



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 12968

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

Elevation 16749L Formation Douglas Sand Eff. Pay Ft.

District Pratt Date 9-29-81 Customer Order No.

COMPANY NAME F + M Oil Company, Inc.

ADDRESS Union Center Bldg, Suite 422 150 N. Market Wichita, Ks. 67202

LEASE AND WELL NO Stevenson #1 COUNTY Barber STATE Ks. Sec. 28 Twp 31 Rge 11

Mail Invoice To Stephenson #1 Same Address No. Copies Requested Req

Mail Charts To Same Address No. Copies Requested Req

Formation Test No. 1 Interval Tested from 3738 ft. to 3820 ft. Total Depth 3820 ft.

Packer Depth 3733 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Packer Depth 3738 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3741 ft. Recorder Number 1566 Cap. 4300

Bottom Recorder Depth (Outside) 3745 ft. Recorder Number 3086 Cap. 4500

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Union Rig 1 Drill Collar Length 283' I. D. 2.2 in.

Mud Type Chemical Viscosity 35 Weight Pipe Length I. D. in.

Weight 9.2 Water Loss 26.4 cc. Drill Pipe Length 3434' I. D. 3.8 in.

Chlorides 22,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 in.

Jars: Make Serial Number 200872 Anchor Length 20' 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: WK 1/4" Building to 2 inch I.F.P.

WK 1/4" Building to 1 inch F.F.P.

Recovered 180 ft. of Dil mud w/a couple specks of oil Top of Tool Jt.

Recovered 240 ft. of muddy salt water w/ 30,000 chlorides

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time On Location 1:45 A.M. Time Pick Up Tool 2:45 P.M. Time Off Location 9:30 P.M.

Time Set Packer(s) 4:20 P.M. Time Started Off Bottom 6:50 P.M. Maximum Temperature 164°

Initial Hydrostatic Pressure (A) 1874 P.S.I.

Initial Flow Period Minutes 30 (B) 118 P.S.I. to (C) 140 P.S.I.

Initial Closed In Period Minutes 45 (D) 1044 P.S.I.

Final Flow Period Minutes 30 (E) 183 P.S.I. to (F) 183 P.S.I.

Final Closed In Period Minutes 45 (G) 1044 P.S.I.

Final Hydrostatic Pressure (H) 1841 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 Phil Akey Signature of Customer or his authorized representative

Western Representative Mike Rogers Thank You!

FIELD INVOICE

Table with 2 columns: Item, Amount. Includes Open Hole Test (\$625.00), Mileage 40 (\$20.00), Fluid Sampler, Extra Charts, Insurance, and TOTAL (\$655.00).

WESTERN TESTING CO., INC.

Pressure Data

Date 9-29-81 Test Ticket No. 12968  
 Recorder No. 1566 Capacity 4300 Location 3741 Ft  
 Clock No. --- Elevation 1674 GL Well Temperature 164 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1861</u>	P.S.I.	<u>4:20 A</u>	M
B First Initial Flow Pressure	<u>111</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins
C First Final Flow Pressure	<u>138</u>	P.S.I.	<u>45</u>	Mins. <u>45</u> Mins
D Initial Closed-in Pressure	<u>1071</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins
E Second Initial Flow Pressure	<u>177</u>	P.S.I.	<u>45</u>	Mins. <u>45</u> Mins
F Second Final Flow Pressure	<u>177</u>	P.S.I.		
G Final Closed-in Pressure	<u>1052</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1848</u>	P.S.I.		

