

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)</i> <i>(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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OPERATOR

Company: ALAN J. VONFELDT
 Address: PO BOX 611
 RUSSELL, KANSAS 67665-0611

Contact Geologist: ALAN VONFELDT
 Contact Phone Nbr: 785-483-1252
 Well Name: MICHAELIS # 4
 Location: NE SE SW SW, SEC.33-T14S-R13W
 API: 15-167-24,083-00-00
 Pool: IN FIELD
 State: KANSAS
 Field: HALL-GURNEY
 Country: USA

Scale 1:240 Imperial

Well Name: MICHAELIS # 4
 Surface Location: NE SE SW SW, SEC.33-T14S-R13W
 Bottom Location:
 API: 15-167-24,083-00-00
 License Number: 7281
 Spud Date: 10/31/2018 Time: 4:00 PM
 Region: RUSSELL COUNTY
 Drilling Completed: 11/3/2018 Time: 7:00 PM
 Surface Coordinates: 460' FSL & 1005' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 1727.00ft
 K.B. Elevation: 1735.00ft
 Logged Interval: 2100.00ft To: 2975.00ft
 Total Depth: 2975.00ft
 Formation: TARKIO SAND
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -98.7768732
 Latitude: 38.785147
 N/S Co-ord: 460' FSL
 E/W Co-ord: 1005' 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 #: 3
 Rig Type: MUD ROTARY
 Spud Date: 10/31/2018 Time: 4:00 PM
 TD Date: 11/3/2018 Time: 7:00 PM
 Rig Release: 11/4/2018 Time: 7:00 PM

ELEVATIONS

K.B. Elevation: 1735.00ft Ground Elevation: 1727.00ft
 K.B. to Ground: 8.00ft

NOTES

PRODUCTION CASING WAS RAN TO TEST AND PRODUCE THE TARKIO SAND.

	MICHAELIS # 4 NE SE SW SW SEC.33-14S-13W KB 1735'	MICHAELIS # 1 SE NE SW SW SEC.33-14-13W KB 1733'	MICHAELIS # 3 NW SE NE SW SEC.33-14-13W KB 1724'
	LOG TOPS		
Anhydrite top	688+1047	+ 1039	
Anhydrite base	723+1012	+1015	+1016
Grand Haven	2240 -505	- 502	- 503
Dover Lime	2263 - 528	- 524	- 525
Tarkio Lime	2311 - 576	- 573	- 574
Elmont	2374 - 639	- 638	- 638
Topeka	2586 -851	- 852	- 850
Heebner Sh.	2815-1080	-1083	-1079
Toronto	2833-1098	-1102	-1098
LKC	2883-1148	-1152	-1148
RTD	2975-1240	-1485	-1478

SUMMARY OF DAILY ACTIVITY

- 10-31-18 RU, spud 4:00PM, drill to 304', slope survey ¾ degree
- 11-01-18 304', set 8 5/8" surface pipe to 304' w/ 175 sxs 60/40 pos 2%gel
3%CC, plug down 12:30AM, drill plug at 8:30AM
- 11-02-18 1909', drilling, displaced 2005'-2029'
- 11-03-18 2700', drilling, RTD 2975'@ 7:00PM, short trip 30 stands, TOWB
- 11-04-18 2975', logs, DST # 1, 2892'-2975', LDDP, run production casing, RD



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Alan J. Vonfeldt
 P.O. BOX 611
 Russell KS 67665+0611
 ATTN: Herb Deines

