

AUTHORITY TO  
DRILL A WELL



CANADA

Exploratory ☒  
Development ☐Delineation ☐  
Service ☐

# AUTHORITY TO DRILL A WELL

## APPLICATION

This application is submitted with Section 82 of the Canada Oil and Gas Drilling Regulations. When approved under Section 83 of the Regulations, it is the requisite authority for the commencement of drilling operations.

Well Name in Full: GREY WOLF - CANAXAS DEH CHO-2 B-14  
Operator: GREY WOLF EXPLORATION INC. Drilling Program No.: N/A  
Contractor: SHEHTAH DRILLING LIMITED Permit or Lease No.: --- Licence 389  
Drilling Rig or Unit: #7 Estimated Well Cost: \$2,480,000.00  
Location-Unit: B Section: 14 Grid Area: 65° 20' N-126° 30' W  
Coordinates: Lat.: 65° 13' 09.27" (EST.) Long.: 126° 32' 47.27" (EST.)  
Area: DEH CHO Field/Pool: WILDCAT  
Elevation-RTKB: 58.36m / 64.76m (ASL) Seafloor: N/A (BRT)  
Approx. Spud Date: DECEMBER 16, 1998 Estimated Days on Location: 15  
Anticipated Total Depth: 754m Target Horizon(s): KEE SCARP FM

## EVALUATION PROGRAM

Ten-metre sample intervals ---  
Five-metre sample intervals SURFACE BEDROCK TO T.D.  
Canned sample intervals EVERY 10m SURFACE BEDROCK TO T.D.  
Conventional cores at NO CORES PLANNED AT THIS TIME  
Logs and Tests SEE ATTACHED SHEET

## CASING AND CEMENTING PROGRAM

| O.D.    | Weight:    | Grade: | Setting Depth<br>Below Seafloor: | Cementing Program (Volumes): |
|---------|------------|--------|----------------------------------|------------------------------|
| 508mm   | 140.2 kg/m | J-55   | 20.0mKB                          | 11.1m <sup>3</sup>           |
| 339.7mm | 81.1 kg/m  | J-55   | 150.0mKB                         | 35.5m <sup>3</sup>           |
| 244.5mm | 53.6 kg/m  | J-55   | 270.0mKB                         | 12.1m <sup>3</sup>           |
| 177.8mm | 29.8 kg/m  | J-55   | 753.8mKB                         | 13.6m <sup>3</sup>           |

B.O.P. Equipment: AS PER CANADA OIL AND GAS REGULATIONS, SECTION 60  
346mm - 35,000 kPa SHAFFER SPHERICAL COMPLETE WITH THREE CAMERON TYPE U  
SINGLE GATES SEE ATTACHED RIG INVENTORY SHEET

Other Information: \_\_\_\_\_

Signed: *[Signature]* Title: SENIOR OPERATIONS ENGINEER  
Date: *[Signature]* Company: GREY WOLF EXPLORATION INC.

## APPROVAL

An approved copy of this notice is to be posted at each wellsite.

Signed: *[Signature]*  
Chief Conservation Officer  
Date: *[Signature]* Dec 4/98

File: 9211-G69-1-2, WID 1853  
UWI 300B146520126300

Canada

WELL  
TERMINATION  
RECORD (with  
attachment)



## WELL TERMINATION RECORD

This record is submitted in compliance with Section 184 of the Canada Oil and Gas Drilling Regulations.

Well Name: Grey Wolf-Canaxas Deh Cho-2 B-14 Area: Deh Cho  
Grid Area: 65°20'N - 126°30'W Field/Pool: Wildcat  
Interest Identifier Final Coordinates: Lat: 65°13'09.27" Long: 126°32'47.27"  
Drilling Unit: Shehtah #7E Elevations-KB/RT K.B.: 65.3 m (ASL) GL/Seafloor GL: 58.4 m  
Spud Date: Jan. 17/99 R.R. Jan. 31/99 Total Depth: 798 m

| O.D. (mm) | Weight (kg/m) | Grade | Depth Set (m KB) | Cement (m³)      |
|-----------|---------------|-------|------------------|------------------|
| 508 mm    | 140.2 kg/m    | J-55  | 26.0 m           | 16.0t. Polarsset |
| 244.5 mm  | 53.6 kg/m     | J-55  | 202.5 m          | 16.6t. Polarsset |
|           |               |       |                  |                  |
|           |               |       |                  |                  |

## PLUGGING PROGRAM

Approval of the following program was obtained by (person) from  
(person) of the, by means of  
on 19

| Type of Plug         | Interval (m KB) | Felt | Cement (m³) |
|----------------------|-----------------|------|-------------|
| 0:1:0 Class G Cement | 798.0 - 400.0   | No   | 23.1 t      |
| 0:1:0 Class G Cement | 400.0 - 119.0   | Yes  | 15.5 t      |
| Polar Set Cement     | 32.5 - 0        | No   | 1.6 t       |
|                      |                 |      |             |
|                      |                 |      |             |

Lost Circulation/Overpressure Zones: None

Equipment left on Seafloor (Describe): None

Provision for Re-entry (Describe and attach sketch): N/A

Cores: Type: N/A Intervals:

Other Downhole Completion/Suspension Equipment: N/A

## CERTIFICATION

I certify on the basis of personal knowledge of operations undertaken at the above named well that the above information is accurate.

Signed: [Signature] Title: Senior Operations Engineer

Name: Glen Glass Date: April 1/99

Company: Grey Wolf Exploration Inc.

Acknowledged by: [Signature]

Well Status

Chief Conservation Officer

Suspended ☐

Date: April 13/99

Completed ☐

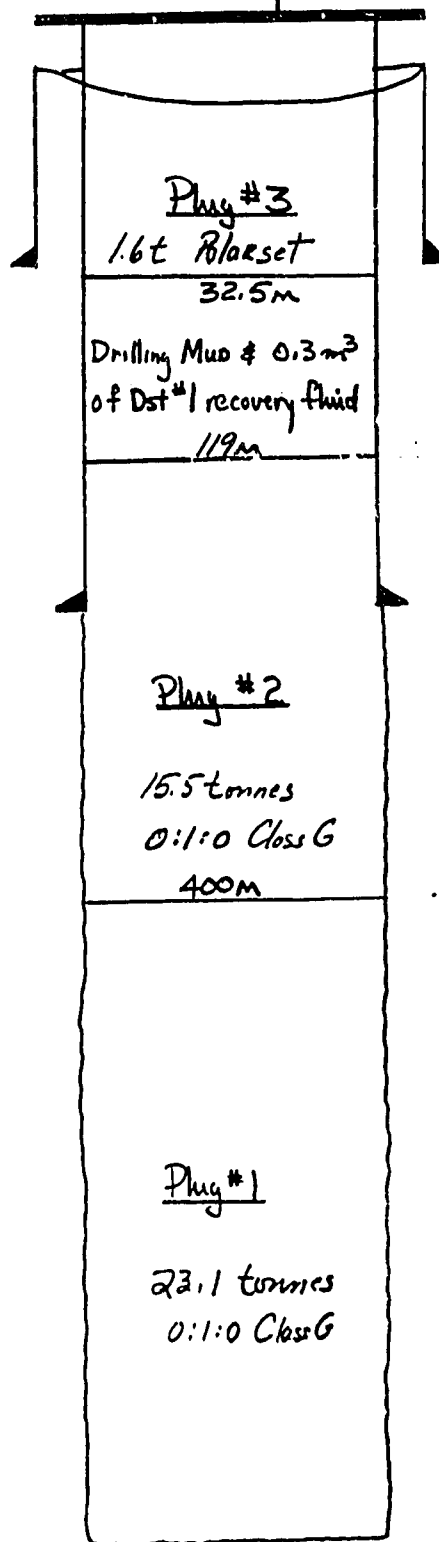
File: 9211-G69-1-2

Abandoned ☒

UWI: 300B146520126300 WID: 1853



Grey Wolf - CANAXAS DEH CHO-2 B-14



508mm 140.2 kg/m J55 Conducto.  
Set at 26m k.B.

244.5mm 53.6 kg/m J55 SURF CS  
Set at 202.5m KB

TD = 798m k.B.



PAJAK ENGINEERING LTD.

## PLUG BACK AND ABANDONMENT REPORT

WELLNAME: GREY WOLF-CANAXAS DEH CHO-2,B14  
 LOCATION: 300-B14-6520-12630-0

DAY NO: 13  
 DATE: 99/01/29

KB Elevation: 65.3  
 F.T.D.: 798.0

Plug Back String: 114 mm 29.7 kg/m DP  
 Service Company: Nowsco Well Service  
 Fluid in Hole: Polymer gel drlg mud

SURFACE  
 INTERMEDIATE  
 PRODUCTION

| HOLE SIZE<br>(mm) | CASING SIZE<br>(mm) | DEPTH<br>(m) | TOP OF CEMENT<br>(m) |
|-------------------|---------------------|--------------|----------------------|
| 311.00            | 244.00              | 202.40       | 0.00                 |

|                        | PLUG # 1                             | PLUG # 2          | PLUG # 3        | PLUG # 4 | PLUG # 5 |
|------------------------|--------------------------------------|-------------------|-----------------|----------|----------|
| DATE                   | 99/01/29                             | 99/01/30          | 99/01/30        |          |          |
| INTERVAL (m)           | Top<br>400.00<br>Bottom<br>798.00    | 175.00<br>400.00  | 0.00<br>32.50   |          |          |
| FELT PLUG DEPTH (m)    |                                      | 119.00            | 0.00            |          |          |
| FORMATION              | Name<br>Canol<br>Depth (m)<br>447.00 | Sur Csg<br>202.40 | Surface<br>0.00 |          |          |
| AVERAGE CALIP.         |                                      |                   |                 |          |          |
| HOLE SIZE (mm)         | 225.00                               | 229.00            | 226.00          |          |          |
| TYPE OF CEMENT         | Class G                              | Class G           | Polar set       |          |          |
| NO. OF TONNES          | 23.1                                 | 15.5              | 1.6             |          |          |
| ADDITIVES              | .5% T-10                             | .5% T-10          | .1 R15C         |          |          |
| LITRES OF H2O AHEAD    | 3050.0                               | 8000.0            | 0.0             |          |          |
| DISPLACEMENT (LITRES)  | Water<br>670.0<br>Mud<br>1480.0      | 1170.0<br>0.0     | 0.0<br>0.0      |          |          |
| SLURRY DENSITY (kg/m3) | 1900.0                               | 1900.0            | 1845.0          |          |          |
| MIXING TIME            | Start<br>20:28<br>Finish<br>20:51    | 23:21<br>23:36    | 18:35<br>18:45  | :        | :        |
| DISPLACING TIMES       | Start<br>20:51<br>Finish<br>20:58    | 23:36<br>21:37    | :               | :        | :        |
| FELT PLUG TIME         | :                                    | 16:15             | 18:45           | :        | :        |
| FELT PLUG WEIGHT (dAN) | 0.0                                  | 4000.0            |                 |          |          |

SURFACE CASING CUT: 1.00 m BELOW GROUND  
 SURFACE PLUG: 1.60 TONNES  
 PLATE WELDED: Y  
 CASING SALVAGE: SHOT OFF AT m  
 BELOW GROUND: JTS. RECOVERED

REMARKS: Plug # 2 felt with entire string weight.  
 Plug #3 pumped down empty casing to 32.5 mKB.  
 Well Marker as follows:  
 Grey Wolf- Canaxas DEH CHO-2 B-14  
 300-B14-6520-12630-0  
 Lat - 65 Degrees 13' 09.26"  
 Long- 126 Degrees 32' 47.26"  
 Welded to casing stub 1.5 m above ground level.

SUPERVISOR: N Gebhart C Brazel

PHONE #: (600) 700-5344

CCARD #: 454-037-6133-9618

# FINAL WELL REPORT

**Grey Wolf-Canaxas**  
**Deh Cho B-14**  
**Final Well Report**

N.E.B. COPY

**Grey Wolf-Canaxas Deh Cho B-14**  
**Final Well Report**

**Grey Wolf-Canaxas Deh Cho B-14**

**Final Well Report**

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## Introduction

### 1) Summary

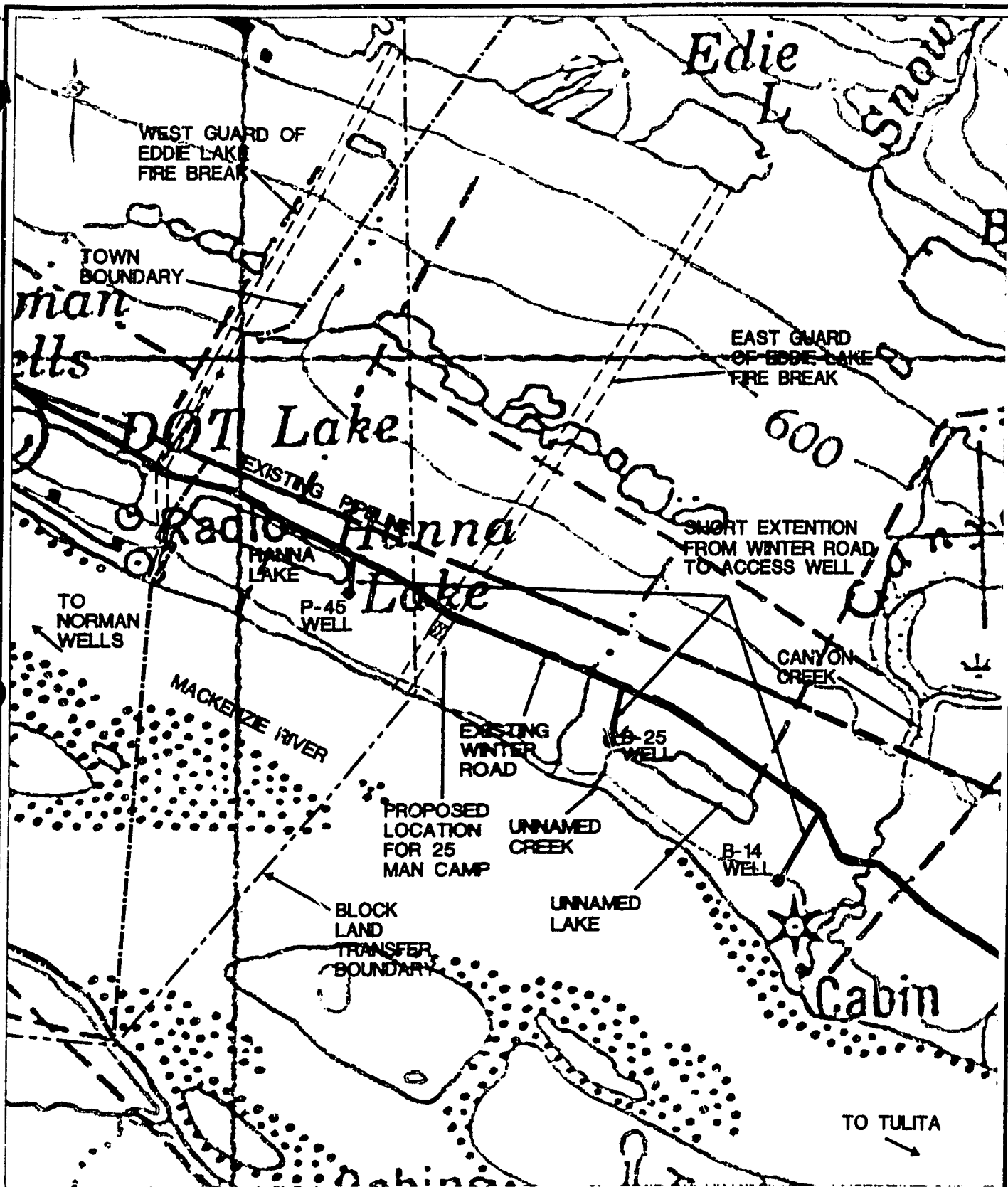
Grey Wolf Exploration Inc. and its partner, Canadian Abraxas Petroleum Limited applied for an Authority to Drill A Well, for Grey Wolf-Canaxas Deh Cho B-14 on October 7, 1998. Approval to proceed with the drilling of the above mentioned well and two additional wells in this project was received on December 4, 1998. Grey Wolf Exploration contracted Shestah Rig #7E to drill to the Fort Norman Formation, which was prognosed to be at a total depth of approximately 800 m. The well was spudded on January 17, 1999 and reached total depth on January 26, 1999. The Kee Scarp formation was the primary objective, while the Canyon Creek Sand, upper member of the Hume formation and Arnica formations of Bear Rock were secondary objectives. Evaluation of the open hole logs indicated that the Canyon Creek Sand was poorly developed in this well with an average porosity of 8%. The Kee Scarp formation (Reef) was not present in this well. The upper member of the Hume formation consisted mostly of well cemented Limestone. There was however, some dolomite present with fragmented and vuggy porosity and a fair cut which warranted a drill stem test. The test had a weak air blow on valve open with no gas to surface and a 10 M recovery of drilling mud. Evaluation of the test indicated low permeability in this formation. The Arnica formation consisted mostly of Dolomite and based on the interpretation of the open hole logs a drill stem test was conducted. The test had a weak air blow on valve open with no gas to surface and a recovery of 89 m of gasified brackish water.  $H_2S$  was detected when pulling the drill pipe to determine the recovery. On the basis of the two drill stem tests, the open hole logs and drill samples, the well was plugged back as a dry hole and abandoned. The drilling rig was released January 31, 1999.



1 Introduction

2) Map





0 500 1000 1500 2000 2500(metres)  
 SCALE 1:50,000

#### REFERENCE

BASE MAP PROVIDED BY THE DEPARTMENT OF ENERGY, MINES AND RESOURCES MAP 96E/2 (1990).



GREY WOLF  
EXPLORATION

#### SCHEMATIC OF WELL SITE LOCATIONS

|                       |                       |                 |
|-----------------------|-----------------------|-----------------|
| DRAWN: RFM            | APPROVED: [Signature] | DATE: 01 OCT 98 |
| PROJECT 982-2255.7010 |                       | FIGURE: 2       |

## **II General Data**

**Well Name:** Gray Wolf-Canacas Deh Cho B-14

**Unit:** B

**Section:** 14

**Grid Area:** 65°20'N 126°30'W

**Coordinates:** Lat: 65°13'00.27"

Long: 126°32'47.27"

**Area:** Deh Cho

**Field:** Wildcat

**Exploration**

**License #:** 389

**UWI:** 300B146520126300

**WID:** 1853

**File:** 8211-G69-1-2

**Operator:** Gray Wolf Exploration Inc.  
Suite 1200, 300 - 5<sup>th</sup> Avenue SW  
Calgary, Alberta T2P 3C4  
**Ph:** (403) 262-1949  
**Fax:** (403) 262-1969

**Drilling Contractor:** Shehtah Drilling Limited  
200, 14707 Bannister Road SE  
Calgary, Alberta T2X 1Z2  
**Ph:** (403) 279-9868  
**Fax:** (403) 279-9859

**Drilling Rig:** Shehtah Rig 7E  
National Model 610E

### III Summary of Drilling Operations

#### 1) General Data Summary

Well Name: Grey Wolf-Canaxas Deh Cho B-14

KB Elevation: 65.3 m

GRD Elevation: 58.4 m

Total Depth: 798 m

Spud Date: 1999.01.17 @ 18:00 hours

Rig Release Date: 1999.01.31 @ 23:59 hours

Well Status: Dry and Abandoned



### III Summary of Drilling Operations

#### 2) Hole Sizes and Bit Record

| <u>Hole Size (mm)</u> | <u>Depth Out (m)</u> |
|-----------------------|----------------------|
| 222.0                 | 23                   |
| 660.0                 | 26                   |
| 311.0                 | 202                  |
| 222.0                 | 798                  |

## BIT RECORD

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

AFE: 9920101      SPUD DATE: 99/01/17

**LOCATION: 300-B14-6520-12630-0**

**CONTRACTOR: Shehtah Drilling Limited**

**RIG: 7**

Mon Feb 22 13:37:52 1999

| RUN | BIT# | SIZE  | TYPE   | MAKE  | SERIAL NUMBER | NOZZLE SIZE(mm) |      |      | --DEPTH-- |     | --- O N B I T --- |              |     |      | ----- R O P ----- |            |            | ----- W O B ----- |            |         | -- R P H -- |         |     | AVG MUD DEN |     |      |
|-----|------|-------|--------|-------|---------------|-----------------|------|------|-----------|-----|-------------------|--------------|-----|------|-------------------|------------|------------|-------------------|------------|---------|-------------|---------|-----|-------------|-----|------|
|     |      | (mm)  |        |       |               | #1/4            | #2/5 | #3/6 | IN        | OUT | DRILL+CORE (m)    | REAMING (hr) | (m) | (hr) | I-O-G-L           | B-G-O-R    | MIN (m/hr) | MAX (m/hr)        | AVG (m/hr) | MIN daN | MAX daN     | AVG daN | MIN |             | MAX | AVG  |
| --- | ---  | ----- | -----  | ----- | -----         | ---             | ---  | ---  | ---       | --- | ---               | ---          | --- | ---  | ---               | ---        | ---        | ---               | ---        | ---     | ---         | ---     | --- | ---         |     |      |
| 1   | 1ARR | 222.0 | FV1    | Smith | ND1394        | 15.9            | 15.9 | 15.9 | 0         | 23  | 23                | 4.00         | 0   | 0.00 | 3-2-WT-A          | E-I -WT-TD | 5.8        | 5.8               | 5.8        | 2000    | 2000        | 2000    | 90  | 90          | 90  | 1120 |
| 1   | 3ART | 311.0 | FDSS   | Smith | LP8464        | 14.3            | 14.3 | 12.7 | 26        |     | 0                 | 0.00         | 0   | 0.00 | - - -             | - - -      | 0.0        | 0.0               | 0.0        | 0       | 0           | 0       | 0   | 0           | 0   |      |
| 2   | 2ARR | 660.0 | DGJC   | Smith | L41427        | 22.0            | 0.0  | 0.0  | 0         | 26  | 3                 | 3.00         | 23  | 4.50 | 5-6-WT-A          | E-I -WT-TD | 1.0        | 1.0               | 1.0        | 3000    | 3000        | 3000    | 135 | 135         | 135 | 1117 |
| 3   | 3ART | 311.0 | FDSS   | Smith | LP8464        | 14.3            | 14.3 | 12.7 | 26        | 202 | 176               | 23.25        | 0   | 0.00 | 4-4-WT-A          | E-I -NO-TD | 7.6        | 10.6              | 9.1        | 2000    | 6000        | 4000    | 100 | 135         | 117 | 1048 |
| 4   | 1    | 222.0 | FM2545 | DBS   | 59853920      | 11.1            | 11.1 | 11.1 | 202       | 798 | 596               | 41.50        | 0   | 0.00 | 2-1-CT-N          | O-I -NO-TD | 14.4       | 27.4              | 20.9       | 3000    | 9000        | 6000    | 50  | 70          | 60  | 1058 |
|     |      |       |        |       |               | 11.1            | 11.1 |      |           |     |                   |              |     |      |                   |            |            |                   |            |         |             |         |     |             |     |      |

**Summary of Drilling Operations**

**3) Daily Drilling Reports**

## DAILY DRILLING REPORT

|                                             |  |                                                             |  |                        |  |
|---------------------------------------------|--|-------------------------------------------------------------|--|------------------------|--|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0                              |  | DATE: 99/01/17         |  |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 300B146520126300                                   |  | DAY:                   |  |
| OFFICE SUPERVISOR: Mickey Sutherland        |  | LICENCE NO.: 1853                                           |  | SPUD DATE: 0 : hrs.    |  |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m KB-GL: 6.9 m                                     |  | RIG RELEASE: 0 : hrs.  |  |
| RIG #: 7                                    |  | GL: 58.4 m KB-CF: m                                         |  | WELL STATUS:           |  |
| WEATHER: Overcast, Snow                     |  | TEMP: -17 °C                                                |  | FINAL TD: m FORMATION: |  |
| Midnight DEPTH: 0.00 m                      |  | PROGRESS: 0.00 m                                            |  | PBTD: m FORMATION:     |  |
| 8:00 a.m. DEPTH: 0.00 m                     |  | 8:00 a.m. OPERATION: Pre spud and safety meeting with crews |  |                        |  |

AFE #: 9920101 AFE AMT: \$ 2480000 DAILY COST: \$ 862884 CUMULATIVE COST: \$ 862884

|             |                      |                     |                         |               |              |  |                             |
|-------------|----------------------|---------------------|-------------------------|---------------|--------------|--|-----------------------------|
| B<br>H<br>A | [Empty Box]          |                     |                         |               |              |  | TOTAL<br>ROTATING<br>HOURS: |
|             | LENGTH: m            | WT. BELOW JARS: daN | JAR HRS:                | JAR SERIAL #: |              |  |                             |
|             | WT. ON BIT: daN      | ROTARY RPM:         | STRING WT.: daN         |               |              |  |                             |
|             | DRILL PIPE O.D.: 114 | THREAD: XH          | DRILL COLLARS O.D.: 226 | THREAD: 7 H90 | NO. IN HOLE: |  |                             |

BITS

| BIT NO. | SIZE<br>mm | MAKE | SERIAL # | TYPE | NOZZLES mm |   |   | DEPTH |     | MTRS | MTRS<br>PER<br>HOUR | HOURS ON BIT |     | BIT    |     | CUTTING STRUCT |   |   |   |   |   | REMARKS |  |
|---------|------------|------|----------|------|------------|---|---|-------|-----|------|---------------------|--------------|-----|--------|-----|----------------|---|---|---|---|---|---------|--|
|         |            |      |          |      | 1          | 2 | 3 | IN    | OUT |      |                     | DRL.         | RMD | WT daN | RPM | I              | O | D | L | B | G |         |  |
|         |            |      |          |      |            |   |   |       |     |      |                     |              |     |        |     |                |   |   |   |   |   |         |  |
|         |            |      |          |      |            |   |   |       |     |      |                     |              |     |        |     |                |   |   |   |   |   |         |  |
|         |            |      |          |      |            |   |   |       |     |      |                     |              |     |        |     |                |   |   |   |   |   |         |  |

LAST PIPE TALLY:

BOARD:

CORRECTION: YES [ ] NO [ ]

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH  | WL<br>cc/30min | FC<br>mm | PV/VP    | GELS<br>O/10 | Tot. Sol<br>kg/m3 | Orid. Sol<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | ° C<br>IN/OUT |
|--------------------|-------------------|-----|----------------|----------|----------|--------------|-------------------|--------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|---------------|
|                    |                   |     |                |          |          |              |                   |                    |               |                    |              |          |           |                  | MFI        | MFO |               |
|                    | /                 |     |                |          | /        | /            |                   |                    |               |                    |              |          |           |                  |            |     | /             |
|                    | /                 |     |                |          | /        | /            |                   |                    |               |                    |              |          |           |                  |            |     | /             |
| CENTRIFUGE         |                   |     |                |          | DESILTER |              |                   | DESANDER           |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |               |
| HR IN              | kg/m3             | OUT | kg/m3          | HR OUT   | kg/m3    | HR OUT       | kg/m3             | HR OUT             | kg/m3         | HR OUT             | kg/m3        |          |           |                  | m3         |     |               |

| PUMP NO. 1 TYPE: DB-550 |          |           |     |        | PUMP NO. 2 TYPE: DB-550 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET            |      |
|-------------------------|----------|-----------|-----|--------|-------------------------|----------|-----------|-----|--------|----------|------------------|----------|----------------|------|
| MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MPa      | DP m/MIN         | DC m/MIN | VELOCITY m/sec | HHP  |
| Emsco                   | 165      | 406       | 25  | 0.72   | Emsco                   | 127      | 406       | 44  | 0.71   |          | 4.2              | 4.2      |                | 0.00 |

| SURVEYS |   |  | TIME BREAKDOWN     |  | MUD ADDITIVES |  |
|---------|---|--|--------------------|--|---------------|--|
| AZIMUTH |   |  | RIG SPUD 24.00     |  |               |  |
| • @     | m |  |                    |  |               |  |
| • @     | m |  |                    |  |               |  |
| • @     | m |  |                    |  |               |  |
| • @     | m |  |                    |  |               |  |
| • @     | m |  |                    |  |               |  |
| • @     | m |  |                    |  |               |  |
| • @     | m |  |                    |  |               |  |
| • @     | m |  |                    |  |               |  |
| • @     | m |  |                    |  |               |  |
| • @     | m |  |                    |  |               |  |
|         |   |  | TOTAL HOURS: 24.00 |  |               |  |

MUD COMMENTS: Pre mixed mud

DRILLING &amp; GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.01.10 Temperature -41C.

Had safety meeting with Arrowhead Construction and Shehtah personnel.

Moved all building, mud tanks and drawworks to new location.

1999.01.11 Temperature -43C.

Trucks and cranes came out to location and rigged up to

remove derrick, temperature dropped from -37 to -43C.

Cranes would not lift. Waited for temperature to warm up.

1999.01.12 Temperature -32C.

Had safety meeting with Arrowhead and Shehtah personnel.

Temperature warmed up to -32C. Cranes dismantled derrick

and sub, spotted matting on new location and pinned and

SUPERVISOR: Jack &amp; Chuck Brazel

PHONE #: (600) 700-5344

CALLING CARD#: 454-037-6133-9618



PAJAK ENGINEERING LTD.

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14      DATE: 99/01/17  
LOCATION: 300-B14-6520-12630-0      U.W.I.: 300-B14-6520-12630-0  
DAY:      DEPTH: 0.00 m      PROGRESS: 0.00 m      CPA NO.: 300B146520126300  
WEATHER: Overcast, Snow      TEMP: -17 °C  
8:00 a.m. OPERATION: Pre spud and safety meeting with crews

### DRILLING & GEOLOGICAL REMARKS (Cont'd)

levelled bottom box on subs.

1999.01.13 Temperature -29C.

Rigged up sub, drawworks, spotted two pump houses, moved derrick and pinned same.

Note: At 1999.01.13 10:30 hours a swamper for Arrowhead Construction was injured when the poles on bed truck where being raised. Rig move was shut down for 2 hours and the accident was analysis and the problem was fixed. Gregg Sills with Flint, David Hogson with Arrowhead Contruction where called to location to assess the problem, a welder was brought out and the pole truck which had engineering flaw in the pole risers was repaired so this situation would never happen again.

Jerry Lennie (Swamper) Had soft tissue damage and will be off work for a week or so.

1999.01.14 Temperature -25C.

Rigged up rig with ~~Arrowhead~~ trucks, Trucks released 99/01/14, 1730 hours. Started on generator 99/01/14 at 16:30 hours.

Rigged in Electrical cords, steam and water lines.

1999.01.15 Temperature -18C.

Rigged up derrick, Had safety meeting prior to derrick being raised.

Contacted flight services at Norman Wells Airport. 1999.01.15 12:00 hrs.

Raised derrick 1999.01.15 14:00 hrs.

Two Boiler started and running, 1999.01.15 15:00 hrs,

Rigged to spud, water and steam circulating, prefab framing was install on rig floor with crane.

1999.01.16 Temperature -18C

Rigged to spud.

Worked on water and steam lines, worked on electrical.

Put in cat walk and rigged up floor.

Moved pipe and drill collars with Arrowhead Construction truck.

Dug ditches and pits with Arrowhead Construction hoe.

Continued to rig up to spud to 23:59 hours 1999.01.16.

REPORTED BY: Jack & Chuck Brazel

PHONE #: (600) 700-5344

CALLING CARD #: 454-037-6133-9618



## DAILY DRILLING REPORT

|                                             |                                           |                                |                |                       |            |
|---------------------------------------------|-------------------------------------------|--------------------------------|----------------|-----------------------|------------|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |                                           | LOCATION: 300-B14-6520-12630-0 |                | DATE: 99/01/18        |            |
| U.W.I.: 300-B14-6520-12630-0                |                                           | CPA NO.: 300B146520126300      |                | DAY: 1                |            |
| OFFICE SUPERVISOR: Mickey Sutherland        |                                           | LICENCE NO.: 1853              |                |                       |            |
| CONTRACTOR: Shehtah Drilling Limited        |                                           | KB: 65.3 m                     | KB-GL: 6.9 m   | SPUD DATE: 99/01/17 @ | 18:00 hrs. |
| RIG #: 7                                    | GL: 58.4 m                                | KB-CF: m                       | RIG RELEASE: @ | :                     | hrs.       |
|                                             |                                           | WELL STATUS:                   |                |                       |            |
| WEATHER: Overcast                           |                                           | TEMP: -22 °C                   | FINAL TD: m    | FORMATION:            |            |
| Midnight DEPTH: 23.00 m                     | PROGRESS: 23.00 m                         | PBTD: m                        | FORMATION:     |                       |            |
| 8:00 a.m. DEPTH: 25.00 m                    | 8:00 a.m. OPERATION: Drilling 660mm hole. |                                |                |                       |            |

**AFE #: 9920101      AFE AMT: \$ 2480000      DAILY COST: \$ 30998      CUMULATIVE COST: \$ 893882**

|   |         |   |              |   |    |   |       |
|---|---------|---|--------------|---|----|---|-------|
| 1 | Bit Sub | 1 | Drill Collar | 1 | XO | 1 | Kelly |
|---|---------|---|--------------|---|----|---|-------|

|                             |      |
|-----------------------------|------|
| TOTAL<br>ROTATING<br>HOURS: | 4.00 |
|-----------------------------|------|

|                  |          |                 |     |                     |               |
|------------------|----------|-----------------|-----|---------------------|---------------|
| LENGTH:          | m        | WT. BELOW JARS: | daN | JAR HRS:            | JAR SERIAL #: |
| WT. ON BIT:      | 2000 daN | ROTARY RPM:     | 90  | STRING WT.:         | 5000 daN      |
| DRILL PIPE O.D.: | 114      | THREAD:         | XH  | DRILL COLLARS O.D.: | 226           |
|                  |          |                 |     | THREAD:             | 7 H90         |

NO. IN HOLE:

| BIT NO. | SIZE mm | MAKE  | SERIAL # | TYPE | NOZZLES mm |      |      | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT   |     | CUTTING STRUCT |   |    |    |   |   | REMARKS |    |
|---------|---------|-------|----------|------|------------|------|------|-------|-----|------|---------------|--------------|-----|-------|-----|----------------|---|----|----|---|---|---------|----|
|         |         |       |          |      | 1          | 2    | 3    | IN    | OUT |      |               | DRL.         | RMD | WT44N | RPM | I              | O | D  | L  | B | G |         | O  |
| 1ARR    | 222.0   | Smith | HD1394   | FV1  | 15.9       | 15.9 | 15.9 | 0     | 23  | 23   | 5.8           | 4.00         |     | 2- 2  | 90  | 3              | 2 | WT | A' | E | I | WT      | TD |
| 2ARR    | 660.0   | Smith | L41427   | DGJC | 22.0       |      |      | 0     |     | 0    |               |              |     | -     |     |                |   |    |    |   |   |         |    |
|         |         |       |          |      |            |      |      |       |     |      |               |              |     | -     |     |                |   |    |    |   |   |         |    |

LAST PIPE TALLY: BOARD: CORRECTION: YES [ ] NO [ ]

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH    | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/10 | Tot. Sol.<br>kg/m3 | Drld. Sol.<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | ° C<br>IN/OUT |
|--------------------|-------------------|-------|----------------|----------|----------|--------------|--------------------|---------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|---------------|
|                    |                   |       |                |          |          |              |                    |                     |               |                    |              |          |           |                  | MFI        | MFO |               |
| 59                 | 1030/1030         | 9.5   |                |          | / 5.5    | 5.0/8.0      |                    |                     |               |                    |              |          |           |                  |            |     | /             |
|                    | /                 |       |                |          | /        | /            |                    |                     |               |                    |              |          |           |                  |            |     | /             |
| CENTRIFUGE         |                   |       |                |          | DESILTER |              |                    | DESANDER            |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |               |
| HR IN              |                   | kg/m3 | OUT            |          | kg/m3    |              | HR OUT             |                     | kg/m3         |                    | HR OUT       |          | kg/m3     |                  | m3         |     |               |

| HR IN | kg/m <sup>3</sup> | OUT | kg/m <sup>3</sup> | HR OUT | kg/m <sup>3</sup> | HR OUT | kg/m <sup>3</sup> | HR OUT | kg/m <sup>3</sup> | m <sup>3</sup> |
|-------|-------------------|-----|-------------------|--------|-------------------|--------|-------------------|--------|-------------------|----------------|
|-------|-------------------|-----|-------------------|--------|-------------------|--------|-------------------|--------|-------------------|----------------|

| PUMP | PUMP NO. 1 |             |              |     |                     | PUMP NO. 2 |             |              |     |                     | PRESSURE | ANNULAR VELOCITY |             | JET                |       |
|------|------------|-------------|--------------|-----|---------------------|------------|-------------|--------------|-----|---------------------|----------|------------------|-------------|--------------------|-------|
|      | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN |          | DP<br>m/MIN      | DC<br>m/MIN | VELOCITY<br>m/sec. | IHP   |
| P    | Emsco      | 165         | 406          | 35  | 1.01                | Emsco      | 127         | 406          |     |                     |          | 3.0              | 3.4         | 44.1               | 18.84 |

| SURVEYS |     |   |         |              |       | TIME BREAKDOWN |   | MUD ADDITIVES |    |
|---------|-----|---|---------|--------------|-------|----------------|---|---------------|----|
|         |     |   | AZIMUTH | RIG SPUD     | 17.25 | Biozan         | 1 | Gel           | 20 |
| .       | .00 | m |         | RIG SERV     |       |                |   |               |    |
| .       | .00 | m |         | SAFETY MTG   | 1.00  |                |   |               |    |
| .       | .00 | m |         | DRILLING     | 4.00  |                |   |               |    |
| .       | .00 | m |         | RAT HOLE     | 1.75  |                |   |               |    |
| .       | .00 | m |         |              |       |                |   |               |    |
| .       | .00 | m |         |              |       |                |   |               |    |
| .       | .00 | m |         |              |       |                |   |               |    |
| .       | .00 | m |         |              |       |                |   |               |    |
| .       | .00 | m |         | TOTAL HOURS: | 24.00 |                |   |               |    |

**MUD COMMENTS:** Mud is in good condition for Conductor Barrel

**DRILLING & GEOLOGICAL REMARKS:** (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.01.17 @ 00:00 Hours:

Rigged up floor. Picked up Kelly. slipped and cut line.

Held rig inspection. Held prespud and safety meeting with Shehtah personnel.

Installed prefab doors. Worked on electrical, escape lines, easy ride lines. Repaired hydraulic lines to tugger. Worked

on hydromatic. Worked on electrical to pump motors.

Spudded 1999.01.17 @ 18:00 hours.

Drilled 222mm pilot hole to 23mKB. Drilled mousehole and  
rathole to 24:00 hours 1999.01.17.

**SUPERVISOR:** Jack & Chuck Brazel

PHONE #: (600) 700-5344

**CALLING CARD#: 454-037-6133-9618**

# DAILY DRILLING REPORT

|                                             |  |                                                                |              |                       |            |
|---------------------------------------------|--|----------------------------------------------------------------|--------------|-----------------------|------------|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0                                 |              | DATE: 99/01/19        |            |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 300B146520126300                                      |              | DAY: 2                |            |
| OFFICE SUPERVISOR: Mickey Sutherland        |  | LICENCE NO.: 1853                                              |              |                       |            |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m                                                     | KB-GL: 6.9 m | SPUD DATE: 99/01/17 @ | 18:00 hrs. |
| RIG #: 7                                    |  | GL: 58.4 m                                                     | KB-CF: m     | RIG RELEASE: @        | : hrs.     |
|                                             |  | WELL STATUS:                                                   |              |                       |            |
| WEATHER: Overcast                           |  | TEMP: -21 °C                                                   | FINAL TD: m  | FORMATION:            |            |
| Midnight DEPTH: 26.00 m                     |  | PROGRESS: 3.00 m                                               | PBTD: m      | FORMATION:            |            |
| 8:00 a.m. DEPTH: 26.00 m                    |  | 8:00 a.m. OPERATION: Nippling up Weatherford Enterra diverter. |              |                       |            |

**AFE #: 9920101      AFE AMT: \$ 2480000      DAILY COST: \$ 45028      CUMULATIVE COST: \$ 938910**

|       |           |        |       |                |
|-------|-----------|--------|-------|----------------|
| 1 Bit | 1 Bit Sub | 1 Jars | 1 X.O | 1 Drill Collar |
| 1 XO  | 1 Kelly   |        |       |                |

|                             |      |
|-----------------------------|------|
| TOTAL<br>ROTATING<br>HOURS: | 7.00 |
|-----------------------------|------|

|                  |          |                 |     |                     |               |
|------------------|----------|-----------------|-----|---------------------|---------------|
| LENGTH:          | 17.83 m  | WT. BELOW JARS: | daN | JAR HRS:            | JAR SERIAL #: |
| WT. ON BIT:      | 2000 daN | ROTARY RPM:     | 90  | STRING WT.:         | 5000 daN      |
| DRILL PIPE O.D.: | 114      | THREAD:         | XH  | DRILL COLLARS O.D.: | 226           |
|                  |          |                 |     | THREAD:             | 7 H90         |

NO. IN HOLE:

[illegible]

**LAST PIPE TALLY:**

**BOARD:**

CORRECTION: YES [ ] NO [ ]

[illegible]

| CENTRIFUGE |       |     |       | DESILTER |       | DESANDER |       | DEGASSER |       | TOTAL MUD DUMPED |
|------------|-------|-----|-------|----------|-------|----------|-------|----------|-------|------------------|
| HR IN      | kg/m3 | OUT | kg/m3 | HR OUT   | kg/m3 | HR OUT   | kg/m3 | HR OUT   | kg/m3 | m3               |

| P<br>U<br>M<br>P | PUMP NO. 1   |             |              |     |                     | PUMP NO. 2   |             |              |     |                     | PRESSURE | ANNULAR VELOCITY |             | JET                |      |
|------------------|--------------|-------------|--------------|-----|---------------------|--------------|-------------|--------------|-----|---------------------|----------|------------------|-------------|--------------------|------|
|                  | TYPE: DB-550 |             |              |     |                     | TYPE: DB-550 |             |              |     |                     |          | DP<br>m/MIN      | DC<br>m/MIN | VELOCITY<br>m/sec. | HHP  |
|                  | MODEL        | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN | MODEL        | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN |          |                  |             |                    |      |
|                  | Emsco        | 165         | 406          | 35  | 1.01                | Emsco        | 127         | 406          |     |                     |          | 3.0              | 3.4         |                    | 0.00 |

| SURVEYS |         | TIME BREAKDOWN |        | MUD ADDITIVES |          |
|---------|---------|----------------|--------|---------------|----------|
|         | AZIMUTH | RIG SPUD       | W.O.C. | 4.25          | Biozan 1 |
| •       | •       | RIG SERV       | 0.50   | W/N.U. BOP    | Gel      |
| •       | •       | SAFETY MTG     | 0.50   | CEMENTING     | 0.75     |
| •       | •       | REAMING        | 4.50   |               |          |
| •       | •       | DRILLING       | 3.00   |               |          |
| •       | •       | RAT HOLE       | 0.25   |               |          |
| •       | •       | HNDL TOOLS     | 5.50   |               |          |
| •       | •       |                |        | MUD RING      | 1.00     |
| •       | •       |                |        | TOTAL HOURS:  | 24.00    |

**MUD COMMENTS:** Mud worked good for drilling Conductor.

**DRILLING & GEOLOGICAL REMARKS:** (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)  
 1999-01-18 @ 00:00 Hours: Safety meeting with Nowsco and Shehtah personnel. Cemented

Installed rathole. Changed out BHA. Reamed 222mm hole to 660mm hole to a depth 23mKB. Drilled 660mm hole to a depth 26mKB. Note: Lots of Rocks. TD on conductor 1999.01.18 @ 11:00 hours. Circulated and conditioned hole. Laid down BHA. Ran 2 joints 508mm, 140 kg/m, J-55, Buttress, (27.2m). Held

safety meeting with Nowasco and Shehtah personnel. Cemented conductor barrel with 16 tonnes Polarset + .2% R15C. Good cement returns. Plug was down 1999.01.18 @ 16:07 hours. Waited on cement. Cut conductor and welded on flange to 24:00 hours 1999.01.18.

SUPERVISOR: Jack & Chuck Brazel      PHONE #: (600) 700-5344      CALLING CARD#: 454-037-6133-9618

# DAILY DRILLING REPORT

|                                             |  |                                              |              |                                  |  |
|---------------------------------------------|--|----------------------------------------------|--------------|----------------------------------|--|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0               |              | DATE: 99/01/20                   |  |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 300B146520126300                    |              | DAY: 3                           |  |
| OFFICE SUPERVISOR: Mickey Sutherland        |  | LICENCE NO.: 1853                            |              |                                  |  |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m                                   | KB-GL: 6.9 m | SPUD DATE: 99/01/17 @ 18:00 hrs. |  |
| RIG #: 7                                    |  | GL: 58.4 m                                   | KB-CF: m     | RIG RELEASE: @ : hrs.            |  |
|                                             |  | WELL STATUS:                                 |              |                                  |  |
| WEATHER: Clear, Wind                        |  | TEMP: -32 °C                                 | FINAL TD: m  | FORMATION:                       |  |
| Midnight DEPTH: 26.00 m                     |  | PROGRESS: 0.00 m                             | PBTD: m      | FORMATION:                       |  |
| 8:00 a.m. DEPTH: 26.00 m                    |  | 8:00 a.m. OPERATION: Waiting on electrician. |              |                                  |  |

**AFE #: 9920101      AFE AMT: \$ 2480000      DAILY COST: \$ 33157      CUMULATIVE COST: \$ 972067**

|             |                                                            |           |                                       |        |              |                                  |
|-------------|------------------------------------------------------------|-----------|---------------------------------------|--------|--------------|----------------------------------|
| B<br>H<br>A | 1 Bit                                                      | 1 Bit Sub | 1 Shock Sub                           | 1 Jars | 1 X.O        | TOTAL<br>ROTATING<br>HOURS: 7.00 |
|             | 1 XO                                                       | 1 Kelly   |                                       |        |              |                                  |
|             | LENGTH: 12.55 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #: |           |                                       |        |              |                                  |
|             | WT. ON BIT: 2000 daN ROTARY RPM: 90 STRING WT.: 5000 daN   |           |                                       |        |              |                                  |
|             | DRILL PIPE O.D.: 114 THREAD: XH                            |           | DRILL COLLARS O.D.: 226 THREAD: 7 H90 |        | NO. IN HOLE: |                                  |

[illegible]

| LAST PIPE TALLY:   |                   |       |                | BOARD:   |          |              |                    | CORRECTION: YES [ ] NO [ ] |               |                    |              |         |           |                  |            |     |              |
|--------------------|-------------------|-------|----------------|----------|----------|--------------|--------------------|----------------------------|---------------|--------------------|--------------|---------|-----------|------------------|------------|-----|--------------|
| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH    | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/lb | Tot. Sol.<br>kg/m3 | Dril. Sol.<br>kg/m3        | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OR<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | °C<br>IN/OUT |
|                    |                   |       |                |          |          |              |                    |                            |               |                    |              |         |           |                  | MF1        | MF0 |              |
| 60                 | 1120/1120         | 9.5   |                |          | / 8.5    | 5.0/8.0      |                    |                            |               |                    |              |         |           |                  |            |     | /            |
|                    | /                 |       |                |          | /        | /            |                    |                            |               |                    |              |         |           |                  |            |     | /            |
| CENTRIFUGE         |                   |       |                |          | DESILTER |              |                    | DESANDER                   |               |                    | DEGASSER     |         |           | TOTAL MUD DUMPED |            |     |              |
| HR IN              |                   | kg/m3 | OUT            |          | kg/m3    | HR OUT       |                    | kg/m3                      | HR OUT        |                    | kg/m3        | HR OUT  |           | kg/m3            | m3         |     |              |

| PUMP | PUMP NO. 1 |             |              |     |                     | PUMP NO. 2 |             |              |     |                     | PRESSURE | ANNULAR VELOCITY |             | JET                |        |
|------|------------|-------------|--------------|-----|---------------------|------------|-------------|--------------|-----|---------------------|----------|------------------|-------------|--------------------|--------|
|      | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN |          | DP<br>m/MIN      | DC<br>m/MIN | VELOCITY<br>m/sec. | HHP    |
| P    | Emsco      | 165         | 406          | 60  | 1.74                | Emsco      | 127         | 406          | 50  | 0.81                | 2500     | 38.8             | 73.4        | 94.5               | 237.46 |

[illegible]

**MUD COMMENTS:**

**DRILLING & GEOLOGICAL REMARKS:** (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)  
1999.01.19 @ 00:00 Hours: \_\_\_\_\_ to 24:00 hours 1999.01.19.

Welded on diverter flange. Completed 1999.01.19 @ 03:00 hours. Nippled up Weatherford Enterra diverter. Rigged in circulating line from sock for Kelly. Thawed out ice plug in belly of Kelly hose. Strapped drill collars and made up bottom hole assembly. Thawed out ice plugs in kicker hoses

to 24:00 hours 1999.01.19.

**Note: Had rig inspection by National Energy Board.**

Safety/Conservation Officer, Ernest Fisher, all items satisfactory.

SUPERVISOR: Jack & Chuck Brazel      PHONE #: (600) 700-5344      CALLING CARD#: 454-037-6133-9618

# DAILY DRILLING REPORT

|                                             |  |                                          |                   |                                  |  |
|---------------------------------------------|--|------------------------------------------|-------------------|----------------------------------|--|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0           |                   | DATE: 99/01/21                   |  |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 300B146520126300                |                   | DAY: 4                           |  |
| OFFICE SUPERVISOR: Mickey Sutherland        |  |                                          | LICENCE NO.: 1853 |                                  |  |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m                               | KB-GL: 6.9 m      | SPUD DATE: 99/01/17 @ 18:00 hrs. |  |
| RIG #: 7                                    |  | GL: 58.4 m                               | KB-CF: m          | RIG RELEASE: @ : hrs.            |  |
|                                             |  |                                          | WELL STATUS:      |                                  |  |
| WEATHER: Clear, Cold & Windy                |  | TEMP: -38 °C                             | FINAL TD: m       | FORMATION:                       |  |
| Midnight DEPTH: 109.00 m                    |  | PROGRESS: 83.00 m                        | PBTD: m           | FORMATION:                       |  |
| 8:00 a.m. DEPTH: 156.00 m                   |  | 8:00 a.m. OPERATION: Drilling 311mm hole |                   |                                  |  |

**AFE #: 9920101      AFE AMT: \$ 2480000      DAILY COST: \$ 51052      CUMULATIVE COST: \$ 1023119**

|       |                |             |        |                |
|-------|----------------|-------------|--------|----------------|
| 1 Bit | 1 Bit Sub      | 1 Shock Sub | 1 Jars | 2 Drill collar |
| 1 X.O | 9 Drill collar |             |        |                |

|                             |       |
|-----------------------------|-------|
| TOTAL<br>ROTATING<br>HOURS: | 17.25 |
|-----------------------------|-------|

|                      |                 |                         |                       |               |
|----------------------|-----------------|-------------------------|-----------------------|---------------|
| LENGTH: 102.54 m     | WT. BELOW JARS: | daN                     | JAR HRS:              | JAR SERIAL #: |
| WT. ON BIT: 4000 daN | ROTARY RPM: 100 |                         | STRING WT.: 20000 daN |               |
| DRILL PIPE O.D.: 114 | THREAD: XH      | DRILL COLLARS O.D.: 226 | THREAD: 7 H90         |               |
|                      |                 |                         | 170                   | 5 H90         |

NO. IN HOLE: 2  
9

[illegible]

**LAST PIPE TALLY:**

**BOARD:**

CORRECTION: YES [ ] NO [ ]

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH   | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/10 | Tot. Sol<br>kg/m3 | Drid. Sol<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | °C<br>IN/OUT |
|--------------------|-------------------|------|----------------|----------|----------|--------------|-------------------|--------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|--------------|
|                    |                   |      |                |          |          |              |                   |                    |               |                    |              |          |           |                  | MF1        | MFO |              |
| 40                 | 1080/1080         | 10.0 |                |          | 22/ 16.0 | 4.5/6.0      | 0.05              | 102.00             | 0.001         | 30                 |              |          | 120       | 600              | 0.3        | 1.0 | /            |
|                    | /                 |      |                |          | /        | /            |                   |                    |               |                    |              |          |           |                  |            |     | /            |
| CENTRIFUGE         |                   |      |                |          | DESILTER |              |                   | DESANDER           |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |              |
| 12 HR IN           | 1070 kg/m3        | OUT  | 1910 kg/m3     |          | HR OUT   | kg/m3        |                   | HR OUT             | kg/m3         |                    | HR OUT       | kg/m3    |           | m3               |            |     |              |

| PUMP | PUMP NO. 1 |             |              |     |                     | PUMP NO. 2 |             |              |     |                     | PRESSURE | ANNULAR VELOCITY |             | JET                |        |
|------|------------|-------------|--------------|-----|---------------------|------------|-------------|--------------|-----|---------------------|----------|------------------|-------------|--------------------|--------|
|      | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN |          | DP<br>m/MIN      | DC<br>m/MIN | VELOCITY<br>m/sec. | HHP    |
| P    | Emsco      | 165         | 406          | 65  | 1.88                | Emsco      | 127         | 406          | 65  | 1.06                | 4800     | 44.7             | 84.6        | 109.0              | 350.93 |

| SURVEYS  |         | TIME BREAKDOWN  |                    | MUD ADDITIVES |    |
|----------|---------|-----------------|--------------------|---------------|----|
|          | AZIMUTH | RIG SPUD        | W.O.C.             | Biozan        |    |
| 0.25 ° @ | 24.00 m | RIG SERV 0.50   | W/N.U. BOP         | Gel           | 17 |
| 0.25 ° @ | 39.00 m | SAFETY MTG      | CEMENTING          | Caustic       | 1  |
| 0.25 ° @ | 59.00 m | REAMING         | PRESS TEST 3.00    | Sapp          | 1  |
| 0.25 ° @ | 77.00 m | DRILLING 10.25  | REPAIRS 3.75       | Sawdust       | 10 |
| 0.75 ° @ | 96.00 m | RAT HOLE        | ORLG OUT 2.50      |               |    |
| • @      | m       | HNDL TOOLS 1.50 | SURVEYING 2.00     |               |    |
| • @      | m       |                 |                    |               |    |
| • @      | m       |                 |                    |               |    |
| • @      | m       |                 |                    |               |    |
| • @      | m       |                 |                    |               |    |
|          |         |                 | THAW OUT 0.50      |               |    |
|          |         |                 | TOTAL HOURS: 24.00 |               |    |

**MUD COMMENTS:** Mud foaming

**DRILLING & GEOLOGICAL REMARKS:** (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)  
 1999-01-20 @ 00:00 Hours: 1999-01-20.

Blew mud lines and kelly hose. Pressure tested diverter system 700 kPa for 15 minutes, OK. Repaired flow nipple. Waited for electrician and worked on SCR unit. Drilled out cement from 12.35mKB to 26mKB. On formation 1999.01.20 at 11:00 hours. Drilled 311mm hole to 109mKB at 23:59 hours

1999.01.20.

**SUPERVISOR:** Jack & Chuck Brazel

**PHONE #: (600) 700-5344**

**CALLING CARD#: 454-037-6133-9618**

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

LOCATION: 300-B14-6520-12630-0

DATE: 99/01/22

U.W.I.: 300-B14-6520-12630-0

CPA NO.: 3008146520126300

DAY: 5

OFFICE SUPERVISOR: Mickey Sutherland

LICENCE NO.: 1853

CONTRACTOR: Shehtah Drilling Limited

KB: 65.3 m KB-GL: 6.9 m

SPUD DATE: 99/01/17 @ 18:00 hrs.

RIG #: 7

GL: 58.4 m KB-CF: m

RIG RELEASE: @ : hrs.

