211 ft-lbs
FILL ON BOTTOM (m)	

MUD RECORD			
TIME	16:30	18:00	23:00
DENSITY	1076	1080	1065
FUNNEL VIS.	62	65	56
W.L. (cm3)			
pH	9.6	9.6	9.0
PVT	136.6m3	138.6m3	134.8m3

MUD MATERIAL ADDED – PRODUCT	AMOUNT x UNIT
Caustic Soda	1sks.
Ligco	5sks.

SOLIDS CONTROL: Centrifuge — Hours run 8.00; 1076; 1070; 1066

METERS DRILLED FROM	TO		ROTARY RPM	WT ON BIT
637.00	673.00	D	25/126	18-23

Circulation pressure (KPa): 9560; Pump No. 1: 152, 90; Pump No. 2: 152, 90
Reduced pump speed: 3200 @ 90 @ 661.00

DEPTH (m)	DEVIATION (o)	DIRECTION
629.70	9.1	74.60
639.10	9.6	75.60
648.60	9.8	78.10
657.90	10.3	75.10

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	20:30	4.50	2	Drill Fr/636m- 662m
20:30	20:45	0.25	7	Rig Service, F/T H.C.R.(2 secs)
20:45	23:00	2.25	2	Drill fr. 662m - 673m
23:00	24:00	1.00	10	Deviation Surveys(Accum.)

NOTES: [illegible]

DRILLER SIGNATURE: Barry Verhelst — 0.00 — MAX EXP HOOKLOAD: 89000.00

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	650-713-324	Jaime Collins	4.00	JC	☐	☑
Floorman	122-830-839	Chris Eddy	4.00	CE	☐	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☐	☑

RATE SCHEDULE: ☑ Manual — DRIVER A — CREW SAFETY DAYS — DRIVER B

ETS SERIAL NUMBER: PREC620 _20040908_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49
RIG RELEASE:
JOB NO: 21
AFE:
LICENCE NO.: a-92-A / 92-J-12
WELL NAME AND NO.: MC5 South Meager
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
(i) Daily Walk Around Inspection
(j) Derrick/ Inspection Work Survey Checklist
(k) H2S Safe Period (if required)
(l) Wind Locator & Sock Diagram Posted
(m) Flare Line Secure
(n) BOP Drills Performed
(o) Weekly Inspect BOP's, Plumbing & Diagram Lines
(p) Pre Tour Meeting Safety Meeting (tour commencement)
(q) C A O D C Rig Safety Inspection Checklist (monthly)
(r) Visual Inspection Before Moving or Lowering
(s) Crown Saver Checked
(t) Lease Info Checked

DAILY COSTS: DFR. | R.M.

DATE: 09-Oct-2004
RIG NO.: 620 E
FUEL @ 0.00
RIG: 71823 BOILER

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

LAST CASING TUBING OR LINER:

						K-55	10	126.00	6.31	124.00	
									7.32		

		29.00	SS-95	83.00	166.00	5"XH	170	F-1600	BPM/MP		305
		36.00	SS-95	67.00	166.00	5"XH	150	F-1600	BPM/MP		305

WELL TYPE: Geothermal
RE-ENTRY: ☐ YES ☑ NO
KB TO GROUND ELEV.: 7.32
WELL NAME & NO.: MC5 South Meager
DATE: 09-Oct-2004
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig
RIG NO.: 620 E
PROVINCE: BC
CAMP: ☑ YES ☐ NO
ROG SAFETY DAYS: 17.00

TIME - HRS

CREW	RIG UP / DOWN	DRILL	REAMING (CORING)	SURVEY	TRIPS	CIRC & COND	REPAIR RIG	SERVICE RIG	DRILL STEM TEST	FISH	WAIT ON WEATHER	WAIT ON ORDERS	RIG REPAIR	CUT OFF DRILL LINE	SLIP DRILL LINE	OTHER	REMARKS	TOTAL
MORN	1.50		0.50	0.50	0.25			0.25								Berrice Top Drive		
DAY	9.00	9.50		1.50	9.25			0.50									0.25	
EVE	4.75				9.25			1.00										
TOTAL	13.25	9.50		2.00	7.00	9.75		1.75									0.25	

SHALE SHAKER(S) | RENTALS/SERVICES

TOTALS		NO.	TYPE
6.00	SCREENS CHANGED	☐ YES	☑ NO
6.00	TOP	100	100
6.00	MIDDLE	100	100
24.00	BOTTOM	100	100

Derrick, new

MORNING TOUR 0:00 TO 8:00

BIT RECORD

NO.	BIT / SUB	O.D. (mm)	LENGTH (m)
1	Bit / Sub, bsr	444.5	0.96
1	Motor	241	10.96
1	Double Pin	245	0.76
1	non-mag monel	241	10.84
2	8" sub stabilizer	230	18.71
1	Shock Sub	240	2.91
10	8" Drill Collars	229	92.92
1	8" Jars/Accelerator	234	6.11
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6	Monel/Non-Mag Spiral Collar	127	56.48
15	DP	S135	460.06
2	DP	S135	18.69
	KELLY DOWN		-19.74
	TOTAL		860.20
WT. OF DC			49000.00
WT. OF STRING			$2000.00

BIT NO.: 5 | 6 | 6
SIZE: 444.5 | 444.5 | H.C.
MDC CODE: | | H.C.
MFG: H.C. | H.C. | CTXC33
TYPE: GTX-40 | CTXC33 | 6018034
SERIAL NO.: 602092 | 6018034 |
JETS: 3 x 20 | 3 x 20 |
DEPTH OUT (m): 535.00 | 680.00
DEPTH IN (m): 535.00 | 535.00
TOTAL HOURS DRILLED: 44.00
TOTAL HOURS RUN: 8.50
CUTTING STRUCTURE: 0 | Gage | ODC | Reason Pulled | Inner
HOLE CONDITION
HOLE DRAG: 3000 up/3000 dwn
TORQUE AT BOTTOM: 4211 ft-lbs
FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Gel Chem | Non-Dispersed | Oil Based
TIME: 02:00
DENSITY (kg/m³): 1066
FUNNEL VIS. (s/L): 58
W.L. (cm3):
pH: 9.0
PV/YP: 135.5m3
MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Ligco	6sks.
Milgel	21sks.

SOLIDS CONTROL: Centrifuge

HOURS RUN	MUD WEIGHT IN	MUD WEIGHT OUT	VISCOSITY OUT
2.00	1065	1060	1880

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kN)
673.00	680.00	D	25/125	21

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER (mm) 152 S.P.M. 90 | PUMP NO. 2 LINER (mm) 152 S.P.M. 90
REDUCED PUMP SPEED: 3200 kPa @ 90 S.P.M. = 679.00 m
DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
665.30	10.5	73.70

TIME LOG

FROM	TO	HOURS	CODE	OPERATION
0:00	1:30	1.50	2	Drill fr. 673m - 680m
1:30	1:45	0.25	10	Deviation Survey
1:45	2:15	0.50	5	Condition Mud & Circ.
2:15	6:15	4.00	6	Hoist bit #5, flow check @ 660, 640, 478, 248, & 0m
6:15	6:30	0.25	7	Rig Service, F/T Blind rams(9 secs)
6:30	8:00	1.50	6	Dress bit #6 & R.I.H., flow check @ 0m

NOTES

DRILLER SIGNATURE: Barry Vertheist
HRS SINCE LAST INSP.: 8.00
STACK TIME:
OPERATOR FUEL:
MAX EXP HOOKLOAD: $7000.00
SAFETY TOPIC: Weekend awareness
M.A.C.P.:

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

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

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES 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	650-713-324	Jaime Collins	8.00	JC	☑
Floorman	122-830-839	Chris Eddy	8.00	CE	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☑
Rig Manager	719-409-464	Kevin Vig		KV	☑
Top Drive	640-589-323	Dan Nicholson		DN	☑

DAY TOUR 8:00 TO 16:00

BIT RECORD

NO.	BIT / SUB	O.D. (mm)	LENGTH (m)
1	Bit / Sub, bsr	444.5	0.96
1	Motor	241	10.96
1	Double Pin	245	0.76
1	non-mag monel	241	10.84
2	8" sub stabilizer	230	18.71
1	Shock Sub	240	2.91
10	8" Drill Collars	229	92.92
1	8" Jars/Accelerator	234	6.11
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6	Monel/Non-Mag Spiral Collar	127	56.48
17	DP	S135	478.18
1	DP	S135	9.33
	KELLY DOWN		-10.66
	TOTAL		788.00
WT. OF DC			49000.00
WT. OF STRING			$3000.00

BIT NO.: 6
SIZE: 444.5
MDC CODE:
MFG: H.C.
TYPE: CTXC33
SERIAL NO.: 6018034
JETS: 3 x 20
DEPTH OUT (m):
DEPTH IN (m): 680.00
TOTAL HOURS DRILLED: 26.00
TOTAL HOURS RUN: 5.00
CUTTING STRUCTURE: 0 | Gage | ODC | Reason Pulled | Inner
HOLE CONDITION
HOLE DRAG: 0 - 2
TORQUE AT BOTTOM:
FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Gel Chem | Non-Dispersed | Oil Based

TIME	11:30	14:30	04:00
DENSITY (kg/m³)	1078	1065	1060
FUNNEL VIS. (s/L)	58	55	43
W.L. (cm3)			
pH	9.0	10.0	10.5
PV/YP	135.4m3	126.9m3	132.1m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Ligco	16 sks
Caustic Soda	3 sks
Hydrated Lime	2 sks
Defoamer LD-8	2 pls
Milgel	5 sks

SOLIDS CONTROL: Centrifuge

HOURS RUN	MUD WEIGHT IN	MUD WEIGHT OUT	VISCOSITY OUT
5.00	1070	1060	1730

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kN)
680.00	702.00	D	25/130	21

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER (mm) 152 S.P.M. 90 | PUMP NO. 2 LINER (mm) 152 S.P.M. 90
REDUCED PUMP SPEED: 3022 kPa @ 90 S.P.M. = 698.00 m
DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
685.10	11.2	70.50

TIME LOG

FROM	TO	HOURS	CODE	OPERATION
8:00	9:00	1.00	6	Run in Hole W/Bit # 6
9:00	9:15	0.25	23	(Service Top Drive)
9:15	9:45	0.50	6	Run in Hole W/Bit #6
9:45	10:15	0.50	3	Wash to Bottom fr 653m
10:15	14:15	4.00	2	Pattern Bit & Drill 444.5mm Hole Fr 680m-698m
14:15	14:30	0.25	7	Rig Service & Function Pipe Rams 9/9 secs
14:30	16:30	1.00	2	Drill Fr/698m-708m
16:30	16:00	0.50	10	Accumulated M.W.D. Survey

NOTES

DRILLER SIGNATURE: Bill Mills
HRS SINCE LAST INSP.:
STACK TIME:
OPERATOR FUEL:
MAX EXP HOOKLOAD: $7000.00
SAFETY TOPIC:
M.A.C.P.:

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ SERVICE
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	629-826-282	Rob Roth	12.00	RR	☐
Motorman	722-572-791	Dwayne Fry	12.00	DF	☐
Floorman	734-598-489	Andy Gray	12.00	AG	☐
Floorman	852-342-416	Jonathan Greeve	12.00	JG	☐
Leaseman	852-890-757	Kyle Hryniw	12.00	KH	☐

EVENING TOUR 16:00 TO 24:00

BIT RECORD

NO.	BIT / SUB	O.D. (mm)	LENGTH (m)
1	Bit / Sub, bsr	444.5	0.96
1	Motor	241	10.96
1	Double Pin	245	0.76
1	non-mag monel	241	10.84
2	8" sub stabilizer	230	18.71
1	Shock Sub	240	2.91
10	8" Drill Collars	229	92.92
1	8" Jars/Accelerator	234	6.11
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6	Monel/Non-Mag Spiral Collar	127	56.48
15	DP	S135	506.34
2	DP	S135	18.70
	KELLY DOWN		-16.11
	TOTAL		738.00
WT. OF DC			49000.00
WT. OF STRING			$3000.00

BIT NO.: 6
SIZE: 444.5
MDC CODE:
MFG: H.C.
TYPE: CTXC33
SERIAL NO.: 6018034
JETS: 3 x 20
DEPTH OUT (m):
DEPTH IN (m): 680.00
TOTAL HOURS DRILLED: 58.00
TOTAL HOURS RUN: 11.75
CUTTING STRUCTURE: 8 | Gage | ODC | Reason Pulled | Inner
HOLE CONDITION
HOLE DRAG:
TORQUE AT BOTTOM: 4211 ft-lbs
FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: Gel Chem | Non-Dispersed | Oil Based

TIME	16:00	21:00	23:00
DENSITY (kg/m³)	1070	1065	1065
FUNNEL VIS. (s/L)	49	48	48
W.L. (cm3)			
pH	10.0	10.5	10.5
PV/YP	129.5m3	136.9m3	139m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Caustic Soda	1sks.
Ligco	8sks.

SOLIDS CONTROL: Centrifuge

HOURS RUN	MUD WEIGHT IN	MUD WEIGHT OUT	VISCOSITY OUT
4.00	1065	1060	1755

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB (kN)
705.00	738.00	D	25/125	23

CIRCULATION PRESSURE (kPa): PUMP NO. 1 LINER (mm) 152 S.P.M. 90 | PUMP NO. 2 LINER (mm) 152 S.P.M. 90
REDUCED PUMP SPEED: 3300 kPa @ 90 S.P.M. = 736.00 m
DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
695.40	11.7	69.60
702.90	11.7	69.80
714.00	12.5	68.10

TIME LOG

FROM	TO	HOURS	CODE	OPERATION
16:00	22:45	6.75	2	Drill Fr/708m- 738m
22:45	23:00	0.25	7	Rig Service, F/T Annular
23:00	24:00	1.00	10	Deviation Survey(Accum.)

NOTES

DRILLER SIGNATURE: Barry Vertheist
HRS SINCE LAST INSP.: 8.00
STACK TIME:
OPERATOR FUEL:
MAX EXP HOOKLOAD: $9000.00
SAFETY TOPIC:
M.A.C.P.:

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

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

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Vertheist	4.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☑
Floorman	650-713-324	Jaime Collins	4.00	JC	☑
Floorman	122-830-839	Chris Eddy	4.00	CE	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☑

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | RIG RELEASE | JOB NO.: 21 | AFE

LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager

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 / D.M.)
(1) Daily Write Up and Inspection
(2) Weekly Inspection (every Monday)
(3) H2S Signs, Personal equipment
(4) Weekly Inspection & Back Pressure Valves
(5) Kelly Cock Checked
(6) BOP Drills Performed
(7) Monthly Inspection BOP's, Functioning & Pressure Tests
(8) Rig Site Weekly Safety Meeting (also recorded)
(9) C.A.O.D.C. Rig Safety Inspection Checklist (also logged)
(10) Mast Inspection Before Raising or Lowering
(11) Crown Saver Checked
(12) Upper Kelly Checked

Date: 10-Oct-2004 | RIG NO.: 620 E | RIG: 58564 BOILER

FUEL @ 8:00: 7.32

LAST CASING, TUBING OR LINER

O.D. (mm)	WALL TH. (mm)	kg/m	GRADE	NO. OF JOINTS	TOTAL PIPE LENGTH	HOLE OR PIPE DEPTH (m)	SET AT (m)
						7.32	
			K-55	10	125.00	6.31	124.00

WELL TYPE: Geothermal | RE-ENTRY: ☐ YES ☑ NO | KB TO GROUND ELEV.: 7.32

WELL NAME & No.: MC6 South Meager | DATE: 10-Oct-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

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

PROVINCE: BC | CAMP: ☑ YES ☐ NO | RIG SAFETY DAYS: 18.00

MORNING TOUR 0:00 TO 8:00

TIME LOG

FROM	TO	CODE	BIT NO.	MUD PUMP NO. 1 SPM	MUD PUMP NO. 2 SPM	HRS	CREW	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
738.00	778.00	D	25/130 15-22	152 90	152 90	0:00	3:30	3.50	2	Drill fr. 738m - 755m
						3:30	3:45	0.25	21	B.O.P. drill w/crew, well secure in 1 min 25 secs
						3:45	4:00	0.25	7	Rig Service, F/T Annular(30 secs)
						4:00	7:00	3.00	2	Drill fr. 755m - 778m
						7:00	8:00	1.00	10	Deviation Surveys & check shots(Accum.)

REDUCED PUMP SPEED: 3300 @ 90 @ 754.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
732.70	14.5	66.00
761.60	15.4	67.20

NOTES
P/T crown saver, on P.U.T. blocks
Engines #1, #2: 24hrs A.D.: 85 hrs, Power #1, # #2: 30.5 hrs

DRILLER SIGNATURE: Barry Varheist

SAFETY MEET	BOP DRILL	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
0.00			93000.00	Unloading casing	

BIT RECORD

NO.	ITEM	O.D. (mm)	LENGTH (m)
1	BI / Bell sub	444.5	0.95
1	Motor	241	10.96
1	Double Pin	246	0.76
1	NM Roller Reamer	241	10.84
2	17 1/2 Stabilizer	230	1871
1	Shock Sub	240	2.91
10	9" Drill Collars	229	92.32
1	8" Jars	234	6.11
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	28.59
6	Accumulator Sub	127	56.48
2	D.P.	114	882.46
	D.P.	Swaged	
	HELLY/DOWN		-15.83
	TOTAL		778.00

BIT NO.: 6 | SIZE: 444.5 | IADC CODE | MFG.: H.C. | TYPE: CTXC33 | SERIAL NO.: 6018034 | JETS: 28 / 28 / 28 | DEPTH OUT (m): 778.00 | DEPTH IN (m): 680.00 | TOTAL METERS DRILLED (m): 98.00 | TOTAL HOURS RUN: 19.25 | CUTTING STRUCTURE: T1 / D / NOZ / LOC | B | Gage | ODC | BEARING VALUE | REASON PULLED

HOLE CONDITION
HOLE DRAG: 5000 up/5000 dwn
TORQUE AT BOTTOM: 7560 ft-lbs
FILL ON BOTTOM (m):

wt. of OC: 49000.00
wt. of STRING: 93000.00

MUD RECORD

MUD TYPE: Gel Chem | MUD SAMPLE FROM: Suction

TIME	02:00	04:00	06:00
DENSITY kg/m3	1055	1056	1060
FUNNEL VIS. - sec/L	44	46	49
W.L. (cm3)			
pH	10.5	10.5	10.5
PV/YP	139.3m3	140.6m3	141.9m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Ligco	12sks.
Lime	4sks.
Milgel	3sks.

Centrifuge: HOURS RUN | VOLUME PROCESSED | DISCHARGE DENSITY | DISCHARGE RATE

METERS DRILLED

FROM	TO	BIT NO.	FOOTAGE M	HOURS ON BOTTOM	ROP M/HR
738.00	778.00	D	25/130	15-22	15.22

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

11700	152	90	152	90

DAY TOUR 8:00 TO 16:00

TIME LOG

FROM	TO	CODE	BIT NO.	MUD PUMP NO. 1 SPM	MUD PUMP NO. 2 SPM	HRS	CREW	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
778.00	894.00	D	25/125 22	152 90	152 90	8:00	13:00	5.00	2	Drill Fr 778m-792m
						13:00	13:15	0.25	7	Rig Service & Function H.C.R. Valve 4/4 Secs
						13:15	13:45	0.50	22	(Service F-1600 Mud Pump) Change head and liner
						13:45	15:30	1.75	2	Drill Fr 792m-804m
						15:30	16:00	0.50	10	Accumulated M.W.D. Surveys & Orient tool face

REDUCED PUMP SPEED: 3182 @ 90 @ 791.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
778.60	16.3	58.10
778.60	17.4	61.90

NOTES
Crew Size Covers same
Weekly Inspect Tongs and Iong (see (at starter Off)

DRILLER SIGNATURE: Bill Mills

SAFETY MEET	BOP DRILL	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
0.00				P/U Drill Pipe	

BIT RECORD

NO.	ITEM	O.D. (mm)	LENGTH (m)
1	BI / Bell sub	444.5	0.95
1	Motor	241	10.96
1	Double Pin	246	0.76
1	NM Roller Reamer	241	10.84
2	17 1/2 Stabilizer	230	18.71
1	Shock Sub	240	2.91
10	9" Drill Collars	229	92.82
1	8" Jars	234	6.11
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	28.59
6	Accumulator Sub	127	56.48
20	D.P.	114	562.46
2	D.P.	Swaged	18.74
	HELLY/DOWN		-8.37
	TOTAL		804.00

BIT NO.: 6 | SIZE: 444.5 | IADC CODE | MFG.: H.C. | TYPE: CTXC33 | SERIAL NO.: 6018034 | JETS: 28 / 28 / 28 | DEPTH OUT (m) | DEPTH IN (m): 680.00 | TOTAL METERS DRILLED (m): 124.00 | TOTAL HOURS RUN: 58.48 | CUTTING STRUCTURE: T1 / D / NOZ / LOC | B | Gage | ODC | BEARING VALUE | REASON PULLED: 25.00

HOLE CONDITION
HOLE DRAG: 2-3 Kdan
TORQUE AT BOTTOM:
FILL ON BOTTOM (m):

wt. of OC: 49000.00
wt. of STRING: 94000.00

MUD RECORD

MUD TYPE: Gel Chem | MUD SAMPLE FROM: Suction

TIME	09:00	12:00	15:00
DENSITY kg/m3	1078	1080	1070
FUNNEL VIS. - sec/L	50	44	48
W.L. (cm3)			
pH	10.5	10.5	10.0
PV/YP	116.3m	111.4m3	109.6m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Ligco	24 sks
Caustic Soda	4 sks
Hydrated Lime	2 sks

Centrifuge: HOURS RUN | VOLUME PROCESSED | DISCHARGE DENSITY | DISCHARGE RATE

8.00	1075	1060	1740

METERS DRILLED

FROM	TO	BIT NO.	FOOTAGE M	HOURS ON BOTTOM	ROP M/HR
778.00	894.00	D	25/125	22	5.27

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

11300	152	90	152	90

EVENING TOUR 16:00 TO 24:00

TIME LOG

FROM	TO	CODE	BIT NO.	MUD PUMP NO. 1 SPM	MUD PUMP NO. 2 SPM	HRS	CREW	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
894.00	963.00	D	25/125 15-22	152 90	152 90	16:00	22:00	6.00	2	Drill Fr/804m- 836m
						22:00	22:15	0.25	7	Rig Service, F/T pipe rams(10 secs)
						22:15	23:15	1.00	2	Drill fr. 836m - 836m
						23:15	24:00	0.75	10	Deviation Surveys & toolface orientation

REDUCED PUMP SPEED: 3400 @ 90 @ 828.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (s)	DIRECTION
807.60	18	48.40

NOTES
P/T crown saver
Drilled into Formation @ 812.5m, P.U.T. base of T.Jnt.), Rotating @ 5000

DRILLER SIGNATURE: Barry Varheist

SAFETY MEET	BOP DRILL	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
4.00			97000.00		

BIT RECORD

NO.	ITEM	O.D. (mm)	LENGTH (m)
1	BI / Bell sub	444.5	0.95
1	Motor	241	10.96
1	Double Pin	246	0.76
1	NM Roller Reamer	241	10.84
2	17 1/2 Stabilizer	230	18.71
1	Shock Sub	240	2.91
10	9" Drill Collars	229	92.92
1	8" Jars	234	6.11
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	28.59
6	Accumulator Sub	127	56.48
22	D.P.	114	618.89
	D.P.	Swaged	
	HELLY/DOWN		-13.85
	TOTAL		836.20

BIT NO.: 6 | SIZE: 444.5 | IADC CODE | MFG.: H.C. | TYPE: CTXC33 | SERIAL NO.: 6018034 | JETS: 28 / 28 / 28 | DEPTH OUT (m) | DEPTH IN (m): 680.00 | TOTAL METERS DRILLED (m): 156.00 | TOTAL HOURS RUN: 32.00 | CUTTING STRUCTURE: T1 / D / NOZ / LOC | B | Gage | ODC | BEARING VALUE | REASON PULLED

HOLE CONDITION
HOLE DRAG: 6000 up/6000 dwn
TORQUE AT BOTTOM: 7540 FT-LBS
FILL ON BOTTOM (m):

wt. of OC: 49000.00
wt. of STRING: 95000.00

MUD RECORD

MUD TYPE: Gel Chem | MUD SAMPLE FROM: Suction

TIME	16:00	21:00	23:00
DENSITY kg/m3	1075	1065	1065
FUNNEL VIS. - sec/L	48	47	48
W.L. (cm3)			
pH	10.0	10.0	9.5
PV/YP	108.7m3	106.4m3	107.3m3

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT
Caustic Soda	1sks.
Ligco	6sks.
Sawdust	12sks.
Lime	1sks.
All Temp	12sks.

Centrifuge: HOURS RUN | VOLUME PROCESSED | DISCHARGE DENSITY | DISCHARGE RATE

8.00	1065	1060	1775

SHALE SHAKER(S) / RENTALS/SERVICES

TOTAL HRS	NO.	TYPE	Derrick	New
8.00				

ADDITIONAL SHAKER(S) ☐ YES ☑ NO

8.00	TOP	100	TOP 100
8.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-388-919	Barry Verheist	8.00	BV	☐ ☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐ ☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐ ☑
Floorman	650-713-324	Jaime Collins	8.00	JC	☐ ☑
Floorman	122-830-839	Chris Eddy	8.00	CE	☐ ☑
Leaseman	713-958-481	Gary Kennedy	8.00	GK	☐ ☑
Rig Manager	719-409-484	Kevin Vig		KV	☐ ☐
Top Drive	640-569-323	Dan Nicholson		DN	☐ ☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STAND BY

DRIVER A | CREW SAFETY DAYS | DRIVER B

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	652-342-416	Jonathan Greeve	12.00	JG	☐ ☑
Leaseman	652-889-757	Kyle Hrynlw	12.00	KH	☐ ☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STAND BY

DRIVER A | CREW SAFETY DAYS | DRIVER B

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-388-919	Barry Verheist	4.00	BV	☐ ☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐ ☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐ ☑
Floorman	650-713-324	Jaime Collins	4.00	JC	☐ ☑
Floorman	122-830-839	Chris Eddy	4.00	CE	☐ ☑
Leaseman	713-958-481	Gary Kennedy	4.00	GK	☐ ☑

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ STAND BY

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620 _20040810_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | RIG RELEASE | JOB NO.: 21 | AFE

LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: b-14I / 92-J-12

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

DAILY CHECKS | DR. | S.M.

DATE: 11-Oct-2004 | RIG NO: 526 E | FUEL @ 8:00: | RIG: 58137 BOILER

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

LAST CASING TOURS OR LINER

O.D. (mm)	WALL TH. (mm)	MASS	GRADE	NO. OF JOINTS	TOTAL CSG LENGTH	KB TO CSG HEAD (m)	SET AT (m)
						7.32	
			K-55	10	126.00	6.31	124.00

LINER/CASING SIZE (mm)	LINER/CASING WEIGHT	GRADE	WALL TH. (mm)	TOTAL LT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
	29.00	SS-95	83.00	168.00	S"XH	178	F-1600	BPMMP	305
	39.00	SS-95	67.00	168.00	S"XH	150	F-1600	SPMMP	305

TIME BREAKDOWN

	DRLG	TRIPS	CIRC	SURVEYS	CORING	REAM	RIG SERV	DEV	RIG REPAIR	DIR WORK	EVAL	OTHER	SAFETY MTG
MDNT	7.25						0.75						
DAY	0.75		1.00	0.25			0.50						
EVE			2.25	0.75	0.25								
TOTAL	8.00		3.25	0.75	0.25		0.50						

Pump cement plug

BIT RECORD

NO.	BIT / Sub size	OUT (m)	METRES (m)	HRS
1	BH / Sub sub	444.5	0.96	
1	Motor	241	10.96	
1	Double Pin	240	9.76	
1		241	10.84	
2		230	18.71	
1	Shock Sub	240	2.91	
10		220	92.82	
1		234	5.17	
1	9" Perry D.C.	228	3.93	
3		171	29.89	
5		127	56.48	
22	D.P.	STANDS	515.59	
2	D.P.	SINGLES	18.75	
	KELLY DOWN		3.64	
	TOTAL		865.00	

BIT NO.: 5 | SIZE: 444.5 | IADC CODE | MFG: H.C. | TYPE: CTXC33 | SERIAL NO.: 6018034 | JETS | DEPTH OUT (m) | DEPTH IN (m): 690.00 | TOTAL METRES DRILLED (m): 185.00 | TOTAL HOURS RUN: 39.26

CUTTING STRUCTURE: T1 | B2 | MSC | LOC | S | Gage | ODC | RACKED / FAILED | Other

HOLE CONDITION: HOLE DRAG: 7000 up/7000 dwn | TORQUE AT BOTTOM: 49000.00 | FILL ON BOTTOM (m): 86000.00

MUD RECORD

MUD TYPE: Water Based | Mud System

TIME	02:00	04:00
DENSITY (kg/m³)	1065	1065
FUNNEL VIS. (sec/L)	43	43
W.L. (cm3)		
pH	9.5	10.5
PV/YP	110.7m3	113m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Caustic Soda	2sks.
Lime	1sks.
Mikel	35sks.
Sawdust	14sks.
Ligco	9sks.
All Temp	6sks.
Mikel NT	35sks.

SOLIDS CONTROL: Centrifuge | HOURS RUN | DISCARD VOLUME (m³) | DISCARD RATE (m³/hr)

	06:00		
	1065		1065
	43		43
	10.5		10.5
	116m3		116m3

Centrifuge	8.00	1065	1065

METERS DRILLED

FROM	TO	BIT RUN	PUMP NO. 1	PUMP NO. 2	METRES DRILLED
865.00	865.00	0	25/130	23	

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

11600 | 152 | 90 | 152 | 90

REDUCED PUMP SPEED

3480 | @ | 90 | @ | 629.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
826.50	19.0	46.00
845.30	19.8	43.80

DRILLER SIGNATURE: Barry Verhelst

TIME LOG

HRS FROM	HRS TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	3:15	3.25	2	Drill fr. 836m - 848m
3:15	3:30	0.25	7	Rig Service, F/T Annular(30 secs)
3:30	7:30	4.00	2	Drill fr. 848m - 865m
7:30	8:00	0.50	10	Deviation Surveys & tool face orientation

NOTES: WT cross over - visually Inspected broken, Belzagon 6 pins. No F.V.I. Inspec. Engine #1, #4, 6 PU 24 hrs Pump #1: 22.6 hrs. Pump #2: 72.25 hrs

HRS SINCE BOP TEST	HRS SINCE LAST BOP DRILL	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
9.00			100000.00	Mixing chemicals	

MORNING TOUR 0:00 to 8:00

RATE SCHEDULE: Modular | Repair | Maint

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES 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	850-713-324	Jaime Collins	8.00	JC		
Floorman	122-830-839	Chris Eddy	8.00	CE		
Leaseman	713-959-461	Gary Kennedy	8.00	GK		
Rig Manager	719-405-484	Kevin Vig		KV		
Top Drive	640-568-323	Dan Nicholson		DN		

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 to 16:00

BIT RECORD

NO.	BIT	OUT (m)	METRES (m)	HRS
31	D.P.	STANDS	872.40	
0	D.P.	SINGLES	0.00	
	KELLY DOWN		0.00	
	TOTAL		872.40	

BIT NO.: 6 | SIZE: 444.5 | IADC CODE | MFG: H.C. | TYPE: CTXC33 | SERIAL NO.: 6018034 | JETS | DEPTH OUT (m) | DEPTH IN (m): 690.00 | TOTAL METRES DRILLED (m): 185.00 | TOTAL HOURS RUN: 39.26

CUTTING STRUCTURE: T1 | B2 | MSC | LOC | S | Gage | ODC | RACKED / FAILED | Other

HOLE CONDITION: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m): 54000.00

MUD RECORD

MUD TYPE: Water Based | Mud System

TIME	08:00	
DENSITY (kg/m³)	1079	
FUNNEL VIS. (sec/L)	44	
W.L. (cm3)		
pH	11.0	
PV/YP	110.6m3	

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
All Temp	3 sks
Ligco	2 sks
Hydrated Lime	1 sk

SOLIDS CONTROL: Centrifuge | HOURS RUN | DISCARD VOLUME (m³) | DISCARD RATE (m³/hr)

METERS DRILLED

FROM	TO	BIT RUN	PUMP NO. 1	PUMP NO. 2	METRES DRILLED
845.00		0	25/125	22	

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

	152	90	152

REDUCED PUMP SPEED

	@		@	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE: Bill Mills

TIME LOG

HRS FROM	HRS TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:45	0.75	2	Drill Actual
8:45	9:00	0.25	7	Rig Service & Function Pipe Rams 8/8 Secs
9:00	10:00	1.00	5	Circulate & monitor hole for losses
10:00	14:00	4.00	6	Pull out of hole & flow checks @ 839m, 752m, 245m, 0m Lay down Motor, shock tool
14:00	16:00	2.00	6	Run in hole & P/U 27 singles

NOTES: Injection Casing Shoe Closed Blind rams while out of hole. Tyte Record - Ames #15.11 out 4 Made in 3.00 out 1 Dull in 2.24 out 3

HRS SINCE BOP TEST	HRS SINCE LAST BOP DRILL	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.

RATE SCHEDULE: Modular | Repair | Maint

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	628-926-262	Rob Roth	12.00	RR		
Motorman	732-572-781	Dwayne Fry	12.00	DF		
Floorman	717-623-260	Sean Cameron	12.00	SC		
Floorman	652-342-416	Jonathan Greeve	12.00	JG		
Leaseman	652-890-757	Kyle Hrynw	12.00	KH		

EVENING TOUR 16:00 to 24:00

BIT RECORD

NO.	BIT	OUT (m)	METRES (m)	HRS
	D.P.	STANDS		
	D.P.	SINGLES		
	KELLY DOWN			
	TOTAL			

BIT NO.: 6RR | SIZE: 444.5 | IADC CODE | MFG: H.C. | TYPE: CTXC33 | SERIAL NO.: 6018034 | JETS | DEPTH OUT (m) | DEPTH IN (m): 690.00 | TOTAL METRES DRILLED (m): 185.00 | TOTAL HOURS RUN: 39.26

CUTTING STRUCTURE: T1 | B2 | MSC | LOC | S | Gage | ODC | RACKED / FAILED | Other

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

MUD RECORD

MUD TYPE: Water Based | Mud System

TIME	20:00	21:00
DENSITY (kg/m³)	1065	1065
FUNNEL VIS. (sec/L)	44	41
W.L. (cm3)		
pH	10.5	10.6
PV/YP	185.8m3	196.3m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Citric Acid	2sks.
Sodium Bicarbonate	2sks.

SOLIDS CONTROL: Centrifuge | HOURS RUN | DISCARD VOLUME (m³) | DISCARD RATE (m³/hr)

METERS DRILLED

FROM	TO	BIT RUN	PUMP NO. 1	PUMP NO. 2	METRES DRILLED
867.00					

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

3600	152	90	152

REDUCED PUMP SPEED

1900	@	90	@	611.80

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE: Barry Verhelst

TIME LOG

HRS FROM	HRS TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
15:00	17:30	1.50	6	Run in hole
17:30	18:30	1.00	5	Condition Mud & Circ.
18:30	18:45	0.25	21	Safety Meeting
18:45	19:45	1.00	17	Plug Back fr. 867m - 844m
19:45	20:00	0.25	6	P.O.O.H. to 811m
20:00	21:15	1.25	5	Condition Mud & Circ.
21:15	23:15	2.00	6	Hoist D.P. slinger, flow check @ 807, 725, 420, & 0M
23:15	23:30	0.25	7	Rig Service, F/T Blind rams(9 secs)
23:30	24:00	0.50	13	Wait on Cement

NOTES: F/T Alpha Annular/Blind Rams BOP DRIVE MODE: HALF. Trip record: Initial: 3.84 Calc.: 1.50 Mill: 0.30m3 Actual

HRS SINCE BOP TEST	HRS SINCE LAST BOP DRILL	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.

RATE SCHEDULE: Modular | Repair | Maint

DRIVER A | CREW SAFETY DAYS | DRIVER B

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES 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	850-713-324	Jaime Collins	4.00	JC		
Floorman	122-830-839	Chris Eddy	4.00	CE		
Leaseman	713-959-461	Gary Kennedy	4.00	GK		

ETS SERIAL NUMBER: PREC526_20040911_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

UWI	
RIG RELEASE	
JOB NO.	21
AFE	
WELL NAME AND NO.	MC6 South Meager
LICENCE NO.	a-92-A / 92-J-12
CONTRACTOR	Precision Drilling
OPERATOR	Western Geopower Corp
UNIQUE ID	b-1-H / 92-J-12
SURFACE LOCATION	a-92-A / 92-J-12
SIGNATURE OF CONTRACTORS REPRESENTATIVE	
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva

DAILY CHECKS

DRR P.M.

DATE 12-Oct-2004
RIG NO. 620 E
LAST CASING TUBING ON L.H.R.

FUEL ON BOARD
RIG 84462 BOILER

WEATHER
TEMPERATURE
CURRENT CONDITION Clear
WIND DIRECTION Calm
ROAD Good

	D.C. (mm)	Weight (kg/m)	Grade	Make	Grade	No. of Joints	Total Len (m/ft)	Ht to DRF (m/ft)	Hgt at DH
					K-55	10	128.00	6.31	124.00
								7.32	

	Length Made (m/ft)	Grade	Min. ID (mm)	Hook Ht O.D. (mm)	Thread Type	No. of Stands	Pump Type	Pump Manufacturer	Engine H.P. (max)
	29.00	S5-95	83.00	165.00	5"XH	170	F-1600	BPMMP	205
	38.90	S5-95	67.00	168.00	5"XH	159	F-1600	BPMMP	308

SHALE SHAKER(S) RENTALS/SERVICES

	No.	Type	Derrick	New
5.90	Screens Changed		YES	NO
6.60	TOP	100	TOP	100
6.09	MIDDLE	100	MIDDLE	100
24.00	BOTTOM	100	BOTTOM	100

	Hrs To Run Casing
	1.25
	1.25

TIME - HRS

CODE	Rig Release	Move	Rig Up/Tear Down	Rig Service	Drilling	Condition Mud & Circ	Trips	Reaming	Coring	Cut Off Drlg Line	Deviation	Wireline Logs	Run Casing & Cement	Wait on Cement	Nipple Up B.O.P.	Test B.O.P.	Slip & Cut Drlg Line	Repair Rig	Misc.	Fishing	Directional Work	Total
MORN														2.00	2.75	0.25						5.00
DAY				2.00		6.25	0.50	6.25							1.75							16.75
EVE								4.75														4.75
TOTAL				2.00		7.25	0.50	11.00						2.00	4.50	0.25						26.50

BIT RECORD

No.	Qty	Size	Make	Type	Serial No.	Jets	Depth Out (m)	Depth In (m)	Total Meters Drilled (m)	Total Hours Run	Cutting Structure	Bearings/Seals	Gauge	ODC	Other	Reason Pulled	Hrs on Bit
1	bit	444.5		6RR													0.48
1	Bit Sub	229															1.01
10	9" Drill Collars	229															92.92
1	7 5/8" Reg Box Up	234		H.C.													6.11
1	9" Pony DC	228		CTXC33													3.93
3	7" Drill Collars	171		6018034													26.59
6	Crossover Sub	127															55.48
24	D/P	114.3	S-135														676.64
1	D/P	114.3	S-135														9.38
	Kelly/Swivel																0.00
	TOTAL																872.46

WT. OF DC 54000.00
WT. OF STRING

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

MUD RECORD

Mud Type	Water Based
Time	06:00
Density (kg/m³)	1065
Funnel Vis. (s/L)	39
W.L. (cm3)	
pH	9.0
PV@	105.4m3

Mud Material Added

Product	Amount + Unit
Citric Acid	15ks.
Sodium Bicarbonate	4cks.

Solids Control: Centrifuge

METERS DRILLED

From	To	Bit Hrs	Rotary R.P.M.	WT. ON BIT (kg)
867.00				

Circulation Pressure (kPa): Pump No. 1 Liner Size (mm) 162, S.P.M. 90; Pump No. 2 Liner Size (mm) 162, S.P.M. 90

Reduced Pump Speed: 1800, S.P.M. 90, 363.00

Deviation Survey

Depth (m)	Deviation (o)	Direction

TIME LOG

Start	End	Hrs	Code	Details of Operations in Sequence and Remarks
0:00	3:00	3.00	13	Wait on Cement(unload & strap csg)
3:00	3:15	0.25	7	Rig Service, R/T Blind rams(8 secs)
3:15	4:45	1.50	6	Make up B.H.A. & R.I.H. to 363m, flow check @ 0m(Strap in)
4:45	6:45	2.00	5	Condition Mud & Circ, unload, strap & drift casing
6:45	8:00	1.25	6	R.I.H., flow check @ 363 & 814m

NOTES
Bit comes apart
Replace 91 5.00" HWDP, 30 Hrs, 83-12 Mm Pump 01 & 02, 0 Hrs

Driller Signature	Operator Fuel	Max BIP Hookload	Safety Topic	M.A.D.P.
Barry Verheist		$4009.00	unloading casing	

MORNING TOUR 0:00 TO 8:00

Crew	SOC. INS. NO.	Name	Hrs	Injured Yes	Injured No
Driller	842-389-910	Barry Verheist	8.00	6V	
Derrickman	647-452-903	Dave Makowsky	8.00	DM	
Motorman	735-714-230	Chantry Vig	8.00	CV	
Floorman	650-713-324	Jaime Collins	8.00	JC	
Floorman	122-830-839	Chris Eddy	8.00	CE	
Leaseman	713-956-461	Gary Kennedy	8.00	GK	
Rig Manager	719-409-484	Kevin Vig		KV	
Top Drive	849-569-323	Dan Nicholson		DN	

RATE SCHEDULE: Regular / Horse / Night
DRIVER A / CREW SAFETY DAYS / DRIVER B

BIT RECORD

No.	Qty	Size	Make	Type	Serial No.	Jets	Depth Out (m)	Depth In (m)	Total Meters Drilled (m)	Total Hours Run	Cutting Structure	Bearings/Seals	Gauge	ODC	Other	Reason Pulled	Hrs on Bit
1	bit	444.5		6RR													0.48
1	Bit Sub	229															1.01
10	9" Drill Collars	229															92.92
1	7 5/8" Reg Box Up	234		H.C.													6.11
1	9" Pony DC	228		CTXC33													3.93
3	7" Drill Collars	171		6018034													26.59
6	Crossover Sub	127															55.48
24	D/P	114.3	S-135														525.64
1	D/P	114.3	S-135														9.38
	Kelly/Swivel																0.00
	TOTAL																825.48

WT. OF DC 73900.00
WT. OF STRING

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

MUD RECORD

	06:00	12:00	16:00
Mud Type	Water Based		
Time	06:00	12:00	16:00
Density (kg/m³)	1070	1070	1075
Funnel Vis. (s/L)	133	39	38
W.L. (cm3)			
pH		12.0	12.0
PV@	107.4m3	106.1m3	99.9m3

Mud Material Added

Product	Amount + Unit		
Citric Acid	7 sks		
All Temp	15 sks		
Sodium Bicarbonate	11 sks		
Cotton Hulls	10 sks		
Sawdust	12 sks		

Solids Control: Centrifuge

METERS DRILLED

From	To	Bit Hrs	Rotary R.P.M.	WT. ON BIT (kg)
843.00	860.00	R	60	5

Circulation Pressure (kPa): Pump No. 1 Liner Size (mm) 162, S.P.M. 90; Pump No. 2 Liner Size (mm) 162, S.P.M. 90

Reduced Pump Speed:

Deviation Survey

Depth (m)	Deviation (o)	Direction

TIME LOG

Start	End	Hrs	Code	Details of Operations in Sequence and Remarks
8:00	10:00	2.00	3	Drill Out Cement Plug
10:00	15:15	5.25	5	Circulate hole clean
15:15	15:30	0.25	7	Rig Service & Function pipe rams 8/9 Secs
15:30	16:00	0.50	6	Pull out of hole & Flow Checks @ 834m, 730m, 193m,

NOTES
Function tested BOP

Driller Signature	Operator Fuel	Max BIP Hookload	Safety Topic	M.A.D.P.
Bill Mills		84000.00		

DAY TOUR 8:00 TO 16:00

Crew	SOC. INS. NO.	Name	Hrs	Injured Yes	Injured 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	13.00	DF	
Floorman	717-823-260	Sean Cameron	12.00	SC	
Floorman	652-342-416	Jonathan Greeve	12.00	JG	
Leaseman	652-899-757	Kyle Hrynw	12.00	KH	

RATE SCHEDULE: Regular / Horse / Night
DRIVER A / CREW SAFETY DAYS / DRIVER B

BIT RECORD

No.	Qty	Size	Make	Type	Serial No.	Jets	Depth Out (m)	Depth In (m)	Total Meters Drilled (m)	Total Hours Run	Cutting Structure	Bearings/Seals	Gauge	ODC	Other	Reason Pulled	Hrs on Bit

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

MUD RECORD

Mud Type	
Time	
Density (kg/m³)	
Funnel Vis. (s/L)	
W.L. (cm3)	
pH	

Mud Material Added

Product	Amount + Unit

Solids Control: Centrifuge

METERS DRILLED

From	To	Bit Hrs	Rotary R.P.M.	WT. ON BIT (kg)
860.00				

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 (o)	Direction

TIME LOG

Start	End	Hrs	Code	Details of Operations in Sequence and Remarks
16:00	17:45	1.75	6	Pull out of hole & flow checks @ 193m,
17:45	19:00	1.25	12	(Rig To Run Casing) Laydown Truck, Change bails,Power Tongs
19:00	19:15	0.25	21	Safety Meeting
19:15	24:00	4.75	12	Rig to & run casing, welded first 4 jts casing, csg shoe & float collar.

NOTES
Function tested crown saver, Inspected top drivedrive, tongs & slips & found satisfactory.

Driller Signature	Operator Fuel	Max BIP Hookload	Safety Topic	M.A.D.P.
Barry Verheist			Running csg	

EVENING TOUR 16:00 TO 24:00

Crew	SOC. INS. NO.	Name	Hrs	Injured Yes	Injured No
Driller	842-389-910	Barry Verheist	4.00		
Derrickman	647-452-903	Dave Makowsky	4.00		
Motorman	735-714-230	Chantry Vig	4.00		
Floorman	650-713-324	Jaime Collins	4.00		
Floorman	122-830-839	Chris Eddy	4.00		
Leaseman	713-956-461	Gary Kennedy	4.00		

RATE SCHEDULE: Regular / Horse / Night
DRIVER A / CREW SAFETY DAYS / DRIVER B

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-09-22 22:49	RIG RELEASE:	JOB NO.: 21	AFE:
LICENCE NO.: a-92-A / 92-J-12	WELL NAME AND NO.: MC6 South Meager		
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling		
SURFACE LOCATION: a-92-A / 92-J-12	BOTTOMS UP: b-1-H / 92-J-12		
SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Silva	SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig		

DAILY CHECKS

(1) Daily Brief Around Inspection
(2) Detailed Inspection-Weekly and/or Bi-Weekly
(3) H2S Gas Precaution (if required)
(4) Well Licence & Sub Diagram Posted
(5) Flare Line Staked
(6) BOP Daily Performance
(7) Manually Inspect BOP's, Manifolds & Diagnostic Lines
(8) Rig Site Written and Safety Meeting (prior to spud/move)
(9) CAODC Rig Related Inspection Checklist (prior to spud/move)
(10) Mast Inspection (Before Raising or Lowering)
(11) Crown Saver Checked
(12) Motor Mud Checked

DAILY OPERATIONS

DATE	13-Oct-2004
RIG NO	820 E
FUEL @ 8:00	
RIG	66475 BOILER

LAST CASING TUBING OR LINER

O.D. (mm)	Wall (mm)	Depth	GRADE	NO. OF JOINTS	TOTAL Length	KB TO BASE HEAD (m)	SET AT (m)
						7.32	
			K-55	16	126.08	6.31	124.00

WEATHER

TEMPERATURE	9
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Good

DRILL STRING

DRILL PIPE SIZE (mm)	LINEAR MASS (kg/m)	GRADE	Wall (mm)	TOOL JT O.D. (mm)	THREAD	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE (LENGTH mm)
	29.00	SS-95	8.00	165.00	S*XH	170	F-1600	BPMMP	305
	38.00	SS-95	9.67	168.00	S*XH	150	F-1600	BPMMP	305

TIME-HRS

	DRLG	TRIPS	REAMING	CORING	CIRC	SURVEY	RIG SERVICE	CUT OFF DRLG LINE	SLIP DRLG LINE	WAIT ON CEMENT	RIG REPAIR	RIG UP/DOWN	TEST BOPE	DRILL STEM TEST	FISHING	OTHER	SAFETY MEETING
MIDNIGHT	1.00	9.25			0.75												
DAY	3.50	8.25															
EVE		0.25				7.75											
TOTAL	4.50	0.75			0.75	7.75											

SHALE SHAKER(S)

NO.	TYPE	Depth/Rate	SCREENS CHANGED	SAMPLE
1			YES NO	
2				

RENTAL/SERVICES

	QUAN.	COST

Rig is 5 crown Crown			4.25
			4.25

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 CHARACTERISTICS	T / B / IADC / LOC / B / Gage / ODC / REASON PULLED / Tooth Wear mm
D.P. STANDS	
D.P. SINGLES	
KELLY/SWIVEL	
TOTAL	
WT. OF DC	
WT. OF STRING	

MUD RECORD

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

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

Centrifuge	HOURS RUN	VOLUME PROCESSED	VOLUME DISCARDED

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

METERS DRILLED

FROM	TO	TOTAL METERS DRILLED	ROTARY R.P.M.	WOB (kN)
860.00				

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 (o)	DIRECTION

TIME LOG

8:00	5:00	8.00	12	Run 13 3/8 csg, flow check @ 583m
5:00	5:15	0.25	7	Rig Service, F/T H.C.R.(2 secs)
5:15	7:00	1.75	12	Run 13 3/8 casing to 860m
7:00	8:00	1.00	5	Condition Mud & Circ.

NOTES

DRILLER SIGNATURE: Barry Verheist

HRS. RIG	HRS. CREW	STAND TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00				120000.00	Running casing	

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	642-389-910	Barry Verheist	8.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☑
Floorman	650-713-324	Jaime Collins	8.00	JC	☑
Floorman	122-830-838	Chris Eddy	8.00	CE	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☑
Rig Manager	718-609-484	Kevin Vig	8.00	KV	☑
Top Drive	640-968-323	Dan Nicholson	8.00	DN	☑

RATE SCHEDULE: ☑ REGULAR ☐ OVERTIME ☐ SPECIAL

DRIVER A | CREW SAFETY DAYS | DRIVER B

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 CHARACTERISTICS	T / B / IADC / LOC / B / Gage / ODC / REASON PULLED / Tooth Wear mm
D.P. STANDS	
D.P. SINGLES	
KELLY/SWIVEL	
TOTAL	
WT. OF DC	
WT. OF STRING	

MUD RECORD

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

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

Centrifuge	HOURS RUN	VOLUME PROCESSED	VOLUME DISCARDED

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

METERS DRILLED

FROM	TO	TOTAL METERS DRILLED	ROTARY R.P.M.	WOB (kN)
860.00				

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.
750	152	100		

REDUCED PUMP SPEED

@	@

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

8:00	11:30	3.50	5	circulate casing
11:30	11:48	0.25	7	Rig Service & Function H.C.R. Valve 4/4 secs
11:48	15:00	4.25	23	(Rig to & cement Casing)

NOTES

DRILLER SIGNATURE: Bill Mills

HRS. RIG	HRS. CREW	STAND TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
				125000.00		

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	716-324-161	Bill Mills	12.00	BM	☑
Derrickman	629-926-282	Rob Roth	12.00	RR	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☑
Floorman	717-523-260	Sean Cameron	12.00	SC	☑
Floorman	853-342-418	Jonathan Greeve	12.00	JG	☑
Leaseman	652-890-757	Kyle Hrynhr	12.00	KH	☑

RATE SCHEDULE: ☑ REGULAR ☐ OVERTIME ☐ SPECIAL

DRIVER A | CREW SAFETY DAYS | DRIVER B

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 CHARACTERISTICS	T / B / IADC / LOC / B / Gage / ODC / REASON PULLED / Tooth Wear mm
D.P. STANDS	
D.P. SINGLES	
KELLY/SWIVEL	
TOTAL	
WT. OF DC	
WT. OF STRING	

MUD RECORD

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

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL

Centrifuge	HOURS RUN	VOLUME PROCESSED	VOLUME DISCARDED

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

METERS DRILLED

FROM	TO	TOTAL METERS DRILLED	ROTARY R.P.M.	WOB (kN)
860.00				

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 (o)	DIRECTION

TIME LOG

16:00	23:45	7.75	13	Wait on Cement
23:45	24:00	0.25	7	Rig Service, F/T Annular(30 secs)

NOTES

DRILLER SIGNATURE: Barry Verheist

HRS. RIG	HRS. CREW	STAND TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00					Nipple down	

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	642-389-910	Barry Verheist	4.00	BV	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☑
Floorman	650-713-324	Jaime Collins	4.00	JC	☑
Floorman	122-830-838	Chris Eddy	4.00	CE	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☑

RATE SCHEDULE: ☑ REGULAR ☐ OVERTIME ☐ SPECIAL

DRIVER A | CREW SAFETY DAYS | DRIVER B

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

WELL TYPE: Geothermal	RE-ENTRY: ☐ YES ☑ NO	KB TO GROUND ELEV.: 7.32	
WELL NAME & No.: MC6 South Meager		DATE: 13-Oct-2004	
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling		
RIG MANAGER: Kevin Vig	RIG NO.: 820 E		
PROVINCE: BC	CAMP: ☑ YES ☐ NO	RIG SAFETY DAYS: 21.00	

ETS SERIAL NUMBER: PREC820_20040913_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-09-22 22:49
RIG RELEASE	
JOB NO.	21
AFE	
LICENCE NO.	a-92-A / 92-J-12
WELL NAME AND NO.	MC6 South Meager
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	14-Oct-2004
RIG NO.	620 E
RIG	65058
TEMPERATURE	10
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Good
WELL TYPE	Geothermal
RE-ENTRY	No
KB TO GROUND ELEV.	7.32
PROVINCE	BC
RIG MANAGER	Kevin Vig
CAMP	Yes
RIG SAFETY DAYS	22.00

Last Casing

GRADE	NO. OF JOINTS	TOTAL (m)	KB TO CSG HEAD (m)	SET AT (m)
			7.32	
K-55	10	125.00	8.31	124.00

Pumps

LINER SIZE	GRADE	ID	TOOL JT OD	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE
29.00	SS-95	83.00	166.00	5"XH	170	F-1600	BPMMP	305
36.00	SS-95	67.00	168.00	5"XH	150	F-1600	BPMMP	305

Time Summary (hrs)

MORN	0.25	6.50	2.00	0.25
DAY	0.25	8.75 / 8.75	0.25	0.25
EVE		8.00		
TOTAL	0.50	12.25 / 4.75	2.25	0.50

Shale Shakers

NO. 2	TYPE Derrick	NEW	
SCREENS CHANGED	No		
8.25 TOP	100	TOP	100
8.00 MIDDLE	100	MIDDLE	100
24.25 BOTTOM	100	BOTTOM	180

MORNING TOUR 0:00 to 8:00

Meters drilled: FROM 840.00. Pump no. 1 / no. 2: 162 / 162.

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	3:45	3.75	13	Wait on Cement
3:45	4:00	0.25	7	Rig Service, F/T Annular(28 sec)
4:00	4:15	0.25	21	Safety Meeting
4:15	6:15	2.00	19	Squeeze Cement from surface
6:15	8:00	1.75	13	Wait on Cement

NOTES

Safety topic: Nipple down. Driller signature: Barry Verheist

CREW	SOC. INS. NO.	NAME	HRS		INJURIES
Driller	642-389-910	Barry Verheist	8.00	BV	No
Derrickman	647-452-903	Dave Makowsky	8.00	DM	No
Motorman	735-714-230	Chantry Vig	8.00	CV	No
Floorman	850-713-324	Jaime Collins	8.00	JC	No
Floorman	122-830-839	Chris Eddy	8.00	CE	No
Leaseman	713-959-461	Gary Kennedy	8.00	GK	No
Rig Manager	719-409-484	Kevin Vig	8.00	KV	No
Top Drive	640-569-323	Dan Nicholson	8.00	DN	No

RATE SCHEDULE: Regular

DAY TOUR 8:00 to 16:00

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	10:45	2.75	13	Wait on Cement
10:45	10:45	0.25	21	Safety Meeting
10:45	11:00	0.25	18	Squeeze Cement From Surface
11:00	15:00	4.00	13	Wait on Cement
15:00	15:15	0.25	7	Rig Service
15:15	16:00	0.75	14	Nipple Down B.O.P. Cut off casing.

NOTES

Driller signature: Bill Mills

CREW	SOC. INS. NO.	NAME	HRS		INJURIES
Driller	716-324-181	Bill Mills	12.00	BM	No
Derrickman	629-926-262	Rob Roth	12.00	RR	No
Motorman	722-572-781	Dwayne Fry	12.00	DF	No
Floorman	717-523-260	Sean Cameron	12.00	SC	No
Floorman	652-342-416	Jonathan Greeve	12.00	JG	No
Leaseman	652-880-757	Kyle Hryntw	12.00	KH	No

RATE SCHEDULE: Regular

EVENING TOUR 16:00 to 24:00

Pump no. 1 / no. 2: 162 / 162.

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	24:00	8.00	14	Nipple Down B.O.P. Wash cement out of H.C.R. Pipe Rams, Blind Rams, & Annular Preventer

NOTES

Driller signature: Barry Verheist

CREW	SOC. INS. NO.	NAME	HRS		INJURIES
Driller	642-389-910	Barry Verheist	4.00	BV	No
Derrickman	647-452-903	Dave Makowsky	4.00	DM	No
Motorman	735-714-230	Chantry Vig	4.00	CV	No
Floorman	650-713-324	Jaime Collins	4.00	JC	No
Floorman	122-830-839	Chris Eddy	4.00	CE	No
Leaseman	713-959-461	Gary Kennedy	4.00	GK	No

RATE SCHEDULE: Regular

ETS SERIAL NUMBER: PREC620_20040914_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Verco Company

Based on the CAODC ETS file standard

SPUD	RIG RELEASE	JOB NO	AFE
2004-09-22 22:49		21	
LICENCE NO.	WELL NAME AND NO		
a-92-A / 92-J-12	MC6 South Meagar		
OPERATOR	CONTRACTOR		
Western Geopower Corp	Precision Drilling		
SURFACE LOCATION	UNIQUE ID		
a-92-A / 92-J-12	b-71-H / 92-J-12		
SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR REPRESENTATIVE		
Russ Silva	Kevin Vig		

DAILY CHECKS — OPR / P.M.

(1) Daily Pre-Tour Inspection
(2) Derrick Inspection (daily/weekly/every stand/etc.)
(3) H2S Signs Posted (if required)
(4) Well Licence & Sour Diagram Posted
(5) Fire Extinguisher Tagged
(6) BOP Drills Performed
(7) Weekly Inspection (BOP's, Flowlines & Diagram) Done
(8) Rig Fire, Health and Safety Meeting (pre-tour report)
(9) C.A.O.D.C. Rig Safety Inspection (Practical) (pre-spud only)
(10) Mast Inspection Before Raising or Lowering
(11) Crown Saver Checked
(12) Snake Kills Checked

DATE	15-Oct-2004	LAST CASING	O.D. (mm)	WT / FT (kg/m)	GRADE		NO. OF JOINTS	TOTAL LNG LENGTH	KB TO CSG HEAD (m)	SET AT (m)
RIG NO	620 E	TUBING							7.32	
FUEL @ 8:00		OH			K-55		10	126.00	8.31	124.00
AVG	63953 BOILER	LINER							9.22	860.00

WEATHER		DRILL PIPE	LINER MAKE & SIZE (mm)	GRADE	WALL TH. (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH. (mm)
TEMPERATURE	9		29.00	SS-95	83.00	166.90	5"XH	179	F-1600	BPMMP	396
CURRENT CONDITION	Cloudy		35.00	SS-95	67.00	166.90	5"XH	160	F-1600	BPMMP	396
WIND DIRECTION	Calm										
ROAD	Good										

TIME - HRS

OPER	DRLG	SLIDE DRLG	REAM	CIRC	COND MUD	TRIPS	RIG SERVICE	SURVEY	WOC	RIG REPAIR	DEVIATION	TEST BOP	TEST CSG	RUN CSG	CEMENT	FISH	OTHER	Weld on bowl	
MORN							0.25										1.50		8.25
DAY							0.25										7.50		8.50
EVE							0.25										7.50	0.25	
TOTAL							0.75										11.25	0.25	11.75

SHALE SHAKER(S) — RENTALS/SERVICES

		NO. 2	TYPE	Derrick	VIEW	
8.00	SCREENS CHANGED		YES		NO	
8.00	TOP	100	TOP	100		
8.00	MIDDLE	100	MIDDLE	100		
24.00	BOTTOM	100	BOTTOM	100		

	MORN	DAY	EVE

WELL TYPE	Geothermal
RE-ENTRY	☐ YES ☑ NO
KB TO GROUND ELEV	7.32
WELL NAME & No.	MC6 South Meagar
DATE	15-Oct-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	23.00

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	T1 / T0 / IADC / LOC / B / Gage / ODC / RESERVE PULLED / In. / Out.
D.P. / STANDS	
D.P. / SINGLES	
HELL TO PAY	
TOTAL	

MUD RECORD

MUD TYPE	☑ WATER BASE ☐ OIL BASE
TIME	
DENSITY (kg/m3)	
FUNNEL VIS. (sec)	
W.L. (cm3)	
pH	
MUD MATERIAL ADDED	
PRODUCT	AMOUNT x UNIT
SOLIDS CONTROL	Centrifuge
HOURS RUN	
MUD LOSS (bbl)	
SOLIDS REMOVED (bbl)	
DILUTION VOLUME (bbl)	

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	
WT. OF DC	
WT. OF STRING	

METERS DRILLED

FROM	TO	WT. ON BIT (kDaN)	ROTARY R.P.M.	NO. OF CYLINDERS

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

NOTES

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	1:30	1.50	14	Nipple down B.O.P. & wash cement from all components.
1:30	1:45	0.25	7	Rig Service
1:45	8:00	6.25	22	Cut down conductor, cut off bowl, make final cut & weld on new casing bowl.

DRILLER SIGNATURE: Barry Vertrelst

HOLE SIZE	HOLE DEPTH	STAGE TIMES	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
9.00					nipple down	

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	642-389-819	Barry Vertrelst	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowesky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	650-713-324	Jaime Collins	8.00	JC	☐	☑
Floorman	122-930-839	Chris Eddy	8.00	CE	☐	☑
Leaseman	713-958-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	640-569-323	Dan Nicholson		DN	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

RATE SCHEDULE: ☑ MORNING ☐ 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	T1 / T0 / IADC / LOC / B / Gage / ODC / RESERVE PULLED / In. / Out.
D.P. / STANDS	
D.P. / SINGLES	
HELL TO PAY	
TOTAL	

MUD RECORD

MUD TYPE	☑ WATER BASE ☐ OIL BASE
TIME	
DENSITY (kg/m3)	
FUNNEL VIS. (sec)	
W.L. (cm3)	
pH	
MUD MATERIAL ADDED	
PRODUCT	AMOUNT x UNIT
SOLIDS CONTROL	Centrifuge
HOURS RUN	
MUD LOSS (bbl)	
SOLIDS REMOVED (bbl)	
DILUTION VOLUME (bbl)	

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	
WT. OF DC	
WT. OF STRING	

METERS DRILLED

FROM	TO	WT. ON BIT (kDaN)	ROTARY R.P.M.	NO. OF CYLINDERS
860.00				

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

NOTES

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	13:30	5.50	22	(Weld on bowl) Heat Bowl Wihot Head, Wrap, & Allow To Cool.
13:30	13:45	0.25	7	Rig Service
13:45	16:00	2.25	14	Nipple Up B.O.P.

DRILLER SIGNATURE: Bill Mills

HOLE SIZE	HOLE DEPTH	STAGE TIMES	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
9.00						

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	929-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	717-523-260	Sean Cameron	8.00	SC	☐	☑
Floorman	652687098	Dave Crowley	2.00	DC	☐	☑
Floorman	652-342-418	Jonathan Greave	4.00	JG	☐	☑
Floorman	740-656-970	Michael Hitchborn	4.00	MH	☐	☑
Leaseman	652-880-757	Kyle Hrynw	8.00	KH	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

RATE SCHEDULE: ☑ MORNING ☐ 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	T1 / T0 / IADC / LOC / B / Gage / ODC / RESERVE PULLED / In. / Out.
D.P. / STANDS	
D.P. / SINGLES	
HELL TO PAY	
TOTAL	

MUD RECORD

MUD TYPE	☑ WATER BASE ☐ OIL BASE
TIME	
DENSITY (kg/m3)	
FUNNEL VIS. (sec)	
W.L. (cm3)	
pH	
MUD MATERIAL ADDED	
PRODUCT	AMOUNT x UNIT
SOLIDS CONTROL	Centrifuge
HOURS RUN	
MUD LOSS (bbl)	
SOLIDS REMOVED (bbl)	
DILUTION VOLUME (bbl)	

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	
WT. OF DC	
WT. OF STRING	

METERS DRILLED

FROM	TO	WT. ON BIT (kDaN)	ROTARY R.P.M.	NO. OF CYLINDERS
860.00				

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

NOTES

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	16:15	0.25	21	Safety Meeting
16:15	16:30	0.25	7	Rig Service
16:30	24:00	7.50	14	Nipple Up B.O.P.'s

DRILLER SIGNATURE: Wade Goddard

HOLE SIZE	HOLE DEPTH	STAGE TIMES	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
9.00					Nipple Up B.O.P.'s	

EVENING TOUR 16:00 TO 24:00

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	651-366-064	Jesse Goddard	8.00	JG	☐	☑
Floorman	732-809-489	Dune Malmberg	8.00	DM	☐	☑
Floorman	730-040-896	Nathan Schwandt	8.00	NS	☐	☑
Leaseman	729-975-063	Daniel Sampson	8.00	DS	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

RATE SCHEDULE: ☑ MORNING ☐ REPAIR ☐ STANDBY

DRIVER A | CREW SAFETY DAYS | DRIVER B

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | MUD RELEASE | JOB NO: 21 | AFE

LICENCE NO: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | RIGCODE 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.)

