

Company Gemini Oil Company Lease & Well No. Swander #1
Elevation ---- Formation Indian Cave Effective Pay - Ft. Ticket No. 830
Date 11/29/80 Sec. 29 Twp. 28S Range 9W County Kingman State Kansas
Test Approved by A. G. Siemens Western Representative Jeff Piotrowski
Formation Test No. 1 Interval Tested from 2393 ft. to 2415 ft. Total Depth 2415 ft.
Packer Depth 2387 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth 2393 ft. Size 6 3/4 in. Packer Depth =- ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 2396 ft. Recorder Number 5673 Cap. 5400
Bottom Recorder Depth (Outside) 2412 ft. Recorder Number 1565 Cap. 4900
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor H-30 Drlg. Rig #3 Drill Collar Length 180 I. D. 2.2 in.
Mud Type monpac Viscosity 41 Weight Pipe Length - I. D. - in.
Weight 9.1 Water Loss 32.0 cc. Drill Pipe Length 2193 I. D. 3.8 in.
Chlorides 29,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.
Jars: Make - Serial Number - Anchor Length 22 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 FH in.

Blow: Weak building to fair throughout test.

Recovered 30 ft. of muddy water

Recovered 60 ft. of water Chlorides 42,000 ppm

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 8:08 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 10:38 ~~P.M.~~ ^{A.M.} Maximum Temperature 99°
Initial Hydrostatic Pressure 1162 (A) P.S.I.
Initial Flow Period 30 (B) P.S.I. to (C) 34 P.S.I.
Initial Closed In Period 45 (D) 878 P.S.I.
Final Flow Period 30 (E) 60 P.S.I. to (F) 66 P.S.I.
Final Closed In Period 45 (G) 860 P.S.I.
Final Hydrostatic Pressure 1124 (H) P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 11/29/80 Test Ticket No. 8306
 Recorder No. 5673 Capacity 5400 Location 2396 Ft.
 Clock No. - Elevation - Well Temperature 99 °F

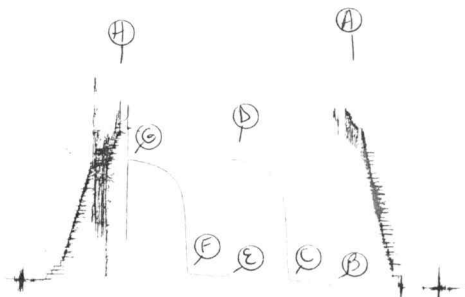
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1162</u> P.S.I.	Open Tool	<u>8:08A</u> M	
B First Initial Flow Pressure	<u>8</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>34</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>878</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>60</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
F Second Final Flow Pressure	<u>66</u> P.S.I.			
G Final Closed-in Pressure	<u>860</u> P.S.I.			
H Final Hydrostatic Mud	<u>1124</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>15</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>8</u>	<u>0</u>	<u>34</u>	<u>0</u>	<u>60</u>	<u>0</u>	<u>66</u>
P 2 <u>5</u>	<u>13</u>	<u>3</u>	<u>402</u>	<u>5</u>	<u>55</u>	<u>3</u>	<u>462</u>
P 3 <u>10</u>	<u>19</u>	<u>6</u>	<u>623</u>	<u>10</u>	<u>55</u>	<u>6</u>	<u>620</u>
P 4 <u>15</u>	<u>23</u>	<u>9</u>	<u>699</u>	<u>15</u>	<u>57</u>	<u>9</u>	<u>694</u>
P 5 <u>20</u>	<u>27</u>	<u>12</u>	<u>746</u>	<u>20</u>	<u>60</u>	<u>12</u>	<u>732</u>
P 6 <u>25</u>	<u>31</u>	<u>15</u>	<u>776</u>	<u>25</u>	<u>63</u>	<u>15</u>	<u>763</u>
P 7 <u>30</u>	<u>34</u>	<u>18</u>	<u>798</u>	<u>30</u>	<u>66</u>	<u>18</u>	<u>784</u>
P 8		<u>21</u>	<u>813</u>			<u>21</u>	<u>801</u>
P 9		<u>24</u>	<u>828</u>			<u>24</u>	<u>814</u>
P10		<u>27</u>	<u>839</u>			<u>27</u>	<u>825</u>
P11		<u>30</u>	<u>852</u>			<u>30</u>	<u>833</u>
P12		<u>33</u>	<u>858</u>			<u>33</u>	<u>842</u>
P13		<u>36</u>	<u>866</u>			<u>36</u>	<u>847</u>
P14		<u>39</u>	<u>871</u>			<u>39</u>	<u>852</u>
P15		<u>42</u>	<u>875</u>			<u>42</u>	<u>857</u>
P16		<u>45</u>	<u>878</u>			<u>45</u>	<u>860</u>
P17							
P18							
P19							
P20							

