

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name RICHARDS #4 Test No. 1 Date 8/6/93
Company MAI OIL OPERATIONS INC Zone PLATTSMOUTH
Address 600 N PEARL #866-LB 150 DALLAS TX 75201-2833 Elevation 2041 KB
Co. Rep./Geo. DAVE SHUMAKER Cont. VONFELDT RIG #1 Est. Ft. of Pay _____
Location: Sec. 6 Twp. 11S Rge. 20W Co. ELLIS State KS

Interval Tested	<u>3229-3250</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>21</u>	Wt. Pipe I.D. - 2.7 Ft. Run	_____
Top Packer Depth	<u>3224</u>	Drill Collar - 2.25 Ft. Run	<u>31</u>
Bottom Packer Depth	<u>3229</u>	Mud Wt.	<u>9.5</u> lb/Gal.
Total Depth	<u>3250</u>	Viscosity	<u>39</u> Filtrate _____

Tool Open @ 5:21 AM Initial Blow WEAK SURFACE BLOW DIED IN 3 MINUTES

Final Blow NO BLOW

Recovery - Total Feet 10 Flush Tool? NO

Rec. <u>10</u>	Feet of	<u>MUD</u>
Rec. _____	Feet of	_____
Rec. _____	Feet of	_____
Rec. _____	Feet of	_____
Rec. _____	Feet of	_____

BHT 102 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud 1796.3 PSI AK1 Recorder No. 22150 Range 3925

(B) First Initial Flow Pressure 40.3 PSI @ (depth) 3232 w / Clock No. 31154

(C) First Final Flow Pressure 40.3 PSI AK1 Recorder No. 24174 Range 3050

(D) Initial Shut-in Pressure 1077.9 PSI @ (depth) 3247 w / Clock No. 30401

(E) Second Initial Flow Pressure _____ PSI AK1 Recorder No. _____ Range _____

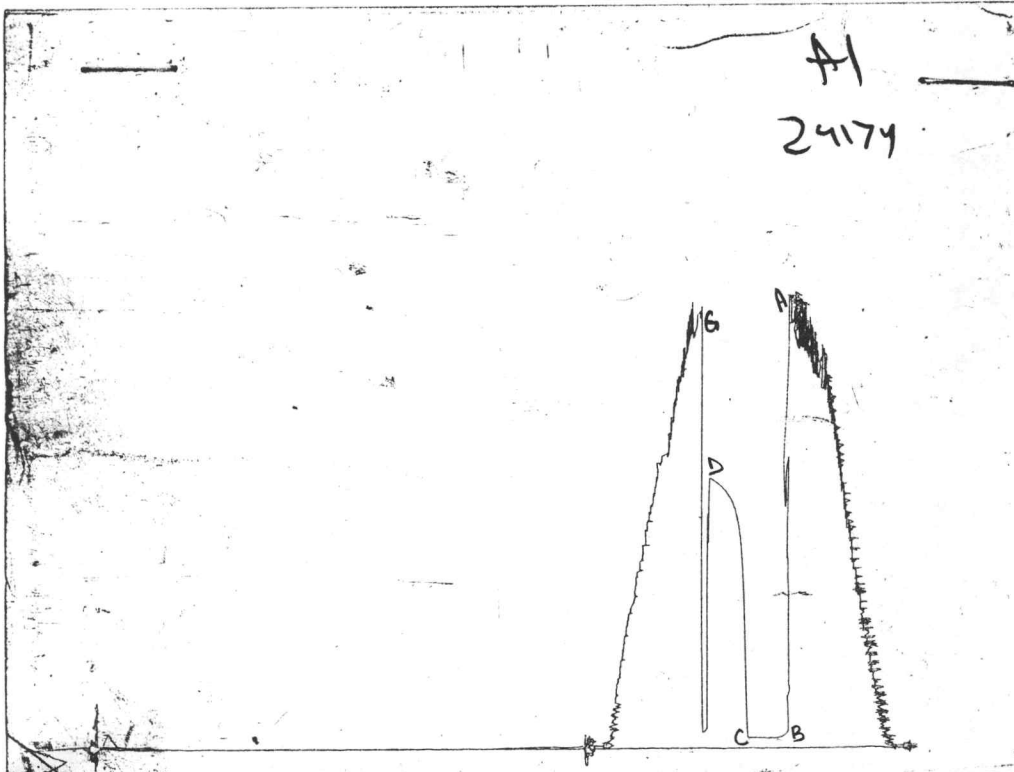
(F) Second Final Flow Pressure _____ PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure _____ PSI Initial Opening 30 Final Flow _____

