

OPERATOR

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

Contact Geologist: TOM DENNING
 Contact Phone Nbr: 785-628-2593
 Well Name: CONELL # 1
 Location: W2 NE SW NE, Sec.26-11s-20w API: 15-051-26,692-00-00
 Pool: WILDCAT Field: UNNAMED
 State: KANSAS Country: USA



Scale 1:240 Imperial

Well Name: CONELL # 1
 Surface Location: W2 NE SW NE, Sec.26-11s-20w
 Bottom Location:
 API: 15-051-26,692-00-00
 License Number: 4787
 Spud Date: 5/8/2014 Time: 4:00 PM
 Region: ELLIS COUNTY
 Drilling Completed: 5/13/2014 Time: 11:31 AM
 Surface Coordinates: 1650' FNL & 1750' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 2086.00ft
 K.B. Elevation: 2096.00ft
 Logged Interval: 3000.00ft To: 3800.00ft
 Total Depth: 3800.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.5065246 Latitude: 39.0693509
 N/S Co-ord: 1650' FNL
 E/W Co-ord: 1750' FEL

LOGGED BY

Company: SOLUTIONS CONSULTING, INC.
 Address: 108 W 35TH
 HAYS, KS 67601
 Phone Nbr: (785) 639-1337
 Logged By: GEOLOGIST Name: HERB DEINES

CONTRACTOR

Contractor: SOUTHWIND DRILLING, INC.
 Rig #: 1
 Rig Type: MUD ROTARY
 Spud Date: 5/8/2014 Time: 4:00 PM
 TD Date: 5/13/2014 Time: 11:31 AM
 Rig Release: 5/15/2014 Time: 4:15 AM

ELEVATIONS

K.B. Elevation: 2096.00ft Ground Elevation: 2086.00ft
 K.B. to Ground: 10.00ft

NOTES

RECOMMENDATION TO RUN CASING BASED ON LOG ANALYSIS AND POSITIVE RESULTS OF DST # 1
 OPEN HOLE LOGGING BY PIONEER ENERGY SERVICES: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, MICRORESISTIVITY LOG
 DRILL STEM TESTING BY TRILOBITE TESTING INC: THREE (3) STRADDLE TESTS

FORMATION TOPS COMPARISON AND CHRONOLOGY OF DAILY ACTIVITY


	CONELL # 1	MARTIN # 1	D. CONELL # 1
	W2 NE SW NE	NE NE NE	E2 E2 E2
	SEC.26-11S-20W	SEC.26-11-20W	SEC.26-11-20W
	2086'GL 2096'KB	KB 2117'	KB 2077'
<u>FORMATION</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1488 +608	+ 608	+617
B-Anhydrite	1528 +568	+ 569	+571
Tuff	2124 +628	+ 628	+637

Topeka	3134-1038	-1033	-1027
Heebner Sh.	3356-1260	-1254	-1249
Toronto	3379-1283	-1277	-1271
LKC	3397-1301	-1295	-1288
BKC	3622-1526	-1521	-1511
Arbuckle	3708-1612	-1601	-1598
RTD	3800-1704	-1618	-1628

SUMMARY OF DAILY ACTIVITY

- 5-08-14 RU, Spud 4:00 PM, set 8 5/8" surface casing to 223' w/ 150 sxs
Common 2%Gel 3%CC, slope 3/4 degree, plug down 11:15 PM
- 5-09-14 224', drill plug 7:15 AM
- 5-10-14 2010', drilling
- 5-11-14 2750', drilling, displaced 2967' to 2985'
- 5-12-14 3315', drilling
- 5-13-14 3705', drilling, CFS 3710', CFS 3718', RTD 3800' @11:31AM, short trip, TOWB, slope @3800' 3/4 degree, logs, straddle DST # 1 3542'-3595' "I-J" LKC
- 5-14-14 3800', straddle DST #2 3675'-3722' Arbuckle- Misrun, straddle DST # 3 3600'-3722', Arbuckle, TIWB, LDDP, start running production casing
- 5-15-14 3800', finish running production casing and cementing