WELL STATUS:

WEATHER: Cold, Clear, Breezy

TEMP: -38 °C

FINAL TD: m FORMATION:

Midnight DEPTH: 202.00 m

PROGRESS: 93.00 m

PBD: m FORMATION:

8:00 a.m. DEPTH: 202.00 m

8:00 a.m. OPERATION: Running 244.5mm surface casing

AFE #: 9920101

AFE AMT: \$ 2480000

DAILY COST: \$ 37114

CUMULATIVE COST: \$ 1060233

1 Bit

1 Bit Sub

1 Shock Sub

1 Jars

2 Drill collar

1 X.O

9 Drill collar

1 x/o

7 Heavy wight

TOTAL  
ROTATING  
HOURS: 30.25

LENGTH: 177.00 m

WT. BELOW JARS: daN

JAR HRS:

JAR SERIAL #:

WT. ON BIT: 6000 daN

ROTARY RPM: 135

STRING WT.: 24000 daN

DRILL PIPE O.D.: 114 THREAD: XH

DRILL COLLARS O.D.: 226

THREAD: 7 H90

NO. IN HOLE: 2

170 5 H90

9

| BIT NO. | SIZE mm | MAKE  | SERIAL # | TYPE | NOZZLES mm |      |      | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT   |     | CUTTING STRUCT |   |    |   |   |   | REMARKS |    |
|---------|---------|-------|----------|------|------------|------|------|-------|-----|------|---------------|--------------|-----|-------|-----|----------------|---|----|---|---|---|---------|----|
|         |         |       |          |      | 1          | 2    | 3    | IN    | OUT |      |               | DRL          | RMD | WT4IN | RPM | I              | O | D  | L | B | G | O       | R  |
| 3ART    | 311.0   | Smith | LP8464   | FDSS | 14.3       | 14.3 | 12.7 | 26    | 202 | 176  | 7.6           | 23.25        |     | 2- 6  | 100 | 4              | 4 | WT | A | E | I | NO      | TD |
|         |         |       |          |      |            |      |      |       |     | 0    |               |              |     | -     |     |                |   |    |   |   |   |         |    |
|         |         |       |          |      |            |      |      |       |     | 0    |               |              |     | -     |     |                |   |    |   |   |   |         |    |

LAST PIPE TALLY: 189.23

BOARD: 189.51

CORRECTION: YES [ ] NO [x]

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH  | WL<br>cc/30.mls | FC<br>sam | PV/YP    | GELS<br>O/10 | Tot. Sol.<br>kg/m3 | Drk. Sol.<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | ORL<br>% | CI<br>ppm | Ca<br>ppm        | ALKALINITY |     | ° C    |
|--------------------|-------------------|-----|-----------------|-----------|----------|--------------|--------------------|--------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|--------|
|                    |                   |     |                 |           |          |              |                    |                    |               |                    |              |          |           |                  | MFI        | MFO | IN/OUT |
| 41                 | 1090/1090         | 9.0 |                 |           | 6/ 9.0   | 6.0/10.      | 149.00             | 100.00             | 0.001         | 49                 |              |          | 150       | 300              | 0.2        | 2.5 | 33/    |
|                    | /                 |     |                 |           | /        | /            |                    |                    |               |                    |              |          |           |                  |            |     | /      |
| CENTRIFUGE         |                   |     |                 |           | DESILTER |              |                    | DESANDER           |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |        |
| 24 HR IN           | 1070 kg/m3        | OUT | 181 kg/m3       | HR OUT    |          |              | kg/m3              | HR OUT             |               |                    | kg/m3        | HR OUT   |           |                  | kg/m3      | m3  |        |

| PUMP NO. 1 |          |           |     |        | PUMP NO. 2 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET             |      |
|------------|----------|-----------|-----|--------|------------|----------|-----------|-----|--------|----------|------------------|----------|-----------------|------|
| MODEL      | LINER mm | STROKE mm | SPM | m3/MIN | MODEL      | LINER mm | STROKE mm | SPM | m3/MIN |          | DP m/MIN         | DC m/MIN | VELOCITY m/sec. | HHP  |
| Emsco      | 165      | 406       | 60  | 1.74   | Emsco      | 127      | 406       | 60  | 0.97   | 7300     | 41.2             | 50.9     |                 | 0.00 |

| SURVEYS |          |  | TIME BREAKDOWN |       |                    | MUD ADDITIVES |    |  |
|---------|----------|--|----------------|-------|--------------------|---------------|----|--|
| AZIMUTH |          |  |                |       |                    |               |    |  |
| 0.50° @ | 115.00 m |  | RIG SPUD       |       | W.O.C.             | Biozan        |    |  |
| 1.00° @ | 133.00 m |  | RIG SERV       |       | W/N.U. BOP         | Gel           | 37 |  |
| 0.50° @ | 143.00 m |  | SAFETY MTG     |       | CEMENTING          | Caustic       |    |  |
| 0.80° @ | 160.00 m |  | REAMING        |       | PRESS TEST         | Sapp          |    |  |
| 1.00° @ | 180.00 m |  | DRILLING       | 13.00 | REPAIRS            | Sawdust       |    |  |
| • @     | m        |  | RAT HOLE       |       | DRLG OUT           | Kelzan        | 2  |  |
| • @     | m        |  | HNDL TOOLS     |       | SURVEYING          |               |    |  |
| • @     | m        |  | CIRCULATE      | 2.75  |                    |               |    |  |
| • @     | m        |  | TRIPPING       | 6.00  |                    |               |    |  |
| • @     | m        |  |                |       | THAW OUT           |               |    |  |
| • @     | m        |  |                |       | TOTAL HOURS: 24.73 |               |    |  |

## MUD COMMENTS:

**DRILLING & GEOLOGICAL REMARKS:** (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)  
1999.01.21 @ 00:00 Hours:

Drilled 311mm hole to 189mKB. Circulated and conditioned mud. Found electrical plug 'in' short and repaired same on hole fill pump. Hooked up hole fill line and isolated (gelled off) trip tank. Tripped out. Strapped pipe, .28m difference, no correction. Tripped in. 0.5m of fill. Drilled

311mm hole to 202.4mKB (TD) for surface hole 1999.01.21 @ 21:15 hours. Circulated hole clean for .75 hours. Tripped out to run casing to 23:59 hours 1999.01.21.

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD#: 454-037-6133-9618

CD 86/97

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

LOCATION: 300-B14-6520-12630-0

DATE: 99/01/23

U.W.I.: 300-B14-6520-12630-0

CPA NO.: 300B146520126300

DAY: 6

OFFICE SUPERVISOR: Mickey Sutherland

LICENCE NO.: 1853

CONTRACTOR: Shehtah Drilling Limited

KB: 65.3 m KB-GL: 6.9 m

SPUD DATE: 99/01/17 @ 18:00 hrs.

RIG #: 7

GL: 58.4 m KB-CF: 6.9 m

RIG RELEASE: @ : hrs.

WELL STATUS:

WEATHER: Clear

TEMP: -27 °C

FINAL TD: m FORMATION:

Midnight DEPTH: 202.00 m

PROGRESS: 0.00 m

PBDT: m FORMATION:

8:00 a.m. DEPTH: 202.00 m

8:00 a.m. OPERATION: Nippling up BOPs.

AFE #: 9920101

AFE AMT: \$ 2480000

DAILY COST: \$ 71148

CUMULATIVE COST: \$ 1131381

1 Bit

1 Bit Sub

1 Shock Sub

1 Jars

2 Drill collar

1 X.O

9 Drill collar

1 x/o

7 Heavy weight

TOTAL  
ROTATING  
HOURS: 30.25

LENGTH: 177.00 m

WT. BELOW JARS: daN

JAR HRS:

JAR SERIAL #:

WT. ON BIT: 6000 daN

ROTARY RPM: 135

STRING WT.: 24000 daN

DRILL PIPE O.D.: 114 THREAD: XH

DRILL COLLARS O.D.: 226 THREAD: 7 H90

NO. IN HOLE: 2

170 5 H90

9

| BIT NO. | SIZE mm | MAKE  | SERIAL # | TYPE | NOZZLES mm |      |      | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT   |     | CUTTING STRUCT |   |    |   |   |   | REMARKS |    |
|---------|---------|-------|----------|------|------------|------|------|-------|-----|------|---------------|--------------|-----|-------|-----|----------------|---|----|---|---|---|---------|----|
|         |         |       |          |      | 1          | 2    | 3    | IN    | OUT |      |               | DRL          | RMD | WTdaN | RPM | I              | O | D  | L | B | G | O       | R  |
| 3ART    | 311.0   | Smith | LP8464   | FDSS | 14.3       | 14.3 | 12.7 | 26    | 202 | 176  | 7.6           | 23.25        |     | 2- 6  | 100 | 4              | 4 | WT | A | E | I | NO      | TD |
|         |         |       |          |      |            |      |      |       |     | 0    |               |              |     | -     |     |                |   |    |   |   |   |         |    |
|         |         |       |          |      |            |      |      |       |     | 0    |               |              |     | -     |     |                |   |    |   |   |   |         |    |

LAST PIPE TALLY: 189.23

BOARD: 189.51

CORRECTION: YES [ ] NO [x]

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH  | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/10 | Tot. Sol.<br>kg/m3 | DrId. Sol.<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | ° C<br>IN/OUT |
|--------------------|-------------------|-----|----------------|----------|----------|--------------|--------------------|---------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|---------------|
|                    |                   |     |                |          |          |              |                    |                     |               |                    |              |          |           |                  | MFI        | MFO |               |
| 41                 | 1090/1090         | 9.0 |                |          | 6/ 9.0   | 6.0/10.      | 149.00             | 100.00              | 0.001         | 49                 |              |          | 150       | 300              | 0.2        | 2.5 | 33/           |
|                    | /                 |     |                |          | /        | /            |                    |                     |               |                    |              |          |           |                  |            |     | /             |
| CENTRIFUGE         |                   |     |                |          | DESILTER |              |                    | DESANDER            |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |               |
| 12 HR IN           | kg/m3             | OUT | kg/m3          | HR OUT   | kg/m3    | HR OUT       | kg/m3              | HR OUT              | kg/m3         | HR OUT             | kg/m3        | m3       |           |                  |            |     |               |

| PUMP NO. 1 |          |           |     |        | PUMP NO. 2 |          |           |     |        | PRESSURE MPa | ANNULAR VELOCITY |          | JET             |      |
|------------|----------|-----------|-----|--------|------------|----------|-----------|-----|--------|--------------|------------------|----------|-----------------|------|
| MODEL      | LINER mm | STROKE mm | SPM | m3/MIN | MODEL      | LINER mm | STROKE mm | SPM | m3/MIN |              | DP m/MIN         | DC m/MIN | VELOCITY m/sec. | HHP  |
| Emsco      | 165      | 406       | 60  | 1.74   | Emsco      | 127      | 406       |     |        | 2000         | 60.0             | 60.0     |                 | 0.00 |

| SURVEYS |   |  | TIME BREAKDOWN     |        |            | MUD ADDITIVES |         |  |
|---------|---|--|--------------------|--------|------------|---------------|---------|--|
| AZIMUTH |   |  |                    |        |            |               |         |  |
| • @     | m |  | RIG SPUD           | W.O.C. | 6.00       | Biozan        |         |  |
| • @     | m |  | RIG SERV           | 0.25   | W/N.U. BOP | 8.00          | Gel     |  |
| • @     | m |  | SAFETY MTG         | 0.75   | CEMENTING  | 0.75          | Caustic |  |
| • @     | m |  | REAMING            |        | PRESS TEST |               | Sapp    |  |
| • @     | m |  | DRILLING           |        | REPAIRS    |               | Sawdust |  |
| • @     | m |  | RAT HOLE           |        | DRLG OUT   |               | Kelzan  |  |
| • @     | m |  | HNDL TOOLS         |        | SURVEYING  |               |         |  |
| • @     | m |  | CIRCULATE          | 1.75   | PU/LD PIPE | 1.25          |         |  |
| • @     | m |  | TRIPPING           |        |            |               |         |  |
| • @     | m |  | RUN CASING         | 5.25   |            |               |         |  |
|         |   |  | TOTAL HOURS: 24.00 |        |            |               |         |  |

## MUD COMMENTS:

DRILLING &amp; GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.01.22 @ 00:00 Hours: Laid down 229mm drill collars.

Held safety meeting with crew. Rigged to and ran 244.5mm

53.6 kg/m J-55 ST&amp;C Rg-3 Lonestar casing. Overall length

203.5m. Set at 202.5mKB. Rigged to and circulated casing

for 1.75 hours. Held safety meeting with rig crews and

Nowaco personnel. Rigged to and cemented with 16.6 tonnes

of Polar set cement with .2% R15C (retarder). Plug down

1999.01.22 @ 10:02 hours. 1m3 of good clean cement returns.

W.O.C. Cleaned mud tanks and tore out diverter. Welded on

a 244.5 mm x 279.4 mm x 21000 kPa Barber casing bowl

SN-3142900114. Nippled up BOPs to 23:59 hours 1999.01.22.

Note: Pressure test bowl to 7000 kPa for 15 minutes.

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD#: 454-037-6133-9618



## DAILY DRILLING REPORT

|                                             |  |                                                           |  |                                  |  |
|---------------------------------------------|--|-----------------------------------------------------------|--|----------------------------------|--|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0                            |  | DATE: 99/01/24                   |  |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 300B146520126300                                 |  | DAY: 7                           |  |
| OFFICE SUPERVISOR: Mickey Sutherland        |  | LICENCE NO.: 1853                                         |  | SPUD DATE: 99/01/17 @ 18:00 hrs. |  |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m KB-GL: 6.9 m                                   |  | RIG RELEASE: @ : hrs.            |  |
| RIG #: 7                                    |  | GL: 58.4 m KB-CF: 6.9 m                                   |  | WELL STATUS:                     |  |
| WEATHER: Overcast, calm                     |  | TEMP: -18 °C                                              |  | FINAL TD: m FORMATION:           |  |
| Midnight DEPTH: 202.00 m                    |  | PROGRESS: 0.00 m                                          |  | PBD: m FORMATION:                |  |
| 8:00 a.m. DEPTH: 202.00 m                   |  | 8:00 a.m. OPERATION: Pressure testing and repairing leaks |  |                                  |  |

AFE #: 9920101 AFE AMT: \$ 2480000 DAILY COST: \$ 43705 CUMULATIVE COST: \$ 1175086

1 PDC FM2545 1 NB stab 1 Drill collar 1 Stab 1 Shock sub  
 2 Drill collar 1 Jars 6 Drill collar 1 X/O 1 TBR  
 7 Heavy weight

TOTAL ROTATING HOURS: 30.25

LENGTH: 161.28 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:

WT. ON BIT: daN ROTARY RPM: STRING WT.: daN

DRILL PIPE O.D.: 114 THREAD: XH DRILL COLLARS O.D.: 170 THREAD: 5 H90 NO. IN HOLE: 9

| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE   | NOZZLES mm |      |      | DEPTH |     | MTRS PER HOUR | HOURS ON BIT |     | BIT    |     | CUTTING STRUCT |   |   |   | REMARKS |
|---------|---------|------|----------|--------|------------|------|------|-------|-----|---------------|--------------|-----|--------|-----|----------------|---|---|---|---------|
|         |         |      |          |        | 1          | 2    | 3    | IN    | OUT |               | DRL          | RMD | WT daN | RPM | I              | O | D | L |         |
| 1       | 222.0   | DBS  | 59853920 | FM2545 | 11.1       | 11.1 | 11.1 | 202   |     | -202          |              |     |        |     |                |   |   |   |         |
|         |         |      |          |        |            |      |      |       |     | 0             |              |     |        |     |                |   |   |   |         |
|         |         |      |          |        |            |      |      |       |     | 0             |              |     |        |     |                |   |   |   |         |

LAST PIPE TALLY: 189.23

BOARD: 189.51

CORRECTION: YES [ ] NO [x]

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH    | WL<br>cc/30mls | FC<br>mm | PV/YP    | GELS<br>O/10 | Tot. Sol.<br>kg/m3 | Dril. Sol.<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | ° C<br>IN/OUT |  |
|--------------------|-------------------|-------|----------------|----------|----------|--------------|--------------------|---------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|---------------|--|
|                    |                   |       |                |          |          |              |                    |                     |               |                    |              |          |           |                  | MFI        | MFO |               |  |
| 58                 | 1030/1030         | 9.0   | 8.4            | 2.0      | 14/ 12.0 | 4.0/5.0      | 49.00              | 0.00                | 0.000         | 14                 |              |          | 140       | 20               | 0.1        | 1.0 | /             |  |
|                    | /                 |       |                |          | /        | /            |                    |                     |               |                    |              |          |           |                  |            |     | /             |  |
| CENTRIFUGE         |                   |       |                |          | DESILTER |              |                    | DESANDER            |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |               |  |
| HR IN              |                   | kg/m3 | OUT            |          | kg/m3    | HR OUT       |                    | kg/m3               | HR OUT        |                    | kg/m3        | HR OUT   |           | kg/m3            | m3         |     |               |  |

| PUMP NO. 1 TYPE: DB-550 |          |           |     |        | PUMP NO. 2 TYPE: DB-550 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET            |      |
|-------------------------|----------|-----------|-----|--------|-------------------------|----------|-----------|-----|--------|----------|------------------|----------|----------------|------|
| MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | kPa      | DP m/MIN         | DC m/MIN | VELOCITY m/sec | HHP  |
| Emsco                   | 165      | 406       |     |        | Emsco                   | 127      | 406       |     |        |          | 0.0              | 0.0      | 0.0            | 0.00 |

| SURVEYS |   |  | TIME BREAKDOWN     |            |       | MUD ADDITIVES |    |
|---------|---|--|--------------------|------------|-------|---------------|----|
| AZIMUTH |   |  |                    |            |       |               |    |
| • @     | m |  | RIG SPUD           | W.O.C.     |       | Biozan        | 2  |
| • @     | m |  | RIG SERV           | W/N.U. BOP | 16.00 | Gel           | 15 |
| • @     | m |  | SAFETY MTG         | CEMENTING  |       | Caustic       |    |
| • @     | m |  | REAMING            | PRESS TEST | 5.25  | Sapp          |    |
| • @     | m |  | DRILLING           | REPAIRS    |       | Sawdust       |    |
| • @     | m |  | RAT HOLE           | DRLG OUT   |       | Kelzan        |    |
| • @     | m |  | HNDL TOOLS         | SURVEYING  |       | Ca Hypo       | 5  |
| • @     | m |  | CIRCULATE          | PU/LD PIPE |       | U Seal        | 10 |
| • @     | m |  | TRIPPING           | 2.75       |       | DefoamerXL    | 1  |
| • @     | m |  | RUN CASING         |            |       | Starlose      | 18 |
| • @     | m |  |                    |            |       | Starpac       | 4  |
| • @     | m |  |                    |            |       | Stayflo       | 4  |
|         |   |  | TOTAL HOURS: 24.00 |            |       |               |    |

MUD COMMENTS: Premix mud check

DRILLING & GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.01.23 @ 00:00 Hours: Nippled up BOPs. Pressure tested manifold and all manifold valves individually for 5 minutes low (1500 kPa) and 15 minute high (7000 kPa) with Nowsco while nipling up BOPs. Pressure tested blind rams 5 minutes low (1500 kPa) and 15 minute high (7000 kPa). Repaired leaks in standpipe and casing bowl valve. Picked

up BHA. Tripped in hole. Circulated air out of system. Replaced 101mm hammer union on standpipe to 24:00 hours 1999.01.23.

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD#: 454-037-6133-9618

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

LOCATION: 300-B14-6520-12630-0

DATE: 99/01/25

U.W.I.: 300-B14-6520-12630-0

CPA NO.: 300B146520126300

DAY: 8

OFFICE SUPERVISOR: Mickey Sutherland

LICENCE NO.: 1853

CONTRACTOR: Shehtah Drilling Limited

KB: 65.3 m KB-GL: 6.9 m

SPUD DATE: 99/01/17 @ 18:00 hrs.

RIG #: 7

GL: 58.4 m KB-CF: 6.9 m

RIG RELEASE: @ : hrs.

WELL STATUS:

WEATHER: Overcast

TEMP: -21 °C

FINAL TD: m

FORMATION:

Midnight DEPTH: 250.00 m

PROGRESS: 48.00 m

PBDT: m

FORMATION:

8:00 a.m. DEPTH: 380.00 m

8:00 a.m. OPERATION: Drilling 222mm hole.

AFE #: 9920101

AFE AMT: \$ 2480000

DAILY COST: \$ 52189

CUMULATIVE COST: \$ 1227275

|                |           |                |        |             |
|----------------|-----------|----------------|--------|-------------|
| 1 PDC FM2545   | 1 NB stab | 1 Drill collar | 1 Stab | 1 Shock sub |
| 2 Drill collar | 1 Jars    | 6 Drill collar | 1 X/O  | 1 TBR       |
| 7 Heavy weight |           |                |        |             |

TOTAL ROTATING HOURS: 32.00

LENGTH: 161.28 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:

WT. ON BIT: 4000 daN

ROTARY RPM: 60-70

STRING WT.: 21000 daN

DRILL PIPE O.D.: 114 THREAD: XH

DRILL COLLARS O.D.: 170 THREAD: 5 H90

NO. IN HOLE: 9

| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE   | NOZZLES mm |      |      | DEPTH |     | MTRS PER HOUR | HOURS ON BIT |     | BIT    |     | CUTTING STRUCT |   |   |   |   | REMARKS |
|---------|---------|------|----------|--------|------------|------|------|-------|-----|---------------|--------------|-----|--------|-----|----------------|---|---|---|---|---------|
|         |         |      |          |        | 1          | 2    | 3    | IN    | OUT |               | DRL          | RMD | WT daN | RPM | I              | O | D | L | B |         |
| 1       | 222.0   | DBS  | 59853920 | FM2545 | 11.1       | 11.1 | 11.1 | 202   |     | 48            | 1.75         |     | 3-4    | 60  |                |   |   |   |   |         |
|         |         |      |          |        |            |      |      |       |     | 0             |              |     | -      |     |                |   |   |   |   |         |
|         |         |      |          |        |            |      |      |       |     | 0             |              |     | -      |     |                |   |   |   |   |         |

LAST PIPE TALLY: 189.23

BOARD: 189.51

CORRECTION: YES [ ] NO [x]

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH    | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/10 | Tot. Sol<br>kg/m3 | Drl. Sol<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | ° C<br>IN/OUT |
|--------------------|-------------------|-------|----------------|----------|----------|--------------|-------------------|-------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|---------------|
|                    |                   |       |                |          |          |              |                   |                   |               |                    |              |          |           |                  | MF1        | MF0 |               |
| 58                 | 1030/1030         | 9.0   | 8.4            | 2.0      | 14/ 12.0 | 4.0/5.0      | 49.00             | 0.00              | 0.000         | 14                 |              |          | 140       | 20               | 0.1        | 1.0 | /             |
|                    | /                 |       |                |          | /        | /            |                   |                   |               |                    |              |          |           |                  |            |     | /             |
| CENTRIFUGE         |                   |       |                |          | DESILYER |              |                   | DESANDER          |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |               |
| HR IN              |                   | kg/m3 | OUT            |          | kg/m3    |              | HR OUT            |                   | kg/m3         |                    | HR OUT       |          | kg/m3     |                  | m3         |     |               |

| PUMP NO. 1 |          |           |     |        | PUMP NO. 2 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET            |       |
|------------|----------|-----------|-----|--------|------------|----------|-----------|-----|--------|----------|------------------|----------|----------------|-------|
| MODEL      | LINER mm | STROKE mm | SPM | m3/MIN | MODEL      | LINER mm | STROKE mm | SPM | m3/MIN |          | DP m/MIN         | DC m/MIN | VELOCITY m/sec | HHP   |
| Emsco      | 165      | 406       | 50  | 1.45   | Emsco      | 127      | 406       |     |        | 2000     | 50.9             | 90.6     | 49.7           | 34.41 |

| SURVEYS |          |  | TIME BREAKDOWN     |                 |      | MUD ADDITIVES |  |  |
|---------|----------|--|--------------------|-----------------|------|---------------|--|--|
| AZIMUTH |          |  |                    |                 |      |               |  |  |
| 1.00° @ | 228.00 m |  | RIG SPUD           | W.O.C.          |      | Biozan        |  |  |
| • @     | m        |  | RIG SERV           | W/N.U. BOP      | 0.25 | Gel           |  |  |
| • @     | m        |  | SAFETY MTG         | CEMENTING       |      | Caustic       |  |  |
| • @     | m        |  | REAMING            | PRESS TEST      | 7.50 | Sapp          |  |  |
| • @     | m        |  | DRILLING           | 1.75 REPAIRS    | 8.50 | Sawdust       |  |  |
| • @     | m        |  | RAT HOLE           | DRLG OUT        | 4.00 | Kelzan        |  |  |
| • @     | m        |  | HNDL TOOLS         | SURVEYING       | 0.75 | Ca Hypo       |  |  |
| • @     | m        |  | CIRCULATE          | 0.50 PU/LD PIPE |      | U Seal        |  |  |
| • @     | m        |  | TRIPPING           | BOP DRILL       | 0.25 | DefoamerXL    |  |  |
| • @     | m        |  | RUN CASING         | LEAK OFF        | 0.50 | Starlose      |  |  |
| • @     | m        |  | TOTAL HOURS: 24.00 |                 |      | Starpac       |  |  |
|         |          |  |                    |                 |      | Stayflo       |  |  |

MUD COMMENTS: Displaced mud after drill out and leak off test

DRILLING &amp; GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.01.24 @ 00:00 Hours: Repaired 101mm standpipe union.

Pressure tested BOPs and BOP components. 1500 kPa and 7000

kPa for 5 minutes and 15 minutes. Filled sweep line,

degasser line, manifold and flarelines with antifreeze

to -45 degrees C. Attempted to pressure test upper kelly

cock, would not test. Waited on upper kelly cock to

arrive from Shehtah Rig #1. While waiting, drilled out

displacement rubber, performed accumulator function test

and held BOP drill with crew. Replaced kelly cock and

pressure tested as above pressure test. Drilled out

float and shoe. Drilled 222mm hole to 211mKB. On

formation 1999.01.24 @ 19:45 hours. Drilled 222mm hole

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD #: 454-037-6133-9618



PAJAK ENGINEERING LTD.

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

DATE: 99/01/25

LOCATION: 300-B14-6520-12630-0

U.W.I.: 300-B14-6520-12630-0

DAY: 8

DEPTH: 250.00 m

PROGRESS: 48.00 m

CPA NO.: 300B146520126300

WEATHER: Overcast

TEMP: -21 °C

8:00 a.m. OPERATION: Drilling 222mm hole.

### DRILLING & GEOLOGICAL REMARKS (Cont'd)

to 211mKB. Circulated hole clean and performed formation leak off test. Leak off Gradient 34.8 kPa/m. Surface pressure 5000 kPa. Mud density 1030 kg/m<sup>3</sup>. Posted formation leak off of 22.6 kPa/m. Held BOP drill with crew. Displaced hole over to mud. Circulated and sheared mud (couldn't keep it on shaker.) Drilled 222mm hole to 250mKB @ 23:59 hours 1999.01.24.

REPORTED BY: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD #: 454-037-6133-9618

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

LOCATION: 300-B14-6520-12630-0

DATE: 99/01/26

U.W.I.: 300-B14-6520-12630-0

CPA NO.: 300B146520126300

DAY: 9

OFFICE SUPERVISOR: Mickey Sutherland

LICENCE NO.: 1853

CONTRACTOR: Shehtah Drilling Limited

KB: 65.3 m KB-GL: 6.9 m

SPUD DATE: 99/01/17 @ 18:00 hrs.

RIG #: 7

GL: 58.4 m KB-CF: 6.9 m

RIG RELEASE: 0 : hrs.

WELL STATUS:

WEATHER: Overcast, light snow

TEMP: -19 °C

FINAL TD: m

FORMATION:

Midnight DEPTH: 580.00 m

PROGRESS: 330.00 m

PBTD: m

FORMATION:

8:00 a.m. DEPTH: 682.00 m

8:00 a.m. OPERATION: Drilling 222mm hole.

AFE #: 9920101 AFE AMT: \$ 2480000 DAILY COST: \$ 40093 CUMULATIVE COST: \$ 1267368

|                |           |                |        |             |
|----------------|-----------|----------------|--------|-------------|
| 1 PDC FH2545   | 1 NB stab | 1 Drill collar | 1 Stab | 1 Shock sub |
| 2 Drill collar | 1 Jars    | 6 Drill collar | 1 X/O  | 1 TBR       |
| 7 Heavy weight |           |                |        |             |

TOTAL ROTATING HOURS: 52.75

LENGTH: 161.28 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:

WT. ON BIT: 7000 daN

ROTARY RPM: 50-70

STRING WT.: 28000 daN

DRILL PIPE O.D.: 114 THREAD: XH

DRILL COLLARS O.D.: 170 THREAD: 5 H90

NO. IN HOLE: 9

| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE   | NOZZLES mm |      |      | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT   |     | CUTTING STRUCT |   |   |   |   |   | REMARKS |   |
|---------|---------|------|----------|--------|------------|------|------|-------|-----|------|---------------|--------------|-----|-------|-----|----------------|---|---|---|---|---|---------|---|
|         |         |      |          |        | 1          | 2    | 3    | IN    | OUT |      |               | DRL          | RMD | V/TdN | RPM | I              | O | D | L | S | G | O       | R |
| 1       | 222.0   | DBS  | 59853920 | FM2545 | 11.1       | 11.1 | 11.1 | 202   |     | 378  | 16.8          | 22.50        |     | 3-    | 50  |                |   |   |   |   |   |         |   |
|         |         |      |          |        |            |      |      |       |     | 0    |               |              |     | -     |     |                |   |   |   |   |   |         |   |
|         |         |      |          |        |            |      |      |       |     | 0    |               |              |     | -     |     |                |   |   |   |   |   |         |   |

LAST PIPE TALLY: 189.23

BOARD: 189.51

CORRECTION: YES [ ] NO [x]

| Viscosity Sec/L | DENSITY IN/OUT | pH  | WL ca/30min | FC mm    | PV/YP   | GELS O/10 | wt. Sol kg/m3 | DRL Sol kg/m3 | SAND kg/m3 | BENTONITE kg/m3 | LCM kg/m3 | OIL %    | Cl ppm | Ca ppm | ALKALINITY MFI MFO | °C IN/OUT        |
|-----------------|----------------|-----|-------------|----------|---------|-----------|---------------|---------------|------------|-----------------|-----------|----------|--------|--------|--------------------|------------------|
| 48              | 1050/1050      | 9.0 | 6.3         | 1.5      | 13/ 9.0 | 4.0/5.0   | 82.00         | 67.00         | 0.008      | 15              |           |          | 400    | 80     | 0.1 1.0            | 26/              |
|                 | /              |     |             |          | /       | /         |               |               |            |                 |           |          |        |        |                    | /                |
| CENTRIFUGE      |                |     |             | DESALTER |         |           |               | DESANDER      |            |                 |           | DEGASSER |        |        |                    | TOTAL MUD DUMPED |
| 24 HR IN        | 1020 kg/m3     | OUT | 1700 kg/m3  | HR OUT   |         | kg/m3     |               | HR OUT        |            | kg/m3           |           | HR OUT   |        | kg/m3  |                    | m3               |

| PUMP NO. 1 |          |           |     |        | PUMP NO. 2 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET            |       |
|------------|----------|-----------|-----|--------|------------|----------|-----------|-----|--------|----------|------------------|----------|----------------|-------|
| MODEL      | LINER mm | STROKE mm | SPM | m3/MIN | MODEL      | LINER mm | STROKE mm | SPM | m3/MIN |          | DP m/MIN         | DC m/MIN | VELOCITY m/sec | HHP   |
| Emsco      | 165      | 406       | 50  | 1.45   | Emsco      | 127      | 406       |     |        | 2000     | 50.9             | 90.6     | 49.7           | 35.07 |

| SURVEYS |          |  | TIME BREAKDOWN |       |                    | MUD ADDITIVES |    |
|---------|----------|--|----------------|-------|--------------------|---------------|----|
| AZIMUTH |          |  |                |       |                    |               |    |
| 1.25° @ | 285.00 m |  | RIG SPUD       |       | W.O.C.             | Biozan        | 4  |
| 2.00° @ | 323.00 m |  | RIG SERV       | 0.50  | W/N.U. BOP         | Gel           | 10 |
| 2.50° @ | 363.00 m |  | SAFETY MTG     |       | CEMENTING          | Caustic       | 1  |
| 2.75° @ | 390.00 m |  | REAMING        |       | PRESS TEST         | TDL33         | 2  |
| 2.50° @ | 420.00 m |  | DRILLING       | 20.75 | REPAIRS            | Sawdust       |    |
| 3.00° @ | 448.00 m |  | RAT HOLE       |       | DRLG OUT           | Kelzan        |    |
| 3.00° @ | 477.00 m |  | HNDL TOOLS     |       | SURVEYING          | Ca Hypo       | 7  |
| 3.25° @ | 505.00 m |  | CIRCULATE      |       | PU/LD PIPE         | U Seal        | 15 |
| 2.75° @ | 532.00 m |  | TRIPPING       |       | BOP DRILL          | DefoamerXL    | 1  |
| ° @     | m        |  | RUN CASING     |       | LEAK OFF           | Starlose      | 18 |
|         |          |  |                |       |                    | Starpac       | 4  |
|         |          |  |                |       |                    | Stayflo       | 4  |
|         |          |  |                |       | TOTAL HOURS: 24.00 |               |    |

MUD COMMENTS: Mud foaming.

DRILLING &amp; GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.01.25 @ 00:00 Hours:

Drilled 222mm hole to 580mKB at 23:59 hours 1999.01.25.

Note #4: BOP drill held with evening crew.

#5: Devonian Imperial FM Canyon Creek SS-389mKB

#6: Canol FM-418mKB

#7: Hare Indian FM Black Shale MBR-470mKB

Note #1: 202mKB to 297mKB, 4000 daN-6000 daN

#2: 297mKB to 401mKB, 3000 daN-5000 daN

#3: 401mKB to 580mKB, 5000 daN-7000 daN

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD#: 454-037-6133-9618

CD 06/07

## DAILY DRILLING REPORT

|                                             |  |                                                 |  |                                           |  |
|---------------------------------------------|--|-------------------------------------------------|--|-------------------------------------------|--|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0                  |  | DATE: 99/01/27                            |  |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 300B146520126300                       |  | DAY: 10                                   |  |
| OFFICE SUPERVISOR: Mickey Sutherland        |  | LICENCE NO.: 1853                               |  | SPUD DATE: 99/01/17 @ 18:00 hrs.          |  |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m KB-GL: 6.9 m                         |  | RIG RELEASE: @ : hrs.                     |  |
| RIG #: 7                                    |  | GL: 58.4 m KB-CF: 6.9 m                         |  | WELL STATUS:                              |  |
| WEATHER: Overcast, Windy                    |  | TEMP: -29 °C                                    |  | FINAL TD: 798.00 m FORMATION: Fort Norman |  |
| Midnight DEPTH: 798.00 m                    |  | PROGRESS: 218.00 m                              |  | PBDT: m FORMATION:                        |  |
| 8:00 a.m. DEPTH: 798.00 m                   |  | 8:00 a.m. OPERATING: Logging with Schlumberger. |  |                                           |  |

AFE #: 9920101 AFE AMT: \$ 2480000 DAILY COST: \$ 47071 CUMULATIVE COST: \$ 1314439

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|                                                                                      |           |                |        |             |
|--------------------------------------------------------------------------------------|-----------|----------------|--------|-------------|
| 1 PDC FM2545                                                                         | 1 NB atab | 1 Drill collar | 1 Stab | 1 Shock sub |
| 2 Drill collar                                                                       | 1 Jars    | 6 Drill collar | 1 x/o  | 1 TBR       |
| 7 Heavy weight                                                                       |           |                |        |             |
| LENGTH: 161.28 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:                          |           |                |        |             |
| WT. ON BIT: 9000 daN ROTARY RPM: 50-70 STRING WT.: 28000 daN                         |           |                |        |             |
| DRILL PIPE O.D.: 114 THREAD: XH DRILL COLLARS O.D.: 170 THREAD: 5 H90 NO. IN HOLE: 9 |           |                |        |             |

TOTAL  
ROTATING  
HOURS: 71.75

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| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE   | NOZZLES mm |      |      | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT    |     | CUTTING STRUCT |   |   |   |   |   |   |   | REMARKS |  |  |
|---------|---------|------|----------|--------|------------|------|------|-------|-----|------|---------------|--------------|-----|--------|-----|----------------|---|---|---|---|---|---|---|---------|--|--|
|         |         |      |          |        | 1          | 2    | 3    | IN    | OUT |      |               | DRL.         | RMD | WT daN | RPM | I              | O | D | L | E | G | O | R |         |  |  |
| 1       | 222.0   | DBS  | 59853920 | FM2545 | 11.1       | 11.1 | 11.1 | 202   | 798 | 596  | 14.4          | 41.50        |     | 3- 9   | 50  |                |   |   |   |   |   |   |   |         |  |  |
|         |         |      |          |        |            |      |      |       |     | 0    |               |              |     | -      |     |                |   |   |   |   |   |   |   |         |  |  |
|         |         |      |          |        |            |      |      |       |     | 0    |               |              |     | -      |     |                |   |   |   |   |   |   |   |         |  |  |

LAST PIPE TALLY: 797.97

BOARD: 797.57

CORRECTION: YES [ ] NO [x]

M  
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| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH   | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/10 | Tot. Sol.<br>kg/m3 | DrM. Sol.<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | ° C<br>IN/OUT |
|--------------------|-------------------|------|----------------|----------|----------|--------------|--------------------|--------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|---------------|
|                    |                   |      |                |          |          |              |                    |                    |               |                    |              |          |           |                  | MFI        | MFO |               |
| 80                 | 1070/1070         | 10.0 | 5.0            | 1.0      | 23/ 22.0 | 7.0/10.      | 115.00             | 80.00              | 0.005         | 35                 |              |          | 600       | 40               | 0.7        | 1.2 | 26/           |
|                    | /                 |      |                |          | /        | /            |                    |                    |               |                    |              |          |           |                  |            |     | /             |
| CENTRIFUGE         |                   |      |                |          | DESILTER |              |                    | DESANDER           |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |               |
| 24 HR IN           | 1040 kg/m3        | OUT  | 1710 kg/m3     |          | HR OUT   | kg/m3        |                    | HR OUT             | kg/m3         |                    | HR OUT       | kg/m3    |           |                  | m3         |     |               |

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| PUMP NO. 1 TYPE: DB-550 |          |           |     |        | PUMP NO. 2 TYPE: DB-550 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET             |      |
|-------------------------|----------|-----------|-----|--------|-------------------------|----------|-----------|-----|--------|----------|------------------|----------|-----------------|------|
| MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MPa      | DP m/MIN         | DC m/MIN | VELOCITY m/sec. | HHP  |
| Emsco                   | 165      | 406       | 50  | 1.45   | Emsco                   | 127      | 406       |     |        | 2800     | 50.9             | 90.6     |                 | 0.00 |

| SURVEYS |          |  | TIME BREAKDOWN     |        |            | MUD ADDITIVES |    |
|---------|----------|--|--------------------|--------|------------|---------------|----|
| AZIMUTH |          |  | RIG SPUD           | W.O.C. |            | Biozan        | 4  |
| 3.00° @ | 569.00 m |  | RIG SERV           | 0.25   | W/N.U. BOP | Gel           | 25 |
| 3.50° @ | 617.00 m |  | SAFETY MTG         |        | CEMENTING  | Caustic       | 5  |
| 3.10° @ | 700.00 m |  | REAMING            |        | PRESS TEST | TDL33         |    |
| 3.50° @ | 789.00 m |  | DRILLING           | 19.00  | REPAIRS    | Sawdust       | 10 |
| • @     | m        |  | RAT HOLE           |        | DRLG OUT   | Kelzan        |    |
| • @     | m        |  | HNDL TOOLS         |        | SURVEYING  | Ca Hypo       | 2  |
| • @     | m        |  | CIRCULATE          | 1.50   | PU/LD PIPE | U Seal        | 10 |
| • @     | m        |  | TRIPPING           | 2.25   | BOP DRILL  | DefoamerXL    |    |
| • @     | m        |  | RUN CASING         |        | LEAK OFF   | Starlose      | 11 |
| • @     | m        |  | TOTAL HOURS: 24.00 |        |            | Starpac       | 3  |
|         |          |  |                    |        |            | Stayflo       | 6  |

## MUD COMMENTS:

DRILLING & GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)  
1999.01.26 @ 00:00 Hours: 23:59 hours 1999.01.26.

Drilled 222mm hole to 705mKB. Phoned National Energy Board for approval to deepen well. Approval granted by Chris Knoechel 1999.01.26 @ 09:45 hours. Drilled 222mm hole to 798mKB. TD well 1999.01.26 @ 20:30 hours. Circulated 1.25 hours. Dummy tripped to heavy weight and strapping pipe to

Notes: Ramparts-548mKB, Hare Indian Grey Shale-563mKB, Bluefish-605mKB, Hume FM Upper Member-637mKB, Hume FM Lower Member-688mKB, Bear Rock Landry FM-733mKB, Bear Rock Arnica FM-756mKB, Bear Rock Ft Norman FM-774mKB, TD-798mKB.

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD#: 454-037-6133-9618

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14  
 U.W.I.: 300-B14-6520-12630-0  
 OFFICE SUPERVISOR: Hickey Sutherland  
 CONTRACTOR: Shehtah Drilling Limited  
 RIG #: 7

LOCATION: 300-B14-6520-12630-0  
 CPA NO.: 300B146520126300

DATE: 99/01/28  
 DAY: 11

KB: 65.3 m KB-GL: 6.9 m  
 GL: 58.4 m KB-CF: 6.9 m

LICENCE NO.: 1853  
 SPUD DATE: 99/01/17 @ 18:00 hrs.  
 RIG RELEASE: @ : hrs.  
 WELL STATUS:

WEATHER: Overcast

TEMP: -32 °C

FINAL TD: 798.00 m

FORMATION: Fort Norman

Midnight DEPTH: 798.00 m

PROGRESS: 0.00 m

PBTD: m

FORMATION:

8:00 a.m. DEPTH: 798.00 m

8:00 a.m. OPERATION: On final shut in DST #1

AFE #: 9920101 AFE AMT: \$ 2480000 DAILY COST: \$ 143809 CUMULATIVE COST: \$ 1458248

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TOTAL  
ROTATING  
HOURS: 71.75

LENGTH: 0.00 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:

WT. ON BIT: daN

ROTARY RPM:

STRING WT.: daN

DRILL PIPE O.D.: 114 THREAD: XH

DRILL COLLARS O.D.: 114 THREAD: 114 XH HW

NO. IN HOLE: 9

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| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE   | NOZZLES mm |      |      | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT   |     | CUTTING STRUCT |   |    |   |   | REMARKS |    |    |
|---------|---------|------|----------|--------|------------|------|------|-------|-----|------|---------------|--------------|-----|-------|-----|----------------|---|----|---|---|---------|----|----|
|         |         |      |          |        | 1          | 2    | 3    | IN    | OUT |      |               | DRL.         | RMD | WTdaN | RPM | I              | O | D  | L | B |         |    | G  |
| 1       | 222.0   | DBS  | 59853920 | FM2545 | 11.1       | 11.1 | 11.1 | 202   | 798 | 596  | 14.4          | 41.50        |     | 3- 9  | 50  | 2              | 1 | CT | N | 0 | I       | NO | TD |
|         |         |      |          |        |            |      |      |       |     | 0    |               |              |     | -     |     |                |   |    |   |   |         |    |    |
|         |         |      |          |        |            |      |      |       |     | 0    |               |              |     | -     |     |                |   |    |   |   |         |    |    |

LAST PIPE TALLY: 797.97

BOARD: 797.57

CORRECTION: YES [ ] NO [x]

M  
U

| Viscosity Sec/L | DENSITY IN/OUT | pH  | WL cc/30min | FC mm  | PV/YP    | GELS O/10 | Tot. Sol. kg/m3 | Drld. Sol. kg/m3 | SAND kg/m3 | BENTONITE kg/m3 | LCM kg/m3 | OIL %            | Cl ppm | Ca ppm | ALKALINITY |     | °C IN/OUT |
|-----------------|----------------|-----|-------------|--------|----------|-----------|-----------------|------------------|------------|-----------------|-----------|------------------|--------|--------|------------|-----|-----------|
| 60              | 1050/1050      | 9.0 | 5.2         | 1.0    | 18/ 13.5 | 4.0/6.0   | 82.00           | 47.00            | 0.005      | 35              |           |                  | 600    | 140    | 0.1        | 1.9 | 22/       |
|                 | /              |     |             |        | /        | /         |                 |                  |            |                 |           |                  |        |        |            |     | /         |
| CENTRIFUGE      |                |     | DESILTER    |        |          | DESANDER  |                 |                  | DEGASSER   |                 |           | TOTAL MUD DUMPED |        |        |            |     |           |
| HR IN           | kg/m3          | OUT | kg/m3       | HR OUT | kg/m3    | HR OUT    | kg/m3           | HR OUT           | kg/m3      | HR OUT          | kg/m3     | m3               |        |        |            |     |           |

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| PUMP NO. 1 TYPE: DB-550 |          |           |     |        | PUMP NO. 2 TYPE: DB-550 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET             |      |
|-------------------------|----------|-----------|-----|--------|-------------------------|----------|-----------|-----|--------|----------|------------------|----------|-----------------|------|
| MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MPa      | DP m/MIN         | DC m/MIN | VELOCITY m/sec. | HHP  |
| Emsco                   | 165      | 406       | 50  | 1.45   | Emsco                   | 127      | 406       |     |        | 2000     | 50.9             | 50.9     |                 | 0.00 |

| SURVEYS |   |  | TIME BREAKDOWN     |  |  | MUD ADDITIVES |  |  |
|---------|---|--|--------------------|--|--|---------------|--|--|
| AZIMUTH |   |  | RIG SPUD           |  |  | Biozan        |  |  |
| • @     | m |  | RIG SERV 0.25      |  |  | Gel           |  |  |
| • @     | m |  | SAFETY MTG 0.25    |  |  | Caustic       |  |  |
| • @     | m |  | REAMING            |  |  | TDL33         |  |  |
| • @     | m |  | DRILLING           |  |  | Sawdust       |  |  |
| • @     | m |  | RAT HOLE           |  |  | Kelzan        |  |  |
| • @     | m |  | HNDL TOOLS 1.75    |  |  | Ca Hypo       |  |  |
| • @     | m |  | CIRCULATE 2.00     |  |  | U Seal        |  |  |
| • @     | m |  | TRIPPING 10.75     |  |  | DefoamerXL    |  |  |
| • @     | m |  | RUN CASING         |  |  | Starlose      |  |  |
| • @     | m |  | LOGGING 8.00       |  |  | Starpac       |  |  |
| • @     | m |  | TOTAL HOURS: 24.00 |  |  | Stayflo       |  |  |

## MUD COMMENTS:

DRILLING & GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.01.27 @ 00:00 Hours: Finished dummy tripping. No fill.

Circulated hole clean. Surveyed and tripped out to log.

Rigged to and logged with Schlumberger as follows:

Run #1-Borehole Compensated Sonic Log 781mKB-190mKB

#1-Phosor Induction SFL 793mKB-190mKB

Run #2-Compensated Neutron Litho-Density Log.

Tore out loggers. Tripped in hole open ended and picked up pipe to match drill collars. Circulated and conditioned mud. Tripped out of hole. Rigged up DST #1, 760-776mKB, Bear Rock Arnica, 16m Inflate Straddle, with Baker to 23:59 hours 1999.01.27.

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD #: 454-037-6133-9618



## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

LOCATION: 300-B14-6520-12630-0

DATE: 99/01/29

U.W.I.: 300-B14-6520-12630-0

CPA NO.: 300B146520126300

DAY: 12

OFFICE SUPERVISOR: Mickey Sutherland

LICENCE NO.: 1853

CONTRACTOR: Shehtah Drilling Limited

KB: 65.3 m KB-GL: 6.9 m

SPUD DATE: 99/01/17 @ 18:00 hrs.

RIG #: 7

GL: 58.4 m KB-CF: 6.9 m

RIG RELEASE: @ : hrs.

WELL STATUS:

WEATHER: Overcast

TEMP: -39 °C

FINAL TD: 798.00 m

FORMATION: Fort Norman

Midnight DEPTH: 798.00 m

PROGRESS: 0.00 m

PBDT: m

FORMATION:

8:00 a.m. DEPTH: 798.00 m

8:00 a.m. OPERATION: Pulling loose from DST #2

AFE #: 9920101

AFE AMT: \$ 2480000

DAILY COST: \$ 40783

CUMULATIVE COST: \$ 1499031

B  
H  
ATOTAL  
ROTATING  
HOURS: 71.75

LENGTH: 0.00 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:

WT. ON BIT: daN ROTARY RPM: STRING WT.: daN

DRILL PIPE O.D.: 114 THREAD: XH DRILL COLLARS O.D.: 114 THREAD: 114 XH HW NO. IN HOLE: 9

B  
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| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE | NOZZLES mm |   |   | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT    |     | CUTTING STRUCT |   |   |   |   |   | REMARKS |   |
|---------|---------|------|----------|------|------------|---|---|-------|-----|------|---------------|--------------|-----|--------|-----|----------------|---|---|---|---|---|---------|---|
|         |         |      |          |      | 1          | 2 | 3 | IN    | OUT |      |               | DRL          | RMD | WT daN | RPM | I              | O | D | L | B | G | O       | R |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     | -      |     |                |   |   |   |   |   |         |   |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     | -      |     |                |   |   |   |   |   |         |   |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     | -      |     |                |   |   |   |   |   |         |   |

LAST PIPE TALLY: 797.97

BOARD: 797.57

CORRECTION: YES [ ] NO [x]

M  
U

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH    | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/18 | Tot. Sol.<br>kg/m3 | Dryd. Sol.<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | ° C<br>IN/OUT |
|--------------------|-------------------|-------|----------------|----------|----------|--------------|--------------------|---------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|---------------|
|                    |                   |       |                |          |          |              |                    |                     |               |                    |              |          |           |                  | MFI        | MFO |               |
| 60                 | 1050/1050         | 9.0   | 5.2            | 1.0      | 18/ 13.5 | 4.0/6.0      | 82.00              | 47.00               | 0.005         | 35                 |              |          | 600       | 140              | 0.1        | 1.9 | 22/           |
|                    | /                 |       |                |          | /        | /            |                    |                     |               |                    |              |          |           |                  |            |     | /             |
| CENTRIFUGE         |                   |       |                |          | DESILTER |              |                    | DESANDER            |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |               |
| HR IN              |                   | kg/m3 | OUT            |          | kg/m3    | HR OUT       |                    | kg/m3               | HR OUT        |                    | kg/m3        | HR OUT   |           | kg/m3            | m3         |     |               |

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| PUMP NO. 1 TYPE: DB-550 |          |           |     |        | PUMP NO. 2 TYPE: DB-550 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET            |      |
|-------------------------|----------|-----------|-----|--------|-------------------------|----------|-----------|-----|--------|----------|------------------|----------|----------------|------|
| MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MPa      | DP m/MIN         | DC m/MIN | VELOCITY m/sec | HHP  |
| Emsco                   | 165      | 406       |     |        | Emsco                   | 127      | 406       |     |        | 2000     | 0.0              | 0.0      |                | 0.00 |

| SURVEYS |   |  | TIME BREAKDOWN |       |                    | MUD ADDITIVES |   |  |
|---------|---|--|----------------|-------|--------------------|---------------|---|--|
| AZIMUTH |   |  | RIG SPUD       |       |                    | Biozan        |   |  |
| • @     | m |  | RIG SERV       | 0.25  | W.O.C.             | Gel           |   |  |
| • @     | m |  | SAFETY MTG     | 10.25 | W/N.U. BOP         | Caustic       |   |  |
| • @     | m |  | REAKING        |       | CEMENTING          | TDL33         |   |  |
| • @     | m |  | DRILLING       |       | PRESS TEST         | Sawdust       | 5 |  |
| • @     | m |  | TESTING        | 5.00  | REPAIRS            | Kelzan        |   |  |
| • @     | m |  | HNDL TOOLS     | 4.00  | DRLG OUT           | Ca Hypo       |   |  |
| • @     | m |  | CIRCULATE      |       | SURVEYING          | U Seal        |   |  |
| • @     | m |  | TRIPPING       | 4.50  | PU/LD PIPE         | DefoamerXL    |   |  |
| • @     | m |  | RUN CASING     |       | BOP DRILL          | Starlose      |   |  |
| • @     | m |  |                |       | LOGGING            | Starpac       |   |  |
| • @     | m |  |                |       | TOTAL HOURS: 24.00 | Stayflo       |   |  |

MUD COMMENTS:

DRILLING &amp; GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.01.28 @ 00:00 Hours:

Made up DST #1, 760-776mKB, Bear Rock Arnica. Tripped in hole. Tested with Baker Hughes. Times: 10/60/60/120. Tripped out of hole to recovery. 100 ppm of H2S gas tested at top of recovery. Chartered a plane and waited on ammonium and safety company to arrive on location from Grande Prairie.

Reversed out recovery. Handled test tool to 23:59 hours

1999.01.28.

Note: Recovered 89m of H2S cut gasified brackish salt water from DST #1. Total volume: 0.31m3.

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD#: 454-037-6133-9618

CD 06/97

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2,B14

LOCATION: 300-B14-6520-12630-0

DATE: 99/01/30

U.W.I.: 300-B14-6520-12630-0

CPA NO.: 3008146520126300

DAY: 13

OFFICE SUPERVISOR: Mickey Sutherland

LICENCE NO.: 1853

CONTRACTOR: Shehtah Drilling Limited

KB: 65.3 m KB-GL: 6.9 m

SPUD DATE: 99/01/17 @ 18:00 hrs.

RIG #: 7

GL: 58.4 m KB-CF: 6.9 m

RIG RELEASE: @ : hrs.

WELL STATUS:

WEATHER: Overcast

TEMP: -31 °C

FINAL TD: 798.00 m

FORMATION: Fort Norman

Midnight DEPTH: 175.00 m

PROGRESS: -623.00 m

PBDT: m

FORMATION:

8:00 a.m. DEPTH: 175.00 m

8:00 a.m. OPERATION: Tearing out rig. Waiting to feel plug #2.

AFE #: 9920101

AFE AMT: \$ 2480000

DAILY COST: \$ 45043

CUMULATIVE COST: \$ 1544074

B  
H  
ATOTAL  
ROTATING  
HOURS: 71.75

LENGTH: 0.00 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:

WT. ON BIT: daN

ROTARY RPM:

STRING WT.: daN

DRILL PIPE O.D.: 114 THREAD: XH

DRILL COLLARS O.D.: 114 THREAD: 114 XH HW

NO. IN HOLE: 9

B  
I  
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S

| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE | NOZZLES mm |   |   | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT    |     | CUTTING STRUCT |   |   |   |   |   | REMARKS |   |
|---------|---------|------|----------|------|------------|---|---|-------|-----|------|---------------|--------------|-----|--------|-----|----------------|---|---|---|---|---|---------|---|
|         |         |      |          |      | 1          | 2 | 3 | IN    | OUT |      |               | DRL          | RND | WT daN | RPM | I              | O | D | L | B | G | O       | R |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     | -      |     |                |   |   |   |   |   |         |   |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     | -      |     |                |   |   |   |   |   |         |   |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     | -      |     |                |   |   |   |   |   |         |   |

LAST PIPE TALLY: 797.97

BOARD: 797.57

CORRECTION: YES [ ] NO [x]

M  
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| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH  | WL<br>cc/30min | FC<br>mm | PV/YP   |        | GELS<br>O/10 | Tot. Sol<br>kg/m3 | DrM. Sol<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm        | Ca<br>ppm | ALKALINITY |     | ° C<br>IN/OUT |
|--------------------|-------------------|-----|----------------|----------|---------|--------|--------------|-------------------|-------------------|---------------|--------------------|--------------|----------|------------------|-----------|------------|-----|---------------|
|                    |                   |     |                |          |         |        |              |                   |                   |               |                    |              |          |                  |           | MFI        | MFO |               |
| 45                 | 1050/1050         | 8.5 | 7.2            | 1.0      | 13/     | 8.5    | 3.0/4.0      | 82.00             | 49.00             | 0.005         | 33                 |              |          | 600              | 120       | 0.1        | 1.5 | 13/           |
|                    | /                 |     |                |          | /       | /      | /            |                   |                   |               |                    |              |          |                  |           |            |     | /             |
| CENTRIFUGE         |                   |     |                |          | DESKTER |        |              | DESANDER          |                   |               | DEGASSER           |              |          | TOTAL MUD DUMPED |           |            |     |               |
| HR IN              | kg/m3             | OUT | kg/m3          | HR OUT   | kg/m3   | HR OUT | kg/m3        | HR OUT            | kg/m3             | HR OUT        | kg/m3              | m3           |          |                  |           |            |     |               |

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| PUMP NO. 1 TYPE: DB-530 |          |           |     |        | PUMP NO. 2 TYPE: DB-550 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET            |      |
|-------------------------|----------|-----------|-----|--------|-------------------------|----------|-----------|-----|--------|----------|------------------|----------|----------------|------|
| MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MPa      | OP m/MIN         | DC m/MIN | VELOCITY m/sec | HHP  |
| Emsco                   | 165      | 406       | 50  | 1.45   | Emsco                   | 127      | 406       |     |        | 2000     | 50.9             | 50.9     |                | 0.00 |

| SURVEYS |   |  | TIME BREAKDOWN     |      |            | MUD ADDITIVES |  |  |
|---------|---|--|--------------------|------|------------|---------------|--|--|
| AZIMUTH |   |  |                    |      |            |               |  |  |
| • @     | m |  | RIG SPUD           |      | W.O.C.     | Biozan        |  |  |
| • @     | m |  | RIG SERV           | 0.50 | W/N.U. BOP | Gel           |  |  |
| • @     | m |  | SAFETY MTG         | 0.75 | CEMENTING  | Caustic       |  |  |
| • @     | m |  | REAMING            |      | PRESS TEST | TDL33         |  |  |
| • @     | m |  | DRILLING           |      | REPAIRS    | Sawdust       |  |  |
| • @     | m |  | TESTING            | 5.50 | DRLG OUT   | Kelzan        |  |  |
| • @     | m |  | HNDL TOOLS         | 6.25 | SURVEYING  | Ca Hypo       |  |  |
| • @     | m |  | CIRCULATE          | 4.25 | PU/LD PIPE | U Seal        |  |  |
| • @     | m |  | TRIPPING           | 5.50 | BOP DRILL  | DefoamerXL    |  |  |
| • @     | m |  | RUN CASING         |      | LOGGING    | Starlose      |  |  |
| • @     | m |  |                    |      |            | Starpac       |  |  |
| • @     | m |  |                    |      |            | Stayflo       |  |  |
|         |   |  | TOTAL HOURS: 24.00 |      |            |               |  |  |

## MUD COMMENTS:

DRILLING &amp; GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

99.01.29 @ 00:00 Hours: Serviced test tool. Tripped in hole.

