

ORIGINAL

CRUDE OIL TESTING CO.

COMPANY Rupe Oil Company, Inc. LEASE AND WELL NO. Hillman #1 SEC. 18 TWP. 11 RGE. 24 #01 thru
TEST NO. 04 DATE 6/16

DRILL STEM TEST REPORT



TEST REPORT

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

JUN 21 1980

Company Rupe Oil Company, Inc. Test Ticket No. 382
 Date 6/14/80
 Company Address P.O. Box 2273 Wichita, KS 67201 No. of Charts 5
 Location: Sec. 18 Twp. 11 Rge. 24 Co. Trego State Kansas
 Well Name And Number Hillman #1 Tester Rod Lewis
 Contractor Warrior Drlg. Rig No. 1 Co. Rep. M. Kopper

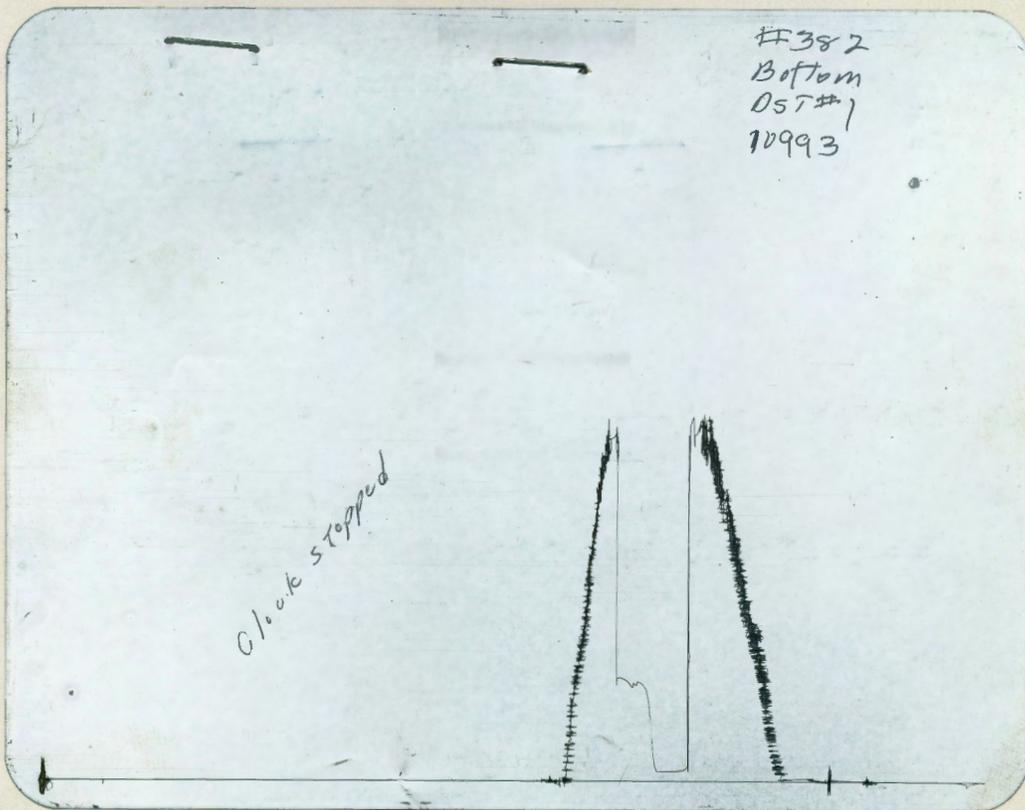
Formation Kansas City Zone A & B Type of Test Conventional

DST# 1 Interval 3,787 To 3,822 Total Depth 3,822
 Open 45 Shut IN 30 Open 30 Shut In 30
 Packer(s) Set 1:28 ~~XXXX~~ P.M. Started off Bottom 3:45 ~~XXXX~~ P.M.
 Blow Very Weak Blow - 2nd. Open Very Weak Blow Died in 18 Min. Flushed
 Tool No Help

Recovery Total Feet 40
 Recovered 40 Ft. of Drilling Mud W/Few Oil Specks
 Recovered _____ Ft. of _____
 Recovered _____ Ft. of _____
 Recovered _____ Ft. of _____
 Gravity (Oil) _____ Corrected To Temp. _____
 Water Chlorides _____

