

**Recommended Plug and Abandonment Procedure**  
**NHF Laura 2**  
**SESE Section 20, T5N, R63W**  
**API# 05-123-19975**

1. MIRU. ND WH. NU BOP.
2. TOOH w/ 2-3/8" tbg, inspect and tally.
3. MIRU wireline and TIH w/ 4-1/2" GR/JB to 6,480' MD. TOH w/ GR/JB. TIH w/ CIBP and set @ 6,466' MD. TOH w/ setting tool.
4. TIH w/ tbg and pump 5 sks of class G, 14.8 ppg, 1.15 Yield cement on top of the CIBP to isolate Codell perforations. TOH w/ tbg.
5. RIH w/ CIBP on wireline. Set CIBP @ 6,288' MD. TOH w/ setting tool.
6. TIH w/ tbg and pump 5 sks of class G, 14.8 ppg, 1.15 Yield cement on top of the CIBP to isolate the Niobrara perforations. Pull tbg above cement and reverse circulate to clean up tbg. TOH w/ tbg.
7. RIH w/ perforating guns and shoot 4 holes @ 426'. TOH w/ perf guns. TIH w/ 4-1/2" CICR and set @ 326'. TOH w/ setting tool and RDMO wireline.
8. TIH w/ tbg and sting into CICR. Establish circulation through braden head **(contact office if circulation through braden head cannot be established)**. Pump 105 sks of Class G, 14.8 ppg, 1.15 yield cement into CICR. Pull out of CICR and leave 5 sks of Class G, 14.8 ppg, 1.15 yield cement on top of CICR to cover surface casing shoe. Pull tbg above cement and reverse circulate to clean up tbg. TOH w/ tbg and LD stinger. **If cement does not circulate to surface through braden head it must be given 4 hrs to set and then tagged with tbg to verify top of cement.**
9. TIH w/ tbg open ended to 100' MD. Pump 10 sks Class G, 14.8 ppg, 1.15 Yield cement to surface for the surface plug. Pull tubing out of hole. Top off casing w/ cement if needed.
10. SI well and WOC.
11. ND BOP and cut off casing below surface casing flange. Install P&A marker w/ cement to comply w/ regulations.
12. RD and move off location. Cut off anchors and restore location.