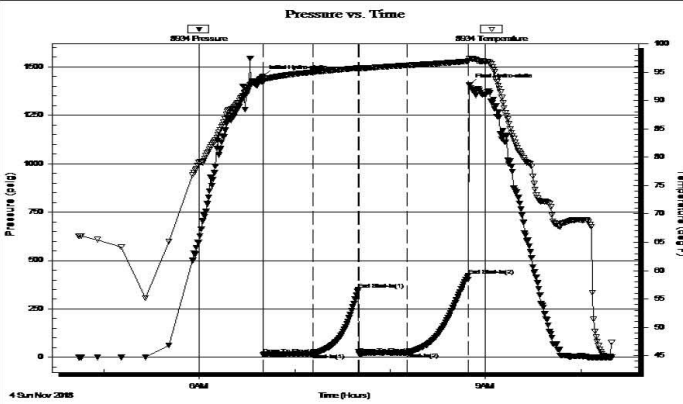
33-14S-13W Russell KS
Michaelis #4
 Job Ticket: 64761 **DST#: 1**
 Test Start: 2018.11.04 @ 04:44:00

GENERAL INFORMATION:

Formation: **LKC 'C'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:40:15
 Time Test Ended: 10:19:45
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Spencer J. Staab
 Unit No: 84
 Interval: **2892.00 ft (KB) To 2975.00 ft (KB) (TVD)**
 Total Depth: 2975.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Reference Elevations: 1735.00 ft (KB)
 1727.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8934 Inside
 Press@RunDepth: 24.43 psig @ 2895.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.11.04 End Date: 2018.11.04 Last Calib.: 2018.11.04
 Start Time: 04:44:15 End Time: 10:19:45 Time On Btm: 2018.11.04 @ 06:40:00
 Time Off Btm: 2018.11.04 @ 08:50:00

TEST COMMENT: 30-IF-Weak-Fair; Built to 4&1/4"
 30-ISI-No Return
 30-FF-Weak; Built to 2&1/4"
 30-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1451.25	94.05	Initial Hydro-static
1	13.11	93.16	Open To Flow (1)
32	19.55	95.01	Shut-In(1)
60	349.93	95.73	End Shut-In(1)
61	18.07	95.65	Open To Flow (2)
91	24.43	96.20	Shut-In(2)
129	422.64	96.93	End Shut-In(2)
130	1407.30	97.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbt)
25.00	V SOCM 2%O 98%M	0.35

