

CRUDE OIL TESTING, INC.

DATE 7/12/84

TEST TICKET NO. 4500

Company: Sunburst Exploration Co.

Company Address: One Main Place Wichita KS 67202

Location: Sec. 14 Twp. 15S Range 23W Co. Trego

State KS

Well Name & Number: Higgins E #1

Code E4

ENGINEERING DATA	Elevation	2274 GL	Drill Pipe Length	3704	ID 3.8 "
	Mud Viscosity	38	Weight Pipe Length		
	Mud Weight	9.7	Drill Collar Length	520	ID 2.25"
	Water Loss	10.8	Top Packer Depth	4193	
	Type of Mud	Starch	Bottom Packer Depth	4198	
	Anchor Length	54	Tool Joint Size	4.0	FH
	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 #	11034	
	Extra Equipment		Safety joint		

REMARKS

DST #1

Had trouble pulling off bottom, very tight for about 3 stands.

FORMATION

Mississippi Zone	Test Type Conventional
Interval 4198 To 4252	Total Depth 4252
Open 30 Shut In 60	Open 60 Shut In 90
Packer(s) Set 08:28AM	Started Off Bottom 12:30AM
Blow 1st Opening Strong blow off bottom in 7 min.	
2nd Opening Strong blow off bottom in 10 min.	

RECOVERY

Total Feet 1270
Recovered 1270 feet of Muddy salt water

CALCULATED RECOVERY

Gas	Oil	Water 1113.5	Mud 156.5
Gravity (Oil)		Test Water Chlorides	21,000 PPM
Test Area Temperature	124F	Mud System Chlorides	38,000 PPM