5673
DST #1

TKT # 8306
I



Company Gemini Oil Company Lease & Well No. Swander #1
Elevation ---- Formation Indian Cave Effective Pay --- Ft. Ticket No. 8307
Date 11/29/80 Sec. 29 Twp. 28S Range 9W County Kingman State Kansas
Test Approved by A. G. Siemens Western Representative Jeff Piotrowski
Formation Test No. 2 Interval Tested from 2412 ft. to 2445 ft. Total Depth 2445 ft.
Packer Depth 2407 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth 2412 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 2415 ft. Recorder Number 5673 Cap. 5400
Bottom Recorder Depth (Outside) 2442 ft. Recorder Number 1565 Cap. 4900
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor H-30 Drlg. Rig #3 Drill Collar Length 180 I. D. 2.2 in.
Mud Type Monpac Viscosity 41 Weight Pipe Length - I. D. - in.
Weight 9.1 Water Loss 32.0 cc. Drill Pipe Length 2218 I. D. 3.8 in.
Chlorides 29,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.
Jars: Make - Serial Number - Anchor Length 33 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 FH in.

Blow: Strong throughout both flow periods.

Recovered 70 ft. of mud (gas cut)
Recovered 180 ft. of water Chlorides 118,000 ppm
Recovered ft. of
Recovered ft. of
Recovered ft. of
Remarks:

Time Set Packer(s) 7:12 ~~AM~~ P.M. Time Started Off Bottom 9:42 ~~AM~~ P.M. Maximum Temperature 110°
Initial Hydrostatic Pressure 1167 (A) P.S.I.
Initial Flow Period 30 Minutes (B) 41 P.S.I. to (C) 87 P.S.I.
Initial Closed In Period 45 Minutes (D) 874 P.S.I.
Final Flow Period 30 Minutes (E) 117 P.S.I. to (F) 134 P.S.I.
Final Closed In Period 45 Minutes (G) 847 P.S.I.
Final Hydrostatic Pressure 1167 (H) P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 11/29/80
 Recorder No. 5673 Capacity 5400 Test Ticket No. 8307
 Clock No. - Elevation ----- Location 2415 Ft.
 Well Temperature 110 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1167</u> P.S.I.	Open Tool	<u>7:12P</u> M	
B First Initial Flow Pressure	<u>41</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>87</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>874</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>117</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
F Second Final Flow Pressure	<u>134</u> P.S.I.			
G Final Closed-in Pressure	<u>847</u> P.S.I.			
H Final Hydrostatic Mud	<u>1167</u> P.S.I.			

