

Company Lance Drilling, Inc. Lease & Well No. Horacek #1  
 Elevation 2180 Kelly Bushing Formation Arbuckle Effective Pay - Ft. Ticket No. 10127  
 Date 1/22/81 Sec. 35 Twp. 19S Range 18W County Rush State Kansas  
 Test Approved by Galen B Babcock Western Representative Steve Michellich

Formation Test No. 1 Interval Tested from 3977 ft. to 4005 ft. Total Depth 4005 ft.  
 Packer Depth 3977 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 3972 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3979 ft. Recorder Number 1561 Cap. 3200  
 Bottom Recorder Depth (Outside) 3982 ft. Recorder Number 1134 Cap. 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Murfin Rig #15 Drill Collar Length 180 I. D. 2.25 in.  
 Mud Type Starch Viscosity 40 Weight Pipe Length 868 I. D. 2.76 in.  
 Weight 9.7 Water Loss 14.6 cc. Drill Pipe Length 2911 I. D. 3.8 in.  
 Chlorides 47,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.  
 Jars: Make None Serial Number - Anchor Length 28 ft. Size 5 1/2 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 died in 10 minutes initial flow period. No blow final flow period.

Recovered 3 ft. of mud  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Remarks: \_\_\_\_\_

Time Set Packer(s) 11:20 A.M. Time Started Off Bottom 1:20 P.M. Maximum Temperature 108  
 Initial Hydrostatic Pressure ..... (A) 2150 P.S.I.  
 Initial Flow Period ..... Minutes 30 (B) 36 P.S.I. to (C) 10 P.S.I.  
 Initial Closed In Period ..... Minutes 30 (D) 13 P.S.I.  
 Final Flow Period ..... Minutes 30 (E) 8 P.S.I. to (F) 4 P.S.I.  
 Final Closed In Period ..... Minutes 30 (G) 5 P.S.I.  
 Final Hydrostatic Pressure ..... (H) 2103 P.S.I.

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date 1/22/81

Recorder No. 1561

Capacity 3200

Test Ticket No. 10127

Clock No. - Elevation 2180 Kelly Bushing

Location 3979 Ft.

Well Temperature 108 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2150</u>	P.S.I.	<u>11:20P</u>	<u>M</u>
B First Initial Flow Pressure	<u>36</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
C First Final Flow Pressure	<u>10</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>13</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>8</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
F Second Final Flow Pressure	<u>4</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
G Final Closed-in Pressure	<u>5</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2103</u>	P.S.I.		

