

# Exploration and Production

## Well Patch Procedure

Revision Date:  
1/29/2019

Wellname **NR 23-3**  
 Location **Sec. 3 T 6S R 94W**  
 Field **North Rulison**  
 County **Garfield, CO**  
 API **05-045-23904**  
 ELEV  
 Footages

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Casing: 9-5/8" 32.3# - 1,125'-ft  
 4-1/2" 11.6#, P-110, - 10,272'-ft  
 Current Top of Cement: 2,000'

**Purpose: Patch Leaking Casing**

Zone: **All Perforations**

Existing Perforations:	Depth	Holes
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Existing Hole 7,770'-7,780'		NA
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### Proposed Procedure

- 1 Set 4.5" Halliburton Obsidan 10K High Temp Kill plug via wireline at 7,692'
- 2 pull frac tree and rig up BOB's
- 3 pick up piloted mill via workover rig and trip in hole
- 4 begin milling failed Owens casing patch
- 5 finish milling failed Owens patch then snub tubing plus BHA out of hole.
- 6 pick up 40 arm caliper log via wireline log failed patched interval
- 7 run two kill plugs in via wireline at 9,930' and 7,860'
- 8 run in cast iron cement retainer via wireline and set at 7,690'
- 9 Pump 100 sks 15.8 PPG Class G Cement
- 10 squeeze cement to max psi of 4,000 psi
- 11 string out of cement retainer and trip out to pickup drillout BHA
- 12 pick up mill and mill out retainer, cement and tag kill plug
- 13 pull out of hole and pick up Enventure patch
- 14 deploy Enventure patch per Enventure BP's
- 15 trip out pick up BHA to mill out bottom cone on Enventure patch
- 16 trip out of hole and lay down tubing
- 17 nipple up frac stack and psi test to 8,000 psi for 30 mins
- 18 Frac Well
- 19 Drill out all frac plugs
- 20 Turn well over to flow