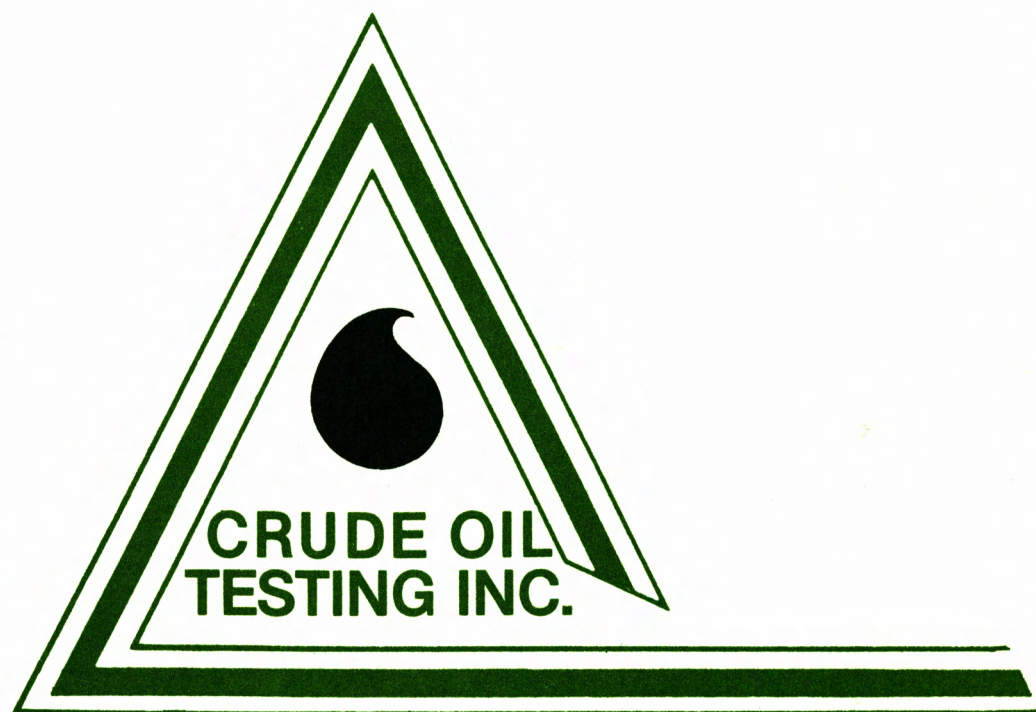


**COPY
CRUDE OIL
TESTING INC.**

DRILL STEM TEST REPORT



FORMATION TESTING SERVICE REPORT

CRUDE OIL TESTING, INC.

DATE 6/26/85

TEST TICKET NO. 5283

Company: A. Scott Ritchie
 Company Address: 125 N. Market Suite 950 Wichita KS 67202
 Location: Sec. 13 Twp. 11S Range 32W Co. Logan State KS
 Well Name & Number: Delzeit #1 Code E9

ENGINEERING DATA	Elevation	3010 KB	Drill Pipe Length	3238	ID 3.8 "
	Mud Viscosity	47	Weight Pipe Length	475	ID 2.76"
	Mud Weight	9.5	Drill Collar Length	248	ID 2.25"
	Water Loss	8.8	Top Packer Depth	3978	
	Type of Mud Chemical		Bottom Packer Depth	3983	
	Anchor Length	49	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 #	11085	
	Extra Equipment		None		

REMARKS DST #1

FORMATION	Toronto/Lans Zone A		Test Type Conventional	
	Interval 3983	To 4032	Total Depth 4032	
	Open 30	Shut In 45	Open 30	Shut In 45
	Packer(s) Set 08:37PM		Started Off Bottom 11:10PM	
	Blow 1st Opening Strong blow off bottom in 9 min. 2nd Opening Strong blow off bottom in 15 min.			

RECOVERY

Total Feet	878
Recovered	754 feet of Muddy frothy oil
Recovered	124 feet of Slightly oil out muddy water
Recovered	250 feet of Gas in pipe

CALCULATED RECOVERY	Gas	18.6	Oil	488.6	Water	272.32	Mud	98.48
	Gravity (Oil)				Test Water Chlorides 37,000 PPM			
	Test Area Temperature 118F				Mud System Chlorides 1,600 PPM			

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2047	2069	PSI
	(B) First Initial Flow Pressure	132	141	PSI
	(C) First Final Flow Pressure	297	304	PSI
	(D) Initial Closed-In Pressure	876	871	PSI
	(E) Second Initial Flow Pressure	352	352	PSI
	(F) Second Final Flow Pressure	396	404	PSI
	(G) Final Closed-In Pressure	865	851	PSI
	(H) Final Hydrostatic Mud	2037	2048	PSI

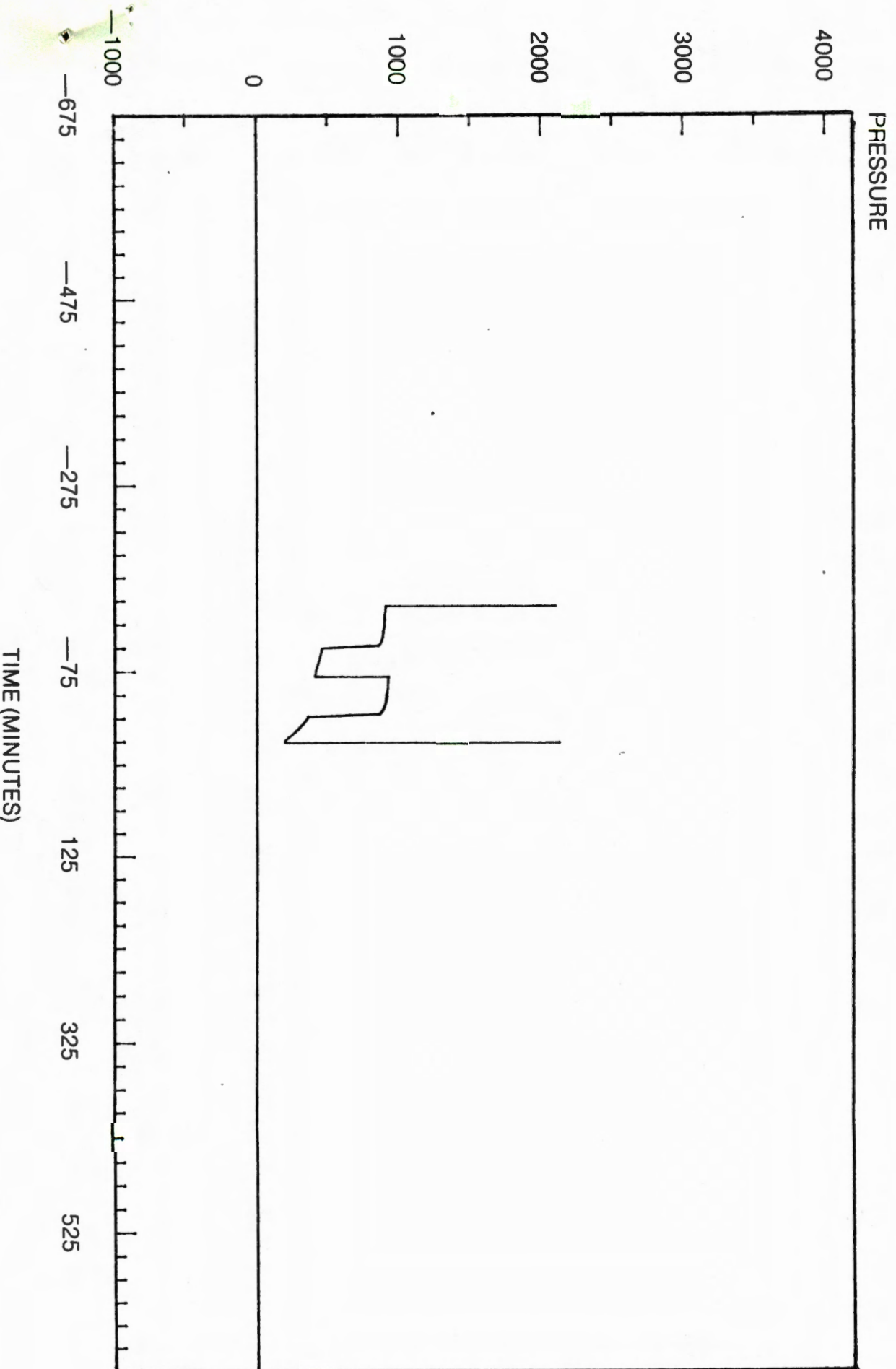
CRUDE OIL TESTING INC.

FOR: A. Scott Ritchie

TEST 5283

DST 1

06/26/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5283

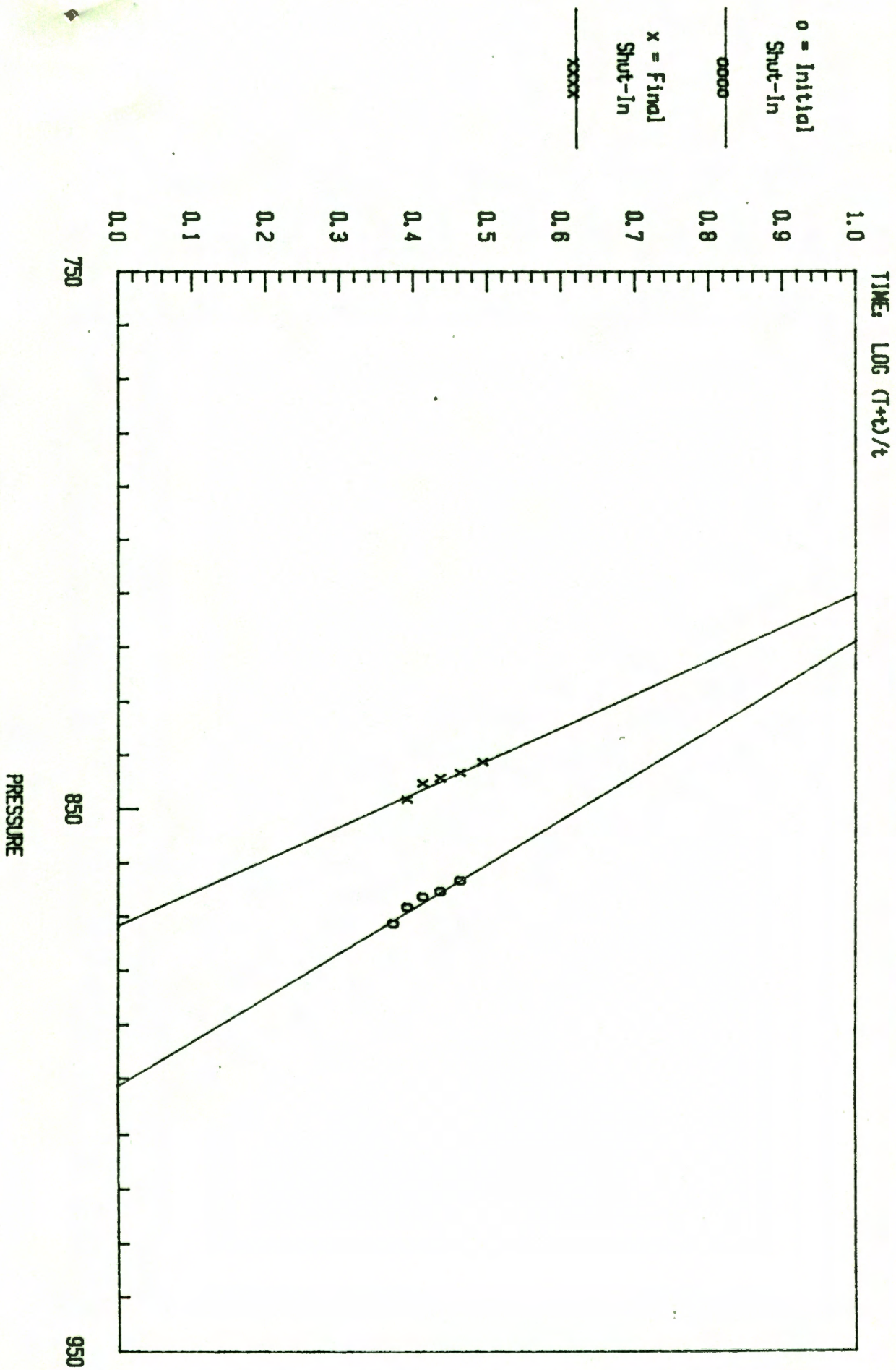
DST Number: 1 Recorder Number: 11085 Clock Number: 19124

