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Mai Oil Operations Inc.
Stull #1
NW-SE-NE-NW (870' FNL & 1990' FWL)
Section 19-16s-19w
Russell County, Kansas
Page 1

5 1/2" Production Casing Set

Contractor: Southwind Drilling Co. (Rig #3)
Commenced: April 3, 2014
Completed: April 10, 2014
Elevation: 2131' K.B.; 2129' D.F.; 2123' G.L.
Casing program: Surface; 8 5/8" @ 1103'
Production; 5 1/2" @ 3921'
Sample: Samples saved and examined 3200' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 3200 ft. 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 Nabors; Dual Induction, Compensated Density, Neutron Log, Micro Log and Sonic Log.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	1377	+754
Base Anhydrite	1410	+721
Topeka	3160	-1029
Heebner	3450	-1319
Toronto	3467	-1336
Lansing	3495	-1364
Base Kansas City	3753	-1622
Marmaton	3796	-1665
Arbuckle	3848	-1717
Rotary Total Depth	3921	-1700
Log Total Depth	3923	-1792

(All top and zone determination were made from a correlation of Electric Log measurements).

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

TOPEKA SECTION

3358-3368' Limestone, gray/tan, fine and medium crystalline, poorly developed inter-crystalline porosity, few fossiliferous, chalky, no shows.

3387-3397' Limestone, tan, gray, finely crystalline, fossiliferous, scattered porosity, cherty in part, few chalky; no shows.

TORONTO SECTION

3467-3478' Limestone, white, light gray, slightly oolitic, fine crystalline, few medium crystalline, slightly dolomitic, poor inter-crystalline porosity, chalky, no show.

LANSING SECTION

3496-3502' Limestone, white cream, finely crystalline, slightly oolitic, poor porosity, slightly chalky, no shows.

3517-3522' Limestone, tan, cream, finely crystalline, oolitic, oomoldic porosity, golden brown stain, fair show of free oil and fair odor in fresh samples.

Drill Stem Test #1 3499-3528

Times: 30-45-45-60

Blow: Strong

**Recovery: 930' gas in pipe
 186' gassy muddy oil
 (25% gas; 55% oil, 10% water, 10% mud)
 124' muddy water**

**Pressures: ISIP 576 psi
 FSIP 576 psi
 IFP 29-82 psi
 FFP 89-155 psi
 HSH 1622-1609 psi**

3562-3574' Limestone, white, cream, finely crystalline, few fossiliferous/oolitic, chalky, poor scattered porosity, plus chert, white, gray, boney.

3587-3598' Limestone, white, cream, light gray, oolitic, oomoldic, fair oomoldic porosity, chalky (barren) plus white, gray boney chert.

3630-3640' Limestone, white cream, finely crystalline, chalky, no shows; trace chert, white, boney.

3653-3660' Limestone, white, cream, light gray, finely crystalline, slightly oolitic, oomoldic, poor to fair oomoldic porosity, (barren).

3677-3692' Limestone, white, cream, finely crystalline, oolitic, chalky, few fossiliferous, oomoldic, fair oomoldic porosity, no show; trace chert, white, boney.

Drill Stem Test #3 **3860-3871**

Times: 30-30-30-45

Blow: Strong

**Recovery: 375' gas in pipe
710' clean oil
90' muddy gassy oil
(15% gas; 75% oil; 10% mud)**

**Pressures: ISIP 703 psi
FSIP 706 psi
IFP 70-189 psi
FFP 206-276 psi
HSH 1716-1634 psi**

- 3871-3880' Dolomite, gray ,tan, finely crystalline, sucrosic scattered pinpoint to finely vuggy porosity, black to dark brown stain, trace of free oil and faint odor, plus chert, amber, gray, boney.
- 3880-3900 Dolomite, gray ,tan, finely crystalline, sucrosic scattered pinpoint to finely vuggy porosity, trace stain, show of free oil.
- 3900-3910' Dolomite, white, gray, fine and medium crystalline, sucrosic, scattered stain, weak show of free oil and faint odor in fresh samples.
- 3910-3921' Dolomite, tan, finely crystalline dense, no show.

Rotary Total Depth 3921
Log Total Depth 3923

Recommendations:

The 5 1/2" production casing was set and cemented on the Mail Oil Operations Inc., Stull #1.

