

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

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

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

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

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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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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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	MILLER 1-29
Doc ID	1636206

All Electric Logs Run

DIL
DUCP
MEL
BHCS



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water
Wichita , KS 67202

ATTN: Bob Peterson

Miller #1-29

29-6s-19w Rooks,KS

Start Date: 2022.03.24 @ 11:10:00

End Date: 2022.03.24 @ 18:03:45

Job Ticket #: 59498 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2022.03.30 @ 10:12:53



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co

29-6s-19w Rooks,KS

250 N Water
Wichita , KS 67202

Miller #1-29

Job Ticket: 59498

DST#: 1

ATTN: Bob Peterson

Test Start: 2022.03.24 @ 11:10:00

GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:25:45

Time Test Ended: 18:03:45

Test Type: Conventional Bottom Hole (Initial)

Tester: terry

Unit No: 75

Interval: 3603.00 ft (KB) To 3652.00 ft (KB) (TVD)

Reference Elevations: 2121.00 ft (KB)

Total Depth: 3652.00 ft (KB) (TVD)

2116.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8368

Inside

Press@RunDepth: 262.91 psig @ 3604.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.03.24

End Date:

2022.03.24

Last Calib.:

2022.03.24

Start Time: 11:10:05

End Time:

18:03:44

Time On Btm:

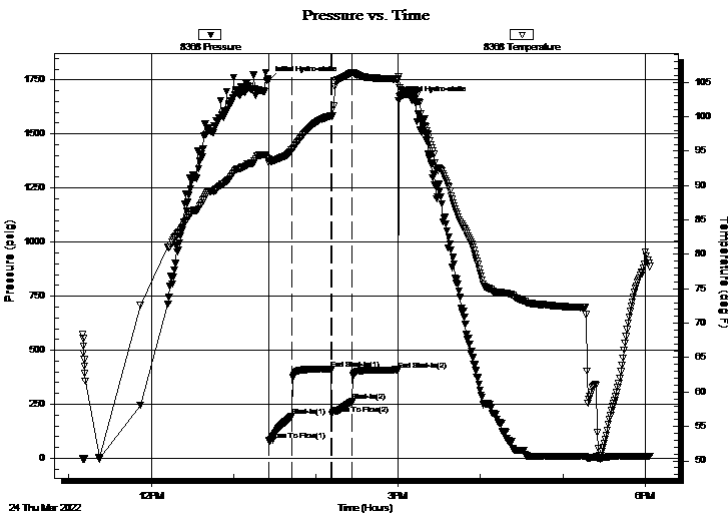
2022.03.24 @ 13:25:30

Time Off Btm:

2022.03.24 @ 15:00:15

TEST COMMENT: IF-15-BOB 3 min
IS-30- No return
FF15- BOB
FS-30- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1746.69	93.89	Initial Hydro-static
1	83.41	93.28	Open To Flow (1)
17	193.55	95.10	Shut-In(1)
46	410.93	100.17	End Shut-In(1)
46	204.06	100.07	Open To Flow (2)
61	262.91	106.43	Shut-In(2)
95	409.54	105.44	End Shut-In(2)
95	1654.50	105.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	ocm 90%oil 10%mud	1.15
400.00	oil	5.76
20.00	w ater	0.29

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co

29-6s-19w Rooks,KS

250 N Water
Wichita , KS 67202

Miller #1-29

Job Ticket: 59498

DST#: 1

ATTN: Bob Peterson

Test Start: 2022.03.24 @ 11:10:00

GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

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Time Test Ended: 18:03:45

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Tester: terry

Unit No: 75

Interval: 3603.00 ft (KB) To 3652.00 ft (KB) (TVD)

Reference Elevations: 2121.00 ft (KB)

Total Depth: 3652.00 ft (KB) (TVD)

2116.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8320 Outside

Press@RunDepth: psig @ 3604.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.03.24

End Date:

2022.03.24

Last Calib.:

1899.12.30

Start Time: 11:10:05

End Time:

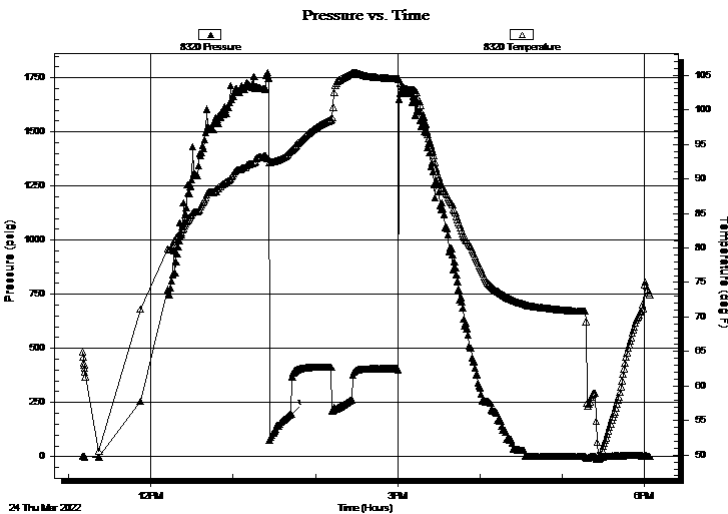
18:03:59

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-15-BOB 3 min
IS-30- No return
FF15- BOB
FS-30- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	195.94	94.12	\

Recovery

Length (ft)	Description	Volume (bbl)
80.00	ocm 90%oil 10%mud	1.15
400.00	oil	5.76
20.00	w ater	0.29

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co

29-6s-19w Rooks,KS

250 N Water
Wichita , KS 67202

Miller #1-29

Job Ticket: 59498

DST#: 1

ATTN: Bob Peterson

Test Start: 2022.03.24 @ 11:10:00

Tool Information

Drill Pipe:	Length: 3588.00 ft	Diameter: 3.85 inches	Volume: 51.66 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	66000.00 lb
			<u>Total Volume: 51.66 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	3603.00 ft			Final	62000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	49.00 ft				
Tool Length:	80.00 ft				
Number of Packers:	2	Diameter: 6.88 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3573.00	
Shut In Tool	5.00			3578.00	
Hydraulic tool	5.00			3583.00	
Jars	5.00			3588.00	
EM Tool	3.00			3591.00	
Safety Joint	3.00			3594.00	
Packer	5.00			3599.00	31.00 Bottom Of Top Packer
Packer	4.00			3603.00	
Stubb	1.00			3604.00	
Recorder	0.00	8368	Inside	3604.00	
Recorder	0.00	8320	Outside	3604.00	
Perforations	2.00			3606.00	
Change Over Sub	1.00			3607.00	
Drill Pipe	31.00			3638.00	
Change Over Sub	1.00			3639.00	
Perforations	10.00			3649.00	
Bullnose	3.00			3652.00	49.00 Bottom Packers & Anchor
Total Tool Length:	80.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

29-6s-19w Rooks,KS

250 N Water
Wichita , KS 67202

Miller #1-29

Job Ticket: 59498

DST#: 1

ATTN: Bob Peterson

Test Start: 2022.03.24 @ 11:10:00

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	ocm 90%oil 10%mud	1.152
400.00	oil	5.760
20.00	water	0.288

Total Length: 500.00 ft Total Volume: 7.200 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8368

