

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](mailto: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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**Company: RJM Oil Company, Inc**  
**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Southwind Drilling, Inc - Rig 3  
 Elevation: 1878 GL  
 Field Name: Odin East  
 Pool: Infield  
 Job Number: 395  
 API #: 15-009-26275

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**24**  
 2019

**DST #1 Formation: Lkc A-F Test Interval: 3063 - 3150' Total Depth: 3150'**  
 Time On: 07:46 09/24 Time Off: 14:35 09/24  
 Time On Bottom: 10:20 09/24 Time Off Bottom: 12:20 09/24

Electronic Volume Estimate:  
 N/A

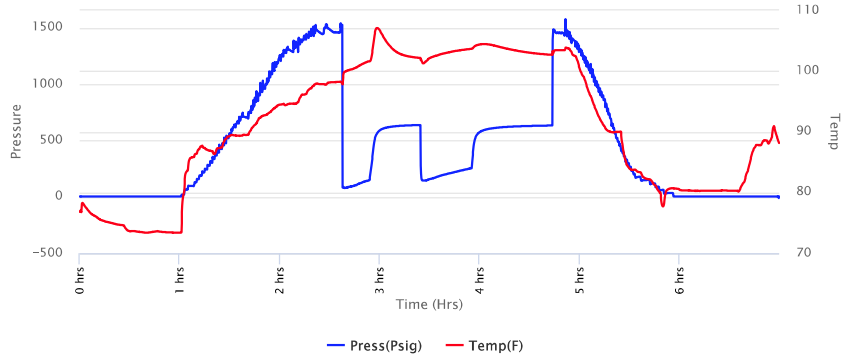
1st Open  
 Minutes: 11  
 Current Reading: 440" at 11 min  
 Max Reading: 440"

1st Close  
 Minutes: 30  
 Current Reading:  
 Bleeding off gas " at 30 min  
 Max Reading: Bleeding off gas "

2nd Open  
 N/A

2nd Close  
 Minutes: 45  
 Current Reading:  
 Bleeding off gas " at 45 min  
 Max Reading: Bleeding off gas "

Inside Recorder



**Company: RJM Oil Company, Inc**  
**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Southwind Drilling, Inc - Rig 3  
 Elevation: 1878 GL  
 Field Name: Odin East  
 Pool: Infield  
 Job Number: 395  
 API #: 15-009-26275

**Operation:**  
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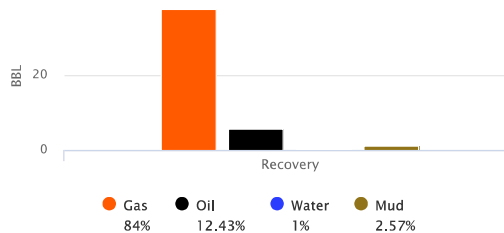
**DST #1 Formation: Lkc A-F Test Interval: 3063 - 3150' Total Depth: 3150'**  
 Time On: 07:46 09/24 Time Off: 14:35 09/24  
 Time On Bottom: 10:20 09/24 Time Off Bottom: 12:20 09/24

Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
2520	35.8596	G	100	0	0	0
510	7.2573	SLWC SLMCGCO	20	65	5	10
120	1.7076	SLWC GCMCO	20	50	5	25

Total Recovered: 3150 ft  
 Total Barrels Recovered: 44,8245

Reversed Out  
 NO

**Recovery at a glance**



GIP cubic foot volume: 211.40041

Initial Hydrostatic Pressure	1462	PSI
Initial Flow	84 to 148	PSI
<b>Initial Closed in Pressure</b>	<b>639</b>	<b>PSI</b>
Final Flow Pressure	146 to 255	PSI
<b>Final Closed in Pressure</b>	<b>635</b>	<b>PSI</b>
Final Hydrostatic Pressure	1461	PSI
Temperature	108	°F
Pressure Change Initial Close / Final Close	0.7	%



**Company: RJM Oil Company,  
Inc  
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Inc - Rig 3  
Elevation: 1878 GL  
Field Name: Odin East  
Pool: Infield  
Job Number: 395  
API #: 15-009-26275

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
September  
**24**  
2019

**DST #1      Formation: Lkc A-F      Test Interval: 3063 -      Total Depth: 3150'**  
**3150'**  
Time On: 07:46 09/24      Time Off: 14:35 09/24  
Time On Bottom: 10:20 09/24      Time Off Bottom: 12:20 09/24

**BUCKET MEASUREMENT:**  
1st Open: BOB IN 45 SEC  
1st Close: Bleeding off gas  
2nd Open: BOB in 1 min  
2nd Close: Bleeding off gas

**REMARKS:**

Tool Sample: 15% Gas 60% Oil 5% Water 20% Mud  
Gravity: 37.5 @ 60 °F



**Company: RJM Oil Company,  
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SEC: 1 TWN: 17S RNG: 12W  
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Inc - Rig 3  
Elevation: 1878 GL  
Field Name: Odin East  
Pool: Infield  
Job Number: 395  
API #: 15-009-26275

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
September

**DST #1      Formation: Lkc A-F      Test Interval: 3063 -      Total Depth: 3150'**  
**3150'**

**Down Hole Makeup**

<b>Heads Up:</b> 6.67 FT	<b>Packer 1:</b> 3058.4 FT
<b>Drill Pipe:</b> 3044.91 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 3063.4 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Packer 3:</b> 3150 FT
<b>Collars:</b> FT <i>ID-2 1/4</i>	<b>Top Recorder:</b> 3050.4 FT
<b>Test Tool:</b> 26.16 FT <i>ID-3 1/2-FH</i>	<b>Bottom Recorder:</b> 3148 FT
<b>Total Anchor:</b> 86.6	<b>Below Straddle Recorder:</b> 3151 FT
<b>Anchor Makeup</b>	<b>Well Bore Size:</b> 7 7/8
<b>Packer Sub:</b> 1 FT	<b>Surface Choke:</b> 1"
<b>Perforations: (top):</b> 17 FT <i>4 1/2-FH</i>	<b>Bottom Choke:</b> 5/8"
<b>Change Over:</b> 1 FT	
<b>Drill Pipe: (in anchor):</b> 63.60 FT <i>ID-3 1/2</i>	
<b>Change Over:</b> 1 FT	
<b>Perforations: (below):</b> 3 FT <i>4 1/2-FH</i>	
<b>STRADDLE</b>	
<b>Straddle Packer(s):</b> FT	
<b>Change Over:</b> FT	
<b>Drill Pipe:</b> FT <i>ID-3 1/2"</i>	
<b>Change Over:</b> FT	
<b>Perforations (in tail pipe):</b> FT <i>4 1/2-FH</i>	



**Operation:**  
Uploading recovery &  
pressures

**Company: RJM Oil Company,  
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Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
County: BARTON  
State: Kansas  
Drilling Contractor: Southwind Drilling,  
Inc - Rig 3  
Elevation: 1878 GL  
Field Name: Odin East  
Pool: Infield  
Job Number: 395  
API #: 15-009-26275

**DATE**  
September  
**24**  
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**DST #1      Formation: Lkc A-F      Test Interval: 3063 - 3150'      Total Depth: 3150'**

Time On: 07:46 09/24      Time Off: 14:35 09/24  
Time On Bottom: 10:20 09/24      Time Off Bottom: 12:20 09/24