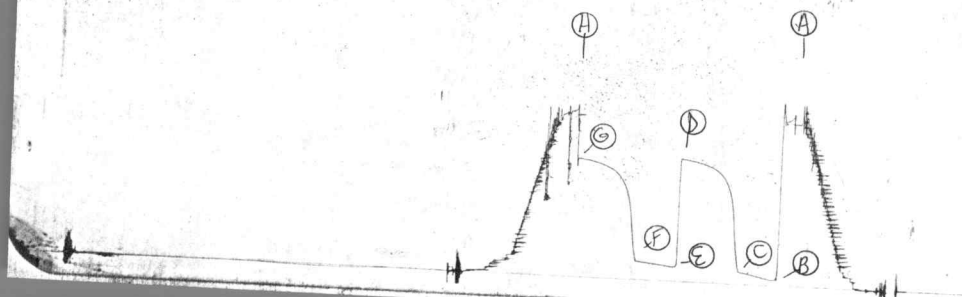
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>15</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>41</u>	<u>0</u>	<u>87</u>	<u>0</u>	<u>117</u>	<u>0</u>	<u>134</u>
P 2 <u>5</u>	<u>46</u>	<u>3</u>	<u>287</u>	<u>5</u>	<u>109</u>	<u>3</u>	<u>325</u>
P 3 <u>10</u>	<u>54</u>	<u>6</u>	<u>555</u>	<u>10</u>	<u>115</u>	<u>6</u>	<u>546</u>
P 4 <u>15</u>	<u>64</u>	<u>9</u>	<u>675</u>	<u>15</u>	<u>119</u>	<u>9</u>	<u>645</u>
P 5 <u>20</u>	<u>74</u>	<u>12</u>	<u>735</u>	<u>20</u>	<u>125</u>	<u>12</u>	<u>702</u>
P 6 <u>25</u>	<u>85</u>	<u>15</u>	<u>770</u>	<u>25</u>	<u>131</u>	<u>15</u>	<u>738</u>
P 7 <u>30</u>	<u>87</u>	<u>18</u>	<u>797</u>	<u>30</u>	<u>134</u>	<u>18</u>	<u>768</u>
P 8 _____	_____	<u>21</u>	<u>814</u>	_____	_____	<u>21</u>	<u>784</u>
P 9 _____	_____	<u>24</u>	<u>828</u>	_____	_____	<u>24</u>	<u>801</u>
P10 _____	_____	<u>27</u>	<u>839</u>	_____	_____	<u>27</u>	<u>811</u>
P11 _____	_____	<u>30</u>	<u>847</u>	_____	_____	<u>30</u>	<u>820</u>
P12 _____	_____	<u>33</u>	<u>855</u>	_____	_____	<u>33</u>	<u>828</u>
P13 _____	_____	<u>36</u>	<u>861</u>	_____	_____	<u>36</u>	<u>836</u>
P14 _____	_____	<u>39</u>	<u>868</u>	_____	_____	<u>39</u>	<u>842</u>
P15 _____	_____	<u>42</u>	<u>872</u>	_____	_____	<u>42</u>	<u>844</u>
P16 _____	_____	<u>45</u>	<u>874</u>	_____	_____	<u>45</u>	<u>847</u>
P17 _____	_____	_____	_____	_____	_____	_____	_____
P18 _____	_____	_____	_____	_____	_____	_____	_____
P19 _____	_____	_____	_____	_____	_____	_____	_____
P20 _____	_____	_____	_____	_____	_____	_____	_____

0673
DST #2

TKT # 8307

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Company Gemini Oil Company Lease & Well No. Swander #1
Elevation ---- Formation ---- Effective Pay ---- Ft. Ticket No. 8462
Date 11/30/80 Sec. 29 Twp. 28S Range 9W County Kingman State Kansas
Test Approved by A. G. Siemens Western Representative Jim Wondra

Formation Test No. 3 Interval Tested from 2610 ft. to 2650 ft. Total Depth 2650 ft.

Packer Depth 2605 ft. Size 6 3/4 in.

Packer Depth - ft. Size - in.

Packer Depth 2610 ft. Size 6 3/4 in.

Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2640 ft.

Recorder Number 2607 Cap. 4150

Bottom Recorder Depth (Outside) 2643 ft.

Recorder Number 3351 Cap. 4000

Below Straddle Recorder Depth - ft.

Recorder Number - Cap. -

Drilling Contractor H-30 Drlg. Rig #3

Drill Collar Length 180 I. D. 2 1/4 in.

Mud Type premix-Monpac Viscosity 40

Weight Pipe Length - I. D. - in.

Weight 9.1 Water Loss 20.2 cc.

Drill Pipe Length 2409 I. D. 3.8 in.

Chlorides 23,000 P.P.M.

Test Tool Length 21 ft. Tool Size 5 1/2 OD in.

