



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

Company Bowers Drilling Company Lease & Well No. Sawyer #1
Elevation 1606 Derrick Floor Ticket Number 4123
Date Sept. 15, 1964 Sec. 33 Twp. 34 Range 13 County Barber State Kansas
Test Approved by Robert E. McCann Western Representative Guy M. Knipe

Formation Test No. 1 O.K. ☒ Misrun ☐ Interval Tested From 3735' to 3757' Total Depth 3757'
Size Main Hole 7 7/8 Rat Hole ☐ Conv. ☐ B.T. ☒ Damaged ☒ Yes ☐ No Conv. ☒ B.T. ☐ Damaged ☐ Yes ☒ No
Packer Depth 3732 Ft. Size 6 3/4 Packer Depth 3735 Ft. Size 6 3/4
Straddle ☐ Yes ☒ No ☐ Conv. ☐ B.T. ☐ Damaged ☐ Yes ☐ No
Packer Depth 3732 Ft. Size 6 3/4
Tool Size 5 1/2 O. D. Tool Jt. Size 4 1/2 F. H. Anchor Length 22 Ft. Size 5 1/2 O. D.

RECORDERS Depth 3749 Ft. Clock No. 5665 Depth 3752 Ft. Clock No. 59
Top Make Amerada Cap. 4200 No. 1559 Inside Outside Bottom Make Western Cap. 4000 No. 59 Inside Outside
Below Straddle: Depth 3749 Clock No. 5665 Inside Outside Depth 3752 Ft. Clock No. 59 Inside Outside
Top Make Amerada Cap. 4200 No. 1559 Inside Outside Bottom Make Western Cap. 4000 No. 59 Inside Outside

Time Set Packer 3:53 A. M
Tool Open I.F.P. From 3:55 A. M to 4:11 A. M Hr. 16 Min. From (B) 31 P.S.I. To (C) 31 P.S.I.
Tool Closed I.C.I.P. From 4:11 A. M. to 4:41 A. M. Hr. 30 Min. (D) 315 P.S.I.
Tool Open F.F.P. From 4:41 A. M. to 5:42 M. 1 Hr. 01 Min. From (E) 41 P.S.I. To (F) 41 P.S.I.
Tool Closed F.C.I.P. From 5:42 A. M. to 6:12 M. Hr. 30 Min. (G) 319 P.S.I.
Initial Hydrostatic Pressure (A) 2059 P.S.I. Final Hydrostatic Pressure (H) 2056 P.S.I.

SURFACE Size Choke 3/4 In. Max. Press. P.S.I. Time Description of Flow
INFORMATION Weak increased to strong Bottom Choke Size 3/4 In.

BLOW Weak increased to strong Bottom Choke Size 3/4 In.
Did Well Flow ☒ Yes ☐ No Recovery Total Ft. 62' drilling mud

Reversed Out ☒ Yes ☐ No Mud Type starch Viscosity 40 Weight 10.2 Maximum Temp. 108 °F

EXTRA EQUIPMENT: Dual Packers ☒ Safety Joint ☐ Jars: Size 10.2 Make 108 Ser. No. 108
Type Circ. Sub. plug Did Tool Plug? ☐ Where? yes Did Packer Hold? ☒
Length Drill Pipe 3597 ft. I.D. Drill Pipe 3.8 In. Length Weight Pipe 117 ft. I.D. Weight Pipe 117 ft.
I. D. Drill Collars 2 1/4 in. Length D. S. T. Tool 43' ft.

Remarks

WESTERN TESTING CO., INC. Pressure Data

Date September 15, 1964 Test Ticket No. 4123
Recorder No. 1559 Capacity 4200 Location 3749 Ft.
Clock No. 5665 Elevation 1606 Derrick Floor Well Temperature 108 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2059</u> P.S.I.	Opened Tool	<u>3:53</u> A. M.	
B First Initial Flow Pressure	<u>31</u> P.S.I.	First Flow Pressure	<u>16</u> Mins.	<u>15</u> Mins.
C First Final Flow Pressure	<u>31</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>315</u> P.S.I.	Second Flow Pressure	<u>61</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>41</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>41</u> P.S.I.			
G Final Closed-in Pressure	<u>319</u> P.S.I.			
H Final Hydrostatic Mud	<u>2056</u> P.S.I.			

