

**OPERATOR**

Company: TDI, INC.  
 Address: 1310 BISON ROAD  
 HAYS, KANSAS 67601

Contact Geologist: TOM DENNING  
 Contact Phone Nbr: 785-628-2593  
 Well Name: MARSHA # 2  
 Location: S2 NW NW SW, SEC.21T15S-R18W  
 API: 15-051-26,727-00-00  
 Pool:  
 State: KANSAS

Field: SCHOENCHEN WEST  
 Country: USA



Scale 1:240 Imperial

Well Name: MARSHA # 2  
 Surface Location: S2 NW NW SW, SEC.21T15S-R18W  
 Bottom Location:  
 API: 15-051-26,727-00-00  
 License Number: 4787  
 Spud Date: 9/17/2014 Time: 12:30 PM  
 Region: ELLIS COUNTY  
 Drilling Completed: 9/22/2014 Time: 4:00 AM  
 Surface Coordinates: 2300' FSL & 330' FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2003.00ft  
 K.B. Elevation: 2013.00ft  
 Logged Interval: 2850.00ft To: 3700.00ft  
 Total Depth: 3700.00ft  
 Formation: ARBUCKLE  
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: -99.3368997  
 Latitude: 38.7322504  
 N/S Co-ord: 2300' FSL  
 E/W Co-ord: 330' FWL

**LOGGED BY**

Company: SOLUTIONS CONSULTING, INC.  
 Address: 108 WEST 35TH STREET  
 HAYS, KANSAS 67601

Phone Nbr: 785-625-3380  
 Logged By: GEOLOGIST Name: HERB DEINES

**CONTRACTOR**

Contractor: SOUTHWIND DRILLING, INC.  
 Rig #: 1  
 Rig Type: MUD ROTARY  
 Spud Date: 9/17/2014 Time: 12:30 PM  
 TD Date: 9/22/2014 Time: 4:00 AM

**ELEVATIONS**

K.B. Elevation: 2013.00ft  
 K.B. to Ground: 10.00ft

Ground Elevation: 2003.00ft

**NOTES**

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON LACK OF SHOWS AND LOG ANALYSIS

OPEN HOLE LOGGING BY PIONEER ENERGY SERVICES: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, MICRORESISTIVITY LOG

THERE WERE NO DRILL STEM TESTS RAN IN THIS WELL

**FORMATION TOPS SUMMARY**

	<b>MARSHA # 2</b>	<b>ROTH # 1</b>	<b>ALTA # 1</b>
	<b>S2 NW NW SW</b>	<b>SW SW NW</b>	<b>SE NW SW NW</b>
	<b>SEC.21-15S-18W</b>	<b>SEC.21-15-18W</b>	<b>SEC.21-15-18W</b>
	<b>2003'GL 2013'KB</b>	<b>KB 2007'</b>	<b>KB 1993'</b>
<u>FORMATION</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
<b>Anhydrite</b>	<b>1168+ 845</b>		<b>+ 846</b>
<b>B-Anhydrite</b>	<b>1205+ 808</b>		<b>+ 813</b>
<b>Topeka</b>	<b>2982 - 969</b>		<b>- 960</b>
<b>Heebner Sh.</b>	<b>3250-1237</b>	<b>-1239</b>	<b>-1237</b>
<b>Toronto</b>	<b>3271-1258</b>	<b>-1263</b>	<b>-1262</b>
<b>LKC</b>	<b>3298-1285</b>	<b>-1289</b>	<b>-1286</b>
<b>BKC</b>	<b>3525-1512</b>	<b>-1515</b>	<b>-1510</b>
<b>Arbuckle</b>	<b>3626-1613</b>	<b>-1613</b>	<b>-1589</b>
<b>RTD</b>	<b>3700-1687</b>		<b>-1679</b>

**SUMMARY OF DAILY ACTIVITY**

**9-17-14** RU, spud 12:30 PM  
**9-18-14** 1178', set 8 5/8" surface casing to 1178' w/ 375 sxs SMD, slope 3/4 degree, plug down 12:45PM, WOC 12 hrs  
**9-19-14** 1424', drill plug 12:45 AM  
**9-20-14** 2593', drilling, displaced 2889'-2904'  
**9-21-14** 3180', drilling  
**9-22-14** 3700', drilling, RTD 3700' @ 4:00AM, short trip, TOWB, logs, P&A

