



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1212009
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: _____

1212009

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

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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Mai Oil Operations, Inc.
Well Name	Stull 1
Doc ID	1212009

All Electric Logs Run

CNDL
DIL
Micro
Sonic

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 Inc.
Stull #1
NW-SE-NE-NW (870' FNL & 1990' FWL)
Section 19-16s-19w
Russell County, Kansas
Page 1

5 1/2" Production Casing Set

Contractor: Southwind Drilling Co. (Rig #3)
Commenced: April 3, 2014
Completed: April 10, 2014
Elevation: 2131' K.B.; 2129' D.F.; 2123' G.L.
Casing program: Surface; 8 5/8" @ 1103'
Production; 5 1/2" @ 3921'
Sample: Samples saved and examined 3200' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 3200 ft. to the Rotary Total Depth.
Measurements: All depths measured from the Kelly Bushing.
Drill Stem Tests: There were three (3) Drill Stem Tests ran by Trilobite Testing Co.
Electric Log: By Nabors; Dual Induction, Compensated Density, Neutron Log, Micro Log and Sonic Log.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	1377	+754
Base Anhydrite	1410	+721
Topeka	3160	-1029
Heebner	3450	-1319
Toronto	3467	-1336
Lansing	3495	-1364
Base Kansas City	3753	-1622
Marmaton	3796	-1665
Arbuckle	3848	-1717
Rotary Total Depth	3921	-1700
Log Total Depth	3923	-1792

(All top and zone determination were made from a correlation of Electric Log measurements).

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

TOPEKA SECTION

3358-3368' Limestone, gray/tan, fine and medium crystalline, poorly developed inter-crystalline porosity, few fossiliferous, chalky, no shows.

3387-3397' Limestone, tan, gray, finely crystalline, fossiliferous, scattered porosity, cherty in part, few chalky; no shows.

TORONTO SECTION

3467-3478' Limestone, white, light gray, slightly oolitic, fine crystalline, few medium crystalline, slightly dolomitic, poor inter-crystalline porosity, chalky, no show.

LANSING SECTION

3496-3502' Limestone, white cream, finely crystalline, slightly oolitic, poor porosity, slightly chalky, no shows.

3517-3522' Limestone, tan, cream, finely crystalline, oolitic, oomoldic porosity, golden brown stain, fair show of free oil and fair odor in fresh samples.

Drill Stem Test #1 3499-3528

Times: 30-45-45-60

Blow: Strong

Recovery: 930' gas in pipe
 186' gassy muddy oil
 (25% gas; 55% oil, 10% water, 10% mud)
 124' muddy water

Pressures: ISIP 576 psi
 FSIP 576 psi
 IFP 29-82 psi
 FFP 89-155 psi
 HSH 1622-1609 psi

3562-3574' Limestone, white, cream, finely crystalline, few fossiliferous/oolitic, chalky, poor scattered porosity, plus chert, white, gray, boney.

3587-3598' Limestone, white, cream, light gray, oolitic, oomoldic, fair oomoldic porosity, chalky (barren) plus white, gray boney chert.

3630-3640' Limestone, white cream, finely crystalline, chalky, no shows; trace chert, white, boney.

3653-3660' Limestone, white, cream, light gray, finely crystalline, slightly oolitic, oomoldic, poor to fair oomoldic porosity, (barren).

3677-3692' Limestone, white, cream, finely crystalline, oolitic, chalky, few fossiliferous, oomoldic, fair oomoldic porosity, no show; trace chert, white, boney.

- 3701-3709' Limestone, white, cream, finely crystalline, oolitic, oomoldic, chalky, poor to fair oomoldic porosity, no shows.
- 3735-3748' Limestone, tan, gray, finely crystalline, slightly oolitic, dense, no shows.

PAWNEE

- 3796-3840' Limestone, tan, buff, finely crystalline, few fossiliferous/oolitic, cherty in part, dense, no shows
- Sand, white, fine to very fine grained, sub rounded; poor inter-granular porosity; no shows.

3843-3848'

ARBUCKLE SECTION

- 3848-3860' Dolomitic, gray, buff, finely crystalline, sucrosic, scattered pinpoint to finely vuggy porosity, dark to golden brown stain, show of free oil and fair odor in fresh samples.

