

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) (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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JAMES C. MUSGROVE

Petroleum Geologist, LLC
212 Main Street
P.O. Box 215
Claflin, KS 67525

Office (620) 588-4250

Res. Claflin (620) 786-0839

Mai Oil Operations
Reiser #11
NE-SW-SW-NE (2093' FNL & 2064' FEL)
Section 21-21s-12w
Stafford County, Kansas

Page 1

Dry and Abandoned

Contractor: Southwind Drilling Co. (rig #3)
Commenced: March 23, 2018
Completed: March 30, 2018
Elevation: 1855' K.B., 1853' D.F., 1847' G.L.
Casing program: Surface; 8 5/8" @ 662'
Production, 5 1/2" @ none
Sample: Samples saved and examined 3000' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 3000' to the Rotary Total Depth.
Measurements: All depths measured from the Kelly Bushing.
Drill Stem Tests: There were four (4) Drill Stem Tests ran by Trilobite Testing Co.
Electric Log: By Eli; Dual Induction; Compensated Density/Neutron Log; Micro Log

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	650	+1205
Base Anhydrite	670	+1185
Heebner	3111	-1256
Toronto	3131	-1276
Douglas	3146	-1291
Brown Lime	3246	-1391
Lansing	3259	-1404
Base Kansas City	3479	-1624
Viola	3483	-1628
Simpson Shale	3498	-1643
Arbuckle	3543	-1688
Rotary Total Depth	3700	-1845
Log Total Depth	3701	-1846

(All tops and zone(s) correlated to Electric Log Measurements.

SAMPLE ANALYSIS, SHOWS OF OIL, TESTING DATA, ETC.

TOPEKA SECTION

- 3031-3046' Limestone, white, cream, sub-oomoldic, few granular, scattered porosity, no shows.
- 3054-3060' Limestone, white, gray; finely crystalline, chalky; few fossiliferous, poor porosity, no shows.
- 3070-3090' Limestone, as above, no shows.

TORONTO SECTION

- 3131-3140' Limestone, tan; gray; finely crystalline, chalky in part; no shows.
- 3140-3146' Limestone, as above, few dolomitic at base.

LANSING SECTION

- 3259-3265' Limestone, tan, gray, finely crystalline, few medium crystalline, fossiliferous in part, chalky; no show.
- 3276-3287' Limestone, white, cream, finely crystalline, slightly chalky, poor visible porosity; no shows.
- 3293-3300' Limestone, white, fine and medium crystalline, fossiliferous, few cherty; poor porosity; no shows.
- 3316-3321' Limestone, tan; oolitic, fair porosity; golden brown stain, no free oil and faint odor in fresh samples.
- 3326-3336' Limestone, as above
- 3341-3351' Limestone, white, gray, finely crystalline, chalky; few cherty; poor visible porosity; no shows.
- 3384-3391' Limestone, white, gray, finely crystalline, fossiliferous, oolitic; scattered porosity; trace brown stain; no show of free oil and no odor in fresh samples.
- 3396-3401' Limestone, tan; sub-oomoldic, chalky; fair porosity; trace brown stain, trace of free oil and no odor in fresh samples.
- 3420-3430' Limestone, cream; oolitic, few chalky, fair porosity; brown stain; no show of free oil and no odor in fresh samples.
- 3440-3450' Limestone, as above; chalky; poor visible porosity, no shows.
- 3463-3473' Limestone, white, gray, tan, few fossiliferous, chalky; no shows.
- 3483-3498' Chert; yellow, gray, white; boney, opaque; no shows.

ARBUCKLE SECTION

- 3543-3550' Dolomite, white, tan, finely crystalline, sucrosic; fair porosity, no shows.
- 3550-3568' Dolomite, tan, medium crystalline, good inter-crystalline porosity; good

stain and saturation, show of free oil and good odor in fresh samples.

Drill Stem Test #1 **3474-3568**

Times: 30-30-45-60

Blow: Strong

Recovery: 208' gas in pipe
40' gassy mud
120' slightly oil and gas cut mud
(2% gas; 8% oil; 90% mud)

Pressures: ISIP 401 psi
FSIP 428 psi
IFP 22-62 psi
FFP 62-91 psi
HSH 1722-1691 psi

3568-3578' Dolomite, white, tan, fine and medium crystalline, fair inter-crystalline porosity; brown stain, show of free oil and good odor in fresh samples.

3578-3590' Dolomite, as above, sucrosic in part.

Drill Stem Test #2 **3568-3590**

Times: 30-30-45-60

Blow: Strong

Recovery: 150' gas in pipe
5' clean oil
153' slightly oil cut muddy water
(2% oil; 65% water; 30% mud)

Pressures: ISIP 477 psi
FSIP 421 psi
IFP 24-81 psi
FFP 84-136 psi
HSH 1792-1728 psi

3600-3608' Dolomite, white and gray; fine to medium crystalline, fair inter-crystalline porosity, few sucrosic, fair stain and saturation; show of free oil and faint to fair odor in fresh samples.

