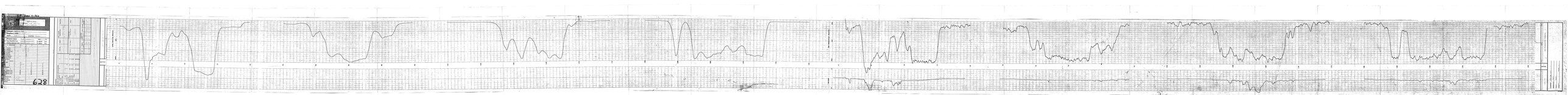
# 638

**DRESSER ATLAS**

**DIVISION OF DRESSER INDUSTRIES, INC.**

**DRESSER ATLAS**
**DIVISION OF DRESSER INDUSTRIES, INC.**
**P.O. BOX 1407**
**HOUSTON, TEXAS 77001


628

Spud 7/13/82

GEOPHYSICAL SERVICES
Gamma
L.S. Density, Caliper

COMPANY Denison Coal
WELL #7620
STATE B.C.
COUNTRY Canada

Permanent Datum Ground Level Elev. ____
Log measured from Ground Level 0.0' M above P.D.
Drilling measured from Ground Level 0.0' K above P.D.

| | | | |
|---|---|---|---|
| Date | 13 March 1977 | | |
| Run No. | ONE | | |
| Depth-Driller | 198 | | |
| Depth-Logger | 198 | | |
| Bottom Log Interval | 198 | | |
| Top Log Interval | 0 | | |
| Casing-Driller | 5 3/4" @ 0 | | |
| Casing-Logger | 5 3/4" @ 0 | | |
| Bit Size | 5 3/4" | | |
| Type Fluid in Hole | Water | | |
| Dens. | | Visc. | |
| pH | | Fluid Loss | |
| Source of Sample | Cuttings | | |
| Rm @ Meas. Temp. | | | |
| Rmf @ Meas. Temp. | | | |
| Rmc @ Meas. Temp. | | | |
| Source: Rmf | | Rmc | |
| Rm @ BHT | | | |
| Rmf @ BHT | | | |
| Rmc @ BHT | | | |
| Max. Rec. Temp. | 12 | °C | |
| Equip. Location | Kamloops | | |
| Recorded by | Schroeder | | |
| Witnessed by | Mr. Sawon | | |

fold here

REMARKS

Changes in Mud Type or Additional Samples

| Date | Sample No. | | | |
|---|---|---|---|---|
| Depth - Driller | | | | |
| Type Fluid in Hole | | | | |

Scale Changes

| Type Log | Depth | Scale Up/Down | Scale Down* |
|---|---|---|---|
| Gamma | 198 | 0 -150 api | - |
| L.S.D. | 198 | 6000 - 0 sdu | - |
| Caliper | 198 | 2" - 2" | - |

Equipment Data

| Run No. | Tool Type | Tool Position | Other |
|---|---|---|---|
| 1 | C.C.S. | Sidewall | - |

Logging Data

| Log | Depths From | To | Speed f/m | T.C. | Norm. | Invoice | Source Number |
|---|---|---|---|---|---|---|---|
| Gamma | 198 | wl | 9 | 1 | out | 101 | - |
| L.S.D. | 198 | wl | 9 | 0.3 | 6.30 | 101 | N-5921 |
| Caliper | 198 | wl | 9 | 0.3 | out | 101 | - |