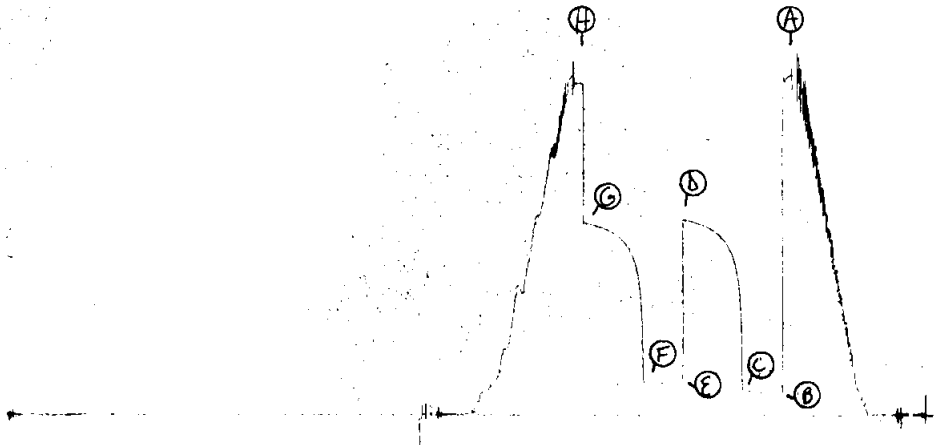
PRESSURE BREAKDOWN

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>8</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>0</u>	<u>0</u>	<u>138</u>	<u>0</u>	<u>177</u>	<u>0</u>	<u>177</u>
P 2	<u>5</u>	<u>3</u>	<u>572</u>	<u>5</u>		<u>3</u>	<u>656</u>
P 3	<u>10</u>	<u>6</u>	<u>765</u>	<u>10</u>		<u>6</u>	<u>796</u>
P 4	<u>15</u>	<u>9</u>	<u>852</u>	<u>15</u>		<u>9</u>	<u>863</u>
P 5	<u>20</u>	<u>12</u>	<u>903</u>	<u>20</u>		<u>12</u>	<u>905</u>
P 6	<u>25</u>	<u>15</u>	<u>942</u>	<u>25</u>		<u>15</u>	<u>938</u>
P 7	<u>30</u>	<u>18</u>	<u>969</u>	<u>30</u>	<u>177</u>	<u>18</u>	<u>962</u>
P 8	<u>35</u>	<u>21</u>	<u>988</u>	<u>35</u>		<u>21</u>	<u>981</u>
P 9	<u>40</u>	<u>24</u>	<u>1006</u>	<u>40</u>		<u>24</u>	<u>996</u>
P10	<u>45</u>	<u>27</u>	<u>1021</u>	<u>45</u>		<u>27</u>	<u>1007</u>
P11	<u>50</u>	<u>30</u>	<u>1034</u>	<u>50</u>		<u>30</u>	<u>1019</u>
P12	<u>55</u>	<u>33</u>	<u>1043</u>	<u>55</u>		<u>33</u>	<u>1029</u>
P13	<u>60</u>	<u>36</u>	<u>1051</u>	<u>60</u>		<u>36</u>	<u>1036</u>
P14		<u>39</u>	<u>1058</u>	<u>65</u>		<u>39</u>	<u>1042</u>
P15		<u>42</u>	<u>1065</u>	<u>70</u>		<u>42</u>	<u>1048</u>
P16		<u>45</u>	<u>1071</u>	<u>75</u>		<u>45</u>	<u>1052</u>
P17		<u>48</u>		<u>80</u>		<u>48</u>	
P18		<u>51</u>		<u>85</u>		<u>51</u>	
P19		<u>54</u>		<u>90</u>		<u>54</u>	
P20		<u>57</u>				<u>57</u>	
		<u>60</u>				<u>60</u>	

TKT # 12968

1566

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Company F. & M. Oil Company, Inc. Lease & Well No. Stephenson #1  
 Elevation 1674 Ground Level Formation Douglas Sand Effective Pay - Ft. Ticket No. 12968  
 Date 9/29/81 Sec. 28 Twp. 31S Range 11W County Barber State Kansas  
 Test Approved by Phil Askey Western Representative Mike Rogers

Formation Test No. 1 Interval Tested from 3738 ft. to 3820 ft. Total Depth 3820 ft.  
 Packer Depth 3733 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.  
 Packer Depth 3738 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -  
 Top Recorder Depth (Inside) 3741 ft. Recorder Number 1566 Cap 4300  
 Bottom Recorder Depth (Outside) 3745 ft. Recorder Number 3086 Cap 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap -

Drilling Contractor Union Drlg. Rig #1 Drill Collar Length 283 I. D. 2.2 in.  
 Mud Type chemical Viscosity 35 Weight Pipe Length - I. D. - in.  
 Weight 9.2 Water Loss 26.4 cc. Drill Pipe Length 3434 I. D. 3.8 in.  
 Chlorides 22,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 in.  
 Jars: Make - Serial Number - Anchor Length 82 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: Weak one fourth inch building to two inches on initial flow period. Weak one fourth inch building to one inch on final flow period.

Recovered 120 ft. of drilling mud with a couple specks of oil top of tool joint  
 Recovered 240 ft. of muddy salt water with 38,000 ppm chlorides  
 Recovered     ft. of      
 Recovered     ft. of      
 Recovered     ft. of    

Remarks:    

Time Set Packer(s)	<u>4:20</u>	<del>P.M.</del> <u>A.M.</u>	Time Started Off Bottom	<u>6:50</u>	<del>P.M.</del> <u>A.M.</u>	Maximum Temperature	<u>164°</u>
Initial Hydrostatic Pressure			(A)	<u>1861</u>		P.S.I.	
Initial Flow Period		Minutes	<u>30</u>	(B)	<u>111</u>	P.S.I. to (C)	<u>138</u> P.S.I.
Initial Closed In Period		Minutes	<u>45</u>	(D)	<u>1071</u>		P.S.I.
Final Flow Period		Minutes	<u>30</u>	(E)	<u>177</u>	P.S.I. to (F)	<u>177</u> P.S.I.
Final Closed In Period		Minutes	<u>45</u>	(G)	<u>1052</u>		P.S.I.
Final Hydrostatic Pressure			(H)	<u>1848</u>			P.S.I.

