Company: Mai Operations | Lease & Well No.: Richards #2

Elevation: 2072 Ground Level | Formation: Kansas City | Effective Pay: ---- Ft. | Ticket No.: 4185

Date: 8/2/80 | Sec.: 6 | Twp.: 11S | Range: 20W | County: Ellis | State: Kansas

Test Approved by: Roy R. Kruger | Western Representative: Randy Lackey

Formation Test No.: 1 | Interval Tested from: 3363 ft. to: 3424 ft. | Total Depth: 3424 ft.

Packer Depth: 3358 ft. | Size: 6 3/4 in. | Packer Depth: - ft. | Size: - in.

Packer Depth: 3363 ft. | Size: 6 3/4 in. | Packer Depth: - ft. | Size: - in.

Depth of Selective Zone Set: -

Top Recorder Depth (Inside): 3366 ft. | Recorder Number: 1564 | Cap.: 3150 PSI

Bottom Recorder Depth (Outside): 3369 ft. | Recorder Number: 3085 | Cap.: 4500 PSI

Below Straddle Recorder Depth: - ft. | Recorder Number: - | Cap.: -

Drilling Contractor: Warrior Drilling | Drill Collar Length: - | I. D.: - in.

Mud Type: starch | Viscosity: 42 | Weight Pipe Length: 315 | I. D.: 2.76 in.

Weight: 9.9 | Water Loss: 9.4 cc. | Drill Pipe Length: 3054 | I. D.: 3.8 in.

Chlorides: 52,000 P.P.M. | Test Tool Length: 19 ft. | Tool Size: 5½ in.

Jars: Make: None | Serial Number: - | Anchor Length: 61 ft. | Size: 5½ in.

Did Well Flow?: No | Reversed Out: No | Surface Choke Size: 3/4 in. | Bottom Choke Size: 3/4 in.

Main Hole Size: 7 7/8 in. | Tool Joint Size: 4½FH in.

Blow: Very weak throughout initial flow. Very weak throughout final flow period.

Recovered: 125 ft. of muddy water

Recovered: ft. of

Recovered: ft. of

Recovered: ft. of

Recovered: ft. of

Remarks:

Time Set Packer(s): 12:27 ~~A.M.~~ P.M. | Time Started Off Bottom: 3:40 ~~A.M.~~ P.M. | Maximum Temperature: 105°

Initial Hydrostatic Pressure		(A) 1798	P.S.I.	
Initial Flow Period	Minutes 65	(B) 62	P.S.I. to (C) 63	P.S.I.
Initial Closed In Period	Minutes 30	(D) 815	P.S.I.	
Final Flow Period	Minutes 55	(E) 89	P.S.I. to (F) 93	P.S.I.
Final Closed In Period	Minutes 27	(G) 783	P.S.I.	
Final Hydrostatic Pressure		(H) 1760	P.S.I.	

WESTERN TESTING CO., INC.
Pressure Data

Date 8/2/80 Test Ticket No. 4185

Recorder No. 1564 Capacity 3150 Location 3366 Ft.

Clock No. - Elevation 2072 Ground Level Well Temperature 105 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1798 P.S.I.	Open Tool	12:27P M	
B	First Initial Flow Pressure	62 P.S.I.	First Flow Pressure	60 Mins.	65 Mins.
C	First Final Flow Pressure	63 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	815 P.S.I.	Second Flow Pressure	60 Mins.	55 Mins.
E	Second Initial Flow Pressure	89 P.S.I.	Final Closed-in Pressure	30 Mins.	27 Mins.
F	Second Final Flow Pressure	93 P.S.I.			
G	Final Closed-in Pressure	783 P.S.I.			
H	Final Hydrostatic Mud	1760 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 13 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	62
P 2 5	49
P 3 10	44
P 4 15	44
P 5 20	44
P 6 25	44
P 7 30	44
P 8 35	PLUGGING
P 9 40	PLUGGING
P10 45	PLUGGING
P11 50	63
P12 55	63
P13 60	63
P14 65	63
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	63
3	105
6	487
9	673
12	726
15	752
18	771
21	788
24	797
27	808
30	815

Second Flow Pressure
Breakdown: 11 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	89
5	82
10	80
15	80
20	80
25	80
30	82
35	83
40	86
45	89
50	91
55	93

Final Shut-In
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	93
3	209
6	478
9	659
12	712
15	735
18	754
21	763
24	774
27	783

