



**FEDERAL 31-1 (P&A)**  
**1801' FNL & 2019' FEL**  
**SWNE SEC. 31, T2S, R100W**  
**RIO BLANCO, CO**

**(API#0510307832)**

**(SINGLE)**

**Purpose: P&A**

**Date: 04/08/2024**

**AFE: Pending**

**KBE: 6328' (9')**  
**GLE: 6319'**  
**PBTD: 3695'**  
**TD: 3738'**  
**CURRENT EOT: 3551' ??**  
**TBG DETAIL: 2 1/16 J55**  
**ETOC: 3290' (see completion info below)**

**API NUMBER: 0510307832**  
**LEASE NUMBER: COC-2228**  
**FEDERAL SURFACE/ FEDERAL MINERALS**  
**LAT/LONG: 39.834675/108.656970**  
**PERFS: MANCOS (3376'-3546')**  
**LAST RIG WORK: 9/9/1976 ??**

**CASING DETAILS SHOWN BELOW:**  
**TUBING DETAILS SHOWN BELOW:**

Casing Strings						
Csg Des	OD (in)	Wt/Len (lb/ft)	Grade	Set Depth (ftKB)		
Surface	8 5/8	24.00	J-55	162.0		
Production	4 1/2	10.50	J-55	3,733.0		
Perforations						
Date	Top (ftKB)	Btn (ftKB)	Linked Zone			
9/10/1976	3376	3546	Mancos B, Original Hole - Initial Migration			
Total						
Tubing Strings						
Tubing Description	Run Date	String Length (ft)	Set Depth (ftKB)			
Tubing - Production	9/9/1976	3,542.00	3,551.0			
Item Des	Icon	Jts	OD (in)	Wt (lb/ft)	Grade	Len (ft)
Tubing			2 1/16	3.25	J-55	3542

**WELL DATA:**

Tubular/Borehole	ID	Drift inches	Collapse psi	Burst psi	Capacities		
	inches				Gal./ft.	Cuft/ft.	Bbl./ft.
2.375" 4.7# J-55 tbg	1.995	1.901	8100	7700	0.1624	0.02171	0.00387
2 1/16" 3.25# J-55 tbg	1.751	1.657	7690	7280	0.1251	0.0167	0.0030
4.5" 10.5# J-55 csg	4.052	3.927	4010	4790	0.6699	0.0896	0.0159

Annular Capacities	Gal./ft.	Cuft/ft.	Bbl./ft.
2.375" tbg. X 4.5" 10.5# csg	0.4397	0.0588	0.0105



4.5" csg. X 8.625" 24# csg	1.8487	0.2471	0.0440
4.5" csg X 7.875 borehole	1.7040	0.2278	0.0406

**GEOLOGIC INFORMATION:**

<b>Formation</b>	<b>Depth to top, ft.</b>
Mesaverde	Surface
Castlegate	2180'
Mancos B	3360'

FEDERAL 31-1 PLUG & ABANDONMENT PROCEDURE

GENERAL

- CHECK FOR H2S AND TAKE APPROPRIATE PRECAUTIONS.
- BLOW DOWN BRADEN HEAD AND SURFACE CASING AS NEEDED.
- CEMENT QUANTITIES BELOW ASSUME NEAT CLASS G, 15.8ppg, YIELD 1.145 CUFT/SX. IF A DIFFERENT PRODUCT IS USED, WELLSITE PERSONNEL ARE RESPONSIBLE FOR CORRECTING QUANTITIES TO YIELD THE STATED SLURRY VOLUME.
- TREATED FRESH WATER WILL BE PLACED BETWEEN ALL PLUGS INSTEAD OF BRINE.
- ALL DISPLACEMENT FLUID SHALL CONTAIN CORROSION INHIBITOR AND BIOCIDES. PREMIX 5 GALLONS PER 100 BBLs FLUID AND IS TO BE PLACED BETWEEN ALL PLUGS.
- NOTIFY APPROPRIATE AGENCY 48 HOURS BEFORE MOVING ON LOCATION.