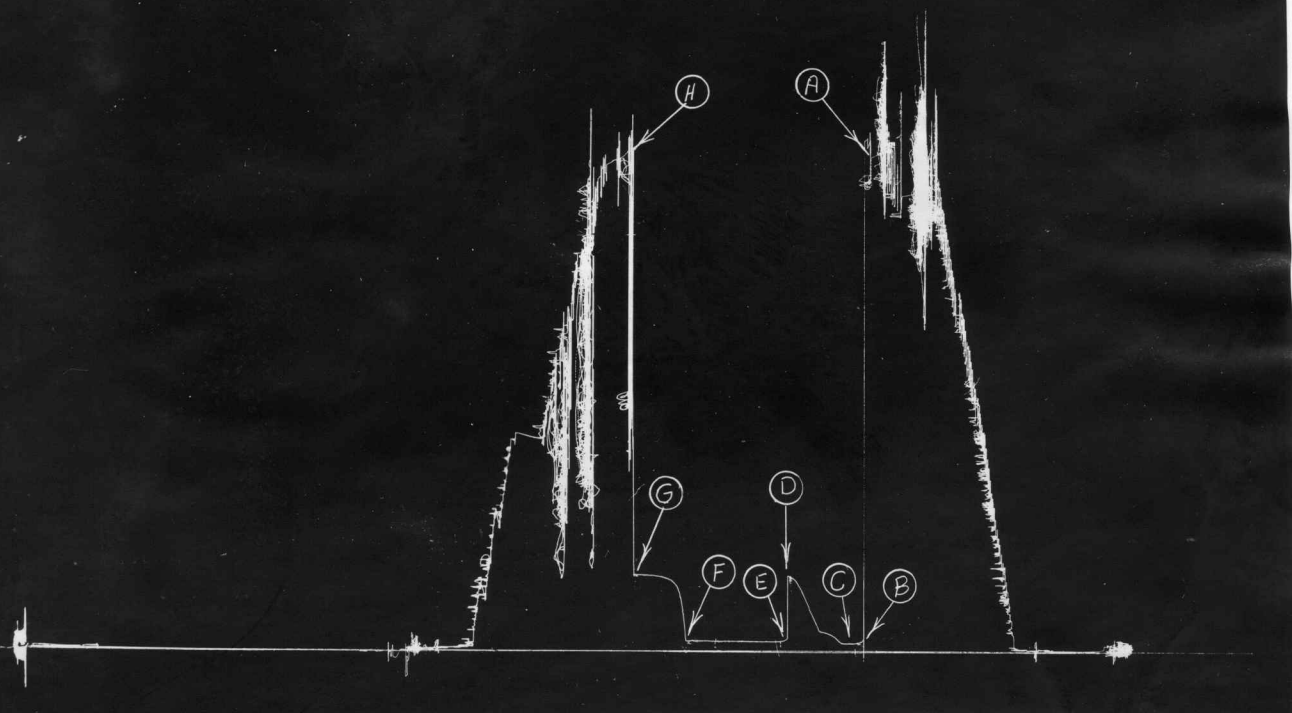
PRESSURE BREAKDOWN

First Flow Press. Initial Shut-In Second Flow Pressure Final Shut-In
Breakdown: 3 Inc. Breakdown: 10 Inc. Breakdown: 12 Inc. Breakdown: 10 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 0 Min. final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>31</u>	<u>0</u>	<u>31</u>	<u>0</u>	<u>41</u>	<u>0</u>	<u>41</u>
P 2 <u>5</u>	<u>31</u>	<u>3</u>	<u>52</u>	<u>5</u>	<u>41</u>	<u>3</u>	<u>202</u>
P 3 <u>10</u>	<u>31</u>	<u>6</u>	<u>68</u>	<u>10</u>	<u>41</u>	<u>6</u>	<u>275</u>
P 4 <u>15</u>	<u>31</u>	<u>9</u>	<u>77</u>	<u>15</u>	<u>41</u>	<u>9</u>	<u>294</u>
P 5		<u>12</u>	<u>83</u>	<u>20</u>	<u>41</u>	<u>12</u>	<u>305</u>
P 6		<u>15</u>	<u>123</u>	<u>25</u>	<u>41</u>	<u>15</u>	<u>311</u>
P 7		<u>18</u>	<u>169</u>	<u>30</u>	<u>41</u>	<u>18</u>	<u>315</u>
P 8		<u>21</u>	<u>217</u>	<u>35</u>	<u>41</u>	<u>21</u>	<u>317</u>
P 9		<u>24</u>	<u>267</u>	<u>40</u>	<u>41</u>	<u>24</u>	<u>319</u>
P 10		<u>27</u>	<u>300</u>	<u>45</u>	<u>41</u>	<u>27</u>	<u>319</u>
P 11		<u>30</u>	<u>315</u>	<u>50</u>	<u>41</u>	<u>30</u>	<u>319</u>
P 12				<u>55</u>	<u>41</u>		
P 13				<u>60</u>	<u>41</u>		
P 14							
P 15							
P 16							
P 17							
P 18							
P 19							
P 20							

Bowers Drilling Co.
Sawyer #1

Test #1
TKT# 4123



This is an actual photograph of recorder chart.

POINT	PRESSURE
(A) Initial Hydrostatic Mud	2059 PSI
(B) First Initial Flow Pressure	31 PSI
(C) First Final Flow Pressure	31 PSI
(D) Initial Closed-in Pressure	315 PSI
(E) Second Initial Flow Pressure	41 PSI
(F) Second Final Flow Pressure	41 PSI
