

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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# GEOLOGIST'S REPORT

## DRILLING TIME AND SAMPLE LOG

**BRUCE OIL COMPANY, L.L.C**

**ANNE MARIE #1  
5-9-12W  
1320' FNL & 300' FEL  
OSBORNE COUNTY, KANSAS  
API: 15-141-20486-00-00**

**DRILLING CONTR.: MURFIN RIG #8  
SPUD: 7-2-2019 COMP: 7-8-2019  
MUD UP: 2200' TYPE MUD: CHEM.  
DRILL TIME: 2200' to RTD  
RTD: 2970' LTD: 2970'  
SAMPLES SAVED: 2300' to RTD  
GEOLOGIST: ROBERT J. PETERSEN**

### ELEVATION

KB: 1693' (1692.5')  
GL: 1688' (1687.5)  
LOG MEASURED  
FROM: KB  
GL 1698 RAISED 1.5'

### SURFACE CASING

24# 8 5/8" SET @219'  
Cem. W/150SX  
60/40 4%cc 2% gel

### PRODUCTION CASING

D&A

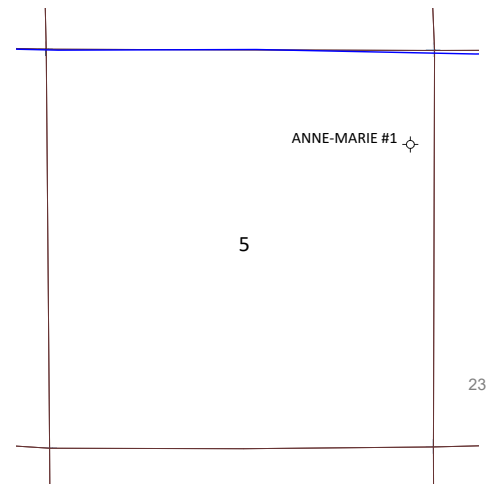
### WELL LOG SURVEYS

RAG

### ELECTRIC LOG TOPS

FORMATION	DEPTH	DATUM	POS A	POS B
ANHYDRITE	837	+856	-24	-14
BASE ANHYDRITE	869	+824	-23	-11
STOTLER	2406	-713	-23	-1
TARKIO SD	2431	-738	-23	2
TOPEKA	2620	-927	-22	-1
QUEEN HILL	2810	-1117	-21	-2
HEEBNER	2883	-1190	-20	-1
TORONTO	2906	-1213	-17	FLAT
LANSING	2931	-1238	-12	+3
LTD	2970	-1277	--	--

### LOCATION MAP



### REFERENCE WELL

REF. WELL A  
DREILING OIL, INC  
CORPSTIEN #1-4  
1000' FNL & 2310' FEL  
4-9-12W

REF. WELL B  
DREILING OIL, INC  
DIXON #1-32  
880' FSL & 330' FWL  
32-8-12W

### DAILY REPORT @7:00 A.M.

7-2-19 MIRU/SPUD  
7-3-19 440' DRILLING  
7-4-19 1615' DRILLING  
7-5-19 2270' DRILLING

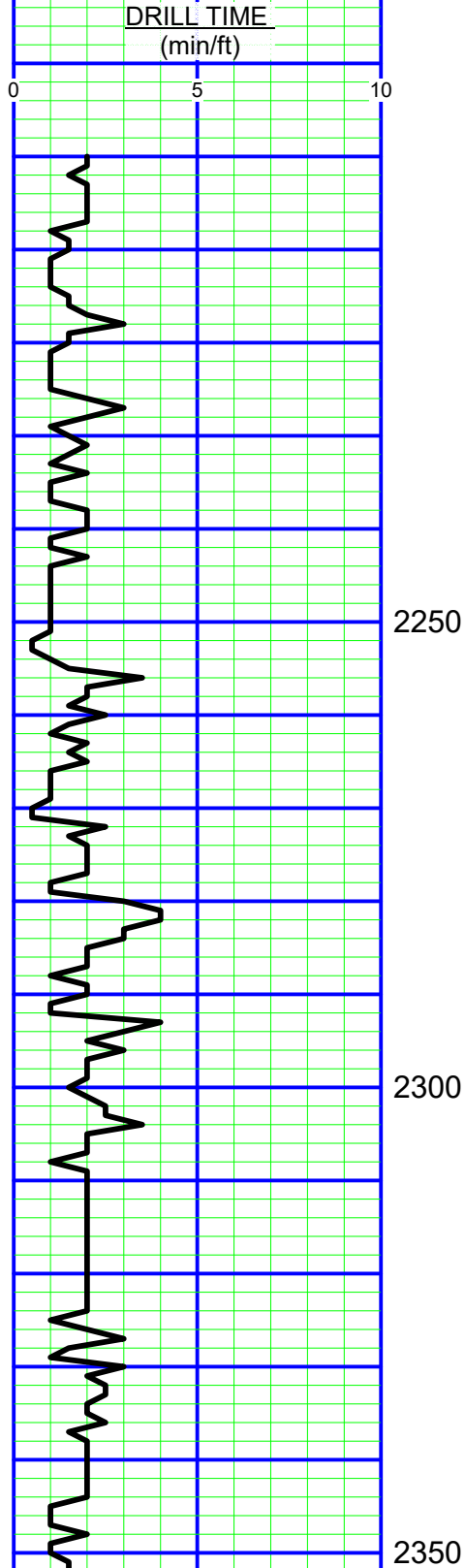
CORPSTIEN #1-4  
1000' FNL & 2310' FEL  
4-9-12W

DIXON #1-32  
880' FSL & 330' FWL  
32-8-12W

7-2-19 MIRU/SPUD  
7-3-19 440' DRILLING  
7-4-19 1615' DRILLING  
7-5-19 2370' DRILLING  
7-6-19 2694' TIH (AFTER DST #1)  
7-7-19 2960' DRILLING  
7-8-19 2970' WELL PLUGGED

## REMARKS

THIS WELL WAS PLUGGED AND ABANDONED



## SAMPLE DESCRIPTION

SH; Gray, calcareous, sandy, micaceous + LS; Cream, dense (2310-2320)

LS; Cream/white, very fine crystalline, oolitic, tr dead stain + SH; Gray (2330)

SH; Gray, silty-sandy (2340)

SH; Gray, sandy + LS; Gray, dense, fossiliferous, tr dead stain (2350)

LS; Gray, fine crystalline to dense, argillaceous + SH; Gray (2360)

SH; Gray, sandy + LS; Tan, fine crystalline, fossiliferous, tr dead stain + SD; Gray, very fine

2350

SH; Gray, sandy + LS; Tan, fine crystalline, fossiliferous, tr dead stain + SD; Gray, very fine grained, mic (2370)

Root

LS; Gray/brown, dense (2380)

SD; Clear/gray, fine grained, angular + SH; Blue gray (2380)

SH; Gray + SD; Clear, fine grained, angular + LS; Cream/tan, dense (2390)

SH; Gray + SD; Clear, fine grained, angular + LS; Cream, dense, sandy (2400)

2400

Stotler

SH; Gray (2410)

LS; Cream/lt gray, dense, tr poor moldic por, tr dead stain (2420)

SH; Dark gray (2430)

MORGAN MUD CHECK 2434'  
VIS 62/WL 8.7/WL 7.2/LCM 2#  
CHLORIDES: 3,500 PPM

Tarkio SD

LS; Cream/gray, mottled in part, dense, fossiliferous + SD; Gray, very fine grained, ang, calc (2430)

LS; Cream, dense, chalky + LS; Gray, fine crystalline, fossiliferous, tr spotted dead stain (2440-2450)

SH; Gray soft (2450)

2450

SD; Blue-gray, fine grained, angular w/tr dead stain (2450/15") + LS; Gray, dense, sl cherty (2450/30")

SH; Gray (2460)

LS; Cream/tan, fine crystalline, fossiliferous, sl dolomitic, chalky + SH; Gray (2470)

LS; Cream/gray, very fine crystalline to dense, fossiliferous, chalky + SH; Gray, sandy (2480)

LS; Cream/tan/gray, dense, fossiliferous, chalky + SH; Gray, pyritic (2490)

SH; Black (2500)

LS; Cream, fine crystalline, fossiliferous, chalky + LS; Gray, dense, fossiliferous, argillaceous + SH; Gray (2510)

2500

LS; Tan/gray, very fine crystalline to dense, fossiliferous, mottled, argillaceous in part, chalky + SH; Gray (2520)

LS; Cream/tan, fine crystalline, fossiliferous, clastic w/shale clast (2530)

SH; Gray, mottled +SD; Cream, fine to med, angular (2540)

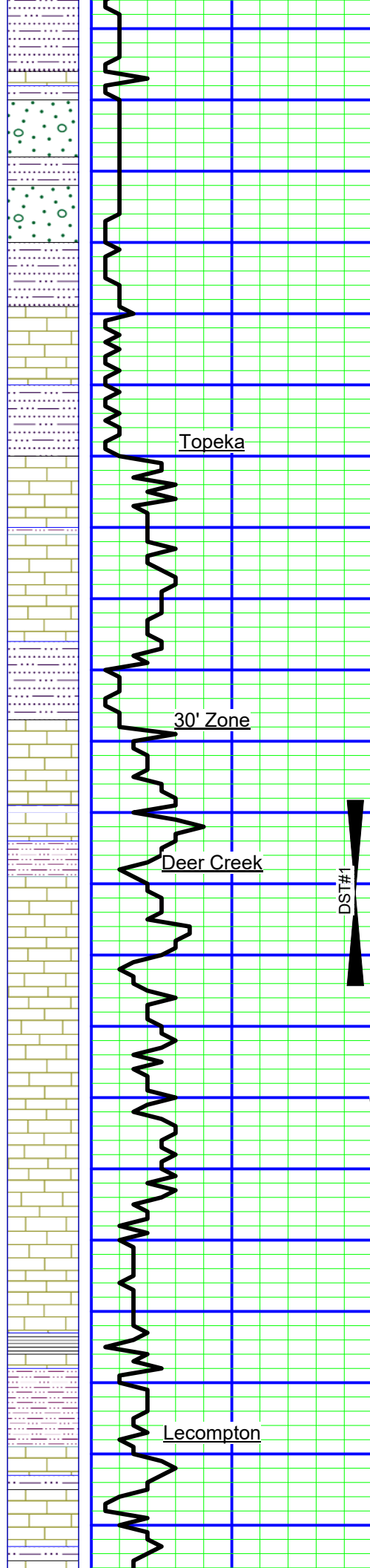
LS; Cream/gray, dense, fossiliferous, chalky (2550)

