

OPERATOR

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

Contact Geologist: TOM DENNING
 Contact Phone Nbr: 785-628-2593
 Well Name: URBAN # 1
 Location: NE SE NW SEC.7-T15S-R18W
 API: 15-051-26,781-00-00
 Pool: WILDCAT
 State: KANSAS

Field: DECHANT
 Country: USA



Scale 1:240 Imperial

Well Name: URBAN # 1
 Surface Location: NE SE NW SEC.7-T15S-R18W
 Bottom Location:
 API: 15-051-26,781-00-00
 License Number: 4787
 Spud Date: 7/28/2015 Time: 4:00 PM
 Region: ELLIS COUNTY
 Drilling Completed: 8/3/2015 Time: 8:00 AM
 Surface Coordinates: 1650' FNL & 2310' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2029.00ft
 K.B. Elevation: 2039.00ft
 Logged Interval: 2900.00ft To: 3751.00ft
 Total Depth: 3751.00ft
 Formation: LANSING-KANSAS CITY
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.3662073
 Latitude: 38.7648948
 N/S Co-ord: 1650' FNL
 E/W Co-ord: 2310' FWL

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: 7/28/2015 Time: 4:00 PM
 TD Date: 8/3/2015 Time: 8:00 AM

ELEVATIONS

K.B. Elevation: 2039.00ft
K.B. to Ground: 10.00ft

Ground Elevation: 2029.00ft

NOTES

RECOMMENDATION TO RUN PRODUCTION CASING BASED ON RESULTS OF DST # 1 AND POTENTIAL IN OTHER LKC BENCHES.

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

DRILL STEM TESTING BY TRILOBITE TESTING, INC: TWO (2) CONVENTIONAL TESTS

	URBAN # 1	JEROME #1	URBAN # 1
	NE SE NW	SW NE NW SE	NE NE NW
	SEC.7-15S-18W	SEC.7-15-18W	SEC.7-15-18W
	2029'GL 2039'KB	KB 2038'	KB 2033'
<u>FORMATION</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1228 +811	+ 818	+ 815
B-Anhydrite	1263 +776	+ 782	+ 781
Topeka	3018- 979	- 970	
Heebner Sh.	3275-1236	-1230	-1231
Toronto	3295-1256	-1251	
LKC	3320-1281	-1276	-1277
BKC	3568-1529	-1520	
Arbuckle	3631-1592	-1602	-1595
RTD	3751-1712	-1686	-1600

SUMMARY OF DAILY ACTIVITY

7-28-15 RU, Spud 4:00 PM, set 8 5/8" surface casing to 213' w/150 sxs
Common 2%Gel 3%CC, slope 1/4 degree

7-29-15 244', drill plug 6:00 AM

7-30-15 2050', drilling

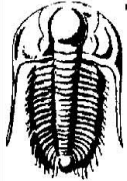
7-31-15 2690', drilling, displaced 2488' to 2509'

8-01-15 3285', drilling, CFS 3320', short trip, CFS 3360', DST #1 3315' to
3360' "A"- "C" LKC, TIWB

8-02-15 3485', drilling, CFS 3540', TOWB, DST # 2 3450' to 3540' "H" - "K"
LKC, TIWB

8-03-15 3700', drilling, RTD 3751' @8:00AM, CCH, TOWB, logs, TIWB, LDDP,
run 5 1/2" production casing, slope survey @3751' 3/4 degree

8-04-15 3751' final completion, production casing, RTD



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI
1310 Bison Rd
Hays KS 67601-9696
ATTN: Herb Deines

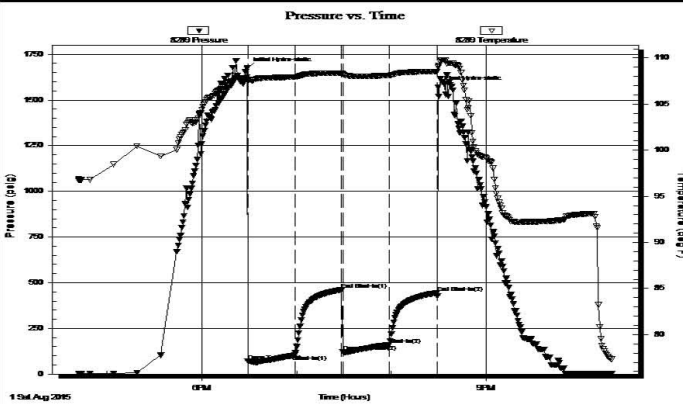
7 15s 18w Ellis
Urban #1
Job Ticket: 62394 **DST#: 1**
Test Start: 2015.08.01 @ 16:42:00

GENERAL INFORMATION:

Formation: **LKC "A - C"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:29:00
Time Test Ended: 22:19:00
Test Type: Conventional Bottom Hole (Initial)
Tester: Jim Svaty
Unit No: 76
Interval: **3315.00 ft (KB) To 3360.00 ft (KB) (TVD)**
Reference Elevations: 2039.00 ft (KB)
Total Depth: 3360.00 ft (KB) (TVD) 2031.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8289 Outside
Press@RunDepth: 161.60 psig @ 3324.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.08.01 End Date: 2015.08.01 Last Calib.: 2015.08.01
Start Time: 16:42:02 End Time: 22:19:30 Time On Btm: 2015.08.01 @ 18:28:45
Time Off Btm: 2015.08.01 @ 20:29:30

TEST COMMENT: 30-IF- BOB in 1min. 45sec.
30-ISI- Surface Blow Building to 1/2in. 7min. Died Back in 12min.
30-FF- BOB in 3min 15sec. GTS in 29min.
30-FSI- BOB in 3min. 45sec.



PRESSURE SUMMARY

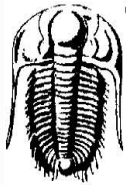
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1674.07	107.93	Initial Hydro-static
1	71.00	107.41	Open To Flow (1)
31	104.74	107.93	Shut-In(1)
60	461.58	108.37	End Shut-In(1)
61	121.04	108.22	Open To Flow (2)
90	161.60	108.11	Shut-In(2)
121	444.36	108.54	End Shut-In(2)
121	1570.87	108.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	VMCO 15%w 20%m 65%o	0.87
186.00	CO 100%	2.61
129.00	MCO 20%m 80%o	1.81

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI
1310 Bison Rd
Hays KS 67601-9696
ATTN: Herb Deines

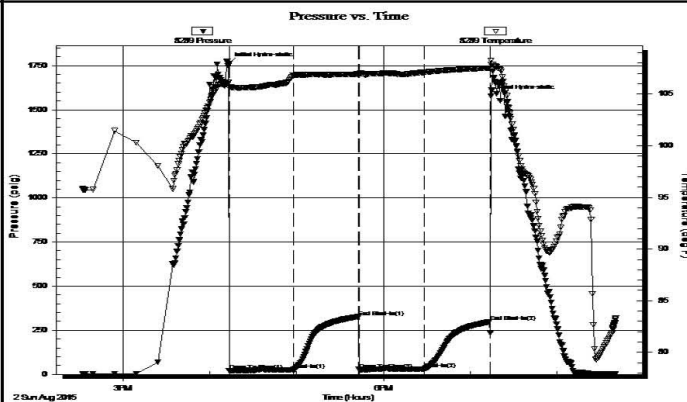
7 15s 18w Ellis
Urban #1
Job Ticket: 62395 **DST#: 2**
Test Start: 2015.08.02 @ 14:32:00

GENERAL INFORMATION:

Formation: **LKC " H - K "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:13:15
Time Test Ended: 20:42:00
Test Type: Conventional Bottom Hole (Reset)
Tester: Jim Svaty
Unit No: 76
Interval: **3450.00 ft (KB) To 3540.00 ft (KB) (TVD)**
Reference Elevations: 2039.00 ft (KB)
Total Depth: 3540.00 ft (KB) (TVD) 2031.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8289 Outside
Press@RunDepth: 29.43 psig @ 3473.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.08.02 End Date: 2015.08.02 Last Calib.: 2015.08.02
Start Time: 14:32:02 End Time: 20:40:36 Time On Btm: 2015.08.02 @ 16:13:00
Time Off Btm: 2015.08.02 @ 19:14:30

TEST COMMENT: 45-IF- Surface Blow Building to 1/2in. Died Back in 17min.
45-ISI- No Blow
45-FF- No Blow
45-FSI- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1761.30	106.12	Initial Hydro-static
1	21.13	105.62	Open To Flow (1)
45	25.59	106.79	Shut-In(1)
90	326.79	106.92	End Shut-In(1)
90	27.33	106.81	Open To Flow (2)
135	29.43	107.10	Shut-In(2)
181	298.01	107.52	End Shut-In(2)
182	1578.71	108.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Oil Speck Mud 100%	0.42

* Recovery from multiple tests

Gas Rates

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

Trilobite Testing, Inc

Ref. No: 62395

Printed: 2015.08.03 @ 00:03:36

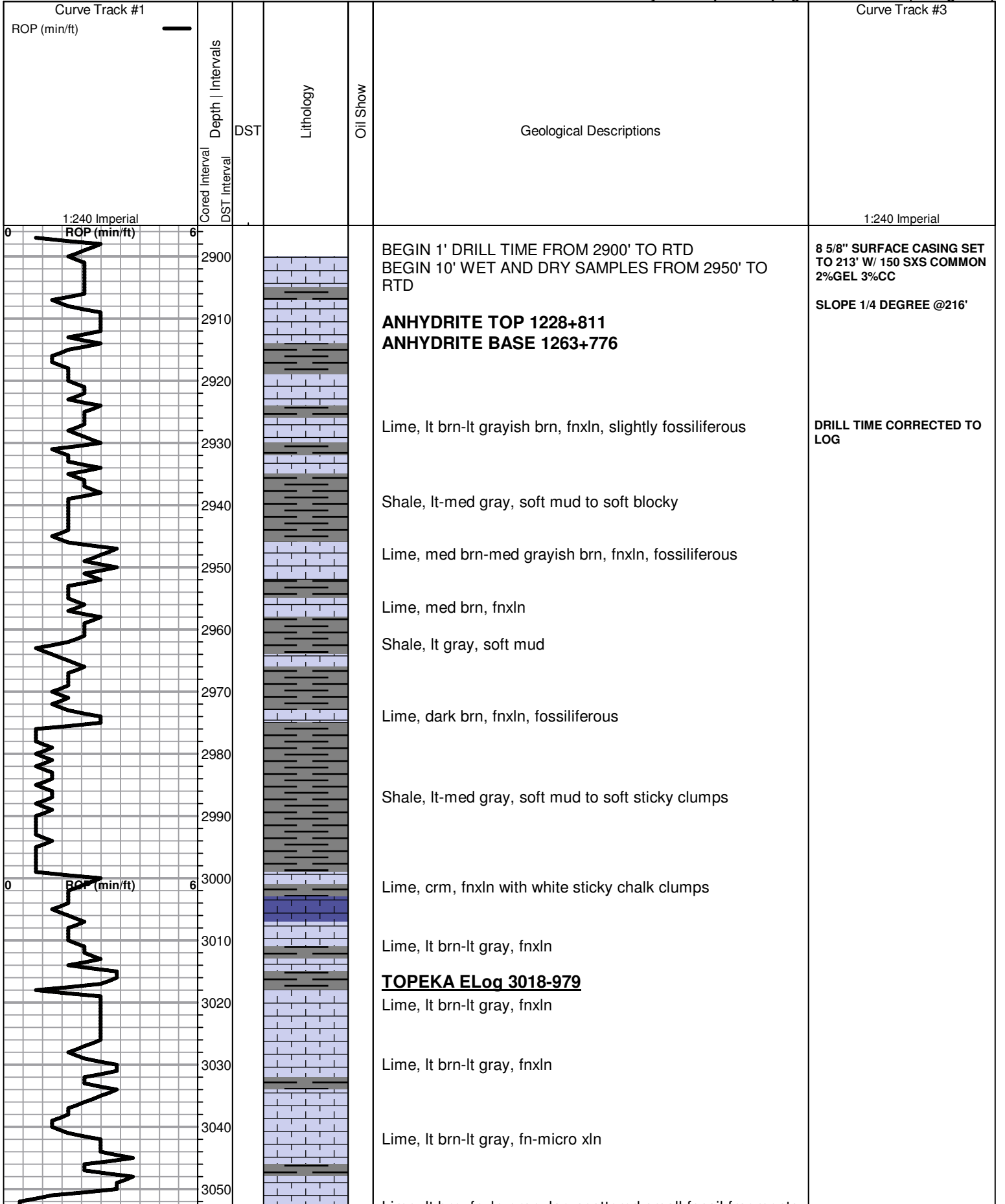
ROCK TYPES

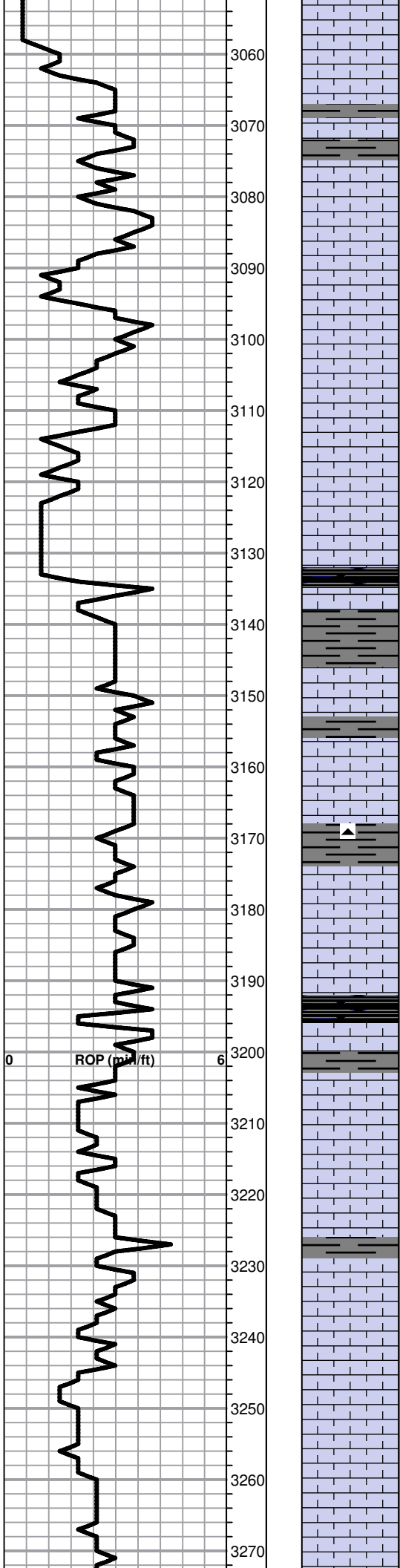
Clystcol	Lmst fw<7	shale, grn	shale, red
Dolprim	Lmst fw>7	shale, gry	
Dol Lime	Lscongl	Carbon Sh	

ACCESSORIES

- MINERAL**
 ▲ Chert, dark
 P Pyrite
 △ Chert White
 ▨ Euhed rhombs of dol or c

- FOSSIL**
 F Fossils < 20%
 ⊕ Oolite
 ⊕ Oomoldic





Lime, lt brn, fnxn-granular, scattered small fossil fragments, slight chalky content, NS, No Odor, No stain

Lime, lt brn-med gray, fn-vfxln

Lime, lt brn, fnxn- slightly granular in part

Lime, lt brn-lt grayish brn, fn-micro xln

Lime, lt brn, granular-fnxln, NS

Lime, lt brn, fn-micro xln

Lime, lt-med brn, fnxn with increasing sticky chalk clumps

Lime, lt brn, granular-fnxln in part, sticky chalk clumps

Lime, crm-lt brn, granular with slight chalk
Shale, black carbonaceous, fissile, blocky

Lime, crm, fn-micro xln sublithographic

Lime, crm-lt brn, fnxn with slight bedded chalk content

Lime, crm-lt brn, fnxn

Lime, lt brn, fnxn

Lime, lt brn, fnxn

Shale, black carbonaceous, blocky

Lime, lt-med brn, fnxn with increasing bedded chalk, NS

Lime, crm-lt brn, fnxn-granular in part

Lime, crm with white chalky wash, fnxn

Lime, crm-lt brn, fnxn with moderate chalk

Lime, crm-lt brn, fnxn

Lime, crm, fnxn-granular, bedded chalk, NS

Lime, crm-lt brn, fnxn-granular, white chalk wash

Lime, lt-med brn, fnxn-granular

HEEBNER SHALE ELog 3275-1236

Shale, black carbonaceous, fissile, blocky
Lime, lt-med brn, fn-micro xln

Shale, lime green, soft sticky clumps

TORONTO ELog 3295-1256

Lime, crm, fn-vfxln, slight bedded chalk, NS
Chert, white, fresh, sharp

Lime, lt brn, fn-micro xln

Shale, red, soft with lt red wash

LKC ELog 3320-1281

Lime, tan-lt brn, mostly fnxln, show zone with fine inter xln porosity, scattered to saturated staining, no odor, NFO

Lime, crm, fn-micro xln

Lime, lt-med brn, fn-micro xln

Lime, crm-lt brn, fnxln, zone of oolitic material with fossil fragments, scattered to saturated staining, lt odor, NFO in inter oolitic porosity

Lime, crm-lt brn, fn-micro xln

Lime, crm, fnxln, spotty staining in fine pin point vuggy porosity, NFO, No Odor grading into fresh oil staining in fossil casts

Lime, crm-lt brn, fn-vfxln, some sticky chalk clumping with lt white chalk wash

Shale, black carbonaceous, soft blocky

Lime, crm-tan, fine oolitic/oolmoldic bed with scattered to saturated staining in inter oolitic-scattered vuggy porosity. NFO, very lt to no detectable odor.

Lime, crm-tan, fnxln with moderate bedded chalk, NS

Lime, crm-tan, fn-vfxln

Lime, lt brn-tan, oolitic/oolmoldic, few chips with spotty staining with barren material. appears to have thin oil accumulation near top of zone with water in mid and lower level

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

Lime, crm-tan, fn-micro xln, slight to moderate bedded chalk

Lime, crm-tan, fn-micro xln, slightly fossiliferous

Shale, black carbonaceous, fossiliferous
Lime, lt gray, fn-vfxln

Lime, crm-lt brn, mostly fnxln with firm bedded chalk, few chips with spotty staining in poorly developed zone with very poor visible porosity

Lime, crm-tan, fn-vfxln

Shale, med-dark gray, firm blocky

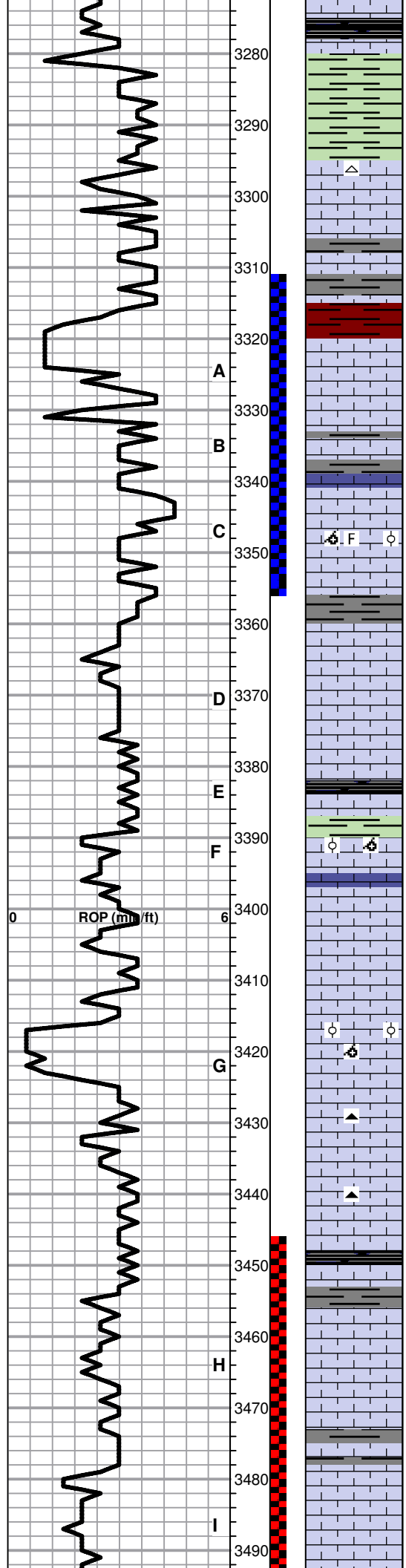
Lime, crm-lt brn, fnxln, few chips with fine inter xln porosity with dark flaky deposits, very lt halo wet cut, NFO, No Odor

Lime, crm-lt brn, fn-vfxln

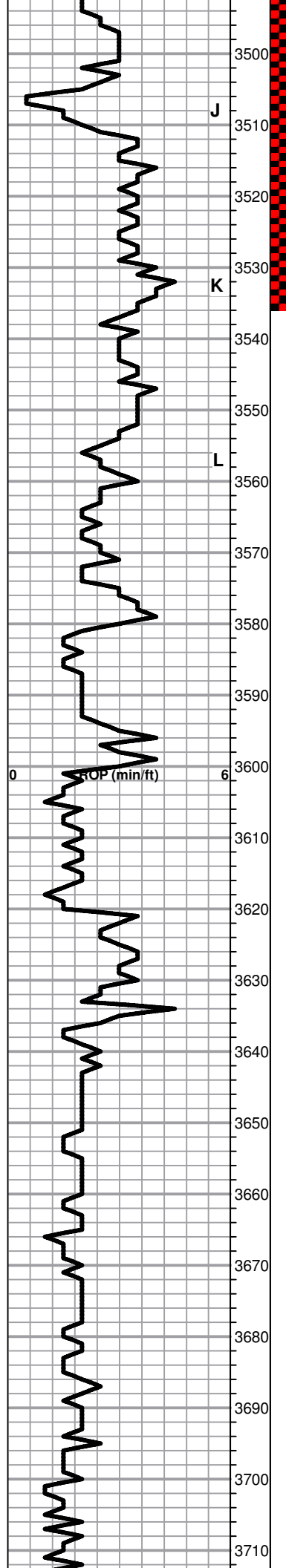
CFS 3320', SHORT TRIP

DST # 1 CORRECTED DEPTH
3311' TO 3356' SEE HEADER
FOR TEST SUMMARY

DST # 2 CORRECTED DEPTH
3446' TO 3536' SEE HEADER



ROP (m) (ft)



3500 Lime crm-lt brn, oolmoldic in part, lt saturated staining with few gas bubbles in fine scattered vuggy porosity.

3510 Lime, crm-tan, fnxln with bedded chalk

3520 Lime, crm-tan, fnxln

3530 Lime, crm, fnxln, lt chalky wash

3540 Lime, white-crm, fn-micro xln, firm bedded chalk

3550

3560 Lime, crm-lt brn, fn-micro xln

BKC ELog 3568-1529

3570 Shale, red-reddish brn, firm blocky, sandy in part
Lime, clastic mix, vari colored, fn-vfxln

3580 Shale, red, soft with lt red wash

3590 Lime, offwhite-crm, fn-micro xln, some clastic lime mix in part

3600 Shale, red-reddish brn, soft-firm blocky

3610 Shale, red-reddish brn with lt red wash, increasing chert content, vari color, nodules and fresh, sharp chips

3620 Lime, white, fnxln, red shale staining and reworked lime and chert clastics

ARBUCKLE ELog 3631-1592

3630 Dolomite, white-ivory, granular with rhombic xln development, inter xln porosity with saturated staining, MSFO and very lt odor

3640 Dolomite, ivory-tan, fnxln-granular, inter xln porosity, rhombic xln, scattered to saturated staining, VMSFO, very lt odor

3650 Dolomite, ivory-crm, fnxln-granular, interxln porosity with decreasing fresh oil staining and more gilsonitic material

3660 Dolomite, ivory-crm, fnxln-granular

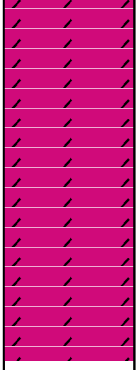
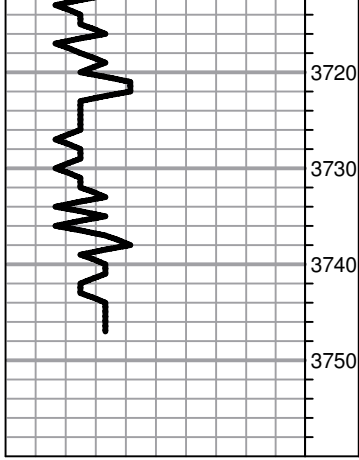
3670 Dolomite, ivory-crm, fnxln-granular

3680 Dolomite, ivory-crm, fnxln-granular

3690 Dolomite, ivory-crm, fnxln-granular, xln pyrite inclusions with scattered quartz grains imbedded in dolomite

3700 Dolomite, ivory-crm, fnxln-granular, lt chalky wash

3710 Dolomite, ivory-crm, fnxln-granular



Dolomite, ivory-crm, fnxln-granular

Dolomite, ivory-crm, fnxln-granular

Dolomite, crm-lt salmon, fnxln-granular

RTD 3751-1712 LTD 3747-1708

**5 1/2" 14# PRODUCTION
CASING SET TO 3746' W/ 150
SXS EA2. DV TOOL SET AT
1226' AND CEMENTED TO
SURFACE**

SLOPE 3/4 DEGREE @ 3751'