

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD
 Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (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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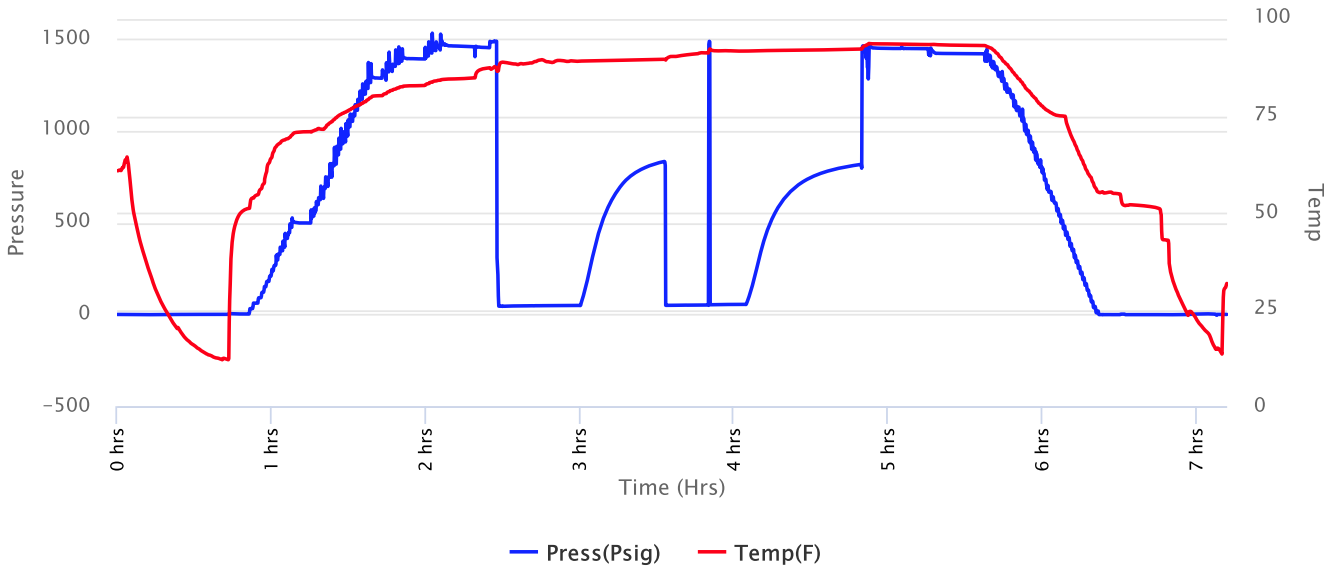
Company: RJM Oil Company, Inc
Lease: Sprawka #1

SEC: 12 TWN: 18 S RNG: 12 W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1847 Sur
 Field Name: Tritsch
 Pool: Infield
 Job Number: 101

DATE
 January
15
 2018

DST #1 **Formation: Lansing A-G** **Test Interval: 3114 - 3208'** **Total Depth: 3208'**
 Time On: 01:58 01/16 Time Off: 08:59 01/16
 Time On Bottom: 04:23 01/16 Time Off Bottom: 06:38 01/16

Electronic Volume Estimate: 0'	<u>1st Open</u> Minutes: 30 0" at 30 min	<u>1st Close</u> Minutes: 30 0" at 30 min	<u>2nd Open</u> Minutes: 30 0" at 30 min	<u>2nd Close</u> Minutes: 45 0" at 45 min
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Company: RJM Oil Company, Inc
Lease: Sprawka #1

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 County: BARTON
 State: Kansas
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 Elevation: 1847 Sur
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DATE
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15
 2018

DST #1 **Formation: Lansing A-G** **Test Interval: 3114 - 3208'** **Total Depth: 3208'**
 Time On: 01:58 01/16 Time Off: 08:59 01/16
 Time On Bottom: 04:23 01/16 Time Off Bottom: 06:38 01/16

Recovered

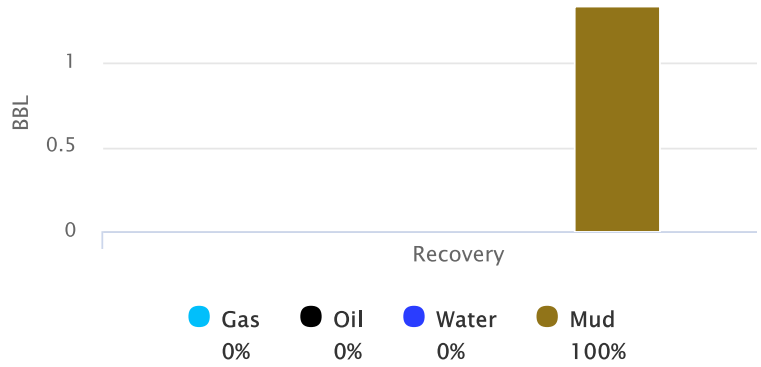
<u>Foot</u>	<u>BBLs</u>	<u>Description of Fluid</u>	<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
94	1.33762	M	0	0	0	100