Respectfully submitted;

James C. Musgrove & *Kurt Talbott*
James C. Musgrove and Kurt Talbott,
Petroleum Geologists





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

19-16s-19w Rush,KS

Stull #1

Job Ticket: 54095

DST#: 1

Test Start: 2014.04.08 @ 02:50:35

GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:36:30

Time Test Ended: 09:08:29

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 70

Interval: **3499.00 ft (KB) To 3528.00 ft (KB) (TVD)**

Total Depth: 3528.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2131.00 ft (KB)

2123.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8369

Inside

Press@RunDepth: 155.75 psig @ 3505.00 ft (KB)

Start Date: 2014.04.08

End Date:

2014.04.08

Start Time: 02:50:35

End Time:

09:08:29

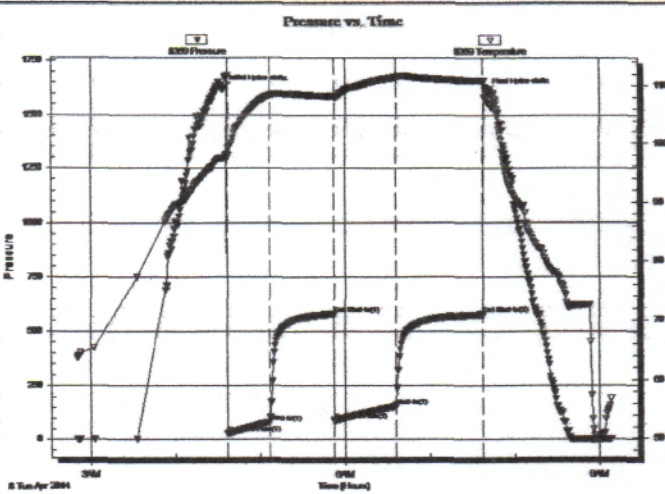
Capacity: 8000.00 psig

Last Calib.: 2014.04.08

Time On Btm: 2014.04.08 @ 04:34:15

Time Off Btm: 2014.04.08 @ 07:39:59

TEST COMMENT: 30-IFP-wk to strg in 4 min
45-ISIP-1/4" bl bk
45-FFP-wk to strg in 10 min
60-FSP-1/2" bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1622.45	97.35	Initial Hydro-static
3	29.13	97.36	Open To Flow (1)
33	82.18	108.28	Shut-In(1)
78	576.37	108.14	End Shut-In(1)
78	89.25	107.89	Open To Flow (2)
122	155.75	111.42	Shut-In(2)
184	576.16	110.78	End Shut-In(2)
186	1609.62	109.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	930'GIP	0.00
186.00	GMO 25%G10%M10%W55%O	2.61
124.00	MW 5%M95%W	1.74

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: Kurt Mai, Kurt Talb

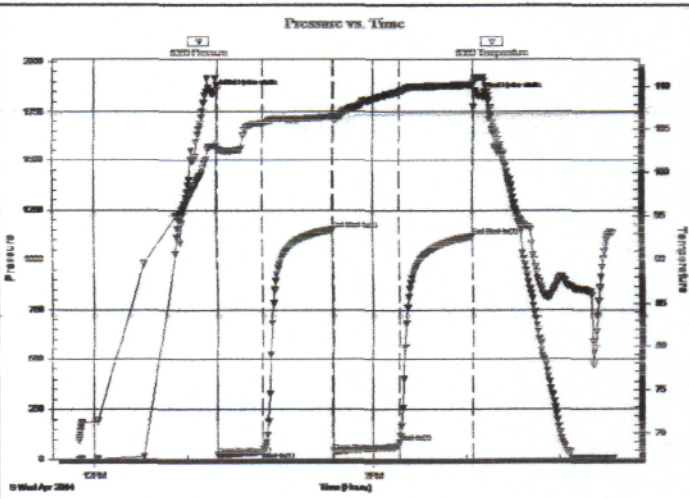
19-16s-19w Rush, KS
Stull #1
 Job Ticket: 54096 **DST#: 2**
 Test Start: 2014.04.09 @ 11:50:30

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: **No Whipstock:** ft (KB)
 Time Tool Opened: 13:19:25
 Time Test Ended: 17:34:24
 Interval: **3822.00 ft (KB) To 3860.00 ft (KB) (TVD)**
 Total Depth: 3860.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: **Conventional Bottom Hole (Reset)**
 Tester: Ray Schwager
 Unit No: 70
 Reference Elevations: 2131.00 ft (KB)
 2123.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8369 **Inside**
 Press@RunDepth: 85.91 psig @ 3833.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.09 End Date: 2014.04.09 Last Calib.: 2014.04.09
 Start Time: 11:50:30 End Time: 17:34:24 Time On Btm: 2014.04.09 @ 13:17:10
 Time Off Btm: 2014.04.09 @ 16:07:24

