

**OPERATOR**

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

Contact Geologist: TOM DENNING  
 Contact Phone Nbr: 785-628-2593  
 Well Name: MARSHA # 1  
 Location: W2 SE SW SW Sec.21-15s-18w  
 Pool:  
 State: KANSAS

API: 15-051-26,559-00-00  
 Field: SCHOENCHEN WEST  
 Country: USA



**TDI, Inc.**  
 1310 BISON ROAD  
 HAYS, KANSAS 67601  
 (785) 628-2593

Scale 1:240 Imperial

Well Name: MARSHA # 1  
 Surface Location: W2 SE SW SW Sec.21-15s-18w  
 Bottom Location:  
 API: 15-051-26,559-00-00  
 License Number: 4787  
 Spud Date: 8/19/2013 Time: 4:45 PM  
 Region: ELLIS COUNTY  
 Drilling Completed: 8/26/2013 Time: 11:45 AM  
 Surface Coordinates: 330' FSL & 850' FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 1950.00ft  
 K.B. Elevation: 1960.00ft  
 Logged Interval: 2800.00ft To: 3695.00ft  
 Total Depth: 3695.00ft  
 Formation: LANSING-KANSAS CITY  
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: -99.3351958 Latitude: 38.7268336  
 N/S Co-ord: 330' FSL  
 E/W Co-ord: 850' 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

Rig Type: MUD ROTARY  
 Spud Date: 8/19/2013  
 TD Date: 8/26/2013  
 Rig Release: 8/27/2013

Time: 4:45 PM  
 Time: 11:45 AM  
 Time: 5:15 AM

**ELEVATIONS**

K.B. Elevation: 1960.00ft      Ground Elevation: 1950.00ft  
 K.B. to Ground: 10.00ft

**NOTES**

RECOMMENDATION TO PLUG AND ABANDON WELL DUE TO NEGATIVE RESULTS OF TWO DSTS AND LOW STRUCTURE OF CONGLOMERATE SAND

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

**FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY**

**MARSHA # 1**

330' FSL & 850' FWL, SW/4

Sec. 21-15s-18w

1950' GL 1960' KB

**BIEKER # 1**

SW SE SW

Sec 21-15s-18w

Reference Well

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1124+ 836	1123+ 837	+ 820
B-Anhydrite	1156+ 804	1156+ 804	
Topeka	2909- 949	2903- 943	- 942
Heebner Shale	3188-1228	3185-1225	-1225
Toronto	3209-1249	3205-1245	-1245
LKC	3238-1278	3233-1273	-1274
BKC	3466-1506	3462-1502	-1503
Conglomerate SS	3549-1589	3547-1587	-1608
Arbuckle	3561-1601	3561-1601	-1611
RTD& LTD	3695-1735	3693-1733	

**SUMMARY OF DAILY ACTIVITY**

8-19-13 RU, spud 4:45 PM,  
 8-20-13 786', set 8 5/8" surface pipe to 1121' w/ 375 sxs (Swift) FMD, plug down 9:00 PM, WOC 12hrs, slope 2 degrees  
 8-21-13 1135,'WOC, drill plug at 9:00 am  
 8-22-13 2082', drilling

- 8-23-13 2675', drilling, displaced 2877' to 2908'
- 8-24-13 3220', CFS@3290', DST # 1 "A" to "D" LKC 3220'- 3290', slope 1/2
- 8-25-13 3382', CFS@3445', DST # 2 "H" to "K" LKC 3354'-3445'
- 8-26-13 3555' , drilling, RTD 3695' @11:45am, CCH, TOWB, logs, P&A
- 8-27-13 3695', LDDP and finish plugging well, plug down 5:15 am

