



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1090414  
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: \_\_\_\_\_

1090414

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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## DRILL STEM TEST REPORT

Prepared For: **TDI, Inc.**

1310 Bison Rd.  
Hays, KS 67601

ATTN: Herb Deines

**Gerstner #1**

**13-15s-19w Ellis,KS**

Start Date: 2012.06.22 @ 20:15:15

End Date: 2012.06.23 @ 02:45:15

Job Ticket #: 47957                      DST #: 1

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

Printed: 2012.06.28 @ 10:11:18

TDI, Inc.  
13-15s-19w Ellis,KS  
Gerstner #1  
DST # 1  
LKC "A-D"  
2012.06.22







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**13-15s-19w Ellis,KS**  
**Gerstner #1**  
Job Ticket: 47957      **DST#: 1**  
Test Start: 2012.06.22 @ 20:15:15

**Tool Information**

Drill Pipe:	Length: 3296.00 ft	Diameter: 3.80 inches	Volume: 46.23 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: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 46.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3300.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.00 ft			
Tool Length:	100.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3281.00	
Shut In Tool	5.00			3286.00	
Hydraulic tool	5.00			3291.00	
Packer	5.00			3296.00	20.00      Bottom Of Top Packer
Packer	4.00			3300.00	
Stubb	1.00			3301.00	
Perforations	5.00			3306.00	
Change Over Sub	1.00			3307.00	
Drill Pipe	62.00			3369.00	
Change Over Sub	1.00			3370.00	
Recorder	0.00	8354	Inside	3370.00	
Recorder	0.00	8520	Outside	3370.00	
Perforations	7.00			3377.00	
Bullnose	3.00			3380.00	80.00      Bottom Packers & Anchor

**Total Tool Length: 100.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**13-15s-19w Ellis,KS**  
**Gerstner #1**  
Job Ticket: 47957      **DST#: 1**  
Test Start: 2012.06.22 @ 20:15:15

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 40 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 38000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.80 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: 0.19 ohm.m	Gas Cushion Pressure: psig	
Salinity: 3300.00 ppm		
Filter Cake: inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	95%Water/5%Mud	0.870
31.00	50%Gas/20%Oil/25%Water/5%Mud	0.435
155.00	50%Gas/50%Oil	2.174
372.00	20%Gas/60%Oil/10%Water/10%Mud	5.218
124.00	25%Gas/5%Oil/70%Mud	1.739
17.00	5%Oil/95%Mud	0.238
0.00	1223' G.I.P.	0.000

Total Length: 761.00 ft      Total Volume: 10.674 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

