



Home Office: Wichita, Kansas 67201
P. O. Box 1599 (316) 838-0601

Company Graves Drilling Co., Inc., ETAL Lease & Well No. Kostner #3
Elevation - Formation Mississippi Effective Pay - Ft. Ticket No. 21713
Date 12-2-76 Sec. 36 Twp. 28S Range 6W County Kingman State Kansas
Test Approved by Fred Stump Western Representative Bill Hager
Formation Test No. 1 O.K. X Misrun - Interval Tested From 3913' to 3935' Total Depth 3935'
Size Main Hole 7 7/8 Rat Hole - Conv. X B.T. - Damaged - Yes X No Conv. - B.T. X Damaged - Yes X No
Top Packer Depth 3908 Ft. Size 6 3/4 Bottom Packer Depth 3913 Ft. Size 6 3/4
Straddle - Conv. - B.T. - Damaged - Yes No Packer Depth - Ft. Size -
Tool Size 5 1/2 OD Tool Joint Size 4 1/2 FH Anchor Length 22 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.
RECORDERS Depth 3925 Ft. Clock No. 6866 Depth 3928 Ft. Clock No. 4763
Top Make Kuster Cap. 4150 No. 2604 Inside Outside Bottom Make Kuster Cap. 4000 No. 3660 Inside Outside
Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside
Time Set Packer 9:50A. M
Tool Open I.F.P. From 9:52A M. to 10:07A M. - Hr. 15 Min. From (B) 149 P.S.I. To (C) 155 P.S.I.
Tool Closed I.C.I.P. From 10:07A M. to 10:52A M. - Hr. 45 Min. (D) 1327 P.S.I.
Tool Open F.F.P. From 10:52A M. to 11:52A M. - Hr. 60 Min. From (E) 179 P.S.I. To (F) 155 P.S.I.
Tool Closed F.C.I.P. From 11:52A M. to 12:37P M. - Hr. 45 Min. (G) 1272 P.S.I.
Initial Hydrostatic Pressure (A) 2076 P.S.I. Final Hydrostatic Pressure (H) 2063 P.S.I. Maximum Temp. 121

INFORMATION

BLOW Strong blow throughout test. Gas to surface in 3 minutes, see attached sheet for gas measurements.

Did Well Flow - Yes X No Recovery Total Ft. 270' total recovery. 90' of heavy oil and gas cut mud, 170' of gas cut muddy oil, 10' of water.

Reversed Out - Yes X No Mud Type Starch Viscosity 55 Weight 9.6 Water Loss 8.0 cc. Chlorides 48,000 PPM

EXTRA EQUIPMENT: Type Circ. Sub. Pin Safety Joint - Jars: Size - In. Make - Ser. No. -

Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where? -

DRILLING CONTRACTOR Graves Drilling Co., Inc. Length Drill Pipe? 3469 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 FH In.

Length Weight Pipe 300 Ft. I.D. Weight Pipe 3 1/2 In. Tool Joint Size 4 1/2 XH In. Length Drill Collars 124 Ft. I.D. Drill Collars 2 1/4 In.

Tool Joint Size 4 1/2 H-90 In. Length D.S.T. Tool 42 Ft.

Remarks: Clock #4763 stopped.

WESTERN TESTING CO., INC.

