



P. O. BOX 1599 PHONE (316) 838-0601
WICHITA, KANSAS 67201

Company Texas Energies, Inc. Lease & Well No. Harbaugh #1
Elevation 1378 Kelly Bushing Formation Mississippi Effective Pay ----- Ft. Ticket No. 477
Date 7/10/78 Sec. 29 Twp 33S Range 11W County Barber State Kansas
Test Approved by Toby Elster Western Representative Rod Tritt

Formation Test No. 1 Interval Tested from 4410' ft. to 4491' ft. Total Depth 4491' ft.
Packer Depth 4405 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
Packer Depth 4410 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
Depth of Selective Zone Set -----

Top Recorder Depth (Inside) 4414 ft. Recorder Number 2604 Cap. 4150
Bottom Recorder Depth (Outside) 4417 ft. Recorder Number 2606 Cap. 4150
Below Straddle Recorder Depth -- ft. Recorder Number -- Cap. --

Drilling Contractor Gabbert - Jones, Inc. Drill Collar Length 247 I. D. 2 1/4 in.
Mud Type drispac Viscosity 64 Weight Pipe Length -- I. D. -- in.
Weight 9.4 Water Loss 12.8 cc. Drill Pipe Length 4203 I. D. 3.8 in.
Chlorides 18,500 P.P.M. Test Tool Size 5 1/2 OD in. Tool Joint Size 4 1/2 FH in.
Jars: Make No Serial Number -- Anchor Length 81 ft. Size 5 1/2 OD 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.

Blow: Strong blow after 4 minutes into initial flow period. Strong blow. No volumn. No gas throughout final flow period.

Recovered 60 ft. of of drilling mud with trace of oil.

Recovered 60 ft. of of slightly oil cut drilling mud.

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 7:10 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 11:10 ~~P.M.~~ ^{A.M.} Maximum Temperature 128
Initial Hydrostatic Pressure 2304 P.S.I. (A)
Initial Flow Period 45 Minutes (B) 80 P.S.I. to (C) 38 P.S.I.
Initial Closed In Period 45 Minutes (D) 384 P.S.I.
Final Flow Period 60 Minutes (E) 87 P.S.I. to (F) 65 P.S.I.
Final Closed In Period 90 Minutes (G) 667 P.S.I.
Final Hydrostatic Pressure 2240 P.S.I. (H)

WESTERN TESTING CO., INC.

Pressure Data

Date 7/10/78 Test Ticket No. 477
Recorder No. 2604 Capacity 4150 Location 4414 Ft.
Clock No. ----- Elevation 1378 Kelly Bushing Well Temperature 128 °F
Point Pressure Time Given Time Computed
A Initial Hydrostatic Mud 2304 P.S.I. Open Tool 7:10 A M
B First Initial Flow Pressure 80 P.S.I. First Flow Pressure 45 Mins. 45 Mins.
C First Final Flow Pressure 38 P.S.I. Initial Closed-in Pressure 45 Mins. 45 Mins.
D Initial Closed-in Pressure 384 P.S.I. Second Flow Pressure 60 Mins. 60 Mins.
E Second Initial Flow Pressure 87 P.S.I. Final Closed-in Pressure 90 Mins. 87 Mins.
F Second Final Flow Pressure 65 P.S.I.
G Final Closed-in Pressure 667 P.S.I.
H Final Hydrostatic Mud 2240 P.S.I.

