

TECHNICAL MEMORANDUM

Subject: FIELD CASE HISTORY
Location: HAWTHORNE #1, ST. JAMES, LA

THE SKIN EFFECT OF LIQUID CASING

As Tested By SCHLUMBERGER

On September 19, 1989 REESE ENERGY tested its well Hawthorne #1 with Schlumberger's new technique, Impulse Testing. This new technology measures, among other things, any damage to the formation caused by the drilling fluids.

Differential pressures were encountered while drilling this well causing the drill string to stick at 11,652 feet. The pipe was freed after spotting Black Magic. To prevent sticking the pipe in these low pressure zones, a 6 to 8 ppb concentration of LIQUID CASING was maintained in the system to drill to total depth.

As evidenced by the test results, there was no damage caused to the formation by any of the drilling fluid additives or completing techniques. The skin effect was -1.4 which indicates a slight stimulation to the wellbore.

Mr. Mike Power, drilling engineer for Reese Energy, will be glad to answer any questions you may have about the use of LIQUID CASING in this particular well. He can be reached by phone at 504/582-2242.

Liquid Casing Inc.

REPORT NO.

122531

PAGE NO. 1

S T A RTM

**A Schlumberger Transient Analysis Report
Based On Model Verified Interpretation
Of A Schlumberger Production Log**

Schlumberger

TEST DATE:

19-SEP-1989

Company: REESE ENERGY CORP.

Well: HAWTHORNE #1

TEST IDENTIFICATION

Test Type MWP
Test No. 1
Formation N/A
Test Interval (ft) 11909-11914

WELL LOCATION

Field LAPICE
Parish ST. JAMES
State LOUISIANA
Sec/Twn/Rng 41/12S/15E

COMPLETION CONFIGURATION

Total Depth (MD/TUD) (ft) 11932 (PBTD)
Casing/Liner I.D. (in) 4.892
Hole Size (in) 6.5
Perforated Interval (ft) 5
Shot Density (shots/ft) 6
Perforation Diameter (in) 0.33
Net Pay (ft) 3

TEST STRING CONFIGURATION

Tubing Length ft/I.D. (in) 11704/1.995
Tubing Length ft/I.D. (in).
Packer Depth (ft) 11666
Gauge Depth (ft)/Type 11902/MWPT
Downhole Valve (Y/N)/Type N

TEST CONDITION

Tbg/Wellhead Press. (psi) .. 690 (Final S.I.)
Separator Pressure (psi) N/A

VALIDATION RESULTS

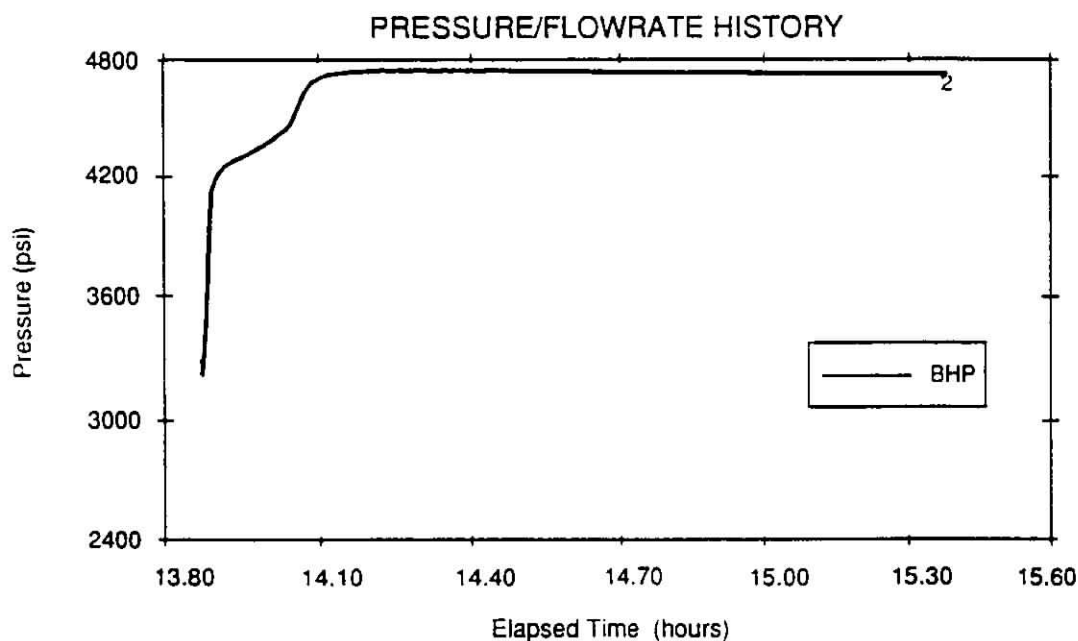
Model of Behavior Homogeneous
Fluid Type Used Gas
Reservoir Pressure (psi) 4747
Transmissivity (md.ft/cp) 4880
Permeability (md) 39
Skin Factor -1.4
Storativity Ratio
Interporosity Flow Coeff
Distance to Anomaly (ft)
Investigation Radius (ft)