Pressure Data

Date 12-2-76 Test Ticket No. 21713
 Recorder No. 2604 Capacity 4150 Location 3925 Ft.
 Clock No. 6866 Elevation - Well Temperature 121 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2076	P.S.I.	9:50A.	M
B First Initial Flow Pressure	149	P.S.I.	15	Mins. 15 Mins.
C First Final Flow Pressure	155	P.S.I.	45	Mins. 45 Mins.
D Initial Closed-in Pressure	1327	P.S.I.	60	Mins. 60 Mins.
E Second Initial Flow Pressure	179	P.S.I.	45	Mins. 45 Mins.
F Second Final Flow Pressure	155	P.S.I.		
G Final Closed-in Pressure	1272	P.S.I.		
H Final Hydrostatic Mud	2063	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>3</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>12</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>	149	<u>0</u>	155	<u>0</u>	179	<u>0</u>	155
P 2 <u>5</u>	148	<u>3</u>	1205	<u>5</u>	162	<u>3</u>	1105
P 3 <u>10</u>	153	<u>6</u>	1272	<u>10</u>	155	<u>6</u>	1169
P 4 <u>15</u>	155	<u>9</u>	1295	<u>15</u>	153	<u>9</u>	1203
P 5		<u>12</u>	1305	<u>20</u>	150	<u>12</u>	1219
P 6		<u>15</u>	1311	<u>25</u>	150	<u>15</u>	1232
P 7		<u>18</u>	1315	<u>30</u>	151	<u>18</u>	1239
P 8		<u>21</u>	1318	<u>35</u>	152	<u>21</u>	1247
P 9		<u>24</u>	1320	<u>40</u>	153	<u>24</u>	1251
P10		<u>27</u>	1322	<u>45</u>	153	<u>27</u>	1255
P11		<u>30</u>	1324	<u>50</u>	154	<u>30</u>	1259
P12		<u>33</u>	1325	<u>55</u>	155	<u>33</u>	1263
P13		<u>36</u>	1326	<u>60</u>	155	<u>36</u>	1265
P14		<u>39</u>	1326			<u>39</u>	1269
P15		<u>42</u>	1327			<u>42</u>	1271
P16		<u>45</u>	1327			<u>45</u>	1272
P17							
P18							
P19							
P20							



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GAS FLOW REPORT

Date 12-2-76 Ticket 21713 Company Graves Drilling Co., Inc. ETAL
Well Name and No. Kostner #3 Dst No. 1 Interval Tested 3913' - 3935'
County Kingman State Kansas Sec. 36 Twp. 28S Rg. 6W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
PRE FLOW						
10:02AM	10 min.	62" of water	1 1/2" orifice	plate		549,000 C.F.P.D.
10:07AM	15 min.	66" of water	1 1/2" orifice	plate		565,000 C.F.P.D.
Gas to surface in 3 minutes.						

SECOND FLOW						
11:02AM	10 min.	3 1/4 PSIG	1 1/2" orifice	plate		681,000 C.F.P.D.
11:12AM	20 min.	3 PSIG	1 1/2" orifice	plate		654,000 C.F.P.D.
11:22AM	30 min.	2 3/4 PSIG	1 1/2" orifice	plate		623,000 C.F.P.D.
11:32AM	40 min.	2 1/2 PSIG	1 1/2" orifice	plate		595,000 C.F.P.D.
11:42AM	50 min.	2 1/2 PSIG	1 1/2" orifice	plate		595,000 C.F.P.D.
11:52AM	60 min.	2 1/4 PSIG	1 1/2" orifice	plate		561,000 C.F.P.D.

GAS BOTTLE

Serial No. - Date Bottle Filled 12-2-76 Date to be Invoiced 12-2-76

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1% per month, equal to 12% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME Graves Drilling Co., Inc., ETAL

Authorized by Fred Stump

TKT #21713

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(C)

(B)



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Company Graves Drilling Co., Inc., ETAL Lease & Well No. Kostner #3
Elevation - Formation Mississippi Effective Pay - Ft. Ticket No. 21714
Date 12-3-76 Sec. 36 Twp. 28S Range 6W County Kingman State Kansas
Test Approved by Fred Stump Western Representative Bill Hager
Formation Test No. 2 O.K. ☒ Misrun ☐ Interval Tested From 3938' to 3950' Total Depth 3950'
Size Main Hole 7 7/8 Rat Hole ☐ Conv. ☒ B.T. ☐ Damaged ☐ Yes ☒ No Conv. ☐ B.T. ☒ Damaged ☐ Yes ☒ No
Top Packer Depth 3933 Ft. Size 6 3/4 Bottom Packer Depth 3938 Ft. Size 6 3/4
Straddle ☐ Conv. ☐ B.T. ☐ Damaged ☐ Yes ☐ No Packer Depth - Ft. Size -
Tool Size 5 1/2 OD Tool Joint Size 4 1/2 FH Anchor Length 12 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.
RECORDERS Depth 3941 Ft. Clock No. 6866 Depth 3944 Ft. Clock No. 4763
Top Make Kuster Cap. 4150 No. 2604 Inside Outside Bottom Make Kuster Cap. 4000 No. 3660 Inside Outside
Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside
Time Set Packer 12:34 M
Tool Open I.F.P. From 12:36 M. to 12:56 M. - Hr. 20 Min. From (B) 15 P.S.I. To (C) 19 P.S.I.
Tool Closed I.C.I.P. From 12:45 M. to 1:41 M. - Hr. 45 Min (D) 1257 P.S.I.
Tool Open F.F.P. From 1:41 M. to 2:41 M. - Hr. 60 Min. From (E) 38 P.S.I. To (F) 50 P.S.I.
Tool Closed F.C.I.P. From 2:41 M. to 3:26 M. - Hr. 45 Min. (G) 1094 P.S.I.
Initial Hydrostatic Pressure (A) 2092 P.S.I. Final Hydrostatic Pressure (H) 2092 P.S.I. Maximum Temp. 122