Total Recovered: 94 ft
 Total Barrels Recovered: 1.33762

Reversed Out
 NO

Initial Hydrostatic Pressure	1458	PSI
Initial Flow	45 to 49	PSI
Initial Closed in Pressure	830	PSI
Final Flow Pressure	49 to 55	PSI
Final Closed in Pressure	816	PSI
Final Hydrostatic Pressure	1447	PSI
Temperature	93	°F
Pressure Change Initial Close / Final Close	1.8	%

Recovery at a glance





**Company: RJM Oil Company,
Inc
Lease: Sprawka #1**

SEC: 12 TWN: 18 S RNG: 12 W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1847 Sur
Field Name: Tritsch
Pool: Infield
Job Number: 101

DATE January 15 2018

DST #1	Formation: Lansing A-G	Test Interval: 3114 - 3208'	Total Depth: 3208'
	Time On: 01:58 01/16	Time Off: 08:59 01/16	
	Time On Bottom: 04:23 01/16	Time Off Bottom: 06:38 01/16	

REMARKS:

12 foot slid to bottom. Bled off 9" blow.

IF: 1/4"- no build

IS: NoBB

FF: WSB- Died in 5 mins. Flushed tool 15 mins into open. 1/8" blow after flush- died in 10 mins

FS: NoBB

Tool Sample:

100% mud (trace oil)



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Inc - Rig 3
Elevation: 1847 Sur
Field Name: Tritsch
Pool: Infield
Job Number: 101

DATE January 15 2018

DST #1	Formation: Lansing A-G	Test Interval: 3114 - 3208'	Total Depth: 3208'
	Time On: 01:58 01/16	Time Off: 08:59 01/16	
	Time On Bottom: 04:23 01/16	Time Off Bottom: 06:38 01/16	

Mud Properties

Mud Type: chemical **Weight:** 8.8 **Viscosity:** 58 **Filtrate:** 7.2 **Chlorides:** 2000 ppm



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Lease: Sprawka #1

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 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1847 GL
 Field Name: Tritsch
 Pool: Infield
 Job Number: 101

DATE
 January
17
 2018

DST #2 **Formation: Lansing G-L** **Test Interval: 3222 - 3374'** **Total Depth: 3374'**
 Time On: 03:35 01/17 Time Off: 10:51 01/17
 Time On Bottom: 05:18 01/17 Time Off Bottom: 08:33 01/17

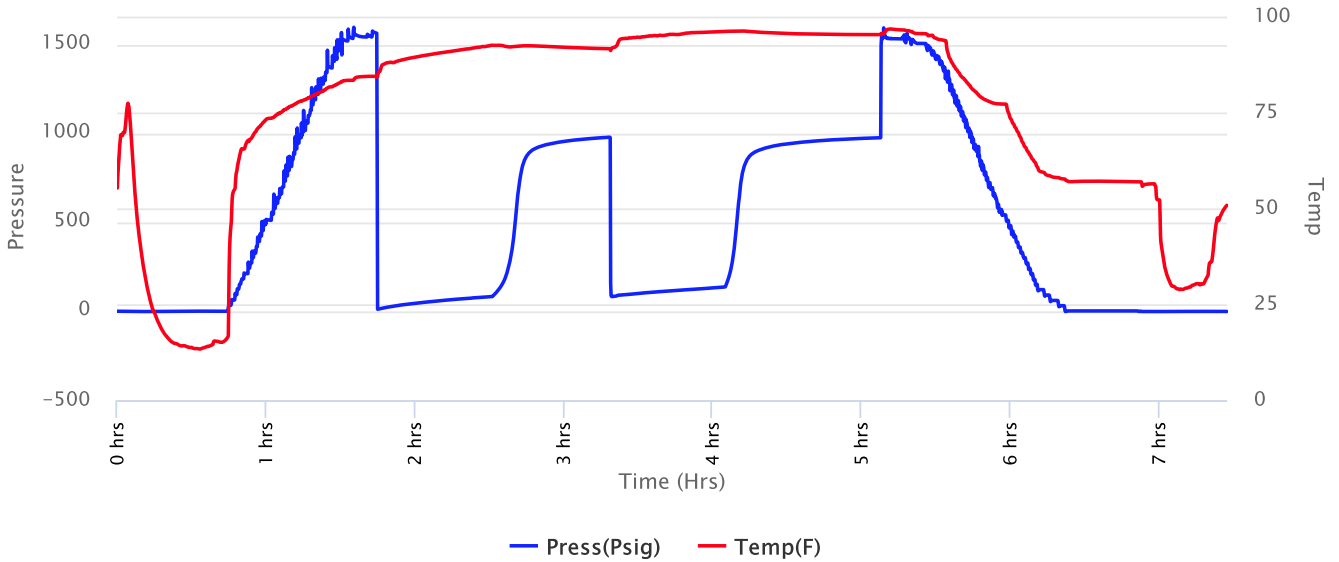
Electronic Volume Estimate:
 987'

