



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1223486  
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: \_\_\_\_\_

1223486

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: <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> _____
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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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**OPERATOR**

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

Contact Geologist: TOM DENNING  
 Contact Phone Nbr: 785-628-2593  
 Well Name: PFANNENSTIEL # 1  
 Location: NW SE NW SE SEC.23-15S-18W  
 API: 15-051-26,728-00-00  
 Pool: INFIELD  
 State: KANSAS

Field: BIELMAN  
 Country: USA



Scale 1:240 Imperial

Well Name: PFANNENSTIEL # 1  
 Surface Location: NW SE NW SE SEC.23-15S-18W  
 Bottom Location:  
 API: 15-051-26,728-00-00  
 License Number: 4787  
 Spud Date: 9/2/2014 Time: 5:30 AM  
 Region: ELLIS COUNTY  
 Drilling Completed: 9/7/2014 Time: 6:45 AM  
 Surface Coordinates: 1745' FSL & 1865' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 1980.00ft  
 K.B. Elevation: 1990.00ft  
 Logged Interval: 2850.00ft To: 3675.00ft  
 Total Depth: 3675.00ft  
 Formation: ARBUCKLE  
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: -99.2889753  
 Latitude: 38.730694  
 N/S Co-ord: 1745' FSL  
 E/W Co-ord: 1865' FEL

**LOGGED BY**

Company: SOLUTIONS CONSULTING, INC.  
 Address: 108 WEST 35TH STREET  
 HAYS, KANSAS 67601

Phone Nbr: 785-625-3380  
 Logged By: GEOLOGIST Name: HERB DEINES

**CONTRACTOR**

Contractor: SOUTHWIND DRILLING, INC.  
 Rig #: 1  
 Rig Type: MUD ROTARY  
 Spud Date: 9/2/2014 Time: 5:30 AM  
 TD Date: 9/7/2014 Time: 6:45 AM

**ELEVATIONS**

K.B. Elevation: 1990.00ft  
 K.B. to Ground: 10.00ft

Ground Elevation: 1980.00ft

**NOTES**

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON LOG ANALYSIS, LOW STRUCTURE OF LKC AND ARBUCKLE AND SHALING OUT OF UPPER ARBUCKLE PRODUCTIIVE INTERVAL

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

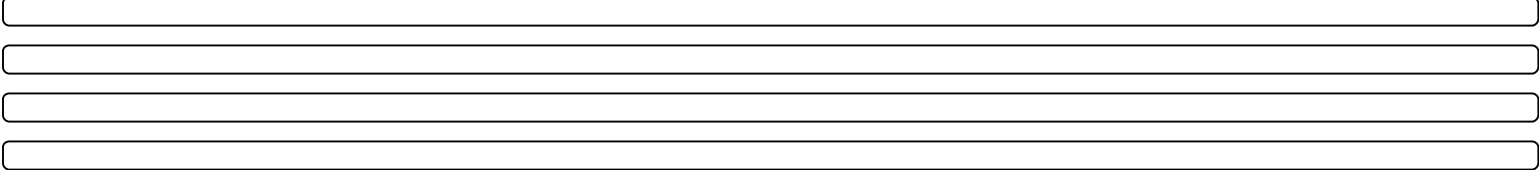
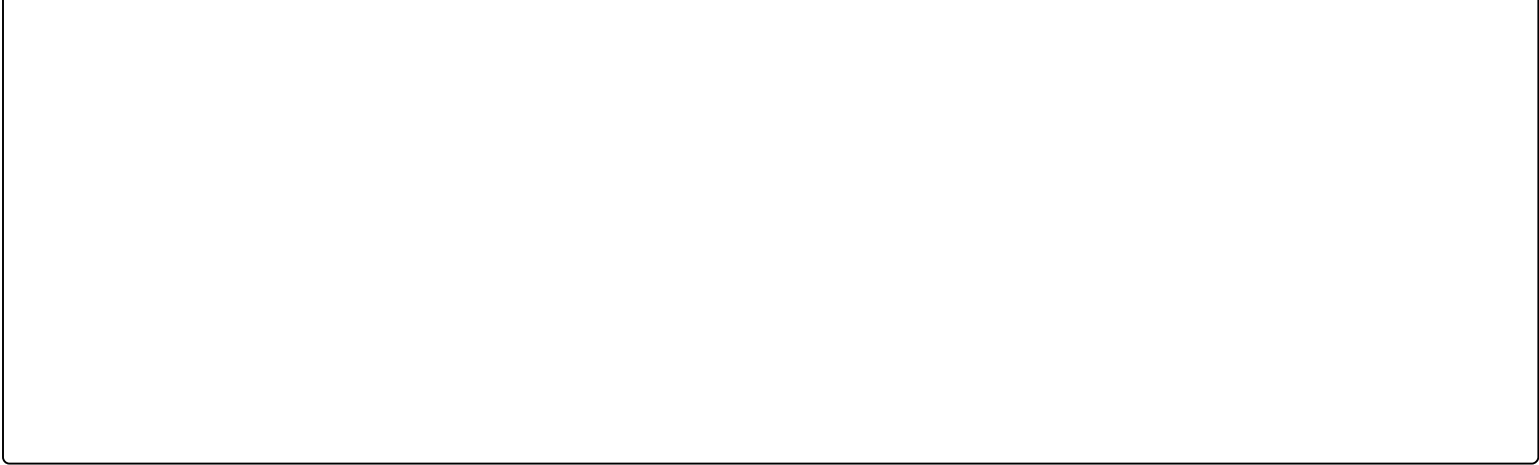
NO DRILL STEM TESTS WERE RAN ON THIS WELL

