**COMPANY: ENERFIN RESOURCES NORTHWEST**

**WELL: 41-06-65 RD#1 (FISHWHACK)**

**FIELD: MIST GAS**

**COUNTY: COLUMBIA STATE: OREGON**

COUNTY: COLUMBIA
Field: MIST GAS
Location: 501.46'S 47 DEG 3 MIN 9 SEC
Well: 41-06-65 RD#1 (FISHWHACK)
Company: ENERFIN RESOURCES NORT

**Schlumberger**

# CEMENT BOND / VDL
# NEUTRON
# COLLAR LOG

LOCATION

501.46'S 47 DEG 3 MIN 9 SEC E
FROM THE SW CORNER OF SECTION 32
T7N R5W

Elev.: K.B. 919 F
G.L. 909 F
D.F.

Permanent Datum: GROUND LEVEL Elev.: 909 F
Log Measured From: KELLY BUSHING 10.0 F above Perm. Datum
Drilling Measured From: KELLY BUSHING

| API Serial No. | SECTION | TOWNSHIP | RANGE |
|---|---|---|---|
| 36-009-00340 | 6 | 6N | 5W |

| | | | |
|---|---|---|---|
| Logging Date | 15-JAN-1999 | | |
| Run Number | 1 | | |
| Depth Driller | 2970 F | | |
| Schlumberger Depth | 2917 F | | |
| Bottom Log Interval | 2909 F | | |
| Top Log Interval | 1300 F | | |
| Casing Fluid Type | WATER | | |
| Salinity | | | |
| Density | | | |
| Fluid Level | | | |
| BIT/CASING/TUBING STRING | | | |
| Bit Size | 6.750 IN | | |
| From | 531 F | | |
| To | 2970 F | | |
| Casing/Tubing Size | 2.875 IN | | |
| Weight | 6.5 LB/F | | |
| Grade | J-55 | | |
| From | 0 F | | |
| To | 2970 F | | |
| Maximum Recorded Temperatures | | | |
| Logger On Bottom / Time | 15-JAN-1999 / 13:20 | | |
| Unit Number / Location | 3152 / SACRAMENTO | | |
| Recorded By | THORNBURY | | |
| Witnessed By | ROB LUCAS | | |

| | Run 1 | Run 2 |
|---|---|---|
| PVT DATA | | |
| Oil Density | | |
| Water Salinity | | |
| Gas Gravity | | |
| Bo | | |
| Bw | | |
| 1/Bg | | |
| Bubble Point Pressure | | |
| Bubble Point Temperature | | |
| Solution GOR | | |
| Maximum Deviation | | |
| CEMENTING DATA | | |
| Primary/Squeeze | Primary | |
| Casing String No | | |
| Lead Cement Type | | |
| Volume | | |
| Density | | |
| Water Loss | | |
| Additives | | |
| Tail Cement Type | | |
| Volume | | |
| Density | | |
| Water Loss | | |
| Additives | | |
| Expected Cement Top | | |

| | |
|---|---|
| Logging Date | |
| Run Number | |
| Depth Driller | |
| Schlumberger Depth | |
| Bottom Log Interval | |
| Top Log Interval | |
| Casing Fluid Type | |
| Salinity | |
| Density | |
| Fluid Level | |
| BIT/CASING/TUBING STRING | |
| Bit Size | |
| From | |
| To | |
| Casing/Tubing Size | |
| Weight | |
| Grade | |
| From | |
| To | |
| Maximum Recorded Temperatures | |
| Logger On Bottom / Time | |
| Unit Number / Location | |
| Recorded By | |
| Witnessed By | |

Run 3

Run 4

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT, AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO CLAUSE 4 OF OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.

| OTHER SERVICES1 | OTHER SERVICES2 |
|---|---|
| OS1: | OS1: |
| OS2: | OS2: |
| OS3: PERFORATE | OS3: |
| OS4: | OS4: |
| OS5: | OS5: |

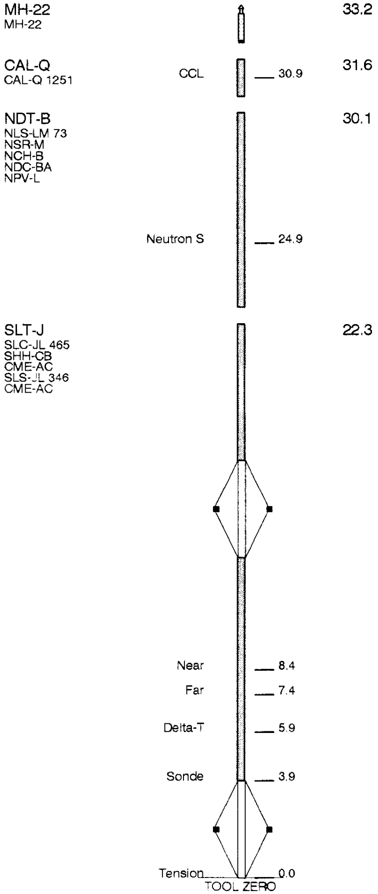
| REMARKS: RUN NUMBER 1 | REMARKS: RUN NUMBER 2 |
|---|---|
| | |
| CORRELATED TO SWS PLATFORM EXPRESS | |
| DATED : 24-DEC-1998 | |
| | |
| | |
| THANK YOU FOR CHOOSING SCHLUMBERGER!!! | |
| | |
| | |
| SWS CREW : R. GUERRA / R. FOREHAND | |

