3-11-23W

TEST REPORT

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

Test Ticket No. 2804

Company A. Scott Ritchie Date 4/20/83

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

Location: Sec. 3 Twp. 11S Rge. 23W Co. Trego State Kansas

Well Name And Number #2 Harger "C" Tester Mark Michellich

Contractor Murfin Drilling Rig No. 21 Co. Rep. Rockey Milford

Engineering Data

Elevation 2,233 K.B. 2,228 G.L.

Mud Viscosity 38

Mud Weight 9.5

Water Loss 4.8

Type of Mud Starch

Anchor Length 33'

Hole Size 7 7/8

Casing Size 8 5/8

Surface Choke 3/4

Bottom Choke 3/4

Drill Pipe Length 3,341 I.D. 3.8 In.

Weight Pipe Length I.D. In.

Drill Collar Length 119 I.D. 2.25 In.

Top Packer Depth. 3,477

Bottom Packer Depth 3,482

Tool Joint Size 4 1/2 FH

Test Tool Size 5 1/2

Packer Size 6 3/4

Reversed Out No

Recorder Type and No. AK-1 10993 Clock Range No. 19124 12 Hr.

Recorder Type and No. AK-1 10992 Clock Range No. 21048 12 Hr.

Extra Equipment

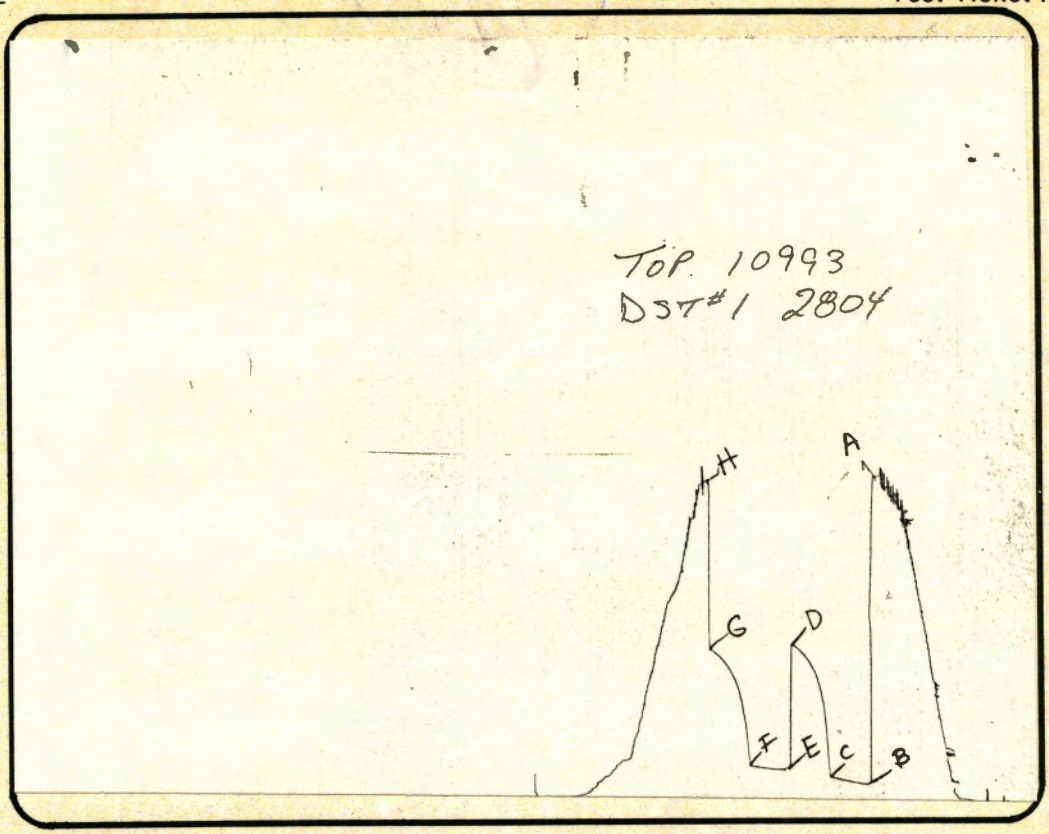
Remarks Open Hole Test. Strong blow came back on both shut-ins.

CRUDE OIL TESTING INC.

3-11-23W

Date 4/20/83 Test Ticket No. 2804

DST # 1



Formation Lansing Zone Top Type of Test Conventional
Interval 3,481 To 3,514 Total Depth 3,514
Open 30 Shut In 30 Open 30 Shut In 30
Packer(s) Set 10:13P M. Started off Bottom 12:15 A M.
Blow 1st Opening Strong blow off bottom in 5 minutes.
2nd Opening Strong blow off bottom in 2 minutes.

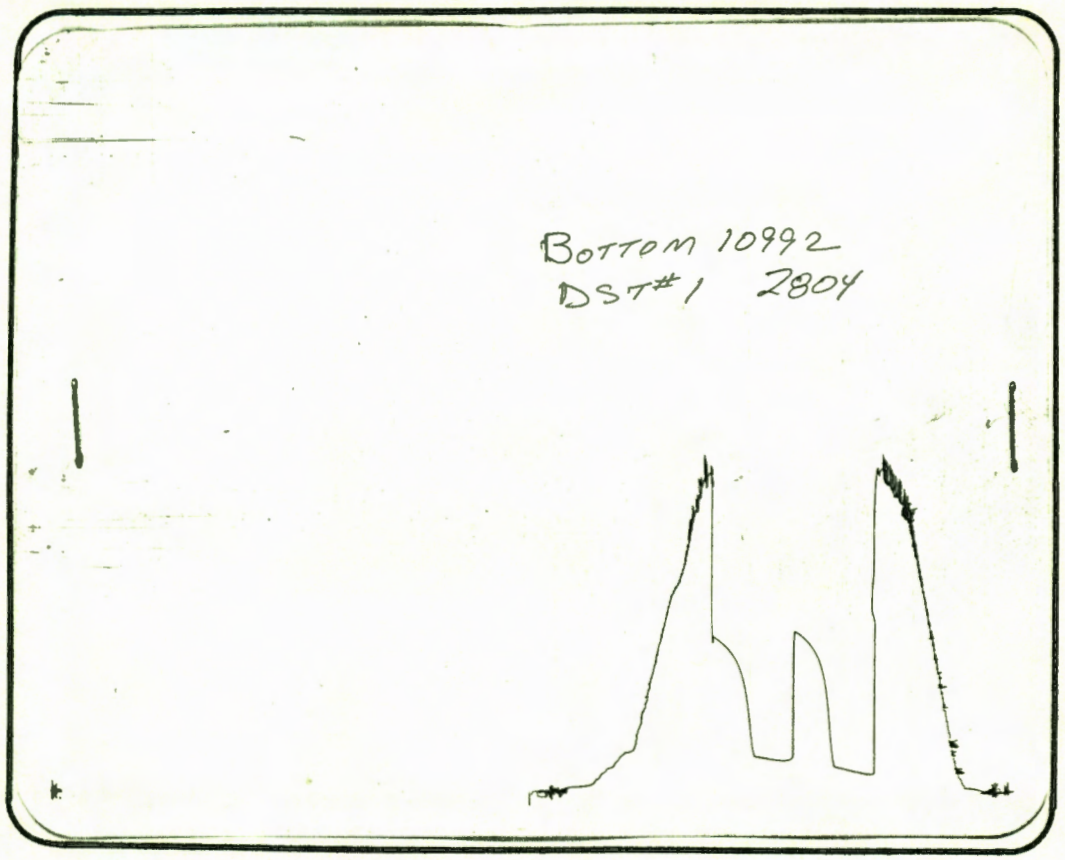
Recovery
Total Feet 402
Recovered 279 Ft. of gas in pipe.
Recovered 402 Ft. of oil cut water.
Recovered _____ Ft. of 6% gas, 31% oil, 6% mud, 57% water.
Recovered _____ Ft. of _____

