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Mai Oil Operations
D&D Unit #1
W/2-NW-NW-SW (2310' FSL & 252' FWL)
Section 16-20s-22w
Ness County, Kansas

Page 1

5 1/2" Production Casing Set

Contractor: Southwind Drilling Co. (rig #3)
Commenced: May 16, 2017
Completed: May 23, 2017
Elevation: 2217' K.B., 2215' D.F., 2209' G.L.
Casing program: Surface; 8 5/8" @ 263'
Production, 5 1/2" @ 4449'
Sample: Samples saved and examined 3500' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 3500' to the Rotary Total Depth.
Measurements: All depths measured from the Kelly Bushing.
Drill Stem Tests: There were three (3) Drill Stem Tests ran by Trilobite Testing Co.
Electric Log: By Eli Wireline Services, Dual Induction, Compensated Density/Neutron and Micro Log.

| <u>Formation</u> | <u>Log Depth</u> | <u>Sub-Sea Datum</u> |
|-----------------------|------------------|----------------------|
| Anhydrite | 1436 | +781 |
| Base Anhydrite | 1473 | +744 |
| Heebner | 3705 | -1488 |
| Toronto | 3719 | -1502 |
| Lansing | 3754 | -1537 |
| Stark | 4010 | -1793 |
| Base Kansas City | 4078 | -1861 |
| Marmaton | 4121 | -1904 |
| Pawnee | 4201 | -1984 |
| Ft Scott | 4274 | -2057 |
| Cherokee Shale | 4295 | -2078 |
| Mississippian "Osage" | 4356 | -2139 |
| Rotary Total Depth | 4450 | -2233 |
| Log Total Depth | 4450 | -2233 |

(All tops and zones corrected to Electric Log Measurement)

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

TOPEKA THROUGH LANSING SECTION

3600-4078' There were several zones of well-developed porosity encountered in the Drilling of the Topeka, Toronto and Lansing/Kansas City Sections but no shows of oil and/or gas was noted (see attached Geologist report/sample log).

MARMATON SECTION

4121-4131' Limestone, tan, finely crystalline, slightly cherty (dense)

4138-4146' Limestone, white, gray, slightly fossiliferous, chalky, poor porosity, no shows.

4150-4170' Limestone, as above, maroon, tinted, chalky; no shows.

4180-4199' Limestone, white and gray, cherty in part, poor porosity, no shows.

PAWNEE SECTION

4201-4230' Limestone, tan, gray, finely crystalline, chalky (dense)

4230-4266' Limestone, as above, poorly developed porosity, no shows..

FT SCOTT SECTION

4279-4280' Limestone, white and gray; few fossiliferous, chalky, trace gray stain, no show of free oil and questionable odor in fresh samples.

4280-4296' Limestone, as above, no shows.

CHEROKEE SECTION

4300-4318' Limestone, gray, white, chalky, poor visible porosity, no shows.

MISSISSIPPIAN SECTION

4356-4364' Chert; white, boney, translucent, few semi-tripolitic, brown and gray stain, plus dolomite, white, gray, finely crystalline, scattered pinpoint porosity, brown stain, show of free oil and faint odor.

Drill Stem Test #1 **4378-4365**

Times: 30-30-30-45
Blow: Surface
Recovery: 30' slightly oil cut mud
(2% oil; 98% mud)
Pressures: ISIP 377 psi
FSIP 675 psi
IFP 13-16 psi
FFP 16-22 psi
HSH 2110-2070 psi

4366-4373'

Chert; and dolomite, as above, brown stain, show of free oil and fair odor in fresh samples.

Drill Stem Test #2 **4318-4373**

Times: 30-30-30-45
Blow: Weak
Recovery: 75' oil cut mud pipe
(10% oil; 90% mud))
Pressures: ISIP 1289 psi
FSIP 1341 psi
IFP 14-33 psi
FFP 40-53 psi
HSH 2137-2106 psi

4373-4379'

Chert; white, cream, fresh; few semi-tripolitic, golden brown to brown stain, plus dolomite, white, gray and tan, finely crystalline, pinpoint type to fine vuggy type porosity, brown stain, show of free oil and faint odor in fresh samples.

