

Covey

The Well Watchers

Scale 1:240 (5"=100") Imperial

Well Name: THOMSEN #1B
Location: Section 30 - Township 22 South - Range 14 East
Licence Number: 15-031-23,496 - 01.00 Region: Coffee County, KS.
Spud Date: 12 June 2013 Drilling Completed:
Surface Coordinates: 1,485' FSL & 1,485' FEL, SE/W
(Approximately SE SE NW SE)
Bottom Hole Coordinates: Horizontal RTD (' MD) reported to be
' Northth & ' West of surface coordinates.
Ground Elevation (ft): 1,181' K.B. Elevation (ft):
Logged Interval (ft): 935' MD To: 'MD Total Depth (ft):
Formation: Lansing -----> Mississippi GEOLOG 1
Type of Drilling Fluid: Chemical; Low Solids (non-dispersed)
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: STEPHEN C. JONES
Address: 12 North Armstrong Street POC
Bixby, Oklahoma 74008 Steve Jones
(918) 366-3710

GEOLOGIST

Name: Curtis Covey
Company: COVEY - The Well Watchers
Address: 6548 Bedford Circle
Derby, Kansas 67037
Office: (316) 776 - 0367 Cell: (316) 217-4679

KB: NA

FORMATION TOPS

GL: 1,181'

Formation	Rotary Sample Depth (Datum from GL)	E-log Depth (Datum)
Stark Sh	1,058' MD / TVD 1,058' (+123')	No open hole log was performed on the well.
B / KC	1,114' MD / TVD 1,114' (+67')	
Altamont	1,274' MD / YVD 1,260' (-78')	
Lexington Coal		
Scammon		
Riverton Coal		
Miss (Chert)		

MRTD: LTD: NA ATD: NA

GEOLOG 1 - VERTICAL & CURVE

14-3/4" Hole

12 June -- Spud @ 1pm.
 Drill to 44'.
 Run 10-3/4" casing (#)
 Set casing @ 40'.
 Cemented w/ sx
 Class A. (2% Gel + 3% CC).
 [Hurricane Well Service]
 Cement Circulated to surface.
 Plug down @ 6:30pm.
 WOC.

9-1/2" Hole (Vertical)

13 June -- Under surface casing @ 2:50am.
 7am @ 771'. Drill to 935'

9-1/2" Hole (Curve)

14 June -- CHC.
 7am @ 935'.
 BHA Trip @ 935'.
 15 -- Resumed Drilling @ 3am.
 7am @ 982'. Drill to 1,248'.
 Mud Pump Clutch Problem.
 16 -- 7am @ 1,248'.
 Resumed Drilling @ 10pm.
 17 -- 7am @ 1,383'.
 18 -- 7am @

6-1/8" Hole (Horizontal)

GEOLOG 2 - HORIZONTAL

HOLE DEVIATION (44' - ')

GEOLOG 1

DEPTH / TVD	INCLINATION	AZIMUTH	NORTH	SOUTH	EAST	WEST	DOGLEG deg/100'
44' / 44'	0 (Surface)						
KOP @ 937'							
937' / 936.9'	1.0	211.4		11.6'		4.9'	1.2
969' / 968.9'	2.1	316.2		11.6'		5.4'	8.0
1,000' / 999.8'	10.7	330.2		10.0'		6.9'	10.7
1,095' / 1,093.3'	14.5	334.5	4.8'			13.8'	9.1
1,189' / 1,182.2'	24.4	324.8	30.7'			29.2'	7.7

CONTRACTOR

KAN-DRILL Drilling -- Rig #1

610 East Main
Blue Mound, Kansas 66010
Office: (913) 756-2619

Rig #1 -

Toolpusher: Donnie Rhyneron (620)

Pump: Gardner DenverFXN
6-1/2" x 14" @ 80 SPM.
680 PSI @ Standpipe.

After BHA Trip @ 935':
Con Emsco F-650
6-1/2" X 8" @ 58 SPM,
778 psi @ Standpipe.

