

**TRILOBITE TESTING, INC**

## DRILL STEM TEST REPORT

Messenger Petroleum Inc.  
525 S. Main St.  
Kingman KS. 67068  
ATTN: Jon Messenger

20-29s-9w Kingman, KS  
Doc's Trust #1  
Job Ticket: 57931      DST#: 1  
Test Start: 2016.01.07 @ 01:59:58

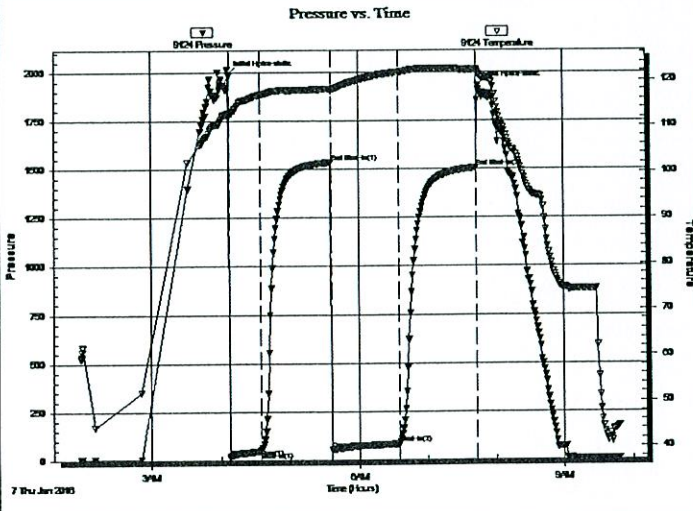
### GENERAL INFORMATION:

Formation: **Swope**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 04:07:28  
Time Test Ended: 09:48:28  
Interval: **3977.00 ft (KB) To 3995.00 ft (KB) (TVD)**  
Total Depth: **3995.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Gary Pavoteaux  
Unit No: 80  
Reference Elevations: 1714.00 ft (KB)  
1704.00 ft (CF)  
KB to GR/CF: 10.00 ft

**Serial #: 9124**      Outside  
Press@RunDepth: 81.96 psig @ 3978.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2016.01.07      End Date: 2016.01.07      Last Calib.: 2016.01.07  
Start Time: 02:00:03      End Time: 09:48:27      Time On Btm: 2016.01.07 @ 04:06:13  
Time Off Btm: 2016.01.07 @ 07:44:13

TEST COMMENT: IF:Weak blow . 1/2 - 3 1/2".  
IS:Weak blow . 1/4"  
FF:Weak blow . 1/2 - 3/4".  
FS:Weak blow . 1/4".

### PRESSURE SUMMARY



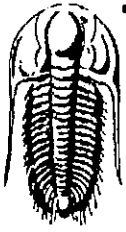
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1990.25	112.55	Initial Hydro-static
2	15.42	112.21	Open To Flow (1)
28	46.31	116.76	Shut-In(1)
90	1536.06	118.01	End Shut-In(1)
91	52.41	117.57	Open To Flow (2)
149	81.96	121.62	Shut-In(2)
217	1506.31	122.10	End Shut-In(2)
218	1928.41	121.55	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
120.00	MW/ w o specs 16% m 84% w	0.59
20.00	OCM 5% o 95% m/ trace of GIP	0.28

### Gas Rates

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



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**FLUID SUMMARY**

Messenger Petroleum Inc.

20-29s-9w Kingman,KS

525 S. Main St.  
Kingman KS. 67068

Doc's Trust #1

Job Ticket: 57931

DST#: 1

ATTN: Jon Messenger

Test Start: 2016.01.07 @ 01:59:58

**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:

93000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.20 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbbl
120.00	MW/ w o specs 16%m 84%w	0.590
20.00	OCM 5%o 95%mV trace of GIP	0.281

Total Length: 140.00 ft      Total Volume: 0.871 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

