

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 Recompletion Date _____ Date Reached TD _____ Completion Date or Recompletion Date _____

API No.: _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

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

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

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

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

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

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

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:
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Company: RJM Oil Company, Inc

Lease: Johanning "B" #4

SEC: 36 TWN: 18S RNG: 11W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1738 GL
 Field Name: Mary Ida
 Pool: Infield
 Job Number: 262

Operation:
 Well Complete

DATE
 November
19
 2018

DST #1 **Formation: Lans "A-F"** **Test Interval: 2941 - 3041'** **Total Depth: 3041'**
 Time On: 04:13 11/19 Time Off: 11:23 11/19
 Time On Bottom: 06:09 11/19 Time Off Bottom: 09:09 11/19

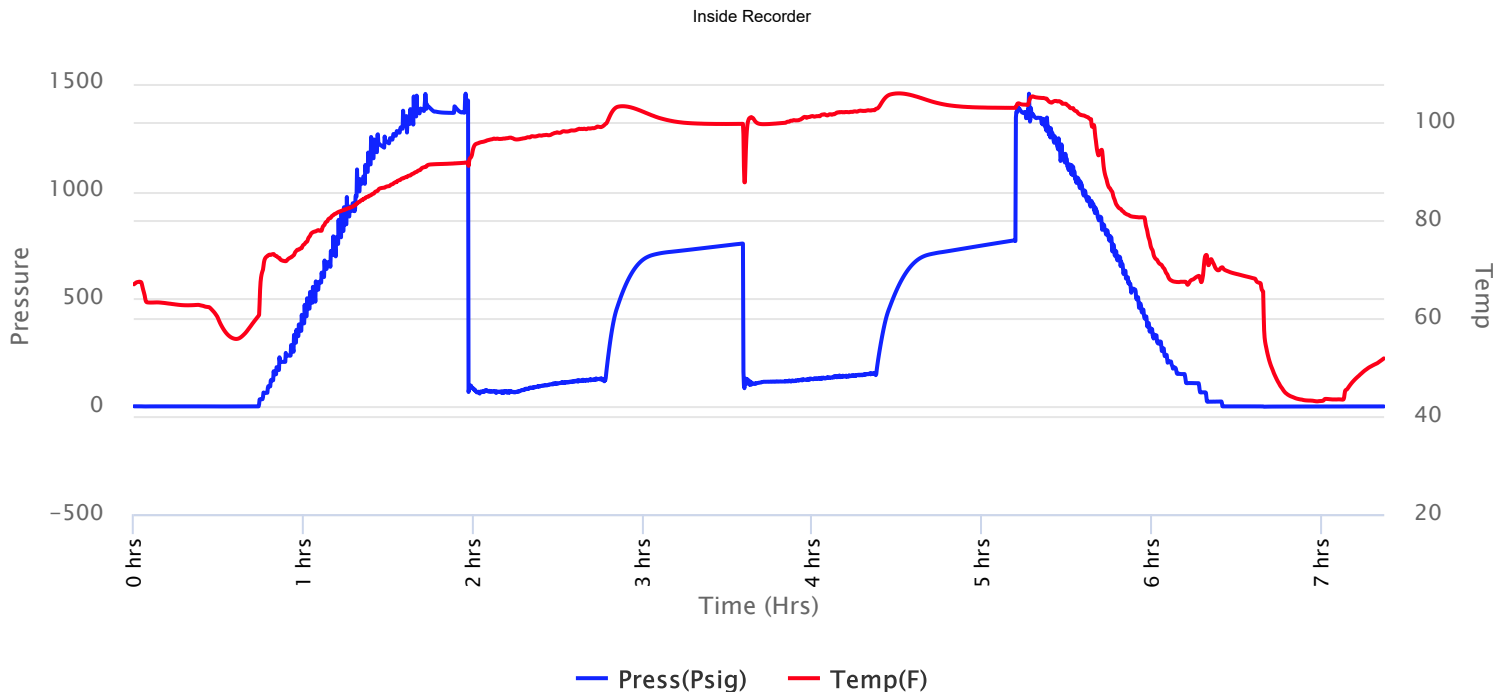
Electronic Volume Estimate:
 N/A

1st Open
 Minutes: 45
 Current Reading:
 Gauging Gas" at 45 min
 Max Reading: Gauging Gas"

1st Close
 Minutes: 45
 Current Reading:
 1" at 45 min
 Max Reading: 13"

2nd Open
 Minutes: 45
 Current Reading:
 Gauging Gas" at 45 min
 Max Reading: Gauging Gas"

2nd Close
 Minutes: 45
 Current Reading:
 19" at 45 min
 Max Reading: 21.2"





Operation:
Well Complete

DATE
November
19
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Inc**
Lease: Johanning "B" #4

SEC: 36 TWN: 18S RNG: 11W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1738 GL
Field Name: Mary Ida
Pool: Infield
Job Number: 262

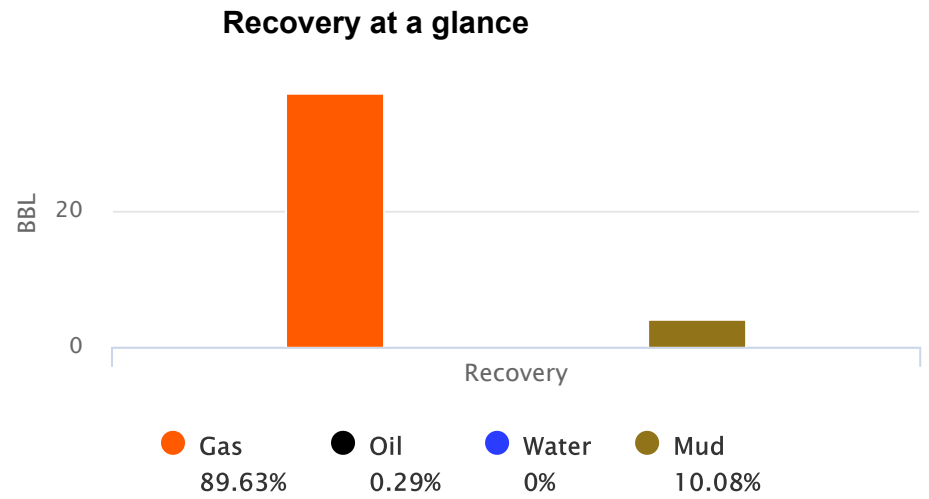
DST #1 **Formation: Lans "A-
F"** **Test Interval: 2941 -
3041'** **Total Depth: 3041'**
Time On: 04:13 11/19 Time Off: 11:23 11/19
Time On Bottom: 06:09 11/19 Time Off Bottom: 09:09 11/19

<u>Recovered</u>		<u>Description of Fluid</u>	<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
<u>Foot</u>	<u>BBLs</u>					
2621	37.29683	G	100	0	0	0
68	0.96764	SLOCM	0	5	0	95
252	3.58596	SLOCSLGCM	6	2	0	92

Total Recovered: 2941 ft
 Total Barrels Recovered: 41.85043

Reversed Out
 NO

Initial Hydrostatic Pressure	1364	PSI
Initial Flow	67 to 122	PSI
Initial Closed in Pressure	757	PSI
Final Flow Pressure	85 to 146	PSI
Final Closed in Pressure	772	PSI
Final Hydrostatic Pressure	1364	PSI
Temperature	106	°F
Pressure Change Initial Close / Final Close	0.0	%



GIP cubic foot volume: 210.61105



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Inc - Rig 3
Elevation: 1738 GL
Field Name: Mary Ida
Pool: Infield
Job Number: 262

Operation:
Well Complete

DATE
November
19
2018

DST #1	Formation: Lans "A- F"	Test Interval: 2941 - 3041'	Total Depth: 3041'
	Time On: 04:13 11/19	Time Off: 11:23 11/19	
	Time On Bottom: 06:09 11/19	Time Off Bottom: 09:09 11/19	

BUCKET MEASUREMENT:

1st Open: 2 3/4 in. blow building. BOB in 36 secs.
1st Close: BOB blow back.
2nd Open: BOB immediately.
2nd Close: BOB blow back.