**PRESSURE BREAKDOWN**

**First Flow Pressure**  
Breakdown: 6 Inc.  
of 5 mins. and a  
final inc. of 0 Min.

**Initial Shut-In**  
Breakdown: 10 Inc.  
of 3 mins. and a  
final inc. of 0 Min.

**Second Flow Pressure**  
Breakdown: 6 Inc.  
of 5 mins. and a  
final inc. of 0 Min.

**Final Shut-In**  
Breakdown: 10 Inc.  
of 3 mins. and a  
final inc. of 0 Min.

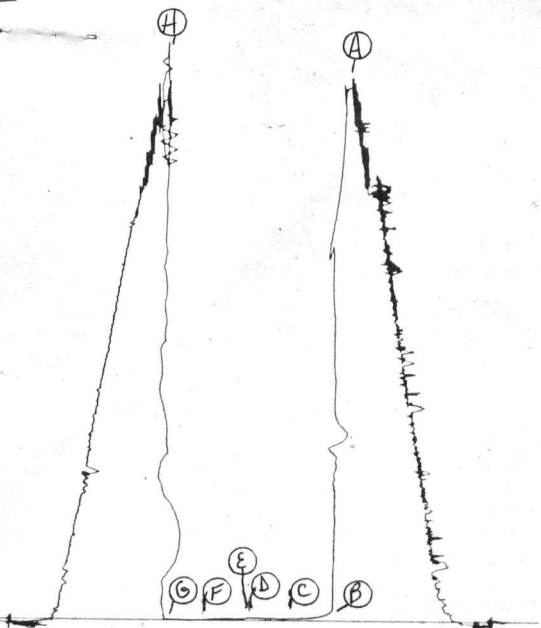
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>36</u>	<u>0</u>	<u>10</u>	<u>0</u>	<u>8</u>	<u>0</u>	<u>4</u>
P 2 <u>5</u>	<u>27</u>	<u>3</u>	<u>10</u>	<u>5</u>	<u>8</u>	<u>3</u>	<u>3</u>
P 3 <u>10</u>	<u>19</u>	<u>6</u>	<u>9</u>	<u>10</u>	<u>8</u>	<u>6</u>	<u>3</u>
P 4 <u>15</u>	<u>14</u>	<u>9</u>	<u>9</u>	<u>15</u>	<u>8</u>	<u>9</u>	<u>3</u>
P 5 <u>20</u>	<u>13</u>	<u>12</u>	<u>10</u>	<u>20</u>	<u>7</u>	<u>12</u>	<u>3</u>
P 6 <u>25</u>	<u>11</u>	<u>15</u>	<u>12</u>	<u>25</u>	<u>5</u>	<u>15</u>	<u>3</u>
P 7 <u>30</u>	<u>10</u>	<u>18</u>	<u>10</u>	<u>30</u>	<u>4</u>	<u>18</u>	<u>4</u>
P 8 _____	_____	<u>21</u>	<u>12</u>	_____	_____	<u>21</u>	<u>4</u>
P 9 _____	_____	<u>24</u>	<u>13</u>	_____	_____	<u>24</u>	<u>4</u>
P10 _____	_____	<u>27</u>	<u>13</u>	_____	_____	<u>27</u>	<u>4</u>
P11 _____	_____	<u>30</u>	<u>13</u>	_____	_____	<u>30</u>	<u>5</u>
P12 _____	_____	_____	_____	_____	_____	_____	_____
P13 _____	_____	_____	_____	_____	_____	_____	_____
P14 _____	_____	_____	_____	_____	_____	_____	_____
P15 _____	_____	_____	_____	_____	_____	_____	_____
P16 _____	_____	_____	_____	_____	_____	_____	_____
P17 _____	_____	_____	_____	_____	_____	_____	_____
P18 _____	_____	_____	_____	_____	_____	_____	_____
P19 _____	_____	_____	_____	_____	_____	_____	_____
P20 _____	_____	_____	_____	_____	_____	_____	_____

TKT # 10127

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1561

10127



Company Lance Drilling, Inc. Lease & Well No. Horacek #1  
 Elevation 2180 Kelly Bushing Formation Arbuckle Effective Pay - Ft. Ticket No. 10128  
 Date 1/23/81 Sec. 35 Twp. 19S Range 18W County Rush State Kansas  
 Test Approved by Galen B Babcock Western Representative Steve Michellich

Formation Test No. 2 Interval Tested from 4003 ft. to 4015 ft. Total Depth 4015 ft.

Packer Depth 4003 ft. Size - in. Packer Depth - ft. Size - in.

Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4005 ft. Recorder Number 1561 Cap. 3200

Bottom Recorder Depth (Outside) 4008 ft. Recorder Number 1143 Cap. 4500

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

Drilling Contractor Murfin Rig #15 Drill Collar Length 180 I. D. 2.25 in.

Mud Type - Viscosity 39 Weight Pipe Length 868 I. D. 2.76 in.

Weight 9.7 Water Loss 13.6 cc. Drill Pipe Length 2940 I. D. 3.8 in.

Chlorides 44,000 P.P.M. Test Tool Length 15 ft. Tool Size 5½ in.

Jars: Make None Serial Number - Anchor Length 12 ft. Size 5½ 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 4½FH in.

Blow: \_\_\_\_\_

Recovered 270 ft. of mud

Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Remarks: Packer did not hold MISRUN

Time Set Packer(s) 2:50 ~~A.M.~~ P.M. Time Started Off Bottom 3:00 ~~A.M.~~ P.M. Maximum Temperature -

Initial Hydrostatic Pressure ..... (A) 2144 P.S.I.

Initial Flow Period ..... Minutes - (B) - P.S.I. to (C) - P.S.I.

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

Final Flow Period ..... Minutes - (E) - P.S.I. to (F) - P.S.I.

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

Final Hydrostatic Pressure ..... (H) 2144 P.S.I.

TKT # 10128

1124

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TKT # 10128

1561

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10128



Company Lance Drilling, Inc. Lease & Well No. Horacek #1  
 Elevation 2180 Kelly Bushing Formation Arbuckle Effective Pay - Ft. Ticket No. 10129'  
 Date 1/23/81 Sec. 35 Twp. 19S Range 18W County Rush State Kansas  
 Test Approved by Galen B Babcock Western Representative Steve Michellich

Formation Test No. 3 Interval Tested from 3978 ft. to 4015 ft. Total Depth 4015 ft.  
 Packer Depth 3978 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 3973 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3980 ft. Recorder Number 1561 Cap. 3200  
 Bottom Recorder Depth (Outside) 3983 ft. Recorder Number 1134 Cap. 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Murfin Rig #15 Drill Collar Length 180 I. D. 2.25 in.  
 Mud Type Starch Viscosity 39 Weight Pipe Length 868 I. D. 2.76 in.  
 Weight 9.7 Water Loss 13.6 cc. Drill Pipe Length 2880 I. D. 3.8 in.  
 Chlorides 44,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.  
 Jars: Make None Serial Number - Anchor Length 37 ft. Size 5 1/2 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 died in 13 minutes initial flow period. No blow on final flow period.