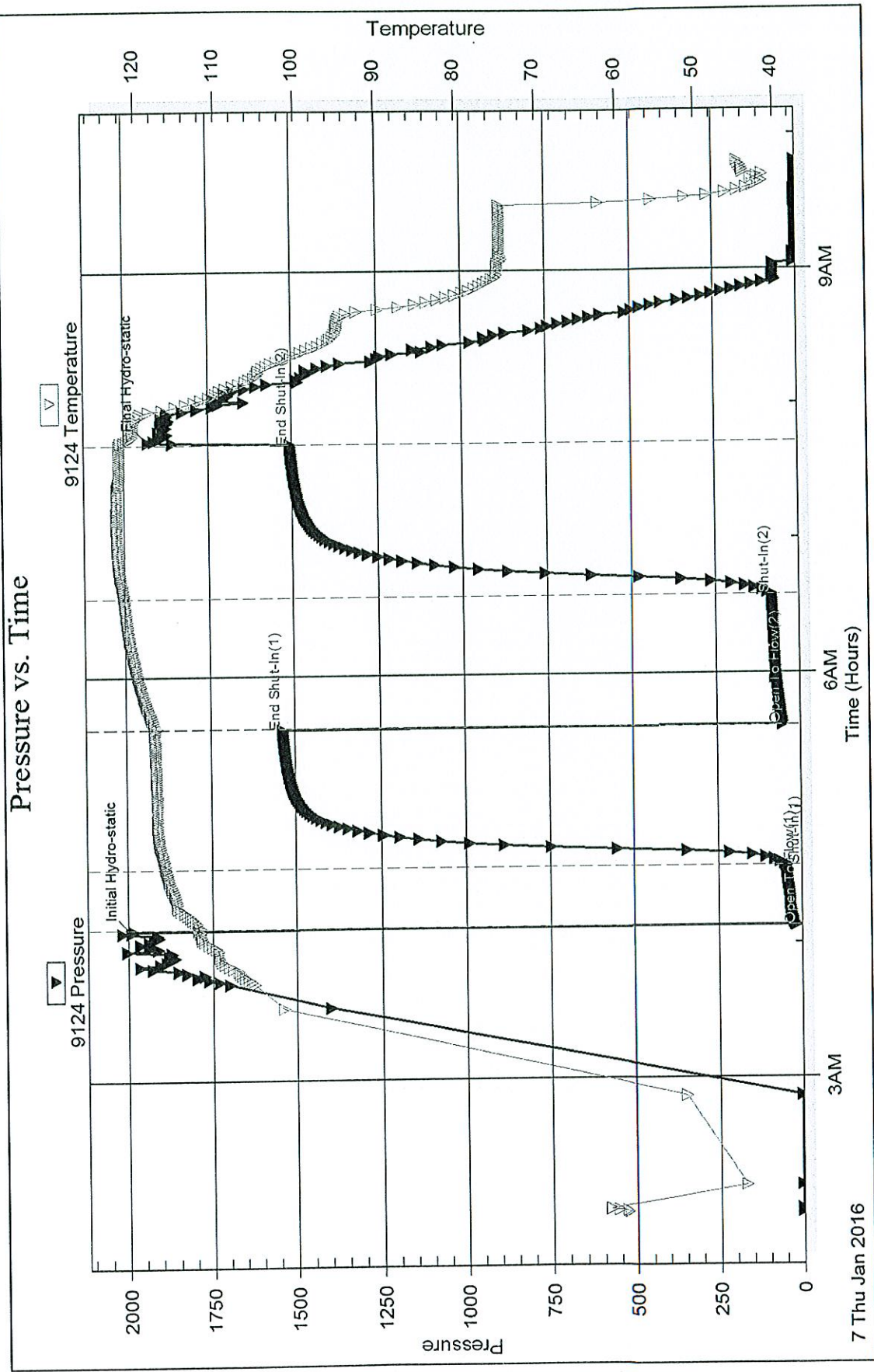
Serial #: none

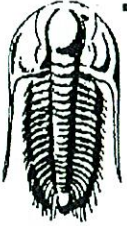
Laboratory Name:

Laboratory Location:

Recovery Comments: Rw .12ohms @ 49deg

### Pressure vs. Time





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# DRILL STEM TEST REPORT

Messenger Petroleum Inc.