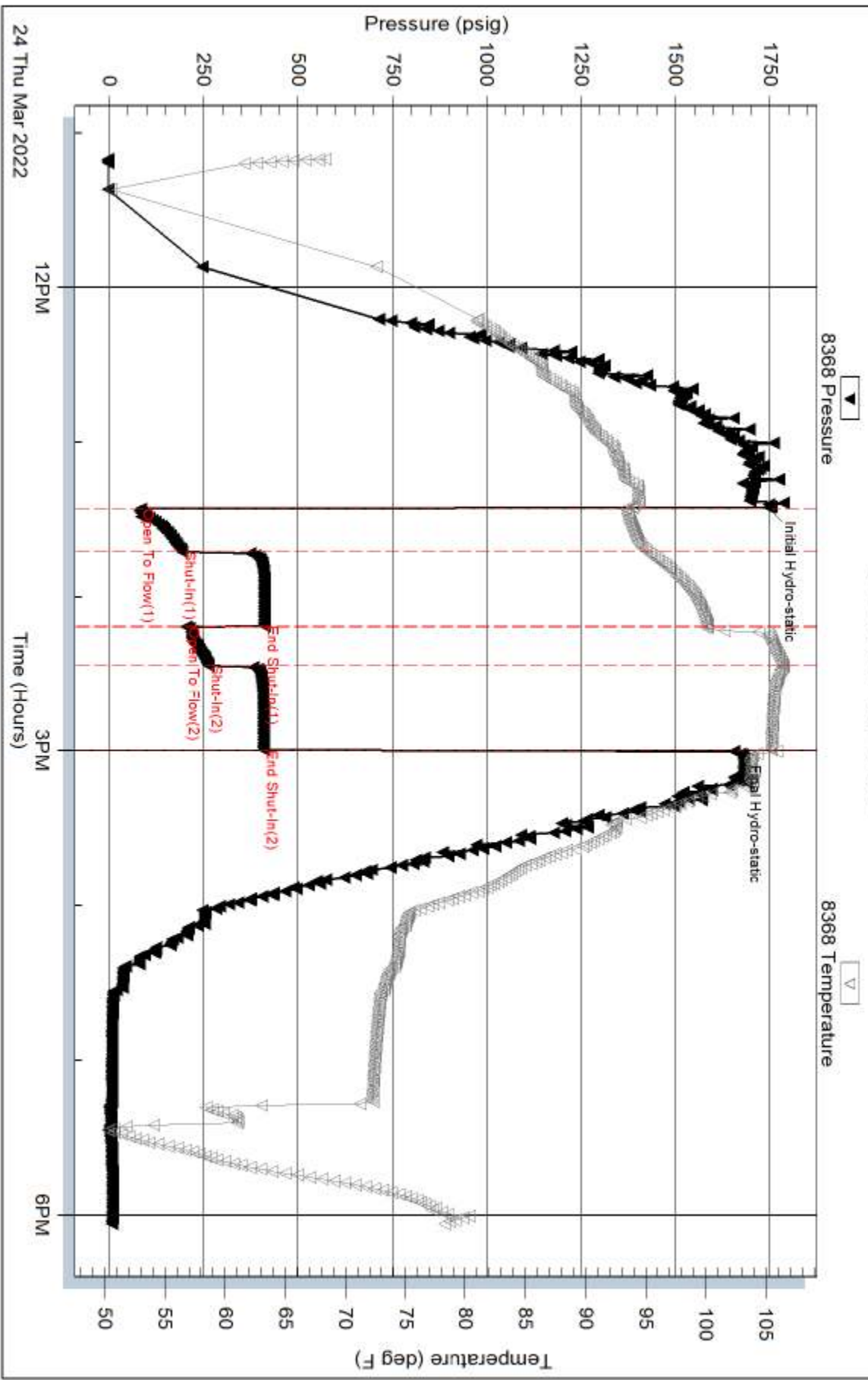
Inside

Murfin Drilling Co

Well #1-29

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 59498

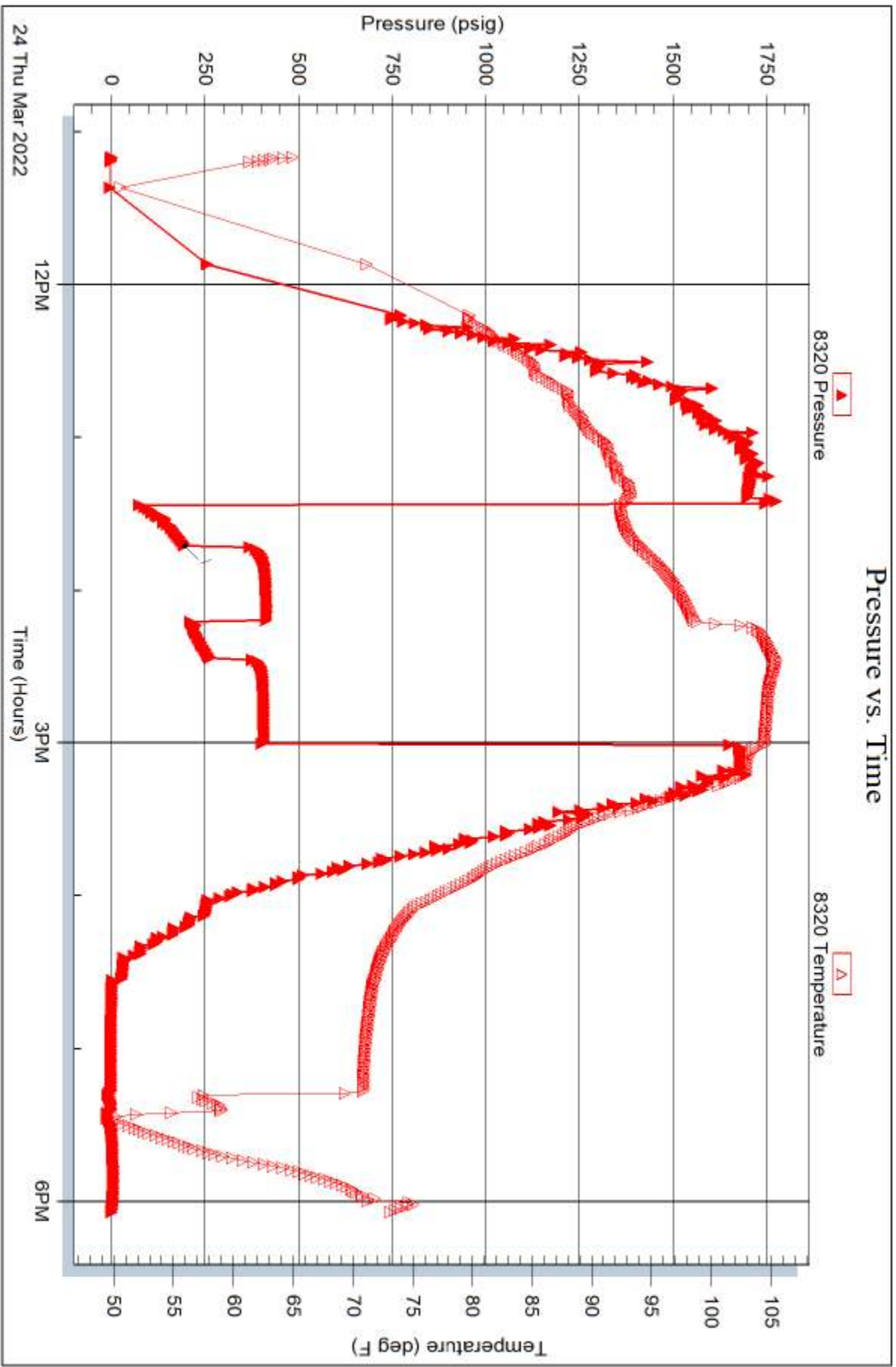
Printed: 2022.03.30 @ 10:12:54

Serial #: 8320

Outside Marfin Drilling Co

Well #1-29

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 59498

Printed: 2022.03.30 @ 10:12:54



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59498

Well Name & No. Miller # 1-29 Test No. 1 Date 3-24-22
 Company Murfin Drilling Co. Elevation 2121 KB 2116 GL
 Address 250 N Water Suite 300 Wichita KS 67202
 Co. Rep / Geo. Bob Peterson Rig Murfin Rig 16
 Location: Sec. 29 Twp. 6S Rge. 19W Co. HOOKS State KS

Interval Tested 3603 - 3652 Zone Tested Sand
 Anchor Length 49 Drill Pipe Run 3588 Mud Wt. 9.0
 Top Packer Depth 3598 Drill Collars Run _____ Vis 53
 Bottom Packer Depth 3603 Wt. Pipe Run _____ WL 7.2
 Total Depth 3652 Chlorides 3200 ppm System LCM 5H
 Blow Description IF-15-BOB 3 min
ISI-30-No Return
FS-15-BOB
FSI-30-No Return

ec	Feet of	%gas	%oil	%water	%mud
<u>80</u>	<u>OCM</u>	<u>90</u>		<u>10</u>	
<u>400</u>		<u>100</u>			
<u>20</u>			<u>100</u>		