2550

LS; Cream/gray, mottled, very fine crystalline, fossiliferous, sl dolomitic, chalky w/shale clast + SH; Gray (2560)

SH; Gray, sandy + LS; Gray, dense, argillaceous (2570)

SD; Gray, fine grained, ang, mic + LS; Gray, dense, argillaceous (2580) + LS; Cream/gray, dense, fossiliferous, mottled, clastic (2590)



SD; Gray, fine grained, ang, mic + LS; Gray, dense, argillaceous (2580) + LS; Cream/gray, dense, fossiliferous, mottled, sl cherty (2590)

LS; Cream, very fine crystalline to dense, chalky LS; Gray, dense, sandy (2600)

LS; Cream/gray, oolitic/fossiliferous, chalky, sl cherty + SH; Gray, silty-sandy (2610)

LS; Cream, fine crystalline, oomoldic por (barren) (2620)

SH; Red/gray (2620)

Topeka

LS; Cream/gray/brown, dense, fossiliferous, cherty, tr dead stain (2630)

LS; Tan/gray, dense, chalky (2640)

LS; Cream/gray, very fine crystalline, sl fossiliferous, sl dolomitic, chalky (2650)

LS; Gray, dense, fossiliferous, mottled chalky (2650/15")

LS; Cream/gray, fine crystalline, oolitic/fossiliferous, chalky + SH; Gray (2650/30")

2650

30' Zone

SH; Gray, sandy (2660-2670)

LS; Cream/gray, fine crystalline, fossiliferous, tr poor ppt por, tr stain (2670)

LS; Cream/gray, fine crystalline, fossiliferous, sl dolomitic, chalky (2670-2670/15")

LS; Gray, fine crystalline, fossiliferous, dolomitic, faint odor (2670/30")

SH; Gray, sandy (2670/30-45")

LS; Cream, fine crystalline, fossiliferous, fossiliferous, sl dolomitic, w/fair ppt por, sfo, faint odor, med sat dry (2680)

Deer Creek

LS; Tan/gray, fine crystalline, fossiliferous-granular, w/good moldic por, sfo, odor, dark sat dry (2690)

LS; Tan, very fine crystalline to dense, fossiliferous, chert + SH; Gray (2694/15")

LS; Cream, very fine crystalline, sl dolomitic, chalky, ppt por, tr stain (2694/30")

LS; Cream/gray, very fine crystalline to dense, mottled in part, sl dolomitic w/tr poor ppt por, tr stain, nsfo (2710)

LS; Cream/tan, fine crystalline, fossiliferous, sl dolomitic, cherty w/tr poor ppt por, tr stain, nsfo (2710/15")

SH; Dark gray (2710/15")

LS; Gray, fine crystalline, fossiliferous, sl dolomitic, chalky-mealy, tr dead oil flake (2710/30")

2700

cfs

cfs

LS; Cream/gray/tan, fine crystalline, fossiliferous, chalky, sl cherty + SH; Gray, silty (2720-2730)

LS; Cream/gray/tan, fine crystalline, fossiliferous, chalky, sl cherty(orange/blocky) + SH; Black/gray, fossiliferous (2740)

LS; Cream/tan/gray, very fine crystalline to dense, fossiliferous, mottled + SH; Dark gray/black (2750)

LS; Cream, fine crystalline, dolomitic, chalky, ppt por, lt stain (2760)

SH; Black (2760)

2750

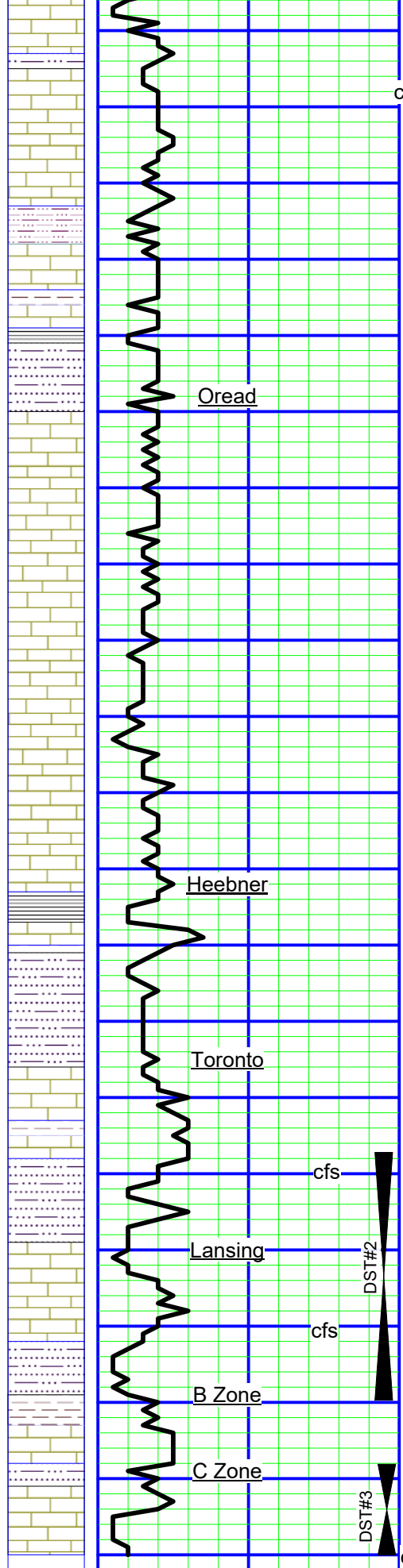
Lecompton

LS; Cream/tan, fine to med crystalline, fossiliferous, sl cherty, poor to fair moldic por, fair odor, ssfo (2770) incr chert (white/ang) (2777)

LS; Cream/gray/tan, fine crystalline to dense, fossiliferous-mottled, chalky (soft) cherty, spot stain, ssfo, faint odor, tr fair moldic por (2777/15-30")

DST #1  
2668-2894'  
30-45-30-45 MIN  
TOOL SLID 12'  
IF: NONE  
FF: FEW BUBBLES THEN DEAD  
RECOVERED:  
195' MUD  
SIP: 972-966#  
FP: 133-122/129-124#  
HP: 1304-1276#  
BHT: 95F

MORGAN MUD CHECK 2710'  
VIS 52/WL 9.0/WL 7.6/LCM 2#  
CHLORIDES: 6,200 PPM



LS; Cream/gray/tan, fine crystalline to dense, fossiliferous-mottled, chalky (soft) cherty, spot stain, ssfo, faint odor, tr fair moldic por (2777/15-30")

LS; Cream/gray, fine crystalline, very fossiliferous, chalky, tr dead stain + SH; Gray (2790)

LS; Cream/lt gray, very fine crystalline to dense, fossiliferous, chalky, tr poor moldic por, faint odor, vssfo, lt stain on dry (2800)

LS; Cream/gray, dense, chalky + SH; Gray (2810)

LS; Tan, fine to med crystalline, fossiliferous, fair moldic por, stain, vssfo, odor (2810-2820)

SH; Black, carb (2820)

Oread

LS; Cream/gray, fine crystalline to dense, fossiliferous, chalky, sl cherty, tr poor moldic por, patchy stain, ssfo (2830)

LS; Cream/gray, fine crystalline to dense, fossiliferous, chalky-mealy, w/tr dead stain + SH; Gray (2840)

LS; Cream/tan./gray, fine crystalline, fossiliferous, chalky, tr poor moldic por, vssfo (2850)

LS; Cream/gray, very fine crystalline to dense, fossiliferous, chalky cherty (blocky) (2860)

LS; Cream/gray, argillaceous (2870)

LS; Cream/tan/gray, very fine crystalline to dense, fossiliferous, chalky, cherty, tr stain, nsfo (2880)

LS; Gray/tan, fine crystalline, fossiliferous, chalky-mealy, brown stain, ssfo, faint odor (2890)

Heebner

SH; Black, carb (tr 2890/incr 2900)

LS; Tan, dense, fossiliferous (2900)

SH; Gray/red, silty-sandy (2910)

Toronto

LS; Cream/gray, fine crystalline, fossiliferous, pyritic, chalky, tr dead stain (2920)

LS; Cream/tan, fine crystalline, fossiliferous, cherty, chalky (2920/15")

LS; Cream/white, fine crystalline, oolitic, chalky (2920/30")

SH; Red/gray/green + LS; Gray, dense, chalky, tr ppt por, tr stain (2930)

Lansing

SH; Gray, silty (2940)

LS; Tan, fine crystalline, sl dolomitic, fossiliferous, poor moldic por, sfo, odor, light med stain on dry (2950) tr chert inclusion, ppt moldic por, sfo, med stain dry (2950/15")

LS; Cream/gray mottled, fine crystalline, chalky + SH; Gray/black (2950/30")

B Zone

LS; Cream, fine crystalline, fossiliferous+ SH; Gray (2960)