Serial #: 8354

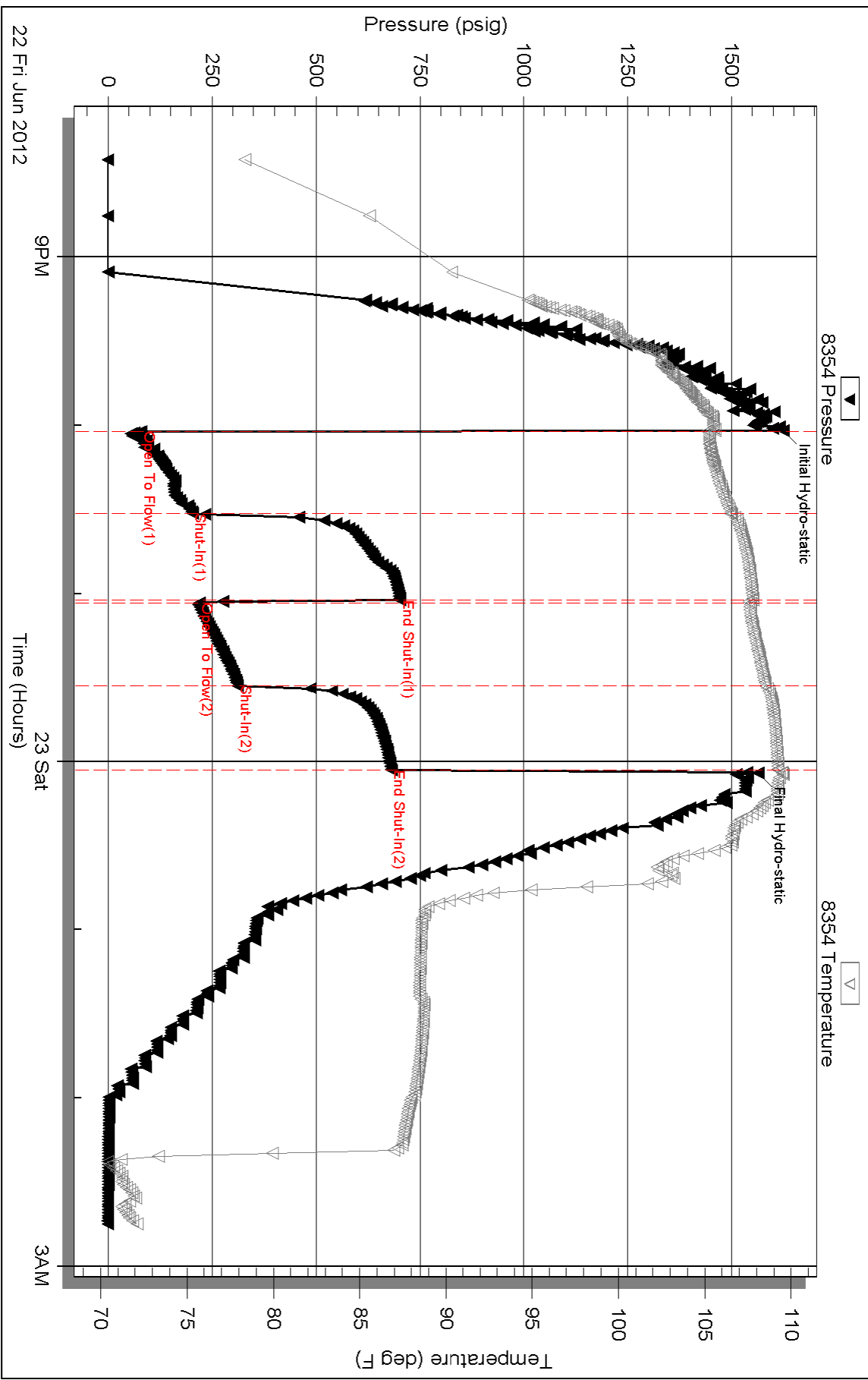
Inside

TDI, Inc.

Gerstner #1

DST Test Number: 1

# Pressure vs. Time



Triobite Testing, Inc

Ref. No: 47957

Printed: 2012.06.28 @ 10:11:20

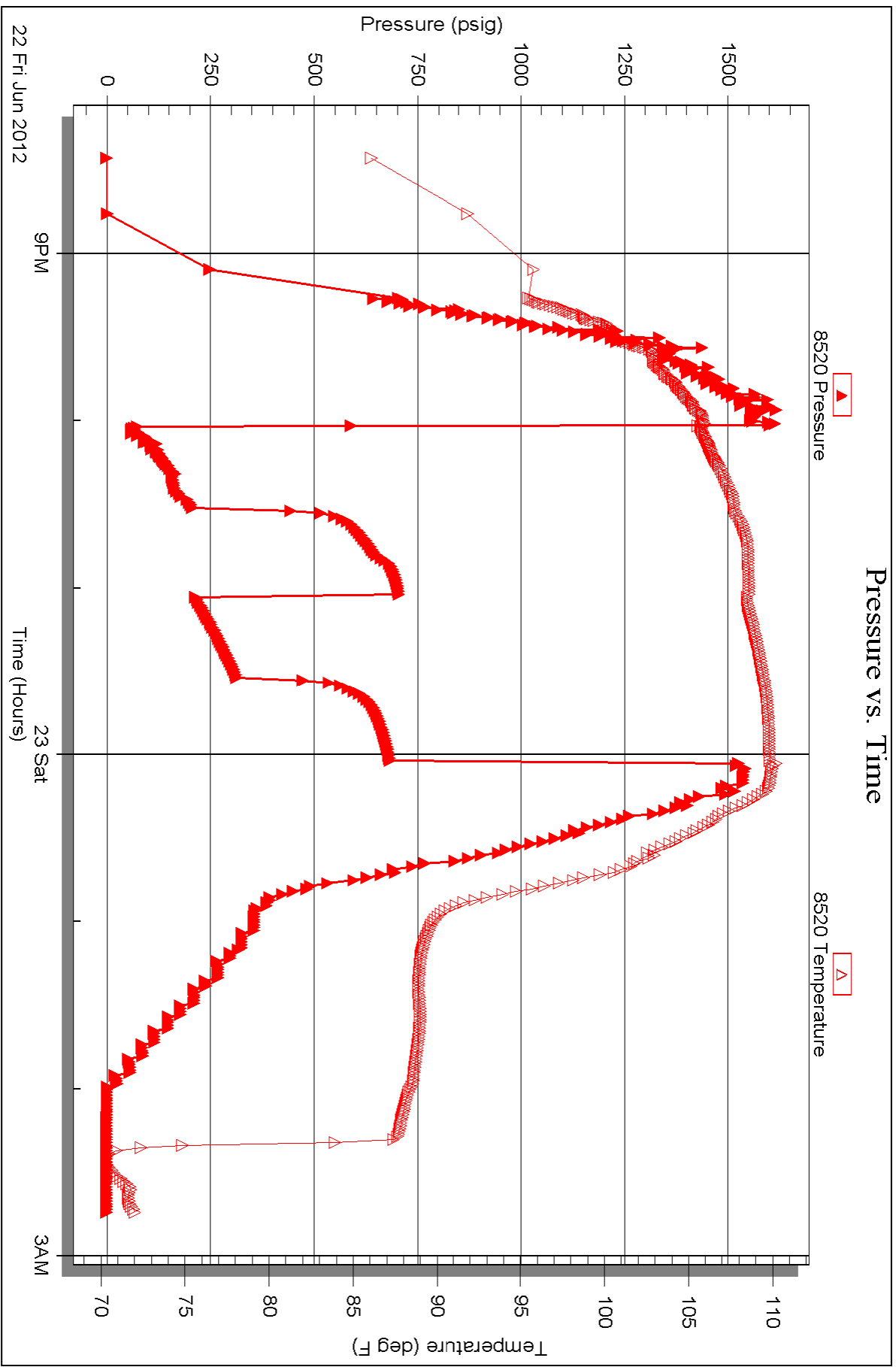


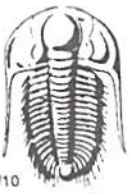
Serial #: 8520

Outside TDI, Inc.

