

Company K & E Petroleum, Inc. Lease & Well No. Hemken #A-1
Elevation 1973 Kelly Bushing Formation Arbuckle Effective Pay - Ft. Ticket No. 13722
Date 11/5/81 Sec. 23 Twp. 19S Range 16W County Rush State Kansas
Test Approved by Mark A Thompson Western Representative Karl L West, Jr.
Formation Test No. 1 Interval Tested from 3598 ft. to 3683 ft. Total Depth 3683 ft.
Packer Depth 3592 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth 3597 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 3603 ft. Recorder Number 1051 Cap. 4250
Bottom Recorder Depth (Outside) 3606 ft. Recorder Number 15640 Cap. 6600
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Abercrombie Rig #8 Drill Collar Length - I. D. - in.
Mud Type Chemical-Monpac Viscosity 39 Weight Pipe Length 473 I. D. 2.8 in.
Weight 9.4 Water Loss 9.3 cc. Drill Pipe Length 2873 I. D. 3.8 in.
Chlorides 16,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.
Jars: Make No Serial Number No Anchor Length 85 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. Tool Joint Size 4 1/2 XH in.

Blow: Initial flow period weak to strong in 14 minutes - died to fair. Final flow period weak to fair - no gas to surface.

Recovered 310 ft. of gas in pipe

Recovered 40 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 9:35 A.M. Time Started Off Bottom 1:05 P.M. Maximum Temperature 122
Initial Hydrostatic Pressure (A) 1771 P.S.I.
Initial Flow Period Minutes 45 (B) 62 P.S.I. to (C) 58 P.S.I.
Initial Closed In Period Minutes 45 (D) 58 P.S.I.
Final Flow Period Minutes 60 (E) 58 P.S.I. to (F) 56 P.S.I.
Final Closed In Period Minutes 51 (G) 161 P.S.I.
Final Hydrostatic Pressure (H) 1738 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 11/5/81 Test Ticket No. 13722
 Recorder No. 1051 Capacity 4250 Location 3603 Ft.
 Clock No. - Elevation 1973 Kelly Bushing Well Temperature 122 °F

Point	Pressure	
A Initial Hydrostatic Mud	<u>1771</u>	P.S.I.
B First Initial Flow Pressure	<u>62</u>	P.S.I.
C First Final Flow Pressure	<u>58</u>	P.S.I.
D Initial Closed-in Pressure	<u>58</u>	P.S.I.
E Second Initial Flow Pressure	<u>58</u>	P.S.I.
F Second Final Flow Pressure	<u>56</u>	P.S.I.
G Final Closed-in Pressure	<u>161</u>	P.S.I.
H Final Hydrostatic Mud	<u>1738</u>	P.S.I.

Open Tool
 First Flow Pressure
 Initial Closed-in Pressure
 Second Flow Pressure
 Final Closed-in Pressure

Time Given	Time Computed
9:35P	M
45 Mins.	45 Mins.
45 Mins.	45 Mins.
60 Mins.	60 Mins.
60 Mins.	51 Mins.

PRESSURE BREAKDOWN

First Flow Pressure
 Breakdown: 9 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: 12 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Final Shut-In
 Breakdown: 17 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

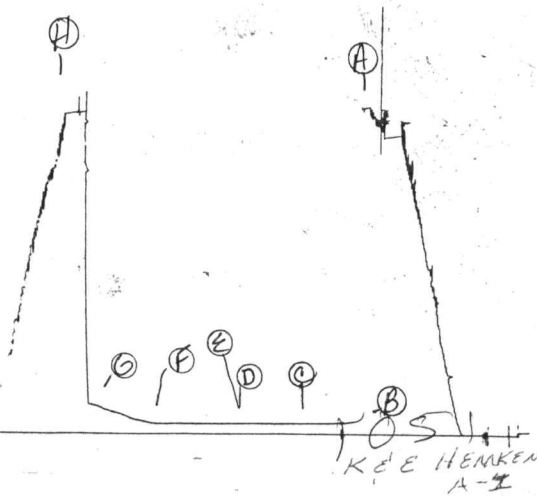
Point Mins.	Press.
P 1 <u>0</u>	<u>62</u>
P 2 <u>5</u>	<u>62</u>
P 3 <u>10</u>	<u>62</u>
P 4 <u>15</u>	<u>62</u>
P 5 <u>20</u>	<u>62</u>
P 6 <u>25</u>	<u>60</u>
P 7 <u>30</u>	<u>60</u>
P 8 <u>35</u>	<u>59</u>
P 9 <u>40</u>	<u>58</u>
P 10 <u>45</u>	<u>58</u>
P 11	
P 12	
P 13	
P 14	
P 15	
P 16	
P 17	
P 18	
P 19	
P 20	