**Mud Properties**

**Mud Type:** Chemical      **Weight:** 8.6      **Viscosity:** 50      **Filtrate:** 8.8      **Chlorides:** 1800 ppm



**Company: RJM Oil Company, Inc**  
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 County: BARTON  
 State: Kansas  
 Drilling Contractor: Southwind Drilling, Inc - Rig 3  
 Elevation: 1878 GL  
 Field Name: Odin East  
 Pool: Infield  
 Job Number: 395  
 API #: 15-009-26275

**Operation:**  
 Uploading recovery & pressures

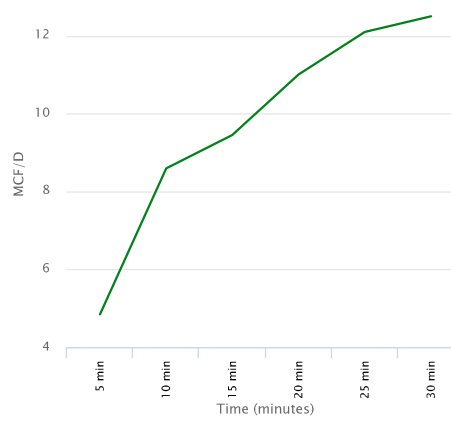
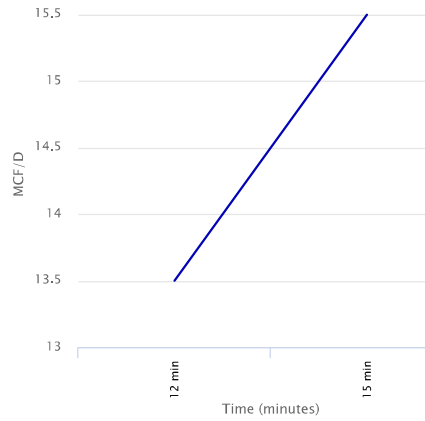
**DATE**  
 September  
**24**  
 2019

**DST #1 Formation: Lkc A-F Test Interval: 3063 - Total Depth: 3150'**  
**3150'**  
 Time On: 07:46 09/24 Time Off: 14:35 09/24  
 Time On Bottom: 10:20 09/24 Time Off Bottom: 12:20 09/24

**Gas Volume Report**

1st Open			
Time	Orifice	PSI	MCF/D
12	0.125	18	13.5
15	0.125	22	15.5

2nd Open			
Time	Orifice	PSI	MCF/D
5	0.125	3.0	4.84
10	0.125	8.5	8.59
15	0.125	10	9.45
20	0.125	13	11.0
25	0.125	15	12.1
30	0.125	16	12.5





**Company: RJM Oil Company, Inc**  
**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Southwind Drilling, Inc - Rig 3  
 Elevation: 1878 GL  
 Field Name: Odin East  
 Pool: Infield  
 Job Number: 395  
 API #: 15-009-26275

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**25**  
 2019

**DST #2 Formation: Arbuckle Test Interval: 3294 - 3346' Total Depth: 3346'**

Time On: 11:00 09/25 Time Off: 16:44 09/25  
 Time On Bottom: 13:00 09/25 Time Off Bottom: 15:00 09/25

Electronic Volume Estimate:  
 4'

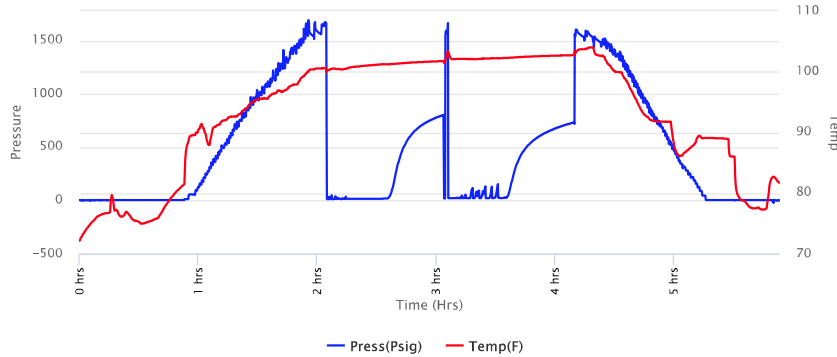
**1st Open**  
 Minutes: 30  
 Current Reading: 0" at 30 min  
 Max Reading: .5"

**1st Close**  
 Minutes: 30  
 Current Reading: 0" at 30 min  
 Max Reading: 0"

**2nd Open**  
 Minutes: 30  
 Current Reading: 0" at 30 min  
 Max Reading: 0"

**2nd Close**  
 Minutes: 30  
 Current Reading: 0" at 30 min  
 Max Reading: 0"

Inside Recorder



**Company: RJM Oil Company, Inc**  
**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Southwind Drilling, Inc - Rig 3  
 Elevation: 1878 GL  
 Field Name: Odin East  
 Pool: Infield  
 Job Number: 395  
 API #: 15-009-26275

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**25**  
 2019

**DST #2 Formation: Arbuckle Test Interval: 3294 - 3346' Total Depth: 3346'**

Time On: 11:00 09/25 Time Off: 16:44 09/25  
 Time On Bottom: 13:00 09/25 Time Off Bottom: 15:00 09/25

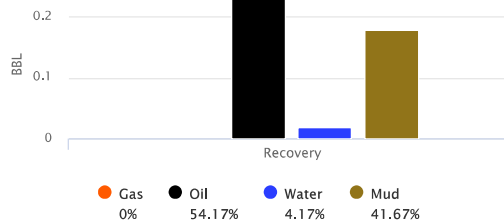
**Recovered**

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
5	0.07115	O	0	100	0	0
25	0.35575	SLWCHOCM	0	45	5	50

Total Recovered: 30 ft  
 Total Barrels Recovered: 0.4269

Reversed Out  
 NO

**Recovery at a glance**



Initial Hydrostatic Pressure	1612	PSI
Initial Flow	14 to 18	PSI
<b>Initial Closed in Pressure</b>	<b>804</b>	<b>PSI</b>
Final Flow Pressure	22 to 25	PSI
<b>Final Closed in Pressure</b>	<b>733</b>	<b>PSI</b>
Final Hydrostatic Pressure	1601	PSI
Temperature	103	°F

Pressure Change Initial Close / Final Close 8.8 %

GIP cubic foot volume: 0





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**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Southwind Drilling, Inc - Rig 3  
 Elevation: 1878 GL  
 Field Name: Odin East  
 Pool: Infield  
 Job Number: 395  
 API #: 15-009-26275

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**25**  
 2019

**DST #2    Formation: Arbuckle    Test Interval: 3294 - 3346'    Total Depth: 3346'**  
 Time On: 11:00 09/25    Time Off: 16:44 09/25  
 Time On Bottom: 13:00 09/25    Time Off Bottom: 15:00 09/25

**BUCKET MEASUREMENT:**  
 1st Open: Built to .5  
 1st Close: No Blow  
 2nd Open: Flushed tool No Blow  
 2nd Close: No Blow

**REMARKS:**  
 Flushed tool on the 2nd open  
 Tool Sample: 0% Gas 35% Oil 5% Water 60% Mud



**Company: RJM Oil Company, Inc**  
**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Southwind Drilling, Inc - Rig 3  
 Elevation: 1878 GL  
 Field Name: Odin East  
 Pool: Infield  
 Job Number: 395  
 API #: 15-009-26275

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September

**DST #2    Formation: Arbuckle    Test Interval: 3294 - 3346'    Total Depth: 3346'**

**25**  
2019

Time On: 11:00 09/25      Time Off: 16:44 09/25  
Time On Bottom: 13:00 09/25      Time Off Bottom: 15:00 09/25