Gerstner #1

DST Test Number: 1





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 47957

4/10

Well Name & No. Geothermal #1 Test No. 1 Date 6-22-12  
 Company TNT, Inc. Elevation 2035 KB 2028 GL  
 Address 1310 Bison Rd, Hays, KS 67601  
 Co. Rep / Geo. Herb Dennes Rig Southward #1  
 Location: Sec. 13 Twp. 15S Rge. 19W Co. Ellis State KS

Interval Tested 3300-3380 Zone Tested LKC "A-D"  
 Anchor Length 80' Drill Pipe Run 3296 Mud Wt. 8.9  
 Top Packer Depth 3295 Drill Collars Run 0 Vis 58  
 Bottom Packer Depth 3300 Wt. Pipe Run 0 WL 6.8  
 Total Depth 3380 Chlorides 3300 ppm System LCM 1"

Blow Description FF- Strong building blow, BOB in 1 minute 45 seconds,  
FST- Return @ 30 seconds, Built to 5 inches,  
FF- Strong building blow, BOB in 3 minutes,  
FST- Return @ 1 minute, BOB in 27 minutes,

Rec	Feet of	%gas	%oil	%water	%mud
17	USOCM		5		95
124	Gassy OCM	25	5		70
372	Gassy wmo.	20	60	10	10
155	Gassy oil	50	50		
31	Gassy mow	50	20	25	5

*(Handwritten note in a circle):*  
 62' MW  
 65% OCM  
 95% W

Rec Total 761 BHT \_\_\_\_\_ Gravity 40 API RW 192 @ 71 °F Chlorides 33000 ppm

(A) Initial Hydrostatic 1624  Test \_\_\_\_\_ 1150 T-On Location 1815  
 (B) First Initial Flow 80  Jars 1223' T-Started 2045  
 (C) First Final Flow 203  Safety Joint 6TIP T-Open 2202  
 (D) Initial Shut-In 701  Circ Sub \_\_\_\_\_ T-Pulled 0005  
 (E) Second Initial Flow 219  Hourly Standby \_\_\_\_\_ T-Out 0245  
 (F) Second Final Flow 312  Mileage 15X2 46.50 Comments BAST-2015  
 (G) Final Shut-In 680  Sampler \_\_\_\_\_ Slid 8-10' after  
 (H) Final Hydrostatic 1565  Straddle \_\_\_\_\_ opening of tool,  
 Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 30  Day Standby \_\_\_\_\_ Total 1196.50  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 30 Sub Total 1196.50

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: 785-259-3141  
 Well Name: GERSTNER # 1  
 Location: NE SW NW NW Sec.13-15S-19W      API: 15-051-26,312-00-00  
 Pool: WILDCAT      Field: DECHANT SOUTH  
 State: KANSAS      Country: USA



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

Scale 1:240 Imperial

Well Name: GERSTNER # 1  
 Surface Location: NE SW NW NW Sec.13-15S-19W  
 Bottom Location:  
 API: 15-051-26,312-00-00  
 License Number: 4787  
 Spud Date: 6/18/2012      Time: 1:00 PM  
 Region: ELLIS COUNTY  
 Drilling Completed: 6/23/2012      Time: 8:39 PM  
 Surface Coordinates: 775' FNL & 615' FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2025.00ft  
 K.B. Elevation: 2035.00ft  
 Logged Interval: 2900.00ft      To: 3752.00ft  
 Total Depth: 3750.00ft  
 Formation: LANSING-KANSAS CITY  
 Drilling Fluid Type: GEL/CHEMICAL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude:      Latitude:  
 N/S Co-ord: 775' FNL  
 E/W Co-ord: 615' 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: 6/18/2012      Time: 1:00 PM  
 TD Date: 6/23/2012      Time: 8:39 PM  
 Rig Release: 6/24/2012      Time: 5:00 PM

**ELEVATIONS**

K.B. Elevation: 2035.00ft      Ground Elevation: 2025.00ft  
 K.B. to Ground: 10.00ft

**NOTES**

RECOMMENDATION TO RUN PRODUCTION CASING BASED ON RESULTS OF DST # 1 AND FAVORABLE STRUCTURE.