INFORMATION

BLOW Weak blow throughout test.

Did Well Flow ☐ Yes ☒ No Recovery Total Ft. 40' of muddy water.

Reversed Out ☐ Yes ☒ No Mud Type Starch Viscosity 46 Weight 9.8 Water Loss 13.2 cc. Chlorides 49,000 PPM

EXTRA EQUIPMENT: Type Circ. Sub. Pin Safety Joint ☐ Jars: Size - In. Make - Ser. No. -

Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where? -

DRILLING CONTRACTOR Graves Drilling Co., Inc. Length Drill Pipe? 3492 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 FH In.

Length Weight Pipe 300 Ft. I.D. Weight Pipe 2 1/2 In. Tool Joint Size 4 1/2 FH In. Length Drill Collars 124 Ft. I.D. Drill Collars 2 1/4 In.

Tool Joint Size 4 1/2 H-90 In. Length D.S.T. Tool 34 Ft.

Remarks:

WESTERN TESTING CO., INC.

• Pressure Data

Date 12-3-76 Test Ticket No. 21714
 Recorder No. 2604 Capacity 4150 Location 3941 Ft.
 Clock No. 6866 Elevation - Well Temperature 122 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2092	P.S.I.	12:34	M
B First Initial Flow Pressure	15	P.S.I.	20	Mins.
C First Final Flow Pressure	19	P.S.I.	45	Mins.
D Initial Closed-in Pressure	1257	P.S.I.	60	Mins.
E Second Initial Flow Pressure	38	P.S.I.	45	Mins.
F Second Final Flow Pressure	50	P.S.I.		
G Final Closed-in Pressure	1094	P.S.I.		
H Final Hydrostatic Mud	2092	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>4</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>12</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>15</u>	<u>0</u>	<u>19</u>	<u>0</u>	<u>38</u>	<u>0</u>	<u>50</u>
P 2 <u>5</u>	<u>15</u>	<u>3</u>	<u>40</u>	<u>5</u>	<u>28</u>	<u>3</u>	<u>60</u>
P 3 <u>10</u>	<u>18</u>	<u>6</u>	<u>124</u>	<u>10</u>	<u>30</u>	<u>6</u>	<u>81</u>
P 4 <u>15</u>	<u>19</u>	<u>9</u>	<u>393</u>	<u>15</u>	<u>32</u>	<u>9</u>	<u>126</u>
P 5 <u>20</u>	<u>19</u>	<u>12</u>	<u>753</u>	<u>20</u>	<u>35</u>	<u>12</u>	<u>205</u>
P 6		<u>15</u>	<u>931</u>	<u>25</u>	<u>37</u>	<u>15</u>	<u>354</u>
P 7		<u>18</u>	<u>1036</u>	<u>30</u>	<u>37</u>	<u>18</u>	<u>559</u>
P 8		<u>21</u>	<u>1092</u>	<u>35</u>	<u>40</u>	<u>21</u>	<u>730</u>
P 9		<u>24</u>	<u>1132</u>	<u>40</u>	<u>43</u>	<u>24</u>	<u>841</u>
P10		<u>27</u>	<u>1161</u>	<u>45</u>	<u>45</u>	<u>27</u>	<u>910</u>
P11		<u>30</u>	<u>1184</u>	<u>50</u>	<u>47</u>	<u>30</u>	<u>954</u>
P12		<u>33</u>	<u>1205</u>	<u>55</u>	<u>49</u>	<u>33</u>	<u>994</u>
P13		<u>36</u>	<u>1218</u>	<u>60</u>	<u>50</u>	<u>36</u>	<u>1025</u>
P14		<u>39</u>	<u>1230</u>			<u>39</u>	<u>1051</u>
P15		<u>42</u>	<u>1240</u>			<u>42</u>	<u>1075</u>
P16		<u>45</u>	<u>1251</u>			<u>45</u>	<u>1094</u>
P17							
P18							
P19							
P20							

