

**OPERATOR**

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

Contact Geologist: TOM DENNING  
 Contact Phone Nbr: 785-259-3141  
 Well Name: AUGUSTINE # 1  
 Location: NW NW SE SW  
 Pool: INFIELD  
 State: Kansas

API: 15-051-26,290-00-00  
 Field: CATHERINE SOUTH  
 Country: USA



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

Scale 1:240 Imperial

Well Name: AUGUSTINE # 1  
 Surface Location: NW NW SE SW  
 Bottom Location:  
 API: 15-051-26,290-00-00  
 License Number: 4787  
 Spud Date: 5/18/2012 Time: 3:30 PM  
 Region: ELLIS COUNTY Time: 8:14 PM  
 Drilling Completed: 5/22/2012  
 Surface Coordinates: 1200' FSL & 1400' FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2008.00ft  
 K.B. Elevation: 2018.00ft  
 Logged Interval: 2900.00ft To: 3732.00ft  
 Total Depth: 3735.00ft  
 Formation: ARBUCKLE  
 Drilling Fluid Type: Chemical/Fresh Water Gel

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: Latitude:  
 N/S Co-ord: 1200' FSL  
 E/W Co-ord: 1400' FWL

**LOGGED BY**

Company: SOLUTIONS CONSULTING  
 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: 5/18/2012 Time: 3:30 PM  
 TD Date: 5/22/2012 Time: 8:14 PM  
 Rig Release: 5/24/2012 Time: 2:00 AM

**ELEVATIONS**

K.B. Elevation: 2018.00ft Ground Elevation: 2008.00ft  
 K.B. to Ground: 10.00ft

**NOTES**

RECOMMENDATION TO RUN 5 1/2' PRODUCTION CASING TO TEST ARBUCKLE BASED ON FAVORABLE STRUCTURE AND POSITIVE RESULTS OF DST # 1.


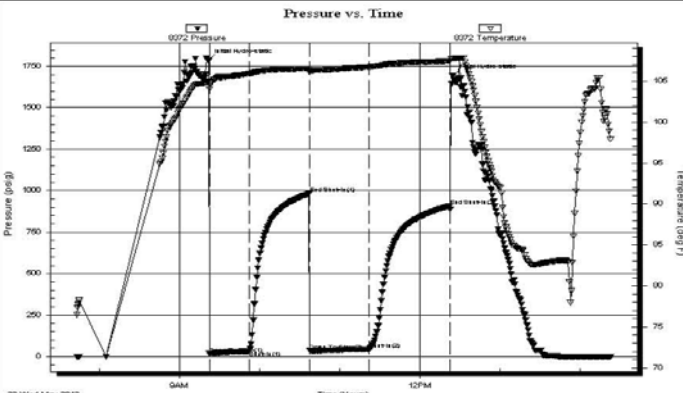
**FORMATION TOPS AND DAILY ACTIVITY REPORT**

