



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1105213
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

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

WELL COMPLETION FORM
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
- Plug Back Conv. to GSW Conv. to Producer
- 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

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical 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

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



1105213

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
--	---

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	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> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	TDI, Inc.
Well Name	Tholen 13
Doc ID	1105213

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3390'-3394'		
4	3379'-3384'		
4	3368'-3372'	100 gals. 15%	
4			
4			
4	3180'-3182'	2,500 gals. 15%	
4	3152'-3156'		
4	3134'-3138'	250 gals. 15%	
4	3110'-3114'	500 gals. 15%	



DRILL STEM TEST REPORT

Prepared For: **TDI Inc**

1310 Bison Rd
Hays, KS 67601

ATTN: Tom Dennind

Tholen #13

22-14s-16w Ellis,KS

Start Date: 2012.10.31 @ 09:05:26

End Date: 2012.10.31 @ 15:52:26

Job Ticket #: 50804 DST #: 1

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

Printed: 2012.11.02 @ 09:50:29



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TDI Inc
1310 Bison Rd
Hays, KS 67601
ATTN: Tom Dennind

22-14s-16w Ellis,KS
Tholen #13
Job Ticket: 50804 **DST#: 1**
Test Start: 2012.10.31 @ 09:05:26

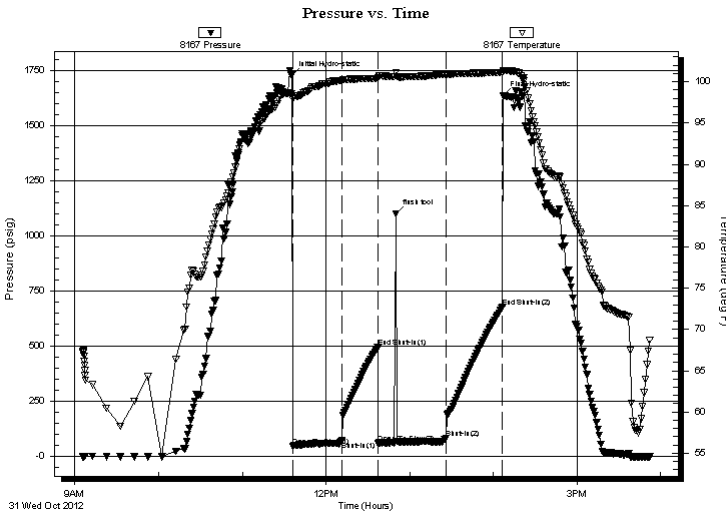
GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:35:56
Time Test Ended: 15:52:26
Interval: **3320.00 ft (KB) To 3397.00 ft (KB) (TVD)**
Total Depth: 3500.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 1872.00 ft (KB)
1864.00 ft (CF)
KB to GR/CF: 8.00 ft
Test Type: Conventional Bottom Hole (Initial)
Tester: Paul Simpson
Unit No: 150

Serial #: 8167 Inside
Press @ Run Depth: 85.08 psig @ 3387.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.10.31 End Date: 2012.10.31 Last Calib.: 2012.10.31
Start Time: 09:05:31 End Time: 15:52:25 Time On Btm: 2012.10.31 @ 11:35:26
Time Off Btm: 2012.10.31 @ 14:06:56

TEST COMMENT: tool slid 3' w hen opening IF 30- weak surging blow built to 2.5"
ISI 30
FF- 45 no blow , flushed tool, w eak surface blow building to 1/8"
FSI 45

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1728.14	98.53	Initial Hydro-static
1	48.75	97.92	Open To Flow (1)
36	71.97	100.18	Shut-In(1)
62	494.48	100.41	End Shut-In(1)
62	62.59	100.47	Open To Flow (2)
75	1098.76	101.13	flush tool
111	85.08	100.90	Shut-In(2)
151	678.08	101.11	End Shut-In(2)
152	1633.92	101.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	HOCM 25% O 75 % M	0.28
25.00	SOCM 5% O 95 %M	0.35

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: Tom Dennind

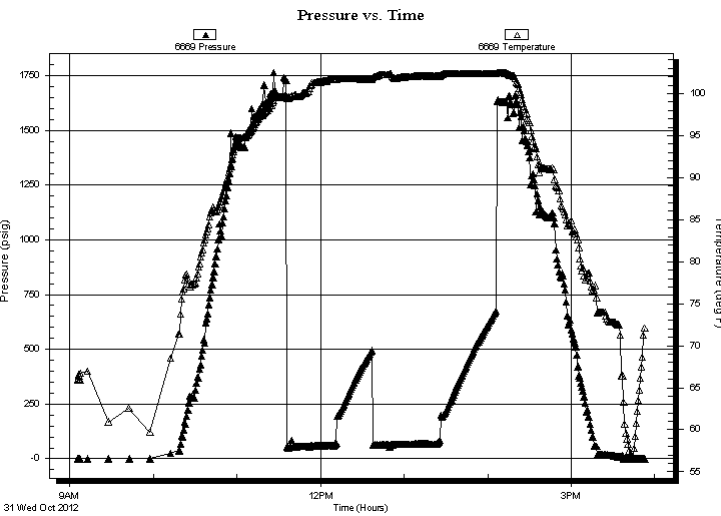
22-14s-16w Ellis, KS
Tholen #13
Job Ticket: 50804 **DST#: 1**
Test Start: 2012.10.31 @ 09:05:26

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 11:35:56 Tester: Paul Slmpson
Time Test Ended: 15:52:26 Unit No: 150
Interval: 3320.00 ft (KB) To 3397.00 ft (KB) (TVD) Reference Elevations: 1872.00 ft (KB)
Total Depth: 3500.00 ft (KB) (TVD) 1864.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 6669 Outside
Press @ Run Depth: psig @ 3387.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.10.31 End Date: 2012.10.31 Last Calib.: 1899.12.30
Start Time: 09:05:46 End Time: 15:52:55 Time On Btm:
Time Off Btm:

TEST COMMENT: tool slid 3' w hen opening IF 30- weak surging blow built to 2.5"
ISI 30
FF- 45 no blow , flushed tool, w eak surface blow building to 1/8"
FSI 45



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	HOCM 25% O 75 % M	0.28
25.00	SOCM 5% O 95 %M	0.35

