

APT. # 15-137-20635-00-00

GEOLOGICAL REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY Baird Oil Company, LLC.
 LEASE Esslinger Ranch, Inc. #1-27
 FIELD Wildcat
 LOCATION 735' FSL + 2545' FEL
 SEC 27 TWSP 3s RGE 22W
 COUNTY Norton STATE Kansas

ELEVATION
 KB 2299'
 DF _____
 GL 2291'
 Depths Measured From
 Log KB Drilling KB

CONTRACTOR WWD Drilling Rig #12
 SPUD 3-1-13 COMP 3-8-13
 SAMPLES SAVED FROM 3250' TO R.T.D.

CASING
 Surface 8 5/8" @ 219'
 Production 5 1/2" @ 3912'

ELECTRIC LOGS
Nabors

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE	E. LOG	DATUM	A	B	C	D
			<u>E Log</u>				
<u>Anhydrite</u>	<u>1985</u>	<u>1980</u>	<u>+ 319</u>	<u>+ 322</u>			
<u>Base Anhydrite</u>	<u>2014</u>	<u>2011</u>	<u>+ 288</u>	<u>+ 292</u>			
<u>Topeka</u>	<u>3286</u>	<u>3286</u>	<u>- 987</u>	<u>- 992</u>			
<u>Heebner</u>	<u>3494</u>	<u>3494</u>	<u>- 1195</u>	<u>- 1192</u>			
<u>Toronto</u>	<u>3519</u>	<u>3519</u>	<u>- 1220</u>	<u>- 1216</u>			
<u>Lansing</u>	<u>3537</u>	<u>3538</u>	<u>- 1239</u>	<u>- 1233</u>			
<u>Base Kansas City</u>	<u>3723</u>	<u>3723</u>	<u>- 1424</u>	<u>- 1423</u>			
<u>Arbuskle</u>	<u>3788</u>	<u>3788</u>	<u>- 1489</u>				
<u>Reagan Sand</u>	<u>3854</u>	<u>3854</u>	<u>- 1555</u>				
<u>Granite</u>	<u>3878</u>	<u>3878</u>	<u>- 1579</u>	<u>- 1479</u>			
<u>Total Depth</u>	<u>3920</u>	<u>3920</u>	<u>- 1621</u>	<u>- 1498</u>			

REFERENCE WELLS

A Baird Oil Co., LLC. Esslinger Ranch, Inc. # 3-35 445' FNL + 2585' FWL
B _____ Sec. 35-35-22W
C _____
D _____ Part Celler @ 1996'

REMARKS

This well ran 6 feet lower on the Lansing top than the reference wells.
Encouraging results on D.S.T. #4 warranted the cementing of production
casing to further test the well. The following zones should be tested; 3723-3705'
and 3604'-3607'.