# WESTERN TESTING CO., INC.

## Pressure Data

Date 9/29/81

Test Ticket No. 12968

Recorder No. 1566 Capacity 4300 Location 3741 Ft.

Clock No. - Elevation 1674 Ground Level Well Temperature 164 °F

Point	Pressure			Time Given	Time Computed
A Initial Hydrostatic Mud	1861	P.S.I.	Open Tool	4:20A	M
B First Initial Flow Pressure	111	P.S.I.	First Flow Pressure	30	30
C First Final Flow Pressure	138	P.S.I.	Initial Closed-in Pressure	45	45
D Initial Closed-in Pressure	1071	P.S.I.	Second Flow Pressure	30	30
E Second Initial Flow Pressure	177	P.S.I.	Final Closed-in Pressure	45	45
F Second Final Flow Pressure	177	P.S.I.			
G Final Closed-in Pressure	1052	P.S.I.			
H Final Hydrostatic Mud	1848	P.S.I.			

### PRESSURE BREAKDOWN

**First Flow Pressure**  
Breakdown: 6 Inc.  
of 5 mins. and a  
final inc. of 0 Min.

**Initial Shut-In**  
Breakdown: 15 Inc.  
of 3 mins. and a  
final inc. of 0 Min.

**Second Flow Pressure**  
Breakdown: 6 Inc.  
of 5 mins. and a  
final inc. of 0 Min.

**Final Shut-In**  
Breakdown: 15 Inc.  
of 3 mins. and a  
final inc. of 0 Min.

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	111	0	138	0	177	0	177
P 2	5	111	3	572	5	177	3	656
P 3	10	114	6	765	10	177	6	796
P 4	15	123	9	852	15	177	9	863
P 5	20	132	12	903	20	177	12	905
P 6	25	133	15	942	25	177	15	938
P 7	30	138	18	969	30	177	18	962
P 8			21	988			21	981
P 9			24	1006			24	996
P10			27	1021			27	1007
P11			30	1034			30	1019
P12			33	1043			33	1029
P13			36	1051			36	1036
P14			39	1058			39	1042
P15			42	1065			42	1048
P16			45	1071			45	1052
P17								
P18								
P19								
P20								



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 12969

OK

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

Elevation 16749L Formation Miss Eff. Pay Ft.

District Pratt Date 10-1-81 Customer Order No.
COMPANY NAME Form Oil Company Denver Center
ADDRESS 150 N main Suite 422 Wichita, Ks 67202
LEASE AND WELL NO. 1 Stephenson COUNTY Barber STATE Ks. Sec. 28 Twp 31 S Rge 11 W
Mail Invoice To #1 Stephenson Co. Name Same Address No. Copies Requested 5
Mail Charts To Same Address No. Copies Requested 5

Formation Test No. 2 Interval Tested from 4430 ft. to 4460 ft. Total Depth 4460 ft.
Packer Depth 4425 ft. Size 6 5/8 in. Packer Depth = ft. Size = in.
Packer Depth 4430 ft. Size 6 5/8 in. Packer Depth = ft. Size = in.
Depth of Selective Zone Set
Top Recorder Depth (Inside) 4433 ft. Recorder Number 1566 Cap. 4300
Bottom Recorder Depth (Outside) 4437 ft. Recorder Number 3086 Cap. 4500
Below Straddle Recorder Depth = ft. Recorder Number = Cap. =
Drilling Contractor Union 1 Drill Collar Length 345 I. D. 2.2 in.
Mud Type chemical Viscosity 41 Weight Pipe Length = I. D. = in.
Weight 9.5 Water Loss 10.4 cc. Drill Pipe Length 4064 I. D. 3.8 in.
Chlorides 28,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 in.
Jars: Make = Serial Number = Anchor Length 30 ft. Size 5 1/2 in. 3/4 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: STRONG Throughout Test. gas to surface 20 min I.E.P. See flowchart

Recovered 245 ft. of Delg mud Attached sheet for gas measurements
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of

Remarks:

Time On Location 3:30 AM PM Time Pick Up Tool 6:00 AM PM Time Off Location AM PM
Time Set Packer(s) 7:30 AM PM Time Started Off Bottom 11:00 AM PM Maximum Temperature
Initial Hydrostatic Pressure (A) 2232 P.S.I.
Initial Flow Period Minutes 30 (B) 118 P.S.I. to (C) 129 P.S.I.
Initial Closed In Period Minutes 60 (D) 1625 P.S.I.
Final Flow Period Minutes 60 (E) 64 P.S.I. to (F) 43 P.S.I.
Final Closed In Period Minutes 60 (G) 1625 P.S.I.
Final Hydrostatic Pressure (H) 2210 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 Phil Askey Signature of Customer or his authorized representative

Western Representative Mike Royce Thanks Again!

