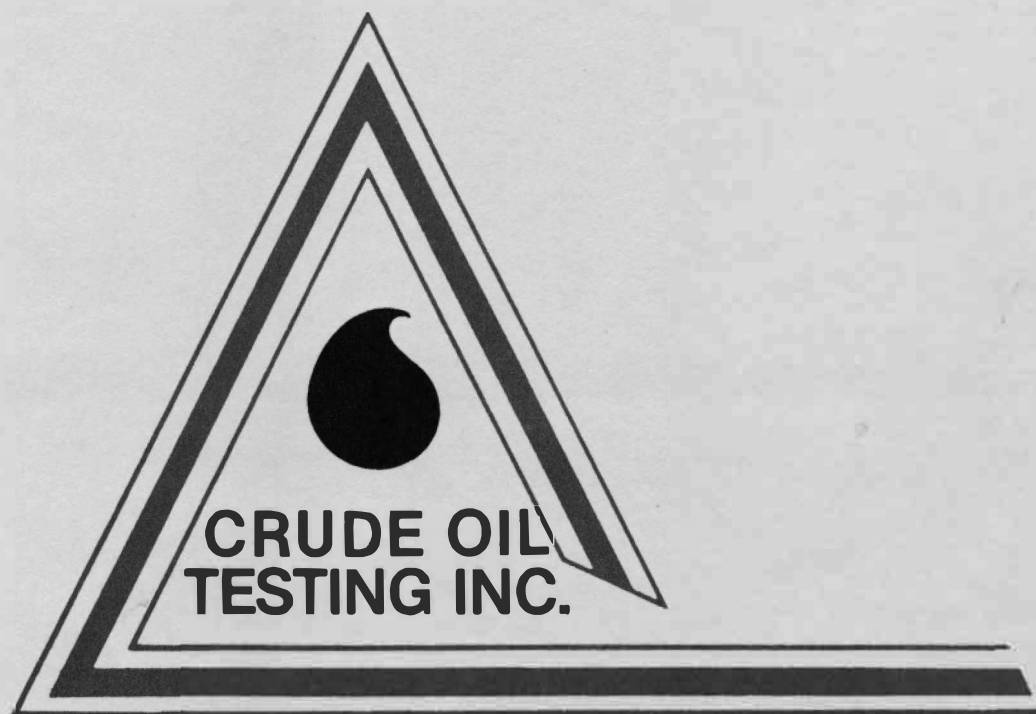




FORMATION TESTING SERVICE REPORT

CRUDE OIL TESTING, INC.

DATE 6/18/85

TEST TICKET NO. 5130

Company: Osborn Heirs Co.
 Company Address: P.O. Box 17968 San Antonio TX 78286
 Location: Sec. 31 Twp. 18S Range 30W Co. Lane State KS
 Well Name & Number: Delmer Whiting #1 Code E4

ENGINEERING DATA	Elevation	2899 GL	Drill Pipe Length	3737	ID 3.8 "
	Mud Viscosity	41	Weight Pipe Length		
	Mud Weight	9.1	Drill Collar Length	451	ID 2.25"
	Water Loss	10.4	Top Packer Depth	4197	
	Type of Mud Chemical		Bottom Packer Depth	4202	
	Anchor Length	18	Tool Joint Size	4.5	XH
	Hole Size	7 7/8	Test Tool Size	5 1/2	
	Casing Size	8 5/8	Packer Size	6 3/4	
	Surface Choke	3/4	Reversed Out	Yes	
	Bottom Choke	3/4	Recorder #	11084	
	Extra Equipment		Jars; Safety joint; circ. sub		

REMARKS
 DST #1
 Reversed out 1020' sulfur water.
 Company jars

FORMATION	Lansing/KC Zone	Test Type Conventional
	Interval 4202 To 4220	Total Depth 4220
	Open 30 Shut In 60	Open 45 Shut In 90
	Packer(s) Set 04:43PM	Started Off Bottom 08:30PM
	Blow 1st Opening Strong blow off bottom in 7 min.	2nd Opening Strong blow off bottom in 8 min.

RECOVERY
 Total Feet 1260
 Recovered 1260 feet of Sulfur water

CALCULATED RECOVERY	Gas	Oil	Water	1188	Mud	72
	Gravity (Oil)		Test Water Chlorides	30,000	PPM	
	Test Area Temperature	130F	Mud System Chlorides	3,000	PPM	

	FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2091	2080 PSI
	(B) First Initial Flow Pressure	121	40 PSI
	(C) First Final Flow Pressure	362	358 PSI
	(D) Initial Closed-In Pressure	1078	1091 PSI
	(E) Second Initial Flow Pressure	406	402 PSI
	(F) Second Final Flow Pressure	580	596 PSI
	(G) Final Closed-In Pressure	1078	1093 PSI
	(H) Final Hydrostatic Mud	2069	2011 PSI

CRUDE OIL TESTING INC.

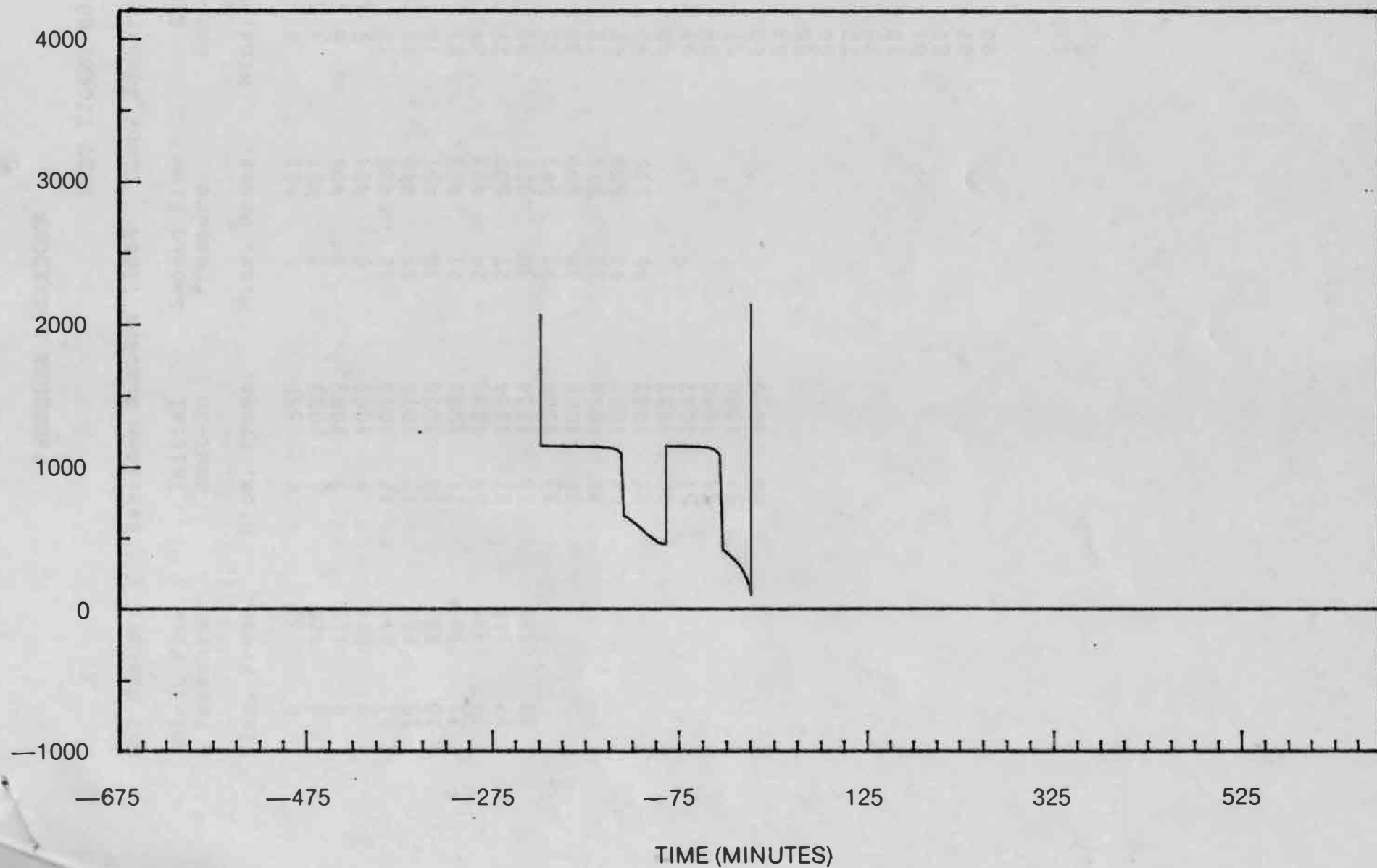
FOR: Osborn Heirs Co.