1st Open
 Minutes: 45
 51.4" at 45 min

1st Close
 Minutes: 45
 .3" at 45 min

2nd Open
 Minutes: 45
 71.7" at 45 min

2nd Close
 Minutes: 60
 3.5" at 60 min





Company: RJM Oil Company, Inc
Lease: Sprawka #1

SEC: 12 TWN: 18S RNG: 12W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1847 GL
 Field Name: Tritsch
 Pool: Infield
 Job Number: 101

DATE
 January
17
 2018

DST #2 **Formation: Lansing G-L** **Test Interval: 3222 - 3374'** **Total Depth: 3374'**
 Time On: 03:35 01/17 Time Off: 10:51 01/17
 Time On Bottom: 05:18 01/17 Time Off Bottom: 08:33 01/17

Recovered

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
851	12.10973	G	100	0	0	0
31	0.44113	SLOCM	0	10	0	90
63	0.89649	OCHGCM	30	20	0	50
126	1.79298	MCHGCO	34	46	0	20
63	0.89649	SLWCSLOCHMCG	50	10	10	30

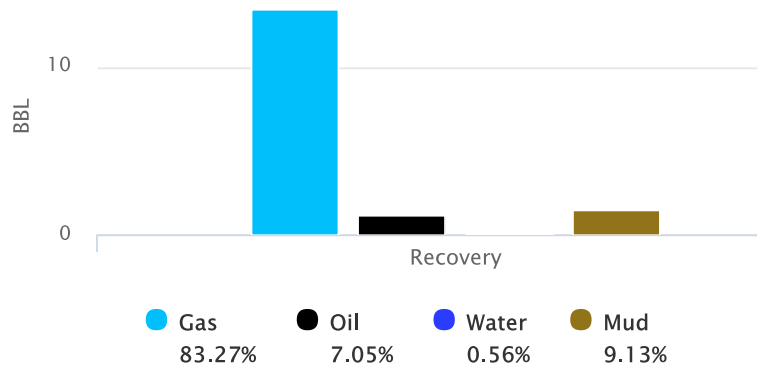
Total Recovered: 1134 ft
 Total Barrels Recovered: 16.13682

Reversed Out
 NO

Initial Hydrostatic Pressure 1541 PSI
 Initial Flow 11 to 83 PSI
Initial Closed in Pressure 978 PSI
 Final Flow Pressure 83 to 137 PSI
Final Closed in Pressure 974 PSI
 Final Hydrostatic Pressure 1531 PSI
 Temperature 97 °F

 Pressure Change Initial 0.4 %
 Close / Final Close

Recovery at a glance





**Company: RJM Oil Company,
Inc
Lease: Sprawka #1**

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County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1847 GL
Field Name: Tritsch
Pool: Infield
Job Number: 101

DATE January 17 2018

DST #2	Formation: Lansing G-L	Test Interval: 3222 - 3374'	Total Depth: 3374'
	Time On: 03:35 01/17	Time Off: 10:51 01/17	
	Time On Bottom: 05:18 01/17	Time Off Bottom: 08:33 01/17	

REMARKS:

IF: 1" Blow- Built to BB in 11 mins.
IS:1/2" BB
FF:2" Blow- Built to BB in 4 mins
FS:3 1/2" BB

Diesel in bucket

Tool Sample:
60% O 10% W 30% M



Company: RJM Oil Company, Inc

Lease: Sprawka #1

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State: Kansas
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Inc - Rig 3
Elevation: 1847 GL
Field Name: Tritsch
Pool: Infield
Job Number: 101

DATE January 17 2018

DST #2 Formation: Lansing G-L Test Interval: 3222 - 3374' Total Depth: 3374'
Time On: 03:35 01/17 Time Off: 10:51 01/17
Time On Bottom: 05:18 01/17 Time Off Bottom: 08:33 01/17

Down Hole Makeup

Heads Up: 36.65 FT	Packer 1: 3216.98 FT
Drill Pipe: 3233.47 FT <i>ID-3 1/2</i>	Packer 2: 3221.98 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 3208.98 FT
Collars: 0 FT <i>ID-2 1/4</i>	Bottom Recorder: 3355 FT
Test Tool: 26.16 FT <i>ID-3 1/2-FH</i>	Well Bore Size: 7 7/8
Total Anchor: 152.02	Surface Choke: 1"
Anchor Makeup	
Packer Sub: 1 FT	Bottom Choke: 5/8"
Perforations: (top): 3 FT <i>4 1/2-FH</i>	
Change Over: .5 FT	
Drill Pipe: (in anchor): 127.02 FT <i>ID-3 1/2</i>	
Change Over: .5 FT	
Perforations: (below): 20 FT <i>4 1/2-FH</i>	