Drill Stem Test #3 **4317-4379'**

Times: 30-30-45-60
Blow: Good
Recovery: 124' gas in pipe
124' clean oil
558' muddy oil
(50% oil; 50% mud))
Pressures: ISIP 1372 psi
FSIP 1371 psi
IFP 28-189 psi
FFP 192-276 psi
HSH 2165-2064 psi

Mai Oil Operations
D&D Unit #1
W/2-NW-NW-SW (2310' FSL & 252' FWL)
Section 16-20s-22w
Ness County, Kansas

Page 4

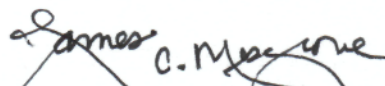
| | |
|------------|--|
| 4379-4390' | Chert; as above, good porosity, fair brown/golden brown stain and saturation, show of free oil and fair odor in fresh samples. |
| 4390-4406' | Chert and dolomite, as above, decreasing stain; trace of free oil and faint odor. |
| 4406-4416' | Limestone, tan, fossiliferous in part, dolomitic, dense. |
| 4416-4430' | Dolomite, white, cream, sucrosic, glauconitic, plus white/cream, boney to translucent chert, few fossiliferous, no shows. |
| 4430-4450' | Dolomite and chert, as above. |

| | |
|---------------------------|-------------|
| Rotary Total Depth | 4450 |
| Log Total Depth | 4450 |

Recommendations:

The 5 ½" production casing was set and cemented on Mai Oil Operations Inc., D&D Unit #1.

Respectfully yours,


James C. Musgrove
Petroleum Geologist





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operation Inc.

16-20S-22W Ness,KS

8411 Preston Road Suite 800
Dallas TX 75225+5520

D&D Unit #1

Job Ticket: 64781

DST#: 1

ATTN: Jim Musgrove

Test Start: 2017.05.21 @ 10:31:00

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:37:30

Time Test Ended: 16:52:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 4318.00 ft (KB) To 4365.00 ft (KB) (TVD)

Total Depth: 4365.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2217.00 ft (KB)

2209.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8960

Outside

Press@RunDepth: 674.79 psig @ 4362.16 ft (KB)

Start Date: 2017.05.21

End Date:

2017.05.21

Capacity: 8000.00 psig

Last Calib.:

2017.05.21

Start Time: 10:31:05

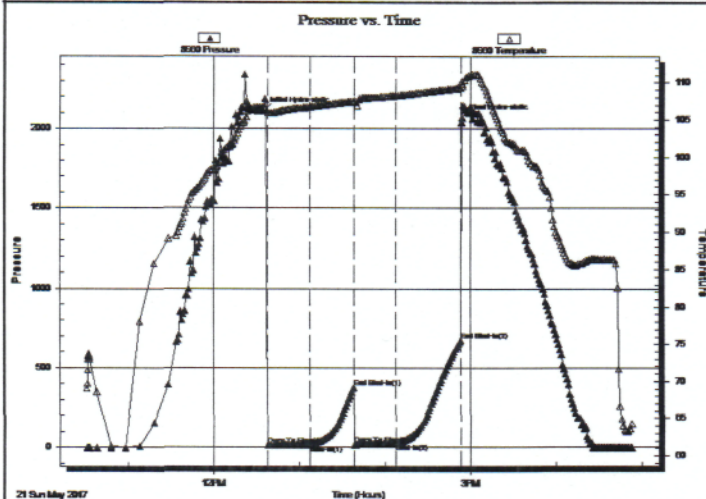
End Time:

16:52:29

Time On Btm: 2017.05.21 @ 12:35:00

Time Off Btm: 2017.05.21 @ 14:54:00

TEST COMMENT: IFP 30 Minutes Surface blow died in 5 minutes
ISI 30 Minutes No blow back
FFP 30 Minutes No blow / Flush tool/ Surface blow died in 1 minute
FSI 45 Minutes No blow back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2108.31 | 106.67 | Initial Hydro-static |
| 3 | 13.53 | 105.99 | Open To Flow (1) |
| 32 | 15.99 | 106.74 | Shut-In(1) |
| 63 | 376.61 | 107.51 | End Shut-In(1) |
| 64 | 16.45 | 107.32 | Open To Flow (2) |
| 92 | 22.16 | 108.22 | Shut-In(2) |
| 138 | 674.79 | 109.29 | End Shut-In(2) |
| 139 | 2068.48 | 109.62 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------|--------------|
| 30.00 | VSOCM Oil 2% Mud 98% | 0.15 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operation Inc.

16-20S-22W Ness,KS

8411 Preston Road Suite 800
Dallas TX 75225+5520

D&D Unit #1

Job Ticket: 64781

DST#: 1

ATTN: Jim Musgrove

Test Start: 2017.05.21 @ 10:31:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3970.00 ft | Diameter: 3.80 inches | Volume: 55.69 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: 359.00 ft | Diameter: 2.25 inches | Volume: 1.77 bbl | Weight to Pull Loose: 72000.00 lb |
| | | | <u>Total Volume: 57.46 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 31.00 ft | | | String Weight: Initial 62000.00 lb |
| Depth to Top Packer: | 4318.00 ft | | | Final 62000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 47.16 ft | | | |
| Tool Length: | 67.16 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 | | | 4303.00 | |
| Hydraulic tool | 5.00 | | | 4308.00 | |
| Top Packer | 5.00 | | | 4313.00 | |
| Packer | 5.00 | | | 4318.00 | 20.00 Bottom Of Top Packer |
| Anchor | 9.00 | | | 4327.00 | |
| Change Over Sub | 1.00 | | | 4328.00 | |
| Drill Pipe | 31.16 | | | 4359.16 | |
| Change Over Sub | 1.00 | | | 4360.16 | |
| Recorder | 1.00 | 8354 | Inside | 4361.16 | |
| Recorder | 1.00 | 8960 | Outside | 4362.16 | |
| Bullnose | 3.00 | | | 4365.16 | 47.16 Anchor Tool |

Total Tool Length: 67.16



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operation Inc.

16-20S-22W Ness,KS

8411 Preston Road Suite 800
Dallas TX 75225+5520

D&D Unit #1

Job Ticket: 64781

DST#: 1

ATTN: Jim Musgrove

Test Start: 2017.05.21 @ 10:31:00

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|----------------------|---------------|
| 30.00 | VSOCM Oil 2% Mud 98% | 0.148 |

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

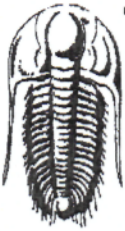
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operation Inc.

16-20S-22W Ness,KS

8411 Preston Road Suite 800
Dallas TX 75225+5520

D&D Unit #1

Job Ticket: 64782

DST#: 2

ATTN: Jim Musgrove

Test Start: 2017.05.21 @ 22:56:00

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:42:00

Time Test Ended: 05:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: **4318.00 ft (KB) To 4373.00 ft (KB) (TVD)**

Reference Elevations: 2217.00 ft (KB)

Total Depth: 4373.00 ft (KB) (TVD)

2209.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8960

Outside

Press@RunDepth: 1340.45 psig @ 4370.16 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.05.21

