

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

GLOBAL OIL FIELD SERVICES, LLC

3202

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell KS

| | | | | | | | |
|------------------------------------|------------------|---|--------------------------|------------|---------------------|-----------------|---------------------------|
| DATE <u>12-5-17</u> | SEC. <u>36</u> | TWP. <u>11 S</u> | RANGE <u>33 W</u> | CALLED OUT | ON LOCATION | JOB START | JOB FINISH <u>12:15pm</u> |
| LEASE <u>Zerr</u> | WELL #. <u>1</u> | LOCATION <u>4 1/2 West of Oakley KS</u> | | | COUNTY <u>Logan</u> | STATE <u>KS</u> | |
| OLD OR NEW (CIRCLE ONE) <u>(N)</u> | | | <u>3 South West Into</u> | | | | |

CONTRACTOR Discovery Drilling Rig # 1
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4 T.D. 224' with 10' bit
 CASING SIZE 8 5/8 DEPTH
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX. MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG.
 PERFS
 DISPLACEMENT

OWNER Pioneer Res.
 CEMENT AMOUNT ORDERED 225 sks 60/40 3% CC
2% Gel
Extra cement ordered by Rig pusher
 COMMON @
 POZMIX @
 GEL @
 CHLORIDE @
 ASC @
 HANDLING @
 MILEAGE @
 TOTAL

EQUIPMENT
 PUMP TRUCK CEMENTER Cody
 # 409 HELPER Chris
 BULK TRUCK
 # 481 DRIVER Mark
 BULK TRUCK
 # DRIVER

REMARKS:
Ran 5 jts of 8 5/8 casing + 10' bit hooked up to Rig. Broke circulation hooked to pump truck + pumped 225 sks of cement it did circulate to surface displaced 12 1/2 bbls of H2O and shut IV.

CHARGE TO: Pioneer Res.
 STREET
 CITY STATE ZIP

Global Oil Field Services, LLC
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME
 SIGNATURE [Signature]

SERVICE
 DEPTH OF JOB
 PUMP TRUCK CHARGE
 EXTRA FOOTAGE @
 MILEAGE @
 MANIFOLD @
 TOTAL

PLUG & FLOAT EQUIPMENT
 @
 @
 @
 @
 @
 TOTAL

SALES TAX (if Any)
 TOTAL CHARGES
 DISCOUNT IF PAID IN 30 DAYS



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Pioneer Resources LLC

36-11s-33w Logan Co KS

80 Windmill Dr.
Phillipsburg KS
67661
ATTN: Jason Alm

Zerr 1

Job Ticket: 64402

DST#: 1

Test Start: 2017.12.09 @ 04:38:00

GENERAL INFORMATION:

Formation: **E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:28:30

Time Test Ended: 12:53:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: 4132.00 ft (KB) To 4170.00 ft (KB) (TVD)

Reference Elevations: 3090.00 ft (KB)

Total Depth: 4170.00 ft (KB) (TVD)

3082.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8672

Inside

Press@RunDepth: 250.37 psig @ 4133.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.12.09

End Date:

2017.12.09

Last Calib.: 2017.12.09

Start Time: 04:38:00

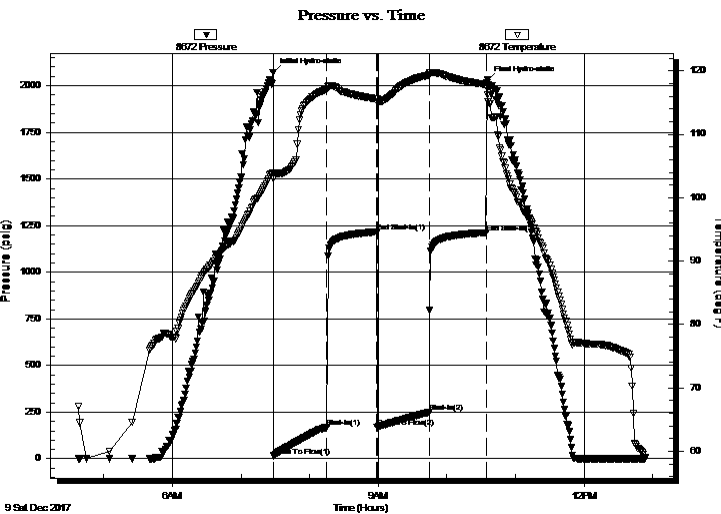
End Time:

12:53:30

Time On Btm: 2017.12.09 @ 07:28:00

Time Off Btm: 2017.12.09 @ 10:35:15

TEST COMMENT: IF:BOB in 24 min.
IS:No return blow
FF:BOB in 29 min.
FS:No return blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2071.39 | 103.91 | Initial Hydro-static |
| 1 | 16.19 | 103.03 | Open To Flow (1) |
| 47 | 168.67 | 117.08 | Shut-In(1) |
| 91 | 1216.18 | 115.57 | End Shut-In(1) |
| 91 | 170.47 | 115.02 | Open To Flow (2) |
| 137 | 250.37 | 119.33 | Shut-In(2) |
| 187 | 1212.39 | 117.82 | End Shut-In(2) |
| 188 | 2029.78 | 116.18 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------|--------------|
| 196.00 | w cm 20%w 80%m | 2.75 |
| 310.00 | mcw 5%m 95%w | 4.35 |
| 0.00 | 1" free oil | 0.00 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Resources LLC

36-11s-33w Logan Co KS

80 Windmill Dr.
Phillipsburg KS
67661

Zerr 1

Job Ticket: 64402

DST#: 1

ATTN: Jason Alm

Test Start: 2017.12.09 @ 04:38:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

12000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbbl |
|--------------|----------------|----------------|
| 196.00 | w cm 20%w 80%m | 2.749 |
| 310.00 | mcw 5%m 95%w | 4.348 |
| 0.00 | 1" free oil | 0.000 |

Total Length: 506.00 ft Total Volume: 7.097 bbl

Num Fluid Samples: 0

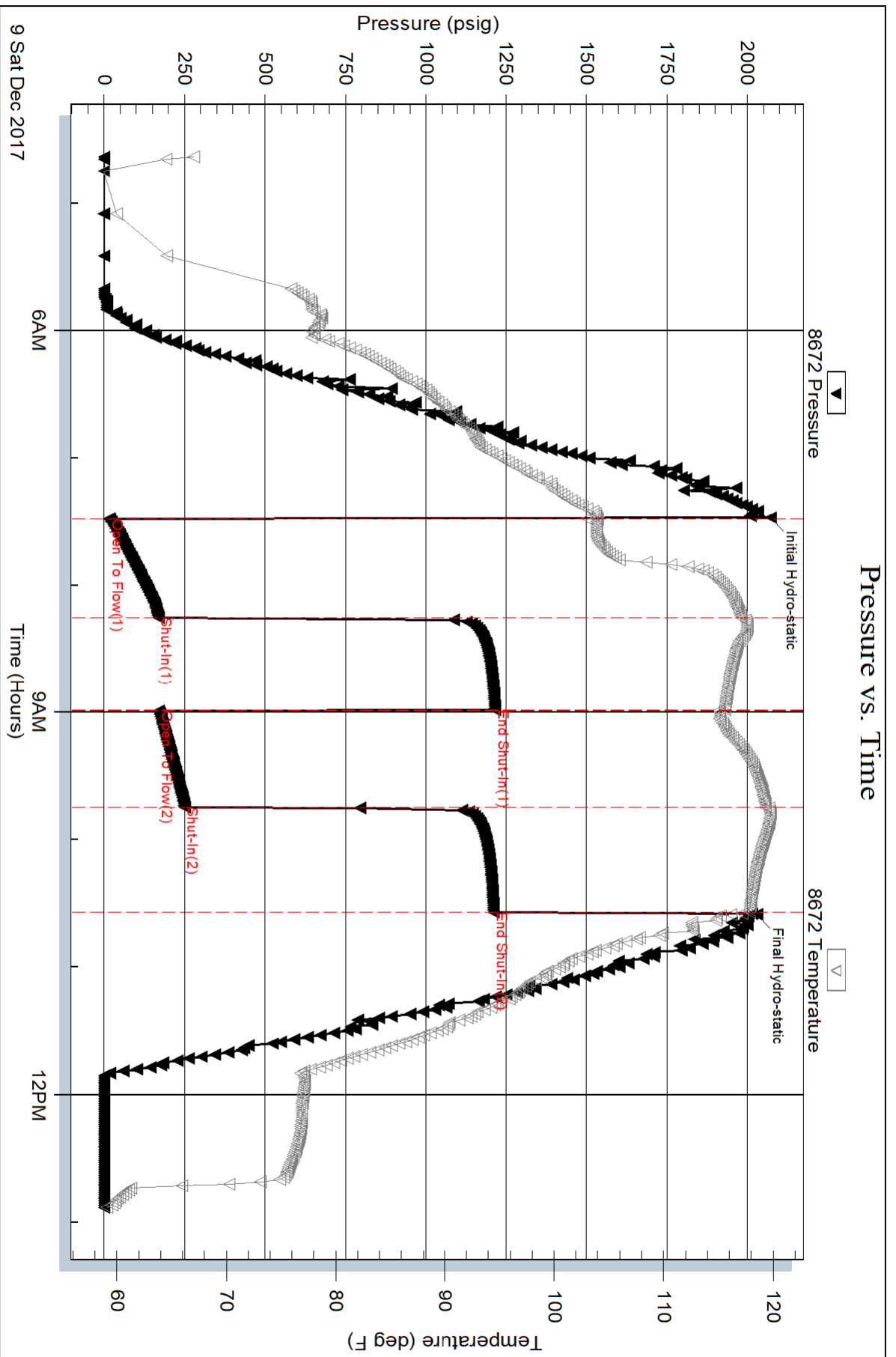
Num Gas Bombs: 0

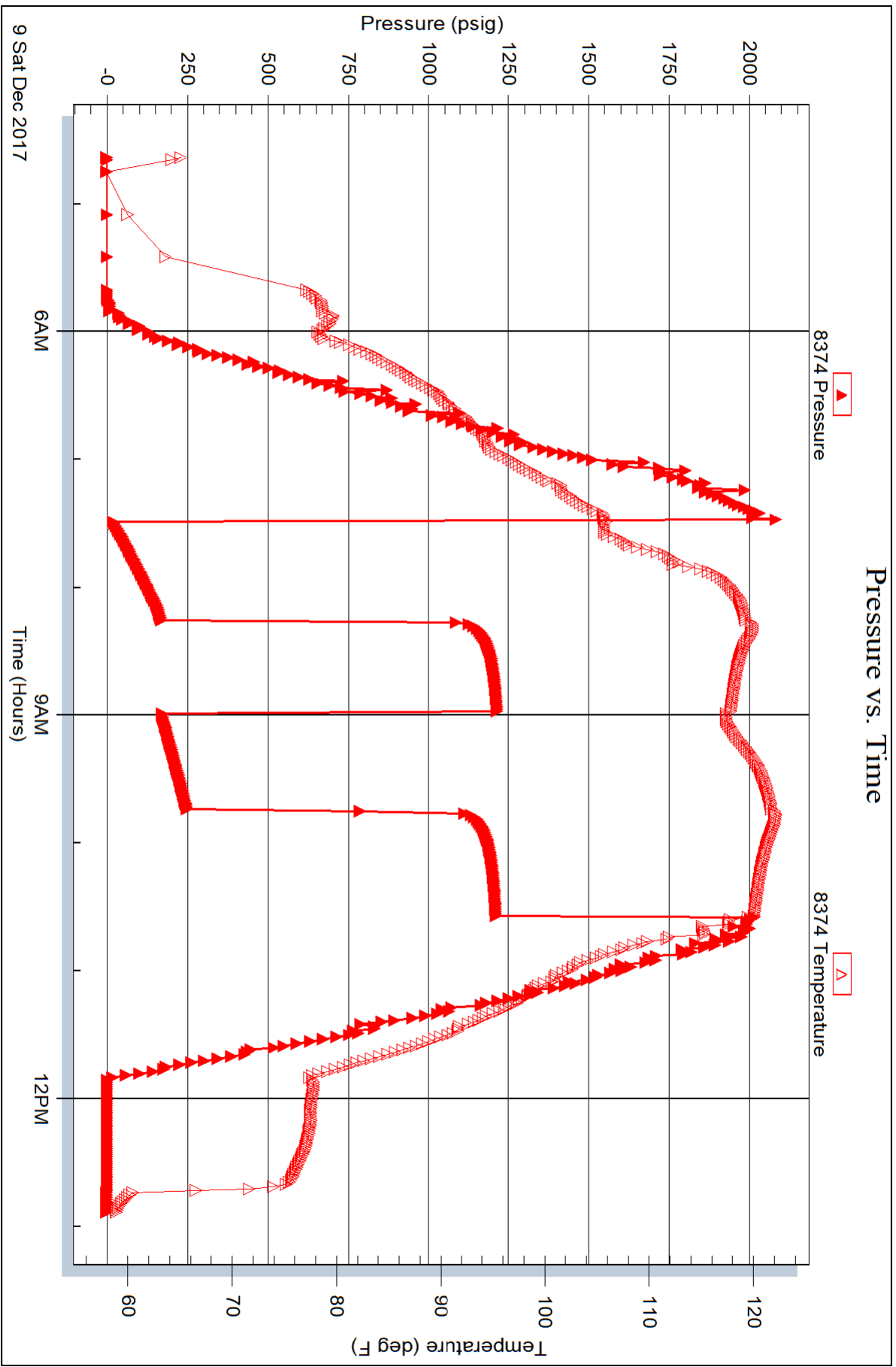
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .741@55.9= 12,000 ppm





Geological Report

Zerr #1

1491' FNL & 1339' FEL

Sec. 36 T11s R33w

Logan County, Kansas



Pioneer Resources, Inc.

General Data

Well Data: Pioneer Resources, Inc.
Zerr #1
1491' FNL & 1339' FEL
Sec. 36 T11s R33w
Logan County, Kansas
API # 15-109-21531-0000

Drilling Contractor: Discovery Drilling Co. Inc. Rig #1

Geologist: Jason T Alm

Spud Date: December 4, 2017

Completion Date: December 11, 2017

Elevation: 3082' Ground Level
3090' Kelly Bushing

Directions: Oakley KS, West on Hwy 40 3 mi to 400 rd. South
3 mi. West into location.

Casing: 224' 8 5/8" surface casing

Samples: 10' wet and dry, 3800' to RTD

Drilling Time: 3775' to RTD

Electric Logs: None

Drillstem Tests: Two, Trilobite Testing, Inc. "Mike Roberts"

Problems: None

Remarks: Deviation $\frac{3}{4}$ degrees at 4170'. Pipe Strap .74 ft
short to board.

Formation Tops

| Formation | Pioneer Resources, Inc. |
|------------------|----------------------------------|
| | Zerr #1 |
| | Sec. 36 T11s R33w |
| | 1491' FNL & 1339' FEL |
| Anhydrite | 2602' +488 |
| Base | 2630' +460 |
| | |
| Topeka | 3797' -707 |
| Heebner | 4023' -933 |
| Toronto | 4042' -952 |
| Lansing | 4062' -792 |
| BKC | 4651' -1261 |
| Marmaton | 4381' -1291 |
| Pawnee | 4488' -1398 |
| Myrick | 4514' -1424 |
| Fort Scott | 4539' -1449 |
| Cherokee | 4568' -1478 |
| Johnson | 4612' -1522 |
| Morrow | 4654' -1564 |
| Mississippian | 4671' -1581 |
| RTD | 4554' -1709 |

Sample Zone Descriptions

- LKC “E” zone (4142’ -1052): Covered in DST #1**
 Ls – Fine crystalline, oolitic with poor oolitic porosity, light to fair oil stain with light scattered saturation, fair show of free oil, fair odor, fair to good spotted yellow fluorescents, chalky towards bottom, 28 units hotwire.
- LKC “F” zone (4156’ -1066): Covered in DST #1**
 Ls – Fine crystalline, oolitic with fair oomoldic and oolitic porosity, light oil stain with spotted light saturation, slight show of free oil, light odor, dull to fair yellow fluorescents, very chalky, 14 units hotwire.
- LKC “J” zone (4268’ -1178): Covered in DST #2**
 Ls – Fine to sub-crystalline, oolitic with poor oolitic porosity, light spotted oil stain in porosity, slight show of free oil when broken, light odor, dull to fair yellow fluorescents, 20 units hotwire.

