

API # 15-163-24332-00-00

GEOLOGICAL REPORT DRILLING TIME AND SAMPLE LOG

COMPANY Baird Oil Company, LLC
 LEASE Perkins # 3-24
 FIELD Alcona
 LOCATION 725' ENL + 330' FWL
 SEC 24 TWSP 7s RGE 20W
 COUNTY Roos STATE Kansas

ELEVATION
 KB 2031'
 DF 2029'
 GL 2023'
 Depths Measured From
 Log KB Drilling KB

CONTRACTOR WWD Drilling Rig #12
 SPUD 3-15-17 COMP 3-20-17
 SAMPLES SAVED FROM 2950' TO R.T.D.

CASING
 Surface 8 5/8" set @ 211'
 Production 5 1/2"
 ELECTRIC LOGS
ELI

FORMATION TOPS AND STRUCTURAL POSITION

| FORMATION | SAMPLE | E. LOG | DATUM | A | B | C | D |
|-------------------------|-------------|-------------|---------------|---------------|---------------|---------------|---|
| | | | <u>2.169</u> | • | • | • | |
| <u>Anhydrite</u> | <u>1545</u> | <u>1541</u> | <u>+ 490</u> | <u>+ 482</u> | <u>+ 484</u> | <u>+ 495</u> | |
| <u>Base Anhydrite</u> | <u>1578</u> | <u>1575</u> | <u>+ 456</u> | <u>+ 448</u> | <u>+ 450</u> | <u>+ 466</u> | |
| <u>Topeka</u> | <u>2994</u> | <u>2993</u> | <u>- 962</u> | <u>- 964</u> | <u>- 966</u> | <u>- 966</u> | |
| <u>Heebner</u> | <u>3195</u> | <u>3195</u> | <u>- 1164</u> | <u>- 1164</u> | <u>- 1168</u> | <u>- 1168</u> | |
| <u>Toronto</u> | <u>3217</u> | <u>3217</u> | <u>- 1186</u> | <u>- 1187</u> | <u>- 1191</u> | <u>- 1191</u> | |
| <u>Lansing</u> | <u>3233</u> | <u>3233</u> | <u>- 1202</u> | <u>- 1202</u> | <u>- 1206</u> | <u>- 1206</u> | |
| <u>Base Kansas City</u> | <u>3443</u> | <u>3443</u> | <u>- 1412</u> | <u>- 1413</u> | <u>- 1419</u> | <u>- 1417</u> | |
| <u>Marmaton</u> | <u>3468</u> | <u>3468</u> | <u>- 1437</u> | <u>- 1441</u> | <u>- 1446</u> | | |
| <u>Arbuckle</u> | <u>3480</u> | <u>3481</u> | <u>- 1450</u> | <u>- 1451</u> | <u>- 1451</u> | <u>NR.</u> | |
| <u>Total Depth</u> | <u>3560</u> | <u>3560</u> | <u>- 1529</u> | <u>- 1522</u> | <u>- 1529</u> | <u>- 1476</u> | |

REFERENCE WELLS

- A Black Diamond; Perkins #1, NE-NW-NW Sec 24-7s-20W
- B Baird Oil Co (current) Wheeler #1, NE-NE-NE Sec 23-7s-20W
- C Baird Oil Co (current) Perkins #2, NW-NW-NW Sec 24-7s-20W
- D

REMARKS

This well ran structurally favorable to other producers in the area. Due to structural position and positive D.S.T. data it was decided production casing should be cemented to further test the well. The following zones should be tested; 3482'-3486' and 3475'-3479'.

Richard B. Well
3-21-17

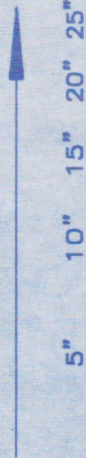
7502

LEGEND

- 
Anhydrite
- 
Salt
- 
Sandstone
- 
Shale
- 
Carb sh
- 
Limestone
- 
Ool. Lime
- 
Chert
- 
Dolomite