20-29s-9w Kingman, KS

525 S. Main St.  
Kingman KS. 67068

Doc's Trust #1

Job Ticket: 57932

DST#: 2

ATTN: Jon Messenger

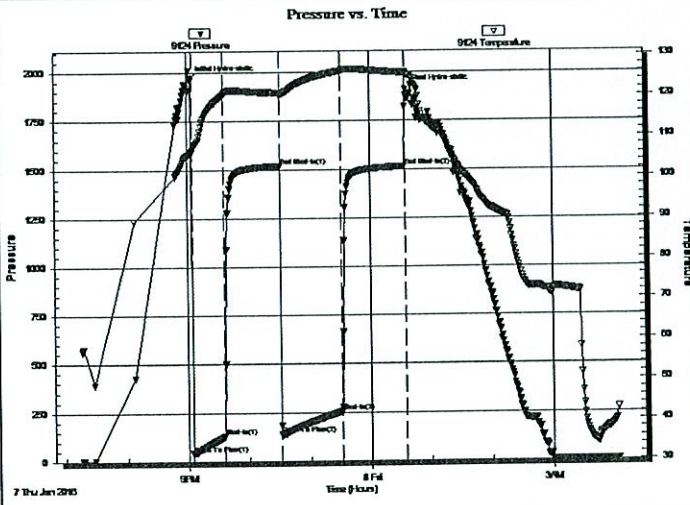
Test Start: 2016.01.07 @ 19:15:35

## GENERAL INFORMATION:

Formation: **Hertha**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:04:20  
 Time Test Ended: 04:04:20  
 Interval: 4012.00 ft (KB) To 4027.00 ft (KB) (TVD)  
 Total Depth: 4027.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Gary Pevoteaux  
 Unit No: 80  
 Reference Elevations: 1714.00 ft (KB)  
 1704.00 ft (CF)  
 KB to GR/CF: 10.00 ft

Serial #: **9124** Outside  
 Press@RunDepth: 255.08 psig @ 4013.00 ft (KB)  
 Start Date: 2016.01.07 End Date: 2016.01.08  
 Start Time: 19:15:40 End Time: 04:04:20  
 Capacity: 8000.00 psig  
 Last Calib.: 2016.01.08  
 Time On Btm: 2016.01.07 @ 21:02:50  
 Time Off Btm: 2016.01.08 @ 00:35:20

TEST COMMENT: IF: Weak to fair blow . 1 - 5"  
 IS: Weak blow . 2 - 4".  
 FF: Strong blow . B.O.B. in 21 mins.  
 FS: Fair blow . 3 - 7".



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1965.70	105.93	Initial Hydro-static
2	41.13	105.93	Open To Flow (1)
33	127.69	120.31	Shut-In(1)
89	1518.75	120.80	End Shut-In(1)
89	137.77	120.40	Open To Flow (2)
149	255.08	126.05	Shut-In(2)
212	1513.83	125.61	End Shut-In(2)
213	1911.04	125.59	Final Hydro-static

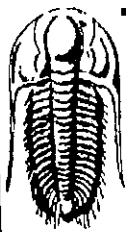
## Recovery

Length (ft)	Description	Volume (bbl)
251.00	SW/w o specs	2.43
184.00	GM&WCO 35%g 12%m 23%w 30%o	2.58
35.00	GMCO 42%g 11%m 47%o	0.49
0.00	3300 ft. of GIP	0.00

## Gas Rates

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

\* Recovery from multiple tests



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# DRILL STEM TEST REPORT

## FLUID SUMMARY

Messenger Petroleum Inc.      20-29s-9w Kingman, KS  
 525 S. Main St.      Doc's Trust #1  
 Kingman KS. 67068      Job Ticket: 57932      DST#: 2  
 ATTN: Jon Messenger      Test Start: 2016.01.07 @ 19:15:35

### 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: 71000 ppm	
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.17 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 8000.00 ppm			
Filter Cake: 0.20 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
251.00	SWw o specs	2.428
184.00	GM&WCO 35%g 12%m 23%w 30%o	2.581
35.00	GMCO 42%g 11%m 47%o	0.491
0.00	3300 ft.of GIP	0.000

