CRUDE OIL TESTING INC.

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

TEST REPORT

Test Ticket No. 2633

Company A. Scott Ritchie Date 1/28/83

Company Address Suite 950, 125 N. Market Wichita,KS 67202 No. of Charts 5

Location: Sec. 10 Twp. 12W Rge. 22E Co. Trego State Kansas

Well Name And Number Hacker #A-3 Tester Elmer S. Burgardt

Contractor Murfin Drilling Rig No. #16 Co. Rep. Rocky Milford

Engineering Data

Elevation 2,362 K.B.

Mud Viscosity 49

Mud Weight 9.8

Water Loss 13

Type of Mud Staren

Anchor Length 43'

Hole Size 7 7/8

Casing Size 8 5/8

Surface Choke 3/4

Bottom Choke 3/4

Drill Pipe Length 2,968 I.D. 3.8 In.

Weight Pipe Length 435 I.D. 2.75 In.

Drill Collar Length ____ I.D. ____ In.

Top Packer Depth. 3,672

Bottom Packer Depth 3,677

Tool Joint Size 4 1/2 F.H.

Test Tool Size 5 1/2

Packer Size 6 3/4

Reversed Out No

Recorder Type and No. AK-1 11086 Clock Range No. 25111 12 Hr.

Recorder Type and No. AK-1 11085 Clock Range No. 22336 12 Hr.

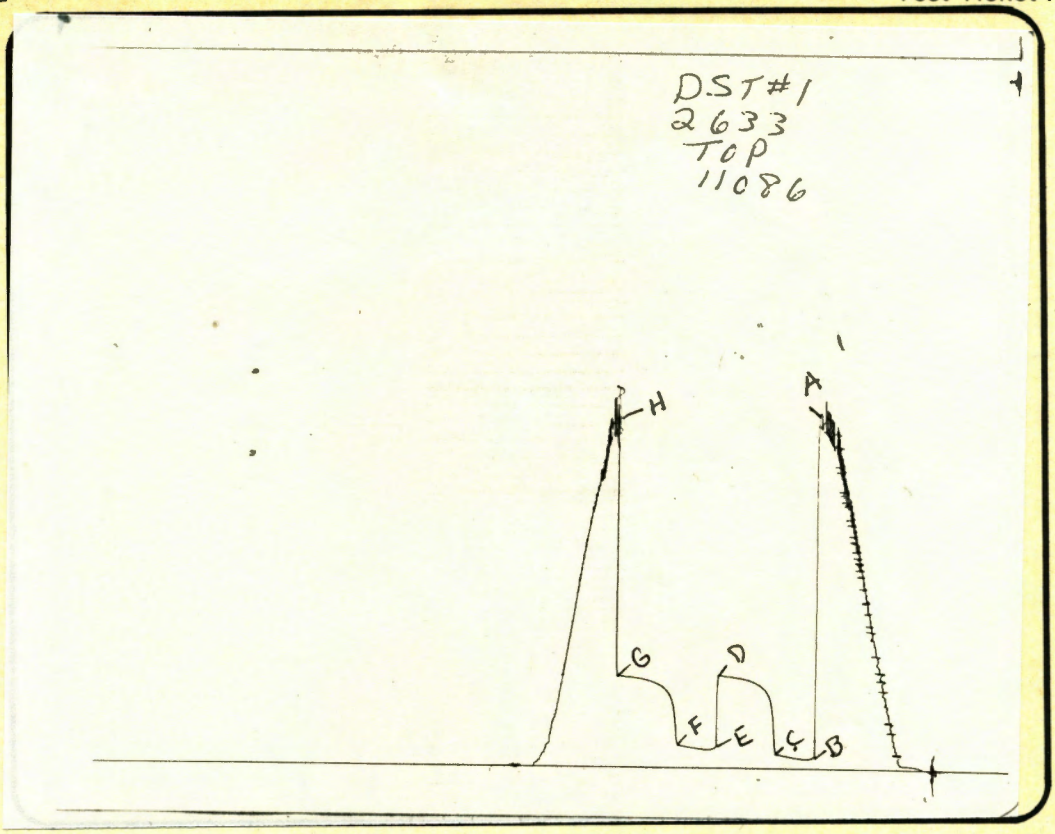
Extra Equipment

Remarks Mud Chlorides 40,000. Open Hole Test.

CRUDE OIL TESTING INC.

Date 1/28/83 Test Ticket No. 28.1

DST # 1



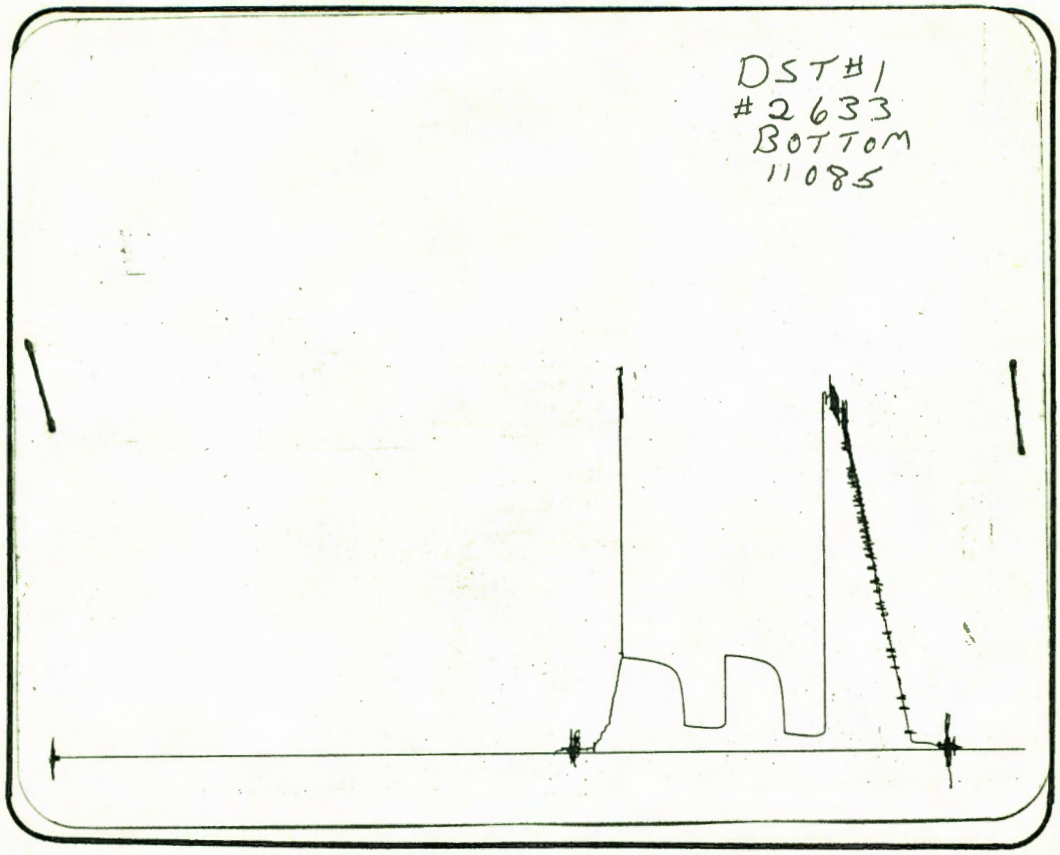
Formation Lansing Zone 35 & 50 Type of Test Conventional
Interval 3,677 To 3,720 Total Depth 3,720
Open 30 Shut In 45 Open 30 Shut In 45
Packer(s) Set 5:43 P M. Started off Bottom 8:15 P M.
Blow 1st Opening Fair blow off bottom of bucket in 16 minutes.
2nd Opening Fair blow off bottom of bucket in 25 minutes.

Recovery
Total Feet 206
Recovered 82 Ft. of muddy water.
Recovered 124 Ft. of muddy water.
Recovered ____ Ft. of ____
Recovered ____ Ft. of Slight show of oil.

