

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 |
|--|---|

| 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 |
|---|--|------------------------------------|

| 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: | |
|----------------|-------|---------|------------|--|



Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1834 GL
 Field Name: Kraft-Prusa
 Pool: Infield
 Job Number: 462
 API #: 15-009-26288

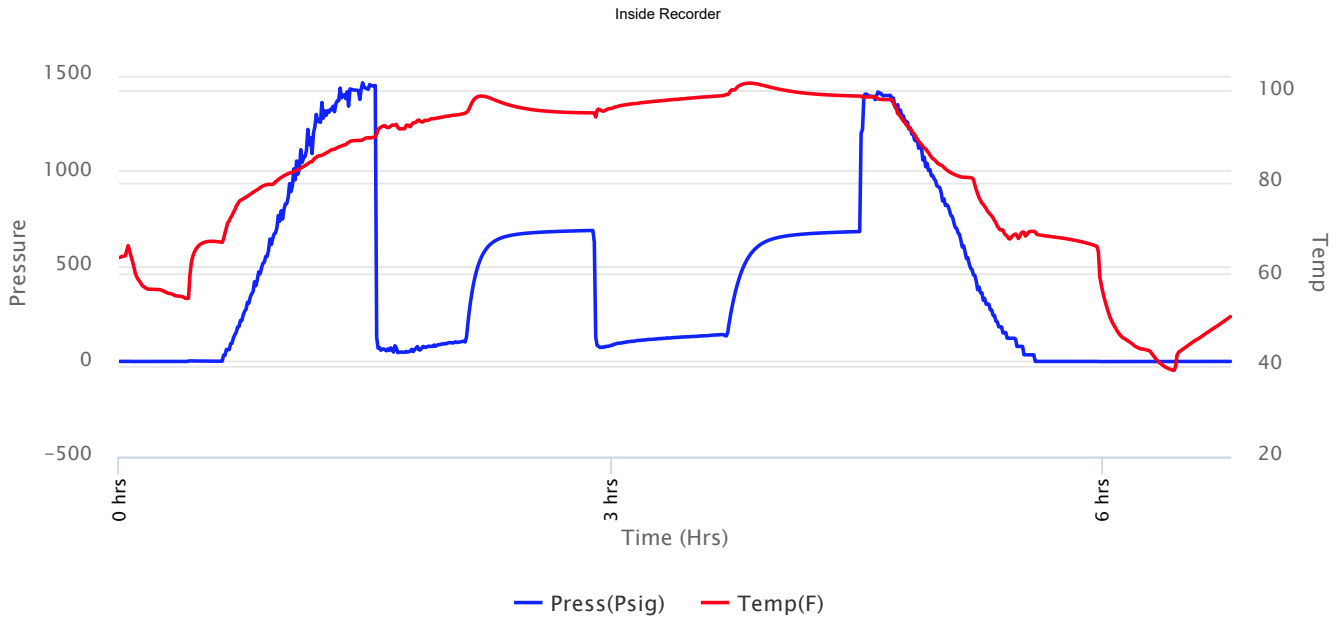
Operation:
 Uploading recovery & pressures

DATE
 November
24
 2020

DST #1 Formation: Lan A-F Test Interval: 2986 - 3088' Total Depth: 3088'
 Time On: 13:33 11/24 Time Off: 20:10 11/24
 Time On Bottom: 15:05 11/24 Time Off Bottom: 17:50 11/24

Electronic Volume Estimate:
 N/A

| <u>1st Open</u> | <u>1st Close</u> | <u>2nd Open</u> | <u>2nd Close</u> |
|---------------------------------|-------------------------------|---------------------------------|--------------------------------|
| Minutes: 30 | Minutes: 45 | Minutes: 45 | Minutes: 45 |
| Current Reading: 380" at 30 min | Current Reading: 2" at 45 min | Current Reading: 380" at 45 min | Current Reading: 17" at 45 min |
| Max Reading: 380" | Max Reading: 4" | Max Reading: 380" | Max Reading: 34" |





Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1834 GL
 Field Name: Kraft-Prusa
 Pool: Infield
 Job Number: 462
 API #: 15-009-26288

Operation:
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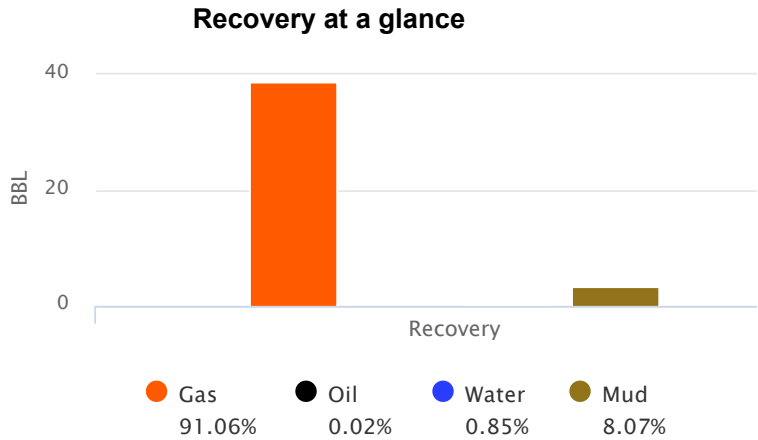
DST #1 **Formation: Lan A-F** **Test Interval: 2986 - 3088'** **Total Depth: 3088'**
 Time On: 13:33 11/24 Time Off: 20:10 11/24
 Time On Bottom: 15:05 11/24 Time Off Bottom: 17:50 11/24

| Recovered | | Description of Fluid | Gas % | Oil % | Water % | Mud % |
|-----------|----------|----------------------|-------|-------|---------|-------|
| Foot | BBLs | | | | | |
| 2668 | 37.96564 | G | 100 | 0 | 0 | 0 |
| 50 | 0.7115 | SLOCSLGCM | 10 | 1 | 0 | 89 |
| 126 | 1.79298 | SLWCSLGCM | 10 | 0 | 5 | 85 |
| 126 | 1.79298 | SLGCSLWCM | 15 | 0 | 15 | 70 |

Total Recovered: 2970 ft
 Total Barrels Recovered: 42.2631

Reversed Out
 NO

| | | |
|---|------------|------------|
| Initial Hydrostatic Pressure | 1429 | PSI |
| Initial Flow | 47 to 102 | PSI |
| Initial Closed in Pressure | 688 | PSI |
| Final Flow Pressure | 74 to 134 | PSI |
| Final Closed in Pressure | 682 | PSI |
| Final Hydrostatic Pressure | 1415 | PSI |
| Temperature | 102 | °F |
| Pressure Change Initial Close / Final Close | 0.9 | % |



GIP cubic foot volume: 216.07423



Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
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State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1834 GL
Field Name: Kraft-Prusa
Pool: Infield
Job Number: 462
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DST #1 Formation: Lan A-F Test Interval: 2986 - Total Depth: 3088'
3088'
Time On: 13:33 11/24 Time Off: 20:10 11/24
Time On Bottom: 15:05 11/24 Time Off Bottom: 17:50 11/24

