



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1109637
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: _____



1109637

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> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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DRILL STEM TEST REPORT

Prepared For: **TDI inc**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Rohleder #3

24-14s-16w Ellis,KS

Start Date: 2012.11.13 @ 16:50:05

End Date: 2012.11.13 @ 22:40:09

Job Ticket #: 50754 DST #: 1

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

Printed: 2012.11.20 @ 15:35:28

TDI inc
24-14s-16w Ellis,KS
Rohleder #3
DST # 1
Arbuckle
2012.11.13



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI inc
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

24-14s-16w Ellis,KS
Rohleder #3
Job Ticket: 50754 **DST#: 1**
Test Start: 2012.11.13 @ 16:50:05

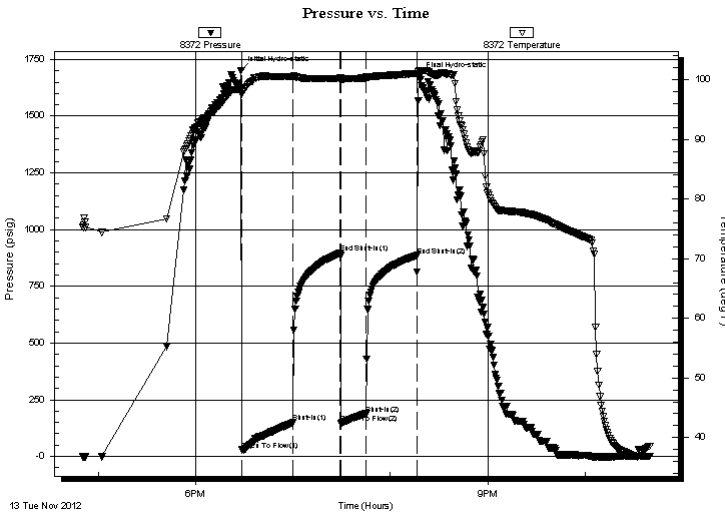
GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:28:20
Time Test Ended: 22:40:09
Interval: **3329.00 ft (KB) To 3396.00 ft (KB) (TVD)**
Total Depth: 3500.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Straddle (Initial)
Tester: Andy Carreira
Unit No: 39
Reference Elevations: 1867.00 ft (KB)
1857.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8372 Outside
Press @ Run Depth: 188.18 psig @ 3324.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.11.13 End Date: 2012.11.13 Last Calib.: 2012.11.13
Start Time: 16:50:05 End Time: 22:40:10 Time On Btm: 2012.11.13 @ 18:27:30
Time Off Btm: 2012.11.13 @ 20:17:50

TEST COMMENT: IF:(30min) 6" blow in 3 min. BOB in 7 min.
ISl:(30min) No Return
FF:(15min) 6" blow in 7 min. BOB in 13 min.
FSl:(30min) No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1701.57	98.39	Initial Hydro-static
1	28.77	97.56	Open To Flow (1)
33	149.11	100.51	Shut-In(1)
62	896.06	100.26	End Shut-In(1)
62	147.48	99.94	Open To Flow (2)
78	188.18	100.31	Shut-In(2)
109	885.98	101.07	End Shut-In(2)
111	1675.80	101.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCWM g=10% o=15% w=30% m=45%	0.84
155.00	OCGM g=10% o=40% m=50%	2.17
180.00	MCGO g=10% m=40% o=50%	2.52

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

24-14s-16w Ellis,KS
Rohleder #3
Job Ticket: 50754 **DST#: 1**
Test Start: 2012.11.13 @ 16:50:05

Tool Information

Drill Pipe:	Length: 3330.00 ft	Diameter: 3.80 inches	Volume: 46.71 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	46000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	31000.00 lb
Drill Pipe Above KB:	30.00 ft			Final	33000.00 lb
Depth to Top Packer:	3320.00 ft				
Depth to Bottom Packer:	3396.00 ft				
Interval between Packers:	76.00 ft				
Tool Length:	204.00 ft				
Number of Packers:	3	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3301.00	
Shut In Tool	5.00			3306.00	
Hydraulic tool	5.00			3311.00	
Packer	5.00			3316.00	20.00 Bottom Of Top Packer
Packer	4.00			3320.00	
Stubb	1.00			3321.00	
Perforations	2.00			3323.00	
Change Over Sub	1.00			3324.00	
Recorder	0.00	8017	Inside	3324.00	
Recorder	0.00	8372	Outside	3324.00	
Drill Pipe	64.00			3388.00	
Change Over Sub	1.00			3389.00	
Perforations	5.00			3394.00	
Blank Spacing	1.00			3395.00	
Blank Off Sub	1.00			3396.00	76.00 Tool Interval
Packer	4.00			3400.00	
Stubb	1.00			3401.00	
Perforations	3.00			3404.00	
Change Over Sub	1.00			3405.00	
Recorder	0.00	8647	Below	3405.00	
Drill Pipe	94.00			3499.00	
Change Over Sub	1.00			3500.00	
Perforations	1.00			3501.00	
Bullnose	3.00			3504.00	108.00 Bottom Packers & Anchor
Total Tool Length:		204.00			



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI inc **24-14s-16w Ellis,KS**
 1310 Bison Rd **Rohleder #3**
 Hays KS 67601 Job Ticket: 50754 **DST#: 1**
 ATTN: Herb Deines Test Start: 2012.11.13 @ 16:50:05