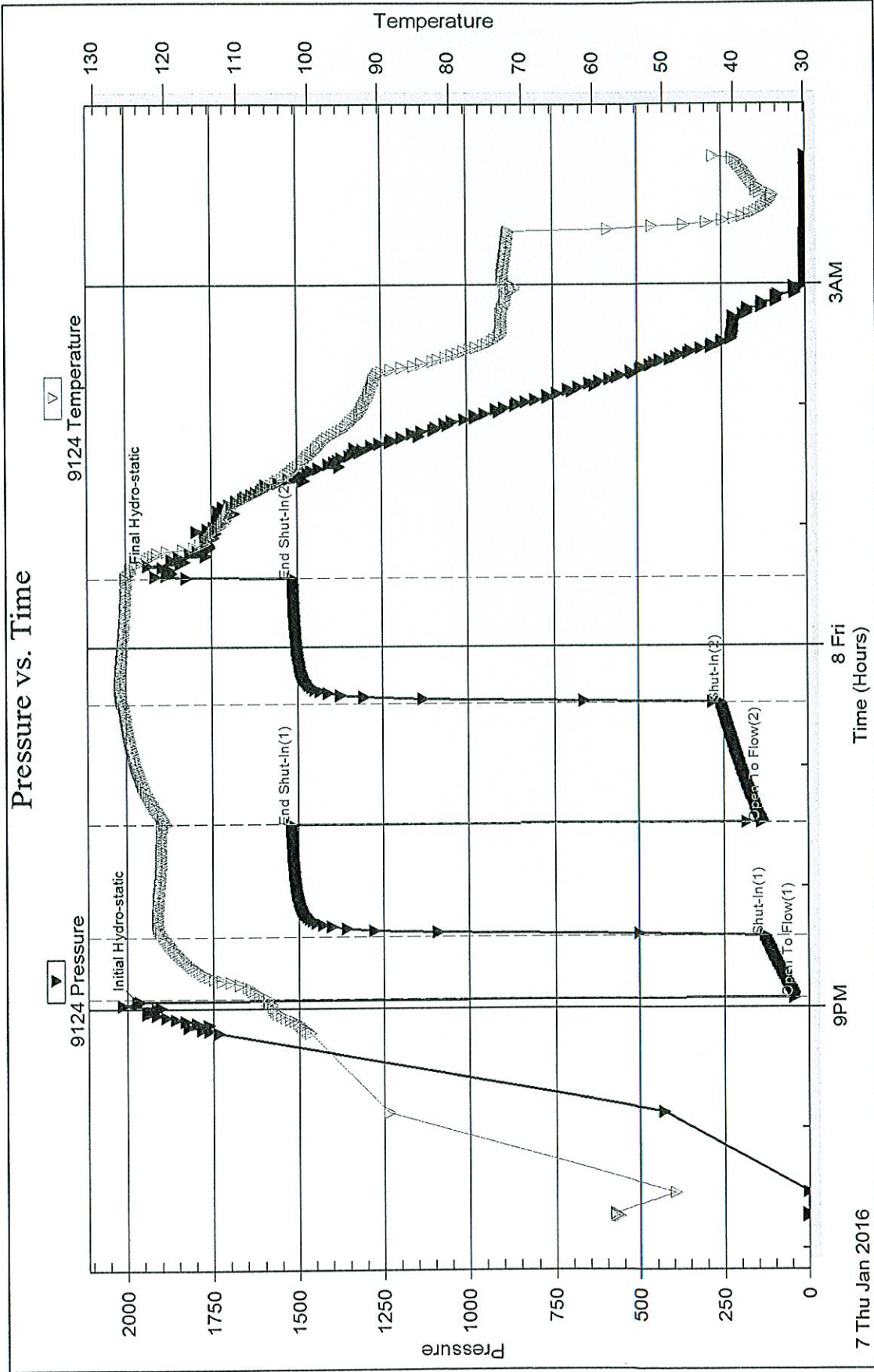
Total Length: 470.00 ft      Total Volume: 5.500 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #: none  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: Rw .17ohms@45deg

Serial #: 9124

Outside Messenger Petroleum Inc.

