



1176812

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
 Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Summary of Changes

Lease Name and Number: Ronald 1

API/Permit #: 15-051-26503-00-00

Doc ID: 1176812

Correction Number: 1

Approved By: NAOMI JAMES

Field Name	Previous Value	New Value
Approved Date	07/12/2013	01/09/2014
Confidential		Yes
Fracturing Question 1		No
Perf_Record_1	3500'-3504'	3550' - 3554'
Save Link	../../kcc/detail/operatorEditDetail.cfm?docID=1143579	../../kcc/detail/operatorEditDetail.cfm?docID=1176812



CONFIDENTIAL

WELL COMPLETION FORM

Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Conv. to GSW
- Plug Back: _____ Plug Back Total Depth _____
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Letter of Confidentiality Received
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	TDI, Inc.
Well Name	Ronald 1
Doc ID	1143579

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
2	3500'-3504'		



DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Ronald #1

23-15s-18w Ellis,KS

Start Date: 2013.05.20 @ 22:30:25

End Date: 2013.05.21 @ 04:14:55

Job Ticket #: 53878 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.05.28 @ 14:35:35

TDI Inc. 23-15s-18w Ellis,KS Ronald #1 DST # 1 KC "A-C" 2013.05.20



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

23-15s-18w Ellis,KS
Ronald #1
Job Ticket: 53878 **DST#: 1**
Test Start: 2013.05.20 @ 22:30:25

GENERAL INFORMATION:

Formation: **KC "A-C"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:18:55
Time Test Ended: 04:14:55
Interval: **3264.00 ft (KB) To 3315.00 ft (KB) (TVD)**
Total Depth: 3315.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:
Test Type: Conventional Bottom Hole (Initial)
Tester: Brett Dickinson
Unit No: 59
Reference Elevations: 2004.00 ft (KB)
1996.00 ft (CF)
KB to GR/CF: 8.00 ft

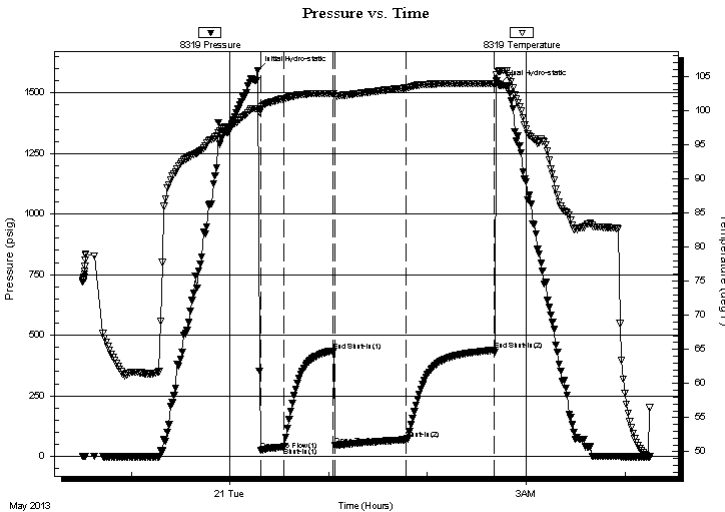
Serial #: 8319

Inside

Press @ Run Depth: 68.62 psig @ 3265.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.05.20 End Date: 2013.05.21 Last Calib.: 2013.05.21
Start Time: 22:30:30 End Time: 04:14:54 Time On Btm: 2013.05.21 @ 00:16:55
Time Off Btm: 2013.05.21 @ 02:43:25

TEST COMMENT: IF-BOB in 2 min
ISI-No blow
FF-BOB in 15 sec
FSI-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1592.50	100.30	Initial Hydro-static
2	25.30	100.50	Open To Flow (1)
16	38.93	101.68	Shut-In(1)
46	435.44	102.44	End Shut-In(1)
47	46.23	102.02	Open To Flow (2)
90	68.62	103.27	Shut-In(2)
144	438.64	103.92	End Shut-In(2)
147	1532.50	105.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
125.00	GSWMCO 15%G 45%O 10%W 30%M	1.75

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

23-15s-18w Ellis,KS

Ronald #1

Job Ticket: 53878

DST#: 1

Test Start: 2013.05.20 @ 22:30:25

GENERAL INFORMATION:

Formation: **KC "A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:18:55

Time Test Ended: 04:14:55

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

Interval: **3264.00 ft (KB) To 3315.00 ft (KB) (TVD)**

Total Depth: 3315.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2004.00 ft (KB)

1996.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8166 Outside

Press @ Run Depth: psig @ 3265.00 ft (KB)

Start Date: 2013.05.20

End Date:

2013.05.21

Start Time: 22:31:00

End Time:

04:14:54

Capacity: 8000.00 psig

Last Calib.:

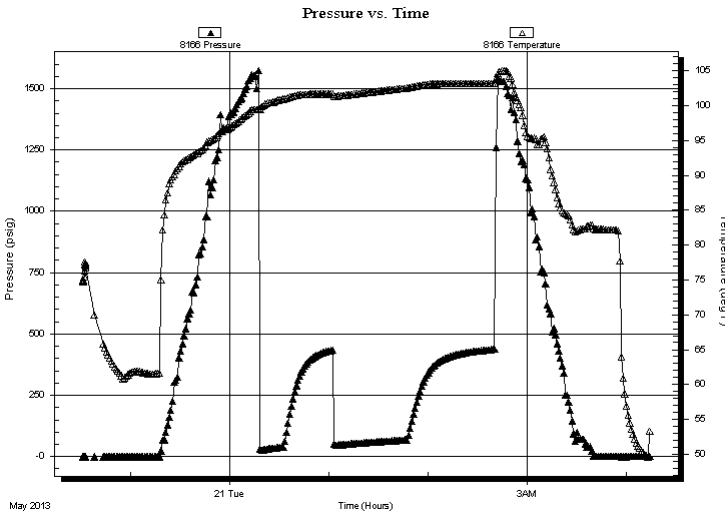
2013.05.21

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-BOB in 2 min
ISI-No blow
FF-BOB in 15 sec
FSI-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
125.00	GSWMCO 15%G 45%O 10%W 30%M	1.75