Calculated Recovery
Gas 23.56 Oil 126.76 WTR 23.46 MUD 228.22
Gravity (Oil) _____ Corrected To Temp. _____ °F Test Water Chlorides 86,000 P.P.M.
Test Area Temperature 108 °F Mud System Chlorides 21,000 P.P.M.

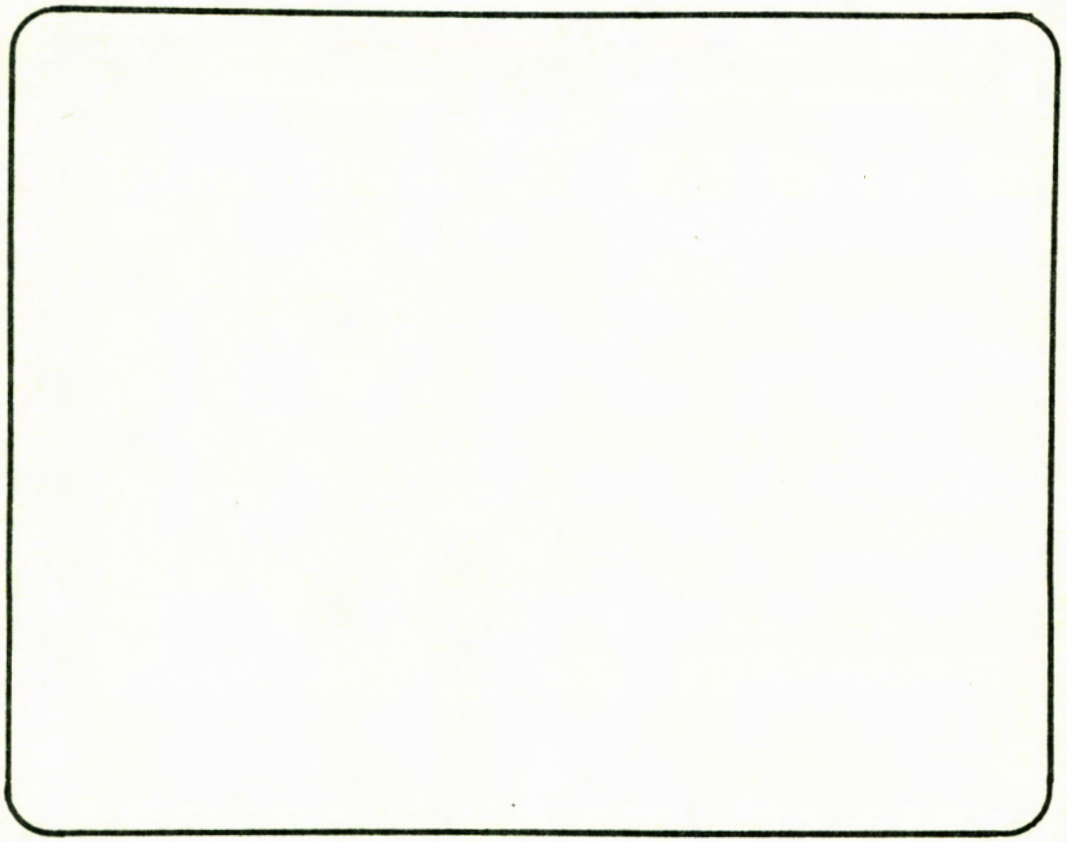
PRESSURE

	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	1,789	1,804	PSI
(B) First Initial Flow Pressure	97	97	PSI
(C) First Final Flow Pressure	141	140	PSI
(D) Initial Closed-in Pressure	877	877	PSI
(E) Second Initial Flow Pressure	173	180	PSI
(F) Second Final Flow Pressure	195	203	PSI
(G) Final Closed-in Pressure	844	855	PSI
(H) Final Hydrostatic Mud	1,768	1,778	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 3,504 Ft. Recorder No. 10993 Test Ticket No. 2804

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 _____ Min.

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

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

Points	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Minutes	Press.	Minutes	Press.	Minutes	Press.	Minutes	Press.
P01	00	97	00	140	00	180	00	203
P02	05	97	05	546	05	180	05	534
P03	10	104	10	680	10	180	10	667
P04	15	113	15	762	15	185	15	742
P05	20	121	20	809	20	192	20	790
P06	25	128	25	849	25	200	25	826
P07	30	140	30	876	30	203	30	855
P08								
P09								
P10								
P11								
P12								
P13								
P14								
P15								
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P38								
P39								
P40								

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: #2 Harger "C" DST # 1

279' gas in pipe.
402' oil cut muddy water.