(G) Final Closed-in Pressure	319 PSI
(H) Final Hydrostatic Mud	2056 PSI



Home Office: Great Bend, Kansas
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Company Bowers Drilling Company Lease & Well No. Sawyer #1
Elevation 1606 Derrick Floor Ticket Number 4125
Date Sept. 20, 1964 Sec. 33 Twp. 34 Range 13 County Barber State Kansas
Test Approved by Robert McCann Western Representative Guy M. Knipe

Formation Test No. 2 O.K. ☒ Misrun ☐ Interval Tested From 4842' to 4890' Total Depth 4890'
Size Main Hole 7 7/8 Rat Hole ☐ Conv. ☐ B.T. ☒ Damaged Yes ☒ No ☐ Conv. ☒ B.T. ☐ Damaged Yes ☒ No ☐
Packer Depth 4839 Ft. Size 6 3/4 Packer Depth 4842 Ft. Size 6 3/4
Straddle ☐ Yes ☒ No ☐ Conv. ☐ B.T. ☐ Damaged Yes ☐ No ☐
Packer Depth Ft. Size 5 1/2 Perf. D.P. 4 1/2
Tool Size 5 1/2 O. D. Tool Jt. Size 4 1/2 F. H. Anchor Length 5 1/2 O. D. Size 18' 30'

RECORDERS Depth 4852 Ft. Clock No. 5665 Depth 4855 Ft. Clock No.
Top Make Amerada Cap. 4200 No. 1559 Inside Bottom Make Western Cap. 4000 No. 59 Inside
Below Straddle: Depth Clock No. Inside Depth Ft. Clock No. Inside
Top Make Cap. No. Outside Bottom Make Cap. No. Outside

Time Set Packer 2:35 P. M
Tool Open I.F.P. From 2:40 P. M to 2:50 P. M Hr. 10 Min. From (B) 35 P.S.I. To (C) 35 P.S.I.
Tool Closed I.C.I.P. From 2:50 P. M. to 3:20 P. M. Hr. 30 Min. (D) 148 P.S.I.
Tool Open F.F.P. From 3:20 P. M. to 4:53 P. M. Hr. 33 Min. From (E) 36 P.S.I. To (F) 41 P.S.I.
Tool Closed F.C.I.P. From 4:53 P. M. to 5:23 P. M. Hr. 30 Min. (G) 720 P.S.I.
Initial Hydrostatic Pressure (A) 2612 P.S.I. Final Hydrostatic Pressure (H) 2578 P.S.I.