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) 54
Basic Solids (%)
Gas Gravity 0.650
GOR (scf/STB)
Water Cut (%)
Viscosity (cp) 0.024
Tot. Compress. (1/psi) 1.07E-04
Porosity (%) 28
Reservoir Temperature (F) 218
Form.Vol.Factor (bb/STB)

CUMMULATIVE RECOVERY DURING TEST: 18 BBLS**COMMENTS:**

The results listed above were obtained from an Impulse Test analysis of the data obtained while perforating the Hawthorne #1 well on 9/19/89. The well was modeled as a homogeneous reservoir with wellbore storage and skin effects. The value of 18 barrels of fluid recovery was determined from the pressure data obtained from logging into and out of the well. From the down log, a fluid level was noticed at approximately 4680', (18 bbbls in 1.995' tbg.). From the up log obtained while pulling out of the hole, it appears the fluid level is near surface, therefore, recovery of 18 barrels is assumed.



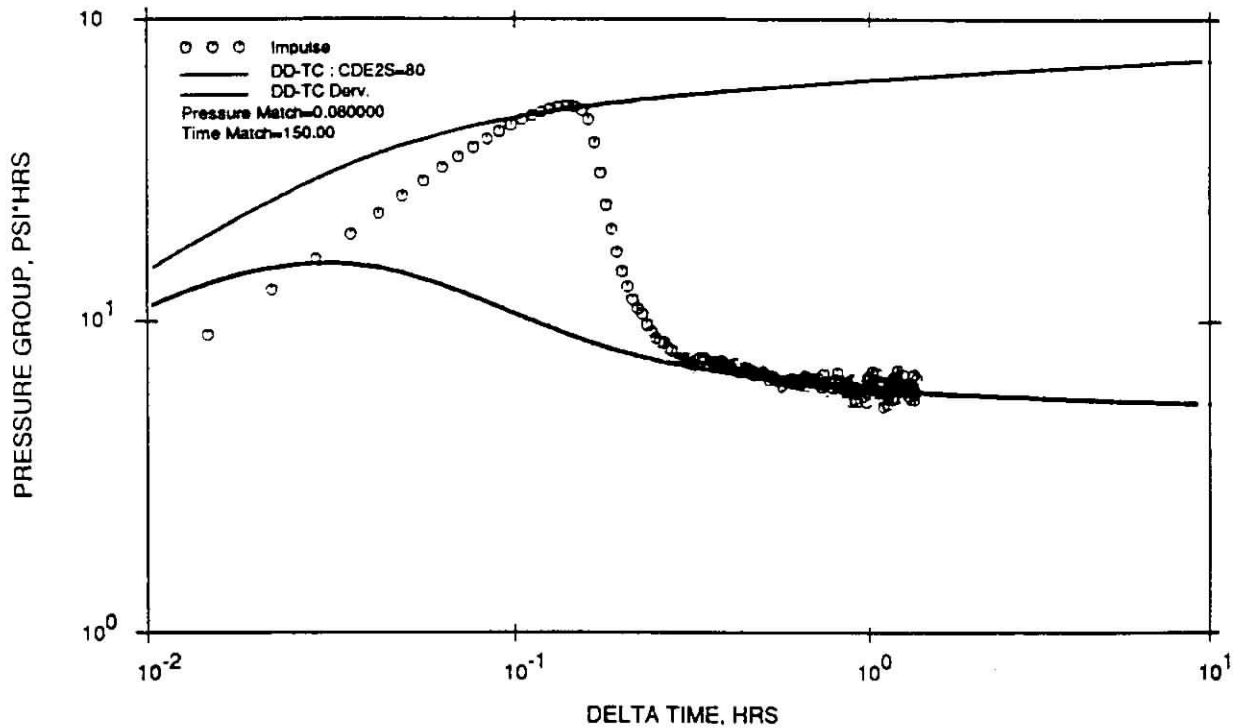
SEQUENCE OF EVENTS

EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (HR:MIN)	BHP (PSIA)	WHP (PSIA)
1	19-SEP	13:54	FIRED GUNS	13:55	3209.	0.
2	19-SEP	15:23	END TEST, POOH	15:24	4743.	690.