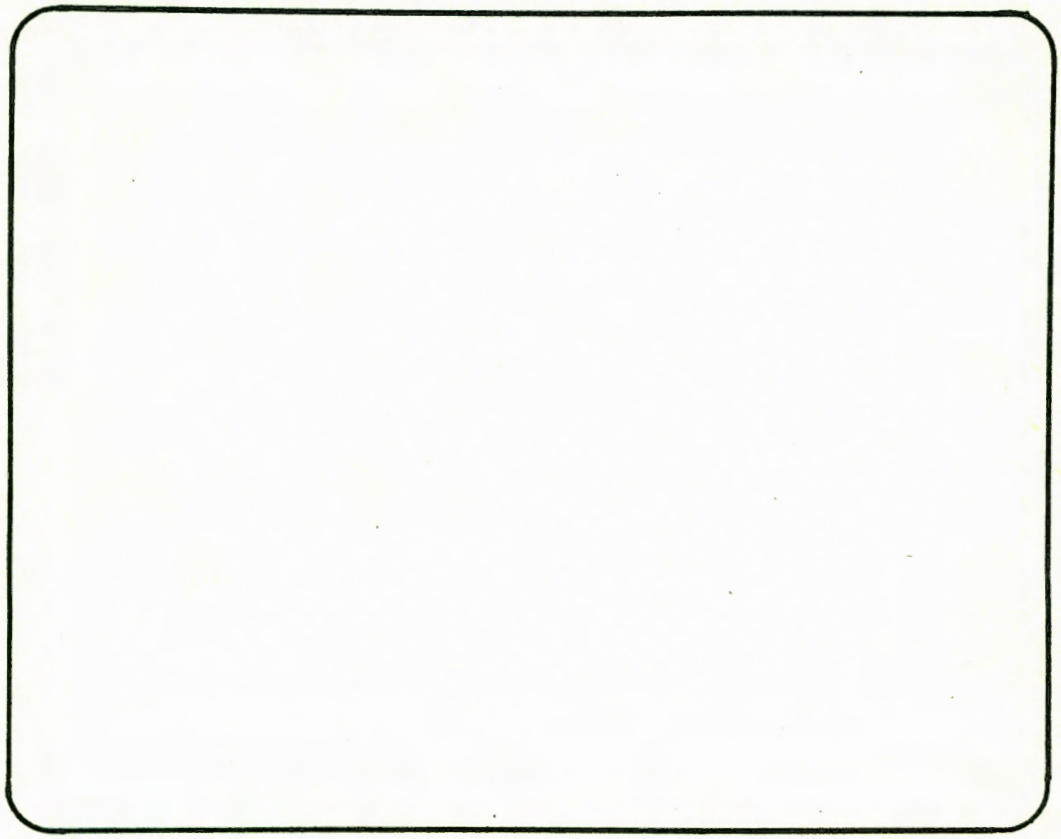
Calculated Recovery
Gas 6.2 Oil 14.4 WTR 68.1 MUD 117.3
Gravity (Oil) ____ Corrected To Temp. ____ °F Test Water Chlorides 52,000 P.P.M.
Test Area Temperature 100 °F Mud System Chlorides 43,000 P.P.M.

PRESSURE		**Field Reading**	**Office Reading**	
(A)	Initial Hydrostatic Mud	1,989	1,989	PSI
(B)	First Initial Flow Pressure	55	55	PSI
(C)	First Final Flow Pressure	65	79	PSI
(D)	Initial Closed-in Pressure	524	517	PSI
(E)	Second Initial Flow Pressure	98	104	PSI
(F)	Second Final Flow Pressure	120	126	PSI
(G)	Final Closed-in Pressure	502	513	PSI
(H)	Final Hydrostatic Mud	1,967	1,967	PSI

CRUDE OIL TESTING INC.



Extra recorder chart



Blank off recorder chart

These are actual photographs of recorder charts.

CRUDE OIL TESTING

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

Recorder Location 3,710 Ft. Recorder No. 11066 Test Ticket No. 2633

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: 6 Inc. of 5 mins. and a final inc. of _____ Min.

Initial Shut-In Breakdown: 6 Inc. of 5 mins. and a final inc. of 3 Min.

Second Flow Pressure Breakdown: 5 Inc. of 5 mins. and a final inc. of _____ Min.

Final Shut-In Breakdown: 9 Inc. of 5 mins. and a final inc. of _____ Min.

	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.
P01	00	55	00	79	00	104	00	126
P02	05	55	05	400	05	104	05	395
P03	10	55	10	454	10	104	10	445
P04	15	61	15	478	15	109	15	468
P05	20	67	20	493	20	115	20	485
P06	25	74	25	502	25	122	25	494
P07	30	79	30	507	30	126	30	502
P08			35	513			35	506
P09			40	517			40	512
P10			42	517			45	513
P11								
P12								
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CRUDE OIL TESTING INC.

DRILL STEM TEST RECOVERY ANALYSIS

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

COMPANY: A. Scott Ritchie **LEASE:** Hacker A-3 **DST #** 1

VISUAL DST RECOVERY:

206' muddy water

Ticket#2633

CALCULATED DST RECOVERY

SAMPLE #	TOTAL FOOTAGE
1	82
2	124
Totals	

GAS IN FLUID

x	%	=	Feet
x	0	=	0
x	5	=	6.2
			6.2

OIL

x	%	=	Feet
x	10	=	8.2
x	5	=	6.2
			14.4

MUD

x	%	=	Feet
x	75	=	61.5
x	45	=	55.8
			117.3

WATER

SAMPLE #	TOTAL FOOTAGE	x	%	=	Feet	CHLORIDES PPM	RESISTIVITY OHMS
1	82	x	15	=	12.3	52,000	
2	124	x	45	=	55.8	52,000	
Totals					68.1		

GAS 6.2

OIL 14.4

MUD 117.3

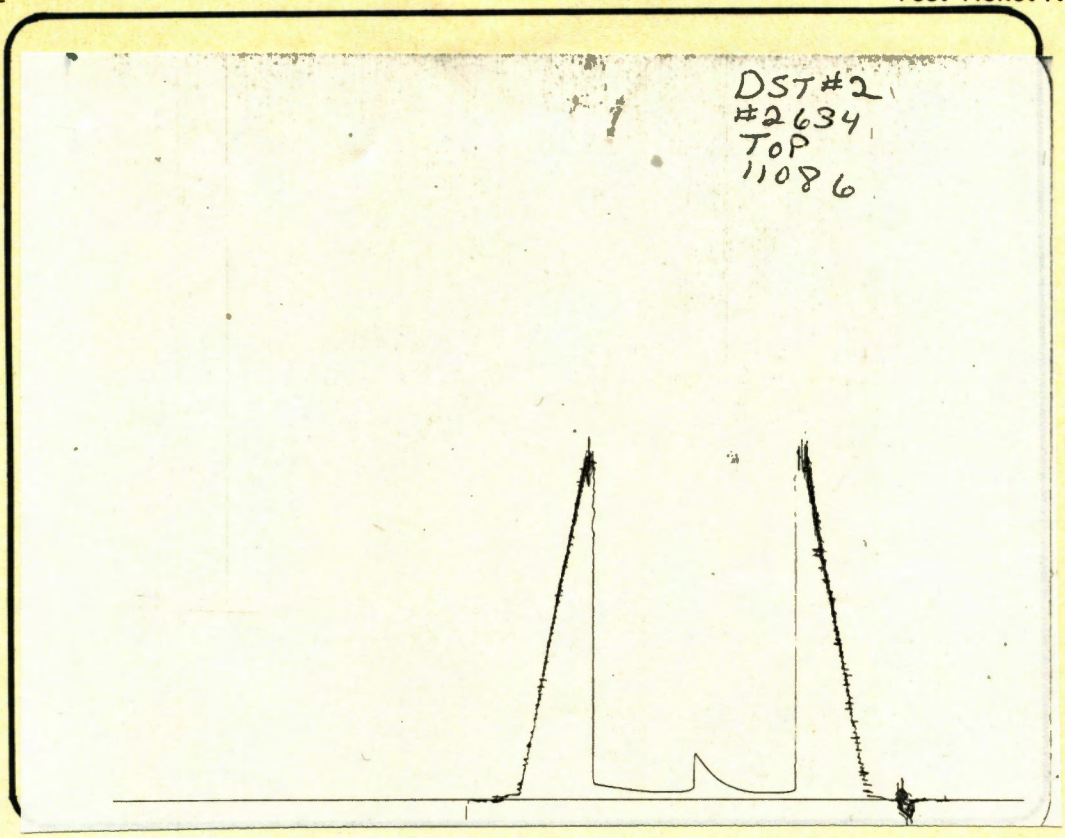
WTR 68.1

TOTAL FLUID 206.