(H) Final Hydrostatic Mud 1754.6 PSI Initial Shut-in 30 Final Shut-in _____

Our Representative PAUL SIMPSON

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
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(A) INITIAL HYDROSTATIC MUD	1788	1796.3
(B) FIRST INITIAL FLOW PRESSURE	37	40.3
(C) FIRST FINAL FLOW PRESSURE	37	40.3
(D) INITIAL CLOSED-IN PRESSURE	1069	1077.9
(E) SECOND INITIAL FLOW PRESSURE		
(F) SECOND FINAL FLOW PRESSURE		
(G) FINAL CLOSED-IN PRESSURE		
(H) FINAL HYDROSTATIC MUD	1750	1754.6

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Drill-Stem Test Data

Well Name RICHARDS #4 Test No. 2 Date 8/6/93
Company MAI OIL OPERATIONS INC Zone LKC-"C"
Address 600 N PEARL #866-LB 150 DALLAS TX 75201-2833 Elevation 2041 KB
Co. Rep./Geo. DAVE SHUMAKER Cont. VONFELDT RIG #1 Est. Ft. of Pay _____
Location: Sec. 6 Twp. 11S Rge. 20W Co. ELLIS State KS

Interval Tested 3316-3375 Drill Pipe Size 4.5" XH
Anchor Length 59 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 3311 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 3316 Mud Wt. 10.2 lb/Gal.
Total Depth 3375 Viscosity 44 Filtrate 13.6

Tool Open @ 12:05 AM Initial Blow 1/4" BLOW TO 1/2"

Final Blow VERY WEAK SURFACE BLOW THROUGHOUT BUILDING TO 1/2"
(HAD LOOSE HAMMER UNION CONNECTION ON FLOOR MANIFOLD)

Recovery - Total Feet 250 Flush Tool? NO

Rec. 250 Feet of MUDDY WATER
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 117 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.13 @ 70 °F Chlorides 65000 ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud 1866.3 PSI AK1 Recorder No. 22150 Range 3925