(1) Daily Walk Around Inspection
(2) Checked Inclinometer Monthly (using a Clinometer)
(3) eBS Signs Placed in Hard Hats
(4) Well Licence & Well Diagram Posted
(5) Pipe Log Issued
(6) BOP Tests Performed
(7) Weekly Checks (BOP's Function & Diagram Logs)
(8) Pre Spud Health and Safety Meeting
(9) C.A.O.D.C. Rig Safety Inspection (Checklist Joining Manual)
(10) Initial Inspection Before Moving or Loading
(11) Crown Saver Checked
(12) Mock Man Checked

DATE: 16-Oct-2004 | RIG NO: 620 E | FUEL @ 8:00: RIG 77690 BOILER

WEATHER: TEMPERATURE 5 | CURRENT CONDITION: Rain | WIND DIRECTION: Calm | ROAD: Good

JOINT CASING TUBING OR LINER

O.D. (mm)	Wall Th. (mm)	Item	Make	Grade	No. of Joints	Total (m) Length	KB to CSG Head (m)	Set at (m)
							7.32	
				K-55	10	128.00	6.31	134.00
							6.32	660.00

Hook Size (mm)	Line Speed (m/s)	Grade	Rec. ID (mm)	Total (m) of Line	Reeving Type	No. of Lines	Pump Type	Pump Manufacturer	Strokes (STK/min)
	28.00	SS-95	63.00	166.00	5*2H	170	F-1600	BPMMP	385
	36.00	SS-95	57.00	166.00	5*2H	150	F-1600	BPMMP	385

SHALE SHAKER(S) | RENTAL EQUIPMENT

No.	Type	Derrick
2		

SCREENS CHANGED: ☐ YES ☑ NO

5.60	TOP	100	TOP 100
5.60	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

Well Type	Re-Entry	KB to Ground Elev
Geothermal	☐ YES ☑ NO	7.32

Well Name & No.: MC6 South Meager | Date: 16-Oct-2004

Operator: Western Geopower Corp | Contractor: Precision Drilling

Rig Manager: Kevin Vig | Rig No.: 620 E

Province: BC | CAMP: ☑ YES ☐ NO | Rig Safety Date: 24.00

TIME BREAKDOWN

	OPER	MCRN	DAT	EVE	TOTAL
0					
1					
2				2.50	2.50
3				0.25	0.25
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
TOTAL			8.25	2.75	11.00

MORNING TOUR

BIT RECORD

No.	Bit	Size (mm)	Make	Type	Serial No.	Jets	Depth Out (m)	Depth In (m)	Total Metres Drilled (m)	Total Hours Run	Dull Grading	Hole Condition
1	Bit	444.5	6.35				7.50					
1	Motor	241	19.96				8.25	1.25				
1	Double Pin	245	0.78				1.50	0.25				
3		241	19.94				13.75	2.75				
2	Float Sub	230	18.71									
1	Shock Sub	240	2.91									
7	9" Drill Collars	229	64.64									
1	Cross Over	224	0.11									
1	9" Pony DC	228	3.93									
3	7" Drill Collars	171	28.59									
1	Accelerator	127	66.48									
24	D.P.	STANDS	528.66									
1	D.P.	SINGLES	8.38									
	HELLYDOWN		0.00									
	TOTAL		840.52									
	WT. OF DC		31000.00									
	WT. OF STRING											

BIT RECORD: OUTSIDE STRUCTURE | T | G | DC | BEARING FAILURE | R.O.P. (m/hr)

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 x Unit

SOLIDS CONTROL: Centrifuge

Hours Run	Manufacturer	Model	Serial No.

METERS DRILLED

From	To	Metres Drilled	Rotary R.P.M.	Cum. Metres Drilled
686.00				

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

TIME LOG

From	To	Hours	Code	Cum. Hours
0:00	0:15	0.25	21	0.25
0:15	7:45	7.50	14	7.75
7:45	8:00	0.25	7	8.00

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Safety Meeting (Nipple Up B.O.P.s)
Nipple Up B.O.P.
Rig Service

NOTES

Driller Signature: Bill Mills

Boiler Blow Down: Start Time | Stop Time | 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
Driller	716-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	629-926-282	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	652687095	Dave Crowley	8.00	DC	☐	☑
Floorman	740-656-970	Michael Hilchborn	8.00	MH	☐	☑
Leaseman	652-890-757	Kyle Hrynlw	8.00	KH	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	838-877-702	Sheldon Langley		SL	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐

Rate Schedule: ☑ REGULAR ☐ WEEKEND ☐ OVERT

Driver A | Crew Safety Days | Driver B

DAY TOUR

BIT RECORD

No.	Bit	Size (mm)	Make	Type	Serial No.	Jets	Depth Out (m)	Depth In (m)	Total Metres Drilled (m)	Total Hours Run	Dull Grading	Hole Condition

BIT RECORD: OUTSIDE STRUCTURE | T | G | DC | BEARING FAILURE | R.O.P. (m/hr)

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 x Unit

SOLIDS CONTROL: Centrifuge

Hours Run	Manufacturer	Model	Serial No.

METERS DRILLED

From	To	Metres Drilled	Rotary R.P.M.	Cum. Metres Drilled

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:

Deviation Survey:

Depth (m)	Deviation (o)	Direction

TIME LOG

From	To	Hours	Code	Cum. Hours
6:00	14:15	8.25	14	8.25
14:15	14:30	0.25	21	8.50
14:30	14:45	0.25	7	8.75
14:45	16:00	1.25	15	10.00

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Nipple Up B.O.P.'s,and Grant Head
Safety Meeting
Rig Service
Pressure Test B.O.P's,Blind Ram's,Casing Bowl Valve's,Spacer Spool Valve's,and HCR, 1,400 KpA Low / 10,500 KpA High, 10 Min.

NOTES

Driller Signature: Wade Goddard

Boiler Blow Down: Start Time | Stop Time | Operator Fuel | Max Exp Hookload | Safety Topic | M.A.C.P.

Pressure Testing

DAY TOUR 6:00 TO 18:00

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	Injuries No
Driller	633-823-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	842-872-840	Murray McBain	12.00	MM	☐	☑
Motorman	851-366-064	Jesse Goddard	12.00	JG	☐	☑
Floorman	732-908-483	Dane Malmberg	12.00	DM	☐	☑
Floorman	730-040-856	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	12.00	DS	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

Rate Schedule: ☑ REGULAR ☐ WEEKEND ☐ OVERT

Driver A | Crew Safety Days | Driver B

EVENING TOUR

BIT RECORD

No.	Bit	Size (mm)	Make	Type	Serial No.	Jets	Depth Out (m)	Depth In (m)	Total Metres Drilled (m)	Total Hours Run	Dull Grading	Hole Condition
1	Bit	444.5	0.35	BIT NO	7							
1	Motor	241	19.96	SIZE	311							
1	Double Pin	245	0.78	IADC CODE	5 3 7							
3		241	19.94	MFG.	H.C.							
2	Float Sub	230	18.71	TYPE	MX-30G							
1	Shock Sub	240	2.91	SERIAL NO	T330X							
7	9" Drill Collars	229	64.64	JETS	22	22	22					
1	Cross Over	224	0.11	DEPTH OUT (m)								
1	9" Pony DC	228	3.93	DEPTH IN (m)								
3	7" Drill Collars	171	28.59	TOTAL METRES DRILLED (m)								
1	Accelerator	127	66.48	TOTAL HOURS RUN								
24	D.P.	STANDS	528.66									
1	D.P.	SINGLES	8.38									
	HELLYDOWN		0.00									
	TOTAL		840.52									
	WT. OF DC		31000.00									
	WT. OF STRING											

BIT RECORD: OUTSIDE STRUCTURE | T | G | DC | BEARING FAILURE | R.O.P. (m/hr)

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 x Unit

SOLIDS CONTROL: Centrifuge

Hours Run	Manufacturer	Model	Serial No.

METERS DRILLED

From	To	Metres Drilled	Rotary R.P.M.	Cum. Metres Drilled
897.00				

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:

Deviation Survey:

Depth (m)	Deviation (o)	Direction

TIME LOG

From	To	Hours	Code	Cum. Hours
16:00	17:00	1.00	15	11.00
17:00	17:15	0.25	7	11.25
17:15	20:00	2.75	20	14.00
20:00	22:30	2.50	6	16.50
22:30	23:30	1.00	24	17.50
23:30	24:00	0.50	15	18.00

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Pressure Test B.O.P.'s
Rig Service and Function Blind Rams
PU Mud Motor,Install Stab,
Run In Hole
(Install Grant Head)
Pressure Test B.O.P. Annular, Choke Lines, Manifold Valves, Pipe Rams. 1400 Kpa Low, 7000 Kpa High,10 Min each

NOTES

Driller Signature: Bill Mills

Boiler Blow Down: Start Time | Stop 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	Injuries No
Driller	716-324-181	Bill Mills	4.00	BM	☐	☑
Derrickman	629-926-292	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	652687096	Dave Crowley	4.00	DC	☐	☑
Floorman	740-656-970	Michael Hilchborn	4.00	MH	☐	☑
Leaseman	652-890-757	Kyle Hrynlw	4.00	KH	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

Rate Schedule: ☑ REGULAR ☐ WEEKEND ☐ OVERT

Driver A | Crew Safety Days | Driver B

CHIMO ETS SOFTWARE VERSION:

ETS SERIAL NUMBER: PREC620 _20040916_1A

Chimo Equipment
A Varco Company

CAODC

Based on the CAODC ETS file standard

SPUD	2004-09-22 22:49
RIG RELEASE	
JOB NO	21
AFE	
LICENSE NO	a-92-A / 92-J-12
WELL NAME AND NO.	MC6 South Meager
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	17-Oct-2004
RIG NO.	620 E
FUEL	RIG 75316
TEMPERATURE	
CURRENT CONDITION	Cloudy
WIND DIRECTION	Calm
ROAD	Fair

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	☐ Yes ☒ No	7.32

WELL NAME & No.	MC6 South Meager
DATE	17-Oct-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☒ Yes ☐ No
RIG SAFETY DAYS	25.00

Last Casing / Liner

GRADE	NO. OF JOINTS	TOTAL LENGTH	KB TO CSG HEAD	SET AT
			7.32	
K-55	18	125.00	6.31	124.00
			8.22	867.00

Pumps

LINER SIZE	GRADE	ROD DIA.	TOOL JT O.D.	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH
29.00	SS-95	83.60	165.00	5"XH	178	F-1600	BPMMP	306
36.00	SS-95	67.80	169.00	5"XH	160	F-1600	BPMMP	306

Shale Shaker(s)

No. 2	Type: Derrick	New
Screens changed	☐ Yes	☒ No
Top	100	100
Middle	100	100
Bottom	100	100

Time – Hrs

									Drill Out
MORN	3.25	0.75	0.25	0.50	0.50		0.25	2.50	
DAY	7.00		0.25	5.50			0.25		
EVE	7.00		0.25	0.75					
TOTAL	17.25	0.75	6.75	1.75	6.00		0.50	2.50	

MORNING TOUR 0:00 TO 8:00

Bit Record

NO.	ITEM	O.D.	LENGTH		
1	bit	311	0.35	BIT NO	7
1	Motor	241	10.96	SIZE	311
1	Double Pin	246	0.78	IADC CODE	5 3 7
1	[illegible]	241	10.64	MFG.	H.C.
2	[illegible]	230	18.71	TYPE	MX-30G
1	Shock Sub	240	2.91	SERIAL NO.	T33DX
7	8" Drill Collars	220	64.84	JETS	22.2 22.2 22.2
1	[illegible]	234	6.11	DEPTH OUT (m)	
1	8" Pony D.C.	228	3.93	DEPTH IN (m)	867.00
3	7" Drill Collars	171	28.69	TOTAL METERS DRILLED	18.00
6	[illegible]	127	56.48	TOTAL HOURS RUN	3.26
24	D.P.		678.66		
1	D.P.		9.39		
	KELLY DOWN		-2.61	HOLE CONDITION	
	TOTAL		886.00	HOLE DRAG	4-6 KdaN
	WT. OF BC		31000.00	TORQUE AT BOTTOM	
	WT. OF STRING		80000.00	FILL ON BOTTOM (m)	

Mud Record

TIME	02:00	04:00	06:00
DENSITY	1040	1040	1040
FUNNEL VIS	35	34	37
W.L. (cm3)			
pH	12.9	11.8	11.5
PVT@	112.7m3	113.7m3	115.4m3

PRODUCT	AMOUNT x UNIT
Soda Ash	1 sk
Milgel NT	25 sks

Solids control: Centrifuge — hours run 6.00; 1040; 1030; 1730

Meters Drilled

FROM	TO		ROTARY RPM	
867.00	886.00	D	10	16

Circulation pressure	Pump No.1 liner	S.P.M.	Pump No.2 liner	S.P.M.
10000	152	80	152	80

Reduced pump speed: 2814 @ 90 @ 858.00

DEPTH (m)	DEVIATION	DIRECTION
864.20	21.4	41.40

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
0:00	0:30	0.50	15	Pressure Test B.O.P. Annular, Choke Lines, Manifold Valves, Pipe Rams, 1400 Kpa Low, 7000 Kpa High,10 Min each
0:30	0:45	0.25	7	Rig Service & Function Annular 19/19 Secs
0:45	1:30	0.75	6	Run In Hole
1:30	1:45	0.25	22	Held (B.O.P. Drill) W/Crewmembers, Well Secure 90 secs
1:45	4:15	2.50	23	(Drill Out) cement, Float Collar & Shoe Fr/833m-867m
4:15	7:30	3.25	2	Drill Fr/867m-
7:30	8:00	0.50	10	Surveys & Orient Tool Face

Driller signature: Bill Mills

Max exp hookload: 93000.00

Crew

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	722-572-781	Dwayne Fry	8.00	DF	☐	☒
Floorman	652687068	Dave Crowley	8.00	DC	☐	☒
Floorman	740-656-970	Michael Hitchborn	8.00	MH	☐	☒
Leaseman	852-890-757	Kyle Hrynew	8.00	KH	☐	☒
Rig Manager	718-409-464	Kevin Vig		KV	☐	☒
Top Drive	638-977-702	Sheldon Langley		SL	☐	☒

Rate schedule: ☒ Regular

DAY TOUR 8:00 TO 16:00

Bit Record

NO.	ITEM	O.D.	LENGTH		
1	bit	311	0.35	BIT NO	7
1	Motor	241	10.96	SIZE	311
1	Double Pin	246	0.76	IADC CODE	5 3 7
1	[illegible]	241	10.64	MFG	H.C.
2	[illegible]	230	18.71	TYPE	MX-30G
1	Shock Sub	240	2.91	SERIAL NO	T33DX
7	8" Drill Collars	220	64.84	JETS	22.2 22.2 22.2
1	[illegible]	234	6.11	DEPTH OUT (m)	
1	8" Pony D.C.	228	3.93	DEPTH IN (m)	867.00
3	7" Drill Collars	171	28.69	TOTAL METERS DRILLED	61.00
6	[illegible]	127	56.48	TOTAL HOURS RUN	10.25
25	D.P.		731.85		
1	D.P.		9.36		
	KELLY DOWN		0.08	HOLE CONDITION	
	TOTAL		928.00	HOLE DRAG	4-8 Dan Up/Down
	WT. OF BC		31000.00	TORQUE AT BOTTOM	
	WT. OF STRING		83000.00	FILL ON BOTTOM (m)	

Mud Record

TIME	09:00	12:00	15:00
DENSITY	1040	1040	1040
FUNNEL VIS	41	39	42
W.L. (cm3)			
pH	11.5	11.5	11.6
PVT@	118.2 m3	120.1 m3	122 m3

PRODUCT	AMOUNT x UNIT
Milgel NT	88 sacks
Ligco	10 sacks

Solids control: Centrifuge

Meters Drilled

FROM	TO		ROTARY RPM	
886.00	928.00	D	15	16

Circulation pressure	Pump No.1 liner	S.P.M.	Pump No.2 liner	S.P.M.
10500	152	80	152	80

Reduced pump speed: 2361 @ 80 @ 911.00

DEPTH (m)	DEVIATION	DIRECTION
882.90	23.5	38.20
901.70	25.3	36.60

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
8:00	13:15	5.25	2	Drill fr/885m-915m
13:15	13:30	0.25	22	Held B.O.P. Drill w/Crewmember's, Well secure in 90 sec.
13:30	13:45	0.25	7	Rig Service and Function Pipe Rams, 8/8
13:45	15:30	1.75	2	Drill fr/915m-926m
15:30	16:00	0.50	10	Accumulated Survey's and Orient Tool Face

Driller signature: Wade Goddard

Max exp hookload: 96000.00

Crew

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-626-704	Wade Goddard	12.00	WG	☐	☒
Derrickman	842-872-840	Murray McBain	12.00	MM	☐	☒
Motorman	661-368-064	Jesse Goddard	12.00	JG	☐	☒
Floorman	732-808-483	Dune Malmberg	12.00	DM	☐	☒
Floorman	730-040-896	Nathan Schwandt	12.00	NS	☐	☒
Leaseman	729-975-003	Daniel Sampson	12.00	DS	☐	☒

Rate schedule: ☒ Regular

EVENING TOUR 16:00 TO 24:00

Bit Record

NO.	ITEM	O.D.	LENGTH		
1	bit	311	0.35	BIT NO.	7
1	Motor	241	10.96	SIZE	311
1	Double Pin	246	0.76	IADC CODE	5 3 7
1	[illegible]	241	10.64	MFG	H.C.
2	[illegible]	230	18.71	TYPE	MX-30G
1	Shock Sub	240	2.91	SERIAL NO.	T33DX
7	8" Drill Collars	220	64.84	JETS	22.2 22.2 22.2
1	[illegible]	234	6.11	DEPTH OUT (m)	
1	8" Pony D.C.	228	3.93	DEPTH IN (m)	867.00
3	7" Drill Collars	171	26.69	TOTAL METERS DRILLED	98.00
6	[illegible]	127	56.48	TOTAL HOURS RUN	17.28
27	D.P.		789.91		
1	D.P.		6.37		
	KELLY DOWN		-6.76	HOLE CONDITION	
	TOTAL		965.00	HOLE DRAG	8-8 KdaN
	WT. OF BC		31000.00	TORQUE AT BOTTOM	
	WT. OF STRING		83000.00	FILL ON BOTTOM (m)	

Mud Record

TIME	18:00	21:00	23:00
DENSITY	1045	1050	1060
FUNNEL VIS	42	43	48
W.L. (cm3)			
pH	11.0	10.5	10.5
PVT@	122.1	103.3m3	105.1m3

PRODUCT	AMOUNT x UNIT
Milgel NT	18 sacks

Solids control: Centrifuge — hours run 8.00; 1058; 1049; 1760

Meters Drilled

FROM	TO		ROTARY RPM	
928.00	965.00	D	15	16

Circulation pressure	Pump No.1 liner	S.P.M.	Pump No.2 liner	S.P.M.
10800	152	80	152	80

Reduced pump speed: 2656 @ 80 @ 965.00

DEPTH (m)	DEVIATION	DIRECTION
920.31	26.2	32.90
929.70	26.6	31.60
939.00	26.7	29.60

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
16:00	20:00	4.00	2	Drill fr/928m-942m
20:00	20:15	0.25	7	Rig Service & Function H.C.R Valve 3/3 Secs
20:15	23:15	3.00	2	Drill Fr/942m-965m
23:15	24:00	0.75	10	Orient Tool Face & M.W.D. Survey

Driller signature: Bill Mills

Max exp hookload: 100000.00

Crew

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	652687096	Dave Crowley	4.00	DC	☐	☒
Leaseman	852-890-757	Kyle Hrynew	4.00	KH	☐	☒

Rate schedule: ☒ Regular

ETS SERIAL NUMBER: PREC620_20040917_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD 2004-09-22 22:49 | JOB RELEASE | JOB NO 21 | DATE

LICENCE NO. a-92-A / 92-J-12 | WELL NAME AND NO. MCS South Meager

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
(1) Daily Walk Around Inspection
(2) Derrick/Substructure Monthly Inspection (if applicable)
(3) H2S Signs Posted (if required)
(4) Well Licence & Site Diagram Posted
(5) Pre-Tour Rig Checks
(6) BOP Drills Performed
(7) Visibility Inspection (Lights, Flagging & Obstacles Clear)
(8) Rig Site Health and Safety Meeting Conducted (monthly)
(9) C.A.O.D.C. Rig Safety Inspection Checklist (spring/monthly)
(10) Hazard Inventory Bakers Rosary or Laundry
(11) Crown Saver Checked
(12) Safety Kits Checked

DATE 18-Oct-2004 | RIG NO. 620 E | FUEL 8.60 | RIG 66742 BOILER

WEATHER: TEMPERATURE D | CURRENT CONDITION Snow | WIND DIRECTION Calm | ROAD Muddy

LAST CASING TUBULARS RUN IN HOLE

DESCRIPTION	O.D. (mm)	WALL TH. (mm)	GRADE	MAKE	WEIGHT	NO. OF JOINTS	TOTAL JNT LENGTH	HEIGHT TO KB/CASING HEAD (m)	SET AT (m)
								7.32	
			K-55		10	125.00	5.31		124.00
								8.22	857.00

DCSP (kN)	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)
	29.99	SS-95	53.60	168.00	5"XH	170	F-1600	BPMMP	305
	38.09	SS-95	67.00	168.00	5"XH	180	F-1600	BPMMP	305

TIME - HRS

	OPER.	RIG SERV.	REPAIR	CUT/SLIP DRLG. LINE	DRLG.	CIRC.	COND. MUD	TRIPS	SURVEY	REAM	WASH	WAIT ON CEMENT	WAIT ON WEATHER	RIG UP/ DOWN	TEST BOPE	OTHER	Work Pipe	TOTAL
MORN	8.75				0.25												0.50	
DAY	6.75				0.25												0.50	
EVE	7.25				0.25												0.50	
TOTAL	20.75				0.75												1.50	1.00

SHALE SHAKER(S) | RENTALS/SERVICES

NO.	TYPE	HOW
2	Derrick	

SCREENS CHANGED ☐ YES ☑ NO

6.00	TOP	100	TOP 100
6.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

HOURS	DAY	EVE

WELL TYPE Geothermal | RE-ENTRY ☐ YES ☑ NO | KB TO GROUND ELEV. 7.32

WELL NAME & NO. MCS South Meager | DATE 18-Oct-2004

OPERATOR Western Geopower Corp | CONTRACTOR Precision Drilling

RIG MANAGER Kevin Vig | RIG NO. 620 E

PROVINCE BC | CAMP ☑ YES ☐ NO | NO SAFETY DAYS 26.00

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	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	652687096	Dave Crowley	8.00	DC	☐	☑
Leaseman	652-690-757	Kyle Hryniw	8.00	KH	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	838-577-752	Sheldon Langley		SL	☐	☑

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

BIT RECORD

NO.	BIT TYPE	SIZE (mm)	CUM. MTRS.	
1	bit	311	0.35	BIT NO 7
1	Motor	241	10.96	SIZE 311
1	Double Pin	246	0.76	IADC CODE 6 3 7
1		241	10.84	MFG. H.C.
2		239	18.71	TYPE MX-30G
1	Shock Sub	240	2.91	SERIAL NO. T33DX
7		220	64.84	JETS 22 22 22
1		234	5.11	DEPTH OUT (m)
1	9" Pony D.C.	228	3.93	DEPTH IN (m) 857.00
3		171	26.69	TOTAL METRES DRILLED (m) 129.00
6		127	56.45	TOTAL HOURS RUN 24.00
28	D.P.	STANDS	786.08	CUTTING STRUCTURE 1 1 WT A E I NO BT G Days CDC KNUM PULLED
1	D.P.	SINGLES	9.39	
	HEVI-WEIGHT		-3.06	HOLE CONDITION
	TOTAL		998.00	HOLE DRAG 6-8 Kdan(Sliding)
WT. OF DC		31000.00		TORQUE AT BOTTOM 8362
WT. OF STRING		82000.00		FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☑ WATER BASED ☐ OIL BASED

TIME	02:00	04:00	06:00
DENSITY (kg/m3)	1050	1050	1050
FUNNEL VIS. (s/L)	46	47	46
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP @	105.1 m3	106.6m3	107.6m3

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN			
	1 sk				
Defoamer LD-9	1 pl	8.00	1050	1045	1745
Milgel NT	41 sks				

METERS DRILLED

FROM	TO	NO. OF BITS	ROTARY R.P.M.	WT. ON BIT (kN)
965.00	996.00	0	15	18

PUMP NO. 1: LINER SIZE (mm) 152, S.P.M. 80 | PUMP NO. 2: LINER SIZE (mm) 152, S.P.M. 80

REDUCED PUMP SPEED: 2855 @ 80 @ 990.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
987.80	26.6	28.70
976.80	26.9	26.60

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	1:30	1.50	2	Drill Fr 965m-971m
1:30	1:45	0.25	7	Rig Service & Function Annular 20/20 Secs
1:45	7:00	5.25	2	Drill Fr971m-996m
7:00	7:30	0.50	10	Orient Tool face & M.W.D. Survey
7:30	8:00	0.50	22	(work Pipe)Stalling Top Drive

NOTES

DRILLER SIGNATURE: Bill Mills | OPERATOR FUEL | MAX EXP HOOKLOAD 102000.00 | SAFETY TOPIC | M.A.D.P.

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	533-828-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	12.00	MM	☐	☑
Motorman	651-366-064	Jesse Goddard	12.00	JG	☐	☑
Floorman	732-808-483	Dane Malmberg	12.00	DM	☐	☑
Floorman	730-690-896	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	728-975-603	Daniel Sampson	12.00	DS	☐	☑

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

BIT RECORD

NO.	BIT TYPE	SIZE (mm)	CUM. MTRS.	
1	bit	311	0.35	BIT NO 7
1	Motor	241	10.96	SIZE 311
1	Double Pin	246	0.76	IADC CODE 6 3 7
1		241	10.84	MFG. H.C.
2		239	18.71	TYPE MX-30G
1	Shock Sub	240	2.91	SERIAL NO. T33DX
7		220	64.84	JETS 22 22 22
1		234	5.11	DEPTH OUT (m)
1	9" Pony D.C.	228	3.93	DEPTH IN (m) 857.00
3		171	26.69	TOTAL METRES DRILLED (m) 160.00
8		127	86.45	TOTAL HOURS RUN 30.75
29	D.P.	STANDS	816.19	CUTTING STRUCTURE 1 1 WT A E I NO BT G Days CDC KNUM PULLED
1	D.P.	SINGLES	9.39	
	HEVI-WEIGHT		0.00	HOLE CONDITION
	TOTAL		1027.00	HOLE DRAG 6-10 Dan Up/Down (Sliding)
WT. OF DC		31000.00		TORQUE AT BOTTOM
WT. OF STRING		83000.00		FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☑ WATER BASED ☐ OIL BASED

TIME	08:00	12:00	16:00
DENSITY (kg/m3)	1050	1050	1050
FUNNEL VIS. (s/L)	45	43	46
W.L. (cm3)			
pH	10.0	9.5	8.0
PV/YP @	107.7 m3	106.7 m3	105.7 m3

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN			
Milgel NT	28 sacks				
Lignco	15 sacks				
	20 sacks				
Caustic Soda	1 sack				

METERS DRILLED

FROM	TO	NO. OF BITS	ROTARY R.P.M.	WT. ON BIT (kN)
996.00	1027.00	D	15	12-18

PUMP NO. 1: LINER SIZE (mm) 152, S.P.M. 80 | PUMP NO. 2: LINER SIZE (mm) 152, S.P.M. 80

REDUCED PUMP SPEED: 2610 @ 80 @ 1027.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
996.36	27.9	24.10

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	13:45	5.75	2	Drill fr996m-1022m
13:45	14:15	0.50	22	(Work Pipe) Stalling Top Drive
14:15	15:15	1.00	2	Drill fr1022m-1027m
15:15	15:30	0.25	7	Rig Service and Function Pipe Ram's 5/8
15:30	16:00	0.50	10	Accumulated M.W.D. Survey's and Orient Tool Face

NOTES

DRILLER SIGNATURE: Wade Goddard | OPERATOR FUEL | MAX EXP HOOKLOAD 108000.00 | SAFETY TOPIC | M.A.D.P.

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	652-687-096	Dave Crowley	4.00	DC	☐	☑
Floorman	652-690-757	Kyle Hryniw	4.00	KH	☐	☑
Leaseman	736-315-639	Nathan Gridio	4.00	NG	☐	☑

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

BIT RECORD

NO.	BIT TYPE	SIZE (mm)	CUM. MTRS.	
1	bit	311	0.35	BIT NO 7
1	Motor	241	10.96	SIZE 311
1	Double Pin	246	0.76	IADC CODE 6 3 7
1		241	10.84	MFG. H.C.
2		239	18.71	TYPE MX-30G
1	Shock Sub	240	2.91	SERIAL NO. T33DX
7		220	64.84	JETS 22 22 22
1		234	5.11	DEPTH OUT (m)
1	9" Pony D.C.	228	3.93	DEPTH IN (m) 857.00
3		171	26.59	TOTAL METRES DRILLED (m) 198.00
6		127	56.45	TOTAL HOURS RUN 38.00
30	D.P.	STANDS	844.27	CUTTING STRUCTURE 1 1 WT A E I NO BT G Days CDC KNUM PULLED
1	D.P.	SINGLES	9.38	
	HEVI-WEIGHT		-1.13	HOLE CONDITION
	TOTAL		1055.00	HOLE DRAG 6-8 KdaN
WT. OF DC		31000.00		TORQUE AT BOTTOM 8980
WT. OF STRING		83000.00		FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☑ WATER BASED ☐ OIL BASED

TIME	18:00	21:00	23:00
DENSITY (kg/m3)	1068	1060	1068
FUNNEL VIS. (s/L)	44	50	46
W.L. (cm3)			
pH	9.5	10.0	10.0
PV/YP @	108.8 m3	109.1m3	109.3m3

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN			
Caustic Soda	1 sack				
Milgel NT	7 sacks	5.00	1060	1050	1730

METERS DRILLED

FROM	TO	NO. OF BITS	ROTARY R.P.M.	WT. ON BIT (kN)
1027.00	1055.00	D	15	10-18

PUMP NO. 1: LINER SIZE (mm) 162, S.P.M. 80 | PUMP NO. 2: LINER SIZE (mm) 152, S.P.M. 80

REDUCED PUMP SPEED: 2736 @ 80 @ 1054.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1014.10	26.3	24.50
1032.90	29	25.80

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	23:15	7.25	2	Drill fr1027m-
23:15	23:30	0.25	7	Rig Service & Function H.C.R. 3/3 Secs
23:30	24:00	0.50	10	Orient tool face and M.W.D. Surveys

NOTES

DRILLER SIGNATURE: Bill Mills | OPERATOR FUEL | MAX EXP HOOKLOAD 103000.00 | SAFETY TOPIC | M.A.D.P.

ETS SERIAL NUMBER: PREC620_20040918_1A

CHIMO ETS SOFTWARE VERSION:

Based on the CAODC ETS file standard

Chimo Equipment
FA Varco Company

SPUD 2004-09-22 22:48	RIG RELEASE	JOB NO. 21	AFE
LICENCE NO a-92-A / 92-J-12	WELL NAME AND NO. MC6 South Meager		
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 / S.M.)
(1) Daily Walk Around Inspection
(2) Derrick Inspection (Monthly Joint) (Yes/No)
(3) H2S Signs Posted (If required)
(4) Well Library / In Shed Diagram Posted
(5) Flare Line Marked
(6) BOP Drills Performed
(7) Weekly Inspect BOP / Flowlines & Choke Lines
(8) Trip Tank Mech and Sensor Working (Yes/No/N/A)
(9) C.A.O.D.C Pre Spud Inspection Checklist (Yes/No/N/A)
(10) Man Inspection Before Rigging or Lowering
(11) Crown Saver Checked
(12) Safety Valve Checked

DATE	19-Oct-2004	LAST CASING TUBING OR LINER																	
RIG NO	620 E																		
FUEL	6.00																		
RIG	71823 BOILER																		
WEATHER	TEMPERATURE -2																		
	CURRENT CONDITION Cloudy																		
	WIND DIRECTION Calm																		
	ROAD Good																		

																	K-55	10	126.90	8.31	124.80
																			8.22	857.90
														29.00	SS-95	83.00	166.00	5"XH	170	F-1600	BPMMP	305
														36.00	SS-95	67.00	158.00	5"XH	158	F-1600	BPMMP	305

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	☐YES ☑NO	7.32
WELL NAME & NO. MC6 South Meager		DATE 19-Oct-2004
OPERATOR Western Geopower Corp	CONTRACTOR Precision Drilling	
RIG MANAGER Kevin Vig	RIG NO 620 E	
PROVINCE BC	CAMP ☑YES ☐NO	RIG SAFETY DAYS 27.00

TIME - HRS

	OPER	RIG SERV	REPAIRS	RIG UP/DN	MOVE RIG	WAIT ON DAYLIGHT	WAIT ON WEATHER	WAIT ON ORDERS	WAIT ON CEMENT	WAIT ON CASING CREW	WAIT ON TESTERS	WAIT ON DIRECTIONAL	WAIT ON MUD	WAIT ON CORES	DRILL	CIRC	SURVEY	WIPER TRIP	CUT DRLG LINE	TRIP	REAM	CORE	CEMENT	CASING	NU BOP	TEST BOP	SAFETY MTG	Work Tight Hole	SLIP & CUT	DEVIATION	OTHER	TOTAL
MORN	4.25				0.50	2.25	0.25													0.25								0.50				8.00
DAY		0.25				7.00	0.25																									7.50
EVE	7.00	0.00					0.25													0.25												0.50
TOTAL	11.25	0.25			0.50	9.25	0.75													0.50								0.50				16.00

SHALE SHAKER(S)

	TYPE	MESH
0.50	Derrick	
SCREENS CHANGED	☐YES	☑NO
8.00	TOP	100
8.00	MIDDLE	100
24.00	BOTTOM	100

RENTAL/SERVICES

	HRS	OUT	LOST

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1	Double Pin	240	0.78
1		241	10.84
2		230	18.71
1	Shock Sub	240	2.91
7	8" Drill Collars	229	64.84
1		234	8.11
1	8" Perry D.C.	228	3.93
3	7" Drill Collars	171	26.59
6		127	56.48
31	D.P.	STANDS	672.42
1	D.P.	SINGLES	9.39
	KELLY DOWN		-16.29
	TOTAL		1069.00

BIT NO.	7
SIZE	311
IADC CODE	5 3 7
MFG	H.C.
TYPE	MX-30G
SERIAL NO.	T33DX
JETS	28.5 28.5 28.5
DEPTH OUT (m)	1068.00
DEPTH IN (m)	867.00
TOTAL METERS DRILLED (m)	202.00
TOTAL HRS. ROT. HOURS	42.25

CUTTING STRUCTURE: T1 | TD | MISC | LOC | B | Gage | DOC | PULLED OUT FOR

HOLE CONDITION
HOLE DRAG 8-8 KdaN
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

WT. OF DC 21000.00
WT. OF STRING 83000.00

MUD RECORD

	1	2	3
TIME	02:00	04:00	06:30
DENSITY (kg/m³)	1060	1065	1066
FUNNEL VIS. (sec)	44	45	46
W.L. (cm3)			
pH	9.5	9.5	9.5
PVT@	107.4m3	105.7m3	103.4m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	3 sks
Milgel NT	25 sks
Lignco	20 sks

SOLIDS CONTROL: Centrifuge

	HOURS RUN	MUD/WATER ADDED (m³)	DISCARDED (m³)

METERS DRILLED

FROM	TO	WOB (kN)	ROTARY R.P.M.	HOURS
1066.00	1069.00	0	15	10-10

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.
10600	152	80	152	80

REDUCED PUMP SPEED

1550	@	80

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1051.50	28.9	23.80

TIME LOG

FROM	TO	HOURS	CODE
0:00	0:15	0.25	7
0:15	4:30	4.25	2
4:30	4:45	0.25	10
4:45	5:15	0.50	22
5:15	5:45	0.50	5
5:45	8:00	2.25	6

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Rig Service & Function Annular 20/20 Secs
Drill Fr/1065m-1069
Deviation Survey
(Work Tight Hole)
Circulate
Pull Out Of hole & Flow Checks @

NOTES

DRILLER SIGNATURE: Bill Mills

HRS FOR TOUR	HOURS AT RIG	CREW TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00						

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	629-928-252	Rob Roth	8.00	RR	☐	☑
Motorman	732-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	652-687-096	Dave Crowley	8.00	DC	☐	☑
Floorman	652-690-757	Kyle Hryniw	8.00	KH	☐	☑
Leaseman	736-315-839	Nathan Guido	8.00	NG	☐	☑
Rig Manager	719-406-584	Kevin Vig		KV	☐	☑
Top Drive	636-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE ☑ROAM ☐REPAIR ☐STAND-BY
DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1		306	2.35
1		241	10.84
2		230	18.71
1	Shock Sub	240	3.02
7	8" Drill Collars	229	64.84
1		234	8.02
1	8" Perry D.C.	228	3.93
3	7" Drill Collars	171	26.59
6		127	56.48
31	D.P.	STANDS	672.42
1	D.P.	SINGLES	9.39
	KELLY DOWN		0.00
	TOTAL		1085.90

BIT NO.	7	8
SIZE	311	311
IADC CODE	5 3 7	5 1 7
MFG	H.C.	H.C.
TYPE	MX-30G	HR-S44
SERIAL NO.	T33DX	6026391
JETS	28.5 28.5 28.5	22 22 22
DEPTH OUT (m)	1069.00	
DEPTH IN (m)	867.00	1069.00
TOTAL METERS DRILLED (m)	202.00	
TOTAL HOURS RUN	42.25	

CUTTING STRUCTURE: T1 | TD | MISC | LOC | B | Gage | DOC | PULLED OUT FOR: BT ROP 4.76

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

WT. OF DC
WT. OF STRING

MUD RECORD

	1	2	3
TIME			
DENSITY (kg/m³)			
FUNNEL VIS. (sec)			
W.L. (cm3)			
pH			
PVT@			

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL: Centrifuge

	HOURS RUN	MUD/WATER ADDED (m³)	DISCARDED (m³)

METERS DRILLED

FROM	TO	WOB (kN)	ROTARY R.P.M.	HOURS
1069.00				

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 (o)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE
9:00	10:45	2.75	6
10:45	11:00	0.25	7
11:00	13:00	2.00	6
13:00	13:30	0.50	23
13:30	15:45	2.25	6
15:45	16:00	0.25	3

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Hoist Bit#7,Flow Check @ 603m,219m,0mChange Out Jar's and Shock Su
Rig Service and Function Blind Rams 5/8
M/U Bit#8,Set Angle @ 1.2 Deg,P/U NorTrac Stab
Service Top Drive,Work on Extend Alarm
M/U B.H.A.,RIH,Flow Check,Fill Pipe and Test M.W.D. @ 891m
Wash and Ream fr/1001m-1039m

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS FOR TOUR	HOURS AT RIG	CREW TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.0			83000.00	Handling B.H.A.	

DAY TOUR 9:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-828-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-849	Murray McBain	12.00	MM	☐	☑
Motorman	651-386-064	Jesse Goddard	12.00	JG	☐	☑
Floorman	732-698-483	Dune Malmberg	12.00	DM	☐	☑
Floorman	730-040-896	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	12.00	DS	☐	☑

RATE SCHEDULE ☑ROAM ☐REPAIR ☐STAND-BY
DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1		306	2.35
1		241	10.84
2		230	18.71
1	Shock Sub	240	3.02
7	8" Drill Collars	229	64.84
1		234	8.02
1	8" Perry D.C.	228	3.93
3	7" Drill Collars	171	26.59
6		127	56.48
32	D.P.	STANDS	900.69
2	D.P.	SINGLES	18.79
	KELLY DOWN		-24.47
	TOTAL		1069.00

BIT NO.	8
SIZE	311
IADC CODE	6 1 7
MFG	H.C.
TYPE	HR-S44
SERIAL NO.	6026391
JETS	22 22 22
DEPTH OUT (m)	1069.00
DEPTH IN (m)	1069.00
TOTAL METERS DRILLED (m)	30.00
TOTAL HOURS RUN	7.00

CUTTING STRUCTURE: T1 | TD | MISC | LOC | B | Gage | DOC | PULLED OUT FOR

HOLE CONDITION
HOLE DRAG 7-9 KdaN
TORQUE AT BOTTOM 6567 ft/lbs
FILL ON BOTTOM (m) 3.00

WT. OF DC 31000.00
WT. OF STRING 84000.00

MUD RECORD

	1	2	3
TIME	16:00	21:00	23:00
DENSITY (kg/m³)	1058	1060	1058
FUNNEL VIS. (sec)	50	54	47
W.L. (cm3)			
pH	9.0	10.0	10.5
PVT@	105.6 m3	104.9m3	105.9m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL: Centrifuge

	HOURS RUN	MUD/WATER ADDED (m³)	DISCARDED (m³)
	8.00	1060	1050

METERS DRILLED

FROM	TO	WOB (kN)	ROTARY R.P.M.	HOURS
1069.00	1099.00	0	15	15-20

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.
11600	152	80	80	

REDUCED PUMP SPEED

	@	80

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1071.00	29.3	24.80

TIME LOG

FROM	TO	HOURS	CODE
18:00	18:30	0.50	3
18:30	23:30	4.00	2
23:30	23:45	0.25	7
23:45	21:00	0.25	10
21:00	24:00	3.00	2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Wash and Ream fr/1038m-1068m,3m Fill
Pattern Bit and Drill fr/1068m-1085m
Rig Service & Function Pipe Rams 7/7 Secs
Deviation Survey
Drill Fr/1085-1099m

NOTES

DRILLER SIGNATURE: Bill Mills

HRS FOR TOUR	HOURS AT RIG	CREW TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	10.0			104000.00	P/U drill pipe	

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	629-928-252	Rob Roth	4.00	RR	☐	☑
Motorman	732-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	652-687-096	Dave Crowley	4.00	DC	☐	☑
Floorman	652-690-757	Kyle Hryniw	4.00	KH	☐	☑
Leaseman	736-315-839	Nathan Guido	4.00	NG	☐	☑

RATE SCHEDULE ☑ROAM ☐REPAIR ☐STAND-BY
DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620 _20040919_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | ROG RELEASE | JOB NO.: 21 | AFE

LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MCE South Meager

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

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

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

DAILY CHECKS

DATE: 20-Oct-2004 | RIG NO.: 820 E | FUEL @ 8:00: | RIG: 95904 BOILER

LAST CASING TUBING OR LINER								K-55	10	135.00	6.31	124.00			
											8.22	667.00			

WEATHER: TEMPERATURE -5 | CURRENT CONDITION: Cloudy | WIND DIRECTION: Calm | ROAD: Fair

DEPTH SIZE (mm)	LINEAR MASS (kg/m)	GRADE	NO. OF JOINTS	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MAKE/MODEL ACTUATED	STROKE LENGTH (mm)
	29.00	SS-95	63.00	165.00	5"XH	170	F-1600	BPMMP	305
	38.00	SS-95	97.00	168.00	5"XH	150	F-1600	BPMMP	305

SHALE SHAKER(S) / RENTALS/SERVICES

NO.	TYPE	Derrick	NEW
2	SCREENS CHANGED	YES	NO
TOP	100	TOP	100
MIDDLE	100	MIDDLE	100
BOTTOM	100	BOTTOM	100

WELL TYPE	RE-ENTRY	YES	NO	KB TO GROUND ELEV.
Geothermal				7.32
WELL NAME & NO.			DATE	
MCE South Meager			20-Oct-2004	
OPERATOR		CONTRACTOR		
Western Geopower Corp		Precision Drilling		
RIG MANAGER		RIG NO.		
Kevin Vig		820 E		
PROVINCE	CAMP		SAG SAFETY DAYS	
BC	YES	NO	28.00	

TIME - HRS

OPER	RIG SERV	DRILL ACTUAL	REAMING	CORING	COND MUD & CIRC	TRIPS	SURVEYS	DRILL OFF LOG	WIRE LINE LOGS	CEMENT & CASING	SLIP CUT DRILL LINE	BOP TEST	RIG REPAIR	RIG UP & TEAR DOWN	STANDBY	SAFETY MEETINGS	OTHER
MORN	7.00					0.25		0.25									
DAY	7.99					0.25		0.25									
EVE	8.25				0.50	2.00		0.25									
TOTAL	23.25				0.50	2.50		0.75									

MORNING TOUR 0:00 TO 8:00

BIT RECORD

1	bit		311	0.35	BIT NO		8														
1	Motor		241	10.96	SIZE		311														
1			306	2.35	IADC CODE	6	1	7													
1			241	10.84	MFG		H.C.														
2			230	18.71	TYPE		HR-S44														
1	Shock Sub		240	3.02	SERIAL NO		6026391														
7			220	54.84	JETS	22.2	22.2	22.2													
1			234	6.02	DEPTH OUT (m)																
1	8" Pony D.C.		228	3.93	DEPTH IN (m)		1089.00														
3			171	26.59	TOTAL HOURS DRILLED		67.00														
6			127	56.48	TOTAL HOURS RUN		7.00														
33	B.H.	STANDARD		928.75	CUTTING STRUCTURE: T1	T2	WEAR	LOC	B	Gage	ODC	RONDED PULLED	WEAR	OTHER							
1	D.P.	SINGLES		9.37																	
	WELL DOWN			-5.22	HOLE CONDITION																
	TOTAL			1136.00	HOLE DRAG		8-10 DN / 11-13 UP														
WT. OF DC				31000.00	TORQUE AT BOTTOM		8587 ft/lbs														
WT. OF STRING				84000.00	FILL ON BOTTOM (m)																

MUD RECORD

MUD TYPE	Gel Chem	Lignosulfonate	Polymer	Salt Water	Fresh Water	Oil Base	Air/Gas	Other
					✓			

TIME	02:00	04:00	06:00
DENSITY (kg/m³)	1060	1060	1060
VIS (s/L)	46	44	47
W.L. (cm3)			
pH	9.5	10.0	10.5
PV/YP	107/m3	109.1m3	109.8m3

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	DRILLING FLUID (m³)	HOLE VOLUME (m³)	CUMULATIVE LOSS (m³)
Caustic Soda	7 sks				
Hydrated Lime	3 sks	8.00	1050	1060	1730
Ligco	30 sks				
Alt Temp	10 sks				
Milgel NT	26 sks				

METERS DRILLED

FROM	TO	BIT SIZE	ROTARY R.P.M.	WT. ON BIT (kN)
1099.00	1136.00	D	15	16-22

PUMP NO. 1: LINER 152 mm, S.P.M. 80, L/min 162
PUMP NO. 2: LINER 152 mm, S.P.M. 80, L/min 162
REDUCED PUMP SPEED: 2720 @ 80 = 1121.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1089.78	28.5	26.30

TIME LOG

HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
6:00	2	Drill Fr1099m-1109m
2:00	2.00	M.W.D. Survey
2:15	0.25	10
5:00	2.75	2 Drill Fr1109m-1122m
5:15	0.25	7 Rig Service & Function Annular 20/20 Secs
8:00	2.75	2 Drill Fr1122m-1136m

NOTES

DRILLER SIGNATURE: Bill Mills | DRIVE HRS: 8.00 | STAND TIME: 0.5 | OPERATOR FUEL | MAX EXP HOOKLOAD: 113000.00 | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: ✓ REGULAR | REPAIR | SUSPEND

DRIVER A	CREW SAFETY DAYS	DRIVER B

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	722-572-781	Dwayne Fry	8.00	DF	✓
Floorman	652-687-098	Dave Crowley	8.00	DC	✓
Floorman	652-889-757	Kyle Hryniw	8.00	KH	✓
Leaseman	736-315-839	Nathan Guido	8.00	NG	✓
Rig Manager	719-409-484	Kevin Vig		KV	✓
Top Drive	636-977-702	Sheldon Langley		SL	✓

DAY TOUR 8:00 TO 16:00

BIT RECORD

1	bit		311	0.35	BIT NO		8														
1	Motor		241	10.96	SIZE		311														
1			306	2.35	IADC CODE	6	1	7													
1			241	10.84	MFG		H.C.														
2			230	18.71	TYPE		HR-S44														
1	Shock Sub		240	3.02	SERIAL NO		6026391														
7			220	54.84	JETS	22.2	22.2	22.2													
1			234	6.02	DEPTH OUT (m)																
1	8" Pony D.C.		228	3.93	DEPTH IN (m)		1089.00														
3			171	26.59	TOTAL HOURS DRILLED		114.00														
6			127	56.48	TOTAL HOURS RUN		22.00														
35	B.H.	STANDARD		985.08	CUTTING STRUCTURE: T1	T2	WEAR	LOC	B	Gage	ODC	RONDED PULLED	WEAR	OTHER							
1	D.P.	SINGLES		9.39																	
	WELL DOWN			0.00	HOLE CONDITION																
	TOTAL			1136.56	HOLE DRAG		8-10 Down/8-14 Up														
WT. OF DC				31000.00	TORQUE AT BOTTOM																
WT. OF STRING				85000.00	FILL ON BOTTOM (m)																

MUD RECORD

MUD TYPE	Gel Chem	Lignosulfonate	Polymer	Salt Water	Fresh Water	Oil Base	Air/Gas	Other
					✓			

TIME	09:00	12:00	16:00
DENSITY (kg/m³)	1060	1070	1070
VIS (s/L)	41	54	48
W.L. (cm3)			
pH	11.5	11.5	11.5
PV/YP	109.8 m3	106.9 m3	105.5 m3

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	DRILLING FLUID (m³)	HOLE VOLUME (m³)	CUMULATIVE LOSS (m³)
Hydrated Lime	2 sacks				
Milgel NT	27 sacks				
Ligco	30 sacks				
Caustic Soda	5 sacks				
Sawdust	30 sacks				

METERS DRILLED

FROM	TO	BIT SIZE	ROTARY R.P.M.	WT. ON BIT (kN)
1136.00	1163.00	D	15	8-22

PUMP NO. 1: LINER 152 mm, S.P.M. 80, L/min 162
PUMP NO. 2: LINER 152 mm, S.P.M. 80, L/min 162
REDUCED PUMP SPEED: 2696 @ 80 = 1160.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1136.60	27.9	25.80
1164.80	27.6	27.30

TIME LOG

HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
3:15	2	Drill fr1136m-1160m
0:15	7	Rig Service and Function Pipe Ram's, B/B
4:30	2	Drill fr1160m-1163m
10:45	10	Accumulated M.W.D. Survey's and Orient Tool Face

NOTES

DRILLER SIGNATURE: Wade Goddard | DRIVE HRS: 8.00 | STAND TIME: 0.5 | OPERATOR FUEL | MAX EXP HOOKLOAD: 135000.00 | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: ✓ REGULAR | REPAIR | SUSPEND

DRIVER A	CREW SAFETY DAYS	DRIVER B

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-528-706	Wade Goddard	12.00	WG	✓
Derrickman	642-872-840	Murray McBain	12.00	MM	✓
Motorman	651-366-064	Jesse Goddard	12.00	JG	✓
Floorman	732-909-483	Dane Malmberg	12.00	DM	✓
Floorman	730-040-896	Nathan Schwandt	12.00	NS	✓
Leaseman	729-975-003	Daniel Sampson	12.00	DS	✓

EVENING TOUR 16:00 TO 24:00

BIT RECORD

1	bit		311	0.35	BIT NO		8														
1	Motor		241	10.96	SIZE		311														
1			306	2.35	IADC CODE	6	1	7													
1			241	10.84	MFG		H.C.														
2			230	18.71	TYPE		HR-S44														
1	Shock Sub		240	3.02	SERIAL NO		6026391														
7			220	54.84	JETS	22.2	22.2	22.2													
1			234	6.02	DEPTH OUT (m)		1197.00														
1	8" Pony D.C.		228	3.93	DEPTH IN (m)		1089.00														
3			171	26.59	TOTAL HOURS DRILLED		128.00														
6			127	56.48	TOTAL HOURS RUN		22.00														
35	B.H.	STANDARD		985.08	CUTTING STRUCTURE: T1	T2	WEAR	LOC	B	Gage	ODC	RONDED PULLED	WEAR	OTHER							
1	D.P.	SINGLES		9.39																	
	WELL DOWN			-1.56	HOLE CONDITION																
	TOTAL			1197.00	HOLE DRAG																
WT. OF DC				31000.00	TORQUE AT BOTTOM																
WT. OF STRING				86000.00	FILL ON BOTTOM (m)																

MUD RECORD

MUD TYPE	Gel Chem	Lignosulfonate	Polymer	Salt Water	Fresh Water	Oil Base	Air/Gas	Other
					✓			

TIME	16:00	21:00	
DENSITY (kg/m³)	1075	1075	
VIS (s/L)	53	60	
W.L. (cm3)			
pH	11.0	11.5	
PV/YP	102.7 m3	102.4m3	

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	DRILLING FLUID (m³)	HOLE VOLUME (m³)	CUMULATIVE LOSS (m³)
Soda Ash	1 sk				
		6.00	1075	1090	1740

METERS DRILLED

FROM	TO	BIT SIZE	ROTARY R.P.M.	WT. ON BIT (kN)
1163.00	1197.00	D	15	8-20

PUMP NO. 1: LINER 152 mm, S.P.M. 80, L/min 162
PUMP NO. 2: LINER 152 mm, S.P.M. 80, L/min 162
REDUCED PUMP SPEED: @ =

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
5:15	2	Drill fr1163m-1197m
0:45	5	Circulate
2:00	6	Pull out of hole & flow check @ 1193m, 1024m, 210m.
0:30	7	Rig Service & function H.C.R. 4/4 SEcs

NOTES

DRILLER SIGNATURE: Bill Mills | DRIVE HRS: 8.00 | STAND TIME: 0.5 | OPERATOR FUEL | MAX EXP HOOKLOAD: 113000.00 | SAFETY TOPIC | M.A.C.P.

RATE SCHEDULE: ✓ REGULAR | REPAIR | SUSPEND

DRIVER A	CREW SAFETY DAYS	DRIVER B

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	652-687-098	Dave Crowley	4.00	DC	✓
Floorman	652-889-757	Kyle Hrynhw	4.00	KH	✓

ETS SERIAL NUMBER: PREC820 _20040920_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
FA Varco Company

Based on the CAODC ETS file standard

BP/AB: 2004-09-23 22:49	MUD RELEASE
JOB NO.: 21	AFE
LICENCE NO.: a-92-A / 92-J-12	WELL NAME AND NO.: MCS South Meager
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

(1) Daily Visual Inspection
(2) Detailed Inspection Weekly during Drilling
(3) H2S Safe Permit (if required)
(4) Well Licence & Spud Diagram Posted
(5) Flare Line Secure
(6) BOP Daily Performed
(7) Visually Inspect BOP Pressure & Diagram Line
(8) Rig Site Health and Safety Meeting (Introduction only)
(9) C.A.O.D.C. Rig Safety Inspection Checklist (One Per Month)
(10) Hold Impromptu Safety Meeting at Licencing
(11) Check Spud Checklist
(12) Notify Regulatory Overlord

DATE	21-Oct-2004
RIG NO	620 E
FUEL @ 8:00	
Rig	74680 BOILER
TEMPERATURE	-4
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Slick

LAST CASING TUBING OH TIGHT

O.D. (mm)	WEIGHT (kg/m)	GRADE	NO. OF JOINTS	TOTAL OH LENGTH	KB TO CSG HEADRAM	SET AT (m)
					7.32	
		K-55	10	125.00	6.31	124.00
					8.22	567.00

DRILL PIPE	CUMULATIVE DRILL PIPE (m)	GRADE	MAX ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE (Dia (mm))
	29.00	SS-95	93.00	166.00	5"XH	179	F-1600	BPMMP	305
	58.00	SS-95	97.00	184.00	5"XH	166	F-1600	BPMMP	305

TIME HRS

	OPER	TRIP	DRILL	REAMING	CORING	CIRC	SURV	WOW	SLIP CUT DRLG	RIG SERV	DRILL STRING	CEMENT	BOP	TESTING	RIG REPAIR	RIG UP/DOWN	DIRECT WORK	WAIT ON DAYLIGHT	OTHER
WORK				4.50	0.25														
DAY	7.00	0.25		0.25		0.25													
EVE	7.50					9.25													
TOT HL	14.50	0.25		0.25	4.50	0.75													

Service Top Drive: 0.50

SHALE SHAKER(S) — RENTALS/SERVICES

NO.	TYPE	MFG	NEW	MONT	DAY	EVE
1	Derrick		YES / NO			

8.00	CENTRIFUGE (CHARGE)	YES	NO
4.00	TOP	100	TOP 100
8.50	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

BIT RECORD

No.		O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1		306	2.36
1		241	10.84
2		230	18.71
1	Shock Sub	240	3.02
7		229	64.64
1		234	5.02
1	9" Pony D.C.	228	3.93
3		171	26.59
6		127	56.48
36	DP	STANDS	986.85
1	DP	SINGLES	9.39
			-1.65
	TOTAL		1197.00
WT. OF DC			31000.00
WT. OF STRING			85000.00

BIT NO.	9
SIZE	311
IADC CODE	6 1 7
MFG	H.C.
TYPE	HRS-44
SERIAL NO.	6027136
JETS	32 32 32
DEPTH OUT (m)	1197.00
DEPTH IN (m)	1049.00
TOTAL WT ON BIT (1000 kg)	126.00
TOTAL HOURS RUN	22.50
CUTTING STRUCTURE: T	2
B	2
G	fc
O	3
D	8
L	0
TD	TD

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

MUD RECORD

TIME			
DEPTH (m)			
PUMP No. (SPM)			
W.L. (cm3)			
pH			
PVYP			

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL: Centrifuge — HOURS RUN

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	WOB (kN)
1197.00				

CIRCULATION PRESSURES (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
9:00	2:00	2.00	6
2:00	4:45	2.75	20
4:45	6:45	2.00	6
6:45	7:00	0.25	7
7:00	7:30	0.50	33
7:30	8:00	0.50	6

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Pull Out of Hole & Flow check @0m
Dir. Work Lay down Mud motor, Scribe Motor, Change out bit Set motor to 1.2
Run In Hole
Rig Service & Function annular 20/20 secs
(Service Top Drive) Extend Alarm
Run In Hole

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	93000.00		

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		☑
Derrickman	629-926-262	Rob Roth	8.00	BM	☑
Motorman	722-572-781	Dwayne Fry	8.00	RR	☑
Floorman	652-687-096	Dave Crowley	8.00	DF	☑
Floorman	652-890-757	Kyle Hryniw	8.00	DC	☑
Rig Manager	719-409-484	Kevin Vig	8.00	KH	☐
Top Drive	638-977-702	Sheldon Langley		KV	☐
				SL	☐

RATE SCHEDULE: ☑ REGULAR ☐ OVERTIME ☐ WEEKEND
DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR

BIT RECORD

No.		O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1		306	2.35
1		241	10.84
2		230	18.71
1	Shock Sub	240	3.02
7		229	64.64
1		234	6.02
1	9" Pony D.C.	228	3.93
3		171	26.59
6		127	56.48
36	DP	STANDS	1013.20
2	DP	SINGLES	18.76
			0.00
	TOTAL		1231.00
WT. OF DC			31000.00
WT. OF STRING			87000.00

BIT NO.	9
SIZE	311
IADC CODE	6 1 7
MFG	H.C.
TYPE	HRS-44
SERIAL NO.	6027136
JETS	32 32 32
DEPTH OUT (m)	1197.00
DEPTH IN (m)	1197.00
TOTAL WT ON BIT (1000 kg)	34.00
TOTAL HOURS RUN	7.00
CUTTING STRUCTURE: T	2
B	2
G	fc
O	3
D	8
L	0
TD	TD

HOLE CONDITION
HOLE DRAG: 5-10Dan/Ml-14Up(Rotate)
TORQUE AT BOTTOM: 9822 ft/lbs
FILL ON BOTTOM (m): 2.00

MUD RECORD

TIME	09:00	12:00	15:00
DEPTH (m)	1078	1079	1095
PUMP No. (SPM)	44	63	46
W.L. (cm3)			
pH	11.0	9.5	10.0
PVYP	96.3 m3	100.7 m3	102.5 m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Moopac	6 sacks
Ligco	30 sacks
Caustic Soda	7 sacks

SOLIDS CONTROL: Centrifuge — HOURS RUN

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	WOB (kN)
1197.00	1231.00	D	15	17-20

CIRCULATION PRESSURES (kPa)

PUMP NO. 1 LINER SIZE (mm)	S.P.M.	PUMP NO. 2 LINER SIZE (mm)	S.P.M.
12900	152	90	152	90

REDUCED PUMP SPEED

3580		90	1214.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1192.80	27.7	27.00
1211.58	27.4	25.90

DRILLER SIGNATURE: Wade Goddard

TIME LOG

FROM	TO	HRS	CODE
8:00	8:15	0.25	3
8:15	8:30	0.25	5
8:30	12:45	4.25	2
12:45	13:00	0.25	7
13:00	15:45	2.75	2
15:45	16:00	0.25	10

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Wash f/1170m to Btm.,2m Fill
Circulate and Manitor Btms. Up Temperature(97 Deg. C)
Pattern Bit and Drill f/1197m-1216m
Rig Service and Function Pipe Ram's &/B
Drill f/1216m-1231m
Accumulated M.W.D. Survey's and Orient Tool Face

NOTES

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

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-628-705	Wade Goddard	12.00	WG	☑
Derrickman	642-872-840	Murray McBain	12.00	MM	☑
Motorman	951-365-064	Jesse Goddard	12.00	JG	☑
Floorman	732-808-483	Duane Malmberg	12.00	DM	☑
Floorman	730-040-896	Nathan Schwandt	12.00	NS	☑
Leaseman	726-975-093	Daniel Sampson	12.00	DS	☑

RATE SCHEDULE: ☑ REGULAR ☐ OVERTIME ☐ WEEKEND
DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

No.		O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.90
1		306	2.35
1		241	10.84
2		230	18.71
1	Shock Sub	240	3.02
7		229	64.64
1		234	5.02
1	9" Pony D.C.	228	3.93
3		171	26.59
6		127	56.48
36	DP	STANDS	1012.20
2	DP	SINGLES	18.76
			0.00
	TOTAL		1231.00
WT. OF DC			31000.00
WT. OF STRING			87000.00

BIT NO.	9
SIZE	311
IADC CODE	6 1 7
MFG	H.C.
TYPE	HRS-44
SERIAL NO.	6027136
JETS	32 32 32
DEPTH OUT (m)	1197.00
DEPTH IN (m)	1197.00
TOTAL WT ON BIT (1000 kg)	63.00
TOTAL HOURS RUN	14.50
CUTTING STRUCTURE: T	2
B	2
G	fc
O	3
D	8
L	0
TD	TD

HOLE CONDITION
HOLE DRAG: 5-10 DN/8-14 UP (Sliding)
TORQUE AT BOTTOM: 10045 ft/lbs
FILL ON BOTTOM (m)

MUD RECORD

TIME	16:00	21:00	23:00
DEPTH (m)	1065	1079	1065
PUMP No. (SPM)	49	45	49
W.L. (cm3)			
pH	10.6	10.5	10.9
PVYP	108.6 m3	108.2m3	108.1m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL: Centrifuge — HOURS RUN: 8.00 | 1078 | 1060 | 1790

METERS DRILLED

FROM	TO	M	ROTARY R.P.M.	WOB (kN)
1231.00	1250.00	D	15	10-20

CIRCULATION PRESSURES (kPa)

PUMP NO. 1 LINER SIZE (mm)	S.P.M.	PUMP NO. 2 LINER SIZE (mm)	S.P.M.
12800	152	90	152	90

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1230.20	27.8	24.10

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HRS	CODE
16:00	19:15	3.25	2
19:15	19:30	0.25	10
19:30	21:30	2.00	2
21:30	21:45	0.25	7
21:45	24:00	2.25	2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill f/1231m-1245m
Deviation Survey
Drill f/1245m-1263m
Rig Service & function H.C.R. 4/4 Secs
Drill f/1253m-1250m

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	112000.00		

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		☑
Derrickman	629-926-262	Rob Roth	4.00	BM	☑
Motorman	722-572-781	Dwayne Fry	4.00	RR	☑
Floorman	652-687-096	Dave Crowley	4.00	DF	☑
Floorman	652-890-757	Kyle Hryniw	4.00	DC	☑
			4.00	KH	☑

RATE SCHEDULE: ☑ REGULAR ☐ OVERTIME ☐ WEEKEND
DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

ETS SERIAL NUMBER: PREC620 _20040921_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49	RIG RELEASE:	JOB NO.: 21	AFE:
LICENCE NO.: a-92-A / 92-J-12	WELL NAME AND NO.: MC6 South Meager		
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 — OPR. / RIG

(1) Daily Walk Around Inspection
(2) Detailed Inspection Weekly (or as shedule)
(3) H2S Safety Protocol (if required)
(4) Weir Locations & Body Weights Posted
(5) Kelly Cock Tested
(6) BOP Drills Performed
(7) Derrick Inspect (BOP) Functions & Deficiencies
(11) Rig Site Health and Safety Meeting (minimum monthly)
(8) C & O D C Rig Safety Inspection (minimum yearly/6months)
(9) Mast Inspection Before Raising or Lowering
(10) Crown Saver Checked
(12) Hydr. Kelly Checked

WEATHER: CURRENT CONDITION: Snow; WIND DIRECTION: North; ROAD: Slippery; TEMPERATURE: -2

DATE: 22-Oct-2004
RIG NO.: 620 E
FUEL @ 8.00
RIG: 472.02 BOILER: 1455

LAST CASING TUBING OR LINER	O.D. (mm)	WALL THICK. (mm)	NOM.	GRADE	GRADE	NO. OF JOINTS	TOTAL NM LENGTH	HEIGHT OF CUT OFF HEAD (m)	SET AT (m)
								7.32	
					K-55	10	126.00	6.31	124.00
								6.23	857.00

	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)
	29.00	SS-95	83.00	166.00	5"XH	179	F-1600	BPMMP	305
	38.00	SS-95	67.00	168.00	5"XH	160	F-1600	BPMMP	305

