

Company Pickrell Drilling Company Lease & Well No. Westermeyer "A"#2  
 Elevation 2341 Kelly Bushing Formation Marmaton Effective Pay -- Ft. Ticket No. 2066  
 Date 5/8/79 Sec. 6 Twp 20S Range 24W County Ness State Kansas  
 Test Approved by Mike G. Russell Western Representative Ken Metzler

Formation Test No. 1 Interval Tested from 4156 ft. to 4220 ft. Total Depth 4220 ft.  
 Packer Depth 4151 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 4156 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Depth of Selective Zone Set --

Top Recorder Depth (Inside) 4176 ft. Recorder Number 1566 Cap. 4300  
 Bottom Recorder Depth (Outside) 4179 ft. Recorder Number 3086 Cap. 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Pickrell Drilling Drill Collar Length 152 I. D. 2.26 in.  
 Mud Type drispac Viscosity 48 Weight Pipe Length - I. D. - in.  
 Weight 9.3 Water Loss 10.2 cc. Drill Pipe Length 4068 I. D. 3.8 in.  
 Chlorides 13,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.  
 Jars: Make None Serial Number - Anchor Length 64 ft. Size 5 1/2 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 4 1/2 FH in.

Blow: Weak blow; died in 18 minutes on first opening.

Recovered 5 ft. of drilling mud with few oil specks.  
 Recovered     ft. of      
 Recovered     ft. of      
 Recovered     ft. of      
 Recovered     ft. of    

Remarks:    

Time Set Packer(s) 9:13 A.M. =P.M. Time Started Off Bottom 10:25 A.M. =P.M. Maximum Temperature 118  
 Initial Hydrostatic Pressure 2150 P.S.I. (A)  
 Initial Flow Period 30 Minutes (B) 45 P.S.I. to (C) 24 P.S.I.  
 Initial Closed In Period 30 Minutes (D) 43 P.S.I.  
 Final Flow Period 10 Minutes (E) 34 P.S.I. to (F) 26 P.S.I.  
 Final Closed In Period 0 Minutes (G) -- P.S.I.  
 Final Hydrostatic Pressure 2117 P.S.I. (H)

# WESTERN TESTING CO., INC.

## Pressure Data

Date 5/8/79 Test Ticket No. 2066  
 Recorder No. 1566 Capacity 4300 Location 4176 Ft.  
 Clock No. -- Elevation 2341 Kelly Bushing Well Temperature 118 °F

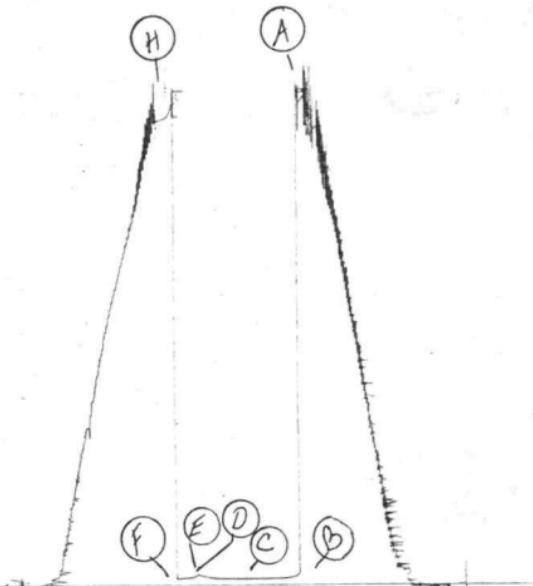
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2150	P.S.I.	9:13A	M
B First Initial Flow Pressure	45	P.S.I.	30	30
C First Final Flow Pressure	24	P.S.I.	30	30
D Initial Closed-in Pressure	43	P.S.I.	10	10
E Second Initial Flow Pressure	34	P.S.I.	--	--
F Second Final Flow Pressure	26	P.S.I.		
G Final Closed-in Pressure	--	P.S.I.		
H Final Hydrostatic Mud	2117	P.S.I.		

### PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>2</u> Inc.		Breakdown: <u>-</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	0	45	0	24	0	34	
P 2	5	30	3	24	5	30	
P 3	10	28	6	24	10	26	
P 4	15	26	9	24			
P 5	20	24	12	24			
P 6	25	24	15	24			
P 7	30	24	18	28			
P 8			21	30			
P 9			24	35			
P 10			27	39			
P 11			30	43			
P 12							
P 13							
P 14							
P 15							
P 16							
P 17							
P 18							
P 19							
P 20							

1566

TKL #2066  
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Company Pickrell Drilling Company Lease & Well No. Westermeyer "A"#2  
 Elevation 2341 Kelly Bushing Formation Ft. Scott Effective Pay -- Ft. Ticket No. 2067  
 Date 5/9/79 Sec. 6 Twp. 20S Range 24W County Ness State Kansas  
 Test Approved by Mike G. Russell Western Representative Ken Metzler

Formation Test No. 2 Interval Tested from 4280' ft. to 4325' ft. Total Depth 4325' ft.  
 Packer Depth 4275 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 4280 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set --  
 Top Recorder Depth (Inside) 4316 ft. Recorder Number 1566 Cap. 4300  
 Bottom Recorder Depth (Outside) 4319 ft. Recorder Number 3086 Cap. 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Pickrell Drilling Company Drill Collar Length 151 I. D. 2.26 in.  
 Mud Type drispac Viscosity 48 Weight Pipe Length - I. D. - in.  
 Weight 9.3 Water Loss 10<sup>0</sup> cc. Drill Pipe Length 4174 I. D. 3.8 in.  
 Chlorides 13,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.  
 Jars: Make None Serial Number -- Anchor Length 45 ft. Size 5 1/2 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 4 1/2 FH in.

Blow: Very weak blow for 12 minutes on first opening.

Recovered 1 ft. of drilling mud  
 Recovered - ft. of -  
 Recovered - ft. of -  
 Recovered - ft. of -  
 Recovered - ft. of -

Remarks: Fourteen hours waiting time (between tests)

Time Set Packer(s) 9:42 ~~P.M.~~ A.M. Time Started Off Bottom 10:55 ~~P.M.~~ A.M. Maximum Temperature 118  
 Initial Hydrostatic Pressure ..... (A) 2226 P.S.I.  
 Initial Flow Period ..... Minutes 30 (B) 30 P.S.I. to (C) 30 P.S.I.  
 Initial Closed In Period ..... Minutes 30 (D) 30 P.S.I.  
 Final Flow Period ..... Minutes 10 (E) 30 P.S.I. to (F) 30 P.S.I.  
 Final Closed In Period ..... Minutes -- (G) -- P.S.I.  
 Final Hydrostatic Pressure ..... (H) 2102 P.S.I.

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date 5/9/79 Test Ticket No. 2067  
 Recorder No. 1566 Capacity 4300 Location 4316 Ft.  
 Clock No. -- Elevation 2341 Kelly Bushing Well Temperature 118 °F

Point	Pressure		Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	2226	P.S.I.		9:42A	M
B First Initial Flow Pressure	30	P.S.I.	First Flow Pressure	30	30
C First Final Flow Pressure	30	P.S.I.	Initial Closed-in Pressure	30	30
D Initial Closed-in Pressure	30	P.S.I.	Second Flow Pressure	10	10
E Second Initial Flow Pressure	30	P.S.I.	Final Closed-in Pressure	--	--
F Second Final Flow Pressure	30	P.S.I.			
G Final Closed-in Pressure	--	P.S.I.			
H Final Hydrostatic Mud	2102	P.S.I.			