VISUAL DST RECOVERY:

CALCULATED DST RECOVERY

SAMPLE #	TOTAL FOOTAGE
1	30
2	62
3	62
4	62
5	62
6	62
7	62
Totals	

GAS IN FLUID

x	%	=	Feet
x	0	=	
x	10	=	6.2
x	13	=	8.06
x	15	=	9.3
			23.56

OIL

x	%	=	Feet
x	65	=	19.5
x	70	=	43.4
x	57	=	35.34
x	34	=	21.08
x	8	=	4.96
x	2	=	1.24
x	2	=	1.24
			126.76

MUD

x	%	=	Feet
x	10	=	3.
x	2	=	1.24
x	2	=	1.24
x	5	=	3.1
x	5	=	3.1
x	4	=	2.48
x	15	=	9.3
			23.46

WATER

SAMPLE #	TOTAL FOOTAGE	x	%	=	Feet	CHLORIDES PPM	RESISTIVITY OHMS
1	30	x	25	=	7.50		
2	62	x	18	=	11.16		
3	62	x	28	=	17.36		
4	62	x	46	=	28.52		
5	62	x	87	=	53.94	86,000	.06 at 67
6	62	x	94	=	58.28		
7	62	x	83	=	51.46	86,000	
		x		=			
		x		=			
		x		=			
		x		=			
		x		=			
		x		=			
		x		=			
		x		=			
Totals					228.22		

GAS 23.56= 6%

OIL 126.76= 31%

MUD 23.46= 6%

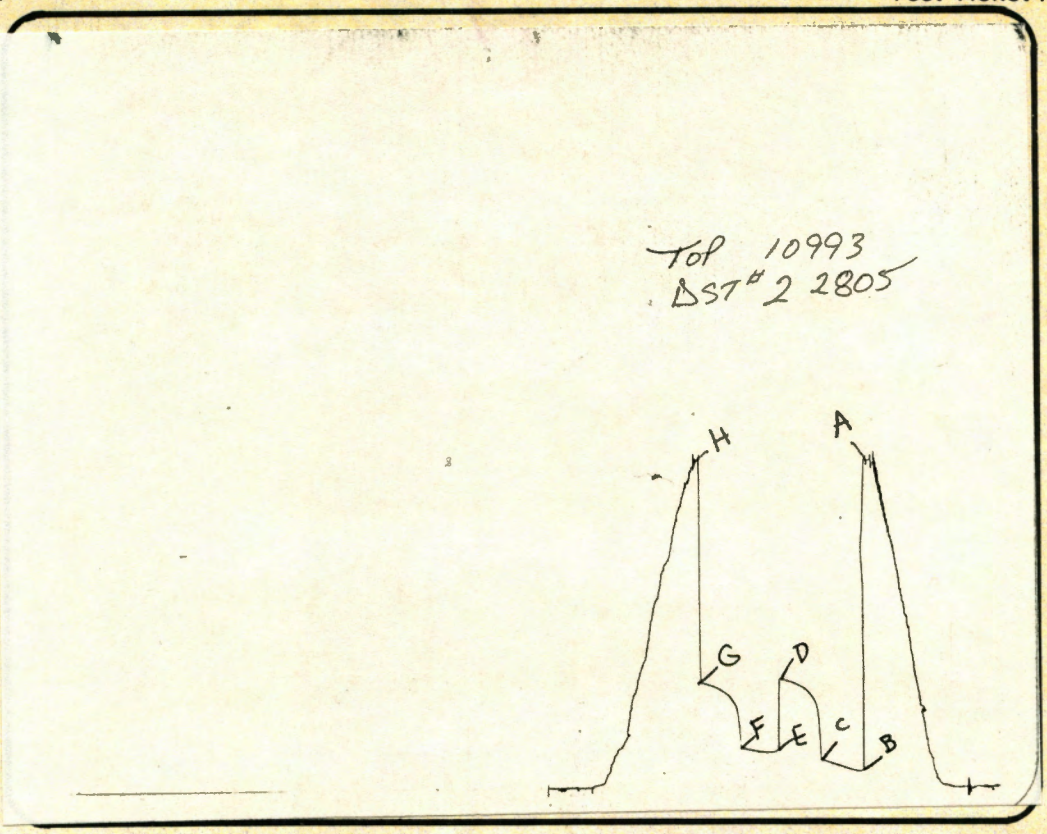
WTR 228.22= 57%

TOTAL FLUID 402''

CRUDE OIL TESTING INC.

Date 4/21/83 Test Ticket No. 2805

DST # 2



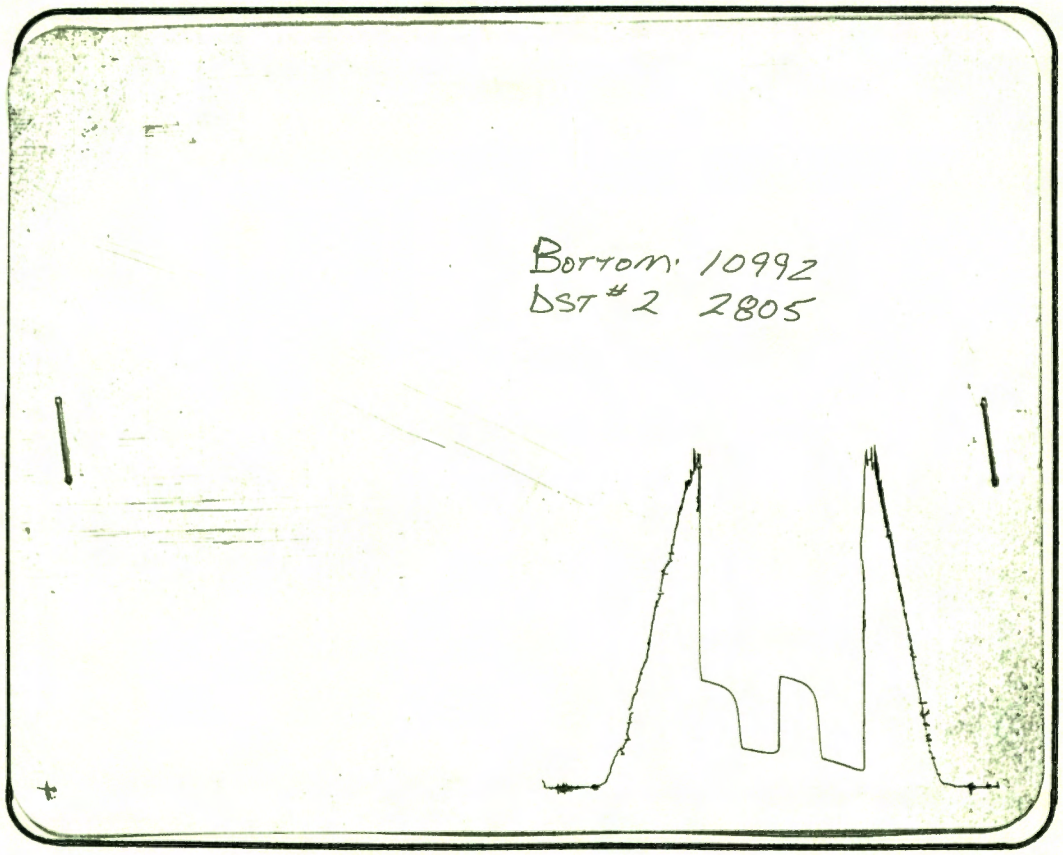
Formation Lansing Zone 70 & 90 Type of Test Conventional
Interval 3,551 To 3,585 Total Depth 3,585
Open 30 Shut In 30 Open 30 Shut In 30
Packer(s) Set 3:43 P M. Started off Bottom 5:45 P M.
Blow 1st Opening Strong blow off bottom of bucket in 6 minutes.
2nd Opening Strong blow off bottom of bucket in 21 minutes.

