

REPORT NO.
110804 DST 4

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TEST DATE:
5-Mar-1988

STAR™

A Schlumberger Transient Analysis Report
A Production System Analysis (NODAL™)
Of A Flopetrol Johnston Drillstem Test

FLOPETROL JOHNSTON

Schlumberger

Company: SANTA FE ENERGY

Well: HUMBLE HUME "5" STATE #1

TEST IDENTIFICATION

Test Type MFE OH J300 DST
Test No. Four
Formation Lower Atoka
Test Interval (ft) ... 12614, 12635
Reference Depth Kelly Bushing

WELL LOCATION

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

HOLE CONDITIONS

Total Depth (MD/TUD)(ft) . 12635
Hole Size (in) 7 7/8
Casing/Liner I.D. (in) ... --
Perf'd Interv./Nt Pay(ft). -- / 4
Shot Density/Diameter(in). --

MUD PROPERTIES

Mud Type Fresh Water Gel
Mud Weight (lb/gal) 9.5
Mud Resistivity (ohm.m) .. 2.2 at 60 F
Filtrate Resistiv.(ohm.m). --
Filtrate Chlorides (ppm) . 2,800

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi). 6325
Gas Cushion Type None
Surface Pressure (psi) ... --
Liquid Cushion Type Fresh Water
Cushion Length (ft) 1981 (21.3 Bbls)

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D.(in). 11835 / 3.83
Collar Length ft/I.D.(in). 737 / 2.25
Packer Depths (ft) 12608, 12614
Bottomhole Choke Size(in). 15/16
Gauge Depth (ft)/Type 12585 / J-300

NET PIPE RECOVERY

Volume	Fluid Type	Properties
150 feet	Condensate	49.8 API at 60 F
1981 feet	Cushion	Gas cut

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
10.55 SCF	Gas	
320 cc	Condensate	49.8 API at 60 F
20 cc	Mud	
Press. 600	GOR: 5242	GLR: 5242

VALIDATION RESULTS

Model of Behavior Dual Porosity
Fluid Type Used Gas
Reservoir Pressure (psi) . 6326
Transmissivity (md.ft/cp) 12.22
Permeability (md) 0.09
Skin Factor/Damage Ratio . -1.92 / 0.53
Storativity Ratio
Interporosity Flow Coeff..
Distance to Anomaly (ft).
Investigation Radius (ft). 26
Potentiometric Surf. (ft).

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ... 49.8
Basic Solids (%)
Gas Gravity 0.65 (est)
Water Cut (%) None
Viscosity (cp) 0.030
Tot. Compress. (1/psi) ... 5.1 E-05
Porosity (%) 10 (est)
Reservoir Temperature (F). 166
Form.Vol.Factor (bbl/STB).

PRODUCTION RATE DURING TEST: 227 mcf/day

COMMENTS:

The results of the interpretation indicate that the well is in an apparent dual porosity (naturally fractured) system with low effective permeability and with no wellbore damage at the time and conditions of the test.

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