Note: This hole drilled at an angle of 50°

Gamma Ray
0 api 150

CALIBRATION DATA
Jig No. Value @ Diam.
Jig mark shown at above value =

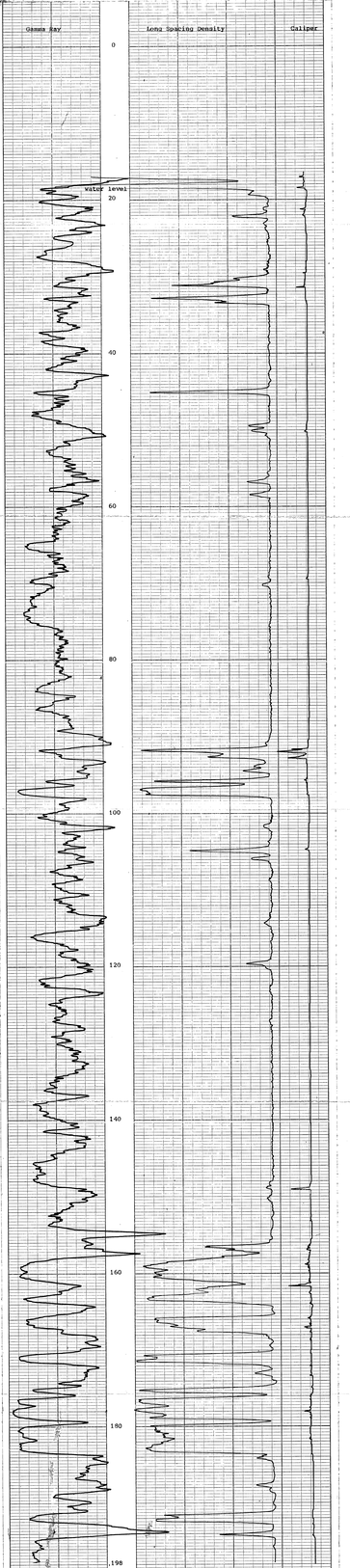
GAMMA RAY
HOLE SIZE CORRECTION

DEPTHS 100ft

Long Spacing Density — Caliper
6000 — 0 7" — 2"

CALIBRATION DATA
Jig Cal. date Jig value SDU@ gr/cc
Jig No. Span NORM gr/cc =
6000 SDU 0

COAL BULK DENSITY
gr/cc




0 api 150 — Gamma Ray
DEPTHS
6000 — 0 7" — 2" — Long Spacing Density — Caliper

COMPANY Denison Coal
BOREHOLE #7620
FIELD Sawon
COUNTY ____ STATE B.C.

# Geophysical Logs

**Denver Office**
Denver, Colorado
U.S. Geological Survey

COMPANY Denslow Oil
BOREHOLE 27701
FIELD Saxon
COUNTY _____ STATE W.Va.

Run No. 1 Date 8-28-80 Time 1:00 PM
Log Measured from Top of Casing
Drillers Depth 314 Logger's Depth 314
Bottom Log Interval 314 Top Log Interval 0
Casing Driller 8 5/8 @ 20 Casing Logger 8 5/8 @ 20
Bit Size 7 7/8 Type Fluid Air
Max. Rec. Temp. 70 °F Equipment No. 1
Operator Rig Time 1:00 PM Witnessed by Mr. Dennis

Tool Face

REMARKS
Circuits in Use Type or Additional Subsets
Gain & Scale No.
Tool Type Gamma Ray
Type Fluid in Hole Air
Hole Diameter 7 7/8 in.
Casing Size 8 5/8 in. @ 20 ft.
Source of Sample Air
Rm @ Meas. Temp. @ °F
Rmf @ Meas. Temp. @ °F
Rmc @ Meas. Temp. @ °F
Source: Rmf Rmc
Rm @ BHT @ °F
Rmf @ BHT @ °F
Rmc @ BHT @ °F

| Type Log | Depth | Scale Up Hole | Scale Down |
|---|---|---|---|
| Scale Change | | | |
| Gamma Ray | 314 | 0 - 50 | |
| Caliper | 314 | 0 - 5000 | |
| Caliper | 314 | 0 - 2000 | |

Equipment Data

| Run No. | Unit Type | Test Position | Other |
|---|---|---|---|
| 1 | D.C.U. | Sidewall | |

Logging Data

| Log | Depth Scale | Time Scale | Speed | Sensitivity | Source Number |
|---|---|---|---|---|---|
| Gamma Ray | 314 | 0 | 0 | Cpm 100 | |
| Long Spacing Density | 314 | 0 | 0 | 10.2 | 4.5 (1) 20.5521 |
| Caliper | 314 | 0 | 0 | 10.2 | 20% (1) |