**AUGUSTINE #1**

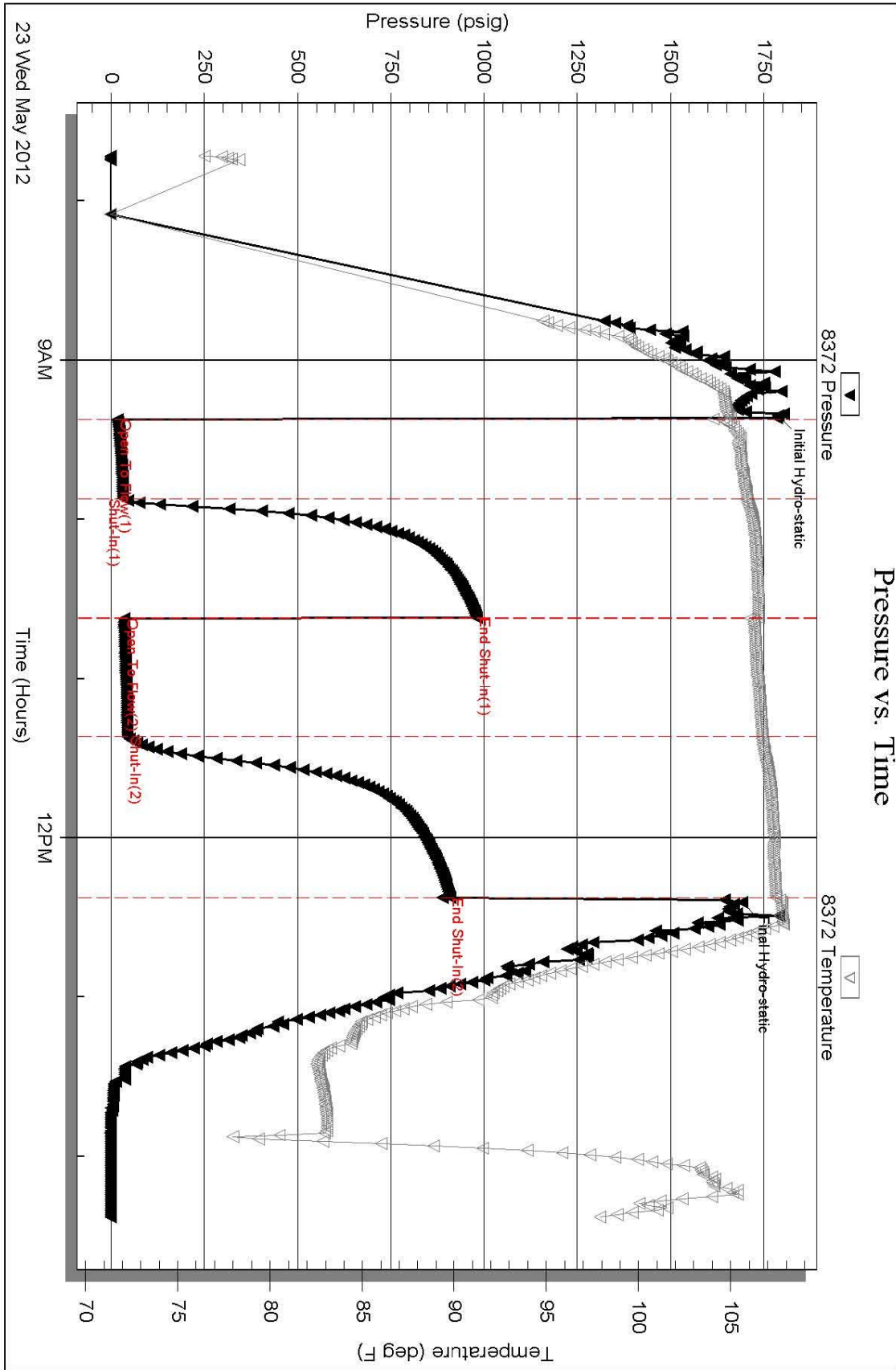
<u>FORMATION</u>	<u>SAMPLE TOP</u>	<u>LOG TOP</u>
Anhydrite	1242+ 776	1240+ 778
B-Anhydrite	1277+ 741	1275+ 743
Topeka	3033-1015	3028-1010
Heebner Shale	3273-1255	3268-1250
Toronto	3294-1276	3289-1271
LKC	3319-1301	3314-1296
BKC	3544-1526	3540-1522
Arbuckle	3563-1545	3558-1540
RTD	3735-1717	
LTD		3732-1714

- 5-18-12 RU, Spud, set surface casing to 215' w/150 sxs. Common, 2%gel, 3%CC, Slope survey ¼ degree, WOC 8 hrs. Plug down 7:15PM.
- 5-19-12 446' drilling
- 5-20-12 1955' drilling
- 5-21-12 2864' drilling
- 5-22-12 3405' drilling
- 5-23-12 3735' RTD, Logs, DST#1 Straddle test, run production casing
- 5-24-12 3735' finish cementing DV tool, RD