TEST 5130

DST 1

06/18/85

PRESSURE



PRESSURE BREAKDOWN

EQUIPMENT DATA

TEST TICKET NO. 5130

DST Number: 1 Recorder Number: 11084 Clock Number: 23934

First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
Mins. Press.	Mins. Press.	Mins. Press.	Mins. Press.
0 39	0 358	0 401	0 595
3 125	3 1025	3 401	3 1039
6 165	6 1049	6 405	6 1057
9 210	9 1063	9 413	9 1065
12 244	12 1070	12 428	12 1072
15 267	15 1076	15 442	15 1076
18 287	18 1078	18 457	18 1077
21 305	21 1080	21 473	21 1078
24 325	24 1083	24 493	24 1081
27 344	27 1084	27 509	27 1081
30 358	30 1084	30 527	30 1083
	33 1084	33 543	33 1084
	36 1085	36 559	36 1084
	39 1086	39 573	39 1085
	42 1087	42 589	42 1085
	45 1087	45 595	45 1085
	48 1087		48 1085
	51 1087		51 1086
	54 1088		54 1087
	57 1088		57 1087
	60 1090		60 1087
			63 1087
			66 1089
			69 1089
			72 1089
			75 1089
			78 1089
			81 1090
			84 1090
			87 1091
			90 1092

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 1

TEST TICKET NO. 5130

WELL NAME: Delmer Whiting #1

WELL LOCATION: 31-18S-30W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3737.00	3.826	4.50
4	Drill Collar - 6"	451.00	2.250	6.00
8	Circulating Sub	1.00	3.000	5.00
7	Changeover Sub	2.00	3.000	5.00
9	Shut-In Tool	5.45	0.870	5.00
10	Hydraulic Tool	5.60	1.000	5.00
12	Jars	7.00	3.000	5.00
13	Safety Joint	2.31	3.000	5.00
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	14.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00

Total Depth

4239.06

CALCULATED RECOVERY ANALYSIS

DST Number: 1

TEST TICKET NO. 5130

Sample #	Total Feet	***** Gas %	***** Oil %	***** Mud %
1	60	0.00	0.00	20.00
2	60	0.00	0.00	5.00
3	1020	0.00	0.00	5.00
4	120	0.00	0.00	5.00
TOTAL	1260	0.00	0.00	5.71

Sample #	Water %	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	80.00	48.00	30,000	
2	95.00	57.00	30,000	
3	95.00	969.00	30,000	
4	95.00	114.00	30,000	
TOTAL	94.29	1188.00		

FORMATION Logging/EC Zone Test Type Conventional
Interval 4201 To 4220 Total Depth 4220
Open 30 Shut in 60 Open 35 Shut in 40
Packer(s) Set 04:45PM Started Off Bottom 06:10PM
Slow 1st Opening Strong blow off bottom in 7 min.
2nd Opening Strong blow off bottom in 3 min.

RECOVERY Total Feet 1260
Recovered 1260 feet of Sulfur water

CALCULATED RECOVERY Gas Oil Water 1188 Mud 72
Gravity (Oil) Test Water Chlorides 30,000 ppm
Test Area Temperature 130F Mud System Chlorides 3,000 ppm

	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	2091	2080	PSI
(B) First Initial Flow Pressure	121	48	PSI
(C) First Final Flow Pressure	382	358	PSI
(D) Initial Closed-In Pressure	1078	1091	PSI
(E) Second Initial Flow Pressure	500	402	PSI
(F) Second Final Flow Pressure	500	538	PSI
(G) Final Closed-In Pressure	1078	1093	PSI
(H) Final Hydrostatic Mud	2089	2011	PSI

CRUDE OIL TESTING, INC.

DATE 6/19/85

TEST TICKET NO. 5131

Company: Osborn Heirs Co.
 Company Address: P.O. Box 17968 San Antonio TX 78286
 Location: Sec. 31 Twp. 18S Range 30W Co. Lane State KS
 Well Name & Number: Delmer Whiting #1 Code E4

ENGINEERING DATA	Elevation	2899 GL	Drill Pipe Length	3832	ID 3.8 "
	Mud Viscosity	42	Weight Pipe Length		
	Mud Weight	9.2	Drill Collar Length	451	ID 2.25"
	Water Loss	10.8	Top Packer Depth	4277	
	Type of Mud Chemical		Bottom Packer Depth	4282	
	Anchor Length	28	Tool Joint Size	4.5	XH
	Hole Size	7 7/8	Test Tool Size	5 1/2	
	Casing Size	8 5/8	Packer Size	6 3/4	
	Surface Choke	3/4	Reversed Out	No	
	Bottom Choke	3/4	Recorder #	11084	
	Extra Equipment		Jars; Safety joint		

REMARKS DST #2
 Slid 3' to bottom when tool opened.
 Company jars

FORMATION	Lansing/KC Zone	Test Type Conventional
	Interval 4282 To 4310	Total Depth 4310
	Open 60 Shut In 60	Open 60 Shut In 120
	Packer(s) Set 01:28PM	Started Off Bottom 06:30PM
	Blow 1st Opening Weak increasing blow to 3 inches. 2nd Opening Weak increasing blow to 1/2 inch.	