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	141	0	303	0	352	0	403
3	144	3	806	3	355	3	802
6	168	6	825	6	357	6	816
9	194	9	837	9	364	9	823
12	214	12	843	12	368	12	830
15	235	15	849	15	376	15	833
18	253	18	852	18	382	18	836
21	271	21	856	21	387	21	839
24	285	24	857	24	394	24	841
27	299	27	861	27	398	27	841
28	303	30	863	30	403	30	843
		33	865			33	844
		36	866			36	845
		39	868			39	848
		42	871			42	849
		43	871			45	851
						46	851

CRUDE OIL TESTING INC TEST 5283 DST 1

FOR: A. Scott Ritchie

6/26/85



ZONE EVALUATION - Page 1

DST NUMBER 1

TEST TICKET NO. 5283

Company: A. Scott Ritchie

Date: 6/26/85

Drill Collar Feet	ID	Weight Pipe Feet	ID	Drill Pipe Feet	ID	Average ID	Gals/ Foot
248	2.250	241	2.760	0	3.800	2.5011	0.255

Bbls Recovered/Test = 3.0716 Est Bbls/Day = 76.2599 T = 58

PRESS. TIME		Initial Shut-In			
		T/t	(T+t)/t	LOG T/t	LOG (T+t)/t
871	42	1.381	2.381	0.14018	0.37675
868	39	1.487	2.487	0.17236	0.39571
866	36	1.611	2.611	0.20713	0.41683
865	33	1.758	2.758	0.24491	0.44053
863	30	1.933	2.933	0.28631	0.46736

Press. Time		Final Shut-In			
		T/t	(T+t)/t	Log T/t	Log (T+t)/t
848	39	1.487	2.487	0.17236	0.39571
845	36	1.611	2.611	0.20713	0.41683
844	33	1.758	2.758	0.24491	0.44053
843	30	1.933	2.933	0.28631	0.46736
841	27	2.148	3.148	0.33206	0.49806

Time Option is Log (T+t)/t								
IP(0)	IP(1)	FP(0)	FP(1)	M	Kh/B	DR	Q1	Pts
918.0	793.2	883.3	794.1	89.2	138.941	1.898	144.751	1,3
917.6	793.4	882.5	794.3	88.3	140.445	1.908	145.492	1-3
905.3	812.5	873.3	807.5	65.9	188.258	1.217	92.802	1-4
901.4	818.5	871.7	809.8	61.9	200.259	1.294	98.718	1-5

Graph Data For Points

Initial		Final	
Time	Pressure	Time	Pressure
0.3767	871	0.3957	848
0.3957	868	0.4168	845
0.4168	866	0.4405	844
0.4405	865	0.4673	843
0.4673	863	0.4980	841

Graph Data For Lines

0	901.39	0	871.67
1	818.45	1	809.75

ZONE EVALUATION - Page 2

DST Number 1

TEST TICKET NO. 5283

Company: A. Scott Ritchie

Date: 6/26/85

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

$$M = G_0 - G_1 \quad 61.92$$

Damage Ratio:

$$DR = .183 \frac{P_s - P_f}{M} \quad 1.29$$

Effective Pay:

$$\frac{Kh}{B} = \frac{162.6 Q}{M} \quad 200.26 \text{ Md. Ft.}$$

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

$$Q_1 = Q DR \quad 98.72 \text{ Bbls/Day}$$

Production:

3.07 Bbls/Hour

$$Q = \frac{1440 R}{T} \quad 76.26 \text{ Bbls/Day}$$

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: 1****TEST TICKET NO. 5283****WELL NAME: Delzeit #1****WELL LOCATION: 13-11S-32W**

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3238.00	3.826	4.50
3	Weight Pipe	475.00	2.760	4.50
4	Drill Collar - 6"	248.00	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
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	45.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
Total Depth		4033.75		

CALCULATED RECOVERY ANALYSIS

DST Number: 1

TEST TICKET NO. 5283

Sample #	Total Feet	***** Gas %	***** Feet	***** Oil %	***** Feet	***** Mud %	***** Feet
1	134	0.00	0.00	50.00	67.00	30.00	40.20
2	124	5.00	6.20	60.00	74.40	15.00	18.60
3	124	5.00	6.20	65.00	80.60	5.00	6.20
4	124	0.00	0.00	80.00	99.20	2.00	2.48
5	124	5.00	6.20	60.00	74.40	5.00	6.20
6	124	0.00	0.00	65.00	80.60	10.00	12.40
7	62	0.00	0.00	20.00	12.40	15.00	9.30
8	62	0.00	0.00	0.00	0.00	5.00	3.10
TOTAL	<u>878</u>	2.12	<u>18.60</u>	55.65	<u>488.60</u>	11.22	<u>98.48</u>

Sample #	***** Water %	*** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	20.00	26.80			
2	20.00	24.80			
3	25.00	31.00	37,000		
4	18.00	22.32			
5	30.00	37.20			
6	25.00	31.00			
7	65.00	40.30			
8	95.00	58.90	56,000		
TOTAL	31.02	<u>272.32</u>			

CRUDE OIL TESTING, INC.

DATE 6/27/85

TEST TICKET NO. 5284

Company: A. Scott Ritchie
 Company Address: 125 N. Market Suite 950 Wichita KS 67202
 Location: Sec. 13 Twp. 11S Range 32W Co. Logan State KS
 Well Name & Number: Delzeit #1 Code E9

ENGINEERING DATA	Elevation	3010 KB	Drill Pipe Length	3263	ID 3.8 "
	Mud Viscosity	42	Weight Pipe Length	506	ID 2.76"
	Mud Weight	9.4	Drill Collar Length	248	ID 2.25"
	Water Loss	9.4	Top Packer Depth		
	Type of Mud Chemical		Bottom Packer Depth	4034	
	Anchor Length	38	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 #	11086	
	Extra Equipment		Circ. sub pin		

REMARKS DST #2
 Read bottom chart.

FORMATION Lansing Zone C & D Test Type Conventional
 Interval 4034 To 4072 Total Depth 4072
 Open 30 Shut In 30 Open 30 Shut In 30
 Packer(s) Set 04:27PM Started Off Bottom 06:30PM
 Blow 1st Opening Strong blow off bottom in 5 min.
 2nd Opening Strong blow off bottom in 12 min.

RECOVERY Total Feet 1136
 Recovered 1136 feet of Muddy water with scum of oil

CALCULATED RECOVERY Gas Oil Water 932.7 Mud 203.3
 Gravity (Oil) Test Water Chlorides 47,000 PPM
 Test Area Temperature 110F Mud System Chlorides 2,000 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2033	2055	PSI
	(B) First Initial Flow Pressure	66	69	PSI
	(C) First Final Flow Pressure	393	385	PSI
	(D) Initial Closed-In Pressure	1096	1103	PSI
	(E) Second Initial Flow Pressure	404	346	PSI
	(F) Second Final Flow Pressure	524	537	PSI
	(G) Final Closed-In Pressure	1096	1091	PSI
	(H) Final Hydrostatic Mud	2022	2036	PSI

CRUDE OIL TESTING INC.

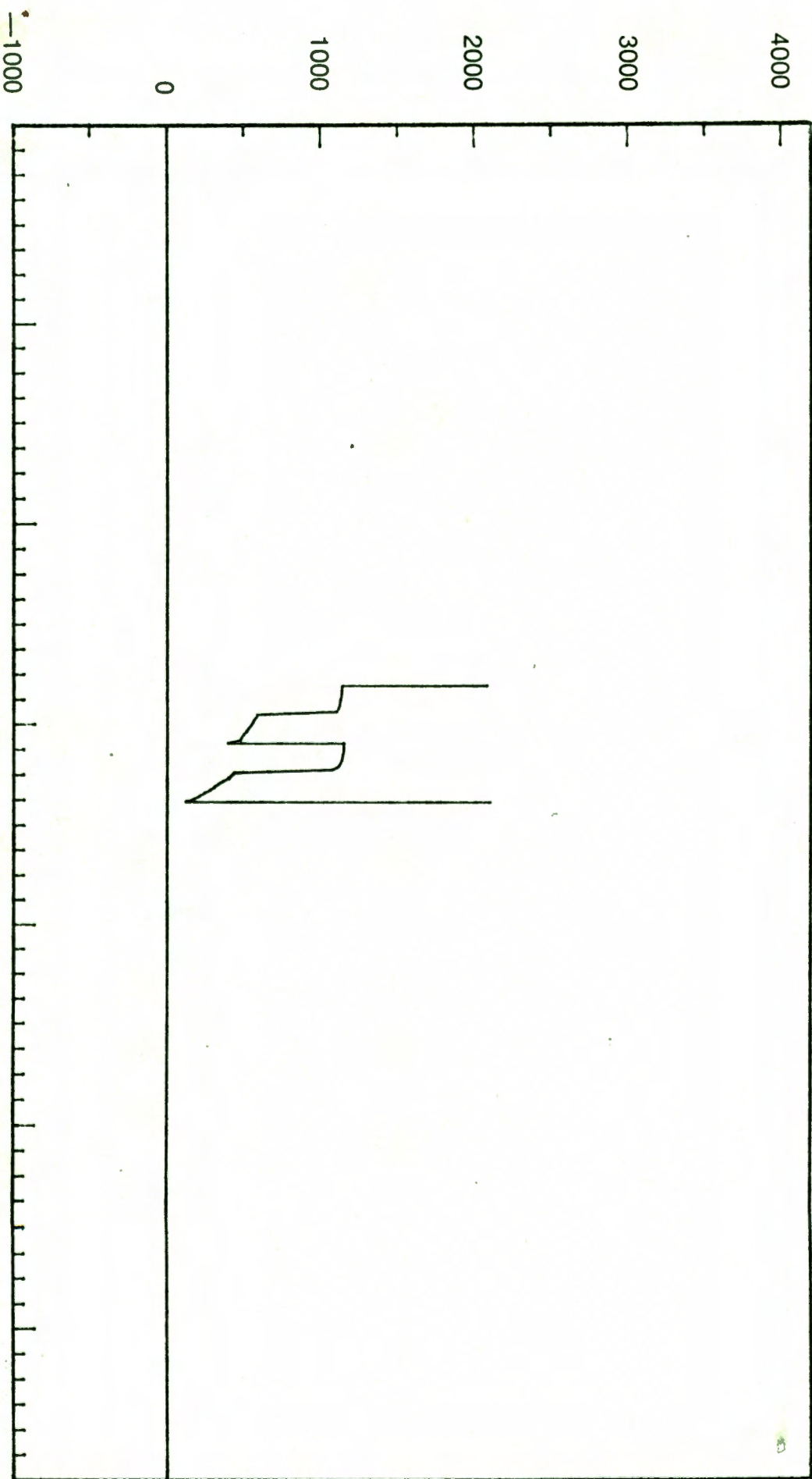
FOR: A. Scott Ritchie

TEST 5284

DST 2

06/27/85

PRESSURE



TIME (MINUTES)