Image Header 02

Image Header 03

Image Header 04

Image Header 05

**ROCK TYPES**

	Clystgy		Lmst fw<7		shale, gry		Lscongl
	Chtcongl		Lmst fw7>		Carbon Sh		CglSandy
	Dolprim		shale, grn		shale, red		

**ACCESSORIES**

**MINERAL**

- ▲ Chert, dark
- △ Chert White

**OTHER SYMBOLS**

**Oil Show**

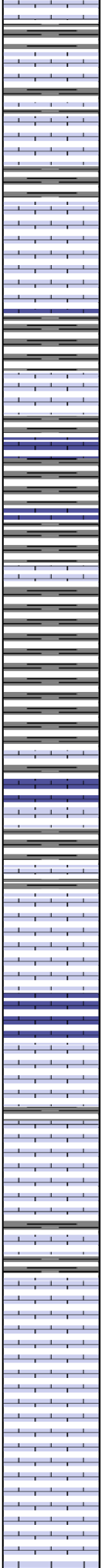
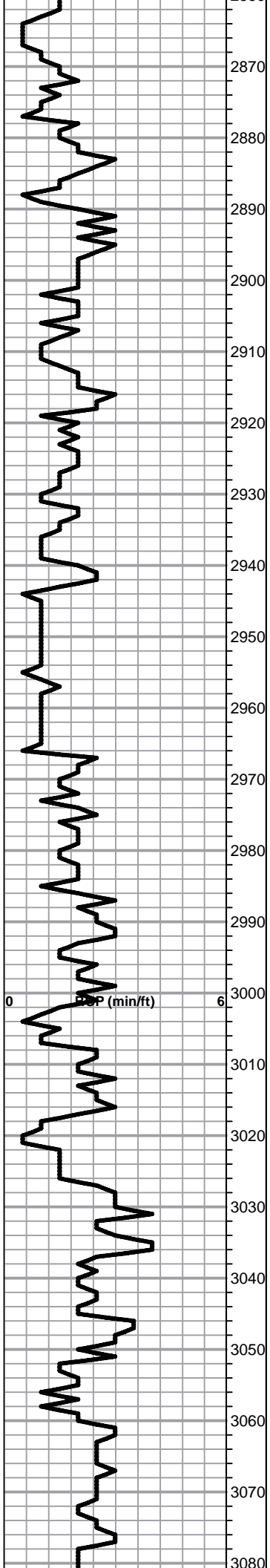
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Stn
- Dead Oil Stn
- Fluorescence
- \* Gas

**DST**

- DST Int
- DST alt
- Core
- tail pipe

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Curve Track #1 ROP (min/ft)	Depth   Intervals DST	Lithology	Oil Show	Geological Descriptions	TG, C1 - C5
1:240 Imperial 0 ROP (min/ft) 6	Cored Interval DST Interval				
	2850 2860			BEGIN 1' DRILL TIME FROM 2850' TO RTD BEGIN 10' WET AND DRY SAMPLES FROM 2950' TO RTD  <b>ANHYDRITE TOP 1168 +845</b> <b>ANHYDRITE BASE 1205+808</b>	1:240 Imperial 8 5/8" SURFACE CASING SET TO 1178' W/ 375 SXS SMD SLOPE 3/4 DEGREE @1178'