TEST COMMENT: 30-IFP-w k bl thru-out 1/2" to 3" bl
 45-ISIP-no bl
 45-FFP-w k to a fr bl 1/4" to 5" bl
 45-FSP-no bl



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1842.62	103.04	Initial Hydro-static
3	20.36	102.61	Open To Flow (1)
32	37.17	105.73	Shut-in(1)
77	1151.88	106.60	End Shut-in(1)
78	39.53	106.20	Open To Flow (2)
120	85.91	109.52	Shut-in(2)
167	1118.95	110.26	End Shut-in(2)
171	1830.11	111.11	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
0.00	80'GIP	0.00
30.00	CO	0.42
20.00	MGO 10%G40%M50%O	0.28
50.00	HO&GCM 10%G20%O70%M	0.70

Gas Rates			
	Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests

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. 402

Date	4-5-14	Sec.	19	Twp.	6	Range	19	County	Rush	State	KS	On Location	5:45 AM	Finish	8:00 AM
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Lease Stall Location Liebenthal 15th AVE E

Well No. 2 Owner 7 1/2 mi to RD 170 IN 1/2 W 3rd

Contractor Southwind 3 To Quality Oilwell Cementing, Inc.

Type Job Surface You are hereby requested to rent cementing equipment and furnish

Hole Size 17 1/4 T.D. 1103' Charge Ma To oil

Csg. 8 5/8 Depth 1103 Street Ma City oil

Tbg. Size _____ Depth _____ City _____ State _____

Tool _____ Depth _____ The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 30 FT Shoe Joint 30 FT Cement Amount Ordered 450 60/40 3% CC

Meas Line 23 FT Displace 68 BBL 2% gel

EQUIPMENT

Pumptrk 5 No. _____ Cementer NOTE Common

Bulktrk 19 No. _____ Helper _____ Poz. Mix

Bulktrk pu No. _____ Driver Beeth Gel.

Bulktrk _____ No. _____ Driver Dave Calcium

JOB SERVICES & REMARKS

Remarks: _____ 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 8 5/8

FLOAT EQUIPMENT

_____ Guide Shoe

_____ Centralizer

_____ Baskets

_____ AFU Inserts

_____ Float Shoe

_____ Latch Down

_____ Rubber plug

_____ Pumptrk Charge

_____ Mileage

_____ Tax

_____ Discount

_____ Total Charge

X Signature Kent

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. 7195

Date	4-11-14	Sec.	19	Twp.	16	Range	19	County	Rush	State	Ks	On Location		Finish	2:30 AM
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Location Liberal, Ks - 15, 7W, 1N, 1/2 W, 5th

Lease	Stull	Well No.	#1	Owner	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.
Contractor	Southland #3				
Type Job	Completion				
Hole Size	7 7/8"	T.D.	3921'	Charge To	Major oil operations
Csg.	5 1/2" New 11A	Depth	3915'	Street	
Tbg. Size		Depth		City	State
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	21.43'	Shoe Joint	2143'	Cement Amount Ordered	160 601MD 2% Gel 15% Salt 1/4 KFI
Meas Line		Displace	9.5 B/S	1000 gal mud clear 48	

EQUIPMENT

Pumptrk	16	No.	Cementer Helper Billy	Common
Bulktrk	14	No.	Driver Jason	Poz. Mix
Bulktrk	14	No.	Driver Rick	Gel.
		No.	Driver	Calcium

JOB SERVICES & REMARKS

Remarks:		Hulls
Rat Hole		Salt
Mouse Hole		Flowseal
Centralizers	1-10	Kol-Seal
Baskets	pipe on bottom break circulation	Mud CLR 48
D/V or Port Collar	plug 100 gal mud clear 48	CFL-117 or CD110 CAF 38
	plug 100 gal mud clear 48	Sand
	plug 100 gal mud clear 48	Handling
	plug 100 gal mud clear 48	Mileage

FLOAT EQUIPMENT

		Guide Shoe
		Centralizer 10
		Baskets
		AFU Inserts
		Float Shoe
		Latch Down

		Pumptrk Charge
		Mileage
		Tax
		Discount
		Total Charge

X Signature Ked

