KOLAR Document ID: 1380473

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 # 30606
Name: Murfin Drilling Co., Inc.
Address 1: 250 N WATER STE 300
Address 2:
City: WICHITA State: KS Zip: 67202 + 1216
Contact Person: Tom Melland
Phone: (316) 267-3241
CONTRACTOR: License # 30606
Name: Murfin Drilling Co., Inc.
Wellsite Geologist: Robert Hendrix
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 #:

11/13/2017 Spud Date or Recompletion Date
11/22/2017 Date Reached TD
11/23/2017 Completion Date or Recompletion Date

API No.: 15-187-21339-00-00
Spot Description:
_ - SW - SW - SE Sec. 36 Twp. 29 S. R. 41 ☐ East ☑ West
330 Feet from ☐ North / ☑ South Line of Section
2310 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Stanton
Lease Name: JANET Well #: 1-36
Field Name:
Producing Formation: NA
Elevation: Ground: 3351 Kelly Bushing: 3362
Total Vertical Depth: 5750 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1755 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: 1300 ppm Fluid volume: 700 bbls
Dewatering method used: Evaporated
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: 01/18/2018
☑ **Confidential Release Date:** 01/18/2020
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 01/26/2018

Operator Name: Murfin Drilling Co., Inc. Lease Name: JANET Well #: 1-36

Sec. 36 Twp. 29 S. R. 41 ☐ East ☑ West County: Stanton

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 *(Attach Additional Sheets)*	☑ Yes	☐ No	
Samples Sent to Geological Survey	☑ Yes	☐ No	
Cores Taken	☐ Yes	☑ No	
Electric Log Run	☑ Yes	☐ No	
Geologist Report / Mud Logs	☑ Yes	☐ No	

List All E. Logs Run:
Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
see attached	see attached	see attached

CASING RECORD ☑ New ☐ 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
Surface	12.250	8.625	24	1755	Lead, Tail	700	4% gel, 2% CCI

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	Top / Bottom

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	JANET 1-36
Doc ID	1380473

All Electric Logs Run

DIL
DUCP
MEL
BHCS

Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	JANET 1-36
Doc ID	1380473

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.250	8.625	24	1755	Lead, Tail	700	4% gel, 2% CCI

Robert D. Hendrix
Petroleum Geologist

GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY Murfin Drilling Company Inc.
LEASE Janet No. 1-36
FIELD
LOCATION 330'fsl & 2310'fel
SEC 36 TWSP 29s RGE 41w
COUNTY Stanton STATE Kansas
CONTRACTOR Murfin Drilling Co. Inc. Rig #21
SPUD 11/13/2017 COMP 11/23/2017
RTD 5750 LTD 5748
MUD UP 3461 TYPE MUD Chemical
SAMPLES SAVED FROM 3530 TO TD
DRILLING TIME KEPT FROM 3530 TO TD
SAMPLES EXAMINED FROM 3530 TO TD
GEOLOGICAL SUPERVISION FROM 3522
GEOLOGIST ON WELL Robert D. Hendrix

ELEVATIONS
KB 3362
DF
GL 3351
Measurements Are All From Kelly Bushing

CASING
CONDUCTOR
SURFACE 8-5/8" at 1754'
PRODUCTION None

ELECTRICAL SURVEYS
Dual Comp Por / Dual Induction
Microresistivity / Sonic

FORMATION TOPS	ELECTRIC LOG	SAMPLE
Anhydrite	1598 (+1764)	
Heebner Shale	3635 (-273)	3637 (-275)
Lansing	3694 (-332)	3700 (-338)
Stark Shale	4120 (-758)	4126 (-764)
Pleasanton	4314 (-952)	4319 (-957)
Ft. Scott	4507 (-1145)	4511 (-1149)
Morrow	5106 (-1744)	5113 (-1751)
Morrow Lime	5370 (-2008)	5373 (-2011)
Mississippi	5480 (-2118)	5512 (-2150)

36

API# 15-187-21339

REMARKS:

LEGEND
Anhydrite · Sandstone · Limestone · Shale · Carb Sh · Cherty LS · Chert · Dolomite

DRILLING TIME IN MINUTES PER FOOT (Rate of Penetration Decreases)	DEPTH	LITHOLOGY	GAS UNIT	SAMPLE DESCRIPTION	REMARKS

Limestone: white to tan, fxln, sl cherty, fossiliferous, no vis por

Limestone: tan to gray, fxln, cherty, oolitic, fossiliferous, no vis por

Limestone: tan to gray, fxln, sl cherty, pyritic, fossiliferous, no vis por

Shale: gray

Limestone: tan, fxln, dense, fossiliferous, no vis por

Limestone: tan, fxln, dense, sl cherty, fossiliferous, no vis por

Shale: black, dark gray, very friable, carbonaceous

Shale: gray, dark gray, some red

Limestone: tan, fxln, mostly dense, fossiliferous, no vis por

Shale: gray, green, red

Limestone: tan, fxln, dense, sl cherty, oolitic, fossiliferous, no vis por

Limestone: tan to brown, f-mxln, granular in part, fossiliferous, no vis por

Shale: gray, green, red

Limestone: tan to white, fxln, chalky, cherty, fossiliferous, no vis por

Limestone: tan to white, fxln, chalky, cherty, dense, no vis por

Shale: gray, red, soft silty

Limestone: tan to gray, f-mxln, fossiliferous, no vis por

Shale: gray, dark gray, silty

Limestone: tan, f-mxln, fossiliferous, no vis por

Shale: gray, red, silty

Limestone: white to lt gray, fxln, chalky, fossiliferous, no vis por

Shale: gray, silty

Limestone: white to tan to lt gray, fxln, v-chalky, fossiliferous, no vis por

Shale: gray, silty

Limestone: tan to white, f-mxln, chalky, oolitic, fossiliferous, fr oolicastic por, ns

Limestone: tan to white, m-lxln, v-chalky, oolitic, ex oolicastic por, ns

Limestone: tan to white, m-lxln, v-chalky, oolitic, ex oolicastic por, ns

Limestone: tan to white, mxln, v-chalky, oolitic, ex oolicastic por, ns

Limestone: tan to white, mxln, v-chalky, oolitic, ex oolicastic por, ns

Shale: gray, green, silty

Limestone: tan to brown, fxln, granular, sl chalky, sl cherty, fossiliferous, no vis por

Shale: gray

Shale/Siltstone: gray, blocky, dense

Limestone: tan to gray, fxln, sl chalky, pyritic, sl fossiliferous, no vis por

Shale: gray, blocky, silty

Limestone: tan to white, m-lxln, v-chalky, v-fossiliferous, fr vug por, ns

Shale: gray, blocky, silty
Limestone: lt gray to tan to white, m-lxln, v-chalky, v-fossiliferous, pr vug por, ns
Limestone: tan to lt gray, m-lxln, v-chalky, v-fossiliferous, pr vug por, ns

Limestone: tan to white, mxln, chalky, oolitic, fossiliferous, fr oolicastic por, ns

Limestone: gray to tan, m-lxln, v-chalky, oolitic, mostly pellatoidal, sl oolicastic por, ns

Shale: gray, black, red
Limestone: tan, m-lxln, oolitic, ex oolicastic por, ns

Limestone: tan, m-lxln, oolitic, ex oolicastic por, ns

Limestone: tan to white, f-mxln, chalky, oolitic, fossiliferous, fr oolicastic por, ns

Shale: gray, dark gray, red

Limestone: tan to white, f-mxln, chalky, oolitic, fossiliferous, fr oolicastic por, ns

Shale: gray, dark gray, blocky, silty

Limestone: tan to white, mxln, v-chalky, oolitic in part, fossiliferous, sl oolicastic por, ns