**Company: RJM Oil Company,
Inc
Lease: Sprawka #1**

SEC: 12 TWN: 18S RNG: 12W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1847 GL
Field Name: Tritsch
Pool: Infield
Job Number: 101

DATE January 17 2018

DST #2	Formation: Lansing G-L	Test Interval: 3222 - 3374'	Total Depth: 3374'
	Time On: 03:35 01/17	Time Off: 10:51 01/17	
	Time On Bottom: 05:18 01/17	Time Off Bottom: 08:33 01/17	

Mud Properties

Mud Type: Chemical **Weight:** 8.8 **Viscosity:** 52 **Filtrate:** 8.8 **Chlorides:** 4000 ppm



Company: RJM Oil Company, Inc
Lease: Sprawka #1

SEC: 12 TWN: 18S RNG: 12W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1847 GL
 Field Name: Tritsch
 Pool: Infield
 Job Number: 101

DATE
 January
17
 2018

DST #3 Formation: Arbuckle Test Interval: 3392 - 3408' Total Depth: 3408'

Time On: 19:54 01/17 Time Off: 03:05 01/18
 Time On Bottom: 21:35 01/17 Time Off Bottom: 00:50 01/18

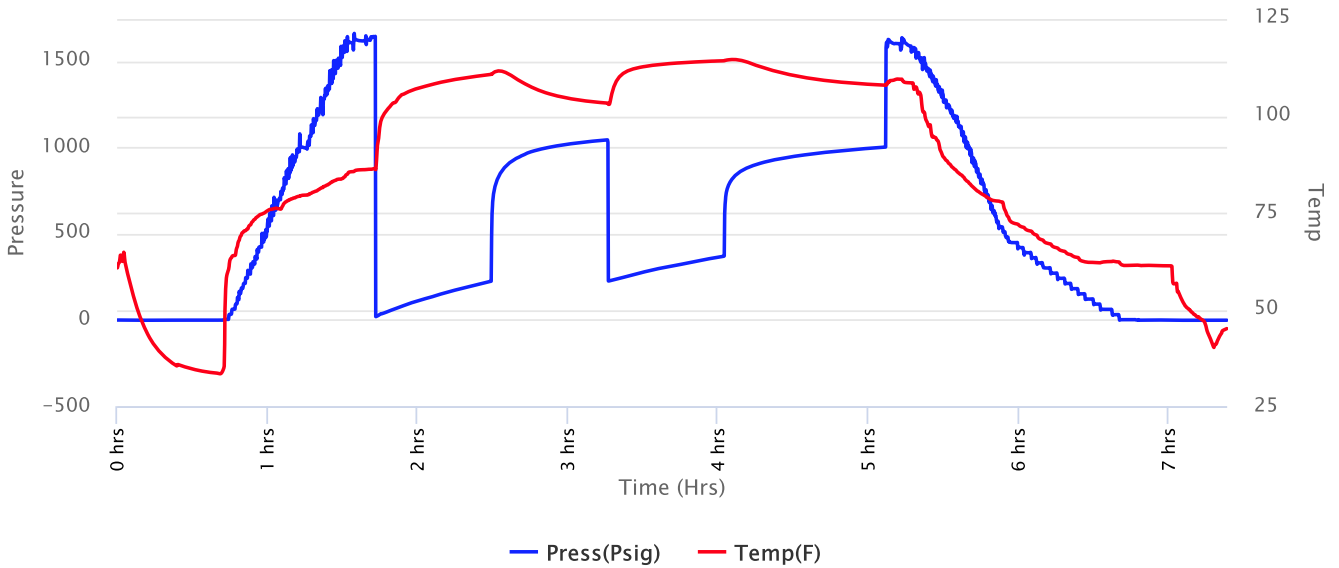
Electronic Volume Estimate:
 1205'

1st Open
 Minutes: 45
 85.7" at 45 min

1st Close
 Minutes: 45
 0" at 45 min

2nd Open
 Minutes: 45
 63.7" at 45 min

2nd Close
 Minutes: 60
 0" at 60 min





Company: RJM Oil Company, Inc
Lease: Sprawka #1

SEC: 12 TWN: 18S RNG: 12W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1847 GL
 Field Name: Tritsch
 Pool: Infield
 Job Number: 101

DATE
 January
17
 2018

DST #3 Formation: Arbuckle Test Interval: 3392 - 3408' Total Depth: 3408'

Time On: 19:54 01/17 Time Off: 03:05 01/18
 Time On Bottom: 21:35 01/17 Time Off Bottom: 00:50 01/18

