

Confidentiality Requested:

Yes  No

**KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

**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

Gas  DH  EOR

OG  GSW

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 EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

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  Drill Stem Tests Received

Geologist Report / Mud Logs 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
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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				

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) (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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## DRILL STEM TEST REPORT

Prepared For: **TDI, Inc**

1310 Bison Rd  
Hays KS 67601-9696

ATTN: Tom Denning, Herb De

### **Staab #2**

### **9-15s-18w Ellis,KS**

Start Date: 2017.11.21 @ 20:35:10

End Date: 2017.11.22 @ 02:52:04

Job Ticket #: 63231                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.11.22 @ 08:30:04



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

TDI, Inc  
 1310 Bison Rd  
 Hays KS 67601-9696  
 ATTN: Tom Denning, Herb De

**9-15s-18w Ellis,KS**  
**Staab #2**  
 Job Ticket: 63231 **DST#: 1**  
 Test Start: 2017.11.21 @ 20:35:10

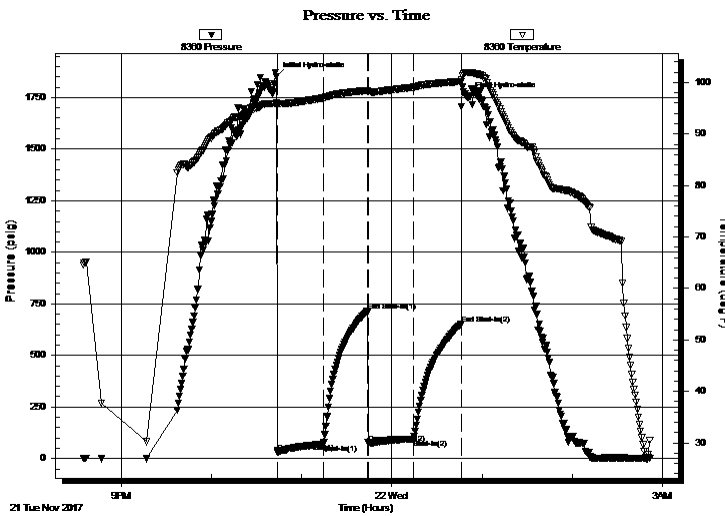
## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 22:44:20 Tester: Ray Schwager  
 Time Test Ended: 02:52:04 Unit No: 77  
 Interval: **3552.00 ft (KB) To 3630.00 ft (KB) (TVD)** Reference Elevations: 2035.00 ft (KB)  
 Total Depth: 3630.00 ft (KB) (TVD) 2025.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

**Serial #: 8360 Inside**  
 Press@RunDepth: 95.22 psig @ 3562.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.11.21 End Date: 2017.11.22 Last Calib.: 2017.11.22  
 Start Time: 20:35:10 End Time: 02:52:04 Time On Btm: 2017.11.21 @ 22:43:20  
 Time Off Btm: 2017.11.22 @ 00:51:05

**TEST COMMENT:** 30-IFP-BOB in 12 min  
 30-ISIP-1/ 4" bl bk  
 30-FFP-w k to BOB in 22 min  
 30-FSIP-surface bl bk

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1852.23	96.14	Initial Hydro-static
1	31.70	95.83	Open To Flow (1)
32	69.60	97.01	Shut-In(1)
61	716.46	98.46	End Shut-In(1)
61	75.58	98.25	Open To Flow (2)
91	95.22	99.07	Shut-In(2)
123	652.16	100.19	End Shut-In(2)
128	1753.13	101.95	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	135' GIP	0.00
40.00	CO	0.56
72.00	MGO 10%G40%M50%O	1.01
62.00	HO&GCM 10%G40%O50%M	0.87

## 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 67601-9696

**9-15s-18w Ellis,KS**

**Staab #2**

Job Ticket: 63231

**DST#: 1**

ATTN: Tom Denning, Herb De

Test Start: 2017.11.21 @ 20:35:10

## Tool Information

Drill Pipe:	Length: 3556.00 ft	Diameter: 3.80 inches	Volume: 49.88 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 49.88 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3552.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	78.00 ft			
Tool Length:	99.00 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			3532.00	
Shut In Tool	5.00			3537.00	
Hydraulic tool	5.00			3542.00	
Packer	5.00			3547.00	21.00 Bottom Of Top Packer
Packer	5.00			3552.00	
Stubb	1.00			3553.00	
Perforations	9.00			3562.00	
Recorder	0.00	8360	Inside	3562.00	
Recorder	0.00	8673	Outside	3562.00	
Blank Spacing	65.00			3627.00	
Bullnose	3.00			3630.00	78.00 Bottom Packers & Anchor

