

REPORT NO.
103007 DST 2

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TEST DATE:
14-Aug-1987

WELL PERFORMANCE TESTING™ REPORT

A Production System Analysis (NODAL™)
Based On Model Verified™ Interpretation

FLOPETROL JOHNSTON

Schlumberger

Company: SANTA FE ENERGY

Well: TRIPLE "S" 33 FEDERAL #1

TEST IDENTIFICATION

Test Type MFE OH SPRO/TEL
Test No. Two
Formation Wolfcamp
Test Interval (ft) ... 9580 to 9666
Reference Depth Kelly Bushing

WELL LOCATION

Field Sterling Silver
County Eddy
State New Mexico
Sec/Twn/Rng 33/ 22s/ 31e
Elevation (ft) 3404

HOLE CONDITIONS

Total Depth (MD/TUD)(ft) . 9666
Hole Size (in) 7 7/8
Casing/Liner I.D. (in) ... --
Perf'd Interv./Nt Pay(ft). - / 6
Shot Density/Diameter(in). --

MUD PROPERTIES

Mud Type Fresh Water Gel
Mud Weight (lb/gal) 9.0
Mud Resistivity (ohm.m) .. 0.40 at 86 F
Filtrate Resistiv.(ohm.m). --
Filtrate Chlorides (ppm) . 12,000

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi). 4469
Gas Cushion Type None
Surface Pressure (psi) ... --
Liquid Cushion Type Water
Cushion Length (ft) 30

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D.(in). 8983 / 3.83
Collar Length ft/I.D.(in). 541 / 2.25
Packer Depths (ft) 9574, 9580
Bottomhole Choke Size(in). 15/16
Gauge Depth (ft)/Type 9533 / SPRO

NET PIPE RECOVERY

Volume	Fluid Type	Properties
4234 feet	Mud	Heavily gas cut
		Rw 0.40 at 86 F
		12,000 PPM

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
2.24 SCF	Gas	
1660 cc	Oil	43.5 API at 60 F
Press. 1174	GOR: 215	GLR: 215

VALIDATION RESULTS

Model of Behavior Heterogeneous
Fluid Type Used Oil
Reservoir Pressure (psi) . 4059
Transmissivity (md.ft/cp) 0.29
Permeability (md) 0.06
Skin Factor/Damage Ratio . -2.08 / 0.34
Storativity Ratio
Interporosity Flow Coeff..
Distance to Anomaly (ft).
Investigation Radius (ft). 10
Potentiometric Surf. (ft). 3243

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ... 43.5
Basic Solids (%)
Gas Gravity 0.65 (est)
Water Cut (%) None
Viscosity (cp) 1.16
Tot. Compress. (1/psi) ... 1.3 E-05
Porosity (%) 10 (est)
Reservoir Temperature (F). 141
Form.Uol.Factor (bbl/STB). 1.09

PRODUCTION RATE DURING TEST: 5 Bbls/day

COMMENTS:

The results of the interpretation indicate that the well is in a non-homogeneous system (probably naturally fractured) with low effective permeability and with some wellbore stimulation at the time and conditions of the test. There was a drill pipe leak during the test so the TELEFLOW(tm) rates were not directly usable. The reported rate of 5 Bbls/day was determined from the difference in the total indicated pipe fillup rate and the apparent rate due to the leak. The difference in the extrapolations is believed to be due to the nature of the system and not due to depletion.