DRILLING TIME IN MINUTES
PER FOOT

Rate of Penetration Decreases



1540

60

DEPTH

LITHOLOGY

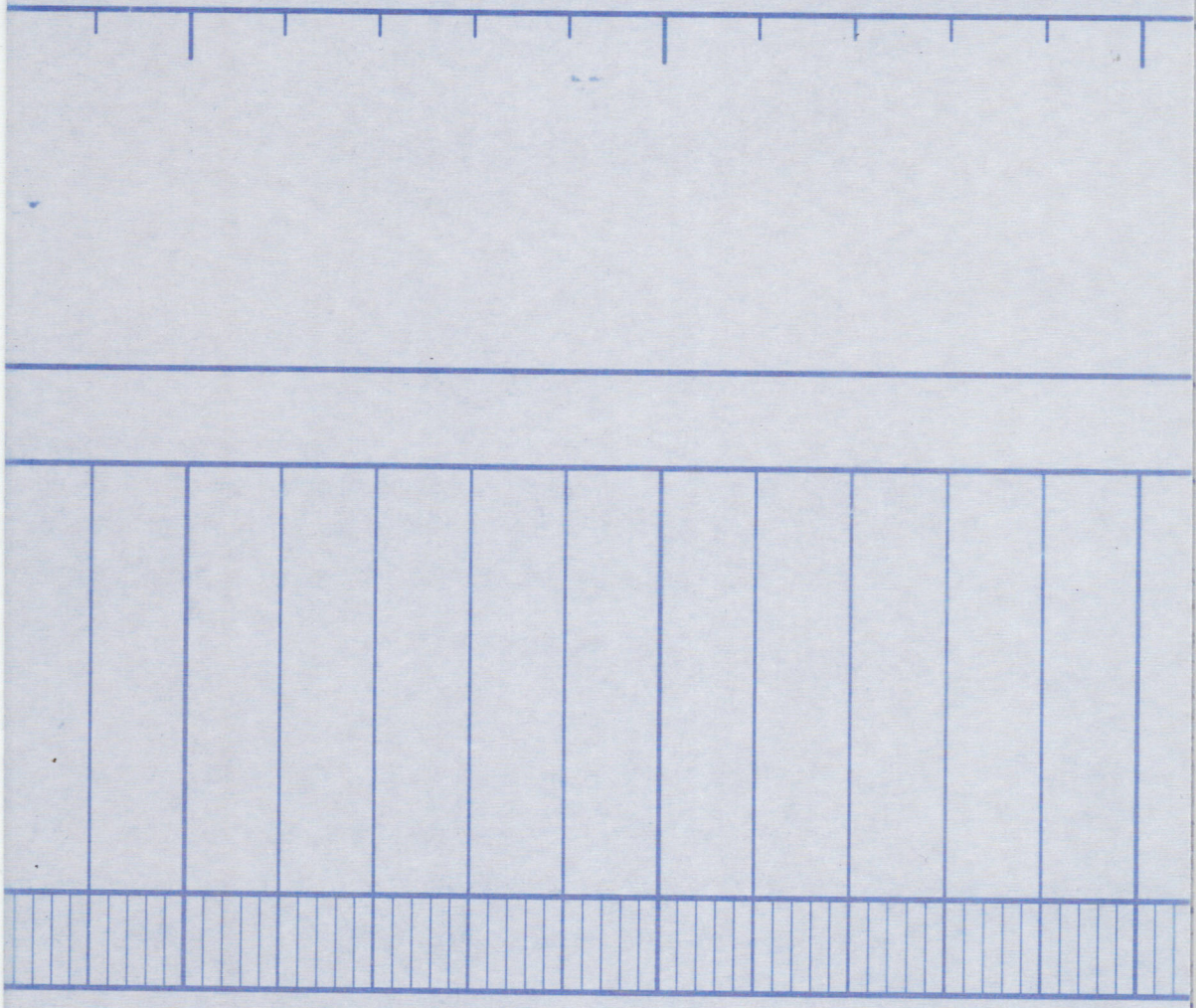
SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS

Port collar @ 1534'