TIME - HRS

TOUR	CODE NO.	DRILLING (Rotating)	SLIDING	REAMING	CIRCULATING	TRIPPING	SURVEYING	WIRELINE LOGGING	CUTTING OFF DRILL LINE	SLIP & CUT DRILL LINE	RIG SERVICE	RIG REPAIR	RIG UP & TEAR DOWN	WAITING ON DAYLIGHT	WAITING ON WEATHER	WAITING ON CEMENT	WAITING ON ORDERS	WAITING ON EQUIPMENT	WAITING ON MATERIALS	SAFETY MEETINGS	OTHER	TOTAL
MORN		7.50					0.25				0.25											8.00
DAY		7.50					0.25				0.25											8.00
EVE		7.50					0.25				0.25											8.00
TOTAL		22.50					0.75				0.75											24.00

SHALE SHAKER(S) — RENTAL/SERVICES

NO.	TYPE	NEW
	Derrick	

SCREENING CHANGED: 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	7.32
WELL NAME & No.		DATE
MC6 South Meager		22-Oct-2004
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling	
RIG MANAGER: Kevin Vig		RIG NO.: 620 E
PROVINCE: BC	CAMP: YES / NO	RIG SAFETY DATE: 30.09

MORNING TOUR

BIT RECORD

	BIT NO.	SIZE	IADC CODE	MFG.	TYPE	SERIAL NO.	JETS	DEPTH OUT (m)	DEPTH IN (m)	TOTAL METERS DRILLED	TOTAL HOURS RUN	DRILLING	SLIDING	REAMING	CIRCULATING	TRIPPING	SURVEYING	WIRELINE LOGGING	CUTTING OFF DRILL LINE	SLIP & CUT DRILL LINE	RIG SERVICE	RIG REPAIR	RIG UP & TEAR DOWN	WAITING ON DAYLIGHT	WAITING ON WEATHER	WAITING ON CEMENT	WAITING ON ORDERS	WAITING ON EQUIPMENT	WAITING ON MATERIALS	SAFETY MEETINGS	OTHER	TOTAL
1	bit	311	0.35	BIT NO	9																										
1	Motor	241	10.90	SIZE	311																										
1		305	2.35	IADC CODE	6 1 7																										
1		241	10.84	MFG.	H.C.																										
2		230	18.71	TYPE	HRS-44																										
1	Shock Sub	240	3.02	SERIAL NO.	6027136																										
7	8" Drill Collars	220	64.84	JETS																											
1		234	6.02	DEPTH OUT (m)	1282.00																										
1	8" Pony D.C.	228	3.93	DEPTH IN (m)	1197.00																										
3	7" Drill Collars	171	26.69	TOTAL METERS DRILLED	85.00																										
6		127	56.48	TOTAL HOURS RUN	22.00																										
38	D.P.		1069.47	OUTSIDE STRUCTURE: TL / TR / MSC / LOC																											
2	D.P.	SINGLES	18.75																												
WELL FLOWN			-10.25	HOLE CONDITION																											
TOTAL			1282.00	HOLE DRAG	0-31 dn/ 13-15 up(Sliding)																										
WT. OF DC			31000.00	TORQUE AT BOTTOM	10527 ft/lbs																										
WT. OF STRING			87000.00	FILL ON BOTTOM (m)																											

MUD RECORD

MUD TYPE: Water Based / Oil Based		Flowline Temp. 58 C		
TIME		02:00	04:00	06:00
DENSITY kg/m3		1060	1065	1060
FUNNEL VIS. (sec)		46	45	48
W.L. (cm3)				
pH		9.5	10.0	10.0
PV/YP		111.4m3	113.8m3	113.8m3

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	DRILLING (Rotating)	SLIDING	CIRCULATING
Ligco	30 sks				
Soda Ash	1 sk	6.00	1065	1060	1730
Caustic Soda	1 sk				
Monpac	4 sks	HOURS RUN	DRILLING (Rotating)	SLIDING	CIRCULATING
Hydrated Lime	2 sks				
Defoamer L.D-8	1 pl				

METERS DRILLED

FROM	TO	METERS DRILLED	BIT NO.	ROTARY HRS	HRS FOR THIS RUN
1280.00	1282.00	D	15	10-21	6:00

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	TOUR	DETAILS
6:00	11:15	5.25	2	Drill Fr/ 1280m-1285m
11:15	11:30	0.25	10	Deviation Survey
11:30	4:30	3.00	2	Drill Fr/1285m-1272m
4:30	4:45	0.25	7	Rig Service & Function Annular 20/20 Secs
4:45	8:00	3.25	2	Drill Fr/1272m-1282m

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: 3293 @ 90 @ 1271.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1248.00	27.6	26.60

NOTES

DRILLER SIGNATURE: Bill Mills

HRS RUN	HOURS AT EOT	STACK HOURS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
6.00	9.5			116000.00		

MORNING TOUR 6:00 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	722-572-781	Dwayne Fry	8.00	DF	
Floorman	652-687-096	Dave Crowley	8.00	DC	
Floorman	652-690-757	Kyle Hrynkiw	8.00	KH	
Rig Manager	719-409-484	Kevin Vig		KV	
Top Drive	638-877-702	Sheldon Langley		SL	

RATE SCHEDULE: REGULAR / REPAIR / DOWN

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	TOTAL HOURS RUN	DRILLING	SLIDING	REAMING	CIRCULATING	TRIPPING	SURVEYING	WIRELINE LOGGING	CUTTING OFF DRILL LINE	SLIP & CUT DRILL LINE	RIG SERVICE	RIG REPAIR	RIG UP & TEAR DOWN	WAITING ON DAYLIGHT	WAITING ON WEATHER	WAITING ON CEMENT	WAITING ON ORDERS	WAITING ON EQUIPMENT	WAITING ON MATERIALS	SAFETY MEETINGS	OTHER	TOTAL
1	bit	311	0.35	BIT NO	9																										
1	Motor	241	10.90	SIZE	311																										
1		305	2.35	IADC CODE	6 1 7																										
1		241	10.84	MFG.	H.C.																										
2		230	18.71	TYPE	HRS-44																										
1	Shock Sub	240	3.02	SERIAL NO.	6027136																										
7	8" Drill Collars	220	64.84	JETS																											
1		234	6.02	DEPTH OUT (m)	1312.00																										
1	8" Pony D.C.	228	3.93	DEPTH IN (m)	1197.00																										
3	7" Drill Collars	171	26.69	TOTAL METERS DRILLED	115.00																										
6		127	56.48	TOTAL HOURS RUN	29.50																										
40	D.P.	STANDS	1125.71	OUTSIDE STRUCTURE: TL / TR / MSC / LOC																											
9	D.P.	SINGLES	9.00																												
WELL FLOWN			0.00	HOLE CONDITION																											
TOTAL			1329.74	HOLE DRAG	8-13Dn/13-17up(Sliding)																										
WT. OF DC			31000.00	TORQUE AT BOTTOM	9622 ft/lbs.																										
WT. OF STRING			89000.00	FILL ON BOTTOM (m)																											

MUD RECORD

MUD TYPE: Water Based / Oil Based		FlowLine Temp. 60.5 C		
TIME		09:00	12:00	16:00
DENSITY kg/m3		1058	1055	1060
FUNNEL VIS. (sec)		42	44	52
W.L. (cm3)				
pH		10.0	9.6	9.5
PV/YP		116.8 m3	116.3 m3	116.8

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	DRILLING (Rotating)	SLIDING	CIRCULATING
Hydrated Lime	2 sacks				
Monpac	3 sacks				
Ligco	15 sacks				
Milgel NT	23 sacks	HOURS RUN	DRILLING (Rotating)	SLIDING	CIRCULATING
Caustic Soda	1 sack				

METERS DRILLED

FROM	TO	METERS DRILLED	BIT NO.	ROTARY HRS	HRS FOR THIS RUN
1282.00	1312.00	D	15	18-20	6:00

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	TOUR	DETAILS
6:00	10:00	2.00	2	Drill fr/1282m-1291m
10:00	10:15	0.25	7	Rig Service and Function Pipe Ram's 3/8
10:15	10:45	0.50	2	Drill fr/1291m-1312m
10:45	16:00	0.25	10	Accumulated M.W.D. Survey's

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: 3500 @ 90 @ 1291.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1277.20	27.5	24.60
1296.00	27.5	24.80

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS RUN	HOURS AT EOT	STACK HOURS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
6.00	9.5			118000.00	Weekend Awareness	

DAY TOUR 6:00 TO 18:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	12.00	WG	
Derrickman	642-872-640	Murray McBain	12.00	MM	
Motorman	651-366-084	Jesse Goddard	12.00	JG	
Floorman	732-808-483	Dune Malmberg	12.00	DM	
Floorman	730-040-896	Nathan Schwandt	12.00	NS	
Lesseman	729-975-003	Daniel Sampson	12.00	DS	

RATE SCHEDULE: REGULAR / REPAIR / DOWN

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	TOTAL HOURS RUN	DRILLING	SLIDING	REAMING	CIRCULATING	TRIPPING	SURVEYING	WIRELINE LOGGING	CUTTING OFF DRILL LINE	SLIP & CUT DRILL LINE	RIG SERVICE	RIG REPAIR	RIG UP & TEAR DOWN	WAITING ON DAYLIGHT	WAITING ON WEATHER	WAITING ON CEMENT	WAITING ON ORDERS	WAITING ON EQUIPMENT	WAITING ON MATERIALS	SAFETY MEETINGS	OTHER	TOTAL
1	bit	311	0.35	BIT NO	9																										
1	Motor	241	10.90	SIZE	311																										
1		305	2.35	IADC CODE	6 1 7																										
1		241	10.84	MFG.	H.C.																										
2		230	18.71	TYPE	HRS-44																										
1	Shock Sub	240	3.02	SERIAL NO.	6027136																										
7	8" Drill Collars	220	64.84	JETS																											
1		234	6.02	DEPTH OUT (m)																											
1	8" Pony D.C.	228	3.93	DEPTH IN (m)	1197.00																										
3	7" Drill Collars	171	26.69	TOTAL METERS DRILLED	142.00																										
6		127	56.48	TOTAL HOURS RUN	37.00																										
40	D.P.	STANDS	1125.71	OUTSIDE STRUCTURE: TL / TR / MSC / LOC																											
2	D.P.	SINGLES	18.79																												
WELL FLOWN			-9.44	HOLE CONDITION																											
TOTAL			1339.60	HOLE DRAG	8-13dn/12-17up(Sliding)																										
WT. OF DC			31000.00	TORQUE AT BOTTOM	10048ft/lbs																										
WT. OF STRING			89000.00	FILL ON BOTTOM (m)																											

MUD RECORD

MUD TYPE: Water Based / Oil Based		FlowLine Temp 58.3 c		
TIME		18:00	21:00	23:00
DENSITY kg/m3		1065	1060	1060
FUNNEL VIS. (sec)		62	53	56
W.L. (cm3)				
pH		9.0	9.6	9.6
PV/YP		118.3	113.8m3	137.6m3

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	DRILLING (Rotating)	SLIDING	CIRCULATING
Caustic Soda	1 sack				
Milgel NT	5 sacks	6.00	1060	1060	1730

METERS DRILLED

FROM	TO	METERS DRILLED	BIT NO.	ROTARY HRS	HRS FOR THIS RUN
1312.00	1339.60	D	15	18-21	16:00

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	TOUR	DETAILS
16:00	20:30	4.50	2	Drill fr/1312m-1328m
20:30	20:45	0.25	7	Rig Service & Function H.C.R. 4/4 Secs
20:45	21:15	0.50	2	Drill Fr/1328m-1330m
21:15	21:30	0.25	10	Deviation Survey
21:30	24:00	2.50	2	Drill Fr.1330m-1339m

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 (d)	DIRECTION
1314.80	27.7	27.90

NOTES

DRILLER SIGNATURE: Bill Mills

HRS RUN	HOURS AT EOT	STACK HOURS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
6.00	9.5			118000.00		

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	629-926-262	Rob Roth	8.00	RR	
Motorman	722-572-781	Dwayne Fry	8.00	DF	
Floorman	652-687-096	Dave Crowley	8.00	DC	
Floorman	652-690-757	Kyle Hrynkiw	8.00	KH	

RATE SCHEDULE: REGULAR / REPAIR / DOWN

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620 _20040922_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | RIG RELEASE | JOB NO: 21 | AFE
LICENCE NO: a-92-A / 92-J-12 | WELL NAME AND NO: MC6 South Meager
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: 23-Oct-2004 | RIG NO: 620 E | FUEL @ 8:00: RIG 77623 SCHLR | TEMPERATURE: -3 | CURRENT CONDITION: Snow | WIND DIRECTION: North | ROAD: Good

CASING	O.D. (mm)	WGHT lb/ft	GRADE	NAME	THREAD	NO. OF JOINTS	TOTAL PIPE LENGTH	KB TO CSG HEAD (m)	SET AT (m)
								7.32	
			K-55			10	125.00	8.31	124.00
								8.22	857.00

DRILL STRING	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	SS-95	83.00	166.00	5"XH	170	F-1600	BPMMP	305
	38.00	SS-95	67.00	159.00	6"XH	160	F-1600	BPMMP	305

WEATHER

TIME - HRS

CREW	TOUR	DRLG ACTUAL	DRLG CUMUL	RMG	TRIPS	RIG SERVICE	REAM	CIRC	COND MUD	SURVEY	TEST BOPE	TEST CSG	DRILL STEM TEST	CORE	WAIT ON DIR	WAIT ON MUD	WAIT ON CSG	WAIT ON CMT	WAIT ON TEST	WAIT ON WELL CONT	WAIT ON OTHER	Service Top Drive		
MORN	7.50					0.25																8.25		
DAY	7.50					0.25																8.25		
EVE	0.50	0.50	6.25	0.25																		0.50		
TOTAL	15.50	0.50	6.25	0.75		0.50																0.50		

SHALE SHAKER(S)

NO.	TYPE	NEW
2	Derrick	
SCREENS CHANGED		
TOP	100	100
MIDDLE	100	100
BOTTOM	100	100

RENTALS/SERVICES

HOURS	DAY	RVR

WELL TYPE: Geothermal | RE-ENTRY: ☐ Yes ☑ No | KB TO GROUND ELEV.: 7.32
WELL NAME & No.: MC6 South Meager | DATE: 23-Oct-2004
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig | RIG NO: 620 E
PROVINCE: BC | CAMP: ☑ Yes ☐ No | RIG SAFETY DAYS: 31.00

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.36
1	Motor	241	10.90
1		306	2.35
1		241	10.84
2		239	18.71
1	Shock Sub	240	3.02
7	9" Drill Collars	229	64.84
1		234	6.02
1	9" Pony D.C.	228	3.93
3	7" Drill Collars	171	28.69
6		127	56.48
42	D.P.	STANDS	1153.84
1	D.P.	SINGLES	9.36
	HWDP		6.23
	TOTAL		1352.80

BIT RECORD			
BIT NO.	9		
SIZE	311		
IADC CODE	6 1 7		
MFG	H.C.		
TYPE	HRS-44		
SERIAL NO.	5027136		
JETS	22	22	22
DEPTH OUT (m)	1342.00		
DEPTH IN (m)	1197.00		
TOTAL METERS DRILLED (m)	185.00		
TOTAL HOURS RUN	44.50		
CUTTING STRUCTURE	1	1	WT
	A	E	BT
	G	1	BT
	DC	LOC	
	B	Gage	OC
REASON PULLED	TD		

HOLE CONDITION: HOLE DRAG: 14-17Up/11-13Dn(sliding)
TORQUE AT BOTTOM:
FILL ON BOTTOM (m):

WT. OF DC	31000.00
WT. OF STRING	89000.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED		
TIME	02:00	04:00	06:00	
DENSITY (kg/m³)	1065	1065	1060	
FUNNEL VIS. (s/L)	54	56	54	
W.L. (cm3)				
pH	10.0	10.0	10.0	
PV/YP	139.1m3	136.3m3	138.7m3	

Flowline Temp: 50.7 C

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Ligco	36 sks
Hydrated Lime	2 sks
Caustic Soda	4 sks
Monpac	2 sks

SOLIDS CONTROL: Centrifuge

HOURS RUN	DRILLED (m)	DISCARDED (m³)	DISCARDED (bbl)
8.00	1065	1050	(740

METERS DRILLED

FROM	TO	BIT NO.	SIZE (mm)	ROTATING HRS	METERS DRILLED
1339.00	1362.00	D	15	21	

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.
12500	152	90	152	90

REDUCED PUMP SPEED

3563	@	90	@	1344.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1345.38	27.3	26.60

TIME LOG

FROM	TO	HOURS	CODE	CUMUL. HRS
0:00	2:30	2.50	2	
2:30	2:45	0.25	7	
2:45	6:30	3.75	2	
6:30	6:45	0.25	10	
6:45	8:00	1.25	2	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill Fr/1339m-1347m
Rig Service & Function Annular 20/20 Secs
Drill Fr/1347m-1359m
Deviation Survey
Drill Fr/1359m-1362m

NOTES: Flowline Check Sensor
Drayline 21-34 bbls 44-48 hrs F-34 bbls F-1600 Pumps 1 F-25 bhp 4 F-25 hrs

HOURS RUN	DRILLED (m)	DISCARDED (m³)	DISCARDED (bbl)
8.00	23		

DRILLER SIGNATURE: Bill Mills

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

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	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	652-687-096	Dave Crowley	8.00	DC	☐	☑
Floorman	652-890-757	Kyle Hryniw	8.00	KH	☐	☑
Rig Manager	718-408-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: ☑ Nisku AB ☐ Repair ☐ Invert
DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.36
1	Motor	241	10.90
1		306	2.35
1		241	10.84
2		239	18.71
1	Shock Sub	240	3.02
7	9" Drill Collars	229	64.84
1		234	6.02
1	9" Pony D.C.	228	3.93
3	7" Drill Collars	171	28.69
6		127	56.48
42	D.P.	STANDS	1161.98
2	D.P.	SINGLES	18.80
	HWDP		0.00
	TOTAL		1388.00

BIT RECORD			
BIT NO.	9		
SIZE	311		
IADC CODE	6 1 7		
MFG	H.C.		
TYPE	HRS-44		
SERIAL NO.	5027136		
JETS	22	22	22
DEPTH OUT (m)	1388.00		
DEPTH IN (m)	1197.00		
TOTAL METERS DRILLED (m)	191.00		
TOTAL HOURS RUN	52.00		
CUTTING STRUCTURE	1	1	WT
	A	E	BT
	G	1	BT
	DC	LOC	
	B	Gage	OC
REASON PULLED	TD		

HOLE CONDITION: HOLE DRAG: 14-17Up/11-13Down(Sliding)
TORQUE AT BOTTOM: 9822 ft/lbs.
FILL ON BOTTOM (m):

WT. OF DC	31000.00
WT. OF STRING	90000.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED		
TIME	09:00	12:00	16:00	
DENSITY (kg/m³)	1065	1065	1060	
FUNNEL VIS. (s/L)	51	52	50	
W.L. (cm3)				
pH	9.5	9.0	9.5	
PV/YP	138.7 m3	140.7 m3	137.7 m3	

Flowline Temp: 52.2 C

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Soda Ash	
Hydrated Lime	2 sacks
Caustic Soda	2 sacks
Monpac	3 sacks
Ligco	30 sacks

SOLIDS CONTROL: Centrifuge

HOURS RUN	DRILLED (m)	DISCARDED (m³)	DISCARDED (bbl)
8.00	1065	1050	(740

METERS DRILLED

FROM	TO	BIT NO.	SIZE (mm)	ROTATING HRS	METERS DRILLED
1362.00	1388.00	D	15	21	

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.
12500	152	90	152	90

REDUCED PUMP SPEED

3313	@	90	@	1365.60

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1371.00	27.3	26.60

TIME LOG

FROM	TO	HOURS	CODE	CUMUL. HRS
8:00	14:15	6.25	2	
14:15	14:30	0.25	7	
14:30	14:45	0.25	10	
14:45	16:00	1.25	2	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill fr/1362m-1385m
Rig Service and Function Pipe Ram's 3/8
M.W.D. Survey @ 1371m
Drill fr/1385m-1388m

NOTES: Flowline Check Sensor

HOURS RUN	DRILLED (m)	DISCARDED (m³)	DISCARDED (bbl)
8.00	23		

DRILLER SIGNATURE: Wade Goddard

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	120000.00		

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-828-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	12.00	MM	☐	☑
Motorman	651-366-064	Jesse Goddard	12.00	JG	☐	☑
Floorman	732-908-463	Dane Malmberg	12.00	DM	☐	☑
Floorman	730-040-896	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-876-003	Daniel Sampson	12.00	DS	☐	☑

RATE SCHEDULE: ☑ Nisku AB ☐ Repair ☐ Invert
DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.36
1	Motor	241	10.90
1		306	2.35
1		241	10.84
2		239	18.71
1	Shock Sub	240	3.02
7	9" Drill Collars	229	64.84
1		234	6.02
1	9" Pony D.C.	228	3.93
3	7" Drill Collars	171	28.69
6		127	56.48
42	D.P.	STANDS	1161.98
2	D.P.	SINGLES	18.80
	HWDP		0.00
	TOTAL		1389.00

BIT RECORD			
BIT NO.	9	10	
SIZE	311	311	
IADC CODE	6 1 7	6 1 7	
MFG	H.C.	H.C.	
TYPE	HRS-44	HR 40 D	
SERIAL NO.	5027136	ZL21DR	
JETS	22 22 22	21 21 21	
DEPTH OUT (m)	1389.00		
DEPTH IN (m)	1197.00	1389.00	
TOTAL METERS DRILLED (m)	192.00		
TOTAL HOURS RUN	52.50		
CUTTING STRUCTURE	1	1	WT
	A	E	BT
	G	1	BT
	DC	LOC	
	B	Gage	OC
REASON PULLED	TD		

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

WT. OF DC	31000.00
WT. OF STRING	90000.00

MUD RECORD

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

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL: Centrifuge

METERS DRILLED

FROM	TO	BIT NO.	SIZE (mm)	ROTATING HRS	METERS DRILLED
1388.00	1389.00	D			

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.
12500	152	90	152	90

REDUCED PUMP SPEED

	@		@	

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE	CUMUL. HRS
16:00	16:30	0.50	2	
16:30	17:00	0.50	5	
17:00	17:15	0.25	7	
17:15	21:45	4.50	6	
21:45	22:15	0.50	22	
22:15	24:00	1.75	6	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill fr/1388m-1389m
Circulate Hole Clean and Repair Head in #2 Pump
Rig Service and Function HCR 3/3
Flow Check @ 1375m,Hoist Bit#9,Flow Check @ 1253m,230M, 0M
(Service Top Drive) Changed out saver sub
Run In Hole W/Bit # 10

NOTES: Flowline Check Sensor, Cracked Blind ram in middle and at top to

HOURS RUN	DRILLED (m)	DISCARDED (m³)	DISCARDED (bbl)
8.00	3.5		

DRILLER SIGNATURE: Bill Mills

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
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	652-687-096	Dave Crowley	4.00	DC	☐	☑
Floorman	652-890-757	Kyle Hryniw	4.00	KH	☐	☑

RATE SCHEDULE: ☑ Nisku AB ☐ Repair ☐ Invert
DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR | DAY TOUR | EVENING TOUR

ETS SERIAL NUMBER: PREC620_20040923_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | RIG RELEASE | JOB NO.: 21 | AFE

LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager

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 — AM / PM

(1) Derrick/Mast Inspection — AM ☑ PM ☑
(2) Derrick/Mast Emergency/Rigging Lowering procedures — AM ☑ PM ☑
(3) H2S Safety Procedures reviewed — AM ☑ PM ☑
(4) Pit Level Indicator & Audio Complaint Tested — AM ☑ PM ☑
(5) Flare Line Secured — AM ☑ PM ☑
(6) BOP Drills Performed — AM ☑ PM ☑
(7) Hourly Inspect BOP's Functions & Diagnostic Lines — AM ☑ PM ☑
(8) Rig Site Hazard and Safety Meeting (employees/guests) — AM ☑ PM ☑
(9) C.A.O.D.C. Rig Safety Inspection Checklist (once per month) — AM ☑ PM ☑
(10) Well Inspection Before Pulling or Lowering — AM ☑ PM ☑
(11) Crown Saver Checked — AM ☑ PM ☑
(12) Water Tank Checked — AM ☑ PM ☑

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

DATE: 24-Oct-2004 | RIG NO.: 620 E | FUEL @ 8:00: RIG: 54509 BOILER:

LAST CASING TUBING OR LINER

O.D. (mm)	WALL TH. (mm)	lg/m	NAME	GRADE	NO. OF JOINTS	TOTAL LINE LENGTH	KB TO CSG HEAD (m)	SET AT (m)
							7.32	
				K-55	10	125.00	6.31	124.00
							6.22	867.00

	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	8.03	165.00	5"XH	170	F-1600	BPMMP	305
	35.00	SS-95	9.02	168.00	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	25	26
MORN	6.00	1.50					1.75	0.25																		
DAY	7.50							0.25																		
EVE	7.25							0.25																		
TOTAL	18.25	1.50					1.75	0.75																		

SHALE SHAKER(S) — NO. 2 | TYPE: Derrick | NEW

5.00	SCREEN CHANGED	YES	NO ☑
5.00	TOP	100	100
5.00	MIDDLE	100	100
84.00	BOTTOM	100	100

RENTALS/SERVICES — WORK | DAY | EST.

WELL TYPE: Geothermal	RE-ENTRY: YES ☐ NO ☑	KB TO GROUND ELEV.: 7.32
WELL NAME & No.: MC6 South Meager		DATE: 24-Oct-2004
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling	
RIG MANAGER: Kevin Vig		RIG NO.: 620 E
PROVINCE: BC	CAMP: YES ☐ NO ☐	RIG SAFETY DAYS: 32.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.90
1		306	2.35
1		241	10.84
2		230	18.71
1	Shock Sub	240	3.02
7		220	64.84
1		234	6.02
1	9" Pony D.C.	228	3.93
3		171	26.69
6		127	56.48
43	D,P	STANDS	1210.15
1	D,P	SINGLES	9.37
	KELLY/DOWN		17.55
	TOTAL		1405.06
WT. OF DC			31000.00
WT. OF STRING			90000.00

BIT RECORD: BIT NO. 10 | SIZE 311 | IADC CODE 6 1 7 | MFG. H.C. | TYPE HR 40 D | SERIAL NO. ZL21DR | JETS 22.2 22.2 22.2 | DEPTH OUT (m) | DEPTH IN (m) 1389.00 | TOTAL METERS DRILLED (m) 17.00 | TOTAL HOURS RUN 4.50 | CUTTING STRUCTURE: I 1 | O 1 | D WT | LOC | B | Gage | OC | Reason Pulled | Tooth Wear

HOLE CONDITION: HOLE DRAG 14-17Up/11-13Dn(sliding)

TORQUE AT BOTTOM 10889 ft/lbs | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: Polymer	Sample From: Pit	Oil Based:	FlowLine Temp 52.7 C
TIME	03:00	06:00	06:30
DENSITY (kg/m³)	1056	1060	1060
FUNNEL VIS. (s/L)	63	50	48
W.L. (cm3)			
pH	9.0	9.5	9.0
PV/YP	129.6mPa	132.8mPa	133.6mPa

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Lignco	30 sks
Caustic Soda	3 sks
Hydrated Lime	2 sks
Desco	5 sks
Monpac	2 sks

SOLIDS CONTROL: Centrifuge — HOURS RUN 6.00 | 1060 | 1060 | 1749

METERS DRILLED

FROM	TO	BIT No.	WOB (kN)	ROTARY RPM	HOURS	ROP (m/hr)	TOOL FACE (°)	CUMULATIVE HOURS
1389.00	1406.00	D	15	20	0:00	1:45	1.75	6
					1:45	3:15	1.50	3
					3:15	6:30	3.25	2
					6:30	6:45	0.25	7
					6:45	8:00	1.25	2

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 | 12600

REDUCED PUMP SPEED: 3430 @ 90 S.P.M.

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	CUMULATIVE HOURS	
0:00	1:45	1.75	6	Run in Hole W/Bit # 10	
1:45	3:15	1.50	3	Wash To Bottom Fr/1300m-1386m	
3:15	6:30	3.25	2	Drill Fr/1389m-1404m	
6:30	6:45	0.25	7	Rig Service & Function Annular 20/20 Secs	
6:45	8:00	1.25	2	Drill Fr/1404m-1406m	

NOTES: Function Crown Saver

DRILLER SIGNATURE	OPERATION FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Mills		121800.00		

MORNING TOUR — CREW

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	716-324-101	Bill Mills	8.00	BM	☐ ☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☐ ☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐ ☑
Floorman	652-887-096	Dave Crowley	8.00	DC	☐ ☑
Floorman	652-890-757	Kyle Hryniw	8.00	KH	☐ ☑
Rig Manager	719-609-464	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 8:00 TO 16:00

BIT RECORD

No.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.90
1		306	2.35
1		241	10.84
2		230	18.71
1	Shock Sub	240	3.02
7		220	64.84
1		234	6.02
1	9" Pony D.C.	228	3.93
3		171	26.59
6		127	56.48
44	D,P	STANDS	1238.31
0	D,P	SINGLES	0.00
	KELLY/DOWN		0.00
	TOTAL		1442.34
WT. OF DC			31000.00
WT. OF STRING			92000.00

BIT RECORD: BIT NO. 10 | SIZE 311 | IADC CODE 6 1 7 | MFG. H.C. | TYPE HR 40 D | SERIAL NO. ZL21DR | JETS 22.2 22.2 22.2 | DEPTH OUT (m) 1440.00 | DEPTH IN (m) 1389.00 | TOTAL METERS DRILLED (m) 51.00 | TOTAL HOURS RUN 12.90 | CUTTING STRUCTURE: I 1 | O 1 | D WT | LOC | B | Gage | OC | Reason Pulled | Tooth Wear

HOLE CONDITION: HOLE DRAG 14-17Up/11-13Dn(sliding)

TORQUE AT BOTTOM 10689 ft/lbs | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: Polymer	Sample From: Pit	Oil Based:	FlowLine Temp 61.2 C
TIME	09:00	12:00	15:00
DENSITY (kg/m³)	1056	1065	1065
FUNNEL VIS. (s/L)	46	44	43
W.L. (cm3)			
pH	9.0	9.5	9.6
PV/YP	132.7 mPa	130.1 mPa	130.9 mPa

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Defoamer LD-8	1 sacks
Lignco	30 sacks
Milgel NT	16 sacks
Caustic Soda	5 sacks
Desco	6 sacks
Monpac	2 sack
Hydrated Lime	2 sacks

SOLIDS CONTROL: Centrifuge — HOURS RUN 6.00 | 1065 | 1065 | 1749

METERS DRILLED

FROM	TO	BIT No.	WOB (kN)	ROTARY RPM	HOURS	ROP (m/hr)	TOOL FACE (°)	CUMULATIVE HOURS
1406.00	1440.00	D	15	20	8:00	13:15	5.25	2
					13:15	13:30	0.25	7
					13:30	15:45	2.25	2
					15:45	16:00	0.25	10

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 | 12600

REDUCED PUMP SPEED: 3400 @ 90 S.P.M.

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION
1388.80	27.4	25.90
1408.80	27.4	27.30

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	CUMULATIVE HOURS	
8:00	13:15	5.25	2	Drill fr/1406m-1429m	
13:15	13:30	0.25	7	Rig Service and Function Pipe Ram's 8/8	
13:30	15:45	2.25	2	Drill fr/1429m-1440m	
15:45	16:00	0.25	10	Accumulated M.W.D. Survey's	

NOTES: Function Crown Saver | Check Crown and Block Sheaves

DRILLER SIGNATURE	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard		122000.00		

DAY TOUR — CREW

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	633-628-706	Wade Goddard	12.00	WG	☐ ☑
Derrickman	642-872-840	Murray McBain	12.00	MM	☐ ☑
Motorman	851-366-064	Jesse Goddard	12.00	JG	☐ ☑
Floorman	732-808-483	Dane Malmberg	12.00	DM	☐ ☑
Floorman	730-040-896	Nathan Schwandt	12.00	NS	☐ ☑
Leaseman	729-975-003	Daniel Sampson	12.00	DS	☐ ☑

RATE SCHEDULE: REGULAR ☑ | REPAIR ☐ | STANDBY ☐ | 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	0.35
1	Motor	241	10.90
1		306	2.35
1		241	10.84
2		230	18.71
1	Shock Sub	240	3.02
7		220	64.84
1		234	6.02
1	9" Pony D.C.	228	3.93
3		171	26.59
6		127	56.48
45	D,P	STANDS	1366.45
1	D,P	SINGLES	9.35
	KELLY/DOWN		-15.86
	TOTAL		1464.80
WT. OF DC			31000.00
WT. OF STRING			95000.00

BIT RECORD: BIT NO. 10 | SIZE 311 | IADC CODE 6 1 7 | MFG. H.C. | TYPE HR 40 D | SERIAL NO. ZL21DR | JETS 22.2 22.2 22.2 | DEPTH OUT (m) 1464.00 | DEPTH IN (m) 1389.00 | TOTAL METERS DRILLED (m) 75.00 | TOTAL HOURS RUN 19.25 | CUTTING STRUCTURE: I 1 | O 1 | D WT | LOC | B | Gage | OC | Reason Pulled | Tooth Wear

HOLE CONDITION: HOLE DRAG 14-17Up/11-13Dn(sliding)

TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: Polymer	Sample From: Pit	Oil Based:	FlowLine Temp 61.5 C
TIME	18:00	21:00	23:00
DENSITY (kg/m³)	1056	1060	1065
FUNNEL VIS. (s/L)	44	43	44
W.L. (cm3)			
pH	9.5	9.5	8.5
PV/YP	130.8 mPa	131.9mPa	130.6mPa

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Milgel NT	16 sacks

SOLIDS CONTROL: Centrifuge — HOURS RUN 6.00 | 1060 | 1060 | 1749

METERS DRILLED

FROM	TO	BIT No.	WOB (kN)	ROTARY RPM	HOURS	ROP (m/hr)	TOOL FACE (°)	CUMULATIVE HOURS
1440.00	1464.00	D	15	20	16:00	23:15	7.25	2
					23:15	23:30	0.25	7
					23:30	24:00	0.50	10

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 | 12600

REDUCED PUMP SPEED: 3551 @ 90 S.P.M.

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION
1427.30	27.4	27.70
1446.90	27.2	26.30

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	CUMULATIVE HOURS	
16:00	23:15	7.25	2	Drill fr/1440m-1464M	
23:15	23:30	0.25	7	Rig Service & Function H.C.R Valve 4/4 Secs	
23:30	24:00	0.50	10	Deviation Survey	

NOTES: Function Crown Saver

DRILLER SIGNATURE	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Mills		140000.00		

EVENING TOUR — CREW

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	716-324-101	Bill Mills	4.00	BM	☐ ☑
Derrickman	629-926-262	Rob Roth	4.00	RR	☐ ☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐ ☑
Floorman	652-887-096	Dave Crowley	4.00	DC	☐ ☑
Floorman	652-890-757	Kyle Hryniw	4.00	KH	☐ ☑

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

ETS SERIAL NUMBER: PREC620_20040924_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

RIG RELEASE | JOB NO. 21 | AFE

WELL NAME AND NO. MC6 South Meager

CONTRACTOR: Precision Drilling

LICENCE NO. b-1-H / 92-J-12

OPERATOR: Western Geopower Corp

SURFACE LOCATION: a-92-A / 92-J-12

SIGNATURE OF OPERATIONS REPRESENTATIVE: Russ Silva

SIGNATURE OF CONTRACTORS REPRESENTATIVE: Kevin Vig

DAILY CHECKS

DATE 25-Oct-2004 | RIG NO 620 E | RUN 39870 | BOILER

TEMPERATURE -3 | CURRENT CONDITION Snow | WIND CONDITION Calm | ROAD Good

WELL TYPE: Geothermal | RE-ENTRY ☐YES ☑NO | KB TO GROUND ELEV. 7.33

WELL NAME & NO.: MC6 South Meager | DATE 25-Oct-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO. 620 E

PROVINCE: BC | CAMP ☑YES ☐NO | RIG SAFETY DAYS 33.00

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	8.00	SM	☐	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	652-687-096	Dave Crowley	8.00	DC	☐	☑
Floorman	652-690-757	Kyle Hrynhw	8.00	KH	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

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

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	853-526-706	Wade Goddard	8.00	WG	☐	☑
Derrickman	642-972-949	Murray McBain	8.00	MM	☐	☑
Motorman	851-368-064	Jesse Goddard	8.00	JG	☐	☑
Floorman	732-808-483	Dane Malmberg	8.00	DM	☐	☑
Floorman	730-940-896	Nathan Schwandt	8.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☐	☑

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

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-919	Barry Verhelst	8.00		☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00		☐	☑
Motorman	735-714-230	Chantry Vig	8.00		☐	☑
Floorman	122-830-839	Chris Eddy	8.00		☐	☑
Floorman	952-890-757	Kyle Hrynhw	8.00		☐	☑
Leaseman	713-958-461	Gary Kennedy	8.00		☐	☑

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

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.38
1	Motor	241	10.90
1		306	2.35
1		241	10.84
2		230	18.71
1	Shock Sub	240	3.02
7	8" Drill Collars	220	64.84
1	7" Jar (Hydraulic)	234	6.02
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6		127	56.48
66	D.P.	114mm(4)	1294.93
0	D.P.	89mm(3.5)	0.00
	HOLE DOWN		-10.56
	TOTAL		1588.06
WT OF DC			33000.00
WT OF STRING			95000.00

BIT NO 10 | SIZE 311 | IADC CODE 6 1 7 | MFG H.C. | TYPE HR 40 D | SERIAL NO ZL21DR | JETS 22 | 22 | 22

DEPTH IN (m) 1389.00 | TOTAL METERS DRILLED (m) 99.00 | TOTAL HOURS RUN 26.75

CUTTING STRUCTURE T1 | T2 | WEAR | LOC | B | GAUGE

HOLE CONDITION

HOLE DRAG 14-17Up/11-13Dn(sliding)

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE Polymer Beads | SOIL BASED | FlowLine Temp 61.8 C

TIME	02:00	04:00	06:00
DENSITY kg/m³	1060	1060	1055
FUNNEL VIS. (sec)	45	44	42
W.L. (cm3)			
pH	9.5	9.5	10.0
PV/YP	133.0m3	134.1m3	133.8m3

MUD MATERIAL ADDED | SOLIDS CONTROL: 600 Kg control | Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN			
Ligco	20 sks				
Desco	3 sks	8.00	1065	1050	1740
Soda Ash	1 sk				
Milgel NT	8 sks	HOURS RUN			
Hydrated Lime	2 sks				
Caustic Soda	4 sks				
Monpac	3 sks	HOURS RUN			

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M	HRS ON BIT
1464.00	1488.00	D	15	21

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

13090 | 152 | 90 | 152 | 90

REDUCED PUMP SPEED

3365 | @ | 90 | @ | 1477.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1464.80	26.9	22.70

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	0:15	0.25	7	Rig Service & Function Annular 20/20 Secs
0:15	7:45	7.50	2	Drill Fr 1464m-1488m
7:45	8:00	0.25	10	M.W.D. Survey

NOTES

DRILLER SIGNATURE: Bill Mills | TOUR HRS 8.00 | STACK TIME 9.5 | OPERATOR FUEL | MAX EXP HOOKLOAD 140000.00 | SAFETY TOPIC | M.A.C.P.

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.38
1	Motor	241	10.90
1		306	2.35
1		241	10.84
2		230	18.71
1	Shock Sub	240	3.02
7	8" Drill Collars	220	64.84
1	7" Jar (Hydraulic)	234	6.02
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
5		127	56.48
47	D.P.	114mm(4)	1322.82
1	D.P.	89mm(3.5)	9.39
	HOLE DOWN		0.00
	TOTAL		1536.24
WT OF DC			32000.00
WT OF STRING			95000.00

BIT NO 10 | SIZE 311 | IADC CODE 6 1 7 | MFG H.C. | TYPE HR 40 D | SERIAL NO ZL21DR | JETS 22 | 22 | 22

DEPTH IN (m) 1389.00 | TOTAL METERS DRILLED (m) 132.00 | TOTAL HOURS RUN 34.25

CUTTING STRUCTURE T1 | T2 | WEAR | LOC | B | GAUGE

HOLE CONDITION

HOLE DRAG 16-20Up/11-13Dwn(Sliding)

TORQUE AT BOTTOM 11,507 ft/lbs.

FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE Polymer Beads | SOIL BASED | FlowLine Temp. 63.8 C

TIME	09:00	12:00	15:00
DENSITY kg/m³	1055	1055	1055
FUNNEL VIS. (sec)	42	42	43
W.L. (cm3)			
pH	9.5	9.5	10.0
PV/YP	139.2 m3	140.6 m3	139.50 m3

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN			
Monpac	4 sacks				
Hydrated Lime	2 sacks				
Desco	2 sacks				
Ligco	36 sacks	HOURS RUN			
Caustic Soda	7 sacks				

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M	HRS ON BIT
1488.00	1521.00	D	15	21

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

12900 | 152 | 90 | 152 | 90

REDUCED PUMP SPEED

3295 | @ | 90 | @ | 1513.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1493.10	26.7	22.70

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	14:45	6.75	2	Drill fr1488m-1517m
14:45	15:00	0.25	7	Rig Service and Function Pipe Ram's 8/8
15:00	15:45	0.75	2	Drill fr1517m-1521m
15:45	16:00	0.25	10	Accumulated M.W.D. Survey's

NOTES

DRILLER SIGNATURE: Wade Goddard | TOUR HRS 8.00 | STACK TIME 9.5 | OPERATOR FUEL | MAX EXP HOOKLOAD 127000.00 | SAFETY TOPIC Grand Rotating Head | M.A.C.P.

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.38
1	Motor	241	10.90
1		306	2.35
1		241	10.84
2		230	18.71
1	Shock Sub	240	3.02
7	8" Drill Collars	220	64.84
1	7" Jar (Hydraulic)	234	6.02
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	25.59
6		127	58.43
48	D.P.	114mm(4)	1350.98
	D.P.	89mm(3.5)	-9.01
	HOLE DOWN		
	TOTAL		1546.00
WT OF DC			33000.00
WT OF STRING			95000.00

BIT NO 10 | SIZE 311 | IADC CODE 6 1 7 | MFG H.C. | TYPE HR 40 D | SERIAL NO ZL21DR | JETS 22 | 22 | 22

DEPTH IN (m) 1389.00 | TOTAL METERS DRILLED (m) 157.00 | TOTAL HOURS RUN 41.50

CUTTING STRUCTURE T1 | T2 | WEAR | LOC | B | GAUGE

HOLE CONDITION

HOLE DRAG 15-20k up/15000 dwn

TORQUE AT BOTTOM 14675 ft-lbs

FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE Polymer Beads | SOIL BASED | FlowLine Temp 61.9 C

TIME	18:00	21:00	23:00
DENSITY kg/m³	1060	1055	1055
FUNNEL VIS. (sec)	41	41	44
W.L. (cm3)			
pH	10.0	10.0	10.5
PV/YP	142m3	144.2m3	145m3

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN			
Hydrated Lime	2sks.				
Caustic Soda	2sks.	8.00	1065	1050	1736
Milgel NT	10sks.	HOURS RUN			
Monpac	4sks.				
Ligco	35sks.	HOURS RUN			

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M	HRS ON BIT
1521.00	1546.00	D	15	21

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

12960 | 152 | 90 | 152 | 90

REDUCED PUMP SPEED

3705 | @ | 90 | @ | 1534.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1511.90	26.5	23.10
1539.60	26.5	28.90

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	18:30	2.50	2	Drill fr1521m- 1527m
18:30	18:45	0.25	21	B.O.P. drill w/crew, well secure in 58 secs
18:45	20:45	2.00	2	Drill fr. 1527m - 1536m
20:45	21:00	0.25	7	Rig Service, F/T H.C.R.(2 secs)
21:00	23:45	2.75	2	Drill fr. 1536m - 1546m
23:45	24:00	0.25	10	Deviation Surveys(Accum.)

NOTES

DRILLER SIGNATURE: Barry Verhelst | TOUR HRS 8.00 | STACK TIME 9.5 | OPERATOR FUEL | MAX EXP HOOKLOAD 129000.00 | SAFETY TOPIC Rotating head | M.A.C.P.

CHIMO ETS SOFTWARE VERSION:

ETS SERIAL NUMBER: PREC620_20040925_1A

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-08-22 22:49
RIG RELEASE	
JOB NO.	21
AFE	
LOC/ SEC. NO	B-62-A / 92-J-12
WELL NAME AND NO.	MCS South Meager
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
LSD/QUAD/ BLK	b-T-H / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig

DAILY CHECKS — OPR. / D.H.

1) Daily Weld Adjust Inspection
2) Derrick Crownomatic Weekly Inspection
3) HCR Valve Power at Hydraulics
4) Weekly Derrick & Sub. Diagram Posted
5) Flare Line Staked
6) BOP Drills Performed
7) Derrick Inspect BOP's Function & Diagram Lines
8) Rig Site Health and Safety Hazard Assessment Meeting
9) CAODC Rig Safety Inspection Checklist Inspection
10) Next Inspection Before Raising or Lowering
11) Other Items Checked
12) Derrick Certificate Posted

WEATHER

TEMPERATURE	+3
CURRENT CONDITION	Cloudy
WIND DIRECTION	Calm
ROAD	Good

LAST CASING RUN

DATE	26-Oct-2004
RIG NO	620 E
FUEL @ 8:00	
RIG	47482 BOILER

						K-55	10	125.00	6.31	126.00
									7.32	
									8.22	867.00

	29.00	SS-95	63.00	165.00	5"XH	170	F-1600	BPMMP		306
	38.09	BS-95	67.80	169.00	5"XH	150	F-1600	BPMMP		306

TIME / HRS

CREW	TRAVEL TIME	DRILL	RIG SERVICE	REAMING	CIRC & COND	SURVEY	TRIPPING	LOST CIRC	DEV. SURVEY	FISHING	RIG REPAIR	TEST BOPE	CUT DRLG LINE	SLIP DRLG LINE	WAIT ON CEMENT	DIRECTIONAL WORK	MISC	SAFETY MEETING	WAITING ON WEATHER
MORN	3.00		0.25	4.50	0.25														
DAY			0.50	5.25	0.25		1.00										0.75		0.25
EVE		5.25	1.75	0.25	0.25	0.25		6.25											
TOTAL		8.25	1.75	1.00	10.00	0.75	1.00	0.25									0.75		0.25

SHALE SHAKER(S) / RENTAL SERVICES

NO.	TYPE	NEW
1	Derrick	
2		

SCREENING 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.	7.32
WELL NAME & No.	MCS South Meager
DATE	26-Oct-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Kevin Vig
RIG NO.	620 E
PROVINCE	BC
CAMP	☑YES ☐NO
RIG SAFETY DAYS	34.00

BIT RECORD

NO.	SIZE	LENGTH	BIT NO.	10
1	bit	311	0.35	
1	Motor	241	10.90	SIZE 311
1		306	2.35	IADC CODE 6 1 7
1		241	10.84	MFG H.C.
2		230	18.71	TYPE HR 40 D
1	Shock Sub	240	3.02	SERIAL NO. ZL21DR
7	8" Drill Collars	220	64.84	JETS 22.1 22.1 22.1
1		234	6.02	DEPTH OUT (m) 1553.00
1	8" Perry D.C.	228	3.93	DEPTH IN (m) 1389.00
3	7" Drill Collars	171	26.59	TOTAL METERS DRILLED (m) 164.00
5		127	56.48	TOTAL HOURS RUN 44.50
48	D/P	31/4IF/S	1350.98	CUTTING STRUCTURE 5 BT A E 1/16 WT TQ 3.50
	D/P	3½IF/S		
	KELLY DOWN		-9.01	HOLE CONDITION
	TOTAL		1553.00	HOLE DRAG 16-20klpr/11-15klpr(Sliding)
WT. OF DC			33000.00	TORQUE AT BOTTOM 11,507 ft/lbs.
WT. OF STRING			95000.00	FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	FlowLine Temp. 64
TIME	02:00
DENSITY kg/m3	1066
FUNNEL VIS. (sec)	42
W.L. (cm3)	
pH	10.0

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	3 sacks

SOLIDS CONTROL: Centrifuge

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

MORNING TOUR

FROM	TO				HOURS	CODE	DETAILS
1546.00	1553.00	D	15	21	0:00	3:00	3.00	2	Drill f/1546m-1553m
					3:00	3:15	0.25	7	Rig Service and Function Annular 20/20
CIRCULATION PRESSURE (KPA)		PUMP NO. 1 LINER SIZE (mm)	S.P.M.	PUMP NO. 2 LINER SIZE (mm)	S.P.M.	3:15	3:30	0.25	5	Circulate and Work Pipe
12500		152	90	152	90	3:30	8:00	4.50	8	Flow Check @ 1525m,Hoist Bit#10,Flow Check's @ 1403m,848m,202m,Ok
REDUCED PUMP SPEED										
3400	@	90	@	1443.00						
DEVIATION SURVEY										
DEPTH (m)	DEVIATION (o)	DIRECTION								

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS	STACK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00			128000.00	Slip & cut	

MORNING TOUR 0:00 TO 8:00

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	651-396-084	Jesse Goddard	8.00	JG	☑
Floorman	732-808-483	Dune Malmberg	8.00	DM	☑
Floorman	730-040-896	Nathan Schwandt	8.00	NS	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☑
Rig Manager	710-406-464	Kevin Vig		KV	☑
Top Drive	636-977-792	Sheldon Langley		SL	☑

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐INVENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

NO.	SIZE	LENGTH	BIT NO.	10	11
1	Bit	311	0.35		
1	Motor	241	10.90	SIZE	311	311
1		306	2.35	IADC CODE	6 1 7	6 1 7
1		241	10.84	MFG	H.C.	H.C.
2		230	18.71	TYPE	HR 40 D	HRS55R
1	Shock Sub	240	3.02	SERIAL NO.	ZL21DR	8017744
7	8" Drill Collars	220	64.84	JETS	22.1 22.1 22.1	22.1 22.1 22.1
1		234	6.02	DEPTH OUT (m)	1553.00	
1	8" Perry D.C.	228	3.93	DEPTH IN (m)	1389.00	1553.00
3	7" Drill Collars	171	26.59	TOTAL METERS DRILLED (m)	164.00	
5		127	56.48	TOTAL HOURS RUN	44.50	
48	D/P	31/4IF/S	1350.98	CUTTING STRUCTURE	5 BT A E 1/16 WT TQ 3.50	
	D/P	3½IF/S				
	KELLY DOWN		-9.01	HOLE CONDITION		
	TOTAL		1546.00	HOLE DRAG		
WT. OF DC			33000.00	TORQUE AT BOTTOM		
WT. OF STRING			95000.00	FILL ON BOTTOM (m)		

MUD RECORD

MUD TYPE	FlowLine Temp 81.9 C
TIME	
DENSITY kg/m3	
FUNNEL VIS. (sec)	
W.L. (cm3)	
pH	

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL: Centrifuge

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

DAY TOUR

FROM	TO				HOURS	CODE	DETAILS
1553.00					8:00	8:45	0.75	28	Dir. Work(Change out bit & bottom stab on m. motor)
					8:45	9:00	0.25	32	(winterize manifold) & H.C.R. lines
CIRCULATION PRESSURE (KPA)		PUMP NO. 1 LINER SIZE (mm)	S.P.M.	PUMP NO. 2 LINER SIZE (mm)	S.P.M.	9:00	12:00	3.00	6	Make up B.H.A. & R.I.H., flow check @ 6m
11400		152	90	152	90	12:00	13:00	1.00	9	Cut Off Drill Line(Monitor hole)
REDUCED PUMP SPEED						13:00	14:30	1.50	6	R.I.H. to 778m
@		@				14:30	14:45	0.25	5	Circulate bottoms up, mud peaked @ 70 deg. C.
DEVIATION SURVEY						14:45	15:15	0.50	6	R.I.H. to 1104m
DEPTH (m)	DEVIATION (o)	DIRECTION				15:15	15:30	0.25	5	Circulate bottoms up, mud peaked @ 48 Deg. C.
						15:30	15:45	0.25	6	R.I.H. to 1400m
						15:45	16:00	0.25	7	Rig Service, F/T Annular(25 secs)

NOTES

DRILLER SIGNATURE: Barry Verhelst

HRS	STACK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00			128000.00	Slip & cut	

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	642-389-810	Barry Verhelst	12.00	BV	☐
Derrickman	647-452-403	Dave Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☐
Floorman	122-830-838	Chris Eddy	12.00	CE	☐
Floorman	852-890-757	Kyle Hryniw	12.00	KH	☐
Leaseman	713-859-461	Gary Kennedy	12.00	GK	☐

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐INVENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

BIT RECORD

NO.	SIZE	LENGTH	BIT NO.	11
1	Bit	311	0.35	
1	Motor	241	10.90	SIZE 311
1		306	2.35	IADC CODE 6 3 7
1		241	10.84	MFG H.C.
1		230	18.71	TYPE HRS55R
1	Shock Sub	240	3.02	SERIAL NO. 8017744
7	8" Drill Collars	220	64.84	JETS 22.1 22.1 22.1
1		234	6.02	DEPTH OUT (m) 1572.00
1	8" Perry D.C.	228	3.93	DEPTH IN (m) 1553.00
3	7" Drill Collars	171	26.59	TOTAL METERS DRILLED (m) 19.00
5		127	56.48	TOTAL HOURS RUN 5.25
48	D/P	31/4IF/S	1350.98	CUTTING STRUCTURE
2	D/P	3½IF/S	19.17	
	KELLY DOWN		0.00	HOLE CONDITION
	TOTAL		1572.00	HOLE DRAG 16-20klpr/11-15klpr(Sliding)
WT. OF DC			33000.00	TORQUE AT BOTTOM 10655 ft/lbs.
WT. OF STRING			95000.00	FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	Flowline Temp. 66.3		
TIME	18:00	21:00	23:00
DENSITY kg/m3	1055	1050	1050
FUNNEL VIS. (sec)	54	42	42
W.L. (cm3)			
pH	9.5	10.0	10.0
PV/YP	133.9m3	136.5 m3	136 m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Lignco	36 sacks
Hydrated Lime	2 sacks
Monpac	3 sacks
Soda Ash	1 sack
Caustic Soda	6 sacks

SOLIDS CONTROL: Centrifuge

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

EVENING TOUR

FROM	TO				HOURS	CODE	DETAILS
1470.00	1553.00	R	20	1-3	16:00	16:15	0.25	5	Fill pipe & break circ. @ 1490m, mud peaked @ 57 Deg. C.
1553.00	1572.00	D	15	20	16:15	16:30	0.25	6	R.I.H. to 1478m
CIRCULATION PRESSURE (KPA)		PUMP NO. 1 LINER SIZE (mm)	S.P.M.	PUMP NO. 2 LINER SIZE (mm)	S.P.M.	16:30	18:15	1.75	3	Wash & ream fr. 1478m - 1553m
12500		152	90	152	90	18:15	23:30	5.25	2	Pattern Bit and Drill fr/1553m-1572m
REDUCED PUMP SPEED						23:30	23:45	0.25	7	Rig Service and Function HCR 3/3
3400	@	90	@	1572.00		23:45	24:00	0.25	10	Accumulated M.W.D. Survey's
DEVIATION SURVEY										
DEPTH (m)	DEVIATION (o)	DIRECTION								
1545.50	26.6	26.20								

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS	STACK TIME	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5		128000.00		

EVENING TOUR 16:00 TO 24:00

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	651-396-084	Jesse Goddard	4.00	JG	☐
Floorman	732-808-483	Dune Malmberg	4.00	DM	☐
Floorman	730-040-896	Nathan Schwandt	4.00	NS	☐
Leaseman	729-975-003	Daniel Sampson	4.00	DS	☐

RATE SCHEDULE ☑REGULAR ☐REPAIR ☐INVENT

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20040826_1A

CHIMO ETS SOFTWARE VERSION:

SPUD: 2004-09-22 22:49 | RIG RELEASE | JOB NO.: 21 | AFE

LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: a-144 / 92-J-12

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

DAILY CHECKS

OPR R/M

(1) Daily Mud Report completed
(2) Detailed Hydraulics Model (using checklist)
(3) H2S Safe Places of Muster
(4) Walkdowns & Safe Digout Rotes
(5) Fire Line Stamp
(6) BOP Daily Performed
(7) Velocity Induced BOP's Practiced & Crews Trained
(8) Rig Site Hazard and Safety Meeting (see comments)
(9) CAODC Rig Safety Inspection Checklist completed
(10) Well Inspection Before Rigging In (Internal)
(11) Crown Saver Checklist
(12) Hard Hat Checklist

DATE: 27-Oct-2004 | RIG NO.: 620 E | FUEL: 5.00 | RIG: 54462 BOILER

WEATHER: TEMPERATURE -5 | CURRENT CONDITION: Clear | WIND DIRECTION: Calm | ROAD: Good

LAST CASING TUBING OR LINER

OD (mm)	WEIGHT (kg/m)	GRADE	NO. OF JOINTS	TOTAL LENGTH	KB TO CSG HEAD (m)	SET AT (m)
					7.32	
		K-55	10	125.00	9.31	124.00
					9.22	857.00

CIRC. TEMP	SURVEY MADE (DEPTH)	GRADE	MIN. ID (mm)	TOOL I.D. (mm)	THREAD TYPE	NO. OF JOINTS	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	166.00	5"XH	150	F-1600	BPMMP	305

Based on the CAODC ETS file standard

Chimo Equipment (A Varco Company)

WELL TYPE: Geothermal | RE-ENTRY: ☐YES ☑NO | KB TO GROUND ELEV.: 7.32

WELL NAME & No.: MC6 South Meager | DATE: 27-Oct-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

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

PROVINCE: BC | CAMP: ☑YES ☐NO | RIG SAFETY DAYS: 35.00

TIME SUMMARY

OPER	TOUR TIME	BIT (hrs)	SURVEYS	CORING	CIRC TIME	TRIPS	DRLG (hrs)	TRIPPING OUT	REAM	CIRC & COND	RIG SERVICE	TEST BOP	TEST CSG	DIR. WORK	SAFETY MTG	OTHER
NOPB	7.75					9.25										
DAY	1.00		0.25		0.75	5.75	6.25				0.25					
EVE			0.25		0.75	6.50	6.25				0.25					
TOTAL	8.75	0.25	1.50	12.25	0.75						0.25					

SHALE SHAKER(S) | RENTALS/SERVICES

NO.	TYPE	
2	Derrick	new

8.00	SCREENS CHANGED	☐YES	☑NO
9.00	TOP	100	THP 100
5.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

DAY 1

BIT RECORD

NO.	BIT TYPE	SER. NUMBER	IADC CODE
1	bit	311	0.35
1	Motor	241	10.90
1	[illegible]	306	2.35
1	[illegible]	241	10.84
2	[illegible]	230	16.71
1	Shock Sub	240	3.02
7	9" DHF Drifters	220	64.84
1	[illegible]	234	6.02
1	9" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6	[illegible]	127	56.48
49	DP	STANDS	1379.73
1	D.P.	SINGLES	9.54
	ABLE TO DOWN		0.00
	TOTAL		1592.00
WT. OF BIT			33000.00
WT. OF STRING			96000.00

BIT NO: 11 | SIZE: 311 | IADC CODE: 6 3 7 | MFG: H.C. | TYPE: HRS55R | SERIAL NO: 6017744 | DEPTH OUT (m): 1592.00 | DEPTH IN (m): 1552.00 | TOTAL METERS DRILLED (m): 39.00 | TOTAL HOURS Run: 13.00

HOLE CONDITION | HOLE DRAG: 15-20klbs/11-13klbs down | TORQUE AT BOTTOM: 14,033 ft/lbs. | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: WATER BASED | OIL BASED | FlowLine Temp. 65

TIME	02:00	06:00
DEPTH (m)	1060	1060
FLOWS WT. (kg/m3)	40	39
W.L. (cm3)		
pH	10.0	10.0
PVT@	138.3 m3	139.6 m3

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	DRILLING FLUID	DISCARDED FLUID	WASHDOWN FLUID
Milgel NT	18 sacks				

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kg)	METERS DRILLED	HOURS ON BIT	ROTATING HOURS
1572.00	1592.00	D	15-30	18-20	20.00	6.25	2.00

CIRCULATION PRESSURE (kPa): 12700 | 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: 3450 kPa @ 90 S.P.M. @ 1587.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CUM. HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	6:15	6.25	6.25	2	Drill fr/1572m-1587m
6:15	6:30	0.25	6.50	7	Rig Service and Function Annular 20/20
6:30	8:00	2.50	9.00	2	Drill fr/1587m-1592m

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS. RUN	HOURS SINCE BOP TEST	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
6.00	9.5		139000.00		

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-826-706	Wade Goddard	8.00	WG	☐ ☑
Derrickman	642-872-840	Murray McBain	8.00	MM	☐ ☑
Motorman	651-366-064	Jesse Goddard	8.00	JG	☐ ☑
Floorman	732-808-483	Dune Malmberg	8.00	DM	☐ ☑
Floorman	730-049-896	Nathan Schwandt	8.00	NS	☐ ☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☐ ☑
Rig Manager	719-409-484	Kevin Vig		KV	☐ ☐
Top Drive	838-977-702	Sheldon Langley		SL	☐ ☐

RATE SCHEDULE: ☑MINIMUM ☐REPAIR ☐HYBRID | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY 2

BIT RECORD

NO.	BIT TYPE	SER. NUMBER	IADC CODE
1	bit	311	0.35
1	Motor	241	10.90
1	[illegible]	306	2.35
1	[illegible]	241	10.84
2	[illegible]	230	16.71
1	Shock Sub	240	3.02
7	9" DHF Drifters	220	64.84
1	[illegible]	234	9.02
1	9" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6	[illegible]	127	56.48
50	DP	STANDS	1408.37
0	D.P.	SINGLES	0.00
	ABLE TO DOWN		0.00
	TOTAL		1609.53
WT. OF BIT			33000.00
WT. OF STRING			96000.00

BIT NO: 11 | SIZE: 311 | IADC CODE: 6 3 7 | MFG: H.C. | TYPE: HRS55R | SERIAL NO: 6017744 | DEPTH OUT (m): 1609.00 | DEPTH IN (m): 1552.00 | TOTAL METERS DRILLED (m): 40.00 | TOTAL HOURS Run: 14.00

DULL CONDITION: 4 | 5 | WT | ALL | E | Gage | FC | TQ | 2.86

HOLE CONDITION | HOLE DRAG: 20k up/15k dwn | TORQUE AT BOTTOM: 18107 ft-lbs | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: WATER BASED | OIL BASED | FlowLine Temp 61.9 C

TIME	08:00	
DEPTH (m)	1066	
FLOWS WT. (kg/m3)	40	
W.L. (cm3)		
pH	10.0	
PVT@	143.8m3	

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	DRILLING FLUID	DISCARDED FLUID	WASHDOWN FLUID

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kg)	METERS DRILLED	HOURS ON BIT	ROTATING HOURS
1592.00	1593.00	D	20-30	5-20	1.00	1.00	1.00

CIRCULATION PRESSURE (kPa): 12000 | 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: 3500 kPa @ 90 S.P.M. @ 1592.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1577.50	26.1	26.20

TIME LOG

FROM	TO	HOURS	CUM. HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	9:00	1.00	1.00	2	Drill fr. 1592 - 1593m
9:00	9:15	0.25	1.25	5	Attempt to drill/ torque too high
9:15	9:30	0.25	1.50	19	Deviation Survey
9:30	10:00	0.50	2.00	5	Condition Mud & Circ.
10:00	15:45	5.75	7.75	6	Hoist bit # 11, flow check @ 1582, 1524, 914, & 0m
15:45	16:00	0.25	8.00	7	Rig Service, F/T Blind rams(8 secs) & H.C.R.(2 secs)

NOTES

DRILLER SIGNATURE: Barry Verheist

HRS. RUN	HOURS SINCE BOP TEST	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00			139000.00	Trucks on location	

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-619	Barry Verheist	12.00		☐ ☑
Derrickman	647-452-903	Dave Makowsky	12.00		☐ ☑
Motorman	735-714-230	Chantry Vig	12.00		☐ ☑
Floorman	122-830-839	Chris Eddy	12.00		☐ ☑
Floorman	852-890-757	Kyle Hrynlw	12.00		☐ ☑
Leaseman	713-959-481	Gary Kennedy	12.00		☐ ☐

RATE SCHEDULE: ☑MINIMUM ☐REPAIR ☐HYBRID | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY 3

BIT RECORD

NO.	BIT TYPE	SER. NUMBER	IADC CODE
1	bit	311	0.35
1	Motor	241	10.90
1	[illegible]	306	2.35
1	[illegible]	241	10.84
2	[illegible]	230	16.71
7	9" DHF Drifters	220	64.84
1	[illegible]	234	5.11
1	9" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6	[illegible]	127	56.48
50	DP	STANDS	1408.37
0	D.P.	SINGLES	0.00
	ABLE TO DOWN		0.00
	TOTAL		1609.53
WT. OF BIT			33000.00
WT. OF STRING			96000.00

BIT NO: 11 | SIZE: 311 | IADC CODE: 6 3 7 | MFG: H.C. | TYPE: HRS55R | SERIAL NO: 6017744 | DEPTH OUT (m): 1609.00 | DEPTH IN (m): 1553.00 | TOTAL METERS DRILLED (m): 40.00 | TOTAL HOURS Run: 14.00

BIT NO: 12 | SIZE: 311 | IADC CODE: 6 4 7 | MFG: H.C. | TYPE: HRP66DX | SERIAL NO: 6026062 | DEPTH OUT (m): 1853.00 | DEPTH IN (m): 1609.00 | TOTAL METERS DRILLED (m): 244.00 | TOTAL HOURS Run: 14.00

DULL CONDITION: 1 | 1 | WT | A | E | Gage | FC | TQ | 2.86

HOLE CONDITION | HOLE DRAG: 20k up/15k dwn | TORQUE AT BOTTOM: 18107 ft-lbs | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: WATER BASED | OIL BASED | FlowLine Temp 61.9 C

TIME	09:00	
DEPTH (m)	1066	
FLOWS WT. (kg/m3)	40	
W.L. (cm3)		
pH	10.0	
PVT@	143.8m3	

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	DRILLING FLUID	DISCARDED FLUID	WASHDOWN FLUID

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kg)	METERS DRILLED	HOURS ON BIT	ROTATING HOURS
1593.00							

CIRCULATION PRESSURE (kPa): 11500 | 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: kPa @ S.P.M. @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

FROM	TO	HOURS	CUM. HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	20:00	4.00	4.00	6	Break stabs off m. motor, lay dwn & pick up new M.M., install stbs, set angle, install bit
20:00	20:15	0.25	4.25	7	Rig Service and Function Blind Ram's
20:15	21:45	1.50	5.75	6	M/U Bit#12,BHA, and RIH
21:45	22:00	0.25	6.00	5	Fill Pipe and Circulate Bims. Up @ 883m(Temp. Peak @ 72 Deg.)
22:00	22:15	0.25	6.25	22	B.O.P. Drill w/Crewmember's,Well Secure in 119 sec.
22:15	22:45	0.50	6.75	6	RIH w/Bit#12
22:45	23:15	0.50	7.25	5	Fill Pipe and Circulate Bims. Up @ 1307m(Temp. Peak @ 74 Deg.)
23:15	23:45	0.50	7.75	6	RIH w/Bit#12
23:45	24:00	0.25	8.00	3	Wash fr/1523m-1576m

NOTES

DRILLER SIGNATURE: Wade Goddard

HRS. RUN	HOURS SINCE BOP TEST	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	8.5		125000.00	Review J.S.A. on Wiping	

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-826-706	Wade Goddard	4.00	WG	☐ ☑
Derrickman	642-872-840	Murray McBain	4.00	MM	☐ ☑
Motorman	651-366-064	Jesse Goddard	4.00	JG	☐ ☑
Floorman	732-808-483	Dune Malmberg	4.00	DM	☐ ☑
Floorman	730-049-896	Nathan Schwandt	4.00	NS	☐ ☑
Leaseman	729-975-003	Daniel Sampson	4.00	DS	☐ ☑

RATE SCHEDULE: ☑MINIMUM ☐REPAIR ☐HYBRID | DRIVER A | CREW SAFETY DAYS | DRIVER B

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

RIG RELEASE	JOB NO 21	AFE	
WELL NAME AND NO MC6 South Meager			
CONTRACTOR Precision Drilling			
RIG NAME OR NO. 6-1-H / 92-J-12			
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE Kevin Vig			

DAILY CHECKS (OPR / RM)
(1) Daily BOP Function Test
(2) Daily Pit Level Indicator
(3) Visual Inspection of Derrick
(4) Hard Lines
(5) Flare Line
(6) BOP Drills
(7) Visually Inspect BOPE
(8) Crown-O-Matic
(9) Daily Safety Meeting
(10) Weekly Safety Meeting
(11) Weekly Inspection
(12) Monthly Inspection
(13) Weekly Inspection Before Rigging-in / Spudding
(14) Crown Saver Checked
(15) Work Site Checked

DATE 28-Oct-2004
RIG NO 620 E
FUEL 8.00
RIG 65126 BOILER
WEATHER: TEMPERATURE 2; CURRENT CONDITION Rain; WIND DIRECTION Calm; ROAD Good

LAST CASING 108.00 OD LINER

						K-55	10	125.00		8.31	124.90
										8.22	857.00

	29.00	SS-95	83.00	169.00	5"XH	170	F-1500	BPMMP		305
	38.00	SS-95	67.00	168.00	5"XH	150	F-1500	BPMMP		305

WELL TYPE Geothermal | RE-ENTRY ☐YES ☑NO | KB TO GROUND ELEV. 7.32
WELL NAME & No. MC6 South Meager | DATE 28-Oct-2004
OPERATOR Western Geopower Corp | CONTRACTOR Precision Drilling
RIG MANAGER Kevin Vig | RIG NO. 620 E
PROVINCE BC | CAMP ☑YES ☐NO | RIG SAFETY DAYS: 38.00

SHALE SHAKER(S) — RENTALS/SERVICES

NO.	TYPE	Derrick
1		☐YES ☑NO
TOP	100	TOP 100
MIDDLE	100	MIDDLE 100
BOTTOM	100	BOTTOM 100

TIME - HRS

	CREW	RIG	DRLG	CIRC	TRIPS	SURV	REAM	CORE	CUT	SLIP	RIG SERV	RIG REPAIR	TEST BOP	TEST CSG	WOC	CMT	WAIT ON CMT	NU/ND BOP	FISH	OTHER	TOTAL
OPER.	8.75	0.50				0.25														0.50	9.75
MORN	7.50					0.25															9.25
DAY	7.75					0.25															9.25
EVE	7.75					0.25															9.75
TOTAL	23.00	0.50				0.75														0.50	24.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

No.	Item	Size	Serial No.	Make	Type	Jets	Depth Out	Depth In	Total Meters Drilled	Total Hours Run	Cutting Structure	Bit Grade
1	bit	311	0.35	BIT NO.	12							
1	Motor	241	10.96	SIZE	311							
1	NorTrac Stab	308	1.59	IADC CODE	6 4 7							
1	Double Pin	246	0.76	MFG.	H.C.							
1		241	10.84	TYPE	HRP86DX							
2		238	18.71	SERIAL NO.	6026062							
7	8" Drill Collars	229	64.84	JETS	22.1 22.5 22.5							
1		234	6.11	DEPTH OUT (m)	1624.00							
1	8" Pony D.C.	228	3.93	DEPTH IN (m)	1593.00							
3	8" Drill Collars	171	26.69	TOTAL METERS DRILLED	31.00							
6		127	56.48	TOTAL HOURS RUN	6.75							
50	D.P.	STANDS	1409.37	CUTTING STRUCTURE	T1	B	MSC	LOC	B	Gage	DOC	BEARING FAILURE	WB
2	D.P.	SINGLES	19.07										
	NULL ROOMIN		0.00	HOLE CONDITION									
	TOTAL		1624.00	HOLE DRAG	16-22klp/13-17Down(Sliding)								
WT. OF BC			33000.00	TORQUE AT BOTTOM	11,507 ft/lbs.								
WT. OF STRING			95000.00	FILL ON BOTTOM (m)	1.00								

MUD RECORD

MUD TYPE: Gel Chem ☐ Oil Based — FlowLine Temp. 56

TIME	02:00	04:00	06:00
DENSITY kg/m3	1050	1050	1055
FUNNEL VIS. sec/L	42	42	43
W.L. (cm3)			
pH	9.5	10.0	10.0
PV/YP	127.9 m3	129.5 m3	130.5 m3

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN
Ligco	25 sacks	
Alcalinity (d) Pm Pmp	3 sacks	
Hydrated Lime	2 sacks	
Caustic Soda	6 sacks	
Defoamer LD-8	1 pail	

METERS DRILLED

FROM	TO	Bit #	Rotary R.P.M.	WOB (klbs)
1593.00	1624.00	D	80	15-20

CIRCULATION PRESSURE (kPa): PUMP NO.1 Liner size (mm) 152 S.P.M. 95; PUMP NO.2 Liner size (mm) 152 S.P.M. 95
13760

REDUCED PUMP SPEED: 4018 @ 95 @ 1590.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1595.30	26.3	25.50

TIME LOG

From	To	Hours	Code	Activity Code
0:00	0:30	0.50	3	Wash and Ream fr1576m-1583m, tm Fill
0:30	4:00	3.50	2	Pattern Bit and Drill fr1583m-1609m
4:00	4:15	0.25	7	Rig Service and Function Annular 20/20
4:15	7:30	3.25	2	Drill fr1609m-1624m
7:30	8:00	0.50	16	Accumulated M.W.D. Survey's and Check-Shot's

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES
Function Cross Sweep
Engine #1 = 15 Hrs. / #2 and #3 = 0 Hrs. / Pumps #1 and #2 = 11 Hrs.