**Down Hole Makeup**

<b>Heads Up:</b> 31.13 FT	<b>Packer 1:</b> 3288.78 FT
<b>Drill Pipe:</b> 3299.75 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 3293.78 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 3280.78 FT
<b>Collars:</b> FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 3344 FT
<b>Test Tool:</b> 26.16 FT <i>ID-3 1/2-FH</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 52.22	<b>Surface Choke:</b> 1"
<b>Anchor Makeup</b>	<b>Bottom Choke:</b> 5/8"
<b>Packer Sub:</b> 1 FT	
<b>Perforations: (top):</b> 15 FT <i>4 1/2-FH</i>	
<b>Change Over:</b> 1 FT	
<b>Drill Pipe: (in anchor):</b> 31.22 FT <i>ID-3 1/2</i>	
<b>Change Over:</b> 1 FT	
<b>Perforations: (below):</b> 3 FT <i>4 1/2-FH</i>	



**Operation:**  
Uploading recovery &  
pressures

**Company: RJM Oil Company, Inc**  
**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
County: BARTON  
State: Kansas  
Drilling Contractor: Southwind Drilling, Inc - Rig 3  
Elevation: 1878 GL  
Field Name: Odin East  
Pool: Infield  
Job Number: 395  
API #: 15-009-26275

**DATE**  
September  
**25**  
2019

**DST #2      Formation: Arbuckle      Test Interval: 3294 - 3346'      Total Depth: 3346'**

Time On: 11:00 09/25      Time Off: 16:44 09/25  
Time On Bottom: 13:00 09/25      Time Off Bottom: 15:00 09/25

**Mud Properties**

**Mud Type:** Chemical      **Weight:** 9.1      **Viscosity:** 55      **Filtrate:** 10.8      **Chlorides:** 7000 ppm



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**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Southwind Drilling, Inc - Rig 3  
 Elevation: 1878 GL  
 Field Name: Odin East  
 Pool: Infield  
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 API #: 15-009-26275

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 Time On: 11:00 09/25    Time Off: 16:44 09/25  
 Time On Bottom: 13:00 09/25    Time Off Bottom: 15:00 09/25

**Gas Volume Report**

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



**Company: RJM Oil Company, Inc**  
**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Southwind Drilling, Inc - Rig 3  
 Elevation: 1878 GL  
 Field Name: Odin East  
 Pool: Infield  
 Job Number: 395  
 API #: 15-009-26275

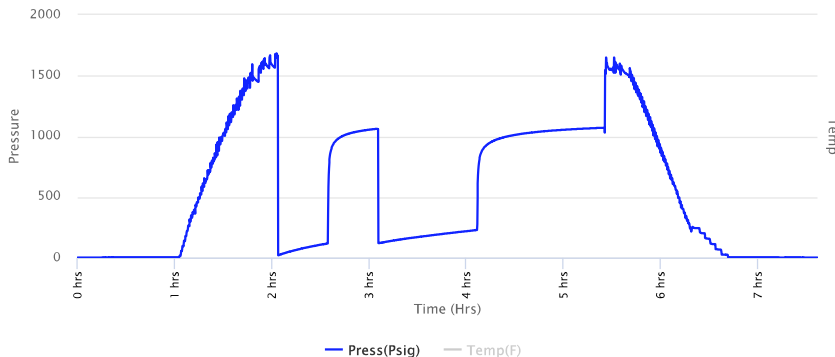
**Operation:**  
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**DATE**  
 September  
**25**  
 2019

**DST #3 Formation: Arbuckle Test Interval: 3294 - 3353' Total Depth: 3353'**  
 Time On: 22:50 09/25 Time Off: 06:14 09/26  
 Time On Bottom: 00:50 09/26 Time Off Bottom: 03:50 09/26

Electronic Volume Estimate: 378'	<u>1st Open</u> Minutes: 30 Current Reading: 22.4" at 30 min Max Reading: 22.4"	<u>1st Close</u> Minutes: 30 Current Reading: 0" at 30 min Max Reading: 0"	<u>2nd Open</u> Minutes: 60 Current Reading: 22.4" at 60 min Max Reading: 22.4"	<u>2nd Close</u> Minutes: 60 Current Reading: 0" at 60 min Max Reading: 0"
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Inside Recorder



**Company: RJM Oil Company, Inc**  
**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Southwind Drilling, Inc - Rig 3  
 Elevation: 1878 GL  
 Field Name: Odin East  
 Pool: Infield  
 Job Number: 395  
 API #: 15-009-26275

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**25**  
 2019

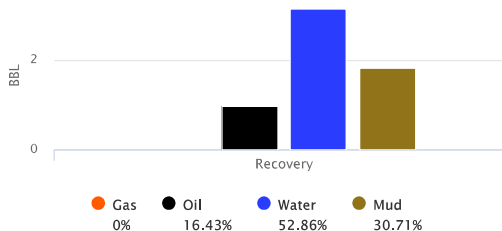
**DST #3 Formation: Arbuckle Test Interval: 3294 - 3353' Total Depth: 3353'**  
 Time On: 22:50 09/25 Time Off: 06:14 09/26  
 Time On Bottom: 00:50 09/26 Time Off Bottom: 03:50 09/26

Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
180	2.5614	OCHWCM	0	25	30	45
240	3.4152	SLOCMCW	0	10	70	20

Total Recovered: 420 ft  
 Total Barrels Recovered: 5.9766

Reversed Out  
 NO

**Recovery at a glance**



Initial Hydrostatic Pressure	1567	PSI
Initial Flow	21 to 118	PSI
<b>Initial Closed in Pressure</b>	<b>1061</b>	<b>PSI</b>
Final Flow Pressure	121 to 229	PSI
<b>Final Closed in Pressure</b>	<b>1071</b>	<b>PSI</b>
Final Hydrostatic Pressure	1566	PSI
Temperature	106	°F

Pressure Change Initial Close / Final Close 0.0 %

GIP cubic foot volume: 0



**Company: RJM Oil Company,  
Inc  
Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
County: BARTON  
State: Kansas  
Drilling Contractor: Southwind Drilling,  
Inc - Rig 3  
Elevation: 1878 GL  
Field Name: Odin East  
Pool: Infield  
Job Number: 395  
API #: 15-009-26275

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
September  
**25**  
2019

**DST #3    Formation: Arbuckle    Test Interval: 3294 -    Total Depth: 3353'**  
3353'

Time On: 22:50 09/25    Time Off: 06:14 09/26  
Time On Bottom: 00:50 09/26    Time Off Bottom: 03:50 09/26

**BUCKET MEASUREMENT:**  
1st Open: BOB in 12 min  
1st Close: No Blow  
2nd Open: BOB in 25 min  
2nd Close: No Blow

**REMARKS:**

Tool Sample: 0% Gas 5% Oil 85% Water 10% Mud

Chlorides: 16000 ppm



**Company: RJM Oil Company,  
Inc  
Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
County: BARTON  
State: Kansas  
Drilling Contractor: Southwind Drilling,  
Inc - Rig 3  
Elevation: 1878 GL  
Field Name: Odin East  
Pool: Infield  
Job Number: 395  
API #: 15-009-26275

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
September

**DST #3    Formation: Arbuckle    Test Interval: 3294 -    Total Depth: 3353'**  
3353'

25  
2019

Time On: 22:50 09/25      Time Off: 06:14 09/26  
Time On Bottom: 00:50 09/26      Time Off Bottom: 03:50 09/26

