

JAMES C. MUSGROVE

Petroleum Geologist, LLC

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P.O. Box 215

Clafin, KS 67525

Office (620) 588-4250

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Mai Oil Operations
Hammeke 'M' #8
S/2-NW-SW-SW (765' FSL & 330' FWL)
Section 22-21s-12w
Stafford County, Kansas

Page 1

5 1/2" Production Casing Set

Contractor: Southwind Drilling Co. (rig #3)

Commenced: August 12, 2014

Completed: August 20, 2014

Elevation: 1849' K.B., 1847' D.F., 1841' G.L.

Casing program: Surface; 8 5/8" @ 600'
Production, 5 1/2 @ 3699'

Sample: Samples saved and examined 1900' to the Rotary Total Depth.

Drilling time: One (1) foot drilling time recorded and kept 1900 ft. to the Rotary Total Depth.

Measurements: All depths measured from the Kelly Bushing.

Drill Stem Tests: There were eight (8) Drill Stem Tests ran by Diamond Testing Co.

Electric Log: By Nabors; Dual Induction, Compensated Density/Neutron; Sonic and Micro.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	641	-1208
Base Anhydrite	662	+1187
Red Eagle	2234	-385
Tarkio Lime	2390	-541
Topeka	2823	-974
Heebner	3106	-1257
Toronto	3125	-1276
Douglas	3141	-1292
Brown Lime	3240	-1391
Lansing	3247	-1398
Base Kansas City	3477	-1628
Viola	3487	-1638
Simpson Shale	3519	-1670
Arbuckle	3570	-1721
Rotary Total Depth	3700	-1851
Log Total Depth	3698	-1849

All tops and zones corrected to Electric Log Measurement.

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

RED EAGLE SECTION

2234-2247' Limestone, cream, finely crystalline, fossiliferous, scattered porosity, no stain, no free oil, no gas bubbles; no odor (7 unit gas kick).

TOPEKA SECTION

2900-3106' No shows of oil and/or gas was noted in the Topeka section.

TORONTO SECTION

3125-3133' Limestone, cream, tan, finely crystalline, poor visible porosity, no shows.

LANSING SECTION

3250-3265' Limestone, cream, tan, finely crystalline, chalky, poor scattered porosity, brown stain, trace of free oil and faint odor in fresh samples.

3272-3278' Limestone, cream, tan, finely crystalline, chalky in part, poorly developed porosity, light brown to black stain; show of free oil and questionable odor in fresh samples.

3288-3292' Limestone, tan, buff, finely crystalline, poor to fair inter-crystalline type porosity, good stain and saturation, good show of free oil and faint odor in fresh samples.

Drill Stem Test #1

3256-3290

Times: 30-30-45-45

Blow: Strong

**Recovery: 63' oil and gas muddy water
(15% gas; 20% oil; 60% water; 5% mud)
63' Heavy oil cut muddy water
(25% oil; 15%; gas; 50% water; 10% mud)
63' oil and gas cut muddy water
(10% gas; 20% oil; 50% water; 10% mud)
63' slightly oil and gas cut muddy water
(10% gas; 5% oil; 35% water; 50% mud)
63' slightly oil and gas cut muddy water
(5% gas; 2.5% oil; 90% water; 2.5% mud)**

**Pressures: ISIP 360 psi
FSIP 416 psi
IFP 84-93 psi
FFP 96-147 psi
HSH 1532-1482 psi**

- 3310-3314' Limestone, tan, cream, finely crystalline, poor visible porosity, trace black/brown stain, no free oil and no odor in fresh samples.
- 3319-3328' Limestone, tan, cream, finely crystalline, slightly chalky, poorly developed porosity, light brown stain, show of free oil and faint odor in fresh samples.

Drill Stem Test #2 3299-3340

Times: 30-30-45-45

Blow: Strong

Recovery: 40' very slightly oil and gas cut muddy water
 (2.5% gas; 2.5% oil; 30% water; 65% mud)
 63' oil and gas cut muddy water
 (15% gas; 10% oil; 45% water; 30% mud)
 63' oil and gas cut muddy water
 (15% gas; 15% oil; 65% water; 15% mud)
 63' slightly oil and gas cut muddy water
 (5% gas; 5% oil; 75% water; 15% mud)
 63' slightly oil and gas cut muddy water
 (10% gas; 5% oil; 80% water; 5% mud)

Pressures: ISIP 750 psi
 FSIP 733 psi
 IFP 83-122 psi
 FFP 136-206 psi
 HSH 1632-1599 psi

- 3346-3360' Limestone, cream, tan, finely crystalline, poor scattered porosity, black stain, no free oil and no odor.
- 3380-3386' Limestone, cream, oomoldic, fair vuggy porosity, trace poor stain, no free oil and questionable odor.
- 3396-3406' Limestone, cream, white, finely crystalline, oolitic, chalky; poorly developed porosity, trace stain, show of free oil and questionable odor.
- 3413-3420' Limestone, cream, tan, finely crystalline, poor visible porosity, no shows.