RECOVERY Total Feet 245
 Recovered 5 feet of Oil cut mud
 Recovered 240 feet of Muddy water

CALCULATED RECOVERY	Gas	Oil	1	Water 156.25	Mud 87.75
	Gravity (Oil)			Test Water Chlorides	21,000 PPM
	Test Area Temperature	128F		Mud System Chlorides	3,000 PPM

PRESSURE		FIELD	OFFICE	
		READING	READING	
	(A) Initial Hydrostatic Mud	2134	2174	PSI
	(B) First Initial Flow Pressure	66	60	PSI
	(C) First Final Flow Pressure	88	89	PSI
	(D) Initial Closed-In Pressure	1121	1112	PSI
	(E) Second Initial Flow Pressure	132	120	PSI
	(F) Second Final Flow Pressure	154	146	PSI
	(G) Final Closed-In Pressure	1131	1134	PSI
	(H) Final Hydrostatic Mud	2112	2153	PSI

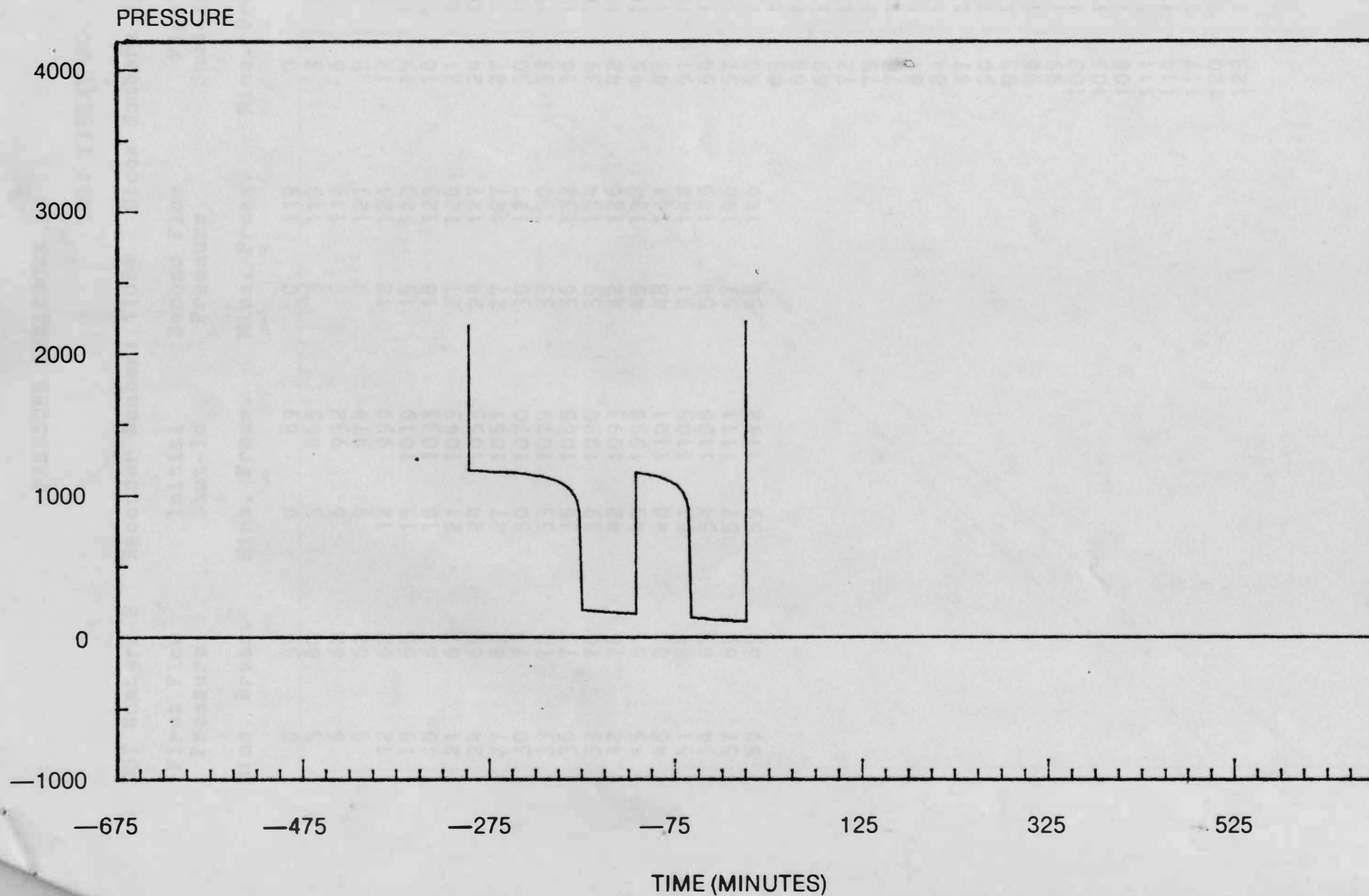
CRUDE OIL TESTING INC.

FOR: Osborn Heirs Co.

TEST 5131

DST 2

06/19/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5131

DST Number: 2 Recorder Number: 11084 Clook Number: 23934

First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
------------------------	--------------------	-------------------------	------------------

Mins. Press.	Mins. Press.	Mins. Press.	Mins. Press.
--------------	--------------	--------------	--------------

0	59	0	89	0	119	0	146
3	60	3	865	3	119	3	832
6	62	6	932	6	119	6	920
9	62	9	974	9	121	9	960
12	62	12	999	12	121	12	986
15	65	15	1019	15	123	15	1007
18	67	18	1033	18	123	18	1022
21	67	21	1043	21	126	21	1034
24	69	24	1053	24	127	24	1045
27	69	27	1061	27	127	27	1053
30	71	30	1070	30	129	30	1062
33	72	33	1079	33	130	33	1067
36	73	36	1085	36	132	36	1074
39	76	39	1090	39	134	39	1079
42	78	42	1093	42	136	42	1086
45	81	45	1098	45	138	45	1089
48	83	48	1101	48	141	48	1089
51	84	51	1105	51	142	51	1093
54	87	54	1108	54	145	54	1097
57	89	57	1111	57	146	57	1101
59	89	59	1112	58	146	60	1104