C Zone

LS; Cream/gray, fine crystalline to dense, fossiliferous, cherty + SH; Gray/dark gray (2970)

SH; Red/gray (2970/15")

LS; Cream, fine crystalline, fossiliferous, cherty, tr coarse crystalline regrowth, fair moldic por, ssfo, odor, med patchy stain on dry (2970/15") increase sfo/stain on dry (2970/30-45")

DST #2  
2917-2950'  
5-45-30-60 MIN  
IF: B.O.B. IN 75 SEC/TOTAL BUILD 28"  
ISIP: LIGHT SURFACE BLOWBACK  
FF: BOB IN 75 SEC/TOTAL BUILD 84"  
RECOVERED:  
93' GIP  
30' GO  
62' SOCMMW  
992' VSOCMMW  
SIP: 1094-891#  
FP: 81-175/257-383#  
HP: 1467-1385#  
BHT: 95F

DRIFT SURVEY  
1/2° @220'  
1/2° @1195'  
1/4° @1791'  
3/4° @2694'

MORGAN MUD CHECK 2970'  
VIS 60/WT 9.2/WL 8.0/LCM 1#  
CHLORIDES: 6,900 PPM

DST #3  
2958-2970'  
5-30-5-45"  
IF: BOB IN 30 SEC. TOTAL BUILD 155"  
ISI: LIGHT SURFACE BLOWBACK  
FF: BOB IN 30 SEC TOTAL BUILD 127"  
FSI: LIGHT SURFACE BLOWBACK  
RECOVERED:  
341' MW 70%W/30% M



1/2° @220'  
1/2° @1195'  
1/4° 1791'  
3/4° @2694'  
3/4° @2970'

DESCRIBED: 3,000' W

IF: BOB IN 30 SEC. TOTAL BUILD 155  
ISI: LIGHT SURFACE BLOW BACK  
FF: BOB IN 30 SEC TOTAL BUILD 127"  
FSI: LIGHT SURFACE BLOW BACK  
RECOVERED:  
341' MW 70%W/30% M  
1054' MCW 95% W/5%M  
SIP: 1180-1181#  
FP: 424-606/757-812#  
HP: 1447-1372#  
BHT: 90F

3000



## DRILL STEM TEST REPORT

Prepared For: **Bruce Oil Company LLC**

1704 Limestone Rd  
McPherson KS 67460+6500

ATTN: Bob Peterson

**Anne Marie #1**

**5-9S-12W Osborne,KS**

Start Date: 2019.07.05 @ 23:54:00

End Date: 2019.07.06 @ 06:04:02

Job Ticket #: 66281                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.07.08 @ 14:42:50



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bruce Oil Company LLC  
 1704 Limestone Rd  
 McPherson KS 67460+6500  
 ATTN: Bob Peterson

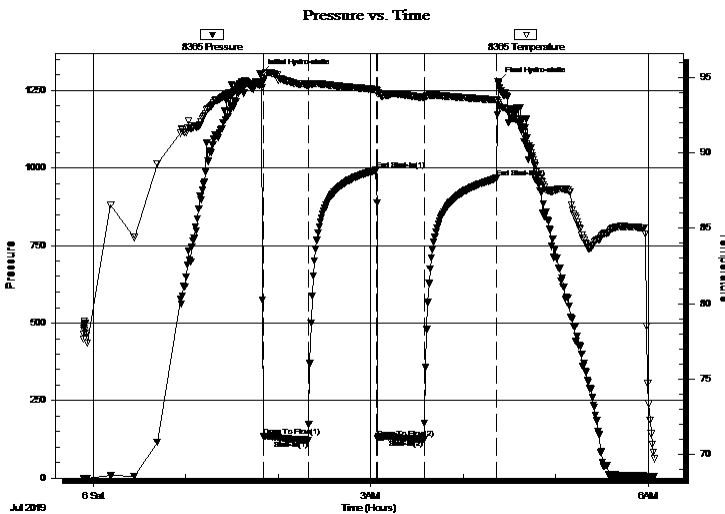
**5-9S-12W Osborne, KS**  
**Anne Marie #1**  
 Job Ticket: 66281 **DST#: 1**  
 Test Start: 2019.07.05 @ 23:54:00

## GENERAL INFORMATION:

Formation: **Topeka**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:50:17  
 Time Test Ended: 06:04:02  
 Interval: **2668.00 ft (KB) To 2694.00 ft (KB) (TVD)**  
 Total Depth: 2694.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ken Swinney  
 Unit No: 72  
 Reference Elevations: 1703.00 ft (KB)  
 1698.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8365 Inside**  
 Press@RunDepth: 124.98 psig @ 2669.00 ft (KB) Capacity: psig  
 Start Date: 2019.07.05 End Date: 2019.07.06 Last Calib.: 2019.07.06  
 Start Time: 23:54:01 End Time: 06:04:02 Time On Btm: 2019.07.06 @ 01:49:17  
 Time Off Btm: 2019.07.06 @ 04:22:32

**TEST COMMENT:** IF 30 Minutes/ Tool slide 12 feet/ BOB in 20 sec. no build after slide/ Bleed of pressure/ Flush blow to 1/4 inch  
 ISI 45 Minutes/ No blow back  
 FF 30 Minutes/ Few bubbles at open then dead  
 FS 45 Minutes/ No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1304.35	94.71	Initial Hydro-static
1	133.65	94.79	Open To Flow (1)
31	122.20	94.50	Shut-In(1)
75	992.81	94.19	End Shut-In(1)
76	129.28	93.96	Open To Flow (2)
106	124.98	93.72	Shut-In(2)
153	966.69	93.52	End Shut-In(2)
154	1276.57	93.33	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
195.00	Mud 100%	1.04

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bruce Oil Company LLC  
 1704 Limestone Rd  
 McPherson KS 67460+6500  
 ATTN: Bob Peterson

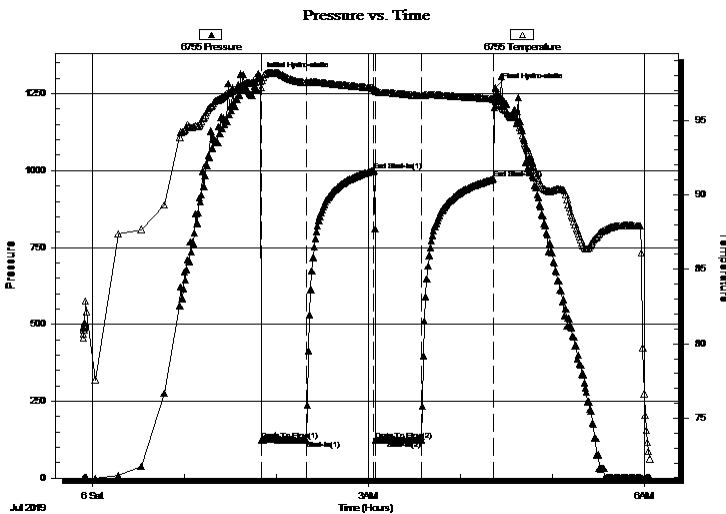
**5-9S-12W Osborne, KS**  
**Anne Marie #1**  
 Job Ticket: 66281 **DST#: 1**  
 Test Start: 2019.07.05 @ 23:54:00

## GENERAL INFORMATION:

Formation: **Topeka**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 01:50:17 Tester: Ken Swinney  
 Time Test Ended: 06:04:02 Unit No: 72  
 Interval: **2668.00 ft (KB) To 2694.00 ft (KB) (TVD)** Reference Elevations: 1703.00 ft (KB)  
 Total Depth: 2694.00 ft (KB) (TVD) 1698.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 5.00 ft

**Serial #: 6755 Outside**  
 Press@RunDepth: 972.36 psig @ 2670.00 ft (KB) Capacity: psig  
 Start Date: 2019.07.05 End Date: 2019.07.06 Last Calib.: 2019.07.06  
 Start Time: 23:54:01 End Time: 06:04:02 Time On Btm: 2019.07.06 @ 01:49:17  
 Time Off Btm: 2019.07.06 @ 04:22:47

**TEST COMMENT:** IF 30 Minutes/ Tool slide 12 feet/ BOB in 20 sec. no build after slide/ Bleed of pressure/ Flush blow to 1/4 inch  
 ISI 45 Minutes/ No blow back  
 FF 30 Minutes/ Few bubbles at open then dead  
 FS 45 Minutes/ No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1306.74	97.58	Initial Hydro-static
1	122.63	97.21	Open To Flow (1)
30	123.23	97.53	Shut-In(1)
75	998.93	97.15	End Shut-In(1)
76	124.39	96.93	Open To Flow (2)
106	123.38	96.65	Shut-In(2)
153	972.36	96.42	End Shut-In(2)
154	1270.52	96.32	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
195.00	Mud 100%	1.04

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bruce Oil Company LLC  
1704 Limestone Rd  
McPherson KS 67460+6500  
ATTN: Bob Peterson

**5-9S-12W Osborne, KS**  
**Anne Marie #1**  
Job Ticket: 66281      **DST#: 1**  
Test Start: 2019.07.05 @ 23:54:00

**Tool Information**

Drill Pipe:	Length: 2459.00 ft	Diameter: 3.80 inches	Volume: 34.49 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 42000.00 lb
		Total Volume: 35.40 bbl		Tool Chased 12.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	2668.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	53.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut-In Tool	5.00			2646.00	
Hydraulic tool	5.00			2651.00	
Jars	5.00			2656.00	
Safety Joint	2.00			2658.00	
Top Packer	5.00			2663.00	
Packer	5.00			2668.00	27.00      Bottom Of Top Packer
Recorder	1.00	8365	Inside	2669.00	
Recorder	1.00	6755	Outside	2670.00	
Anchor	21.00			2691.00	
Bullnose	3.00			2694.00	26.00      Anchor Tool
<b>Total Tool Length:</b>	<b>53.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bruce Oil Company LLC  
1704 Limestone Rd  
McPherson KS 67460+6500  
ATTN: Bob Peterson

