



P. O. BOX 793 PHONE 793-7903  
GREAT BEND, KANSAS

WESTERN TESTING CO., INC.  
FORMATION TESTING

TICKET 19088

Formation Miss Elevation 2178 KB Eff. Pay \_\_\_\_\_ Ft.

District Great Bend Date 11-20-74 Customer Order No. \_\_\_\_\_  
COMPANY NAME Mack Oil Co. ADDRESS 812 Union center, Wichita Kans. 67202  
LEASE AND WELL NO. Cook #1 COUNTY Ness STATE Kans. Sec. 28 Twp. 20S Rge. 22W  
Mail Inv. To \_\_\_\_\_ Co. Name Same Address \_\_\_\_\_ No. Copies Requested 1  
Mail Charts To \_\_\_\_\_ Co. Name Same Address \_\_\_\_\_ No. Copies Requested 5

Formation Test No. 1 O.K.  Misrun  Interval Tested From 4308 to 4356 Total Depth 4356  
Size Main Hole 7/8 Rat Hole \_\_\_\_\_ Conv.  B.T.  Damaged  Yes  No Conv.  B.T.  Damaged  Yes  No  
Packer Depth 4303 Ft. Size 6 3/4 Packer Depth 4308 Ft. Size 6 3/4  
Straddle Yes  No  Conv.  B.T.  Damaged  Yes  No  
Packer Depth \_\_\_\_\_ Ft. Size \_\_\_\_\_  
Tool Size 5 1/2 00 Tool Jt. Size 4 1/2 FH Anchor Length 48 Ft. Size 5 1/2 00

RECORDERS Depth 4345 Fr. Clock No. 5377 Depth 4348 Fr. Clock No. 6866  
Top Make Kuster Cap. 4500 No. 3085 Inside Outside Bottom Make Kuster Cap. 4400 No. 2603 Inside Outside  
Below Straddle: Depth \_\_\_\_\_ Clock No. \_\_\_\_\_ Outside \_\_\_\_\_ Inside \_\_\_\_\_  
Top Make \_\_\_\_\_ Cap. \_\_\_\_\_ No. \_\_\_\_\_ Outside \_\_\_\_\_ Inside \_\_\_\_\_  
Bottom Make \_\_\_\_\_ Cap. \_\_\_\_\_ No. \_\_\_\_\_ Outside \_\_\_\_\_ Inside \_\_\_\_\_

Time Set Packer 9:50 A.M.  
Tool Open I.F.P. From 9:55 M. to 10:35 M. — Hr. 30 Min. From (B) 57 54 P.S.I. To (C) 50 54 P.S.I.  
Tool Closed I.C.I.P. From 10:35 M. to 11:05 M. — Hr. 30 Min. (D) 1180 1176 P.S.I.  
Tool Open F.F.P. From 11:05 M. to 12:05 M. — Hr. 60 Min. From (B) 60 54 P.S.I. To (F) 72 60 P.S.I.  
Tool Closed F.C.I.P. From 12:05 M. to 12:35 M. — Hr. 30 Min. (G) 1231 1281 P.S.I.  
Initial Hydrostatic Pressure (A) 2440 2369 P.S.I. Final Hydrostatic Pressure (H) 2406 2315 P.S.I.

SURFACE Size Choke 3/4 In. Max. Press. P.S.I. \_\_\_\_\_ Time \_\_\_\_\_ Description of Flow \_\_\_\_\_  
INFORMATION \_\_\_\_\_ M. \_\_\_\_\_ M. \_\_\_\_\_ M. \_\_\_\_\_  
BLOW weak to very weak dead 15 min 2nd opening Bottom Choke Size 3/4 In.  
Did Well Flow Yes  No \_\_\_\_\_ Recovery Total Ft. 75' slightly oil control

Reversed Out Yes  No \_\_\_\_\_ Mud Type Starch Viscosity 48 Weight 9.7 Water Loss 8.2 cc. Maximum Temp. 124° °F  
Type Circ. Sub. Pin Safety Joint yes Jars: Size \_\_\_\_\_ Make \_\_\_\_\_ Ser. No. \_\_\_\_\_  
EXTRA EQUIPMENT: Dual Packers yes Did Packer Hold? yes Did Tool Plug? no Where? \_\_\_\_\_  
Length Drill Pipe 376 1/2 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 546 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars \_\_\_\_\_ ft.  
I. D. Drill Collars \_\_\_\_\_ in. Length D.S.T. Tool 72 ft.

