

Southern Ute Tribal AE 2

API # 050-067-09571

Sec 35 - T34N - R8W

Colorado

Reason/Background for Job

Following drilling it was noted a sustained BH pressure of approx. 150 psi. and some bubbling behind surface casing.

The proposed work is to squeeze cement behind 5 ½" casing to address this issues.

Basic job procedure

Option 1

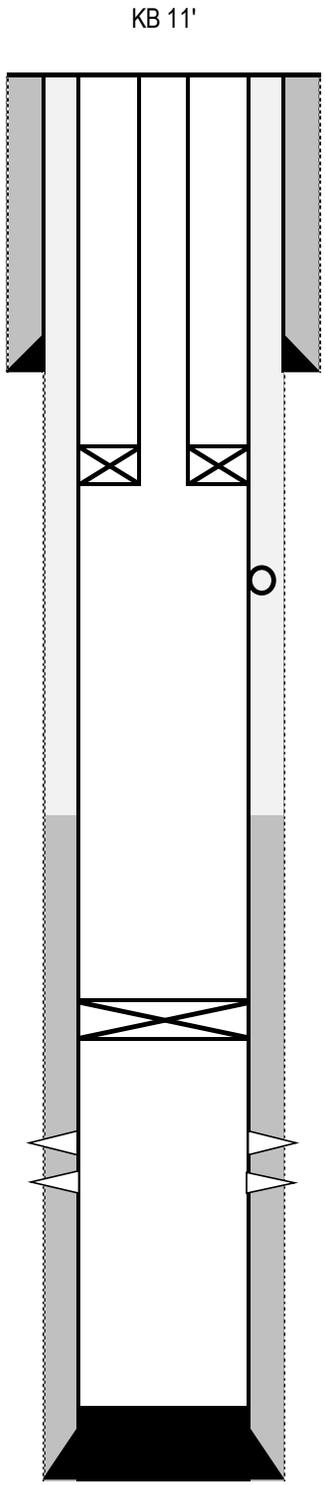
1. Attempt to establish injection down 8 ⅝" x 5 ½" annulus; stage pressure to a max of 1000 psi
2. Monitor pressure decline
3. If injection is successful mix and pump cement down annulus – if injection pressure is low or pressure drops rapidly do a hesitation squeeze – max pressure 1000 psi
4. Shut in casing valves and WOC.

Option 2 – (if not able to pump down 8 ⅝" x 5 ½" annulus)

1. Set CBP at depth in well to isolate perforations
2. Perforate block sqz perfs ~ 75 – 150' below surface csg shoe set at 414'
3. Set cement retainer 50 – 60' above perfs
4. Run workstring & sting into retainer.
5. Attempt to establish circulation to surface. If circulation can be established:
 - a. Mix & circulate cement behind 5 ½" casing taking returns at surface until cement returns observed at surface.
 - b. Unsting, reverse out, & pull workstring. WOC.
 - c. Bleed off surface csg pressure.
 - d. Monitor surface csg to not rebuild & bubbling in cellar to cease.
 - e. If surface csg pressure & bubbling persist, drillout and re-squeeze as necessary.
6. If circulation to surface cannot be established in Step 5:
 - a. Establish injection pressure into formation with fluid.
 - b. Mix & pump cement below cement retainer. Inject cement below retainer to achieve squeeze pressure of 500-700 psi above initial injection pressure.
 - c. Unsting, reverse out, & POOH. WOC.
 - d. Monitor surface csg to not rebuild & bubbling in cellar to cease.
 - e. If surface csg pressure & bubbling persist, drillout and re-squeeze as necessary.
7. Once communication to surface seems to be isolated, drill out cement inside casing. Test block squeeze perfs to ~200 psi over initial injection pressure or maximum 1000 psi.

WBD for squeeze job (Option #2)

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Surface Csg

12 1/4" hole
8 5/8", 24#, J55 @ 414'
TOC @ surf

CR @ 500' ±

Squeeze perfs @ 560' ±

CBP @ 3200' ±

Perfs (MD)

3318 - 3356'
3406 - 3418'
3471 - 3476'

Prod Csg

7 7/8" hole
5 1/2", 15.5#, J55 @ 3717' MD

PBTD 3675' MD
TD 3724' MD (3194' TVD)