**Down Hole Makeup**

<b>Heads Up:</b> 31.13 FT	<b>Packer 1:</b> 3288.78 FT
<b>Drill Pipe:</b> 3299.75 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 3293.78 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 3280.78 FT
<b>Collars:</b> FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 3351 FT
<b>Test Tool:</b> 26.16 FT <i>ID-3 1/2-FH</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 59.22	<b>Surface Choke:</b> 1"
<b>Anchor Makeup</b>	<b>Bottom Choke:</b> 5/8"
<b>Packer Sub:</b> 1 FT	
<b>Perforations: (top):</b> 22 FT <i>4 1/2-FH</i>	
<b>Change Over:</b> 1 FT	
<b>Drill Pipe: (in anchor):</b> 31.22 FT <i>ID-3 1/2</i>	
<b>Change Over:</b> 1 FT	
<b>Perforations: (below):</b> 3 FT <i>4 1/2-FH</i>	



**Operation:**  
Uploading recovery &  
pressures

**Company: RJM Oil Company, Inc**  
**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
County: BARTON  
State: Kansas  
Drilling Contractor: Southwind Drilling, Inc - Rig 3  
Elevation: 1878 GL  
Field Name: Odin East  
Pool: Infield  
Job Number: 395  
API #: 15-009-26275

**DATE**  
September  
**25**  
2019

**DST #3      Formation: Arbuckle      Test Interval: 3294 - 3353'      Total Depth: 3353'**

Time On: 22:50 09/25      Time Off: 06:14 09/26  
Time On Bottom: 00:50 09/26      Time Off Bottom: 03:50 09/26

**Mud Properties**

**Mud Type:** Chemical      **Weight:** 9.2      **Viscosity:** 54      **Filtrate:** 10.4      **Chlorides:** 6000 ppm



**Company: RJM Oil Company, Inc**  
**Lease: Reif #2**

SEC: 1 TWN: 17S RNG: 12W  
 County: BARTON  
 State: Kansas  
 Drilling Contractor: Southwind Drilling, Inc - Rig 3  
 Elevation: 1878 GL  
 Field Name: Odin East  
 Pool: Infield  
 Job Number: 395  
 API #: 15-009-26275

**Operation:**  
 Uploading recovery & pressures

**DATE**  
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**25**  
 2019

**DST #3    Formation: Arbuckle    Test Interval: 3294 - 3353'    Total Depth: 3353'**  
 Time On: 22:50 09/25    Time Off: 06:14 09/26  
 Time On Bottom: 00:50 09/26    Time Off Bottom: 03:50 09/26

**Gas Volume Report**

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



# Musgrove

**PETROLEUM CORPORATION**  
Clafin, Kansas

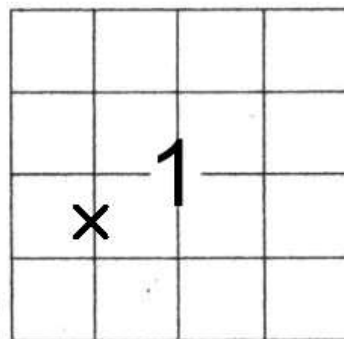
## GEOLOGIST'S REPORT

### DRILLING TIME AND SAMPLE LOG

COMPANY <u>RJM Company</u>	ELEVATIONS
LEASE <u>Reif # 2</u>	KB <u>1887'</u>
FIELD <u>Unknown</u>	DF _____
LOCATION <u>SE-NE-NW-SW (2252' FSL &amp; 1238' FWL)</u>	GL <u>1878'</u>
SEC <u>1</u> TWSP <u>17S</u> RGE <u>12W</u>	Measurements Are All From <u>KB</u>
COUNTY <u>Barton</u> STATE <u>Kansas</u>	
CONTRACTOR <u>Southwind Drilling co. (Rig #3)</u>	CASING
SPUD <u>09/20/2019</u> COMP <u>09/26/2019</u>	SURFACE <u>8 5/8" @ 350'</u>
RTD <u>3353'</u> LTD <u>3355'</u>	PRODUCTION <u>5 1/2" @ 3323'</u>
MUD UP <u>2600'</u> TYPE MUD <u>Chemical</u>	ELECTRICAL SURVEYS
	Pioneer Wireline: DIL, MEL, DUCP

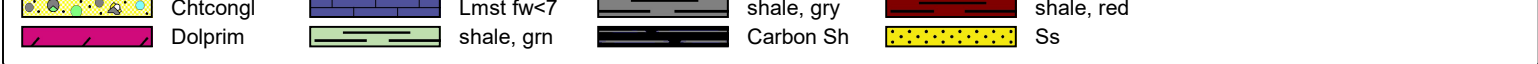
SAMPLES SAVED FROM 2700' TO RTD  
 DRILLING TIME KEPT FROM 2700' TO RTD  
 SAMPLES EXAMINED FROM 2700' TO RTD  
 GEOLOGICAL SUPERVISION FROM 2736' TO RTD  
 GEOLOGIST ON WELL Wyatt Urban

FORMATION TOPS	LOG		SAMPLES	
Anhydrite	748	+1139	748	+1139
Heebner	2966	-1079	2968	-1081
Toronto	2978	-1091	2977	-1090
Brown Lime	3059	-1172	3059	-1172
Lansing	3078	-1191	3080	-1193
Muncie Creek	3208	-1321	3204	-1317
BKC	3320	-1433	3320	-1433
Arbuckle	3331	-1444	3331	-1444
RTD	3353	-1466	3353	-1466
LTD	3355	-1468	3355	-1468