Gamma Ray — Long Spacing Density — Caliper

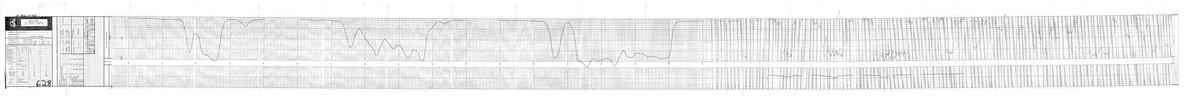
CALIBRATION DATA
Jig No. Water @ Elev.
Jig mark shown at above value =
GAMMA RAY
HALF SIZE CORRECTION

CALIBRATION DATA
Jig Cal. date Jig value NONE gpcc
Jig No. Spam NONE 200 =
5000 GEU 0
COAL BULK DENSITY
gpcc

Casing Shoe
Water Level
Calibration Mark 570 mds

Gamma Ray | Density | Long Spacing Density | Caliper

COMPANY Denslow Oil
BOREHOLE 27701
FIELD Saxon
COUNTY _____ STATE W.Va.



Be Gamma 77 6/16

COMPANY: DENISON COAL
BOREHOLE: A7702
FIELD: SANGRO
COUNTY: Elk Valley
STATE: B.C.

Gamma Ray
Long Spacing Density
Caliper

Casing Shoe

Water level

| Log | Depth From | Depth To | Speed | Sensitivity | Time Const. | Source Gamma | Source Density |
|---|---|---|---|---|---|---|---|
| GAMMA | 288 | 0 | 3 | 1 | std | 50 | std |
| density | 288 | 0 | 3 | 0.5 | std | 101 | std |
| caliper | 288 | 0 | 3 | 0.5 | std | 101 | — |

Gamma Ray: 0 – 150 API
Long Spacing Density: 6000 – 500 kg/m³
Caliper: 0 – 7" – 2"

11-5844-73 Gulf

COMPANY Denison Coal
BOREHOLE #7704
STATE B.C. COUNTY Sahtlam
Other Services: Density, Caliper, Temp.
Date: 1-Jul-73
Run No. 1

| | |
|---|---|
| Date | 2-Jul-1973 |
| Depth Driller | 249.0 |
| Depth Logger | 249.0 |
| Bottom Logged Interval | 249.0 |
| Top Logged Interval | 0.0 |
| Drill Measured From | Ground Level |
| Drill Bit Size | 4 3/4" |
| Drill Collar Length | 40.0 |
| Drill Pipe Length | 209.0 |
| Last Casing Size | 4 1/2" |
| Casing Depth | 9.0 |
| Casing Type | Steel |
| Casing Weight | 9.5 |
| Casing Depth | 249.0 |
| Bottom Hole Temp. | 54°F |
| Max. Recorded Temp. | 54°F |
| Estimated Cement Top | Surface |
| Equipment No. | C-5 Det-Ref-Cal |

Log Measured from Ground Level 2.00 ft. above P.D.
Drill Measured from Ground Level 2.00 ft. above P.D.

Elev.: K.B. ft. D.F. ft. G.L. ft.

REMARKS

Changes in Mud Type or Additional Samples
Date | Sample No.
Depth | Sample Temp.
Type Fluid in Hole

Stop | Start
Fluid Loss | ml

Source of Sample
Rm @ Meas Temp. | Rmf @ Meas Temp. | Rmc @ Meas Temp. | Source: Rmf | Rmc | Rm @ BHT | Rmf @ BHT | Rmc @ BHT

| Type Log | Depth | Scale Up/Hrs | Scale Down |
|---|---|---|---|
| GAMMA | 249 | 0 - 150 API | |
| L-5,10, | 249 | 5000/- 0 | mhos |
| Caliper | 249 | 2"- 7" | |

Equipment Data

| Run No. | Tool Type | Tool Position | Other |
|---|---|---|---|
| 1 | C.C.S. | Sidewall | |

