

Zachman #1

FORMATION TESTING SERVICE REPORT

CRUDE OIL TESTING, INC.

DATE 6/30/55

TEST TICKET NO. 5271

Company: Noble C. Hoover
 Company Address: NRC Plaza Suite 302 El Dorado AR 71750
 Location: Sec. 15 Twp. 12S Range 21W Co. Yrego State KS
 Well Name & Number: Zachman #1 Code 214

ENGINEERING DATA	Elevation	2296 KB	Drill Pipe Length	3631	ID 3.6 "
	Mud Viscosity	44	Weight Pipe Length	541	ID 2.75"
	Mud Weight	9.4	Drill Collar Length		
	Water Loss	9.8	Top Packer Depth	3588	
	Type of Mud	Starch	Bottom Packer Depth	3593	
	Anchor Length	24	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 #	13251	
	Extra Equipment		None		

REMARKS DST #1

FORMATION Lansing/KC Zone A Test Type Conventional
 Interval 3593 To 3617 Total Depth 3617
 Open 30 Shut In 45 Open 50 Shut In 45
 Packer(s) Set 09:42AM Started Off Bottom 12:45PM
 Blow 1st Opening Weak steady increasing blow to 5 inches.
 2nd Opening Weak steady increasing blow to 6 inches.

RECOVERY Total Feet 211
 Recovered 211 feet of Muddy water

CALCULATED RECOVERY Gas Oil Water 44.7 Mud 166.3
 Gravity (Oil) Test Water Chlorides 72,000 PPM
 Test Area Temperature 110F Mud System Chlorides 32,000 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	1898	1875	PSI
	(B) First Initial Flow Pressure	35	27	PSI
	(C) First Final Flow Pressure	58	56	PSI
	(D) Initial Closed-In Pressure	610	604	PSI
	(E) Second Initial Flow Pressure	31	72	PSI
	(F) Second Final Flow Pressure	138	129	PSI
	(G) Final Closed-In Pressure	587	583	PSI
	(H) Final Hydrostatic Mud	1875	1860	PSI

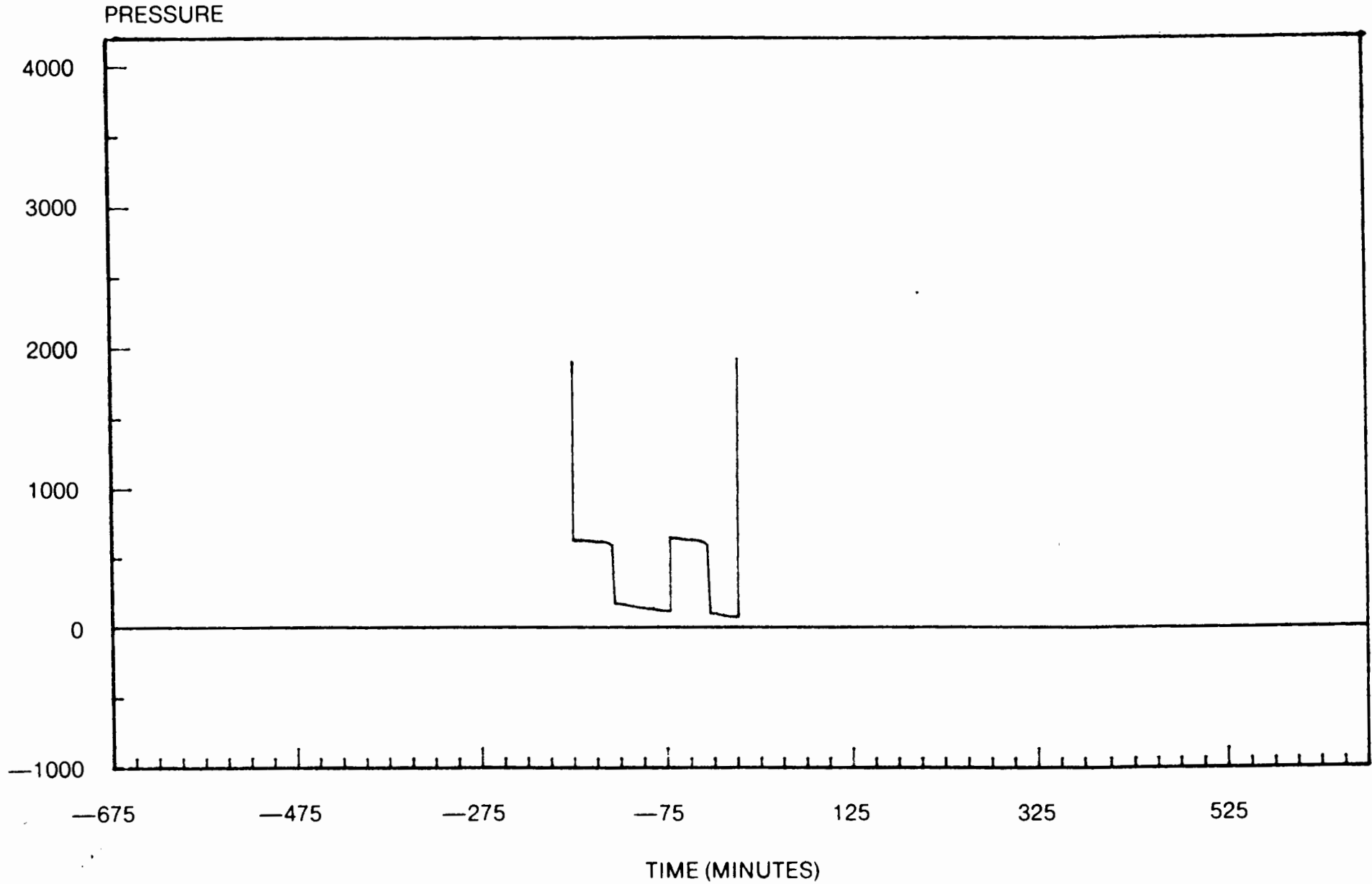
CRUDE OIL TESTING INC.

FOR: Moble C. Hoover

TEST 5271

DST 1

06/30/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5271

DST Number: 1 Recorder Number: 13251 Clock Number: 23832

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	27	0	56	0	72	0	129
3	27	3	549	3	72	3	546
6	28	6	564	6	73	6	560
9	30	9	571	9	75	9	566
12	34	12	578	12	78	12	568
15	37	15	580	15	80	15	569
18	42	18	583	18	85	18	570
21	45	21	583	21	87	21	571
24	51	24	585	24	90	24	574
27	53	27	586	27	94	27	575
30	56	30	588	30	96	30	578
		33	594	33	100	33	580
		36	596	36	103	36	580
		39	600	39	107	39	580
		42	603	42	110	42	582
		43	603	45	114	45	583
				48	119		
				51	123		
				54	125		
				57	127		
				59	129		

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 1

TEST TICKET NO. 5271

WELL NAME: Zachman #1

WELL LOCATION: 18-12S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3031.00	3.826	4.50
3	Weight Pipe	541.00	2.760	4.50
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
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	20.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	3619.75		

CALCULATED RECOVERY ANALYSIS

DST Number: 1

TEST TICKET NO. 5271

Sample #	Total Feet	**** Gas %	**** Feet	**** Oil %	**** Feet	**** Mud %	**** Feet
1	25	0.00	0.00	0.00	0.00	30.00	7.50
2	52	0.00	0.00	0.00	0.00	30.00	16.60
3	52	0.00	0.00	0.00	0.00	20.00	12.40
4	62	0.00	0.00	0.00	0.00	10.00	6.20
TOTAL	<u>211</u>	0.00	<u>0.00</u>	0.00	<u>0.00</u>	21.18	<u>44.70</u>

Sample #	**** Water %	**** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	70.00	17.50	72,000		
2	70.00	43.40			
3	80.00	49.60			
4	90.00	55.80			
TOTAL	78.82	<u>166.30</u>			

CRUDE OIL TESTING, INC.

