



P. O. BOX 1599 PHONE (316) 262-5861  
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.  
FORMATION TESTING

TICKET NO 20121

Elevation 3816 K.B Formation MARMADON Eff. Pay Ft.

District GREAT BAND Date 11-27-93 Customer Order No.

COMPANY NAME MURFIN DRILLING CO.

ADDRESS 250 N WATER SUITE 300 WICHITA KS 67202

LEASE AND WELL NO. NIKRBASH 1-30 COUNTY WALLACE STATE KS Sec. 30 Twp. 15S Rge. 41W

Mail Invoice To Co. Name SAME Address No. Copies Requested

Mail Charts To Co. Name 11 Address No. Copies Requested

Formation Test No. 1 Interval Tested From 4650 ft. to 4723 ft. Total Depth 4723 ft.

Packer Depth 4645 ft. Size 6 5/8 in. Packer Depth - ft. Size 2 in.

Packer Depth 4650 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4655 ft. Recorder Number 11012 Cap. 4425 PSI

Bottom Recorder Depth (Outside) 4720 ft. Recorder Number 13629 Cap. 4425 PSI

Below Straddle Recorder Depth ft. Recorder Number - Cap. -

Drilling Contractor COMPANY TOOLS R16 RS Drill Collar Length 520 I. D. 2 1/2 in.

Mud Type CHEMICAL Viscosity 42 Weight Pipe Length 0 I. D. - in.

Weight 9.4 Water Loss 10.4 cc. Drill Pipe Length 410.4 I. D. 2 1/2 in.

Chlorides 5,900 P.P.M. Test Tool Length 26 ft. Tool Size 5 1/2 in.

Jars: Make WESTERN Serial Number 12369 Anchor Length 23 ft. Size 5 1/2 in.

Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 2 7/8 in. Tool Joint Size 4 1/2 in.

Blow: 1ST FLOW: WEAK BLOW DEAD IN 15 MINUTES

2ND FLOW: WEAK BLOW DEAD IN 5 MINUTES FLUSHED TOOL BUT NO HELP

Recovered 30 ft. of DRILLING MUD

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides P.P.M. Sample Jars used Remarks:

Time On Location 4:00 AM/PM Time Pick Up Tool 5:00 AM/PM Time Off Location 12:00 AM/PM

Time Set Packer(s) 6:15 AM/PM Time Started Off Bottom 9:00 AM/PM Maximum Temperature 130°

Initial Hydrostatic Pressure (A) 2233 P.S.I.

Initial Flow Period Minutes 30 (B) 33 P.S.I. to (C) 34 P.S.I.

Initial Closed In Period Minutes 45 (D) 466 P.S.I.

Final Flow Period Minutes 45 (E) 33 P.S.I. to (F) 40 P.S.I.

Final Closed In Period Minutes 45 (G) 333 P.S.I.

Final Hydrostatic Pressure (H) 2200 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By [Signature] CURTIS COURTNEY  
Signature of Customer or his authorized representative

Western Representative [Signature]

FIELD INVOICE

Open Hole Test \$   
Misrun \$   
Straddle Test \$   
Jars \$   
Selective Zone \$   
Safety Joint \$   
Standby \$   
Evaluation \$   
Extra Packer \$   
Circ. Sub. \$   
Mileage \$   
Fluid Sampler \$   
Extra Charts \$   
Insurance \$   
Telecopier \$ 23 SHEETS  
TOTAL \$

**WESTERN TESTING CO., INC.**  
Pressure Data

Date 11-27-93 Test Ticket No. 20121  
 Recorder No. 11018 Capacity 4425 PSI Location 4655 Ft.  
 Clock No. \_\_\_\_\_ Elevation 3816 R.B. Well Temperature 130 °F

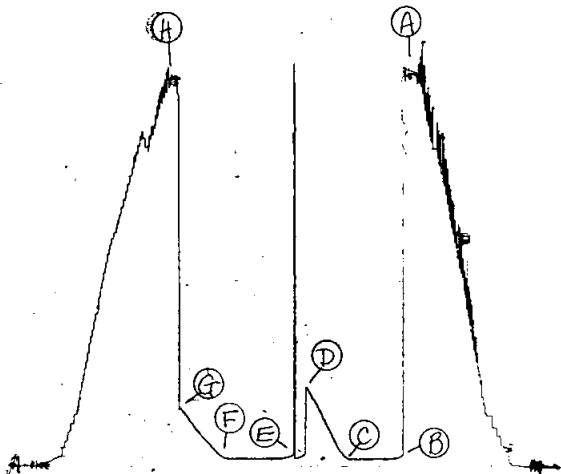
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2234</u> P.S.I.	Open Tool	<u>165</u> M	<u>165</u>
B First Initial Flow Pressure	<u>48</u> P.S.I.	First Flow Pressure	<u>30</u> Mins	<u>30</u> Mins
C First Final Flow Pressure	<del>48</del> <u>48</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins	<u>45</u> Mins
D Initial Closed-in Pressure	<u>462</u> P.S.I.	Second Flow Pressure	<u>45</u> Mins	<u>45</u> Mins
E Second Initial Flow Pressure	<u>49</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins	<u>45</u> Mins
F Second Final Flow Pressure	<u>50</u> P.S.I.			
G Final Closed-in Pressure	<u>342</u> P.S.I.			
H Final Hydrostatic Mud	<u>2204</u> P.S.I.			

**PRESSURE BREAKDOWN**

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>9</u> Inc.		Breakdown: <u>15</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>72</u>	<u>0</u>	<u>50</u>	<u>0</u>	<u>76</u>	<u>0</u>	<u>50</u>
P 2 5	<u>52</u>	<u>3</u>	<u>50</u>	<u>5</u>	<u>58</u>	<u>3</u>	<u>50</u>
P 3 10	<u>48</u>	<u>6</u>	<u>52</u>	<u>10</u>	<u>48</u>	<u>6</u>	<u>51</u>
P 4 15	<u>48</u>	<u>9</u>	<u>54</u>	<u>15</u>	<u>48</u>	<u>9</u>	<u>53</u>
P 5 20	<u>48</u>	<u>12</u>	<u>56</u>	<u>20</u>	<u>49</u>	<u>12</u>	<u>54</u>
P 6 25	<del>48</del> <u>48</u>	<u>15</u>	<u>58</u>	<u>25</u>	<u>49</u>	<u>15</u>	<u>56</u>
P 7 30	<del>48</del> <u>48</u>	<u>18</u>	<u>82</u>	<u>30</u>	<u>49</u>	<u>18</u>	<u>58</u>
P 8 35		<u>21</u>	<u>123</u>	<u>35</u>	<u>49</u>	<u>21</u>	<u>78</u>
P 9 40		<u>24</u>	<u>173</u>	<u>40</u>	<u>49</u>	<u>24</u>	<u>112</u>
P10 45		<u>27</u>	<u>226</u>	<u>45</u>	<del>50</del>	<u>27</u>	<u>142</u>
P11 50		<u>30</u>	<u>267</u>	<u>50</u>		<u>30</u>	<u>164</u>
P12 55		<u>33</u>	<u>318</u>	<u>55</u>		<u>33</u>	<u>200</u>
P13 60		<u>36</u>	<u>353</u>	<u>60</u>		<u>36</u>	<u>267</u>
P14 65		<u>39</u>	<u>398</u>	<u>65</u>		<u>39</u>	<u>300</u>
P15 70		<u>42</u>	<u>430</u>	<u>70</u>		<u>42</u>	<u>321</u>
P16 75		<u>45</u>	<u>462</u>	<u>75</u>		<u>45</u>	<u>342</u>
P17 80		<u>48</u>		<u>80</u>		<u>48</u>	
P18 85		<u>51</u>		<u>85</u>		<u>51</u>	
P19 90		<u>54</u>		<u>90</u>		<u>54</u>	
P20 95		<u>57</u>		<u>95</u>		<u>57</u>	
100		<u>60</u>		<u>100</u>		<u>60</u>	

TR# 20121

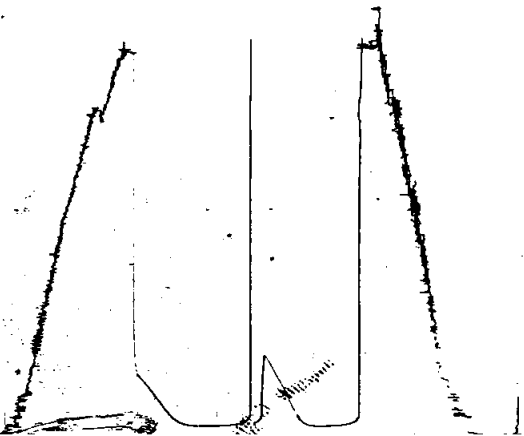
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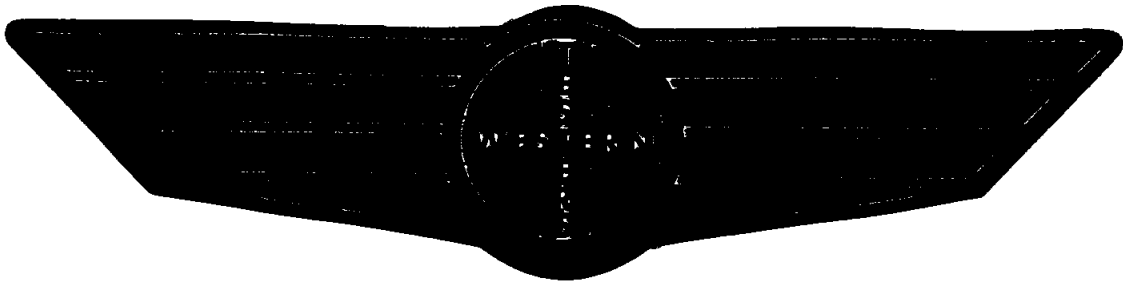
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TK# 20121

O.



# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 11/27/93  
CUSTOMER : MURFIN DRILLING CO., INC  
WELL : #1-30 TEST: 1  
ELEVATION: 3816 KB  
SECTION : 30  
RANGE : 41W COUNTY: WALLACE  
GAUGE SN#: 11018 RANGE : 4425  
TICKET : 20121  
LEASE : NIKRBASH  
GEOLOGIST: COVEY  
FORMATION: MARMATON  
TOWNSHIP : 15S  
STATE : KS  
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4650.00 ft TO: 4723.00 ft TVD: 4723.0 ft  
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL  
DEPTH OF RECORDERS: 4655.0 ft 4720.0 ft  
TEMPERATURE: 130.0  
DRILL COLLAR LENGTH: 520.0 ft I.D.: 2.200 in  
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in  
DRILL PIPE LENGTH : 4104.0 ft I.D.: 3.800 in  
TEST TOOL LENGTH : 26.0 ft TOOL SIZE : 5.500 in  
ANCHOR LENGTH : 73.0 ft ANCHOR SIZE: 5.500 in  
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in  
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH  
PACKER DEPTH: 4645.0 ft SIZE: 6.630 in  
PACKER DEPTH: 4650.0 ft SIZE: 6.630 in  
PACKER DEPTH: 0.0 ft SIZE: 0.000 in  
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 25  
MUD TYPE : CHEMICAL VISCOSITY : 42.00 cp  
WEIGHT : 9.400 ppg WATER LOSS: 10.400 cc  
CHLORIDES : 5800 ppm  
JARS-MAKE : WTC SERIAL NUMBER: 12369  
DID WELL FLOW?: NO REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BLOW - DEAD IN 15 MINUTES  
FINAL FLOW PERIOD WEAK BLOW - DEAD IN 5 MINUTES -  
FLUSHED TOOL - NO HELP.

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment \_\_\_\_\_

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
30.0	0.0	0.0	0.0	100.0	DRILLING MUD

RATE INFORMATION

OIL VOLUME: 0.0000 STB	TOTAL FLOW TIME: 75.0000 min.
GAS VOLUME: 0.0000 SCF	AVERAGE OIL RATE: 0.0000 STB/D
MUD VOLUME: 0.1410 STB	AVERAGE WATER RATE: 0.0000 STB/D
WATER VOLUME: 0.0000 STB	
TOTAL FLUID : 0.1410 STB	

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2233.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	33.00	34.00
INITIAL SHUT-IN	45.00		466.00
FINAL FLOW	45.00	33.00	40.00
FINAL SHUT-IN	45.00		333.00

FINAL HYDROSTATIC PRESSURE: 2200.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2234.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	30.00	72.00	48.00
INITIAL SHUT-IN	45.00		462.00
FINAL FLOW	45.00	76.00	50.00
FINAL SHUT-IN	45.00		342.00

FINAL HYDROSTATIC PRESSURE: 2204.00

**PRESSURE TRANSIENT REPORT**

**GENERAL INFORMATION**

DATE	: 11/27/93	TICKET	: 20121
CUSTOMER	: MURFIN DRILLING CO., INC	LEASE	: NIKRBASH
WELL	: #1-30 TEST: 1	GEOLOGIST	: COVEY
ELEVATION	: 3816 KB	FORMATION	: MARMATON
SECTION	: 30	TOWNSHIP	: 15S
RANGE	: 41W COUNTY: WALLACE	STATE	: KS
GAUGE SN#	: 11018 RANGE : 4425	CLOCK	: 12

**INITIAL FLOW**

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	72.00	72.00
5.00	52.00	-20.00
10.00	48.00	-4.00
15.00	48.00	0.00
20.00	48.00	0.00
25.00	48.00	0.00
30.00	48.00	0.00

**INITIAL SHUT IN**

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	50.00	50.00	12.67
6.00	52.00	2.00	6.83
9.00	54.00	2.00	4.89
12.00	56.00	2.00	3.92
15.00	58.00	2.00	3.33
18.00	82.00	24.00	2.94
21.00	123.00	41.00	2.67
24.00	173.00	50.00	2.46
27.00	226.00	53.00	2.30
30.00	267.00	41.00	2.17
33.00	318.00	51.00	2.06
36.00	353.00	35.00	1.97
39.00	398.00	45.00	1.90
42.00	430.00	32.00	1.83
45.00	462.00	32.00	1.78

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	76.00	76.00
5.00	58.00	-18.00
10.00	48.00	-10.00
15.00	48.00	0.00
20.00	49.00	1.00
25.00	49.00	0.00
30.00	49.00	0.00
35.00	49.00	0.00
40.00	49.00	0.00
45.00	50.00	1.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	50.00	50.00	21.00
6.00	51.00	1.00	11.00
9.00	53.00	2.00	7.67
12.00	54.00	1.00	6.00
15.00	56.00	2.00	5.00
18.00	58.00	2.00	4.33
21.00	78.00	20.00	3.86
24.00	112.00	34.00	3.50
27.00	142.00	30.00	3.22
30.00	164.00	22.00	3.00
33.00	200.00	36.00	2.82
36.00	267.00	67.00	2.67
39.00	300.00	33.00	2.54
42.00	321.00	21.00	2.43
45.00	342.00	21.00	2.33



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 20122

P. O. BOX 1599 WICHITA, KANSAS 67201 PHONE (316) 262-5861

Elevation 3816 K.B Formation MORROW SAND Eff. Pay Ft.

District GREAT BEND Date 11-29-93 Customer Order No.

COMPANY NAME MURFIN DRILLING CO

ADDRESS 250 N WATER SUITE 300 WICHITA KS 67202

LEASE AND WELL NO. NIKRBAWA 1-30 COUNTY WALLACE STATE KS Sec. 30 Twp. 15S Rge. 41W

Mail Invoice To Co. Name Address No. Copies Requested

Mail Charts To Co. Name Address No. Copies Requested

Formation Test No. 2 Interval Tested From 4985 ft. to 5020 ft. Total Depth 5020 ft.

Packer Depth 4980 ft. Size 6 5/8 in. Packer Depth 4985 ft. Size 6 5/8 in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4988 ft. Recorder Number 11018 Cap. 4425 PSI

Bottom Recorder Depth (Outside) 5017 ft. Recorder Number 13629 Cap. 4425 PSI

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor COMPANY TOOLS R1628 Drill Collar Length 520 I. D. 2.2 in.

Mud Type CHEMICAL Viscosity 50 Weight Pipe Length 0 I. D. in.

Weight 9.3 Water Loss 7.0 cc. Drill Pipe Length 4439 I. D. 3.8 in.

Chlorides 3,400 P.P.M. Test Tool Length 26 ft. Tool Size 5 1/2 in.

Jars: Make WESTERN Serial Number 12869 Anchor Length 35 ft. Size 5 1/2 in.

Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 in.

Blow: 1ST FLOW: STRONG BLOW B.O.B IN 20 MINUTES

2ND FLOW: STRONG BLOW B.O.B IN 5 MINUTES

Recovered 1300 ft. of GAS IN PIPE

Recovered 100 ft. of OIL SPECKED GAS CUT DRILLING MUD (10% GAS 90% MUD) R.W. 1.8 @ 70°

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides 4,000 P.P.M. Sample Jars used Remarks:

Time On Location 10:00 A.M. P.M. Time Pick Up Tool 11:00 A.M. P.M. Time Off Location 10:00 A.M. P.M.

Time Set Packer(s) 2:30 A.M. P.M. Time Started Off Bottom 2:00 A.M. P.M. Maximum Temperature 141°

Initial Hydrostatic Pressure (A) 2411 P.S.I.

Initial Flow Period Minutes 30 (B) 37 P.S.I. to (C) 42 P.S.I.

Initial Closed In Period Minutes 60 (D) 816 P.S.I.

Final Flow Period Minutes 60 (E) 55 P.S.I. to (F) 55 P.S.I.

Final Closed In Period Minutes 120 (G) 1030 P.S.I.

Final Hydrostatic Pressure (H) 2006 P.S.I.

COMPANY TERMS

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All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By [Signature] Signature of Customer or his authorized representative

Western Representative [Signature]

FIELD INVOICE

Table with 2 columns: Item, Amount. Includes Open Hole Test, Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, TOTAL.

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date 11-28-93 Test Ticket No. 20122  
 Recorder No. 11018 Capacity 4425 PSI Location 4988 Ft.  
 Clock No. \_\_\_\_\_ Elevation 3816 K.B. Well Temperature 144 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2428</u> P.S.I.	Open Tool	<u>270</u> M	<u>270</u>
B First Initial Flow Pressure	<u>44</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>45</u> P.S.I.	Initial Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
D Initial Closed-in Pressure	<u>816</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>65</u> P.S.I.	Final Closed-in Pressure	<u>120</u> Mins.	<u>120</u> Mins.
F Second Final Flow Pressure	<u>67</u> P.S.I.			
G Final Closed-in Pressure	<u>1029</u> P.S.I.			
H Final Hydrostatic Mud	<u>2403</u> P.S.I.			

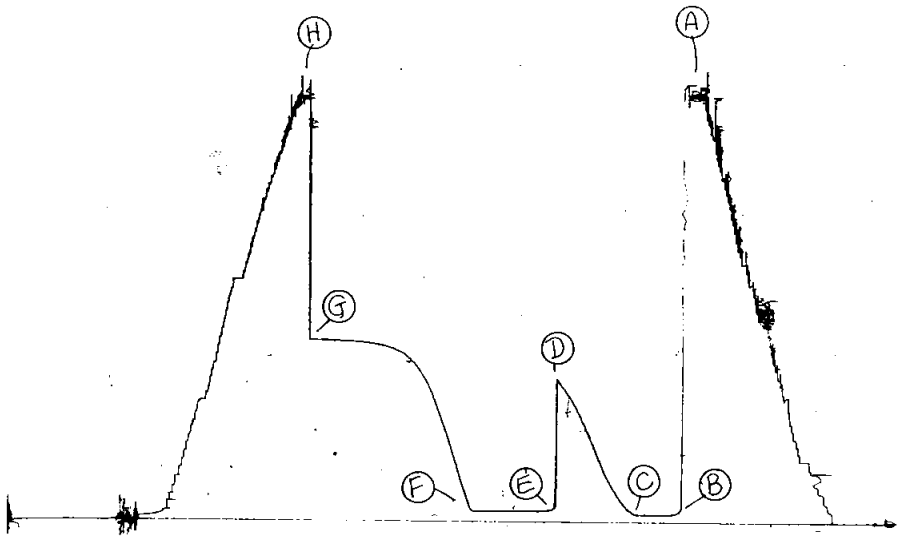
**PRESSURE BREAKDOWN**

<b>First Flow Pressure</b> Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	<b>Initial Shut-In</b> Breakdown: <u>20</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	<b>Second Flow Pressure</b> Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	<b>Final Shut-In</b> Breakdown: <u>40</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>78</u>	0	<u>45</u>	0		0	
P 2 5	<u>52</u>	3	<u>53</u>	5	<u>83</u>	3	<u>67</u> <u>998</u>
P 3 10	<u>47</u>	6	<u>71</u>	10	<u>64</u>	6	<u>76</u> <u>1004</u>
P 4 15	<u>44</u>	9	<u>98</u>	15	<u>65</u>	9	<u>178</u> <u>1008</u>
P 5 20	<u>44</u>	12	<u>124</u>	20	<u>65</u>	12	<u>222</u> <u>1013</u>
P 6 25	<u>44</u>	15	<u>156</u>	25	<u>65</u>	15	<u>298</u> <u>1017</u>
P 7 30	<u>45</u>	18	<u>198</u>	30	<u>66</u>	18	<u>380</u> <u>1020</u>
P 8 35		21	<u>237</u>	35	<u>66</u>	21	<u>445</u> <u>1020</u>
P 9 40		24	<u>293</u>	40	<u>66</u>	24	<u>511</u> <u>1021</u>
P10 45		27	<u>336</u>	45	<u>67</u>	27	<u>568</u> <u>1021</u>
P11 50		30	<u>396</u>	50	<u>67</u>	30	<u>639</u> <u>1022</u>
P12 55		33	<u>444</u>	55	<u>67</u>	33	<u>695</u> <u>1022</u>
P13 60		36	<u>502</u>	60	<u>67</u>	36	<u>756</u> <u>1023</u>
P14 65		39	<u>548</u>	65		39	<u>810</u> <u>1024</u>
P15 70		42	<u>596</u>	70		42	<u>846</u> <u>1025</u>
P16 75		45	<u>644</u>	75		45	<u>880</u> <u>1025</u>
P17 80		48	<u>677</u>	80		48	<u>910</u> <u>1026</u>
P18 85		51	<u>726</u>	85		51	<u>932</u> <u>1027</u>
P19 90		54	<u>758</u>	90		54	<u>954</u> <u>1027</u>
P20 95		57	<u>787</u>	95		57	<u>970</u> <u>1028</u>
100		60	<u>816</u>	100		60	<u>988</u> <u>1029</u>

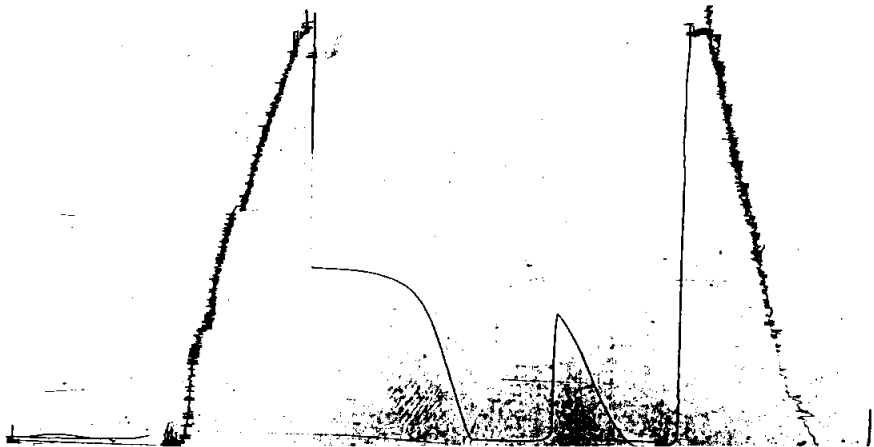
TK# 20122

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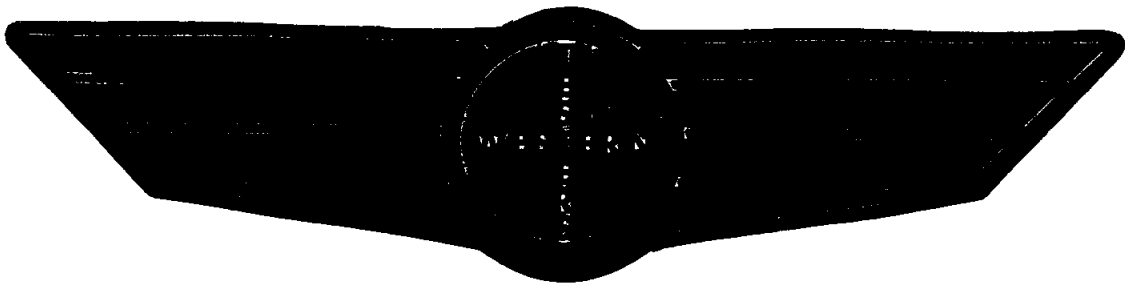


TK#20122

O.



# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 11/29/93  
CUSTOMER : MURFIN DRILLING CO., INC  
WELL : #1-30 TEST: 2  
ELEVATION: 3816 KB  
SECTION : 30  
RANGE : 41W COUNTY: WALLACE  
GAUGE SN#: 11018 RANGE : 4425  
TICKET : 20122  
LEASE : NIKRBASH  
GEOLOGIST: COVEY  
FORMATION: MORROW SAND  
TOWNSHIP : 15S  
STATE : KS  
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4985.00 ft TO: 5020.00 ft TVD: 5020.0 ft  
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL  
DEPTH OF RECORDERS: 4988.0 ft 5017.0 ft  
TEMPERATURE: 141.0  
DRILL COLLAR LENGTH: 520.0 ft I.D.: 2.200 in  
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in  
DRILL PIPE LENGTH : 4439.0 ft I.D.: 3.800 in  
TEST TOOL LENGTH : 26.0 ft TOOL SIZE : 5.500 in  
ANCHOR LENGTH : 35.0 ft ANCHOR SIZE: 5.500 in  
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in  
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH  
PACKER DEPTH: 4980.0 ft SIZE: 6.630 in  
PACKER DEPTH: 4985.0 ft SIZE: 6.630 in  
PACKER DEPTH: 0.0 ft SIZE: 0.000 in  
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 25  
MUD TYPE : CHEMICAL VISCOSITY : 50.00 cp  
WEIGHT : 9.300 ppg WATER LOSS: 7.000 cc  
CHLORIDES : 3400 ppm  
JARS-MAKE : WTC SERIAL NUMBER: 12369  
DID WELL FLOW?: NO REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW - BOTTOM OF BUCKET  
IN 20 MINUTES. FINAL FLOW PERIOD STRONG BLOW -  
BOTTOM OF BUCKET IN 5 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	1300 FT GAS ABOVE FLUID
100.0	0.0	10.0	0.0	90.0	OIL SPECKED GAS CUT MUD
0.0	0.0	0.0	0.0	0.0	RW. 1.8 @ 70 DEGREES
0.0	0.0	0.0	0.0	0.0	CHLORIDES 4000 PPM

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	90.0000	min.
GAS VOLUME:	0.2640	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.4231	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.4231	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2411.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	37.00	42.00
INITIAL SHUT-IN	60.00		816.00
FINAL FLOW	60.00	55.00	55.00
FINAL SHUT-IN	120.00		1030.00

FINAL HYDROSTATIC PRESSURE: 2386.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2428.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	78.00	45.00
INITIAL SHUT-IN	60.00		816.00
FINAL FLOW	60.00	83.00	67.00
FINAL SHUT-IN	120.00		1029.00

FINAL HYDROSTATIC PRESSURE: 2402.00

**PRESSURE TRANSIENT REPORT**

**GENERAL INFORMATION**

DATE	: 11/29/93	TICKET	: 20122
CUSTOMER	: MURFIN DRILLING CO., INC	LEASE	: NIKRBASH
WELL	: #1-30	TEST:	2
ELEVATION:	3816 KB	GEOLOGIST:	COVEY
SECTION	: 30	FORMATION:	MORROW SAND
RANGE	: 41W	TOWNSHIP	: 15S
GAUGE SN#:	11018	STATE	: KS
		CLOCK	: 12
		COUNTY:	WALLACE
		RANGE :	4425

**INITIAL FLOW**

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	78.00	78.00
5.00	52.00	-26.00
10.00	47.00	-5.00
15.00	44.00	-3.00
20.00	44.00	0.00
25.00	44.00	0.00
30.00	45.00	1.00

**INITIAL SHUT IN**

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	53.00	53.00	12.67
6.00	71.00	18.00	6.83
9.00	98.00	27.00	4.89
12.00	124.00	26.00	3.92
15.00	156.00	32.00	3.33
18.00	198.00	42.00	2.94
21.00	237.00	39.00	2.67
24.00	293.00	56.00	2.46
27.00	336.00	43.00	2.30
30.00	396.00	60.00	2.17
33.00	444.00	48.00	2.06
36.00	502.00	58.00	1.97
39.00	548.00	46.00	1.90
42.00	596.00	48.00	1.83
45.00	644.00	48.00	1.78
48.00	677.00	33.00	1.73
51.00	726.00	49.00	0.00
54.00	758.00	32.00	0.00
57.00	787.00	29.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	816.00	29.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	83.00	83.00
5.00	64.00	-19.00
10.00	65.00	1.00
15.00	65.00	0.00
20.00	65.00	0.00
25.00	66.00	1.00
30.00	66.00	0.00
35.00	66.00	0.00
40.00	67.00	1.00
45.00	67.00	0.00
50.00	67.00	0.00
55.00	67.00	0.00
60.00	67.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	67.00	67.00	21.00
6.00	67.00	0.00	11.00
9.00	76.00	9.00	7.67
12.00	178.00	102.00	6.00
15.00	222.00	44.00	5.00
18.00	298.00	76.00	4.33
21.00	380.00	82.00	3.86
24.00	445.00	65.00	3.50
27.00	511.00	66.00	3.22
30.00	568.00	57.00	3.00
33.00	639.00	71.00	2.82
36.00	695.00	56.00	2.67
39.00	756.00	61.00	2.54
42.00	810.00	54.00	2.43
45.00	846.00	36.00	2.33
48.00	910.00	64.00	2.25

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
51.00	932.00	22.00	2.18
54.00	954.00	22.00	2.11
57.00	970.00	16.00	2.05
60.00	988.00	18.00	2.00
63.00	998.00	10.00	1.95
66.00	1004.00	6.00	0.00
69.00	1008.00	4.00	0.00
72.00	1013.00	5.00	0.00
75.00	1017.00	4.00	0.00
78.00	1020.00	3.00	0.00
81.00	1020.00	0.00	0.00
84.00	1021.00	1.00	0.00
87.00	1021.00	0.00	0.00
90.00	1022.00	1.00	0.00
93.00	1022.00	0.00	0.00
96.00	1023.00	1.00	0.00
99.00	1024.00	1.00	0.00
102.00	1025.00	1.00	0.00
105.00	1025.00	0.00	0.00
108.00	1026.00	1.00	0.00
111.00	1027.00	1.00	0.00
114.00	1027.00	0.00	0.00
117.00	1028.00	1.00	0.00
120.00	1029.00	1.00	0.00



H110N10N SCOTI 15031N SON

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 20123

P. O. BOX 1599 PHONE (316) 262-5861 WICHITA, KANSAS 67201

Elevation 3816 K.B. Formation MORROW SD Eff. Pay Ft.

District GREAT BEND Date 11-29-93 Customer Order No.

COMPANY NAME MURFIN DRILLING CO

ADDRESS 250 N. WATER SUITE 300 WICHITA KS 67202

LEASE AND WELL NO. WIKRBASH COUNTY WALLACE STATE KS Sec. 30 Twp. 18S Rge. 4W

Mail Invoice To Co. Name Address No. Copies Requested

Mail Charts To Address No. Copies Requested

Formation Test No. 3 Interval Tested From 4982 ft. to 5113 ft. Total Depth 5113 ft.

Packer Depth 4977 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 4982 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4985 ft. Recorder Number 11618 Cap. 4425 PSI

Bottom Recorder Depth (Outside) 5110 ft. Recorder Number 13629 Cap. 4425 PSI

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor COMPANY TOOLS RIG 25 Drill Collar Length 520 I. D. 2.2 in.

Mud Type CHEMICAL Viscosity 53 Weight Pipe Length - I. D. - in.

Weight 9.3 Water Loss 2.2 cc. Drill Pipe Length 4436 I. D. 3.8 in.

Chlorides 2,401 P.P.M. Test Tool Length 26 ft. Tool Size 5 1/2 in.

Jars: Make WESTERN Serial Number 12369 Anchor Length 131 ft. Size 5 1/2 in.

Did Well Flow? NO Reversed Out YES Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 in.

Blow: 1ST FLOW: STRONG BLOW B.O.B IN 2 MINUTES

2ND FLOW: STRONG BLOW B.O.B IN 2 MINUTES INCREASING TO 5" A.U. AND

Recovered 2300 ft. of GASSY MUDDY WATER WITH A SCUM OF OIL THROUGHOUT

Recovered ft. of 20% GAS 25% MUD 5% WATER 1% OIL (R.V. = 3 @ 70° 20,000 PPM)

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides 20,000 P.P.M. Sample Jars used Remarks:

Time On Location 9:00 A.M. Time Pick Up Tool 10:00 A.M. Time Off Location 10:00 A.M.

Time Set Packer(s) 12:00 P.M. Time Started Off Bottom 3:45 P.M. Maximum Temperature 144°

Initial Hydrostatic Pressure (A) 2466 P.S.I.

Initial Flow Period Minutes 30 (B) 910 P.S.I. to (C) 976 P.S.I.

Initial Closed In Period Minutes 45 (D) 1011 P.S.I.

Final Flow Period Minutes 60 (E) 1009 P.S.I. to (F) 1011 P.S.I.

Final Closed In Period Minutes 90 (G) 1041 P.S.I.

Final Hydrostatic Pressure (H) 2446 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By Signature of Customer or his authorized representative

Western Representative

FIELD INVOICE

Open Hole Test \$ V
Misrun \$
Straddle Test \$
Jars \$ V
Selective Zone \$
Safety Joint \$ V
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$ V
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$ 3 PAGES
TOTAL \$

# WESTERN TESTING CO., INC.

## Pressure Data

Date: 11-30-93 Recorder No. 11018 Capacity 4425 PSI Test Ticket No. 20103  
 Clock No. \_\_\_\_\_ Elevation 2816 K.B Location 4985 Ft. \_\_\_\_\_ Well Temperature 144 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2468</u> P.S.I.	Open Tool		M
B First Initial Flow Pressure	<u>912</u> P.S.I.	First Flow Pressure	<u>30</u> Mins	<u>30</u> Mins.
C First Final Flow Pressure	<u>980</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>1017</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>1011</u> P.S.I.	Final Closed-in Pressure	<u>90</u> Mins	<u>90</u> Mins.
F Second Final Flow Pressure	<u>1032</u> P.S.I.			
G Final Closed-in Pressure	<u>1039</u> P.S.I.			
H Final Hydrostatic Mud	<u>2444</u> P.S.I.			