| RUN 1 | | RUN 2 | |
|---|---|---|---|
| SERVICE ORDER #: | | SERVICE ORDER #: | |
| PROGRAM VERSION: | 8C1-205 | PROGRAM VERSION | |
| FLUID LEVEL: | | FLUID LEVEL: | |

| LOGGED INTERVAL | START | STOP | LOGGED INTERVAL | START | STOP |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

## EQUIPMENT DESCRIPTION

| RUN 1 | RUN 2 |
|---|---|
| SURFACE EQUIPMENT<br>WDM-AB 462<br>SMM-AA 331<br>NCS-WB | |
| DOWNHOLE EQUIPMENT | |



MAXIMUM STRING DIAMETER 2.92 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

## Input DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | SLTJ .002 | FN:1 | FIELD | 15-Jan-1999 13:51 | 2933.5 FT | 1286.2 FT |

## Output DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | SLTJ .005 | FN:4 | FIELD | 15-Jan-1999 14:40 | 2932.5 FT | 1285.5 FT |

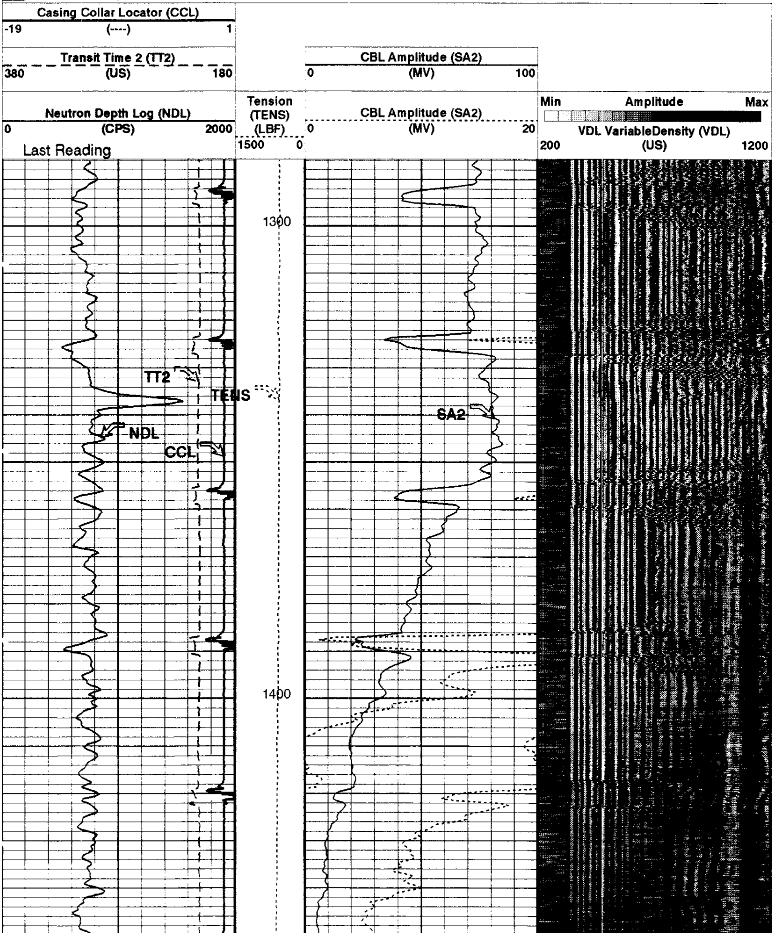
## OP System Version: 8C1-205

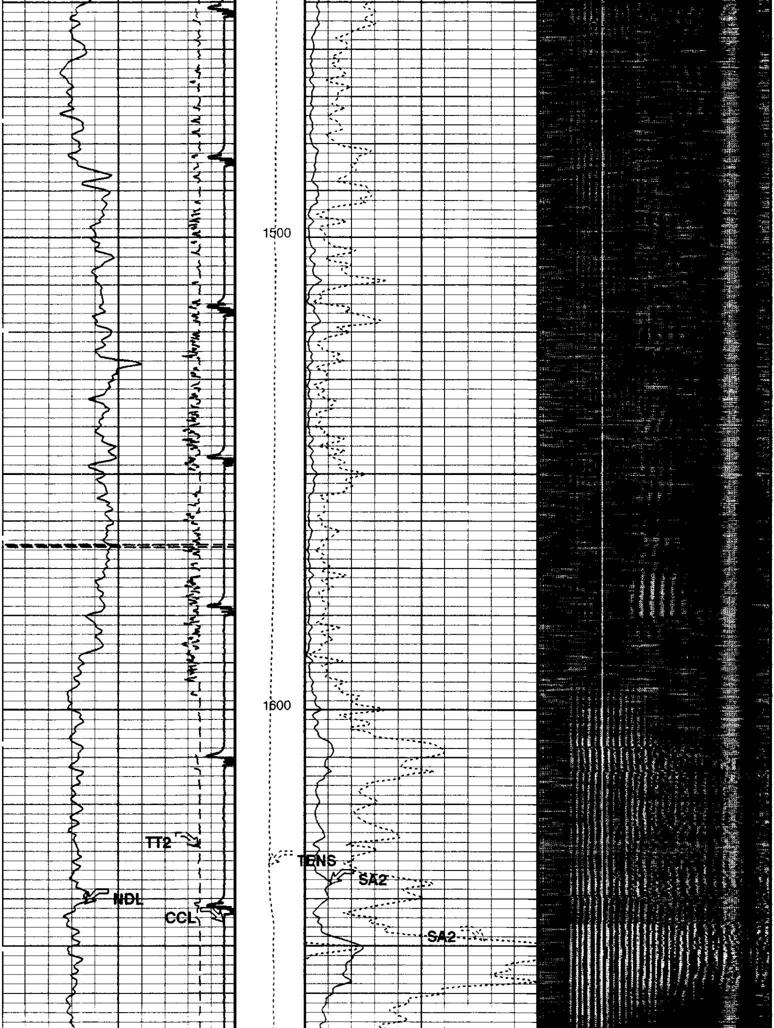
MCM

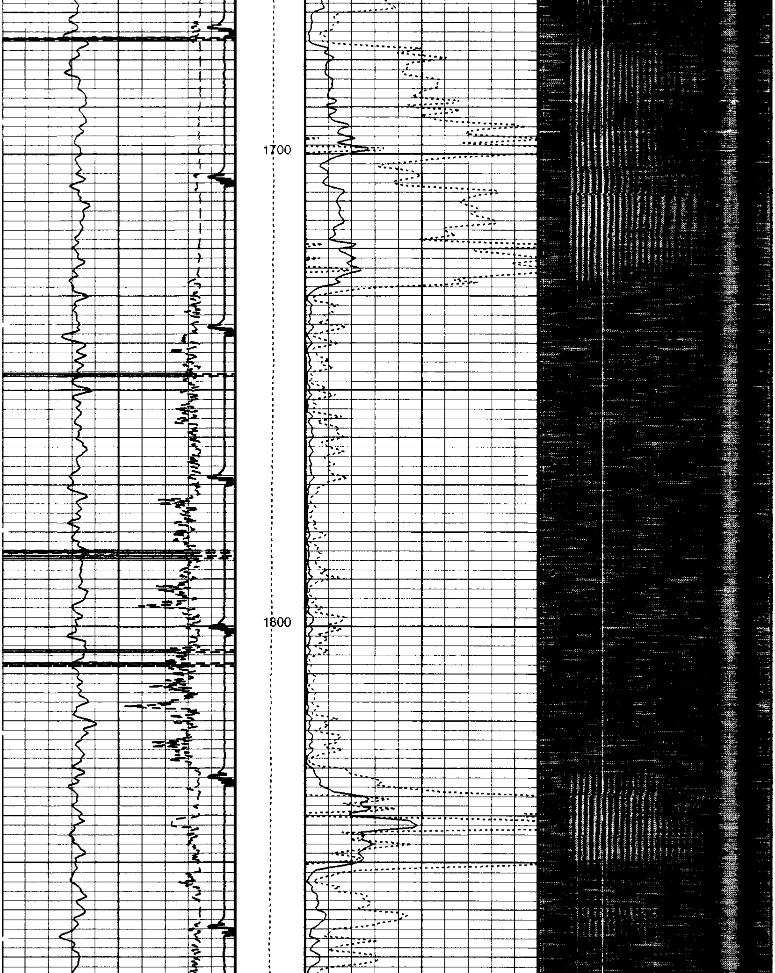
| | | | |
|---|---|---|---|
| SLT-J | APCW-98Q2 | NDT-B | APCW-98Q2 |
| CAL-Q | APCW-98Q2 | | |