Drill Stem Test #2 **3822-3860**

Times: 30-45-45-45

Blow: Weak (3")

Recovery: 80' gas in pipe
30' clean oil
20' muddy gassy oil
(10% gas, 50% oil, 40% mud)
50' oil and gas cut mud
(10% gas, 20% oil, 70% mud)

Pressures: ISIP 1151 psi
FSIP 1118 psi
IFP 20-37 psi
FFP 39-85 psi
HSH 1842-1830 psi

- 3860-3871' Dolomite, gray, tan, finely crystalline, sucrosic, scattered pinpoint to finely vuggy porosity, dark brown to black stain, show of free oil and faint to fair odor in fresh samples.

Drill Stem Test #3 **3860-3871**

Times: 30-30-30-45

Blow: Strong

Recovery: 375' gas in pipe
710' clean oil
90' muddy gassy oil
(15% gas; 75% oil; 10% mud)

Pressures: ISIP 703 psi
FSIP 706 psi
IFP 70-189 psi
FFP 206-276 psi
HSH 1716-1634 psi

- 3871-3880' Dolomite, gray ,tan, finely crystalline, sucrosic scattered pinpoint to finely vuggy porosity, black to dark brown stain, trace of free oil and faint odor, plus chert, amber, gray, boney.
- 3880-3900 Dolomite, gray ,tan, finely crystalline, sucrosic scattered pinpoint to finely vuggy porosity, trace stain, show of free oil.
- 3900-3910' Dolomite, white, gray, fine and medium crystalline, sucrosic, scattered stain, weak show of free oil and faint odor in fresh samples.
- 3910-3921' Dolomite, tan, finely crystalline dense, no show.

Rotary Total Depth 3921
Log Total Depth 3923

Recommendations:

The 5 ½" production casing was set and cemented on the Mail Oil Operations Inc., Stull #1.

Respectfully submitted;

James C. Musgrove & *Kurt Talbott*
James C. Musgrove and Kurt Talbott,
Petroleum Geologists





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations Inc
8411 Preston Rd. STE 800
Dallas TX 75225-5520
ATTN: Kurt Mai, Kurt Talb

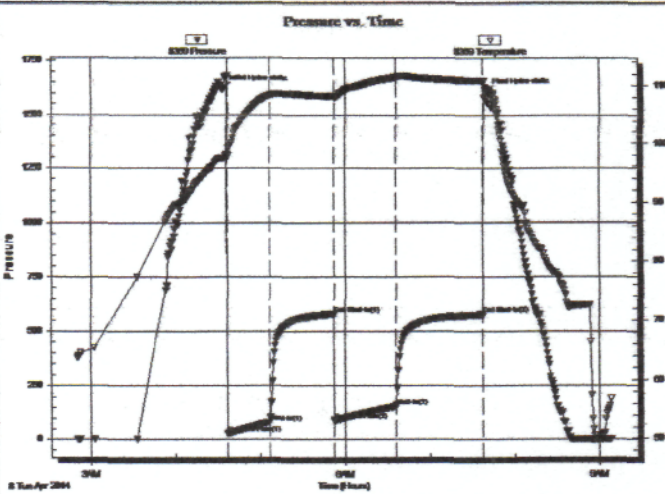
19-16s-19w Rush,KS
Stull #1
Job Ticket: 54095 DST#: 1
Test Start: 2014.04.08 @ 02:50:35

GENERAL INFORMATION:

Formation: **LKC "C"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:36:30
Time Test Ended: 09:08:29
Interval: **3499.00 ft (KB) To 3528.00 ft (KB) (TVD)**
Total Depth: 3528.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Ray Schwager
Unit No: 70
Reference Elevations: 2131.00 ft (KB)
2123.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8369 Inside
Press@RunDepth: 155.75 psig @ 3505.00 ft (KB)
Start Date: 2014.04.08 End Date: 2014.04.08
Start Time: 02:50:35 End Time: 09:08:29
Capacity: 8000.00 psig
Last Calib.: 2014.04.08
Time On Btm: 2014.04.08 @ 04:34:15
Time Off Btm: 2014.04.08 @ 07:39:59

TEST COMMENT: 30-IFP-wk to strg in 4 min
45-ISIP-1/4" bl bk
45-FFP-wk to strg in 10 min
60-FSP-1/2" bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1622.45	97.35	Initial Hydro-static
3	29.13	97.36	Open To Flow (1)
33	82.18	108.28	Shut-In(1)
78	576.37	108.14	End Shut-In(1)
78	89.25	107.89	Open To Flow (2)
122	155.75	111.42	Shut-In(2)
184	576.16	110.78	End Shut-In(2)
186	1609.62	109.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	930'GIP	0.00
186.00	GMO 25%G10%M10%W55%O	2.61
124.00	MW 5%M95%W	1.74