**Total Tool Length: 99.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

TDI, Inc  
1310 Bison Rd  
Hays KS 67601-9696

**9-15s-18w Ellis,KS**

**Staab #2**

Job Ticket: 63231

**DST#: 1**

ATTN: Tom Denning, Herb De

Test Start: 2017.11.21 @ 20:35:10

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 68.00 sec/qt  
Water Loss: 6.79 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 5400.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 29 deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	135' GIP	0.000
40.00	CO	0.561
72.00	MGO 10%G40%M50%O	1.010
62.00	HO&GCM 10%G40%O50%M	0.870

Total Length: 174.00 ft      Total Volume: 2.441 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

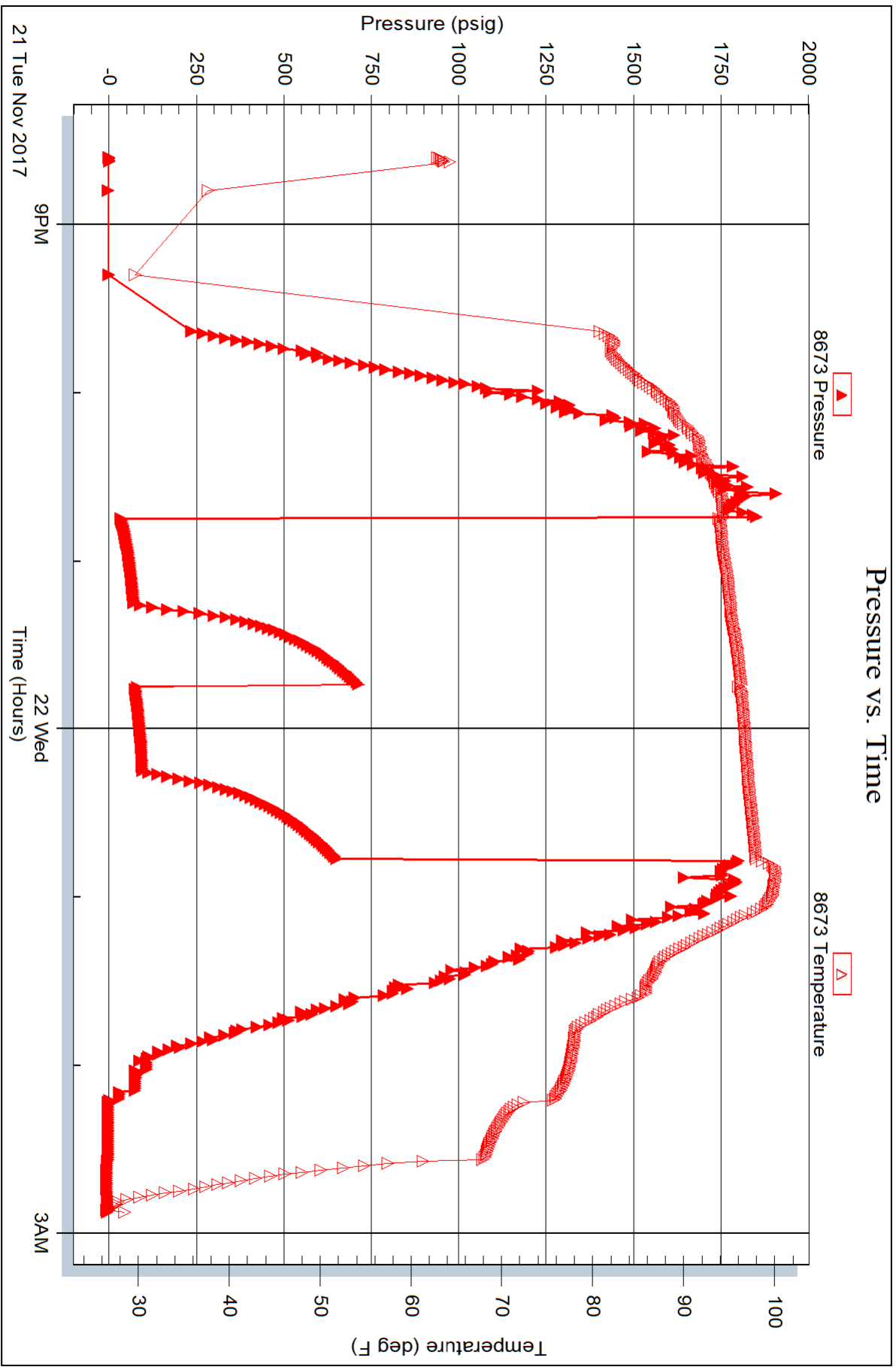
Laboratory Name:

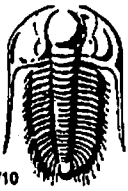
Laboratory Location:

Recovery Comments:









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63231

Well Name & No. STAAB #2 Test No. 1 Date 11-21-17  
 Company TOI, Inc Elevation 2035 KB 2025 GL  
 Address 1310 Bison Rd Hays Ks 67601-9696  
 Co. Rep / Geo. Herb Deines Rig Southwind rig 8  
 Location: Sec. 9 Twp. 15<sup>s</sup> Rge. 18<sup>w</sup> Co. ELLIS State Ks

Interval Tested 3552-3630 Zone Tested ARBuckle  
 Anchor Length 70 Drill Pipe Run 3556 Mud Wt. 9.3  
 Top Packer Depth 3547 Drill Collars Run - Vis 68  
 Bottom Packer Depth 3552 Wt. Pipe Run - WL 6.8  
 Total Depth 3630 Chlorides 5400 ppm System LCM 1#

Blow Description IFP - BOBIN 12 min  
ISTP - 1/4" Blow BACK  
FFP - Weak To BOBIN 22 min  
FSTP - surface Blow BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>135</u>	<u>GIP</u>				
<u>40</u>	<u>CO</u>				
<u>72</u>	<u>MGO</u>	<u>10</u>	<u>50</u>		<u>40</u>
<u>62</u>	<u>H04GCM</u>	<u>10</u>	<u>40</u>		<u>50</u>
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 174 BHT 100 Gravity 29 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1852  Test 1050 T-On Location 1855  
 (B) First Initial Flow 31  Jars - T-Started 2035  
 (C) First Final Flow 69  Safety Joint - T-Open 2245  
 (D) Initial Shut-In 716  Circ Sub - T-Pulled 0045  
 (E) Second Initial Flow 75  Hourly Standby - T-Out 0252  
 (F) Second Final Flow 95  Mileage 24 RT<sup>18</sup> Comments -  
 (G) Final Shut-In 652  Sampler -  
 (H) Final Hydrostatic 1753  Straddle -  
 Shale Packer -  
 Ruined Shale Packer -

Initial Open 30  Ruined Packer -  
 Initial Shut-In 30  Extra Copies -  
 Final Flow 30  Extra Recorder - Sub Total 0  
 Final Shut-In 30  Day Standby - Total 1068  
 Accessibility - MP/DST Disc't -  
 Sub Total 1068

Approved By \_\_\_\_\_ Our Representative Ray Schwager THANK YOU

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 67601-9696

Contact Geologist: TOM DENNING  
 Contact Phone Nbr: 785-628-2593  
 Well Name: STAAB # 2  
 Location: SE SE NW SEC.9-T15S-R18W  
 API: 15-051-26,893-00-00  
 Pool: IN FIELD  
 State: KANSAS

Field: DINGES  
 Country: USA



Scale 1:240 Imperial

Well Name: STAAB # 2  
 Surface Location: SE SE NW SEC.9-T15S-R18W  
 Bottom Location:  
 API: 15-051-26,893-00-00  
 License Number: 4787  
 Spud Date: 11/17/2017 Time: 4:30 PM  
 Region: ELLIS COUNTY  
 Drilling Completed: 11/22/2017 Time: 11:05 AM  
 Surface Coordinates: 2310' FNL & 2310' FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2025.00ft  
 K.B. Elevation: 2035.00ft  
 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: -99.3292421  
 Latitude: 38.763151  
 N/S Co-ord: 2310' FNL  
 E/W Co-ord: 2310' 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 #: 8  
 Rig Type: MUD ROTARY  
 Spud Date: 11/17/2017 Time: 4:30 PM  
 TD Date: 11/22/2017 Time: 11:05 AM

**ELEVATIONS**

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

Ground Elevation: 2025.00ft

**NOTES**

DECISION TO RUN PRODUCTION CASING BASED ON POSITIVE RESULTS OF DST # 1.