REMARKS:

Tool Sample: 10% Gas 1% Oil 0% Water 89% Mud



Operation:
Well Complete

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19
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County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1738 GL
Field Name: Mary Ida
Pool: Infield
Job Number: 262

**DST #1 Formation: Lans "A-
F" Test Interval: 2941 - Total Depth: 3041'**
Time On: 04:13 11/19 Time Off: 11:23 11/19
Time On Bottom: 06:09 11/19 Time Off Bottom: 09:09 11/19

Down Hole Makeup

Heads Up: 27.98 FT	Packer 1: 2935.93 FT
Drill Pipe: 2941.17 FT <i>ID-3 1/2</i>	Packer 2: 2940.93 FT
Weight Pipe: FT <i>ID-2 7/8</i>	Top Recorder: 2925.35 FT
Collars: FT <i>ID-2 1/4</i>	Bottom Recorder: 3011 FT
	Well Bore Size: 7 7/8
	Surface Choke: 1"

Test Tool: 28.74 FT

ID-3 1/2-FH

Safety Joint

Bottom Choke: 5/8"

Total Anchor: 100.07

Anchor Makeup

Packer Sub: 1 FT

Perforations: (top): 3 FT

4 1/2-FH

Change Over: .5 FT

Drill Pipe: (in anchor): 63.57 FT

ID-3 1/2

Change Over: 1 FT

Perforations: (below): 31 FT

4 1/2-FH



Operation:

Well Complete

**Company: RJM Oil Company,
Inc**

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SEC: 36 TWN: 18S RNG: 11W

County: BARTON

State: Kansas

Drilling Contractor: Southwind Drilling,
Inc - Rig 3

Elevation: 1738 GL

Field Name: Mary Ida

Pool: Infield

Job Number: 262

DATE
November
19
2018

DST #1 **Formation: Lans "A-
F"** **Test Interval: 2941 -
3041'** **Total Depth: 3041'**

Time On: 04:13 11/19 Time Off: 11:23 11/19

Time On Bottom: 06:09 11/19 Time Off Bottom: 09:09 11/19

Mud Properties

Mud Type: Chemical

Weight: 8.7

Viscosity: 54

Filtrate: 7.2

Chlorides: 6,000 ppm



Operation:
Well Complete

DATE
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State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1738 GL
Field Name: Mary Ida
Pool: Infield
Job Number: 262

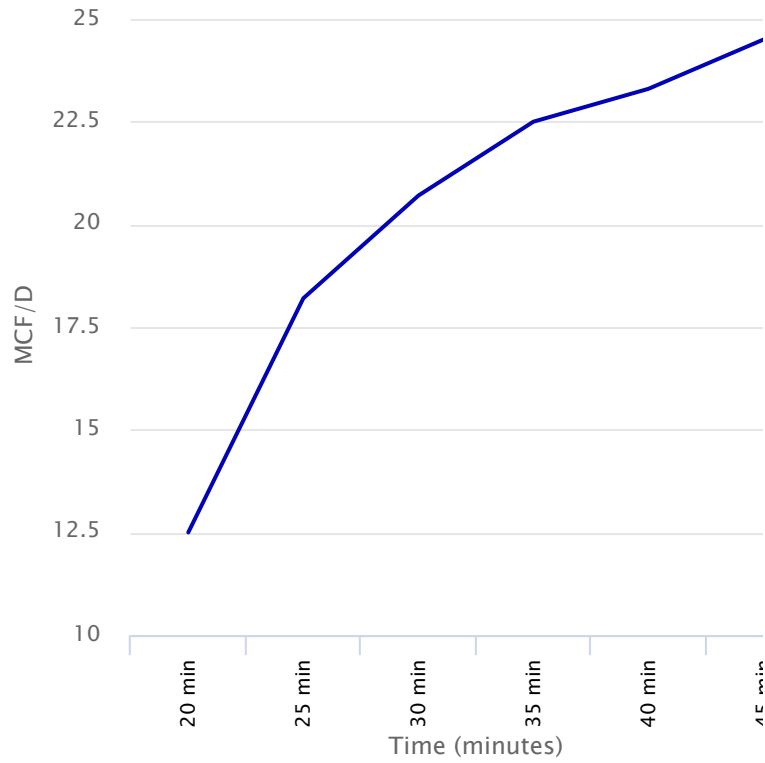
DST #1	Formation: Lans "A- F"	Test Interval: 2941 - 3041'	Total Depth: 3041'
	Time On: 04:13 11/19	Time Off: 11:23 11/19	
	Time On Bottom: 06:09 11/19	Time Off Bottom: 09:09 11/19	

Gas Volume Report

Remarks: Caught gas sample 23 mins into first shut in.

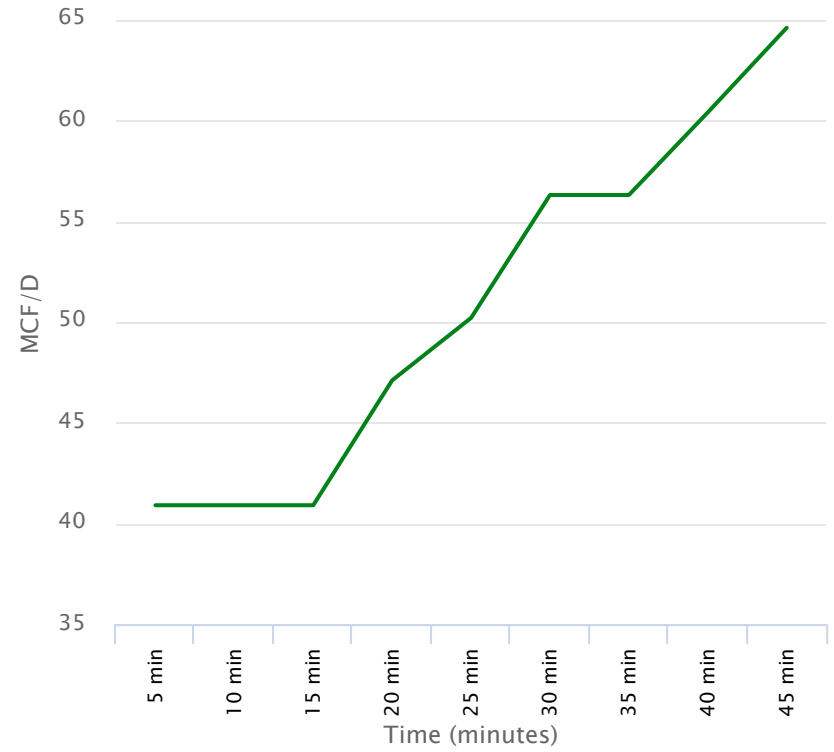
1st Open

Time	Orifice	PSI	MCF/D
20	0.125	16	12.5
25	0.125	28	18.2
30	0.125	34	20.7
35	0.125	38	22.5
40	0.125	40	23.3
45	0.125	43	24.5



2nd Open

Time	Orifice	PSI	MCF/D
5	0.25	16	40.9
10	0.25	16	40.9
15	0.25	16	40.9
20	0.25	20	47.1
25	0.25	22	50.2
30	0.25	26	56.3
35	0.25	26	56.3
40	0.25	29	60.4
45	0.25	32	64.6





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 Elevation: 1738 GL
 Field Name: Mary Ida
 Pool: Infield
 Job Number: 262

