

Company Graves Drilling Company, Inc. Lease & Well No. Viney "A" #1
Elevation 1405 Kelly Bushing Formation Indian Cave Effective Pay -- Ft. Ticket No. 3894
Date 10/8/79 Sec. 8 Twp. 28S Range 5W County Kingman State Kansas
Test Approved by H. Deane Jirrels Western Representative W. K. Hager

Formation Test No. 1 Interval Tested from 1737 ft. to 1755 ft. Total Depth 1755 ft.

Packer Depth 1732 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 1737 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 1742 ft. Recorder Number 1558 Cap. 4200

Bottom Recorder Depth (Outside) 1745 ft. Recorder Number 1559 Cap. 4200

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

Drilling Contractor Graves Drilling Drill Collar Length 150 I. D. 2 1/4 in.

Mud Type premix Viscosity 35 Weight Pipe Length - I. D. - in.

Weight 9.2 Water Loss W.C. cc. Drill Pipe Length 1567 I. D. 3.8 in.

~~Chlorides~~ Salt 58,000 P.P.M. Test Tool Length 38 ft. Tool Size 5 1/2 in.

Jars: Make -- Serial Number -- Anchor Length 18 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, increasing to fair on Initial Flow Period/fair blow on Final Flow Period.

Recovered 420 ft. of muddy salt water

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Remarks: -

Time Set Packer(s) 11:10 ~~A.M.~~ P.M. Time Started Off Bottom 1:10 ~~A.M.~~ P.M. Maximum Temperature 96

Initial Hydrostatic Pressure (A) 891 P.S.I.

Initial Flow Period 30 Minutes (B) 53 P.S.I. to (C) 99 P.S.I.

Initial Closed In Period 30 Minutes (D) 710 P.S.I.

Final Flow Period 30 Minutes (E) 146 P.S.I. to (F) 154 P.S.I.

Final Closed In Period 30 Minutes (G) 698 P.S.I.

Final Hydrostatic Pressure (H) 860 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

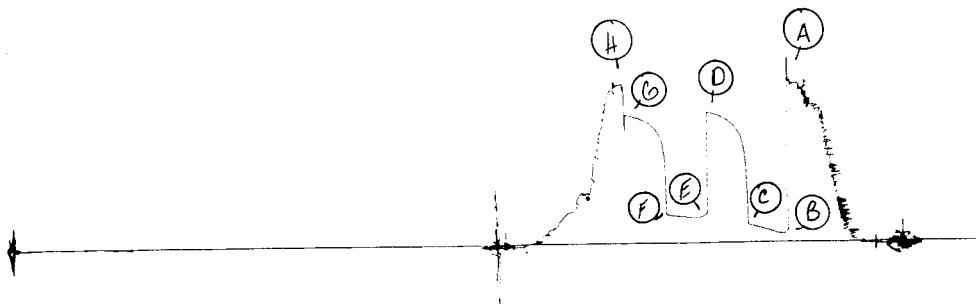
Date 10/8/79 Test Ticket No. 3894
 Recorder No. 1558 Capacity 4200 Location 1742 Ft.
 Clock No. -- Elevation 1405 Kelly Bushing Well Temperature 96 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	891	P.S.I.	11:10P	M
B First Initial Flow Pressure	53	P.S.I.	30	30
C First Final Flow Pressure	99	P.S.I.	30	30
D Initial Closed-in Pressure	710	P.S.I.	30	30
E Second Initial Flow Pressure	146	P.S.I.	30	30
F Second Final Flow Pressure	154	P.S.I.	30	30
G Final Closed-in Pressure	698	P.S.I.		
H Final Hydrostatic Mud	860	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>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>99</u>	<u>0</u>	<u>146</u>	<u>0</u>	<u>154</u>
P 2 <u>5</u>	<u>51</u>	<u>3</u>	<u>496</u>	<u>5</u>	<u>141</u>	<u>3</u>	<u>529</u>
P 3 <u>10</u>	<u>59</u>	<u>6</u>	<u>587</u>	<u>10</u>	<u>139</u>	<u>6</u>	<u>594</u>
P 4 <u>15</u>	<u>72</u>	<u>9</u>	<u>629</u>	<u>15</u>	<u>141</u>	<u>9</u>	<u>625</u>
P 5 <u>20</u>	<u>80</u>	<u>12</u>	<u>648</u>	<u>20</u>	<u>146</u>	<u>12</u>	<u>644</u>
P 6 <u>25</u>	<u>91</u>	<u>15</u>	<u>664</u>	<u>25</u>	<u>150</u>	<u>15</u>	<u>660</u>
P 7 <u>30</u>	<u>99</u>	<u>18</u>	<u>679</u>	<u>30</u>	<u>154</u>	<u>18</u>	<u>671</u>
P 8		<u>21</u>	<u>693</u>			<u>21</u>	<u>681</u>
P 9		<u>24</u>	<u>701</u>			<u>24</u>	<u>687</u>
P10		<u>27</u>	<u>706</u>			<u>27</u>	<u>691</u>
P11		<u>30</u>	<u>710</u>			<u>30</u>	<u>698</u>
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