PRESSURE BREAKDOWN

TEST TICKET NO. 5284

DST Number: 2

Recorder Number: 11086

Clock Number: 22348

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	69	0	385	0	345	0	536
3	121	3	1029	3	425	3	1053
6	161	6	1065	6	435	6	1066
9	194	9	1078	9	447	9	1073
12	227	12	1087	12	465	12	1076
15	258	15	1092	15	480	15	1080
18	284	18	1096	18	495	18	1085
21	319	21	1099	21	508	21	1088
24	351	24	1100	24	519	24	1088
27	372	27	1102	27	532	27	1090
29	385	29	1102	29	536	29	1090

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 2

TEST TICKET NO. 5284

WELL NAME: Delzeit #1

WELL LOCATION: 13-11S-32W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3263.00	3.826	4.50
3	Weight Pipe	506.00	2.760	4.50
4	Drill Collar - 6"	248.00	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
14	Packer	5.35	1.530	6.75
6	Anchor	34.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4073.40		

CALCULATED RECOVERY ANALYSIS

DST Number: 2

TEST TICKET NO. 5284

Sample #	Total Feet	***** Gas %	***** Feet	***** Oil %	***** Feet	***** Mud %	***** Feet
1	82	0.00	0.00	0.00	0.00	40.00	32.80
2	124	0.00	0.00	0.00	0.00	30.00	37.20
3	806	0.00	0.00	0.00	0.00	15.00	120.90
4	124	0.00	0.00	0.00	0.00	10.00	12.40
TOTAL	<u>1136</u>	0.00	<u>0.00</u>	0.00	<u>0.00</u>	17.90	<u>203.30</u>

Sample #	***** Water %	***** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	60.00	49.20			
2	70.00	86.80	47,000		
3	85.00	685.10			
4	90.00	111.60	52,000		
TOTAL	82.10	<u>932.70</u>			

CRUDE OIL TESTING, INC.

DATE 6/28/85

TEST TICKET NO. 5285

Company: A. Soott Ritchie
 Company Address: 125 N. Market Suite 950 Wichita KS 67202
 Location: Sec. 13 Twp. 11S Range 32W Co. Logan State KS
 Well Name & Number: Delzeit #1 Code E9

ENGINEERING DATA	Elevation	3010 KB	Drill Pipe Length	3439	ID 3.8 "
	Mud Viscosity	45	Weight Pipe Length	443	ID 2.76"
	Mud Weight	9.6	Drill Collar Length	248	ID 2.25"
	Water Loss	10.4	Top Packer Depth	4147	
	Type of Mud Chemical		Bottom Packer Depth	4152	
	Anchor Length	93	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 #	11085	
	Extra Equipment		None		

REMARKS DST #3

FORMATION Lansing Zone G H I J Test Type Conventional
 Interval 4152 To 4245 Total Depth 4245
 Open 45 Shut In 45 Open 45 Shut In 45
 Packer(s) Set 08:27PM Started Off Bottom 11:30PM
 Blow 1st Opening Weak blow 2.25 inches in bucket.
 2nd Opening Weak blow 2 inches in bucket.

RECOVERY Total Feet 72
 Recovered 72 feet of Gassy oil out mud

CALCULATED Gas 12.4 Oil 19.6 Water Mud 40
 RECOVERY Gravity (Oil) Test Water Chlorides PPM
 Test Area Temperature 118F Mud System Chlorides 2,200 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2155	2192	PSI
	(B) First Initial Flow Pressure	110	105	PSI
	(C) First Final Flow Pressure	110	118	PSI
	(D) Initial Closed-In Pressure	909	919	PSI
	(E) Second Initial Flow Pressure	121	127	PSI
	(F) Second Final Flow Pressure	121	137	PSI
	(G) Final Closed-In Pressure	909	903	PSI
	(H) Final Hydrostatic Mud	2144	2173	PSI

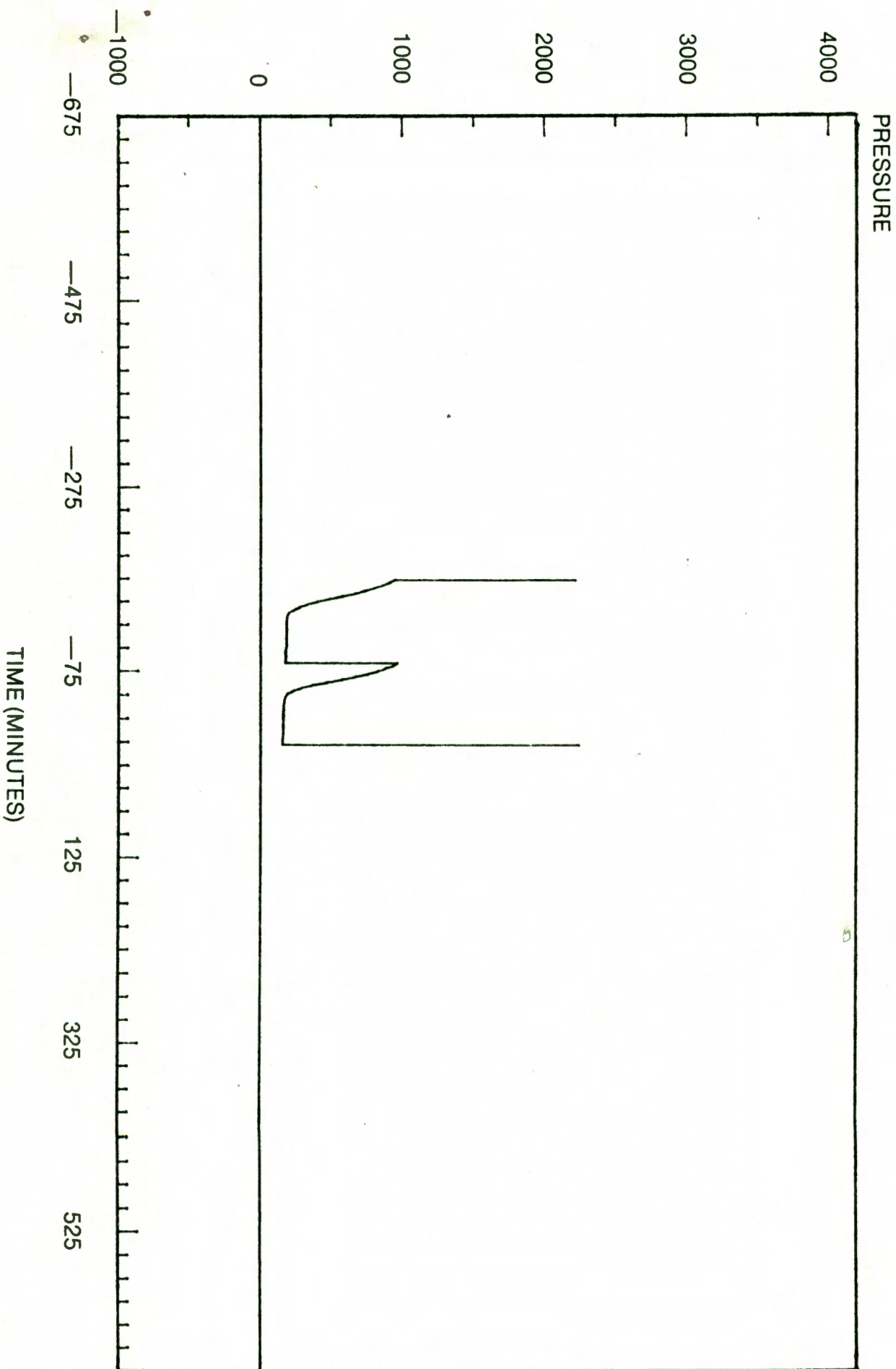
CRUDE OIL TESTING INC.

FOR: A. Scott Ritchie

TEST 5285

DST 3

06/28/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5285

DST Number: 3

Recorder Number: 11085

Clock Number: 19124

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	104	0	118	0	126	0	136
3	106	3	121	3	128	3	140
6	107	6	126	6	129	6	143
9	109	9	143	9	129	9	154
12	111	12	183	12	130	12	189
15	111	15	239	15	133	15	228
18	111	18	314	18	135	18	284
21	111	21	415	21	135	21	352
24	112	24	522	24	135	24	441
27	113	27	624	27	135	27	536
30	113	30	710	30	135	30	624
33	113	33	780	33	136	33	696
36	113	36	833	36	136	36	760
39	115	39	889	39	136	39	819
42	115	42	918	42	136	42	868
45	118			45	136	45	902

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 3

TEST TICKET NO. 5285

WELL NAME: Delzeit #1

WELL LOCATION: 13-11S-32W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3439.00	3.826	4.50
3	Weight Pipe	443.00	2.760	4.50
4	Drill Collar - 6"	248.00	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
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	89.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4246.75		

CALCULATED RECOVERY ANALYSIS

DST Number: 3

TEST TICKET NO. 5285

Sample #	Total Feet	***** Gas %	***** Feet	***** Oil %	***** Feet	***** Mud %	***** Feet
1	10	0.00	0.00	10.00	1.00	90.00	9.00
2	62	20.00	12.40	30.00	18.60	50.00	31.00
TOTAL	<u>72</u>	17.22	<u>12.40</u>	27.22	<u>19.60</u>	55.56	<u>40.00</u>

Sample #	***** Water %	***** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	0.00	0.00			
2	0.00	0.00			
TOTAL	0.00	<u>0.00</u>			

CRUDE OIL TESTING, INC.

DATE 6/29/85

TEST TICKET NO. 5319

Company: A. Scott Ritchie
 Company Address: 125 N. Market Suite 950 Wichita KS 67202
 Location: Sec. 13 Twp. 11S Range 32W Co. Logan State KS
 Well Name & Number: Delzeit #1 Code B9

ENGINEERING DATA	Elevation	3010 KB	Drill Pipe Length	3464	ID 3.8 "
	Mud Viscosity	42	Weight Pipe Length	506	ID 2.76"
	Mud Weight	9.6	Drill Collar Length	248	ID 2.25"
	Water Loss	8.8	Top Packer Depth		
	Type of Mud Chemical		Bottom Packer Depth	4240	
	Anchor Length	40	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 #	11085	
	Extra Equipment		None		

REMARKS DST #4

FORMATION	Lansing	Zone K	Test Type	Conventional
	Interval	4240 To 4280	Total Depth	4280
	Open	45	Shut In	45
	Packer(s) Set	10:27AM	Started Off Bottom	01:30PM
	Blow 1st Opening Weak blow 2.5 inches in bucket.			
2nd Opening Weak blow 1.5 inches in bucket.				