Drill Stem Test #3

3372-3440

Times: 30-30-45-45

Blow: Strong

**Recovery: 30' clean oil
63' oil and gas cut water
(40% gas; 10% oil; 10% water; 40% mud)
63' Heavy oil and gas cut water
(50% oil; 30%; water; 20% mud)
63' oil and gas cut muddy water
(5% gas; 5% oil; 50% water; 10% mud)
63' slightly oil and gas cut muddy water
(10% gas; 5% oil; 60% water; 30% mud)
63' muddy water**

**Pressures: ISIP 750 psi
FSIP 733 psi
IFP 83-122 psi
FFP 136-206 psi
HSH 1632-1599 psi**

3436-3450' Limestone, cream, gray, finely crystalline, poorly developed porosity, no shows.

3456-3470' Limestone, cream, gray, finely crystalline, cherty, poor scattered porosity, trace black stain, light brown stain, show of free oil and no odor.

VIOLA SECTION

3486-3500' Chert, tan, brown, opaque, few semi-tripolitic, black stain, golden brown stain, show of free oil and no odor.

3500-3520' Chert, white, boney, tan, brown, black/brown stain, race of free oil and no odor.

Drill Stem Test #4

3460-3535

Times: 30-30-45-45

Blow: Strong

**Recovery: 126' oil and gas cut mud
(70% gas; 15% oil; 15% mud)
126' heavy oil and gas cut mud
(45% gas; 40% oil; 15% mud)
63' muddy gassy oil
(15% gas; 70% oil; 15% mud)
63' muddy gassy oil
(20% gas; 50% oil; 30% mud)
20' mud**

**Pressures: ISIP 1104 psi
FSIP 1085 psi
IFP 72-129 psi
FFP 145-206 psi
HSH 1671-1639 psi**

ARBUCKLE SECTION

- 3570-3580' Dolomite, white, tan, finely crystalline, sucrosic, scattered porosity, trace brown stain, trace of free oil and faint odor.
- 3580-3597' Dolomite, white/tan, fine and medium crystalline, sucrosic, fair to poor vuggy type porosity, brown stain, show of free oil and strong odor in fresh samples.

Drill Stem Test #5

3523-3597

Times: 30-45-45-60

Blow: Fair to good

**Recovery: 232' gas in pipe
20' slightly oil cut mud
(5% oil; 95% mud)
63' oil and gas cut mud
(50% gas; 10% oil; 40% mud)**

**Pressures: ISIP 243 psi
FSIP 294 psi
IFP 56-114 psi
FFP 66-79 psi
HSH 1716-1669 psi**

3598-3615' Dolomite, tan, finely crystalline, fair inter-crystalline and vuggy type porosity, black/brown stain, show of free oil and strong odor in fresh samples

Drill Stem Test #6 **3601-3615**

Times: 30-30-45-45

Blow: Strong

Recovery: 461' clean gassy oil

Pressures: ISIP 1054 psi
FSIP 1042 psi
IFP 35-72 psi
FFP 78-144 psi
HSH 1714-1691 psi

3616-3635' Dolomite, tan, finely crystalline, fair vuggy porosity, golden brown stain, show of free oil and fair odor in fresh samples.

Drill Stem Test #7 **3616-3635**

Times: 30-30-45-45

Blow: Strong

Recovery: 420' clean gassy oil

Pressures: ISIP 1165 psi
FSIP 1162 psi
IFP 42-84 psi
FFP 92-172 psi
HSH 1735-1676 psi

3641-3647' Dolomite, tan, finely crystalline, poor to fair porosity, light brown and black stain, show of free oil and faint odor in fresh samples.