Drill Stem Test #3 **3591-3611**

Times: 30-30-45-60

Blow: Fair

Recovery: 50' gas in pipe
 75' oil cut muddy water
 (10% oil 20% water; 70% mud)

Pressures: ISIP 384 psi
 FSIP 441 psi
 IFP 14-33 psi
 FFP 30-36 psi
 HSH 1785-1725 psi

3613-3620' Dolomite, tan; gray, sucrosic, good pinpoint and fine vuggy porosity, good stain and saturation; show of free oil and good odor in fresh samples.

3620-3631' Dolomite, as above, plus dolomite, white and gray; medium crystalline, fair to good porosity; brown and gray stain, show of free oil and good odor in fresh samples.

Drill Stem Test #4 **3611-3631**

Times: 30-30-45-60

Blow: Fair

Recovery: 5' clean oil
 80' slightly oil cut muddy water
 (5% oil; 45% water; 50% mud)

Pressures: ISIP 472 psi
 FSIP 496 psi
 IFP 15-37 psi
 FFP 32-52 psi
 HSH 1790-1744 psi

3631-3650' Dolomite, gray, white, finely crystalline, sucrosic, fair porosity, gray and brown and black stain, show of free oil and odor in fresh samples.

3650-3670' Dolomite, tan, gray and pink; fine to medium crystalline, slightly cherty, gray and black stain, trace of free oil and faint odor in fresh samples.

3670-3690' Dolomite; as above, plus chert, white, weathered; black and gray stain; trace of free oil (dead appearing), and faint odor in fresh samples.

3690-3700' Dolomite and chert; as above.

Mai Oil Operations
Reiser #11
NE-SW-SW-NE (2093' FNL & 2064' FEL)
Section 21-21s-12w
Stafford County, Kansas

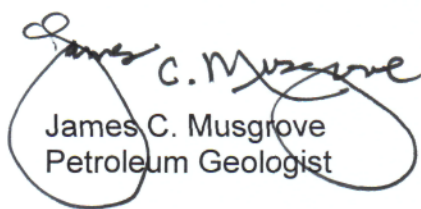
Page 5

Rotary Total Depth	3700
Log Total Depth	3701

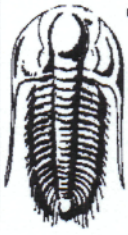
Recommendations:

The Mai Oil Operations, Inc., Reiser #11; was plugged and abandoned at the RTD 3700.

Respectfully yours,


James C. Musgrove
Petroleum Geologist





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations
 8411 Preston Rd Ste 800
 Dallas, TX 75225
 ATTN: Jim Musgrove

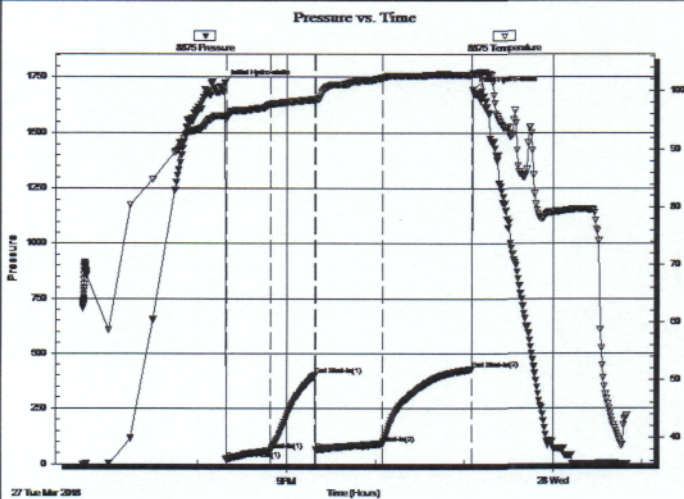
21-21S-12W Stafford,KS
Reiser #11
 Job Ticket: 63372 **DST#: 1**
 Test Start: 2018.03.27 @ 18:41:55

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 20:18:57
 Time Test Ended: 00:49:57
 Interval: **3474.00 ft (KB) To 3568.00 ft (KB) (TVD)**
 Total Depth: 3568.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 1855.00 ft (KB)
 1847.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8875 **Inside**
 Press@RunDepth: 90.77 psig @ 3475.00 ft (KB) Capacity: psig
 Start Date: 2018.03.27 End Date: 2018.03.28 Last Calib.: 2018.03.28
 Start Time: 18:41:56 End Time: 00:49:57 Time On Btm: 2018.03.27 @ 20:18:12
 Time Off Btm: 2018.03.27 @ 23:05:27