DST #1

JKI #4185

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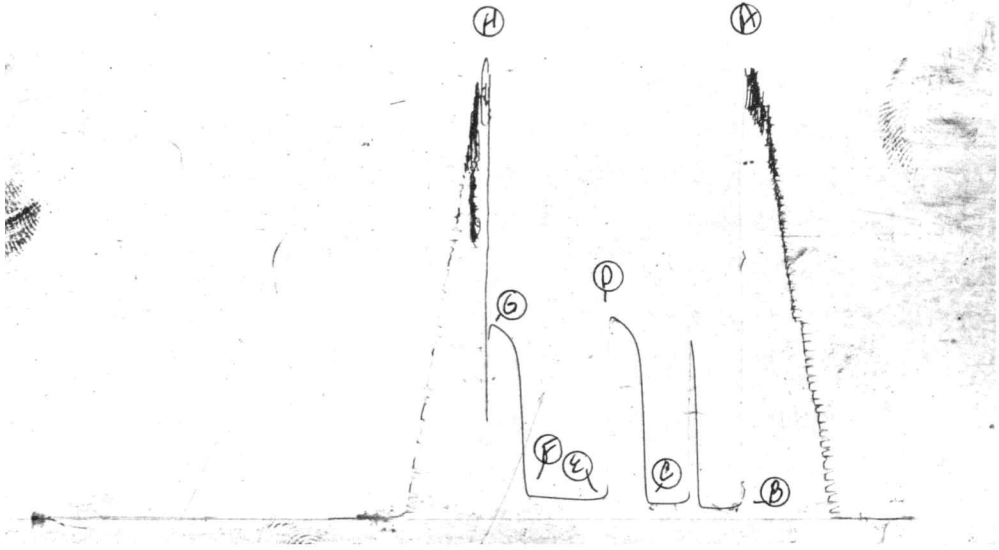

Company Mai Operations — Lease & Well No. Richards #2

Elevation 2072 Ground Level — Formation Kansas City — Effective Pay ---- Ft. — Ticket No. 4186

Date 8/3/80 — Sec. 6 — Twp. 11S — Range 20W — County Ellis — State Kansas

Test Approved by Roy R. Krueger — Western Representative Randy Lackey

Formation Test No. 2 — Interval Tested from 3437 ft. to 3496 ft. — Total Depth 3496 ft.

Packer Depth 3432 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Packer Depth 3437 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3488 ft. — Recorder Number 1564 — Cap. 3150 PSI

Bottom Recorder Depth (Outside) 3491 ft. — Recorder Number 3085 — Cap. 4500 PSI

Below Straddle Recorder Depth - ft. — Recorder Number - — Cap. -

Drilling Contractor Warrior Drilling — Drill Collar Length - — I. D. - in.

Mud Type starch — Viscosity 42 — Weight Pipe Length 315 — I. D. 2.76 in.

Weight 9.9 — Water Loss 9.4 cc. — Drill Pipe Length 3116 — I. D. 3.8 in.

Chlorides 52,000 P.P.M. — Test Tool Length 19 ft. — Tool Size 5½ in.

Jars: Make None — Serial Number - — Anchor Length 59 ft. — Size 5½ in.

Did Well Flow? No — Reversed Out No — Surface Choke Size 3/4 in. — Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. — Tool Joint Size 4½FH in.

Blow: Weak throughout initial flow.

Weak throughout final flow.

Recovered 240 ft. of muddy water

Recovered ft. of scum of oil

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 4:57 ~~P.M.~~ A.M. — Time Started Off Bottom 8:00 ~~P.M.~~ A.M. — Maximum Temperature 114°

Initial Hydrostatic Pressure		(A) 1904	P.S.I.
Initial Flow Period	Minutes 60	(B) 86	P.S.I. to (C) 98 P.S.I.
Initial Closed In Period	Minutes 30	(D) 940	P.S.I.
Final Flow Period	Minutes 60	(E) 136	P.S.I. to (F) 147 P.S.I.
Final Closed In Period	Minutes 30	(G) 907	P.S.I.
Final Hydrostatic Pressure		(H) 1884	P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 8/3/80 Test Ticket No. 4186

Recorder No. 1564 Capacity 3150 Location 3488 Ft.

Clock No. ---- Elevation 2072 Ground Level Well Temperature 114 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1904	P.S.I.
B	First Initial Flow Pressure	86	P.S.I.
C	First Final Flow Pressure	98	P.S.I.
D	Initial Closed-in Pressure	940	P.S.I.
E	Second Initial Flow Pressure	136	P.S.I.
F	Second Final Flow Pressure	147	P.S.I.
G	Final Closed-in Pressure	907	P.S.I.
H	Final Hydrostatic Mud	1884	P.S.I.

	Time Given		Time Computed	
Open Tool	4:57	M		
First Flow Pressure	60	Mins.	60	Mins.
Initial Closed-in Pressure	30	Mins.	30	Mins.
Second Flow Pressure	60	Mins.	60	Mins.
Final Closed-in Pressure	30	Mins.	30	Mins.