Operation:
 Well Complete

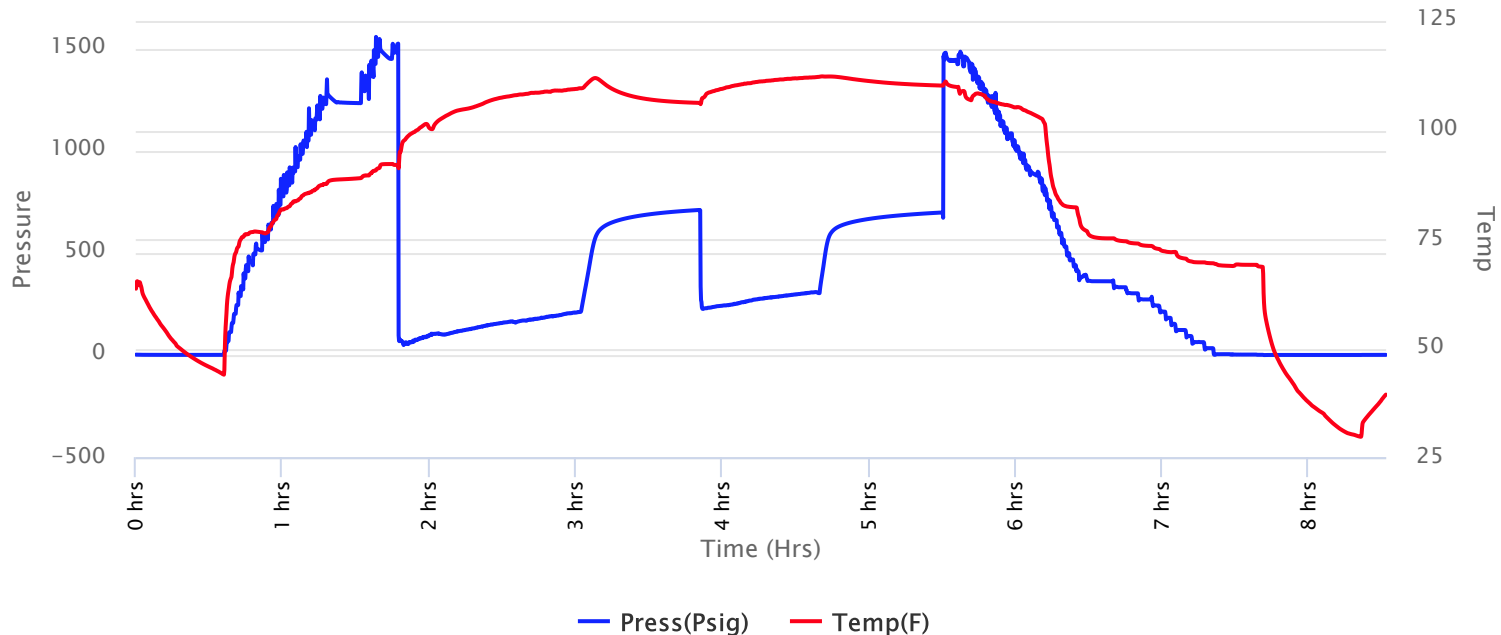
DATE
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 2018

DST #2 **Formation: Lans "H-J"** **Test Interval: 3070 - 3180'** **Total Depth: 3180'**
 Time On: 23:39 11/19 Time Off: 07:57 11/20
 Time On Bottom: 01:25 11/20 Time Off Bottom: 04:25 11/20

Electronic Volume Estimate:
 N/A

<u>1st Open</u>	<u>1st Close</u>	<u>2nd Open</u>	<u>2nd Close</u>
Minutes: 45	Minutes: 45	Minutes: 45	Minutes: 45
Current Reading:	Current Reading:	Current Reading:	Current Reading:
Gauging Gas" at 45 min	93" at 45 min	Gauging Gas" at 45 min	282" at 45 min
Max Reading: Gauging Gas"	Max Reading: 93.8"	Max Reading: Gauging Gas"	Max Reading: 286"

Inside Recorder





Operation:

Well Complete

DATE

November

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2018

Company: RJM Oil Company, Inc
Lease: Johanning "B" #4

SEC: 36 TWN: 18S RNG: 11W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1738 GL
 Field Name: Mary Ida
 Pool: Infield
 Job Number: 262

DST #2 Formation: Lans "H-J" Test Interval: 3070 - 3180' Total Depth: 3180'
 Time On: 23:39 11/19 Time Off: 07:57 11/20
 Time On Bottom: 01:25 11/20 Time Off Bottom: 04:25 11/20

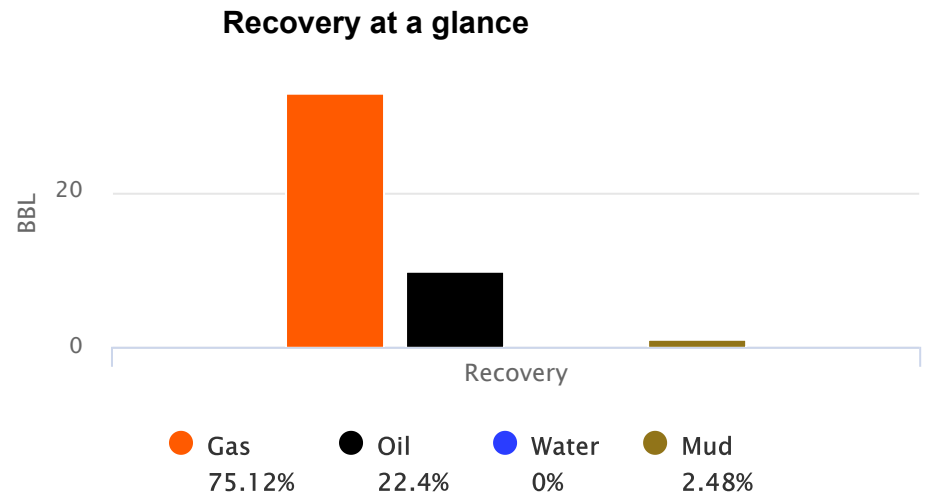
Recovered

<u>Foot</u>	<u>BBLs</u>	<u>Description of Fluid</u>	<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
2247	31.97481	G	100	0	0	0
190	2.7037	HGCHO CM	30	30	0	40
630	8.9649	O	0	100	0	0

Total Recovered: 3067 ft
 Total Barrels Recovered: 43.64341

Reversed Out
 NO

Initial Hydrostatic Pressure	1448	PSI
Initial Flow	48 to 211	PSI
Initial Closed in Pressure	709	PSI
Final Flow Pressure	225 to 308	PSI
Final Closed in Pressure	697	PSI
Final Hydrostatic Pressure	1448	PSI
Temperature	113	°F
Pressure Change Initial	1.7	%
Close / Final Close		



GIP cubic foot volume: 184.07655



**Company: RJM Oil Company,
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Lease: Johanning "B" #4

SEC: 36 TWN: 18S RNG: 11W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1738 GL
Field Name: Mary Ida
Pool: Infield
Job Number: 262

Operation:
Well Complete

DATE
November
19
2018

DST #2	Formation: Lans "H- J"	Test Interval: 3070 - 3180'	Total Depth: 3180'
	Time On: 23:39 11/19	Time Off: 07:57 11/20	
	Time On Bottom: 01:25 11/20	Time Off Bottom: 04:25 11/20	

BUCKET MEASUREMENT:

1st Open: 3 in. blow building. BOB in 45 secs.
1st Close: BOB blow back.
2nd Open: 1 in. blow building. BOB in 3 mins.
2nd Close: BOB blow back.

REMARKS:

Tool sample blew out.

