



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1168016  
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: \_\_\_\_\_

1168016

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> <i>(Submit ACO-4)</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: NICHOLSON UNIT # 1  
 Location: NE NE NW NE Sec.7-13s-20w  
 Pool: WILDCAT  
 State: KANSAS  
 API: 15-051-26,598-00-00  
 Field: UNNAMED  
 Country: USA



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

Scale 1:240 Imperial

Well Name: NICHOLSON UNIT # 1  
 Surface Location: NE NE NW NE Sec.7-13s-20w  
 Bottom Location:  
 API: 15-051-26,598-00-00  
 License Number: 4787  
 Spud Date: 10/11/2013 Time: 3:30 PM  
 Region: ELLIS COUNTY Time: 6:49 AM  
 Drilling Completed: 10/16/2013  
 Surface Coordinates: 267' FNL & 1426' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2150.00ft  
 K.B. Elevation: 2160.00ft  
 Logged Interval: 3100.00ft To: 3925.00ft  
 Total Depth: 3925.00ft  
 Formation: ARBUCKLE  
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: -99.5811879 Latitude: 38.942102  
 N/S Co-ord: 267' FNL  
 E/W Co-ord: 1426' FEL

**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 #: 1  
 Rig Type: MUD ROTARY  
 Spud Date: 10/11/2013 Time: 3:30 PM  
 TD Date: 10/16/2013 Time: 6:49 AM  
 Rig Release: 10/17/2013 Time: 6:15 AM

**ELEVATIONS**

K.B. Elevation: 2160.00ft Ground Elevation: 2150.00ft  
 K.B. to Ground: 10.00ft

**NOTES**

RECOMMENDATION TO RUN PRODUCTION CASING BASED ON LOG ANALYSIS AND FAVORABLE STRUCTURE. LOST CIRCULATION PROBLEMS BEFORE AND AFTER MUD UP REQUIRED HEAVY LEVELS OF LCM TO MAINTAIN CIRCULATION. PROBLEM AREA MOST LIKELY IN LOWER SALT SECTION.

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

NO DRILL STEM TESTS WERE RAN

**FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY**

<b>NICHOLSON UNIT # 1</b>	<b>Kohl #1</b>
<b>NE NE NW NE</b>	<b>E2 NW NW NW</b>
<b>Sec. 7-13s-20w</b>	<b>Sec. 8-13s-20w</b>
<b>2138' GL 2148' KB</b>	<b>Reference Well</b>

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1508+ 652	1508+ 652	+ 658
B-Anhydrite	1546+ 614	1546+ 614	+ 620
Topeka	3186-1026	3186-1026	-1020
Heebner Shale	3412-1252	3414-1254	-1249
Toronto	3436-1276	3434-1274	-1270
LKC	3450-1290	3450-1290	-1287
BKC	3682-1522	3694-1534	-1533
Marmaton-Pawnee	3750-1590	3755-1595	-1584
Arbuckle	3810-1650	3820-1660	-1643
RTD	3925-1765		
LTD		3927-1767	-1799

**SUMMARY OF DAILY ACTIVITY**

10-11-13 RU, spud 4:00PM, set 8 5/8" to 224' w/ 150 sxs Common 2%Gel 3%CC, plug down 9:45PM, WOC 8 hrs, slope 1 degree

10-12-13 288', drill plug at 5:45AM

10-13-13 1868', drilling

10-14-13 2850', drilling, displaced 3058'-3090'