### DST # 1 TEST SUMMARY

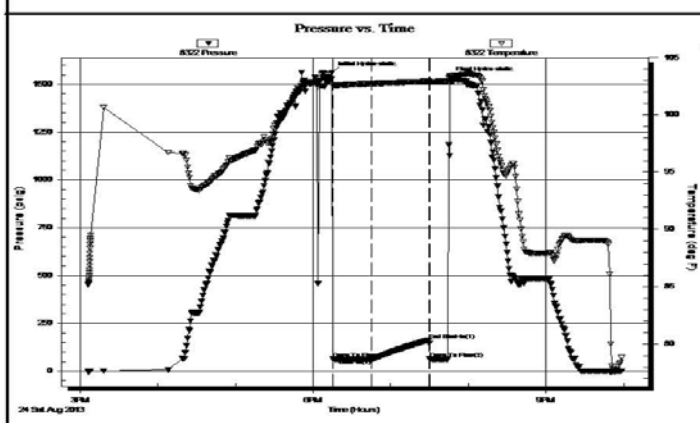
	<b>DRILL STEM TEST REPORT</b>		
	TDI Inc. 1310 Bison Rd. Hays, KS 67601 ATTN: Herb Deines	<b>21-15-18- Eliis Co.</b>  <b>Marsha #1</b> Job Ticket: 54390 <b>DST#: 1</b> Test Start: 2013.08.24 @ 15:06:13	

**GENERAL INFORMATION:**

Formation: <b>A-D</b>	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Tate Lang
Time Tool Opened: 18:15:33	Unit No: 41
Time Test Ended: 21:58:22	Reference Elevations: 1964.00 ft (KB)
<b>Interval: 3220.00 ft (KB) To 3290.00 ft (KB) (TVD)</b>	1954.00 ft (CF)
Total Depth: 3290.00 ft (KB) (TVD)	KB to GR/CF: 10.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Good

<b>Serial #: 8322</b>	<b>Outside</b>	Capacity: 8000.00 psig
Press@RunDepth: 63.44 psig @ 3221.00 ft (KB)	Start Date: 2013.08.24	End Date: 2013.08.24
Start Time: 15:06:14	End Time: 21:58:23	Last Calib.: 2013.08.24
		Time On Btm: 2013.08.24 @ 18:14:43
		Time Off Btm: 2013.08.24 @ 19:45:43

**TEST COMMENT:** Slid 20 ft Weak surface blow started at 3 1/4in Died back to 2 1/2in  
 Dead no blow back  
 Dead no blow Flushed tool @ 15mins no blow tried 3 times think i unseated packers on the 3rd try.  
 pulled it




PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1561.44	103.15	Initial Hydro-static
1	63.49	102.59	Open To Flow (1)
31	63.44	102.73	Shut-In(1)
75	163.93	102.91	End Shut-In(1)
76	63.54	102.88	Open To Flow (2)
91	1534.00	103.42	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
100.00	100%M	1.40

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


**DST # 2 TEST SUMMARY**

 <p><b>TRILOBITE TESTING, INC.</b></p>	<b>DRILL STEM TEST REPORT</b>	
	TDI Inc. 1310 Bison Rd. Hays, KS 67601 ATTN: Herb Deines	<b>21-15-18- Ellis Co.</b> <b>Marsha #1</b> Job Ticket: 54391 <b>DST#: 2</b> Test Start: 2013.08.25 @ 14:50:42

**GENERAL INFORMATION:**

Formation: **H,I,J,K**  
 Deviated: No Whipstock:                      ft (KB)  
 Time Tool Opened: 16:30:02  
 Time Test Ended: 21:08:42

**Interval: 3354.00 ft (KB) To 3445.00 ft (KB) (TVD)**  
 Total Depth: 3445.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good

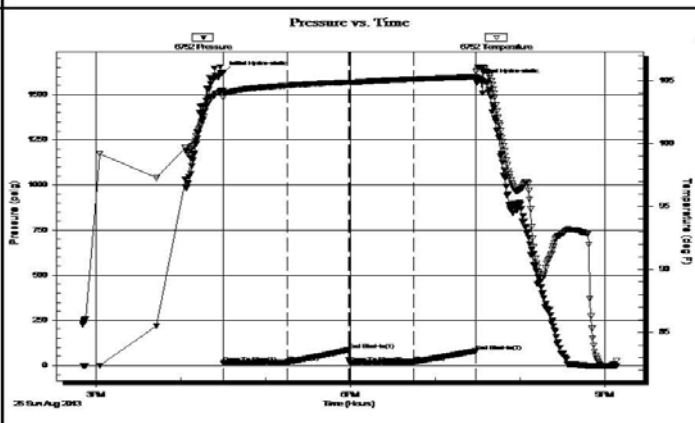
Test Type: Conventional Bottom Hole (Reset)  
 Tester: Tate Lang  
 Unit No: 41