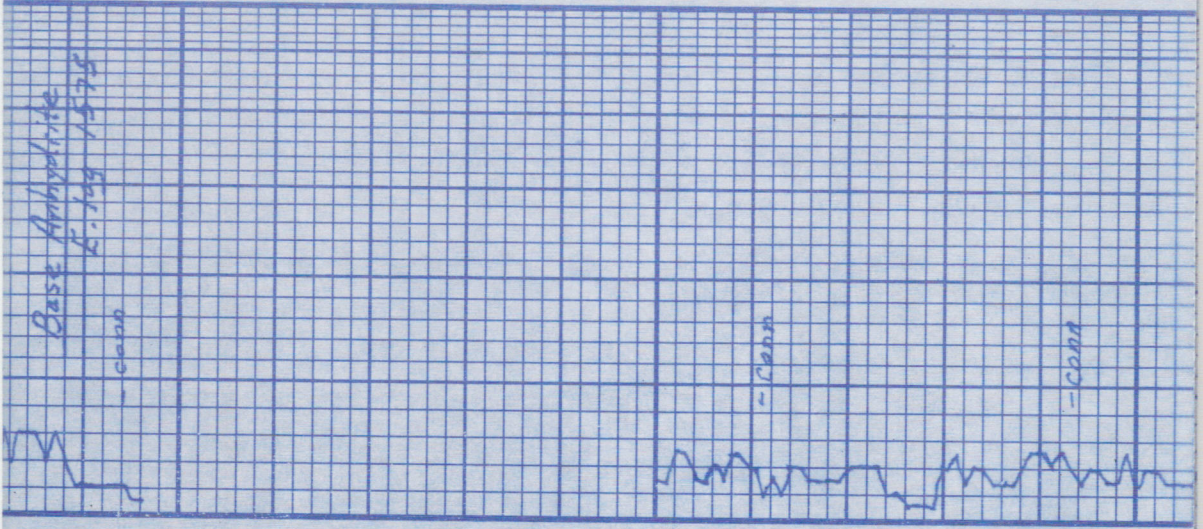
LOG 7710



80

2850

2900



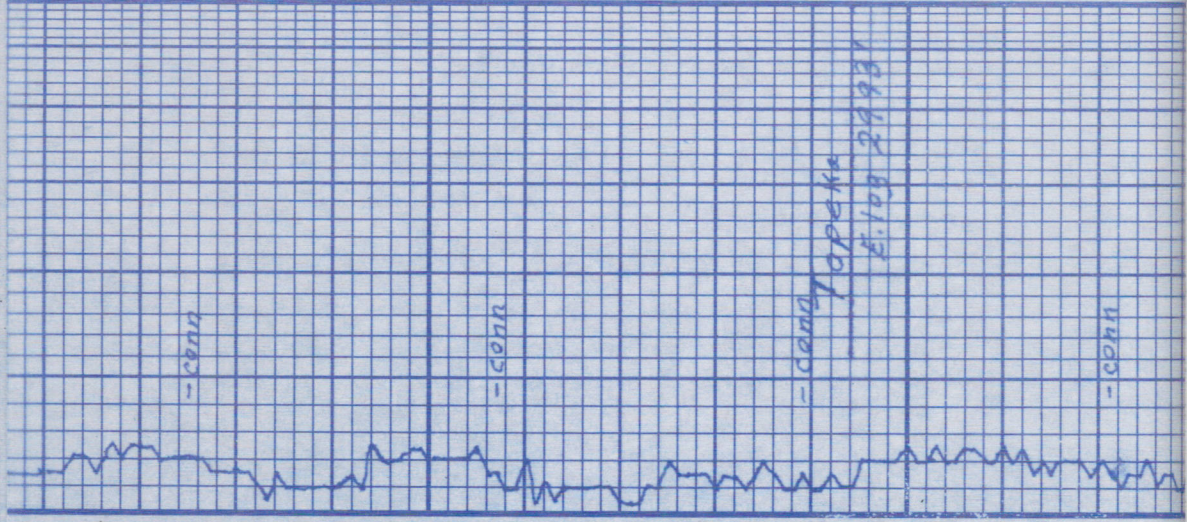
Base Anhydrite
L. 109 1575

- Conn

- Conn

- Conn





20

40

60

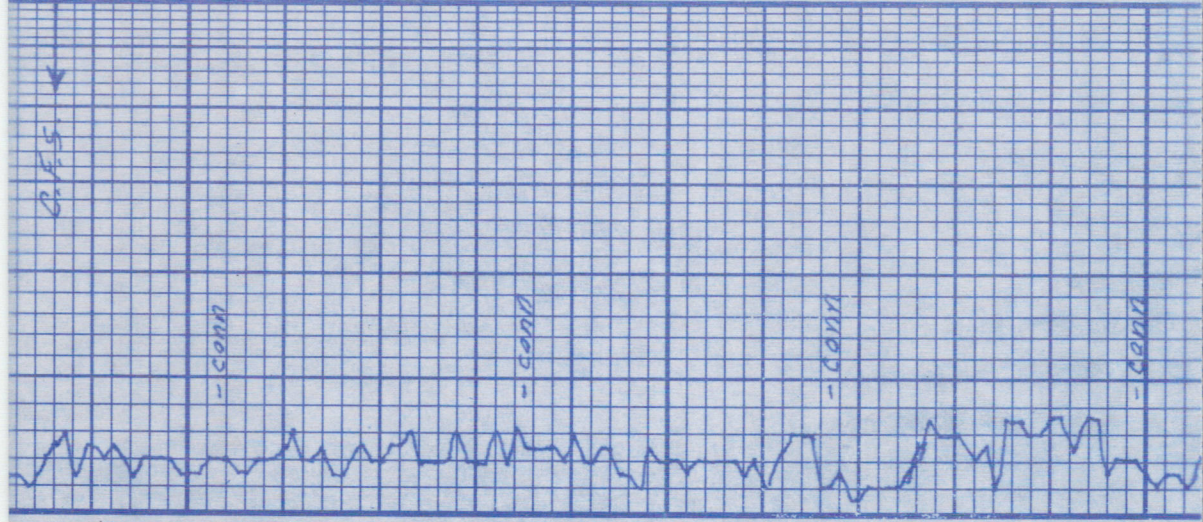
80

3000

20

| | | | | | | | | | |
|--|--|---|--|--|--|--|--|--|--|
| | | | | | | | | | |
| | | sltstone: brn + gry | | | | | | | |
| | | ls: tn-gry mt/d fs/f ds N.S.O. | | | | | | | |
| | | sltstone: gry | | | | | | | |
| | | ls: tn-gry fs/f ds N.S.O. | | | | | | | |
| | | sltstone: gry | | | | | | | |
| | | ls: tn-gry fs/f N.S.O. | | | | | | | |
| | | ls: tn-gry fs/f ds N.S.O. | | | | | | | |
| | | ls: tn-gry fs/f ds N.S.O. | | | | | | | |
| | | ls: tn-gry sli. suc. fs/in fs/f N.S.O. | | | | | | | |

Samples are lagged
good samples



| | | |