ROCK TYPES





**OTHER SYMBOLS**

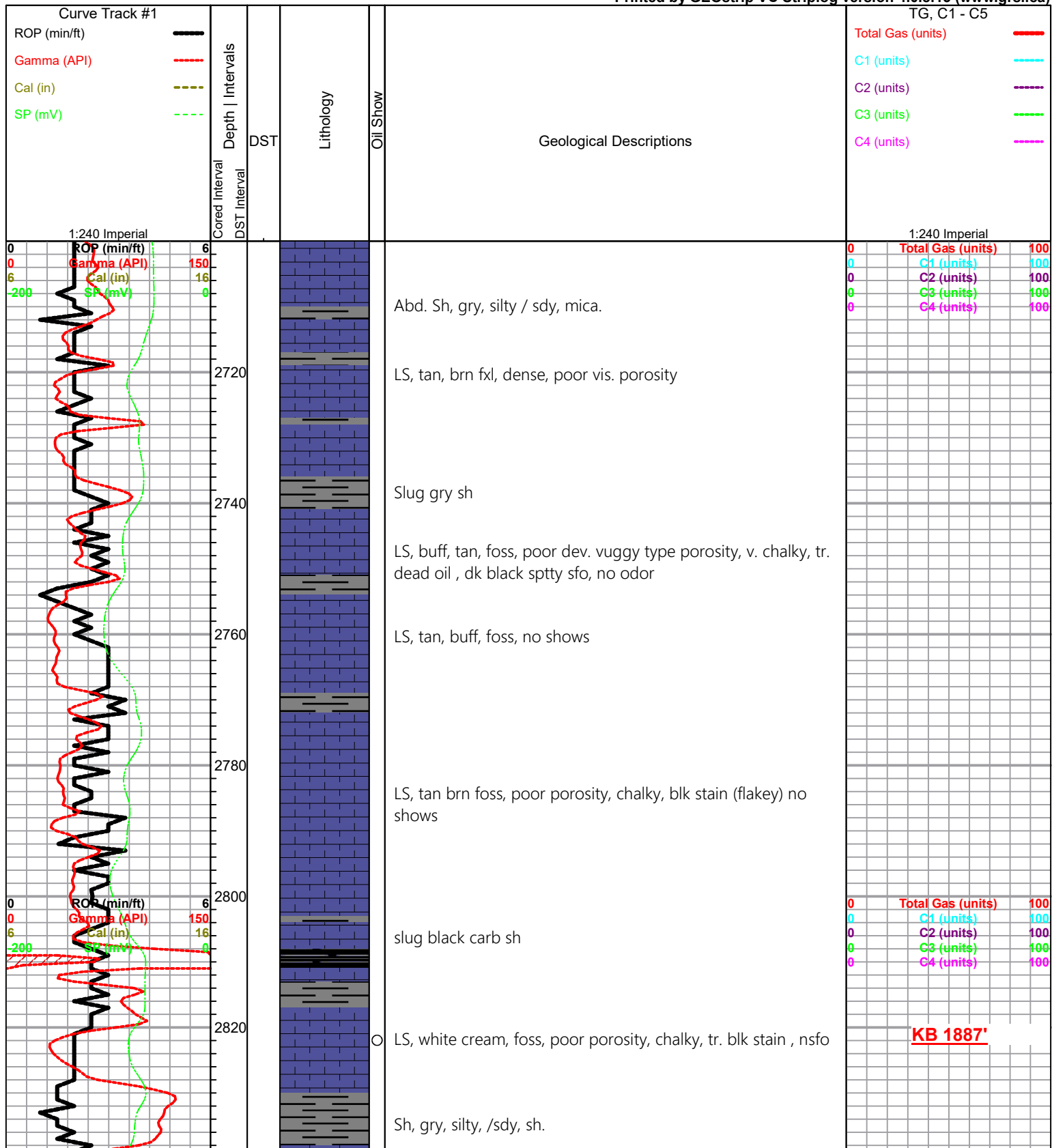
**Oil Show**

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

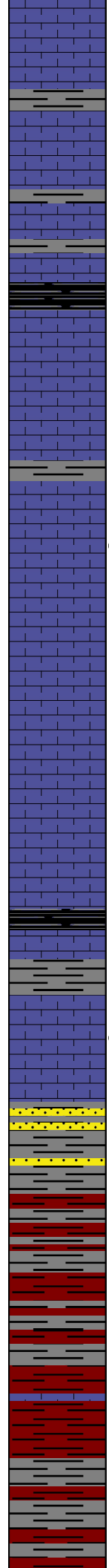
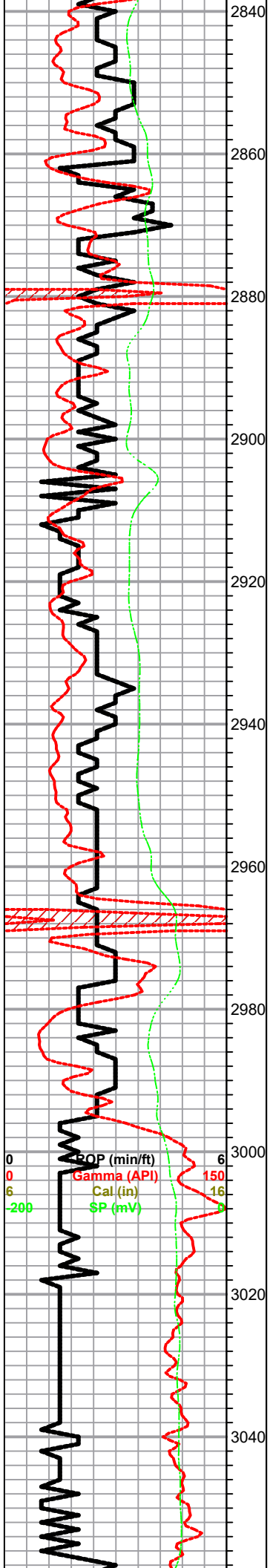
**DST**

- DST Int
- DST alt
- Core
- tail pipe

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



**KB 188'**



LS, white, cream, foss, poor vis. porosity, chalky, no shows

**BIT TRIP @  
2871'**

Sh, black carb

LS, tan, gry, dense, poor vis. porosity, sl. chalky, no shows

Sh, gry, silty

○ LS, ool, / foss, poorly developed vuggy por., sparry calcite cement, sl. chalky, tr. lt. black stain, nsfo

LS, white, dol, good inxln porosity, no shows

Tr. LS, tan, ool, poor porosity, no shows

LS, tan, buff, poor vis. porosity, chalky, few foss, no shows

**HEEBNER 2966.0 -1079.0**

Sh, black carb

**TORONTO 2977.0 -1090.0**

● LS, tan, cream, white, foss/ ool, poor inxln porosity, chalky tr. spty stain, spty sfo, tr. brn stain , odor???

**DOUGLAS 2992.0 -1105.0**

Sh, gry, green , maroon, tr. sd. clr, med grain , poorly sorted, tr. v. wk spty brn stain , nsfo, no odor

Sh, gry, maroon, silty, soft

Sh, gry, maroon, tr. sd. , f. grain well sorted, nsfo, no odor

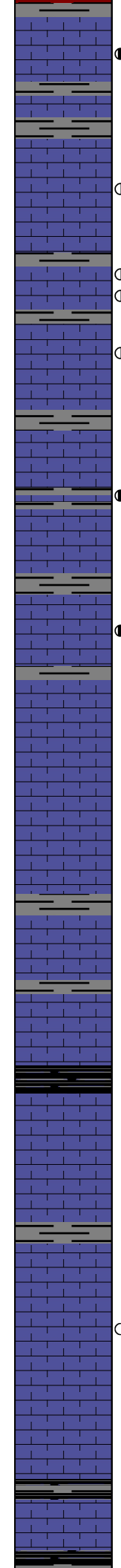
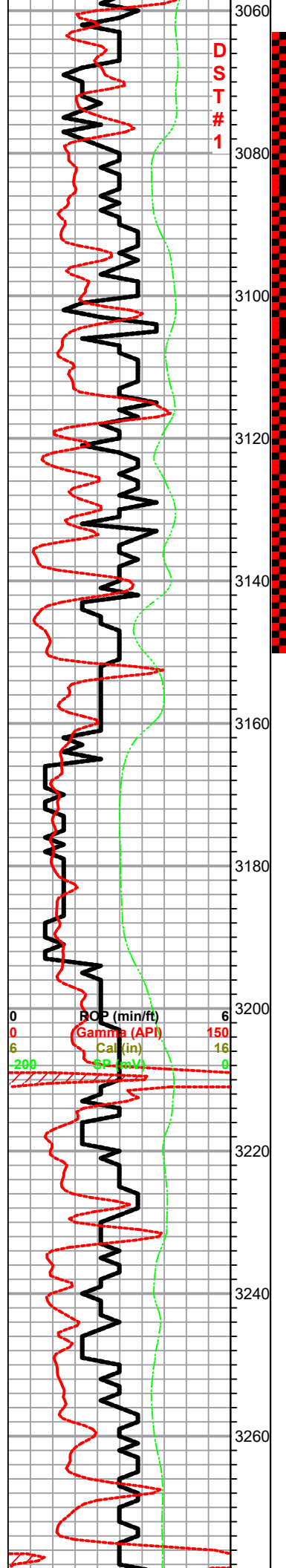
Sh, maroon, a/a no shows,