**FORMATION TOPS SUMMARY**

	<b>PFANNENSTIEL #1</b>	<b>CHARLOTTE TR #1</b>	<b>RUDER #1-23</b>
	<b>NW SE NW SE</b>	<b>E2 SW SE NE</b>	<b>E2 E2 SW</b>
	<b>SEC.23-15S-18W</b>	<b>SEC.23-15-18W</b>	<b>SEC.23-15-18W</b>
	<b>1980'GL 1990'KB</b>	<b>KB 1965'</b>	<b>KB 2000'</b>
<u>FORMATION</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1150 +840	+ 837	+ 855
B-Anhydrite	1186 +804	+ 803	+ 818
Topeka	2971 - 981	- 979	- 964
Heebner Sh.	3237-1247	-1243	-1230
Toronto	3260-1270	-1265	-1252
LKC	3289-1299	-1294	-1281
BKC	3514-1524	-1515	-1506
Arbuckle	3590-1600	-1557	-1576
RTD	3675-1685	-1685	-1955

**SUMMARY OF DAILY ACTIVITY**

9-02-14 RU, spud 5:00 PM  
 9-03-14 1018', set 8 5/8" surface casing to 1166' w/ 375 sxs SMD, slope 1/2 degree, plug down 4:30PM, WOC 12 hrs  
 9-04-14 1240', drill plug 4:30 AM  
 9-05-14 2385', drilling, displaced 2879'-2898'  
 9-06-14 3163', drilling, CFS 3325'  
 9-07-14 3675', drilling, RTD 3675' @ 6:45AM, short trip, TOWB, logs, P&A



**ROCK TYPES**

- |          |           |            |            |         |
|----------|-----------|------------|------------|---------|
| Cht vari | Dolprim   | shale, grn | shale, red | Lscongl |
| Clystgy  | Lmst fw<7 | shale, gry | Shcol      |         |
| Chtcongl | Lmst fw7> | Carbon Sh  | Karst Topo |         |