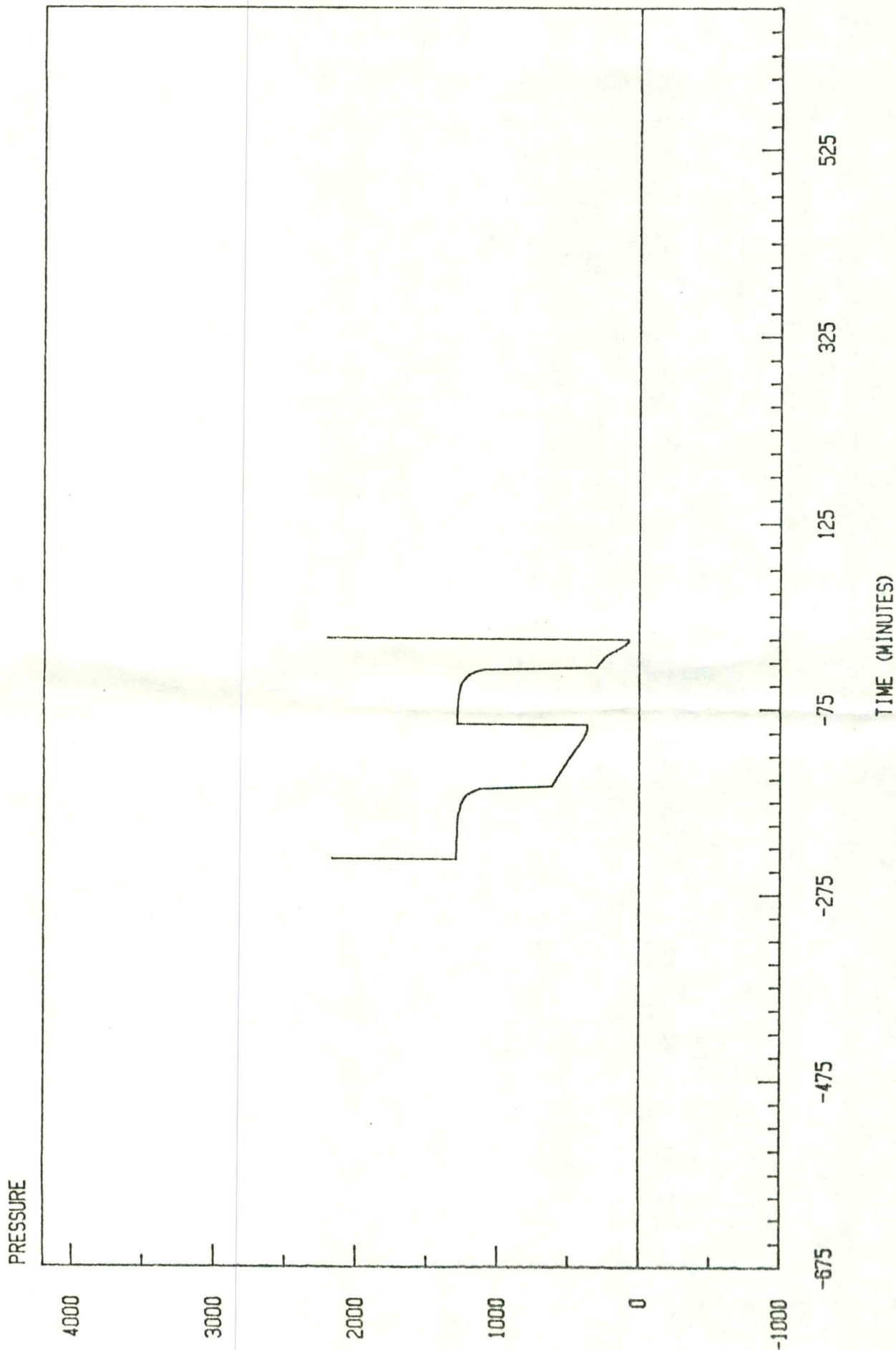
PRESSURE

	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	2155	2201	PSI
(B) First Initial Flow Pressure	77	72	PSI
(C) First Final Flow Pressure	296	300	PSI
(D) Initial Closed-In Pressure	1282	1287	PSI
(E) Second Initial Flow Pressure	373	365	PSI
(F) Second Final Flow Pressure	602	614	PSI
(G) Final Closed-In Pressure	1282	1294	PSI
(H) Final Hydrostatic Mud	2134	2167	PSI

NE-NW-SW 14-15S-23W

CRUDE OIL TESTING INC Test 4500 DST 1

FOR: Sunburst Exploration Co. 07/12/84



PRESSURE BREAKDOWN

TEST TICKET NO. 4500

DST Number: 1 Recorder Number: 11034 Clock Number: 22337

First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
Mins. Press.	Mins. Press.	Mins. Press.	Mins. Press.
0 71	0 300	0 364	0 614
3 77	3 1099	3 365	3 1127
6 99	6 1166	6 370	6 1173
9 133	9 1202	9 376	9 1209
12 165	12 1223	12 386	12 1229
15 206	15 1238	15 397	15 1241
18 233	18 1253	18 410	18 1252
21 252	21 1260	21 422	21 1261
24 268	24 1266	24 438	24 1264
27 285	27 1269	27 452	27 1268
30 300	30 1273	30 465	30 1276
	33 1275	33 478	33 1278
	36 1279	36 492	36 1281
	39 1280	39 505	39 1282
	42 1281	42 517	42 1283
	45 1284	45 529	45 1285
	48 1284	48 542	48 1285
	51 1287	51 555	51 1285
	54 1287	54 566	54 1285
	57 1287	57 580	57 1288
	60 1287	60 591	60 1289
	61 1287	63 603	63 1290
		66 614	66 1290
			69 1290
			72 1290
			75 1292
			78 1292
			81 1293

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 1

TEST TICKET NO. 4500

WELL NAME: Higgins E #1

WELL LOCATION: 14-15S-23W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3704.00	3.826	4.50
4	Drill Collar - 6"	8.00	2.250	6.00
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
14	Packer	5.35	1.530	6.75
6	Anchor	50.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
Total Depth		3789.06		