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

23-15s-18w Ellis,KS
Ronald #1
Job Ticket: 53878 **DST#: 1**
Test Start: 2013.05.20 @ 22:30:25

Tool Information

Drill Pipe:	Length: 3254.00 ft	Diameter: 3.80 inches	Volume: 45.65 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 45.65 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3264.00 ft			Final	43000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	51.00 ft				
Tool Length:	72.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3244.00	
Shut In Tool	5.00			3249.00	
Hydraulic tool	5.00			3254.00	
Packer	5.00			3259.00	21.00 Bottom Of Top Packer
Packer	5.00			3264.00	
Stubb	1.00			3265.00	
Recorder	0.00	8319	Inside	3265.00	
Recorder	0.00	8166	Outside	3265.00	
Perforations	4.00			3269.00	
Change Over Sub	1.00			3270.00	
Drill Pipe	31.00			3301.00	
Change Over Sub	1.00			3302.00	
Perforations	10.00			3312.00	
Bullnose	3.00			3315.00	51.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **23-15s-18w Ellis,KS**
 1310 Bison Rd **Ronald #1**
 Hays KS 67601 Job Ticket: 53878 **DST#: 1**
 ATTN: Herb Deines Test Start: 2013.05.20 @ 22:30:25

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2800.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	GSWMCO 15%G 45%O 10%W 30%M	1.753

Total Length: 125.00 ft Total Volume: 1.753 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 8319

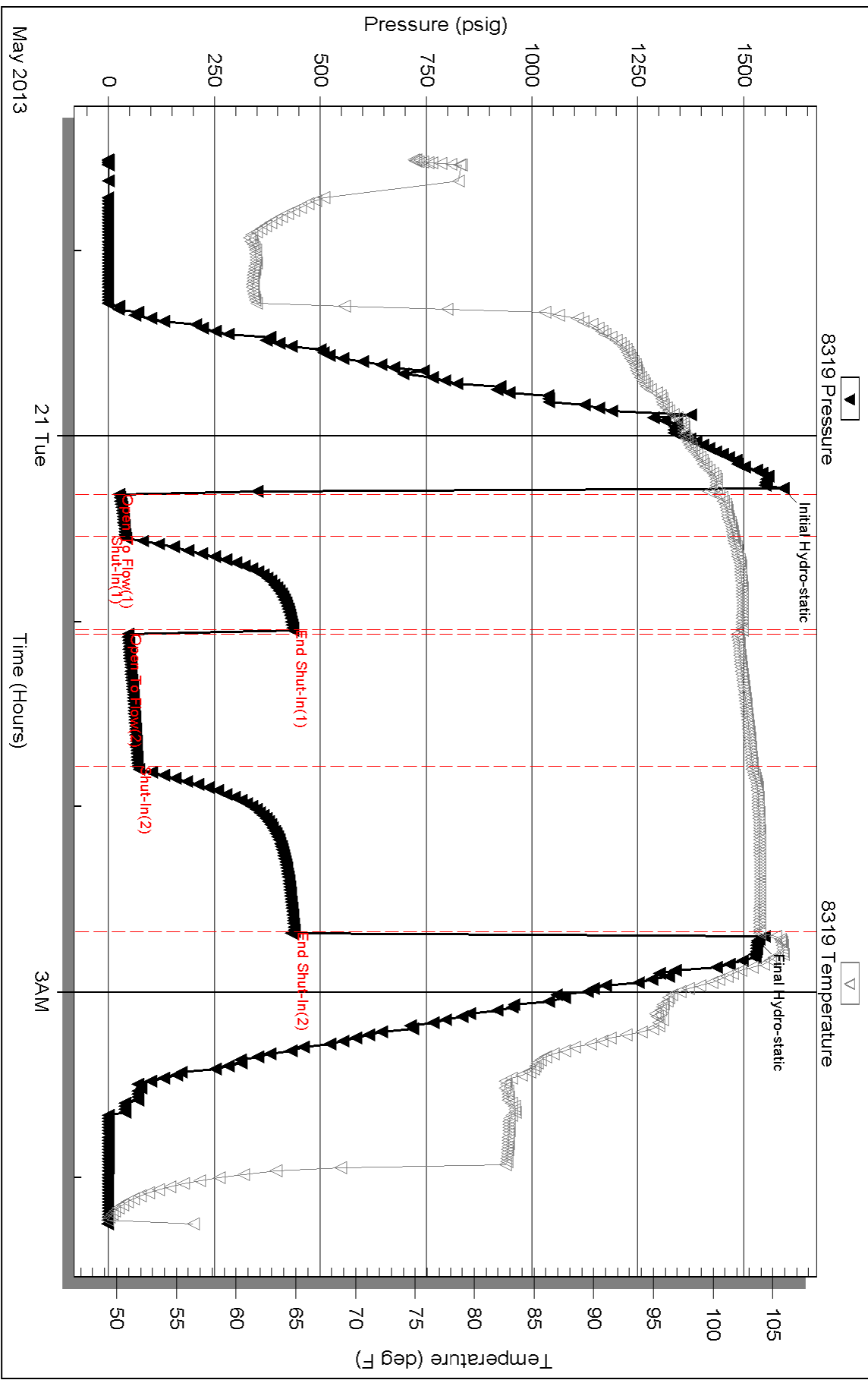
Inside

TDI Inc.