Drill Stem Test #8 **3633-3648**

Times: 30-45-45-60

Blow: Strong

Recovery: 6' clean gassy oil
150' muddy water

Pressures: ISIP 1190 psi
FSIP 1185 psi
IFP 23-58 psi
FFP 64-119 psi
HSH 1748-1689 psi

Mai Oil Operations
Hammeke 'M' #8
S/2-NW-SW-SW (765' FSL & 330' FWL)
Section 22-21s-12w
Stafford County, Kansas

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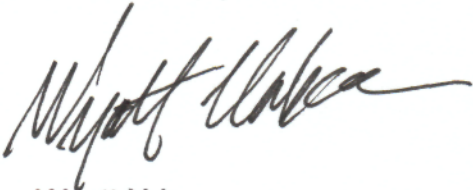
3650-3660'	Dolomite, tan, finely crystalline, poor visible porosity, brown/black spotty stain, trace of oil and faint odor in fresh samples.
3660-3680'	Dolomite, tan, fine and medium crystalline, poor to fair vuggy porosity (barren).
3680-3700'	Dolomite tan, white, fine and medium crystalline, poor to fair vuggy porosity, no shows.

Rotary Total Depth	3700
Log Total Depth	3698

Recommendations:

5 ½" production casing set and cemented on the Mai Oil Operations Inc., Hammeke 'M' #8.

Respectfully yours,



Wyatt Urban
Petroleum Geologist



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations, Inc.

22-21s-12w Stafford, KS

8411 Preston Rd, STE 800
Dallas TX 75225-5520

Hammeke "M" #8

Job Ticket: 60335

DST#: 1

ATTN: Wyatt Urban

Test Start: 2014.08.15 @ 21:30:00

GENERAL INFORMATION:

Formation: **LKC "A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:28:30

Time Test Ended: 04:04:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzern

Unit No: S3

Interval: **3256.00 ft (KB) To 3290.00 ft (KB) (TVD)**

Reference Elevations: 1849.00 ft (KB)

Total Depth: 3290.00 ft (KB) (TVD)

1841.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8524

Inside

Press@RunDepth: 147.46 psig @ 3286.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.08.15

End Date:

2014.08.16

Last Calib.:

2014.08.16

Start Time: 21:31:00

End Time:

04:04:00

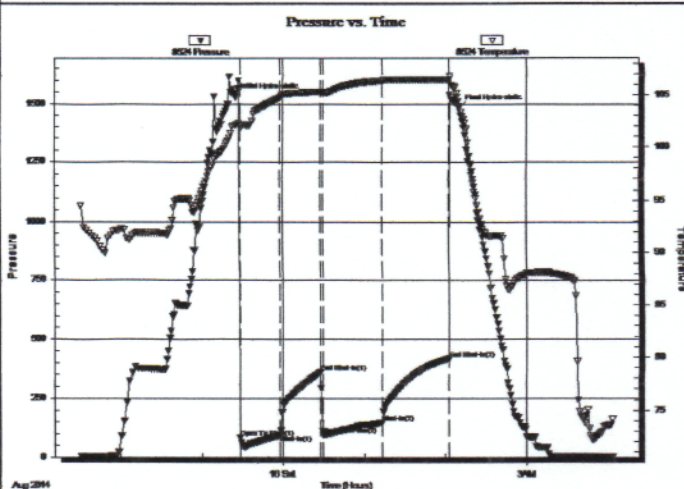
Time On Btm:

2014.08.15 @ 23:24:30

Time Off Btm:

2014.08.16 @ 02:10:30

TEST COMMENT: FFP 30 - Strong blow built to bottom of bucket in 34 seconds. Gas to surface in 10 min
ISI 30 - Weak surface blow back.
FFP 45 - Strong blow built to bottom of bucket in 10 seconds.
FSI 45 - Blow back built to 2"



PRESSURE SUMMARY

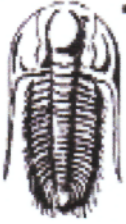
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1532.21	102.08	Initial Hydro-static
4	84.26	102.01	Open To Flow (1)
34	93.18	104.77	Shut-In(1)
64	360.03	105.28	End Shut-In(1)
66	96.60	105.20	Open To Flow (2)
109	147.46	106.38	Shut-In(2)
158	416.65	106.42	End Shut-In(2)
166	1482.38	103.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	GOCMV 15% G, 20% O, 5% M, 60% W	0.88
63.00	GOCMV 15% G, 10% M, 25% O, 50% W	0.88
63.00	GOCMV 10% G, 20% O, 20% M, 50% W	0.88
63.00	GOCMV 5% O, 10% G, 35% W, 50% M	0.88
63.00	GOCMV 2.5% O, 5% G, 2.5% M, 90% W	0.88