TEST COMMENT: IF: Fair Blow , BOB in 10 minutes, Built to 21"
 IS: No Blow Back
 FF: Fair Blow , BOB in 14 minutes, Built to 22"
 FS: No Blow Back



PRESSURE SUMMARY

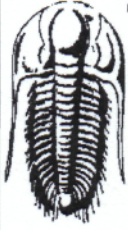
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1722.10	95.67	Initial Hydro-static
1	21.96	95.00	Open To Flow (1)
31	61.94	97.60	Shut-In(1)
61	401.07	98.43	End Shut-In(1)
62	62.16	98.44	Open To Flow (2)
107	90.77	102.10	Shut-In(2)
167	427.87	102.61	End Shut-In(2)
168	1691.51	102.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	208 GIP	0.00
120.00	GOCM 2%G 8%O 90%M	1.68
40.00	GCM 5%G 95%M	0.56

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations
8411 Preston Rd Ste 800
Dallas, TX 75225
ATTN: Jim Musgrove

21-21S-12W Stafford,KS
Reiser #11
Job Ticket: 63372 DST#: 1
Test Start: 2018.03.27 @ 18:41:55

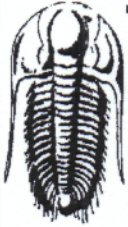
Tool Information

Drill Pipe:	Length: 3487.00 ft	Diameter: 3.80 inches	Volume: 48.91 bbl	Tool Weight: 2100.00 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: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 48.91 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3474.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	94.00 ft			
Tool Length:	113.00 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			3460.00	
Hydraulic tool	5.00			3465.00	
Packer	5.00			3470.00	19.00 Bottom Of Top Packer
Packer	4.00			3474.00	
Stubb	1.00			3475.00	
Recorder	0.00	8875	Inside	3475.00	
Recorder	0.00	6749	Outside	3475.00	
Perforations	4.00			3479.00	
Change Over Sub	1.00			3480.00	
Drill Pipe	63.00			3543.00	
Change Over Sub	2.00			3545.00	
Perforations	20.00			3565.00	
Bullnose	3.00			3568.00	94.00 Bottom Packers & Anchor

Total Tool Length: 113.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations
8411 Preston Rd Ste 800
Dallas, TX 75225
ATTN: Jim Musgrove

21-21S-12W Stafford,KS
Reiser #11
Job Ticket: 63372 **DST#: 1**
Test Start: 2018.03.27 @ 18:41:55

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: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.39 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	208 GIP	0.000
120.00	GOCM 2%G 8%O 90%M	1.683
40.00	GCM 5%G 95%M	0.561

Total Length: 160.00 ft Total Volume: 2.244 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