Gas Rates

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

ROCK TYPES

Lmst fw<7
 shale, grn
 Carbon Sh
 Ss

Lmst fw7>

shale, gry

shale, red

ACCESSORIES

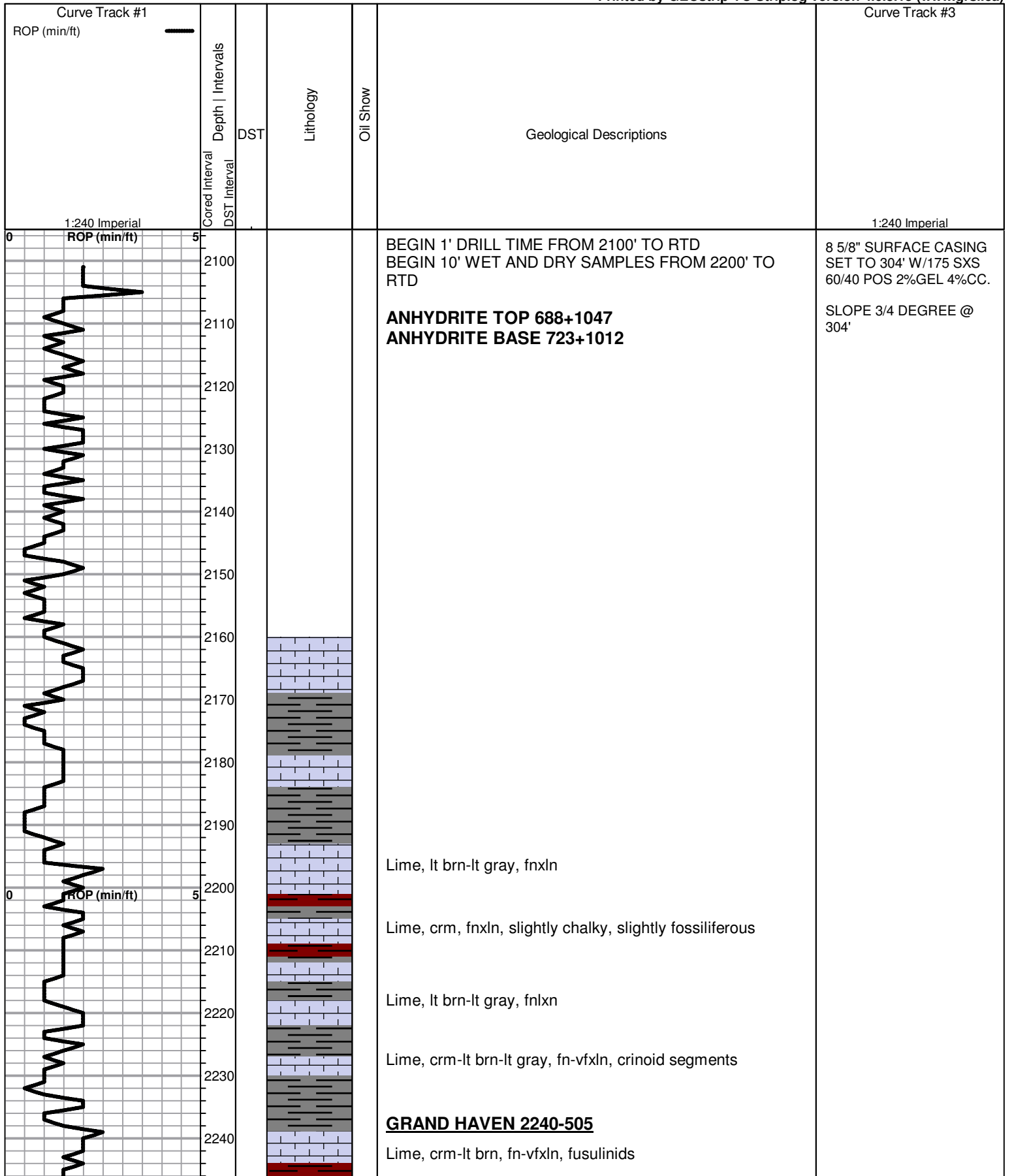
MINERAL

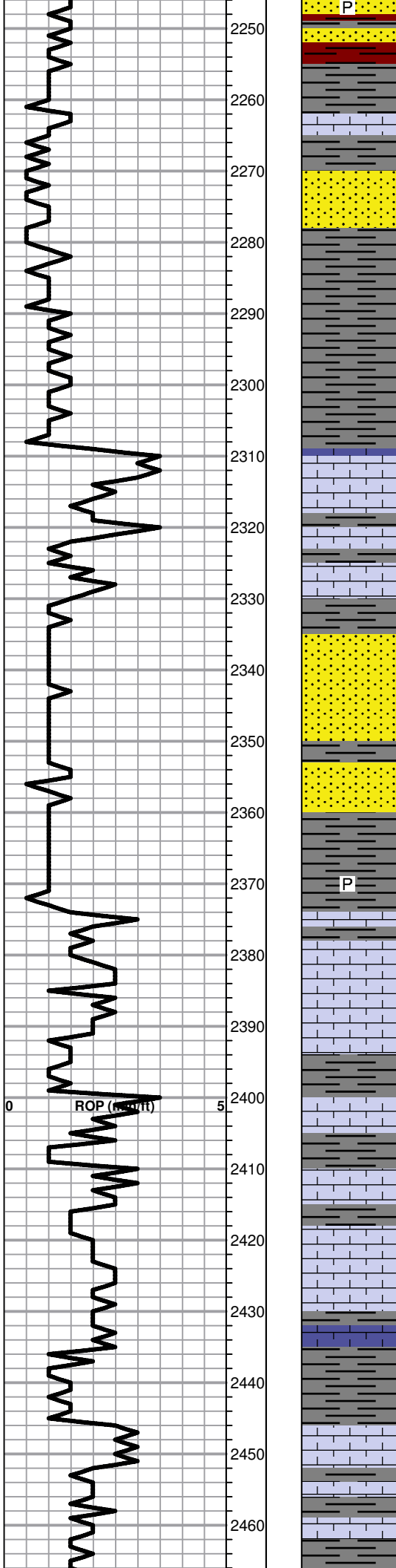
- P Pyrite
- △ Chert White

FOSSIL

- Oolite
- ⊠ Oomoldic

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)