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

**DST#1 3063-3150**  
**30-45-45-60**

**BROWN LIME 3050.0 -1173.0**

**BROWN LIME 3059.0 -1172.0**



LS, tan white, cream, sdy, frosted, poor scattered porosity, tr. stain , ??? Tr. LS, white, sparry calc. cement (frosted) gran., poorly developed vuggy type por. lt. blk stain, wk spty sfo, no odor. ?? Sh, gry, silty

**LANSING 3078.0 -1190.0**

LS, white, fxl, v. chalky, fair inxln porosity, tr. brn stain , tr. sfo, faint odor

LS, tan, dolomitic good inxln porosity, tr. brn stain , lt. sfo odor

LS, tan, dol./ suc. f-med xln, good inxln porosity, scattered vuggy porosity, brn stain , sfo , odor

LS, cream, white, fxl, dense, poor vis. porosity, nsfo, odor

Sh, gry, silty, soft

LS, tan, dol. / suc. f- med xln, scattered vuggy porosity, stain, sfo, odor

LS, whtie, tan, foss, poorly developed ool, fair inxln porosity, brn stain , sfo, odor

LS, tan, buff, oom, good vuggy oom, porosity, barren .

LS, white, foss, fair vuggy type porosity, nsfo, barren

LS, white, dense , poor vis. porosity, cherty no shows

Sh, black carb

LS, tan, white, foss, poor vuggy--->p.p. type porosity, dense, chalky in pts, no shows.

tr. gry sh .

LS, white, tan, dol. good inxln porosity, poor p.p. por. tr. brn stain , spty sfo, faint odor

LS, white, gry, foss, poor p.p. type porosity, few cherty, nsfo, ??? odor

Tr. black carb Sh

**1ST open:**  
BOB 45 sec.

**GTS 5 ms**

**2nd Open:**  
BOB 1 MINS.

**Recovery:**  
2520' GIP

**510' SLWCGCO**  
(20%G, 65 %O, 5%W, 10%M)

**120' SLWCGCMCO**  
(20%G, 50%O, 5%W, 25%M)

**Pressures:**  
ISIP 639 psi  
FSIP 635 psi  
IFP 84-148 psi  
FFP 146-255 psi  
HSH 1462 - 1461 psi

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

**DST#2 3294-3346**  
30-30-45-45

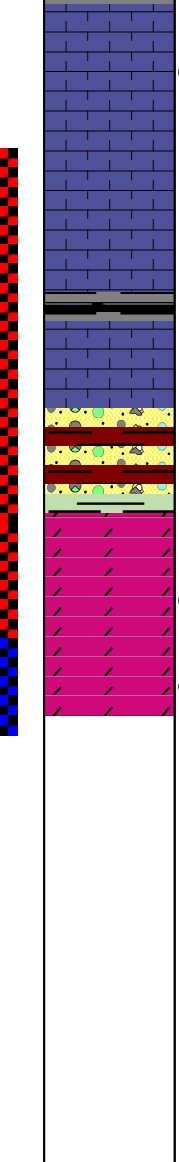
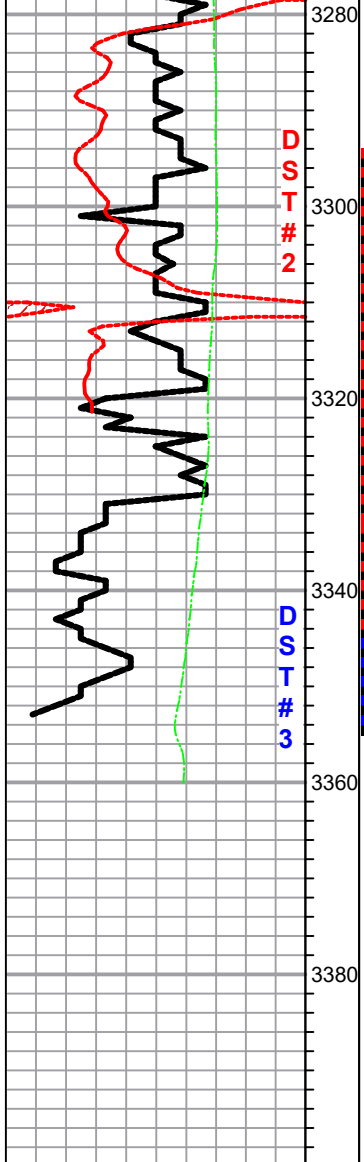
**1st Open:**  
weak build .5"

**2nd Open:**  
no blow  
(flushed tool no help)

**Recovery:**  
5 ' clean oil

**25' SLWCHOCM**  
(45%O, 5%W, 50%M)

**Pressures:**  
ISIP 804 psi  
FSIP 733 psi  
IFP 14-18 psi  
FFP 22-25 psi



○ LS, white, ool, poorly developed p.p. --> vuggy type por. tr. blk stain , nsfo, no odor

LS, white, a/a, dense, poor vis porosity, no shows

**Base KC 3320.0 -1433.0**

Sh, dk gry, black carb

Sh, maroon, gry, tr tan, white, chert, tr. LS, tan, buff few ool, poor porosity, nsfo, Ahd aaua green sh

**Arbuckle 3331.0 -1444.0**

Dol. tan, buff, fxl, dense, poor inxln porosity, no show, no odor

○ Dol. tan, buff, suc. good inxln vuggy, dk brn stain , sfo dk brn fair odor in broken samples

○ Dol. tan, buff, suc. good inxln porosity, dark brn sptty sfo, faint odor in samples

**RTD 3353.0 -1466.0**

**DST#3 3294-3346**

**30-30-45-45**

**1st Open:**  
**BOB 12 mins.**

**2nd Open:**  
**BOB 25 mins.**

**Recovery:**  
**180' OCHWCM**  
**(25%O, 30%W, 45%M)**

**240' SLOCMCW**  
**(10%o, 70%W, 20%M)**

**Pressures:**  
**ISIP 1061 psi**  
**FSIP 1071 psi**  
**IFP 21-118 psi**  
**FFP121-229 psi**  
**HSH 21-118 psi**

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071  
Cell 785-324-1041

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

No. 1716

Date 9-26-19 Sec. 1 Twp. 17 Range 12 County Barton State KS On Location \_\_\_\_\_ Finish 8:30 PM

Lease Reif Well No. 2 Location Beaver - 3E to Curve, 2 1/2 S, E 1 Into

Contractor Southwind #3 Owner To Quality Oilwell Cementing, Inc.  
Type Job Longstring 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 5 7/8" T.D. 3353' Charge To RJM Company  
Csg. 5 1/2" New 17# Depth 3332.88' 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. 10.50' Shoe Joint 10.50' Cement Amount Ordered 180 Cam 10% Salt 5% Gilsomite  
Meas Line \_\_\_\_\_ Displace 77 BLS 500 gal mud Clear 48

**EQUIPMENT**

Pumptrk <u>16</u>	No.	Cementer <u>Jim</u>	Common <u>180</u>
		Helper _____	Poz. Mix _____
Bulktrk <u>15</u>	No.	Driver <u>Tony L.</u>	Gel. _____
		Driver _____	Calcium _____
<del>Banktrk</del> <u>P.U.</u>	No.	Driver <u>Rick</u>	Hulls _____
		Driver _____	Salt <u>16</u>