Recovered 70 ft. of mud  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Remarks: \_\_\_\_\_

Time Set Packer(s) 7:35 <sup>A.M.</sup>/<sub>P.M.</sub> Time Started Off Bottom 9:35 <sup>A.M.</sup>/<sub>P.M.</sub> Maximum Temperature 110  
 Initial Hydrostatic Pressure ..... (A) 2098 P.S.I.  
 Initial Flow Period ..... Minutes 30 (B) 53 P.S.I. to (C) 36 P.S.I.  
 Initial Closed In Period ..... Minutes 30 (D) 648 \* P.S.I.  
 Final Flow Period ..... Minutes 35 (E) 60 P.S.I. to (F) 30 P.S.I.  
 Final Closed In Period ..... Minutes 30 (G) 92 P.S.I.  
 Final Hydrostatic Pressure ..... (H) 2034 P.S.I.

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date 1/23/81 Test Ticket No. 10129  
 Recorder No. 1561 Capacity 3200 Location 3980 Ft.  
 Clock No. -- Elevation 2180 Kelly Bushing Well Temperature 110 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2098</u>	P.S.I.	<u>7:35P</u>	<u>M</u>
B First Initial Flow Pressure	<u>53</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
C First Final Flow Pressure	<u>36</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
D Initial Closed-in Pressure	<u>648 *</u>	P.S.I.	<u>30</u>	Mins. <u>35</u> Mins.
E Second Initial Flow Pressure	<u>60</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
F Second Final Flow Pressure	<u>30</u>	P.S.I.		
G Final Closed-in Pressure	<u>92</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2034</u>	P.S.I.		

\* Pressures questionable due to tool being picked up too high and trapping shut-in pressure.

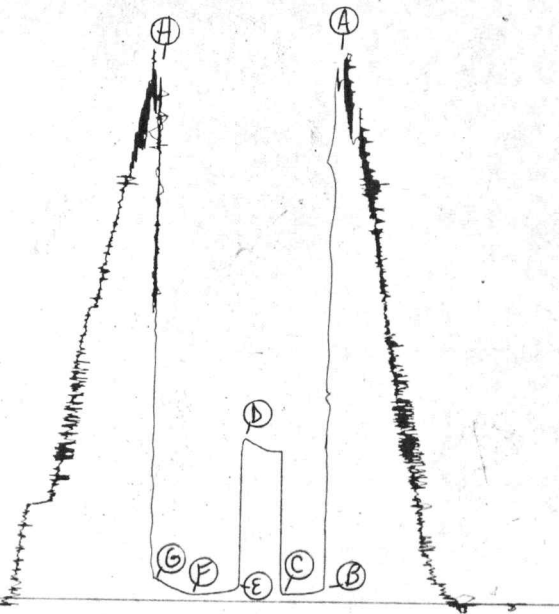
**PRESSURE BREAKDOWN**

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>7</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>53</u>	<u>0</u>	<u>36</u>	<u>0</u>	<u>60</u>	<u>0</u>	<u>30</u>
P 2 <u>5</u>	<u>47</u>	<u>3</u>	<u>597 *</u>	<u>5</u>	<u>49</u>	<u>3</u>	<u>33</u>
P 3 <u>10</u>	<u>41</u>	<u>6</u>	<u>597 *</u>	<u>10</u>	<u>42</u>	<u>6</u>	<u>38</u>
P 4 <u>15</u>	<u>36</u>	<u>9</u>	<u>597 *</u>	<u>15</u>	<u>39</u>	<u>9</u>	<u>44</u>
P 5 <u>20</u>	<u>36</u>	<u>12</u>	<u>599 *</u>	<u>20</u>	<u>36</u>	<u>12</u>	<u>50</u>
P 6 <u>25</u>	<u>36</u>	<u>15</u>	<u>604 *</u>	<u>25</u>	<u>33</u>	<u>15</u>	<u>57</u>
P 7 <u>30</u>	<u>36</u>	<u>18</u>	<u>613 *</u>	<u>30</u>	<u>30</u>	<u>18</u>	<u>64</u>
P 8		<u>21</u>	<u>621 *</u>	<u>35</u>	<u>30</u>	<u>21</u>	<u>74</u>
P 9		<u>24</u>	<u>629 *</u>			<u>24</u>	<u>83</u>
P10		<u>27</u>	<u>641 *</u>			<u>27</u>	<u>89</u>
P11		<u>30</u>	<u>648 *</u>			<u>30</u>	<u>92</u>
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