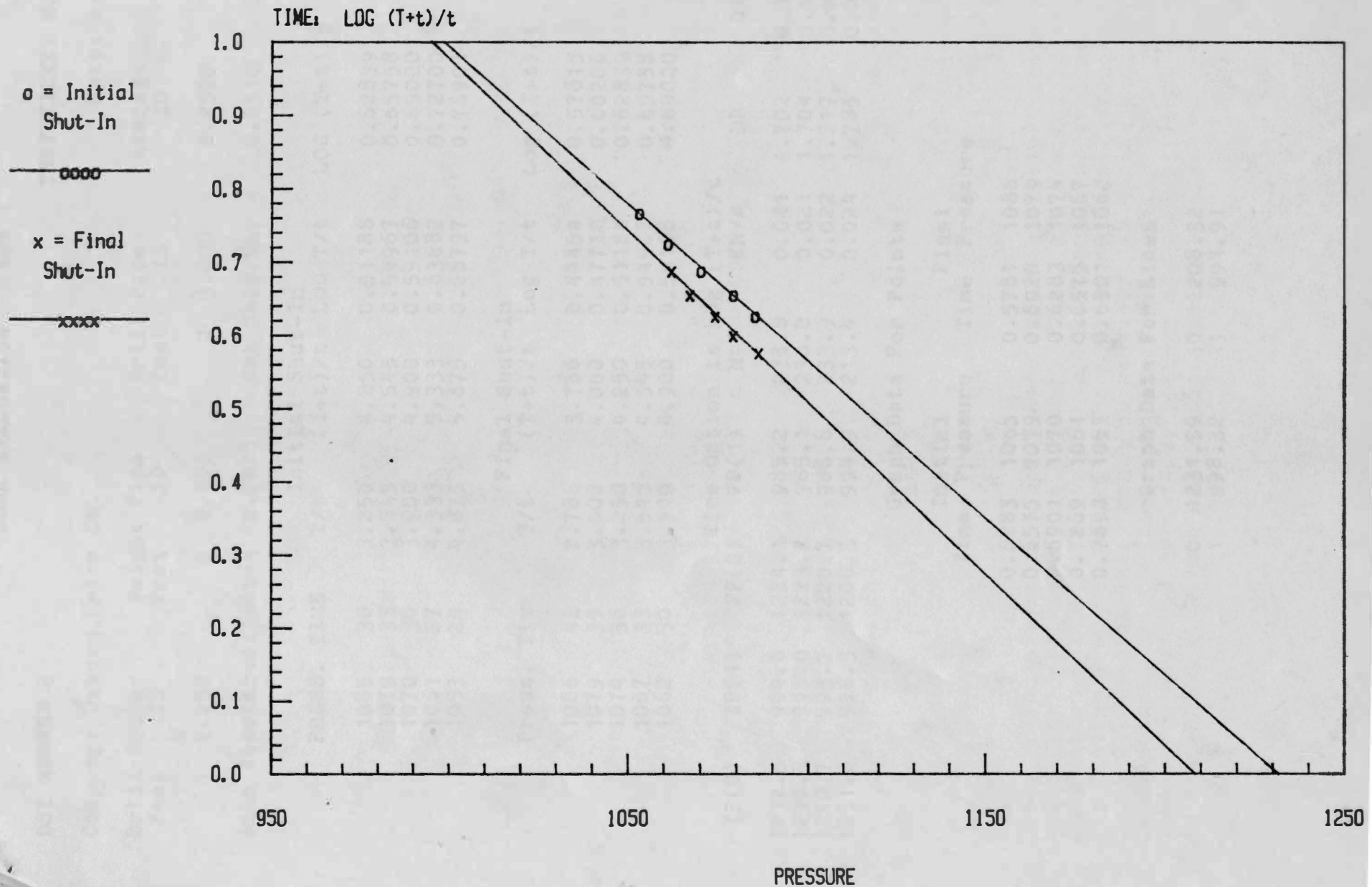
63	1106
66	1107
69	1111
72	1113
75	1115
78	1115
81	1116
84	1117
87	1119
90	1119
93	1119
96	1119
99	1121
102	1124
105	1125
108	1126
111	1128
114	1130
117	1130
120	1131
123	1133

CRUDE OIL TESTING INC. TEST 5131 DST 2

CRUDE OIL TESTING INC TEST 5131 DST 2

FOR: Osborn Heirs Co.

6/19/85



ZONE EVALUATION - Page 1

DST NUMBER 2

TEST TICKET NO. 5131

Company: Osborn Heirs Co.

Date: 6/19/85

Drill Collar Feet	ID	Weight Pipe Feet	ID	Drill Pipe Feet	ID	Average ID	Gals/ Foot
1	2.250	0	0.000	0	3.800	2.2500	0.207

Bbls Recovered/Test = 0.0025 Est Bbls/Day = 0.0310 T = 117

PRESS. TIME		Initial Shut-In			
T/t	(f+t)/t	LOG T/t	LOG (T+t)/t		
1085	36	3.250	4.250	0.51188	0.62839
1079	33	3.545	4.545	0.54967	0.65758
1070	30	3.900	4.900	0.59106	0.69020
1061	27	4.333	5.333	0.63682	0.72700
1053	24	4.875	5.875	0.68797	0.76901

Press. Time		Final Shut-In			
T/t	(T+t)/t	Log T/t	Log (T+t)/t		
1086	42	2.786	3.786	0.44494	0.57815
1079	39	3.000	4.000	0.47712	0.60206
1074	36	3.250	4.250	0.51188	0.62839
1067	33	3.545	4.545	0.54967	0.65758
1062	30	3.900	4.900	0.59106	0.69020

IP(0)	IP(1)	FP(0)	FP(1)	M	Kh/B	DR	Q1	Pts
1237.5	994.8	1224.1	985.2	238.8	0.021	1.702	0.053	1,3
1238.3	995.0	1223.2	985.1	238.0	0.021	1.704	0.053	1-3
1240.7	993.7	1220.7	986.8	233.9	0.022	1.717	0.053	1-4
1231.6	998.3	1208.3	994.9	213.4	0.024	1.785	0.055	1-5

Graph Data For Points

Initial Time	Pressure	Final Time	Pressure
-----------------	----------	---------------	----------

0.6283	1085	0.5781	1086
0.6575	1079	0.6020	1079
0.6901	1070	0.6283	1074
0.7269	1061	0.6575	1067
0.7690	1053	0.6901	1062

Graph Data For Lines

0	1231.59	0	1208.32
1	998.32	1	994.91

ZONE EVALUATION - Page 2

TOOL SEQUENCE REPORT

DST Number 2

TEST TICKET NO. 5131

Company: Osborn Heirs Co.

Date: 6/19/85

P.S.I. Slope Cycle (From Log $\frac{T + t}{t}$)

$$M = Q_0 - Q_1$$

213.41

Damage Ratio:

$$DR = .183 \frac{P_s - P_f}{M}$$

1.79

Effective Pay:

$$\frac{Kh}{B} = \frac{162.6 Q}{M}$$

0.02 Md. Ft.

Theoretical Potential With
Damage Removed (for DR greater than 1):

$$Q_1 = Q DR$$

0.06 Bbls/Day

Production:

0.00 Bbls/Hour

$$Q = \frac{1440 R}{T}$$

0.03 Bbls/Day

These calculations are based upon information furnished by you and taken from drill stem test pressure charts and are furnished for your information. In furnishing such calculations and evaluations, Crude Oil Testing Inc. is merely expressing an opinion. You agree that Crude Oil Testing Inc. makes no warranty as to the accuracy of such calculations or opinions, and Crude Oil Testing Inc. shall not be liable for any loss or damage, whether due to negligence or otherwise in connection with such calculations and opinions.