CRUDE OIL TESTING INC.

Date 1/29/85 Test Ticket No. 2634

DST # 2



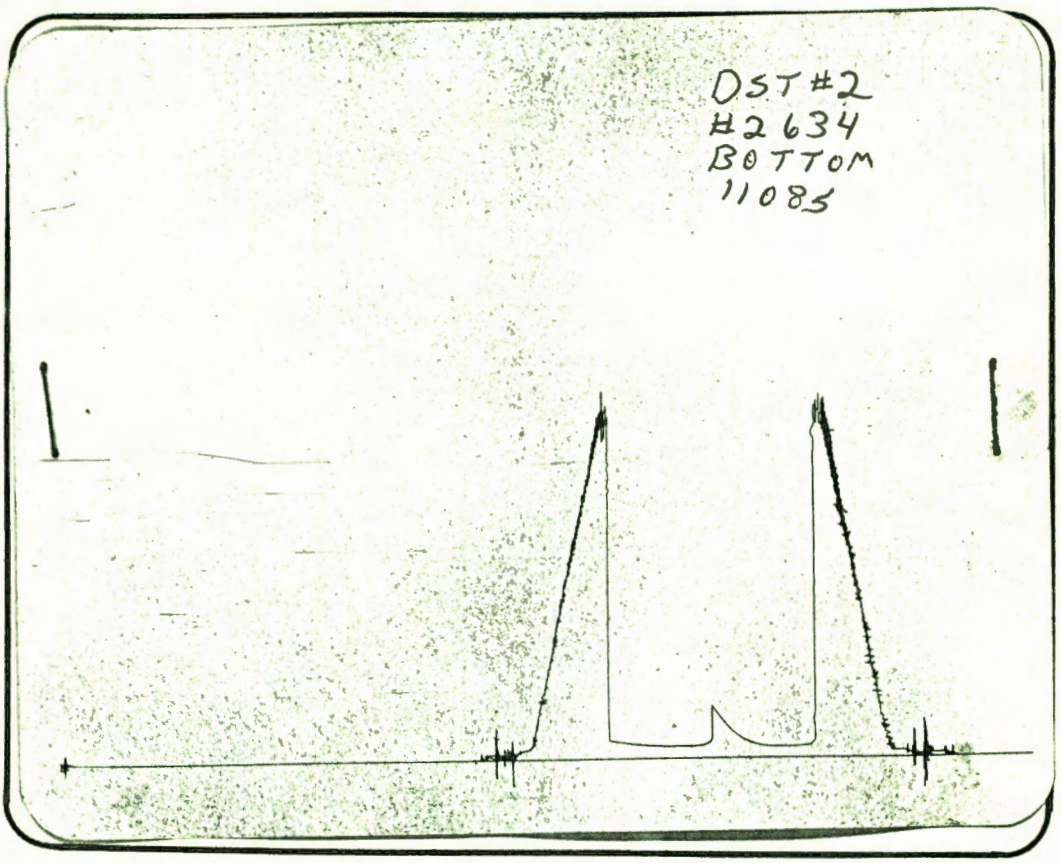
Formation Toronto & Lansing Zone "A" Type of Test Straddle
Interval 3,606 To 3,667 Total Depth 3,720
Open 30 Shut In 45 Open 30 Shut In 45
Packer(s) Set 2:33 A M. Started off Bottom 3:05 A M.
Blow 1st Opening Weak steady blow on top of bucket.
2nd Opening No blow.

Recovery Total Feet 40
Recovered 40 Ft. of mud.
Recovered ____ Ft. of ____
Recovered ____ Ft. of ____
Recovered ____ Ft. of ____

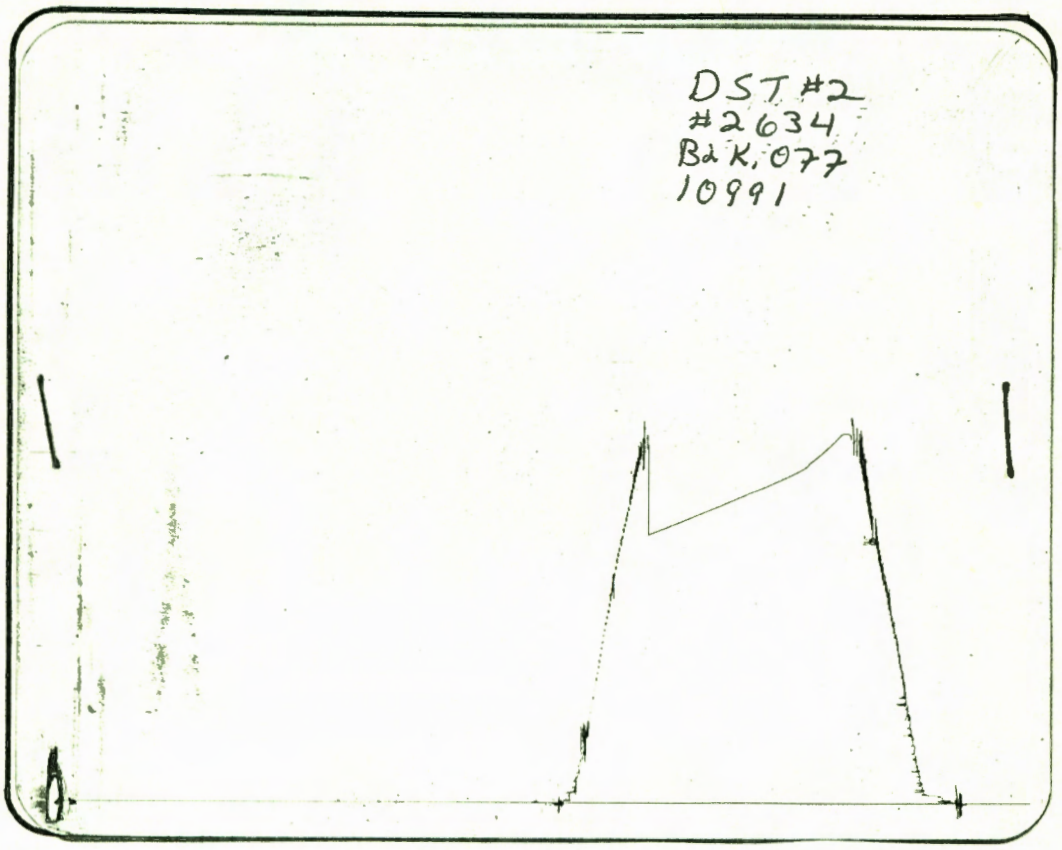
Calculated Recovery Gas ____ Oil ____ WTR ____ MUD ____
Gravity (Oil) ____ Corrected To Temp. ____ °F Test Water Chlorides ____ P.P.M.
Test Area Temperature 118 °F Mud System Chlorides 43,000 P.P.M.

PRESSURE	**Field Reading**	**Office Reading**
(A) Initial Hydrostatic Mud	1,957	PSI
(B) First Initial Flow Pressure	44	PSI
(C) First Final Flow Pressure	44	PSI
(D) Initial Closed-in Pressure	251	PSI
(E) Second Initial Flow Pressure	56	PSI
(F) Second Final Flow Pressure	56	PSI
(G) Final Closed-in Pressure	67	PSI
(H) Final Hydrostatic Mud	1,935	PSI

CRUDE OIL TESTING INC.