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>9</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>29</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>80</u>	<u>0</u>	<u>38</u>	<u>0</u>	<u>87</u>	<u>0</u>	<u>65</u>
P 2 <u>5</u>	<u>58</u>	<u>3</u>	<u>47</u>	<u>5</u>	<u>67</u>	<u>3</u>	<u>73</u>
P 3 <u>10</u>	<u>49</u>	<u>6</u>	<u>58</u>	<u>10</u>	<u>62</u>	<u>6</u>	<u>83</u>
P 4 <u>15</u>	<u>45</u>	<u>9</u>	<u>70</u>	<u>15</u>	<u>60</u>	<u>9</u>	<u>95</u>
P 5 <u>20</u>	<u>40</u>	<u>12</u>	<u>90</u>	<u>20</u>	<u>58</u>	<u>12</u>	<u>107</u>
P 6 <u>25</u>	<u>39</u>	<u>15</u>	<u>111</u>	<u>25</u>	<u>58</u>	<u>15</u>	<u>118</u>
P 7 <u>30</u>	<u>44</u>	<u>18</u>	<u>130</u>	<u>30</u>	<u>60</u>	<u>18</u>	<u>133</u>
P 8 <u>35</u>	<u>40</u>	<u>21</u>	<u>153</u>	<u>35</u>	<u>60</u>	<u>21</u>	<u>149</u>
P 9 <u>40</u>	<u>39</u>	<u>24</u>	<u>177</u>	<u>40</u>	<u>62</u>	<u>24</u>	<u>166</u>
P10 <u>45</u>	<u>38</u>	<u>27</u>	<u>207</u>	<u>45</u>	<u>63</u>	<u>27</u>	<u>183</u>
P11		<u>30</u>	<u>233</u>	<u>50</u>	<u>63</u>	<u>30</u>	<u>204</u>
P12		<u>33</u>	<u>260</u>	<u>55</u>	<u>64</u>	<u>33</u>	<u>221</u>
P13		<u>36</u>	<u>292</u>	<u>60</u>	<u>65</u>	<u>36</u>	<u>242</u>
P14		<u>39</u>	<u>329</u>			<u>39</u>	<u>263</u>
P15		<u>42</u>	<u>365</u>			<u>42</u>	<u>283</u>
P16		<u>45</u>	<u>384</u>			<u>45</u>	<u>305</u>
P17						<u>48</u>	<u>331</u>
P18						<u>51</u>	<u>355</u>
P19						<u>54</u>	<u>381</u>
P20						<u>57</u>	<u>404</u>
						<u>60</u>	<u>430</u>

WESTERN TESTING CO., INC.

Pressure Data

Date 7/10/78 Test Ticket No. 477
 Recorder No. 2604 Capacity 4150 Location 4414 F
 Clock No. ----- Elevation 1378 Kelly Bushing Well Temperature 128 °
 Point Pressure Time Given Time Computed
 A Initial Hydrostatic Mud 2304 P.S.I. Open Tool 7:10 A M
 B First Initial Flow Pressure 80 P.S.I. First Flow Pressure 45 Mins. 45 Min.
 C First Final Flow Pressure 38 P.S.I. Initial Closed-in Pressure 45 Mins. 45 Min.
 D Initial Closed-in Pressure 384 P.S.I. Second Flow Pressure 60 Mins. 60 Min.
 E Second Initial Flow Pressure 87 P.S.I. Final Closed-in Pressure 90 Mins. 87 Min.
 F Second Final Flow Pressure 65 P.S.I.
 G Final Closed-in Pressure 667 P.S.I.
 H Final Hydrostatic Mud 2240 P.S.I.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>9</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>29</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						63	459
P 2						66	489
P 3						69	516
P 4						72	544
P 5						75	571
P 6						78	599
P 7						81	624
P 8						84	651
P 9						87	667
P10							
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

2604

TR # 477

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(H)

(A)

(G)

(D)

(F)

(E)

(C)

(B)



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WICHITA, KANSAS 67201

Company Texas Energies, Inc. Lease & Well No. Harbaugh #1
Elevation 1378 Kelly Bushing Mississippi Effective Pay ----- Ft. Ticket No. 478
Date 7/11/78 Sec. 29 Twp 33S Range 11W County Barber State Kansas
Test Approved by Patrick Balthazor Western Representative Rod Tritt

Formation Test No. 2 Interval Tested from 4491' ft. to 4558' ft. Total Depth 4558' ft.

Packer Depth 4486 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 4491 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set -----

Top Recorder Depth (Inside) 4493 ft. Recorder Number 2604 Cap. 4150

Bottom Recorder Depth (Outside) 4496 ft. Recorder Number 2606 Cap. 4150

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

Drilling Contractor Gabbert - Jones, Inc. Drill Collar Length 248 I. D. 2 1/4 in.

Mud Type drispac Viscosity 64 Weight Pipe Length -- I. D. -- in.

Weight 9.4 Water Loss 12.8 cc. Drill Pipe Length 4245 I. D. 3.8 in.

Chlorides 18,500 P.P.M. Test Tool Size 5 1/2 OD in. Tool Joint Size 4 1/2 FH in.

Jars: Make WTC Serial Number 408 Anchor Length 67 ft. Size 5 1/2 OD 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.

Blow: Strong blow throughout test. No gas to surface.

