

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1270683  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

November 2016

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  
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: \_\_\_\_\_

1270683

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			
Geologist Report / Mud Logs	<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)*

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>			PRODUCTION INTERVAL: Top _____ Bottom _____	

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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Form	ACO1 - Well Completion
Operator	Mai Oil Operations, Inc.
Well Name	Appleton 5
Doc ID	1270683

Tops

Name	Top	Datum
Anhydrite	417	+1340
Heebner	2801	-1044
Toronto	2823	-1066
Douglas	2837	-1080
Brown Lime	2921	-1164
Lansing	2952	-1195
Base Kansas City	3197	-1440
Arbuckle	3270	-1513



**JAMES C. MUSGROVE**

Petroleum Geologist, LLC  
212 Main Street  
P.O. Box 215  
Claflin, KS 67525

Office (620) 588-4250

Res. Claflin (620) 587-3444

Mai Oil Operations  
Appleton #5  
NE-SW-SE-NW (2240' FNL & 1810' FWL)  
Section 14-19s-10w  
Rice County, Kansas

Page 1

**5 1/2" Production Casing Set**

**Contractor:** Southwind Drilling Co. (rig #3)  
**Commenced:** August 19, 2015  
**Completed:** August 26, 2015  
**Elevation:** 1757' K.B., 1755' D.F., 1749' G.L.  
**Casing program:** Surface; 8 5/8" @ 303'  
Production, 5 1/2" @ 3342'  
**Sample:** Samples saved and examined 2500' to the Rotary Total Depth.  
**Drilling time:** One (1) foot drilling time recorded and kept 2500' to the Rotary Total Depth.  
**Measurements:** All depths measured from the Kelly Bushing.  
**Drill Stem Tests:** There were six (6) Drill Stem Tests ran by Trilobite Testing Co.  
**Electric Log:** By Nabors, Dual Induction, Compensated Density/Neutron, Micro and Sonic.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	417	+1340
Base Anhydrite	438	+1319
Heebner	2801	-1044
Toronto	2823	-1066
Douglas	2837	-1080
Douglas Sand	2851	-1094
Brown Lime	2921	-1164
Lansing	2952	-1195
Base Kansas City	3197	-1440
Conglomerate	3253	-1496
Arbuckle	3270	-1513
Rotary Total Depth	3345	-1588
Log Total Depth	3345	-1588

All tops and zones corrected to Electric Log Measurement

**SAMPLE ANALYSIS, SHOWS OF OIL, TESTING DATA, ETC.**

**TOPEKA SECTION**

- 2725-2740' Limestone, white, gray, fossiliferous in part, trace black to questionable brown stain, no free oil and no odor in fresh samples.
- 2746-2766' Limestone, gray, finely crystalline, slightly fossiliferous, sub-oomoldic, scattered porosity, black stain, no free oil and no odor in fresh samples.

**DOUGLAS SECTION**

- 2851-2873' Sand, gray, dark gray, fine to medium grained, micaeous in part, shaley in part, fair inter-granular porosity; good brown and black stain and saturation, show of free oil and fair odor in fresh samples.

**Drill Stem Test #1** **2830-2870**

**Times:** 30-30-45-60

**Blow:** Strong

**Recovery:** 60' gas in pipe  
60' very slightly oil cut mud  
(5% oil; 95% mud)

**Pressures:** ISIP 268 psi  
FSIP 424 psi  
IFP 83-70 psi  
FFP 76-86 psi  
HSH 1364-1317 psi

**LANSING SECTION**

- 2952-2966' Limestone, gray, yellow, finely crystalline, fossiliferous, poor visible porosity, no shows.
- 2972-2976' Limestone, white, tan, sub-oomoldic, chalky, few cherty, poor visible porosity.
- 2994-3004' Limestone, tan, white sub-oomoldic, chalky, few cherty, poorly developed porosity, few with fair porosity, brown stain no free oil and no odor in fresh samples (gas zone in surrounding offsets).
- 3019-3031' Limestone, tan, oolitic, chalky, trace brown stain, no free oil and faint odor in fresh samples.
- 3033-3041' Limestone, tan, gray, oomoldic, fair oomoldic porosity, brown stain, trace of free oil and faint odor in fresh samples.