DRILLER SIGNATURE	LAST BOP TEST	NEXT BOP TEST	STOCK TANK	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	6.00	6.5			125000.00		

MORNING TOUR CREW

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	851-366-064	Jesse Goddard	8.00	JG	☑
Floorman	732-808-483	Dune Malmberg	8.00	DM	☑
Floorman	730-040-896	Nathan Schwandt	8.00	NS	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☑
Rig Manager	719-406-484	Kevin Vig		KV	☐
Top Drive	638-977-702	Sheldon Langley		SL	☐

RATE SCHEDULE ☑MINIMUM ☐REPAIR ☐MYSELF — DRIVER A — CREW SAFETY DAYS — DRIVER B

DAY TOUR 8:00 TO 16:00

BIT RECORD

No.	Item	Size	Serial No.	Make	Type	Jets	Depth Out	Depth In	Total Meters Drilled	Total Hours Run	Cutting Structure	Bit Grade
1	bit	311	0.35	BIT NO.	12							
1	Motor	241	10.96	SIZE	311							
1	NorTrac Stab	308	1.59	IADC CODE	6 4 7							
1	Double Pin	246	0.76	MFG.	H.C.							
1		241	10.84	TYPE	HRP86DX							
2		238	18.71	SERIAL NO.	6026062							
7	8" Drill Collars	229	64.84	JETS	22.1 22.5 22.5							
1		234	6.11	DEPTH OUT (m)								
1	8" Pony D.C.	228	3.93	DEPTH IN (m)	1593.00							
3	8" Drill Collars	171	26.69	TOTAL METERS DRILLED	57.00							
6		127	56.48	TOTAL HOURS RUN	14.25							
52	D.P.	STANDS	1466.42	CUTTING STRUCTURE	T1	B	MSC	LOC	4	Gage	DOC	BEARING FAILURE	WB
	D.P.	SINGLES											
	NULL ROOMIN		-16.98	HOLE CONDITION									
	TOTAL		1659.50	HOLE DRAG	21000 up/17000 dwn								
WT. OF BC			33000.00	TORQUE AT BOTTOM	13896 ft-lbs								
WT. OF STRING			98000.00	FILL ON BOTTOM (m)									

MUD RECORD

MUD TYPE: Gel Chem ☐ Oil Based — FlowLine Temp. 67.3C

TIME	10:00	12:00	18:00
DENSITY kg/m3	1055	1060	1050
FUNNEL VIS. sec/L	41	41	44
W.L. (cm3)			
pH	10.5	10.0	10.0
PV/YP	132.4m3	134.3m3	134.1m3

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN
Caustic Soda	6sks.	
Pentox 99.5% Pmp	3sks.	6.00 1050 1045 1735
Hydrated Lime	2sks	
Ligco	35sks.	

METERS DRILLED

FROM	TO	Bit #	Rotary R.P.M.	WOB (klbs)
1624.00	1680.00	D	15-20	15-20

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
13560

REDUCED PUMP SPEED: 3560 @ 90 @ 1645.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION
1624.10	26.2	25.50

TIME LOG

From	To	Hours	Code	Activity Code
8:00	14:15	6.25	2	Drill fr. 1624m - 1647m
14:15	14:30	0.25	7	Rig Service, F/T pipe rams(6 secs)
14:30	15:45	1.25	2	Drill fr. 1647m - 1650
15:45	16:00	0.25	10	Deviation Surveys(Accum.)

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES
BIT broken down, visually dropped bongs, hang links & shackle.

DRILLER SIGNATURE	LAST BOP TEST	NEXT BOP TEST	STOCK TANK	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verhelst	6.00	5.5			131000.00	Well control	

DAY TOUR CREW

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verhelst	12.00	BV	☑
Derrickman	847-457-903	Dave Mekowsky	12.00	DM	☑
Motorman	739-714-230	Chantry Vig	12.00	CV	☑
Floorman	122-830-839	Chris Eddy	12.00	CE	☑
Floorman	852-990-757	Kyle Hrynkiw	12.00	KH	☑
Leaseman	713-959-461	Gary Kennedy	12.00	GK	☑

RATE SCHEDULE ☑MINIMUM ☐REPAIR ☐MYSELF — DRIVER A — CREW SAFETY DAYS — DRIVER B

EVENING TOUR 16:00 TO 24:00

BIT RECORD

No.	Item	Size	Serial No.	Make	Type	Jets	Depth Out	Depth In	Total Meters Drilled	Total Hours Run	Cutting Structure	Bit Grade
1	bit	311	0.35	BIT NO.	12							
1	Motor	241	10.96	SIZE	311							
1	NorTrac Stab	308	1.59	IADC CODE	6 4 7							
1	Double Pin	246	0.76	MFG.	H.C.							
1		241	10.84	TYPE	HRP86DX							
2		238	18.71	SERIAL NO.	6026062							
7	8" Drill Collars	229	64.84	JETS	22.1 22.5 22.5							
1		234	6.11	DEPTH OUT (m)	1679.00							
1	8" Pony D.C.	228	3.93	DEPTH IN (m)	1593.00							
3	8" Drill Collars	171	26.69	TOTAL METERS DRILLED	86.00							
6		127	56.48	TOTAL HOURS RUN	22.00							
52	D.P.	STANDS	1465.42	CUTTING STRUCTURE	T1	B	MSC	LOC	4	Gage	DOC	BEARING FAILURE	WB
2	D.P.	SINGLES	19.12										
	NULL ROOMIN		0.00	HOLE CONDITION									
	TOTAL		1679.00	HOLE DRAG	15-23klp/13-17Down(Sliding)								
WT. OF BC			33000.00	TORQUE AT BOTTOM	10,565 ft/lbs.								
WT. OF STRING			99000.00	FILL ON BOTTOM (m)									

MUD RECORD

MUD TYPE: Gel Chem ☐ Oil Based — FlowLine Temp. 68.8

TIME	18:00	21:00	23:00
DENSITY kg/m3	1050	1050	1050
FUNNEL VIS. sec/L	44	41	40
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	135.7m3	137.5 m3	138.8 m3

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN
Milgel NT	20sks.	
Nut Plug	6sks.	
Pentox 99.5% Pmp	3sacks	
Hydrated Lime	2 sacks	
Ligco	45 sacks	
Defoamer LD-8	1 pail	

METERS DRILLED

FROM	TO	Bit #	Rotary R.P.M.	WOB (klbs)
1650.00	1679.00	D	15-20	17-21

CIRCULATION PRESSURE (kPa): PUMP NO.1 Liner size (mm) 152 S.P.M. 95; PUMP NO.2 Liner size (mm) 152 S.P.M. 95
13759

REDUCED PUMP SPEED: 4289 @ 95 @ 1680.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

TIME LOG

From	To	Hours	Code	Activity Code
16:00	20:15	4.25	2	Drill fr1650m-1666m
20:15	20:30	0.25	7	Rig Service and Function HCR 3/3
20:30	24:00	3.50	2	Drill fr1666m-1679m

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES
BIT broken down

DRILLER SIGNATURE	LAST BOP TEST	NEXT BOP TEST	STOCK TANK	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	6.00	5.5			124000.00		

EVENING TOUR CREW

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	851-366-064	Jesse Goddard	4.00	JG	☑
Floorman	732-808-483	Dune Malmberg	4.00	DM	☑
Floorman	730-040-896	Nathan Schwandt	4.00	NS	☑
Leaseman	729-975-003	Daniel Sampson	4.00	DS	☑

RATE SCHEDULE ☑MINIMUM ☐REPAIR ☐MYSELF — DRIVER A — CREW SAFETY DAYS — DRIVER B

CHIMO ETS SOFTWARE VERSION:

ETS SERIAL NUMBER: PREC620_20040928_1A

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD 2004-09-22 22:49	RIG RELEASE	JOB NO 21	AFE
LICENCE NO. a-92-A / 92-J-12	WELL NAME AND NO. MC6 South Meager		
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		SIGNATURE OF CONTRACTOR'S REPRESENTATIVE	

DATE	29-Oct-2004
RIG NO	620 E
FUEL - RIG	63939
TEMPERATURE	
CURRENT CONDITION	Cloudy
WIND DIRECTION	Calm
ROAD	Muddy

LAST CASING TUBING OR LINER

GRADE	NO. OF JOINTS	TOTAL LENGTH	KB TO CSG HEAD	SET AT
			7.32	
K-55	10	128.00	6.31	124.00
			8.22	557.00

LINEAR MASS	GRADE	ID	TOOL JT OD	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE
29.00	SS-95	83.00	186.00	5"XH	170	F-1600	BPMMP	305
38.00	SS-95	67.00	168.00	5"XH	160	F-1600	BPMMP	305

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

4.00	TOP 100	TOP 100
7.75	MIDDLE 100	MIDDLE 100
23.75	BOTTOM 100	BOTTOM 100

RENTALS/SERVICES

WELL TYPE	Geothermal
RE-ENTRY	☐ YES ☑ NO
KB TO GROUND ELEV	7.32
WELL NAME & No.	MC6 South Meager
DATE	29-Oct-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	
RIG NO.	620 E
PROVINCE	BC
CAMP	☑ YES ☐ NO
RIG SAFETY DAYS	37.00

TIME - HRS

OPER.	1	2	3	4	5	6	7	8	9	10
MORN		7.25			0.25		0.25			0.25
DAY		7.76					0.25			
EVE		7.49					0.25			
TOTAL		22.60			0.25		0.75			0.25

MORNING TOUR

Drilling Assembly

NO.		O.D.	LENGTH
1	bit	311	0.35
1	Motor	241	10.96
1	Nortrac Stab	306	1.59
1	Double Pin	246	0.76
1		241	10.84
2		230	18.71
7		220	64.84
1		234	6.11
1	9" Pony D.C.	228	3.93
3		171	26.59
6		127	58.48
53	D.P. STANDS		1496.34
1	D.P. SINGLES		9.56
	KELLY DOWN		0.00
	TOTAL		1701.00
WT. OF DC			33000.00
WT. OF STRING			100000.00

BIT RECORD

BIT NO	12
SIZE	311
IADC CODE	6 4 7
MFG.	H.C.
TYPE	HRP86DX
SERIAL NO	6026062
JETS	3/3 3/3 3/3
DEPTH OUT (m)	1701.00
DEPTH IN (m)	1593.00
TOTAL METERS DRILLED	108.00
TOTAL HOURS RUN	29.25
HOLE DRAG	16-22Up/13-17Down(Sliding)
TORQUE AT BOTTOM	12,349 ft/lbs.
FILL ON BOTTOM (m)	

MUD RECORD — MUD TYPE ☑ WATER BASED ☐ OIL BASED — FlowLine Temp. 69.5

TIME	02:00	04:00	06:00
DENSITY	1050	1050	1055
FUNNEL VIS	46	45	46
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT @	141.2 m3	141.4 m3	141.9 m3

MUD MATERIAL ADDED — PRODUCT	AMOUNT x UNIT
Nut Plug	37 sacks
Milgel NT	96 sacks
Caustic Soda	7 sacks

SOLIDS CONTROL: Centrifuge

METERS DRILLED

FROM	TO		ROTARY RPM	WOB
1679.00	1701.00	D	20-25	18-22

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
14390	152	95	152	95

REDUCED PUMP SPEED: 4289 @ 98 @ 1679.00

DEPTH (m)	DEVIATION (o)	DIRECTION
1670.50	26.3	26.90

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
0:00	0:15	0.25	7	Rig Service and Function Annular 20/20
0:15	0:30	0.25	5	Circulate and Replace Head and Liner in #2 Pump
0:30	3:30	3.00	2	Drill fr/1679m-1686m
3:30	3:45	0.25	10	M.W.D. Survey @ 1670.50m
3:45	8:00	4.25	2	Drill fr/1686m-1701m

NOTES

DRILLER SIGNATURE	MUD WT		OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	4.00	9.5		127000.00		

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-628-706	Wade Goddard	8.00	WG	☐	☑
Derrickman	642-672-840	Murray McBain	8.00	MM	☐	☑
Motorman	651-366-064	Jesse Goddard	8.00	JG	☐	☑
Floorman	732-808-483	Dune Malmberg	8.00	DM	☐	☑
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	638-977-702	Sheldon Langley		SL	☐	☑

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

DAY TOUR

Drilling Assembly

NO.		O.D.	LENGTH
1	bit	311	0.35
1	Motor	241	10.96
1	NorTrac Stab	306	1.59
1	Double Pin	246	0.76
1		241	10.84
2		230	18.71
7		220	64.84
1		234	6.11
1	8" Pony D.C.	228	3.93
3		171	26.59
6		127	58.48
64	D.P. STANDS		1622.71
2	D.P. SINGLES		19.16
	KELLY DOWN		-18.15
	TOTAL		1724.87
WT. OF DC			33000.00
WT. OF STRING			100000.00

BIT RECORD

BIT NO.	12
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HRP86DX
SERIAL NO	6026062
JETS	3/3 3/3 3/3
DEPTH OUT (m)	1701.00
DEPTH IN (m)	1593.00
TOTAL METERS DRILLED	108.00
TOTAL HOURS RUN	37.00
HOLE DRAG	21000 up/17000 dwn
TORQUE AT BOTTOM	14875 ft-lbs
FILL ON BOTTOM (m)	

MUD RECORD — MUD TYPE ☑ WATER BASED ☐ OIL BASED — FlowLine Temp.

TIME	09:00	12:00	15:00
DENSITY	1066	1056	1065
FUNNEL VIS	46	52	49
W.L. (cm3)			
pH	10.0	10.0	10.5
PVT @	143.4m3	143.6m3	134m3

MUD MATERIAL ADDED — PRODUCT	AMOUNT x UNIT
Caustic Soda	7sks.
Defoamer LD-8	1 pail
Poly...	3sks.
Hydrated Lime	2sks.
Milgel NT	17sks.
Nut Plug	4sks.
Ligco	30sks.

SOLIDS CONTROL: Centrifuge — HOURS RUN 8.00 — 1066 — 1060 — 1740

METERS DRILLED

FROM	TO		ROTARY RPM	WOB
1701.00	1724.00	D	15-25	20-24

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
14600	152	95	152	95

REDUCED PUMP SPEED: 4000 @ 90 @ 1716.00

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
8:00	15:45	7.75	2	Drill fr. 1701m - 1724m
15:45	16:00	0.25	7	Rig Service, F/T pipe rams(6 secs)

NOTES

DRILLER SIGNATURE	MUD WT		OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verhelst	8.00	9.5		132000.00		

DAY TOUR 8:00 TO 16:00

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	122-630-639	Chris Eddy	12.00	CE	☐	☑
Floorman	652-890-757	Kyle Hrynew	12.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	12.00	GK	☐	☑

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

EVENING TOUR

Drilling Assembly

NO.		O.D.	LENGTH
1	bit	311	0.35
1	Motor	241	10.96
1	Nortrac Stab	306	1.59
1	Double Pin	246	0.76
1		241	10.84
2		230	18.71
7		220	64.84
1		234	6.11
1	9" Pony D.C.	228	3.93
3		171	26.59
6		127	58.48
55	D.P. STANDS		1651.22
1	D.P. SINGLES		9.81
	KELLY DOWN		0.00
	TOTAL		1762.19
WT. OF DC			33000.00
WT. OF STRING			100000.00

BIT RECORD

BIT NO	12
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HRP86DX
SERIAL NO	6026062
JETS	3/3 3/3 3/3
DEPTH OUT (m)	
DEPTH IN (m)	1593.00
TOTAL METERS DRILLED	158.00
TOTAL HOURS RUN	44.50
HOLE DRAG	16-22Up/13-17Down(Sliding)
TORQUE AT BOTTOM	12,349 ft/lbs.
FILL ON BOTTOM (m)	

MUD RECORD — MUD TYPE ☑ WATER BASED ☐ OIL BASED — FlowLine Temp. 71.4

TIME	18:00	21:00	23:00
DENSITY	1060	1065	1060
FUNNEL VIS	46	48	48
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT @	133.8 m3	134.2 m3	136.7 m3

MUD MATERIAL ADDED — PRODUCT	AMOUNT x UNIT
Milgel NT	17sks.
Nut Plug	1sks.

SOLIDS CONTROL: Centrifuge

METERS DRILLED

FROM	TO		ROTARY RPM	WOB
1724.00	1751.00	D	15-25	18-22

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER	S.P.M.	PUMP NO. 2 LINER	S.P.M.
14700	152	95	152	95

REDUCED PUMP SPEED: 4200 @ 95 @ 1742.00

DEPTH (m)	DEVIATION (o)	DIRECTION
1709.06	26.4	25.90
1729.00	28.5	24.80

TIME LOG / DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HRS	CODE	DETAILS
16:00	20:15	4.25	2	Drill fr/1724m-1742m
20:15	20:30	0.25	7	Rig Service and Function HCR 3/3
20:30	23:45	3.25	2	Drill fr/1742m-1751m
23:45			10	Accumulated M.W.D. Survey's

NOTES

DRILLER SIGNATURE	MUD WT		OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	9.5		130000.00		

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-628-706	Wade Goddard	4.00	WG	☐	☑
Derrickman	642-672-840	Murray McBain	4.00	MM	☐	☑
Motorman	651-366-064	Jesse Goddard	4.00	JG	☐	☑
Floorman	732-808-483	Dune Malmberg	4.00	DM	☐	☑
Floorman	730-040-896	Nathan Schwandt	4.00	NS	☐	☑
Leaseman	729-976-003	Daniel Sampson	4.00	DS	☐	☑

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

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | RIG RELEASE: | JOB NO: 21 | AFE:
LICENCE NO: a-02-A / 92-J-12 | WELL NAME AND NO.: MCR South Meager
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
SURFACE LOCATION: a-02-A / 92-J-12 | ANNULUS ID: a-1-H / 93-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Bill Mills

DAILY CHECKS — CREW | R/M

DATE: 30-Oct-2004 | RIG NO: 620 E | FUEL: 28 | RIG: 43590 | BOILER:

WEATHER		
TEMPERATURE	-3	
CURRENT DIRECTION	Snow	
WIND DIRECTION	North	
ROAD	Snow	

LAST CASING TUBING OR LINER	O.D (mm)	WEIGHT (kg/m)	GRADE	NO OF JOINTS	TOTAL PIPE LENGTH	NO TO GRD LEVEL (Driller)	SET AT (m)
						7.32	
			K-55	10	125.99	6.31	124.00
						6.22	857.00

	LENGTH	O.D (mm)	GRADE	MIN ID (mm)	TOOL JT O.D (mm)	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH (mm)
	29.00	SS-95	83.00	165.00	5"XH	170	F-1600	BPMMP		305
	39.00	SS-95	97.00	168.00	5"XH	150	F-1600	BPMMP		305

WELL TYPE: Geothermal | RE-ENTRY: ☐YES ☑NO | KB TO GROUND ELEV.: 7.32
WELL NAME & No.: MCR South Meager | DATE: 30-Oct-2004
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Bill Mills | RIG NO.: 620 E
PROVINCE: BC | CAMP: ☑YES ☐NO | RIG SAFETY DAYS: 38.00

TIME HRS

	0	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								6.75	0.25																	6.75
DAY								6.75	0.25																	6.75
EVE								6.50	1.00	0.25																6.75
TOTAL								6.75	1.25	0.25																6.25

SHALE SHAKER(S)

	NO. 1	NO. 2
TYPE	Derrick	
SCREENS CHANGED	☑YES ☐NO	
8.00	100	100
8.00	100	100
8.00	100	100
24.00	100	100

TOP / MIDDLE / BOTTOM

RENTALS/SERVICES

	MORN	DAY	EVE

BIT RECORD

NO	BIT	DAILY DIST	CUMM DIST
1	bit		311
1	Motor	241	10.96
1	NorTrac Stab	306	1.59
1	Double Pin	246	0.75
1	MWD Sonic/Screens	241	10.84
2	E.M.R.Shock	230	18.71
7	8" Drill Collars	220	64.84
1	7" Cross Sovers	224	6.11
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6	Rectangle Sub Pac	127	56.48
56	D.P.	STANDS	1580.99
0	D.P.	SINGLES	0.00
	KELLY/DOWN		0.00
	TOTAL		1774.90
WT. OF DC			33000.00
WT. OF STRING			101000.00

BIT NO: 12 | SIZE: 311 | IADC CODE: 6 4 7 | MFG: H.C. | TYPE: HRP66DX | SERIAL NO: 6026062 | JETS: 22 | 22 | 22 | DEPTH OUT (m): 1774.00 | DEPTH IN (m): 1593.00 | TOTAL METERS DRILLED (m): 181.00 | TOTAL HOURS Run: 51.25

CUTTING STRUCTURE: I: 1 | O: 1 | DC: WT | LOC: A | B: | Gage: | OC: | RANGE: | PULL: | REASON: TD

HOLE CONDITION

HOLE DRAG: 13-22up/33-17down(Sliding) | TORQUE AT BOTTOM: 13,139 ft/lbs | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE: ☑WATER BASED ☐OIL BASED | FlowLine Temp: 72.3

	1	2	3
TIME	02:00	04:00	06:00
DENSITY (kg/m3)	1060	1060	1060
VIS (S/L)	49	47	46
W.L. (cm3)			
pH	10.0	10.0	10.0
P.V.T.	140.1 m3	146.6 m3	141.8 m3

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	MUD LOST (m3)	DISCARDED (m3)
Caustic Soda	5 sacks			
Ligco	45 sacks			
Nut Plug	3 sacks			
Hydrated Lime	2 sacks			

METERS DRILLED

FROM	TO	BIT NO.	ROTARY HRS	BIT HRS
1781.00	1774.00	D	15-25	16-22

CIRCULATION PRESSURE (KPa) | PUMP NO.1: LINER SIZE (mm) 152 | S.P.M. 98 | PUMP NO.2: LINER SIZE (mm) 152 | S.P.M. 96

REDUCED PUMP SPEED: 4399 @ 98 @ 1741.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
1747.70	25.5	24.50

TIME LOG

FROM	TO	HRS	CODE	Drill Rate (m/hr)	Rot. Hrs (Cum.)	Circ. Hrs (Cum.)	Days Since Last LTI
0:00	2:30	2.50	2				
2:30	2:45	0.25	7				
2:45	7:00	4.25	2				
7:00	7:15	0.25	10				
7:15	7:30	0.25	5				
7:30	8:00	0.50	5				

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill fr/1751m-1761m
Rig Service and Function Annular 20/20
Drill fr/1761m-1774m
Accumulated M.W.D. Survey's and Check-shot's
Circulate
Flow Check @ 1751m,Hoist Bit #12, Flow Check @ 1598m

NOTES: Function Crown Saver; Trip Gauge @ 4230 Hrs. Engine #1 RUN = 24 Hrs. / Pump #1 and #2 = 12.5 Hrs.

DRILLER SIGNATURE: Wade Goddard | SAFETY MEETING: HRS RUN 8.00 | HELD 1 | STACK TEMP. | OPERATOR FUEL | MAX EXP HOOKLOAD: 135000.00 | SAFETY TOPIC: Weekend Awareness | M.A.C.P.

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	633-628-706	Wade Goddard	9.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	9.00	MM	☐	☑
Motorman	651-366-064	Jesse Goddard	9.00	JG	☐	☑
Floorman	732-808-483	Dune Malmberg	9.00	DM	☐	☑
Floorman	730-040-896	Nathan Schwandt	9.00	NS	☐	☑
Leaseman	729-975-093	Daniel Sampson	9.00	DS	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑
Rig Manager	710-324-181	Bill Mills		BM	☐	☑

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

BIT RECORD

NO	BIT	DAILY DIST	CUMM DIST
1	bit		311
1	Motor	241	10.96
1	NorTrac Stab	306	1.59
1	Double Pin	246	0.75
1	MWD Sonic/Screens	241	10.84
2	E.M.R.Shock	230	18.71
7	8" Drill Collars	220	64.84
1	7" Cross Sovers	224	6.49
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6	Rectangle Sub Pac	127	56.48
56	D.P.	STANDS	1560.15
1	D.P.	SINGLES	9.55
	KELLY/DOWN		0.00
	TOTAL		1791.26
WT. OF DC			33000.00
WT. OF STRING			101000.00

BIT NO: 12 | 13 | SIZE: 311 | 311 | IADC CODE: 6 4 7 | 6 4 7 | MFG: H.C. | H.C. | TYPE: HRP66DX | HRP66DX | SERIAL NO: 6026062 | 6026063 | JETS: 22 | 22 | 22 | 22 | 22 | 22 | DEPTH OUT (m): 1774.00 | DEPTH IN (m): 1593.00 | 1774.00 | TOTAL METERS DRILLED (m): 181.00 | TOTAL HOURS Run: 51.25

CUTTING STRUCTURE: I: 1 | O: 7 | DC: FC | LOC: A-I-I | B: F | Gage: GAUGE | OC: CT | RANGE: HRS | PULL: 3.53 | REASON: TD

HOLE CONDITION

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

MUD RECORD

MUD TYPE: ☑WATER BASED ☐OIL BASED | FlowLine Temp.

	1	2	3
TIME			
DENSITY (kg/m3)			
VIS (S/L)			
W.L. (cm3)			
pH			

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	MUD LOST (m3)	DISCARDED (m3)

METERS DRILLED

FROM	TO	BIT NO.	ROTARY HRS	BIT HRS
1774.00				

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 (o)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	Drill Rate (m/hr)	Rot. Hrs (Cum.)	Circ. Hrs (Cum.)	Days Since Last LTI
8:00	11:30	3.50	6				
11:30	12:00	0.50	6				
12:00	12:15	0.25	7				
12:15	16:00	2.75	6				
16:00	16:00	1.00	22				

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Hoist bit # 12, flow check @ 1751, 1598,1059, 214
Change out in string jars & replace w/HI-temp jars
Rig Service, F/T Annular
Handle B.H.A., change bit, flow check out.
Resting blocks from 10 line to 12 line(Monitor hole)

NOTES: 2/7 drilling hour, Trip reading: equal: 16.55 Calc.: 11.50 Diff.: 4.63=3 more

DRILLER SIGNATURE: Barry Verheist | SAFETY MEETING: HRS RUN 8.00 | HELD 0.5 | STACK TEMP. | OPERATOR FUEL | MAX EXP HOOKLOAD: 121000.00 | SAFETY TOPIC: Using mud can | M.A.C.P.

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-389-910	Barry Verheist	12.00	BV	☐	☑
Derrickman	947-452-903	Dave Makowsky	12.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☐	☑
Floorman	122-836-839	Chris Eddy	12.00	CE	☐	☑
Floorman	652-890-757	Kyle Hryniw	12.00	KH	☐	☑
Leaseman	713-958-461	Gary Kennedy	12.00	GK	☐	☑

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

BIT RECORD

NO	BIT	DAILY DIST	CUMM DIST
1	bit		311
1	Motor	241	10.96
1	NorTrac Stab	306	1.59
1	Double Pin	246	0.75
1	MWD Sonic/Screens	241	10.64
2	E.M.R.Shock	230	18.71
7	8" Drill Collars	220	64.84
1	7" Cross Sovers	224	6.49
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6	Rectangle Sub Pac	127	56.48
56	D.P.	STANDS	1560.15
1	D.P.	SINGLES	9.55
	KELLY/DOWN		0.00
	TOTAL		1791.26
WT. OF DC			33000.00
WT. OF STRING			101000.00

BIT NO: 13 | SIZE: 311 | IADC CODE: 6 4 7 | MFG: H.C. | TYPE: HRP66DX | SERIAL NO: 6026063 | JETS: 22 | 22 | 22 | DEPTH OUT (m): 1774.00 | DEPTH IN (m): | TOTAL METERS DRILLED (m): | TOTAL HOURS Run:

CUTTING STRUCTURE: I: | O: | DC: | LOC: | B: | Gage: | OC: | RANGE: | PULL: | REASON:

HOLE CONDITION

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

MUD RECORD

MUD TYPE: ☑WATER BASED ☐OIL BASED | FlowLine Temp.

	1	2	3
TIME			
DENSITY (kg/m3)			
VIS (S/L)			
W.L. (cm3)			
pH			

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN	MUD LOST (m3)	DISCARDED (m3)

METERS DRILLED

FROM	TO	BIT NO.	ROTARY HRS	BIT HRS
1774.00				

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 (o)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE	Drill Rate (m/hr)	Rot. Hrs (Cum.)	Circ. Hrs (Cum.)	Days Since Last LTI
16:00	20:15	4.25	22				
20:15	20:30	0.25	7				
20:30	23:00	2.50	6				
23:00	23:15	0.25	5				
23:15	23:45	0.50	6				
23:45	24:00	0.25	5				

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

(Resting blocks) fr. 10 lines to 12
Rig Service and Function HCR 3/3
M/U B.H.A. and R.L.H. w/Bit #13.
Circulate Btms. Up @ 894m,(Temp Peak @ 75 Deg.)
RIH w/Bit #13
Circulate Btms. Up @ 1206m,(Temp. Peak @ 75 Deg.)

NOTES: Function Crown Saver

DRILLER SIGNATURE: Wade Goddard | SAFETY MEETING: HRS RUN 8.00 | HELD 0.5 | STACK TEMP. | 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	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	732-808-483	Dune Malmberg	4.00	DM	☐	☑
Floorman	730-040-896	Nathan Schwandt	4.00	NS	☐	☑
Leaseman	729-975-093	Daniel Sampson	4.00	DS	☐	☑

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

ETS SERIAL NUMBER: PREC620_20040930_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	2004-09-22 22:49
RIG RELEASE	
JOB NO.	21
AFE	
LICENCE NO.	a-92-A / 92-J-12
WELL NAME AND NO.	MC6 South Meager
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
SURFACE LOCATION	a-92-A / 92-J-12
LINEUP ID	b-1-H / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE	Russ Silva
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE	Bill Mills

DAILY CHECKS (OPR. / R.M)
(1) Daily Visual Ground Inspection
(2) Overhead Visible Sun/Windy Tubing (Weekly)
(3) HDS Sight Rod-up (Photograph)
(4) Trial Lubricate & Back Dropped Pipe(s)
(5) Pump Liner Rinsed
(6) BOP Drills Performed
(7) Weekly Weighed BOP's Pressure & Stabilizer Lines
(8) Rig Floor Height and Safety Measures (Hard Hats, Visors)
(9) CAODC Rig Safety Inspection (Checklist Set-up Hazard)
(10) Solid Separation (Before Reaching a Crossing)
(11) Others Made (Supplied)
(12) Hazard Hunt Conducted

DATE	31-Oct-2004
RIG NO	626 E
FUEL @ 8:00	
M/D	37054
BOILER	

LAST CASING TUBING OR LINER

	O.D. (mm)	WT. / I.D. (mm)	kg/m	GRADE	NO. OF JOINTS	TOTAL PIPE LENGTH	KB TO CSG. HEAD (m)	SET AT (m)
							7.32	
				K-55	10	125.00	6.31	124.00
							6.22	867.00

WEATHER
TEMPERATURE -4
CONDITION clear
WIND DIRECTION North
ROAD Snow

	LINEAR MASS (kg/m)	GRADE	MIN. I.D. (mm)	MAX. P.O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP RATING (kPa)	STROKE LENGTH (mm)
	29.00	SS-95	83.90	165.00	5"XH	170	F-1600	BPMMP	305
	38.00	SS-95	67.00	168.00	5"XH	160	F-1600	BPMMP	305

TIME - HRS

	OPER	RIG SERV	DRILL ACTUAL	REAMING	CORING	COND MUD	TRIPS	RIG REPAIR	RIG SERVICE	DRILL OTHER	SURVEY	LOG RUN	CASING RUN	CEMENT	WAIT ON CEMENT	NIPPLE UP BOP	TEST BOP	SLIP DRILL LINE	WAIT ON WEATHER	WAIT ON DAYLIGHT	MOVE RIG	RIG UP/ DOWN	OTHER	TOTAL
MORN	6.00	0.50	8.25	0.25	0.25																			9.25
DAY	7.25				0.25																			0.25
EVE	7.50				0.25																			0.25
TOTAL	21.25	0.50	8.25	0.25	0.75																			9.25

SHALE SHAKER(S)

NO.	TYPE	SCREEN	NEW
1	Derrick	84	
SCREENS CHANGED		YES	NO
8.00	TOP	100	TOP 100
8.00	MIDDLE	100	MIDDLE 100
24.00	BOTTOM	100	BOTTOM 100

RENTALS/SERVICES

	HOURS	DAYS	COST

WELL TYPE	Geothermal
RE-ENTRY	YES NO
KB TO GROUND ELEV.	7.32
WELL NAME & NO.	MC6 South Meager
DATE	31-Oct-2004
OPERATOR	Western Geopower Corp
CONTRACTOR	Precision Drilling
RIG MANAGER	Bill Mills
RIG NO	626 E
PROVINCE	BC
CAMP	YES NO
RIG SAFETY DAYS	39.00

MORNING TOUR 0:00 TO 8:00

BIT RECORD

	BIT	SIZE (mm)	HOURS
1	DB	311	8.25
1	Motor	241	10.96
1	RotTec Stab	306	1.59
1	Double Pin	246	0.76
1		241	10.64
2		230	18.71
7	9" Drill Collars	229	64.84
1		234	6.49
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6		127	56.48
56	DP	STANDS	1580.09
2	DP	SINGLES	19.14
	KELLY/DOWN		9.00
	TOTAL		1809.00

	BIT NO	13
	SIZE	311
	MUC CODE	5 4 7
	MFG	H.C.
	TYPE	HRP66DX
	SERIAL NO	6026063
	JETS	20 20 20
	DEPTH OUT (m)	
	DEPTH IN (m)	1774.00
	TOTAL METERS DRILLED (m)	26.00
	TOTAL HOURS RUN	5.50
	CUTTING STRUCTURE T1 T2 TOOL LOC. B G OTHER	

HOLE CONDITION
HOLE DRAG 17-22klb/13-17Down(Sticking)
TORQUE AT BOTTOM 12,349 ft/lbs.
FILL ON BOTTOM (m) 2.00

WT. OF DC	33000.00
WT. OF STRING	104000.00

MUD RECORD

MUD TYPE	Water Based	Oil Based	FlowLine Temp. 75.6
TIME	02:00	04:00	06:00
DENSITY (kg/m³)	1060	1060	1060
FUNNEL VIS. (Sec)	54	54	55
W.L. (cm3)			
pH	9.5	10.0	9.5
PV/YP	127.4 m3	128.9 m3	129.5 m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Ligco	50 sacks
Hydrated Lime	2 sacks
Caustic Soda	5 sacks
Defoamer LD-8	3 sacks
	1 pail

SOLIDS CONTROL
Centrifuge

METERS DRILLED

FROM	TO	BIT NO	ROTARY R.P.M.	WT. ON BIT (klbs)	METERS DRILLED
1774.00	1800.00	D	15-20	20	26

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	
16390	162	95	152	95

REDUCED PUMP SPEED

4617	@	95	@ 1781.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION
1776.20	26.6	25.20

TIME LOG

FROM	TO	HRS	CODE
0:00	0:15	0.25	8
0:15	0:30	0.25	5
0:30	1:00	0.50	3
1:00	2:45	1.75	2
2:45	3:00	0.25	7
3:00	6:00	3.00	2
6:00	6:15	0.25	10
6:15	8:00	1.75	2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

1. R.I.H. w/BHA#13
2. Circulate Btms. Up @ 1513m(Temp. Peak @ 90 Deg.)
3. Wash fr/1715m to Btm., 2m FN!
4. Pattern Bit and Drill fr/1774m-1781m
5. Rig Service and Function Annular 20/20
6. Drill fr/1781m-1795m
7. M.W.D. Survey
8. Drill fr/1795m-1800m

NOTES
Drawdown Current: Normal Static Condition per hr/gs = 12 m3
Engine #1 and #2 = 3d No.1 Engine #3 = 4d Hrs. / Pump #1 use #2 = 1.75 Hrs.

DRILLER SIGNATURE	MUD ENG.	BOILER ATTEND	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	8.5		132000.00	Review J.S.A. on Tripping	

MORNING TOUR CREW

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-628-708	Wade Goddard	8.00	WG	
Derrickman	642-872-840	Murray McBain	8.00	MM	
Motorman	651-366-064	Jesse Goddard	8.00	JG	
Floorman	732-808-483	Dune Malmberg	8.00	DM	
Floorman	730-040-896	Nathan Schwandt	8.00	NS	
Leaseman	729-975-003	Daniel Sampson	8.00	DS	
Rig Manager	716-324-191	Bill Mills		BM	
Top Drive	838-977-702	Sheldon Langley		SL	

RATE SCHEDULE: STANDARD / ARMAN / OTHER
DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

BIT RECORD

	BIT	SIZE (mm)	HOURS
1	DB	311	0.35
1	Motor	241	10.96
1	RotTec Stab	306	1.59
1	Double Pin	246	0.76
1		241	10.64
2		230	18.71
7	9" Drill Collars	229	64.84
1		234	6.49
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6		127	56.48
56	DP	STANDS	1638.19
0	DP	SINGLES	0.00
	KELLY/DOWN		-9.74
	TOTAL		1829.99

	BIT NO	13
	SIZE	311
	MUC CODE	5 4 7
	MFG	H.C.
	TYPE	HRP66DX
	SERIAL NO	6026063
	JETS	20 20 20
	DEPTH OUT (m)	
	DEPTH IN (m)	1774.00
	TOTAL METERS DRILLED (m)	55.00
	TOTAL HOURS RUN	13.75
	CUTTING STRUCTURE T1 T2 TOOL LOC. B G OTHER	

HOLE CONDITION
HOLE DRAG 19000 up/17000 dwn
TORQUE AT BOTTOM 11507 ft-lbs
FILL ON BOTTOM (m)

WT. OF DC	33000.00
WT. OF STRING	106000.00

MUD RECORD

MUD TYPE	Water Based	Oil Based	FlowLine Temp. 88 C		
TIME	08:00	12:00	15:00		
DENSITY (kg/m³)	1050	1060	1045		
FUNNEL VIS. (Sec)	45	47	48		
W.L. (cm3)					
pH	10.6	10.0	10.0		
PV/YP	130.8m3	134.7m3	132.5m3		

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	7sks.
	3sks.
Hydrated Lime	3sks.
Ligco	40sks.
All Temp	6sks.

SOLIDS CONTROL
Centrifuge

HOURS RUN			
	5.50	1845	1060	1730

METERS DRILLED

FROM	TO	BIT NO	ROTARY R.P.M.	WT. ON BIT (klbs)	METERS DRILLED
1800.00	1829.00	D	15-20	20-24	29

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	
14980	152	95	152	95

REDUCED PUMP SPEED

4200	@	90	@ 1819.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION
1806.60	26.4	25.60

TIME LOG

FROM	TO	HRS	CODE
8:00	12:30	4.50	2
12:30	12:45	0.25	7
12:45	13:00	0.25	22
13:00	13:15	0.25	10
13:15	16:00	2.75	2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

1. Drill fr. 1800m - 1821m
2. Rig Service, F/T pipe rams(8 secs)
3. (Service top drive)
4. Deviation Survey
5. Drill fr. 1821m - 1829m

NOTES
F/T crown saver, visually inspected all top drive & crownsaver mechanism.
Had reaction above ft. 0000 hrs. to do bi-directional problems. Service tears packies @ 07.2 deg. C.

DRILLER SIGNATURE	MUD ENG.	BOILER ATTEND	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verhelst	8.00	8.5		135000.00	Overhead equipment	

DAY TOUR CREW

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	Chantry Vig	12.00	CV	
Floorman	122-839-838	Chris Eddy	12.00	CE	
Floorman	652-890-757	Kyle Hryniw	12.00	KH	
Leaseman	713-958-461	Gary Kennedy	12.00	GK	

RATE SCHEDULE: STANDARD / ARMAN / OTHER
DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

BIT RECORD

	BIT	SIZE (mm)	HOURS
1	DB	311	0.35
1	Motor	241	10.96
1	RotTec Stab	306	1.59
1	Double Pin	246	0.76
1		241	10.64
2		230	18.71
7	9" Drill Collars	229	64.84
1		234	6.49
1	8" Pony D.C.	228	3.93
3	7" Drill Collars	171	26.59
6		127	56.48
56	DP	STANDS	1638.19
2	DP	SINGLES	19.13
	KELLY/DOWN		0.00
	TOTAL		1855.80

	BIT NO	13
	SIZE	311
	MUC CODE	5 4 7
	MFG	H.C.
	TYPE	HRP66DX
	SERIAL NO	6026063
	JETS	20 20 20
	DEPTH OUT (m)	
	DEPTH IN (m)	1774.00
	TOTAL METERS DRILLED (m)	81.00
	TOTAL HOURS RUN	21.25
	CUTTING STRUCTURE T1 T2 TOOL LOC. B G OTHER	

HOLE CONDITION
HOLE DRAG 17-22klb/13-17Down(Sticking)
TORQUE AT BOTTOM 12,349 ft/lbs.
FILL ON BOTTOM (m)

WT. OF DC	33000.00
WT. OF STRING	106000.00

MUD RECORD

MUD TYPE	Water Based	Oil Based	FlowLine Temp. 74.6		
TIME	16:00	21:00	23:00		
DENSITY (kg/m³)	1055	1060	1060		
FUNNEL VIS. (Sec)	47	44	41		
W.L. (cm3)					
pH	10.5	10.6	10.5		
PV/YP	132.5m3	135.9 m3	138.7 m3		

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
	3 sacks
Ligco	45 sacks
	4 sacks
All Temp	2 sacks
Caustic Soda	7 sacks

SOLIDS CONTROL
Centrifuge

HOURS RUN			
	5.00	1845	1060	1730

METERS DRILLED

FROM	TO	BIT NO	ROTARY R.P.M.	WT. ON BIT (klbs)	METERS DRILLED
1829.00	1868.00	D	15	20	39

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	
14765	152	95	152	95

REDUCED PUMP SPEED

4200	@	90	@ 1837.90

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION
1824.80	26.3	25.90

TIME LOG

FROM	TO	HRS	CODE
16:00	16:15	2.25	2
16:15	19:30	0.25	7
19:30	19:00	0.50	3
19:00	19:15	0.25	10
19:15	24:00	4.75	2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

1. Drill fr. 1829m - 1839m
2. Rig Service, F/T H.C.R.(2 secs)
3. Drill fr/1839m-1841m
4. M.W.D. Survey
5. Drill fr/1841m-1855m

NOTES
F/T crown saver

DRILLER SIGNATURE	MUD ENG.	BOILER ATTEND	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	8.5		134000.00	Working Near Temperature	

EVENING TOUR CREW

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-628-708	Wade Goddard	4.00	WG	
Derrickman	642-872-840	Murray McBain	4.00	MM	
Motorman	651-366-064	Jesse Goddard	4.00	JG	
Floorman	732-808-483	Dune Malmberg	4.00	DM	
Floorman	730-040-896	Nathan Schwandt	4.00	NS	
Leaseman	729-975-003	Daniel Sampson	4.00	DS	

RATE SCHEDULE: STANDARD / ARMAN / OTHER
DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC626_20040831_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD	RIG RELEASE	JOB NO.	AFE
2004-09-22 22:49		21	

LICENCE NO.	WELL NAME AND NO.
a-92-A / 92-J-12	MC6 South Meager

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 OPERATORS REPRESENTATIVE	SIGNATURE OF CONTRACTORS REPRESENTATIVE
Russ Silva	Bill Mills

DAILY CHECKS (OPR / RM)

DATE	01-Nov-2004
RIG NO	620 E
FUEL @ 8:00	
RIG	27366
BOILER	

WEATHER

TEMPERATURE	-2
CURRENT CONDITION	Snowing
WIND DIRECTION	North
ROAD	Snow

LAST CASING TUBING OR LINER

O.D. (mm)	MASS	GRADE	NO. OF JOINTS	TOTAL (m) LENGTH	KB TO CSG HEAD (m)	SET at (m)
					7.32	
		K-55	10	126.00	6.31	124.00
					8.22	857.00

LINEAR MAX (Opsn)	GRADE	NOM ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN. (mm)
28.00	SS-95	83.00	166.00	5"XH	170	F-1600	BPMMP	305
38.90	SS-95	67.00	168.00	5"XH	150	F-1600	BPMMP	305

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	☐ Yes ☒ No	7.32

WELL NAME & NO	DATE
MC6 South Meager	01-Nov-2004

OPERATOR	CONTRACTOR
Western Geopower Corp	Precision Drilling

RIG MANAGER	RIG NO.
Bill Mills	620 E

PROVINCE	CAMP	RIG SAFETY DAYS
BC	☒ Yes ☐ No	40.00

TIME / HRS

OPER	RIG ACTUAL	7	10
MORN	7.25	0.25	0.50
DAY	7.50	0.25	0.25
EVE	7.25	0.25	0.50
TOTAL	22.00	0.75	1.25

SHALE SHAKER(S)

NO. 2	TYPE Derrick	NEW
8.50 SCREENS CHANGED	☒ Yes	☐ No
8.00 TOP	100 TOP	100
4.50 MIDDLE	100 MIDDLE	100
24.00 BOTTOM	100 BOTTOM	100

RENTALS/SERVICES

MORNING TOUR

BHA / Bit Record

NO.	BHA	O.D. (mm)	LENGTH		
1	Bit	311	0.35	BIT NO.	13
1	Motor	241	10.96	SIZE	311
1	NorTrac Stab	306	1.69	IADC CODE	5 4 7
1	Double Pin	246	0.76	MFG	H.C.
1		241	10.34	TYPE	HRP66DX
2		230	18.71	SERIAL NO	6026063
7	8" Drill Collars	220	64.84	JETS	22.2 / 22.2 / 22.2
1		234	6.49	DEPTH OUT (m)	
1	9" Pony D.C.	228	3.93	DEPTH IN (m)	1774.00
3	7" Drill Collars	171	26.59	TOTAL METERS DRILLED (m)	108.00
6		127	58.48	TOTAL HOURS RUN	28.50
60	D.P.	STANDS	1695.33		
0	D.P.	SINGLES	0.00		
	KELLYDOWN		0.00	HOLE CONDITION	
	TOTAL		1862.00	HOLE DRAG	17-24Up/15-17Down(Sliding)
WT. OF DC			33000.00	TORQUE AT BOTTOM	11,507 ft/lbs.
WT. OF STRING			108000.00	FILL ON BOTTOM (m)	

Mud Record

MUD TYPE ☒ Water Based ☐ Oil Based — FlowLine Temp. 73.3

TIME	02:00	04:00	06:00
DENSITY	1055	1060	1060
FUNNEL VIS	41	42	44
W.L. (cm3)			
pH	10.5	10.5	10.5
P.V.T.	138.7 m3	138.4 m3	140.2 m3

PRODUCT	AMOUNT x UNIT
Defoamer LD-8	1 pail
Milgel NT	68 sacks

SOLIDS CONTROL: Centrifuge

Meters Drilled

FROM	TO	D	ROTARY RPM	WT ON BIT
1856.00	1882.00	D	15-20	20-22

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER	S.P.M	PUMP NO. 2 LINER	S.P.M
15250	152	95	152	95

REDUCED PUMP SPEED: 4312 @ 65 @ 1856.00

DEPTH (m)	DEVIATION (o)	DIRECTION
1853.50	26.8	27.50

DRILLER SIGNATURE: Wade Goddard

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
0:00	1:00	1.00	2	Drill fr/1855m-1856m
1:00	1:15	0.25	7	Rig Service and Function Annular 20/20
1:15	4:00	2.75	2	Drill fr/1856m-1866m
4:00	4:15	0.25	10	M.W.D. Survey
4:15	6:15	2.00	2	Drill fr/1866m-1877m
6:15	6:30	0.25	10	M.W.D. Check-Shot
6:30	8:00	1.50	2	Drill fr/1877m-1882m

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	135000.00		

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	651-366-064	Jesse Goddard	8.00	JG	☐	☒
Floorman	732-808-483	Dune Malmberg	8.00	DM	☐	☒
Floorman	730-040-898	Nathan Schwandt	8.00	NS	☐	☒
Leaseman	729-875-003	Daniel Sampson	8.00	DS	☐	☒
Rig Manager	716-324-181	Bill Mills		BM	☐	☒
Top Drive	638-977-702	Sheldon Langley		SL	☐	☒

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

DAY TOUR

BHA / Bit Record

NO.	BHA	O.D. (mm)	LENGTH		
1	Bit	311	0.35	BIT NO.	13
1	Motor	241	10.96	SIZE	311
1	NorTrac Stab	306	1.69	IADC CODE	6 4 7
1	Double Pin	246	0.76	MFG	H.C.
1		241	10.84	TYPE	HRP66DX
2		230	18.71	SERIAL NO	6026063
7	8" Drill Collars	220	64.84	JETS	22.2 / 22.2 / 22.2
1		234	6.49	DEPTH OUT (m)	
1	9" Pony D.C.	228	3.93	DEPTH IN (m)	1774.00
3	7" Drill Collars	171	26.59	TOTAL METERS DRILLED	133.00
6		127	58.48	TOTAL HOURS RUN	36.00
60	D.P.	STANDS	1695.33		
2	D.P.	SINGLES	19.11		
	KELLYDOWN		-3.98	HOLE CONDITION	
	TOTAL		1907.00	HOLE DRAG	
WT. OF DC			33000.00	TORQUE AT BOTTOM	13191 ft-lbs
WT. OF STRING			108000.00	FILL ON BOTTOM (m)	

Mud Record

MUD TYPE ☒ Water Based ☐ Oil Based — FlowLine Temp.

TIME	08:00	12:00	15:00
DENSITY	1050	1050	1060
FUNNEL VIS	45	44	43
W.L. (cm3)			
pH	10.5	10.5	10.5
PVT	136.8m3	139.1m3	140.8m3

PRODUCT	AMOUNT x UNIT
Caustic Soda	8sks.
Defoamer LD-8	1pail
Pocketex	3sks
Hydrated Lime	4sks
Lignite	46sks
Sawdust	8sks
Milgel NT	38sks.

SOLIDS CONTROL: Centrifuge

Meters Drilled

FROM	TO	D	ROTARY RPM	WT ON BIT
1882.00	1907.00	D	15-20	20-22

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER	S.P.M	PUMP NO. 2 LINER	S.P.M
15300	152	96	152	96

REDUCED PUMP SPEED: 4400 @ 50 @ 1895.00

DEPTH (m)	DEVIATION (o)	DIRECTION
1872.66	26.5	27.30

DRILLER SIGNATURE: Barry Verhelst

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
8:00	10:15	2.25	2	Drill fr. 1882m - 1888m
10:15	10:30	0.25	10	Deviation Survey
10:30	12:45	2.25	2	Drill fr. 1888m - 1895m
12:45	13:00	0.25	7	Rig Service, F/T pipe rams(8 secs)
13:00	16:00	3.00	2	Drill fr. 1895m - 1907m

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	135000.00	avalanches	

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-369-810	Barry Verhelst	12.00	BV	☐	☒
Derrickman	847-452-903	Dave Makowsky	12.00	DM	☐	☒
Motorman	735-714-230	Chantry Vig	12.00	CV	☐	☒
Floorman	122-830-839	Chris Eddy	12.00	CE	☐	☒
Floorman	652-890-757	Kyle Hrynew	12.00	KH	☐	☒
Leaseman	713-959-461	Gary Kennedy	12.00	GK	☐	☒

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

EVENING TOUR

BHA / Bit Record

NO.	BHA	O.D. (mm)	LENGTH		
1	Bit	311	0.38	BIT NO.	13
1	Motor	241	10.98	SIZE	311
1	NorTrac Stab	306	1.59	IADC CODE	6 4 7
1	Double Pin	246	0.76	MFG	H.C.
1		241	10.84	TYPE	HRP66DX
2		230	18.71	SERIAL NO.	6026063
7	8" Drill Collars	220	64.84	JETS	22.2 / 22.2 / 22.2
1		234	6.49	DEPTH OUT (m)	
1	9" Pony D.C.	228	3.93	DEPTH IN (m)	1774.00
3	7" Drill Collars	171	26.59	TOTAL METERS DRILLED	155.00
4		127	56.48	TOTAL HOURS RUN	43.25
61	D.P.	STANDS	1724.02		
1	D.P.	SINGLES	9.67		
	KELLYDOWN		0.00	HOLE CONDITION	
	TOTAL		1938.13	HOLE DRAG	17-24Up/15-17Down(Sliding)
WT. OF DC			33000.00	TORQUE AT BOTTOM	12,349 ft/lbs.
WT. OF STRING			108000.00	FILL ON BOTTOM (m)	

Mud Record

MUD TYPE ☒ Water Based ☐ Oil Based — FlowLine Temp. 71.7

TIME	19:00	21:00	23:00
DENSITY	1060	1068	1070
FUNNEL VIS	48	43	42
W.L. (cm3)			
pH	10.5	10.6	10.6
PVT	144.1m3	141.5 m3	130.4 m3

PRODUCT	AMOUNT x UNIT
Pocketex	2 sacks
Hydrated Lime	3 sacks
Lignite	30 sacks
Defoamer LD-8	1 pail
Caustic Soda	5 sacks
All Temp	2 sacks

SOLIDS CONTROL: Centrifuge

Meters Drilled

FROM	TO	D	ROTARY RPM	WT ON BIT
1907.00	1929.00	D	15-20	20-22

CIRCULATION PRESSURE (KPa)	PUMP NO. 1 LINER	S.P.M	PUMP NO. 2 LINER	S.P.M
14200	152	96	152	98

REDUCED PUMP SPEED: 4250 @ 95 @ 1909.00

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE: Wade Goddard

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
16:00	16:30	0.50	2	Drill fr. 1907m - 1909m
16:30	17:00	0.50	10	Attempt to get pulse fr. M.W.D. tool(No response)
17:00	23:45	6.75	2	Drill fr/1909m-1929m
23:45	24:00	0.25	7	Rig Service and Function HCR 3/3

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	135000.00		

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	651-366-064	Jesse Goddard	4.00	JG	☐	☒
Floorman	732-808-483	Dune Malmberg	4.00	DM	☐	☒
Floorman	730-040-898	Nathan Schwandt	4.00	NS	☐	☒
Leaseman	729-875-003	Daniel Sampson	4.00	DS	☐	☒

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

ETS SERIAL NUMBER: PREC620_20041001_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:48 | RIG RELEASE | JOB NO.: 21 | AFE

LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MCS South Meager

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

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

SIGNATURE OF OPERATORS REPRESENTATIVE: Russ Sibus | SIGNATURE OF CONTRACTORS REPRESENTATIVE: Bill Mills

DAILY CHECKS

CPR | B.M

DATE: 02-Nov-2004 | RIG NO: 620 E

FUEL @ RIG: 31000 BOILER

WEATHER: TEMPERATURE -1 | CURRENT CONDITION: overcast | WIND DIRECTION: calm | ROAD: snow

CASING TUBING ON GRND

OD (mm)	WT/ID (kg/m)	Grade	No. OF JOINTS	TOTAL (m) MONTH	TOTAL (m) TO DATE	SET AT (m)
					7.32	
		K-55	10	125.00	6.31	124.00
					6.22	867.00

DRILL PIPE	HOOK LOAD (kgs)	GRADE	WALL/ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN (mm)
	29.00	S3-95	53.00	166.00	5"XH	170	F-1600	BPMMP	305
	38.00	S5-95	47.09	184.80	5"XH	156	F-1600	BPMMP	305

SHALE SHAKER(S) | RENTALS/SERVICES

NO.	TYPE	Derrick	NEW
2	SCREENS CLEANED	YES	NO

8.00	TOP	100	TOP	100	
8.00	MIDDLE	100	MIDDLE	100	
8.00	BOTTOM	100	BOTTOM	100	
24.00					

WELL TYPE: Geothermal | RE-ENTRY: YES NO | KB TO GROUND ELEV: 7.32

WELL NAME & No.: MCS South Meager | DATE: 02-Nov-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Bill Mills | RIG NO.: 620 E

PROVINCE: BC | CAMP: SITE YES NO | RIG SAFETY DATE: 47.00

TIME HRS

	OPER	DRLG	RIG SERV	REAMING	CORING	CIRC	TRIPS	SURV	WAIT ON CMT	WAIT ON DAYLT	SLIP DRILL	CUT DRLG LINE	RIG REPAIR	JAR HRS	WAIT ON WEATHER	OTHER
MORN		7.75						0.25								
DAY		4.50				0.50	2.75	0.25								
EVE							7.75	0.25								
TOTAL		12.25				0.50	10.50	0.75								

BIT RECORD

NO.	BIT	RUN (m)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1	NonTrac Stab	306	1.59
1	Double Pin	246	0.76
1		241	10.84
2		230	18.71
7		220	64.84
1		234	6.49
1	8" Perry D.C.	228	3.93
3		171	26.59
6		127	56.48
62	D.P.	STANDS 1752.68	
0	D.P.	SINGLES 0.00	
	WASH / REAM	0.00	
	TOTAL	1953.00	
WT. OF DC		33000.00	
WT. OF STRING		199000.00	

DRILLING STRUCTURE: T | B | G | OD | RESERVE PULLED | WEAR

HOLE CONDITION: HOLE DRAG 17-25k(pt)-17Down(Sliding) | TORQUE AT BOTTOM 12,348 ft/lbs. | FILL ON BOTTOM (m)

BIT RECORD

NO.	BIT	RUN (m)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1	NonTrac Stab	306	1.59
1	Double Pin	246	0.76
1		241	10.84
2		230	18.71
7		220	64.84
1		234	6.49
1	8" Perry D.C.	228	3.93
3		171	26.59
6		127	56.48
62	D.P.	STANDS 1752.68	
2	D.P.	SINGLES 19.10	
	WASH / REAM	-7.52	
	TOTAL	1968.80	
WT. OF DC		33000.00	
WT. OF STRING		111000.00	

DRILLING STRUCTURE: 5 | 6 | FC | A | E | 1 | NO | Hrs. 3.44

HOLE CONDITION: HOLE DRAG 23000 up/14000 dwn | TORQUE AT BOTTOM 11507 ft-lbs | FILL ON BOTTOM (m)

BIT RECORD

NO.	BIT	RUN (m)	LENGTH (m)	NO.	BIT	RUN (m)	LENGTH (m)
1	bit	311	0.35	13		311	
1	Motor	241	10.96	SIZE		311	
1	NonTrac Stab	306	1.59	IADC CODE	6 4 7	6 4 7	
1	Double Pin	246	0.76	MFG.	H.C.	H.C.	
1		241	10.82	TYPE	HRP66DX	HRP66DX	
2		230	19.71	SERIAL NO.	6026063	6027090	
6		220	37.27	JETS			
1		234	6.49	DEPTH OUT (m)		1965.00	
1	8" Perry D.C.	228	3.93	DEPTH IN (m)		1774.00	1965.00
3		171	26.59	TOTAL METERS DRILLED (m)		191.00	
6		127	56.48	TOTAL HOURS RUN		56.00	
62	D.P.	STANDS 1752.68		DRILLING STRUCTURE: T	B	G	OD	RESERVE PULLED	WEAR
2	D.P.	SINGLES 19.10		5	6	FC	A	E	1	NO	Hrs. 3.44
	WASH / REAM	0.00		HOLE CONDITION							
	TOTAL	1945.73		HOLE DRAG							
WT. OF DC		31000.00		TORQUE AT BOTTOM							
WT. OF STRING				FILL ON BOTTOM (m)							

MUD RECORD

MUD TYPE	Water Based	Oil Based	FlowLine Temp. 71.6
TIME	03:00	04:00	06:00
DENSITY (kg/m3)	1965	1070	1965
FUNNEL VIS. (sec)	43	43	45
W.L. (cm3)			
pH	10.6	11.0	11.0
P.V.T.	128.7 m3	128.0 m3	127.2 m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Milgel	36 sacks

SOLIDS CONTROL: Centrifuge

METERS DRILLED

FROM	TO	BIT SIZE	ROTARY R.P.M	SLIDE (UNDER GUIDE)
1929.00	1953.00	D	15-20	20-22

CIRCULATION PRESSURE (KPa): PUMP NO. 1 LINER SIZE 6.5" P.M. | PUMP NO. 2 LINER SIZE 6.5" P.M.