Gravity: 42.1 @ 60 °F



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Inc - Rig 3
Elevation: 1738 GL
Field Name: Mary Ida
Pool: Infield
Job Number: 262

Operation:
Well Complete

DATE
November
19
2018

DST #2 **Formation: Lans "H-
J"** **Test Interval: 3070 -
3180'** **Total Depth: 3180'**

Time On: 23:39 11/19 Time Off: 07:57 11/20
Time On Bottom: 01:25 11/20 Time Off Bottom: 04:25 11/20

Down Hole Makeup

Heads Up: 24.62 FT	Packer 1: 3065.2 FT
Drill Pipe: 3067.08 FT <i>ID-3 1/2</i>	Packer 2: 3070.2 FT
Weight Pipe: FT <i>ID-2 7/8</i>	Top Recorder: 3054.62 FT
Collars: 0 FT <i>ID-2 1/4</i>	Bottom Recorder: 3172 FT
	Well Bore Size: 7 7/8
	Surface Choke: 1"

Test Tool: 28.74 FT

ID-3 1/2-FH

Safety Joint

Bottom Choke: 5/8"

Total Anchor: 109.8

Anchor Makeup

Packer Sub: 1 FT

Perforations: (top): 3 FT

4 1/2-FH

Change Over: .5 FT

Drill Pipe: (in anchor): 95.3 FT

ID-3 1/2

Change Over: 1 FT

Perforations: (below): 9 FT

4 1/2-FH



Operation:

Well Complete

**Company: RJM Oil Company,
Inc**

Lease: Johanning "B" #4

SEC: 36 TWN: 18S RNG: 11W

County: BARTON

State: Kansas

Drilling Contractor: Southwind Drilling,
Inc - Rig 3

Elevation: 1738 GL

Field Name: Mary Ida

Pool: Infield

Job Number: 262

DATE
November
19
2018

DST #2 **Formation: Lans "H-
J"** **Test Interval: 3070 -
3180'** **Total Depth: 3180'**

Time On: 23:39 11/19 Time Off: 07:57 11/20

Time On Bottom: 01:25 11/20 Time Off Bottom: 04:25 11/20

Mud Properties

Mud Type: Chemical **Weight:** 9.0 **Viscosity:** 45 **Filtrate:** 8.0 **Chlorides:** 11,000 ppm



Company: RJM Oil Company, Inc
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 Elevation: 1738 GL
 Field Name: Mary Ida
 Pool: Infield
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Operation:
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19
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DST #2 **Formation: Lans "H-J"** **Test Interval: 3070 - 3180'** **Total Depth: 3180'**
 Time On: 23:39 11/19 Time Off: 07:57 11/20
 Time On Bottom: 01:25 11/20 Time Off Bottom: 04:25 11/20

Gas Volume Report

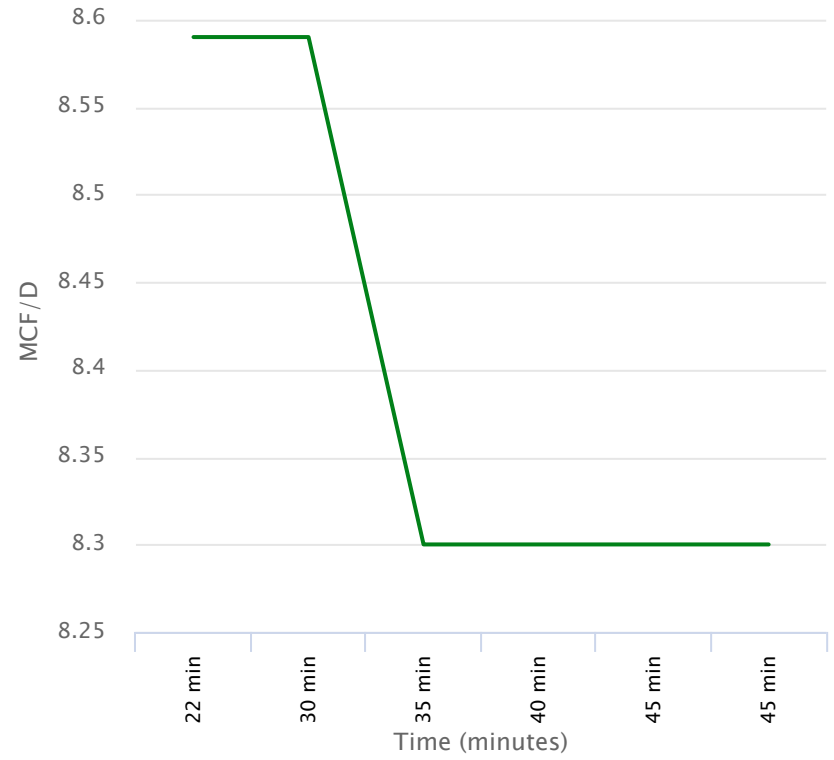
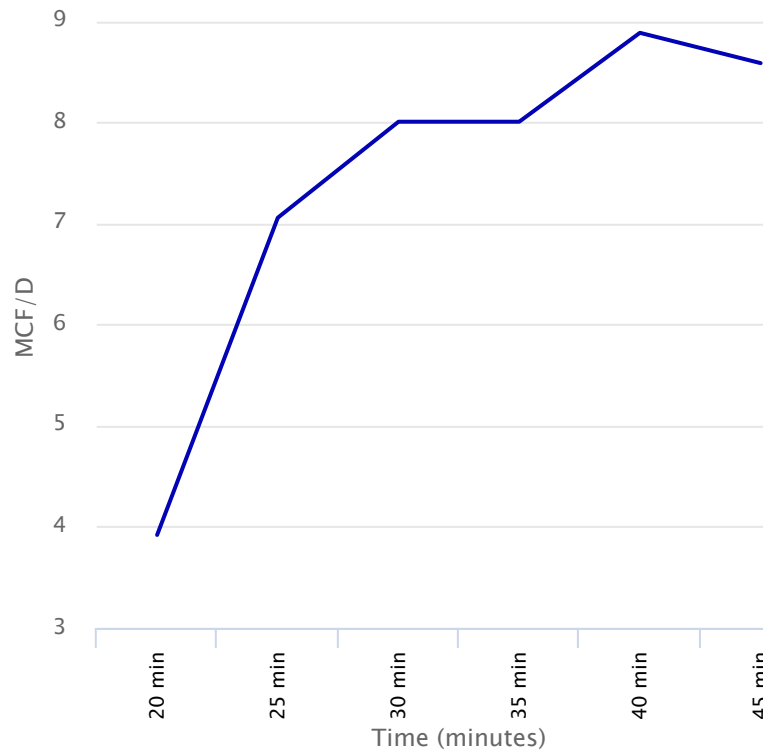
Remarks: Gas sample taken 23 mins. into 1st Opening. First 15 mins. of 2nd Opening was too weak to gauge.

1st Open

Time	Orifice	PSI	MCF/D
20	0.125	2.0	3.92
25	0.125	6.0	7.06
30	0.125	7.5	8.01
35	0.125	7.5	8.01
40	0.125	9.0	8.89
45	0.125	8.5	8.59

2nd Open

Time	Orifice	PSI	MCF/D
22	0.125	8.5	8.59
30	0.125	8.5	8.59
35	0.125	8.0	8.30
40	0.125	8.0	8.30
45	0.125	8.0	8.30
45	0.125	8.0	8.30





Company: RJM Oil Company, Inc

Lease: Johanning "B" #4

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 Elevation: 1738 GL
 Field Name: Mary Ida
 Pool: Infield
 Job Number: 262