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: Tom Dennind

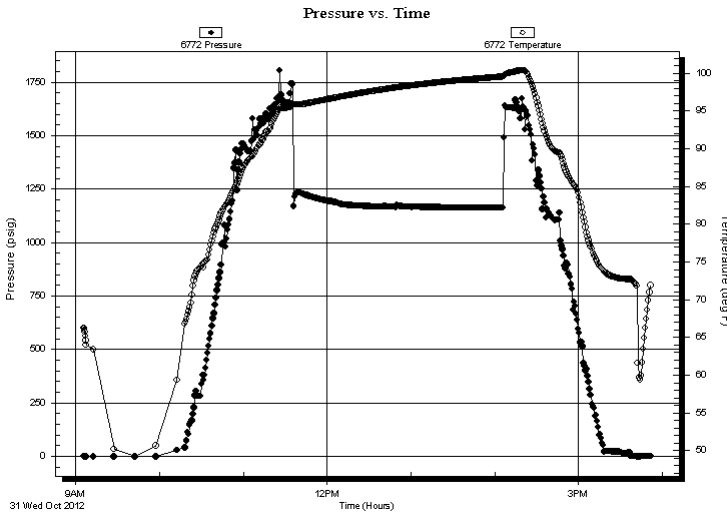
22-14s-16w Ellis, KS
Tholen #13
Job Ticket: 50804 **DST#: 1**
Test Start: 2012.10.31 @ 09:05:26

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:35:56
Time Test Ended: 15:52:26
Interval: 3320.00 ft (KB) To 3397.00 ft (KB) (TVD)
Total Depth: 3500.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Paul Slmpson
Unit No: 150
Reference Elevations: 1872.00 ft (KB)
1864.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6772 Below (Straddle)
Press @ Run Depth: psig @ 3400.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.10.31 End Date: 2012.10.31 Last Calib.: 1899.12.30
Start Time: 09:05:30 End Time: 15:51:54 Time On Btm:
Time Off Btm:

TEST COMMENT: tool slid 3' w hen opening IF 30- weak surging blow built to 2.5"
ISI 30
FF- 45 no blow , flushed tool, w eak surface blow building to 1/8"
FSI 45



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	HOCM 25% O 75 % M	0.28
25.00	SOCM 5% O 95 %M	0.35

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: Tom Dennind

22-14s-16w Ellis,KS
Tholen #13
Job Ticket: 50804 **DST#: 1**
Test Start: 2012.10.31 @ 09:05:26

Tool Information

Drill Pipe:	Length: 3331.00 ft	Diameter: 3.80 inches	Volume: 46.73 bbl	Tool Weight:	3500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	34000.00 lb
			<u>Total Volume: 46.73 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	34000.00 lb
Depth to Top Packer:	3320.00 ft			Final	34000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	179.00 ft				
Tool Length:	200.00 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			3300.00	
Shut In Tool	5.00			3305.00	
Hydraulic tool	5.00			3310.00	
Packer	5.00			3315.00	21.00 Bottom Of Top Packer
Packer	5.00			3320.00	
Stubb	1.00			3321.00	
Perforations	2.00			3323.00	
Change Over Sub	1.00			3324.00	
Blank Spacing	62.00			3386.00	
Change Over Sub	1.00			3387.00	
Recorder	0.00	8167	Inside	3387.00	
Recorder	0.00	6669	Outside	3387.00	
Perforations	5.00			3392.00	
Blank Off Sub	1.00			3393.00	
Blank Spacing	3.00			3396.00	179.00 Tool Interval
Packer	2.00			3398.00	
Stubb	1.00			3399.00	
Change Over Sub	1.00			3400.00	
Recorder	0.00	6772	Below	3400.00	
Blank Spacing	94.00			3494.00	
Change Over Sub	1.00			3495.00	
Bullnose	4.00			3499.00	1000199.00 Bottom Packers & Anchor

Total Tool Length: 200.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc **22-14s-16w Ellis,KS**
 1310 Bison Rd **Tholen #13**
 Hays, KS 67601 Job Ticket: 50804 **DST#: 1**
 ATTN: Tom Dennind Test Start: 2012.10.31 @ 09:05:26

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: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.38 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: ppm			
Filter Cake: inches			

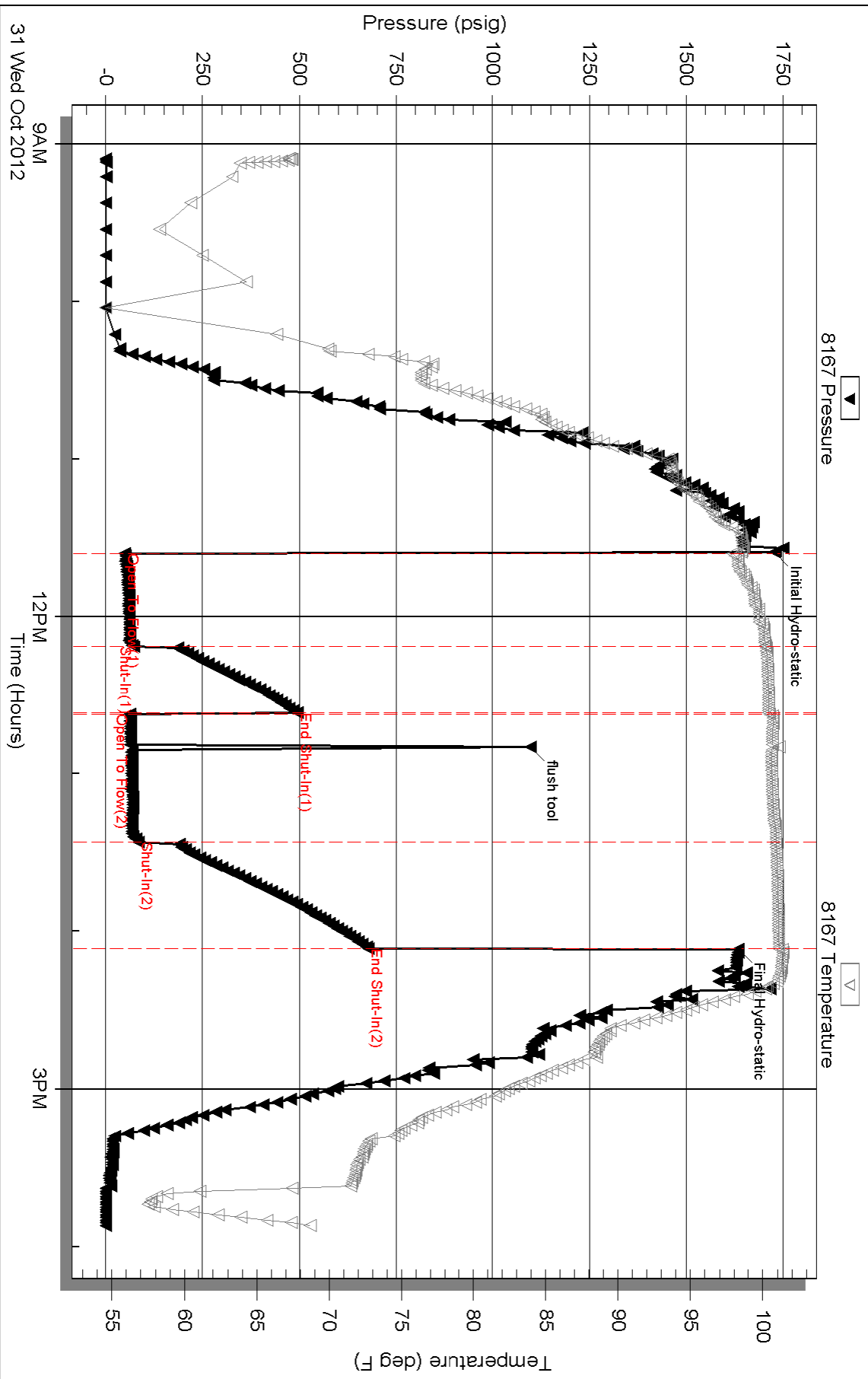
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	HOCM 25% O 75 % M	0.281
25.00	SOCM 5% O 95 %M	0.351