Mud and Cushion Information

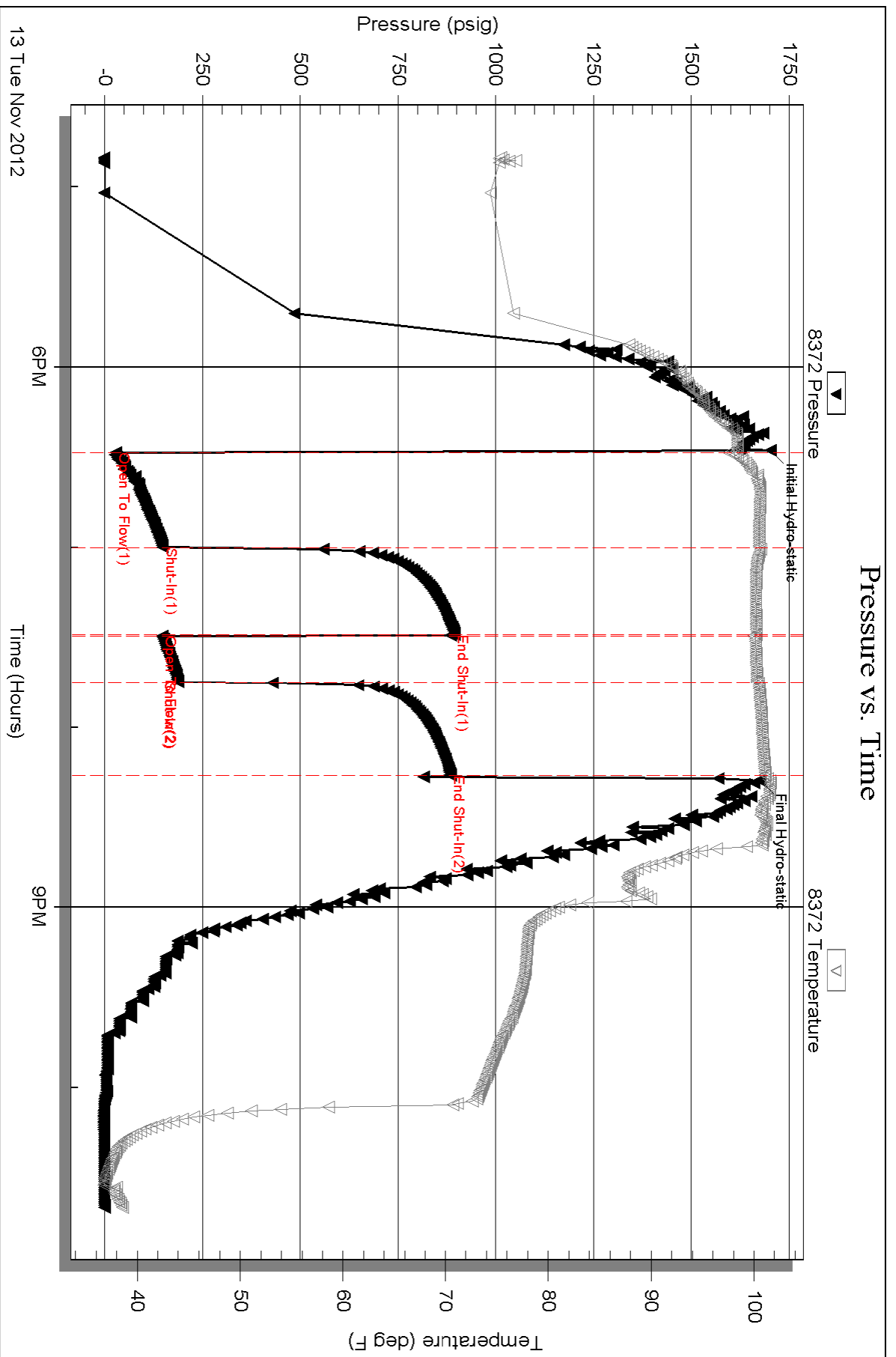
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3600.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GOCWM g=10% o=15% w =30% m=45%	0.842
155.00	OCCGM g=10% o=40% m=50%	2.174
180.00	MCCGO g=10% m=40% o=50%	2.525

Total Length: 395.00 ft Total Volume: 5.541 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