Remarks \_\_\_\_\_

WESTERN TESTING CO., INC. shall not be liable for damage of any kind to the property or personnel for whom a test is made or for any loss suffered or sustained directly or indirectly by the use of its equipment, or its statements or opinion concerning the results of any test. Any damage in the hole shall be paid at cost by the party for whom the test is made. Subject to 12% interest after 60 days from date of invoice. Any expense incurred for the test shall be added to the original amount.

INVOICE SECTION	
Open Hole Test	\$ <u>370.00</u>
Straddle Test	\$ _____
Jars	\$ _____
Selective Zone	\$ _____
Safety Joint	\$ <u>30.00</u>
Misrun	\$ <u>?</u>
Evaluation	\$ _____
Total	\$ <u>350.00</u>

Signature of Customer or his Authorized Representative: L E Moore Western Representative: Daniel Ferguson  
Operator's Time \_\_\_\_\_ Hrs.

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

Date 11-22-74 Test Ticket No. 19088  
 Recorder No. 3085 Capacity 4500 Location 4345 Ft.  
 Clock No. 8377 Elevation 2178 KB Well Temperature 124 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2369</u>	P.S.I.	<u>9:50 A</u>	<u>M</u>
B First Initial Flow Pressure	<u>57</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
C First Final Flow Pressure	<u>50</u>	P.S.I.	<u>30</u>	Mins. <u>33</u> Mins.
D Initial Closed-in Pressure	<u>1180</u>	P.S.I.	<u>60</u>	Mins. <u>60</u> Mins.
E Second Initial Flow Pressure	<u>60</u>	P.S.I.	<u>30</u>	Mins. <u>36</u> Mins.
F Second Final Flow Pressure	<u>72</u>	P.S.I.		
G Final Closed-in Pressure	<u>1231</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2315</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>—</u> Min.	<b>Initial Shut-In</b> Breakdown: <u>11</u> Inc. of <u>3</u> mins. and a final inc. of <u>—</u> Min.	<b>Second Flow Pressure</b> Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>—</u> Min.	<b>Final Shut-In</b> Breakdown: <u>12</u> Inc. of <u>3</u> mins. and a final inc. of <u>—</u> Min.
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>0</u>	<u>57</u>	<u>0</u>	<u>50</u>	<u>0</u>	<u>62</u>	<u>62</u>
P 2	<u>5</u>	<u>53</u>	<u>3</u>	<u>127</u>	<u>5</u>	<u>55</u>	<u>234</u>
P 3	<u>10</u>	<u>48</u>	<u>6</u>	<u>342</u>	<u>10</u>	<u>60</u>	<u>516</u>
P 4	<u>15</u>	<u>48</u>	<u>9</u>	<u>556</u>	<u>15</u>	<u>55</u>	<u>700</u>
P 5	<u>20</u>	<u>48</u>	<u>12</u>	<u>711</u>	<u>20</u>	<u>60</u>	<u>823</u>
P 6	<u>25</u>	<u>48</u>	<u>15</u>	<u>823</u>	<u>25</u>	<u>60</u>	<u>937</u>
P 7	<u>30</u>	<u>50</u>	<u>18</u>	<u>918</u>	<u>30</u>	<u>60</u>	<u>1016</u>
P 8			<u>21</u>	<u>990</u>	<u>35</u>	<u>61</u>	<u>1074</u>
P 9			<u>24</u>	<u>1053</u>	<u>40</u>	<u>61</u>	<u>1118</u>
P10			<u>27</u>	<u>1106</u>	<u>45</u>	<u>61</u>	<u>1157</u>
P11			<u>30</u>	<u>1155</u>	<u>50</u>	<u>62</u>	<u>1187</u>
P12			<u>33</u>	<u>1180</u>	<u>55</u>	<u>62</u>	<u>1207</u>
P13					<u>60</u>	<u>72</u>	<u>1231</u>
P14					<u>65</u>		
P15					<u>70</u>		
P16					<u>75</u>		
P17					<u>80</u>		
P18					<u>85</u>		
P19					<u>90</u>		
P20							

**W. G. S. LIBRARY**

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WESTERN TESTING CO., INC.  
FORMATION TESTING

TICKET 19089

P. O. BOX 793 PHONE 793-7903  
GREAT BEND, KANSAS

Formation Miss. Elevation 2178K3 Eff. Pay \_\_\_\_\_ Ft.