TKT #21714

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(H)

(A)

(G)

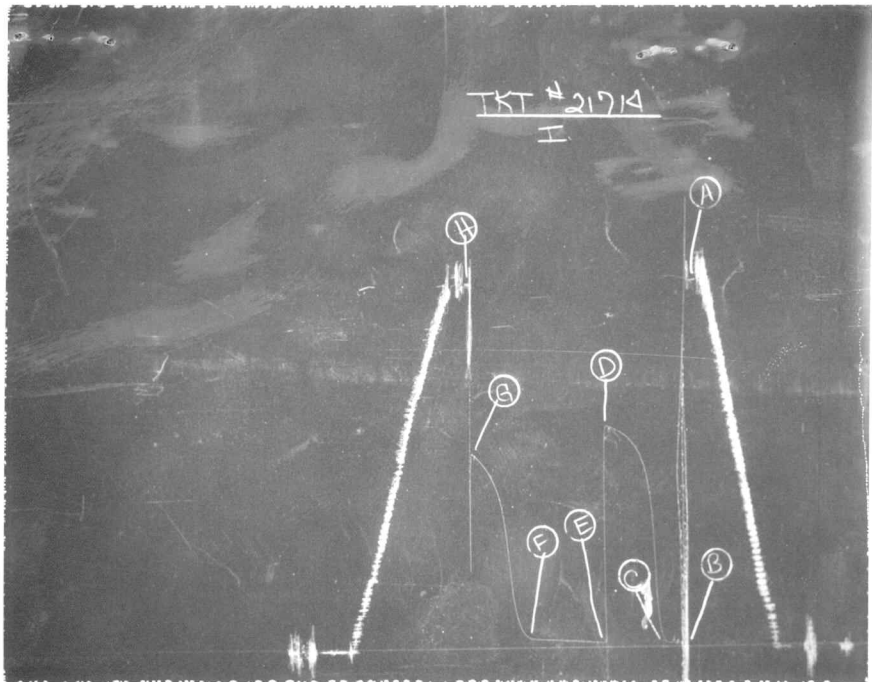
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Home Office: Wichita, Kansas 67201
P. O. Box 1599 (316) 838-0601

1010/000-0001

Company Graves Drilling Co., Inc., ETAL Lease & Well No. Kostner #3
Elevation - Formation Topeka Effective Pay - Ft. Ticket No. 21715
Date 12-3-76 Sec. 36 Twp. 28S Range 6W County Kingman State Kansas
Test Approved by Fred Stump Western Representative Bill Hager
Formation Test No. 3 O.K. X Misrun - Interval Tested From 2672' to 2682' Total Depth 3965'
Size Main Hole 7 7/8 Rat Hole - Conv. X B.T. - Damaged - Yes X No Conv. - B.T. X Damaged - Yes X No
Top Packer Depth 2667 Ft. Size 6 3/4 Bottom Packer Depth 2672 Ft. Size 6 3/4
Straddle Yes Conv. X B.T. - Damaged - Yes X No Packer Depth 2682 Ft. Size 6 3/4
Tool Size 5 1/2 OD Tool Joint Size 4 1/2 FH Anchor Length 10 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.
RECORDERS Depth 2674 Ft. Clock No. 4763 Depth 2677 Ft. Clock No. 6866
Top Make Kuster Cap. 4150 No. 2604 Inside Outside Bottom Make Kuster Cap. 4000 No. 3660 Inside Outside
Below Straddle: Depth 2710 Rec. No. 28 Clock No. 123 Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside
Time Set Packer 7:59P. M
Tool Open I.F.P. From 8:02P M. to 8:32P M. - Hr. 30 Min. From (B) 87 P.S.I. To (C) 918 P.S.I.
Tool Closed I.C.I.P. From 8:32P M. to 9:02P M. - Hr. 30 Min (D) 1144 P.S.I.
Tool Open F.F.P. From 9:02P M. to 9:32P M. - Hr. 30 Min. From (E) 929 P.S.I. To (F) 1096 P.S.I.
Tool Closed F.C.I.P. From 9:02P M. to 10:02P M. - Hr. 30 Min. (G) 1146 P.S.I.
Initial Hydrostatic Pressure (A) 1443 P.S.I. Final Hydrostatic Pressure (H) 1437 P.S.I. Maximum Temp. -