TKT # 3894
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P. O. BOX 1599 PHONE (316) 838-0601
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET NO 3894

Elevation 1405 KB Formation Indian Caves Eff. Pay Ft.

District Augusta Date 8 Oct 79 Customer Order No.

COMPANY NAME Graves Drilling Company, Inc.

ADDRESS 910 Union Center Wichita Kansas

LEASE AND WELL NO. Uney #A-1 COUNTY Kernman STATE Kan Sec. 8 Twp 28S Rge 5W

Mail Invoice To Same Co. Name Address No. Copies Requested 1

Mail Charts To Same Address No. Copies Requested 5

Formation Test No. 1 Interval Tested from 1737 ft. to 1755 ft. Total Depth 1755 ft.

Packer Depth 1732 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Packer Depth 1737 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 1742 ft. Recorder Number 1558 Cap 4200

Bottom Recorder Depth (Outside) 1745 ft. Recorder Number 1559 Cap 4200

Below Straddle Recorder Depth ft. Recorder Number Cap

Drilling Contractor Company Tools Drill Collar Length 150' I. D. 2 1/4 in.

Mud Type Premix Viscosity 35 Weight Pipe Length I. D. in.

Weight 9.8 Water Loss W.C. cc. Drill Pipe Length 1567' I. D. 3.8 in.

Chlorides SALT 50,000 P.P.M. Test Tool Length 38 ft. Tool Size 5 1/2 in.

Jars: Make Serial Number Anchor Length 18 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 Ch in.

Blow: Weak increasing to fair on initial flow period /
fair flow on final flow period

Recovered 420 ft. of muddy salt water

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 11:10 P.M. Time Started Off Bottom 1:10 A.M. Maximum Temperature 96°

Initial Hydrostatic Pressure (A) 891 P.S.I.

Initial Flow Period 30 Minutes (B) 63 P.S.I. to (C) 105 P.S.I.

Initial Closed In Period 30 Minutes (D) 714 P.S.I.

Final Flow Period 30 Minutes (E) 168 P.S.I. to (F) 158 P.S.I.

Final Closed In Period 30 Minutes (G) 703 P.S.I.

Final Hydrostatic Pressure (H) 880 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By [Signature]
Signature of Customer or his authorized representative

Western Representative WK Hagen Thank You!

FIELD INVOICE

Open Hole Test \$500.00
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$
Extra Charts \$

TOTAL \$500.00

WESTERN TESTING CO., INC.