RECOVERY Total Feet 196
 Recovered 196 feet of Watery mud with scum of oil

CALCULATED RECOVERY	Gas	Oil	Water	65.4	Mud	130.6
	Gravity (Oil)		Test Water Chlorides	24,000 PPM		
	Test Area Temperature	118F	Mud System Chlorides	2,400 PPM		

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2209	2230	PSI
	(B) First Initial Flow Pressure	77	74	PSI
	(C) First Final Flow Pressure	99	97	PSI
	(D) Initial Closed-In Pressure	1148	1156	PSI
	(E) Second Initial Flow Pressure	132	125	PSI
	(F) Second Final Flow Pressure	143	143	PSI
	(G) Final Closed-In Pressure	1148	1146	PSI
	(H) Final Hydrostatic Mud	2198	2184	PSI

CRUDE OIL TESTING INC.

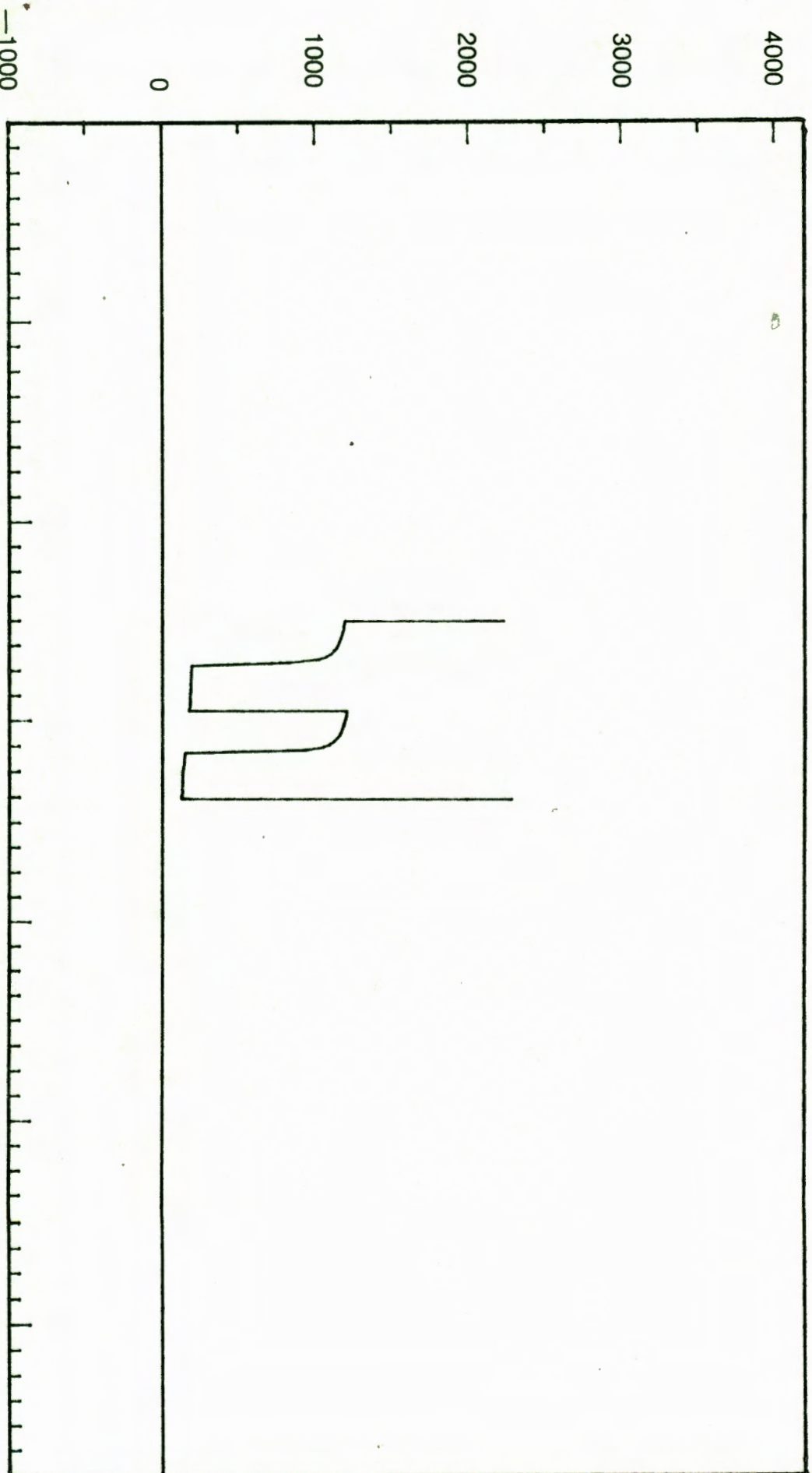
FOR: A. Scott Ritchie

TEST 5319

DST 4

06/29/85

PRESSURE



TIME (MINUTES)

PRESSURE BREAKDOWN

TEST TICKET NO. 5319

DST Number: 4

Recorder Number: 11085

Clock Number: 19124

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins. Press.		Mins. Press.		Mins. Press.		Mins. Press.	
0	74	0	97	0	124	0	143
3	74	3	884	3	128	3	780
6	78	6	1002	6	130	6	972
9	78	9	1049	9	131	9	1026
12	78	12	1074	12	131	12	1058
15	78	15	1094	15	131	15	1075
18	78	18	1108	18	133	18	1092
21	79	21	1119	21	134	21	1101
24	80	24	1127	24	135	24	1109
27	81	27	1134	27	135	27	1117
30	85	30	1139	30	137	30	1125
33	88	33	1146	33	137	33	1130
36	90	36	1151	36	139	36	1136
39	92	39	1154	39	139	39	1137
42	95	42	1155	42	141	42	1142
45	97			45	143	45	1146

EQUIPMENT DATA
TOOL SEQUENCE REPORT

DST Number: 4

TEST TICKET NO. 5319

WELL NAME: Delzeit #1

WELL LOCATION: 13-118-32W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3464.00	3.826	4.50
3	Weight Pipe	506.00	2.760	4.50
4	Drill Collar - 6"	248.00	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
14	Packer	5.35	1.530	6.75
6	Anchor	36.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4276.40		

CALCULATED RECOVERY ANALYSIS

DST Number: 4

TEST TICKET NO. 5319

Sample #	Total Feet	***** Gas %	***** Gas Feet	***** Oil %	***** Oil Feet	***** Mud %	***** Mud Feet
1	10	0.00	0.00	0.00	0.00	97.00	9.70
2	62	0.00	0.00	0.00	0.00	75.00	46.50
3	62	0.00	0.00	0.00	0.00	60.00	37.20
4	62	0.00	0.00	0.00	0.00	60.00	37.20
TOTAL	<u>196</u>	0.00	<u>0.00</u>	0.00	<u>0.00</u>	66.63	<u>130.60</u>

Sample #	**** Water %	*** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	3.00	0.30			
2	25.00	15.50	24,000		
3	40.00	24.80			
4	40.00	24.80	27,000		
TOTAL	33.37	<u>65.40</u>			

CRUDE OIL TESTING, INC.

DATE 6/30/85

TEST TICKET NO. 5320

Company: A. Scott Ritchie
 Company Address: 125 N. Market Suite 950 Wichita KS 67202
 Location: Sec. 13 Twp. 11S Range 32W Co. Logan State KS
 Well Name & Number: Delzeit #1 Code E9

ENGINEERING DATA	Elevation	3010 KB	Drill Pipe Length	3569	ID 3.8 "
	Mud Viscosity	42	Weight Pipe Length	506	ID 2.76"
	Mud Weight	9.6	Drill Collar Length	248	ID 2.25"
	Water Loss	8.8	Top Packer Depth		
	Type of Mud Chemical		Bottom Packer Depth	4340	
	Anchor Length	35	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 #	11085	
	Extra Equipment		None		

REMARKS DST #5
 Blow back on shutins.

FORMATION	Marmaton	Zone	Test Type	Conventional
	Interval 4340	To 4375	Total Depth	4375
	Open 30	Shut In 30	Open 30	Shut In 30
	Packer(s) Set	05:27AM	Started Off Bottom	07:30AM
	Blow 1st Opening Strong blow off bottom in 5 min.			
	2nd Opening Strong blow off bottom in 10 min.			

RECOVERY Total Feet 387
 Recovered 377 feet of Clean gassy oil
 Recovered 10 feet of Muddy gassy oil
 Recovered 789 feet of Gas in pipe

CALCULATED RECOVERY	Gas	74.9	Oil	307.6	Water		Mud	4.5
	Gravity (Oil)	44	Test Water Chlorides		PPM			
	Test Area Temperature	122F	Mud System Chlorides	2,400	PPM			

PRESSURE		FIELD	OFFICE	
		READING	READING	
(A)	Initial Hydrostatic Mud	2284	2281	PSI
(B)	First Initial Flow Pressure	99	97	PSI
(C)	First Final Flow Pressure	132	130	PSI
(D)	Initial Closed-In Pressure	1452	1473	PSI
(E)	Second Initial Flow Pressure	187	189	PSI
(F)	Second Final Flow Pressure	198	206	PSI
(G)	Final Closed-In Pressure	1398	1414	PSI
(H)	Final Hydrostatic Mud	2274	2259	PSI