Ronald #1

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 53878

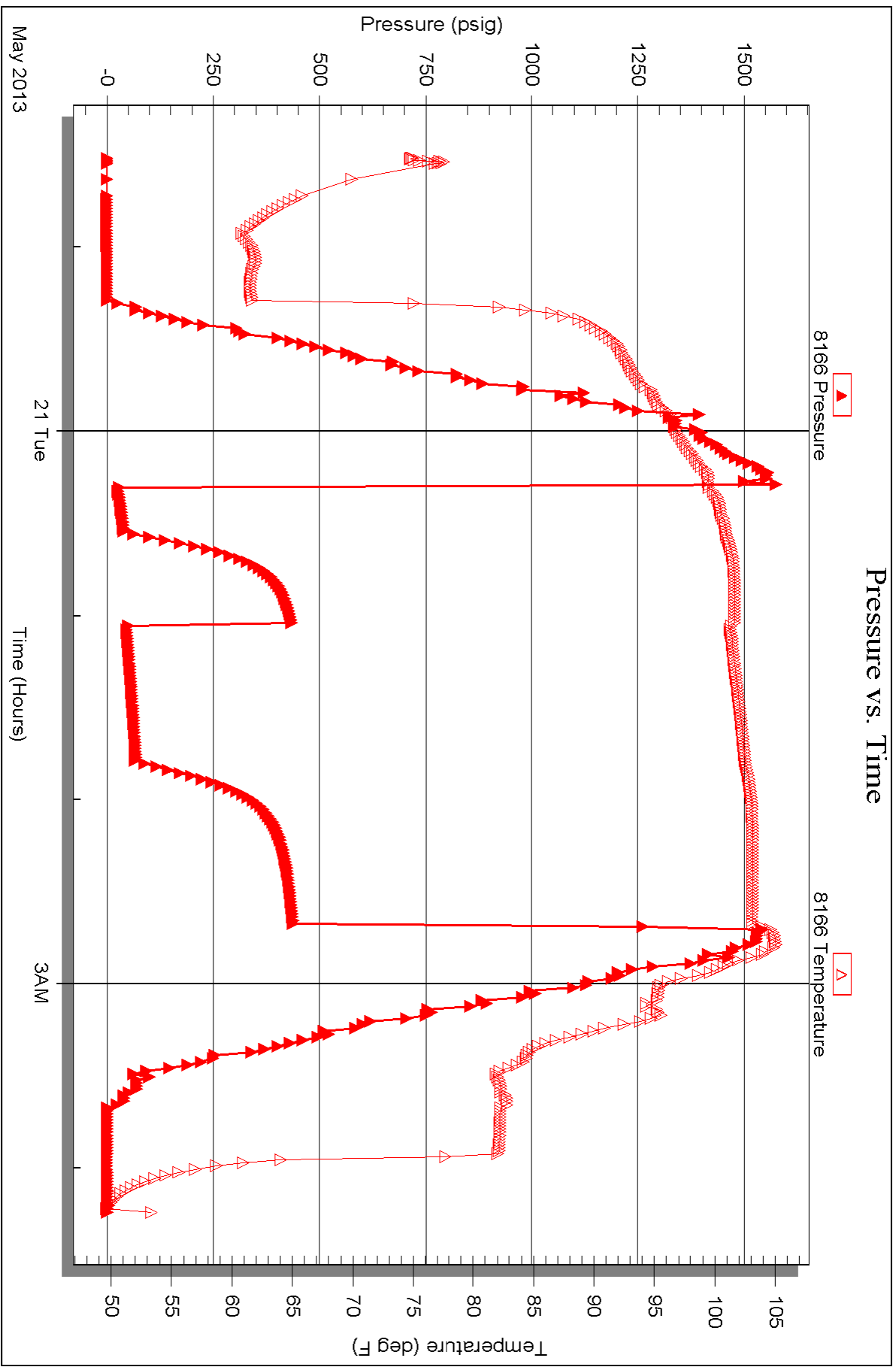
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Serial #: 8166

Outside TDI Inc.

Ronald #1

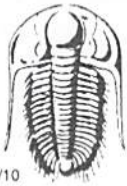
DST Test Number: 1



Triobite Testing, Inc

Ref. No: 53878

Printed: 2013.05.28 @ 14:35:38



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53878

Well Name & No. Ronald #1 Test No. 1 Date 5/20/13
 Company TDF, Inc Elevation 2004 KB 1996 GL
 Address 1310 Bison Rd Hays KS 67601
 Co. Rep / Geo. Herb Peines Rig Southwind #1
 Location: Sec. 23 Twp. 15S Rge. 18W Co. Ellis State KS

Interval Tested 3264-3315 Zone Tested A-C
 Anchor Length 51 Drill Pipe Run _____ Mud Wt. 8.6
 Top Packer Depth 3259 Drill Collars Run — Vis 60
 Bottom Packer Depth 3264 Wt. Pipe Run — WL 6.8
 Total Depth 3315 Chlorides 2,800 ppm System LCM 2#

Blow Description IF - BOB in 2 min
ISI - No blow
FF - BOB in 15 sec
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>125</u>	<u>GSWMC0</u>	<u>15</u>	<u>45</u>	<u>10</u>	<u>30</u>
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 125 BHT 104 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1,593 Test 1150 T-On Location 22:05
 (B) First Initial Flow 25 Jars T-Started 22:30
 (C) First Final Flow 39 Safety Joint T-Open 00:17
 (D) Initial Shut-In 435 Circ Sub T-Pulled 2:32
 (E) Second Initial Flow 46 Hourly Standby T-Out 4:15
 (F) Second Final Flow 69 Mileage 26RT 80.60 Comments _____
 (G) Final Shut-In 439 Sampler loaded tools 5/21 23:15
 (H) Final Hydrostatic 1,535 Straddle Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 15 Extra Packer _____
 Initial Shut-In 30 Extra Recorder _____
 Final Flow 43 Day Standby _____
 Final Shut-In 45 Accessibility _____
 Sub Total 1230.60 MP/DST Disc't _____

Approved By _____ Our Representative Bruce D...