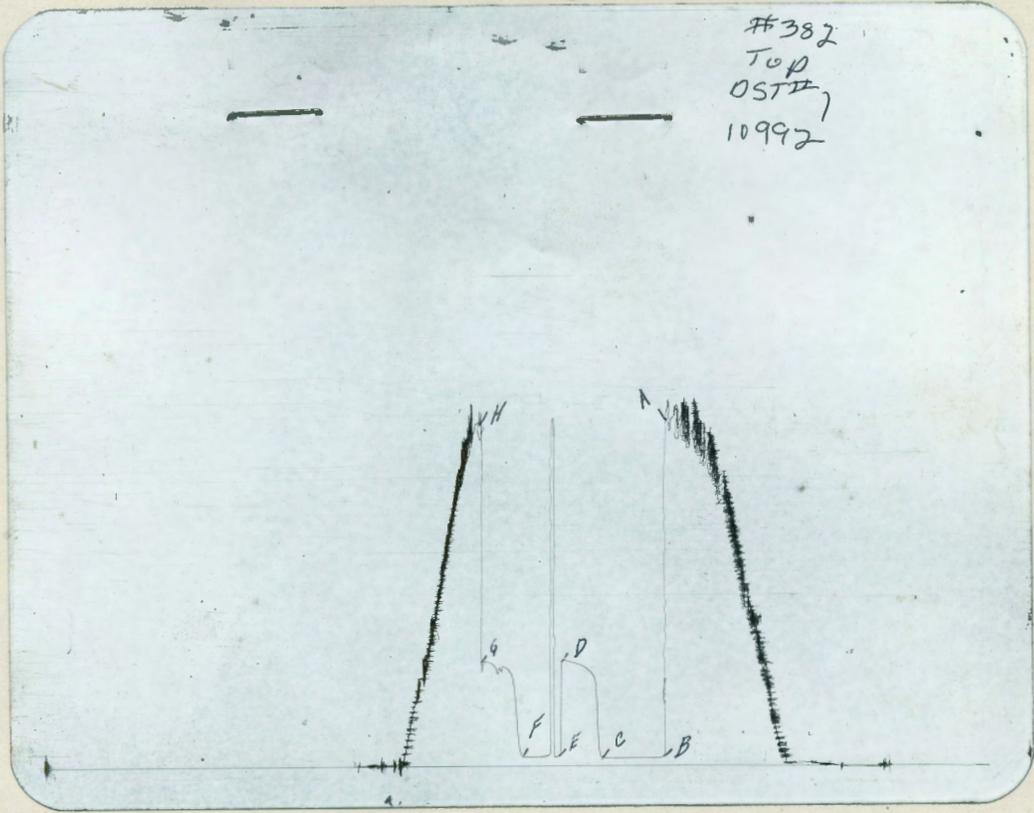
Pressures & Temp. Initial Hydrostatic Pressure 1,948 Final Hydrostatic Pressure 1,927
 Initial Closed In Pressure 599 Final Closed In Pressure 588
 Initial Flow Pressure 443 To 43 Final Flow Pressure 54 To 54
 Test Area Temperature 118
(Office Reading if Applicable)

Engineering Date Elevation 2,415 G.L.
 Mud Viscosity 43 Mud Weight 9.6 Water Loss 13.4
 Chlorides 16,000 P.P.M. Type of Mud Drispac
 Hole Size 7 7/8 Casing Size 8 5/8 Anchor Length 35
 Drill Pipe Length 3,098 I.D. 3.8 In. Weight Pipe Length 317 I.D. 2.76 In.
 Drill Collar Length _____ I.D. _____ In.
 Surface Choke 3/4 Bottom Choke 3/4
 Top Packer Depth. 3,782 Bottom Packer Depth. 3,787 Packer Size 6 3/4
 Test Tool Size 5 1/2 In. Tool Joint Size 4 1/2 FH-XH In.
 Did Well Flow No Reversed Out No
 Recorder Type and No. Kuster 10992 Clock Range 12 Hr. No. 14074
 Recorder Type and No. Kuster 10993 Clock Range 12 Hr. No. 22336
 Extra Equipment None
 Remarks Thank you!



This is an actual photograph of recorder chart.

POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	1,948	1,953	PSI
(B) First Initial Flow Pressure	43	34	PSI
(C) First Final Flow Pressure	43	46	PSI
(D) Initial Closed-in Pressure	599	605	PSI
(E) Second Initial Flow Pressure	54	46	PSI
(F) Second Final Flow Pressure	54	53	PSI
(G) Final Closed-in Pressure	588	600	PSI
(H) Final Hydrostatic Mud	1,927	1,953	PSI



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud		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



TEST REPORT

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

301 21 1980

Company Rupe Oil Company, Inc. Test Ticket No. 383
 Date 6/15/80
 Company Address P.O. Box 2273 Wichita, KS 67201 No. of Charts 5
 Location: Sec. 18 Twp. 11 Rge. 24 Co. Trego State Kansas
 Well Name And Number Hillman #1 Tester Rod Lewis
 Contractor Warrioe Drlg. Rig No. 1 Co. Rep. M. Kopper