Recovered

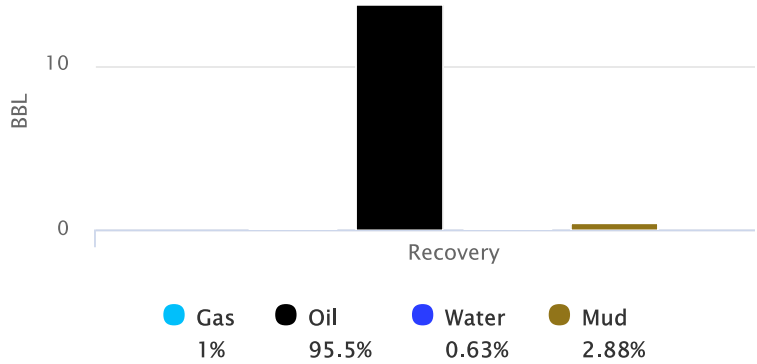
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
945	13.44735	O	0	100	0	0
63	0.89649	SLWCSLGCOCM	16	28	10	46

Total Recovered: 1008 ft
 Total Barrels Recovered: 14.34384

Reversed Out
 NO

Initial Hydrostatic Pressure	1618	PSI
Initial Flow	20 to 225	PSI
Initial Closed in Pressure	1044	PSI
Final Flow Pressure	226 to 371	PSI
Final Closed in Pressure	1002	PSI
Final Hydrostatic Pressure	1602	PSI
Temperature	115	°F
Pressure Change Initial Close / Final Close	4.0	%

Recovery at a glance





**Company: RJM Oil Company,
Inc
Lease: Sprawka #1**

SEC: 12 TWN: 18S RNG: 12W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1847 GL
Field Name: Tritsch
Pool: Infield
Job Number: 101

DATE January 17 2018

DST #3 Formation: Arbuckle Test Interval: 3392 - Total Depth: 3408'
3408'

Time On: 19:54 01/17 Time Off: 03:05 01/18
Time On Bottom: 21:35 01/17 Time Off Bottom: 00:50 01/18

REMARKS:

IF: 1 1/2" blow - built to BOB in 4 mins.
IS: NoBB
FF: 1 1/2" blow - built to BOB in 5 1/2 mins.
FS: NoBB

Diesel in bucket.

Tool sample:
100% O

Gravity: 38.2 @ 60 degrees F



**Company: RJM Oil Company,
Inc
Lease: Sprawka #1**

SEC: 12 TWN: 18S RNG: 12W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1847 GL
Field Name: Tritsch
Pool: Infield
Job Number: 101

<p>DATE January 17 2018</p>

DST #3 Formation: Arbuckle Test Interval: 3392 - 3408' Total Depth: 3408'

Time On: 19:54 01/17 Time Off: 03:05 01/18
Time On Bottom: 21:35 01/17 Time Off Bottom: 00:50 01/18

Down Hole Makeup

Heads Up: 25.57 FT	Packer 1: 3387 FT
Drill Pipe: 3392.41 FT <i>ID-3 1/2</i>	Packer 2: 3392 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 3379 FT
Collars: 0 FT <i>ID-2 1/4</i>	Bottom Recorder: 3394 FT
Test Tool: 26.16 FT <i>ID-3 1/2-FH</i>	Well Bore Size: 7 7/8
Total Anchor: 16	Surface Choke: 1"
<u>Anchor Makeup</u>	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 0 FT <i>4 1/2-FH</i>	
Change Over: 0 FT	
Drill Pipe: (in anchor): 0 FT <i>ID-3 1/2</i>	
Change Over: 0 FT	
Perforations: (below): 15 FT <i>4 1/2-FH</i>	



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County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1847 GL
Field Name: Tritsch
Pool: Infield
Job Number: 101

DATE January 17 2018

DST #3 Formation: Arbuckle Test Interval: 3392 - Total Depth: 3408'
3408'

Time On: 19:54 01/17 Time Off: 03:05 01/18
Time On Bottom: 21:35 01/17 Time Off Bottom: 00:50 01/18

Mud Properties

Mud Type: Chemical **Weight:** 9.1 **Viscosity:** 48 **Filtrate:** 9.2 **Chlorides:** 5000 ppm



Musgrove

Petroleum Geology
212 Main Street, Claflin KS

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY RJM Co.
 LEASE Sprawka #1
 FIELD Tritsch
 LOCATION SW-SW-NW (2310' FNL & 330' FWL)
 SEC 12 TWSP 18S RGE 12W
 COUNTY Barton STATE Kansas

ELEVATIONS

KB 1856'
 DF _____
 GL 1848'
 Measurements Are All
 From KB

CONTRACTOR Southwind Drilling (Rig # 3)
 SPUD 1/12/2018 COMP 01/18/2018
 RTD 3409' LTD 3407'
 MUD UP 2800' TYPE MUD Chemical

CASING

SURFACE 8 5/8" @ 370'
 PRODUCTION 5 1/2" @ 3391'