**ACCESSORIES**

**MINERAL**

- ▲ Chert, dark
- △ Chert White

**OTHER SYMBOLS**

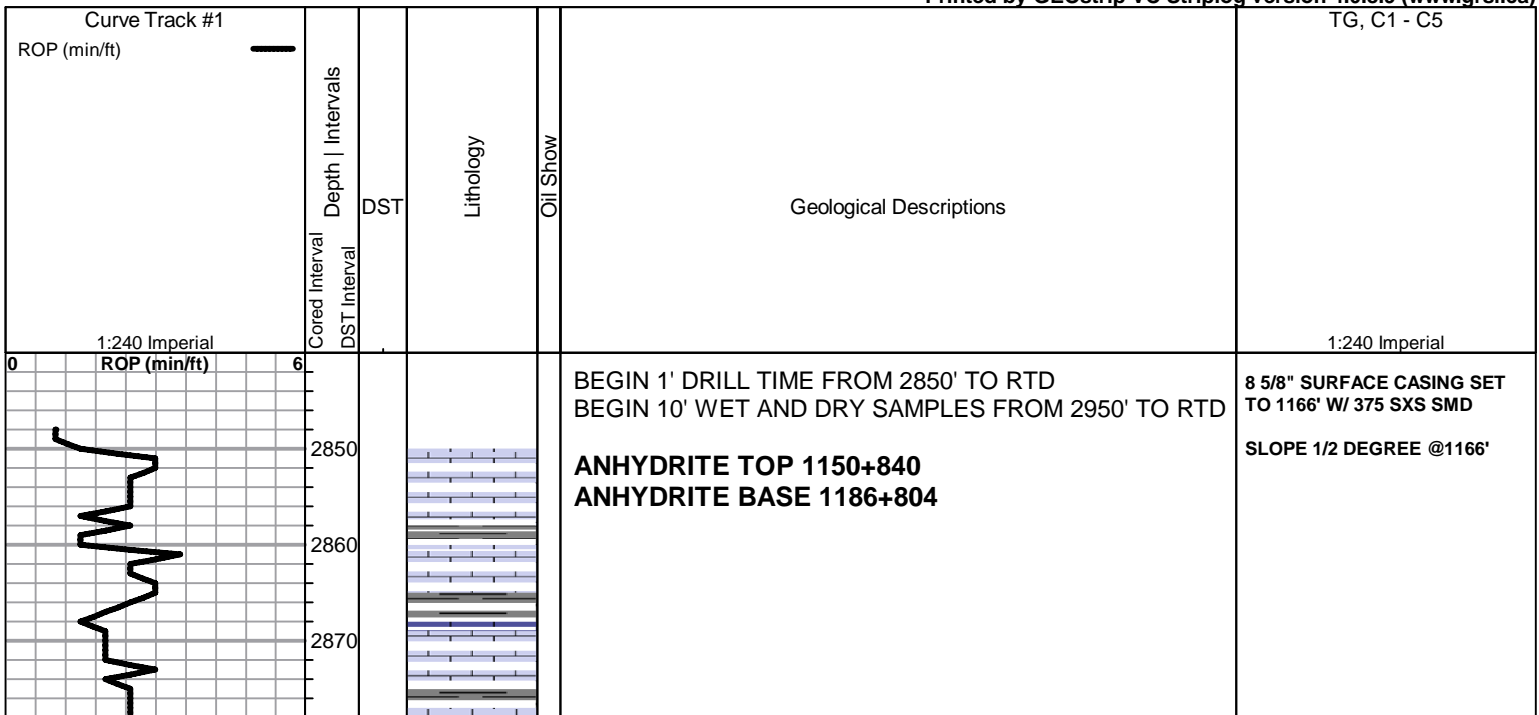
**Oil Show**

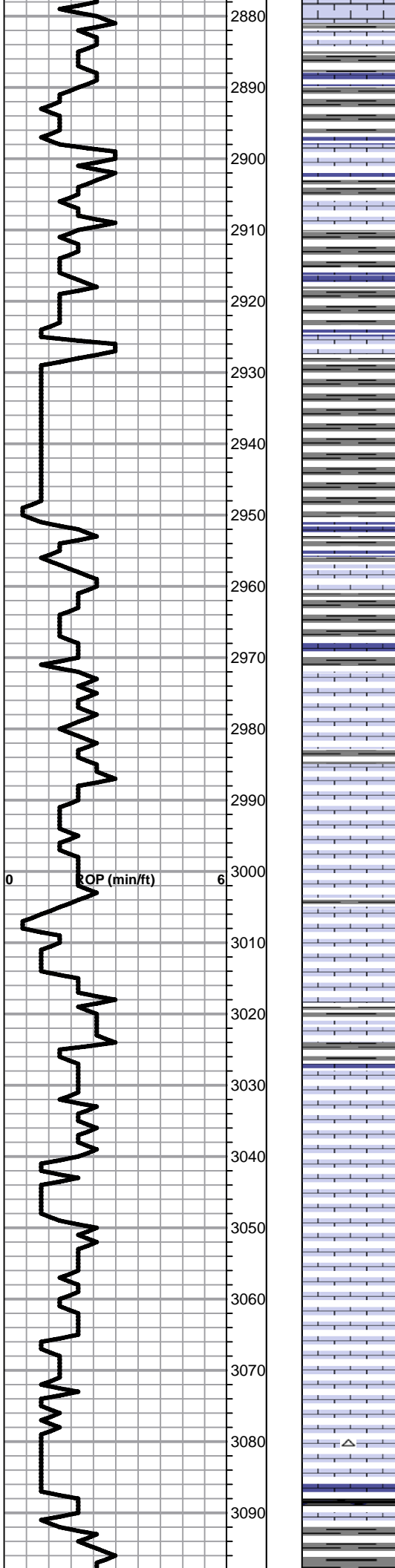
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Stn
- Dead Oil Stn
- Fluorescence
- \* Gas

