

Papoose Canyon 2-20

Directions: Beginning at the intersection of Colorado State Highway 491 and CR 7 located at the north west city limits of Dove Creek Colorado. Turn south on CR 7 travel approximately 2 city blocks, turn west on CR 6 and travel approximately 1 mile. Turn south at "T" intersection for 5 3/4 miles on CR 6. Turn west on CR P for 1/4 mile to "T" intersection. Turn left on CR R and continue south for 2 miles. Turn right for 1/2 mile on CR S. Turn left on CR R for 1/2 mile. Turn right to west on CR S for 1/2 mile. Turn left and continue south on CR R for 1 mile. Turn right on CR T and continue west for 1 mile. Turn left on CR 4 to south for 1 mile. Turn left onto lease road to east then north along fence to location.

Lat: 37.619709° Long: 109.973369°

Location: Surface: 910' FSL, 990' FWL, Sec 20, T39N, R19W, Dolores, Colorado

Field: Papoose

API #: 05-033-06100

Spud Date: May 30, 1985

Elevation: 6670'GR, 6684'KB

TD: 6337'

Wellhead:

Tubulars:

Surface: 13 3/8" 54# conductor casing @ 40' KB, circulated to surface

Intermediate: 8 5/8" 24# @ 2078', circulated to surface w/380 sx Class H

Production: 5 1/2" 15.5# & 17# csg @ 6337' KB w/ 380 sx Class H

Liner:

Procedure:

- 1) Back drag and clean location for crew & rig safety. Find anchors and have them tested and certified.
- 2) Move in well service unit and rig up with associated plugging equipment.
- 3) Bleed pressure off well. Nipple down wellhead and nipple up BOP.
- 4) Trip out of hole with 2 3/8" tubing landed at 6249' in 1985.
- 5) Trip in with 4 3/4" bit and casing scraper for 5 1/2" 15.5# and 17# casing through perforations to bottom shot at 6267' circulating well clean in the process.
- 6) Trip out of hole.
- 7) Trip in hole with tubing to set cement retainer at 6200'+/-.
- 8) Test tubing to check integrity.

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- 9) Test casing to 500psi to establish integrity.
- 10) **Perforated Desert Creek interval and Ismay top (5930') Plug #1:** Circulate cement to end of tubing and sting into retainer, inject 13 sx (15.3cuft) 15.6 ppg at 1.18cuft/sx cement below retainer filling casing to bottom perf and injecting 5sx into formation, sting out of retainer and spot 34 sx (40.0 cuft) cement at 15.6 ppg 1.18 cuft/sx on top to 5900'+/-. Total 47sx plug of 367' from 5900' to 6267'.
- 11) Trip out laying down tubing to land at 5900'+/- and standing back the rest.
- 12) Run cement bond log to find cement top behind 5 1/2" casing. If the cement top will not be covered by plug #2, adjust the plug location or size to cover the cement top. If necessary, add another plug.
- 13) Trip in hole with tubing to 5900'+/-.
- 14) With end of tubing at 5900'+/-, circulate hole and spot 20 bbls bentonite laden fluid to 5050'+/-.
- 15) Trip out of hole laying down pipe to land end of tubing at 5050'+/-.
- 16) **Hermosa (4775') Plug #2:** With end of tubing at 5050'+/-, spot 85 sx (100cuft) cement at 15.6ppg and yield of 1.18 cuft/sx to leave cement at 4300'+/- in 2 stages if necessary.
- 17) Trip out of hole laying down excess tubing beyond 4300'+/-.
- 18) With end of tubing at 4300'+/-, circulate hole and spot 50 bbls bentonite laden fluid to 2200'+/-.
- 19) Trip out of hole laying down excess tubing beyond 2200'+/-.
- 20) Perforate squeeze holes at 2200'+/-.
- 21) Trip in hole with cement retainer and tubing to set cement retainer at 2150'+/-.
- 22) **9 5/8" Casing Shoe (2078') Plug #3:** Establish circulation to bradenhead and cement through cement retainer at 2150'+/- with 107 sx (126 cuft) cement at 15.6ppg and 1.18cuft/sx yield using 79 sx below and leaving 28sx balanced plug on top of retainer to place cement from 2200'+/- up to 1900'+/- inside and outside of casing. 50% excess cement used for annular space outside 5 1/2" casing.
- 23) Trip out of hole laying down tubing to land at 1900'+/-.
- 24) With end of tubing at 1900'+/-, circulate hole and spot 38 bbls bentonite laden fluid to surface.
- 25) Trip out of hole laying down tubing saving 300'.

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- 26) Perforate squeeze holes at 300'.
- 27) **Surface Plug #4:** Squeeze through perforations at 300' with 100sx (118 cuft) cement from surface and circulating through 5 1/2"x 8 5/8" annulus leaving 5 1/2" casing full of cement and cement circulated to surface through perforations and 5 1/2"x 8 5/8" annulus.
- 28) Cut off casing, top off all annuli and bell hole with cement and install marker as indicated in stipulations.
- 29) Remove equipment and remediate location as indicated in lease agreements, conditions of approval and stipulations.