Total Length: 45.00 ft Total Volume: 0.632 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time

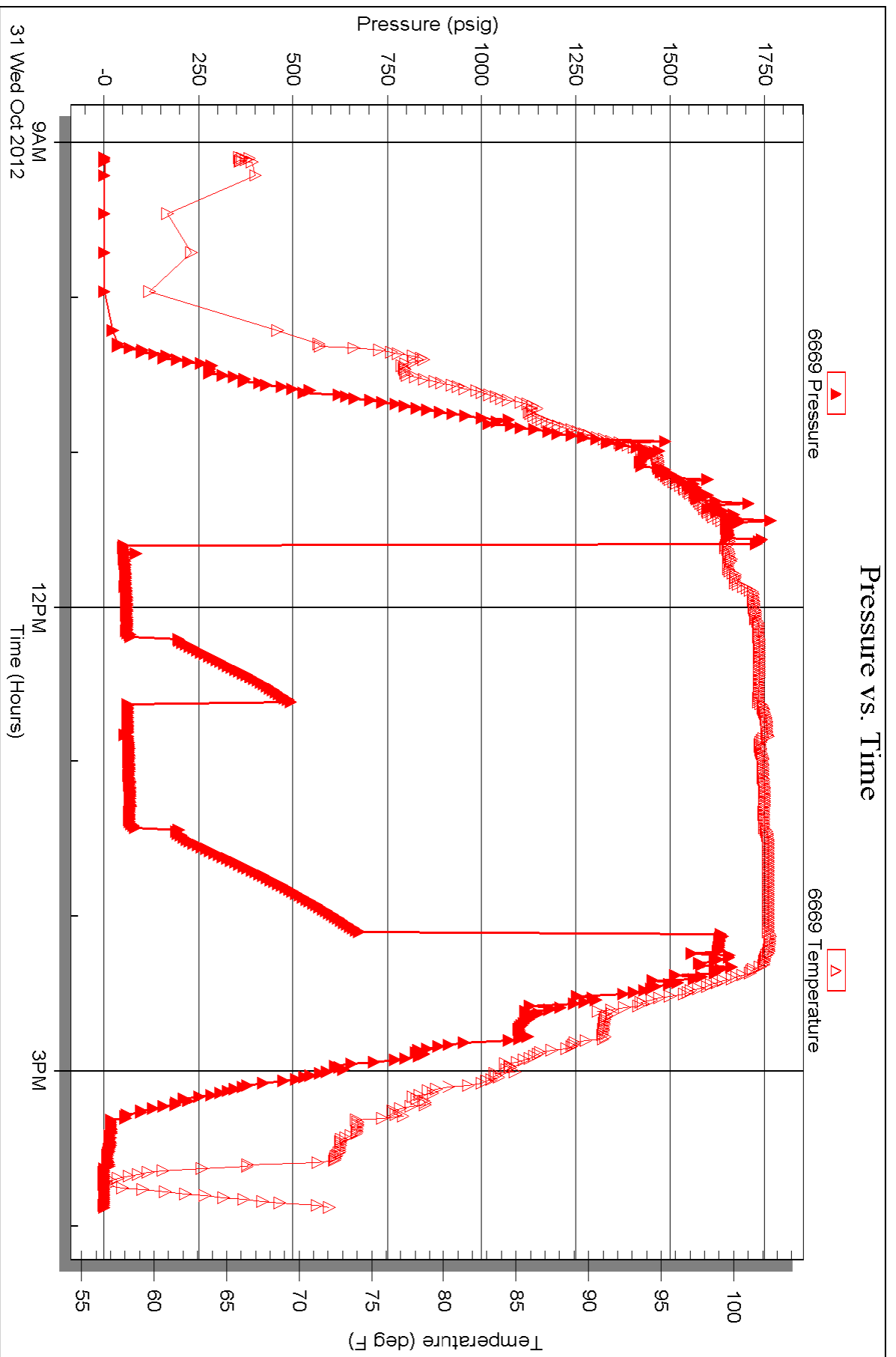


Serial #: 6669

Outside TDI Inc

Tholen #13

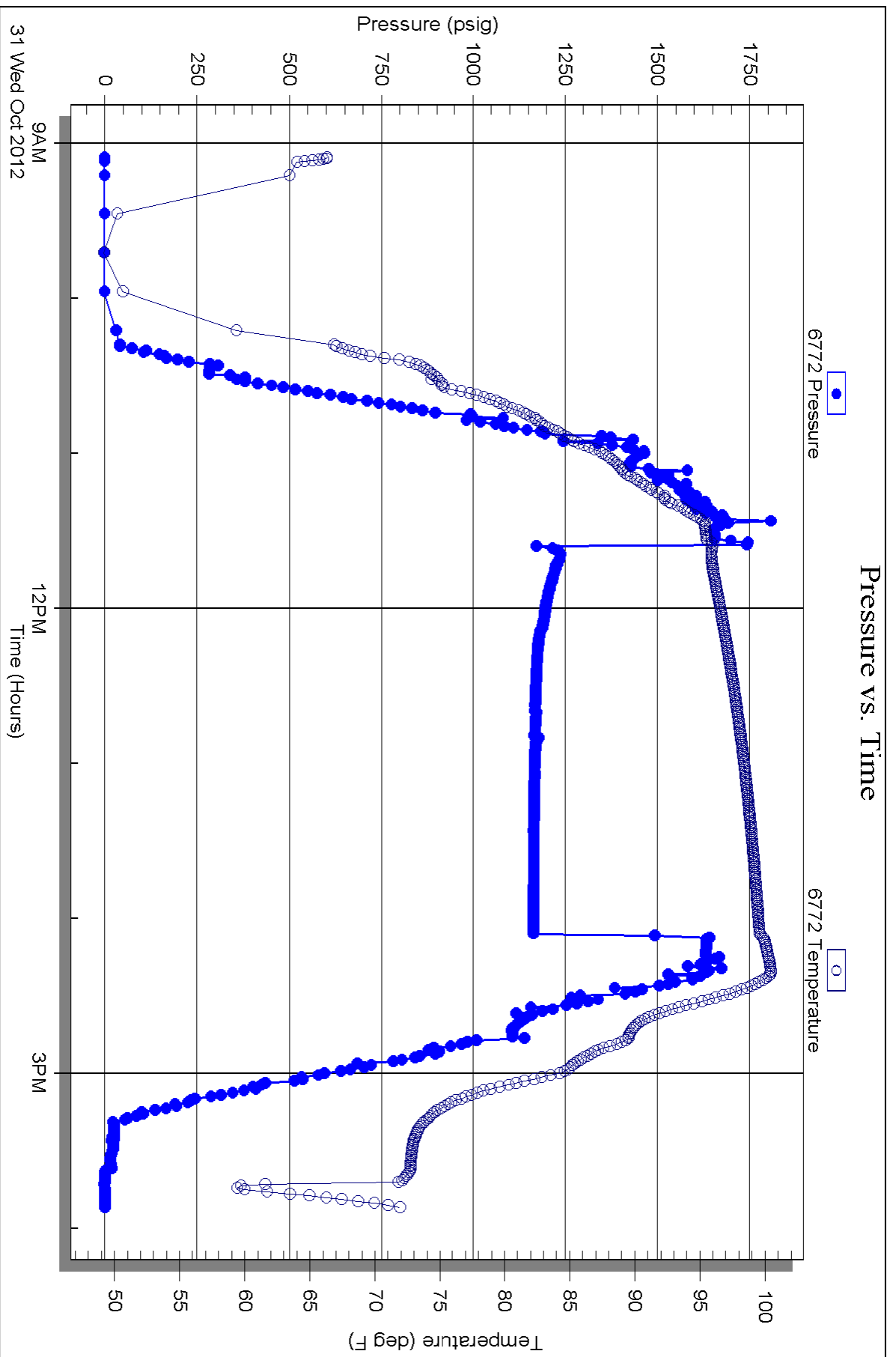
DST Test Number: 1

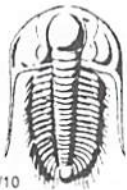


Triobite Testing, Inc

Ref. No: 50804

Printed: 2012.11.02 @ 09:50:34





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50804

4/10

Well Name & No. Tholen #13 Test No. 1 Date 10/31/12
 Company TOI Elevation 1872 KB _____ GL _____
 Address _____
 Co. Rep / Geo. Herb Deines Rig Southward A1
 Location: Sec. 22 Twp. 14S Rge. 16W Co. Ellis State Ky

Interval Tested 3320-3397 Zone Tested Arb. dk
 Anchor Length 77 Drill Pipe Run 3331 Mud Wt. 9.2
 Top Packer Depth 3315-3320 Drill Collars Run - Vis 55
 Bottom Packer Depth 3397 Wt. Pipe Run - WL 8.4
 Total Depth 3500 Chlorides _____ ppm System LCM _____
 Blow Description tool stick 2' when open - weak surging blow built to 2 1/2" DST - no blow
ff - no blow - flushed tool - weak surface blow built to 1 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>HOCM</u>	<u>25</u>		<u>75</u>	
<u>25</u>	<u>50CM</u>	<u>5</u>		<u>95</u>	
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Rec Total 45 BHT 99 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1728 Test 1150 T-On Location 0815
 (B) First Initial Flow 48 Jars _____ T-Started 0905
 (C) First Final Flow 92 Safety Joint _____ T-Open 1136
 (D) Initial Shut-In 494 Circ Sub _____ T-Pulled 1406
 (E) Second Initial Flow 62 Hourly Standby _____ T-Out _____
 (F) Second Final Flow 85 Mileage 32 RT 49.60 Comments _____
 (G) Final Shut-In 678 Sampler _____
 (H) Final Hydrostatic 1634 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1249.20
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1249.20

Approved By _____ Our Representative [Signature]
 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: THOLEN # 13
 Location: SW SW SE Sec.22-14s-16w
 Pool: IN FIELD
 State: KANSAS

API: 15-051-26,409-00-00
 Field: DREILING