Doc's Trust #1

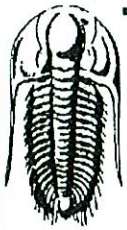
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 57932

Printed: 2016.01.13 @ 08:40:06



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Messenger Petroleum Inc.

20-29s-9w Kingman, KS

525 S. Main St.  
Kingman KS. 67068

Doc's Trust #1

Job Ticket: 57933

DST#: 3

ATTN: Jon Messenger

Test Start: 2016.01.09 @ 09:42:43

## GENERAL INFORMATION:

Formation: **Mississippi**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 12:07:43  
Time Test Ended: 17:31:28

Test Type: Conventional Bottom Hole (Reset)  
Tester: Gary Pevoteaux  
Unit No: 80

Interval: 4263.00 ft (KB) To 4277.00 ft (KB) (TVD)  
Total Depth: 4277.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1714.00 ft (KB)  
1704.00 ft (CF)  
KB to GR/CF: 10.00 ft

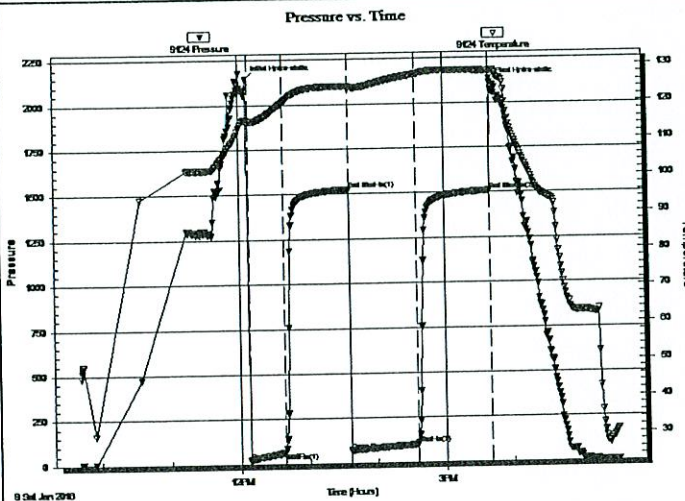
Serial #: 9124

Outside

Press@RunDepth: 99.78 psig @ 4264.00 ft (KB)  
Start Date: 2016.01.09 End Date: 2016.01.09  
Start Time: 09:42:48 End Time: 17:31:27

Capacity: 8000.00 psig  
Last Calib.: 2016.01.09  
Time On Btm: 2016.01.09 @ 12:06:43  
Time Off Btm: 2016.01.09 @ 15:40:58

TEST COMMENT: IF:Weak to fair blow . 1 - 7".  
ISI:No blow .  
FF:Weak to fir blow . 1 - 5 1/2".  
FSI:No blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2145.22	115.57	Initial Hydro-static
1	18.62	114.94	Open To Flow (1)
33	62.83	120.27	Shut-In(1)
90	1524.83	124.56	End Shut-In(1)
91	68.67	124.15	Open To Flow (2)
149	99.78	127.54	Shut-In(2)
214	1510.09	128.27	End Shut-In(2)
215	2112.53	128.39	Final Hydro-static

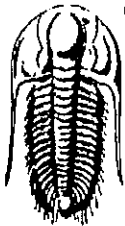
## Recovery

Length (ft)	Description	Volume (bbl)
120.00	SW/w o specs/ Rw . 15ohms@37deg	0.59
30.00	SOCMW 1%o 29% m 70%w	0.42
0.00	35 ft. of GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



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Messenger Petroleum Inc.

20-29s-9w Kingman, KS

525 S. Main St.  
Kingman KS. 67068

Doc's Trust #1

Job Ticket: 57933

DST#: 3

ATTN: Jon Messenger

Test Start: 2016.01.09 @ 09:42:43

### 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:

103000 ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

#### Recovery Table

Length ft	Description	Volume bbl
120.00	SW/w o specs/ Rw .15ohms@37deg	0.590
30.00	SOCMW 1%o 29%m 70%w	0.421
0.00	35 ft. of GIP	0.000