DATE 7/1/85

TEST TICKET NO. 5328

Company: Noble C. Hoover
 Company Address: NBC Plaza Suite 302 El Dorado AR 71730
 Location: Sec. 13 Twp. 12S Range 21W Co. Trego State KS
 Well Name & Number: Zachman #1 Code E14

ENGINEERING DATA	Elevation	2250 KB	Drill Pipe Length	3065	ID 3.8 "
	Mud Viscosity	44	Weight Pipe Length	541	ID 2.75"
	Mud Weight	9.4	Drill Collar Length		
	Water Loss	9.8	Top Packer Depth	3622	
	Type of Mud	Staron	Bottom Packer Depth	3627	
	Anchor Length	23	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 #	13251	
	Extra Equipment		None		

REMARKS DST #2

FORMATION	Lansing/KC Zone D	Test Type Conventional
	Interval 3627 To 3650	Total Depth 3650
	Open 30 Shut In 30	Open 30 Shut In 30
	Packer(s) Set 12:58AM	Started Off Bottom 03:00AM
	blow 1st Opening Weak decreasing blow died in 10 min. 2nd Opening No blow.	

RECOVERY Total Feet 10
 Recovered 10 feet of Drilling mud

CALCULATED RECOVERY	Gas	Oil	Water	Mud
	Gravity (Oil)		Test Water Chlorides	PPM
	Test Area Temperature 110F		Mud System Chlorides	32,000 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2045	1932	PSI
	(B) First Initial Flow Pressure	35	26	PSI
	(C) First Final Flow Pressure	35	29	PSI
	(D) Initial Closed-In Pressure	838	838	PSI
	(E) Second Initial Flow Pressure	35	32	PSI
	(F) Second Final Flow Pressure	35	35	PSI
	(G) Final Closed-In Pressure	826	828	PSI
	(H) Final Hydrostatic Mud	2023	1916	PSI

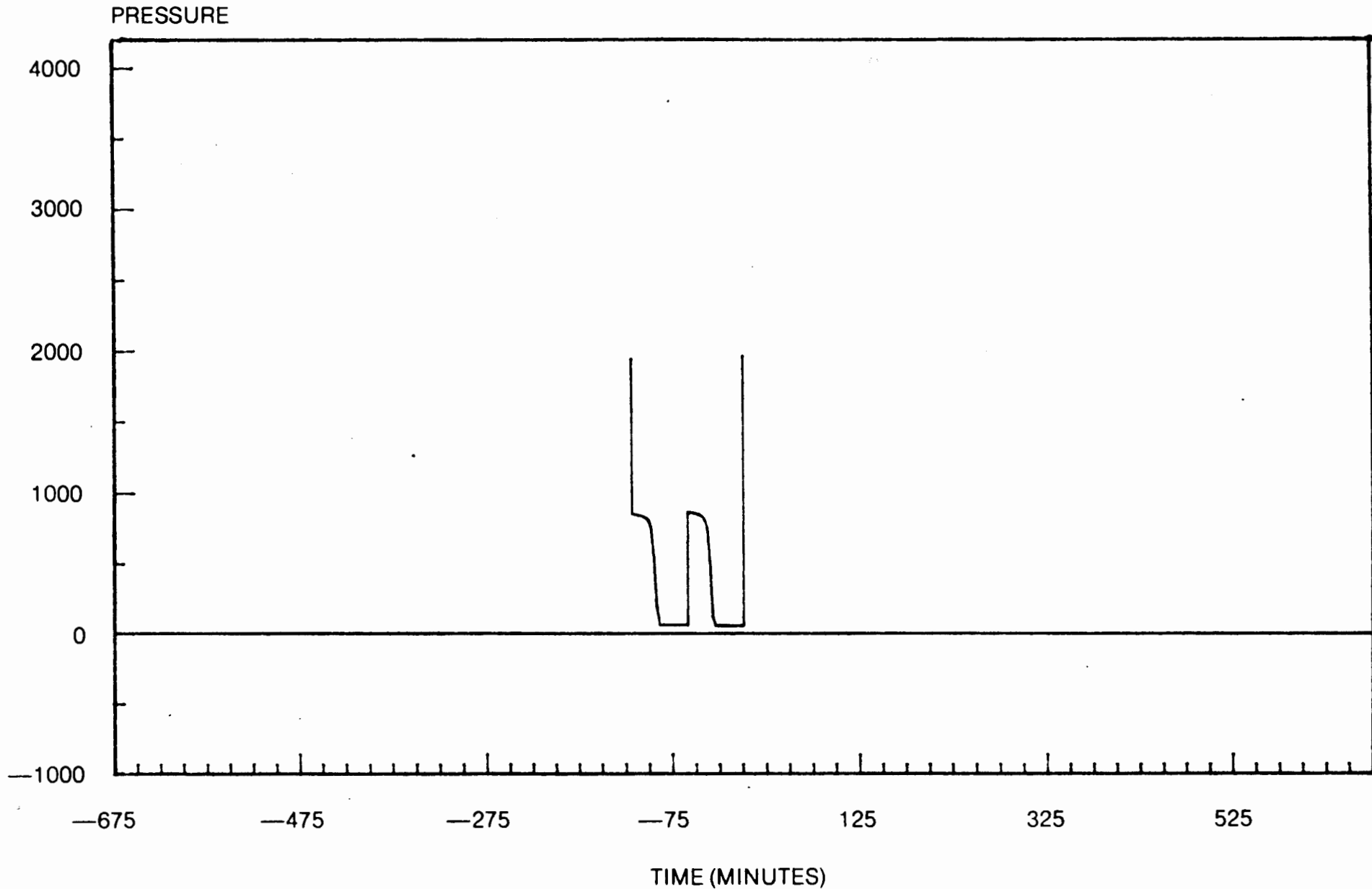
CRUDE OIL TESTING INC.

FOR: Moble C. Hoover

TEST 5328

DST 2

07/01/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5328

DST Number: 2 Recorder Number: 13251 Clock Number: 23832

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	25	0	23	0	32	0	35
3	25	3	37	3	32	3	171
6	27	6	485	6	33	6	532
9	27	9	727	9	33	9	730
12	27	12	790	12	33	12	783
15	27	15	811	15	33	15	799
18	27	18	820	18	33	18	809
21	27	21	828	21	34	21	815
24	28	24	833	24	35	24	820
27	28	27	838	27	35	27	824
30	28	30	838	30	35	30	828

EQUIPMENT DATA
TOOL SEQUENCE REPORT

DST Number: 2

TEST TICKET NO. 5325

WELL NAME: Zachman #1

WELL LOCATION: 13-12S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3065.00	3.826	4.50
3	Weight Pipe	541.00	2.760	4.50
3	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
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	19.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	3652.75		

CRUDE OIL TESTING, INC.

DATE 7/1/85

TEST TICKET NO. 5329

Company: Noble C. Hoover
 Company Address: NBC Plaza Suite 302 El Dorado AR 71730
 Location: Sec. 13 Twp. 12S Range 21W Co. Trego State KS
 Well Name & Number: Zachman #1 Code E14

ENGINEERING DATA	Elevation	2260 KB	Drill Pipe Length	3087	ID 3.8 "
	Mud Viscosity	43	Weight Pipe Length	541	ID 2.76"
	Mud Weight	9.5	Drill Collar Length		
	Water Loss	9.6	Top Packer Depth	3644	
	Type of Mud	Starch	Bottom Packer Depth	3649	
	Anchor Length	21	Tool Joint Size	4.5	Xn
	Hole Size	7 7/8	Test Tool Size	5 1/2	
	Casing Size	3 5/8	Packer Size	5 3/4	
	Surface Choke	3/4	Reversed Out	No	
	Bottom Choke	3/4	Recorder #	13251	
	Extra Equipment		None		

REMARKS DST #3

FORMATION	Lansing/KC Zone E	Test Type Conventional
	Interval 3649 To 3670	Total Depth 3670
	Open 30 Shut In 30	Open 30 Shut In 30
	Packer(s) Set 01:28PM	Started Off Bottom 03:30PM
	Blow 1st Opening Weak decreasing blow died in 5 min. 2nd Opening No blow.	