Reference Elevations: 1964.00 ft (KB)  
 1954.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 6752      Inside**

Press@RunDepth: 18.33 psig @ 3357.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2013.08.25      End Date: 2013.08.25	Last Calib.: 2013.08.25
Start Time: 14:50:43      End Time: 21:08:42	Time On Btm: 2013.08.25 @ 16:29:52
	Time Off Btm: 2013.08.25 @ 19:29:02

**TEST COMMENT:** Fair surface blow built to 4 1/2in.  
 Dead no blow back  
 Fair surface blow built to 5in.  
 Dead no blow back















PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1624.80	104.26	Initial Hydro-static
1	13.53	103.64	Open To Flow (1)
46	16.64	104.63	Shut-In(1)
89	85.04	104.88	End Shut-In(1)
90	15.12	104.87	Open To Flow (2)
136	18.33	105.13	Shut-In(2)
179	78.79	105.31	End Shut-In(2)
180	1580.47	105.73	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
20.00	8%O 92%M	0.28
0.00	100' GIP	0.00

\* Recovery from multiple tests

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

**ROCK TYPES**

 Clystgy	 Lmst fw7>	 Carbon Sh	 Ss
 Dolprim	 shale, grn	 shale, red	 Lscong1
 Lmst fw<7	 shale, gry	 Shcol	 CglSandy