Point Minutes	Press.
<u>0</u>	<u>58</u>
<u>3</u>	<u>58</u>
<u>6</u>	<u>58</u>
<u>9</u>	<u>58</u>
<u>12</u>	<u>58</u>
<u>15</u>	<u>58</u>
<u>18</u>	<u>58</u>
<u>21</u>	<u>58</u>
<u>24</u>	<u>58</u>
<u>27</u>	<u>58</u>
<u>30</u>	<u>58</u>
<u>33</u>	<u>58</u>
<u>36</u>	<u>58</u>
<u>39</u>	<u>58</u>
<u>42</u>	<u>58</u>
<u>45</u>	<u>58</u>

Point Minutes	Press.
<u>0</u>	<u>58</u>
<u>5</u>	<u>58</u>
<u>10</u>	<u>58</u>
<u>15</u>	<u>58</u>
<u>20</u>	<u>58</u>
<u>25</u>	<u>57</u>
<u>30</u>	<u>56</u>
<u>35</u>	<u>56</u>
<u>40</u>	<u>56</u>
<u>45</u>	<u>56</u>
<u>50</u>	<u>56</u>
<u>55</u>	<u>56</u>
<u>60</u>	<u>56</u>

Point Minutes	Press.
<u>0</u>	<u>56</u>
<u>3</u>	<u>57</u>
<u>6</u>	<u>60</u>
<u>9</u>	<u>66</u>
<u>12</u>	<u>70</u>
<u>15</u>	<u>73</u>
<u>18</u>	<u>79</u>
<u>21</u>	<u>90</u>
<u>24</u>	<u>100</u>
<u>27</u>	<u>107</u>
<u>30</u>	<u>114</u>
<u>33</u>	<u>120</u>
<u>36</u>	<u>126</u>
<u>39</u>	<u>133</u>
<u>42</u>	<u>144</u>
<u>45</u>	<u>153</u>
<u>48</u>	<u>157</u>
<u>51</u>	<u>161</u>

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K'E E HENKEN
A-1

Company K & E Petroleum, Inc. Lease & Well No. Hemken #A-1
 Elevation 1973 Kelly Bushing Arbuckle Formation Effective Pay - Ft. Ticket No. 14251
 Date 11/6/81 Sec. 23 Twp. 19S Range 16W County Rush State Kansas
 Test Approved by Mark A Thompson Western Representative Karl L West, Jr.
 Formation Test No. 2 Interval Tested from 3684 ft. to 3693 ft. Total Depth 3693 ft.
 Packer Depth 3679 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 3684 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 3685 ft. Recorder Number 1051 Cap. 4250
 Bottom Recorder Depth (Outside) 3688 ft. Recorder Number 15640 Cap. 6600
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
 Drilling Contractor Abercrombie Rig #8 Drill Collar Length - I. D. - in.
 Mud Type Chemical-Monpac Viscosity 51 Weight Pipe Length 473 I. D. 2.8 in.
 Weight 9.5 Water Loss 9.3 cc. Drill Pipe Length 2873 I. D. 3.8 in.
 Chlorides 17,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.
 Jars: Make No Serial Number No Anchor Length 9 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. Tool Joint Size 4 1/2 XH in.

Blow: Strong. Held steady throughout test.