Recovery
Total Feet 412
Recovered 60 Ft. of gas in pipe.
Recovered 412 Ft. of slightly oil cut water.
Recovered _____ Ft. of 2% gas, 6% oil, 15% mud, 76% water.
Recovered _____ Ft. of _____

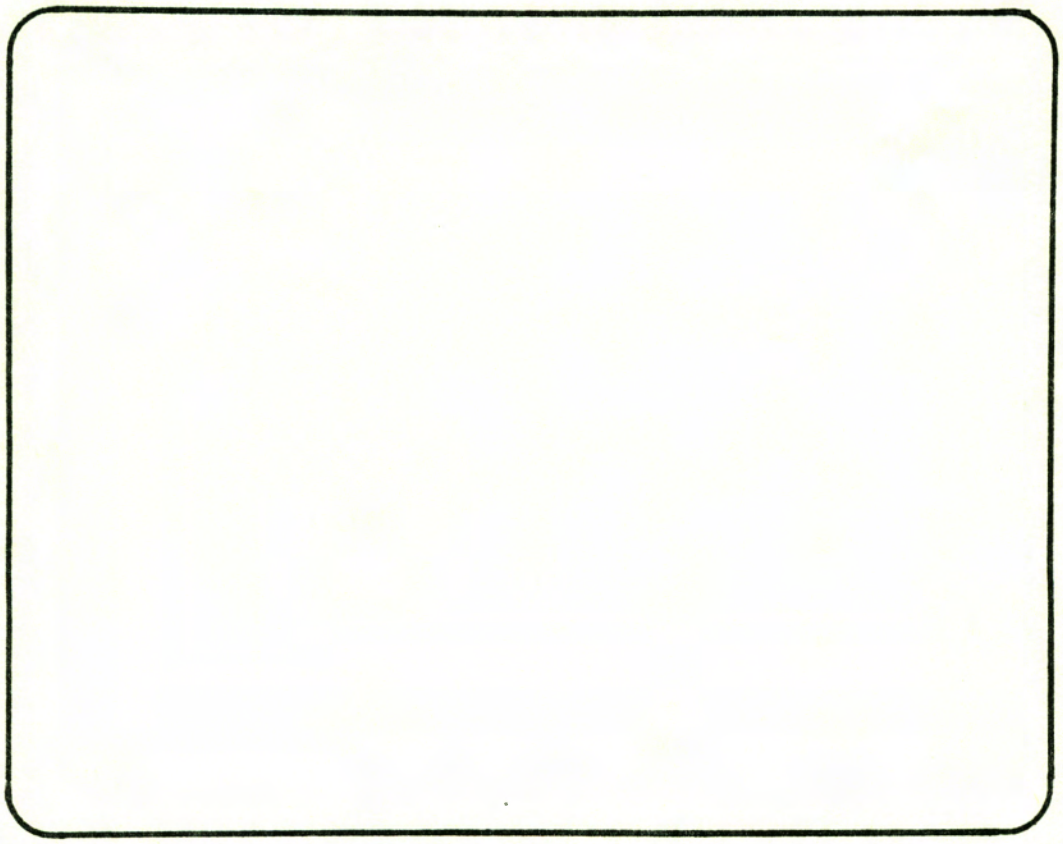
Calculated Recovery
Gas 10.1 Oil 26.7 WTR 310.28 MUD 64.92
Gravity (Oil) _____ Corrected To Temp. _____ °F Test Water Chlorides 64,000 P.P.M.
Test Area Temperature 111 °F Mud System Chlorides 35,000 P.P.M.

PRESSURE		**Field Reading**	**Office Reading**	
(A)	Initial Hydrostatic Mud	1,832	1,834	PSI
(B)	First Initial Flow Pressure	86	89	PSI
(C)	First Final Flow Pressure	152	154	PSI
(D)	Initial Closed-in Pressure	607	607	PSI
(E)	Second Initial Flow Pressure	195	195	PSI
(F)	Second Final Flow Pressure	217	219	PSI
(G)	Final Closed-in Pressure	586	590	PSI
(H)	Final Hydrostatic Mud	1,811	1,821	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. 2805

Company A. Scott Ritchie Date 4/21/83

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

Location: Sec. 3 Twp. 11S Rge. 23W Co. Trego State Kansas

Well Name And Number #2 Harger "C" Tester Mark Michellich

Contractor Murfin Drilling Rig No. 21 Co. Rep. Rockey Milford

Engineering Data

Elevation 2,233 K.B. 2,228 G.L.

Mud Viscosity 37

Mud Weight 9.6

Water Loss 8.2

Type of Mud Starch

Anchor Length 34'

Hole Size 7 7/8

Casing Size 8 5/8

Surface Choke 3/4

Bottom Choke 3/4

Drill Pipe Length 3,410 I.D. 3.8 In.

Weight Pipe Length I.D. In.

Drill Collar Length 119 I.D. 2.25 In.

Top Packer Depth. 3,546

Bottom Packer Depth 3,551

Tool Joint Size 4 1/2 FH

Test Tool Size 5 1/2

Packer Size 6 3/4

Reversed Out No

Recorder Type and No. AK-1 10993 Clock Range No. 19124 12 Hr.

Recorder Type and No. AK-1 10992 Clock Range No. 21048 12 Hr.

Extra Equipment

Remarks Open Hole Test. No blow on shut-ins, loosing 30' of mud in hole per hour through out test.

CRUDE OIL TESTING

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

Recorder Location 3,575 Ft. Recorder No. 10993 Test Ticket No. 2805

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 _____ Min.

Second Flow Pressure Breakdown: 4 Inc. of 5 mins. and a final inc. of 2 Min.

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

	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.
P01	00	89	00	154	00	195	00	219
P02	05	89	05	484	05	195	05	484
P03	10	100	10	536	10	201	10	530
P04	15	113	15	565	15	208	15	551
P05	20	126	20	586	20	215	20	571
P06	25	138	25	596	22	219	25	585
P07	30	154	30	607			30	590
P08								
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CRUDE OIL TESTING INC.