**PROCEDURE**

**Note:** Approx. 104 SXS Class "G" cmt needed for procedure, (1) 4.5" CIBP AND (1) 4.5" CICR.

1. MIRU, NDWH, AND NUBOPE. **NOTE: UTILIZE STANDARD WELL SERVICES GUIDELINES FOR WELL CONTROL WHENEVER RIGGING UP BOPE AND WIRELINE, OR WHENEVER TRIPPING IN OR OUT OF THE WELL.**
2. (P1) ISOLATE MANCOS B (3360'): LD 2 1/16" TUBING. PU CIBP AND WORK STRING. TIH TO ~3326' AND SET CIBP. PUMP A MINIMUM OF (60FT) CMT F/ 3266' TO 3326' (5 SXS, 5.38 FT3, 0.96 BBLs).
3. (P2) PROTECT CASTLEGATE AND MANCOS TOP (2180'): POOH. PRESSURE TEST CASING FOR INTEGRITY. RU WIRELINE AND RIH AND PERFORATE AT 2230'. RD W/L. IF CAN ESTABLISH INJECTION RATE PU CICR AND TIH TO ~2200' AND SET CICR. CEMENT F/ 2105' TO 2230' ON BOTH THE 4.5" ANNULUS WITH (25 SXS, 28.48 FT3, 5.07 BBLs) AND INSIDE THE 4.5" CASING ABOVE AND BELOW THE CICR WITH (10 SXS, 11.20 FT3, 1.99 BBLs). TOTAL VOLUME FOR INSIDE AND OUTSIDE IS: (35 SXS, 39.68 FT3, 7.06 BBLs) MONITOR ANNULUS, IF POSSIBLE, FOR COMMUNICATION WHEN PERFORATING AND CEMENTING. **NOTE: IF CIRCULATION CAN'T BE ESTABLISHED, SET 125' BALANCE PLUG FROM 2105' TO 2230' INSIDE THE 4.5"**
4. (P3) PROTECT SURFACE CASING SHOE (162') AND SURFACE (105'): POOH LAYING DOWN TUBING. RU W/L AND TIH TO 220' AND PERFORATE. RD W/L AND ESTABLISH CIRCULATION. FILL THE 4.5" CASING AND THE 4.5" X 8.625" ANNULUS FROM 220' TO SURFACE WITH A



MINIMUM OF (220FT) CMT INSIDE 4.5" (18 SXS, 19.71 FT3, 3.51 BBLs) AND IN 4.5" X 8.625" ANNULUS (47 SXS, 53.24 FT3, 9.48 BBLs). TOTAL VOLUME FOR INSIDE AND OUTSIDE IS: (64 SXS, 72.95 FT3, 13 BBLs)

5. CUT OFF WELLHEAD, TOP OFF ALL ANNULI AS NEEDED, AND INSTALL MARKER PER REGULATIONS.
6. RDMO. TURN OVER TO OPERATIONS FOR SURFACE REHAB. SURFACE RECLAMATION TO BE PERFORMED IN ACCORDANCE WITH REGULATIONS.

#### #31-1 Douglas Creek

5/13/76 - Drilling surface hole with air mist at 10:45 a.m. TD 165' KB at 6:45 p.m. Set 152' of 3-5/8" csg. at 162' KB. Condition hole with 20 bbls. gel water. Good returns. Cmt with 90 sxs. class "G" amt. 2% CaCl<sub>2</sub>, and 1/2# floeal. Plug down 9:00 p.m. Good returns. Cmt. dropped 3' below collar because of a leak at cementing head. Used 1 guide shoe, and 1 centralizer.

#### #31-1 Douglas Creek

5/19/76 - Logs out noon. CNL-FDC shows 4-5 zones of average cross-over. If logs are normalized, 10-12 porosity units. Ke top 3360'. 3380-3405 normalizing 6 porosity units will cross-over; FDC-Ø 10%. 3435-3450 normalizing 4 porosity units will cross-over; FDC-Ø 11%. Ø = porosity.  
5/20/76 - Ran 106 jts. 4 1/2" csg. Set at 3733' KB. Ran guide shoe, float collar, 8 centralizers, and a pedabasket. Spearhead with 25 bbls. 2% KCL water. Cement with 105 sx. 50-50 pozmix with 1/2" floeal per/sx. Displaced 59 bbls. 2% KCL water. Pump plug with 1100# at 7:45 p.m.

#### #31-1 Douglas Creek

9/3/76 - Ran GR, CBL and Csg. collar locator logs. Perf at 3376, 3380, 84, 95, 98, 3401, 34, 37, 40, 43, 46, 49, 56, 60, 92, 96, 3500, 04, 08, 16, 19, 22, 26, 32, 35, 38, 41, 44, 46 with 1 35 gram/shot. Top of cmt. 3290'.  
9/4/76 - Acidized with 3500 gals. mud acid, 2 ball sealers every 6 bbls. CO<sub>2</sub> at 1200 scf/bbl. broke down 4000-2500 psi. Frac with 30,000# of 100 mesh, 100,000 of 10/20 mesh. 66 gals. of 28% acid, 2700# gelling agent. Dropped 35 balls. No ball action. Avg. frac pressure 2300#. Instantaneous SI after frac 950#, after 15 min. 600#. 2-1/16" tbgs. set at 3339'.  
9/5/76 - Well flowing back frac fluid and CO<sub>2</sub>. CP 570 psi.  
9/6/76 - Still blowing back heavy mist of frac fluid, CO<sub>2</sub> and gas. CP 360 psi.