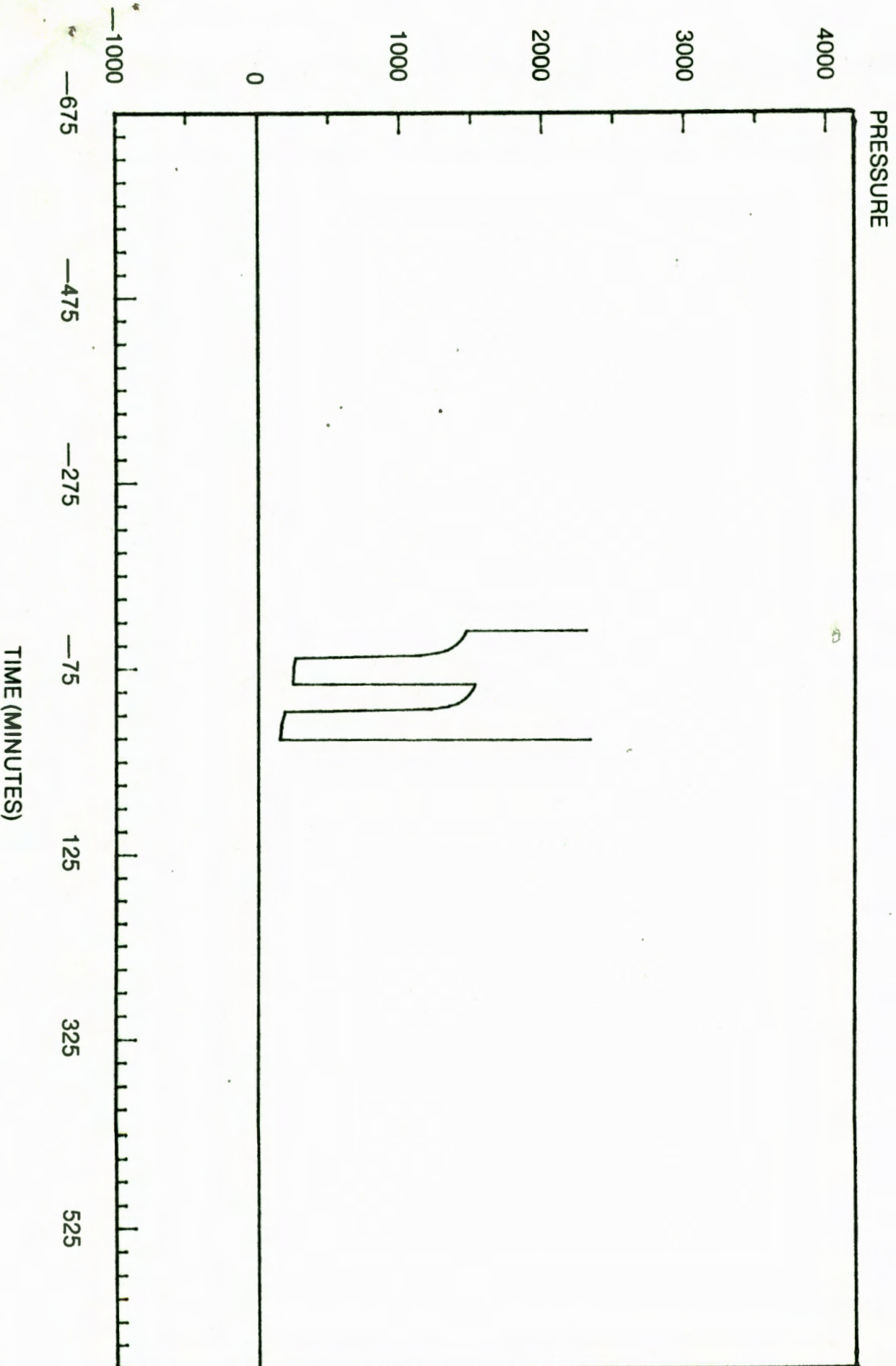
CRUDE OIL TESTING INC.

FOR: A. Scott Ritchie

TEST 5320

DST 5

06/30/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5320

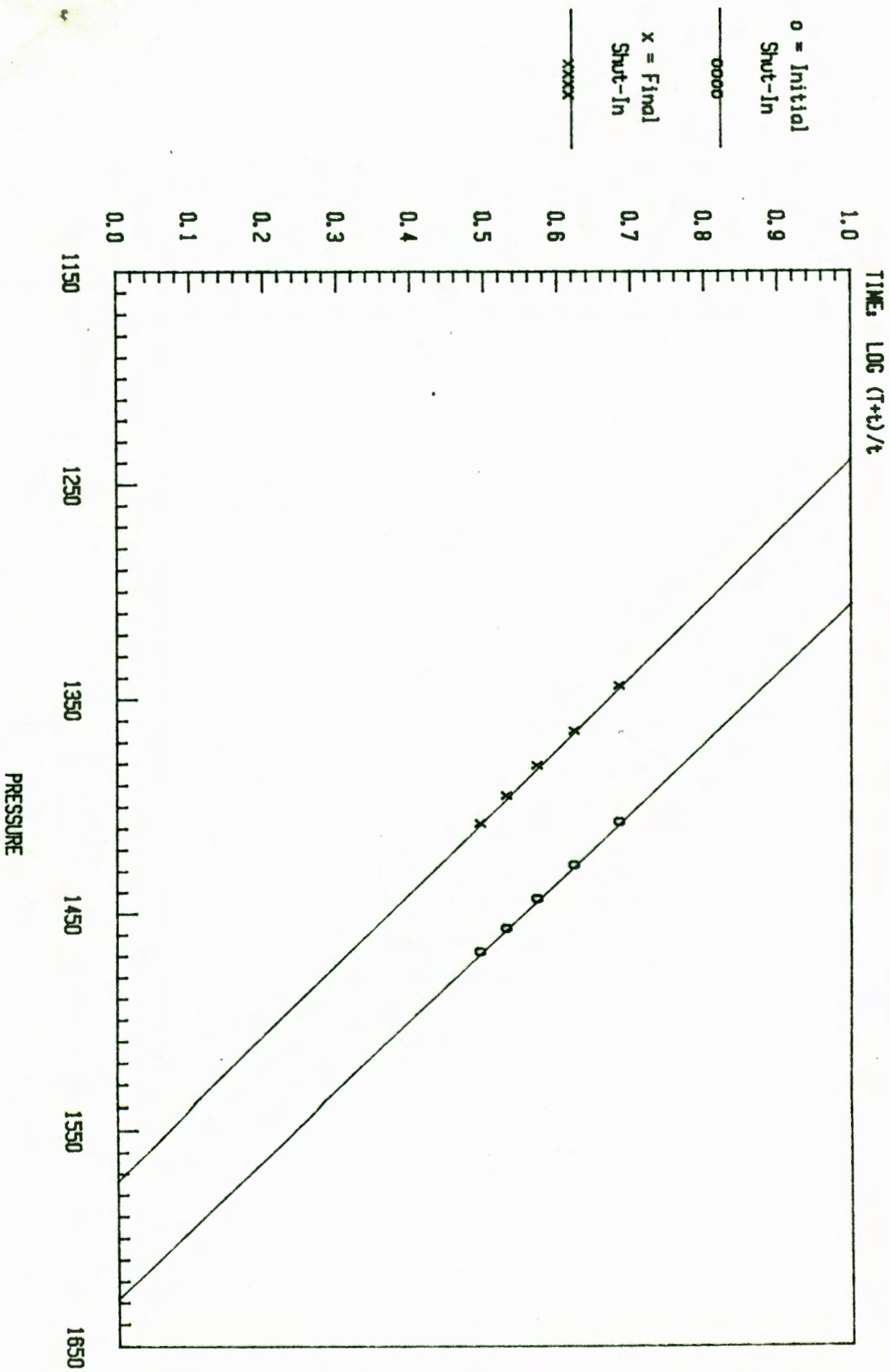
DST Number: 5 Recorder Number: 11085 Clock Number: 19124

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	97	0	130	0	188	0	206
3	100	3	1169	3	189	3	1086
6	102	6	1290	6	191	6	1217
9	103	9	1350	9	192	9	1281
12	106	12	1381	12	195	12	1315
15	108	15	1406	15	195	15	1343
18	111	18	1426	18	195	18	1364
21	117	21	1442	21	198	21	1380
24	122	24	1456	24	201	24	1394
27	129	27	1467	27	206	27	1407
30	130	30	1472	28	206	30	1414

CRUDE OIL TESTING INC TEST 5320 DST 5

FOR: A. Scott Ritchie

6/30/85



ZONE EVALUATION - Page 1

DST NUMBER 5

TEST TICKET NO. 5320

Company: A. Scott Ritchie

Date: 6/30/85

Drill Collar Feet	ID	Weight Pipe Feet	ID	Drill Pipe Feet	ID	Average ID	Gals/ Foot
248	2.250	60	2.760	0	3.800	2.3488	0.225

Bbls Recovered/Test = 1.7054 Est Bbls/Day = 42.3401 T = 58

Initial Shut-In					
PRESS.	TIME	T/t	(T+t)/t	LOG T/t	LOG (T+t)/t
1467	27	2.148	3.148	0.33206	0.49806
1456	24	2.417	3.417	0.38322	0.53360
1442	21	2.762	3.762	0.44121	0.57541
1426	18	3.222	4.222	0.50816	0.62554
1406	15	3.867	4.867	0.58734	0.68723

Final Shut-In					
Press.	Time	T/t	(T+t)/t	Log T/t	Log (T+t)/t
1407	27	2.148	3.148	0.33206	0.49806
1394	24	2.417	3.417	0.38322	0.53360
1380	21	2.762	3.762	0.44121	0.57541
1364	18	3.222	4.222	0.50816	0.62554
1343	15	3.867	4.867	0.58734	0.68723

Time Option is Log (T+t)/t								
IP(0)	IP(1)	FP(0)	FP(1)	M	Kh/B	DR	Q1	Pts
1628.0	1304.8	1580.8	1231.8	349.1	19.723	1.596	67.579	1,3
1628.3	1304.8	1580.4	1231.8	348.6	19.747	1.597	67.609	1-3
1628.0	1305.0	1573.9	1237.7	336.3	20.472	1.619	68.537	1-4
1628.2	1304.9	1573.6	1238.0	335.6	20.517	1.620	68.594	1-5

Graph Data For Points

Initial		Final	
Time	Pressure	Time	Pressure
0.4980	1467	0.4980	1407
0.5336	1456	0.5336	1394
0.5754	1442	0.5754	1380
0.6255	1426	0.6255	1364
0.6872	1406	0.6872	1343

Graph Data For Lines

0	1628.18	0	1573.56
1	1304.91	1	1238.00

ZONE EVALUATION - Page 2

DST Number 5

TEST TICKET NO. 5320

Company: A. Scott Ritchie

Date: 6/30/85

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

$$M = G_0 - G_1 \quad 335.56$$

Damage Ratio:

$$DR = .183 \frac{P_s - P_f}{M} \quad 1.62$$

Effective Pay:

$$\frac{K_h}{B} = \frac{162.6 Q}{M} \quad 20.52 \text{ Md. Ft.}$$

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

$$Q_1 = Q DR \quad 68.59 \text{ Bbls/Day}$$

Production:

$$1.71 \text{ Bbls/Hour}$$

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

$$42.34 \text{ Bbls/Day}$$

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: 5

TEST TICKET NO. 5320

WELL NAME: Delzeit #1

WELL LOCATION: 13-11S-32W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3569.00	3.826	4.50
3	Weight Pipe	506.00	2.760	4.50
4	Drill Collar - 6"	248.00	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
14	Packer	5.35	1.530	6.75
6	Anchor	31.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
Total Depth		4376.40		

CALCULATED RECOVERY ANALYSIS

DST Number: 5

TEST TICKET NO. 5320

Sample #	Total Feet	***** Gas %	***** Feet	***** Oil %	***** Feet	***** Mud %	***** Feet
1	15	10.00	1.50	90.00	13.50	0.00	0.00
2	124	30.00	37.20	70.00	86.80	0.00	0.00
3	124	10.00	12.40	90.00	111.60	0.00	0.00
4	114	20.00	22.80	80.00	91.20	0.00	0.00
5	10	10.00	1.00	45.00	4.50	45.00	4.50
TOTAL	<u>387</u>	19.35	<u>74.90</u>	79.48	<u>307.60</u>	1.16	<u>4.50</u>

Sample #	***** Water %	***** Feet	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			
5	0.00	0.00			
TOTAL	0.00	<u>0.00</u>			

CRUDE OIL TESTING, INC.

