



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET N^o 1878

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

Elevation 1503 DF Formation Marmington Eff. Pay Ft.

District Pratt Date 9-6-83 Customer Order No.

COMPANY NAME Graves ~~and~~ Drilling Company Inc.

ADDRESS 910 Union Center Wichita, Ks 67202

LEASE AND WELL NO. William #1 COUNTY Barber STATE KANSAS Sec. 32 Twp. 32S Rge. 10W

Mail Invoice To SAME #1 William No. Copies Requested reg

Co. Name Address No. Copies Requested reg

Mail Charts To SAME Address No. Copies Requested reg

Formation Test No. 1 Interval Tested From 4367 ft. to 4400 ft. Total Depth 4400 ft.

Packer Depth 4364 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Packer Depth 4367 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4373 ft. Recorder Number 10260 Cap. 4775

Bottom Recorder Depth (Outside) 4376 ft. Recorder Number 6077 Cap. 4700

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor GRAVES DRILLING Drill Collar Length 120 I. D. 2.25 in.

Mud Type Premix-Tmp Viscosity 48 Weight Pipe Length I. D. in.

Weight 9.2 Water Loss 7.5 cc. Drill Pipe Length 4227 I. D. 3.2 in.

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

Jars: Make Serial Number Anchor Length 33 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 in.

Blow: Weaker blow on first opening (2 in. in bucket)

Weaker blow building to good blow on second opening (hose 8 in. in bucket)

Recovered 40 ft. of Slightly gas cut Mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides P.P.M. Sample Jars used Remarks:

Time On Location 8:30 A.M. Time Pick Up Tool 11:30 A.M. Time Off Location 6:30 A.M.

Time Set Packer(s) 1:05 A.M. Time Started Off Bottom 4:05 A.M. Maximum Temperature 118

Initial Hydrostatic Pressure (A) 2232 P.S.I.

Initial Flow Period Minutes 30 (B) 23 P.S.I. to (C) 23 P.S.I.

Initial Closed In Period Minutes 45 (D) 202 P.S.I.

Final Flow Period Minutes 60 (E) 23 P.S.I. to (F) 23 P.S.I.

Final Closed In Period Minutes 45 (G) 238 P.S.I.

Final Hydrostatic Pressure (H) 2137 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 Andrew Katzlaff
Signature of Customer or his authorized representative

Western Representative Mike Witt - Thank You

FIELD INVOICE

Open Hole Test \$ 595.00
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$
TOTAL \$ 595.00

Pressure Data

Date 9-6-83 Test Ticket No. 1878
 Recorder No. 10266 Capacity 4775 Location 4373 Ft
 Clock No. --- Elevation 1503 D.F. Well Temperature 118 °F
 Point Pressure Time Given Time Computed
 A Initial Hydrostatic Mud 2270 P.S.I. Open Tool M
 B First Initial Flow Pressure 16 P.S.I. First Flow Pressure 30 Mins. 25 Mins.
 C First Final Flow Pressure 16 P.S.I. Initial Closed-in Pressure 45 Mins. 45 Mins.
 D Initial Closed-in Pressure 226 P.S.I. Second Flow Pressure 60 Mins. 60 Mins.
 E Second Initial Flow Pressure 32 P.S.I. Final Closed-in Pressure 45 Mins. 42 Mins.
 F Second Final Flow Pressure 32 P.S.I.
 G Final Closed-in Pressure 240 P.S.I.
 H Final Hydrostatic Mud 2163 P.S.I.

PRESSURE BREAKDOWN

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

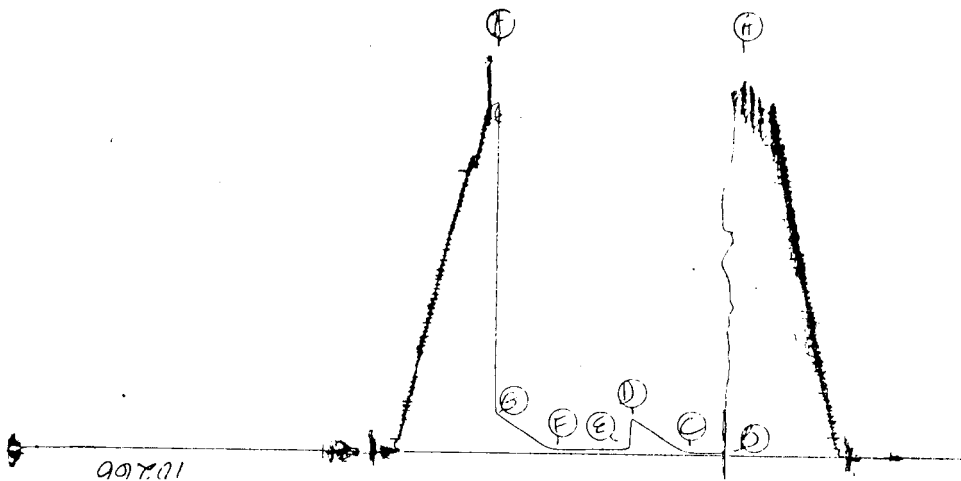
Initial Shut-In
 Breakdown: 16 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Second Flow Pressure
 Breakdown: 13 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Final Shut-In
 Breakdown: 15 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	16	0	16	0	32	0	32
P 2 5	16	3	21	5	32	3	38
P 3 10	16	6	30	10	32	6	50
P 4 15	16	9	38	15	32	9	61
P 5 20	16	12	52	20	32	12	78
P 6 25	16	15	69	25	32	15	95
P 7 30		18	85	30	32	18	111
P 8 35		21	102	35	32	21	128
P 9 40		24	119	40	32	24	147
P 10 45		27	135	45	32	27	161
P 11 50		30	150	50	32	30	176
P 12 55		33	164	55	32	33	192
P 13 60		36	180	60	32	36	207
P 14		39	200	65		39	223
P 15		42	214	70		42	240
P 16		45	226	75		45	
P 17		48		80		48	
P 18		51		85		51	
P 19		54		90		54	
P 20		57				57	
		60				60	

IKT #1878
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WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 9/6/83
CUSTOMER: GRAVES DRILLING CO. INC.
WELL: 1 TEST: 1
ELEVATION (KB): 1508 FORMATION: MARMATON
SECTION: 32 TOWNSHIP: 32S
RANGE: 10W COUNTY: BARBER STATE: KANSAS
GAUGE SN #10266 RANGE: 4775 CLOCK: 12

INTERVAL TEST FROM: 4367 FT TO: 4400 FT TOTAL DEPTH: 4400 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 4364 FT SIZE: 6 5/8 IN PACKER DEPTH: 4367 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: GRAVES
MUD TYPE: PRE-IMP VISCOSITY: 48
WEIGHT: 9.2 WATER LOSS (CC): 7.5
CHLORIDES (P.P.M.): 10000
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 120 FT I.D.: 2.25 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 4227 FT I.D.: 3.2 IN
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 IN
ANCHOR LENGTH: 33 FT SIZE: 5 1/2 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 XH IN

BLOW: INITIAL FLOW PERIOD WEAK BLOW -
2 INCHES IN BUCKET.
FINAL FLOW PERIOD WEAK BLOW BUILDING
TO A GOOD BLOW - HOSE 8 INCHES IN BUCKET.

RECOVERED: 40	FT	OF: SLIGHTLY GAS CUT MUD
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:

REMARKS:

TIME SET PACKER(S): 1:05 AM	TIME STARTED OFF BOTTOM: 4:05 AM
WELL TEMPERATURE: 118 °F	
INITIAL HYDROSTATIC PRESSURE:	(A) 2270 PSI
INITIAL FLOW PERIOD MIN: 25	(B) 16 PSI TO (C) 16 PSI
INITIAL CLOSED IN PERIOD MIN: 45	(D) 226 PSI
FINAL FLOW PERIOD MIN: 60	(E) 32 PSI TO (F) 32 PSI
FINAL CLOSED IN PERIOD MIN: 42	(G) 240 PSI
FINAL HYDROSTATIC PRESSURE	(H) 2163 PSI



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 1879

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

Elevation 1503 DF Formation Cheerokee Eff. Pay Ft.

District Pratt Date 9-6-83 Customer Order No.

COMPANY NAME Graves ~~Est~~ Drilling Co. Inc.

ADDRESS 910 Union Center Wichita, Ks 67202

LEASE AND WELL NO. Williams #1 COUNTY Barber STATE Ks Sec. 32 Twp. 32S Rge. 10W

Mail Invoice To SAME Co. Name Address No. Copies Requested reg

Mail Charts To SAME #1 Williams Address No. Copies Requested reg

Formation Test No. 2 Interval Tested From 4442 ft. to 4460 ft. Total Depth 4460 ft.

Packer Depth 4439 ft. Size 6 5/8 in. Packer Depth — ft. Size — in.

Packer Depth 4442 ft. Size 6 5/8 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4447 ft. Recorder Number 10266 Cap. 4775

Bottom Recorder Depth (Outside) 4450 ft. Recorder Number 6077 Cap. 4700

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

Drilling Contractor Graves Drllg Drill Collar Length 120 I. D. 2.25 in.

Mud Type Premix - Imp Viscosity 45 Weight Pipe Length — I. D. — in.

Weight 9.2 Water Loss 7.2 cc. Drill Pipe Length 4302 I. D. 3.2 in.

Chlorides 15,000 P.P.M. Test Tool Length 20 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 1/8 in. Tool Joint Size 4 1/2 x 4 in.

Blow: Strong blow on first opening. Gas to surface in 5 min. (see chart).

Recovered 40 ft. of pluggy oil

Recovered 120 ft. of gas cut oil

Recovered — ft. of

Recovered — ft. of

Recovered — ft. of

Chlorides — P.P.M. Sample Jars used — Remarks: Clock stopped on #102 wk, we read #

#6077 for test.

Time On Location 3:30 A.M. Time Pick Up Tool 4:30 A.M. Time Off Location 12:00 A.M.

Time Set Packer(s) 5:45 A.M. Time Started Off Bottom 9:00 A.M. Maximum Temperature 122

Initial Hydrostatic Pressure (A) 2315 P.S.I.

Initial Flow Period Minutes 30 (B) 59 P.S.I. to (C) 59 P.S.I.

Initial Closed In Period Minutes 45 (D) 1364 P.S.I.

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

Final Closed In Period Minutes 60 (G) 1578 P.S.I.

Final Hydrostatic Pressure (H) 2255 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 Katlaff Signature of Customer or his authorized representative

Western Representative Mike Litt Thank You!

FIELD INVOICE

Open Hole Test \$ 595.00
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$
TOTAL \$ 595.00

WICHITA, KANSAS 67201

Nº 4434

GAS FLOW REPORT

Date 9-6-83 Ticket 1879 Company GRAVES Etl
Well Name and No. Williams #1 Dst No. 2 Interval Tested 4442 - 4460
County Barber State Ks Sec. 32 Twp. 32S Rg. 10W

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
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PRE FLOW

[illegible]

SECOND FLOW

	Water				
7:05					Tool open gas to surface 5 min.
:10	6 inches	1/4"			4.120 cfpd
:20	8	1/4"			4.760 cfpd.
:30	7	1/4"			4.450
:40	5	{			3.710
:50	5				3.710
8:00	5				3.710
					} JH /

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 _____

WESTERN TESTING CO., INC.

Pressure Data

Date 9-6-83 Test Ticket No. 1879
 Recorder No. 6077 Capacity 4700 Location 4450 Ft
 Clock No. 1508 Elevation 7.18 Well Temperature 122

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2350</u> P.S.I.	<u>5:45 P.M.</u>	
B First Initial Flow Pressure	<u>81</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>61</u> P.S.I.	<u>45</u> Mins.	<u>42</u> Mins.
D Initial Closed-in Pressure	<u>1451</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>92</u> P.S.I.	<u>60</u> Mins.	<u>57</u> Mins.
F Second Final Flow Pressure	<u>79</u> P.S.I.		
G Final Closed-in Pressure	<u>1670</u> P.S.I.		
H Final Hydrostatic Mud	<u>2335</u> P.S.I.		

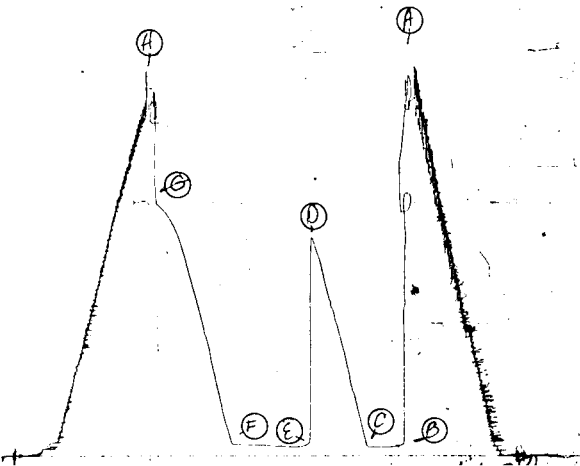
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>7</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>13</u> Inc.		Breakdown: <u>20</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>81</u>	0	<u>61</u>	0	<u>92</u>	0	<u>79</u>
P 2 5	<u>66</u>	3	<u>171</u>	5	<u>71</u>	3	<u>179</u>
P 3 10	<u>61</u>	6	<u>278</u>	10	<u>63</u>	6	<u>281</u>
P 4 15	<u>61</u>	9	<u>383</u>	15	<u>63</u>	9	<u>396</u>
P 5 20	<u>61</u>	12	<u>483</u>	20	<u>66</u>	12	<u>508</u>
P 6 25	<u>61</u>	15	<u>621</u>	25	<u>66</u>	15	<u>629</u>
P 7 30	<u>61</u>	18	<u>731</u>	30	<u>71</u>	18	<u>757</u>
P 8 35		21	<u>854</u>	35	<u>71</u>	21	<u>854</u>
P 9 40		24	<u>956</u>	40	<u>76</u>	24	<u>959</u>
P10 45		27	<u>1045</u>	45	<u>76</u>	27	<u>1061</u>
P11 50		30	<u>1142</u>	50	<u>79</u>	30	<u>1158</u>
P12 55		33	<u>1262</u>	55	<u>79</u>	33	<u>1250</u>
P13 60		36	<u>1344</u>	60	<u>79</u>	36	<u>1351</u>
P14		39	<u>1428</u>	65		39	<u>1443</u>
P15		42	<u>1451</u>	70		42	<u>1500</u>
P16		45		75		45	<u>1558</u>
P17		48		80		48	<u>1602</u>
P18		51		85		51	<u>1630</u>
P19		54		90		54	<u>1655</u>
P20		57				57	<u>1676</u>
		60				60	

DST# 2

TKT # 1879

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WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 9/6/83
CUSTOMER: GRAVES DRILLING CO. INC.
WELL: 1 TEST: 2
ELEVATION (KB): 1508 FORMATION: CHEROKEE GROUP
SECTION: 32 TOWNSHIP: 32S
RANGE: 10W COUNTY: BARBER STATE: KANSAS
GAUGE SN #6077 RANGE: 4700 CLOCK: 12

INTERVAL TEST FROM: 4442 FT TO: 4460 FT TOTAL DEPTH: 4460 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 4439 FT SIZE: 6 5/8 IN PACKER DEPTH: 4442 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: GRAVES DRILLING
MUD TYPE: PREMIX-IMP VISCOSITY: 45
WEIGHT: 9.2 WATER LOSS (CC): 9.2
CHLORIDES (P.P.M.): 15000
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 120 FT I.D.: 2.25 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 4302 FT I.D.: 3.2 IN
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 O.D. IN
ANCHOR LENGTH: 18 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 X.H. IN

BLOW: STRONG BLOW ON FIRST OPENING
GAS TO SURFACE IN 5 MINUTES -
SEE GAS FLOW REPORT.

RECOVERED: 40	FT	OF: FROGGY OIL
RECOVERED: 120	FT	OF: GAS CUT OIL
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:

REMARKS: CLOKED STOPPED ON #10266
WE READ #6077 FOR TEST.

TIME SET PACKER(S): 5:45 P.M.	TIME STARTED OFF BOTTOM: 9:00 P.M.
WELL TEMPERATURE: 122 °F	
INITIAL HYDROSTATIC PRESSURE:	(A) 2350 PSI
INITIAL FLOW PERIOD MIN: 30	(B) 81 PSI TO (C) 61 PSI
INITIAL CLOSED IN PERIOD MIN: 42	(D) 1451 PSI
FINAL FLOW PERIOD MIN: 60	(E) 92 PSI TO (F) 79 PSI
FINAL CLOSED IN PERIOD MIN: 57	(G) 1670 PSI
FINAL HYDROSTATIC PRESSURE	(H) 2335 PSI

WESTERN TESTING CO. INC.
GAS FLOW REPORT

DATE: 9/6/83
CUSTOMER: GRAVES DRILLING CO. INC.
WELL: 1 TEST: 2
ELEVATION (KB): 1508 FORMATION: CHEROKEE GROUP
SECTION: 32 TOWNSHIP: 32S
RANGE: 10W COUNTY: BARBER STATE: KANSAS
GAUGE SN #6077 RANGE: 4700 CLOCK: 12

TIME GAUGE (MIN)	TESTER TYPE	ORIFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
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PRE FLOW

SECOND FLOW

				GAS TO SURFACE
5				
10	MERLA	1/4	6"WTR	4120 CFPD
20		1/4	8"WTR	4760 CFPD
30		1/4	7"WTR	4450 CFPD
40		1/4	5"WTR	3710 CFPD
50		1/4	5"WTR	3710 CFPD
60		1/4	5"WTR	3710 CFPD

GAS BOTTLE SN #:
DATE BOTTLE FILLED:
DATE TO BE INVOICED: 9/6/83



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No. 1880

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

Elevation 1503 DF Formation Miss Eff. Pay Ft.

District Pratt Date 9-7-83 Customer Order No.

COMPANY NAME Graves ~~Flat~~ Drilling Co. Inc.

ADDRESS 910 Union Center Wichita, Ks 67202

LEASE AND WELL NO. Williams #1 COUNTY Barber STATE Ks Sec. 32 Twp. 32S Rge. 10W

Mail Invoice To SAME Co. Name No. Copies Requested req.

Mail Charts To SAME #1 William Address No. Copies Requested req.

Formation Test No. 3 Interval Tested From 4481 ft. to 4496 ft. Total Depth 4496 ft.

Packer Depth 4478 ft. Size 6 5/8 in. Packer Depth — ft. Size — in.

Packer Depth 4481 ft. Size 6 5/8 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set —

Top Recorder Depth (Inside) 4486 ft. Recorder Number 10266 Cap. 4775

Bottom Recorder Depth (Outside) 4489 ft. Recorder Number 6077 Cap. 4700

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

Drilling Contractor Graves Drilling Mud Type Premix-Imp Viscosity 45

Weight 9.2 Water Loss 9.2 cc. Drill Collar Length 120 I. D. 2.25 in.

Chlorides 15,000 P.P.M. Weight Pipe Length — I. D. — in.

Jars: Make — Serial Number — Drill Pipe Length 4341 I. D. 3.2 in.

Did Well Flow? No Reversed Out No Test Tool Length 20 ft. Tool Size 5 1/2 in.

Anchor Length 15 ft. Size 5 1/2 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 in.

Blow: Strong blow, gas to surface in 12 min. on first opening. (See flow chart)

Recovered 120 ft. of Froggy oil

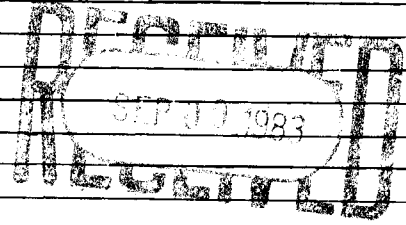
Recovered 180 ft. of gassy oil

Recovered — ft. of

Recovered — ft. of

Recovered — ft. of

Chlorides — P.P.M. Sample Jars used — Remarks: —



Time On Location 6:30 A.M. Time Pick Up Tool 7:15 A.M. Time Off Location 2:30 P.M.

Time Set Packer(s) 8:30 A.M. Time Started Off Bottom 11:45 A.M. Maximum Temperature 122°

Initial Hydrostatic Pressure (A) 2302 P.S.I.

Initial Flow Period Minutes 30 (B) 59 P.S.I. to (C) 59 P.S.I.

Initial Closed In Period Minutes 45 (D) 1578 P.S.I.

Final Flow Period Minutes 60 (E) 71 P.S.I. to (F) 107 P.S.I.

Final Closed In Period Minutes 60 (G) 1578 P.S.I.

Final Hydrostatic Pressure (H) 2279 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 Arden Ratliff
Signature of Customer or his authorized representative

Western Representative Mike Jitt Thank You!

FIELD INVOICE

Open Hole Test \$ 55.00
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$
TOTAL \$ 55.00



GAS FLOW REPORT

N^o 4435

Date 9-7-83 Ticket # 1880 Company Graves Etc
 Well Name and No. Williams #1 Dst No. 3 Interval Tested 4481-4496
 County Barber State Ks. Sec. 32 Twp. 32 S Rg. 10 W

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					
8:30	1				gas to surface in 12 min
:20	15"	1/2"			24.500 cfpd.
:30	18"	1/2"			26.600 cfpd. <i>ok</i>

SECOND FLOW					
9:45	26"	1/2"			Gas to Surface
:55	26"	1/2"			31.900 cfpd.
10:05	20"	1/2"			28.800 cfpd. 28,000
:25	17"	}			25.800 cfpd
:25	17"				25.800 cfpd
:35	17"				25.800 cfpd
:45	17"				25.800 cfpd

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 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 _____

Authorized by _____

WESTERN TESTING CO., INC.

Pressure Data

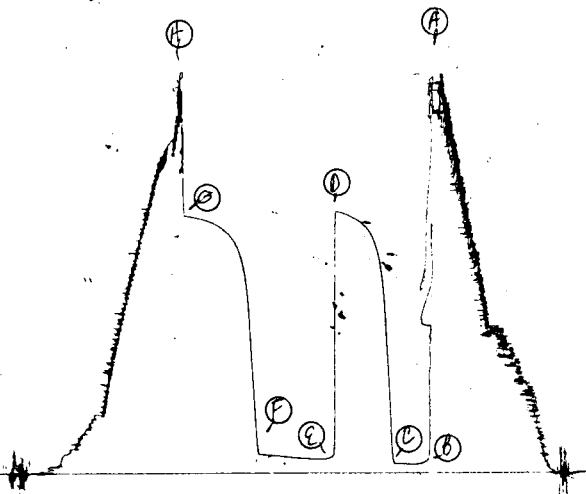
Date: 9-7-83 Test Ticket No. 1880
 Recorder No. 10266 Capacity 4775 Location 4486 Ft
 Clock No. --- Elevation 1508 Well Temperature 122 °F
 Point Pressure Time Given Time Computed
 A Initial Hydrostatic Mud 2374 P.S.I. Open Tool 8:30 A M
 B First Initial Flow Pressure 76 P.S.I. First Flow Pressure 30 Mins. 25 Mins
 C First Final Flow Pressure 54 P.S.I. Initial Closed-in Pressure 45 Mins. 42 Mins
 D Initial Closed-in Pressure 1595 P.S.I. Second Flow Pressure 60 Mins. 55 Mins
 E Second Initial Flow Pressure 88 P.S.I. Final Closed-in Pressure 60 Mins. 54 Mins
 F Second Final Flow Pressure 116 P.S.I.
 G Final Closed-in Pressure 1569 P.S.I.
 H Final Hydrostatic Mud 2348 P.S.I.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>19</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	76 76	0	54	0	88	0	116
P 2 5	59	3	471	5	88	3	409
P 3 10	54	6	931	10	88	6	755
P 4 15	54	9	1244	15	88	9	1130
P 5 20	54	12	1362	20	89	12	1284
P 6 25	54	15	1436	25	92	15	1369
P 7 30		18	1481	30	97	18	1417
P 8 35		21	1507	35	102	21	1447
P 9 40		24	1530	40	107	24	1475
P 10 45		27	1550	45	111	27	1497
P 11 50		30	1559	50	114	30	1516
P 12 55		33	1573	55	116	33	1528
P 13 60		36	1583	60		36	1535
P 14		39	1592	65		39	1545
P 15		42	1595	70		42	1552
P 16		45		75		45	1557
P 17		48		80		48	1561
P 18		51		85		51	1569
P 19		54		90		54	1569
P 20		57				57	
		60				60	

TKT # 1880

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WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 9/7/83
CUSTOMER: GRAVES DRILLING CO. INC.
WELL: 1 TEST: 3
ELEVATION (KB): 1508 FORMATION: MISSISSIPPI
SECTION: 32 TOWNSHIP: 32S
RANGE: 10W COUNTY: BARBER STATE: KANSAS
GAUGE SN #10266 RANGE: 4775 CLOCK: 12

INTERVAL TEST FROM: 4481 FT TO: 4496 FT TOTAL DEPTH: 4496 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 4478 FT SIZE: 6 5/8 IN PACKER DEPTH: 4481 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: GRAVES DRILLING
MUD TYPE: PREMIX-IMP VISCOSITY: 45
WEIGHT: 9.2 WATER LOSS (CC): 9.2
CHLORIDES (P.P.M.): 15000
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 120 FT I.D.: 2.25 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 4341 FT I.D.: 3.2 IN
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 O.D. IN
ANCHOR LENGTH: 15 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 X.H. IN

BLOW: STRONG BLOW - GAS TO SURFACE IN
12 MINUTES. SEE GAS FLOW REPORT

RECOVERED: 120	FT	OF: FROGGY OIL
RECOVERED: 180	FT	OF: GASSY OIL
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:

REMARKS:

TIME SET PACKER(S): 8:30 A.M.	TIME STARTED OFF BOTTOM: 11:45 A.M.
WELL TEMPERATURE: 122 °F	
INITIAL HYDROSTATIC PRESSURE:	(A) 2374 PSI
INITIAL FLOW PERIOD MIN: 25	(B) 76 PSI TO (C) 54 PSI
INITIAL CLOSED IN PERIOD MIN: 42	(D) 1595 PSI
FINAL FLOW PERIOD MIN: 55	(E) 88 PSI TO (F) 116 PSI
FINAL CLOSED IN PERIOD MIN: 54	(G) 1569 PSI
FINAL HYDROSTATIC PRESSURE	(H) 2348 PSI

WESTERN TESTING CO. INC.
GAS FLOW REPORT

DATE: 9/7/83
CUSTOMER: GRAVES DRILLING CO. INC.
WELL: 1 TEST: 3
ELEVATION (KB): 1508 FORMATION: MISSISSIPPI
SECTION: 32 TOWNSHIP: 32S
RANGE: 10W COUNTY: BARBER STATE: KANSAS
GAUGE SN #10266 RANGE: 4775 CLOCK: 12

TIME GAUGE (MIN)	TESTER TYPE	ORIFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
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PRE FLOW

12				GAS TO SURFACE
20	MERLA	1/2	15"WTR	24500 CFPD
30		1/2	18"WTR	26600 CFPD

SECOND FLOW

9:45				GAS TO SURFACE
9:55	MERLA	1/2	26"WTR	31900 CFPD
10:05		1/2	20"WTR	28000 CFPD
10:15		1/2	17"WTR	25800 CFPD
10:25		1/2	17"WTR	25800 CFPD
10:35		1/2	17"WTR	25800 CFPD
10:45		1/2	17"WTR	25800 CFPD

GAS BOTTLE SN #:
DATE BOTTLE FILLED:
DATE TO BE INVOICED: 9/7/83