10-15-13 3480', drilling

10-16-13 3925', RTD 3925'@6:49AM, ST, CCH, TOWB, logs, TIWB, LDDP

10-17-13 3925', finish running casing and cementing, RD

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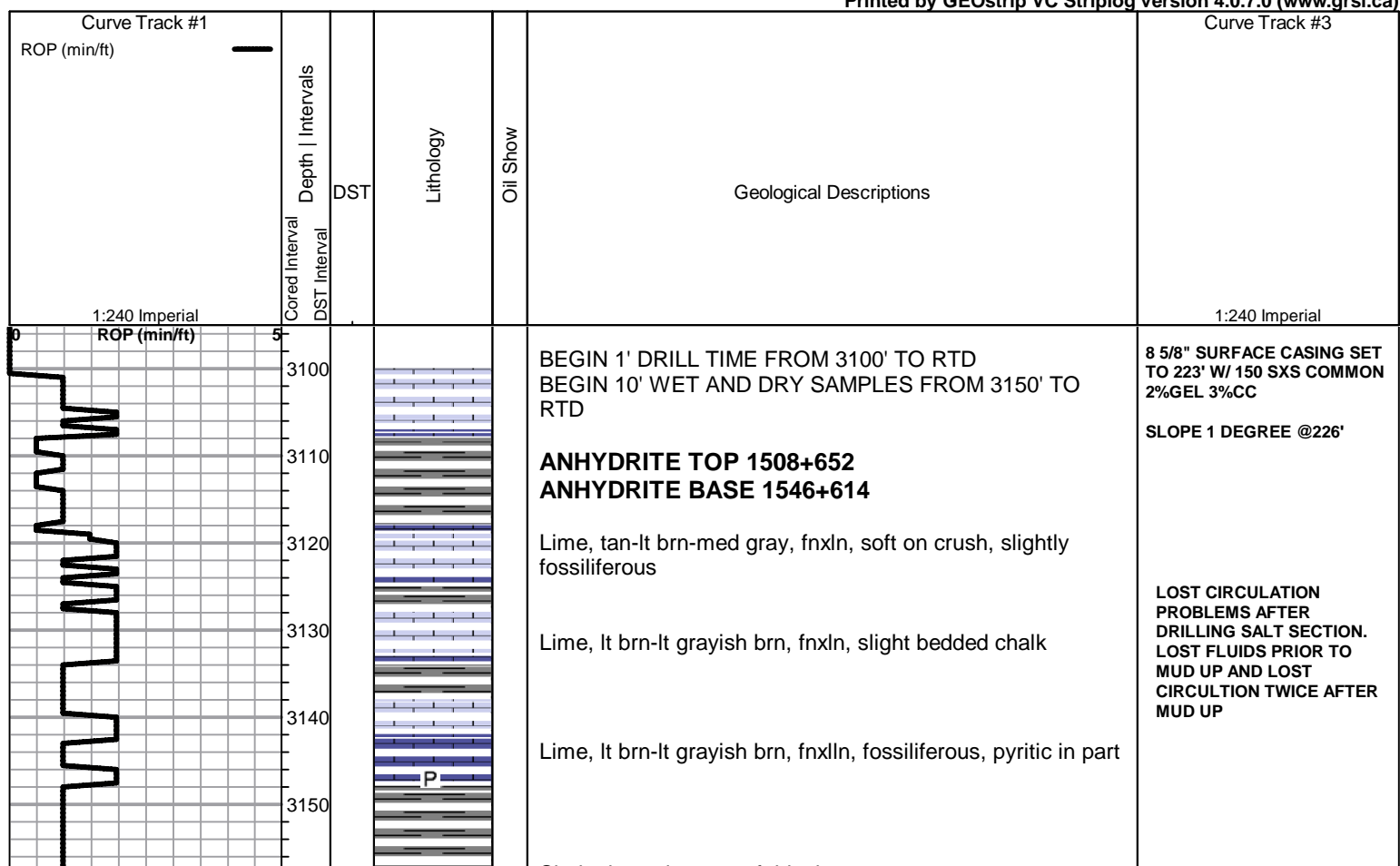


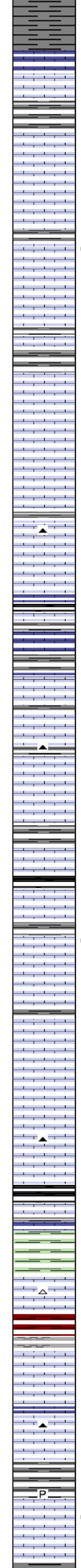
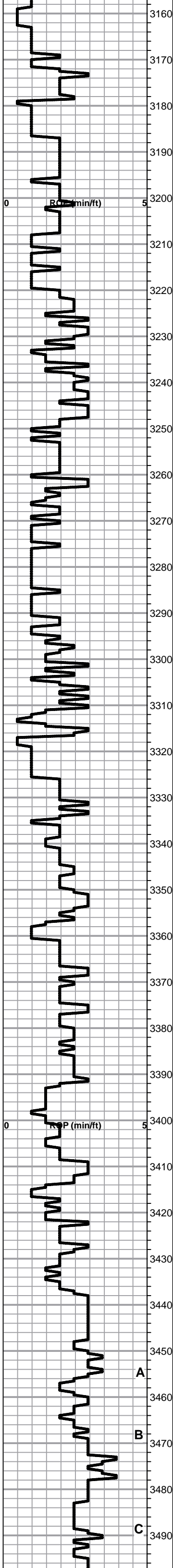
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ROCK TYPES							
	Clystgy		Dol Lime		Lscongl		Carbon Sh
	Chtcongl		Lmst fw<7		shale, grn		shale, red
	Dolprim		Lmst fw7>		shale, gry		Shcol