### PRESSURE BREAKDOWN

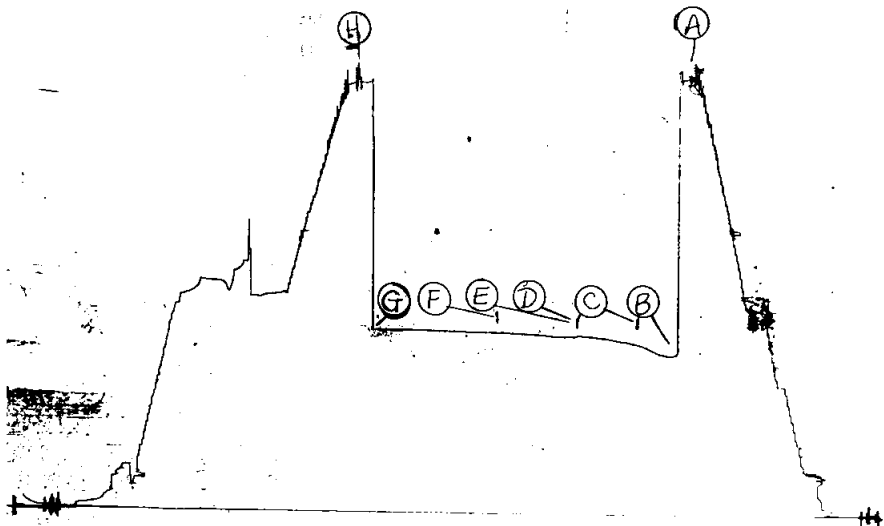
First Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Initial Shut-In Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Second Flow Pressure Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Final Shut-In Breakdown: <u>30</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
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Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	0	925	0	980	0	1017	0	1039
P 2 5	5	912	3	982	5	1011	3	1032
P 3 10	10	914	6	984	10	1013	6	1034
P 4 15	15	922	9	985	15	1015	9	1035
P 5 20	20	940	12	986	20	1016	12	1035
P 6 25	25	962	15	991	25	1018	15	1035
P 7 30	30	980	18	993	30	1021	18	1036
P 8 35	35		21	997	35	1024	21	1036
P 9 40	40		24	1001	40	1026	24	1037
P10 45	45		27	1003	45	1027	27	1038
P11 50	50		30	1006	50	1030	30	1038
P12 55	55		33	1008	55	1031	33	1039
P13 60	60		36	1012	60	1032	36	1039
P14 65	65		39	1014	65		39	1039
P15 70	70		42	1016	70		42	1039
P16 75	75		45	1017	75		45	1039
P17 80	80		48		80		48	1039
P18 85	85		51		85		51	1039
P19 90	90		54		90		54	1039
P20 95	95		57		95		57	1039
100	100		60		100		60	1039

TK # 20123:

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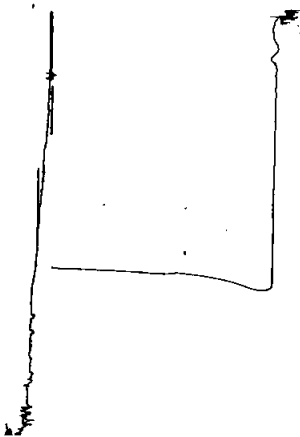


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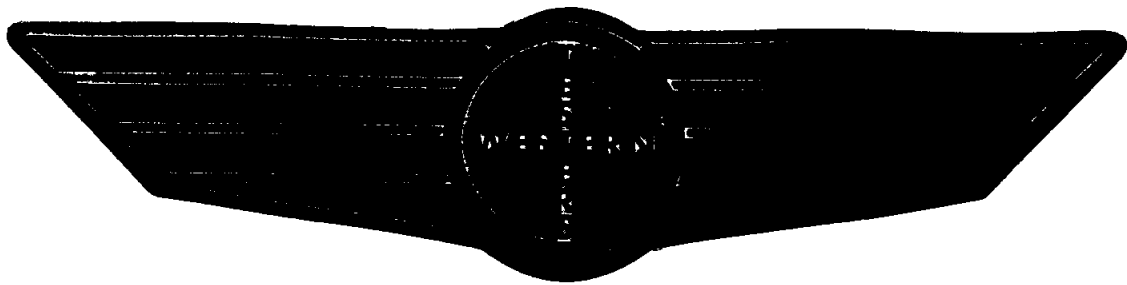
TK# 20123

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# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 11/29/93	TICKET : 20123
CUSTOMER : MURFIN DRILLING CO., INC	LEASE : NIKRBASH
WELL : #1-30 TEST: 3	GEOLOGIST: COVEY
ELEVATION: 3816 KB	FORMATION: MORROW SAND
SECTION : 30	TOWNSHIP : 15S
RANGE : 41W COUNTY: WALLACE	STATE : KS
GAUGE SN#: 11018 RANGE : 4425	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4982.00 ft	TO: 5113.00 ft	TVD: 5113.0 ft
DEPTH OF SELECTIVE ZONE:		TEST TYPE: OIL
DEPTH OF RECORDERS: 4985.0 ft	5110.0 ft	
TEMPERATURE: 144.0		

DRILL COLLAR LENGTH: 520.0 ft	I.D.:	2.200 in
WEIGHT PIPE LENGTH : 0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH : 4436.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH : 26.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH : 131.0 ft	ANCHOR SIZE:	5.500 in
SURFACE CHOKE SIZE : 0.750 in	BOTTOM CHOKE SIZE:	0.750 in
MAIN HOLE SIZE : 7.875 in	TOOL JOINT SIZE :	4.5XH
PACKER DEPTH: 4977.0 ft	SIZE:	6.630 in
PACKER DEPTH: 4982.0 ft	SIZE:	6.630 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 25	VISCOSITY : 53.00 cp
MUD TYPE : CHEMICAL	WATER LOSS: 7.200 cc
WEIGHT : 9.300 ppg	
CHLORIDES : 5400 ppm	SERIAL NUMBER: 12369
JARS-MAKE : WTC	REVERSED OUT?: YES
DID WELL FLOW?: NO	

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW - BOTTOM OF BUCKET  
 IN 2 MINUTES. FINAL FLOW PERIOD STRONG BLOW -  
 BOTTOM OF BUCKET IN 20 MINUTES DECREASING TO 5

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

INCHES BY END OF FLOW.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
2300.0	1.0	20.0	54.0	25.0	GASSY MUDDY WTR W/SCUM OF OIL THROUGHOUT CHLORIDES 20000 PPM RW .3 @ 70 DEGREES
0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	

RATE INFORMATION

OIL VOLUME:	0.2741 STB	TOTAL FLOW TIME:	90.0000 min.
GAS VOLUME:	30.7832 SCF	AVERAGE OIL RATE:	6.3794 STB/D
MUD VOLUME:	6.8529 STB	AVERAGE WATER RATE:	344.4893 STB/D
WATER VOLUME:	14.8023 STB		
TOTAL FLUID :	21.9293 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2466.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	910.00	976.00
INITIAL SHUT-IN	45.00		1011.00
FINAL FLOW	60.00	1008.00	1011.00
FINAL SHUT-IN	90.00		1041.00

FINAL HYDROSTATIC PRESSURE: 2440.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2468.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	30.00	925.00	980.00
INITIAL SHUT-IN	45.00		1017.00
FINAL FLOW	60.00	1011.00	1032.00
FINAL SHUT-IN	90.00		1039.00

FINAL HYDROSTATIC PRESSURE: 2444.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 11/29/93	TICKET	: 20123
CUSTOMER	: MURFIN DRILLING CO., INC	LEASE	: NIKRBASH
WELL	: #1-30 TEST: 3	GEOLOGIST	: COVEY
ELEVATION	: 3816 KB	FORMATION	: MORROW SAND
SECTION	: 30	TOWNSHIP	: 15S
RANGE	: 41W COUNTY: WALLACE	STATE	: KS
GAUGE SN#	: 11018 RANGE : 4425	CLOCK	: 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	925.00	925.00
5.00	912.00	-13.00
10.00	914.00	2.00
15.00	922.00	8.00
20.00	940.00	18.00
25.00	962.00	22.00
30.00	980.00	18.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	982.00	982.00	12.67
6.00	984.00	2.00	6.83
9.00	985.00	1.00	4.89
12.00	986.00	1.00	3.92
15.00	991.00	5.00	3.33
18.00	993.00	2.00	2.94
21.00	997.00	4.00	2.67
24.00	1001.00	4.00	2.46
27.00	1003.00	2.00	2.30
30.00	1006.00	3.00	2.17
33.00	1008.00	2.00	2.06
36.00	1012.00	4.00	1.97
39.00	1014.00	2.00	1.90
42.00	1016.00	2.00	1.83
45.00	1017.00	1.00	1.78

