



**Black Hills Plateau Production, LLC**  
*A Black Hills Corporation Enterprise*

**Horse Shoe Canyon 2-27**  
**SWSE Sec 27 T9S R97W**  
**API #05-077-08427**  
**Mesa County, Colorado**

**GL: 5658' RKB: 5668' TD: 7566' PBTD: 7560'**  
**Spud 9/2/81 TD 11/2/81 Completion 11/25/81**

**Surface casing:** 10 3/4" (14 3/4" hole) 40.5# @ 320', 300 sx, TOC @ srf)

**Intermediate casing:** 7" (8 3/4" hole) 23# @ 3568', 400 sx, TOC 3030'

**Production casing:** 4-1/2" (6 1/4" hole) 10.5# & 11.6#, K-55, top at 3366', bottom at 7566' 460 sx, TOC into overlap at 3454-3562'

**Perforations:** **Corcoran** 3074', 3077', 3080', 3083', 3085', 3089', 3091', 3093', 3096', 3099', 3104', 3107', 3113', 3133' (1 spf, .45" ehd, 14 holes)  
 Frac 57,000 gal 75Q foam, 117,000 # 20/40, 750,000 scf N2  
**Dakota** 7312', 7316', 7320', 7342', 7344', 7357', 7359', 7446', 7450', 7458', 7466', 7474', 7482', 7490', 7498', 7506' (1 spf, .45" ehd, 16 holes)  
 Frac 1500 gal 7 1/2% HCl, 68,000# 20/40, 1730 bbls cross linked gel and 865,000 scf CO2

**Production tubing:** 2 3/8" tbg, 228 jts, "F" nipple, 4 1/2" model "R" pkr at 7257', 1 jt tbg EOT 7290'

**Packer:** Model "R" at 7257'

**Rods:** None

**Production:** Resumed production 6/5/2006 Dakota – up tbg, 15-20 mcfpd, drop daily soap sticks to maintain prod, Corcoran – up csg, no flow  
 Corcoran – SI 10/31/99 ~ 5-10 mcf, 110,472 mcf cum  
 Dakota – SI 8/31/05 ~ 5-10 mcf, 144,015 mcf cum

**History:** 2006 notes - Uneconomical to repair casing and return well to 50 mcfpd. (\$200k, tie 4 1/2" casing liner back to surface)  
 Offset HSC 4-27 new drill scheduled for 2007  
 3/7/00 – COGCC sundry; well being produced w/pkr in hole below Corcoran to isolate casing holes above Corcoran.  
 Note: Holes in 7" casing from 1892'-2617'.

**OBJECTIVE:** Determine HIC (if any). Plug and abandon well.  
 Notify landowner 7 days and COGCC and BLM 48 hrs prior to moving in.

1. Set and test deadman anchors as necessary. Blow down well ahead of time if possible. Note TP and CP.
2. MIRU workover rig. ND WH. NU BOP's.
3. RU for tbg. Release packer. Tally & TOH w/tbg.

4. If tubing shows to be in bad condition, TIH w/3 ¾" bit and 4 ½" csg scraper to 7250'. TOH.
5. TIH w/4 ½" RBP and 4 ½" pkr. Set RBP @ +/-7250'. Set pkr & test RBP. Release pkr. Pressure test csg to 400 PSI. Treat test as if it was for an MIT. Use digital recorder if available. Note: HIC's in 7" csg from previous report.

Note from COGCC:

Make sure your chart recordings for MITs are easy to interpret. The Colorado Oil and Gas Conservation Commission (COGCC) is rejecting MIT tests where the recorded pressure range and/or the rotation rate make interpretation difficult or the recordings do not support the values written on the Form 21.

For test pressures between (+/-) 350 and 450 psi on a chart recorder use a 0-1,000 psi range spring. The chart rotation rates for the MITs needs to be acceptable for interpretation. The recording needs to cover ¼ to ½ a revolution, suggestion is 1 hour per revolution.

It is the COGCC's policy to fail any MITs where the pressure changes (either increases or decreases) more than 10%. We also look for evidence that the pressure stabilized during the test. If you don't have an appropriate chart for either the pressure range or rotation rate then write down the pressure range and rotation rate used on the chart itself and initial it.

6. If csg holds pressure, release RBP and TOH or SOH and LD tubing as needed.
7. If csg does not hold pressure, isolate holes and determine the interval of leaks and injection rate. Will have to TOH for 7" pkr. Note: HIC's in 7" csg from previous report. Release RBP and TOH w/tbg, pkr and rbp.
8. Contact BHPP office to discuss options. Contact COGCC and BLM before any formation is P&A'd.

### **P&A Procedure**

Water aquifer depth is at 1600'.

1. MIRU WL. RIH and set 4 ½" CIBP @ +/-7250' (within 100' of top Dakota perf at 7312'.) POH. RIH and dump bail 2 sx cmt on top of plug. POH.
2. If no HIC in 4 1/2", **Proceed to Step #4**. If HIC in 4 ½", RIH or TIH and set cement retainer 50' above top HIC. TIH w/stinger and tbg, if not already in hole. RU cementers. Sting in to retainer.
3. Pump 45sx class III cmt below retainer. Sting out. Dump 5 sx G cmt on top of retainer. Reverse circulate clean as needed. TOH w/tbg & stinger. SOH & LD and stand back tbg as needed.
4. RIH and set 7" CIBP @ 3050'. POH. RIH and dump bail 2 sx cmt on top of plug. POH.
5. If HIC in 7", compare top HIC to top of water aquifer. If they are close enough together, combine HIC squeeze with water aquifer squeeze. **Proceed to Step #9**. Otherwise, if far enough below water aquifer, RIH and perforate 4 circulating holes +/- 50' above HIC, IF poor injection rate. Do not perforate if good injection rate.
6. RIH or TIH and set cement retainer 50' above top HIC. POH.
7. TIH w/stinger and tbg, if not already in hole. RU cementers. Sting in to retainer. Pump 45sx class III cmt below retainer. Sting out. Dump 5 sx G cmt on top of retainer. Reverse circulate clean as needed.
8. TOH w/tbg & stinger. SOH & LD and/or stand back tbg as needed.
9. If needed, RIH and perforate 4 circulating holes at 1800'. POH.
10. RIH or TIH and set cement retainer @ 1750'. POH.
11. TIH w/stinger and tbg, if not already in hole. RU cementers. Sting in to retainer. Pump 90 sx Class III cement below retainer. Sting out. Dump 10 sx cmt on top of retainer. SOH and LD tbg.

12. RIH and perforate 4 circulating holes at 370'. POH.
13. RU cementers, circulate down 7" and up 10 3/4" surface pipe. Establish rate and circulation. Mix and pump 120 sx Class III. Circulate cmt to surface. Do not displace, leave 7" csg full of cmt. RD cementers.
14. WOC. Top off as needed. RDMOSU.
15. Dig out wellhead. Cut off 10 3/4" & 7" csg 6' below ground level. Install dry hole marker plate as per COGCC.
16. Reclaim location. File necessary sundries.