FIELD INVOICE

Open Hole Test \$ 100.00
Miscrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Sandby 1/2 \$ LHC
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage 40 \$ 40.00
Fluid Sampler \$
Extra Charts \$
Insurance \$
TOTAL \$



**Nº 2784**

**GAS FLOW REPORT**

Date 10-1-81 Ticket 12969 Company F + M Oil Co. Inc.  
 Well Name and No. #1 Stevenson Dst No. 2 Interval Tested 4430-4460  
 County Barber State Ko. Sec. 28 Twp. 31 Rg. 11

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitor Tester	P.S.I. on Side Static Tester	Description of Flow
<b>PRE FLOW</b>					
					gas to surface 20 min I.F.A.
25	50 <sup>H</sup>	3/4			756,000 CF0
30	30 <sup>H</sup>	3/4			522,000 CF0

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitor Tester	P.S.I. on Side Static Tester	Description of Flow
<b>SECOND FLOW</b>					
05	2.0	3/4			108,000 CF0
10	2.5	"			121,000 CF0
20	2.5	"			" " "
30	2.5	"			" " "
40	3.0	"			133,000 CF0
50	3.0	"			" " "
60	3.0	"			" " "

**GAS BOTTLE**

Serial No. \_\_\_\_\_ Date Bottle Filled \_\_\_\_\_ Date to be Invoiced \_\_\_\_\_

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1 1/2% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME \_\_\_\_\_

Authorized by \_\_\_\_\_

WESTERN TESTING CO., INC.

Pressure Data

Date 10-1-81 Test Ticket No. 12969  
 Recorder No. 1566 Capacity 4300 Location 4433 Ft.  
 Clock No. --- Elevation 1674 GL Well Temperature --- °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2232</u> P.S.I.	<u>7:30 A</u> M	
B First Initial Flow Pressure	<u>102</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>125</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
D Initial Closed-in Pressure	<u>1631</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>45</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
F Second Final Flow Pressure	<u>45</u> P.S.I.		
G Final Closed-in Pressure	<u>1635</u> P.S.I.		
H Final Hydrostatic Mud	<u>2219</u> P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

Initial Shut-In  
 Breakdown: 20 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Second Flow Pressure  
 Breakdown: 12 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

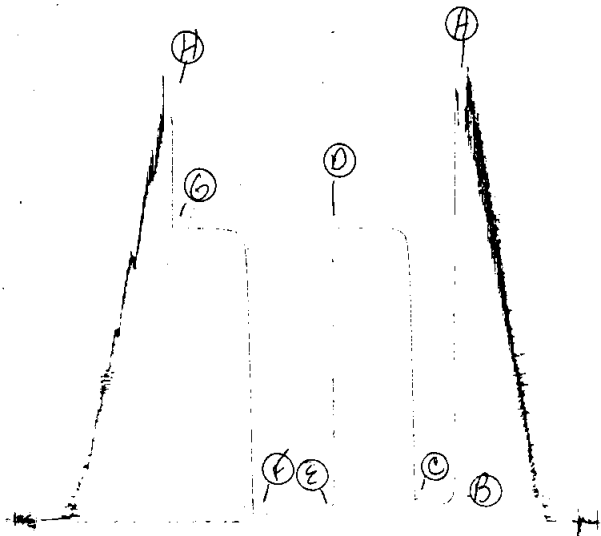
Final Shut-In  
 Breakdown: 20 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>102</u>	0	<u>125</u>	0	<u>45</u>	0	<u>45</u>
P 2	<u>102</u>	3	<u>714</u>	5		3	<u>577</u>
P 3	<u>102</u>	6	<u>1515</u>	10		6	<u>1483</u>
P 4	<u>107</u>	9	<u>1595</u>	15		9	<u>1586</u>
P 5	<u>119</u>	12	<u>1614</u>	20		12	<u>1608</u>
P 6	<u>135</u> (ok)	15	<u>1624</u>	25		15	<u>1615</u>
P 7	<u>125</u>	18	<u>1626</u>	30		18	<u>1618</u>
P 8		21	<u>1628</u>	35		21	<u>1621</u>
P 9		24	<u>1629</u>	40		24	<u>1624</u>
P10		27	<u>1630</u>	45		27	<u>1624</u>
P11		30	<u>1631</u>	50		30	<u>1628</u>
P12		33		55		33	<u>1628</u>
P13		36		60	<u>45</u>	36	<u>1629</u>
P14		39		65		39	<u>1630</u>
P15		42		70		42	<u>1631</u>
P16		45	<u>1631</u>	75		45	<u>1632</u>
P17		48		80		48	<u>1633</u>
P18		51		85		51	<u>1634</u>
P19		54		90		54	<u>1635</u>
P20		57				57	<u>1635</u>
		60	<u>1631</u>			60	<u>1635</u>

