



Home Office: Great Bend, Kansas
P. O. Box 793 Gladstone 3-7903

Company Bowers Drilling Company Lease & Well No. Marsh Estate #1
Elevation Not Available Ticket Number 3837
Date May 31, 1964 Sec. 9 Twp. 32 Range 15 County Barber, State Kansas
Test Approved by Robert McCann Western Representative Guy M. Knipe

Formation Test No. 1 O.K. ☒ Misrun ☐ Interval Tested From 4240 to 4254 Total Depth 4254'
Size Main Hole 7 7/8 Rat Hole ☐ Conv. ☐ B.T. ☒ Damaged Yes ☒ No ☐ Conv. ☒ B.T. ☐ Damaged Yes ☒ No ☐
Packer Depth 4237 Ft. Size 6 3/4 Packer Depth 4240 Ft. Size 6 3/4
Straddle ☐ Yes ☒ No ☐ Conv. ☐ B.T. ☐ Damaged Yes ☐ No ☐
Packer Depth Ft. Size
Tool Size 5 1/2 O. D. Tool Jt. Size 4 1/2 F. H/ Anchor Length 14 8 Ft. Size 5 1/2 O. D.

RECORDERS Depth 4246 Ft. Clock No. 5665 Depth 4249 Ft. Clock No. 150
Top Make Amarada Cap. 4200 No. 1559 Inside Outside Bottom Make Western Cap. 4000 No. 59 Inside Outside
Below Straddle: Depth Clock No. Inside Outside Depth Ft. Clock No. Inside Outside
Top Make Cap. No. Inside Outside Bottom Make Cap. No. Inside Outside

Time Set Packer 11:53 A M
Tool Open I.F.P. From 11:55A M to 12:00 PM Hr. 5 Min. From (B) 280 P.S.I. To (C) 288 P.S.I.
Tool Closed I.C.I.P. From 12:00P M. to 12:30 P M. Hr. 30 Min. (D) 1562 P.S.I.
Tool Open F.F.P. From 12:30P M. to 1:15P M. Hr. 45 Min. From (E) 319 P.S.I. To (F) 622 P.S.I.
Tool Closed F.C.I.P. From 1:15P M. to 1:47P M. Hr. 32 Min. (G) 1522 P.S.I.
Initial Hydrostatic Pressure (A) 2316 P.S.I. Final Hydrostatic Pressure (H) 2305 P.S.I.

SURFACE	Size Choke	In.	Max. Press. P.S.I.	Time	Description of Flow
INFORMATION	<u>Spring gauge</u>		<u>17.5" water</u>	<u>10</u> M.	<u>558,000 C.F.</u>
	<u>" "</u>		<u>15 "</u>	<u>20</u> M.	<u>516,000 C. F.</u>
	<u>" "</u>		<u>13.5 "</u>	<u>30</u> M.	<u>492,000 C. F.</u>

BLOW Strong gas in 4 minutes. Flowed salt water in 40 minutes Bottom Choke Size 3/4 In.
Did Well Flow ☒ Yes ☐ No Recovery Total Ft. 1110' gassy salt water

Reversed Out ☐ Yes ☐ No Mud Type starch Viscosity 45 Weight 9.8 Maximum Temp. 128 °F
EXTRA EQUIPMENT: Dual Packers yes Safety Joint Jars: Size 4 1/2 Make Bowen Ser. No. 192
Type Circ. Sub. plug Did Tool Plug? no Where? Did Packer Hold? yes
Length Drill Pipe 4095 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe ft. I.D. Weight Pipe in. Length Drill Collars 115 ft.
I. D. Drill Collars 2.25 in. Length D. S. T. Tool 44 ft.

Remarks

WESTERN TESTING CO., INC.

Pressure Data

Date May 31, 1964 Test Ticket No. 3837
 Recorder No. 1559 Capacity 4200 Location _____ Ft. _____
 Clock No. 5665 Elevation Not Ava. Well Temperature 128 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2316</u> P.S.I.	Opened Tool	<u>11:53 A</u> M	
B First Initial Flow Pressure	<u>280</u> P.S.I.	First Flow Pressure	<u>5</u> Mins.	<u>5</u> Mins.
C First Final Flow Pressure	<u>288</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1562</u> P.S.I.	Second Flow Pressure	<u>45</u> Mins.	<u>42</u> Mins.
E Second Initial Flow Pressure	<u>319</u> P.S.I.	Final Closed-in Pressure	<u>32</u> Mins.	<u>33</u> Mins.
F Second Final Flow Pressure	<u>622</u> P.S.I.			
G Final Closed-in Pressure	<u>1522</u> P.S.I.			
H Final Hydrostatic Mud	<u>2305</u> P.S.I.			