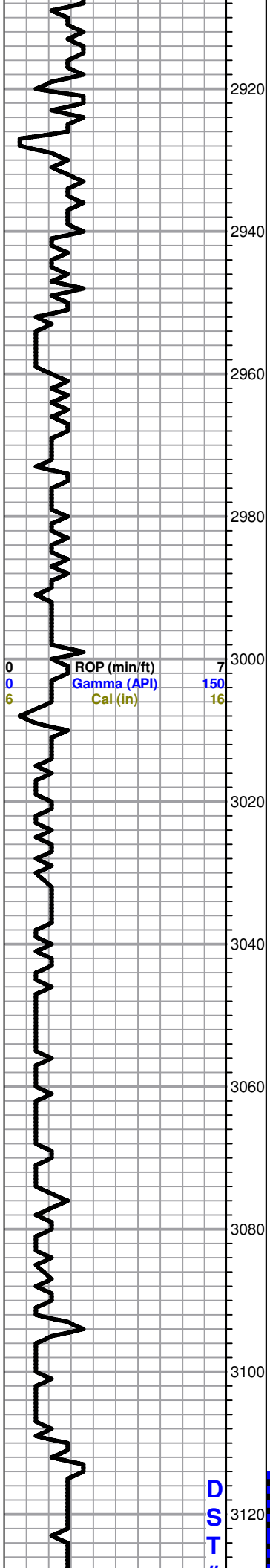
ELECTRICAL SURVEYS

Pioneer; DIL, MEL, CNL/DNL

SAMPLES SAVED FROM 2800' TO RTD
 DRILLING TIME KEPT FROM 2800' TO RTD
 SAMPLES EXAMINED FROM 2800' TO RTD
 GEOLOGICAL SUPERVISION FROM 2800' TO RTD
 GEOLOGIST ON WELL Jim Musgrove

FORMATION TOPS	LOG	SAMPLES
Anhydrite	714 (+1142)	
B. Anhydrite	738 (+1118)	
Heebner	3006 (-1150)	3007 (-1151)
Toronto	3026 (-1170)	3022 (-1166)
Douglas	3037 (-1181)	3034 (-1178)
Brown Lime	3111 (-1255)	3109 (-1253)

X		12	



2920
2940
2960
2980
3000
3020
3040
3060
3080
3100
3120

Tr. blk chert

LS, white, sub oom, chalky, poor visible porosity, few ool, tr. blk stain, nsfo, no odor

LS, a/a, + white, cream, chalky, no shows

LS, a/a

gry, boney & opaue chert

Heebner 3007.0 (-1151.0)

Sh, black carb

Sh, gry, maroon, greenish limey shale

Toronto 3022.0 (-1166.0)

LS, gry, tan, finely ool, poor visible porosity, no shows

Douglas 3034.0 (-1178.0)

Sh, gry, greenish, silty

Sh, a/a, tr. white, gryish, green, tr. vfg. mica sd.

Sh, a/a

Brown Lime 3109.0 (-1253.0)

LS, tan, brown, fxl, poor visible porosity

Lansing 3123.0 (-1267.0)

LS, tan, fxl, slightly chalky, tr. light brown stain, sfo,

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

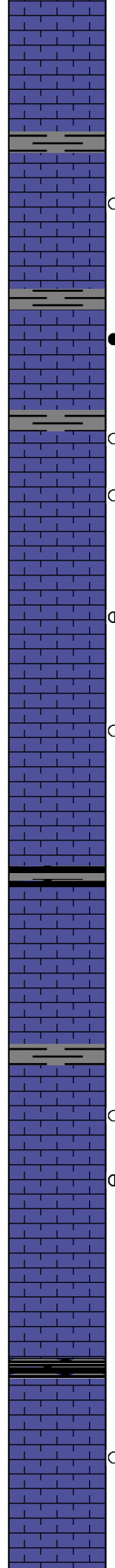
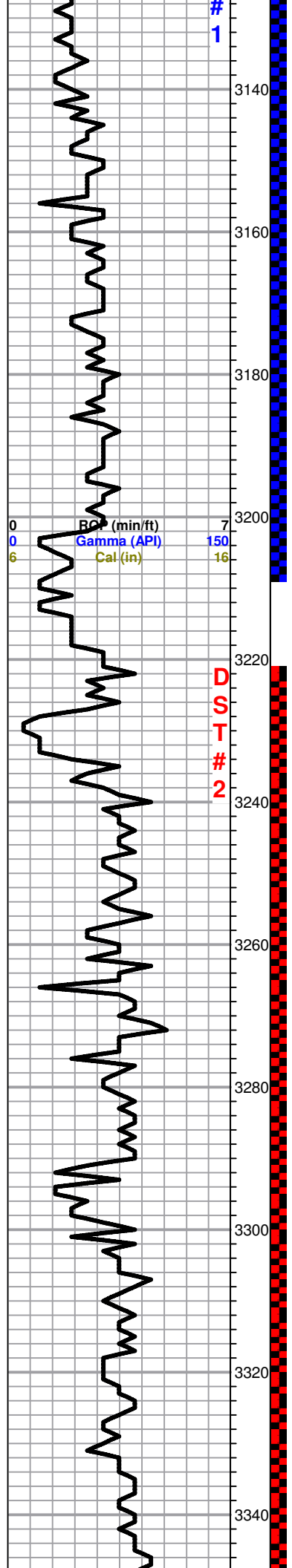
DST#1 3114-3208