1566

TK# 12569

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Company F & M Oil Company, Inc. Lease & Well No. #1 Stephenson  
 Elevation 1674 Ground Level Formation Mississippi Effective Pay - Ft. Ticket No. 12969  
 Date 10/1/81 Sec. 28 Twp. 31S Range 11W County Barber State Kansas  
 Test Approved by Phil Askey Western Representative Mike Rogers

Formation Test No. 2 Interval Tested from 4430 ft. to 4460 ft. Total Depth 4460 ft.  
 Packer Depth 4425 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.  
 Packer Depth 4430 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -  
 Top Recorder Depth (Inside) 4433 ft. Recorder Number 1566 Cap 4300  
 Bottom Recorder Depth (Outside) 4437 ft. Recorder Number 3086 Cap 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap -

Drilling Contractor Union Rig #1 Drill Collar Length 345 I. D. 2.2 in.  
 Mud Type Chemical Viscosity 41 Weight Pipe Length - I. D. - in.  
 Weight 9.5 Water Loss 10.4 cc. Drill Pipe Length 4064 I. D. 3.8 in.  
 Chlorides 28,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 in.  
 Jars: Make - Serial Number - Anchor Length 30 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: Strong throughout test. Gas to surface in 20 minutes initial flow period. See attached sheet for gas measurements.

Recovered 45 ft. of drilling mud  
 Recovered        ft. of         
 Recovered        ft. of         
 Recovered        ft. of         
 Recovered        ft. of       

Remarks:         
        
      

Time Set Packer(s)	<u>7:30</u>	<u>A.M.</u> <u>P.M.</u>	Time Started Off Bottom	<u>11:00</u>	<u>A.M.</u> <u>P.M.</u>	Maximum Temperature	<u>      </u>
Initial Hydrostatic Pressure			(A)	<u>2232</u>	P.S.I.		
Initial Flow Period	Minutes	<u>30</u>	(B)	<u>102</u>	P.S.I. to (C)	<u>125</u>	P.S.I.
Initial Closed In Period	Minutes	<u>60</u>	(D)	<u>1631</u>	P.S.I.		
Final Flow Period	Minutes	<u>60</u>	(E)	<u>45</u>	P.S.I. to (F)	<u>45</u>	P.S.I.
Final Closed In Period	Minutes	<u>60</u>	(G)	<u>1635</u>	P.S.I.		
Final Hydrostatic Pressure			(H)	<u>2219</u>	P.S.I.		

## GAS FLOW REPORT

Date 10/1/81 Ticket 12969 Company F & M Oil Company, Inc.  
 Well Name and No. #1 Stephenson Dst No. 2 Interval Tested 4430-4460  
 County Barber State Kansas Sec. 28 Twp. 31S Rg. 11W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
<b>PRE FLOW</b>						
	25 Min	50 PSIG	3/4" Orifice			756,000 C.F.P.D.
	30 Min	30 PSIG	3/4" Orifice			522,000 C.F.P.D.

<b>SECOND FLOW</b>						
	5 Min	2.0 PSIG	3/4" Orifice			108,000 C.F.P.D.
	10 Min	2.5 PSIG	3/4" Orifice			121,000 C.F.P.D.
	20 Min	2.5 PSIG	3/4" Orifice			121,000 C.F.P.D.
	30 Min	2.5 PSIG	3/4" Orifice			121,000 C.F.P.D.
	40 Min	3.0 PSIG	3/4" Orifice			133,000 C.F.P.D.
	50 Min	3.0 PSIG	3/4" Orifice			133,000 C.F.P.D.
	60 Min	3.0 PSIG	3/4" Orifice			133,000 C.F.P.D.

### GAS BOTTLE

Serial No. \_\_\_\_\_ - Date Bottle Filled \_\_\_\_\_ - Date to be Invoiced 10/1/81

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1% per month, equal to 12% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME F & M Oil Company, Inc.  
 Authorized by Phil Askey

# WESTERN TESTING CO., INC.

## Pressure Data

Date 10/1/81 Test Ticket No. 12969  
 Recorder No. 1566 Capacity 4300 Location 4433 Ft.  
 Clock No. - Elevation 1674 Ground Level Well Temperature - °F

Point	Pressure			Time	
				Given	Computed
A Initial Hydrostatic Mud	2232	P.S.I.	Open Tool	7:30A	M
B First Initial Flow Pressure	102	P.S.I.	First Flow Pressure	30	Mins. 30 Mins.
C First Final Flow Pressure	125	P.S.I.	Initial Closed-in Pressure	60	Mins. 60 Mins.
D Initial Closed-in Pressure	1631	P.S.I.	Second Flow Pressure	60	Mins. 60 Mins.
E Second Initial Flow Pressure	45	P.S.I.	Final Closed-in Pressure	60	Mins. 60 Mins.
F Second Final Flow Pressure	45	P.S.I.			
G Final Closed-in Pressure	1635	P.S.I.			
H Final Hydrostatic Mud	2219	P.S.I.			

### PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	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 <u>0</u>	<u>102</u>	<u>0</u>	<u>125</u>	<u>0</u>	<u>45</u>	<u>0</u>	<u>45</u>	
P 2 <u>5</u>	<u>102</u>	<u>3</u>	<u>714</u>	<u>5</u>	<u>45</u>	<u>3</u>	<u>577</u>	
P 3 <u>10</u>	<u>102</u>	<u>6</u>	<u>1515</u>	<u>10</u>	<u>45</u>	<u>6</u>	<u>1483</u>	
P 4 <u>15</u>	<u>107</u>	<u>9</u>	<u>1595</u>	<u>15</u>	<u>45</u>	<u>9</u>	<u>1586</u>	
P 5 <u>20</u>	<u>119</u>	<u>12</u>	<u>1614</u>	<u>20</u>	<u>45</u>	<u>12</u>	<u>1608</u>	
P 6 <u>25</u>	<u>135</u>	<u>15</u>	<u>1624</u>	<u>25</u>	<u>45</u>	<u>15</u>	<u>1615</u>	
P 7 <u>30</u>	<u>125</u>	<u>18</u>	<u>1626</u>	<u>30</u>	<u>45</u>	<u>18</u>	<u>1618</u>	
P 8		<u>21</u>	<u>1628</u>	<u>35</u>	<u>45</u>	<u>21</u>	<u>1621</u>	
P 9		<u>24</u>	<u>1629</u>	<u>40</u>	<u>45</u>	<u>24</u>	<u>1624</u>	
P10		<u>27</u>	<u>1630</u>	<u>45</u>	<u>45</u>	<u>27</u>	<u>1626</u>	
P11		<u>30</u>	<u>1631</u>	<u>50</u>	<u>45</u>	<u>30</u>	<u>1628</u>	
P12		<u>33</u>	<u>1631</u>	<u>55</u>	<u>45</u>	<u>33</u>	<u>1628</u>	
P13		<u>36</u>	<u>1631</u>	<u>60</u>	<u>45</u>	<u>36</u>	<u>1629</u>	
P14		<u>39</u>	<u>1631</u>			<u>39</u>	<u>1630</u>	
P15		<u>42</u>	<u>1631</u>			<u>42</u>	<u>1631</u>	
P16		<u>45</u>	<u>1631</u>			<u>45</u>	<u>1632</u>	
P17		<u>48</u>	<u>1631</u>			<u>48</u>	<u>1633</u>	
P18		<u>51</u>	<u>1631</u>			<u>51</u>	<u>1634</u>	
P19		<u>54</u>	<u>1631</u>			<u>54</u>	<u>1635</u>	
P20		<u>57</u>	<u>1631</u>			<u>57</u>	<u>1635</u>	
		<u>60</u>	<u>1631</u>			<u>60</u>	<u>1635</u>	



WESTERN TESTING CO., INC.  
FORMATION TESTING

TICKET No 12970 OK

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

Elevation 16749L Formation Mus. Eff. Pay Ft.

District Pratt Date 10-1-81 Customer Order No.  
COMPANY NAME Form Oil Co. Inc. Union Center Biter 422  
ADDRESS 150 W market Wichita, Ks 67202  
LEASE AND WELL NO. #1 Stephenson COUNTY Barber STATE Ks. Sec. 28 Twp. 31 Rge 11W  
Mail Invoice To #1 Stephenson No. Copies Requested R<sub>y</sub>  
Co. Name Address  
Mail Charts To Address No. Copies Requested R<sub>y</sub>

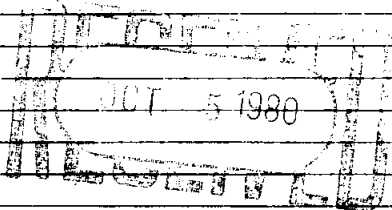
Formation Test No. 3 Interval Tested from 4461 ft. to 4460 ft. Total Depth 4480 ft.  
Packer Depth 4456 ft. Size 6 3/8 in. Packer Depth — ft. Size — in.  
Packer Depth 4461 ft. Size 6 3/8 in. Packer Depth — ft. Size — in.  
Depth of Selective Zone Set —

Top Recorder Depth (Inside) 4464 ft. Recorder Number 1566 Cap. 4300  
Bottom Recorder Depth (Outside) 4468 ft. Recorder Number 3086 Cap. 4500  
Below Straddle Recorder Depth — ft. Recorder Number — Cap. —