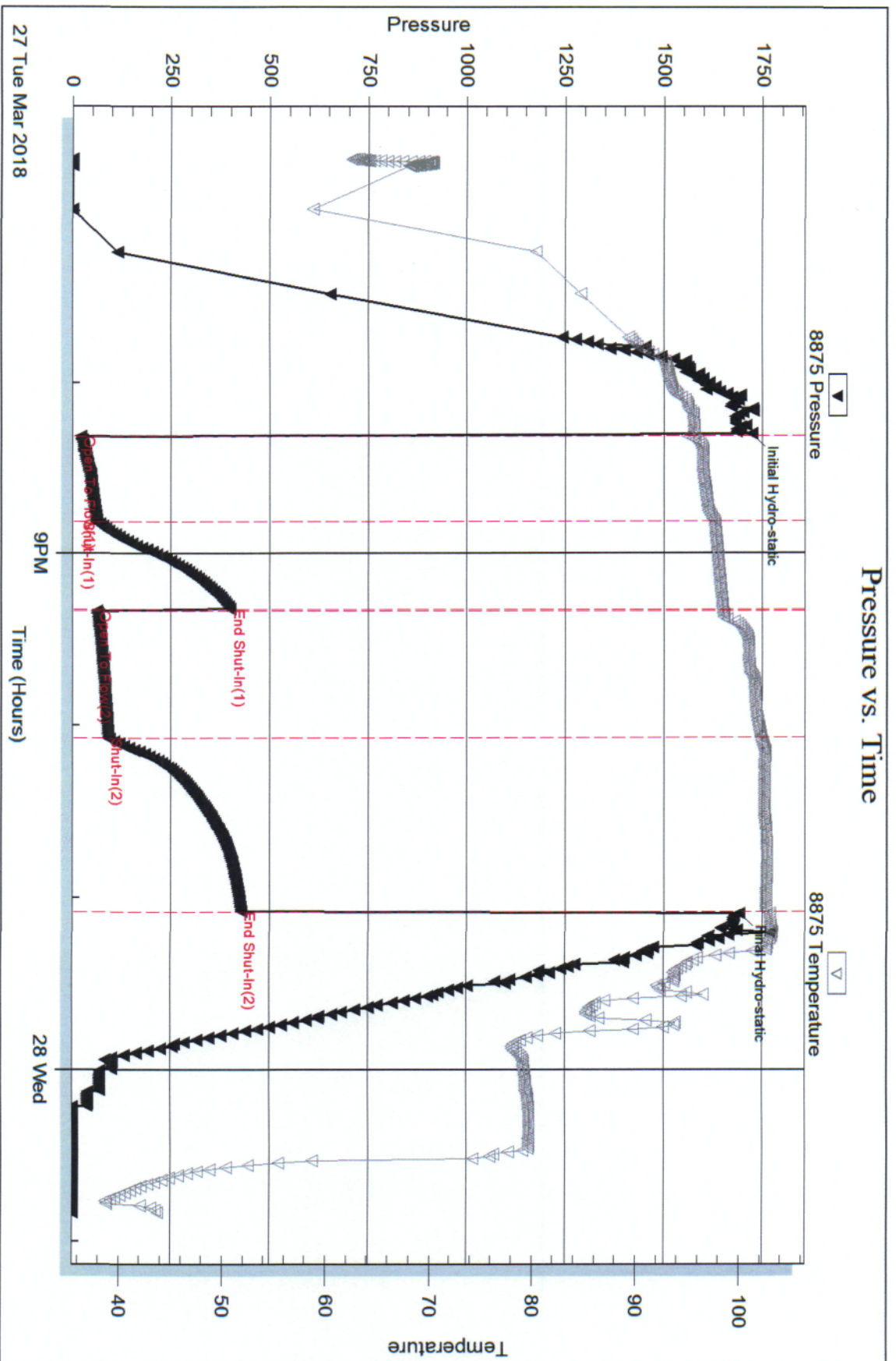
Serial #: 8875

Inside

Mai Oil Operations

Reiser #11

DST Test Number: 1





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations
8411 Preston Rd Ste 800
Dallas, TX 75225
ATTN: Jim Musgrove

21-21S-12W Stafford,KS
Reiser #11
Job Ticket: 63373 **DST#: 2**
Test Start: 2018.03.28 @ 07:00:54

Tool Information

Drill Pipe:	Length: 3581.00 ft	Diameter: 3.80 inches	Volume: 50.23 bbl	Tool Weight: 2100.00 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: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 50.23 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3568.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	41.00 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			3554.00	
Hydraulic tool	5.00			3559.00	
Packer	5.00			3564.00	19.00 Bottom Of Top Packer
Packer	4.00			3568.00	
Stubb	1.00			3569.00	
Recorder	0.00	8875	Inside	3569.00	
Recorder	0.00	6749	Outside	3569.00	
Perforations	18.00			3587.00	
Bullnose	3.00			3590.00	22.00 Bottom Packers & Anchor
Total Tool Length:	41.00				

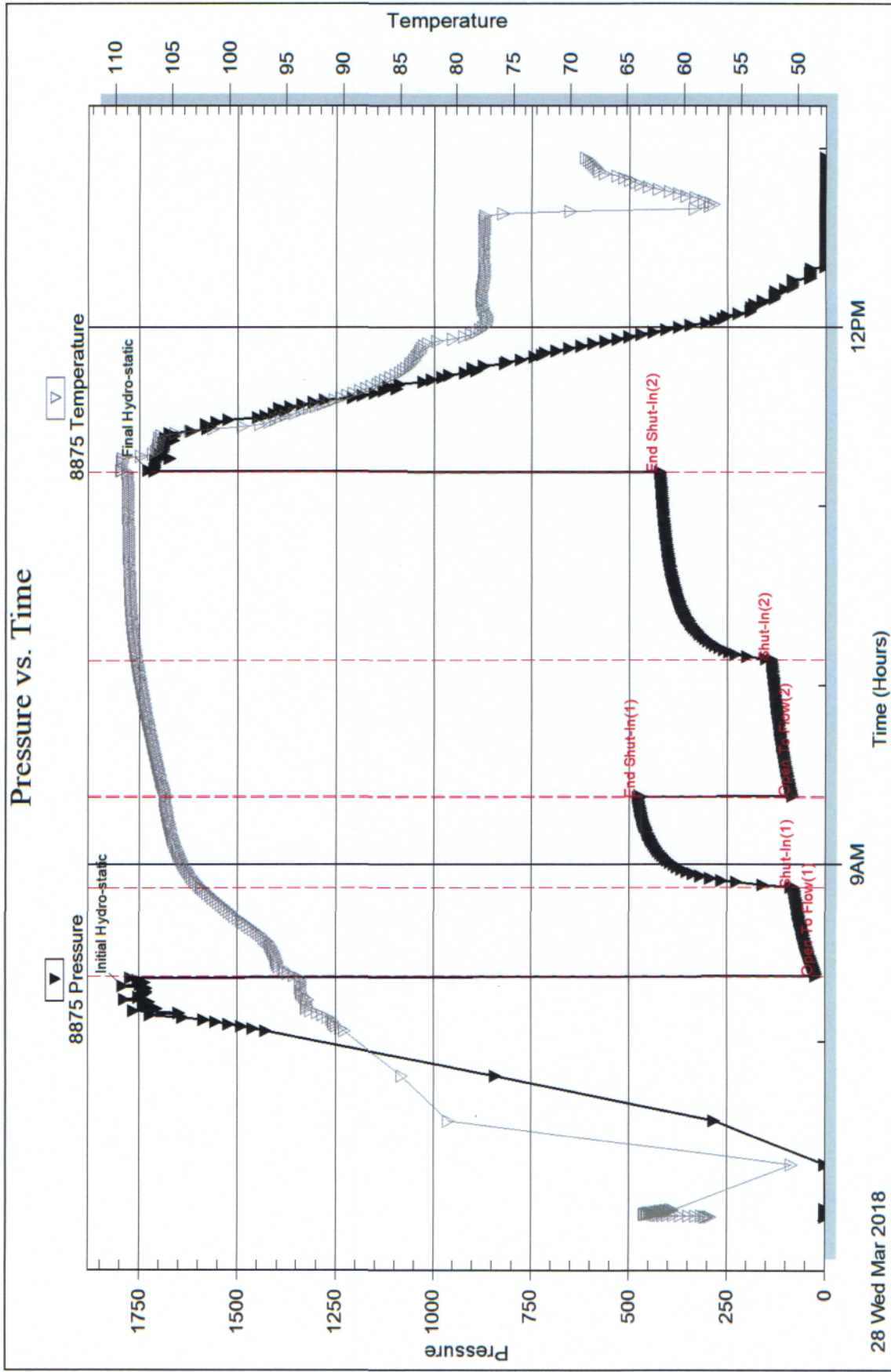
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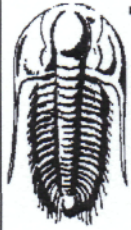
Inside