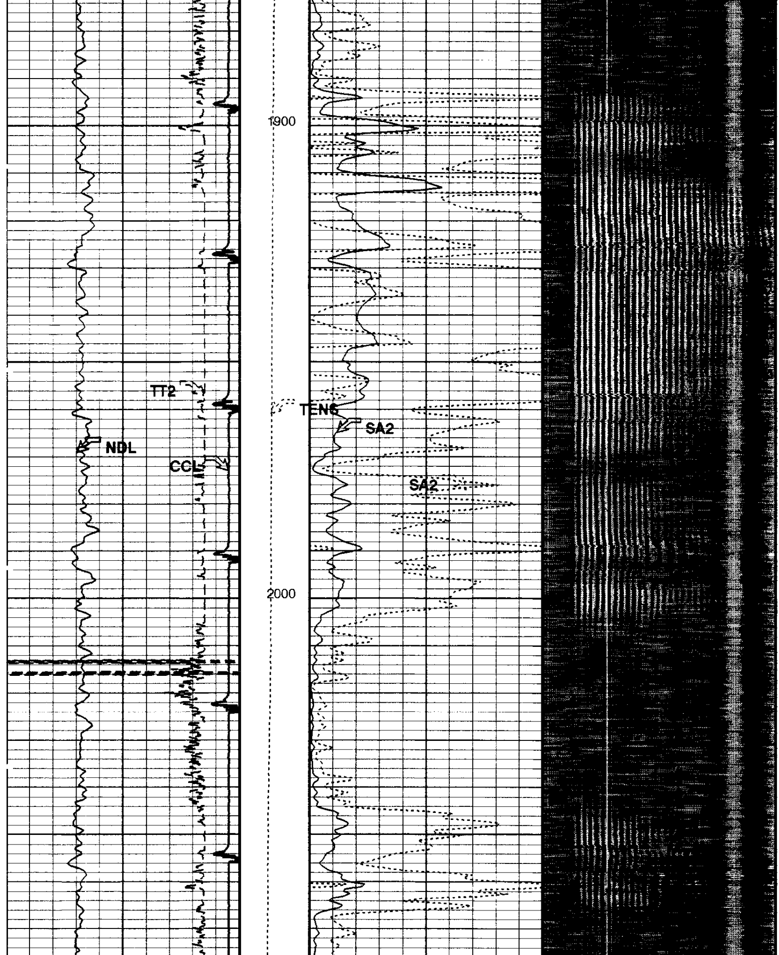
PIP SUMMARY

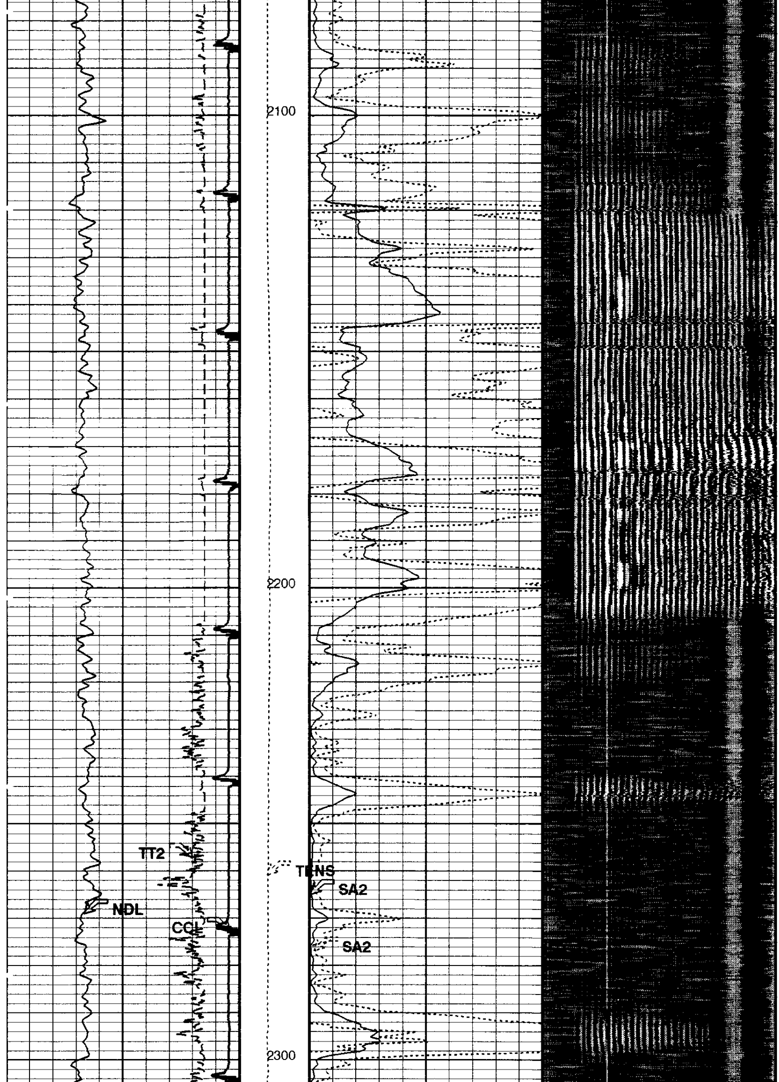
▶ Time Mark Every 60 S

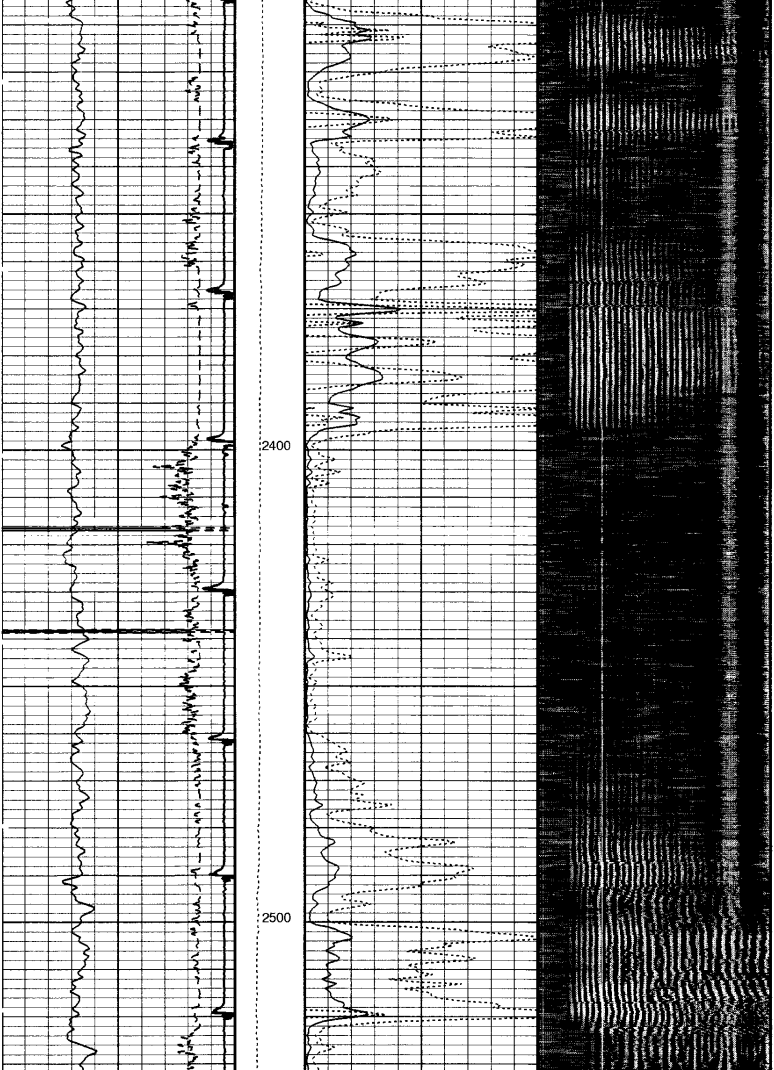


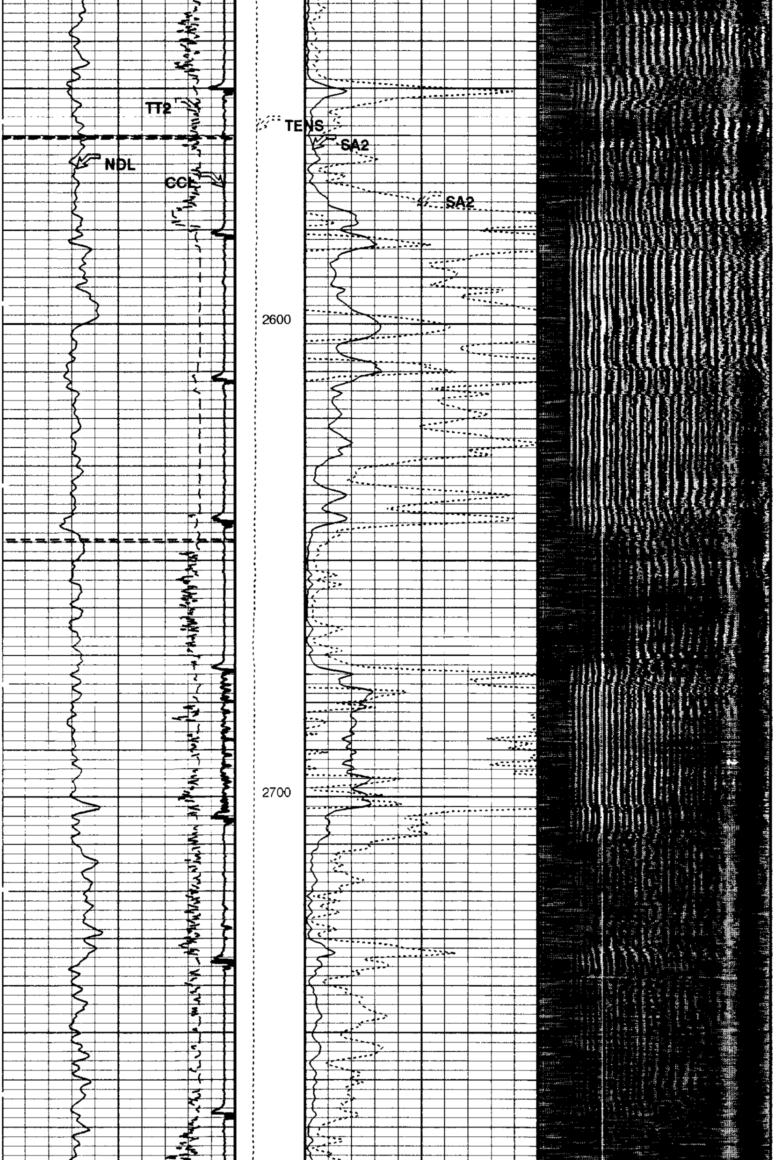


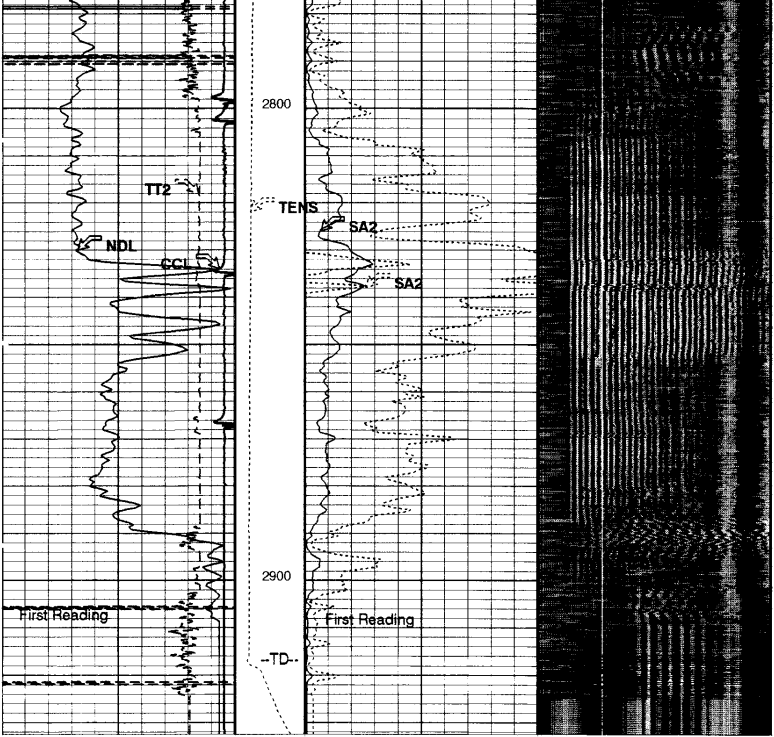












**Neutron Depth Log (NDL)**
0 (CPS) 2000

**Tension (TENS) (LBF)**
1500 0

**CBL Amplitude (SA2)**
0 (MV) 20

**Min Amplitude Max**

**VDL VariableDensity (VDL)**
200 (US) 1200

**Transit Time 2 (TT2)**
380 (US) 180

**CBL Amplitude (SA2)**
0 (MV) 100

**Casing Collar Locator (CCL)**
-19 (----) 1

**PIP SUMMARY**

**Time Mark Every 60 S**

## Parameters

| DLIS Name | Description | Value |
|---|---|---|

| | | | |
|---|---|---|---|
| AGC | Automatic Gain Control | ENABLE | |
| ALTDPCHAN | Alternate depth channel name | TVDE | |
| BHS | Bore Hole Status | CASED | |
| BHT | Bottom Hole Temperature (used in calculations) | 212 | DEGF |
| BILI | Bond Index Level for Zone Isolation | 0.8 | |
| BS | Bit Size | 6.750 | IN |
| BSAL | Borehole Salinity | -50000.00 | PPM |
| CABL | Cable Type | MULTI | |
| CBLG | CBL Gate Width | 25 | US |
| CCLD | CCL reset delay | 12 | IN |