**ACCESSORIES**

**MINERAL**

- ▲ Chert, dark
- P Pyrite
- Sandy

**FOSSIL**

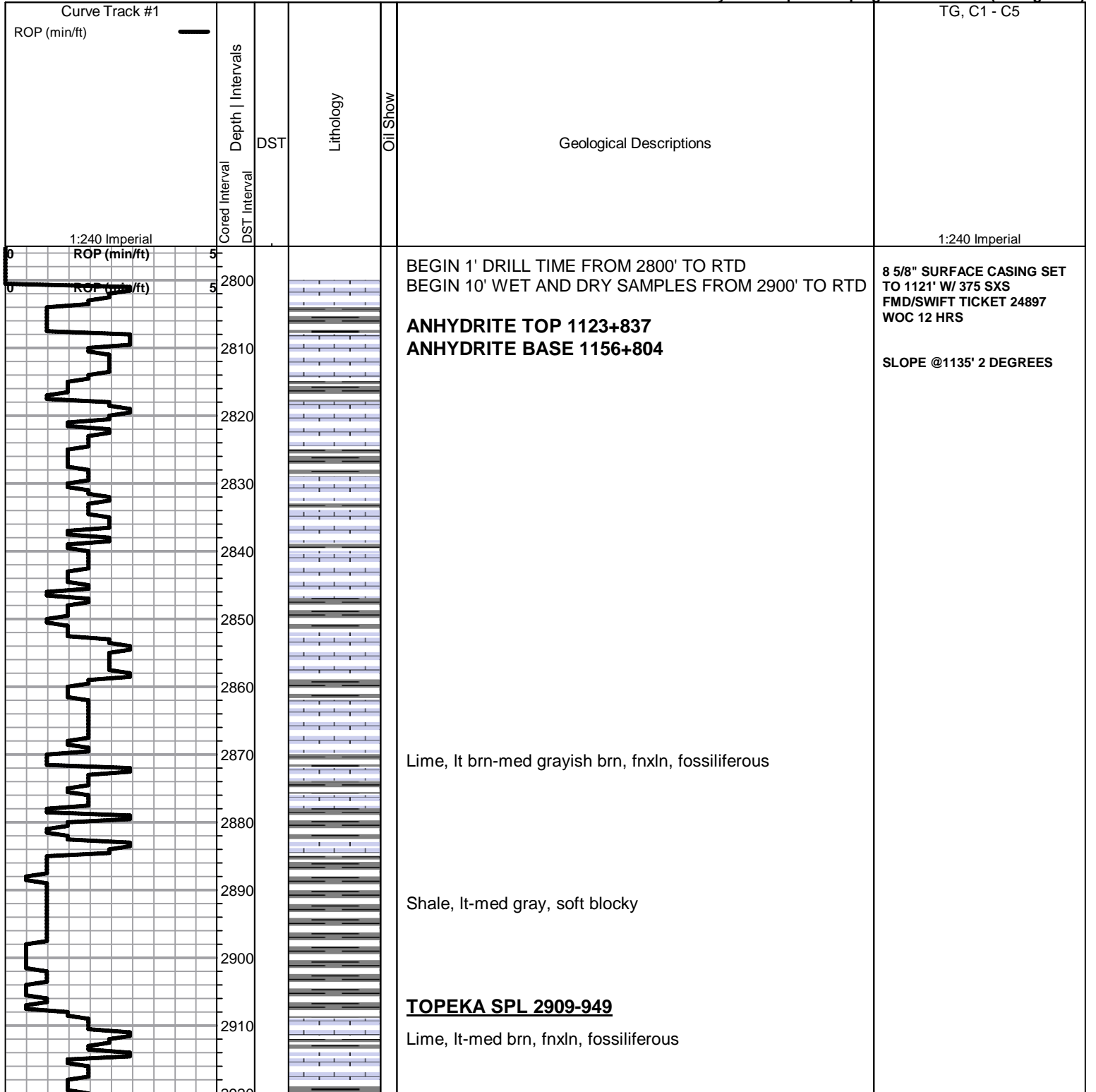
- Oolite
- ⊕ Oomoldic

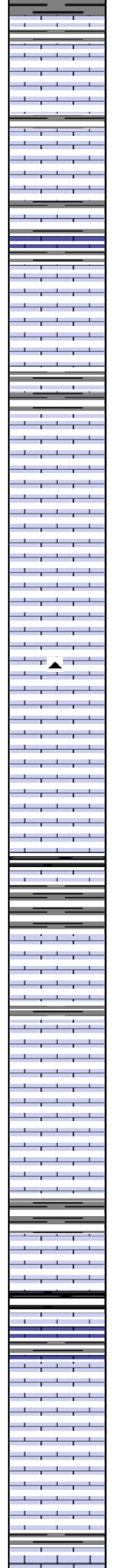
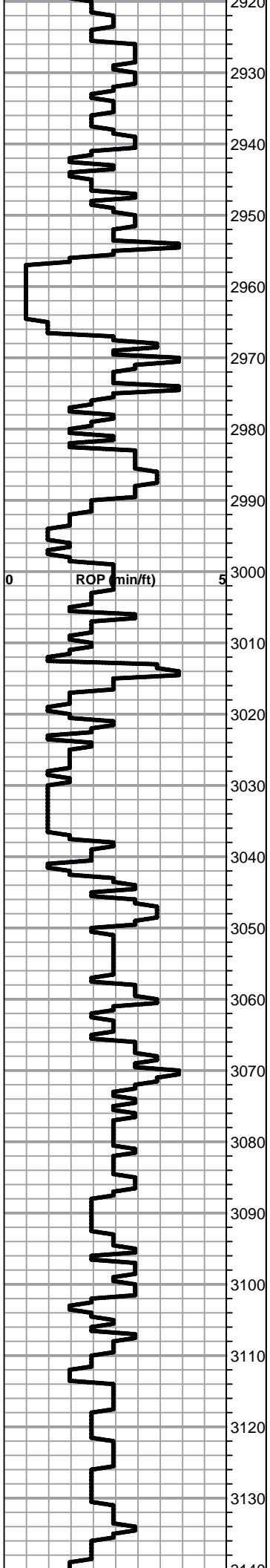
**OTHER SYMBOLS**

**DST**

- DST Int
- DST alt
- Core

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





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

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

Lime, lt-med brn, fnxln, fossiliferous

Lime, lt-dark brn, fnxln, soft on crush, slightly fossiliferous

Lime, lt brn, granular, NS

Lime, lt-med brn, fnxln  
Shale, dove gray, soft mud

Lime, med brn, fnxln-granular, slightly fossiliferous

Lime, lt-med brn, fnxln-granular, NS

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

Lime, lt-med brn, granular-fnxln

Lime, lt-med brn-grayish brn, mostly granular

Lime, lt-med brn, granular, slightly fossiliferous  
Shale, gray-black carbonaceous