RECOVERY Total Feet 10
 Recovered 10 feet of Very slightly oil spotted mud

CALCULATED RECOVERY	Gas	Oil	Water	Mud
	Gravity (Oil)		Test Water Chlorides	PPM
	Test Area Temperature 108F		Mud System Chlorides	35,000 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	1955	1951	PSI
	(B) First Initial Flow Pressure	35	18	PSI
	(C) First Final Flow Pressure	35	25	PSI
	(D) Initial Closed-In Pressure	461	454	PSI
	(E) Second Initial Flow Pressure	35	23	PSI
	(F) Second Final Flow Pressure	35	26	PSI
	(G) Final Closed-In Pressure	69	59	PSI
	(H) Final Hydrostatic Mud	1932	1887	PSI

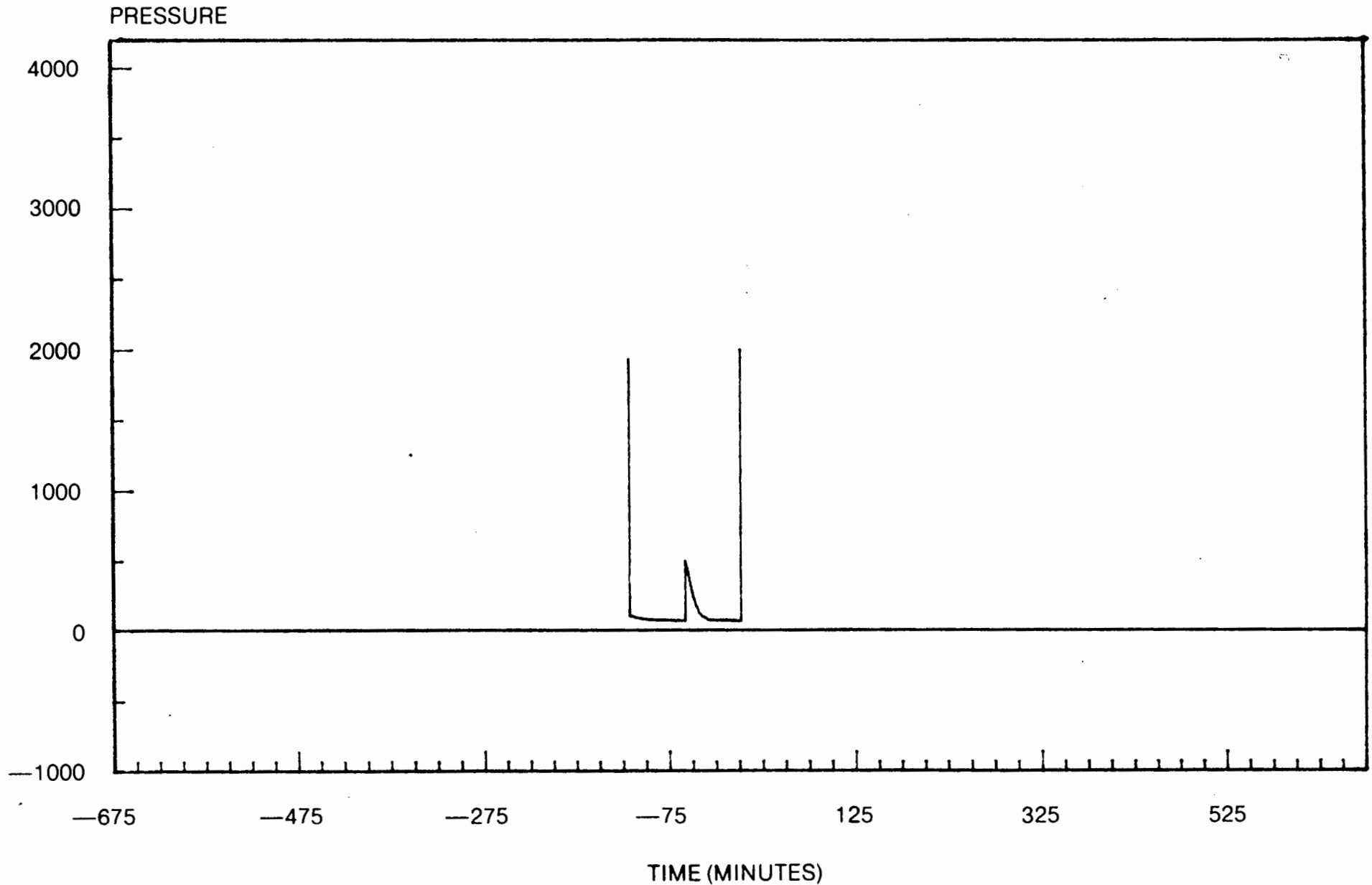
CRUDE OIL TESTING INC.

FOR: Moble C. Hoover

TEST 5329

DST 3

07/01/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5329

DST Number: 3 Recorder Number: 13251 Clock Number: 23832

First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
Mins. Press.	Mins. Press.	Mins. Press.	Mins. Press.
0 18	0 25	0 22	0 26
3 19	3 26	3 22	3 26
6 21	6 32	6 22	6 28
9 22	9 44	9 23	9 30
12 22	12 56	12 23	12 33
15 25	15 80	15 25	15 35
18 25	18 127	18 25	18 38
21 25	21 191	21 25	21 43
24 25	24 277	24 26	24 48
27 25	27 374	27 26	27 53
30 25	30 453	30 26	30 58

EQUIPMENT DATA
TOOL SEQUENCE REPORT

DST Number: 3

TEST TICKET NO. 5329

WELL NAME: Zachman #1

WELL LOCATION: 18-12S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3087.00	3.826	4.50
3	Weight Pipe	541.00	2.760	4.50
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
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	17.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	3672.75		

CRUDE OIL TESTING, INC.

DATE 7/2/85

TEST TICKET NO. 5330

Company: Mobile C. Hoover
 Company Address: NBC Plaza Suite 302 El Dorado AR 71730
 Location: Sec. 18 Twp. 12S Range 21W Co. Trego State KS
 Well Name & Number: Zachman #1 Code B14

ENGINEERING DATA	Elevation	2260 KB	Drill Pipe Length	3106	ID 3.8 "
	Mud Viscosity	43	Weight Pipe Length	541	ID 2.75"
	Mud Weight	9.5	Drill Collar Length		
	Water Loss	9.6	Top Packer Depth	3663	
	Type of Mud	Starch	Bottom Packer Depth	3668	
	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 #	13251	
	Extra Equipment		None		

REMARKS DST #4

FORMATION Lansing/KC Zone F Test Type Conventional
 Interval 3668 To 3690 Total Depth 3690
 Open 30 Shut In 60 Open 30 Shut In 60
 Packer(s) Set 01:28AM Started Off Bottom 04:30AM
 Blow 1st Opening Fair blow off bottom in 28 min.
 2nd Opening No blow, flushed, fair increasing blow 6 in.

RECOVERY Total Feet 248
 Recovered 248 feet of Muddy water

CALCULATED RECOVERY Gas Oil Water 104.3 Mud 83.7
 Gravity (Oil) Test Water Chlorides 68,000 PPM
 Test Area Temperature 118F Mud System Chlorides 35,000 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	1960	1929	PSI
	(B) First Initial Flow Pressure	46	34	PSI
	(C) First Final Flow Pressure	92	79	PSI
	(D) Initial Closed-In Pressure	918	907	PSI
	(E) Second Initial Flow Pressure	104	98	PSI
	(F) Second Final Flow Pressure	138	136	PSI
	(G) Final Closed-In Pressure	906	899	PSI
	(H) Final Hydrostatic Mud	1943	1885	PSI