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

OPERATOR

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

Contact Geologist: TOM DENNING
 Contact Phone Nbr: 785-628-2593
 Well Name: RONALD # 1
 Location: S2 N2 SW NW Sec 23-15s-18w
 Pool:
 State: KANSAS

API: 15-051-26,503-00-00
 Field: LEIKER SOUTHEAST
 Country: USA



1310 BISON ROAD
 HAYS, KANSAS 67601
 (785) 628-2593

Scale 1:240 Imperial

Well Name: RONALD # 1
 Surface Location: S2 N2 SW NW Sec 23-15s-18w
 Bottom Location:
 API: 15-051-26,503-00-00
 License Number: 4787
 Spud Date: 5/16/2013 Time: 3:15 AM
 Region: ELLIS COUNTY
 Drilling Completed: 5/22/2013 Time: 2:54 AM
 Surface Coordinates: 1790' FNL & 660' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 1994.00ft
 K.B. Elevation: 2004.00ft
 Logged Interval: 2900.00ft To: 3750.00ft
 Total Depth: 3750.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: Latitude:
 N/S Co-ord: 1790' FNL
 E/W Co-ord: 660' 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: 5/16/2013
 TD Date: 5/22/2013
 Rig Release: 5/22/2013

Time: 3:15 AM
 Time: 2:54 AM
 Time: 10:00 PM

ELEVATIONS

K.B. Elevation: 2004.00ft Ground Elevation: 1994.00ft
 K.B. to Ground: 10.00ft

NOTES

RECOMMENDATION TO RUN PRODUCTION CASING BASED ON FAVORABLE STRUCTURE OF ARBUCKLE

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

DRILL STEM TESTING BY TRILOBITE TESTING INC: ONE (1) CONVENTIONAL TEST

FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY

RONALD # 1
1790' FNL & 660' FWL, NW/4
Sec. 23-15s-18w
1994' GL 2004' KB

WARREN # 1
SW SE NE
Sec 22-15s-18w
Reference Well


<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1158+ 846	1159+ 845	+ 847
B-Anhydrite	1194+ 810	1195+ 809	+ 812
Topeka	2966- 962	2969- 965	- 968
Heebner Shale	3233-1229	3230-1226	-1234
Toronto	3254-1250	3250-1246	-1255
LKC	3280-1276	3280-1276	-1285
BKC	3500-1496	3508-1504	-1507
Marmaton	3535-1531	3542-1538	-1542
Arbuckle	3549-1545	3549-1545	-1573
RTD	3750-1746		
LTD		3748-1744	

SUMMARY OF DAILY ACTIVITY

5-16-13 spud 3:15 AM, drilling for 8 5/8" surface casing
 5-17-13 1169', set 8 5/8" surface pipe to 1168' w/ 375 sxs SMD, plug down
 9:30 AM, slope 2 degrees, WOC 12hrs
 5-18-13 1470', drilling
 5-19-13 2250', drilling, diplog 2871', 2890'

- 5-19-13 2550', drilling, displace 2871 -2900
- 5-20-13 3059', drilling, DST # 1 3264'-3315' "A" to "C" LKC, slope @3315' 1 degree
- 5-21-13 3330', finish DST # 1, drilling
- 5-22-13 3750', RTD @2:54AM, mini short trip, CCH 1 ½ hrs, TOWB, logs, LDDP, run and cement production casing

DST # 1 TEST SUMMARY "A" TO "C"

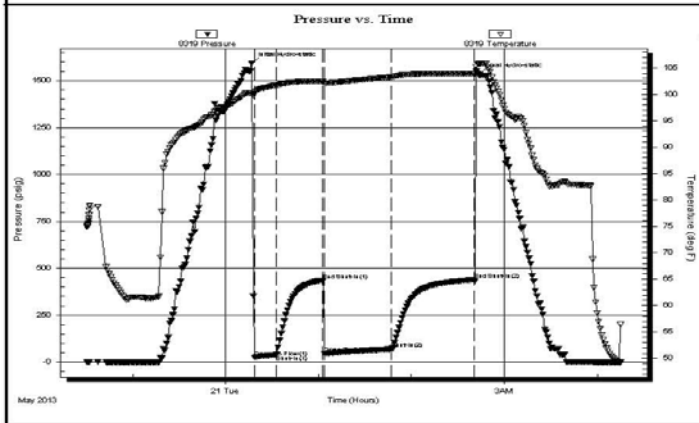
	DRILL STEM TEST REPORT		
	TDI Inc. 1310 Bison Rd Hays KS 67601 ATTN: Herb Deines	23-15-18, Ellis, KS Ronald #1 Job Ticket: 53878 DST#: 1 Test Start: 2013.05.20 @ 22:30:25	

GENERAL INFORMATION:

Formation: KC "A-C"	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Brett Dickinson
Time Tool Opened: 00:18:55	Unit No: 59
Time Test Ended: 04:14:55	Reference Elevations: 2004.00 ft (KB)
Interval: 3264.00 ft (KB) To 3315.00 ft (KB) (TVD)	1996.00 ft (CF)
Total Depth: 3315.00 ft (KB) (TVD)	KB to GR/CF: 8.00 ft
Hole Diameter: 7.88 inches	Hole Condition:

Serial #: 8319	Inside				
Press@RunDepth: 68.62 psig @ 3265.00 ft (KB)	Capacity: 8000.00 psig				
Start Date: 2013.05.20	End Date: 2013.05.21	Last Calib.: 2013.05.21			
Start Time: 22:30:30	End Time: 04:14:54	Time On Btm: 2013.05.21 @ 00:16:55			
		Time Off Btm: 2013.05.21 @ 02:43:25			

TEST COMMENT: IF-BOB in 2min
 ISI-No blow
 FF-BOB in 15sec
 FSI-No blow



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1592.50	100.30	Initial Hydro-static
2	25.30	100.50	Open To Flow (1)
16	38.93	101.68	Shut-In(1)
46	435.44	102.44	End Shut-In(1)
47	46.23	102.02	Open To Flow (2)
90	68.62	103.27	Shut-In(2)
144	438.64	103.92	End Shut-In(2)
147	1532.50	105.71	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
125.00	GSMCO 15%G 45%O 10%W 30%M	1.75

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

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DST # 1 EXPANDED CHART

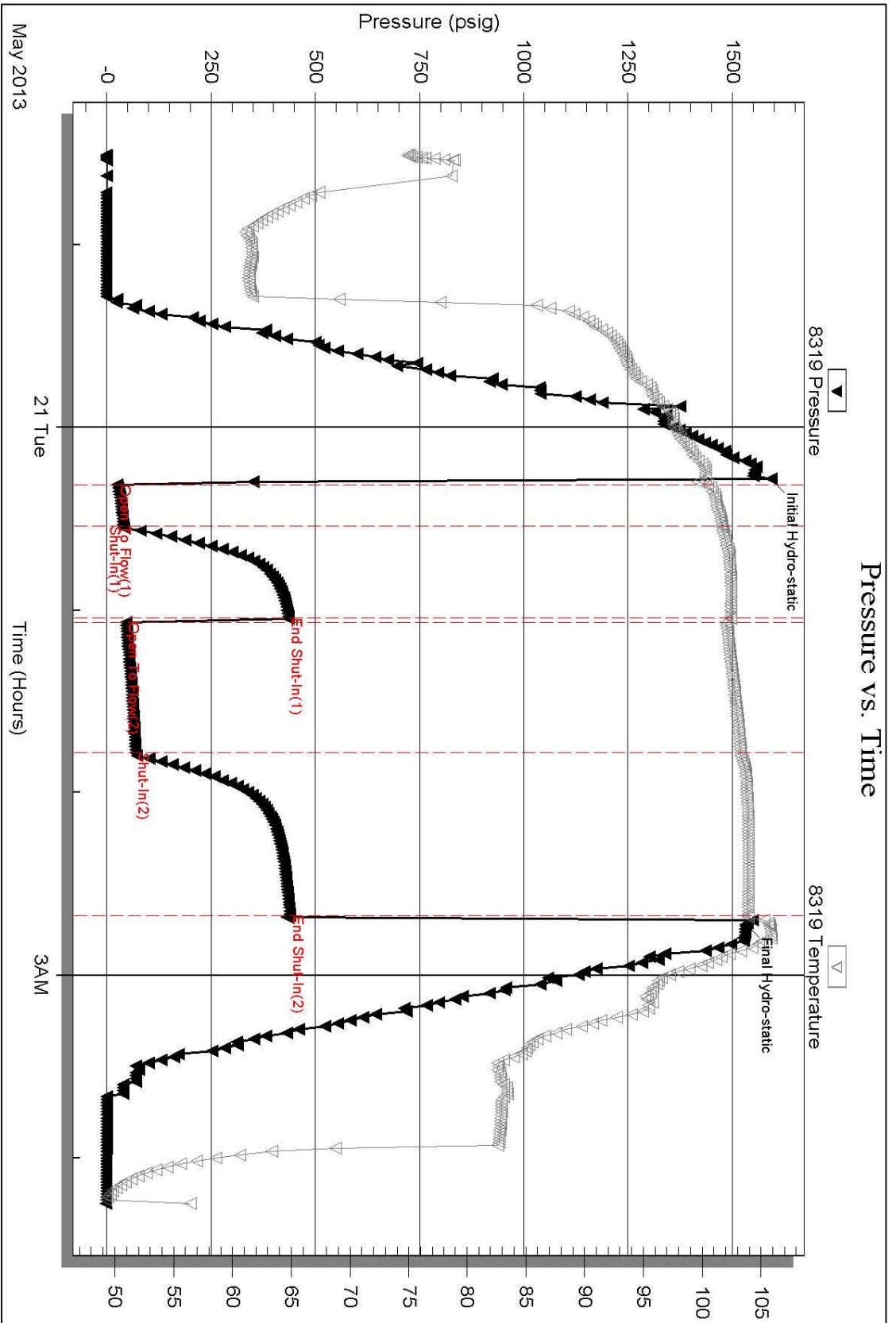
Serial #: 8319

Inside










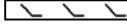
TDI Inc.

Ronald #1

DST Test Number: 1



ROCK TYPES

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

ACCESSORIES

MINERAL	FOSSIL
∩ Glauconite	F Fossils < 20%
• Sandy	⊙ Oolite
△ Chert White	⊕ Oomoldic