30-30-30-45

1st Open:
Blow; Weak

Recovery:
94' Mud w/ Show of oil

Pressures:
ISIP 830 psi
FSIP 816 psi
IEP 15.49 psi



faint odor

tr. gry chert

LS, white, cream, fxl, slightly foss, poor visible porosity, tr. stain, nsfo, no odor

LS, white, cream, fxl, ool, chalky, tr. poor brown stain, sfo, ft. odor

LS, white, gry, ool, chalky, tr. stain, nsfo, no odor

LS, tan, ool, poorly developed porosity, ??? stain, nsfo, no odor

LS, tan, ool, oom, slightly chalky, scattered porosity, lt. brown stain, wk sfo, ft. odor

LS, white, buff, gry, oom, few chalky, brown stain, tr. fo, no odor

LS, white, gry, chalky, poor visible porosity, no shows

Sh, black carb

LS, tan, oom, poorly developed porosity, no shows

LS, tan, sub oom, poor visible porosity, no shows

Sh, gry, greenish

LS, tan, ool, scattered porosity, brn stain, tr. fo, no odor

LS, tan, fos,/ ool, few oom, tr. brown stain, nsfo, no odor

Tr. gry foss chert

LS, white, cream, ool, chalky, no shows, no odor

Sh, gry, blk

LS, white, cream, ool, slightly chalky, tr. golden brown stain, nsfo, ft. odor

IFP 43-49 psi
FFP 49-55 psi
HSH 1458-1447 psi

Poor samples
95%-98% Shales

DST#2 3222-3374
45-45-45-60

1st Open:
Strong BOB 11 mins.

2nd Open:
Strong BOB 4 mins.

Recovery:
851' GIP

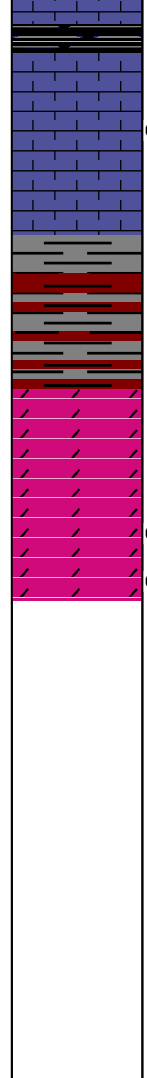
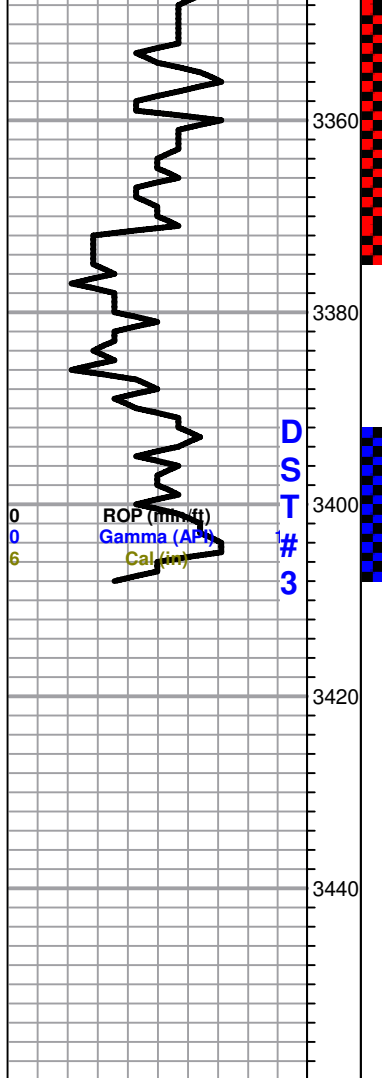
31' SLOCM
(10%O, 90%M)

63' O&GCM
(30%G, 46%O, 20%M)

126' MGO
(34%G, 46%O, 20%M)

65' Oil & gas cut
watery mud
(50%G, 10%O, 10%W, 30%M)

Pressures:
ISIP 978 psi
FSIP 974 psi
IFP 11-83 psi
FFP 83-137 psi
HSH 1541-1531



Sh, gry, black

LS, white, cream, ool, slightly chalky, tr. golden brown stain, nsfo, ft. odor

Base KC 3371.0 (-1515.0)

Slug maroon, brick red shale, maroon, gry, -dk green shale

Sh, maroon, gry, lime green shale

Arbuckle 3388.0 (-1532.0)

Dol. gry, white, fxl, poor visible porosity

Dol. a/a, gry, white, f-med xln

Dol. a/a, few chalky lusters, tr. stain, tr. fo., odor

Dol. tan, med xl, fair inxln porosity, fair stain & sat. sfo, fair odor

RTD 3409.0 (-1553.0)

LTD 3408.0 (-1552.0)

DST#3 3392-3408

45-45-45-60

1st Open:
BOB 4 mins.

