

REPORT NO.

132864

S T A R

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Schlumberger Transient Analysis Report

Schlumberger

TEST DATE:

30-MAR-1992

Based on Model Verified Interpretation

COMPANY: Santa Fe Energy

WELL: NE Loving 34 Fed. #1

TEST IDENTIFICATION

Test Type Buildup/4 Point
 Test No. One
 Formation Strawn
 Test Interval (ft) 11232 to 11238

WELL LOCATION

Field
 County Eddy
 State New Mexico
 Sec/Twn/Rng 34/22s/28e

COMPLETION CONFIGURATION

Total Depth (MD/TVD) (ft)
 Casing/Liner I.D. (in) 7" 26#
 Hole Size (in) 8.75
 Perforated Interval (ft) 11232 to 11238
 Shot Density (shots/ft) 4
 Perforation Diameter (in)
 Net Pay (ft) 5

TEST STRING CONFIGURATION

Tubing Length (ft)/I.D. (in)... 11112 / 1.995
 Tubing Length (ft)/I.D. (in)...
 Packer Depth (ft) 11162.
 Gauge Depth (ft)/Type 11120/SB-20297
 Downhole Valve (Y/N)/Type

TEST CONDITIONS

Tbg/Wellhead Pressure (psi) ..
 Separator Pressure (psi)

INTERPRETATION RESULTS

Model of Behavior Homogeneous
 Fluid Type Used for Analysis.. Gas
 Reservoir Pressure (psi) 5740
 Transmissibility (md.ft/cp) .. 23.02
 Effective Permeability (md) .. 0.12
 Skin Factor 2.9
 Storage Ratio, Omega
 Interporos.Flow Coef..Lambda..
 Distance to an Anomaly (ft) ..
 Radius of Investigation (ft)... 343

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API)
 Basic Solids (%)
 Gas Gravity 0.75 (est)
 GOR (scf/STB)
 Water Cut (%) 0
 Viscosity (cp) 0.026
 Total Compressibility (1/psi).. 1.303e-4
 Porosity (%) 5
 Reservoir Temperature (F) 187
 Form.Vol.Factor (mcf/mscf) ... 0.0042

LAST PRODUCTION RATE BEFORE BUILDUP: 70 mcf/d

COMMENTS:

This is a Model Verified interpretation of a pressure buildup recorded with electronic gauges. This interpretation indicates a tested interval of fair permeability to the produced gas with some wellbore damage (skin = 2.9) for the given 5 feet interval. The buildup did not reach infinite acting radial flow, therefore all answers are based upon the type curve solution and there is no agreement with the semilog (Horner) solution. The Horner solution is presented for reference. The indicated solution is the "best" answer available, however the actual permeability may vary plus or minus .04 md. There was a large amount of wellbore storage. The reservoir pressure is indicated to be 5740 from the type curve. Nothing definitive was indicated about boundaries.

Also presented in this report is the flowing and static gradients which indicated no liquids over the traverse. For the four point test: the pressure log, production data and copies of the New Mexico C-122 backpressure test are included (AOFP = 540 mcf/d). Thank you for using Schlumberger. For questions about this report please call Gil Hilsman (915) 894-1986.