Mai Oil Operations

Reiser #11

DST Test Number: 2





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations
8411 Preston Rd Ste 800
Dallas, TX 75225
ATTN: Jim Musgrove

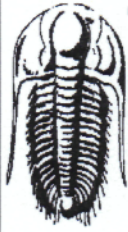
21-21S-12W Stafford,KS
Reiser #11
Job Ticket: 63374 **DST#: 3**
Test Start: 2018.03.28 @ 19:47:21

Tool Information

Drill Pipe:	Length: 3581.00 ft	Diameter: 3.80 inches	Volume: 50.23 bbl	Tool Weight:	2100.00 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: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	40000.00 lb
			<u>Total Volume: 50.23 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial	38000.00 lb
Depth to Top Packer:	3591.00 ft			Final	39000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	20.00 ft				
Tool Length:	39.00 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			3577.00	
Hydraulic tool	5.00			3582.00	
Packer	5.00			3587.00	19.00 Bottom Of Top Packer
Packer	4.00			3591.00	
Stubb	1.00			3592.00	
Recorder	0.00	8875	Inside	3592.00	
Recorder	0.00	6749	Outside	3592.00	
Perforations	16.00			3608.00	
Bullnose	3.00			3611.00	20.00 Bottom Packers & Anchor
Total Tool Length:	39.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations

21-21S-12W Stafford,KS

8411 Preston Rd Ste 800
Dallas, TX 75225

Reiser #11

Job Ticket: 63374

DST#: 3

ATTN: Jim Musgrove

Test Start: 2018.03.28 @ 19:47:21

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: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	GIP	0.000
75.00	OWCM 10%O 20%W 70%M	1.052

Total Length: 75.00 ft Total Volume: 1.052 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