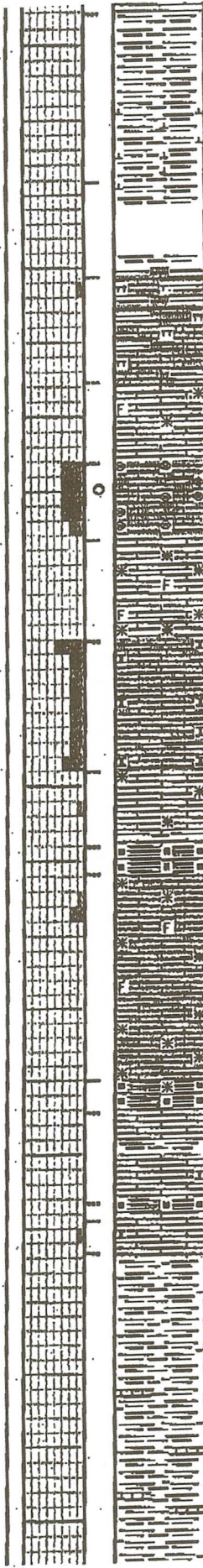
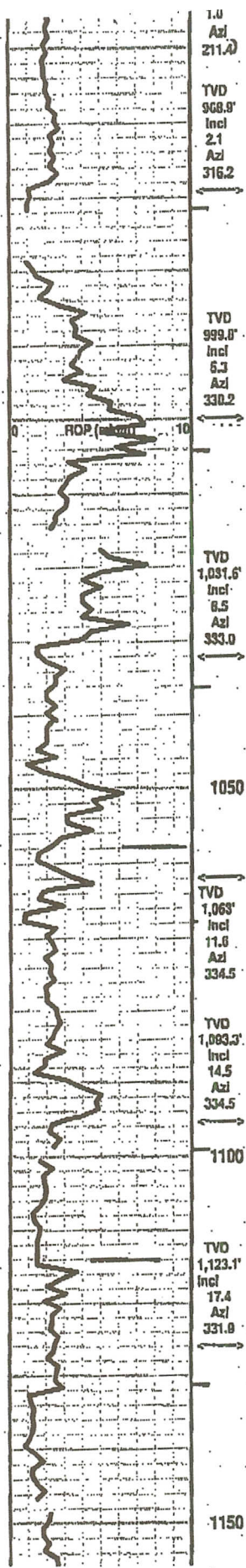
Drill Pipe: 4-1/2"XH. (16#/ft - used)

BIT RECORD

DATE	SIZE	TYPE	JET SIZE	DEPTH IN / OUT	CUM. FT.	HOURS	Fl/Hr ROP
12 June 2013	14-3/4"	R-T	NA	0' / 44'	44'	4.0	11.0
13 June 2013	9-1/2"	SMITH HAL357GX	20-20-20	44' /			

ROP (min/ft)	Depth	Porosity Type	Porosity	Shows	Lithology	Geological Descriptions	INFORMATON
	0 10 800 850 900	24% 18% 12% 6%				<p>This geolog uses plotted drilling time, available rotary drilling samples to produce this work product.</p> <p>Non-representative drilling time, rotary rock samples and/or drilling practices does effect the accuracy of any geolog.</p>	<p>← BHA Trio @ 935'</p>
ROP (min/ft)							

TVD
 904.9'
 Incl
 1.3
 Azi
 198.8



fr3016. No/ tr vis por.
SH - Med Gray. Sing. Massive. Calc/ Limy In part. partly soft.

SH - Med Gray. Sing. Massive. soft.

LS - Pale Grayish Tan. Sing. Micro-xln. xln por. argll/ shaly In part. partly Firm. No/ tr vis por.

LS - L/ Med Tan. tr Off White. Sing/ tr Mot. XF-/ Micro-xln. No/ tr fossil frags. mostly No/ rare subchalky In part. No/ tr vis por.

LS - Pale Lt Tan/ Off White Micro-Oolites. Cloot/ semi-transparent Tan Matrix. part por. partly Friable. No/ tr vis por. few pcs: some lith rare spotted L/ Med Brown stain. Nothing else.