Logging Data

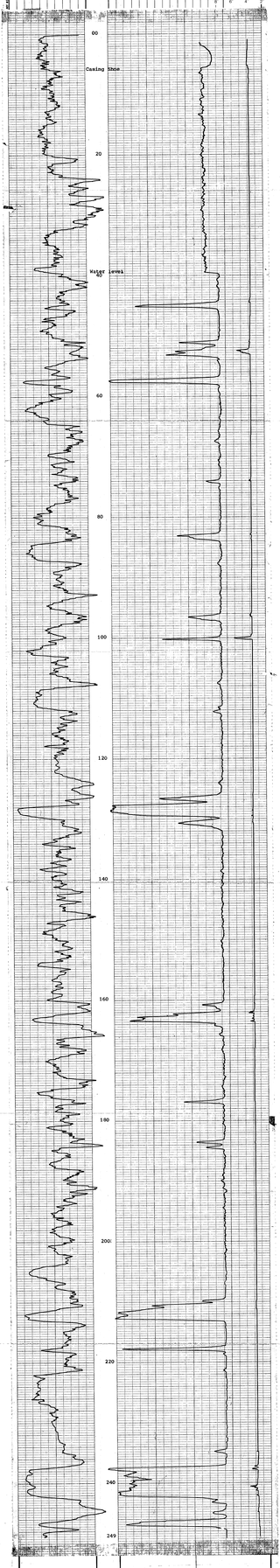
| Log | Depths From | To | Speed ft/hr | L.C. | Norm. | Scale/sq | Source Factor |
|---|---|---|---|---|---|---|---|
| GAMMA | 249 | 0 | 9 | - | out | 10? | - |
| L-5,10 | 249 | 0 | 9 | 0.2 | .748 | 10? | A-5562 |
| Caliper | 249 | 0 | 9 | 0.1 | .998 | 10? | |

Gamma Ray — API — °F

Long Spacing Density — Caliper
5000 mhos — 0 7" 2"

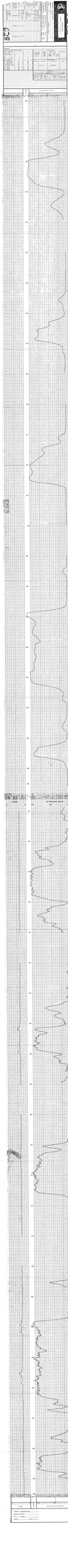
CALIBRATION DATA
Jig No. Value @ Diam.
Jig mark shown at above value →
GAMMA RAY
HOLE SIZE CORRECTION

CALIBRATION DATA
Jig Cal date Jig value 5000 gmcc
Jig No. Scan NORM FAC =
6000 SDU 0
COAL BULK DENSITY
gmcc




0 API 150 — DEPTHS — 5000 mhos 0 7" 2"

COMPANY Denison Coal
BOREHOLE #7704
FIELD Sahtlam
COUNTY STATE B.C.


367
Hydrograph
Water Level Recorder
Model 1
Serial No. 1
Date Installed
Date Removed
Well Number
Location
Recorded by
Chart Speed
Chart Type
Remarks
Time Zero
Time Change
Water Level Change
Time Change
Water Level Change
Time Change
Water Level Change

Sawn 27108

628

COMPANY Dennison Coal
BOREHOLE #7705
FIELD Sawn
COUNTY
STATE B.C.

Gamma Ray, Long Spacing Density, Caliper
B.H. Geophysics

| | | | | | |
|---|---|---|---|---|---|
| Date | 7-9-83 | Run No. | 1 | Elevation | |
| Depth - Driller | 260 | Depth - Logger | 260 | Bottom Log Interval | 260 |
| Type Fluid in Hole | | Salinity, PPM Cl | | Fluid Level | Full |
| Max. Rec. Temp. | | °F | Equipment Number | | |
| Location | | | | | |
| Recorded By | | | Witnessed By | | |

| Run No. | Bit | From | To | Cas. | Wgt. | Fluid | Visc. | Loss |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |

| Run No. | Time | Date | Unit No. | Operator |
|---|---|---|---|---|
| 1 | | 7-9-83 | | |