BUCKET MEASUREMENT:

1st Open: 6" Blow. BOB in 45 secs
1st Close: 4" Blow Back
2nd Open: BOB Instantly
2nd Close: Bottom Bucket Blow Back

REMARKS:

Ph: 7

Measured RW: .62 @ .47 degrees °F

RW at Formation Temp: 0.041 @ 102 °F

Chlorides: 12000 ppm



Company: C & K Oil Company
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SEC: 22 TWN: 17S RNG: 11W
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Inc - Rig 3
Elevation: 1834 GL
Field Name: Kraft-Prusa
Pool: Infield
Job Number: 462
API #: 15-009-26288

Operation:
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DST #1 **Formation: Lan A-F** **Test Interval: 2986 - 3088'** **Total Depth: 3088'**
Time On: 13:33 11/24 Time Off: 20:10 11/24
Time On Bottom: 15:05 11/24 Time Off Bottom: 17:50 11/24

Down Hole Makeup

| | |
|---|---------------------------------|
| Heads Up: 10.09 FT | Packer 1: 2980.96 FT |
| Drill Pipe: 2970.89 FT <i>ID-3 1/2</i> | Packer 2: 2985.96 FT |
| Weight Pipe: FT <i>ID-2 7/8</i> | Top Recorder: 2972.96 FT |
| Collars: 0 FT <i>ID-2 1/4</i> | Bottom Recorder: 1 FT |
| Test Tool: 26.16 FT <i>ID-3 1/2-FH</i> | Well Bore Size: 7 7/8 |
| Total Anchor: 102.04 | Surface Choke: 1" |
| <u>Anchor Makeup</u> | Bottom Choke: 5/8" |
| Packer Sub: 1 FT | |
| Perforations: (top): 3 FT <i>4 1/2-FH</i> | |
| Change Over: .5 FT | |
| Drill Pipe: (in anchor): 63.54 FT <i>ID-3 1/2</i> | |
| Change Over: 1 FT | |
| Perforations: (below): 33 FT <i>4 1/2-FH</i> | |



Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling,
 Inc - Rig 3
 Elevation: 1834 GL
 Field Name: Kraft-Prusa
 Pool: Infield
 Job Number: 462
 API #: 15-009-26288

Operation:
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DST #1 **Formation: Lan A-F** **Test Interval: 2986 -**
3088' **Total Depth: 3088'**

Time On: 13:33 11/24 Time Off: 20:10 11/24
 Time On Bottom: 15:05 11/24 Time Off Bottom: 17:50 11/24

Mud Properties

Mud Type: Chem **Weight:** 9.2 **Viscosity:** 48 **Filtrate:** 8.8 **Chlorides:** 2000 ppm



Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1834 GL
 Field Name: Kraft-Prusa
 Pool: Infield
 Job Number: 462
 API #: 15-009-26288

Operation:
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DST #1 Formation: Lan A-F Test Interval: 2986 - 3088' Total Depth: 3088'
 Time On: 13:33 11/24 Time Off: 20:10 11/24
 Time On Bottom: 15:05 11/24 Time Off Bottom: 17:50 11/24

Gas Volume Report

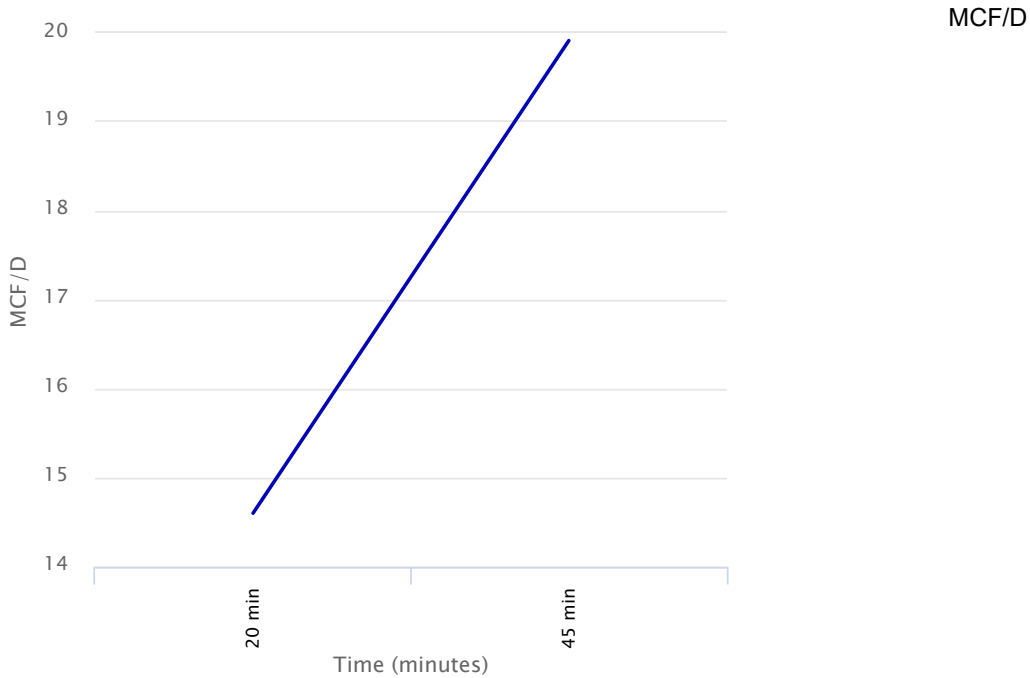
Remarks: Gas to surface 7 mins Caught gas sample 20 mins into first opening.

1st Open

| Time | Orifice | PSI | MCF/D |
|------|---------|-----|-------|
| 20 | 0.125 | 20 | 14.6 |
| 45 | 0.125 | 32 | 19.9 |

2nd Open

| Time | Orifice | PSI | MCF/D |
|------|---------|-----|-------|
| 14 | 0.25 | 11 | Weak |
| 25 | 0.25 | 17 | 42.4 |
| 35 | 0.25 | 17 | 42.4 |
| 45 | 0.25 | 16 | 40.9 |





Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1834 GL
 Field Name: Kraft-Prusa
 Pool: Infield
 Job Number: 462
 API #: 15-009-26288