Sandstone, lt gray, gritty, pyritic, NS

DOVER LIME 2263-528

● * Sandstone, lt gray to white, poorly sorted with fine grit in part, scattered to sat staining, lt odor, show of lt gassy oil, gas bubbles.

Shale, med gray, soft sticky clumping

TARKIO LIME 2311-576

Lime, crm-lt brn-lt gray, fnlxn

Lime, lt-med brn, fn-micro ln

Lime, lt-med brn, fn-vfxln

Sandstone, lt gray, very fine grained to gritty, laminated in part, micaceous, NS, no staining, no odor

Shale, lt brn-med gray, blocky to sticky clumping with pyrite clusters

Lime, lt brn, fn-vfxln

Lime, lt brn, fnxln, chalky matrix in part

Shale, lt gray, soft mud

Lime, lt-med brn, fn-vfxln

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

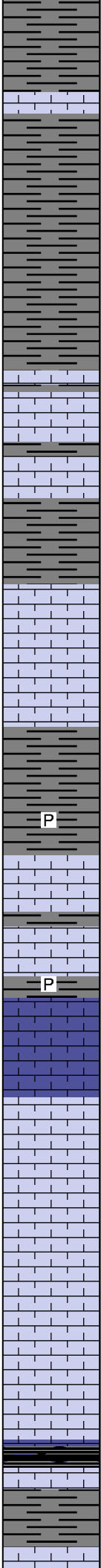
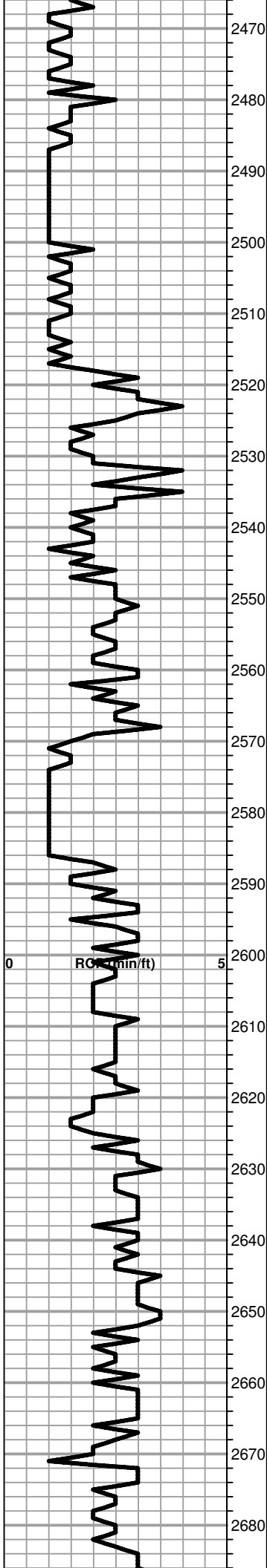
Lime, med to dark grayish brn, fnxln, fossiliferous

Lime, med brn-med grayish brn, fnxln-granular in part, slightly fossiliferous, dirty shaley in part

Shale, lt gray, soft sticky

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

Lime, lt-med gray, fnxln, gray-black mottling



Shale, lt-med gray, soft mud

Lime, dark brn, fnxln

Shale, lt-med gray, soft mud to soft sticky to soft blocky

Lime, med-dark brn-dark grayish brn,fn-vfxln, fusulinids

Lime, lt-dark brn, fn-vfxln

Shale, lt-med gray, soft blocky

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

Lime, lt-dark brn, fn-vfxln

Lime, med brn-drk grayish brn, fn-vfxln

Shale, lt gray, soft sticky with pyrite clusters

TOPEKA 2586-851

Lime, lt-med brn, fn-micro xln

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

Lime, lt-med brn, fnxln

Lime, med brn-lt grayish brn, fnxln

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

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

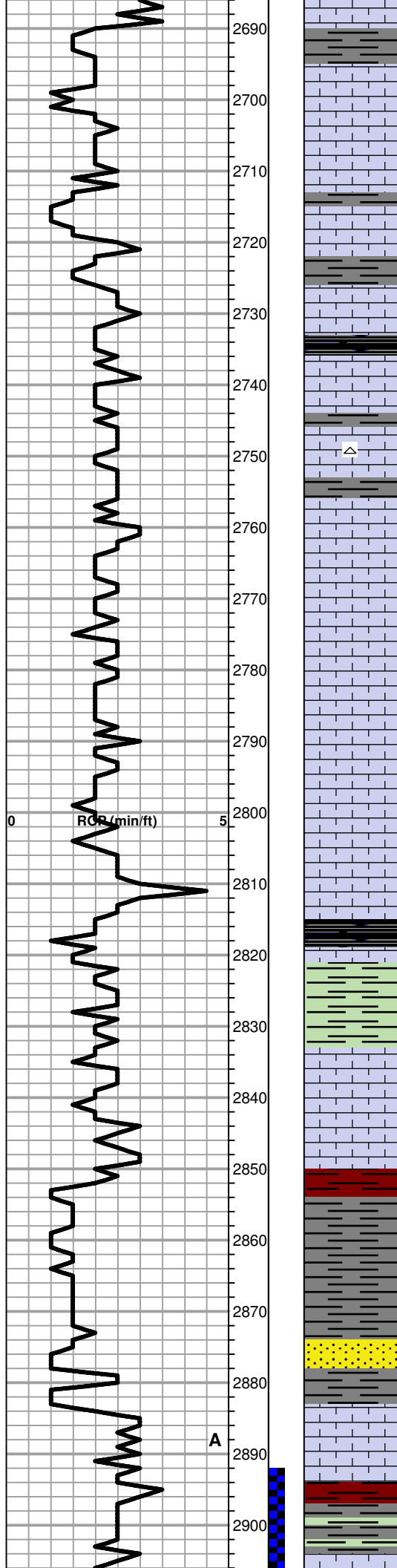
Lime, med brn, fn-vfxln, slightly fossiliferous

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

Shale, black carbonaceous

Lime, lt brn, microxln

Shale, lt gray, firm blocky, calcareous in part



Lime, white-crm, vfxln, lithographic

Lime, lt brn, fnxln

Lime, lt brn-lt grayish brn, fn-vfxln

Lime, lt-med brn, fnxln

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

Shale, black carbonaceous

Lime, lt brn, granular in part with scattered fine vugs, show of dark oil in few chips, no odor

Lime, lt-med brn-lt grayish brn, fn-vfxln with scattered microxln

Lime

Lime, lt brn, fnlxn-granular in part, bedded chalk in part

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

Lime, lt brn, fnxln, bedded chalk

Lime, lt brn, fnxln, bedded chalk

Lime, lt-med brn, fn-micro xln

HEEBNER SHALE 2815-1080

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

Shale, lime green to lt gray, soft sticky

TORONTO 2833-1098

* Lime, crm, fnxln to granular in part, lt odor, NFO, fair wet cut, very lt staining, likely gas zone