14750 | 152 | 95 | 152 | 95

REDUCED PUMP SPEED: 4400 @ 80 @ 1934.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

0:00	1:15	1.25	2	Drill fr/1929m-1934m	
1:15	1:30	0.25	7	Rig Service and Function Annular 20/20	
1:30	8:00	6.50	2	Drill fr/1934m-1953m	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES: Function Annular, Blind, Manual Kelly Valve and Stab Valve

DRILLER SIGNATURE: Wade Goddard

HRS. RUN	HRS. TO NEXT SERVICE	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.0		139000.00		

MORNING TOUR 0:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-828-706	Wade Goddard	8.00	WG	☑
Derrickman	642-872-840	Murray McBain	8.00	MM	☑
Motorman	651-386-064	Jesse Goddard	8.00	JG	☑
Floorman	732-806-483	Dune Malmberg	8.00	DM	☑
Floorman	730-040-896	Nathan Schwandt	8.00	NS	☑
Leaseman	729-875-003	Daniel Sampson	8.00	DS	☑
Rig Manager	716-324-161	Bill Mills		BM	☑
Top Drive	638-977-702	Sheldon Langley		SL	☑

RATE SCHEDULE: ☑ REGULAR ☐ REMOTE ☐ INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

MUD RECORD

MUD TYPE	Water Based	Oil Based	FlowLine Temp.
TIME	09:00	12:00	
DENSITY (kg/m3)	1965	1095	
FUNNEL VIS. (sec)	43	42	
W.L. (cm3)			
pH	10.0	10.0	
PVT/T	122.9m3	122.7m3	

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Caustic Soda	4sks.
Barite	3sks.
Hydrated Lime	4sks.
Lignco	30sks.
Milgel NT	20sks.
Sawdust	6sks.

SOLIDS CONTROL: Centrifuge

METERS DRILLED

FROM	TO	BIT SIZE	ROTARY R.P.M	SLIDE (UNDER GUIDE)
1953.00	1965.00	D	15	20-22

CIRCULATION PRESSURE (KPa): PUMP NO. 1 LINER SIZE 6.5" P.M. | PUMP NO. 2 LINER SIZE 6.5" P.M.

14680 | 152 | 95 | 152 | 95

REDUCED PUMP SPEED: 4400 @ 80 @ 1952.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

8:00	12:30	4.50	2	Drill fr. 1953m - 1965m	
12:30	13:00	0.50	5	Condition Mud & Circ.	
13:00	13:15	0.25	7	Rig Service, F/T pipe rams(8 secs)	
13:15	16:00	2.75	6	Hoist bit #13, flow check @ 1944, 1857, 1130m	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES: MT crown sheet, widewidth bumper & hydro-blaze, changed out screens 62 shaker

DRILLER SIGNATURE: Barry Verheist

HRS. RUN	HRS. TO NEXT SERVICE	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.0		140000.00		

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 Makowsky	12.00	DM	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☑
Floorman	122-830-839	Chris Eddy	12.00	CE	☑
Floorman	852-890-757	Kyle Hrynkiw	12.00	KH	☑
Leaseman	713-859-461	Gary Kennedy	12.00	GK	☑

RATE SCHEDULE: ☑ REGULAR ☐ REMOTE ☐ INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

MUD RECORD

MUD TYPE	Water Based	Oil Based	FlowLine Temp.
TIME			
DENSITY (kg/m3)			
FUNNEL VIS. (sec)			
W.L. (cm3)			
pH			

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL: Centrifuge

METERS DRILLED

FROM	TO	BIT SIZE	ROTARY R.P.M	SLIDE (UNDER GUIDE)
1965.00				

CIRCULATION PRESSURE (KPa): PUMP NO. 1 LINER SIZE 6.5" P.M. | PUMP NO. 2 LINER SIZE 6.5" P.M.

152 | 152

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

16:00	18:15	2.25	6	Hoist bit #13, flow check @ 201m	
18:15	20:45	2.50	6	Handle B.H.A., move jars in string, change out Teleco M.W.D., & change out bit, flow check out of hole	
20:45	21:00	0.25	7	Rig Service and Function Blind Ram's 8/8	
21:00	24:00	3.00	6	M/U Bit #14,B.H.A.,Shallow Test M.W.D.,R.I.H.	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES: PU crown sheet & Wear Leader sub(s) | Trip results: Actual: 24.00 Calc.: 52.47 hole took 11.50m3 more

DRILLER SIGNATURE: Wade Goddard

HRS. RUN	HRS. TO NEXT SERVICE	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.0			Handling B.H.A.	

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-828-706	Wade Goddard	4.00	WG	☑
Derrickman	642-872-840	Murray McBain	4.00	MM	☑
Motorman	651-386-064	Jesse Goddard	4.00	JG	☑
Floorman	732-806-483	Dune Malmberg	4.00	DM	☑
Floorman	730-040-896	Nathan Schwandt	4.00	NS	☑
Leaseman	729-875-003	Daniel Sampson	4.00	DS	☑

RATE SCHEDULE: ☑ REGULAR ☐ REMOTE ☐ INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20041002_1A

CHIMO ETS SOFTWARE VERSION:

CAODC — Chimo Equipment (A Varco Company)

Based on the CAODC ETS file standard

Field	Value
SPUD	2004-09-22 22:49
LICENCE NO	a-92-A / 92-J-12
OPERATOR	Western Geopower Corp
SURFACE LOCATION	a-92-A / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
JOB NO	21
WELL NAME AND NO.	MC6 South Meager
CONTRACTOR	Precision Drilling
UNIQUE ID	b-1-H / 92-J-12
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Bill Mills
DATE	03-Nov-2004
RIG NO	620 E
FUEL	8.00
RIG	22967
TEMPERATURE	-4
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Compact Snow
WELL TYPE	Geothermal
RE-ENTRY	No
KB TO GROUND ELEV.	7.32
RIG MANAGER	Bill Mills
PROVINCE	BC
CAMP	Yes
RIG SAFETY DAYS	42.00

Last Casing / Tubing / Liner

Grade	No. of Joints	Total Length	KB to CSG Flange	Set At
			7.32	
K-55	10	125.00	6.31	124.00
			5.22	357.00

Pumps

Liner	Grade	Max Press	Rod/Ln	Thread Type	No. of Joints	Pump Type	Manufacturer	Stroke
29.00	SS-95	83.00	166.00	5"XH	170	F-1600	BPMMP	306
38.00	SS-95	67.00	168.00	5"XH	160	F-1600	BPMMP	308

Shale Shaker(s)

Totals			
	No. 2	Type: Derrick	
4.00	Screens changed	Yes ☐	No ☑
8.00	Top	100	180
8.00	Middle	100	180
24.00	Bottom	100	100

Time Distribution (hrs)

Oper								
MORN	4.75	0.50	0.75	1.50	0.25		0.25	
DAY	7.00				0.25		0.75	
EVE	7.50				0.25		0.25	
TOTAL	19.25	0.50	0.75	1.50	0.73		1.25	

MORNING TOUR 0:00 to 8:00

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	651-366-064	Jesse Goddard	8.00	JG	☐	☑
Floorman	732-808-483	Dune Malmberg	8.00	DM	☐	☑
Floorman	730-040-896	Nathan Schwandt	8.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☐	☑
Rig Manager	716-324-161	Bill Mills		BM	☐	☑
Top Drive	838-877-702	Sheldon Langley		SL	☐	☑

Rate schedule: Regular ☑

Meters Drilled

From	To		Rotary RPM	Wt on Bit
1965.00	1985.00	D	15-20	18-20

Circulation pressure 15750; Pump No. 1: 152, 90; Pump No. 2: 152, 90. Reduced pump speed: 5305 @ 90 @ 1973.00

Depth (m)	Deviation	Direction
1920.00	25.7	24.80
1952.00	25.9	25.20

Driller signature: Wade Goddard

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
0:00	0:15	0.25	5	Circulate @ 977m, Temp Peak @ 70.2 Deg.
0:15	0:45	0.50	6	R.I.H. w/Bit #14
0:45	1:00	0.25	5	Circulate @ 1242m
1:00	1:30	0.50	6	R.I.H. w/Bit #14
1:30	1:45	0.25	5	Circulate @ 1836m
1:45	2:15	0.50	6	R.I.H. w/Bit #14
2:15	2:45	0.50	3	Wash fr/1926m to Btm.,1m Fill
2:45	4:45	2.00	2	Pattern Bit and Drill fr/1965m-1973m
4:45	5:00	0.25	7	Rig Service and Function Annular 20/20
5:00	7:45	2.75	2	Drill fr/1973m-1985m
7:45	8:00	0.25	10	Accumulated M.W.D. Survey's

Boiler: 8.00 / 8.4 — Max exp hookload 135000.00

Mud Record — FlowLine Temp. 73.2

Time	00:00	04:00	08:00
Density	1075	1070	1065
Funnel Vis.	66	50	44
pH	10.5	10.0	10.5
P.V.T.	118.6 m3	109.9 m3	108.2 m3

Product	Amount + Unit
Premix	21 m3
Lignite	30 sacks
Caustic Soda	3 sacks
Hydrated Lime	3sacks
	3 sacks
All Temp	2 sacks
Defoamer LD-8	1 pail

Solids control: Centrifuge

Bit Record

Bit No	14
Size	311
IADC Code	5 4 7
Mfg.	H.C.
Type	HRP56DX
Serial No.	6027090
Depth In (m)	1965.00
Total Meters	20.00
Total Hours	4.75
Hole Drag	16-35Up/13-16Down(Sliding)
Torque at Bottom	11,507 ft/lbs.
Fill on Bottom (m)	1.00

Drill String

No.	Item	O.D.	Length
1	bit	311	0.35
1	Motor	241	10.95
1		306	2.35
1		241	10.82
2		230	18.71
2		220	18.72
1		234	9.26
2		220	18.55
1	Bell Sub	224	1.17
3		171	26.59
6		127	56.48
64	D.P.		1809.96
1	D.P.		9.40
	Kelly down		0.00
	Total		1985.00
	Wt of BC		31000.00
	Wt of string		108000.00

DAY TOUR 8:00 to 16:00

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	642-389-910	Barry Verheist	12.00	BV	☐	☑
Derrickman	947-452-903	Dave Makowsky	12.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	12.00	CV	☐	☑
Floorman	122-830-839	Chris Eddy	12.00	CE	☐	☑
Floorman	652-890-757	Kyle Hrynkiw	12.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	12.00	GK	☐	☑

Rate schedule: Regular ☑

Meters Drilled

From	To		Rotary RPM	Wt on Bit
1985.00	2012.00	D	15-20	18-25

Circulation pressure 14900; Pump No. 1: 152, 90; Pump No. 2: 152, 90. Reduced pump speed: 5200 @ 90 @ 1999.00

Depth (m)	Deviation	Direction
1958.32	26.1	26.30
1988.06	26.1	26.30

Driller signature: Barry Verheist

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
8:00	10:15	2.25	2	Drill fr. 1985m - 1992m
10:15	10:30	0.25	7	Rig Service, F/T pipe rams(8 secs)
10:30	15:15	4.75	2	Drill fr. 1992m - 2012m
15:15	16:00	0.75	10	Deviation Surveys(Accum.) & check shot

Boiler: 8.00 / 8.4 — Max exp hookload 135000.00

Mud Record — FlowLine Temp. 66.8C

Time	10:00	12:00	16:00
Density	1060	1056	1048
Funnel Vis.	45	43	43
pH	10.0	10.0	10.0
PVT	101.9m3	95.6m3	108.9m3

Product	Amount + Unit
Caustic Soda	8sks.
	8sks.
Hydrated Lime	3sks.
Lignite	35sks.
Milgel NT	94sks.

Centrifuge: 8.00 hrs; 1055, 1050, 1735

Bit Record

Bit No.	14
Size	311
IADC Code	5 4 7
Mfg.	H.C.
Type	HRP56DX
Serial No.	6027090
Depth In (m)	1965.00
Total Meters	47.00
Total Hours	11.75
Hole Drag	24000 up/16000 dwn
Torque at Bottom	11507 ft-lbs

Drill String

No.	Item	O.D.	Length
1	bit	311	0.35
1	Motor	241	10.95
1		306	2.35
1		241	10.82
2		230	18.71
2		220	18.72
1		234	9.26
2		220	18.55
1	Bell Sub	224	1.17
3		171	26.59
6		127	56.48
65	D.P.		1838.41
	Kelly down		0.60
	Total		2012.36
	Wt of BC		31000.00
	Wt of string		108000.00

EVENING TOUR 16:00 to 24:00

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	651-366-064	Jesse Goddard	4.00	JG	☐	☑
Floorman	732-808-483	Dune Malmberg	4.00	DM	☐	☑
Floorman	730-040-896	Nathan Schwandt	4.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	4.00	DS	☐	☑

Rate schedule: Regular ☑

Meters Drilled

From	To		Rotary RPM	Wt on Bit
2012.00	2038.00	D	15-20	18-24

Circulation pressure 14700; Pump No. 1: 152, 90; Pump No. 2: 152, 90. Reduced pump speed: 4973 @ 90 @ 2031.00

Depth (m)	Deviation	Direction
2007.40	26.8	25.60

Driller signature: Wade Goddard

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
16:00	21:15	5.25	2	Drill fr/2012m-2031m
21:15	21:30	0.25	7	Rig Service and Function HCR 3/3
21:30	23:45	2.25	2	Drill fr/2031m-2038m
23:45	24:00	0.25	10	Accumulated M.W.D. Survey's

Boiler: 8.00 / 8.5 — Max exp hookload 145000.00

Mud Record — FlowLine Temp. 65.8

Time	18:00	21:00	23:00
Density	1040	1040	1040
Funnel Vis.	41	42	41
pH	10.0	10.5	10.9
PVT	116.8m3	126.5 m3	133.7 m3

Product	Amount + Unit
Milgel NT	55 sacks
Hydrated Lime	3 sacks
	6 sacks
Caustic Soda	1 sack
Lignite	20 sacks

Bit Record

Bit No.	14
Size	311
IADC Code	5 4 7
Mfg.	H.C.
Type	HRP56DX
Serial No.	6027090
Depth In (m)	1965.00
Total Meters	73.00
Total Hours	19.25
Hole Drag	16-34Up/13-15Down(Sliding)
Torque at Bottom	11,507 ft/lbs.

Drill String

No.	Item	O.D.	Length
1	bit	311	0.35
1	Motor	241	10.95
1		306	2.35
1		241	10.82
2		230	18.71
2		220	18.72
1		234	9.26
2		220	18.55
1	Bell Sub	224	1.17
3		171	26.59
6		127	56.48
66	D.P.		1867.38
1	D.P.		9.57
	Kelly down		0.00
	Total		2038.00
	Wt of BC		31000.00
	Wt of string		110000.00

ETS SERIAL NUMBER: PREC620_20041003_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | RIG RELEASE: | JOB NO.: 21 | AFE:

LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager

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-Nov-2004 | RIG NO.: 620 E | RIG: 56049 BOILER | FUEL: 06:00

WEATHER: TEMPERATURE -1 | CURRENT CONDITION: Overcast | WIND DIRECTION: Calm | ROAD: Compact Snow

LAST CASING / LINER / TUBING RUN

O.D. (mm)	W/Ft I.D. (mm)	Wght.	NAME	GRADE	NO. OF JOINTS	TOTAL (m) LENGTH	KB TO CSG HEAD DIF.	SET AT (m)
							7.32	
				K-55	19	135.00	8.31	124.00
							8.22	667.00

CASING SIZE (mm)	LINER SIZE (mm)	GRADE	WALL THICK. (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE (LNG)
	28.00	SS-95	53.90	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	SERV	REPAIR	CORING	CIRC	TRIP	SURVEY	RIG SERV	DRILL ACT	REAM	CORE	CUT/SLIP DRLG LINE	DEV	WAIT	SAFETY MTG
MORN	7.50					0.25			0.25						0.50
DAY	7.00	0.25				0.25			0.25						0.50
EVE	7.25					0.25			0.25						0.50
TOTAL	21.75	0.25				0.75			0.75						1.50

SHALE SHAKER(S) | RENTALS/SERVICES

NO.	TYPE
2	Derrick

SCREENS CHANGED: YES / NO

8.00	TOP	100	TOP
8.00	MIDDLE	100	MIDDLE
24.00	BOTTOM	100	BOTTOM

WELL TYPE: Geothermal | RE-ENTRY: YES / NO | KB TO GROUND ELEV.: 7.32

WELL NAME & No.: MC6 South Meager | DATE: 04-Nov-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

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

TELEPHONE: SC | CAMP: YES / NO | DOG SAFETY DAYS: 43.00

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1		306	2.36
1		241	10.82
2		230	18.71
2	8" Drill Collars	220	18.72
1		234	9.25
2	8" Drill Collars	220	18.56
1	Bell Sub	224	1.17
3	7" Drill Collars	171	28.69
6		127	56.48
67	D.P.	114mm	1885.97
0	D.P.	S-HWDP	0.00
	WELL DOWN		0.00
	TOTAL		2064.00

BIT NO.	14
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HRP66DX
SERIAL NO.	6027090
JETS	32 32 32
DEPTH OUT (m)	
DEPTH IN (m)	1965.00
TOTAL METERS DRILLED (m)	99.00
TOTAL HOURS RUN	25.75
CUTTING STRUCTURE	T B G
	1 Gage
	OC BC PR

HOLE CONDITION

HOLE DRAG: 16-24Up/13-16Down(Sticking)

TORQUE AT BOTTOM: 11,507 ft/lbs.

FILL ON BOTTOM (m):

WT. OF DC: 31000.00 | WT. OF STRING: 113000.00

MUD RECORD

MUD TYPE	Native Gypsum	Oil Based	Flowline Temp. 65.2
TIME	02:00	04:00	06:00
DENSITY (kg/m³)	1940	1835	1835
FUNNEL VIS. (sec)	45	43	41
W.L. (cm3)			
pH	10.0	10.0	10.0
P.V.T.	126.5 m3	133.3 m3	136.9 m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Milgel NT	88 sacks

SOLIDS CONTROL: Centrifuge

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kDaN)
2036.00	2064.00	D	15-20	18-22

CIRCULATION PRESSURE (KPa): 16756

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

REDUCED PUMP SPEED: 4185 @ 90 @ 2058.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2033.70	26.5	25.50

TIME LOG

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kDaN)	HOURS	CODE
0:00	3:00	3.00	2	Drill fr2038m-2050m		
3:00	3:15	0.25	7	Rig Service and Function Annular 20/20		
3:15	3:30	0.25	10	M.W.D. Survey		
3:30	8:00	4.50	2	Drill fr2050m-2064m		

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE	TOUR HRS	DRILL HRS	BOARD HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	8.0			140000.00		

MORNING TOUR 6:00 TO 8:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-628-705	Wade Goddard	8.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	8.00	MM	☐	☑
Motorman	651-366-984	Jesse Goddard	8.00	JG	☐	☑
Floorman	732-808-483	Dune Mahmberg	8.00	DM	☐	☑
Floorman	730-040-896	Nathan Schwandt	8.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	8.00	DS	☐	☑
Rig Manager	716-324-191	Bill Mills		BM	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑

RATE SCHEDULE: MANUAL / REPAIR / PARKED | DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1		306	2.36
1		241	10.82
2		230	18.71
2	8" Drill Collars	220	18.72
1		234	9.25
2	8" Drill Collars	220	18.56
1	Bell Sub	224	1.17
3	7" Drill Collars	171	28.69
6		127	56.48
65	D.P.	114mm	1924.52
1	D.P.	S-HWDP	9.60
	WELL DOWN		-17.17
	TOTAL		2091.90

BIT NO.	14
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HRP66DX
SERIAL NO.	6027090
JETS	32 32 32
DEPTH OUT (m)	
DEPTH IN (m)	1965.00
TOTAL METERS DRILLED (m)	126.00
TOTAL HOURS RUN	33.75
CUTTING STRUCTURE	T B G
	1 Gage
	OC BC PR

HOLE CONDITION

HOLE DRAG: 25000 up/16000 dwn

TORQUE AT BOTTOM: 11507 ft-lbs

FILL ON BOTTOM (m):

WT. OF DC: 31000.00 | WT. OF STRING: 111000.00

MUD RECORD

MUD TYPE	Native Gypsum	Oil Based	Flowline Temp.
TIME	10:00	12:00	14:00
DENSITY (kg/m³)	1030	1030	1030
FUNNEL VIS. (sec)	40	41	42
W.L. (cm3)			
pH	10.0	10.0	10.5
PVT@	130.9m3	131.4m3	136.6m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	5sks.
Defoamer LD-8	1pail
	8sks.
Hydrated Lime	3sks.
Lignite	20sks.
Milgel NT	100sks.

SOLIDS CONTROL: Centrifuge

HOURS RUN			
6.00	1035	1030	1686

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kDaN)
2064.00	2071.00	D	15-20	15-26
2071.00	2073.00	R	20	1-2

CIRCULATION PRESSURE (KPa): 14500

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

REDUCED PUMP SPEED: 5100 @ 90 @ 2068.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2065.30	25.2	24.80
2073.70	25.3	27.70

TIME LOG

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kDaN)	HOURS	CODE
8:00	9:00	1.00	2	Drill fr. 2064m - 2068m		
9:00	9:15	0.25	7	Rig Service, F/T pipe rams(8 secs)		
9:15	10:45	1.50	2	Drill fr. 2068m - 2073		
10:45	11:00	0.25	3	Reaming build section fr. 2071m - 2073m		
11:00	15:30	4.50	2	Drill fr. 2073m - 2091m		
15:30	16:00	0.50	10	Deviation Surveys(Accum.)		

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE	TOUR HRS	DRILL HRS	BOARD HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verhelst	8.00	8.0			140000.00	debris @ helipad	

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES 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	122-838-838	Chris Eddy	8.00	CE	☐	☑
Floorman	652-880-757	Kyle Hrynlw	8.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑

RATE SCHEDULE: MANUAL / REPAIR / PARKED | DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1		306	2.36
1		241	10.82
2		230	18.71
2	8" Drill Collars	220	18.72
1		234	9.25
2	8" Drill Collars	220	18.56
1	Bell Sub	224	1.17
3	7" Drill Collars	171	28.69
6		127	56.48
65	D.P.	114mm	1963.37
0	D.P.	S-HWDP	0.00
	WELL DOWN		-12.32
	TOTAL		2116.00

BIT NO.	14
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HRP66DX
SERIAL NO.	6027090
JETS	32 32 32
DEPTH OUT (m)	2115.00
DEPTH IN (m)	1965.00
TOTAL METERS DRILLED (m)	150.00
TOTAL HOURS RUN	41.00
CUTTING STRUCTURE	T B G
	1 Gage
	OC BC PR

HOLE CONDITION

HOLE DRAG: 22-26 Up/14-16 Down(Sticking)

TORQUE AT BOTTOM: 11,507 ft/lbs

FILL ON BOTTOM (m): 12573.00

WT. OF DC: 31000.00 | WT. OF STRING: 113000.00

MUD RECORD

MUD TYPE	Native Gypsum	Oil Based	Flowline Temp. 64.4 c
TIME	17:00	20:00	22:00
DENSITY (kg/m³)	1030	1030	1030
FUNNEL VIS. (sec)	44	41	40
W.L. (cm3)			
pH	10.0	10.5	10.5
PVT@	131.6m3	134.2m3	134.0m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	3 sks
Milgel NT	110 sks
Hydrated Lime	4 sks
	4 sks
Lignite	12 sks

SOLIDS CONTROL: Centrifuge

HOURS RUN			
6.00	1030	1030	1038

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kDaN)
2091.90	2116.00	D	17	18-26

CIRCULATION PRESSURE (KPa): 14500

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

REDUCED PUMP SPEED: 4285 @ 90 @ 2107.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	BIT NO.	ROTARY R.P.M.	WT. ON BIT (kDaN)	HOURS	CODE
16:00	20:15	4.25	2	Drill Fr2091m-2107m		
20:15	20:30	0.25	22	Held B.O.P. Drill W/Crewmembers Well secure 90 Secs		
20:30	20:45	0.25	7	Rig Service & Function H.C.R. 4/4 Secs		
20:45	21:30	0.75	2	Drill Fr2107m-2109m		
21:30	21:45	0.25	10	M.W.D. Survey (Magnetic Interference)		
21:45	24:00	2.25	2	Drill Fr2109m-2115m		

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

DRILLER SIGNATURE	TOUR HRS	DRILL HRS	BOARD HRS	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Mills	8.00	8.0			142000.00	Orientations	

EVENING TOUR 16:00 TO 24:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-191	Bill Mills	8.00	BM	☐	☑
Derrickman	629-929-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	721-804-656	Zach Preston	8.00	ZP	☐	☑
Floorman	736-523-366	Nathan Surmak	8.00	NS	☐	☑
Leaseman	648-747-428	Adam Johnson	8.00	AJ	☐	☑

RATE SCHEDULE: MANUAL / REPAIR / PARKED | DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20041004_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment

A Yarco Company

Based on the CAODC ETS file standard

RPT'D 2004-09-22 22:49	RIG RELEASE	JOB NO. 21	AFE
LICENCE NO a-92-A / 92-J-12	WELL NAME AND NO. MC6 South Meager		
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	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE		

DAILY CHECKS
(1) Daily Visit Around Inspection
(2) Derrick Inspection/Wrench Hang Checked
(3) H2S Gas Proved If required
(4) Hoist Lines & Tech Diagram Posted
(5) Fire Line Marked
(6) BOP Tests Performed
(7) Weekly Proved BOPs Pressured & Diagnosed Lines
(8) Rig Site Housekept and Safety Meeting Documentation
(9) C.S.A.O.G.C Rig Safety Inspection Checklist (Monthly visit)
(10) Hoist Inspection Books Posting at Derrick Landing
(11) Crown Block Checked
(12) Water Tanks Checked

DATE 05-Nov-2004 | RIG NO. 620 E | FUEL at 8:00 | RIG 88236 | BOILER

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

HOLE	DRILL PIPE							
						GRADE	NO. OF JOINTS	TOTAL FISH LENGTH	KB TO CSG HEAD (m)	KBT AT (m)
						K-55	10	125.00	6.31	124.00
									6.22	657.00

DRILL COLLARS										
DCP SIZE (mm)	LENGTH (m)	GRADE	WT. (kg/m)	TOOL JT O.D. (mm)	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP LINER ACTIVITIES	STROKE (in)
	29.00	SS-95	83.00	166.00	3"XH	170	F-1600	BP&MP	306
	38.00	SS-95	67.00	164.00	5"XH	180	F-1600	BP&MP	306

SHALE SHAKER(S) | RENTALS/SERVICES

SHALE SHAKER(S)			RENTALS/SERVICES		
NO. 2	TYPE Derrick	NEW			
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. 7.32

WELL NAME & No. MC6 South Meager | DATE 05-Nov-2004

OPERATOR Western Geopower Corp | CONTRACTOR Precision Drilling

RIG MANAGER | RIG NO. 620 E

PROVINCE BC | CAMP ☑ YES ☐ NO | RIG SAFETY DAYS 44.00

TIME - HRS

	DRLG	CIRC	TRIPS	RIG SERVICE	REAM	SURVEY	BOTTOM TIME	DEV. SURVEY	CORE	CUT & SLIP DRLG LINE	WAIT ON CEMENT	WAIT ON DAYLIGHT	TEST BOP	TEST CSG	TEST CSG	REPAIR RIG	PERFORATE	CORE ANALYSIS	SQUEEZE CEMENT	build volume										
MORN	7.50				0.25		0.25																							
DAY	5.50		0.75	4.25	0.25															0.25										
EVE				3.25	0.25		0.75																							
TOTAL	13.00		0.75	7.50	0.75		0.75	4.25												0.25	0.25									

MORNING TOUR 0:00 TO 8:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1		306	2.35
1		241	10.82
2		230	18.71
2		220	18.72
1		234	9.25
2		220	18.55
1	Bell Sub	224	1.17
3		171	26.59
6		127	56.45
59	D.P.		1953.37
2	D.P.		19.08
			-8.40
	TOTAL		2136.00
WT. OF DC			31000.00
WT. OF STRING			114000.00

BIT NO. 14 | SIZE 311 | IADC CODE 6 4 7 | MFG. H.C. | TYPE HRP66DX | SERIAL NO. 6027090 | JETS 22 | 22 | 22 | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED (m) | TOTAL HOURS RUN | CUTTING STRUCTURE | HOLE CONDITION | HOLE DRAG 28000 upn/18000 dwn | TORQUE AT BOTTOM 12349 ft-lbs | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☑ WATER BASED ☐ OIL BASED | FlowLine Temp. 64.4 c

TIME	02:00	04:00	06:00
DENSITY (kg/m3)	1025	1025	1025
FUNNEL VIS. (SEC)	40	40	38
W L (cm3)			
pH	10.0	10.0	10.0
PV/YP	136.6m3	136.2m3	131.1

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT
Caustic Soda	1sks.
	4sks.
Lignite	13sks.
Milgel NT	105sks.

Centrifuge | HOURS RUN | DISCHARGE (kg/m3) | DISCHARGE (m3/hr)

METERS DRILLED

FROM	TO	BIT SIZE (mm)	ROTARY R.P.M.	WOB (kN)	METERS DRILLED
2118.00	2138.00	D	15	15-25	20.00

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

	LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
14300	152	99	152	90

REDUCED PUMP SPEED

4000	@	95	@	2124.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2111.80	25.8	27.00

TIME LOG

FROM	TO	HOURS	CODE	DESCRIPTION
0:00	3:00	3.00	2	Drill fr. 2115m - 2128m
3:00	3:15	0.25	7	Rig Service, F/T Annular(20 secs)
3:15	3:45	0.50	2	Drill fr. 2128m - 2128m
3:45	4:00	0.25	10	Deviation Survey
4:00	8:00	4.00	2	Drill fr. 2128m - 2138m

NOTES
Fill across sump, antisiphon hoses @ 22.8m Mixer, pumped high-vis sweep @ 2134m
Daylight #1, #2, & #3: Drilled Pump #1 SPR: 34 SPM

DRILLER SIGNATURE | SHIFT SUB | SHIFT TIME | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

Barry Verheist | 8.00 | 8.0 | | 151000.00

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

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	122-830-839	Chris Eddy	8.00	CE	☐	☑
Floorman	652-890-757	Kyle Hrynkiw	8.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
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 8:00 TO 16:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	241	10.96
1		306	2.35
1		241	10.82
2		230	18.71
2		220	18.72
1		234	9.25
2		220	18.56
1	Bell Sub	224	1.17
3		171	26.59
8		127	56.45
59	D.P.		1953.37
2	D.P.		19.08
			-1.40
	TOTAL		2148.00
WT. OF DC			31000.00
WT. OF STRING			114000.00

BIT NO. 14 | SIZE 311 | IADC CODE 6 4 7 | MFG. H.C. | TYPE HRP66DX | SERIAL NO. 6027090 | JETS 22 | 22 | 22 | DEPTH OUT (m) 2146.00 | DEPTH IN (m) 1965.00 | TOTAL METERS DRILLED (m) 180.00 | TOTAL HOURS RUN 51.00 | CUTTING STRUCTURE | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☑ WATER BASED ☐ OIL BASED | FlowLine Temp. 64.4 c

TIME	08:00	10:30	
DENSITY (kg/m3)	1035	1035	
FUNNEL VIS. (SEC)	40	44	
W L (cm3)			
pH	10.0	10.0	
PV/YP	139.0m3	129.4m3	

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT
Milgel NT	25 sks
Hydrated Lime	3 sks
Caustic Soda	1 sk
Lignite	6 sks

Centrifuge | HOURS RUN | DISCHARGE (kg/m3) | DISCHARGE (m3/hr)

METERS DRILLED

FROM	TO	BIT SIZE (mm)	ROTARY R.P.M.	WOB (kN)	METERS DRILLED
2138.00	2148.00	D	17	15-25	10.00

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

	LINER SIZE (mm)	S.P.M.	LINER SIZE (mm)	S.P.M.
16500	152	95	152	96

REDUCED PUMP SPEED

3845	@	92	@	2145.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE	DESCRIPTION
8:00	10:30	2.50	2	Drill Actual
10:30	11:15	0.75	5	Condition Mud & Circ.
11:15	11:30	0.25	7	Rig Service & Function Pipe Rams 7/7 Secs
11:30	11:45	0.25	21	Safety Meeting (Tripping)
11:45	16:00	4.25	6	Pull Out Of Hole & Flow Checks @ 2136m, 1982m,1108

NOTES
Transition Crown Barrel

DRILLER SIGNATURE | SHIFT SUB | SHIFT TIME | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

	8.00	8.0		162000.00

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES 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	721-804-656	Zach Preston	12.00	ZP	☐	☑
Floorman	736-523-366	Nathan Surinak	12.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	12.00	AJ	☐	☑

RATE SCHEDULE ☑ REGULAR ☐ REPAIR ☐ STANDBY | 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	0.35
1	Motor	241	10.96
1		268	4.80
1		241	10.82
2		230	18.71
1	Shock Sub	240	3.83
2		220	18.72
1		234	9.25
2		220	18.56
1	Bell Sub	224	1.17
3		171	26.59
69	D.P.		1953.37
2	D.P.		19.08
			0.00
	TOTAL		2896.39
WT. OF DC			31000.00
WT. OF STRING			

BIT NO. 14 | 15 | SIZE 311 | 311 | IADC CODE 6 4 7 | 6 4 7 | MFG. H.C. | H.C. | TYPE HRP66DX | HRP66DX | SERIAL NO. 6027090 | 6027563 | JETS 22 22 22 | 22 22 22 | DEPTH OUT (m) | DEPTH IN (m) 1968.00 | TOTAL METERS DRILLED (m) 173.00 | TOTAL HOURS RUN 48.50 | CUTTING STRUCTURE 7 7 lc a e 1 | 7 7 lc a e 1 hrs | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE ☑ WATER BASED ☐ OIL BASED | FlowLine Temp. 64.4 c

TIME			
DENSITY (kg/m3)			
FUNNEL VIS. (SEC)			
W L (cm3)			
pH			
PV/YP			

MUD MATERIAL ADDED | SOLIDS CONTROL

PRODUCT	AMOUNT + UNIT

Centrifuge | HOURS RUN | DISCHARGE (kg/m3) | DISCHARGE (m3/hr)

METERS DRILLED

FROM	TO	BIT SIZE (mm)	ROTARY R.P.M.	WOB (kN)	METERS DRILLED
2148.00					

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 (o)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE	DESCRIPTION
16:00	16:45	0.75	6	Pull Out Of Hole & Flow Check @ 178m, dm
16:45	19:30	2.75	26	Dir. Work(Change Bit, Lay Down Nortrak Stab, P/U Short Monel
19:30	20:45	1.25	6	Make up B.H.A.
20:45	21:30	0.75	9	Single slip & cut(Monitor hole)
21:30	22:45	1.25	6	R.I.H. to 885m, flow check
22:45	23:00	0.25	29	Fill pipe, test MWD(no mud returns @ shaker)
23:00	23:15	0.25	7	Rig Service, F/T H.C.R.(2 secs)
23:15	24:00	0.75	22	(build volume) & viscosity in mud system(monitor hole)

NOTES
Left crown barrel, no indication when R.I.H. at 885m

DRILLER SIGNATURE | SHIFT SUB | SHIFT TIME | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

Barry Verheist | 8.00 | 8.0 | | 85000.00

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

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	5.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	122-830-839	Chris Eddy	4.00	CE	☐	☑
Floorman	652-890-757	Kyle Hrynkiw	5.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☐	☑

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

ETS SERIAL NUMBER: PREC620_20041005_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

Field	Value
Spud	2004-09-22 22:49
Rig Release	
Job No	21
AFE	
Licence No.	a-92-A / 92-J-12
Well Name and No	MC6 South Meager
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-Nov-2004
Rig No.	620 E
Fuel @ 8:00 – Rig	62256
Boiler	
Temperature	0
Current Condition	Snow
Wind Direction	Calm
Road	Slick
Well Type	Geothermal
Re-Entry	No
KB to Ground Elev.	7.32
Well Name & No.	MC6 South Meager
Date	06-Nov-2004
Operator	Western Geopower Corp
Contractor	Precision Drilling
Rig Manager	Kevin Vig
Rig No.	620 E
Province	BC
Camp	Yes
Rig Safety Days	45.00

Last Casing / Tubing / OH / Liner

Grade	No of Joints	Total Length	KB to CSG Head	Set at
			7.32	
K-55	10	125.00	6.31	124.00
			8.22	657.00

Pumps

Liner Size	Stroke	Grade	Nol ID	Tool Jt OD	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
	38.00	SS-95	67.00	168.00	5"XH	150	F-1600	BPMMP	305

Time – Hrs

Oper	1	2	3	4	5	6	7	8	9	10	21
Morn					0.50	3.75	0.25				3.50
Day		8.50	0.50			1.75	0.25				
Eve		6.75					0.25			1.00	
Total		12.25	0.50		0.50	5.50	0.75			1.00	3.50

Column 21: build volume

Shale Shaker(s)

No. 2, Type: Derrick. Screens changed: Yes

	Top	Middle	Bottom
Old	100	100	100
New	100	100	100

Totals: 8.00, 8.00, 8.00, 24.00

Daily Checks

OPR / RM checked.

MORNING TOUR

Drilling Assembly

No.	BHA	OD	Length
1	bit	311	0.36
1	Motor	241	10.86
1		245	4.80
1		241	10.82
2		230	18.71
1	Shock Sub	240	3.83
2		220	18.72
1		234	9.26
2		220	18.55
1	Bell Sub	224	1.17
3		171	26.59
69	D.P.		1953.37
2	D.P.		19.08
	Kelly		-7.18
	Total		2089.02
	Wt. of DC		31000.00
	Wt. of String		85000.00

Bit Record

Bit No	15
Size	311
IADC Code	6 4 7
MFG.	H.C.
Type	HRP66DX
Serial No	6027563
Jets	o p e n
Depth Out (m)	
Depth In (m)	2145.00
Hole Condition	
Hole Drag	
Torque at Bottom	
Fill on Bottom (m)	

Mud Record

Mud Type: Water Based. FlowLine Temp. 64.4 c

Mud Material Added – Product	Amount x Unit
Caustic Soda	12sks.
	5sks.
Lignite	88sks.
Milgel NT	167sks.
All Temp	1sks.

Solids Control: Centrifuge

Meters Drilled

From	To
2145.00	

Circulation Pressure (kPa): 8400. Pump No. 1: 162, 95. Pump No. 2: 162, 85.

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
0:00	1:30	1.50	6	Hoist bit to 189m to prevent heat damage to MWD tool
1:30	5:00	3.50	22	(build volume) & raise viscosity in mud system
5:00	5:15	0.25	7	Rig Service, F/T Annular(20 secs)
5:15	6:00	0.75	6	R.I.H. to 865m(flow check)
6:00	6:15	0.25	5	Condition Mud & Circ.(Hole took 28m3 before returns @ shaker)
6:15	7:15	1.00	6	R.I.H. to 1287m
7:15	7:30	0.25	5	Condition Mud & Circ.
7:30	8:00	0.50	6	R.I.H. to 1712m

NOTES

Driller Signature: Barry Verhelst

Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
	68000.00	Incinerator	

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	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	122-830-839	Chris Eddy	8.00	CE	☐	☑
Floorman	652-880-757	Kyle Hryniw	8.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-077-702	Sheldon Langley		SL	☐	☑

Rate Schedule: ☑ Regular ☐ Repair ☐ Moves

Driver A / Crew Safety Days / Driver B

DAY TOUR

Drilling Assembly

No.	BHA	OD	Length
1	Motor/Bit	0	11.31
1		246	4.80
1		241	10.82
2		230	18.71
1	Shock Sub	240	3.83
2		220	18.72
1		234	9.35
2		220	18.66
1	Bell Sub	224	1.17
3		171	26.59
6		127	56.45
71	D.P.		2010.60
0	D.P.		0.00
	Kelly		-20.83
	Total		2170.00
	Wt. of DC		31000.00
	Wt. of String		115000.00

Bit Record

Bit No.	15
Size	311
IADC Code	6 4 7
MFG	H.C.
Type	HRP66DX
Serial No.	6027563
Jets	o p e n
Depth Out (m)	
Depth In (m)	2145.00
Total Meters Drilled	25.00
Total Hours Run	5.50
Hole Drag	15-17 dn/20-25 Up(Sliding)
Torque at Bottom	
Fill on Bottom (m)	

Mud Record

Mud Type: Water Based. FlowLine Temp 68.0 c

Time	08:30	12:00	15:00
Density	1030	1030	1030
Funnel Vis	51	44	41
W.L. (cm3)			
pH	9.8	9.6	10.0
PVT	158.9m3	170.3m3	164.5m3

Mud Material Added – Product	Amount x Unit
Milgel NT	105 sks
Caustic Soda	4 sks
Hydrated Lime	5 sks
Defoamer LD-8	2 pls
Lignite	36 sks

Solids Control: Centrifuge

Meters Drilled

From	To	D	Rotary RPM	Wt on Bit
2145.00	2170.00	D	15	18-26

Circulation Pressure (kPa): 14750. Pump No. 1: 162, 90. Pump No. 2: 162, 90.

Reduced Pump Speed: 4148 @ 90 @ 2170.00

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
8:00	9:45	1.75	6	Run In HoleW/Bit # 15
9:45	10:15	0.50	3	Wash to Bottom Fr2095m-2145m
10:15	15:45	5.50	2	Drill Fr/2145m-2170m
15:45	16:00	0.25	7	Rig Service & Function H.C.R. 4/4 Secs

NOTES

Driller Signature: Bill Mills

Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
	152000.00	Steam	

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	629-528-282	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	721-804-858	Zach Preston	12.00	ZP	☐	☑
Floorman	736-523-366	Nathan Surinak	12.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	12.00	AJ	☐	☑

Rate Schedule: ☑ Regular ☐ Repair ☐ Moves

Driver A / Crew Safety Days / Driver B

EVENING TOUR

Drilling Assembly

No.	BHA	OD	Length
1	Motor/Bit	0	11.31
1		246	4.80
1		241	10.82
2		230	18.71
1	Shock Sub	240	3.83
2		220	18.72
1		234	9.35
2		220	19.55
1	Bell Sub	224	1.17
3		171	26.59
6		127	56.48
71	D.P.		2010.60
2	D.P.		18.78
	Kelly		-13.21
	Total		2196.40
	Wt. of DC		31000.00
	Wt. of String		116000.00

Bit Record

Bit No	15
Size	311
IADC Code	6 4 7
MFG.	H.C.
Type	HRP66DX
Serial No.	6027563
Jets	o p e n
Depth Out (m)	
Depth In (m)	2145.00
Total Meters Drilled	51.00
Total Hours Run	12.25
Hole Drag	25000 up/17000 dwn
Torque at Bottom	13191 ft-lbs
Fill on Bottom (m)	

Mud Record

Mud Type: Water Based. FlowLine Temp 69.2 c

Time	18:00	21:00	23:00
Density	1030	1025	1025
Funnel Vis	43	41	42
W.L. (cm3)			
pH	9.8	10.0	10.0
PVT	158.4m3	159.6m3	159m3

Mud Material Added – Product	Amount x Unit
Milgel	70 sks
Caustic Soda	2 sks

Solids Control: Centrifuge

Meters Drilled

From	To	D	Rotary RPM	Wt on Bit
2170.00	2196.00	D	15	18-28

Circulation Pressure (kPa): 14500. Pump No. 1: 162, 90. Pump No. 2: 162, 90.

Reduced Pump Speed: 4000 @ 90 @ 2169.00

Deviation Survey

Depth (m)	Deviation (o)	Direction
2154.70	26.8	25.30
2174.30	26.5	27.90

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
16:00	16:45	0.75	2	Drill Fr/2170m-2172m
16:45	17:30	0.75	10	M.W.D.Survey, Orient Toolface,& Change Out Transducer
17:30	21:30	4.00	2	Drill Fr2172m- 2191m
21:30	21:45	0.25	7	Rig Service, F/T pipe rams(8 secs)
21:45	22:00	0.25	10	Deviation Survey
22:00	24:00	2.00	2	Drill fr. 2191m - 2196m

NOTES

Driller Signature: Barry Verhelst

Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
	152000.00	Steam	

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	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	122-830-839	Chris Eddy	4.00	CE	☐	☑
Floorman	652-880-757	Kyle Hryniw	4.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☐	☑

Rate Schedule: ☑ Regular ☐ Repair ☐ Moves

Driver A / Crew Safety Days / Driver B

ETS SERIAL NUMBER: PREC620 _20041006_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment — A Varco Company

Based on the CAODC ETS file standard

Field	Value
SPUD	2004-09-22 22:48
RIG RELEASE	
JOB NO.	Z1
AFE	
LICENSE NO.	a-92-A / 92-J-12
WELL NAME AND NO.	MCS South Meager
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-Nov-2004
RIG NO.	520 E
FUEL @ 8:00 — RIG / BOILER	53213 /
WEATHER — TEMPERATURE	1
CURRENT CONDITION	Snow
WIND DIRECTION	Calm
ROAD	Fair
WELL TYPE	Geothermal
KB TO GROUND ELEV.	7.32
PROVINCE	BC
RIG MANAGER	Kevin Vig
RIG NO.	620 E
RIG SAFETY DAYS	46.00

Last casing, tubing or liner

Grade	No. of joints	Total length	KB to CSG head	Set at
			7.32	
K-55	10	126.00	8.31	124.00
			8.22	557.00

Drill pipe / pumps

Length	Grade	Wall	Tool JT O.D.	Thread type	No. of joints	Pump type	Pump manufacturer	Stroke
29.60	SS-95	63.00	156.00	5"XH	179	F-1600	BPMMP	305
38.00	SS-95	67.00	156.00	5"XH	150	F-1600	BPMMP	305

Shale shaker(s): No. 2, Type Derrick, Screens changed: Yes

	Top	Middle	Bottom
Screens	100 / 100	100 / 100	100 / 100

Totals: 8.00, 8.00, 8.00, 24.00

Time – hrs

Oper	Drilling	1	2	3
MORN	7.00		0.25	0.75
DAY	7.25		0.25	0.50
EVE	7.25		0.25	0.50
TOTAL	21.50		0.75	1.75

MORNING TOUR (0:00 to 8:00)

Drill string / Bit record

No.	Item	O.D.	Length
1	Motor/Bit	0	11.31
1		246	4.80
1		241	10.82
2		230	18.71
1	Shock Sub	240	3.83
2		220	18.72
1		234	9.25
2		220	18.55
1	Bell Sub	224	1.17
3		171	26.59
6		127	56.48
72	D.P.		2038.90
1	D.P.		9.71
	Kelly down		-8.84
	Total		2220.00
	Wt. of DC		31000.00
	Wt. of string		116000.00

Bit No. 15; Size 311; IADC code 6 4 7; MFG H.C.; Type HRP66DX; Serial No. 6027563; Depth in 2145.00; Total meters drilled 75.00; Total hours 19.25; Hole drag 28000 up/18000 dwn; Torque at bottom 14033 ft-lbs.

Mud record — FlowLine Temp 68.2 c

Time	02:00	04:00	06:00
Density	1025	1025	1025
Funnel vis.	45	46	46
pH	10.0	10.0	10.0
PVT	138.8m3	142m3	143.6m3

Product	Amount
Caustic Soda	6sks.
[illegible]	6sks.
Hydrated Lime	6sks.
Lignite	45sks.
Milgel	110sks.
Milgel NT	35sks.
Milpac	12sks.

Solids control: Centrifuge

Meters drilled: From 2196.00 To 2220.00, D, 15, 18-26. Circulation pressure 14700; Pump No. 1: 152, 90; Pump No. 2: 152, 90. Reduced pump speed: 4100 @ 90 @ 2203.00. Deviation survey: Depth 2191.50, Deviation 28.8, Direction 28.40.

Time log / Details of operations in sequence and remarks

From	To	Hrs	Code	Details
0:00	1:15	1.25	2	Drill fr. 2196m - 2201m
1:15	1:30	0.25	10	Deviation Survey(Magnetic Interference)
1:30	2:15	0.75	2	Drill fr. 2201m - 2203m
2:15	2:30	0.25	10	Deviation Survey(Magnetic Interference)
2:30	3:45	1.25	2	Drill fr. 2203m - 2208m
3:45	4:00	0.25	7	Rig Service, F/T Annular(20 secs)
4:00	4:30	0.50	2	Drill fr. 2208m - 2210m
4:30	4:45	0.25	10	Deviation Survey
4:45	8:00	3.25	2	Drill fr. 2210m - 2220m

Driller signature: Barry Verhelst. Fuel: 8.00, 9.5. Max exp hookload: 153000.00. Safety topic: Steam.

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	642-389-910	Barry Verhelst	8.00	BV	No
Derrickman	647-452-603	Dave Makowsky	8.00	DM	No
Motorman	735-714-230	Chantry Vig	8.00	CV	No
Floorman	122-830-839	Chris Eddy	8.00	CE	No
Floorman	652-890-757	Kyle Hrynlw	8.00	KH	No
Leaseman	713-959-461	Gary Kennedy	8.00	GK	No
Rig Manager	719-409-484	Kevin Vig		KV	No
Top Drive	638-977-702	Sheldon Langley		SL	No

DAY TOUR (8:00 to 16:00)

No.	Item	O.D.	Length
1	Motor/Bit	0	11.31
1		246	4.80
1		241	10.82
2		230	18.71
1	Shock Sub	240	3.83
2		220	18.72
1		234	9.25
2		220	18.56
1	Bell Sub	224	1.17
3		171	26.59
6		127	56.48
73	D.P.		2067.77
0	D.P.		0.00
	Kelly down		-6.00
	Total		2242.00
	Wt. of DC		31000.00
	Wt. of string		119000.00

Bit No. 15; Size 311; IADC code 6 4 7; MFG H.C.; Type HRP66DX; Serial No. 6027563; Jets o p e n; Depth in 2145.00; Total meters drilled 97.00; Total hours 26.86; Hole drag 25-30Kdan Up/17-20Dn sliding.

Mud record — FlowLine Temp 69.2 c

Time	09:00	12:00	15:00
Density	1035	1030	1030
Funnel vis.	43	47	46
pH	10.0	10.5	10.0
PVT	145.6m3	138.5m3	136.3m3

Product	Amount
Milgel NT	105 sks
Caustic Soda	6 sks
All Temp	3 sks
Milpac	12 sks
Hydrated Lime	10 sks
Ligco	45 sks

Solids control: Centrifuge

Meters drilled: From 2220.00 To 2242.00, D, 15, 18-26. Circulation pressure 14700; Pump No. 1: 152, 90; Pump No. 2: 152, 90. Reduced pump speed: 3790 @ 90 @ 2227.00. Deviation survey: 2201.10 / 28.4 / 27.78; 2210.80 / 26.1 / 28.08.

From	To	Hrs	Code	Details
8:00	10:30	2.50	2	Drill Fr/2220m-2227m
10:30	10:45	0.25	7	Rig Service & Function Pipe Rams 7/7 Secs
10:45	15:30	4.75	2	Drill Fr/2227m-2242m
15:30	16:00	0.50	10	M.W.D. Surveys & Orient Tool Face

Driller signature: Bill Mills. Fuel: 4.00, 8.5. Max exp hookload: 162000.00.

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	716-324-181	Bill Mills	12.00	BM	No
Derrickman	629-926-282	Rob Roth	12.00	RR	No
Motorman	722-672-787	Dwayne Fry	12.00	DF	No
Floorman	721-604-656	Zach Preston	12.00	ZP	No
Floorman	736-523-366	Nathan Surinak	12.00	NS	No
Leaseman	648-747-426	Adam Johnson	12.00	AJ	No

EVENING TOUR (16:00 to 24:00)

No.	Item	O.D.	Length
1	Motor/Bit	0	11.31
1		246	4.80
1		241	10.82
2		230	18.71
1	Shock Sub	240	3.83
2		220	18.72
1		234	9.25
2		220	18.66
1	Bell Sub	224	1.17
3		171	26.59
6		127	58.48
73	D.P.		2087.77
2	D.P.		19.14
	Kelly down		-2.64
	Total		2264.30
	Wt. of DC		31000.00
	Wt. of string		120000.00

Bit No. 15; Size 311; IADC code 6 4 7; MFG H.C.; Type HRP66DX; Serial No. 6027563; Depth in 2145.00; Total meters drilled 119.00; Total hours 33.75; Hole drag 25-30Kdan Up/17-20Dn sliding; Torque at bottom 14875 ft-lbs.

Mud record — FlowLine Temp 68.2 c

Time	18:00	21:00	23:00
Density	1030	1025	1025
Funnel vis.	46	46	48
pH	10.0	10.0	10.0
PVT	141.4m3	145.6m3	148.8m3

Product	Amount
Milgel NT	70 sks
Caustic Soda	2 sks

Solids control: Centrifuge

Meters drilled: From 2242.00 To 2264.00, D, 17, 18-28. Circulation pressure 14750; Pump No. 1: 152, 90; Pump No. 2: 152, 90. Reduced pump speed: 3800 @ 90 @ 2264.00. Deviation survey: Depth 2230.00, Deviation 26.5, Direction 29.10.

From	To	Hrs	Code	Details
16:00	23:15	7.25	2	Drill fr. 2242m - 2264m
23:15	23:30	0.25	7	Rig Service, F/T H.C.R.(2 secs)
23:30	24:00	0.50	10	Deviation Surveys & toolface orientation(Accum.)

Driller signature: Barry Verhelst. Fuel: 4.00, 9.5. Max exp hookload: 153000.00.

Crew	Soc. Ins. No.	Name	Hrs		Injuries
Driller	642-389-910	Barry Verhelst	4.00	BV	No
Derrickman	647-452-603	Dave Makowsky	4.00	DM	No
Motorman	735-714-230	Chantry Vig	4.00	CV	No
Floorman	122-830-839	Chris Eddy	4.00	CE	No
Floorman	652-890-757	Kyle Hrynlw	4.00	KH	No
Leaseman	713-959-461	Gary Kennedy	4.00	GK	No

Chimo Equipment | A Varco Company

Based on the CAODC ETS file standard

SPUD	RIG RELEASE	JOB NO.	AFE
2004-09-22 22:49		21	

LICENCE NO.	WELL NAME AND NO.
a-92-A / 92-J-12	MC6 South Meager

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 OPERATORS REPRESENTATIVE	SIGNATURE OF CONTRACTORS REPRESENTATIVE
Russ Silva	Kevin Vig

DAILY CHECKS (OPR / R.M.)

DATE	08-Nov-2004	
RIG NO.	620 E	
FUEL @ 8:00		
RIG	44241	BOILER

WEATHER

TEMPERATURE	5
CURRENT CONDITION	Rain
WIND DIRECTION	Calm
ROAD	Slick

LAST CASING / TUBING OR LINER

O.D. (mm)	MASS (kg/m)	GRADE	NO. OF JOINTS	TOTAL (m) LENGTH	KB TO CSG HEAD (m)	SET AT (m)
					7.32	
		K-55	10	125.00	6.31	124.00
					8.22	857.00

PUMP SIZE	LINER SIZE	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	F-1600	BPMMP	305
	38.00	SS-95	67.00	166.00	5"XH	160	F-1600	BPMMP	305

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	☐ YES ☑ NO	7.32

WELL NAME & No.	DATE
MC6 South Meager	08-Nov-2004

OPERATOR	CONTRACTOR
Western Geopower Corp	Precision Drilling

RIG MANAGER	RIG NO.
Kevin Vig	620 E

PROVINCE	CAMP	RIG SAFETY DAYS
BC	☑ YES ☐ NO	47.00

TIME HRS

CODE	1	2	3	4	5	6	7	8	9	10	…	21
MORN		7.25					0.25			0.50		
DAY		5.00			1.00	1.50	0.25			0.25		
EVE						7.50	0.25					0.25
TOTAL		12.25			1.00	9.00	0.75			0.75		0.25

SHALE SHAKER(S)

NO. 2	TYPE Derrick	
SCREENS CHANGED	☑ YES	☐ NO
TOP 100	TOP 100	
MIDDLE 100	MIDDLE 100	
BOTTOM 100	BOTTOM 100	

TOTAL: 4.00, 8.00, 6.00, 24.00

RENTALS/SERVICES

MORNING TOUR (0:00 to 8:00)

Drill String Assembly

No.	Bit	O.D. (mm)	Length (m)
1	Motor/Bit	0	11.31
1		248	4.80
1		241	10.82
2		230	18.71
1	Shock Sub	240	3.83
2	8" Drill Collars	220	18.72
1		234	9.25
2		220	18.65
1	Bell Sub	224	1.17
3		171	26.59
6		127	65.48
78	D.P. STANDS		2124.96
	D.P. SINGLES		
	KELLY DOWN		-16.19
	TOTAL		2289.00
WT. OF DC			31000.00
WT. OF STRING			120000.00

Bit Record

BIT NO.	15	
SIZE	311	
IADC CODE	6 4 7	
MFG	H.C.	
TYPE	HRP68DX	
SERIAL NO.	6027563	
JETS		
DEPTH OUT (m)		
DEPTH IN (m)	2145.00	
TOTAL METERS DRILLED	144.00	
TOTAL HOURS RUN	41.00	

HOLE CONDITION

HOLE DRAG	39000 up/22000 dwn
TORQUE AT BOTTOM	14033 ft-lbs
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE ☑ Water based ☐ Oil based — FlowLine Temp 59.2 c

TIME	02:00	04:00
DENSITY	1025	1025
FUNNEL VIS	46	44
W.L. (cm3)		
pH	10.0	10.0
PVT@	149.5m3	148.4m3

MUD MATERIAL ADDED / SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT / UNIT
AB Temp	3sks.
Caustic Soda	4sks.
Lignite	70sks.
Milgel NT	140sks.
Milpac	13sks.
Hydrated Lime	10sks.
Milgel	35sks.
Defoamer LD-8	1sks.

Meters Drilled

FROM	TO		ROTARY RPM	WT. ON BIT
2264.00	2289.00	D	15	18-28

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.
14100	152	90	152	90

REDUCED PUMP SPEED: 4200 @ 90 @ 2284.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2260.70	25.2	28.30

DRILLER SIGNATURE: Barry Verhelst

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
0:00	6:00	6.00	2	Drill fr. 2264m - 2287m
6:00	6:15	0.25	7	Rig Service, F/T Annular(20 secs)
6:15	7:30	1.25	2	Drill fr. 2287m - 2289m
7:30	8:00	0.50	10	Deviation Surveys(Accum.)

NOTES

		OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.60	9.5		162000.00		

Crew

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	122-830-839	Chris Eddy	8.00	CE	☐	☑
Floorman	652-890-757	Kyle Hrymiw	8.00	KH	☐	☑
Leaseman	713-859-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	638-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE ☑ Regular ☐ Repair ☐ Move — DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR (8:00 to 16:00)

Drill String Assembly

No.	Bit	O.D. (mm)	Length (m)
1		0	11.31
1		246	4.80
1		241	10.82
2		230	18.71
1	Shock Sub	240	3.83
2	8" Drill Collars	220	18.72
1		234	9.25
2		220	18.65
1	Bell Sub	224	1.17
3		171	26.59
6		127	66.48
75	D.P. STANDS		2124.96
0	D.P. SINGLES		0.00
	KELLY DOWN		-1.19
	TOTAL		2304.00
WT. OF DC			31000.00
WT. OF STRING			121000.00

Bit Record

BIT NO.	15
SIZE	311
IADC CODE	6 4 7
MFG	H.C.
TYPE	HRP68DX
SERIAL NO.	6027563
JETS	
DEPTH OUT (m)	2304.00
DEPTH IN (m)	2145.00
TOTAL METERS DRILLED	159.00
TOTAL HOURS RUN	45.00

HOLE CONDITION

HOLE DRAG	26-32up/18-22dn
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE ☑ Water based ☐ Oil based — FlowLine Temp

TIME	09:00	12:00	01:30
DENSITY	1030	1025	1025
FUNNEL VIS	48	49	45
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT@	143.4m3	147.7m3	150.7m3

MUD MATERIAL ADDED / SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT / UNIT
Caustic Soda	3 sks
Hydrated Lime	12 sks
Milpac	11 sks
Milgel	77 sks
Desco	6 sks
Lignite	36 sks
Defoamer LD-8	1 pl

Meters Drilled

FROM	TO		ROTARY RPM	WT. ON BIT
2289.00	2304.00	D	15	18-26

CIRCULATION PRESSURE (kPa)	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.
14600	152	90	152	90

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2277.40	26.4	26.30

DRILLER SIGNATURE: Bill Mills

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
8:00	10:15	2.25	2	Drill Fr/2296
10:15	10:30	0.25	10	Deviation Surveys & Orient toolface
10:30	13:15	2.75	2	Drill Fr/2296m-2304m
13:15	14:15	1.00	5	Circulate Hole Clean
14:15	14:30	0.25	7	Rig Service & Function Pipe Rams
14:30	16:00	1.50	6	Pull out of hole & flow checks @ 2304m,2095m

NOTES

		OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.60	9.5				

Crew

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	718-324-181	Bill Mills	12.00	BM	☐	☑
Derrickman	629-825-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	734-831-324	Zach Preston	12.00	ZP	☐	☑
Floorman	736-523-366	Nathan Surinak	12.00	NS	☐	☑
Leaseman	646-747-426	Adam Johnson	12.00	AJ	☐	☑

RATE SCHEDULE ☑ Regular ☐ Repair ☐ Move — DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR (16:00 to 24:00)

Drill String Assembly

No.	Bit	O.D. (mm)	Length (m)
75	D.P. STANDS		2124.96
	D.P. SINGLES		
	KELLY DOWN		
	TOTAL		2124.96
WT. OF DC			
WT. OF STRING			

Bit Record

BIT NO.	15
SIZE	311
IADC CODE	6 4 7
MFG.	H.C.
TYPE	HRP68DX
SERIAL NO.	6027563
JETS	
DEPTH OUT (m)	2304.00
DEPTH IN (m)	2145.00
TOTAL METERS DRILLED	159.00
TOTAL HOURS RUN	45.00

HOLE CONDITION

HOLE DRAG	
TORQUE AT BOTTOM	
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE ☑ Water based ☐ Oil based — FlowLine Temp 59.2 c

MUD MATERIAL ADDED / SOLIDS CONTROL: Centrifuge

Meters Drilled

FROM	TO		ROTARY RPM	WT. ON BIT
2304.00				

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

DRILLER SIGNATURE: Barry Verhelst

Time Log / Details of Operations in Sequence and Remarks

FROM	TO	HRS	CODE	DETAILS
16:00	20:15	4.25	6	Pull Out Of hole & Flow Checks @ 1268m, 310m
20:15	20:30	0.25	7	Rig Service, F/T H.C.R.(2 secs)
20:30	20:45	0.25	21	Safety Meeting
20:45	24:00	3.25	6	Lay down B.H.A.

NOTES

		OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5		75000.00	Handling B.H.A.	