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 2

TEST TICKET NO.: 5131

WELL NAME: Delmer Whiting #1

WELL LOCATION: 31-18S-30W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3832.00	3.826	4.50
4	Drill Collar - 6"	451.00	2.250	6.00
8	Circulating Sub	1.00	3.000	5.00
7	Changeover Sub	2.00	3.000	5.00
9	Shut-In Tool	5.45	0.870	5.00
10	Hydraulic Tool	5.60	1.000	5.00
12	Jars	7.00	3.000	5.00
13	Safety Joint	2.31	3.000	5.00
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	24.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4344.06		

CALCULATED RECOVERY ANALYSIS

DST Number: 2

TEST TICKET NO. 5131

Sample #	Total Feet	***** Gas %	***** Oil %	***** Mud %
1	5	0.00	20.00	75.00
2	60	0.00	0.00	70.00
3	60	0.00	0.00	40.00
4	60	0.00	0.00	20.00
5	60	0.00	0.00	10.00
TOTAL	245	0.00	0.41	35.82

Sample #	Water %	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	5.00	0.25		
2	30.00	18.00	21,000	
3	60.00	36.00	21,000	
4	80.00	48.00	21,000	
5	90.00	54.00	21,000	
TOTAL	63.78	156.25		

FORMATION
Landing/...
Interval 4282 To 4310
Open 80 Shut In 80
Packer(s) Set 01:25PM
Flow 1st Opening Week increasing blow to 3 inches.
2nd Opening Week increasing blow to 1 1/2 inch.

RECOVERY
Total Feet 245
Recovered 5 feet of Oil and mud.
Recovered 240 feet of muddy water

CALCULATED RECOVERY
Gas Oil 1 Water 156.25 Mud 87.75
Gravity (Oil)
Test Area Temperature 1287 Test Water Chlorides 21,000 PPM
Mud System Chlorides 3,000 PPM

	FIELD READING	OFFICE READING	
PRESSURE			
(A) Initial Hydrostatic Mud	2134	2174	PS1
(B) First Initial Flow Pressure	66	60	PS1
(C) First Final Flow Pressure	88	89	PS1
(D) Initial Closed-In Pressure	1121	1112	PS1
(E) Second Initial Flow Pressure	132	120	PS1
(F) Second Final Flow Pressure	154	146	PS1
(G) Final Closed-In Pressure	1131	1134	PS1
(H) Final Hydrostatic Mud	2112	2155	PS1

CRUDE OIL TESTING, INC.

DATE 6/21/85

TEST TICKET NO. 5132

Company: Osborn Heirs Co.
 Company Address: P.O. Box 17968 San Antonio TX 78286
 Location: Sec. 31 Twp. 18S Range 30W Co. Lane State KS
 Well Name & Number: Delmer Whiting #1 Code E4

ENGINEERING DATA

Elevation	2899 GL	Drill Pipe Length	4016	ID 3.8 "
Mud Viscosity	44	Weight Pipe Length		
Mud Weight	9.4	Drill Collar Length	451	ID 2.25"
Water Loss	10.4	Top Packer Depth	4478	
Type of Mud Chemical		Bottom Packer Depth	4483	
Anchor Length	31	Tool Joint Size	4.5	XH
Hole Size	7 7/8	Test Tool Size	5 1/2	
Casing Size	8 5/8	Packer Size	6 3/4	
Surface Choke	3/4	Reversed Out	No	
Bottom Choke	3/4	Recorder #	11084	
Extra Equipment		Company jars; Safety joint		

REMARKS

DST #3
 No blow on shutins.

FORMATION

Fort Scott	Zone	Test Type	Conventional
Interval 4483	To 4514	Total Depth	4514
Open 60	Shut In 60	Open 60	Shut In 120
Packer(s) Set	01:43AM	Started Off Bottom	06:45AM
Blow 1st Opening Strong blow off bottom in 37 min.			
2nd Opening Fair increasing blow to 8 inches in bucket.			

RECOVERY

Total Feet 241
 Recovered 60 feet of Gassy oil cut mud
 Recovered 181 feet of Clean gassy oil
 Recovered 479 feet of Gas in pipe

CALCULATED RECOVERY

Gas	81.55	Oil	114.45	Water		Mud	45
Gravity (Oil)	39	Test Water Chlorides					PPM
Test Area Temperature	130F	Mud System Chlorides	3,000				PPM

PRESSURE

	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	2244	2250	PSI
(B) First Initial Flow Pressure	77	68	PSI
(C) First Final Flow Pressure	88	87	PSI
(D) Initial Closed-In Pressure	926	932	PSI
(E) Second Initial Flow Pressure	110	109	PSI
(F) Second Final Flow Pressure	132	127	PSI
(G) Final Closed-In Pressure	1034	1034	PSI
(H) Final Hydrostatic Mud	2220	2190	PSI

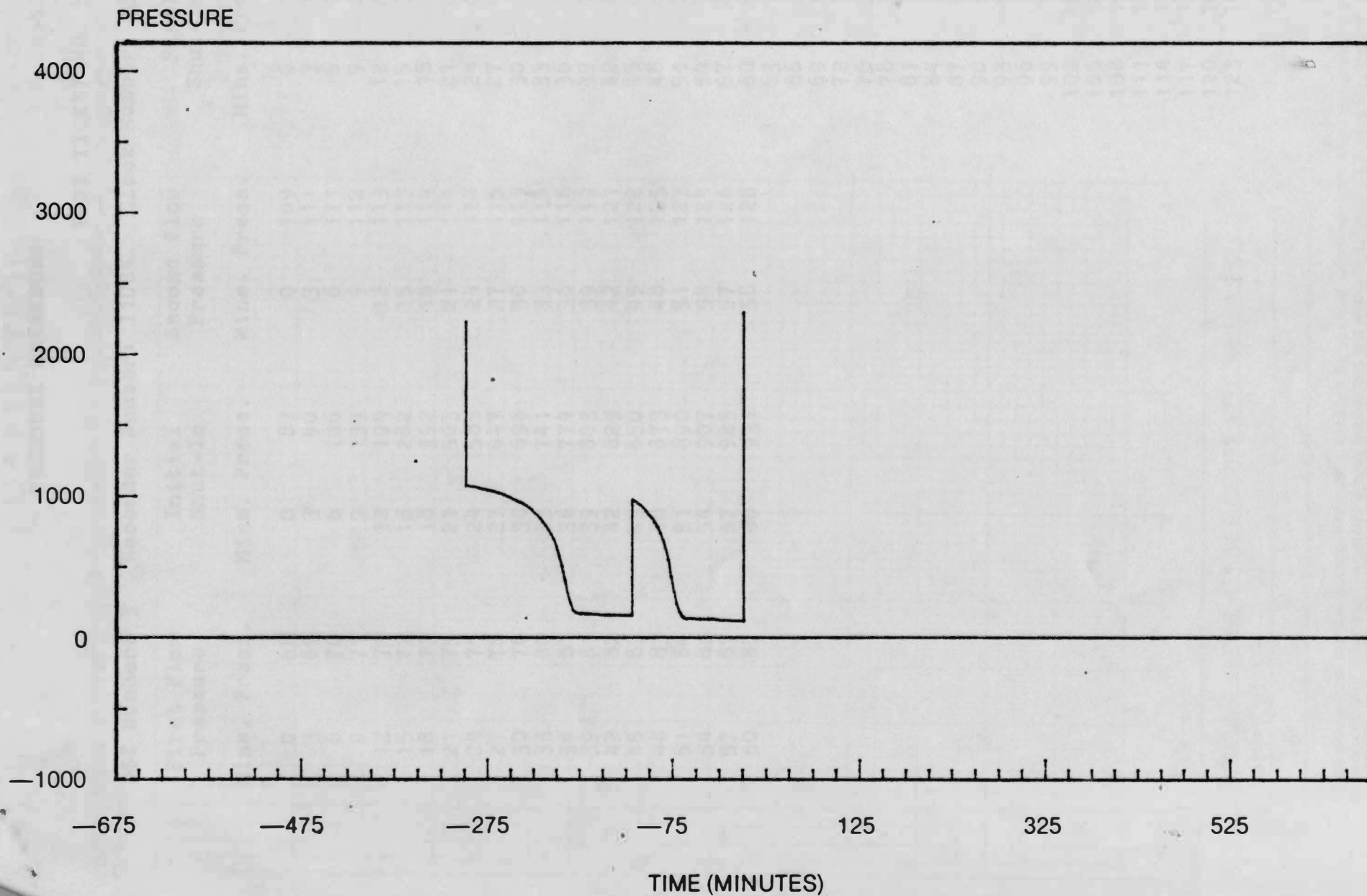
CRUDE OIL TESTING INC.

FOR: Osborn Heirs Co.

TEST 5132

DST 3

06/21/85





EVALUATION

PRESSURE BREAKDOWN

(303) 473-6900
P.O. Box 2200
Colorado Springs, CO 80901

TEST TICKET NO. 5132

Company DST Number: 3 Recorder Number: 11084 Clock Number: 23934

First Flow Pressure		Initial Shut-In		Second Flow Pressure	
Mins. Press.		Mins. Press.		Mins. Press.	
0	68	0	87	0	109
3	69	3	90	3	111
6	70	6	106	6	111
9	71	9	139	9	112
12	71	12	194	12	113
15	72	15	282	15	113
18	73	18	392	18	114
21	75	21	503	21	114
24	75	24	585	24	114
27	78	27	647	27	115
30	78	30	698	30	115
33	80	33	741	33	116
36	81	36	774	36	118
39	81	39	803	39	119
42	82	42	825	42	121
45	83	45	850	45	122
48	83	48	873	48	123
51	84	51	890	51	123
54	86	54	907	54	124
57	87	57	923	57	126
60	87	60	931	58	126

Date	Final Shut-In
12/21/85	
0	126
3	132
6	150
9	207
12	273
15	370
18	460
21	533
24	601
27	652
30	688
33	720
36	751
39	775
42	800
45	822
48	836
51	858
54	874
57	887
60	899
63	910
66	919
69	929
72	938
75	948
78	956
81	966
84	973
87	979
90	985
93	991
96	995
99	999
102	1004
105	1009
108	1013
111	1019
114	1023
117	1025
120	1030
123	1034

Remarks:

Pressure curves are not turned over enough for
Horner plot.

6.86 Bbls/Day

These calculations are based upon information furnished by you and taken from drill stem test pressure charts and are furnished for your information. In furnishing such calculations and evaluations, Crude Oil Testing Co., is merely expressing its opinion. You agree that the Testing Company makes no warranty as to the accuracy of such calculations or opinions and the Testing Company shall not be liable for any loss or damage, whether due to negligence or otherwise in connection with



EVALUATION

(303) 473-6909
P.O. Box 2260
Colorado Springs, CO 80901

Company Osborn Heirs Co.

Ticket No. 5132

Date 6/21/85

P.S.I. Slope Cycle

$$M = \frac{P_{isi} - P_{fsi}}{\log \frac{T + t}{t}}$$

N/A

Damage Ratio

$$DR = \frac{.183 P_s - P_f}{M}$$

N/A

Effective Pay

$$\frac{K_h}{B} = \frac{162.6 Q}{M}$$

N/A Md. Ft

Theoretical Potential
With Damage Removed

$$Q_1 = Q DR$$

N/A Bbls./Day

Production

$$Q = \frac{1440 R}{T}$$

.563 Bbls./Hr.
6.86 Bbls./Day

Remarks

Pressure curves are not turned over enough for
Horner plot.

CALCULATED RECOVERY ANALYSIS EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 3

TEST TICKET NO. 5132

WELL NAME: Delmer Whiting #1

WELL LOCATION: 31-18S-30W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	4016.00	3.826	4.50
4	Drill Collar - 6"	451.00	2.250	6.00
8	Circulating Sub	1.00	3.000	5.00
7	Changeover Sub	2.00	3.000	5.00
9	Shut-In Tool	5.45	0.870	5.00
10	Hydraulic Tool	5.50	1.000	5.00
12	Jars	7.00	3.000	5.00
13	Safety Joint	2.31	3.000	5.00
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	27.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
Total Depth		4531.06		

CALCULATED RECOVERY ANALYSIS

DST Number: 3

TEST TICKET NO. 5132

Sample #	Total Feet	***** Gas ***** %	***** Oil ***** %	***** Mud ***** %
1	61	55.00	33.55	45.00
2	60	15.00	9.00	70.00
3	50	50.00	30.00	35.00
4	60	15.00	9.00	40.00
TOTAL	241	33.84	81.55	47.49

Sample #	***** Water ***** %	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	0.00	0.00		
2	0.00	0.00		
3	0.00	0.00		
4	0.00	0.00		
TOTAL	0.00	0.00		

FORMATION

Port 200 ft. 4000
Interval 4000 to 4014
Open 60 Shot In 60
Packer Set 4000
Flow 1st Opening Strong blow off bottom in 37 min.
2nd Opening Fair increasing blow to 8 inches in 10 min.

RECOVERY

Total Feet 241
Recovered 60 feet of Dassy oil out mud
Recovered 161 feet of Clean gassy oil
Recovered 879 feet of Gas in pipe

CALCULATED RECOVERY

Gas 81.55 Oil 114.45 Water
Gravity (Oil) 35 Test Water Chlorides
Test Area Temperature 130F Mud System Chlorides 3,000 ppm

PRESSURE

	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	2244	2250	PSI
(B) First Initial Flow Pressure	77	68	PSI
(C) First Final Flow Pressure	86	67	PSI
(D) Initial Closed-In Pressure	926	932	PSI
(E) Second Initial Flow Pressure	110	109	PSI
(F) Second Final Flow Pressure	132	127	PSI
(G) Final Closed-In Pressure	1034	1034	PSI
(H) Final Hydrostatic Mud	2220	2190	PSI

CRUDE OIL TESTING, INC.

DATE 6/21/85

TEST TICKET NO. 5133

Company: Osborn Heirs Co.
 Company Address: P.O. Box 17968 San Antonio TX 78286
 Location: Sec. 31 Twp. 18S Range 30W Co. Lane State KS
 Well Name & Number: Delmer Whiting #1 Code E4

ENGINEERING DATA	Elevation	2899 GL	Drill Pipe Length	4077	ID 3.8 "
	Mud Viscosity	44	Weight Pipe Length		
	Mud Weight	9.3	Drill Collar Length	451	ID 2.25"
	Water Loss	11.6	Top Packer Depth	4522	
	Type of Mud Chemical		Bottom Packer Depth	4527	
	Anchor Length	43	Tool Joint Size	4.5	XH
	Hole Size	7 7/8	Test Tool Size	5 1/2	
	Casing Size	8 5/8	Packer Size	6 3/4	
	Surface Choke	3/4	Reversed Out	No	
	Bottom Choke	3/4	Recorder #	11084	
	Extra Equipment		Company jars; Safety joint		

REMARKS DST #4

FORMATION	Johnson	Zone	Test Type	Conventional
	Interval 4527	To 4570	Total Depth	4570
	Open 30	Shut In 30	Open 30	Shut In 30
	Packer(s) Set	09:58PM	Started Off Bottom	12:00PM
	Blow 1st Opening Very weak blow died in 6 min. 2nd Opening No blow, flushed tool, no help.			

RECOVERY	Total Feet	5
	Recovered	5 feet of Drilling mud

CALCULATED RECOVERY	Gas	Oil	Water	Mud	5
	Gravity (Oil)		Test Water Chlorides		PPM
	Test Area Temperature	130F	Mud System Chlorides	3,000	PPM

PRESSURE		FIELD	OFFICE	
		READING	READING	
	(A) Initial Hydrostatic Mud	2274	2289	PSI
	(B) First Initial Flow Pressure	66	50	PSI
	(C) First Final Flow Pressure	66	58	PSI
	(D) Initial Closed-In Pressure	307	296	PSI
	(E) Second Initial Flow Pressure	66	52	PSI
	(F) Second Final Flow Pressure	66	59	PSI
	(G) Final Closed-In Pressure	99	106	PSI
	(H) Final Hydrostatic Mud	2252	2278	PSI

CRUDE OIL TESTING INC.

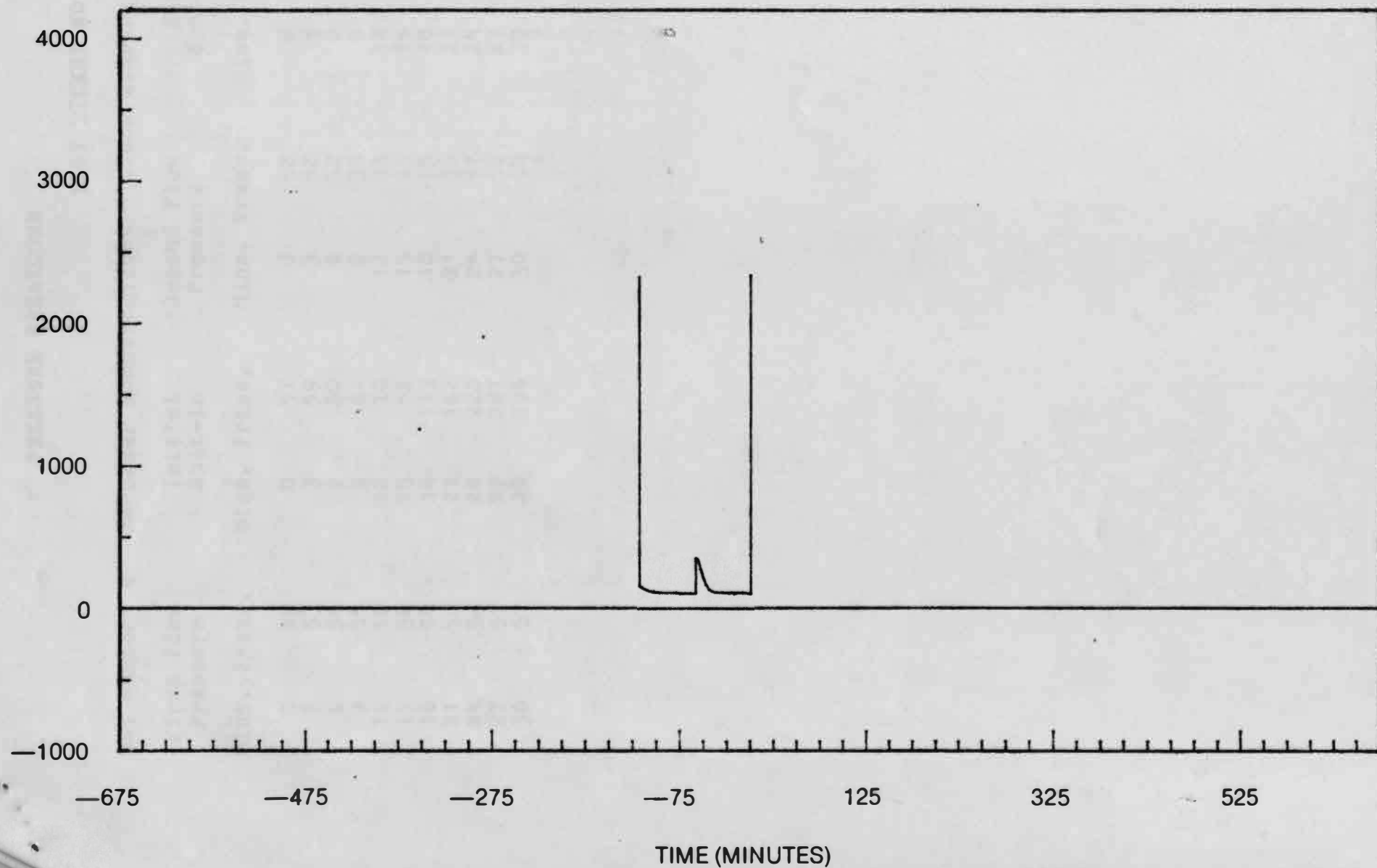
FOR: Osborn Heirs Co.

TEST 5133

DST 4

06/21/85

PRESSURE



PRESSURE BREAKDOWN

TEST TICKET NO. 5133

DST Number: 4 Recorder Number: 11084 Clock Number: 23934

First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
Mins. Press.	Mins. Press.	Mins. Press.	Mins. Press.
0 49	0 57	0 52	0 58
3 53	3 59	3 52	3 58
6 54	6 60	6 52	6 58
9 55	9 61	9 53	9 59
12 56	12 70	12 53	12 61
15 56	15 82	15 53	15 65
18 56	18 113	18 55	18 68
21 56	21 162	21 56	21 75
24 56	24 222	24 57	24 82
27 57	27 287	27 58	27 96
30 57	29 296	30 58	30 105

Total Depth 4604.04

CALCULATED RECOVERY ANALYSIS
EQUIPMENT DATA

DST Number: 4 TOOL SEQUENCE REPORT TEST TICKET NO. 5133

DST Number: 4 TEST TICKET NO. 5133

WELL NAME: Delmer Whiting #1 WELL LOCATION: 31-18S-30W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	4077.00	3.826	4.50
4	Drill Collar - 6"	451.00	2.250	6.00
8	Circulating Sub	1.00	3.000	5.00
7	Changeover Sub	2.00	3.000	5.00
9	Shut-In Tool	5.45	0.870	5.00
10	Hydraulic Tool	5.60	1.000	5.00
12	Jars	7.00	3.000	5.00
13	Safety Joint	2.31	3.000	5.00
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	39.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00

Total Depth 4604.06

CALCULATED RECOVERY ANALYSIS

CRUDE OIL TESTING, INC.

DST Number: 4

TEST TICKET NO. 5133

Sample #	Total Feet	***** Gas %	***** Feet	***** Oil %	***** Feet	***** Mud %	***** Feet
1	5	0.00	0.00	0.00	0.00	100.00	5.00
TOTAL	5	0.00	0.00	0.00	0.00	100.00	5.00

Sample #	***** Water %	***** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	0.00	0.00			
TOTAL	0.00	0.00			

Drill Pipe Length 4077 ID 1.3
 Weight Pipe Length
 Drill Collar Length 451 ID 2.25
 Tool Joint Size 4.5
 Test Tool Size 3 1/2
 Fucker Size 2 3/4
 Reversed Out No
 Recorder 11086
 Company Jars Safety Joint

REMARKS DST #4

FORMATION Johnson Zone Test Type Conventional
 Interval 4527 To 4570 Total Depth 4570
 Open 30 Shut In 30 Open 30 Shut In 30
 Packer (at Bot) 03:15PM Started Off Bottom 12:00PM
 Blow 1st Opening Tool work blow died in 5 min.
 2nd Opening No blow, flushed tool, no help.

RECOVERY Total Feet 5
 Recovered 5 feet of Drilling mud

CALCULATED RECOVERY Gas Oil Water Mud
 Gravity (G/G) Test Water Chlorides PPM
 Test Area Temperature 130F Mud System Chlorides 3,000 PPM

PRESSURE	(A) Initial Hydrostatic Mud	FIELD READING	OFFICE READING	
	(B) First Initial Flow Pressure	68	50	PSI
	(C) First Final Flow Pressure	68	58	PSI
	(D) Initial Closed-In Pressure	307	298	PSI
	(E) Second Initial Flow Pressure	68	42	PSI
	(F) Second Final Flow Pressure	66	53	PSI
	(G) Final Closed-In Pressure	79	106	PSI
	(H) Final Hydrostatic Mud	3452	2278	PSI

CRUDE OIL TESTING, INC.

DATE 6/22/85

TEST TICKET NO. 5134

Company: Osborn Heirs Co.

Company Address: P.O. Box 17968 San Antonio TX 78286

Location: Sec. 31 Twp. 18S Range 30W Co. Lane

State KS

Well Name & Number: Delmer Whiting #1

Code E4

ENGINEERING DATA	Elevation	2899 GL	Drill Pipe Length	4110	ID 3.8 "
	Mud Viscosity	43	Weight Pipe Length		
	Mud Weight	9.5	Drill Collar Length	451	ID 2.25"
	Water Loss	11.6	Top Packer Depth	4562	
	Type of Mud Chemical		Bottom Packer Depth	4567	
	Anchor Length	22	Tool Joint Size	4.5	XH
	Hole Size	7 7/8	Test Tool Size	5 1/2	
	Casing Size	8 5/8	Packer Size	6 3/4	
	Surface Choke	3/4	Reversed Out	No	
	Bottom Choke	3/4	Recorder #	11084	
	Extra Equipment		Company jars; Safety joint		

REMARKS DST #5

FORMATION	Johnson Zone	Test Type Conventional
	Interval 4567 To 4589	Total Depth 4589
	Open 30 Shut In 30	Open 30 Shut In 30
	Packer(s) Set 11:58AM	Started Off Bottom 02:00PM
	Blow 1st Opening Very weak blow died in 6 min.	

2nd Opening No blow, flushed tool, no help.

RECOVERY	Total Feet	5
	Recovered	5 feet of Oil out mud

CALCULATED RECOVERY	Gas	Oil	.5	Water	Mud	4.5
	Gravity (Oil)			Test Water Chlorides		PPM
	Test Area Temperature	130F	Mud System Chlorides		3,000	PPM

	FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2317	PSI
	(B) First Initial Flow Pressure	55	PSI
	(C) First Final Flow Pressure	55	PSI
	(D) Initial Closed-In Pressure	99	PSI
	(E) Second Initial Flow Pressure	55	PSI
	(F) Second Final Flow Pressure	66	PSI
	(G) Final Closed-In Pressure	77	PSI
	(H) Final Hydrostatic Mud	2295	PSI

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 5

TEST TICKET NO. 5134

WELL NAME: Delmer Whiting #1

WELL LOCATION: 31-18S-30W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	4110.00	3.826	4.50
4	Drill Collar - 6"	451.00	2.250	6.00
8	Circulating Sub	1.00	3.000	5.00
7	Changeover Sub	2.00	3.000	5.00
9	Shut-In Tool	5.45	0.870	5.00
10	Hydraulic Tool	5.60	1.000	5.00
12	Jars	7.00	3.000	5.00
13	Safety Joint	2.31	3.000	5.00
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	18.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4616.06		

CALCULATED RECOVERY ANALYSIS

DST Number: 5

TEST TICKET NO. 5134

Sample #	Total Feet	***** Gas %	***** Feet	***** Oil %	***** Feet	***** Mud %	***** Feet
1	5	0.00	0.00	10.00	0.50	90.00	4.50
TOTAL	<u>5</u>	0.00	<u>0.00</u>	10.00	<u>0.50</u>	90.00	<u>4.50</u>

Sample #	**** Water %	*** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	0.00	0.00			
TOTAL	0.00	<u>0.00</u>			

FORMATION

Interval 4507 to 4509
Open 30 1000 lb 30
Pressure 13.534
Time 1st Opening 10 min 1st 10 min
2nd Opening No blow, finished test, no help

LOGGING

Total Feet: 5
Recovered: 5 feet of oil and mud

CALCULATED RECOVERY

Gas Oil Water Mud
Gravimetric 100% 100% 100% 100%
Test Area Temperature 130F and System Chlorides 1,000 PPM

PRESSURE

	FIELD READING	OFFICE READING
(1) Initial Hydrostatic Mud	23.7	23.7
(2) First Initial Flow Pressure	24	24
(3) First Final Flow Pressure	25	25
(4) Initial Circulation Pressure	25	25
(5) Second Initial Flow Pressure	25	25
(6) Second Final Flow Pressure	25	25
(7) Final Circulation Pressure	27	27
(8) Final Hydrostatic Mud	27.5	27.5