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	0.00	22.84
Last Gas Rate	0.25	5.00	30.78
Max. Gas Rate	0.25	8.00	35.54



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations, Inc.
8411 Preston Rd, STE 800
Dallas TX 75225-5520
ATTN: Wyatt Urban

22-21s-12w Stafford, KS
Hammeke "M" #8
Job Ticket: 60336 **DST#: 2**
Test Start: 2014.08.16 @ 10:45:00

GENERAL INFORMATION:

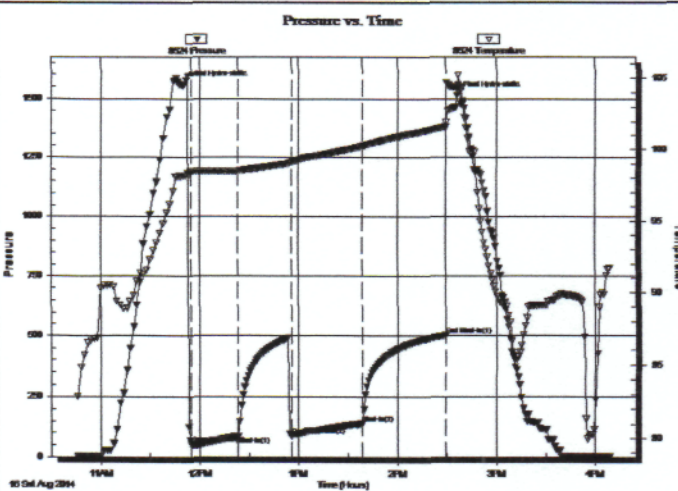
Formation: **LKC "D-F"**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 11:55:00 Tester: Shane Konzern
Time Test Ended: 16:08:30 Unit No: S3
Interval: 3299.00 ft (KB) To 3340.00 ft (KB) (TVD) Reference Elevations: 1849.00 ft (KB)
Total Depth: 3340.00 ft (KB) (TVD) 1841.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 8.00 ft

Serial #: 8524

Inside

Press@RunDepth: 85.66 psig @ 3336.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.08.16 End Date: 2014.08.16 Last Calib.: 2014.08.16
Start Time: 10:46:00 End Time: 16:08:30 Time On Btrm: 2014.08.16 @ 11:49:30
Time Off Btrm: 2014.08.16 @ 14:36:00

TEST COMMENT: FFP - 30 - Strong blow built to bottom of bucket in 30 seconds. Gas to surface in 15 min
ISI - 30 - No blow back.
FFP - 45 - Strong blow built to bottom of 5 gallon bucket in 10 seconds.
FSI - 45 - Weak surface blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1555.89	98.11	Initial Hydro-static
6	54.07	98.42	Open To Flow (1)
34	85.66	98.47	Shut-In(1)
66	88.54	99.10	Open To Flow (2)
109	139.48	100.22	Shut-In(2)
160	502.39	101.56	End Shut-In(1)
167	1515.32	103.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	GOCMW 2.5% G, 2.5% O, 30% W, 65% M 0.56	
63.00	GOCMW 15% G, 10% O, 30% M, 45% W 0.88	
63.00	GOCMW 15% G, 15% O, 15% M, 65% W 0.88	
63.00	GOCMW 5% G, 5% O, 15% M, 75% W 0.88	
63.00	GOCMW 10% G, 5% O 5% M 80% W 0.88	

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	0.00	5.39
Last Gas Rate	0.13	5.00	7.26
Max. Gas Rate	0.13	5.00	7.26



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations, Inc.
 8411 Preston Rd, STE 800
 Dallas TX 75225-5520
 ATTN: Wyatt Urban

22-21s-12w Stafford,KS
Hammeke "M" #8
 Job Ticket: 60337 **DST#: 3**
 Test Start: 2014.08.17 @ 00:55:00