Crew

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	122-830-839	Chris Eddy	4.00	CE	☐	☑
Floorman	652-890-757	Kyle Hrymiw	4.00	KH	☐	☑
Leaseman	713-859-461	Gary Kennedy	4.00	GK	☐	☑

RATE SCHEDULE ☑ Regular ☐ Repair ☐ Move — DRIVER A | CREW SAFETY DAYS | DRIVER B

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 23:45
RIG RELEASE:
JOB NO.: 21
AFE:
LICENCE NO.: a-92-A / 92-J-12
WELL NAME AND NO.: MC6 South Meager
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
SURFACE LOCATION: a-92-A / 92-J-12
SPUD/UP ID: b-14 / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS
(1) Daily Visual Inspection
(2) Detailed Inspection (Monthly, Every 250 Hours)
(3) H2S Signs Posted (if required)
(4) Well Licence & Well Emergency Plan(s)
(5) Flare Line Anchor
(6) BOP Daily Pressured
(7) Visually Inspect BOP's, Flanges & Ungrounded Lines
(8) Rig Site Health and Safety Meeting and Documentation
(9) C A O D C Rig Safety Inspection Checklist (Monthly Inspn)
(10) Weekly Inspection, Service, Running or Lubricating
(11) Derrick Board Checked
(12) Weekly Kills Checked

DATE: 09-Nov-2004
RIG NO: 620 E
FUEL @ 6:00: 37700 BOILER
LAST CASING I.D. / PIPE OR LINER
WEATHER: TEMPERATURE 5; CURRENT CONDITION Rain; WIND DIRECTION Calm; ROAD Slick

OLD (mm)	NEW (mm)	New	NAME	GRADE	NO OF JOINTS	TOTAL LINE LENGTH	KB TO CSG HEAD (m)	WT. AT (m)
							7.32	
				K-55	16	125.90	8.31	124.00
							8.22	867.00

DRILL PIPE SIZE (mm)	LENGTH MADE (m/jnt)	GRADE	MIN ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	SHOCK SUB TYPE	PUMP MANUFACTURER	STRING LENGTH (m)
	29.00	SS-95	83.00	166.00	5"XH	170	F-1600	6PMMP	305
	38.00	SS-95	67.00	168.00	5"XH	150	F-1600	6PMMP	386

SHALE SHAKER(S) | RENTALS/SERVICES

	NO.	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

WELL TYPE: Geothermal
RE-ENTRY ☐ YES ☑ NO
KB TO GROUND ELEV.: 7.32
WELL NAME & No.: MC6 South Meager
DATE: 09-Nov-2004
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig
RIG NO.: 620 E
PROVINCE: BC
CAMP ☑ YES ☐ NO
RIG SAFETY DAYS: 48.00

TIME / HRS

	OPER	DRLG	CIRC	REAM	COND	SURV	TRIPS	RIG SERVICE	WAIT ON CMT	WAIT ON DST	WAIT ON FISH	WAIT ON WEATHER	TEST BOP	TEST CSG	RIG REPAIR	RIG UP/ TEAR DOWN	SLIP/ CUT DRLG LINE	DEVIATION	SAFETY MTG	OTHER
NOON							7.75	0.25												
DAY							7.00	0.25												
EVE		6.25	0.75				9.00	0.25										0.25		
TOTAL		6.25	0.75				15.25	0.75										0.25		0.75

Service Top Drive: 0.75

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	196	8.22
1	Float Collar Sub	194	1.07
1	Monels	204	18.65
1	Crossover	193	0.44
8	180mm D.C.	180	75.11
1	Jars	175	6.69
6	160mm D.C.	160	56.60
5	Accumulator Sub	127	47.17
75	DP	114mm(4 1/2)	2124.96
0	DP	SINGLES	0.00
	KELLY/DWN		0.00
	TOTAL		2337.26
WT. OF BC			
WT. OF STRING			

BIT NO.	16	16
SIZE	311	311
IADC CODE	G 4 7	
MFG.	H.C.	H.C.
TYPE	HRP66DX	HRP66DX
SERIAL NO.	6027593	6027059
JETS		
DEPTH OUT (m)	2364.00	
DEPTH IN (m)	2145.00	2304.00
TOTAL METERS DRILLED (m)	159.00	
TOTAL HOURS RUN	46.00	

OUTER STRUCTURE: T1 | T0 | WEAR | LOC | B | Gage | ODC | REASON PULLED | TIME
8 | 0 | FC | ALL | E | | | HR | 3.46

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

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	FlowLine Temp 69.2 c
TIME			
DEPTH (m)			
FUNNEL VIS. (Sec)			
W.L. (cm3)			
pH			

MUD MATERIAL ADDED	PRODUCT	AMOUNT x UNIT
	Caustic Soda	3sks.
	Lignite	22sks.
	Milgel	30sks.
	Milpac	1sks.

SOLIDS CONTROL: Centrifuge

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY R.P.M.	HOURS ON BOTTOM

CIRCULATION PRESSURE (kPa): PUMP NO.1 LINER SIZE (mm) S.P.M.; PUMP NO.2 LINER SIZE (mm) S.P.M. = 82 / 152
REDUCED PUMP SPEED
DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	
0:00	3:00	3.00	6	Lay down B.H.A., flow check @ 0m
3:00	3:15	0.25	7	Rig Service, F/T Blind rams(8 secs)
3:15	8:00	4.75	6	Pick & make up new B.H.A. (F/T master valve w/out of hole.)/Build volume & viscosity

NOTES
(1) Bypass Valve, Trip manifold, Annular 14.7K, Choke: 13.5K, Shaffer: 8.11/4.5 Rams
Engine #1: 425 hrs, EC Shaw Pump #1 & #2: 6.25 hrs

DRILLER SIGNATURE	HRS. RUN	HOURS ON JAR	STAND TEMP.	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verheist	4.50	9.5				Picking up D.C.'s	

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	122-830-839	Chris Eddy	8.00	CE	☐	☑
Floorman	652-890-757	Kyle Hryniw	8.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	719-486-484	Kevin Vig		KV	☐	☐
Top Drive	638-877-782	Sheldon Langley		SL	☐	☐

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

MORNING TOUR

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	Bit	311	0.35
1	Motor	196	8.22
1	Float Collar Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
8	180mm D.C.	180	75.11
1	Jars	175	6.69
6	160mm D.C.	160	56.60
5	Accumulator Sub	127	47.17
74	DP	114mm(4 1/2)	2095.50
1	DP	SINGLES	9.61
	KELLY/DWN		-13.71
	TOTAL		2304.00
WT. OF BC			23000.00
WT. OF STRING			119000.00

BIT NO.	16
SIZE	311
IADC CODE	
MFG.	H.C.
TYPE	HRP66DX
SERIAL NO.	6027059
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2304.00
TOTAL METERS DRILLED (m)	
TOTAL HOURS RUN	

OUTER STRUCTURE: T1 | T0 | WEAR | LOC | B | Gage | ODC | REASON PULLED | TIME

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

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	FlowLine Temp 69.2 c
TIME			
DEPTH (m)			
FUNNEL VIS. (Sec)			
W.L. (cm3)			
pH			

MUD MATERIAL ADDED	PRODUCT	AMOUNT x UNIT
	Milgel	30 sks
	Lignite	45 sks
	Milpac	2 sks
	Caustic Soda	6 sks
	Gel	30 sks

SOLIDS CONTROL: Centrifuge

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY R.P.M.	HOURS ON BOTTOM
2364.00				

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 — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	
5:00	11:15	6.25	6	Pick Up & Make Up B.H.A.Build Volume And Mix Mud
11:15	11:30	0.25	7	Rig Service & Function Pipe Rams 7/7 Secs
11:30	12:15	0.75	23	(Service Top Drive) Change Out Saver Sub, Install Safety Cables in Place of Safety Chains
12:15	16:00	3.75	6	Run In Hole

NOTES
4 section Crown saved

DRILLER SIGNATURE	HRS. RUN	HOURS ON JAR	STAND TEMP.	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Mills	8.00	9.5			147000.00		

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	629-926-262	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	734-831-324	Zach Preston	12.00	ZP	☐	☑
Floorman	736-523-386	Nathan Surinak	12.00	NS	☐	☑
Leaseman	648-747-428	Adam Johnson	12.00	AJ	☐	☑

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

DAY TOUR

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	Bit	311	0.35
1	Motor	196	8.22
1	Float Collar Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
8	180mm D.C.	180	75.11
1	Jars	175	6.69
6	160mm D.C.	160	56.60
5	Accumulator Sub	127	47.17
75	DP	114mm(4 1/2)	2124.40
	DP	Grade E	
	KELLY/DWN		0.00
	TOTAL		2336.70
WT. OF BC			23000.00
WT. OF STRING			118000.00

BIT NO.	16
SIZE	311
IADC CODE	
MFG.	H.C.
TYPE	HRP66DX
SERIAL NO.	6027059
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2304.00
TOTAL METERS DRILLED (m)	32.00
TOTAL HOURS RUN	6.25

OUTER STRUCTURE: T1 | T0 | WEAR | LOC | B | Gage | ODC | REASON PULLED | TIME

HOLE CONDITION
HOLE DRAG: 27000 up/ 18000 dwn
TORQUE AT BOTTOM: 13191 ft-lbs
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	FlowLine Temp 69.2 c		
TIME	18:00	21:00	23:00		
DEPTH (m)	1036	1025	1020		
FUNNEL VIS. (Sec)	45	45	42		
W.L. (cm3)					
pH	9.5	10.0	10.0		
PV@	131.4cm3	137.3m3	141.3m3		

MUD MATERIAL ADDED	PRODUCT	AMOUNT x UNIT
	Milgel	48 sks
	Caustic Soda	2 sks

SOLIDS CONTROL: Centrifuge

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY R.P.M.	HOURS ON BOTTOM
2304.00	2336.00	D 15	18	

CIRCULATION PRESSURE (kPa): PUMP NO.1 LINER SIZE (mm) S.P.M.; PUMP NO.2 LINER SIZE (mm) S.P.M. = 12700 / 152 / 90 / 152 / 90
REDUCED PUMP SPEED: 3900 | 80 | 80 | 2314.00
DEVIATION SURVEY: DEPTH (m) | DEVIATION (d) | DIRECTION

TIME LOG — DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

FROM	TO	HOURS	CODE	
16:00	16:30	0.50	6	Run in hole/Bit #16
16:30	17:15	0.75	3	Wash To Bottom Fr/2232m-2304m
17:15	19:45	2.50	2	Pattern Bit & Drill Fr 2304m - 2317m
19:45	20:00	0.25	21	B.O.P. drill w/crew, well secure & diverted in 93 secs
20:00	20:15	0.25	7	Rig Service, F/T Annular(20 secs)
20:15	24:00	3.75	2	Drill fr. 2317m - 2336m

NOTES
Accumulator Pressure @ 19.0m/Shear

DRILLER SIGNATURE	HRS. RUN	HOURS ON JAR	STAND TEMP.	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verheist	8.00	9.5			145000.00	B.O.P. DRILL	

EVENING TOUR 16:00 TO 24:00

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	122-830-839	Chris Eddy	8.00	CE	☐	☑
Floorman	652-890-757	Kyle Hryniw	8.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑

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

EVENING TOUR

CHIMO ETS SOFTWARE VERSION:

ETS SERIAL NUMBER: PREC620_20041009_1A

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | RIG RELEASE | JOB NO.: 21 | AFE:
LICENCE NO.: a-52-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
SURFACE LOCATION: a-52-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 (OPR / R.M.)
(1) Daily Visual Rigging Inspection
(2) Derrick/Inspection/Weekly Lacing (Anabloc)
(3) 4Z5 Sigma Pipelay (if required)
(4) Visual Inspection of Block Dragline Ropes
(5) Crown Line Sheaves
(6) BOP Drills Performed
(7) Visually Inspect BOP's Hydraulic & Diagnostic Lines
(8) Rig the Hoist/Drill Safety Meeting (Emergency Hoist)
(9) D.A.D.S.C. Rig Safety Inspection Checklist (every 14 months)
(10) Mast Inspection Before Raising or Lowering
(11) Crown Saver Checked
(12) Upper Kelly Checked

DATE: 10-Nov-2004 | RIG NO.: 620 E | RIG: 39556 BOILER | TEMPERATURE: -3 | CURRENT CONDITION: Clear | WIND DIRECTION: Calm | ROAD: Fair

LAST CASING T. BING OR LINER

O.D. (mm)	WT/FT (kg/m)	Grade	Make	No. of Joints	Total Lng. Length (m)	KB To Csg. Head/Flange (m)	SET AT (m)
							7.32
			K-55	10	126.00	6.31	124.00
						8.22	857.00

	Boop Size (mm)	Liner Make (type)	Grade	Wt. of Joint (kg/m)	Tool JT O.D. (mm)	Thread Type	No. of Joints	Pump Type	Pump Liner Size (mm)	Stroke Length (mm)
		23.00	SS-95	53.00	168.00	5"XH	170	F-1600	BPMMP	305
		23.00	SS-95	67.00	168.00	5"XH	150	F-1600	BPMMP	305

TOTALS

SHALE SHAKER(S) | RENTAL/SERVICES

No.	Type	New
2	Derrick	☑

Screens Changed: ☑ YES ☐ NO

6.00	TOP	100	TOP
6.00	MIDDLE	100	MIDDLE
24.00	BOTTOM	100	BOTTOM

WELL TYPE: Geothermal | RE-ENTRY ☐ YES ☑ NO | KB TO GROUND ELEV: 7.32
WELL NAME & No.: MC6 South Meager | DATE: 10-Nov-2004
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig | RIG NO.: 620 E
PROVINCE: BC | CAMP ☑ YES ☐ NO | RIG SAFETY DAYS: 49.00

TIME - HRS

	DRLG	CIRC	TRIPS	REAM	SURV	RIG SERV	RIG REPAIR	WAIT ON CSG	WAIT ON CMT	WAIT ON WELL	WAIT ON WEATHER	WAIT ON DAYLIGHT	RIG MOVE	TEST BOPE	CUT DRLG LINE	SLIP DRLG LINE	SAFETY MTG	OTHER
MORN	7.75					0.25												
DAY	7.75					0.25												
EVE	7.00		0.50			0.25	0.25											
TOTAL	22.50		0.50			0.75	0.25											

MORNING TOUR 0:00 TO 8:00

BIT RECORD

No.	Bit	Size (mm)	Length (m)
1	Bit	311	0.35
1	Motor	196	8.22
1	Float/Hydro Sub	194	1.07
2	Monels	204	18.56
1	Crossover	193	0.44
9	190mm D.C.	190	75.11
1	Jars	175	4.69
6	180mm D.C.	180	56.90
5	Accelerator/Jar	127	47.17
78	D.P.	STANDS	2153.16
1	D.P.	SINGLES	9.56
KELLY DOWN			-5.02
TOTAL			2367.00
WT. OF DC			23000.00
WT. OF STRING			120000.00

BIT NO.	16
SIZE	311
IADC CODE	
MFG	H.C.
TYPE	HRP66DX
SERIAL NO.	6027059
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2364.06
TOTAL METERS DRILLED (m)	63.00
TOTAL HOURS RUN	14.00
CUTTING STRUCTURE: T	
B	
G	
OC	
RP	
PR	
HOLE CONDITION	
HOLE DRAG	30000 up/17000 dwn
TORQUE AT BOTTOM	13191 ft-lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Fresh Water | Gel Based: ☐ | Oil Based: ☐ | Flowline Temp 69.2 c

	12:00	04:00	08:00
TIME	92.80		
DENSITY kg/m3	1020	1020	1020
FUNNEL VIS. (s/L)	43	42	41
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	142.9m3	143.9m3	144m3

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

Product	Amount x Unit
Caustic Soda	8sks.
Desco	5sks.
Gel	190sks.
Hydrated Lime	12sks.
Lignite	60sks.
Milpac	12sks.

METERS DRILLED

From	To	Bit No.	Rotary R.P.M.	WOB (1000 kg)	Avg. ROP (m/hr)
2336.00	2367.00	D	15	18-20	9.00

TIME LOG

From	To	Avg. ROP (m/hr)	Hours	Code	Activity
0:00	4:15	4.25	2		Drill fr. 2336m - 2365m
4:15	4:30	0.25	7		Rig Service, F/T Annular(20 secs)
4:30	8:00	3.60	2		Drill fr. 2355m - 2367m

CIRCULATING PRESSURE (KPA): 12400
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: 3800 @ 90 @ 2382.00

DEVIATION SURVEY

Depth (m)	Deviation (o)	Direction

NOTES

DRILLER SIGNATURE: Barry Verheist

Hrs. Run	Hrs. on Bit	Stack Temp	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
8.00	8.5			151000.00		

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Hours	Code	Activity
0:00	4:15	4.25	2	Drill fr. 2336m - 2365m
4:15	4:30	0.25	7	Rig Service, F/T Annular(20 secs)
4:30	8:00	3.60	2	Drill fr. 2355m - 2367m

MORNING TOUR CREW

RATE SCHEDULE: ☑ Kelman ☐ Hitchen ☐ Hydril

Crew	SOC. INS. NO.	Name	Hrs		Injuries Yes	Injuries No
Driller	642-369-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	122-830-839	Chris Eddy	8.00	CE	☐	☑
Floorman	652-890-757	Kyle Hryniw	8.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	636-977-702	Sheldon Langley		SL	☐	☑

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR 8:00 TO 16:00

BIT RECORD

No.	Bit	Size (mm)	Length (m)
1	Bit	311	0.35
1	Motor	196	8.22
1	Float/Hydro Sub	194	1.07
2	Monels	204	18.56
1	Crossover	193	0.44
9	190mm D.C.	190	75.11
1	Jars	175	4.69
6	180mm D.C.	180	56.90
5	Accelerator/Jar	127	47.17
77	D.P.	STANDS	2182.16
	D.P.	SINGLES	
KELLY DOWN			0.00
TOTAL			2394.40
WT. OF DC			23000.00
WT. OF STRING			121000.00

BIT NO.	16
SIZE	311
IADC CODE	
MFG	H.C.
TYPE	HRP66DX
SERIAL NO.	6027059
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2364.06
TOTAL METERS DRILLED (m)	90.00
TOTAL HOURS RUN	21.75
CUTTING STRUCTURE: T	
B	
G	
OC	
RP	
PR	
HOLE CONDITION	
HOLE DRAG	25-32 Up/14-20 Dn Sliding
TORQUE AT BOTTOM	13191
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Fresh Water | Gel Based: ☐ | Oil Based: ☐ | Flowline Temp 65.5 c

	00:00	12:00	16:00
TIME			
DENSITY kg/m3	1025	1030	1035
FUNNEL VIS. (s/L)	41	44	46
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	144.6m3	136.0m3	138.6m3

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

Product	Amount x Unit
Ligco	60 sks
Gel	80 sks
Caustic Soda	5 sks
Hydrated Lime	12 sks
Milpac	20 sks
Milgel	35 sks

METERS DRILLED

From	To	Bit No.	Rotary R.P.M.	WOB (1000 kg)	Avg. ROP (m/hr)
2367.00	2394.00	D	15-20	18-22	8.00

TIME LOG

From	To	Avg. ROP (m/hr)	Hours	Code	Activity
8:00	15:45	7.75	2		Drill Fr/2367m-2394m
15:45	16:00	0.25	7		Rig Service & Function Pipe Rams T/T Secs

CIRCULATING PRESSURE (KPA): 13200
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: 3829 @ 90 @ 2372.00

DEVIATION SURVEY

Depth (m)	Deviation (o)	Direction

NOTES

DRILLER SIGNATURE: Bill Mills

Hrs. Run	Hrs. on Bit	Stack Temp	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
8.00	8.5			155000.00		

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Hours	Code	Activity
8:00	15:45	7.75	2	Drill Fr/2367m-2394m
15:45	16:00	0.25	7	Rig Service & Function Pipe Rams T/T Secs

DAY TOUR CREW

RATE SCHEDULE: ☑ Kelman ☐ Hitchen ☐ Hydril

Crew	SOC. INS. NO.	Name	Hrs		Injuries Yes	Injuries No
Driller	716-324-181	Bill Mills	12.00	BM	☐	☑
Derrickman	829-826-282	Rob Roth	12.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	12.00	DF	☐	☑
Floorman	734-831-324	Zach Preston	12.00	ZP	☐	☑
Floorman	736-523-368	Nathan Surlnak	12.00	NS	☐	☑
Leaseman	648-747-428	Adam Johnson	12.00	AJ	☐	☑

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR 16:00 TO 24:00

BIT RECORD

No.	Bit	Size (mm)	Length (m)
1	Bit	311	0.35
1	Motor	196	8.22
1	Float/Hydro Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
9	190mm D.C.	190	75.11
1	Jars	175	4.69
6	180mm D.C.	180	56.69
5	Accelerator/Jar	127	47.17
78	D.P.	STANDS	2216.80
	D.P.	SINGLES	
KELLY DOWN			-1.00
TOTAL			2422.10
WT. OF DC			23000.00
WT. OF STRING			121000.00

BIT NO.	16
SIZE	311
IADC CODE	
MFG	H.C.
TYPE	HRP66DX
SERIAL NO.	6027059
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2364.06
TOTAL METERS DRILLED (m)	118.00
TOTAL HOURS RUN	26.75
CUTTING STRUCTURE: T	
B	
G	
OC	
RP	
PR	
HOLE CONDITION	
HOLE DRAG	31000 up/18000 dwn
TORQUE AT BOTTOM	13191 ft-lbs
FILL ON BOTTOM (m)	

MUD RECORD

MUD TYPE: Fresh Water | Gel Based: ☐ | Oil Based: ☐ | Flowline Temp 69.2 c

	16:00	21:00	23:00
TIME			
DENSITY kg/m3	1030	1025	1025
FUNNEL VIS. (s/L)	45	43	43
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	144.7m3	133.9m3	136.1m3

MUD MATERIAL ADDED | SOLIDS CONTROL: Centrifuge

Product	Amount x Unit
Caustic Soda	3 sks
Milgel	35 sks
Defoamer L64	2 pls

METERS DRILLED

From	To	Bit No.	Rotary R.P.M.	WOB (1000 kg)	Avg. ROP (m/hr)
2394.00	2422.00	D	15-20	18-22	16:00

TIME LOG

From	To	Avg. ROP (m/hr)	Hours	Code	Activity
16:00	23:00	7.00	2		Drill Fr/2394m- 2422m
23:00	23:15	0.25	7		Rig Service, F/T H.C.R.(2 secs)
23:15	23:45	0.50	5		Circ & clean hole for single shot survey
23:45	24:00	0.25	10		Install circulating head & pump down survey BBL.

CIRCULATING PRESSURE (KPA): 11900
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: 3936 @ 90 @ 2391.00

DEVIATION SURVEY

Depth (m)	Deviation (o)	Direction

NOTES

DRILLER SIGNATURE: Barry Verheist

Hrs. Run	Hrs. on Bit	Stack Temp	Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
8.00	9.5			153000.00	W/L surveys	

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

From	To	Hours	Code	Activity
16:00	23:00	7.00	2	Drill Fr/2394m- 2422m
23:00	23:15	0.25	7	Rig Service, F/T H.C.R.(2 secs)
23:15	23:45	0.50	5	Circ & clean hole for single shot survey
23:45	24:00	0.25	10	Install circulating head & pump down survey BBL.

EVENING TOUR CREW

RATE SCHEDULE: ☑ Kelman ☐ Hitchen ☐ Hydril

Crew	SOC. INS. NO.	Name	Hrs		Injuries Yes	Injuries No
Driller	642-369-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	122-830-839	Chris Eddy	8.00	CE	☐	☑
Floorman	652-890-757	Kyle Hryniw	8.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20041010_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Yarco Company

Based on the CAODC ETS file standard

SPUD 2004-09-22 22:48	RIG RELEASE	JOB NO. 21	AFE
LICENCE NO a-92-A / 92-J-12	WELL NAME AND NO MC6 South Meager		
OPERATOR Western Geopower Corp		CONTRACTOR Precision Drilling	
SURFACE LOCATION a-92-A / 92-J-12		KINGDOM ID b-1-H / 92-J-12	
SIGNATURE OF OPERATOR'S REPRESENTATIVE Russ Silva		SIGNATURE OF CONTRACTOR'S REPRESENTATIVE Kevin Vig	

DAILY CHECKS (OPR / B.M.)
1) Daily Walk Around Inspection
2) Derrick Inspection/Weekly (Every Weekend)
3) H2S Signs Posted & Washed
4) Well Logging & Mud Gas Equipment
5) Fire Extinguishers
6) BOP Drills Performed
7) Weekly Inspect BOP's Functional & Operable (Also Daily)
8) Rig Site Hazard and Safety Meeting (Pre-tour Meeting)
9) C & S BOP's Rig Safety Inspection (Complete Upon Arrival)
10) Mast Inspection Before Raising or Lowering
11) Down Hole Checklist
12) Derrick Safe Checklist

DATE 11-Nov-2004 | RIG NO 620 E | RIG 29130 BOILER | FUEL @ 5:00

WEATHER: TEMPERATURE -5 | CURRENT CONDITION Clear | WIND DIRECTION Calm | ROAD Fair

CASING TUBING OR LINER

O.D. (mm)	WEIGHT (kg/m)	GRADE	THREAD	NO. OF JOINTS	TOTAL CSG LENGTH	TOP TO CSG HEAD (m)	SET AT (m)
						7.32	
		K-55		10	125.00	6.31	124.00
						8.22	867.00

LINEAR MASS (kg/m)	GRADE	NOM. ID (mm)	DRIFT/CLEARANCE (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LENGTH (mm)
29.00	S-95	63.90	165.00	5"XH	170	F-1600	BPMMP	305
38.00	S-95	57.90	159.00	5"XH	150	F-1600	BPMMP	305

TIME - HRS

	OPER	RIG SERV.	REPAIR	SCHEDULED CORING	SLIDE DRLG	WOW	RIG RELEASE	DRLG ROTATE	TRIP IN/OUT	CIRC CONDITION	TRIP IN/OUT	REAM/WASH	SURVEY	DEVIATION	CUT DRLG LINE	WAIT ON CEMENT	RIG REPAIR	RIG MAINT.	TEST BOPE	MISC.	MAKE UP BHA	Pump maintenance
MORN	6.50				0.50			0.25														1.75
DAY	7.75							0.25														
EVE	5.25							0.25														
TOTAL	20.00				0.50			0.75														1.75

SHALE SHAKER(S)

NO.	TYPE	NEW
2	Derrick	

SCREENS CHANGED: 8.00 — YES / NO

	TOP	BOTTOM
1.00	100	100
4.00	100	100
24.00	100	100

RENTALS/SERVICES

INCL.	INV.	EVA.

WELL TYPE: Geothermal | RE-ENTRY: YES / NO | KB TO GROUND ELEV.: 7.32

WELL NAME & NO.: MC6 South Meager | DATE: 11-Nov-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

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

PROVINCE: BC | CAMP: YES / NO | RIG SAFETY DAYS: 50.00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.35
1	Motor	196	8.22
1	Float / Lifting Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	8.44
8	180mm D.C.	180	75.11
1	Jars	176	4.69
6	180mm D.C.	180	55.59
5	Heavyweight Drill Pipe	127	47.17
79	D/P	STANDS	2210.80
2	D/P	SINGLES	19.14
	KELLY/SWIVEL		-3.24
	TOTAL		2439.00

BIT NO	16
SIZE	311
IADC CODE	
MFG	H.C.
TYPE	HRP86DX
SERIAL NO	6027059
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2304.00
TOTAL METERS DRILLED (m)	135.00
TOTAL HOURS RUN	34.25

OUTSIDE STRUCTURE: T | B | WOC | LOC | G | Gage | OC | BEARING/SEAL | NOZZLES

HOLE CONDITION

HOLE DRAG	31000 up/ 17000 dwn
TORQUE AT BOTTOM	13191 ft-lbs
FILL ON BOTTOM (m)	

WT. OF DC: 23000.00 | WT. OF STRING: 121000.00

MUD RECORD

MUD TYPE: Water Based / Oil Based — Flowline Temp 69.2 c

TIME	02:00	04:00	08:00
DENSITY (kg/m3)	1025	1025	1025
FUNNEL VIS. (s/L)	44	44	45
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	139.9/m3	141.2m3	143.3m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	MUD LOST (m3)	MUD RECOVERED (m3)	MUD DISCARDED (m3)
Caustic Soda	9sks.				
Defoamer LD-8	1pail				
Hydrated Lime	12sks.				
Lignite	70sks.				
Milgel	175sks.				
Milpac	15sks.				

Centrifuge

HOURS RUN	MUD LOST (m3)	MUD RECOVERED (m3)	MUD DISCARDED (m3)

HOURS RUN	MUD LOST (m3)	MUD RECOVERED (m3)	MUD DISCARDED (m3)

METERS DRILLED

FROM	TO	NO. OF BITS	BIT NO.	ROTARY R.P.M.	WT. ON BIT (1000 kg)
2432.00	2439.00	D	16	15-20	

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.
11700	152	90	152	90

REDUCED PUMP SPEED: 3900 @ 90 @ 2431.80

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2406.10	19.5	24.00

DRILLER SIGNATURE: Barry Verhelst

TIME LOG

FROM	TO	HRS	CODE	NPT	DESCRIPTION
0:00	1:00	1.00	10		Install circulating head & pump down single shot survey(Missrun)
1:00	3:30	2.50	2		Drill fr. 2422m - 2432m
3:30	3:45	0.25	7		Rig Service, F/T Annular(20 secs)
3:45	4:15	0.50	5		Circulate & clean hole
4:15	5:00	0.75	10		Install circulating head, pump down single shot survey & retrieve
5:00	8:00	3.00	2		Drill fr. 2432m - 2439m

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	190000.00	W/L surveys	

MORNING TOUR 0:00 to 8:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verhelst	8.00	BV	
Derrickman	647-452-803	Dave Makowsky	8.00	DM	
Motorman	735-714-230	Chantry Vig	8.00	CV	
Floorman	122-830-839	Chris Eddy	8.00	CE	
Floorman	652-890-757	Kyle Hryniw	8.00	KH	
Leaseman	713-959-461	Gary Kennedy	8.00	GK	
Rig Manager	719-409-484	Kevin Vig		KV	
Top Drive	638-977-702	Sheldon Langley		SL	

RATE SCHEDULE: REGULAR / REPAIR / DOWN

DRIVER A | CREW SAFETY DAYS | DRIVER B

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.35
1	Motor	196	8.22
1	Float / Lifting Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	8.44
8	180mm D.C.	180	75.11
1	Jars	176	4.69
6	180mm D.C.	180	55.59
5	Heavyweight Drill Pipe	127	47.17
79	D/P	STANDS	2239.47
1	D/P	SINGLES	9.78
	KELLY/SWIVEL		3.45
	TOTAL		2465.00

BIT NO	16
SIZE	311
IADC CODE	
MFG	H.C.
TYPE	HRP86DX
SERIAL NO	6027059
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2304.80
TOTAL METERS DRILLED (m)	135.00
TOTAL HOURS RUN	42.00

OUTSIDE STRUCTURE: T | B | WOC | LOC | G | Gage | OC | BEARING/SEAL | NOZZLES

HOLE CONDITION

HOLE DRAG	28-38 Up/16-21 Dn Sliding
TORQUE AT BOTTOM	13415
FILL ON BOTTOM (m)	

WT. OF DC: 23000.00 | WT. OF STRING: 124000.00

MUD RECORD

MUD TYPE: Water Based / Oil Based — Flowline Temp 69.2 c

TIME	09:00	12:00	16:00
DENSITY (kg/m3)	1025	1030	1030
FUNNEL VIS. (s/L)	40	41	42
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP @	136.2m3	138.6m3	143.3m3

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	MUD LOST (m3)	MUD RECOVERED (m3)	MUD DISCARDED (m3)
Caustic Soda	9 sks				
Milgel	210 sks				
Milpac	20 sks				
Hydrated Lime	12 sks				
Lignite	80 sks				
Defoamer LD-8	2 pls				

Centrifuge

HOURS RUN	MUD LOST (m3)	MUD RECOVERED (m3)	MUD DISCARDED (m3)

HOURS RUN	MUD LOST (m3)	MUD RECOVERED (m3)	MUD DISCARDED (m3)

METERS DRILLED

FROM	TO	NO. OF BITS	BIT NO.	ROTARY R.P.M.	WT. ON BIT (1000 kg)
2439.00	2465.00	D	15	18-22	

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.
12500	152	90	152	90

REDUCED PUMP SPEED: 3902 @ 90 @ 2439.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HRS	CODE	NPT	DESCRIPTION
8:00	14:15	6.25	2		Drill Fr/2439m-2460m
14:15	14:30	0.25	7		Rig Service & Function Pipe Rams 7/7 Secs
14:30	16:00	1.50	2		Drill Fr/2460m-2465m

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	164000.00		

DAY TOUR 8:00 to 16:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-161	Bill Mills	12.00	BM	
Derrickman	629-926-262	Rob Roth	12.00	RR	
Motorman	722-572-781	Dwayne Fry	12.00	DF	
Floorman	734-831-324	Zach Preston	12.00	ZP	
Floorman	738-523-366	Nathan Surinak	12.00	NS	
Leaseman	648-747-426	Adam Johnson	12.00	AJ	

RATE SCHEDULE: REGULAR / REPAIR / DOWN

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	Bit	311	0.35
1	Motor	196	8.22
1	Float / Lifting Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	9.04
8	180mm D.C.	180	75.11
1	Jars	176	4.69
6	180mm D.C.	180	55.59
5	Heavyweight Drill Pipe	127	47.17
80	D/P	STANDS	2288.52
2	D/P	SINGLES	19.11
	KELLY/SWIVEL		-12.33
	TOTAL		2487.60

BIT NO	16
SIZE	311
IADC CODE	
MFG	H.C.
TYPE	HRP86DX
SERIAL NO	6027059
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2304.00
TOTAL METERS DRILLED (m)	183.00
TOTAL HOURS RUN	48.75

OUTSIDE STRUCTURE: T | B | WOC | LOC | G | Gage | OC | BEARING/SEAL | NOZZLES

HOLE CONDITION

HOLE DRAG	28-38 Up/16-21 Dn Sliding
TORQUE AT BOTTOM	13415
FILL ON BOTTOM (m)	

WT. OF DC: 23000.00 | WT. OF STRING: 124000.00

MUD RECORD

MUD TYPE: Water Based / Oil Based — Flowline Temp 68.2 c

TIME	16:00	21:00	
DENSITY (kg/m3)	1026	1020	
FUNNEL VIS. (s/L)	40	39	
W.L. (cm3)			
pH	10.0	10.0	
PV/YP @	144.6m3	149.7m3	

MUD MATERIAL ADDED — SOLIDS CONTROL

PRODUCT	AMOUNT x UNIT	HOURS RUN	MUD LOST (m3)	MUD RECOVERED (m3)	MUD DISCARDED (m3)
Caustic Soda	2 sks				
Gel	35 sks				
Milgel	35 sks				

Centrifuge

HOURS RUN	MUD LOST (m3)	MUD RECOVERED (m3)	MUD DISCARDED (m3)

HOURS RUN	MUD LOST (m3)	MUD RECOVERED (m3)	MUD DISCARDED (m3)

METERS DRILLED

FROM	TO	NO. OF BITS	BIT NO.	ROTARY R.P.M.	WT. ON BIT (1000 kg)
2465.00	2487.00	D	15-20	18-22	

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.
12800	152	90	152	90

REDUCED PUMP SPEED: 3800 @ 90 @ 2473.80

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

DRILLER SIGNATURE: Barry Verhelst

TIME LOG

FROM	TO	HRS	CODE	NPT	DESCRIPTION
16:00	20:15	4.25	2		Drill Fr/2465m- 2480m
20:15	20:30	0.25	7		Rig Service, F/T H.C.R.(2 secs)
20:30	23:00	2.50	2		Drill fr. 2480m - 2487m
23:00	24:00	1.00	22		(Pump maintenance)Work drill string

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

NOTES

OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
	171000.00		

EVENING TOUR 16:00 to 24:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	642-389-910	Barry Verhelst	4.00	BV	
Derrickman	647-452-803	Dave Makowsky	4.00	DM	
Motorman	735-714-230	Chantry Vig	4.00	CV	
Floorman	122-830-839	Chris Eddy	4.00	CE	
Floorman	652-890-757	Kyle Hrynlw	4.00	KH	
Leaseman	713-959-461	Gary Kennedy	4.00	GK	

RATE SCHEDULE: REGULAR / REPAIR / DOWN

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

ETS SERIAL NUMBER: PREC620 _20041011_1A

CHIMO ETS SOFTWARE VERSION:

Chimo Equipment
A Vanco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:19 | RIG RELEASE | JOB NO.: 21 | AFE

LICENCE NO.: 8-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | MUNICIPALITY: b-T-N / 92-J-12

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

DAILY CHECKS

DATE: 12-Nov-2004 | RIG NO: 620 E | RIG: 43416 BOILER | TEMPERATURE: -3 | CURRENT CONDITION: Clear | WIND DIRECTION: Calm | ROAD: Fair

LAST CASING / TUBING OR LINER

	O.D. (mm)	WT. lb/ft (kg/m)	GRADE	TOP (m)	BOTTOM (m)	THREAD	NO OF JOINTS	TOTAL PIPE LENGTH (m)	KB TO CSG HEADING (m)	DEPTH AT (m)
									7.32	
			K-55				10	125.90	6.31	124.00
									6.22	857.00

	LINER HOLE Depth	GRADE	WT. lb/ft (kg/m)	SOCK. I.D. (mm)	THREAD TYPE	NO OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LEN. (mm)
	29.00	SS-95	83.00	168.00	5"XH	178	F-1600	GPMMP	305
	38.00	SS-95	67.00	168.00	5"XH	189	F-1600	GPMMP	305

WELL TYPE: Geothermal | RE-ENTRY ☐YES ☒NO | KB TO GROUND ELEV.: 7.32

WELL NAME & NO.: MC6 South Meager | DATE: 12-Nov-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

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

PROVINCE: BC | CAMP ☑YES ☐NO | RIG SAFETY DAYS: 51.00

TIME / HRS

	TOP(s)	BOTTOM	DRL. ACTUAL	REAMED	CORED	DRLG	CIRC & COND	TRIPS	SURVEY	LUBRICATE RIG	REPAIR RIG	CUT OFF DRLG LINE	SLIP DRLG LINE	DEVIATION	WAIT ON CEMENT	RIG UP & TEAR DOWN	OTHER	TOTAL HRS
MORN	4.75			1.00	1.00	0.25												1.00
DAY					7.75	0.25												
EVE	4.50	1.00			2.75	0.25												
TOTAL	9.75	1.00		1.00	11.50	0.75												1.00

SHALE SHAKER(S) / RENTALS/SERVICES

DEPTH	SCREEN TYPE	NO.	SCREEN CHANGED	HOLE
	Derrick		☑YES ☐NO	
0.00	BOTTOMS UP			
0.00	TOP	100	TOP 100	
0.00	MIDDLE	100	MIDDLE 100	
24.00	BOTTOM	100	BOTTOM 100	

MORNING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	196	8.22
1	Float / Upper Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
3	180mm D.C.	180	75.11
1	Jars	175	4.69
9	180mm D.C.	180	86.60
5	Accelerator Sub Typ	127	47.17
			TOTAL METERS DRILLED (m): 199.00
			TOTAL HOURS RUN: 53.50
81	D.P.	STANDS	2297.20
0	D.P.	SINGLES	0.00
	WELL TOTAL		-5.70
	TOTAL		2503.80
WT. OF DC			23000.00
WT. OF STRING			125000.00

BIT NO: 16 | SIZE: 311 | IADC CODE: | MFG.: H.C. | TYPE: HRP86DX | SERIAL NO.: 6027059 | JETS: | DEPTH OUT (m): 2503.00 | DEPTH IN (m): 2304.00 | CUTTING STRUCTURE: 1 | 1 | WT | A | 0 | Chgs | LOC | BEARINGS / SEALS | GAUGE | OTHER | PULLED FOR

HOLE CONDITION | HOLE DRAG: 41000 up/21000 dwn | TORQUE AT BOTTOM: 13191 ft-lbs | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED | FlowLine Temp 69.2 c

TIME	02:00	04:00	06:00
Density (kg/m³)	1020	1020	1020
Funnel Vis. (sec)	40	41	41
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT@	145m3	142.8m3	143.3m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	10sks.
Natural Gel	240sks.
Hydrated Lime	12sks.
Ligco	60sks.
Milpac	1Bsks.

SOLIDS CONTROL: Centrifuge | HOURS RUN | MUD LOSS | DILUTION VOLUME

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB
2487.00	2503.00	D	15	18-20

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

12900	152	90	152	90

REDUCED PUMP SPEED: 4000 @ 90 @ 2488.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2478.50	14.5	11.00

TIME LOG

FROM	TO	HOURS	CODE
0:00	3:00	3.00	2
3:00	3:15	0.25	7
3:15	5:00	1.75	2
5:00	6:00	1.00	5
6:00	7:00	1.00	10
7:00	8:00	1.00	6

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill fr. 2487m - 2488m	
Rig Service, F/T Annular(20 secs)	
Drill fr. 2488m - 2502m	
Condition Mud & Circ.	
Pump down & retrieve single shot survey	
Hoist bit #16, flow check @ 2490m	

NOTES: RT crown 12.0m, estimated losses @ Hydrothermal, Viscosity frequent bangs, blows & slips. Singhurst Pt. 62.5 m Pt. 24.1m, Pump #1: 24.0 spm, Pump #2: 26.0 spm

DRILLER SIGNATURE: Barry Verheist | HRS. RUN: 8.00 | GOOD: 8.5 | CRACK / WEAR | OPERATOR FUEL | MAX EXP. HOOKLOAD: 179000.00 | SAFETY TOPIC | M.A.C.P.

MORNING TOUR 0:00 TO 8:00

RATE SCHEDULE: ☑REGULAR ☐ ☐

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-388-910	Barry Verheist	8.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	8.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	8.00	CV	☐	☑
Floorman	122-830-839	Chris Eddy	8.00	CE	☐	☑
Floorman	652-890-757	Kyle Hryniw	8.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	713-405-484	Kevin Vig		KV	☐	☐
Top Drive	936-977-702	Sheldon Langley		SL	☐	☐

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	196	8.22
1	Float / Upper Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
3	180mm D.C.	180	75.11
1	Jars	175	4.69
5	180mm D.C.	180	56.60
5	Accelerator Sub Typ	127	47.17
			TOTAL METERS DRILLED (m): 199.00
			TOTAL HOURS RUN: 53.50
81	D.P.	STANDS	2297.20
0	D.P.	SINGLES	0.00
	WELL TOTAL		-5.70
	TOTAL		2503.80
WT. OF DC			23000.00
WT. OF STRING			125000.00

	BIT NO.	16	17
	SIZE	311	311
	IADC CODE		
	MFG.	H.C.	H.C.
	TYPE	HRP86DX	HRP86DX
	SERIAL NO.	6027059	5044615
	JETS		
	DEPTH OUT (m)	2503.00	
	DEPTH IN (m)	2304.00	2503.00

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

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED | FlowLine Temp 69.2 c

TIME		
Density (kg/m³)		
Funnel Vis. (sec)		
W.L. (cm3)		
pH		
PVT@		

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Gel	60 sks
Ligco	44 sks
Milpac	2 sks
Caustic Soda	6 sks

SOLIDS CONTROL: Centrifuge | HOURS RUN | MUD LOSS | DILUTION VOLUME

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB
2503.00		D		

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	HOURS	CODE
0:00	12:30	4.50	5
12:30	12:45	0.25	7
12:45	16:00	3.25	6

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Pull Out Of Hole	
Rig Service & Function H.C.R. Valve 4/4 Secs	
Make up Bit & Run in Hole	

NOTES: Fraction Crown 0.0m, Closed Manifold Valve out of hole. Trip Record: mass = 57.30 t, Cas. = 54.00 t / Diff = 3.30 mt

DRILLER SIGNATURE: Bill Mills | HRS. RUN: 8.00 | GOOD: 9.5 | CRACK / WEAR | OPERATOR FUEL | MAX EXP. HOOKLOAD: 165000.00 | SAFETY TOPIC | M.A.C.P.

DAY TOUR 8:00 TO 16:00

RATE SCHEDULE: ☑REGULAR ☐REPAIR ☐WAITING

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	734-831-324	Zach Preston	12.00	ZP	☐	☑
Floorman	736-523-388	Nathan Surinak	12.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	12.00	AJ	☐	☑

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	bit	311	0.35
1	Motor	196	8.22
1	Float / Upper Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
3	180mm D.C.	180	75.11
1	Jars	175	4.69
6	180mm D.C.	180	56.60
5	Accelerator Sub Typ	127	47.17
			TOTAL METERS DRILLED (m): 18.00
			TOTAL HOURS RUN: 4.00
81	D.P.	STANDS	2297.20
2	D.P.	SINGLES	18.87
	WELL TOTAL		-6.77
	TOTAL		2521.60
WT. OF DC			23000.00
WT. OF STRING			126000.00

	BIT NO.	17
	SIZE	311
	IADC CODE	
	MFG.	H.C.
	TYPE	HRP86DX
	SERIAL NO.	5044615
	JETS	
	DEPTH OUT (m)	2503.80
	DEPTH IN (m)	2503.00

HOLE CONDITION | HOLE DRAG: 41000 up/21000 dwn | TORQUE AT BOTTOM: 14033 ft-lbs | FILL ON BOTTOM (m):

MUD RECORD

MUD TYPE ☑WATER BASED ☐OIL BASED | FlowLine Temp 69.2 c

TIME	18:00	21:00	23:00
Density (kg/m³)	1010	1010	1020
Funnel Vis. (sec)	37	37	46
W.L. (cm3)			
pH	9.5	10.0	10.0
PVT@	122.4m3	127m3	134.9m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL: Centrifuge | HOURS RUN | MUD LOSS | DILUTION VOLUME

METERS DRILLED

FROM	TO	BIT NO.	ROTARY R.P.M.	WOB
2503.00	2521.00	D	15	18-20

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

13580	152	90	152	90

REDUCED PUMP SPEED: 4000 @ 90 @ 2506.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE
16:00	18:45	2.75	6
18:45	19:45	1.00	3
19:45	20:45	1.00	2
20:45	21:00	0.25	7
21:00	24:00	3.00	2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Run in Hole	
Wash To Bottom Fr2478m - 2503m	
Pattern bit & drill fr. 2503m - 2508m	
Rig Service, F/T pipe rams(6 secs)	
Drill fr. 2508m - 2521m	

NOTES: RT Crown 12.0m, estimated losses @ 20.0m/hour. Estimate losses from trip @ 180m3

DRILLER SIGNATURE: Barry Verheist | HRS. RUN: 8.00 | GOOD: 9.5 | CRACK / WEAR | OPERATOR FUEL | MAX EXP. HOOKLOAD: 171000.00 | SAFETY TOPIC: Slip & falls | M.A.C.P.

EVENING TOUR 16:00 TO 24:00

RATE SCHEDULE: ☑REGULAR ☐REPAIR ☐WAITING

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	642-388-910	Barry Verheist	4.00	BV	☐	☑
Derrickman	647-452-903	Dave Makowsky	4.00	DM	☐	☑
Motorman	735-714-230	Chantry Vig	4.00	CV	☐	☑
Floorman	122-830-839	Chris Eddy	4.00	CE	☐	☑
Floorman	652-890-757	Kyle Hryniw	4.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☐	☑

DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20041012_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49	RIG RELEASE:	JOB NO.: 21	AFE:	
LICENCE NO.: a-92-A / 92-J-12	WELL NAME AND NO: MC6 South Meager			
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		SIGNATURE OF CONTRACTORS REPRESENTATIVE		

DATE	13-Nov-2004
RIG NO.	620 E
FUEL (RIG)	42938
BOILER	
TEMPERATURE	0
CURRENT CONDITION	Cloudy
WIND DIRECTION	Calm
ROAD	Muddy

DAILY CHECKS (OPR / R.M): all checked.

LAST CASING, TUBING OR LINER								KB TO CSG HEAD	SET AT
								7.32	
				K-55	10	125.00		6.31	124.00
								6.22	657.00

	Stroke	Grade		Tool J.T.O.D	Thread type	No. of joints	Pump type	Pump manufacturer	Stroke
	29.00	SS-95	83.00	165.00	5"XH	170	F-1600	BPMMP	305
	36.00	SS-95	67.00	165.00	5"XH	150	F-1600	BPMMP	305

WELL TYPE: Geothermal	RE-ENTRY: ☐ Yes ☑ No	KB TO GROUND ELEV.: 7.32	
WELL NAME & No.: MC6 South Meager		DATE: 13-Nov-2004	
OPERATOR: Western Geopower Corp	CONTRACTOR: Precision Drilling		
RIG MANAGER:		RIG NO: 620 E	
PROVINCE: BC	CAMP: ☑ Yes ☐ No	RIG SAFETY DAYS: 52.00	

TIME - HRS

OPER	Drill actual	Other	Service Top Drive	Service F1600 Pump	TOTALS
MORN	4.75	0.25	1.00		6.00
DAY	7.50	0.25	0.25		8.00
EVE	7.50	0.25		0.25	8.00
TOTAL	21.75	0.75	1.25	0.25	24.00

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

MORNING TOUR (0:00 to 6:00)

Drill String Assembly

No.	Item	O.D. (mm)	Length
1	bit	311	0.35
1	Motor	196	8.22
1		194	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
8	180mm D.C.	180	75.11
1	Jars	175	4.69
6	180mm D.C.	180	56.60
5		127	47.17
82	D.P.	Stands	2326.62
1	D.P.	Singles	9.55
	Kelly down		
	Total		2547.47
	Wt. of DC		23000.00
	Wt. of string		128000.00

Bit Record

BIT NO.	17
SIZE	311
IADC CODE	
MFG	H.C.
TYPE	HRP66DX
SERIAL NO	5044615
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2503.00
TOTAL METERS DRILLED (m)	44.00
TOTAL HOURS RUN	10.75
HOLE DRAG	37000 up/21000 dwn
TORQUE AT BOTTOM	14875 ft-lbs
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE: ☑ Water base ☐ Oil base — FlowLine Temp 68.2 c

TIME	02:00	04:00	06:00
DENSITY	1020	1025	1026
FUNNEL VIS.	53	52	51
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT@	144m3	126.1m3	133.6m3

Mud Material Added: Product	Amount + Unit
Caustic Soda	11sks.
Defoamer LD-8	1pail
Hydrated Lime	12sks.
Ligco	61sks.
Natural Gel	340sks.
Milpac	20sks.
Desco	2sks.

Solids Control: Centrifuge

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
2521.00	2547.00	D	15	18-20

Circulation Pressure (kPa)	Pump No. 1 Liner	S.P.M	Pump No. 2 Liner	S.P.M
14300	152	90	152	90

Reduced Pump Speed: 4500 @ 10 @ 2524.00

Deviation Survey: DEPTH (m) / DEVIATION (o) / DIRECTION — none recorded

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
0:00	1:15	1.25	2	Drill fr. 2521m - 2527m
1:15	1:30	0.25	7	Rig Service, F/T Annular(20 secs)
1:30	5:00	3.50	2	Drill fr. 2527m - 2540m
5:00	6:00	1.00	22	(Maintenance) on pump #2
6:00	8:00	2.00	2	Drill fr. 2540 - 2547m

NOTES

Driller Signature	BOP Drill		Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
Barry Verhelst	6.00	5.5		167000.00	Slip & falls	

Crew

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	122-830-838	Chris Eddy	8.00	CE	☐	☑
Floorman	652-890-757	Kyle Hryniw	8.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	8.00	GK	☐	☑
Rig Manager	719-408-484	Kevin Vig		KV	☐	☑
Top Drive	636-977-702	Sheldon Langley		SL	☐	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invert — DRIVER A / CREW SAFETY DAYS / DRIVER B

DAY TOUR (8:00 to 16:00)

Drill String Assembly

No.	Item	O.D. (mm)	Length
1	bit	311	0.35
1	Motor	196	8.22
1		184	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
8	180mm D.C.	180	75.11
1	Jars	175	4.69
6	180mm D.C.	180	56.60
5		127	47.17
83	DP	Stands	2354.89
2	DP	Singles	19.12
	Kelly down		-10.31
	Total		2576.00
	Wt. of DC		23000.00
	Wt. of string		128000.00

Bit Record

BIT NO.	17
SIZE	311
IADC CODE	
MFG.	H.C.
TYPE	HRP66DX
SERIAL NO.	5044615
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2503.00
TOTAL METERS DRILLED	73.00
TOTAL HOURS RUN	18.25
HOLE DRAG	37up/20dn Sliding
TORQUE AT BOTTOM	14257
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE: ☑ Water base ☐ Oil base — FlowLine Temp 68.2 c

TIME	09:00	12:00	15:00
DENSITY	1026	1026	1026
FUNNEL VIS.	46	56	50
W.L. (cm3)			
pH	10.0	9.5	10.0
PVT@	140.3m3	148.3m3	146.1m3

Mud Material Added: Product	Amount + Unit
Gel	240 sks
Hydrated Lime	12 sks
Milpac	18 sks
Ligco	80 sks
Caustic Soda	7 sks
Desco	2 sks

Solids Control: Centrifuge

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
2547.00	2576.00	D	15	18-20

Circulation Pressure (kPa)	Pump No. 1 Liner	S.P.M	Pump No. 2 Liner	S.P.M
13768	152	90	152	90

Reduced Pump Speed: 4361 @ 90 @ 2564.00

Deviation Survey: DEPTH (m) / DEVIATION (o) / DIRECTION — none recorded

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
8:00	12:30	4.50	2	Drill Fr/2547m-2565m
12:30	12:45	0.25	7	Rig Service & Function Pipe Rams 7/7 Secs
12:45	13:00	0.25	22	(Service Top Drive)
13:00	16:00	3.00	2	Drill Fr/2565m-2576m

NOTES

Driller Signature	BOP Drill		Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
Bill Mills	6.00	5.5		174000.00	Slips & Falls	

Crew

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	734-631-324	Zach Preston	12.00	ZP	☐	☑
Floorman	736-523-366	Nathan Surinak	12.00	NS	☐	☑
Leaseman	848-747-426	Adam Johnson	12.00	AJ	☐	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invert — DRIVER A / CREW SAFETY DAYS / DRIVER B

EVENING TOUR (16:00 to 24:00)

Drill String Assembly

No.	Item	O.D. (mm)	Length
1	bit	311	0.35
1	Motor	196	8.22
1		194	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
8	180mm D.C.	180	75.11
1	Jars	175	4.69
6	180mm D.C.	180	56.60
5		127	47.17
84	DP	Stands	2383.58
1	DP	Singles	9.50
	Kelly down		-2.48
	Total		2603.00
	Wt. of DC		23000.00
	Wt. of string		129000.00

Bit Record

BIT NO.	17
SIZE	311
IADC CODE	
MFG.	H.C.
TYPE	HRP66DX
SERIAL NO	5044615
JETS	
DEPTH OUT (m)	
DEPTH IN (m)	2503.00
TOTAL METERS DRILLED	100.00
TOTAL HOURS RUN	25.75
HOLE DRAG	36000 up/22000 dwn
TORQUE AT BOTTOM	14875 ft-lbs
FILL ON BOTTOM (m)	

Mud Record

MUD TYPE: ☑ Water base ☐ Oil base — FlowLine Temp 69.2 c

TIME	18:00	21:00	23:00
DENSITY	1025	1020	1020
FUNNEL VIS.	48	47	50
W.L. (cm3)			
pH	10.0	10.0	10.0
PVT@	144.3m3	138.8m3	140.1m3

Mud Material Added: Product	Amount + Unit
Caustic Soda	3 sks

Solids Control: Centrifuge

Meters Drilled

FROM	TO		ROTARY RPM	WT ON BIT
2576.00	2603.00	D	15	18-22

Circulation Pressure (kPa)	Pump No. 1 Liner	S.P.M	Pump No. 2 Liner	S.P.M
13400	152	90	152	90

Reduced Pump Speed: 4200 @ 90 @ 2603.00

Deviation Survey: DEPTH (m) / DEVIATION (o) / DIRECTION — none recorded

Time Log / Details of Operations in Sequence and Remarks

From	To	Hrs	Code	Details
16:00	18:30	2.50	2	Drill Fr/2576m-2584m
18:30	18:45	0.25	23	(Service F1600 Pump) Changed Head
18:45	23:45	5.00	2	Drill Fr/2584 - 2603m
23:45	24:00	0.25	7	Rig Service, F/T H.C.R.(2 secs)

NOTES

Driller Signature	BOP Drill		Operator Fuel	Max Exp Hookload	Safety Topic	M.A.C.P.
Barry Verhelst	6.00	9.5		174000.00		

Crew

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	122-830-838	Chris Eddy	4.00	CE	☐	☑
Floorman	652-890-757	Kyle Hryniw	4.00	KH	☐	☑
Leaseman	713-959-461	Gary Kennedy	4.00	GK	☐	☑

RATE SCHEDULE: ☑ Regular ☐ Repair ☐ Invert — DRIVER A / CREW SAFETY DAYS / DRIVER B

Chimo Equipment
A Versa Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49	RIG RELEASE:	JOB NO.: 21	AFE:
LICENCE NO.: a-92-A / 92-J-12	WELL NAME AND NO.: MC6 South Meager		
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: P.M.

WEATHER: DATE 14-Nov-2004; RIG NO. 620 E; FUEL @ 6:00; RIG 13795 BOILER; TEMPERATURE 0; CURRENT CONDITION Snow; WIND DIRECTION Calm; ROAD Good

CASING OR LINER	O.D. (inch)	WEIGHT (lb/ft)	GRADE	MAKE	THREAD	NO. OF JOINTS	TOTAL PIPE LENGTH	KB TO CSG HEAD (m)	SET AT (m)
								7.32	
					K-55	10	126.00	6.31	124.00
								6.23	867.00

	DEPTH (m)	LINER SIZE (inch)	GRADE	MFG. ID (mm)	FUEL/T.O.G. (l/min)	THREAD TYPE	NO. OF JOINTS	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	97.00	166.00	5"XH	150	F-1600	BPMMP	305

TIME SHEET

CODE	OPER.	REPAIR	STANDBY	RELEASED	CURRENT	DOWN TIME	TRIPS	RIG SERVICE	3	4	5	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
MIDNIGHT	7.75							0.25																		
DAY	7.75							0.25																		
EVE				2.50	6.00	0.25															0.25					
TOTAL	15.50			2.50	6.00	0.75															0.25					

SHALE SHAKER(S) — RENTALS/SERVICES

	NO.	TYPE
	2	Derrick

SCREENS CHANGED: YES / NO

	TOP	MIDDLE	BOTTOM
6.00	180	100	100
6.00	100	100	100
24.00	100	100	100

WELL TYPE	RE-ENTRY	KB TO GROUND ELEV.
Geothermal	YES / NO	7.32

WELL NAME & No.	DATE
MC6 South Meager	14-Nov-2004

OPERATOR	CONTRACTOR
Western Geopower Corp	Precision Drilling

RIG MANAGER	RIG NO.
Kevin Vig	620 E

PROVINCE	CAMP	RIG SAFETY DAYS
BC	YES / NO	53.00

MORNING TOUR 0:00 to 8:00

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
	bit	311	0.35
1	Motor	196	8.22
1	Float/UBHO Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
8	180mm D.C.	180	76.11
1	Jars	175	4.69
6	180mm D.C.	180	56.60
5	Heavyweight Drill Pipe	127	47.17
			-13.26
85	D/P	STANDS	2412.58
2	D/P	SINGLES	19.37
	KELLY/DWN		
	TOTAL		2631.00
WT. OF DC			23000.00
WT. OF STRING			129000.00

BIT NO. 17; SIZE 311; IADC CODE; MFG. H.C.; TYPE HRP66DX; SERIAL NO. 5044615; JETS; DEPTH OUT (m) 2503.00; DEPTH IN (m) 2503.00; TOTAL METERS DRILLED (m) 128.00; TOTAL HOURS RUN 33.50; CUTTING STRUCTURE I / O / D / L / B / G / O / R; HOLE CONDITION; HOLE DRAG 38000 up/22000 dwn; TORQUE AT BOTTOM 14033 ft-lbs; FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flow Line Temp 89.2 c
TIME	07:00	04:00	06:00
DENSITY kg/m3	1020	1020	1020
FUNNEL VIS. (sec)	45	45	45
W.L. (cm3)			
pH	10.0	10.0	10.0
PV/YP	14cm3	14cm3	14cm3

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN
Caustic Soda	10sks.	
Desco	2sks.	
Hydrated Lime	12sks.	
Lignco	50sks.	
Milpac	16sks.	
Natural Gel	240sks.	
Defoamer LD-8	1pail	

METERS DRILLED

FROM	TO	BIT SIZE (mm)	ROTARY R.P.M.	WT. ON BIT (klbs)
2503.00	2631.00	D	15	18-20

CIRCULATION PRESSURE (kPa): 13360

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

REDUCED PUMP SPEED: 4000 @ 90 = 2622.00

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

Time	Hrs	Code
0:00	5:45	5.75	2
5:45	6:00	0.25	7
6:00	8:00	2.00	2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill FR. 2503m - 2623m
Rig Service, F/T Annular(20 secs)
Drill fr. 2623m - 2631m

NOTES
Fill cross over, sediment layers @ 91 inch hose. Viscosity suspect broken. Mitigate & plan.
Engines #1, #2, & #3: 24 hrs. Pumps #1:0.0 hrs. Pump #2 22.0 hrs

DRILLER SIGNATURE	RIG HRS	BOP DRILLS: MIN.	BOP DRILLS: STACK, SECS.	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Barry Verheist	8.00	9.5			174000.00	Defensive driving	

RATE SCHEDULE	DRIVER A	CREW SAFETY DAYS	DRIVER B
REGULAR / OVER / SHORT			

MORNING TOUR

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	733-714-230	Chantry Vig	8.00	CV	
Floorman	122-830-639	Chris Eddy	8.00	CE	
Floorman	652-890-757	Kyle Hrynkiw	8.00	KH	
Leaseman	713-959-461	Gary Kennedy	8.00	GK	
Rig Manager	710-409-484	Kevin Vig		KV	
Top Drive	639-977-702	Sheldon Langley		SL	

DAY TOUR 8:00 to 16:00

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
	bit	311	0.35
1	Motor	196	8.22
1	Float/UBHO Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
8	180mm D.C.	180	76.11
1	Jars	175	4.69
6	180mm D.C.	180	56.60
5	Heavyweight Drill Pipe	127	47.17
			0.00
85	D/P	STANDS	2441.49
1	D/P	SINGLES	9.59
	KELLY/DWN		0.00
	TOTAL		2663.38
WT. OF DC			23000.00
WT. OF STRING			129000.00

BIT NO. 17; SIZE 311; IADC CODE; MFG. H.C.; TYPE HRP66DX; SERIAL NO. 5044615; JETS; DEPTH OUT (m) 2662.00; DEPTH IN (m) 2503.00; TOTAL METERS DRILLED (m) 159.00; TOTAL HOURS RUN 41.25; CUTTING STRUCTURE I / O / D / L / B / G / O / R; HOLE CONDITION; HOLE DRAG 38000 up/22000 dwn; TORQUE AT BOTTOM 14033 ft/lbs; FILL ON BOTTOM (m) 129000.00

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flow Line Temp 87.1 c
TIME	05:00	12:00	16:00
DENSITY kg/m3	1025	1030	1020
FUNNEL VIS. (sec)	44	54	45
W.L. (cm3)			
pH	9.5	10.0	10.5
PV/YP	14cm3	14cm3	14cm3

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN
Caustic Soda	8 sks	
Hydrated Lime	10 sks	
Milpac	15 sks	
Gel	120 sks	
Hematite	80 sks	
Defoamer LD-8	2 pls	

METERS DRILLED

FROM	TO	BIT SIZE (mm)	ROTARY R.P.M.	WT. ON BIT (klbs)
2631.00	2662.00	D	15-20	18-22

CIRCULATION PRESSURE (kPa): 13750

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

REDUCED PUMP SPEED: @ / @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

Time	Hrs	Code
8:00	11:15	3.25	2
11:15	11:30	0.25	7
11:30	16:00	4.50	2

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Drill Fr2631m-2642m
Rig Service & Function Pipe Rams 7/7 Secs
Drill Fr2642m-2662m

NOTES
Function Crown Saver

DRILLER SIGNATURE	RIG HRS	BOP DRILLS: MIN.	BOP DRILLS: STACK, SECS.	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Bill Mills	8.00	9.5			173000.00		

RATE SCHEDULE	DRIVER A	CREW SAFETY DAYS	DRIVER B
REGULAR / OVER / SHORT			

DAY TOUR

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	716-324-781	Bill Mills	8.00	BM	
Derrickman	629-926-262	Rob Roth	8.00	RR	
Motorman	722-572-781	Dwayne Fry	8.00	DF	
Floorman	736-523-356	Nathan Surinak	8.00	NS	
Leaseman	648-747-428	Adam Johnson	8.00	AJ	

EVENING TOUR 16:00 to 24:00

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
	bit	311	0.35
1	Motor	196	8.22
1	Float/UBHO Sub	194	1.07
2	Monels	204	18.65
1	Crossover	193	0.44
8	180mm D.C.	180	76.11
1	Jars	175	4.69
6	180mm D.C.	180	56.60
5	Heavyweight Drill Pipe	127	47.17
			0.00
85	D/P	STANDS	2441.49
1	D/P	SINGLES	9.59
	KELLY/DWN		0.00
	TOTAL		2663.38
WT. OF DC			23000.00
WT. OF STRING			129000.00

BIT NO. 17; SIZE 311; IADC CODE; MFG. H.C.; TYPE HRP66DX; SERIAL NO. 5044615; JETS; DEPTH OUT (m) 2662.00; DEPTH IN (m) 2503.00; TOTAL METERS DRILLED (m) 159.00; TOTAL HOURS RUN 41.25; CUTTING STRUCTURE I / O / D / L / B / G / O / R; HOLE CONDITION; HOLE DRAG; TORQUE AT BOTTOM; FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE	WATER BASED	OIL BASED	Flow Line Temp
TIME			
DENSITY kg/m3			
FUNNEL VIS. (sec)			
W.L. (cm3)			
pH			

MUD MATERIAL ADDED — SOLIDS CONTROL: Centrifuge

PRODUCT	AMOUNT x UNIT	HOURS RUN
Gel	120 sacks	

METERS DRILLED

FROM	TO	BIT SIZE (mm)	ROTARY R.P.M.	WT. ON BIT (klbs)
2662.00				

CIRCULATION PRESSURE (kPa): 13260

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

REDUCED PUMP SPEED: @ / @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

Time	Hrs	Code
16:00	17:45	1.75	5
17:45	18:00	0.25	7
18:00	21:00	3.00	6
21:00	21:15	0.25	22
21:15	21:30	0.25	5
21:30	22:00	0.50	6
22:00	22:15	0.25	5
22:15	23:00	0.75	6
23:00	23:15	0.25	5
23:15	24:00	0.75	6

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Circulate and Work Pipe
Rig Service and Function H.C.R. 3/3
P.O.O.H. to 850m
B.O.P. Drill w/Crewmember's, Well Secure in 80 sec.
Fill Pipe @ 864m
R.I.H.
Pump 5 m3 Mud @ 1568m
Trips
Pump 5 m3 Mud @ 2256m
R.I.H.

