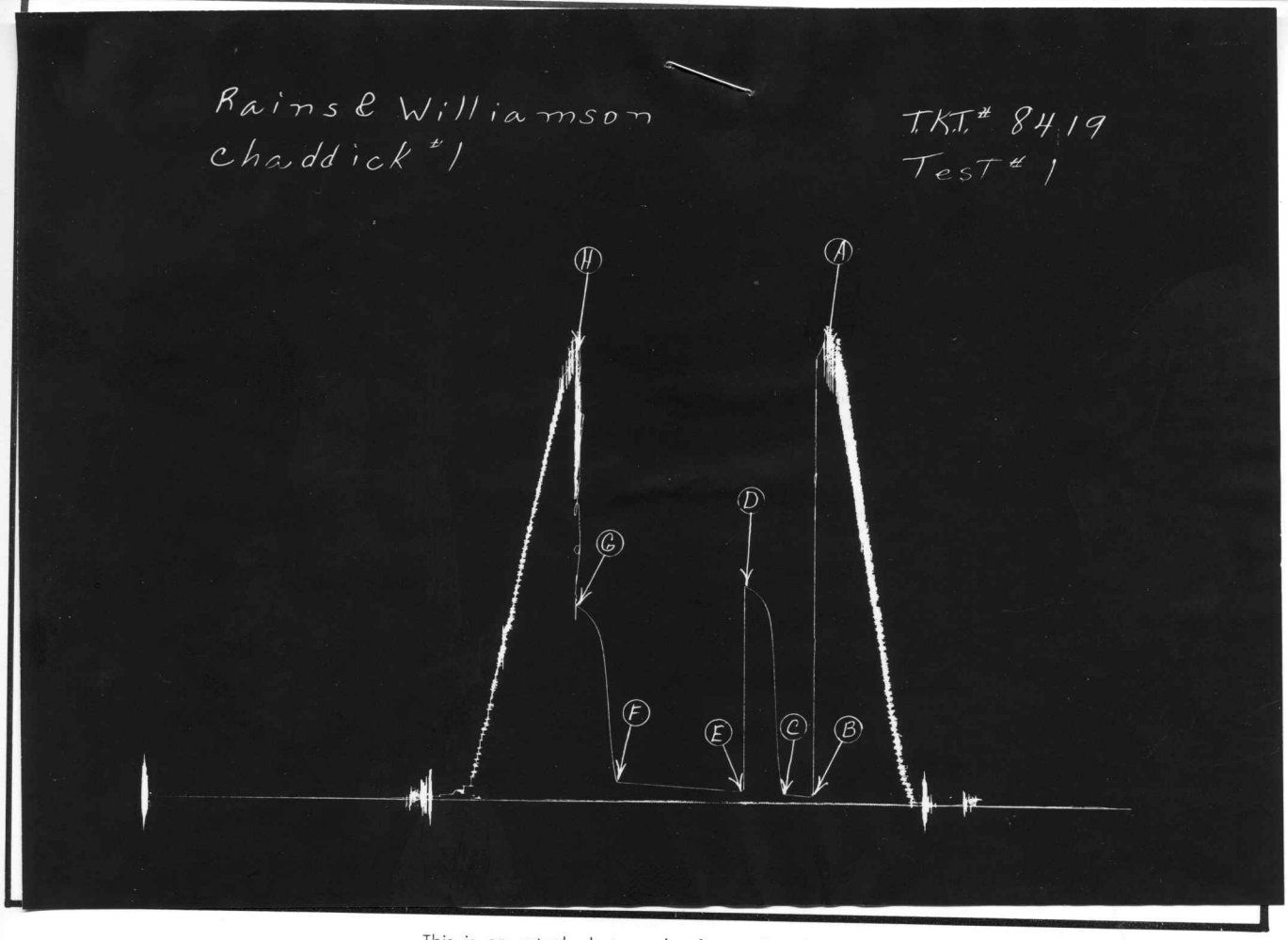


This is an actual photograph of recorder chart.

| POINT | | PRESSURE | |
|---|---|---|---|
| (A) | Initial Hydrostatic Mud | 2316 | PSI |
| (B) | First Initial Flow Pressure | 35 | PSI |
| (C) | First Final Flow Pressure | 43 | PSI |
| (D) | Initial Closed-in Pressure | 1124 | PSI |
| (E) | Second Initial Flow Pressure | 60 | PSI |
| (F) | Second Final Flow Pressure | 101 | PSI |
| (G) | Final Closed-in Pressure | 1018 | PSI |
| (H) | Final Hydrostatic Mud | 2303 | PSI |

COMPANY RAINS & WILLIAMSON OIL CO. LEASE AND WELL NO. CHADDICK #1 SEC. 31 TWP. 20S RGE. 20W TEST NO. 1 DATE 5-19-67

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 SWift 3-7903

Company Rains & Williamson Oil Company Lease & Well No. Chaddick #1

Elevation === Formation Mississippi Ticket Number 8419

Date May 19,1967 Sec. 31 Twp. 20s Range 20w County Pawnee State Kansas

Test Approved by Tom Wesselowski Western Representative Dean Blagrave

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Formation Test No. 1 O.K. X Misrun Interval Tested From 4369' to 4376' Total Depth 4376'

Size Main Hole 7 7/8 Rat Hole Conv. B.T. X Damaged Yes X No Conv. X B.T. Damaged Yes X No

Packer Depth 4364 Ft. Size 6 3/4 Packer Depth 4369 Ft. Size 6 3/4

Straddle Yes X No Conv. B.T. Damaged Yes No

Packer Depth Ft. Size

Tool Size 5½ OD Tool Jt. Size 4½ FH Anchor Length 7 Ft. Size 5½ OD

RECORDERS Depth 4358 Ft. Clock No. 6892 Depth 4372 Ft. Clock No. 6774

Top Make Amerada Cap. 4150 No. 2666 Inside Outside Bottom Make Amerada Cap. 4300 No. 1567 Inside Outside

Below Straddle: Depth Clock No. Inside Outside Depth Ft. Clock No. Inside Outside

Top Make Cap. No. Inside Outside Bottom Make Cap. No. Inside Outside

Time Set Packer 7:35 P M

Tool Open I.F.P. From 7:40 M to 8:00 M Hr. 20 Min. From (B) 35 P.S.I. To (C) 43 P.S.I.

Tool Closed I.C.I.P. From 8:00 M. to 8:30 M. Hr. 30 Min. (D) 1124 P.S.I.

Tool Open F.F.P. From 8:30P M. to 10:00 M. 1 Hr. 30 Min. From (E) 60 P.S.I. To (F) 101 P.S.I.

Tool Closed F.C.I.P. From 10:00 M. to 10:30 M. Hr. 30 Min. (G) 1018 P.S.I.

Initial Hydrostatic Pressure (A) 2316 P.S.I. Final Hydrostatic Pressure (H) 2303 P.S.I.

| SURFACE INFORMATION | Size Choke | Max. Press. P.S.I. | Time | Description of Flow |
|---|---|---|---|---|
| | 1/4 In. | | M. | |
| | | | M. | |
| | | | M. | |

BLOW Good throughout/ Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 150' gassy muddy oil

Mud

Reversed Out Yes X No Mud Type starch Viscosity 47 Weight 9.8 Maximum Temp. 123 °F

EXTRA EQUIPMENT: Dual Packers yes Safety Joint D Jars: Size no Make Ser. No.

Type Circ. Sub. plug Did Tool Plug? no Where? Did Packer Hold? yes

Length Drill Pipe ft. I.D. Drill Pipe 3.8 in Length Weight Pipe 910 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars none ft.

I. D. Drill Collars in. Length D.S.T. Tool 31 ft.

Remarks

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

Date May 19, 1967 Test Ticket No. 8419

Recorder No. 2606 Capacity 4150 Location 4358 Ft.

Clock No. 6892 Elevation ?/ Well Temperature 123 °F

| Point | Pressure | | Time Given | Time Computed |
|---|---|---|---|---|
| A Initial Hydrostatic Mud | 2316 P.S.I. | Opened Tool | 7:35 P M | |
| B First Initial Flow Pressure | 35 P.S.I. | First Flow Pressure | 20 Mins. | 20 Mins. |
| C First Final Flow Pressure | 43 P.S.I. | Initial Closed-in Pressure | 30 Mins. | 32 Mins. |
| D Initial Closed-in Pressure | 1124 P.S.I. | Second Flow Pressure | 90 Mins. | 89 Mins. |
| E Second Initial Flow Pressure | 60 P.S.I. | Final Closed-in Pressure | 30 Mins. | 31 Mins. |
| F Second Final Flow Pressure | 101 P.S.I. | | | |
| G Final Closed-in Pressure | 1018 P.S.I. | | | |
| H Final Hydrostatic Mud | 2303 P.S.I. | | | |

## PRESSURE BREAKDOWN

**First Flow Press.**
Breakdown: 4 Inc.
of 5 mins. and a
final inc. of = Min.

| Point Mins. | Press. |
|---|---|
| P 1 0 | 35 |
| P 2 5 | 36 |
| P 3 10 | 37 |
| P 4 15 | 41 |
| P 5 20 | 43 |
| P 6 | |
| P 7 | |
| P 8 | |
| P 9 | |
| P10 | |
| P11 | |
| P12 | |
| P13 | |
| P14 | |
| P15 | |
| P16 | |
| P17 | |
| P18 | |
| P19 | |
| P20 | |

**Initial Shut-In**
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 2 Min.

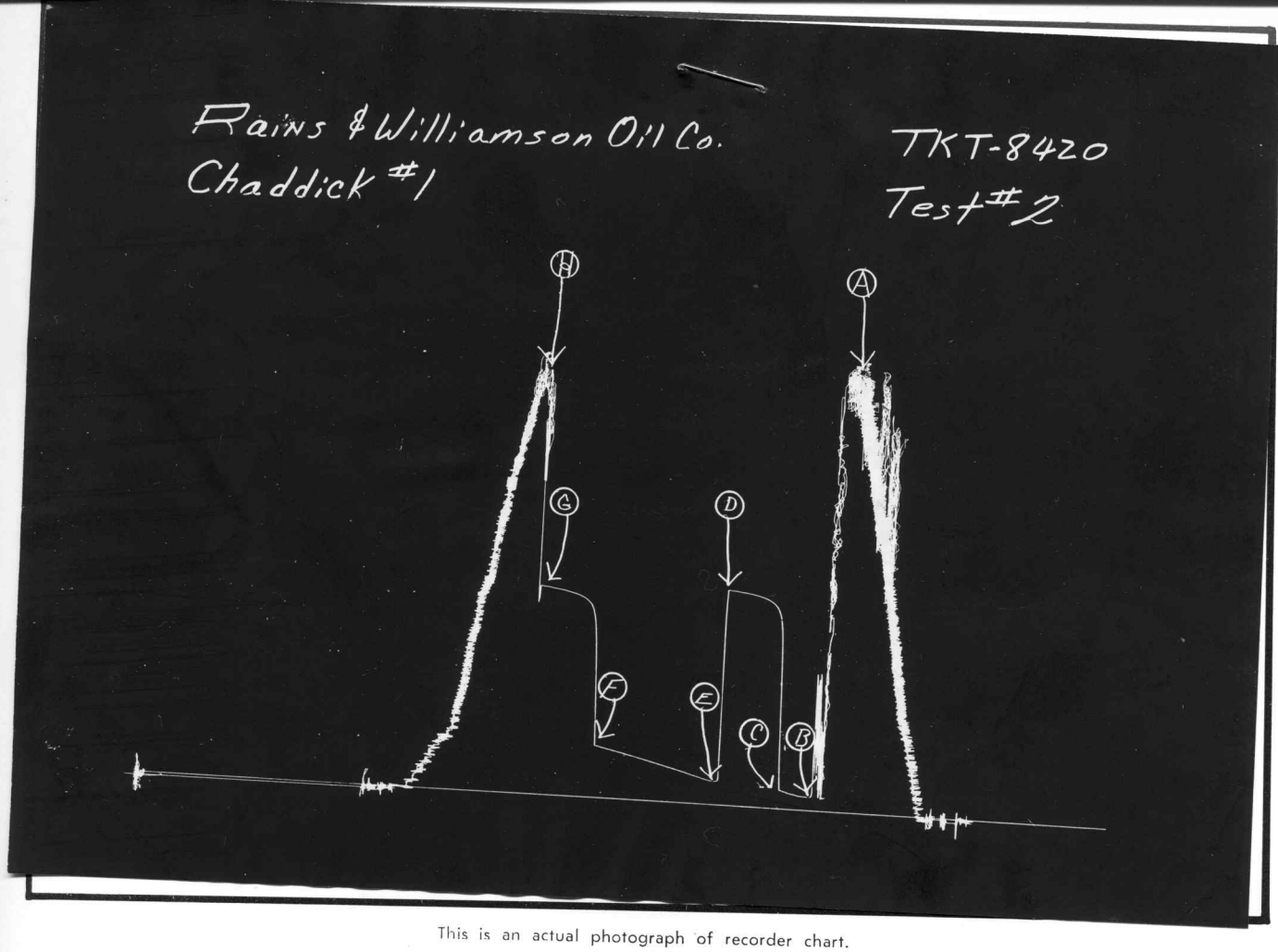
| Point Minutes | Press. |
|---|---|
| 0 | 43 |
| 3 | 137 |
| 6 | 312 |
| 9 | 547 |
| 12 | 831 |
| 15 | 977 |
| 18 | 1035 |
| 21 | 1066 |
| 24 | 1089 |
| 27 | 1105 |
| 30 | 1117 |
| 32 | 1124 |

**Second Flow Pressure**
Breakdown: 17 Inc.
of 5 mins. and a
final inc. of 4 Min.

| Point Minutes | Press. |
|---|---|
| 0 | 60 |
| 5 | 60 |
| 10 | 60 |
| 15 | 64 |
| 20 | 68 |
| 25 | 70 |
| 30 | 73 |
| 35 | 75 |
| 50 | 78 |
| 45 | 80 |
| 50 | 82 |
| 55 | 85 |
| 60 | 87 |
| 65 | 90 |
| 70 | 93 |
| 75 | 95 |
| 80 | 97 |
| 85 | 99 |
| 89 | 101 |

**Final Shut-In**
Breakdown 10 Inc.
of 3 mins. and a
final inc. of 1 Min.

| Point Minutes | Press. |
|---|---|
| 0 | 101 |
| 3 | 191 |
| 6 | 343 |
| 9 | 593 |
| 12 | 771 |
| 15 | 868 |
| 18 | 923 |
| 21 | 956 |
| 24 | 981 |
| 27 | 1000 |
| 30 | 1014 |
| 31 | 1018 |




This is an actual photograph of recorder chart.

| POINT | | PRESSURE |
|---|---|---|
| (A) | Initial Hydrostatic Mud | 2300 PSI |
| (B) | First Initial Flow Pressure | 54 PSI |
| (C) | First Final Flow Pressure | 116 PSI |
| (D) | Initial Closed-in Pressure | 1182 PSI |
| (E) | Second Initial Flow Pressure | 145 PSI |
| (F) | Second Final Flow Pressure | 294 PSI |
| (G) | Final Closed-in Pressure | 1149 PSI |
| (H) | Final Hydrostatic Mud | 2296 PSI |

COMPANY RAINS & WILLIAMSON OIL CO. LEASE AND WELL NO. CHADDICK #1 SEC. 31 TWP. 20s RGE. 20w TEST NO. 2 DATE 5-20-67

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 SWift 3-7903

Company Rains & Williamson Oil Company Lease & Well No. Chaddick #1

Elevation ==== Formation Mississippi Ticket Number 8420

Date May 20,1967 Sec. 31 Twp. 20s Range 20w County Pawnee State Kansas

Test Approved by Tom Wesselowski Western Representative Dean Blagrave

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Formation Test No. 2 O.K. X Misrun ____ Interval Tested From 4375' to 4382' Total Depth 4382'

Size Main Hole 7 7/8 Rat Hole none Conv. ____ B.T. X Damaged ____ Yes X No Conv. X B.T. ____ Damaged ____ Yes X No

Packer Depth 4370 Ft. Size 6 3/4 Packer Depth 4375 Ft. Size 6 3/4

Straddle ____ Yes X No ____ Conv. ____ B.T. ____ Damaged ____ Yes ____ No

Packer Depth ____ Ft. Size ____

Tool Size 5½ OD Tool Jt. Size 4½ FH Anchor Length 7 Ft. Size 5½ OD

RECORDERS Depth 4 364 Ft. Clock No. 6892 Depth 4378 Ft. Clock No. 6774

Top Make Amerada Cap. 4150 No. 2606 Inside Outside Bottom Make Amerada Cap. 4300 No. 1567 Inside Outside

Below Straddle: Depth ____ Clock No. ____ Inside Outside Depth ____ Ft. Clock No. ____ Inside Outside

Top Make ____ Cap. ____ No. ____ Inside Outside Bottom Make ____ Cap. ____ No. ____ Inside Outside

Time Set Packer 8:50 A M

Tool Open I.F.P. From 8:55A M to 9:25 M Hr. 30 Min. From (B) 54 P.S.I. To (C) 116 P.S.I.

Tool Closed I.C.I.P. From 9:25 M. to 10:10 M. Hr. 45 Min. (D) 1182 P.S.I.

Tool Open F.F.P. From 10:10 M. to 11:40A M. 1 Hr. 30 Min. From (E) 145 P.S.I. To (F) 294 P.S.I.

Tool Closed F.C.I.P. From 11:40A M. to 12:25P M. Hr. 45 Min. (G) 1149 P.S.I.

Initial Hydrostatic Pressure (A) 2300 P.S.I. Final Hydrostatic Pressure (H) 2296 P.S.I.

SURFACE INFORMATION — Size Choke 1/4 In. | Max. Press. P.S.I. | Time | Description of Flow

____ | ____ | ____ M. | ____

____ | ____ | ____ M. | ____

____ | ____ | ____ M. | ____

BLOW Good throughout Bottom Choke Size 3/4 In.

Did Well Flow ____ Yes X No Recovery Total Ft. 350' oil cut mud;320' muddy oil;180' clean oil;

130' muddy salt water (665"total);1795' gas in pipe Mud

Reversed Out ____ Yes X No Mud Type starch Viscosity 45 Weight 9.8 Maximum Temp. 125 °F

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Jars: Size no Make ____ Ser. No. ____

Type Circ. Sub. plug Did Tool Plug? no Where? ____ Did Packer Hold? yes

Length Drill Pipe ____ ft. I.D. Drill Pipe 3.8 in Length Weight Pipe 940 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars none ft.

I. D. Drill Collars ____ in. Length D.S.T. Tool 31 ft.

Remarks 37° gravity corrected.

# WESTERN TESTING CO., INC.

## Pressure Data

Date May 20, 1967 Test Ticket No. 8420

Recorder No. 2606 Capacity 4150 Location 4364 Ft.

Clock No. 6892 Elevation ?? Well Temperature 125 °F

| Point | | Pressure | |
|---|---|---|---|
| A | Initial Hydrostatic Mud | 2300 | P.S.I. |
| B | First Initial Flow Pressure | 54 | P.S.I. |
| C | First Final Flow Pressure | 116 | P.S.I. |
| D | Initial Closed-in Pressure | 1182 | P.S.I. |
| E | Second Initial Flow Pressure | 145 | P.S.I. |
| F | Second Final Flow Pressure | 294 | P.S.I. |
| G | Final Closed-in Pressure | 1149 | P.S.I. |
| H | Final Hydrostatic Mud | 2296 | P.S.I. |

| | Time Given | Time Computed |
|---|---|---|
| Opened Tool | 8:50 A M | |
| First Flow Pressure | 30 Mins. | 30 Mins. |
| Initial Closed-in Pressure | 45 Mins. | 45 Mins. |
| Second Flow Pressure | 90 Mins. | 89 Mins. |
| Final Closed-in Pressure | 45 Mins. | 45 Mins. |

## PRESSURE BREAKDOWN

**First Flow Press.**
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of = Min.

| Point | Mins. | Press. |
|---|---|---|
| P 1 | 0 | 54 |
| P 2 | 5 | 68 |
| P 3 | 10 | 79 |
| P 4 | 15 | 85 |
| P 5 | 20 | 93 |
| P 6 | 25 | 104 |
| P 7 | 30 | 116 |
| P 8 | | |
| P 9 | | |
| P10 | | |
| P11 | | |
| P12 | | |
| P13 | | |
| P14 | | |
| P15 | | |
| P16 | | |
| P17 | | |
| P18 | | |
| P19 | | |
| P20 | | |

**Initial Shut-In**
Breakdown: 15 Inc.
of 3 mins. and a
final inc. of = Min.

| Point | Minutes | Press. |
|---|---|---|
| | 0 | 116 |
| | 3 | 374 |
| | 6 | 904 |
| | 9 | 1068 |
| | 12 | 1111 |
| | 15 | 1130 |
| | 18 | 1142 |
| | 21 | 1153 |
| | 24 | 1157 |
| | 27 | 1163 |
| | 30 | 1167 |
| | 33 | 1171 |
| | 36 | 1173 |
| | 39 | 1175 |
| | 42 | 1178 |
| | 45 | 1182 |

**Second Flow Pressure**
Breakdown: 17 Inc.
of 5 mins. and a
final inc. of 4 Min.

| Point | Minutes | Press. |
|---|---|---|
| | 0 | 145 |
| | 5 | 146 |
| | 10 | 151 |
| | 15 | 160 |
| | 20 | 170 |
| | 25 | 178 |
| | 30 | 191 |
| | 35 | 201 |
| | 40 | 210 |
| | 45 | 218 |
| | 50 | 228 |
| | 55 | 237 |
| | 60 | 246 |
| | 65 | 255 |
| | 70 | 264 |
| | 75 | 274 |
| | 80 | 280 |
| | 85 | 289 |
| | 89 | 294 |

**Final Shut-In**
Breakdown 15 Inc.
of 3 mins. and a
final inc. of = Min.

| Point | Minutes | Press. |
|---|---|---|
| | 0 | 294 |
| | 3 | 702 |
| | 6 | 960 |
| | 9 | 1053 |
| | 12 | 1086 |
| | 15 | 1097 |
| | 18 | 1107 |
| | 21 | 1115 |
| | 24 | 1122 |
| | 27 | 1128 |
| | 30 | 1132 |
| | 33 | 1136 |
| | 36 | 1139 |
| | 39 | 1142 |
| | 42 | 1146 |
| | 45 | 1149 |