**Drill Stem Test #2** **3029-3041**

----Misrun, plugged tool----

**Drill Stem Test #3**

**3029-3041**

**---Misrun, plugged tool---**

- 3041-3060' Limestone, as above, spotty stain, no free oil and questionable odor in fresh samples.
- 3097-3101' Limestone, white, gray oomoldic, good oomoldic porosity, no shows.
- 3112-3121' Limestone, tan, fossiliferous, chalky, trace brown stain, trace free oil and questionable odor in fresh samples.
- 3134-3142' Limestone, tan, oomoldic, scattered oomoldic porosity, brown stain, trace free oil and faint odor in fresh samples.
- 3159-3170' Limestone, white, gray, finely crystalline, few oolitic, oomoldic in part, fair porosity, trace stain show of free oil and faint odor in fresh samples.
- 3180-3190' Limestone, white, oolitic, chalky, poor visible porosity, no shows.

**Drill Stem Test #4**

**3121-3200**

**Times: 30-30-30-45**

**Blow: Strong**

**Recovery: 1430' gas in pipe  
60' muddy oil  
(50% oil; 50% mud)  
70' gassy mud**

**Pressures: ISIP 279 psi  
FSIP 368 psi  
IFP 68-70 psi  
FFP 98-92 psi  
HSH 1559-1526 psi**

- 3204-3212' Limestone, tan, finely crystalline, few medium crystalline, chalky, glauconitic, poor visible porosity, brown stain, no free oil and no odor in fresh samples.

**ARBUCKLE SECTION**

- 3270-3280' Dolomite, gray and white, fine and medium crystalline poor visible porosity, trace black stain, no show of free oil and faint odor in fresh samples.
- 3282-3293' Dolomite, tan finely crystalline, sucrosic, fair slightly cherty, fair pinpoint to fine inter-crystalline porosity, poor to fair stain, show of free oil and good odor in fresh samples.

**Drill Stem Test #5**

**3204-3290**

**---Misrun, plugged tool---**

Mai Oil Operations  
Appleton #5  
NE-SW-SE-NW (2240' FNL & 1810' FWL)  
Section 14-19s-10w  
Rice County, Kansas

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**Drill Stem Test #6** **3204-3293**

**Times: 30-30-30-45**

**Blow: Strong**

**Recovery: 480' gas in pipe  
660' oil and gas cut muddy water  
(10% oil; 10% gas; 60% water; 20% mud)**

**Pressures: ISIP 884 psi  
FSIP 897 psi  
IFP 157-232 psi  
FFP 284-331 psi  
HSH 1670-1502 psi**

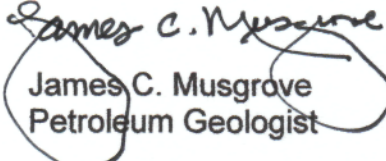
- 3293-3310' Dolomite, tan; sucrosic, fair pinpoint porosity, fair stain and saturation, show of free oil and good odor in fresh samples, plus white/gray, oolitic chert.
- 3310-3330' Dolomite, gray fine and medium crystalline, scattered porosity, gray and black stain, no free oil and fair odor in fresh samples.
- 3330-3345' Dolomite as above, plus gray chert, no shows.

**Rotary Total Depth 3345**  
**Log Total Depth 3345**

**Recommendations:**

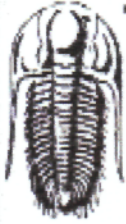
The 5 1/2" production casing was set and cemented on Mai Oil Operations Inc., Appleton #5.

