

REPORT NO.  
108962 DST 1

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TEST DATE:

6-Feb-1988

# STAR<sup>TM</sup>

## A Schlumberger Transient Analysis Report Of A Flopetrol Johnston Drillstem Test

FLOPETROL JOHNSTON

**Schlumberger**

Company: SANTA FE ENERGY

### TEST IDENTIFICATION

Test Type ..... MFE OH DST  
Test No. .... One  
Formation ..... San Andres  
Test Interval (ft) ... 4994 to 5049  
Reference Depth ..... Kelly Bushing

### HOLE CONDITIONS

Total Depth (MD/TUD)(ft) . 5049  
Hole Size (in) ..... 7 7/8  
Casing/Liner I.D. (in) ... --  
Perf'd Interv./Nt Pay(ft). -- / 50  
Shot Density/Diameter(in). --

### INITIAL TEST CONDITIONS

Initial Hydrostatic (psi). 2233  
Gas Cushion Type ..... None  
Surface Pressure (psi) ... --  
Liquid Cushion Type ..... None  
Cushion Length (ft) ..... --

### NET PIPE RECOVERY

| Volume  | Fluid Type | Properties                                    |
|---------|------------|-----------------------------------------------|
| 28 feet | Mud        | Trace of oil<br>Rw 0.35 at 60 F<br>20,000 PPM |
|         |            |                                               |
|         |            |                                               |
|         |            |                                               |

### VALIDATION RESULTS

Model of Behavior .....  
Fluid Type Used .....  
Reservoir Pressure (psi) .  
Transmissivity (md.ft/cp)  
Permeability (md) .....  
Skin Factor/Damage Ratio .  
Storativity Ratio .....  
Interporosity Flow Coeff..  
Distance to Anomaly (ft).  
Investigation Radius (ft).  
Potentiometric Surf. (ft).

Well: HUMBLE HUME "S" STATE #1

### WELL LOCATION

Field ..... Hume  
County ..... Lea  
State ..... New Mexico  
Sec/Twn/Rng ..... 5/ 16s/ 34e  
Elevation (ft) ..... 4138 (G.L.)

### MUD PROPERTIES

Mud Type ..... Water  
Mud Weight (lb/gal) ..... 8.9  
Mud Resistivity (ohm.m) .. 0.35 at 60 F  
Filtrate Resistiv.(ohm.m). --  
Filtrate Chlorides (ppm) . 60,000

### TEST STRING CONFIGURATION

Pipe Length (ft)/I.D.(in). 4236 / 3.83  
Collar Length ft/I.D.(in). 723 / 2.25  
Packer Depths (ft) ..... 4988, 4994  
Bottomhole Choke Size(in). 15/16  
Gauge Depth (ft)/Type .... 5042 / J-200

### NET SAMPLE CHAMBER RECOVERY

| Volume    | Fluid Type | Properties     |
|-----------|------------|----------------|
| 1.0 SCF   | Gas        |                |
| 590 cc    | Oil        | 34 API at 60 F |
|           |            |                |
|           |            |                |
| Press. 50 | GOR: 269   | GLR: 269       |

### ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ... 34  
Basic Solids (%) .....  
Gas Gravity .....  
Water Cut (%) .....  
Viscosity (cp) .....  
Tot. Compress. (1/psi) ...  
Porosity (%) ..... 10  
Reservoir Temperature (F). 148  
Form.Vol.Factor (bbl/STB).

PRODUCTION RATE DURING TEST: --

### COMMENTS:

This test was mechanically successful and the zone did produce enough gas and oil for proper reservoir fluid identification. Both buildups were dominated by wellbore storage to the extent that the plots are considered to be unreliable for analysis.

The general character of the buildup plots suggest that the zone has low effective permeability and no wellbore damage at the time and conditions of the test.

RECEIVED  
APR 21 1988  
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