2nd Open:
BOB 5.5 mins.

Recovery:
945' Clean Oil

63' MCOGW
(46%M, 28%O, 16%G, 10%W)

Pressures:
ISIP 1044 psi
FSIP 1002 psi
IFP 20-225 psi
FFP 226-371 psi
HSH 1618-1602 psi

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. 637

Date	1-18-18	Sec.	12	Twp.	18	Range	12	County	Barton	State	Ks	On Location		Finish	7:00 PM
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Location Hoisington E to Odia Rd, 1 1/2 S, E/S

Lease	<u>Sprawka</u>		Well No.	<u>1</u>	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	<u>Southwind</u>			<u>3</u>	Charge To	<u>RSM Company</u>									
Type Job	<u>Longstring</u>		T.D.	<u>3409'</u>	Street										
Hole Size	<u>7 7/8"</u>		Depth	<u>3395'</u>	City	State									
Csg.	<u>5 1/2" New 15.50"</u>		Depth	<u>9.50'</u>	The above was done to satisfaction and supervision of owner agent or contractor.										
Tbg. Size	<u>9.50'</u>		Depth	<u>9.50'</u>	Cement Amount Ordered <u>180 Com 10% salt 5% Gilsomite</u>										
Tool	<u>9.50'</u>		Shoe Joint	<u>9.50'</u>	Meas Line Displace <u>80 1/2 BLS</u> <u>500 gal mud clear 48</u>										
Cement Left in Csg.	<u>0</u>					Common <u>180</u>									

EQUIPMENT

Pumptrk	<u>16</u>	No.	Cementer	<u>Travis</u>
			Helper	
Bulktrk	<u>14</u>	No.	Driver	<u>Jordan</u>
			Driver	
Bulktrk	<u>p.u.</u>	No.	Driver	<u>Rick</u>
			Driver	

JOB SERVICES & REMARKS

Remarks:
Rat Hole
Mouse Hole
Centralizers 1-9
Baskets 2+6
D/V or Port Collar pipe on bottom break Circulation
plug 500 gal mud clear 48
Reathole w/ 30x Cement 5 1/2" casing
w/ 150 sx shut down wash pump + line
Released plug w/ 80 1/2 BLS of N2O
Released + held.

Hulls	
Salt	<u>15</u>
Flowseal	
Kol-Seal	<u>750 #</u>
Mud CLR 48	<u>500 gal</u>
CFL-117 or CD110 CAF 38	
Sand	
Handling	<u>203</u>
Mileage	

FLOAT EQUIPMENT

Lift pressure 700 #
Land plug to 1500 #

Guide Shoe	
Centralizer	<u>9 turbo's</u>
Baskets	<u>2</u>
AFU Inserts	
Float Shoe	<u>1</u>
Latch Down	<u>1</u>
Rotating head	

Pumptrk Charge prod string
Mileage 24

Pumptrk Charge	<u>prod string</u>
Mileage	<u>24</u>

X Signature Jay Brown

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 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 785-483-2025

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

No. 633

Cell 785-324-1041

Date	1-13-18	Sec.	12	Twp.	18	Range	12	County	Barton	State	Ks	On Location		Finish	12:30 AM
Lease	Sprawka							Location	Haisington - E to Odin Rd, 1 1/2 S, E 1/4 to						
Contractor	Southwind	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.									
Type Job	Surface														
Hole Size	12 1/4"	T.D.	371'		Charge To	RJM Company									
Csg.	8 5/8"	Depth	371'		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 6/40 4% CC 2% Gel									
Meas Line		Displace	22 1/2 BLS												
EQUIPMENT					Common	110									
Pumptrk	16	No.	Cementer	Travis	Poz. Mix	70									
			Helper												
Bulktrk	3	No.	Driver	David	Gel.	3									
			Driver												
Bulktrk	p.u.	No.	Driver	Rick	Calcium	8									
			Driver												
JOB SERVICES & REMARKS					Hulls										
Remarks:	Cement did Circulate				Salt										
Rat Hole					Flowseal										
Mouse Hole					Kol-Seal										
Centralizers					Mud CLR 48										
Baskets					CFL-117 or CD110 CAF 38										
D/V or Port Collar					Sand										
					Handling	191									
					Mileage										
					FLOAT EQUIPMENT										
					Guide Shoe										
					Centralizer										
					Baskets										
					AFU Inserts										
					Float Shoe										
					Latch Down										
					Pumptrk Charge	Surface									
					Mileage	24									
					Tax										
					Discount										
					Total Charge										
X Signature	Jay Shaw														

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