Respectfully yours,

  
James C. Musgrove  
Petroleum Geologist







**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Mai Oil Operations  
 8411 Preston RD Ste 800  
 Dallas TX 75225+5520  
 ATTN: Jim Musgrove

**14-19s-10w Rice,KS**  
**Appleton #5**  
 Job Ticket: 62935      **DST#: 1**  
 Test Start: 2015.08.22 @ 14:10:00

**GENERAL INFORMATION:**

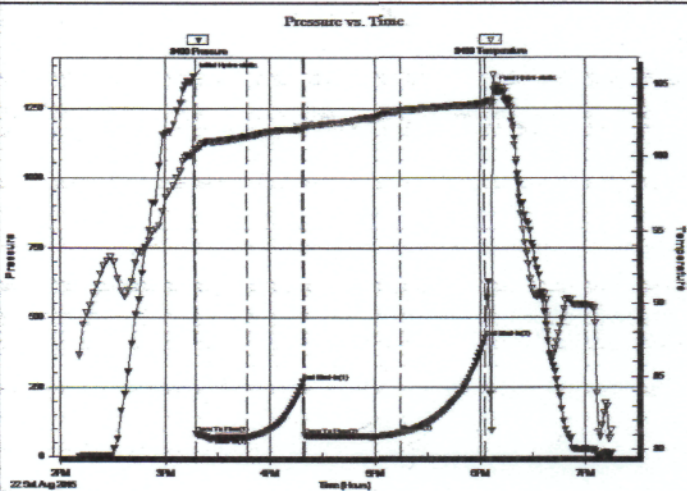
Formation: **Douglas Sand**  
 Deviated: No    Whipstock:                      ft (KB)  
 Time Tool Opened: 15:17:30  
 Time Test Ended: 19:15:00  
 Interval: **2830.00 ft (KB) To 2870.00 ft (KB) (TVD)**  
 Total Depth: 2870.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches    Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jared Scheck  
 Unit No: 55  
 Reference Elevations: 1757.00 ft (KB)  
 1749.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8400**

**Inside**

Press@RunDepth: 86.28 psig @ 2831.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2015.08.22      End Date: 2015.08.22      Last Calib.: 2015.08.22  
 Start Time: 14:11:00      End Time: 19:15:00      Time On Btm: 2015.08.22 @ 15:16:30  
 Time Off Btm: 2015.08.22 @ 18:07:30

**TEST COMMENT:** FFP-30 Minutes-Fair blow built 10"  
 FSIP-30 Minutes-No blow back  
 FFP-45 Minutes-BOB in 20 minutes  
 FSIP-60 Minutes-No blow back



**PRESSURE SUMMARY**

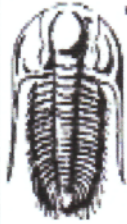
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1364.67	100.28	Initial Hydro-static
1	83.56	100.54	Open To Flow (1)
31	70.60	101.38	Shut-in(1)
62	268.22	101.90	End Shut-in(1)
63	76.27	102.03	Open To Flow (2)
118	86.28	103.24	Shut-in(2)
166	424.01	103.74	End Shut-in(2)
171	1317.39	105.65	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
65.00	OCM 5%O 95%M	0.91
0.00	60' GIP	0.00

**Gas Rates**

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



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Mai Oil Operations  
 8411 Preston RD Ste 800  
 Dallas TX 75225+5520  
 ATTN: Jim Musgrove