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

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

	<b>STAAB # 2</b>	<b>STAAB # 1</b>	<b>MUNSCH # 11</b>
	<b>SE SE NW</b>	<b>W2 SW SE NW</b>	<b>SE NW NW SE</b>
	<b>SEC.9-15S-18W</b>	<b>SEC.9-15-18W</b>	<b>SEC.9-15-18W</b>
	<b>2035'KB</b>	<b>KB 2025'</b>	<b>KB 2039'</b>
<b>Anhydrite top</b>	<b>1204 +831</b>	<b>+ 827</b>	<b>+ 831</b>
<b>Anhydrite base</b>	<b>1242 +793</b>	<b>+ 791</b>	<b>+ 797</b>
<b>Topeka</b>	<b>3003 - 968</b>	<b>- 960</b>	<b>- 960</b>
<b>Heebner Sh.</b>	<b>3280-1245</b>	<b>-1239</b>	<b>-1240</b>
<b>Toronto</b>	<b>3298-1263</b>	<b>-1258</b>	<b>-1259</b>
<b>LKC</b>	<b>3325-1290</b>	<b>-1287</b>	<b>-1285</b>
<b>BKC</b>	<b>3552-1517</b>	<b>-1516</b>	<b>-1513</b>
<b>Arbuckle</b>	<b>3612-1577</b>	<b>-1577</b>	<b>-1623</b>
<b>RTD</b>	<b>3750-1715</b>	<b>-1727</b>	<b>-1707</b>

**SUMMARY OF DAILY ACTIVITY**

- 11-17-17** RU, spud 4:30 PM, set 8 5/8" surface casing to 217' w/ 150 sxs  
60/40 pos 2%gel 3%CC, slope 3/4 degree
- 11-18-17** 257', drill plug 6:15 AM
- 11-19-17** 1775', drilling
- 11-20-17** 2830', drilling, displaced 2792'-2830'
- 11-21-17** 3500', drilling, , CFS 3630', DST # 1 3552' to 3630'
- 11-22-17** 3650', finish DST # 1, TIWB, RTD 3750' @11:05 AM, TOWB, logs,  
LDDP
- 11-23-17** 3950', finish running casing and cementing bottom and top stages



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

TDI, Inc  
 1310 Bison Rd  
 Hays Ks 67601-9696  
 ATTN: Tom Denning, Herb De

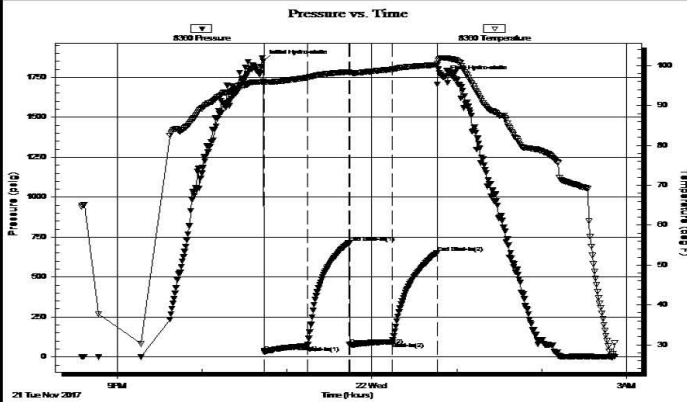
**9-15s-18w Ellis**  
**Staab #2**  
 Job Ticket: 63231 **DST#: 1**  
 Test Start: 2017.11.21 @ 20:35:10

**GENERAL INFORMATION:**

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 22:44:20  
 Time Test Ended: 02:52:04  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ray Schwager  
 Unit No: 77  
 Interval: **3552.00 ft (KB) To 3630.00 ft (KB) (TVD)**  
 Total Depth: 3630.00 ft (KB) (TVD)  
 Hole Diameter: 7.85 inches Hole Condition: Fair  
 Reference Elevations: 2035.00 ft (KB)  
 2025.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8360 Inside**  
 Press@RunDepth: 95.22 psig @ 3562.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.11.21 End Date: 2017.11.22 Last Calib.: 2017.11.22  
 Start Time: 20:35:10 End Time: 02:52:04 Time On Btm: 2017.11.21 @ 22:43:20  
 Time Off Btm: 2017.11.22 @ 00:51:05

