



Great Western Oil and Gas Company

Mitigation Procedure

Wellname: **GW 26-31** Prepared By: Ty Woodworth 10/26/2015
Location: **NENE 26 6N67W** Office Phone:
API: **05-123-24363** Cell Phone: 970-274-9254
Directions:

Surface Casing: 8 5/8" 24# at 441 ft
Production Casing: 4 1/2" 11.6# at 7391 ft
Perfs: 6908 ft - 7236 ft
Tubing: 2 3/8" at 6877 ft
TOC: 3910 ft (CBL dated 9/13/2007)
Deepest Water Well: 480 ft
Base Upper Pierre: 1200 ft (approx)
Top Niobrara: 6898 ft

Invoice Coding: Please sign/code all invoices to "GWOG Burr Pad Mitigation" 8420.451

Objective: Remediate hole in casing at 3282 ft and isolate Fox Hills/Upper Pierre for offset frac

Procedure:

- 1 Check pressures/kill well if needed
- 2 MIRUSU, ND wellhead, NU BOPS
- 3 POOH w/ 2 3/8" tbg, establish inj into hole in casing
- 4 RIH w/ CICR and set at 3232 ft
- 5 Sting out, roll gas out of hole, test casing and rtnr to 500 psi
- 6 MIRU cement crew, pressure test surf equip to 3000 psi
- 7 Sting in, pump 250 sx Class G 15.8 ppg cement w/ 1/2% CFR-3 with surface csg open
Pump at approx 1 bpm to keep circulation
Displace to within 1/2 bbl
- 8 Sting out, reverse clean, close surface casing
- 9 POOH LD stinger, PU bit and RIH, WOC for 24 hrs
- 10 Drill out CICR and cement, test to 1000 psi, POOH
- 11 MIRU WL and run CBL from 3300 to surface.
- 12 ND BOPs and unland 4 1/2"
- 13 NU 8 5/8" flange, split flange, BOPs
- 14 PU and RIH w/ 1 1/4" tbg in annulus circulating
- 15 Attempt to get to 1250 ft and pump 275 sx Type III 1.33 cuft/sx plug to surface
- 16 POOH w/ 1 1/4" laying down
- 17 ND BOPs/land csg in slips/install surface csg head
- 18 NU 5K tbg head and BOPs
- 19 WOC for 24 hrs
- 20 Run CBL from 1500 ft to surface to verify isolation, call with results
- 21 RIH w/ 2 3/8" and retrieving head pressure testing, release RBP at 6877'
- 22 POOH, LD plug
- 23 RIH land 2 3/8" at 7181 ft +/- 5 ft
- 24 Return to production

Please keep CBL, all wireline and cement tickets for subsequent report requirements