

**Porter 2**  
**40.376788 / -104.160462**  
**05-123-05165**

**Porter 2 Procedure**

1. Survey and locate plugged wellbore. Set a stake and record as-drilled GPS coordinates.
2. Excavate around wellbore to expose the top of the surface casing.
3. Cut existing cap off wellbore. Weld a slip collar to both 5-1/2" and 10-3/4" casing and necessary length of casing to reach ground level. Weld another 10-3/4" slip collar at surface. If no 5-1/2" casing at surface, contact engineer.
4. MIRU workover rig.
5. Install wellhead and BOP. Test BOP.
6. PU and RIH with 6-1/4" tricone bit, 10 3-1/2" drill collars, and 2-7/8", 6.5#, L80, EUE workstring.
7. Drill out 1st cement plug and circulate hole clean.
8. Continue drilling or RIH to top of 2<sup>nd</sup> casing plug. Record depth of plug.
9. Pressure test casing to 250 psi. If casing fails pressure test, contact engineer and hunt holes.
10. After pressure test of casing, drill out 2nd casing plug. If pressure is encountered below the plug, circulate hole with mud or kill fluid until well is dead or blown down.
11. POOH and LD 6-1/4" tricone bit.
12. PU and RIH with mule shoe and 2-7/8" L80 tubing down to 6478'.
13. RU cement crew, pressure test lines to 4,500 psi, and spot plug from 6478'-6378' with 15.8 ppg (1.15 cuft/sk) Class G neat cement (12 sks) to cover the D Sand formation.
14. POOH and spot plug from 5900'-5600' with 15.8 ppg (1.15 cuft/sk) Class G neat cement (35 sks) to cover the Niobrara formation.
15. POOH and SU workstring.
16. Rig up Wireline and RIH with perf gun, shoot holes at 1477'. POOH.
17. PU and RIH with CICR on workstring down to 1427' and set CICR at depth.
18. Establish circulation through the CICR and back up the annulus to surface.
19. RU cement crew, pressure test lines to 4,500 psi and squeeze 15.8 ppg Class G neat cement through retainer and into perfs (72 sks).
20. Disengage from CICR and pump a balanced plug from 1427'-1327' with 15.8 ppg (1.15 cuft/sk) Class G neat cement (12 sks).
21. POOH and SU workstring.
22. Rig up Wireline and RIH with perf gun, shoot holes at 246'. POOH.
23. RBIH with workstring to 246', establish circulation through the perfs and back up the annulus to surface and squeeze 15.8 ppg Class G neat cement through perfs and back up to surface (148 sks).
24. RDMO. Top off cement after rig has moved, if necessary.
25. After surface plug has set, cut casing to 5' below ground level and weld on a plate to seal the well.
26. Inscribe the well's legal location, well name and number, and API number on the plate as shown:

Bison IV Operating
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990' FNL, 1650' FWL, NENW Sec 25, T5N, R61W
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27. Photograph welded name plate and conduct bubble test before proceeding.
28. After Bubble Test is successfully performed, backfill hole and reclaim surface to original conditions.
29. Cover up the well and remediate the disturbed area.

**Porter 2 Cement Plug Table**

CEMENT PLUG TABLE								
Plug Number	Plug Status	Formation	Location	Plug Bottom Depth	Plug Top Depth	Cement Class	Yield (ft <sup>3</sup> /sk)	Number of Sacks
1	Existing	D Sand	Open Hole	6505'	6478'	Unknown	Unknown	10
2	New	D Sand	Casing	6478'	6378'	G	1.15	12
3	New	Niobrara	Casing	5900'	5600'	G	1.15	35
4.1	New	Fox Hills	Casing	1477'	1427'	G	1.15	6
4.2	New	Fox Hills	Annulus	1477'	1277'	G	1.15	66
5	New	Fox Hills	Casing	1427'	1327'	G	1.15	12
6.1	New	Surface	Casing	246'	Surface	G	1.15	29
6.2	New	Surface	Annulus	246'	196'	G	1.15	16
6.3	New	Surface	Annulus	196'	Surface	G	1.15	103
<b>TOTAL NEW SKS OF CEMENT REQUIRED:</b>								<b>279</b>