Company W. L. Kirkman, Inc. Lease & Well No. Woodworth #1

Elevation -- Formation -- Effective Pay -- Ft. Ticket No. 1531

Date 2/4/79 Sec. 8 Twp. 34S Range 9W County Harper State Kansas

Test Approved by Donald J. Malone Western Representative Jim Wondra

Formation Test No. 1 Interval Tested from 3851' ft. to 3873' ft. Total Depth 3932' ft.

Packer Depth 3851 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3873 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set --

Top Recorder Depth (Inside) 3859 ft. Recorder Number 2607 Cap. 4150

Bottom Recorder Depth (Outside) 3862 ft. Recorder Number 3351 Cap. 4000

Below Straddle Recorder Depth 3932 ft. Recorder Number Cap.

Drilling Contractor H-30, Inc. Rig #5 Drill Collar Length 249 I. D. 2¼ in.

Mud Type premix Viscosity 39 Weight Pipe Length - I. D. - in.

Weight 9.5 Water Loss cc. Drill Pipe Length 3586 I. D. 3.8 in.

Chlorides 18,500 P.P.M. Test Tool Length 38' ~~in.~~ Tool Size 5½OD in.

Jars: Make Serial Number - Anchor Length 59 ft. Size 5½OD 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: Fair increased to strong on first opening.
Strong blow throughout second flow period.

Recovered 120 ft. of muddy water

Recovered 1540 ft. of salt water (60,000 ppm)

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 4:45 ~~P.M.~~ A.M. Time Started Off Bottom 6:45 ~~P.M.~~ A.M. Maximum Temperature 115

Initial Hydrostatic Pressure ..... (A) 1920 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 148 P.S.I. to (C) 519 P.S.I.

Initial Closed In Period ..... Minutes 30 (D) 1666 P.S.I.

Final Flow Period ..... Minutes 30 (E) 608 P.S.I. to (F) 824 P.S.I.

Final Closed In Period ..... Minutes 30 (G) 1662 P.S.I.

Final Hydrostatic Pressure ..... (H) 1910 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 2/4/79 Test Ticket No. 1531

Recorder No. 2607 Capacity 4150 Location 3859 Ft.

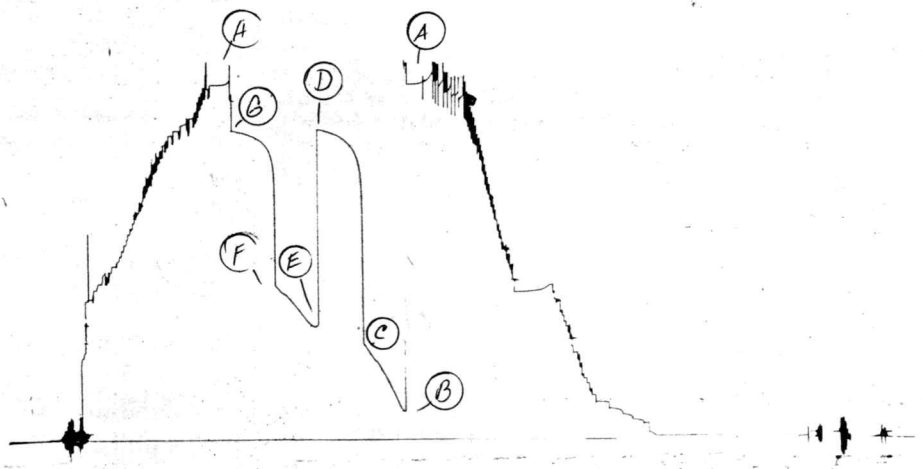
Clock No. -- Elevation -- Well Temperature 115 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1920 P.S.I.	Open Tool	4:45A M	
B First Initial Flow Pressure	148 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	519 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	1666 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E Second Initial Flow Pressure	608 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	824 P.S.I.			
G Final Closed-in Pressure	1662 P.S.I.			
H Final Hydrostatic Mud	1910 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 6 Inc.		Breakdown: 10 Inc.		Breakdown: 6 Inc.		Breakdown: 10 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	148	0	519	0	608	0	824
P 2 5	199	3	1424	5	616	3	1475
P 3 10	280	6	1517	10	658	6	1553
P 4 15	354	9	1565	15	708	9	1588
P 5 20	422	12	1590	20	748	12	1609
P 6 25	462	15	1613	25	783	15	1622
P 7 30	519	18	1630	30	824	18	1632
P 8		21	1639			21	1641
P 9		24	1645			24	1649
P10		27	1655			27	1656
P11		30	1666			30	1662
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

JKt # 5.31
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Company W.L.Kirkman, Inc. Lease & Well No. Woodworth #1

Elevation 1310 Ground Level Formation Mississippi Effective Pay -- Ft. Ticket No. 1137

Date 2/7/79 Sec. 8 Twp. 34S Range 9W County Harper State Kansas

Test Approved by Donald J. Malone Western Representative W. K. Hager

Formation Test No. 2 Interval Tested from 4604' ft. to 4630' ft. Total Depth 4630' ft.

