Company Leach & Associates — Lease & Well No. Baker#1

Elevation --- — Formation Kansas City — Effective Pay - Ft. — Ticket No. 15103

Date 12/16/81 — Sec. 34 — Twp. 34S — Range 5W — County Harper — State Kansas

Test Approved by Bing Leach — Western Representative Richard Howell

Formation Test No. 1 — Interval Tested from 4120 ft. to 4170 ft. — Total Depth 4170 ft.

Packer Depth 4115 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Packer Depth 4120 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4124 ft. — Recorder Number 13402 — Cap. 4025

Bottom Recorder Depth (Outside) 4127 ft. — Recorder Number 13267 — Cap. 4050

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

Drilling Contractor Slawson Drlg. Rig #4 — Drill Collar Length - — I. D. - in.

Mud Type drispac — Viscosity 46 — Weight Pipe Length - — I. D. - in.

Weight 9.1 — Water Loss 8.7 cc. — Drill Pipe Length 4100 — I. D. 3.8 in.

Chlorides 9,000 P.P.M. — Test Tool Length 20 ft. — Tool Size 5½ in.

Jars: Make - — Serial Number - — Anchor Length 50 ft. — Size 5½ & 6¼ 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: Initial flow period weak one inch into bucket. Final flow period weak one inch into bucket ; decreasing after ten minutes.

Recovered 850 ft. of gas in pipe

Recovered 70 ft. of slightly gas cut mud Chlorides 10,000 ppm

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: Slid tool six feet on initial opening; also flushed tool.

Time Set Packer(s) 6:55 A.M. P.M. — Time Started Off Bottom 8:40 A.M. P.M. — Maximum Temperature 132°

Initial Hydrostatic Pressure			(A) 1995	P.S.I.		
Initial Flow Period	Minutes 30	(B) 33	P.S.I. to	(C) 59	P.S.I.	
Initial Closed In Period	Minutes 30	(D) 1029	P.S.I.			
Final Flow Period	Minutes 15	(E) 50	P.S.I. to	(F) 50	P.S.I.	
Final Closed In Period	Minutes 30	(G) 749	P.S.I.			
Final Hydrostatic Pressure			(H) 1965	P.S.I.		

WTC-1

WESTERN TESTING CO., INC.
Pressure Data

Date 12-16-81 Test Ticket No. 15103

Recorder No. 13402 Capacity 4025 Location 4124 Ft.

Clock No. ------- Elevation ---------- Well Temperature 132 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1995 P.S.I.	Open Tool		6:55 AM	
B	First Initial Flow Pressure	33 P.S.I.	First Flow Pressure		30 Mins.	30 Mins.
C	First Final Flow Pressure	59 P.S.I.	Initial Closed-in Pressure		30 Mins.	30 Mins.
D	Initial Closed-in Pressure	1029 P.S.I.	Second Flow Pressure		15 Mins.	15 Mins.
E	Second Initial Flow Pressure	50 P.S.I.	Final Closed-in Pressure		30 Mins.	30 Mins.
F	Second Final Flow Pressure	50 P.S.I.				
G	Final Closed-in Pressure	749 P.S.I.				
H	Final Hydrostatic Mud	1965 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: 3 Inc. of 5 mins. and a final inc. of 0 Min.