**5-9S-12W Osborne, KS**  
**Anne Marie #1**  
Job Ticket: 66281      **DST#: 1**  
Test Start: 2019.07.05 @ 23:54:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.18 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3500.00 ppm			
Filter Cake: 2.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
195.00	Mud 100%	1.041

Total Length: 195.00 ft      Total Volume: 1.041 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:

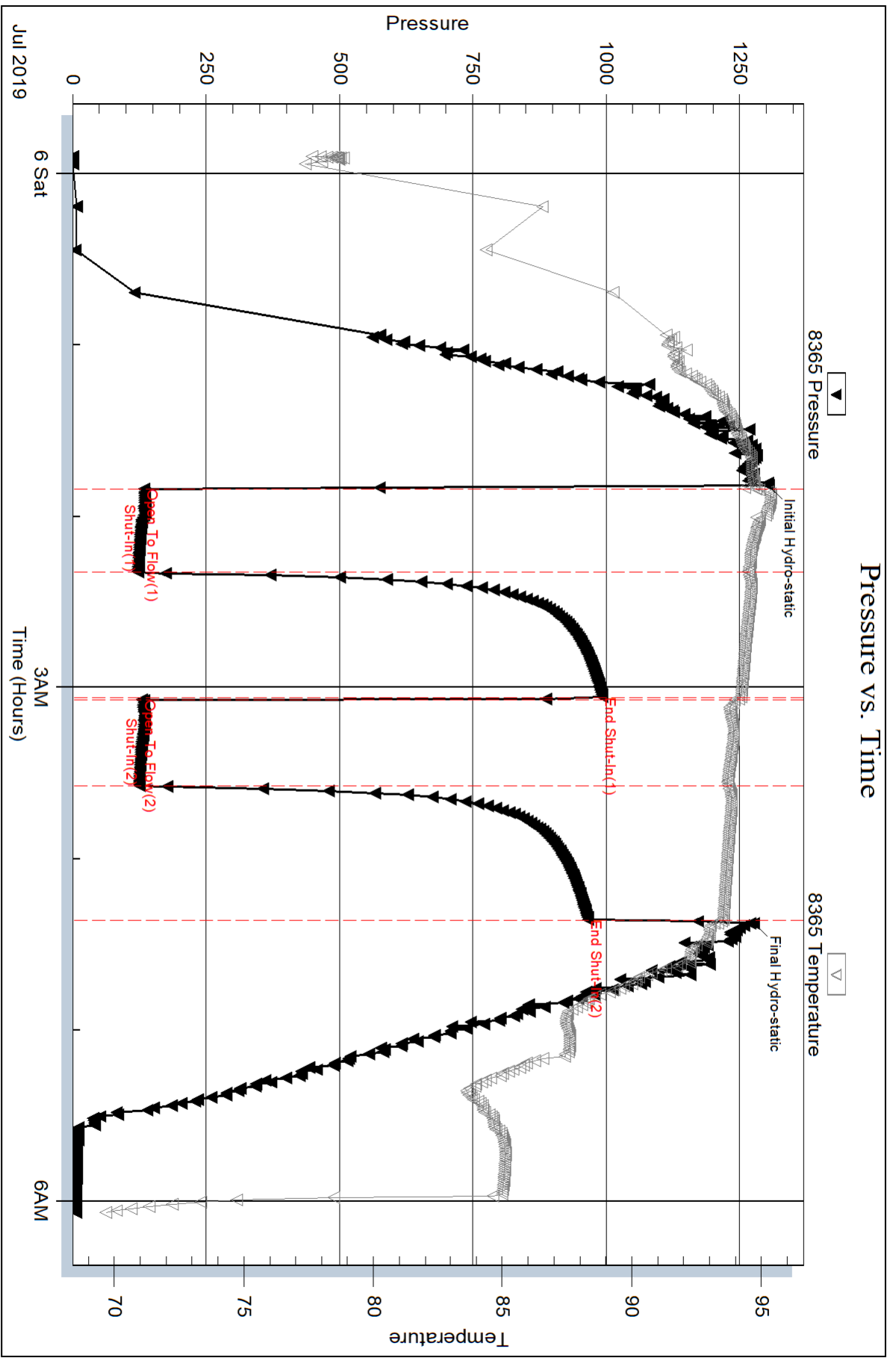
Serial #: 8365

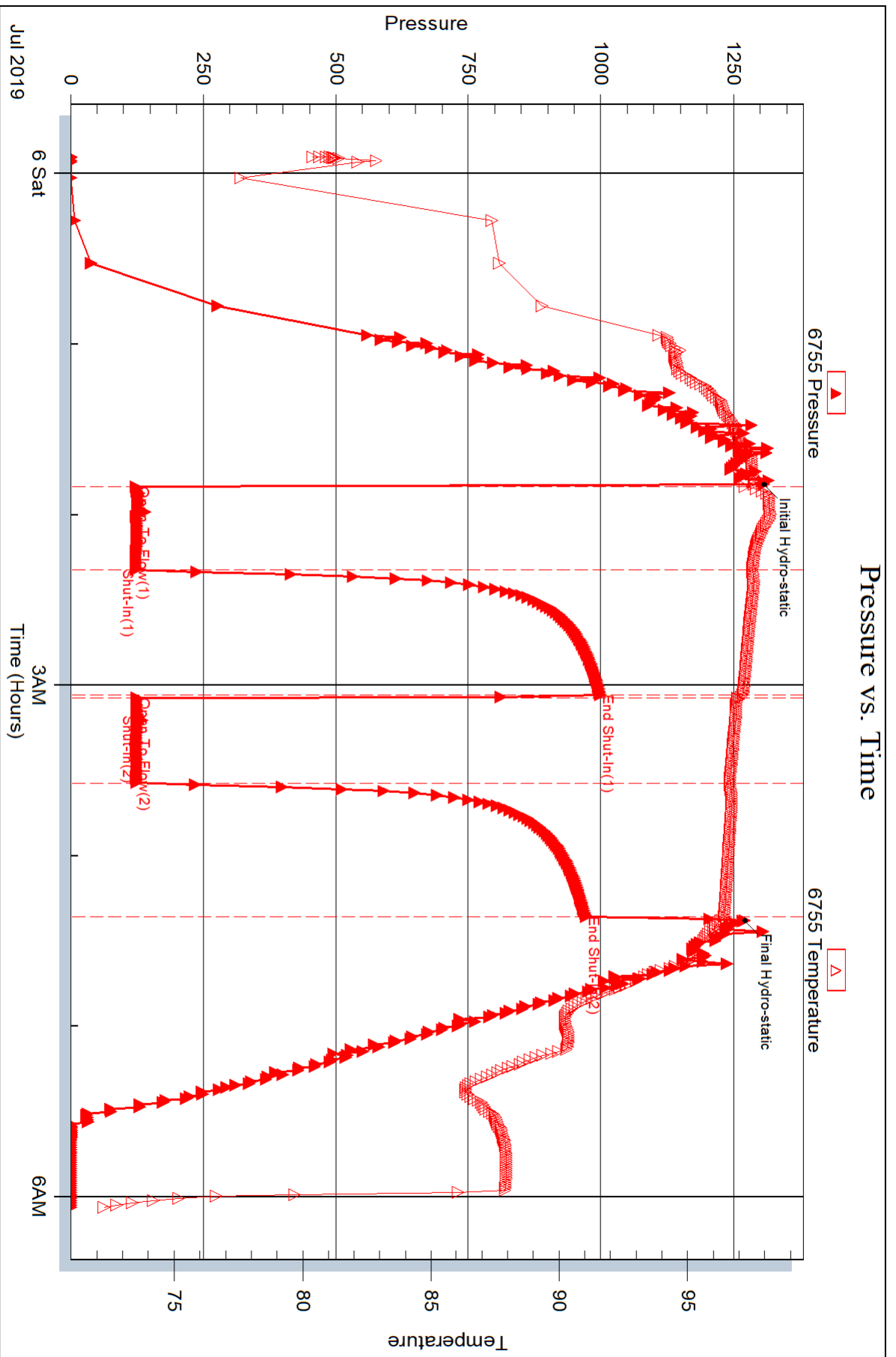
Inside

Bruce Oil Company LLC

Anne Marie #1

DST Test Number: 1









## DRILL STEM TEST REPORT

Prepared For: **Bruce Oil Company LLC**

1704 Limestone Rd  
McPherson KS 67460+6500

ATTN: Bob Peterson

**Anne Marie #1**

**5-9S-12W Osborne,KS**

Start Date: 2019.07.06 @ 21:56:00

End Date: 2019.07.07 @ 04:14:02

Job Ticket #: 66282                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.07.08 @ 14:40:56





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Bruce Oil Company LLC  
1704 Limestone Rd  
McPherson KS 67460+6500  
ATTN: Bob Peterson