 Country: USA



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

Scale 1:240 Imperial

Well Name: THOLEN # 13
 Surface Location: SW SW SE Sec.22-14s-16w
 Bottom Location:
 API: 15-051-26,409-00-00
 License Number: 4787
 Spud Date: 10/26/2012 Time: 7:15 PM
 Region: ELLIS COUNTY
 Drilling Completed: 10/30/2012 Time: 10:45 PM
 Surface Coordinates: 330' FSL & 2310' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 1862.00ft
 K.B. Elevation: 1872.00ft
 Logged Interval: 2200.00ft To: 3500.00ft
 Total Depth: 3500.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: Latitude:
 N/S Co-ord: 330' FSL
 E/W Co-ord: 2310' FEL

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

Rig Type: MUD ROTARY
Spud Date: 10/26/2012
TD Date: 10/30/2012
Rig Release: 11/1/2012

Time: 7:15 PM
Time: 10:45 PM
Time: 3:30 AM

ELEVATIONS

K.B. Elevation: 1872.00ft
K.B. to Ground: 10.00ft

Ground Elevation: 1862.00ft

NOTES

DECISION TO RUN PRODUCTION CASING BASED ON FAVORABLE STRUCTURE 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 TESTERS, INC: ONE (1) STRADDLE TEST

FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY

THOLEN # 13

330' FSL & 2310' FEL, SE/4

Sec. 22-14s-16w

1862' GL 1872' KB

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>LOG TOPS</u>
Anhydrite	950+ 922	956+ 916
B-Anhydrite	995+ 877	994+ 878
Topeka		2835- 963
Heebner Shale	3060-1188	3057-1185
Toronto	3080-1208	3078-1206
LKC	3109-1237	3109-1237
BKC	3340-1468	3340-1468
Arbuckle	3360-1488	3361-1489
RTD	3500-1628	
LTD		3497-1625

SUMMARY OF DAILY ACTIVITY

10-26-12 Spud 7:15 PM, set 8 5/8" surface casing to 235' w/ 150 sxs common, 2%Gel, 3%CC, plug down 12:30AM on 10-27-12, WOC 8 hrs, slope ¾ degree


10-27-12 235', drill plug at 8:30 AM

10-28-12 1602', drilling

10-29-12 2405', drilling, displace 2736'-2768'

10-30-12 3150', drilling, RTD 3500' @ 10:45 PM, CCH 1 hr at RTD
 10-31-12 3500', short trip, CCH 1 ½ hrs, logs, straddle test # 1 3320' – 3397',
 LDDP
 11-01-12 3500', finish running casing and cement, plug down 3:30AM, RD

DST # 1 STRADDLE TEST

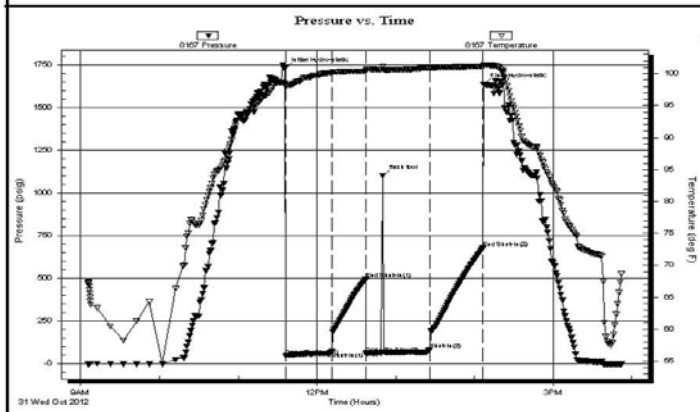
	DRILL STEM TEST REPORT	
	TDI Inc ATTN: Tom Dennind	Sec 22 14s 16w Ellis KS Tholen #13 Job Ticket: 50804 DST#: 1 Test Start: 2012.10.31 @ 09:05:26

GENERAL INFORMATION:

Formation: Arbuckle	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Paul Simpson
Time Tool Opened: 11:35:56	Unit No: 150
Time Test Ended: 15:52:26	Reference Elevations: 1872.00 ft (KB)
Interval: 3320.00 ft (KB) To 3397.00 ft (KB) (TVD)	1864.00 ft (CF)
Total Depth: 3500.00 ft (KB) (TVD)	KB to GR/CF: 8.00 ft
Hole Diameter: 7.88 inches Hole Condition: Fair	

Serial #: 8167	Inside				
Press@RunDepth: 85.08 psig @ 3387.00 ft (KB)	Capacity: 8000.00 psig				
Start Date: 2012.10.31	End Date: 2012.10.31	Last Calib.: 1899.12.30			
Start Time: 09:05:31	End Time: 15:52:25	Time On Btm: 2012.10.31 @ 11:35:26			
		Time Off Btm: 2012.10.31 @ 14:06:56			

TEST COMMENT: tool slid 3' w hen opening IF 30- w eak surging blow built to 2.5"
 ISI 30
 FF- 45 no blow , flushed tool, w eak surface blow building to 1/8"
 FSI 45



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1728.14	98.53	Initial Hydro-static
1	48.75	97.92	Open To Flow (1)
36	71.97	100.18	Shut-in(1)
62	494.48	100.41	End Shut-In(1)
62	62.59	100.47	Open To Flow (2)
75	1098.76	101.13	flush tool
111	85.08	100.90	Shut-in(2)
151	678.08	101.11	End Shut-In(2)
152	1633.92	101.37	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
20.00	HOCM 25% O 75 % M	0.28
25.00	SOCM 5% O 95 % M	0.35

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

DST # 1 EXPANDED CHART OF TEST INTERVAL

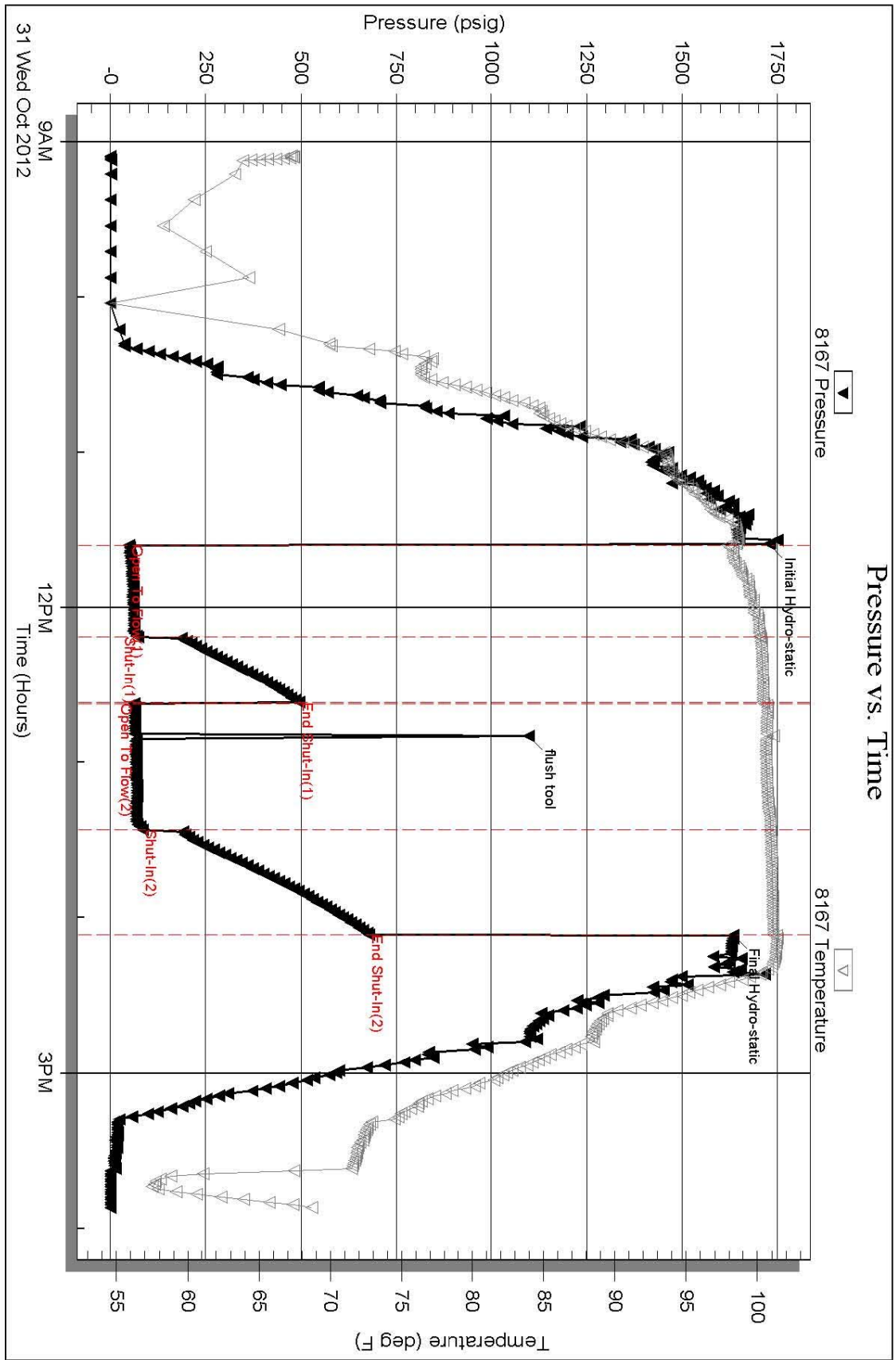
Serial #: 8167

Inside

TDI Inc

Tholen #13

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 50804

Printed: 2012.10.31 @ 16:22:35

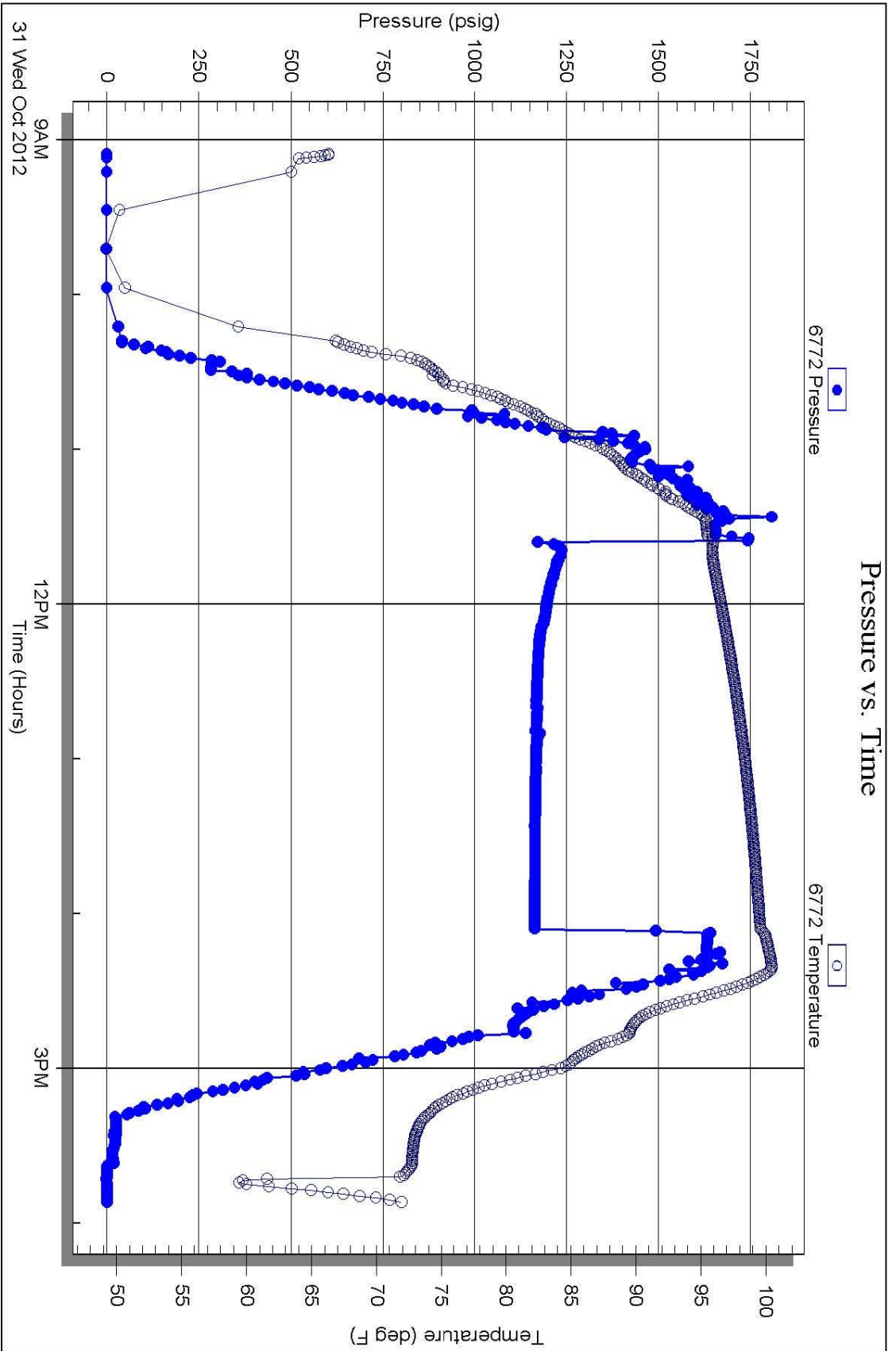
DST # 1 BOTTOM PACKER CHART

Serial #: 6772

Below (Stratallin)