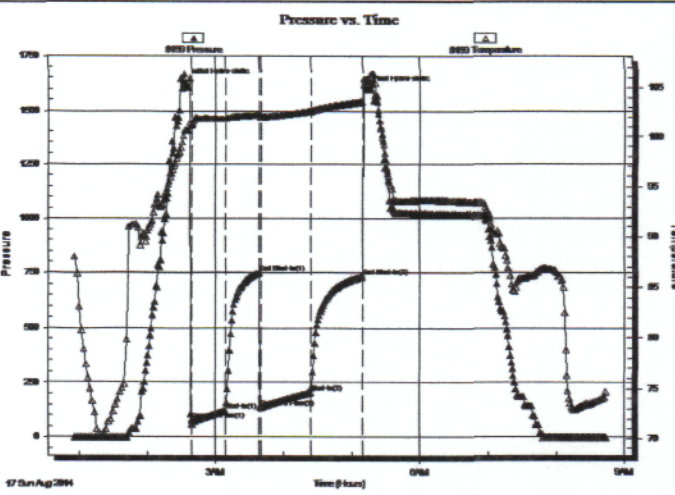
GENERAL INFORMATION:

Formation: **LKC "H-J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:38:00
 Time Test Ended: 08:43:00
 Interval: **3370.00 ft (KB) To 3440.00 ft (KB) (TVD)**
 Total Depth: **3440.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Poor**
 Test Type: **Conventional Bottom Hole (Initial)**
 Tester: **Shane Konzem**
 Unit No: **S3**
 Reference Elevations: **1849.00 ft (KB)**
1841.00 ft (CF)
 KB to GR/CF: **8.00 ft**

Serial #: 8159 **Outside**

Press@RunDepth: **732.60 psig @ 3437.26 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2014.08.17** End Date: **2014.08.17** Last Calib.: **2014.08.17**
 Start Time: **00:56:00** End Time: **08:44:00** Time On Btm: **2014.08.17 @ 02:33:30**
 Time Off Btm: **2014.08.17 @ 05:13:00**

TEST COMMENT: FP - 30 - Good blow built to bottom of bucket in 1 1/2 min
 ISI - 30 - Weak surface blow back.
 FFP - 45 - Good blow built to bottom of bucket in 4 min
 FSI - 45 - Weak surface blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1630.47	100.69	Initial Hydro-static
6	79.73	101.31	Open To Flow (1)
35	121.42	101.85	Shut-In(1)
65	749.11	102.25	End Shut-In(1)
67	135.64	102.07	Open To Flow (2)
111	204.98	102.65	Shut-In(2)
156	732.60	103.61	End Shut-In(2)
160	1597.95	105.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	100% Clean gassy oil.	0.42
63.00	GOCVM 40% Gas, 10% Oil, 10% Water	0.88 M
63.00	MVCO 30% water, 20% Mud, 50% Oil	0.88
63.00	GOCMV 5% Gas, 5% Oil, 60% water;	0.88ud
63.00	OCMV 5% Oil, 20% Mud, 75% Water	0.88
63.00	VM 30% Water, 70% Mud	0.88

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations, Inc.
 8411 Preston Rd, STE 800
 Dallas TX 75225-5520
 ATTN: Wyatt Urban

22-21s-12w Stafford,KS
Hammeke "M" #8
 Job Ticket: 60338 **DST#: 4**
 Test Start: 2014.08.17 @ 17:40:00

GENERAL INFORMATION:

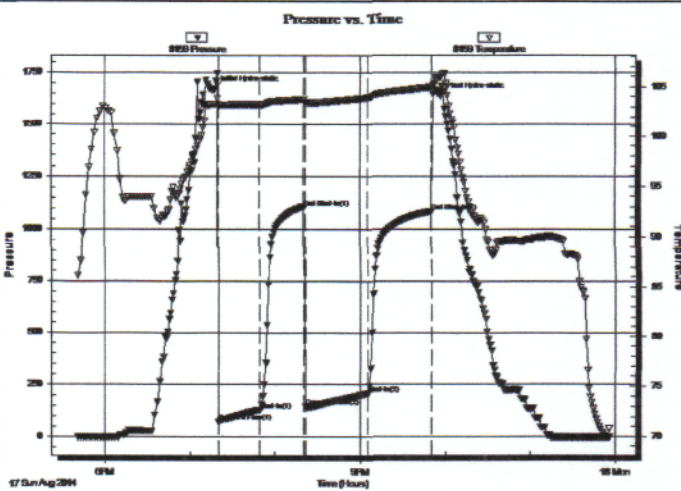
Formation: **Viola**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:20:00
 Time Test Ended: 23:55:30
 Interval: **3460.00 ft (KB) To 3535.00 ft (KB) (TVD)**
 Total Depth: 3535.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane Konzern
 Unit No: S3/40/Great Bend
 Reference Elevations: 1849.00 ft (KB)
 1841.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8159