Shale: gray, dark gray, red

Limestone: gray to tan, fxln, sl cherty, dense, no vis por

Shale: gray, dark gray, silty

Limestone: gray to white, fxln, chalky, soft, sl fossiliferous, no vis por

Shale: gray, red

Limestone: brown, fxln, dense, no vis por

Shale: gray, silty, sandy

Shale: gray, fossiliferous, silty

Limestone: tan, fxln, dense, no vis por

Limestone: tan, mxln, v-chalky, oolitic, gd oolicastic por, ns

Limestone: tan to brown, fxln, sl cherty, dense, no vis por

Shale: gray, dark gray, black

Limestone: tan, mxln, chalky, oolitic, oolicastic por, ns

Limestone: tan, fxln, chalky, fossiliferous, no vis por

Shale: gray, black, green

Shale: gray, dark gray, black
Limestone: tan, fxln, sl chalky, sl fossiliferous, no vis por

Limestone: tan to white, f-mxln, sl chalky, oolitic, fossiliferous, no vis por, ns

Limestone: tan to brown, fxln, sl chalky, fossiliferous, no vis por, ns

Shale: dark gray, blocky, silty

Limestone: tan, fxln, dense, fossiliferous, no vis por, ns

Shale: dark to lt gray, silty

Limestone: gray to brown, f-mxln, chalky, oolitic in part, fossiliferous, no vis por, ns

Limestone: tan, f-mxln, chalky, sl fossiliferous, no vis por

Shale: black carbonaceous

Shale: dark to lt gray

Limestone: tan to white, f-mxln, v-chalky, fossiliferous, granular, no vis por
Shale: gray, dark gray, black

Limestone: tan, f-mxln, fossiliferous, granular, no vis por

Shale: dark gray, black, silty

Limestone: Tan to gray, f-mxln, chalky, granular, fossiliferous, no vis por

Shale: dark gray, black, silty

Limestone: tan, fxln, granular, sl fossiliferous, no vis por

Shale: dark gray, black, silty

Limestone: tan to brown, fxln, sl chalky, granular, sl fossiliferous, no vis por

Shale: dark gray, black, silty

Shale: dark gray, black, silty

Limestone: tan, fxln, fossiliferous, granular, no vis por

Shale: dark gray, black, silty

Limestone: tan to brown, fxln, chalky, fossiliferous, no vis por

Limestone: tan to lt gray, fxln, sl fossiliferous, granular in part, no vis por

Shale: dark gray, black, silty

Limestone: tan to brown, fxln, dense, sl fossiliferous, no vis por

Shale: dark gray, black, silty

Shale: dark gray, black, silty

Limestone: tan to brown, fxln, dense, sl fossiliferous, no vis por

Shale: dark gray, black

Limestone: brown, vfxln, dense, sl fossiliferous, no vis por

Limestone: brown, fxln, sl chalky, dense, fossiliferous, no vis por

Shale: dark gray, silty, black, carbonaceous

Limestone: tan to brown, v-fxln, dense, fossiliferous, no vis por

Shale: black, carbonaceous

Limestone: tan, fxln, dense sl fossiliferous, no vis por

Shale: black, carbonaceous, few small pieces of black chert intermingled in sample

Limestone: tan to brown, fxln, sl chalky, dense, no vis por

Shale: black, carbonaceous

Limestone: gray, fxln, dense, no vis por

Shale: black, carbonaceous

Limestone: gray to tan, fxln, dense, no vis por

Shale: black, carbonaceous

Limestone: gray, fxln, dense, no vis por

Shale: black, carbonaceous

Limestone: tan, fxln, fossiliferous, no vis por

Shale: black, carbonaceous

Limestone: tan to lt gray, fxln, granular, soft, sl fossiliferous, no vis por

Shale: black, carbonaceous

Shale: black, carbonaceous

Shale: black, carbonaceous

Limestone: tan to gray, fxln, granular, no vis por

Shale: black

Sample:
Flood of black shale some carbonaceous with few pieces of:
Sandstone: 2 small clusters and a few individual grains, gray to white, fn to coarse grained, poorly sorted, sub round, no show noted, no fluorescence, a 225 unit gas kick.

Shale: black, dark gray, silty

Shale: dark gray, silty, black

Shale: dark gray, silty, black

Shale: dark gray, silty, black

Limestone: gray, fxln, dense, sl fossiliferous, sandy, no vis por

Limestone: gray, fxln, dense, sl fossiliferous, sandy, no vis por

Sandstone: gray, lt, glauconitic, med-crse grained, sub-angular to angular, moderately sorted, very calcareous with limestone in matrix, no vis por, ns

Shale: dark gray, silty, black

Shale: dark gray, silty, black, carbonaceous

Sandstone: clear to white, lt, glauconitic in top, fn-med grained, sub-md to md, well sorted, calcareous, no vis por, 3 pieces lt brown stain?, nfo, no odor
Some sandstone clusters present were clear, biotitic, sub-angular, med to coarse grained, poorly sorted, calcareous, no vis por, ns

Note:
All samples still contain a flood of black to dark gray shale

Limestone: lt gray to white, f-mxln, v-sandy, sl chalky, no vis por

Note:
All samples still contain a flood of black to dark gray shale

Limestone: lt gray to white, f-mxln, oolitic, sl chalky, no vis por

Note:
samples reducing to a 50/50 amt black to dark gray shale

Limestone: white to tan, f-mxln, oolitic in part, v-chalky, no vis por, ns

Limestone: white to tan, f-mxln, oolitic, v-chalky, pyritic, no vis por, ns

Sandstone: clear, lt, glauconitic, biotitic, sub-round, fn-med grained, moderately sorted, calcareous, no vis por, no fluorescence

Dolomite: gray, v-fxln, hard, no vis por, ns

Limestone: white to tan, fxln, sl micro oolitic, sl sandy, chalky, soft, no vis por, ns

Limestone: tan to brown, fxln, cherty (orange) no vis por, ns

Limestone: white to tan, fxln, sl micro oolitic, sl sandy, chalky, soft, no vis por, ns

Limestone: tan to brown, fxln, dense, cherty, no vis por, ns

Dolomite: gray to brown, v-fxln, hard, no vis por, ns

Limestone: brown, v-fxln, dense, sl oolitic, fossiliferous, no vis por, ns

Limestone: white to brown, mxln, oolitic, chalky, granular, sl fossiliferous, no vis por, ns

30 min sample
Anhydrite: white, soft, laminated in part
Limestone: brown, f-mxln, some dense, sl oolitic, sl cherty, fossiliferous, granular in part, no vis por, ns

60 min sample
Limestone: brown, f-mxln, some dense, sl oolitic, cherty, fossiliferous, granular in part, no vis por, ns

Remarks:

Geologist on location 3522' at 12:51 am 11/18/2017

Heebner Shale 3637 (-275)

8:00am, 11/18/2017

Lansing 3700 (-338)

wt 9.15, vis. 53, lcm 6#
Mud-Co, Justin Whiting

Stark Shale 4126 (-764)

Wiper trip at 4300'

Pleasanton 4319 (-957)

8:00am, 11/19/2017

Ft Scott 4557 (-1149)

Atoka 4792 (-1430)

wt 9.2, vis. 77, lcm 12#
Mud-Co, Justin Whiting

DST #1
5109-5162
30-60-30-60
1st open: few bubbles blow died 20 min
2nd open: no blow
Rec:
45' mud
hydro: 2446-2437 psi
if: 22-48 psi
ff: 31-41 psi
sip: 70-52 psi
bht:117° F

Morrow 5113 (-1751)

8:00am, 11/20/2017
wt 9.1, vis. 65, lcm 10#
Mud-Co, Justin Whiting

Morrow Lime 5373 (-2011)