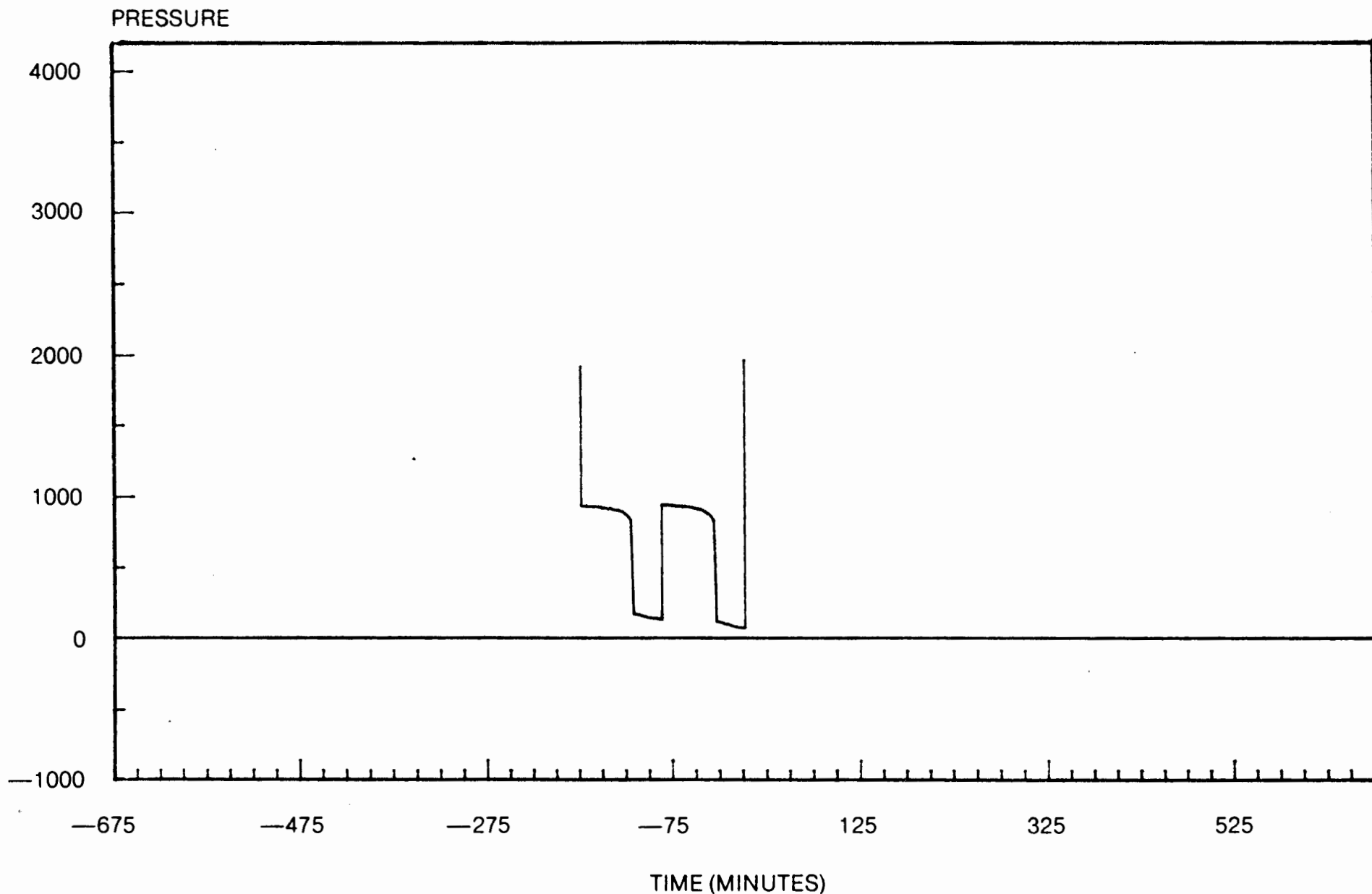
CRUDE OIL TESTING INC.

FOR: Moble C. Hoover

TEST 5330

DST 4

07/02/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5330

DST Number: 4 Recorder Number: 13251 Clock Number: 23832

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	34	0	79	0	97	0	135
3	34	3	791	3	97	3	797
6	36	6	824	6	103	6	825
9	41	9	843	9	104	9	843
12	45	12	856	12	108	12	856
15	51	15	867	15	111	15	863
18	59	18	873	18	117	18	869
21	64	21	879	21	122	21	873
24	71	24	884	24	129	24	878
27	75	27	889	27	131	27	880
30	79	30	892	30	135	30	884
		33	894			33	886
		36	895			36	889
		39	897			39	891
		42	899			42	893
		45	900			45	894
		48	902			48	895
		51	904			51	896
		54	905			54	897
		57	907			57	899
		59	907				

EQUIPMENT DATA
TOOL SEQUENCE REPORT

DST Number: 4

TEST TICKET NO. 5330

WELL NAME: Zachman #1

WELL LOCATION: 18-128-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3106.00	3.826	4.50
3	Weight Pipe	541.00	2.760	4.50
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
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	3692.75		

CALCULATED RECOVERY ANALYSIS

DST Number: 4

TEST TICKET NO. 5330

Sample #	Total Feet	**** Gas %	**** Feet	**** Oil %	**** Feet	**** Mud %	**** Feet
1	62	0.00	0.00	0.00	0.00	40.00	24.80
2	62	0.00	0.00	0.00	0.00	40.00	24.80
3	62	0.00	0.00	0.00	0.00	40.00	24.80
4	62	0.00	0.00	0.00	0.00	15.00	9.30
TOTAL	<u>248</u>	0.00	<u>0.00</u>	0.00	<u>0.00</u>	33.75	<u>83.70</u>

Sample #	**** Water %	**** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	60.00	37.20	68,000		
2	60.00	37.20			
3	60.00	37.20			
4	65.00	52.70			
TOTAL	65.25	<u>164.30</u>			

CRUDE OIL TESTING, INC.

DATE 7/3/85

TEST TICKET NO. 5331

Company: Moble C. Hoover
 Company Address: NBC Plaza Suite 302 El Dorado AR 71730
 Location: Sec. 18 Twp. 12S Range 21W Co. Frego State KS
 Well Name & Number: Zachman #1 Code E14

ENGINEERING DATA	Elevation	2260 KB	Drill Pipe Length	3226	ID 3.3 "
	Mud Viscosity	43	Weight Pipe Length	541	ID 2.76"
	Mud Weight	9.6	Drill Collar Length		
	Water Loss	9.2	Top Packer Depth	3783	
	Type of Mud	Starch	Bottom Packer Depth	3788	
	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 #	13251	
	Extra Equipment		None		

REMARKS DSI #5

FORMATION Lansing/KC Zone K Test Type Conventional
 Interval 3788 To 3810 Total Depth 3810
 Open 30 Shut In 30 Open 30 Shut In 30
 Packer(s) Set 02:28AM Started Off Bottom 04:30AM
 Blow 1st Opening Weak decreasing blow died in 7 min.
 2nd Opening No blow.

RECOVERY Total Feet 10
 Recovered 10 feet of Drilling mud

CALCULATED RECOVERY Gas Oil Water Mud
 Gravity (Oil) Test Water Chlorides PPM
 Test Area Temperature 116F Mud System Chlorides 34,000 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2057		PSI
	(B) First Initial Flow Pressure	35		PSI
	(C) First Final Flow Pressure	35		PSI
	(D) Initial Closed-In Pressure	115		PSI
	(E) Second Initial Flow Pressure	35		PSI
	(F) Second Final Flow Pressure	35		PSI
	(G) Final Closed-In Pressure	35		PSI
	(H) Final Hydrostatic Mud	2034		PSI

EQUIPMENT DATA
TOOL SEQUENCE REPORT

DST Number: 5

TEST TICKET NO. 5331

WELL NAME: Zacman #1

WELL LOCATION: 18-12S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3226.00	3.826	4.50
3	Weight Pipe	541.00	2.760	4.50
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
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	3812.75		

CRUDE OIL TESTING, INC.

DATE 7/4/65

TEST TICKET NO. 5332

Company: Noble C. Hoover
 Company Address: RSC Plaza Suite 302 El Dorado AR 71730
 Location: Sec. 18 Twp. 12S Range 21W Co. Trego State KS
 Well Name & Number: Zachman #1 Code E14

ENGINEERING DATA	Elevation	2260 Kb	Drill Pipe Length	3261	ID 3.6 "
	Mud Viscosity	45	Weight Pipe Length	541	ID 2.70"
	Mud Weight	9.6	Drill Collar Length		
	Water Loss	4.4	Top Packer Depth	3820	
	Type of Mud	Staron	Bottom Packer Depth	3825	
	Anchor Length	115	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 #	13251	
	Extra Equipment		None		

REMARKS DST #6

FORMATION Pawnee Zone Test Type Conventional
 Interval 3825 To 3940 Total Depth 3940
 Open 30 Shut In 30 Open 30 Shut In 30
 Packer(s) Set 02:58AM Started Off Bottom 05:00AM
 Blow 1st Opening Weak decreasing blow died in 15 min.
 2nd Opening No blow.