| CCLT | CCL detection level | 0.3 | V |
| CDTS | C-Delta-T Shale | 100 | US/F |
| CLEN | Cable Length | SHORT | |
| CSRL | Cycle Skip Recovery Logic Algorithm | DISABLE | |
| CSTR | Compressive Strength of Cement | 0 | PSIA |
| CWEI | Casing Weight | 6.50 | LB/F |
| DDEL | Digitizing Delay | 0 | US |
| DETE | Detection | E1 | |
| DFD | Drilling Fluid Density | -50000.00 | LB/G |
| DG | Downhole Gain | 1/20 | |
| DO | Depth Offset | -1.0 | FT |
| DSIN | Digitizer Sample Interval | 5 | US |
| DTF | Delta-T Fluid | 189 | US/F |
| DTM | Delta-T Matrix | 56 | US/F |
| DWCO | Digitizer Word Count | 512 | |
| FCF | CBL Fluid Compensation Factor | 1 | |
| FMSG | Far Minimum Sliding Gate | 320 | US |
| FRR | Far Receiver Reduction | 1 | |
| FRRC | Far Receiver Reduction Control | DISABLE | |
| GAI | Manual Gain | 2 | |
| GCSE | Generalized Caliper Selection | BS | |
| GDEV | Average Angular Deviation of Borehole from Normal | 0 | DEG |
| GGRD | Geothermal Gradient | 0.01 | DF/F |
| GOBO | Good Bond | 2 | MV |
| GRSE | Generalized Mud Resistivity Selection | CHART_GEN_9 | |
| GTSE | Generalized Temperature Selection | LINEAR_ESTIMATE | |
| ITTS | Integrated Transit Time Source | DT | |
