

PARAS 9-30 (HSR)

- 1 Provide 48 hour notice of MIRU to COGCC (Randy Edelen (970) 520-2531)
- 2 Prepare location for base beam rig to move onto.
- 3 Call Foreman and/or Field Coordinator before rig up to remove all production equipment off wellhead.
- 4 MIRU WO rig, pump, & tank. Kill w/ fresh water with biocide as needed. ND wellhead. NU BOP's. Unseat landing joint and lay down.
- 5 Place cementers on "will call" when rig moves onto location. Baker Hughes cementing services (Sheldon Kelley: (303) 659-5853).
- 6 PU and TIH 2-3/8" tubing (retrieving head is already in hole), Circulate sand off and unseat RBP set at 6,919' KB, TOO H with 2-3/8" tbg, standing back, LD RBP
- 7 TIH with 2 3/8" N-80 working string and tag cmt on top of CIBP set at 6,990', pull up to just above tag. Attempt to establish circulation with fresh water.
- 8 MIRU cementing services.
- 9 Pump cement job to cover Niobrara inside 4-1/2" casing. Pump job as follows: establish circulation, followed by 6.2 bbl (24 sks) Class G 15.8 lbs cement w/ 35% Silica Flour, 0.2% R-3, displace to 400' above end of tubing (0.00387 bbl / ln ft for 2-3/8" 4.7# tbg. 25.5 bbl based on EOT at 6,590' KB)
- 10 POOH so EOT is just above cement plug. Reverse Circulate down casing and up tubing with minimum 9# mud w/ biocide for 2 times tubing capacity and have clean returns (51 bbl if EOT is at 6,590' KB)
- 11 TOO H 2-3/8" workstring, standing back
- 12 Unseat casing from slips and work casing free
- 13 MIRU E-Line Service Company
- 14 RIH with jet cutter (For 4-1/2", 11.6 lbs casing) to cut csg at 4,700 (100' below bottom of Sussex formation). If unable to pull casing after first cut, cut again with jet cutter 50' above first cut. If still unable to pull casing following second cut, call engineering.
- 15 POOH. RDMO E-Line service company.
- 16 TOO H 4-1/2" casing and LD. If unable to pull casing contact engineering for plugging modifications.
- 17 TIH with 2 3/8" N-80 working string to 50' inside casing stub (4,750' KB)
- 18 Pump cement plug from 4,750' KB to 4,250' KB to cover Sussex (Sussex formation is at 4,349' – 4,600'). Pump job as follows: after establishing circulation with mud, pump 52 bbl (252 sks, calculated using 50' inside 4-1/2" casing + 450' in 9-1/2" hole based on caliper log dated 4/12/1993 + 30% excess for portion in open hole) class G 15.8# cmt w/ 0.25 pps Cello Flake, displace to 4,250' KB (16.5 bbl mud)
- 19 TOO H to have EOT above cement plug (approximately 20 jnts, standing back jnts. Circulate with mud 2 times tubing capacity (32 bbl if EOT is at 4,000') and have clean returns.
- 20 WOC minimum 4 hours; IF SDFN, TOO H with workstring, standing back. (DO NOT LEAVE TUBING IN HOLE OVERNIGHT)
- 21 PU and TIH 2-3/8" tbg to tag top of cement (must be minimum 50' above top of Sussex), if cement is not at or above 4,299' KB, notify engineering.

- 22 TOO H with 2-3/8" working string to have end of tubing at 770' KB (100' below Surface casing shoe). Pump cement plug from 770' KB to Surface to cover Surface casing shoe and set top plug (Surface casing set at 670' KB). Pump job as follows: Establish circulation, followed by 55 bbl (314 sks) class G 15.8# cmt w/ 2% CaCl, cement should come to surface (Calculated using 100' in 9-1/2" hole based on closest caliper log + 40% excess + 670' in 8-5/8" csg.)
- 23 RDMO cementing service company. TOO H with workstring and LD.
- 24 RDMO WO rig
- 25 POST RIG ACTIVITIES
- 26 Wellsite supervisor turn all paper copies of cementing reports/invoices and logs in to the APC engineer who wrote the prog. (NOTE: During the job, wellsite supervisor should instruct the logging and cementing contractors to e-mail all logs, job reports/invoices to the APC engineer who wrote the prog.)
- 27 Have excavation contractor notify One-Call to clear for digging around wellhead and flowline removal.
- 28 Check top of cement inside 8-5/8" surface casing. If cement is not of sufficient height (less than 25' below ground level), place redi-mix cementer on will call.
- 29 Excavate hole around surface casing of sufficient size and depth to allow welder to cut off 8-5/8" surface casing at least 5' below ground level.
- 30 Have welder cut off 8-5/8" surface casing at least 5' below ground level.
- 31 If needed, MIRU ready cement mixer. Use 4,500 psi compressive strength redi-mix cement (sand and cement only, no gravel) to finish filling surface casing to top of cut off.
- 32 Have welder weld on steel marker plate. (Note: marker shall be labeled with well name and number, legal location (qtr, qtr description) and API number.
- 33 Properly abandon flowlines as per Rule 1103.
- 34 Have excavation contractor back fill hole with native material. Clean up location and have leveled to plant any vegetation required.
- 35 Submit Form 6 to COGCC. Provide "As Plugged" wellbore diagram identifying the specific plugging completed.