**JOB SERVICES & REMARKS**

Remarks: \_\_\_\_\_  
Rat Hole 30 SX Flowseal \_\_\_\_\_  
Mouse Hole \_\_\_\_\_ Kol-Seal 900#  
Centralizers 1-9 Mud CLR 48 500 gal  
Baskets 2, 6 CFL-117 or CD110 CAF 38  
D/V or Port Collar Pipe on bottom break Sand \_\_\_\_\_  
Circulation pump 500 gal mud Handling 205  
Clear 48, plug Rathole w/ 30 SX Mileage \_\_\_\_\_  
Hook to 5 1/2" Casing + mix

**FLOAT EQUIPMENT**

150 SX Cement. Shutdown wash Guide Shoe \_\_\_\_\_  
Pump + lines Displaced plug w/ 77 Centralizer 9  
BLS. Released + held. Baskets 2  
AFU Inserts \_\_\_\_\_  
Lift pressure 750 # Float Shoe 1  
Land plug to 1800 # Latch Down 1  
Rotating head

*Thank you*

Pumptrk Charge prod string  
Mileage 27

X Signature Jeff Shier Tax \_\_\_\_\_  
Discount \_\_\_\_\_  
Total Charge \_\_\_\_\_

## GENERAL TERMS AND CONDITIONS

**DEFINITIONS:** In these terms and conditions, "Quality" shall mean Quality Oilwell Cementing, Inc., and "Customer" shall refer to the party identified by that term on the front of this contract. As applicable, "Job" relates to the services described on the front side of this contract, "merchandise" refers to the material described on the front of this contract and to any other materials, products, or supplies used, sold, or furnished under the requirements of this contract.

– **TERMS:** Unless satisfactory credit has been established, "CUSTOMER" must tender full cash payment to "QUALITY" before the job is undertaken or merchandise is delivered. If satisfactory credit has been established, the terms of payment for the job and/or merchandise, including bulk cement, are net cash, payable in 30 days from the completion of the job and/or delivery of the merchandise. For all past due invoices, "CUSTOMER" agrees to pay interest on amounts invoiced at a rate of 18 percent per annum until paid. Notwithstanding the foregoing in no event shall this Contract provide for interest exceeding the maximum rate of interest that "CUSTOMER" may agree to pay under applicable law. If any such interest should be provided for, it shall be and hereby is deemed to be a mistake, and this contract shall be automatically reformed to lower the rate of interest to the maximum legal contract rate, any amounts previously paid as excess interest shall be deducted from the amounts owing from the "CUSTOMER" or at the option of "QUALITY," refunded directly to "CUSTOMER." For purposes of this paragraph, QUALITY and CUSTOMER agree that KANSAS law shall apply. Any discounts granted with this contract are null and void if the charges are not paid when due.

– **ATTORNEY FEES:** In any legal action or proceeding between the parties to enforce any of the terms of this Service Contract, or in any way pertaining to the term of this Contract, the prevailing party shall be entitled to recover all expenses, including, but not limit to, a reasonable sum as and attorney's fees.

– **PRICES AND TAXES:** All merchandise listed in "QUALITY'S" current price shall schedule are F.O.B. QUALITY'S local station and are subject to change without notice. All prices are exclusive of any federal, state, local, or special taxes for the sale or use of the merchandise or services listed. The amount of taxes required to be paid by QUALITY shall be added to the quoted prices charged to CUSTOMER.

– **TOWING CHARGES:** QUALITY will make a reasonable attempt to get to and from each job site using its own equipment. Should QUALITY be unable to do so because of poor or inadequate road conditions, and should it become necessary to employ a tractor or other pulling equipment to get to or from the job site, the tractor or pulling equipment will be supplied by CUSTOMER or, if furnished by QUALITY, will be charged to and paid by CUSTOMER.

– **PREPARATION CHARGES:** If a job and/or merchandise is ordered and CUSTOMER cancels the order after preparation of a chemical solution or other material, CUSTOMER will pay QUALITY for the expenses incurred by QUALITY as a result of the cancellation.

– **DEADHAUL, CHARGES:** Unless otherwise specified on the front of this Contract, a deadhaul charges as set forth in QUALITY'S current price book will be charged each way for each service unit which is ordered by CUSTOMER but not used.

– **SERVICE CONDITIONS AND LIABILITIES:** 1. QUALITY carries public liability and property damage insurance, but since there are so many uncertain and unknown conditions beyond QUALITY'S control, QUALITY shall not be liable for injuries to property or persons or for loss or damage arising from the performance of the job or delivery of the merchandise. Customer shall be responsible for and indemnify, defend, and hold harmless QUALITY, its officers, agents and employees, from and against any and all claims or suits for:

(A) Damage to property or for bodily injury, sickness, disease, or death, brought by any person, including CUSTOMER and/or the well owner; and:

(B) Oil spills, pollution, surface or sub-surface damage, injury to the well, reservoir loss, or damage arising from a well blowout arising out of or in connection with QUALITY'S performance of the job or furnishing of merchandise in accordance with this contract, unless such loss or damage is caused by the willful misconduct or gross negligence of QUALITY or its employees.

2. With respect to any of QUALITY'S tools, equipment, or instruments which are lost in the well or damaged when performing or attempting to perform the job or, in the case of marine operations, are lost or damaged at any time after delivery to the landing for CUSTOMER and before return to QUALITY at the landing, CUSTOMER shall either recover the lost item without cost to QUALITY or reimburse QUALITY the current replacement cost of the item unless the loss or damage results from the sole negligence of QUALITY or its employees.

3. QUALITY does not assume any liability or responsibility for damages or conditions resulting from chemical action in cements caused by contamination of water or other fluids.

**WARRANTIES:** 1. QUALITY warrants all merchandise manufactured or furnished by it to be free from defects in material and workmanship under normal use and service when installed, and used, and/or serviced in the manner provided and intended. QUALITY'S obligation under this warranty is expressly limited to repair replacement, or allowance for credit, at its option, for any merchandise which is determined by QUALITY to be defective. THIS IS THE SOLE WARRANTY OF QUALITY AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESS OR OTHERWISE IMPLIED, IN FACT OR IN LAW, INCLUDING ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE, CUSTOMER'S sole and only remedy with regard to any defective merchandise shall be the repair or replacement thereof or allowance for credit as herein provided, and QUALITY shall not be liable for any consequential, special, incidental, or punitive damages resulting from or caused by defective materials, products or supplies.

2. More specifically:

(A) Nothing in this contract shall be constructed as a warranty by QUALITY of the success or the effectiveness of the result of any work done or merchandise used, sold, or furnished under this contract.

(B) Nothing in this contract shall be construed as a warranty of the accuracy or correctness of any facts, information, or data furnished by QUALITY or any interpretation of test, meter readings, chart information, analysis or research, or recommendations made by QUALITY, unless the inaccuracy or incorrectness is caused by the willful misconduct or gross negligence of QUALITY or its employees in the preparation or furnishing of such facts, information or data. (C) Work done by QUALITY shall be under the direct supervision and control of the CUSTOMER or his agent and QUALITY will accomplish the job as an independent contractor and not as an employee or agent of the CUSTOMER.