ACCESSORIES	
<b>MINERAL</b>	
▲ Chert, dark	
≡ Nodules	
P Pyrite	
.* Sandy	
⋄ Varicolored chert	
△ Chert White	

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





Shale, lt-med gray, soft blocky

Lime, tan-lt brn, fnxln,

Lime, tan-lt brn, fnxln, slight bedded chalk in part  
Shale, lt-med gray, soft blocky to soft mud

**TOPEKA ELog 3186-1026**

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

Lime, lt brn-lt grayish brn, fnxln

Lime, tan, granular with fine oomoldic in part, few specks of oil on crush

Lime, tan-lt brn, fnxln, bedded chalk

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

Shale, lt gray, soft blocky

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

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

Lime, tan-lt brn, fnxln, brittle on crush

Lime, tan-lt brn, fnxln, slightly fossiliferous, slight chalk

Lime, tan-lt brn-lt gray, fnxln

Lime, lt-med brn, granular, slightly fossiliferous, lt bedded chalk

Shale, dark gray-black carbonaceous, soft blocky

Lime, lt brn-lt grayish brn, fnxln

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

Lime, tan-lt brn, fnxln-granular

Lime, tan, granular

Lime, crm-tan, fnxln

Lime, crm-tan-lt gray, fnxln-granular in part

Shale, black carbonaceous, soft blocky

Lime, tan, fnxln

Lime, tan, fnxln, few chips granular/fine vuggy, dolomitic, minor show of oil specks on crush

Lime, tan-crm, fnxln

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

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

Lime, tan-lt brn, fnxln-granular

Lime, tan-lt brn-lt grayish brn, fnxln

**HEEBNER SHALE ELog 3414-1254**

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

Shale, dove gray-lime green, soft blocky

**TORONTO ELog 3434-1274**

Lime, white-crm, fn-vfxln, hard bedded chalk, lithographic in part, NS

**LKC ELog 3450-1290**

Lime, crm-lt brn, fn-vfxln, hard on crush, slightly fossiliferous, NS

Lime, lt-med brn, fn-vfxln, hard on crush

Lime, lt gray, fn-vfxln, slight bedded chalk, NS

Shale, dove gray forming soft mud

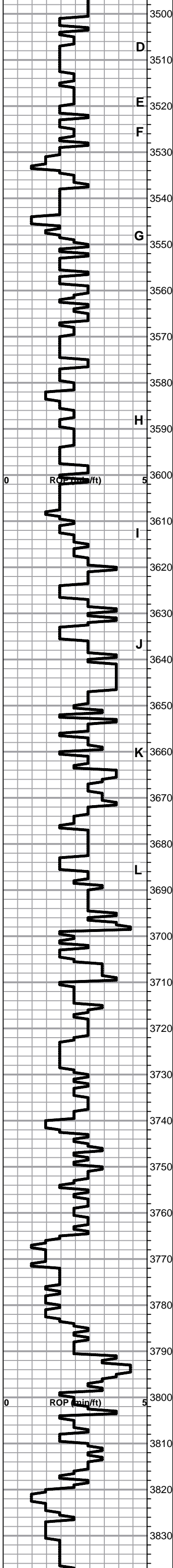
Lime, crm-tan, fnxln, bedded chalk with few chips, oolitic, spotty stain in interoolitic voids, NFO, V Lt Odor, appears poorly developed from sample examination

STARTED LOSING MUD VOLUME. STOPPED AND REBUILT VOLUME AND REESTABLISHED CIRC WITH HEAVY LCM LEVELS

A

B

C



Shale, lt gray, soft-firm blocky, waxy

Lime, crm, fn-vfxln, slight bedded chalk

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

Shale, gray-black, soft blocky

Lime, lt grayish green, fnxln

Lime, tan, fnxln, dolomitic in part, fossiliferous with spotty staining in foss voids and scattered vugs, minor SFO under heat with lt odor

Lime, tan, fnxln, bedded chalk

Lime, crm-tan, fn-micro xln, bedded chalk

Lime, crm-tan, fn-micro xln, bedded chalk, white chert

Lime, crm-tan-lt gray near shale boundary, fnxln, lt gray mottling near base of lime section

Shale, gray-black, cherty

Lime, med brn, fossiliferous, scattered to saturated staining, NFO, V LT Odor, little visible porosity noted

Lime, crm-med brn-med grayish brn, fn-vfxln, slight bedded chalk

Lime, crm-lt brn, fn-vfxln

Lime, tan, fn-micro xln, spotty dead oil stain, NFO, No Odor

Lime, crm-tan, fn-micro xln, slight bedded chalk

Shale, med-dark gray, firm blocky

Lime, off white-lt brn, fn-micro xln grading into granular lime with spotty dark oil stain, NFO, No Odor