REMARKS

Changes in Mud Type or Additional Samples

| Date | Sample No. | |
|---|---|---|
| | | |

Depth - Driller

Type Fluid in Hole

| Density | Visc. | |
|---|---|---|
| pH | Fluid Loss | ml |

Source of Sample

| | | | | | |
|---|---|---|---|---|---|
| Rm | @ Meas. Temp. | @ | °F | @ | °F |
| Rmf | @ Meas. Temp. | @ | °F | @ | °F |
| Rmc | @ Meas. Temp. | @ | °F | @ | °F |
| Source Rmf | Rmc | F | | F | |
| Rm | @ BHT | @ | °F | @ | °F |
| Rmf | @ BHT | @ | °F | @ | °F |
| Rmc | @ BHT | @ | °F | @ | °F |

Total Time

Scale Changes

| Type Log | Depth | Scale Up Note | Scale Down |
|---|---|---|---|
| Gamma | 260 | 0 - 150 api | |
| L.S.D. | 260 | 6000- 0 adu | |
| Caliper | 260 | 7"- " | |

Equipment Data

| Run No. | Tool Type | Tool Position | Other |
|---|---|---|---|
| 1 | C.L.S.D. | Sidewall | |

Logging Data

| Log | Depths From | To | Speed | T.C. | Norm. | Invert. | Source Neutron |
|---|---|---|---|---|---|---|---|
| Gamma | 260 | 0 | 9 | 1 | out | 107 | |
| L.S.D. | 260 | 0 | 9 | 0.1 | 748 | 107 | R=5507 |
| Caliper | 260 | 0 | 9 | 0.1 | out | 107 | - |

Gamma Ray 0 api 150 | Depths | Long Spacing Density 6000 adu 0 7" 2"

CALIBRATION DATA

Jig No. Value @ Diam.

Jig mark shown at above value =

GAMMA RAY
HOLE SIZE CORRECTION

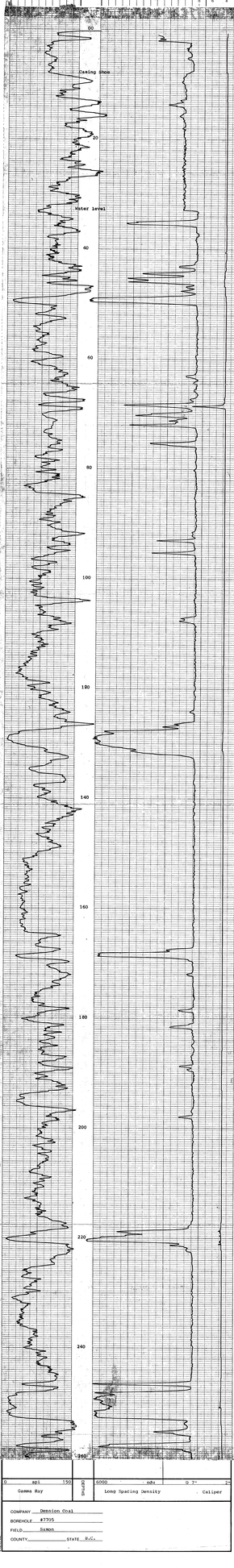
CALIBRATION DATA

Jig Cal date Jig value SDU@ gr/cc

Jig No. Span NORM INV

6000 SDU 0

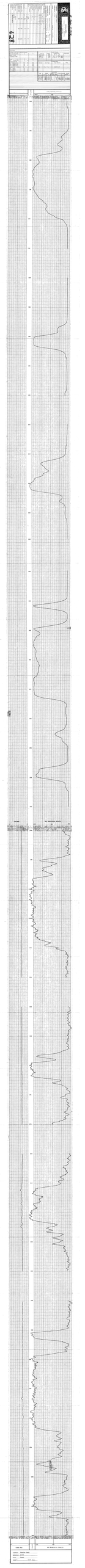
COAL BULK DENSITY
gr/cc




0 api 150 | Depths | 6000 adu 0 7" 2"

Gamma Ray | Long Spacing Density | Caliper

COMPANY Dennison Coal
BOREHOLE #7705
FIELD Sawn
COUNTY STATE B.C.