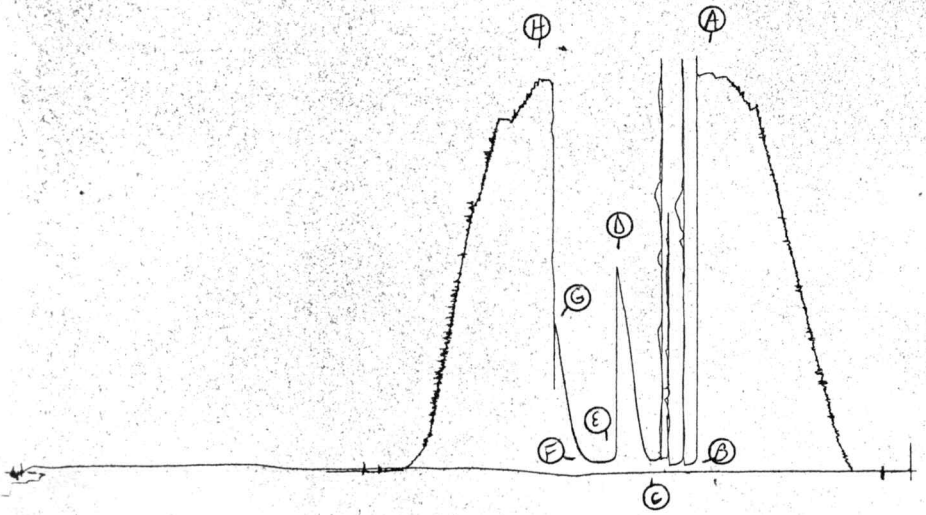
Final Shut-In
Breakdown: 10 Inc. of 3 mins. and a final inc. of 0 Min.

	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	0	33	0	59	0	50	0	50
P 2	5	33	3	59	5	50	3	52
P 3	10	Flushed Tool	6	73	10	50	6	65
P 4	15	39	9	132	15	50	9	83
P 5	20	35	12	234			12	121
P 6	25	Flushed 69 Tool	15	380			15	179
P 7	30	59	18	571			18	256
P 8			21	735			21	374
P 9			24	846			24	494
P10			27	959			27	640
P11			30	1029			30	749
P12								
P13								
P14								
P15								
P16								
P17								
P18								
P19								
P20								

IKT # 15703

#13402 DST #1

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Company Leach & Associates — Lease & Well No. Baker #1

Elevation --- — Formation Mississippi — Effective Pay - Ft. — Ticket No. 11888

Date 12/19/81 — Sec. 34 — Twp. 34S — Range 5W — County Harper — State Kansas

Test Approved by B.R.------? — Western Representative Louis Spencer

Formation Test No. 2 — Interval Tested from 4949 ft. to 5045 ft. — Total Depth 5045 ft.

Packer Depth 4944 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Packer Depth 4949 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4975 ft. — Recorder Number 11019 — Cap. 4500

Bottom Recorder Depth (Outside) 5042 ft. — Recorder Number 1560 — Cap. 4500

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

Drilling Contractor Slawson Drlg.

Mud Type — Viscosity 47

Weight 9.4 — Water Loss 10.5 cc.

Chlorides 9,000 P.P.M.

Jars: Make WTC — Serial Number 13029

Did Well Flow? -- — Reversed Out -

Drill Collar Length 400 — I. D. 2.25 in.

Weight Pipe Length 60 — I. D. 2.5 in.

Drill Pipe Length 4462 — I. D. 3.8 in.

Test Tool Length 27 ft. — Tool Size 5½ in.

Anchor Length 96 ft. — Size 5½ in.

Surface Choke Size 3/4 in. — Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. — Tool Joint Size 3½ in.

Blow: Initial flow period weak; four inches in bucket. Final flow period no blow; flushed tool twice.

Recovered 210 ft. of mud Chlorides 8,500 ppm

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: Slid tool forty-five feet.

Time Set Packer(s) 1:35 A.M. ~~P.M.~~ — Time Started Off Bottom 4:20 A.M. ~~P.M.~~ — Maximum Temperature 129°

Initial Hydrostatic Pressure			(A)	2375	P.S.I.	
Initial Flow Period	Minutes 15	(B)	117	P.S.I. to (C)	117	P.S.I.
Initial Closed In Period	Minutes 57	(D)	2068	P.S.I.		
Final Flow Period	Minutes 30	(E)	147	P.S.I. to (F)	139	P.S.I.
Final Closed In Period	Minutes 60	(G)	2039	P.S.I.		
Final Hydrostatic Pressure		(H)	2375	P.S.I.		