**PRESSURE BREAKDOWN**

**First Flow Pressure**  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

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

**Second Flow Pressure**  
 Breakdown: 2 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

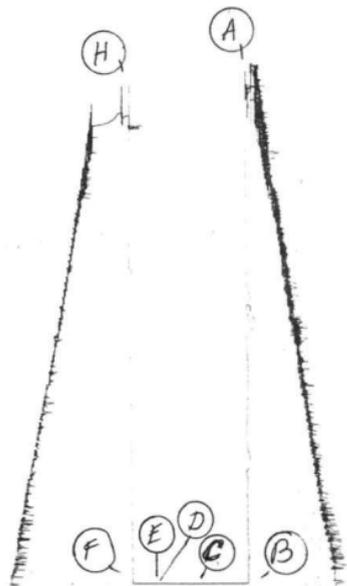
**Final Shut-In**  
 Breakdown: 0 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	0	30	0	30	0		
P 2	5	30	3	30	5		
P 3	10	30	6	30	10		
P 4	15	30	9	30			
P 5	20	30	12	30			
P 6	25	30	15	30			
P 7	30	30	18	30			
P 8			21	30			
P 9			24	30			
P10			27	30			
P11			30	30			
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

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TKT #2067  
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Company Pickrell Drilling Company Lease & Well No. Westermeyer "A"#2  
 Elevation 2341 Kelly Bushing Formation Mississippi Effective Pay -- Ft. Ticket No. 2068  
 Date 5/10/79 Sec. 6 Twp. 20S Range 2 4W County Ness State Kansas  
 Test Approved by Mike G. Russell Western Representative Ken Metzler

Formation Test No. 3 Interval Tested from 4340 ft. to 4391 ft. Total Depth 4391 ft.  
 Packer Depth 4335 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 4340 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Depth of Selective Zone Set --

Top Recorder Depth (Inside) 4346 ft. Recorder Number 1566 Cap. 4300  
 Bottom Recorder Depth (Outside) 4349 ft. Recorder Number 3086 Cap. 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Pickrell Drilling Drill Collar Length 151 I. D. 2.26 in.  
 Mud Type drispac Viscosity 68 Weight Pipe Length - I. D. - in.  
 Weight 9.2 Water Loss 14 cc. Drill Pipe Length 4240 I. D. 3.8 in.  
 Chlorides 17,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.  
 Jars: Make None Serial Number -- Anchor Length 51 ft. Size 5 1/2 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 4 1/2 FH in.

Blow: Very weak blow; did not blow on second opening.

Recovered 15 ft. of drilling mud  
 Recovered      ft. of       
 Recovered      ft. of       
 Recovered      ft. of       
 Recovered      ft. of     

Remarks: (Six hours between tests)

Time Set Packer(s) 3:27 ~~P.M.~~ A.M. Time Started Off Bottom 6:00 ~~P.M.~~ A.M. Maximum Temperature 120  
 Initial Hydrostatic Pressure ..... (A) 2161 P.S.I.  
 Initial Flow Period ..... Minutes 30 (B) 35 P.S.I. to (C) 26 P.S.I.  
 Initial Closed In Period ..... Minutes 30 (D) 26 P.S.I.  
 Final Flow Period ..... Minutes 30 (E) 26 P.S.I. to (F) 26 P.S.I.  
 Final Closed In Period ..... Minutes 60 (G) 32 P.S.I.  
 Final Hydrostatic Pressure ..... (H) 2076 P.S.I.

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date 5/10/79 Test Ticket No. 2068  
 Recorder No. 1566 Capacity 4300 Location 4346 Ft.  
 Clock No. -- Elevation 2341 Kelly Bushing Well Temperature 120 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2161	P.S.I.	3:27A	M
B First Initial Flow Pressure	35	P.S.I.	30	30 Mins.
C First Final Flow Pressure	26	P.S.I.	30	30 Mins.
D Initial Closed-in Pressure	26	P.S.I.	30	30 Mins.
E Second Initial Flow Pressure	26	P.S.I.	60	60 Mins.
F Second Final Flow Pressure	26	P.S.I.		
G Final Closed-in Pressure	32	P.S.I.		
H Final Hydrostatic Mud	2076	P.S.I.		