Outside

Press@RunDepth: 206.97 psig @ 3537.24 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.08.17 End Date: 2014.08.17 Last Calib.: 2014.08.18
 Start Time: 17:41:00 End Time: 23:55:30 Time On Btm: 2014.08.17 @ 19:17:30
 Time Off Btm: 2014.08.17 @ 21:57:00

TEST COMMENT: IFP - 30 - Good blow built to bottom of bucket in 2 min and 40 sec
 ISI - 30 - No blow back.
 IFP - 45 - Good blow built to bottom of bucket in 2 min and 40 sec
 FSI - 45 - Blow back built to 3" into water and died back to 1 1/2" GTS at 20 minutes into shut in.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1671.41	103.26	Initial Hydro-static
3	72.62	103.28	Open To Flow (1)
32	129.48	103.22	Shut-In(1)
63	1104.29	103.74	End Shut-In(1)
64	145.22	103.45	Open To Flow (2)
108	206.97	103.91	Shut-In(2)
153	1085.43	104.96	End Shut-In(2)
160	1639.51	105.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	100% Mud	0.28
126.00	GOCM 70% Gas, 15% Oil, 15% Mud	1.77
126.00	GOCM 45% Gas, 40% Oil, 15% Mud	1.77
63.00	GOCM 15% Gas, 70% Oil, 15% Mud	0.88
63.00	GOCM 20% Gas, 50% Oil, 30% Mud	0.88

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations, Inc.
 8411 Preston Rd, STE 800
 Dallas TX 75225-5520
 ATTN: Wyatt Urban

22-21s-12w Stafford,KS
Hammeke "M" #8
 Job Ticket: 60339 **DST#: 5**
 Test Start: 2014.08.18 @ 08:40:00

GENERAL INFORMATION:

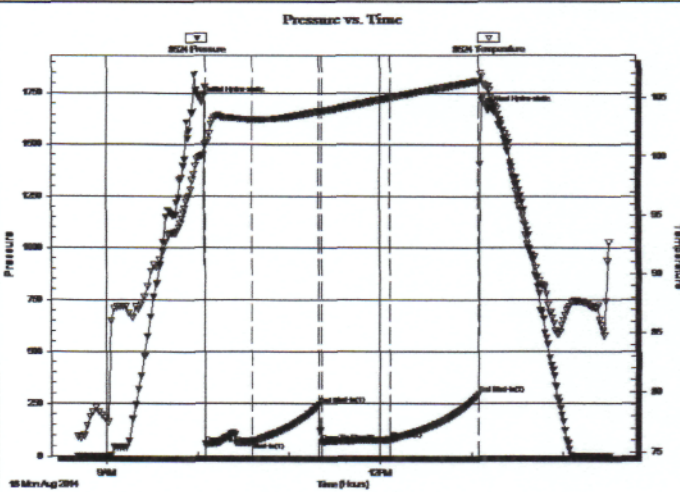
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 10:05:00
 Time Test Ended: 14:31:00
 Interval: **3523.00 ft (KB) To 3597.00 ft (KB) (TVD)**
 Total Depth: 3597.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane Konzern
 Unit No: S3
 Reference Elevations: 1849.00 ft (KB)
 1841.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8524

Inside

Press@RunDepth: 79.65 psig @ 3593.23 ft (KB)
 Start Date: 2014.08.18 End Date: 2014.08.18
 Start Time: 08:41:00 End Time: 14:31:00
 Capacity: 8000.00 psig
 Last Calib.: 2014.08.18
 Time On Btm: 2014.08.18 @ 10:01:30
 Time Off Btm: 2014.08.18 @ 13:11:00

TEST COMMENT: FFP 30 Fair blow built to 11 1/2"
 FSI 45 No blow back.
 FFP 45 Good blow built to bottom of bucket in 4 minutes.
 FSI 60 No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1716.94	99.95	Initial Hydro-static
4	56.50	100.82	Open To Flow (1)
34	67.22	103.10	Shut-In(1)
78	243.69	103.84	End Shut-In(1)
80	66.72	103.86	Open To Flow (2)
125	79.65	104.97	Shut-In(2)
183	294.14	106.36	End Shut-In(2)
190	1669.74	105.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	232' GP	0.00
20.00	SOCM 5% O 95% M	0.28
63.00	GOCM 5-%G 15%O 40%M	0.88

