



## **Plug & Abandon Procedure**

**Well: Horseshoe Canyon 3-29**

**Prepared by John Grubich**

**WELL INFORMATION:**

**Well Name:** Horseshoe Canyon 3-29  
**API #:** 05-077-08658-00

**Pad:** N/A  
**County:** Mesa  
**Field:** Shire Gulch

**Surface Location:** 990 FNL & 688 FWL NWNW SEC29 T9S R97W  
**Bottom Hole Location:** Same

**Elevations:** KB Elevation: 5509  
KB Height: 13  
GL Elevation: 5496

**TD:** 7340 MD / 7340 TVD  
**PBTD:** 7305 MD / 7305 TVD

**Casing:** Surface: 12.25" hole @ 450', 8-5/8" 24 ppf K55 STC @ 449', TOC @ surface  
Production: 7.875" hole @ 7340', 5-1/2" 15.50 ppf K55 LTC @ 7339,  
TOC stage 1 @ 6830' stage 2 @ 2010' per Schlumberger CBL dated 12/7/1992

**Tubing:** 2 3/8", 4.7 ppf J55 EUE @ 7030'

**Perforations:** 2580-2618, 2797-2853, 7041-76, 7152-7203

**Packer:** 2893'

**Well Status:** SI

**Directions:** From the Debeque cut across road turn onto Horse Canyon road. Follow Horse Canyon road for 4.6 miles. Turn left and follow 0.5 mile. Turn right and follow 0.4 mile to well location.

**Contacts:**

Health & Safety Coordinator	Laura Lancaster	970 644 1259
Production Coordinator	Luke Cody	970 618 2571
Completions Manager	John Grubich	970 589 9496
Production Manager	Eric Lane	970 640 9172
Senior Regulatory Manager	Wayne Bankert	970 985 5383
Operations Manager	Chris Clark	970 462 8375
COGCC Contact	Craig Burger	970 625 2497
BLM Contact	Stephen Garcia	970 876 9031

## **PROCEDURE:**

1. Hold pre-job safety meeting with all personnel involved in each operation.
2. MIRU service rig and portable gas separation equipment with flare stack to blow down well.
3. Pump top kill on tubing with lease water.
4. ND production tree and NU and test 5K BOPE to 2500 psi for 10 minutes.
5. Un-land hanger and LD. Release packer and TOO H 2 3/8" J55 tubing visually inspecting for use as work string to plug well. If tubing looks good stand back at least 2500' in derrick. If tubing shows signs of corrosion LD and prepare to PU 2 3/8" work string for P&A procedure.

### Isolate Dakota/Cedar Mtn production perforations:

6. MIRU Wireline service. PU gauge ring for 5 1/2" 15.5 ppg casing and RIH to 7000'. LD gauge ring and PU 5 1/2" CIBP and RIH to set plug at 6950'. PU dump bailer and RIH to dump bail 6 sks (50 LF) Class H (16.1 ppg, 1.10 cu.ft./sk, 4.65 gal/sk) cement on CIBP.

### Place COGCC required stabilization plug in wellbore:

7. LD dump bailer and PU 3 1/8" perf gun with 4 spf 90 degree phased and RIH to shoot 4 perforations at +/- 4350'. RD wireline service.
8. RU to production casing and attempt to pump into perforations at 4350'. Do not exceed 700 psi while attempting to pump into perforations.
9. RIH with 2 3/8" tubing to +/- 4360' and balance 30 sacks (100 LF) Class G (15.8 ppg, 1.15 cu.ft./sk, 4.97 gal/sk) cement plug. POOH above balanced cement plug in casing at least 200 ft and secure tubing.
10. Load hole with fresh water. Apply pressure to casing to squeeze cement into annulus. Do not exceed 700 psi and do not displace more than 3.5 bbls cement into perforations. SD WOC. If cement cannot be squeezed into annulus bleed pressure to 0 psi and verify well is dead. TOO H stand back at least 2500' and LD remaining tubing.

### Isolate Corcoran Production Perforations:

11. PU 5 1/2" CIBP and RIH to set plug at 2500. RD Wireline service. TIH with tubing and spot 12 sacks (100 LF) Class G (15.8 ppg, 1.15 cu.ft./sk yield, 4.97 gal/sk water) cement plug on top of CIBP.
12. TOO H standing back 8 stands and LD remaining tubing.

### Isolate Surface Shoe:

13. RU Wireline service. PU 3 1/8" perf gun with 4 spf 90 degree phased and RIH to shoot 4 perforations at 500'. RD Wireline service.
14. RU rig pump to 5 1/2" production casing and attempt to circulate down 5 1/2" casing and up 5 1/2" annulus through braden head valve. If circulation is achieved, make sure fluid coming out of annulus is clean before pumping cement. If circulation is not achieved contact Completion Manager in Grand Junction to discuss plan for surface shoe cement plug.
15. TIH with 2 3/8" tubing to +/- 510'
16. Place 30 sacks (100 LF) Class G (15.8 ppg, 1.15 cu.ft./sk yield, 4.97 gal/sk water) balanced cement plug inside 5 1/2" casing and 5 1/2" casing annulus @ 400-500'.

### Surface Cement Plug:

17. RU wireline service. RIH and shoot 4 spf 90 degree phased @ 100'.
18. Establish circulation down 5 1/2" casing and out braden head valve.
19. RDMO wireline service and service rig.

20. RU cement service company to wellhead and pump down 4 ½" casing.
21. Pump 30 sacks (100 LF) Class G (15.8 ppg, 1.15 cu.ft./sk yield, 4.97 gal/sk water) cement plug inside and outside 5 1/2" casing from Surface-100'.
22. Cut off casing 3-4 feet below GL.
23. Install abandonment marker over SHL as per COGCC regulations. The following minimum information shall be permanently placed on the marker with a plate beaded on by welding:
  - a. Operator name
  - b. Lease number
  - c. Well name and number
  - d. API number
  - e. Location by ¼ ¼ Section, Township and Range.

**POST-JOB:**

24. Send tubing to Petros for inspection or Debeque yard for storage.