

Randall Kilian Corporation

Geologist



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GEOLOGIST'S WELL REPORT

COMPANY HERTEL OIL CO LLC (33625)

WELL CWB #1

FIELD Antonino Townsite West

LOCATION (legal) Ap. W $\frac{1}{2}$ W $\frac{1}{2}$ SE

(footages) 1355' FSL & 2305' FEL

Section 35 TWP 14S RGE 19W

(Map) $\frac{1}{2}$ mi W & $\frac{1}{4}$ mi N of Antonino

COUNTY Ellis STATE Kansas

ELEVATION: 2104' K.B., 2096' G.L.

Depths measured from Kelly Bushing

A. P. I. NUMBER 15-051-26694

GEOLOGY BY Randall Kilian

PERTINENT WELL DATA

CONTRACTOR Discovery Drilling (31548)

RIG #2 HYDRAULICS D-375 6x14x60
(Terry Wickham TP)

DRILL PIPE 4 1/2" X-H COLLARS 6 1/4" 16 (487')

CASING: SURFACE 8 5/8" @ 222'w/ 150 sx Common

PRODUCTION _____

DRILLING FLUID. COMPANY Mud-Co/Service Mud, Inc.
(Gary Schmidtberger)

TYPE: Chemical

REMARKS: Full service

DRILL STEM TESTS: COMPANY Trilobite Testing Inc.
(Jim Svaty)

NUMBER OF TESTS Three (3)

ELECTIC LOGS: COMPANY Gemini Wireline Services

DETAIL (5") 3000' - RTD

TYPE DI, Comp. N-D, Micro

DRILLING TIME FROM 3000' TO RTD

SAMPLE TIME FROM 3000' TO RTD

SUPERVISION FROM 3000' TO RTD

VERTICAL DEVIATION 1° @ 223', 3/4° @ 3720'

PLUGGING REPORT 50 sx @ 3684', 25 @ 1352', 85 @ 652',
40 @ 271', 10 @ 40' 30 Rat, 15 Mouse, 255 sx 60/40 Poz; Ray Dinkel

RESERVE PIT 800 bbls., Chl. 41000

DAILY REPORT

DATE:	7 a.m.	Depth	RIG ACTIVITY
5-14-14			MIRU, Spud
5-15-14		425'	Drilling under surface
5-16-14		2085'	Drilling shale & lime
5-17-14		2840'	Drilling lime & shale
5-18-14		3380'	Drilling Toronto lime
5-19-14		3720'	DST #1 Arb.
5-20-14		3770'	TD, Logged, DST #2 Arb. P&A

DRILL STEM TESTS

NO	INTERVAL	IFP/TIME	ISIP/TIME	FFP/TIME	FSIP/TIME	IHP/FHP	RECOVERY
1	Arb. 3656- 3720'	27# 56# 5'	1176# 60"	61# 357# 60"	1177# 90"	1864# 1826#	1' Oil 625' O&M,C,Wtr 125' M.,Wtr 14% Oil 18k
2	Arb. 3688- 3715'	23# 24# 5"	1196# 60"	27# 40# 60"	1194# 90"	1876# 1851#	15' M,Oil 15' O,C,Mud
3	LKc I-J 3545- 3595'	44# 80# 5"	484# 60"	87# 295# 60"	361# 90"	1858# 1747#	10' Oil 155' O,C,Mud 437' O,C,M,Wtr
4							
5							
6							
7							
8							

MUD RECORD						
CHK	DEPTH	WT	VIS	FIL	CHL	YP
1	2915'					
2	2967'	8.8	46	7.2	1.9k	12
3	3240'	8.4	61			
4	3369'	8.9	51	7.8	5.1k	36
5	3535'	8.9	59	8.0		
6	3670'	8.9	63			
7	3720'	9.2	60+	7.6	5.8k	29
8						
9						
10						
11						

Displaced

LCM 1#

LCM 1#

LCM 2# \$6362

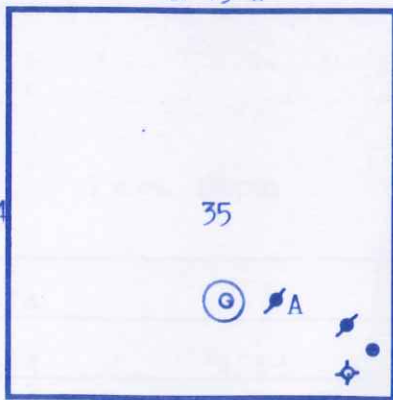
BIT RECORD

NO	SIZE	MAKE	TYPE	DEPTHOUT	FEET	HOURS
1	12 1/4"	IADC	437	223'	223'	2 3/4
2	7 7/8"	HTCo.	GX20C	2967'	2744'	40 3/4
3	7 7/8"	HTCo.	GX20C	3770'	803'	31 3/4
4						
5						
6						
7						
8						

FORMATION TOPS & STRUCTURAL GEOLOGY

R 19 W

REFERRED TO:



A: PATE-DOMBAUGH
#1 Speier E $\frac{1}{2}$ W $\frac{1}{2}$ SE 35

B: _____

C: _____

D: _____

E: _____

STRATIGRAPHIC

SUBJECT WELL

STRUCTURAL POSITION

MARKERS

SAMPLES

E. LOGS

DATUM

A

B

C

D

E

Anhydrite	1330'	1326'	+ 778	+ 781					
Base	1374'	1370'	+ 734	+ 738					
Topeka	3077'	3076'	- 972	- 971					
Heeb. Sh.	3351'	3352'	-1248	-1246					
Toronto	3369'	3369'	-1265	-1265					
Lansing	3397'	3397'	-1293	-1292					
BKc.	3638'	3639'	-1535	-1536					
Arbuckle	3704'	3704'	-1600	-----					
TD	3770'	3770'	-1666	-1623					

*Structural position of subject well as compared to referred well.