Geo
Geophysics
Geophysics
Geophysics

329

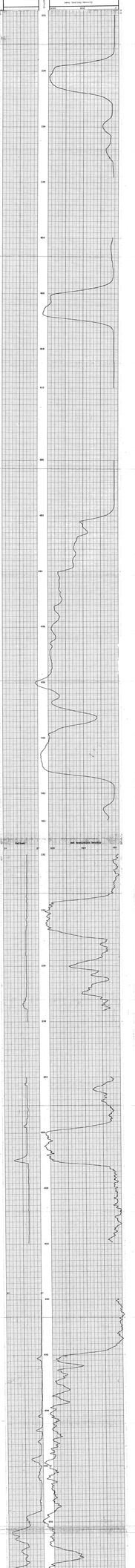
| | | | | | |
|---|---|---|---|---|---|
| Date | 1-Jun-1994 | | | | |
| Run No. | 1 | | | | |
| Depth Reference | KB | | | | |
| Elevation | | | | | |
| Perm. Datum | GL | | | | |
| Log Measured From | KB | | | | |
| Drilling Measured From | KB | | | | |
| Max. Rec. Temp. | 90 | C | 194 | F | |
| Equipment Number | | | | | |
| Location | | | | | |
| Recorded By | | | | | |
| Witnessed By | | | | | |

| | | | |
|---|---|---|---|
| Bit Size | 8 1/2 | in | |
| Type Fluid in Hole | Gel Chem | | |
| Density | 9.2 | lb/gal | |
| Viscosity | 45 | s | |
| PH | 9.5 | | |
| Fluid Loss | 4.0 | ml | |
| Source of Sample | Flowline | | |
| Rm @ Meas. Temp. | 0.080 | @ | 90 C |
| Rmf @ Meas. Temp. | 0.060 | @ | 90 C |
| Rmc @ Meas. Temp. | 0.080 | @ | 90 C |
| Source Rmf / Rmc | Measured | | |
| Rm @ BHT | 0.040 | @ | 194 F |
| Time Since Circ. | 24 | hrs | |
| Time Since Stop | 1 | hrs | |

| Equipment | Location | Serial No. |
|---|---|---|
| Logging Unit | Calgary | 3-1-1 |
| Sonde | Calgary | 3-1-1 |
| Cable | Calgary | 3-1-1 |

| Run | Bit Size | Casing Size | Casing Weight | Casing Grade | Casing Depth | Liner Size | Liner Weight | Liner Grade | Liner Top | Liner Bottom |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8 1/2 | 9 5/8 | 36 | J-55 | 1000 | | | | | |

| Time | Date | Depth | Comment |
|---|---|---|---|
| 12:00 | 31-May-94 | 1000 | Start Run |
| 18:00 | 31-May-94 | 1000 | Log Down |
| 20:00 | 31-May-94 | 1000 | Log Up |
| 21:00 | 31-May-94 | 1000 | Stop Log |
| 22:00 | 31-May-94 | 1000 | Start Log |
| 23:00 | 31-May-94 | 1000 | Stop Log |
| 24:00 | 31-May-94 | 1000 | Start Log |
| 01:00 | 1-Jun-94 | 1000 | Stop Log |




Company: Petrocan Oman

Well: Wadi Al Ayla

Field: Sumail

County: State: Oman

Schlumberger

COMPUTED BY: Chris Hayes

Jackson Coal

Sandy Creek Resources

Jackson Coal

Jackson Co., W. Virginia

Field Name

Gamma Ray

Long Spacing Density

Caliper

Depth Scale

Gamma Ray: 0 API 150

Long Spacing Density: 1000 mRe 0 3

Caliper: 6 in 16 in

COMPANY: Jackson Coal

BOREHOLE: #7707

FIELD: Sandy Creek

COUNTY: Jackson

STATE: W.V.