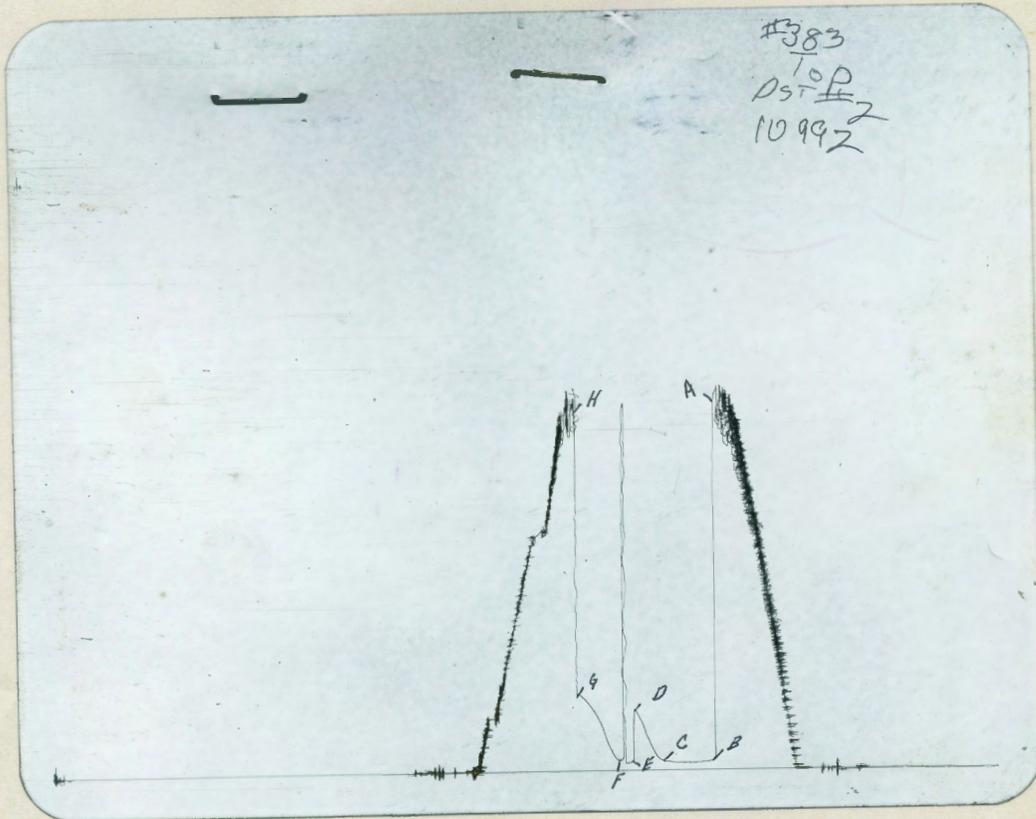
Formation Kansas City Zone H & I Type of Test Conventional

DST# 2 Interval 3,896 To 3,940 Total Depth 3,940
 Open 30 Shut IN 30 Open 10 Shut In 30
 Packer(s) Set 12:13 ^{XXXX} Started off Bottom 1:55 ^{XX}
 Blow Very Weak Blow Died in 12 Min. - 2nd Open No Blow Flushed Tool
No Help.

Recovery Total Feet 10
 Recovered 10 Ft. of Drilling Mud
 Recovered _____ Ft. of _____
 Recovered _____ Ft. of _____
 Recovered _____ Ft. of _____
 Gravity (Oil) _____ Corrected To Temp. _____
 Water Chlorides _____

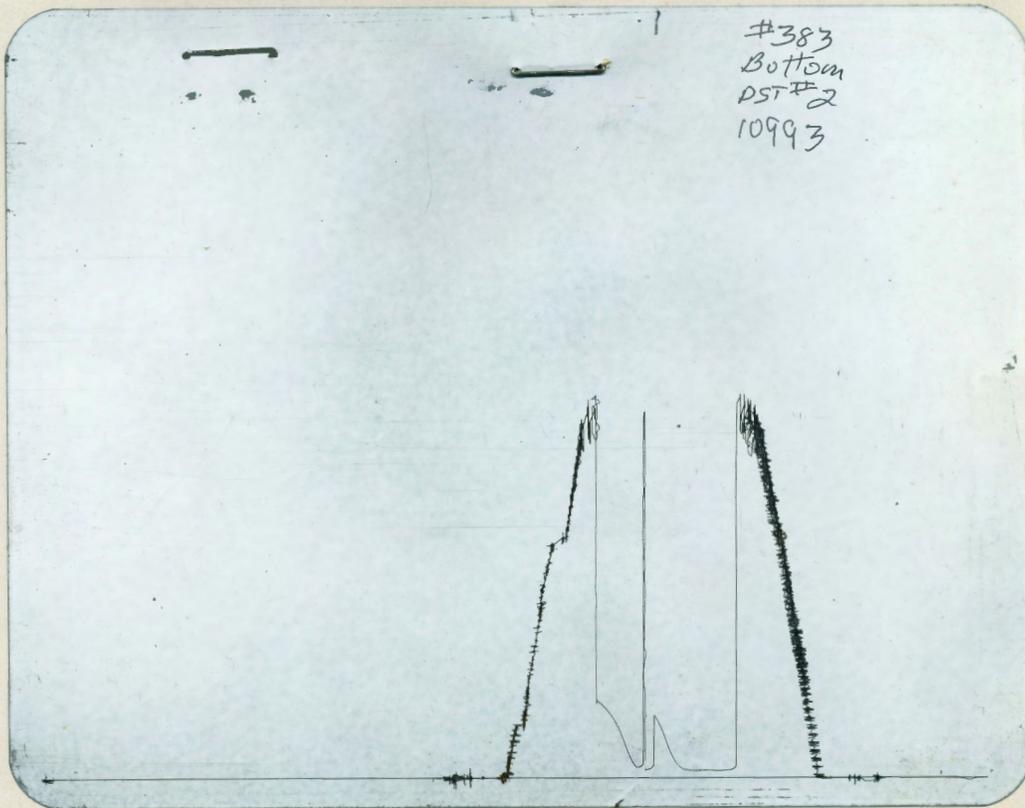
Pressures & Temp. Initial Hydrostatic Pressure 2,108 Final Hydrostatic Pressure 2,087
 Initial Closed In Pressure 349 Final Closed In Pressure 426
 Initial Flow Pressure 43 To 43 Final Flow Pressure 43 To 54
 Test Area Temperature 118
(Office Reading if Applicable)