Extra recorder chart



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CRUDE OIL TESTING INC

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

TEST REPORT

Test Ticket No. 2534
Company A. Scott Ritchie Date 1/29/83
Company Address Suite 950, 125 N. Market Wichita, KS 67202 No. of Charts 5
Location: Sec. 10 Twp. 12W Rge. 22E Co. Trego State Kansas
Well Name And Number Hacker #A-3 Tester Elmer J. Burgardt
Contractor Murfin Drilling Rig No. #16 Co. Rep. Rocky Milford

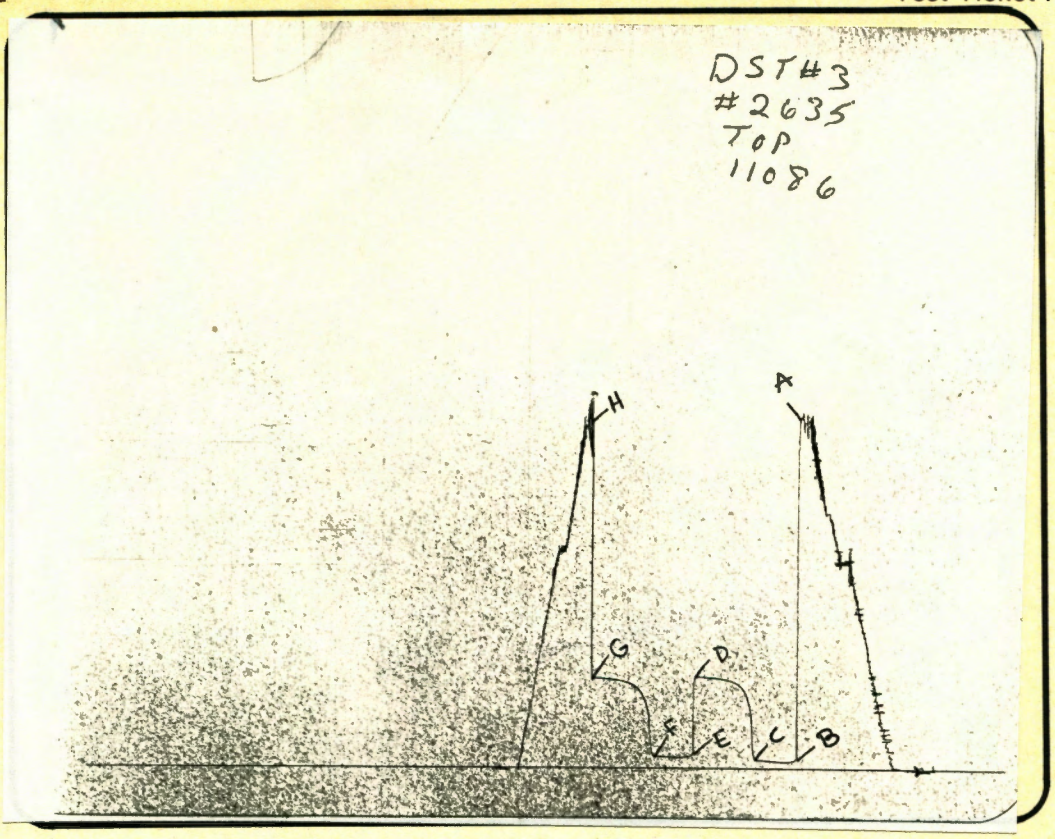
Engineering Data

Elevation 2,362 K.B.
Mud Viscosity 49
Mud Weight 9.8
Water Loss 13
Type of Mud Starch
Anchor Length 59'
Hole Size 7 7/8
Casing Size 8 5/8
Surface Choke 3/4
Bottom Choke 3/4
Drill Pipe Length 2,899 I.D. 3.8 In.
Weight Pipe Length 435 I.D. 2.70 In.
Drill Collar Length ____ I.D. ____ In.
Top Packer Depth. 3,608
Bottom Packer Depth 3,667
Tool Joint Size 4 1/2 F.H.
Test Tool Size 5 1/2
Packer Size 6 3/4
Reversed Out No
Recorder Type and No. AK-1 11086 Clock Range No. 25111 12 Hr.
Recorder Type and No. AK-1 11085 Clock Range No. 22336 12 Hr.
Extra Equipment Third clock #22347
Remarks Chlorides 40,000. Straddle Test. Open Hole Test.

CRUDE OIL TESTING INC.

Date 1/29/83 Test Ticket No. 2635

DST # 3



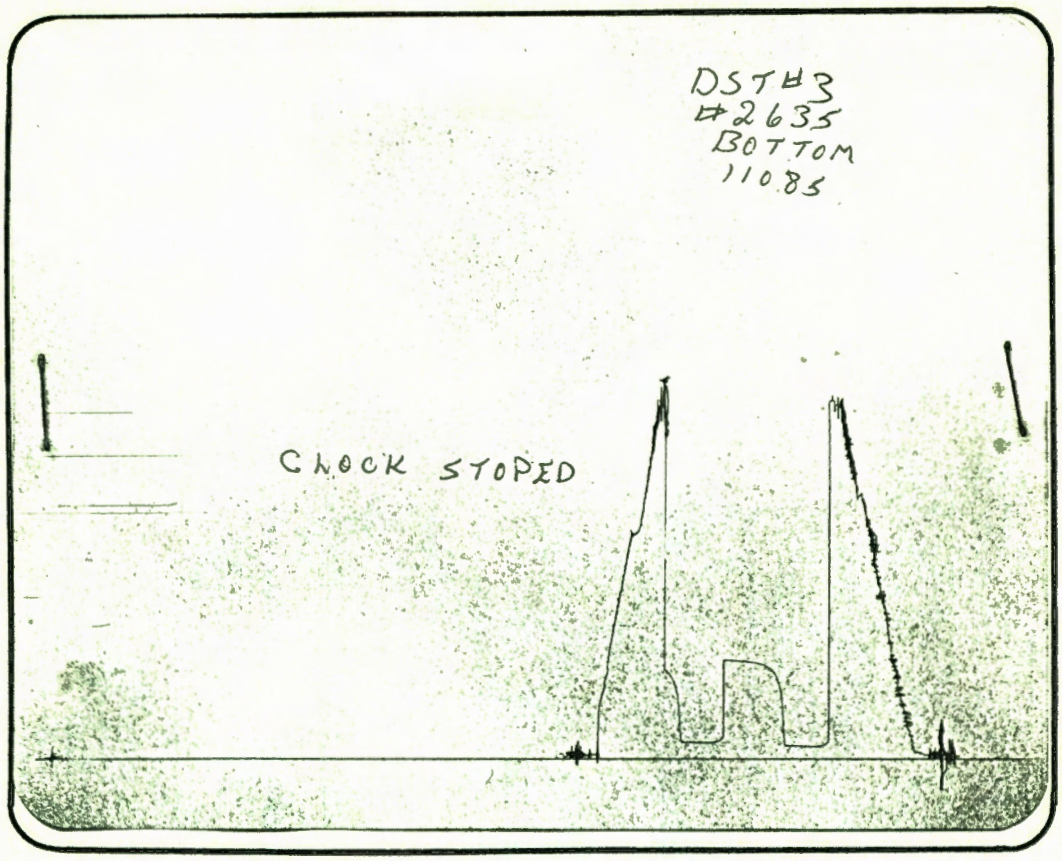
Formation Lansing Zone 70 & 90 Type of Test Conventional
Interval 3,718 To 3,746 Total Depth 3,746
Open 30 Shut In 45 Open 30 Shut In 45
Packer(s) Set 5:08 P M. Started off Bottom 5:40 P M.
Blow 1st Opening Fair blow 4" in bucket.
2nd Opening Weak blow on top of bucket.