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

Lime, crm-tan, fnxln, very clean-lithographic

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

Lime, crm-tan, fnxln, slight bedded chalk

Shale, lt gray, soft, waxy

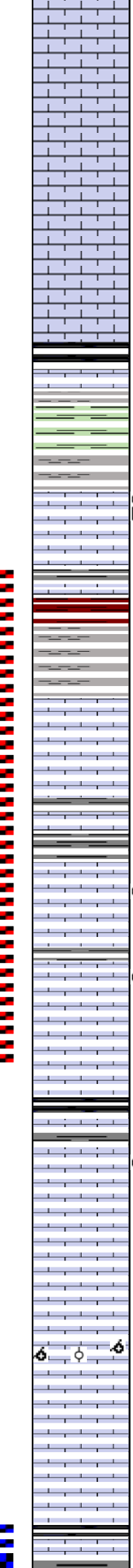
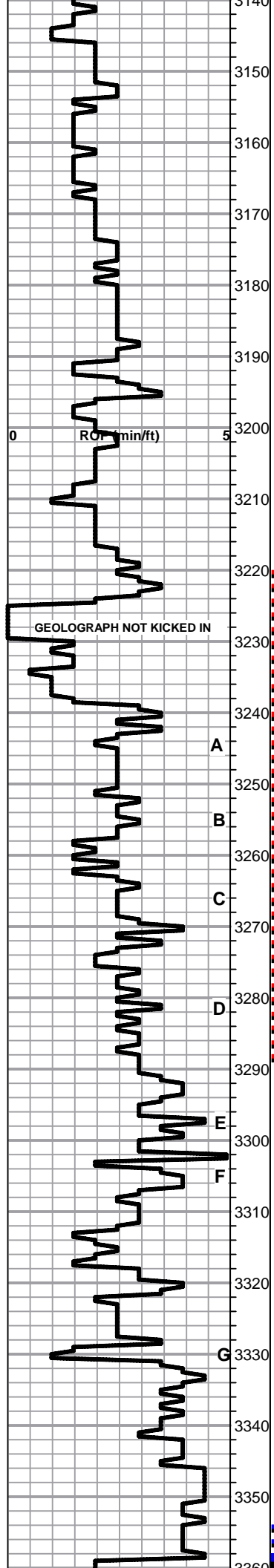
Lime, tan-lt brn, fnxln, gray mottling in part near shale

Lime, med brn-lt grayish brn, fnxln, hard on crush

Lime, crm, granular, slight chalk

Lime, lt brn with lt gray tint in part, fnxln, slight bedded chalk

Lime, tan-lt brn, fnxln, darker brn lime near shale boundary



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

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

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

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

**HEEBNER SHALE SPL 3188-1228**

Shale, black carbonaceous, fissile, blocky  
Lime, lt-med brn, fn-vfxln, slightly fossiliferous

Shale, lt gray-lime green, soft

**TORONTO SPL 3209-1249**

Lime, tan, fnxln-granular, slight fn vuggy porosity, dead oil and gilsonite, v lt odor, spotty staining,

Lime, crm-tan-brn with spotted mottling, fnxln

Shale, reddish brn-lt gray, soft, blocky

**LKC SPL 3238-1278**

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

Lime, mix of lt-dark brn-gray, fnxln, mottling in part

Lime, crm-lt brn, fnxln with few oolitic chips, spotty stain, NFO, no odor

Lime, crm-tan, granular in part with fine vugs, f-g odor, spotty staining

Lime, crm-tan, fnxln, slight bedded chalk

Shale, black carbonaceous, fissile, blocky  
Lime, crm-lt brn fnxln, slight bedded chalk

Lime, tan, fnxln, few chips with fine inter xln and fine vuggy porosity, scattered to saturated stain in part, NFO, v lt odor