Lime, crm-lt brn, fn-vfxln

Shale, reddish brn, soft sticky grading into med gray sticky

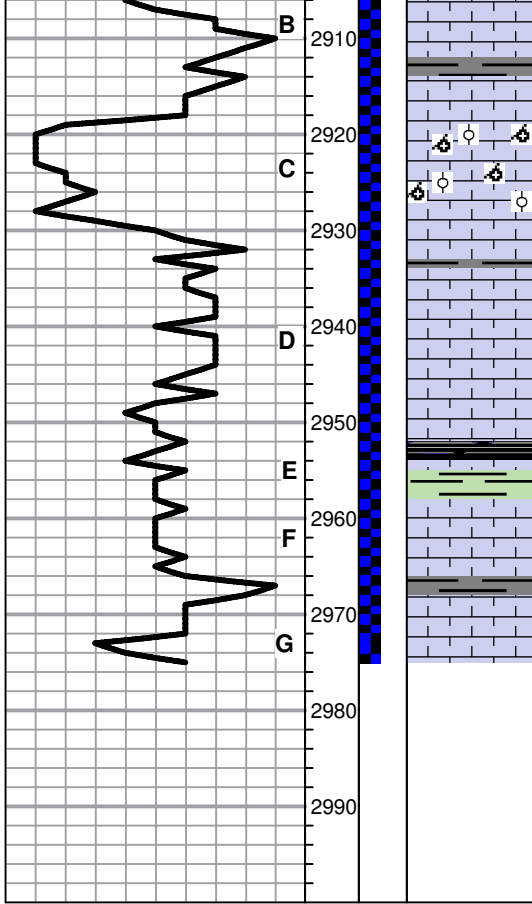
Sandstone, crm-lt gray, very fine grain, lt staining, NFO or odor.

LKC 2883-1148

Lime, lt-med brn, fn-vfxln

Lime, lt-med brn, fn-vfxln with bedded chalk, NS

Shale, red-brn-lt green, soft sticky



Lime, lt-med brn, fn-micro xln

Lime, lt brn-oolmoldic, strong odor, sat staining in part with show of lt gassy oil on crush.

Lime, crm, fn-micro xln

Lime, crm-buff, fn-micro xln

Lime crm, fn-micro xln

Shale, black carbonaceous
Lime, offwhite to lt gray, fnxln

Lime, med brn-granular in part, slightly fossiliferous, scattered ppt vuggy porosity with lt spotty stain, NFO or odor

Lime, crm-lt brn, fn-micro xln

RTD 2975-1240 LTD 2975-1240

DST # 1 2892' TO 2975'
SEE HEADER FOR TEST SUMMARY

4 1/2" PRODUCTION CASING SET TO 2472' W/125 SXS 60/40 POS 10% SALT, 2%GEL, 4%CC,30 SKS IN RATHOLE, JOB COMPLETE 6:45PM 11/04/18

SLOPE 1 1/2 DEGREES

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. 1140

Date	11-1-18	Sec.	33	Twp.	14	Range	13	County	Russell	State	Ks	On Location		Finish	12:30 AM
------	---------	------	----	------	----	-------	----	--------	---------	-------	----	-------------	--	--------	----------

Location Alan's house - 1S, 1/8 E, N 1/4 into

Lease	Michaelis	Well No.	4	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.
Contractor	Southwind	#	3	Charge To	Alan Vonfeldt
Type Job	Surface	Hole Size	12 1/4"	T.D.	304'
Csg.	8 5/8"	Depth	304'	Street	
Tbg. Size		Depth		City	State
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	15'	Shoe Joint	15'	Cement Amount Ordered	175 60/40 4% CC 2% Gel
Meas Line		Displace	18 1/4 BLS		

EQUIPMENT

Pumptrk	17	No.	Cement	Common	105
			Helper	Poz. Mix	70
Bulktrk	3	No.	Driver	Gel.	3
			Driver	Calcium	8
Bulktrk	p.u.	No.	Driver		
			Driver		

JOB SERVICES & REMARKS

Remarks:	Cement did Circulate	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	186
		Mileage	

FLOAT EQUIPMENT

	Guide Shoe	
	Centralizer	
	Baskets	
	AFU Inserts	
	Float Shoe	
	Latch Down	
	Pumptrk Charge	Surface
	Mileage	15

X Signature	July 2018	Tax	
		Discount	
		Total Charge	

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. 1056

Date	11-4-18	Sec.	33	Twp.	14	Range	13	County	Russell	State	KS	On Location		Finish	6:45pm	
Location								Allans house 1 1/8 E N into								
Lease	Michael's			Well No.	4			Owner								
Contractor	Southwind #3			To Quality Oilwell Cementing, Inc.												
Type Job	Production String			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	7 7/8			T.D.	2975			Charge To Alan Alan Ventelot								
Csg.	4 1/2			Depth	2479.94			Street								
Tbg. Size				Depth				City State								
Tool				Depth				The above was done to satisfaction and supervision of owner agent or contractor.								
Cement Left in Csg.	36.58			Shoe Joint	36.58			Cement Amount Ordered 125 ⁶⁰ /40 10/Salt 2-CEL								
Meas Line				Displace	39.8L			1/4#Flo 500gal mud Clear								
EQUIPMENT								Common 75								
Pumptrk	18	No.	Cement	Helper			Brest			Poz. Mix 50						
Bulktrk		No.	Driver	Driver			Doug			Gel. 2						
Bulktrk	153	No.	Driver	Driver			Doug			Calcium						
JOB SERVICES & REMARKS								Hulls								
Remarks:								Salt 10								
Rat Hole	30SK							Flowseal 25#								
Mouse Hole								Kol-Seal								
Centralizers								Mud CLR 48 500 gal								
Baskets								CFL-117 or CD110 CAF 38								
D/V or Port Collar								Sand								
4 1/2 set @ 2479.94. Bulk @ 2443.								Handling 138								
Best Circulation. Pump special mud Clear								Mileage								
Plug Rathole 30SK. Cement 4 1/2 with								FLOAT EQUIPMENT 4 1/2								
9.5SK. Cleanlines + Displace Plug.								Guide Shoe								
Plug landed @ 1200#								Centralizer 5								
								Baskets 1								
								AFU Inserts								
								Float Shoe 1								
								Latch Down 1								
								Pumptrk Charge Prodi String								
								Mileage 15								
								Tax								
								Discount								
								Total Charge								

Thanks

X Signature *Joy Lewis*



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Alan J. Vonfeldt
P.O. BOX 611
Russell KS 67665+0611
ATTN: Herb Deines

33-14S-13W Russell KS
Michaelis #4
Job Ticket: 64761 **DST#: 1**
Test Start: 2018.11.04 @ 04:44:00

GENERAL INFORMATION:

Formation: **LKC 'C'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:40:15
Time Test Ended: 10:19:45
Interval: **2892.00 ft (KB) To 2975.00 ft (KB) (TVD)**
Total Depth: 2975.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Spencer J. Staab
Unit No: 84
Reference Elevations: 1735.00 ft (KB)
1727.00 ft (CF)
KB to GR/CF: 8.00 ft