Operation:
 Uploading recovery & pressures

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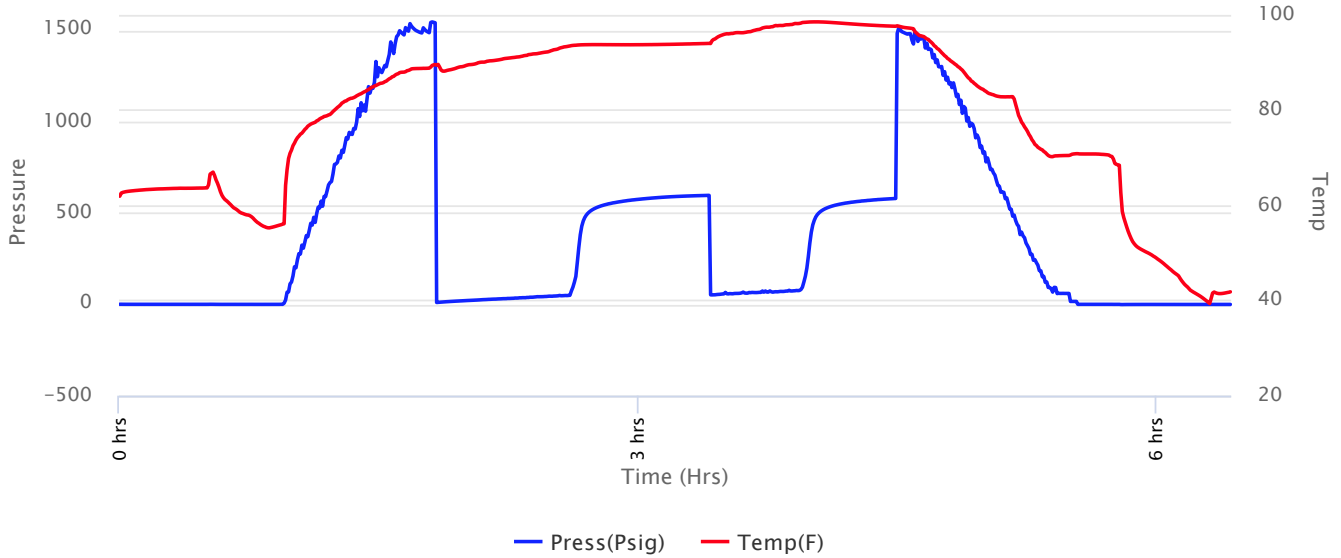
DST #2 Formation: Lans H-K Test Interval: 3120 - 3250' Total Depth: 3250'

Time On: 12:54 11/25 Time Off: 19:10 11/25
 Time On Bottom: 14:42 11/25 Time Off Bottom: 17:12 11/25

Electronic Volume Estimate:
 70'

| <u>1st Open</u> | <u>1st Close</u> | <u>2nd Open</u> | <u>2nd Close</u> |
|---------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Minutes: 45 | Minutes: 45 | Minutes: 30 | Minutes: 30 |
| Current Reading: 5.5" at 45 min | Current Reading: 0" at 45 min | Current Reading: 3" at 30 min | Current Reading: 0" at 30 min |
| Max Reading: 5.5" | Max Reading: 0" | Max Reading: 3" | Max Reading: 0" |

Inside Recorder





Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1834 GL
 Field Name: Kraft-Prusa
 Pool: Infield
 Job Number: 462
 API #: 15-009-26288

Operation:
 Uploading recovery & pressures

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DST #2 **Formation: Lans H-K** **Test Interval: 3120 - 3250'** **Total Depth: 3250'**
 Time On: 12:54 11/25 Time Off: 19:10 11/25
 Time On Bottom: 14:42 11/25 Time Off Bottom: 17:12 11/25

Recovered

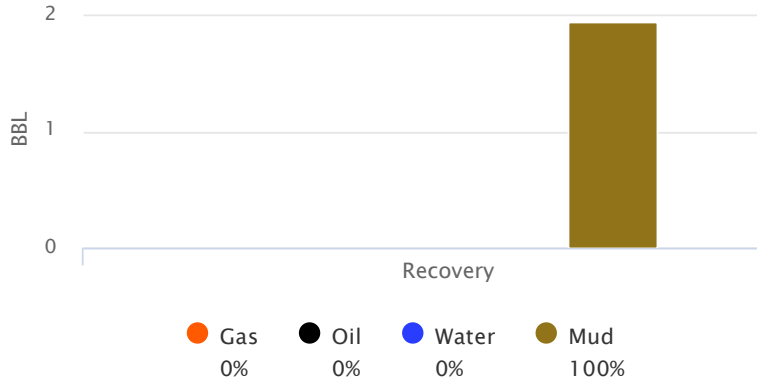
| Foot | BBLs | Description of Fluid | Gas % | Oil % | Water % | Mud % |
|------|---------|----------------------|-------|-------|---------|-------|
| 136 | 1.93528 | M | 0 | 0 | 0 | 100 |

Total Recovered: 136 ft
 Total Barrels Recovered: 1.93528

Reversed Out
 NO

| | | |
|---|------------|------------|
| Initial Hydrostatic Pressure | 1488 | PSI |
| Initial Flow | 11 to 50 | PSI |
| Initial Closed in Pressure | 597 | PSI |
| Final Flow Pressure | 53 to 77 | PSI |
| Final Closed in Pressure | 580 | PSI |
| Final Hydrostatic Pressure | 1487 | PSI |
| Temperature | 99 | °F |
| Pressure Change Initial Close / Final Close | 2.9 | % |

Recovery at a glance



GIP cubic foot volume: 0



Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1834 GL
Field Name: Kraft-Prusa
Pool: Infield
Job Number: 462
API #: 15-009-26288

Operation:
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DST #2 Formation: Lans H-K Test Interval: 3120 - Total Depth: 3250'
3250'
Time On: 12:54 11/25 Time Off: 19:10 11/25
Time On Bottom: 14:42 11/25 Time Off Bottom: 17:12 11/25

BUCKET MEASUREMENT:

1st Open: WSB. Built to 5 1/2 inches in 45 mins
1st Close: NOBB
2nd Open: WSB. Built to 3 inches in 30 mins
2nd Close: NOBB

REMARKS:

Tool Sample: 0% Gas 0% Oil 0% Water 100% Mud



Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
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State: Kansas
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Inc - Rig 3
Elevation: 1834 GL
Field Name: Kraft-Prusa
Pool: Infield
Job Number: 462
API #: 15-009-26288

Operation:
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DST #2 **Formation: Lans H-K** **Test Interval: 3120 - 3250'** **Total Depth: 3250'**
Time On: 12:54 11/25 Time Off: 19:10 11/25
Time On Bottom: 14:42 11/25 Time Off Bottom: 17:12 11/25

Down Hole Makeup

| | |
|---|---------------------------------|
| Heads Up: 33.93 FT | Packer 1: 3115.16 FT |
| Drill Pipe: 3128.93 FT <i>ID-3 1/2</i> | Packer 2: 3120.16 FT |
| Weight Pipe: FT <i>ID-2 7/8</i> | Top Recorder: 3107.16 FT |
| Collars: 0 FT <i>ID-2 1/4</i> | Bottom Recorder: 3220 FT |
| Test Tool: 26.16 FT <i>ID-3 1/2-FH</i> | Well Bore Size: 7 7/8 |
| Total Anchor: 129.84 | Surface Choke: 1" |
| <u>Anchor Makeup</u> | Bottom Choke: 5/8" |
| Packer Sub: 1 FT | |
| Perforations: (top): FT <i>4 1/2-FH</i> | |
| Change Over: .5 FT | |
| Drill Pipe: (in anchor): 95.34 FT <i>ID-3 1/2</i> | |
| Change Over: 1 FT | |
| Perforations: (below): 32 FT <i>4 1/2-FH</i> | |



Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1834 GL
Field Name: Kraft-Prusa
Pool: Infield
Job Number: 462
API #: 15-009-26288

Operation:
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pressures

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DST #2 Formation: Lans H-K Test Interval: 3120 - Total Depth: 3250'
3250'