DATE 6/30/85

TEST TICKET NO. 5321

Company: A. Scott Ritchie
 Company Address: 125 N. Market Suite 950 Wichita KS 67202
 Location: Sec. 13 Twp. 11S Range 32W Co. Logan State KS
 Well Name & Number: Delzeit #1 Code E9

ENGINEERING DATA	Elevation	3010 KB	Drill Pipe Length	3651	ID 3.8 "
	Mud Viscosity	40	Weight Pipe Length	475	ID 2.76"
	Mud Weight	9.6	Drill Collar Length	248	ID 2.25"
	Water Loss	10.4	Top Packer Depth		
	Type of Mud Chemical		Bottom Packer Depth	4391	
	Anchor Length	60	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 #	11085	
	Extra Equipment		None		

REMARKS DST #6

FORMATION	Pawnee	Zone	Test Type	Conventional
	Interval 4391	To 4451	Total Depth	4451
	Open 45	Shut In 45	Open 45	Shut In 45
	Packer(s) Set	10:57PM	Started Off Bottom	02:00AM
	Blow 1st Opening Weak increasing to good 8 inches in bucket. 2nd Opening Weak increasing to fair 6 inches in bucket.			

RECOVERY Total Feet 496
 Recovered 496 feet of Muddy water with scum of oil

CALCULATED RECOVERY	Gas	Oil	Water 198.4	Mud 297.6
	Gravity (Oil)		Test Water Chlorides	38,000 PPM
	Test Area Temperature 122F		Mud System Chlorides	2,200 PPM

		FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2306	2326	PSI
	(B) First Initial Flow Pressure	77	94	PSI
	(C) First Final Flow Pressure	198	211	PSI
	(D) Initial Closed-In Pressure	920	934	PSI
	(E) Second Initial Flow Pressure	242	260	PSI
	(F) Second Final Flow Pressure	308	306	PSI
	(G) Final Closed-In Pressure	920	920	PSI
	(H) Final Hydrostatic Mud	2295	2290	PSI

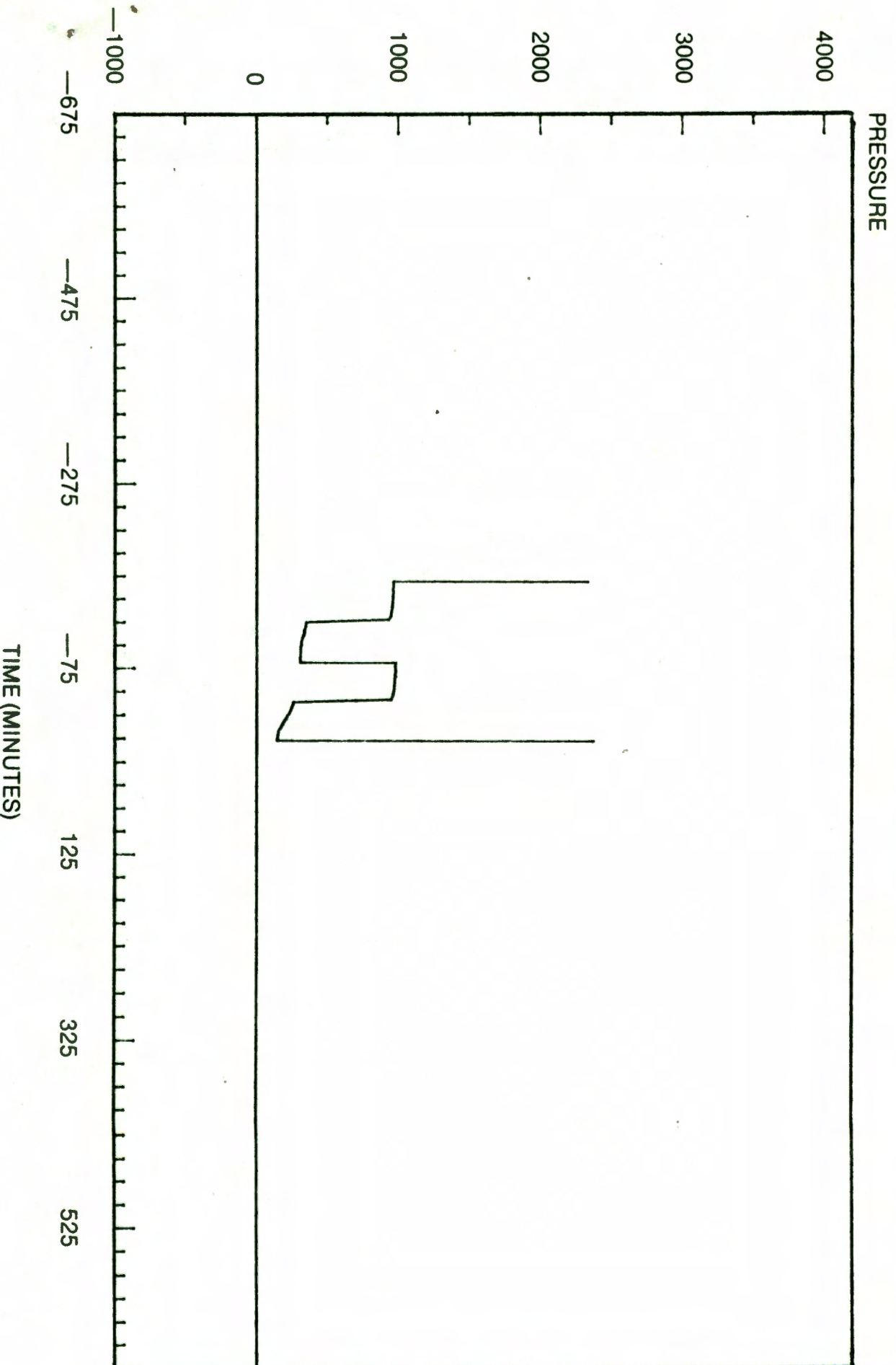
CRUDE OIL TESTING INC.

FOR: A. Scott Ritchie

TEST 5321

DST 6

06/30/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5321

DST Number: 6

Recorder Number: 11085

Clock Number: 19124

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	93	0	210	0	259	0	306
3	100	3	900	3	259	3	886
6	100	6	910	6	259	6	898
9	104	9	916	9	261	9	902
12	113	12	921	12	262	12	906
15	125	15	924	15	263	15	909
18	135	18	925	18	266	18	910
21	146	21	926	21	268	21	912
24	159	24	928	24	271	24	914
27	170	27	930	27	277	27	915
30	184	30	930	30	284	30	916
33	192	33	933	33	290	33	917
36	199	36	933	36	293	36	917
39	207	39	933	39	298	39	920
41	210	42	934	42	304	42	920
		43	934	44	306	45	920

EQUIPMENT DATA
TOOL SEQUENCE REPORT

DST Number: 6

TEST TICKET NO. 5321

WELL NAME: Delzeit #1

WELL LOCATION: 13-118-32W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3651.00	3.826	4.50
3	Weight Pipe	475.00	2.760	4.50
4	Drill Collar - 6"	248.00	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
14	Packer	5.35	1.530	6.75
6	Anchor	56.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4452.40		

CALCULATED RECOVERY ANALYSIS

DST Number: 6

TEST TICKET NO. 5321

Sample #	Total Feet	***** Gas %	***** Feet	***** Oil %	***** Feet	***** Mud %	***** Feet
1	124	0.00	0.00	0.00	0.00	95.00	117.80
2	124	0.00	0.00	0.00	0.00	55.00	68.20
3	124	0.00	0.00	0.00	0.00	50.00	62.00
4	124	0.00	0.00	0.00	0.00	40.00	49.60
TOTAL	<u>496</u>	0.00	<u>0.00</u>	0.00	<u>0.00</u>	60.00	<u>297.60</u>

Sample #	***** Water %	***** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	5.00	6.20			
2	45.00	55.80	36,000		
3	50.00	62.00			
4	60.00	74.40	38,000		
TOTAL	40.00	<u>198.40</u>			

CRUDE OIL TESTING, INC.

DATE 7/1/85

TEST TICKET NO. 5322

Company: A. Scott Ritchie
 Company Address: 125 N. Market Suite 950 Wichita KS 67202
 Location: Sec. 13 Twp. 11S Range 32W Co. Logan State KS
 Well Name & Number: Delzeit #1 Code E9

ENGINEERING DATA	Elevation	3010 KB	Drill Pipe Length	3712	ID 3.8 "
	Mud Viscosity	43	Weight Pipe Length	475	ID 2.76"
	Mud Weight	9.6	Drill Collar Length	248	ID 2.25"
	Water Loss	10.6	Top Packer Depth	4452	
	Type of Mud Chemical		Bottom Packer Depth	4457	
	Anchor Length	69	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 #	11085	
	Extra Equipment		None		

REMARKS DST #7
 Blow back on final shutin.

FORMATION	Myrick Sta. Zone	Test Type Conventional
	Interval 4457 To 4526	Total Depth 4526
	Open 30 Shut In 30	Open 30 Shut In 30
	Packer(s) Set 07:27PM	Started Off Bottom 09:30PM
	Blow 1st Opening Strong blow off bottom of bucket in 7 min.	
2nd Opening Strong blow off bottom of bucket in 12 min.		

RECOVERY Total Feet 898
 Recovered 30 feet of Gassy slightly oil out watery mud
 Recovered 372 feet of Gassy slightly oil out muddy water
 Recovered 496 feet of Muddy water with scum of oil
 Recovered 340 feet of Gas in pipe

CALCULATED RECOVERY	Gas 151.8 Oil 27.8 Water 511.4 Mud 207
	Gravity (Oil) Test Water Chlorides 36,000 PPM
	Test Area Temperature 121F Mud System Chlorides 2,000 PPM

	FIELD READING	OFFICE READING	
PRESSURE	(A) Initial Hydrostatic Mud	2317	2385 PSI
	(B) First Initial Flow Pressure	143	143 PSI
	(C) First Final Flow Pressure	330	341 PSI
	(D) Initial Closed-In Pressure	800	825 PSI
	(E) Second Initial Flow Pressure	396	400 PSI
	(F) Second Final Flow Pressure	441	464 PSI
	(G) Final Closed-In Pressure	800	823 PSI
	(H) Final Hydrostatic Mud	2306	2343 PSI

CRUDE OIL TESTING INC.