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations Inc
 8411 Preston Rd. STE 800
 Dallas TX 75225-5520
 ATTN: Kurt Mai, Kurt Talb

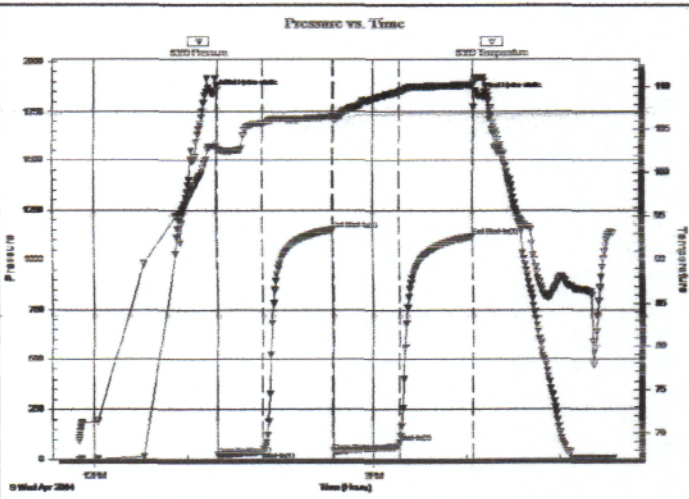
19-16s-19w Rush, KS
Stull #1
 Job Ticket: 54096 **DST#: 2**
 Test Start: 2014.04.09 @ 11:50:30

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: **No Whipstock:** ft (KB)
 Time Tool Opened: 13:19:25
 Time Test Ended: 17:34:24
 Interval: **3822.00 ft (KB) To 3860.00 ft (KB) (TVD)**
 Total Depth: 3860.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: **Conventional Bottom Hole (Reset)**
 Tester: Ray Schwager
 Unit No: 70
 Reference Elevations: 2131.00 ft (KB)
 2123.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8369 **Inside**
 Press@RunDepth: 85.91 psig @ 3833.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.09 End Date: 2014.04.09 Last Calib.: 2014.04.09
 Start Time: 11:50:30 End Time: 17:34:24 Time On Btm: 2014.04.09 @ 13:17:10
 Time Off Btm: 2014.04.09 @ 16:07:24

TEST COMMENT: 30-IFP-w k bl thru-out 1/2" to 3" bl
 45-ISIP-no bl
 45-FFP-w k to a fr bl 1/4" to 5" bl
 45-FSP-no bl

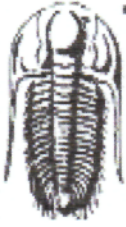


PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1842.62	103.04	Initial Hydro-static
3	20.36	102.61	Open To Flow (1)
32	37.17	105.73	Shut-in(1)
77	1151.88	106.60	End Shut-in(1)
78	39.53	106.20	Open To Flow (2)
120	85.91	109.52	Shut-in(2)
167	1118.95	110.26	End Shut-in(2)
171	1830.11	111.11	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
0.00	80'GIP	0.00
30.00	CO	0.42
20.00	MGO 10%G40%M50%O	0.28
50.00	HO&GCM 10%G20%O70%M	0.70

Gas Rates			
	Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mai Oil Operations Inc
8411 Preston Rd. STE 800
Dallas TX 75225-5520
ATTN: Kurt Mai, Kurt Talb

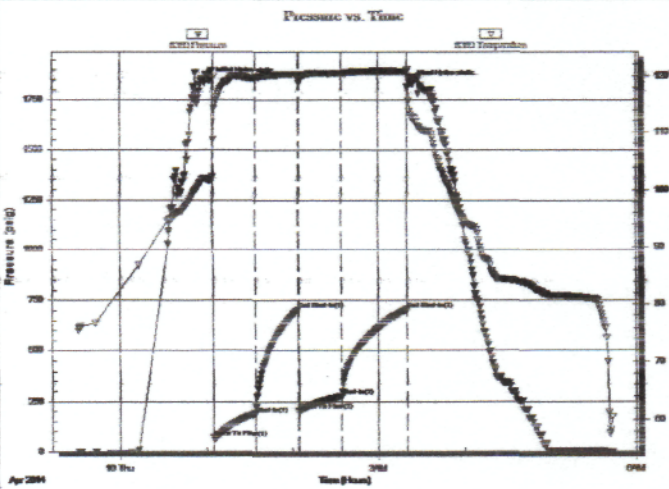
19-16s-19w Rush,KS
Stull #1
Job Ticket: 54097 DST#: 3
Test Start: 2014.04.09 @ 23:30:55