Lime, lt-med brn, fnxln, slightly fossiliferous

Shale, lt-med gray, soft blocky, slightly waxy

Lime, med-dark brn, fnxln, slightly fossiliferous

Shale, lt-med gray, soft mud-soft blocky

Lime, med-dark brn-lt brn in part, fnxln

**TOPEKA ELog 2982-969**

Lime, lt brn-med grayish brn, fnxln, slightly fossiliferous

Lime, lt-med brn, fnxln, lt white chalk wash with sticky clumps in part

Lime, lt-med brn, fnxln, lt chalky matrix in part with lt chalk wash

Lime, lt brn-med grayish brn, fn-vfxln

Lime, lt brn, granular, NS

Lime, lt-med brn, fn-vfxln,

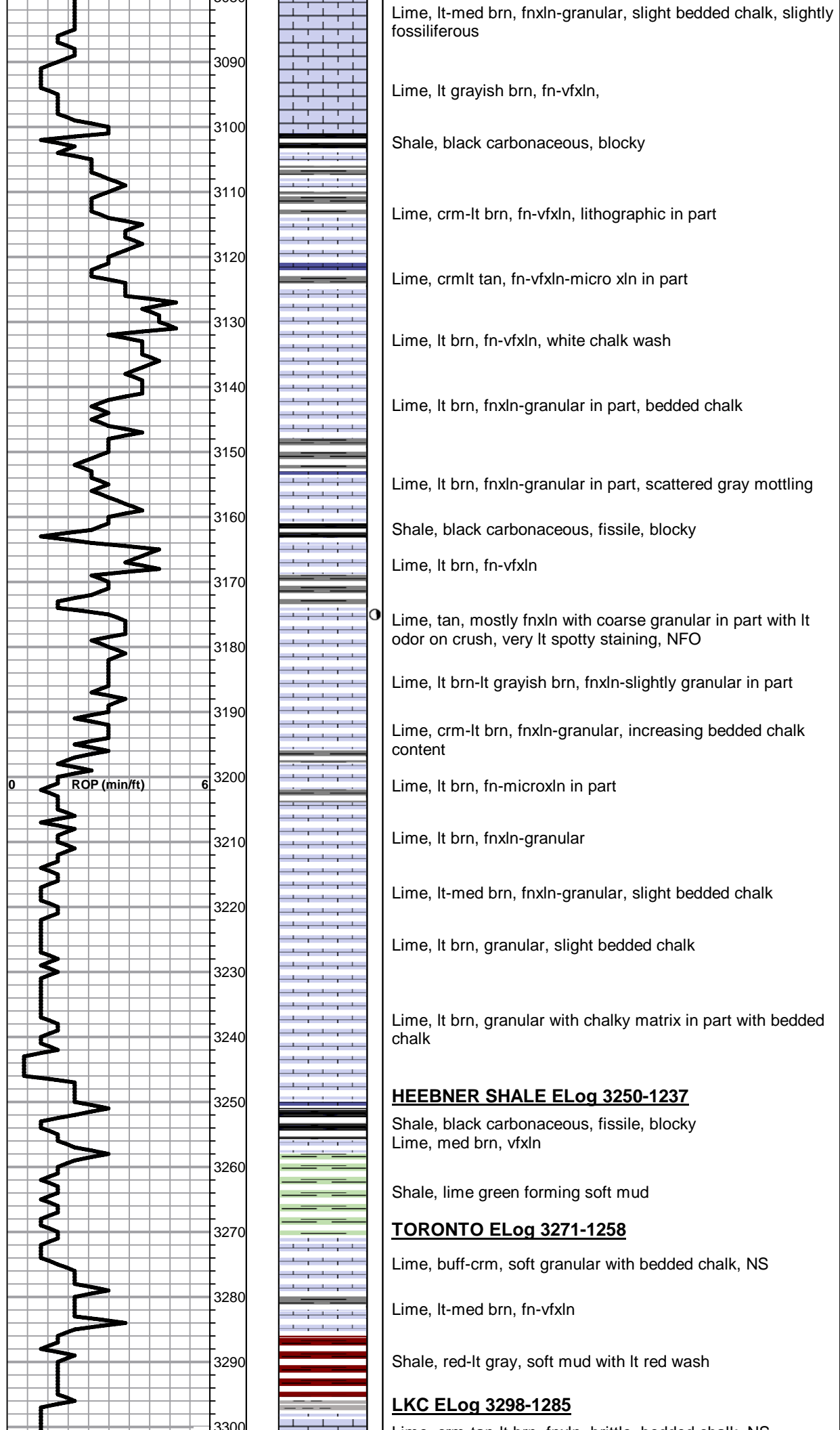
Lime, lt brn-lt grayish brn, fn-vfxln

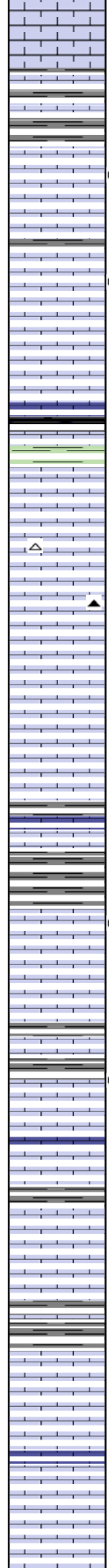