District Great Bend Date 11-22-74 Customer Order No. \_\_\_\_\_  
COMPANY NAME Mack Oil Co. ADDRESS 812 Union Center Bldg. Wichita Kansas  
LEASE AND WELL NO. Cook #1 COUNTY Ness STATE Kansas Sec. 28 Twp. 20S Rge. 22W  
Mail Inv. To \_\_\_\_\_ Co. Name Same Address \_\_\_\_\_ No. Copies Requested 1  
Mail Charts To \_\_\_\_\_ Co. Name Same Address \_\_\_\_\_ No. Copies Requested 5

Formation Test No. 2 O.K.  Misrun  Interval Tested From 4340 to 4362 Total Depth 4368  
Size Main Hole 7/8 Rat Hole  Conv.  B.T.  Damaged  Yes  No Conv.  B.T.  Damaged  Yes  No  
Packer Depth 4335 Ft. Size 6 3/4 Packer Depth 4340 Ft. Size 6 3/4  
Straddle Yes  No  Conv.  B.T.  Damaged  Yes  No  
Packer Depth \_\_\_\_\_ Ft. Size \_\_\_\_\_  
Tool Size 5 1/2 00 Tool Jt. Size 4 1/2 RH Anchor Length 22 Ft. Size 5 1/2 00

RECORDERS Depth 4354 Ft. Clock No. 8317 Depth 4357 Ft. Clock No. 6866  
Top Make Kuster Cap. 4500 No. 3085  Inside Bottom Make Kuster Cap. 4400 No. 2603  Outside  
Below Straddle: Depth \_\_\_\_\_ Clock No. \_\_\_\_\_ Outside Depth \_\_\_\_\_ Ft. Clock No. \_\_\_\_\_ Outside  
Top Make \_\_\_\_\_ Cap. \_\_\_\_\_ No. \_\_\_\_\_ Inside Bottom Make \_\_\_\_\_ Cap. \_\_\_\_\_ No. \_\_\_\_\_ Outside

Time Set Packer AM  
Tool Open I.F.P. From \_\_\_\_\_ M. to \_\_\_\_\_ M. \_\_\_\_\_ Hr. \_\_\_\_\_ Min. From (B) \_\_\_\_\_ P.S.I. To (C) \_\_\_\_\_ P.S.I.  
Tool Closed I.C.I.P. From \_\_\_\_\_ M. to \_\_\_\_\_ M. \_\_\_\_\_ Hr. \_\_\_\_\_ Min. (D) \_\_\_\_\_ P.S.I.  
Tool Open F.F.P. From \_\_\_\_\_ M. to \_\_\_\_\_ M. \_\_\_\_\_ Hr. \_\_\_\_\_ Min. From (E) \_\_\_\_\_ P.S.I. To (F) \_\_\_\_\_ P.S.I.  
Tool Closed F.C.I.P. From \_\_\_\_\_ M. to \_\_\_\_\_ M. \_\_\_\_\_ Hr. \_\_\_\_\_ Min. (G) \_\_\_\_\_ P.S.I.  
Initial Hydrostatic Pressure (A) 2370 2389 P.S.I. Final Hydrostatic Pressure (H) 2350 2364 P.S.I.

SURFACE Size Choke 3/4 In. Max. Press. P.S.I. \_\_\_\_\_ Time \_\_\_\_\_ Description of Flow \_\_\_\_\_  
INFORMATION \_\_\_\_\_ M. \_\_\_\_\_ M. \_\_\_\_\_ M. \_\_\_\_\_

BLOW Did Well Flow Yes  No  Recovery Total Fr. 630' drlg. mud. Misrun Packer Failed Bottom Choke Size 3/4 In.

