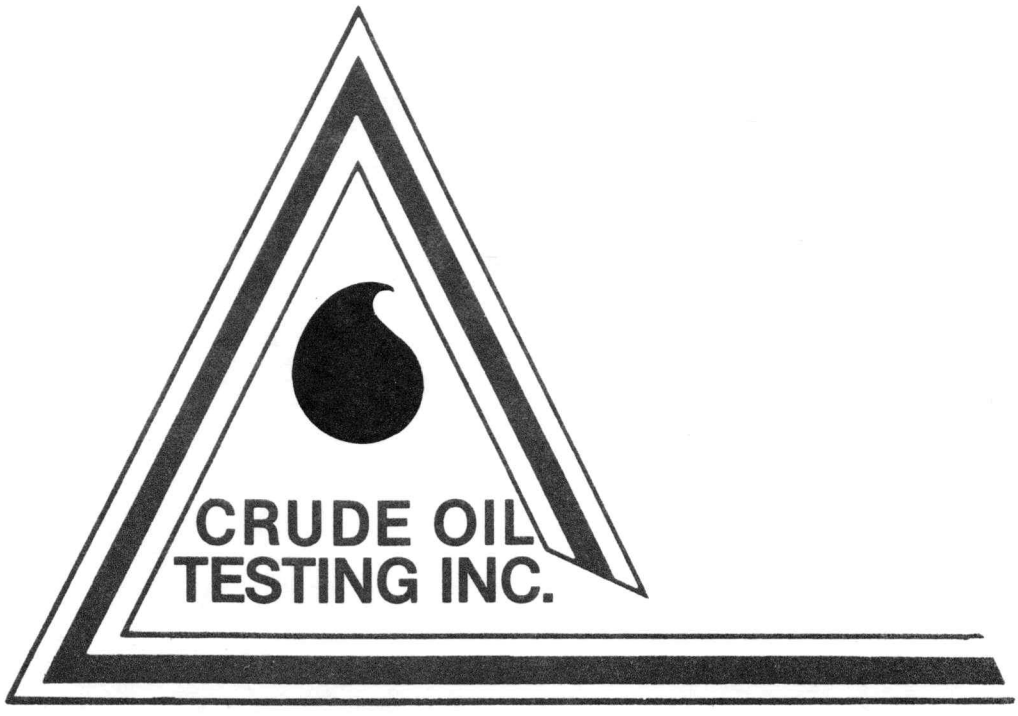


FORMATION TESTING SERVICE REPORT

CRUDE OIL TESTING, INC.

DATE 1/1/85 TEST TICKET NO. 4918

Company: A. Scott Ritchie
Company Address: 125 N Market Suite 950 Wichita KS 67202
Location: Sec. 1 Twp. 20S Range 21W Co. Ness State KS
Well Name & Number: #1 Kathryn Young Code E4

ENGINEERING DATA

Elevation	2253 KB	Drill Pipe Length	3221 ID 3.8 "
Mud Viscosity	42	Weight Pipe Length	950 ID 2.76"
Mud Weight	9.7	Drill Collar Length	181 ID 2.25"
Water Loss	9	Top Packer Depth	4378
Type of Mud	Starch	Bottom Packer Depth	4383
Anchor Length	9	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			None

REMARKS

DST #1
Mud pit sample 46000 ppm.

FORMATION

Mississippi Zone Test Type Conventional
Interval 4383 To 4392 Total Depth 4392
Open 30 Shut In 30 Open 30 Shut In 30
Packer(s) Set 06:43AM Started Off Bottom 08:45AM
Blow 1st Opening Weak blow died in 10 min.
2nd Opening No blow, flushed tool, no help.

RECOVERY

Total Feet 10
Recovered 10 feet of Rotary mud (no show of oil).

CALCULATED RECOVERY

Gas	Oil	Water	Mud 10
Gravity (Oil)		Test Water Chlorides	PPM
Test Area Temperature 120F		Mud System Chlorides	44,000 PPM

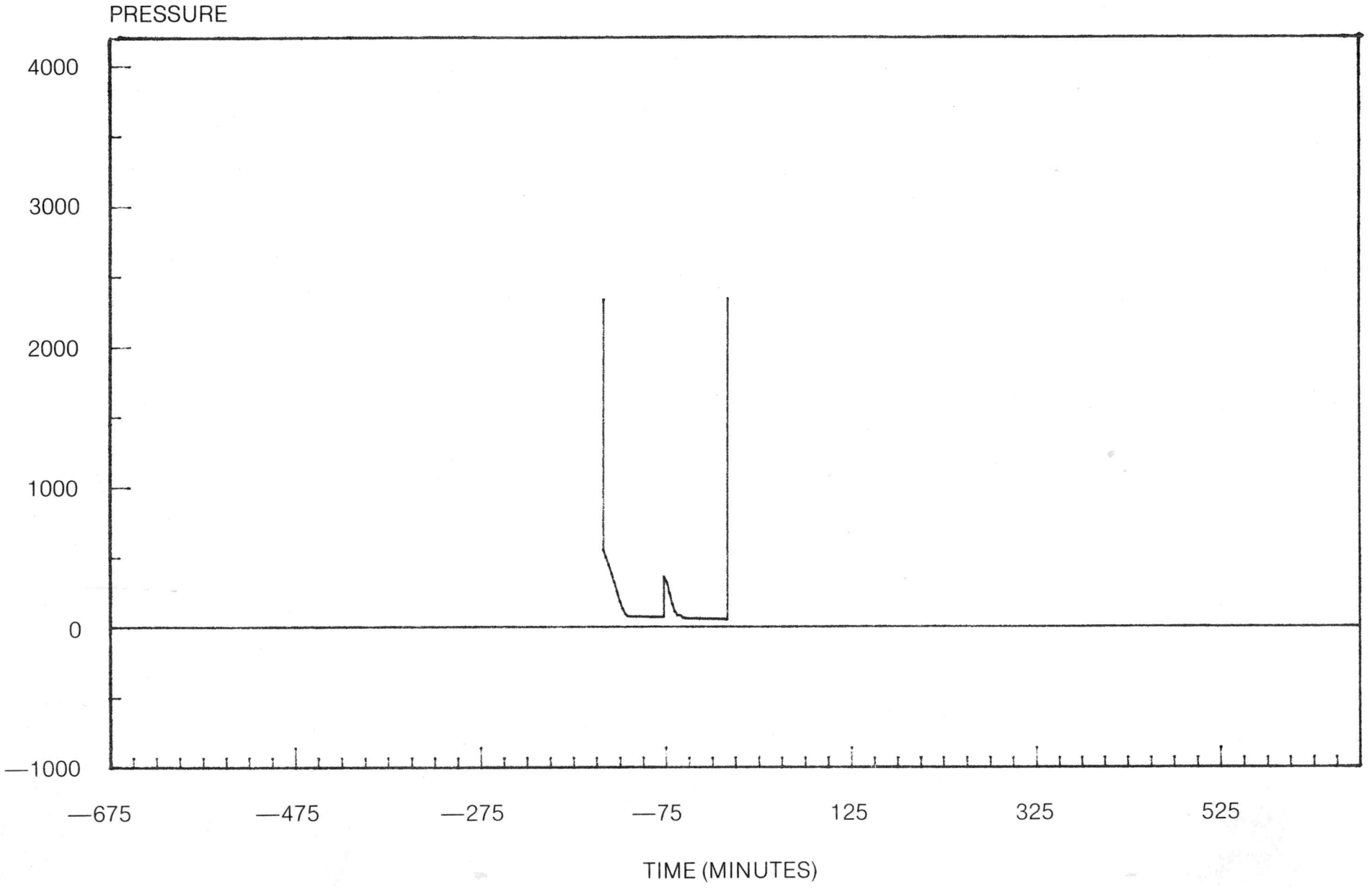
PRESSURE

	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	2328	2331	PSI
(B) First Initial Flow Pressure	44	36	PSI
(C) First Final Flow Pressure	44	40	PSI
(D) Initial Closed-In Pressure	351	340	PSI
(E) Second Initial Flow Pressure	44	52	PSI
(F) Second Final Flow Pressure	55	55	PSI
(G) Final Closed-In Pressure	526	535	PSI
(H) Final Hydrostatic Mud	2306	2322	PSI

CRUDE OIL TESTING INC.

FOR: A. Scott Ritchie TEST 4918

DST 1 01/01/85



PRESSURE BREAKDOWN

TEST TICKET NO. 4918

DST Number: 1 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	35	0	39	0	52	0	55
3	37	3	41	3	52	3	55
6	37	6	41	6	52	6	56
9	38	9	41	9	52	9	59
12	38	12	41	12	52	12	75
15	38	15	43	15	52	15	114
18	38	18	48	18	54	18	167
21	39	21	66	21	54	21	237
24	39	24	66	24	54	24	304
27	39	27	95	27	55	27	365
30	39	30	151	30	55	30	430
		33	227			33	483
		36	304			36	534
		39	339				