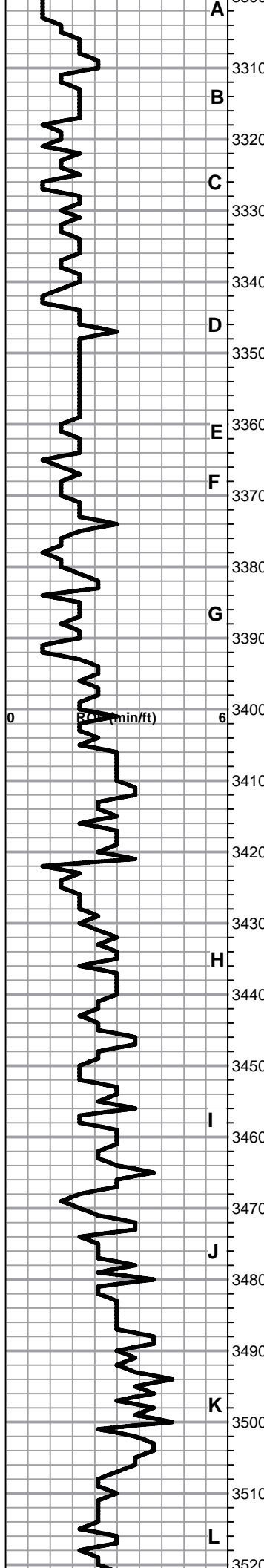
Lime, lt-med brn, fn-vfxln, slight bedded chalk, slightly fossiliferous

Lime, lt brn, fnxln-granular, slightly fossiliferous-fusulinids

Lime, lt brn, fnxln

STARTED LOSING PUMP PRESSURE WITH POOR SAMPLES. PULLED DRILL PIPE AT 3085' TO LOOK FOR HOLE IN PIPE





Lime, crm-tan-lt brn, fnxln, brittle, bedded chalk, NS

3310  
Lime, lt-med brn, fn-vfxln

3320  
Lime, crm-tan, mostly fnxln, few chips oolitic/oomoldic with trace of spotty staining, No Odor, NFO

3330  
Lime, crm-tan, fnxln

3340  
Lime, crm-tan, fnxln, few chips oolitic w fossil fragments, very lt odor with spotty staining, increasing chalk with depth