**14-19s-10w Rice,KS**  
**Appleton #5**  
 Job Ticket: 62936      **DST#: 2**  
 Test Start: 2015.08.23 @ 10:07:00

**GENERAL INFORMATION:**

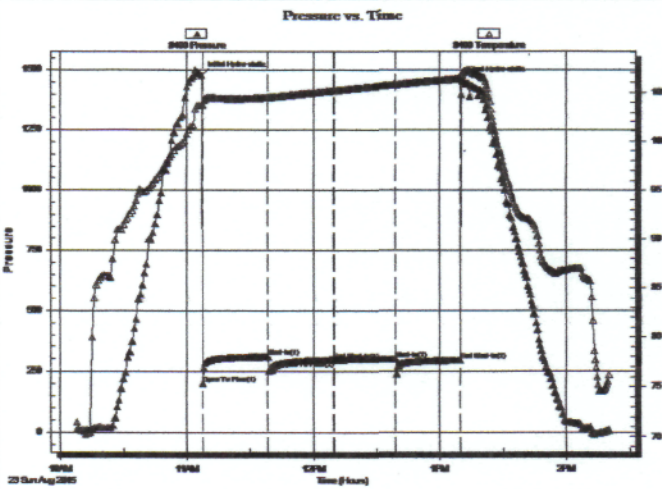
Formation: **LKC G**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:07:00  
 Time Test Ended: 14:20:30  
 Interval: **3029.00 ft (KB) To 3041.00 ft (KB) (TVD)**  
 Total Depth: 3041.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jared Scheck  
 Unit No: 55  
 Reference Elevations: 1757.00 ft (KB)  
 1749.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8400**

**Inside**

Press@RunDepth: 292.88 psig @ 3030.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.08.23 End Date: 2015.08.23 Last Calib.: 2015.08.23  
 Start Time: 10:08:00 End Time: 14:20:00 Time On Btm: 2015.08.23 @ 11:07:00  
 Time Off Btm: 2015.08.23 @ 13:10:30

**TEST COMMENT:** FFP-30 Minutes-Weak surface blow 1/4"  
 ISIP-30 Minutes-No blow back  
 FFP-30 Minutes-Very weak surge did not build  
 FSIP-30 Minutes-No blow back



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1476.94	103.80	Initial Hydro-static
1	201.44	103.77	Open To Flow (1)
32	308.25	104.53	Shut-In(1)
63	295.14	105.18	End Shut-In(1)
63	294.10	105.19	Open To Flow (2)
92	297.99	105.81	Shut-In(2)
123	292.88	106.40	End Shut-In(2)
124	1456.88	106.70	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
1.00	VSOOM 1%O 99%M	0.01

**Gas Rates**

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



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Mai Oil Operations  
 8411 Preston RD Ste 800  
 Dallas TX 75225+5520  
 ATTN: Jim Musgrove

**14-19s-10w Rice,KS**  
**Appleton #5**  
 Job Ticket: 62937 **DST#: 3**  
 Test Start: 2015.08.23 @ 18:12:00

**GENERAL INFORMATION:**

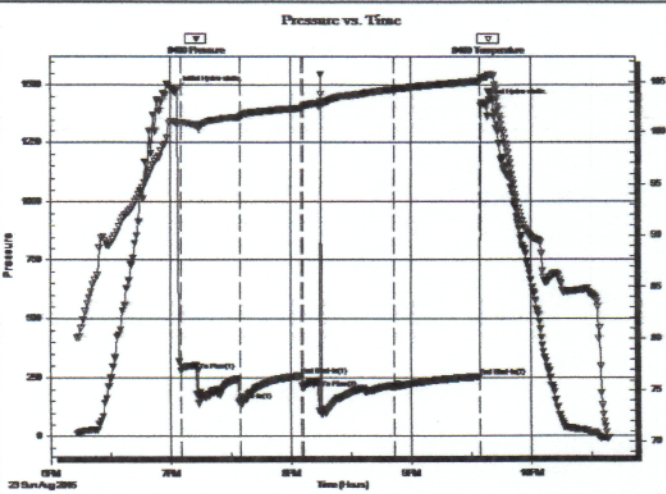
Formation: **LKC G**  
 Deviated: **No Whipstock:** ft (KB)  
 Time Tool Opened: 19:05:00  
 Time Test Ended: 22:38:30  
 Interval: **3029.00 ft (KB) To 3041.00 ft (KB) (TVD)**  
 Total Depth: 3041.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: **Poor**  
 Test Type: **Conventional Bottom Hole (Initial)**  
 Tester: **Jared Scheck**  
 Unit No: **55**  
 Reference Elevations: 1757.00 ft (KB)  
 1749.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8400**