ec Total <u>500</u>	BHT <u>105</u>	Gravity <u>19</u>	API RW _____	@ _____ °F	Chlorides _____ ppm

Initial Hydrostatic 1747
 First Initial Flow 83
 First Final Flow 353
 Initial Shut-In 410
 Second Initial Flow 204
 Second Final Flow 363
 Final Shut-In 427
 Final Hydrostatic 1654
 Initial Open 15
 Initial Shut-In 30
 Final Flow 15
 Final Shut-In 30

Test 1300
 Jars 250
 Safety Joint 75
 Circ Sub _____
 Hourly Standby _____
 Mileage 55 X 2 330
 Sampler 35 X 2 pickup tools
 Straddle _____
 Shale Packer 250
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 2205

T-On Location 9:20 AM
 T-Started 11:10 AM
 T-Open 1:29 PM
 T-Pulled 3:00 PM
 T-Out 4:05 PM
 Comments EM Tool 350
loaded tools 8:00 3/25
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 350
 Total 2555
 MP/DST Disc't _____

Our Representative Terry Wickham

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

MURFIN DRILLING CO, INC.

MILLER #1-29
29-6-19W
NW NW NW
ROOKS COUNTY, KS
API: 15-163-24449-00-00

ELEVATION

KB: 2121
 GL: 2116
 LOG MEASURED
 FROM: KB

SURFACE CASING

Ran 5jts 23# 8 5/8" csg set @ 220'.
 HSI cmt, H-325, 200sxs. Circ 5bbl.