NOTES
Function Crown Saver

DRILLER SIGNATURE	RIG HRS	BOP DRILLS: MIN.	BOP DRILLS: STACK, SECS.	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
Wade Goddard	8.00	9.5			183000.00	Working at a heights	

RATE SCHEDULE	DRIVER A	CREW SAFETY DAYS	DRIVER B
REGULAR / OVER / SHORT			

EVENING TOUR

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	8.00	WG	
Derrickman	642-872-840	Murray McBain	8.00	MM	
Motorman	651-356-084	Jesse Goddard	8.00	JG	
Floorman	505-422-253	Rory Mitchell	8.00	RM	
Floorman	730-040-898	Nathan Schwandt	8.00	NS	
Leaseman	729-975-003	Daniel Sampson	8.00	DS	
Top Drive	640-589-323	Dan Nicholson		DN	

ETS SERIAL NUMBER: PREC620_20041014_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

RIG RELEASE		JOB NO. 21	AFE
SPUD 2004-09-22 22:48			
LICENCE NO. a-92-A / 92-J-12	WELL NAME AND NO. MCS South Meager		
OPERATOR Western Geopower Corp	CONTRACTOR Precision Drilling		
SURFACE LOCATION a-92-A / 92-J-12	RIG/UNIQUE ID: b-141 / 92-J-12		
SIGNATURE OF OPERATOR'S REPRESENTATIVE Russ Silva	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE Kevin Vig		

DAILY CHECKS
(1) Daily Hydrogen Sulphide Inspection
(2) Daily/Weekly Inspection Weekly Testing (Pason Test)
(3) HOP Signs, Placed At Wellhead
(4) Wind Sock(s) & Wind Direction Indicator(s) Placed
(5) Flare Line Placed
(6) BOP Drills Performed
(7) Weekly Inspect BOP's, Plumbing & Choke & Lines
(8) Rig Site Health and Safety Meeting Held (Documented)
(9) Crown Saver Checked
(10) Derrick Walk Checked

DATE 15-Nov-2004
RIG NO. 620 E
FUEL @ 8:00
RIG 25721 BOILER
TEMPERATURE 9
CURRENT CONDITION Snow
WIND DIRECTION Calm
ROAD Slick

LAST CASING STRING 244.5 mm OD

												7.32
								K-55	10	125.00	5.31	124.00
											8.22	857.00

DCOP REF	CASING WEAR (mm)	choke	MW ID (mm)	TOOL JT O D (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MAKE/MODEL/NUMBER	STROKE LTH (mm)
	29.00	SS-95	83.00	166.00	5"XH	170	F-1600	BPMMP	305
	38.00	SS-95	87.00	168.00	5"XH	150	F-1600	BPMMP	305

TIMES - HRS

OPER	NO. OF CREW	ACTUAL HRS	REAM/RE-CONFIG	SLIDE DRLG	TRIPS	SERVICE RIG	REPAIR RIG	DRLG CIRC	TRIP CIRC	WASH & REAM	DEV SVY	DIR SVY	CORE	CORE/RECOVERY	REAMING	MISC
MORN					1.75	5.00	0.25									1.00
DAY						1.00	0.25									4.75
EVE							0.25	0.75								6.25
TOTAL					1.75	6.00	0.75	0.75	1.00				1.25	0.25		11.00

SHALE SHAKER(S)

NO.	TYPE	SCREENS	NEW
	Derrick	YES / NO	
6.00			
6.00	TOP	100	100
6.00	MIDDLE	100	100
24.00	BOTTOM	100	100

RENTALS/SERVICES

DESCR	QTY	EVT

BIT RECORD

NO.	SIZE (mm)	MAKE	BIT NO	SIZE	IADC CODE	MFG	TYPE	SERIAL NO	JETS	DEPTH OUT (m)	DEPTH IN (m)	TOTAL METRES DRILLED (m)	TOTAL HOURS RUN	DULL	LOC	B	G	OC	PRESENT COND.	T.F.
1	bit	311	0.35	17	311	H.C.	HRP86DX	5044615		2662.00	2503.00	159.00	41.25							
1	Motor	196	8.22																	
1	Flex Hang Sub	194	1.07																	
2	Monels	204	18.65																	
1	Crossover	193	0.44																	
8	146mm D.C.	180	75.11																	
11	Jars	175	4.88																	
6	146mm D.C.	180	56.60																	
5	Heavyweight	127	47.17																	
86	D.P.	114mm	2441.49																	
1	D.P.	Saddle	8.59																	
KELLY/SWIV			1.36																	
TOTAL			2662.00																	

wt. of bit: 23000.00
wt. of string: 129000.00

HOLE CONDITION

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

MUD RECORD

MUD TYPE: Water Base / Oil Base

	FLOWLINE TEMP		
Visc	12:30	01:00	01:30
Density kg/m3	1025	1020	1020
Fluid Vis. (Sec)	51	40	38
W.L. (cm3)			
pH	9.5	10.0	10.0
PV/YP	143.1/m3	141.5/m3	144.5/m3

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT
Caustic Soda	5 sks
All Temp	16 sks
Pyrotrol	16 sks
Hydrated Lime	3 sks
Humalite	20 sks
Gel	40 sks

SOLIDS CONTROL: Centrifuge

METERS DRILLED

FROM	TO	DP SIZE mm x kg/m	ROTARY R.P.M.	WT. ON BIT
2662.00				

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

ENCODED PUMP SPEED: 9 A.M. 90 | 9 P.M. 90

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION
2829.50	9	4.00

TIME LOG

FROM	TO	HRS	CODE
0:00	1:45	1.75	5
1:45	2:45	1.00	10
2:45	3:00	0.25	7
3:00	8:00	5.00	5

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Circulate & Condition Mud
Wireline Directional Survey
Rig Service & Function Annular 23/23 Secs
Pull Out Of Hole, Strap Out, & Flow Checks @2950m, 2519m, 1596m,

NOTES
Function Drown Survey

DRILLER SIGNATURE: Bill Mills

DRLG HRS	TOUR	OPERATOR FUEL	MAX EXP ROCKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5			Orientation	

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	722-572-781	Dwayne Fry	8.00	DF		
Floorman	482-955-820	Gary Laughlin	8.00	GL		
Floorman	736-523-386	Nathan Surinek	8.00	NS		
Lesseman	848-747-426	Adam Johnson	8.00	AJ		
Rig Manager	719-409-484	Kevin Vig		KV		
Top Drive	640-569-323	Dan Nicholson		DN		

RATE SCHEDULE: Regular / Repair / Irregular
DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

METERS DRILLED

FROM	TO	DP SIZE mm x kg/m	ROTARY R.P.M.	WT. ON BIT
2662.00				

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

ENCODED PUMP SPEED: 9 A.M. 90 | 9 P.M. 90

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE
8:00	9:30	1.50	6
9:30	10:45	1.25	20
10:45	11:00	0.25	7
11:00	13:15	2.25	12
13:15	13:30	0.25	21
13:30	16:00	2.50	12

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

P.O.O.H.,Strap Out
Dir. Work/LayOut Dir. Tools
Rig Service and Function Blind Ram's, 8/8
Rig to Run Casing
Safety Meeting
Run 244.5 mm Casing

NOTES
Function Drown Survey Magnetic Rotor Torque, Revolution and Slips and Verified BH at Casing

DRILLER SIGNATURE: Wade Goddard

DRLG HRS	TOUR	OPERATOR FUEL	MAX EXP ROCKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5			Running Casing	

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-626-706	Wade Goddard	12.00	WG		
Derrickman	642-872-840	Murray McBain	12.00	MM		
Motorman	651-386-064	Jesse Goddard	12.00	JG		
Floorman	505-422-263	Rory Mitchell	12.00	RM		
Floorman	730-040-896	Nathan Schwandt	12.00	NS		
Lesseman	729-975-003	Daniel Sampson	12.00	DS		

RATE SCHEDULE: Regular / Repair / Irregular
DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

METERS DRILLED

FROM	TO	DP SIZE mm x kg/m	ROTARY R.P.M.	WT. ON BIT
2662.00				

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

ENCODED PUMP SPEED: 9 A.M. | 9 P.M.

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE
16:00	22:15	6.25	12
22:15	23:00	0.75	22
23:00	23:45	0.75	9
23:45	24:00	0.25	7

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Run 244.5 mm Casing
Rig Out Laydown Track & Power Tongs
Cut Off Drill Line
Rig Service & Function H.C.R. 4/4 Secs

NOTES

DRILLER SIGNATURE: Bill Mills

DRLG HRS	TOUR	OPERATOR FUEL	MAX EXP ROCKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5		150000.00		

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	722-572-781	Dwayne Fry	4.00	DF		
Floorman	482-955-820	Gary Laughlin	4.00	GL		
Floorman	736-523-386	Nathan Surinek	4.00	NS		
Lesseman	848-747-426	Adam Johnson	4.00	AJ		

RATE SCHEDULE: Regular / Repair / Irregular
DRIVER A | CREW SAFETY DAYS | DRIVER B

ETS SERIAL NUMBER: PREC620_20041015_1A

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
(A Varco Company)

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49
RIG RELEASE:
JOB NO: 21
AFE:
LICENCE NO.: a-82-A / 92-J-12
WELL NAME AND NO.: MC6 South Meager
CONTRACTOR: Precision Drilling
OPERATOR: Western Geopower Corp
SURFACE LOCATION: a-82-A / 92-J-12
UNIQUE ID: b-1-H / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Sliva
SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS
(1) Daily Visit, Around Inspection
(2) Derrick Inspection (Visual & Spring Checked)
(3) ADS Sling Packed (if required)
(4) Wire Line(s) & Slick Diagram Posted
(5) Pipe Line Secured
(6) BOP Daily Performed
(7) Weekly Visual BOP's Performed & Crewmen Live
(1) Rig Safe Visual and Safety Meeting (also mid-morning)
(2) C.A.O.D.C. Rig Safety Inspection Checklist (every month)
(3) Visual Inspection Before Raising or Lowering
(4) Crown Saver Checked
(5) Visual Daily Checked

DATE: 16-Nov-2004
RIG NO: 626 E
FUEL @ 8:00
RIG: 39008 SOLAR
TEMPERATURE
CURRENT CONDITION
WIND DIRECTION
ROAD

CASING / TUBING / DRILL PIPE

OD (mm)	WT / FT	kg/m	GRADE	NO. OF JOINTS	TOTAL NO. METERS	KB TO CSG HEADFLGE	MET AT (m)
						7.32	
			K-55	19	125.00	6.31	124.00
						8.22	857.00

DRILL STRING

DRILL PIPE OD (mm)	LINEAR MASS (kg/m)	GRADE	IADC ID CODE	FISH. N.O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH. (mm)
	29.00	SS-95	83.00	166.00	5"XH	176	F-1600	BPMMP	305
	38.00	SS-95	67.00	168.00	5"XH	160	F-1600	BPMMP	305

SHALE SHAKER(S)

NO.	TYPE	Derrick	NEW
2		PRE	NO

SCREENS CHANGED		
8.00	TOP	100
8.00	MIDDLE	100
24.00	BOTTOM	100

RENTALS/SERVICES

WORK	QTY	EVE

WELL TYPE: Geothermal
RE-ENTRY: YES NO
KB TO GROUND ELEV.: 7.32
WELL NAME & No.: MC6 South Meager
DATE: 16-Nov-2004
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig
RIG NO.: 626 E
PROVINCE: BC
CAMP: YES NO
RIG SAFETY DAYS: 56.00

TIME / HRS

CODE TO	OPER	REPAIR	DRILL ACTUAL	EQUIPMENT	CORING	SURVEY	TRIPS	BIT RUNNING	WASH / REAM	DRILL ACTUAL	SURVEY	CIRC	CUT DRLG LINE	SLIP DRLG LINE	TEST BOPE	RIG SERVICE	TEST BOILER	SAFETY MTG
MORN																		
DAY			2.00				3.75	0.25										
EVE			5.25				3.50	0.25										
TOTAL			7.25				14.75	0.75										

Remarks: Running Into Position 1.25 — 1.25

MORNING TOUR 0:00 TO 8:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH

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: T | B | G | OC | L | B | G | OC | REASON PULLED
WOB | RPM | HRS | P/U | S/O | ROT TQ

DP		
DP		
HWDP		
DRILL COLLARS		
TOTAL		

MUD RECORD

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

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL: Centrifuge

HOURS RUN	MUD CLEANER (Hours)	CENTRIFUGE (Hours)	DESANDER (Hours)

HOURS RUN	DESILTER (Hours)	DEGASSER (Hours)

HOLE CONDITION

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

METERS DRILLED

FROM	TO	BIT NO.	BIT SIZE	ROTARY R.P.M.	HRS. ON BIT
2642.00					

CIRCULATION PRESSURE (kPa): PUMP NO. 1 — LINER SIZE (mm) / S.P.M.; PUMP NO. 2 — LINER SIZE (mm) / S.P.M.
152 | | 152 | |
W.L. (cm3)
pH
REDUCED PUMP SPEED: @ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	0:30	0.50	6	Run In Liner On End Of 38kg/m D.P. (Slips Set On Hanger)
0:30	1:00	0.50	5	Pull Back Out of Hole
1:00	2:15	1.25	23	(Removes Slip Dies Fr Hanger)
2:15	4:30	2.25	6	Run In Liner On End Of 38kg/m D.P.
4:30	4:45	0.25	7	Rig Service & Function Annular 21/21 Secs
4:45	6:45	2.00	5	Pull Out of hole & Flow Check @ 812m, 404m
6:45	8:00	1.25	6	Run In Hole

NOTES (Function Drawn Below)
Pump # 1 5 x 14 liners Pump # 2 5 x 14 liners

HOURS RUN	DRILLING (Hours)	CIRC. (Hours)	STAND TIME
8.00	6.5		

OPERATOR FUEL: 209000.00
MAX EXP HOOKLOAD
SAFETY TOPIC
M.A.C.P.

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

MORNING TOUR

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	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	482-955-820	Gary Laughlin	8.00	GL	☐	☑
Floorman	736-523-386	Nathan Surinak	8.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	8.00	AJ	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	640-569-323	Dan Nicholson		DN	☐	☐

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

DAY TOUR 8:00 TO 16:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH
1	JunkSub	159	0.70
1	Bit Sub	168	0.91
4		127	37.72
92	D.P.	STANDS	2611.84
2	D.P.	SINGLES	19.12
	HEVI-WATE		0.00
	TOTAL		2670.29
WT. OF DC			
WT. OF STRING			112000.00

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: T | B | G | OC | L | B | G | OC | REASON PULLED
WOB | RPM | HRS | P/U | S/O | ROT TQ

MUD RECORD

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

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL: Centrifuge

HOURS RUN	MUD CLEANER (Hours)	CENTRIFUGE (Hours)	DESANDER (Hours)

HOURS RUN	DESILTER (Hours)	DEGASSER (Hours)

HOLE CONDITION

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

METERS DRILLED

FROM	TO	BIT NO.	BIT SIZE	ROTARY R.P.M.	HRS. ON BIT
2642.00					

CIRCULATION PRESSURE (kPa): PUMP NO. 1 — LINER SIZE (mm) / S.P.M.; PUMP NO. 2 — LINER SIZE (mm) / S.P.M.
3300 | 152 | 90 | 152 | 90
REDUCED PUMP SPEED: @ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Wade Goddard

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	10:45	2.75	6	MU B.H.A., P/U 11 Jts. 29 Kg X-95 D.P., R.I.H.,
10:45	11:00	0.25	7	Rig Service and Function Pipe Ram's 8/8
11:00	11:30	0.50	5	Fill Pipe and Circulate @ 865m w/Sump Water
11:30	12:45	1.25	6	R.I.H.
12:45	13:15	0.50	5	Fill Pipe and Circulate @ 1542m w/Sump Water
13:15	14:00	0.75	6	R.I.H.
14:00	14:30	0.50	5	Fill Pipe and Circulate @ 2287m w/Sump Water
14:30	15:30	1.00	6	R.I.H.
15:30	16:00	0.50	5	Circulate On Btm.

NOTES (Function Drawn Below)

HOURS RUN	DRILLING (Hours)	CIRC. (Hours)	STAND TIME
8.00	5.5		

OPERATOR FUEL: 142000.00
MAX EXP HOOKLOAD: Caustic Sweep
SAFETY TOPIC
M.A.C.P.

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

DAY TOUR

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	633-828-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-849	Murray McBain	12.00	MM	☐	☑
Motorman	651-368-064	Jesse Goddard	12.00	JG	☐	☑
Floorman	506-422-253	Rory Mitchell	12.00	RM	☐	☑
Floorman	730-040-896	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-976-603	Daniel Sampson	12.00	DS	☐	☑

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

EVENING TOUR 16:00 TO 24:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH
1	JunkSub	159	0.70
1	Bit Sub	156	0.91
4		127	37.72
92	D.P.	STANDS	2611.84
2	D.P.	SINGLES	19.12
	HEVI-WATE		0.00
	TOTAL		2670.29
WT. OF DC			
WT. OF STRING			112000.00

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: T | B | G | OC | L | B | G | OC | REASON PULLED
WOB | RPM | HRS | P/U | S/O | ROT TQ

MUD RECORD

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

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT
Caustic Soda	2 sacks

SOLIDS CONTROL: Centrifuge

HOURS RUN	MUD CLEANER (Hours)	CENTRIFUGE (Hours)	DESANDER (Hours)

HOURS RUN	DESILTER (Hours)	DEGASSER (Hours)

HOLE CONDITION

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

METERS DRILLED

FROM	TO	BIT NO.	BIT SIZE	ROTARY R.P.M.	HRS. ON BIT
2642.00					

CIRCULATION PRESSURE (kPa): PUMP NO. 1 — LINER SIZE (mm) / S.P.M.; PUMP NO. 2 — LINER SIZE (mm) / S.P.M.
3300 | 152 | 90 | 152 | 90
REDUCED PUMP SPEED: @ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HRS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	17:00	1.00	5	Circulate On Btm.
17:00	18:30	1.50	5	Circulate and Pump 32 m3 Caustic Sweep
18:30	18:45	0.25	7	Rig Service and Function HCR 3/3
18:45	21:30	2.75	5	Circulate and Displace Hole w/Fresh Water
21:30	24:00	2.50	6	Pull Out Of Hole & Flow Check @ 2658m, 1733m,
24:00				

NOTES (Function Drawn Below)

HOURS RUN	DRILLING (Hours)	CIRC. (Hours)	STAND TIME
8.00	6.5		

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

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

EVENING TOUR

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	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	482-955-820	Gary Laughlin	4.00	GL	☐	☑
Floorman	736-523-386	Nathan Surinak	4.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	4.00	AJ	☐	☑

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

CHIMO ETS SOFTWARE VERSION:

ETS SERIAL NUMBER: PREC626_20041016_1A

CAODC

Chimo Equipment
A Varec Company

Based on the CAODC ETS file standard

DATE	2004-09-22 22:49
LICENCE NO	9-92-A / 92-J-12
OPERATOR	Western Geopower Corp
SURFACE LOCATION	9-92-A / 92-J-12
SIGNATURE OF OPERATORS REPRESENTATIVE	Russ Silva
RIG RELEASE	
WELL NAME AND NO	MC® South Meager
CONTRACTOR	Precision Drilling
ANNOUE I/R	2-1-H / 82-J-12
SIGNATURE OF CONTRACTORS REPRESENTATIVE	Kevin Vig
AGN NO	21
AFE	

DAILY CHECKS

	DPR	B.M.
(a) Derrick Wash Around Inspection		
(b) Crownsaver Inspection (Weekly) (using checklist)		
(c) H2S Alarm Test (if required)		
(d) Weekly Mast & Sub Structure Report		
(e) Fast Line Retired		
(f) BOP Drills Performed		
(g) Monthly Inspect BOP's Function & Pressure Tests		
(h) Rig Site Health and Safety Meeting (each day/report)		
(i) C.A.O.D.C. Rig Safety Inspection Checklist (monthly/each)		
(j) Mast Inspection (Before Raising or Lowering)		
(k) Crown Saver Checked		
(l) Monthly Checks		

DATE	17-Nov-2004
RIG NO.	620 E
FUEL @ 0.00	
RIG	43590 BOILER
TEMPERATURE	-5
CURRENT CONDITION	Clear
WIND DIRECTION	Calm
ROAD	Good

LAST CASING TUBING DRILL LINER

											7.32
					K-55	10	125.00		8.11		124.00
									8.22		957.08

		28.00	S5-S5	83.00	166.00	5"XH	170	F-1600	BPMMP	305
		38.00	S5-S5	67.00	166.00	5"XH	160	F-1600	BPMMP	305

WELL TYPE: Geothermal | RE-ENTRY ☐ YES ☑ NO | KB TO GROUND ELEV.: 7.32
WELL NAME & No.: MC® South Meager | DATE: 17-Nov-2004
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling | RIG NO.: 620 E
RIG MANAGER: Kevin Vig | CAMP ☑ YES ☐ NO | RIG SAFETY DAYS: 56.00
PROVINCE: BC

TIME - HRS

	DRLG	TRIP	REAM	CIRC	SURV	RIG SERV	CUT DRLG	WOW	WOC	TEST BOP	TEST CSG	RUN CSG	CMT	SQZ	WOO	RIG REPAIR	SLIP CUT	SAFETY MTG.
MORN				2.50	0.25													0.25
DAY					0.25													0.25
EVE					0.25					1.00								0.25
TOTAL				2.50	0.75					1.00								0.75

SHALE SHAKER(S)

NO	TYPE	MFR
2	Derrick	

SCREENS CHANGED ☐ YES ☑ NO

TOP	100	TOP	100
MIDDLE	100	MIDDLE	100
BOTTOM	100	BOTTOM	100

RENTAL & SERVICES

ITEM	QTY	UNIT

BIT RECORD

NO.	BIT OD	SUB-TOTAL	CUMULATIVE
1	JunkSub	169	0.70
1	Bit Sub	156	0.91
4		127	37.72

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.	TYPE	STANDS	CUMULATIVE
82	D.P.	STANDS	2611.84
2	D.P.	SINGLES	19.12
	KELLY/SWIVEL		0.00
	TOTAL		2670.29

WT. OF DC
WT. OF STRING: 112000.00

MUD RECORD

MUD TYPE: ☑ WATER BASED ☐ OIL BASED — FlowLine Temp

TIME
DENSITY (g/cc)
FUNNEL VIS. (s/L)
W.L. (cm3)
pH

MUD MATERIAL ADDED

PRODUCT	AMOUNT + UNIT

SOLIDS CONTROL: Centrifuge

HOURS RUN | DRILLING FLUID DISCARDED | DRILLING FLUID RECEIVED | VOLUME LOST DOWNHOLE

HOLE CONDITION

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

METERS DRILLED

FROM	TO	METERS DRILLED	ROTARY HRS	WT. ON BIT (kN)
2662.00				

CIRCULATION PRESSURE (kPa) | PUMP NO. 1: LINER SIZE (mm) | S.P.M. | PUMP NO. 2: LINER SIZE (mm) | S.P.M.
162 | 152

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (o)	DIRECTION

TIME LOG

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	0:15	0.25	7	Rig Service & Function annular 21/21 Secs
0:15	2:45	2.50	6	Pull Out Of Hole & Flow Checks @ 59m
2:45	9:00	6.25	14	Nipple Down B.O.P.s (Tear out flow line & grant head)

NOTES
Function Times: Annular 21 sec, Rams 17.5 sec, Choice 4.5 sec

DRILLER SIGNATURE: Bill Mills
HOLE DEPTH: 4.00 | BIT #1 HRS: 9.5 | STUCK PIPE | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

MORNING TOUR 9:00 TO 6:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	716-324-181	Bill Mills	9.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	9.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	9.00	DF	☐	☑
Floorman	482-955-820	Gary Laughlin	9.00	GL	☐	☑
Floorman	736-523-366	Nathan Surinak	9.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	9.00	AJ	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	640-568-323	Dan Nicholson		DN	☐	☑

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

DAY TOUR 9:00 TO 18:00

CREW	SOC. INS. NO.	NAME	HRS	INJURIES YES	NO
Driller	633-628-795	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-849	Murray McBain	12.00	MM	☐	☑
Motorman	651-366-964	Jesse Goddard	12.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	12.00	RM	☐	☑
Floorman	730-046-866	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	12.00	DS	☐	☑

FROM	TO	METERS DRILLED	ROTARY HRS	WT. ON BIT (kN)
2662.00				

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
9:00	9:15	0.25	21	Safety Meeting
9:15	12:30	4.25	14	Nipple Down B.O.P.'s
12:30	12:45	0.25	7	Rig Service
12:45	16:00	3.25	14	Nipple Up B.O.P.'s

NOTES

DRILLER SIGNATURE: Wade Goddard
HOLE DEPTH: 9.00 | BIT #1 HRS: 9.5 | STUCK PIPE | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

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

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	629-926-262	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	482-955-820	Gary Laughlin	4.00	GL	☐	☑
Floorman	736-523-366	Nathan Surinak	4.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	4.00	AJ	☐	☑

FROM	TO	METERS DRILLED	ROTARY HRS	WT. ON BIT (kN)
2662.00				

FROM	TO	HOURS	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	22:45	6.75	14	Nipple Up B.O.P.'s
22:45	23:00	0.25	7	Rig Service
23:00	24:00	1.00	11	Wireline Logs W/ChaRanger (Temperature Log)

NOTES

DRILLER SIGNATURE: Bill Mills
HOLE DEPTH: 6.00 | BIT #1 HRS: 9.5 | STUCK PIPE | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC: Nipple Down BOPs | M.A.C.P.

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

CHIMO ETS SOFTWARE VERSION:

CAODC

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49
RIG RELEASE:
JOB NO.: 21
AFE:
LICENCE NO.: a-92-A / 92-J-12
WELL NAME AND NO.: MCS South Meager
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
(1) Daily Walk Around Inspection
(2) Derrick Inspection Monthly (every checkmark)
(3) Hard Hats Present (if required)
(4) Well Location Sign Complete/Posted
(5) Flare Line Shelved
(6) BOP Drills Performed
(7) Visually Inspect BOP's Flowback & Separator Lines
(8) Rig Site Health and Safety Meeting (minimum monthly)
(9) C A O D C Rig Safety Inspection Checklist Completed
(10) Keep Inspection Binder Ready for Inspection
(11) Crown Saver Checked
(12) Weight Indicator Checked

DATE: 18-Nov-2004
RIG NO.: 620 E
RIG: 40971 BOILER
TEMPERATURE: -2
CURRENT CONDITION: Snow
WIND DIRECTION: Calm
ROAD: Snowy

LAST CASTS TIMING OR LOGS

					K-55	10	125.00	6.31	124.00	
								7.32		
								8.22	857.00	
	29.00	SS-95	63.00	155.00	5"XH	170	F-1600	BPMMP		308
	38.00	SS-95	67.00	168.00	5"XH	160	F-1600	BPMMP		305

Page 1 of 1

WELL TYPE: Geothermal
RE-ENTRY: ☐ YES ☑ NO
KB TO GROUND ELEV: 7.32
WELL NAME & NO.: MCS South Meager
DATE: 18-Nov-2004
OPERATOR: Western Geopower Corp
CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig
RIG NO.: 620 E
PROVINCE: BC
CAMP: ☑ YES ☐ NO
RIG SAFETY DAYS: 57.00

TIME - HRS

	OPER	MOVE	REPAIR	CONNECT	CIRC	TRIPS	SURVEYS	REAMING TO	WASH TO	CUT DRLG LINE	SLIP DRLG LINE	SERVICE RIG	TEST BOPE	DIR WORK	DRILLSTEM TEST	CORING	OTHER	SAFETY MTG
MORN																		5.00
DAY						0.25												1.75
EVE						0.25												1.00
TOTAL						0.50												7.75

Rig to Service Skidholes: 9.25 | 4.75 | 1.50 | 7.75 | 9.75

BIT RECORD

NO.	BIT	SIZE (mm)	LENGTH (m)
1	JunkSub	159	0.70
1	Bit Sub	156	0.91
4		127	37.72
92	D.P.	STANDS	2611.84
2	D.P.	SINGLES	19.12
	HWDP/DCs		0.00
	TOTAL		2670.29
WT. OF DC			
WT. OF STRING			112000.00

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: T1 | T2 | WEAR | LOC | B | Gage | ODC | BEARING / SEALS | OTHER

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: Centrifuge

HOURS RUN	MAKE	CAPACITY L/min	UNDERFLOW Kg/m³

FlowLine Temp

METERS DRILLED

FROM	TO	TOTAL M DRILLED	ROTARY R.P.M	AT OR UNDER
2652.00				

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: @ @

DEVIATION SURVEY

DEPTH (m)	DEVIATION (d)	DIRECTION

DRILLER SIGNATURE: Bill Mills

TIME LOG

FROM	TO	HOURS	ROTARY HRS	CUM ROTARY HRS	CODE
0:00	8:00	8.00	11		Wireline Logs W/Challenger (Temperature Log)

NOTES: Engine hrs # 1 = 31 hrs / Pulled hrs # 1 4.62 = 0 hrs

HRS RUN	SOLIDS %	STARTING TEMP	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5					

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

RENTALS/SERVICES

SHALE SHAKER(S): NO. 2 | TYPE: Derrick | NEW

	SCREENS CHANGED	YES	NO
6.00		☐	☑
8.00	TOP	100	100
8.00	MIDDLE	100	100
24.00	BOTTOM	100	100

	MODEL	QTY	SIZE

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	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	482-955-826	Gary Laughlin	8.00	GL	☐	☑
Floorman	736-523-368	Nathan Surinak	8.00	NS	☐	☑
Leaseman	848-747-426	Adam Johnson	8.00	AJ	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	840-569-323	Dan Nicholson		DN	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ OTHER
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	833-826-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	12.00	MM	☐	☑
Motorman	651-368-664	Jesse Goddard	12.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	12.00	RM	☐	☑
Floorman	730-940-898	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-093	Daniel Sampson	12.00	DS	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

RATE SCHEDULE: ☑ REGULAR ☐ REPAIR ☐ OTHER
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	629-926-262	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	482-955-826	Gary Laughlin	4.00	GL	☐	☑
Floorman	736-523-368	Nathan Surinak	4.00	NS	☐	☑
Leaseman	848-747-426	Adam Johnson	4.00	AJ	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

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

CHIMO ETS SOFTWARE VERSION:

ETS SERIAL NUMBER: PREC620_20041018_1A

CAODC — Chimo Equipment (A Varco Company)

Based on the CAODC ETS file standard

Field	Value
Spud	2004-09-22 22:48
Licence No.	a-92-A / 92-J-12
Job No.	21
Well Name and No.	MC6 South Meager
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	19-Nov-2004
Rig No.	620 E
Fuel @ 8:00 — Rig	37700
Temperature	-5
Current Condition	Cloudy
Wind Direction	Calm
Road	Good
Well Type	Geothermal
Re-Entry	No
KB to Ground Elev.	7.32
Rig Manager	Kevin Vig
Province	BC
Camp	Yes
Rig Safety Days	58.00

Last Casing, Tubing or Liner

Grade	No. of Joints	Total Length	KB to Csg Head	Set At
			7.32	
K-55	10	126.00	6.31	124.00
			8.22	567.00

Pumps

Liner Size	Grade	Nom. ID	Tool Jt O.D.	Thread Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke
29.00	SS-95	63.00	166.00	5"XH	170	F-1600	BPMMP	306
38.00	SS-95	67.00	168.00	5"XH	160	F-1600	BPMMP	306

Shale Shaker(s)

No. 2	Type: Derrick	Screens Changed: No
8.00	Top 100	Top 100
8.00	Middle 100	Middle 100
24.00	Bottom 100	Bottom 100

Time (hrs)

	5	6	7	11	21	22 (Blow Down Well)	23 (Rig in Testing Equipment)
Morn			0.25	6.75			1.00
Day		2.75	0.25	1.75	0.25	3.00	
Eve	0.25	1.25	0.25			6.25	
Total	0.25	4.00	0.75	8.50	0.25	9.25	1.00

Morning Tour (0:00 to 8:00)

Bit Record

No.	Item	O.D.	Length
1	JunkSub	169	0.70
1	Bit Sub	168	0.91
4	[illegible]	127	37.72
92	D.P. stands		2611.84
2	D.P. singles		19.12
	Kelly down		-8.29
	Total		2662.00
	Wt. on string		112000.00

Mud Type: Water Based. Meters Drilled From: 2662.00. Pump liner: 152 / 152.

Time Log / Details of Operations

From	To	Hrs	Code	Details
0:00	1:00	1.00	23	(Rig In Testing Equipment)
1:00	7:45	6.75	11	Wireline Logs W/Challenger
7:45	8:00	0.25	7	Rig Service & Function H.C.R. 4/4 Secs

Driller Signature: Bill Mills

Crew

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	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	482-955-820	Gary Laughlin	8.00	GL	☐	☑
Floorman	738-523-366	Nathan Surinak	8.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	8.00	AJ	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	640-589-323	Dan Nicholson		DN	☐	☑

Rate Schedule: Regular

Day Tour (8:00 to 16:00)

Bit Record

No.	Item	O.D.	Length
1	JunkSub	169	0.70
1	Bit Sub	168	0.91
4	[illegible]	127	37.72
92	D.P. stands		2611.84
2	D.P. singles		19.12
	Kelly down		-8.29
	Total		2662.00
	Wt. on string		112000.00

Mud Type: Water Based. Meters Drilled From: 2662.00. Pump liner: 152 / 152.

Time Log / Details of Operations

From	To	Hrs	Code	Details
8:00	9:45	1.75	11	Wireline Logs w/Challenger and Rig Out
9:45	10:00	0.25	7	Rig Service and Function Blind Ram's 8/8
10:00	11:45	1.75	6	R.I.H. to 593m
11:45	12:00	0.25	21	Safety Meeting
12:00	12:45	0.75	22	Rig in Air Unit and Blow Down Well @ 593m
12:45	13:00	0.25	6	R.I.H. to 734m
13:00	13:15	0.25	22	Blow Down Well @ 734m
13:15	13:30	0.25	6	R.I.H to 875m
13:30	14:00	0.50	22	Blow Down Well @ 875m
14:00	14:15	0.25	6	R.I.H. to 1015m
14:15	14:30	0.25	22	Blow Down Well @ 1015m
14:30	14:45	0.25	6	R.I.H. to 1212m

Driller Signature: Wade Goddard. Safety Topic: Blowing Well w/Air

Crew

Crew	Soc. Ins. No.	Name	Hrs		Injuries Yes	No
Driller	833-626-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	842-872-840	Murray McBain	12.00	MM	☐	☑
Motorman	651-366-064	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	☐	☑

Rate Schedule: Regular

Evening Tour (16:00 to 24:00)

Bit Record

No.	Item	O.D.	Length
1	JunkSub	169	0.70
1	Bit Sub	168	0.91
4	[illegible]	127	37.72
92	D.P. stands		2611.84
2	D.P. singles		19.12
	Kelly down		-8.29
	Total		2662.00
	Wt. on string		112000.00

Mud Type: Water Based. Meters Drilled From: 2662.00. Pump liner: 152 / 152.

Time Log / Details of Operations

From	To	Hrs	Code	Details
16:00	16:15	0.25	6	R.I.H. to 1551m
16:15	18:00	1.75	22	Blow Down Well @ 1551m
18:00	18:15	0.25	5	R.I.H. to 1838m
18:15	20:00	1.75	22	(Blow Down Well) @ 1838m
20:00	20:30	0.50	6	R.I.H. to 2124m
20:30	22:15	1.75	22	(Blow Down Well) @ 2124m
22:15	22:45	0.50	6	Run in Hole to2411m
22:45	23:45	1.00	22	(Blow Down Well) @ 2411m
23:45	24:00	0.25	7	Rig Service & FunctionPipe Rams 7/7 Secs

Notes: Function Crown Saver

Driller Signature: Bill Mills

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	482-955-820	Gary Laughlin	4.00	GL	☐	☑
Floorman	736-523-366	Nathan Surinak	4.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	4.00	AJ	☐	☑

Rate Schedule: Regular

Chimo Equipment

A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | RIG RELEASE: | JOB NO.: 21 | AFE:

LICENCE NO.: 9-92-A / 92-J-12 | WELL NAME AND NO.: MCS South Masger

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: 9-92-A / 92-J-12 | UNIQUE ID: 9-1-H / 92-J-12

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

DAILY CHECKS — CHK | INIT

(1) Daily Visit Around Rig/Yard — | —
(2) Derrick/Substructure/Weekly Crown Inspection — | —
(3) H2S Signs Posted (if required) — | —
(4) Well Logging & Mud Gas Alarm Tested — | —
(5) Rig Line Marked — | —
(6) BOP Tests Performed — | —
(7) Portable Water BOPs Flowlines & Degasser Lines — | —
(8) Rig Site Hazard and Safety Meeting (new crew member) — | —
(9) C.A.O.D.C. Rig Safety Inspection Checklist (this form) — | —
(10) Mast Inspection Before Raising or Lowering — | —
(11) Crown Saver Checked — | —
(12) Weather Man Checked — | —

DATE: 20-Nov-2004 | RIG NO: 820 E | FUEL ON HAND: | RIG: 32494 BOILER

LAST CASING RUN: | OD (mm): | WALL (mm): | GRADE: K-55 | NO. OF JOINTS: 16 | TOTAL (m) LENGTH: 126.00 | KB TO CSG FLANGE (m): 7.32 | SET AT (m): 124.00

OR LINER: | | | | | | | | 6.22 | 667.00

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

DRILL STRING

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)
	29.80	S-95	83.00	165.00	5"XH	170	F-1600	BPM/MP	356
	34.80	S-95	67.00	165.00	5"XH	150	F-1600	BPM/MP	305

SHALE SHAKER(S) — NO.: 2 | TYPE: Derrick | SCREENS CHANGED: YES / NO

RENTAL EQUIPMENT / SERVICES — WORK | DAY | EVE

	TOP	MIDDLE	BOTTOM
8.00	100	100	100
8.60	100	100	100
24.60	100	100	100

WELL TYPE: Geothermal | RE-ENTRY: YES / NO | KB TO GROUND ELEV.: 7.32

WELL NAME & No.: MCS South Masger | DATE: 20-Nov-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

RIG MANAGER: Kevin Vig | RIG NO.: 820 E

PROVINCE: BC | CAMP: YES / NO | RIG SAFETY DAYS: 59.00

TIME / HRS

	OPER	RIG UP/DOWN	DRILL	REAMING	CORING	COND. MUD & CIRC	TRIPS	WIPER TRIPS	SERVICE RIG	SURV.	DRILL STEM TEST	CORE & CORING	CUT OFF DRLG LINE	SERVICE RIG & P	FISH	SLIP & CUT DRLG LINE	DIR WORK	SAFETY MTG	Blow Down Well
MORN							0.25	0.25											7.50
DAY							4.00	0.25											9.75
EVE								0.25											7.75
TOTAL			4.25	0.75															25.00

MORNING TOUR — 0:00 TO 8:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	JunkSub	159	0.70
1	Bit Sub	156	0.91
4		127	37.72
92	D.P.	STANDS	2611.64
2	D.P.	SINGLES	19.12
	KELLY/DWN		-8.29
	TOTAL		2562.09
wt. on bit:			
wt. of string:			112000.00

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 | Wt. on Bit

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

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED | FlowLine Temp

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

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL — Centrifuge | HOURS RUN | MUD DISCARDED (m³) | MUD RECEIVED (m³) | DISCARDED (m³)

METERS DRILLED

FROM	TO	SIZE (mm)	ROTARY R.P.M.	WT. ON BIT (kN)
2562.00				

CIRCULATION PRESSURE (kPa) — PUMP NO. 1: LINER SIZE (mm) 6.22 | S.P.M. 162 — PUMP NO. 2: LINER SIZE (mm) 6.22 | S.P.M. 162

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE
0:00	1:00	1.00	22
1:00	1:15	0.25	6
1:15	1:30	0.25	7
1:30	8:00	6.50	22

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

(Blow Down Well) @ 2411m
Run In Hole To 2561m
Rig Service & Function K.C.R. 4/4 Secs
(Blow Down Well) @ 2841m

NOTES: Pumpdown Circuit Relief — Engines #1 24 hrs # 2 24 hrs / Pumps 4 hrs

DRILLER SIGNATURE: Bill Mills

BOILER PSI	STACK TEMP	OPERATOR FUEL	MAX EXP MOORLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.0				

RATE SCHEDULE: REGULAR / REPAIR / INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

CREW

CREW	SOC. INS. NO.	NAME	HRS		INJURED YES	INJURED NO
Driller	716-324-181	Bill Mills	8.00	BM	☐	☑
Derrickman	629-926-262	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	482-955-820	Gary Laughlin	8.00	GL	☐	☑
Floorman	736-523-388	Nathan Surinak	8.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	8.00	AJ	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	640-548-323	Dan Nicholson		DN	☐	☑

DAY TOUR — 8:00 TO 16:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	JunkSub	159	0.70
1	Bit Sub	156	0.91
4		127	37.72
92	D.P.	STANDS	2611.64
2	D.P.	SINGLES	19.12
	KELLY/DWN		-8.29
	TOTAL		2562.09
wt. on bit:			
wt. of string:			112000.00

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 | Wt. on Bit

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

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED | FlowLine Temp

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

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL — Centrifuge | HOURS RUN | MUD DISCARDED (m³) | MUD RECEIVED (m³) | DISCARDED (m³)

METERS DRILLED

FROM	TO	SIZE (mm)	ROTARY R.P.M.	WT. ON BIT (kN)
2562.00				

CIRCULATION PRESSURE (kPa) — PUMP NO. 1: LINER SIZE (mm) 6.22 | S.P.M. 162 — PUMP NO. 2: LINER SIZE (mm) 6.22 | S.P.M. 162

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE
8:00	8:45	0.75	22
8:45	9:00	0.25	7
9:00	9:15	0.25	21
9:15	13:15	4.00	6
13:15	16:00	2.75	11

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

(Blow Down Well) @ 2641m
Rig Service and Function Pipe Ram's 8/8
Safety Meeting
P.O.O.H.
Rig to and Run Wireline Log w/Challenger

NOTES: Pumpdown Circuit Relief

DRILLER SIGNATURE: Wade Goddard

BOILER PSI	STACK TEMP	OPERATOR FUEL	MAX EXP MOORLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5			High Temperatures	

RATE SCHEDULE: REGULAR / REPAIR / INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

CREW

CREW	SOC. INS. NO.	NAME	HRS		INJURED YES	INJURED NO
Driller	533-528-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-972-640	Murray McBain	12.00	MM	☐	☑
Motorman	651-386-064	Jesse Goddard	12.00	JG	☐	☑
Floorman	505-422-252	Rory Mitchell	12.00	RM	☐	☑
Floorman	730-040-896	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-993	Daniel Sampson	12.00	DS	☐	☑

EVENING TOUR — 16:00 TO 24:00

BIT RECORD

NO.	BIT	O.D. (mm)	LENGTH (m)
1	JunkSub	159	0.70
1	Bit Sub	156	0.91
4		127	37.72
92	D.P.	STANDS	2611.64
2	D.P.	SINGLES	19.12
	KELLY/DWN		-8.29
	TOTAL		2562.09
wt. on bit:			
wt. of string:			112000.00

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 | Wt. on Bit

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

MUD RECORD

MUD TYPE: WATER BASED / OIL BASED | FlowLine Temp

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

MUD MATERIAL ADDED

PRODUCT	AMOUNT x UNIT

SOLIDS CONTROL — Centrifuge | HOURS RUN | MUD DISCARDED (m³) | MUD RECEIVED (m³) | DISCARDED (m³)

METERS DRILLED

FROM	TO	SIZE (mm)	ROTARY R.P.M.	WT. ON BIT (kN)
2562.00				

CIRCULATION PRESSURE (kPa) — PUMP NO. 1: LINER SIZE (mm) 6.22 | S.P.M. 162 — PUMP NO. 2: LINER SIZE (mm) 6.22 | S.P.M. 162

REDUCED PUMP SPEED

DEVIATION SURVEY

DEPTH (m)	DEVIATION (°)	DIRECTION

TIME LOG

FROM	TO	HRS	CODE
16:00	23:45	7.75	11
23:45	24:00	0.25	7

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Wireline Logs w/Challenger
Rig Service and Function Blind Ram's 8/8

NOTES

DRILLER SIGNATURE: Bill Mills

BOILER PSI	STACK TEMP	OPERATOR FUEL	MAX EXP MOORLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5				

RATE SCHEDULE: REGULAR / REPAIR / INVERT

DRIVER A | CREW SAFETY DAYS | DRIVER B

CREW

CREW	SOC. INS. NO.	NAME	HRS		INJURED YES	INJURED 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	482-955-820	Gary Laughlin	4.00	GL	☐	☑
Floorman	736-523-388	Nathan Surinak	4.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	4.00	AJ	☐	☑

CHIMO ETS SOFTWARE VERSION:

ETS SERIAL NUMBER: PREC620_20041020_1A

Chimo Equipment
A Varco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | RIG RELEASE: | JOB NO: 21 | AFE:
LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
SURFACE LOCATION: a-92-A / 92-J-12 | UNIQUE ID: D-1-H / 92-J-12
SIGNATURE OF OPERATOR'S REPRESENTATIVE: Russ Silva | SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: Kevin Vig

DAILY CHECKS (OPR / R.M.)
(1) Daily Walk Around Inspection
(2) Detailed Inspection (Weekly, Log Entry Required)
(3) H2S Equip Posted (If Required)
(4) Well Licence & Spill Clean-up Planning
(5) Fire Line Stated
(6) BOP Data Posted
(7) Weekly Inspect BOP's Flare Line & Diverter Lines
(8) Rig Safety/Health and Safety Meeting (Supervisor Present)
(9) C.A.O.D.C. Rig Safety Inspection Checklist (Initial Up Posted)
(10) Main Hoisting or Safety Equipment (Crown-O-Matic)
(11) Crown Saver Checked
(12) Hoist Line Checked

DATE: 21-Nov-2004 | RIG NO: 520 E | TIME: 6:00 | RIG: 29911 BOILER

LAST CASING TAGGED OR LINER

	O.D. (mm)	Lbs/ft. (kg/m)	Grade	Depth (m)	New or Used	No. of Joints	Total Joint Length (m)	Hole Depth Measured From	Ref. Elevation (m)
									7.32
			K-55	10		126.00	6.31		124.90
									6.221	857.00

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

BOP SIZE (mm)	Liner Size (mm)	Stroke (mm)	No. of Cylinders	Total Liner Area (mm²)	Pump Type	No. of Pumps	Pump Manufacturer	Stroke Length (mm)
	29.00	SS-95	83.00	165.00	5"XH	170	F-1600	BPMMP	305
	38.00	SS-95	67.00	168.00	6"XH	150	F-1600	BPMMP	305

WELL TYPE: Geothermal | RE-ENTRY: ☐YES ☒NO | KB TO GROUND ELEV.: 7.32
WELL NAME & No.: MC6 South Meager | DATE: 21-Nov-2004
OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling
RIG MANAGER: Kevin Vig | RIG NO.: 520 E
PROVINCE: BC | CAMP: ☑YES ☐NO | H2S SAFETY DATE: 60.00

TIME-HRS

CREW	Rig out Muffler		
MORN	3.00	0.25	0.25	3.25	1.00	0.25	3.25	1.00
DAY	7.50	0.25	0.25	4.00	4.00
EVE	8.25	0.25	5.00	0.50	4.00
TOTAL	18.75	0.75	5.25	0.50	1.00	0.25	3.25	1.00	24.00

SHALE SHAKER(S): No. 2 | TYPE: Derrick | SCREENS CHANGED: ☐YES ☑NO

	TOP	BOTTOM
NEW		
TOP	100	100
MIDDLE	100	100
BOTTOM	100	100

RENTALS/SERVICES

MORNING TOUR 0:00 TO 8:00

BIT RECORD

NO.	RN	SIZE (mm)	MAKE	DEPTH OUT (m)	FOOTAGE	HOURS	ROP
1		JunkSub	165				0.70
1		Bit Sub	165				0.91
4			127				37.72
B2	DP	STANDS		2611.84			
2	DP	SINGLES		19.12			
		KELLY/SWIVEL		-8.29			
		TOTAL		2662.00			

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 (T | B | G | O | R) | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

WT. OF DC | WT. OF STRING: 112000.00

MUD RECORD

MUD TYPE: ☑WATER BASED ☐OIL BASED | FlowLine Temp | TIME | DENSITY (kg/m³) | FUNNEL VIS. (sec/L) | W.L. (cm³) | pH | REDUCED PUMP SPEED | DEVIATION SURVEY (DEPTH (m) | DEVIATION (o) | DIRECTION) | DRILLER SIGNATURE: Bill Mills

MUD MATERIAL ADDED (PRODUCT | AMOUNT x UNIT)

SOLIDS CONTROL: Centrifuge (HOURS RUN | MFG | CAPACITY (L/min) | DISCHARGE (kg/m³))

METERS DRILLED

FROM	TO	BIT No.	ROTARY R.P.M.	WOB (kN)
2662.00				

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (MFG | SPM | B.P.M) | PUMP NO. 2 (MFG | SPM | B.P.M)

	SPM	B.P.M
PUMP NO. 1	152	
PUMP NO. 2	152	

TIME LOG

FROM	TO	HRS	CODE
0:00	0:15	0.25	11
0:15	3:30	3.25	22
3:30	4:45	1.25	6
4:45	5:00	0.25	7
5:00	6:00	1.00	23
6:00	6:15	0.25	21
6:15	8:00	1.75	6

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Rig out Wireline Loggers
(Rig out Muffler) & Install V-Door
Run In Hole
Rig Service & Function Pipe Rams
(Rig Up Laydown Truck)
Safety Meeting (Laying Down Drlull String)
Lay Down D.P. & H.W.D.P.

NOTES: Function Crown Saver. Engine data: 1 2 > 11 mm 1 3 > 24 Hrs. Pumps: 1 & 2 > 5 litre

DRILLER SIGNATURE | BOILER (FUEL | pH | STACK TEMP.) | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

Bill Mills	8.00	9.5				

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

MORNING TOUR CREW

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	482-955-820	Gary Laughlin	8.00	GL	☐	☑
Floorman	736-523-366	Nathan Surinak	8.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	8.00	AJ	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	640-569-323	Dan Nicholson		DN	☐	☑

DAY TOUR 8:00 TO 16:00

BIT RECORD

NO.	RN	SIZE (mm)	MAKE	DEPTH OUT (m)	FOOTAGE	HOURS	ROP
1		JunkSub	165				0.70
1		Bit Sub	165				0.91
4			127				37.72
B2	DP	STANDS		2611.84			
2	DP	SINGLES		19.12			
		KELLY/SWIVEL		-8.29			
		TOTAL		2662.00			

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 (T | B | G | O | R) | HOLE CONDITION | HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

WT. OF DC | WT. OF STRING: 112000.00

MUD RECORD

MUD TYPE: ☑WATER BASED ☐OIL BASED | FlowLine Temp | TIME | DENSITY (kg/m³) | FUNNEL VIS. (sec/L) | W.L. (cm³) | pH | REDUCED PUMP SPEED | DEVIATION SURVEY (DEPTH (m) | DEVIATION (o) | DIRECTION) | DRILLER SIGNATURE: Wade Goddard

MUD MATERIAL ADDED (PRODUCT | AMOUNT x UNIT)

SOLIDS CONTROL: Centrifuge (HOURS RUN | MFG | CAPACITY (L/min) | DISCHARGE (kg/m³))

METERS DRILLED

FROM	TO	BIT No.	ROTARY R.P.M.	WOB (kN)
2662.00				

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (MFG | SPM | B.P.M) | PUMP NO. 2 (MFG | SPM | B.P.M)

	SPM	B.P.M
PUMP NO. 1	152	
PUMP NO. 2	152	

TIME LOG

FROM	TO	HRS	CODE
8:00	8:15	0.25	21
8:15	15:45	7.50	6
15:45	16:00	0.25	7

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

Safety Meeting
LayDown 127 mm D.P.
Rig Service and Function HCR 3/3

NOTES: Function Crown Saver

DRILLER SIGNATURE | BOILER (FUEL | pH | STACK TEMP.) | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

Wade Goddard	8.00	9.5			LayDown D.P.	

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

DAY TOUR CREW

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	533-528-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-840	Murray McBain	12.00	MM	☐	☑
Motorman	651-366-084	Jesse Goddard	12.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	12.00	RM	☐	☑
Floorman	739-040-895	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-003	Daniel Sampson	12.00	DS	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

EVENING TOUR 16:00 TO 24:00

BIT RECORD

NO.	RN	SIZE (mm)	MAKE	DEPTH OUT (m)	FOOTAGE	HOURS	ROP
	DP	STANDS					
	DP	SINGLES					
		KELLY/SWIVEL					
		TOTAL					

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 | O | R) | 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 | FlowLine Temp | TIME | DENSITY (kg/m³) | FUNNEL VIS. (sec/L) | W.L. (cm³) | pH | REDUCED PUMP SPEED | DEVIATION SURVEY (DEPTH (m) | DEVIATION (o) | DIRECTION) | DRILLER SIGNATURE: Bill Mills

MUD MATERIAL ADDED (PRODUCT | AMOUNT x UNIT)

SOLIDS CONTROL: Centrifuge (HOURS RUN | MFG | CAPACITY (L/min) | DISCHARGE (kg/m³))

METERS DRILLED

FROM	TO	BIT No.	ROTARY R.P.M.	WOB (kN)
2662.00				

CIRCULATION PRESSURE (kPa): PUMP NO. 1 (MFG | SPM | B.P.M) | PUMP NO. 2 (MFG | SPM | B.P.M)

	SPM	B.P.M
PUMP NO. 1	152	
PUMP NO. 2	152	

TIME LOG

FROM	TO	HRS	CODE
16:00	17:15	1.25	6
17:15	17:45	0.50	23
17:45	18:00	0.25	7
18:00	23:15	5.25	11
23:15	24:00	0.75	11

DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

LayDown 127 mm D.P., H.W.D.P. and D.C.'s
Rig Out LayDown Truck
Rig Service and Function Blind Ram's
Rig to and Wireline Logs w/Challenger(Pressure & Temperature)
Wireline Logs (Pressure Temperature & Inject well @ 750 Litres / minute

NOTES

DRILLER SIGNATURE | BOILER (FUEL | pH | STACK TEMP.) | OPERATOR FUEL | MAX EXP HOOKLOAD | SAFETY TOPIC | M.A.C.P.

Bill Mills	8.00	9.5				

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

EVENING TOUR CREW

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	INJURIES NO
Driller	716-324-181	Bill Mills	4.00	BM	☐	☑
Derrickman	529-926-262	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	482-955-820	Gary Laughlin	4.00	GL	☐	☑
Floorman	736-523-366	Nathan Surinak	4.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	4.00	AJ	☐	☑
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

CAODC

Chimo Equipment
A Vanco Company

Based on the CAODC ETS file standard

SPUD: 2004-09-22 22:49 | RIG RELEASE | JOB NO.: 21 | AFE

GUIDENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager

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
(1) Daily Well Visual Inspection
(2) Detailed Inspection-Weekly Inspection Checklist
(3) H2S Signs Posted (if required)
(4) Well Logging & Shut Dowgner Process
(5) Pason Data Backup
(6) BOP Drills Performed
(7) Weekly Inspect BOP's Functional & Pressure Tests
(8) Rig Site Hazard and Safety Meeting documentation
(9) E & D & C Rig Safety Inspection Checklist (ongoing reports)
(10) Mud Additives Safety Training in Language
(11) Green Gas or Chemical
(12) Motor Fully Charged

DATE: 22-Nov-2004 | RIG NO.: 620 E | FUEL: 0 & 30 | RIG: 24932 BOILER

WEATHER: TEMPERATURE -2 | CURRENT CONDITION: Cloudy | WIND DIRECTION: Calm | ROAD: Fair

	O.D. (mm)	WT/FT	Hgth	GRADE	No. OF JOINTS	TOTAL NO. LENGTH	RETRIEVED MEASURE	SET AT (m)
LAST CASING							7.32	
TUBING				K-55	16	125.00	6.31	124.00
OPEN HOLE							8.23	857.00

	DCDP SIZE (mm)	AMOUNT USED (kg/m)	GRADE	NOM. ID (mm)	TOOL JT O.D. (mm)	THREAD TYPE	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER	STROKE LTH. (mm)
		29.00	S5-95	63.09	166.00	5"XH	170	F-1600	BPMMP	305
		38.00	S5-95	67.00	166.00	5"XH	150	F-1600	BPMMP	305

TIME - HRS

DAYS NO.	1 OPER.	2 STAND-BY	3 REPAIRS	4 CUTTING/SLIP	5 CASING	6 RIG UP/DOWN	7 DRLG.	8 REAMING	9 CORING	10 CIRC. & COND.	11 TRIPS	12 SURVEYS	13 WIRELINE LOGS	14 DRILL STEM TEST	15 MISC.	16 TOTAL HOURS	17 DRLG. HRS	18 REAMING HRS	19 CORING HRS	20 CIRC. & COND. HRS	21 TRIPS HRS	22 SURVEYS HRS	23 WIRELINE LOGS HRS	24 DRILL STEM TEST HRS	25 MISC. HRS	26 ELECTRIC HRS	27 DOWN HRS	28 NPT HRS
MORN							9.25										1.25											
DAY							8.25										7.75											
EVE							8.25										7.75											
TOTAL							9.75										22.75											

SHALE SHAKER(S) / RENTALS/SERVICES

TOTAL	RIG #	TYPE	NEW
8.00		Derrick	
	SCREENS CHANGED	YES	NO
8.00	TOP	100	100
8.00	MIDDLE	100	100
24.00	BOTTOM	100	100

	HRS	DAY	EVE

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 CHARACTERISTICS (T1 T2 IADC LOC B Gage OC PRIMARY FAILED) | 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) | FlowLine Temp | TIME | DENSITY (kg/m³) | FUNNEL VIS. (Sec) | W.L. (cm3) | pH | MUD MATERIAL ADDED: PRODUCT / AMOUNT x UNIT | SOLIDS CONTROL: Centrifuge | HOURS RUN | VOLUME DISCARDED (m³) | VOLUME BUILT (m³)

METERS DRILLED / TIME LOG

FROM	TO	METRES DRILLED	ROTARY HOURS	CUM. ROTARY HOURS	Time From	Time To	Hours	Code	Remarks
2562.00					0:00	0:15	0.25	7	Rig Service & function Pipe Rams 7/7 Secs
					0:15	7:00	6.75	11	Wireline Logs (Pressure Temperature & Inject well @ 750 Litres / minute
					7:00	8:00	1.00	11	Wireline Logs(Pressure Temperature & Increase injection to well to 1500 Litres / minute)

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

BOILER HRS	STOCK TANK	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5				

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	716-324-161	Bill Mills	8.00	BM	☐	☑
Derrickman	629-926-282	Rob Roth	8.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	8.00	DF	☐	☑
Floorman	482-955-820	Gary Laughlin	8.00	GL	☐	☑
Floorman	736-523-366	Nathan Surinak	8.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	8.00	AJ	☐	☑
Rig Manager	719-409-484	Kevin Vig		KV	☐	☑
Top Drive	649-569-323	Dan Nicholson		DN	☐	☐

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

DAY TOUR

BIT RECORD / MUD RECORD / METERS DRILLED / TIME LOG — same layout as MORNING TOUR

FROM	TO	METRES DRILLED	ROTARY HOURS	CUM. ROTARY HOURS	Time From	Time To	Hours	Code	Remarks
2562.00					8:00	10:30	2.50	11	Wireline Logs(Pressure Temperature & Injection to Well At 1500 Litres/Minute)
					10:30	12:00	1.50	11	Monitor Pressure/Temperature and Pull WireLine Out Of Hole
					12:00	12:15	0.25	7	Rig Service and Function HCR 3/3
					12:15	16:00	3.75	11	Wireline Logs(Pressure Temperature)

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

BOILER HRS	STOCK TANK	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5				

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	633-626-706	Wade Goddard	12.00	WG	☐	☑
Derrickman	642-872-640	Murray McBain	12.00	MM	☐	☑
Motorman	851-366-064	Jesse Goddard	12.00	JG	☐	☑
Floorman	505-422-253	Rory Mitchell	12.00	RM	☐	☑
Floorman	730-040-895	Nathan Schwandt	12.00	NS	☐	☑
Leaseman	729-975-693	Daniel Sampson	12.00	DS	☐	☐

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

EVENING TOUR

BIT RECORD / MUD RECORD / METERS DRILLED / TIME LOG — same layout as MORNING TOUR

FROM	TO	METRES DRILLED	ROTARY HOURS	CUM. ROTARY HOURS	Time From	Time To	Hours	Code	Remarks
2562.00					16:00	23:45	7.75	11	Wireline Logs(Pressure Temperature)
					23:45	24:00	0.25	7	Rig Service & Function Blind Rams

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

BOILER HRS	STOCK TANK	OPERATOR FUEL	MAX EXP HOOKLOAD	SAFETY TOPIC	M.A.C.P.
8.00	9.5				

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	716-324-161	Bill Mills	4.00	BM	☐	☑
Derrickman	629-926-282	Rob Roth	4.00	RR	☐	☑
Motorman	722-572-781	Dwayne Fry	4.00	DF	☐	☑
Floorman	482-955-820	Gary Laughlin	4.00	GL	☐	☑
Floorman	736-523-366	Nathan Surinak	4.00	NS	☐	☑
Leaseman	648-747-426	Adam Johnson	4.00	AJ	☐	☑

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

SPUD: 2004-09-22 22:40 | RIG RELEASE | JOB NO: 21 | AFE

LICENCE NO.: a-92-A / 92-J-12 | WELL NAME AND NO.: MC6 South Meager

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

SURFACE LOCATION: a-92-A / 92-J-12 | RIG/UNIT NO.: b-1-H / 92-J-12

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

DAILY CHECKS

(1) Daily Walk Around Inspection
(2) Operator Inspection/Weekly Lubing Schedule
(3) 1/2 Pipe Movement (survey)
(4) Visit Interval & Desk Diagram Posted
(5) Hours Log Updated
(6) BOP Data Recorded
(7) Function Inspect BOP's Following Diagnostic Lines
(8) Rig Site Health and Safety Meeting (once/day monthly)
(9) C.A.O.D.C. Rig Safety Inspection Check (once/every month)
(10) MWD Inspection Before Running in (logging)
(11) Others Spread Checked
(12) Mine Site Checks

DAILY COSTS: DFR | R.M.

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

DATE 23-Nov-2004 | RIG NO 620 E | FUEL on 8:00 | RIG 21130 BOILER

LAST CASING TUBING OR LINER

	O.D. (mm)	Wall I.D. (mm)	Weight	Grade	Range	No. of Joints	Total Joints Length	Hole Depth Measured From	Set at (m)
								7.32	
					K-55	10	120.90	5.31	124.00
								5.22	657.00

	Drill Pipe Size (mm)	Linear Mass (kg/m)	Grade	Inner ID (mm)	Total Jt O.D. (mm)	Thread Type	No. of Joints	Pump Type	Pump Manufacturer	Stroke Length (mm)
		29.00	S5-95	83.00	168.00	5"XH	179	F-1600	BPMMP	305
		38.00	S5-95	67.00	168.00	5"XH	150	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	TOTALS
MORN							0.25															Loadpath Inspection	4.00
DAY							0.25																7.50
EVE	5.75						0.25																1.00
TOTAL	5.75						0.75																12.25

SHALE SHAKER(S) | RECTALS SERVICES

	NO.	TYPE		
	8.00	SCREENS CHANGED	Yes	No
	5.00	TOP	100	
	8.00	MIDDLE	100	
	24.00	BOTTOM	100	

WELL TYPE: Geothermal | RE-ENTRY: Yes No | KB TO GROUND ELEV.: 7.32

WELL NAME & NO.: MC6 South Meager | DATE: 23-Nov-2004

OPERATOR: Western Geopower Corp | CONTRACTOR: Precision Drilling

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

PROVINCE: BC | CAMP: Yes No | RIG SAFETY DAYS: 62.00

MORNING TOUR

BIT RECORD | MUD RECORD | METERS DRILLED | TIME LOG | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

BIT RECORD: BIT NO. | SIZE | IADC CODE | MFG. | TYPE | SERIAL NO | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL METERS DRILLED | TOTAL HOURS RUN | CUTTING STRUCTURE (T | B | Gage | OC | Reason Pulled | Inner/Outer) | DULL CONDITION (T | B | Gage | OC | L/C) | 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) | PLASTIC VIS. (dPa·s) | YIELD PT. (kPa) | W.L. (cm3) | pH | MUD MATERIAL ADDED: PRODUCT / AMOUNT x UNIT | SOLIDS CONTROL: Centrifuge | HOURS RUN | DRILLING PARAMETERS | DRILLING FLUID PROPERTIES | TROUBLE/DOWNTIME

METERS DRILLED

FROM	TO	Bit #	Hole Size (mm)	ROTARY R.P.M.	WT. ON BIT (kN)	Drilled (m)	Rotating Hours	Cum. Hrs.	Cum. Rot. Hrs.
2642.00									

TIME LOG

FROM	TO	Hours	Cum. Hrs.	Code	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
0:00	4:00	4.00		22	Top Drive (Loadpath Inspection)
4:00	4:15	0.25		7	Rig Service
4:15	8:00	3.75		14	Nipple Down B.O.P.s

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

NOTES

DRILLER SIGNATURE: Bill Mills | HRS. RUN: 8.00 | STACK TEMP: 9.5 | 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	NO
Driller	716-324-181	Bill Mills	8.00	BM		
Derrickman	629-926-262	Rob Roth	8.00	RR		
Motorman	722-572-781	Dwayne Fry	8.00	DF		
Floorman	482-955-826	Gary Laughlin	8.00	GL		
Floorman	736-523-366	Nathan Surinak	8.00	NS		
Leaseman	648-747-426	Adam Johnson	8.00	AJ		
Rig Manager	719-409-484	Kevin Vig		KV		
Top Drive	840-589-323	Dan Nicholson		DN		

RATE SCHEDULE: Regular | Repair | Invert

DRIVER A | CREW SAFETY DAYS | DRIVER B

DAY TOUR

BIT RECORD | MUD RECORD | METERS DRILLED | TIME LOG | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

METERS DRILLED

FROM	TO	Bit #	Hole Size (mm)	ROTARY R.P.M.	WT. ON BIT (kN)	Drilled (m)	Rotating Hours	Cum. Hrs.	Cum. Rot. Hrs.
2642.00									

TIME LOG

FROM	TO	Hours	Cum. Hrs.	Code	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
8:00	8:15	0.25		7	Rig Service
8:15	8:30	0.25		21	Safety Meeting
8:30	16:00	7.50		14	Rig to and Nipple Down GrantHead and B.O.P.'s

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

NOTES

DRILLER SIGNATURE: Wade Goddard | HRS. RUN: 8.00 | STACK TEMP: 9.5 | OPERATOR FUEL | MAX EXP. HOOKLOAD | SAFETY TOPIC: Nipple Down B.O.P.'s | M.A.C.P.