Drilling Contractor Union  
Mud Type Chem. Viscosity 49  
Weight 9.4 Water Loss 12.8 cc.  
Chlorides 20,000 P.P.M.  
Jars: Make — Serial Number —  
Did Well Flow? no Reversed Out no  
Drill Collar Length 345 I. D. 2.2 in.  
Weight Pipe Length — I. D. — in.  
Drill Pipe Length 4095' I. D. 3.8 in.  
Test Tool Length 21 ft. Tool Size 5 1/2 in.  
Anchor Length 19 ft. Size 5 1/2 in.  
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: Very Wk diec 20min I.P.P. Flashed (Tool ok) Dead F.F.P.

Recovered 60 ft. of Dog and —  
Recovered — ft. of  
Recovered — ft. of  
Recovered — ft. of  
Recovered — ft. of  
Remarks:



Time On Location 7:30 AM P.M. Time Pick Up Tool 8:15 AM P.M. Time Off Location 3:30 AM P.M.  
Time Set Packer(s) 9:30 AM P.M. Time Started Off Bottom 11:30 AM P.M. Maximum Temperature 121°  
Initial Hydrostatic Pressure (A) 2264 P.S.I. 43 P.S.I.  
Initial Flow Period Minutes 30 (B) 54 P.S.I. to (C) 43 P.S.I.  
Initial Closed In Period Minutes 30 (D) 43 P.S.I.  
Final Flow Period Minutes 30 (E) 64 P.S.I. to (F) 54 P.S.I.  
Final Closed In Period Minutes 30 (G) 54 P.S.I.  
Final Hydrostatic Pressure (H) 2264 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 expenses incurred for collection will be added to the original amount.

Test Approved By Philip Arkey Signature of Customer or his authorized representative

Western Representative Mike Roy Thank You!

FIELD INVOICE

Open Hole Test \$ 700.00  
Misrun \$  
Straddle Test \$  
Jars \$  
Selective Zone \$  
Safety Joint \$  
Standby \$  
Evaluation \$  
Extra Packer \$  
Circ. Sub. \$  
Mileage 40 \$ 30.00  
Fluid Sampler \$  
Extra Charts \$  
Insurance \$  
TOTAL \$ 730.00

WESTERN TESTING CO., INC.

Pressure Data

Date 10-1-81 Test Ticket No. 12970  
 Recorder No. 1566 Capacity 4300 Location 4464 Ft.  
 Clock No. --- Elevation 1674 GL Well Temperature 121 °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2271</u> P.S.I.		<u>9:30 P</u> M	
B First Initial Flow Pressure	<u>50</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>50</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>27</u> Mins.
D Initial Closed-in Pressure	<u>55</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>55</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>32</u> Mins.
F Second Final Flow Pressure	<u>65</u> P.S.I.			
G Final Closed-in Pressure	<u>70</u> P.S.I.			
H Final Hydrostatic Mud	<u>2256</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

Initial Shut-In  
 Breakdown: 9 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

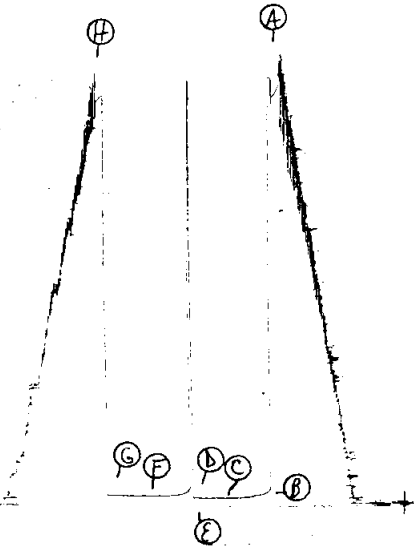
Second Flow Pressure  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

Final Shut-In  
 Breakdown: 11 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	
P 1 0	<u>50</u>	0	<u>50</u>	0	<u>55</u>	0	<u>65</u>	
P 2 5	}	3	<u>50</u>	5	<u>56</u> Flushed Tool	3	}	
P 3 10		6	<u>50</u>	10	<u>71</u>	6		
P 4 15		9	<u>51</u>	15	<u>66</u>	9		
P 5 20		12	<u>52</u>	20	<u>65</u>	12		<u>65</u>
P 6 25		15	<u>53</u>	25	<u>65</u>	15		<u>66</u>
P 7 30		<u>50</u>	18	<u>54</u>	30	<u>65</u>		18
P 8 35	}	21	<u>55</u>	35	}	21	<u>68</u>	
P 9 40		24	<u>55</u>	40		24	<u>69</u>	
P10 45		27	<u>55</u>	45		27	<u>70</u>	
P11 50		30		50		30	<u>70</u>	
P12 55		33		55		33	<u>70</u>	
P13 60		36		60		36		
P14		39		65		39		
P15		42		70		42		
P16		45		75		45		
P17		48		80		48		
P18	51		85	51				
P19	54		90	54				
P20	57			57				
		60				60		