Pressure Data

Date 10-8-79 Test Ticket No. 3874
 Recorder No. 1558 Capacity 4200 Location 1742 Ft.
 Clock No. Elevation 1405 HB Well Temperature 96 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>891</u> P.S.I.	<u>1110</u> P.M.	
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>99</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>710</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>146</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>154</u> P.S.I.		
G Final Closed-in Pressure	<u>698</u> P.S.I.		
H Final Hydrostatic Mud	<u>860</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>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 0	<u>53</u>	0	<u>99</u>	0	<u>146</u>	0	<u>154</u>
P 2 5	<u>51</u>	3	<u>496</u>	5	<u>141</u>	3	<u>529</u>
P 3 10	<u>59</u>	6	<u>587</u>	10	<u>139</u>	6	<u>594</u>
P 4 15	<u>72</u>	9	<u>629</u>	15	<u>141</u>	9	<u>625</u>
P 5 20	<u>80</u>	12	<u>648</u>	20	<u>146</u>	12	<u>644</u>
P 6 25	<u>91</u>	15	<u>664</u>	25	<u>150</u>	15	<u>660</u>
P 7 30	<u>99</u>	18	<u>679</u>	30	<u>154</u>	18	<u>671</u>
P 8 35		21	<u>693</u>	35		21	<u>681</u>
P 9 40		24	<u>701</u>	40		24	<u>687</u>
P 10 45		27	<u>706</u>	45		27	<u>691</u>
P 11 50		30	<u>710</u>	50		30	<u>698</u>
P 12 55		33		55		33	
P 13 60		36		60		36	
P 14		39		65		39	
P 15		42		70		42	
P 16		45		75		45	
P 17		48		80		48	
P 18		51		85		51	
P 19		54		90		54	
P 20		57				57	
		60				60	

Company Graves Drilling Company, Inc. Lease & Well No. Viney "A" #1

Elevation 1405 Kelly Bushing Formation --- Effective Pay --- Ft. Ticket No. 3985

Date 10/11/79 Sec. 8 Twp. 28S Range 5W County Kingman State Kansas

Test Approved by H. Deane Jirrels Western Representative Jim Wondra

Formation Test No. 2 Interval Tested from 3313 ft. to 3325 ft. Total Depth 3325 ft.

Packer Depth 3307 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3313 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3315 ft. Recorder Number 2607 Cap. 4150

Bottom Recorder Depth (Outside) 3318 ft. Recorder Number 3351 Cap. 4000

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

Drilling Contractor Graves Drilling Rig #1 Drill Collar Length 155 I. D. 2 1/4 in.

Mud Type premix-driscac Viscosity 36 Weight Pipe Length - I. D. - in.

Weight 9.3 Water Loss 28 cc. Drill Pipe Length 3137 I. D. 3.8 in.

Chlorides 15,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.

Jars: Make -- Serial Number -- Anchor Length 12 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 190 ft. of salt water (100,000 chlorides ppm)

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 9:20 ~~A.M.~~ P.M. Time Started Off Bottom 12:05 ~~A.M.~~ P.M. Maximum Temperature 109⁰

Initial Hydrostatic Pressure 1620 P.S.I. (A)

Initial Flow Period 30 Minutes (B) 31 P.S.I. to (C) 66 P.S.I.

Initial Closed In Period 33 Minutes (D) 1318 P.S.I.

Final Flow Period 60 Minutes (E) 137 P.S.I. to (F) 133 P.S.I.

Final Closed In Period 48 Minutes (G) 1303 P.S.I.

Final Hydrostatic Pressure 1586 P.S.I. (H)

WESTERN TESTING CO., INC.