Tested with Baker, DST #2, 651-667mKB, Hume Upper Member, inflate straddle. Times 10-60-60-120. Tripped out of hole.

Recovered recorders and laid down test tool. Tripped in hole open ended to 341mKB. Circulated bottoms up. Tripped in hole to bottom. Circulated and conditioned mud and hole.

Held safety meeting with crew. Rigged to and ran plug #1, 798-400mKB with 23.1 tonnes O-1-0 Class "G", (10X) excess, with .4X T-10. Plug down on 99/01/29 @ 2058 hours. Pulled up to 400mKB. Circulated out .5 m3 of good clean cement returns. Circulated and conditioned mud 1.25 hours. Held safety meeting with crew. Rigged to and ran plug #2.

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD#: 454-037-6133-9618

CD 06/07



PAJAK ENGINEERING LTD.

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2,B14

DATE: 99/01/30

LOCATION: 300-B14-6520-12630-0

U.W.I.: 300-B14-6520-12630-0

DAY: 13

DEPTH: 175.00 m

PROGRESS: -623.00 m

CPA NO.: 300B146520126300

WEATHER: Overcast

TEMP: -31 °C

8:00 a.m. OPERATION: Tearing out rig. Waiting to feel plug #2.

### DRILLING & GEOLOGICAL REMARKS (Cont'd)

400-175mKB, 30% excess (open hole) with 15.5 tonnes 0-1-0 Class "G" with .3 % T-10. Pulled out of plug on to 23:59 hours 1999.01.29.

REPORTED BY: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD #: 454-037-6133-9618

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

U.W.I.: 300-B14-6520-12630-0

OFFICE SUPERVISOR: Mickey Sutherland

CONTRACTOR: Shehtah Drilling Limited

RIG #: 7

LOCATION: 300-B14-6520-12630-0

CPA NO.: 3008146520126300

DATE: 99/01/31

DAY: 14

LICENCE NO.: 1853

SPUD DATE: 99/01/17 @ 18:00 hrs.

RIG RELEASE: @ : hrs.

WELL STATUS:

WEATHER: Clear, light breeze

TEMP: -39 °C

FINAL TD: 798.00 m

FORMATION: Fort Norman

Midnight DEPTH: 0.00 m

PROGRESS: -798.00 m

PBTD: m

FORMATION:

8:00 a.m. DEPTH: 0.00 m

8:00 a.m. OPERATION: Tearing out Shehtah Rig #7

AFE #: 9920101

AFE AMT: \$ 2480000

DAILY COST: \$ 75716

CUMULATIVE COST: \$ 1619790

B  
H  
A

LENGTH: 0.00 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:

WT. ON BIT: daN

ROTARY RPM:

STRING WT.: daN

DRILL PIPE O.D.:

THREAD:

DRILL COLLARS O.D.:

THREAD:

NO. IN HOLE:

TOTAL  
ROTATING  
HOURS: 71.75B  
I  
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S

| BIT NO. | SIZE IN. | MAKE | SERIAL # | TYPE | NOZZLES mm |   |   | DEPTH |     | MTRS PER HOUR | HOURS ON BIT |     | BIT WT daN | RPM | CUTTING STRUCT |   |   |   |   |   |   |   | REMARKS |
|---------|----------|------|----------|------|------------|---|---|-------|-----|---------------|--------------|-----|------------|-----|----------------|---|---|---|---|---|---|---|---------|
|         |          |      |          |      | 1          | 2 | 3 | IN    | OUT |               | DRL.         | RMD |            |     | I              | O | D | L | B | G | O | R |         |
|         |          |      |          |      |            |   |   |       |     | 0             |              |     | -          |     |                |   |   |   |   |   |   |   |         |
|         |          |      |          |      |            |   |   |       |     | 0             |              |     | -          |     |                |   |   |   |   |   |   |   |         |
|         |          |      |          |      |            |   |   |       |     | 0             |              |     | -          |     |                |   |   |   |   |   |   |   |         |

LAST PIPE TALLY: 797.97

BOARD: 797.57

CORRECTION: YES [ ] NO [x]

M  
U

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH    | WL<br>cc/30min | FC<br>mm | PV/YP    |     | GELS<br>O/10 | Tot. Sol<br>kg/m3 | Dril. Sol<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OR<br>% | CI<br>ppm | Ca<br>ppm | ALKALINITY       |       | ° C<br>IN/OUT |    |  |
|--------------------|-------------------|-------|----------------|----------|----------|-----|--------------|-------------------|--------------------|---------------|--------------------|--------------|---------|-----------|-----------|------------------|-------|---------------|----|--|
|                    |                   |       |                |          |          |     |              |                   |                    |               |                    |              |         |           |           | MFI              | MFO   |               |    |  |
| 45                 | 1050/1050         | 8.5   | 7.2            | 1.0      | 13/      | 8.5 | 3.0/4.0      | 82.00             | 49.00              | 0.005         | 33                 |              |         | 600       | 120       | 0.1              | 1.5   | 13/           |    |  |
|                    | /                 |       |                |          | /        | /   |              |                   |                    |               |                    |              |         |           |           |                  |       | /             |    |  |
| CENTRIFUGE         |                   |       |                |          | DESILTER |     |              |                   | DESANDER           |               |                    | DEGASSER     |         |           |           | TOTAL MUD DUMPED |       |               |    |  |
| HR IN              |                   | kg/m3 | OUT            |          | kg/m3    |     | HR OUT       |                   | kg/m3              |               | HR OUT             |              | kg/m3   |           | HR OUT    |                  | kg/m3 |               | m3 |  |

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| PUMP NO. 1 |             |              |     |        | TYPE: DB-550 |             |              |     |        | PUMP NO. 2 |             |             |                    |      | TYPE: DB-550 |  |  |  |  | PRESSURE | ANNULAR VELOCITY |  | JET |  |
|------------|-------------|--------------|-----|--------|--------------|-------------|--------------|-----|--------|------------|-------------|-------------|--------------------|------|--------------|--|--|--|--|----------|------------------|--|-----|--|
| MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m3/MIN | MODEL        | LINER<br>mm | STROKE<br>mm | SPM | m3/MIN | HP         | OP<br>m/MIN | DC<br>m/MIN | VELOCITY<br>m/sec. | MHP  |              |  |  |  |  |          |                  |  |     |  |
| Emsco      | 165         | 406          |     |        | Emsco        | 127         | 406          |     |        |            | 0.0         | 0.0         |                    | 0.00 |              |  |  |  |  |          |                  |  |     |  |

| SURVEYS |   |  | TIME BREAKDOWN     |        |            | MUD ADDITIVES |    |
|---------|---|--|--------------------|--------|------------|---------------|----|
| AZIMUTH |   |  | RIG SPUD           | W.O.C. | 8.00       | Biozan        |    |
| • @     | m |  | RIG SERV           | 0.25   | W/N.U. BOP | Gel           | 2  |
| • @     | m |  | SAFETY MTG         |        | CEMENTING  | Caustic       | 1  |
| • @     | m |  | REAMING            |        | PRESS TEST | TDL33         |    |
| • @     | m |  | DRILLING           |        | REPAIRS    | Sawdust       | 30 |
| • @     | m |  | TESTING            |        | DRLG OUT   | Desco         | 3  |
| • @     | m |  | HNDL TOOLS         |        | SURVEYING  | Ca Hypo       |    |
| • @     | m |  | CIRCULATE          |        | PU/LD PIPE | U Seal        | 19 |
| • @     | m |  | TRIPPING           | 3.00   | RIG UP/DN  | DefoamerXL    |    |
| • @     | m |  | RUN CASING         |        | LOGGING    | Starlose      | 7  |
| • @     | m |  | TOTAL HOURS: 24.00 |        |            | Starpac       |    |
|         |   |  |                    |        |            | Stayflo       |    |

MUD COMMENTS: Inventory correction on mud products

DRILLING &amp; GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.01.30 @ 00:00 Hours: Finished pulling out of plug.

Laid down remaining drill pipe. Tripped in 4 stands and

laid down same. Repeated procedure until pipe was laid down.

W.O.C. Clean mud tanks. Tripped in hole to top of cement

at 119mKB. Plug in place but soft at 99.01.30 @ 12:00 hours.

Tripped out of hole. Tore out BOPs. Tripped in hole. Felt

plug @ 119mKB with string weight, 4000 daN, 1999.01.30 @ 16:15 hours. Laid down drill pipe. Dumped .3m3 of DST #1 recovery fluid down on top of plug. Cemented plug #3, Top plug, 0-32mKB, with 1.65 tonnes of Polar set cement with .1% R15C. Plug down 99.01.30 @ 18:45 hours. Cement at surface. Tore out rig to 24:00 hours 1999.01.30.

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD #: 454-037-6133-9618

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

LOCATION: 300-B14-6520-12630-0

DATE: 99/02/01

U.W.I.: 300-B14-6520-12630-0

CPA NO.: 300B146520126300

DAY: 15

OFFICE SUPERVISOR: Mickey Sutherland

LICENCE NO.: 1853

CONTRACTOR: Shehtah Drilling Limited

KB: 65.3 m

KB-GL: 6.9 m

SPUD DATE: 99/01/17 @ 18:00 hrs.

RIG #: 7

GL: 58.4 m

KB-CF: 6.9 m

RIG RELEASE: 99/01/31 @ 23:59 hrs.

WELL STATUS: ABANDONED

WEATHER: Overcast, slight breeze

TEMP: -39 °C

FINAL TD: 798.00 m

FORMATION: Fort Norman

Midnight DEPTH: 0.00 m

PROGRESS: -798.00 m

PBTD: m

FORMATION:

8:00 a.m. DEPTH: 0.00 m

8:00 a.m. OPERATION: Preparing derrick to lay down

AFE #: 9920101

AFE AMT: \$ 2480000

DAILY COST: \$ 48511

CUMULATIVE COST: \$ 1668301

B  
H  
ATOTAL  
ROTATING  
HOURS: 71.75

LENGTH: 0.00 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:

WT. ON BIT: daN

ROTARY RPM:

STRING WT.: daN

DRILL PIPE O.D.:

THREAD:

DRILL COLLARS O.D.:

THREAD:

NO. IN HOLE:

B  
I  
T  
S

| BIT NO. | SIZE mm | MAKE | ST | J | TYPE | NOZZLES mm |   |   | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT    |     | CUTTING STRUCT |   |   |   |   |   |   | REMARKS |   |  |  |  |
|---------|---------|------|----|---|------|------------|---|---|-------|-----|------|---------------|--------------|-----|--------|-----|----------------|---|---|---|---|---|---|---------|---|--|--|--|
|         |         |      |    |   |      | 1          | 2 | 3 | IN    | OUT |      |               | DRL.         | RMD | WT daN | RPM | I              | O | D | L | B | G | O |         | R |  |  |  |
|         |         |      |    |   |      |            |   |   |       |     | 0    |               |              |     |        | -   |                |   |   |   |   |   |   |         |   |  |  |  |
|         |         |      |    |   |      |            |   |   |       |     | 0    |               |              |     |        | -   |                |   |   |   |   |   |   |         |   |  |  |  |
|         |         |      |    |   |      |            |   |   |       |     | 0    |               |              |     |        | -   |                |   |   |   |   |   |   |         |   |  |  |  |

LAST PIPE TALLY:

BOARD:

CORRECTION: YES [ ] NO [ ]

M  
U

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH    | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/10 | Tot. Sol.<br>kg/m3 | Drld. Sol.<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm | ALKALINITY       |     | ° C |        |
|--------------------|-------------------|-------|----------------|----------|----------|--------------|--------------------|---------------------|---------------|--------------------|--------------|----------|-----------|-----------|------------------|-----|-----|--------|
|                    | /                 |       |                |          | /        | /            |                    |                     |               |                    |              |          |           |           |                  | MFI | MFO | IN/OUT |
|                    | /                 |       |                |          | /        | /            |                    |                     |               |                    |              |          |           |           |                  |     |     | /      |
| CENTRIFUGE         |                   |       |                |          | DESILTER |              |                    | DESANDER            |               |                    | DEGASSER     |          |           |           | TOTAL MUD DUMPED |     |     |        |
| HR IN              |                   | kg/m3 | OUT            |          | kg/m3    | HR OUT       |                    | kg/m3               | HR OUT        |                    | kg/m3        | HR OUT   |           | kg/m3     | m3               |     |     |        |

P  
U  
M  
P

| PUMP NO. 1 |          |           |     |        | PUMP NO. 2 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET             |      |
|------------|----------|-----------|-----|--------|------------|----------|-----------|-----|--------|----------|------------------|----------|-----------------|------|
| MODEL      | LINER mm | STROKE mm | SPM | m3/MIN | MODEL      | LINER mm | STROKE mm | SPM | m3/MIN | MPa      | DP m/MIN         | DC m/MIN | VELOCITY m/sec. | HHP  |
| Emsco      | 165      | 406       |     |        | Emsco      | 127      | 406       |     |        |          | 0.0              | 0.0      |                 | 0.00 |

| SURVEYS |   |  | TIME BREAKDOWN |              |       | MUD ADDITIVES |  |
|---------|---|--|----------------|--------------|-------|---------------|--|
| AZIMUTH |   |  | RIG SPUD       | W.O.C.       |       | Biozan        |  |
| • @     | m |  | RIG SERV       | W/N.U. BOP   |       | Gel           |  |
| • @     | m |  | SAFETY MTG     | CEMENTING    |       | Caustic       |  |
| • @     | m |  | REAMING        | PRESS TEST   |       | TDL33         |  |
| • @     | m |  | DRILLING       | REPAIRS      |       | Sawdust       |  |
| • @     | m |  | TESTING        | DRLG OUT     |       | Desco         |  |
| • @     | m |  | HNDL TOOLS     | SURVEYING    |       | Ca Hypo       |  |
| • @     | m |  | CIRCULATE      | PU/LD PIPE   |       | U Seal        |  |
| • @     | m |  | TRIPPING       | RIG UP/DN    | 24.00 | DefoamerXL    |  |
| • @     | m |  | RUN CASING     | LOGGING      |       | Starlose      |  |
| • @     | m |  |                | TOTAL HOURS: | 24.00 | Starpac       |  |
|         |   |  |                |              |       | Stayflo       |  |

## MUD COMMENTS:

**DRILLING & GEOLOGICAL REMARKS:** (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)  
1999.01.31 @ 00:00 Hours:

Tore out and cleaned mud tanks. Tore out catwalk and pipe rack with loader. Installed junk basket in front of sub.

Tore out rig floor into junk basket. Pulled liners out of pump. Tore out pump to 23:59 hours 1999.01.31.

Rig released @ 23:59 hours 1999.01.31.

Note: Cut 244.5mm casing and welded a cap on same. Welded a cap on 508mm conductor barrel. All 1m below ground level.

WELL STATUS: D&A

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD#: 454-037-6133-9618

CD #/97

# DAILY DRILLING REPORT

|                                             |  |                                                          |              |                                    |  |
|---------------------------------------------|--|----------------------------------------------------------|--------------|------------------------------------|--|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0                           |              | DATE: 99/02/02                     |  |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 300B146520126300                                |              | DAY: 16                            |  |
| OFFICE SUPERVISOR: Mickey Sutherland        |  | LICENCE NO.: 1853                                        |              |                                    |  |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m                                               | KB-GL: 6.9 m | SPUD DATE: 99/01/17 @ 18:00 hrs.   |  |
| RIG #: 7                                    |  | GL: 58.4 m                                               | KB-CF: 6.9 m | RIG RELEASE: 99/01/31 @ 23:59 hrs. |  |
|                                             |  | WELL STATUS: ABANDONED                                   |              |                                    |  |
| WEATHER: Clear                              |  | TEMP: -40 °C                                             |              | FINAL TD: 798.00 m                 |  |
| Midnight DEPTH: 0.00 m                      |  | PROGRESS: -798.00 m                                      |              | FORMATION: Fort Norman             |  |
| 8:00 a.m. DEPTH: 0.00 m                     |  | 8:00 a.m. OPERATION: Moving Shehtah Rig #7 to rack site. |              | P8TD: m                            |  |
|                                             |  |                                                          |              | FORMATION:                         |  |

**AFE #: 9920101      AFE AMT: \$ 2480000      DAILY COST: \$ 27247      CUMULATIVE COST: \$ 1695548**

|                  |        |                 |     |                     |                             |              |
|------------------|--------|-----------------|-----|---------------------|-----------------------------|--------------|
|                  |        |                 |     |                     | TOTAL ROTATING HOURS: 71.75 |              |
| LENGTH:          | 0.00 m | WT. BELOW JARS: | daN | JAR HRS:            | JAR SERIAL #:               |              |
| WT. ON BIT:      | daN    | ROTARY RPM:     |     | STRING WT.:         | daN                         |              |
| DRILL PIPE O.D.: |        | THREAD:         |     | DRILL COLLARS O.D.: | THREAD:                     | NO. IN HOLE: |

BITS

| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE | NOZZLES mm |   |   | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |      | BIT   |     | CUTTING STRUCT |   |   |   | REMARKS |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |
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|         |         |      |          |      |            |   |   |       |     | 0    |               |              |      | -     |     |                |   |   |   |         |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | </ |

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|------------------|--------|-------------|-----|----|
| LAST PIPE TALLY: | BOARD: | CORRECTION: | YES | NO |
|------------------|--------|-------------|-----|----|

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH  | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/10 | Tot. Sol.<br>kg/m3 | Dried. Sol.<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OR<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | ° C<br>IN/OUT |
|--------------------|-------------------|-----|----------------|----------|----------|--------------|--------------------|----------------------|---------------|--------------------|--------------|---------|-----------|------------------|------------|-----|---------------|
|                    |                   |     |                |          |          |              |                    |                      |               |                    |              |         |           |                  | API        | MFO |               |
|                    | /                 |     |                |          | /        | /            |                    |                      |               |                    |              |         |           |                  |            |     | /             |
|                    | /                 |     |                |          | /        | /            |                    |                      |               |                    |              |         |           |                  |            |     | /             |
| CENTRIFUGE         |                   |     |                |          | DESILTER |              |                    | DESANDER             |               |                    | DEGASSER     |         |           | TOTAL MUD DUMPED |            |     |               |
| HR IN              | kg/m3             | OUT | kg/m3          |          | HR OUT   | kg/m3        |                    | HR OUT               | kg/m3         |                    | HR OUT       | kg/m3   |           | m3               |            |     |               |

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| PUMP NO. 1   |             |              |     |        | PUMP NO. 2   |             |              |     |        | PRESSURE | ANNULAR VELOCITY |             | JET                |      |
|--------------|-------------|--------------|-----|--------|--------------|-------------|--------------|-----|--------|----------|------------------|-------------|--------------------|------|
| TYPE: DB-550 |             |              |     |        | TYPE: DB-550 |             |              |     |        |          |                  |             |                    |      |
| MODEL        | LINER<br>mm | STROKE<br>mm | SPM | mJ/MIN | MODEL        | LINER<br>mm | STROKE<br>mm | SPM | mJ/MIN | IPa      | OP<br>m/MIN      | DC<br>m/MIN | VELOCITY<br>m/sec. | HHP  |
| Emsco        | 165         | 406          |     |        | Emsco        | 127         | 406          |     |        |          | 0.0              | 0.0         |                    | 0.00 |

| SURVEYS |    |         | TIME BREAKDOWN |              | MUD ADDITIVES |  |
|---------|----|---------|----------------|--------------|---------------|--|
|         |    | AZIMUTH | RIG SPUD       | W.O.C.       |               |  |
| •       | 12 | m       | RIG SERV       | W/N.U. BOP   |               |  |
| •       | 12 | m       | SAFETY MTG     | CEMENTING    |               |  |
| •       | 12 | m       | REAMING        | PRESS TEST   |               |  |
| •       | 12 | m       | DRILLING       | REPAIRS      |               |  |
| •       | 12 | m       | TESTING        | DRLG OUT     |               |  |
| •       | 12 | m       | HNDL TOOLS     | SURVEYING    |               |  |
| •       | 12 | m       | CIRCULATE      | PU/LD PIPE   |               |  |
| •       | 12 | m       | TRIPPING       | RIG UP/DN    | 19.00         |  |
| •       | 12 | m       | RUN CASING     | LOGGING      |               |  |
| •       | 12 | m       |                | TOTAL HOURS: | 19.00         |  |

**MUD COMMENTS:**

**DRILLING & GEOLOGICAL REMARKS:** (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.02.01 @ 00:00 Hours:

Tore out floor prefabs, rigged to lay down derrick and stored away equipment. Laid down derrick 1999.02.01 @ 11:00 hours. Moved rental equipment, casing, drill pipe and miscellaneous equipment to Shehtah's yard, Grey Wolf's yard, and Matco's yard in Norman Wells. Shut down 1999.02.01 @

19:00 hours. Boiler down 1999.02.01 @ 17:00 hours.

Day #1 of rig move to rack site. Equipment used:

Loader finished @ 19:00 hours.

Bed truck with swamper, 09:30 to 18:00 hours, 9.5 hours.

Bed truck with swamper, 09:30 to 17:30 hours, 9 hours.

Tractor with scissor neck, no swamper, 11:30 to 19:00 hours,

**SUPERVISOR: N. Gebhart/C. Brazel**

**PHONE #: (600) 700-5344**

**CALLING CARD#: 454-037-6133-9618**



PAJAK ENGINEERING LTD.

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

DATE: 99/02/02

LOCATION: 300-B14-6520-12630-0

U.W.I.: 300-B14-6520-12630-0

DAY: 16

DEPTH:

0.00 m

PROGRESS: -798.00 m

CPA NO.: 300B146520126300

WEATHER: Clear

TEMP: -40 °C

8:00 a.m. OPERATION: Moving Shehtah Rig #7 to rack site.

### DRILLING & GEOLOGICAL REMARKS (Cont'd)

7.5 hours.

Tractor with scissor neck, no swamper, 13:00 to 18:00 hours, 5 hours.

Tractor, no swamper, 09:30 to 12:00/16:30 to 18:00 hours, 5 hours.

REPORTED BY: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD #: 454-037-6133-9618



## DAILY DRILLING REPORT

|                                             |  |                                                                       |  |                                           |  |
|---------------------------------------------|--|-----------------------------------------------------------------------|--|-------------------------------------------|--|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0                                        |  | DATE: 99/02/03                            |  |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 3008146520126300                                             |  | DAY: 17                                   |  |
| OFFICE SUPERVISOR: Mickey Sutherland        |  | LICENCE NO.: 1853                                                     |  | SPUD DATE: 99/01/17 @ 18:00 hrs.          |  |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m KB-GL: 6.9 m                                               |  | RIG RELEASE: 99/01/31 @ 23:59 hrs.        |  |
| RIG #: 7                                    |  | GL: 58.4 m KB-CF: 6.9 m                                               |  | WELL STATUS: ABANDONED                    |  |
| WEATHER: Overcast, snowing                  |  | TEMP: -35 °C                                                          |  | FINAL TD: 798.00 m FORMATION: Fort Norman |  |
| Midnight DEPTH: 0.00 m                      |  | PROGRESS: -798.00 m                                                   |  | PBD: m FORMATION:                         |  |
| 8:00 a.m. DEPTH: 0.00 m                     |  | 8:00 a.m. OPERATION: Tearing out camp. Dismantle derrick with cranes. |  |                                           |  |

AFE #: 9920101 AFE AMT: \$ 2480000 DAILY COST: \$ 34480 CUMULATIVE COST: \$ 1730028

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|------------------|--|--|--|---------------------|--|--|--|---------------------|--|--|--|---------------|--|--|--|
| LENGTH: 0.00 m   |  |  |  | WT. BELOW JARS: daN |  |  |  | JAR HRS:            |  |  |  | JAR SERIAL #: |  |  |  |
| WT. ON BIT: daN  |  |  |  | ROTARY RPM:         |  |  |  | STRING WT.: daN     |  |  |  | NO. IN HOLE:  |  |  |  |
| DRILL PIPE O.D.: |  |  |  | THREAD:             |  |  |  | DRILL COLLARS O.D.: |  |  |  | THREAD:       |  |  |  |

TOTAL  
ROTATING  
HOURS: 71.75

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| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE | NOZZLES mm |   |   | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT    |     | CUTTING STRUCT |   |   |   |   |   | REMARKS |   |
|---------|---------|------|----------|------|------------|---|---|-------|-----|------|---------------|--------------|-----|--------|-----|----------------|---|---|---|---|---|---------|---|
|         |         |      |          |      | 1          | 2 | 3 | IN    | OUT |      |               | DRL.         | RMD | WT daN | RPM | I              | O | D | L | B | G | O       | R |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     |        | -   |                |   |   |   |   |   |         |   |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     |        | -   |                |   |   |   |   |   |         |   |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     |        | -   |                |   |   |   |   |   |         |   |

LAST PIPE TALLY:

BOARD:

CORRECTION: YES [ ] NO [ ]

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| Viscosity Sec/L |  | DENSITY IN/OUT | pH  | WL cc/30min | FC mm  | PV/YP    | GELS O/10 | Tot. Sol. kg/m3 | Dril. Sol. kg/m3 | SAND kg/m3 | BENTONITE kg/m3 | LCM kg/m3 | OE %  | Cl ppm | Ca ppm | ALKALINITY MFI MFO |    | ° C IN/OUT |
|-----------------|--|----------------|-----|-------------|--------|----------|-----------|-----------------|------------------|------------|-----------------|-----------|-------|--------|--------|--------------------|----|------------|
|                 |  | /              |     |             |        | /        | /         |                 |                  |            |                 |           |       |        |        |                    |    | /          |
|                 |  | /              |     |             |        | /        | /         |                 |                  |            |                 |           |       |        |        |                    |    | /          |
| CENTRIFUGE      |  |                |     |             |        | DESILTER |           | DESANDER        |                  |            |                 | DEGASSER  |       |        |        | TOTAL MUD DUMPED   |    |            |
| HR IN           |  | kg/m3          | OUT | kg/m3       | HR OUT |          | kg/m3     | HR OUT          |                  | kg/m3      | HR OUT          |           | kg/m3 | HR OUT |        | kg/m3              | m3 |            |

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| PUMP NO. 1 TYPE: DB-550 |          |           |     |        | PUMP NO. 2 TYPE: DB-550 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET             |      |
|-------------------------|----------|-----------|-----|--------|-------------------------|----------|-----------|-----|--------|----------|------------------|----------|-----------------|------|
| MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | SP       | DP m/MIN         | DC m/MIN | VELOCITY m/sec. | HHP  |
| Emsco                   | 165      | 406       |     |        | Emsco                   | 127      | 406       |     |        |          | 0.0              | 0.0      |                 | 0.00 |

| SURVEYS |   |  | TIME BREAKDOWN |  |  | MUD ADDITIVES |  |  |
|---------|---|--|----------------|--|--|---------------|--|--|
| AZIMUTH |   |  | RIG SPUD       |  |  | W.O.C.        |  |  |
| • @     | m |  | RIG SERV       |  |  | W/N.U. BOP    |  |  |
| • @     | m |  | SAFETY MTG     |  |  | CEMENTING     |  |  |
| • @     | m |  | REAMING        |  |  | PRESS TEST    |  |  |
| • @     | m |  | DRILLING       |  |  | REPAIRS       |  |  |
| • @     | m |  | TESTING        |  |  | DRLG OUT      |  |  |
| • @     | m |  | HNDL TOOLS     |  |  | SURVEYING     |  |  |
| • @     | m |  | CIRCULATE      |  |  | PU/LD PIPE    |  |  |
| • @     | m |  | TRIPPING       |  |  | RIG UP/DN     |  |  |
| • @     | m |  | RUN CASING     |  |  | LOGGING       |  |  |
|         |   |  | TOTAL HOURS:   |  |  |               |  |  |

MUD COMMENTS:

DRILLING & GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.02.02 @ 08:00 Hours: Drained boilers, disconnected electrical supply and tore out the back end of the rig.

Spotted matting underneath the ramp. Spotted the ramp. Held safety meeting prior to taking down drawworks. Loaded up remainder of pallets and equipment around lease. Sub and derrick still on location, waiting for warm (-36) weather

to start tearing out with cranes. Shut down for night at 19:00 hours 1999.02.02. Equipment used: Tractors: 33 hours total on lease (est). Bed Trucks: 19.5 hours total on lease (est). One tractor broke down and was replaced by another. Third bed truck brought in to help with lower drawworks. Loader: 11 hours (est).

SUPERVISOR: N. Gebhart/C. Brazel PHONE #: (600) 700-5344 CALLING CARD#: 454-037-6133-9618

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

LOCATION: 300-B14-6520-12630-0

DATE: 99/02/04

U.W.I.: 300-B14-6520-12630-0

CPA NO.: 3008146520126300

DAY: 18

OFFICE SUPERVISOR: Mickey Sutherland

LICENCE NO.: 1853

CONTRACTOR: Shehtah Drilling Limited

KB: 65.3 m KB-GL: 6.9 m

SPUD DATE: 99/01/17 @ 18:00 hrs.

RIG #: 7

GL: 58.4 m KB-CF: 6.9 m

RIG RELEASE: 99/01/31 @ 23:59 hrs.

WELL STATUS: ABANDONED

WEATHER: Overcast

TEMP: -33 °C

FINAL TD: 798.00 m

FORMATION: Fort Norman

Midnight DEPTH: 0.00 m

PROGRESS: -798.00 m

PBDT: m

FORMATION:

8:00 a.m. DEPTH: 0.00 m

8:00 a.m. OPERATION: Tear out derrick, sub and moving to rack site.

AFE #: 9920101

AFE AMT: \$ 2480000

DAILY COST: \$ 39947

CUMULATIVE COST: \$ 1769975

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ATOTAL  
ROTATING  
HOURS: 71.75

LENGTH: 0.00 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:

WT. ON BIT: daN

ROTARY RPM:

STRING WT.: daN

DRILL PIPE O.D.:

THREAD:

DRILL COLLARS O.D.:

THREAD:

NO. IN HOLE:

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| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE | NOZZLES mm |   |   | DEPTH |     | MTRS PER HOUR | HOURS ON BIT |     | BIT | CUTTING STRUCT |     |   |   |   |   |   |   |   |   | REMARKS |
|---------|---------|------|----------|------|------------|---|---|-------|-----|---------------|--------------|-----|-----|----------------|-----|---|---|---|---|---|---|---|---|---------|
|         |         |      |          |      | 1          | 2 | 3 | IN    | OUT |               | DRL.         | RMD |     | WT daN         | RPM | I | O | D | L | B | G | O | R |         |
|         |         |      |          |      |            |   |   |       |     | 0             |              |     | -   |                |     |   |   |   |   |   |   |   |   |         |
|         |         |      |          |      |            |   |   |       |     | 0             |              |     | -   |                |     |   |   |   |   |   |   |   |   |         |
|         |         |      |          |      |            |   |   |       |     | 0             |              |     | -   |                |     |   |   |   |   |   |   |   |   |         |

LAST PIPE TALLY:

BOARD:

CORRECTION: YES [ ] NO [ ]

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| Viscosity Sec/L | DENSITY IN/OUT | pH  | WL cc/30min | FC mm  | PV/YP | GELS O/10 | Tot. Sol. kg/m3 | D.M. Sol. kg/m3 | SAND kg/m3 | BENTONITE kg/m3 | LCM kg/m3 | OIL %            | CI ppm | Ca ppm | ALKALINITY MFI MFO | °C IN/OUT |
|-----------------|----------------|-----|-------------|--------|-------|-----------|-----------------|-----------------|------------|-----------------|-----------|------------------|--------|--------|--------------------|-----------|
|                 | /              |     |             |        | /     | /         |                 |                 |            |                 |           |                  |        |        |                    | /         |
|                 | /              |     |             |        | /     | /         |                 |                 |            |                 |           |                  |        |        |                    | /         |
| CENTRIFUGE      |                |     | DESILTER    |        |       | DESANDER  |                 |                 | DEGASSER   |                 |           | TOTAL MUD DUMPED |        |        |                    |           |
| HR IN           | kg/m3          | OUT | kg/m3       | HR OUT | kg/m3 | HR OUT    | kg/m3           | HR OUT          | kg/m3      | HR OUT          | kg/m3     | m3               |        |        |                    |           |

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| PUMP NO. 1 |          |           |     |        | PUMP NO. 2 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET            |      |
|------------|----------|-----------|-----|--------|------------|----------|-----------|-----|--------|----------|------------------|----------|----------------|------|
| MODEL      | LINER mm | STROKE mm | SPM | m3/MIN | MODEL      | LINER mm | STROKE mm | SPM | m3/MIN | kPa      | DP m/MIN         | DC m/MIN | VELOCITY m/sec | HHP  |
| Emsco      | 165      | 406       |     |        | Emsco      | 127      | 406       |     |        |          | 0.0              | 0.0      |                | 0.00 |

| SURVEYS |   |  | TIME BREAKDOWN     |  |                 | MUD ADDITIVES |  |
|---------|---|--|--------------------|--|-----------------|---------------|--|
| AZIMUTH |   |  |                    |  |                 |               |  |
| • @     | m |  | RIG SPUD           |  | W.O.C.          |               |  |
| • @     | m |  | RIG SERV           |  | W/N.U. BOP      |               |  |
| • @     | m |  | SAFETY MTG         |  | CEMENTING       |               |  |
| • @     | m |  | REAMING            |  | PRESS TEST      |               |  |
| • @     | m |  | DRILLING           |  | REPAIRS         |               |  |
| • @     | m |  | TESTING            |  | DRLG OUT        |               |  |
| • @     | m |  | HNDL TOOLS         |  | SURVEYING       |               |  |
| • @     | m |  | CIRCULATE          |  | PU/LD PIPE      |               |  |
| • @     | m |  | TRIPPING           |  | RIG UP/DN 10.00 |               |  |
| • @     | m |  | RUN CASING         |  | LOGGING         |               |  |
|         |   |  | TOTAL HOURS: 10.00 |  |                 |               |  |

## MUD COMMENTS:

DRILLING &amp; GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.02.03 @ 08:00 Hours:

Tore out camp and moved to rack site.

1999.02.03 @ 12:00 Hours:

Moved to rig site. Tore out derrick, doghouse and sub.

Finished 1999.02.03 @ 07:00 hours.

Note #1: Camp released on 1999.02.03 @ 10:00 hours.

Note #2: Tractors, 25 hours (est) on lease.

#3: Beds, 16 hours (est) on lease.

#4: Cranes, 5.5 x 2 = 11 hours on lease, left on lease idling for night, to be used if weather permits, otherwise we are far enough along we can finish tearing apart the rig with gin pole trucks.

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD #: 454-037-6133-9618

## DAILY DRILLING REPORT

|                                             |  |                                                             |  |                                           |  |
|---------------------------------------------|--|-------------------------------------------------------------|--|-------------------------------------------|--|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0                              |  | DATE: 99/02/05                            |  |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 3008146520126300                                   |  | DAY: 19                                   |  |
| OFFICE SUPERVISOR: Mickey Sutherland        |  | LICENCE NO.: 1853                                           |  | SPUD DATE: 99/01/17 @ 18:00 hrs.          |  |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m KB-GL: 6.9 m                                     |  | RIG RELEASE: 99/01/31 @ 23:59 hrs.        |  |
| RIG #: 7                                    |  | GL: 58.4 m KB-CF: 6.9 m                                     |  | WELL STATUS: ABANDONED                    |  |
| WEATHER: Windy                              |  | TEMP: -30 °C                                                |  | FINAL TD: 798.00 m FORMATION: Fort Norman |  |
| Midnight DEPTH: 0.00 m                      |  | PROGRESS: -798.00 m                                         |  | PBDT: m FORMATION:                        |  |
| 8:00 a.m. DEPTH: 0.00 m                     |  | 8:00 a.m. OPERATION: Haul in two loads and block off yards. |  |                                           |  |

AFE #: 9920101 AFE AMT: \$ 2480000 DAILY COST: \$ 43852 CUMULATIVE COST: \$ 1813827

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TOTAL  
ROTATING  
HOURS: 71.75

LENGTH: 0.00 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:  
 WT. ON BIT: daN ROTARY RPM: STRING WT.: daN  
 DRILL PIPE O.D.: THREAD: DRILL COLLARS O.D.: THREAD: NO. IN HOLE:

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| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE | NOZZLES mm |   |   | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT    |     | CUTTING STRUCT |   |   |   |   |   |   |   | REMARKS |  |
|---------|---------|------|----------|------|------------|---|---|-------|-----|------|---------------|--------------|-----|--------|-----|----------------|---|---|---|---|---|---|---|---------|--|
|         |         |      |          |      | 1          | 2 | 3 | IN    | OUT |      |               | DRL.         | RMD | WT daN | RPM | I              | O | D | L | B | G | O | R |         |  |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     | -      |     |                |   |   |   |   |   |   |   |         |  |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     | -      |     |                |   |   |   |   |   |   |   |         |  |
|         |         |      |          |      |            |   |   |       |     | 0    |               |              |     | -      |     |                |   |   |   |   |   |   |   |         |  |

LAST PIPE TALLY: BOARD: CORRECTION: YES [ ] NO [ ]

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| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH  | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/10 | Tot. Sol.<br>kg/m3 | Dril. Sol.<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OR<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | ° C<br>IN/OUT |
|--------------------|-------------------|-----|----------------|----------|----------|--------------|--------------------|---------------------|---------------|--------------------|--------------|---------|-----------|------------------|------------|-----|---------------|
|                    |                   |     |                |          |          |              |                    |                     |               |                    |              |         |           |                  | MFI        | MFO |               |
|                    | /                 |     |                |          | /        | /            |                    |                     |               |                    |              |         |           |                  |            |     | /             |
|                    | /                 |     |                |          | /        | /            |                    |                     |               |                    |              |         |           |                  |            |     | /             |
| CENTRIFUGE         |                   |     |                |          | DESILTER |              |                    | DESANDER            |               |                    | DEGASSER     |         |           | TOTAL MUD DUMPED |            |     |               |
| HR IN              | kg/m3             | OUT | kg/m3          | HR OUT   | kg/m3    | HR OUT       | kg/m3              | HR OUT              | kg/m3         | HR OUT             | kg/m3        |         |           |                  | m3         |     |               |

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| PUMP NO. 1 TYPE: DB-550 |          |           |     |        | PUMP NO. 2 TYPE: DB-550 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET             |      |
|-------------------------|----------|-----------|-----|--------|-------------------------|----------|-----------|-----|--------|----------|------------------|----------|-----------------|------|
| MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MPa      | DP m/MIN         | DC m/MIN | VELOCITY m/sec. | HHP  |
| Ensco                   | 165      | 406       |     |        | Ensco                   | 127      | 406       |     |        |          | 0.0              | 0.0      |                 | 0.00 |

| SURVEYS |   |  | TIME BREAKDOWN     |            |       | MUD ADDITIVES |  |  |
|---------|---|--|--------------------|------------|-------|---------------|--|--|
| AZIMUTH |   |  | RIG SPUD           | W.O.C.     |       |               |  |  |
| • @     | m |  | RIG SERV           | W/N.U. BOP |       |               |  |  |
| • @     | m |  | SAFETY MTG         | CEMENTING  |       |               |  |  |
| • @     | m |  | REAMING            | PRESS TEST |       |               |  |  |
| • @     | m |  | DRILLING           | REPAIRS    |       |               |  |  |
| • @     | m |  | TESTING            | DRLG OUT   |       |               |  |  |
| • @     | m |  | HNDL TOOLS         | SURVEYING  |       |               |  |  |
| • @     | m |  | CIRCULATE          | PU/LD PIPE |       |               |  |  |
| • @     | m |  | TRIPPING           | RIG UP/DN  | 12.00 |               |  |  |
| • @     | m |  | RUN CASING         | LOGGING    |       |               |  |  |
| • @     | m |  | TOTAL HOURS: 12.00 |            |       |               |  |  |

## MUD COMMENTS:

DRILLING & GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.02.04 @ 08:00 Hours:

Tore apart derrick. Loaded it out with cranes. Hauled sub, matting and related loads to Shehtah's ruck site. Cleaned up garbage on lease into container at 19:00 hours 1999.02.04.

Note: Only two loads left to return to Shehtah's yard.

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD #: 454-037-6133-9618

# DAILY DRILLING REPORT

|                                             |  |                                                                         |                    |                                    |                        |
|---------------------------------------------|--|-------------------------------------------------------------------------|--------------------|------------------------------------|------------------------|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0                                          |                    | DATE: 99/02/06                     |                        |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 300B146520126300                                               |                    | DAY: 20                            |                        |
| OFFICE SUPERVISOR: Mickey Sutherland        |  | LICENCE NO.: 1853                                                       |                    |                                    |                        |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m                                                              | KB-GL: 6.9 m       | SPUD DATE: 99/01/17 @ 18:00 hrs.   |                        |
| RIG #: 7                                    |  | GL: 58.4 m                                                              | KB-CF: 6.9 m       | RIG RELEASE: 99/01/31 @ 23:59 hrs. |                        |
|                                             |  |                                                                         |                    | WELL STATUS: ABANDONED             |                        |
| WEATHER:                                    |  | TEMP: °C                                                                | FINAL TD: 798.00 m |                                    | FORMATION: Fort Norman |
| Midnight DEPTH: 0.00 m                      |  | PROGRESS: -798.00 m                                                     | PBSD: m            |                                    | FORMATION:             |
| 8:00 a.m. DEPTH: 0.00 m                     |  | 8:00 a.m. OPERATION: Rig Move trucks released 1999.02.06 @ 10:30 hours. |                    |                                    |                        |

**AFE #: 9920101      AFE AMT: \$ 2480000      DAILY COST: \$ 34519      CUMULATIVE COST: \$ 1848346**

|                      |             |         |                 |                     |          |                                            |               |
|----------------------|-------------|---------|-----------------|---------------------|----------|--------------------------------------------|---------------|
| <b>B<br/>H<br/>A</b> |             |         |                 |                     |          | <b>TOTAL<br/>ROTATING<br/>HOURS:</b> 71.75 |               |
|                      |             |         |                 |                     |          |                                            |               |
|                      | LENGTH:     | 0.00 m  | WT. BELOW JARS: | daN                 | JAR HRS: |                                            | JAR SERIAL #: |
|                      | WT. ON BIT: | daN     | ROTARY RPM:     | STRING WT.:         | daN      |                                            |               |
| DRILL PIPE O.D.:     |             | THREAD: |                 | DRILL COLLARS O.D.: | THREAD:  | NO. IN HOLE:                               |               |

[illegible]

| LAST PIPE TALLY:   |                   |       |                | BOARD:   |          |              |                   | CORRECTION: YES [ ] NO [ ] |               |                    |              |          |           |                  |            |     |              |
|--------------------|-------------------|-------|----------------|----------|----------|--------------|-------------------|----------------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|--------------|
| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH    | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/10 | Tot. Sol<br>kg/m3 | Dir. Sol<br>kg/m3          | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | °C<br>IN/OUT |
|                    |                   |       |                |          |          |              |                   |                            |               |                    |              |          |           |                  | MFI        | MFO |              |
|                    | /                 |       |                |          | /        | /            |                   |                            |               |                    |              |          |           |                  |            |     | /            |
|                    | /                 |       |                |          | /        | /            |                   |                            |               |                    |              |          |           |                  |            |     | /            |
| CENTRIFUGE         |                   |       |                |          | DESILTER |              |                   | DESANDER                   |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |              |
| HR IN              |                   | kg/m3 | OUT            |          | kg/m3    | HR OUT       |                   | kg/m3                      | HR OUT        |                    | kg/m3        | HR OUT   |           | kg/m3            | m3         |     |              |

| P<br>U<br>M<br>P | PUMP NO. 1 |             |              |     |                     | PUMP NO. 2 |             |              |     |                     | PRESSURE<br>kPa | ANNULAR VELOCITY          |                           | JET                |      |
|------------------|------------|-------------|--------------|-----|---------------------|------------|-------------|--------------|-----|---------------------|-----------------|---------------------------|---------------------------|--------------------|------|
|                  | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN |                 | DP<br>m <sup>3</sup> /MIN | DC<br>m <sup>3</sup> /MIN | VELOCITY<br>m/sec. | HHP  |
|                  | Emsco      | 165         | 406          |     |                     | Emsco      | 127         | 406          |     |                     |                 | 0.0                       | 0.0                       |                    | 0.00 |

| SURVEYS |   |         | TIME BREAKDOWN |              | MUD ADDITIVES |  |
|---------|---|---------|----------------|--------------|---------------|--|
|         |   | AZIMUTH | RIG SPUD       | W.O.C.       |               |  |
| •       | 0 | m       | RIG SERV       | W/N.U. BOP   |               |  |
| •       | 0 | m       | SAFETY MTG     | CEMENTING    |               |  |
| •       | 0 | m       | REAMING        | PRESS TEST   |               |  |
| •       | 0 | m       | DRILLING       | REPAIRS      |               |  |
| •       | 0 | m       | TESTING        | DRLG OUT     |               |  |
| •       | 0 | m       | HNDL TOOLS     | SURVEYING    |               |  |
| •       | 0 | m       | CIRCULATE      | PU/LD PIPE   |               |  |
| •       | 0 | m       | TRIPPING       | RIG UP/DN    | 2.50          |  |
| •       | 0 | m       | RUN CASING     | LOGGING      |               |  |
| •       | 0 | m       |                | TOTAL HOURS: | 2.50          |  |

**MUD COMMENTS:**

**DRILLING & GEOLOGICAL REMARKS:** (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.02.05 @ 08:00 Hours: Moved equipment around Shehtah's yard. Blocked off access to local traffic. Moved garbage bin from location to local dump and emptied same. Moved fuel tank from camp site to Island Valley's yard. Rig move trucks released 1999.02.05 @ 10:30 hours.

**SUPERVISOR:** N. Gebhart/C. Brazel      **PHONE #:** (600) 700-5344      **CALLING CARD#:** 454-037-6133-9618

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

U.V.I.: 300-814-6520-12630-0

OFFICE SUPERVISOR: Hickey Sutherland

CONTRACTOR: Shehtah Drilling Limited

RIG #: 7

LOCATION: 300-814-6520-12630-0

CPA NO.: 3008146520126300

DATE: 99/02/07

DAY: 21

LICENCE NO.: 1853

SPUD DATE: 99/01/17 @ 18:00 hrs.

RIG RELEASE: 99/01/31 @ 23:59 hrs.

WELL STATUS: ABANDONED

WEATHER:

TEMP: °C

FINAL TD: 798.00 m

FORMATION: Fort Norman

Midnight DEPTH: 0.00 m

PROGRESS: 0.00 m

PBDT: m

FORMATION:

8:00 a.m. DEPTH: 0.00 m

8:00 a.m. OPERATION: Finishing up paper work, signing tickets, organize backhauls

AFE #: 9920101

AFE AMT: \$ 2480000

DAILY COST: \$ 41749

CUMULATIVE COST: \$ 1890095

B  
H  
ATOTAL  
ROTATING  
HOURS: 71.75

LENGTH: 0.00 m WT. BELOW JARS: daN JAR HRS: JAR SERIAL #:

WT. ON BIT: daN

ROTARY RPM:

STRING WT.: daN

DRILL PIPE O.D.: THREAD:

DRILL COLLARS O.D.:

THREAD:

NO. IN HOLE:

B  
I  
T  
S

| BIT NO. | SIZE mm | MAKE | SERIAL # | TYPE | NOZZLES mm |   |   | DEPTH |     | MTRS | MTRS PER HOUR | HOURS ON BIT |     | BIT   |     | CUTTING STRUCT |   |   |   |   |   |   |   | REMARKS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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LAST PIPE TALLY:

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| Viscosity Sec/L | DENSITY IN/OUT | pH  | WL cc/30min | FC mm  | PV/VP | GELS O/10 | Tot. Sol kg/m3 | DrM. Sol kg/m3 | SAND kg/m3 | BENTONITE kg/m3 | LCM kg/m3 | OR %             | Cl ppm | Ca ppm | ALKALINITY MFI MFO | °C IN/OUT |
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|                 | /              |     |             |        | /     | /         |                |                |            |                 |           |                  |        |        |                    | /         |
| CENTRIFUGE      |                |     | DESILTER    |        |       | DESANDER  |                |                | DEGASSER   |                 |           | TOTAL MUD DUMPED |        |        |                    |           |
| HR IN           | kg/m3          | OUT | kg/m3       | HR OUT | kg/m3 | HR OUT    | kg/m3          | HR OUT         | kg/m3      | HR OUT          | kg/m3     | m3               |        |        |                    |           |

P  
U  
M  
P

| PUMP NO. 1 TYPE: DB-550 |          |           |     |        | PUMP NO. 2 TYPE: DB-550 |          |           |     |        | PRESSURE | ANNULAR VELOCITY |          | JET            |      |
|-------------------------|----------|-----------|-----|--------|-------------------------|----------|-----------|-----|--------|----------|------------------|----------|----------------|------|
| MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | MODEL                   | LINER mm | STROKE mm | SPM | m3/MIN | lPa      | DP m/MIN         | DC m/MIN | VELOCITY m/sec | HP   |
| Emsco                   | 165      | 406       |     |        | Emsco                   | 127      | 406       |     |        |          | 0.0              | 0.0      |                | 0.00 |

| SURVEYS |   |  | TIME BREAKDOWN |  |  | MUD ADDITIVES |  |  |
|---------|---|--|----------------|--|--|---------------|--|--|
| AZIMUTH |   |  | RIG SPUD       |  |  | W.O.C.        |  |  |
| • @     | m |  | RIG SERV       |  |  | W/N.U. BOP    |  |  |
| • @     | m |  | SAFETY MTG     |  |  | CEMENTING     |  |  |
| • @     | m |  | REAMING        |  |  | PRESS TEST    |  |  |
| • @     | m |  | DRILLING       |  |  | REPAIRS       |  |  |
| • @     | m |  | TESTING        |  |  | DRLG OUT      |  |  |
| • @     | m |  | HNDL TOOLS     |  |  | SURVEYING     |  |  |
| • @     | m |  | CIRCULATE      |  |  | PU/LD PIPE    |  |  |
| • @     | m |  | TRIPPING       |  |  | RIG UP/DN     |  |  |
| • @     | m |  | RUN CASING     |  |  | LOGGING       |  |  |
| • @     | m |  | TOTAL HOURS:   |  |  |               |  |  |

MUD COMMENTS:

DRILLING &amp; GEOLOGICAL REMARKS: (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.02.06

Matco backhaul charges to move 9 loads, includes pilot cars, delivery of equipment to rightful owners and permits.

Premix tank, engineers trailer, 2 x 400 bbl tank, 400 bbl tank, shale tank, these 5 loads all require pilot cars

Nowasco equipment, divertor and 2 loads of miscellaneous

do not require pilot cars.

Total estimated trucking bill \$38,770.

Organized backhauls out of Norman Wells.

SUPERVISOR: N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD#: 454-037-6133-9618

CD 06/07

### III Summary of Drilling Operations

#### 4) Casing & Cementing Records

- ~~a) 508.0 mm, 146.9 kg/m J-55~~
- ~~b) 508.0 mm, 81.0 kg/m J-55~~
- c) 244.5 mm, 53.6 kg/m J-55



# DAILY DRILLING REPORT

|                                             |  |                                                                |              |                                  |  |
|---------------------------------------------|--|----------------------------------------------------------------|--------------|----------------------------------|--|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0                                 |              | DATE: 99/01/19                   |  |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 300B146520126300                                      |              | DAY: 2                           |  |
| OFFICE SUPERVISOR: Mickey Sutherland        |  | LICENCE NO.: 1853                                              |              |                                  |  |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m                                                     | KB-GL: 6.9 m | SPUD DATE: 99/01/17 @ 18:00 hrs. |  |
| RIG #: 7                                    |  | GL: 58.4 m                                                     | KB-CF: m     | RIG RELEASE: @ : hrs.            |  |
|                                             |  | WELL STATUS:                                                   |              |                                  |  |
| WEATHER: Overcast                           |  | TEMP: -21 °C                                                   |              | FINAL TD: m FORMATION:           |  |
| Midnight DEPTH: 26.00 m                     |  | PROGRESS: 3.00 m                                               |              | PBTD: m FORMATION:               |  |
| 8:00 a.m. DEPTH: 26.00 m                    |  | 8:00 a.m. OPERATION: Nippling up Weatherford Enterra diverter. |              |                                  |  |

**AFE #: 9920101      AFE AMT: \$ 2480000      DAILY COST: \$ 45028      CUMULATIVE COST: \$ 938910**

|       |           |        |       |                |
|-------|-----------|--------|-------|----------------|
| 1 Bit | 1 Bit Sub | 1 Jars | 1 X.O | 1 Drill Collar |
| 1 XO  | 1 Kelly   |        |       |                |

|                             |      |
|-----------------------------|------|
| TOTAL<br>ROTATING<br>HOURS: | 7.00 |
|-----------------------------|------|

|                  |          |                 |     |                     |               |
|------------------|----------|-----------------|-----|---------------------|---------------|
| LENGTH:          | 17.83 m  | WT. BELOW JARS: | daN | JAR HRS:            | JAR SERIAL #: |
| WT. ON BIT:      | 2000 daN | ROTARY RPM:     | 90  | STRING WT.:         | 5000 daN      |
| DRILL PIPE O.D.: | 114      | THREAD:         | XH  | DRILL COLLARS O.D.: | 226           |
|                  |          |                 |     | THREAD:             | 7 H90         |

NO. IN HOLE:

[illegible]

LAST PIPE TALLY: BOARD: CORRECTION: YES [ ] NO [ ]

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH  | WL<br>cc/30min | FC<br>mm | PV/YP    | GELS<br>O/10 | Tot. Sol.<br>kg/m3 | Diss. Sol.<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | °C<br>IN/OUT |
|--------------------|-------------------|-----|----------------|----------|----------|--------------|--------------------|---------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|--------------|
|                    |                   |     |                |          |          |              |                    |                     |               |                    |              |          |           |                  | MF1        | MF0 |              |
| 60                 | 1120/1120         | 9.5 |                |          | /        | 8.5          | 5.0/8.0            |                     |               |                    |              |          |           |                  |            |     | /            |
|                    | /                 |     |                |          | /        | /            |                    |                     |               |                    |              |          |           |                  |            |     | /            |
| CENTRIFUGE         |                   |     |                |          | DESILTER |              |                    | DESANDER            |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |              |
| HR IN              | kg/m3             | OUT | kg/m3          |          | HR OUT   | kg/m3        |                    | HR OUT              | kg/m3         |                    | HR OUT       | kg/m3    |           | m3               |            |     |              |

| PUMP | PUMP NO. 1 |             |              |     |                     | PUMP NO. 2 |             |              |     |                     | PRESSURE | ANNULAR VELOCITY |             | JET                |      |
|------|------------|-------------|--------------|-----|---------------------|------------|-------------|--------------|-----|---------------------|----------|------------------|-------------|--------------------|------|
|      | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN |          | DP<br>m/MIN      | DC<br>m/MIN | VELOCITY<br>m/sec. | HHP  |
|      | Emsco      | 165         | 406          | 35  | 1.01                | Emsco      | 127         | 406          |     |                     |          | 3.0              | 3.4         |                    | 0.00 |

| SURVEYS |   |         | TIME BREAKDOWN |      |              | MUD ADDITIVES |          |
|---------|---|---------|----------------|------|--------------|---------------|----------|
|         |   | AZIMUTH | RIG SPUD       |      | W.O.C.       | 4.25          | Biozan 1 |
| •       | 0 | m       | RIG SERV       | 0.50 | W/N.U. BOP   | 3.75          | Gel      |
| •       | 0 | m       | SAFETY MTG     | 0.50 | CEMENTING    | 0.75          |          |
| •       | 0 | m       | REAMING        | 4.50 |              |               |          |
| •       | 0 | m       | DRILLING       | 3.00 |              |               |          |
| •       | 0 | m       | RAT HOLE       | 0.25 |              |               |          |
| •       | 0 | m       | HNDL TOOLS     | 5.50 |              |               |          |
| •       | 0 | m       |                |      |              |               |          |
| •       | 0 | m       |                |      |              |               |          |
| •       | 0 | m       |                |      |              |               |          |
| •       | 0 | m       |                |      |              |               |          |
| •       | 0 | m       |                |      |              |               |          |
| •       | 0 | m       |                |      |              |               |          |
|         |   |         |                |      | MUD RING     | 1.00          |          |
|         |   |         |                |      | TOTAL HOURS: | 24.00         |          |

**MUD COMMENTS:** Mud worked good for drilling Conductor.

**DRILLING & GEOLOGICAL REMARKS:** (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.01.18 @ 00:00 Hours:

Installed rathole. Changed out BHA. Reamed 222mm hole to 660mm hole to a depth 23mKB. Drilled 660mm hole to a depth 26mKB. Note: Lots of Rocks. TD on conductor 1999.01.18 @ 11:00 hours. Circulated and conditioned hole. Laid down BHA. Ran 2 joints 508mm, 140 kg/m, J-55, Buttress, (27.2m). Held

safety meeting with Nowsco and Shehtah personnel. Cemented conductor barrel with 16 tonnes Polaset + .2% R15C. Good cement returns. Plug was down 1999.01.18 @ 16:07 hours. Waited on cement. Cut conductor and welded on flange to 24:00 hours 1999.01.18.