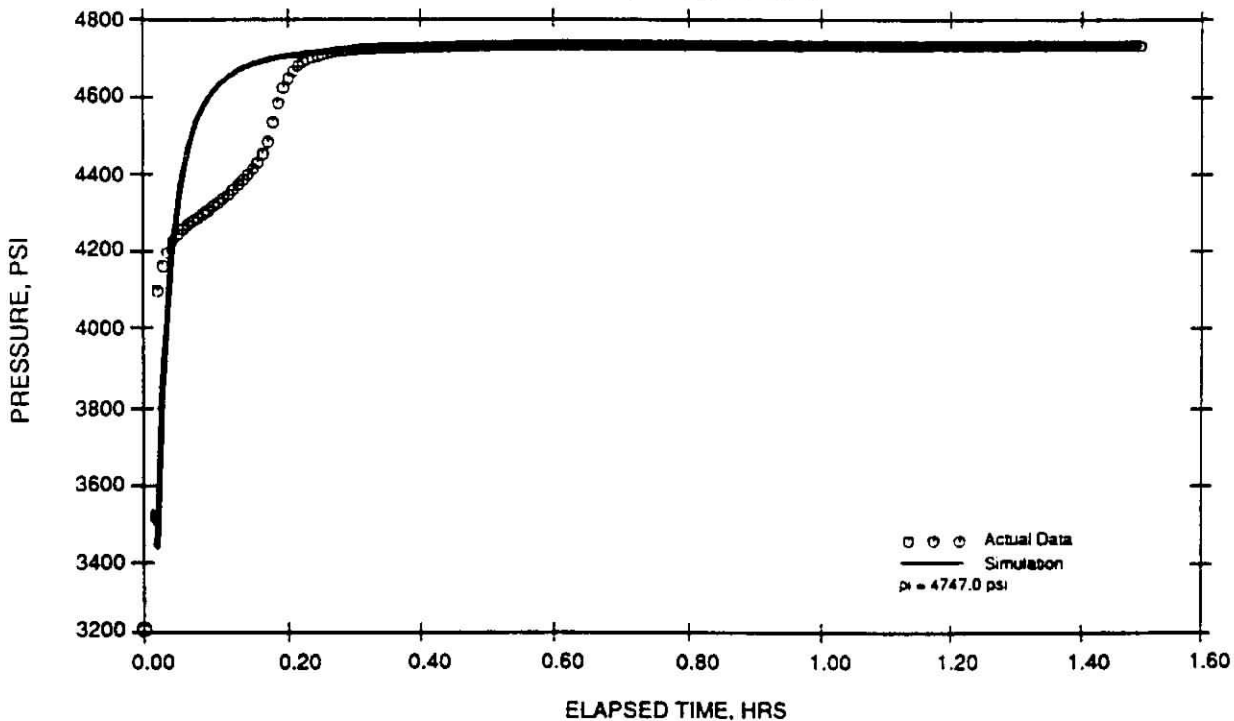
SUMMARY OF FLOW PERIODS

PERIOD	DURATION (HR:MIN)	PRESSURE (PSIA)		RECOVERY		CHOKE SIZE (INCHES)
		START	STOP	LIQUID (BBLS)	GAS (MMSCF)	
# 1, DD/BU	1:29	3209.	4743.	18.0	0.	N/A

ANALYSIS PLOT



VERIFICATION PLOT



WELL TEST INTERPRETATION REPORT #: 122531		PAGE: 1, APPENDIX
CLIENT: REESE ENERGY CORP.		21-SEP-89
REGION:	TEST DATA CARTESIAN PLOT	Field: LAPICE
DISTRICT:		Zone:
BASE : HOUMA LAND		Well: HAWTHORNE #1
Engr:		Location:

