

Phone  
(806) 637-3678

# Harvill's Drill Stem Testing

P.O. Box 725  
Brownfield, Texas 79316

Contractor Landis Drilling  
Rig No. 1  
Spot 610' FSL & 760' FWL  
Sec. 23  
Twp. 18 S  
Rng. 32 E  
Field Wildcat  
County Lea  
State New Mexico  
Elevation 3780' KB

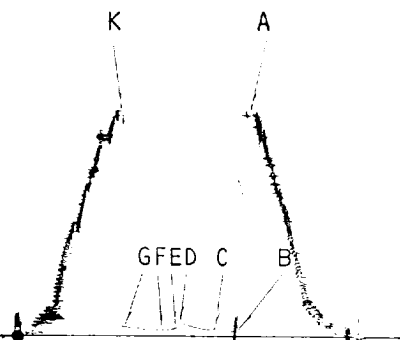
Surface Choke 1/8"  
Bottom Choke 5/8"  
Hole Size 7 7/8"  
Rat Hole Size --  
DP Size & Weight 4 1/2" XH 16.60  
Wt. Pipe None  
I.D. of DC 2 1/2"  
Length of DC 720'  
Total Depth 5230'  
Type of Test Conventional

Mud Type Fresh Water  
Weight 8.5  
Viscosity 29  
Water Loss --  
Filter Cake --  
Resistivity 9000 @ --- of ---  
Ppm. NaCl ---  
Bottom  
Hole Temp. 98°F

Opened Tool @ 02:40 hrs.  
Flow No. 1 (30) 30\* min.  
Shut-in No. 1 (60) 55\* min.  
Flow No. 2 (30) 30\* min.  
Shut-in No. 2 (60) 59\* min.  
Flow No. 3 None Taken min.  
Shut-in No. 3 " min.  
\*Computed

Recorder Type Kuster AK-1  
No. 13750 Cap. 7950 psi  
Depth 5224 feet  
Inside [ ] Outside [x]

|                     |   |        |
|---------------------|---|--------|
| Initial Hydrostatic | A | 2268.9 |
| Final Hydrostatic   | K | 2255.9 |
| Initial Flow        | B | 41.0   |
| Final Initial Flow  | C | 44.9   |
| Initial Shut-in     | D | 129.0  |
| Second Initial Flow | E | 85.6   |
| Second Final Flow   | F | 44.6   |
| Second Shut-in      | G | 82.5   |
| Third Initial Flow  | H |        |
| Third Final Flow    | I |        |
| Third Shut-in       | J |        |



Pipe Recovery: 60' Drilling fluid = 0.37 bbl.

Recovery: 9000 ppm Cl.

1st Flow: Tool opened with a weak blow and remained through flow period.

2nd Flow: Tool opened with few bubbles, died immediately and remained through flow period.

Co. Rep. Charlie Pappas  
Tester Eugene Harvill

Operator **MARSHALL & WINSTON, INC.**  
Address **See Distribution**  
Well Name & No. **Querecho Federal #1**  
Formation **San Andres**  
Test Interval **5185' - 5230'**  
DST No. **1**  
Ticket No. **0232**  
Date **1/10/86**

# Harvill's Drill Stem Testing

Marshall & Winston, Inc.

Operator

Querecho Federal #1

Well Name and No.

1

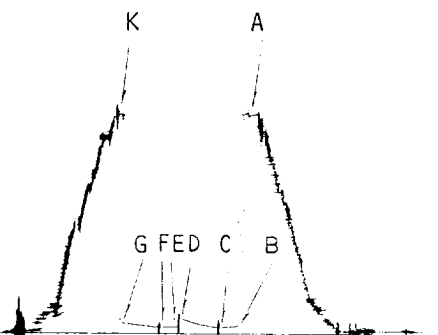
DST No.

Inside Recorder

PRD Make Kuster AK-1

No. 13751 Cap. 7875 @ 5165'

|                     | Press | Corrected |
|---------------------|-------|-----------|
| Initial Hydrostatic | A     | 2204.1    |
| Final Hydrostatic   | K     | 2198.4    |
| Initial Flow        | B     | 55.6      |
| Final Initial Flow  | C     | 39.2      |
| Initial Shut-in     | D     | 133.3     |
| Second Initial Flow | E     | 40.8      |
| Second Final Flow   | F     | 38.7      |
| Second Shut-in      | G     | 86.6      |
| Third Initial Flow  | H     |           |
| Third Final Flow    | I     |           |
| Third Shut-in       | J     |           |
|                     |       |           |
|                     |       |           |
|                     |       |           |



PRD Make

No. Cap. @

|                     | Press | Corrected |
|---------------------|-------|-----------|
| Initial Hydrostatic | A     |           |
| Final Hydrostatic   | K     |           |
| Initial Flow        | B     |           |
| Final Initial Flow  | C     |           |
| Initial Shut-in     | D     |           |
| Second Initial Flow | E     |           |
| Second Final Flow   | F     |           |
| Second Shut-in      | G     |           |
| Third Initial Flow  | H     |           |
| Third Final Flow    | I     |           |
| Third Shut-in       | J     |           |
|                     |       |           |
|                     |       |           |
|                     |       |           |

# Harvill's Drill Stem Testing

Marshall & Winston, Inc.

Operator

Querecho Federal #1

Well Name and No.

1

DST No.

RECORDER NO. 13750 DEPTH 5224 FT.

## INITIAL SHUT-IN

INITIAL FLOW TIME: T = 30 MIN.

| DT(MIN) | LOG((T+DT)/DT) | PRESSURE(P SIG) | DP(P SIG) |
|---------|----------------|-----------------|-----------|
| 0       |                | 44.9            | 0.0       |
| 4       | .929           | 48.0            | 3.1       |
| 8       | .677           | 52.3            | 7.4       |
| 12      | .544           | 56.0            | 11.1      |
| 16      | .459           | 60.1            | 15.2      |
| 20      | .398           | 64.6            | 19.7      |
| 24      | .352           | 70.1            | 25.1      |
| 28      | .316           | 76.7            | 31.8      |
| 32      | .287           | 82.8            | 37.8      |
| 36      | .263           | 88.8            | 43.9      |
| 40      | .243           | 96.5            | 51.5      |
| 44      | .226           | 105.1           | 60.1      |
| 48      | .211           | 113.5           | 68.6      |
| 52      | .198           | 123.3           | 78.4      |
| 55      | .189           | 129.0           | 84.1      |

EXTRAPOLATED PRESSURE: INDETERMINATE

# Harvill's Drill Stem Testing

## Sampler Report

Company Marshall & Winston, Inc. Date 1/10/86  
Well Name & No. Querecho Federal #1 Ticket No. 0232  
County Lea State New Mexico  
Test Interval 5185' - 5230' DST No. 1

Total Volume of Sampler: 2250 cc.  
Total Volume of Sample: 2250 cc.  
Pressure in Sampler: None psig  
Oil: Trace cc.  
Water: None cc.  
Mud: 2250 cc.  
Gas: None cu. ft.  
Other: None

### Resistivity

Make Up Water \_\_\_\_\_ @ \_\_\_\_\_ of Chloride Content \_\_\_\_\_ ppm.  
Mud Pit Sample \_\_\_\_\_ @ \_\_\_\_\_ of Chloride Content 9000 ppm.  
Gas/Oil Ratio \_\_\_\_\_ Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F  
Where was sample drained On Location

Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Harvill's Drill Stem Testing

Marshall & Winston, Inc.

Operator

Querecho Federal #1

Well Name and No.

1

DST No.

RECORDER NO. 13750 DEPTH 5224 FT.

## FINAL SHUT-IN

TOTAL FLOW TIME: T = 60 MIN.

| DT(MIN) | LOG((T+DT)/DT) | PRESSURE(P SIG) | DP(P SIG) |
|---------|----------------|-----------------|-----------|
| 0       |                | 44.6            | 0.0       |
| 4       | 1.204          | 44.6            | -0.1      |
| 8       | .929           | 46.9            | 2.3       |
| 12      | .778           | 49.6            | 5.0       |
| 16      | .677           | 51.7            | 7.1       |
| 20      | .602           | 53.7            | 9.0       |
| 24      | .544           | 57.2            | 12.5      |
| 28      | .497           | 58.9            | 14.2      |
| 32      | .459           | 62.6            | 17.9      |
| 36      | .426           | 66.5            | 21.8      |
| 40      | .398           | 68.8            | 24.1      |
| 44      | .374           | 71.3            | 26.6      |
| 48      | .352           | 74.2            | 29.5      |
| 52      | .333           | 77.7            | 33.0      |
| 56      | .316           | 79.4            | 34.8      |
| 59      | .305           | 82.5            | 37.9      |

EXTRAPOLATED PRESSURE: INDETERMINATE

350

HORNER PLOT

Marshall & Winston, Inc.  
Querecho Federal #1, DST #1  
Interval: 5185' - 5230'

Recorder No. 13750 @ 5224'

$P^*_i$  = Indeterminate

$P^*_f$  = Indeterminate

PRESSURE (PSI)

INITIAL SHUT-IN

FINAL SHUT-IN

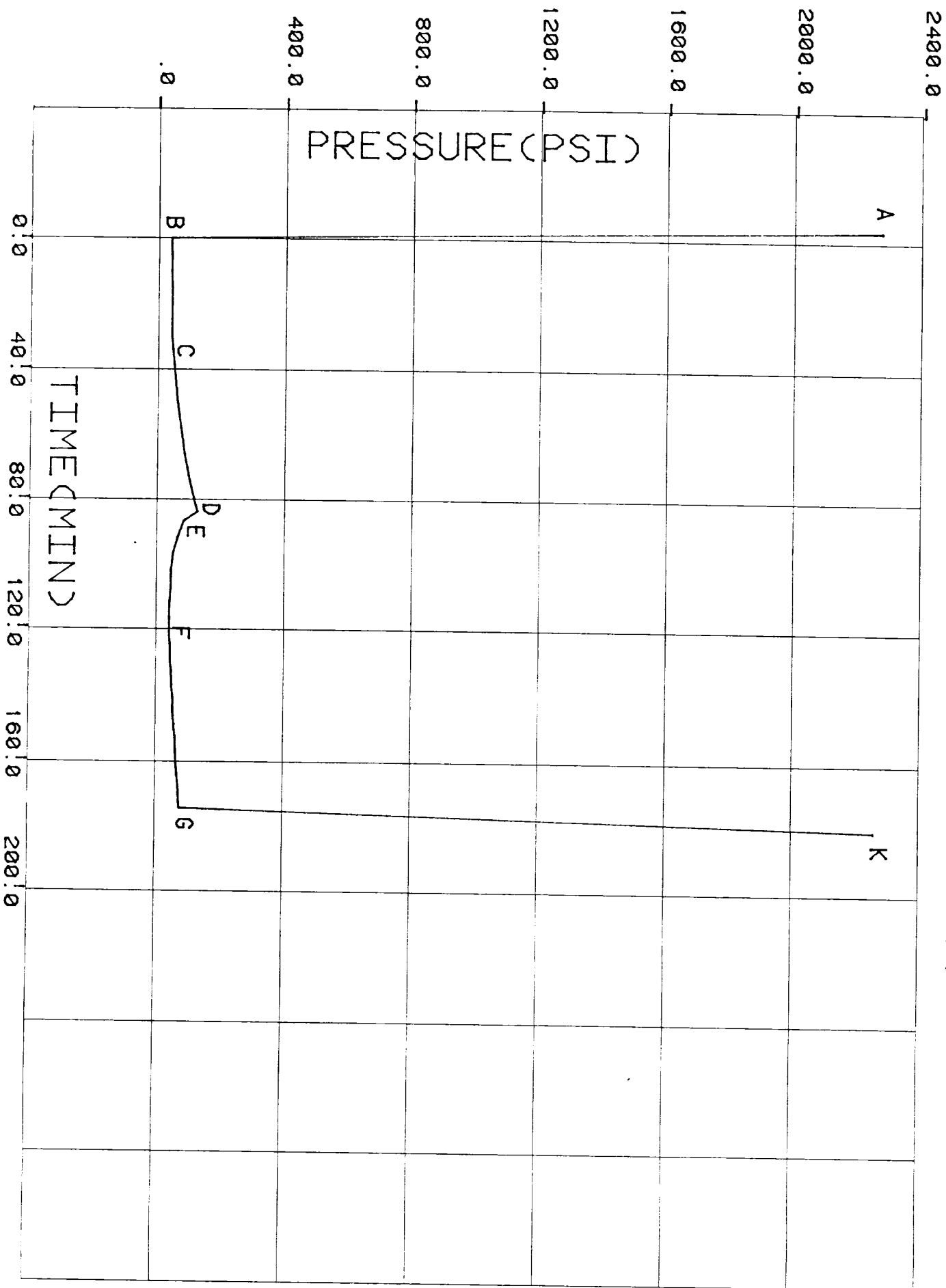
$C(T+DT)/DT$

0  
100.0

10.0

1.0

GAUGE NO. 13750 @ 5224 FT.



# Harvill's Drill Stem Testing

Marshall & Winston, Inc.

Operator

Querecho Federal #1

Well Name and No.

MARSHALL & WINSTON INC. 3  
310 W. - #10 DESTA DR.  
MIDLAND TX 79705

MAR-WIN DEVELOPMENT 1  
P.O. BOX 4482  
TOPEKA KS 66604

MEWBORNE OIL CO. 1  
ATTN MR. PAUL HADEN  
400 W. ILLINOIS SUITE 1270  
MIDLAND TX 79701

TXO PRODUCTION CO. 1  
ATTN MR. ANDY OHARE  
900 WILCO BLDG.  
MIDLAND TX 79701

NEW MEXICO OIL CONSERVATION COMM. 1  
P.O. BOX 1980  
HOBBS NM 88240

BUREAU OF LAND MANAGEMENT 1  
P.O. BOX 1778  
CARLSBAD NM 88220