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

DRILL STEM TEST RECOVERY ANALYSIS

2

COMPANY: A. Scott Ritchie **LEASE:** #2 Harger "C" **DST #** 2

412' slightly oil cut water.
60' gas in pipe

VISUAL DST RECOVERY:

CALCULATED DST RECOVERY

SAMPLE #	TOTAL FOOTAGE
1	40
2	62
3	62
4	62
5	62
6	62
7	62
Totals	

GAS IN FLUID

x	%	=	Feet
x	2	=	.8
x	5	=	3.1
x	5	=	3.1
x	5	=	3.1
			10.1

OIL

x	%	=	Feet
x	28	=	11.2
x	10	=	6.2
x	10	=	6.2
x	5	=	3.1
			26.7

MUD

x	%	=	Feet
x	29	=	11.6
x	38	=	23.56
x	31	=	19.22
x	8	=	4.96
x	2	=	1.24
x	2	=	1.24
x	5	=	3.1
			64.92

WATER

SAMPLE #	TOTAL FOOTAGE	x	%	=	Feet	CHLORIDES PPM	RESISTIVITY OHMS
1		x	41	=	16.4		
2		x	47	=	29.14		
3		x	54	=	33.48		
4		x	82	=	50.84		
5		x	98	=	60.76		
6		x	98	=	60.76	64,000	.08 at 68°
7		x	95	=	58.9		
Totals					310.28		

GAS 10.1= 2%

OIL 26.7= 6%

MUD 64.92= 16%

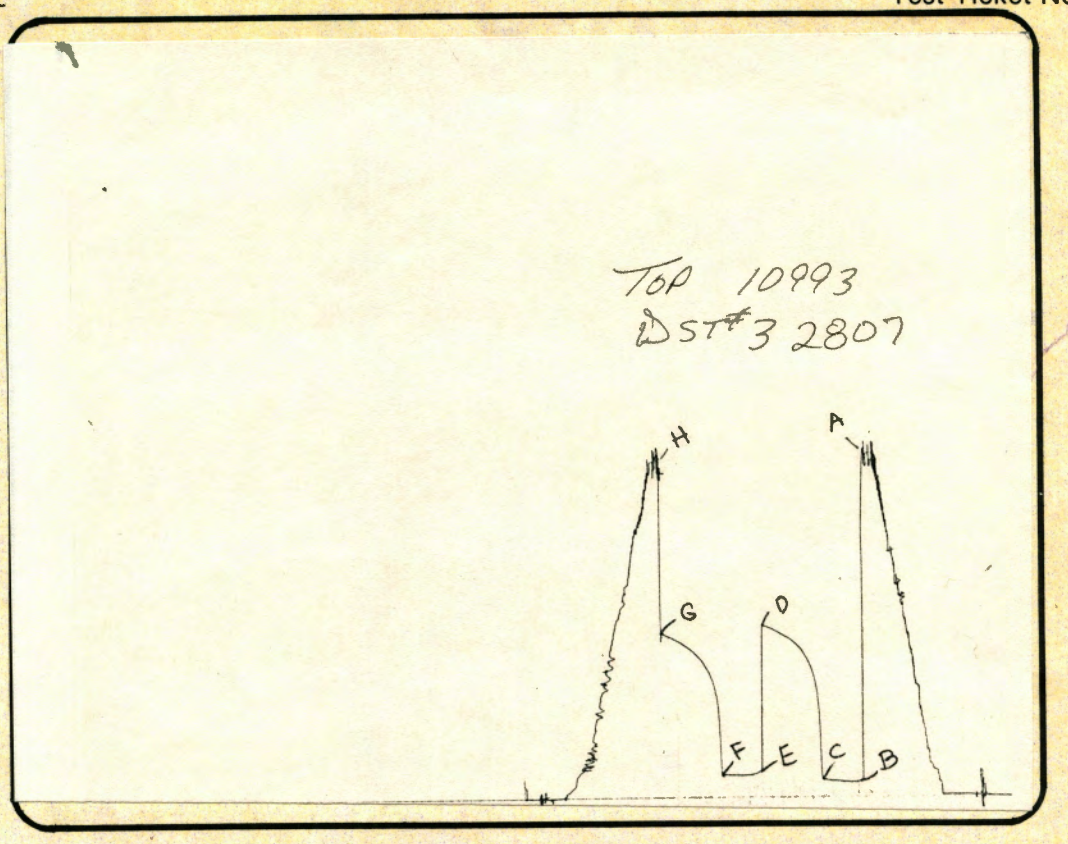
WTR 310.28= 76%

TOTAL FLUID 412'

CRUDE OIL TESTING INC.

Date 4/22/83 Test Ticket No. 2807

DST # 3



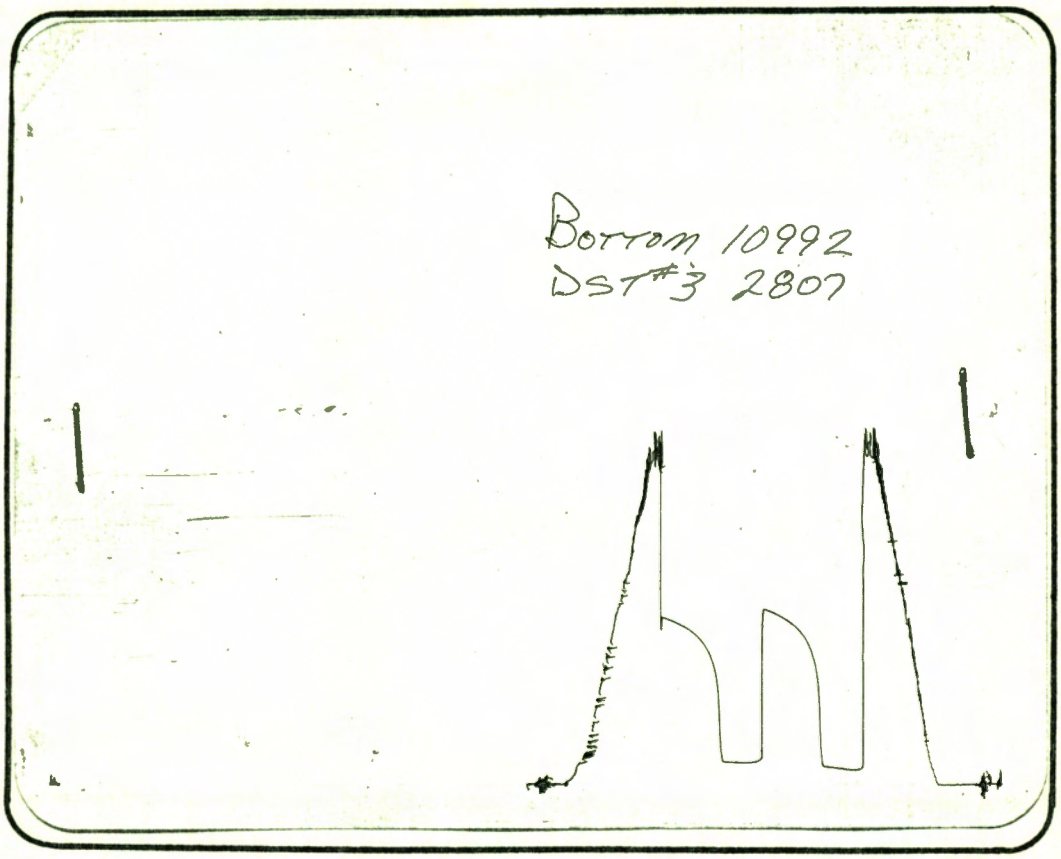
Formation Lansing Zone 140'& 180' Type of Test Conventional
Interval 3,609 To 3,676 Total Depth 3,676
Open 30 Shut In 45 Open 30 Shut In 45
Packer(s) Set 11:58A M. Started off Bottom 2:30 P M.
Blow 1st Opening Fair blow 1" in 2m,2" in 5m,3" in 12m,4" in 20m,5" in 27m
2nd Opening Weak blow 1" in 15 minute, 2" in 28 minutes.