Jars: Make - Serial Number -

Anchor Length 40 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 FH in.

Blow: Weak blow throughout flow periods.

Recovered 70 ft. of muddy water

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Remarks: -

Time Set Packer(s) 7:25 ~~AM~~ PM Time Started Off Bottom 9:55 ~~AM~~ PM Maximum Temperature 108°
Initial Hydrostatic Pressure 1309 P.S.I.
Initial Flow Period 30 Minutes (A) 50 P.S.I. to (C) 42 P.S.I.
Initial Closed In Period 51 Minutes (D) 886 P.S.I. 70
Final Flow Period 30 Minutes (E) 70 P.S.I. to (F) 60 P.S.I.
Final Closed In Period 48 Minutes (G) 820 P.S.I.
Final Hydrostatic Pressure 1282 P.S.I. (H)

WESTERN TESTING CO., INC.

Pressure Data

Date 11-30-80
 Recorder No. 3351 Capacity 4000 Location 2643 Ft.
 Clock No. - Elevation - Well Temperature 108 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1309</u> P.S.I.	Open Tool	<u>7:25P</u>	<u>M</u>
B First Initial Flow Pressure	<u>50</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>42</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>51</u> Mins.
D Initial Closed-in Pressure	<u>886</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>70</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	<u>48</u> Mins.
F Second Final Flow Pressure	<u>60</u> P.S.I.			
G Final Closed-in Pressure	<u>820</u> P.S.I.			
H Final Hydrostatic Mud	<u>1282</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>17</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>16</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>50</u>	<u>0</u>	<u>42</u>	<u>0</u>	<u>70</u>	<u>0</u>	<u>60</u>
P 2 <u>5</u>	<u>42</u>	<u>3</u>	<u>45</u>	<u>5</u>	<u>60</u>	<u>3</u>	<u>64</u>
P 3 <u>10</u>	<u>42</u>	<u>6</u>	<u>49</u>	<u>10</u>	<u>60</u>	<u>6</u>	<u>73</u>
P 4 <u>15</u>	<u>42</u>	<u>9</u>	<u>57</u>	<u>15</u>	<u>60</u>	<u>9</u>	<u>89</u>
P 5 <u>20</u>	<u>42</u>	<u>12</u>	<u>71</u>	<u>20</u>	<u>60</u>	<u>12</u>	<u>121</u>
P 6 <u>25</u>	<u>42</u>	<u>15</u>	<u>109</u>	<u>25</u>	<u>60</u>	<u>15</u>	<u>172</u>
P 7 <u>30</u>	<u>42</u>	<u>18</u>	<u>170</u>	<u>30</u>	<u>60</u>	<u>18</u>	<u>240</u>
P 8 _____	_____	<u>21</u>	<u>283</u>	_____	_____	<u>21</u>	<u>330</u>
P 9 _____	_____	<u>24</u>	<u>436</u>	_____	_____	<u>24</u>	<u>444</u>
P10 _____	_____	<u>27</u>	<u>566</u>	_____	_____	<u>27</u>	<u>537</u>
P11 _____	_____	<u>30</u>	<u>643</u>	_____	_____	<u>30</u>	<u>604</u>
P12 _____	_____	<u>33</u>	<u>709</u>	_____	_____	<u>33</u>	<u>658</u>
P13 _____	_____	<u>36</u>	<u>760</u>	_____	_____	<u>36</u>	<u>704</u>
P14 _____	_____	<u>39</u>	<u>801</u>	_____	_____	<u>39</u>	<u>746</u>
P15 _____	_____	<u>42</u>	<u>829</u>	_____	_____	<u>42</u>	<u>771</u>
P16 _____	_____	<u>45</u>	<u>851</u>	_____	_____	<u>45</u>	<u>795</u>
P17 _____	_____	<u>48</u>	<u>874</u>	_____	_____	<u>48</u>	<u>820</u>
P18 _____	_____	<u>51</u>	<u>886</u>	_____	_____	_____	_____
P19 _____	_____	_____	_____	_____	_____	_____	_____
P20 _____	_____	_____	_____	_____	_____	_____	_____

TKT # 8462
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