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071  
Cell 785-324-1041

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

No. 1586

Date	9-21-19	Sec.	1	Twp.	17	Range	12	County	Barton	State	Ks	On Location		Finish	1:30 AM
Location								Beaver 3 E to Curve 2 1/2 S							
Lease	Reif			Well No.	#1			Owner	E into						
Contractor	Southwind			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	San Paa.			Charge To				RJM							
Hole Size	12 1/4			T.D.											
Csg.	8 5/8			Depth	350'			Street							
Tbg. Size				Depth	City										
Tool				Depth	State										
Cement Left in Csg.				Shoe Joint	15'			The above was done to satisfaction and supervision of owner agent or contractor.							
Meas Line				Displace	2 1/2 1/4 1/20			Cement Amount Ordered 180 SK 60/40 41. 21.							
<b>EQUIPMENT</b>															
Pumptrk	#17	No.	Cementer	Tony P.			Common			108					
			Helper				Poz. Mix			72					
Bulktrk		No.	Driver	DAVID L.			Gel.			3					
Bulktrk	#3	No.	Driver	M. K.			Calcium			8					
<b>JOB SERVICES &amp; REMARKS</b>															
Remarks:	USEP3 180 SK 60/40														
Rat Hole	41. 2X														
Mouse Hole															
Centralizers															
Baskets															
D/V or Port Collar															
8 5/8 Csg @ 350' - Break circulation.													Hulls		
Mix 180 SK 60/40 41. 2X													Salt		
Displace amount @ 2 1/2 1/4 1/20													Flowseal		
Cement @ San Paa													Kol-Seal		
													Mud CLR 48		
													CFL-117 or CD110 CAF 38		
													Sand		
													Handling		
													191		
													Mileage		
													<b>FLOAT EQUIPMENT</b>		
													Guide Shoe		
													Centralizer		
													Baskets		
													AFU Inserts		
													Float Shoe		
													Latch Down		
													Pumptrk Charge		
													Surface		
													27		
													Tax		
													Discount		
													Total Charge		
Signature													Guy Hines		

## GENERAL TERMS AND CONDITIONS

**DEFINITIONS:** In these terms and conditions, "Quality" shall mean Quality Oilwell Cementing, Inc., and "Customer" shall refer to the party identified by that term on the front of this contract. As applicable, "Job" relates to the services described on the front side of this contract, "merchandise" refers to the material described on the front of this contract and to any other materials, products, or supplies used, sold, or furnished under the requirements of this contract.

- **TERMS:** Unless satisfactory credit has been established, "CUSTOMER" must tender full cash payment to "QUALITY" before the job is undertaken or merchandise is delivered. If satisfactory credit has been established, the terms of payment for the job and/or merchandise, including bulk cement, are net cash, payable in 30 days from the completion of the job and/or delivery of the merchandise. For all past due invoices, "CUSTOMER" agrees to pay interest on amounts invoiced at a rate of 18 percent per annum until paid. Notwithstanding the foregoing in no event shall this Contract provide for interest exceeding the maximum rate of interest that "CUSTOMER" may agree to pay under applicable law. If any such interest should be provided for, it shall be and hereby is deemed to be a mistake, and this contract shall be automatically reformed to lower the rate of interest to the maximum legal contract rate, any amounts previously paid as excess interest shall be deducted from the amounts owing from the "CUSTOMER" or at the option of "QUALITY," refunded directly to "CUSTOMER." For purposes of this paragraph, QUALITY and CUSTOMER agree that KANSAS law shall apply. Any discounts granted with this contract are null and void if the charges are not paid when due.

- **ATTORNEY FEES:** In any legal action or proceeding between the parties to enforce any of the terms of this Service Contract, or in any way pertaining to the term of this Contract, the prevailing party shall be entitled to recover all expenses, including, but not limit to, a reasonable sum as and attorney's fees.

- **PRICES AND TAXES:** All merchandise listed in "QUALITY'S" current price schedule are F.O.B. QUALITY'S local station and are subject to change without notice. All prices are exclusive of any federal, state, local, or special taxes for the sale or use of the merchandise or services listed. The amount of taxes required to be paid by QUALITY shall be added to the quoted prices charged to CUSTOMER.

- **TOWING CHARGES:** QUALITY will make a reasonable attempt to get to and from each job site using its own equipment. Should QUALITY be unable to do so because of poor or inadequate road conditions, and should it become necessary to employ a tractor or other pulling equipment to get to or from the job site, the tractor or pulling equipment will be supplied by CUSTOMER or, if furnished by QUALITY, will be charged to and paid by CUSTOMER.

- **PREPARATION CHARGES:** If a job and/or merchandise is ordered and CUSTOMER cancels the order after preparation of a chemical solution or other material, CUSTOMER will pay QUALITY for the expenses incurred by QUALITY as a result of the cancellation.

- **DEADHAUL CHARGES:** Unless otherwise specified on the front of this Contract, a deadhaul charges as set forth in QUALITY'S current price book will be charged each way for each service unit which is ordered by CUSTOMER but not used.

- **SERVICE CONDITIONS AND LIABILITIES:** 1. QUALITY carries public liability and property damage insurance, but since there are so many uncertain and unknown conditions beyond QUALITY'S control, QUALITY shall not be liable for injuries to property or persons or for loss or damage arising from the performance of the job or delivery of the merchandise. Customer shall be responsible for and indemnify, defend, and hold harmless QUALITY, its officers, agents and employees, from and against any and all claims or suits for:

(A) Damage to property or for bodily injury, sickness, disease, or death, brought by any person, including CUSTOMER and/or the well owner; and:

(B) Oil spills, pollution, surface or sub-surface damage, injury to the well, reservoir loss, or damage arising from a well blowout arising out of or in connection with QUALITY'S performance of the job or furnishing of merchandise in accordance with this contract, unless such loss or damage is caused by the willful misconduct or gross negligence of QUALITY or its employees.

2. With respect to any of QUALITY'S tools, equipment, or instruments which are lost in the well or damaged when performing or attempting to perform the job or, in the case of marine operations, are lost or damaged at any time after delivery to the landing for CUSTOMER and before return to QUALITY at the landing, CUSTOMER shall either recover the lost item without cost to QUALITY or reimburse QUALITY the current replacement cost of the item unless the loss or damage results from the sole negligence of QUALITY or its employees.

3. QUALITY does not assume any liability or responsibility for damages or conditions resulting from chemical action in cements caused by contamination of water or other fluids.

**WARRANTIES:** 1. QUALITY warrants all merchandise manufactured or furnished by it to be free from defects in material and workmanship under normal use and service when installed, and used, and/or serviced in the manner provided and intended. QUALITY'S obligation under this warranty is expressly limited to repair replacement, or allowance for credit, at its option, for any merchandise which is determined by QUALITY to be defective. THIS IS THE SOLE WARRANTY OF QUALITY AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESS OR OTHERWISE IMPLIED, IN FACT OR IN LAW, INCLUDING ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE, CUSTOMER'S sole and only remedy with regard to any defective merchandise shall be the repair or replacement thereof or allowance for credit as herein provided, and QUALITY shall not be liable for any consequential, special, incidental, or punitive damages resulting from or caused by defective materials, products or supplies.

2. More specifically:

(A) Nothing in this contract shall be construed as a warranty by QUALITY of the success or the effectiveness of the result of any work done or merchandise used, sold, or furnished under this contract.

(B) Nothing in this contract shall be construed as a warranty of the accuracy or correctness of any facts, information, or data furnished by QUALITY or any interpretation of test, meter readings, chart information, analysis or research, or recommendations made by QUALITY, unless the inaccuracy or incorrectness is caused by the willful misconduct or gross negligence of QUALITY or its employees in the preparation or furnishing of such facts, information or data. (C) Work done by QUALITY shall be under the direct supervision and control of the CUSTOMER or his agent and QUALITY will accomplish the job as an independent contractor and not as an employee or agent of the CUSTOMER.