Operation:
 Well Complete

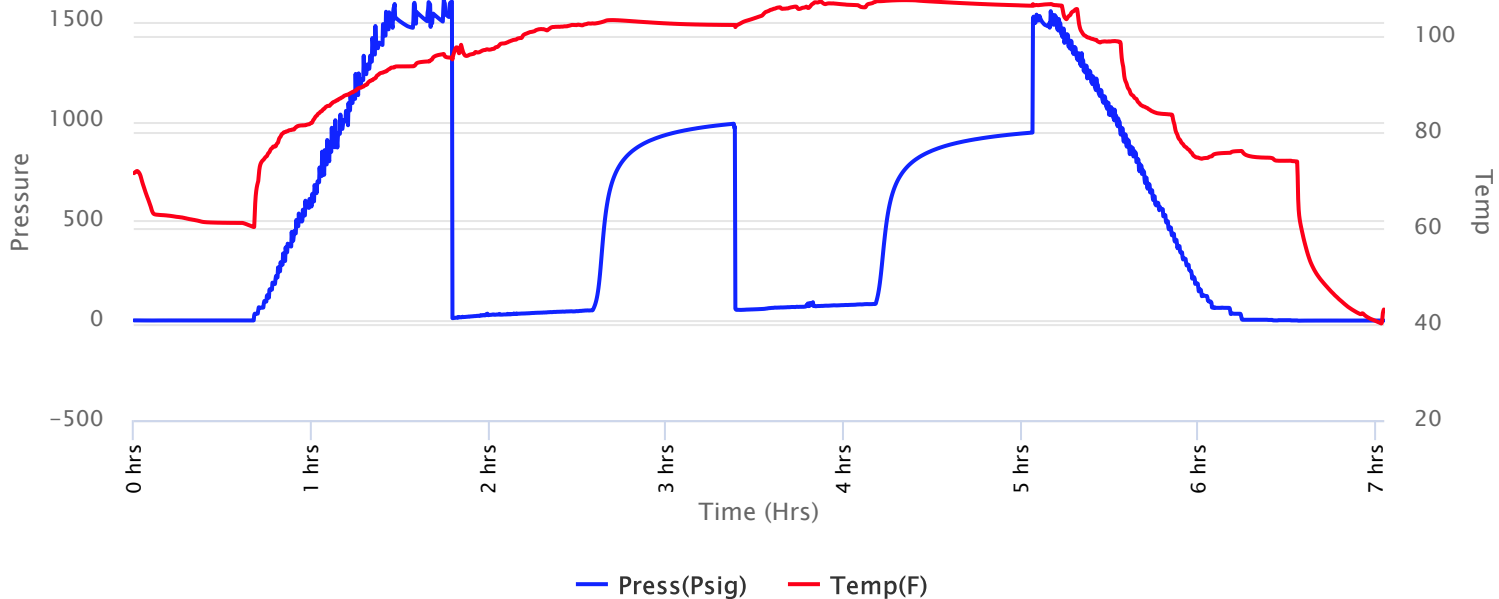
DATE
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20
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DST #3 **Formation: Basal Sand** **Test Interval: 3184 - 3275'** **Total Depth: 3275'**
 Time On: 17:53 11/20 Time Off: 00:56 11/21
 Time On Bottom: 19:37 11/20 Time Off Bottom: 22:37 11/20

Electronic Volume Estimate:
 246'

<u>1st Open</u>	<u>1st Close</u>	<u>2nd Open</u>	<u>2nd Close</u>
Minutes: 45	Minutes: 45	Minutes: 45	Minutes: 45
Current Reading: 14.8" at 45 min	Current Reading: .6" at 45 min	Current Reading: 14.4" at 45 min	Current Reading: .5" at 45 min
Max Reading: 14.8"	Max Reading: .6"	Max Reading: 14.4"	Max Reading: .6"

Inside Recorder





Operation:
Well Complete

DATE
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**Company: RJM Oil Company,
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SEC: 36 TWN: 18S RNG: 11W
County: BARTON
State: Kansas
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Inc - Rig 3
Elevation: 1738 GL
Field Name: Mary Ida
Pool: Infield
Job Number: 262

DST #3 Formation: Basal Sand Test Interval: 3184 - 3275' Total Depth: 3275'
Time On: 17:53 11/20 Time Off: 00:56 11/21
Time On Bottom: 19:37 11/20 Time Off Bottom: 22:37 11/20

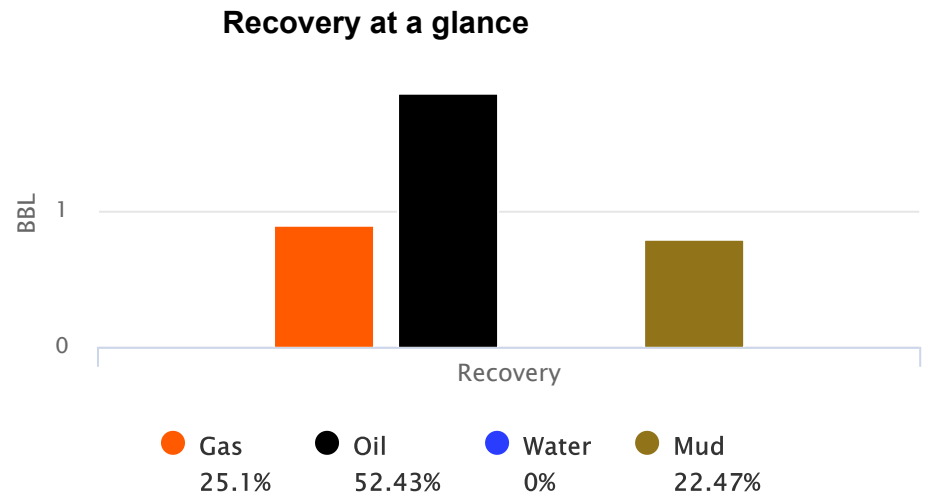
Recovered

<u>Foot</u>	<u>BBLs</u>	<u>Description of Fluid</u>	<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
63	0.89649	G	100	0	0	0
94	1.33762	O	0	100	0	0
94	1.33762	HOCM	0	40	0	60

Total Recovered: 251 ft
Total Barrels Recovered: 3.57173

Reversed Out
NO

Initial Hydrostatic Pressure	1470	PSI
Initial Flow	12 to 52	PSI
Initial Closed in Pressure	988	PSI
Final Flow Pressure	54 to 83	PSI
Final Closed in Pressure	944	PSI
Final Hydrostatic Pressure	1470	PSI
Temperature	108	°F
Pressure Change Initial Close / Final Close	4.5	%



GIP cubic foot volume: 5.03334



**Company: RJM Oil Company,
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Inc - Rig 3
Elevation: 1738 GL
Field Name: Mary Ida
Pool: Infield
Job Number: 262

Operation:
Well Complete

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20
2018

DST #3	Formation: Basal Sand	Test Interval: 3184 - 3275'	Total Depth: 3275'
	Time On: 17:53 11/20	Time Off: 00:56 11/21	
	Time On Bottom: 19:37 11/20	Time Off Bottom: 22:37 11/20	

BUCKET MEASUREMENT:

Diesel in Bucket

1st Open: 1 in. blow building. BOB in 35 mins.

1st Close: BOB blow back.

2nd Open: 1 1/4 in. blow building. BOB in 35 mins.

2nd Close: BOB blow back.