**TEST COMMENT:** 30-IFP-BOB in 12 min  
 30-ISIP-1/ 4"bl bk  
 30-FFP-w k to BOB in 22 min  
 30-FSIP-surface bl bk



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1852.23	96.14	Initial Hydro-static
1	31.70	95.83	Open To Flow (1)
32	69.60	97.01	Shut-In(1)
61	716.46	98.46	End Shut-In(1)
61	75.58	98.25	Open To Flow (2)
91	95.22	99.07	Shut-In(2)
123	652.16	100.19	End Shut-In(2)
128	1753.13	101.95	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbt)
0.00	135' GIP	0.00
40.00	CO	0.56
72.00	MGO 10%G40%M50%O	1.01
62.00	HO&GCM 10%G40%O50%M	0.87

**Gas Rates**

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


**ROCK TYPES**

Cht vari	Lmst fw7>	shale, gry	Ss
Dolprim	Lscongl	Carbon Sh	
Lmst fw<7	shale, grn	shale, red	

**ACCESSORIES**

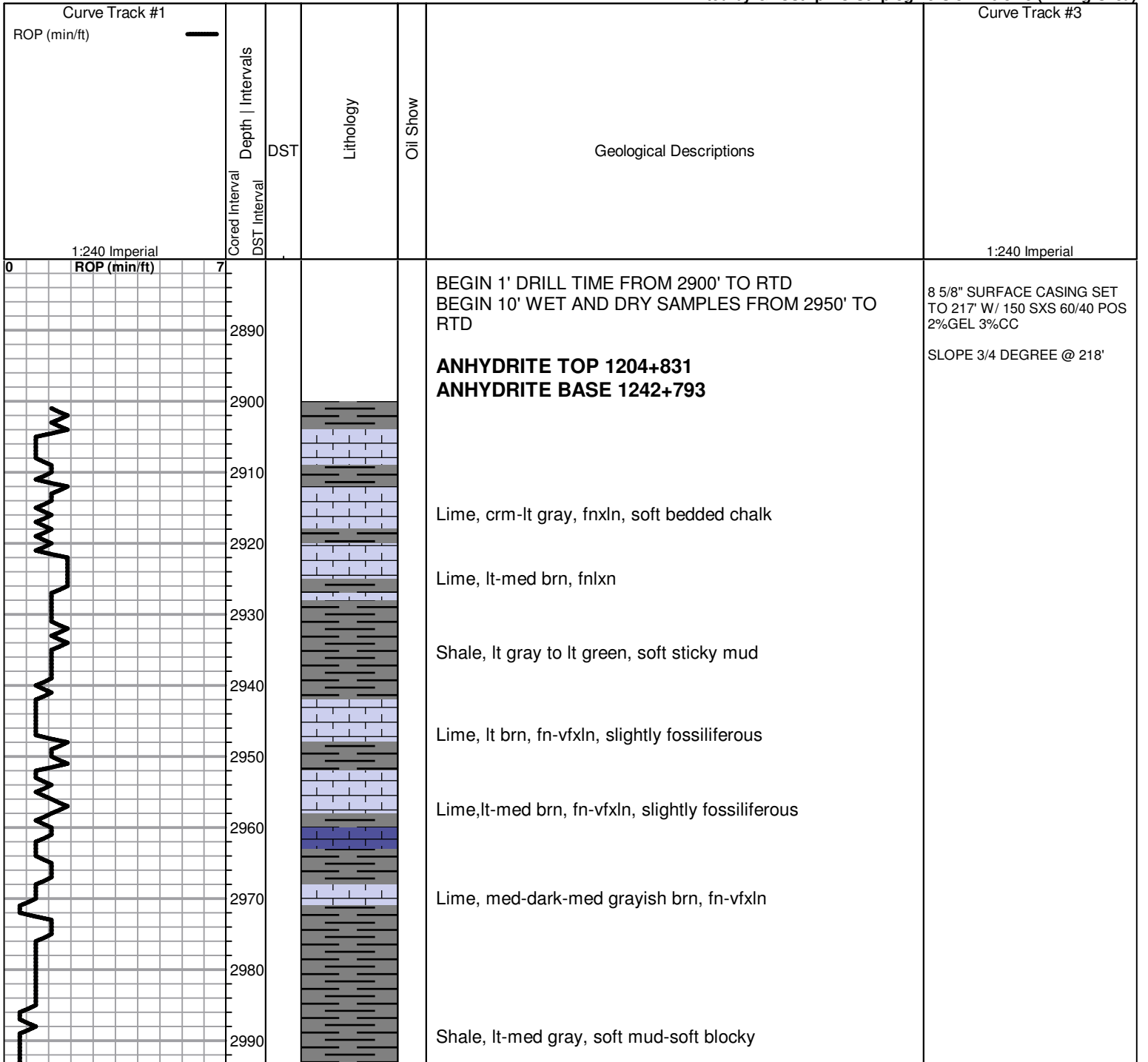
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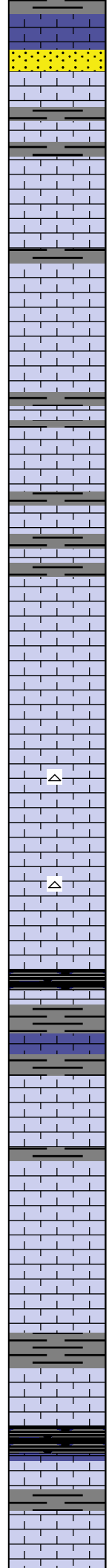
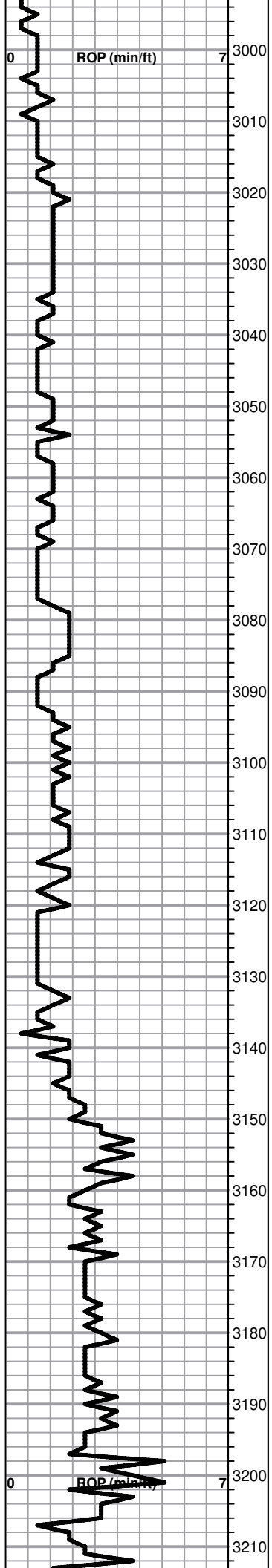
- ▲ Chert, dark
- △ Chert White

**FOSSIL**

- 🦠 Oomoldic

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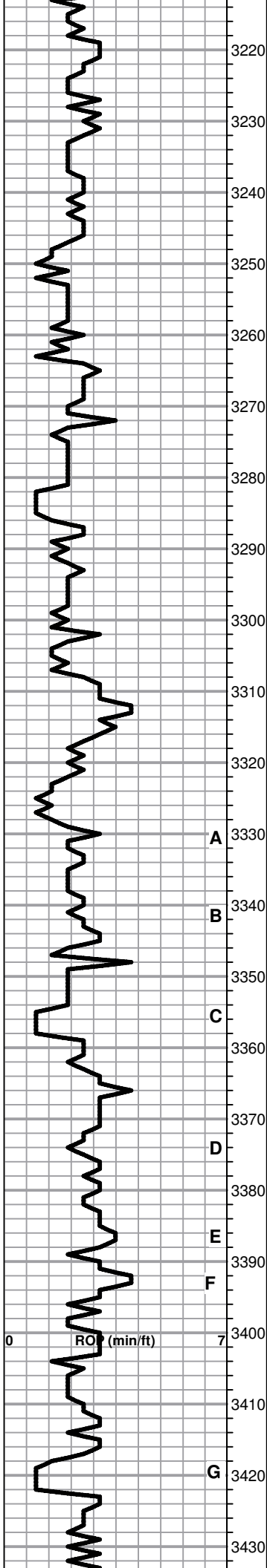