**DST #1 STRADDLE TEST - ARBUCKLE**

 <p><b>TRIOBITE TESTING, INC.</b></p>	<b>DRILL STEM TEST REPORT</b>																																										
TDI Inc. 1310 Bison Rd. Hays KS 67601+9696  ATTN: Herb Deines	<b>15-13s-17w Ellis,KS</b>  <b>Augustine #1</b> Job Ticket: 47332 <b>DST#: 1</b> Test Start: 2012.05.23 @ 07:43:05																																										
<b>GENERAL INFORMATION:</b>																																											
Formation: <b>Arbuckle</b> Deviated: No Whipstock: ft (KB) Time Tool Opened: 09:22:10 Time Test Ended: 14:22:39		Test Type: Conventional Straddle (Initial) Tester: Andy Carreira Unit No: 39																																									
Interval: <b>3536.00 ft (KB) To 3596.00 ft (KB) (TVD)</b> Total Depth: 3732.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Fair		Reference Elevations: 2018.00 ft (KB) 2011.00 ft (CF) KB to GR/CF: 7.00 ft																																									
<b>Serial #: 8372 Outside</b>																																											
Press@RunDepth: 44.08 psig @ 3539.00 ft (KB) Start Date: 2012.05.23      End Date: 2012.05.23 Start Time: 07:43:05      End Time: 14:22:40		Capacity: 8000.00 psig Last Calib.: 2012.05.23 Time On Btm: 2012.05.23 @ 09:20:50 Time Off Btm: 2012.05.23 @ 12:24:20																																									
<b>TEST COMMENT:</b> IF:(30min) Fair 3" blow ISl:(45min) No Return FF:(45min) 1" blow FSl:(60min) No Return																																											
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">PRESSURE SUMMARY</th> </tr> <tr> <th>Time (Min.)</th> <th>Pressure (psig)</th> <th>Temp (deg F)</th> <th>Annotation</th> </tr> </thead> <tbody> <tr><td>0</td><td>1788.17</td><td>104.93</td><td>Initial Hydro-static</td></tr> <tr><td>2</td><td>17.24</td><td>104.05</td><td>Open To Flow (1)</td></tr> <tr><td>32</td><td>31.25</td><td>105.88</td><td>Shut-In(1)</td></tr> <tr><td>77</td><td>981.82</td><td>106.53</td><td>End Shut-In(1)</td></tr> <tr><td>77</td><td>35.89</td><td>106.06</td><td>Open To Flow (2)</td></tr> <tr><td>121</td><td>44.08</td><td>106.71</td><td>Shut-In(2)</td></tr> <tr><td>182</td><td>908.81</td><td>107.44</td><td>End Shut-In(2)</td></tr> <tr><td>184</td><td>1691.78</td><td>107.74</td><td>Final Hydro-static</td></tr> </tbody> </table>			PRESSURE SUMMARY				Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation	0	1788.17	104.93	Initial Hydro-static	2	17.24	104.05	Open To Flow (1)	32	31.25	105.88	Shut-In(1)	77	981.82	106.53	End Shut-In(1)	77	35.89	106.06	Open To Flow (2)	121	44.08	106.71	Shut-In(2)	182	908.81	107.44	End Shut-In(2)	184	1691.78	107.74	Final Hydro-static
PRESSURE SUMMARY																																											
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation																																								
0	1788.17	104.93	Initial Hydro-static																																								
2	17.24	104.05	Open To Flow (1)																																								
32	31.25	105.88	Shut-In(1)																																								
77	981.82	106.53	End Shut-In(1)																																								
77	35.89	106.06	Open To Flow (2)																																								
121	44.08	106.71	Shut-In(2)																																								
182	908.81	107.44	End Shut-In(2)																																								
184	1691.78	107.74	Final Hydro-static																																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">Recovery</th> </tr> <tr> <th>Length (ft)</th> <th>Description</th> <th>Volume (bbl)</th> </tr> </thead> <tbody> <tr> <td>60.00</td> <td>OCM o=5% m=95%</td> <td>0.84</td> </tr> <tr> <td>10.00</td> <td>CO o=100%</td> <td>0.14</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Recovery			Length (ft)	Description	Volume (bbl)	60.00	OCM o=5% m=95%	0.84	10.00	CO o=100%	0.14										<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">Gas Rates</th> </tr> <tr> <th> </th> <th>Choke (inches)</th> <th>Pressure (psig)</th> <th>Gas Rate (Mcf/d)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			Gas Rates					Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)											
Recovery																																											
Length (ft)	Description	Volume (bbl)																																									
60.00	OCM o=5% m=95%	0.84																																									
10.00	CO o=100%	0.14																																									
Gas Rates																																											
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)																																								