DST #2
5379-5521
30-60-60-90
1st open: 1/4" blow died in 5 min
2nd open: surface blow died in 3 min
Rec:
50' mud
hydro: 2691-2631 psi
if: 26-32 psi
ff: 32-38 psi
sip: 97-139 psi
bht: 126° F

8:00am, 11/21/2017

wt 9.35, vis. 61, lcm 10#
Mud-Co, Justin Whiting

Mississippian 5512 (-2150)

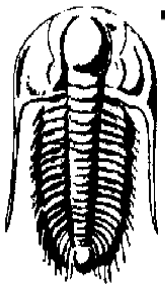
Note: recirculating gas kick at test reached 350 units.
A pill was spotted before test to bring down the LCM to below 8#.
The test was conducted with 5# LCM

8:00am, 11/22/2017

RTD 5750 (-2388)

Geologist off location at 4:15am, 11/23/2017

Murfin Drilling Co Inc.
Janet No. 1-36
330'fsl & 2310'fel
36-29s-41w, Stanton County, Kansas
KB=3362', GL=3351'
API: 15-187-21339



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water Suite 300
Wichita, KS 67202+1216

ATTN: Robert Hendrix

Janet # 1-36

36-29S-41W Stanton,KS

Start Date: 2017.11.20 @ 11:06:00

End Date: 2017.11.20 @ 18:44:02

Job Ticket #: 62087 DST #: 1

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.11.22 @ 14:09:07

DRILL STEM TEST REPORT

Murfin Drilling Company

250 N Water Suite 300
Wichita, KS 67202+1216

ATTN: Robert Hendrix

36-29S-41W Stanton,KS

Janet # 1-36

Job Ticket: 62087 **DST#: 1**

Test Start: 2017.11.20 @ 11:06:00

GENERAL INFORMATION:

Formation: **Morrow Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:25:32
Time Test Ended: 18:44:02

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72

Interval: 5109.00 ft (KB) To 5162.00 ft (KB) (TVD)
Total Depth: 5162.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

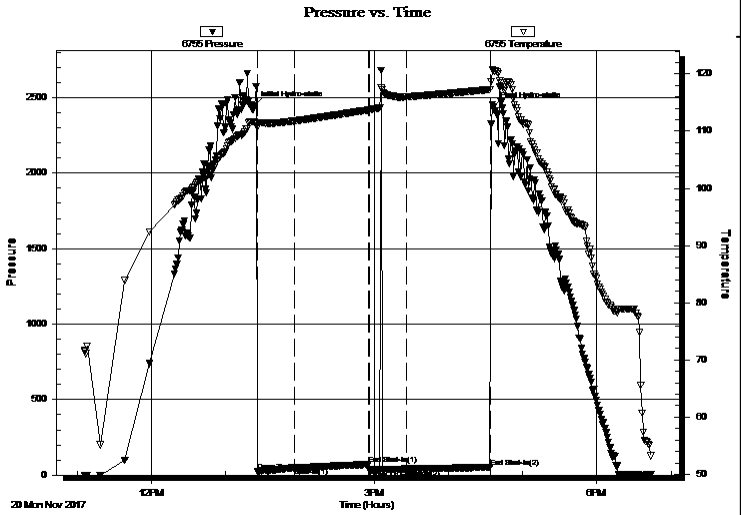
Reference Elevations: 3362.00 ft (KB)
3351.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6755 **Inside**

Press@RunDepth: 41.00 psig @ 5158.42 ft (KB)
Start Date: 2017.11.20 End Date: 2017.11.20
Start Time: 11:06:01 End Time: 18:44:02

Capacity: psig
Last Calib.: 2017.11.20
Time On Btm: 2017.11.20 @ 13:23:17
Time Off Btm: 2017.11.20 @ 16:36:17

TEST COMMENT: IFP 30 Minutes Few bubbles at open then dead
ISI 60 Minutes No blow back
FFP 30 Minutes Dead no blow - Flushed tool no help
FSI 60 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2446.00	111.56	Initial Hydro-static
3	22.78	110.66	Open To Flow (1)
32	48.70	111.78	Shut-In(1)
92	70.01	113.69	End Shut-In(1)
93	31.66	113.70	Open To Flow (2)
123	41.00	116.00	Shut-In(2)
191	52.15	117.30	End Shut-In(2)
193	2437.51	120.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud 100%	0.22

Gas Rates

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

DRILL STEM TEST REPORT

Murfin Drilling Company

250 N Water Suite 300
Wichita, KS 67202+1216

ATTN: Robert Hendrix

36-29S-41W Stanton,KS

Janet # 1-36

Job Ticket: 62087 **DST#: 1**

Test Start: 2017.11.20 @ 11:06:00

GENERAL INFORMATION:

Formation: **Morrow Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:25:32
Time Test Ended: 18:44:02

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72

Interval: 5109.00 ft (KB) To 5162.00 ft (KB) (TVD)
Total Depth: 5162.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

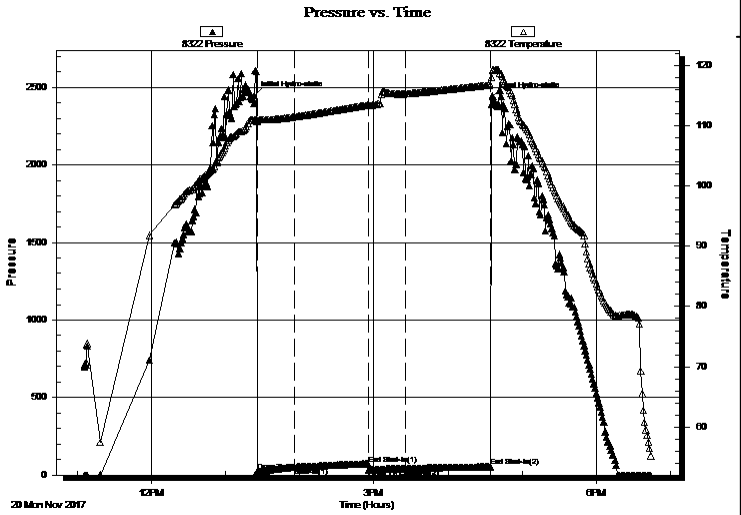
Reference Elevations: 3362.00 ft (KB)
3351.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8322 **Outside**

Press@RunDepth: 54.62 psig @ 5159.42 ft (KB)
Start Date: 2017.11.20 End Date: 2017.11.20
Start Time: 11:06:01 End Time: 18:44:02

Capacity: psig
Last Calib.: 2017.11.20
Time On Btm: 2017.11.20 @ 13:23:17
Time Off Btm: 2017.11.20 @ 16:36:17

TEST COMMENT: IFP 30 Minutes Few bubbles at open then dead
ISI 60 Minutes No blow back
FFP 30 Minutes Dead no blow - Flushed tool no help
FSI 60 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2447.65	110.93	Initial Hydro-static
3	22.67	110.65	Open To Flow (1)
33	51.58	111.44	Shut-In(1)
92	73.10	113.39	End Shut-In(1)
93	32.96	113.38	Open To Flow (2)
123	42.93	115.28	Shut-In(2)
191	54.62	116.77	End Shut-In(2)
193	2439.47	119.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud 100%	0.22