(B) First Initial Flow Pressure 70.5 PSI @ (depth) 3319 w / Clock No. 31152

(C) First Final Flow Pressure 103.9 PSI AK1 Recorder No. 24174 Range 3050

(D) Initial Shut-in Pressure 877.9 PSI @ (depth) 3374 w / Clock No. 17642

(E) Second Initial Flow Pressure 136.8 PSI AK1 Recorder No. _____ Range _____

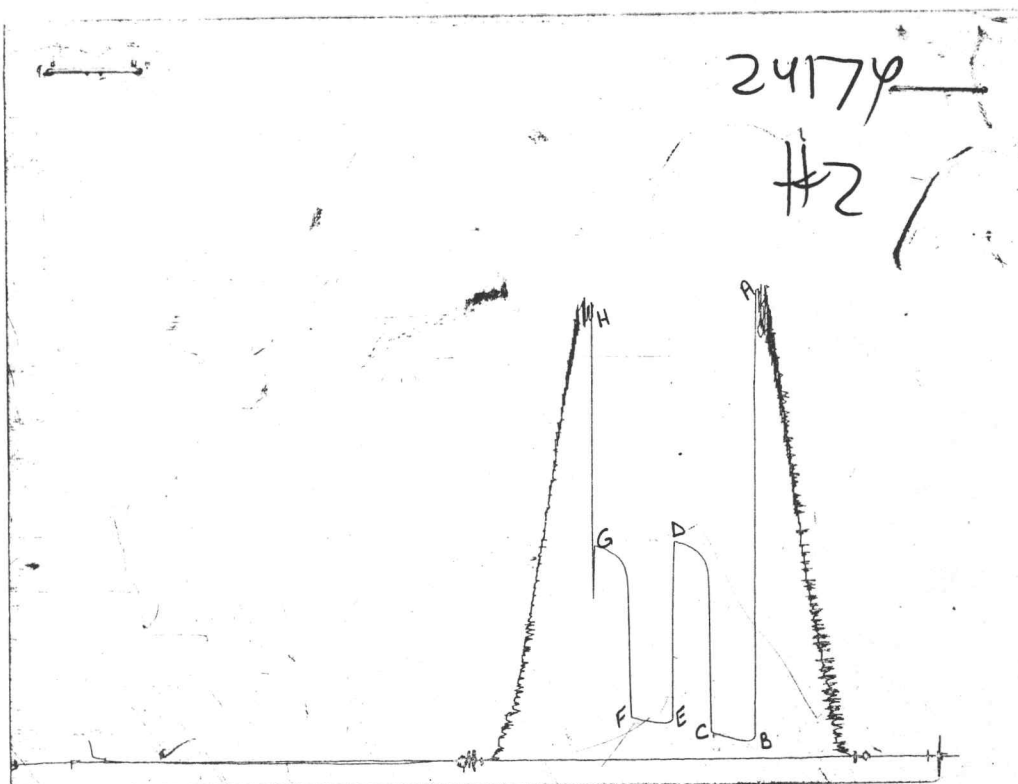
(F) Second Final Flow Pressure 160.4 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 867.9 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 1822.6 PSI Initial Shut-in 30 Final Shut-in 30

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CHART PAGE



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	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1872	1866.3
(B) FIRST INITIAL FLOW PRESSURE	67	70.5
(C) FIRST FINAL FLOW PRESSURE	104	103.9
(D) INITIAL CLOSED-IN PRESSURE	872	877.9
(E) SECOND INITIAL FLOW PRESSURE	134	136.8
(F) SECOND FINAL FLOW PRESSURE	157	160.4
(G) FINAL CLOSED-IN PRESSURE	857	867.9
(H) FINAL HYDROSTATIC MUD	1818	1822.6

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Drill-Stem Test Data

Well Name RICHARDS #4 Test No. 3 Date 8/8/93
Company MAI OIL OPERATIONS INC Zone LKC-"C"
Address 600 N PEARL #866-LB 150 DALLAS TX 75201-2833 Elevation 2041 KB
Co. Rep./Geo. DAVE SHUMAKER Cont. VONFELDT RIG #1 Est. Ft. of Pay _____
Location: Sec. 6 Twp. 11S Rge. 20W Co. ELLIS State KS

Interval Tested 3444-3510
Anchor Length 66
Top Packer Depth 3439
Bottom Packer Depth 3444
Total Depth 3510

Drill Pipe Size 4.5" XH
Wt. Pipe I.D. - 2.7 Ft. Run _____
Drill Collar - 2.25 Ft. Run 29
Mud Wt. _____ lb/Gal.
Viscosity _____ Filtrate _____

Tool Open @ 3:03 AM Initial Blow VERY WEAK SURFACE BLOW - DIED IN 3 MINUTES

Final Blow VERY WEAK BLOW DIED IN 4 MINUTES

Recovery - Total Feet 10

Flush Tool? NO

Rec. 10 Feet of SLTLY OIL SPECKED MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 114 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud 1955.6 PSI AK1 Recorder No. 24174 Range 3050

