

REPORT NO.
102900 DST 2

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TEST DATE:
16-Jun-1987

WELL PERFORMANCE TESTING™ REPORT

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

FLOPETROL JOHNSTON

Schlumberger

Company: U.F. PETROLEUM, INC.

Well: CHEURON STATE #1 -7M 36 15-33

TEST IDENTIFICATION

Test Type MFE OH SPRO/TEL
Test No. Two
Formation Wolfcamp
Test Interval (ft) 10212 to 10238
Reference Depth Kelly Bushing

WELL LOCATION

Field Wildcat
County Lea
State New Mexico
Sec/Twn/Rng 36/ 15s/ 33e
Elevation (ft) 4142 (G.L.)

HOLE CONDITIONS

Total Depth (MD/TUD) (ft) 10238
Hole Size (in) 7 7/8
Casing/Liner I.D. (in) --
Perf'd Interval/Net Pay (ft) .. -- / 21
Shot Density/Diameter (in) ... --

MUD PROPERTIES

Mud Type Gel Drispac
Mud Weight (lb/gal) 8.7
Mud Resistivity (ohm.m) 0.86 at 100 F
Filtrate Resistivity (ohm.m) .. --
Filtrate Chlorides (ppm) 1600

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi) 4743
Gas Cushion Type None
Surface Pressure (psi) --
Liquid Cushion Type Fresh Water
Cushion Length (ft) 134

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in) ... 9494 / 3.34
Collar Length (ft)/I.D. (in) .. 693 / 2.25
Packer Depths (ft) 10206, 10212
Bottomhole Choke Size (in) ... 1/2
Gauge Depth (ft)/Type 10169 / SPRO

NET PIPE RECOVERY

Volume	Fluid Type	Properties
4612 feet	Oil	41.7 API at 60 F
2306 feet	Mud	Heavily oil/gas cut
612 feet	Water	Rw 0.05 at 100 F
		72,000 PPM

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
1.5 SCF	Gas	
200 cc	Oil	41.7 API
1800 cc	Mud	Gas/oil cut
Tool was	opened after	final shutin
Pressure: 2000	GOR: 1193	GLR: 1193

INTERPRETATION RESULTS

Model of Behavior Dual Porosity
Fluid Type Used for Analysis .. Liquid
Reservoir Pressure (psi) 3714 at 10169'
Transmissibility (md.ft/cp) .. 34.86
Effective Permeability (md) .. 0.53
Skin Factor/Damage Ratio -0.52 / 0.89
Storativity Ratio
Interporosity Flow Coeff.
Distance to an Anomaly (ft) ..
Radius of Investigation (ft) .. 51
Potentiometric Surface (ft) .. 2549