Time On: 12:54 11/25 Time Off: 19:10 11/25
Time On Bottom: 14:42 11/25 Time Off Bottom: 17:12 11/25

Mud Properties

Mud Type: Chem **Weight:** 9.2 **Viscosity:** 46 **Filtrate:** 8.8 **Chlorides:** 2500 ppm



Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1834 GL
Field Name: Kraft-Prusa
Pool: Infield
Job Number: 462
API #: 15-009-26288

Operation:
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pressures

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DST #2 Formation: Lans H-K Test Interval: 3120 - Total Depth: 3250'
3250'
Time On: 12:54 11/25 Time Off: 19:10 11/25
Time On Bottom: 14:42 11/25 Time Off Bottom: 17:12 11/25

Gas Volume Report

1st Open

2nd Open

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

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



Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1834 GL
 Field Name: Kraft-Prusa
 Pool: Infield
 Job Number: 462
 API #: 15-009-26288

Operation:
 Uploading recovery & pressures

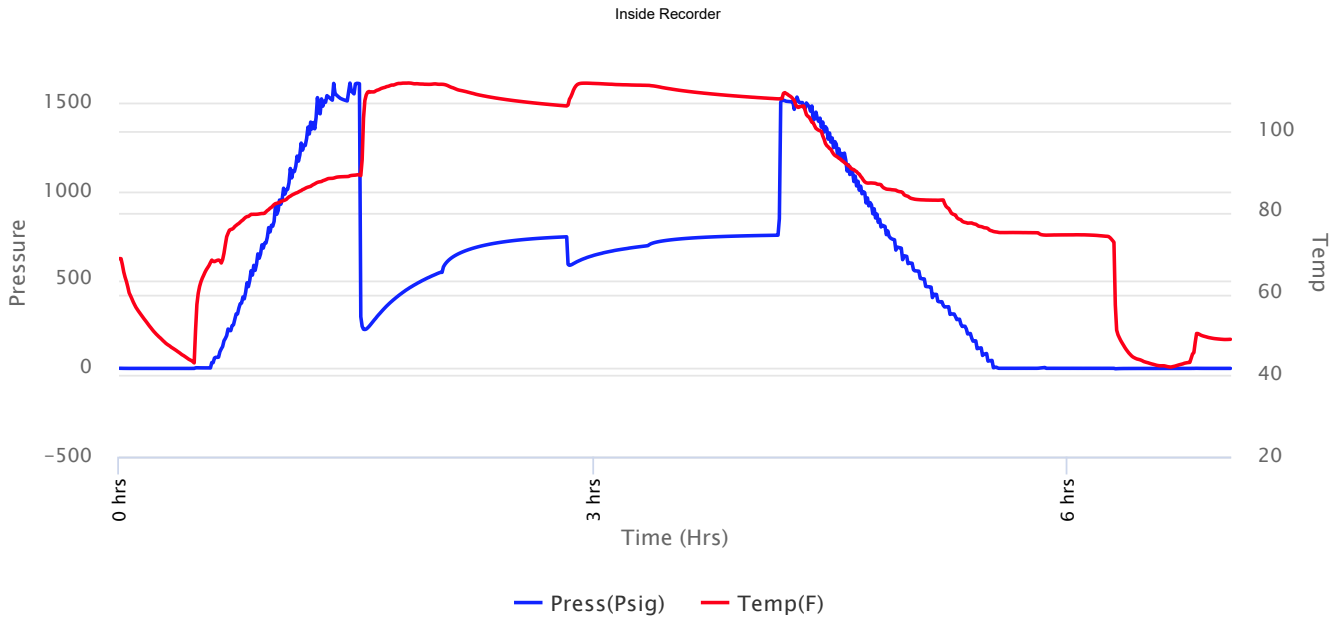
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DST #3 **Formation: Arbuckle** **Test Interval: 3238 - 3288'** **Total Depth: 3288'**
 Time On: 02:37 11/26 Time Off: 09:27 11/26
 Time On Bottom: 04:07 11/26 Time Off Bottom: 06:37 11/26



Electronic Volume Estimate:
 1926'

| <u>1st Open</u> | <u>1st Close</u> | <u>2nd Open</u> | <u>2nd Close</u> |
|---------------------------------|-------------------------------|----------------------------------|-------------------------------|
| Minutes: 30 | Minutes: 45 | Minutes: 30 | Minutes: 45 |
| Current Reading: 202" at 30 min | Current Reading: 0" at 45 min | Current Reading: 53.7" at 30 min | Current Reading: 0" at 45 min |
| Max Reading: 202" | Max Reading: 0" | Max Reading: 53.7" | Max Reading: 0" |





Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 3
 Elevation: 1834 GL
 Field Name: Kraft-Prusa
 Pool: Infield
 Job Number: 462
 API #: 15-009-26288

Operation:
 Uploading recovery & pressures

DATE
 November
26
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DST #3 **Formation: Arbuckle** **Test Interval: 3238 - 3288'** **Total Depth: 3288'**
 Time On: 02:37 11/26 Time Off: 09:27 11/26
 Time On Bottom: 04:07 11/26 Time Off Bottom: 06:37 11/26



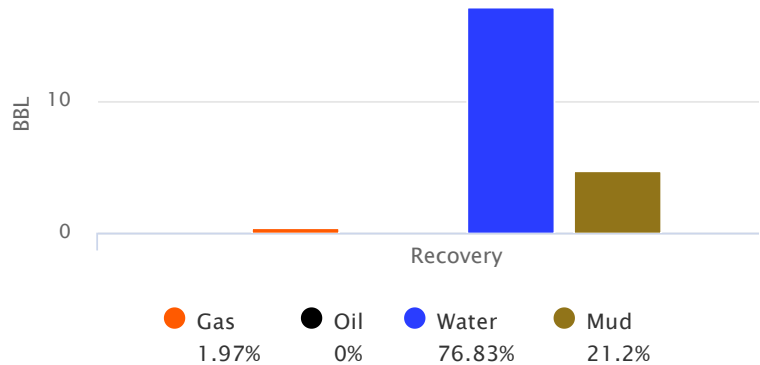
| Recovered | | | | | | |
|-----------|----------|----------------------|-------|-------|---------|-------|
| Foot | BBLs | Description of Fluid | Gas % | Oil % | Water % | Mud % |
| 31 | 0.44113 | G | 100 | 0 | 0 | 0 |
| 283 | 4.02709 | HMCW | 0 | 0 | 50 | 50 |
| 945 | 13.44735 | MCW | 0 | 0 | 80 | 20 |
| 315 | 4.48245 | SLMCW | 0 | 0 | 99 | 1 |

Total Recovered: 1574 ft
 Total Barrels Recovered: 22.39802

Reversed Out
 NO

| | | |
|---|------------|------------|
| Initial Hydrostatic Pressure | 1554 | PSI |
| Initial Flow | 222 to 544 | PSI |
| Initial Closed in Pressure | 745 | PSI |
| Final Flow Pressure | 584 to 696 | PSI |
| Final Closed in Pressure | 754 | PSI |
| Final Hydrostatic Pressure | 1536 | PSI |
| Temperature | 112 | °F |
| Pressure Change Initial Close / Final Close | 0.0 | % |

Recovery at a glance



GIP cubic foot volume: 2.47672



Company: C & K Oil Company Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling, Inc - Rig 3
Elevation: 1834 GL
Field Name: Kraft-Prusa
Pool: Infield
Job Number: 462
API #: 15-009-26288

Operation:
Uploading recovery & pressures

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DST #3 Formation: Arbuckle Test Interval: 3238 - 3288' Total Depth: 3288'
Time On: 02:37 11/26 Time Off: 09:27 11/26
Time On Bottom: 04:07 11/26 Time Off Bottom: 06:37 11/26



BUCKET MEASUREMENT:

Diesel in Bucket

- 1st Open: 1" Blow. BOB in 1 1/4 mins
- 1st Close: NOBB
- 2nd Open: 1 1/4". BOB in 1 1/4 mins
- 2nd Close: NOBB

REMARKS:

Spilt my water sample

Tool Sample: 0% Gas 0% Oil 98% Water 2% Mud

Max H2S Reading: 200 ppm



Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
 County: BARTON
 State: Kansas
 Drilling Contractor: Southwind Drilling,
 Inc - Rig 3
 Elevation: 1834 GL
 Field Name: Kraft-Prusa
 Pool: Infield
 Job Number: 462
 API #: 15-009-26288

Operation:
 Uploading recovery &
 pressures

DATE
 November
26
 2020

DST #3 Formation: Arbuckle Test Interval: 3238 - Total Depth: 3288'
3288'
 Time On: 02:37 11/26 Time Off: 09:27 11/26
 Time On Bottom: 04:07 11/26 Time Off Bottom: 06:37 11/26



Down Hole Makeup

| | |
|---|---------------------------------|
| Heads Up: 12.3 FT | Packer 1: 3232.5 FT |
| Drill Pipe: 3224.64 FT <i>ID-3 1/2</i> | Packer 2: 3237.5 FT |
| Weight Pipe: FT <i>ID-2 7/8</i> | Top Recorder: 3224.5 FT |
| Collars: 0 FT <i>ID-2 1/4</i> | Bottom Recorder: 3275 FT |
| Test Tool: 26.16 FT <i>ID-3 1/2-FH</i> | Well Bore Size: 7 7/8 |
| Total Anchor: 50.5 | Surface Choke: 1" |
| <u>Anchor Makeup</u> | Bottom Choke: 5/8" |
| Packer Sub: 1 FT | |
| Perforations: (top): 3 FT <i>4 1/2-FH</i> | |
| Change Over: .5 FT | |
| Drill Pipe: (in anchor): 31 75 FT <i>ID-3 1/2</i> | |
| Change Over: 1 FT | |
| Perforations: (below): 14 FT <i>4 1/2-FH</i> | |



Company: C & K Oil Company
Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling,
Inc - Rig 3
Elevation: 1834 GL
Field Name: Kraft-Prusa
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DATE
November
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2020

DST #3 Formation: Arbuckle Test Interval: 3238 - 3288' Total Depth: 3288'

Time On: 02:37 11/26 Time Off: 09:27 11/26
Time On Bottom: 04:07 11/26 Time Off Bottom: 06:37 11/26



Mud Properties

Mud Type: Chem **Weight:** 9.2 **Viscosity:** 46 **Filtrate:** 8.8 **Chlorides:** 2500 ppm



Company: C & K Oil Company Lease: Heller #10

SEC: 22 TWN: 17S RNG: 11W
County: BARTON
State: Kansas
Drilling Contractor: Southwind Drilling, Inc - Rig 3
Elevation: 1834 GL
Field Name: Kraft-Prusa
Pool: Infield
Job Number: 462
API #: 15-009-26288

Operation:
Uploading recovery & pressures



DATE
November
26
2020

DST #3 Formation: Arbuckle Test Interval: 3238 - 3288' Total Depth: 3288'

Time On: 02:37 11/26 Time Off: 09:27 11/26
Time On Bottom: 04:07 11/26 Time Off Bottom: 06:37 11/26

Gas Volume Report

1st Open

2nd Open

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

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



Musgrove

Petroleum Geology
212 Main Street, Claflin KS

Scale 1:240 Imperial

Well Name: HELLER #10
 Surface Location: 22-17S-11W
 Bottom Location: 2270' FSL / 800' FEL
 API: 15-009-26288-00-00
 License Number: 31561
 Spud Date: 2/23/2020 Time: 3:34 PM
 Region: BARTON
 Drilling Completed: 11/26/2020 Time: 4:00 AM
 Surface Coordinates:
 Bottom Hole Coordinates:
 Ground Elevation: 1834.00ft
 K.B. Elevation: 1843.00ft
 Logged Interval: 2650.00ft To: 3500.00ft
 Total Depth: 3288.00ft
 Formation: LANSING
 Drilling Fluid Type: Chemical/Fresh Water Gel

LOGGED BY



Company: Musgrove Petroleum, LLC
 Address: 212 Main Street
 Claflin, KS 67525

Phone Nbr: 620-639-1948
 Logged By: Geologist

Name: Wyatt Urban

OPERATOR

Company: C_K OIL CO.
 Address: 410 B ST.
 P.O. BOX 531

Contact Geologist: CHRIS HOFFMAN
 Contact Phone Nbr: 620-587-0150
 Well Name: HELLER #10
 Location: 22-17S-11W
 API: 15-009-26288-00-00

Pool:
 State: Kansas

Field: KRAFT - PRUSA
 Country: USA

TOTAL DEPTH

Measurement Type:
 RTD

Measurement Depth:
 3288.00

TVD:
 -1445.00

CONTRACTOR

Contractor: SOUTHWIND DRILLING, INC.
 Rig #: 3
 Rig Type: MUD ROTARY
 Spud Date: 2/23/2020
 TD Date: 11/26/2020
 Rig Release: 11/30/2020