RECOVERY Total Feet 30
 Recovered 30 feet of Drilling mud

CALCULATED RECOVERY Gas Oil Water Mud
 Gravity (Oil) Test Water Chlorides FPM
 Test Area Temperature 117F Mud System Chlorides 26,000 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	-2136	2097	PSI
	(B) First Initial Flow Pressure	92	89	PSI
	(C) First Final Flow Pressure	92	94	PSI
	(D) Initial Closed-In Pressure	334	325	PSI
	(E) Second Initial Flow Pressure	92	90	PSI
	(F) Second Final Flow Pressure	104	109	PSI
	(G) Final Closed-In Pressure	277	266	PSI
	(H) Final Hydrostatic Mud	2113	2073	PSI

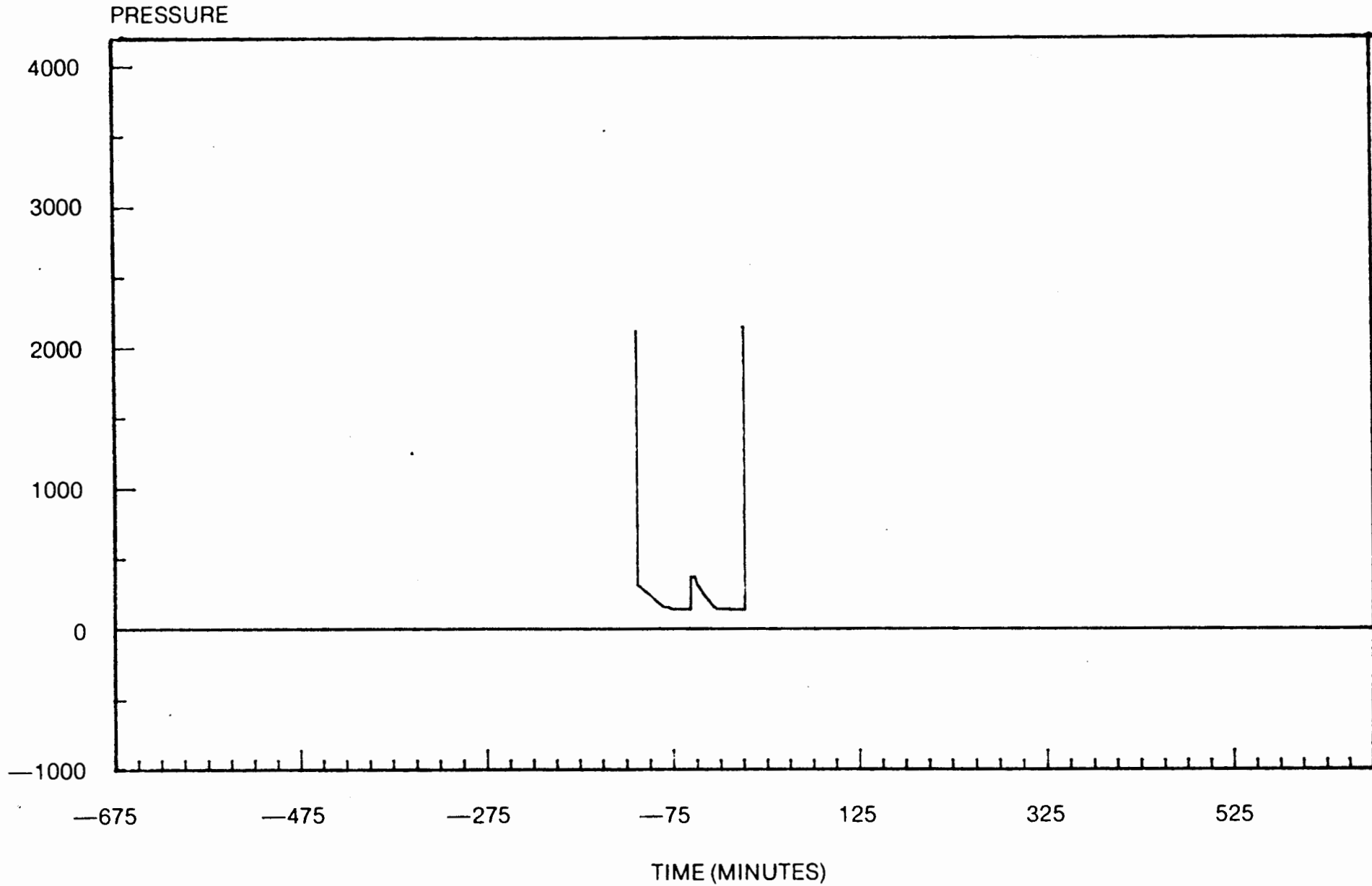
CRUDE OIL TESTING INC.

FOR: Moble C. Hoover

TEST 5332

DST 6

07/04/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5332

DST Number: 6 Recorder Number: 13251 Clock Number: 23832

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	88	0	94	0	89	0	109
3	88	3	111	3	94	0	109
6	90	6	134	6	94	3	118
9	90	9	159	9	94	6	135
12	90	12	185	12	94	9	152
15	90	15	209	15	94	12	168
18	94	18	240	18	94	15	186
21	94	21	268	21	99	18	203
24	94	24	328	24	109	21	220
27	94	27	319	27	109	24	239
30	94	28	324			27	256
						30	266

EQUIPMENT DATA
TOOL SEQUENCE REPORT

DST Number: 6

TEST TICKET NO. 5332

WELL NAME: Zachman #1

WELL LOCATION: 18-12S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3261.00	3.826	4.50
3	Weight Pipe	541.00	2.760	4.50
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
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	111.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	3940.75		

CRUDE OIL TESTING, INC.

DATE 7/4/85

TEST TICKET NO. 5333

Company: Moble C. Hoover
 Company Address: NBC Plaza Suite 302 El Dorado AR 71730
 Location: Sec. 18 Twp. 12S Range 21W Co. Irego State KS
 Well Name & Number: Zachman #1 Code B14

ENGINEERING DATA	Elevation	2260 KB	Drill Pipe Length	3402	ID 3.8 "
	Mud Viscosity	44	Weight Pipe Length	541	ID 2.76"
	Mud Weight	9.8	Drill Collar Length		
	Water Loss	8.4	Top Packer Depth	3927	
	Type of Mud	Starch	Bottom Packer Depth	3932	
	Anchor Length	56	Tool Joint Size	4.5	XR
	Hole Size	7 7/8	Test Tool Size	5 1/2	
	Casing Size	3 5/8	Packer Size	6 3/4	
	Surface Choke	3/4	Reversed Out	No	
	Bottom Choke	3/4	Recorder #	13251	
	Extra Equipment		None		

REMARKS DST #7

FORMATION Arbuckle Zone Test Type Conventional
 Interval 3932 To 3988 Total Depth 3988
 Open 30 Snut In 30 Open 30 Shut In 30
 Packer(s) Set 09:28PM Started Off Bottom 11:30PM
 Blow 1st Opening Weak decreasing blow die to 0 min.
 2nd Opening Flushed tool, good surge, no help.

RECOVERY Total Feet 10
 Recovered 10 feet of Drilling mud

CALCULATED RECOVERY Gas Oil Water Mud
 Gravity (Oil) Test Water Chlorides PPM
 Test Area Temperature 112°F Mud System Chlorides 37,000 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2170	2127	PSI
	(B) First Initial Flow Pressure	58	48	PSI
	(C) First Final Flow Pressure	58	53	PSI
	(D) Initial Closed-In Pressure	392	390	PSI
	(E) Second Initial Flow Pressure	58	51	PSI
	(F) Second Final Flow Pressure	58	55	PSI
	(G) Final Closed-In Pressure	334	321	PSI
	(H) Final Hydrostatic Mud	2147	2105	PSI

