

A.P.T. # 15-195-22912-00-00

GEOLOGICAL REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY Reilly Oil Company, Inc.
 LEASE Wendy # 2-7
 FIELD Tidball Northeast
 LOCATION 685'FNL+870'FWL
 SEC 7 TWSP 11s RGE 24w
 COUNTY Trego STATE Kansas

ELEVATION
 KB 2350'
 DF 2348'
 GL 2345'
 Depths Measured From
 Log KB Drilling KB

CONTRACTOR WWD Drilling Rig #6
 SPUD 1-24-14 COMP 2-1-14
 SAMPLES SAVED FROM 3420' TO R.T.D.

CASING
 Surface 8 7/8" @ 207
 Production 5 1/2"
 ELECTRIC LOGS
Nabors

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE	E. LOG	DATUM	A	B	C	D
			<u>2. log</u>	●	●		
<u>Anhydrite</u>	<u>1964</u>	<u>1964</u>	<u>+ 386</u>	<u>+ 386</u>	<u>+ 380</u>		
<u>Base Anhydrite</u>	<u>2006</u>	<u>2005</u>	<u>+ 345</u>	<u>+ 346</u>	<u>+ 340</u>		
<u>Topeka</u>	<u>3432</u>	<u>3434</u>	<u>- 1084</u>	<u>- 1082</u>	<u>- 1085</u>		
<u>Heebner</u>	<u>3649</u>	<u>3652</u>	<u>- 1302</u>	<u>- 1297</u>	<u>- 1303</u>		
<u>Toronto</u>	<u>3671</u>	<u>3673</u>	<u>- 1323</u>	<u>- 1318</u>	<u>- 1323</u>		
<u>Lansing</u>	<u>3688</u>	<u>3690</u>	<u>- 1340</u>	<u>- 1337</u>	<u>- 1339</u>		
<u>Base Kansas City</u>	<u>3925</u>	<u>3927</u>	<u>- 1577</u>	<u>- 1576</u>	<u>- 1577</u>		
<u>Pawnee</u>	<u>4056</u>	<u>4059</u>	<u>- 1709</u>	<u>- 1706</u>	<u>- 1708</u>		
<u>Ft. Scott</u>	<u>4124</u>	<u>4126</u>	<u>- 1776</u>	<u>- 1774</u>	<u>- 1776</u>		
<u>Total Depth</u>	<u>4170</u>	<u>4174</u>	<u>- 1824</u>	<u>- 1974</u>	<u>- 1849</u>		

REFERENCE WELLS

- A Reilly Oil Co, Inc. Wendy #1-7, 657'FNL+1540'FWL Sec. 7-11s-24w
- B Reilly Oil Co, Inc. Ruth #1-6, 775'FSL+430'FWL Sec. 6-11s-24w
- C
- D

REMARKS

This well ran structurally favorable on the Lansing top with the nearby reference wells. Also positive D.S.T. results warranted the cementing of producing casing to further test the well. The following zones should be tested; 3829-3835, 3733-3736, and 3721-3723.