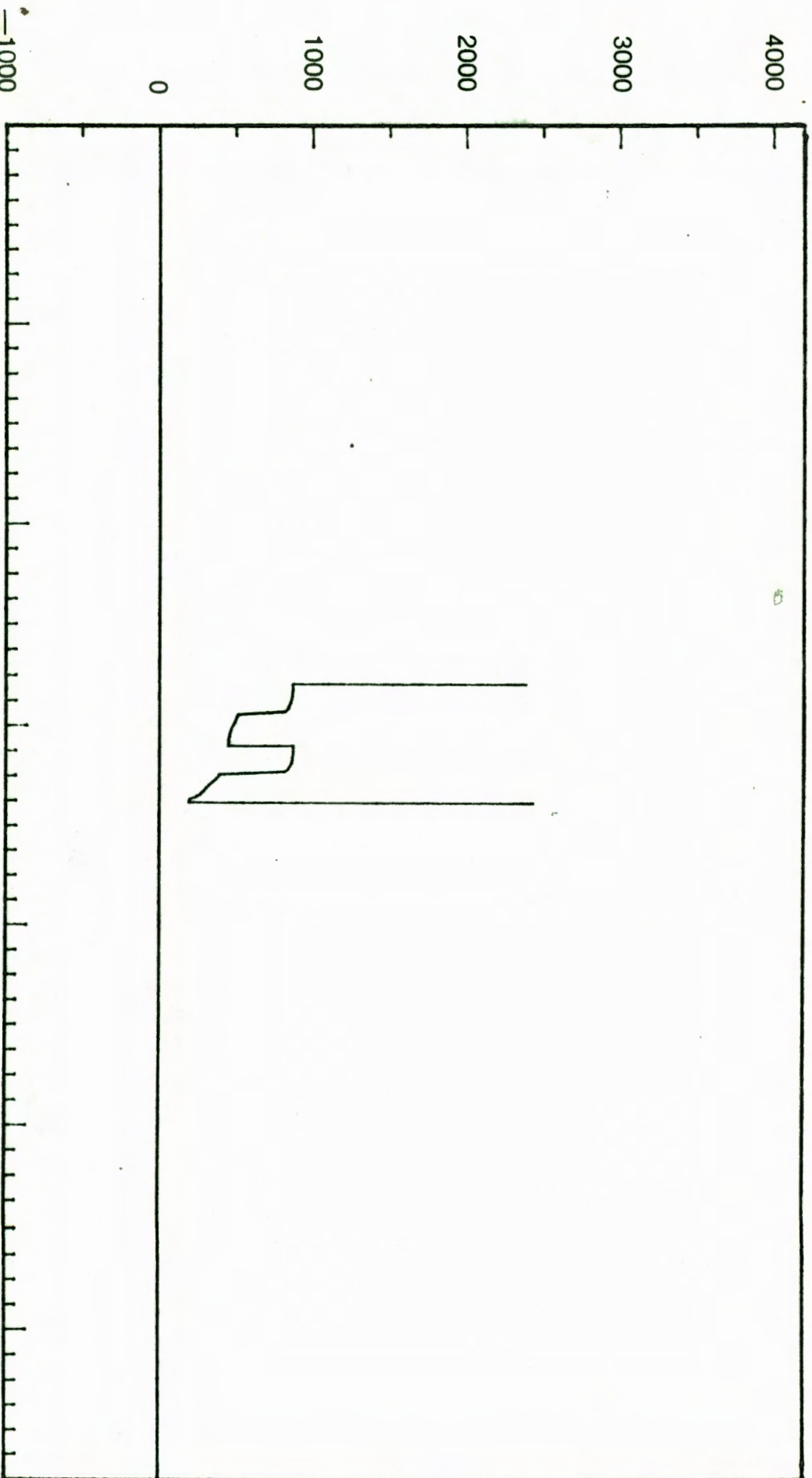
FOR: A. Scott Ritchie

TEST 5322

DST 7

07/01/85

PRESSURE



TIME (MINUTES)

PRESSURE BREAKDOWN

TEST TICKET NO. 5322

DST Number: 7

Recorder Number: 11085

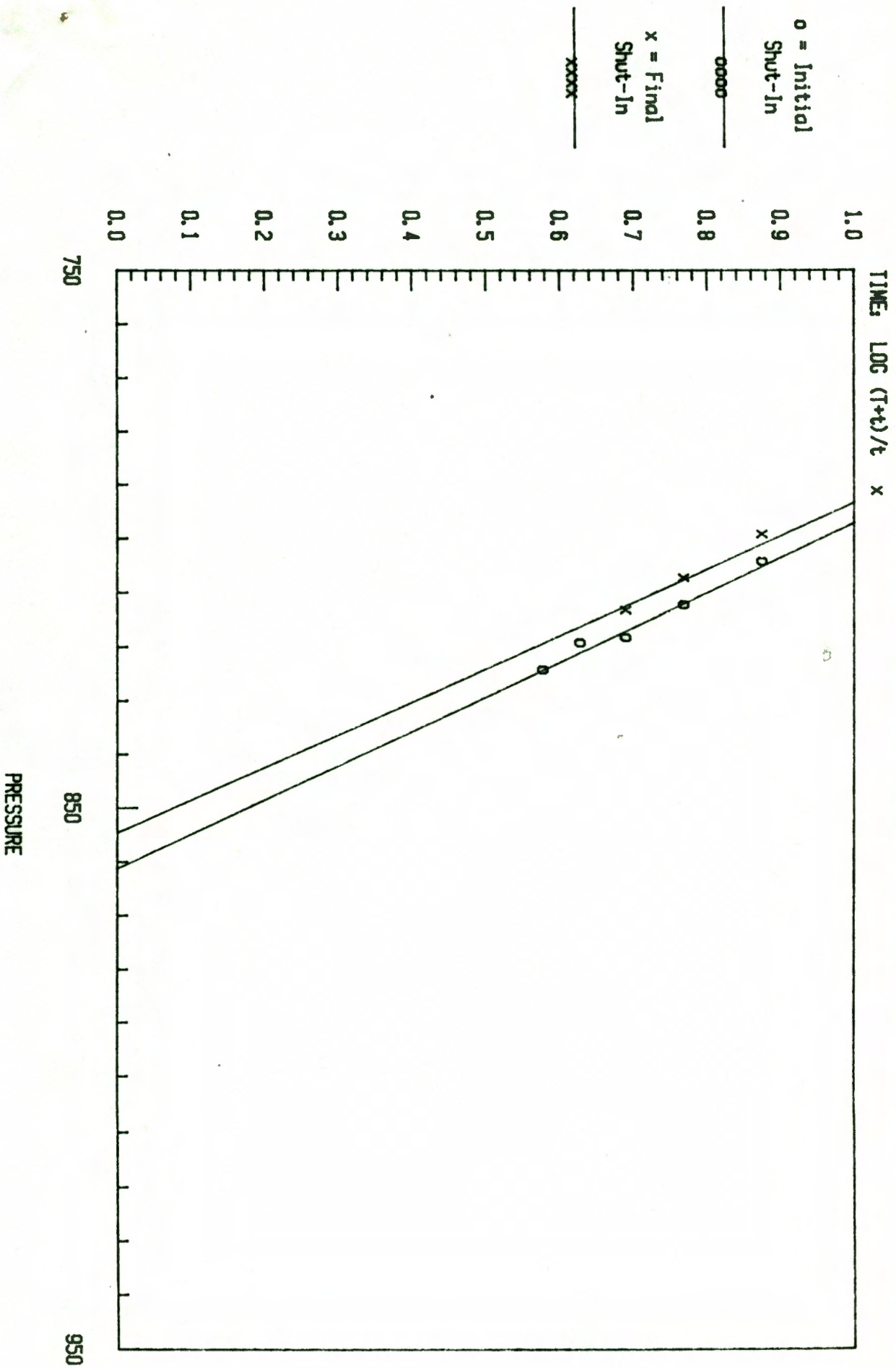
Clock Number: 19124

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins.	Press.	Mins.	Press.	Mins.	Press.	Mins.	Press.
0	143	0	341	0	400	0	463
3	150	3	772	3	403	3	774
6	195	6	792	6	403	6	791
9	223	9	804	9	407	9	799
12	242	12	812	12	410	12	807
15	259	15	818	15	417	15	813
18	278	18	819	18	424	18	817
21	301	21	824	21	435	21	818
24	322	24	825	24	444	24	820
27	340	27	825	27	452	27	822
28	341	29	825	30	461	30	823
				31	463	31	823

CRUDE OIL TESTING INC TEST 5322 DST 7

FOR: A. Scott Ritchie

7/1/85



ZONE EVALUATION - Page 1

DST NUMBER 7

TEST TICKET NO. 5322

Company: A. Scott Ritchie

Date: 7/1/85

Drill Collar Feet	ID	Weight Pipe Feet	ID	Drill Pipe Feet	ID	Average ID	Gals/ Foot
28	2.250	0	2.760	0	3.800	2.2500	0.207

Bbls Recovered/Test = 0.1390 Est Bbls/Day = 3.3934 T = 59

Initial Shut-In

PRESS.	TIME	T/t	(T+t)/t	LOG T/t	LOG (T+t)/t
824	21	2.810	3.810	0.44863	0.58087
819	18	3.278	4.278	0.51558	0.63122
818	15	3.933	4.933	0.59476	0.69314
812	12	4.917	5.917	0.69167	0.77208
804	9	6.556	7.556	0.81661	0.87827

Final Shut-In

Press.	Time	T/t	(T+t)/t	Log T/t	Log (T+t)/t
813	15	3.933	4.933	0.59476	0.69314
807	12	4.917	5.917	0.69167	0.77208
799	9	6.556	7.556	0.81661	0.87827
791	6	9.833	10.833	0.99270	1.03476
774	3	19.667	20.667	1.29373	1.31527

Time Option is Log (T+t)/t

IP(0)	IP(1)	FP(0)	FP(1)	M	Kh/B	DR	Q1	Pts
855.0	801.6	865.4	789.8	75.6	7.296	1.753	5.947	1,3
853.4	801.3	865.4	789.8	75.6	7.298	1.753	5.948	1-3
857.1	799.0	856.9	792.5	64.5	8.561	1.883	6.390	1-4
861.3	796.8	854.6	793.0	61.6	8.957	1.924	6.528	1-5

Graph Data For Points

Initial		Final	
Time	Pressure	Time	Pressure
0.5808	824	0.6931	813
0.6312	819	0.7720	807
0.6931	818	0.8782	799
0.7720	812	1.0347	791
0.8782	804	1.3152	774

Graph Data For Lines

0	861.25	0	854.63
1	796.77	1	793.02

ZONE EVALUATION - Page 2

DST Number 7

TEST TICKET NO. 5322

Company: A. Scott Ritchie

Date: 7/1/85

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

$$M = G_0 - G_1 \quad 61.60$$

Damage Ratio:

$$DR = .183 \frac{P_s - P_f}{M} \quad 1.92$$

Effective Pay:

$$\frac{Kh}{B} = \frac{162.6 Q}{M} \quad 8.96 \text{ Md. Ft.}$$

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

$$Q_1 = Q DR \quad 6.53 \text{ Bbls/Day}$$

Production:

0.14 Bbls/Hour

$$Q = \frac{1440 R}{T} \quad 3.39 \text{ Bbls/Day}$$

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: 7

TEST TICKET NO. 5322

WELL NAME: Delzeit #1

WELL LOCATION: 13-11S-32W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3712.00	3.826	4.50
3	Weight Pipe	475.00	2.760	4.50
4	Drill Collar - 6"	248.00	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
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	65.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
Total Depth		4527.75		

CALCULATED RECOVERY ANALYSIS

DST Number: 7

TEST TICKET NO. 5322

Sample #	Total Feet	***** Gas %	***** Gas Feet	***** Oil %	***** Oil Feet	***** Mud %	***** Mud Feet
1	30	10.00	3.00	10.00	3.00	70.00	21.00
2	248	35.00	86.80	5.00	12.40	30.00	74.40
3	124	50.00	62.00	10.00	12.40	30.00	37.20
4	496	0.00	0.00	0.00	0.00	15.00	74.40
TOTAL	<u>898</u>	16.90	<u>151.80</u>	3.10	<u>27.80</u>	23.05	<u>207.00</u>

Sample #	***** Water %	***** Water Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	10.00	3.00			
2	30.00	74.40			
3	10.00	12.40			
4	85.00	421.60	36,000		
TOTAL	56.95	<u>511.40</u>			

CRUDE OIL TESTING, INC.