**DST**

- DST Int
- DST alt
- Core
- tail pipe

Printed by GEOstrip VC Striplog version 4.0.8.9 (www.grsi.ca)





Shale, lt-med gray, soft blocky

Lime, med-dark brn, fnxln, fossiliferous

Shale, lt-med gray, soft-firm blocky, calcareous in part

Lime, dark brn, fnxln, slightly fossiliferous

Lime, lt-med brn, fnxln  
Shale, med gray, soft blocky

**TOPEKA ELog 2971-981**

Lime, lt-med brn, fnxln, slight bedded chalk

Lime, lt-med brn-lt grayish brn, fnxln

Lime, lt chocolate brn, slightly granular-fnxln

Lime, lt brn-lt grayish brn, fnxln

Lime, lt brn, granular, NS, bedded chalk in chalky matrix

Lime, lt brn-lt grayish brn, fnxln

Lime, lt brn, fnxln-granular in part, slight bedded chalk

Lime, lt brn-lt grayish brn, fnxln-granular, slight bedded chalk

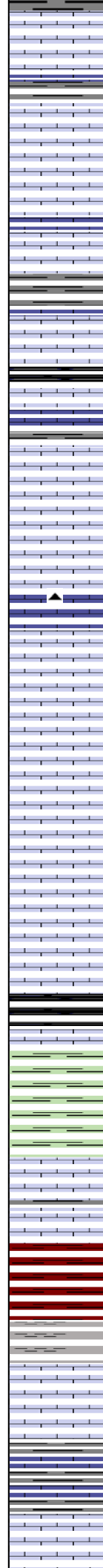
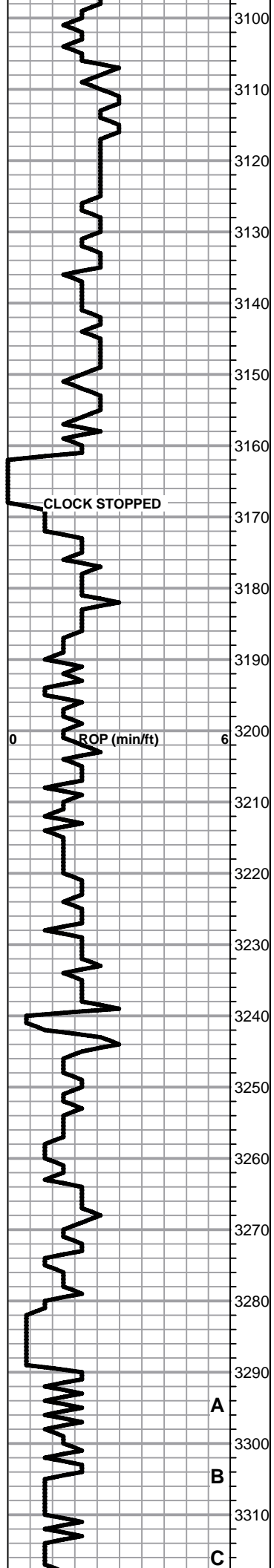
Lime, lt brn, fnxln-granular, slightly fossiliferous, slight bedded chalk

Lime, lt brn, fnxln-granular, slight bedded chalk

Lime, tan-lt brn, fnxln-granular, slight bedded chalk

Lime, lt brn, granular, slightly fossiliferous-fusulinds  
Chert, white, sharp, fossiliferous in part