DST # 1 STRADDLE TEST 3542' TO 3595' BOTTOM PACKER HELD

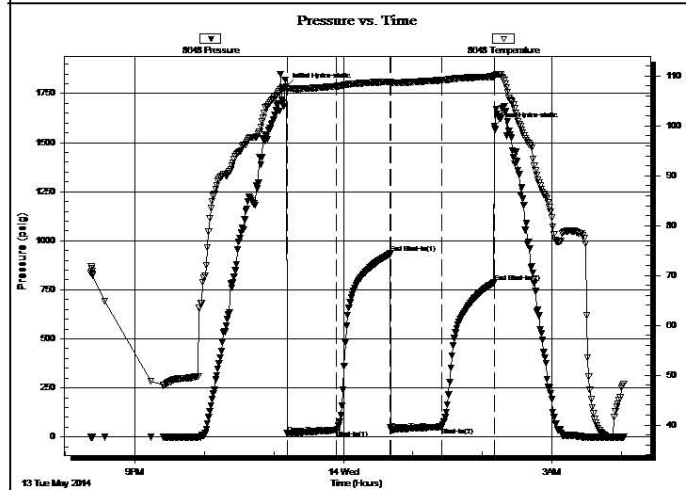
	DRILL STEM TEST REPORT	
	TDI, Inc 1310 Bison Rd Hays KS, 67601 ATTN: Herb Deines	26-11s-20w Ellis Conell #1 Job Ticket: 54043 DST#: 1 Test Start: 2014.05.13 @ 20:22:00

GENERAL INFORMATION:

Formation: LKC "I,J"	Deviated: No Whipstock: ft (KB)	Test Type: Conventional Straddle (Initial)
Time Tool Opened: 23:11:15	Time Test Ended: 04:01:45	Tester: Cody Bloedorn
Interval: 3542.00 ft (KB) To 3595.00 ft (KB) (TVD)	Total Depth: 3798.00 ft (KB) (TVD)	Reference Elevations: 2096.00 ft (KB)
Hole Diameter: 7.88 inches	Hole Condition: Fair	2088.00 ft (CF)
		KB to GR/CF: 8.00 ft

Serial #: 8648 Inside	Press@RunDepth: 51.07 psig @ 3580.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2014.05.13	End Date: 2014.05.14	Last Calib.: 2014.05.14
Start Time: 20:22:05	End Time: 04:01:44	Time On Btm: 2014.05.13 @ 23:11:00
		Time Off Btm: 2014.05.14 @ 02:10:30

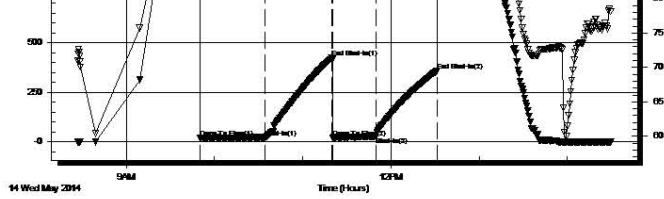
TEST COMMENT: 45 - IF- B.O.B. in 17 minutes
 45 - IS- Surface return
 45 - FF- B.O.B. in 34 Minutes
 45 - FS- Surface return



PRESSURE SUMMARY			
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1787.78	107.93	Initial Hydro-static
1	17.83	107.22	Open To Flow (1)
44	34.86	107.94	Shut-In(1)
90	934.47	108.88	End Shut-In(1)
90	36.76	108.61	Open To Flow (2)
134	51.07	109.16	Shut-In(2)
179	787.31	109.87	End Shut-In(2)
180	1584.87	110.10	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
10.00	HOCM, 30%O, 70%M	0.14
77.00	GO, 5%G, 95%O	1.08
0.00	341' of G.I.P.	0.00

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



162 1763.27 111.94 Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
15.00	Mud - with Oil spots, 100%M	0.21

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Trilobite Testing, Inc Ref. No: 54045 Printed: 2014.05.14 @ 14:44:52