REMARKS:

Tool Sample: 0% Gas 50% Oil 0% Water 50% Mud

Gravity: 30.2 @ 60 °F



Operation:
Well Complete

DATE
November
20
2018

**Company: RJM Oil Company,
Inc**
Lease: Johanning "B" #4

SEC: 36 TWN: 18S RNG: 11W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1738 GL
Field Name: Mary Ida
Pool: Infield
Job Number: 262

DST #3	Formation: Basal Sand	Test Interval: 3184 - 3275'	Total Depth: 3275'
	Time On: 17:53 11/20	Time Off: 00:56 11/21	
	Time On Bottom: 19:37 11/20	Time Off Bottom: 22:37 11/20	

Down Hole Makeup

Heads Up: 5.93000000000001 FT	Packer 1: 3178.93 FT
Drill Pipe: 3162.12 FT <i>ID-3 1/2</i>	Packer 2: 3183.93 FT
Weight Pipe: FT <i>ID-2 7/8</i>	Top Recorder: 3168.35 FT
Collars: 0 FT <i>ID-2 1/4</i>	Bottom Recorder: 3254 FT
	Well Bore Size: 7 7/8
	Surface Choke: 1"

Test Tool: 28.74 FT

ID-3 1/2-FH

Safety Joint

Bottom Choke: 5/8"

Total Anchor: 91.07

Anchor Makeup

Packer Sub: 1 FT

Perforations: (top): 3 FT

4 1/2-FH

Change Over: .5 FT

Drill Pipe: (in anchor): 63.57 FT

ID-3 1/2

Change Over: 1 FT

Perforations: (below): 22 FT

4 1/2-FH



Operation:

Well Complete

**Company: RJM Oil Company,
Inc**

Lease: Johanning "B" #4

SEC: 36 TWN: 18S RNG: 11W

County: BARTON

State: Kansas

Drilling Contractor: Southwind Drilling,
Inc - Rig 3

Elevation: 1738 GL

Field Name: Mary Ida

Pool: Infield

Job Number: 262

DATE
November
20
2018

DST #3

**Formation: Basal
Sand**

**Test Interval: 3184 -
3275'**

Total Depth: 3275'

Time On: 17:53 11/20

Time Off: 00:56 11/21

Time On Bottom: 19:37 11/20

Time Off Bottom: 22:37 11/20

Mud Properties

Mud Type: Chemical

Weight: 9.0

Viscosity: 52

Filtrate: 8.0

Chlorides: 12,000 ppm



Operation:
Well Complete

DATE
November
20
2018

**Company: RJM Oil Company,
Inc**
Lease: Johanning "B" #4

SEC: 36 TWN: 18S RNG: 11W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1738 GL
Field Name: Mary Ida
Pool: Infield
Job Number: 262

DST #3 Formation: Basal Sand Test Interval: 3184 - 3275' Total Depth: 3275'
Time On: 17:53 11/20 Time Off: 00:56 11/21
Time On Bottom: 19:37 11/20 Time Off Bottom: 22:37 11/20

Gas Volume Report

1st Open

Time	Orifice	PSI	MCF/D
------	---------	-----	-------

2nd Open

Time	Orifice	PSI	MCF/D
------	---------	-----	-------



Mudgrove

Petroleum Geology
212 Main Street, Claflin KS

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY RJM Company
 LEASE Johanning # B-4
 FIELD Unknown
 LOCATION SE-SW-NW-SW (1360' FSL & 560' FWL)
 SEC 36 TWSP 18S RGE 11W
 COUNTY Barton STATE Kansas

ELEVATIONS

KB 1748'
 DF _____
 GL 1740'
 Measurements Are All
 From KB

CONTRACTOR Southwind Drilling Co. (Rig #3)
 SPUD 11/15/2018 COMP 11/21/2018
 RTD 3325' LTD 3326'
 MUD UP 2600' TYPE MUD Chemical

CASING

SURFACE 8 5/8" @ 331'
 PRODUCTION 5 1/2" @ 3324'

ELECTRICAL SURVEYS

Pioneer; CNL/CDL,
 MEL, BHCS

SAMPLES SAVED FROM 2700' TO RTD
 DRILLING TIME KEPT FROM 2700' TO RTD
 SAMPLES EXAMINED FROM 2700' TO RTD
 GEOLOGICAL SUPERVISION FROM 2740' TO RTD
 GEOLOGIST ON WELL Wyatt Urban

FORMATION TOPS	LOG		SAMPLES	
Anhydrite	497	+1251	Quartzite	3268 -1520
B. Anhydrite	512	+ 1236	RTD	3325 -1577
Heebner	2816	-1068	LTD	3326 -1578
Toronto	2834	-1086		
Douglas	2849	-1101		
B. Lime	2933	-1185		