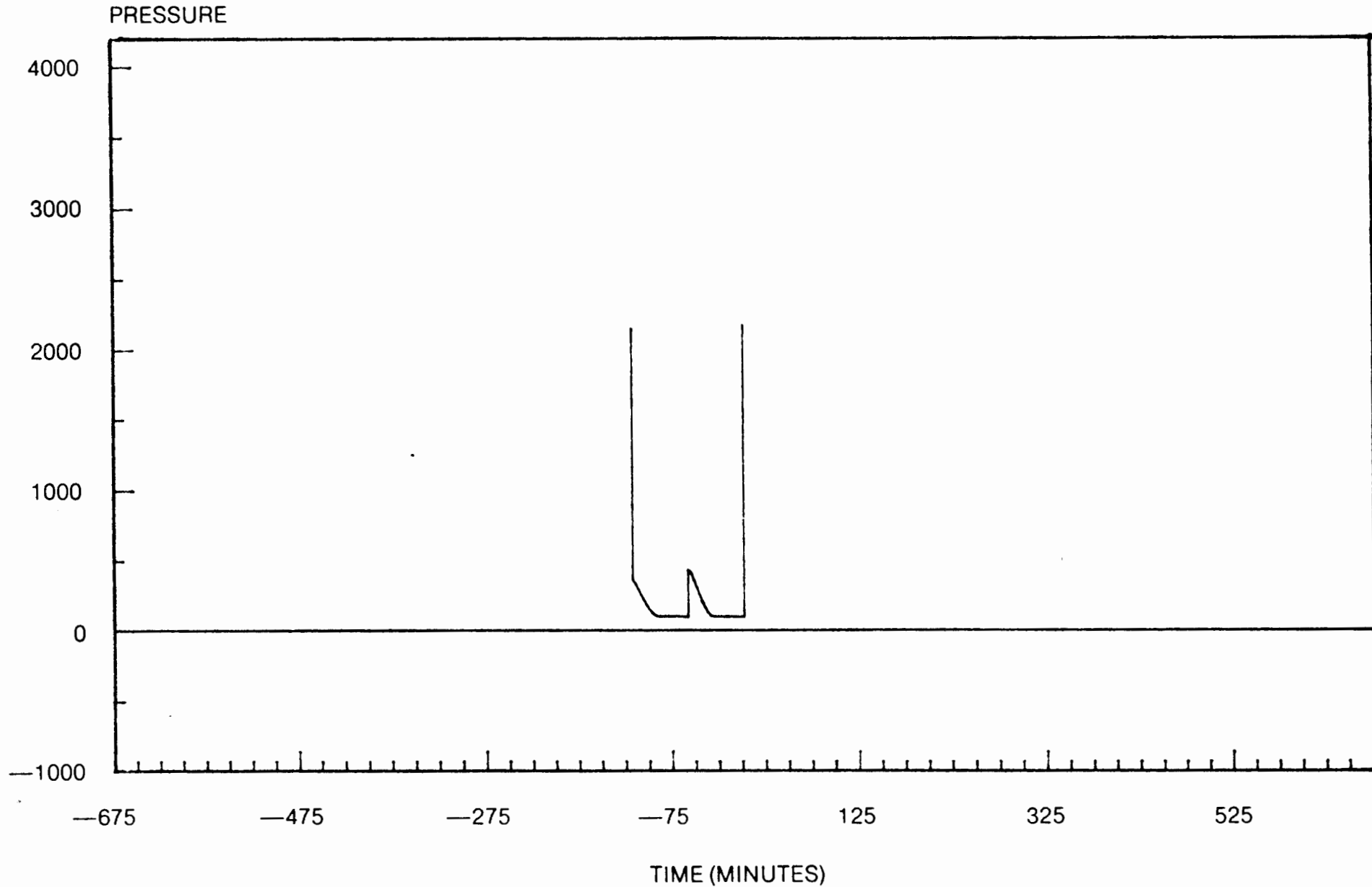
CRUDE OIL TESTING INC.

FOR: Moble C. Hoover

TEST 5333

DST 7

07/04/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5333

DST Number: 7 Recorder Number: 13251 Clock Number: 23832

First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
Mins. Press.	Mins. Press.	Mins. Press.	Mins. Press.
0 48	0 52	0 50	0 55
3 50	3 53	3 50	3 56
6 50	6 62	6 52	6 66
9 51	9 84	9 53	9 82
12 51	12 122	12 55	12 108
15 52	15 165	15 55	15 140
18 52	18 216	18 55	18 177
21 52	21 270	21 55	21 217
24 52	24 321	24 55	24 255
27 52	27 374	27 55	27 294
30 52	30 390	30 55	30 321

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 7

TEST TICKET NO. 5333

WELL NAME: Zachman #1

WELL LOCATION: 18-123-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3402.00	3.826	4.50
3	Weight Pipe	541.00	2.760	4.50
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
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	52.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4022.75		

CRUDE OIL TESTING, INC.

DATE 7/5/85

TEST TICKET NO. 5334

Company: Moble C. Hoover
 Company Address: NEC Plaza Suite 302 El Dorado AR 71730
 Location: Sec. 18 Twp. 12S Range 21W Co. Trego State KS
 Well Name & Number: Zachman #1 Code E14

ENGINEERING DATA	Elevation	2260 KB	Drill Pipe Length	3402	ID 3.8 "
	Mud Viscosity	48	Weight Pipe Length	541	ID 2.76"
	Mud Weight	9.9	Drill Collar Length		
	Water Loss	5.2	Top Packer Depth	3927	
	Type of Mud	Starch	Bottom Packer Depth	3932	
	Anchor Length	62	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 Cut	No	
	Bottom Choke	3/4	Recorder #	13251	
	Extra Equipment		None		

REMARKS DST #8

FORMATION	Arbuckle Zone	Test Type	Conventional
	Interval 3932 To 3994	Total Depth	3994
	Open 30 Shut In 30	Open 30 Shut In 30	
	Packer(s) Set 09:13AM	Started Off Bottom	11:15AM
	Blow 1st Opening Weak decreasing blow died in 9 min. 2nd Opening No blow.		

RECOVERY Total Feet 5
 Recovered 5 Feet of Drilling Mud

CALCULATED RECOVERY	Gas	Oil	Water	Mud
	Gravity (Oil)		Test Water Chlorides	PPM
	Test Area Temperature 114F		Mud System Chlorides	35,000 PPM

	FIELD READING	OFFICE READING	
PRESSURE (A) Initial Hydrostatic Mud	2204	2190	PSI
(B) First Initial Flow Pressure	69	54	PSI
(C) First Final Flow Pressure	69	60	PSI
(D) Initial Closed-In Pressure	621	624	PSI
(E) Second Initial Flow Pressure	69	54	PSI
(F) Second Final Flow Pressure	81	74	PSI
(G) Final Closed-In Pressure	518	518	PSI
(H) Final Hydrostatic Mud	2181	2155	PSI

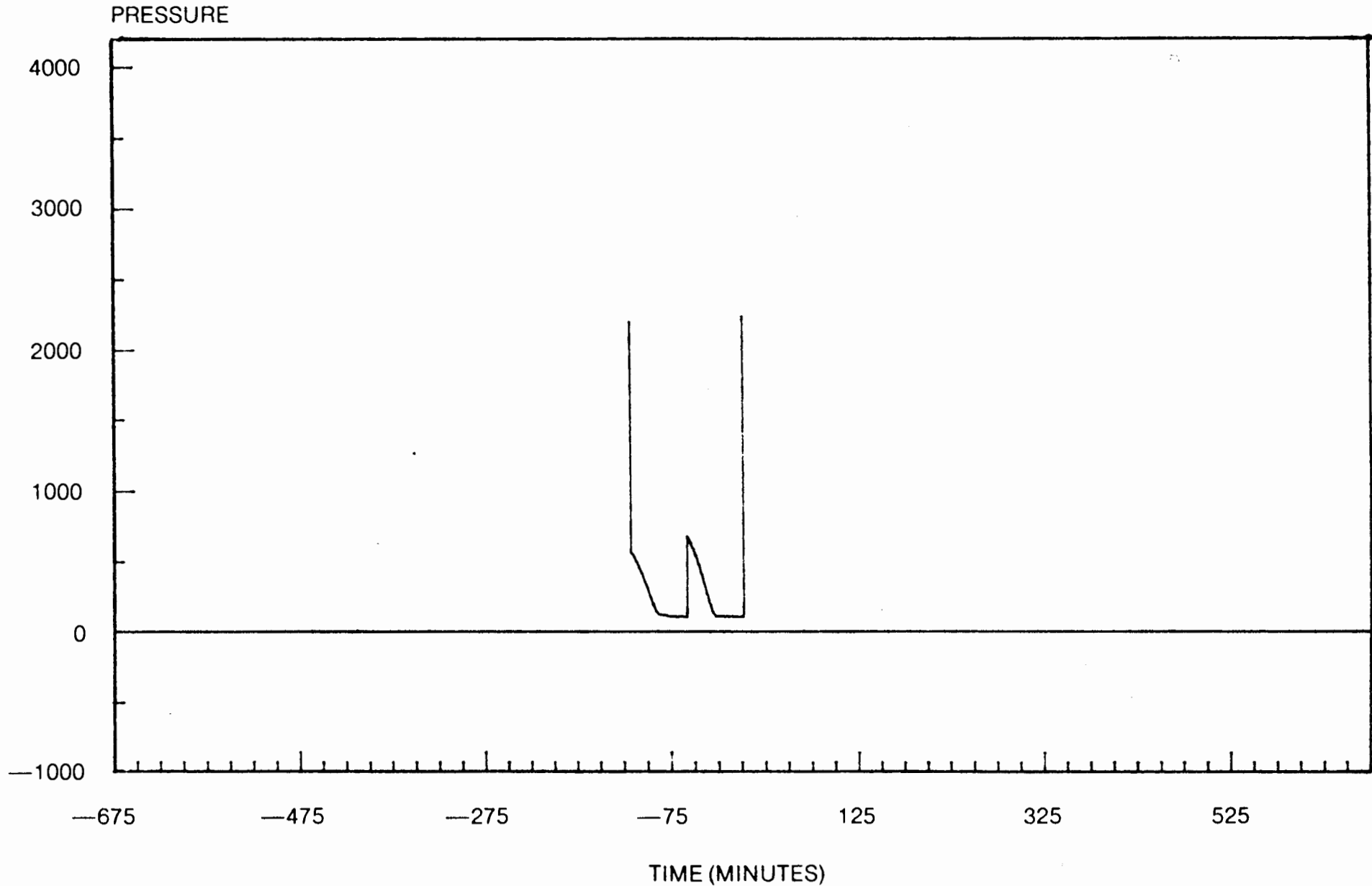
CRUDE OIL TESTING INC.

