

WORKOVER PROCEDURE

DATE: 20 June 1990

WELL & JOB: Empire Abo Unit F-31 GIW

LAST WORKOVER: Scrape Paraffin (1/19/81)

BY: L. M. Thompson

TD: 6175'

PBD: 6050'

DRILLED: 1960

FIELD: Empire COUNTY: Eddy

DATUM: GL

TUBINGHEAD:

PRESS RATING:

CASING: SIZE

WEIGHT

SIZE:

GRADE

SET @

SX CMT

TOC

SURFACE: 8-5/8"

22.7#

SW SJ

1000'

650

surface

(Armco)

PROD: 4-1/2"

9.5#

J-55

5461'

800 sx

surface

4-1/2"

11.6#

J-55

6175'

PERFORATIONS: Abo: 6107'-34' (isolated by CIBP), 5828', 34, 40, 50, 55, 60, 69, 76, 81, 87' (open)

TUBING: SIZE: 2-3/8"

WEIGHT: 4.7#

GRADE: J-55

THREAD: 8RD

BTM'D @ 5753'

JOINTS:

MISC: Guiberson KVL-30 Pkr @ 5753', Guiberson H-1
type Hydraulic Holddown Anchor on top of pkr

HISTORY AND BACKGROUND: This well was drilled and completed in 1960 as a flowing Abo oil well. It was originally perforated and acidized from 6107'-34'. In 1974, the well was converted to a GIW. A CBL was run which indicated TOC @ 1310'. The csg was perfed @ 1248'-49' w/ 4 holes and cement was circulated to surface. A CIBP was set @ 6050' and additional Abo was perfed and acidized (10 holes from 5828'-87').

SCOPE OF WORK: Squeeze cement upper Abo zone, stimulate lower Abo zone, and complete as lower Abo gas injection well.

PROCEDURE

1. MIRU PU. Dig down and check casing valves. Check for pressure and bleed off. If necessary, kill well w/ 10# BW. ND injection tree. NU BOP.
2. Release Guiberson KVL-30 packer w/ Guiberson type H-1 Hydraulic Holddown Anchor @ 5753' (to release packer, put 500# pressure on csg/tbg annulus and PU over string weight). Circulate hole with 10# brine water. TOH, laying down tbg, Guiberson KVL-30 production packer, and Guiberson H-1 Hydraulic Holddown Anchor.
3. PU and TIH w/ 4-1/2" cement retainer on 2-3/8" workstring and set @ 5778'. Establish injection rate and pressure into Abo perfs 5828'-87'.
4. Squeeze Abo perfs 5828'-87' as per injection rate and pressure obtained in step #3. Release stinger and TOH. WOC.
5. TIH w/ 3-7/8" bit and 3-1/8" DC's on 2-3/8" workstring. Drill out cement retainer and cement. Pressure test 5-1/2" csg to 500 psi. TIH w/ bit to CIBP @ 6050' (old PBD). Drill out CIBP. Circulate hole clean. TOH, laying down DC's, bit, and workstring.
6. TIH w/ retrievable packer on 2-3/8" workstring to 6134'. Spot 100 gals 15% NEFE HCl acid across Abo perfs 6107'-34'. PUH, reverse 5 bbls and set packer @ 5007'. Pressure annulus to 500 psi.

Note: May want to do acid job through Lck-set Pkr.