Time: 3:34 PM
 Time: 4:00 AM
 Time: 12:00 AM

ROCK TYPES



OTHER SYMBOLS

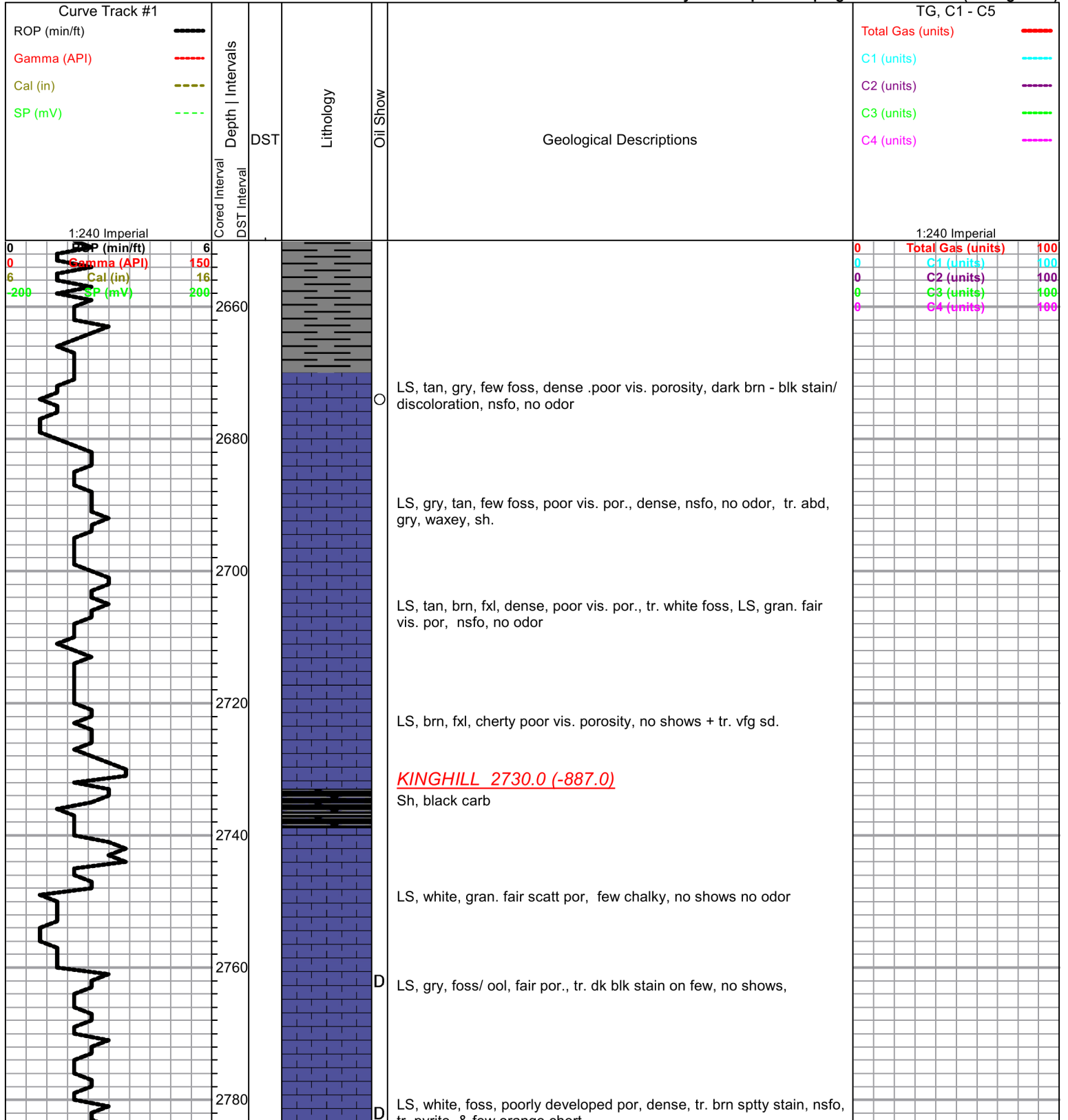
Oil Show

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

DST

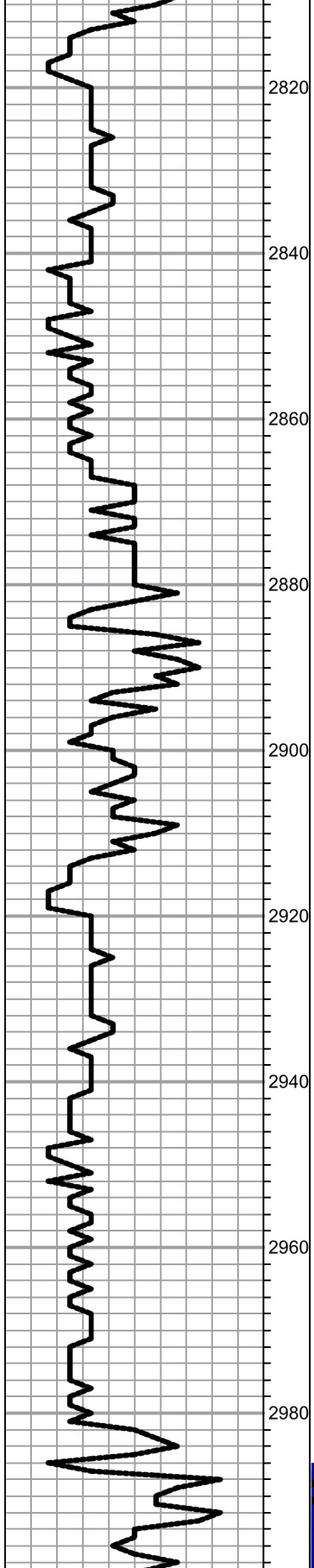
- DST Int
- DST alt
- Core
- tail pipe

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



tr. pyrite, & few orange chert

ROP (min/ft) 6
Gamma (API) 150
Cal (in) 16
SP (mV) 200



ROP (min/ft) 6
Gamma (API) 150
Cal (in) 16
SP (mV) 200

QUEEN HILL 2799.0 (-956.0)

Sh, black carb

LS, gry, tan, foss, dense, poor vis. por., dense no shows

LS, tan, gry, foss, scatt. por., lt. brn, spty stain , nsfo, no odor

PLATTSMOUTH 2829.0 (-986.0)

○ LS, tan, / brn, few foss, scatt. p.p. por., sl. chalky, tr. brn/ dk brn stain (dead in app.) / flakey , nsfo, no odor

LS, gry, dense, poor p.p. type/ scatt. por, sl. chalky in pts, no shows+ white & opaque chert

LS, tan, gry, gran, good vuggy por, chalky in pts, no shows no odor

○ LS, tan, buff, mottled, fair p.p. - scatt. por, nsfo, tr. pyrite,
LS, a/a tr. dk blk sfo floating in sample

HEEBNER 2883.0 (-1040.0)

Sh., black carb

TORONTO 2894.0 (-1056.0)

○ LS, white, tan, foss, dense, poor vis. por. tr. lt. brn stain, nsfo, no odor
* (1) LS, white chalky, p.p. - scatt. por., dk blk stain , heavy dark sfo , no odor

DOUGLAS 2910.0 (-1071.0)

Sh, gry, maroon, greenish gry, silty

○ ASH, a/a, Tr. sd., white, clr, med grain, poorly sorted, dk brn spty stain , nsfo, no odor

○ Sh, gry, dk gry- blk , silty soft, tr. sd. white, clr, sub rounded, fair sorted, friable, dk blk stain, nsfo, no odor

Sh, a/a

BROWN LIME 2983.0 (-1140.0)

LS, brn, fxl, dense, poor vis. por. cherty in pt./,

LANSING 2998.0 (-1155.0)