| KNOB | Knob Control | DISABLE | |
| LQMS | LQMS Coverage | NONE | |
| MATR | Rock Matrix Type | SANDSTONE | |
| MCI | Minimum Cemented Interval | 1.25 | FT |
| MGAI | Maximum Gain | 16 | |
| MODE | Firing Mode | CBL | |
| MSA | Minimum Sonic Amplitude | 8.60622 | MV |
| MST | Mud Sample Temperature | -50000.00 | DEGF |
| NMSG | Near Minimum Sliding Gate | 210 | US |
| PBVSADP | Alternate depth channel playback enabled | NO | |
| PP | Playback Processing | NORMAL | |
| RMFS | Resistivity of Mud Filtrate Sample | -50000.0000 | OHMM |
| RW | Resistivity of Connate Water | 1.0000 | OHMM |
| SA1G | Sonic Amplitude 1 Gain Corrrection | 1 | |
| SA2G | Sonic Amplitude 2 Gain Corrrection | 1 | |
| SGAD | Sliding Gate Status | DISABLE | |
| SGW | Sliding Gate Width | 45 | US |
| SHT | Surface Hole Temperature | 68 | DEGF |
| SLEV | Signal Level | 4 | V |
| SPFS | Sonic Porosity Formula | RAYMER_HUNT | |
| SPSO | Sonic Porosity Source | DT | |
| TD | Total Depth | 2970 | FT |
| TDD | Total Depth - Driller | 2970.00 | FT |
| TDL | Total Depth - Logger | 2917.00 | FT |
| TWS | Temperature of Connate Water Sample | 100.00 | DEGF |