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

BLOW Weak increased to (strong rest of flow period) Bottom Choke Size 3/4 in.
Did Well Flow Yes ☒ No ☐ Recovery Total Ft. 74' very slightly gas cut mud

Reversed Out Yes ☒ No ☐ Mud Type starch Viscosity 57 Weight 10.1 Maximum Temp. 123 *F
EXTRA EQUIPMENT: Dual Packers yes Safety Joint Jars: Size 4 1/2 O. D. Make Bowen Ser. No. 192
Type Circ. Sub. plug Did Tool Plug? no Where? Did Packer Hold? yes
Length Drill Pipe 4697 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe ft. I.D. Weight Pipe in. Length Drill Collars 116 ft.
I. D. Drill Collars 2.3 in. Length D. S. T. Tool 77 ft.

Remarks

WESTERN TESTING CO., INC.

Pressure Data

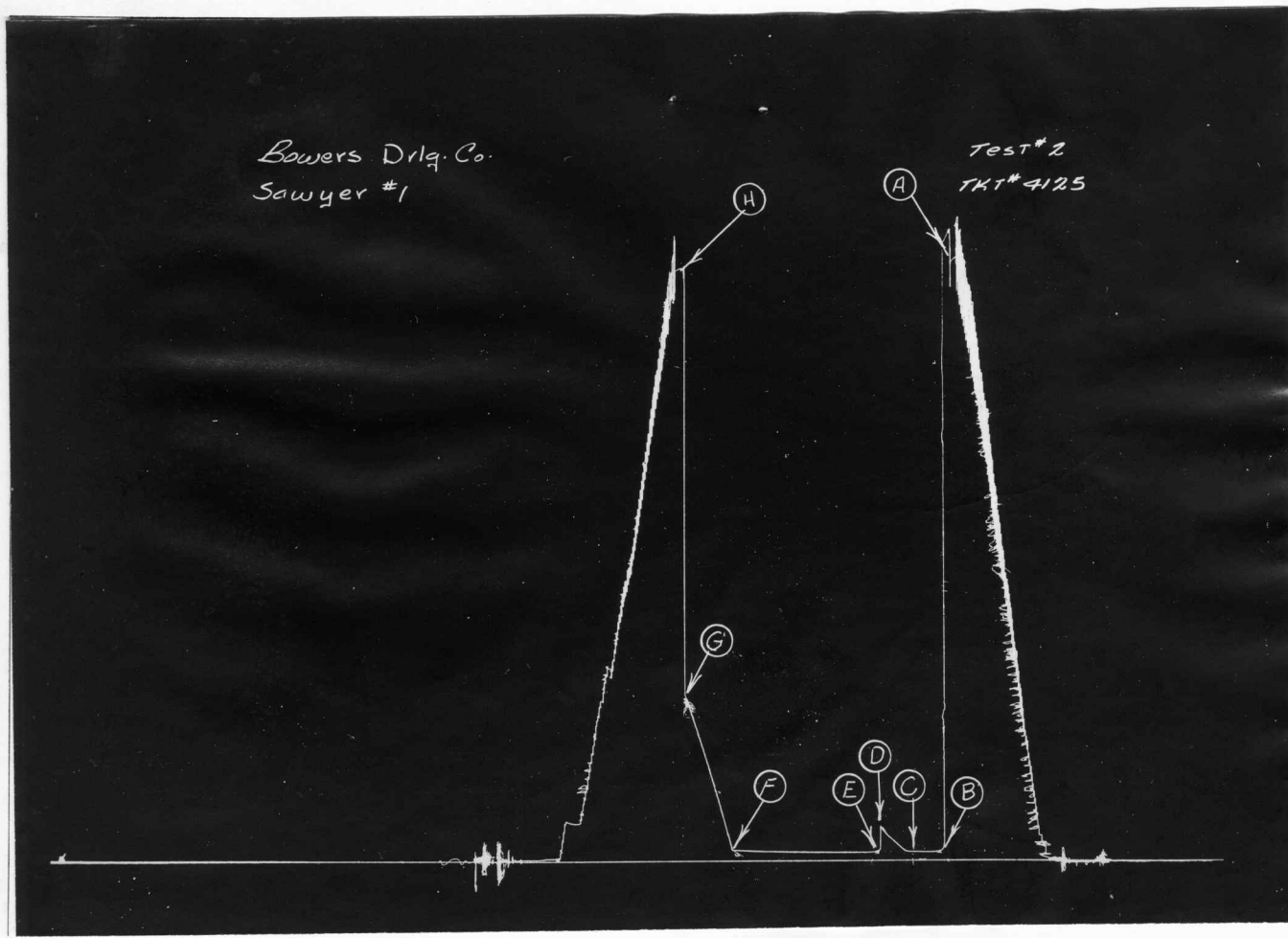
Date September 20, 1964 Test Ticket No. 4125
 Recorder No. 3559 Capacity 4200 Location 4852 Ft.
 Clock No. 5665 Elevation 1606 Derrick Floor Well Temperature 123 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2612</u> P.S.I.	Opened Tool	<u>2:35</u> P	M
B First Initial Flow Pressure	<u>35</u> P.S.I.	First Flow Pressure	<u>10</u> Mins.	<u>10</u> Mins.
C First Final Flow Pressure	<u>35</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>28</u> Mins.
D Initial Closed-in Pressure	<u>148</u> P.S.I.	Second Flow Pressure	<u>93</u> Mins.	<u>90</u> Mins.
E Second Initial Flow Pressure	<u>36</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>28</u> Mins.
F Second Final Flow Pressure	<u>41</u> P.S.I.			
G Final Closed-in Pressure	<u>720</u> P.S.I.			
H Final Hydrostatic Mud	<u>2578</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.	Initial Shut-In	Second Flow Pressure	Final Shut-In