**5-9S-12W Osborne, KS**

**Anne Marie #1**

Job Ticket: 66282 **DST#: 2**  
Test Start: 2019.07.06 @ 21:56:00

## GENERAL INFORMATION:

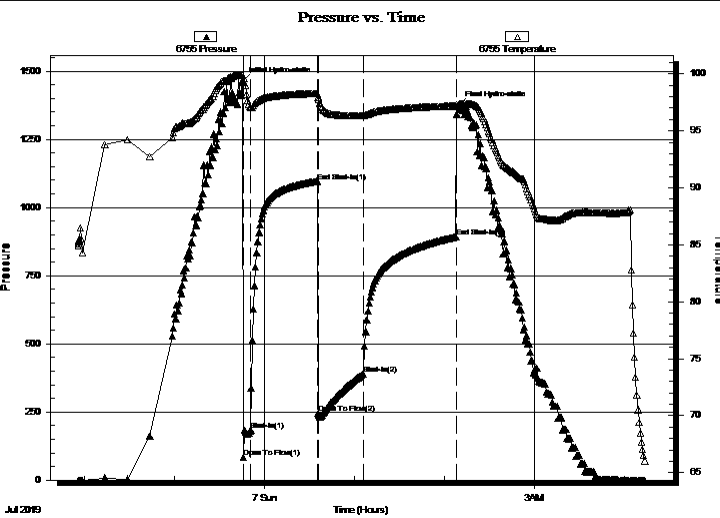
Formation: **LKC A**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 23:46:02  
Time Test Ended: 04:14:02  
Interval: **2917.00 ft (KB) To 2950.00 ft (KB) (TVD)**  
Total Depth: 2950.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Reference Elevations: 1703.00 ft (KB)  
1698.00 ft (CF)  
KB to GR/CF: 5.00 ft

## Serial #: 6755

## Outside

Press@RunDepth: 892.50 psig @ 2919.00 ft (KB) Capacity: psig  
Start Date: 2019.07.06 End Date: 2019.07.07 Last Calib.: 2019.07.07  
Start Time: 21:56:01 End Time: 04:14:02 Time On Btm: 2019.07.06 @ 23:45:17  
Time Off Btm: 2019.07.07 @ 02:09:02

TEST COMMENT: IF 5 Minutes/ Blow to BOB in 1 min 10 sec/ Total build 28 inches  
ISI 45 Minutes/ light surface blow back  
FF 30 Minutes/ Blow to BOB in 1 min 15 sec/ Total build 84 inches  
FSI 60 Minutes/ Blow back built to 7 inches



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1463.38	99.95	Initial Hydro-static
1	83.58	99.21	Open To Flow (1)
6	182.08	97.03	Shut-In(1)
50	1096.37	98.25	End Shut-In(1)
51	246.40	97.95	Open To Flow (2)
81	388.54	96.32	Shut-In(2)
143	892.50	97.21	End Shut-In(2)
144	1374.42	97.32	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
992.00	VSOCMW / O 5% M 5% W 90%	12.22
62.00	SOCMW / O 10% M 30% W 60%	0.87
30.00	GO/ G 5% W 95%	0.42
0.00	93 feet GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bruce Oil Company LLC  
1704 Limestone Rd  
McPherson KS 67460+6500  
ATTN: Bob Peterson

**5-9S-12W Osborne, KS**  
**Anne Marie #1**  
Job Ticket: 66282      **DST#: 2**  
Test Start: 2019.07.06 @ 21:56:00

**Tool Information**

Drill Pipe:	Length: 2713.00 ft	Diameter: 3.80 inches	Volume: 38.06 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 38000.00 lb
			<u>Total Volume: 38.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	2917.00 ft			Final 37000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut-In Tool	5.00			2895.00	
Hydraulic tool	5.00			2900.00	
Jars	5.00			2905.00	
Safety Joint	2.00			2907.00	
Top Packer	5.00			2912.00	
Packer	5.00			2917.00	27.00      Bottom Of Top Packer
Recorder	1.00	8365	Inside	2918.00	
Recorder	1.00	6755	Outside	2919.00	
Anchor	28.00			2947.00	
Bullnose	3.00			2950.00	33.00      Anchor Tool
<b>Total Tool Length:</b>	<b>60.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bruce Oil Company LLC

**5-9S-12W Osborne, KS**

1704 Limestone Rd  
McPherson KS 67460+6500

**Anne Marie #1**

Job Ticket: 66282

**DST#: 2**

ATTN: Bob Peterson

Test Start: 2019.07.06 @ 21:56:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

27000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6200.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
992.00	VSOCMW / O 5% M 5% W 90%	12.221
62.00	SOCMW / O10% M 30% W 60%	0.870
30.00	GO/ G 5% W 95%	0.421
0.00	93 feet GIP	0.000

Total Length: 1084.00 ft      Total Volume: 13.512 bbl

Num Fluid Samples: 0

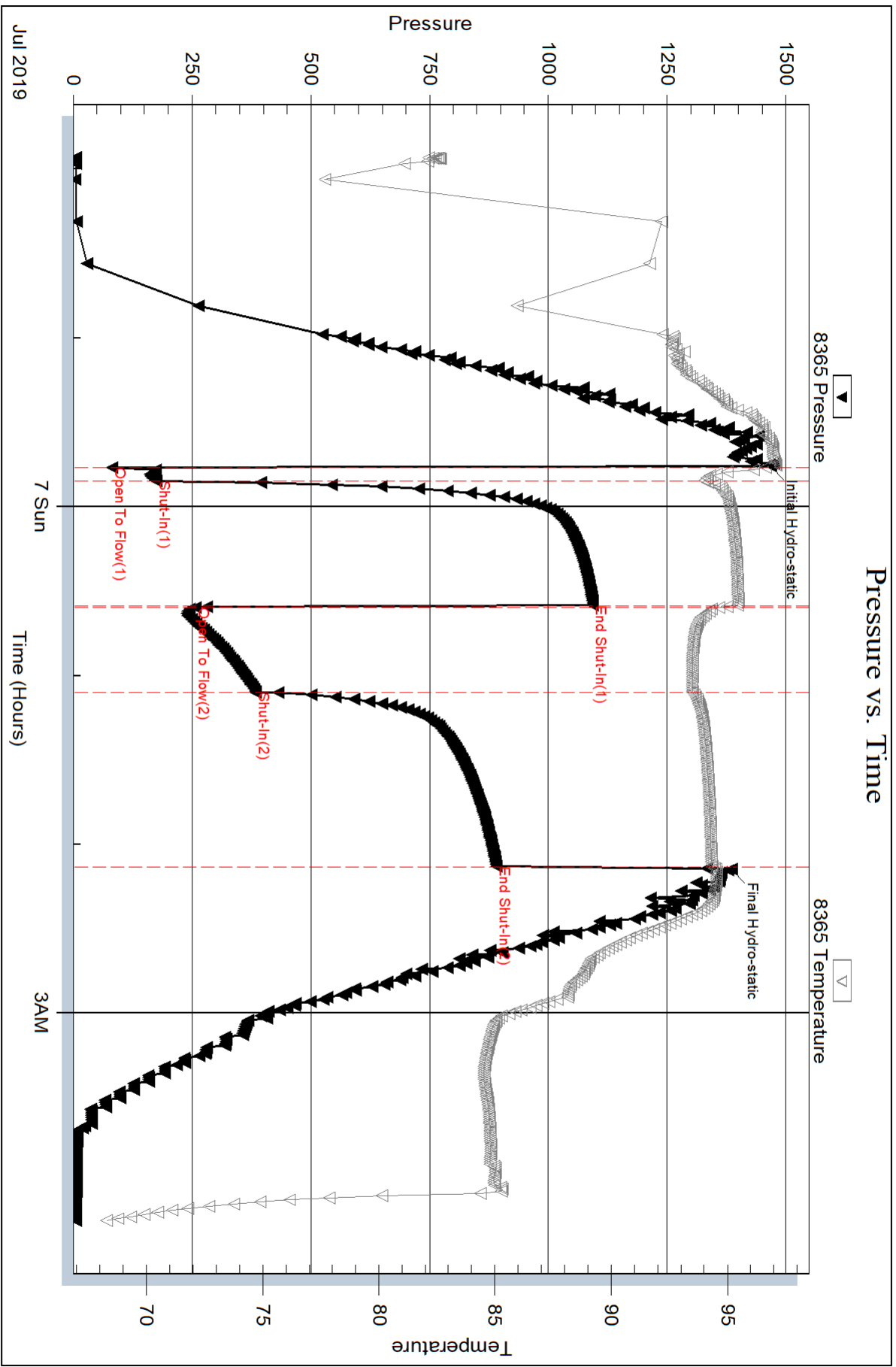
Num Gas Bombs: 0

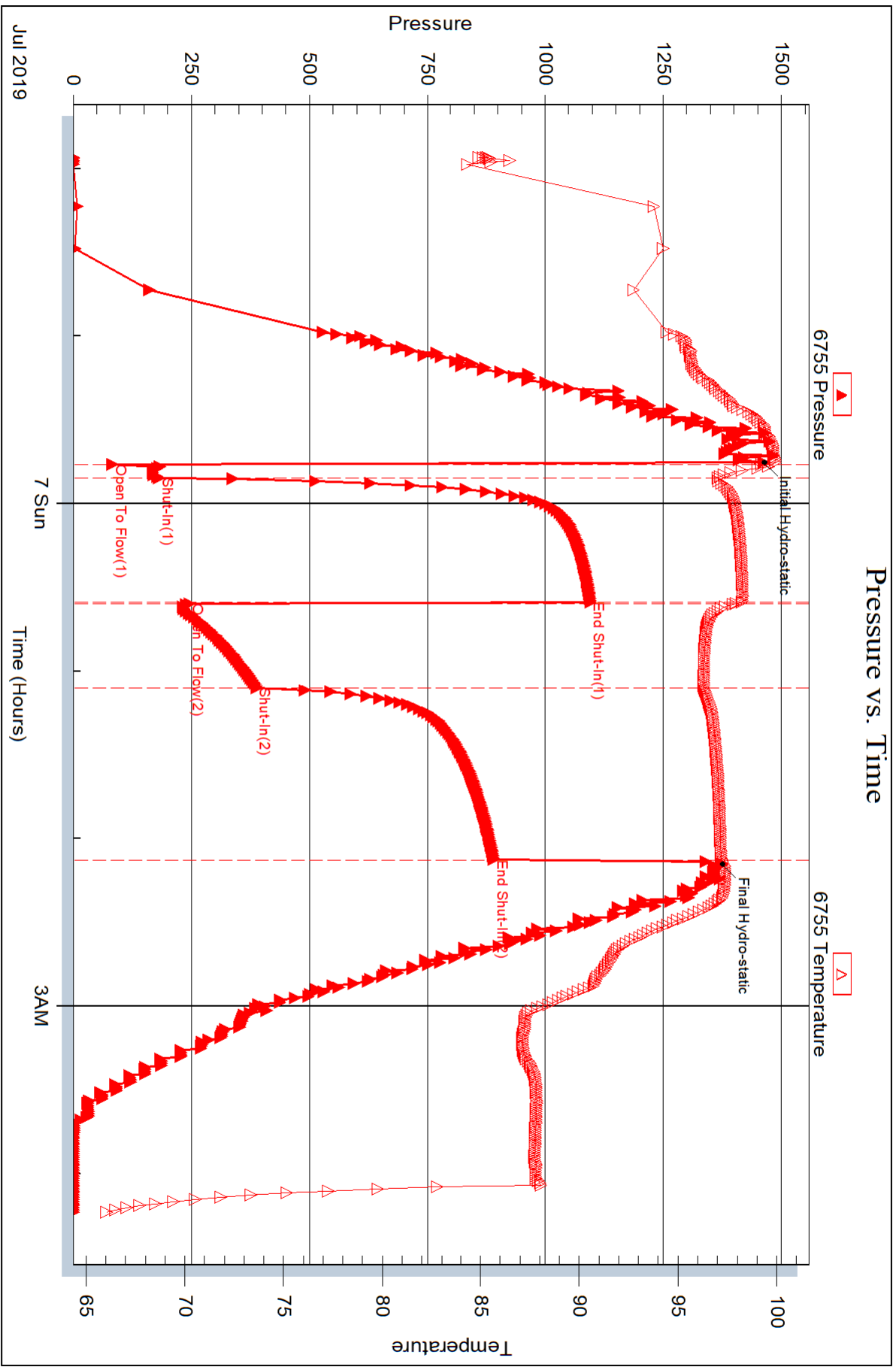
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Recovery Resistivity .247 ohms @ 68 deg.







## DRILL STEM TEST REPORT

Prepared For: **Bruce Oil Company LLC**

1704 Limestone Rd  
McPherson KS 67460+6500

ATTN: Bob Peterson

**Anne Marie #1**

**5-9S-12W Osborne,KS**

Start Date: 2019.07.07 @ 10:14:00

End Date: 2019.07.07 @ 15:30:02

Job Ticket #: 66283                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.07.08 @ 14:37:36





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bruce Oil Company LLC  
 1704 Limestone Rd  
 McPherson KS 67460+6500  
 ATTN: Bob Peterson

**5-9S-12W Osborne, KS**  
**Anne Marie #1**  
 Job Ticket: 66283 **DST#: 3**  
 Test Start: 2019.07.07 @ 10:14:00

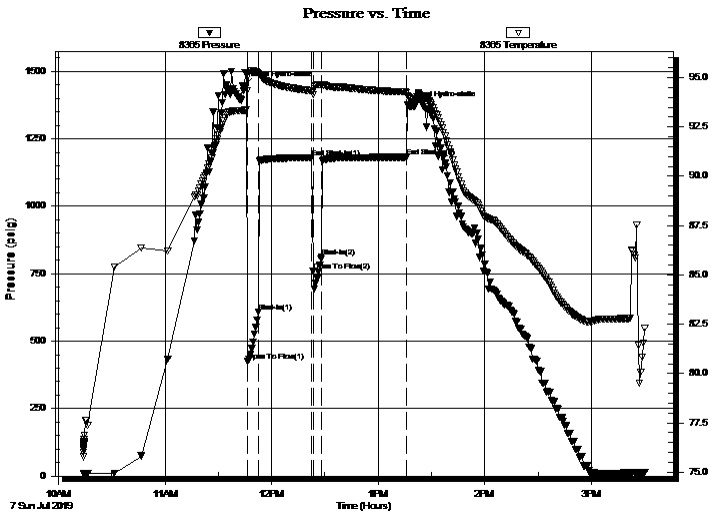
## GENERAL INFORMATION:

Formation: **LKC B**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 11:46:32 Tester: Ken Swinney  
 Time Test Ended: 15:30:02 Unit No: 72  
 Interval: **2958.00 ft (KB) To 2970.00 ft (KB) (TVD)** Reference Elevations: 1703.00 ft (KB)  
 Total Depth: 2970.00 ft (KB) (TVD) 1698.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

**Serial #: 8365 Inside**  
 Press@RunDepth: 812.98 psig @ 2959.00 ft (KB) Capacity: psig  
 Start Date: 2019.07.07 End Date: 2019.07.07 Last Calib.: 2019.07.07  
 Start Time: 10:14:01 End Time: 15:30:02 Time On Btm: 2019.07.07 @ 11:44:47  
 Time Off Btm: 2019.07.07 @ 13:17:02

**TEST COMMENT:** IF 5 Minutes/ Blow to BOB in 30 sec. Total build 155 inches  
 ISI 30 Minutes/ Light surface blow back  
 FF 5 Minutes/ Blow to BOB in 30 sec Total build 127 inches  
 FSI 45 Minutes/ Light surface blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1447.80	93.34	Initial Hydro-static
2	424.60	94.33	Open To Flow (1)
8	606.49	95.20	Shut-In(1)
38	1180.01	94.32	End Shut-In(1)
39	759.57	94.15	Open To Flow (2)
44	812.98	94.62	Shut-In(2)
91	1181.68	94.24	End Shut-In(2)
93	1372.95	94.01	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
341.00	MW/ Muddy Water/ M 30% W 70%	3.62
1054.00	MCW/ M 5% W 95%	14.78

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bruce Oil Company LLC  
 1704 Limestone Rd  
 McPherson KS 67460+6500  
 ATTN: Bob Peterson

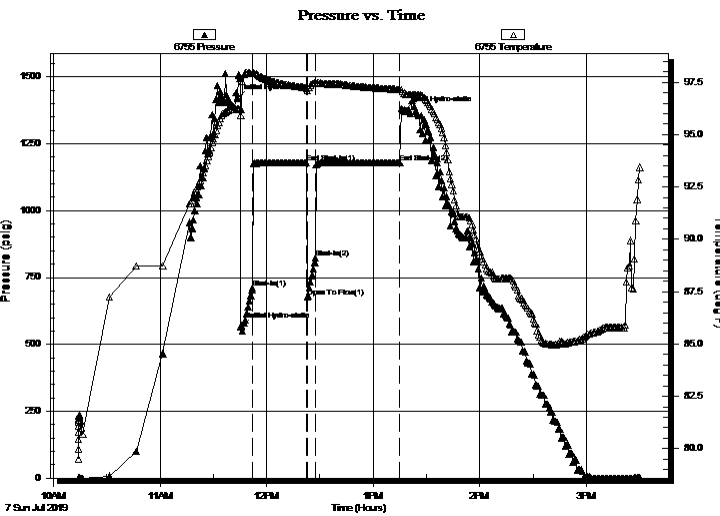
**5-9S-12W Osborne, KS**  
**Anne Marie #1**  
 Job Ticket: 66283 **DST#: 3**  
 Test Start: 2019.07.07 @ 10:14:00

## GENERAL INFORMATION:

Formation: **LKC B**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:46:32  
 Time Test Ended: 15:30:02  
 Interval: **2958.00 ft (KB) To 2970.00 ft (KB) (TVD)**  
 Total Depth: 2970.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ken Swinney  
 Unit No: 72  
 Reference Elevations: 1703.00 ft (KB)  
 1698.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 6755 Outside**  
 Press@RunDepth: 1179.99 psig @ 2960.00 ft (KB) Capacity: psig  
 Start Date: 2019.07.07 End Date: 2019.07.07 Last Calib.: 2019.07.07  
 Start Time: 10:14:01 End Time: 15:30:02 Time On Btm: 2019.07.07 @ 11:43:47  
 Time Off Btm: 2019.07.07 @ 13:17:17

**TEST COMMENT:** IF 5 Minutes/ Blow to BOB in 30 sec. Total build 155 inches  
 ISI 30 Minutes/ Light surface blow back  
 FF 5 Minutes/ Blow to BOB in 30 sec Total build 127 inches  
 FSI 45 Minutes/ Light surface blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1417.11	96.20	Initial Hydro-static
2	565.45	95.91	Initial Hydro-static
9	711.47	97.92	Shut-In(1)
39	1179.26	97.20	End Shut-In(1)
40	677.19	97.11	Open To Flow (1)
44	822.65	97.47	Shut-In(2)
92	1179.99	97.15	End Shut-In(2)
94	1374.80	96.97	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
341.00	MW/ Muddy Water/ M 30% W 70%	3.62
1054.00	MCW/ M 5% W 95%	14.78

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bruce Oil Company LLC  
1704 Limestone Rd  
McPherson KS 67460+6500  
ATTN: Bob Peterson