PRODUCTION CASING

15.5# 5 1/2" prod csg set @ 3710'.
 HSI cmt w/ 430sx

DRILLING CONTR.: MURFIN RIG #16
 SPUD: 3-19-22 COMP:3-26-22
 MUD UP:3000' TYPE MUD: CHEM.
 DRILL TIME: 3240' to RTD
 RTD:3712' LTD: 3709'
 SAMPLES SAVED: 3240' to RTD
 GEOLOGIST: ROBERT J. PETERSEN

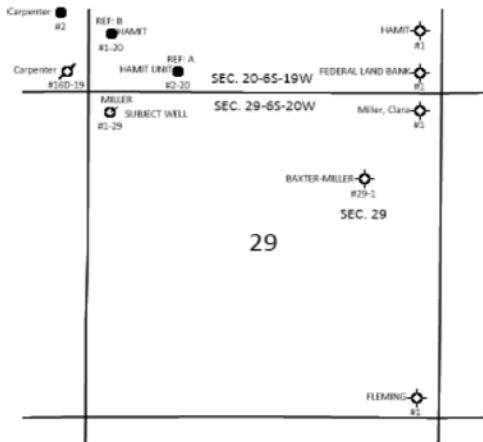
WELL LOG SURVEYS

MIDWEST WIRELINE
 CND/DIL/MICRO/SONIC

ELECTRIC LOG TOPS

Formation	Samp. Datum	Log Datum	Ref A	Ref B
Anhydrite	1718 +403	1715 +406	-22	-22
B/Anhydrite	1749 +372	1748 +373	-22	-21
Topeka	3115 -994	3126 -1005	-12	-16
Heebner	3323 -1202	3319 -1198	-7	-11
Toronto	3343 -1222	3341 -1220	-8	-11
Lansing	3360 -1239	3355 -1234	-8	-11
Mound City	3569 -1448	3563 -1442	0	-5
Reagan	3640 -1519	3625 -1504	-4	-9
Granite	3707 -1586	3705 -1584	-45	-53
RTD	3712 -1591	-----	-31	-47
LTD		3709 -1588		

LOCATION MAP



REFERENCE WELL

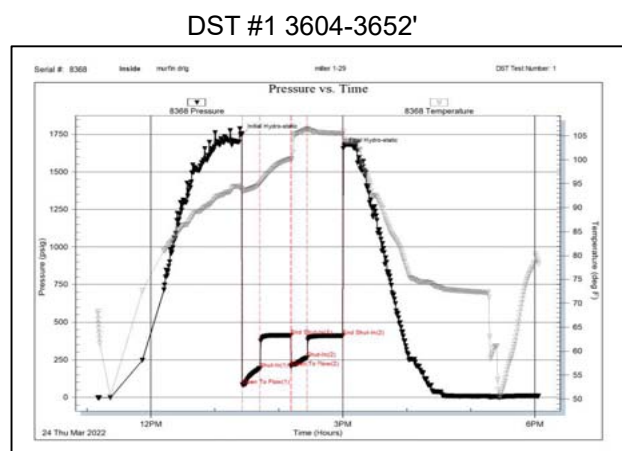
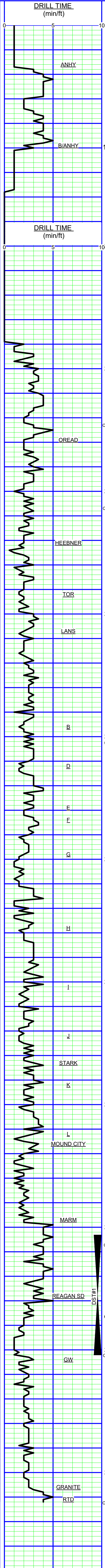
WELL A: MURFIN HAMIT UNIT #2-20 330' FSL & 1330' FWL 20-6S-19W
 WELL B: MURFIN HAMIT UNIT #1-20 930' FSL & 330' FWL 20-6S-19W

DAILY REPORT @7:00 A.M.

3/17/22 MIRT
 3/19/22 SPUD/ SET SURFACE CASING
 3/20/22 510'
 3/21/22 2220'
 3/22/22 2763' (DT: 9 1/2 HRS)
 3/23/22 DEPTH 3450' (DT: 3 3/4 HRS, WEATHER)
 3/24/22 DEPTH 3642'
 3/25/22 RTD 3712' LOGGING
 3/26/22 PD @ 11:30PM 3/25/22. RR @ 3:30AM

REMARKS

THE OPERATOR RAN PRODUCTION CASING TO FURTHER TEST THIS WELL.