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

250 N Water Suite 300
Wichita, KS 67202+1216

ATTN: Robert Hendrix

36-29S-41W Stanton,KS

Janet # 1-36

Job Ticket: 62087 **DST#: 1**

Test Start: 2017.11.20 @ 11:06:00

Tool Information

Drill Pipe:	Length:	4833.00 ft	Diameter:	3.80 inches	Volume:	67.79 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:	273.00 ft	Diameter:	2.25 inches	Volume:	1.34 bbl	Weight to Pull Loose:		90000.00 lb
					Total Volume:	69.13 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		25.00 ft					String Weight:	Initial	70000.00 lb
Depth to Top Packer:		5109.00 ft						Final	70000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		53.42 ft							
Tool Length:		81.42 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			5086.00		
Hydraulic tool	5.00			5091.00		
Jars	6.00			5097.00		
Safety Joint	2.00			5099.00		
Packer - Shale	5.00			5104.00		
Packer	5.00			5109.00	28.00	Bottom Of Top Packer
Anchor	15.00			5124.00		
Change Over Sub	1.00			5125.00		
Drill Pipe	31.42			5156.42		
Change Over Sub	1.00			5157.42		
Recorder	1.00	6755	Inside	5158.42		
Recorder	1.00	8322	Outside	5159.42		
Bullnose	3.00			5162.42	53.42	Anchor Tool
Total Tool Length:	**81.42**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

250 N Water Suite 300
Wichita, KS 67202+1216

ATTN: Robert Hendrix

36-29S-41W Stanton,KS

Janet # 1-36

Job Ticket: 62087 **DST#: 1**

Test Start: 2017.11.20 @ 11:06:00

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:	65.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2950.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

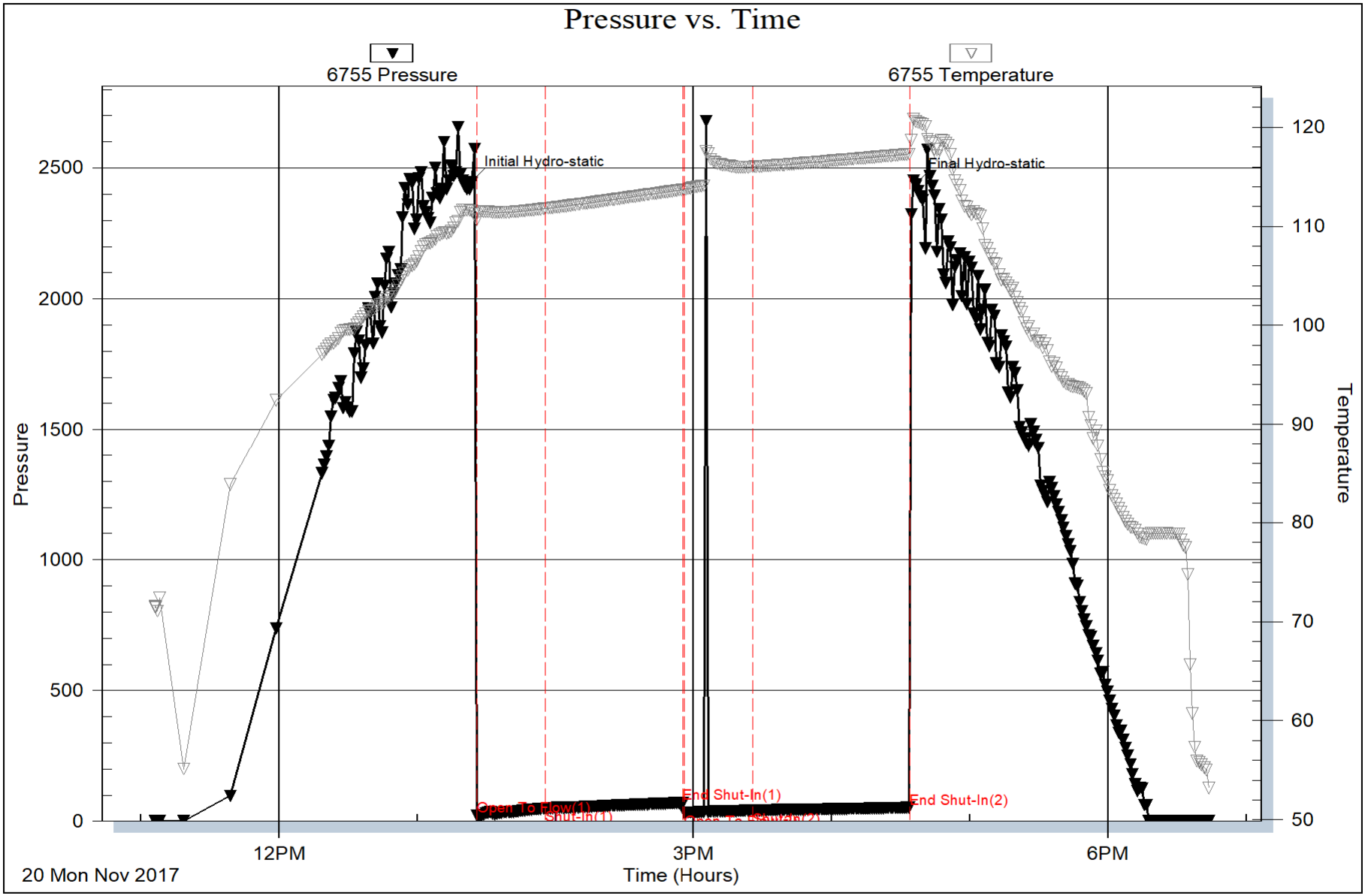
Recovery Table

Length ft	Description	Volume bbl
45.00	Mud 100%	0.221

Total Length: 45.00 ft Total Volume: 0.221 bbl

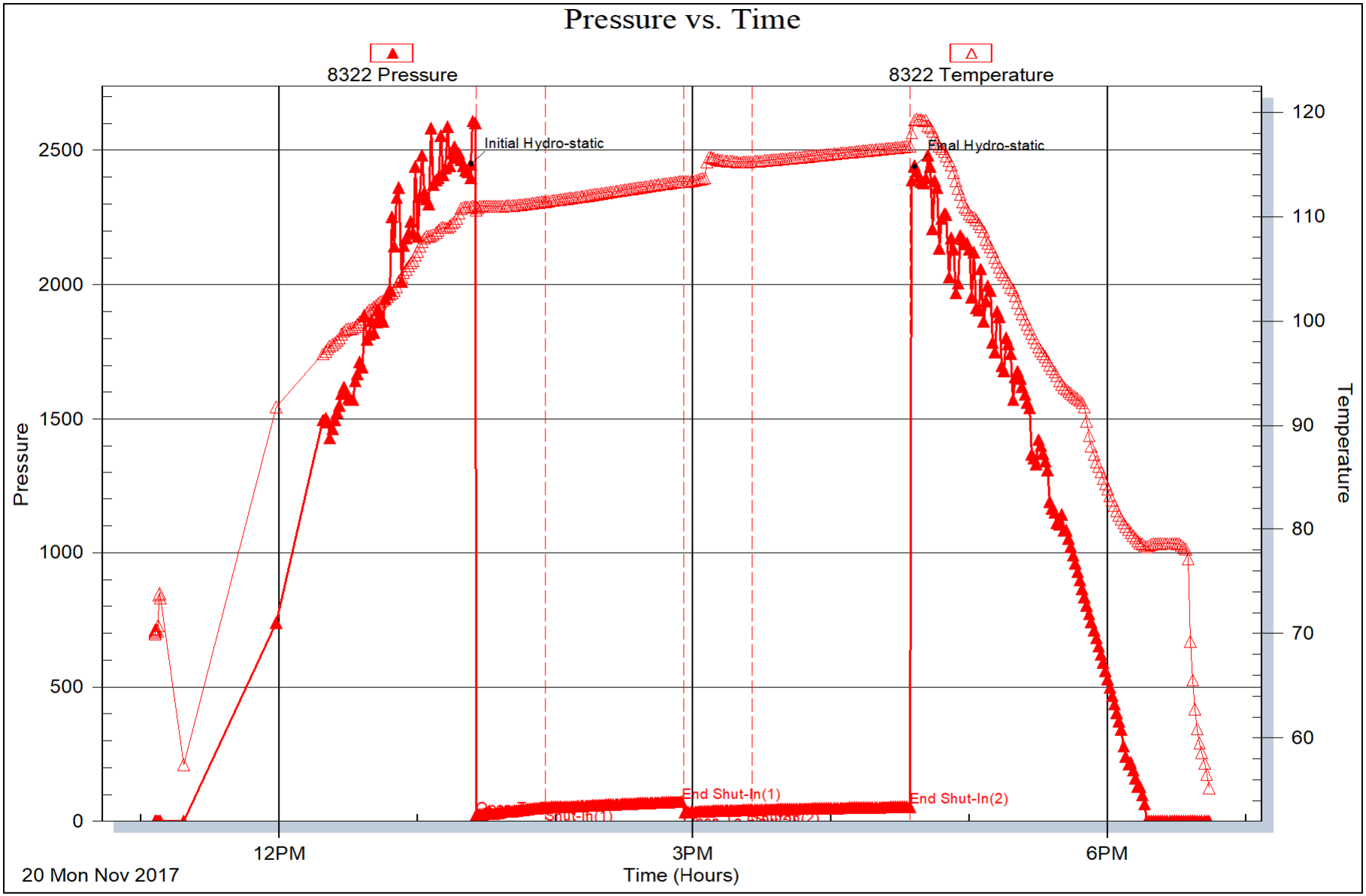
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6755 **Inside** Murfin Drilling Company Janet # 1-36 DST Test Number: 1