|------|---|---------------------------------------|
| 40 | LS: tn-gry slt.cky-fsif ppp N.S.O. | LS: tn-gry slt.cky-fsif ppp N.S.O. |
| 60 | LS: a.a. | LS: tn-gry slt.cky-fsif ppp N.S.O. |
| 80 | sh: blk Carb LS: tn-gry slt.cky-fsif ppp N.S.O. | LS: tn-gry slt.cky-fsif ppp N.S.O. |
| 3100 | LS: wh-ta fcln-fsif tr suc in mmp N.S.O. | LS: wh-ta fcln-fsif ppp N.S.O. |
| 20 | LS: wh-ta fcln-fsif tr suc in mmp N.S.O. | LS: wh-ta fcln-fsif ppp N.S.O. |
| 40 | LS: wh-ta fcln-fsif tr suc in mmp N.S.O. | LS: wh-ta fcln-fsif ppp N.S.O. |

no vis p No cut No par
N.S.O.

LS: tn-gry slt.cky-fsif
ppp N.S.O.

LS: tn-gry slt.cky-fsif
ppp N.S.O.

sh: blk Carb
LS: tn-gry slt.cky-fsif
ppp N.S.O.

LS: wh-ta fcln-fsif tr
suc in mmp N.S.O.

LS: wh-ta fcln-fsif tr
suc in mmp N.S.O.

LS: wh-ta fcln-fsif tr
suc in mmp N.S.O.

✓

No odor Δ Lt. gry + wh
 sh: brn, gry, grn
 Lt. wh to frxn - fsh
 Δ ty fr No V15
 N.S.O.
 Lt: wh to fsh ppφ - sl: vgyφ
 gd rainbow S.O. pp F.O. on
 Ckshb gd odor ✓
 sh: BIK Carb.
 Lt: fr - gry fsh dms
 sh: gry + brn slty
 Lt: wh to fr. Lt. gry fsh ppφ
 sl: vgyφ fr fr. sptd
 5th RT. pp floating F.O.
 fr. odor ✓
 Lt: wh to frxn oil - sl: oil
 ppφ - in part φ fr sptd
 O strn R.T. F.O. on crush ✓
 Lt: wh to frxn dms
 fr. blk Carb Sh.
 Lt: gry fsh dms
 sh: brn + gry
 Lt: wh to frxn sl: oil sl:
 BIK ppφ fr vgyφ ✓

60

80

3200

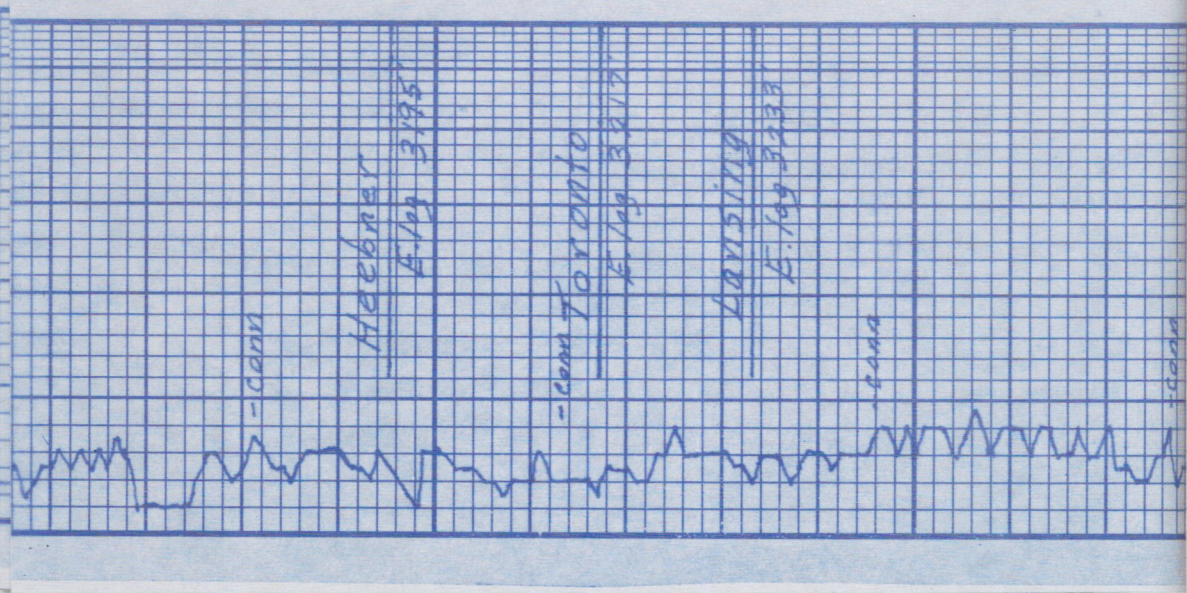
20

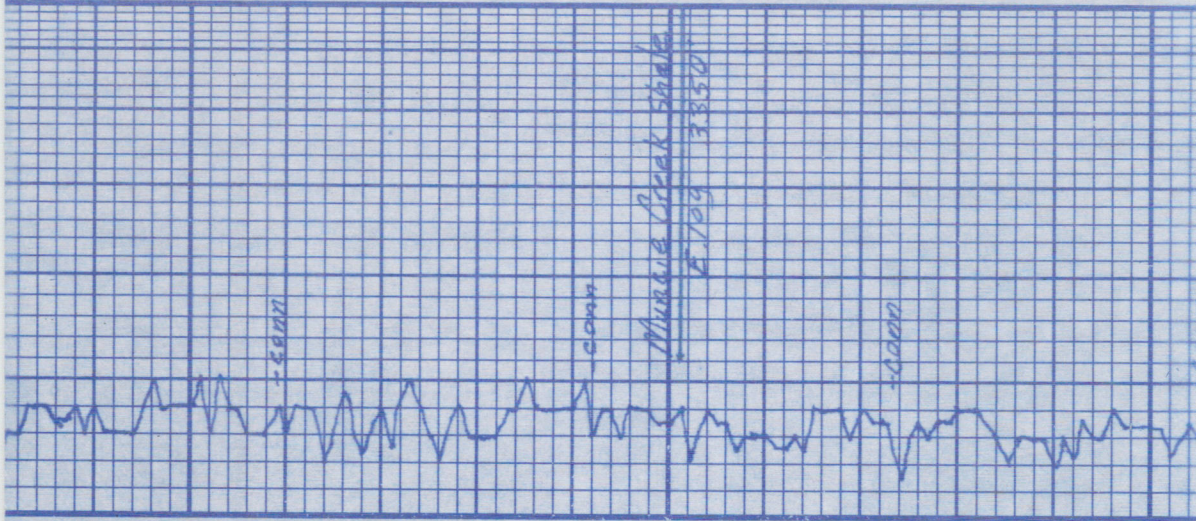
40

60

'A'

'C'





| | | | | | | | |
|---|---|--|---|---|---|--|-------------------|
| 15: wh to fsh - fsh pr. ppφ 14: spid 0.5m R.T. floating F.O. Δ wh | 15: wh to fsh Tr. ppφ Tr. pp 1.0 sta | 15: wh to fsh - fsh Tr 5li. 0.01 Tr. 0.5m Tr. pp F.O. odor | 15: wh to fsh - fsh oil in part of Tr. vgyφ 1.0 0.5m Δ wh | 15: wh to fsh das Tr. Δ or Tr. 61K Carb Sh. | 15: wh to fsh - fsh das Tr. pp. 1.5 - 5ptd 0.5m N.F.O. Tr. Δ to | 15: wh to fsh pr. ppφ pr. 1.5 - 5ptd 0.5m N.F.O. | 15: wh to fsh das |
|---|---|--|---|---|---|--|-------------------|

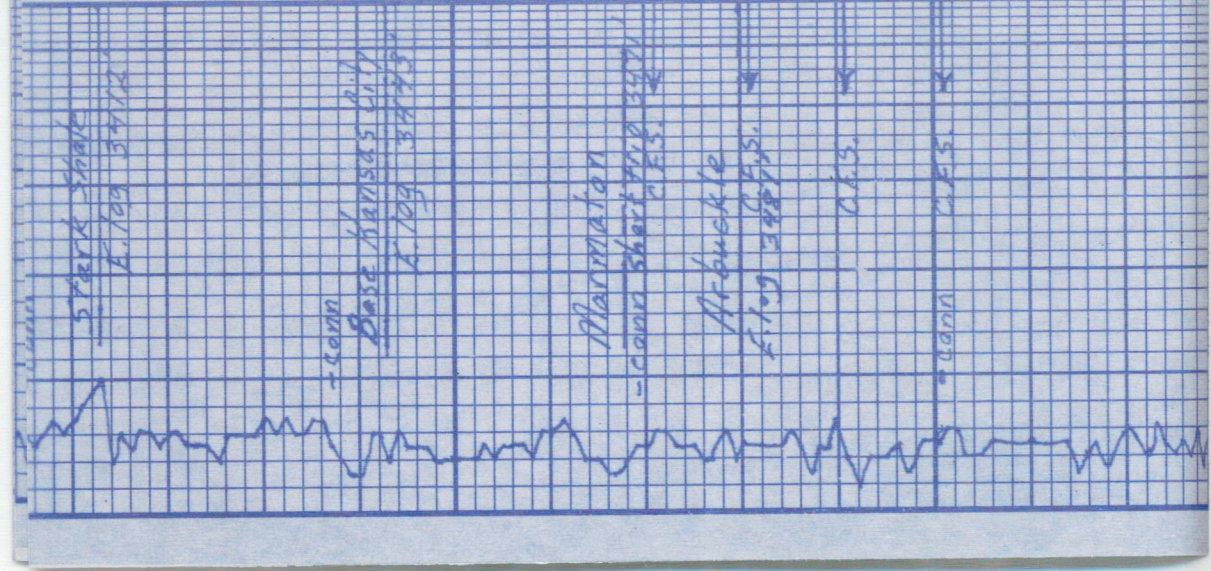
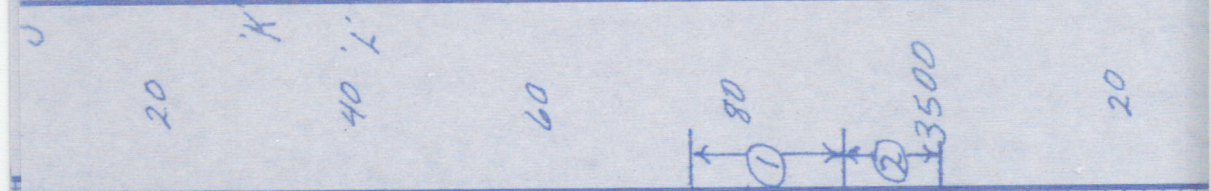
11: 5ptd 0.5m N.F.O. ✓
✓
✓
✓
✓
✓
✓
✓

