Ricketts Testing

Company HAR-KEN AGENT OK | Lease & Well No. METZINGER #1

Elevation 1141 G.L. | Formation MISSISSIPPI | Effective Pay ____ ft. | Ticket No. 1586

Date 6-1-91 | Sec. 5 | Twp. 35 | Range 3W | County SUMNER | State KANSAS

Test Approved by ARDEN RATZLAFF | Ricketts Representative JIM RICKETTS

Formation Test No. 1 | Interval Tested from 4364 ft. to 4377 ft. | Total Depth 4377 ft.

Packer Depth 4364 ft. | Size 6 3/4 in. | Packer Depth ____ ft. | Size ____ in.

Packer Depth 4361 ft. | Size 6 3/4 in. | Packer Depth ____ ft. | Size ____ in.

Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 4369 ft. | Recorder Number 13307 | Cap. 4650

Bottom Recorder Depth (Outside) 4372 ft. | Recorder Number 13306 | Cap. 4625

Below Straddle Recorder Depth ____ ft. | Recorder Number ____ | Cap. ____

Drilling Contractor Brandt Drilling Rig #1 | Drill Collar Length 435 | I.D. 2.25 in.

Mud Type Chemical | Viscosity 46 | Weight Pipe Length ____ | I.D. ____ in.

Weight 9.3 | Water Loss 12.8 cc. | Drill Pipe Length 3902 | I.D. 3.25 in.

Chlorides 9,000 P.P.M. | Test Tool Length 27 ft. | Tool Size 5½ in.

Jars: Make Dowing | Serial Number 404 | Anchor Length 13 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 4½xh in.

Blow: Weak blow building to 3" in water Initial Flow Period.
Weak blow building to a strong blow in 55 minutes Final Flow Period.

Recovered 420 ft. of Gas in pipe.

Recovered 60 ft. of Mud with a trace of oil.

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Remarks: ____

Time Set Packer (s) 3:42 A.M. P.M. | Time Started Off Bottom 6:57 A.M. P.M. | Maximum Temperature 132°

Initial Hydrostatic Pressure ..... (A) 2179 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 81 P.S.I. to (C) 81 P.S.I.

Initial Closed In Period ..... Minutes 45 (D) 134 P.S.I.

Final Flow Period ..... Minutes 60 (E) 81 P.S.I. to (F) 81 P.S.I.

Final Closed In Period ..... Minutes 60 (G) 175 P.S.I.

Final Hydrostatic Pressure ..... (H) 2164 P.S.I.

KCC AUG 28 1994 AUG 29 1994

RICKETTS TESTING

Pressure Data

Date 6-1-91 Test Ticket No. 1586

Recorder No. 13307 Capacity 4650 Location 4369 Ft.

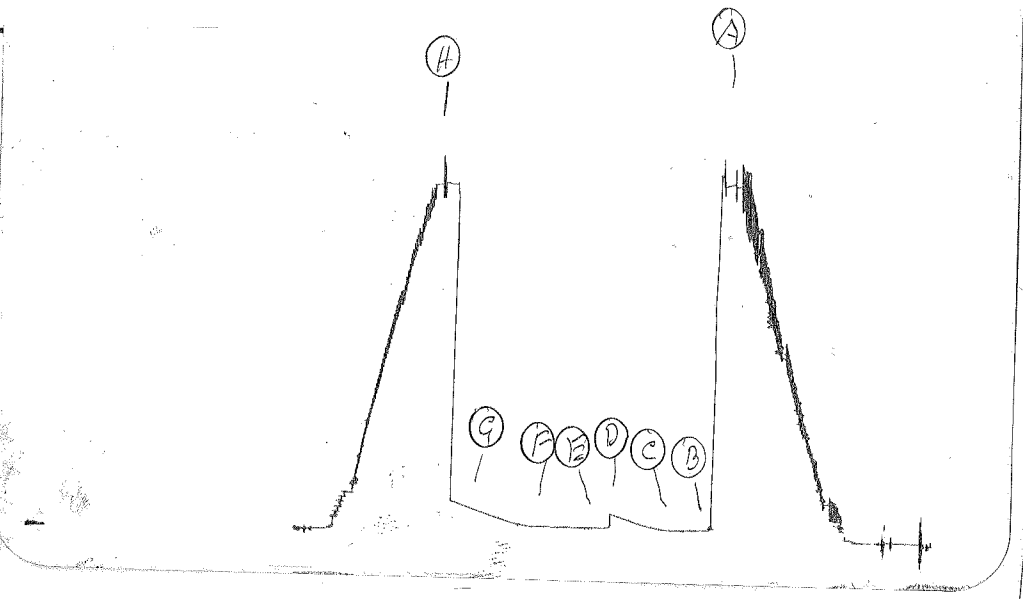
Clock No. Elevation 1141 G.L. Well Temperature 132 °F

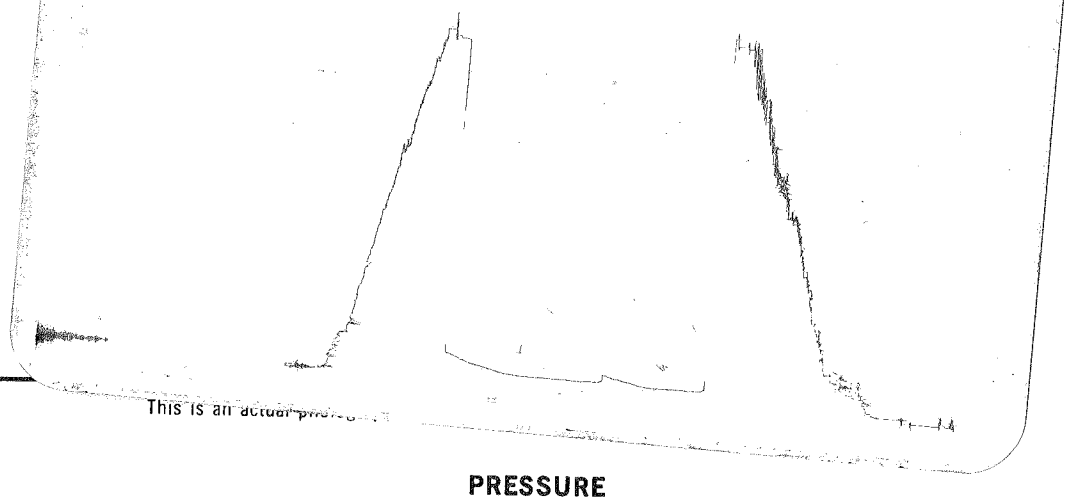
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2179 P.S.I.	Open Tool	3:42 A M	
B First Initial Flow Pressure	81 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	81 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D Initial Closed-in Pressure	134 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	81 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	81 P.S.I.			
G Final Closed-in Pressure	175 P.S.I.			
H Final Hydrostatic Mud	2164 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 6 Inc.		Breakdown: 15 Inc.		Breakdown: 12 Inc.		Breakdown: 20 Inc.	
of 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
final inc. of Min.		final inc. of Min.		final inc. of Min.		final inc. of Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	81	0	81	0	81	0	81
P 2 5	81	3	81	5	81	3	84
P 3 10	81	6	84	10	81	6	90
P 4 15	81	9	86	15	81	9	93
P 5 20	81	12	88	20	81	12	96
P 6 25	81	15	90	25	81	15	101
P 7 30	81	18	92	30	81	18	104
P 8 35		21	95	35	81	21	109
P 9 40		24	98	40	81	24	114
P10 45		27	102	45	81	27	118
P11 50		30	108	50	81	30	125
P12 55		33	117	55	81	33	129
P13 60		36	122	60	81	36	134
P14 65		39	126	65		39	141
P15 70		42	129	70		42	147
P16 75		45	134	75		45	155
P17 80		48		80		48	160
P18 85		51		85		51	165
P19 90		54		90		54	170
P20 95		57				57	175
		60				60	185

DST #1 TK# 1586





This is an actual pressure chart

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2181	2179	PSI
(B)	First Initial Flow Pressure	69	81	PSI
(C)	First Final Flow Pressure	69	81	PSI
(D)	Initial Closed-in Pressure	139	134	PSI
(E)	Second Initial Flow Pressure	81	81	PSI
(F)	Second Final Flow Pressure	81	81	PSI
(G)	Final Closed-in Pressure	197	175	PSI
(H)	Final Hydrostatic Mud	2158	2164	PSI

COMPANY HAR-KEN AGENT OK LEASE AND WELL NO. METZINGER #1 SEC. 5 TWP. 35 RGE. 3W TEST NO. 1