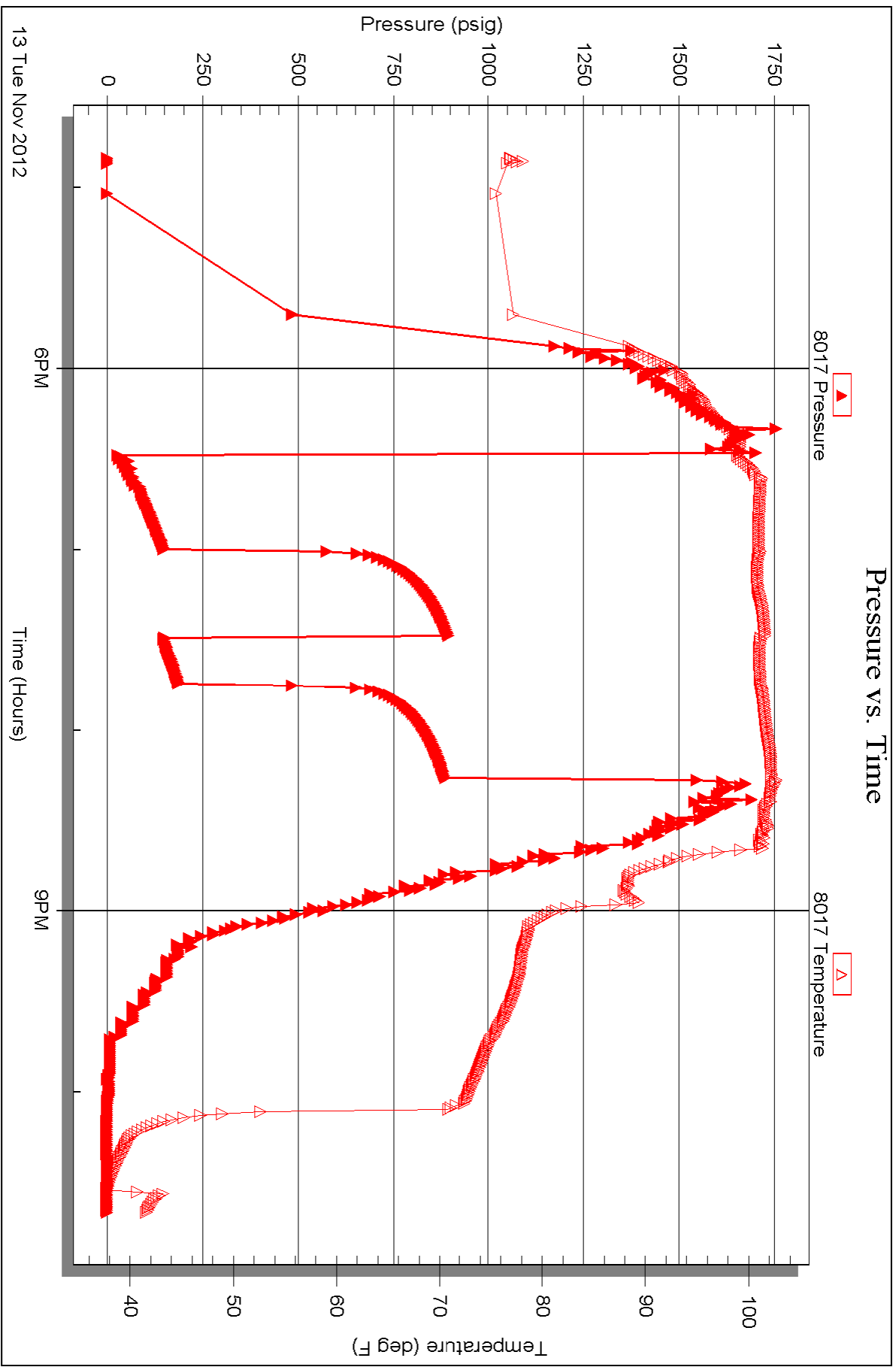
Serial #: 8017

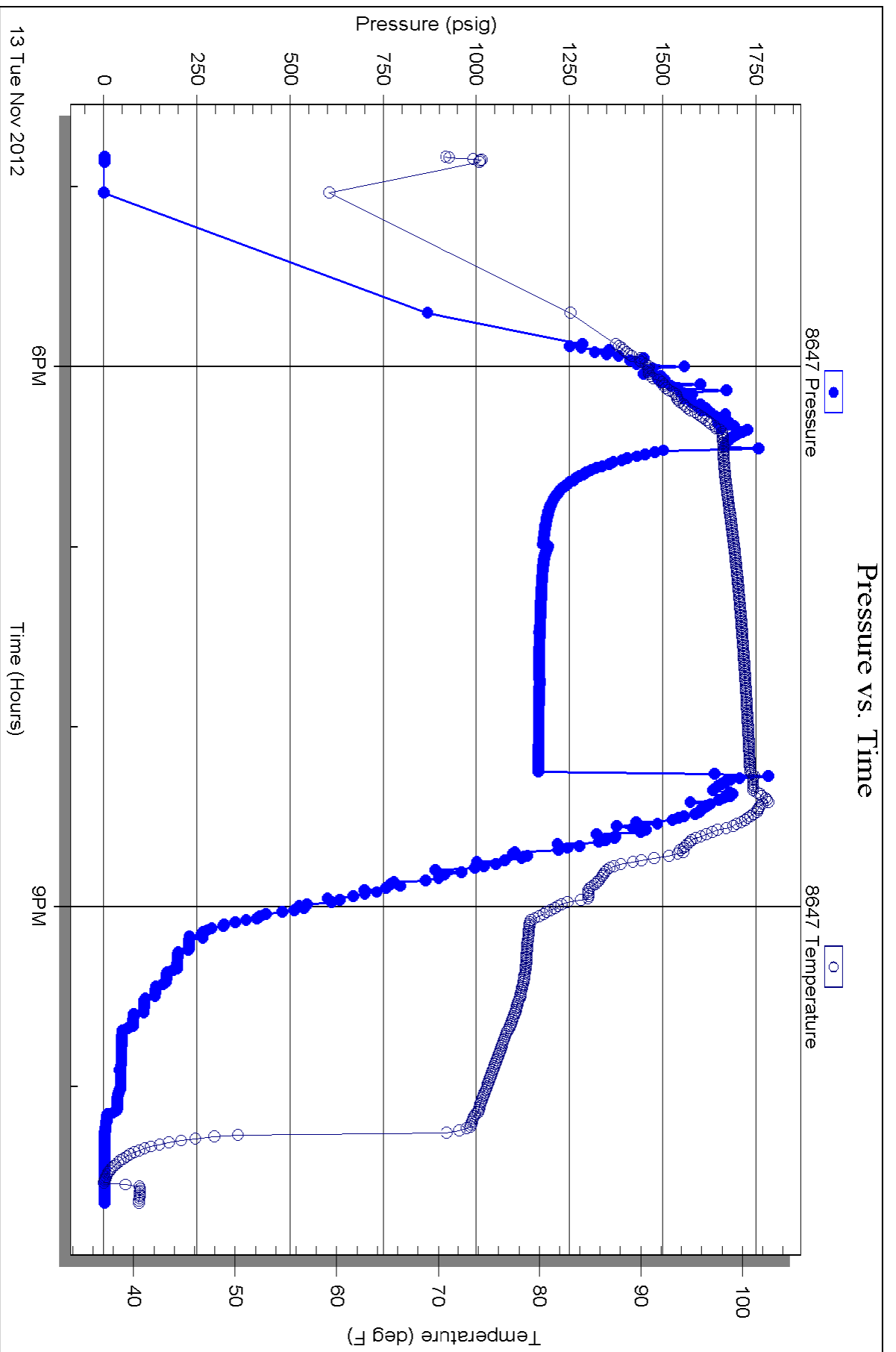
Inside

TD/Inc

Rohleder #3

DST Test Number: 1







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50754

Well Name & No. Rohleder #3 Test No. 1 Date 11-13-12
 Company TDI INC Elevation 1857 KB 1867 GL
 Address 1310 BISON RD Hays Ks 67601
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 24 Twp. 14s Rge. 16w Co. Ellis State Ks

Interval Tested 3320-3396 Zone Tested Neubuckle
 Anchor Length 76 Drill Pipe Run 3330 Mud Wt. 9.2
 Top Packer Depth 3320 Drill Collars Run 0 Vis 56
 Bottom Packer Depth 3396 Wt. Pipe Run 0 WL 7.2
 Total Depth 3500 Chlorides 3600 ppm System LCM 1 1/2"

Blow Description IF: 6" blow in 3min BOB 7min
FSD: NO Return
FF: 6" blow in 7min BOB 13min
FSD NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>180</u>	<u>MCBD</u>	<u>10</u>	<u>50</u>	<u>40</u>	<u>0</u>
<u>155</u>	<u>OCCM</u>	<u>10</u>	<u>40</u>	<u>50</u>	<u>0</u>
<u>60</u>	<u>GOCWM</u>	<u>10</u>	<u>15</u>	<u>30</u>	<u>45</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 395 BHT 101 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1701 Test 1150 T-On Location 15:55
 (B) First Initial Flow 28 Jars _____ T-Started 16:50
 (C) First Final Flow 149 Safety Joint _____ T-Open 18:30
 (D) Initial Shut-In 896 Circ Sub _____ T-Pulled 20:15
 (E) Second Initial Flow 147 Hourly Standby _____ T-Out 22:40
 (F) Second Final Flow 188 Mileage 35RT 54.25 Comments _____
 (G) Final Shut-In 885 Sampler _____
 (H) Final Hydrostatic 1675 Straddle 600 Ruined Shale Packer _____

Initial Open 30 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 30 Extra Packer _____ Extra Copies _____
 Final Flow 15 Extra Recorder _____ Sub Total 0
 Final Shut-In 30 Day Standby _____ Total 1804.25
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1804.25

Approved By _____ Our Representative Orly C

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: ROHLEDER # 3