Reversed Out Yes  No  Mud Type Starch Viscosity 43 Weight 9.7 Water Loss 10.0 cc. Maximum Temp. 124.2 °F  
Type Circ. Sub. Pin Safety Joint yes Jars: Size \_\_\_\_\_ Make \_\_\_\_\_ Ser. No. \_\_\_\_\_  
EXTRA EQUIPMENT: Dual Packers yes Did Packer Hold? No Did Tool Plug? No Where? \_\_\_\_\_  
Length Drill Pipe 3720 ft. I.D. Drill Pipe 38 in. Length Weight Pipe 546 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars \_\_\_\_\_ ft.  
I. D. Drill Collars \_\_\_\_\_ in. Length D.S.T. Tool 46 ft.

Remarks \_\_\_\_\_

COMPANY TERMS  
Western Testing Co., Inc., shall not be liable for damage 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, or 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.

INVOICE SECTION

Open Hole Test	\$ _____
Straddle Test	\$ _____
Jars	\$ _____
Selective Zone	\$ _____
Safety Joint	\$ <u>3000</u>
Misrun	\$ <u>11500</u>
Production Packers	\$ <u>8500</u>
Total	\$ <u>23000</u>

Test Approved By L. E. Moore Western Representative Darrel Ferguson  
Signature of Customer or his Authorized Representative Operator's Time \_\_\_\_\_ Hrs.



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET 19090

P. O. BOX 793 PHONE 793-7903 GREAT BEND, KANSAS

Formation Miss Elevation 2178 KB Eff. Pay Ft.

District Gt Bend Date 11-22-74 Customer Order No. COMPANY NAME Mack Oil Co. ADDRESS 812 Union Center Bldg. Wichita KS LEASE AND WELL NO. Cook #1 COUNTY Ness STATE Kans. Sec. 28 Twp. 20 S Rge. 22 W Mail Inv. To Co. Name Same Address No. Copies Requested 1 Mail Charts To Same Address No. Copies Requested 5

Formation Test No. 3 O.K. Misrun Interval Tested From 4320 to 4362 Total Depth 4362 Size Main Hole 7 7/8 Rat Hole Conv. B.T. X Damaged Yes X No Conv. X B.T. Damaged Yes X No Packer Depth 4315 Ft. Size 6 3/4 Packer Depth 4320 Ft. Size 6 3/4 Straddle Yes No X Conv. B.T. Damaged Yes No Packer Depth Ft. Size Tool Size 5 1/2 00 Tool Jt. Size 4 1/2 FH Anchor Length 42 Ft. Size 5 1/2 00

RECORDERS Depth 4353 Ft. Clock No. 8377 Inside Top Make Kuster Cap. 4500 No. 3085 Outside Below Straddle: Depth Clock No. Outside Top Make Cap. No. Inside Bottom Make Kuster Cap. 4400 No. 2603 Outside Depth Ft. Clock No. Outside Top Make Cap. No. Inside Bottom Make Cap. No. Outside

Time Set Packer 10:13 AM Plugging action 244 Tool Open I.F.P. From 10:18 M. to 10:45 M. Hr. 30 Min. From (B) 11 P.S.I. To (C) 262 P.S.I. Tool Closed I.C.I.P. From 10:48 M. to 11:10 M. Hr. 30 Min. (D) 1306 1266 P.S.I. Tool Open F.F.P. From 11:18 M. to 12:18 M. Hr. 60 Min. From (E) 265 284 P.S.I. To (F) 474 472 P.S.I. Tool Closed F.C.I.P. From 12:18 M. to 12:48 M. Hr. 30 Min. (G) 1291 1250 P.S.I. Initial Hydrostatic Pressure (A) 2178 2235 P.S.I. Final Hydrostatic Pressure (H) 2144 2201 P.S.I.

SURFACE Size Choke 3/4 In. Max. Press. P.S.I. Time Description of Flow INFORMATION: X X W O S LIBRARY BLOW Weak to Good - Good blow air through out Bottom Choke Size 3/4 In. Did Well Flow Yes X No Recovery Total Ft. 750' 0 Cut-Moldy S.W.H. 360' gassy S wtr.