Richard B. Bell
2-2-14

7502

LEGEND

- 

Anhydrite
- 

Salt
- 

Sandstone
- 

Shale
- 

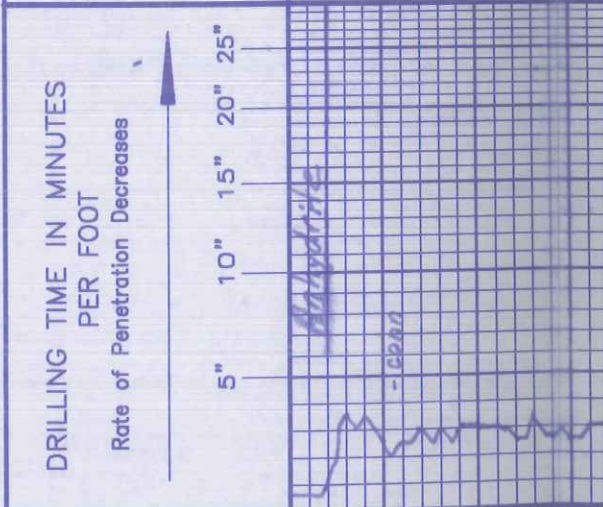
Carb sh
- 

Limestone
- 

Ool. Lime
- 

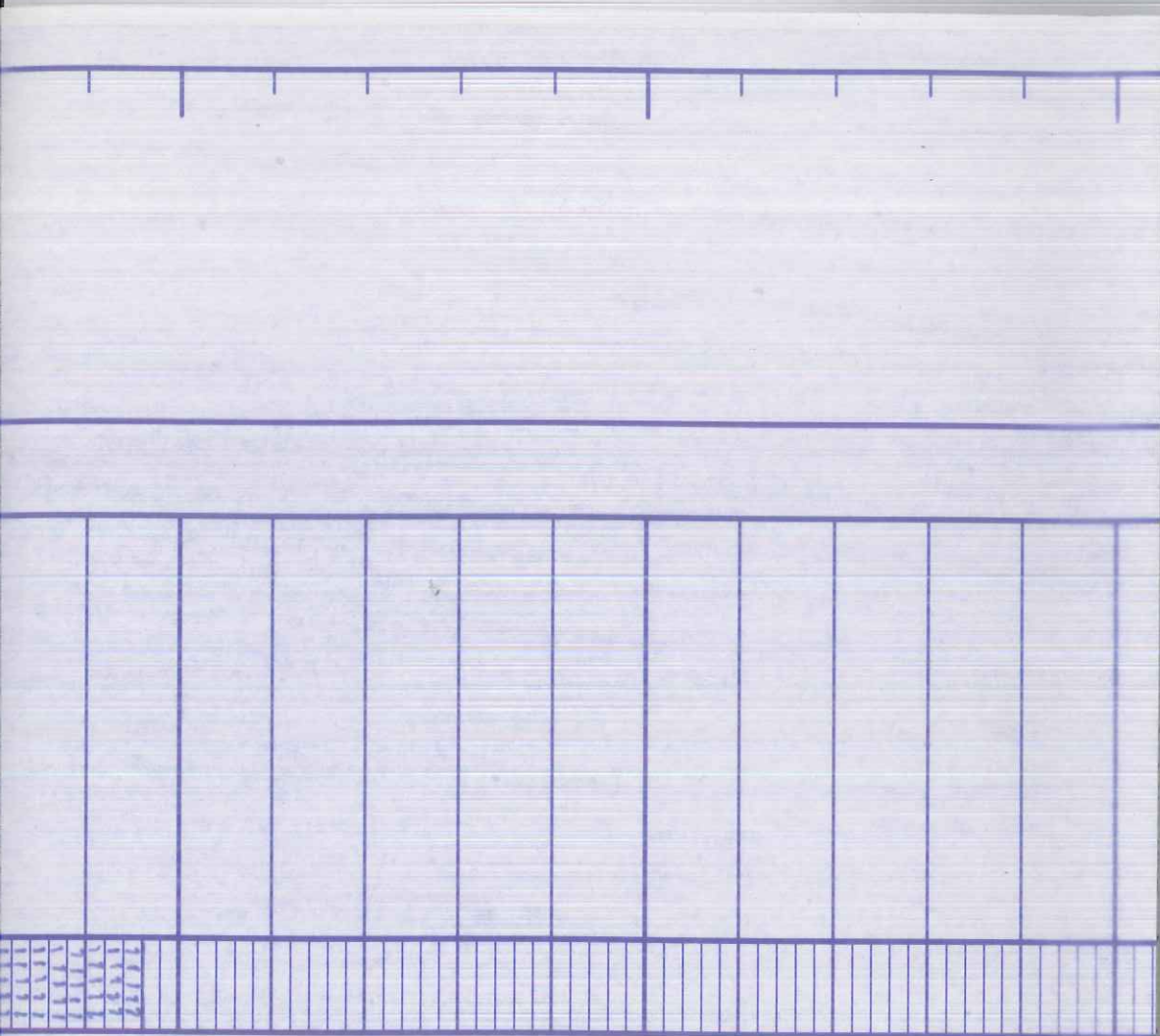
Chert
- 

Dolomite



DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS
0 - 19.60	Anhydrite			
19.60 - 8.0	Salt			
8.0 - 25				