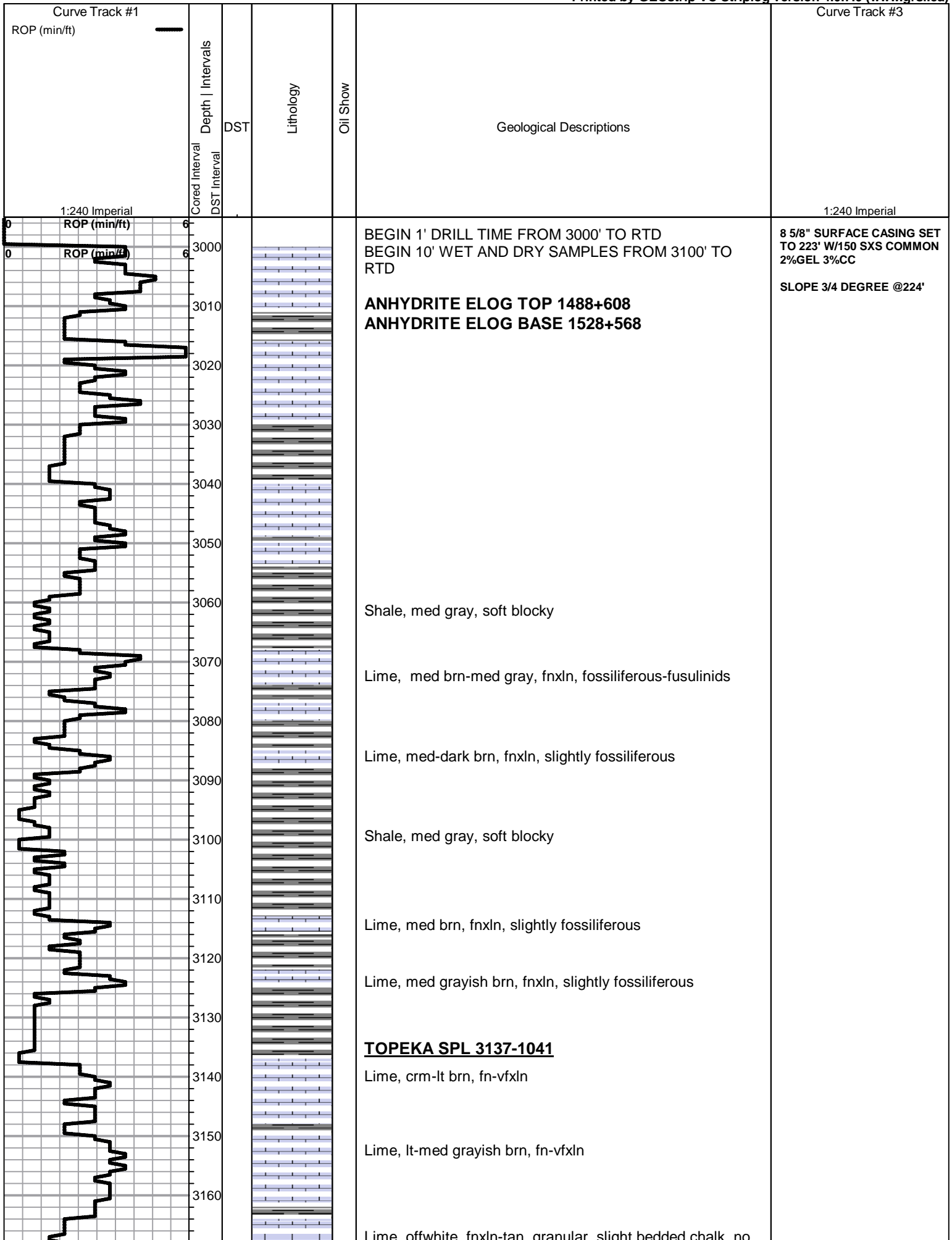
ROCK TYPES

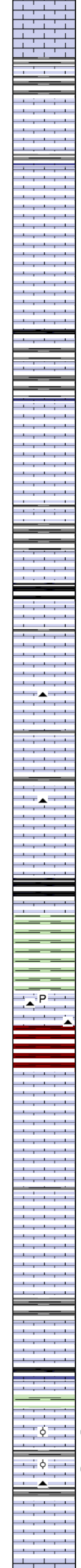
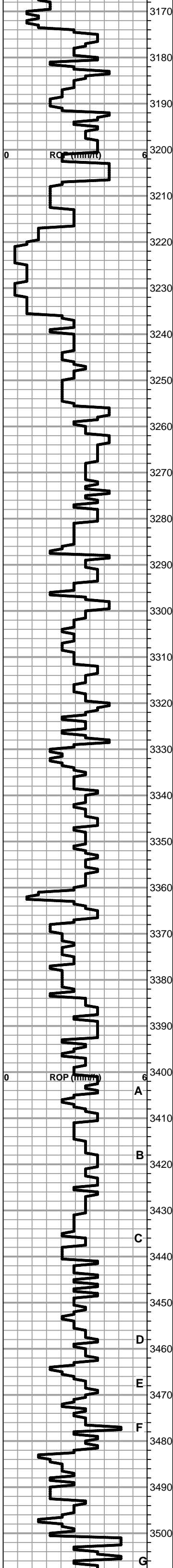
Clystcol	Lmst fw<7	shale, grn	shale, red
Dolprim	Lmst fw7>	shale, gry	Ss
Dol Lime	Lscongl	Carbon Sh	

ACCESSORIES

MINERAL	FOSSIL
▲ Chert, dark	◊ Oolite
P Pyrite	
△ Chert White	

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)





Lime, offwhite, med tan, granular, slight bedded chert, no wet cut

Lime, med brn-med gray, fnxln, slightly fossiliferous

Lime, med grayish brn, fnxln, slightly fossiliferous

Lime, lt-med brn, fnxln, slightly fossiliferous

Lime, offwhite-med grayish brn, fnxln, slightly granular

Lime, offwhite-grayish brn, fn-vfxln, slightly fossiliferous

Lime, med-dark brn, fnxln-granular, slightly fossiliferous

Shale, black carbonaceous, blocky

Lime, lt-med brn, fnxln

Lime, crm-tan, fn-micro xln

Lime, tan-lt brn, fn-vfxln

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

Lime, lt-med brn, fnxln