**5-9S-12W Osborne, KS**  
**Anne Marie #1**  
Job Ticket: 66283      **DST#: 3**  
Test Start: 2019.07.07 @ 10:14:00

**Tool Information**

Drill Pipe:	Length: 2839.00 ft	Diameter: 3.80 inches	Volume: 39.82 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 128.00 ft	Diameter: 2.25 inches	Volume: 0.63 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 40.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	36.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	2958.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	39.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut-In Tool	5.00			2936.00	
Hydraulic tool	5.00			2941.00	
Jars	5.00			2946.00	
Safety Joint	2.00			2948.00	
Packer - Shale	5.00			2953.00	
Packer	5.00			2958.00	27.00      Bottom Of Top Packer
Recorder	1.00	8365	Inside	2959.00	
Recorder	1.00	6755	Outside	2960.00	
Anchor	7.00			2967.00	
Bullnose	3.00			2970.00	12.00      Anchor Tool
<b>Total Tool Length:</b>	<b>39.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bruce Oil Company LLC

**5-9S-12W Osborne, KS**

1704 Limestone Rd  
McPherson KS 67460+6500

**Anne Marie #1**

Job Ticket: 66283

**DST#: 3**

ATTN: Bob Peterson

Test Start: 2019.07.07 @ 10:14:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

90000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6200.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
341.00	MW/ Muddy Water/ M 30% W 70%	3.617
1054.00	MCW/ M 5% W 95%	14.785

Total Length: 1395.00 ft      Total Volume: 18.402 bbf

Num Fluid Samples: 0

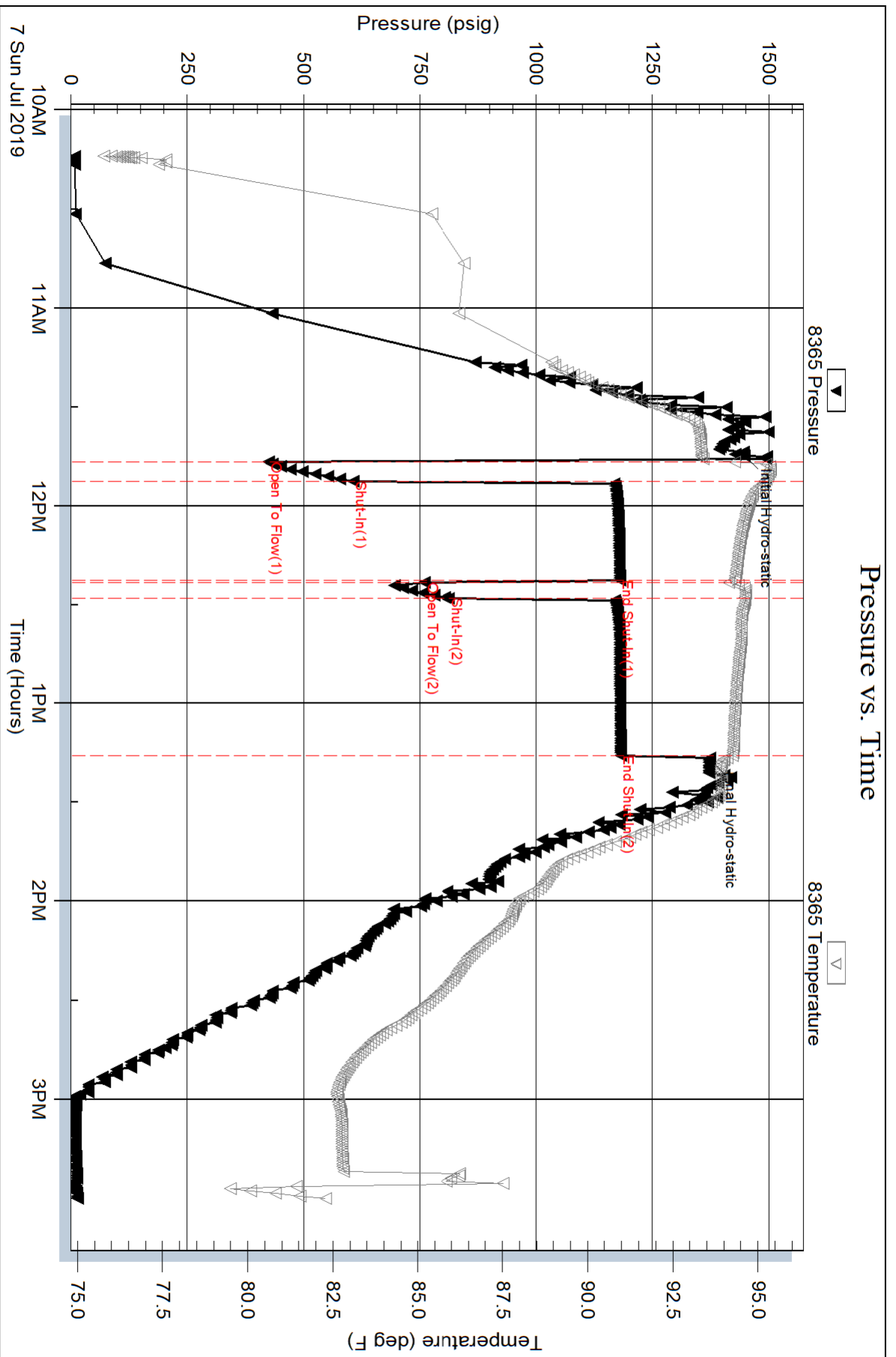
Num Gas Bombs: 0

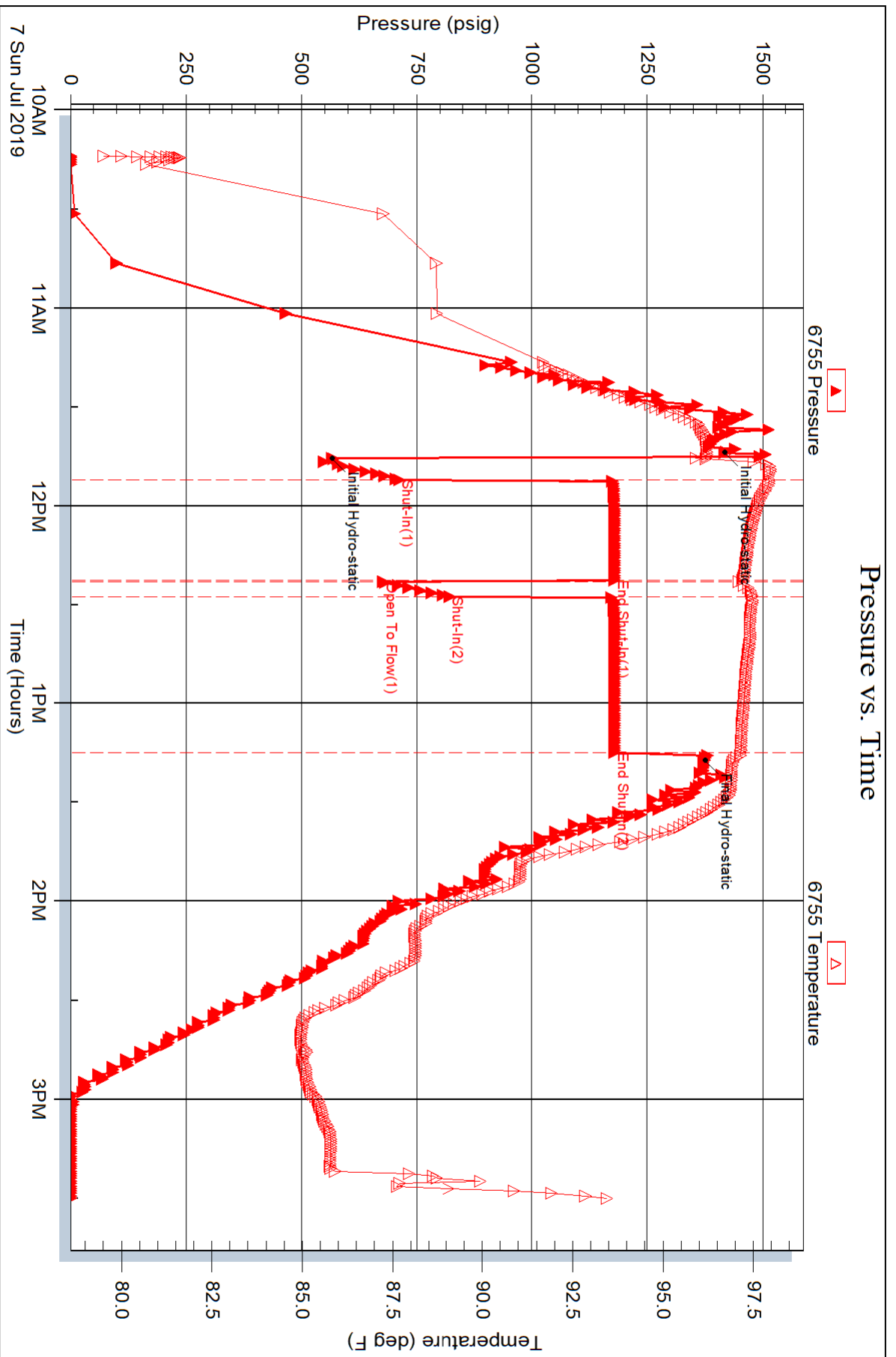
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Recovery Resistivity .065 ohms @ 90 deg







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket 66281

NO.