DST # 1 EXPANDED CHARTS



Serial #: 8372 Outside TDI Inc. Augustne #1 DST Test Number: 1

Trilobite Testing, Inc Ref. No: 47332 Printed: 2012.05.23 @ 16:20:00

**ROCK TYPES**

Dolprim	Lscongl	Carbon Sh	Shgy
Lmst fw7>	shale, grn	shale, red	

**ACCESSORIES**

<b>MINERAL</b>	<b>FOSSIL</b>
Varicolored chert	∅ Oolite
Chert White	

**OTHER SYMBOLS**

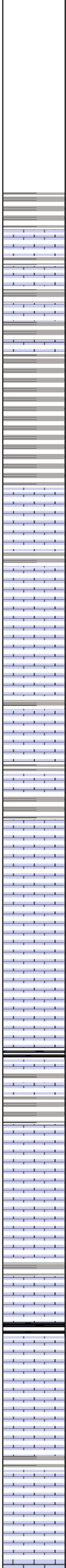
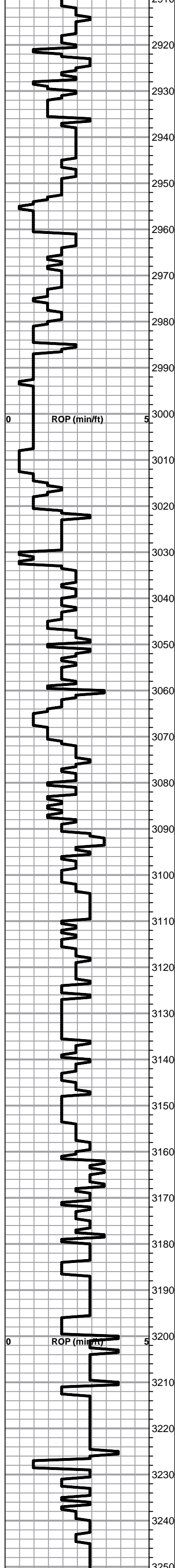
<b>DST</b>
DST Int
DST alt

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

Curve Track #1 ROP (min/ft)	Depth Intervals DST	Lithology	Oil Show	Geological Descriptions	Curve Track #3
1:240 Imperial ROP (min/ft)	Cored Interval DST Interval				1:240 Imperial
	2900				
	2910				
				<b>ANHYDRITE TOP Spl 1242+776 ELog 1240+778</b>	
				<b>ANHYDRITE BASE Spl 1277+ ELog 1275+743</b>	

1' drill time from 2900' to RTD  
 10' wet and dry samples from 3000' to RTD

Slope 215' 1/4 degree



Lime, med brn-gray, fnxln, fossiliferous in brn lime  
 Shale, light gray, soft, sticky mud balls  
 Lime, brn-gray, fnxln, shaley in part