**Inside**

Press@RunDepth: 213.13 psig @ 3030.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.08.23 End Date: 2015.08.23 Last Calib.: 2015.08.23  
 Start Time: 18:13:00 End Time: 22:38:30 Time On Btrm: 2015.08.23 @ 19:03:00  
 Time Off Btrm: 2015.08.23 @ 21:35:30

**TEST COMMENT:** FP-30 Minutes-Weak surface blow flushed tool blow built 2 1/2" flushed again blow built 3" total  
 ISIP-30 Minutes-No blow back  
 FFP-45 Minutes-Very weak surface blow flushed tool blow built 3"  
 FSIP 45 Minutes-No blow back



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1481.21	100.71	Initial Hydro-static
2	280.93	101.02	Open To Flow (1)
32	155.97	101.53	Shut-In(1)
62	259.23	102.42	End Shut-In(1)
63	207.43	102.57	Open To Flow (2)
109	213.13	104.26	Shut-In(2)
151	255.87	105.05	End Shut-In(2)
153	1424.00	105.40	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
20.00	Mud	0.28

**Gas Rates**

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

# 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. 1809  
8-20-15

Date	8-19-15	Sec.	14	Twp.	19	Range	10	County	Rice	State	Ks	On Location		Finish	1:00 AM
------	---------	------	----	------	----	-------	----	--------	------	-------	----	-------------	--	--------	---------

Location Clatlin, Ks - E to 4th Rd, S to I Rd

Lease	Appleton		Well No.	5	Owner	1/4 S, E 1/4 Sec 14	
Contractor	Southwind			3	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						
Hole Size	12 1/4"		T.D.	303'	Charge To	Main oil	
Csg.	8 5/8"		Depth	303'	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 180 @ 60/40 3 1/2 CC 2 1/2 bel		
Meas Line	Displace		18 1/4 BU				

**EQUIPMENT**

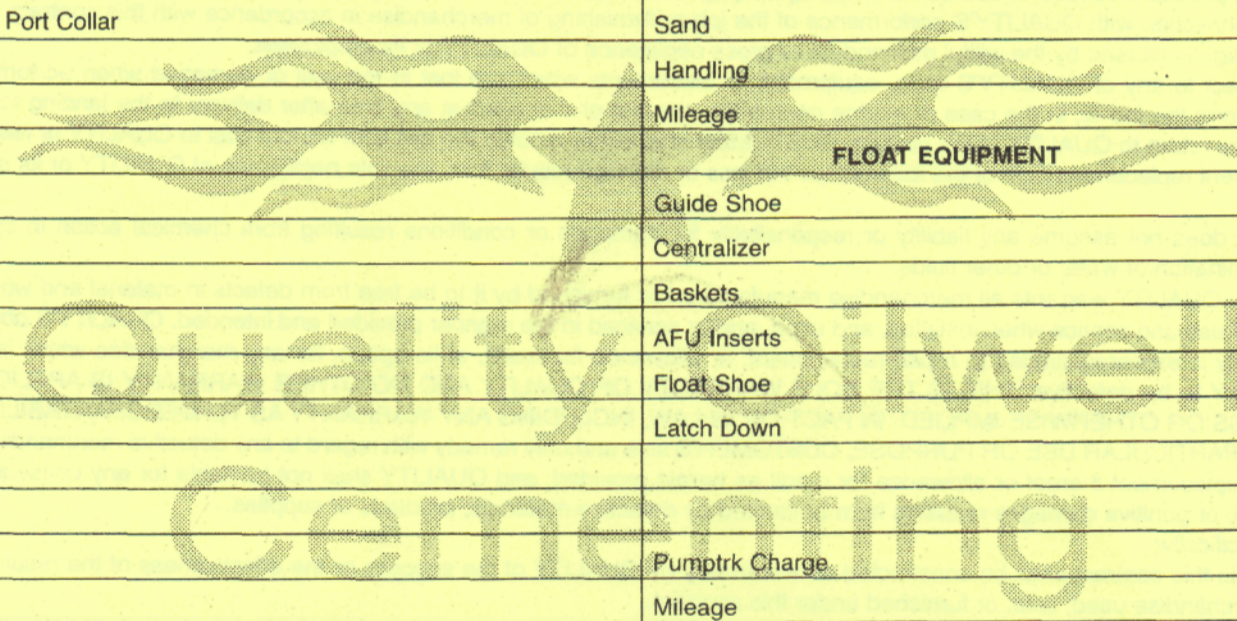
Pumptrk	18	No.	Cementer		Common
			Helper	Traub	
Bulktrk	3	No.	Driver	Nick	Poz. Mix
			Driver		Gel.
Bulktrk	p.u.	No.	Driver	Rock	Calcium
			Driver		