SD: Dark gray, subrounded (3250)

LS: Tan/gray, fine crystalline, foss, chalky, cherty (3260)

LS: Cream/tan, fine crystalline, ool/foss, chalky cherty w/ tr oolitic gran w/fair inter ool por w/ coarse crystalline regrowth, sfo (sticky), odor, brown stain on dry (3270)

LS: Cream/gray/brown, fine crystalline, foss, chalky, cherty, sfo (sticky) on fracture +SH; Red/gray(3273/15") + SH; Black (junk?3280)

LS: Cream/gray/tan, fine crystalline, foss, chalky, tr dead stain, few dead oil flakes + tr SD; Brown/gray, hard (3290)

LS: Cream/tan/gray, fine crystalline, foss, ool in part, poor to fair ppt por, sfo, odor, light brown stain on dry (3300/3307/15")

LS: Cream/tan/gray, mottled in part, fine crystalline, foss, chalky, tr poor moldic por, ssfo, odor + SH; Green-gray/gray, sandy (3320)

LS: Cream/tan/lt gray, fine crystalline to dense, foss, cherty (ang foss/gray/dark gray/tan), chalky + SH; Red/gray (3330)

LS: Cream/lt gray, fine crystalline, foss, ool in part w/ fair intergran por, sfo, odor (3340)
 SH; Black (flood 3340)
 LS: Tan/gray, foss, hard (3350)

SH; Red/gray, silty, sandy (3350)

LS: Cream/lt gray/white, fine crystalline, foss, cherty (angular/gray), tr poor moldic por, stain, ssdo flakes (3360)

LS: Cream/lt gray/tan, fine crystalline, foss, chalky, cherty (angular/gray) w/chert inclusions, spot stain, odor, nsfo, tr dead oil flakes (3370)
 SH; Gray, sandy/SH; Red (3370-3380)

LS: Cream/lt gray, ool granular in part, tr fair inter ool por w/patchy stain, vssfo (sticky), odor, paraffin sheen (3380)

LS: Cream/white, fine crystalline, ool/foss w/fair moldic por, patchy stain, sfo odor, cherty (cream/gray/white/angular) increase fracture por, sfo, odor, bleeding gas (3400)

SH; Black (3410)
 SH; Red/gray (3410)

LS: Cream, fine crystalline, foss, sl chalky, chert(white/ang) tr fair vug por, patchy stain, odor, vssfo (3410-3420)

SH; Red/gray (3430)

LS: Cream/tan, fine crystalline, foss, chert gray ang with depth, tr poor moldic por, spotty stain, vssfo, odor (3430-3440)

SH; Red/gray (3450)

LS: Cream/tan, fine crystalline, ool, chalky, poor moldic por, stain, nsfo, no odor (3450)

SH; Black (3460)
 LS: Cream/white, fine crystalline, ool, chalky, trace intergran por, sfo on break (sticky), spot stain, faint odor (3460)
 SH; Green/gray (3470)
 LS: Cream, fine crystalline, foss, chalky, tr dolo, ns (3470)

LS: Cream/tan, fine crystalline, ool w/some coarse regrowth, fair moldic por, sfo in break, odor, paraffin sheen, spot to patchy stain (3485) bleeding oil, sour odor (3490)

LS: Cream/gray, fine crystalline to dense, foss, sl pyr + SH; Gray (3490)

LS: Cream/gray, fine crystalline, foss, chalky, cherty (tan/gray/ang), pyr, poor intercrystalline por, ssfo, lt stain, sour odor (3500)

LS: Cream/gray, fine crystalline, sl foss, chert (gray/blocky) poor moldic por, ssfo, odor (3510)
 SH; Red/gray (3520)

LS: Cream/gray, fine crystalline to dense, foss,, tr por moldic por, spot stain, nsfo, sour odor (3530)
 SH; Red/gray, silty (3540)

LS: Cream/tan, fine crystalline, ool/foss, poor ppt/moldic por, patchy stain, sfo odor (3540) + LS: Cream/gray, dense, increase patchy sat (3550)

SH; Black, hard + SH; Gray, sandy (3560)

LS: Cream, fine crystalline, ool, chalky, tr poor inter ool por, stain, vssfo + LS; Cream/gray, fine crystalline to dense, foss (3566)

SH; Black/SH; Red/gray, sandy (3570)

LS: Cream/gray, fine crystalline to dense, ool, chalky (3580)
 SH; Gray/yellow, sandy (3580)