Format: CBL_VDL    Vertical Scale: 5" per 100'    Graphics File Created: 15-Jan-1999 14:40

## OP System Version: 8C1-205

MCM

| | | | |
|---|---|---|---|
| SLT-J | APCW-98Q2 | NDT-B | APCW-98Q2 |
| CAL-Q | APCW-98Q2 | | |

## Input DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | SLTJ .002 | FN:1 | FIELD | 15-Jan-1999 13:51 | 2933.5 FT | 1286.2 FT |

## Output DLIS Files

| | | | | |
|---|---|---|---|---|
| DEFAULT | SLTJ .005 | FN:4 | FIELD | 15-Jan-1999 14:40 |

# Output DLIS Files

DEFAULT SLTJ .003 FN:2 FIELD 15-Jan-1999 14:33 1483.5 FT 1244.0 FT

## OP System Version: 8C1-205

MCM

| | | | |
|---|---|---|---|
| SLT-J | APCW-98Q2 | NDT-B | APCW-98Q2 |
| CAL-Q | APCW-98Q2 | | |

PIP SUMMARY

▪ Time Mark Every 60 S

# REPEAT SECTION

Casing Collar Locator (CCL)
-19 (----) 1

Transit Time 2 (TT2)
380 (US) 180

CBL Amplitude (SA2)
0 (MV) 100

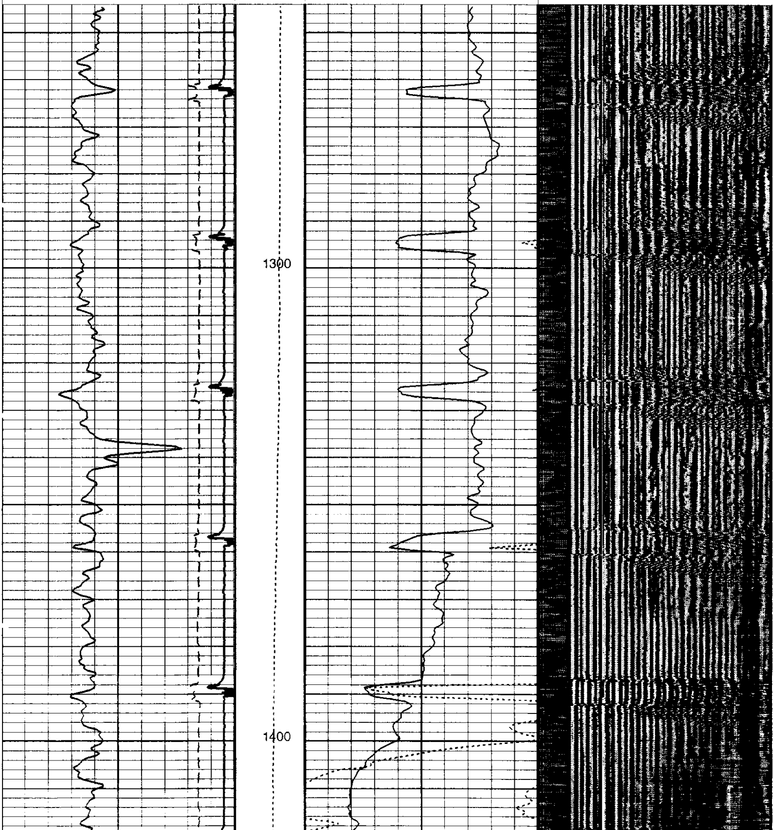
Neutron Depth Log (NDL)
0 (CPS) 2000

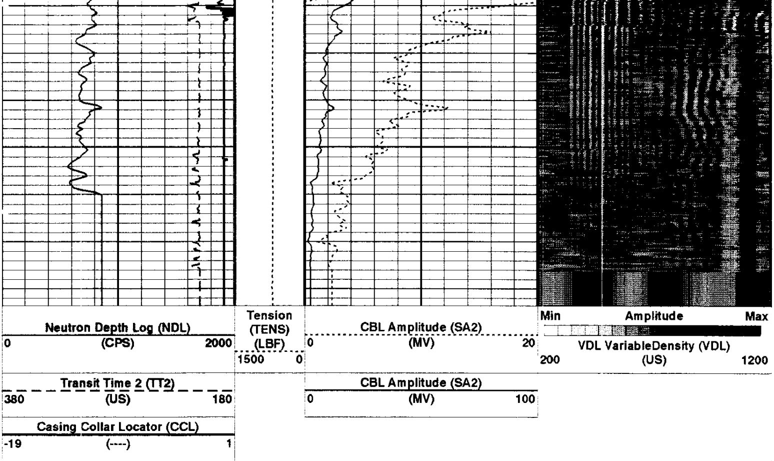
Tension (TENS) (LBF)
1500 0

CBL Amplitude (SA2)
0 (MV) 20

Min Amplitude Max

VDL VariableDensity (VDL)
200 (US) 1200





PIP SUMMARY

■ Time Mark Every 60 S

## Parameters

| DLIS Name | Description | Value | |
|---|---|---|---|
| AGC | Automatic Gain Control | ENABLE | |
| ALTDPCHAN | Alternate depth channel name | TVDE | |
| BHS | Bore Hole Status | CASED | |
| BHT | Bottom Hole Temperature (used in calculations) | 212 | DEGF |
| BILI | Bond Index Level for Zone Isolation | 0.8 | |
| BS | Bit Size | 6.750 | IN |
| BSAL | Borehole Salinity | -50000.00 | PPM |
| CABL | Cable Type | MULTI | |
| CBLG | CBL Gate Width | 25 | US |
| CCLD | CCL reset delay | 12 | IN |
| CCLT | CCL detection level | 0.3 | V |
| CDTS | C-Delta-T Shale | 100 | US/F |
| CLEN | Cable Length | SHORT | |
| CSRL | Cycle Skip Recovery Logic Algorithm | DISABLE | |
| CSTR | Compressive Strength of Cement | 0 | PSIA |
| CWEI | Casing Weight | 6.50 | LB/F |
| DDEL | Digitizing Delay | 0 | US |
| DETE | Detection | E1 | |
| DFD | Drilling Fluid Density | -50000.00 | LB/G |
| DG | Downhole Gain | 1/20 | |
| DSIN | Digitizer Sample Interval | 5 | US |
| DTF | Delta-T Fluid | 189 | US/F |
| DTM | Delta-T Matrix | 56 | US/F |
| DWCO | Digitizer Word Count | 512 | |
| FCF | CBL Fluid Compensation Factor | 1 | |
| FMSG | Far Minimum Sliding Gate | 320 | US |