End Date: 2017.05.22

Last Calib.: 2017.05.22

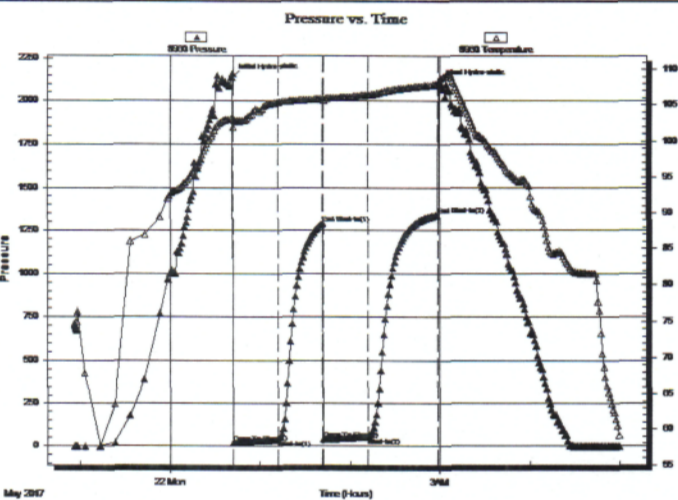
Start Time: 22:56:05

End Time: 04:59:59

Time On Btm: 2017.05.22 @ 00:41:00

Time Off Btm: 2017.05.22 @ 03:00:00

TEST COMMENT: IFP 30 Minutes Blow built to 1/2' then died in 19 minutes
 ISI 30 Minutes No blow back
 FFP 30 Minutes Surface blow died in 9 minutes
 FSI 45 Minutes No blow back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2136.70 | 102.99 | Initial Hydro-static |
| 1 | 16.11 | 101.88 | Open To Flow (1) |
| 31 | 36.30 | 105.34 | Shut-In(1) |
| 61 | 1292.30 | 105.86 | End Shut-In(1) |
| 62 | 40.35 | 105.64 | Open To Flow (2) |
| 91 | 53.61 | 106.38 | Shut-In(2) |
| 138 | 1340.45 | 107.84 | End Shut-In(2) |
| 139 | 2104.99 | 108.37 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------|--------------|
| 75.00 | OCM Oil 10% Mud 90% | 0.37 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operation Inc.

16-20S-22W Ness,KS

8411 Preston Road Suite 800
Dallas TX 75225+5520

D&D Unit #1

Job Ticket: 64782

DST#: 2

ATTN: Jim Musgrove

Test Start: 2017.05.21 @ 22:56:00

Tool Information

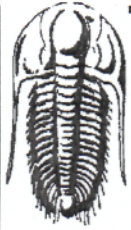
| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 3958.00 ft | Diameter: 3.80 inches | Volume: 55.52 bbl | Tool Weight: | 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: | 20000.00 lb |
| Drill Collar: | Length: 359.00 ft | Diameter: 2.25 inches | Volume: 1.77 bbl | Weight to Pull Loose: | 74000.00 lb |
| | | | <u>Total Volume: 57.29 bbl</u> | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | 19.00 ft | | | String Weight: Initial | 60000.00 lb |
| Depth to Top Packer: | 4318.00 ft | | | Final | 60000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 55.16 ft | | | | |
| Tool Length: | 75.16 ft | | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | | |

Tool Comments: Ruined Packer

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

| | | | | | |
|-----------------|-------|------|---------|---------|----------------------------|
| Shut-In Tool | 5.00 | | | 4303.00 | |
| Hydraulic tool | 5.00 | | | 4308.00 | |
| Top Packer | 5.00 | | | 4313.00 | |
| Packer | 5.00 | | | 4318.00 | 20.00 Bottom Of Top Packer |
| Anchor | 17.00 | | | 4335.00 | |
| Change Over Sub | 1.00 | | | 4336.00 | |
| Drill Pipe | 31.16 | | | 4367.16 | |
| Change Over Sub | 1.00 | | | 4368.16 | |
| Recorder | 1.00 | 8354 | Inside | 4369.16 | |
| Recorder | 1.00 | 8960 | Outside | 4370.16 | |
| Bullnose | 3.00 | | | 4373.16 | 55.16 Anchor Tool |

Total Tool Length: 75.16



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operation Inc.