Lansing	2949	-1201
BKC	3236	-1488
Conglomerate	3249	-1501
Regan Sd.	3257	-1509

X			

LEGEND

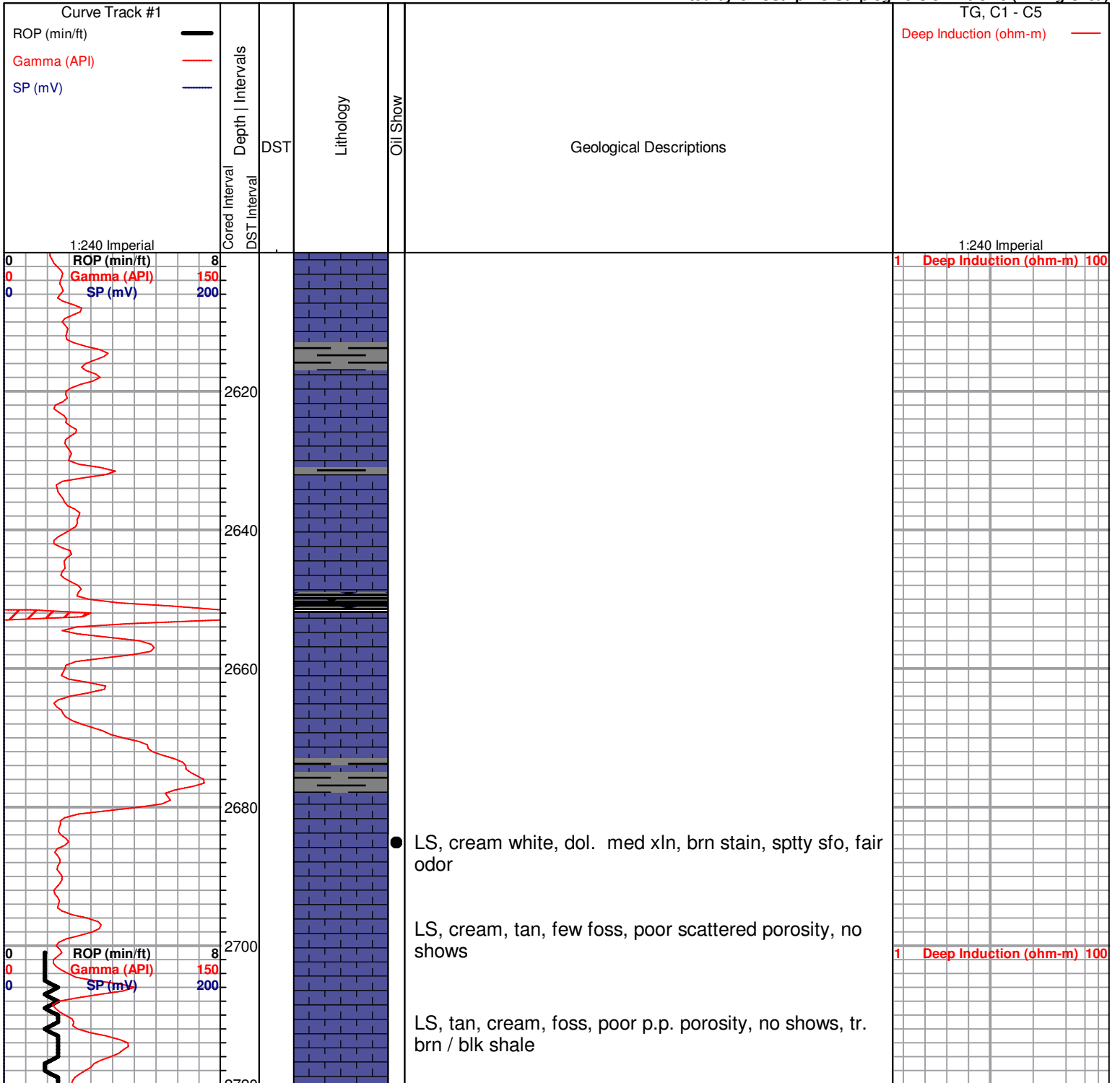
Oil Show

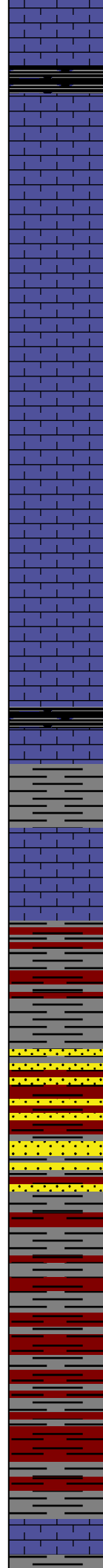
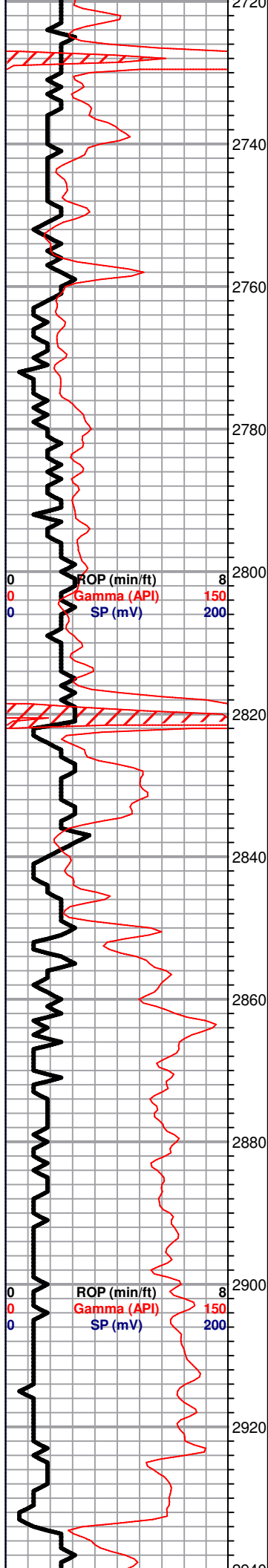
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Stn
- Dead Oil Stn
- Fluorescence
- * Gas

DST

- DST Int
- DST alt
- Core
- tail pipe

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LS, tan, brn dense, few foss, no shows, no odor

Sh, black carb

LS, white, cream, fxl, dense, no shows

LS, tan, buff, foss, p.p. porosity, v. chalky, tr. black stain, tr. black spty sfo

LS, tan, buff, fxl, poor p.p. porosity, chalky in pt, no shows, faint odor in samples

LS, tan, foss/ool, chalky poor scattered porosity, tr. brn stain, tr. (wk) SFO, tr. white boney chert

Heebner 2820.0 (-1072.0)

Sh, black carb

Slug gry, dk gry shale,

Toronto 2834.0 (-1086.0)

LS, tan, white, few foss scattered p.p. porosity, lt. brn stain, tr. spty (wk) sfo, odor???

Douglas 2855.0 (-1107.0)

Slug black carb sh, gry, maroon / brick red

Sd. white, med. grain, calc. poorly sorted, dk brn stain, lt. sfo, ft. odor

Sh, maroon, waxey, gry

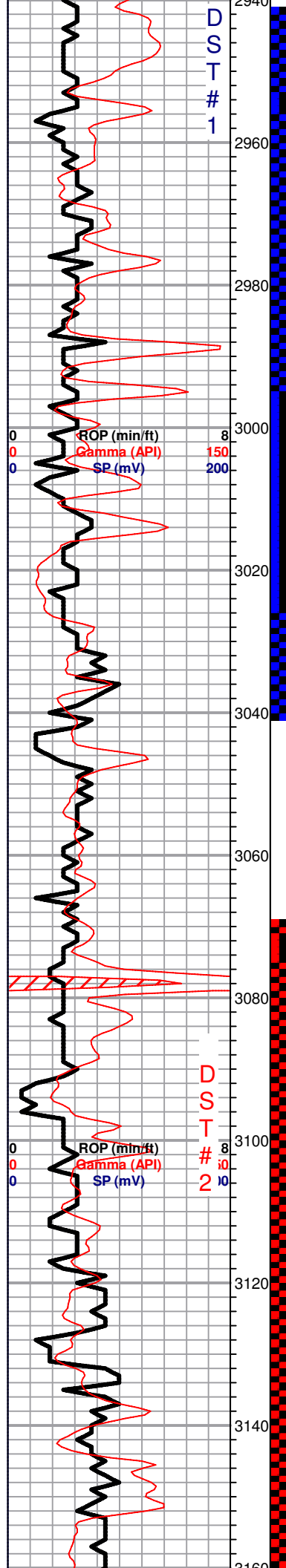
Sh, gry, dk gry, few maroon

Brown Lime 2934.0 (-1186.0)

LS, tan, brn fxl, dense

1 Deep Induction (ohm-m) 100

1 Deep Induction (ohm-m) 100



Sh, gry, waxey

Lansing 2958.0 (-1210.0)

non-representative samples, (90% Shales) Tr. LS, brn, fxl dense cherty in samples NSFO, NO ODOR

40 min. LS, white ool, scattered p.p. / vuggy type porosity, tr. brn stain, sfo, no odor

LS, white, cream, few foss, poor porosity, chalky, tr. brn stain, spty (wk) sfo, odor??

LS, gry, foss/ ool, fair (sm- med.)p.p. porosity, tr. blk stain, nsfo, no odor

LS, tan, oom, good vuggy oom porosity, lt. brn stain, spty sfo, odor

LS, tan, white, oom, sl. chalky, good vuggy porosity, lt. brn stain, sfo, fair odor

LS, tan, oom, good vuggy oom porosity, lt. brn stain, dk golden brown sfo, odor

LS, cream fxl dense, poor vis. porosity, chalky, no shows

Slug dk gry/ black carb sh

LS, tan, brn gran./ dol, scattered p.p. porosity, chalky, no shows no odor

LS, white, oom, good vuggy porosity, lt. brn stain, lt. sfo, odor

Sh, slug dk gry/ maroon, waxey, tr. ls tan oom good vuggy oom porosity, lt. brn sfo, fair odor, vis. gas bubbles

LS, cream, tan, foss, poor scattered p.p. porosity, chalky, tr. brn stain, nsfo, no odor

LS, tan, buff, foss, vuggy porosity/ oom porosity, lt. brn stain, sfo, faint odor

LOST MUD VISC.
NO REPRESENTATIVE
SAMPLES FROM 2950' - 85'

CFS @ 2985
to condition mud

Poor Samples : boiler
housed mix of all.

DST#1 2941-3041
45-45-45-45

1st Open: BOB 36
sec.

1st Close : BOB
return

2nd Open: BOB
instant
2nd Close: BOB
return

Recovery:
2621' GIP

68' SLOCM

252' SLOCSLGCM

Recovery Breakdown
(89%G,29%O, 10%M
0%W)

ISIP 757 psi
FSIP 772 psi
IFP 67-122 psi
FFP 85-146 psi
HSH 1364-1364 psi

DST#2 3070-3180
30-30-45-45

1st Open:
BOB 45 sec.

1st Close:
BOB return.