CALCULATED RECOVERY ANALYSIS

DST Number: 1

TEST TICKET NO. 4500

Sample #	Total Feet	**** %	Gas Feet	**** %	Oil Feet	**** %	Mud Feet	**** %
1	10	0.00	0.00	0.00	0.00	35.00	3.50	
2	60	0.00	0.00	0.00	0.00	30.00	18.00	
3	180	0.00	0.00	0.00	0.00	30.00	54.00	
4	300	0.00	0.00	0.00	0.00	15.00	45.00	
5	300	0.00	0.00	0.00	0.00	5.00	15.00	
6	420	0.00	0.00	0.00	0.00	5.00	21.00	
TOTAL	<u>1270</u>	0.00	<u>0.00</u>	0.00	<u>0.00</u>	12.32	<u>156.50</u>	

Sample #	**** Water %	**** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	65.00	6.50	21,000		
2	70.00	42.00			
3	70.00	126.00			
4	85.00	255.00			
5	95.00	285.00			
6	95.00	399.00			
TOTAL	87.68	<u>1113.50</u>			

CRUDE OIL TESTING, INC.

DATE 7/13/84

TEST TICKET NO. 4501

Company: Sunburst Exploration Co.
 Company Address: One Main Place Wichita KS 67202
 Location: Sec. 14 Twp. 15S Range 23W Co. Trego State KS
 Well Name & Number: Higgins E #1 Code E4

ENGINEERING DATA

Elevation	2274 GL	Drill Pipe Length	3792	ID 3.8 "
Mud Viscosity	45	Weight Pipe Length		
Mud Weight	9.7	Drill Collar Length	520	ID 2.25"
Water Loss	12.8	Top Packer Depth	4121	
Type of Mud	Starch	Bottom Packer Depth	4164	
Anchor Length	43	Tool Joint Size	4.0	FH
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		Safety joint		

REMARKS

DST #2
 Some slight plugging on first opening.

FORMATION

Fort Scott Zone	Test Type Straddle
Interval 4121 To 4164	Total Depth 4164
Open 30 Shut In 30	Open 30 Shut In 30
Packer(s) Set 05:28PM	Started Off Bottom 07:30PM
Blow 1st Opening Weak decreasing blow died in 17 min.	
2nd Opening Flushed tool, weak increasing to 1 inch.	

RECOVERY

Total Feet	60
Recovered	60 feet of Rotary mud w/oil spots on top of fluid

CALCULATED RECOVERY

Gas	Oil	Water	Mud	60
Gravity (Oil)		Test Water Chlorides		PPM
Test Area Temperature	119F	Mud System Chlorides	45,000	PPM