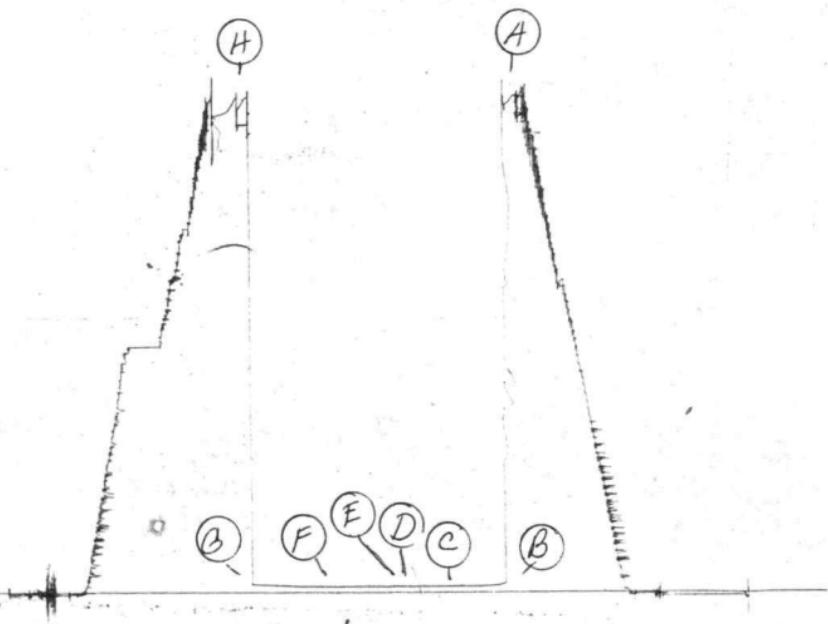
**PRESSURE BREAKDOWN**

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.
	6		10		6		20	
	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.	
	Press.	Point Minutes						
P 1	35	0	26	0	26	0	26	0
P 2	30	5	26	3	26	5	26	3
P 3	28	10	26	6	26	10	26	6
P 4	26	15	26	9	26	15	26	9
P 5	26	20	26	12	26	20	26	12
P 6	26	25	26	15	26	25	26	15
P 7	26	30	26	18	26	30	26	18
P 8			26	21			26	21
P 9			26	24			26	24
P10			26	27			26	27
P11			26	30			26	30
P12							26	33
P13							27	36
P14							28	39
P15							29	42
P16							29	45
P17							30	48
P18							31	51
P19							31	54
P20							32	57
							32	60

DST # 3

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TKT # 2068  
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Company Pickrell Drilling Company Lease & Well No. Westermeyer "A"#2  
 Elevation 2341 Kelly Bushing Formation Mississippi Effective Pay -- Ft. Ticket No. 2069  
 Date 5/10/79 Sec. 6 Twp. 20S Range 24W County Ness State Kansas  
 Test Approved by Mike G. Russell Western Representative Steven J. Storm

Formation Test No. 4 Interval Tested from 4338' ft. to 4401' ft. Total Depth 4401' ft.  
 Packer Depth 4333 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 4338 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Depth of Selective Zone Set --

Top Recorder Depth (Inside) 4344 ft. Recorder Number 1566 Cap. 4300  
 Bottom Recorder Depth (Outside) 4347 ft. Recorder Number 3086 Cap. 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Pickrell Drilling Company Drill Collar Length 151 I. D. 2.26 in.  
 Mud Type drispac Viscosity 46 Weight Pipe Length - I. D. - in.  
 Weight 9.4 Water Loss 10<sup>0</sup> cc. Drill Pipe Length 4250 I. D. 3.8 in.  
 Chlorides 10,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.  
 Jars: Make No Serial Number - Anchor Length 63 ft. Size 5 1/2 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 4 1/2 FH in.

Blow: Fair blow throughout test.

Recovered 90 ft. of gas in pipe  
 Recovered 90 ft. of clean oil (38 gravity)  
 Recovered 60 ft. of oil and gas cut mud (Top : 10% gas;20% oil;70% mud)  
 Recovered          ft. of (Bottom:16% gas;15% oil;69% mud)  
 Recovered          ft. of No water

Remarks:         

Time Set Packer(s) 5:57 ~~A.M.~~ P.M. Time Started Off Bottom 9:30 ~~A.M.~~ P.M. Maximum Temperature ?  
 Initial Hydrostatic Pressure          (A) 2154 P.S.I.  
 Initial Flow Period          Minutes 30 (B) 45 P.S.I. to (C) 32 P.S.I.  
 Initial Closed In Period          Minutes 30 (D) 1073 P.S.I.  
 Final Flow Period          Minutes 90 (E) 69 P.S.I. to (F) 69 P.S.I.  
 Final Closed In Period          Minutes 60 (G) 1047 P.S.I.  
 Final Hydrostatic Pressure          (H) 2150 P.S.I.

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date 5/10/79 Test Ticket No. 2069  
 Recorder No. 1566 Capacity 4300 Location 4344 Ft.  
 Clock No. -- Elevation 2341 Kelly Bushing Well Temperature - °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2154	P.S.I.	5:57P	M
B First Initial Flow Pressure	45	P.S.I.	30	Mins. 30 Mins.
C First Final Flow Pressure	32	P.S.I.	30	Mins. 30 Mins.
D Initial Closed-in Pressure	1073	P.S.I.	90	Mins. 90 Mins.
E Second Initial Flow Pressure	69	P.S.I.	60	Mins. 60 Mins.
F Second Final Flow Pressure	69	P.S.I.		
G Final Closed-in Pressure	1047	P.S.I.		
H Final Hydrostatic Mud	2150	P.S.I.		

**PRESSURE BREAKDOWN**

**First Flow Pressure**  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

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

**Second Flow Pressure**  
 Breakdown: 18 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

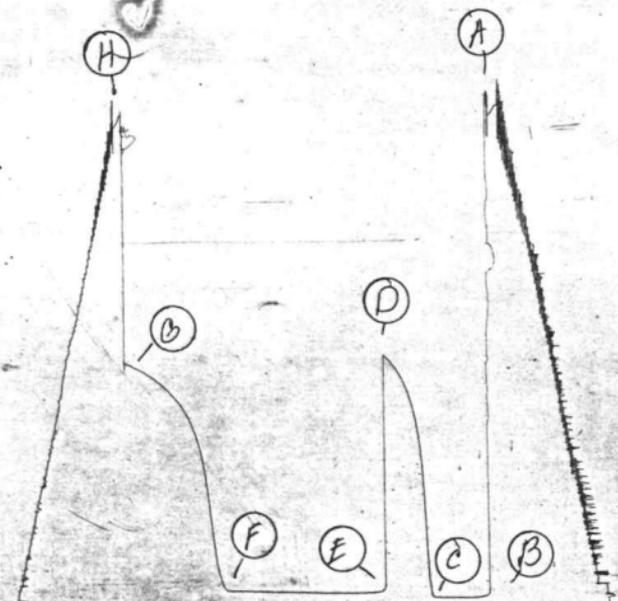
**Final Shut-In**  
 Breakdown: 20 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	45	0	32	0	69	0	69
P 2 5	35	3	162	5	58	3	86
P 3 10	32	6	480	10	56	6	164
P 4 15	32	9	705	15	56	9	298
P 5 20	32	12	826	20	56	12	474
P 6 25	32	15	908	25	56	15	598
P 7 30	32	18	961	30	56	18	695
P 8		21	1004	35	56	21	761
P 9		24	1034	40	56	24	811
P10		27	1058	45	56	27	852
P11		30	1073	50	58	30	886
P12				55	59	33	910
P13				60	63	36	936
P14				65	64	39	957
P15				70	65	42	974
P16				75	65	45	989
P17				80	66	48	1004
P18				85	67	51	1013
P19				90	69	54	1028
P20						57	1039
						60	1047