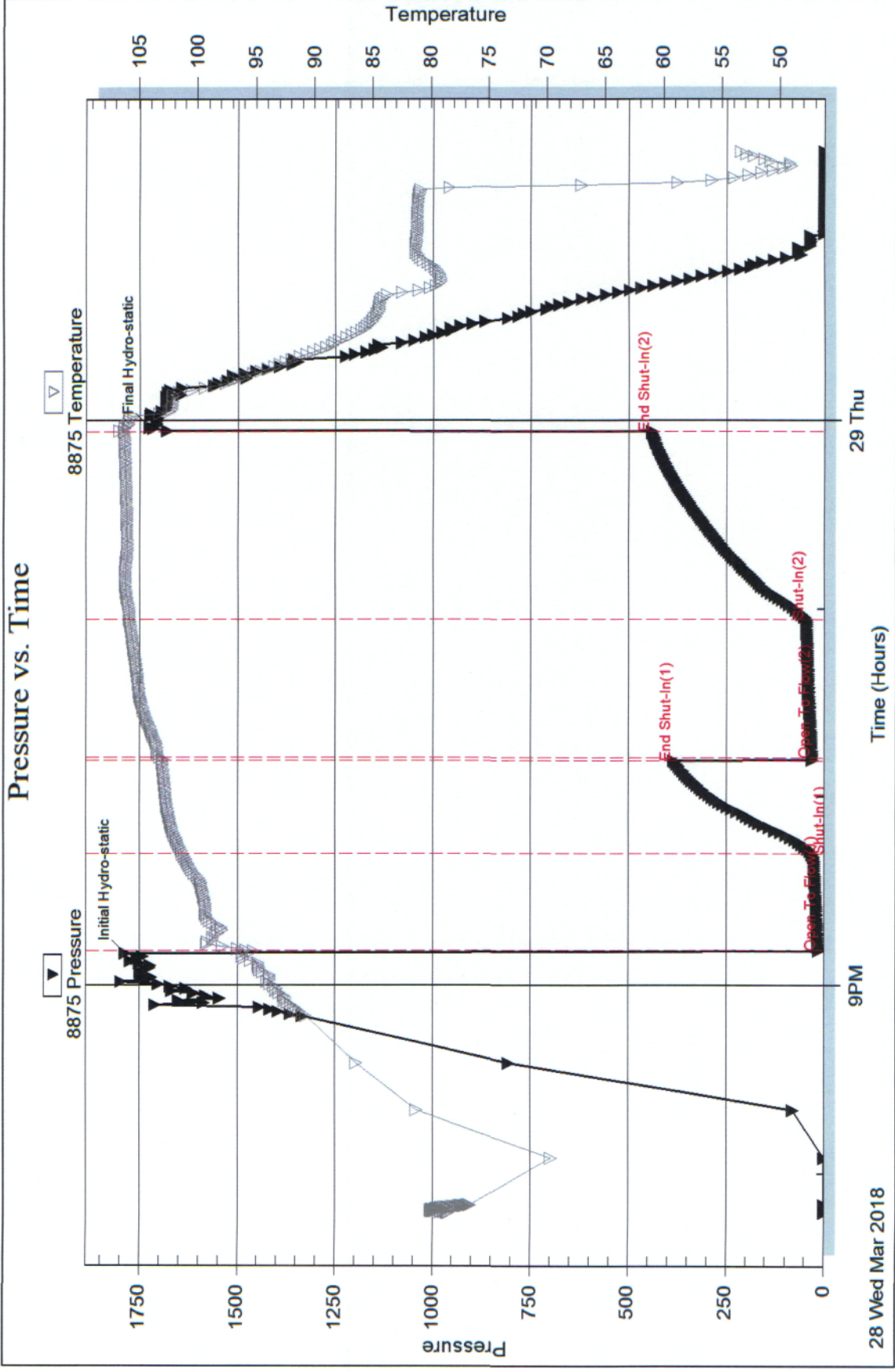
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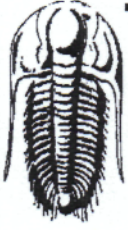
Inside

Mai Oil Operations

Reiser #11

DST Test Number: 3





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations
 8411 Preston Rd Ste 800
 Dallas, TX 75225
 ATTN: Jim Musgrove

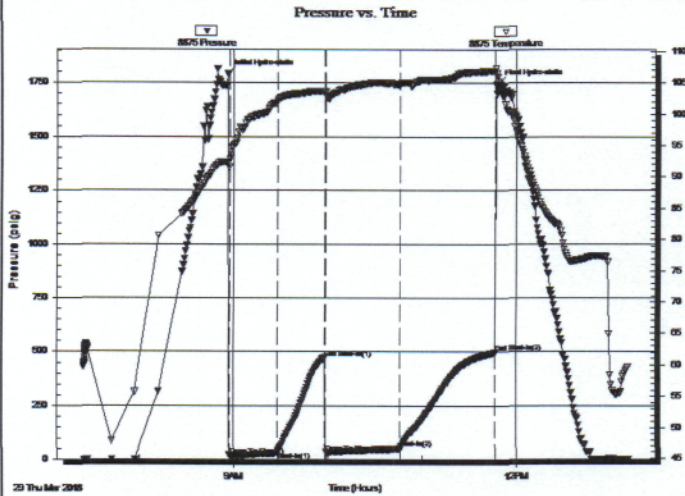
21-21S-12W Stafford,KS
Reiser #11
 Job Ticket: 63375 **DST#: 4**
 Test Start: 2018.03.29 @ 07:24:58

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:57:45
 Time Test Ended: 13:11:00
 Interval: **3611.00 ft (KB) To 3631.00 ft (KB) (TVD)**
 Total Depth: 3631.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 1855.00 ft (KB)
 1847.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8875 Inside
 Press@RunDepth: 51.73 psig @ 3612.00 ft (KB) Capacity: psig
 Start Date: 2018.03.29 End Date: 2018.03.29 Last Calib.: 2018.03.29
 Start Time: 07:24:59 End Time: 13:11:00 Time On Btm: 2018.03.29 @ 08:56:45
 Time Off Btm: 2018.03.29 @ 11:48:00