Breakdown: <u>2</u> Inc.	Breakdown: <u>9</u> Inc.	Breakdown: <u>18</u> Inc.	Breakdown: <u>9</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>1</u> Min.	final inc. of <u>0</u> Min.	final inc. of <u>1</u> Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>35</u>	<u>0</u>	<u>35</u>	<u>0</u>	<u>36</u>	<u>0</u>	<u>41</u>
P 2 <u>5</u>	<u>35</u>	<u>3</u>	<u>35</u>	<u>5</u>	<u>36</u>	<u>3</u>	<u>110</u>
<u>10</u>	<u>35</u>	<u>6</u>	<u>35</u>	<u>10</u>	<u>36</u>	<u>6</u>	<u>196</u>
P 3		<u>9</u>	<u>25</u>	<u>15</u>	<u>36</u>	<u>9</u>	<u>273</u>
P 4		<u>12</u>	<u>35</u>	<u>20</u>	<u>36</u>	<u>12</u>	<u>357</u>
P 5		<u>15</u>	<u>54</u>	<u>25</u>	<u>36</u>	<u>15</u>	<u>420</u>
P 6		<u>18</u>	<u>73</u>	<u>30</u>	<u>36</u>	<u>18</u>	<u>489</u>
P 7		<u>21</u>	<u>94</u>	<u>35</u>	<u>36</u>	<u>21</u>	<u>560</u>
P 8		<u>24</u>	<u>112</u>	<u>40</u>	<u>36</u>	<u>24</u>	<u>622</u>
P 9		<u>27</u>	<u>133</u>	<u>45</u>	<u>37</u>	<u>27</u>	<u>689</u>
P 10		<u>28</u>	<u>148</u>	<u>50</u>	<u>37</u>	<u>28</u>	<u>720</u>
P 11				<u>55</u>	<u>38</u>		
P 12				<u>60</u>	<u>38</u>		
P 13				<u>65</u>	<u>38</u>		
P 14				<u>70</u>	<u>39</u>		
P 15				<u>75</u>	<u>39</u>		
P 16				<u>80</u>	<u>40</u>		
P 17				<u>85</u>	<u>40</u>		
P 18				<u>90</u>	<u>41</u>		
P 19							
P 20							



This is an actual photograph of recorder chart.

POINT	PRESSURE
(A) Initial Hydrostatic Mud	2612 PSI
(B) First Initial Flow Pressure	35 PSI
(C) First Final Flow Pressure	35 PSI
(D) Initial Closed-in Pressure	148 PSI
(E) Second Initial Flow Pressure	36 PSI
(F) Second Final Flow Pressure	41 PSI
(G) Final Closed-in Pressure	720 PSI
(H) Final Hydrostatic Mud	2578 PSI