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	1011.00	1011.00
5.00	1011.00	0.00
10.00	1013.00	2.00
15.00	1015.00	2.00
20.00	1016.00	1.00
25.00	1018.00	2.00
30.00	1021.00	3.00
35.00	1024.00	3.00
40.00	1026.00	2.00
45.00	1027.00	1.00
50.00	1030.00	3.00
55.00	1031.00	1.00
60.00	1032.00	1.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	1032.00	1032.00	21.00
6.00	1034.00	2.00	11.00
9.00	1035.00	1.00	7.67
12.00	1035.00	0.00	6.00
15.00	1035.00	0.00	5.00
18.00	1036.00	1.00	4.33
21.00	1036.00	0.00	3.86
24.00	1037.00	1.00	3.50
27.00	1038.00	1.00	3.22
30.00	1038.00	0.00	3.00
33.00	1039.00	1.00	2.82
36.00	1039.00	0.00	2.67
39.00	1039.00	0.00	2.54
42.00	1039.00	0.00	2.43
45.00	1039.00	0.00	2.33
48.00	1039.00	0.00	2.25
51.00	1039.00	0.00	2.18
54.00	1039.00	0.00	2.11
57.00	1039.00	0.00	2.05
60.00	1039.00	0.00	2.00
63.00	1039.00	0.00	1.95
66.00	1039.00	0.00	0.00
69.00	1039.00	0.00	0.00
72.00	1039.00	0.00	0.00
75.00	1039.00	0.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
78.00	1039.00	0.00	0.00
81.00	1039.00	0.00	0.00
84.00	1039.00	0.00	0.00
87.00	1039.00	0.00	0.00
90.00	1039.00	0.00	0.00



HILL SCOTT WOODMANSON

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No. 20124

P. O. BOX 1599 WICHITA, KANSAS 67201 PHONE (316) 262-5861

Elevation 3816 K.F. Formation MORROW SAND Eff. Pay Ft.

District GREAT BEND Date 12-1-93 Customer Order No.

COMPANY NAME MURFIN DRILLING CO. Inc

ADDRESS 250 N WATER SUITE 300 WICHITA KS 67202

LEASE AND WELL NO. NIKRBASH 1-30 COUNTY WALLACE STATE KS Sec. 30 Twp. 15S Rge. 41W

Mail Invoice To Co. Name #1-30 NIKRBASH Address No. Copies Requested

Mail Charts To Address No. Copies Requested

Formation Test No. 4 Interval Tested From 4980 ft. to 5027 ft. Total Depth 5296 ft.

Packer Depth 4974 ft. Size 6 5/8 in. Packer Depth 5027 ft. Size 6 5/8 in.

Packer Depth 4980 ft. Size 6 5/8 in. Packer Depth 5032 ft. Size 6 5/8 in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4985 ft. Recorder Number 11018 Cap. 4425 PSI

Bottom Recorder Depth (Outside) 5020 ft. Recorder Number 3659 Cap. 4110 "

Below Straddle Recorder Depth 5036 ft. Recorder Number 13629 Cap. 4425 "

Drilling Contractor COMPANY TOOLS R16 25 Drill Collar Length 270 I. D. 2.2 in.

Mud Type CHEMICAL Viscosity 55 Weight Pipe Length 0 I. D. in.

Weight 9.2 Water Loss 2.2 cc. Drill Pipe Length 4680 I. D. 3.8 in.

Chlorides 3600 P.P.M. Test Tool Length 30 ft. Tool Size 5 1/2 in.

Jars: Make WESTERN Serial Number 12364 Anchor Length 47 ft. Size 5 1/2 in.

Did Well Flow? NO Reversed Out YES Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 in.

Blow: 1st FLOW: STRONG BLOW B.O.B IN 2 MINUTES

2nd FLOW: STRONG BLOW B.O.B IN 10 MINUTES - BLOW DR. TO 3" BY END WIK BLOWBACK

Recovered 270 ft. of GAS IN PIPE

Recovered 150 ft. of GASSY SLT MUDRY WATER WITH SCUM OF OIL (20% GAS 20% MUD 10% OIL 50% WATER)

Recovered 2200 ft. of GASSY WATER (10% GAS 90% WATER (.32 @ 70° 22000 PPM)

Recovered ft. of

Recovered 2350 ft. of TOTAL FLUID RECOVERY

Chlorides 2 P.P.M. Sample Jars used Remarks: BTM RECORDER PSI: 1400 PSI

5- MUD RW @ 50' - CHLORIDES 3600 PPM SAMPLER REC: 1800 CG WATER 500 LBS ON

27,000 PPM SAME IN SAMPLER + DRILL PIPE .9 CF GAS SAMPLERS

Time On Location 10:00 AM Time Pick Up Tool 8:00 AM

Time Set Packer(s) 10:00 AM Time Started Off Bottom 4:00 PM

Initial Hydrostatic Pressure (A) 2366 P.S.I. Maximum Temperature 141°

Initial Flow Period Minutes 60 (B) 377 P.S.I. to (C) 680 P.S.I.

Initial Closed In Period Minutes 60 (D) 968 P.S.I.

Final Flow Period Minutes 120 (E) 878 P.S.I. to (F) 878 P.S.I.

Final Closed In Period Minutes 120 (G) 878 P.S.I.

Final Hydrostatic Pressure (H) 2342 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By Signature of Customer or his authorized representative

Western Representative John Scott

FIELD INVOICE

Table with 2 columns: Item, Amount. Includes Open Hole Test, Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, TOTAL.



### Fluid Sample Report

Date 12-01-93 Ticket No. 20124  
 Company Murfin  
 Well Name & No. H-1-30 NIKRO ASH DST No. 4  
 County Wallace State Ks.  
 Sampler No. 6 Test Interval 4980-5027

Pressure in Sampler 500 PSIG BHT 141 OF

Total Volume of Sampler 3150 cc.  
 Total Volume of Sample: ..... cc.  
 Oil: ..... cc.  
 Water: 1800 cc.  
 Mud: ..... cc.  
 Gas: .9 cu. ft.  
 Other: .....

#### Resistivity

Water: 20 @ 500 of Chloride Content 3600 ppm.  
 Mud Pit Sample 2 @ 300 of Chloride Content 3600 ppm.  
 Gas/Oil Ratio ..... Gravity ..... °API @ ..... OF

Where was sample drained Rig

Remarks: .....

WESTERN TESTING CO., INC.

Pressure Data

DATE 12-1-93

Test Ticket No. 20124

Recorder No. 3659 Capacity \_\_\_\_\_ Location \_\_\_\_\_ Ft.

Clock No. \_\_\_\_\_ Elevation \_\_\_\_\_ Well Temperature \_\_\_\_\_ °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2369</u> P.S.I.			
B First Initial Flow Pressure	<u>390</u> P.S.I.	First Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
C First Final Flow Pressure	<u>683</u> P.S.I.	Initial Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
D Initial Closed-in Pressure	<u>978</u> P.S.I.	Second Flow Pressure		
E Second Initial Flow Pressure	<u>892</u> P.S.I.	Final Closed-in Pressure		
F Second Final Flow Pressure	<u>892</u> P.S.I.			
G Final Closed-in Pressure	<u>892</u> P.S.I.			
H Final Hydrostatic Mud	<u>2340</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure

Initial Shut-In

Second Flow Pressure

Final Shut-In

Breakdown: \_\_\_\_\_ Inc.  
of 5 mins. and a  
final inc. of \_\_\_\_\_ Min.

Breakdown: \_\_\_\_\_ Inc.  
of 3 mins. and a  
final inc. of \_\_\_\_\_ Min.

Breakdown: \_\_\_\_\_ Inc.  
of 5 mins. and a  
final inc. of \_\_\_\_\_ Min.

Breakdown: \_\_\_\_\_ Inc.  
of 3 mins. and a  
final inc. of \_\_\_\_\_ Min.