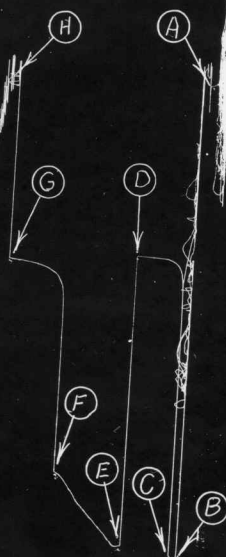
PRESSURE BREAKDOWN

First Flow Press. Initial Shut-In Second Flow Pressure Final Shut-In
 Breakdown: 1 Inc. Breakdown: 10 Inc. Breakdown: 8 Inc. Breakdown: 11 Inc.
 of 5 mins. and a of 3 mins. and a of 5 mins. and a of 3 mins. and a
 final inc. of 0 Min. final inc. of 0 Min. final inc. of 2 Min. final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>280</u>	<u>0</u>	<u>288</u>	<u>0</u>	<u>319</u>	<u>0</u>	<u>622</u>
P 2 <u>5</u>	<u>288</u>	<u>3</u>	<u>1309</u>	<u>5</u>	<u>330</u>	<u>3</u>	<u>1422</u>
P 3		<u>6</u>	<u>1523</u>	<u>10</u>	<u>365</u>	<u>6</u>	<u>1462</u>
P 4		<u>9</u>	<u>1548</u>	<u>15</u>	<u>407</u>	<u>9</u>	<u>1479</u>
P 5		<u>12</u>	<u>1556</u>	<u>20</u>	<u>447</u>	<u>12</u>	<u>1493</u>
P 6		<u>15</u>	<u>1559</u>	<u>25</u>	<u>487</u>	<u>15</u>	<u>1502</u>
P 7		<u>18</u>	<u>1561</u>	<u>30</u>	<u>533</u>	<u>18</u>	<u>1506</u>
P 8		<u>21</u>	<u>1562</u>	<u>35</u>	<u>585</u>	<u>21</u>	<u>1510</u>
P 9		<u>24</u>	<u>1562</u>	<u>40</u>	<u>616</u>	<u>24</u>	<u>1514</u>
P 10		<u>27</u>	<u>1562</u>	<u>42</u>	<u>622</u>	<u>27</u>	<u>1516</u>
P 11		<u>30</u>	<u>1562</u>			<u>30</u>	<u>1518</u>
P 12						<u>33</u>	<u>1522</u>
P 13							
P 14							
P 15							
P 16							
P 17							
P 18							
P 19							
P 20							

*Bowers Drilling Co.
Marsh Estate #1*

TEST #1
TKT #3837

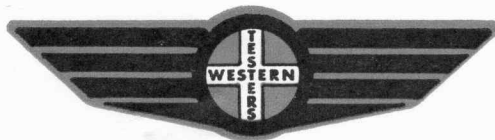


This is an actual photograph of recorder chart.

POINT

PRESSURE

(A) Initial Hydrostatic Mud	2316	PSI
(B) First Initial Flow Pressure	280	PSI
(C) First Final Flow Pressure	288	PSI
(D) Initial Closed-in Pressure	1562	PSI
(E) Second Initial Flow Pressure	319	PSI
(F) Second Final Flow Pressure	622	PSI
(G) Final Closed-in Pressure	1522	PSI
(H) Final Hydrostatic Mud	2305	PSI



Home Office: Great Bend, Kansas
P. O. Box 793 Gladstone 3-7903

Company Bowers Drilling Company Lease & Well No. Marsh Estate #1
Elevation 1956 K. B. Ticket Number 4045
Date 6-4-64 Sec. 9 Twp. 32 Range 15 County Barber State Kansas
Test Approved by Robert McCain Western Representative George Tew

Formation Test No. 2 O.K. ☒ Misrun ☐ Interval Tested From 4793 to 4835 Total Depth 4835
Size Main Hole 7 7/8 Rat Hole None Conv. ☒ B.T. ☐ Damaged Yes ☒ No ☐ Conv. ☒ B.T. ☐ Damaged Yes ☒ No ☐
Packer Depth 4793 Ft. Size 6 3/4 Packer Depth 4788 Ft. Size 6 3/4
Straddle Yes ☒ No ☐ Conv. ☐ B.T. ☐ Damaged Yes ☐ No ☐
Packer Depth Ft. Size
Tool Size 5 1/2 O. D. Tool Jt. Size 4 1/2 I. F. Anchor Length 42 Ft. Size 5 1/2 O. D.