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: **No Whipstock:** ft (KB) Test Type: **Conventional Bottom Hole (Reset)**
Time Tool Opened: 01:04:35 Tester: **Ray Schwager**
Time Test Ended: 05:43:04 Unit No: **70**
Interval: 3860.00 ft (KB) To 3871.00 ft (KB) (TVD) Reference Elevations: 2131.00 ft (KB)
Total Depth: 3871.00 ft (KB) (TVD) 2123.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GRVCF: 8.00 ft

Serial #: 8369 **Inside**
Press@RunDepth: 276.96 psig @ 3865.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.04.09 End Date: 2014.04.10 Last Calib.: 2014.04.10
Start Time: 23:30:55 End Time: 05:43:04 Time On Btm: 2014.04.10 @ 01:02:35
Time Off Btm: 2014.04.10 @ 03:23:35

TEST COMMENT: 30-FFP-strg bl in 1 min
30-ISIP-3" bl bk
30-FFP-strg bl in 2 min
45-FSIP-3" bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1844.12	101.68	Initial Hydro-static
2	70.00	108.76	Open To Flow (1)
32	189.24	119.60	Shut-in(1)
62	703.78	120.18	End Shut-in(1)
62	206.83	119.64	Open To Flow (2)
92	276.96	120.37	Shut-in(2)
138	706.54	120.73	End Shut-in(2)
141	1830.38	112.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	375'GP	0.00
710.00	CO	9.96
90.00	MGO 15%G10%M75%O	1.26

* Recovery from multiple tests

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. 402

Date	4-5-14	Sec.	19	Twp.	6	Range	19	County	Bush	State	KS	On Location	5:45 AM	Finish	8:00 AM
Lease	Stall		Well No.		2		Location		Liebenthal 15th AVE E						
Contractor	Southwind 3		Owner		7 1/2 mi to RD 170 IN 1/2 W 3/4										
Type Job	Surface		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	17 1/4		T.D.		1103'										
Csg.	8 5/8		Depth		1103										
Tbg. Size			Street		Main Oil										
Tool			City												
Cement Left in Csg.	30 FT		Depth		State										
Meas Line	23 FT		Displace		6.8 BBL										
EQUIPMENT													Common		
Pumptrk	5		Cementer		NOTE										
Bulktrk	19		Helper												
Bulktrk	04		Driver		Beeth										
JOB SERVICES & REMARKS													Hulls		
Remarks:													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		
Cement did													Handling		
Circulate													Mileage		
													8 5/8		
													FLOAT EQUIPMENT		
													Guide Shoe		
													Centralizer		
													Baskets		
													AFU Inserts		
													Float Shoe		
													Latch Down		
													Rubber plug		
													Pumptrk Charge		
													Mileage		
													Tax		
													Discount		
													Total Charge		

X
Signature

Kent

Quality Oilwell Cementing

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. 7195

Date	4-11-14	Sec.	19	Twp.	16	Range	19	County	Rush	State	Ks	On Location		Finish	2:30 AM
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Location Liberal, Ks - 15, 7W, 1N, 1/2 W, 5th

Lease	Stull	Well No.	#1	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	Southland #3			Charge To	Major oil operations
Type Job	Completion			Street	
Hole Size	7 7/8"	T.D.	3921'	City	
Csg.	5 1/2" New 11A	Depth	3915'	State	
Tbg. Size		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tool		Depth		Cement Amount Ordered	160 601MD 2% Gel 15% Salt 1/4 KFI
Cement Left in Csg.	21.43'	Shoe Joint	2143'	Meas Line	
Displace	9.5 B/S			Displace	1000 gal mud clear 48

EQUIPMENT

Pumptrk	16	No.	Cementer Helper Billy	Common
Bulktrk	14	No.	Driver Jason	Poz. Mix
Bulktrk	14	No.	Driver Rick	Gel.
		No.	Driver	Calcium

JOB SERVICES & REMARKS

Remarks:		Hulls
Rat Hole		Salt
Mouse Hole		Flowseal
Centralizers	1-10	Kol-Seal
Baskets	pipe on bottom break circulation	Mud CLR 48
D/V or Port Collar	plug 100 gal mud clear 48	CFL-117 or CD110 CAF 38
	plug 100 gal mud clear 48	Sand
	plug 100 gal mud clear 48	Handling
	plug 100 gal mud clear 48	Mileage

FLOAT EQUIPMENT

		Guide Shoe
		Centralizer 10
		Baskets
		AFU Inserts
		Float Shoe
		Latch Down

		Pumptrk Charge
		Mileage
		Tax
		Discount
		Total Charge

X Signature Ked