Shale, black carbonaceous



Lime, crm-lt brn, fnxln, slightly fossiliferous

Lime, crm, fnxln, sub-lithographic, slight bedded chalk

Lime, crm-lt brn, fn-vfxln, sub-lithographic

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

Lime, tan-lt gray, fnxln

Shale, black carbonaceous  
Lime, lt-med brn, fn-vfxln

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

Lime, lt-med brn, granular-fnxln, slight bedded chalk

Lime, lt brn, fn-vfxln

Lime, crm-lt brn, fnxln-granular , NS

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

Lime, tan-lt brn, fnxln-granular, slight bedded chalk

Lime, tan-lt brn, fnxln-granular

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

**HEEBNER SHALE ELog 3237-1247**  
Shale, black carbonaceous, fissile, blocky

Shale, lime green soft mud

**TORONTO ELog 3260-1270**  
Lime, tan-lt brn, fnxln, bedded chalk, NS  
Lime, lt brn, fnxln, NS

Shale, red-brn, soft blocky with lt red wash

**LKC ELog 3289-1299**  
Lime, tan, fnxln, NS

Lime, lt-med brn, fnxln

Lime, lt brn, fnxln, soft on crush, NS

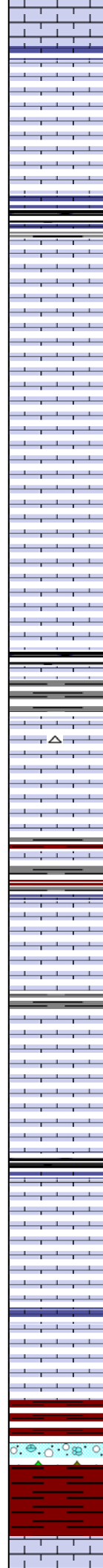
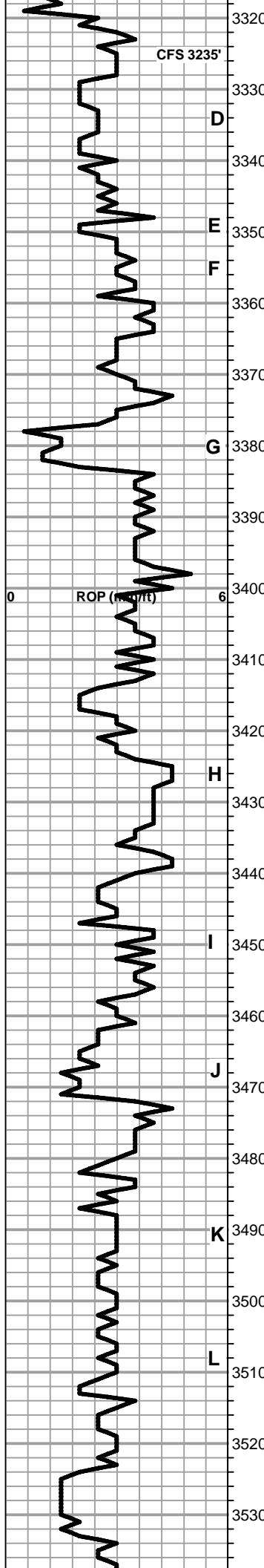
Lime, tan-lt brn, fnxln, chalk matrix with bedded chalk, NS

A

B

C





Lime, lt-med brn, fn-vf xln

Lime, lt brn, fn-vfxln

Lime, lt brn-lt grayish brn, fnxln, lt chalky matrix, NS

Lime, lt brn-lt grayish brn, fnxln

Shale, black carbonaceous, blocky

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

Lime, lt-med brn, fnxln, slight bedded chalk, NS

Lime, crm-lt brn, granular, chalky matrix with bedded chalk, NS

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

Lime, lt brn-lt grayish brn, fn-micro xln, slight bedded chalk

Lime, lt brn-lt grayish brn, fn-micro xln

Shale, gray-black carbonaceous, blocky

Shale, grayish green, med firm, blocky

Lime, crm-tan, fnxln, slight bedded chalk, NS chert, white

Lime, crm-lt brn, fn-micro xln, thin well cemented fossil beds, no visible porosity

Shale, tan-med gray, soft, sticky clumps in part

Lime, crm, fnxln

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

Lime, crm-tan, fn-vfxln

Lime, crm-tan, fnxln-granular in part, mostly granular with chalky matrix with bedded chalk, few chips of fossiliferous lime with trace of lt spotty stain