LS - Tans/ tr Off White. Sing/ mostly Mot, tr Mixed. XF-/ Micro-xln. xln por. tr Re-xln. tr fossil frag. No/ tr vis por.

LS - Tan/ some Off White. Micro-xln. xln por. Subchalky/ Chalky In part. Friable. No/ tr vis por.

LS - Tans. Sing/ mostly Mot, tr Mixed. XF-/ Micro-xln. xln por. tr Re-xln. No/ tr vis por.

SH - Black. Sing. carb. soft.

LS - L/ Med Tan, some Off White. Sing/ tr Mot. XF-/ Micro-xln. xln & tr part por. tr Re-xln. No/ tr fossil frags. partly Firm. No/ tr vis por.

SH - Black. Sing. carb. soft.

LS (1)- Tan/ some Off White. Micro-xln. xln por. Subchalky In part. Friable. No/ tr vis por.

Interbedded SH - Med Gray. Sing. tr calc / Black. Sing. carb.

SH - Black. Sing. carb. soft.

LS - similar to (1) above.

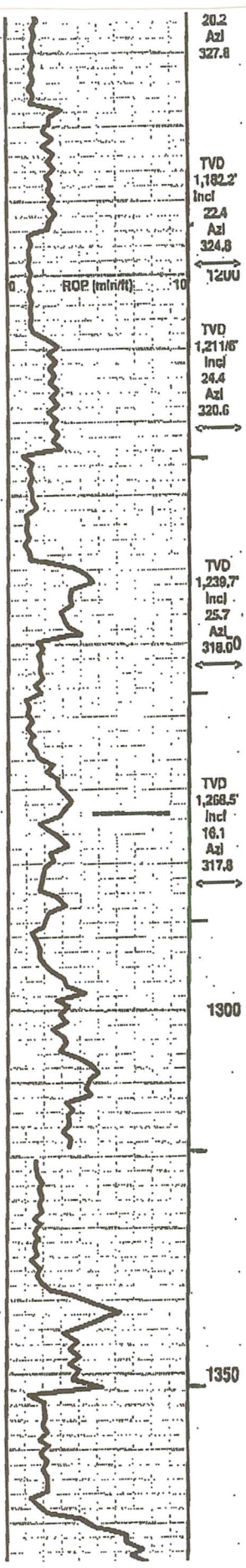
SH - tr L/ mostly Med Gray, rare Dark Green Gray. Sing.

Driller forgot to Flip Footage Switch on.

Vis: 38
 Wt: 8.2

- STARK SH
 1,058' MD /
 TVD 1,058' (+123')

- B / KC
 1,114' MD /
 TVD 1,114' (+67')



20.2
Azl
327.8

TVD
1,182.2'
Incl
22.4
Azl
324.8
1200

TVD
1,211.6'
Incl
24.4
Azl
320.6

TVD
1,239.7'
Incl
25.7
Azl
318.0

TVD
1,268.5'
Incl
16.1
Azl
317.8

1300

1350

SH - tr Lt/ mostly Med Gray, rare Dark Green Gray.
Sing. No/ rare Interbedded LS stringers - Tan. Sing.
Micro-xln. xln por. No/ tr vis por.

SH - tr Lt/ mostly Med Gray, rare Dark Green Gray; tr
Dark Gray mixed in. Sing/ tr Mixed.

LS - Lt Tan. Sing. Micro-xln. xln por. No/ tr Re-xln; partly
Firm. No/ tr vis por.
SH - Med/ some Dark Gray. Add: Black Sing. carb in
part. Massive.

LS - Dark Tan / Pale Lt Brown. Sing. XF/Micro-xln. No/ tr Re-xln. No/
rare fossil frag. No/ tr vis pos.
SH - Med/ Dark Gray. Sing/ Mixed. Missive.

LS - Lt & Med Tan / No to rare Off White. Sing.
XF/Micro-xln. No/ tr Re-xln. No/ rare fossil frag. No/ tr
vis pos.

← R/R Mud Pump
Clutch @ 1,248'

— ALTAMONT
1,274' MD/ TVD 1,260' (- 79')