**SUPERVISOR:** Jack & Chuck Brazel      **PHONE #:** (600) 700-5344      **CALLING CARD#:** 454-037-6133-9618



## CASING SUMMARY REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14  
 LOCATION: 300-B14-6520-12630-0

DATE: 99/01/21  
 G.L. ELEVATION: 58.40 m  
 K.B. ELEVATION: 65.30 m  
 KB TO GROUND: 6.90 m

SURFACE (X) INTERMEDIATE ( ) PRODUCTION ( )

SIZE: 244.50 mm  
 MAKE: Lonestar

WEIGHT: 54 kg/m  
 THREAD: ST&C

GRADE: J-55  
 CONDITION: New

FLOAT/GUIDE SHOE - MAKE: Weatherford  
 HANGER - TYPE:

FLOAT COLLAR - MAKE: Weatherford

RAN: 15 jts. 244.50 mm OD CASING SET @ 202.40 m (by pipe tally)

## Casing String Details

| ITEM         | LENGTH<br>(m) | DEPTH LANDED<br>(mKB) | ITEM | LENGTH<br>(m) | DEPTH LANDED<br>(mKB) |
|--------------|---------------|-----------------------|------|---------------|-----------------------|
| Float shoe   | 0.48          |                       |      |               |                       |
| Float collar | 0.39          |                       |      |               |                       |

## CASING BOWL

SIZE: 279 x 244 mm  
 SERIAL #:   
 TYPE: Weld on  
 API: 21000 kPa

## CENTRALIZERS

NO.: 8  
 INTERVALS: 198.00 - 15.00  
 MAKE: Weatherford  
 TYPE: Bow spring

## CASING HANGER

SIZE: X mm  
 MAKE:   
 TYPE:   
 API: kPa

## SCRATCHERS

NO.:   
 INTERVALS: -  
 MAKE:   
 TYPE:

RECIPROCATED/ROTATE CASING IN 12.00 m/rpm STROKES/RPM 1 mins. PRIOR TO CEMENTING  
 RECIPROCATED/ROTATE CASING IN 3.00 m/rpm STROKES/RPM 1 mins. WHILE CEMENTING

SURPLUS:

REMARKS: (Circ. pressures, mud properties, additional equip., etc.)

Circulated with no abnormal pressures, mud density 1090 kg/m<sup>3</sup>, 41 viscosity

SUPERVISOR: Jack & Chuck Brazel

PHONE #: (600) 700-5344

CCARD #: 454-037-6133-9618

## CASING TALLY

WELLNAME: GREY WOLF-CANAXAS DEH CHO-2, B14

DATE: 99/01/21

LOCATION: 300-B14-6520-12630-0

SUPERVISOR: Jack &amp; Chuck Brazel

PHONE #: (600) 700-5344

CCARD #: 454-037-6133-9618

SIZE: 244.50mm

WEIGHT:

54 kg/m

THREAD: ST&amp;C

GRADE: J-55

MAKE: Lonestar

| JT. # | LENGTH | * | JT. #  | LENGTH | * | JT. # | LENGTH | * | JT. # | LENGTH | * | JT. # | LENGTH | * |
|-------|--------|---|--------|--------|---|-------|--------|---|-------|--------|---|-------|--------|---|
| 1     | 13.67  |   | 31     |        |   | 61    |        |   | 91    |        |   | 121   |        |   |
| 2     | 13.72  |   | 32     |        |   | 62    |        |   | 92    |        |   | 122   |        |   |
| 3     | 13.63  |   | 33     |        |   | 63    |        |   | 93    |        |   | 123   |        |   |
| 4     | 13.84  |   | 34     |        |   | 64    |        |   | 94    |        |   | 124   |        |   |
| 5     | 13.76  |   | 35     |        |   | 65    |        |   | 95    |        |   | 125   |        |   |
| 6     | 13.71  |   | 36     |        |   | 66    |        |   | 96    |        |   | 126   |        |   |
| 7     | 12.00  |   | 37     |        |   | 67    |        |   | 97    |        |   | 127   |        |   |
| 8     | 13.68  |   | 38     |        |   | 68    |        |   | 98    |        |   | 128   |        |   |
| 9     | 13.75  |   | 39     |        |   | 69    |        |   | 99    |        |   | 129   |        |   |
| 10    | 13.74  |   | 40     |        |   | 70    |        |   | 100   |        |   | 130   |        |   |
| TOTAL |        |   | 135.50 |        |   | TOTAL |        |   | TOTAL |        |   | TOTAL |        |   |
| JT. # | LENGTH | * | JT. #  | LENGTH | * | JT. # | LENGTH | * | JT. # | LENGTH | * | JT. # | LENGTH | * |
| 11    | 13.72  |   | 41     |        |   | 71    |        |   | 101   |        |   | 131   |        |   |
| 12    | 13.76  |   | 42     |        |   | 72    |        |   | 102   |        |   | 132   |        |   |
| 13    | 13.81  |   | 43     |        |   | 73    |        |   | 103   |        |   | 133   |        |   |
| 14    | 12.47  |   | 44     |        |   | 74    |        |   | 104   |        |   | 134   |        |   |
| 15    | 13.27  |   | 45     |        |   | 75    |        |   | 105   |        |   | 135   |        |   |
| 16    |        |   | 46     |        |   | 76    |        |   | 106   |        |   | 136   |        |   |
| 17    |        |   | 47     |        |   | 77    |        |   | 107   |        |   | 137   |        |   |
| 18    |        |   | 48     |        |   | 78    |        |   | 108   |        |   | 138   |        |   |
| 19    |        |   | 49     |        |   | 79    |        |   | 109   |        |   | 139   |        |   |
| 20    |        |   | 50     |        |   | 80    |        |   | 110   |        |   | 140   |        |   |
| TOTAL |        |   | 67.03  |        |   | TOTAL |        |   | TOTAL |        |   | TOTAL |        |   |
| JT. # | LENGTH | * | JT. #  | LENGTH | * | JT. # | LENGTH | * | JT. # | LENGTH | * | JT. # | LENGTH | * |
| 21    |        |   | 51     |        |   | 81    |        |   | 111   |        |   | 141   |        |   |
| 22    |        |   | 52     |        |   | 82    |        |   | 112   |        |   | 142   |        |   |
| 23    |        |   | 53     |        |   | 83    |        |   | 113   |        |   | 143   |        |   |
| 24    |        |   | 54     |        |   | 84    |        |   | 114   |        |   | 144   |        |   |
| 25    |        |   | 55     |        |   | 85    |        |   | 115   |        |   | 145   |        |   |
| 26    |        |   | 56     |        |   | 86    |        |   | 116   |        |   | 146   |        |   |
| 27    |        |   | 57     |        |   | 87    |        |   | 117   |        |   | 147   |        |   |
| 28    |        |   | 58     |        |   | 88    |        |   | 118   |        |   | 148   |        |   |
| 29    |        |   | 59     |        |   | 89    |        |   | 119   |        |   | 149   |        |   |
| 30    |        |   | 60     |        |   | 90    |        |   | 120   |        |   | 150   |        |   |
| TOTAL |        |   |        |        |   | TOTAL |        |   | TOTAL |        |   | TOTAL |        |   |

| GROUP # | LENGTH | GROUP # | LENGTH | GROUP # | LENGTH | JTS. | LENGTH |                           |
|---------|--------|---------|--------|---------|--------|------|--------|---------------------------|
| 1- 10   | 135.50 | 51- 60  |        | 101-110 |        | 15   | 202.53 | Brought Forward           |
| 11- 20  | 67.03  | 61- 70  |        | 111-120 |        | 15   | 202.53 | Page Total                |
| 21- 30  |        | 71- 80  |        | 121-130 |        | 0    | 0.00   | Total on Location         |
| 31- 40  |        | 81- 90  |        | 131-140 |        | 15   | 202.53 | Total Left Out (incl. LJ) |
| 41- 50  |        | 91-100  |        | 141-150 |        |      |        | Total Perm. in Hole       |
|         |        |         |        | TOTAL   | 202.53 |      |        |                           |

REMARKS



PAJAK ENGINEERING LTD.

## CEMENTING REPORT

|                                             |                                   |                          |                                                                                                                                                              |
|---------------------------------------------|-----------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, 814 | DATE: 99/01/23                    | RPT #: 2                 | (*) STRING IDENTIFIERS<br>C = Conductor<br>S = Surface<br>I = Intermediate<br>P = Production<br>L = Liner<br>(**) JOB IDENTIFIERS<br>P = Primary S = Squeeze |
| LOCATION: 300-B14-6520-12630-0              | AFE #: 9920101                    | DFS: 2                   |                                                                                                                                                              |
| SUPERVISOR: Jack & Chuck Brazel             | CEMENT JOB ID (**): P             | STRING IDENTIFIER (*): S |                                                                                                                                                              |
| PHONE #: ( 600 ) 700-5344                   | CALLING CARD #: 454-037-6133-9618 |                          |                                                                                                                                                              |

| Summary         |     |      |                     |      |                 |       |
|-----------------|-----|------|---------------------|------|-----------------|-------|
| CEMENT INTERVAL |     |      | ANNULAR VOLUME (m3) |      |                 |       |
| 1st STAGE       | 0.0 | m KB | 202.4               | m KB | CALIPER         | 5.90  |
| 2nd STAGE       |     | m KB |                     | m KB | GAUGE           | 5.90  |
| 3rd STAGE       |     | m KB |                     | m KB | SLURRY (actual) | 12.20 |

| Job Details                                                                                                                                                                                                                                                           | Comments                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| HOLE SIZE: 311.00 mm<br>CASING O.D.: 244.50 mm<br>SHOE DEPTH: 202.40 m KB<br>MAX. RECORDED BHT: 33 deg C<br><br>(**) JOB TYPES<br>1 = Conventional<br>2 = Foam<br><br>JOB TYPE (**): 1<br>PROPOSED CEMENT TOP: 0.00 m KB<br>MAXIMUM DEVIATION: 1.00 deg @ 180.00 m KB | Good cement job with well blended cement. 1m3 of good clean cement returns (density 1880 kg/m3). |

| Mud Data (prior to cementing) |                                                                                                                                                   | Plug Type                        | Pipe Movement   |              |             |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------|--------------|-------------|
| TYPE: Gel/polymer             | DENSITY: 1090.00 kg/m3<br>VISCOSITY: 41.00 sec/l<br>YIELD POINT: 6.00 Pa<br>WATER LOSS: ml/30 min<br>P. V. 10.00 mPa - sec<br>GELS 4.50 / 6.00 Pa | TOP: Rubber<br>BOTTOM:<br>OTHER: | WHILE:          | CONDITIONING | CEMENTING   |
|                               |                                                                                                                                                   |                                  | TYPE            | Reciprocate  | Reciprocate |
|                               |                                                                                                                                                   |                                  | STROKE (m)      | 10.0         | 3.0         |
|                               |                                                                                                                                                   |                                  | RATE (stks/min) | 1.0          | 1.0         |
|                               |                                                                                                                                                   | Cement Head                      | Stage Tools     |              |             |
|                               |                                                                                                                                                   | TYPE: Plug loading               | TYPE            |              |             |
|                               |                                                                                                                                                   |                                  | DEPTH (m KB)    |              |             |
| Mix Water                     |                                                                                                                                                   |                                  |                 |              |             |
| River water / 400 bbl tank    |                                                                                                                                                   |                                  |                 |              |             |

| Services & Equipment       |                      |
|----------------------------|----------------------|
| CEMENT COMPANY: Nowsco     | EQUIPMENT: Skid Unit |
| REPRESENTATIVE: Garry Park |                      |

## STAGE ONE

| A. Cement Blend Description |                   |        |                |             |               |             | PREFLUSH |                |            |           |         |
|-----------------------------|-------------------|--------|----------------|-------------|---------------|-------------|----------|----------------|------------|-----------|---------|
|                             | CEMENT TYPE       |        | ADDITIVES      |             |               |             | TYPE     | VOL (m3)       |            |           |         |
| SCAVENGER                   |                   |        |                |             |               |             | Water    | 4.00           |            |           |         |
| FILL                        |                   |        |                |             |               |             |          |                |            |           |         |
| TAIL                        | Polarset          |        | .2% R15c       |             |               |             |          |                |            |           |         |
| OTHER                       |                   |        |                |             |               |             |          |                |            |           |         |
|                             |                   |        |                |             |               |             |          |                |            |           |         |
| B. Cement Data              |                   |        |                |             |               |             |          |                |            |           |         |
|                             | CEMENTED INTERVAL |        | ANNULAR VOLUME | EXCESS USED | SLURRY VOLUME | BULK WEIGHT | YIELD    | SLURRY DENSITY | THICK TIME | MIX WATER |         |
|                             | (m)               | to (m) |                |             |               |             |          |                |            | RATIO     | TEMP    |
|                             |                   |        | (m3)           | (%)         | (m3)          | (tonnes)    | (m3/t)   | (kg/m3)        | (mins)     | (m3/t)    | (deg C) |
| SCAVENGER                   | -                 |        |                |             |               |             |          |                |            |           |         |
| FILL                        | -                 |        |                |             |               |             |          |                |            |           |         |
| TAIL                        | 0.0 - 202.4       |        | 5.90           | 107         | 12.21         | 16.60       | 0.739    | 1881.00        | 180        | 0.390     |         |
| OTHER                       | -                 |        |                |             |               |             |          |                |            |           |         |



## CEMENTING REPORT

|                                             |                                   |                          |                                                                                                                                                              |
|---------------------------------------------|-----------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 | DATE: 99/01/23                    | RPT #: 2                 | (*) STRING IDENTIFIERS<br>C = Conductor<br>S = Surface<br>I = Intermediate<br>P = Production<br>L = Liner<br>(**) JOB IDENTIFIERS<br>P = Primary S = Squeeze |
| LOCATION: 300-B14-6520-12630-0              | AFE #: 9920101                    | DFS: 2                   |                                                                                                                                                              |
| SUPERVISOR: Jack & Chuck Brazel             | CEMENT JOB ID (**): P             | STRING IDENTIFIER (*): S |                                                                                                                                                              |
| PHONE #: ( 600 ) 700-5344                   | CALLING CARD #: 454-037-6133-9618 |                          |                                                                                                                                                              |

## C. Record of Operations

| OPERATION DESCRIPTION      | START TIME<br>(day / hr:min)                                        | FINISH TIME<br>(day / hr:min) | ELAPSED TIME    | VOLUME<br>(m3) | RATE<br>(m3/min) | PRESSURE (kPa) |      |
|----------------------------|---------------------------------------------------------------------|-------------------------------|-----------------|----------------|------------------|----------------|------|
|                            |                                                                     |                               |                 |                |                  | MAX.           | MIN. |
| MUD CONDITIONING           | / :                                                                 | / :                           |                 |                |                  |                |      |
| POOH W/ DRILL PIPE         | / :                                                                 | / :                           |                 |                |                  |                |      |
| RIH W/ CASING              | / :                                                                 | / :                           |                 |                |                  |                |      |
| CIRCULATION                | / :                                                                 | / :                           |                 |                |                  |                |      |
| CEMENTING - PREFLUSH       | 22 / 09 : 17                                                        | 22 / 09 : 23                  | 0.10            | 4.0            | 0.6              | 2000           | 0    |
| - SCAVENGER                | / :                                                                 | / :                           |                 |                |                  |                |      |
| - FILL                     | / :                                                                 | / :                           |                 |                |                  |                |      |
| - TAIL                     | 22 / 09 : 27                                                        | 22 / 09 : 45                  | 0.30            | 12.2           | 0.6              | 2000           | 0    |
| - OTHER                    | / :                                                                 | / :                           |                 |                |                  |                |      |
| RLSE TOP PLUG 1/4 PO LINES | 22 / 09 : 45                                                        | 22 / 09 : 49                  | 0.07            |                |                  |                |      |
| DISPLACEMENT               | 22 / 09 : 49                                                        | 22 / 10 : 02                  | 0.22            | 7.6            | 0.6              | 3000           | 0    |
| BUMP PLUG & BLEED OFF      | 22 / 10 : 02                                                        | 22 / 10 : 07                  | 0.08            |                |                  | 5500           | 2000 |
| CEMENT RETURNS             | TYPE: Polarset                                                      |                               | VOLUME: 1.00 m3 |                |                  |                |      |
| FLOAT HELD                 | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> |                               |                 |                |                  |                |      |

## STAGE TWO

## A. Cement Blend Description

|           | CEMENT TYPE | ADDITIVES | PREFLUSH |          |
|-----------|-------------|-----------|----------|----------|
|           |             |           | TYPE     | VOL (m3) |
| SCAVENGER |             |           |          |          |
| FILL      |             |           |          |          |
| TAIL      |             |           |          |          |
| OTHER     |             |           |          |          |

## B. Cement Data

|           | CEMENTED<br>INTERVAL<br>(m) to (m) | ANNULAR<br>VOLUME<br>(m3) | EXCESS<br>USED<br>(%) | SLURRY<br>VOLUME<br>(m3) | BULK<br>WEIGHT<br>(tonnes) | YIELD<br>(m3/t) | SLURRY<br>DENSITY<br>(kg/m3) | THICK<br>TIME<br>(mins) | MIX WATER       |                 |
|-----------|------------------------------------|---------------------------|-----------------------|--------------------------|----------------------------|-----------------|------------------------------|-------------------------|-----------------|-----------------|
|           |                                    |                           |                       |                          |                            |                 |                              |                         | RATIO<br>(m3/t) | TEMP<br>(deg C) |
| SCAVENGER | -                                  |                           |                       |                          |                            |                 |                              |                         |                 |                 |
| FILL      | -                                  |                           |                       |                          |                            |                 |                              |                         |                 |                 |
| TAIL      | -                                  |                           |                       |                          |                            |                 |                              |                         |                 |                 |
| OTHER     | -                                  |                           |                       |                          |                            |                 |                              |                         |                 |                 |

## C. Record of Operations

| OPERATION DESCRIPTION    | START TIME<br>(day / hr:min)                             | FINISH TIME<br>(day / hr:min) | ELAPSED TIME | VOLUME<br>(m3) | RATE<br>(m3/min) | PRESSURE (kPa) |      |
|--------------------------|----------------------------------------------------------|-------------------------------|--------------|----------------|------------------|----------------|------|
|                          |                                                          |                               |              |                |                  | MAX.           | MIN. |
| MUD CONDITIONING         | / :                                                      | / :                           |              |                |                  |                |      |
| POOH W/ DRILL PIPE       | / :                                                      | / :                           |              |                |                  |                |      |
| RIH W/ CASING            | / :                                                      | / :                           |              |                |                  |                |      |
| CIRCULATION              | / :                                                      | / :                           |              |                |                  |                |      |
| CEMENTING - PREFLUSH     | / :                                                      | / :                           |              |                |                  |                |      |
| - SCAVENGER              | / :                                                      | / :                           |              |                |                  |                |      |
| - FILL                   | / :                                                      | / :                           |              |                |                  |                |      |
| - TAIL                   | / :                                                      | / :                           |              |                |                  |                |      |
| - OTHER                  | / :                                                      | / :                           |              |                |                  |                |      |
| RLSE TOP PLUG & PO LINES | / :                                                      | / :                           |              |                |                  |                |      |
| DISPLACEMENT             | / :                                                      | / :                           |              |                |                  |                |      |
| BUMP PLUG & BLEED OFF    | / :                                                      | / :                           |              |                |                  |                |      |
| CEMENT RETURNS           | TYPE:                                                    |                               | VOLUME: m3   |                |                  |                |      |
| FLOAT HELD               | YES <input type="checkbox"/> NO <input type="checkbox"/> |                               |              |                |                  |                |      |

### **III Summary of Drilling Operations**

#### **5) Drilling Fluid Property Records and Mud Additive Summary**

# DRILLING MUD PROPERTIES RECORD

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

AFE: 9920101 SPUD DATE: 99/01/17

LOCATION: 300-B14-0520-12630-0

CONTRACTOR: Shehtah Drilling Limited

RIG: 7

Mon Feb 22 13:38:03 1999

| DAY | DEPTH (m) | MUD TYPE | DENSITY   | VIS | GELS     | pH   | PF/MF | PV | YP | WATER LOSS | FC  | TEMP C in/out | SAND kg/m3 | SOLIDS kg/m3 | TOTAL SOLIDS kg/m3 | OIL % | MBT | POLY | BENT | LCM | CA++ | CL- | ALKALYDE MFI | MFO |
|-----|-----------|----------|-----------|-----|----------|------|-------|----|----|------------|-----|---------------|------------|--------------|--------------------|-------|-----|------|------|-----|------|-----|--------------|-----|
| 1   | 24        | Gel-Chem | 1030/1030 | 59  | 5.0/ 8.0 | 9.5  | 0/ 0  | 0  | 6  | 0.0        | 0.0 | 0/ 0          | 0.000      | 0.00         | 0.00               | 0.000 | 0   | 0    | 0    | 0   | 0    | 0   | 0.0          | 0.0 |
| 2   | 24        | Gel-Chem | 1120/1120 | 60  | 5.0/ 8.0 | 9.5  | 0/ 0  | 0  | 8  | 0.0        | 0.0 | 0/ 0          | 0.000      | 0.00         | 0.00               | 0.000 | 0   | 0    | 0    | 0   | 0    | 0   | 0.0          | 0.0 |
| 3   | 24        | Gel-Chem | 1120/1120 | 60  | 5.0/ 8.0 | 9.5  | 0/ 0  | 0  | 8  | 0.0        | 0.0 | 0/ 0          | 0.000      | 0.00         | 0.00               | 0.000 | 0   | 0    | 0    | 0   | 0    | 0   | 0.0          | 0.0 |
| 4   | 90        | Gel-Chem | 1080/1080 | 40  | 4.5/ 6.0 | 10.0 | 0/ 0  | 22 | 16 | 0.0        | 0.0 | 0/ 0          | 0.001      | 102.00       | 0.05               | 0.000 | 0   | 0    | 30   | 0   | 600  | 120 | 0.3          | 1.0 |
| 5   | 203       | Gel-Chem | 1090/1090 | 41  | 6.0/10.0 | 9.0  | 0/ 0  | 6  | 9  | 0.0        | 0.0 | 33/ 0         | 0.001      | 100.00       | 149.00             | 0.000 | 0   | 0    | 49   | 0   | 300  | 150 | 0.2          | 2.5 |
| 6   | 203       | Gel-Chem | 1090/1090 | 41  | 6.0/10.0 | 9.0  | 0/ 0  | 6  | 9  | 0.0        | 0.0 | 33/ 0         | 0.001      | 100.00       | 149.00             | 0.000 | 0   | 0    | 49   | 0   | 300  | 150 | 0.2          | 2.5 |
| 7   | 203       | Gel-Chem | 1030/1030 | 58  | 4.0/ 5.0 | 9.0  | 0/ 0  | 14 | 12 | 8.4        | 2.0 | 0/ 0          | 0.000      | 0.00         | 49.00              | 0.000 | 0   | 0    | 14   | 0   | 20   | 140 | 0.1          | 1.0 |
| 8   | 203       | Gel-Chem | 1030/1030 | 58  | 4.0/ 5.0 | 9.0  | 0/ 0  | 14 | 12 | 8.4        | 2.0 | 0/ 0          | 0.000      | 0.00         | 49.00              | 0.000 | 0   | 0    | 14   | 0   | 20   | 140 | 0.1          | 1.0 |
| 9   | 534       | Gel-Chem | 1050/1050 | 48  | 4.0/ 5.0 | 9.0  | 0/ 0  | 13 | 9  | 6.3        | 1.5 | 26/ 0         | 0.008      | 67.00        | 82.00              | 0.000 | 0   | 0    | 15   | 0   | 80   | 400 | 0.1          | 1.0 |
| 10  | 780       | Gel-Chem | 1070/1070 | 80  | 7 0/10.0 | 10.0 | 0/ 0  | 23 | 22 | 5.0        | 1.0 | 26/ 0         | 0.005      | 80.00        | 115.00             | 0.000 | 0   | 0    | 35   | 0   | 40   | 600 | 0.7          | 1.2 |
| 11  | 798       | Gel-Chem | 1050/1050 | 60  | 4.0/ 6.0 | 9.0  | 0/ 0  | 18 | 14 | 5.2        | 1.0 | 22/ 0         | 0.005      | 47.00        | 82.00              | 0.000 | 0   | 0    | 35   | 0   | 140  | 600 | 0.1          | 1.9 |
| 12  | 798       | Gel-Chem | 1050/1050 | 60  | 4.0/ 6.0 | 9.0  | 0/ 0  | 18 | 14 | 5.2        | 1.0 | 22/ 0         | 0.005      | 47.00        | 82.00              | 0.000 | 0   | 0    | 35   | 0   | 140  | 600 | 0.1          | 1.9 |
| 13  | 798       | Gel-Chem | 1050/1050 | 45  | 3.0/ 4.0 | 8.5  | 0/ 0  | 13 | 8  | 7.2        | 1.0 | 13/ 0         | 0.005      | 49.00        | 82.00              | 0.000 | 0   | 0    | 33   | 0   | 120  | 600 | 0.1          | 1.5 |
| 14  | 798       | Gel-Chem | 1050/1050 | 45  | 3.0/ 4.0 | 8.5  | 0/ 0  | 13 | 8  | 7.2        | 1.0 | 13/ 0         | 0.005      | 49.00        | 82.00              | 0.000 | 0   | 0    | 33   | 0   | 120  | 600 | 0.1          | 1.5 |



## MUD ADDITIVES BY HOLE SECTION

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

AFE: 9920101

RIG: 7

LOCATION: 300-B14-6520-12630-0

CONTRACTOR: Shehtah Drilling Limited

Mon Feb 22 13:38:00 1999

| MUD ADDITIVE          | NO. OF<br>SACKS | INVENT<br>ADJUST | KG/<br>SACK | KG TOT.<br>WEIGHT | \$COST/<br>SACK | %<br>DISCOUNT | \$TOTAL<br>COST |
|-----------------------|-----------------|------------------|-------------|-------------------|-----------------|---------------|-----------------|
| Hole Section: CONDUCT |                 |                  |             |                   |                 |               |                 |
| Biozan                | 2               | 0                | 25.0        | 50                | 879.84          | 0.00          | 1759.68         |
| Gel                   | 20              | 0                | 40.0        | 800               | 11.04           | 0.00          | 220.80          |
|                       | 22              | 0                |             |                   |                 |               | 1980.48         |

## Hole Section: MAIN

|            |     |   |      |      |        |      |          |
|------------|-----|---|------|------|--------|------|----------|
| Biozan     | 10  | 0 | 25.0 | 250  | 879.84 | 0.00 | 8798.40  |
| Ca Hypo    | 14  | 0 | 1.0  | 14   | 13.67  | 0.00 | 191.38   |
| Caustic    | 7   | 0 | 22.7 | 159  | 41.64  | 0.00 | 291.48   |
| DefoamerXL | 2   | 0 | 0.0  | 0    | 176.65 | 0.00 | 353.30   |
| Desco      | 3   | 0 | 11.4 | 34   | 77.91  | 0.00 | 233.73   |
| Gel        | 52  | 0 | 40.0 | 2080 | 11.04  | 0.00 | 574.08   |
| Sawdust    | 45  | 0 | 0.0  | 0    | 4.34   | 0.00 | 195.30   |
| Starlose   | 54  | 0 | 22.7 | 1226 | 86.47  | 0.00 | 4669.38  |
| Starpac    | 11  | 0 | 22.7 | 250  | 143.60 | 0.00 | 1579.60  |
| Stayflo    | 14  | 0 | 25.0 | 350  | 241.71 | 0.00 | 3383.94  |
| TDL33      | 2   | 0 | 0.0  | 0    | 258.10 | 0.00 | 516.20   |
| U Seal     | 54  | 0 | 11.4 | 616  | 89.71  | 0.00 | 4844.34  |
|            | 268 | 0 |      |      |        |      | 25631.13 |

## Hole Section: SURFACE

|         |    |   |      |      |        |      |         |
|---------|----|---|------|------|--------|------|---------|
| Caustic | 1  | 0 | 22.7 | 23   | 41.64  | 0.00 | 41.64   |
| Gel     | 54 | 0 | 40.0 | 2160 | 11.04  | 0.00 | 596.16  |
| Kelzan  | 2  | 0 | 25.0 | 50   | 646.31 | 0.00 | 1292.62 |
| Sapp    | 1  | 0 | 22.7 | 23   | 74.76  | 0.00 | 74.76   |
| Sawdust | 10 | 0 | 0.0  | 0    | 4.34   | 0.00 | 43.40   |
|         | 68 | 0 |      |      |        |      | 2048.58 |



## M U D    A D D I T I V E S    S U M M A R Y

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

AFE: 9920101

RIG: 7

LOCATION: 300-B14-6520-12630-0

CONTRACTOR: Shehtah Drilling Limited

Mon Feb 22 13:38:02 1999

| MUD ADDITIVE | NO. OF<br>SACKS | INVENT<br>ADJUST | KG/<br>SACK | KG TOT.<br>WEIGHT | \$COST/<br>SACK | %<br>DISCOUNT | \$TOTAL<br>COST |
|--------------|-----------------|------------------|-------------|-------------------|-----------------|---------------|-----------------|
| Biozan       | 12              | 0                | 25.0        | 300               | 879.84          | 0.00          | 10558.08        |
| Ca Hypo      | 14              | 0                | 1.0         | 14                | 13.67           | 0.00          | 191.38          |
| Caustic      | 8               | 0                | 22.7        | 182               | 41.64           | 0.00          | 333.12          |
| DefoamerXL   | 2               | 0                | 0.0         | 0                 | 176.65          | 0.00          | 353.30          |
| Desco        | 3               | 0                | 11.4        | 34                | 77.91           | 0.00          | 233.73          |
| Gel          | 126             | 0                | 40.0        | 5040              | 11.04           | 0.00          | 1391.04         |
| Kelzan       | 2               | 0                | 25.0        | 50                | 646.31          | 0.00          | 1292.62         |
| Sapp         | 1               | 0                | 22.7        | 23                | 74.76           | 0.00          | 74.76           |
| Sawdust      | 55              | 0                | 0.0         | 0                 | 4.34            | 0.00          | 238.70          |
| Starlose     | 54              | 0                | 22.7        | 1226              | 86.47           | 0.00          | 4669.38         |
| Starpac      | 11              | 0                | 22.7        | 250               | 143.60          | 0.00          | 1579.60         |
| Stayflo      | 14              | 0                | 25.0        | 350               | 241.71          | 0.00          | 3383.94         |
| TDL33        | 2               | 0                | 0.0         | 0                 | 258.10          | 0.00          | 516.20          |
| U Seal       | 54              | 0                | 11.4        | 616               | 89.71           | 0.00          | 4844.34         |
|              | 358             | 0                |             |                   |                 |               | 29660.19        |

### **III Summary of Drilling Operations**

#### **6) Formation Leak Off Tests**

# DAILY DRILLING REPORT

|                                             |  |                                           |              |                                  |  |
|---------------------------------------------|--|-------------------------------------------|--------------|----------------------------------|--|
| WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 |  | LOCATION: 300-B14-6520-12630-0            |              | DATE: 99/01/25                   |  |
| U.W.I.: 300-B14-6520-12630-0                |  | CPA NO.: 300B146520126300                 |              | DAY: 8                           |  |
| OFFICE SUPERVISOR: Mickey Sutherland        |  | LICENCE NO.: 1853                         |              |                                  |  |
| CONTRACTOR: Shehtah Drilling Limited        |  | KB: 65.3 m                                | KB-GL: 6.9 m | SPUD DATE: 99/01/17 @ 18:00 hrs. |  |
| RIG #: 7                                    |  | GL: 58.4 m                                | KB-CF: 6.9 m | RIG RELEASE: @ : hrs.            |  |
|                                             |  | WELL STATUS:                              |              |                                  |  |
| WEATHER: Overcast                           |  | TEMP: -21 °C                              | FINAL TD: m  | FORMATION:                       |  |
| Midnight DEPTH: 250.00 m                    |  | PROGRESS: 48.00 m                         | PBTD: m      | FORMATION:                       |  |
| 8:00 a.m. DEPTH: 380.00 m                   |  | 8:00 a.m. OPERATION: Drilling 222mm hole. |              |                                  |  |

**AFE #:** 9920101      **AFE AMT:** \$ 2480000      **DAILY COST:** \$ 52189      **CUMULATIVE COST:** \$ 1227275

В  
Н  
А

|                |           |                |        |             |
|----------------|-----------|----------------|--------|-------------|
| 1 PDC FM2545   | 1 NB stab | 1 Drill collar | 1 Stab | 1 Shock sub |
| 2 Drill collar | 1 Jars    | 6 Drill collar | 1 x/o  | 1 TBR       |
| 7 Heavy weight |           |                |        |             |

|                             |       |
|-----------------------------|-------|
| TOTAL<br>ROTATING<br>HOURS: | 32.00 |
|-----------------------------|-------|

LENGTH: 161.28 m      WT. BELOW JARS:      daN      JAR HRS:      JAR SERIAL #:

WT. ON BIT: 4000 daN

ROTARY RPM: 60-70

STRING WT.: 21000 daN

DRILL PIPE O.D.: 114 THREAD: XH

DRILL COLLARS O.D.: 170      THREAD: 5 H90

NO. IN HOLE: 9

[illegible]

LAST PIPE TALLY: 189.23

**BOARD: 189.51**

CORRECTION: YES [ ] NO [x]

| Viscosity<br>Sec/L | DENSITY<br>IN/OUT | pH    | WL<br>cc/30min | FC<br>mm | PV/YP    | GLS<br>O/10 | Tot. Sol.<br>kg/m3 | Drhd. Sol.<br>kg/m3 | SAND<br>kg/m3 | BENTONITE<br>kg/m3 | LCM<br>kg/m3 | OIL<br>% | Cl<br>ppm | Ca<br>ppm        | ALKALINITY |     | ° C<br>IN/OUT |  |
|--------------------|-------------------|-------|----------------|----------|----------|-------------|--------------------|---------------------|---------------|--------------------|--------------|----------|-----------|------------------|------------|-----|---------------|--|
|                    |                   |       |                |          |          |             |                    |                     |               |                    |              |          |           |                  | MF1        | NFO |               |  |
| 58                 | 1030/1030         | 9.0   | 8.4            | 2.0      | 14/ 12.0 | 4.0/5.0     | 49.00              | 0.00                | 0.000         | 14                 |              |          | 140       | 20               | 0.1        | 1.0 | /             |  |
|                    | /                 |       |                |          | /        | /           |                    |                     |               |                    |              |          |           |                  |            |     | /             |  |
| CENTRIFUGE         |                   |       |                |          | DESILTER |             |                    | DESANDER            |               |                    | DEGASSER     |          |           | TOTAL MUD DUMPED |            |     |               |  |
| HR IN              |                   | kg/m3 | OUT            |          | kg/m3    |             | HR OUT             |                     | kg/m3         |                    | HR OUT       |          | kg/m3     |                  | m3         |     |               |  |

| P<br>U<br>M<br>P | PUMP NO. 1 |             |              |     |                     | PUMP NO. 2 |             |              |     |                     | PRESSURE<br>kPa | ANNULAR VELOCITY |             | JET                |       |
|------------------|------------|-------------|--------------|-----|---------------------|------------|-------------|--------------|-----|---------------------|-----------------|------------------|-------------|--------------------|-------|
|                  | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN | MODEL      | LINER<br>mm | STROKE<br>mm | SPM | m <sup>3</sup> /MIN |                 | DP<br>m/MIN      | DC<br>m/MIN | VELOCITY<br>m/sec. | HHP   |
|                  | Emsco      | 165         | 406          | 50  | 1.45                | Emsco      | 127         | 406          |     |                     | 2000            | 50.9             | 90.6        | 49.7               | 34.41 |

| SURVEYS  |          |  | TIME BREAKDOWN |                    |  | MUD ADDITIVES |  |
|----------|----------|--|----------------|--------------------|--|---------------|--|
|          | AZIMUTH  |  | RIG SPUD       | W.O.C.             |  | Biozan        |  |
| 1.00 ° @ | 228.00 m |  | RIG SERV       | W/N.U. BOP 0.25    |  | Gel           |  |
| • @      | m        |  | SAFETY MTG     | CEMENTING          |  | Caustic       |  |
| • @      | m        |  | REAMING        | PRESS TEST 7.50    |  | Sapp          |  |
| • @      | m        |  | DRILLING 1.75  | REPAIRS 8.50       |  | Sawdust       |  |
| • @      | m        |  | RAT HOLE       | DRLG OUT 4.00      |  | Kelzan        |  |
| • @      | m        |  | HNDL TOOLS     | SURVEYING 0.75     |  | Ca Hypo       |  |
| • @      | m        |  | CIRCULATE 0.50 | PU/LD PIPE         |  | U Seal        |  |
| • @      | m        |  | TRIPPING       | BOP DRILL 0.25     |  | DefoamerXL    |  |
| • @      | m        |  | RUN CASING     | LEAK OFF 0.50      |  | Starlose      |  |
| • @      | m        |  |                | TOTAL HOURS: 24.00 |  | Starpac       |  |
|          |          |  |                |                    |  | Stayflo       |  |

MUD COMMENTS: Displaced mud after drill out and leak off test

**DRILLING & GEOLOGICAL REMARKS:** (Report all details of Casing, Cementing, Drill Stem Tests, Logging, Abandonment Plugs, etc. Sequence of Operations to be inserted below.)

1999.01.24 @ 0000 Hours. Repaired 101mm standpipe union.

**Pressure tested BOPs and BOP components. 1500 kPa and 7000**

kPa for 5 minutes and 15 minutes. Filled sweep line,

degasser line, manifold and flarelines with antifreeze

to -45 degrees F. Attempted to pressure test upper Kelly

to -45 degrees C. Attempted to pressure test upper Kelly  
cock, would not test. Waited on upper Kelly cock to

arrive from Shehtah Rig #1. While waiting, drilled out  
displacement rubber, performed accumulator function test  
and held BOP drill with crew. Replaced kelly cock and  
pressure tested as above pressure test. Drilled out  
float and shoe. Drilled 222mm hole to 211mKB. On  
formation 1999.01.24 @ 19:45 hours. Drilled 222mm hole

**SUPERVISOR:** N. Gebhart/C. Brazel

PHONE #: (600) 700-5344

CALLING CARD#: 454-037-6133-9618



PAJAK ENGINEERING LTD

## DAILY DRILLING REPORT

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14 DATE: 99/01/25  
LOCATION: 300-B14-6520-12630-0 U.W.I.: 300-B14-6520-12630-0  
DAY: 8 DEPTH: 250.00 m PROGRESS: 48.00 m CPA NO.: 300B146520126300  
WEATHER: Overcast TEMP: -21 °C  
8:00 a.m. OPERATION: Drilling 222mm hole.

### DRILLING & GEOLOGICAL REMARKS (Cont'd)

to 211mKB. Circulated hole clean and performed formation leak off test. Leak off Gradient 34.8 kPa/m. Surface pressure 5000 kPa. Mud density 1030 kg/m<sup>3</sup>. Posted formation leak off of 22.6 kPa/m. Held BOP drill with crew. Displaced hole over to mud. Circulated and sheared mud (couldn't keep it on shaker.) Drilled 222mm hole to 250mKB @ 23:59 hours 1999.01.24.

*5000 ÷ 211 ÷ .00981*

REPORTED BY: N. Gebhart/C. Brazel

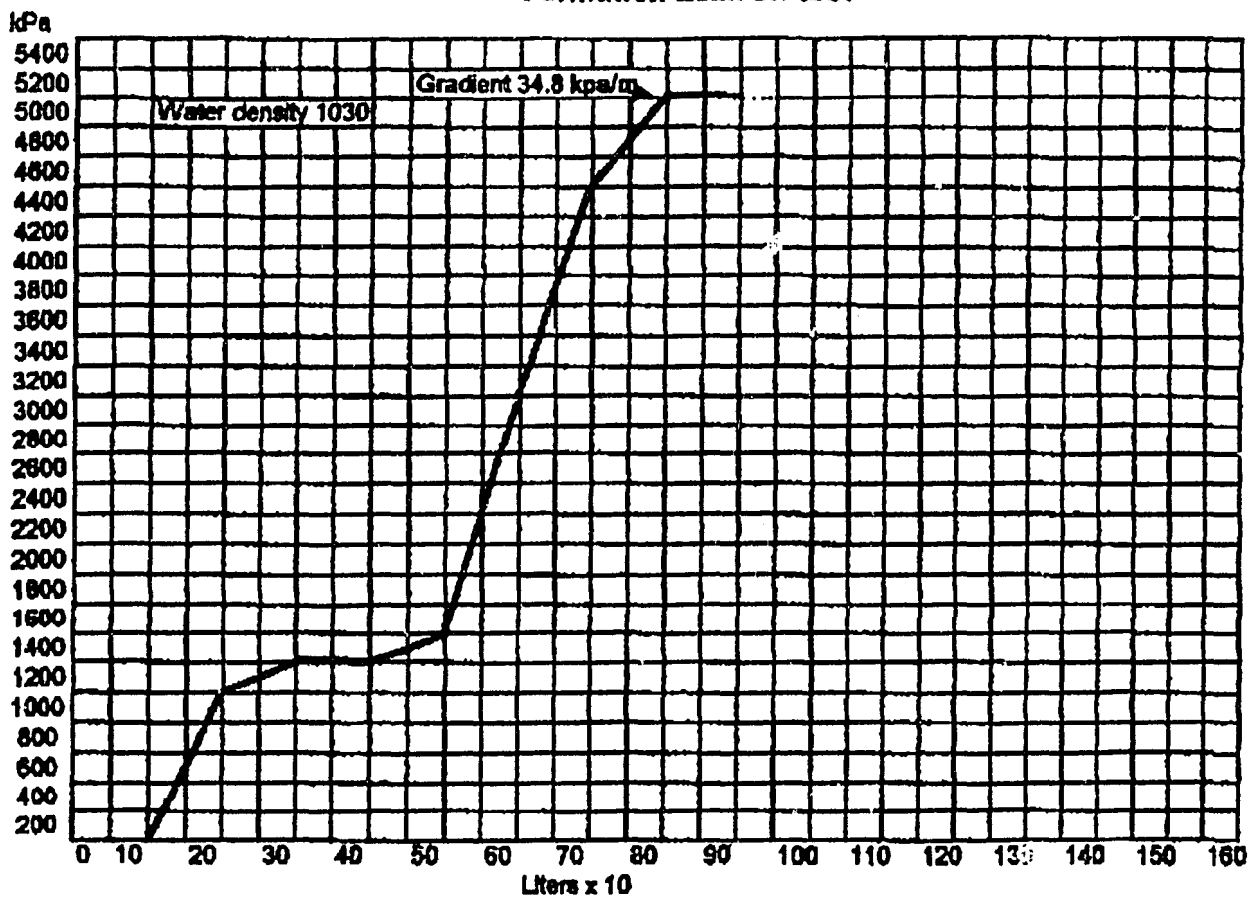
PHONE #: (600) 700-5344  
CALLING CARD #: 454-037-6133-9618

GREY WOLF EXPLORATION L.C.

GREY WOLF-CANAXAS DEH CHO-2,B14

300-B14-8520-12530-0

Formation Leak off test





### III Summary of Drilling Operations

#### 7) Time Distribution

## R I G   A C T I V I T Y   S U M M A R Y

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

AFE: 9920101

RIG: 7

LOCATION: 300-B14-6520-12630-0

CONTRACTOR: Shehtah Drilling Limited

Mon Feb 22 13:37:54 1999

| HOLE SECTION | ACTIVITY   | HOURS | PERCENTAGE |       |
|--------------|------------|-------|------------|-------|
| =====        | =====      | ===== | =====      |       |
| CONDUCT      | CEMENTING  | 0.75  | 1.0        |       |
|              | DRILLING   | 7.00  | 9.7        |       |
|              | HNDL TOOLS | 5.50  | 7.6        |       |
|              | MUD RING   | 1.00  | 1.4        |       |
|              | RAT HOLE   | 2.00  | 2.8        |       |
|              | REAMING    | 4.50  | 6.2        |       |
|              | RIG SERV   | 0.50  | 0.7        |       |
|              | RIG SPUD   | 41.25 | 57.3       |       |
|              | SAFETY MTG | 1.50  | 2.1        |       |
|              | W.O.C.     | 4.25  | 5.9        |       |
|              | W/N.U. BOP | 3.75  | 5.2        |       |
|              |            | ===== | =====      |       |
|              |            | 72.00 | 100.0      | 16.8% |
| SURFACE      | CEMENTING  | 0.75  | 0.8        |       |
|              | CIRCULATE  | 4.50  | 4.7        |       |
|              | DRILLING   | 23.25 | 24.2       |       |
|              | DRLG OUT   | 2.50  | 2.6        |       |
|              | HNDL TOOLS | 4.00  | 4.2        |       |
|              | PRESS TEST | 3.00  | 3.1        |       |
|              | PU/LD PIPE | 1.25  | 1.3        |       |
|              | REPAIRS    | 3.75  | 3.9        |       |
|              | RIG SERV   | 0.75  | 0.8        |       |
|              | RUN CASING | 5.25  | 5.5        |       |
|              | SAFETY MTG | 0.75  | 0.8        |       |
|              | SURVEYING  | 4.25  | 4.4        |       |
|              | THAW OUT   | 3.00  | 3.1        |       |
|              | TRIPPING   | 6.00  | 6.2        |       |
|              | W.O.C.     | 6.00  | 6.2        |       |
|              | W/N.U. BOP | 27.00 | 28.1       |       |
|              |            | ===== | =====      |       |
|              |            | 96.00 | 100.0      | 22.5% |
| MAIN         | BOP DRILL  | 0.25  | 0.1        |       |
|              | CEMENTING  | 1.75  | 0.7        |       |
|              | CIRCULATE  | 8.25  | 3.2        |       |
|              | DRILLING   | 41.50 | 16.0       |       |
|              | DRLG OUT   | 4.00  | 1.5        |       |
|              | HNDL TOOLS | 12.00 | 4.6        |       |
|              | LEAK OFF   | 0.50  | 0.2        |       |
|              | LOGGING    | 8.00  | 3.1        |       |
|              | PRESS TEST | 12.75 | 4.9        |       |
|              | PU/LD PIPE | 0.75  | 0.3        |       |
|              | REPAIRS    | 8.50  | 3.3        |       |
|              | RIG SERV   | 2.00  | 0.8        |       |



## R I G   A C T I V I T Y   S U M M A R Y

WELL NAME: GREY WOLF-CANAXAS DEH CHO-2, B14

AFE: 9920101

RIG: 7

LOCATION: 300-B14-6520-12630-0

CONTRACTOR: Shehtah Drilling Limited

Mon Feb 22 13:37:55 1999

| HOLE SECTION | ACTIVITY   | HOURS  | PERCENTAGE |        |
|--------------|------------|--------|------------|--------|
| =====        | =====      | =====  | =====      |        |
|              | RIG UP/DN  | 79.75  | 30.7       |        |
|              | SAFETY MTG | 11.25  | 4.3        |        |
|              | SURVEYING  | 4.75   | 1.8        |        |
|              | TESTING    | 10.50  | 4.0        |        |
|              | TRIPPING   | 28.75  | 11.1       |        |
|              | W.O.C.     | 8.00   | 3.1        |        |
|              | W/N.U. BOP | 16.25  | 6.3        |        |
|              |            | =====  | =====      |        |
|              |            | 259.50 | 100.0      | 60.7%  |
| TOTAL        | BOP DRILL  | 0.25   | 0.1        |        |
|              | CEMENTING  | 3.25   | 0.8        |        |
|              | CIRCULATE  | 12.75  | 3.0        |        |
|              | DRILLING   | 71.75  | 16.8       |        |
|              | DRLG OUT   | 6.50   | 1.5        |        |
|              | HNDL TOOLS | 21.50  | 5.0        |        |
|              | LEAK OFF   | 0.50   | 0.1        |        |
|              | LOGGING    | 8.00   | 1.9        |        |
|              | MUD RING   | 1.00   | 0.2        |        |
|              | PRESS TEST | 15.75  | 3.7        |        |
|              | PU/LD PIPE | 2.00   | 0.5        |        |
|              | RAT HOLE   | 2.00   | 0.5        |        |
|              | REAMING    | 4.50   | 1.1        |        |
|              | REPAIRS    | 12.25  | 2.9        |        |
|              | RIG SERV   | 3.25   | 0.8        |        |
|              | RIG SPUD   | 41.25  | 9.6        |        |
|              | RIG UP/DN  | 79.75  | 18.7       |        |
|              | RUN CASING | 5.25   | 1.2        |        |
|              | SAFETY MTG | 13.50  | 3.2        |        |
|              | SURVEYING  | 9.00   | 2.1        |        |
|              | TESTING    | 10.50  | 2.5        |        |
|              | THAW OUT   | 3.00   | 0.7        |        |
|              | TRIPPING   | 34.75  | 8.1        |        |
|              | W.O.C.     | 18.25  | 4.3        |        |
|              | W/N.U. BOP | 47.00  | 4.3        |        |
|              |            | =====  | =====      |        |
|              |            | 427.50 | 100.0      | 100.0% |

TOTAL ESTIMATED: 0.00 Hours

VARIANCE: -427.50 Hours

### III Summary of Drilling Operations

#### 8) Survey Record



PAJAK ENGINEERING LTD.

S U R V E Y     R E C O R D   (Minimum curvature method)

WELL NAME: GREY WOLF-CANAKAS DEH CHO-2, B14

AFE: 9920101

RIG: 7

LOCATION: 300-B14-6520-12630-0

CONTRACTOR: Shehtah Drilling Limited

Mon Feb 22 13:38:38 1999

Target not specified.

| #  | DEPTH (m) | TRUE BEARING<br>DRIFT(m) | V.SECT.<br>(deg) | --DEFLECTION (m)-- |    |    |    | TRUE<br>DEPTH (m) | DLS<br>(d/30m) |
|----|-----------|--------------------------|------------------|--------------------|----|----|----|-------------------|----------------|
|    |           |                          |                  | N+                 | S- | E+ | W- |                   |                |
| 1  | 24.00     | 0.25                     |                  |                    |    |    |    |                   |                |
| 2  | 39.00     | 0.25                     |                  |                    |    |    |    |                   |                |
| 3  | 59.00     | 0.25                     |                  |                    |    |    |    |                   |                |
| 4  | 77.00     | 0.25                     |                  |                    |    |    |    |                   |                |
| 5  | 96.00     | 0.75                     |                  |                    |    |    |    |                   |                |
| 6  | 115.00    | 0.50                     |                  |                    |    |    |    |                   |                |
| 7  | 133.00    | 1.00                     |                  |                    |    |    |    |                   |                |
| 8  | 143.00    | 0.50                     |                  |                    |    |    |    |                   |                |
| 9  | 160.00    | 0.80                     |                  |                    |    |    |    |                   |                |
| 10 | 180.00    | 1.00                     |                  |                    |    |    |    |                   |                |
| 11 | 228.00    | 1.00                     |                  |                    |    |    |    |                   |                |
| 12 | 285.00    | 1.25                     |                  |                    |    |    |    |                   |                |
| 13 | 323.00    | 2.00                     |                  |                    |    |    |    |                   |                |
| 14 | 363.00    | 2.50                     |                  |                    |    |    |    |                   |                |
| 15 | 390.00    | 2.75                     |                  |                    |    |    |    |                   |                |
| 16 | 420.00    | 2.50                     |                  |                    |    |    |    |                   |                |
| 17 | 448.00    | 3.00                     |                  |                    |    |    |    |                   |                |
| 18 | 477.00    | 3.00                     |                  |                    |    |    |    |                   |                |
| 19 | 505.00    | 3.25                     |                  |                    |    |    |    |                   |                |
| 20 | 532.00    | 2.75                     |                  |                    |    |    |    |                   |                |
| 21 | 569.00    | 3.00                     |                  |                    |    |    |    |                   |                |
| 22 | 617.00    | 3.50                     |                  |                    |    |    |    |                   |                |
| 23 | 700.00    | 3.10                     |                  |                    |    |    |    |                   |                |
| 24 | 789.00    | 3.50                     |                  |                    |    |    |    |                   |                |

III Summary of Drilling Operations

9) Abandonment Plugs

## PLUG BACK AND ABANDONMENT REPORT

WELLNAME: GREY WOLF-CANAXAS DEH CHO-2, B14  
 LOCATION: 300-B14-6520-12630-0

DAY NO: 13  
 DATE: 99/01/29

KB Elevation: 65.3  
 F.T.D.: 798.0

Plug Back String: 114 mm 29.7 kg/m DP  
 Service Company: Nowsco Well Service  
 Fluid in Hole: Polymer gel drlg mud

SURFACE  
 INTERMEDIATE  
 PRODUCTION

| HOLE SIZE<br>(mm) | CASING SIZE<br>(mm) | DEPTH<br>(m) | TOP OF CEMENT<br>(m) |
|-------------------|---------------------|--------------|----------------------|
| 311.00            | 244.00              | 202.40       | 0.00                 |

|                                  | PLUG # 1 | PLUG # 2 | PLUG # 3  | PLUG # 4 | PLUG # 5 |
|----------------------------------|----------|----------|-----------|----------|----------|
| DATE                             | 99/01/29 | 99/01/30 | 99/01/30  |          |          |
| INTERVAL                         | 400.00   | 175.00   | 0.00      |          |          |
| (m)                              | 798.00   | 400.00   | 32.50     |          |          |
| FELT PLUG DEPTH (m)              |          | 119.00   | 0.00      |          |          |
| FORMATION                        | Canol    | Sur Csg  | Surface   |          |          |
| Name                             |          |          |           |          |          |
| Depth (m)                        | 447.00   | 202.40   | 0.00      |          |          |
| AVERAGE CALIP.<br>HOLE SIZE (mm) | 225.00   | 229.00   | 226.00    |          |          |
| TYPE OF CEMENT                   | Class G  | Class G  | Polar set |          |          |
| NO. OF TONNES                    | 23.1     | 15.5     | 1.6       |          |          |
| ADDITIVES                        | .5% T-10 | .5% T-10 | .1 R15C   |          |          |
| LITRES OF H2O AHEAD              | 3050.0   | 8000.0   | 0.0       |          |          |
| DISPLACEMENT                     | 670.0    | 1170.0   | 0.0       |          |          |
| (LITRES)                         | 1480.0   | 0.0      | 0.0       |          |          |
| SLURRY DENSITY<br>(kg/m3)        | 1900.0   | 1900.0   | 1845.0    |          |          |
| MIXING TIME                      | 20:28    | 23:21    | 18:35     | :        | :        |
| Start                            |          |          |           | :        | :        |
| Finish                           | 20:51    | 23:36    | 18:45     | :        | :        |
| DISPLACING                       | 20:51    | 23:36    | :         | :        | :        |
| TIMES                            | 20:58    | 21:37    | :         | :        | :        |
| Start                            |          |          |           | :        | :        |
| Finish                           | :        | 16:15    | 18:45     | :        | :        |
| FELT PLUG TIME                   |          |          |           |          |          |
| FELT PLUG WEIGHT<br>(dAN)        | 0.0      | 4000.0   |           |          |          |

SURFACE CASING CUT: 1.00 m BELOW GROUND

SURFACE PLUG: 1.60 TONNES

PLATE WELDED: Y

CASING SALVAGE: SHOT OFF AT  
 BELOW GROUND:

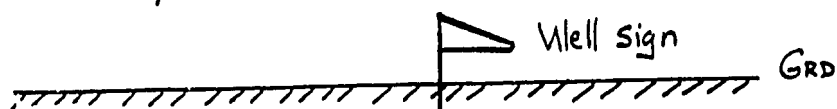
m  
 JTS. RECOVERED

REMARKS: Plug # 2 felt with entire string weight.  
 Plug #3 pumped down empty casing to 32.5 mKB.  
 Well Marker as follows:  
 Grey Wolf- Canaxas DEH CHO-2 B-14  
 300-B14-6520-12630-0  
 Lat - 65 Degrees 13' 09.26"  
 Long- 126 Degrees 32' 47.26"  
 Welded to casing stub 1.5 m above ground level.