Packer Depth 4604 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth - ft. Size in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set --

Top Recorder Depth (Inside) 4617 ft. Recorder Number 969 Cap. 4200

Bottom Recorder Depth (Outside) 4620 ft. Recorder Number 2603 Cap. 4400

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

Drilling Contractor H-30 #5 Drill Collar Length 240' I. D. 2¼ in.

Mud Type premix Viscosity 44 Weight Pipe Length - I. D. - in.

Weight 9.4 Water Loss 16.4 cc. Drill Pipe Length 4349 I. D. 3.8 in.

Chlorides 22,500 P.P.M. Test Tool Length 41' Tool Size 5½ in.

Jars: Make -- Serial Number -- Anchor Length 26' ft. Size 5½ in.

Did Well Flow? No Reversed Out Yes 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: Strong decreasing to weak on initial flow period. Very weak blow;died 20 minutes into final flow period.

Recovered 960 ft. of drilling mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: Packer seat failure 10 minutes into initial flow period. Pulled packer loose and reset packer;packer held second attempt.

Time Set Packer(s) 7:25 A.M. ~~P.M.~~ Time Started Off Bottom 9:25 A.M. ~~P.M.~~ Maximum Temperature 130

Initial Hydrostatic Pressure ..... (A) 2304 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 488 P.S.I. to (C) 484 P.S.I.

Initial Closed In Period ..... Minutes 30 (D) 1177 P.S.I.

Final Flow Period ..... Minutes 30 (E) 496 P.S.I. to (F) 490 P.S.I.

Final Closed In Period ..... Minutes 30 (G) 932 P.S.I.

Final Hydrostatic Pressure ..... (H) 2297 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 2/7/79 Test Ticket No. 1137

Recorder No. 969 Capacity 4200 Location 4617 Ft.

Clock No. -- Elevation 1310 Ground Level Well Temperature 130 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2304 P.S.I.	Open Tool	7:25A M	
B First Initial Flow Pressure	488 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	484 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	1177 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E Second Initial Flow Pressure	496 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	490 P.S.I.			
G Final Closed-in Pressure	932 P.S.I.			
H Final Hydrostatic Mud	2297 P.S.I.			

PRESSURE BREAKDOWN

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

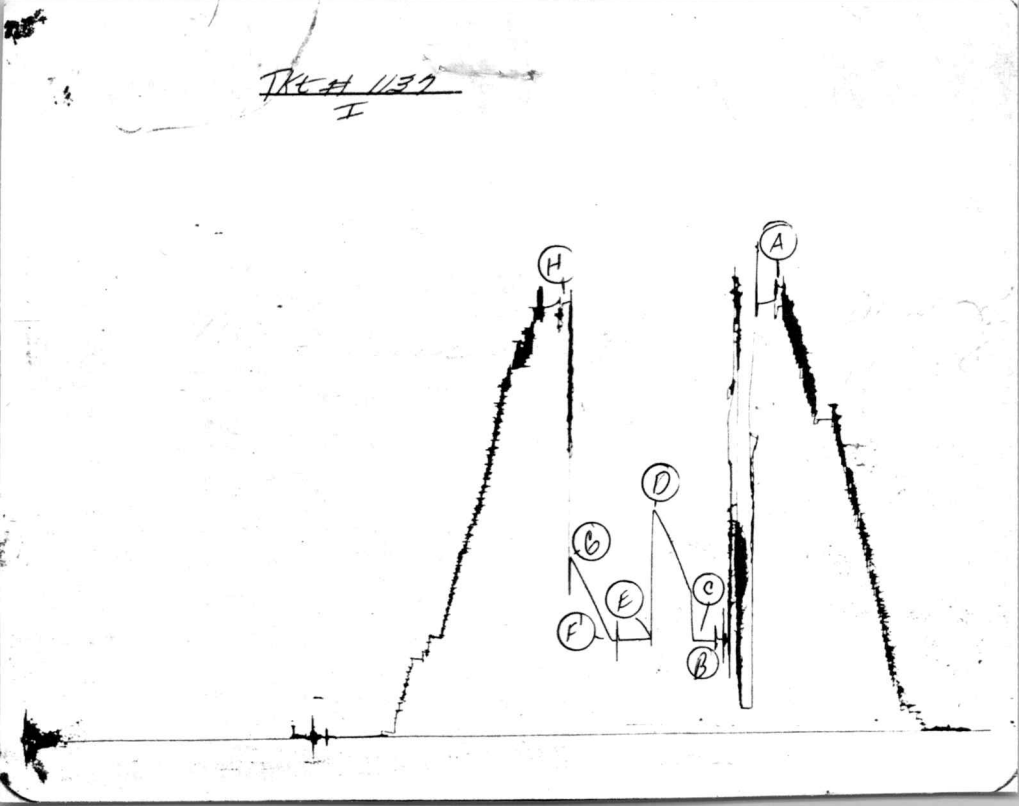
Initial Shut-In
Breakdown: 10 Inc. of 3 mins. and a final inc. of 0 Min.