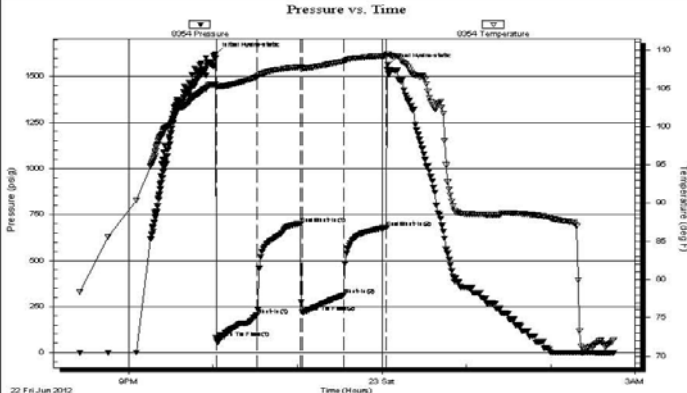
**FORMATION TOPS SUMMARY AND SUMMARY OF DAILY ACTIVITY AND DEPTH AT 7:00 AM**

**GERSTNER #1**  
**775' FNL & 615' FWL, NW/4**  
**Sec.13-15s-19w**  
**2025' GL 2035' KB**

FORMATION	SAMPLE TOPS	LOG TOPS
Anhydrite	1222+ 813	1226+ 812
B-Anhydrite	1262+ 773	1262+ 773
Topeka	2992- 957	2994- 959
Heebner Shale	3274-1239	3275-1240
Toronto	3295-1260	3293-1258
LKC	3319-1284	3318-1283
BKC		3566-1531
Arbuckle		3633-1598
RTD	3750-1715	
LTD		3752-1717

- 6-18-12 RU, Spud 1:00PM, set surface casing to 212.77' w/150 sxs. Common, 2%gel, 3%CC, Slope survey 3/4 degree, WOC 8 hrs. Plug down 5:15PM, Quality Cementing Ticket # 873
- 6-19-12 214', change brake pads on draw works, drilling
- 6-20-12 1680', drilling
- 6-21-12 2521', drilling
- 6-22-12 3210', drilling, DST # 1, slope survey 3/4 degree
- 6-23-12 3413', drilling, RTD 3750', mini short trip, CCH, out for logs
- 6-24-12 3750', logging completed, trip in with drill pipe, run casing, RD

### DST # 1 SUMMARY PAGE

 <b>TRILOBITE TESTING, INC.</b>	<b>DRILL STEM TEST REPORT</b>																																						
	TDI, Inc. 1310 Bison Rd. Hays, KS 67601 ATTN: Herb Deines	<b>13/15S/19W-Ellis</b>  <b>Gerstner #1</b> Job Ticket: 47957 Test Start: 2012.06.22 @ 20:15:15	<b>DST#: 1</b>																																				
<b>GENERAL INFORMATION:</b> Formation: <b>LKC "A-D"</b> Deviated: No Whipstock: ft (KB) Time Tool Opened: 22:02:05 Time Test Ended: 02:45:15 Interval: <b>3300.00 ft (KB) To 3380.00 ft (KB) (TVD)</b> Total Depth: 3380.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Poor Test Type: Conventional Bottom Hole (Initial) Tester: Dustin Rash Unit No: 38 Reference Elevations: 2035.00 ft (KB) 2028.00 ft (CF) KB to GR/CF: 7.00 ft																																							
<b>Serial #: 8354 Inside</b> Press@RunDepth: 311.82 psig @ 3370.00 ft (KB) Start Date: 2012.06.22 End Date: 2012.06.23 Start Time: 20:25:15 End Time: 02:45:15 Capacity: 8000.00 psig Last Calib.: 2012.06.23 Time On Btm: 2012.06.22 @ 22:01:45 Time Off Btm: 2012.06.23 @ 00:04:15																																							
<b>TEST COMMENT:</b> IF-Strong building blow. BOB in 1 minute 45 seconds. IS-Return @ 30 seconds. Built to 5 inches. FF-Strong building blow. BOB in 3 minutes. FS-Return @ 1 minute. BOB in 27 minutes.																																							
	<b>PRESSURE SUMMARY</b> <table border="1"> <thead> <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>1624.07</td><td>105.60</td><td>Initial Hydro-static</td></tr> <tr><td>1</td><td>79.90</td><td>105.14</td><td>Open To Flow (1)</td></tr> <tr><td>30</td><td>202.80</td><td>106.53</td><td>Shut-In(1)</td></tr> <tr><td>61</td><td>701.32</td><td>107.79</td><td>End Shut-In(1)</td></tr> <tr><td>62</td><td>219.20</td><td>107.68</td><td>Open To Flow (2)</td></tr> <tr><td>91</td><td>311.82</td><td>108.51</td><td>Shut-In(2)</td></tr> <tr><td>122</td><td>680.35</td><td>109.25</td><td>End Shut-In(2)</td></tr> <tr><td>123</td><td>1564.78</td><td>109.50</td><td>Final Hydro-static</td></tr> </tbody> </table>			Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation	0	1624.07	105.60	Initial Hydro-static	1	79.90	105.14	Open To Flow (1)	30	202.80	106.53	Shut-In(1)	61	701.32	107.79	End Shut-In(1)	62	219.20	107.68	Open To Flow (2)	91	311.82	108.51	Shut-In(2)	122	680.35	109.25	End Shut-In(2)	123	1564.78	109.50	Final Hydro-static
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31.00	50%Gas/20%Oil/25%Water/5%Mud	0.43																																					
155.00	50%Gas/50%Oil	2.17																																					
372.00	20%Gas/60%Oil/10%Water/10%Mud	5.22																																					
124.00	25%Gas/5%Oil/70%Mud	1.74																																					
17.00	5%Oil/95%Mud	0.24																																					
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)																																					

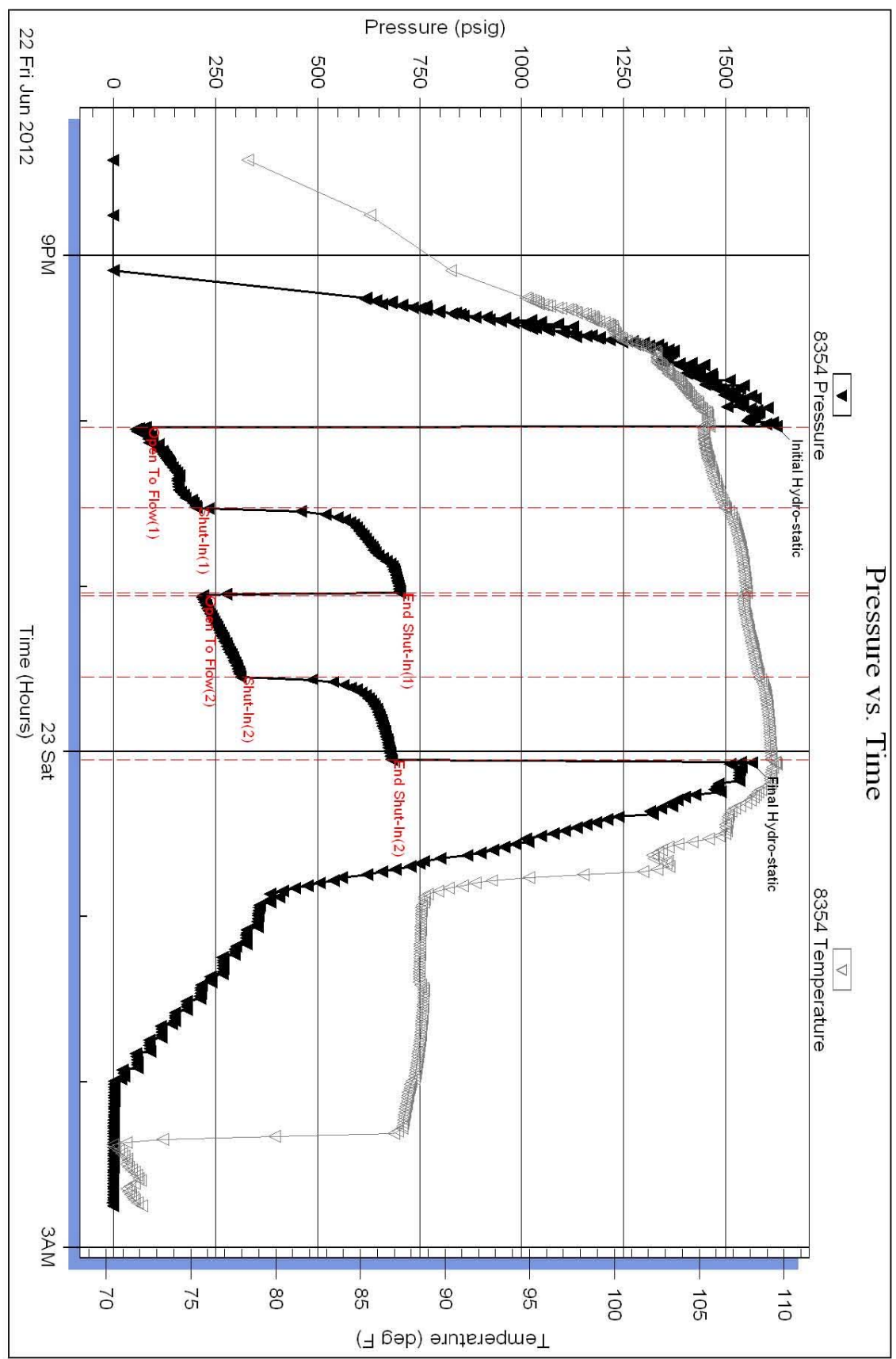
Trilobite Testing, Inc

Ref. No: 47957

Printed: 2012.06.25 @ 12:04:24

### DST # 1-EXPANDED CHART

Serial #: 8354    Inside    TDI, Inc.    Gerstner #1    DST Test Number: 1



Triolbite Testing, Inc    Ref. No: 47957    Printed: 2012.06.25 @ 12:04:25

**ROCK TYPES**

Dolprim	Lmst fw<7	shale, grn	Shcol
Dolsec	Lmst fw7>	Carbon Sh	Shgy
Dol Lime	Lscongl	shale, red	