SUPERVISOR: N Gebhart C Brazel

PHONE #: (600) 700-5344 - CCARD #: 454-037-6133-9618

Grey Wolf - CANAXAS DEH CHO-2 B-14



Plug #3

1.6t Blarset

32.5m

Drilling Mud & 0.3 m<sup>3</sup>  
of Dst #1 recovery fluid  
119m

508mm 140.2 kg/m J55 Conductor  
Set at 26m K.B.

Plug #2

15.5 tonnes

0:1:0 Class G

400m

244.5mm 53.6 kg/m J55 SURF Csg  
Set at 202.5m KB

Plug #1

23.1 tonnes

0:1:0 Class G

TD = 798m K.B.



#### **IV**

#### **Geology**

##### **1) Geological Report**

**GEOLOGICAL WELLSITE REPORT**  
**GREY WOLF CANAXAS DEH CHO 23-14300-B14-6520-12630-0**  
**65 13 09.265 126 32 47.267**

Prepared For: Grey Wolf Exploration

By: Azam Zadi, January 1999

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### WELL SUMMARY

WELL NAME: GREY WOLF CANAXAS DEH CHO 2B-14  
LOCATION: UNIT: B, SECTION: 14  
UWI: 300-B14-6520-12630-0  
COORDINATES: 65 13 09.265 126 32 47.267  
WELL LICENSE #: 1853 AFE#: 9920101  
ELEVATION: Ground: 58.40 m K.B.: 65.30 m  
OPERATOR: GREY WOLF EXPLORATION INC.  
DRILL CONTRACTOR: SHEHTAH DRILLING LIMITED RIG # 7E  
WELLSITE SUPERVISION: Engineer: Jack & Chuck Brezal  
Geologist: Azam Zaidi  
WELL SPUDDED: 18:00 Hours, 1999-01-17  
DRILLING COMPLETED: 20:20 Hours, 1999-01-26  
BOTTOM HOLE FORM: Fort Norman  
TOTAL DEPTH: Driller: 798.0 m Logger: 797.6 m  
BIT SIZES: Surface: 311 mm  
Downhole: 222 mm  
CASING SIZES: Surface: 244.5 m  
CORES CUT: NONE  
LOGS RUN: Logs: Phasor Induction SFL (190m - 793m)  
Sonic (781m - 190m)  
Density Neutron (793m - 190m)  
DRILL STEM TESTS: DST 1: 760m-776m (Bear Rock, Arnica)  
DST 2: 651m-667m (Hume, Upper Member)  
ADDITIONAL: NONE  
RIG RELEASE: 23:59 Hours, 1999-01-31  
WELL STATUS: Dry & Abundant  
SAMPLE REQUIREMENTS: Grey Wolf Exploration: 205 m - 798 m  
NEB, Calgary: 205 m - 798 m  
ISPG, Calgary: 205 m - 798 m

## DAILY SUMMARY

**1999-01-10**

Moving all buildings, mud tanks and draw works to the new location of Grey Wolf Canaxas DEH CHO 2B-14 from the location of 1B-25

**1999-01-11**

Trucks and cranes came out to location and rigged up to remove derrick, temperature dropped to 45C, cranes would not lift, wait on warm weather.

**1999-01-12**

Cranes dismantled derrick and sub, spotted mattings on new location Pinned and leveled bottom box subs

**1999-01-13**

Rigged up sub, draw works, spotted two pump houses Moved derrick and pinned

**1999-01-14**

Rigged up rig, started up generators, rigged in electrical cords

**1999-01-15**

Rigged up derrick, raised derrick, start up boilers, and rigged to spud

**1999-01-16**

Worked on water and steam lines, worked on electrical, put in cat walk Rigged up floor, moved pipe and drill collars

**1999-01-17**

Rigged up floors, pick up Kelley, slip and cut line, installed pre fab doors, some electrical work Spudded the well at 18:00 Hours, 99-01-17, drill 222 mm pilot hole

**1999-01-18**

Depth: 25m, drilling 660 mm hole, installed rat hole Reamed 222 mm hole to 660 mm to a depth of 23m, drill 660 mm hole to 26m. Ran conductor pipe and cemented, wait on cement

**1999-01-19**

Depth: 26m, nipple up Weatherford Enterra diverter, weld on diverter flange. Rigged in circulation lines from sock for Kelley, blow mud lines. Performed pressure test for diverter system

**1999-01-20**

Depth: 26m, wait on electrician, worked on SCR unit. Drilled out cement from 12.3m – 26m, and drill ahead 311mm hole. Drilling ahead 311 mm hole and survey as required

**1999-01-21**

Depth: 156m, drilling 311mm hole, drill and survey. Drilled to 189m, dummy trip prior to pick surface casing pipes, trip in. Drilled to 202.5m, circulate and condition mud, laid down 229-mm drill collars. Rigged up to pick 244.5mm surface casing pipes.

**1999-01-22**

Depth: 202m, running 244.5mm surface casing, rigged to run cement. Ran surface cement, wait on cement, cleaned mud tanks. Weld on a 244.5mmx279.4mmx2100 Kpa casing bowl, nipple up.

**1999-01-23**

Depth: 202m, nipple up BOP'S, make up new BHA. Pressure testing

**1999-01-24**

Depth: 202m, pressure testing, trip in hole, work on leaking lines. Wait on rig part, drill out cement, drill to 211m and perform leak off test. Drill ahead 222 mm hole

**1999-01-25**

Depth: 372m, drilling ahead 222mm hole with bit #1, FM-2545. Drilling ahead and survey as required

**1999-01-26**

Depth: 675m, drilling ahead and survey as required. Drill to 798m (T.D.), circulate bottom hole sample. Dummy trip to 202m, circulate and condition mud prior logging.

**1999-01-27**

Depth: 798m, (T.D.), logging with Schlumberger. Ran Dual Induction-SFL, Sonic and Density Neutron. Wait on orders, two drill stem tests, make up test tools.

**1999-01-28**

Depth: 798m, testing, DST #1, 760m – 776m Bear Rock, Arnica.

**1999-01-29**

Testing.

**1999-01-30**

Testing, ran plugs.

**1999-01-31**

Ran plugs and rig released at 23:59 Hours, 99-01-31.

**CASING SUMMARY**

**Conductor Pipe:**

Ran 2 joints of 508 mm, 140 Kg/m, J-55, Buttress, conductor pipe. Cemented by NOWSCO with 16 tonnes Of Polarset + .2% R15C. Plug down at 16:07 Hours, 1999-01-18. Good cement returns to surface

**Surface Casing**

Ran 15 joints of 244.5 mm, 53.6 kg/m, J-55, ST & C, Lonerstar, surface casing. Cemented by NOWSCO with 16.6 tonnes of Polarset with .2% R15C (retarder). Landed at 202.50 m K.B. Plug down at 10:02 Hour, 1999-01-22, with 1 m3 good clean cement returns to surface.

**DRILL STEM TEST SUMMARY**

**DST#1: INTERVAL: 760.0m – 776.0 m FM: Bear Rock, Arnica; TYPE: Inflate Straddle**

Times: 10 – 60 – 60 - 120  
On PF: Faint air blow, increasing to weak in 10 minutes. No gas to surface  
VO: Faint air blow, increasing to weak in 60 minutes. No gas to surface  
Recovery: 89m of gasified brackish water, (Salinity 6000)  
HP: 7816 / 8065 Kpa  
SIP: 8362 / 8023 Kpa  
FP: 349 / 399 / 1042 Kpa  
Other: Detected H2S



**DFT#2: INTERVAL: 651.0 – 667.0 m FM: HUME, Upper Member; TYPE: Inflate Straddle**

Times: 10 – 60 – 60 – 120  
On PF: Very weak air blow throughout. No gas to surface  
VO: Weak to strong air blow, opened up and decreased to weak blow, took 5 minutes to build back to Strong, and same throughout. No gas to surface  
Recovery: 10m of drilling mud, salinity of 1500  
HP: 6839 / 6870 Kpa  
SIP: 3330 / 6160 Kpa  
FP: 211 / 226 / 240 Kpa  
Other: Good mechanical test, low permeability within the tested interval

**ABANDONMENT PROGRAM**

**Plug #1** Interval: 400.00m – 798.00m  
Cemented with: 23.1 tonnes of Class G, + .5 % T-10  
Plug down at: 20:58 Hours, 99-01-29

**Plug #2** Interval: 175.00m – 400.00m  
Cemented with: 15.5 tonnes of Class G, + .5 % T-10  
Plug down at: 16:15 Hours, 99-01-30

**Plug #3** Interval: 0.00m – 32.50m  
Cemented with: 1.6 tonnes of Polar set + .1 % R15-C  
Plug down at: 18:45 Hours, 99-01-30

**GEOLOGICAL SUMMARY**

The well Grey Wolf Canaxas DEH CHO 2B-14 in the Norman Wells area in Northwest Territories was drilled as an exploratory well based on seismic line 98-106, Shot point 569 to evaluate the Kee Scarp (Reef) formation. The well was spudded on January 17, 1999, and reached a total depth of 798.0m on January 26, 1999. Sample study and continuous hot wire readings were recorded from 203m to 798m, and no core. The Kee Scarp (reef) formation was the primary objective, while the Canyon Creek Sand, Hume, Upper Member and Bear Rock, Arnica were secondary objectives.

The Canyon Creek Sand formation showed on logs at 391.0m and consisted of Sandstone; light brown, quartzitic, very fine to slightly fine grained, silty, dolomitic and partly pyritic mica flakes, mostly firm, partly loosely consolidated, uneven poor to streaky fair porosity, very dull fluorescence and slow greenish yellow cut. Logs showed 6-10% porosity, and variable 20-30 OHMS of resistivity, and up to 45 OHMS at 432.0m-434.5m, a possible thin productive zone.

The Kee Scarp (Reef) formation was not developed in this well.

The Hume, Upper Member showed on logs at 634.0m, and mostly consisted of Limestone; light brown, cream and white, cryptocrystalline to microcrystalline, clean, tight and partly very fine to fine fragmental, bioclastic debris, pellet, crinoid, mostly cemented with clear calcite and slightly dolomitic, trace of pin point to very poor inter fragmental and vuggy porosity, bituminous, dull to poor fluorescence and fair cut. On the basis of logs, one drill stem test at 651m-667m showed no gas to surface 10m with a recovery of drilling mud.

The Bear Rock, Arnica formation showed and recovery was at 756.0m, which consisted of Dolomite; light brown, sugary, sucrosic, very fine to fine crystalline, mostly clean, slightly sandy, calcareous and bituminous. Tight to uneven poor to fair intercrystalline and vuggy porosity, trace pyritic cement, dull fluorescence and poor to fair cut. On the basis of logs one drill stem test was from 760m-776m and recovery was 89m of dirty water and a presence of H<sub>2</sub>S.

The bottom hole formation, Fort Norman, came in on logs at 774.0m and consisted of mostly Anhydrite; white, light brownish gray, cryptocrystalline, clean, massive, slightly dolomitic, with scattered thin tight Dolomite.

On the basis of two drill stem tests, logs, sample study and the absence of the Kee Scarp (reef), this well was plugged back and a status of dry & abandoned was assigned.

#### FORMATION TOPS

| <u>FORMATION</u>         | <u>PROGNOSED</u> | <u>SAMPLE</u>   |              | <u>LOG TOPS</u> |              |
|--------------------------|------------------|-----------------|--------------|-----------------|--------------|
|                          | <u>Depth(m)</u>  | <u>Depth(m)</u> | <u>SS(m)</u> | <u>Depth(m)</u> | <u>SS(m)</u> |
| Imperial Deep Water      | 287.3            | 295.0           | -229.7       | 296.5           | -231.2       |
| Canyon Creek Sandstone   | 395.8            | 389.0           | -323.7       | 391.0           | -325.7       |
| Canol                    | 426.8            | 445.0           | -379.7       | 447.0           | -381.7       |
| Hare Indian, Black Shale | 476.8            | 490.0           | -424.7       | 493.5           | -428.2       |
| KEE SCARP                | 445.3            | -               | -            | -               | -            |
| Ramparts                 | 550.3            | -               | -            | -               | -            |
| Hare Indian, Grey Shale  | 564.3            | 590.0           | -524.7       | 595.5           | -530.2       |
| Bluefish                 | 602.3            | 618.0           | -552.7       | 620.5           | -555.2       |
| Hume, Upper Member       | 616.3            | 637.0           | -571.7       | 634.0           | -568.7       |
| Hume, Lower Member       | 667.3            | 688.0           | -622.7       | 691.0           | -625.7       |
| Bear Rock, Landry        | -                | 734.0           | -668.7       | 732.5           | -667.2       |
| Bear Rock, Arnica        | -                | 757.0           | -691.7       | 756.0           | -690.7       |
| Fort Norman              | -                | 774.0           | -708.7       | 774.0           | -708.7       |
| TOTAL DEPTH              | -                | 798.0           | -732.7       | 797.6           | -732.3       |

#### SAMPLE DESCRIPTIONS

|           |                                                                                                                                                                                                                                                  |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 203 - 205 | <b>SHALE;</b> light to medium gray, micro micaceous, blocky, partly flaky, soft, trace silty, carbonaceous, 30 % casing cement.                                                                                                                  |
| 205 - 210 | <b>SHALE;</b> medium to dark gray, micro micaceous, soft, flaky and blocky, partly silty and carbonaceous flake, as above.                                                                                                                       |
| 210 - 215 | <b>SHALE;</b> medium to dark gray, micro micaceous, as above, partly dark brownish gray, silty, sideritic, trace thin, band of, <b>SILTSTONE;</b> dark brown, argillaceous, micaceous, dolomitic, slightly calcareous.                           |
| 215 - 220 | <b>SHALE;</b> light to medium gray, and brownish gray, micro micaceous, blocky, and flaky in part, carbonaceous and slightly silty, trace <b>SILTSTONE;</b> stringer and band, as above.                                                         |
| 220 - 230 | <b>SHALE;</b> medium to dark gray, and brownish gray, micro micaceous, blocky, silty in part, as above, trace siderite.                                                                                                                          |
| 230 - 240 | <b>SANDSTONE;</b> light gray, light grayish brown, silt to very fine grained, sub angular, well sorted, silty, argillaceous, micaceous, dolomitic, slightly calcareous, tight, trace argillite, thinly interbedded with, <b>SHALE;</b> as above. |
| 240 - 250 | <b>SHALE;</b> medium gray, micro micaceous, blocky, partly silty, sandy, and pyretic.                                                                                                                                                            |
| 250 - 260 | <b>SHALE;</b> medium to dark gray, micro micaceous, blocky, partly flaky, trace carbonaceous, silty in part, as above, trace pyrite.                                                                                                             |
| 260 - 270 | <b>SHALE;</b> dark gray, micro micaceous, blocky, trace flaky and fissile, sideritic and pyretic, scattered dirty silty stringer.                                                                                                                |

- 270 - 280 **SHALE**; dark gray, trace dark brown, micro micaceous, blocky and flaky, slightly silty, carbonaceous, trace pyretic, as above.
- 280 - 290 **SHALE**; dark grayish brown, micro micaceous, blocky, silty and carbonaceous in part, dirty SILTSTONE; band in places, slightly pyretic.
- 290 - 300 **SHALE**; dark gray, slightly dark brownish gray, micro micaceous, blocky, flaky in part, dark brown siderite and partly sideritic.
- IMPERIAL DEEP WATER 295.0m (-229.7m SS)**
- 300 - 310 **SHALE**; medium to dark gray, grayish brown, micro micaceous, flaky and fissile, partly blocky, as above, slightly sideritic, trace silty stringer.
- 310 - 320 **SHALE**; dark gray and dark grayish brown, micro micaceous, blocky, partly flaky and fissile, trace silty and sideritic, as above.
- 320 - 330 **SHALE**; light to medium gray, micro micaceous, flaky and fissile, partly blocky, dark brown siderite parting, slightly silty and carbonaceous, as above.
- 330 - 340 **SHALE**; medium gray, micro micaceous, blocky, flaky in part, carbonaceous, trace siderite, as above, scattered silty lenses.
- 340 - 350 **SHALE**; light gray, micro micaceous, blocky, slightly silty, carbonaceous in part, trace sideritic, scattered silty stringer, as above.
- 350 - 360 **SHALE**; light to medium gray, micro micaceous, blocky, partly flaky, carbonaceous, slightly silty, trace sideritic and pyretic, as above.
- 360 - 370 **SHALE**; light to medium gray, micro micaceous, blocky and flaky, slightly silty, carbonaceous in part, sideritic and dark brown siderite parting, trace silty stringer, as above.
- 370 - 380 **SHALE**; medium to dark gray, micro micaceous, blocky, trace flaky, carbonaceous, sideritic in part, as above.
- 380 - 389 **SHALE**; medium to dark gray, micro micaceous, blocky and flaky in part, carbonaceous, as above, thin, **LIMESTONE**; dark brownish gray, microcrystalline, argillaceous, bituminous, tight, partly grading to **MARLSTONE**
- CANYON CREEK SAND 389.0m (-323.7m SS)**
- 389 - 395 **SANDSTONE**; light brown and brownish gray, very fine grained, slightly fine, sub angular, well sorted, silty, dolomitic, trace pyretic, micaceous, mostly consolidated, possible poor porosity, dull fluorescence, slow greenish yellow cut, argillite.
- 395 - 400 **SANDSTONE**; light gray, light brown, quartzitic, very fine grained, silty, dolomitic, as above, firm, argillite, mostly tight, uneven poor porosity, slow cut, trace pyretic.
- 400 - 405 **SANDSTONE**; light brown and brownish gray, silt to very fine grained, sub angular, well sorted, silty, dolomitic, pyretic in part, tight, argillite, as above.
- 405 - 411 **SANDSTONE**; light brown, quartzitic, very fine grained, slightly fine, sub angular, well sorted, silty, dolomitic, trace pyretic, partly uneven consolidated, possible poor porosity, light brown stain, dull fluorescence, greenish yellow cut, argillite, as above.

- 411 - 418 **SANDSTONE**; light gray, light brown, silt to very fine grained, silty, consolidated, no shows, grading to, sandy, **SILTSTONE**; interbedded with, **SHALE**; as above.
- 424 - 425 **SHALE**; dark gray, grayish brown, micro micaceous, blocky, trace calcareous, trace **LIMESTONE**; brownish gray, argillaceous, bituminous, tight, interbedded with, thin, **SANDSTONE**; as above.
- 425 - 435 **SHALE**; dark gray, black, micro micaceous, hard, blocky, partly sideritic and pyretic, trace disseminated pyrite, interbedded with, **SANDSTONE**; and minor **SILTSTONE**; as above.
- 435 - 440 **SHALE**; dark gray, black, micro micaceous, bituminous, trace disseminated pyrite and partly pyretic, as above, trace siltstone; ; as above.
- 440 - 445 **SHALE**; dark gray, black, and grayish brown, micro micaceous, hard, blocky, sideritic, pyretic and trace disseminated pyrite.
- CANOL 445.0m (-379.7m SS)**
- 445 - 450 **SHALE**; dark gray, black, and grayish brown, micro micaceous, hard, blocky, trace fractured, bituminous, trace disseminated pyrite and calcite vein.
- 450 - 455 **SHALE**; dark brownish gray, black, micro micaceous, blocky, bituminous in part, trace **SILTSTONE**; as above.
- 455 - 460 **SHALE**; dark gray, brownish gray, micro micaceous, flaky, fissile, partly blocky, bituminous, trace **LIMESTONE**; dark brown, buff, microcrystalline, argillaceous, bituminous, tight.
- 460 - 470 **SHALE**; brownish gray, dark gray, micro micaceous, as above, trace disseminated pyrite.
- 470 - 480 **SHALE**; medium to dark gray, micro micaceous, flaky, fissile, partly blocky, bituminous, trace pyretic hairline, fractured, disseminated pyrite, petro odor.
- 480 - 490 **SHALE**; dark gray, black, and dark brownish gray, micro micaceous, flaky, blocky, bituminous, fractured, trace calcite vein and hair lines, strong petroliferous odor, trace disseminated pyrite, as above.
- 490 - 500 **SHALE**; dark grayish brown, black, dull to partly micro micaceous, bituminous, strong petroleum odor, fractured, minor **MARLSTONE**; dark brownish gray, argillaceous, silty, dolomitic.
- HARE INDIAN (Black Shale) 490.0m (-424.7m SS)**
- 500 - 510 **SHALE**; dark gray, black, grayish brown, hard, blocky, fractured, bituminous, as above, dark brownish gray, **MARLSTONE** parting.
- 510 - 520 **SHALE**; dark brownish gray, black, micro micaceous, bituminous, trace speckled, blocky, pyretic, fractured, as above, trace **MARLSTONE**; dark brownish gray, as above.
- 520 - 530 **SHALE**; dark gray, black and brownish gray, micro micaceous, blocky, slightly calcareous, bituminous, strong petroleum odor, trace speckled, partly fractured, disseminated pyrite.
- 530 - 540 **SHALE**; dark brownish gray, dark gray and black, micro micaceous, partly dull, bituminous, fractured, trace speckled, trace of, **LIMESTONE**; dark brownish gray, microcrystalline, argillaceous, bituminous, trace pyretic, tight.

- 540 - 545 **SHALE**; dark gray, black and brownish gray, micro micaceous, blocky, slightly speckled, fractured, bituminous, petroleum odor, as above.
- 545 - 550 **SHALE**; dark brownish gray, micro micaceous, hard, blocky, slightly silty, bituminous, trace sideritic.
- 550 - 560 **SHALE**; as above, interbedded with, **LIMESTONE**; dark grayish brown, buff, microcrystalline, argillaceous, bituminous, slightly dolomitic, tight, trace fossil.
- 560 - 565 **LIMESTONE**; dark grayish brown, buff, microcrystalline, argillaceous bituminous, tight, trace fossil, bioclastic debris, thinly interbedded with, **SHALE**; dark gray, black, brownish gray, micro micaceous, blocky, bituminous, as above.
- 565 - 575 **SHALE**; dark brownish gray, dull, partly micro micaceous, blocky, slightly calcareous, mostly sideritic, hard, as above, trace, **LIMESTONE**; dark brownish gray, microcrystalline, argillaceous, slightly dolomitic, bituminous, as above, indistinct fossil, no shows.
- 575 - 580 **SHALE**; dark gray, brownish gray, dull, micro micaceous, hard, blocky, slightly calcareous, bituminous, as above, trace **LIMESTONE**; parting.
- 580 - 590 **SHALE**; dark gray, black, micro micaceous, blocky, trace flaky, fissile, sideritic, and pyretic, bituminous, disseminated pyrite, as above.
- HARE INDIAN, GRAY SHALE 590.0m (-524.7m SS)**
- 590 - 600 **SHALE**; dark gray, dark brownish gray, and black, micro micaceous, hard, blocky, sideritic in part, as above.
- 600 - 605 **SHALE**; dark brownish gray, black, micro micaceous, blocky, slightly sideritic, and pyretic, bituminous, as above.
- 605 - 610 **SHALE**; light to medium and dark gray, micro micaceous, blocky and flaky, trace calcareous, as above.
- 610 - 620 **SHALE**; dark brownish gray, and dark gray, micro micaceous, partly dull, blocky to flaky in part, bituminous, as above.
- BLUEFISH 618.0m (-552.7m SS)**
- 620 - 630 **SHALE**; dark brownish gray, black, micro micaceous, blocky, bituminous, slightly calcareous, as above, trace fractured, tentaculites, trace disseminated pyrite, trace of, dirty, argillaceous, bituminous, **LIMESTONE**.
- 630 - 637 **SHALE**; dark gray, dark brownish gray, and black, micro micaceous, blocky, bituminous, as above.
- HUME, UPPER MEMBER 637.0m (-571.7m SS)**
- 637 - 645 **LIMESTONE**; light brown, brownish gray, cream, and white, cryptocrystalline, clean, tight, slightly dolomitic, partly microcrystalline, argillaceous, bituminous, scattered fossil, no shows.
- 645 - 650 **LIMESTONE**; white, light brown, cream, cryptocrystalline, clean, tight, partly chalky, and partly microcrystalline, bituminous, indistinct fossil, trace dark brown, very fine

crystalline, calcareous and bituminous, DOLOMITE stringer.

- 650 - 660 **LIMESTONE**; light brown, cream, chalky, cryptocrystalline to microcrystalline, clean, tight, slightly argillaceous and bituminous, trace indistinct fossil, dark brown DOLOMITE stringer, as above.
- 660 - 670 **LIMESTONE**; light brown, cream and chalky, clean, as above, partly, very fine to fine fragmental, bioclastic debris, pellets, crinoid, slightly fractured, trace stylolite, clear calcite cement, dark brown DOLOMITE stringer, trace earthy pinpoint porosity, dark brown stain, poor to fair cut.
- 670 - 680 **LIMESTONE**; light to medium brown, cream, cryptocrystalline, clean, partly fine fragmental, as above, indistinct fossil, tight, partly fractured, crinoid, pellets, stylolite, bituminous.
- 680 - 688 **LIMESTONE**; light brown, brownish gray, cryptocrystalline clean, tight, partly, microcrystalline, very fine to fine fragmental, bituminous, argillaceous, calcite cement, trace dolomitic, as above.

**HUME, LOWER MEMBER 688.0m (-622.7m SS)**

- 688 - 695 **LIMESTONE**; light greenish gray, light brown, cryptocrystalline, argillaceous, tight, dolomitic and pyretic, grading to, MARLSTONE; and marly SHALE.
- 695 - 700 **LIMESTONE**; light brown, light grayish brown, fine to medium fragmental, bioclastic debris, crinoid, pellets, argillaceous, bituminous, dolomitic in part, no shows, interbedded with, SHALE; and MARLSTONE.
- 700 - 710 **LIMESTONE**; light to medium brown, grayish brown, fine fragmental, bioclastic debris, argillaceous, bituminous, tight, partly microcrystalline to cryptocrystalline, mostly clean, trace bituminous, no shows.
- 710 - 720 **LIMESTONE**; light brown, brownish gray, cryptocrystalline to microcrystalline, clean, slightly argillaceous, bituminous, tight, partly, fine fragmental, bioclastic debris, tight, bituminous, no shows.
- 720 - 730 **LIMESTONE**; light brown, cream and brownish gray, cryptocrystalline, clean, tight, and very fine to fine fragmental, as above, argillaceous, bituminous and slightly dolomitic, tight, trace green marly SHALE and MARLSTONE.
- 730 - 734 **LIMESTONE**; as above, cryptocrystalline, clean, partly very fine to fine fragmental, no shows.

**BEAR ROCK, LANDRY 734.0m (-668.7m SS)**

- 734 - 740 **LIMESTONE**; medium to dark brown, and brownish gray, partly cream, cryptocrystalline, mostly clean, slightly argillaceous, bituminous, tight, and partly very fine to fine fragmental, pelletoidal, crinoidal, bituminous, slightly dolomitic, tight, trace pinpoint porosity in places, dark brown stain, poor cut.
- 740 - 750 **LIMESTONE**; light to medium brown, cream, very fine to fine fragmental, pelletoidal, and crinoidal, argillaceous, bituminous, tight, partly cryptocrystalline, as above, oily scum with acid.
- 750 - 757 **LIMESTONE**; light brown cream and brownish gray, cryptocrystalline, clean, tight, partly, very fine to fragmental, bioclastic debris, pellets, crinoid, dolomitic, bituminous, tight.

**BEAR ROCK, ARNICA 757.0m (-691.7m SS)**

- 757 - 765 **DOLOMITE**; light brown, cream, very fine to fine crystalline., sugary and sucrosic, trace sandy, calcareous and bituminous, tight to partly with, poor to streaky fair intercrystalline porosity, uneven light brown stain, bright yellow milky cut, and slightly pyretic.
- 765 - 770 **DOLOMITE**; light brown, sugary and sucrosic, very fine to fine crystalline., mostly tight, calcareous, bituminous, dolomitic, Limestone stringer.
- 770 - 774 **DOLOMITE**; light to medium brown, as above, mostly tight, calcareous, bituminous, possible streaky very poor porosity and light brown stain.

**FORT NORMAN 774.0m (-708.7m SS)**

- 774 - 780 **ANHYDRITE**; white, light brown, white, cryptocrystalline, massive clean, slightly dolomitic, interbedded with, thin, **DOLOMITE**; brown, very fine crystalline, anhydritic, tight.
- 780 - 784 **ANHYDRITE**; white, light brown, cryptocrystalline, massive, clean, as above, interbedded with, **DOLOMITE**; medium to dark brown, microcrystalline to slightly very fine crystalline, tight, anhydritic, no shows.
- 784 - 790 **DOLOMITE**; light to medium brown, microcrystalline, slightly very fine crystalline, mostly tight, anhydritic, as above, thinly interbedded with, **ANHYDRITE**; as above, clean, massive.
- 790 - 798 **ANHYDRITE**; light brown, white, brownish gray, cryptocrystalline, clean massive, as above, interbedded with, thin, **DOLOMITE**; brown and brownish gray, microcrystalline to very fine crystalline, tight, no shows.

**TOTAL DEPTH (Driller's) 798.0m (-732.7m SS)**



IV

Geology

2)

Lithology Strip Log



## Pro Geo Consultants

Azam Zaidi

FIELD: Norman Wells

WELL NAME: Grey Wolf Canadas DEH CHO 2B-14

WELL IDENTIFIER: 300-B14-6520-12630-0

CO-ORDINATES: Surface: 065 13 09.265 Hz: Btm Hole: 126 32 47.267

ELEVATION: Grd.: 58.4 K.B.: 65.3

LICENCE NUMBER: 1853 A.F.E.: 9920101

Well History: Contractor: Shestah Drilling RIG # 8E Operator: Grey Wolf Exploration Inc.

Spud: 1989-01-17 @ 18:00 Hou F.T.D.: 1989-01-26 @ 20:20 Hours

Rig Release: Geologist: AZAM ZAIDI Drg. Sup: Jack / Chuch Brazel

Casing: Surf: 244.5 mm, 53.6 kg/m Set @ 202.50 m K.B.

Int: None Set @

Production: Set @

Log Run: Type: Placer Induction SFL : Borehole Compensated Sonic

Interval: 793 m - 190 m GR to surface

Company: Schlumberger

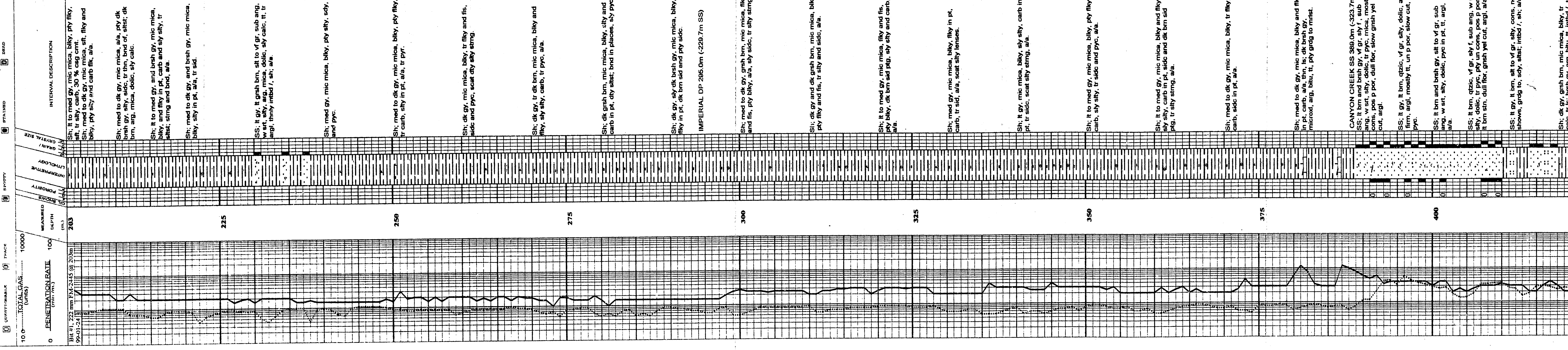
Cores: NONE

D.S.T.: TWO

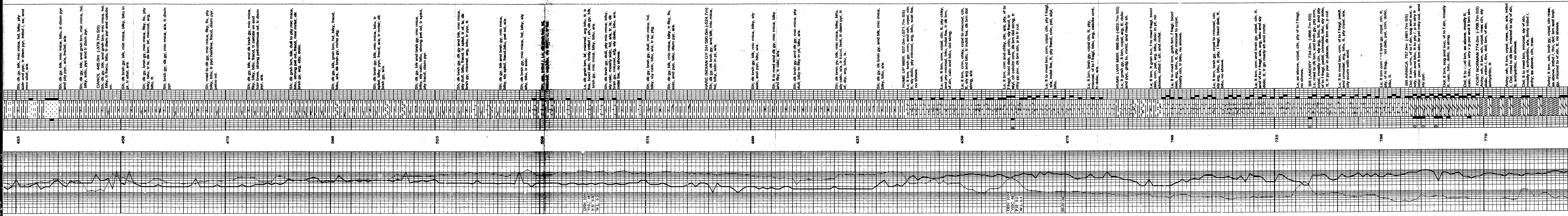
| Formation Tops: | MD      | Prognosis | IVD | MD      | Sample Depth | IVD |
|-----------------|---------|-----------|-----|---------|--------------|-----|
| Deep Water      | 287.3 m |           |     | 295.0 m |              |     |
| Canyon Creek    | 395.8 m |           |     | 389.0 m |              |     |
| Canol           | 426.8 m |           |     | 445.0 m |              |     |
| Black Shale Mbr | 476.8 m |           |     | 490.0 m |              |     |
| Ramparts        | 550.3 m |           |     | 590.0 m |              |     |
| Grey Shale Mbr. | 564.3 m |           |     | 618.0 m |              |     |
| Bluelish Mbr.   | 602.3 m |           |     | 637.0 m |              |     |
| Hume UP MBR.    | 616.3 m |           |     | 686.0 m |              |     |
| Hume LWR MBR    | 667.3 m |           |     | 734.0 m |              |     |
| BR Landry       |         |           |     | 757.0 m |              |     |
| BR Amica        |         |           |     | 774.0 m |              |     |
| Fort Norman     |         |           |     | 796.0 m |              |     |
| Total Depth     |         |           |     |         |              |     |

Comments: F.T.D. being changed to 796.0 m

| ROCK TYPE           | CHERT | GLACIAL TILL | COAL | BENTONITE | SALT | GYPSUM | ANHYDRITE | IGNEOUS BASIC | IGNEOUS ACID | METAMORPHIC |
|---------------------|-------|--------------|------|-----------|------|--------|-----------|---------------|--------------|-------------|
| SANDSTONE           |       |              |      |           |      |        |           |               |              |             |
| SHALE               |       |              |      |           |      |        |           |               |              |             |
| SILTSTONE           |       |              |      |           |      |        |           |               |              |             |
| SANDST.             |       |              |      |           |      |        |           |               |              |             |
| SILTST.             |       |              |      |           |      |        |           |               |              |             |
| ANGILLITE GRAINS    |       |              |      |           |      |        |           |               |              |             |
| SHALE LAMINAE       |       |              |      |           |      |        |           |               |              |             |
| GLAUC-RTITE         |       |              |      |           |      |        |           |               |              |             |
| MINERAL CRYSTALS    |       |              |      |           |      |        |           |               |              |             |
| ACCESSORIES         |       |              |      |           |      |        |           |               |              |             |
| SANDY               |       |              |      |           |      |        |           |               |              |             |
| SANDSTONE STRINGERS |       |              |      |           |      |        |           |               |              |             |
| SILTSTONE STRINGERS |       |              |      |           |      |        |           |               |              |             |
| ANGILLITE GRAINS    |       |              |      |           |      |        |           |               |              |             |
| SHALE LAMINAE       |       |              |      |           |      |        |           |               |              |             |
| GLAUC-RTITE         |       |              |      |           |      |        |           |               |              |             |
| MINERAL CRYSTALS    |       |              |      |           |      |        |           |               |              |             |
| ROCK BUILDERS       |       |              |      |           |      |        |           |               |              |             |
| OPINION             |       |              |      |           |      |        |           |               |              |             |
| HELP-YIELD          |       |              |      |           |      |        |           |               |              |             |
| FOREAL              |       |              |      |           |      |        |           |               |              |             |
| AMPHIB. PA          |       |              |      |           |      |        |           |               |              |             |
| QUARTZITE           |       |              |      |           |      |        |           |               |              |             |
| MUDANITIC PA        |       |              |      |           |      |        |           |               |              |             |
| MISCELLANEOUS       |       |              |      |           |      |        |           |               |              |             |
| NO SAMPLE           |       |              |      |           |      |        |           |               |              |             |
| QUANTIFIABLE        |       |              |      |           |      |        |           |               |              |             |
| THICK               |       |              |      |           |      |        |           |               |              |             |
| SPOTTY              |       |              |      |           |      |        |           |               |              |             |
| STAINED             |       |              |      |           |      |        |           |               |              |             |
| DEAD                |       |              |      |           |      |        |           |               |              |             |







DBN 1050  
VISC 48  
PH 9.0  
WL 63

DBN 1050  
VISC 48  
PH 9.0  
WL 63

99-01-26

**BEST  
COPY  
ON FILE**



**V Well Evaluation**

- 1) **Open Hole Logs**



V

Well Evaluation

2) Synthetic Seismograms

(Data removed - release date Jan. 31, 2004)



V

Well Evaluation

3) DST's





GREY WOLF-CANAXAS DEH CHO-2 B-14  
00/ 65.131 / 126.325 /0  
DST# 1

Baker Oil Tools

Formation: Bear Rock Arnica  
Interval - from: 760.00 to: 776.00 meters

Test Date: 1999-01-28  
Test Type : Inflate Straddle

Recorder# 71005 at 763.00 meters

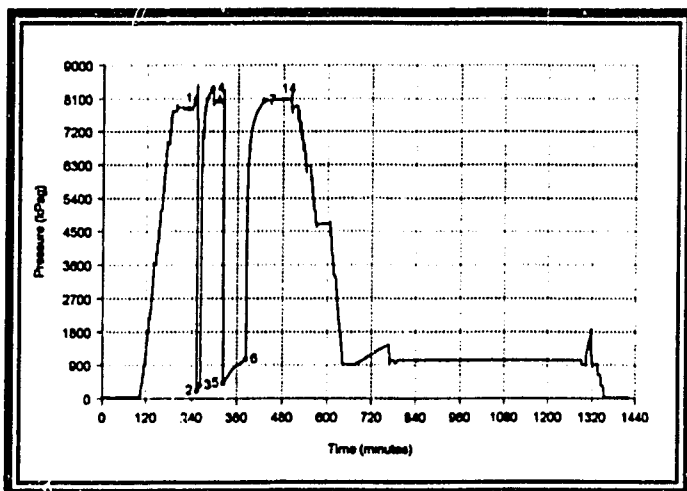
Blow Description:

PREFLOW: Faint air blow increasing to weak in 10 minutes. No gas to surface.

FINAL FLOW: Faint air blow increasing to weak in 60 minutes. No gas to surface.

Remarks:

The available results suggest low permeability within the interval tested. The formation pressure on both shut-ins exceeded hydrostatic. When this happened, the relieve valve opened allowing the pressure to escape to the annulus. Therefore, the initial shut-in is only valid for the first 30.5 minutes and the final shut-in for the first 46 minutes. Was three stands from surface and detected H2S. Waited for a safety company employee to arrive.



Max Btm Hole Temperature @ FSI: 32.6 C

|    |                     | Pressure<br>(kPag) | Time<br>(min) | Extrapolated<br>Pressure<br>(kPag) |
|----|---------------------|--------------------|---------------|------------------------------------|
| 1  | Initial Hydrostatic | 7816               |               |                                    |
| 2  | Start of 1st Flow   | 200                |               |                                    |
| 3  | End of 1st Flow     | 349                | 9.5           |                                    |
| 4  | End of 1st Shut-in  | 8362               | 30.5          | 8742.0                             |
| 5  | Start of 2nd Flow   | 399                |               |                                    |
| 6  | End of 2nd Flow     | 1042               | 60.0          |                                    |
| 7  | End of 2nd Shut-in  | 8023               | 46.0          | 8753.9                             |
| 14 | Final Hydrostatic   | 8065               |               |                                    |

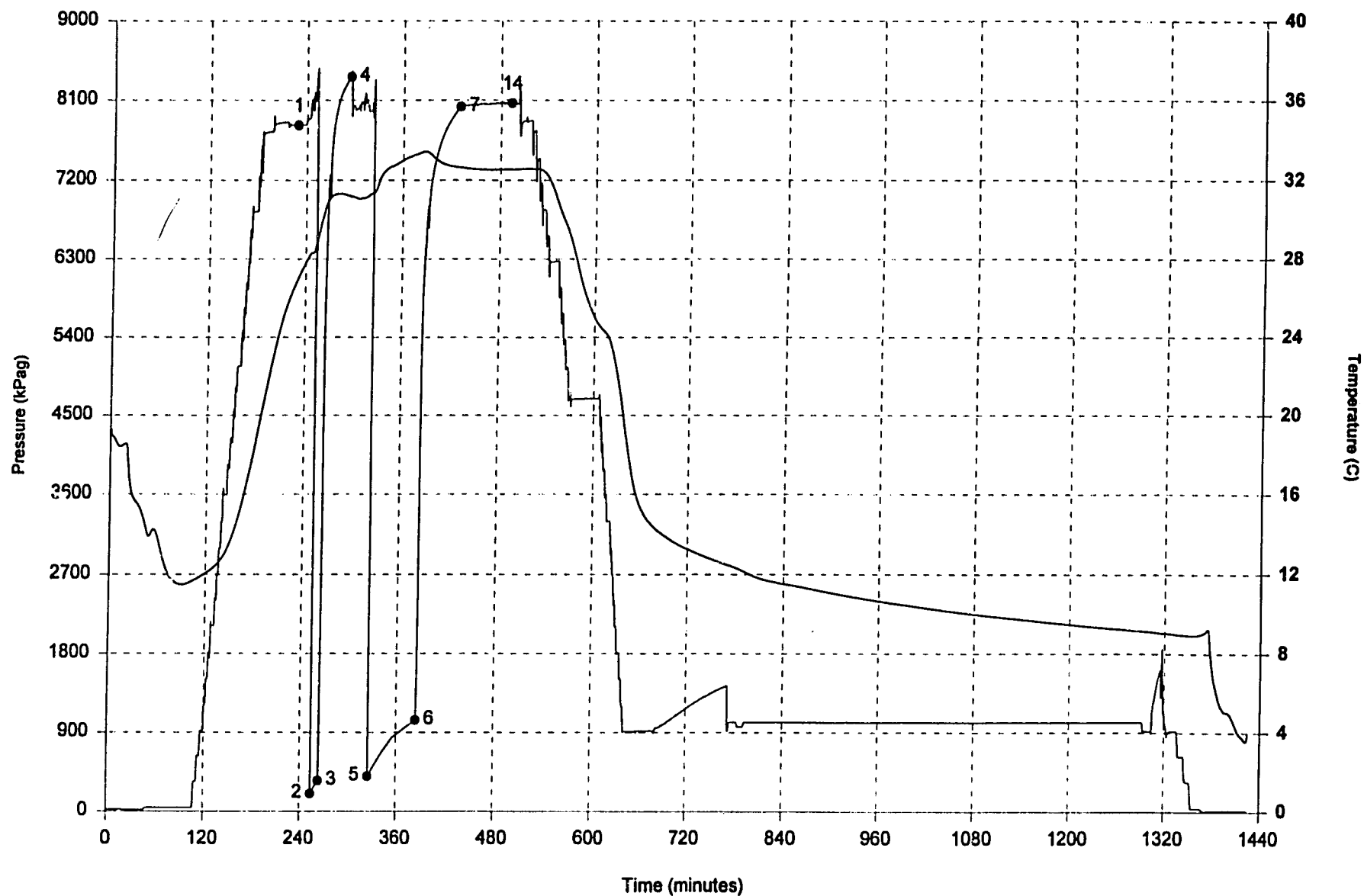
Liquid Recovery 89.00 meters

Salinity : 6 000 g/m3

| Recovery | Description |
|----------|-------------|
| 89.00 m  | DIRTY WATER |

GREY WOLF-CANAXAS DEH CHO-2 B-14  
 00/85.131 / 126.325 / 0  
 DST #: 1  
 Recorder: 71005

Pressure (kPag) at Critical Points:  
 1: 7816    4: 8362    7: 8023  
 2: 200    5: 399    14: 8065  
 3: 349    6: 1042

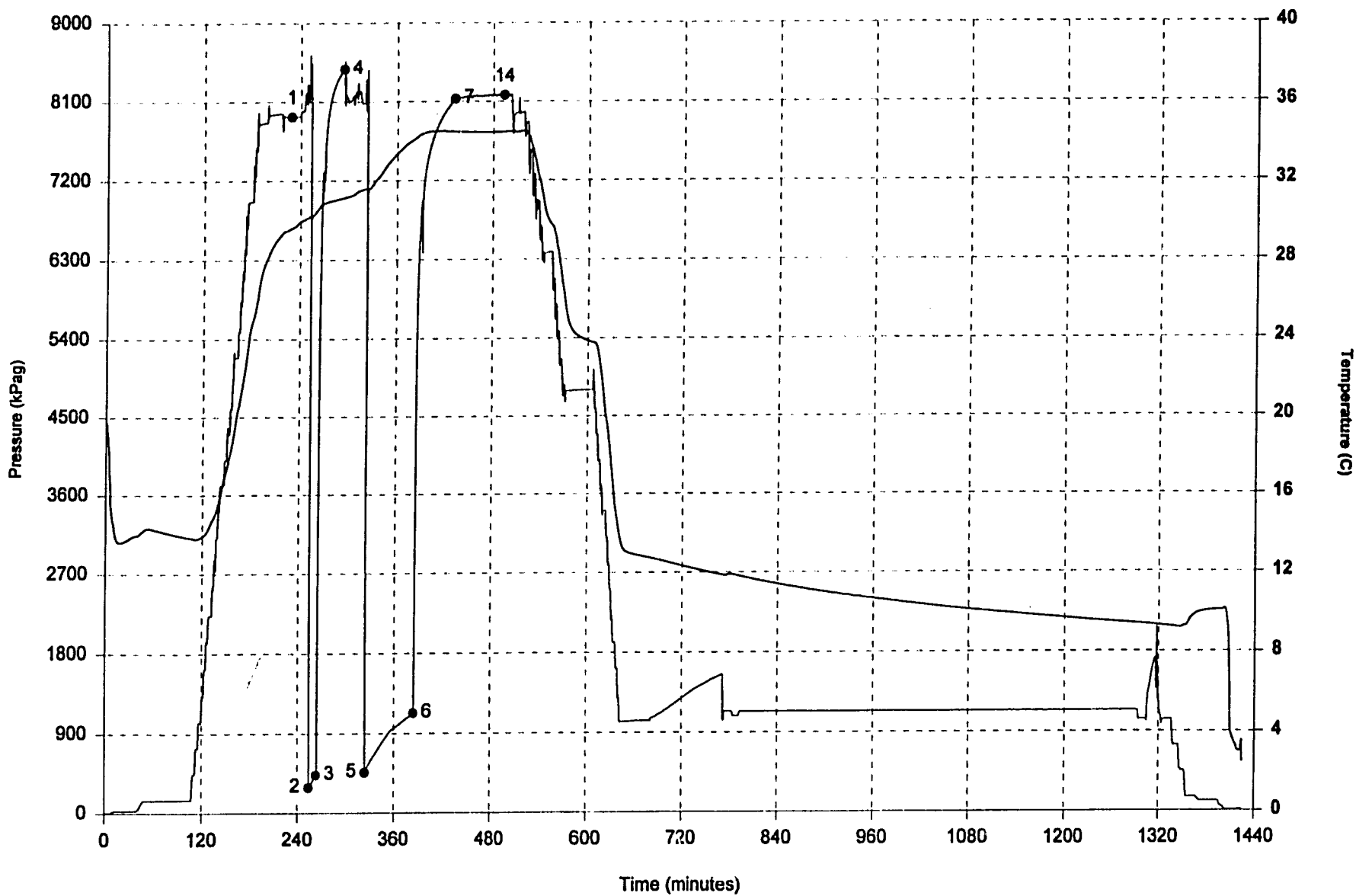


GREY WOLF-CANAXAS DEH CHO-2 B-14  
 00/ 65.131 / 126.325 / 0  
 DST #: 1  
 Recorder: 70107

Pressure (kPag) at Critical Points:

|         |         |          |
|---------|---------|----------|
| 1: 7927 | 4: 8470 | 7: 8128  |
| 2: 290  | 5: 460  | 14: 8170 |
| 3: 430  | 6: 1129 |          |

Above interval



**GREY WOLF-CANAXAS DEH CHO-2 B-14**  
**00/ 65.131 / 126.325 /0**  
**DST# 1**

**General Information:**

Operator: Grey Wolf Exploration Inc.  
c/o: Pajak Engineering Ltd.  
1660, 717 - 7th Avenue SW  
Calgary Alberta T2P 0Z3

Tester: Halligan J

Ticket#: 807776

Reverse Circulated? Y

KB Elevation: 65.30 meters

Ground Elevat'n: 58.40 meters

Total Depth: 800.00 meters

**Mud Data:**

Weight: 1050 kg/m3  
Type: Gel Polymer  
Viscosity: 65 s/l  
Water Loss: 5.0 cc/s

**Hole Data:**

Drilled Hole Size: 222 mm  
Calipered Hole Size: 222 mm  
Hole Condition at Test Time: Fair  
Conditioned prior to this test? Y

**Recorder Summary:**

| Recorder# | Type | Position | Capacity | Units | Depth  | Comments                            |
|-----------|------|----------|----------|-------|--------|-------------------------------------|
| 13654     | K-3  | Inside   | 20000    | kPag  | 747.00 | Recovery recorder<br>Above interval |
| 70107     | SPAR | Inside   | 34500    | kPag  | 750.00 |                                     |
| 21155     | K-3  | Outside  | 21400    | kPag  | 763.00 |                                     |
| 71005     | SPAR | Outside  | 68900    | kPag  | 763.00 |                                     |

**Distributions:**

Reports Sent To: Gerard Geib

Fluid Samples - no of: 6

| Bottom Hole Sampler# | Sent To |
|----------------------|---------|
| 507                  |         |

**GREY WOLF-CANAXAS DEH CHO-2 B-14**  
**00/ 65.131 / 126.325 /0**  
**DST# 1**

**Tool Sequence:**

| Diagram | Description           | Length |
|---------|-----------------------|--------|
|         | Pump Out Sub          | 0.40 m |
|         | Cross Over Sub        | 0.30 m |
|         | Pump Out Sub          | 0.40 m |
|         | Recorder Carrier      | 1.38 m |
|         | Hydraulic Tool        | 1.50 m |
|         | Bottom Hole Sampler   | 1.03 m |
|         | Recorder Carrier      | 1.38 m |
|         | Hydraulic Jars        | 2.22 m |
|         | Safety Joint          | 0.65 m |
|         | Inflate Pump          | 2.38 m |
|         | Screen                | 1.16 m |
|         | Top Inflate Packer    | 1.78 m |
|         | Packer Stick Down     | 0.82 m |
|         | Port Sub              | 0.42 m |
|         | Recorder Carrier      | 2.06 m |
|         | Spacing               | 1.95 m |
|         | Cross Over Sub        | 0.30 m |
|         | Drill Collar          | 9.55 m |
|         | Cross Over Sub        | 0.40 m |
|         | Packer Stick Up       | 0.50 m |
|         | Bottom Inflate Packer | 1.90 m |
|         | Perforations          | 0.30 m |
|         | Belly Spring          | 2.00 m |

Tool String Length: 34.78 m  
 Drill Pipe O.D.: 114 mm 83.97 m  
 667.25 m  
 Collar Pipe Total: 751.22 m  
 Stick Up: 5.80 m  
 Tool Above: 14.58 m  
 Interval Tested: 16.00 m  
 Bottom Hole Choke Size: 25.40 mm



**GREY WOLF-CANAXAS DEH CHO-2 B-14**  
**00/ 65.131 / 126.325 /0**  
**DST# 1**  
**Recorder#70107**

**Build-up and Flow Curve Increments**

**Flow# 1**

| Chart Label | Time (min) | Pressure (kPag) |
|-------------|------------|-----------------|
| 2           | 0.0        | 200             |
|             | 1.0        | 220             |
|             | 2.0        | 234             |
|             | 3.0        | 251             |
|             | 4.0        | 268             |
|             | 5.0        | 285             |
|             | 6.0        | 299             |
|             | 7.0        | 314             |
|             | 8.0        | 328             |
| 3           | 9.0        | 342             |
|             | 9.5        | 349             |

**Shut-in# 1**

| Chart Label | Time (min) | Delta P (kPag) | Pressure (kPag) | Abscissa (T+dT)/dT | Used for Extrap |
|-------------|------------|----------------|-----------------|--------------------|-----------------|
| 4           | 0.0        |                | 349             |                    |                 |
|             | 1.5        | 4993           | 5342            | 7.3333             |                 |
|             | 3.0        | 6347           | 6696            | 4.1667             |                 |
|             | 4.5        | 6817           | 7166            | 3.1111             |                 |
|             | 6.0        | 6675           | 7023            | 2.5833             |                 |
|             | 7.5        | 7166           | 7515            | 2.2667             |                 |
|             | 9.0        | 7364           | 7712            | 2.0556             |                 |
|             | 10.5       | 7483           | 7832            | 1.9048             |                 |
|             | 12.0       | 7573           | 7922            | 1.7917             |                 |
|             | 13.5       | 7644           | 7993            | 1.7037             |                 |
|             | 15.0       | 7705           | 8054            | 1.6333             |                 |
|             | 16.5       | 7755           | 8104            | 1.5758             |                 |
|             | 18.0       | 7797           | 8146            | 1.5278             | *               |
|             | 19.5       | 7835           | 8184            | 1.4872             | *               |
|             | 21.0       | 7867           | 8216            | 1.4524             | *               |
|             | 22.5       | 7897           | 8246            | 1.4222             | *               |
|             | 24.0       | 7923           | 8272            | 1.3958             | *               |
|             | 25.5       | 7947           | 8296            | 1.3725             | *               |
|             | 27.0       | 7968           | 8317            | 1.3519             | *               |
|             | 28.5       | 7988           | 8336            | 1.3333             | *               |
|             | 30.0       | 8005           | 8354            | 1.3167             | *               |
|             | 30.5       | 8013           | 8362            | 1.3115             | *               |

**Flow# 2**

| Chart Label | Time (min) | Pressure (kPag) |
|-------------|------------|-----------------|
| 5           | 0.0        | 399             |
|             | 1.5        | 422             |
|             | 3.0        | 446             |
|             | 4.5        | 470             |
|             | 6.0        | 494             |
|             | 7.5        | 518             |
|             | 9.0        | 541             |
|             | 10.5       | 563             |
|             | 12.0       | 584             |
|             | 13.5       | 606             |
|             | 15.0       | 628             |
|             | 16.5       | 650             |
|             | 18.0       | 671             |
|             | 19.5       | 691             |
|             | 21.0       | 712             |
|             | 22.5       | 732             |

**Shut-in# 2**

| Chart Label | Time (min) | Delta P (kPag) | Pressure (kPag) | Abscissa (T+dT)/dT | Used for Extrap |
|-------------|------------|----------------|-----------------|--------------------|-----------------|
|             | 0.0        |                | 1042            |                    |                 |
|             | 1.5        | 3903           | 4945            | 47.3333            |                 |
|             | 3.0        | 5015           | 6057            | 24.1667            |                 |
|             | 4.5        | 5420           | 6462            | 16.4444            |                 |
|             | 6.0        | 5666           | 6707            | 12.5833            |                 |
|             | 7.5        | 5864           | 6906            | 10.2667            |                 |
|             | 9.0        | 5941           | 6983            | 8.7222             |                 |
|             | 10.5       | 6089           | 7131            | 7.6190             |                 |
|             | 12.0       | 6189           | 7231            | 6.7917             |                 |
|             | 13.5       | 6272           | 7314            | 6.1481             |                 |
|             | 15.0       | 6342           | 7384            | 5.6333             |                 |
|             | 16.5       | 6404           | 7446            | 5.2121             |                 |
|             | 18.0       | 6459           | 7501            | 4.8611             |                 |
|             | 19.5       | 6509           | 7551            | 4.5641             |                 |
|             | 21.0       | 6554           | 7596            | 4.3095             |                 |
|             | 22.5       | 6595           | 7637            | 4.0889             |                 |
|             | 24.0       | 6633           | 7675            | 3.8958             |                 |

Note: Increment listing is filtered to include critical data only. Complete time/pressure data is available in electronic or printed format.