SH; Red/gray w/dense calc nods (3590)

+SD; Gray, fine grained, glauc/SH; Red, sandy/LS; Cream/gray, dense, ool, sl glauc (3600)

SH; Red/green-gray (3607)

LS: Cream/gray, very fine crystalline to dense, foss, chalky (3607)

LS: Gray, dense, sandy (3607/30") [SHORT TRIP 3607]
 SH; Red/gray, sandy, gummy + SD; Gray, calc (3607/30-60")
 LS: White, dense, chalky, spot glauconite stain
 + SD; Clear, calc, friable to loose, tr stain (3620)

LS: Cream, dense, sandy/SD; White/clear, coarse, tr dead stain + SH; Red/gray (3630)

SH; Red + reworked Granite/Quartzite; Cream/pink + LS; Cream, dense, chalky + SD; Clear/white, med to coarse, calc, hard, tr stain (3640)
 SD; Clear, coarse, subangular, friable cluster, gsfo, odor, heavy sat, loose SD; Clear, vfg, round + LS; Cream, dense, chalky+ weathered feldspar w/light stain+ tr reworked Dolo (3642/20")
 increase SD; Clear, subangular to subrounded, coarse, friable sl glauc, sfo, odor(3642/40")

SD; Clear, coarse, subangular to subrounded, friable, sl pyr, gsfo, odor, sat + weathered feldspar w/stain/weathered granite (pink/biotite/pyr), tr fresh feldspar, SH; Dark gray, soft (3652/20") [SURVEY 3652 1/2 DEGREE]

SD; Clear, coarse, subrounded, friable, increase glauc, gsfo, sat odor (3652/40") Weathered Granite: Pink/cream, biote, tr frac stain+ weathered feldspar (pink/cream) tr SS; Clear, subang/subrounded, w/stain on veins (3652/60")
 Quartz/clear; fresh/weathered/Feldspar; SD; Clear, Pyr, glauc, tr weathered granite, sl stain odor, sample carrying LS; Cream, dense/SH; Gray/black/red (3660-3670)

Quartz; Clear; Feldspar; Pink, weathered, Glauc/pyr, SD; Clear, poorly sorted, coarse, calc matrix, ssfo, faint odor + SH; gray/olive, blocky, tr Chert; Cream (3680) +biotite (poor sample)(3690)

Feldspar; Pink, weathered/Quartz, Orange/clear, sample carrying LS; Cream/gray, dense + SH; Dark gray (Recycle?) (3700-3710)

Granite-Quartz; Clear/pink, Feldspar: Pink/cream, abund pyrite/biotite (3712 30-60")

2780' TOH TO SURFACE CASING FOR REPAIRS

MUDCO MUD CHECK 3271'
 VIS 60+WT 8.9/WL 5.8
 LCM 2#/CHL 2.900 PPM

LOSING FLUID
 ADDED PREMIX
 W/LCM

DST #1
 3603-3652'
 15-30-15-30
 IF: BOTTOM 3 MIN
 FF: BOTTOM 1 MIN
 NO RETURN BLOWS
 ON SHUT INS
 RECOVERED:
 80' OCM 90%O/10%M
 400 OIL
 20' WATER
 SIP: 411-409#
 FP: 83-194#/204-263#
 HP: 1747-1655#
 BHT: 106F
 OIL GRAV: 19°

MUDCO MUD CHECK 3652'
 VIS 51+WT 9.1/WL 6.0
 LCM 5#/CHL 3200 PPM

SURVEY 3652 1/2 DEGREE



CEMENT TREATMENT REPORT

Customer: Murfin Drilling	Well: Miller #1-29	Ticket: WP 2550
City, State: Oakley KS	County: Rooks KS	Date: 3/19/2022
Field Rep: Andy D	S-T-R: 29-6S-19W	Service: Surface

Downhole Information

Hole Size:	12.25 in
Hole Depth:	222 ft
Casing Size:	8 5/8 in
Casing Depth:	220 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	12.5 bbls

Calculated Slurry - Lead

Blend:	H-325
Weight:	14.8 ppg
Water / Sx:	8.8 gal / sx
Yield:	1.41 ft³ / sx
Annular Bbls / Ft.:	0.0035 bbls / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	50.2 bbls
Total Sacks:	200 sx