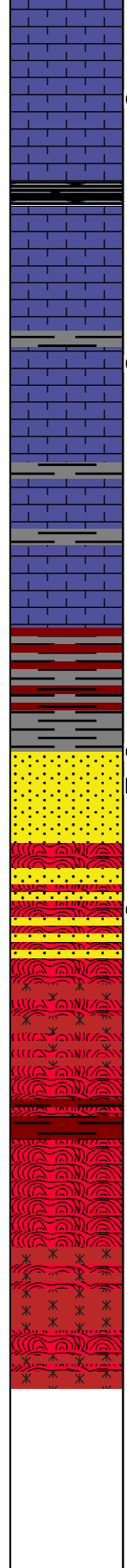
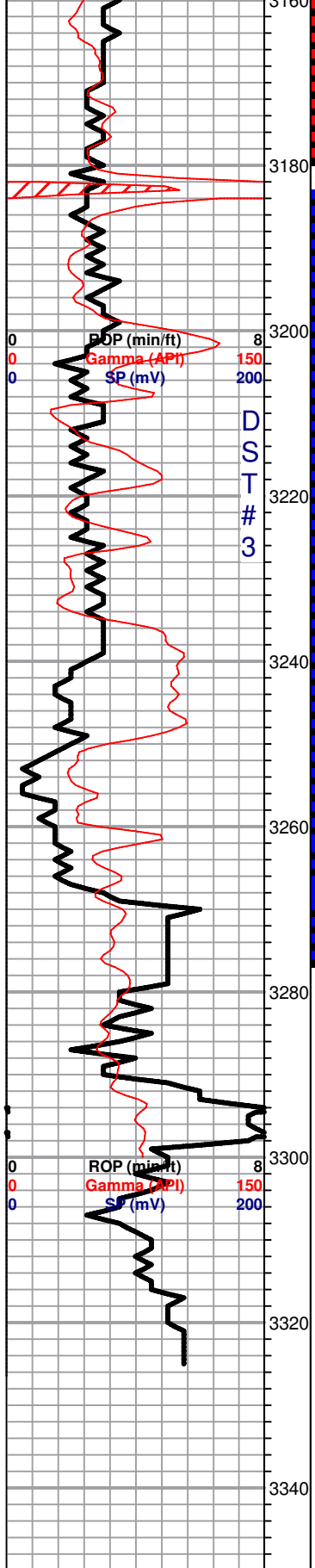
2nd Open:
BOB 3 mins.

2nd Close:
BOB return

Recovery:
2247 gip

630' HGO

190' HOCGM



LS, cream, tan, fxl, dense, poor p.p. porosity, no shows

LS, tan, brn, oom, poor- fair vuggy porosity, sl. chalky ltr. brn stain, dk brn sfo, odor

Sh, dk gry, / black carb

LS, tan, foss, poor vis. porosity, sl. chalky no shows

LS, white, lg. ool, good scattered vuggy type porosity, lt. sfo, odor

Slug gry, dk gry black

LS, tan, buff, fxl, few foss, no shows, no odor tr. boney white cherts

Conglomerate 3236.0 (-1488.0)

Sh, gry, waxey, tr. tan, white opaque cherts no shows

Cong. Sd. 3253.0 (-1505.0)

Sd. white, f. grain, well sorted, tr. black stain, nsfo, no odor, Abd. shale maroon, gry, purp. waxey

Regan Sand 3257.0 (-1509.0)

Quartzite 3262.0 (-1514.0)

2960-*Sd. clr qtz, med- lg grain, poorly sorted, tr. orange tan cherts, tr. lg. biotite & orange/ pink feldspar inclusions. sfo, fair odor.

Qtz, clr, heavily fractured dense. tr. biotite & no shows Tr. abd. maroon, red, waxey shales in samples.

Abd. shales, maroon, waxey
Lg. Qtz clast heavily fractured, no shows no odor, a/a, tr. orange cherts

Qtz, a/a tr. orange feldspar heavily fractured lg qtz clasts no shows no odor abd. cherts & shale in samples.

RTD 3325.0 (-1577.0)

LTD 3326.0 (-1578.0)

(30%G, 30%O, 40%M)

Pressures:
ISIP 709psi
FSIP 697 psi
IFP 48-211 psi
FFP 225-308 psi
HSH 144801448 psi

1 Deep Induction (ohm-m) 100
DST#3 3184-3275
30-30-30-30

1st Open:
1" building blow
BOB in 35 mins.

1st Shut in:
BOB return

2nd Open:
1 1/4" blow
BOB 35 mins.

Recovery:
63' GIP
94' Clean Oil
94' HOCCM
(40%O, 60%M)

Pressures:
ISIP 988 psi
FSIP 944 psi
IFP 12-52 psi
FFP 54-83 psi
HSH 1470- 1470 psi

1 Deep Induction (ohm-m) 100

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 1148

Cell 785-324-1041

Date	11-16-18	Sec.	36	Twp.	18	Range	11	County	Barton	State	KS	On Location		Finish	2:30 AM
Lease								Location							
Johanning B								Clifton - 65 to 50 Rd, 2 1/4 E, N 1/4 into							
Contractor				Well No.				Owner							
Southwind				#3				To Quality Oilwell Cementing, Inc.				You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Type Job				T.D.				Charge To							
Surface				331'				RJM Company							
Hole Size				Depth				Street							
12 1/4"				331'											
Csg.				Depth				City				State			
8 5/8"				331'											
Tbg. Size				Depth				City				State			
Tool				Depth				The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.				Shoe Joint				Cement Amount Ordered							
15'				15'				180				60/40 4% CC 2% Gel			
Meas Line				Displace											
				20 BLS											
EQUIPMENT															
Pumptrk		No.		Cementer		Helper		Common							
16				David		David		110							
Bulktrk		No.		Driver		Driver		Poz. Mix							
9				Jack		Jack		20							
Bulktrk		No.		Driver		Driver		Gel.							
p.u.				Rick		Rick		3							
								Calcium							
								8							
JOB SERVICES & REMARKS															
Remarks				Cement did Circulate				Hulls							
								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				190 191			
								Mileage							
FLOAT EQUIPMENT															
								Guide Shoe							
								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								Pumptrk Charge				Surface			
								Mileage				23			
												Tax			
												Discount			
												Total Charge			
X Signature				Jay Idries											

Thanks

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
Cell 785-324-1041

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

No. 973

Date	Sec.	Twp.	Range	County	State	On Location	Finish
11-22-18				Barton	KS		1:00 AM

Location Clafin 65 to 50 Rd 2 1/4 E

Lease <u>Johanning "B"</u>	Well No. <u>#4</u>	Owner
Contractor <u>Southwind #3</u>		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 <u>Production String</u>		
Hole Size <u>7 7/8</u>	T.D. <u>3325</u>	Charge To <u>RJM</u>
Csg. <u>5 1/2</u>	Depth <u>3322</u>	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. <u>12'</u>	Shoe Joint <u>12'</u>	Cement Amount Ordered <u>180 com 10% salt</u>
Meas Line	Displace <u>78 3/4 bbl</u>	<u>5% Gilsomite</u>

EQUIPMENT

Pumptrk <u>5</u>	No.	Cementer Helper <u>Brett</u>	Common <u>180</u>
Bulktrk <u>9</u>	No.	Driver <u>Doug</u>	Poz. Mix
Bulktrk	No.	Driver <u>Tony</u>	Gel.
			Calcium

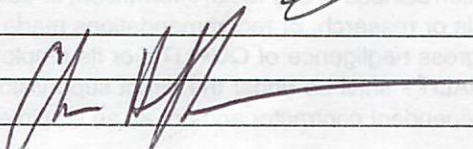
JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole - <u>30 sx</u>	Salt <u>16</u>
Mouse Hole	Flowseal <u>850#</u>
Centralizers - <u>1-9</u>	Kol-Seal
Baskets - <u>2+7</u>	Mud CLR 48 - <u>500 gal</u>
DV or Port Collar	CFL-117 or CD110 CAF 38
	Sand
	Handling <u>204</u>
	Mileage

FLOAT EQUIPMENT

<u>Ran 3322' 5 1/2 & Est Circulation</u>	Guide Shoe
<u>Mix 500 gal Mud Flush</u>	Centralizer - <u>9</u>
<u>Plug Rat hole</u>	Baskets - <u>2</u>
<u>Mix 150 sx down 5 1/4</u>	AFU Inserts
<u>Displaced 78 3/4 bbl</u>	Float Shoe - <u>1</u>
	Latch Down - <u>1</u>
<u>Lift pressure @ 600 lbs</u>	Rotate
<u>Landed @ 1500 lbs</u>	

Thanks

X Signature 

Pumptrk Charge prod string
Mileage 23

Tax
Discount
Total Charge

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- **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.