Richard H. Bell
3-8-13

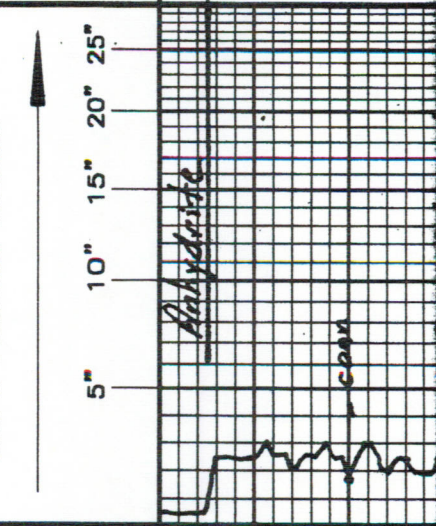
7502

LEGEND

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

DRILLING TIME IN MINUTES
PER FOOT

Rate of Penetration Decreases



1980

2000

LITHOLOGY

SAMPLE DESCRIPTIONS

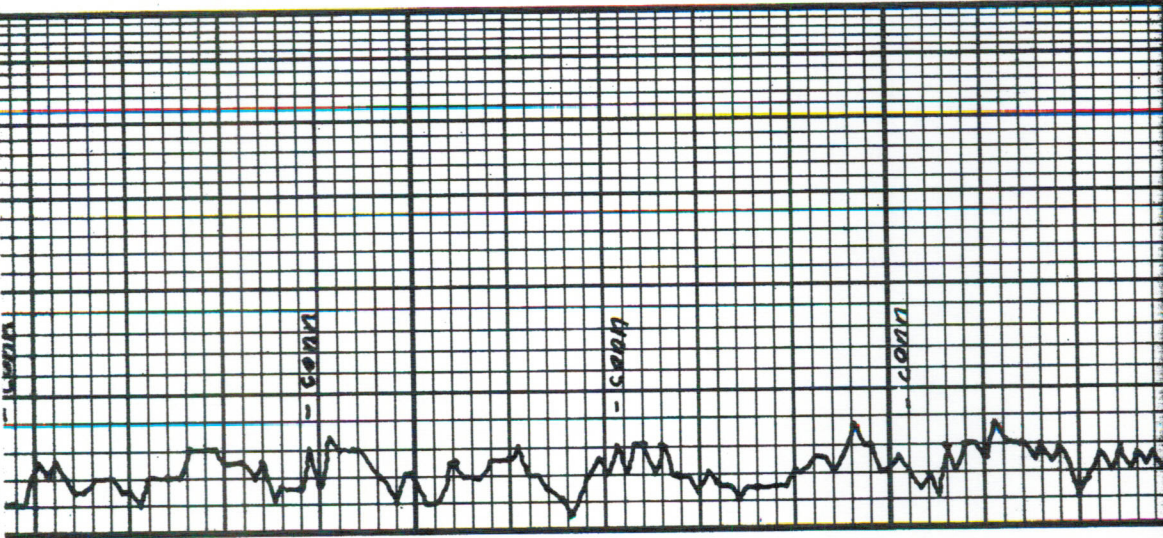
OIL SHOWS

REMARKS

LOG 7710

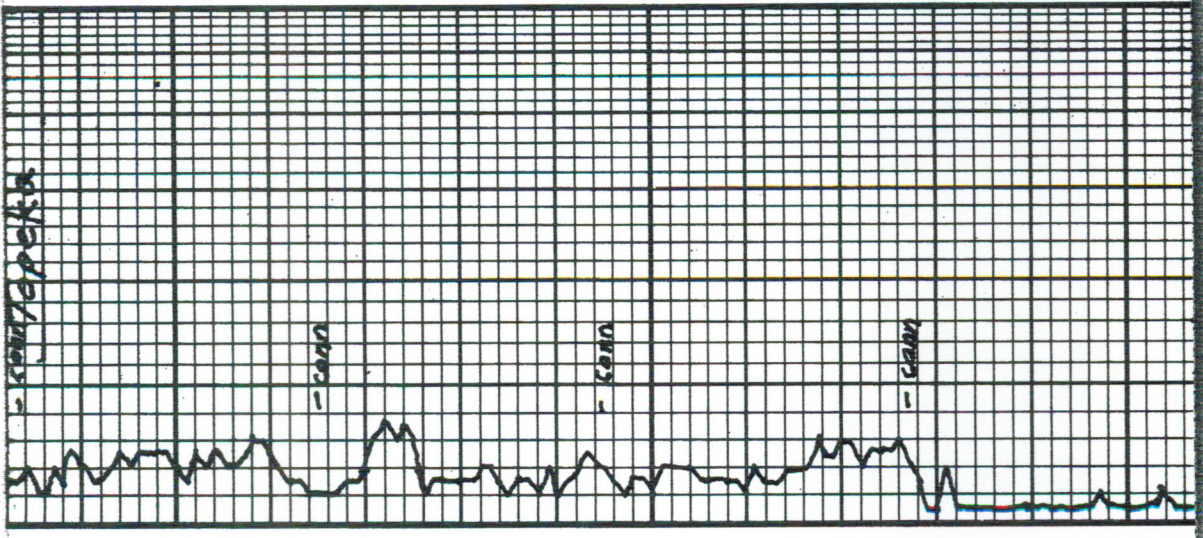


60 80 3200 20 40 60 80



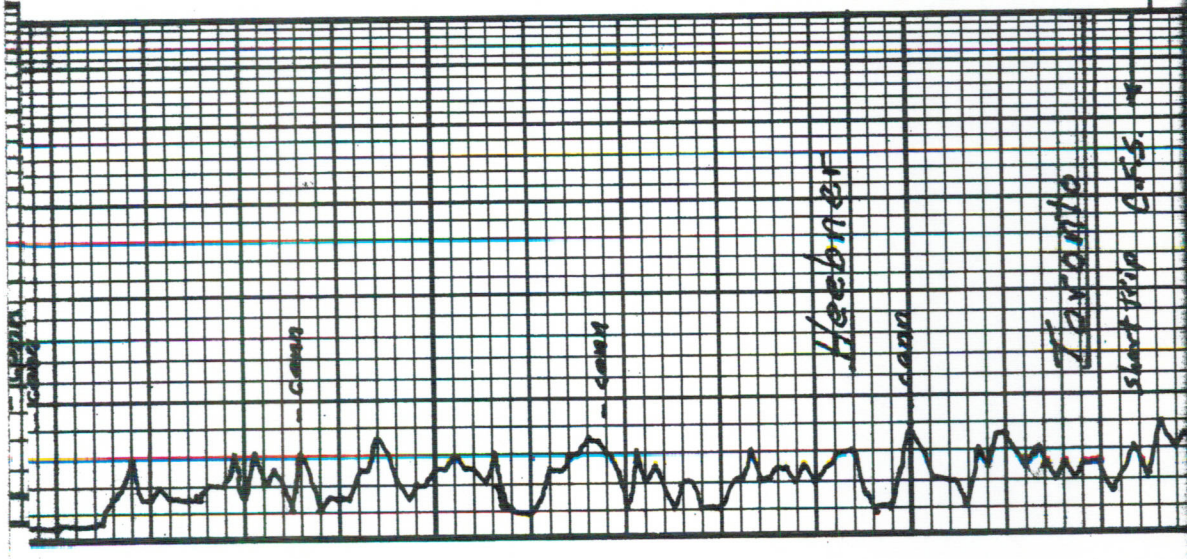
sh:brn slty
LS:wh-tn-fsln dns
LS:wh-tn-ht-gry cty-fsln dns
Sh: gry
LS:tn-gry fsln-sli-fslf dns
LS:tn-ht-gry fslf dns
LS:wh-tn-sli-cty-fsln
PPP N.S.O.
LS:wh-tn-fsln dns





3300	LS: wh-tn-gry sli. cky. fs/f dns N.S.O.
3300	LS: wh-tn-kt. gry Tr. cky - fxln dns N.S.O.
3300	LS: wh-tn V. cky-fxln öl pe & ingran & N.S.O. Tr. Δ tn a.a. sh: gry, brn
3300	sh: brn s. Hy. ss: v. fn gn Consol: ingran & N.S.O.
3300	LS: wh-tn V. cky-fxln öl inpart & Tr. vgy & N.S.O.
3300	LS: wh-tndecr. cky-fxln Tr. öl mostly dns. Δ ty tn-gry
3300	LS: wh-tn cky-fxln sli. öl glau. spks pp & N.S.O.
3300	LS: a LS: gry fs/f dns
3300	sh: tn-brn sly sh
3400	SS: wh gry, brn V. fn. gn Consol. friable ingran & N.S.O.