**GREY WOLF-CANAXAS DEH CHO-2 B-14**  
**00/ 65.131 / 126.325 /0**  
**DST# 1**  
**Recorder#71005**

**Build-up and Flow Curve Increments**

**Flow# 2**

| Chart Label | Time (min) | Pressure (kPag) |
|-------------|------------|-----------------|
|             | 24.0       | 751             |
|             | 25.5       | 771             |
|             | 27.0       | 791             |
|             | 28.5       | 811             |
|             | 30.0       | 830             |
|             | 31.5       | 844             |
|             | 33.0       | 855             |
|             | 34.5       | 865             |
|             | 36.0       | 876             |
|             | 37.5       | 886             |
|             | 39.0       | 897             |
|             | 40.5       | 907             |
|             | 42.0       | 917             |
|             | 43.5       | 929             |
|             | 45.0       | 940             |
|             | 46.5       | 950             |
|             | 48.0       | 960             |
|             | 49.5       | 970             |
|             | 51.0       | 980             |
|             | 52.5       | 990             |
|             | 54.0       | 1000            |
|             | 55.5       | 1010            |
|             | 57.0       | 1021            |
|             | 58.5       | 1032            |
| 6           | 60.0       | 1042            |

**Shut-in# 2**

| Chart Label | Time (min) | Delta P (kPag) | Pressure (kPag) | Abscissa (T+dT)/dT | Used for Extrap |
|-------------|------------|----------------|-----------------|--------------------|-----------------|
|             | 25.5       | 6668           | 7710            | 3.7255             |                 |
|             | 27.0       | 6701           | 7743            | 3.5741             |                 |
|             | 28.5       | 6732           | 7773            | 3.4386             |                 |
|             | 30.0       | 6760           | 7802            | 3.3167             |                 |
|             | 31.5       | 6787           | 7828            | 3.2063             |                 |
|             | 33.0       | 6812           | 7854            | 3.1061             | *               |
|             | 34.5       | 6835           | 7877            | 3.0145             | *               |
|             | 36.0       | 6858           | 7900            | 2.9306             | *               |
|             | 37.5       | 6879           | 7921            | 2.8533             | *               |
|             | 39.0       | 6899           | 7941            | 2.7821             | *               |
|             | 40.5       | 6918           | 7960            | 2.7160             | *               |
|             | 42.0       | 6936           | 7978            | 2.6548             | *               |
|             | 43.5       | 6954           | 7996            | 2.5977             | *               |
|             | 45.0       | 6970           | 8012            | 2.5444             | *               |
| 7           | 46.0       | 6981           | 8023            | 2.5109             | *               |

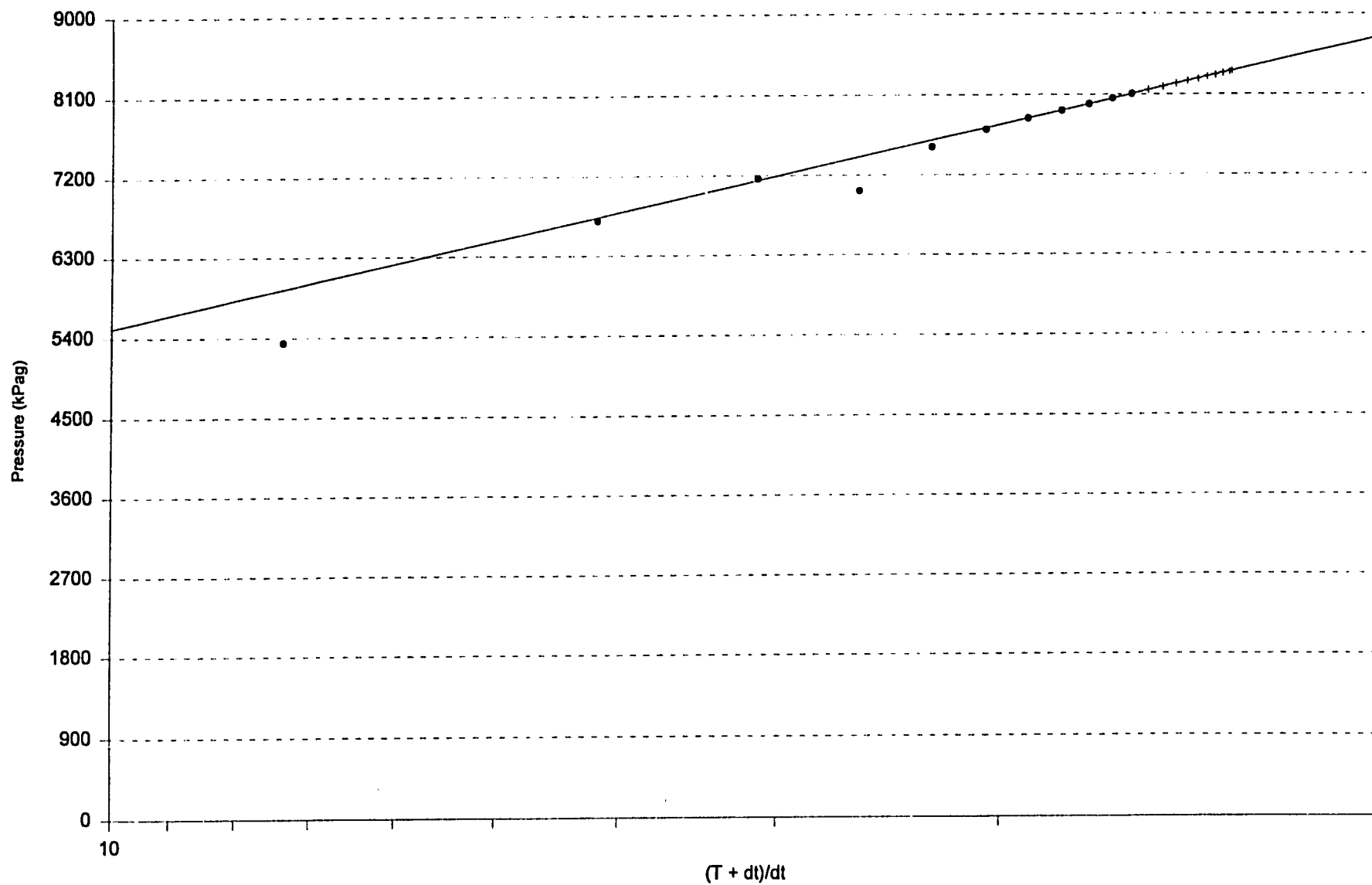
**Horner Extrapolation:**

| Shut-in# | Extrapolated Pressure (kPag) | Extrapolated Slope ((kPag/cycle) |
|----------|------------------------------|----------------------------------|
| 1        | 8742.0                       | 3,241.88753                      |
| 2        | 8753.9                       | 1,829.34498                      |

Note: Increment listing is filtered to include critical data only. Complete time/pressure data is available in electronic or printed format.

GREY WOLF-CANAXAS DEH CHO-2 B-14  
00/ 65.131 / 126.325 / 0  
DST #: 1  
Recorder: 71005

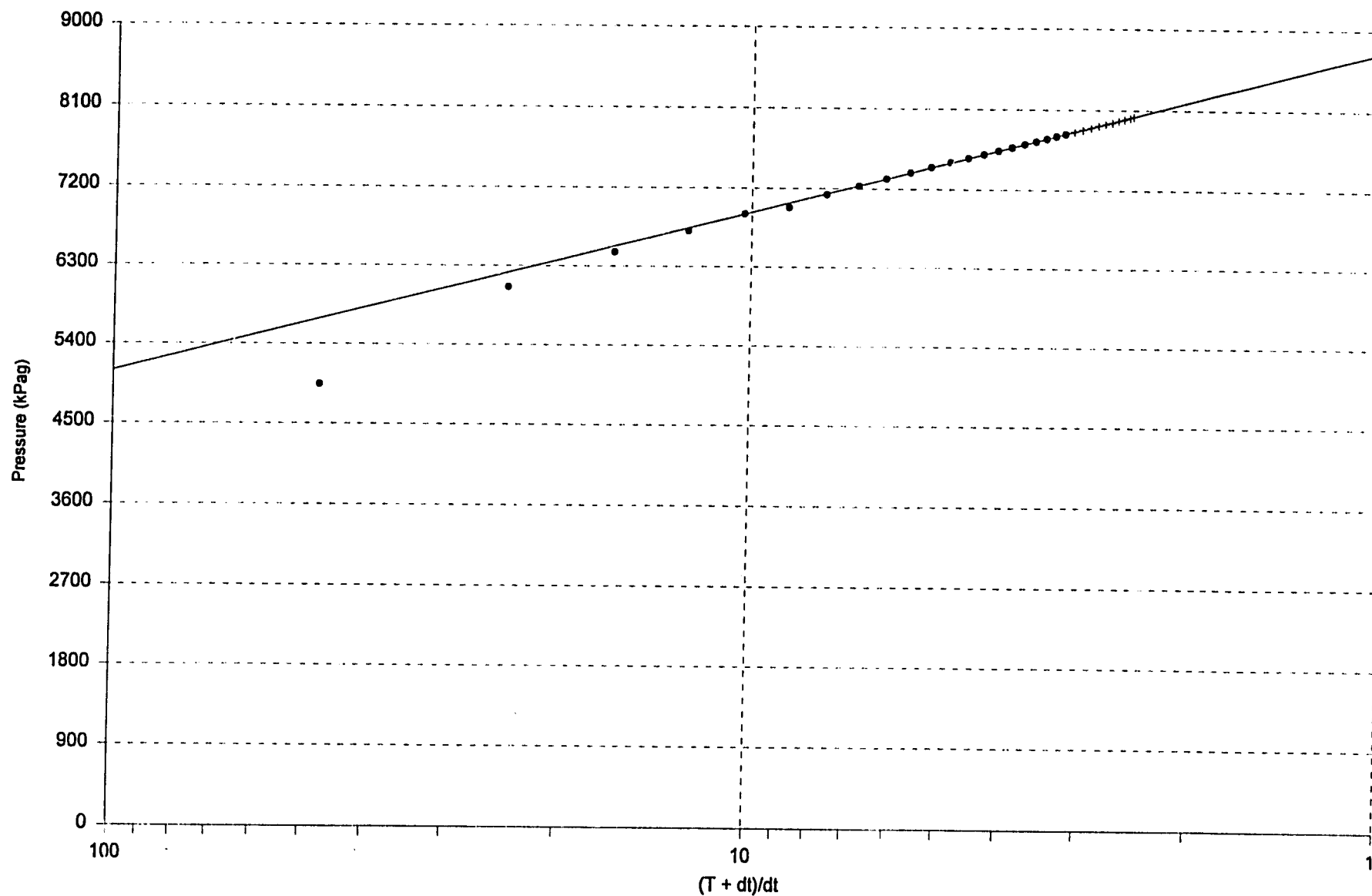
Shut-in #1  
Slope = 3241.89 kPag/cycle  
Extrapolated Pressure = 8742.04 kPag



GREY WOLF-CANAXAS DEH CHO-2 B-14  
00/65.131 / 126.325 / 0  
DST #: 1  
Recorder: 71005

Shut-in #2  
Slope = 1829.34 kPag/cycle  
Extrapolated Pressure = 8753.88 kPag

BAKER OIL TOOLS / LYNES DRILL STEM TESTING

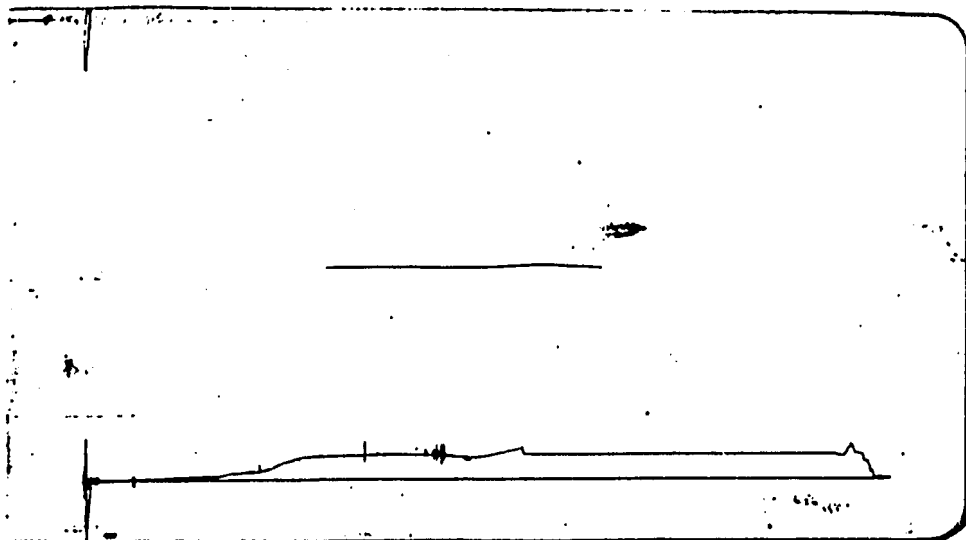


**GREY WOLF-CANAXAS DEH CHO-2 B-14**  
**00/ 65.131 / 126.325 /0**  
**DST# 1**

**Recorder# 13654**

Depth: 747.00 m  
 Location: Inside

Recorder Type: K-3  
 Capacity: 20,000 kPag  
 Comments: Recovery recorder

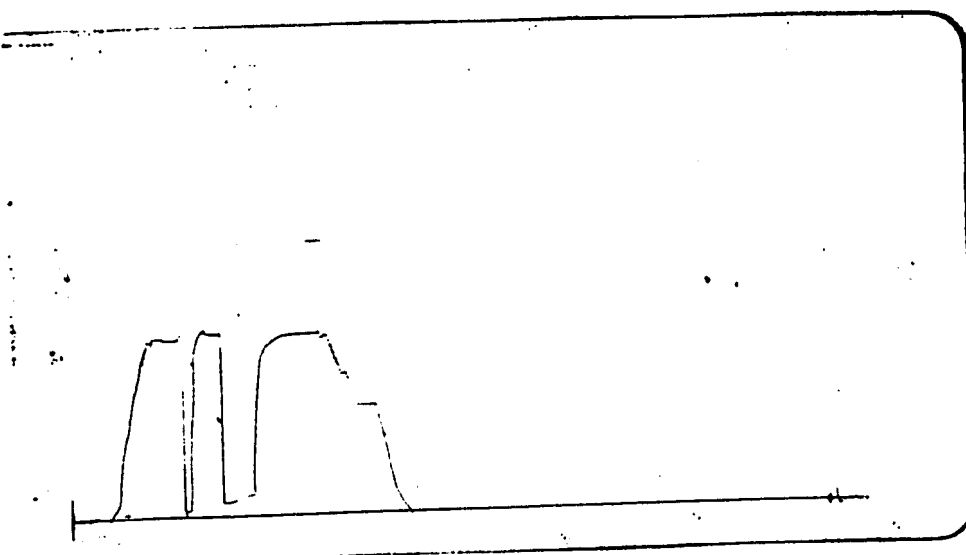


|   |                    | Pressure<br>(kPag) | Time<br>(min) |
|---|--------------------|--------------------|---------------|
| 2 | Start of 1st Flow  | 33                 |               |
| 3 | End of 1st Flow    | 298                | 9.5           |
| 5 | Start of 2nd Flow  | 298                |               |
| 6 | End of 2nd Flow    | 991                | 60.0          |
| 7 | End of 2nd Shut-in | 991                | 46.0          |

**Recorder# 21155**

Depth: 763.00 m  
 Location: Outside

Recorder Type: K-3  
 Capacity: 21,400 kPag



|    |                     | Pressure<br>(kPag) | Time<br>(min) |
|----|---------------------|--------------------|---------------|
| 1  | Initial Hydrostatic | 7904               |               |
| 2  | Start of 1st Flow   | 112                |               |
| 3  | End of 1st Flow     | 302                | 9.5           |
| 4  | End of 1st Shut-in  | 8292               | 30.5          |
| 5  | Start of 2nd Flow   | 617                |               |
| 6  | End of 2nd Flow     | 993                | 60.0          |
| 7  | End of 2nd Shut-in  | 7972               | 46.0          |
| 14 | Final Hydrostatic   | 7972               |               |

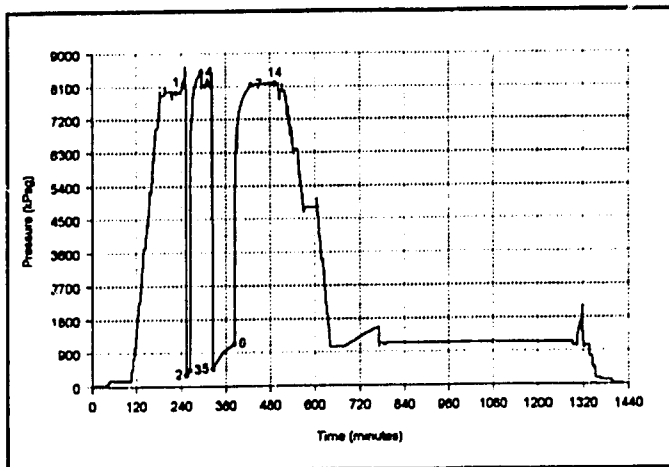
# GREY WOLF-CANAXAS DEH CHO-2 B-14

00/ 65.131 / 126.325 / 0  
DST# 1

## Recorder# 70107

Depth: 750.00 m  
Temperature: 34.7 C  
Location: Inside

Recorder Type: SPAR  
Capacity: 34,500 kPag  
Comments: Above interval

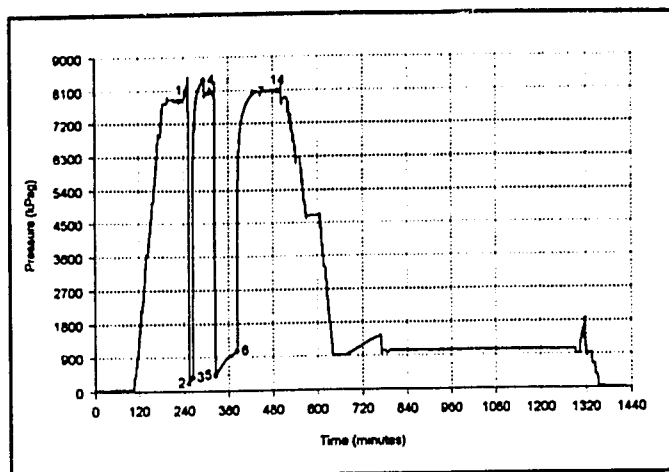


|    |                     | Pressure<br>(kPag) | Time<br>(min) |
|----|---------------------|--------------------|---------------|
| 1  | Initial Hydrostatic | 7927               |               |
| 2  | Start of 1st Flow   | 290                |               |
| 3  | End of 1st Flow     | 430                | 9.5           |
| 4  | End of 1st Shut-in  | 8470               | 30.5          |
| 5  | Start of 2nd Flow   | 460                |               |
| 6  | End of 2nd Flow     | 1129               | 60.0          |
| 7  | End of 2nd Shut-in  | 8128               | 46.0          |
| 14 | Final Hydrostatic   | 8170               |               |

## Recorder# 71005

Depth: 763.00 m  
Temperature: 32.6 C  
Location: Outside

Recorder Type: SPAR  
Capacity: 68,900 kPag



|    |                     | Pressure<br>(kPag) | Time<br>(min) |
|----|---------------------|--------------------|---------------|
| 1  | Initial Hydrostatic | 7816               |               |
| 2  | Start of 1st Flow   | 200                |               |
| 3  | End of 1st Flow     | 349                | 9.5           |
| 4  | End of 1st Shut-in  | 8362               | 30.5          |
| 5  | Start of 2nd Flow   | 395                |               |
| 6  | End of 2nd Flow     | 1042               | 60.0          |
| 7  | End of 2nd Shut-in  | 8023               | 46.0          |
| 14 | Final Hydrostatic   | 8065               |               |





**GREY WOLF-CANAXAS DEH CHO-2 B-14-**  
**00/ 65.131 / 126.325 /0**  
**DST# 2**

**Baker Oil Tools**

**Formation:** Upper Hume Member  
**Interval - from:** 651.00 **to:** 667.00 meters

**Test Date:** 1999-01-29  
**Test Type :** Inflate Straddle

**Recorder#** 71005 at 654.00 meters

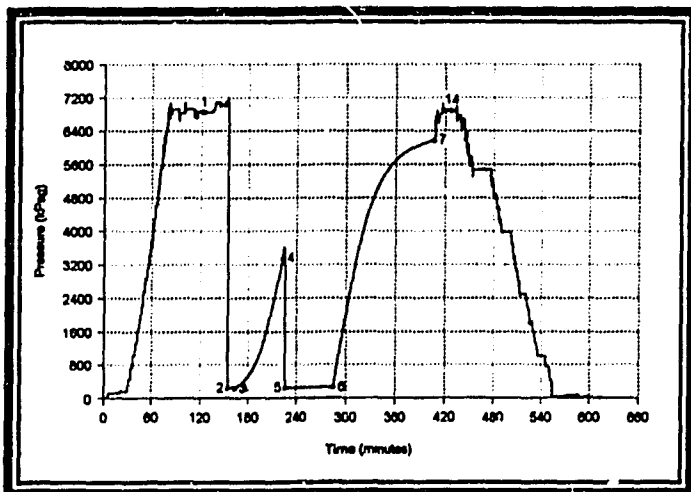
**Blow Description:**

**PREFLOW:** Very weak air blow throughout. No gas to surface.

**FINAL FLOW:** Weak air blow increasing to strong. Opened to the pit and the blow decreased to weak. It took 5 minutes to build back to strong. No gas to surface.

**Remarks:**

Mechanically successful test. Results suggest low permeability within the interval tested. The shut-ins were not extrapolated due to insufficient curve development.



**Max Btm Hole Temperature @ FSI:** 31.2 C

|    |                     | Pressure<br>(kPag) | Time<br>(min) | Extrapolated<br>Pressure<br>(kPag) |
|----|---------------------|--------------------|---------------|------------------------------------|
| 1  | Initial Hydrostatic | 6839               |               |                                    |
| 2  | Start of 1st Flow   | 211                |               |                                    |
| 3  | End of 1st Flow     | 208                | 9.5           |                                    |
| 4  | End of 1st Shut-in  | 3330               | 57.5          |                                    |
| 5  | Start of 2nd Flow   | 226                |               |                                    |
| 6  | End of 2nd Flow     | 240                | 59.0          |                                    |
| 7  | End of 2nd Shut-in  | 6160               | 122.5         |                                    |
| 14 | Final Hydrostatic   | 6870               |               |                                    |

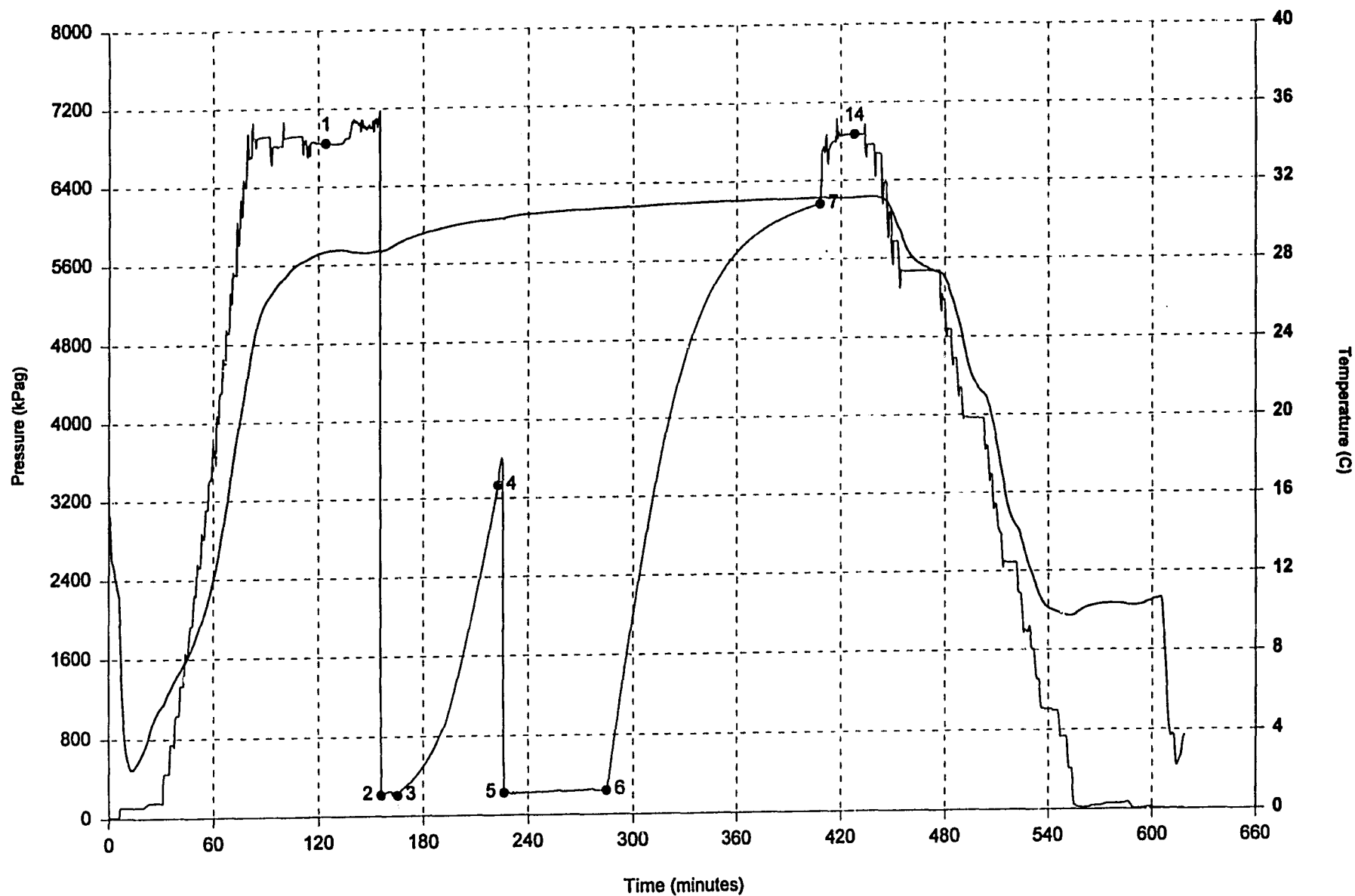
**Liquid Recovery 10.00 meters**

**Salinity :** 1 500 g/m3

| Recovery | Description    |
|----------|----------------|
| 10.00 m  | DRILLING FLUID |

GREY WOLF-CANAXAS DEH CHO-2 B-14  
00/ 65.131 / 126.325 /0  
DST #: 2  
Recorder: 71005

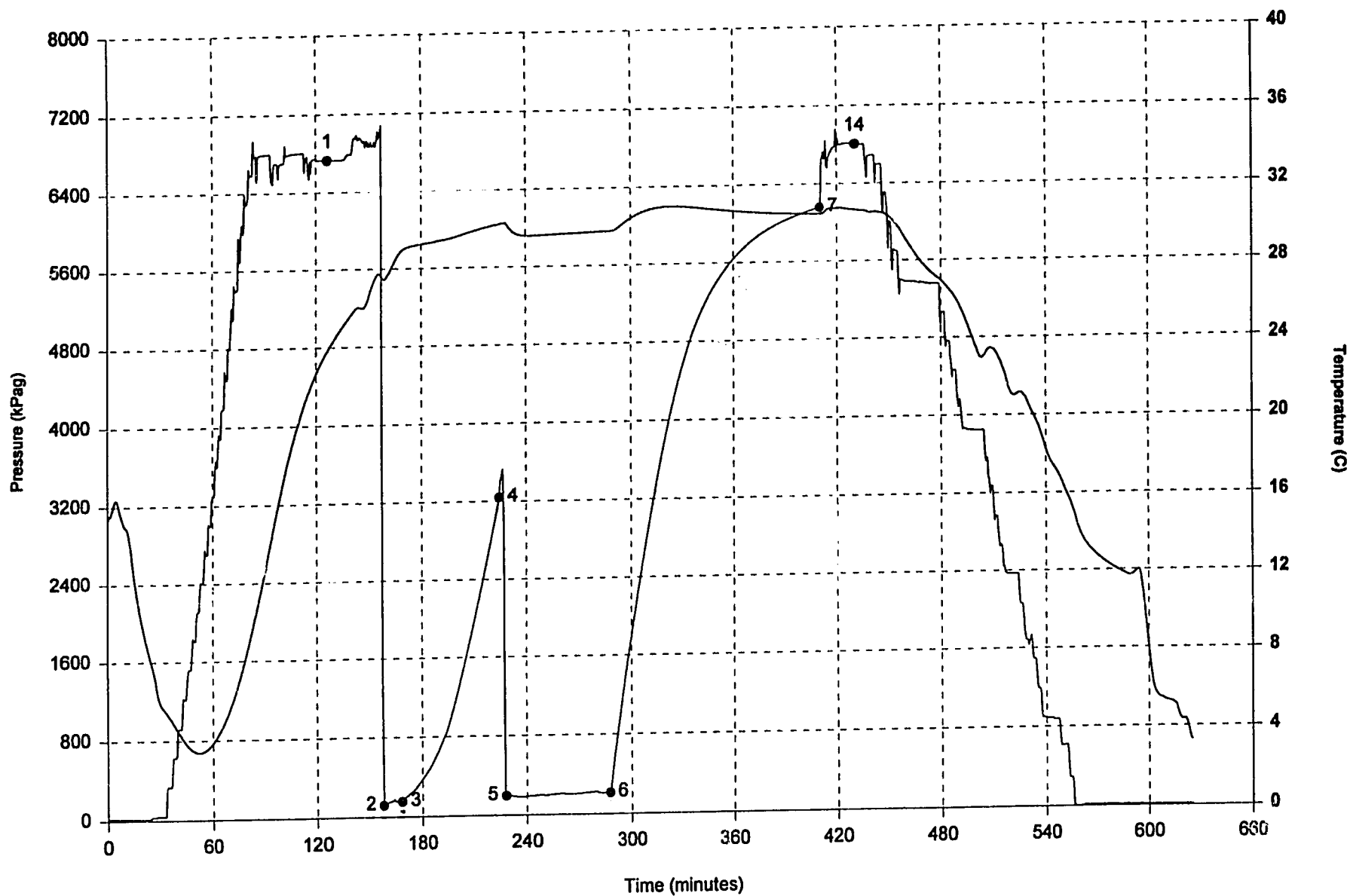
Pressure (kPag) at Critical Points:  
1: 6839 4: 3330 7: 6160  
2: 211 5: 226 14: 6870  
3: 208 6: 240



GREY WOLF-CANAXAS DEH CHO-2 B-14  
 00/ 65.131 / 126.325 / 0  
 DST #: 2  
 Recorder: 70107

Pressure (kPag) at Critical Points:  
 1: 6726    4: 3240    7: 6157  
 2: 115    5: 192    14: 6800  
 3: 150    6: 210

Above interval



**GREY WOLF-CANAXAS DEH CHO-2 B-14**  
**00/ 65.131 / 126.325 /0**  
**DST# 2**

**General Information:**

Operator: GreyWolf Exploration Inc.  
c/o: Pajak Engineering Ltd.  
1660, 717 - 7th Avenue SW  
Calgary Alberta T2P 0Z3

Tester: Halligan J  
Ticket#: 807777  
Reverse Circulated? N  
KB Elevation: 65.30 meters  
Ground Elevat'n: 58.40 meters  
Total Depth: 800.00 meters

**Mud Data:**

Weight: 1050 kg/m3  
Type: Gel Polymer  
Viscosity: 65 s/l  
Water Loss: 5.0 cc/s

**Hole Data:**

Drilled Hole Size: 222 mm  
Calipered Hole Size: 222 mm  
Hole Condition at Test Time: Fair  
Conditioned prior to this test? N

**Recorder Summary:**

| Recorder# | Type | Position | Capacity | Units | Depth  | Comments                            |
|-----------|------|----------|----------|-------|--------|-------------------------------------|
| 13654     | K-3  | Inside   | 20000    | kPag  | 638.00 | Recovery recorder<br>Above interval |
| 70107     | SPAR | Inside   | 34500    | kPag  | 641.00 |                                     |
| 21158     | K-3  | Outside  | 23100    | kPag  | 654.00 |                                     |
| 71005     | SPAR | Outside  | 68900    | kPag  | 654.00 |                                     |

**Distributions:**

Reports Sent To: Gerard Geib  
Fluid Samples - no of: 1

| Bottom Hole Sampler# | Sent To |
|----------------------|---------|
| 98                   |         |

**GREY WOLF-CANAXAS DEH CHO-2 B-14**  
**00/ 65.131 / 126.325 /0**  
**DST# 2**

**Tool Sequence:**

| <i>Diagram</i> | <i>Description</i>    | <i>Length</i> |
|----------------|-----------------------|---------------|
|                | Pump Out Sub          | 0.40 m        |
|                | Cross Over Sub        | 0.30 m        |
|                | Pump Out Sub          | 0.40 m        |
|                | Recorder Carrier      | 1.38 m        |
|                | Hydraulic Tool        | 1.50 m        |
|                | Bottom Hole Sampler   | 1.03 m        |
|                | Recorder Carrier      | 1.38 m        |
|                | Hydraulic Jars        | 2.22 m        |
|                | Safety Joint          | 0.65 m        |
|                | Inflate Pump          | 2.38 m        |
|                | Screen                | 1.16 m        |
|                | Top Inflate Packer    | 1.78 m        |
|                | Packer Stick Down     | 0.82 m        |
|                | Port Sub              | 0.42 m        |
|                | Recorder Carrier      | 2.06 m        |
|                | Spacing               | 1.95 m        |
|                | Cross Over Sub        | 0.30 m        |
|                | Drill Collar          | 9.55 m        |
|                | Cross Over Sub        | 0.40 m        |
|                | Packer Stick Up       | 0.50 m        |
|                | Bottom Inflate Packer | 1.90 m        |
|                | Perforations          | 0.30 m        |
|                | Belly Spring          | 2.00 m        |

Tool String Length: 34.78 m  
Drill Pipe O.D.: 114 mm 83.97 m  
558.87 m  
Collar Pipe Total: 642.84 m  
Stick Up: 6.42 m  
Tool Above: 14.58 m  
Interval Tested: 16.00 m  
Bottom Hole Choke Size: 25.40 mm

**GREY WOLF-CANAXAS DEH CHO-2 B-14**  
**00/ 65.131 / 126.325 /0**  
**DST# 2**  
**Recorder# 70107**

**Build-up and Flow Curve Increments**

**Flow# 1**

**Shut-in# 1**

| Chart Label | Time (min) | Pressure (kPag) | Chart Label | Time (min) | Delta P (kPag) | Pressure (kPag) | Abscissa (T+dT)/dT | Used for Extrap |
|-------------|------------|-----------------|-------------|------------|----------------|-----------------|--------------------|-----------------|
| 2           | 0.0        | 211             |             | 0.0        |                | 208             |                    |                 |
|             | 1.0        | 223             |             | 1.5        | 40             | 249             | 7.3333             |                 |
|             | 2.0        | 231             |             | 3.0        | 66             | 274             | 4.1667             |                 |
|             | 3.0        | 238             |             | 4.5        | 88             | 296             | 3.1111             |                 |
|             | 4.0        | 243             |             | 6.0        | 111            | 319             | 2.5833             |                 |
|             | 5.0        | 248             |             | 7.5        | 133            | 341             | 2.2667             |                 |
|             | 6.0        | 245             |             | 9.0        | 163            | 371             | 2.0556             |                 |
|             | 7.0        | 230             |             | 10.5       | 197            | 405             | 1.9048             |                 |
|             | 8.0        | 201             |             | 12.0       | 232            | 440             | 1.7917             |                 |
|             | 9.0        | 240             |             | 13.5       | 268            | 476             | 1.7037             |                 |
| 3           | 9.5        | 208             |             | 15.0       | 306            | 514             | 1.6333             |                 |
|             |            |                 |             | 16.5       | 346            | 554             | 1.5758             |                 |
|             |            |                 |             | 18.0       | 390            | 598             | 1.5278             |                 |
|             |            |                 |             | 19.5       | 439            | 647             | 1.4872             |                 |
|             |            |                 |             | 21.0       | 491            | 699             | 1.4524             |                 |
|             |            |                 |             | 22.5       | 546            | 755             | 1.4222             |                 |
|             |            |                 |             | 24.0       | 605            | 814             | 1.3958             |                 |
|             |            |                 |             | 25.5       | 665            | 873             | 1.3725             |                 |
|             |            |                 |             | 27.0       | 730            | 938             | 1.3519             |                 |
|             |            |                 |             | 28.5       | 816            | 1024            | 1.3333             |                 |
|             |            |                 |             | 30.0       | 906            | 1114            | 1.3167             |                 |
|             |            |                 |             | 31.5       | 1000           | 1208            | 1.3016             |                 |
|             |            |                 |             | 33.0       | 1098           | 1306            | 1.2879             |                 |
|             |            |                 |             | 34.5       | 1200           | 1408            | 1.2754             |                 |
|             |            |                 |             | 36.0       | 1306           | 1514            | 1.2639             |                 |
|             |            |                 |             | 37.5       | 1416           | 1624            | 1.2533             |                 |
|             |            |                 |             | 39.0       | 1529           | 1737            | 1.2436             |                 |
|             |            |                 |             | 40.5       | 1645           | 1853            | 1.2346             |                 |
|             |            |                 |             | 42.0       | 1764           | 1972            | 1.2262             |                 |
|             |            |                 |             | 43.5       | 1887           | 2095            | 1.2184             |                 |
|             |            |                 |             | 45.0       | 2012           | 2220            | 1.2111             |                 |
|             |            |                 |             | 46.5       | 2139           | 2347            | 1.2043             |                 |
|             |            |                 |             | 48.0       | 2268           | 2477            | 1.1979             |                 |
|             |            |                 |             | 49.5       | 2400           | 2608            | 1.1919             |                 |
|             |            |                 |             | 51.0       | 2534           | 2742            | 1.1863             |                 |
|             |            |                 |             | 52.5       | 2668           | 2876            | 1.1810             |                 |
|             |            |                 |             | 54.0       | 2804           | 3012            | 1.1759             |                 |
|             |            |                 |             | 55.5       | 2940           | 3148            | 1.1712             |                 |
|             |            |                 |             | 57.0       | 3076           | 3284            | 1.1667             |                 |
| 4           |            |                 |             | 57.5       | 3122           | 3330            | 1.1652             |                 |

Note: Increment listing is filtered to include critical data only. Complete time/pressure data is available in electronic or printed format.



# GREY WOLF-CANAXAS DEH CHO-2 B-14

00/ 65.131 / 126.325 /0

DST# 2

Recorder#70107

## Build-up and Flow Curve Increments

### Flow# 2

### Shut-in# 2

| Chart Label | Time (min) | Pressure (kPag) | Chart Label | Time (min) | Delta P (kPag) | Pressure (kPag) | Abscissa (T+dT)/dT | Used for Extrap |
|-------------|------------|-----------------|-------------|------------|----------------|-----------------|--------------------|-----------------|
| 5           | 0.0        | 226             |             | 0.0        |                | 240             |                    |                 |
|             | 1.5        | 232             |             | 3.0        | 374            | 614             | 23.8333            |                 |
|             | 3.0        | 226             |             | 6.0        | 747            | 988             | 12.4167            |                 |
|             | 4.5        | 208             |             | 9.0        | 1116           | 1356            | 8.6111             |                 |
|             | 6.0        | 211             |             | 12.0       | 1467           | 1707            | 6.7083             |                 |
|             | 7.5        | 229             |             | 15.0       | 1815           | 2055            | 5.5667             |                 |
|             | 9.0        | 218             |             | 18.0       | 2152           | 2392            | 4.8056             |                 |
|             | 10.5       | 224             |             | 21.0       | 2475           | 2715            | 4.2619             |                 |
|             | 12.0       | 223             |             | 24.0       | 2783           | 3023            | 3.8542             |                 |
|             | 13.5       | 225             |             | 27.0       | 3074           | 3315            | 3.5370             |                 |
|             | 15.0       | 225             |             | 30.0       | 3347           | 3588            | 3.2833             |                 |
|             | 16.5       | 231             |             | 33.0       | 3601           | 3842            | 3.0758             |                 |
|             | 18.0       | 229             |             | 36.0       | 3836           | 4076            | 2.9028             |                 |
|             | 19.5       | 235             |             | 39.0       | 4051           | 4291            | 2.7564             |                 |
|             | 21.0       | 230             |             | 42.0       | 4247           | 4487            | 2.6310             |                 |
|             | 22.5       | 232             |             | 45.0       | 4424           | 4664            | 2.5222             |                 |
|             | 24.0       | 230             |             | 48.0       | 4583           | 4823            | 2.4271             |                 |
|             | 25.5       | 235             |             | 51.0       | 4726           | 4966            | 2.3431             |                 |
|             | 27.0       | 234             |             | 54.0       | 4854           | 5095            | 2.2685             |                 |
|             | 28.5       | 239             |             | 57.0       | 4969           | 5209            | 2.2018             |                 |
|             | 30.0       | 241             |             | 60.0       | 5071           | 5312            | 2.1417             |                 |
|             | 31.5       | 244             |             | 63.0       | 5163           | 5403            | 2.0873             |                 |
|             | 33.0       | 235             |             | 66.0       | 5245           | 5486            | 2.0379             |                 |
|             | 34.5       | 234             |             | 69.0       | 5319           | 5559            | 1.9928             |                 |
|             | 36.0       | 234             |             | 72.0       | 5385           | 5626            | 1.9514             |                 |
|             | 37.5       | 236             |             | 75.0       | 5445           | 5685            | 1.9133             |                 |
|             | 39.0       | 236             |             | 78.0       | 5498           | 5739            | 1.8782             |                 |
|             | 40.5       | 238             |             | 81.0       | 5547           | 5788            | 1.8457             |                 |
|             | 42.0       | 240             |             | 84.0       | 5591           | 5832            | 1.8155             |                 |
|             | 43.5       | 243             |             | 87.0       | 5632           | 5872            | 1.7874             |                 |
|             | 45.0       | 247             |             | 90.0       | 5668           | 5908            | 1.7611             |                 |
|             | 46.5       | 246             |             | 93.0       | 5702           | 5942            | 1.7366             |                 |
|             | 48.0       | 250             |             | 96.0       | 5732           | 5972            | 1.7135             |                 |
|             | 49.5       | 252             |             | 99.0       | 5760           | 6001            | 1.6919             |                 |
|             | 51.0       | 256             |             | 102.0      | 5786           | 6027            | 1.6716             |                 |
|             | 52.5       | 240             |             | 105.0      | 5810           | 6051            | 1.6524             |                 |
|             | 54.0       | 238             |             | 108.0      | 5833           | 6073            | 1.6343             |                 |
|             | 55.5       | 238             |             | 111.0      | 5853           | 6094            | 1.6171             |                 |
|             | 57.0       | 239             |             | 114.0      | 5872           | 6113            | 1.6009             |                 |
|             | 58.5       | 239             |             | 117.0      | 5890           | 6131            | 1.5855             |                 |
| 6           | 59.0       | 240             |             | 120.0      | 5907           | 6147            | 1.5708             |                 |
|             |            |                 | 7           | 122.5      | 5920           | 6160            | 1.5592             |                 |

Note: Increment listing is filtered to include critical data only. Complete time/pressure data is available in electronic or printed format.

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**GREY WOLF-CANAXAS DEH CHO-2 B-14**

**00/ 65.131 / 126.325 /0**

**DST# 2**

**Recorder#71005**

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**Build-up and Flow Curve Increments**

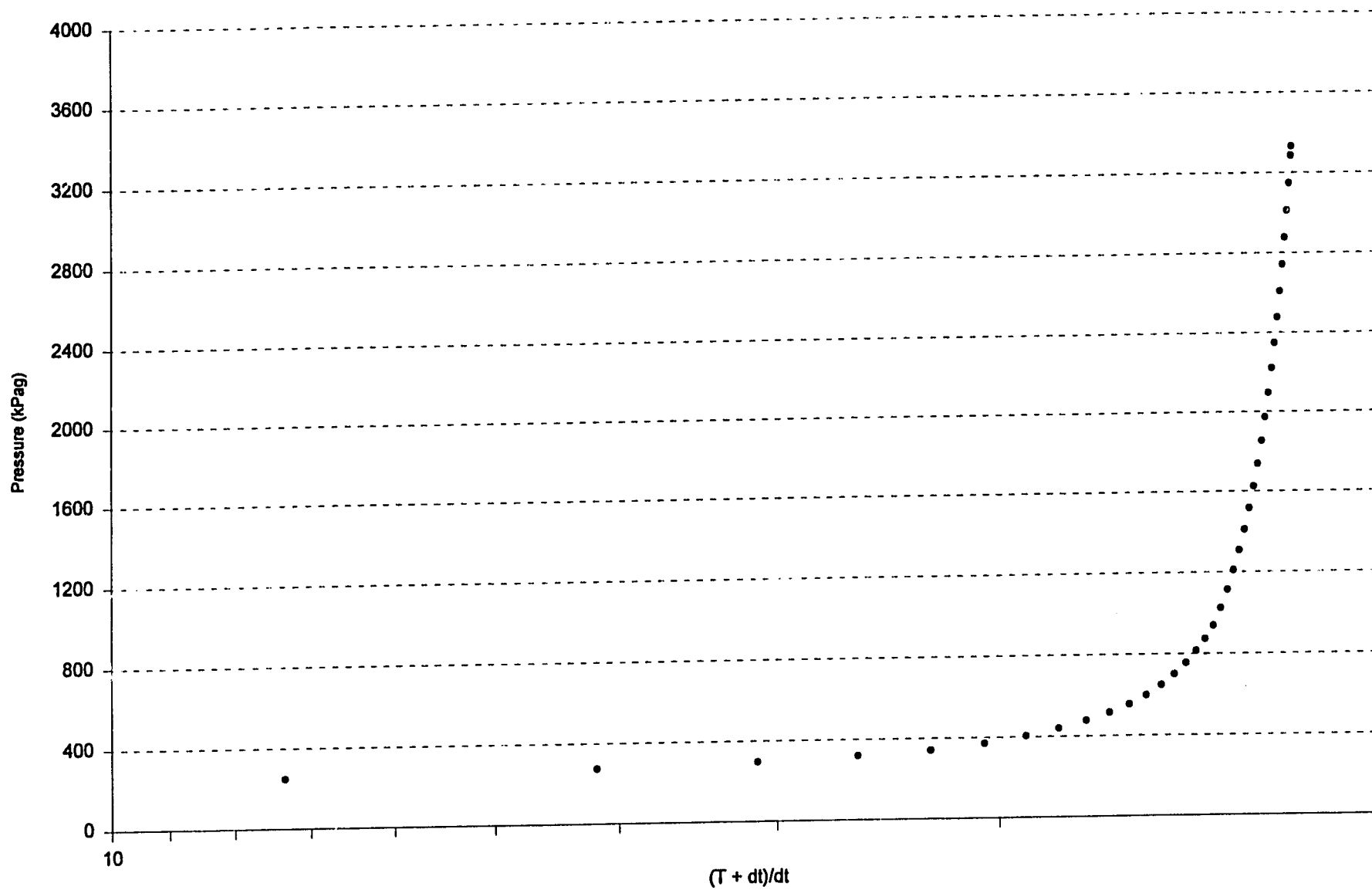
**Horner Extrapolation:**

**Note: Increment listing is filtered to include critical data only. Complete time/pressure data is available in electronic or printed format.**

### Shut-in #1

BAKER OIL TOOLS / LYNES DRILL STEM TESTING

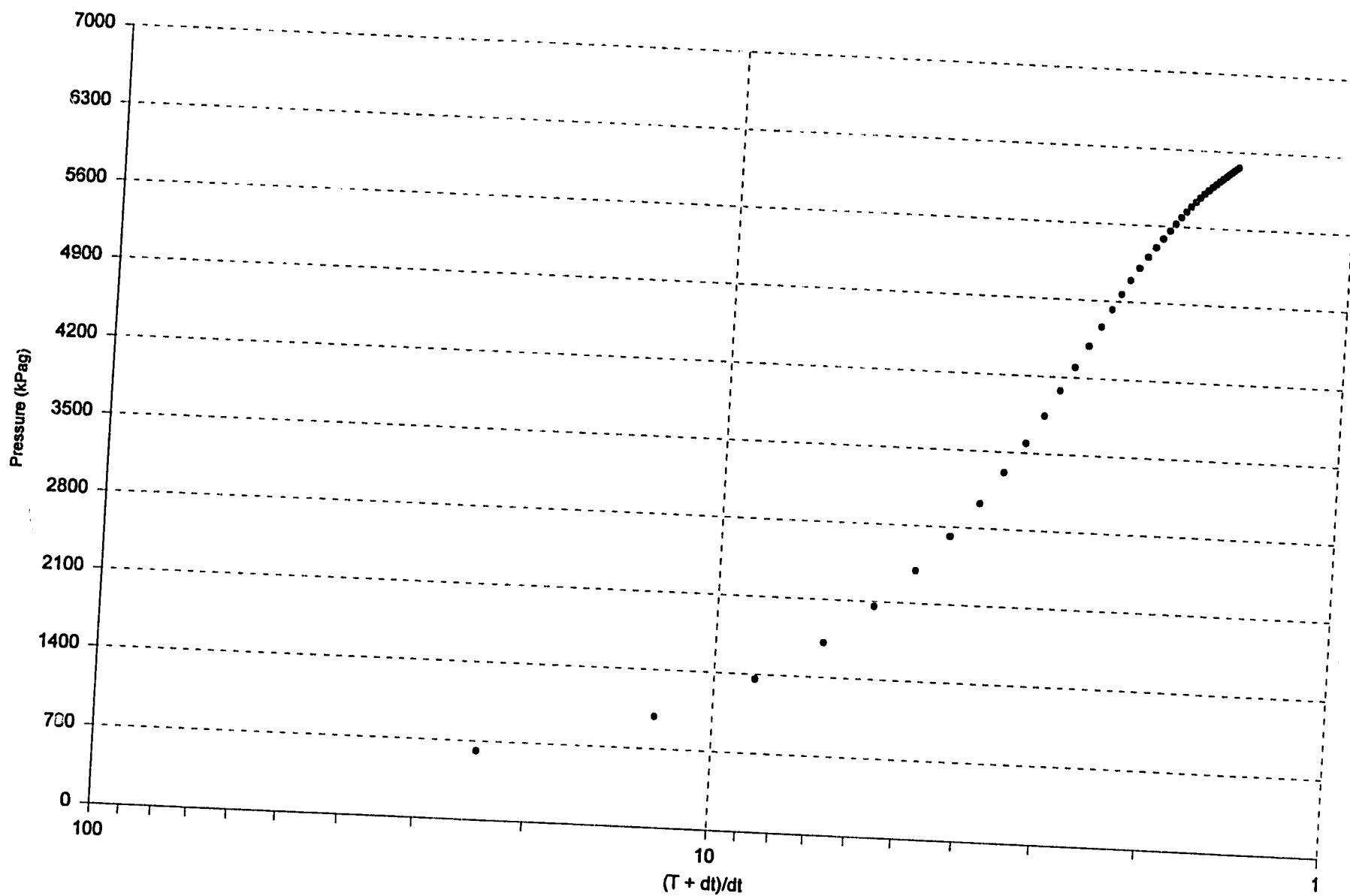
Page: 9



GREY WOLF-CANAXAS DEH CHO-2 B-14  
00/65.131 / 126.325 / 0  
DST #: 2  
Recorder: 71005

Shut-in #2

BAKER OIL TOOLS / LYNES DRILL STEM TESTING

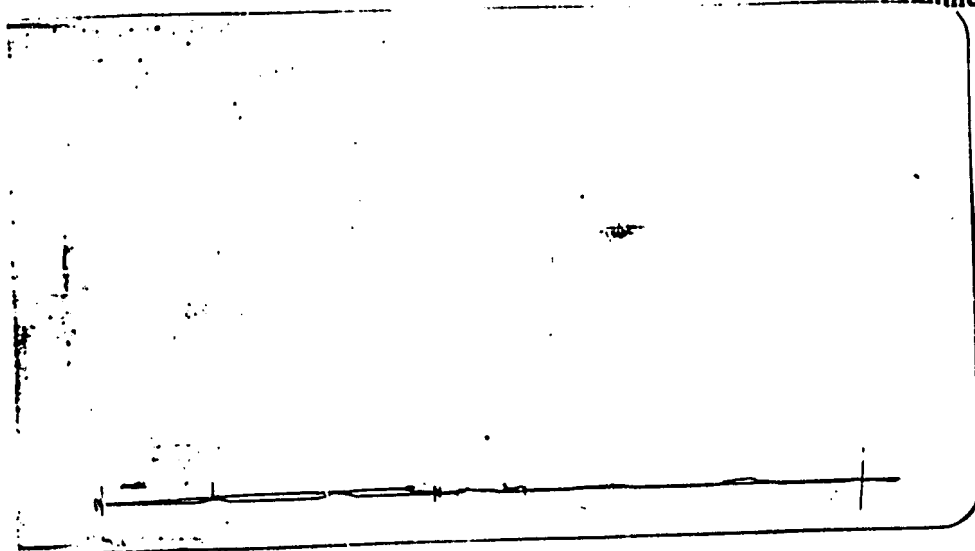


**GREY WOLF-CANAXAS DEH CHO-2 B-14**  
**00/ 65.131 / 126.325 /0**  
**DST# 2**

**Recorder# 13654**

Depth: 638.00 m  
 Location: Inside

Recorder Type: K-3  
 Capacity: 20,000 kPag  
 Comments: Recovery recorder

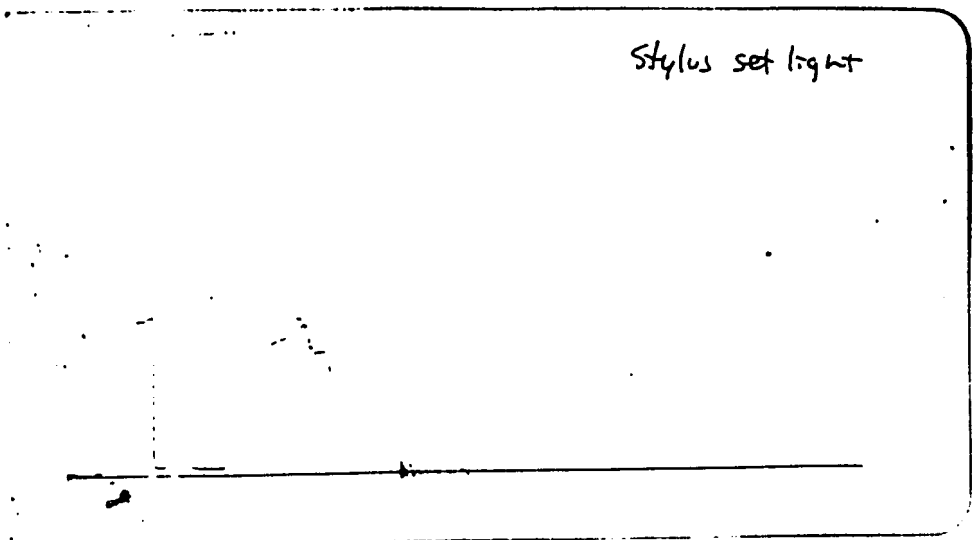


|   |                    | Pressure<br>(kPag) | Time<br>(min) |
|---|--------------------|--------------------|---------------|
| 2 | Start of 1st Flow  | 0                  |               |
| 3 | End of 1st Flow    | 181                | 9.5           |
| 5 | Start of 2nd Flow  | 181                |               |
| 6 | End of 2nd Flow    | 272                | 59.0          |
| 7 | End of 2nd Shut-in | 272                | 122.5         |

**Recorder# 21158**

Depth: 654.00 m  
 Location: Outside

Recorder Type: K-3  
 Capacity: 23,100 kPag



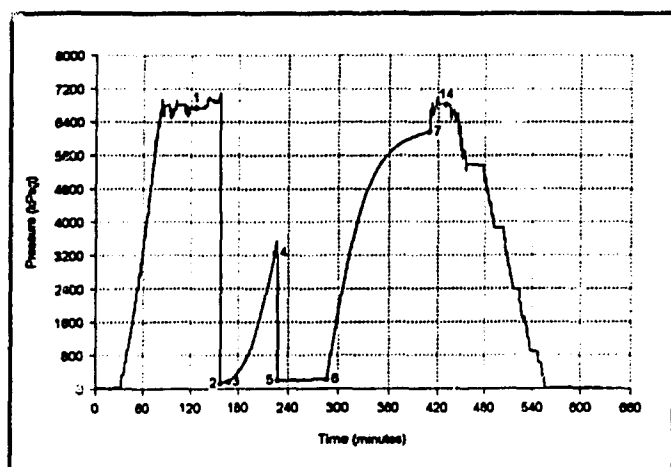
|    |                     | Pressure<br>(kPag) | Time<br>(min) |
|----|---------------------|--------------------|---------------|
| 1  | Initial Hydrostatic | 6877               |               |
| 2  | Start of 1st Flow   | 332                |               |
| 3  | End of 1st Flow     | 326                | 9.5           |
| 4  | End of 1st Shut-in  | 3402               | 57.5          |
| 5  | Start of 2nd Flow   | 335                |               |
| 6  | End of 2nd Flow     | 364                | 59.0          |
| 7  | End of 2nd Shut-in  | 6085               | 122.5         |
| 14 | Final Hydrostatic   | 6877               |               |

# **GREY WOLF-CANAXAS DEH CHO-2 B-14** **00/ 65.131 / 126.325 / 0** **DST# 2**

## **Recorder# 70107**

Depth: 641.00 m  
 Temperature: 30.4 C  
 Location: Inside

Recorder Type: SPAR  
 Capacity: 34,500 kPag  
 Comments: Above interval

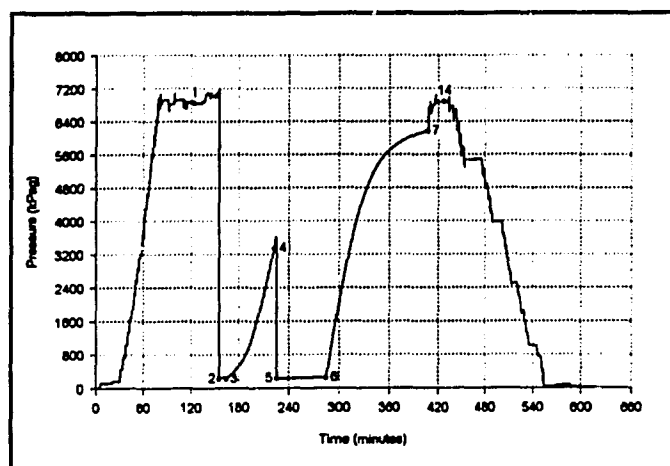


|    |                     | Pressure<br>(kPag) | Time<br>(min) |
|----|---------------------|--------------------|---------------|
| 1  | Initial Hydrostatic | 6726               |               |
| 2  | Start of 1st Flow   | 115                |               |
| 3  | End of 1st Flow     | 150                | 9.5           |
| 4  | End of 1st Shut-in  | 3240               | 57.5          |
| 5  | Start of 2nd Flow   | 192                |               |
| 6  | End of 2nd Flow     | 210                | 59.0          |
| 7  | End of 2nd Shut-in  | 6157               | 122.5         |
| 14 | Final Hydrostatic   | 6800               |               |

## **Recorder# 71005**

Depth: 654.00 m  
 Temperature: 31.2 C  
 Location: Outside

Recorder Type: SPAR  
 Capacity: 68,900 kPag



|    |                     | Pressure<br>(kPag) | Time<br>(min) |
|----|---------------------|--------------------|---------------|
| 1  | Initial Hydrostatic | 6839               |               |
| 2  | Start of 1st Flow   | 211                |               |
| 3  | End of 1st Flow     | 208                | 9.5           |
| 4  | End of 1st Shut-in  | 3330               | 57.5          |
| 5  | Start of 2nd Flow   | 226                |               |
| 6  | End of 2nd Flow     | 240                | 59.0          |
| 7  | End of 2nd Shut-in  | 6160               | 122.5         |
| 14 | Final Hydrostatic   | 6870               |               |



## **VI Appendices**

### **1) Fluid Analysis**



14203 - 129 Avenue, Edmonton, Alberta T5L 4N9  
Phone (780) 433-5522

E99-31072-01  
Laboratory Report Number

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## WATER ANALYSIS

Energy Resource Group

Grey Wolf Exploration Inc.