 Location: NE SW NW SW Sec.27-14s-16w
 Pool: IN FIELD
 State: KANSAS

API: 15-051-26,410-00-00
 Field: DREILING
 Country: USA



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

Scale 1:240 Imperial

Well Name: ROHLEDER # 3
 Surface Location: NE SW NW SW Sec.27-14s-16w
 Bottom Location:
 API: 15-051-26,410-00-00
 License Number: 4787
 Spud Date: 11/8/2012
 Region: ELLIS COUNTY
 Drilling Completed: 11/13/2012
 Surface Coordinates: 1950' FSL & 465' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 1857.00ft
 K.B. Elevation: 1867.00ft
 Logged Interval: 2500.00ft
 Total Depth: 3500.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER

Time: 3:15 PM
 Time: 2:51 AM
 To: 3500.00ft

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: Latitude:
 N/S Co-ord: 1950' FSL
 E/W Co-ord: 465' 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

Rig Type: MUD ROTARY
Spud Date: 11/8/2012
TD Date: 11/13/2012
Rig Release: 11/14/2012

Time: 3:15 PM
Time: 2:51 AM
Time: 10:30 AM

ELEVATIONS

K.B. Elevation: 1867.00ft
K.B. to Ground: 10.00ft

Ground Elevation: 1857.00ft

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 TESTING INC: ONE (1) STRADDLE TEST

FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY

ROHLEDER # 3

1950' FSL & 465' FWL, SW/4

Sec. 27-14s-16w

1857' GL 1867' KB

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>LOG TOPS</u>
Anhydrite	967+ 900	972+ 895
B-Anhydrite	1006+ 861	1008+ 859
Topeka	2846- 979	2847- 980
Heebner Shale	3067-1200	3066-1199
Toronto	3088-1221	3086-1219
LKC	3112-1245	3114-1247
BKC	3342-1475	3343-1476
Arbuckle		3358-1491
RTD	3500-1633	
LTD		3501-1634

SUMMARY OF DAILY ACTIVITY

11-08-12 Spud 3:15 PM, set 8 5/8" surface casing to 226' w/ 150 sxs common, 2%Gel, 3%CC, plug down 7:30pm, WOC 8 hrs, slope ½ degree

11-09-12 381', drill plug at 3:30 AM


11-10-12 1560', drilling

11-11-12 2370', drilling, displace 2673'-2691'