EQUIPMENT DATA

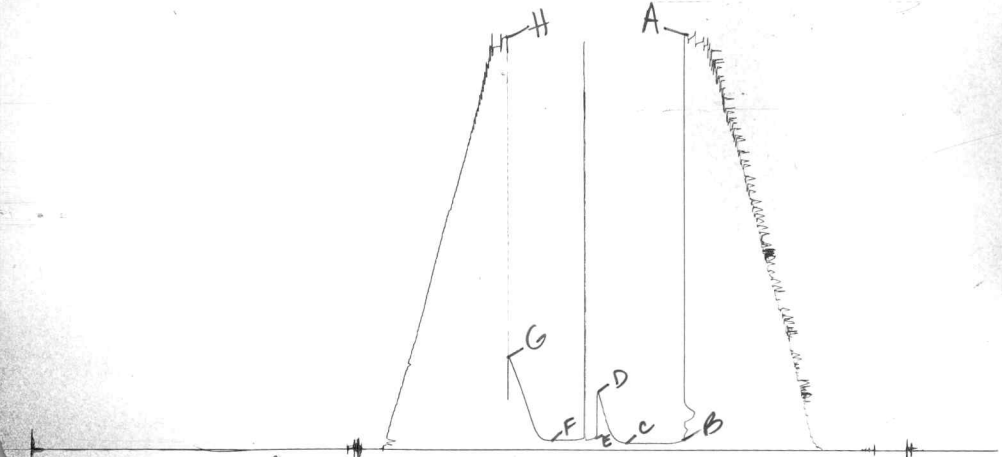
TOOL SEQUENCE REPORT

DST Number: 1 TEST TICKET NO. 4918

WELL NAME: #1 Kathryn Young WELL LOCATION: 1-20S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3221.00	3.826	4.50
3	Weight Pipe	950.00	2.760	4.50
4	Drill Collar - 6"	181.00	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
11	A.P. Carrier	5.00	3.060	5.00
14	Packer	5.35	1.530	6.75
14	Packer	5.35	1.530	6.75
6	Anchor	5.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4389.75		

DST #1
No 4918
Top
AK-1 110 84



CRUDE OIL TESTING, INC.

DATE 1/1/85 TEST TICKET NO. 4919

Company: A. Scott Ritchie
Company Address: 125 N Market Suite 950 Wichita KS 67202
Location: Sec. 1 Twp. 20S Range 21W Co. Ness State KS
Well Name & Number: #1 Kathryn Young Code E4

ENGINEERING DATA

Elevation	2253 KB	Drill Pipe Length	3250 ID 3.8 "
Mud Viscosity	45	Weight Pipe Length	950 ID 2.76"
Mud Weight	9.9	Drill Collar Length	181 ID 2.25"
Water Loss	9	Top Packer Depth	4383
Type of Mud	Starch	Bottom Packer Depth	4388
Anchor Length	12	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		None	

REMARKS

DST #2
Mud pit sample 45000 ppm.

FORMATION

Mississippi Zone Test Type Conventional
Interval 4388 To 4400 Total Depth 4400
Open 30 Shut In 30 Open 30 Shut In 30
Packer(s) Set 08:13PM Started Off Bottom 10:15PM
Blow 1st Opening Weak decreasing from 1/2 in. to 1/8 in.
2nd Opening No blow, flushed tool, no help.

RECOVERY

Total Feet 5
Recovered 5 feet of Drilling mud (no show of oil).

CALCULATED RECOVERY

Gas Oil Water .15 Mud 4.85
Gravity (Oil) Test Water Chlorides 45,000 PPM
Test Area Temperature 121F Mud System Chlorides 44,000 PPM

PRESSURE

	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	2338		PSI
(B) First Initial Flow Pressure	44		PSI
(C) First Final Flow Pressure	44		PSI
(D) Initial Closed-In Pressure	208		PSI
(E) Second Initial Flow Pressure	44		PSI
(F) Second Final Flow Pressure	55		PSI
(G) Final Closed-In Pressure	197		PSI
(H) Final Hydrostatic Mud	2317		PSI

