

# PLUG AND ABANDONMENT PROCEDURE

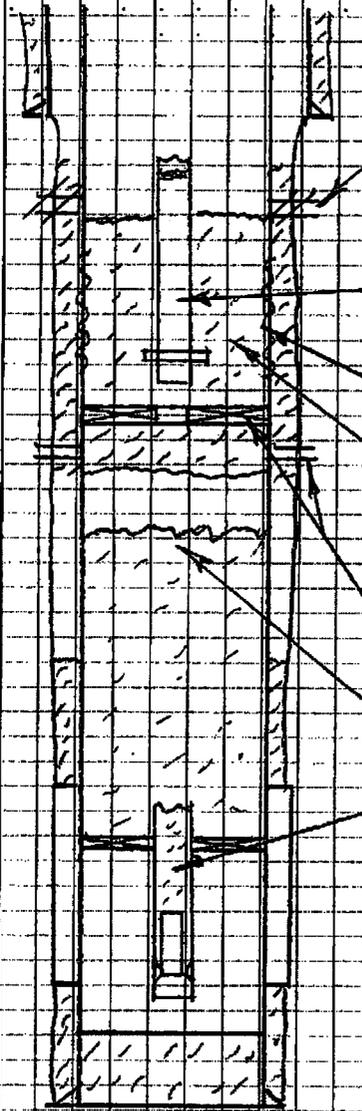
## Retherford #3

1875' FNL & 2072' FEL, Section 22, T-35-N, R-20-W  
Montezuma County, CO / API 05-083-05172  
Lat: 37.27878 / Long: -109.03513

Note: All cement volumes use 10% excess per 1000 foot of depth or 100% excess outside pipe and 50' excess inside pipe, whichever is greater. The stabilizing wellbore fluid will be 8.3 ppg, sufficient to balance all exposed formation pressures. All cement will be Class B, mixed at 15.6 ppg with a 1.18 cf/sx yield.

1. This project will use A-Plus steel tank to handle waste fluids circulated from the well and cement wash up.
2. Install and test location rig anchors. Comply with all COGCC, Colorado BLM, and Operator safety regulations. MOL and RU daylight pulling unit. Conduct safety meeting for all personnel on location. Record casing, tubing and bradenhead pressures. NU relief line and blow down well. ND wellhead and NU BOP. Function test BOP.
3. Rods: Yes  , No  , Unknown \_\_\_\_\_;  
Tubing: Yes  , No  , Unknown \_\_\_\_\_, Size \_\_\_\_\_, Length \_\_\_\_\_;  
Packer: Yes  , No  , Unknown \_\_\_\_\_, Type \_\_\_\_\_.  
If this well has rods or a packer, then modify the work sequence in step #2 as appropriate.
4. **Plug #1 (tubing stub, 1200' – 1100')**: TIH and tag tubing stub at 1200' or as deep as possible. TIH with open ended tubing and spot 12 sxs Class B cement to cover the tubing stub. PUH and WOC. TIH and tag cement. If cement falls below 1100' then spot additional cement as appropriate. TOH.
5. **Plug #2 (8.625" Surface casing shoe, 290' – 0')**: Perforate 3 HSC holes at 290'. Establish circulation out bradenhead. Mix approximately 90 sxs Class B cement and pump down the 5.5" casing from 290' to surface, circulate good cement out the bradenhead valve. Shut well in and WOC.
6. ND BOP and cut off casing below surface casing flange. Install P&A marker with cement to comply with regulations. RD, move off location, cut off anchors and clean up location.

**WELLBORE DIAGRAM**  
**RETFERFORD NO. 3**  
**SW NE, SECTION 22, T35N, R20W**  
**MONTEZUMA COUNTY, COLORADO**  
**5214' GL**  
**5227.5' KB**



8 5/8" CASING SET AT 240' IN HOLE  
 CEMENTED WITH 150 SX. GOOD RETURNS

SQUEEZE PERFS 2400'

SQUEEZED 150 SX BELOW RETAINER AT 2430' INTO BAD CSG.  
 CLASS G 1.15 CF/SX. 6/20/12. DRILLED OUT.

2 7/8" TBG 6.5# J55 TOP AT 1200', BOTTOM AT 3005'  
 RETAINER SETTING TOOL AND STINGER ON BOTTOM  
 OBSTRUCTION IN TUBING AT 1200'

CASING LEAK BAD PIPE 2478-2920'  
 TIGHT SPOT PROBABLY METAL AT 2780'; 8"

UNKNOWN CEMENT AND FILL ON TOP OF RETAINER

SQUEEZED 150 SX BELOW RETAINER AT 3007' INTO PERFS  
 AT 3100' GOOD CIRC AROUND RETAINER MOST OF JOB  
 STING OUT OF RETAINER. PIPE STUCK, CLASS G 1.15 CF/SX. 6/27/12

CEMENT RETAINER AT 3007'  
 SQUEEZE PERFS 3100'

FILL IN CASING FROM DE CHELLY LEAK TO ABOUT 3500'

2 7/8" TBG 6.5# J55 (NO TALLY) TOP AT 5,690.00  
 TUBING ANCHOR

PUMP 2 1/2" X 1.5" X 16' RWBC (SEATED IN SEATING NIPPLE)  
 2 7/8" SEATING NIPPLE AND MA 11' AT 5835'  
 FILL INSIDE TUBING AT 5793'

PERFS 5678-86, 5690-5700, 5720-26, 5740-56, 5785-91,  
 5806-28' 1 SPF. ACIDIZED 17500 GAL RETARDED & 40000 GAL  
 REGULAR

5 1/2" 15.5# J-55 CASING SET AT 5923'. CEMENTED WITH 120  
 SX 50:50 POZ, 2% GEL, 70 SX LATEX

PBB: 5886  
 TD: 5925