**ACCESSORIES**

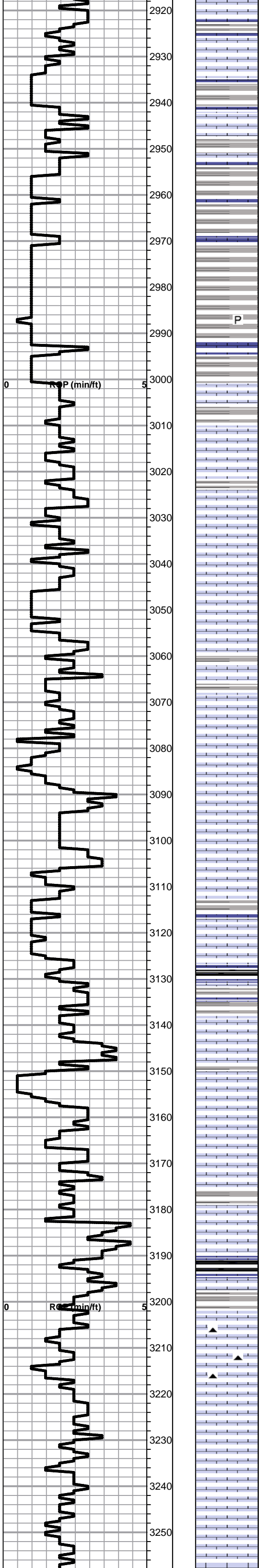
<b>MINERAL</b>	<b>FOSSIL</b>
■ Carbonaceous Flakes	○ Oolite
▲ Chert, dark	⊕ Oomoldic
P Pyrite	
• Sandy	
⋄ Varicolored chert	
△ Chert White	

**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			Begin 1' drill time from 2900' to RTD Begin 10' wet and dry samples from 3000' to RTD <b>ANHYDRITE SPL TOP 1222+813 ELog 1226+809</b> <b>ANHYDRITE SPL BASE 1262+773 ELog 1262+773</b>	1:240 Imperial <b>8 5/8" set to 212.77' with 150 sxs. Common, 2%gel, 3%CC</b> Slope @213' 3/4 degree



Shale, lt-med gray, soft blocky

Shale, lt-med gray, soft blocky with pyrite clusters in part

**TOPEKA SPL 2992-957 ELog 2994-959**

Lime, dark brn, fnxln, fossiliferous

Lime, lt-med brn, fnxln, fossiliferous

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

Lime, offwht-lt brn, fnxln

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

Lime, lt brn-grayish brn, fnxln with gray mottling in part

Lime, med brn-grayish brn, fnxln-granular, slightly chalky

Lime, lt brn-grayish brn, fnxln-granular, slightly chalky

Lime, lt-med brn, fnxln, fossiliferous in part-fusulinids

Lime, med brn, fnxln-granular, slightly fossiliferous, slight chalk

Lime, med brn-grayish brn, granular, fossiliferous in part

Shale, gray-black carbonaceous

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

Lime, crm-lt brn, granular, slightly chalky, NS

Lime, crm-tan, fnxln, slightly chalky

Shale, gray, calcareous with fossil fragments in part

Lime, grn-grayish brn, fnxln, trashy in part

Shale, black carbonaceous

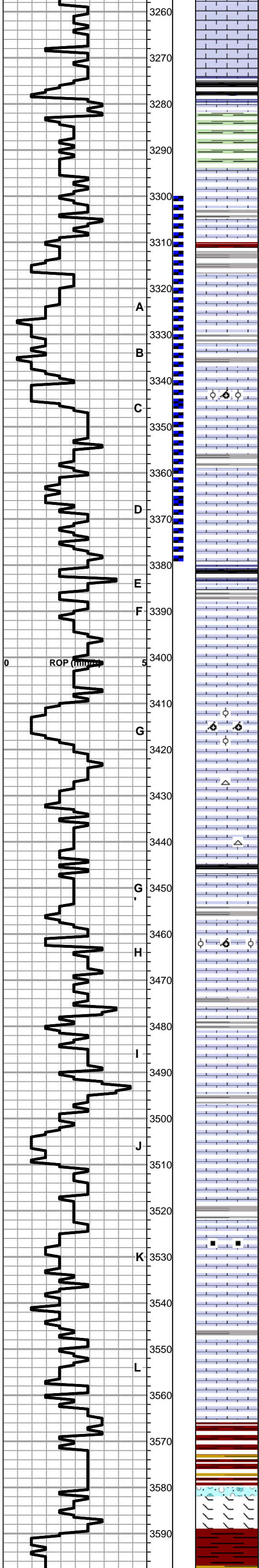
Lime, brn-brownish gray, fnxln

Lime, lt-med brn-grayish brn, fnxln, slight chalk in part, scattered fossiliferous, dark gray chert, NS

Lime, med brn-grayish brn, fnxln-granular in part, NS

Lime, med brn-grayish brn, fnxln

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



Lime, lt brn, fnxn, slightly fossiliferous in part

**HEEBNER SHALE SPL 3274-1239 ELog 3275-1240**

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

**TORONTO SPL 3295-1260 ELog 3293-1258**

Lime, crm, fn-vfxln, NS

Lime, crm, fn-vfxln, NS  
Shale, lt red wash to gray, soft

**LKC SPL 3319-1284 ELog 3318-1283**

A

Lime, lt-med brn, fnxn with scattered fossiliferous in part with lt saturated staining, lt odor in a fine intercrystalline, interfossiliferous porosity