EQUIPMENT DATA

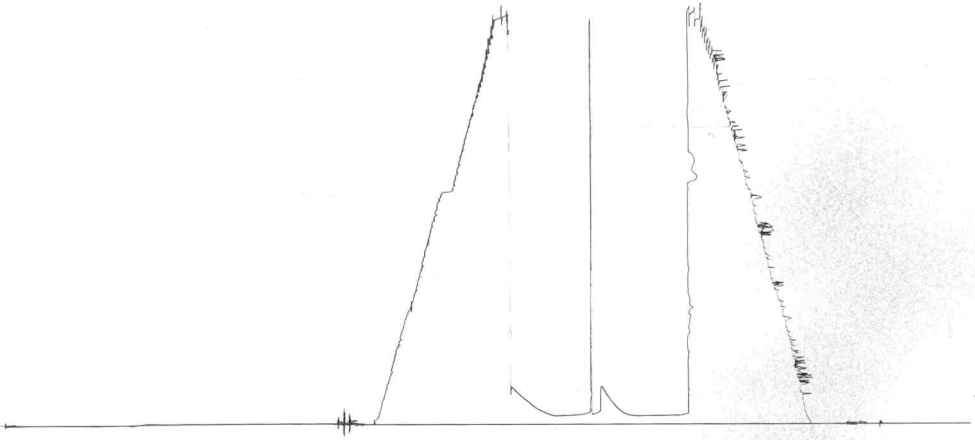
TOOL SEQUENCE REPORT

DST Number: 2 TEST TICKET NO. 4919

WELL NAME: #1 Kathryn Young WELL LOCATION: 1-20S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3250.00	3.826	4.50
3	Weight Pipe	950.00	2.760	4.50
4	Drill Collar - 6"	181.00	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	8.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4416.75		

DST #2
NO 4919
TOP
AH-1 11084



CRUDE OIL TESTING, INC.

DATE 1/2/85 TEST TICKET NO. 4920

Company: A. Scott Ritchie
Company Address: 125 N Market Suite 950 Wichita KS 67202
Location: Sec. 1 Twp. 20S Range 21W Co. Ness State KS
Well Name & Number: #1 Kathryn Young Code E4

ENGINEERING DATA

Elevation	2253 KB	Drill Pipe Length	3250 ID 3.8 "
Mud Viscosity	39	Weight Pipe Length	950 ID 2.76"
Mud Weight	9.8	Drill Collar Length	181 ID 2.25"
Water Loss	11.2	Top Packer Depth	4393
Type of Mud	Starch	Bottom Packer Depth	4398
Anchor Length	10	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		None	

REMARKS

DST #3
Mud pit sample 44000 ppm.
Lost about 50' of mud in hole while tool was opened.

FORMATION

Mississippi Zone Test Type Conventional
Interval 4398 To 4408 Total Depth 4408
Open 30 Shut In 45 Open 30 Shut In 45
Packer(s) Set 11:28AM Started Off Bottom 02:00PM
Blow 1st Opening Off bottom in 3 1/2 min. (surging blow).
2nd Opening Weak blow to 1/2 in. died off in 15 min.

RECOVERY

Total Feet 495
Recovered 495 feet of Watery mud.

CALCULATED RECOVERY

Gas Oil Water 27.75 Mud 467.25
Gravity (Oil) Test Water Chlorides 38,000 PPM
Test Area Temperature 121F Mud System Chlorides 44,000 PPM