FOR: Moble C. Hoover

TEST 5334

DST 8

07/05/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5334

DST Number: 8 Recorder Number: 13251 Clock Number: 23832

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	53	0	59	0	53	0	73
3	53	3	88	3	55	3	96
6	53	6	150	6	56	6	147
9	56	9	217	9	56	9	200
12	56	12	291	12	56	12	262
15	56	15	361	15	57	15	313
18	56	18	429	18	57	18	366
21	56	21	490	21	63	21	411
24	58	24	543	24	67	24	453
27	59	27	590	27	71	27	495
30	59	30	624	30	73	30	517

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 8

TEST TICKET NO. 5334

WELL NAME: Zachman #1

WELL LOCATION: 18-12S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3402.00	3.826	4.50
3	Weight Pipe	541.00	2.750	4.50
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
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	58.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4028.75		

CRUDE OIL TESTING, INC.

DATE 7/5/85

TEST TICKET NO. 4160

Company: Moble C. Hoover
 Company Address: NBC Plaza Suite 302 El Dorado AR 71730
 Location: Sec. 18 Twp. 12S Range 21W Co. Trego State KS
 Well Name & Number: Zachman #1 Code E14

ENGINEERING DATA	Elevation	2260 KB	Drill Pipe Length	3402	ID 3.8 "
	Mud Viscosity	48	Weight Pipe Length	541	ID 2.76"
	Mud Weight	9.9	Drill Collar Length		
	Water Loss	5.2	Top Packer Depth	3927	
	Type of Mud	Starch	Bottom Packer Depth	3932	
	Anchor Length	63	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 #	13251	
	Extra Equipment		None		

REMARKS DST #9

FORMATION Arbuckle Zone Test Type Conventional
 Interval 3932 To 3995 Total Depth 3995
 Open 30 Shut In 60 Open 30 Shut In 60
 Packer(s) Set 07:58PM Started Off Bottom 11:00PM
 Blow 1st opening weak decreasing blow died in 7 min.
 2nd Opening No blow.

RECOVERY Total Feet 0
 Recovered 5 feet of Drilling mud

CALCULATED RECOVERY Gas Oil Water Mud
 Gravity (Oil) Test Water Chlorides PPM
 Test Area Temperature 113F Mud System Chlorides 35,000 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2204	2149	PSI
	(B) First Initial Flow Pressure	58	52	PSI
	(C) First Final Flow Pressure	58	50	PSI
	(D) Initial Closed-In Pressure	804	806	PSI
	(E) Second Initial Flow Pressure	58	55	PSI
	(F) Second Final Flow Pressure	69	71	PSI
	(G) Final Closed-In Pressure	690	689	PSI
	(H) Final Hydrostatic Mud	2181	2111	PSI

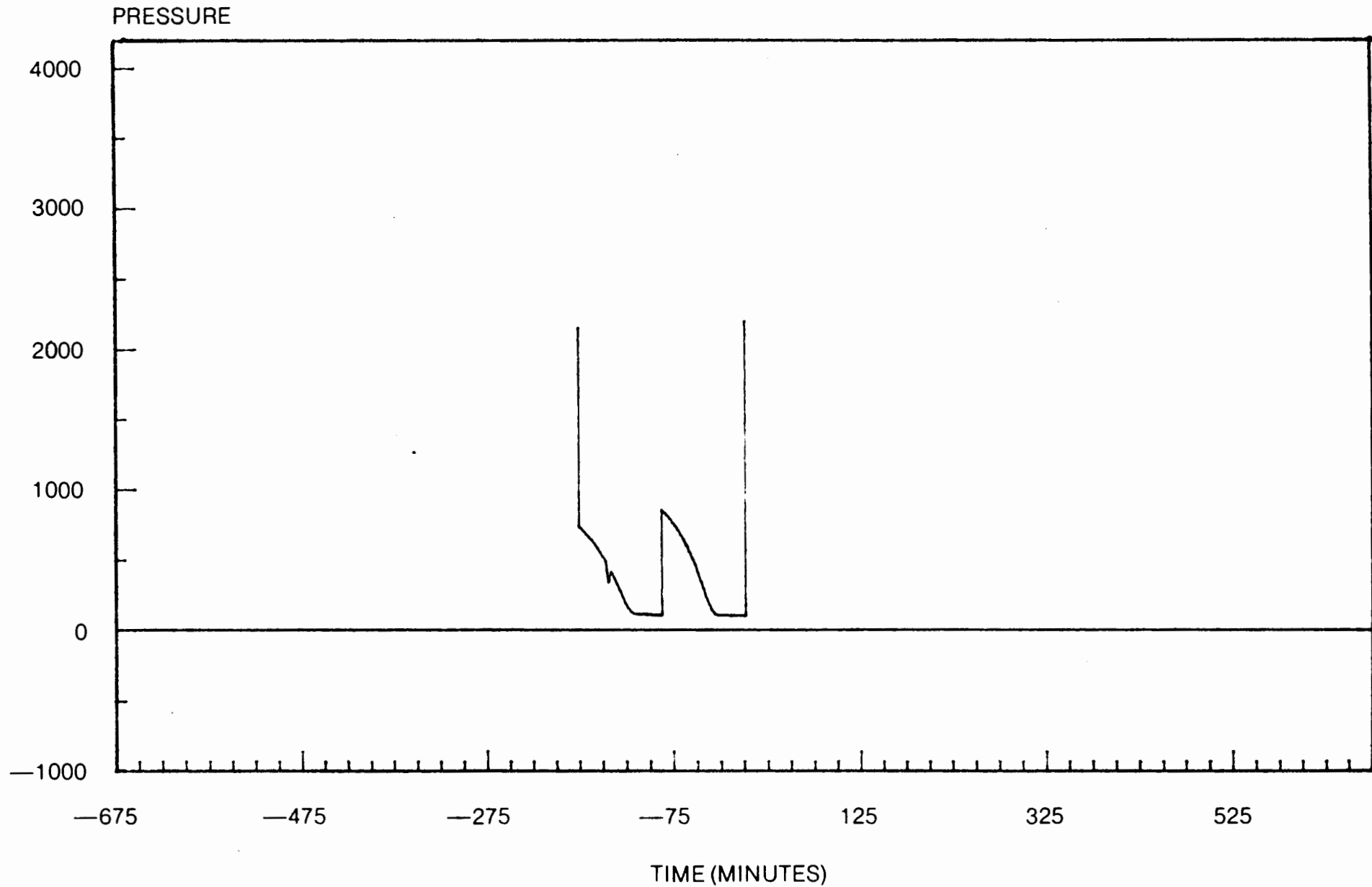
CRUDE OIL TESTING INC.

