

**Roth 11-7**  
**40.587886 / -104.023650**  
**05-123-14673**

**Roth 11-7 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 8-5/8" casing and necessary length of casing to reach ground level. Weld another 8-5/8" slip collar.
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 surface cement plug and circulate hole clean.
8. Continue drilling or RIH to top of 2<sup>nd</sup> surface casing plug. Record depth of plug.
9. Pressure test surface casing to 250 psi. If surface casing fails pressure test, contact engineer and hunt holes.
10. After pressure test of surface casing, drill out surface casing plug. If pressure is encountered below surface casing 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 7" x 4-1/2" Casing Dress Off Assembly and RIH to top of casing stub (~889') and mill down 5' of casing stub and circulate hole clean.
13. POOH and LD Casing Dress Off Assembly.
14. RU casing crew and RIH with 5-3/4" x 4-1/2" Casing patch and 4-1/2" 11.6#, K-55 casing and land on casing stub.
15. PU and RIH with mule shoe and 2-3/8", 6.5#, L80, EUE workstring to top of existing Niobrara plug (~5958'). Record depth of plug.
16. Circulate hole clean and POOH.
17. Rig up Wireline and RIH with perf gun, shoot holes at 5950'. POOH.
18. RBIH with wireline and set CICR at 5900'. POOH.
19. PU and RIH with 2-3/8" 6.5# L80 EUE workstring and stab into CICR at 5900'.
20. RU cement crew, pressure test lines to 4,500 psi, and squeeze 15.8 ppg Class G neat cement through retainer and into perfs to cover the Niobrara formation (50 sks).
21. Disengage from CICR and pump a balanced plug above CICR from 5900'-5800' with 15.8 ppg Class G neat cement (10 sks).
22. POOH and confirm circulation through existing holes in casing at 1425'. POOH.
23. RBIH with wireline and set CICR at 1375'. POOH.
24. PU and RIH with 2-3/8" 6.5# L80 EUE workstring and stab into CICR at 1375'.
25. RU cement crew, pressure test lines to 4,500 psi, and squeeze 15.8 ppg Class G neat cement through retainer and into holes to cover the Pierre formation (34 sks).
26. Disengage from CICR and pump a balanced plug above CICR from 1375'-1275' with 15.8 ppg Class G neat cement (10 sks). POOH and LD 2-3/8" tubing.
27. Release casing patch. POOH and LD 4-1/2" casing and casing patch.
28. PU and RIH with mule shoe and 2-7/8" 6.5# L80 EUE workstring and spot plug from 889'-689' with class G cement (65 sks) to cover the casing stub.
29. POOH and spot plug from 438' to surface with class G cement (148 sks).
30. POOH and wait 4 hours. Tag TOC if not set at surface. Record tag depth. If tag is deeper than 257', contact engineer.
31. RDMO. Top off cement after rig has moved, if necessary.
32. After surface plug has set, cut casing to 5' below ground level and weld on a plate to seal the well.
33. Inscribe the well's legal location, well name and number, and API number on the plate as shown:

2000' FSL, 2050' FWL, NESW Sec 7, T7N, R59W
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- 34. Photograph welded name plate and send to engineer before proceeding.
- 35. After confirmation from engineer is received, backfill hole and reclaim surface to original conditions.
- 36. Cover up the well and remediate the disturbed area.

**Roth 11-7 Cement Plug Table**

CEMENT PLUG TABLE													
Plug Number	Plug Status	Plug Location	Formation	Plug Bottom Depth	Plug Top Depth	Cement Class	Yield (ft <sup>3</sup> /sk)	Number of Sacks		Must Be Tagged?	Maximum Tag Depth	New Sks Required	New Sks Required w/ (10% SF)
1.1	Existing	Casing	Niobrara	6128'	5958'	Unknown	Unknown	19	30	Yes	5958'	317	349
1.2	Existing	Annulus	Niobrara	6128'	6088'	Unknown	Unknown	11					
2.1	New	Casing	Niobrara	5958'	5900'	G	1.15	5	50	No	N/A		
2.2	New	Annulus	Niobrara	5950'	5800'	G	1.15	45					
3	New	Casing	Niobrara	5900'	5800'	G	1.15	10		No	N/A		
4.1	New	Casing	Pierre	1425'	1375'	G	1.15	4	34	No	N/A		
4.2	New	Annulus	Pierre	1425'	1325'	G	1.15	30					
5	New	Casing	Pierre	1375'	1275'	G	1.15	10		No	N/A		
6	New	Open Hole	Pierre	889'	689'	G	1.15	65		No	N/A		
7.1	New	Open Hole	Fresh Water	438'	307'	G	1.15	43	148	Possibly	257'		
7.2	New	Casing	Fresh Water	307'	Surface	G	1.15	105					