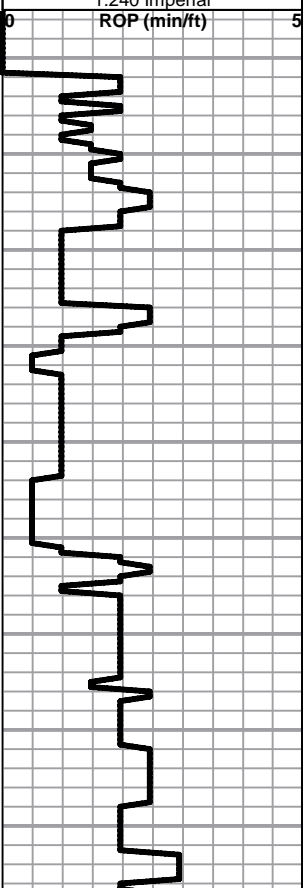
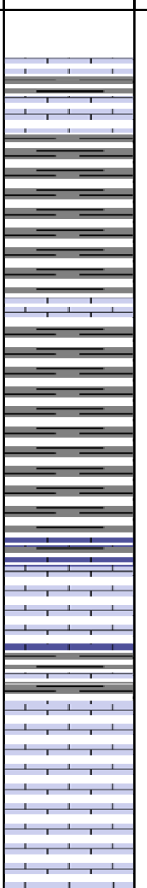
OTHER SYMBOLS

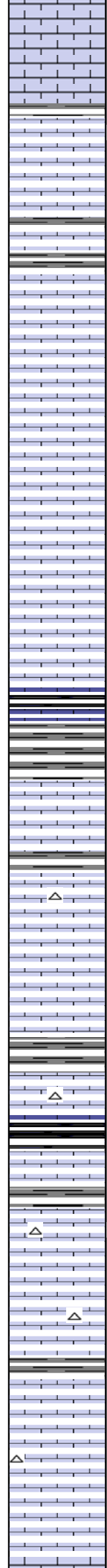
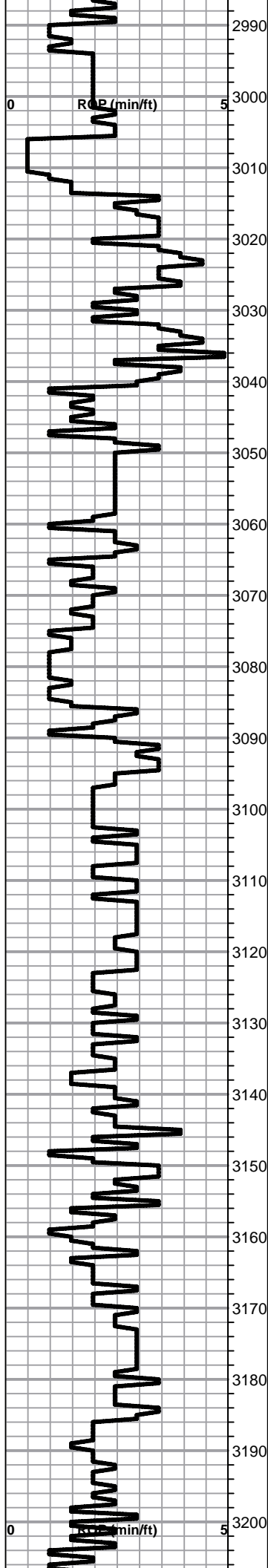
DST

■ DST Int

■ DST alt

■ Core

Curve Track #1 ROP (min/ft)	Depth Intervals Cored Interval DST Interval	Lithology	Geological Descriptions	TG, C1 - C5
<p>1:240 Imperial</p> 	<p>2900</p> <p>2910</p> <p>2920</p> <p>2930</p> <p>2940</p> <p>2950</p> <p>2960</p> <p>2970</p> <p>2980</p>		<p>BEGIN 1' DRILL TIME FROM 2900' TO RTD BEGIN 10' WET AND DRY SAMPLES FROM 2950 TO RTD</p> <p>ANHYDRITE TOP 1159+845 ANHYDRITE BASE 1195+809</p> <p>Shale, lt-med gray, soft blocky to soft sticky clumps</p> <p>Lime, lt-med brn, fnxln, fossiliferous in part</p> <p>Lime, lt-med brn-grayish brn, fnxln</p> <p><u>TOPEKA 2969-965</u></p> <p>Lime, lt-med brn-grayish brn, fnxln, slightly fossiliferous</p> <p>Lime, lt-med brn, fnxln, scattered fusulinids</p>	<p>1:240 Imperial</p> <p>8 5/8" SURFACE CASING SET TO 1168' W/ 375 SXS SMD, DID CIRCULATE</p>



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

Lime, lt-med brn, fnxln

Lime, lt-med brn, micro oolmoldic, sheen with lt odor on break

Lime, lt brn-lt grayish brn, fnxln

Lime, lt-med brn-grayish brn, fnxln

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

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

Lime, lt-med brn, fnxln-granular in part, slightly fossiliferous

Lime, lt brn, fnxln-granular, few crinoid segments

Lime, lt-med brn, granular, slightly fossiliferous

Lime, tan-lt brn, granular, slightly fossiliferous
Shale, black carbonaceous, fissile, blocky