| FRR | Far Receiver Reduction | 1 | |
| FRRC | Far Receiver Reduction Control | DISABLE | |
| GAI | Manual Gain | 2 | |
| GCSE | Generalized Caliper Selection | BS | |
| GDEV | Average Angular Deviation of Borehole from Normal | 0 | DEG |
| GGRD | Geothermal Gradient | 0.01 | DF/F |
| GOBO | Good Bond | 2 | MV |
| GRSE | Generalized Mud Resistivity Selection | CHART_GEN_9 | |
| GTSE | Generalized Temperature Selection | LINEAR_ESTIMATE | |
| ITTS | Integrated Transit Time Source | DT | |
| KNOB | Knob Control | DISABLE | |
| LQMS | LQMS Coverage | NONE | |
| MATR | Rock Matrix Type | SANDSTONE | |
| MCI | Minimum Cemented Interval | 1.25 | FT |

| | | | |
|---|---|---|---|
| MGAI | Maximum Gain | 16 | |
| MODE | Firing Mode | CBL | |
| MSA | Minimum Sonic Amplitude | 8.60622 | MV |
| MST | Mud Sample Temperature | -50000.00 | DEGF |
| NMSG | Near Minimum Sliding Gate | 210 | US |
| PBVSADP | Alternate depth channel playback enabled | NO | |
| RMFS | Resistivity of Mud Filtrate Sample | -50000.0000 | OHMM |
| RW | Resistivity of Connate Water | 1.0000 | OHMM |
| SA1G | Sonic Amplitude 1 Gain Corrrection | 1 | |
| SA2G | Sonic Amplitude 2 Gain Corrrection | 1 | |
| SGAD | Sliding Gate Status | DISABLE | |
| SGW | Sliding Gate Width | 45 | US |
| SHT | Surface Hole Temperature | 68 | DEGF |
| SLEV | Signal Level | 4 | V |
| SPFS | Sonic Porosity Formula | RAYMER_HUNT | |
| SPSO | Sonic Porosity Source | DT | |
| TD | Total Depth | 2970 | FT |
| TDD | Total Depth - Driller | 2970.00 | FT |
| TDL | Total Depth - Logger | 2917.00 | FT |
| TWS | Temperature of Connate Water Sample | 100.00 | DEGF |

**Format: CBL_VDL** **Vertical Scale: 5" per 100'** **Graphics File Created: 15-Jan-1999 14:33**

## OP System Version: 8C1-205

**MCM**

| | | | |
|---|---|---|---|
| SLT-J | APCW-98Q2 | NDT-B | APCW-98Q2 |
| CAL-Q | APCW-98Q2 | | |

## Output DLIS Files

| | | | | |
|---|---|---|---|---|
| DEFAULT | SLTJ .003 | FN:2 | FIELD | 15-Jan-1999 14:33 |

COMPANY: **ENERFIN RESOURCES NORTHWEST**

WELL: **41-06-65 RD#1 (FISHWHACK)**

FIELD: **MIST GAS**

COUNTY: **COLUMBIA**

STATE: **OREGON**

| | |
|---|---|
| BOTTOM LOG INTERVAL | 2909 F |
| SCHLUMBERGER DEPTH | 2917 F |
| DEPTH DRILLER | 2970 F |
| KELLY BUSHING | 919 F |
| DRILL FLOOR | |
| GROUND LEVEL | 909 F |

Schlumberger

# CEMENT BOND / VDL
# NEUTRON
# COLLAR LOG