Engineering Date Elevation 2,415 G.L.
 Mud Viscosity 43 Mud Weight 9.6 Water Loss 13.4
 Chlorides 16,000 P.P.M. Type of Mud Drispac
 Hole Size 7 7/8 Casing Size 8 5/8 Anchor Length 44
 Drill Pipe Length 3,216 I.D. 3.8 In. Weight Pipe Length 317 I.D. 2.76 In.
 Drill Collar Length _____ I.D. _____ In.
 Surface Choke 3/4 Bottom Choke 3/4
 Top Packer Depth. 3,891 Bottom Packer Depth. 3,896 Packer Size 6 3/4
 Test Tool Size 5 1/2 In. Tool Joint Size 4 1/2 FH-XH In.
 Did Well Flow No Reversed Out No
 Recorder Type and No. Kuster 10992 Clock Range 12 Hr. No. 14074
 Recorder Type and No. Kuster 10993 Clock Range 12 Hr. No. 22336
 Extra Equipment None
 Remarks Thank you!



This is an actual photograph of recorder chart.

POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2,108	2,056	PSI
(B) First Initial Flow Pressure	43	39	PSI
(C) First Final Flow Pressure	43	45	PSI
(D) Initial Closed-in Pressure	349	352	PSI
(E) Second Initial Flow Pressure	43	45	PSI
(F) Second Final Flow Pressure	54	58	PSI
(G) Final Closed-in Pressure	426	441	PSI
(H) Final Hydrostatic Mud	2,087	2,045	PSI



This is an actual photograph of recorder chart.

POINT	PRESSURE		PSI
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud			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

CRUDE OIL TESTING COMPANY

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

Date 6/18/80 Test Ticket No. 383
 Recorder No. Kuster AK-1 #10992 Capacity 4,250 P.S.I. Location 3,930 Ft.
 Clock No. 14074 Elevation 2,415 G.L. Well Temperature 118 °F

Point	Pressure		Field Time	Time Computed
A Initial Hydrostatic Mud	<u>2,056</u>	P.S.I.	<u>12:15</u>	<u>P M</u>
B First Initial Flow Pressure	<u>39</u>	P.S.I.	<u>30</u>	Mins. _____ Mins.
C First Final Flow Pressure	<u>45</u>	P.S.I.	<u>30</u>	Mins. _____ Mins.
D Initial Closed-in Pressure	<u>352</u>	P.S.I.	<u>10</u>	Mins. _____ Mins.
E Second Initial Flow Pressure	<u>45</u>	P.S.I.	<u>30</u>	Mins. _____ Mins.
F Second Final Flow Pressure	<u>58</u>	P.S.I.		
G Final Closed-in Pressure	<u>441</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2,045</u>	P.S.I.		

PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In			
	Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of _____ Min.	Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of _____ Min.	Breakdown: <u>2</u> Inc. of <u>5</u> mins. and a final inc. of _____ Min.	Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of _____ Min.			
	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>39</u>	<u>00</u>	<u>42</u>	<u>00</u>	<u>45</u>	<u>00</u>	<u>58</u>
P 2	<u>39</u>	<u>05</u>	<u>50</u>	<u>05</u>	<u>45</u>	<u>05</u>	<u>96</u>
P 3	<u>39</u>	<u>10</u>	<u>61</u>	<u>10</u>	<u>58</u>	<u>10</u>	<u>188</u>
P 4	<u>40</u>	<u>15</u>	<u>111</u>			<u>15</u>	<u>296</u>
P 5	<u>42</u>	<u>20</u>	<u>201</u>			<u>20</u>	<u>362</u>
P 6	<u>43</u>	<u>25</u>	<u>296</u>			<u>25</u>	<u>410</u>
P 7	<u>45</u>	<u>30</u>	<u>352</u>			<u>30</u>	<u>441</u>
P 8							
P 9							
P10							
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							



TEST REPORT

JUN 21 1980

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

Test Ticket No. 384
 Company Rupe Oil Company, Inc. Date 6/16/80
 Company Address P.O. Box 2273 Wichita, KS 67201 No. of Charts 5
 Location: Sec. 18 Twp. 11 Rge. 24 Co. Trego State Kansas
 Well Name And Number Hillman #1 Tester Rod Lewis
 Contractor Warrior Drlg. Rig No. 1 Co. Rep. M. Kopper