Shale, med gray, soft blocky, calcareous

Lime, crm, fnxln, lithographic in part

Lime, crm, fnxln

Lime, crm-lt brn, fn-vfxln

Lime, crm-lt brn, fnxln, slight bedded chalk, firm on crush

Lime, lt-med brn, fnxln

Shale, black carbonaceous, fissile, blocky

Lime, offwhite, fnxln

Lime, lt brn, fnxln-granular, lt chalky matrix, lt odor no source

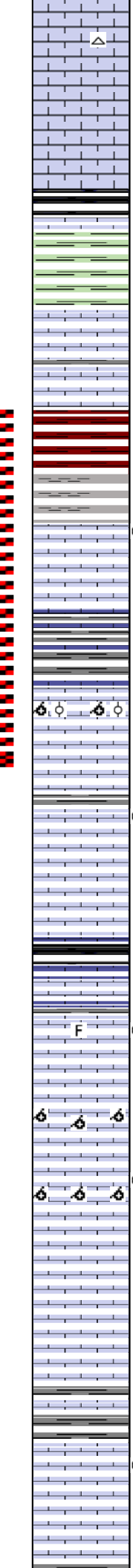
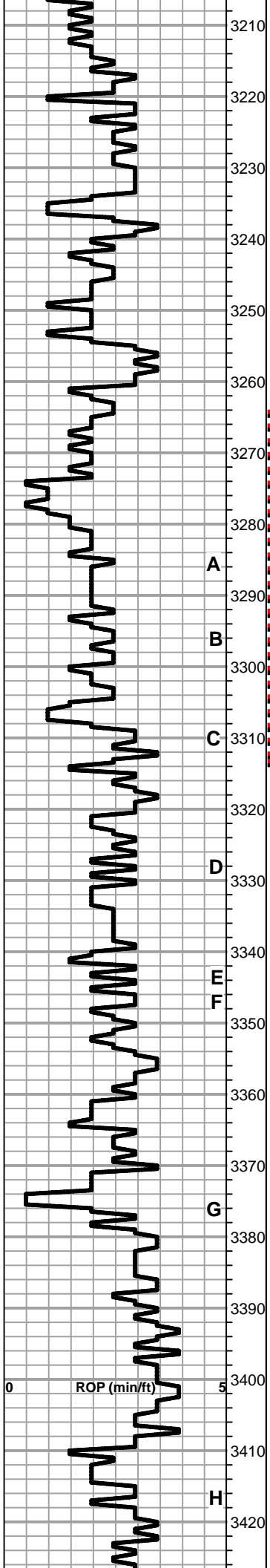
Lime, lt-med brn, fnxln, slight chalk in part

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

Lime, lt brn, fnxln-granular

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

Lime, crm-lt brn, fnxln-granular, chalk matrix in part, NS



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

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

Lime, crm-lt brn, fnxln, slightly fossiliferous

HEEBNER SHALE SPL 3233-1229
 Shale, black carbonaceous, fissile, blocky
 Lime, lt-med brn, fnxln, hard on crush
 Shale, dove gray-lime green, soft mud clumps

TORONTO 3250-1246
 Lime, white-crm, fnxln, lithographic, thin chalk beds, NS

Lime, white-crm, fnxln, very clean

Shale, reddish brn, soft blocky

LKC 3280-1276
 Lime, crm-lt brn, soft chalky matrix, few chips w/ trace stain

A
 Shale, dove gray, soft sticky clumps
 Lime, lt-med gray, fnxln

B
 Lime, crm-lt brn, fnxln grading into oolmoldic lime, scattered to saturated staining, V Lt Odor, NFO

C
 Lime, crm-lt brn, fnxln

D
 Shale, lt gray, soft blocky w/ fossil fragments
 Lime, crm-lt brn, thin fossil beds, spotty stain in interfossiliferous voids and fossil casts, V Lt Odor, NFO

E
 Lime, crm-lt brn, fnxln, bedded chalk in part

F
 Shale, gray-black carbonaceous, fissile, blocky
 Lime, lt gray-lt grayish green, fnxln

F
 Lime, crm-lt brn, fossiliferous with fine pinpt porosity, spotty staining, no odor, NFO

G
 Lime, crm-tan, fnxln, bed chalk, barren oolmoldic in part

G
 Lime, crm-tan, fnxln with oolmoldic in part, mostly barren with few chips with lt gassy oil on crush,

H
 Lime, crm-tan, fn-vfxln, slightly fossiliferous, crinoids

Lime, crm-lt brn, fnxln-micro xln in part, hard on crush

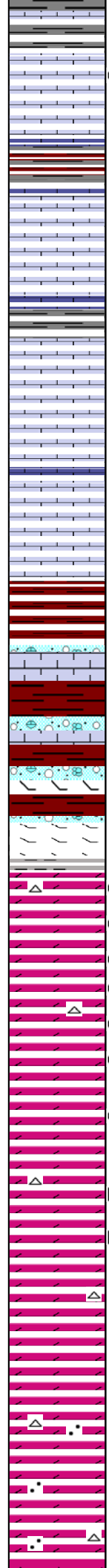
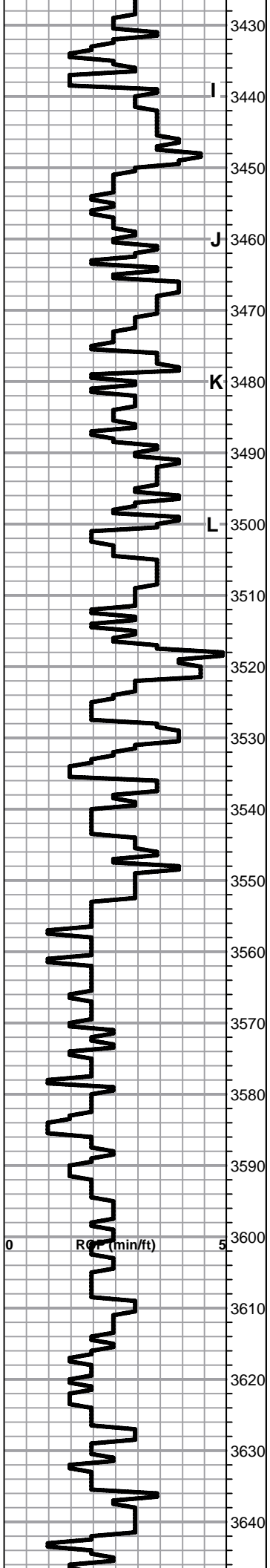
Lime, crm-lt brn, fn-micro xln, slight chalk

Shale, gray-black carbonaceous

H
 Lime, crm-tan, mostly fnxln, slight chalk in part, thin fossil bed at top of bench, spotty staining, no odor, NFO

Lime, crm-tan, fnxln

DST # 1 3264' TO 3315' SEE
 HEADER FOR TEST SUMMARY



Shale, med grayish green, firm, blocky

Lime, tan, fnxn, brittle on crush, thin fossiliferous bed near top of zone, spotty stain, no odor, NFO