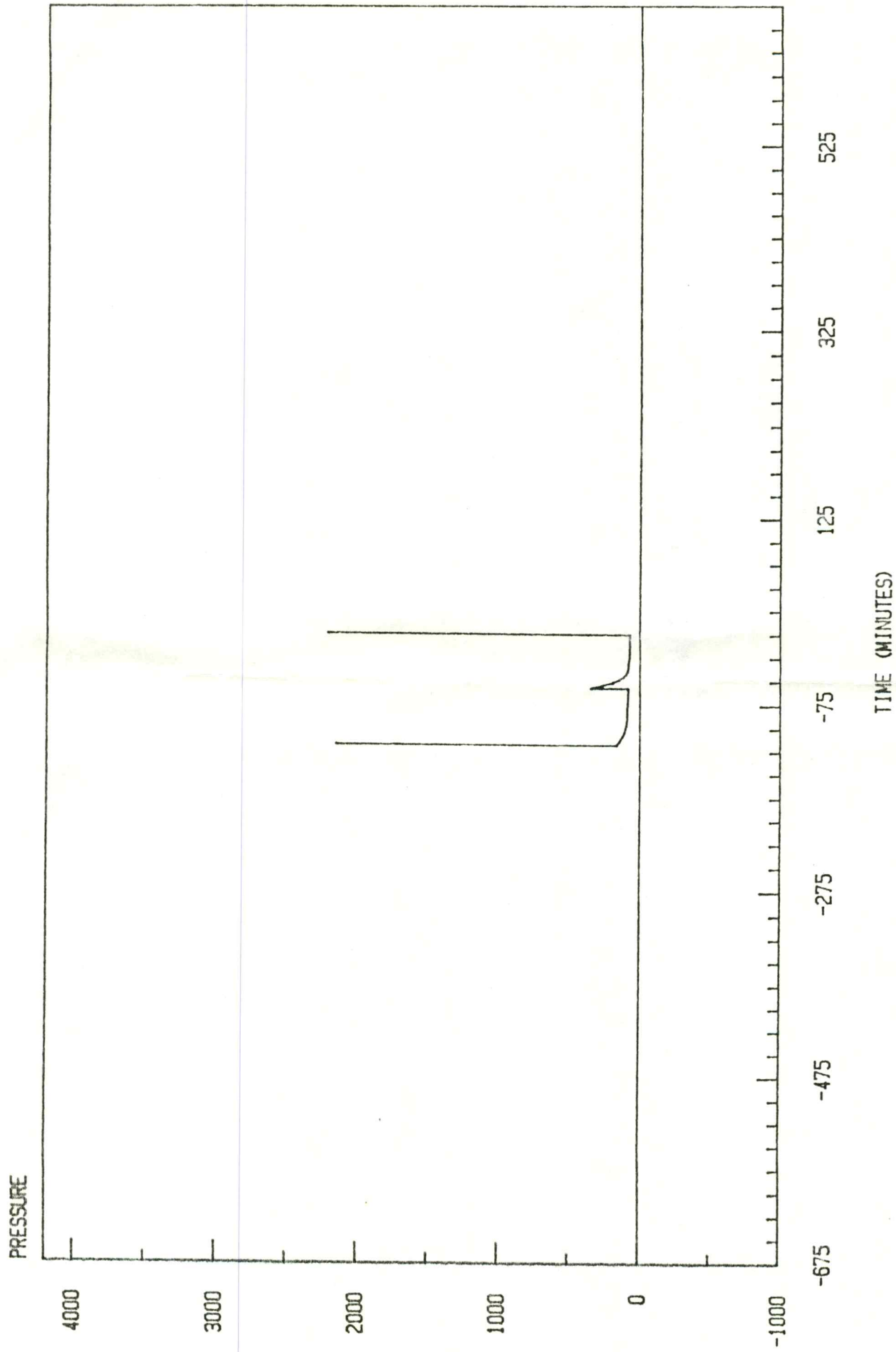
PRESSURE

	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	2198	2212	PSI
(B) First Initial Flow Pressure	77	68	PSI
(C) First Final Flow Pressure	77	78	PSI
(D) Initial Closed-In Pressure	329	347	PSI
(E) Second Initial Flow Pressure	88	78	PSI
(F) Second Final Flow Pressure	88	88	PSI
(G) Final Closed-In Pressure	154	166	PSI
(H) Final Hydrostatic Mud	2177	2152	PSI

NE-NW-SW 14-15S-23W

CRUDE OIL TESTING INC Test 4501 DST 2

FOR: Sunburst Exploration Co. 07/13/84



PRESSURE BREAKDOWN

TEST TICKET NO. 4501

DST Number: 2 Recorder Number: 11084 Clock Number: 22337

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Mins. Press.		Mins. Press.		Mins. Press.		Mins. Press.	
0	68	0	78	0	78	0	88
3	68	3	78	3	79	3	89
6	70	6	80	6	81	6	92
9	70	9	87	9	82	9	96
12	70	12	99	12	82	12	101
15	71	15	117	15	82	15	105
18	72	18	149	18	84	18	113
21	72	21	193	21	88	21	122
24	73	24	270	24	88	24	134
27	76	27	347	27	88	27	147
30	78			30	88	30	163
						31	165

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 2

TEST TICKET NO. 4501

WELL NAME: Higgins E #1

WELL LOCATION: 14-15S-23W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3792.00	3.826	4.50
8	Circulating Sub	1.00	3.000	5.00
4	Drill Collar - 6"	520.00	2.250	6.00
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	36.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
7	Changeover Sub	2.00	3.000	5.00
15	Recorder Carrier	1.00		5.00
6	Anchor	173.00	2.750	5.00
16	Bull Plug	2.00		5.00
Total Depth		4546.71		