**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

**FLOAT EQUIPMENT**

	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down



	Pumptrk Charge	
	Mileage	
		Tax
		Discount
		Total Charge

X Signature Jay Klein

# QUALITY OILWELL CEMENTING, INC.

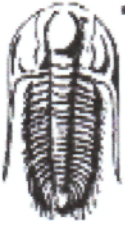
Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1610

Date	8-26-15	Sec.	14	Twp.	19	Range	10	County	Rice	State	Ks	On Location		Finish	10:45AM	
Lease	Appleton							Well No.	5	Location Clifton, Ks - E to 4th Rd, S to I Rd						
Contractor	Southwind 3							Owner	TE 1/4 S E15							
Type Job	Longstring							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	7 7/8"		T.D.	3345'		Charge To	mai oil									
Csg.	5 1/2" New 14#		Depth	3342'		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.	20.56'		Shoe Joint	20.56'		Cement Amount Ordered	160 60/40 10% Salt 2% Gel 1/4# Flt									
Meas Line			Displace	81 BCS		1000 gal mud Clear 48										
<b>EQUIPMENT</b>						Common										
Pumptrk	18	No.	Cementer	Travis		Poz. Mix										
			Helper													
Bulktrk	3	No.	Driver	Doug		Gel.										
			Driver													
Bulktrk	p.u.	No.	Driver	Rick		Calcium										
			Driver													
<b>JOB SERVICES &amp; REMARKS</b>						Hulls										
Remarks:											Salt					
Rat Hole											Flowseal					
Mouse Hole											Kol-Seal					
Centralizers	1-12		14		Mud CLR 48											
Baskets	pipe on bottom, break Circulation										CFL-117 or CD110 CAF 38					
D/V or Port Collar	pump 1000 gal mud Clear 48										Sand					
plug Rathole w/ 30 sx Hook to casing + pump 1305x Cement						Handling										
shut down, released plug + Displaced w/ 81 BCS of water.						Mileage										
Released + hold						<b>FLOAT EQUIPMENT</b>										
Lift pressure 700 #						Guide Shoe										
Land plug to 1500 #						Centralizer 13										
						Baskets										
						AFU Inserts										
						Float Shoe										
						Latch Down										
						Pumptrk Charge										
						Mileage										
						Tax										
						Discount										
						Total Charge										
X Signature	[Signature]															



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Mai Oil Operations  
 8411 Preston RD Ste 800  
 Dallas TX 75225+5520  
 ATTN: Jim Musgrove