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

Shale, reddish tan, soft sticky clumps

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

Lime, lt-med brn, fnxn, slight chalk

Lime, lt-med brn, fn-micro xln, slight chalk

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

Lime, crm-tan, fn-micro xln

BKC 3508-1504

Shale, reddish brn with mix of clastic lime and chert nodules

Lime, crm, micro xln, lot of bedded chalk, few fractures with sparry calcite backfill, NS
 Shale, red wash, soft

Lime, crm-lt brn, fn-micro xln, bedded chalk, clastic lime in part

Lime, crm, fn-vfxln, hard, dolomitic

MARMATON 3542-1538

ARBUCKLE 3549-1545

Dolomite, ivory, fnxn-granular, lt odor at top boundary increasing in intensity with depth.

Dolomite, ivory-crm, fn-cxln, rhombic, good odor and stain

Dolomite, ivory-crm, fn-cxln, rhombic, good odor and stain

Dolomite, crm-lt brn, fn-cxln, rhombic, fair odor and stain

Dolomite, lt brn, fn-cxln, rhombic, fair odor

Dolomite, lt brn, fn-cxln, interxln porosity, lt decreasing odor and staining

Dolomite, ivory-crm, fn-cxln, gilsonitic

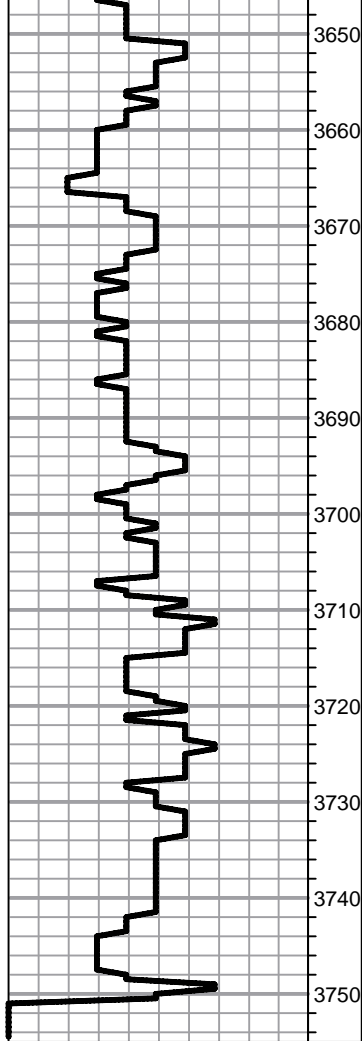
Dolomite, ivory-lt brn, fn-cxln, lt sulfur odor

Dolomite, ivory, fn-cxln

Dolomite, ivory-lt brn, fn-cxln with few quartz grain inclusions

Dolomite, ivory-lt brn, fn-cxln

CFS @ 3471'



Dolomite, ivory-tan, fn-cxln, quartz grain inclusions

Dolomite, tan, fn-cxln, sucrosic in part

Dolomite, ivory, fn-cxln, specks of glauconite

Dolomite, tan, fn-cxln, sucrosic

Dolomite, ivory-tan, fn-cxln, sucrosic

Dolomite, ivory-crm, fn-cxln

Dolomite, crm, fn-cxln

Dolomite, crm, fn-cxln, scattered quartz grainis

Dolomite, tan, fn-cxln

Dolomite, tan, mostly fnxln

Dolomite, tan, fn-cxln

RTD 3750 LTD 3748

**SET 5 1/2" PRODUCTION
CASING TO 3745' W/ 130 SXS
EA2, 30 SXS RATHOLE, 15
SXS MOUSEHOLE**

SLOPE @ 3750' 1/4 DEGREE

JOB LOG

SWIFT Services, Inc.

DATE 5-17-13 PAGE NO. 9

CUSTOMER *TDI* WELL NO. *#1* LEASE *Ronald* JOB TYPE *Deep Surface* TICKET NO. *24000*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	<i>0500</i>							<i>on loc w/FE</i>
								<i>TD 1169</i>
								<i>8 5/8" x 23' x 1168' x 42"</i>
	<i>0600</i>							<i>Start Csg</i>
	<i>0800</i>							<i>Break Circ</i>
	<i>0825</i>	<i>5</i>	<i>0</i>			<i>150</i>		<i>Start KCL Flush</i>
		<i>5</i>	<i>20/0</i>			<i>150</i>		<i>Start 100sks SMD @ 11.8</i>
		<i>5</i>	<i>45/0</i>			<i>150</i>		<i>Start 100sks SMD @ 12.8</i>
		<i>5</i>	<i>35/0</i>			<i>150</i>		<i>Start 100sks SMD @ 13.5</i>
		<i>5</i>	<i>31/0</i>			<i>150</i>		<i>Start 75sks SMD @ 14.5</i>
	<i>0835</i>		<i>21</i>					<i>End Cement</i>
								<i>Drop Plug</i>
	<i>0900</i>	<i>5</i>	<i>0</i>			<i>100</i>		<i>Start Displacement</i>
	<i>0905</i>	<i>4</i>	<i>25</i>			<i>150</i>		<i>Land Circ Cement</i>
	<i>0920</i>		<i>75</i>			<i>400/150</i>		<i>Land Plug</i>
								<i>Shut In</i>
								<i>circ 40 sks cnt to Pit</i>
								<i>Thank you</i>
								<i>Nick, David E. & Rob</i>

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

July 03, 2013

Tom Denning
TDI, Inc.
1310 BISON RD
HAYS, KS 67601-9696

Re: ACO1
API 15-051-26503-00-00
Ronald 1
NW/4 Sec.23-15S-18W
Ellis County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Tom Denning