Shale, black carbonaceous, fissile, blocky

Lime, crm-lt brn, fn-vfxln

Lime, lt-med brn, fn-vfxln, hard on crush

Lime, crm-med brn, fn-micro xln, slight bedded chalk

Lime, crm-lt brn, fnxln-granular, slight bedded chalk

Lime, lt-med brn, fnxln-granular, Lime gray, shaley with dark chert

Lime, lt-med brn, fnxln-granular in part, chalk matrix in part

HEEBNER SHALE SPL 3358-1262
 Shale, black carbonaceous, fissile, blocky
 Lime, lt-med brn, micro xln

Shale, lime green soft blocky-sticky clumps in part

TORONTO SPL 3382-1286
 Lime, lt-med brn, fn-vfxln, slightly pyritic, chert in part

Shale, soft with red wash

LKC SPL 3400-1304
 Lime, crm-lt brn, fn-vfxln

Lime, crm-tan, fn-micro xln NS

Lime, lt gray-crm-tan, fn-vfxln, NS

Lime, tan-med brn, fn-vfxln, slightly fossiliferous, well cemented

Lime, lt-med brn, fnxln, NS

Shale, med gray, soft-firm, calcareous and fossiliferous in part

Lime, tan-lt brn, mostly fnxln, few chips with scattered vuggy porosity, scattered-saturated stain, NFO, No Odor