Lime, offwhite-lt brn, fn-vfxln

Shale, med-dark gray, firm blocky

Lime, lt brn-crm, few oolitic chips with lt spotty staining, NFO, no detectable odor

Lime, lt brn-lt gray, fn-vfxln

Shale, gray-black carbonaceous

Lime, crm-tan, fnxln, bedded chalk

Lime, crm-off white, fnxln, white chert

**BKC ELog 3694-1534**

Shale, dark brn-grays, firm blocky with clastic lime rubble in mix

Shale, tan, soft mud with lt red wash

Lime, crm-tan, fn-vfxln

Shale, red wash, soft blocky with dark chert nodules

Shale, red-dark brn, some clastic lime mix with red staining

**MARMATON-PAWNEE ELog 3755-1595**

Lime, crm-tan, fnxln-granular in part, dolomitic, orange chert

Lime, crm-tan-lt brn, granular, dolomitic, fine grain granular, lt even staining, NFO, no odor,

Lime, crm-tan, fnxln, increasing chert content with tan, white, orange cherts, fresh, sharp

Shale, maroon-gray, soft blocky

Shale, maroon-gray, soft blocky

**ARBUCKLE ELog 3820-1660**

Dolomite, ivory, fn-med xln, granular-sucrosic, lt-fair odor and saturated staining

Dolomite, ivory, fn-med xln, granular-sucrosic, lt odor with spotted to saturated staining, some gilsonitic specks in part

STARTED LOSING MUD VOLUME WITH EVENTUAL LOST CIRCULATION. PULLED 5 STANDS AND MIXED MUD TO REBUILD VOLUME. REGAINED CIRCULATION WITH HEAVY LCM LEVELS TO MAINTAIN CIRCULATION





# 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. 7205

Date	Sec.	Twp.	Range	County	State	On Location	Finish
10-11-13	7	13	20	Ellis	KS		9:45 PM

Location *Ellis 6th St 2w?*

Lease *Nicholson Unit* Well No. *1* Owner

Contractor *Southwind 1* 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 *TDI Inc.*

Hole Size *12 3/4* T.D. *227* Street

Csg. *8 5/8* Depth *223* City State

Tbg. Size Depth City State

Tool Depth The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. *20* Shoe Joint *20* Cement Amount Ordered *150 com 3%bcc 2%gel*

Meas Line Displace *12 3/4* Common *150*

**EQUIPMENT** Poz. Mix

Pumptrk *15* No. Cementer Helper *Nick* Gel. *3*

Bulktrk *9* No. Driver *Lonnie W* Calcium *5*

Bulktrk *PU* No. Driver *Travis*

**JOB SERVICES & REMARKS** Hulls

Remarks: *cement did circulate* 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 *150*

Mileage

**FLOAT EQUIPMENT**

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge *Surface*

Mileage *11*

Signature *[Signature]* Tax Discount Total Charge

JOB LOG

SWIFT Services, Inc.

DATE 10-16-13 PAGE NO. 1

CUSTOMER TDI WELL NO. #1 LEASE Nicholson Unit JOB TYPE 2-stage TICKET NO. 25742

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2230							ea low w/ FE
								RTD 3925'
								5 1/2" x 14 1/4" x 3920' x 42'
								Cent, 1, 3, 97, 6, 8, 9, 11, 42
								Base 2, 43, 63
								DV 43 @ 2074'
	0100							start FE
	0255							Break Circ
	0410	2	7/5					Plug RHMH <sup>1/5</sup> 30 bbls EA-2
	0421	5	0			200		Start Pct 50 gal Mod flush
	0424	5	12/0			200		Start 150 bbls EA-2
	0428	5	20/0			200		End Cement
	0435		36					Wash P/L
								Drop L.D. Plug
	0443	6	0			200		Start Displacement wtr
	0450	6	45			200		cut cement mud
	0455	5	73			250		catch Cement
	0500		96			<del>200</del> 700		Land Plug
								Release Pressure
								Floater Hold
	0502							Drop Opening Plug
	0510					1100		Open DV
	0511		0			200		Start KCL flush 20 bbl
	0515		20/0			200		Start 240 bbls SMD Cement
	0541		134					End Cement
								Wash P/L
								Drop Closing Plug
	0545		0			200		Start Displacement
			50			700		Circ Cement
	0555		50.6			<del>200</del> 700		Land Plug
								Release Pressure
								DV Closed
								circ 5 bbls to pit
								Thank you, Nick, David E. + Rob