Recovery Total Feet 92
Recovered 92 Ft. of muddy water-slight show of oil.
Recovered ____ Ft. of ____
Recovered ____ Ft. of ____
Recovered ____ Ft. of ____

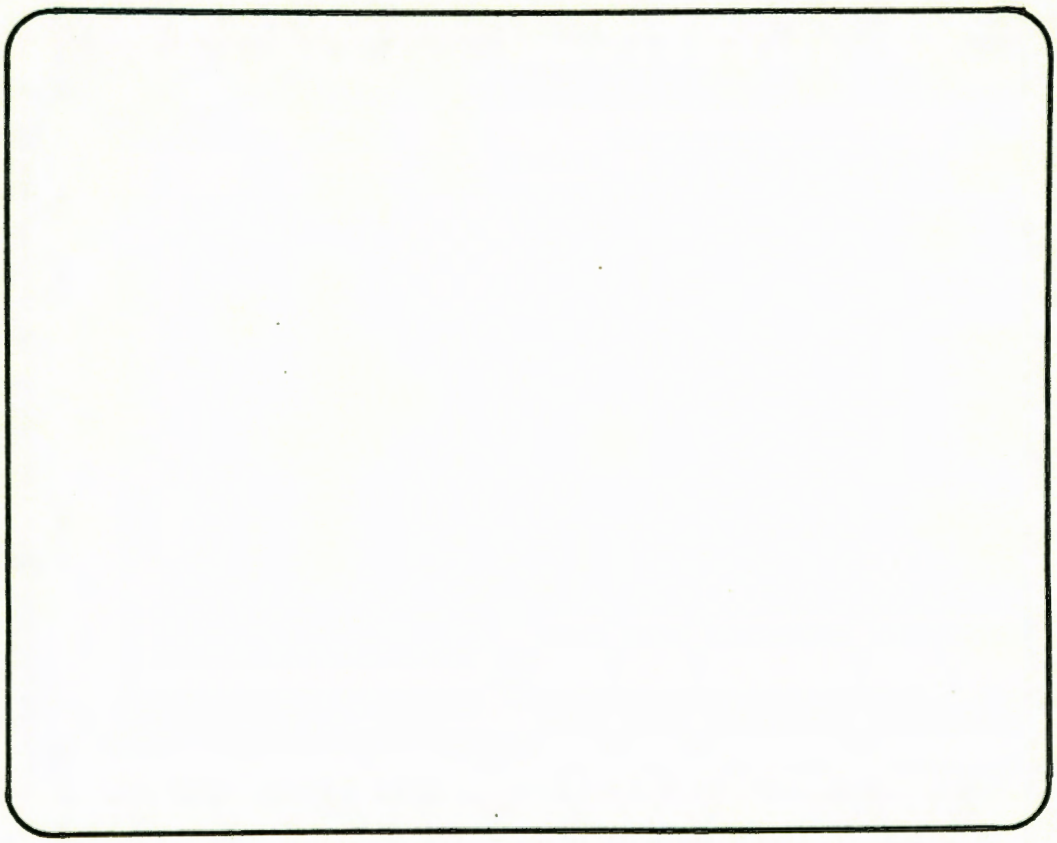
Calculated Recovery Gas ____ Oil Trace WTR 12.3 MUD 79.7
Gravity (Oil) ____ Corrected To Temp. ____ °F Test Water Chlorides 42,000 P.P.M.
Test Area Temperature 110 °F Mud System Chlorides 42,000 P.P.M.

PRESSURE		**Field Reading**	**Office Reading**	
(A)	Initial Hydrostatic Mud	1,978	1,960	PSI
(B)	First Initial Flow Pressure	44	37	PSI
(C)	First Final Flow Pressure	44	45	PSI
(D)	Initial Closed-in Pressure	513	517	PSI
(E)	Second Initial Flow Pressure	54	58	PSI
(F)	Second Final Flow Pressure	65	69	PSI
(G)	Final Closed-in Pressure	502	508	PSI
(H)	Final Hydrostatic Mud	1,956	1,956	PSI

CRUDE OIL TESTING INC.



Extra recorder chart



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CRUDE OIL TESTING INC.

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

TEST REPORT

Test Ticket No. 2635
Company A. Scott Ritchie Date 1/29/83
Company Address Suite 950, 125 N. Market Wichita, KS 67202 No. of Charts 5
Location: Sec. 10 Twp. 12W Rge. 22E Co. Trego State Kansas
Well Name And Number Hacker #A-3 Tester Elmer S. Burgardt
Contractor Martin Drilling Rig No. #16 Co. Rep. Rocky Milford

Engineering Data

Elevation 2,362 K.B.
Mud Viscosity 41
Mud Weight 9.7
Water Loss 11.8
Type of Mud Starch
Anchor Length 28'
Hole Size 7 7/8
Casing Size 8 5/8
Surface Choke 3/4
Bottom Choke 3/4
Drill Pipe Length 3,009 I.D. 3.8 In.
Weight Pipe Length 435 I.D. 2.76 In.
Drill Collar Length I.D. In.
Top Packer Depth. 3,713
Bottom Packer Depth 3,718
Tool Joint Size 4 1/2 F.H.
Test Tool Size 5 1/2
Packer Size 6 3/4
Reversed Out No
Recorder Type and No. AK-1 11086 Clock Range No. 25111 12 Hr.
Recorder Type and No. AK-1 11085 Clock Range No. 22336 12 Hr.
Extra Equipment
Remarks Chlorides 41,000. Open Hole Test.

CRUDE OIL TESTING

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

Recorder Location 3,736 Ft. Recorder No. 11066 Test Ticket No. 2635

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: 8 Inc. of 5 mins. and a final inc. of 1 Min.

Initial Shut-In Breakdown: 9 Inc. of 5 mins. and a final inc. of _____ Min.

Second Flow Pressure Breakdown: 6 Inc. of 5 mins. and a final inc. of _____ Min.

Final Shut-In Breakdown: 9 Inc. of 5 mins. and a final inc. of _____ Min.

	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.
P01	00	37	00	48	00	58	00	69
P02	05	37	05	351	05	58	05	349
P03	10	37	10	446	10	58	10	432
P04	15	37	15	479	15	58	15	465
P05	20	41	20	497	20	63	20	484
P06	25	44	25	504	25	65	25	495
P07	30	48	30	508	30	69	30	501
P08	31	48	35	513			35	505
P09			40	516			40	508
P10			45	517			45	508
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CRUDE OIL TESTING INC.

DRILL STEM TEST RECOVERY ANALYSIS

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

COMPANY: A. Scott Ritchie **LEASE:** Hacker A-3 **DST #** 3

92' muddy water

VISUAL DST RECOVERY:

Ticket#2635

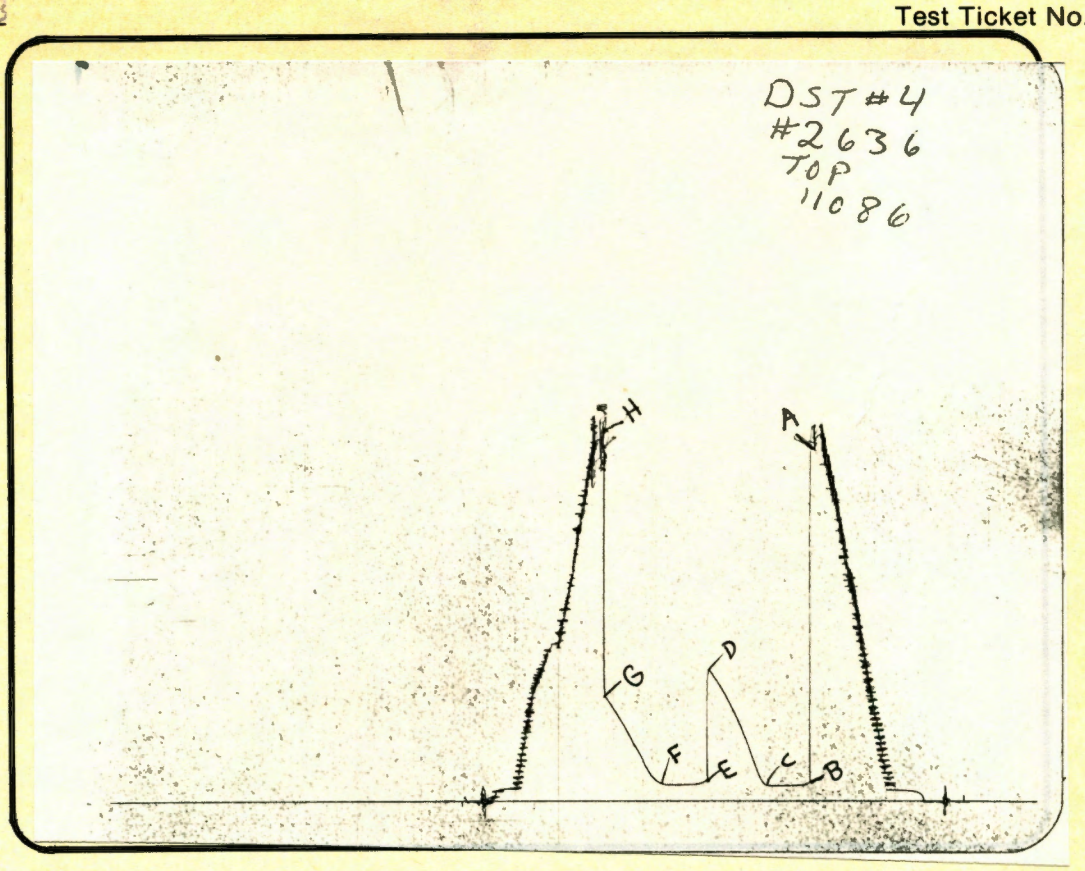
CALCULATED DST RECOVERY

SAMPLE #	TOTAL FOOTAGE
1	30
2	62

CRUDE OIL TESTING INC.