(B) First Initial Flow Pressure 55.3 PSI @ (depth) 3508 w / Clock No. 30401

(C) First Final Flow Pressure 55.3 PSI AK1 Recorder No. 22150 Range 3925

(D) Initial Shut-in Pressure 220.1 PSI @ (depth) 3447 w / Clock No. 31154

(E) Second Initial Flow Pressure 55.3 PSI AK1 Recorder No. _____ Range _____

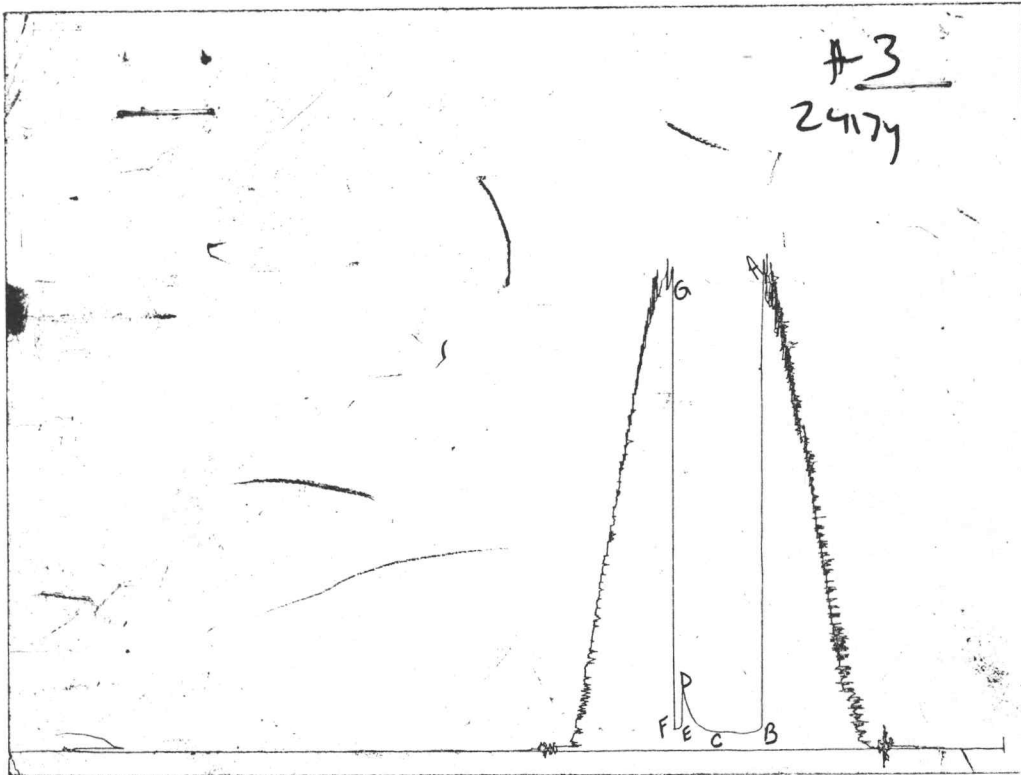
(F) Second Final Flow Pressure 55.3 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure _____ PSI Initial Opening 30 Final Flow 4

(H) Final Hydrostatic Mud 1922.6 PSI Initial Shut-in 30 Final Shut-in _____

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CHART PAGE



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	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1949	1955.6
(B) FIRST INITIAL FLOW PRESSURE	52	55.3
(C) FIRST FINAL FLOW PRESSURE	52	55.3
(D) INITIAL CLOSED-IN PRESSURE	247	220.1
(E) SECOND INITIAL FLOW PRESSURE	52	55.3
(F) SECOND FINAL FLOW PRESSURE	52	55.3
(G) FINAL CLOSED-IN PRESSURE		
(H) FINAL HYDROSTATIC MUD	1926	1922.6

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Drill-Stem Test Data

Well Name RICHARDS #4 Test No. 4 Date 8/9/93
Company MAI OIL OPERATIONS INC Zone ARBUCKLE
Address 600 N PEARL #866-LB 150 DALLAS TX 75201-2833 Elevation 2041 KB
Co. Rep./Geo. DAVE SHUMAKER Cont. VONFELDT RIG #1 Est. Ft. of Pay _____
Location: Sec. 6 Twp. 11S Rge. 20W Co. ELLIS State KS

Interval Tested 3575-3649
Anchor Length 74
Top Packer Depth 3570
Bottom Packer Depth 3575
Total Depth 3649

Drill Pipe Size 4.5" XH
Wt. Pipe I.D. - 2.7 Ft. Run _____
Drill Collar - 2.25 Ft. Run _____
Mud Wt. 10.2 lb/Gal.
Viscosity 60 Filtrate 12.4