PLASTIC

DEH CHO-2,14B

Location

Grey Wolf Canaxas DEH CHO-2,14B

Well Name

\* KB Elev, m

\* GR Elev, m

Canaxas

Field/Area

Not Provided

Pool / Zone

Sampler

Company

DST

1

Test Type

No

Multiple Recovery

N

Test Recovery:

\*

\*Not Provided

Test Interval, m

760-776

Perforations, m

Top #1

Sample Point

Amount & Type of Cushion

Mud Resistivity

@ 25°C

Type of Production:

Pumping

Flowing

Gas Lift

Swab

Production Rates:

Water

m<sup>3</sup>/d

Oil

m<sup>3</sup>/d

Gas

10<sup>3</sup> m<sup>3</sup>/d

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

Date Sampled (Y-M-D)

1999-02-22

Date Received (Y-M-D)

1999-03-03

Date Reported (Y-M-D)

K. Leong

Analyst

Other Information

| Ion | mg/L  | Mass Fraction | meq/L  |
|-----|-------|---------------|--------|
| Na  | 2 829 | 0.2414        | 123.06 |
| K   | 39    | 0.0033        | 1.00   |
| Ca  | 1 049 | 0.0895        | 52.35  |
| Mg  | 238   | 0.0203        | 19.56  |
| Ba  |       |               |        |
| Sr  |       |               |        |
| Fe  | Nil   |               |        |
|     |       |               |        |
|     |       |               |        |

| Ion              | mg/L    | Mass Fraction | meq/L  |
|------------------|---------|---------------|--------|
| Cl               | 4 240   | 0.3619        | 119.57 |
| Br               |         |               |        |
| I                |         |               |        |
| HCO <sub>3</sub> | 146     | 0.0125        | 2.40   |
| SO <sub>4</sub>  | 3 177   | 0.2711        | 66.08  |
| CO <sub>3</sub>  | 0       | 0.0000        | 0.00   |
| OH               | 0       | 0.0000        | 0.00   |
| H <sub>2</sub> S | Present |               |        |
|                  |         |               |        |
|                  |         |               |        |

Total Dissolved Solids, mg/L

Evaporated @ 110°C Evaporated @ 180°C

13 320

At Ignition

Calculated

10 820

11 718

Organic Matter: Much

Relative Density

Refractive Index

1.010 @ 25°C

1.3347 @ 25°C

Observed pH

Resistivity ohm.m

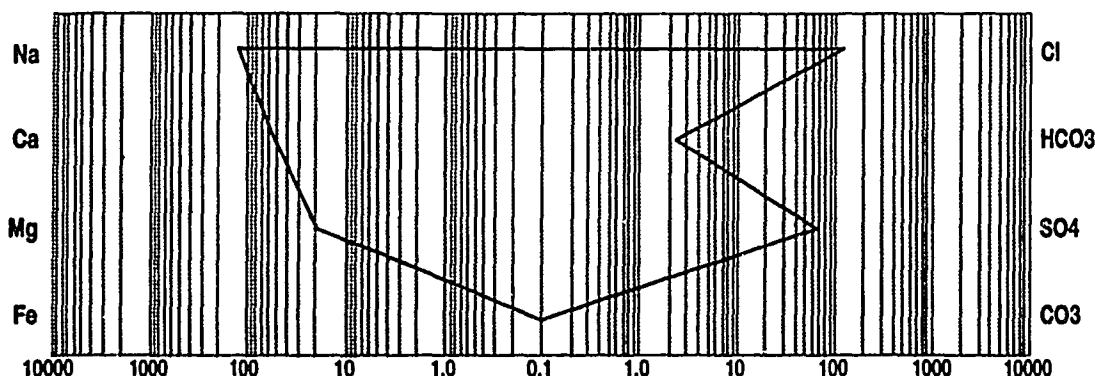
8.0 @ 17 °C

0.658 @ 25°C

Remarks

Analysis performed on a green filtrate recovered from sour watery mud.

Logarithmic Pattern of Dissolved Ions, meq/L



Supervisor

R. Peters

R. Peters

Approved

S. Montgomery



14203 - 129 Avenue, Edmonton, Alberta T5L 4N9  
Phone (780) 438-6522

E99-31072-02  
Laboratory Report Number

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## WATER ANALYSIS

Energy Resource Group

Grey Wolf Exploration Inc.

PLASTIC

Operator

Container Identity

DEH CHO-2,14B

Grey Wolf Canaxas DEH CHO-2,14B

Location

Well Name

\* KB Elev, m

\* GR Elev, m

Canaxas

Field/Area

Not Provided

Pool / Zone

Sampler

Company

DST

1

Test Type

No

Multiple Recovery

N

Test Recovery:

\*

\*Not Provided

Test Interval, m

760-776

Perforations, m

Top #2

Sample Point

Amount & Type of Cushion

Mud Resistivity

@ 25°C

Type of Production:

Pumping

Flowing

Gas Lift

Swab

Production Rates:

Water

m<sup>3</sup>/d

Oil

m<sup>3</sup>/d

Gas

10<sup>3</sup> m<sup>3</sup>/d

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

Date Sampled (Y-M-D)

1999-02-22  
Date Received (Y-M-D)

1999-03-03  
Date Reported (Y-M-D)

K. Leong  
Analyst

Other Information

| Ion | mg/L  | Mass Fraction | meq/L  |
|-----|-------|---------------|--------|
| Na  | 2 829 | 0.2391        | 123.06 |
| K   | 39    | 0.0033        | 1.00   |
| Ca  | 969   | 0.0819        | 48.35  |
| Mg  | 243   | 0.0205        | 19.96  |
| Ba  |       |               |        |
| Sr  |       |               |        |
| Fe  | Nil   |               |        |
|     |       |               |        |
|     |       |               |        |

| Ion              | mg/L    | Mass Fraction | meq/L  |
|------------------|---------|---------------|--------|
| Cl               | 4 170   | 0.3524        | 117.59 |
| Br               |         |               |        |
| I                |         |               |        |
| HCO <sub>3</sub> | 464     | 0.0392        | 7.60   |
| SO <sub>4</sub>  | 3 119   | 0.2636        | 64.88  |
| CO <sub>3</sub>  | 0       | 0.0000        | 0.00   |
| OH               | 0       | 0.0000        | 0.00   |
| H <sub>2</sub> S | Present |               |        |
|                  |         |               |        |
|                  |         |               |        |

Total Dissolved Solids, mg/L

Evaporated @ 110°C Evaporated @ 180°C

13 340

At Ignition

Calculated

10 940

11 833

Organic Matter: Much

Relative Density

Refractive Index

1.010 @ 25°C

1.3347 @ 25°C

Observed pH

Resistivity ohm.m

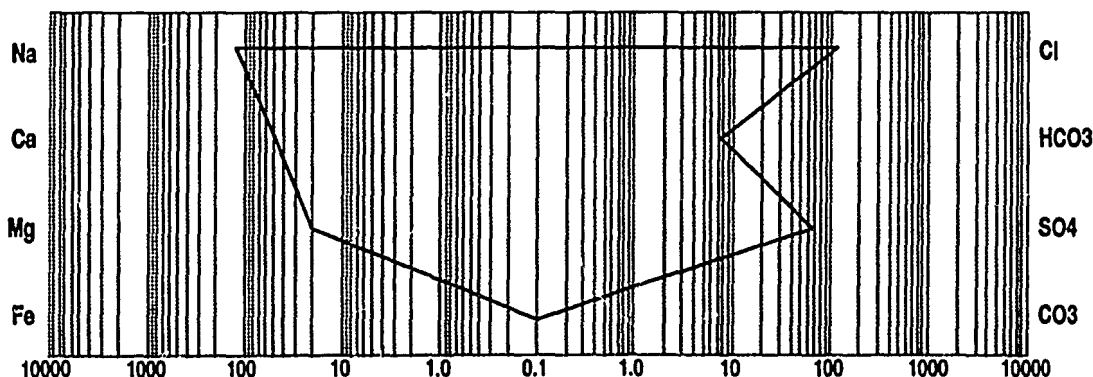
8.0 @ 17 °C

0.667 @ 25°C

Remarks

Analysis performed on a green filtrate recovered from sour watery mud.

Logarithmic Pattern of Dissolved Ions, meq/L



Supervisor R. Peters

Approved S. Montgomery



14203 - 129 Avenue, Edmonton, Alberta T5L 4N9  
Phone (780) 438-5522

E99-31072-03  
Laboratory Report Number

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## WATER ANALYSIS

Energy Resource Group

Grey Wolf Exploration Inc.

PLASTIC

Container Identity

DEH CHO-2,14B

Location

Grey Wolf Canaxas DEH CHO-2,14B

Well Name

\* KB Elev, m

\* GR Elev, m

Canaxas

Field/Area

Not Provided

Pool / Zone

Sampler

Company

DST

1

Test Type No

Multiple Recovery N

Test Recovery:

\*

\*Not Provided

Test Interval, m

760-776

Perforations, m

Middle #1

@ 25°C

Sample Point

Amount & Type of Cushion

Mud Resistivity

Type of Production: Pumping \_\_\_\_\_ Flowing \_\_\_\_\_ Gas Lift \_\_\_\_\_ Swab \_\_\_\_\_

Production Rates: Water \_\_\_\_\_ m<sup>3</sup>/d Oil \_\_\_\_\_ m<sup>3</sup>/d Gas \_\_\_\_\_ 10<sup>3</sup> m<sup>3</sup>/d

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

Date Sampled (Y-M-D)

1999-02-22  
Date Received (Y-M-D)

1999-03-03  
Date Reported (Y-M-D)

K. Leong  
Analyst

Other Information

| Ion | mg/L  | Mass Fraction | meq/L  |
|-----|-------|---------------|--------|
| Na  | 2 944 | 0.2367        | 128.06 |
| K   | 39    | 0.0031        | 1.00   |
| Ca  | 1 041 | 0.0837        | 51.95  |
| Mg  | 238   | 0.0191        | 19.56  |
| Ba  |       |               |        |
| Sr  |       |               |        |
| Fe  | Nil   |               |        |
|     |       |               |        |
|     |       |               |        |

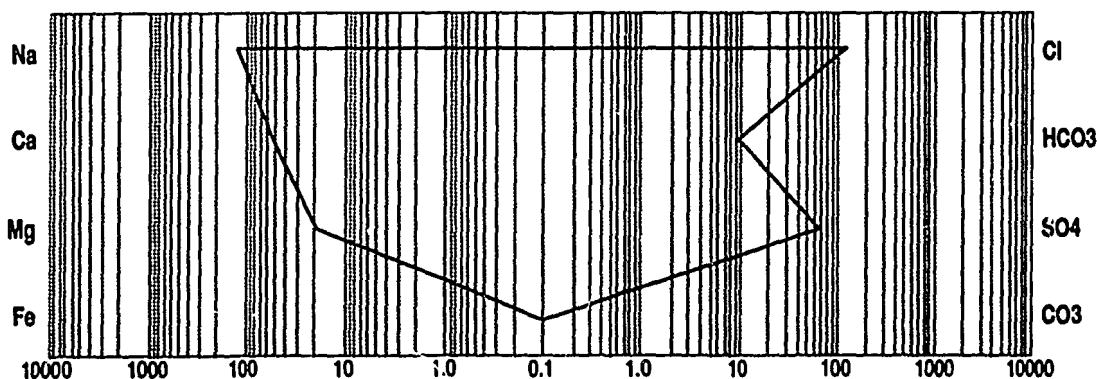
| Ion              | mg/L    | Mass Fraction | meq/L  |
|------------------|---------|---------------|--------|
| Cl               | 4 415   | 0.3550        | 124.50 |
| Br               |         |               |        |
| I                |         |               |        |
| HCO <sub>3</sub> | 569     | 0.0457        | 9.32   |
| SO <sub>4</sub>  | 3 193   | 0.2567        | 66.42  |
| CO <sub>3</sub>  | 0       | 0.0000        | 0.00   |
| OH               | 0       | 0.0000        | 0.00   |
| H <sub>2</sub> S | Present |               |        |
|                  |         |               |        |
|                  |         |               |        |

| Total Dissolved Solids, mg/L |                    |
|------------------------------|--------------------|
| Evaporated @ 110°C           | Evaporated @ 180°C |
| 13 460                       |                    |
| At Ignition                  | Calculated         |
| 11 520                       | 12 439             |
| Organic Matter: Much         |                    |
| Relative Density             | Refractive Index   |
| 1.011 @ 25°C                 | 1.3349 @ 25°C      |
| Observed pH                  | Resistivity ohm.m  |
| 8.1 @ 17 °C                  | 0.637 @ 25°C       |

### Remarks

Analysis performed on a colourless filtrate recovered from sour watery mud.

Logarithmic Pattern of Dissolved Ions, meq/L



Supervisor R. Peters R. Peters

Approved S. Montgomery S. Montgomery



14203 - 129 Avenue, Edmonton, Alberta T5L 4N9  
Phone (780) 438-5522

E99-31072-04  
Laboratory Report Number

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## WATER ANALYSIS

Energy Resource Group

Grey Wolf Exploration Inc.

PLASTIC

Container Identity

DEH CHO-2,14B

Location

Grey Wolf Canaxas DEH CHO-2,14B

Well Name

\* KB Elev, m

\* GR Elev, m

Canaxas

Field/Area

Not Provided

Pool / Zone

Sampler

Company

DST

1

Test Type

No

Multiple Recovery

N

Test Recovery:

\*

\*Not Provided

Test Interval, m

760-776

Perforations, m

Middle #2

Sample Point

Amount & Type of Cushion

Mud Resistivity

@ 25°C

Type of Production:

Pumping

Flowing

Gas Lift

Swab

Production Rates:

Water

m<sup>3</sup>/d

Oil

m<sup>3</sup>/d

Gas

10<sup>3</sup> m<sup>3</sup>/d

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

Date Sampled (Y-M-D)

1999-02-22  
Date Received (Y-M-D)

1999-03-03  
Date Reported (Y-M-D)

K. Leong  
Analyst

Other Information

| Ion | mg/L  | Mass Fraction | meq/L  |
|-----|-------|---------------|--------|
| Na  | 2 829 | 0.2369        | 123.06 |
| K   | 43    | 0.0036        | 1.10   |
| Ca  | 1 041 | 0.0872        | 51.95  |
| Mg  | 243   | 0.0203        | 19.96  |
| Ba  |       |               |        |
| Sr  |       |               |        |
| Fe  | Nil   |               |        |
|     |       |               |        |
|     |       |               |        |

| Ion              | mg/L    | Mass Fraction | meq/L  |
|------------------|---------|---------------|--------|
| Cl               | 4 165   | 0.3487        | 117.45 |
| Br               |         |               |        |
| I                |         |               |        |
| HCO <sub>3</sub> | 578     | 0.0484        | 9.48   |
| SO <sub>4</sub>  | 3 045   | 0.2549        | 63.34  |
| CO <sub>3</sub>  | 0       | 0.0000        | 0.00   |
| OH               | 0       | 0.0000        | 0.00   |
| H <sub>2</sub> S | Present |               |        |
|                  |         |               |        |
|                  |         |               |        |

Total Dissolved Solids, mg/L

Evaporated @ 110°C Evaporated @ 180°C

13 160

At Ignition

Calculated

10 660

11 944

Organic Matter: Much

Relative Density

Refractive Index

1.010 @ 25°C

1.3347 @ 25°C

Observed pH

Resistivity ohm.m

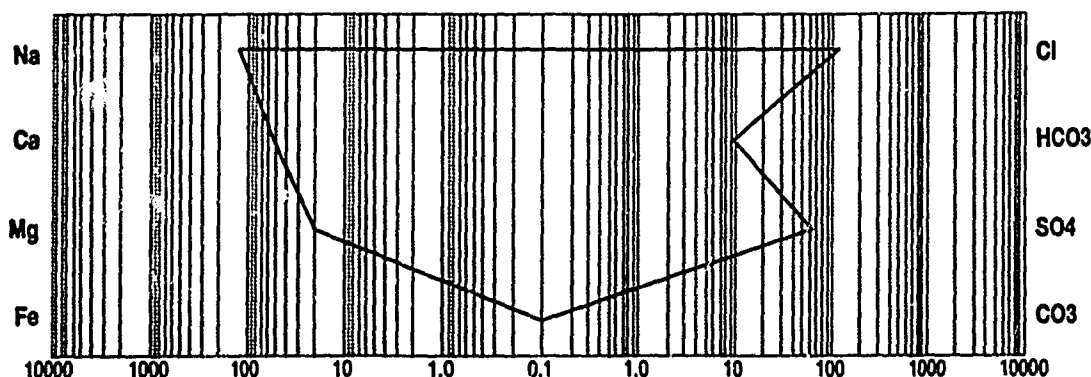
7.9 @ 17 °C

0.667 @ 25°C

Remarks

Analysis performed on a colourless filtrate recovered from sour watery mud.

Logarithmic Pattern of Dissolved Ions, meq/L



Supervisor

R. Peters

R. Peters

Approved

S. Montgomery

S. Montgomery





14203 - 129 Avenue, Edmonton, Alberta T5L 4N9  
Phone (780) 431-5522

E99-31072-05  
Laboratory Report Number

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## WATER ANALYSIS

Energy Resource Group

Grey Wolf Exploration Inc.

PLASTIC

Container Identity

DEH CHO-2,14B

Location

Grey Wolf Canaxas DEH CHO-2,14B

Well Name

\* KB Elev, m

\* GR Elev, m

Canaxas

Field/Area

Not Provided

Pool / Zone

Sampler

Company

DST

1

Test Type

No

Multiple Recovery

N

Test Recovery:

\*

\*Not Provided

Test Interval, m

760-776

Perforations, m

Bottom #1

Sample Point

Amount & Type of Cushion

Mud Resistivity

@ 25°C

Type of Production:

Pumping

Flowing

Gas Lift

Swab

Production Rates:

Water

m<sup>3</sup>/d

Oil

m<sup>3</sup>/d

Gas

10<sup>3</sup> m<sup>3</sup>/d

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

Date Sampled (Y-M-D)

1999-02-22  
Date Received (Y-M-D)

1999-03-03  
Date Reported (Y-M-D)

K. Leong  
Analyst

Other Information

| Ion | mg/L  | Mass Fraction | meq/L  |
|-----|-------|---------------|--------|
| Na  | 2 852 | 0.2311        | 124.06 |
| K   | 39    | 0.0032        | 1.00   |
| Ca  | 1 121 | 0.0909        | 55.94  |
| Mg  | 262   | 0.0213        | 21.55  |
| Ba  |       |               |        |
| Sr  |       |               |        |
| Fe  | Nil   |               |        |
|     |       |               |        |
|     |       |               |        |

| Ion              | mg/L    | Mass Fraction | meq/L  |
|------------------|---------|---------------|--------|
| Cl               | 4 165   | 0.3374        | 117.45 |
| Br               |         |               |        |
| I                |         |               |        |
| HCO <sub>3</sub> | 805     | 0.0653        | 13.21  |
| SO <sub>4</sub>  | 3 094   | 0.2508        | 64.37  |
| CO <sub>3</sub>  | 0       | 0.0000        | 0.00   |
| OH               | 0       | 0.0000        | 0.00   |
| H <sub>2</sub> S | Present |               |        |
|                  |         |               |        |
|                  |         |               |        |

Total Dissolved Solids, mg/L  
Evaporated @ 110°C Evaporated @ 180°C

13 300

At Ignition

Calculated

11 220

12 339

Organic Matter: Much

Relative Density

Refractive Index

1.011 @ 25°C

1.3350 @ 25°C

Observed pH

Resistivity ohm.m

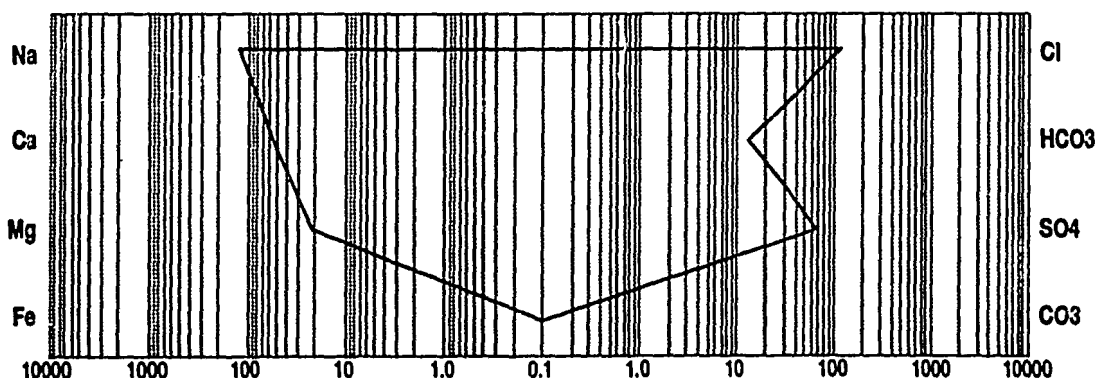
8.3 @ 17 °C

0.658 @ 25°C

Remarks

Analysis performed on a colourless filtrate recovered from sour watery mud.

Logarithmic Pattern of Dissolved Ions, meq/L



Supervisor R. Peters R. Peters

Approved S. Montgomery S. Montgomery





14203 - 129 Avenue, Edmonton, Alberta T5L 4N9  
Phone (780) 438-5522

E99-31072-06  
Laboratory Report Number

Page 6 of 8

## WATER ANALYSIS

Energy Resource Group

Grey Wolf Exploration Inc.

PLASTIC

Operator

Container Identity

DEH CHO-2,14B

Grey Wolf Canaxas DEH CHO-2,14B

\* KB Elev, m

\* GR Elev, m

Location

Well Name

Canaxas

Not Provided

Field/Area

Pool / Zone

Sampler

Company

DST

1

Test Type

No

Multiple Recovery

N

Test Recovery:

\*

\*Not Provided

Test Interval, m

760-776

Perforations, m

Bottom #2

@ 25°C

Sample Point

Amount & Type of Cushion

Mud Resistivity

Type of Production:

Pumping

Flowing

Gas Lift

Swab

Production Rates:

Water

m<sup>3</sup>/d

Oil

m<sup>3</sup>/d

Gas

10<sup>3</sup> m<sup>3</sup>/d

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

Date Sampled (Y-M-D)

1999-02-22  
Date Received (Y-M-D)

1999-03-03  
Date Reported (Y-M-D)

K. Leong  
Analyst

Other Information

| Ion | mg/L  | Mass Fraction | meq/L |
|-----|-------|---------------|-------|
| Na  | 2 001 | 0.2028        | 87.04 |
| K   | 35    | 0.0035        | 0.90  |
| Ca  | 1 121 | 0.1136        | 55.94 |
| Mg  | 175   | 0.0177        | 14.37 |
| Ba  |       |               |       |
| Sr  |       |               |       |
| Fe  | Nil   |               |       |
|     |       |               |       |
|     |       |               |       |

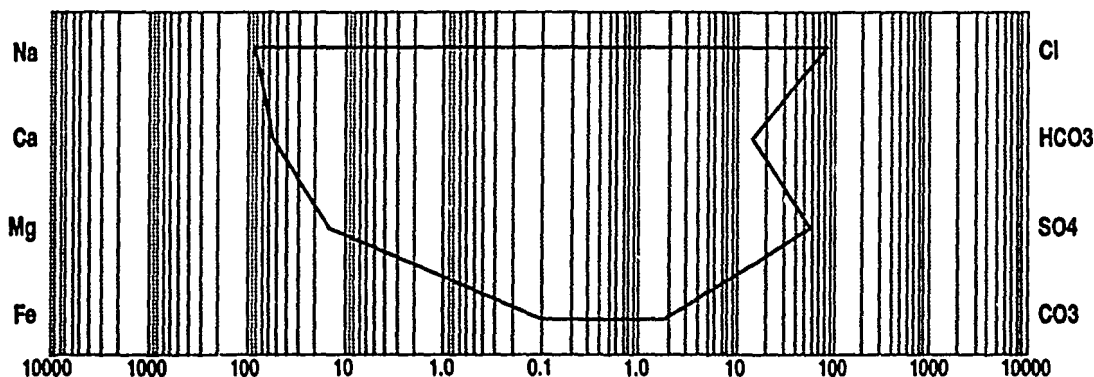
| Ion              | mg/L    | Mass Fraction | meq/L |
|------------------|---------|---------------|-------|
| Cl               | 2 950   | 0.2992        | 83.19 |
| Br               |         |               |       |
| I                |         |               |       |
| HCO <sub>3</sub> | 837     | 0.0848        | 13.73 |
| SO <sub>4</sub>  | 2 691   | 0.2728        | 55.98 |
| CO <sub>3</sub>  | 55      | 0.0056        | 1.84  |
| OH               | 0       | 0.0000        | 0.00  |
| H <sub>2</sub> S | Present |               |       |
|                  |         |               |       |
|                  |         |               |       |

| Total Dissolved Solids, mg/L |                    |
|------------------------------|--------------------|
| Evaporated @ 110°C           | Evaporated @ 180°C |
| 11 640                       |                    |
| At Ignition                  | Calculated         |
| 9 100                        | 9 865              |
| Organic Matter, Much         |                    |
| Relative Density             | Refractive Index   |
| 1.010 @ 25°C                 | 1.3349 @ 25°C      |
| Observed pH                  | Resistivity ohm.m  |
| 8.6 @ 17 °C                  | 0.877 @ 25°C       |

Remarks

Analysis performed on a colourless filtrate recovered from sour watery mud.

Logarithmic Pattern of Dissolved Ions, meq/L



Supervisor R. Peters R. Peters

Approved S. Montgomery S. Montgomery



14203 - 129 Avenue, Edmonton, Alberta T5L 4N9  
Phone (780) 438-5522

E99-31072-07  
Laboratory Report Number

Page 7 of 8

## WATER ANALYSIS

Energy Resource Group

Grey Wolf Exploration Inc.

PLASTIC

Container Identity

DEH CHO-2,14B

Location

Grey Wolf Canaxas DEH CHO-2,14B

Well Name

\* KB Elev, m

\* GR Elev, m

Canaxas

Field/Area

Not Provided

Pool / Zone

Sampler

Company

DST

1

Test Type

No

Multiple Recovery

N

Test Recovery:

\*

\*Not Provided

Test Interval, m

760-776

Perforations, m

Downhole Sampler - Drained on Site

@ 25°C

Sample Point

Amount & Type of Cushion

Mud Resistivity

Type of Production:

Pumping

Flowing

Gas Lift

Swab

Production Rates:

Water

m<sup>3</sup>/d

Oil

m<sup>3</sup>/d

Gas

10<sup>3</sup> m<sup>3</sup>/d

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

Date Sampled (Y-M-D)

1999-02-22  
Date Received (Y-M-D)

1999-03-04  
Date Reported (Y-M-D)

K. Leong  
Analyst

Other Information

| Ion | mg/L  | Mass Fraction | meq/L  |
|-----|-------|---------------|--------|
| Na  | 3 381 | 0.2385        | 147.07 |
| K   | 39    | 0.0028        | 1.00   |
| Ca  | 1 069 | 0.0754        | 53.35  |
| Mg  | 345   | 0.0243        | 28.34  |
| Ba  |       |               |        |
| Sr  |       |               |        |
| Fe  | Nil   |               |        |
|     |       |               |        |
|     |       |               |        |

| Ion              | mg/L    | Mass Fraction | meq/L  |
|------------------|---------|---------------|--------|
| Cl               | 5 320   | 0.3753        | 150.02 |
| Br               |         |               |        |
| I                |         |               |        |
| HCO <sub>3</sub> | 605     | 0.0427        | 9.92   |
| SO <sub>4</sub>  | 3 415   | 0.2410        | 71.04  |
| CO <sub>3</sub>  | 0       | 0.0000        | 0.00   |
| OH               | 0       | 0.0000        | 0.00   |
| H <sub>2</sub> S | Present |               |        |
|                  |         |               |        |
|                  |         |               |        |

Total Dissolved Solids, mg/L

Evaporated @ 110°C Evaporated @ 180°C

14 560

At Ignition

Calculated

12 900

14 174

Organic Matter: Much

Relative Density

Refractive Index

1.012 @ 25°C

1.3353 @ 25°C

Observed pH

Resistivity ohm.m

8.0 @ 17 °C

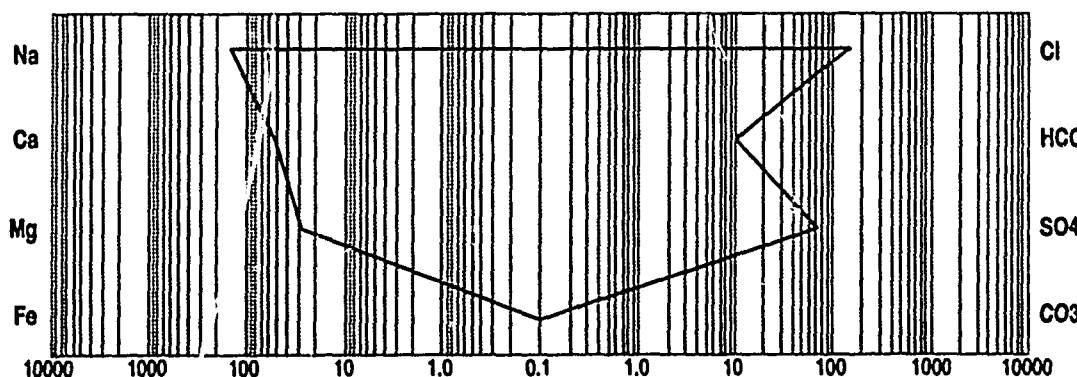
0.562 @ 25°C

Remarks

Analysis performed on a green filtrate recovered from sour watery mud.

Final Report.

Logarithmic Pattern of Dissolved Ions, meq/L



Supervisor

R. Peters

Approved

S. Montgomery



**NORWEST  
LABS**

14203 - 129 Avenue, Edmonton, Alberta T5L 4N9  
Phone (780) 438-5522

**B99-31072-08**  
Laboratory Report Number

Page 8 of 8

Energy Resource Group

Grey Wolf Exploration Inc.

PLASTIC

Container Identity

DEH CHO-2,14B

Location

Grey Wolf Canaxas DEH CHO-2,14B

Well Name

\* KB Elev, m

\* GR Elev, m

Canaxas

Field/Area

Not Provided

Pool / Zone

Sampler

Company

DST

1

Test Type

No

Multiple Recovery

N

Test Recovery:

\*

\*Not Provided

Test Interval, m

760-776

Perforations, m

Downhole Sampler - Drained on Site

@ 25°C

Sample Point

Amount & Type of Cushion

Mud Resistivity

Type of Production:

Pumping

Flowing

Gas Lift

Swab

Production Rates:

Water

m<sup>3</sup>/d

Oil

m<sup>3</sup>/d

Gas

10<sup>3</sup> m<sup>3</sup>/d

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

Date Sampled (Y-M-D)

1999-02-22

Date Received (Y-M-D)

1999-03-04

Date Reported (Y-M-D)

K. Leong

Analyst

Other Information

### Water Analysis

Oil and Grease, mg/L: 40

### Methodology

Parameter

Brief Method Description

Reference

Oil and Grease

Hexane Extraction  
(silica gel) Gravimetric

EPA 1664

Supervisor

R. Peters

R. Peters

Approved

S. Montgomery

S. Montgomery

Source Group

Grey Wolf Exploration Inc.

Operator

Container Identity

2,14B

Grey Wolf Canaxes DEH CHO-2,14B

Location

Well Name

\* KB Elev, m

\* GR Elev, m

7, m

Not Provided

Field/Area

Pool / Zone

Sampler

Company

2

No

ary N

Test Recovery:  
\*  
\*Not Provided

Interval, m

\*

See Below

@ 25°C

25°C

Sample Point

Amount & Type of Cushion

Mud Resistivity

Type of Production: Pumping \_\_\_\_\_ Flowing \_\_\_\_\_ Gas Lift \_\_\_\_\_ Swab \_\_\_\_\_

Production Rates: Water \_\_\_\_\_ m<sup>3</sup>/d Oil \_\_\_\_\_ m<sup>3</sup>/d Gas \_\_\_\_\_ 10<sup>3</sup> m<sup>3</sup>/d

ations, m

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

ed (Y-M-D)

1999-02-22  
Date Received (Y-M-D)

1999-03-03  
Date Reported (Y-M-D)

K. Leong  
Analyst

Other Information

**Sample Summary**

E99-31073-1 Tool #2

Water analysis E99-31073-1

E99-31073-2 Downhole Sampler - Drained on Site

Sample contained 42.0% air. No gas analysis reported.

Water Analysis E99-31073-3.

10°C

ed  
19

ex  
25°C

1.m  
25°C

on  
ite  
ary

Supervisor R. Peters

Approved S. Montgomery

ery

**VI Appendices**

**2) Final Survey Plan**

# Well Survey Plan



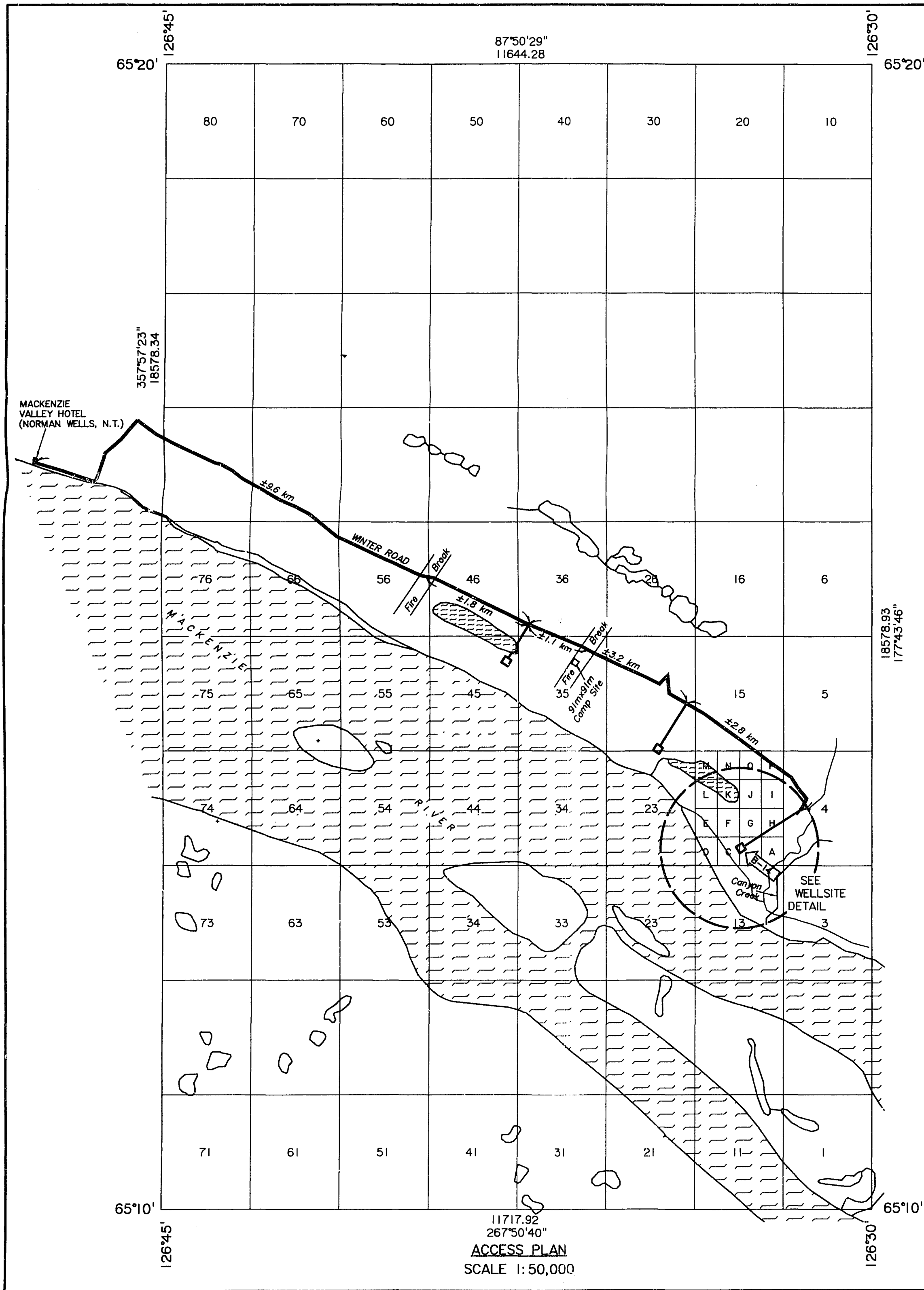
**OVERSIZED**

**DOCUMENT**

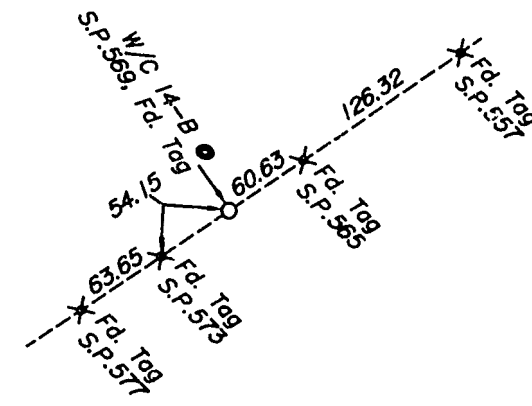
**FILMED**

**ON**

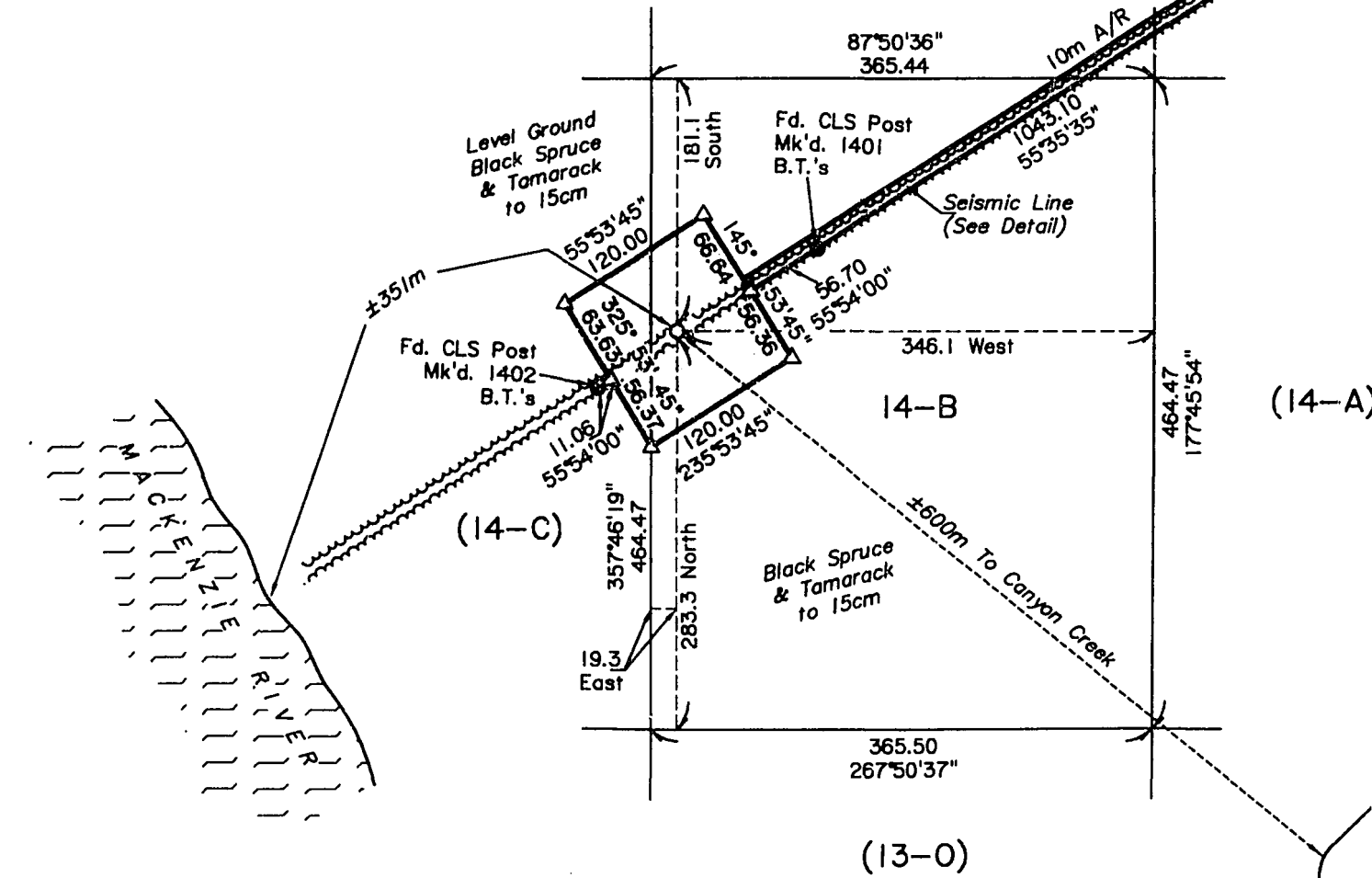
**35mm**



SEISMIC DETAIL  
SCALE 1:5000



(14-G)



WELL SITE DETAIL  
SCALE 1:5000

ELEVATIONS:

GROUND: 58.36  
Corners:  
N.: 59.80  
W.: 58.38 E.: 58.77  
S.: 59.28  
Datum: GSC 519017  
Elev.=71.63

AREAS:

| Within   | ha    | Ac   |
|----------|-------|------|
| W/S:     | 1.440 | 3.56 |
| 10m A/R: | 1.100 | 2.72 |
| Total:   | 2.540 | 6.28 |

NAD 27 CO-ORDINATES:

|                | Northing  | Easting  | Latitude      | Longitude      |
|----------------|-----------|----------|---------------|----------------|
| W/C:           | 7234927.3 | 614733.5 | 65°13'09.265" | 126°32'47.267" |
| CLS Post 1401: | 7234989.7 | 614832.2 | 65°13'11.155" | 126°32'39.493" |
| CLS Post 1402: | 7234884.4 | 614676.7 | 65°13'07.954" | 126°32'51.762" |

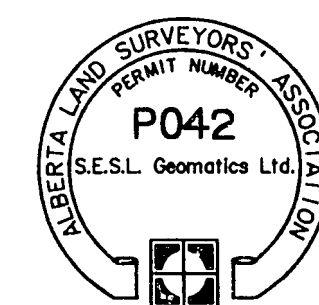
LEGEND

CLS 77 Post Found: \_\_\_\_\_  
25cm Iron Spike Placed: \_\_\_\_\_

OPERATOR:  
**GREY WOLF**  
Exploration Inc.

I, PATRICE LANTEIGNE, CANADA LANDS SURVEYOR,  
OF CALGARY, ALBERTA, CERTIFY THAT THE SURVEY  
REPRESENTED BY THIS PLAN IS TRUE AND CORRECT,  
TO THE BEST OF MY KNOWLEDGE, AND WAS  
COMPLETED ON THE 5th DAY OF SEPTEMBER, 1998.

*P. Lanteigne, c.l.s.*  
(CANADA LANDS) SURVEYOR  
*Sept 22 1998*



**GREY WOLF-CANAXAS**  
**DEH CHO - 2, 14-B**  
**IN SECTION 14, UNIT B**  
**GRID AREA 65°20', 126°30'**

SCALES AS SHOWN

**sesl**  
GEOMATICS  
LAND SURVEYING & SURVEY ENGINEERING

|                                                                 |                |              |          |
|-----------------------------------------------------------------|----------------|--------------|----------|
| Surveyor: PL                                                    | Calculator: FS |              |          |
| Draftsperson: BD                                                | Chk'd: FS      |              |          |
| Job No.: 98N006B                                                |                | No. Revision | 22/09/98 |
| TOLL FREE 1-800-565-2389 PH. (403) 234-9018 FAX. (403) 266-2919 |                | Date         |          |

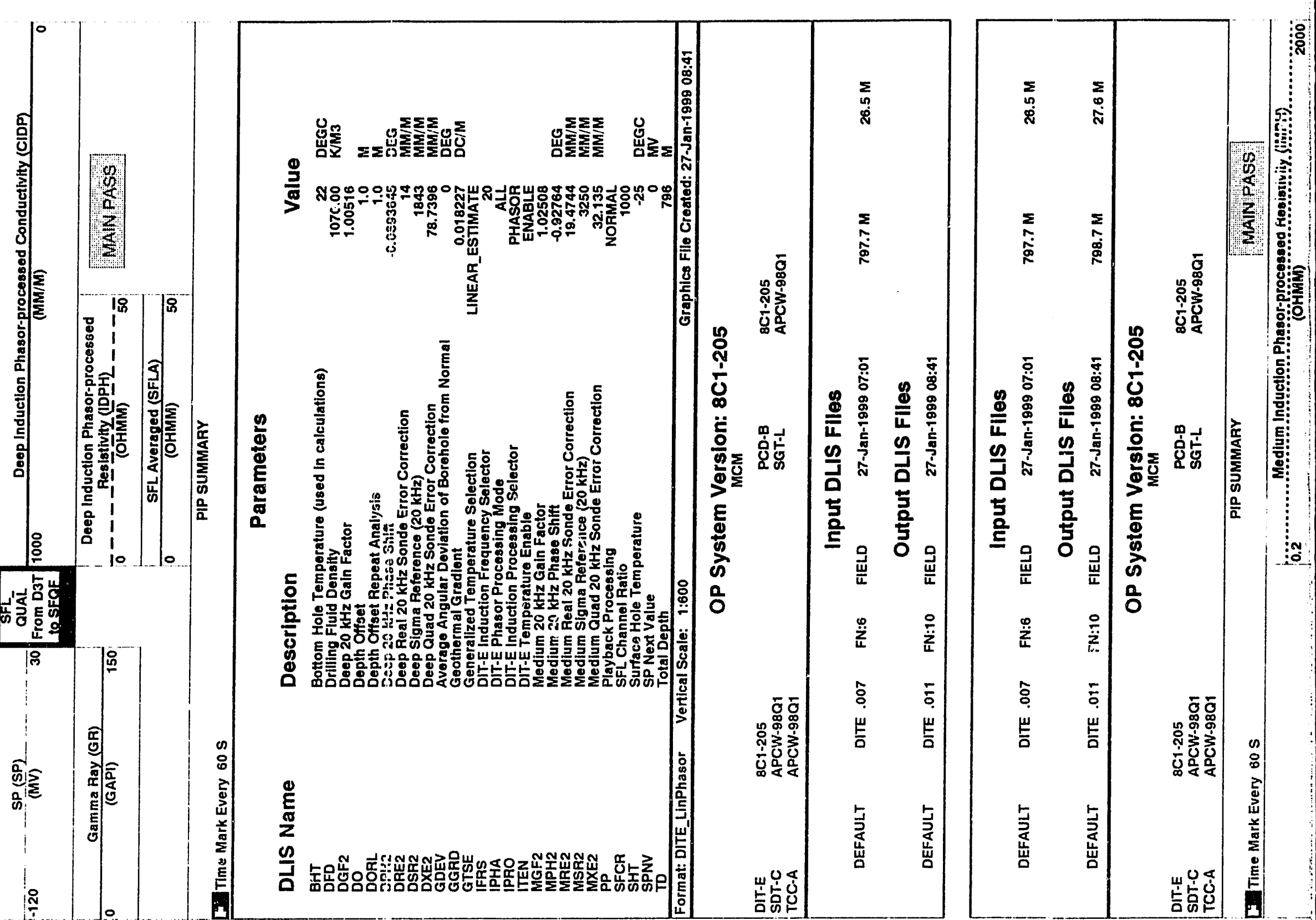


**RESISTIVITY/  
CONDUCTIVITY**

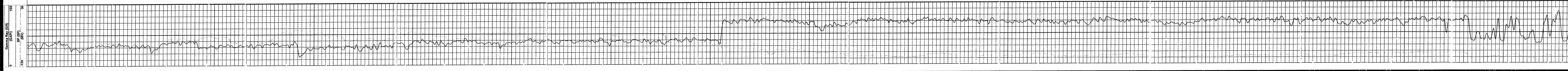
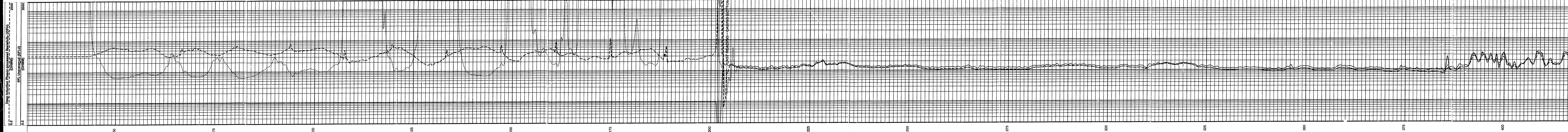




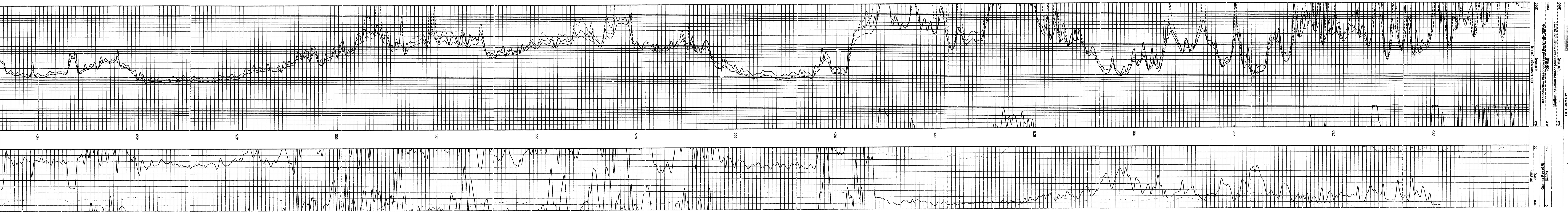














|           |                                  |                     |         |
|-----------|----------------------------------|---------------------|---------|
| COMPANY:  | GREY WOLF EXPLORATION LTD.       | BOTTOM LOG INTERVAL | 753.3 M |
| WELL:     | GREY WOLF CANAXAS DEH CHO 2 B-14 | SCHLUMBERGER DEPTH  | 797.6 M |
| FIELD:    | CANAXAS DEH CHO                  | DEPTH DRILLER       | 798 M   |
| PROVINCE: | N.W.T.                           | KELLY BUSHING       | 855.3 M |
|           |                                  | DRILL FLOOR         |         |
|           |                                  | GROUND LEVEL        | 558.4 M |

**SONIC**





|                   |       |       |           |                   |         |        |
|-------------------|-------|-------|-----------|-------------------|---------|--------|
| Input DLIS Files  | FIELD | FN:6  | DITE .007 | 27-Jan-1999 07:01 | 797.7 M | 28.5 M |
| Output DLIS Files | FIELD | FN:10 | DITE .011 | 27-Jan-1999 08:41 | 798.7 M | 27.8 M |

OP System Version: 8C1-205  
MCM

|       |          |       |          |
|-------|----------|-------|----------|
| DIT-E | 8C1-205  | PCD-B | 8C1-205  |
| SDT-C | APCW98Q1 | SGT-L | APCW98Q1 |
| TCC-A | APCW98Q1 |       |          |