Recovered 650 ft. of gas in pipe
 Recovered 110 ft. of drilling mud Chlorides 16,000 PPM
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Remarks:

Time Set Packer(s) 12:30 A.M. Time Started Off Bottom 4:00 A.M. Maximum Temperature 123
P.M. P.M.
 Initial Hydrostatic Pressure 1824 P.S.I. (A)
 Initial Flow Period 45 Minutes (B) 86 P.S.I. to (C) 78 P.S.I.
 Initial Closed In Period 45 Minutes (D) 614 P.S.I.
 Final Flow Period 60 Minutes (E) 90 P.S.I. to (F) 79 P.S.I.
 Final Closed In Period 57 Minutes (G) 631 P.S.I.
 Final Hydrostatic Pressure 1771 P.S.I. (H)

WESTERN TESTING CO., INC.

Pressure Data

Date 11/6/81 Recorder No. 1051 Capacity 4250 Test Ticket No. 14251
 Clock No. - Elevation 1973 Kelly Bushing Location 3685 Ft.
 Well Temperature 123 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1824</u>	P.S.I.	<u>12:30P</u>	<u>M</u>
B First Initial Flow Pressure	<u>86</u>	P.S.I.	<u>45</u>	<u>Mins.</u>
C First Final Flow Pressure	<u>78</u>	P.S.I.	<u>45</u>	<u>Mins.</u>
D Initial Closed-in Pressure	<u>614</u>	P.S.I.	<u>60</u>	<u>Mins.</u>
E Second Initial Flow Pressure	<u>90</u>	P.S.I.	<u>60</u>	<u>Mins.</u>
F Second Final Flow Pressure	<u>79</u>	P.S.I.	<u>57</u>	<u>Mins.</u>
G Final Closed-in Pressure	<u>631</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1771</u>	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>19</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>86</u>	<u>0</u>	<u>78</u>	<u>0</u>	<u>90</u>	<u>0</u>	<u>79</u>
P 2 <u>5</u>	<u>86</u>	<u>3</u>	<u>148</u>	<u>5</u>	<u>90</u>	<u>3</u>	<u>129</u>
P 3 <u>10</u>	<u>86</u>	<u>6</u>	<u>224</u>	<u>10</u>	<u>90</u>	<u>6</u>	<u>185</u>
P 4 <u>15</u>	<u>86</u>	<u>9</u>	<u>286</u>	<u>15</u>	<u>90</u>	<u>9</u>	<u>231</u>
P 5 <u>20</u>	<u>86</u>	<u>12</u>	<u>340</u>	<u>20</u>	<u>88</u>	<u>12</u>	<u>278</u>
P 6 <u>25</u>	<u>83</u>	<u>15</u>	<u>394</u>	<u>25</u>	<u>84</u>	<u>15</u>	<u>323</u>
P 7 <u>30</u>	<u>79</u>	<u>18</u>	<u>433</u>	<u>30</u>	<u>83</u>	<u>18</u>	<u>366</u>
P 8 <u>35</u>	<u>78</u>	<u>21</u>	<u>472</u>	<u>35</u>	<u>82</u>	<u>21</u>	<u>398</u>
P 9 <u>40</u>	<u>78</u>	<u>24</u>	<u>502</u>	<u>40</u>	<u>80</u>	<u>24</u>	<u>429</u>
P10 <u>45</u>	<u>78</u>	<u>27</u>	<u>525</u>	<u>45</u>	<u>79</u>	<u>27</u>	<u>457</u>
P11		<u>30</u>	<u>551</u>	<u>50</u>	<u>79</u>	<u>30</u>	<u>483</u>
P12		<u>33</u>	<u>570</u>	<u>55</u>	<u>79</u>	<u>33</u>	<u>506</u>
P13		<u>36</u>	<u>586</u>	<u>60</u>	<u>79</u>	<u>36</u>	<u>528</u>
P14		<u>39</u>	<u>602</u>			<u>39</u>	<u>545</u>
P15		<u>42</u>	<u>609</u>			<u>42</u>	<u>561</u>
P16		<u>45</u>	<u>614</u>			<u>45</u>	<u>574</u>
P17						<u>48</u>	<u>591</u>
P18						<u>51</u>	<u>606</u>
P19						<u>54</u>	<u>619</u>
P20						<u>57</u>	<u>631</u>

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