Tool Open @ 1:44 AM Initial Blow VERY WEAK SURFACE BLOW - DIED IN 4 MINUTES

Final Blow NO BLOW - FLUSHED TOOL - NO BLOW AFTER SURGE

Recovery - Total Feet 5

Flush Tool? NO

Rec. 5 Feet of MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 114 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud 2113.4 PSI AK1 Recorder No. 22150 Range 3925

(B) First Initial Flow Pressure 55.3 PSI @ (depth) 3579 w / Clock No. 31154

(C) First Final Flow Pressure 55.3 PSI AK1 Recorder No. 24174 Range 3050

(D) Initial Shut-in Pressure 436.9 PSI @ (depth) 3644 w / Clock No. 25810

(E) Second Initial Flow Pressure 55.3 PSI AK1 Recorder No. _____ Range _____

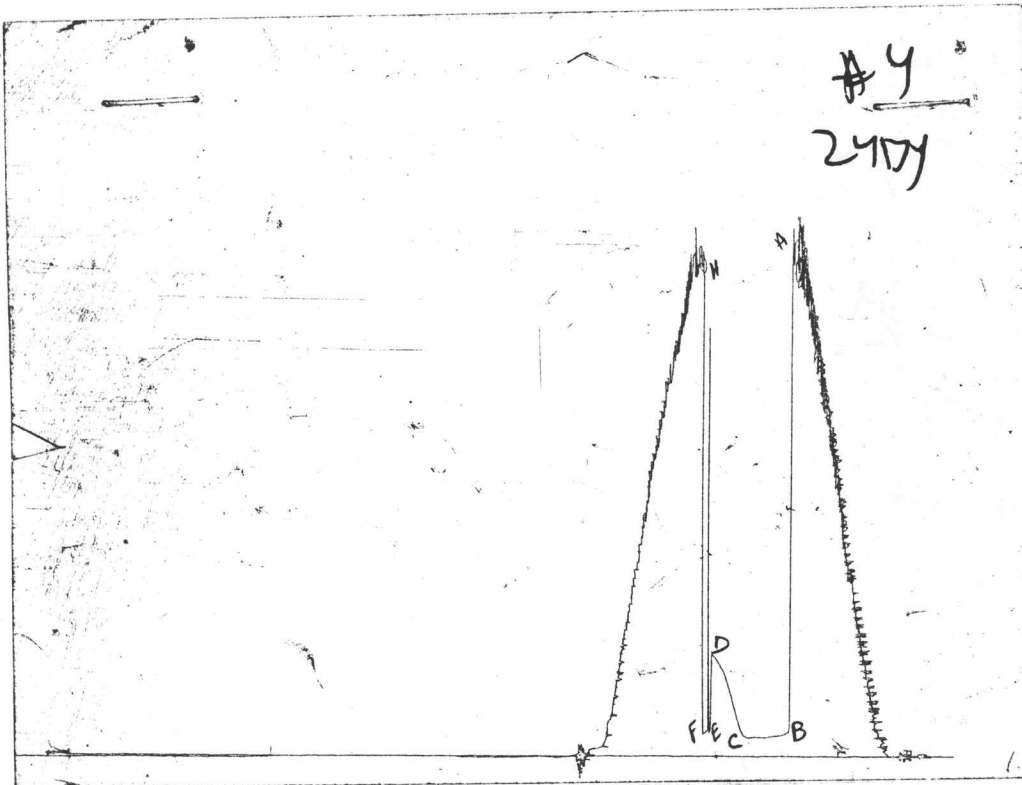
(F) Second Final Flow Pressure 55.3 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure _____ PSI Initial Opening 30 Final Flow _____

(H) Final Hydrostatic Mud 1922.6 PSI Initial Shut-in 30 Final Shut-in _____

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CHART PAGE



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	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2104	2113.4
(B) FIRST INITIAL FLOW PRESSURE	53	55.3
(C) FIRST FINAL FLOW PRESSURE	53	55.3
(D) INITIAL CLOSED-IN PRESSURE	430	436.9
(E) SECOND INITIAL FLOW PRESSURE	53	55.3
(F) SECOND FINAL FLOW PRESSURE	53	55.3
(G) FINAL CLOSED-IN PRESSURE		
(H) FINAL HYDROSTATIC MUD	1949	1922.6