DAY TOUR 8:00 TO 16:00

CREW	SOC. INS. NO.	NAME	HRS		INJURIES YES	NO
Driller	533-628-706	Wade Goddard	12.00	WG		
Derrickman	642-872-846	Murray McBain	12.00	MM		
Motorman	851-368-084	Jesse Goddard	12.00	JG		
Floorman	505-422-253	Rory Mitchell	12.00	RM		
Floorman	730-040-696	Nathan Schwandt	12.00	NS		
Leaseman	729-875-093	Daniel Sampson	12.00	DS		

RATE SCHEDULE: Regular | Repair | Invert

DRIVER A | CREW SAFETY DAYS | DRIVER B

EVENING TOUR

BIT RECORD | MUD RECORD | METERS DRILLED | TIME LOG | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS

METERS DRILLED

FROM	TO	Bit #	Hole Size (mm)	ROTARY R.P.M.	WT. ON BIT (kN)	Drilled (m)	Rotating Hours	Cum. Hrs.	Cum. Rot. Hrs.
2642.00									

TIME LOG

FROM	TO	Hours	Cum. Hrs.	Code	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS
16:00	17:00	1.00		14	Nipple Down Master Valve and Install Wellhead Cap
17:00	17:15	0.25		7	Rig Service
17:15	24:00	6.75		1	Drain Water fr/400 BBl Tank's and MudTank's and Rig Out
					Rig released @ 24:00 hours

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

NOTES

DRILLER SIGNATURE: Bill Mills | HRS. RUN: 8.00 | STACK TEMP: 9.5 | 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	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	482-955-826	Gary Laughlin	4.00	GL		
Floorman	736-523-366	Nathan Surinak	4.00	NS		
Leaseman	648-747-426	Adam Johnson	4.00	AJ		

RATE SCHEDULE: Regular | Repair | Invert

DRIVER A | CREW SAFETY DAYS | DRIVER B

CAODC | Chimo Equipment, A Veron Company

Based on the CAODC ETS file standard

ETS SERIAL NUMBER: PREC620_20041023_1A

CHIMO ETS SOFTWARE VERSION:

Section 3: Directional Survey Data, (Baker Hughes INTEQ)

FINAL SURVEY LISTING

by:

Baker Hughes INTEQ

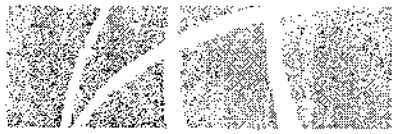
for:

WESTERN GEOPOWER CORP.

Well:

WESTERN GEOPOWER SOUTH MEAGER MC-6

SRFC. a-92-A/92-J-12
SOUTH MEAGER
BRITISH COLUMBIA, CANADA



BAKER HUGHES

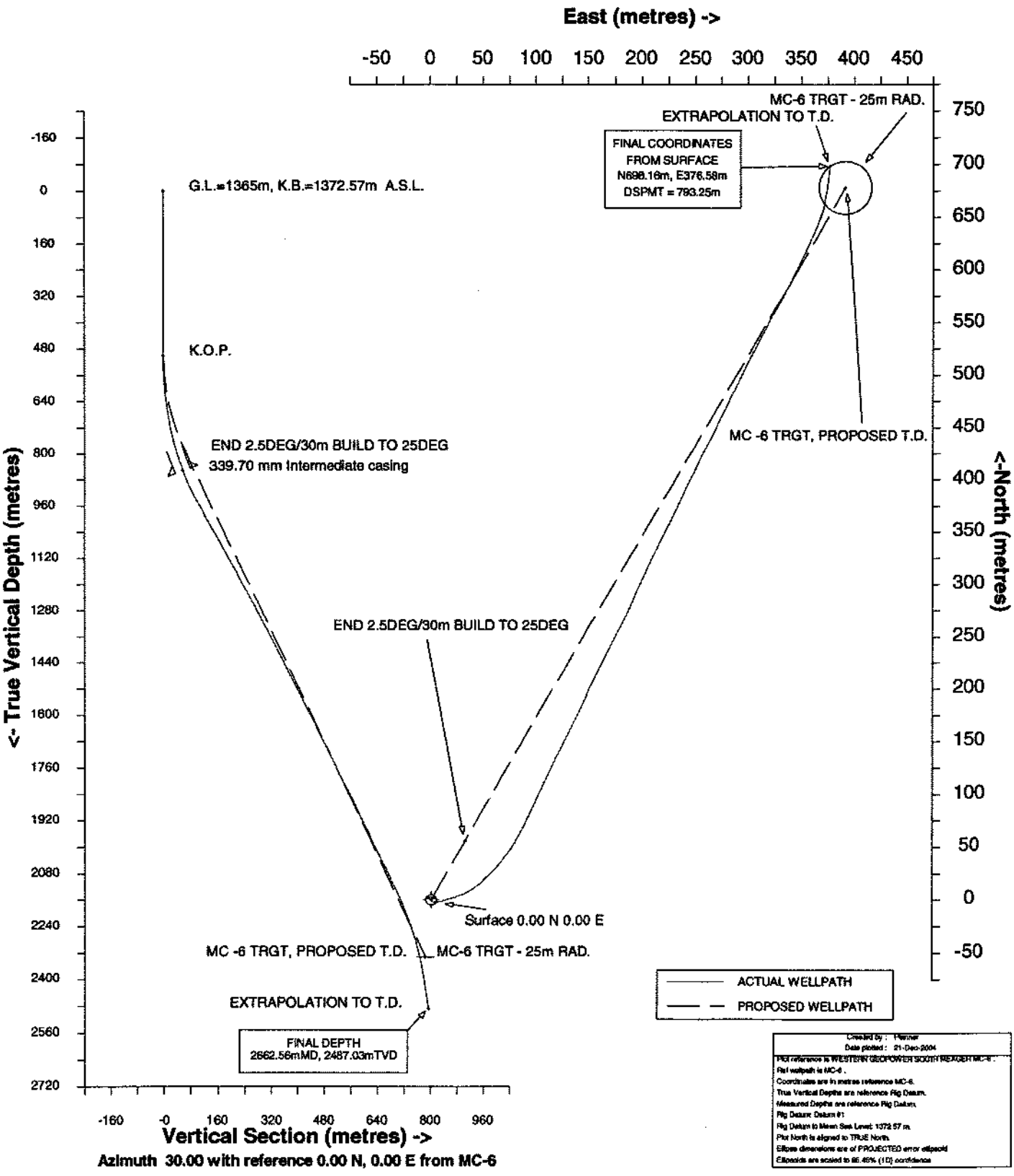
INTEQ

WESTERN GEOPOWER CORP.

Location:	BRITISH COLUMBIA, CANADA	**Slot:**	MC-6
Field:	MEAGER	**Well:**	SRFC. a-92-A/92-J-12
Installation:	SOUTH MEAGER	**Wellbore:**	WESTERN GEOPOWER SOUTH MEAGER MC-6

BAKER HUGHES INTEQ

BAKER HUGHES INTEQ



WESTERN GEOPOWER CORP.,MC-6
SOUTH MEAGER,
MEAGER ,BRITISH COLUMBIA, CANADA

Wellbore: WESTERN GEOPOWER SOUTH MEAGER MC-6
Wellpath: (SVY)MC-6
Date Printed: 21-Dec-2004

BAKER HUGHES
INTEQ

Wellbore

Name	Created	Last Revised	Wellbore Official Name	Planned/Actual
WESTERN GEOPOWER SOUTH MEAGER MC-6	6-Oct-2004	21-Dec-2004		Actual

Well

Name	Government ID	Last Revised
SREC. a-92-A/92-J-12		17-Sep-2004

Slot

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
MC-6	5603038.9000	463229.5000	N50 34 41.1745	W123 319.5848	0.00N	0.00E

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

Final Directional Survey

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 1372.6m above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 30.00 degrees
Bottom hole distance is 793.25 Metres on azimuth 28.34 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes Incorporated

WESTERN GEOPOWER CORP.,MC-6
SOUTH MEAGER,
MEAGER ,BRITISH COLUMBIA, CANADA

Wellbore: WESTERN GEOPOWER SOUTH MEAGER MC-6
Wellpath: (SVY)MC-6
Date Printed: 21-Dec-2004

BAKER HUGHES
INTEQ

Wellpath Report

MD[m]	Inc[deg]	Azi[deg]	TVD[m]	North[m]	East[m]	Dog[eg [deg/30m]	Vertical Section[m]	Station Comment
0.00	0.00	0.00	0.00	0.00N	0.00E	0.00	0.00	
100.00	0.00	0.00	100.00	0.00N	0.00E	0.00	0.00	
155.00	0.50	214.00	155.00	0.20S	0.13W	0.27	-0.24	
212.00	0.25	129.00	212.00	0.48S	0.18W	0.28	-0.51	
277.00	0.25	84.00	277.00	0.56S	0.07E	0.09	-0.45	
352.00	0.25	229.00	352.00	0.65S	0.11E	0.19	-0.50	
418.00	0.75	124.00	418.00	0.98S	0.36E	0.39	-0.67	
457.00	0.70	152.80	456.99	1.34S	0.68E	0.28	-0.82	
466.50	0.80	163.00	466.49	1.45S	0.73E	0.53	-0.89	
476.30	0.90	144.70	476.29	1.58S	0.79E	0.68	-0.97	
485.50	1.10	125.70	485.49	1.69S	0.91E	1.25	-1.01	
494.60	1.60	106.90	494.59	1.78S	1.10E	2.09	-1.00	
504.20	2.40	105.70	504.18	1.88S	1.42E	2.52	-0.92	
513.60	3.50	99.40	513.57	1.98S	1.89E	3.65	-0.77	
522.80	4.70	95.20	522.75	2.06S	2.54E	4.03	-0.51	
532.30	5.20	93.80	532.21	2.13S	3.36E	1.62	-0.16	
541.70	4.80	90.90	541.57	2.16S	4.18E	1.51	0.22	
552.00	4.50	88.80	551.84	2.16S	5.01E	1.00	0.64	
558.40	4.70	85.30	558.22	2.13S	5.53E	1.62	0.92	
569.50	5.10	79.00	569.28	2.00S	6.46E	1.81	1.50	
578.10	5.80	76.90	577.84	1.83S	7.26E	2.54	2.05	
587.60	6.30	74.40	587.29	1.58S	8.23E	1.78	2.75	
596.00	6.90	73.00	595.63	1.31S	9.16E	2.22	3.45	
607.20	7.60	72.70	606.74	0.89S	10.51E	1.88	4.48	
614.50	8.10	73.40	613.97	0.60S	11.46E	2.09	5.21	
629.70	9.10	74.80	629.00	0.02N	13.65E	2.02	6.84	
639.10	9.50	75.10	638.28	0.41N	15.12E	1.29	7.92	
648.80	9.80	75.10	647.84	0.83N	16.69E	0.93	9.06	
657.90	10.30	75.10	656.80	1.24N	18.22E	1.65	10.19	
665.30	10.50	73.70	664.08	1.60N	19.51E	1.31	11.14	
675.70	10.70	73.40	674.30	2.14N	21.34E	0.60	12.53	
685.10	11.20	70.50	683.53	2.69N	23.04E	2.37	13.85	
695.40	11.70	69.50	693.63	3.40N	24.96E	1.57	15.42	
714.00	12.50	68.10	711.81	4.81N	28.60E	1.37	18.46	
732.70	14.50	66.00	730.00	6.51N	32.61E	3.30	21.95	
751.60	15.40	58.20	748.26	8.80N	36.91E	3.50	26.07	
770.60	16.30	55.10	766.53	11.65N	41.24E	1.95	30.71	
789.00	17.40	51.90	784.14	14.83N	45.52E	2.35	35.60	
807.50	18.00	48.40	801.77	18.43N	49.84E	1.98	40.88	
826.50	18.80	45.60	819.80	22.52N	54.22E	1.88	46.62	
845.30	19.80	43.80	837.54	26.94N	58.59E	1.86	52.63	
860.00	21.04	41.90	851.32	30.70N	62.07E	2.87	57.63	339.70 mm Intermediate casing
864.20	21.40	41.40	855.23	31.84N	63.08E	2.87	59.12	
882.90	23.50	38.20	872.52	37.33N	67.65E	3.90	66.15	
901.70	25.30	36.80	889.64	43.49N	72.37E	3.02	73.85	
920.30	26.20	32.90	906.39	50.12N	76.98E	3.09	81.90	
939.00	26.70	29.80	923.13	57.23N	81.31E	2.36	90.22	
957.80	26.60	28.70	939.94	64.59N	85.43E	0.80	98.65	
976.80	26.90	26.60	956.90	72.17N	89.40E	1.57	107.20	
995.40	27.60	24.10	973.44	79.86N	93.04E	2.16	115.68	
1014.10	28.30	24.50	989.96	87.85N	96.65E	1.16	124.41	

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 1372.6m above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 30.00 degrees
Bottom hole distance is 793.25 Metres on azimuth 28.34 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes Incorporated

WESTERN GEOPOWER CORP.,MC-6
SOUTH MEAGER,
MEAGER ,BRITISH COLUMBIA, CANADA

Wellbore: WESTERN GEOPOWER SOUTH MEAGER MC-6
Wellpath: (SVY)MC-6
Date Printed: 21-Dec-2004

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
1032.80	29.00	25.90	1006.37	95.96N	100.47E	1.56	133.34	
1051.50	28.90	23.80	1022.73	104.17N	104.27E	1.64	142.35	
1071.00	29.30	24.80	1039.77	112.82N	108.18E	0.97	151.79	
1089.70	28.50	26.20	1056.14	120.97N	112.06E	1.68	160.80	
1117.70	27.70	24.80	1080.84	132.88N	117.74E	1.11	173.95	
1136.60	27.90	25.50	1097.56	140.85N	121.49E	0.61	182.73	
1164.80	27.80	27.30	1122.49	152.65N	127.35E	0.90	195.87	
1192.80	27.70	27.00	1147.27	164.25N	133.30E	0.18	208.90	
1211.60	27.40	25.90	1163.94	172.04N	137.17E	0.94	217.57	
1230.20	27.50	24.10	1180.45	179.81N	140.79E	1.35	226.11	
1249.00	27.60	25.60	1197.12	187.70N	144.45E	1.12	234.77	
1277.60	27.50	24.50	1222.47	199.68N	150.05E	0.54	247.95	
1296.00	27.50	24.80	1238.80	207.40N	153.59E	0.23	256.41	
1314.80	27.70	27.00	1255.46	215.24N	157.40E	1.66	265.10	
1343.30	27.30	25.60	1280.74	227.03N	163.23E	0.80	278.23	
1371.00	27.30	26.60	1305.35	238.44N	168.82E	0.50	290.90	
1389.80	27.40	25.60	1322.05	246.20N	172.62E	0.75	299.52	
1408.50	27.40	27.30	1338.65	253.90N	176.45E	1.26	308.11	
1427.30	27.40	27.70	1355.34	261.58N	180.44E	0.29	316.75	
1446.00	27.20	26.30	1371.96	269.22N	184.34E	1.08	325.32	
1464.80	26.90	22.70	1388.70	276.99N	187.88E	2.66	333.82	
1493.10	26.70	22.70	1413.96	288.77N	192.81E	0.21	346.48	
1511.90	26.60	23.10	1430.77	296.53N	196.09E	0.33	354.85	
1530.70	26.80	25.90	1447.56	304.22N	199.59E	2.03	363.26	
1549.60	26.50	25.20	1464.46	311.87N	203.25E	0.69	371.71	
1577.60	26.10	25.20	1489.56	323.09N	208.53E	0.43	384.07	
1595.30	26.30	25.60	1505.44	330.15N	211.88E	0.45	391.86	
1624.10	26.20	25.50	1531.27	341.64N	217.37E	0.11	404.56	
1642.00	26.20	25.20	1547.33	348.79N	220.76E	0.22	412.44	
1670.50	26.30	25.90	1572.89	360.16N	226.19E	0.34	425.00	
1709.10	26.40	25.90	1607.48	375.57N	233.68E	0.08	442.09	
1726.00	26.50	24.80	1622.61	382.37N	236.90E	0.89	449.59	
1747.70	26.60	24.50	1642.02	391.19N	240.95E	0.23	459.25	
1779.00	26.60	25.20	1670.01	403.90N	246.84E	0.30	473.21	
1805.40	26.40	25.60	1693.64	414.55N	251.89E	0.30	484.95	
1824.80	25.90	26.30	1711.05	422.23N	255.63E	0.91	493.48	
1853.50	25.80	27.50	1736.88	433.39N	261.29E	0.56	505.97	
1872.70	25.80	27.30	1754.17	440.81N	265.14E	0.14	514.32	
1920.00	25.70	24.80	1796.77	459.27N	274.16E	0.69	534.82	
1952.00	25.90	25.20	1825.58	471.89N	280.05E	0.25	548.69	
1968.90	26.10	26.30	1840.77	478.56N	283.26E	0.93	556.08	
1988.10	26.10	26.30	1858.01	486.14N	287.01E	0.00	564.51	
2007.40	25.80	25.60	1875.37	493.73N	290.70E	0.67	572.93	
2033.70	25.50	25.60	1899.07	504.00N	295.62E	0.34	584.28	
2073.70	25.30	27.70	1935.21	519.33N	303.32E	0.69	601.41	
2093.30	25.40	27.40	1952.92	526.77N	307.20E	0.25	609.79	
2111.80	25.50	27.00	1969.63	533.84N	310.83E	0.32	617.73	
2133.70	25.20	27.70	1989.42	542.17N	315.14E	0.58	627.10	
2154.70	25.80	26.30	2008.37	550.22N	319.24E	1.21	636.13	
2174.30	26.50	27.90	2025.96	557.91N	323.18E	1.52	644.75	
2191.50	26.90	29.40	2041.33	564.69N	326.88E	1.37	652.48	

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 1372.6m above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 30.00 degrees
Bottom hole distance is 793.25 Metres on azimuth 28.34 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes Incorporated

WESTERN GEOPOWER CORP.,MC-6
SOUTH MEAGER,
MEAGER ,BRITISH COLUMBIA, CANADA

Wellbore: WESTERN GEOPOWER SOUTH MEAGER MC-6
Wellpath: (SVY)MC-6
Date Printed: 21-Dec-2004

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
2210.80	26.10	28.00	2058.60	572.25N	331.02E	1.58	661.09	
2230.00	25.50	29.00	2075.89	579.59N	335.01E	1.16	669.44	
2260.70	25.20	26.30	2103.63	591.23N	341.11E	1.17	682.57	
2286.00	25.60	25.50	2126.49	600.99N	345.85E	0.62	693.40	
2408.10	19.50	24.00	2239.20	643.46N	365.51E	1.51	740.01	
2475.50	14.50	11.00	2303.66	662.04N	371.70E	2.78	759.19	
2629.50	9.00	4.00	2454.38	693.00N	376.22E	1.10	788.27	
2662.56	9.00	4.00	2487.03	698.16N	376.58E	0.00	792.92	EXTRAPOLATIONTO T.D.

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 1372.6m above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 30.00 degrees
Bottom hole distance is 793.25 Metres on azimuth 28.34 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes Incorporated

WESTERN GEOPOWER CORP.,MC-6
SOUTH MEAGER,
MEAGER ,BRITISH COLUMBIA, CANADA

Wellbore: WESTERN GEOPOWER SOUTH MEAGER MC-6
Wellpath: (SVY)MC-6
Date Printed: 21-Dec-2004

BAKER HUGHES
INTEQ

Comments

MD[m]	TVD[m]	North[m]	East[m]	Comment
2662.56	2487.03	698.16N	376.58E	EXTRAPOLATION TO T.D.

Casings

Name	Top MD[m]	Top TVD[m]	Top North[m]	Top East[m]	Shoe MD[m]	Shoe TVD[m]	Shoe North[m]	Shoe East[m]	Wellbore
339.70 mm Intermediate casing	0.00	0.00	0.00N	0.00E	860.00	851.32	30.70N	62.07E	WESTERN GEOPOWER SOUTH MEAGER MC-6

Survey Tool Program

Reference	Survey Name	MD[m]	TVD[m]	Survey Tool	Error Model
574339	VERTICAL ASSUMPTION	100.00	100.00	No Tool	No Model
574338	NAVITRAK SVY	2662.56	2487.03	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 1372.6m above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 30.00 degrees
Bottom hole distance is 793.25 Metres on azimuth 28.34 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes Incorporated

Section 4: Casing Reports, (RIMBase Files)

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
POST JOB REPORT

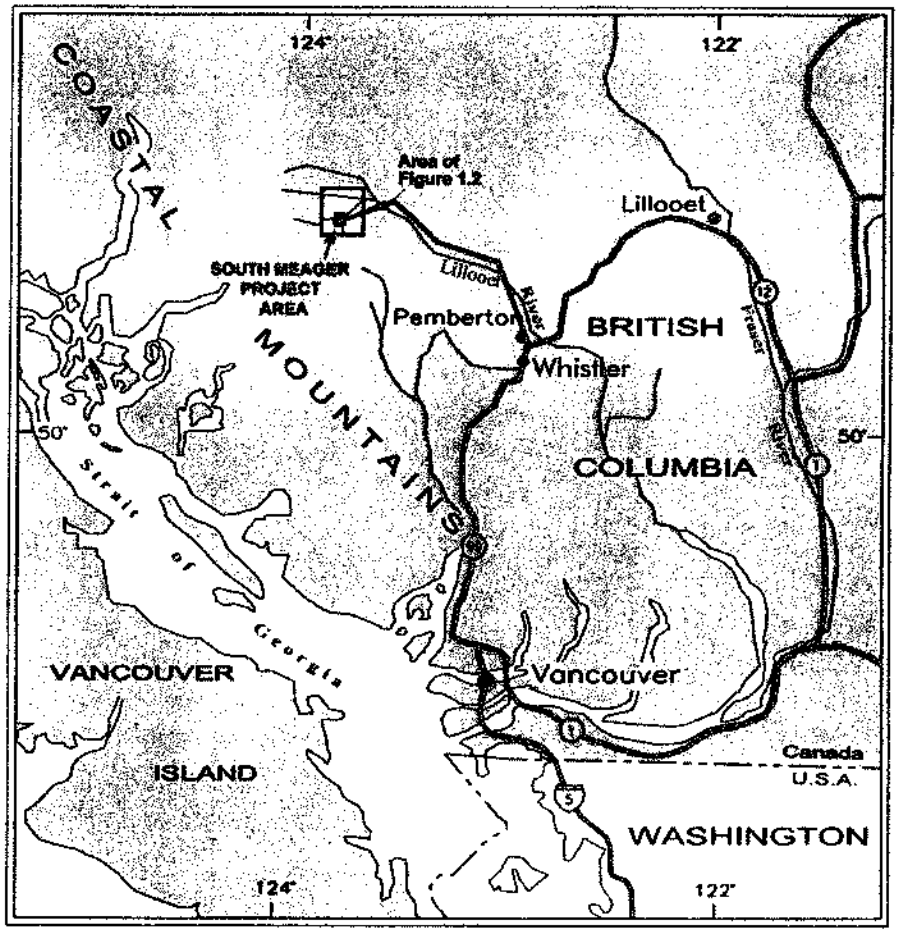
Prepared for: Mr. Andrew Ryder & Mr. Russ Silva
December 31, 2004
Version: 1

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.

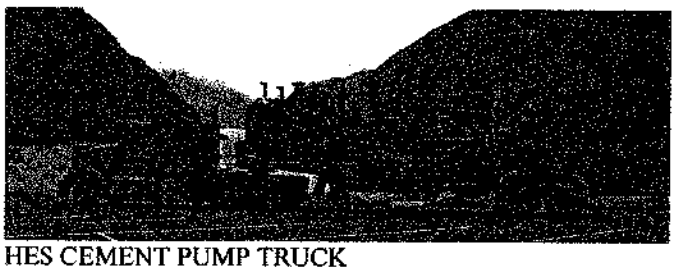


2 HES MOBILIZATION

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.

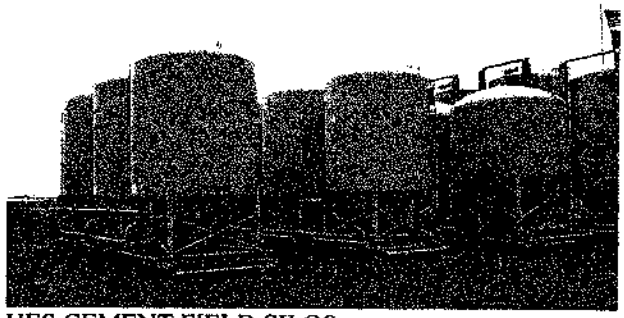
3 ZONAL ISOLATION PROJECT REVIEW

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

4 MC-6

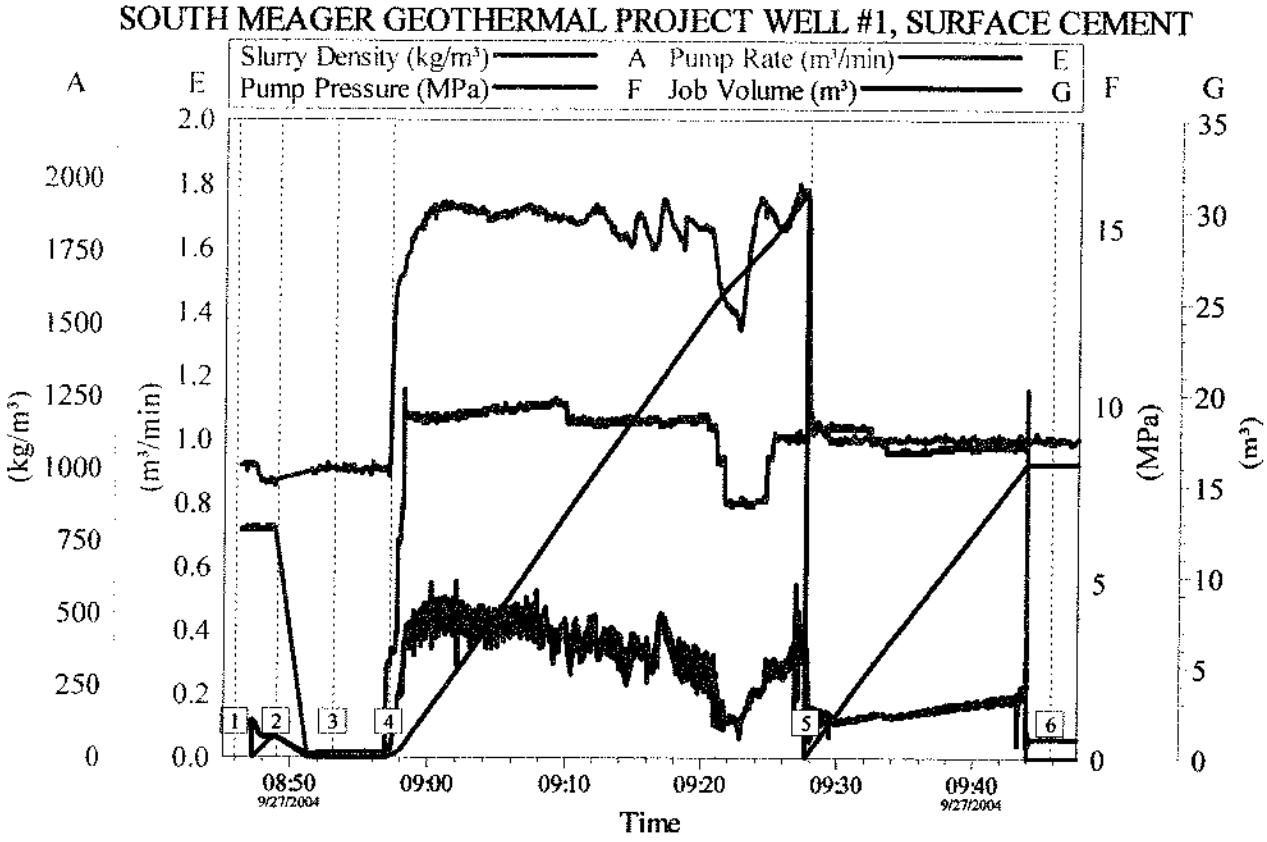
4.1 SURFACE CEMENT JOB

4.1.1 JOB DATA

DATE:	September 27, 2004
HOLE:	609.0 mm
CASING:	473.08 mm, 130.21 kg/m, L-80 landed at 128 m
BHST:	40°C (est)
OBJECTIVE:	Perform a successful surface cement job.
SPACER:	Super Flush 104
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) Luke Neville (Service Supervisor I) Ron Glen (Service Operator I) Keith Monford (Service Supervisor I)
EQUIPMENT:	75TC4 Cement Pumper (10033988) 473 mm Swedge 473 mm Standard HPUJ Float Collar 473 mm Float Shoe

4.1.2 JOB OUTLINE

1. Pump 3m^3 Water ahead
2. Pump 2m^3 SuperFlush 104
3. Pump 2m^3 Water
4. Pump 31 m^3 of Cement @ 1860 kg/m^3
5. Displace with 16 m^3 of water
6. Check Floats and Rig-out HES



4.1.3 JOB SUMMARY

During the preparation of the casing it was discovered that the 609 mm collar was not the one requested by the consultant. The collar which was sent was capable of performing an inner string cement job but wasn't the stab-in type. It was a regular Super Seal II collar with an inner-string cementing adapter with a flat face seal that seals to any float collar having a flat surface of concrete. The consultant was not familiar with this type of collar and was concerned that there wouldn't be enough weight to seal the adapter to the collar. In the event a seal was kept, it would be likely that the drill-string would just move around and allow cement to flow into the casing. It was decided to do a conventional surface cement job with a 473 mm swedge. The pumping of the cement went well but we had partially contaminated cement returns to surface. If the proper stab-in collar was on location, it is likely that we would have had full cement returns. If we performed an inner-string job we would have been able to pump until we obtained good cement returns and than displaced. Because we were forced to do a conventional surface job we were constrained by available cement on location and thus forced to pump absolute volumes. The contaminated returns can most likely be attributed to the large annulus. If we pumped a little more excess cement and spaced the reactive flush and cement with more water it we would have had a better chance to get good returns.

Therefore, it was decided that for the next surface job we will perform an Inner-String Cement Job with the proper Super-Seal II Stab-in Inner String equipment.

4.2 PRESSURE TEST

4.2.1 JOB DATA

DATE: September 29, 2004

OBJECTIVE: Pressure Test Surface equipment

PERSONNEL: Ron Glen (Service Operator I)
Keith Monford (Service Supervisor I)

EQUIPMENT: 75TC4 Cement Pumper (10033988)

4.2.2 JOB OUTLINE

1. Pump 1.5 m^3 Water ahead
2. Held Pressure 5.5 MPa
3. Pressure Tested iron and valves

4.2.3 JOB SUMMARY

Halliburton pumper was successfully used to pressure test surface equipment on and off for 7 hours.

4.3 BALANCED PLUG #1

4.3.1 JOB DATA

DATE: October 1, 2004

HOLE: 473 mm

PLUG DEPTH: 205 m

OBJECTIVE: Perform a Balanced Plug to cure Lost of Circulation

CEMENT: Class G + 40% SSA-1 @ 1860 kg/m^3

PERSONNEL: Keith Monford (Service Supervisor I)
Ron Glen (Service Operator I)

EQUIPMENT: 75TC4 Cement Pumper (10033988)

4.3.2 JOB OUTLINE

1. Pump 1.5 m^3 ahead
2. Pressure test to 10 MPa
3. Pump 3.1 m^3 of Cement @ 1860 kg/m^3
4. Pump 1.2 m^3 Water Behind to Balance
5. Rig out HES

4.3.3 JOB SUMMARY

Calculations show that this was a balanced plug but it did not help cure the lost circulation problem. Another plug was needed.

4.4 BALANCED PLUG #2

4.4.1 JOB DATA

DATE: October 2, 2004

HOLE: 473 mm

PLUG DEPTH: 205 m

OBJECTIVE: Perform a Balanced Plug to cure Lost of Circulation

CEMENT: Class G + 40% SSA-1 + 1.0 % $CaCl_2$ @ 1860 kg/m^3

PERSONNEL: Keith Monford (Service Supervisor I)
Ron Glen (Service Operator I)

EQUIPMENT: 75TC4 Cement Pumper (10033988)

4.4.2 JOB OUTLINE

1. Pump 1.5 m^3 ahead
2. Pressure test to 10 MPa
3. Pump 3.1 m^3 of Cement @ 1860 kg/m^3
4. Pump 1.2 m^3 Water Behind to Balance
5. Rig out HES

4.4.3 JOB SUMMARY

After the previous plug did not cure the loss of circulation problem, 1 % CaCl2 was added to the next plug to try and speed up the setting of the cement. The calculations show this plug to be balanced and help cure the loss of circulation. This plug was successful.

4.5 BALANCED PLUG #3

4.5.1 JOB DATA

DATE: October 11, 2004

HOLE: 473 mm

PLUG DEPTH: 845 m – 867 m

OBJECTIVE: Perform a Balanced Plug to cure Lost of Circulation

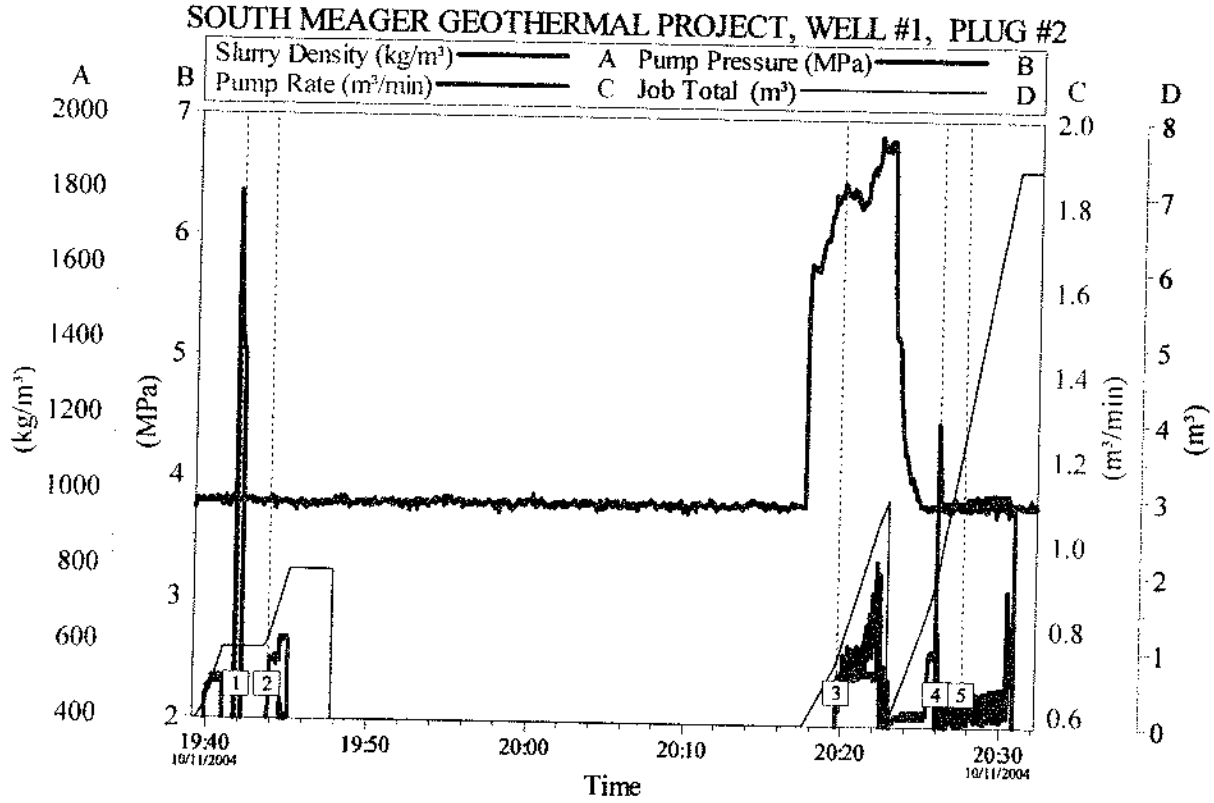
CEMENT: Class G + 40% SSA-1 + 0.1% CFR-3 @ 1860 kg/m^3

PERSONNEL: Luke Neville (Service Supervisor I)
Ron Glen (Service Operator I)

EQUIPMENT: 75TC4 Cement Pumper (10033988)

4.5.2 JOB OUTLINE

1. Pressure Test 7 MPa
2. Pump 2m^3 Water ahead
3. Pump 3 m^3 of Cement @ 1860 kg/m^3
4. Pump Water Behind to Balance
5. Rig out HES



4.5.3 JOB SUMMARY

Had a slight problem with bulk delivery at the beginning of the job but was able to get the density up for the majority of the plug. Calculations show that this was a perfect balance and it helped cure the lost circulation.

4.6 INTERMEDIATE CEMENT JOB

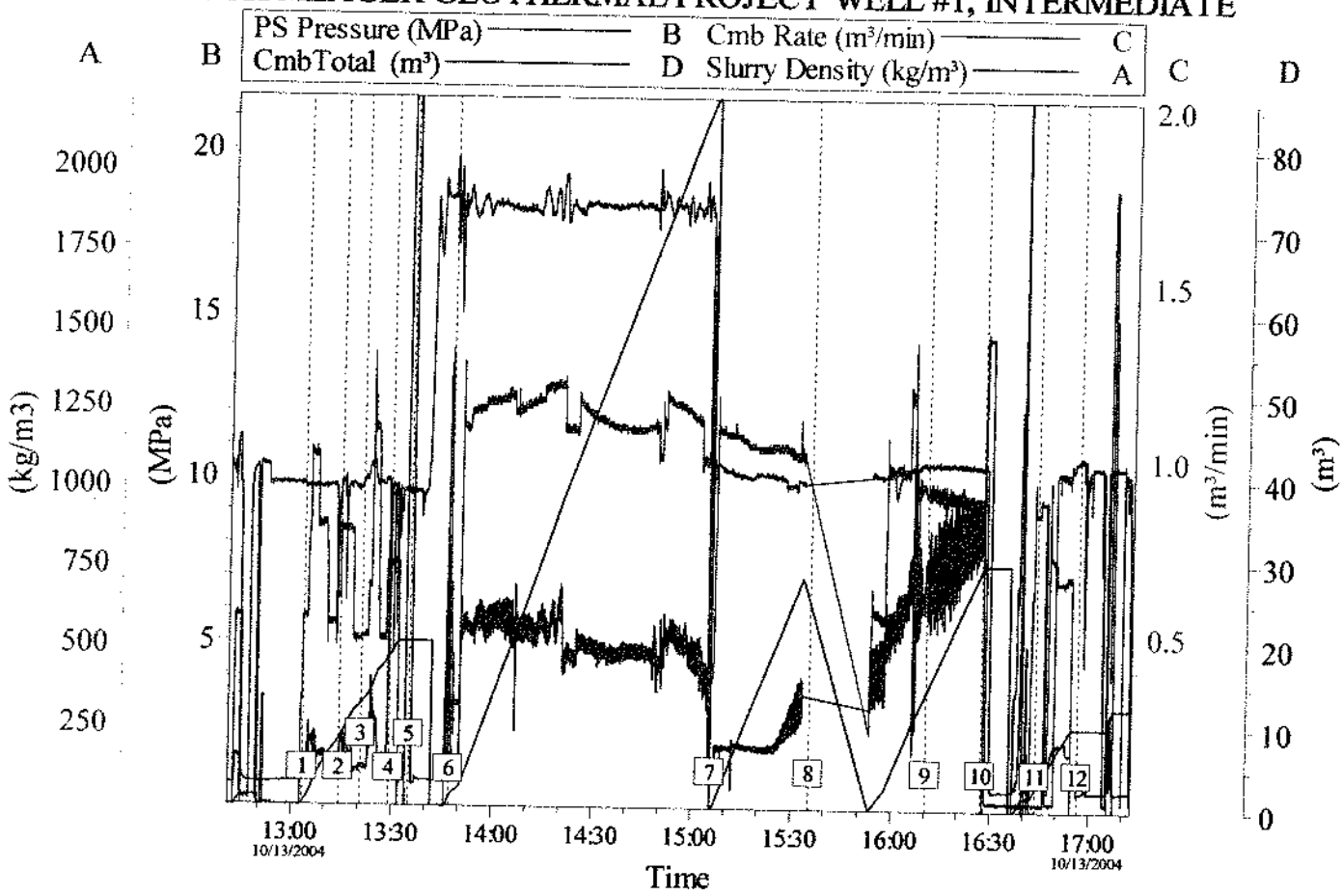
4.6.1 JOB DATA

DATE:	October 13, 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 a conventional intermediate cement job
SPACER:	Super Flush 102
CEMENT:	Class G + 40% SSA-1 + 0.3% Halad-413 + 0.5% SCR-100 Density at 1860 kg/m^3 (Halad-413 and SCR-100 were prehydrated in the mix water)
PERSONNEL:	Ron Beeston (Service Supervisor III) Luke Neville (Service Supervisor I) Ron Glen (Service Operator I) Chris Quinton (Technical Professional) Adam Rayne (Technical Professional) Bob Valentine (Service Quality Leader)
EQUIPMENT:	75TC4 Cement Pumper (10033988) 15 Centralizers (*Centralizer Program supplied to consultant*) 339.73 mm Standard Super Seal II Float Collar 339.73 mm Standard Super Seal II Float Shoe 339.73 mm Continuous Cement Head 339.73 mm 5W Top Plug

4.6.2 JOB OUTLINE

1. Pump 7 m^3 Water ahead
2. Pump 3 m^3 of 10% $CaCl_2$ Water
3. Pump 5 m^3 SuperFlush 102
4. Pump 1.5 m^3 Water
5. Pressure Test to 25 MPa
6. Pump 84 m^3 of Cement @ 1860 kg/m^3
7. Start to Displace with 65 m^3 of water
8. Lost Circulation, slowed rate, and stop reciprocating casing
9. Got Circulation back
10. Finished Displacement, no cement returns, some spacer returns
11. Tied into backside and pumped 10 m^3 down backside
12. Shut-In and WOC

SOUTH MEAGER GEOTHERMAL PROJECT WELL #1, INTERMEDIATE



CemWin v1.6.0
31-Dec-04 15:18

4.6.3 JOB SUMMARY

A Centralizer program was performed in OptiCem for 70% Standoff and review with the consultant to insure optimum results. After reviewing the cement program with Calgary, a decision was made to run a reactive spacer instead of a weighted tuned spacer. The reactive spacer chosen was Super Flush 102. There was enough Metso Beads on location to mix 5 m^3 and it was also decided to run 3 m^3 of 10% $CaCl_2$ water ahead to react with the Super Flush. This helped to coat and penetrate the formation to heal losses before cement was placed. Since there was no stab-in float collar on location for innerstring cementing as preferred, we had to perform a conventional cement job. We were not able to have all bulk tanks tied-in, so we had to break off and transfer the bulk lines once during the operation. This made it difficult for the operator to maintain density. For future jobs more "Y" connections are necessary and a Steady flow separator is recommended to contend with the geothermal slurries with wetability problems and dusting (health hazard from sodium silicate). Also this will improve density consistency during mixing thus controlling any freewater problems which is a killer in geothermal applications. The 3m^3 of 10% $CaCl_2$ water and 5 m^3 of Super Flush 102 were mixed on the fly. To insure a better quality spacer for next job a Batch Mixer was recommended. During the job the cement truck became over heated, all 6 pumps began to leak and the downhole densometer shorted out. The water for displacement was initially going to come from a glacial lake which was on gravity feed. This line was only feeding at 600 L/min. Therefore it was decided to tie into the rig water tank and have them pump us water so we could displace at 1.0 – 1.2 m^3/min. We lost circulation approximately half way through the displacement (30m3). We slowed down the pumping to 300 - 500 L/min and stopped reciprocating the casing. After doing this for approximately 10 minutes we got circulation back but we never did get cement to surface. There was, however, evidence of spacer and $CaCl_2$ to surface. We then, on request of the consultant, pumped water down the backside to force the cement past the surface casing shoe. We pumped 1.2 times the casing / casing annular volume, then shut-in and WOC. After discussions with the consultant it was decided that we would perform a casing/casing squeeze, then check to see if cement would fallback, and if it does perform a top-up. We waited on cement for 7 hours then proceeded on to the casing-casing squeeze.

4.7 CASING-CASING SQUEEZE

4.7.1 JOB DATA

DATE: October 14, 2004

CASING: Intermediate - 339.73 mm, 107.15 kg/m, L-80
Surface - 473.08 mm, 130.21 kg/m, L-80 landed at 128 m

BHST: 35°C (est)

OBJECTIVE: Tie into the backside and squeeze cement down the annulus. Once cement is at the surface, stop pumping and check whether the cement falls back. If cement falls back, perform a cement top-up.

CEMENT: Class G + 40% SSA-1 + 3% $CaCl_2$
Density at 2000 kg/m^3
($CaCl_2$ was prehydrated in mix water)

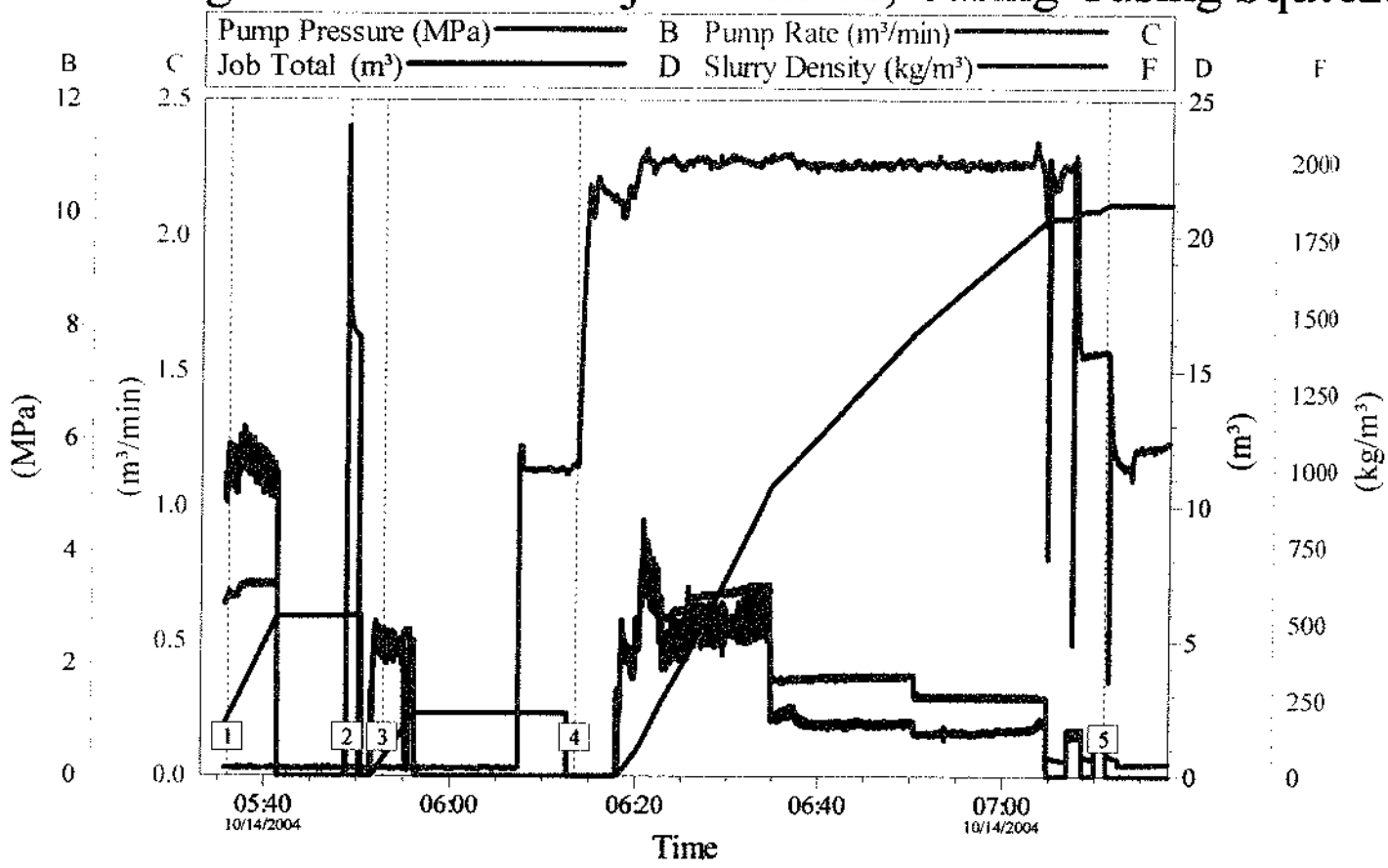
PERSONNEL: Ron Beeston (Service Supervisor III)
Luke Neville (Service Supervisor I)
Ron Glen (Service Operator I)
Chris Quinton (Technical Professional)
Adam Rayne (Technical Professional)
Bob Valentine (Service Quality Leader)

EQUIPMENT: 75TC4 Cement Pumper (10033988)

4.7.2 JOB OUTLINE

1. Pump 5 m^3 Water to fill annulus
2. Pressure Test
3. Pump 6 m^3 to establish injection rate
4. Pump 21 m^3 of Cement @ 2000 kg/m^3
5. Shutdown

South Meager Geothermal Project Well #1, Casing-Casing Squeeze



4.7.3 JOB SUMMARY

Once a feed rate was established, 21 m3 of cement was pumped down the casing-casing annulus. The cement was densified to 2000 kg/m3. Since the Downhole densometer shorted out we had to use the Recirculation Densometer. After the cement was in place, the cement began to fall back down the annulus. Therefore it was decided that once this cement was set, a cement top-up was required. We Waited On Cement for 5 hours and preceded to the top-up.

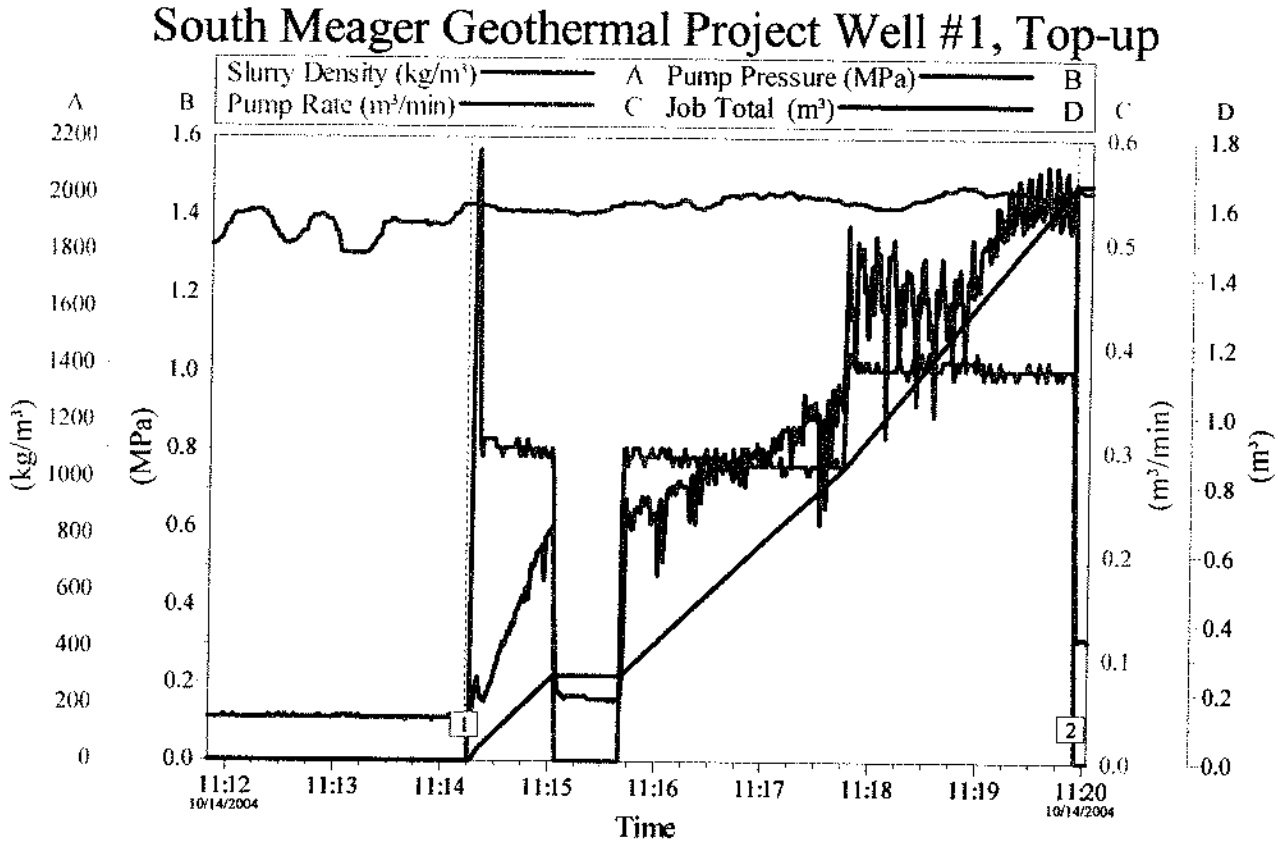
4.8 CEMENT TOP UP

4.8.1 JOB DATA

DATE:	October 14, 2004
CASING:	Intermediate - 339.73 mm, 107.15 kg/m, L-80 Surface - 473.08 mm, 130.21 kg/m, L-80
BHST:	35°C (est)
OBJECTIVE:	To top up the previous cement job
CEMENT:	Class G + 40% SSA-1 + 3% $CaCl_2$ Density at 2000 kg/m^3 ($CaCl_2$ was prehydrated in mix water)
PERSONNEL:	Ron Beeston (Service Supervisor III) Luke Neville (Service Supervisor I) Ron Glen (Service Operator I) Chris Quinton (Technical Professional) Adam Rayne (Technical Professional) Bob Valentine (Service Quality Leader)
EQUIPMENT:	75TC4 Cement Pumper (10033988)

4.8.2 JOB OUTLINE

1. Pump 3 m^3 of Cement
2. Shutdown & WOC



4.8.3 JOB SUMMARY

Once it was determine that the squeeze did not work as expected, a cement top-up was performed with 3 m^3 of cement. There was no water pumped ahead or behind the cement to insure that no water was in the casing-casing annulus. Once 3m^3 of cement was pumped the cement did not fall back. The Casing bowl valves were closed, we waited on cement and HES rigged out.

Section 6: Operations Time Analysis, (RIMBase Files);

- *Operations Time Analysis Data*
- *Operations Time Chart*

Operations Time Analysis — Meager Creek Development Corp.

Well ID: MC-6 **Well Name:** Meager Creek 6

Rig: Precision #620

	Total Hrs	% of Total
Drill		
Drilling Ahead w/ Connections	560.00	39.5
Directional Work	120.50	8.5
Running Survey Tools	44.00	3.1
Circulate/Condition Mud	43.50	3.1
Reaming/Underreaming	35.50	2.5
Total for Drill:	803.50	56.7
Trip		
Tripping Out	141.50	10.0
Tripping in	80.50	5.7
BHA Operations	51.00	3.6
Total for Trip:	273.00	19.3
BOP Ops		
BOP Nipple Up	74.50	5.3
BOP Nipple Down	25.00	1.8
BOP Testing	10.00	0.7
Other BOP Operations	1.00	0.1
Total for BOP Ops:	110.50	7.8
Cementing		
Waiting On Cement	63.50	4.5
Drilling Cement/Shoe	4.50	0.3
Secondary Cement Operations	2.50	0.2
Primary Cement Operations	1.50	0.1
Cement Plug Operations	0.50	0.0
Total for Cementing:	72.50	5.1
Misc Other		
Other Activity	55.50	3.9
Cut and Slip Drill Line	4.00	0.3
Rig Service	2.50	0.2
Total for Misc Other:	62.00	4.4
Evaluate		
Testing Operations, DST etc	55.50	3.9
Total for Evaluate:	55.50	3.9
Casing		
Running Casing	36.50	2.6
Total for Casing:	36.50	2.6

Operations Time Analysis — Meager Creek Development Corp.

Well ID: MC-6 **Well Name:** Meager Creek 6

Rig: Precision #620

	Total Hrs	% of Total
Abandonment		
Plugging Operations	1.50	0.1
Total for Abandonment:	1.50	0.1
Mobilize/Demob		
Rigging Up	1.00	0.1
Total for Mobilize/Demob:	1.00	0.1
Total Elapsed Time for Well:	1416.00 hrs.	
Total Non-Productive Time for Well:	1.00 hrs.	0.1%
Total Productive Time for Well:	1415.00 hrs.	99.9%

Printed: 16:27 15-Dec-05

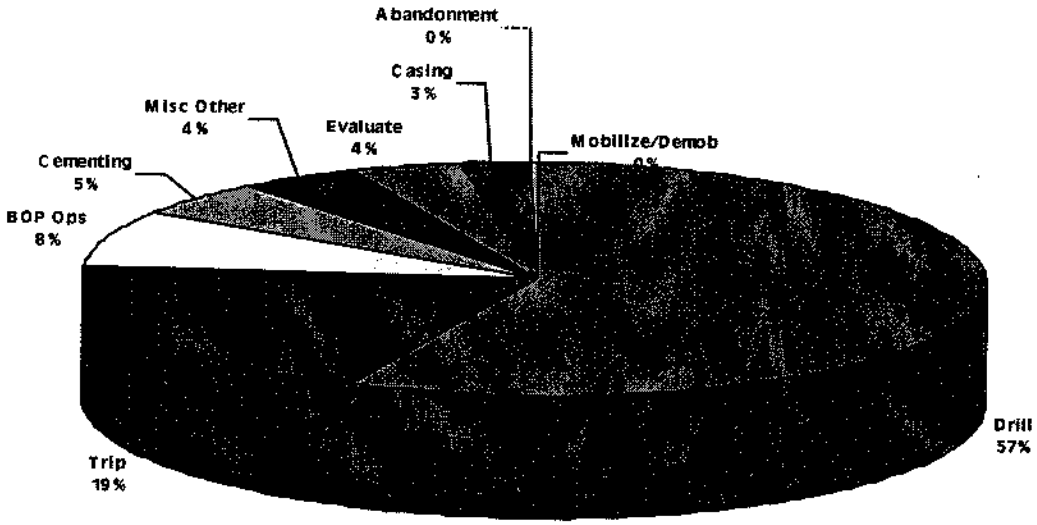
End of Report

Operations Time Graph

Meager Creek Development Corp.

Well ID: MC-6

Analysis by Operations Group



Descriptio	Time - hrs	%
Drill	803.50	56.74%
Trip	273.00	19.28%
BOP Ops	110.50	7.80%
Cementing	72.50	5.12%
Misc Other	62.00	4.38%
Evaluate	55.50	3.92%
Casing	36.50	2.58%
Abandonment	1.50	0.11%
Mobilize/Demob	1.00	0.07%
Total Tim	1,416.00 hrs.	

Printed 08 Dec 05 14:35

Section 7: MC-6 Wellhead

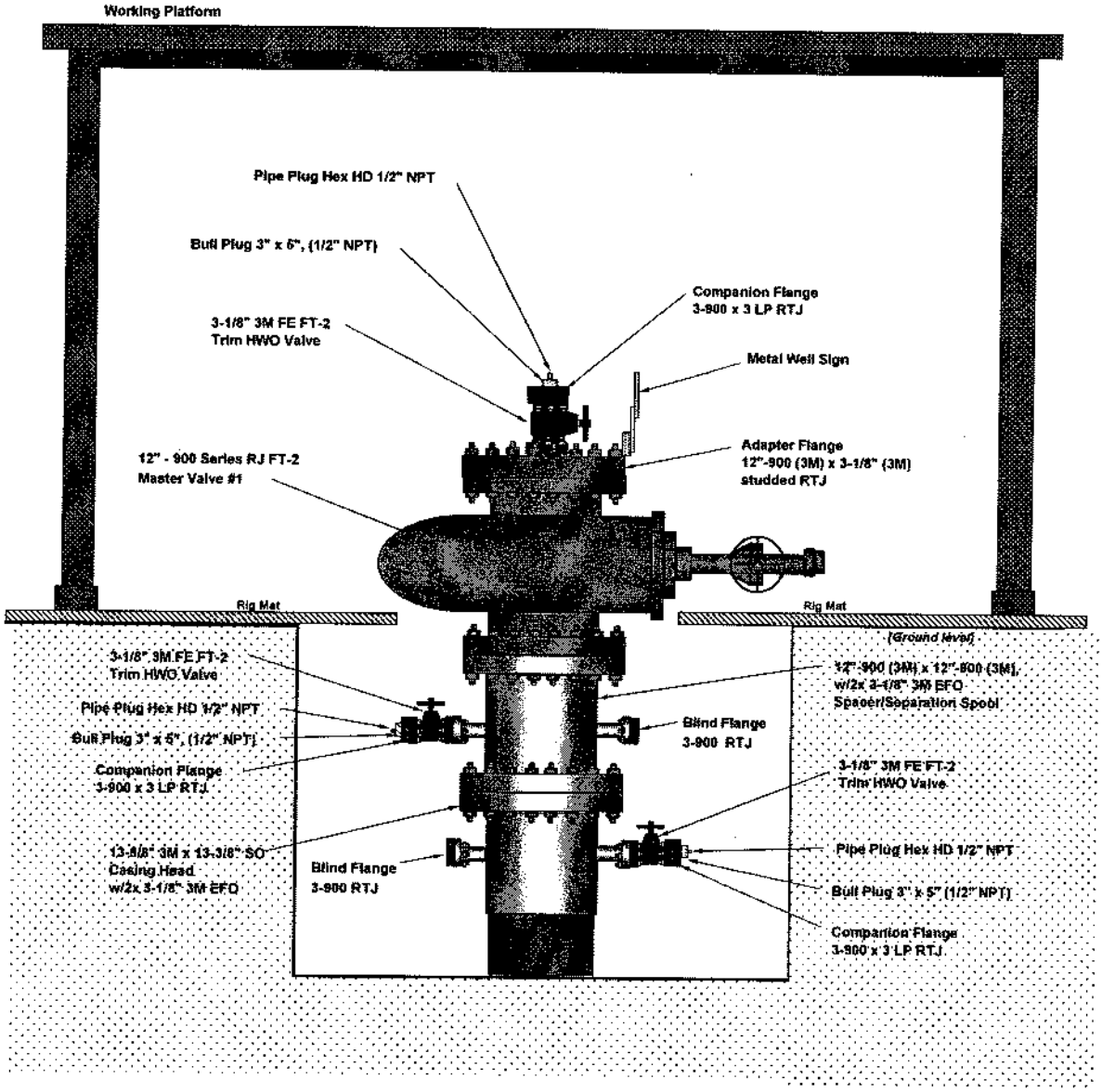
(*Shut-in; October, 2005*)

updated October, 2006

MC-6 Wellhead

(Shut-in October, 2006)

***Note**: Hole centered in floor*
40" x 40" (1.02 x 1.02m) of working platform
positioned over wellhead.



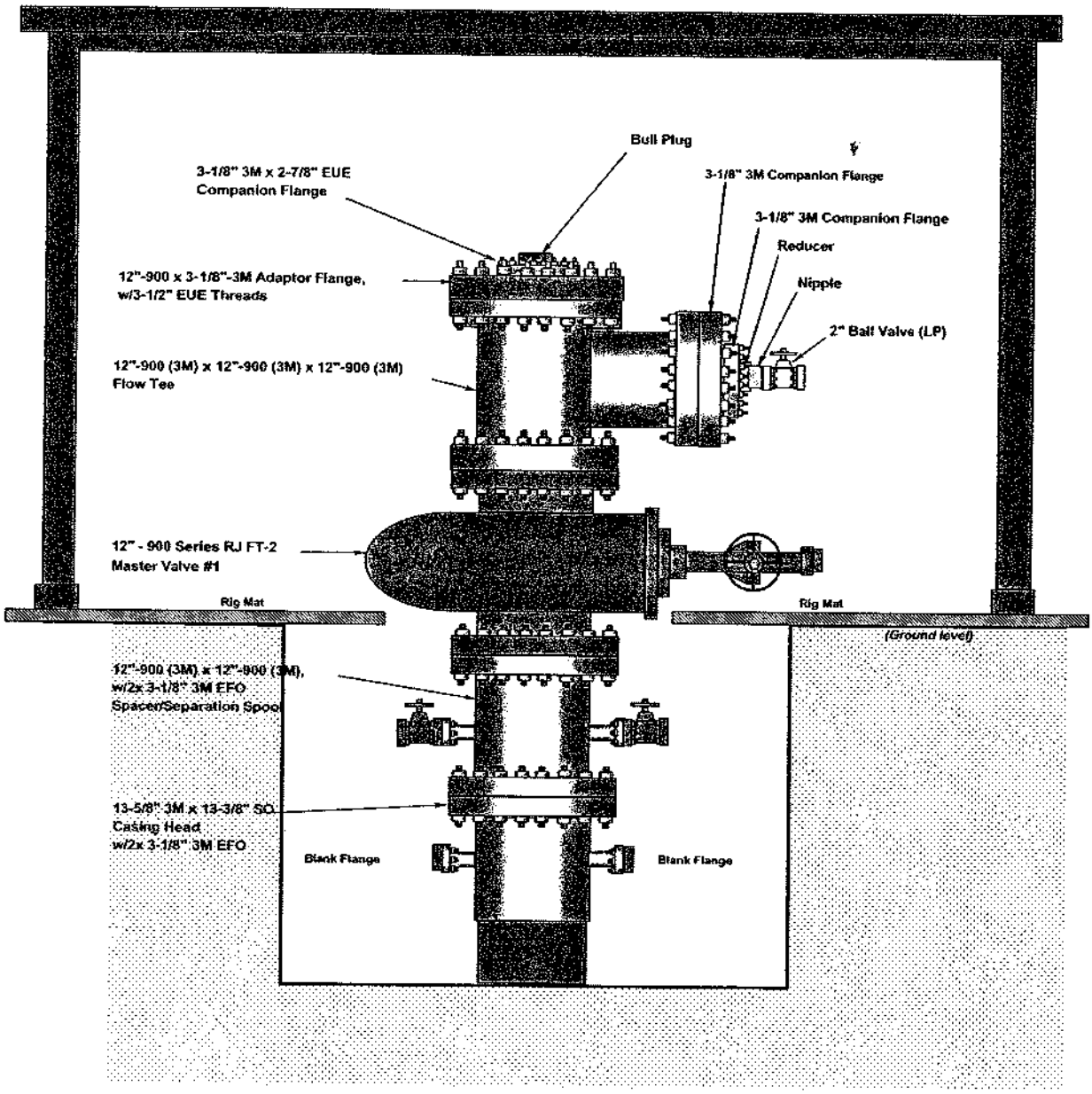
AJDR / Oct. 2006

DRAFT *** DRAFT *** DRAFT

OLD / SUPERSEDED

MC-6 Wellhead: ~ 'As Built' Drawing (Oct. 19, 2005)

(Note: Hole centered in floor
40" x 40" (1.02 x 1.02m) of working platform
positioned over wellhead)



A.IDR/Nov. 17, 2005