LKC “K” zone (4298’ -1208): Covered in DST #2
Ls – Fine to sub-crystalline, oolitic in part with poor scattered oolitic and oomoldic porosity, light spotted oil stain in porosity, no show of free oil, mostly dense, 12 units hotwire.

Drill Stem Tests
Trilobite Testing, Inc.
“Mike Roberts”

DST #1 LKC E-F zones

Interval (4132’ – 4170’) Anchor Length 38’

| | | |
|-----|------------------------|-----------|
| IHP | – 2071 # | |
| IFP | – 45” – B.O.B. 24 min. | 16-169 # |
| ISI | – 45” – Dead | 1216 # |
| FFP | – 45” – B.O.B. 29 min. | 170-250 # |
| FSI | – 45” – Dead | 1212 # |
| FHP | – 2029 # | |
| BHT | – 119°F | |

Recovery: 1” Clean Oil
310’ MCW 95% Water
196’ WCM 20% Water

DST #2 LKC J-K zones

Interval (4256 – 4320’) Anchor Length 64’

| | | |
|-----|---------------------------|---------|
| IHP | – 2142 # | |
| IFP | – 30” – W.S.B. | 33-35 # |
| ISI | – 30” – Dead | 774 # |
| FFP | – 20” – Dead, Flush, Dead | 35-40 # |
| FHP | – 2136 # | |
| BHT | – 108°F | |

Recovery: 5’ Mud w/ oil spots

Structural Comparison

| | Pioneer Resources, Inc. Zerr #1 Sec. 36 T11s R33w 1491' FNL & 1339' FEL | Bickle Energies, LLC. Willie Z #1 Sec. 36 T11s R33w 1870' FNL & 535' FEL | | Dane G Hansen Trust Bahr #1 Sec. 36 T11s R33w NW SW NW | |
|------------------|--|---|--------------|---|--------------|
| Formation | | | | | |
| Anhydrite | 2602' +488 | 2602' +488 | FL | 2591' +489 | (-1) |
| Base | 2630' +460 | 2626' +464 | (-4) | NA | NA |
| | | | | | |
| Topeka | 3797' -707 | 3802' -712 | (+5) | NA | NA |
| Heebner | 4023' -933 | 4028' -938 | (+5) | 4003' -923 | (-10) |
| Toronto | 4042' -952 | 4048' -958 | (+6) | NA | NA |
| Lansing | 4062' -992 | 4072' -981 | (+9) | NA | NA |
| BKC | 4651' -1261 | 4365' -1275 | (+14) | NA | NA |
| Marmaton | 4381' -1291 | 4396' -1306 | (+15) | 4354' -1274 | (-17) |
| Pawnee | 4488' -1398 | 4502' -1412 | (+14) | 4464' -1384 | (-14) |
| Myrick | 4514' -1424 | 4531' -1441 | (+17) | NA | NA |
| Fort Scott | 4539' -1449 | 4557' -1467 | (+18) | 4518' -1438 | (-11) |
| Cherokee | 4568' -1478 | 4588' -1498 | (+20) | 4544' -1464 | (-14) |
| Johnson | 4612' -1522 | 4632' -1542 | (+20) | 4590' -1510 | (-12) |
| Morrow | 4654' -1564 | 4670' -1580 | (+16) | NA | NA |
| Mississippian | 4671' -1581 | 4685' -1597 | (+16) | 4644' -1564 | (-17) |

Summary

The location for the Zerr #1 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. Two Drill Stem Tests were conducted, both of which were negative. After all gathered data had been examined the decision was made to plug and abandon the Zerr #1 well.

Respectfully Submitted,

Jason T Alm
Hard Rock Consulting, Inc.