3300-3400

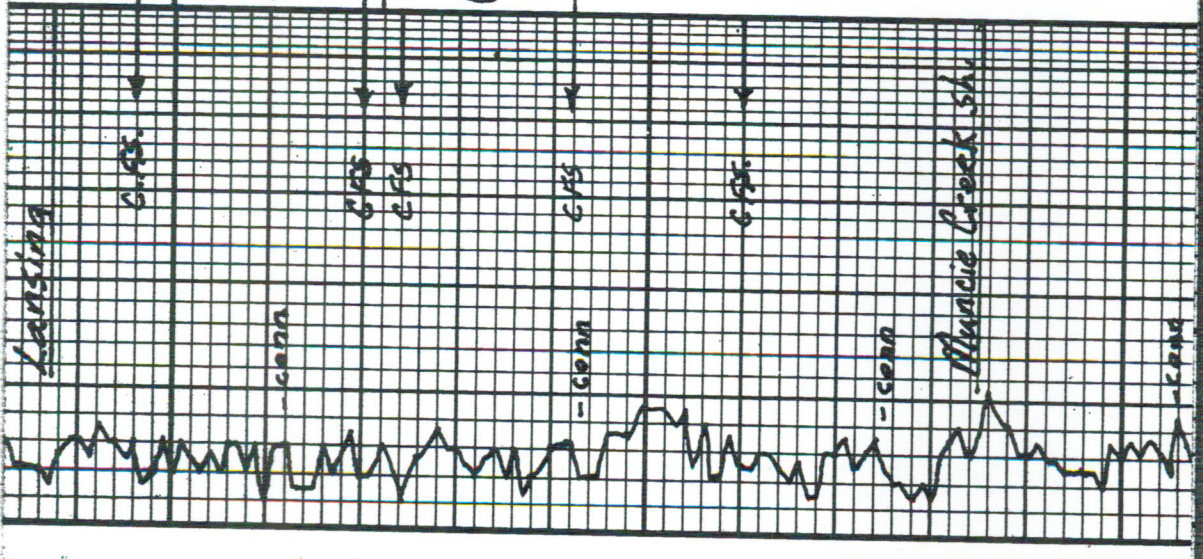


20	a.a. sh:brn slty LS: wh-trn fuln oöl ppφ N.S.O.
40	sh:brn slty LS: wh-trn cky-faln oöl ppφ N.S.O.
60	Tr. blk Carb. Sh. LS: gry fslf dms. LS: brn faln dms LS: wh-trn v. cky-faln Tr. oöl ppφ N.S.O.
80	LS: wh-trn cky-faln oöl vgyφ N.S.O. LS: wh-trn decr. cky-faln dms N.S.O.
3500	Sh: blk Carb LS: trn fslf dms sh: gry-brn sh: y sd brn
20	LS: wh-trn cky-sli-suc-faln ppφ N.S.O. Tr. dtr

Incline @ 3546' 3/4

Strap 3593.92
Board 3593.71
Diff. .21

Trilobite Testing
DST#1 3526'-3546'
30-30-0-0
IF: wk blow died in 20min.
TSZ: No blow
Recovery: 3' Mud
HYD: 1732-1728#
8-11#



Sh: brn + gry	LS: wh-tn sli. ckr-fxl. ool. sli. pyrit. Lt.-fr. 0 stn. nppp fully diss Oil on crushing fr. Lt rainbow s.o. No odor
Sh: brn	LS: wh-tn fxl. n. sli. ool. tr. ppp pr. Lt. 0 stn fully diss on crushing Δ wh
Sh: brn + gry	LS: wh-tn fxl. n. sli. ool. ppp - 1/2 p drk spds 0 stn pp floating E.O. No odor
Sh: brn	LS: wh-tn fxl. n. sli. ool. pyritic ppp tr. isol. vugs Thicketary 0 stn - asph Str- Δ wh. gry
Sh: gry	LS: wh-tm fxl. n. gry fxl. n. sli. fsh dns N.S.O.