3300 'D'
3300 'E'
20 'F'
40 'G'
60 'H'
80 'I'
3400

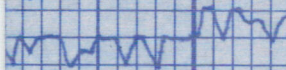
Incline @ 3491' 1/2°

Strap 3502.05
 Board 3501.87
 Diff. .18
 Trilobite Testing
 DST #1 3475'-3491'
 30-45-30-45
 FF: B.O.B. in 9 min
 FSI: 1 1/2" blow
 FF: B.O.B. in 6 min
 FSI: 1/2" blow
 Recovery: 390' G.I.P.
 416' Total
 230' C.O. 37° API gravity
 62' G.M.+WCO
 107.9, 40% O, 40% W
 107.7 M
 124' O+C.M.W 57.9,
 107.0, 80% W, 57.2 M
 Hyd: 1724-1707 #
 FP: 33-119/130-183 #
 SHP: 533-517 #
 BH Temp: 110° F.
 Chlorides: 42,000 ppm
 DST #2 3491'-3501'
 30-30-30-30 "
 IF: wk. blow incr. to 3 "
 FSI: No blow
 FF: wk. blow incr. to 1/2 "
 FSI: No blow
 Recovery: 129' Total
 5' C.O. 32° API gravity

| | |
|---|---|
| V.R.T. pr. ht. 0.5th | Sh: brn + gry sily |
| Ls: wh. tn. fcln - sil. fcln ppφ pr. ht. 0.5th | Ls: wh. tn. fcln - sil. fcln ppφ pr. ht. 0.5th |
| Slt. stone: gry + brn | Slt. stone: gry + brn |
| Fr. 55: gry v. tn. gn consol in gran φ N.S.O. | Fr. 55: gry v. tn. gn consol in gran φ N.S.O. |
| Ls: wh. tn. fcln dol | Ls: wh. tn. fcln dol |
| Sh: brn + gry | Sh: brn + gry |
| Ls: wh. tn. fcln sil. fcln ppφ ht. 5 ft 0.5th | Ls: wh. tn. fcln sil. fcln ppφ ht. 5 ft 0.5th |
| Tr. ppφ | Tr. ppφ |
| Comp. Dol: to sil. fcln in ln φ Lt. Fr. O sat F.O. | Comp. Dol: to sil. fcln in ln φ Lt. Fr. O sat F.O. |
| Dol: wh. tn. fcln - mxln in ln φ scat. ht. 0.5th ppφ. Tr. V.V. | Dol: wh. tn. fcln - mxln in ln φ scat. ht. 0.5th ppφ. Tr. V.V. |
| φ odor | φ odor |
| Dol: wh. tn. fcln - mxln Fr. ht. 0.5th Fr. 6 incr cky | Dol: wh. tn. fcln - mxln Fr. ht. 0.5th Fr. 6 incr cky |
| Trashy sample | Trashy sample |
| Dol: wh. tn. fcln pr. in ln φ R.T. ht. 0.5th | Dol: wh. tn. fcln pr. in ln φ R.T. ht. 0.5th |
| Dol: wh. tn. fcln - mxln in ln φ to above cks. Fr. ht. 0.5th | Dol: wh. tn. fcln - mxln in ln φ to above cks. Fr. ht. 0.5th |



-cont



P.T.D.

E.109 35881

40

60



T.T. Taryo SPKS

Dol: to -pk feln-mxh insid
glau SPKS fr 2tz 5d embok
A drk favy-85pk SPKS
mostly barren

Dol: a.a.

62' O+G CWM 57.9, 57.0
30% W 60% M
62' OCMW 27.0, 78.0
207.0 M
M/d: 1759-1714#
FP: 17-47/52-86#
BHP: 565-539#
BHTemp: 108°F
Chlorides: 38,000ppm
Incline @ 3560' 3/4°