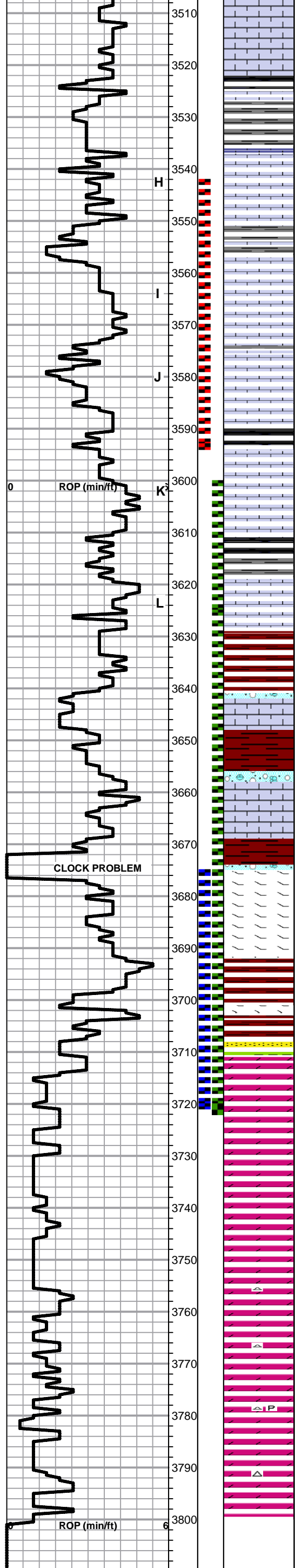
Shale, black carbonaceous

Lime, tan, oolitic w/ fossil fragments, scattered to saturated staining, NFO, No Odor

Lime, tan, oolitic, interoolitic porosity, scattered to saturated staining, NFO, No Odor

Lime, crm-tan, fnxln, bedded chalk with white wash

Lime, crm-tan, fnxln, bedded chalk



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

Shale, black carbonaceous

Lime, tan, fn-vfxln, bedded chalk in part, few chips with spotty staining, NFO, No Odor

Lime, offwhite-crm, fn-vfxln

● Lime, crm, mostly fnxln, zone of oolitic/fossil fragments, lt odor, scattered-saturated staining, NFO

Lime, offwhite-crm, fn-vfxln

● Lime, crm-tan, oomoldic, scattered to saturated staining, very lt odor, oily sheen on samples

Lime, crm, fn-vfxln, slight bedded chalk

Shale, black carbonaceous, blocky

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

Shale, gray-black carbonaceous, blocky

Lime, crm, fn-vfxln-micro xln in part

BKC SPL 3629-1533

Shale, red, sandy, hard on crush in part grading into softer shale with red wash

Lime, crm, fnxln with red shale staining and shale inclusions

Shale, red, sandy, hard on crush, lime clastics mixed with red shale

Lime, fn-micro xln with red shale staining and shale inclusions

CLOCK PROBLEM

Lime, crm-tan-lt brn, fn-vfxln, slightly dolomitic

Lime, tan-lt gray, fnxln-granular, orange chert, NS

Shale, red, brn, maroon, soft blocky

SS, quartz, poorly sorted, deed flacky gilsonite, No Odor, NFO

ARBUCKLE SPL 3710-1614

● Dolomite, lt-med brn, fnxln with fn-med grained granular with interxln porosity, scattered to saturated staining, lt odor, oily sheen

○ Dolomite, tan-lt brn, fnxln-granular with few chips of cxln with rhombic xln development, oolitic chert

Dolomite, crm-tan, fnxln-granular

Dolomite, crm-tan, fnxln-granular with lt white chalk wash

Dolomite, tan-lt brn, fnxln-granular, white chert

Dolomite, crm-tan-lt salmon, fnxln-granular

Dolomite, crm-lt brn, fnxln-granular, slightly pyritic

Dolomite, crm-lt brn, fnxln-granular

RTD 3800-1704 LTD 3798-1702

DST # 1 STRADDLE TEST
LOG INTERVAL 3542'-3595'
SEE HEADER FOR TEST
SUMMARY

DST # 2 STRADDLE TEST LOG
INTERVAL 3675'-3722'
TOP PACKER FAILURE

DST # 3 STRADDLE TEST
LOG INTERVAL 3600'-3722'
SEE HEADER FOR TEST
SUMMARY

RAN 90 JOINTS 14# 5 1/2"
CASING SET TO 3799' W/ 150
SXS EA2, TOP STAGE W/ 150
SMD, 30 SXS RATHOLE, 15 SX
MOUSEHOLE

SLOPE @3800' 3/4 DEGREE