Well Name & No. Anne Marie #1 Test No. 1 Date 6 JUL 19  
 Company Bruce Oil Company LLC Elevation 1703 KB 1698 GL  
 Address 1704 Limestone RD McPherson KS 67460+6500  
 Co. Rep / Geo. Bob Peterson Rig Murfin Rig 8  
 Location: Sec. 5 Twp 9S Rge. 12W Co. Osborne State KS

Interval Tested 2668-2694 Zone Tested Topeka  
 Anchor Length 26 Drill Pipe Run 2459 Mud Wt. 8.7  
 Top Packer Depth 2663 Drill Collars Run 186 Vis 62  
 Bottom Packer Depth 2668 Wt. Pipe Run \_\_\_\_\_ WL 7.2  
 Total Depth 2694 Chlorides 3500 ppm System LCM 2#

Blow Description IF Tool slide 12 feet BOB in 20 seconds no build after slide / Bleed pressure  
ISF No bobback Flush tool 1/4 inch build  
FF Few bubbles at open then dead  
FSI No blow back

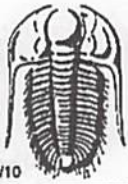
Rec	Feet of	%gas	%oil	%water	%mud
<u>195</u>	<u>mud</u>				<u>100%</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Rec Total 195 BHT 95 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1304  Test 1200 T-On Location 11:29 pm  
 (B) First Initial Flow 133  Jars 250 T-Started 11:54 pm  
 (C) First Final Flow 122  Safety Joint 75 T-Open 1:48 am  
 (D) Initial Shut-In 992  Circ Sub \_\_\_\_\_ T-Pulled 4:18 am  
 (E) Second Initial Flow 129  Hourly Standby \_\_\_\_\_ T-Out 6:05 am  
 (F) Second Final Flow 124  Mileage 128 128 Comments \_\_\_\_\_  
 (G) Final Shut-In 966  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1276  Straddle \_\_\_\_\_  EM Tool \_\_\_\_\_  
 Initial Open 30  Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Final Shut-In 45  Day Standby \_\_\_\_\_ Sub Total 0  
 Sub Total 1653  Accessibility \_\_\_\_\_ Total 1653  
 Sub Total 1653 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket 66282

NO.

Well Name & No. Anne Marie #1 Test No. 2 Date 6 JUL 19  
 Company Bruce Oil Company LLC Elevation 1703 KB 1698 GL  
 Address 1704 Limestone Rd McPherson Kansas 67460+6500  
 Co. Rep / Geo. Bob Peterson Rig Murphy Rig 8  
 Location: Sec. 5 Twp 9S Rge. 12W Co. Osborne State KS

Interval Tested 2917-2950 Zone Tested Lansing/Kansas City zone A  
 Anchor Length 33 Drill Pipe Run 2713 Mud Wt. 9.0  
 Top Packer Depth 2912 Drill Collars Run 186 Vis 5-2  
 Bottom Packer Depth 2917 Wt. Pipe Run — WL 7.6  
 Total Depth 2950 Chlorides 6200 ppm System LCM 24

Blow Description IF Blow to BOB in 1min 15 sec / Total build 28 inches  
ISI Light surface blow back  
FF Blow to BOB 1min 15 sec / Total build 84 inches  
FSI Blow back built to 7 inches

Rec	Feet of	%gas	%oil	%water	%mud
<u>992</u>	<u>VSOCMW</u>	<u>5</u>	<u>90</u>	<u>5</u>	
<u>62</u>	<u>SOCMW</u>	<u>10</u>	<u>60</u>	<u>30</u>	
<u>30</u>	<u>GO</u>	<u>5</u>	<u>95</u>		
<u>93</u>	<u>GIP</u>	<u>100</u>			

Rec Total BHT 95 Gravity API RW 247 @ 68 °F Chlorides 27000 ppm  
 (A) Initial Hydrostatic 1467  Test 1200 T-On Location 9:16 pm  
 (B) First Initial Flow 81  Jars 250 T-Started 9:56 pm  
 (C) First Final Flow 175  Safety Joint 75 T-Open 11:46 pm  
 (D) Initial Shut-In 1094  Circ Sub \_\_\_\_\_ T-Pulled 2:06 am  
 (E) Second Initial Flow 257  Hourly Standby \_\_\_\_\_ T-Out 4:15 am  
 (F) Second Final Flow 383  Mileage 128 128 Comments \_\_\_\_\_  
 (G) Final Shut-In 891  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1385  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 5  EM Tool \_\_\_\_\_  
 Initial Shut-In 45  Ruined Shale Packer \_\_\_\_\_  
 Final Flow 30  Ruined Packer \_\_\_\_\_  
 Final Shut-In 60  Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1653  
 Sub Total 1653 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative \_\_\_\_\_

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket 66283

NO.

Well Name & No. Anne Marie #1 Test No. 3 Date 7 JUL 19  
 Company Bruce O. I Company LLC Elevation 1703 KB 1698 GL  
 Address 1704 Limestone Rd McPhearson KS 67460+6500  
 Co. Rep / Geo. Bob Peterson Rig Murfin Rig 8  
 Location: Sec. 5 Twp 9S Rge. 12W Co. Osborne State KS

Interval Tested 2958-2970 Zone Tested Lansing/Kansas City zone B  
 Anchor Length 12 Drill Pipe Run 2839 Mud Wt. 9.0  
 Top Packer Depth 2953 Drill Collars Run 186 Vis 52  
 Bottom Packer Depth 2958 Wt. Pipe Run - WL 7.6  
 Total Depth 2970 Chlorides 6200 ppm System LCM 2#

Blow Description IF Blow to BOB 30 sec. Total build 155 inches  
ISF Light surface blow back  
FF Blow to BOB in 30 sec. Total build 127 inches  
FSI Light surface blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>341</u>	<u>MW</u>			<u>70%</u>	<u>30%</u>
<u>1064</u>	<u>MCW</u>			<u>95%</u>	<u>5%</u>

Rec Total 1395 BHT 94 Gravity API RW 1.065 @ 90 ° F Chlorides 90000 ppm

(A) Initial Hydrostatic <u>1447</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>9:07 am</u>
(B) First Initial Flow <u>424</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>10:14 am</u>
(C) First Final Flow <u>606</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>11:46 am</u>
(D) Initial Shut-In <u>1180</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1:11 pm</u>
(E) Second Initial Flow <u>759</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>3:31 pm</u>
(F) Second Final Flow <u>812</u>	<input checked="" type="checkbox"/> Mileage <u>128</u> 128	Comments _____
(G) Final Shut-In <u>1181</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>1372</u>	<input type="checkbox"/> Straddle	_____

Initial Open <u>5</u>	<input checked="" type="checkbox"/> Shale Packer	<input type="checkbox"/> EM Tool
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Shale Packer
Final Flow <u>5</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Ruined Packer
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Accessibility	Sub Total <u>0</u>
	Sub Total <u>1653</u>	Total <u>1653</u>
		MP/DST Disc't _____

Approved By \_\_\_\_\_ Our Representative [Signature]

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# 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. 1502

Date	Sec.	Twp.	Range	County	State	On Location	Finish
7-8-19	5	9	12	Ostome	KS		2:45 PM
Lease				Well No.		Owner	
Anne Marie				1		To Quality Oilwell Cementing, Inc.	
Contractor						You are hereby requested to rent cementing equipment and furnish	
munk #8						cement and helper to assist owner or contractor to do work as listed.	
Type Job				T.D.		Charge To	
Rotary Plug				2970		Bruce Oil	
Hole Size				Depth		Street	
7 7/8							
Csg.				Depth		City	
						State	
Tbg. Size				Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tool				Shoe Joint		Cement Amount Ordered	
						225 <sup>60/40</sup> 4:42 <sup>1/4</sup> 1970	
Cement Left in Csg.							
Meas Line				Displace			
<b>EQUIPMENT</b>						Common	
Pumptrk 1				No. Cementer		135	
				Helper		90	
Bulktrk				No. Driver		8	
				Driver			
Bulktrk 3				No. Driver		Calcium	
				Driver			
<b>JOB SERVICES &amp; REMARKS</b>						Hulls	
Remarks:						Salt	
Rat Hole						Flowseal	
30SK						507A	
Mouse Hole						Kol-Seal	
15SK							
Centralizers						Mud CLR 48	
Baskets						CFL-117 or CD110 CAF 38	
D/V or Port Collar						Sand	
1st 855				50SK		Handling	
2nd 600				80SK		233	
3rd 270				40SK		Mileage	
4th 40				40SK		FLOAT EQUIPMENT	
						8 9/8 Day/Hole Plug	
						Guide Shoe	
						Centralizer	
						Baskets	
						AFU Inserts	
						Float Shoe	
						Latch Down	
						Pumptrk Charge	
						Mileage	
						36 Plug	
X Signature <i>John Doherty</i>						Tax	
						Discount	
						Total Charge	

*Thanks*

# 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. 1501

Date	7-2-19	Sec.	5	Twp.	9	Range	12	County	Osborne	State	KS	On Location		Finish	7:00pm
Location								Loyal 13N 18E R4 IE S into							

Lease	Anne mare	Well No.	/	Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Contractor	moufin 8			Charge To	Bruce O. I
Type Job	Surface			Street	
Hole Size	12 1/4	T.D.	220	City	
Csg.	8 5/8	Depth	219	State	
Tbg. Size		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tool		Depth		Cement Amount Ordered	150 60/40 4/CC 2/662
Cement Left in Csg.	10	Shoe Joint			

Meas Line	Displace	1334	Common	90
<b>EQUIPMENT</b>			Poz. Mix	60
Pumptrk	17 No.	Cementer	Driver	3
		Helper	Driver	8
Bulktrk	No.	Driver	Driver	
Bulktrk	15 No.	Driver	Driver	

<b>JOB SERVICES &amp; REMARKS</b>		Hulls	
Remarks:		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	
8 5/8 on bottom Est Circulation.		Handling	161
Mix 150/40 Displace.		Mileage	
Cement Circulated!		<b>FLOAT EQUIPMENT</b> 8 5/8 Surge	
		Guide Shoe	
		Centralizer	
		Baskets	
		AFU Inserts	
		Float Shoe	
		Latch Down	

Pumptrk Charge	Surface	Tax	
Mileage	36	Discount	
Signature <i>[Signature]</i>		Total Charge	