DATE 7/3/85

TEST TICKET NO. 5323

Company: A. Scott Ritchie
 Company Address: 125 N. Market Suite 950 Wichita KS 67202
 Location: Sec. 13 Twp. 11S Range 32W Co. Logan State KS
 Well Name & Number: Delzeit #1 Code E9

ENGINEERING DATA	Elevation	3010 KB	Drill Pipe Length	3811	ID 3.8 "
	Mud Viscosity	49	Weight Pipe Length	506	ID 2.76"
	Mud Weight	9.3	Drill Collar Length	248	ID 2.25"
	Water Loss	9.6	Top Packer Depth		
	Type of Mud Chemical		Bottom Packer Depth	4583	
	Anchor Length	21	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 #	11085	
	Extra Equipment		Safety joint		

REMARKS DST #8

FORMATION	Cherokee Zone	Test Type Conventional
	Interval 4583 To 4604	Total Depth 4604
	Open 30 Shut In 30	Open 30 Shut In 30
	Packer(s) Set 10:47PM	Started Off Bottom 12:50AM
	Blow 1st Opening Weak blow died in 8 min. 2nd Opening No blow.	

RECOVERY	Total Feet	2
	Recovered	2 feet of Drilling mud (no show)

CALCULATED RECOVERY	Gas	Oil	Water	Mud	2
	Gravity (Oil)		Test Water Chlorides		PPM
	Test Area Temperature	123F	Mud System Chlorides	1,700	PPM

PRESSURE		FIELD	OFFICE	PSI
		READING	READING	
	(A) Initial Hydrostatic Mud	2349		PSI
	(B) First Initial Flow Pressure	66		PSI
	(C) First Final Flow Pressure	66		PSI
	(D) Initial Closed-In Pressure	77		PSI
	(E) Second Initial Flow Pressure	66		PSI
	(F) Second Final Flow Pressure	66		PSI
	(G) Final Closed-In Pressure	77		PSI
	(H) Final Hydrostatic Mud	2338		PSI

EQUIPMENT DATA
TOOL SEQUENCE REPORT

DST Number: 8

TEST TICKET NO. 5323

WELL NAME: Delzeit #1

WELL LOCATION: 13-11S-32W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3811.00	3.826	4.50
3	Weight Pipe	506.00	2.760	4.50
4	Drill Collar - 6"	248.00	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
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		4609.75		

CRUDE OIL TESTING, INC.

DATE 7/3/85

TEST TICKET NO. 5324

Company: A. Scott Ritchie
 Company Address: 125 N. Market Suite 950 Wichita KS 67202
 Location: Sec. 13 Twp. 11S Range 32W Co. Logan State KS
 Well Name & Number: Delzeit #1 Code E6

ENGINEERING DATA	Elevation	3010 KB	Drill Pipe Length	3814	ID 3.8 "
	Mud Viscosity	47	Weight Pipe Length		
	Mud Weight	9.6	Drill Collar Length	248	ID 2.25"
	Water Loss	10.4	Top Packer Depth	4081	
	Type of Mud Chemical		Bottom Packer Depth	4115	
	Anchor Length	34	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 #	11085	
Extra Equipment		Safety joint			

REMARKS DST #9

FORMATION	Lansing	Zone E & F	Test Type	Straddle
	Interval 4081	To 4115	Total Depth	4115
	Open 45	Shut In 45	Open 45	Shut In 45
	Packer(s) Set	08:28PM	Started Off Bottom	11:30PM
	Blow 1st Opening Weak increasing to 1.25 inches in water. 2nd Opening Weak on top, died in 15 min.			

RECOVERY	Total Feet	90
	Recovered	90 feet of Slightly oil cut mud

CALCULATED RECOVERY	Gas	5.1	Oil	.9	Water	.6	Mud	83.4
	Gravity (Oil)		Test Water Chlorides		5,000 PPM			
	Test Area Temperature 113F		Mud System Chlorides		2,000 PPM			

PRESSURE		FIELD	OFFICE	
		READING	READING	
(A)	Initial Hydrostatic Mud	2112	2147	PSI
(B)	First Initial Flow Pressure	66	60	PSI
(C)	First Final Flow Pressure	66	75	PSI
(D)	Initial Closed-In Pressure	647	645	PSI
(E)	Second Initial Flow Pressure	88	83	PSI
(F)	Second Final Flow Pressure	88	93	PSI
(G)	Final Closed-In Pressure	615	626	PSI
(H)	Final Hydrostatic Mud	2047	2047	PSI

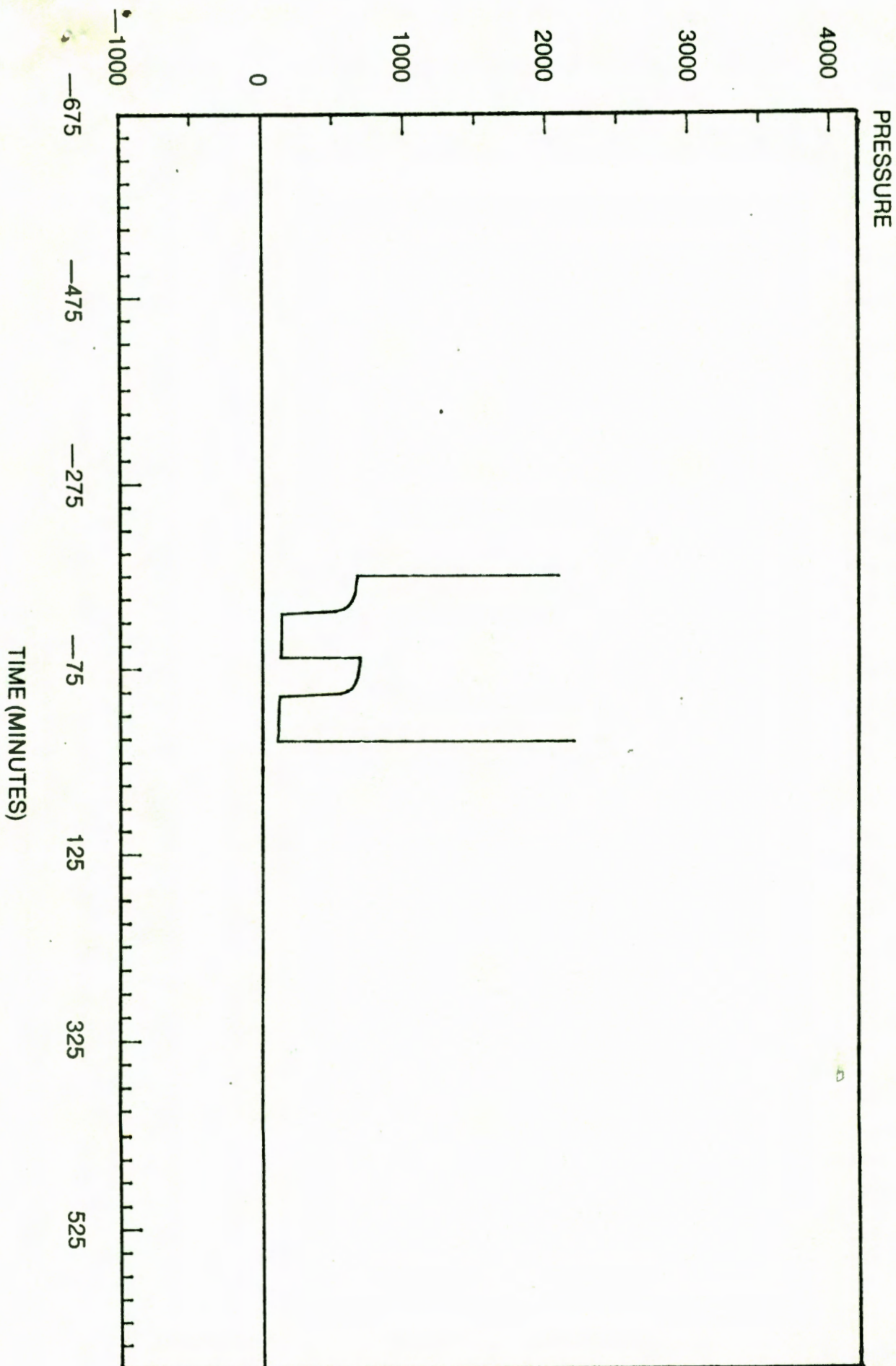
CRUDE OIL TESTING INC.

FOR: A. Scott Ritchie

TEST 5324

DST 9

07/03/85



PRESSURE BREAKDOWN

TEST TICKET NO. 5324

DST Number: 9 Recorder Number: 11085 Clock Number: 19124

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins. Press.		Mins. Press.		Mins. Press.		Mins. Press.	
0	59	0	75	0	82	0	92
3	59	3	507	3	86	3	476
6	64	6	558	6	86	6	536
9	65	9	585	9	87	9	563
12	66	12	598	12	88	12	578
15	66	15	608	15	88	15	589
18	66	18	616	18	88	18	597
21	66	21	623	21	89	21	604
24	66	24	627	24	89	24	609
27	68	27	631	27	90	27	611
30	68	30	635	30	90	30	613
33	69	33	638	33	90	33	617
36	69	36	640	36	90	36	620
39	70	39	643	39	91	39	623
42	71	42	645	42	91	42	625
45	74			45	92		
48	75			47	92		

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 9

TEST TICKET NO. 5324

WELL NAME: Delzeit #1

WELL LOCATION: 13-11S-37W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3814.00	3.826	4.50
4	Drill Collar - 6"	248.00	2.250	6.00
8	Circulating Sub	1.00	3.000	5.00
9	Shut-In Tool	5.45	0.870	5.00
10	Hydraulic Tool	5.60	1.000	5.00
13	Safety Joint	2.31	3.000	5.00
14	Packer	5.35	1.530	6.75
6	Anchor	27.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
7	Changeover Sub	2.00	3.000	5.00
14	Packer	5.35	1.530	6.75
6	Anchor	532.00	2.750	5.00
16	Bull Plug	2.00		5.00
	Total Depth	4651.06		

CALCULATED RECOVERY ANALYSIS

DST Number: 9

TEST TICKET NO. 5324

Sample #	Total Feet	***** Gas %	***** Gas Feet	***** Oil %	***** Oil Feet	***** Mud %	***** Mud Feet
1	30	0.00	0.00	1.00	0.30	97.00	29.10
2	30	8.00	2.40	1.00	0.30	91.00	27.30
3	30	9.00	2.70	1.00	0.30	90.00	27.00
TOTAL	<u>90</u>	5.67	<u>5.10</u>	1.00	<u>0.90</u>	92.67	<u>83.40</u>

Sample #	***** Water %	***** Water Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	2.00	0.60	5,000		
2	0.00	0.00			
3	0.00	0.00			
TOTAL	0.67	<u>0.60</u>			