WESTERN TESTING CO., INC.
Pressure Data

Date 12/19/81 Test Ticket No. 11888

Recorder No. 11019 Capacity 4500 Location 4975 Ft.

Clock No. - Elevation -- Well Temperature 129 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	2375 P.S.I.	Open Tool		1:35A M	
B	First Initial Flow Pressure	117 P.S.I.	First Flow Pressure		15 Mins.	15 Mins.
C	First Final Flow Pressure	117 P.S.I.	Initial Closed-in Pressure		60 Mins.	57 Mins.
D	Initial Closed-in Pressure	2068 P.S.I.	Second Flow Pressure		30 Mins.	30 Mins.
E	Second Initial Flow Pressure	147 P.S.I.	Final Closed-in Pressure		60 Mins.	60 Mins.
F	Second Final Flow Pressure	139 P.S.I.				
G	Final Closed-in Pressure	2039 P.S.I.				
H	Final Hydrostatic Mud	2375 P.S.I.				

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 3 Inc. of 5 mins. and a final inc. of 0 Min.

Point Mins.	Press.
P 1 0	117
P 2 5	117
P 3 10	117
P 4 15	117
P 5	
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 19 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	117
3	226
6	980
9	1443
12	1679
15	1808
18	1889
21	1927
24	1955
27	1980
30	2006
33	2020
36	2033
39	2039
42	2046
45	2052
48	2058
51	2060
54	2064
57	2068

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

Point Minutes	Press.
0	147
5	147 Flushed tool
10	137
15	155 Flushed tool
20	146
25	139
30	139

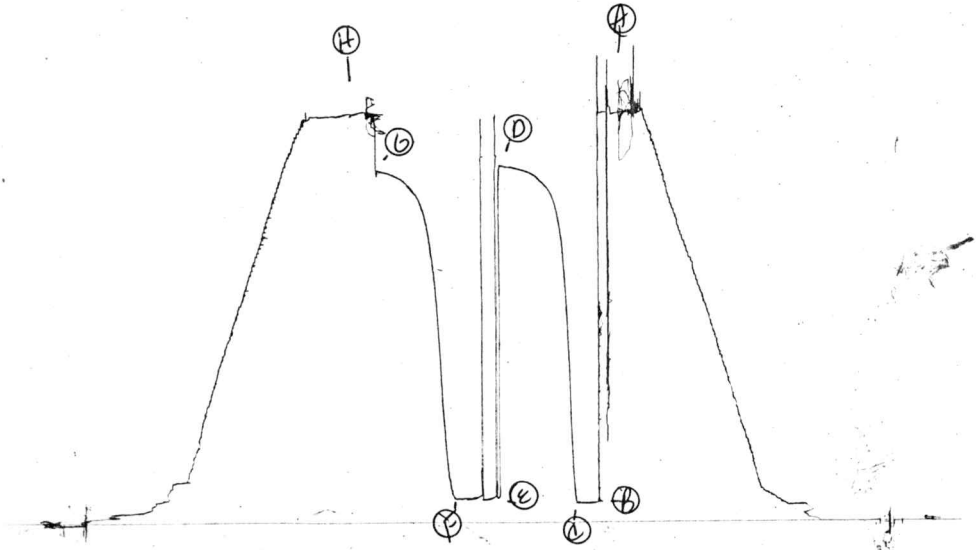
Final Shut-In
Breakdown: 20 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	139
3	143
6	201
9	414
12	761
15	1183
18	1455
21	1647
24	1760
27	1836
30	1880
33	1916
36	1948
39	1968
42	1989
45	2000
48	2013
51	2022
54	2029
57	2034
60	2039

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TK# 11888

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Company Leach & Associates | Lease & Well No. Baker #1

Elevation -- | Formation Mississippi | Effective Pay - Ft. | Ticket No. 15104

Date 12/21/81 | Sec. 34 | Twp. 34S | Range 5W | County Harper | State Kansas

Test Approved by B. R. Leach | Western Representative Richard Howell

Formation Test No. 3 | Interval Tested from 4066 ft. to 4164 ft. | Total Depth 4164 ft.