**14-19s-10w Rice,KS**  
**Appleton #5**  
 Job Ticket: 62938      **DST#: 4**  
 Test Start: 2015.08.24 @ 10:30:00

**GENERAL INFORMATION:**

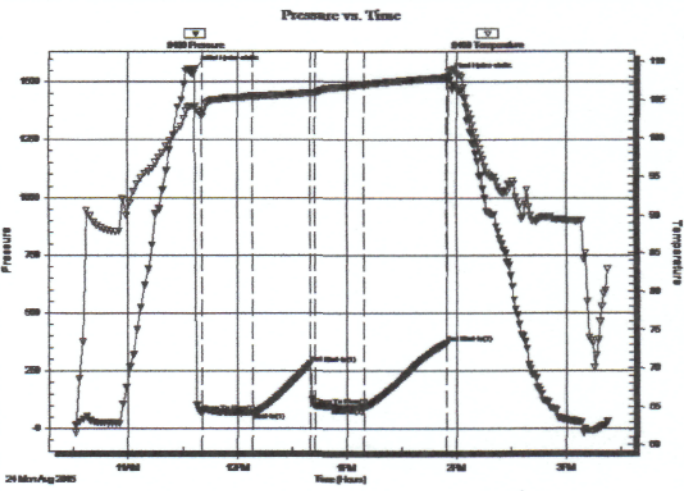
Formation: **LKC I - K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:40:30  
 Time Test Ended: 15:22:30  
 Interval: **3121.00 ft (KB) To 3200.00 ft (KB) (TVD)**  
 Total Depth: 3200.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jared Scheck  
 Unit No: 55  
 Reference Elevations: 1757.00 ft (KB)  
 1749.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8400**

**Inside**

Press@RunDepth: 92.55 psig @ 3160.00 ft (KB)  
 Start Date: 2015.08.24 End Date: 2015.08.24  
 Start Time: 10:31:00 End Time: 15:22:30  
 Capacity: 8000.00 psig  
 Last Calib.: 2015.08.24  
 Time On Btrr: 2015.08.24 @ 11:36:30  
 Time Off Btrr: 2015.08.24 @ 13:55:30

**TEST COMMENT:** FFP-30 Minutes-BOB in 4 1/2 minutes  
 ISIP-30 Minutes-No blow back  
 FFP-30 Minutes-BOB in 2 1/2 minutes  
 FSIP- 45 Minutes-No blow back



**PRESSURE SUMMARY**

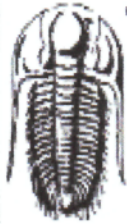
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1559.86	104.08	Initial Hydro-static
4	68.72	102.73	Open To Flow (1)
32	70.11	105.40	Shut-In(1)
63	279.40	105.88	End Shut-In(1)
66	98.74	105.84	Open To Flow (2)
93	92.55	106.95	Shut-In(2)
138	368.97	107.90	End Shut-In(2)
139	1526.71	108.71	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
60.00	VGM 50%G 50%M	0.84
70.00	GM 40%G 60%M	0.98
0.00	1430 gas in pipe	0.00

**Gas Rates**

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Mai Oil Operations

**14-19s-10w Rice,KS**

8411 Preston RD Ste 800 Dallas TX 75225+5520

**Appleton #5**

Job Ticket: 62939

**DST#: 5**

ATTN: Jim Musgrove

Test Start: 2015.08.25 @ 00:25:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:24:30

Time Test Ended: 05:03:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 55

Interval: **3204.00 ft (KB) To 3290.00 ft (KB) (TVD)**

Reference Elevations: 1757.00 ft (KB)

Total Depth: 3290.00 ft (KB) (TVD)

1749.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

## Serial #: 8400

Inside

Press@RunDepth: 1014.57 psig @ 3210.75 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.08.25

End Date:

2015.08.25

Last Calib.: 2015.08.25

Start Time: 00:25:00

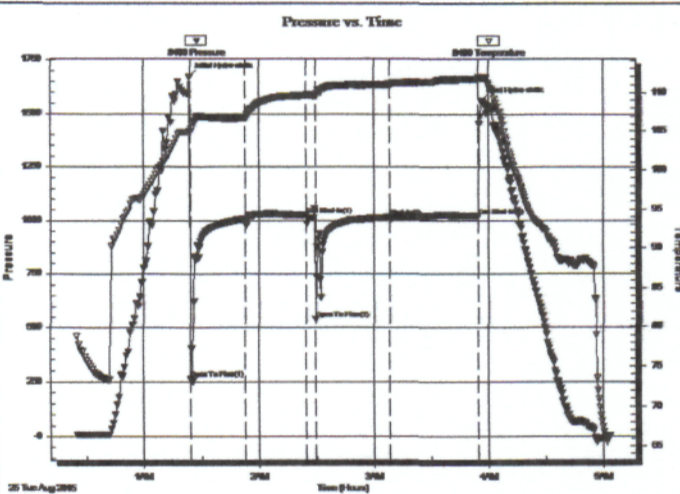
End Time:

05:03:00

Time On Btm: 2015.08.25 @ 01:24:00

Time Off Btm: 2015.08.25 @ 03:56:00

TEST COMMENT: IFP-Weak blow built to 2 1/2' started to die back  
 IS- No blow back  
 FFP- Very weak surface blow - flushed tool - good surge blow died  
 FS- No blow back



## PRESSURE SUMMARY

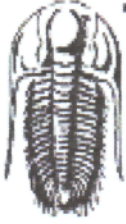
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1672.69	104.89	Initial Hydro-static
1	263.08	104.89	Open To Flow (1)
29	1007.61	106.74	Shut-In(1)
61	1024.79	109.60	End Shut-In(1)
66	541.67	109.48	Open To Flow (2)
105	1014.57	110.98	Shut-In(2)
151	1021.76	111.65	End Shut-In(2)
152	1560.88	111.81	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	Mud	0.35

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Mai Oil Operations

**14-19s-10w Rice,KS**

8411 Preston RD Ste 800 Dallas TX 75225+5520

**Appleton #5**

Job Ticket: 62940

**DST#: 6**

ATTN: Jim Musgrove

Test Start: 2015.08.25 @ 10:00:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:14:30

Time Test Ended: 15:12:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 55

Interval: **3204.00 ft (KB) To 3293.00 ft (KB) (TVD)**

Reference Elevations: 1757.00 ft (KB)

Total Depth: 3293.00 ft (KB) (TVD)

1749.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8400**

Inside

Press@RunDepth: 331.64 psig @ 3288.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.08.25

End Date:

2015.08.25

Last Calib.: 2015.08.25

Start Time: 10:01:00

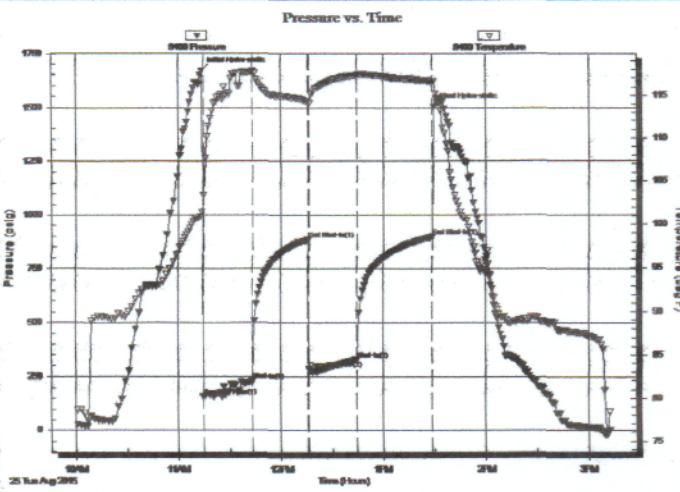
End Time:

15:12:30

Time On Btm: 2015.08.25 @ 11:13:30

Time Off Btm: 2015.08.25 @ 13:29:30

TEST COMMENT: IFF-30 Minutes-BOB in 6 minutes  
ISIP-30 Minutes-No blow back  
FFP-30 Minutes-BOB in 11 minutes  
FSP-45 Minutes-No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1670.27	101.43	Initial Hydro-static
1	157.69	103.41	Open To Flow (1)
30	232.12	117.83	Shut-In(1)
62	884.44	114.32	End Shut-In(1)
63	284.73	114.12	Open To Flow (2)
91	331.64	117.32	Shut-In(2)
135	897.14	116.61	End Shut-In(2)
136	1502.10	116.58	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
420.00	GOCMW 10%g 10%o 20%m 60%w	5.89
120.00	GOCMW 10%g 10%o 25%m 55%w	1.68
120.00	GOCMW 10%g 10%o 30%m 50%w	1.68
0.00	180' GIP	0.00

## Gas Rates

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