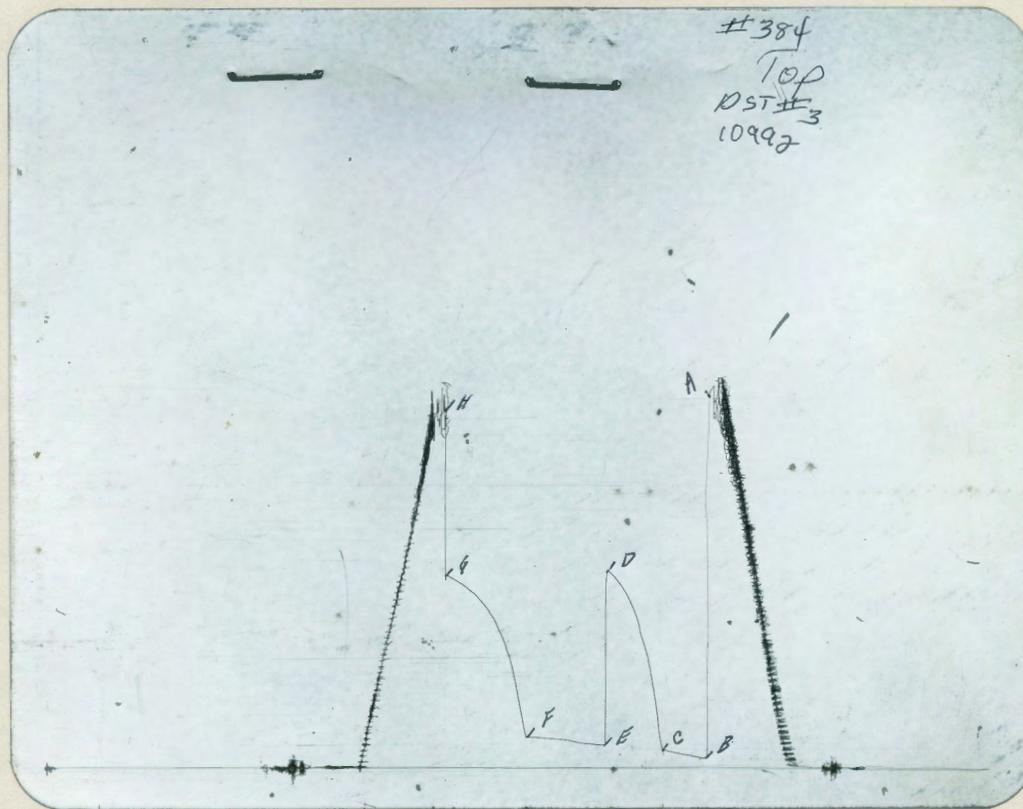
Formation Kansas City Zone J Type of Test Conventional

DST# 3 Interval 3,944 To 3,970 Total Depth 3,970
 Open 30 Shut IN 45 Open 60 Shut In 60
 Packer(s) Set 4.43 ^{A.M.} Started off Bottom 8:00 ^{A.M.} ~~P.M.~~
 Blow Steady Blow Throughout 1st Flow Period & Fair Blow Throughout 2nd
Flow Period

Recovery Total Feet 320
~~Total Feet~~ 5 Free Oil
 Recovered 5 Ft. of Mud Cut Oil - Slightly Gas Cut
 Recovered 10 Ft. of Slightly Oil Cut Mud - Slightly Gas Cut
 Recovered 52 Ft. of Muddy Water Slightly Gas Cut
 Recovered 62 Ft. of Gas Cut Salt Water / 186' of Salt Water
 Recovered 114 Ft. of Gas in Pipe
 Water Chlorides _____