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mai Oil Operations, Inc.
8411 Preston Rd, STE 800
Dallas TX 75225-5520
ATTN: Wyatt Urban

22-21s-12w Stafford,KS
Hammeke "M" #8
Job Ticket: 60340 **DST#: 6**
Test Start: 2014.08.18 @ 19:35:00

GENERAL INFORMATION:

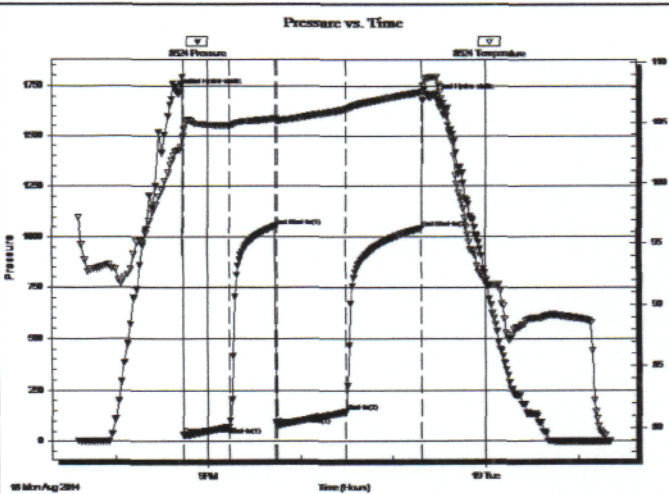
Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:44:00
Time Test Ended: 01:21:00
Interval: **3601.00 ft (KB) To 3615.00 ft (KB) (TVD)**
Total Depth: 3615.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor
Test Type: Conventional Bottom Hole (Initial)
Tester: Shane Konzem
Unit No: S3/40/Great Bend
Reference Elevations: 1849.00 ft (KB)
1841.00 ft (CF)
KB to GRV/CF: 8.00 ft

Serial #: 8524

Inside

Press@RunDepth: 144.88 psig @ 3611.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.08.18 End Date: 2014.08.19 Last Calib.: 2014.08.19
Start Time: 19:36:00 End Time: 01:21:00 Time On Btmr: 2014.08.18 @ 20:40:30
Time Off Btmr: 2014.08.18 @ 23:24:30

TEST COMMENT: IFP 30 Good blow built to bottom of bucket in 1 1/2 min
ISI 30 Blow back built to 2"
FFP 45 Fair blow built to bottom bucket in 5 minutes.
FSI 45 Blow back built to 4" into w water. Gas to surface 30 minutes into shut in.



PRESSURE SUMMARY

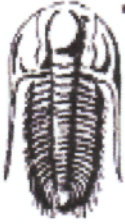
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1714.68	102.69	Initial Hydro-static
4	35.15	103.83	Open To Flow (1)
34	72.54	104.76	Shut-In(1)
64	1054.23	105.41	End Shut-In(1)
65	78.90	105.24	Open To Flow (2)
109	144.88	106.16	Shut-In(2)
158	1042.20	107.56	End Shut-In(2)
164	1691.71	108.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
461.00	100% Clean Gassy oil	6.47

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations, Inc.
 8411 Preston Rd, STE 800
 Dallas TX 75225-5520
 ATTN: Wyatt Urban

22-21s-12w Stafford,KS
Hammeke "M" #8
 Job Ticket: 60341 **DST#: 7**
 Test Start: 2014.08.19 @ 10:00:00

GENERAL INFORMATION:

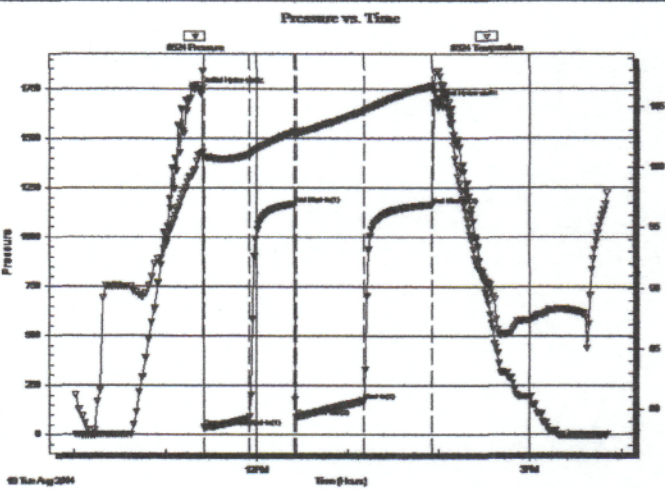
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:25:30
 Time Test Ended: 15:50:30
 Interval: **3616.00 ft (KB) To 3635.00 ft (KB) (TVD)**
 Total Depth: 3635.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane Konzern
 Unit No: S3
 Reference Elevations: 1849.00 ft (KB)
 1841.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8524