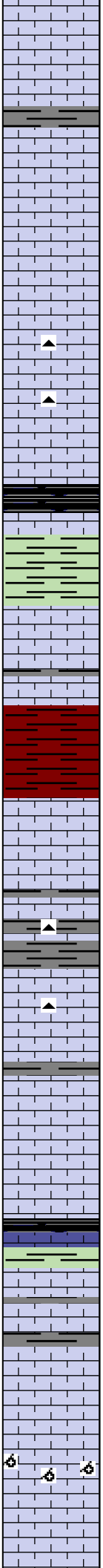
**TOPEKA 3003-968**

- 3000 Lime, med brn-med grayish brn, fnxln, slightly fossiliferous
- 3010 Lime, crm-lt brn, fn-vfxln
- 3020 Lime, lt-dark brn, fnxln
- 3030 Lime, crm-lt brn, fnxln, slight bedded chalk
- 3040 Lime, lt-med brn-lt grayish brn, fn-vfxln, slightly fossiliferous-fusulinids
- 3050 Lime, lt-med brn-med grayish brn, fnxln, slightly fossiliferous in part-fusulinids
- 3060 Lime, lt brn-lt gray, fnxln, slightly fossiliferous
- 3070 Lime, lt brn-lt gray, fn-vfxln, slightly fossiliferous, fusulinids
- 3080 Lime, lt brn-lt gray, fnxln, slight bedded chalk, slightly fossiliferous
- 3090 Lime, lt brn, fnxln
- 3100 Lime, crm-lt brn, fn-vfxln, slightly fossiliferous
- 3110 Lime, lt-med brn, fnxln-granular, slightly fossiliferous
- 3120 Lime, lt-med brn, granular with sticky bedded chalk
- 3130 Shale, black carbonaceous, blocky
- 3140 Lime, med brn, vfxln
- 3150 Lime, crm-lt brn, fn-micro xln, lithographic
- 3160 Lime, lt brn, fn-micro xln
- 3170 Lime, lt brn, fn-micro xln
- 3180 Lime, lt brn-lt grayish brn, fn-vfxln
- 3190 Lime, lt-med brn, fn-vfxln
- 3200 Shale, black carbonaceous, fissile, blocky
- 3210 Lime, crm-lt brn, fn-micro xln
- 3220 Lime, lt-med brn, fnxln, slight bedded chalk





3220  
3230  
3240  
3250  
3260  
3270  
3280  
3290  
3300  
3310  
3320  
3330  
3340  
3350  
3360  
3370  
3380  
3390  
3400  
3410  
3420  
3430



Lime, lt brn-lt gray, fn-vfxln

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

Lime, lt brn, fn-vfxln

Lime, crm-lt brn, fnxln

Lime, lt brn, fn-vfxln

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

Lime, crm-lt brn, fnxln, chalk matrix with bedded chalk  
**HEEBNER SHALE 3280-1245**

Shale, black carbonaceous, fissile, blocky  
Lime, med brn, microxln

Shale, lt gray, soft mud  
**TORONTO 3298-1263**

Lime, lt brn, fn-vfxln, few chips fine granular with trace of spotty stain, NFO, no odor

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

Shale, red-reddish brn, soft mud to soft blocky, red wash  
**LKC 3325-1290**

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

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

Lime, crm-lt brn, fn-vfxln, NS

Lime, crm-lt brn, fnxln, soft on crush in part, NS, no odor

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

Lime, lt-med brn, fn-vfxln, few chips with trace of spotty stain, NFO, no odor in scattered pinpoint vugs

Shale, black carbonaceous, blocky  
Lime, lt gray, vfxln

Lime, crm-lt brn, fn-micro xln, NS

Lime, crm-tan, fn-vfxln, few chips with scattered vugs with trace of staining, NFO, no odor