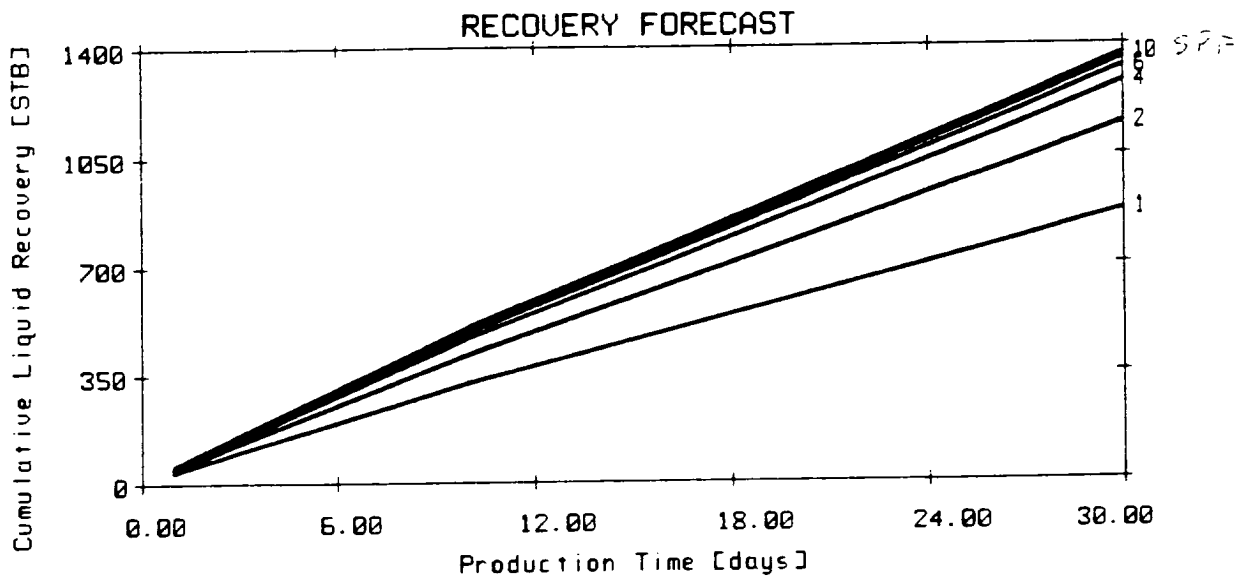
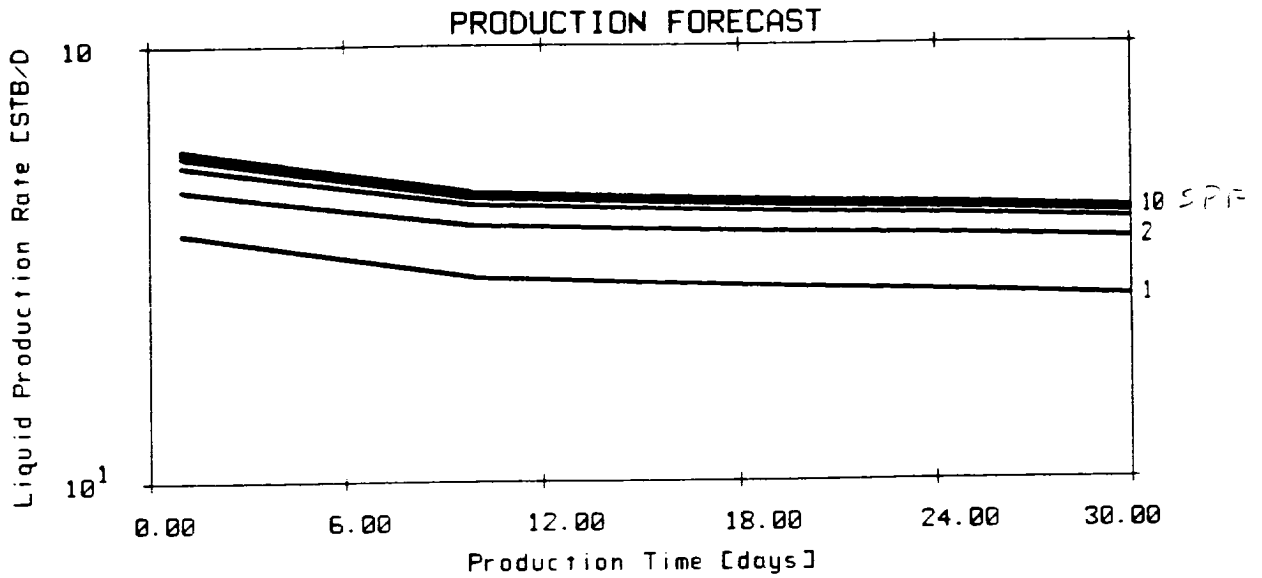
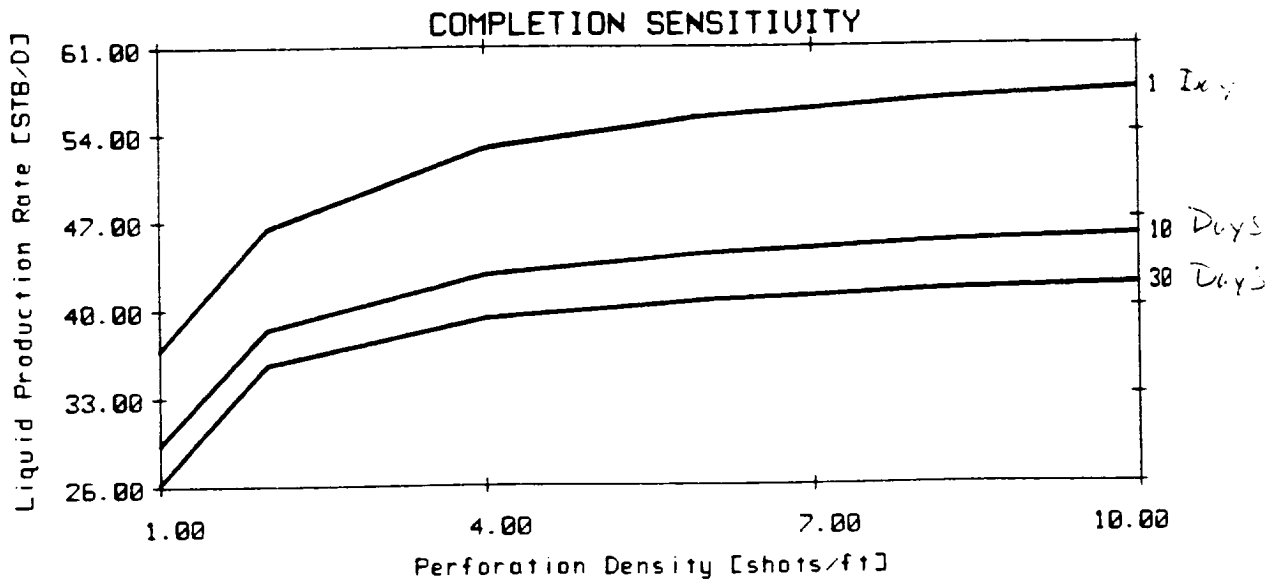
ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) 41.7
Basic Solids (%)
Gas Gravity 0.65 (est)
Water Cut (%) 6 (pipe rec.)
Viscosity (cp) 0.32
Total Compressibility (1/psi) .. 3.0 E-05
Porosity (%) 10 (est)
Reservoir Temperature (F) 146
Form.Vol.Factor (bbl/STB) 1.64