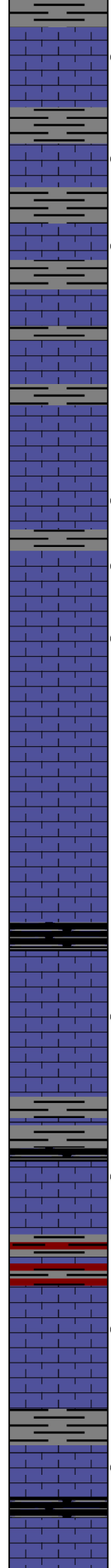
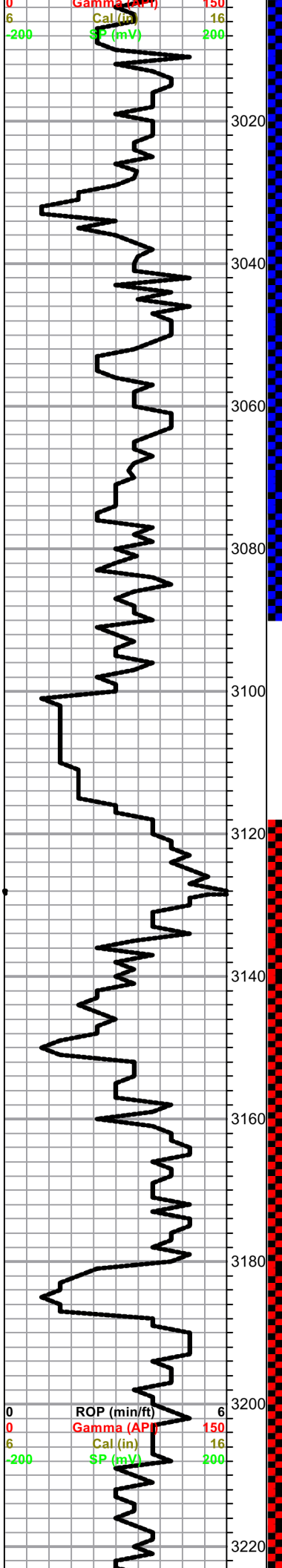
○ LS, brn ,tan, mottled poor vis. por, lt. spty stain nsfo, no odor

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

DST#1 2986-3088
30-45-45-45

1st Open:
BOB 45 sec.

| |
|-----|
| 100 |
| 100 |
| 100 |



Sh, dk, gry, waxey

○ LS, tan, brn, fair vuggy type por, gran. few dense, lt. brn - dk brn stain, spotty sfo in broken samples, fair odor, vis. gas bubbles.

● LS, crm, tan, poor- fr. vuggy type por, lt. brn, stain, dk brn spotty sfo, strong odor

Sh, gry, silty

○ LS, oom, fair vuggy/ oom por., dk brn stain, fair spotty sfo, strong odor, vis. gas bubbles in few .

Abd. Gry silty sh.,

LS, tan, crm, chalky , poor scattered porosity, lt. brn stain , nsfo., Tr. LS, tan-buff, gran., lt. brn - blk stain, v. wk spotty sfo.

Abd, gry silty/ soft gry sh,

LS ,tan - crm, oom, fair vis. por, chalky, lt. blk stain, nsfo,

○ LS, tan, buff, re-xln lg. qtz, clast, few vuggy / . oom por., lt. brn -dakk brn stain , lt. sfo, fair odor in broken samples

○ LS, tan, brn, gran. / foss, fair p.p. por, lt. golden brn stain , spotty sfo, few vis. gas bubbles.

○ LS, tan, brn, ool, dense, cherty in pts, poor vis. por, dk blk stain ,nsfo, no odor

LS, tan, buff, oom , good vuggy por., sl. chalky, no shows

LS, tan, buff, dense. few oom, / ool, poorly developed porosity no shows

LS, tan, buff, / mottled, dense, ool, poor vis. por., no shows, no odor

Sh, dk gry/ blk carb

○ LS, tan, buff, few ool, chalky, poor vis. por., lt. brn discoloration/ stain, no sfo, no odor

Tr. gry sh, silty

○ LS, tan, oom, fair oom vuggy type por, lt. brn spotty stain, nsfo, v. strong odor , vis. gas bubbles in open sample

Tr. maroon, gry sh.

○ LS, tan, buff, foss/ ool, chalky, fair scatt. por., lt. golden brn stain, spotty sfo, fair odor .

○ Sh, gry, greenish,

○ LS, white, tan, fxl, fair p.p. por., Lt, blk stain on few, lt. spotty

Tr. sh. black carb

0 1st Close: 100
 6 4" return 100

2nd Open:
 BOB instant.

2nd Close:
 BOB .

Recovery:
 2668' GIP

50' SLOGGM
 (10%G, 1%O, 80%M)

126' SLWCGM
 (10%G, 5%W, 85%M)

126' SLGCSLWCM
 (15%G, 15%W, 70%M)

Pressures:
 ISIP 688 psi
 FSIP 682 psi
 IFP 47-102 psi
 FFP 74-134 psi
 HSH 1429-1415 psi

DST # 2 3120-3250
 30-45-45-45

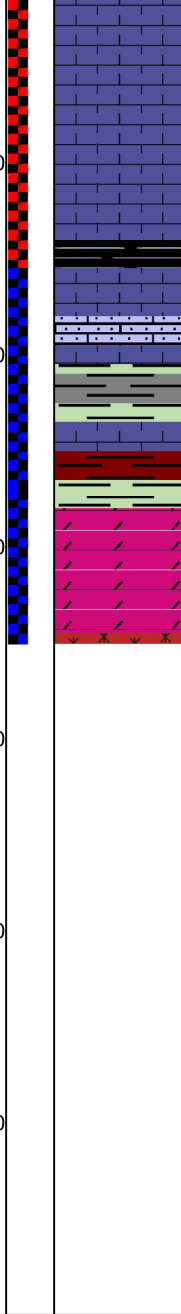
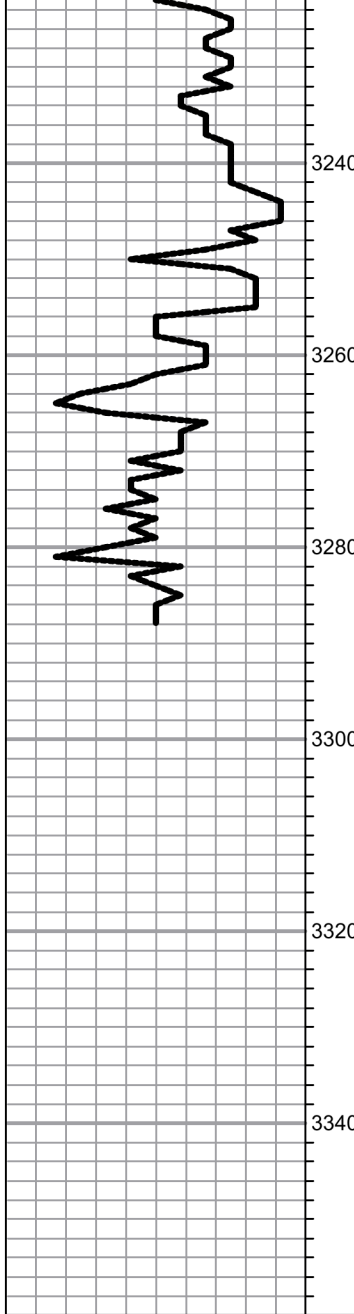
1st Open:
 5.5" in 45 mins.

2nd Open:
 3" @ 30 mins.

Recovery:
 136' Mud

Pressures:
 ISIP 597 psi
 FSIP 580 psi
 IFP 11-50 psi
 FFP 53-77 psi
 HSH 1488-1487 psi

| | | |
|---|-------------------|-----|
| 0 | Total Gas (units) | 100 |
| 0 | C1 (units) | 100 |
| 0 | C2 (units) | 100 |
| 0 | C3 (units) | 100 |
| 6 | C4 (units) | 100 |



LS, tan, brn, fxl, dense, poor vis. porosity, sl. cherty in parts, no shows.

○ LS, gry, tan, cherty, poor vis. porosity, few ool. poor lt. golden brn stain, nsfo, no odor

Tr. black carb sh. ,
 LS, tan, brn, fxl, dense, poor vis. por. , few foss/ ool., poor blk tr. stain, nsfo, no odor .

○ LS, tan, brn, ool./oom, good vuggy oom por. , no shows, no odor.

Sh, gry, dk gry

LS, tan, buff, cherty, dense, poor vis. por., no shows,
 Sh, gry, green , waxey

ARBUCKLE 3276.0 (-1433.0)

● Dol. white, crm, med xln, fair inxln por., tr. spty brn stain , tr. sfo fair - strong odor

● Dol., crm, wht, med- coarse xln, good inxln/ por., golden brn stain , sfo, strong odor

○ Dol, / a/a, inc. sur tr. lt. brn stain, dark brn sfo, strong odor, tr. glauc. in few

RTD 3288.0 (-1445.0)

DST # 3 3238-3288
30-45-45-45

1st Open:
BOB. 1.25 mins.

2nd: Open:
BOB 1.25 mins.

Recovery:
31' G.I.P.

283' HWCM
 (50%W, 50%M)

945' MCW
 (80%W, 20%M)

315' SLMCW
 (99%W, 1%M)

Pressures:
 ISIP 745 psi
 FSIP 754 psi
 IFP 222-544 psi
 FFP 584-696 psi
 HSH 1554-1536 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. 2078

| | | | | | | | |
|------------|------|------|-------|--------|--------|-------------|---------|
| Date | Sec. | Twp. | Range | County | State | On Location | Finish |
| 11/21/2020 | 22 | 17 | 11 | Barton | Kansas | | 12:45am |

Location *Claflin 2N to 130 Rd 1E 1/2 N W into*

| | | |
|-----------------------------------|--|--|
| Lease <i>Heller</i> | Well No. <i>10</i> | Owner |
| Contractor <i>Southwind Rig 3</i> | 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 <i>Surface</i> | Charge To <i>C&K Oil</i> | |
| Hole Size <i>12 1/4</i> | T.D. <i>390.2</i> | Street |
| Csg. <i>8 5/8</i> | Depth <i>390'</i> | City |
| Tbg. Size | Depth | State |
| Tool | Depth | The above was done to satisfaction and supervision of owner agent or contractor. |
| Cement Left in Csg. <i>15</i> | Shoe Joint <i>15</i> | Cement Amount Ordered <i>180 60 40 4% cc 2% gel</i> |
| Meas Line | Displace <i>23.5</i> | |

EQUIPMENT

| | | |
|------------------------|---------------------|--------------------|
| Pumptrk <i>16</i> No. | Cementer <i>Tim</i> | Common <i>110</i> |
| | Helper | Poz. Mix <i>70</i> |
| Bulktrk <i>15</i> No. | Driver <i>Tom</i> | Gel. <i>3</i> |
| | Driver | Calcium <i>8</i> |
| Bulktrk <i>PU.</i> No. | Driver <i>David</i> | |

JOB SERVICES & REMARKS

| | |
|--------------------|-------------------------|
| Remarks: | Hulls |
| Rat Hole | Salt |
| Mouse Hole | Flowseal |
| Centralizers | Kol-Seal |
| Baskets | Mud CLR 48 |
| D/V or Port Collar | CFL-117 or CD110 CAF 38 |
| | Sand |
| | Handling <i>191</i> |
| | Mileage |

Ran 8 5/8 casing and est. circulation cemented with 180 SKS

FLOAT EQUIPMENT

| |
|-------------|
| Guide Shoe |
| Centralizer |
| Baskets |
| AFU Inserts |
| Float Shoe |
| Latch Down |

Cement Did Circulate

Pumptrk Charge *Surface*
Mileage *30*

X Signature *Frank J. Rowe*

Thanks

| |
|--------------|
| Tax |
| Discount |
| Total Charge |

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071

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

No. 2138

Cell 785-324-1041

| | | | | | | | | |
|------|----------|---------|---------|----------|---------------------------------|----------|-------------|-------------|
| Date | 11-26-20 | Sec. 22 | Twp. 17 | Range 11 | County Barton | State KS | On Location | Finish 3:45 |
| | | | | | Location Catlin 20 1E 420 Winto | | | |

| | | | | |
|---------------------|--------------|-------------|--|------------------------------------|
| Lease | Heiler | Well No. 10 | Owner | To Quality Oilwell Cementing, Inc. |
| Contractor | Southwind #3 | | 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 | Rotary Plug | | Charge To | CK Oil company |
| Hole Size | 7 7/8 | T.D. 3288 | Street | |
| Csg. | | Depth | City | State |
| Tbg. Size | | Depth | The above was done to satisfaction and supervision of owner agent or contractor. | |
| Tool | | Depth | Cement Amount Ordered 220 60/40 41.462 1/4 #110 | |
| Cement Left in Csg. | | Shoe Joint | | |

| | | | |
|------------------|--------------------|----------|-----|
| Meas Line | Displace | Common | 132 |
| EQUIPMENT | | Poz. Mix | 88 |
| Pumptrk 20 | No. Cementer Craig | Gel. | 8 |
| Bulktrk | No. Driver NCK | Calcium | |
| Bulktrk 14 | No. Driver Tony | Hulls | |

| | | |
|-----------------------------------|------|-------------------------|
| JOB SERVICES & REMARKS | | Salt |
| Remarks: | | Flowseal 50 # |
| Rat Hole | 30SK | Kol-Seal |
| Mouse Hole | | Mud CLR 48 |
| Centralizers | | CFL-117 or CD110 CAF 38 |
| Baskets | | Sand |
| D/V or Port Collar | | Handling 228 |
| 1st 3255 | 50SK | Mileage |
| 2nd 750 | 50SK | |
| 3rd 425 | 80SK | |
| 4th 40' | 10SK | |

| | | | |
|--|--|------------------------|--------------------|
| | | FLOAT EQUIPMENT | 8 5/8 In Hole Plug |
| | | Guide Shoe | |
| | | Centralizer | |
| | | Baskets | |
| | | AFU Inserts | |
| | | Float Shoe | |
| | | Latch Down | |

| | |
|----------------|------|
| Pumptrk Charge | plug |
| Mileage | 30 |

| | | | |
|-----------|----------------|--------------|--|
| Signature | Frank J. Rouse | Tax | |
| | | Discount | |
| | | Total Charge | |

Thanks