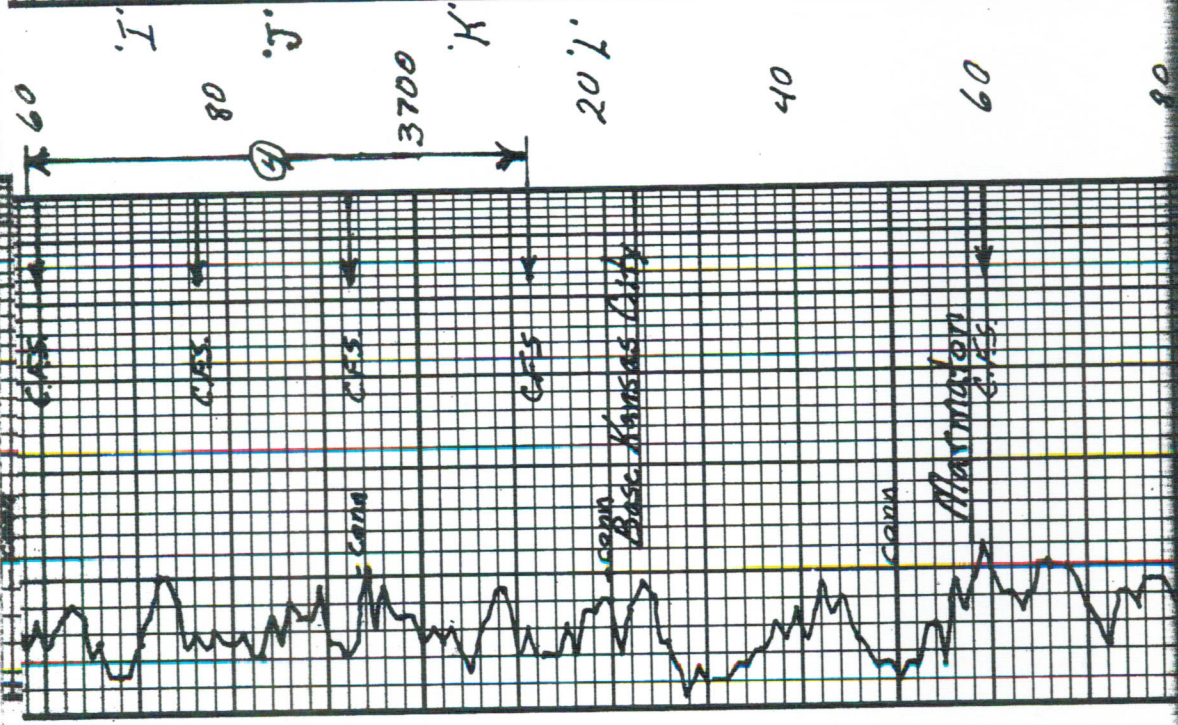
BHP: 42#
BHTemp: 89°F

DST #2 3550'-3570'
30-30-0-0
IF: wk blow died 1/15 min
ISI: No blow
Recovery: 5' Mud
Hyd: 1753-1730#
FP: 8-16#
BHP: 1176#
BHTemp: 88°F

DST #3 3572'-3592'
45-45-15-0
IF: wk blow incr. to 1 1/4"
ISI: No blow
FF: No blow
Recovery: 10' MW
50% m 50% w.
Hyd: 1744-1727#
FP: 7-19/20-22#
BHP: 1183#
BHTemp: 89°F

DST#4 3659: 3712
 45-45-45-45
 IF: B.O.B. in 28 min.
 IST: wk blow in 20 min.
 FF: B.O.B. in 25 min.
 FSJ: wk blow in 20 min.
 Recovery: 206 B.P.
 232 Total Fluid
 50' MCO 90% O, 10% M
 62' MCO 60% O, 40% M
 120' OCM 40% O, 60% M
 Hyd: 1797 - 1794 ft
 FP: 23-72 / 78-98 ft
 BHP: 1143 - 1106 ft
 BH Temp: 93°F
 Gravity: 26° A.P.I

IT	DATA
	sh: gry, brn
	LS: tn fxl'n dns
	sh: brn
	LS: wk-tn sh: cky-fslf ppg in part of sh. fr. O str ppg drk brn f. & v. fl. odor
	sh: brn
	LS: tn fxl'n - fslf oil w abund fss. inclus. in part of fr O set fr. O str ppg drk fr. odor sh: brn
	LS: wk-tn cky-fxl'n sh: oil pp. ppg N.S.O.
	sh: brn, gry
	Tr. S. gry v. fn. gn consol in gran & N.S.O.
	LS: wk-tn sh: cky-fxl'n sub oil dns N.S.O.
	sh: brn stty
	LS: tn - yel fslf dns. N.S.O.
	sh: brn
	LS: wk-tn cky-fxl'n sub. oil dns asph spks



60
 80
 3700
 20 ft
 40
 60
 80

Archeozoic

-cont

-cont

Regan Sand

-cont Granite

-cont

1171

3800

20

40

60

80

3900

20

Dol: wh-tn feld inxl nφ
glauc Spks N.S.O.

Dol: wh-tn-pk mxln vgr φ
inxl nφ glauc Spks
N.S.O.

Dol: wh-tn-brn fxdn-mxl n
inxl nφ glauc Spks N.S.O.

Dol: aa Qtz clr angular
r sl: rnd unconsol. N.S.O.
clr - sl: frasted
aa. incr Lky

Dol. + Qtz aa
Increase Qtz ang. incr
Sub rnd. unconsol
N.S.O. incr frasted

SS aa mostly frasted
Tr ang - mostly sub rnd.

Quartz, biotite, feldspar

Qtz., biotite, felds.

q.a.

Qtz, felds, biotite