INFORMATION

BLOW Strong blow throughout test.

Did Well Flow - Yes X No Recovery Total Ft. 2300' of gas cut salt water.

Reversed Out X Yes - No Mud Type Starch Viscosity 54 Weight 9.7 Water Loss 15.2 cc. Chlorides 53,000 PPM
EXTRA EQUIPMENT: Type Circ. Sub. Pin Safety Joint - Jars: Size - In. Make - Ser. No. -
Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where? -
DRILLING CONTRACTOR Graves Drllg. Co., Inc. Length Drill Pipe? 2158 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 FH In.
Length Weight Pipe 300 Ft. I.D. Weight Pipe 2 1/2 In. Tool Joint Size 4 1/2 XH In. Length Drill Collars 124 Ft. I.D. Drill Collars 2 1/4 In.
Tool Joint Size 4 1/2 H-90 In. Length D.S.T. Tool 70 Ft.

Remarks:

WESTERN TESTING CO., INC.

• Pressure Data

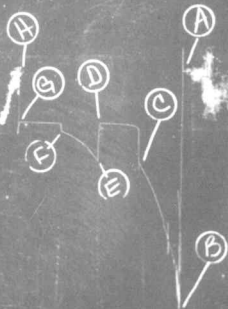
Date 12-3-76 Test Ticket No. 21715
 Recorder No. 2604 Capacity 4150 Location 2674 Ft.
 Clock No. 4763 Elevation - Well Temperature - °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1443</u> P.S.I.	Open Tool	<u>7:59P.</u> M	
B First Initial Flow Pressure	<u>87</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>918</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1144</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>929</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.
F Second Final Flow Pressure	<u>1096</u> P.S.I.			
G Final Closed-in Pressure	<u>1146</u> P.S.I.			
H Final Hydrostatic Mud	<u>1437</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>10</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>11</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>87</u>	<u>0</u>	<u>918</u>	<u>0</u>	<u>929</u>	<u>0</u>	<u>1096</u>
P 2 <u>5</u>	<u>404</u>	<u>3</u>	<u>1127</u>	<u>5</u>	<u>975</u>	<u>3</u>	<u>1140</u>
P 3 <u>10</u>	<u>529</u>	<u>6</u>	<u>1134</u>	<u>10</u>	<u>1017</u>	<u>6</u>	<u>1142</u>
P 4 <u>15</u>	<u>665</u>	<u>9</u>	<u>1138</u>	<u>15</u>	<u>1046</u>	<u>9</u>	<u>1143</u>
P 5 <u>20</u>	<u>765</u>	<u>12</u>	<u>1140</u>	<u>20</u>	<u>1069</u>	<u>12</u>	<u>1143</u>
P 6 <u>25</u>	<u>839</u>	<u>15</u>	<u>1142</u>	<u>25</u>	<u>1086</u>	<u>15</u>	<u>1144</u>
P 7 <u>30</u>	<u>901</u>	<u>18</u>	<u>1142</u>	<u>30</u>	<u>1096</u>	<u>18</u>	<u>1144</u>
P 8 <u>35</u>	<u>918</u>	<u>21</u>	<u>1143</u>			<u>21</u>	<u>1145</u>
P 9		<u>24</u>	<u>1143</u>			<u>24</u>	<u>1145</u>
P10		<u>27</u>	<u>1144</u>			<u>27</u>	<u>1145</u>
P11		<u>30</u>	<u>1144</u>			<u>30</u>	<u>1146</u>
P12						<u>33</u>	<u>1146</u>
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

IKT # 21715
I



TKT 21715
Below Straddle