Reversed Out Yes X No Mud Type Starch Viscosity 43 Weight 9.7 Water Loss 10.0 cc. Maximum Temp 128 degrees F Type Circ. Sub Pin Safety Joint yes Jars: Size Make Ser. No. EXTRA EQUIPMENT: Dual Packers yes Did Packer Hold? yes Did Tool Plug? no Where? Length Drill Pipe 3750 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 546 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft. I. D. Drill Collars in. Length D.S.T. Tool 66 ft. Remarks

COMPANY TERMS Western Testing Co., Inc., shall not be liable for damage 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, or 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.

INVOICE SECTION Table with 2 columns: Test Name, Amount. Rows include Open Hole Test (\$320.00), Straddle Test, Jars, Selective Zone, Safety Joint (\$30.00), Misrun, Evaluation, Total (\$350.00).

Test Approved By L. E. Moore Signature of Customer or his Authorized Representative Western Representative Darrel Ferguson Operator's Time Hrs.

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

Date 11-22-74

Test Ticket No. 19090

Recorder No. 3085

Capacity 4500

Location 4353 Ft.

Clock No. 8377

Elevation 2178 KB

Well Temperature 128 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2235</u>	P.S.I.	<u>10:73 AM</u>	
B First Initial Flow Pressure		P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>244</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1306</u>	P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>265</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>472</u>	P.S.I.		
G Final Closed-in Pressure	<u>1291</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2201</u>	P.S.I.		

**PRESSURE BREAKDOWN**

**First Flow Pressure**

Breakdown: 6 Inc.  
of 5 mins. and a  
final inc. of — Min.

**Initial Shut-In**

Breakdown: 10 Inc.  
of 3 mins. and a  
final inc. of — Min.

**Second Flow Pressure**

Breakdown: 12 Inc.  
of 5 mins. and a  
final inc. of — Min.

**Final Shut-In**

Breakdown: 10 Inc.  
of 3 mins. and a  
final inc. of — Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>Plugging Action</u>	<u>0</u>	<u>244</u>	<u>0</u>	<u>265</u>	<u>0</u>	<u>472</u>
P 2 <u>5</u>	<u>11</u>	<u>3</u>	<u>1102</u>	<u>5</u>	<u>280</u>	<u>3</u>	<u>1162</u>
P 3 <u>10</u>	<u>11</u>	<u>6</u>	<u>1217</u>	<u>10</u>	<u>290</u>	<u>6</u>	<u>1217</u>
P 4 <u>15</u>	<u>122</u>	<u>9</u>	<u>1249</u>	<u>15</u>	<u>318</u>	<u>9</u>	<u>1236</u>
P 5 <u>20</u>	<u>167</u>	<u>12</u>	<u>1270</u>	<u>20</u>	<u>340</u>	<u>12</u>	<u>1252</u>
P 6 <u>25</u>	<u>203</u>	<u>15</u>	<u>1280</u>	<u>25</u>	<u>361</u>	<u>15</u>	<u>1263</u>
P 7 <u>30</u>	<u>244</u>	<u>18</u>	<u>1289</u>	<u>30</u>	<u>378</u>	<u>18</u>	<u>1273</u>
P 8		<u>21</u>	<u>1296</u>	<u>35</u>	<u>397</u>	<u>21</u>	<u>1281</u>
P 9		<u>24</u>	<u>1300</u>	<u>40</u>	<u>414</u>	<u>24</u>	<u>1287</u>
P10		<u>27</u>	<u>1303</u>	<u>45</u>	<u>430</u>	<u>27</u>	<u>1289</u>
P11		<u>30</u>	<u>1306</u>	<u>50</u>	<u>445</u>	<u>30</u>	<u>1291</u>
P12				<u>55</u>	<u>462</u>	<u>33</u>	
P13				<u>60</u>	<u>472</u>	<u>36</u>	
P14				<u>65</u>		<u>39</u>	
P15				<u>70</u>		<u>41</u>	
P16				<u>75</u>		<u>44</u>	
P17				<u>80</u>		<u>45</u>	
P18				<u>85</u>		<u>48</u>	
P19				<u>90</u>		<u>51</u>	
P20						<u>54</u>	
						<u>57</u>	
						<u>60</u>	

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