11-12-12 3085' drilling, RTD 3496' @ 8:23am, CGU short trip

11-12-12 5085', drilling, RTD 5496 @ 8:55pm, CCH, TOWB, logs, straddle test # 1
 11-13-12 3500', RTD 2:51 am, short trip, CCH, TOWB, logs, straddle test # 1
 3320' – 3396', LDDP
 11-14-12 3500', LDDP, run 5 1/2" casing, cementing, plug down 10:30 AM, RD

DST # 1 TEST SUMMARY

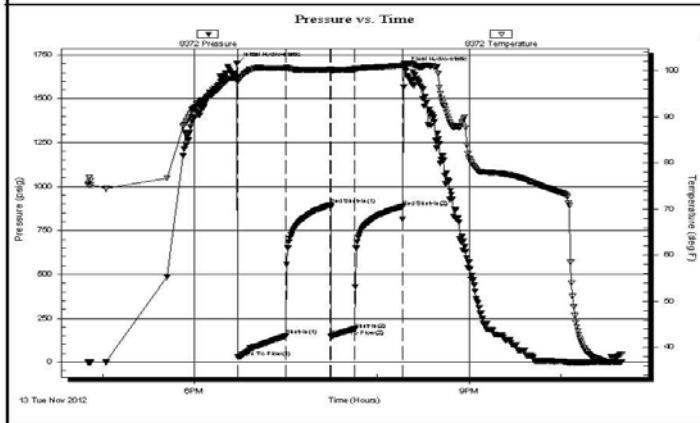
	DRILL STEM TEST REPORT		
	TDI inc 1310 Bison rd Hays Ks. 67601 ATTN: Herb Deines	24-14s-16w Ellis Rohleder #3 Job Ticket: 50754 DST#: 1 Test Start: 2012.11.13 @ 16:50:05	

GENERAL INFORMATION:

Formation: Arbuckle	Test Type: Conventional Straddle (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Andy Carreira
Time Tool Opened: 18:28:20	Unit No: 39
Time Test Ended: 22:40:09	Reference Elevations: 1867.00 ft (KB)
Interval: 3329.00 ft (KB) To 3396.00 ft (KB) (TVD)	1857.00 ft (CF)
Total Depth: 3500.00 ft (KB) (TVD)	KB to GR/CF: 10.00 ft
Hole Diameter: 7.88 inches Hole Condition: Fair	

Serial #: 8372 Outside	Capacity: 8000.00 psig
Press@RunDepth: 188.18 psig @ 3324.00 ft (KB)	Last Calib.: 2012.11.13
Start Date: 2012.11.13 End Date: 2012.11.13	Time On Btm: 2012.11.13 @ 18:27:30
Start Time: 16:50:05 End Time: 22:40:10	Time Off Btm: 2012.11.13 @ 20:17:50

TEST COMMENT: IF:(30min) 6" blow in 3 min. BOB in 7 min.
 ISl:(30min) No Return
 FF:(15min) 6" blow in 7 min. BOB in 13 min.
 FSt:(30min) No Return



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1701.57	98.39	Initial Hydro-static
1	28.77	97.56	Open To Flow (1)
33	149.11	100.51	Shut-In(1)
62	896.06	100.26	End Shut-In(1)
62	147.48	99.94	Open To Flow (2)
78	188.18	100.31	Shut-In(2)
109	885.98	101.07	End Shut-In(2)
111	1675.80	101.56	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
60.00	GOCVM g=10% o=15% w=30% m=45%	0.84
155.00	OCGM g=10% o=40% m=50%	2.17
180.00	MCOGO g=10% m=40% o=50%	2.52

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

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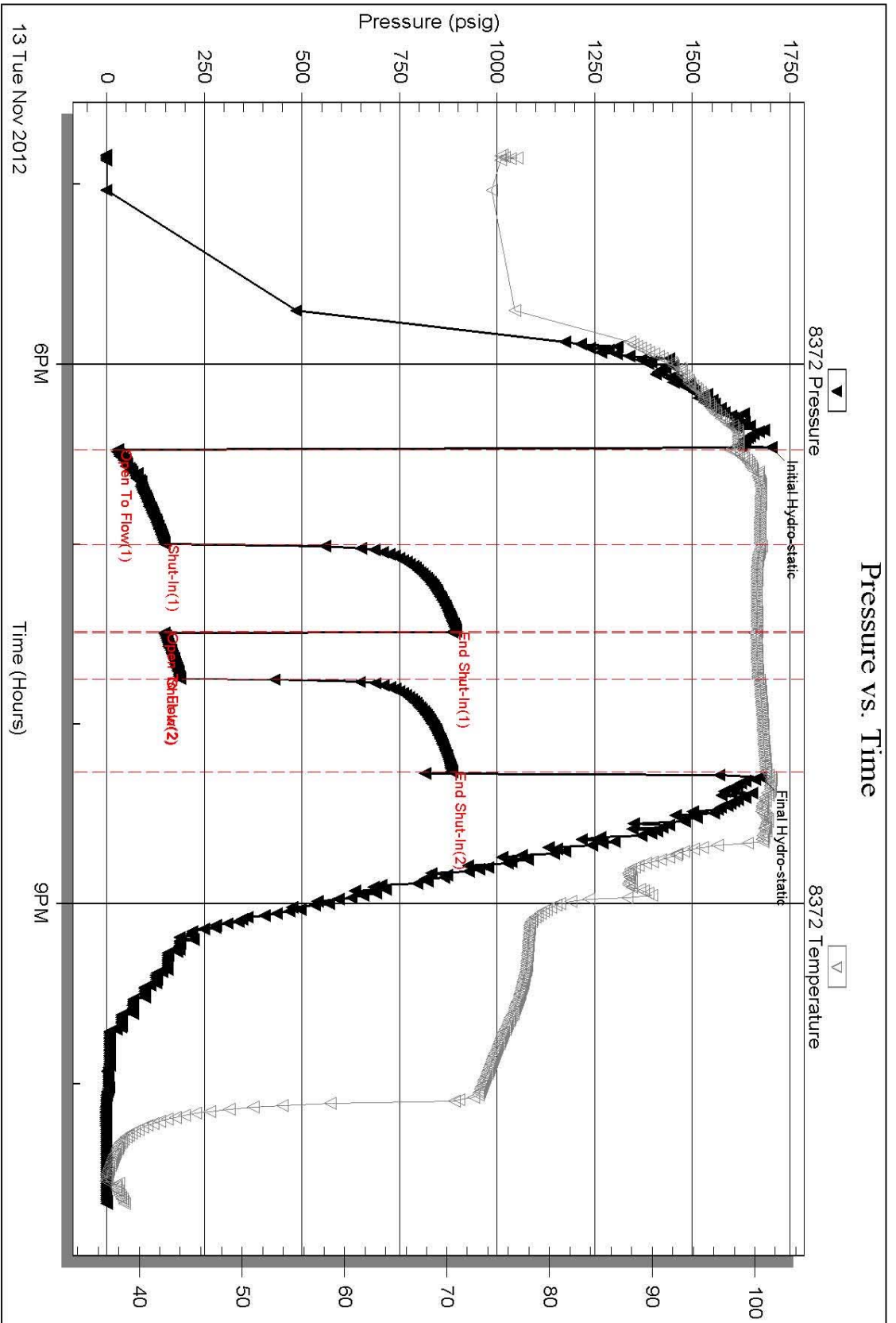
DST # 1 EXPANDED CHART

Serial #: 8372

Outside TDI inc

Rohleder #3

DST Test Number: 1



ACCESSORIES

MINERAL

- ▲ Chert, dark
- ∩ Glauconite
- P Pyrite
- △ Chert White

FOSSIL

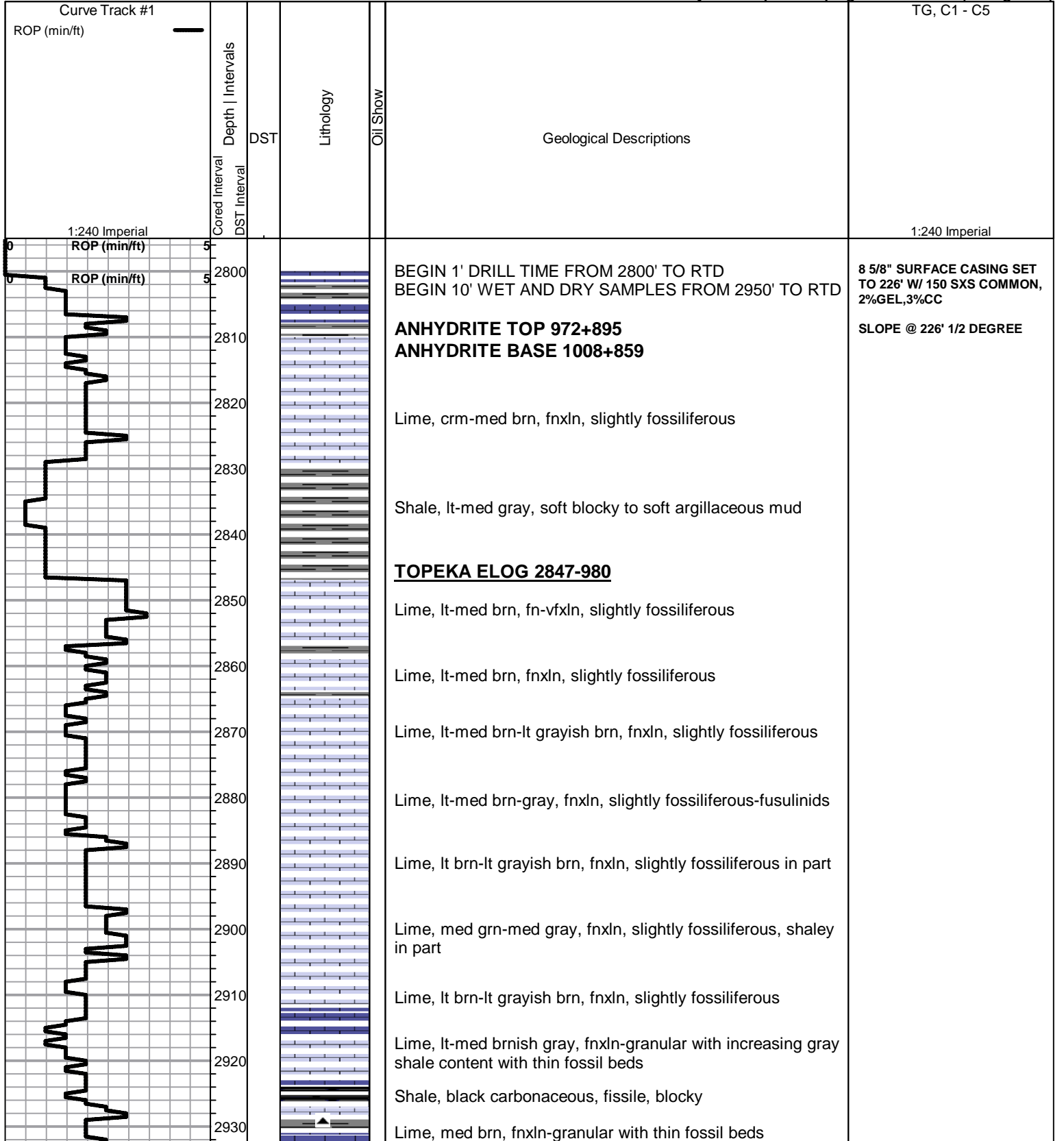
- ⊖ Oolite
- ⊖ Oomoldic

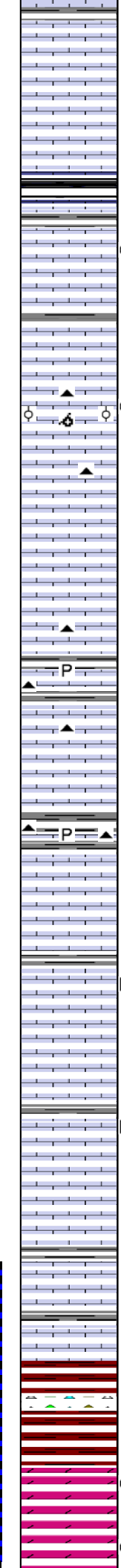
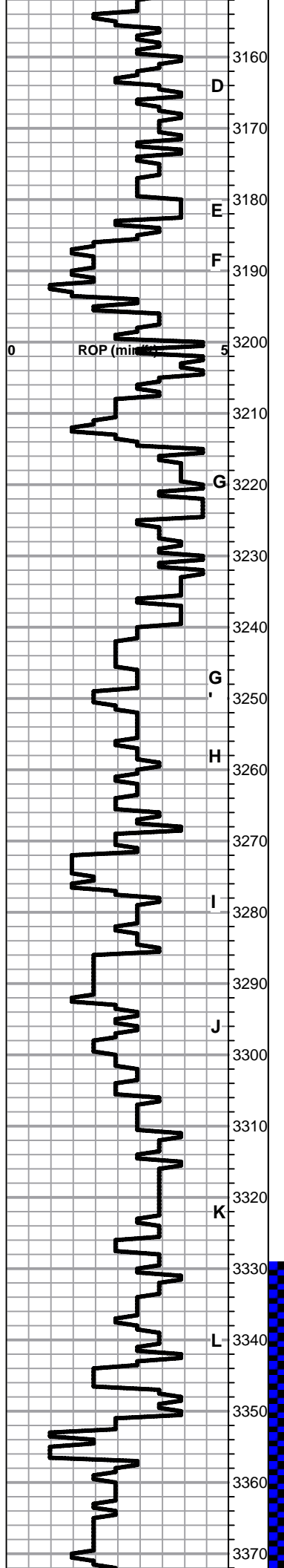
OTHER SYMBOLS

DST

- DST Int
- DST alt
- Core

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





Lime, crm, fnxln, bedded chalk, NS

Lime, crm, fnxln, bedded chalk, NS

Shale, gray-black carbonaceous
Lime, pale gray, vfxln

○ Lime, crm-tan, fnxln-granular , few chips with ppt vug porosity, 1 chip lt gray, dolomitic lime with vug porosity with lt contact staining, NFO, No Odor

Lime, crm, fnxln

○ Lime, crm, fnxln with oolitic-oolmodlic in part, few chips with lt staining with barren chips in part

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