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

Final Shut-In
Breakdown: 10 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	488	0	484	0	496	0	490
P 2 5	488	3	760	5	494	3	514
P 3 10	488	6	811	10	494	6	563
P 4 15	482	9	869	15	494	9	617
P 5 20	484	12	1021	20	494	12	666
P 6 25	484	15	969	25	490	15	709
P 7 30	484	18	1012	30	490	18	756
P 8		21	1059			21	799
P 9		24	1078			24	846
P10		27	1142			27	887
P11		30	1177			30	932
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

TKT# 1137
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Company W. L. Kirkman, Inc. Lease & Well No. Woodworth #1

Elevation 1310 Ground Level Formation Mississippi Effective Pay -- Ft. Ticket No. 1138

Date 2/8/79 Sec. 8 Twp. 34S Range 9W County Harper State Kansas

Test Approved by Donald J. Malone Western Representative W. K. Hager

Formation Test No. 3 Interval Tested from 4628' ft. to 4640' ft. Total Depth 4640' ft.

Packer Depth 4628' ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set --

Top Recorder Depth (Inside) 4633 ft. Recorder Number 969 Cap. 4200

Bottom Recorder Depth (Outside) 4636 ft. Recorder Number 2603 Cap. 4400

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

Drilling Contractor H-30 #5 Drill Collar Length 240' I. D. 2¼ in.

Mud Type premix Viscosity 44 Weight Pipe Length - I. D. - in.

Weight 9.4 Water Loss 10.4 cc. Drill Pipe Length 4372 I. D. 3.8 in.

Chlorides 20,500 P.P.M. Test Tool Length 28' Tool Size 5½ in.

Jars: Make -- Serial Number -- Anchor Length 12' 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 blow;died in 16 minutes on initial flow period. Flushed tool 26 minutes into period/no blow on final flow period.

Recovered 15 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 4:10 A.M. P.M. Time Started Off Bottom 5:50 A.M. P.M. Maximum Temperature 130

Initial Hydrostatic Pressure			(A)	2270	P.S.I.	
Initial Flow Period	Minutes	30	(B)	34 P.S.I. to (C)	27	P.S.I.
Initial Closed In Period	Minutes	30	(D)	1655	P.S.I.	
Final Flow Period	Minutes	10	(E)	41 P.S.I. to (F)	35	P.S.I.
Final Closed In Period	Minutes	30	(G)	1657	P.S.I.	
Final Hydrostatic Pressure			(H)	2268	P.S.I.	

WESTERN TESTING CO., INC.
Pressure Data

Date 2/8/79 Test Ticket No. 1138

Recorder No. 969 Capacity 4200 Location 4633 Ft.

Clock No. -- Elevation 1310 Ground Level Well Temperature 130 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2270	P.S.I.	Open Tool 4:10A M	
B First Initial Flow Pressure	34	P.S.I.	First Flow Pressure 30 Mins.	30 Mins.
C First Final Flow Pressure	27	P.S.I.	Initial Closed-in Pressure 30 Mins.	24 Mins.
D Initial Closed-in Pressure	1655	P.S.I.	Second Flow Pressure 10 Mins.	10 Mins.
E Second Initial Flow Pressure	41	P.S.I.	Final Closed-in Pressure 30 Mins.	24 Mins.
F Second Final Flow Pressure	35	P.S.I.		
G Final Closed-in Pressure	1657	P.S.I.		
H Final Hydrostatic Mud	2268	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: 8 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: 8 Inc. of 3 mins. and a final inc. of 0 Min.

Point	First Flow Pressure Mins.	First Flow Pressure Press.	Initial Shut-In Point Minutes	Initial Shut-In Press.	Second Flow Pressure Point Minutes	Second Flow Pressure Press.	Final Shut-In Point Minutes	Final Shut-In Press.
P 1	0	34	0	27	0	41	0	35
P 2	5	29	3	74	5	35	3	94
P 3	10	27	6	348	10	35	6	404
P 4	15	27	9	961			9	1051
P 5	20	27	12	1249			12	1306
P 6	25	27	15	1426			15	1467
P 7	30	27 flushed tool	18	1542			18	1552
P 8			21	1615			21	1617
P 9			24	1655			24	1657
P10								
P11								
P12								
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