PIP SUMMARY

Time Mark Every 60 S

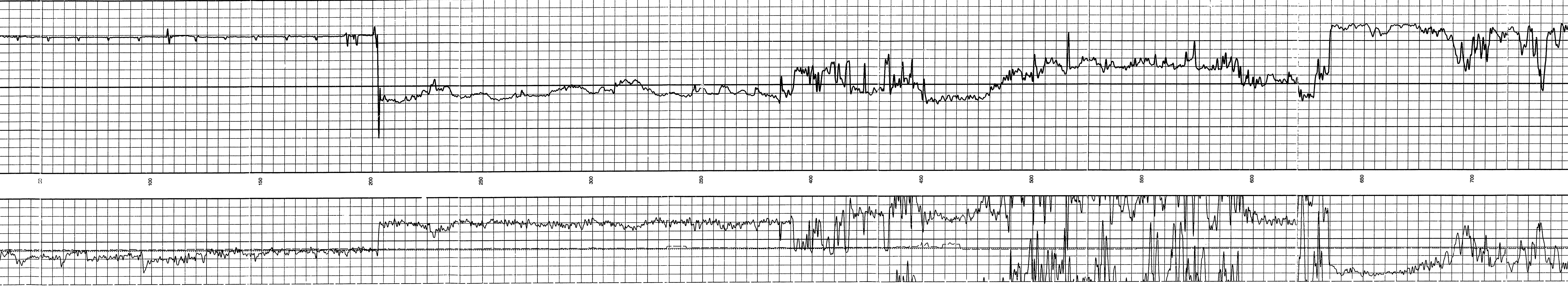
Hole Diameter (HDA) 375

Gamma Ray (GR) 150

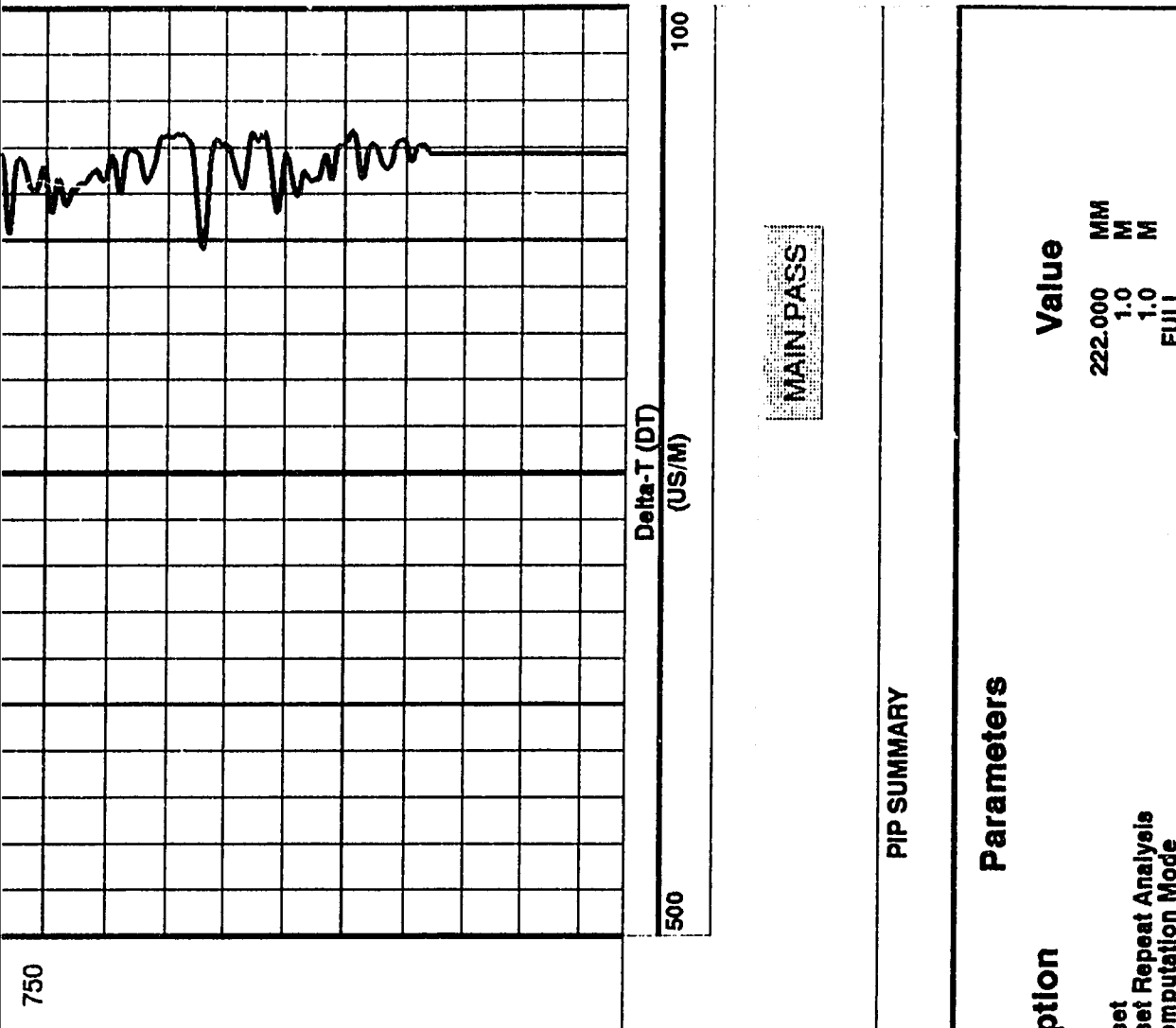
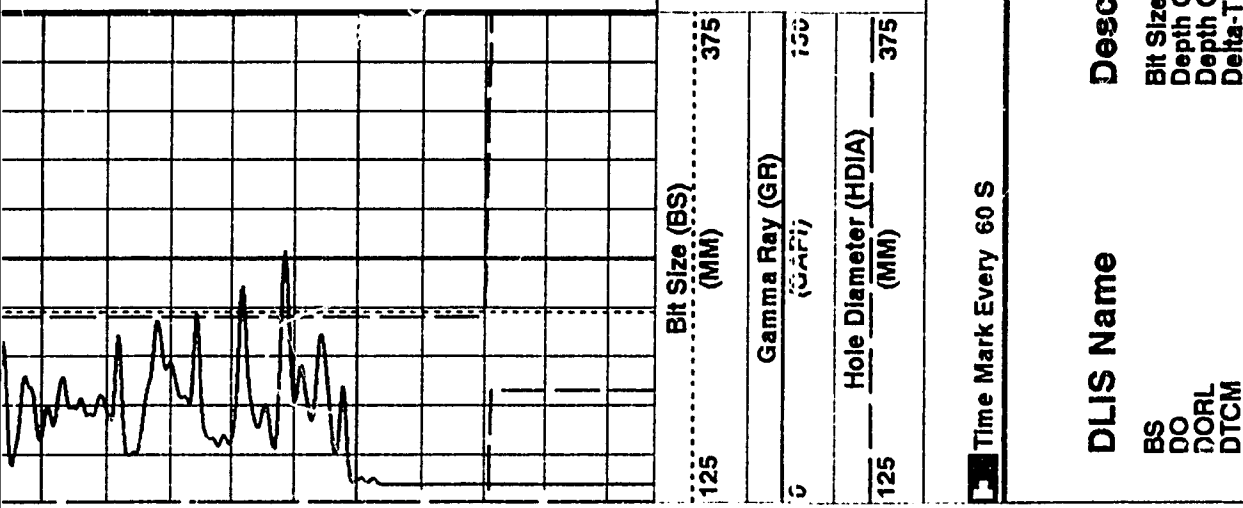
Bit Size (BS) 375

MAIN PASS

Delta-T (DT) (US/M)



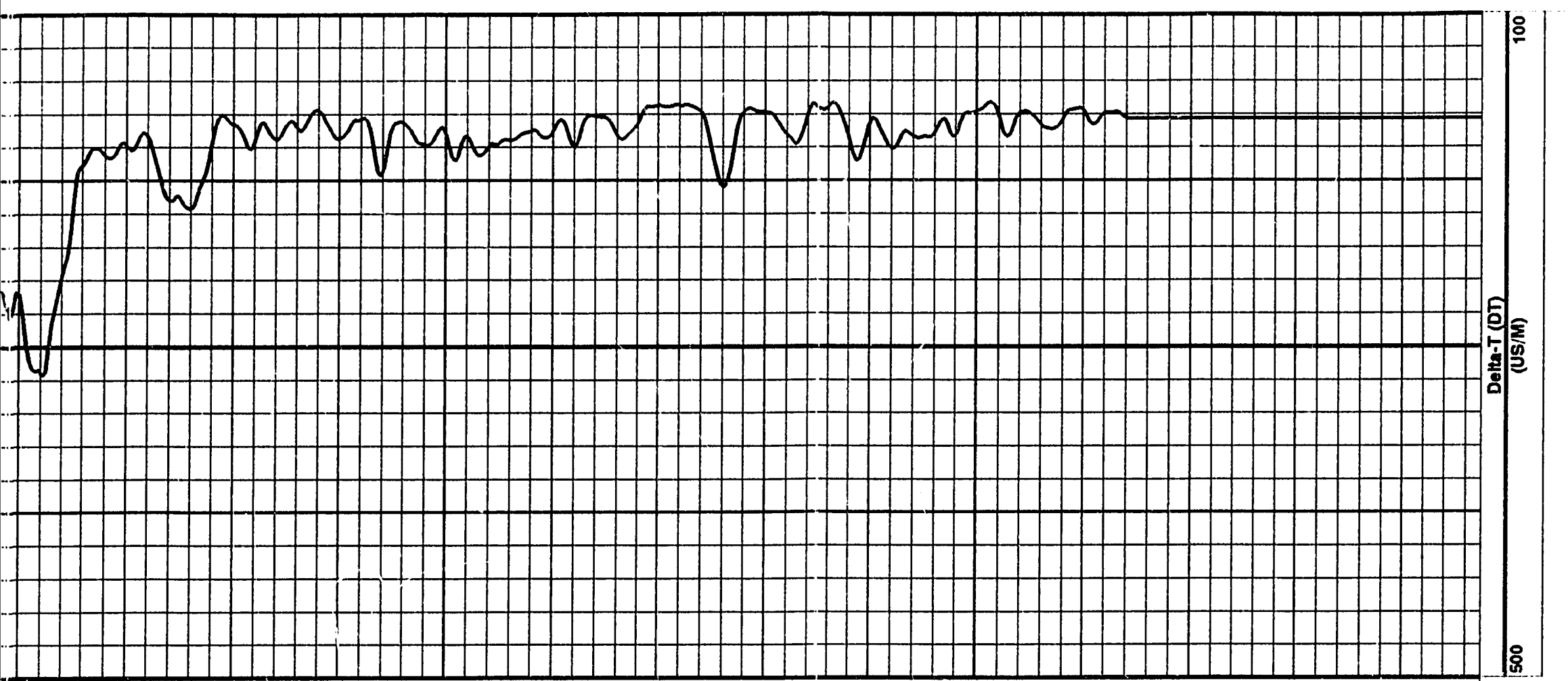
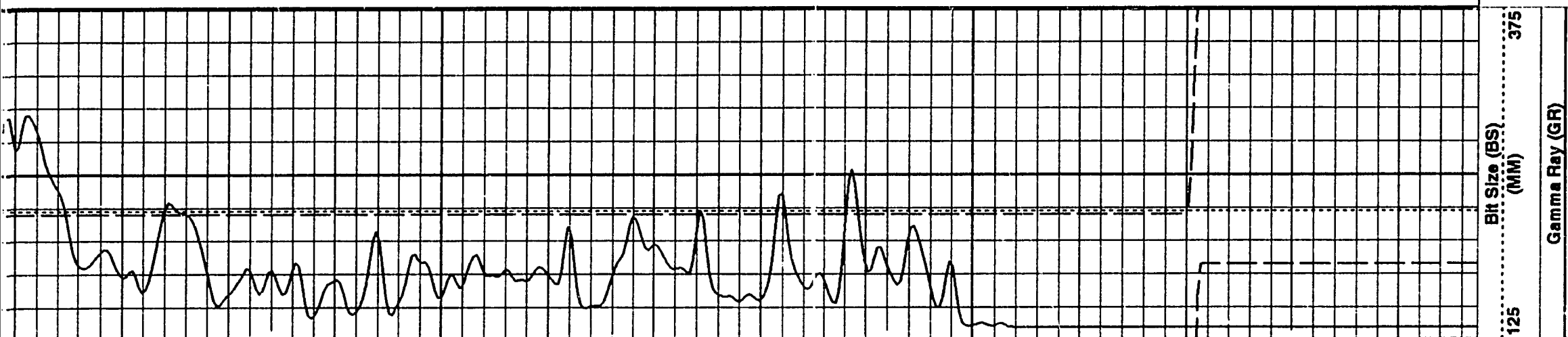












Time Mark Every 60 S

| DLIS Name                                 | Description                  | Value                                    |
|-------------------------------------------|------------------------------|------------------------------------------|
| BS                                        | Bit Size                     | 222,000                                  |
| DO                                        | Depth Offset                 | 1.0                                      |
| DDRL                                      | Depth Offset Repeat Analysis | M                                        |
| DTGM                                      | Delta-T Computation Mode     | M                                        |
| MODE                                      | Piling Mode                  | FULL                                     |
| PP                                        | Playback Processing          | BHC                                      |
|                                           |                              | NORMAL                                   |
| Format: GW SONI_240 Vertical Scale: 1:240 |                              | Graphics File Created: 27-Jan-1989 08:41 |

|       |           |       |           |
|-------|-----------|-------|-----------|
| DIT-E | 8C1-205   | PCD-B | 8C1-205   |
| SDT-C | APCW-98Q1 | SGT-L | APCW-98Q1 |
| TCC-A | APCW-98Q1 |       |           |

| Input DLIS Files |           |      |       |                   |         |        |
|------------------|-----------|------|-------|-------------------|---------|--------|
| DEFAULT          | DITE .007 | FN:6 | FIELD | 27-Jan-1989 07:01 | 797.7 M | 26.5 M |

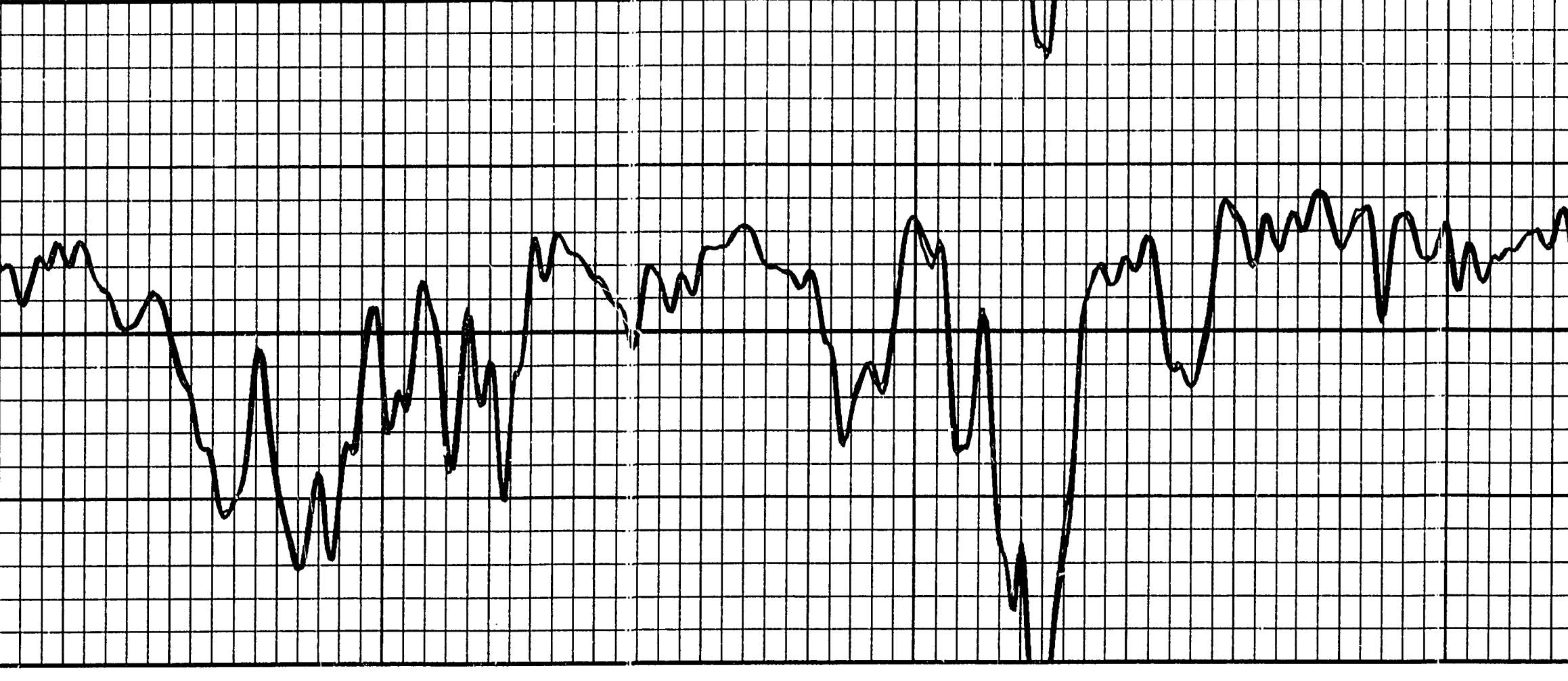
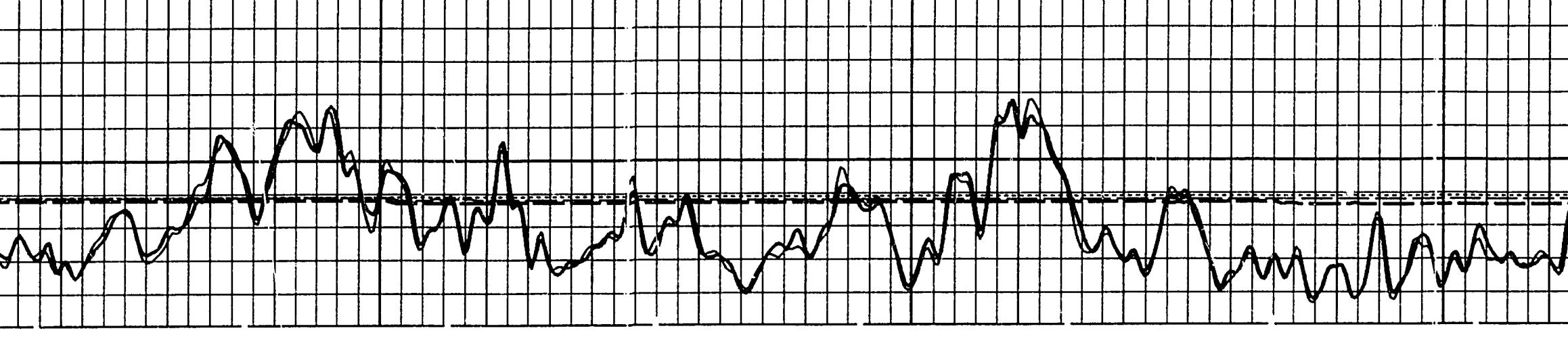
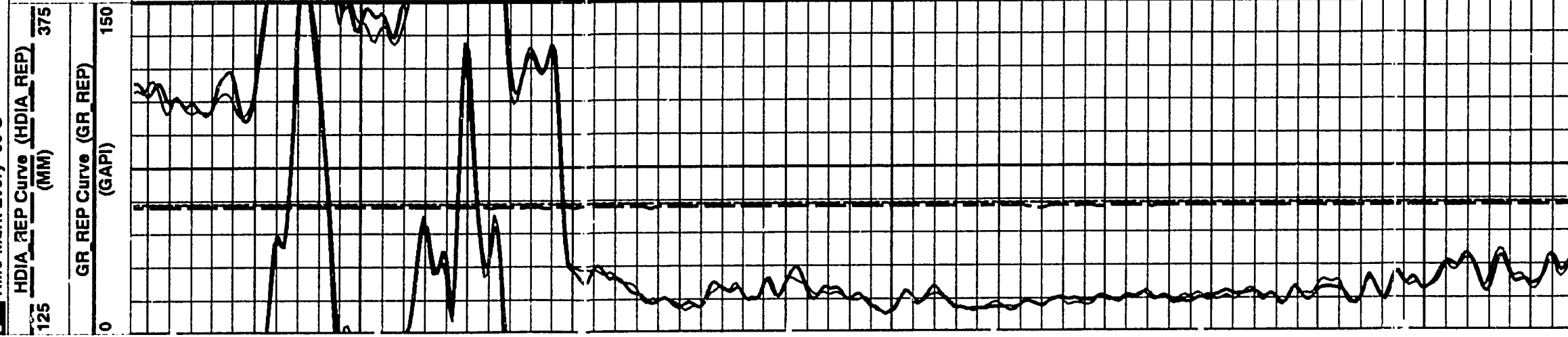
| Output Data Files |      |      |       |       |                   |
|-------------------|------|------|-------|-------|-------------------|
| DEFAULT           | DITE | .011 | FN:10 | FIELD | 27-Jan-1999 08:41 |

| Input DLIS Files |           |      |       |                   |         |         |
|------------------|-----------|------|-------|-------------------|---------|---------|
| DEFAULT          | DITE .007 | FN:6 | FIELD | 27-Jan-1999 07:01 | 797.7 M | 26.5 M  |
| DEFAULT T        | DITE .004 | FN:3 | FIELD | 27-Jan-1999 04:20 | 707.7 M | 642.4 M |

| Output DLIS Files |           |       |       |                   |
|-------------------|-----------|-------|-------|-------------------|
| DEFAULT           | DITE .011 | FN:10 | FIELD | 27-Jan-1999 08:41 |

OP System Version: 8C1-205  
MCM

| PIP SUMMARY |           |
|-------------|-----------|
| SDT-C       | APCW-98Q1 |
| TCC-A       | APCW-98Q1 |
| SGT-L       | APCW-98Q1 |



|  |  |                               |                                   |                      |                                                            |                                                                     |          |                         |                                   |                         |                                   |                    |                        |
|--|--|-------------------------------|-----------------------------------|----------------------|------------------------------------------------------------|---------------------------------------------------------------------|----------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|--------------------|------------------------|
|  |  | GR REP Curve (GR REP)<br>(MM) | HDIA REP Curve (HDIA REP)<br>(MM) | Time Mark Every 60 S | <b>DLIS Name</b><br>BS<br>DO<br>DORL<br>DTCM<br>MODE<br>RP | <b>De</b><br>BN S<br>Dept<br>Dept<br>Delta<br>Delta<br>Phys<br>Phys | Vertical | Format: GW SONI-240 REP | 8C1-205<br>APCW-98Q1<br>APCW-98Q1 | DIT-E<br>SDT-C<br>TCC-A | 8C1-205<br>APCW-98Q1<br>APCW-98Q1 | DEFAULT<br>UEFAULT | DITE .007<br>DITE .004 |
|--|--|-------------------------------|-----------------------------------|----------------------|------------------------------------------------------------|---------------------------------------------------------------------|----------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|--------------------|------------------------|

DT REP Curve (DT REP) (US/M)

REPEAT ANALYSIS

| Output DLIS Files |      |       |                   |
|-------------------|------|-------|-------------------|
| DEFAULT           | DITE | FN:10 | FIELD             |
|                   | .011 |       | 27-Jan-1999 08:41 |

---

Calibration and Check Summary

| Measurement                                     | Nominal | Master | Before | After | Change | Limit | Units |
|-------------------------------------------------|---------|--------|--------|-------|--------|-------|-------|
| Powered Caliper Device - B Welisite Calibration |         |        |        |       |        |       |       |
| Before: Calibration out of date 09 15 23 1598   |         |        |        |       |        |       |       |
| Large Arm Small Ring                            | 200.2   | N/A    | 200.4  | N/A   | N/A    | N/A   | N/A   |

|                                                                                                                               |       |     |       |     |     |
|-------------------------------------------------------------------------------------------------------------------------------|-------|-----|-------|-----|-----|
| Large Arm Large Ring                                                                                                          | 304.8 | N/A | 305.1 | N/A | N/A |
| Powered Caliper Device - B Wellsite Calibration<br>Before: Calibration out of date Dec 09 15:23 1998<br>Small Arm Small Gauge | 203.2 | N/A | 121.9 | N/A | N/A |

| Serial Anti-Large Gauge                           | 304.8 | N/A | 172.0 | N/A | N/A    |
|---------------------------------------------------|-------|-----|-------|-----|--------|
| Powered Caliper Device - B Wellsite Calibration   |       |     |       |     |        |
| Before: Calibration out of date Dec 09 14:22 1998 |       |     |       |     |        |
| Micro Inverse Zero                                | 0     | N/A | 1.588 | N/A | 0.1000 |

| Micro Normal 1.05                                                                                                              | 3.000 | 1.435 | N/A | 0.2000 | OHMM   |
|--------------------------------------------------------------------------------------------------------------------------------|-------|-------|-----|--------|--------|
| Powered Caliper Device - B Welista Calibration - Micro Normal Calibration<br>Before: Calibration out of date Dec 09 14:22 1998 |       |       |     |        |        |
| Micro Normal Zero                                                                                                              | 0     | 1.568 | N/A | N/A    | 0.1000 |
| Micro Normal 1.05                                                                                                              | 5.000 | 2.000 |     |        | 0.1000 |

| Scintillation Gamma-Ray - L Wellste Calibration - Detector Calibration | Before Jan 28 10:54 1999 |     |       |       |      |
|------------------------------------------------------------------------|--------------------------|-----|-------|-------|------|
| Gamma Ray Background                                                   | 30.00                    | N/A | 52.67 | N/A   | GAPI |
| Gamma Ray (Lin - Pkg)                                                  | 160.1                    | N/A | 160.1 | N/A   | CXVI |
| Gamma Ray (Lin - Pkg)                                                  |                          |     |       | 44.66 |      |

| Gamma Ray (Calibrated) | 165.0 | N/A | 165.0 | N/A | 15.50 | GAPI |
|------------------------|-------|-----|-------|-----|-------|------|
|                        |       |     |       |     |       |      |

| Primary Equipment:        | Dual Induction: E / Equipment Identification |
|---------------------------|----------------------------------------------|
| Dual Induction Sonde      | DIS - HB                                     |
| Dual Induction Controller | DIS - CB                                     |

| Auxiliary Equipment:<br>Mass Isolated Housing | MH - ZA |
|-----------------------------------------------|---------|
|                                               |         |

|                                         |  |
|-----------------------------------------|--|
| Dual Induction - E Wellite Calibration  |  |
| Projecting Electronics (10 knz)         |  |
| Discs (D, E) Dual Cal at 10 (10 - 1017) |  |

|                           |  |  |                                  |       |        |                    |        |             |                     |             |        |                           |             |        |                    |  |             |                      |  |  |                           |  |  |                    |  |  |
|---------------------------|--|--|----------------------------------|-------|--------|--------------------|--------|-------------|---------------------|-------------|--------|---------------------------|-------------|--------|--------------------|--|-------------|----------------------|--|--|---------------------------|--|--|--------------------|--|--|
| Before                    |  |  | <div></div>                      | 26.67 | Before |                    |        | <div></div> | 0.9386              | Before      |        |                           | <div></div> | 7.249  |                    |  |             |                      |  |  |                           |  |  |                    |  |  |
| -273.6<br>(Minimum)       |  |  | 28.43<br>(Nominal)               |       |        | 328.4<br>(Maximum) |        |             | 0.8048<br>(Minimum) |             |        | 0.9546<br>(Nominal)       |             |        | 1.138<br>(Maximum) |  |             | -2.727<br>(Minimum)  |  |  | 7.273<br>(Nominal)        |  |  | 17.27<br>(Maximum) |  |  |
| Phase                     |  |  | ID Elect Quad Offset 10 kHz MM/M |       |        | Value              |        |             | Phase               |             |        | ID Elect Quad Gain 10 kHz |             |        | Value              |  |             | Phase                |  |  | IM Elect Phase 10 kHz DEG |  |  | Value              |  |  |
| Before                    |  |  | <div></div>                      | 34.18 |        |                    | Before |             |                     | <div></div> | 0.9484 |                           |             | Before |                    |  | <div></div> | 10.05                |  |  |                           |  |  |                    |  |  |
| -270.1<br>(Minimum)       |  |  | 29.92<br>(Nominal)               |       |        | 328.9<br>(Maximum) |        |             | 0.8108<br>(Minimum) |             |        | 0.9608<br>(Nominal)       |             |        | 1.145<br>(Maximum) |  |             | 0.01334<br>(Minimum) |  |  | 10.01<br>(Nominal)        |  |  | 20.01<br>(Maximum) |  |  |
| Phase                     |  |  | IM Elect Real Offset 10 kHz MM/M |       |        | Value              |        |             | Phase               |             |        | IM Elect Real Gain 10 kHz |             |        | Value              |  |             |                      |  |  |                           |  |  |                    |  |  |
| Before                    |  |  | <div></div>                      | 37.52 |        |                    | Before |             |                     | <div></div> | 0.8921 |                           |             |        |                    |  |             |                      |  |  |                           |  |  |                    |  |  |
| -512.7<br>(Minimum)       |  |  | 37.32<br>(Nominal)               |       |        | 587.3<br>(Maximum) |        |             | 0.7674<br>(Minimum) |             |        | 0.9174<br>(Nominal)       |             |        | 1.083<br>(Maximum) |  |             |                      |  |  |                           |  |  |                    |  |  |
| Phase                     |  |  | IM Elect Quad Offset 10 kHz MM/M |       |        | Value              |        |             | Phase               |             |        | IM Elect Quad Gain 10 kHz |             |        | Value              |  |             |                      |  |  |                           |  |  |                    |  |  |
| Before                    |  |  | <div></div>                      | 85.90 |        |                    | Before |             |                     | <div></div> | 0.9142 |                           |             |        |                    |  |             |                      |  |  |                           |  |  |                    |  |  |
| -462.5<br>(Minimum)       |  |  | 87.48<br>(Nominal)               |       |        | 637.5<br>(Maximum) |        |             | 0.7888<br>(Minimum) |             |        | 0.9368<br>(Nominal)       |             |        | 1.111<br>(Maximum) |  |             |                      |  |  |                           |  |  |                    |  |  |
| Before: Jan 27 08:26 1999 |  |  |                                  |       |        |                    |        |             |                     |             |        |                           |             |        |                    |  |             |                      |  |  |                           |  |  |                    |  |  |

| Dual Induction - E Wellsite Calibration |                             |                    |       |                     |                           |                    |                     |                        |                    |       |  |  |
|-----------------------------------------|-----------------------------|--------------------|-------|---------------------|---------------------------|--------------------|---------------------|------------------------|--------------------|-------|--|--|
| Induction Electronics (20 kHz)          |                             |                    |       |                     |                           |                    |                     |                        |                    |       |  |  |
| Phase                                   | ID Elect Real Offset 20 kHz | MM/M               | Value | Phase               | ID Elect Real Gain 20 kHz | Value              | Phase               | ID Elect Phase 20 kHz  | DEG                | Value |  |  |
| Before                                  | <div><div></div></div>      |                    | 10.17 | Before              | <div><div></div></div>    | 0.9390             | Before              | <div><div></div></div> |                    | 4.681 |  |  |
| -115.0<br>(Minimum)                     | 10.03<br>(Nominal)          | 135.0<br>(Maximum) |       | 0.8017<br>(Minimum) | 0.9517<br>(Nominal)       | 1.132<br>(Maximum) | -10.97<br>(Minimum) | 4.025<br>(Nominal)     | 19.03<br>(Maximum) |       |  |  |
| Phase                                   | ID Elect Quad Offset 20 kHz | MM/M               | Value | Phase               | ID Elect Quad Gain 20 kHz | Value              | Phase               | IM Elect Phase 20 kHz  | DEG                | Value |  |  |
| Before                                  | <div><div></div></div>      |                    | 13.42 | Before              | <div><div></div></div>    | 0.9487             | Before              | <div><div></div></div> |                    | 8.037 |  |  |
| -113.3<br>(Minimum)                     | 11.68<br>(Nominal)          | 136.7<br>(Maximum) |       | 0.8078<br>(Minimum) | 0.9578<br>(Nominal)       | 1.140<br>(Maximum) | -7.671<br>(Minimum) | 7.329<br>(Nominal)     | 22.33<br>(Maximum) |       |  |  |
| Phase                                   | IM Elect Real Offset 20 kHz | MM/M               | Value | Phase               | IM Elect Real Gain 20 kHz | Value              |                     |                        |                    |       |  |  |
| Before                                  | <div><div></div></div>      |                    | 15.31 | Before              | <div><div></div></div>    | 0.9309             |                     |                        |                    |       |  |  |
| -209.9<br>(Minimum)                     | 15.15<br>(Nominal)          | 240.1<br>(Maximum) |       | 0.7971<br>(Minimum) | 0.9471<br>(Nominal)       | 1.125<br>(Maximum) |                     |                        |                    |       |  |  |
| Phase                                   | IM Elect Quad Offset 20 kHz | MM/M               | Value | Phase               | IM Elect Quad Gain 20 kHz | Value              |                     |                        |                    |       |  |  |
| Before                                  | <div><div></div></div>      |                    | 35.29 | Before              | <div><div></div></div>    | 0.9540             |                     |                        |                    |       |  |  |
| -189.2<br>(Minimum)                     | 35.76<br>(Nominal)          | 260.8<br>(Maximum) |       | 0.8172<br>(Minimum) | 0.9672<br>(Nominal)       | 1.154<br>(Maximum) |                     |                        |                    |       |  |  |
| Before: Jan 27 08:27 1999               |                             |                    |       |                     |                           |                    |                     |                        |                    |       |  |  |

| Dual Induction - E Wellsite Calibration |                             |                    |       |                     |                           |                    |                     |                        |                    |       |  |  |
|-----------------------------------------|-----------------------------|--------------------|-------|---------------------|---------------------------|--------------------|---------------------|------------------------|--------------------|-------|--|--|
| Induction Electronics (40 kHz)          |                             |                    |       |                     |                           |                    |                     |                        |                    |       |  |  |
| Phase                                   | ID Elect Real Offset 40 kHz | MM/M               | Value | Phase               | ID Elect Real Gain 40 kHz | Value              | Phase               | ID Elect Phase 40 kHz  | DEG                | Value |  |  |
| Before                                  | <div><div></div></div>      |                    | 6.534 | Before              | <div><div></div></div>    | 0.9129             | Before              | <div><div></div></div> |                    | 18.42 |  |  |
| -78.62<br>(Minimum)                     | 6.385<br>(Nominal)          | 91.38<br>(Maximum) |       | 0.7734<br>(Minimum) | 0.9234<br>(Nominal)       | 1.092<br>(Maximum) | -4.186<br>(Minimum) | 15.83<br>(Nominal)     | 35.83<br>(Maximum) |       |  |  |
| Phase                                   | ID Elect Quad Offset 40 kHz | MM/M               | Value | Phase               | ID Elect Quad Gain 40 kHz | Value              | Phase               | IM Elect Phase 40 kHz  | DEG                | Value |  |  |
| Before                                  | <div><div></div></div>      |                    | 8.790 | Before              | <div><div></div></div>    | 0.9218             | Before              | <div><div></div></div> |                    | 21.54 |  |  |
| -77.41<br>(Minimum)                     | 7.592<br>(Nominal)          | 92.59<br>(Maximum) |       | 0.7787<br>(Minimum) | 0.9287<br>(Nominal)       | 1.099<br>(Maximum) | -1.141<br>(Minimum) | 18.86<br>(Nominal)     | 38.86<br>(Maximum) |       |  |  |
| Phase                                   | IM Elect Real Offset 40 kHz | MM/M               | Value | Phase               | IM Elect Real Gain 40 kHz | Value              |                     |                        |                    |       |  |  |
| Before                                  | <div><div></div></div>      |                    | 9.898 | Before              | <div><div></div></div>    | 0.9377             |                     |                        |                    |       |  |  |
| -120.3<br>(Minimum)                     | 9.728<br>(Nominal)          | 139.7<br>(Maximum) |       | 0.7968<br>(Minimum) | 0.9468<br>(Nominal)       | 1.125<br>(Maximum) |                     |                        |                    |       |  |  |
| Phase                                   | IM Elect Quad Offset 40 kHz | MM/M               | Value | Phase               | IM Elect Quad Gain 40 kHz | Value              |                     |                        |                    |       |  |  |
| Before                                  | <div><div></div></div>      |                    | 22.94 | Before              | <div><div></div></div>    | 0.9806             |                     |                        |                    |       |  |  |
| -107.0<br>(Minimum)                     | 23.05<br>(Nominal)          | 153.0<br>(Maximum) |       | 0.8166<br>(Minimum) | 0.9686<br>(Nominal)       | 1.153<br>(Maximum) |                     |                        |                    |       |  |  |
| Before: Jan 27 08:28 1999               |                             |                    |       |                     |                           |                    |                     |                        |                    |       |  |  |

| Dual Induction - E Wellsite Calibration |                |                     |                        |                    |                    |
|-----------------------------------------|----------------|---------------------|------------------------|--------------------|--------------------|
| SFL Electronics                         |                |                     |                        |                    |                    |
| Phase SFL Voltage Offset MV             |                | Value               | Phase SFL Voltage Gain |                    | Value              |
| Before                                  |                | 1.352               | Before                 |                    | 0.9973             |
| -15.00<br>(Minimum)                     | 0<br>(Nominal) | 15.00<br>(Maximum)  | 0.8500<br>(Minimum)    | 1.000<br>(Nominal) | 1.200<br>(Maximum) |
| Phase SFL Current Offset MA             |                | Value               | Phase SFL Current Gain |                    | Value              |
| Before                                  |                | 0.03954             | Before                 |                    | 0.9923             |
| -0.6000<br>(Minimum)                    | 0<br>(Nominal) | 0.6000<br>(Maximum) | 0.8500<br>(Minimum)    | 1.000<br>(Nominal) | 1.200<br>(Maximum) |
| Before: Jan 27 08:29 1999               |                |                     |                        |                    |                    |

Powered Caliper Device - B / Equipment Identification

Primary Equipment:  
Powered Caliper Mechanical (sonde) - A  
Powered Caliper Cartridge - H  
PCM - A  
PCC - H

Auxiliary Equipment:  
Powered Caliper Housing - A  
PCH - A

| Powered Caliper Device - B Wellsite Calibration   |                |                    |                               |                    |                    |
|---------------------------------------------------|----------------|--------------------|-------------------------------|--------------------|--------------------|
| Micro Inverse Calibration                         |                |                    |                               |                    |                    |
| Phase Micro Inverse Zero OHMM                     |                | Value              | Phase Micro Inverse Plus OHMM |                    | Value              |
| Before                                            |                | 1.568              | Before                        |                    | 1.439              |
| -1.000<br>(Minimum)                               | 0<br>(Nominal) | 1.000<br>(Maximum) | 4.250<br>(Minimum)            | 5.000<br>(Nominal) | 5.750<br>(Maximum) |
| Before: Calibration out of date Dec 09 14:22 1998 |                |                    |                               |                    |                    |

| Powered Caliper Device - B Wellsite Calibration   |                |                    |                              |                    |                    |
|---------------------------------------------------|----------------|--------------------|------------------------------|--------------------|--------------------|
| Micro Normal Calibration                          |                |                    |                              |                    |                    |
| Phase Micro Normal Zero OHMM                      |                | Value              | Phase Micro Normal Plus OHMM |                    | Value              |
| Before                                            |                | 1.568              | Before                       |                    | 1.439              |
| -1.000<br>(Minimum)                               | 0<br>(Nominal) | 1.000<br>(Maximum) | 4.250<br>(Minimum)           | 5.000<br>(Nominal) | 5.750<br>(Maximum) |
| Before: Calibration out of date Dec 09 14:22 1998 |                |                    |                              |                    |                    |

Scintillation Gamma-Ray - L / Equipment Identification

Primary Equipment:  
Scintillation Gamma Cartridge  
Scintillation Gamma Detector  
SGC - SA  
SGD - TAA  
1048

Auxiliary Equipment:  
Scintillation Gamma Housing  
Gamma Source Radioactive  
SGH - K  
GSR - U/Y  
530

| Scintillation Gamma-Ray - L Wellsite Calibration |                      |                    |      |       |                    |                       |                    |      |       |                    |                        |                    |      |       |
|--------------------------------------------------|----------------------|--------------------|------|-------|--------------------|-----------------------|--------------------|------|-------|--------------------|------------------------|--------------------|------|-------|
| Detector Calibration                             |                      |                    |      |       |                    |                       |                    |      |       |                    |                        |                    |      |       |
| Phase                                            | Gamma Ray Background |                    | GAPI | Value | Phase              | Gamma Ray (Jig - Bkg) |                    | GAPI | Value | Phase              | Gamma Ray (Calibrated) |                    | GAPI | Value |
| Before                                           |                      |                    |      | 52.67 | Before             |                       |                    |      | 160.1 | Before             |                        |                    |      | 165.0 |
| 0<br>(Minimum)                                   | 30.00<br>(Nominal)   | 120.0<br>(Maximum) |      |       | 145.6<br>(Minimum) | 160.1<br>(Nominal)    | 174.7<br>(Maximum) |      |       | 150.0<br>(Minimum) | 165.0<br>(Nominal)     | 180.0<br>(Maximum) |      |       |
| Before: Jan 26 10:54 1999                        |                      |                    |      |       |                    |                       |                    |      |       |                    |                        |                    |      |       |

COMPANY: GREY WOLF EXPLORATION LTD.

WELL: GREY WOLF CANAXAS DEH CHO 2 B-14

FIELD: CANAXAS DEH CHO

PROVINCE: N.W.T.

|                     |         |
|---------------------|---------|
| BOTTOM LOG INTERVAL | 781 M   |
| SCHLUMBERGER DEPTH  | 797.6 M |
| DEPTH DRILLER       | 798 M   |
| KELLY BUSHING       | 65.3 M  |
| DRILL FLOOR         |         |
| GROUND LEVEL        | 58.4 M  |

BOREHOLE COMPENSATED  
SONIC LOG

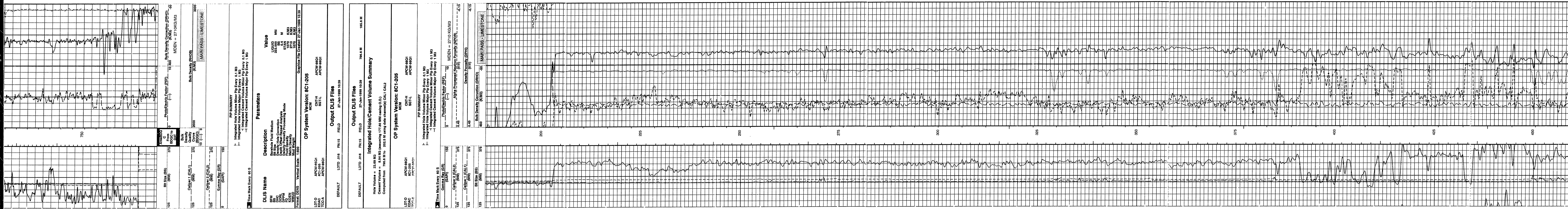
Schlumberger

**DENSITY**



















|                               |           |      |  |
|-------------------------------|-----------|------|--|
| Primary Equipment:            |           |      |  |
| Nuclear Services Cartridge    | NSC - E   | 785  |  |
| Powered Gamma Director        | PGD - G   | 1687 |  |
| Gamma Source Radiocentre      | GSR - J   | 2043 |  |
| Auxiliary Equipment:          |           |      |  |
| Control Room Response         | DRS - C   | 3926 |  |
| Electronics Cartridge Housing | ECRH - Mm | 77   |  |
| Powered Detector Assembly     | PDT - E   | 3745 |  |

| Litho Density - D Wellsite Calibration            |                     |  |                    |                    |                    |                           |                    |        |                    |                    |                    |  |
|---------------------------------------------------|---------------------|--|--------------------|--------------------|--------------------|---------------------------|--------------------|--------|--------------------|--------------------|--------------------|--|
| Background Measurement                            |                     |  |                    |                    |                    |                           |                    |        |                    |                    |                    |  |
| Phase                                             | LL Background CPS   |  | Value              | Phase              | LU Background CPS  |                           | Value              | Phase  | LS Background CPS  |                    | Value              |  |
| Master                                            |                     |  | 17.84              | Master             |                    |                           | 67.50              | Master |                    |                    | 51.59              |  |
| Before                                            |                     |  | 17.81              | Before             |                    |                           | 67.31              | Before |                    |                    | 51.47              |  |
| 15.00<br>(Minimum)                                |                     |  | 20.00<br>(Nominal) | 25.00<br>(Maximum) |                    |                           | 58.00<br>(Minimum) |        |                    | 78.00<br>(Nominal) | 94.00<br>(Maximum) |  |
| 43.00<br>(Minimum)                                |                     |  | 57.00<br>(Nominal) | 72.00<br>(Maximum) |                    |                           |                    |        |                    |                    |                    |  |
| Phase                                             | LITH Background CPS |  | Value              | Phase              | SS1 Background CPS |                           | Value              | Phase  | SS2 Background CPS |                    | Value              |  |
| Master                                            |                     |  | 5.085              | Master             |                    |                           | 16.59              | Master |                    |                    | 11.34              |  |
| Before                                            |                     |  | 5.017              | Before             |                    |                           | 16.52              | Before |                    |                    | 11.27              |  |
| 4.000<br>(Minimum)                                |                     |  | 5.500<br>(Nominal) | 7.000<br>(Maximum) |                    |                           | 12.00<br>(Minimum) |        |                    | 18.00<br>(Nominal) | 19.50<br>(Maximum) |  |
| 8.000<br>(Minimum)                                |                     |  | 11.00<br>(Nominal) | 13.50<br>(Maximum) |                    |                           |                    |        |                    |                    |                    |  |
| Master: Calibration out of date Dec 12 14:05 1998 |                     |  |                    |                    |                    | Before: Jan 26 10:48 1999 |                    |        |                    |                    |                    |  |

| Litho Density - D Wellsite Calibration            |                          |  |                    |                          |                          |  |                    |                    |
|---------------------------------------------------|--------------------------|--|--------------------|--------------------------|--------------------------|--|--------------------|--------------------|
| Detectors Resolution From BKG Measurements        |                          |  |                    |                          |                          |  |                    |                    |
| Phase                                             | LS Resolution Background |  | Value              | Phase                    | SS Resolution Background |  | Value              |                    |
| Master                                            |                          |  | 8.497              | Master                   |                          |  | 8.541              |                    |
| Before                                            |                          |  | 8.459              | Before                   |                          |  | 8.572              |                    |
| 5.000<br>(Minimum)                                |                          |  | 8.000<br>(Nominal) | 5.000<br>(Minimum)       |                          |  | 8.000<br>(Nominal) | 11.50<br>(Maximum) |
| Master: Calibration out of date Dec 12 14 05 1998 |                          |  |                    | Before Jan 26 10:48 1999 |                          |  |                    |                    |

#### Compensated Neutron - H / Equipment Identification

##### Primary Equipment:

Compensated Neutron Cartridge

Neutron Logging Source

Neutron Source Radioactive

Neutron Detector with Alpha Source

Compensated Neutron Box

CNC - HA

1247

NLS - KL

1491

NSR - F

1491

CND - A

CNB - AB

##### Auxiliary Equipment:

Compensated Neutron Housing

Neutron Calibration Tank

CNH - A

4465

NCT - B

| Compensated Neutron - H Wellsite Calibration |                     |  |                    |                           |                     |  |                    |                    |
|----------------------------------------------|---------------------|--|--------------------|---------------------------|---------------------|--|--------------------|--------------------|
| Zero Measurement                             |                     |  |                    |                           |                     |  |                    |                    |
| Phase                                        | CNTC Background CPS |  | Value              | Phase                     | CFTC Background CPS |  | Value              |                    |
| Master                                       |                     |  | 27.24              | Master                    |                     |  | 33.74              |                    |
| Before                                       |                     |  | 27.89              | Before                    |                     |  | 38.51              |                    |
| 5.000<br>(Minimum)                           |                     |  | 27.24<br>(Nominal) | 5.000<br>(Minimum)        |                     |  | 33.74<br>(Nominal) | 40.00<br>(Maximum) |
| Master: Dec 08 11:26 1998                    |                     |  |                    | Before: Jan 26 10:47 1999 |                     |  |                    |                    |

#### Scintillation Gamma-Ray - L / Equipment Identification

##### Primary Equipment:

Scintillation Gamma Cartridge

Scintillation Gamma Detector

SGC - SA

1048

SGD - TAA

##### Auxiliary Equipment:

Scintillation Gamma Housing

Gamma Source Radioactive

SGH - K

530

GSR - U/Y

| Scintillation Gamma-Ray - L Wellsite Calibration |                           |                    |       |                    |                            |                    |       |                    |                             |                    |       |
|--------------------------------------------------|---------------------------|--------------------|-------|--------------------|----------------------------|--------------------|-------|--------------------|-----------------------------|--------------------|-------|
| Detector Calibration                             |                           |                    |       |                    |                            |                    |       |                    |                             |                    |       |
| Phase                                            | Gamma Ray Background GAPI |                    | Value | Phase              | Gamma Ray (Jig - Bkg) GAPI |                    | Value | Phase              | Gamma Ray (Calibrated) GAPI |                    | Value |
| Before                                           |                           |                    | 52.87 | Before             |                            |                    | 160.1 | Before             |                             |                    | 165.0 |
| 0<br>(Minimum)                                   | 30.00<br>(Nominal)        | 120.0<br>(Maximum) |       | 145.6<br>(Minimum) | 160.1<br>(Nominal)         | 174.7<br>(Maximum) |       | 150.0<br>(Minimum) | 165.0<br>(Nominal)          | 180.0<br>(Maximum) |       |
| Before: Jan 26 10:54 1999                        |                           |                    |       |                    |                            |                    |       |                    |                             |                    |       |

COMPANY:

GREY WOLF EXPLORATION LTD.

WELL:

GREY WOLF CANAXAS DEH CHO 2 B-14

FIELD:

CANAXAS DEH CHO

PROVINCE:

N.W.T.

BOTTOM LOG INTERVAL

793 M

SCHLUMBERGER DEPTH

797.6 M

DEPTH DRILLER

798 M

KELLY BUSHING

65.3 M

DRILL FLOOR

GROUND LEVEL

56.4 M

Schlumberger

COMPENSATED NEUTRON  
LITHO-DENSITY LOG

# Synthetic Seismogram (2 pages)



# GeoSyn

## FAR-AWAY RESOURCES LTD.

07:34 AM Sat Feb 08, 1999

Binary source file C:\GEOSYN\SYNTH~1\WWTB14DEHCH.SYN

GREY WOLF CANAXAS DEH CHO 2 B-14  
300-B14-6520-12630-0  
GREY WOLF EXPLORATION INC.  
300/ B14 65-20 126-30 /00

Start depth(KB): -26.52 (m.)

End depth(KB): -797.05 (m.)

Start time: 0.000 secs

End time: 0.382 secs

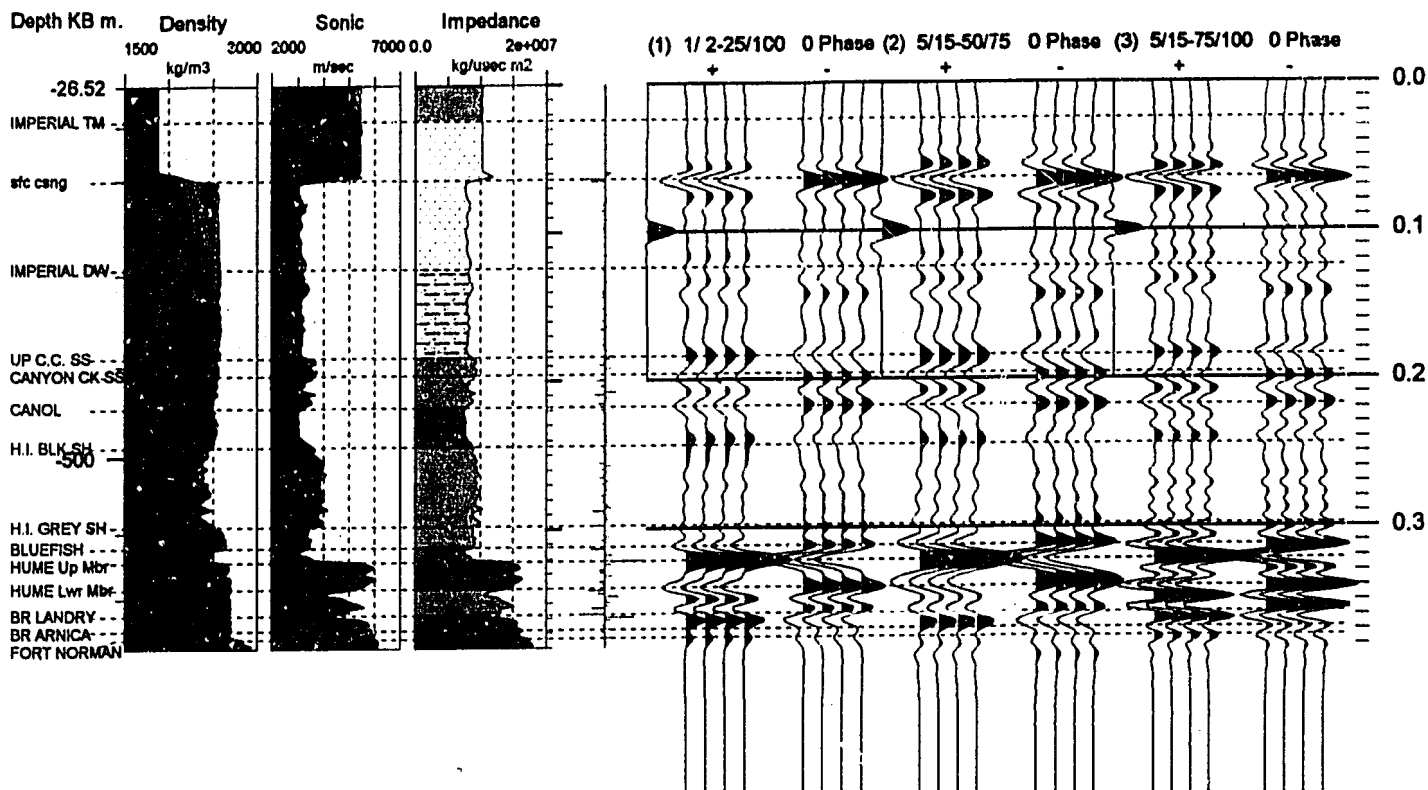
\* Density is included in the reflection calculation

KB: 65.30 (m.) above msl

Time scale: 19.05 (cm/sec.)

Trace amplitude: 1.000

Sample rate: 2.00 (ms)



RELEASE DATE

DATE DE DIFFUSION:

Jan. 31, 2004

GREY WOLF CANAXAS DEH CHO 2 B-14

| Tops Author:<br>RMC                  | Depth KB<br>m. | Depth SS<br>m. | Time 2 Way<br>secs. | Vav.<br>m/sec | Vint.<br>m/sec | Isochron<br>secs. | Isopach<br>m. |
|--------------------------------------|----------------|----------------|---------------------|---------------|----------------|-------------------|---------------|
| Kelly Bushing = 65.30 (m.) above msl |                |                |                     |               |                |                   |               |
| Top of Log                           | -26.52         | 38.78          | 0                   |               | 5437.2         | 0.0256            | 69.48         |
| IMPERIAL TM                          | -96.00         | -30.70         | 0.0256              | 5437.2        | 5413.7         | 0.0393            | 106.50        |
| sfc cong                             | -202.50        | -137.20        | 0.0649              | 5423.0        | 3115.9         | 0.0607            | 94.50         |
| IMPERIAL DW                          | -297.00        | -231.70        | 0.1256              | 4308.4        | 3173.5         | 0.0594            | 84.20         |
| UP C.C. SS                           | -391.20        | -325.00        | 0.1849              | 3944.1        | 3610.9         | 0.0128            | 23.10         |
| CANYON CK SS                         | -414.30        | -349.00        | 0.1977              | 3922.5        | 3355.3         | 0.0213            | 35.70         |
| CANOL                                | -450.00        | -384.70        | 0.2190              | 3867.4        | 3090.1         | 0.0260            | 40.20         |
| H.I. BLK SH                          | -490.20        | -424.90        | 0.2450              | 3784.9        | 3884.6         | 0.0534            | 103.80        |
| H.I. GREY SH                         | -594.00        | -528.70        | 0.2985              | 3802.7        | 3408.1         | 0.0154            | 26.20         |
| BLUEFISH                             | -620.20        | -554.90        | 0.3138              | 3783.4        | 3291.7         | 0.0085            | 14.00         |
| HUME Up Mbr                          | -634.20        | -568.90        | 0.3223              | 3770.4        | 5812.4         | 0.0182            | 52.80         |
| HUME Lwr Mbr                         | -687.00        | -621.70        | 0.3405              | 3879.4        | 4702.0         | 0.0194            | 45.50         |
| BR LANDRY                            | -732.50        | -667.20        | 0.3599              | 3923.6        | 5595.6         | 0.0083            | 23.10         |
| BR ARNICA                            | -755.60        | -690.30        | 0.3681              | 3961.1        | 5988.6         | 0.0061            | 18.40         |
| FORT NORMAN                          | -774.00        | -708.70        | 0.3743              | 3994.4        | 6145.4         | 0.0075            | 23.05         |
| Bottom of Log                        | -797.05        | -731.75        | 0.3818              | 4036.7        |                |                   |               |

RELEASE DATE  
DATE DE DIFFUSION:

Jan 31, 2004