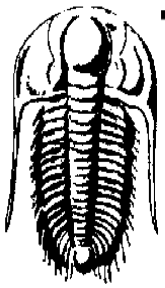


Trilobite Testing, Inc Ref. No: 62087 Printed: 2017.11.22 @ 14:09:08

Serial #: 8322 **Outside** Murfin Drilling Company Janet # 1-36 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 62087 Printed: 2017.11.22 @ 14:09:08



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water Suite 300
Wichita, KS 67202+1216

ATTN: Robert Hendrix

Janet # 1-36

36-29S-41W Stanton,KS

Start Date: 2017.11.21 @ 17:16:00
End Date: 2017.11.22 @ 02:22:02
Job Ticket #: 62088 DST #: 2

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

Printed: 2017.11.22 @ 14:08:23

DRILL STEM TEST REPORT

Murfin Drilling Company

250 N Water Suite 300
Wichita, KS 67202+1216

ATTN: Robert Hendrix

36-29S-41W Stanton,KS

Janet # 1-36

Job Ticket: 62088 **DST#: 2**

Test Start: 2017.11.21 @ 17:16:00

GENERAL INFORMATION:

Formation: **Keyes**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:40:47
Time Test Ended: 02:22:02

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72

Interval: 5379.00 ft (KB) To 5521.00 ft (KB) (TVD)
Total Depth: 5521.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

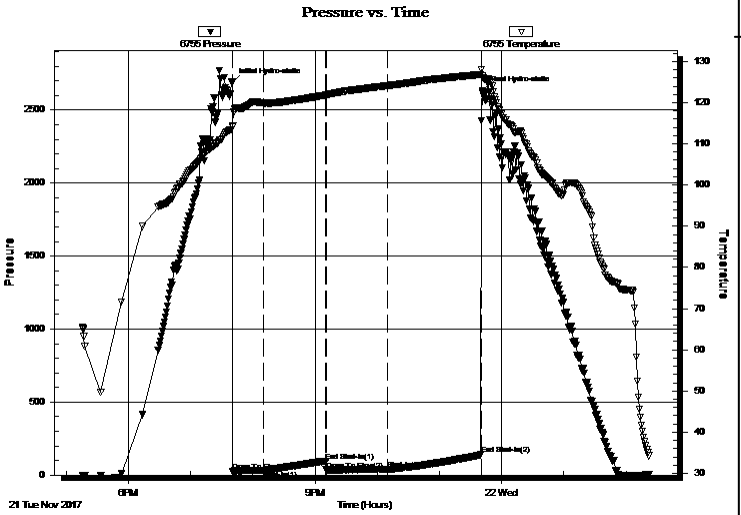
Reference Elevations: 3362.00 ft (KB)
3351.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6755 **Inside**

Press@RunDepth: 38.20 psig @ 5516.64 ft (KB)
Start Date: 2017.11.21 End Date: 2017.11.22
Start Time: 17:16:01 End Time: 02:22:02

Capacity: psig
Last Calib.: 2017.11.22
Time On Btm: 2017.11.21 @ 19:40:17
Time Off Btm: 2017.11.21 @ 23:41:17

TEST COMMENT: IFP 30 Minutes Blow at 1/4" at open/ Died in 5 minutes
ISI 60 Minutes No blow back
FFP 60 Minuttes Surface blow died in 3 minutes
FSI 90 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2691.48	114.03	Initial Hydro-static
1	26.28	114.40	Open To Flow (1)
31	32.39	119.92	Shut-In(1)
91	97.21	121.79	End Shut-In(1)
91	32.04	121.78	Open To Flow (2)
150	38.20	124.12	Shut-In(2)
240	139.55	126.84	End Shut-In(2)
241	2631.71	126.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	Mud 100%	0.25

Gas Rates

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

DRILL STEM TEST REPORT

Murfin Drilling Company

250 N Water Suite 300
Wichita, KS 67202+1216

ATTN: Robert Hendrix

36-29S-41W Stanton,KS

Janet # 1-36

Job Ticket: 62088 **DST#: 2**

Test Start: 2017.11.21 @ 17:16:00

GENERAL INFORMATION:

Formation: **Keyes**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:40:47
Time Test Ended: 02:22:02

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72

Interval: 5379.00 ft (KB) To 5521.00 ft (KB) (TVD)
Total Depth: 5521.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

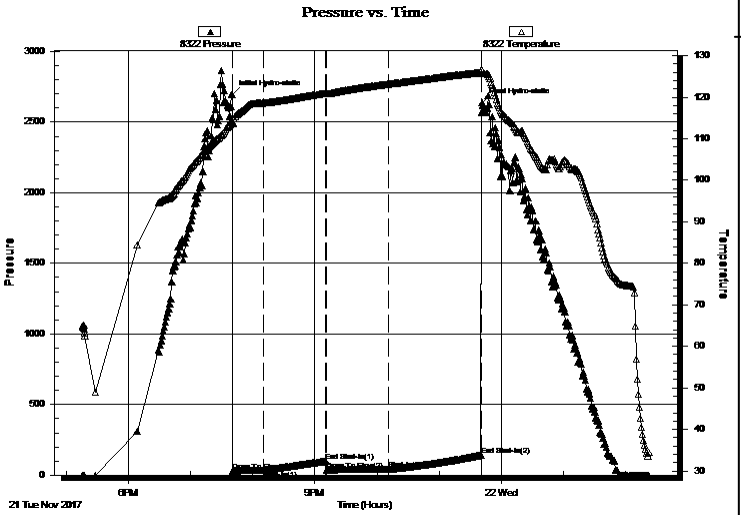
Reference Elevations: 3362.00 ft (KB)
3351.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8322 **Outside**

Press@RunDepth: 143.06 psig @ 5517.64 ft (KB)
Start Date: 2017.11.21 End Date: 2017.11.22
Start Time: 17:16:01 End Time: 02:22:02

Capacity: psig
Last Calib.: 2017.11.22
Time On Btm: 2017.11.21 @ 19:40:32
Time Off Btm: 2017.11.21 @ 23:41:17