LOG 7710

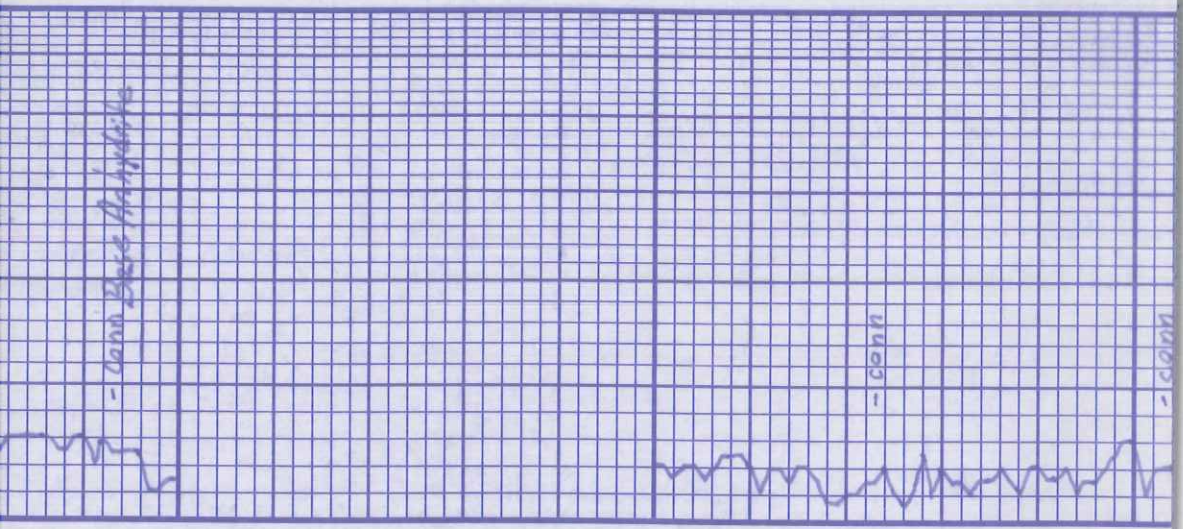


2000

3300

20

40

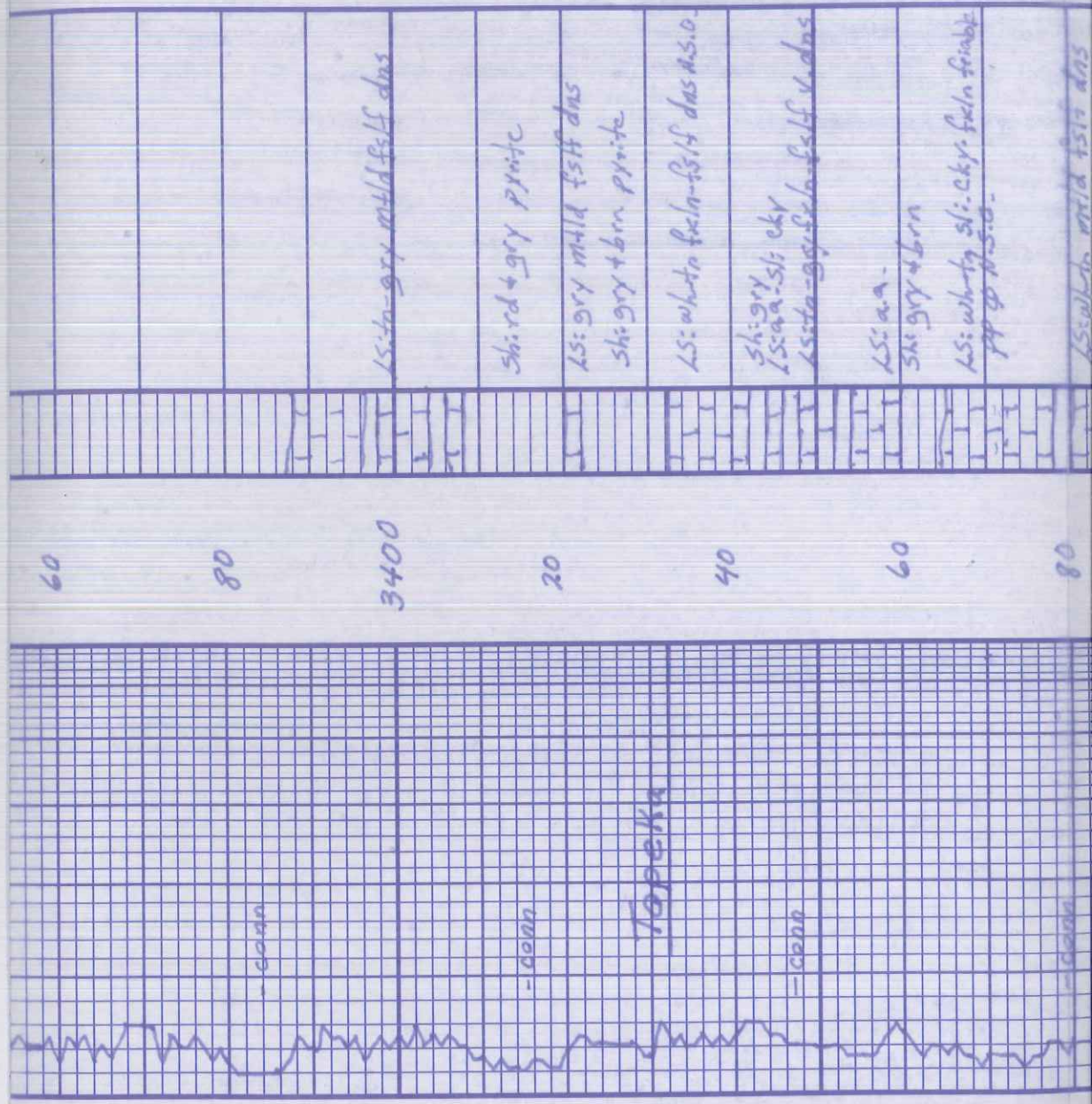


-conn Best Analysis