Lime, crm-lt brn, fn-crypto xln, bedded chalk in part

Lime, crm-pale gray, fnxln-crypto xln, slight bed chalk in part

▲ P
Lime, crm-lt gray, fn-vfxln with scattered fossiliferous chert, NS, NFO, No Odor

Lime, lt gray, fnxln, NS

▲ P ▲
Shale, gray-black carbonaceous, black chert , pyritic

Lime, crm-tan, fn-vfxln, brittle in part, NS

D Lime, crm-tan, fnxln, scattered dead oil stain in chalky lime

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

D Lime, crm-lt brn, fnxln, gilsonite staining, NFO, No Odor

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

K Lime, crm, fnxln

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

Lime, crm-lt brn, fnxln

BKC ELOG 3343-1476

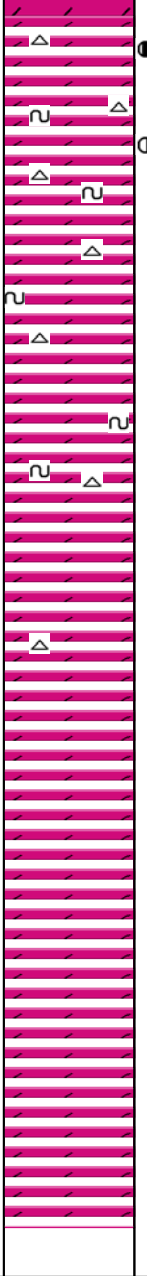
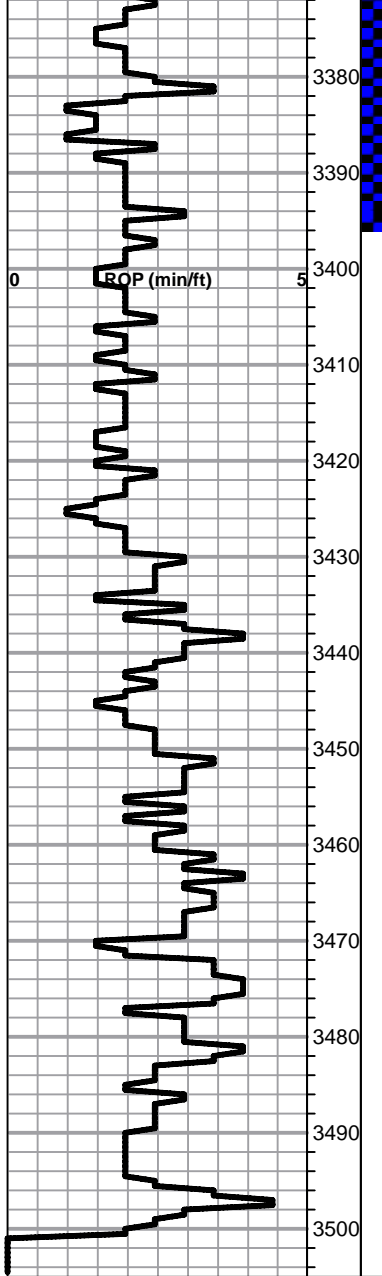
Shale, red, soft
Lime, crm-med brn, fnxln, bedded chalk
Shale, red - brn wash, soft