TEST COMMENT: IFP 30 Minutes Blow at 1/4" at open/ Died in 5 minutes
ISI 60 Minutes No blow back
FFP 60 Minuttes Surface blow died in 3 minutes
FSI 90 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2694.74	114.18	Initial Hydro-static
1	29.01	113.56	Open To Flow (1)
30	34.73	118.63	Shut-In(1)
90	100.25	120.98	End Shut-In(1)
91	35.15	120.97	Open To Flow (2)
151	40.86	123.19	Shut-In(2)
240	143.06	125.98	End Shut-In(2)
241	2636.33	126.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	Mud 100%	0.25

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

250 N Water Suite 300
Wichita, KS 67202+1216

ATTN: Robert Hendrix

36-29S-41W Stanton,KS

Janet # 1-36

Job Ticket: 62088 **DST#: 2**

Test Start: 2017.11.21 @ 17:16:00

Tool Information

Drill Pipe:	Length:	5090.00 ft	Diameter:	3.80	inches	Volume:	71.40	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	273.00 ft	Diameter:	2.25	inches	Volume:	1.34	bbl	
						Total Volume:	72.74	bbl	

Drill Pipe Above KB:	12.00 ft
Depth to Top Packer:	5379.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	141.64 ft
Tool Length:	169.64 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		78000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	72000.00 lb
	Final	72000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut-In Tool	5.00			5356.00		
Hydraulic tool	5.00			5361.00		
Jars	6.00			5367.00		
Safety Joint	2.00			5369.00		
Packer - Shale	5.00			5374.00		
Packer	5.00			5379.00	28.00	Bottom Of Top Packer
Anchor	9.00			5388.00		
Change Over Sub	1.00			5389.00		
Drill Pipe	125.64			5514.64		
Change Over Sub	1.00			5515.64		
Recorder	1.00	6755	Inside	5516.64		
Recorder	1.00	8322	Outside	5517.64		
Bullnose	3.00			5520.64	141.64	Anchor Tool
Total Tool Length:	**169.64**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

250 N Water Suite 300
Wichita, KS 67202+1216

ATTN: Robert Hendrix

36-29S-41W Stanton,KS

Janet # 1-36

Job Ticket: 62088 **DST#: 2**

Test Start: 2017.11.21 @ 17:16:00

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:	61.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.19 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1050.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

