

## Overview

Engineer: Jonathan Humphreys  
 Field: NR  
 Pad: RMV 4-16 Pad  
 Well Name: RWF 431-21  
 API: 05-045-11097

## Proposed Procedure:

1. MIRU Service rig, spot all equipment, kill well
2. ND Production tree, NU BOP's, Pressure test BOP's to 300 psi low, 4,000 psi high
3. POOH 2-3/8" tbg while scanning/inspecting, leaving final 10-15 jts of tbg in hole for tail string
  - a. EM only indicates potential pitting in production casing @ +/-1,245'
4. RIH with 4-1/2" TSBP and tail string using only YB tbg pulled from well. If necessary PUMU YB, WB, or new tbg
5. Set BP at +/-3,500' (TOC 3,300'), POOH SB tbg
6. PU pkr, RIH to isolate depth of csg leak, POOH SB tbg
7. If csg leak is above surface csg shoe:
  - a. Mechanically cut casing +/-20' below leak depth if necessary to allow un-landing csg slips
  - b. POOH LD damaged csg
  - c. RIH w/ overshot and LHWS and latch onto production csg
  - d. Manually backoff production casing with string shot appx 1+ jt below damaged csg
  - e. POOH with casing and lay down
  - f. RIH with new casing and screw back into existing casing, fully torque (+/-2,650 ft-lbs)
  - g. Pull test +/-65k. Land in minimum tension (+/-55k)
  - h. Pressure test csg
8. If csg leak is below surface csg shoe:
  - a. RIH set RBP 100' below csg leak, dump bail sand on top of RBP
  - b. RIH w/ tbg to 50' below csg leak; establish circulation down production csg and up surface csg
  - c. Pump 50 sks cmt to balance from 50' below to 100' above csg leak inside/outside 4-1/2" 11.6# csg
  - d. PU tbg to 100' above csg leak and circulate hole clean
  - e. RIH w/ bit and drill out 150' cement plug from inside 4-1/2" csg
  - f. Pressure test csg
  - g. RIH to retrieve top RBP, washing sand and circulating hole clean prior to latching up
9. RIH and retrieve lower RBP; POOH entire string, visually inspect tbg and tally
10. RIH with production tubing while HYDROTESTING, make light tag on fill
  - a. Note – Run lower grade pipe on bottom of string. Clearly notate within daily operation activity details the makeup of the string (grade, color, depths)
11. POOH to land depth +/-7,552' (+/-150' above tag). Pump tbg volume if tagged to clear tbg; Hydrotest hanger connection
12. RDMO Service Unit and cleanup location