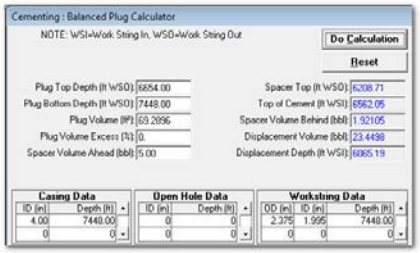
HSR Teacher 10-14A API #0512315725– P&A Procedure

1 Call Foreman or Lead Operator at least 24 hr prior to rig move. If not already completed, request that they catch and remove plunger, isolate production equipment and remove any automation equipment prior to the rig showing up. Install perimeter fence as needed.
2 A gyro survey for this well will need to be completed prior to any P&A work.
3 Provide notice of MIRU to COGCC field inspector as specified in approved Form 6.
4 Notify cement company to have 12 bbl (50 sx) of G" mixed at 15.8 ppg and 1.38 ft3/sx blended for 3 hr pump time, 60 bbl (270 sx) of G" w/ 0.25 pps cello flake, 4% CD-32, 0.4% ASA-301 mixed at 15.8 ppg and 1.15 cuft/sx blended for 3 hr pump time, 72 bbl (265 sx) of Type III w/ CaCl2 mixed at 14.0 ppg and 1.53 cuft/sk blended for 3 hr pump time.
5 Notify IOC when rig moves on location to generate work order for flow line removal and one call for line locates.
6 Spot 12 jts of 2 3/8" J55 8rd EUE tbg.
7 Prepare location for base beam rig.
8 MIRU WO rig. Kill well with fresh water.
9 ND wellhead, NU BOP.
10 Run 2 3" lines from starting head to tank. (Need to be able to take returns at 12 bbl/min)
11 TOOH with existing 2 3/8" and 1 ¼" tbg string. Do not exceed maximum pull weight of 57,384 lbs. SB 2 3/8" tbg. LD 1 ¼" tbg.
12 MIRU Wire line. RIH with CCL and 2 7/8" gage ring to 7985'. POOH. If gage is less than 2 7/8", contact engineering for further support.
13 RIH with 2 7/8" CIBP (2 7/8" 6.5# N80) and set @ 7980' (Collars at 7962' and 7994') . POOH. RIH with dump bailer and dump bail 2 sx of G" mixed at 15.8 ppg, 1.15 ft3/sk on top of CIBP (Isolate Dakota). POOH.
14 RIH with 2 7/8" CIBP (2 7/8" 6.5# N80) and set @ 7750' (Collars at 7734' and 7765'). POOH. RIH with dump bailer and dump bail 2 sx of G" mixed at 15.8 ppg, 1.15 ft3/sk on top of CIBP (Isolate J Sand). POOH.
15 MIRU Cementing company.
16 TIH with 248 jts of 2 3/8" J-55 tbg to 7448. Test tbg to 3,000 psi while TIH.
17 Pump a balanced plug consisting of a 5 bbl pre-flush, 12 bbl (50 sx) of G" mixed at 15.8 ppg and 1.38 ft3/sk. (Cement Codell and Niobrara perfs in-pipe) Displace with 22.5 bbl fresh water (Under displaced by 1/2 bbl).



18 TOOH with 37 jts of 2 3/8" tbg and circulate 2x tbg volume or until cement cleans up.
19 TOOH with remaining tbg and SB tbg
20 PU and RIH with gage ring, CCL and two 1' 3-1/8" perf guns. Tag plug @ 6654' or higher. Perforate casing at closest to 4750' (50' below Sussex base), and closest to 4153' (200' above

Sussex) with 3 spf, minimum 0.50" EHD, minimum 16" penetration, 120 deg phasing, 1' net, 3 shot total. Avoid perforating on collars from CCL. There is no existing CCL for this depth range. POOH with wire line and stand by wire line.

21 TIH with 139 jts of 2 3/8" tbg and 4 ½" CICR closest to 4183' per new CCL. (Set CICR 30' below top perf)

22 Circulate 9.0 ppg drilling mud for a minimum of 30 minutes at **12 bbl/min**. (Use cement pump if required to achieve rate)

23 Commence pumping cement job consisting of a 5 bbl fresh water spacer, 10 bbl sodium meta sillicate, 5 bbl fresh water and 60 bbl (270 sx) of G" w/ 0.25 pps cello flake, 4% CD-32, 0.4% ASA-301 mixed at 15.8 ppg and 1.15 cuft/sx blended for 3 hr pump time. (Cement 50' below Sussex base and 200' above Sussex top). Displace with 15.5 bbl fresh water. (Under displaced by ½ a bbl).

24 Release CICR and TOOH with 10 jts of 2 3/8" tbg. Circulate 2x tbg volume or until cement cleans up. TOOH and SB tbg.

25 RIH with wire line and chemical cutter for 4-1/2" 11.6# J-55 csg. Cut csg @ 1238'. POOH with wire line and RDMO wire line.

26 TOOH with remaining 4-1/2" production casing and LD casing.

27 TIH with 48 jts of 2-3/8" tbg open-ended to 1438' (200' inside production casing stub).

28 Pump cement plug consisting of 5 bbl fresh water spacer, 72 bbl (260 sx) of Type III w/ CaCl2 mixed at 14.0 ppg and 1.53 cuft/sk blended for 3 hr pump time. (Cement 200' below Fox Hill base from production casing stub to 200' inside surface casing). Displace with 5 bbl of fresh water (Under displaced by ½ bbl).

29 TOOH with 2 3/8" tbg and LD all but 2 jts tbg.

30 PU and TIH with 8 5/8" wiper plug and push down to 60' with tbg. TOOH with tbg LD tbg. RMDO WO rig.

31 Well site supervisor turn all paper copies of cementing reports/invoices and logs in to Sabrina Frantz.

32 NOTE: During the job, well site supervisor should instruct the logging and cementing contractors to e-mail all logs, job reports/invoices to Sabrina Frantz.

33 Have excavation contractor notify One-Call to clear for digging around wellhead and flow line removal.

34 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.

35 Have welder cut off 8-5/8" surface casing at least 5' below ground level.

36 MIRU ready cement mixer. Fill the last 60' inside the 8-5/8" surface casing. 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.

37 Spot weld on steel marker plate. (Note: marker shall be labeled with well name and number, legal location (¼ ¼ description) and API number.

38 Properly abandon flow lines as per Rule 1103.

39 Have excavation contractor back fill hole with native material. Clean up location and have leveled to plant any vegetation required.

40 Submit Form 6 to COGCC. Provide “As Plugged” wellbore diagram identifying the specific plugging completed.