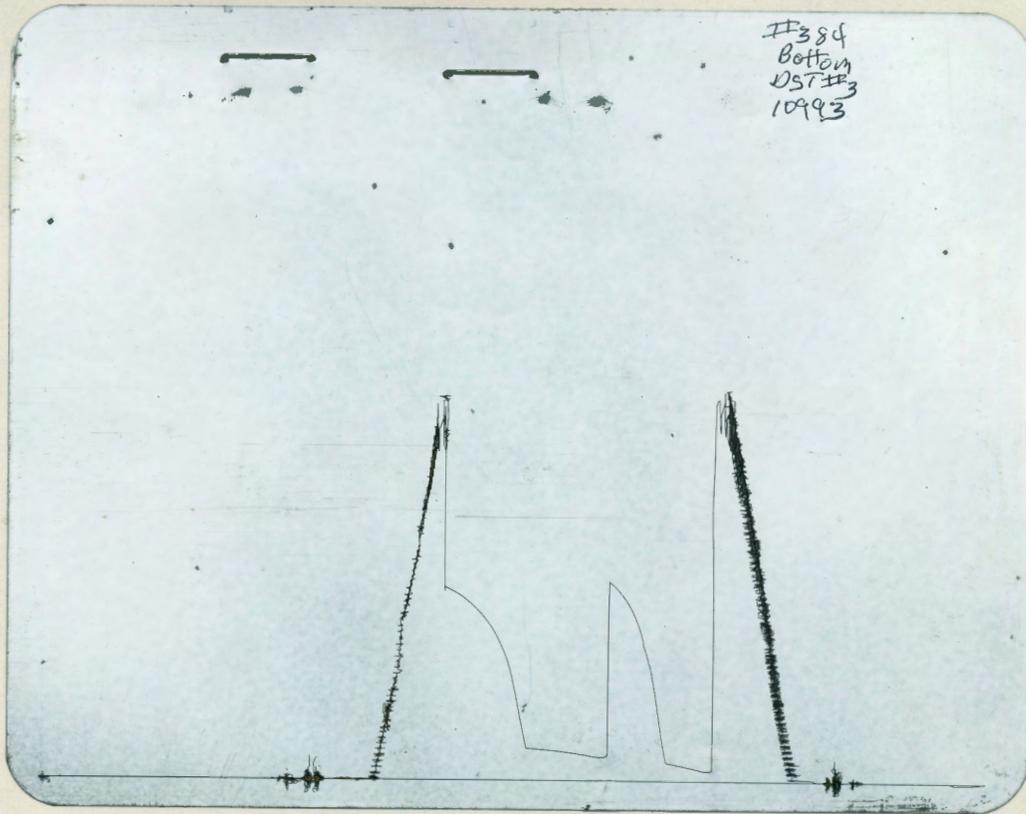
Pressures & Temp. (Office Reading if Applicable)
 Initial Hydrostatic Pressure 2,065 Final Hydrostatic Pressure 2,044
 Initial Closed In Pressure 1,115 Final Closed In Pressure 1,083
 Initial Flow Pressure 54 To 98 Final Flow Pressure 120 To 174
 Test Area Temperature 118

Engineering Date
 Elevation 2,415 G.L.
 Mud Viscosity 52 Mud Weight 9.7 Water Loss 14.8
 Chlorides 15,000 P.P.M. Type of Mud Drispac
 Hole Size 7 7/8 Casing Size 8 5/8 Anchor Length 26
 Drill Pipe Length 3,246 I.D. 3.8 In. Weight Pipe Length 317 I.D. 2.76 In.
 Drill Collar Length _____ I.D. _____ In.
 Surface Choke 3/4 Bottom Choke 3/4
 Top Packer Depth. 3,939 Bottom Packer Depth. 3,944 Packer Size 6 3/4
 Test Tool Size 5 1/2 In. Tool Joint Size 4 3/4 FH-XH _____ In.
 Did Well Flow No Reversed Out No
 Recorder Type and No. Kuster 10992 Clock Range 12 Hr. No. 14074
 Recorder Type and No. Kuster 10993 Clock Range 12 Hr. No. 22336
 Extra Equipment None
 Remarks Thank you!



This is an actual photograph of recorder chart.

POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2,065	2,066	PSI
(B) First Initial Flow Pressure	54	54	PSI
(C) First Final Flow Pressure	98	96	PSI
(D) Initial Closed-in Pressure	1,115	1,117	PSI
(E) Second Initial Flow Pressure	120	133	PSI
(F) Second Final Flow Pressure	174	180	PSI
(G) Final Closed-in Pressure	1,083	1,096	PSI
(H) Final Hydrostatic Mud	2,044	2,029	PSI



This is an actual photograph of recorder chart.

POINT	PRESSURE		PSI
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	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



TEST REPORT

JUN 21 1980

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

Company Rupe Oil Company, Inc. Test Ticket No. 336
 Company Address P.O. Box 2273 Wichita, KS 67201 Date 6/16/80
 Location: Sec. 18 Twp. 11 Rge. 24 Co. Trego State Kansas
 Well Name And Number Hillman #1 Tester Rod Lewis
 Contractor Warrior Drlg. Rig No. 1 Co. Rep. M. Kopper