16-20S-22W Ness,KS

8411 Preston Road Suite 800
Dallas TX 75225+5520

D&D Unit #1

Job Ticket: 64782

DST#: 2

ATTN: Jim Musgrove

Test Start: 2017.05.21 @ 22:56:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|---------------------|---------------|
| 75.00 | OCM Oil 10% Mud 90% | 0.369 |

Total Length: 75.00 ft Total Volume: 0.369 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8354

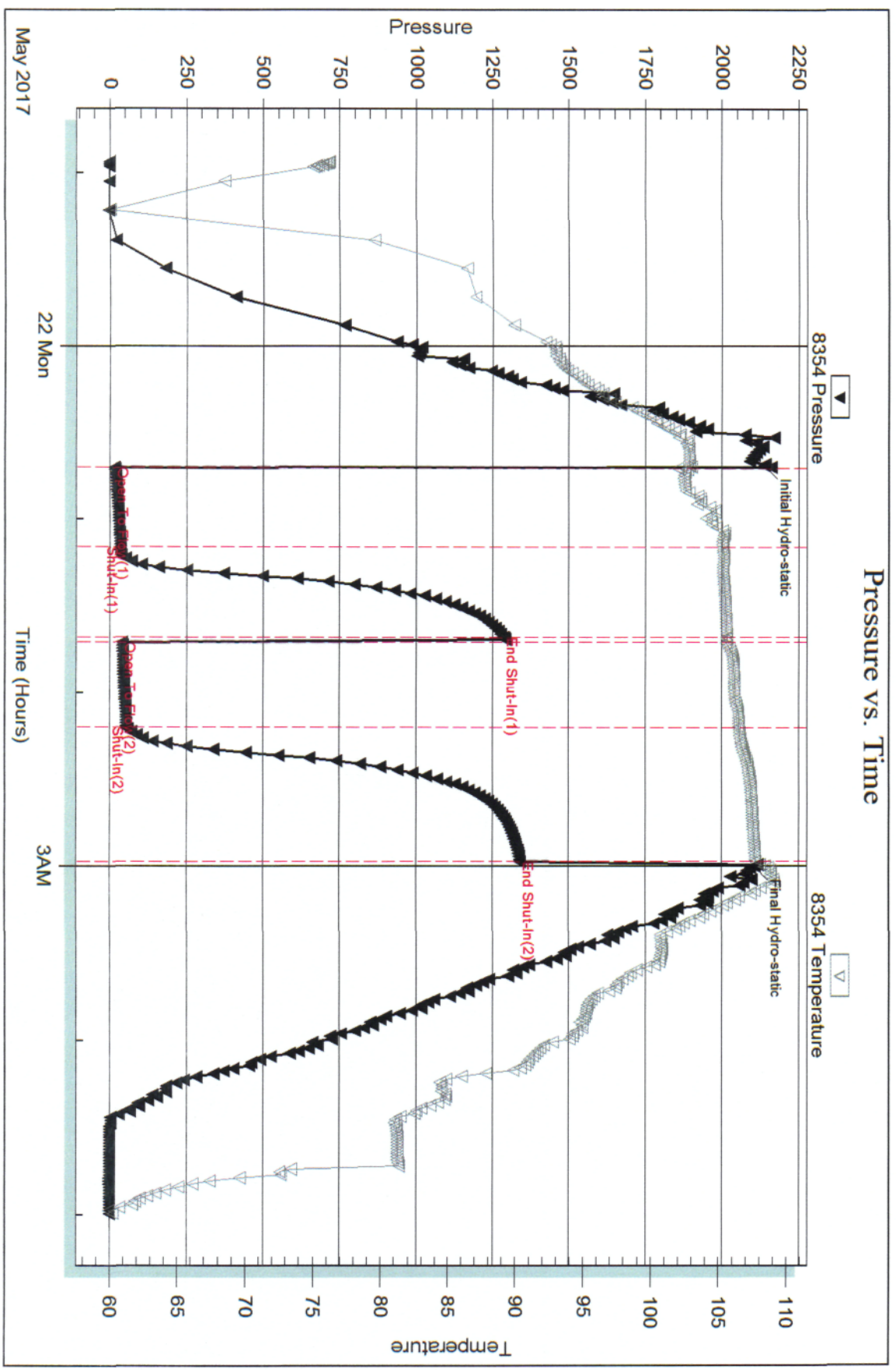
Inside

Mat Oil Operation Inc.

D&D Unit #1

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 64782

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