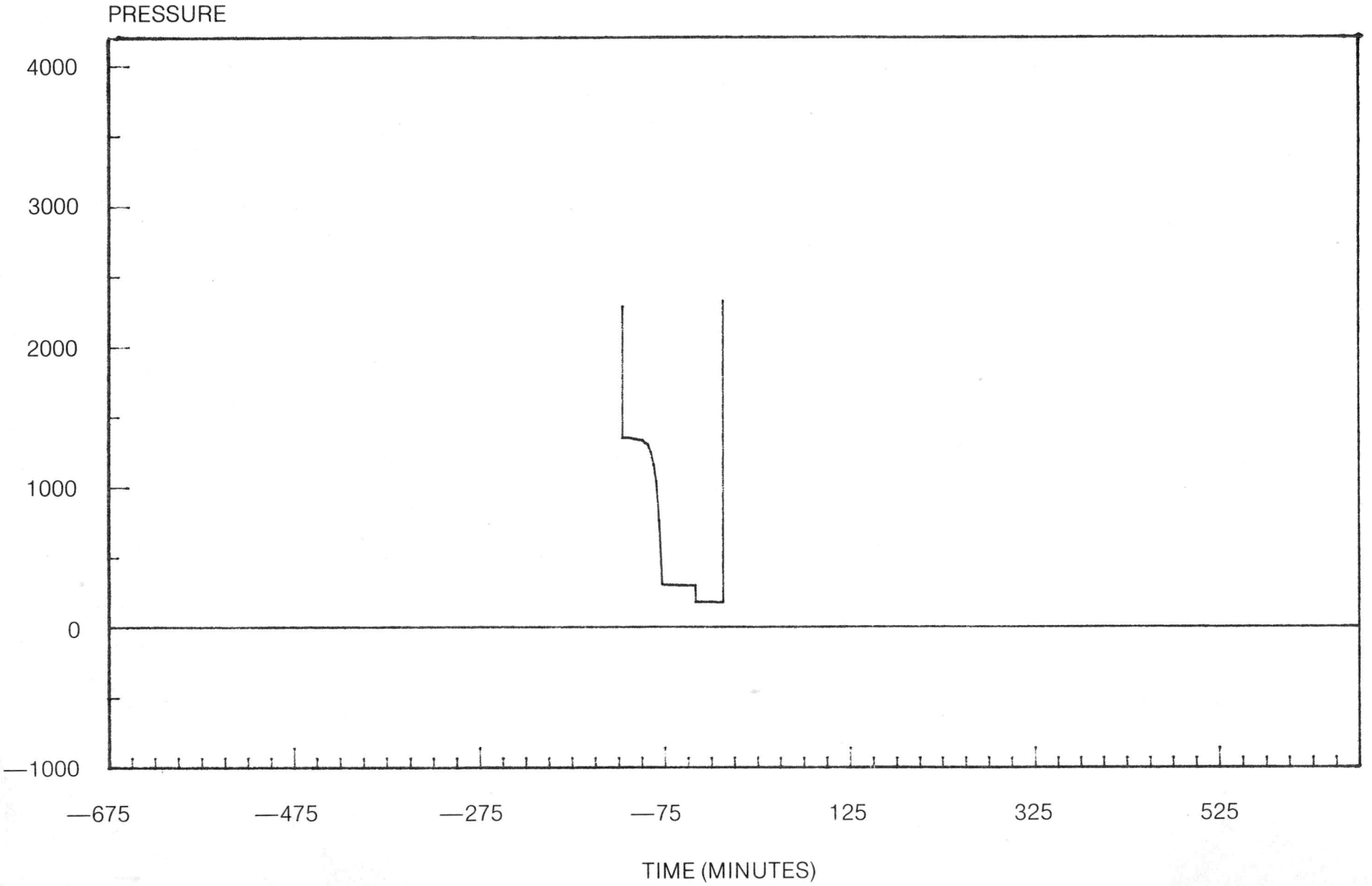
PRESSURE

	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	2306	2309	PSI
(B) First Initial Flow Pressure	154	156	PSI
(C) First Final Flow Pressure		158	PSI
(D) Initial Closed-In Pressure			PSI
(E) Second Initial Flow Pressure	296	276	PSI
(F) Second Final Flow Pressure	296	285	PSI
(G) Final Closed-In Pressure	1325	1334	PSI
(H) Final Hydrostatic Mud	2284	2271	PSI

CRUDE OIL TESTING INC.

FOR: A. Scott Ritchie TEST 4920

DST 3 01/02/85



EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 3 TEST TICKET NO. 4920

WELL NAME: #1 Kathryn Young WELL LOCATION: 1-20S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3250.00	3.826	4.50
3	Weight Pipe	950.00	2.760	4.50
4	Drill Collar - 6"	181.00	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	6.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4414.75		

PRESSURE BREAKDOWN

TEST TICKET NO. 4920

DST Number: 3 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	156	0	0	0	276	0	285
3	156			3	276	3	744
6	156			6	276	6	1021
9	158			9	276	9	1145
12	158			12	276	12	1234
15	158			15	276	15	1287
18	158			18	276	18	1297
21	158			21	278	21	1315
24	158			24	279	24	1318
27	158			27	279	27	1322
30	158			30	279	30	1325
				33	280	33	1331
				36	285	36	1333
						39	1334
						42	1334