Shale, lt-med gray, soft forming soft mud balls in part

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

**TOPEKA Spl 3033-1015 ELog 3028-1010**

Lime, lt-med brn-grayish brn, fnxln, fossiliferous, trashy in part

Lime, lt-med brn-lt gray, fn-vfxln, slightly fossiliferous

Lime, lt-med brn-gray, fnxln, slightly fossiliferous, slight chalk

Lime, brn-gray, fnxln with light brn granular lime in part, NS

Lime, offwht-med brn, fnxln

Shale, med gray, calcareous

Lime, lt brn-grayish brn, fn-vfxln

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

Lime, lt-dark brn, fn-vfxln, slightly fossiliferous

Lime, lt-med brn, vfxln, slightly fossiliferous, slightly chalky

Lime, lt-med brn, granular with chalk, slightly fossiliferous

Shale, blk carbonaceous, pyritic

Lime, brnsh gray, fnxln

Lime, crm-lt brn, fnxln-lithographic

Lime, crm-lt brn, cryptocrystalline

Lime, offwht-crm, cryptocrystalline

Shale, med gray, calcareous with fossil fragments

Lime, brn-lt gray, fnxln

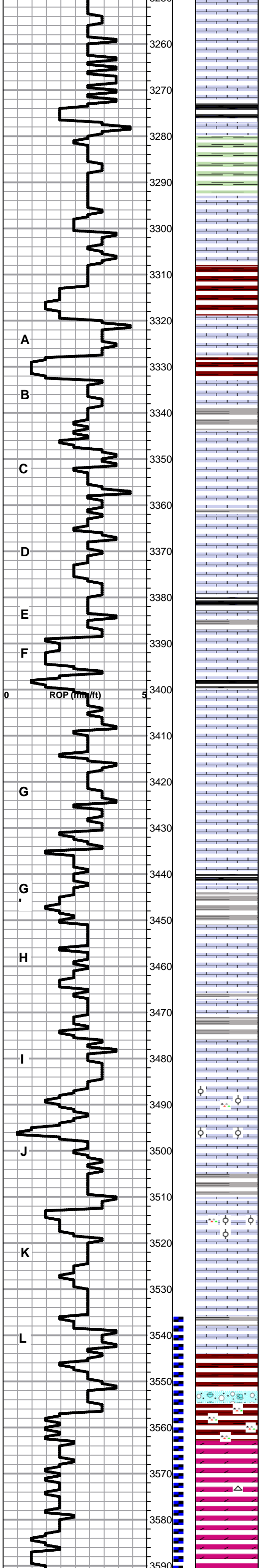
Shale, black carbonaceous with black chert, sharp, fresh

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

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

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

Lime, crm-lt brn, fnxln



Lime, lt-med brn, fnxn with increasing chalk content

**HEEBNER SHALE Spl 3273-1255 ELog 3268-1250**

Shale, black carbonaceous  
Lime, brn, fnxn  
Shale, lime green-dove gray, soft

**TORONTO Spl 3294-1276 ELog 3289-1271**

Lime, lt-med brn, fnxn, chalk in part, few chips with pinpoint vuggy porosity, VMSFO on break, No Odor

Lime, crm-wht, fn-vfxln, NS

Shale, red, soft forming mud balls

**LKC Spl 3319-1301 ELog 3314-1296**

Lime, lt-med brn, fnxn

Shale, red wash

Lime, crm-lt-med brn, fnxn, chalk in part, NS

Lime, lt-med brn-lt gray in part, fn-vfxln

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

Lime, crm-lt brn, vfxln, very clean in appearance, slight chalk in part

Shale, gray-black carbonaceous  
Lime, lt brn, fnxn  
Shale, lime green, soft

Lime, crm-tan, mostly fnxn, few chips with vuggy porosity with minor SFO on break with light odor

Lime, crm-tan, fn-vfxln, very clean

Lime, crm-tan, fn-vfxln, slight chalk in part

Lime, crm-tan, fn-vfxln

Lime, lt brn, shaley, fnxn  
Shale, blk carbonaceous with black chert

Shale, gray, calcareous

Lime, crm-gray, fnxn, slightly fossiliferous, light scattered stain in fine pinpoint porosity NFO, No Odor

Lime, crm-lt brn, fn-vfxln

Lime, lt-med brn, fn-vfxln

Lime, crm-lt brn, few oolmolic with scattered stain, NFO, No Odor

Lime, lt-med brn, fnxn

Lime, crm-lt brn, mostly fnxn, oolmoldic in part with light odor on crush, spreading stain as sample heated up.