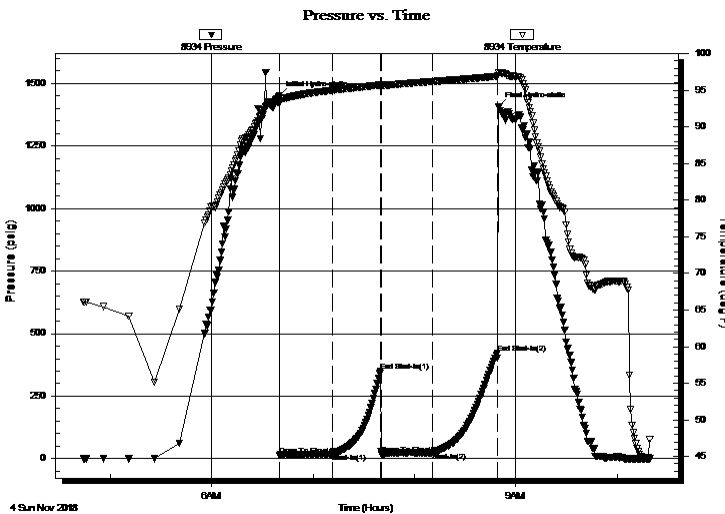
Serial #: 8934

Inside

Press@RunDepth: 24.43 psig @ 2895.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.11.04 End Date: 2018.11.04 Last Calib.: 2018.11.04
Start Time: 04:44:15 End Time: 10:19:45 Time On Btm: 2018.11.04 @ 06:40:00
Time Off Btm: 2018.11.04 @ 08:50:00

TEST COMMENT: 30-IF-Weak-Fair; Built to 4&1/4"
30-ISI-No Return
30-FF-Weak; Built to 2&1/4"
30-FSI-No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1451.25	94.05	Initial Hydro-static
1	13.11	93.16	Open To Flow (1)
32	19.55	95.01	Shut-In(1)
60	349.93	95.73	End Shut-In(1)
61	18.07	95.65	Open To Flow (2)
91	24.43	96.20	Shut-In(2)
129	422.64	96.93	End Shut-In(2)
130	1407.30	97.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	VSOCM 2%O 98%M	0.35

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Alan J. Vonfeldt
P.O. BOX 611
Russell KS 67665+0611
ATTN: Herb Deines

33-14S-13W Russell KS

Michaelis #4

Job Ticket: 64761

DST#: 1

Test Start: 2018.11.04 @ 04:44:00

GENERAL INFORMATION:

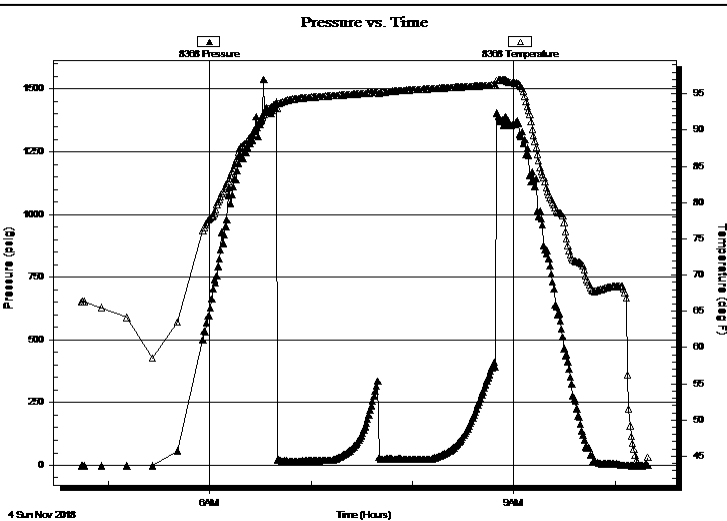
Formation: **LKC 'C'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:40:15
 Time Test Ended: 10:19:45
 Interval: **2892.00 ft (KB) To 2975.00 ft (KB) (TVD)**
 Total Depth: 2975.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Spencer J. Staab
 Unit No: 84
 Reference Elevations: 1735.00 ft (KB)
 1727.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8368

Outside

Press@RunDepth: psig @ 2895.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.11.04 End Date: 2018.11.04 Last Calib.: 2018.11.04
 Start Time: 04:44:15 End Time: 10:19:45 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30-IF-Weak-Fair; Built to 4&1/4"
 30-ISI-No Return
 30-FF-Weak; Built to 2&1/4"
 30-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
25.00	VSOCM 2%O 98%M	0.35

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Alan J. Vonfeldt
P.O. BOX 611
Russell KS 67665+0611
ATTN: Herb Deines

33-14S-13W Russell KS
Michaelis #4
Job Ticket: 64761 **DST#: 1**
Test Start: 2018.11.04 @ 04:44:00

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: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.00 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2600.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	VSOCM 2%O 98%M	0.354

Total Length: 25.00 ft Total Volume: 0.354 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 2#LCM