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	86
P 2 5	80
P 3 10	71
P 4 15	60
P 5 20	68
P 6 25	75
P 7 30	80
P 8 35	82
P 9 40	84
P10 45	86
P11 50	89
P12 55	94
P13 60	98
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	98
3	344
6	687
9	796
12	835
15	865
18	883
21	904
24	918
27	930
30	940

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	136
5	125
10	125
15	125
20	125
25	129
30	130
35	138
40	138
45	141
50	143
55	145
60	147

Final Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	147
3	372
6	657
9	776
12	816
15	841
18	858
21	872
24	885
27	896
30	907

DST #2

DK # 4186

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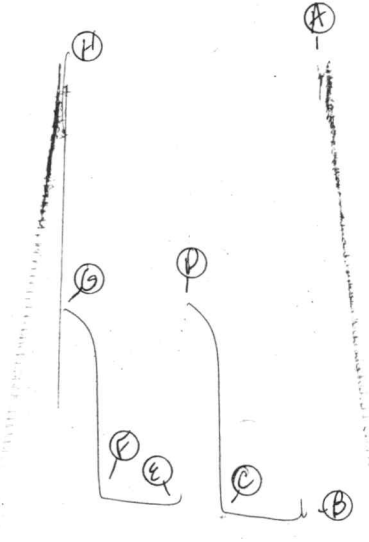
T-4186



Company Mai Operations Lease & Well No. Richards #2

Elevation 2072 Ground Level Formation Kansas City Effective Pay ---- Ft. Ticket No. 4187

Date 8/3/80 Sec. 6 Twp 11S Range 20W County Ellis State Kansas

Test Approved by Rod Randall Western Representative Randy Lackey

Formation Test No. 3 Interval Tested from 3488 ft. to 3560 ft. Total Depth 3560 ft.

Packer Depth 3483 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3488 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3551 ft. Recorder Number 1564 Cap. 3150 PSI

Bottom Recorder Depth (Outside) 3554 ft. Recorder Number 3085 Cap. 4500 PSI

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Warrior Drilling Drill Collar Length - I. D. - in.

Mud Type starch Viscosity 40-44 Weight Pipe Length 315 I. D. 2.76 in.

Weight 9.8 Water Loss 14.2 cc. Drill Pipe Length 3192 I. D. 3.8 in.

Chlorides 56,000 P.P.M. Test Tool Length 19 ft. Tool Size 5½ in.

Jars: Make None Serial Number -- - Anchor Length 72 ft. Size 5½ in.

Did Well Flow? No Reversed Out No Surface Choke Size - in. Bottom Choke Size in.

Main Hole Size 7 7/8 in. Tool Joint Size 4½FH in.

Blow: Very weak, died in thirteen minutes of initial flow. Flushed tool thirty minutes into final flow ;died in one minute.

Recovered 2 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 8:27 ~~A.M.~~ P.M. Time Started Off Bottom 10:00 ~~A.M.~~ P.M. Maximum Temperature 114°

Initial Hydrostatic Pressure			(A)	1904	P.S.I.	
Initial Flow Period	Minutes 60	(B)	80	P.S.I. to (C)	69	P.S.I.
Initial Closed In Period	Minutes 24	(D)	103	P.S.I.		
Final Flow Period	Minutes --	(E)	--	P.S.I. to (F)	--	P.S.I.
Final Closed In Period	Minutes --	(G)	--	P.S.I.		
Final Hydrostatic Pressure		(H)	1878	P.S.I.		

WESTERN TESTING CO., INC.
Pressure Data

Date 8/3/80 Test Ticket No. 4187

Recorder No. 1564 Capacity 3150 Location 3551 Ft.

Clock No. ---- Elevation 2072 Ground Level Well Temperature 114 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1904	P.S.I.
B	First Initial Flow Pressure	80	P.S.I.
C	First Final Flow Pressure	69	P.S.I.
D	Initial Closed-in Pressure	103	P.S.I.
E	Second Initial Flow Pressure	--	P.S.I.
F	Second Final Flow Pressure	--	P.S.I.
G	Final Closed-in Pressure	--	P.S.I.
H	Final Hydrostatic Mud	1878	P.S.I.

	Time Given	Time Computed
Open Tool	8:27P M	
First Flow Pressure	60 Mins.	60 Mins.
Initial Closed-in Pressure	30 Mins.	24 Mins.
Second Flow Pressure	=- Mins.	-- Mins.
Final Closed-in Pressure	-- Mins.	-- Mins.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 12 Inc.		Breakdown: 8 Inc.		Breakdown: 0 Inc.		Breakdown: 0 Inc.	
of 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	80	0	69				
P 2 5	71	3	69				
P 3 10	65	6	69				
P 4 15	65	9	72				
P 5 20	65	12	77				
P 6 25	65	15	80				
P 7 30	65	18	88				
P 8 35	Flushed tool	21	96				
P 9 40	77	24	103				
P10 45	69						
P11 50	69						
P12 55	69						
P13 60	69						
P14							
P15							
P16							
P17							
P18							
P19							
P20							

Dkt #3

Dkt #4187
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