# WESTERN TESTING CO., INC.
## FORMATION TESTING

OK

TICKET No 16163

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

Elevation 1459 KB Formation Mississippian Eff. Pay Ft.

District Pratt Date 9-7-82 Customer Order No.

COMPANY NAME Graves Drilling Company Inc.

ADDRESS 90 Union Center Wichita, Ks. 67202 35-31-7W

LEASE AND WELL NO. Williams #1 COUNTY Harper STATE KS Sec. 35 Twp. 31 S Rge. 7 W

Mail Invoice To #1 WILLIAMS Co. Name Sama Address No. Copies Requested Reg.

Mail Charts To Sama Address No. Copies Requested Reg.

Formation Test No. 1 Interval Tested From 4383 ft. to 4395 ft. Total Depth 4395 ft.

Packer Depth 4378 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Packer Depth 4383 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4384 ft. Recorder Number 1051 Cap. 4250

Bottom Recorder Depth (Outside) 4387 ft. Recorder Number 15640 Cap. 6600

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Graves

Mud Type CHEM.-Dispac Viscosity 45

Weight 9.5 Water Loss 12.4 cc.

Chlorides 6,000 P.P.M.

Jars: Make Serial Number

Did Well Flow? no Reversed Out no

Drill Collar Length 120 I. D. 2.26 in.

Weight Pipe Length I. D. in.

Drill Pipe Length 4252 I. D. 3.8 in.

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

Anchor Length 12 ft. Size 5 1/2 O.D. in.

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 F.H. in.

Blow: IFP- Strong
FFP- GTS in 56 min. Q-Hydro est. 10 Mcf/d See attached sheet for gas measurements

Recovered 45 ft. of H.O.&G.C.M. 53% mud 3% water 32% oil 12% GAS

Recovered 60 ft. of H.O.C.M. w/ trace GSY. 47% mud 8% water 21% oil 24% GAS

Recovered 60 ft. of H.O.C.M. 28% Mud 38% water 7% oil 38% GAS

Recovered 1000 ft. of Salt water

Recovered ft. of 113,000 p.p.m. chlorides

Remarks:

Time On Location 9:30 A.M. Time Pick Up Tool 12:30 P.M. Time Off Location 7:30 P.M.

Time Set Packer(s) 2:05 A.M. Time Started Off Bottom 1:50 P.M. Maximum Temperature 119 °F

| | | | | | |
|---|---|---|---|---|---|
| Initial Hydrostatic Pressure | | (A) | 2219 | P.S.I. | |
| Initial Flow Period | Minutes 15 | (B) | 129 | P.S.I. to (C) | 139 P.S.I. |
| Initial Closed In Period | Minutes 45 | (D) | 1557 | P.S.I. | |
| Final Flow Period | Minutes 60 | (E) | 290 | P.S.I. to (F) | 484 P.S.I. |
| Final Closed In Period | Minutes 45 | (G) | 1451 | P.S.I. | |
| Final Hydrostatic Pressure | | (H) | 2155 | 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.

RECEIVED SEP 10 1982

Test Approved By Signature of Customer or his authorized representative Linahan

Western Representative Karl Thomas Jr. Thank You

**FIELD INVOICE**

| | |
|---|---|
| Open Hole Test | $ 675.00 |
| Misrun | $ |
| Straddle Test | $ |
| Jars | $ |
| Selective Zone | $ |
| Safety Joint | $ |
| Sundry | $ |
| Evaluation | $ |
| Extra Packer | $ |
| Circ. Sub. | $ |
| Mileage | $ |
| Fluid Sampler | $ |
| Extra Charts | $ |
| Insurance | $ |
| Telecopier | $ |
| TOTAL | $ 675.00 |

Phone 316 262-5861

P. O. Box 1599
WICHITA, KANSAS 67201

# GAS FLOW REPORT

**Nº 3949**

Date 9-7-82 Ticket 16163 Company Gravas

Well Name and No. Williams #1 Dst No. 1 Interval Tested 4383 - 4395

County HARPER State KS. Sec. 35 Twp. 31S Rg. 7W

| 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** | | | | | |
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| **SECOND FLOW** | | | | | |
| 56 | 1.5 | 1/4 | | | 11,020 C.F./DAY |
| 60 | 1.5 | 1/4 | | | 11,020 C.F/DAY |
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## 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 ———

Authorized by ———

FORM WTC 9

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

Date 9-7-82 Test Ticket No. 16163

Recorder No. 1051 Capacity 4250 Location 4384 Ft.

Clock No. — — — — Elevation 1459 KB Well Temperature 119 °F

| Point | | Pressure | | Time Given | Time Computed |
|---|---|---|---|---|---|
| A | Initial Hydrostatic Mud | 2203 P.S.I. | Open Tool | 2:05 P M | |
| B | First Initial Flow Pressure | 127 P.S.I. | First Flow Pressure | 15 Mins. | 15 Mins. |
| C | First Final Flow Pressure | 142 P.S.I. | Initial Closed-in Pressure | 45 Mins. | 48 Mins. |
| D | Initial Closed-in Pressure | 1566 P.S.I. | Second Flow Pressure | 60 Mins. | 60 Mins. |
| E | Second Initial Flow Pressure | 281 P.S.I. | Final Closed-in Pressure | 45 Mins. | 54 Mins. |
| F | Second Final Flow Pressure | 497 P.S.I. | | | |
| G | Final Closed-in Pressure | 1465 P.S.I. | | | |
| H | Final Hydrostatic Mud | 2166 P.S.I. | | | |

## PRESSURE BREAKDOWN

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

| Point | Mins. | Press. |
|---|---|---|
| P 1 | 0 | 127 |
| P 2 | 5 | 127 |
| P 3 | 10 | 135 |
| P 4 | 15 | 142 |
| P 5 | 20 | |
| P 6 | 25 | |
| P 7 | 30 | |
| P 8 | 35 | |
| P 9 | 40 | |
| P10 | 45 | |
| P11 | 50 | |
| P12 | 55 | |
| P13 | 60 | |
| P14 | | |
| P15 | | |
| P16 | | |
| P17 | | |
| P18 | | |
| P19 | | |
| P20 | | |

**Initial Shut-In**
Breakdown: 16 Inc. of 3 mins. and a final inc. of 0 Min.

| Point Minutes | Press. |
|---|---|
| 0 | 142 |
| 3 | 1154 |
| 6 | 1293 |
| 9 | 1360 |
| 12 | 1405 |
| 15 | 1441 |
| 18 | 1464 |
| 21 | 1485 |
| 24 | 1501 |
| 27 | 1515 |
| 30 | 1528 |
| 33 | 1537 |
| 36 | 1547 |
| 39 | 1553 |
| 42 | 1561 |
| 45 | 1566 |
| 48 | 1566 |
| 51 | |
| 54 | |
| 57 | |
| 60 | |

**Second Flow Pressure**
Breakdown: 12 Inc. of 5 mins. and a final inc. of 0 Min.

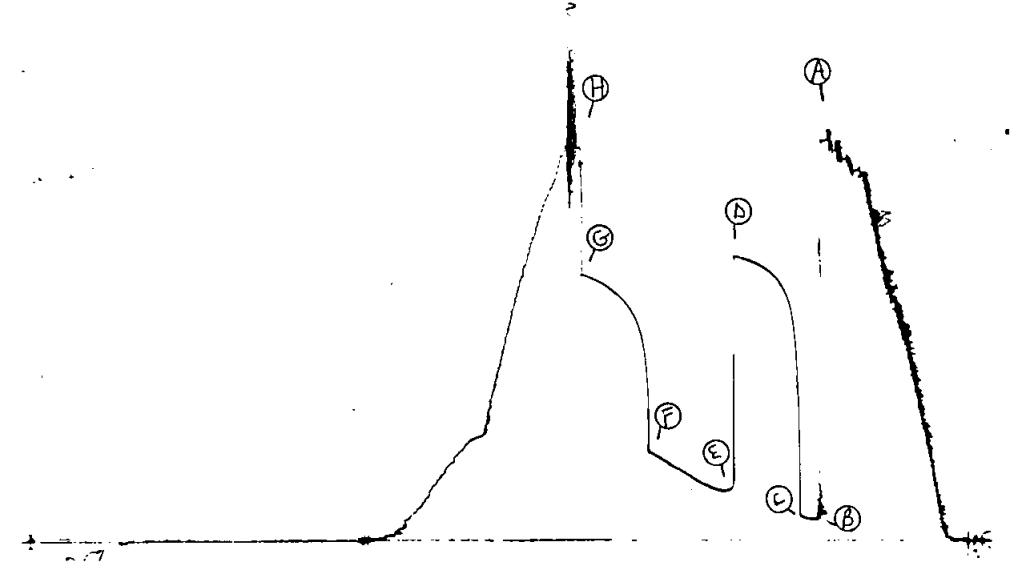
| Point Minutes | Press. |
|---|---|
| 0 | 281 |
| 5 | 281 |
| 10 | 283 |
| 15 | 292 |
| 20 | 310 |
| 25 | 328 |
| 30 | 353 |
| 35 | 377 |
| 40 | 400 |
| 45 | 420 |
| 50 | 448 |
| 55 | 470 |
| 60 | 497 |
| 65 | |
| 70 | |
| 75 | |
| 80 | |
| 85 | |
| 90 | |

**Final Shut-In**
Breakdown: 19 Inc. of 3 mins. and a final inc. of 0 Min.

| Point Minutes | Press. |
|---|---|
| 0 | 497 |
| 3 | 868 |
| 6 | 1020 |
| 9 | 1165 |
| 12 | 1220 |
| 15 | 1263 |
| 18 | 1296 |
| 21 | 1324 |
| 24 | 1346 |
| 27 | 1365 |
| 30 | 1383 |
| 33 | 1398 |
| 36 | 1414 |
| 39 | 1427 |
| 42 | 1436 |
| 45 | 1447 |
| 48 | 1454 |
| 51 | 1465 |
| 54 | 1465 |
| 57 | |
| 60 | |

TKT # 16163

I



Company Graves Drilling Company, Inc. Lease & Well No. #1 Williams

Elevation 1459 Kelly Bushing Formation Mississippi Effective Pay -- Ft. Ticket No. 16163

Date 9/7/82 Sec. 35 Twp. 31S Range 7W County Harper State Kansas

Test Approved by R. M. Lineham Western Representative Karl Leo West, Jr.

Formation Test No. 1 Interval Tested from 4383 ft. to 4395 ft. Total Depth 4395 ft.

Packer Depth 4378 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 4383 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4384 ft. Recorder Number 1051 Cap. 4250

Bottom Recorder Depth (Outside) 4387 ft. Recorder Number 15640 Cap. 6600

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

Drilling Contractor Graves Drilling Rig Drill Collar Length 120 I. D. 2.26 in.

Mud Type chemical-drispac Viscosity 45 Weight Pipe Length - I. D. - in.

Weight 9.5 Water Loss 12.4 cc. Drill Pipe Length 4252 I. D. 3.8 in.

Chlorides 6,000 P.P.M. Test Tool Length 20 ft. Tool Size 5½OD in.

Jars: Make - Serial Number - Anchor Length 12 ft. Size 5½OD 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: Initial flow period strong blow. Gas to surface in fifty-six minutes on final flow period. See attached sheet for gas measurements.

| | | |
|---|---|---|
| Recovered 45 ft. of | heavy oil and gas cut mud | 53% mud;3% water;32% oil;12% gas |
| Recovered 60 ft. of | heavy oil cut mud very gassy | 47% mud;8% water;21% oil;24% gas |
| Recovered 60 ft. of | heavy oil cut mud | 22% mud;33% water;7% oil;38% gas |
| Recovered 1000 ft. of | salt water | Chlorides 113,000 ppm |
| Recovered ft. of | | |

Remarks:

Time Set Packer(s) 2:05 ~~A.M.~~ P.M. Time Started Off Bottom 4:50 ~~A.M.~~ P.M. Maximum Temperature 119°

| | | | | |
|---|---|---|---|---|
| Initial Hydrostatic Pressure | | (A) 2203 P.S.I. | | |
| Initial Flow Period | Minutes 15 | (B) 127 P.S.I. | to (C) 142 P.S.I. | |
| Initial Closed In Period | Minutes 48 | (D) 1566 P.S.I. | | |
| Final Flow Period | Minutes 60 | (E) 281 P.S.I. | to (F) 497 P.S.I. | |
| Final Closed In Period | Minutes 54 | (G) 1465 P.S.I. | | |
| Final Hydrostatic Pressure | | (H) 2166 P.S.I. | | |

# GAS FLOW REPORT

Date 9/7/82 Ticket 16163 Company Graves Drilling Company, Inc.

Well Name and No. Williams #1 Dst No. 1 Interval Tested 4383'-4395'

County Harper State Kansas Sec. 35 Twp. 31S Rg. 7W

| 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** | | | | | | |
| | | | | | | |
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| **SECOND FLOW** | | | | | | |
| 56 min. | 1.5 PSIG | 1/4" orifice | | | | 11,020 CFPD |
| 60 min. | 1.5 PSIG | 1/4" orifice | | | | 11,020 CFPD |
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## GAS BOTTLE

Serial No. ---- Date Bottle Filled -- Date to be Invoiced 9/7/82

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 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 Graves Drilling Company, Inc.

R. M. Lineham

Authorized by _____

FORM WTC 6

# WESTERN TESTING CO., INC.

## Pressure Data

Date 9/7/82 Test Ticket No. 16163

Recorder No. 1051 Capacity 4250 Location 4384 Ft.

Clock No. -- Elevation 1459 Kelly Bushing Well Temperature 119 °F

| Point | Pressure | | Time Given | | Time Computed | |
|---|---|---|---|---|---|---|
| A Initial Hydrostatic Mud | 2203 | P.S.I. | Open Tool | 2:05P M | | |
| B First Initial Flow Pressure | 127 | P.S.I. | First Flow Pressure | 15 Mins. | 15 | Mins. |
| C First Final Flow Pressure | 142 | P.S.I. | Initial Closed-in Pressure | 45 Mins. | 48 | Mins. |
| D Initial Closed-in Pressure | 1566 | P.S.I. | Second Flow Pressure | 60 Mins. | 60 | Mins. |
| E Second Initial Flow Pressure | 281 | P.S.I. | Final Closed-in Pressure | 45 Mins. | 54 | Mins. |
| F Second Final Flow Pressure | 497 | P.S.I. | | | | |
| G Final Closed-in Pressure | 1465 | P.S.I. | | | | |
| H Final Hydrostatic Mud | 2166 | P.S.I. | | | | |

## PRESSURE BREAKDOWN

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

| Point Mins. | Press. |
|---|---|
| P 1 0 | 127 |
| P 2 5 | 127 |
| P 3 10 | 135 |
| P 4 15 | 142 |
| P 5 | |
| P 6 | |
| P 7 | |
| P 8 | |
| P 9 | |
| P10 | |
| P11 | |
| P12 | |
| P13 | |
| P14 | |
| P15 | |
| P16 | |
| P17 | |
| P18 | |
| P19 | |
| P20 | |

**Initial Shut-In**
Breakdown: 16 Inc. of 3 mins. and a final inc. of 0 Min.

| Point Minutes | Press. |
|---|---|
| 0 | 142 |
| 3 | 1154 |
| 6 | 1293 |
| 9 | 1360 |
| 12 | 1405 |
| 15 | 1441 |
| 18 | 1464 |
| 21 | 1485 |
| 24 | 1501 |
| 27 | 1515 |
| 30 | 1528 |
| 33 | 1537 |
| 36 | 1547 |
| 39 | 1553 |
| 42 | 1561 |
| 45 | 1566 |
| 48 | 1566 |
| | |
| | |
| | |

**Second Flow Pressure**
Breakdown: 12 Inc. of 5 mins. and a final inc. of 0 Min.

| Point Minutes | Press. |
|---|---|
| 0 | 281 |
| 5 | 281 |
| 10 | 283 |
| 15 | 292 |
| 20 | 310 |
| 25 | 328 |
| 30 | 353 |
| 35 | 377 |
| 40 | 400 |
| 45 | 420 |
| 50 | 448 |
| 55 | 470 |
| 60 | 497 |
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**Final Shut-In**
Breakdown: 19 Inc. of 3 mins. and a final inc. of 0 Min.

| Point Minutes | Press. |
|---|---|
| 0 | 497 |
| 3 | 868 |
| 6 | 1070 |
| 9 | 1165 |
| 12 | 1220 |
| 15 | 1263 |
| 18 | 1296 |
| 21 | 1324 |
| 24 | 1346 |
| 27 | 1365 |
| 30 | 1383 |
| 33 | 1398 |
| 36 | 1414 |
| 39 | 1427 |
| 42 | 1436 |
| 45 | 1447 |
| 48 | 1454 |
| 51 | 1465 |
| 54 | 1465 |
| | |
| | |

# WESTERN TESTING CO., INC.

FORMATION TESTING TICKET № 17275

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

Elevation 1448 GL 1459 KB Formation Simpson Sand Eff. Pay — Ft.

District GT Bend Date 9-8-82 Customer Order No. —

COMPANY NAME Graves Drilling Co., Inc.

ADDRESS 910 Union Center Wichita, Ks. 67202

LEASE AND WELL NO. Williams #1 COUNTY Harper STATE Ks. Sec. 35 Twp. 31S Rge. 7W

Mail Invoice To Same (Co. Name / Address) No. Copies Requested 5

Mail Charts To Same (Address) No. Copies Requested 5

Formation Test No. 2 Interval Tested From 4747 ft. to 4757 ft. Total Depth 4757 ft.

Packer Depth 4742 ft. Size 6 3/8 in. Packer Depth — ft. Size — in.

Packer Depth 4747 ft. Size 6 3/8 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set —

Top Recorder Depth (Inside) 4749 ft. Recorder Number 13269 Cap. 4375

Bottom Recorder Depth (Outside) 4752 ft. Recorder Number 13270 Cap. 4375

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

Drilling Contractor Graves drlg rig #1 Drill Collar Length 465 I. D. 2.2 in.

Mud Type — Viscosity 55 Weight Pipe Length — I. D. — in.

Weight 9.7 Water Loss 12 cc. Drill Pipe Length 4255 I. D. 3.8 in.

Chlorides 8,500 P.P.M. Test Tool Length 27 ft. Tool Size 5½ in.

Jars: Make Bowen Serial Number 414 Anchor Length 10 ft. Size 5½ in.

Did Well Flow? No Reversed Out yes Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4½ FH in.

Blow: IF - Strong Blow Throughout
FF - Strong Blow Throughout

Recovered — ft. of SALT WATER Chlorides 98000

Recovered — ft. of Approx 2,000' reversed out no show of oil

Recovered — ft. of —

Recovered — ft. of —

Recovered — ft. of —

Remarks: Went To shut in Tool on final shut-in, pipe would not rotate. Tried To come out of hole and was stuck in hole

Time On Location 5:20 A.M./P.M. Time Pick Up Tool 9:15 A.M./P.M. Time Off Location — A.M./P.M.

Time Set Packer(s) 11:05 A.M./P.M. Time Started Off Bottom — A.M./P.M. Maximum Temperature —

| | | | | | |
|---|---|---|---|---|---|
| Initial Hydrostatic Pressure | | | (A) | | P.S.I. |
| Initial Flow Period | Minutes 15 | | (B) | | P.S.I. to (C) P.S.I. |
| Initial Closed In Period | Minutes 45 | | (D) | | P.S.I. |
| Final Flow Period | Minutes 60 | | (E) | | P.S.I. to (F) P.S.I. |
| Final Closed In Period | Minutes 45 | | (G) | | P.S.I. |
| Final Hydrostatic Pressure | | | (H) | | 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 Richard M Linehan
Signature of Customer or his authorized representative

Western Representative Ray Schwagel

## FIELD INVOICE

| | |
|---|---|
| Open Hole Test | $ 675.00 |
| Misrun | $ — |
| Straddle Test | $ — |
| Jars | $ 300.00 |
| Selective Zone | $ — |
| Safety Joint | $ 65.00 |
| Standby | $ — |
| Evaluation | $ — |
| Extra Packer | $ — |
| Circ. Sub | $ 35.00 |
| Mileage | $ — |
| Fluid Sampler | $ — |
| Extra Charts | $ — |
| Insurance | $ 50.00 |
| Telecopier | $ — |
| TOTAL | $ 1125.00 |

Company Graves Drilling Company, Inc. Lease & Well No. Williams #1

Elevation 1448 Ground Level 1459 Kelly Bushing Formation Simpson Sand Effective Pay --- Ft. Ticket No. 17275

Date 9/8/82 Sec. 35 Twp. 31S Range 7W County Harper State Kansas

Test Approved by Richard M. Linehan Western Representative Ray Schwager

Formation Test No. 2 Interval Tested from 4747 ft. to 4757 ft. Total Depth 4757 ft.

Packer Depth 4742 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 4747 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4749 ft. Recorder Number 13269 Cap. 4375

Bottom Recorder Depth (Outside) 4752 ft. Recorder Number 13270 Cap. 4375

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

Drilling Contractor Graves Drilling Rig #1 Drill Collar Length 465 I. D. 2.2 in.

Mud Type - Viscosity 55 Weight Pipe Length - I. D. - in.

Weight 9.7 Water Loss 12 cc. Drill Pipe Length 4255 I. D. 3.8 in.

Chlorides 8,500 P.P.M. Test Tool Length 27 ft. Tool Size 5½ in.

Jars: Make WTC Serial Number 414 Anchor Length 10 ft. Size 5½ in.

Did Well Flow? No Reversed Out Yes Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4½FH in.

Blow: Strong blow throughout test.

Recovered ft. of salt water Chlorides 98,000 ppm

Recovered ft. of Approximately 2,000' reversed out - no show of oil

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: Went to shut-in tool on final shut-in; pipe would not rotate; tried to come out of hole and was stuck in hole.

Time Set Packer(s) 11:05 ~~A.M.~~ P.M. Time Started Off Bottom ----- A.M. P.M. Maximum Temperature -----

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

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

# WESTERN TESTING CO., INC.
## FORMATION TESTING

TICKET Nº 17272

Elevation 1448 G.L. 1459 K.B. Formation Simpson SAND Eff. Pay — Ft.

District GT. Bend Date 9-8-82 Customer Order No. —

COMPANY NAME Graves Drilling Co. Inc.

ADDRESS 910 Union Center Wichita, Ks. 67202

LEASE AND WELL NO. Williams #1 COUNTY Harper STATE Ks. Sec. 35 Twp. 31S Rge. 7W

Mail Invoice To Williams #1 (Co. Name) Same (Address) No. Copies Requested 5

Mail Charts To Same (Address) No. Copies Requested 5

Formation Test No. 2. Interval Tested From 4747 ft. to 4757 ft. Total Depth 4757 ft.

Packer Depth 4742 ft. Size 6 3/8 in. Packer Depth — ft. Size — in.

Packer Depth 4747 ft. Size 6 3/8 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set —

Top Recorder Depth (Inside) 4749 ft. Recorder Number 13269 Cap. 4375

Bottom Recorder Depth (Outside) 4751 ft. Recorder Number 13270 Cap. 4375

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

Drilling Contractor Graves drlg rig #1 Drill Collar Length 473 (465) I. D. 2.2 in.

Mud Type — Viscosity 55 Weight Pipe Length — I. D. — in.

Weight 9.7 Water Loss 12 cc. Drill Pipe Length 4255 I. D. 3.8 in.

Chlorides 8,500 P.P.M. Test Tool Length 19 (27) ft. Tool Size 5 1/2 in.

Jars: Make Bowen Serial Number 414 Anchor Length 10 ft. Size 5 1/2 in.

Did Well Flow? No Reversed Out yes Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: IF - Strong Blow throughout

FF - Strong Blow throughout

Recovered (?) ft. of Salt water Chlorides 98 000 PPM.

Recovered — ft. of Reversed out Approx. 2,000' salt water no oil in samples

Recovered — ft. of —

Recovered — ft. of —

Recovered — ft. of —

Remarks: Tool wouldn't Turn for final shut-in, started out of hole wouldn't Break Loose stuck in hole lost Tool in Hole

Time On Location 5:20 A.M. (P.M.) Time Pick Up Tool 9:15 A.M. (P.M.) Time Off Location — A.M. P.M.

Time Set Packer(s) 11:05 A.M. (P.M.) Time Started Off Bottom 1:50 A.M. (P.M.) Maximum Temperature —

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

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

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

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

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

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

No charge Jake Burick

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.

SEP 13 1982

Test Approved By R.M. Linehan

Signature of Customer or his authorized representative R.M. Linehan

Western Representative Ray Schwager Frank 904

Insurance Certificate

## FIELD INVOICE

| | |
|---|---|
| Open Hole Test | $ 675 |
| Misrun | $ — |
| Straddle Test | $ — |
| Jars | $ 300 |
| Selective Zone | $ — |
| Safety Joint | $ 65 |
| Standby | $ — |
| Evaluation | $ — |
| Extra Packer | $ 35 |
| Circ. Sub | $ — |
| Mileage | $ — |
| Fluid Sampler | $ — |
| Extra Charts | $ — |
| Insurance | $ 50 |
| Telecopier | $ — |
| TOTAL | $ 1125 |

# WESTERN TESTING CO., INC.
## FORMATION TESTING

TICKET No 17272

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

Elevation 1448 G.L. 1459 K.B. Formation Simpson SAND Eff. Pay — Ft.

District GT. Bend Date 9-8-82 Customer Order No. —

COMPANY NAME Graves Drilling Co. Inc.

ADDRESS 910 Union Center Wichita, Ks. 67202

LEASE AND WELL NO. Williams #1 COUNTY Harper STATE Ks. Sec. 35 Twp. 31S Rge. 7W

Mail Invoice To (Williams #1) Co. Name Same Address No. Copies Requested 5

Mail Charts To Same Address No. Copies Requested 5

Formation Test No. 2 Interval Tested From 4742 ft. to 4757 ft. Total Depth 4757 ft.

Packer Depth 4742 ft. Size 6 3/4 in. Packer Depth — ft. Size — in.

Packer Depth 4747 ft. Size 6 7/8 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set —

Top Recorder Depth (Inside) 4749 ft. Recorder Number 13269 Cap. 4375

Bottom Recorder Depth (Outside) 4751 ft. Recorder Number 13270 Cap. 4375

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

Drilling Contractor Graves Drlg Co #1 Drill Collar Length 473 1/2 I. D. 2.2 in.

Mud Type — Viscosity 55 Weight Pipe Length — I. D. — in.

Weight 9.7 Water Loss 12 cc. Drill Pipe Length 4255 I. D. 3.8 in.

Chlorides 8,500 P.P.M. Test Tool Length 19.71 ft. Tool Size 5 1/2 in.

Jars: Make Bowen Serial Number 44 Anchor Length 10 ft. Size 5 1/2 in.

Did Well Flow? No Reversed Out yes Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: IF - Strong Blow Throughout

FF - Strong Blow Throughout

Recovered (7) ft. of Salt water Chlorides 98000 PPM.

Recovered ft. of Reversed out approx 2,000 salt water no oil in samples

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: Tool wouldn't Turn for final shut-in, started out of hole wouldn't Break Loose Stuck in hole Lost Tool in Hole

Time On Location 5:20 A.M. (P.M.) Time Pick Up Tool 9:15 A.M. (P.M.) Time Off Location A.M. P.M.

Time Set Packer(s) 11:05 A.M. (P.M.) Time Started Off Bottom 1:50 A.M. (P.M.) Maximum Temperature

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

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

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

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

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

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

COMPANY TERMS

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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 M Linahan
Signature of Customer or his authorized representative

Western Representative Ray Schwagy Thank you

### FIELD INVOICE

| | |
|---|---|
| (Open Hole Test) | $ |
| Misrun | $ |
| Straddle Test | $ |
| (Jars) | $ |
| Selective Zone | $ |
| (Safety Joint) | $ |
| Standby | $ |
| Evaluation | $ |
| Extra Packer | $ |
| (Circ. Sub) | $ |
| Mileage | $ |
| Fluid Sampler | $ |
| Extra Charts | $ |
| (Insurance) | $ |
| Telecopier | $ |
| TOTAL | $ |

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

# WESTERN TESTING CO., INC.
## FORMATION TESTING

TICKET Nº 17272

Elevation _____ Formation _____ Eff. Pay _____ Ft.

District _____ Date _____ Customer Order No. _____

COMPANY NAME _____

ADDRESS _____

LEASE AND WELL NO. _____ COUNTY _____ STATE _____ Sec. _____ Twp. _____ Rge. _____

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

Mail Charts To _____ No. Copies Requested _____
Address

Formation Test No. _____ Interval Tested From _____ ft. to _____ ft. Total Depth _____ ft.

Packer Depth _____ 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) _____ ft. Recorder Number _____ Cap. _____

Bottom Recorder Depth (Outside) _____ ft. Recorder Number _____ Cap. _____

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

Drilling Contractor _____

Mud Type _____ Viscosity _____ Drill Collar Length _____ I. D. _____ in.

Weight _____ Water Loss _____ cc. Weight Pipe Length _____ I. D. _____ in.

Chlorides _____ P.P.M. Drill Pipe Length _____ I. D. _____ in.

Jars: Make _____ Serial Number _____ Test Tool Length _____ ft. Tool Size _____ in.

Did Well Flow? _____ Reversed Out _____ Anchor Length _____ ft. Size _____ in.

Surface Choke Size _____ in. Bottom Choke Size _____ in.

Main Hole Size _____ in. Tool Joint Size _____ in.

Blow: _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Remarks: _____

Time On Location _____ A.M. P.M. Time Pick Up Tool _____ A.M. P.M. Time Off Location _____ A.M. P.M.

Time Set Packer(s) _____ A.M. P.M. Time Started Off Bottom _____ A.M. P.M. Maximum Temperature _____

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

COMPANY TERMS

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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 of Customer or his authorized representative

Western Representative _____

## FIELD INVOICE

| | |
|---|---|
| Open Hole Test | $ |
| Misrun | $ |
| Straddle Test | $ |
| Jars | $ |
| Selective Zone | $ |
| Safety Joint | $ |
| Standby | $ |
| Evaluation | $ |
| Extra Packer | $ |
| Circ. Sub. | $ |
| Mileage | $ |
| Fluid Sampler | $ |
| Extra Charts | $ |
| Insurance | $ |
| Telecopier | $ |
| TOTAL | $ |