Recovery
Total Feet 134
Recovered 134 Ft. of muddy salt water.
Recovered ____ Ft. of 27% mud, 73% water.
Recovered ____ Ft. of
Recovered ____ Ft. of

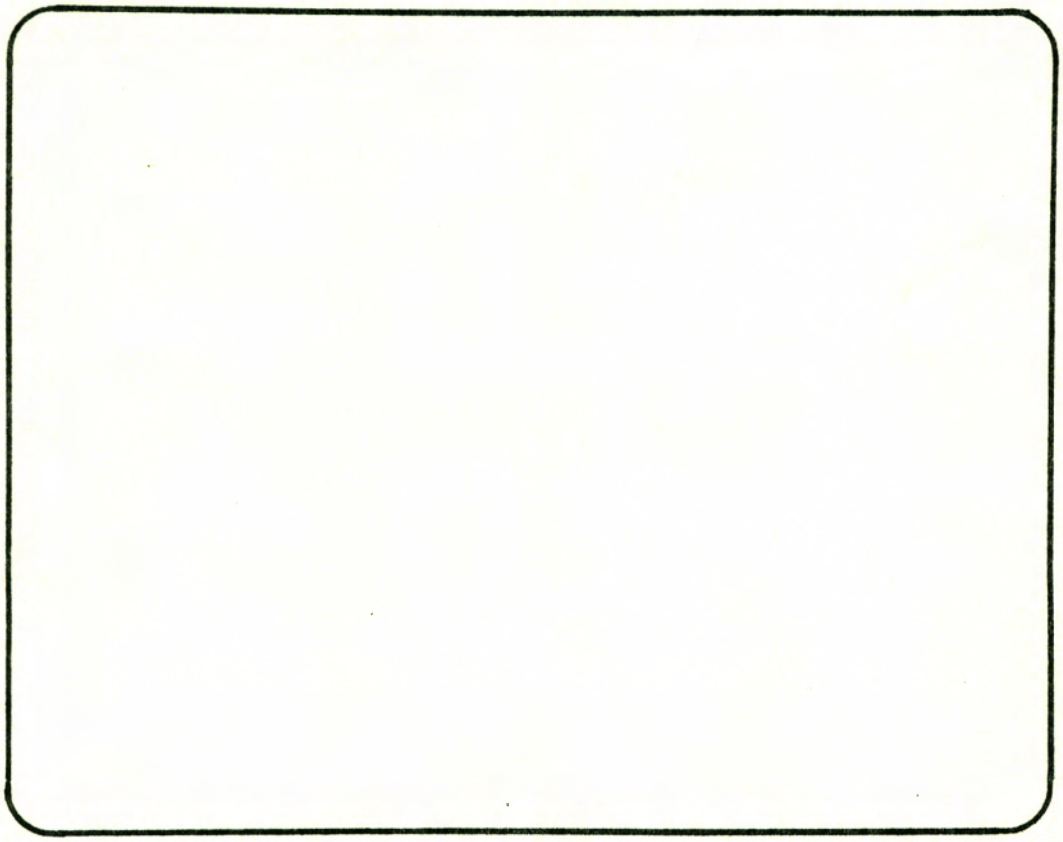
Calculated Recovery
Gas ____ Oil ____ WTR 98.2 MUD 35.8
Gravity (Oil) ____ Corrected To Temp. ____ °F Test Water Chlorides 40,000 P.P.M.
Test Area Temperature 110 °F Mud System Chlorides 25,000 P.P.M.

PRESSURE		**Field Reading**	**Office Reading**	
(A)	Initial Hydrostatic Mud	1,929	1,922	PSI
(B)	First Initial Flow Pressure	76	80	PSI
(C)	First Final Flow Pressure	97	97	PSI
(D)	Initial Closed-in Pressure	952	961	PSI
(E)	Second Initial Flow Pressure	119	121	PSI
(F)	Second Final Flow Pressure	119	121	PSI
(G)	Final Closed-in Pressure	920	918	PSI
(H)	Final Hydrostatic Mud	1,907	1,866	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. 2807

Company A. Scott Ritchie Date 4/22/83

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

Location: Sec. 3 Twp. 11S Rge. 23W Co. Trego State Kansas

Well Name And Number #2 Harger "C" Tester Mark Michellich

Contractor Murfin Drilling Rig No. 21 Co. Rep. Rockey Milford

Engineering Data

Elevation 2,233 K.B. 2,228 G.L.

Mud Viscosity 39

Mud Weight 9.7

Water Loss 13.4

Type of Mud Starch

Anchor Length 67'

Hole Size 7 7/8

Casing Size 8 5/8

Surface Choke 3/4

Bottom Choke 3/4

Drill Pipe Length 3,468 I.D. 3.8 In.

Weight Pipe Length I.D. In.

Drill Collar Length 119 I.D. 2.25 In.

Top Packer Depth. 3,604

Bottom Packer Depth 3,609

Tool Joint Size 4 1/2 FH

Test Tool Size 5 1/2

Packer Size 6 3/4

Reversed Out No

Recorder Type and No. AK-1 10993 Clock Range No. 19124 12 Hr.

Recorder Type and No. AK-1 10992 Clock Range No. 21048 12 Hr.

Extra Equipment

Remarks Open Hole Test. No blow on shut-ins.

CRUDE OIL TESTING

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

Recorder Location 3,666 Ft. Recorder No. 10993 Test Ticket No. 2807

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: 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	80	00	97	00	121	00	121
P02	05	80	05	656	05	121	05	624
P03	10	82	10	760	10	121	10	714
P04	15	84	15	822	15	121	15	769
P05	20	89	20	861	20	121	20	808
P06	25	94	25	890	25	121	25	840
P07	30	97	30	910	30	121	30	864
P08			35	931			35	885
P09			40	959			40	903
P10			44	961			45	918
P11								
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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: #2 Harger "C" DST # 3

134' muddy salt water.