Total Length: 150.00 ft

Total Volume: 1.011 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

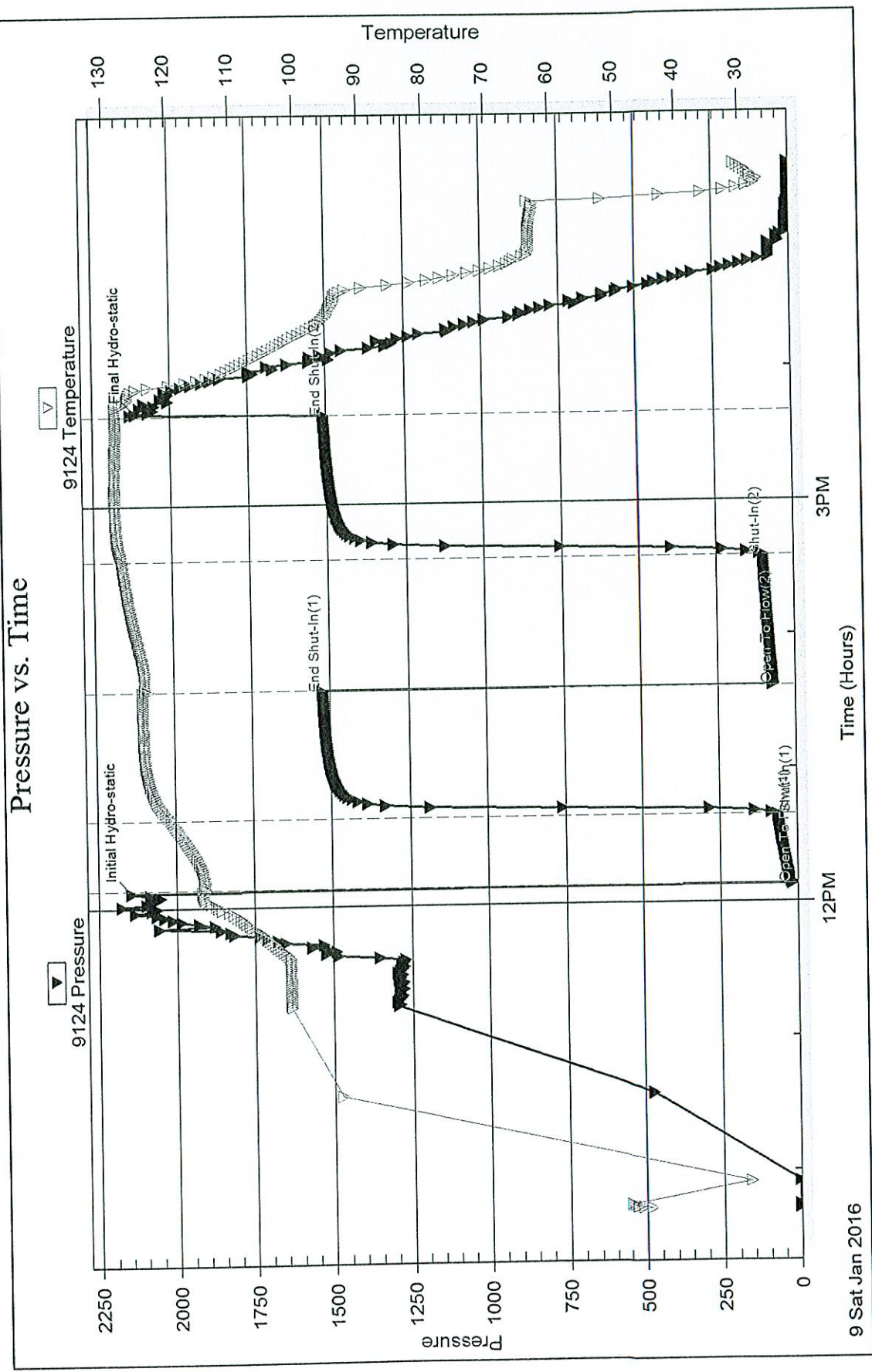
Laboratory Name:

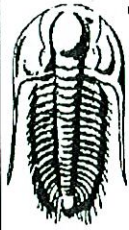
Laboratory Location:

Recovery Comments:



# Pressure vs. Time





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# DRILL STEM TEST REPORT

Messenger Petroleum Inc.