Pressure Data

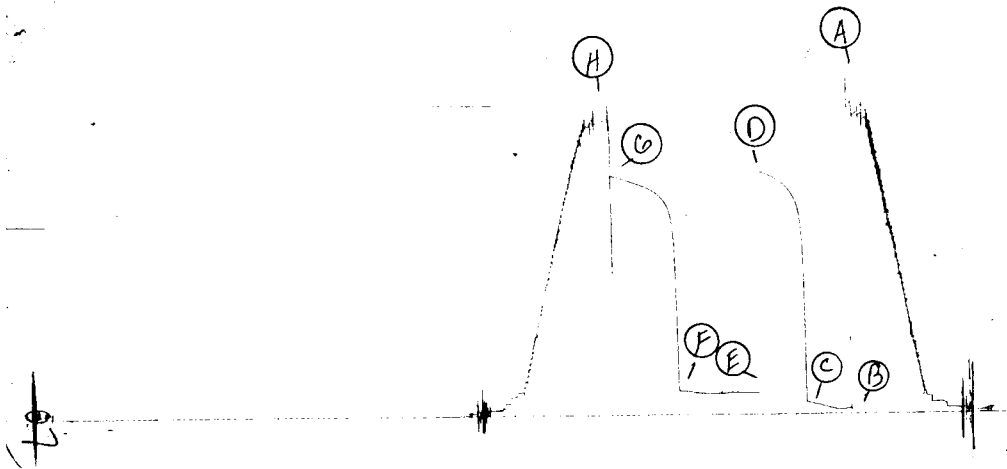
Date 10-11-79 Test Ticket No. 3985
 Recorder No. 2607 Capacity 4150 Location 3315 Ft.
 Clock No. ----- Elevation 1405 Kelly Bushing Well Temperature 109 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1620</u> P.S.I.	Open Tool	9:20 P. M.	
B First Initial Flow Pressure	<u>31</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>66</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.
D Initial Closed-in Pressure	<u>1318</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>137</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	<u>48</u> Mins.
F Second Final Flow Pressure	<u>133</u> P.S.I.			
G Final Closed-in Pressure	<u>1303</u> P.S.I.			
H Final Hydrostatic Mud	<u>1586</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Initial Shut-In Breakdown: <u>11</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>16</u> Inc. 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>31</u>	<u>0</u>	<u>63</u>	<u>0</u>	<u>137</u>	<u>0</u>	<u>133</u>
P 2 <u>5</u>	<u>26</u>	<u>3</u>	<u>992</u>	<u>5</u>	<u>121</u>	<u>3</u>	<u>633</u>
P 3 <u>10</u>	<u>26</u>	<u>6</u>	<u>1138</u>	<u>10</u>	<u>117</u>	<u>6</u>	<u>1088</u>
P 4 <u>15</u>	<u>35</u>	<u>9</u>	<u>1188</u>	<u>15</u>	<u>117</u>	<u>9</u>	<u>1146</u>
P 5 <u>20</u>	<u>45</u>	<u>12</u>	<u>1219</u>	<u>20</u>	<u>117</u>	<u>12</u>	<u>1177</u>
P 6 <u>25</u>	<u>55</u>	<u>15</u>	<u>1245</u>	<u>25</u>	<u>117</u>	<u>15</u>	<u>1199</u>
P 7 <u>30</u>	<u>63</u>	<u>18</u>	<u>1265</u>	<u>30</u>	<u>117</u>	<u>18</u>	<u>1217</u>
P 8		<u>21</u>	<u>1280</u>	<u>35</u>	<u>117</u>	<u>21</u>	<u>1232</u>
P 9		<u>24</u>	<u>1291</u>	<u>40</u>	<u>117</u>	<u>24</u>	<u>1242</u>
P10		<u>27</u>	<u>1302</u>	<u>45</u>	<u>117</u>	<u>27</u>	<u>1253</u>
P11		<u>30</u>	<u>1314</u>	<u>50</u>	<u>122</u>	<u>30</u>	<u>1260</u>
P12		<u>33</u>	<u>1318</u>	<u>55</u>	<u>128</u>	<u>33</u>	<u>1268</u>
P13				<u>60</u>	<u>133</u>	<u>36</u>	<u>1276</u>
P14						<u>39</u>	<u>1282</u>
P15						<u>42</u>	<u>1291</u>
P16						<u>45</u>	<u>1297</u>
P17						<u>48</u>	<u>1303</u>
P18							
P19							
P20							

TKT # 3985
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P. O. BOX 1599 PHONE (316) 838-0601
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET NO 3985

Elevation 1405 H.E. Formation _____ Eff. Pay _____ Ft.

District Pratt Date 10/11/79 Customer Order No. _____

COMPANY NAME Graves Drilling Co. Inc.

ADDRESS 910 Union Center Wichita, Ks 67202

LEASE AND WELL NO. Viney A-1 COUNTY Kingman STATE Ks Sec. 8 Twp. 28S Rge. 5W

Mail Invoice To Same Co. Name _____ Address _____ No. Copies Requested 5

Mail Charts To Same Co. Name _____ Address _____ No. Copies Requested 5

Formation Test No. 2 Interval Tested from 3313 ft. to 3325 ft. Total Depth 3325 ft.

Packer Depth 3307 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.

Packer Depth 3313 ft. Size 6 7/8 in. Packer Depth _____ ft. Size _____ in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3315 ft. Recorder Number 2607 Cap 4150

Bottom Recorder Depth (Outside) 3318 ft. Recorder Number 3351 Cap 4000

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

Drilling Contractor Graves Drilling Co. Inc. Drill Collar Length 155 I. D. 2 1/2 in.

Mud Type Premix-Drispac Viscosity 36 Weight Pipe Length _____ I. D. _____ in.

Weight 9.3 Water Loss 28 cc. Drill Pipe Length 3137 I. D. 3.8 in.

Chlorides 15,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 in.

Jars: Make _____ Serial Number _____ Anchor Length 12 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 1/2 in. Tool Joint Size 4 1/2 FH in.

Blow: Weak blow throughout flow periods

Recovered 190 ft. of Salt Water (100,000 p.p.m.)

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Remarks: _____

Time Set Packer(s) 9:20 P.M. Time Started Off Bottom 12:05 A.M.

Initial Hydrostatic Pressure _____ (A) 1405 P.S.I.

Initial Flow Period _____ Minutes 30 (B) 31 P.S.I. to (C) 63 P.S.I.

Initial Closed In Period _____ Minutes 30 (D) 1321 P.S.I.

Final Flow Period _____ Minutes 60 (E) 116 P.S.I. to (F) 137 P.S.I.

Final Closed In Period _____ Minutes 45 (G) 1300 P.S.I.

Final Hydrostatic Pressure _____ (H) 1584 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By [Signature]
Signature of Customer or his authorized representative

Western Representative Jim Woods Thank You

FIELD INVOICE

Open Hole Test \$ 500.00
Misrun \$ _____
Straddle Test \$ _____
Jars \$ _____
Selective Zone \$ _____
Safety Joint \$ _____
Standby \$ _____
Evaluation \$ _____
Extra Packer \$ _____
Circ. Sub. \$ _____
Mileage \$ _____
Fluid Sampler \$ _____
Extra Charts \$ _____

TOTAL \$ 500.00

WESTERN TESTING CO., INC.
Pressure Data

Date 10-11-79 Test Ticket No. 3985
 Recorder No. 2607 Capacity 4.50 Location 3315 Ft.
 Clock No. - Elevation 1405 K.B. Well Temperature 109 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1620</u>	P.S.I.	<u>9:20 P</u>	M.
B First Initial Flow Pressure	<u>31</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
C First Final Flow Pressure	<u>66</u>	P.S.I.	<u>30</u>	Mins. <u>33</u> Mins.
D Initial Closed-in Pressure	<u>1318</u>	P.S.I.	<u>60</u>	Mins. <u>60</u> Mins.
E Second Initial Flow Pressure	<u>137</u>	P.S.I.	<u>45</u>	Mins. <u>48</u> Mins.
F Second Final Flow Pressure	<u>133</u>	P.S.I.		
G Final Closed-in Pressure	<u>1303</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1586</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>11</u> Inc.		Breakdown: <u>12</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>231</u>	<u>0</u>	<u>63</u>	<u>0</u>	<u>137</u>	<u>0</u>	<u>133</u>
P 2 <u>5</u>	<u>26</u>	<u>3</u>	<u>992</u>	<u>5</u>	<u>121</u>	<u>3</u>	<u>633</u>
P 3 <u>10</u>	<u>26</u>	<u>6</u>	<u>1138</u>	<u>10</u>	<u>117</u>	<u>6</u>	<u>1088</u>
P 4 <u>15</u>	<u>35</u>	<u>9</u>	<u>1188</u>	<u>15</u>		<u>9</u>	<u>1146</u>
P 5 <u>20</u>	<u>45</u>	<u>12</u>	<u>1219</u>	<u>20</u>		<u>12</u>	<u>1197</u>
P 6 <u>25</u>	<u>55</u>	<u>15</u>	<u>1245</u>	<u>25</u>		<u>15</u>	<u>1199</u>
P 7 <u>30</u>	<u>63</u>	<u>18</u>	<u>1265</u>	<u>30</u>		<u>18</u>	<u>1217</u>
P 8 <u>35</u>		<u>21</u>	<u>1280</u>	<u>35</u>		<u>21</u>	<u>1232</u>
P 9 <u>40</u>		<u>24</u>	<u>1291</u>	<u>40</u>		<u>24</u>	<u>1242</u>
P10 <u>45</u>		<u>27</u>	<u>1302</u>	<u>45</u>	<u>117</u>	<u>27</u>	<u>1253</u>
P11 <u>50</u>		<u>30</u>	<u>1314</u>	<u>50</u>	<u>122</u>	<u>30</u>	<u>1260</u>
P12 <u>55</u>		<u>33</u>	<u>1318</u>	<u>55</u>	<u>128</u>	<u>33</u>	<u>1268</u>
P13 <u>60</u>		<u>36</u>		<u>60</u>	<u>133</u>	<u>36</u>	<u>1276</u>
P14		<u>39</u>		<u>65</u>		<u>39</u>	<u>1282</u>
P15		<u>42</u>		<u>70</u>		<u>42</u>	<u>1291</u>
P16		<u>45</u>		<u>75</u>		<u>45</u>	<u>1297</u>
P17		<u>48</u>		<u>80</u>		<u>48</u>	<u>1303</u>
P18		<u>51</u>		<u>85</u>		<u>51</u>	
P19		<u>54</u>		<u>90</u>		<u>54</u>	
P20		<u>57</u>				<u>57</u>	
		<u>60</u>				<u>60</u>	

Company Graves Drilling Company, Inc. Lease & Well No. Viney "A" #1
 Elevation 1405 Kelly Bushing Mississippi Effective Pay -- Ft. Ticket No. 4032
 Date 10/13/79 Sec. 8 Twp. 28S Range 5W County Kingman State Kansas
 Test Approved by H. Deane Jirrels Western Representative Dave Sloan
 Formation Test No. 3 Interval Tested from 3792 ft. to 3817 ft. Total Depth 3817 ft.
 Packer Depth 3787 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 3792 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 3809 ft. Recorder Number 3354 Cap. 4200
 Bottom Recorder Depth (Outside) 3812 ft. Recorder Number 2605 Cap. 4150
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
 Drilling Contractor Graves Drilling Company Drill Collar Length 150 I. D. 2.2 in.
 Mud Type drispac Viscosity 43 Weight Pipe Length - I. D. - in.
 Weight 9.1 Water Loss 10.4 cc. Drill Pipe Length 3622 I. D. 3.8 in.
 Chlorides 14,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.
 Jars: Make -- Serial Number -- Anchor Length 25 ft. Size 5 1/2 OD in.
 Did Well Flow? No Reversed Out - 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 blow throughout test. Gas to surface five minutes after final flow period.

Recovered 160 ft. of gas cut thin mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 6:33 ~~A.M.~~ P.M. Time Started Off Bottom 9:18 ~~A.M.~~ P.M. Maximum Temperature 118⁰
 Initial Hydrostatic Pressure 1898 P.S.I.
 Initial Flow Period 30 Minutes (B) 49 P.S.I. to (C) 70 P.S.I.
 Initial Closed In Period 30 Minutes (D) 380 P.S.I.
 Final Flow Period 60 Minutes (E) 72 P.S.I. to (F) 80 P.S.I.
 Final Closed In Period 45 Minutes (G) 399 P.S.I.
 Final Hydrostatic Pressure 1837 P.S.I. (H)

WESTERN TESTING CO., INC.

Pressure Data

Date 10/13/79 Recorder No. 3354 Capacity 4200 Test Ticket No. 4032
 Clock No. -- Elevation 1405 Kelly Bushing Location 118 Ft. 118
 Well Temperature °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1898	P.S.I.	6:33P	M
B First Initial Flow Pressure	49	P.S.I.	30	Mins.
C First Final Flow Pressure	70	P.S.I.	30	Mins.
D Initial Closed-in Pressure	380	P.S.I.	60	Mins.
E Second Initial Flow Pressure	72	P.S.I.	45	Mins.
F Second Final Flow Pressure	80	P.S.I.		
G Final Closed-in Pressure	399	P.S.I.		
H Final Hydrostatic Mud	1837	P.S.I.		

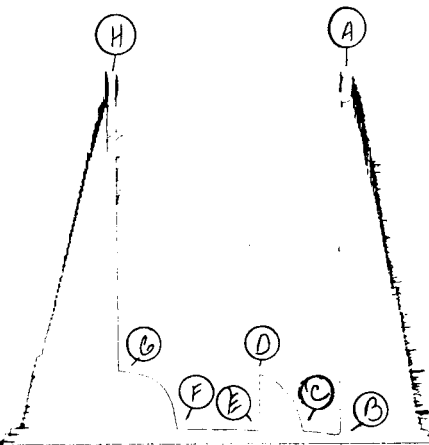
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>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>49</u>	<u>0</u>	<u>70</u>	<u>0</u>	<u>72</u>	<u>0</u>	<u>80</u>
P 2 <u>5</u>	<u>49</u>	<u>3</u>	<u>150</u>	<u>5</u>	<u>73</u>	<u>3</u>	<u>196</u>
P 3 <u>10</u>	<u>53</u>	<u>6</u>	<u>217</u>	<u>10</u>	<u>75</u>	<u>6</u>	<u>249</u>
P 4 <u>15</u>	<u>58</u>	<u>9</u>	<u>264</u>	<u>15</u>	<u>76</u>	<u>9</u>	<u>291</u>
P 5 <u>20</u>	<u>63</u>	<u>12</u>	<u>295</u>	<u>20</u>	<u>77</u>	<u>12</u>	<u>319</u>
P 6 <u>25</u>	<u>65</u>	<u>15</u>	<u>321</u>	<u>25</u>	<u>77</u>	<u>15</u>	<u>338</u>
P 7 <u>30</u>	<u>70</u>	<u>18</u>	<u>340</u>	<u>30</u>	<u>78</u>	<u>18</u>	<u>354</u>
P 8 <u> </u>	<u> </u>	<u>21</u>	<u>352</u>	<u>35</u>	<u>78</u>	<u>21</u>	<u>367</u>
P 9 <u> </u>	<u> </u>	<u>24</u>	<u>363</u>	<u>40</u>	<u>79</u>	<u>24</u>	<u>376</u>
P10 <u> </u>	<u> </u>	<u>27</u>	<u>371</u>	<u>45</u>	<u>80</u>	<u>27</u>	<u>382</u>
P11 <u> </u>	<u> </u>	<u>30</u>	<u>380</u>	<u>50</u>	<u>80</u>	<u>30</u>	<u>386</u>
P12 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>55</u>	<u>80</u>	<u>33</u>	<u>390</u>
P13 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>60</u>	<u>80</u>	<u>36</u>	<u>395</u>
P14 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>39</u>	<u>397</u>
P15 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>42</u>	<u>399</u>
P16 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>45</u>	<u>399</u>
P17 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P18 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P19 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P20 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

3354

GRAVES DRG Co.
Viney A-1
DST #3

TKT # 4032
I





P. O. BOX 1599 PHONE (316) 838-0601
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET NO 4032

Elevation 1405 K.B. Formation MISS. Eff. Pay _____ Ft.

District PRATT Date 10-13-79 Customer Order No. _____
COMPANY NAME GRAVES DRILLING CO. INC.
ADDRESS 910 UNION CENTER - WICHITA, KANS. 67202
LEASE AND WELL NO. VINEY A-1 COUNTY KINGMAN STATE KANS. Sec. 8 Twp. 28S Rge. 5W
Mail Invoice To _____ Co. Name SAME Address _____ No. Copies Requested Reg.
Mail Charts To _____ Address _____ No. Copies Requested Reg.

Formation Test No. 3 Interval Tested from 3792 ft. to 3817 ft. Total Depth 3817 ft.
Packer Depth 3787 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.
Packer Depth 3792 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.
Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3809 ft. Recorder Number 3354 Cap. 4200
Bottom Recorder Depth (Outside) 3812 ft. Recorder Number 2605 Cap. 4150
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____
Drilling Contractor GRAVES DRILLING CO. Drill Collar Length 150 I. D. 2.2 in.
Mud Type DRISPAK Viscosity 43 Weight Pipe Length _____ I. D. _____ in.
Weight 9.1 Water Loss 10.4 cc. Drill Pipe Length 362 I. D. 3.8 in.
Chlorides 14,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 O.D. in.
Jars: Make _____ Serial Number _____ Anchor Length 25 ft. Size 5 1/2 O.D. in.
Did Well Flow? NO Reversed Out _____ Surface Choke Size 3 1/4 in. Bottom Choke Size 3 1/4 in.
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 in.

Blow: STRONG BLOW THRU-OUT TEST - GAS TO SURFACE 5 MIN.
AFTER FINAL FLOW PERIOD

Recovered 160 ft. of GAS CUT THIN MUD
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____

Remarks: _____

Time Set Packer(s) 6:33 P.M. Time Started Off Bottom 9:18 P.M. Maximum Temperature 118
Initial Hydrostatic Pressure _____ (A) 1847 P.S.I.
Initial Flow Period _____ Minutes 30 (B) 42 P.S.I. to (C) 63 P.S.I.
Initial Closed In Period _____ Minutes 30 (D) 369 P.S.I.
Final Flow Period _____ Minutes 60 (E) 73 P.S.I. to (F) 73 P.S.I.
Final Closed In Period _____ Minutes 45 (G) 390 P.S.I.
Final Hydrostatic Pressure _____ (H) 1836 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By D. McNamee
Signature of Customer or his authorized representative

Western Representative Dave Sloan - Mike Lott

FIELD INVOICE

Open Hole Test \$ 500.00
Misrun \$ _____
Straddle Test \$ _____
Jars \$ _____
Selective Zone \$ _____
Safety Joint \$ _____
Standby \$ _____
Evaluation \$ _____
Extra Packer \$ _____
Circ. Sub. \$ _____
Mileage \$ _____
Fluid Sampler \$ _____
Extra Charts \$ _____

TOTAL

\$ 500.00

WESTERN TESTING CO., INC.

Pressure Data

Date 10-13-79 Test Ticket No. 4032
 Recorder No. 3354 Capacity 4200 Location 3809 Ft.
 Clock No. Elevation 1405 KB Well Temperature 118 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1898</u> P.S.I.	<u>6:33</u> P.M.	
B First Initial Flow Pressure	<u>49</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>70</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>380</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>72</u> P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
F Second Final Flow Pressure	<u>80</u> P.S.I.		
G Final Closed-in Pressure	<u>399</u> P.S.I.		
H Final Hydrostatic Mud	<u>1837</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>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 0	<u>49</u>	0	<u>70</u>	0	<u>72</u>	0	<u>80</u>
P 2 5	<u>49</u>	3	<u>150</u>	5	<u>73</u>	3	<u>196</u>
P 3 10	<u>53</u>	6	<u>217</u>	10	<u>75</u>	6	<u>249</u>
P 4 15	<u>58</u>	9	<u>264</u>	15	<u>76</u>	9	<u>291</u>
P 5 20	<u>63</u>	12	<u>285</u>	20	<u>77</u>	12	<u>319</u>
P 6 25	<u>65</u>	15	<u>321</u>	25	<u>77</u>	15	<u>338</u>
P 7 30	<u>70</u>	18	<u>340</u>	30	<u>78</u>	18	<u>354</u>
P 8 35		21	<u>352</u>	35	<u>78</u>	21	<u>367</u>
P 9 40		24	<u>363</u>	40	<u>79</u>	24	<u>376</u>
P 10 45		27	<u>371</u>	45	<u>80</u>	27	<u>382</u>
P 11 50		30	<u>380</u>	50		30	<u>386</u>
P 12 55		33		55		33	<u>390</u>
P 13 60		36		60	<u>80</u>	36	<u>395</u>
P 14		39		63		39	<u>397</u>
P 15		42		70		42	<u>399</u>
P 16		45		75		45	<u>399</u>
P 17		48		80		48	
P 18		51		85		51	
P 19		54		90		54	
P 20		57				57	
		60				60	