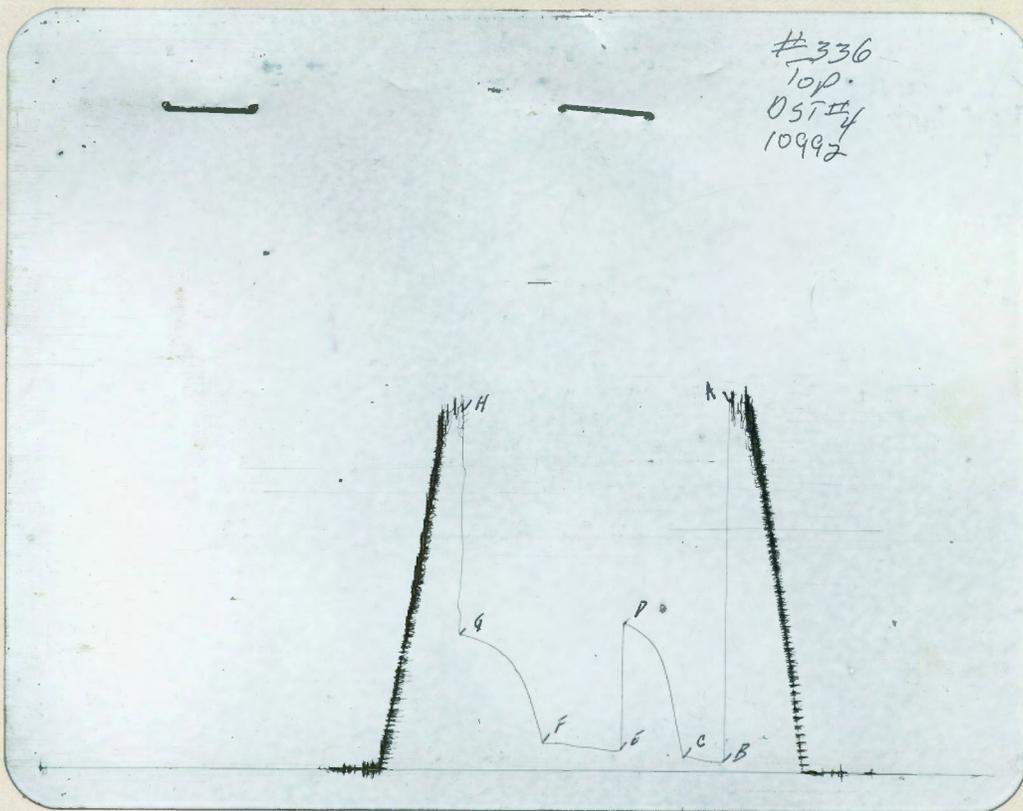
Formation Kansas City Zone K Type of Test Conventional

DST# 4 Interval 3,965 To 4,011 Total Depth 4,011
 Open 30 Shut IN 45 Open 60 Shut In 60
 Packer(s) Set 10:43 ^{AM} P.M. Started off Bottom 2:00 ^{AM}
 Blow Fair Steady Blow Throughout Both Flow Periods

Recovery Total Feet 278
 Recovered 278 Ft. of Salt Water
 Recovered _____ Ft. of _____
 Recovered _____ Ft. of _____
 Recovered _____ Ft. of _____
 Gravity (Oil) _____ Corrected To Temp. _____
 Water Chlorides 55,000

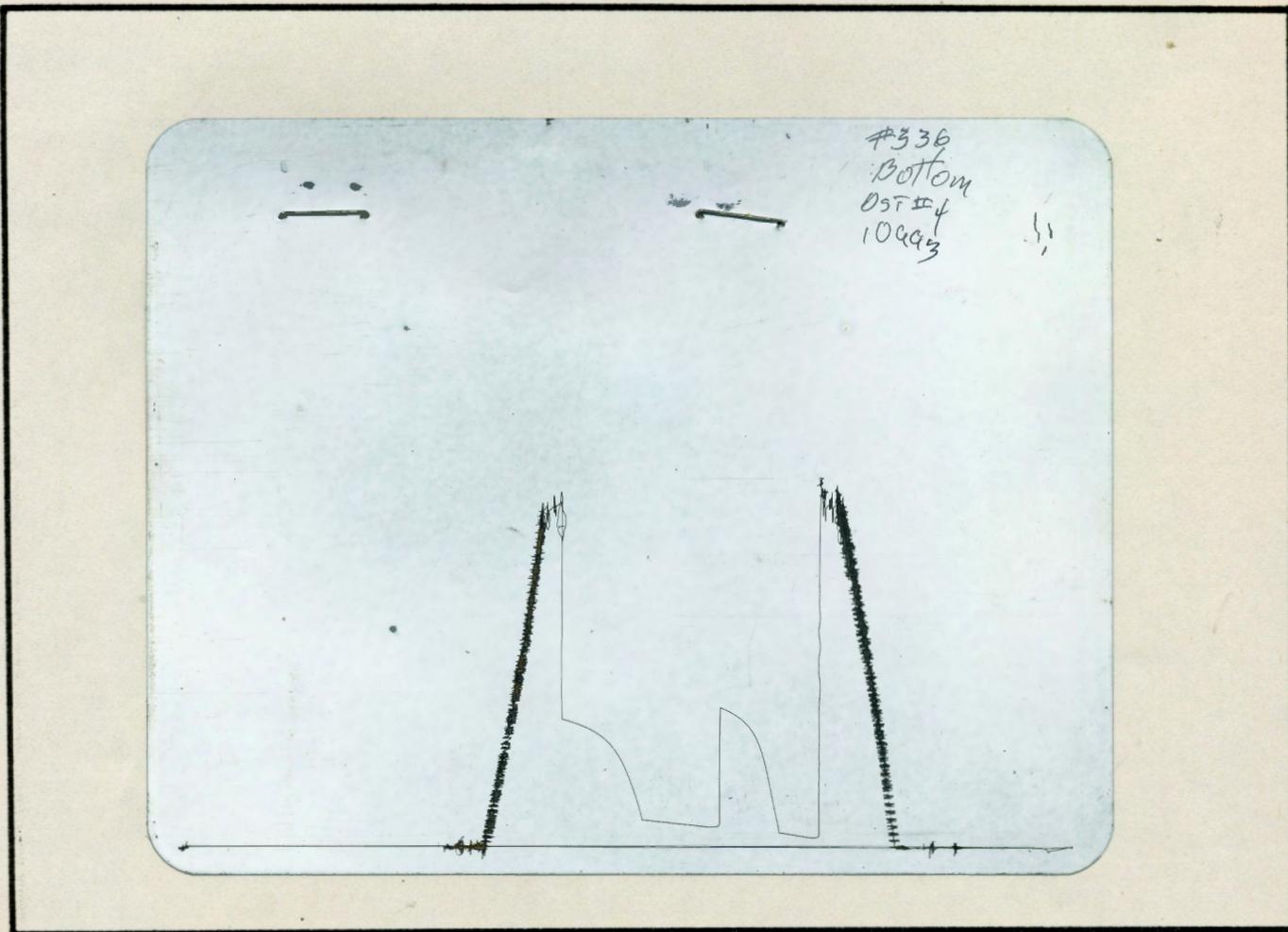
Pressures & Temp. Initial Hydrostatic Pressure 2,033 Final Hydrostatic Pressure 2,012
 Initial Closed In Pressure 825 Final Closed In Pressure 750
 Initial Flow Pressure 43 To 65 Final Flow Pressure 98 To 141
 Test Area Temperature 90
(Offes Reading If Applicable)