Date 1/30/83 Test Ticket No. 2636

DST # 4



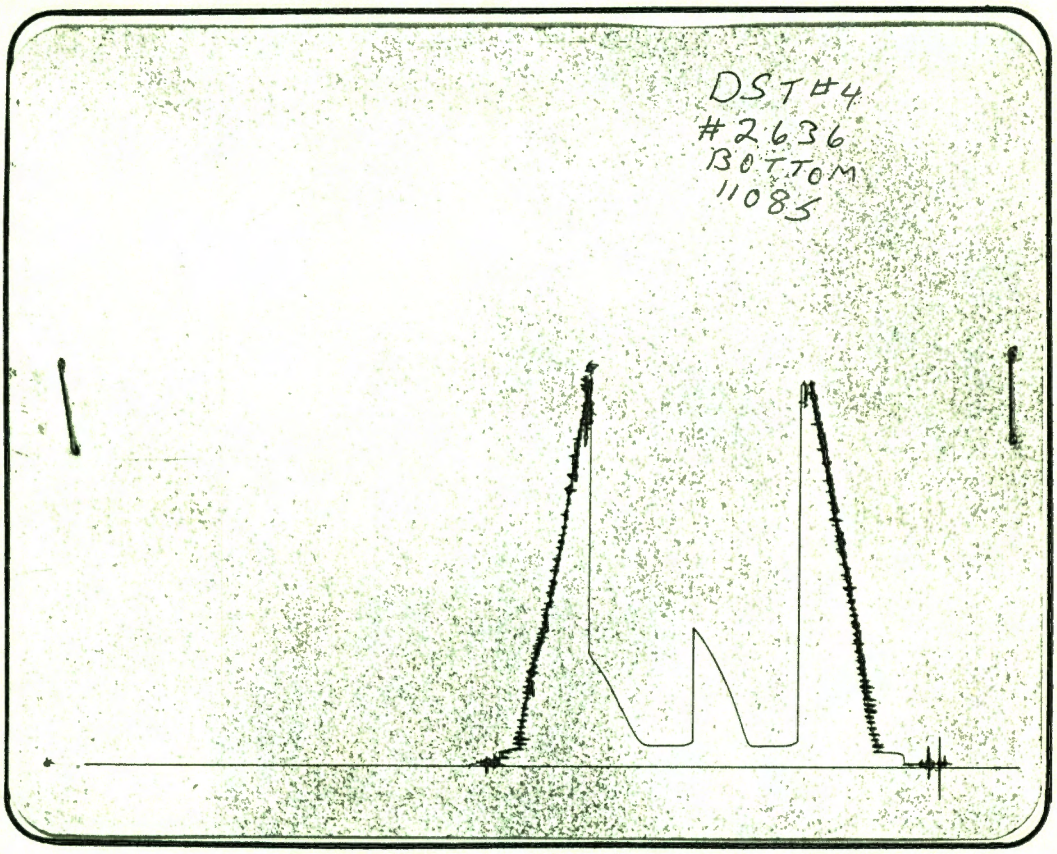
Formation Lansing Zone 140-220 Type of Test Conventional
Interval 3,775 To 3,908 Total Depth 3,908
Open 30 Shut In 45 Open 30 Shut In 45
Packer(s) Set 7:48 P M. Started off Bottom 10:20 P M.
Blow 1st Opening Weak blow on top of bucket.
2nd Opening No blow.

Recovery Total Feet 25
Recovered 25 Ft. of mud.
Recovered ____ Ft. of ____
Recovered ____ Ft. of ____
Recovered ____ Ft. of ____

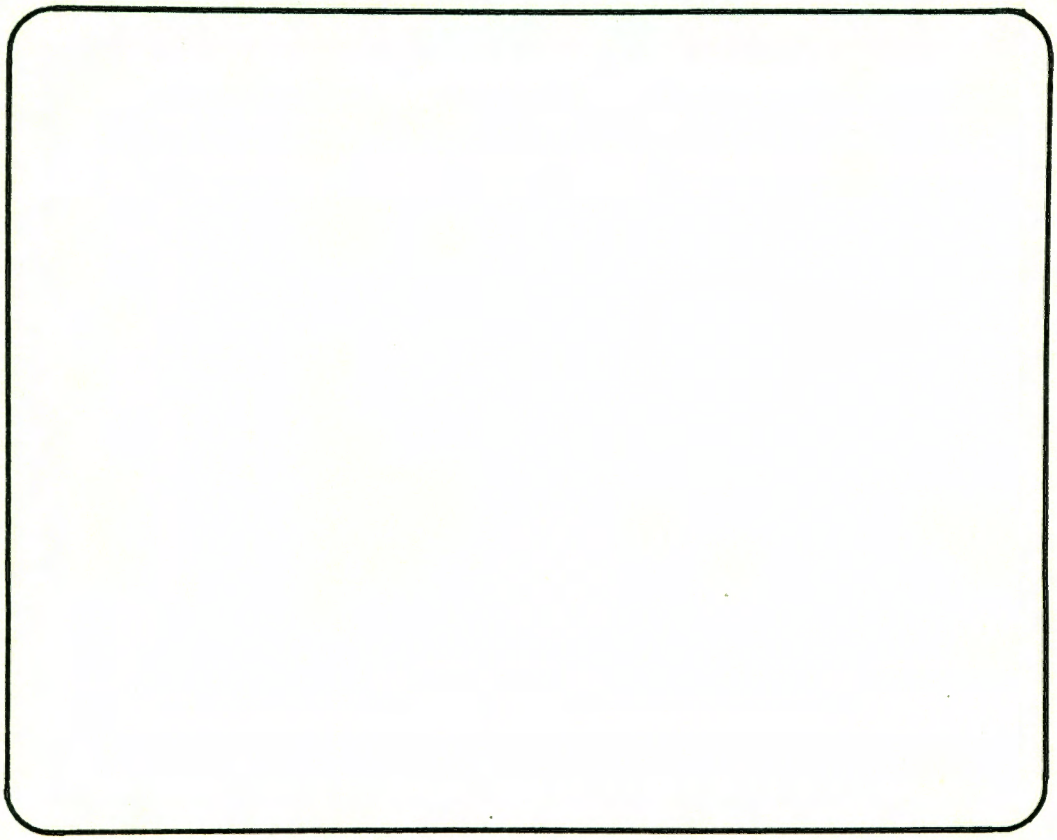
Calculated Recovery Gas ____ Oil ____ WTR ____ MUD ____
Gravity (Oil) ____ Corrected To Temp. ____ °F Test Water Chlorides ____ P.P.M.
Test Area Temperature 112 °F Mud System Chlorides 44,000 P.P.M.

PRESSURE	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2,109	2,013	PSI
(B) First Initial Flow Pressure	87	89	PSI
(C) First Final Flow Pressure	98	89	PSI
(D) Initial Closed-in Pressure	744	738	PSI
(E) Second Initial Flow Pressure	98	91	PSI
(F) Second Final Flow Pressure	98	91	PSI
(G) Final Closed-in Pressure	601	592	PSI
(H) Final Hydrostatic Mud	2,087	2,087	PSI

CRUDE OIL TESTING INC.



Extra recorder chart



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These are actual photographs of recorder charts.

CRUDE OIL TESTING INC.

