

Company Graves Drilling Company, Inc. Lease & Well No. #1 Helen
Elevation 1481 Kelly Bushing Formation Mississippi Effective Pay -- Ft. Ticket No. 16103
Date 7/ 26/82 Sec. 4 Twp. 32S Range 9W County Harper State Kansas
Test Approved by Arden Ratzlaff Western Representative Rod Tritt

Formation Test No. 1 Interval Tested from 4272 ft. to 4322 ft. Total Depth 4322 ft.

Packer Depth 4267 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 4272 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4274 ft. Recorder Number 2606 Cap. 4150

Bottom Recorder Depth (Outside) 4279 ft. Recorder Number 4332 Cap. 4200

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

Drilling Contractor Graves Drilling Rig Drill Collar Length 86 I. D. 2 3/4 in.

Mud Type premix & gel Viscosity 52 Weight Pipe Length - I. D. - in.

Weight 9.5 Water Loss 18.4 cc. Drill Pipe Length 4185 I. D. 3.8 in.

Chlorides 10,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.

Jars: Make No Serial Number - Anchor Length 50 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 blow in fifteen minutes on initial flow period. Strong blow on final flow period
Would not maintain two inch flow line.

Recovered 600 ft. of gas in pipe

Recovered 62 ft. of gas cut mud

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Remarks: -

Time Set	Packer(s)	A.M. P.M.	Time Started	Off Bottom	A.M. P.M.	Maximum Temperature	--
Initial Hydrostatic Pressure			(A)	<u>2259</u>		P.S.I.	
Initial Flow Period			Minutes	<u>15</u>	(B)	<u>41</u>	P.S.I. to (C) <u>41</u> P.S.I.
Initial Closed In Period			Minutes	<u>42</u>	(D)	<u>253</u>	P.S.I.
Final Flow Period			Minutes	<u>60</u>	(E)	<u>51</u>	P.S.I. to (F) <u>59</u> P.S.I.
Final Closed In Period			Minutes	<u>48</u>	(G)	<u>239</u>	P.S.I.
Final Hydrostatic Pressure			(H)	<u>2157</u>		P.S.I.	

WESTERN TESTING CO., INC.

Pressure Data

Date 7/26/82 Test Ticket No. 16103

Recorder No. 2606 Capacity 4150 Location 4274 Ft. --

Clock No. -- Elevation 1481 Kelly Bushing Well Temperature -- °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	2259 P.S.I.	Open Tool	2:00P	M
B First Initial Flow Pressure	41 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C First Final Flow Pressure	41 P.S.I.	Initial Closed-in Pressure	45 Mins.	42 Mins.
D Initial Closed-in Pressure	253 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	51 P.S.I.	Final Closed-in Pressure	45 Mins.	48 Mins.
F Second Final Flow Pressure	59 P.S.I.			
G Final Closed-in Pressure	239 P.S.I.			
H Final Hydrostatic Mud	2157 P.S.I.			

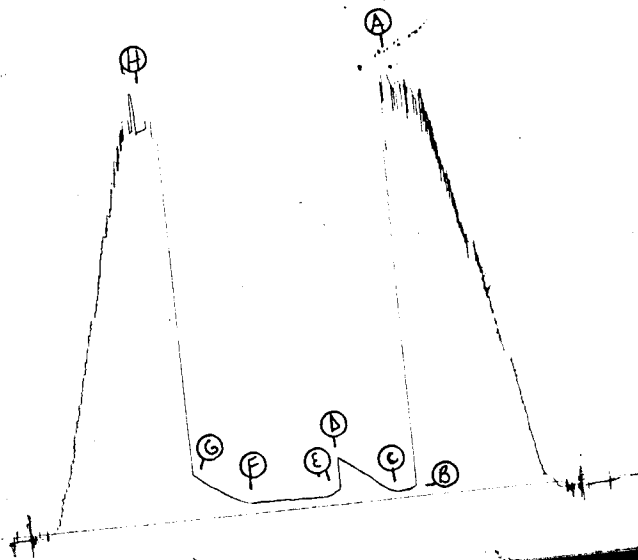
PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>3</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Initial Shut-In Breakdown: <u>14</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>41</u>	<u>0</u>	<u>41</u>	<u>0</u>	<u>51</u>	<u>0</u>	<u>59</u>
P 2 <u>5</u>	<u>41</u>	<u>3</u>	<u>49</u>	<u>5</u>	<u>51</u>	<u>3</u>	<u>59</u>
P 3 <u>10</u>	<u>41</u>	<u>6</u>	<u>61</u>	<u>10</u>	<u>51</u>	<u>6</u>	<u>59</u>
P 4 <u>15</u>	<u>41</u>	<u>9</u>	<u>76</u>	<u>15</u>	<u>51</u>	<u>9</u>	<u>63</u>
P 5		<u>12</u>	<u>92</u>	<u>20</u>	<u>51</u>	<u>12</u>	<u>71</u>
P 6		<u>15</u>	<u>111</u>	<u>25</u>	<u>53</u>	<u>15</u>	<u>80</u>
P 7		<u>18</u>	<u>130</u>	<u>30</u>	<u>55</u>	<u>18</u>	<u>92</u>
P 8		<u>21</u>	<u>149</u>	<u>35</u>	<u>56</u>	<u>21</u>	<u>104</u>
P 9		<u>24</u>	<u>164</u>	<u>40</u>	<u>57</u>	<u>24</u>	<u>116</u>
P10		<u>27</u>	<u>184</u>	<u>45</u>	<u>57</u>	<u>27</u>	<u>132</u>
P11		<u>30</u>	<u>201</u>	<u>50</u>	<u>58</u>	<u>30</u>	<u>149</u>
P12		<u>33</u>	<u>217</u>	<u>55</u>	<u>58</u>	<u>33</u>	<u>161</u>
P13		<u>36</u>	<u>232</u>	<u>60</u>	<u>59</u>	<u>36</u>	<u>175</u>
P14		<u>39</u>	<u>248</u>			<u>39</u>	<u>192</u>
P15		<u>42</u>	<u>253</u>			<u>42</u>	<u>211</u>
P16						<u>45</u>	<u>230</u>
P17						<u>48</u>	<u>239</u>
P18							
P19							
P20							

2606PST #1

TKT. #16103

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P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 16103

OK

Elevation 1481 KB Formation Miss Eff. Pay Ft.

District PRATT Date 7-26-82 Customer Order No.

COMPANY NAME GRAVES Drilling Co, Inc.
ADDRESS 410 Union Center Wichita, Kansas 67202

LEASE AND WELL NO. 1 Helen COUNTY HARPER STATE Kans Sec. 4 Twp 32S Rge 9W

Mail Invoice To #1 HELENSame Co. Name Address No. Copies Requested 19

Mail Charts To Same Address No. Copies Requested 19

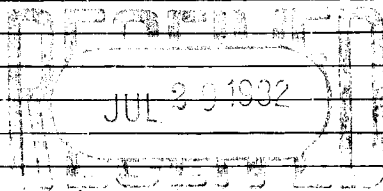
Formation Test No. 1 Interval Tested From 4272 ft. to 4322 ft. Total Depth 4322 ft.
Packer Depth 4267 ft. Size 6 3/4 in. Packer Depth ft. Size in.
Packer Depth 4272 ft. Size 6 3/4 in. Packer Depth ft. Size in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 4274 ft. Recorder Number 2606 Cap. 4150
Bottom Recorder Depth (Outside) 4279 ft. Recorder Number 4332 Cap. 4200
Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Co Wells Drill Collar Length 86 I. D. 2 1/4 in.
Mud Type Benit Hgel Viscosity 52 Weight Pipe Length I. D. in.
Weight 9.5 Water Loss 18.4 cc. Drill Pipe Length 4185 I. D. 3.0 in.
Chlorides 10,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.
Jars: Make NO Serial Number Anchor Length 50 3 1/4 ft. Size 4 1/2 15 3/4 in.
Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
Main Hole Size 7 1/8 in. Tool Joint Size 4 1/2 1 1/4 in.

Blow: Strong blow in 15 min on initial flow period
Strong blow on final flow - wouldn't maintain 2" flowline

Recovered 600 ft. of gas in pipe
Recovered ft. of
Recovered 62 ft. of gas cut mud
Recovered ft. of
Recovered ft. of
Remarks:



Time On Location 10:00 A.M. Time Pick Up Tool 12:15 P.M. Time Off Location A.M.
Time Set Packer(s) 2:00 P.M. Time Started Off Bottom 4:45 P.M. Maximum Temperature
Initial Hydrostatic Pressure (A) 2261 P.S.I.
Initial Flow Period Minutes 15 (B) 52 P.S.I. to (C) 41 P.S.I.
Initial Closed In Period Minutes 45 (D) 260 P.S.I.
Final Flow Period Minutes 60 (E) 52 P.S.I. to (F) 52 P.S.I.
Final Closed In Period Minutes 45 (G) 239 P.S.I.
Final Hydrostatic Pressure (H) 2188 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 Order Katloff
Signature of Customer or his authorized representative

Western Representative Rod Lutz Thank you

FIELD INVOICE

Open Hole Test 675.00
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$

WESTERN TESTING CO., INC.

Pressure Data

Date 7-26-82 Test Ticket No. 16103
 Recorder No. 2606 Capacity 9150 Location 4274 Ft.
 Clock No. --- Elevation 1481 KB Well Temperature --- °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2259</u>	P.S.I.	<u>2:20 P</u>	M
B First Initial Flow Pressure	<u>41</u>	P.S.I.	<u>15</u>	Mins. <u>15</u> Mins.
C First Final Flow Pressure	<u>41</u>	P.S.I.	<u>45</u>	Mins. <u>42</u> Mins.
D Initial Closed-in Pressure	<u>253</u>	P.S.I.	<u>60</u>	Mins. <u>60</u> Mins.
E Second Initial Flow Pressure	<u>51</u>	P.S.I.	<u>45</u>	Mins. <u>48</u> Mins.
F Second Final Flow Pressure	<u>59</u>	P.S.I.		
G Final Closed-in Pressure	<u>239</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2157</u>	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure
 Breakdown: 3 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Initial Shut-In
 Breakdown: 14 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: 16 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 0	<u>41</u>	0	<u>41</u>	0	<u>51</u>	0	<u>59</u>
P 2 5	<u>41</u>	3	<u>49</u>	5	<u>51</u>	3	<u>59</u>
P 3 10	<u>41</u>	6	<u>61</u>	10	<u>51</u>	6	<u>59</u>
P 4 15	<u>41</u>	9	<u>76</u>	15	<u>51</u>	9	<u>63</u>
P 5 20		12	<u>92</u>	20	<u>53</u>	12	<u>71</u>
P 6 25		15	<u>111</u>	25	<u>53</u>	15	<u>80</u>
P 7 30		18	<u>130</u>	30	<u>55</u>	18	<u>92</u>
P 8 35		21	<u>149</u>	35	<u>56</u>	21	<u>104</u>
P 9 40		24	<u>164</u>	40	<u>57</u>	24	<u>116</u>
P10 45		27	<u>184</u>	45	<u>57</u>	27	<u>132</u>
P11 50		30	<u>201</u>	50	<u>58</u>	30	<u>149</u>
P12 55		33	<u>217</u>	55	<u>58</u>	33	<u>161</u>
P13 60		36	<u>232</u>	60	<u>59</u>	36	<u>175</u>
P14		39	<u>248</u>	65		39	<u>192</u>
P15		42	<u>253</u>	70		42	<u>211</u>
P16		45		75		45	<u>230</u>
P17		48		80		48	<u>239</u>
P18		51		85		51	
P19		54		90		54	
P20		57				57	
		60				60	

Company Graves Drilling Company, Inc. Lease & Well No. #1 Helen
Elevation 1481 Kelly Bushing Formation Mississippi Effective Pay -- Ft. Ticker No. 16104
Date 7/ 27/82 Sec. 4 Twp. 32S Range 9W County Harper State Kansas
Test Approved by Arden Ratzlaff Western Representative Rod Tritt

Formation Test No. 2 Interval Tested from 4322 ft. to 4342 ft. Total Depth 4342 ft.

Packer Depth 4317 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 4322 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4326 ft. Recorder Number 2606 Cap. 4150

Bottom Recorder Depth (Outside) 4329 ft. Recorder Number 4332 Cap. 4200

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

Drilling Contractor Graves Drilling Rig

Drill Collar Length 86 I. D. 2 1/4 in.

Mud Type premix Viscosity 52

Weight Pipe Length - I. D. - in.

Weight 9.5 Water Loss 18.4 cc.

Drill Pipe Length 4216 I. D. 3.8 in.

Chlorides 10,000 P.P.M.

Test Tool Length 20 ft. Tool Size 5 1/2 OD in.

Jars: Make No Serial Number -

Anchor Length 20 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 blow on initial flow period. Gas to surface eight minutes into final flow period.

See attached sheet for gas measurements.

Recovered 80 ft. of gas and mud cut oil

Recovered 150 ft. of oil and gas cut water Chlorides 42,000 ppm

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Remarks: Stilist on recorder #4332 stuck - no chart.

Time Set	Packer(s)	<u>4:35</u>	<u>A.M.</u> P.M.	Time Started	Off Bottom	<u>7:20</u>	<u>A.M.</u> P.M.	Maximum Temperature	<u>123°</u>
Initial Hydrostatic Pressure				(A)	<u>2265</u>		P.S.I.		
Initial Flow Period		Minutes	<u>10</u>	(B)	<u>75</u>		P.S.I.	to (C)	<u>75</u> P.S.I.
Initial Closed In Period		Minutes	<u>42</u>	(D)	<u>1094</u>		P.S.I.		
Final Flow Period		Minutes	<u>60</u>	(E)	<u>88</u>		P.S.I.	to (F)	<u>92</u> P.S.I.
Final Closed In Period		Minutes	<u>45</u>	(G)	<u>1040</u>		P.S.I.		
Final Hydrostatic Pressure				(H)	<u>2184</u>		P.S.I.		

GAS FLOW REPORT

Date 7/27/82 Ticket 16104 Company Graves Drilling Company, Inc.
 Well Name and No. #1 Helen Dst No. 2 Interval Tested 4322-4342'
 County Harper State Kansas Sec. 4 Twp. 32S Rg. 9W

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
PRE FLOW					

SECOND FLOW					
8 min.	--		1/2" orifice		Gas to surface
10 min	8" of water		1/2" orifice		17,200 CFPD
20 min	8" of water		1/2" orifice		17,200 CFPD
30 min	8" of water		1/2" orifice		17,200 CFPD
40 min	8" of water		1/2" orifice		17,200 CFPD
50 min	8" of water		1/2" orifice		17,200 CFPD
60 min	8" of water		1/2" orifice		17,200 CFPD

GAS BOTTLE

Serial No. ---- Date Bottle Filled --- Date to be Invoiced 7/27/82

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 1/2% per month, equal to 18% 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 Company, Inc.
 Authorized by Arden Ratzlaff

WESTERN TESTING CO., INC.

Pressure Data

Date 7/27/82 Test Ticket No. 16104

Recorder No. 2606 Capacity 4150 Location 4326 Ft.

Clock No. -- Elevation 1481 Kelly Bushing Well Temperature 123 °F

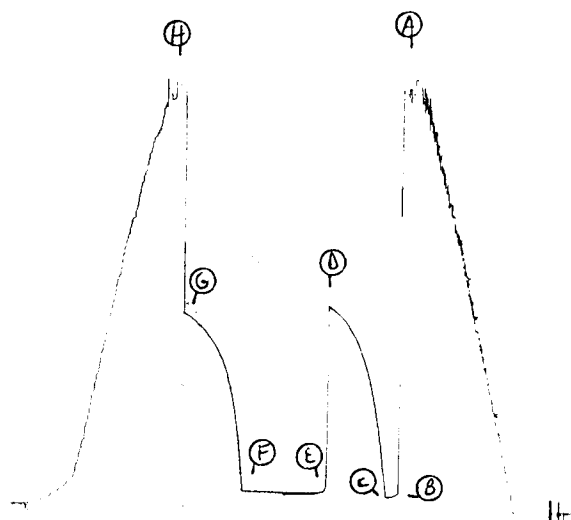
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2265	P.S.I.	4:35A	
B First Initial Flow Pressure	75	P.S.I.	15	10
C First Final Flow Pressure	75	P.S.I.	45	42
D Initial Closed-in Pressure	1094	P.S.I.	60	60
E Second Initial Flow Pressure	88	P.S.I.	45	45
F Second Final Flow Pressure	92	P.S.I.		
G Final Closed-in Pressure	1040	P.S.I.		
H Final Hydrostatic Mud	2184	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>2</u> Inc.		Breakdown: <u>14</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>14</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>75</u>	<u>0</u>	<u>75</u>	<u>0</u>	<u>88</u>	<u>0</u>	<u>92</u>
P 2 <u>5</u>	<u>75</u>	<u>3</u>	<u>312</u>	<u>5</u>	<u>88</u>	<u>3</u>	<u>364</u>
P 3 <u>10</u>	<u>75</u>	<u>6</u>	<u>462</u>	<u>10</u>	<u>88</u>	<u>6</u>	<u>517</u>
P 4		<u>9</u>	<u>589</u>	<u>15</u>	<u>88</u>	<u>9</u>	<u>628</u>
P 5		<u>12</u>	<u>690</u>	<u>20</u>	<u>88</u>	<u>12</u>	<u>713</u>
P 6		<u>15</u>	<u>769</u>	<u>25</u>	<u>88</u>	<u>15</u>	<u>780</u>
P 7		<u>18</u>	<u>840</u>	<u>30</u>	<u>88</u>	<u>18</u>	<u>834</u>
P 8		<u>21</u>	<u>900</u>	<u>35</u>	<u>89</u>	<u>21</u>	<u>875</u>
P 9		<u>24</u>	<u>941</u>	<u>40</u>	<u>90</u>	<u>24</u>	<u>902</u>
P10		<u>27</u>	<u>977</u>	<u>45</u>	<u>91</u>	<u>27</u>	<u>932</u>
P11		<u>30</u>	<u>1012</u>	<u>50</u>	<u>92</u>	<u>30</u>	<u>960</u>
P12		<u>33</u>	<u>1036</u>	<u>55</u>	<u>92</u>	<u>33</u>	<u>979</u>
P13		<u>36</u>	<u>1057</u>	<u>60</u>	<u>92</u>	<u>36</u>	<u>1005</u>
P14		<u>39</u>	<u>1076</u>			<u>39</u>	<u>1020</u>
P15		<u>42</u>	<u>1094</u>			<u>42</u>	<u>1033</u>
P16						<u>45</u>	<u>1040</u>
P17							
P18							
P19							
P20							

TKT # 16104

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WESTERN TESTING CO., INC. FORMATION TESTING

TICKET

No 16104

P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

Elevation 1481 LB Formation Miss. Eff. Pay Ft.

District RATT Date 7-27-82 Customer Order No.

COMPANY NAME Graves Drilling Co., Inc.
ADDRESS #101 Union Center Wichita, Kansas 67124-6700

LEASE AND WELL NO. 1-Helen COUNTY HARPER STATE Kansas Sec. 4 Twp. 32S Rge. 1W

Mail Invoice To #1 HELEN SAME Co. Name Address No. Copies Requested By

Mail Charts To SAME Address No. Copies Requested By

Formation Test No. 2 Interval Tested From 4322 ft. to 4342 ft. Total Depth 4342 ft.

Packer Depth 4317 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Packer Depth 4322 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4326 ft. Recorder Number 2606 Cap. 4150

Bottom Recorder Depth (Outside) 4329 ft. Recorder Number 4332 Cap. 4200

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Co Tools Drill Collar Length 86 I. D. 2 1/4 in.

Mud Type Heavy Viscosity 52 Weight Pipe Length I. D. in.

Weight 9.5 Water Loss 18.4 cc. Drill Pipe Length 4216 I. D. 3.8 in.

Chlorides 10,000 P.P.M. Test Tool Length 20 ft. Tool Size 5/8 OD in.

Jars: Make NO Serial Number Anchor Length 20 ft. Size 5/8 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 1/8 in. Tool Joint Size 4 1/2 in.

Blow: strangle blow on initial flow period - gas to surface 8 min
into 2nd flow period see flow about

Recovered 80 ft. of Heavy oil + gas cut oil

Recovered ft. of Gas + mud cut oil

Recovered 150 ft. of Oil + gas cut water chlorides 42,000 P.P.M.

Recovered ft. of

Recovered ft. of

Remarks: Still on recorder #4332 stuck no chart

Time On Location 9:00 A.M. Time Pick Up Tool 3:00 P.M. Time Off Location A.M.

Time Set Packer(s) 4:35 P.M. Time Started Off Bottom 7:20 P.M. Maximum Temperature 123°-1

Initial Hydrostatic Pressure (A) 2240 P.S.I.

Initial Flow Period 15 Minutes (B) 83 P.S.I. to (C) 62 P.S.I.

Initial Closed In Period 45 Minutes (D) 1091 P.S.I.

Final Flow Period 60 Minutes (E) 83 P.S.I. to (F) 83 P.S.I.

Final Closed In Period 45 Minutes (G) 1039 P.S.I.

Final Hydrostatic Pressure (H) 2240 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 Arden Katzloff
Signature of Customer or his authorized representative

Western Representative Red Hirt Thank you

FIELD INVOICE

Open Hole Test ✓ 625.00
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$

Nº 3952

GAS BOTTLE

Serial No. _____ Date Bottle Filled _____ Date to be Invoiced _____

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 1½% per month, equal to 18% 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 Peoples Drilling Co., Inc.

Authorized by _____

WESTERN TESTING CO., INC.

Pressure Data

Date: 7-27-82 Test Ticket No. 16104
 Recorder No. 2606 Capacity 4150 Location 4326 Ft.
 Clock No. --- Elevation 1481 KB Well Temperature 123 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2265</u> P.S.I.	<u>4:35</u> A M	
B First Initial Flow Pressure	<u>75</u> P.S.I.	<u>15</u> Mins.	<u>10</u> Mins.
C First Final Flow Pressure	<u>75</u> P.S.I.	<u>45</u> Mins.	<u>42</u> Mins.
D Initial Closed-in Pressure	<u>1094</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>88</u> P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
F Second Final Flow Pressure	<u>92</u> P.S.I.		
G Final Closed-in Pressure	<u>1040</u> P.S.I.		
H Final Hydrostatic Mud	<u>2184</u> P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>2</u> Inc.		Breakdown: <u>14</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>14</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>75</u>	<u>0</u>	<u>75</u>	<u>0</u>	<u>88</u>	<u>0</u>	<u>92</u>
P 2 <u>5</u>	<u>7</u>	<u>3</u>	<u>312</u>	<u>5</u>		<u>3</u>	<u>364</u>
P 3 <u>10</u>	<u>75</u>	<u>6</u>	<u>462</u>	<u>10</u>		<u>6</u>	<u>512</u>
P 4 <u>15</u>		<u>9</u>	<u>589</u>	<u>15</u>		<u>9</u>	<u>628</u>
P 5 <u>20</u>		<u>12</u>	<u>690</u>	<u>20</u>		<u>12</u>	<u>713</u>
P 6 <u>25</u>		<u>15</u>	<u>769</u>	<u>25</u>		<u>15</u>	<u>780</u>
P 7 <u>30</u>		<u>18</u>	<u>840</u>	<u>30</u>	<u>88</u>	<u>18</u>	<u>834</u>
P 8 <u>35</u>		<u>21</u>	<u>900</u>	<u>35</u>	<u>89</u>	<u>21</u>	<u>875</u>
P 9 <u>40</u>		<u>24</u>	<u>941</u>	<u>40</u>	<u>90</u>	<u>24</u>	<u>902</u>
P10 <u>45</u>		<u>27</u>	<u>977</u>	<u>45</u>	<u>91</u>	<u>27</u>	<u>932</u>
P11 <u>50</u>		<u>30</u>	<u>1012</u>	<u>50</u>	<u>92</u>	<u>30</u>	<u>960</u>
P12 <u>55</u>		<u>33</u>	<u>1036</u>	<u>55</u>	<u>5</u>	<u>33</u>	<u>979</u>
P13 <u>60</u>		<u>36</u>	<u>1057</u>	<u>60</u>	<u>92</u>	<u>36</u>	<u>1005</u>
P14		<u>39</u>	<u>1076</u>	<u>65</u>		<u>39</u>	<u>1020</u>
P15		<u>42</u>	<u>1094</u>	<u>70</u>		<u>42</u>	<u>1033</u>
P16		<u>45</u>		<u>75</u>		<u>45</u>	<u>1040</u>
P17		<u>48</u>		<u>80</u>		<u>48</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>	