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

Lime, crm-tan, mostly fnxln with few oomoldic chips-barren

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

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

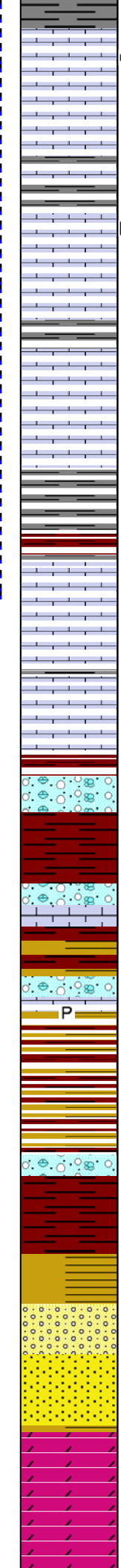
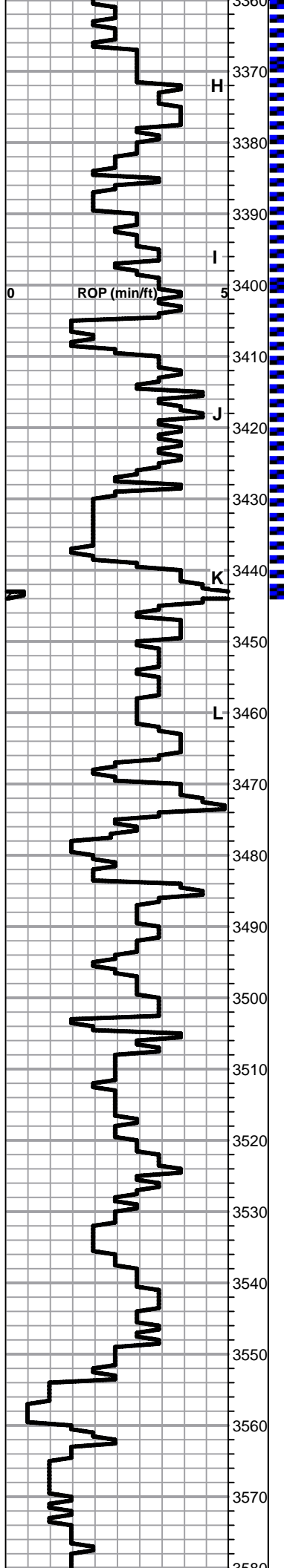
Shale, black carbonaceous  
Lime, lt-med gray, fnxln

MICROLOG SHOWED ZONE TO BE POORLY DEVELOPED

DST # 1 3220' TO 3290' SEE HEADER FOR TEST SUMMARY

MICROLOG SHOWED ZONE TO BE VERY THIN

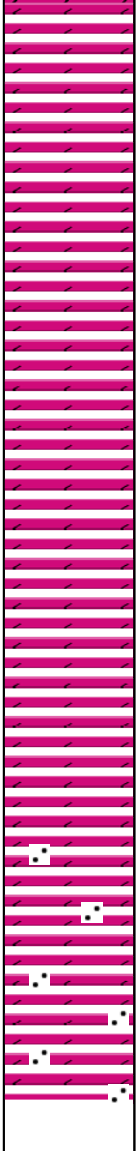
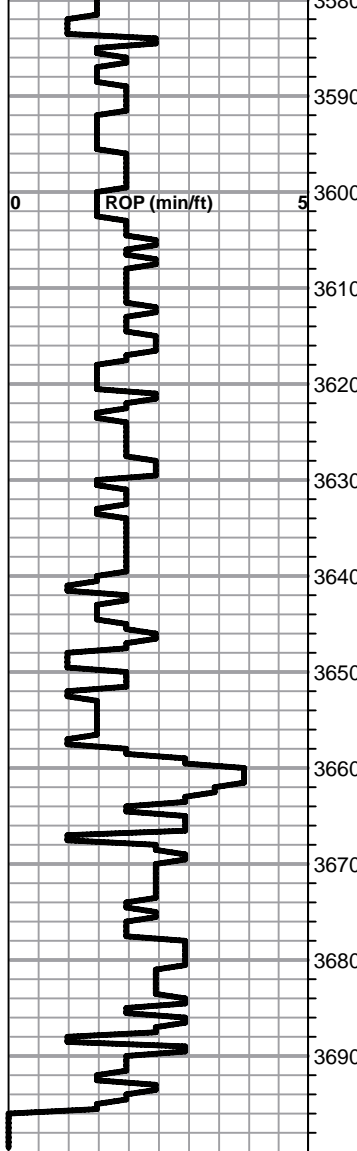
CFS@3340'