TEST COMMENT: IF: Fair Blow , Built to 7 1/2"
 IS: No Blow Back
 FF: Fair Blow , Built to 8 1/2"
 FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1789.82	92.41	Initial Hydro-static
1	15.15	92.83	Open To Flow (1)
32	36.97	102.05	Shut-In(1)
62	472.52	103.65	End Shut-In(1)
63	32.40	103.55	Open To Flow (2)
110	51.73	104.70	Shut-In(2)
170	496.32	106.89	End Shut-In(2)
172	1743.96	105.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	SOWCM 5%O 45%W 50%M	1.12
5.00	Oil	0.07

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations
8411 Preston Rd Ste 800
Dallas, TX 75225
ATTN: Jim Musgrove

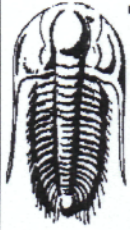
21-21S-12W Stafford,KS
Reiser #11
Job Ticket: 63375 **DST#: 4**
Test Start: 2018.03.29 @ 07:24:58

Tool Information

Drill Pipe:	Length: 3612.00 ft	Diameter: 3.80 inches	Volume: 50.67 bbl	Tool Weight: 2100.00 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: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 50.67 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3611.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	39.00 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			3597.00	
Hydraulic tool	5.00			3602.00	
Packer	5.00			3607.00	19.00 Bottom Of Top Packer
Packer	4.00			3611.00	
Stubb	1.00			3612.00	
Recorder	0.00	8875	Inside	3612.00	
Recorder	0.00	6749	Outside	3612.00	
Perforations	16.00			3628.00	
Bullnose	3.00			3631.00	20.00 Bottom Packers & Anchor
Total Tool Length:	39.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations
8411 Preston Rd Ste 800
Dallas, TX 75225
ATTN: Jim Musgrove

21-21S-12W Stafford,KS
Reiser #11
Job Ticket: 63375 **DST#: 4**
Test Start: 2018.03.29 @ 07:24:58

Mud and Cushion Information

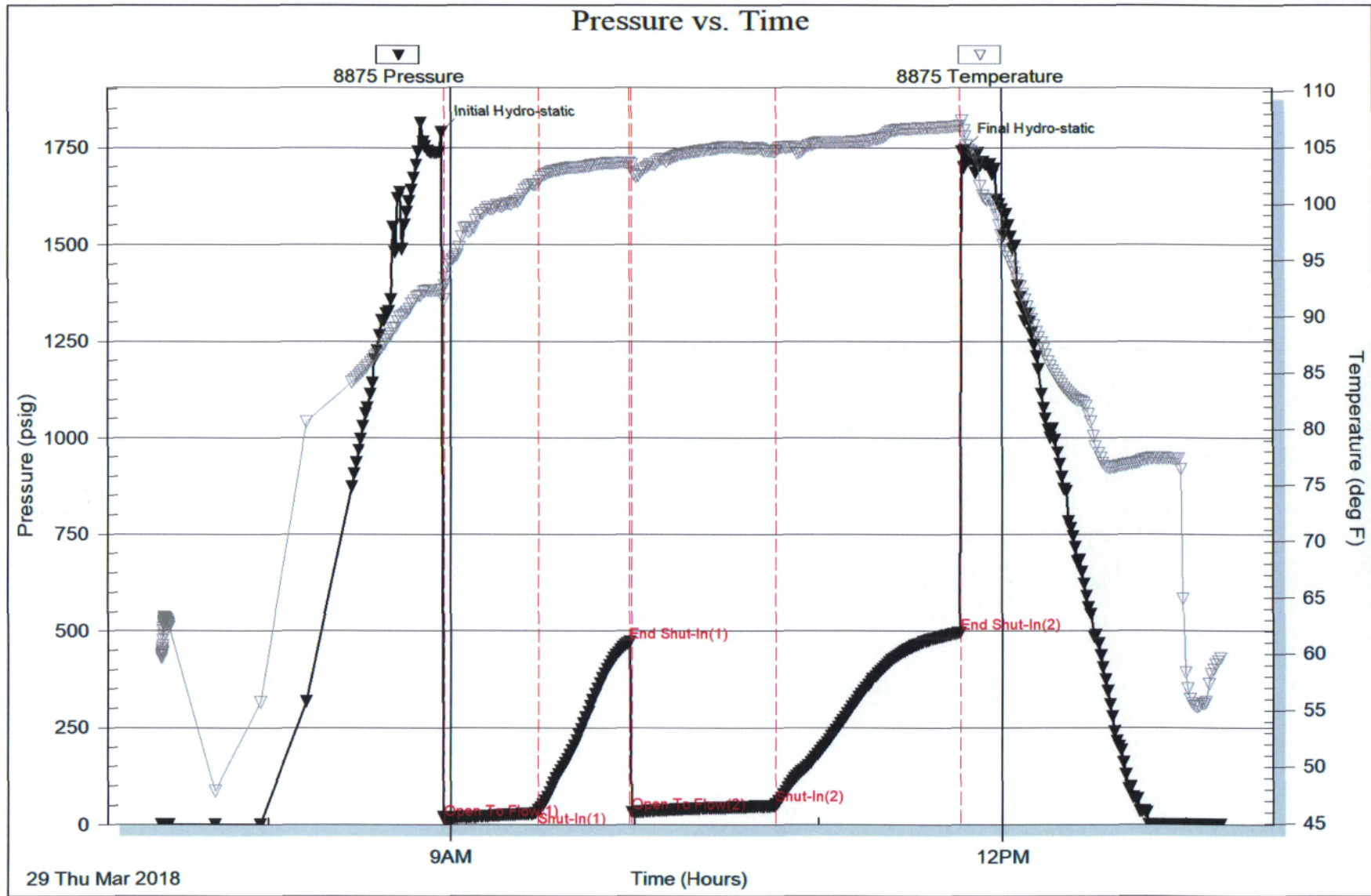
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length:	Water Salinity:	26000 ppm
Viscosity: 48.00 sec/qt			
Water Loss: 7.19 in ³	Cushion Volume:		
Resistivity: ohm.m			
Salinity: 5000.00 ppm	Gas Cushion Type:		
Filter Cake: 0.02 inches	Gas Cushion Pressure:		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	SOWCM 5%O 45%W 50%M	1.122
5.00	Oil	0.070