CALCULATED RECOVERY ANALYSIS

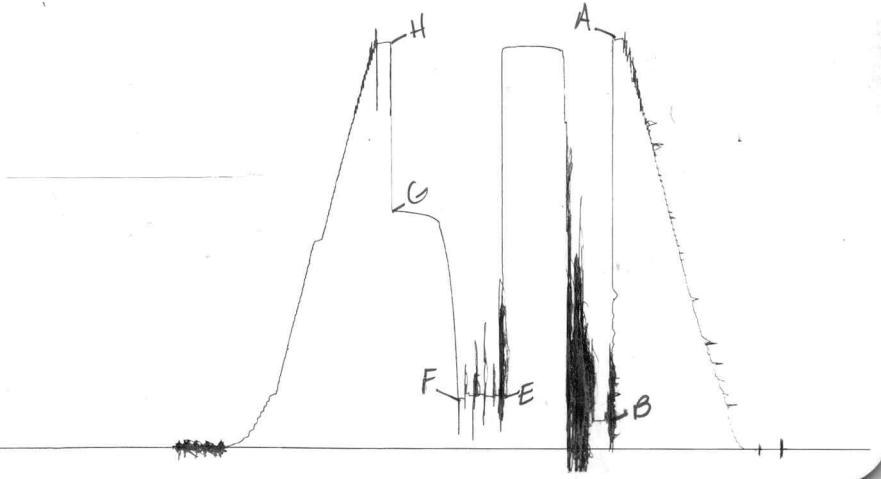
DST Number: 3

TEST TICKET NO. 4920

Sample #	Total Feet	***** Gas %	**** Feet	***** Oil %	**** Feet	***** Mud %	**** Feet
1	15	0.00	0.00	0.00	0.00	75.00	11.25
2	60	0.00	0.00	0.00	0.00	95.00	57.00
3	60	0.00	0.00	0.00	0.00	95.00	57.00
4	60	0.00	0.00	0.00	0.00	95.00	57.00
5	60	0.00	0.00	0.00	0.00	95.00	57.00
6	180	0.00	0.00	0.00	0.00	95.00	171.00
7	60	0.00	0.00	0.00	0.00	95.00	57.00
TOTAL	495	0.00	0.00	0.00	0.00	94.39	467.25

Sample #	**** Water %	*** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	25.00	3.75			
2	5.00	3.00			
3	5.00	3.00			
4	5.00	3.00			
5	5.00	3.00			
6	5.00	9.00			
7	5.00	3.00			
TOTAL	5.61	27.75			

DST #3
10492'
Top
RKI 11084



CRUDE OIL TESTING, INC.

DATE 1/2/85 TEST TICKET NO. 4921

Company: A. Scott Ritchie
Company Address: 125 N Market Suite 950 Wichita KS 67202
Location: Sec. 1 Twp. 20S Range 21W Co. Ness State KS
Well Name & Number: #1 Kathryn Young Code E4

ENGINEERING DATA

Elevation	2253 KB	Drill Pipe Length	3250 ID 3.8 "
Mud Viscosity	39	Weight Pipe Length	950 ID 2.76"
Mud Weight	9.8	Drill Collar Length	181 ID 2.25"
Water Loss	11.2	Top Packer Depth	
Type of Mud	Starch	Bottom Packer Depth	4402
Anchor Length	8	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

REMARKS

DST #4
Misrun packer failure.

FORMATION

Mississippi Zone
Interval 4402 To 4410
Open 0 Shut In 0
Packer(s) Set 00:00AM
Blow 1st Opening 0
2nd Opening 0

Test Type Conventional
Total Depth 4410
Open 0 Shut In 0
Started Off Bottom 01:05AM

RECOVERY

Total Feet 200
Recovered 200 feet of Drilling mud.

CALCULATED RECOVERY

Gas Oil Water Mud
Gravity (Oil) Test Water Chlorides PPM
Test Area Temperature Mud System Chlorides 44,000 PPM

PRESSURE

	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	0		PSI
(B) First Initial Flow Pressure			PSI
(C) First Final Flow Pressure			PSI
(D) Initial Closed-In Pressure			PSI
(E) Second Initial Flow Pressure			PSI
(F) Second Final Flow Pressure			PSI
(G) Final Closed-In Pressure			PSI
(H) Final Hydrostatic Mud			PSI