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Tkt # 2069  
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Company Pickrell Drilling Company Lease & Well No. Westermeyer "A"#2  
 Elevation 2341 Kelly Bushing Formation Mississippi Effective Pay == Ft. Ticket No. 2070  
 Date 5/11/79 Sec. 6 Twp. 20S Range 24W County Ness State Kansas  
 Test Approved by Mike G. Russell Western Representative Steven Storm

Formation Test No. 5 Interval Tested from 4396 ft. to 4406 ft. Total Depth 4406 ft.  
 Packer Depth 4391 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 4396 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set --  
 Top Recorder Depth (Inside) 4399 ft. Recorder Number 1566 Cap. 4300  
 Bottom Recorder Depth (Outside) 4402 ft. Recorder Number 3086 Cap. 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Pickrell Drilling Drill Collar Length 152 I. D. 2.26 in.  
 Mud Type drispac Viscosity 46 Weight Pipe Length - I. D. - in.  
 Weight 9.4 Water Loss 10<sup>0</sup> cc. Drill Pipe Length 4254 I. D. 3.8 in.  
 Chlorides 10,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.  
 Jars: Make None Serial Number -- Anchor Length 10 ft. Size 5 1/2 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 4 1/2 FH in.

Blow: Good blow throughout test.

Recovered 150 ft. of gas in pipe  
 Recovered 210 ft. of clean gassy oil 38 gravity  
 Recovered 120 ft. of oil and gas cut mud (Top: 17% gas;20% oil;63% mud)  
 Recovered        ft. of (Bottom 37% gas;30% oil;33% mud)  
 Recovered        ft. of No water

Remarks: \_\_\_\_\_

Time Set Packer(s) 7:45 ~~P.M.~~ <sup>A.M.</sup> Time Started Off Bottom 11:15 ~~P.M.~~ <sup>A.M.</sup> Maximum Temperature 129  
 Initial Hydrostatic Pressure ..... (A) 2239 P.S.I.  
 Initial Flow Period ..... Minutes 30 (B) 50 P.S.I. to (C) 63 P.S.I.  
 Initial Closed In Period ..... Minutes 30 (D) 1255 P.S.I.  
 Final Flow Period ..... Minutes 90 (E) 99 P.S.I. to (F) 123 P.S.I.  
 Final Closed In Period ..... Minutes 60 (G) 1208 P.S.I.  
 Final Hydrostatic Pressure ..... (H) 2200 P.S.I.

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date 5/11/79 Test Ticket No. 2070  
 Recorder No. 1566 Capacity 4300 Location 4399 Ft.  
 Clock No. -- Elevation 2341 Kelly Bushing Well Temperature 129 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2239	P.S.I.	7:45A	M
B First Initial Flow Pressure	50	P.S.I.	30	30
C First Final Flow Pressure	63	P.S.I.	30	30
D Initial Closed-in Pressure	1255	P.S.I.	90	90
E Second Initial Flow Pressure	99	P.S.I.	60	60
F Second Final Flow Pressure	123	P.S.I.		
G Final Closed-in Pressure	1208	P.S.I.		
H Final Hydrostatic Mud	2200	P.S.I.		

**PRESSURE BREAKDOWN**

**First Flow Pressure**  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

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

**Second Flow Pressure**  
 Breakdown: 18 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

**Final Shut-In**  
 Breakdown: 20 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	0	0	63	0	99	0	123
P 2	5	3	839	5	91	3	601
P 3	10	6	1064	10	86	6	927
P 4	15	9	1137	15	86	9	1000
P 5	20	12	1175	20	86	12	1066
P 6	25	15	1197	25	86	15	1092
P 7	30	18	1216	30	86	18	1111
P 8		21	1229	35	89	21	1128
P 9		24	1240	40	91	24	1141
P10		27	1248	45	97	27	1150
P11		30	1255	50	99	30	1158
P12				55	104	33	1164
P13				60	104	36	1168
P14				65	109	39	1173
P15				70	115	42	1179
P16				75	119	45	1184
P17				80	120	48	1188
P18				85	122	51	1195
P19				90	123	54	1199
P20						57	1204
						60	1208

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Tkt # 2070  
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