FINAL PRODUCTION RATE DURING TEST: 123 Bbls/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. Two slopes were drawn on the Horner plots but the latter slopes were used in the calculations.



SHUTIN PRESSURE [PSIA]

HORNER PLOT

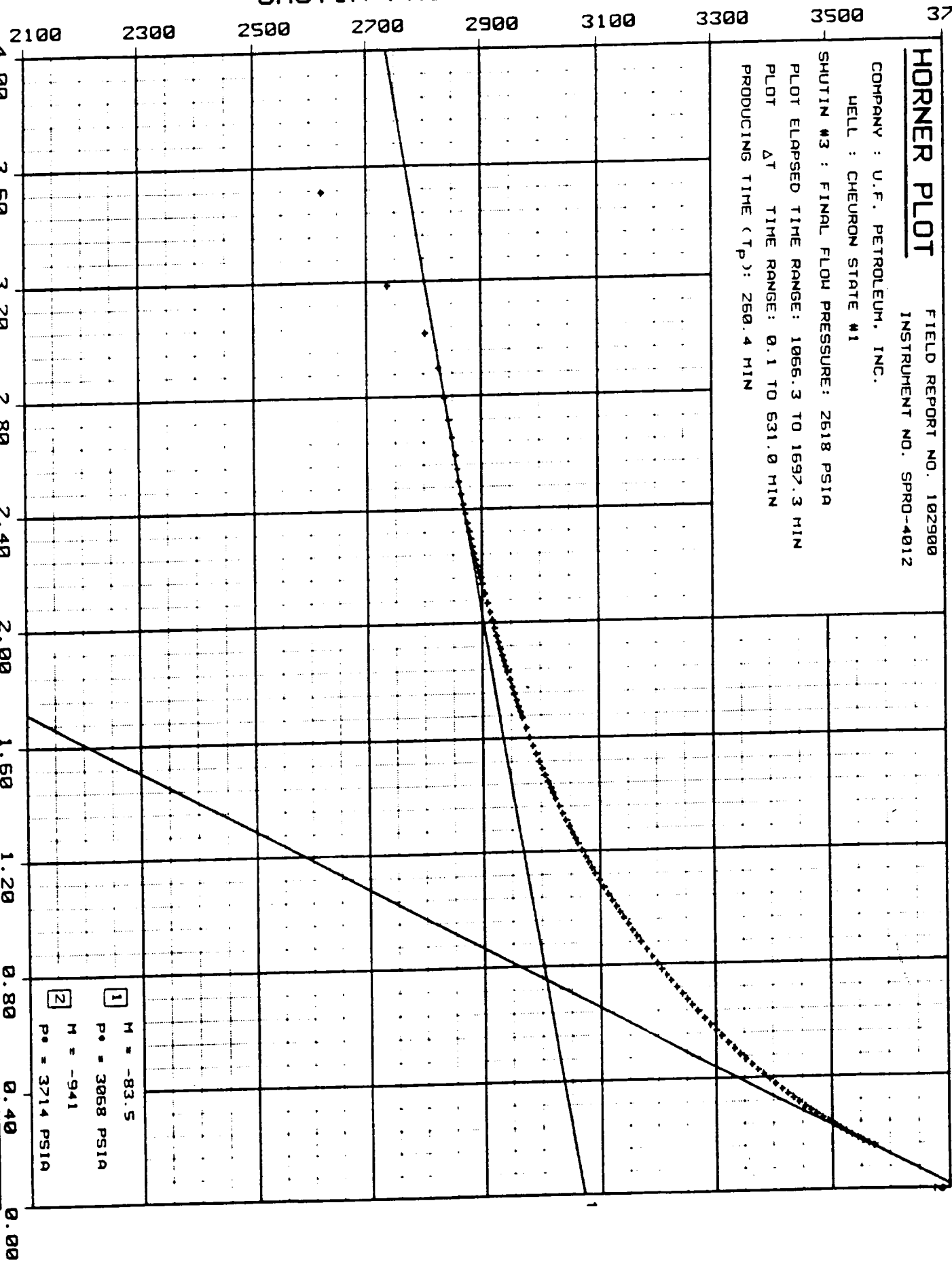
FIELD REPORT NO. 102900
INSTRUMENT NO. SPRO-4012

COMPANY : U.F. PETROLEUM, INC.
WELL : CHEURON STATE #1

SHUTIN #3 : FINAL FLOW PRESSURE: 2618 PSIA
PLOT ELAPSED TIME RANGE: 1066.3 TO 1697.3 MIN
PLOT ΔT TIME RANGE: 0.1 TO 631.0 MIN
PRODUCING TIME (T_p): 250.4 MIN

ΔT (MIN)

0.026 0.065 0.16 0.41 1.0 2.6 6.7 17 49 172 0



$\text{LOG} \left[\frac{T_p + \Delta T}{\Delta T} \right]$

1 $M = -83.5$
 $P_e = 3068$ PSIA

2 $M = -94.1$
 $P_e = 3714$ PSIA

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BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 102900 COMPANY : U.F. PETROLEUM, INC.
INSTRUMENT NO. SPRO-4012 WELL : CHEURON STATE #1
DEPTH : 10169 FT
CAPACITY : 10000 PSI
PORT OPENING : INSIDE