3350  
Lime, crm-tan, fnxln, bedded chalk

3360  
Shale, black carbonaceous, blocky  
Lime, lt gray, fnxln

3370  
Lime, crm-tan, fnxln, soft on crush, lot of bedded chalk in chalk matrix, NS

3380  
Lime, crm-tan, fn-micro xln, slight bedded chalk, NS  
Chert, lt gray with white chert in part

3390  
Lime, crm-lt brn, fn-micro xln, slight bedded chalk

3400  
Lime, crm-tan-lt brn, fn-micro xln, slight bedded chalk

3410  
Lime, lt-med brn-med grayish brn, fnxln

3420  
Lime, crm-tan, fnxln, spotty stain in fine interxln porosity with fine vuggy development, No Odor, NFO

3430  
Lime, crm-lt brn, fn-micro xln, slight bedded chalk

3440  
Lime, crm-tan, fn-vfxln, bedded chalk, few chips, lt spotty staining, No Odor, NFO, appears thinly developed

3450  
Lime, lt-med brn, fn-vfxln, slight bedded chalk

3460  
Lime, lt-med brn, fn-vfxln

3470  
Lime, crm-tan, fn-vfxln, moderate bedded chalk

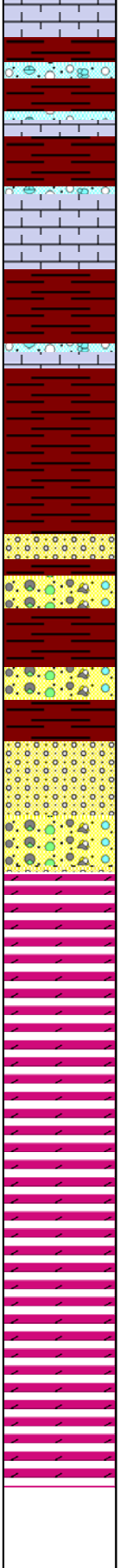
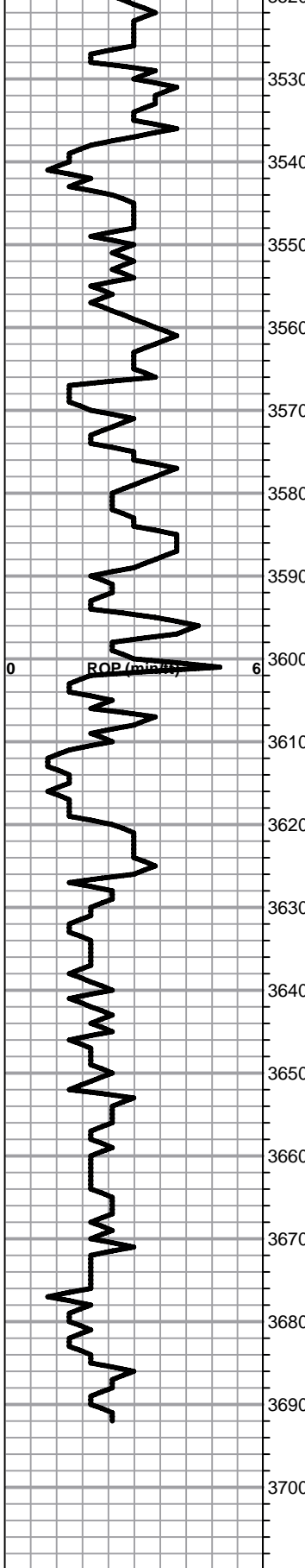
3480  
Lime, crm, fnxln, moderate bedded chalk

3490  
Lime, crm-tan-lt brn, fn-vfxln

3500  
Lime, crm, fn-vfxln, slight bedded chalk

3510  
Lime, crm, fn-micro xln, slight bedded chalk

3520



**BKC ELog 3525-1512**

Lime, crm, fn-flxn, slight bedded chnk

3530 Shale, red wash, sticky brown clumps of clay with clastic lime mix

3540 Shale, red wash with sticky clumping

3550 Lime, crm, fn-vflxn

3560 Shale, red wash, soft mud

3570 Shale, lt red wash with sticky clumps

3580 Shale, red with lt red wash

3590 Shale, red-dark brn, soft mud  
Chert, vari colored

3600 Shale, red wash, sticky clumps

3610 Shale, red wash, soft mud  
Chert vari colored, scattered sandstone clusters, cemented with white clay, NS

**ARBUCKLE ELog 3626-1613**

3630 Dolomite, crm, fnxn-granular, sucrosic in part, NS, No Odor, scattered few chips with SFO on crush

3640 Dolomite, crm, fnxn-granular, NS, scattered quartz grains

3650 Dolomite, crm, fnxn-granular, very clean

3660 Dolomite, ivory-crm, fnxn-granular

3670 Dolomite, crm, fnxn-slightly granular, lt chalk wash

3680 Dolomite, crm,fnlxn-granular, lt chalk wash

3690 Dolomite, crm, fnxn-granular

**RTD 3700-1687 LTD 3692-1679**

1ST PLUG @3600' W/ 50 SXS  
 2ND PLUG @ 1230' W/ 50 SXS  
 3RD PLUG @ 570' W/ 100 SXS  
 4TH PLUG @ 40' W/ 10 SXS  
 RATHOLE W/ 30 SXS  
 MOUSEHOLE W/ 15 SXS

255 SXS 60/40 POS 4%GEL  
 1/4# FLOCELE PER SX

SLOPE 1/4 DEGREE @3700'