Tholen #13

DST Test Number: 1

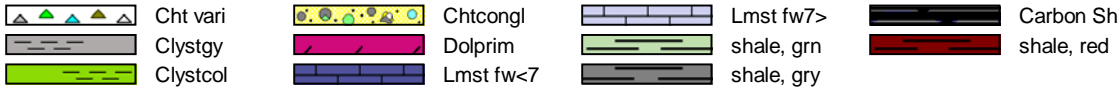


Trilobite Testing, Inc

Ref. No: 50804

Printed: 2012.10.31 @ 16:22:36

ROCK TYPES



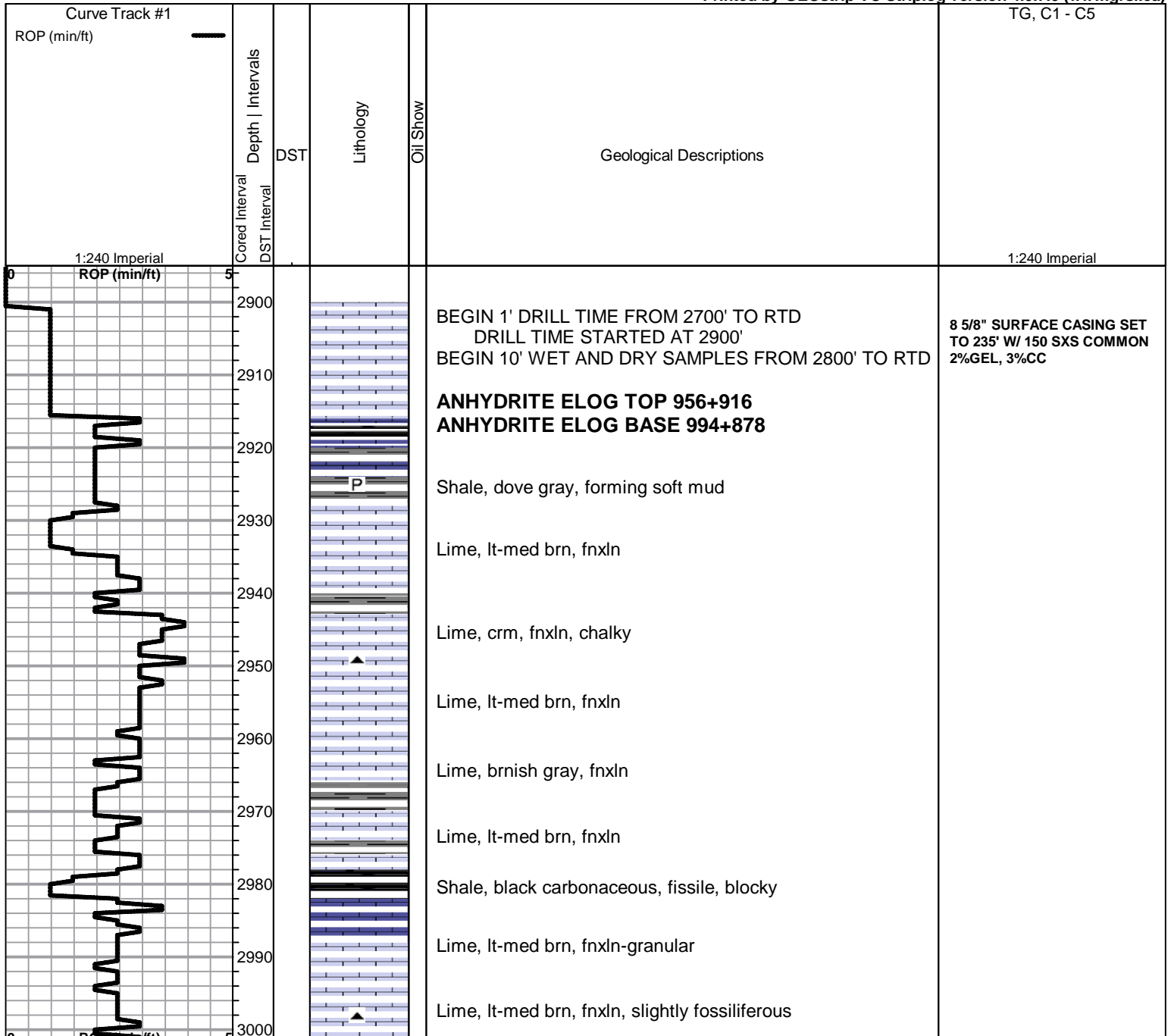
ACCESSORIES

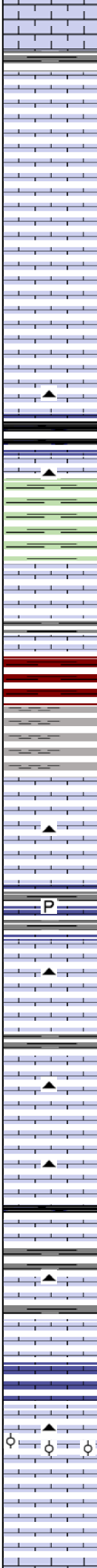
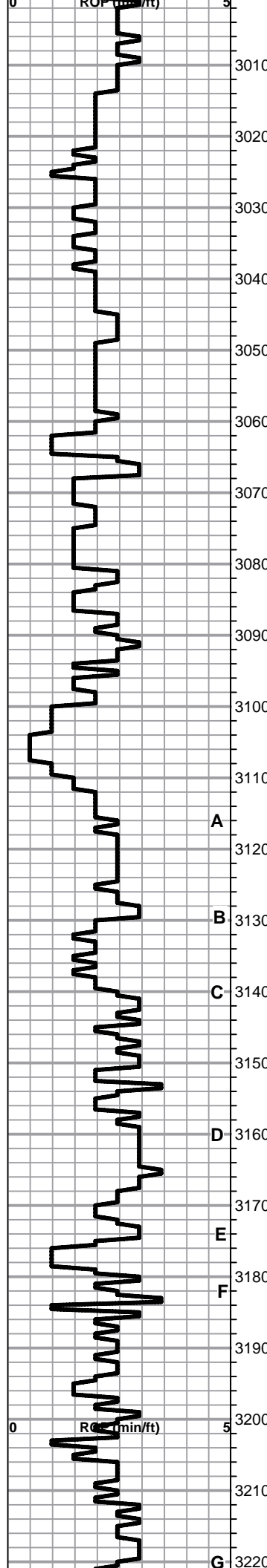


OTHER SYMBOLS



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





Lime, med brn fnxln

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

Lime, tan-lt brn, fnxln, bedded chalk, NS

Lime, tan-lt brn, fnxln, bedded chalk in part, slightly fossiliferous - fusulinids

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

HEEBNER SHALE SPL 3060-1188 ELog 3057-1185
 Shale, black carbonaceous, fissile, blocky
 Lime, lt brn, fn-vfxln

Shale, dove gray-lime green, soft forming soft mud

TORONTO SPL 3080-1208 ELog 3078-1206
 Lime, white-crm, fnxln, bedded chalk in part, NS

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

Shale, lt red wash with soft mud grading into soft, blocky

LKC SPL 3109 SPL 3109-1237 ELog 3109-1237
 Lime, tan-lt brn, mostly fnxln with few chips with fine vuggy porosity, lt scattered stain, NFO, No Odor

Lime, crm-tan, mostly fnxln

Lime, lt brn, fnxln

Lime, lt brn, fnxln, scattered vuggy porosity with sheen of hydrocarbon mixed in sample.

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

Lime, crm-lt brn, fnxln, no shows or staining noted

Lime, crm-tan, fn-crypto xln, slightly chalk in part, slightly fossiliferous

Shale, gray-black carbonaceous
 Lime, lt gray-pale green tint, fnxln

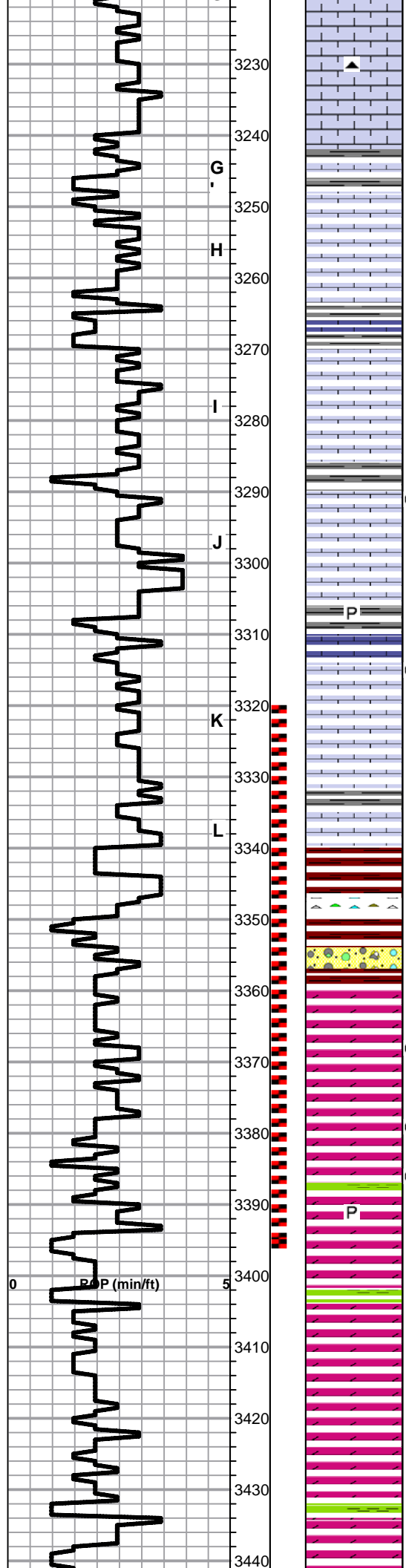
Lime, crm, fnxln, fossiliferous but tightly cemented, NS

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

Lime, fnxln with scattered oolitic and vuggy chips with light sheen mixed in samples, No Odor.