B

Lime, lt brn-gry, fnxn  
Shale, med gray, calcareous with fossil fragments

C

Lime, crm, fnxn-granular with few pieces of oolitic-oolimoldic material with scattered to saturated staining with light odor with interoolitic porosity

D

Lime, crm-tan, fnxn with chalky white wash

E

Shale, black carbonaceous  
Lime, off wht-lt gray, fnxn

F

Lime, crm, fnxn and chalky, NS

G

Lime, crm, fnxn with bedded chalk in part

Lime, crm, granular, chalky, NS

G

Lime, crm-lt brn, fnxn with chalk

Lime, crm-tan, fnxn with chalk

H

Shale, black carbonaceous with soft gray mud balls in part

Lime, crm-tan, mostly fnxn with few pieces oolitic-oolimoldic with lite odor and scattered to saturated staining with scattered vuggy channels

I

Lime, offwhite-lt crm, fnxn with slight chalk in part  
Shale, gray, blocky

J

Lime, ivory-crm, fn-vfxln with slight chalk, NS

Lime, crm, micro oolitic, few pieces with very light, scattered stain and very lite odor

K

Lime, crm, fnxn, slight chalk in part

Lime, crm-tan, fnxn, flakey stain, no odor, NFO

L

Lime, ivory-crm-lt brn, fnxn with chalk and specks of glauconite

Lime, crm-tan, fnxn with chalk in part

**BKC ELog 3566-1598**

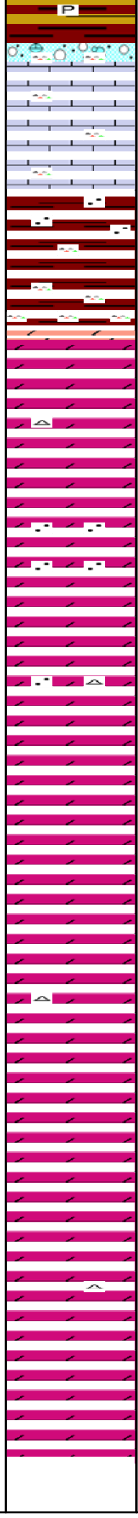
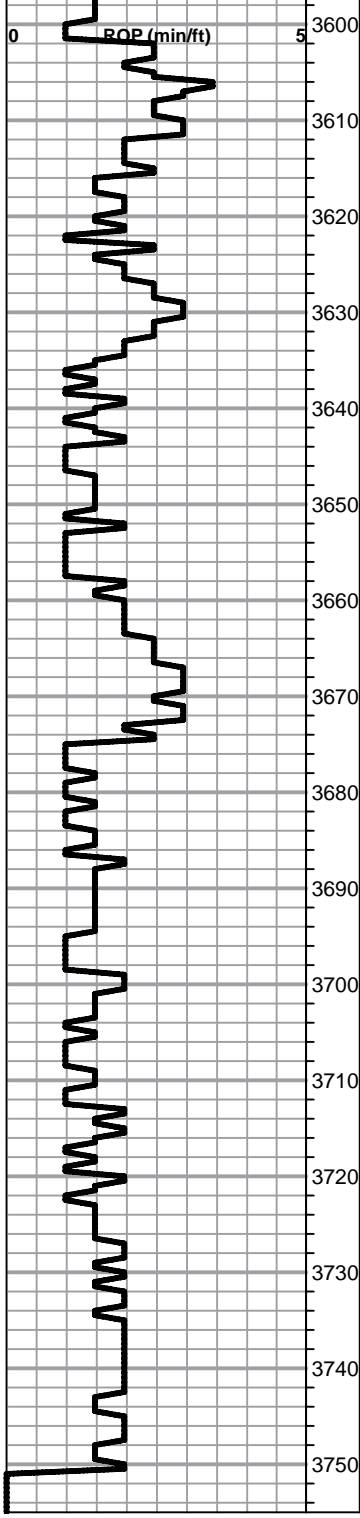
Shale, reddish brn grading into vari colored shales

Lime, crm, slightly dolomitic, fnxn

Shale, vari color with light red wash

DST #1 3300'-3380'  
SEE HEADER FOR TEST  
DETAIL

SLOPE 3/4 degree



**REMNENT MARMATON MARKER**

Lime, crm-lt brn, fnxln with orange chert fragments

Shale, red with scattered mix of sand/dolomite material with light staining and good wet cut, NFO, no odor

**ARBUCKLE ELog 3633-1598**

Dolomite, crm-lt brn, fn-cxln with mix of qtz grains near top of zone. saturated staining, SFO on crush, no odor

Dolomite, crm-lt brn, fn-cxln, intercrystalline porosity, sandy in part, scattered to saturated staining, VMSFO, no odor.