TKT # 12-970

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Company F & M Oil Company, Inc. Lease & Well No. #1 Stephenson  
 Elevation 1674 Ground Level Formation Mississippi Effective Pay - Ft. Ticket No. 12970  
 Date 10/1/81 Sec 28 Twp 31S Range 11W County Barber State Kansas  
 Test Approved by Phil Askey Western Representative Mike Rogers

Formation Test No. 3 Interval Tested from 4461 ft. to 4480 ft. Total Depth 4480 ft.  
 Packer Depth 4456 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.  
 Packer Depth 4461 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -  
 Top Recorder Depth (Inside) 4464 ft. Recorder Number 1566 Cap. 4300  
 Bottom Recorder Depth (Outside) 4468 ft. Recorder Number 3086 Cap. 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Union Rig #1 Drill Collar Length 345 I. D. 2.2 in.  
 Mud Type Chemical Viscosity 49 Weight Pipe Length - I. D. - in.  
 Weight 9.4 Water Loss 12.8 cc. Drill Pipe Length 4095 I. D. 3.8 in.  
 Chlorides 20,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 in.  
 Jars: Make - Serial Number - Anchor Length 19 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: Very weak died in 20 minutes on initial flow period. Flushed tool - dead on final flow period.

Recovered 60 ft. of drilling mud  
 Recovered          ft. of           
 Recovered          ft. of           
 Recovered          ft. of           
 Recovered          ft. of         

Remarks:         

Time Set Packer(s) 9:30 ~~AM~~ P.M. Time Started Off Bottom 11:30 ~~AM~~ P.M. Maximum Temperature 121  
 Initial Hydrostatic Pressure 2271 P.S.I. (A)  
 Initial Flow Period 30 Minutes (B) 50 P.S.I. to (C) 50 P.S.I.  
 Initial Closed In Period 27 Minutes (D) 55 P.S.I.  
 Final Flow Period 30 Minutes (E) 55 P.S.I. to (F) 65 P.S.I.  
 Final Closed In Period 33 Minutes (G) 70 P.S.I.  
 Final Hydrostatic Pressure 2256 P.S.I. (H)

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

Date 10/1/81

Test Ticket No. 12970

Recorder No. 1566 Capacity 4300

Location 4464 Ft.

Clock No. - Elevation 1674 Ground Level

Well Temperature 121 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2271</u> P.S.I.	Open Tool	<u>9:30P</u>	<u>M</u>
B First Initial Flow Pressure	<u>50</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>50</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>27</u> Mins.
D Initial Closed-in Pressure	<u>55</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>55</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.
F Second Final Flow Pressure	<u>65</u> P.S.I.			
G Final Closed-in Pressure	<u>70</u> P.S.I.			
H Final Hydrostatic Mud	<u>2256</u> P.S.I.			

**PRESSURE BREAKDOWN**

Point Mins.	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>9</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>11</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	
	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>50</u>	<u>0</u>	<u>50</u>	<u>0</u>	<u>55</u>	<u>0</u>	<u>65</u>	
P 2 <u>5</u>	<u>50</u>	<u>3</u>	<u>50</u>	<u>5</u>	<u>86</u>	<u>3</u>	<u>65</u>	
P 3 <u>10</u>	<u>50</u>	<u>6</u>	<u>50</u>	<u>10</u>	<u>71</u>	<u>6</u>	<u>65</u>	
P 4 <u>15</u>	<u>50</u>	<u>9</u>	<u>51</u>	<u>15</u>	<u>66</u>	<u>9</u>	<u>65</u>	
P 5 <u>20</u>	<u>50</u>	<u>12</u>	<u>52</u>	<u>20</u>	<u>65</u>	<u>12</u>	<u>65</u>	
P 6 <u>25</u>	<u>50</u>	<u>15</u>	<u>53</u>	<u>25</u>	<u>65</u>	<u>15</u>	<u>66</u>	
P 7 <u>30</u>	<u>50</u>	<u>18</u>	<u>54</u>	<u>30</u>	<u>65</u>	<u>18</u>	<u>67</u>	
P 8		<u>21</u>	<u>55</u>			<u>21</u>	<u>68</u>	
P 9		<u>24</u>	<u>55</u>			<u>24</u>	<u>69</u>	
P10		<u>27</u>	<u>55</u>			<u>27</u>	<u>70</u>	
P11						<u>30</u>	<u>70</u>	
P12						<u>33</u>	<u>70</u>	
P13								
P14								
P15								
P16								
P17								
P18								
P19								
P20								