-conn

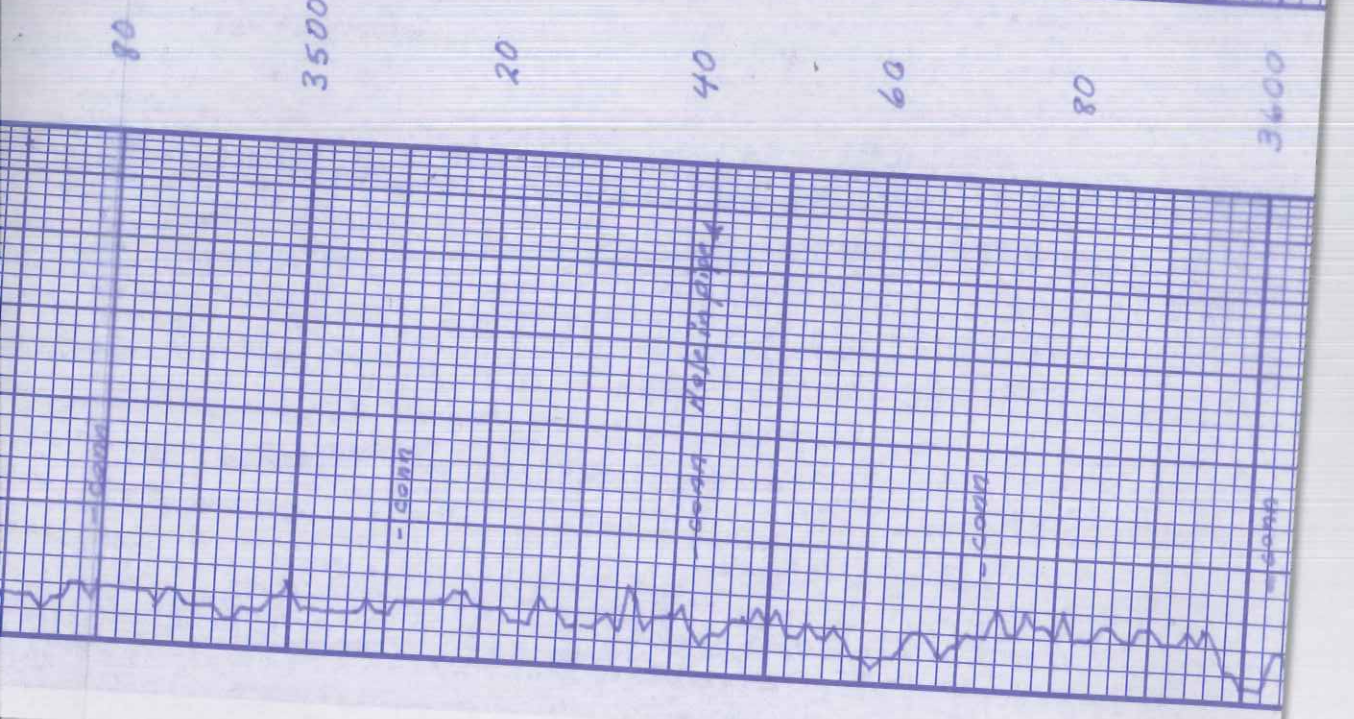
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Samples are tagged
good samples

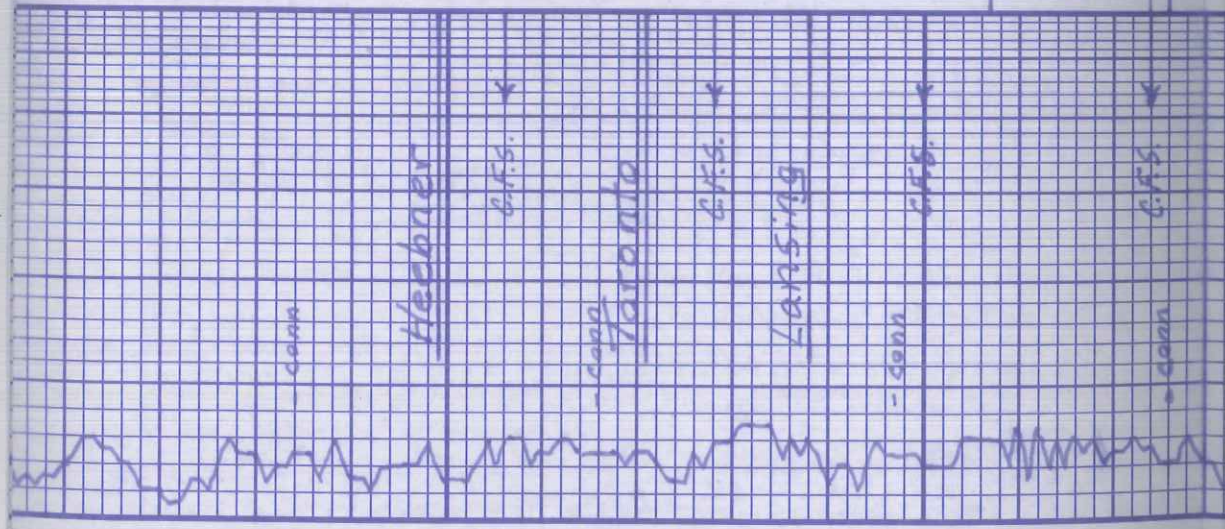


LS: wh-ta sli.cky-feln frible PP @ N.S.O.	LS: wh-ta mtd fslf dms
Sh: brn, gry, rd	
LS: wh-ta cky-feln pp @ frible N.S.O.	
LS: wh-ta cky-feln-sli. suc. frible N.S.O. Δ tn	
LS: wh-ta feln pritic ool pp @ N.S.O. Δ tn	
Sh: blk Carb LS: gry fslf dms	
Sh: brn t gry	
LS: wh-ta cky-feln pp @ N.S.O.	
LS: wh-ta cky-feln ool pp @ frible N.S.O. Tr Δ tn fslf	
LS: wh-ta t gry feln-fslf pp @ N.S.O. Tr Δ tn fslf	
LS: t n gry fslf dms	
LS: wh-ta feln ool pp @ N.S.O. Δ tn	

Pump pressure is
down. 35% come out
of hole looking for a
hole in drill pipe.
Found at 7.5 stands
out



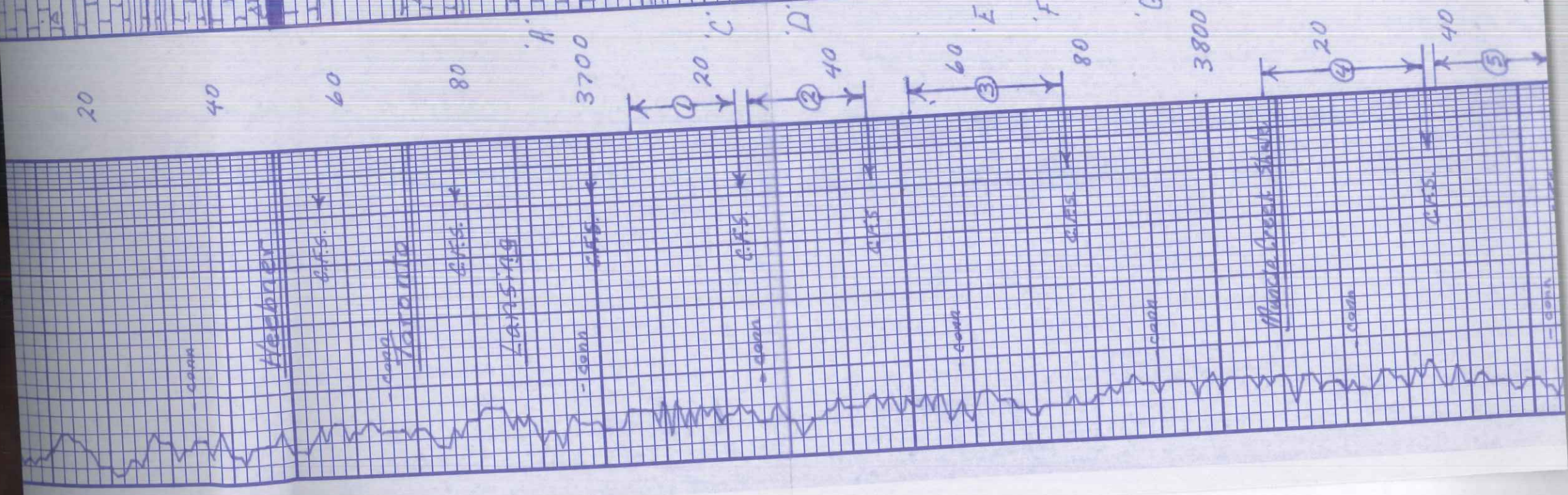
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LS: wh-tn-fxln-oolc-deer oolc. ppp N.S.O. - Δ tn-tt.gry	LS: wh-tn-fxln-oolc. N.S.O.	LS: tn-fsif dns	LS: tn-ht.gry fsif dns Δ wh-tr fsif	LS: tn-ht.gry fsif dns Δ ty wh-tr	Sh-blt Carb.	LS: tn mtd fsif dns	Sh: gry & brn	LS: wh-tr-fxln-fsif Tr: sl: cky friable N.S.O. - Δ wh-tr	Sh: brn & gry	LS: wh-tr-fxln-ool ppp Tr: vgy φ N.S.O. - Δ wh-tr	LS: wh-tr-fxln dns Tr Δ wh-tr	Sh: brn LS: wh-tr-fxln-fsif Tr: ool w/ abund. fass. incus. in part φ Tr VGY φ H. rainbow S.A. flowing F. & no odor Δ wL
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Board 3726.84
 Strap 3722.61
 Diff. 4.23
 Incline @ 3724' kg^a

Diamond Testing
 DST#1 3707' 3724'
 30-60-30-60
 IF: B.O.B. in 8 3/4 min
 ISI: 1 1/2" blow
 FF: B.O.B. in 9 min.
 Recovery: 375' G.I.P.
 812' G.O. 27°C, 98% O
 Gravity: 24.2° A.P.I.
 Hyd: 1739-1719#
 FP: 31-161 / 172-261#
 BHP: 1061-1029#



Ls: wh. fxl. oalc. dr. oblc.
 pp @ N.S.O. Δ tr. br. gry
 Ls: wh. tr. fxl. oalc.
 N.S.O.
 Ls: tr. fxl. dns
 Ls: tr. lt. gry fxl. dns
 Δ wh. tr. fxl.
 Ls: tr. lt. gry fxl. dns
 Δ tr. wh. tr.
 Sh: blk Carb.
 Ls: tr. mtd fxl. dns
 Sh: gry & brn
 Ls: wh. tr. fxl. fxl. Tr: vgy
 cky friable N.S.O. Δ wh. tr.
 Sh: brn & gry
 Ls: wh. tr. fxl. oalc. pp pp Tr: vgy
 φ N.S.O. Δ wh. tr.
 Ls: wh. tr. fxl. dns
 Tr Δ wh. tr.
 Sh: brn
 Ls: wh. tr. fxl. fxl. fxl. Tr: oalc.
 w/ abund. foss. incl. imp. of Tr
 vgy φ H. rainbow SA. floating
 F.O. no odor Δ wh.
 Ls: wh. tr. sli. cky. fxl. fxl.
 imp. of g. vgy φ floating F.O.
 fr. drk. sptd. 0.5 in. fr. odor
 Ls: wh. tr. fxl. dns
 Ls: wh. tr. gry pr. pp φ RT.
 Lt. sptd. 0.5 in. RT. F.O. no odor
 Ls: wh. tr. sli. cky. fxl. fxl.
 pp φ - sli. vgy φ H. - fr. sptd. o. str.
 Tr: pp floating F.O. fr. odor
 Sh: brn & gry
 Ls: wh. tr. fxl. dns tr. asph. str.
 Ls: wh. tr. sli. cky. fxl. dns
 Δ tr.
 Ls: tr. fxl. sli. fxl. dns
 Sh: blk Carb.
 Ls: tr. gry fxl. dns
 Sh: gry
 Ls: wh. tr. fxl. - sli. fxl. oalc.
 f. imp. of vgy φ
 Lt. 0.5 in. pp F.O.
 Ls: wh. tr. fxl. - sli. suc. dolc. - fr.
 fr. odor - vgy φ pp F.O.
 Ls: wh. tr. fxl. - sli. fxl. dns
 Sh: gry & brn
 Ls: wh. tr. fxl. fxl. pp φ - imp.

Board 3726.84
 Strap 3722.61
 Diff. 4.23
 Incline @ 3724' 1/2"
 Diamond Testing
 DST#1 3707'-3724'
 30-60-30-60
 IF: B.O.B. in 8 3/4 min
 ISI: 1 1/2" blow
 FF: B.O.B. in 9 min.
 Recovery: 375' G.I.P.
 812' G.O. 27.6, 987.0
 Gravity: 24.2° A.P.I.
 Hyd: 1739-1719#
 FP: 31-161 / 172-261#
 BHP: 1061-1029#
 BH Temp: 122° F.
 DST#2 3726'-3745'
 30-60-30-60
 IF: B.O.B. in 8 1/4 min
 ISI: 4" blow
 FF: B.O.B. in 9 min
 Recovery: 510' G.I.P.
 866' Total fluid
 745' G.O. 57.6, 957.0
 121' G.O.C.W.M. 326, 1720
 Hyd: 1750-1744#
 FP: 24-166 / 174-170#
 BHP: 895-886#
 BH Temp: 122° F.
 Chlorides: 22,000 ppm
 DST#3 3752'-3777'
 30-30-30-30
 IF: wk blow incr. to 7/8"
 FF: wk blow incr. to 1/4"
 Recovery: 10' M. sli. 0.5 in
 Hyd: 1749-1749#
 FP: 7-17 / 18-28#
 BHP: 1069-1055#
 BH Temp: 106° F.
 DST#4 3809'-3835'
 15-60-30-60
 IF: B.O.B. in 6 1/4 min
 ISI: 4" blow
 FF: B.O.B. in 8 3/4 min.
 Recovery: 375' G.I.P.
 560' Total fluid
 125' G.O. 87.6, 927.0
 Gravity: 35.6° API.
 329' G.M.C.O. 1026, 127.0
 106' G.O.C.W.M. 1976, 67.0
 Hyd: 1795-1788#
 FP: 21-79 / 107-175#

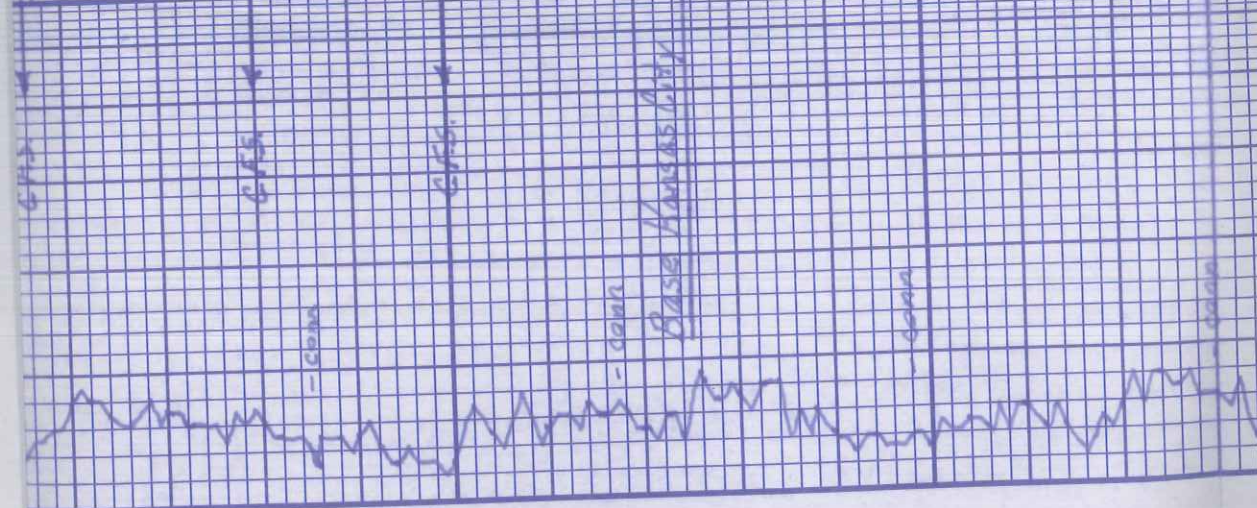
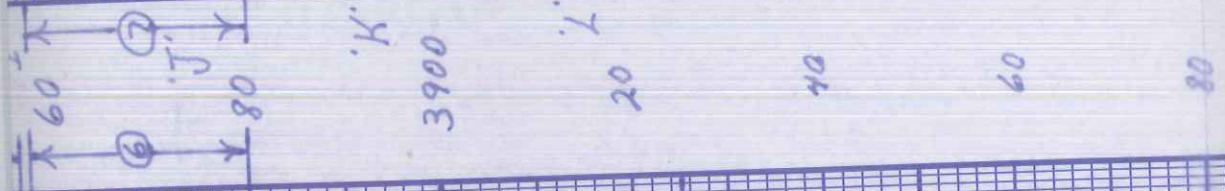
BHP: 397-393#
 BHTemp: 119°F.
 DST #5 3837-3856'
 30-30-30-30
 IF: Surface blow
 FF: No blow
 Recovery: 1' Mud
 Hyd: 1793-1787#
 FP: 6-7 / 7-8#
 BHP: 18-12#
 BHTemp: 104°F.

DST #6 3857-3880'
 30-75
 Rig air controls froze
 open while turning tool
 for shut in causing to
 many rotations.
 Pulled tool and retested

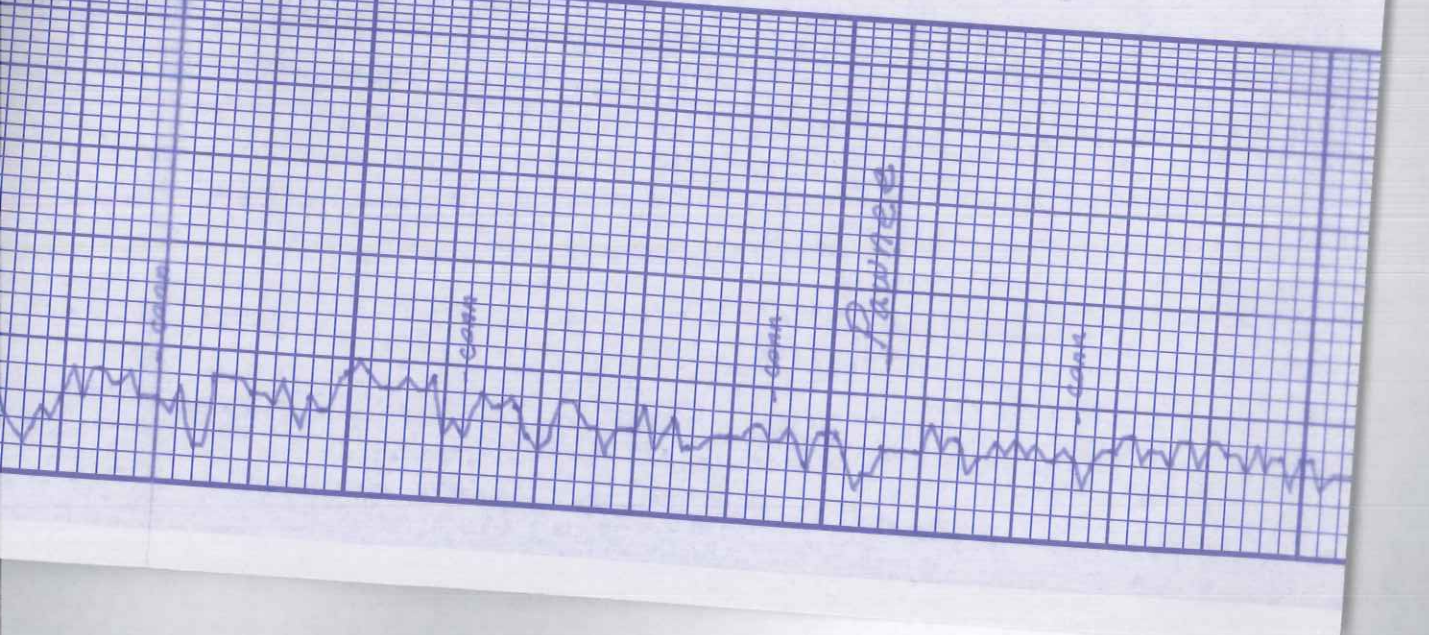
DST #7 3857-3880'
 30-60-30-60
 IF: wk blow inc. to 2 1/2"
 FF: wk blow inc. to 2 1/4"
 Recovery: 57 GOCM
 6% G. 4020.579.M
 HH: 1801-1795#
 FP: 14-24 / 28-32#
 BHP: 302-276#
 BHTemp: 112°F.

PH. Spd 0 Str. H. 0 Sat.
 Tr. PP F.O.

sh: gry + brn	sh: gry + brn
LS: white ch. Tr. Ugy p mostly isol. v. grs. H. Spd - fr. 0 Str. PP floating F.O. No odor	LS: white v. ch. - fch oil pr. PP & Lt. SPKS fchly diss O on crushing Tr. PP F.O. or crushing no odor
LS: str-brn fs/f dns	LS: white sl: ch. - fch dns N.S.O.
sh: brn + gry ss: brn slly v. fm. gr. Conso ingran. & N.S.O.	sh: brn + gry LS: white ch. - fch dns N.S.O.
sh: brn + gry LS: white ch. - fch dns N.S.O.	sh: gry + brn
sh: brn + gry	LS: white - fch. gry ch. - fch Tr. sl: fch dns N.S.O.
sh: brn + gry	sh: brn + gry



60	Sh: gry + brn	Sh: gry + brn
80	LS: wh. brn - Lt. gry cky - fch Fr. S: fch das N.S.O.	LS: wh. brn - Lt. gry cky - fch Fr. S: fch das N.S.O.
4000	Sh: brn + gry	Sh: brn + gry
	LS: fch das Tr. glauc. spks N.S.O.	LS: fch das Tr. glauc. spks N.S.O.
20	Sh: gry + brn Tr. S.S. gry V. fr. gn. Consol. in gran. p N.S.O.	Sh: gry + brn Tr. S.S. gry V. fr. gn. Consol. in gran. p N.S.O.
40	Sh: brn + gry	Sh: brn + gry
	LS: wh. brn sli. cky. fch das N.S.O. A Tn - or	LS: wh. brn sli. cky. fch das N.S.O. A Tn - or
60	Sh: brn + gry	Sh: brn + gry
	LS: wh. brn fch v. das N.S.O.	LS: wh. brn fch v. das N.S.O.
80	LS: wh. brn - Lt. brn Tr. cky - fch das N.S.O. - Sh: gry + brn	LS: wh. brn - Lt. brn Tr. cky - fch das N.S.O. - Sh: gry + brn
4100	"	"
	LS: wh. brn	LS: wh. brn



-cont

F. Scott

-cont

Q.F.S.

P.T.D.

20

40

60

80

Sh: drk gry, brn Tr. blk Carb	Sh: drk gry	LS: wh. brn cky - fr. In Tr. Sli. Sst dms Tr. blk brn Q. Sli. fr. Carb N.S.O. - No odd	LS: wh. brn - Lt. gry Sli. cky - fr. In dms N.S.O. Tr. Dr. fr.	SS: gry fr. gr. Consol. Ingr. N.S.O.	LS: wh. - fr. cky - fr. In dms N.S.O.	LS: wh. - fr. cky - fr. In dms N.S.O.	Sh: brn + gry													
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Incline @ 4170' 3/4"