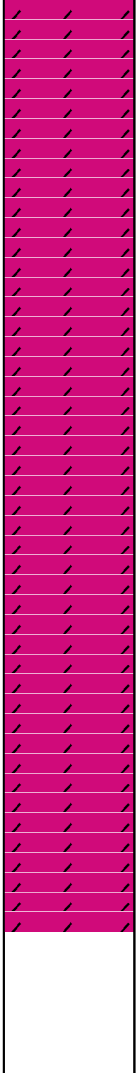
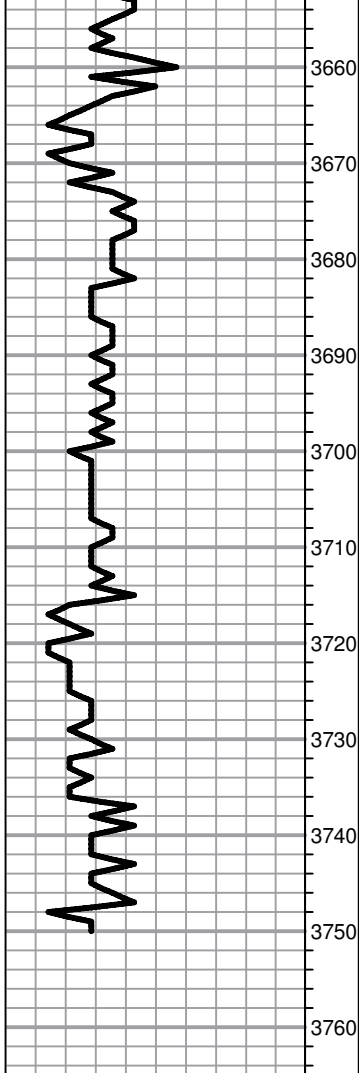
Lime, tan-lt brn, fnxln-oomoldic, barren, NS

Lime, crm-lt brn, fn-vfxln

A  
B  
C  
D  
E  
F  
G

ROP (min/ft)





Dolomite, crm-ivory, fnxln-granular

Dolomite, fnxln-granular, white-ivory, rhombic

Dolomite, white-ivory, fnxln-granular, coarse xln

Dolomite, ivory, fnxln-granular, interxln porosity

Dolomite, ivory-crm, fnxln-granular

Dolomite, crm-ivory-rose, fnxln-granular

Dolomite, ivory-crm, fnxln-granular

Dolomite, ivory-crm, fnxln-granular

SET 5 1/2" PRODUCTION  
CASING TO 3747' W/ 150 SXS  
EA2, DV TOOL AT 1231'  
W/180 SXS SMD, 30 SXS  
RATHOLE 15 SXS  
MOUSEHOLE

SLOPE 3/4 DEGREE #3750'



JOB LOG

SWIFT Services, Inc.

DATE 4/22/17 PAGE NO. 1

CUSTOMER TDI WELL NO. #2 LEASE Staab JOB TYPE Crst Long String TICKET NO. 30826

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2315							On location w/Float Equipment 5 1/2" x 14# Casing RTD - 3750 Total Pipe - 3747, 89 Jts Baffle @ 3704.6 D.V. Tool - 1226, 58 # 59 Centralizers - 1, 3, 5, 7, 9, 11, 13, 58 Baskets - 1, 7, 58
	0115							Start Running Casing w/Float Equip
	0300							Break Circ on bottom
	0405	5	12				400	Pump Mudflush
	0410	5	20				400	Pump KGL spacer
	0415		36				400	Start Cmt, 150 SKS EA2 @ 15.5 ppg
	0430						Vac	Drop 1st Plug/Wash P+L
	0435						Vac	Start Displacement
	0443		70				800	Catch Cmt
	0447	7	90 3/4				1000	Land Plug Lift 1000 Land 1500
								Release back, Dry
	0450							Drop D.V. Bomb
	0455	2 1/2	7					Plug RH - 30 SKS SMD
	0500	2 1/2	5					Plug MH - 15 SKS SMD
	0505	3	5				1400	Open D.V. Tool and Pump Water
	0510	5					400	Start Cmt - 180 SKS SMD
			85				<del>400</del>	Fin Cmt
	0530		3					Drop Plug - Wash P+L
	0535	5	15				500	Catch Cmt
	0540		30				<del>600</del> 1200	Land Plug Lift 600 Land 1200
								Circ 30 SKS to pit.
								Release Back, Dry
								Wash up truck
	0600							Rack up Job Complete Thanks, Jon, Austin, Isaac