Inside

Press@RunDepth: 172.16 psig @ 3631.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.08.19 End Date: 2014.08.19 Last Calib.: 2014.08.19
 Start Time: 10:01:00 End Time: 15:50:30 Time On Btm: 2014.08.19 @ 11:22:30
 Time Off Btm: 2014.08.19 @ 13:56:30

TEST COMMENT: FFP 30 Good blow built to bottom of bucket in 2 min and 50 sec
 ISI 30 Blow back built to 11"
 FFP 45 Good blow built to bottom of bucket in 2 min and 50 sec
 FSI 45 Blow back built to bottom of bucket in 15 min. GTS in 40 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1735.77	101.08	Initial Hydro-static
3	42.12	100.85	Open To Flow (1)
33	84.35	101.02	Shut-in(1)
62	1165.96	102.90	End Shut-in(1)
64	92.45	102.78	Open To Flow (2)
108	172.16	104.70	Shut-in(2)
153	1162.27	106.74	End Shut-in(2)
154	1676.34	106.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
420.00	100% Clean gassy oil.	5.89

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations, Inc.
 8411 Preston Rd, STE 800
 Dallas TX 75225-5520
 ATTN: Wyatt Urban

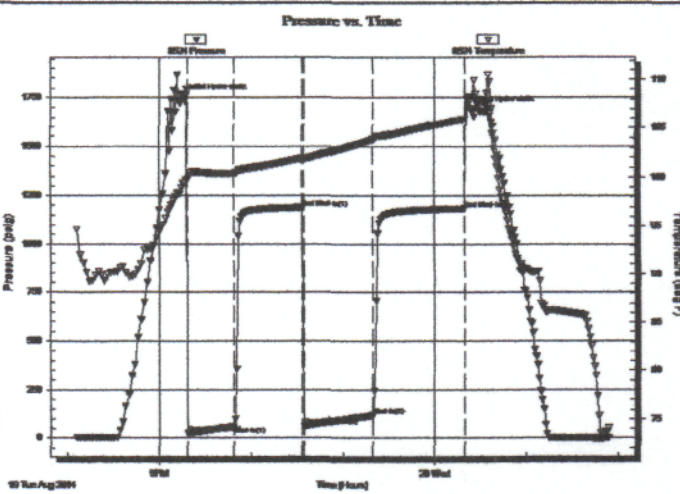
22-21s-12w Stafford,KS
Hammeke "M" #8
 Job Ticket: 60342 **DST#: 8**
 Test Start: 2014.08.19 @ 20:05:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:18:30
 Time Test Ended: 01:53:30
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane Konzem
 Unit No: S3
 Interval: **3633.00 ft (KB) To 3648.00 ft (KB) (TVD)**
 Total Depth: 3648.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Reference Elevations: 1849.00 ft (KB)
 1841.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8524 **Inside**
 Press@RunDepth: 119.59 psig @ 3644.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.08.19 End Date: 2014.08.20 Last Calib.: 2014.08.20
 Start Time: 20:06:00 End Time: 01:53:30 Time On Btm: 2014.08.19 @ 21:15:30
 Time Off Btm: 2014.08.20 @ 00:23:30

TEST COMMENT: FP 30 Fair blow built to bottom of bucket in 23 1/2 min
 ISI 45 No blow back.
 FFP 45 Fair blow built to bottom of bucket in 25 min
 FSI 60 No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1748.44	99.35	Initial Hydro-static
3	23.79	99.77	Open To Flow (1)
33	58.91	100.40	Shut-In(1)
78	1190.26	101.94	End Shut-In(1)
79	64.14	101.79	Open To Flow (2)
124	119.59	103.82	Shut-In(2)
184	1185.16	105.92	End Shut-In(2)
188	1689.03	108.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
6.00	100% CGO	0.08
87.00	MV 30% Mud, 70% Water	1.22
63.00	MV 10% Mud, 90% Water	0.88

Gas Rates

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