Lime, crm-tan, fn-micro xln

Shale, gray-black, firm, blocky

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

Lime, crm-tan, fnxln

Lime, crm-tan, fnxln

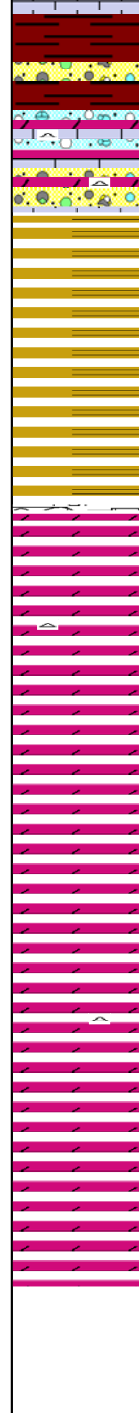
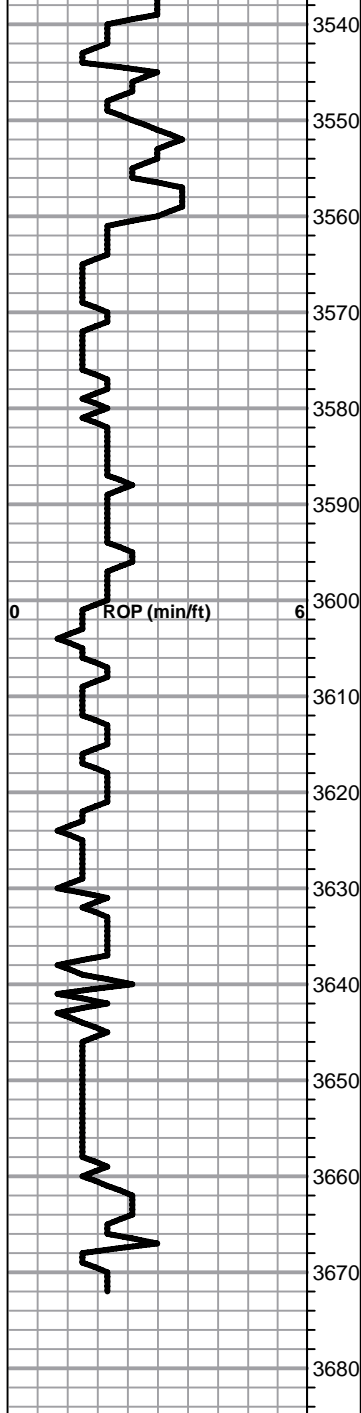
Lime, crm-tan, fnxln, bedded chalk

**BKC ELog 3514-1524**

Shale, red-brn, lt red wash, mix of clastic material in part

Shale, red-brn, soft, red wash

Lime, crm-tan fn-vfxln



Shale, moderate red wash with mix of vari color shales

Clastic mix of loose quartz sand grains, white oolitic chert fragments, and reworked limes and dolomite, NS

Shale, vari colored, soft-firm, earthy, blocky

Shale, vari colored, soft-firm, earthy, blocky

Shale, vari colored with white sticky clumps in part

**ARBUCKLE ELog 3590-1600**

Dolomite, ivory, granular, sucrosic, NS, No Odor

Dolomite, ivory, granular, sucrosic, NS

Dolomite, ivory, granular, sucrosic

Dolomite, ivory, granular, sucrosic

Dolomite, ivory, granular, sucrosic

Dolomite, ivory, granular-fnxln

Dolomite, ivory-crm, fnxln-granular

Dolomite, ivroy-crm, fnxln-granular

**RTD 3675-1685    LTD 3672-1682**

1ST PLUG @3570' W/ 50 SXS  
 2ND PLUG @1200' W/ 50 SXS  
 3RD PLUG @650' W/100 SXS  
 4TH PLUG @40' W/10 SXS  
 RATHOLE W/ 30 SXS  
 MOUSEHOLE W/ 15SXS  
 255 SXS 60/40 POS 4%GEL

JOB LOG

SWIFT Services, Inc.

DATE 9-3-14 PAGE NO. 1

CUSTOMER T.O.I. WELL NO. #1 LEASE Pfannenstiel JOB TYPE Surface TICKET NO. 26257

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	12:30							on loc.
	12:35							Start in hole 8 5/8" Csg. Baffle Plate 1150'
								Cent. #1, #3, #13 Csg. on Bottom
	14:20							Circulate
	15:20							Pump 500 gal Mud Flush 20 <sup>gal</sup> RCL Flush
	15:30							Mix 375 sacks SMO Cement
			59					125 sacks @ 11.8 #/gal
			32					100 sacks @ 12.5 #/gal
			23					75 sacks @ 13.5 #/gal
			19					75 sacks @ 14.5 #/gal
			139					Finish mixing Release Top Plug
	16:10							Displ. 73 <sup>gal</sup>
	16:20							Plug Down Circulated 30 <sup>min</sup> to A.T
	16:45							Wash + Rack up traced Job Complete

*[Signature]*

Russell, Don, Tom, Rob