VISUAL DST RECOVERY:

CALCULATED DST RECOVERY

SAMPLE #	TOTAL FOOTAGE
1	10
2	62
3	62
Totals	

GAS IN FLUID

x	%	=	Feet
x		=	

OIL

x	%	=	Feet
x		=	

MUD

x	%	=	Feet
x	48	=	4.8
x	32	=	19.84
x	16	=	11.16
x		=	

35.8

WATER

SAMPLE #	TOTAL FOOTAGE	x	%	=	Feet	CHLORIDES PPM	RESISTIVITY OHMS
1	10	x	52	=	5.2		
2	62	x	68	=	42.16		
3	62	x	82	=	50.84		
		x		=			

Totals 98.2

GAS _____

OIL _____

MUD 35.8 = 27%

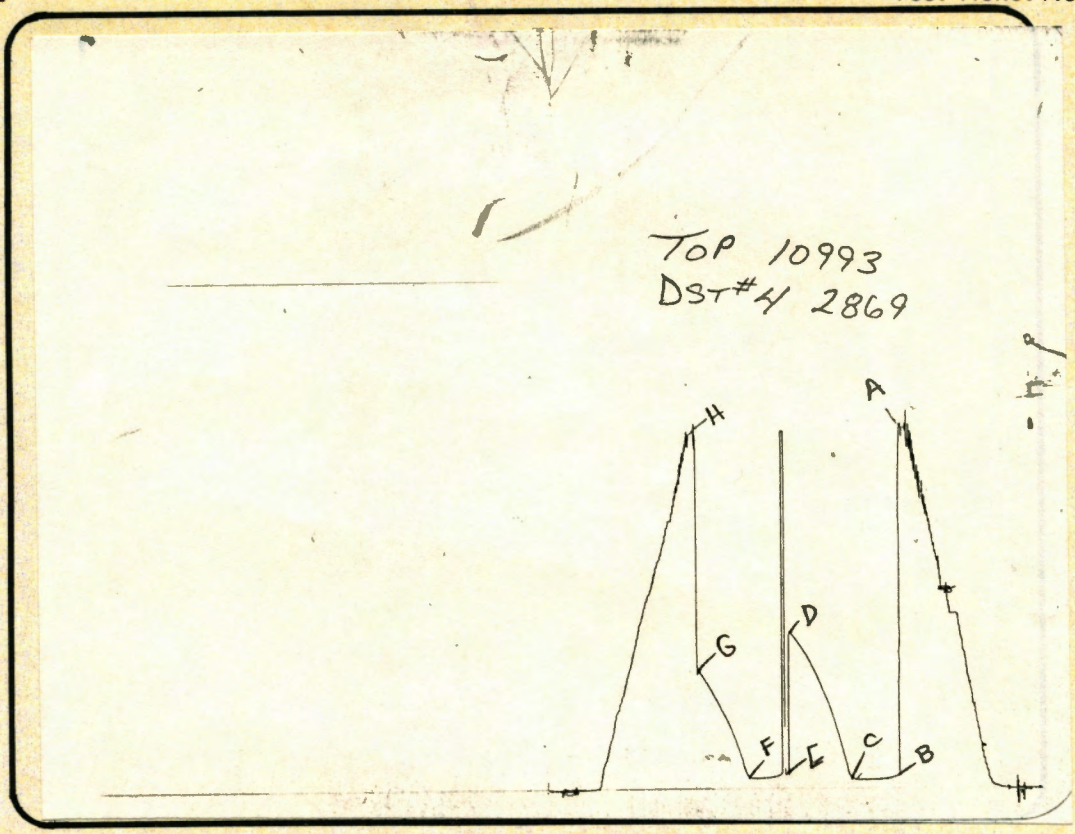
WTR 98.2 = 73%

TOTAL FLUID 134'

CRUDE OIL TESTING INC.

Date 4/23/83 Test Ticket No. 2869

DST # 4



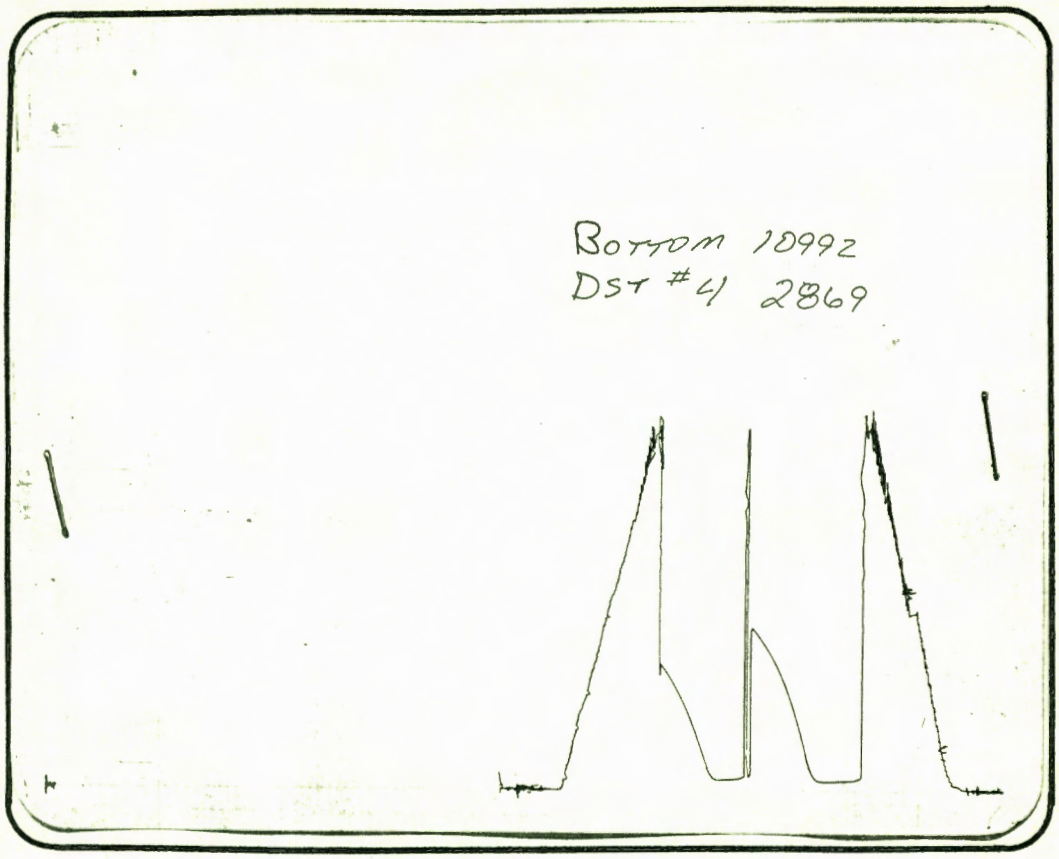
Formation Marmaton Zone _____ Type of Test Conventional
Interval 3,820 To 3,869 Total Depth 3,869
Open 30 Shut In 45 Open 30 Shut In 45
Packer(s) Set 2:58 P M. Started off Bottom 5:30 P M.
Blow 1st Opening Weak blow died in 24 minutes.
2nd Opening No blow-flushed tool-no help.