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

TEST REPORT

Test Ticket No. 2636

Company A. Scott Ritchie Date 1/30/85

Company Address Suite 950, 125 N. Market Wichita, KS 67202 No. of Charts 5

Location: Sec. 10 Twp. 12W Rge. 22S Co. Trego State Kansas

Well Name And Number Hacker #A-3 Tester Elmer S. Durgardt

Contractor Murfin Drilling Rig No. #16 Co. Rep. Rocky Milford

Engineering Data

Elevation 2,362 K.B.

Mud Viscosity 39

Mud Weight 10.0

Water Loss 15.4

Type of Mud Starch

Anchor Length 133'

Hole Size 7 7/8

Casing Size 8 5/8

Surface Choke 3/4

Bottom Choke 3/4

Drill Pipe Length 3,066 I.D. 3.8 In.

Weight Pipe Length 455 I.D. 2.76 In.

Drill Collar Length ____ I.D. ____ In.

Top Packer Depth. 3,770

Bottom Packer Depth 3,775

Tool Joint Size 4 1/2 F.H.

Test Tool Size 5 1/2

Packer Size 6 3/4

Reversed Out No

Recorder Type and No. AK-1 11086 Clock Range No. 25111 12 Hr.

Recorder Type and No. AK-1 11085 Clock Range No. 22536 12 Hr.

Extra Equipment

Remarks Chlorides 42,000. Open Hole Test.

CRUDE OIL TESTING

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

Recorder Location 3,898 Ft. Recorder No. 11086 Test Ticket No. 2636

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: 6 Inc. of 5 mins. and a final inc. of _____ Min.

Initial Shut-In Breakdown: 9 Inc. of 5 mins. and a final inc. of 1 Min.

Second Flow Pressure Breakdown: 6 Inc. of 5 mins. and a final inc. of _____ Min.

Final Shut-In Breakdown: 9 Inc. of 5 mins. and a final inc. of 1 Min.

	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.
P01	00	89	00	89	00	91	00	91
P02	05	89	05	103	05	91	05	100
P03	10	89	10	135	10	91	10	126
P04	15	89	15	289	15	91	15	187
P05	20	89	20	379	20	91	20	262
P06	25	89	25	471	25	91	25	327
P07	30	89	30	550	30	91	30	397
P08			35	618			35	462
P09			40	680			40	526
P10			45	734			45	581
P11			46	734			46	592
P12								
P13								
P14								
P15								
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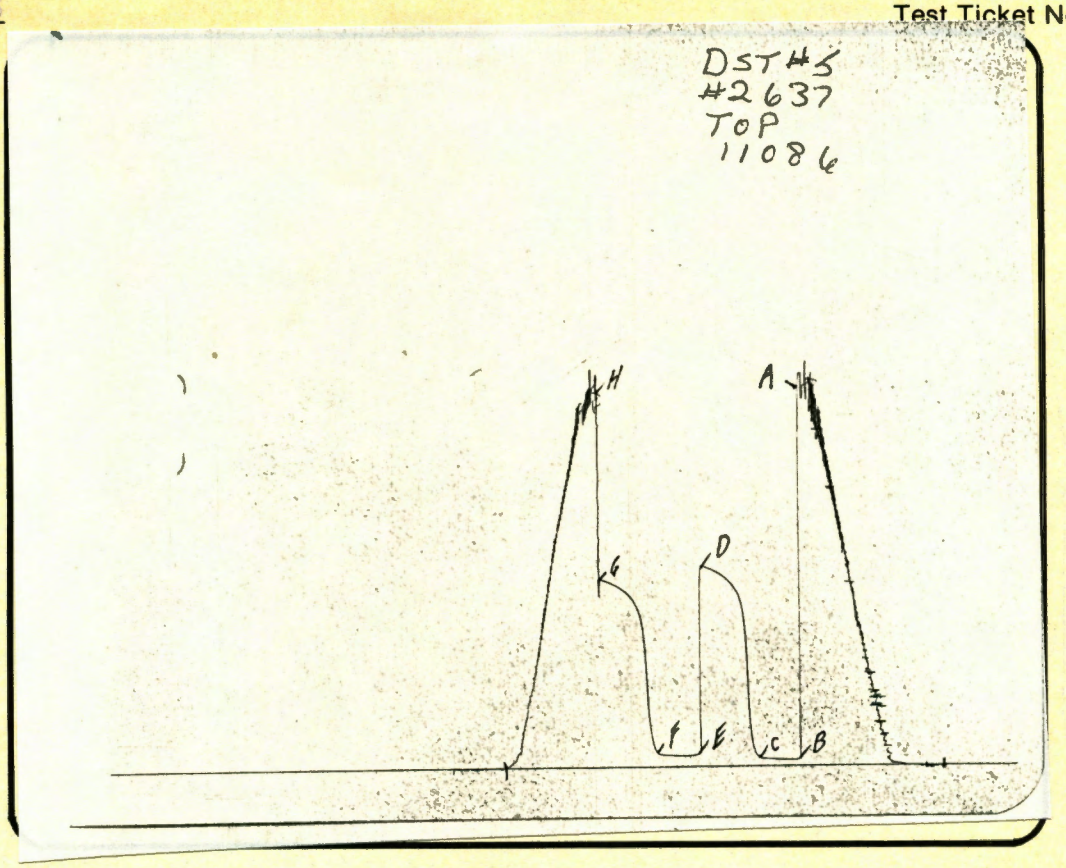
CRUDE OIL TESTING INC.

Date 1/31/83 Test Ticket No. 2637

DST # 5



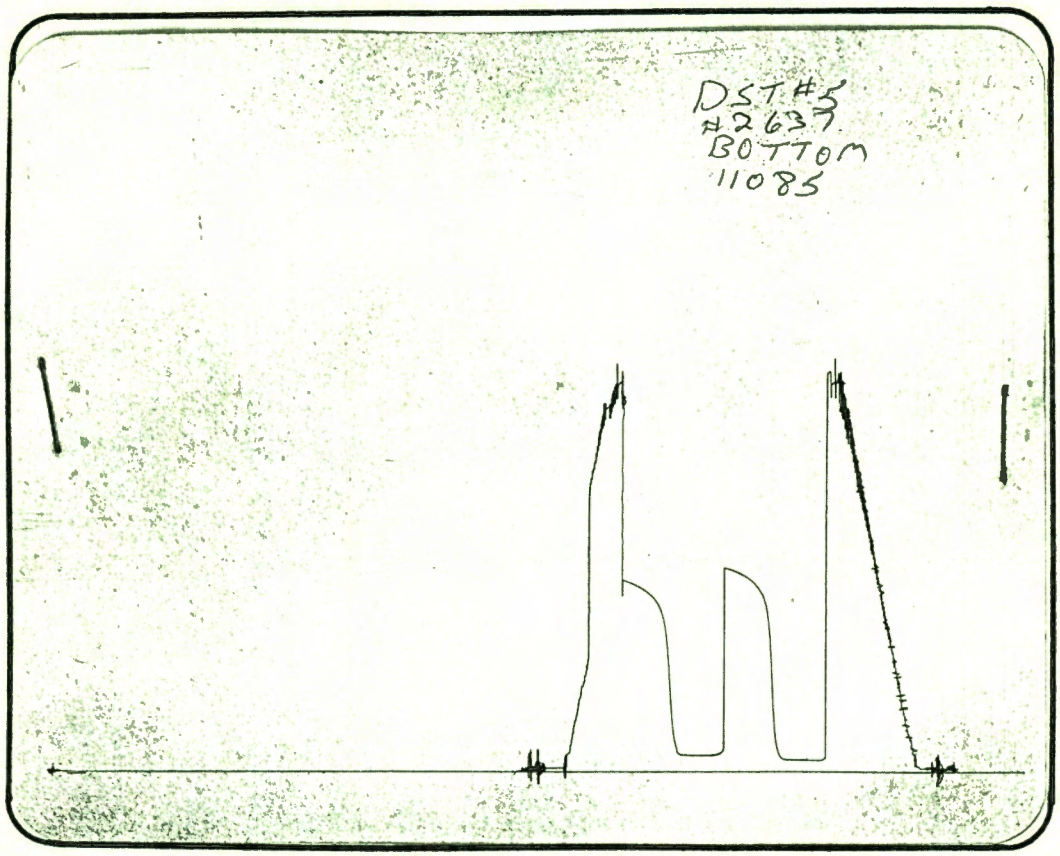
Formation Marmaton Zone _____ Type of Test Conventional
Interval 3,979 To 4,015 Total Depth 4,015
Open 30 Shut In 45 Open 30 Shut In 45
Packer(s) Set 2:23 P M. Started off Bottom 4:55 P M.
Blow 1st Opening Fair blow off bottom of bucket, in 30 minutes.
2nd Opening weak blow 1" in bucket.