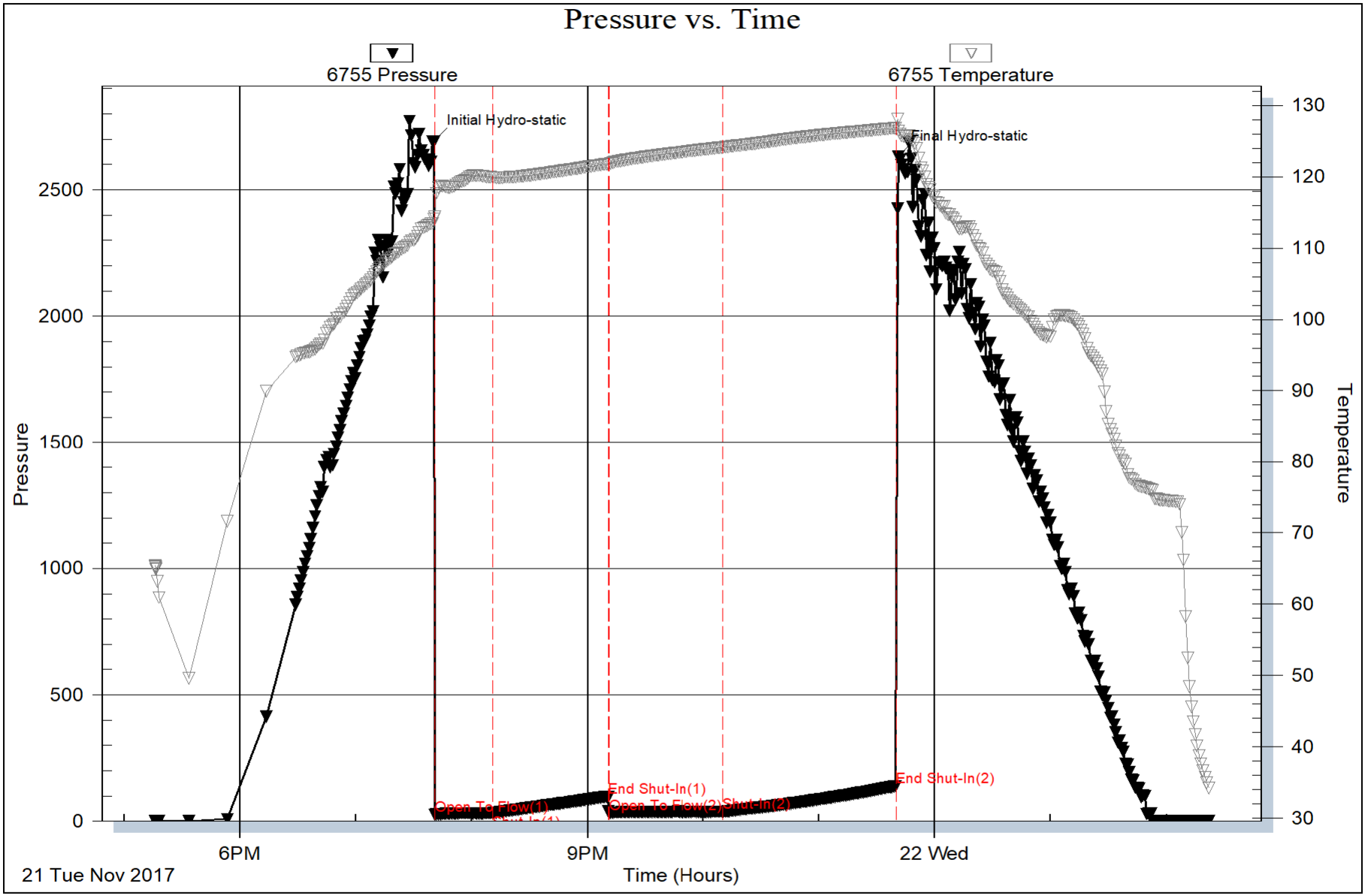
Recovery Table

Length ft	Description	Volume bbl
50.00	Mud 100%	0.246

Total Length: 50.00 ft Total Volume: 0.246 bbl

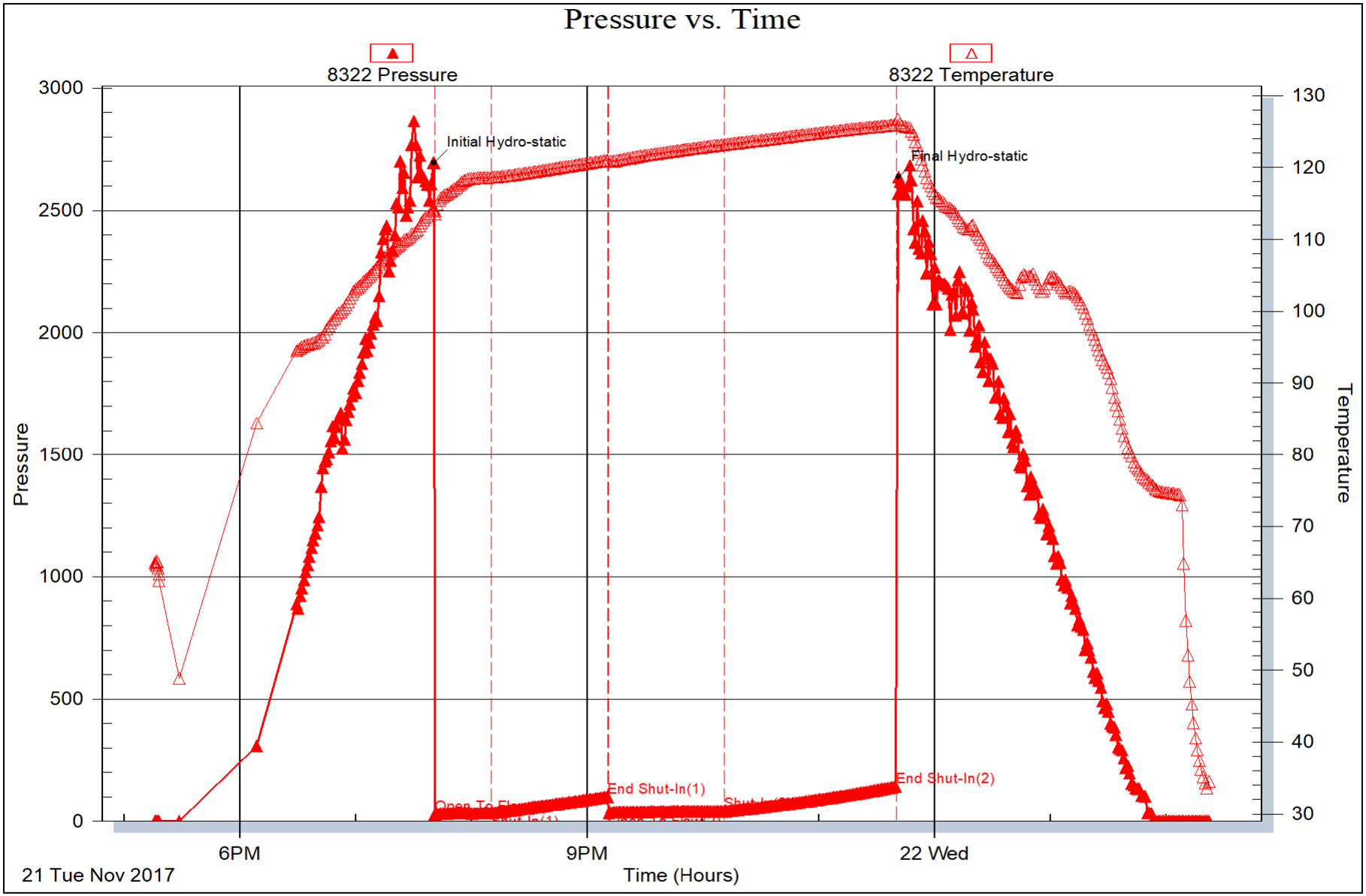
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6755 **Inside** Murfin Drilling Company Janet # 1-36 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 62088 Printed: 2017.11.22 @ 14:08:24

Serial #: 8322 **Outside** Murfin Drilling Company Janet # 1-36 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 62088 Printed: 2017.11.22 @ 14:08:25

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 62087

Well Name & No. Janet # 1-36 Test No. 1 Date 20 NOV 17

Company Murfin Drilling Co. Elevation 3362 KB 3351 GL

Address 250 N Water Suite 300 Wichita Kansas 67202 + Q16

Co. Rep / Geo. Robert Hendrix Rig Murfin Rig 21

Location: Sec. 36 Twp. 29S Rge. 41W Co. Stanton State KS

Interval Tested 5109-5162 Zone Tested Morrow Sand

Anchor Length 53 Drill Pipe Run 4933 Mud Wt. 9.1

Top Packer Depth 5104 Drill Collars Run 273 Vis 65

Bottom Packer Depth 5109 Wt. Pipe Run — WL 7.6

Total Depth 5162 Chlorides 2950 ppm System LCM 10#

Blow Description I.F. Few bubbles at open then dead

I.S.I No blow back

F.F. Dead no blow/ Flush tool no help

F.S.I No blow back

Rec 45	Feet of Mud	%gas	%oil	%water 100	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 45 BHT 117 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 2446	☒ Test 1250	T-On Location 9:15 am	
(B) First Initial Flow 22	☒ Jars 250	T-Started 11:06 am	
(C) First Final Flow 48	☒ Safety Joint 75	T-Open 1:25 pm	
(D) Initial Shut-In 70	☐ Circ Sub	T-Pulled 4:25 pm	
(E) Second Initial Flow 31	☐ Hourly Standby	T-Out 6:45 pm	
(F) Second Final Flow 41	☒ Mileage 236 96rt 72	Comments	
(G) Final Shut-In 52	☐ Sampler		
(H) Final Hydrostatic 2437	☐ Straddle	☐ Ruined Shale Packer	
	☒ Shale Packer 250	☐ Ruined Packer	
Initial Open 30	☐ Extra Packer	☐ Extra Copies	
Initial Shut-In 60	☐ Extra Recorder	Sub Total 0	
Final Flow 30	☐ Day Standby	Total 1897	
Final Shut-In 60	☐ Accessibility	MP/DST Disc't	
	Sub Total 1897		

Approved By [signature] Our Representative [signature]

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 62088

Well Name & No. Janet #1-36 Test No. 2 Date 21 NOV 17

Company Murfin Drilling Co Elevation 3362 KB 3351 GL

Address 250 N Water Suite 300 Wichita Kansas 67202-1216

Co. Rep / Geo. Robert Hendrix Rig Murfin Rig 21

Location: Sec. 36 Twp. 29S Rge. 41W Co. Stanton State KS

Interval Tested 5379-5520 Zone Tested Keyes

Anchor Length 142 Drill Pipe Run 5090 Mud Wt. 9.35

Top Packer Depth 5374 Drill Collars Run 273 Vis 61

Bottom Packer Depth 5379 Wt. Pipe Run — WL 7.2

Total Depth 5520 Chlorides 1050 ppm System LCM 10#

Blow Description I.F. Blow at ½ inch at open / Died in 5 minutes

I.S.I No blow back

F.F. Surface blow died in 3 minutes

F.S.I No blow back

Rec 50	Feet of Mud	%gas	%oil	%water	100 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 50 BHT 126 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic	2691	☒ Test 1250	T-On Location 3:21 pm
(B) First Initial Flow	26	☒ Jars 250	T-Started 5:16 pm
(C) First Final Flow	32	☒ Safety Joint 75	T-Open 7:41 pm
(D) Initial Shut-In	97	☐ Circ Sub	T-Pulled 11:41 pm
(E) Second Initial Flow	32	☐ Hourly Standby	T-Out 2:22 am
(F) Second Final Flow	38	☒ Mileage 236 144	Comments loaded 11/22 12:10
(G) Final Shut-In	139	☐ Sampler	
(H) Final Hydrostatic	2631	☐ Straddle	☐ Ruined Shale Packer
		☒ Shale Packer 250	☐ Ruined Packer
Initial Open	30	☐ Extra Packer	☐ Extra Copies
Initial Shut-In	60	☐ Extra Recorder	Sub Total 0
Final Flow	60	☐ Day Standby	Total 1969
Final Shut-In	90	☐ Accessibility	MP/DST Disc't
		Sub Total 1969	

Approved By ____ Our Representative ____

	MDCI Janet #1-36 330' FNL 2310' FEL Sec. 36-T29S-R41W 3362' KB					
Formation	Sample Top	Datum	Ref	Log tops	Datum	Ref
Anhydrite				1598	+1764	
B/Anhydrite				1610	+1752	
Heebner	3637	-275	-10	3635	-273	-8
Lansing	3700	-338	-16	3694	-332	-10
Stark	4126	-764	-20	4120	-758	-14
Pleasanton	4319	-957	-18	4314	-952	-13
Ft Scott	4511	-1149	-24	4507	-1145	-20
Morrow	5113	-1751	-34	5106	-1744	-27
Morrow Lm	5377	-2015	-21	5370	-2008	-14
Mississippian	5512	-2150	-17	5480	-2118	+15
RTD	5750					
LTD				5748		

Cementing Treatment

Start Date	11/15/2017	**Well**	Janet 1-36
End Date	12/30/2017	**County**	Stanton
Client	MURFIN DRILLING CO INC	**State/Province**	KS
Client Field Rep	Juan Tinoco	**API**	15-187-21339
Service Supervisor		**Formation**	
Field Ticket No.		**Rig**	
District	Liberal, KS	**Type of Job**	Surface

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Open Hole	12.25			1,650.00	1,650.00	100.00		
Casing	8.10	8.63	24.00	1,650.00	1,650.00			

Shoe Length (ft): 41

HARDWARE

Bottom Plug Used?	No	**Tool Type**	
Bottom Plug Provided By		**Tool Depth (ft)**	
Bottom Plug Size		**Max Tubing Pressure - Rated (psi)**	
Top Plug Used?	No	**Max Tubing Pressure - Operated (psi)**	
Top Plug Provided By		**Max Casing Pressure - Rated (psi)**	
Top Plug Size		**Max Casing Pressure - Operated (psi)**	
Centralizers Used	No	**Pipe Movement**	
Centralizers Quantity		**Job Pumped Through**	
Centralizers Type		**Top Connection Thread**	
Landing Collar Depth (ft)	1,755	**Top Connection Size**	

CIRCULATION PRIOR TO JOB

Well Circulated By

Solids Present at End of Circulation No

Cementing Treatment

Circulation Prior to Job	No	**10 sec SGS**	
Circulation Time (min)		**10 min SGS**	
Circulation Rate (bpm)		**30 min SGS**	
Circulation Volume (bbls)		**Flare Prior to/during the Cement Job**	No
Lost Circulation Prior to Cement Job	No	**Gas Present**	No
Mud Density In (ppg)		**Gas Units**	
Mud Density Out (ppg)			
PV Mud In			
PV Mud Out			
YP Mud In			
YP Mud Out			

TEMPERATURE

Ambient Temperature (°F)	**Slurry Cement Temperature (°F)**
Mix Water Temperature (°F)	**Flow Line Temperature (°F)**

BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Lead Slurry	Lightweight Lead	12.0000	2.2511	12.83	500	1,114.0000	198.2000
Tail Slurry	Tail Cement	14.9000	1.3336	6.21	200	263.0000	46.7000
Displacement Final	Displacment	8.3400				0.0000	102.4000

Fluid Type	Fluid Name	Component	Concentration	UOM
Lead Slurry	Lightweight Lead	EXTENDER, BENTONITE	6.00	BWOB
Lead Slurry	Lightweight Lead	IntegraSeal CELLO	0.25	LBS/SK
Lead Slurry	Lightweight Lead	CEMENT, ASTM TYPE I	65.00	PCT
Lead Slurry	Lightweight Lead	CEMENT, FLY ASH	35.00	PCT

Cementing Treatment

		(POZZOLAN)	
Lead Slurry	Lightweight Lead	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	3.00 BWOB
Tail Slurry	Tail Cement	CEMENT, ASTM TYPE I	100.00 PCT
Tail Slurry	Tail Cement	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	3.00 BWOB

TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
	Lightweight Lead	0.00	198.20			
	Tail Cement	0.00	46.70			
	Displacment	0.00	102.40			

	Min	Max	Avg
Pressure (psi)	0.00	0.00	0.00
Rate (bpm)	0.00	0.00	0.00

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By		**Amount of Cement Returned/Reversed**	
Calculated Displacement Volume (bbls)		**Method Used to Verify Returns**	
Actual Displacement Volume (bbls)		**Amount of Spacer to Surface**	
Did Float Hold?	Yes	**Pressure Left on Casing (psi)**	
Bump Plug	No	**Amount Bled Back After Job**	
Bump Plug Pressure (psi)		**Total Volume Pumped (bbls)**	
Were Returned Planned at Surface	No	**Top Out Cement Spotted**	No
Cement returns During Job		**Lost Circulation During Cement Job**	No

CEMENT PLUG

Cementing Treatment

Bottom of Cement Plug?	No	**Wiper Balls Used?**	No
Wiper Ball Quantity		**Plug Catcher**	No
Number of Plugs			

SQUEEZE

Injection Rate (bpm)	**Fluid Density (ppg)**
Injection Pressure (psi)	**ISIP (psi)**
Type of Squeeze	**FSIP (psi)**
Operators Max SQ Pressure (psi)	

COMMENTS

Treatment Report

Job Summary

Customer Name Murfin Drilling
Well Name Janet 1-36
Job Type Surface

District Liberal
Supervisor Victor Corona-Marta
Engineer Kevin Aldridge

Seq No.	Start Date/Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
	11/13/2017 11:30pm	Mobilization	Leave Location	Cement Pump Truck						Pretrip trucks had journey management brief
	11/14/2017 2:30am	Mobilization	Arrive on Location	Cement Pump Truck						Arrived at location
	11/14/2017 3:00am	StandBy	3rd Party Other							casing crew had 4000 feet of pipe left
	11/14/2017 6:00am	Operational	Other (See comments)	Cement Pump Truck						spotted trucks to rig
	11/14/2017 6:15am	Operational	Rig Up	Cement Pump Truck						rig up to rig
	11/14/2017 7:15am	Operational	Safety Meeting							safety meetin
	11/14/2017 7:58am	Operational	Pressure Test	Cement Pump Truck					4500	pressure test lines to 4500psi
	11/14/2017 8:09am	Operational	Pump Spacer	Cement Pump Truck		9.5	4	50bbls	140	50bbls of mud purge with chemicals 9.5lbs
	11/15/2017 8:00am	Operational	Other (See comments)							Pretrip trucks had journey management brief
	9:30am	Mobilization	Leave Location	Cement Pump Truck						leaving yard to location
	11:00am	Mobilization	Arrive on Location	Cement Pump Truck						Arrived at location
	11:30am	StandBy	Other (See comment)							casin crew showed up
	13:45pm	Mobilization	spot trucks	Cement Pump Truck						spotted trucks to rig
	14:00pm	Operational		Cement Pump Truck						rig up to rig
	14:40pm	Operational	Safety Meeting							safety meeting with company man rig crew
										and BJ crew
	14:51pm	Operational	Pressure Test	Cement Pump Truck					1500	pressure test lines to 1500 psi
	14:52pm	Operational	Pump Spacer	Cement Pump Truck		8.33	5	10	70	10bbls of water spacer
	14:54pm	Operational	Pump Lead Cement	Cement Pump Truck		12	5	200	50	lead cement 500sacks, 200bbls @12lbs
	15:32pm	Operational	Pump Tail Cement	Cement Pump Truck		14.9	5	47	80	tail cement 200sacks,47bbls @14.9lbs
	15:46pm	Operational	Drop Top Plug							drop plug/wash on top of plug
	15:48pm	Operational	Start Pumping	Cement Pump Truck				109		start displacement 109bbls of water
	15:52pm	Operational	Pump Displacement	Cement Pump Truck		8.33	5	20	120	20bbls gone
	15:56pm	Operational	Pump Displacement	Cement Pump Truck		8.33	5	40	140	40bbls gone
	16:00pm	Operational	Pump Displacement	Cement Pump Truck		8.33	5	60	190	60bbls gone
	16:04pm	Operational	Pump Displacement	Cement Pump Truck		8.33	5	80	250	80bbls gone
	16:08pm	Operational	Pump Displacement	Cement Pump Truck		8.33	5	100	320	100bbls gone/slow down rate to 3bpm
	16:11pm	Operational	Pump Displacement	Cement Pump Truck		8.33	3	109	880	bump plug/ check if float holds
										had 40bbls of cement to surface
										and .5bbls of water returns
										rig down
34										
35										Crew and I thanked the company man
36										and rig crew for job opportunity
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