Lime, crm-med brn, fn-vfxln, bedded chalk in part

Lime, lt-med brn, fn-vfxln, chalk in part

Lime, lt brn, fn-vfxln

**BKC Spl 3544-1526 ELog 3540-1522**

Shale, reddish brn, blocky  
Lime, clastic mix with red shale staining  
Shale, lt brn red, soft, vari color cherts

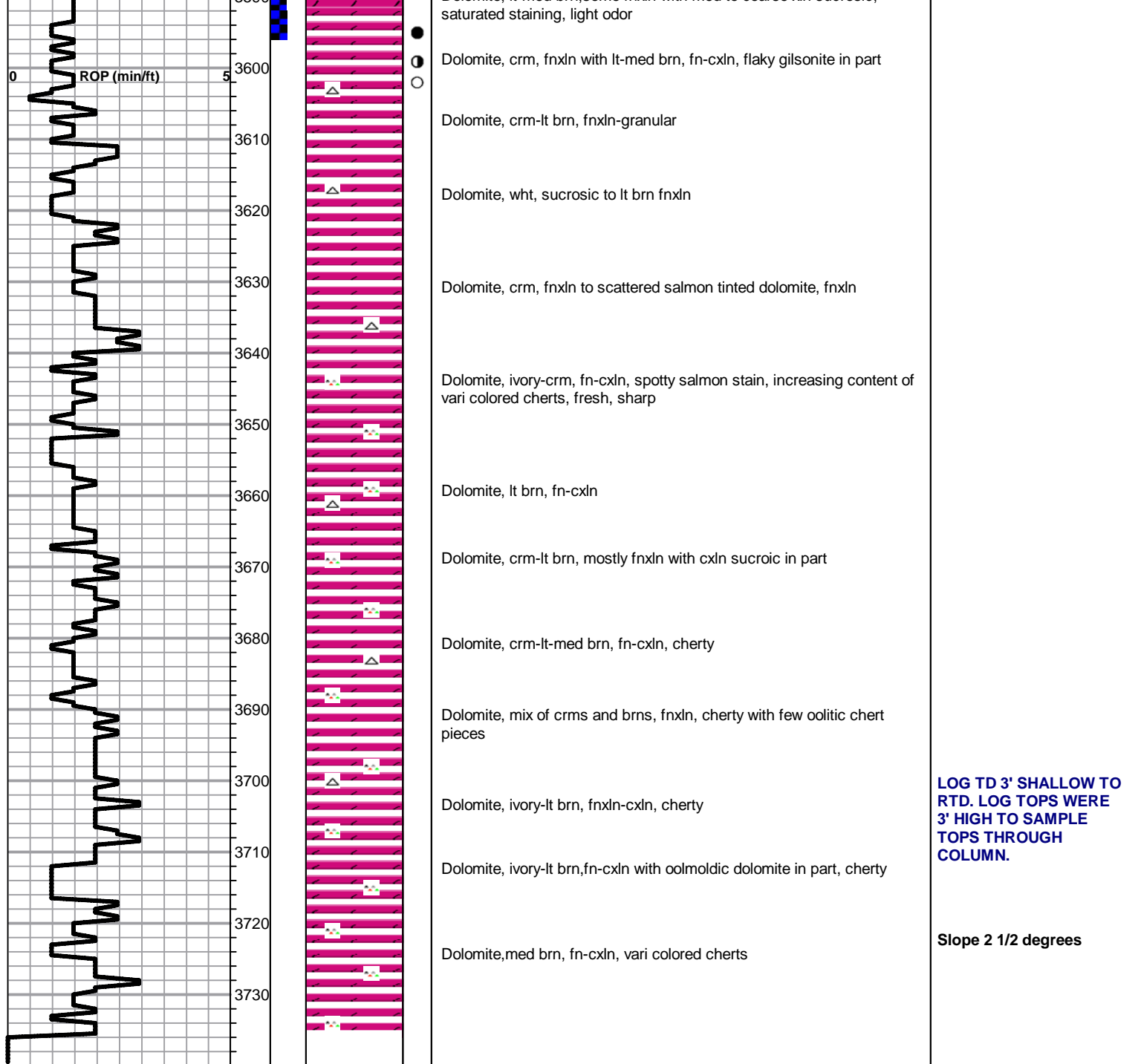
**ARBUCKLE Spl 3563-1545 ELog 3558-1540**

Dolomite, lt-med brn, fn-med granular, sucrosic, saturated stain with light odor and MSFO as sample warmed up

Dolomite, lt-med brn, fn-med granular, saturated staining, light odor

Dolomite, lt-med brn, some fnxn with med to coarse xln sucrosic.