ARBUCKLE ELOG 3358-1491

● Dolomite,lt brn, fnxln-granular-sucrosic, fine chips, SFO, Lt odor, lt staining.

● Lime, lt-med brn, fnxln-granular-sucrosic, F-G odor, lt sat stain. best samples very fine chips

stain, test samples very fine chips



Dolomite, crm-med brn, oolmoldic in part with white chert, good odor and staining

Dolomite, ivory-crm, fnxln-granular, specks of green glauconite, lt odor decreasing with depth

Dolomite, crm-tan, fnxln, hard on crush, few chips of sucrosic material with no odor or staining.

Dolomite, ivory-crm, fnxln-granular

Dolomite, ivory-crm, fn-cxln, lt white chalk wash, specks of glauconite.

Dolomite, ivoty-crm, fnxln

Dolomite, ivory-crm, fnxln with scattered cxln

Dolomite, ivory-crm, fn-cxln

Dolomite, ivory-crm, fn-cxln

Dolomite, ivory, fnxln, hard on crush

Dolomite, ivory mostly fnxln

Dolomite, ivory, mostly fnxln with scattered euhedral dev.

RTD 3500-1633 LTD 3501-1634

**RAN 5 1/2" PRODUCTION
CASING SET TO 3499' W/ 150
SXS EA2 FOR BOTTOM STAGE
DV TOOL AT 963' W/ 155 SXS
SMD, 30 SXS IN RATHOLE, 15
SXS IN THE MOUSEHOLE**

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. 6092

Date	11-8-12	Sec.	27	Twp.	14	Range	16	County	Ellis	State	KS	On Location	5:00pm	Finish	7:30pm	
Lease	Rohleder							Well No.	3	Location Walker 3 1/2 S 1 W 1/2 S E into						
Contractor	Eckhardt I							Owner 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.								
Type Job	Surface							Charge To T D I								
Hole Size	1 1/4							T.D.	227	Street						
Csg.	8 5/8							Depth	226.18	City						
Tbg. Size								Depth		State						
Tool								The above was done to satisfaction and supervision of owner agent or contractor.								
Cement Left in Csg.	20ft							Shoe Joint	20ft	Cement Amount Ordered 150 3% CC 2% Gel						
Meas Line								Displace	13. BIDL							
EQUIPMENT													Common			150
Pumptrk	5	No.	Cementer	Matt							Poz. Mix	2				
Bulktrk	1	No.	Helper	Brett							Gel.	3				
Bulktrk		No.	Driver								Calcium	5				
JOB SERVICES & REMARKS													Hulls			
Remarks:													Salt			
Rat Hole													Flowseal			
Mouse Hole													Kol-Seal			
Centralizers													Mud CLR 48			
Baskets													CFL-117 or CD110 CAF 38			
D/V or Port Collar													Sand			
													Handling 158			
													Mileage			
FLOAT EQUIPMENT																
Cement did Circulate													Guide Shoe			
													Centralizer			
													Baskets			
													AFU Inserts			
													Float Shoe			
													Latch Down			
													Pumptrk Charge Surface			
													Mileage 18			
													Tax			
													Discount			
													Total Charge			
X Signature	[Signature]															

JOB LOG

SWIFT Services, Inc.

DATE 11-14-12 PAGE NO. 1

CUSTOMER *TDI* WELL NO. *23* LEASE *Rohleder* JOB TYPE *2-stage* TICKET NO. *21965*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0600							on loc w/FE
								RTD
								5 1/2" x 15.5" x 3499' x 41'
								Cont. 1, 4, 6, 8, 6, 9, 11, 87, 60
								Pusk. 3, 13, 61, 25
								DV 61 @ 963'
	0615							Start FE
	0750							Break Circ
	0900	5	0			200		Start Part. 500 gal / Mu. d-Flash
		5	32/0			200		20 bbl KCL Flash
	0913		36					Start EA-2 Cement 150 sks
								End Cement
								Wash P+L
								Drip & D Plug
	0920	6	0			200		Start Displacement
		5	60			250		Catch Cement / Start KCL Flash
	0940		82.5			750 / 200		Land Plug / Release pressure / Hold
								Drop Opening Plug
	0945	2.5	7/4					Plug RH & MH 30/15 sks 3/11
	0954					1100		Open D.V.
	0955	5	0			175		Start SMD Cement 155 sks
	0910		90					End Cement
								Drop Closing Plug
	0915	5	0			150		Start Displacement
		4	15			300		Circ Cement
	0925		23			420		Land Plug
						1500		Close DV
								circ 25 sks to pit
								Thank you
								Nick, David E. & Rob

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

January 23, 2013

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

Re: ACO1
API 15-051-26410-00-00
Rohleder 3
SW/4 Sec.27-14S-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