Packer Depth 4061 ft. | Size 6 3/4 in. | Packer Depth - ft. | Size - in.

Packer Depth 4066 ft. | Size 6 3/4 in. | Packer Depth - ft. | Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4069 ft. | Recorder Number 13402 | Cap. 4025

Bottom Recorder Depth (Outside) 4072 ft. | Recorder Number 13267 | Cap. 4050

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

Drilling Contractor Slawson Drlg. Rig #4 | Drill Collar Length 420 | I. D. 2.2 in.

Mud Type drispac | Viscosity 56 | Weight Pipe Length - | I. D. - in.

Weight 9.1 | Water Loss 9.2 cc. | Drill Pipe Length 3677 | I. D. 3.8 in.

Chlorides 9,000 P.P.M. | Test Tool Length 29 ft. | Tool Size in.

Jars: Make WTC | Serial Number 405 | Anchor Length 98 ft. | Size 5½ & 6½ 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 4½ in.

Blow: Initial flow period strong; off bottom of bucket in one minute. Final flow period strong - off bottom of bucket in one minutes.

Recovered 300 ft. of slightly heavy gas cut mud 95% mud;5% water

Recovered 300 ft. of slightly heavy gas cut watery mud 65% mud;35% water

Recovered 3,000 ft. of water Chlorides 145,000 ppm

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 10:15 ~~A.M.~~ P.M. | Time Started Off Bottom 1:30 A.M. ~~P.M.~~ | Maximum Temperature 152°

Initial Hydrostatic Pressure			(A) 2451	P.S.I.		
Initial Flow Period	Minutes 15	(B) 372	P.S.I. to	(C) 700	P.S.I.	
Initial Closed In Period	Minutes 63	(D) 2097	P.S.I.			
Final Flow Period	Minutes 60	(E) 798	P.S.I. to	(F) 1703	P.S.I.	
Final Closed In Period	Minutes 60	(G) 2083	P.S.I.			
Final Hydrostatic Pressure			(H) 2370	P.S.I.		

WESTERN TESTING CO., INC.
Pressure Data

Date 12-21-81 Test Ticket No. 15104

Recorder No. 13402 Capacity 4025 Location 4069 Ft.

Clock No. ------- Elevation ------- Well Temperature 152 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2451 P.S.I.	Open Tool	10:15 P M	
B First Initial Flow Pressure	372 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C First Final Flow Pressure	700 P.S.I.	Initial Closed-in Pressure	60 Mins.	63 Mins.
D Initial Closed-in Pressure	2097 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	798 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	1703 P.S.I.			
G Final Closed-in Pressure	2083 P.S.I.			
H Final Hydrostatic Mud	2370 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 3 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	372
P 2 5	453
P 3 10	565
P 4 15	700
P 5	
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 21 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	700
3	1960
6	2032
9	2061
12	2073
15	2081
18	2085
21	2089
24	2090
27	2091
30	2092
33	2093
36	2094
39	2095
42	2096
45	2096
48	2097
51	2097
54	2097
57	2097
60	2097
63	2097

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

Point Minutes	Press.
0	798
5	856
10	962
15	1046
20	1155
25	1247
30	1335
35	1412
40	1480
45	1548
50	1598
55	1647
60	1703

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

Point Minutes	Press.
0	1703
3	2018
6	2053
9	2063
12	2069
15	2072
18	2074
21	2076
24	2077
27	2078
30	2079
33	2080
36	2081
39	2081
42	2081
45	2081
48	2082
51	2082
54	2082
57	2082
60	2083

#13402 DST #3

Kt #15104

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