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

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



Lime, crm-tan, fn-fxln, slight bed chalk in part

Lime, lt grading to dark brn, fnxln

Lime, crm-lt brn, fnxln, bedded chalk, NS

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

Lime, crm- fnxln, bedded chalk, NS

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

Lime, crm-tan, fn-vfxln, few chips with granular, fn-med interxln porosity with scattered stain, NFO, No Odor

Lime, crm-lt brn, vfxln, slight chalk in part

Lime, crm-tan, fnxln, bedded chalk in part

Shale, lt gray, slivers

Lime, crm, mostly fnxln, bedded chalk, few chips with scattered stain, NFO, No Odor

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

Lime, crm-tan, fnxln, bedded chalk, slightly fossiliferous

BKC SPL 3340-1468 ELog 3340-1468

Shale, red wash-soft blocky
Clastic limestone mix in part

Shale, red wash to soft mud

ARBUCKLE SPL 3360-1488 ELog 3361-1489

Dolomite, lt brn, granular with med-cxln in part, friable clusters, lt odor and lt scattered staining

Dolomite, fn-cxln, sucrosic in part, lt odor, lt staining

Dolomite, white-crm-lt brn, fnxln with sucrosic in part, lt odor, scattered staining

Dolomite, crm-lt brn, fn-cxln, very lt odor,

Dolomite, ivory-tan, fnxln, crystalline pyrite growth with scattered quartz crystals., very lt to no detectable odor.

Dolomite, ivory with pale green tint in part, fn-cxln

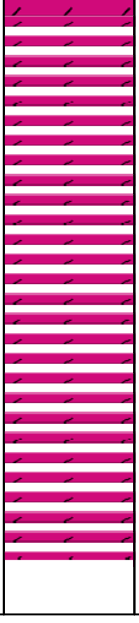
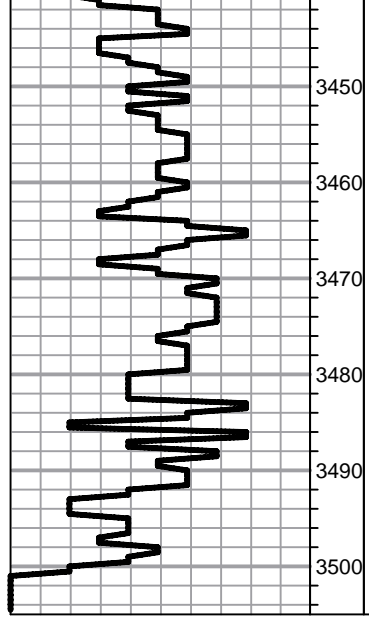
Dolomite, ivory-crm, fnxln with med-cxln in part

Dolomite, ivory-crm, fn-cxln

Dolomite, Ivory-crm, fn-cxln

Dolomite, ivory-crm, fnxln with scattered large rhombic crvstalline development.

crystalline development



Dolomite, ivory-crm, fnxln with scattered sucrosic in part

Dolomite, ivory-crm, fn-cxln-granular

Dolomite, ivory-crm, fnxln-granular

Dolomite, ivory-crm, fnxln-granular

Dolomite, ivory-crm, fnxln, hard on crush

RTD 3500-1628 LTD 3497-1625

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 5397
10-27-12

Date	10-26-12	Sec.	22	Twp.	14	Range	16	County	Ellis	State	KS	On Location		Finish	12:30AM	
Lease	Tholen		Well No.	13		Location Walker, KS - 45 to Munjoc Rd.										
Contractor	Southwind #1					Owner	1/2 W N Into									
Type Job	Surface					To Quality Oilwell Cementing, Inc. 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	12 1/4"		T.D.	237'		Charge To	TDI Inc.									
Csg.	8 5/8"		Depth	235' 235'		Street										
Tbg. Size			Depth			City	State									
Tool			Depth			The above was done to satisfaction and supervision of owner agent or contractor.										
Cement Left in Csg.	15'		Shoe Joint	15'		Cement Amount Ordered	150 ex Common 3% CC									
Meas Line			Displace	14 BUS												

EQUIPMENT

Pumptrk	5	No.	Cementer	Brett	2 1/2 Gal
			Helper		Common 150
Bulktrk	14	No.	Driver	Lonnie M.	Poz. Mix
			Driver		
Bulktrk	p.u.	No.	Driver	Rick	Gel. 3
			Driver		Calcium 5


JOB SERVICES & REMARKS

Remarks:	Cement did Circulate	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	
		Sand	
		Handling 158	
		Mileage	

FLOAT EQUIPMENT

	Guide Shoe	
	Centralizer	
	Baskets	
	AFU Inserts	
	Float Shoe	
	Latch Down	
	Pumptrk Charge	Surface
	Mileage	17

	Tax	
	Discount	
	Total Charge	

X Signature 

JOB LOG

SWIFT Services, Inc.

DATE 10-31-12 PAGE NO.

CUSTOMER **T D I** WELL NO. **#13** LEASE **Thales** JOB TYPE **2-Stage** TICKET NO. **21956**

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2130							on loc w/ FE
								RTD 3500' LTD3497'
								5 1/2" x 14" x 3495' x 42'
								Lost 1, 3, 5, 8, 8, 10, 12, 5-9
								Back 2, 13, 60, 73
								DV 60 @ 944'
	2325							start FE
	0105							Break Circ
	0200	5	0			200		Start Mudflush 500 gal
		5	12/0			200		Start KCL flush 20 bbl
		5	20/0			200		Start 150 sks EA-2 Cement
	0220		36					End Cement
								Wash P/L
								Drop L D Plug
	0225	6	0			200		Start Displacement
	0235	5	58			250		Catch Cement / start KCL flush
	0241		84					Land Plug
								Release Pressure / Float Hold
	0245							Drop Opening Plug
	0250	2.5	7/4					Plug RH + MH 30/15 sks SMD
	0300					1100		Open DV
	0305	5	0			200		Start Cement 130 sks SMD
	0320		72					End Cement
								Drop Closing Plug
	0325	5	0			200		Start Displacement
		4	7			250		Circ Cement
	0330		23			450 / 1500		Land Plug
								Close DV
								Release Pressure / DV closed
								circ 25 sks top it
								Thank you
								Nick, David E, + Sereniy

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

December 18, 2012

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

Re: ACO1
API 15-051-26409-00-00
Tholen 13
SE/4 Sec.22-14S-16W
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