Point	Press.	Point	Press.	Point	Press.	Point	Press.
Mins.		Minutes		Minutes		Minutes	
P1 0	390	C 0	683	E 0	892	F 0	892
P2 5	391	3	875	5		3	
P3 10	403	6	915	10		6	
P4 15	403	9	936	15		9	
P5 20	413	12	944	20		12	
P6 25	445	15	954	25		15	892
P7 30	479	18	960	30	892	18	
P8 35	512	21	967	35		21	
P9 40	584	24	968	40		24	
P10 45	622	27	971	45	892	27	
P11 50	657	30	970	50		30	892
P12 55	683	33	973	55		33	
C P13 60	683	36	976	60	892	36	
P14 65		39	978	65		39	
P15 70		42	978	70		42	
P16 75		45		75	892	45	892
P17 80		48		80		48	
P18 85		51		85		51	
P19 90		54		90	892	54	
P20 95		57		95		57	
wtd 100		60	978	100	892	60	892

20124

pg 2

WESTERN TESTING CO., INC.  
Pressure Data

Date 12-1-93 Test Ticket No. 20124  
 Recorder No. ~~1018~~ 5659 Capacity \_\_\_\_\_ Location \_\_\_\_\_ Ft. \_\_\_\_\_  
 Clock No. \_\_\_\_\_ Elevation \_\_\_\_\_ Well Temperature \_\_\_\_\_ °F

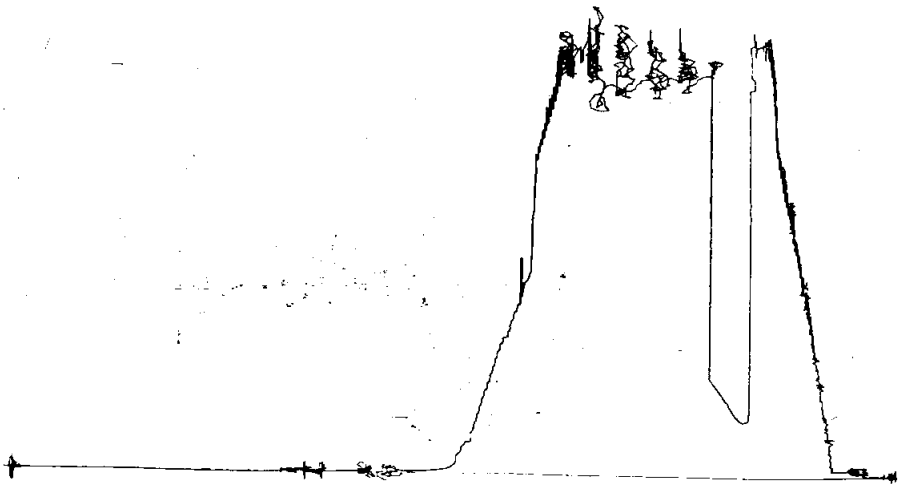
Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud _____ P.S.I.	Open Tool _____ M		
B First Initial Flow Pressure _____ P.S.I.	First Flow Pressure _____ Mins. _____ Mins.		
C First Final Flow Pressure _____ P.S.I.	Initial Closed-in Pressure _____ Mins. _____ Mins.		
D Initial Closed-in Pressure _____ P.S.I.	Second Flow Pressure _____ Mins. _____ Mins.		
E Second Initial Flow Pressure _____ P.S.I.	Final Closed-in Pressure _____ Mins. _____ Mins.		
F Second Final Flow Pressure _____ P.S.I.			
G Final Closed-in Pressure _____ P.S.I.			
H Final Hydrostatic Mud _____ P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of _____ mins. and a		of _____ mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 105		63		105	892	F 63	892
P 2 110		66		110	1	66	1
P 3 115		69		115	1	69	1
P 4 120		72		F 120	892	72	1
P 5 125		75		125		75	892
P 6 130		78		130		78	1
P 7 135		81		135		81	1
P 8 140		84		140		84	1
P 9 145		87		145		87	1
P10 150		90		150		90	892
P11 155		93		155		93	1
P12 160		96		160		96	1
P13 165		99		165		99	892
P14 170		102		170		102	1
P15 175		105		175		105	892
P16 180		108		180		108	1
P17 185		111		185		111	1
P18 190		114		190		114	892
P19 195		117		195		117	
P20 200		120		200		G 120	892
						135	892

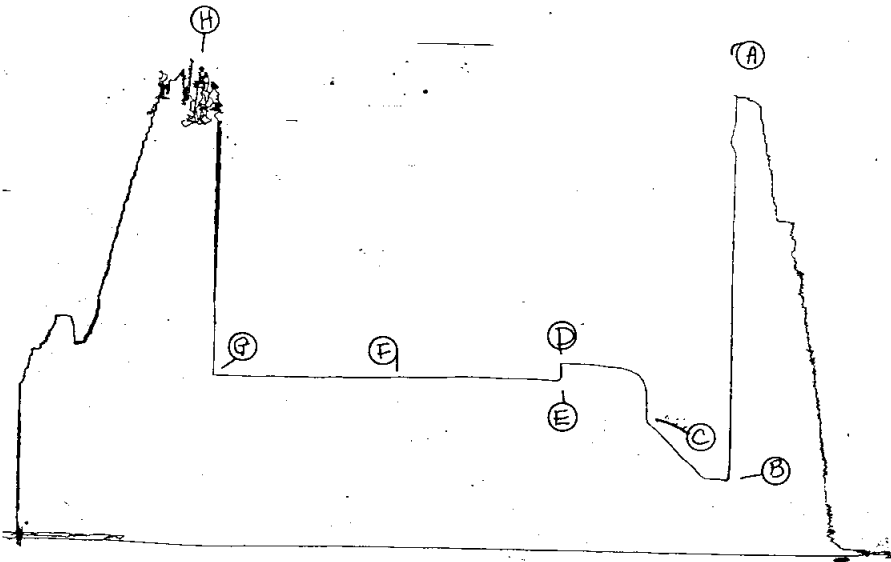
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TK # 20124

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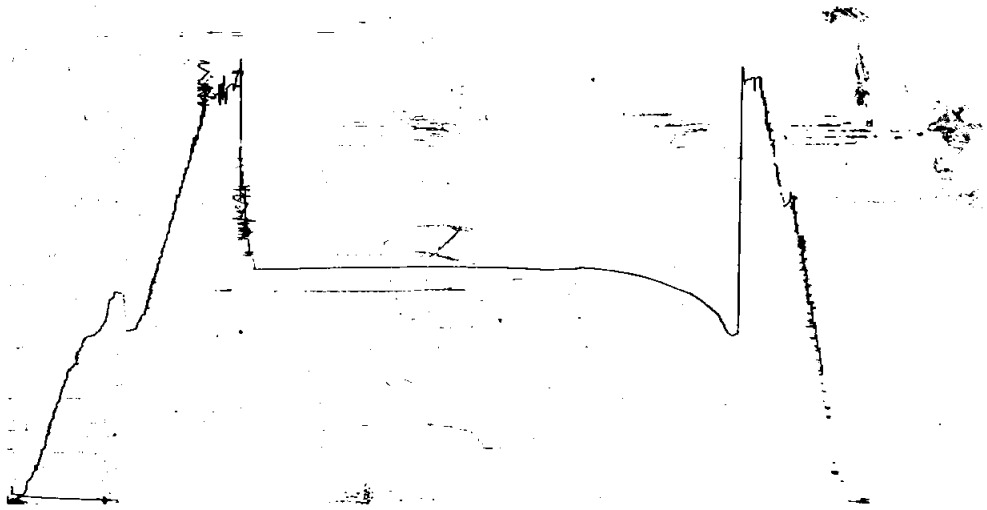


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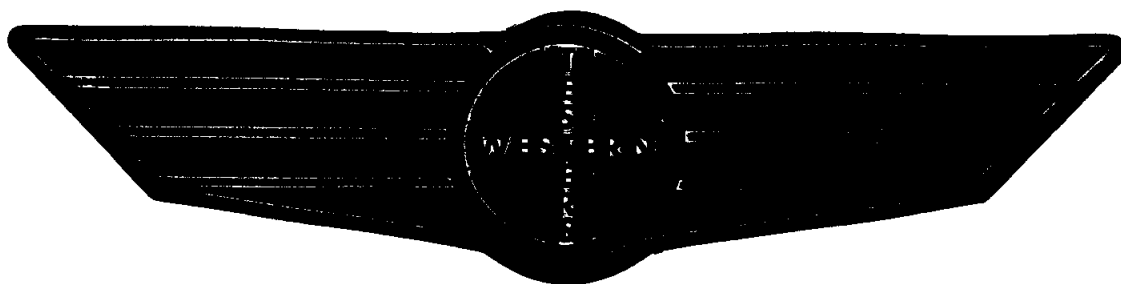
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Below Straddle



# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 12/1/93  
CUSTOMER : MURFIN DRILLING CO., INC  
WELL : #1-30 TEST: 4  
ELEVATION: 3816 KB  
SECTION : 30  
RANGE : 41W COUNTY: WALLACE  
GAUGE SN#: 11018 RANGE : 4425  
TICKET : 20124  
LEASE : NIKRBASH  
GEOLOGIST:  
FORMATION: MORROW SAND  
TOWNSHIP : 15S  
STATE : KS  
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4980.00 ft TO: 5027.00 ft TVD: 5296.0 ft  
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL  
DEPTH OF RECORDERS: 4985.0 ft 5020.0 ft  
TEMPERATURE: 141.0  
DRILL COLLAR LENGTH: 270.0 ft I.D.: 2.200 in  
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in  
DRILL PIPE LENGTH : 4680.0 ft I.D.: 3.800 in  
TEST TOOL LENGTH : 30.0 ft TOOL SIZE : 5.500 in  
ANCHOR LENGTH : 47.0 ft ANCHOR SIZE: 5.500 in  
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in  
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH  
PACKER DEPTH: 4974.0 ft SIZE: 6.630 in  
PACKER DEPTH: 4980.0 ft SIZE: 6.630 in  
PACKER DEPTH: 5027.0 ft SIZE: 6.630 in  
PACKER DEPTH: 5032.0 ft SIZE: 6.630 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 25  
MUD TYPE : CHEMICAL  
WEIGHT : 9.200 ppg  
CHLORIDES : 3600 ppm  
JARS-MAKE : WTC  
DID WELL FLOW?: NO  
VISCOSITY : 55.00 cp  
WATER LOSS: 7.200 cc  
SERIAL NUMBER: 12369  
REVERSED OUT?: YES

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW - BOTTOM OF BUCKET  
IN 2 MINUTES. FINAL FLOW PERIOD STRONG BLOW -  
BOTTOM OF BUCKET IN 10 MINUTES. BLOW DECREASING

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

TO 3 INCHES BY END. WEAK BLOW BACK.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	270 FT GAS ABOVE FLUID
150.0	1.0	20.0	59.0	20.0	GASSY SL MUDDY WTR W/SCUM
0.0	0.0	0.0	0.0	0.0	OF OIL
2200.0	0.0	10.0	90.0	0.0	GASSY WATER
0.0	0.0	0.0	0.0	0.0	.32 @ 70 DEGREES
0.0	0.0	0.0	0.0	0.0	CHLORIDES 22000 PPM

RATE INFORMATION

OIL VOLUME: 0.0210 STB  
 GAS VOLUME: 18.2758 SCF  
 MUD VOLUME: 0.4208 STB  
 WATER VOLUME: 26.7475 STB  
 TOTAL FLUID : 27.1894 STB

TOTAL FLOW TIME: 180.0000 min.  
 AVERAGE OIL RATE: 0.2244 STB/D  
 AVERAGE WATER RATE: 217.2905 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2366.00

Description	Duration	p1	p End
INITIAL FLOW	60.00	377.00	680.00
INITIAL SHUT-IN	60.00		968.00
FINAL FLOW	120.00	878.00	878.00
FINAL SHUT-IN	120.00		878.00

FINAL HYDROSTATIC PRESSURE: 2342.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2369.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	60.00	390.00	683.00
INITIAL SHUT-IN	66.00		978.00
FINAL FLOW	120.00	892.00	892.00
FINAL SHUT-IN	135.00		892.00
FINAL HYDROSTATIC PRESSURE:	2340.00		

**PRESSURE TRANSIENT REPORT**

**GENERAL INFORMATION**

DATE : 12/1/93	TICKET : 20124
CUSTOMER : MURFIN DRILLING CO., INC	LEASE : NIKRBASH
WELL : #1-30 TEST: 4	GEOLOGIST:
ELEVATION: 3816 KB	FORMATION: MORROW SAND
SECTION : 30	TOWNSHIP : 15S
RANGE : 41W	COUNTY: WALLACE
GAUGE SN#: 11018	STATE : KS
	RANGE : 4425
	CLOCK : 12

**INITIAL FLOW**

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	390.00	390.00
5.00	391.00	1.00
10.00	403.00	12.00
15.00	403.00	0.00
20.00	413.00	10.00
25.00	445.00	32.00
30.00	479.00	34.00
35.00	512.00	33.00
40.00	584.00	72.00
45.00	622.00	38.00
50.00	657.00	35.00
55.00	683.00	26.00
60.00	683.00	0.00

**INITIAL SHUT IN**

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	875.00	875.00	12.67
6.00	915.00	40.00	6.83
9.00	936.00	21.00	4.89
12.00	944.00	8.00	3.92
15.00	954.00	10.00	3.33
18.00	960.00	6.00	2.94
21.00	967.00	7.00	2.67
24.00	969.00	2.00	2.46
27.00	970.00	1.00	2.30
30.00	971.00	1.00	2.17
33.00	973.00	2.00	2.06
36.00	976.00	3.00	1.97
39.00	978.00	2.00	1.90

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
42.00	978.00	0.00	1.83
45.00	978.00	0.00	1.78
48.00	978.00	0.00	1.73
51.00	978.00	0.00	0.00
54.00	978.00	0.00	0.00
57.00	978.00	0.00	0.00
60.00	978.00	0.00	0.00
63.00	978.00	0.00	0.00
66.00	978.00	0.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	892.00	892.00
5.00	892.00	0.00
10.00	892.00	0.00
15.00	892.00	0.00
20.00	892.00	0.00
25.00	892.00	0.00
30.00	892.00	0.00
35.00	892.00	0.00
40.00	892.00	0.00
45.00	892.00	0.00
50.00	892.00	0.00
55.00	892.00	0.00
60.00	892.00	0.00
65.00	892.00	0.00
70.00	892.00	0.00
75.00	892.00	0.00
80.00	892.00	0.00
85.00	892.00	0.00
90.00	892.00	0.00
95.00	892.00	0.00
100.00	892.00	0.00
105.00	892.00	0.00
110.00	892.00	0.00
115.00	892.00	0.00
120.00	892.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	892.00	892.00	21.00
6.00	892.00	0.00	11.00
9.00	892.00	0.00	7.67
12.00	892.00	0.00	6.00
15.00	892.00	0.00	5.00
18.00	892.00	0.00	4.33
21.00	892.00	0.00	3.86
24.00	892.00	0.00	3.50
27.00	892.00	0.00	3.22
30.00	892.00	0.00	3.00
33.00	892.00	0.00	2.82
36.00	892.00	0.00	2.67
39.00	892.00	0.00	2.54
42.00	892.00	0.00	2.43
45.00	892.00	0.00	2.33
48.00	892.00	0.00	2.25
51.00	892.00	0.00	2.18
54.00	892.00	0.00	2.11
57.00	892.00	0.00	2.05
60.00	892.00	0.00	2.00
63.00	892.00	0.00	1.95
66.00	892.00	0.00	0.00
69.00	892.00	0.00	0.00
72.00	892.00	0.00	0.00
75.00	892.00	0.00	0.00
78.00	892.00	0.00	0.00
81.00	892.00	0.00	0.00
84.00	892.00	0.00	0.00
87.00	892.00	0.00	0.00
90.00	892.00	0.00	0.00
93.00	892.00	0.00	0.00
96.00	892.00	0.00	0.00
99.00	892.00	0.00	0.00
102.00	892.00	0.00	0.00
105.00	892.00	0.00	0.00
108.00	892.00	0.00	0.00
111.00	892.00	0.00	0.00
114.00	892.00	0.00	0.00
117.00	892.00	0.00	0.00
120.00	892.00	0.00	0.00
123.00	892.00	0.00	0.00
126.00	892.00	0.00	0.00
129.00	892.00	0.00	0.00
132.00	892.00	0.00	0.00
135.00	892.00	0.00	0.00

FLUID SAMPLE REPORT

GENERAL INFORMATION

DATE : 12/1/93  
CUSTOMER : MURFIN DRILLING CO., INC  
WELL : #1-30 TEST: 4  
ELEVATION: 3816 KB  
SECTION : 30  
RANGE : 41W COUNTY: WALLACE  
GAUGE SN#: 11018 RANGE : 4425  
TICKET : 20124  
LEASE : NIKRBASH  
GEOLOGIST:  
FORMATION: MORROW SAND  
TOWNSHIP : 15S  
STATE : KS  
CLOCK : 12

SAMPLE INFORMATION

PRESSURE IN SAMPLER: 500.00 PSIG BHT: 141.0 DEG F  
TOTAL VOLUME OF SAMPLER: 3150.00 cc  
TOTAL VOLUME OF SAMPLE: 0.00 cc  
OIL: 0.00 cc  
WATER: 1800.00 cc  
MUD: 0.00 cc  
GAS: 0.90 cc  
OTHER: 0.00 cc

RESISTIVITY

DRILLING MUD:  
MUD PIT SAMPLE: .2 @ 50 DEG. F.  
GAS/OIL RATIO:  
WHERE WAS SAMPLE DRAINED: RIG  
REMARKS:  
CHLORIDE CONTENT: 0.00 ppm  
CHLORIDE CONTENT: 3600.00 ppm  
GRAVITY: