

# MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company THUNDERBIRD DRILLING CO.

Lease and Well No. BRYANT A-1

County LANE State KANSAS Date OCTOBER 1, 1979

Formation Test No. 1 Total Depth 4145 Elev. \_\_\_\_\_  
Interval Tested 4115 To 4145 Anchor Length 30'  
Size Hole 7 7/8 Size Drill Pipe 4 1/2 X.H. Size Packer 6 3/4  
Mud Weight 9.3 Viscosity 45 Water Loss 7.2 c.c. Bottom Hole Temp. 112 °F  
Chokes: Top 1/2 Bottom 1/2 Ticket No. 18165  
Length of Drill Collar \_\_\_\_\_ I. D. \_\_\_\_\_ Length Flexweight 541 I. D. 2.76

## RECOVERY

FIRST FLOW: GOOD BLOW THROUGHOUT TEST.  
SECOND FLOW: GOOD BLOW DECREASING TO FAIR BLOW.

960 FEET OF GAS IN PIPE.  
2440 FEET OF CLEAN GASSY OIL.  
60 FEET OF MUDDY GASSY OIL.

Lease and Well No. BRYANT A #1 33-18S-30W

Formation Test No. 1

COMPANY THUNDERBIRD DRILLING CO.DATE OCTOBER 1, 1979LEASE BRYANTWELL NO. A #1TEST NO. 1TICKET NO. 18165

|                               | TIME         | PSI        |
|-------------------------------|--------------|------------|
| INITIAL HYDRO<br>MUD PRESSURE |              | 2032       |
| INITIAL CLOSED<br>IN PRESSURE | 40 MINUTES * | 1034       |
| INITIAL FLOW                  | 45 MINUTES   | 184 to 534 |
| FINAL FLOW                    | 45 MINUTES   | 622 to 946 |
| FINAL CLOSED<br>IN PRESSURE   | 40 MINUTES * | 1020       |
| FINAL HYDRO<br>MUD PRESSURE   |              | 2032       |

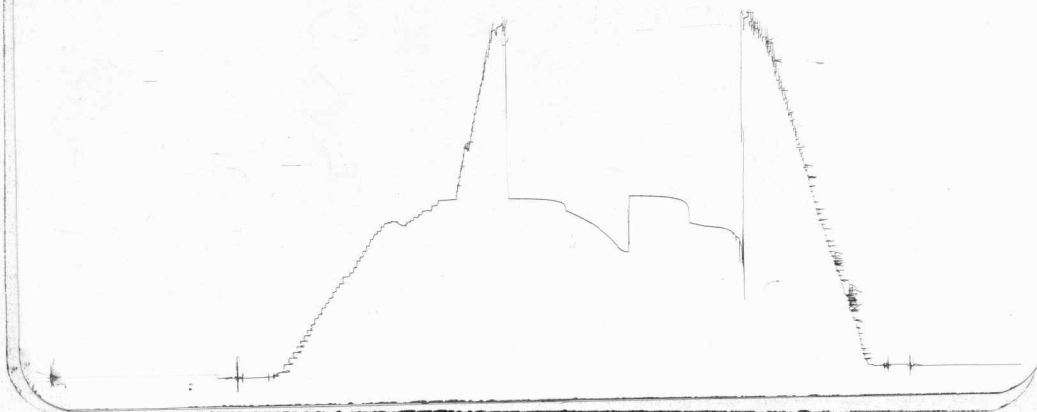
TOTAL DEPTH 4145PACKER DEPTH 4115AK-1 NO. 5666 DEPTH 4140

| 1ST FLOW PRESSURE |                 | INITIAL CIP |                 | 2ND FLOW PRESSURE |                 | FINAL CIP |                 |
|-------------------|-----------------|-------------|-----------------|-------------------|-----------------|-----------|-----------------|
|                   | 184             |             | 534             |                   | 622             |           | 946             |
|                   | 296             |             | 1004            |                   | 755             |           | 1002            |
|                   | 441             |             | 1018            |                   | 881             |           | 1012            |
|                   | 534             |             | 1024            |                   | 946             |           | 1014            |
|                   |                 |             | 1028            |                   |                 |           | 1016            |
|                   |                 |             | 1028            |                   |                 |           | 1020            |
|                   |                 |             | 1030            |                   |                 |           | 1020            |
|                   |                 |             | 1034            |                   |                 |           | 1020            |
|                   |                 |             | 1034            |                   |                 |           | 1020            |
|                   |                 |             |                 |                   |                 |           |                 |
|                   |                 |             |                 |                   |                 |           |                 |
|                   |                 |             |                 |                   |                 |           |                 |
|                   |                 |             |                 |                   |                 |           |                 |
| 15                | MINUTE INTERVAL | 5           | MINUTE INTERVAL | 15                | MINUTE INTERVAL | 5         | MINUTE INTERVAL |

REMARKS \*FINAL C I P IS A 40 MINUTE INTERVAL\*INITIAL C I P IS A 40 MINUTE INTERVAL**SPECIAL PRESSURE DATA**

6234 - 18165

6



Tool Open: 1st Flow hr. 45 mins: Shut-in Initial hr. 45 min: 2nd Flow hr. 45 min: Shut-in Final hr. 45 min.

|                                  | Field Reading | Corrected Reading |
|----------------------------------|---------------|-------------------|
| (A) Initial Hydrostatic Pressure | <u>2083</u>   | <u>2032</u>       |
| (B) Initial 1st Flow Pressure    | <u>163</u>    | <u>184</u>        |
| (C) Final 1st Flow Pressure      | <u>529</u>    | <u>534</u>        |
| (D) Initial Shut-in Pressure     | <u>1027</u>   | <u>1034</u>       |
| (E) Initial 2nd Flow Pressure    | <u>609</u>    | <u>622</u>        |
| (F) Final 2nd Flow Pressure      | <u>948</u>    | <u>946</u>        |
| (G) Final Shut-in Pressure       | <u>1027</u>   | <u>1020</u>       |
| (H) Final Hydrostatic Pressure   | <u>2083</u>   | <u>2032</u>       |

18165



# MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company THUNDERBIRD DRILLING CO.

Lease and Well No. BRYANT A #1

County LANE State KANSAS Date OCTOBER 1, 1979

Formation Test No. 2 Total Depth 4186 Elev. \_\_\_\_\_  
Interval Tested 4160 To 4186 Anchor Length 26'  
Size Hole 7 7/8 Size Drill Pipe 4 1/2 X.H. Size Packer 6 3/4  
Mud Weight 9.5 Viscosity 42 Water Loss \_\_\_\_\_ c.c. Bottom Hole Temp. \_\_\_\_\_ °F  
Chokes: Top 1/2 Bottom 1/2 Ticket No. 18166  
Length of Drill Collar \_\_\_\_\_ I. D. \_\_\_\_\_ Length Flexweight 541 I. D. 2.76

## RECOVERY

FAIR BLOW INCREASING TO GOOD BLOW.

30 FEET OF HEAVY OIL CUT MUDDY WATER.  
360 FEET OF SLIGHTLY OIL CUT WATER.

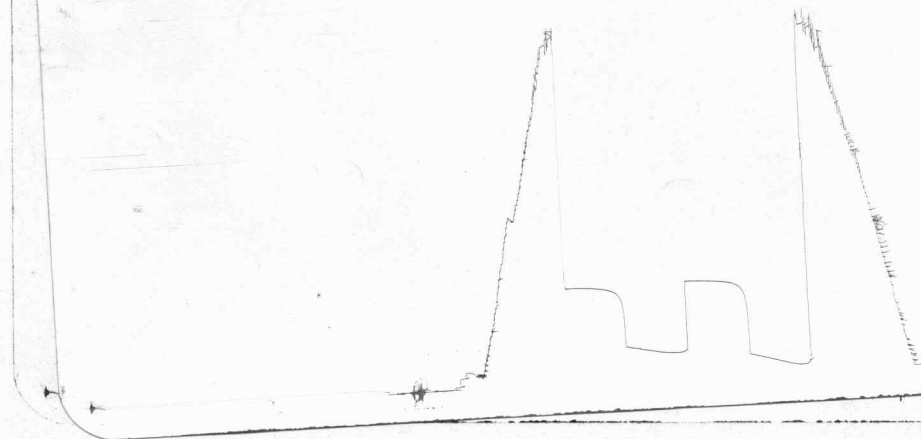
Lease and Well No. BRYANT A #1

33-188-50W

Formation Test No. 2

6234-18166

6



Tool Open: 1st Flow hr. 45 mins: Shut-in Initial hr. 45 min: 2nd Flow hr. 45 min: Shut-in Final hr. 45 min

|                                  | Field Reading | Corrected Reading |
|----------------------------------|---------------|-------------------|
| (A) Initial Hydrostatic Pressure | 2143          | 2056              |
| (B) Initial 1st Flow Pressure    | 81            | 92                |
| (C) Final 1st Flow Pressure      | 122           | 125               |
| (D) Initial Shut-in Pressure     | 569           | 574               |
| (E) Initial 2nd Flow Pressure    | 183           | 186               |
| (F) Final 2nd Flow Pressure      | 224           | 203               |
| (G) Final Shut-in Pressure       | 569           | 560               |
| (H) Final Hydrostatic Pressure   | 2143          | 2056              |

18166

DATE 10-1-79  
SEC. 33 TWN 18S RG 30W

**MILLER**

TICKET N<sup>o</sup> 18166

LEGAL DESCRIPTION \_\_\_\_\_

**TESTING COMPANY**

TEST NO. 2

P. O. BOX 547 PHONE (316) 793-3370  
GREAT BEND, KANSAS

COMPANY Thunderbird Drilling Co.  
ADDRESS Box 18407 Wichita Ks  
LEASE Bryant WELL NO. A-1 COUNTY Lane STATE Ks  
INVOICES SENT TO: Same  
DST COPIES SENT TO: "

**GENERAL INFORMATION**

TOOL JT. 4 1/2 X 1 1/4 HOLE SIZE 2 7/8 PACKER O.D. 6 3/4  
ELEV. \_\_\_\_\_ TOTAL DEPTH 4186  
TESTED FROM 4160 TO 4186  
ANCHOR LENGTH BELOW 26' BETWEEN \_\_\_\_\_  
TOOL OPEN 1ST FLOW \_\_\_\_\_ A.M. 9:30 P.M. \_\_\_\_\_  
TOOL CLOSED INITIAL SHUT-IN \_\_\_\_\_ A.M. 10:15 P.M. \_\_\_\_\_  
TOOL OPEN 2ND FLOW \_\_\_\_\_ A.M. 11:00 P.M. \_\_\_\_\_  
TOOL CLOSED FINAL SHUT-IN \_\_\_\_\_ A.M. 11:45 P.M. \_\_\_\_\_  
MUD WT. 9.5 VISCOSITY 42 W.L. \_\_\_\_\_ C.C. \_\_\_\_\_  
SP. GRAVITY OIL \_\_\_\_\_ BOTTOM HOLE TEMPERATURE \_\_\_\_\_  
LENGTH DRILL COLLAR \_\_\_\_\_ I.D. \_\_\_\_\_  
LENGTH WEIGHT PIPE 541' I.D. 2.76  
SUCCESSFUL TEST NO. 2 MISRUN NO. \_\_\_\_\_  
CHOKES: TOP 1/2 BOTTOM 1/2

**PRESSURE DATA & TIME**

|                              | FIELD READINGS                  | CORRECTED READINGS |
|------------------------------|---------------------------------|--------------------|
| INITIAL HYDROSTATIC          | <u>2143</u>                     | <u>2056</u>        |
| INITIAL 1ST FLOW             | <u>81</u>                       | <u>92</u>          |
| FINAL 1ST FLOW               | <u>122</u>                      | <u>135</u>         |
| INITIAL SHUT-IN              | <u>569</u>                      | <u>574</u>         |
| INITIAL 2ND FLOW             | <u>183</u>                      | <u>186</u>         |
| FINAL 2ND FLOW               | <u>224</u>                      | <u>203</u>         |
| FINAL SHUT-IN                | <u>569</u>                      | <u>560</u>         |
| FINAL HYDROSTATIC            | <u>2143</u>                     | <u>2056</u>        |
| TOOL OPEN: 1ST FLOW          | _____                           | HR. <u>45</u> MIN. |
| INITIAL SHUT-IN              | _____                           | HR. <u>45</u> MIN. |
| 2ND FLOW                     | _____                           | HR. <u>45</u> MIN. |
| FINAL SHUT-IN                | _____                           | HR. <u>45</u> MIN. |
| TOP RECORDER NO. <u>5666</u> | BOTTOM RECORDER NO. <u>6234</u> |                    |

TYPE BLOW Fair <sup>slow</sup> increasing to Good blow

RECOVERY: 30' Heavy oil cut Muddy water  
360' slightly oil cut water

EXTRA EQUIPMENT \_\_\_\_\_

APPROVED BY: \_\_\_\_\_

TESTER Stuart Stover

FORMATION TESTED 1/2

OPERATOR TIME: Stanton Co.

**MILLER TESTING COMPANY**

SHALL NOT BE LIABLE FOR ANY DAMAGE 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, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST WAS MADE.

**CHARGES**

|                 |                            |
|-----------------|----------------------------|
| TEST CHARGE     | \$ <u>510<sup>00</sup></u> |
| EXTRA PACKERS   | \$ _____                   |
| JARS            | \$ _____                   |
| SAFETY JOINT    | \$ _____                   |
| HOOK WALL       | \$ _____                   |
| MISRUN CHARGE   | \$ _____                   |
| STAND-BY CHARGE | \$ _____                   |
| DST EVALUATION  | \$ _____                   |
| STRADDLE        | \$ _____                   |
| TOTAL           | \$ <u>510<sup>00</sup></u> |

# MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company THUNDERBIRD DRILLING CO.

Lease and Well No. BRYANT A #1

County LANE State KANSAS Date OCTOBER 2, 1979

Formation Test No. 3 Total Depth 4284 Elev. \_\_\_\_\_

Interval Tested 4237 To 4284 Anchor Length 47'

Size Hole 7 7/8 Size Drill Pipe 4 1/2 F.H. & X. Size Packer 6 3/4

Mud Weight 9.2 Viscosity 44 Water Loss 7.2 c.c. Bottom Hole Temp. \_\_\_\_\_ °F

Chokes: Top 1/2 Bottom 1/2 Ticket No. 18167

Length of Drill Collar \_\_\_\_\_ I. D. \_\_\_\_\_ Length Flexweight 541 I. D. 2.76

## RECOVERY

STRONG BLOW, GAS TO SURFACE IN 30 MINUTES ON SECOND OPENING,  
NOT MEASURABLE.

2820 FEET OF CLEAN GASSY OIL.

Lease and Well No. BRYANT A #1 33-18S-30N

Formation Test No. 3



COMPANY THUNDERBIRD DRILLING, INC.

DATE OCTOBER 2, 1979

LEASE BRYANT

WELL NO. A#1

TEST NO. 3

TICKET NO. 18167

|                               | TIME       | PSI        |
|-------------------------------|------------|------------|
| INITIAL HYDRO<br>MUD PRESSURE |            | 1885       |
| INITIAL CLOSED<br>IN PRESSURE | 45 MINUTES | 955        |
| INITIAL FLOW                  | 45 MINUTES | 171 to 792 |
| FINAL FLOW                    | 45 MINUTES | 841 to 938 |
| FINAL CLOSED<br>IN PRESSURE   | 45 MINUTES | 950        |
| FINAL HYDRO<br>MUD PRESSURE   |            | 1864       |

TOTAL DEPTH 4284

PACKER DEPTH 4237

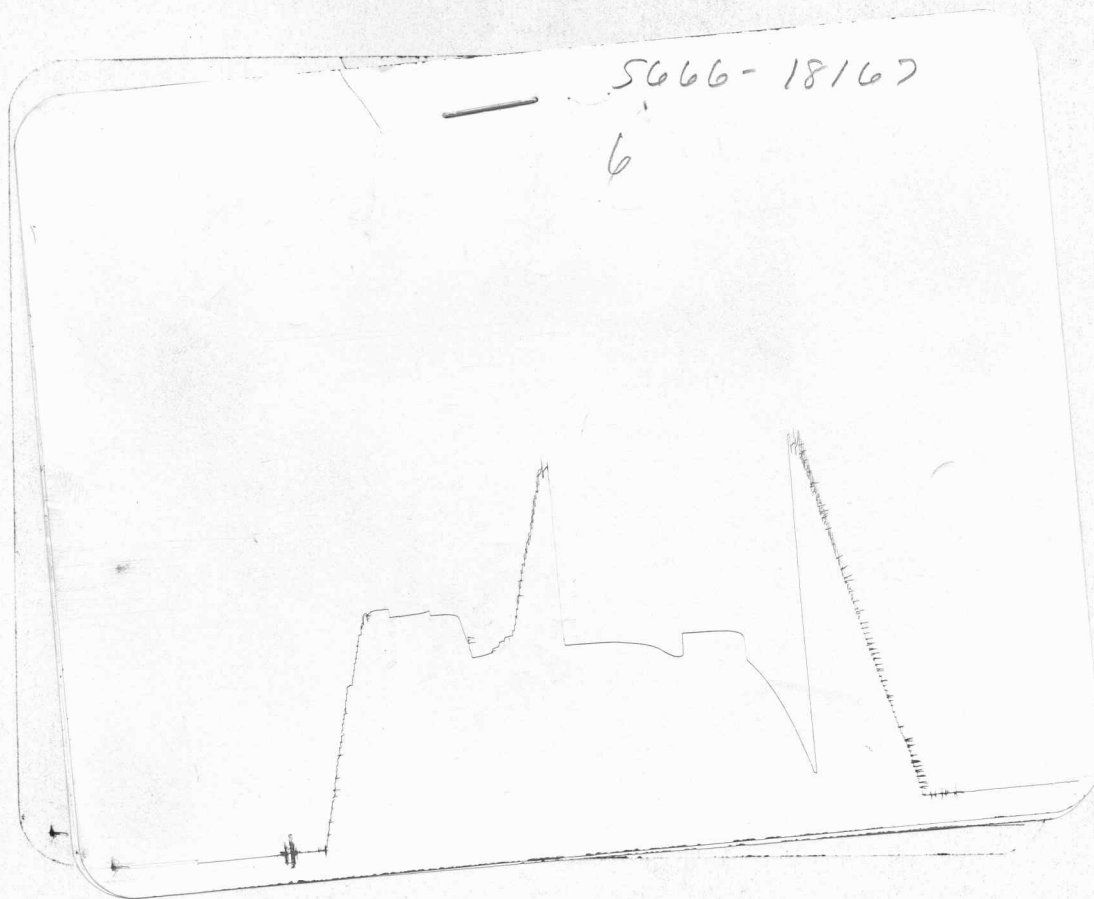
AK-1 NO. 5666 DEPTH 4279

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REMARKS \_\_\_\_\_

## SPECIAL PRESSURE DATA



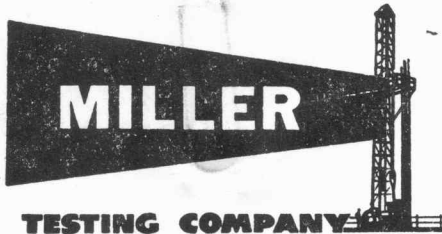


Tool Open: 1st Flow 45 mins: Shut-in Initial 45 min: 2nd Flow 45 min: Shut-in Final 45 min.

|                                  | Field Reading | Corrected Reading |
|----------------------------------|---------------|-------------------|
| (A) Initial Hydrostatic Pressure | 1924          | 1885              |
| (B) Initial 1st Flow Pressure    | 163           | 171               |
| (C) Final 1st Flow Pressure      | 768           | 792               |
| (D) Initial Shut-in Pressure     | 948           | 955               |
| (E) Initial 2nd Flow Pressure    | 828           | 841               |
| (F) Final 2nd Flow Pressure      | 948           | 938               |
| (G) Final Shut-in Pressure       | 948           | 950               |
| (H) Final Hydrostatic Pressure   | 1884          | 1864              |

18167

DATE 10-2-79  
SEC. 33 TWN 18 RG 30



TICKET N<sup>o</sup> 18167

LEGAL DESCRIPTION

TESTING COMPANY  
P. O. BOX 547 PHONE (316) 793-3370  
GREAT BEND, KANSAS

TEST NO. 3

COMPANY Thunderbird Drlg chnc  
ADDRESS Box 18407 Wichita KS  
LEASE Bryant WELL NO. A-1 COUNTY Lane STATE Ks  
INVOICES SENT TO: Same  
DST COPIES SENT TO: "

| GENERAL INFORMATION               |                               |                          |            | PRESSURE DATA & TIME         |             |                                 |             |
|-----------------------------------|-------------------------------|--------------------------|------------|------------------------------|-------------|---------------------------------|-------------|
| TOOL JT. <u>4 1/2 x 14</u>        | HOLE SIZE <u>7 7/8</u>        | PACKER O.D. <u>6 3/4</u> |            | FIELD READINGS               |             | CORRECTED READINGS              |             |
| ELEV. _____                       | TOTAL DEPTH <u>4284</u>       |                          |            | INITIAL HYDROSTATIC          | <u>1924</u> |                                 | <u>1885</u> |
| TESTED FROM <u>4237</u>           | TO <u>4284</u>                |                          |            | INITIAL 1ST FLOW             | <u>163</u>  |                                 | <u>171</u>  |
| ANCHOR LENGTH BELOW <u>47'</u>    | BETWEEN _____                 |                          |            | FINAL 1ST FLOW               | <u>768</u>  |                                 | <u>792</u>  |
| TOOL OPEN 1ST FLOW _____          | A.M. <u>8:30</u> P.M. _____   |                          |            | INITIAL SHUT-IN              | <u>948</u>  |                                 | <u>955</u>  |
| TOOL CLOSED INITIAL SHUT-IN _____ | A.M. <u>9:15</u> P.M. _____   |                          |            | INITIAL 2ND FLOW             | <u>828</u>  |                                 | <u>841</u>  |
| TOOL OPEN 2ND FLOW _____          | A.M. <u>10:00</u> P.M. _____  |                          |            | FINAL 2ND FLOW               | <u>948</u>  |                                 | <u>938</u>  |
| TOOL CLOSED FINAL SHUT-IN _____   | A.M. <u>10:45</u> P.M. _____  |                          |            | FINAL SHUT-IN                | <u>948</u>  |                                 | <u>950</u>  |
| MUD WT. <u>9.2</u>                | VISCOSITY <u>44</u>           | W.L. <u>2.2</u>          | C.C. _____ | FINAL HYDROSTATIC            | <u>1884</u> |                                 | <u>1864</u> |
| SP. GRAVITY OIL <u>38'</u>        | BOTTOM HOLE TEMPERATURE _____ |                          |            | TOOL OPEN: 1ST FLOW          |             | HR. <u>45</u>                   | MIN. _____  |
| LENGTH DRILL COLLAR _____         | I.D. _____                    |                          |            | INITIAL SHUT-IN              |             | HR. <u>45</u>                   | MIN. _____  |
| LENGTH WEIGHT PIPE <u>541'</u>    | I.D. <u>2.76</u>              |                          |            | 2ND FLOW                     |             | HR. <u>45</u>                   | MIN. _____  |
| SUCCESSFUL TEST NO. <u>3</u>      | MISRUN NO. _____              |                          |            | FINAL SHUT-IN                |             | HR. <u>45</u>                   | MIN. _____  |
| CHOKES: TOP <u>1/2</u>            | BOTTOM <u>1/2</u>             |                          |            | TOP RECORDER NO. <u>5666</u> |             | BOTTOM RECORDER NO. <u>6234</u> |             |

TYPE BLOW Strong Blow GTS in 30 minutes on  
2nd opening - not measureable.

RECOVERY: 2820' clean gassy 0.1

EXTRA EQUIPMENT

APPROVED BY: Stanton Cox

TESTER: Stuart Stone

FORMATION TESTED T.C.

OPERATOR TIME:

MILLER TESTING COMPANY

SHALL NOT BE LIABLE FOR ANY DAMAGE 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, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST WAS MADE.

|                 | CHARGES          |
|-----------------|------------------|
| TEST CHARGE     | \$ <u>510.00</u> |
| EXTRA PACKERS   | \$ _____         |
| JARS            | \$ _____         |
| SAFETY JOINT    | \$ _____         |
| HOOK WALL       | \$ _____         |
| MISRUN CHARGE   | \$ _____         |
| STAND-BY CHARGE | \$ _____         |
| DST EVALUATION  | \$ _____         |
| STRADDLE        | \$ _____         |
| TOTAL           | \$ <u>510.00</u> |

# MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company THUNDERBIRD DRILLING CO.

Lease and Well No. BRYANT A #1

County LANE State KANSAS Date OCTOBER 3, 1979

Formation Test No. 4 Total Depth 4317 Elev. \_\_\_\_\_  
Interval Tested 4290 To 4317 Anchor Length 27'  
Size Hole 7 7/8 Size Drill Pipe 4 1/2 F.H. & X.H. Size Packer 6 3/4  
Mud Weight 9.2 Viscosity 53 Water Loss 7.2 c.c. Bottom Hole Temp. \_\_\_\_\_ °F  
Chokes: Top 1/2 Bottom 1/2 Ticket No. 18168  
Length of Drill Collar \_\_\_\_\_ I. D. \_\_\_\_\_ Length Flexweight 541 I. D. 2.76

## RECOVERY

SURGE WHEN TOOL OPENED, NO BLOW, FLUSHED TOOL-SURGE- NO BLOW.

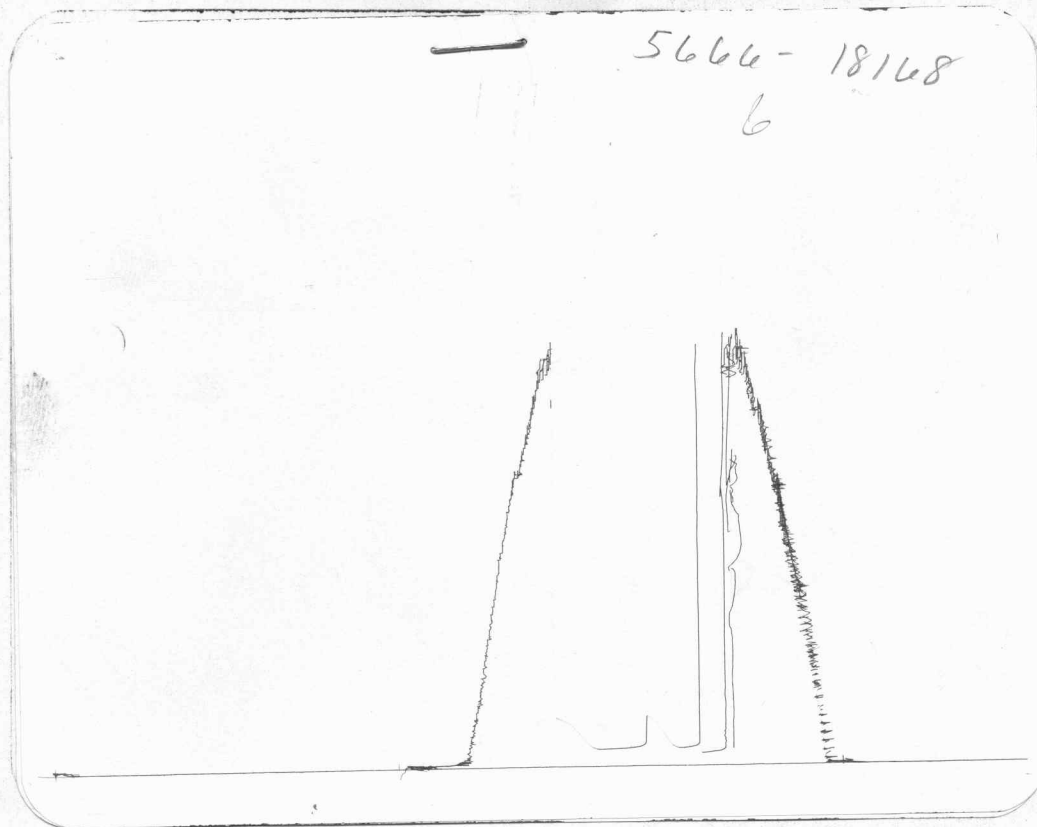
120 FEET OF HEAVY OIL CUT MUD.

Lease and Well No.

BRYANT A #1

33-18S-30W

Formation Test No. 4



Tool Open: 1st Flow      hr. 30 mins; Shut-in Initial      hr. 30 min: 2nd Flow      hr. 30 min: Shut-in Final      hr. 30 min

|                                  | Field Reading | Corrected Reading |
|----------------------------------|---------------|-------------------|
| (A) Initial Hydrostatic Pressure | <u>2163</u>   | <u>2126</u>       |
| (B) Initial 1st Flow Pressure    | <u>61</u>     | <u>88</u>         |
| (C) Final 1st Flow Pressure      | <u>81</u>     | <u>113</u>        |
| (D) Initial Shut-in Pressure     | <u>265</u>    | <u>262</u>        |
| (E) Initial 2nd Flow Pressure    | <u>81</u>     | <u>114</u>        |
| (F) Final 2nd Flow Pressure      | <u>102</u>    | <u>105</u>        |
| (G) Final Shut-in Pressure       | <u>265</u>    | <u>254</u>        |
| (H) Final Hydrostatic Pressure   | <u>2163</u>   | <u>2126</u>       |

18168



DATE 10-3-79  
SEC. 33 TWN 18s RG 30w

**MILLER**

TICKET N<sup>o</sup> 18168

LEGAL DESCRIPTION \_\_\_\_\_

**TESTING COMPANY**

TEST NO. 4

P. O. BOX 547      PHONE (316) 793-3370  
GREAT BEND, KANSAS

COMPANY Thunderbird Drly. Inc.  
ADDRESS Box 18407 Wichita Ks  
LEASE Bryant WELL NO. A-1 COUNTY Lane STATE Ks  
INVOICES SENT TO: Same  
DST COPIES SENT TO: "

**GENERAL INFORMATION**

TOOL JT. 4 1/2 FH HOLE SIZE 7 7/8 PACKER O.D. 6 3/4  
ELEV. \_\_\_\_\_ TOTAL DEPTH 4317  
TESTED FROM 4290 TO 4317  
ANCHOR LENGTH BELOW 27' BETWEEN \_\_\_\_\_  
TOOL OPEN 1ST FLOW \_\_\_\_\_ A.M. 2:30 P.M. \_\_\_\_\_  
TOOL CLOSED INITIAL SHUT-IN \_\_\_\_\_ A.M. 3:00 P.M. \_\_\_\_\_  
TOOL OPEN 2ND FLOW \_\_\_\_\_ A.M. 3:30 P.M. \_\_\_\_\_  
TOOL CLOSED FINAL SHUT-IN \_\_\_\_\_ A.M. 4:00 P.M. \_\_\_\_\_  
MUD WT. 9.2 VISCOSITY 53 W.L. 7.2 C.C. \_\_\_\_\_  
SP. GRAVITY OIL \_\_\_\_\_ BOTTOM HOLE TEMPERATURE \_\_\_\_\_  
LENGTH DRILL COLLAR \_\_\_\_\_ I.D. \_\_\_\_\_  
LENGTH WEIGHT PIPE 541' I.D. 2.76  
SUCCESSFUL TEST NO. 4 MISRUN NO. \_\_\_\_\_  
CHOKES: TOP 1/2 BOTTOM 1/2

**PRESSURE DATA & TIME**

|                              | FIELD READINGS | CORRECTED READINGS              |
|------------------------------|----------------|---------------------------------|
| INITIAL HYDROSTATIC          | <u>2163</u>    | <u>2126</u>                     |
| INITIAL 1ST FLOW             | <u>61</u>      | <u>88</u>                       |
| FINAL 1ST FLOW               | <u>81</u>      | <u>113</u>                      |
| INITIAL SHUT-IN              | <u>265</u>     | <u>262</u>                      |
| INITIAL 2ND FLOW             | <u>81</u>      | <u>114</u>                      |
| FINAL 2ND FLOW               | <u>102</u>     | <u>105</u>                      |
| FINAL SHUT-IN                | <u>265</u>     | <u>254</u>                      |
| FINAL HYDROSTATIC            | <u>2163</u>    | <u>2126</u>                     |
| TOOL OPEN: 1ST FLOW          |                | HR. <u>30</u> MIN.              |
| INITIAL SHUT-IN              |                | HR. <u>30</u> MIN.              |
| 2ND FLOW                     |                | HR. <u>30</u> MIN.              |
| FINAL SHUT-IN                |                | HR. <u>30</u> MIN.              |
| TOP RECORDER NO. <u>5666</u> |                | BOTTOM RECORDER NO. <u>6234</u> |

TYPE BLOW Surge when Tool opened - no Blow  
Flushed Tool - Surge - no Blow

RECOVERY: \_\_\_\_\_

120' Heavy oil cut mud

EXTRA EQUIPMENT \_\_\_\_\_

APPROVED BY: Stanton Cox

TESTER: Stuart Stone

FORMATION TESTED A.C

OPERATOR TIME: \_\_\_\_\_

**MILLER TESTING COMPANY**

SHALL NOT BE LIABLE FOR ANY DAMAGE 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, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST WAS MADE.

**CHARGES**

|                 |                            |
|-----------------|----------------------------|
| TEST CHARGE     | \$ <u>510<sup>00</sup></u> |
| EXTRA PACKERS   | \$ _____                   |
| JARS            | \$ _____                   |
| SAFETY JOINT    | \$ _____                   |
| HOOK WALL       | \$ _____                   |
| MISRUN CHARGE   | \$ _____                   |
| STAND-BY CHARGE | \$ _____                   |
| DST EVALUATION  | \$ _____                   |
| STRADDLE        | \$ _____                   |
| TOTAL           | \$ <u>510<sup>00</sup></u> |

# MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company THUNDERBIRD DRILLING CO.

Lease and Well No. BRYANT A #1

County LANE State KANSAS Date OCTOBER 4, 1979

Formation Test No. 5 Total Depth 4358 Elev. \_\_\_\_\_

Interval Tested 4314 To 4358 Anchor Length 44'

Size Hole 7 7/8 Size Drill Pipe 4 1/2 F.H. & X.H. Size Packer 6 3/4

Mud Weight 9.3 Viscosity 50 Water Loss \_\_\_\_\_ c.c. Bottom Hole Temp. \_\_\_\_\_ °F

Chokes: Top 1/2 Bottom 1/2 Ticket No. 18169

Length of Drill Collar \_\_\_\_\_ I. D. \_\_\_\_\_ Length Flexweight 541 I. D. 2.76

## RECOVERY

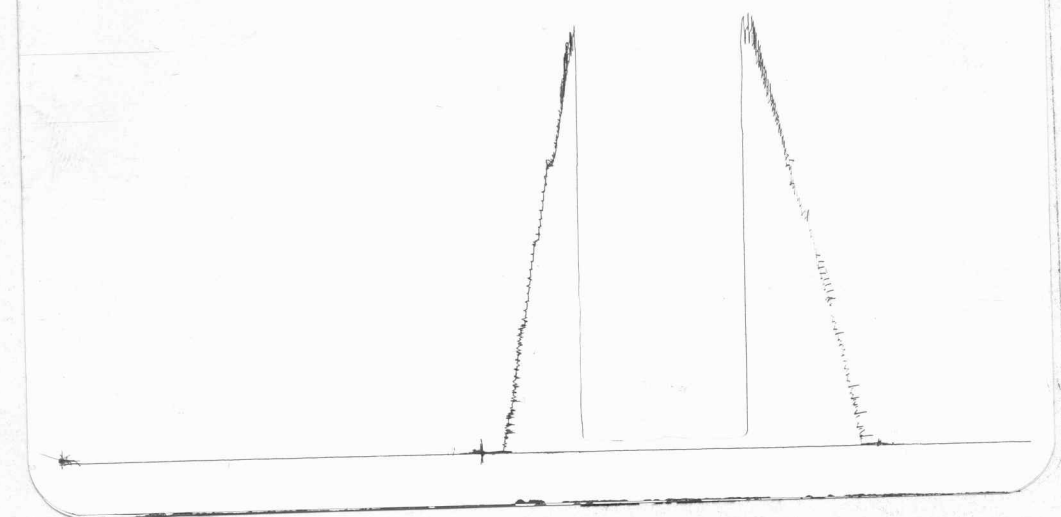
WEAK BLOW FOR 20 MINUTES.

15 FEET OF SLIGHTLY OIL CUT MUD.

Lease and Well No. BRYANT A #1 23-18S-30W

Formation Test No. 5

5666-18169  
6

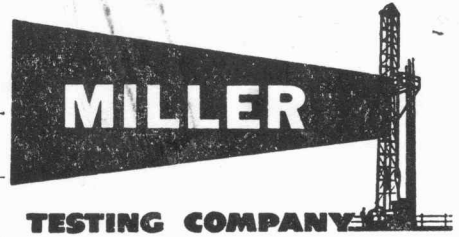


Tool Open: 1st Flow 30 hr. 30 mins: Shut-in Initial 30 hr. 30 min: 2nd Flow 30 hr. 30 min: Shut-in Final 30 hr. 30 min

|                                  | Field Reading | Corrected Reading |
|----------------------------------|---------------|-------------------|
| (A) Initial Hydrostatic Pressure | <u>2243</u>   | <u>2129</u>       |
| (B) Initial 1st Flow Pressure    | <u>61</u>     | <u>65</u>         |
| (C) Final 1st Flow Pressure      | <u>61</u>     | <u>65</u>         |
| (D) Initial Shut-in Pressure     | <u>81</u>     | <u>71</u>         |
| (E) Initial 2nd Flow Pressure    | <u>61</u>     | <u>65</u>         |
| (F) Final 2nd Flow Pressure      | <u>61</u>     | <u>65</u>         |
| (G) Final Shut-in Pressure       | <u>61</u>     | <u>65</u>         |
| (H) Final Hydrostatic Pressure   | <u>2243</u>   | <u>2129</u>       |

18169

DATE 10-4-79  
SEC. 33 TWN 18 RG 30



TICKET N<sup>o</sup> 18169  
TEST NO. 5

LEGAL DESCRIPTION \_\_\_\_\_  
P. O. BOX 547 PHONE (316) 793-3370  
GREAT BEND, KANSAS

COMPANY Thunderbird Drilling Co Inc  
ADDRESS Box 18407 Wichita Ks  
LEASE Bryant WELL NO. 1-1 COUNTY Lane STATE Ks  
INVOICES SENT TO: Same  
DST COPIES SENT TO: "

| GENERAL INFORMATION                     |                               |                          |            | PRESSURE DATA & TIME                   |                                 |
|-----------------------------------------|-------------------------------|--------------------------|------------|----------------------------------------|---------------------------------|
| TOOL JT. <u>4 1/2 x 1/4</u>             | HOLE SIZE <u>7 7/8</u>        | PACKER O.D. <u>6 3/4</u> |            | FIELD READINGS                         | CORRECTED READINGS              |
| ELEV. _____                             | TOTAL DEPTH <u>4358</u>       |                          |            | INITIAL HYDROSTATIC <u>2243</u>        | <u>2129</u>                     |
| TESTED FROM <u>4314</u>                 | TO <u>4358</u>                |                          |            | INITIAL 1ST FLOW <u>2</u> <u>61</u>    | <u>65</u>                       |
| ANCHOR LENGTH BELOW <u>44</u>           | BETWEEN _____                 |                          |            | FINAL 1ST FLOW <u>3</u> <u>61</u>      | <u>65</u>                       |
| TOOL OPEN 1ST FLOW <u>7:30</u>          | A.M. _____                    | P.M. _____               |            | INITIAL SHUT-IN <u>4</u> <u>81</u>     | <u>71</u>                       |
| TOOL CLOSED INITIAL SHUT-IN <u>8:00</u> | A.M. _____                    | P.M. _____               |            | INITIAL 2ND FLOW <u>5</u> <u>61</u>    | <u>65</u>                       |
| TOOL OPEN 2ND FLOW <u>8:30</u>          | A.M. _____                    | P.M. _____               |            | FINAL 2ND FLOW <u>6</u> <u>61</u>      | <u>65</u>                       |
| TOOL CLOSED FINAL SHUT-IN <u>9:00</u>   | A.M. _____                    | P.M. _____               |            | FINAL SHUT-IN <u>7</u> <u>61</u>       | <u>65</u>                       |
| MUD WT. <u>9.3</u>                      | VISCOSITY <u>50</u>           | W.L. _____               | C.C. _____ | FINAL HYDROSTATIC <u>6</u> <u>2243</u> | <u>2129</u>                     |
| SP. GRAVITY OIL _____                   | BOTTOM HOLE TEMPERATURE _____ |                          |            | TOOL OPEN: 1ST FLOW _____              | HR. <u>30</u> MIN.              |
| LENGTH DRILL COLLAR _____               | I.D. _____                    |                          |            | INITIAL SHUT-IN _____                  | HR. <u>30</u> MIN.              |
| LENGTH WEIGHT PIPE <u>541'</u>          | I.D. <u>276</u>               |                          |            | 2ND FLOW _____                         | HR. <u>30</u> MIN.              |
| SUCCESSFUL TEST NO. <u>5</u>            | MISRUN NO. _____              |                          |            | FINAL SHUT-IN _____                    | HR. <u>30</u> MIN.              |
| CHOKES: TOP <u>1/2</u>                  | BOTTOM <u>1/2</u>             |                          |            | TOP RECORDER NO. <u>5666</u>           | BOTTOM RECORDER NO. <u>6234</u> |

TYPE BLOW Weak blow for 20 minutes

RECOVERY: 15' slightly oil cut mud

EXTRA EQUIPMENT \_\_\_\_\_  
APPROVED BY: Stanton Co MILLER TESTING COMPANY  
TESTER: Stuart Stover  
FORMATION TESTED Marmaton  
OPERATOR TIME: \_\_\_\_\_

SHALL NOT BE LIABLE FOR ANY DAMAGE 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, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST WAS MADE.

| CHARGES         |                  |
|-----------------|------------------|
| TEST CHARGE     | \$ <u>510.00</u> |
| EXTRA PACKERS   | \$ _____         |
| JARS            | \$ _____         |
| SAFETY JOINT    | \$ _____         |
| HOOK WALL       | \$ _____         |
| MISRUN CHARGE   | \$ _____         |
| STAND-BY CHARGE | \$ _____         |
| DST EVALUATION  | \$ _____         |
| STRADDLE        | \$ _____         |
| TOTAL           | \$ <u>510.00</u> |



# MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company THUNDERBIRD DRILLING CO.

Lease and Well No. BRYANT A #1

County LANE State KANSAS Date OCTOBER 5, 1979

Formation Test No. 6 Total Depth 4420 Elev. \_\_\_\_\_  
Interval Tested 4360 To 4420 Anchor Length 60'  
Size Hole 7 7/8 Size Drill Pipe 4 1/2 F.H. & X.H. Size Packer 6 3/4  
Mud Weight 9.3 Viscosity 60 Water Loss \_\_\_\_\_ c.c. Bottom Hole Temp. \_\_\_\_\_ °F  
Chokes: Top 1/2 Bottom 1/2 Ticket No. 18170  
Length of Drill Collar \_\_\_\_\_ I. D. \_\_\_\_\_ Length Flexweight 541 I. D. 2.76

## RECOVERY

GOOD BLOW THROUGHOUT TEST.

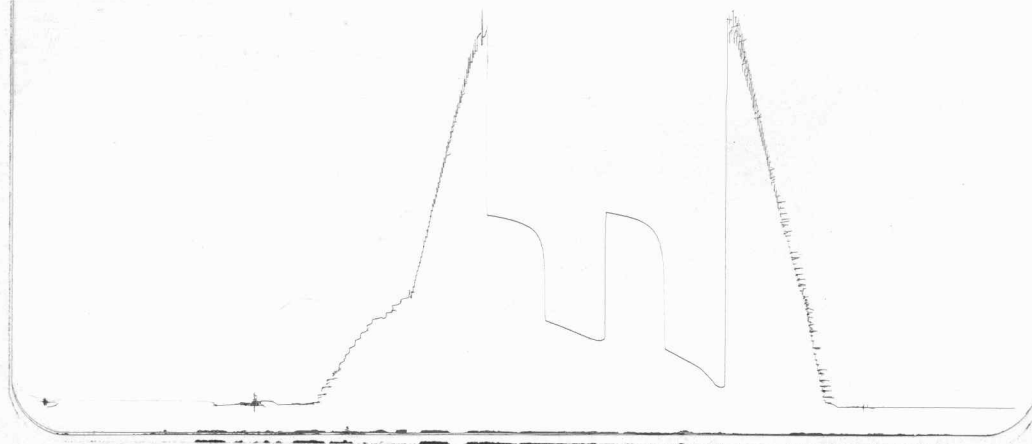
840 FEET OF CLEAN GASSY OIL.  
120 FEET OF HEAVY OIL CUT MUD.  
60 FEET OF WATERY OIL CUT MUD.  
120 FEET OF OIL CUT WATER.

Lease and Well No. BRYANT A #1 33-188-30W

Formation Test No. 6

6234-18170

6



Tool Open: 1st Flow hr. 45 mins: Shut-in Initial hr. 45 min: 2nd Flow hr. 45 min: Shut-in Final hr. 45 min

|                                  | Field Reading | Corrected Reading |
|----------------------------------|---------------|-------------------|
| (A) Initial Hydrostatic Pressure | <u>2262</u>   | <u>2197</u>       |
| (B) Initial 1st Flow Pressure    | <u>122</u>    | <u>125</u>        |
| (C) Final 1st Flow Pressure      | <u>346</u>    | <u>333</u>        |
| (D) Initial Shut-in Pressure     | <u>1127</u>   | <u>1132</u>       |
| (E) Initial 2nd Flow Pressure    | <u>408</u>    | <u>404</u>        |
| (F) Final 2nd Flow Pressure      | <u>489</u>    | <u>500</u>        |
| (G) Final Shut-in Pressure       | <u>1127</u>   | <u>1112</u>       |
| (H) Final Hydrostatic Pressure   | <u>2243</u>   | <u>2181</u>       |

18170

DATE 10-5-79  
SEC. 33 TWN 18S RG 30W

**MILLER**

TICKET N<sup>o</sup> 18170

LEGAL DESCRIPTION \_\_\_\_\_

**TESTING COMPANY**

TEST NO. 6

P. O. BOX 547 PHONE (316) 793-3370  
GREAT BEND, KANSAS

COMPANY Thunderbird Drilling Co.  
ADDRESS Box 18407 Wichita KS  
LEASE Bryant WELL NO. A-1 COUNTY Lane STATE KS  
INVOICES SENT TO: Same  
DST COPIES SENT TO: "

| GENERAL INFORMATION                     |                               |                          |            | PRESSURE DATA & TIME         |             |                                 |             |
|-----------------------------------------|-------------------------------|--------------------------|------------|------------------------------|-------------|---------------------------------|-------------|
| TOOL JT. <u>4 1/2 FH</u>                | HOLE SIZE <u>7 7/8</u>        | PACKER O.D. <u>6 3/4</u> |            | FIELD READINGS               |             | CORRECTED READINGS              |             |
| ELEV. _____                             | TOTAL DEPTH <u>4420</u>       |                          |            | INITIAL HYDROSTATIC          | <u>2262</u> |                                 | <u>2197</u> |
| TESTED FROM <u>4360</u>                 | TO <u>4420</u>                |                          |            | INITIAL 1ST FLOW             | <u>122</u>  |                                 | <u>125</u>  |
| ANCHOR LENGTH BELOW <u>60'</u>          | BETWEEN _____                 |                          |            | FINAL 1ST FLOW               | <u>346</u>  |                                 | <u>333</u>  |
| TOOL OPEN 1ST FLOW <u>1:45</u>          | A.M. _____ P.M. _____         |                          |            | INITIAL SHUT-IN              | <u>1127</u> |                                 | <u>1132</u> |
| TOOL CLOSED INITIAL SHUT-IN <u>2:30</u> | A.M. _____ P.M. _____         |                          |            | INITIAL 2ND FLOW             | <u>408</u>  |                                 | <u>404</u>  |
| TOOL OPEN 2ND FLOW <u>3:15</u>          | A.M. _____ P.M. _____         |                          |            | FINAL 2ND FLOW               | <u>489</u>  |                                 | <u>500</u>  |
| TOOL CLOSED FINAL SHUT-IN <u>4:00</u>   | A.M. _____ P.M. _____         |                          |            | FINAL SHUT-IN                | <u>1127</u> |                                 | <u>1112</u> |
| MUD WT. <u>9.3</u>                      | VISCOSITY <u>60</u>           | W.L. _____               | C.C. _____ | FINAL HYDROSTATIC            | <u>2243</u> |                                 | <u>2181</u> |
| SP. GRAVITY OIL <u>37</u>               | BOTTOM HOLE TEMPERATURE _____ |                          |            | TOOL OPEN: 1ST FLOW          |             | HR. <u>45</u>                   | MIN. _____  |
| LENGTH DRILL COLLAR _____               | I.D. _____                    |                          |            | INITIAL SHUT-IN              |             | HR. <u>45</u>                   | MIN. _____  |
| LENGTH WEIGHT PIPE <u>541'</u>          | I.D. <u>2.76</u>              |                          |            | 2ND FLOW                     |             | HR. <u>45</u>                   | MIN. _____  |
| SUCCESSFUL TEST NO. <u>6</u>            | MISRUN NO. _____              |                          |            | FINAL SHUT-IN                |             | HR. <u>45</u>                   | MIN. _____  |
| CHOKES: TOP <u>1/2</u>                  | BOTTOM <u>1/2</u>             |                          |            | TOP RECORDER NO. <u>5666</u> |             | BOTTOM RECORDER NO. <u>6234</u> |             |

TYPE BLOW Good Blow Throughout Test

RECOVERY:

840' Clean gassy oil  
120' Heavy oil cut mud  
60' Watery oil cut mud  
120' oil cut water  
1140' Total Fluid

EXTRA EQUIPMENT \_\_\_\_\_

APPROVED BY: Stanton Cox

**MILLER TESTING COMPANY**

TESTER: Stuart Stover

FORMATION TESTED Narmaton

OPERATOR TIME: \_\_\_\_\_

SHALL NOT BE LIABLE FOR ANY DAMAGE 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, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST WAS MADE.

| CHARGES         |                  |
|-----------------|------------------|
| TEST CHARGE     | \$ <u>510.00</u> |
| EXTRA PACKERS   | \$ _____         |
| JARS            | \$ _____         |
| SAFETY JOINT    | \$ _____         |
| HOOK WALL       | \$ _____         |
| MISRUN CHARGE   | \$ _____         |
| STAND-BY CHARGE | \$ _____         |
| DST EVALUATION  | \$ _____         |
| STRADDLE        | \$ <u>510.00</u> |
| TOTAL           | \$ _____         |

# MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company THUNDERBIRD DRILLING CO.

Lease and Well No. BRYANT A #1

County LANE State KANSAS Date OCTOBER 5, 1979

Formation Test No. 7 Total Depth 4445 Elev. \_\_\_\_\_

Interval Tested 4416 To 4445 Anchor Length 29'

Size Hole 7 7/8 Size Drill Pipe 4 1/2 F.H. & X.H. Size Packer 6 3/4

Mud Weight 9.2 Viscosity 55 Water Loss 7.6 c.c. Bottom Hole Temp. \_\_\_\_\_ °F

Chokes: Top 1/2 Bottom 1/2 Ticket No. 18171

Length of Drill Collar \_\_\_\_\_ I. D. \_\_\_\_\_ Length Flexweight 541 I. D. 2.76

## RECOVERY

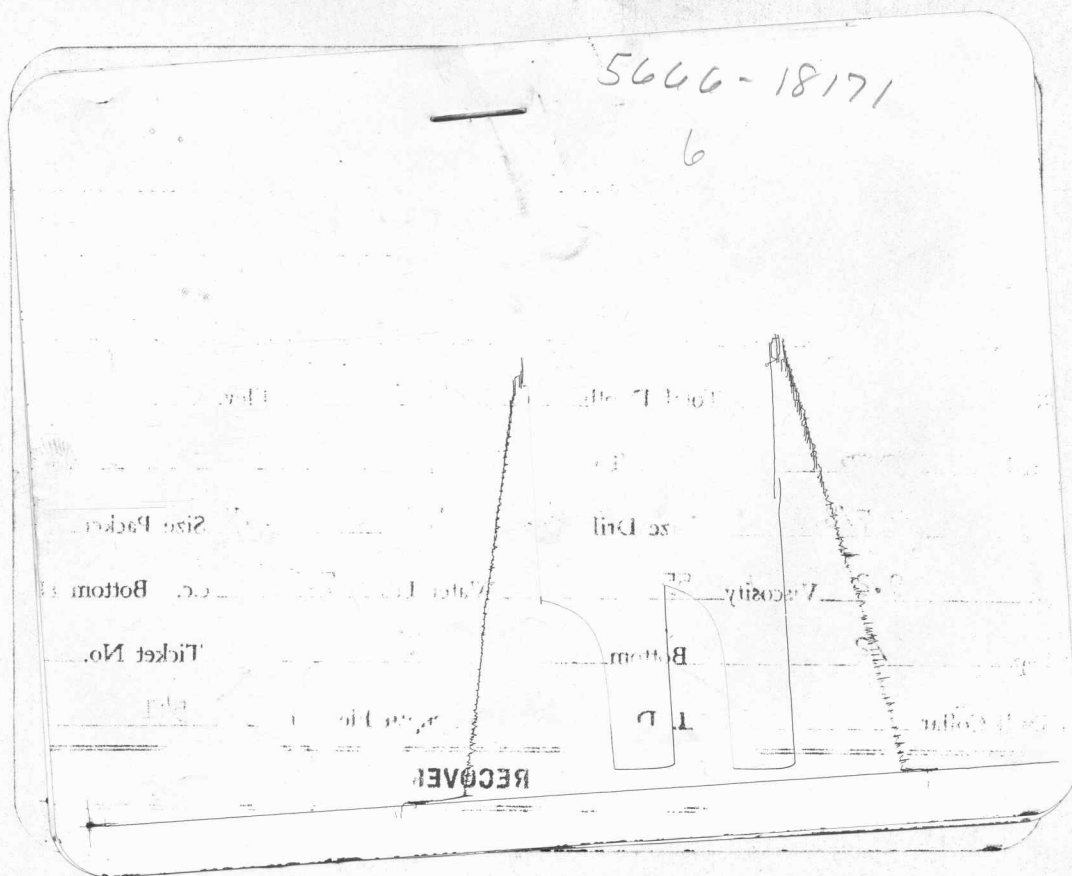
FIRST FLOW: WEAK BLOW THROUGHOUT TEST.  
SECOND FLOW: WEAK DECREASING BLOW.

75 FEET OF OIL CUT WATER.  
60 FEET OF WATER.

Lease and Well No. BRYANT A #1 23-18S-30M

Formation Test No. 7





Tool Open: 1st Flow hr. 45 mins: Shut-in Initial hr. 45 min: 2nd Flow hr. 45 min: Shut-in Final hr. 45 min

|                                  | Field Reading | Corrected Reading |
|----------------------------------|---------------|-------------------|
| (A) Initial Hydrostatic Pressure | 2183          | 2216              |
| (B) Initial 1st Flow Pressure    | 61            | 84                |
| (C) Final 1st Flow Pressure      | 61            | 84                |
| (D) Initial Shut-in Pressure     | 1147          | 1052              |
| (E) Initial 2nd Flow Pressure    | 122           | 109               |
| (F) Final 2nd Flow Pressure      | 122           | 109               |
| (G) Final Shut-in Pressure       | 1027          | 1006              |
| (H) Final Hydrostatic Pressure   | 2143          | 2131              |

18171

DATE 10-5-79  
SEC. 33 TWN 18S RG 30W

**MILLER**

TICKET N<sup>o</sup> 18171

LEGAL DESCRIPTION \_\_\_\_\_

**TESTING COMPANY**

TEST NO. 7

P. O. BOX 547 PHONE (316) 793-3370  
GREAT BEND, KANSAS

COMPANY Thunderbird Drilg. Co.  
ADDRESS Box 18407 Wichita Ks  
LEASE Bryant WELL NO A-1 COUNTY Lane STATE Ks  
INVOICES SENT TO: Same  
DST COPIES SENT TO: "

**GENERAL INFORMATION**

TOOL JT. 4 1/2<sup>FM</sup> HOLE SIZE 7 7/8 PACKER O.D. 6 3/4  
ELEV. \_\_\_\_\_ TOTAL DEPTH 4445  
TESTED FROM 4416 TO 4445  
ANCHOR LENGTH BELOW 29' BETWEEN \_\_\_\_\_  
TOOL OPEN 1ST FLOW \_\_\_\_\_ A.M. 5:45 P.M. \_\_\_\_\_  
TOOL CLOSED INITIAL SHUT-IN \_\_\_\_\_ A.M. 6:30 P.M. \_\_\_\_\_  
TOOL OPEN 2ND FLOW \_\_\_\_\_ A.M. 7:15 P.M. \_\_\_\_\_  
TOOL CLOSED FINAL SHUT-IN \_\_\_\_\_ A.M. 8:00 P.M. \_\_\_\_\_  
MUD WT. 9.2 VISCOSITY 55 W.L. 7.6 C.C. \_\_\_\_\_  
SP. GRAVITY OIL \_\_\_\_\_ BOTTOM HOLE TEMPERATURE \_\_\_\_\_  
LENGTH DRILL COLLAR \_\_\_\_\_ I.D. \_\_\_\_\_  
LENGTH WEIGHT PIPE 541' I.D. 2.76  
SUCCESSFUL TEST NO. 7 MISRUN NO. \_\_\_\_\_  
CHOKES: TOP 1/2 BOTTOM 1/2

**PRESSURE DATA & TIME**

|                              | FIELD READINGS                  | CORRECTED READINGS |
|------------------------------|---------------------------------|--------------------|
| INITIAL HYDROSTATIC          | <u>2183</u>                     | <u>2216</u>        |
| INITIAL 1ST FLOW             | <u>61</u>                       | <u>84</u>          |
| FINAL 1ST FLOW               | <u>61</u>                       | <u>84</u>          |
| INITIAL SHUT-IN              | <u>1147</u>                     | <u>1052</u>        |
| INITIAL 2ND FLOW             | <u>122</u>                      | <u>109</u>         |
| FINAL 2ND FLOW               | <u>122</u>                      | <u>109</u>         |
| FINAL SHUT-IN                | <u>1027</u>                     | <u>1006</u>        |
| FINAL HYDROSTATIC            | <u>2143</u>                     | <u>2131</u>        |
| TOOL OPEN: 1ST FLOW          | _____                           | HR. <u>45</u> MIN. |
| INITIAL SHUT-IN              | _____                           | HR. <u>45</u> MIN. |
| 2ND FLOW                     | _____                           | HR. <u>45</u> MIN. |
| FINAL SHUT-IN                | _____                           | HR. <u>45</u> MIN. |
| TOP RECORDER NO. <u>5666</u> | BOTTOM RECORDER NO. <u>6234</u> |                    |

TYPE BLOW 1st Flow - weak throughout test  
2nd Flow - weak decreasing blow

RECOVERY: \_\_\_\_\_

75' oil cut water  
60' water

EXTRA EQUIPMENT \_\_\_\_\_

APPROVED BY: Stanton Co.

TESTER: Stuart Storch

FORMATION TESTED Pawnee

OPERATOR TIME: \_\_\_\_\_

**MILLER TESTING COMPANY**

SHALL NOT BE LIABLE FOR ANY DAMAGE 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, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST WAS MADE.

**CHARGES** 510<sup>00</sup>

|                 |                            |
|-----------------|----------------------------|
| TEST CHARGE     | \$                         |
| EXTRA PACKERS   | \$                         |
| JARS            | \$                         |
| SAFETY JOINT    | \$                         |
| HOOK WALL       | \$                         |
| MISRUN CHARGE   | \$                         |
| STAND-BY CHARGE | \$                         |
| DST EVALUATION  | \$                         |
| STRADDLE        | \$                         |
| TOTAL           | \$ <u>510<sup>00</sup></u> |