Dolomite, wht-lt brn, fn-cxln, qtz grains in part

Dolomite, ivory-crm, fn-cxln, sucrosic in part

Dolomite, ivory-crm, fn-cxln, sucrosic in part

Dolomite, ivory-crm, fn-cxln

Dolomite, ivory-crm, fn-cxln

Dolomite, ivory-crm, fn-cxln

**RTD 3750-1715 LTD 3752-1717**



# 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. 873

Date	6-18-12	Sec.	13	Twp.	15	Range	19	County	ELLIS	State	KANSAS	On Location		Finish	5:00 pm
Lease	GERSTNER		Well No.	#1		Location	ANTONINO - 25 - E - INTO								
Contractor	SOUTHWIND #1				Owner	T.D.I									
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.	214'											
Csg.	8 5/8"		Depth	214'											
Tbg. Size					Charge To	T.D.I									
Tool					Street	1310 BISON RD									
Cement Left in Csg.					City	HAYS				State	KS, 67601				
Meas Line					Shoe Joint	15'									
					Displace	13 BLS									
					The above was done to satisfaction and supervision of owner agent or contractor.										
					Cement Amount Ordered	150 com - 3% - 2% GEL									

**EQUIPMENT**

Pumptrk #15	No.	Cementer Helper	NECK	Common	150
Bulktrk #13	No.	Driver	LONNIE	Poz. Mix	
Bulktrk Du	No.	Driver	CESCO	Gel.	3
				Calcium	5

**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
	Sand
	Handling 158
	Mileage

**FLOAT EQUIPMENT**

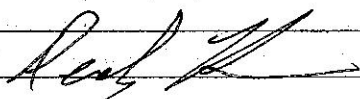
	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

CEMENT DID CIRCULATE!

THANK YOU!

Pumptrk Charge	Surface
Mileage	11
	Tax
	Discount
	Total Charge

X Signature





**CONSOLIDATED**  
Oil Well Services, LLC

55

PO Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-8676

TICKET NUMBER 36963

LOCATION Oakley, KS

FOREMAN Kelly Gabel

Walt D. N. Ke

**FIELD TICKET & TREATMENT REPORT**

**CEMENT**

KS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-24-12	9999	Berstner #1	13	15	19	Ellis
CUSTOMER TDI			Amining 1 1/2 S E into			
MAILING ADDRESS 1310 Bison Rd			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY Hays			566	Wes F		
STATE KS			389	Damon M	466	Cody R
ZIP CODE 67601				Jerry Y		Jordan L

JOB TYPE 2-stage HOLE SIZE 7 7/8 HOLE DEPTH 3750' CASING SIZE & WEIGHT 5 1/2 14 1/2  
 CASING DEPTH 3749 DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 3200 SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 42.48  
 DISPLACEMENT 90/2 DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting, rigged up on southwind rig #1, hooked up to circulate for approx 1hr, pumped 500gal mud plus, 20bbl KCL, mixed 150skcs com 100bsalt + 520 cal seal, released plug, displaced with 60 bbl water 30 bbl mud, 500# lift, Plug landed @ 1100', dropped DV bomb waited 30 min, opened tool, pumped 20bbl KCL, mixed 30 skcs 60/40 690gal 1/4" Flo-seal, in RH, 20 skcs Mt, mixed 225 skcs 60/40 690gal 1/4" Flo-seal down center, washed out pumps + lines, released plug, displaced with 30 bbl water, 500# lift + plug landed @ 1500', released pressure, float, hold, rigged down. Thank You  
 Cement Did Circ  
 Walt, Kelly & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401P	1	PUMP CHARGE	2700 <sup>00</sup>	2700 <sup>00</sup>
5410b	30	MILEAGE	5 <sup>00</sup>	150 <sup>00</sup>
11045	150 skcs	class A Cement (Bottom stage)	17 <sup>65</sup>	2647 <sup>50</sup>
1111	718	salt	.45	323 <sup>10</sup>
1101	205#	cal seal	.49	345 <sup>45</sup>
1131	275	60/40 Poz (Top stage)	15 <sup>10</sup>	4152 <sup>50</sup>
1188B	1419	Bentonite	.25	354 <sup>75</sup>
1107	68#	flp-seal	2 <sup>82</sup>	191 <sup>76</sup>
5407D	18.8	Ten Mileage delivery	167	942 <sup>00</sup>
41104	4	5 1/2 basket	276 <sup>00</sup>	1104 <sup>00</sup>
41130	7	5 1/2 centralizer (1-2, 6-6)	58 <sup>00</sup>	406 <sup>00</sup>
41159	1	5 1/2 AFU float shoe	413 <sup>00</sup>	413 <sup>00</sup>
41283	1	5 1/2 DV Tool/w latchdown	3850 <sup>00</sup>	3850 <sup>00</sup>
1142A	4 gal	KCL	39 <sup>10</sup>	156 <sup>40</sup>
				17736 <sup>46</sup>
		Less 10% disc		1773 <sup>45</sup>
				15,962 <sup>01</sup>
		SALES TAX		548.10
		ESTIMATED TOTAL		16510.91

Revin 3737

6:00PM AUTHORIZATION

*[Signature]*

TITLE

250747

DATE 6-24-12

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form

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

Sam Brownback, Governor

September 05, 2012

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

Re: ACO1  
API 15-051-26312-00-00  
Gerstner 1  
NW/4 Sec.13-15S-19W  
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