Recovery Total Feet 129
Recovered 67 Ft. of slightly oil cut mud-gassy.
Recovered 62 Ft. of heavy oil cut mud.
Recovered _____ Ft. of _____
Recovered _____ Ft. of _____

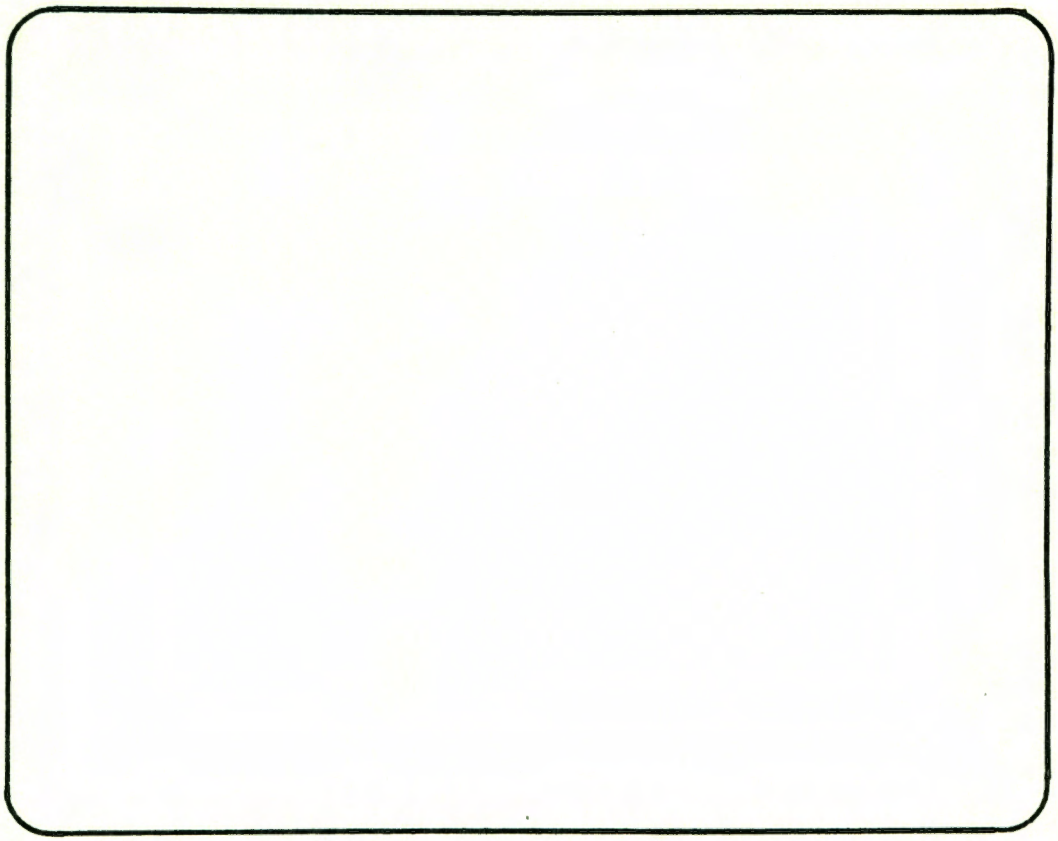
Calculated Recovery Gas 46.4 Oil 41.05 WTR _____ MUD 41.55
Gravity (Oil) _____ Corrected To Temp. _____ °F Test Water Chlorides _____ P.P.M.
Test Area Temperature 118 °F Mud System Chlorides 40,000 P.P.M.

PRESSURE		**Field Reading**	**Office Reading**	
(A)	Initial Hydrostatic Mud	2,207	2,136	PSI
(B)	First Initial Flow Pressure	44	33	PSI
(C)	First Final Flow Pressure	55	46	PSI
(D)	Initial Closed-in Pressure	1,129	1,135	PSI
(E)	Second Initial Flow Pressure	65	57	PSI
(F)	Second Final Flow Pressure	65	67	PSI
(G)	Final Closed-in Pressure	1,052	1,061	PSI
(H)	Final Hydrostatic Mud	2,186	2,112	PSI

CRUDE OIL TESTING INC.



Extra recorder chart



Blank off recorder chart

These are actual photographs of recorder charts.

CRUDE OIL TESTING INC.

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

TEST REPORT

Test Ticket No. 2637

Company A. Scott Ritchie Date 1/31/83

Company Address Suite 950, 125 N. Market Wichita,KS 67202 No. of Charts 5

Location: Sec. 10 Twp. 12W Rge. 22S Co. Trego State Kansas

Well Name And Number Hacker #A-3 Tester Elmer S. Burgardt

Contractor Murfin Drilling Rig No. #16 Co. Rep. Rocky Milford

Engineering Data

Elevation 2,362 K.B.

Mud Viscosity 45

Mud Weight 10.1

Water Loss 16.0

Type of Mud Starch

Anchor Length 36'

Hole Size 7 7/8

Casing Size 8 5/8

Surface Choke 3/4

Bottom Choke 3/4

Drill Pipe Length 3,270 I.D. 3.8 In.

Weight Pipe Length 435 I.D. 2.76 In.

Drill Collar Length ____ I.D. ____ In.

Top Packer Depth.

Bottom Packer Depth 3,979

Tool Joint Size 4 1/2 F.H.

Test Tool Size 5 1/2

Packer Size 6 3/4

Reversed Out No

Recorder Type and No. AK-1 11086 Clock Range No. 25111 12 Hr.

Recorder Type and No. AK-1 11085 Clock Range No. 22336 12 Hr.

Extra Equipment Single Conventional Packer

Remarks Chlorides 40,000. Open Hole Test.

CRUDE OIL TESTING

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

Recorder Location 4,005 Ft. Recorder No. 11066 Test Ticket No. 2637

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: 6 Inc. of 5 mins. and a final inc. of _____ Min.

Initial Shut-In Breakdown: 8 Inc. of 5 mins. and a final inc. of 4 Min.

Second Flow Pressure Breakdown: 6 Inc. of 5 mins. and a final inc. of _____ Min.

Final Shut-In Breakdown: 8 Inc. of 5 mins. and a final inc. of 4 Min.

	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.
P01	00	33	00	46	00	57	00	67
P02	05	34	05	146	05	57	05	145
P03	10	37	10	723	10	58	10	618
P04	15	39	15	958	15	59	15	881
P05	20	40	20	1,027	20	62	20	953
P06	25	43	25	1,065	25	65	25	994
P07	30	46	30	1,092	30	67	30	1,020
P08			35	1,113			35	1,039
P09			40	1,129			40	1,055
P10			44	1,135			44	1,061
P11								
P12								
P13								
P14								
P15								
P16								
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CRUDE OIL TESTING INC

DRILL STEM TEST RECOVERY ANALYSIS

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

COMPANY: A. Scott Ritchie LEASE: Hacker A-3 DST # 5

VISUAL DST RECOVERY:

129' oil cut mud

Ticket#2637

CALCULATED DST RECOVERY

SAMPLE #	TOTAL FOOTAGE
1	67
2	62
Totals	

GAS IN FLUID

x	%	=	Feet
x	60	=	40.2
x	10	=	6.2
			46.4

OIL

x	%	=	Feet
x	15	=	10.05
x	50	=	31.
			41.05

MUD

x	%	=	Feet
x	25	=	16.75
x	40	=	24.8
			41.55

WATER

SAMPLE #	TOTAL FOOTAGE	x	%	=	Feet	CHLORIDES PPM	RESISTIVITY OHMS
1	67	x	0	=	0.	40,000	
2	62	x	0	=	0.	40,000	
Totals							

GAS 46.4

OIL 41.05

MUD 41.55

WTR 0.0

TOTAL FLUID 129.