Recovered 4148 ft. of gas in pipe

Recovered 305 ft. of foamy oil

Recovered 305 ft. of water cut oil; 20% oil; chlorides 56,000 PPM

Recovered 610 ft. of water cut oil; 20% oil; chlorides 75,000 PPM

Recovered 2128 ft. of water; chlorides checked 110,000 PPM

Remarks: 3348 feet total fluid.

Time Set Packer(s) 12:30 A.M. PM Time Started Off Bottom 5:30 A.M. PM Maximum Temperature 128

Initial Hydrostatic Pressure (A) 2243 P.S.I.

Initial Flow Period Minutes 60 (B) 149 P.S.I. to (C) 839 P.S.I.

Initial Closed In Period Minutes 60 (D) 2124 P.S.I.

Final Flow Period Minutes 90 (E) 923 P.S.I. to (F) 1460 P.S.I.

Final Closed In Period Minutes 90 (G) 2129 P.S.I.

Final Hydrostatic Pressure (H) 2197 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 7/11/78 Test Ticket No. 478
 Recorder No. 2604 Capacity 4150 Location 4493 Ft.
 Clock No. ----- Elevation 1378 Kelly Bushing Well Temperature 128 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2243 P.S.I.	Open Tool	12:30A	M
B First Initial Flow Pressure	149 P.S.I.	First Flow Pressure	60 Mins.	60 Mins.
C First Final Flow Pressure	839 P.S.I.	Initial Closed-in Pressure	60 Mins.	60 Mins.
D Initial Closed-in Pressure	2124 P.S.I.	Second Flow Pressure	90 Mins.	90 Mins.
E Second Initial Flow Pressure	923 P.S.I.	Final Closed-in Pressure	90 Mins.	90 Mins.
F Second Final Flow Pressure	1460 P.S.I.			
G Final Closed-in Pressure	2129 P.S.I.			
H Final Hydrostatic Mud	2197 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>12</u> Inc.		Breakdown: <u>20</u> Inc.		Breakdown: <u>18</u> Inc.		Breakdown: <u>30</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	149	0	839	0	923	0	1460
P 2 5	194	3	2004	5	931	3	2017
P 3 10	267	6	2044	10	958	6	2060
P 4 15	335	9	2060	15	998	9	2074
P 5 20	399	12	2074	20	1038	12	2082
P 6 25	466	15	2083	25	1077	15	209;
P 7 30	529	18	2093	30	1115	18	2096
P 8 35	590	21	2098	35	1155	21	2100
P 9 40	653	24	2103	40	1190	24	2104
P10 45	705	27	2108	45	1219	27	2108
P11 50	761	30	2111	50	1257	30	2110
P12 55	816	33	2113	55	1288	33	2112
P13 60	839	36	2116	60	1316	36	2113
P14		39	2117	65	1345	39	2114
P15		42	2119	70	1374	42	2115
P16		45	2120	75	1399	45	2116
P17		48	2121	80	1424	48	2117
P18		51	2122	85	1450	51	2118
P19		54	2123	90	1460	54	2119
P20		57	2124			57	2121
		60	2124			60	2123

WESTERN TESTING CO., INC.

Pressure Data

Date 7/11/78 Test Ticket No. 478
 Recorder No. 2604 Capacity 4150 Location 4493 Ft.
 Clock No. ----- Elevation 1378 Kelly Bushing Well Temperature 128 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2243 P.S.I.	Open Tool	12:30A	M
B First Initial Flow Pressure	149 P.S.I.	First Flow Pressure	60 Mins.	60 Mins.
C First Final Flow Pressure	839 P.S.I.	Initial Closed-in Pressure	60 Mins.	60 Mins.
D Initial Closed-in Pressure	2124 P.S.I.	Second Flow Pressure	90 Mins.	90 Mins.
E Second Initial Flow Pressure	923 P.S.I.	Final Closed-in Pressure	90 Mins.	90 Mins.
F Second Final Flow Pressure	1460 P.S.I.			
G Final Closed-in Pressure	2129 P.S.I.			
H Final Hydrostatic Mud	2197 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>12</u> Inc.		Breakdown: <u>20</u> Inc.		Breakdown: <u>18</u> Inc.		Breakdown: <u>30</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						63	2123
P 2						66	2124
P 3						69	2124
P 4						72	2125
P 5						75	2125
P 6						78	2126
P 7						81	2127
P 8						84	2128
P 9						87	2129
P10						90	2129
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

2604

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