FOR: Moble C. Hoover

TEST 4160

DST 9

07/05/85



PRESSURE BREAKDOWN

TEST TICKET NO. 4160

DST Number: 9 Recorder Number: 13251 Clock Number: 23832

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	51	0	56	0	55	0	71
3	51	3	65	3	57	3	84
6	51	6	92	6	57	6	112
9	52	9	137	9	58	9	149
12	52	12	167	12	62	12	194
15	53	15	251	15	63	15	241
18	53	18	305	18	64	18	285
21	55	21	362	21	65	21	330
24	56	24	423	24	65	24	369
27	56	27	466	27	67	27	294
30	56	30	513	30	71	30	446
		33	558			33	479
		36	599			36	509
		39	633			39	540
		42	669			42	570
		45	697			45	596
		48	722			48	619
		51	751			51	641
		54	774			54	663
		57	793			57	682
		59	806			59	688

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DSI Number: 9

TEST TICKET NO. 4160

WELL NAME: Zachman #1

WELL LOCATION: 18-12S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3402.00	3.826	4.50
3	Weight Pipe	541.00	2.760	4.50
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
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	59.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4029.75		

CRUDE OIL TESTING, INC.

DATE 7/6/85

TEST TICKET NO. 4161

Company: Moble C. Hoover
 Company Address: NBC Plaza Suite 302 El Dorado AR 71730
 Location: Sec. 18 Twp. 12S Range 21W Co. Trego State KS
 Well Name & Number: Zachman #1 Code E14

ENGINEERING DATA	Elevation	2260 KB	Drill Pipe Length	3402	ID 3.8 "
	Mud Viscosity	48	Weight Pipe Length	541	ID 2.76"
	Mud Weight	9.9	Drill Collar Length		
	Water Loss	5.2	Top Packer Depth	3927	
	Type of Mud	Starch	Bottom Packer Depth	3932	
	Anchor Length	64	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 #	13251	
	Extra Equipment		None		

REMARKS DST #10

FORMATION Arbuckle Zone Test Type Conventional
 Interval 3932 To 3996 Total Depth 3996
 Open 30 Shut In 30 Open 30 Shut In 30
 Packer(s) Set 07:58AM Started Off Bottom 10:00AM
 Blow 1st Opening Weak decreasing blow died in 10 min.
 2nd Opening No blow.

RECOVERY Total Feet 10
 Recovered 10 feet of Drilling mud

CALCULATED RECOVERY Gas Oil Water Mud
 Gravity (Oil) Test Water Chlorides PPM
 Test Area Temperature 120F Mud System Chlorides 35,000 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2215	2209	PSI
	(B) First Initial Flow Pressure	58	53	PSI
	(C) First Final Flow Pressure	58	57	PSI
	(D) Initial Closed-In Pressure	507	503	PSI
	(E) Second Initial Flow Pressure	58	56	PSI
	(F) Second Final Flow Pressure	58	60	PSI
	(G) Final Closed-In Pressure	426	429	PSI
	(H) Final Hydrostatic Mud	2192	2142	PSI

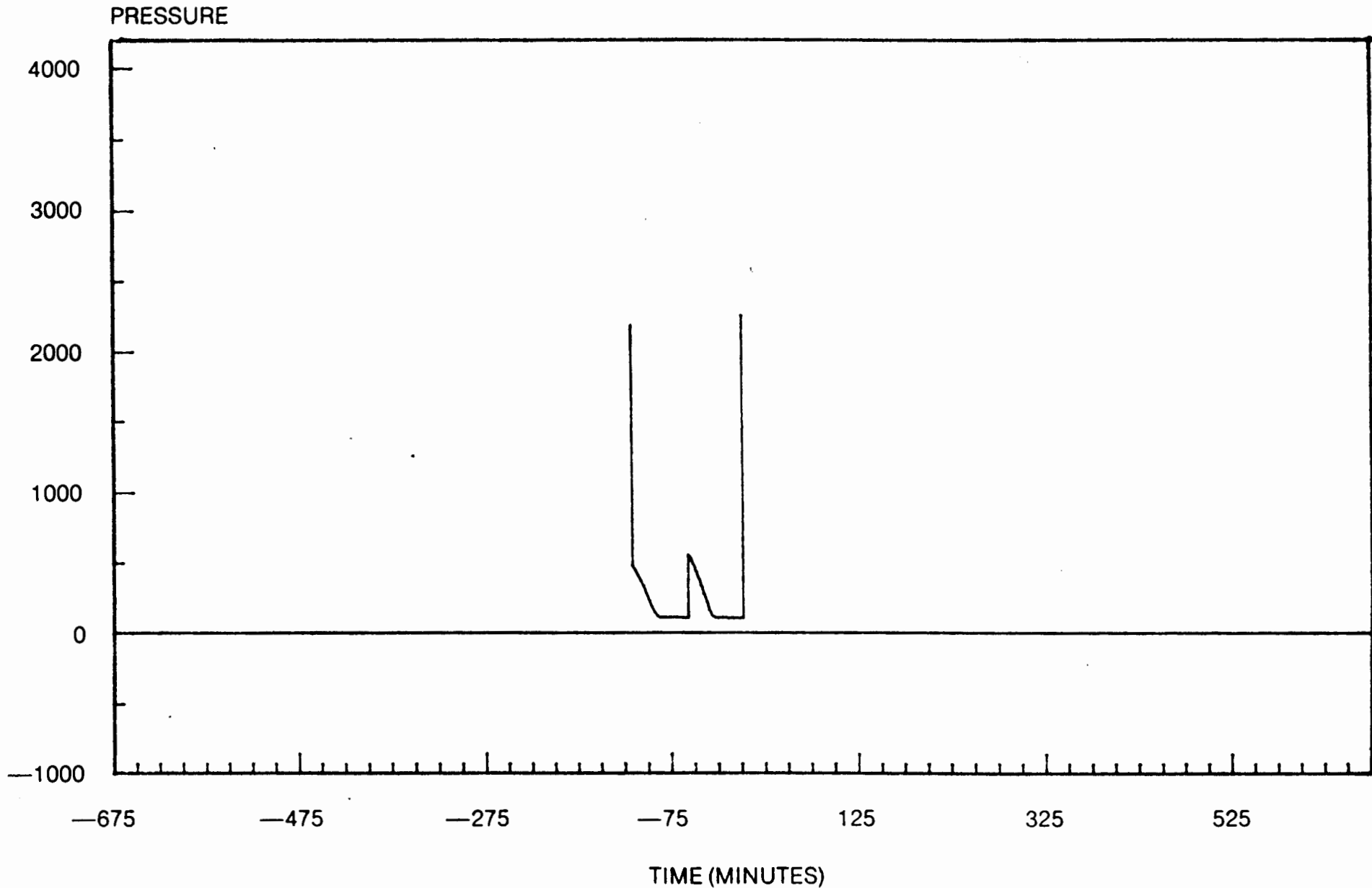
CRUDE OIL TESTING INC.

FOR: Moble C. Hoover

TEST 4161

DST 10

07/06/85



PRESSURE BREAKDOWN

TEST TICKET NO. 4161

DST Number: 10 Recorder Number: 13251 Clock Number: 23832

First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
Mins. Press.	Mins. Press.	Mins. Press.	Mins. Press.
0 52	0 57	0 56	0 59
3 52	3 71	3 57	3 72
6 52	6 110	6 58	6 99
9 52	9 172	9 59	9 139
12 53	12 229	12 59	12 186
15 53	15 286	15 59	15 233
18 56	18 344	18 59	18 282
21 56	21 391	21 59	21 323
24 56	24 440	24 59	24 362
27 56	27 466	27 59	27 403
30 57	29 502	30 59	30 429

EQUIPMENT DATA
TOOL SEQUENCE REPORT

DST Number: 10

TEST TICKET NO. 4151

WELL NAME: Zachman #1

WELL LOCATION: 18-12S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3402.00	3.826	4.50
3	Weight Pipe	541.00	2.760	4.50
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
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	60.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4030.75		