RECORDERS Depth 4827 Ft. Clock No. 6861 Depth 4830 Ft. Clock No. 120
Top Make Amarada Cap. 4200 No. 1558 Inside Outside Bottom Make Western Cap. 4000 No. 60 Inside Outside
Below Straddle: Depth Clock No. Inside Outside Depth Ft. Clock No. Inside Outside
Top Make Cap. No. Inside Outside Bottom Make Cap. No. Inside Outside

Time Set Packer 3:37 P M
Tool Open I.F.P. From 3:40 P M to 3:45 P M Hr. 5 Min. From (B) 48 P.S.I. To (C) 48 P.S.I.
Tool Closed I.C.I.P. From 3:45 M. to 4:15 M. Hr. 30 Min. (D) 77 P.S.I.
Tool Open F.F.P. From 4:15 P M. to 5:15 M. 1 Hr. Min. From (E) 50 P.S.I. To (F) 50 P.S.I.
Tool Closed F.C.I.P. From 5:15 M. to 5:45 P M. Hr. 30 Min. (G) 85 P.S.I.
Initial Hydrostatic Pressure (A) 2621 P.S.I. Final Hydrostatic Pressure (H) 2600 P.S.I.

SURFACE Size Choke 1/2 In. Max. Press. P.S.I. Time Description of Flow
INFORMATION

BLOW Weak blow throughout test Bottom Choke Size 3/4 in.
Did Well Flow Yes ☒ No ☐ Recovery Total Ft. 30' Drilling mud

Reversed Out Yes ☒ No ☐ Mud Type starch Viscosity 52 Weight 10.4 Maximum Temp. 128 °F
EXTRA EQUIPMENT: Dual Packers yes Safety Joint yes Jars: Size 4 1/2 O. D. Make Bowen Ser. No. 2638
Type Circ. Sub. plug Did Tool Plug? no Where? Did Packer Hold? yes
Length Drill Pipe 4643 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe ft. I.D. Weight Pipe in. Length Drill Collars 120 ft.
I. D. Drill Collars 2.25 in. Length D. S. T. Tool 72 ft.

Remarks

WESTERN TESTING CO., INC. Pressure Data

Date June 4, 1964 Test Ticket No. 4045
 Recorder No. 1558 Capacity 4200 Location 4827 Ft.
 Clock No. 6861 Elevation 1956 Kelly Bushings Well Temperature 128 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2621</u> P.S.I.	Opened Tool	<u>3:37P</u> M	
B First Initial Flow Pressure	<u>48</u> P.S.I.	First Flow Pressure	<u>5</u> Mins.	<u>5</u> Mins.
C First Final Flow Pressure	<u>48</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>77</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>50</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>50</u> P.S.I.			
G Final Closed-in Pressure	<u>85</u> P.S.I.			
H Final Hydrostatic Mud	<u>2600</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.	Initial Shut-In	Second Flow Pressure	Final Shut-In
Breakdown: <u>1</u> Inc.	Breakdown: <u>10</u> Inc.	Breakdown: <u>12</u> Inc.	Breakdown: <u>10</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 <u>0</u>	<u>48</u>	<u>0</u>	<u>48</u>	<u>0</u>	<u>50</u>	<u>0</u>	<u>50</u>
P 2 <u>5</u>	<u>48</u>	<u>3</u>	<u>56</u>	<u>5</u>	<u>50</u>	<u>3</u>	<u>51</u>
P 3		<u>6</u>	<u>62</u>	<u>10</u>	<u>50</u>	<u>6</u>	<u>54</u>
P 4		<u>9</u>	<u>66</u>	<u>15</u>	<u>50</u>	<u>9</u>	<u>58</u>
P 5		<u>12</u>	<u>73</u>	<u>20</u>	<u>50</u>	<u>12</u>	<u>61</u>
P 6		<u>15</u>	<u>75</u>	<u>25</u>	<u>50</u>	<u>15</u>	<u>64</u>
P 7		<u>18</u>	<u>77</u>	<u>30</u>	<u>50</u>	<u>18</u>	<u>68</u>
P 8		<u>21</u>	<u>77</u>	<u>35</u>	<u>50</u>	<u>21</u>	<u>75</u>
P 9		<u>24</u>	<u>77</u>	<u>40</u>	<u>50</u>	<u>24</u>	<u>79</u>
P 10		<u>27</u>	<u>77</u>	<u>45</u>	<u>50</u>	<u>27</u>	<u>81</u>
P 11		<u>30</u>	<u>77</u>	<u>50</u>	<u>50</u>	<u>30</u>	<u>85</u>
P 12				<u>55</u>	<u>50</u>		
P 13				<u>60</u>	<u>50</u>		
P 14							
P 15							
P 16							
P 17							
P 18							
P 19							
P 20							

Bowers Drilg. Co.
Marsh Estate #1

TEST # 2
AKT # 4045

This is an actual photograph of recorder chart.

POINT

PRESSURE

(A) Initial Hydrostatic Mud	2621	PSI
(B) First Initial Flow Pressure	48	PSI
(C) First Final Flow Pressure	48	PSI
(D) Initial Closed-in Pressure	77	PSI
(E) Second Initial Flow Pressure	50	PSI
(F) Second Final Flow Pressure	50	PSI
(G) Final Closed-in Pressure	85	PSI
(H) Final Hydrostatic Mud	2600	PSI