Total Length: 85.00 ft Total Volume: 1.192 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW was .3 @ 61 degrees



QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 879

Date	3-24-18	Sec.	21	Twp.	21	Range	12	County	Stafford	State	Ks	On Location		Finish	4:00 AM
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Location *Dartmouth - 11 1/2 S to 170th, 2E, 1/2 N*

Lease	<i>Reiser</i>	Well No.	<i>11</i>	Owner	<i>Wigato</i>
Contractor	<i>Southwind</i>	#	<i>3</i>	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Type Job	<i>Surface</i>			Charge To <i>mai oil operations</i>	
Hole Size	<i>12 1/4"</i>	T.D.	<i>662'</i>	Street	
Csg.	<i>8 5/8"</i>	Depth	<i>662'</i>	City	
Tbg. Size		Depth		State	
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	<i>20'</i>	Shoe Joint	<i>20'</i>	Cement Amount Ordered <i>450 60/40 4% cc 2% gel</i>	
Meas Line		Displace	<i>41 BCS</i>	<i>1/2# Flb-seal</i>	

EQUIPMENT

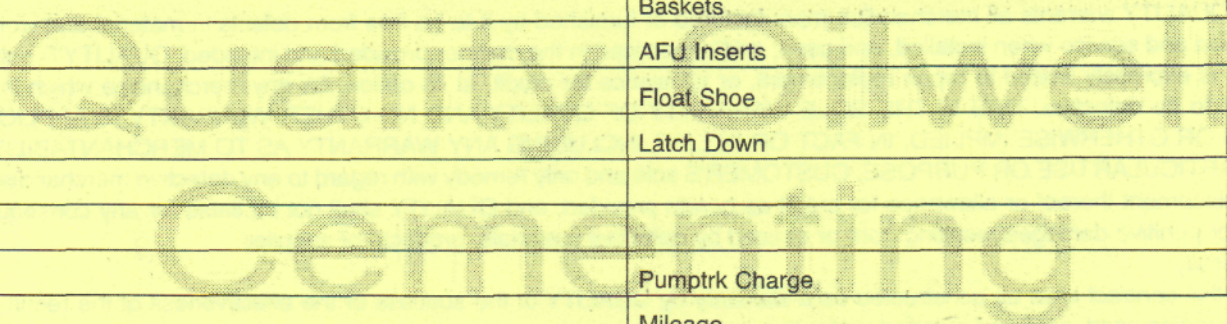
Pumptrk	<i>16</i>	No.		Cementer		Common
				Helper	<i>Travis</i>	Poz. Mix
Bulktrk	<i>21</i>	No.		Driver	<i>David</i>	Gel.
				Driver	<i>Rick</i>	Calcium
Bulktrk	<i>p.w.</i>	No.		Driver		

JOB SERVICES & REMARKS

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

FLOAT EQUIPMENT

Guide Shoe	<i>Rubber plug</i>
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	



Pumptrk Charge		Tax	
Mileage		Discount	
		Total Charge	

X Signature *Jay Brian*