Calculated Slurry - Tail

Blend:	
Weight:	ppg
Water / Sx:	gal / sx
Yield:	ft³ / sx
Annular Bbls / Ft.:	bbls / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	0.0 bbls
Total Sacks:	0 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
2:15p					Arrived on location
2:25p					Safety meeting
2:35p					Rigged up
3:43p					Casing on bottom
3:50p					Circulated mud
3:57p	3.0	100.0	8.0	8.0	Water ahead
4:05p	5.0	300.0	50.2	55.2	Mixed cement 14.8 ppg
4:11p	4.0	200.0	12.5	67.7	Begin displacement
4:18p		100.0		67.7	Plug down and shut in
4:17p				67.7	Wash up and rig down
4:37p				67.7	Left location

Crew	UNIT	SUMMARY		
		Average Rate	Average Pressure	Total Fluid
Cementor: John	64	4.0 bpm	175 psi	68 bbls
Pump Operator: Jose V	208			
Bulk #1: Charlie	527-250			
Bulk #2:				



CEMENT TREATMENT REPORT

Customer: Murfin Drilling	Well: Miller #1-29	Ticket: WP 2581
City, State: Oakley KS	County: Rooks KS	Date: 3/25/2022
Field Rep: John G	S-T-R: 29-63-19W	Service: 2 Stage

Downhole Information	
Hole Size:	7.875 in
Hole Depth:	3712 ft
Casing Size:	5 1/2 in
Casing Depth:	3707 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	1742 ft
Displacement:	87.7 bbls

Calculated Slurry - Lead	
Blend:	HLD
Weight:	14.8 ppg
Water / Sx:	6.5 gal / sx
Yield:	1.81 ft³ / sx
Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	47.0 bbls
Total Sacks:	175 sx

Calculated Slurry - Tail	
Blend:	H-Con
Weight:	12 ppg
Water / Sx:	13.5 gal / sx
Yield:	2.56 ft³ / sx
Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	136.7 bbls
Total Sacks:	300 sx

TIME	RATE	PSI	BBLs	TOTAL BBLs	REMARKS
2:58p					Arrived on location
3:06p					Safety meeting
3:18p					Rig up
7:06p					Casing on bottom and dropped ball
7:16p					Circulated mud
8:09p	3.0	270.0	6.0	6.0	Water ahead
8:10p	6.0	480.0	12.0	17.0	Mud flush
8:13p	5.4	440.0	10.0	27.0	Water behind
8:17p	5.8	600.0	47.0	74.0	Mixed cement @ 14.8 ppg
8:33p				74.0	Shut down wash up pump and load LD plug
8:43p	6.0	300.0	48.0	120.0	Begin water displacement
8:50p	6.0	600.0	41.0		Begin mud displacement
9:05p		1,100.0			Plug down with 600 psi lift pressure took to 1100 psi
9:08p					Released pressure/plug held
9:10p					Dropped bomb waited 15 minutes
9:26p	2.0	780.0	0.8		Opened tool @ 760 psi
9:30p					Circulated hole with rig pump
10:32p	4.0	200.0	6.0		Water ahead
10:38p	3.0	150.0	13.8		Mixed cement @ 12.0 ppg for cat hole
10:37p					Plug down
10:39p	3.0	15.0	6.8		Mixed cement @ 12.0 ppg for mouse hole
10:41p					Plug down
10:42p	6.3	400.0	116.2		Mixed cement @ 12.0 ppg
11:04p					Shut down wash up pump and load 2nd stage plug
11:12p	6.3	600.0	42.0		Begin displacement
11:21p		1,100.0			Plug down with 600 psi lift pressure took to 1100 psi
11:24 AM					Released pressure/plug held

CREW		UNIT	SUMMARY		
Cementor:	Josh	73	Average Rate	Average Pressure	Total Fluid
Pump Operator:	John	208	4.6 bpm	487 psi	348 bbls
Bulk #1:	Charlie	242			
Bulk #2:	Jose V	194-230			

DRILLING REPORT - LOG TOPS - MILLER 1-29

MDCI
 Miller #1-29
 330 FNL 330 FWL
 Sec. 29-T6S-R19W
 2121' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	1718	+403	-25	1715	+407	-21
B/Anhydrite	1749	+372	-22	1748	+374	-20
Topeka	3115	-994	-5	3126	-1004	-15
Heebner	3323	-1202	-15	3319	-1197	-10
Toronto	3343	-1222	-13	3341	-1219	-3
Lansing	3360	-1239	-16	3355	-1233	-10
Mound City	3569	-1448	-11	3563	-1441	-4
Reagan	3640	-1519	-24	3625	-1503	-8
Granite	3707	-1586	-55	3705	-1583	-52
RTD	3712					
LTD				3709		