4% Oil
8k

T
14
S

7 8

SUMMARY

The CWB #1 well was drilled with Discovery Drilling tools rig #2 beginning 5-14-14 and drilling was completed 5-20-14.

The drill site was located via a 3-D seismic survey.

The well ran high to nearby dry holes and 1' low to the referenced well down through the BKc. However, the Arbuckle was encountered high.

The top 6' of Arbuckle was tight. The oil/water contact is ap. 3717' (-1613). DST #1 over the top 16' down to 3720' (-1616) recovered mud, oil, and water so DST #2 was run over the upper 11'. Only 15' oil & 15' Mud was recovered from the upper Arbuckle on DST #2. DST #3 over the LKc I-J zones, was also a negative test.

Based upon all data, the well was plugged as a dry hole.

Respectfully,

Randy

Randall Kilian

ITION

E

ed well.

DRILLING TIME (min/ft)

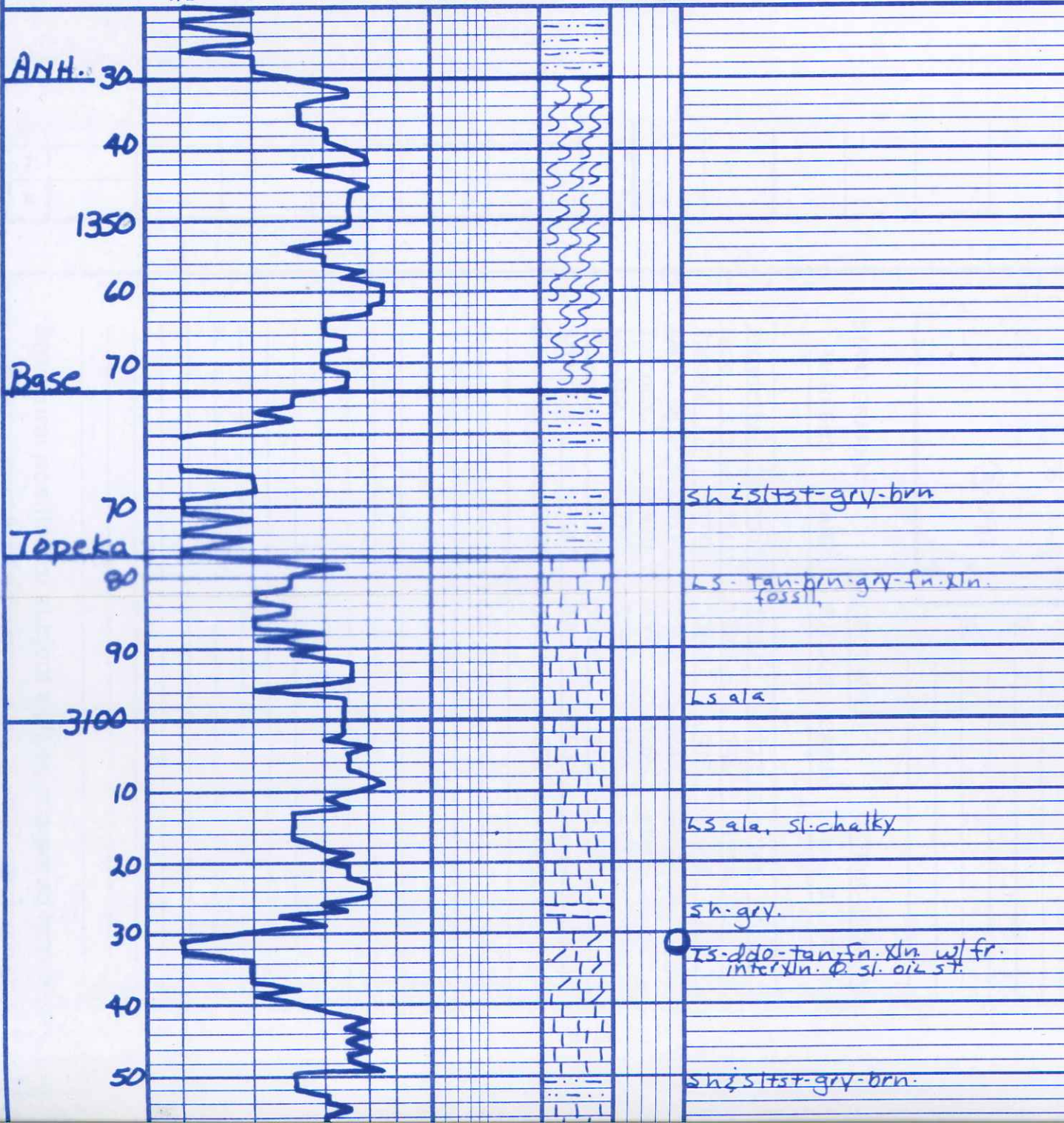
O & SHOWS

LITHOLOGY (LAGGED)

REMARKS

1/2 1 2 3 4 5 6 7 8 9 10

DST
POOR
FAIR
GOOD



Displaced @ 2915'
Mud @ 2967
Vis. - 96 Y.P. - 12
WT. - 88 Chl. - 1.95
Wk. - 7.2 LCM - 1

geo on location
6:00pm 5-17-19