EQUIPMENT DATA

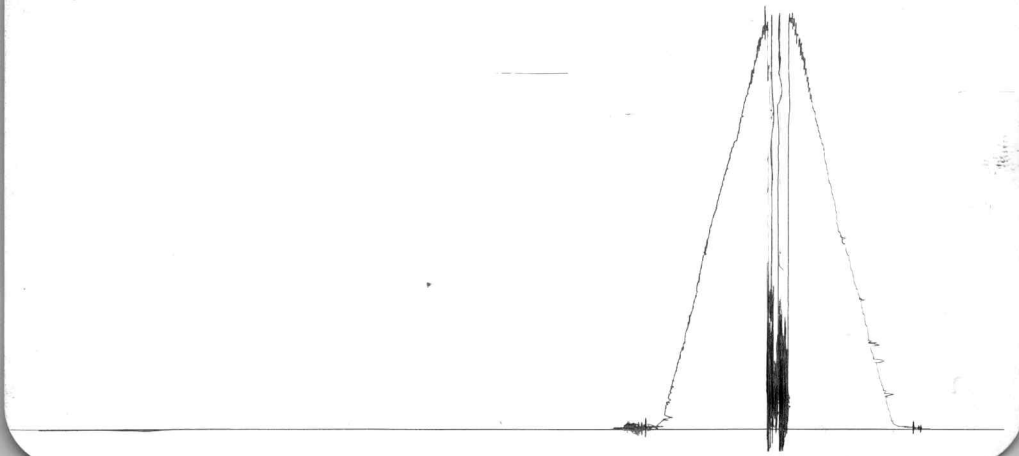
TOOL SEQUENCE REPORT

DST Number: 4 TEST TICKET NO. 4921

WELL NAME: #1 Kathryn Young WELL LOCATION: 1-20S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3250.00	3.826	4.50
3	Weight Pipe	950.00	2.760	4.50
4	Drill Collar - 6"	181.00	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
11	A.P. Carrier	5.00	3.060	5.00
14	Packer	5.35	1.530	6.75
6	Anchor	4.00	2.750	5.00
15	Recorder Carrier	1.00		5.00
16	Bull Plug	2.00		5.00
	Total Depth	4412.40		

DST #4
10492'
Top
AK1 11084



CRUDE OIL TESTING, INC.

DATE 1/3/85 TEST TICKET NO. 4922

Company: A. Scott Ritchie
Company Address: 125 N Market Suite 950 Wichita KS 67202
Location: Sec. 1 Twp. 20S Range 21W Co. Ness State KS
Well Name & Number: #1 Kathryn Young Code E4

ENGINEERING DATA

Elevation	2253 KB	Drill Pipe Length	3250 ID 3.8 "
Mud Viscosity	45	Weight Pipe Length	950 ID 2.76"
Mud Weight	9.8	Drill Collar Length	181 ID 2.25"
Water Loss	11.2	Top Packer Depth	4384
Type of Mud	Starch	Bottom Packer Depth	4389
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 #	11084
Extra Equipment		None	

REMARKS

DST #5
Mud pit sample 42000 ppm.

FORMATION

Mississippi Zone Test Type Conventional
Interval 4389 To 4410 Total Depth 4410
Open 45 Shut In 60 Open 45 Shut In 60
Packer(s) Set 10:43AM Started Off Bottom 02:15PM
Blow 1st Opening Weak steady blow 2 1/2 in. in bucket.
2nd Opening No blow.

RECOVERY

Total Feet 150
Recovered 90 feet of Oil spotted watery mud.
Recovered 60 feet of Slightly oil cut muddy water.

CALCULATED RECOVERY

Gas Oil 1.2 Water 70.8 Mud 78
Gravity (Oil) Test Water Chlorides 38,000 PPM
Test Area Temperature 121F Mud System Chlorides 44,000 PPM