Engineering Date Elevation 2,415 G.L.
 Mud Viscosity 49 Mud Weight 9.7 Water Loss 14.2
 Chlorides 14,000 P.P.M. Type of Mud Drispac
 Hole Size 7 7/8 Casing Size 8 5/8 Anchor Length 46
 Drill Pipe Length 3,287 I.D. 3.8 In. Weight Pipe Length 317 I.D. 2.76 In.
 Drill Collar Length _____ I.D. _____ In.
 Surface Choke 3/4 Bottom Choke 3/4
 Top Packer Depth. 3,960 Bottom Packer Depth. 3,965 Packer Size 6 3/4
 Test Tool Size 5 1/2 In. Tool Joint Size 4 1/2 FH XH In.
 Did Well Flow No Reversed Out No
 Recorder Type and No. Kuster 10992 Clock Range 12 Hr. No. 14074
 Recorder Type and No. Kuster 10993 Clock Range 12 Hr. No. 22336
 Extra Equipment None
 Remarks Thank you!



This is an actual photograph of recorder chart.

POINT	PRESSURE		PSI
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2,033	2,095	PSI
(B) First Initial Flow Pressure	43	55	PSI
(C) First Final Flow Pressure	65	88	PSI
(D) Initial Closed-in Pressure	825	841	PSI
(E) Second Initial Flow Pressure	98	112	PSI
(F) Second Final Flow Pressure	141	158	PSI
(G) Final Closed-in Pressure	750	770	PSI
(H) Final Hydrostatic Mud	2,012	2,063	PSI



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud		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

CRUDE OIL TESTING COMPANY

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

Date 6/16/80 Test Ticket No. 336
Recorder No. Kuster AK-1 #10992 Capacity 4,250 P.S.I. Location 4,001 Ft.
Clock No. 14074 Elevation 2,415 G.L. Well Temperature 90 °F

Point	Pressure		Field Time	Time Computed
A Initial Hydrostatic Mud	<u>2,095</u>	P.S.I.	<u>10:45</u> P M	
B First Initial Flow Pressure	<u>55</u>	P.S.I.	<u>30</u>	Mins. _____ Mins.
C First Final Flow Pressure	<u>88</u>	P.S.I.	<u>45</u>	Mins. _____ Mins.
D Initial Closed-in Pressure	<u>841</u>	P.S.I.	<u>60</u>	Mins. _____ Mins.
E Second Initial Flow Pressure	<u>112</u>	P.S.I.	<u>60</u>	Mins. _____ Mins.
F Second Final Flow Pressure	<u>158</u>	P.S.I.		
G Final Closed-in Pressure	<u>770</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2,063</u>	P.S.I.		

PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
	Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of _____ Min.	Breakdown: <u>9</u> Inc. of <u>5</u> mins. and a final inc. of _____ Min.	Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of _____ Min.	Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of _____ Min.
	Press.	Point Minutes	Press.	Point Minutes
P 1	<u>55</u>	<u>00</u>	<u>88</u>	<u>00</u>
P 2	<u>56</u>	<u>05</u>	<u>254</u>	<u>05</u>
P 3	<u>58</u>	<u>10</u>	<u>462</u>	<u>10</u>
P 4	<u>63</u>	<u>15</u>	<u>609</u>	<u>15</u>
P 5	<u>72</u>	<u>20</u>	<u>694</u>	<u>20</u>
P 6	<u>82</u>	<u>25</u>	<u>743</u>	<u>25</u>
P 7	<u>88</u>	<u>30</u>	<u>779</u>	<u>30</u>
P 8		<u>35</u>	<u>806</u>	<u>35</u>
P 9		<u>40</u>	<u>828</u>	<u>40</u>
P10		<u>45</u>	<u>841</u>	<u>45</u>
P11				<u>50</u>
P12				<u>55</u>
P13				<u>60</u>
P14				
P15				
P16				
P17				
P18				
P19				
P20				