Recovery
Total Feet 10
Recovered 10 Ft. of rotary mud.
Recovered _____ Ft. of 61% mud, 39% water.
Recovered _____ Ft. of _____
Recovered _____ Ft. of _____

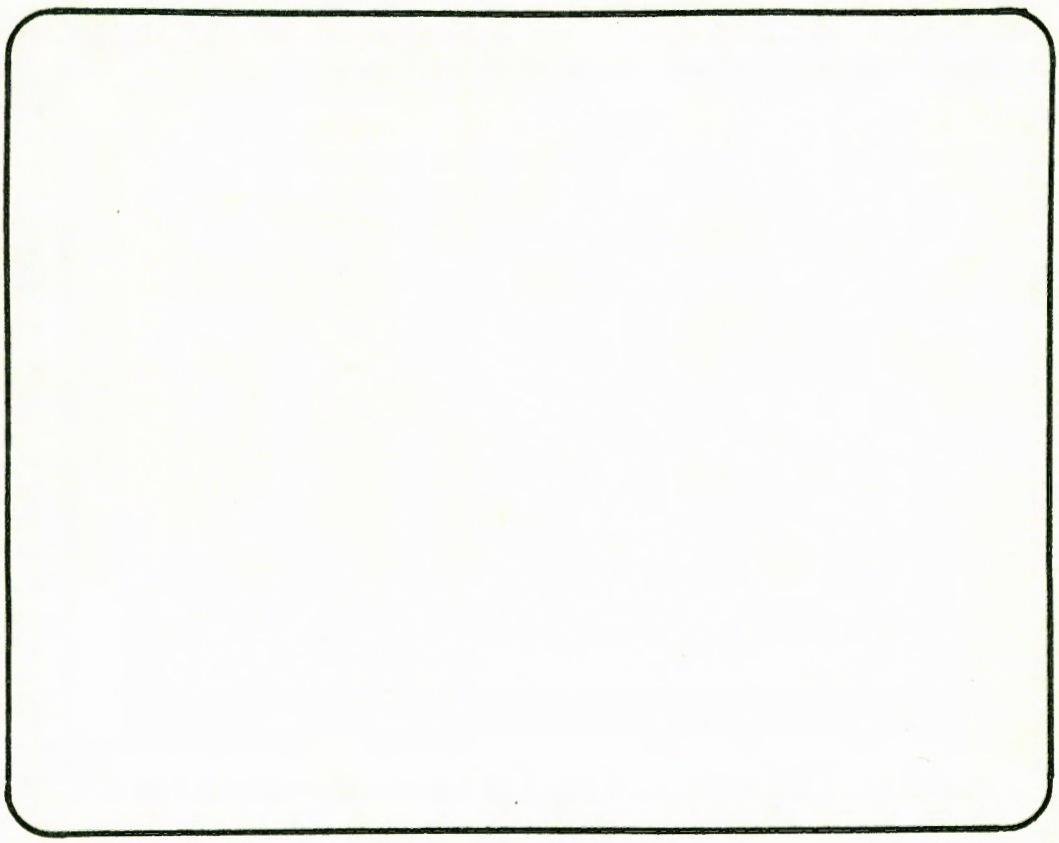
Calculated Recovery
Gas _____ Oil _____ WTR _____ MUD _____
Gravity (Oil) _____ Corrected To Temp. _____ °F Test Water Chlorides 22,000 P.P.M.
Test Area Temperature 113 °F Mud System Chlorides 35,000 P.P.M.

PRESSURE		**Field Reading**	**Office Reading**	
(A)	Initial Hydrostatic Mud	2,025	2,019	PSI
(B)	First Initial Flow Pressure	54	43	PSI
(C)	First Final Flow Pressure	54	47	PSI
(D)	Initial Closed-in Pressure	877	875	PSI
(E)	Second Initial Flow Pressure	54	54	PSI
(F)	Second Final Flow Pressure	54	57	PSI
(G)	Final Closed-in Pressure	661	672	PSI
(H)	Final Hydrostatic Mud	2,004	1,995	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. 2869

Company A. Scott Ritchie Date 4/23/83

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

Location: Sec. 3 Twp. 11S Rge. 23W Co. Trego State Kansas

Well Name And Number #2 Harger "C" Tester Mark Michellich

Contractor Murfin Drilling Rig No. 21 Co. Rep. Rockey Milford

Engineering Data

Elevation 2,233 K.B. 2,228 G.L.

Mud Viscosity 42

Mud Weight 9.7

Water Loss 16.8

Type of Mud Starch

Anchor Length 49'

Hole Size 7 7/8

Casing Size 8 5/8

Surface Choke 3/4

Bottom Choke 3/4

Drill Pipe Length 3,679 I.D. 3.8 In.

Weight Pipe Length ____ I.D. ____ In.

Drill Collar Length 119 I.D. 2.25 In.

Top Packer Depth. 3,815

Bottom Packer Depth 3,820

Tool Joint Size 4 1/2 FH

Test Tool Size 5 1/2

Packer Size 6 3/4

Reversed Out No

Recorder Type and No. AK-1 10993 Clock Range No. 19124 12 Hr.

Recorder Type and No. AK-1 10992 Clock Range No. 21048 12 Hr.

Extra Equipment

Remarks Open Hole Test. No blow on shut-ins, slid 2' to bottom.

CRUDE OIL TESTING

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

Recorder Location 3,859 Ft. Recorder No. 10993 Test Ticket No. 2869

PRESSURE BREAKDOWN

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

Initial Shut-In Breakdown: 10 Inc. of 5 mins. and a final inc. of _____ Min.

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

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

	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.	Points Minutes	Press.
P01	00	43	00	47	00	54	00	57
P02	05	43	05	62	05	54	05	134
P03	10	43	10	191	10	54	10	250
P04	15	43	15	330	15	56	15	354
P05	20	43	20	447	20	56	20	426
P06	25	43	25	538	25	57	25	496
P07	30	47	30	629			30	566
P08			35	699			35	625
P09			40	765			40	672
P10			45	823				
P11			50	875				
P12								
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