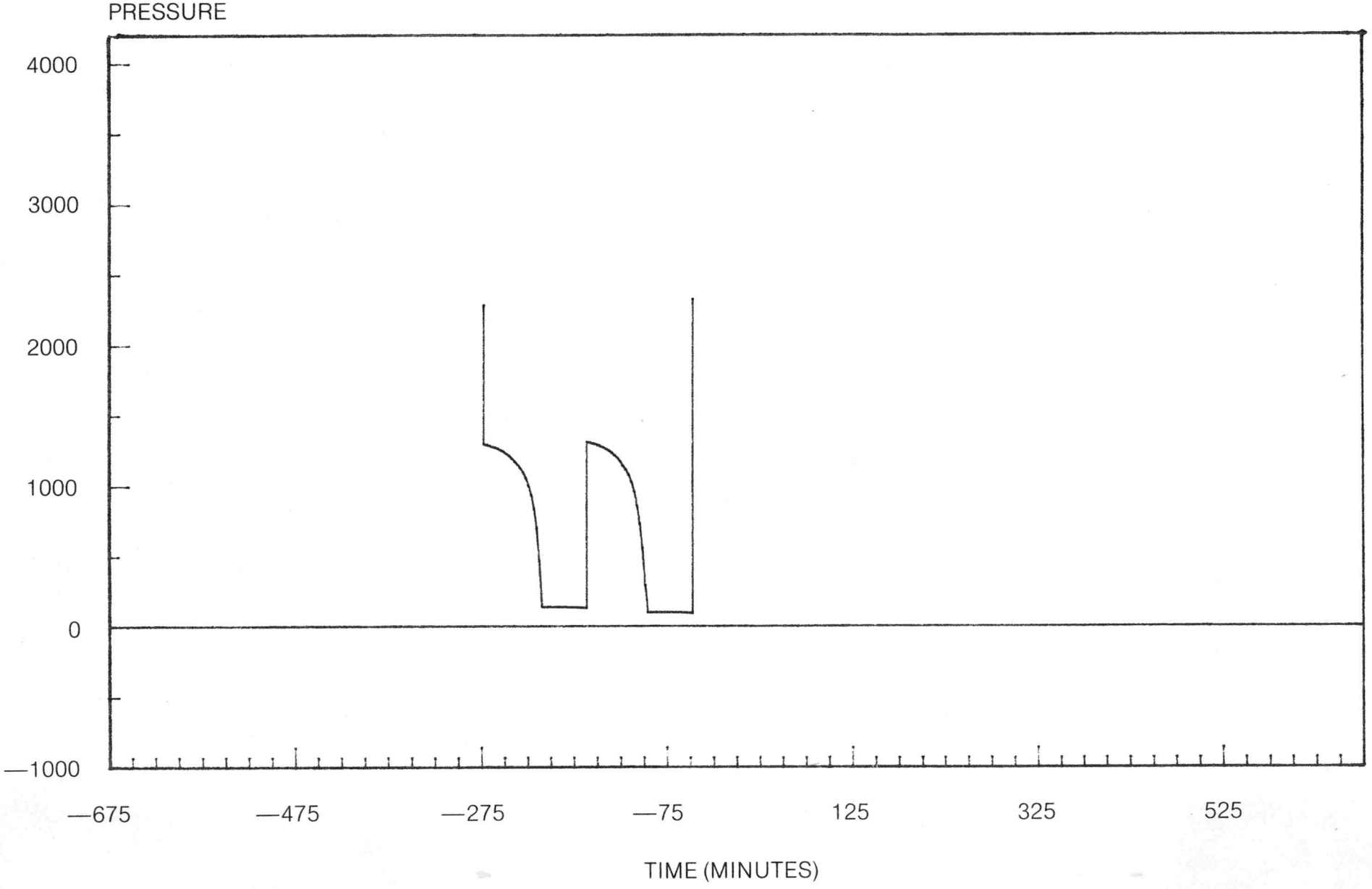
PRESSURE

	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	2338	2306	PSI
(B) First Initial Flow Pressure	77	68	PSI
(C) First Final Flow Pressure	77	76	PSI
(D) Initial Closed-In Pressure	1282	1290	PSI
(E) Second Initial Flow Pressure	110	105	PSI
(F) Second Final Flow Pressure	110	113	PSI
(G) Final Closed-In Pressure	1272	1274	PSI
(H) Final Hydrostatic Mud	2317	2263	PSI

CRUDE OIL TESTING INC.

FOR: A. Scott Ritchie TEST 4922

DST 5 01/03/85



PRESSURE BREAKDOWN

TEST TICKET NO. 4922

DST Number: 5 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	76	0	104	0	113
3	71	3	268	3	106	3	442
6	72	6	536	6	107	6	677
9	73	9	710	9	107	9	816
12	73	12	834	12	109	12	911
15	75	15	937	15	109	15	980
18	75	18	1008	18	109	18	1034
21	75	21	1058	21	110	21	1075
24	75	24	1094	24	112	24	1104
27	75	27	1122	27	112	27	1130
30	75	30	1153	30	112	30	1152
33	75	33	1176	33	112	33	1173
36	75	36	1195	36	112	36	1191
39	75	39	1213	39	112	39	1205
42	75	42	1227	42	112	42	1219
45	75	45	1239	45	112	45	1230
48	76	48	1251	48	113	48	1241
		51	1258			51	1249
		54	1267			54	1254
		57	1276			57	1261
		60	1280			60	1266
		63	1287			63	1273
		66	1290			64	1274

EQUIPMENT DATA

TOOL SEQUENCE REPORT

DST Number: 5 TEST TICKET NO. 4922

WELL NAME: #1 Kathryn Young WELL LOCATION: 1-20S-21W

Tool #	Tool	Length	I.D.	O.D.
1	Drill Pipe - 4.5"	3250.00	3.826	4.50
3	Weight Pipe	950.00	2.760	4.50
4	Drill Collar - 6"	181.00	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	4425.75		

CALCULATED RECOVERY ANALYSIS

DST Number: 5 TEST TICKET NO. 4922

Sample #	Total Feet	***** Gas %	**** Feet	***** Oil %	**** Feet	***** Mud %	**** Feet
1	30	0.00	0.00	0.00	0.00	60.00	18.00
2	60	0.00	0.00	0.00	0.00	55.00	33.00
3	60	0.00	0.00	2.00	1.20	45.00	27.00
TOTAL	150	0.00	0.00	0.80	1.20	52.00	78.00

Sample #	**** Water %	*** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temperature (Deg)
1	40.00	12.00	38,000		
2	45.00	27.00	38,000		
3	53.00	31.80	38,000		
TOTAL	47.20	70.80			

DST #5
N04922
Top
AKJ 110884