**DST # 1 STRADDLE TEST**  
3536-3596 LOG INTERVAL  
SEE HEADER FOR TEST DETAILS AND CHART



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

Home Office P.O. Box 32 Russell, KS 67665

No. 662

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
5-18-12	15	13	17	Ellis	KS		7:15 p.m.

Lease	Well No.	Location
Augustine	1	Catherine 1/2 E 13 1/2 R N. into

Contractor	Owner
Southwind #1	To Quality Oilwell Cementing, Inc.

Type Job	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Hole Size	T.D.	
12 1/4	215	

Csg.	Depth	Charge To
8 5/8	215	TDI

Tbg. Size	Depth	Street

Tool	Depth	City	State

Cement Left in Csg.	Shoe Joint	The above was done to satisfaction and supervision of owner agent or contractor.
15'		

Meas Line	Displace	Cement Amount Ordered
	12 1/2 BCL	150 com 3 1/2 L 2 1/2 L 1

**EQUIPMENT**

Pumptrk	No.	Cementer	Helper	Common
9		Craig		150

Bulktrk	No.	Driver	Driver	Poz. Mix
		Matt		

Bulktrk	No.	Driver	Driver	Gel.
14		Lennie		3

**JOB SERVICES & REMARKS**

Remarks:	Hulls
----------	-------

Rat Hole	Salt
----------	------

Mouse Hole	Flowseal
------------	----------

Centralizers	Kol-Seal
--------------	----------

Baskets	Mud CLR 48
---------	------------

D/V or Port Collar	CFL-117 or CD110 CAF 38
--------------------	-------------------------

8 5/8 on bottom Fst + Circulation.	Sand
------------------------------------	------

Mix 150 5/8 + Displace	Handling 15 B
------------------------	---------------

	Mileage
--	---------

**FLOAT EQUIPMENT**

	Guide Shoe
--	------------

	Centralizer
	8 5/8 surge

	Baskets
--	---------

	AFU Inserts
--	-------------

	Float Shoe
--	------------

	Latch Down
--	------------

--	--

--	--

	Pumptrk Charge
	Surface

	Mileage
	13

	Tax
--	-----

	Discount
--	----------

	Total Charge
--	--------------

X Signature *Dick*

**JOB LOG**

**SWIFT Services, Inc.**

DATE 05-23-12 PAGE NO. 1

CUSTOMER T.O. Z. WELL NO. 1 LEASE AVGUSTINE JOB TYPE 2-STAGE TICKET NO. 21373

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL)(GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2030							ON LOCATION CMT: Bottom 150 S&S STD EA-2 Top 200 S&S SMD
								R/D-3735 SET PIPE-3728 S-142.53 INSERT 3785 5 1/2 14 1/4 D.V. ON TOP #60, 1259 FT CENT: 1,3,5,6,8,10,12,59 BAYS: 4,14,60,82 Run 88 JOINTS, JOINS OUT 2,40,91
	2215							START C&U AFFOATED
	2345							TAG BOTTOM - DROP BALL
	2350							BREATH CIRC & ROTATE PIPE
	0050	5.0	12		-		200	500 GALS MUD FLUSH
		5	20		-		5	20 bbls MCL FLUSH
			36.5		-			150 S&S EA-2
								DROP L.D. PLUG & WASH OUT PL.
	0105	6.5	0		-		20	START DISP. w/ H2O
			62		-		400	" " w/ MUD 15 bbls
			77		-		600	" " w/ MCL 15 bbls
			85		-		700	
	0120		90.1		-		1500	LAND PLUG
								RELEASE RV, DRY
								DROP D.V. OPENING PART
	0125		7.5		-			PLUG RH 30, MH 20
	0133	2.0	5.0		-		1100	OPEN D.V. w/ 5 bbls MCL
	0135	5.7	0		-		200	START SMD CMT
	0150	5	85		-		5	END
								DROP D.V. CLOSING PLUG
	0153	5.0	0		-		200	START DISP.
			20		-		400	CIRC CMT TO PIT!!! 20 S&S
			25		-		500	
	0200		30.1		-		1300	LAND & CLOSE D.V.
	0245							JOB COMPLETE THANK YOU! DAVE, JOSH, ROB