TKT # 10129  
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10129



Company Lance Drilling, Inc. Lease & Well No. Horacek #1  
 Elevation 2180 Kelly Bushing Formation Arbuckle Effective Pay - Ft. Ticker No. 10130  
 Date 1/24/81 Sec. 35 Twp. 19S Range 18W County Rush State Kansas  
 Test Approved by Galen B Babcock Western Representative Steve Michellich

Formation Test No. 4 Interval Tested from 3978 ft. to 4028 ft. Total Depth 4028 ft.  
 Packer Depth 3978 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 3973 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3980 ft. Recorder Number 1561 Cap. 3200  
 Bottom Recorder Depth (Outside) 3983 ft. Recorder Number 1134 Cap. 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Murfin Rig #15 Drill Collar Length 180 I. D. 2.25 in.  
 Mud Type Starch Viscosity 56 Weight Pipe Length 868 I. D. 2.76 in.  
 Weight 9.7 Water Loss 13.6 cc. Drill Pipe Length 2880 I. D. 3.8 in.  
 Chlorides 47,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.  
 Jars: Make None Serial Number - Anchor Length 50 ft. Size 5 1/2 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 died in 18 minutes initial flow period. No blow final flow period.

Recovered 10 ft. of mud  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
 Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Remarks: \_\_\_\_\_

Time Set Packer(s) 12:45 ~~AM~~ P.M. Time Started Off Bottom 2:45 ~~AM~~ P.M. Maximum Temperature 110  
 Initial Hydrostatic Pressure ..... (A) 2127 P.S.I.  
 Initial Flow Period ..... Minutes 30 (B) 86 P.S.I. to (C) 65 P.S.I.  
 Initial Closed In Period ..... Minutes 30 (D) 860 P.S.I.  
 Final Flow Period ..... Minutes 30 (E) 93 P.S.I. to (F) 63 P.S.I.  
 Final Closed In Period ..... Minutes 27 (G) 736 P.S.I.  
 Final Hydrostatic Pressure ..... (H) 2014 P.S.I.

**WESTERN TESTING CO., INC.**

**Pressure Data**

Date 1/24/81 Test Ticket No. 10130  
 Recorder No. 1561 Capacity 3200 Location 3980 Ft.  
 Clock No. - Elevation 2180 Kelly Bushing Well Temperature 110 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2127</u> P.S.I.	Open Tool	<u>12:45P</u> M	
B First Initial Flow Pressure	<u>86</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>65</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>860</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>93</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>27</u> Mins.
F Second Final Flow Pressure	<u>63</u> P.S.I.			
G Final Closed-in Pressure	<u>736</u> P.S.I.			
H Final Hydrostatic Mud	<u>2014</u> P.S.I.			

**PRESSURE BREAKDOWN**

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.
	of <u>5</u> mins.	and a final inc. of <u>0</u> Min.	of <u>3</u> mins.	and a final inc. of <u>0</u> Min.	of <u>5</u> mins.	and a final inc. of <u>0</u> Min.	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>86</u>	<u>0</u>	<u>65</u>	<u>0</u>	<u>93</u>	<u>0</u>	<u>63</u>	
P 2 <u>5</u>	<u>75</u>	<u>3</u>	<u>97</u>	<u>5</u>	<u>80</u>	<u>3</u>	<u>129</u>	
P 3 <u>10</u>	<u>71</u>	<u>6</u>	<u>254</u>	<u>10</u>	<u>72</u>	<u>6</u>	<u>240</u>	
P 4 <u>15</u>	<u>69</u>	<u>9</u>	<u>415</u>	<u>15</u>	<u>69</u>	<u>9</u>	<u>347</u>	
P 5 <u>20</u>	<u>68</u>	<u>12</u>	<u>524</u>	<u>20</u>	<u>67</u>	<u>12</u>	<u>451</u>	
P 6 <u>25</u>	<u>66</u>	<u>15</u>	<u>613</u>	<u>25</u>	<u>63</u>	<u>15</u>	<u>535</u>	
P 7 <u>30</u>	<u>65</u>	<u>18</u>	<u>699</u>	<u>30</u>	<u>63</u>	<u>18</u>	<u>597</u>	
P 8		<u>21</u>	<u>762</u>			<u>21</u>	<u>659</u>	
P 9		<u>24</u>	<u>814</u>			<u>24</u>	<u>704</u>	
P10		<u>27</u>	<u>847</u>			<u>27</u>	<u>736</u>	
P11		<u>30</u>	<u>860</u>					
P12								
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TKT #10130

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