- Lime, crm-tan, mostly fn-vfxln, few chips with spotty stain, NFO, no odor
- Lime, crm-tan, fn-micro xln, slight bedded chalk
- D Lime, crm-tan, fnxln, bedded chalk, dead, dark oil staining, spotty, NFO, no odor
- Lime, crm-tan, fn-vfxln, slight bedded chalk
- Lime, crm-tan, most fnxln-micro xln, bedded chalk, NS
- J Lime, crm-tan, fn-micro xln
- Shale, med gray, calcareous in part
- K Lime, tan, fn-micro xln, , lt red wash in part
- Lime, white-crm, fn-vfxln, bedded chalk
- L Lime, crm-tan, frnxln, bedded chalk
- BKC SPL 3466-1506**
- Shale, reddish brn-brn, firm blocky with clastic lime shale mix in part
- Shale, red wash, soft-firm
- Clastic lime mix
- Shale, vari colored, soft-firm blocky
- Shale, lime, chert mix
- P Shale, vari color, pyrite clusters
- Shale, vari color with red wash
- Shale, soft red mud forming sticky clumps, red wash
- Shale, varicolored
- CONGLOMERATE SAND SPL 3549-1589**
- Sandstone and dolomite mix, sucrosic, chert, few ss clusters, NS
- ARBUCKLE SPL 3561-1601**
- Dolomite, crm, fnxln, sucrosic in part, few chips with lt spotty staining with few oil specks on crush
- Dolomite, crm, fnxln-granular

DST # 2 3354' TO 3445' SEE HEADER FOR TEST SUMMARY





Dolomite, crm, fnxln-granular

Dolomite, crm, fnxln-granular

Dolomite, crm, fnxln-granular

Dolomite, crm, fnxln-granular

Dolomite, crm, fnxln-granular

Dolomite, ivory-crm, fnxln-granular

Dolomite, crm, fnxln-granular, few clusters fused quartz grains

Dolomite, crm-tan, fnxln-granular

Dolomite, crm, fnxln-granular with quartz grain inclusions, clear and angular

Dolomite, crm, fnxln-granular with increasing quartz grains

**RTD 3695-1735**

**LTD 3693-1733**

**JOB LOG**

**SWIFT Services, Inc.**

DATE 8-2073 PAGE NO. 1

CUSTOMER *TDI* WELL NO. *41* LEASE *Marsha* JOB TYPE *Deep Surface* TICKET NO. *24897*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1500							on loc w/FE
								RTD 1135'
								8 5/8" x 23# x 1133' x 17'
								Turbo 4, 3, 13
	1730							start FE
	1930							Break Circ
	2000	5	0			200		Start KCL Flush
	2005	5	20/0			200		Start SMD 100sks 11.2#
	2016	5	55/0			200		start SMD 100sks 12.5#
	2023	5	37/0			200		start SMD 100sks 13.5#
	2029	5	31/0			200		start SMD 25sks 14.5#
	2033		21					End Cement
								Drop Plug
	2038	5	0			150		Start Displacement
	2047	4	45			300		Circulate cement
	2055		71.5			<del>450</del> 700		Land Plug
						700		Shut In
								circ 50sks top 17
								Thank you
								Nick, David E. & Rob

JOB LOG

SWIFT Services, Inc.

DATE 2-26-13 PAGE NO. 1

CUSTOMER T D I WELL NO. #1 LEASE Marshq JOB TYPE Plug to Abandon TICKET NO. 24997

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2215							On location - 235 SKS 60/40 P2 Rig LDDP 40% GE Rig run Plugging Stabs to 3560'
	2400							D.P. @ 3560 - Rig CIR
	0030							1st Plug 3560' - 50 SKS cont
			10			100		10 BBI H2O
			12 1/2			100		12 1/2 BBI cont - 50 SKS
			3 1/2			100		3 1/2 BBI H2O thru tub
	0100		40					Rig pump 70 BBI H2O 2nd Plug 1170' - Full hole
			10					10 BBI H2O
			10					10 BBI cont - 40 SKS
	0230		10					10 BBI H2O thru tub
								3rd Plug 450' - Full hole
			5					5 BBI H2O
			23					23 BBI cont - 90 SKS cont
	0330		1					1 BBI H2O
			3					10 SKS @ 40' 8 5/8 Plug
			7 1/2					30 SKS @ RH
			4					15 SKS @ uH
	0515							Job Complete Washup & Reequip
	0545							<i>Mark</i> Don Johnson John J