20-29s-9w Kingman, KS

525 S. Main St.  
Kingman KS. 67068

Doc's Trust #1

Job Ticket: 57934

DST#: 4

ATTN: Jon Messenger

Test Start: 2016.01.11 @ 00:47:23

## GENERAL INFORMATION:

Formation: Viola  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 02:49:53  
Time Test Ended: 08:46:23

Test Type: Conventional Bottom Hole (Reset)  
Tester: Gary Pevoteaux  
Unit No: 80

Interval: 4517.00 ft (KB) To 4535.00 ft (KB) (TVD)  
Total Depth: 4535.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1714.00 ft (KB)  
1704.00 ft (CF)  
KB to GR/CF: 10.00 ft

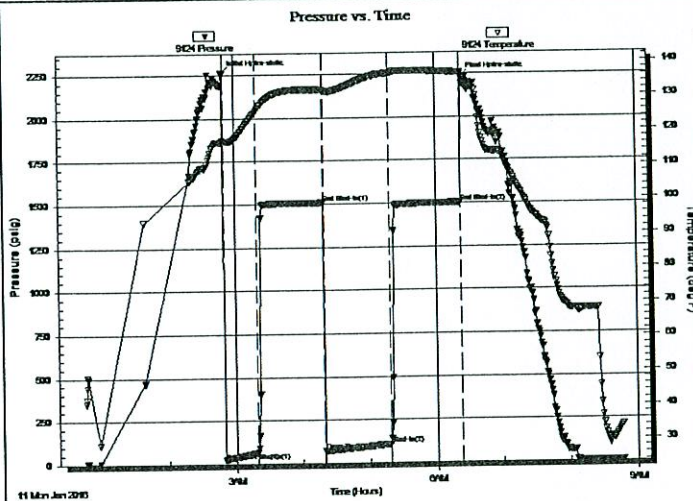
Serial #: 9124

Outside

Press@RunDepth: 107.24 psig @ 4518.00 ft (KB)  
Start Date: 2016.01.11 End Date: 2016.01.11  
Start Time: 00:47:28 End Time: 08:46:22

Capacity: 8000.00 psig  
Last Calib.: 2016.01.11  
Time On Btm: 2016.01.11 @ 02:48:53  
Time Off Btm: 2016.01.11 @ 06:23:08

TEST COMMENT: IF:Weak blow . 1 - 3 1/2".  
ISI:No blow .  
FF:Weak to fair blow . 1 - 8".  
FSI:No blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2259.83	116.97	Initial Hydro-static
1	17.99	116.63	Open To Flow (1)
31	64.47	125.61	Shut-In(1)
91	1508.61	131.87	End Shut-In(1)
92	69.65	131.25	Open To Flow (2)
150	107.24	136.51	Shut-In(2)
214	1503.31	136.55	End Shut-In(2)
215	2231.46	136.56	Final Hydro-static

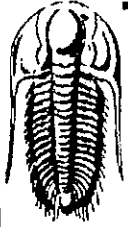
## Recovery

Length (ft)	Description	Volume (bbl)
180.00	MW 5% m 95% w /Rw .20ohms@40deg	1.43
35.00	SOCWM 1% o 35% w 64% m	0.49

\* Recovery from multiple tests

## Gas Rates

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



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## FLUID SUMMARY

Messenger Petroleum Inc.

20-29s-9w Kingman,KS

525 S. Main St.  
Kingman KS. 67068

Doc's Trust #1

Job Ticket: 57934

DST#: 4

ATTN: Jon Messenger

Test Start: 2016.01.11 @ 00:47:23

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 60.00 sec/qt  
Water Loss: 11.99 in<sup>3</sup>  
Resistivity: 0.00 ohm.m  
Salinity: 9500.00 ppm  
Filter Cake: 0.20 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: 67000 ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	MW 5% <sub>m</sub> 95% <sub>w</sub> /Rw .20ohms@40deg	1.432
35.00	SOCWM 1% <sub>o</sub> 35% <sub>w</sub> 64% <sub>m</sub>	0.491

Total Length: 215.00 ft      Total Volume: 1.923 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

