

**C&J Field Service
100 Gilliam Draw Road
Rangely, Colorado.**

**Mailing Address:
3650 Rio Blanco Co Rd. 2
970-675-5300**

Federal 2-21

**NW NW Section 21, T1N, R103W
Federal Lease: COC-47768
API: 05-103-09461
Lat. 40.046206 / Long. -108.968148
Rio Blanco County, Colorado**

P&A Procedure

October 5, 2015

Owner / Operator: Curt Dembowski

API Number:	05 103 09461	
Spud Date:	May 31, 1990	
GL Elevation:	5,321 ft	
KB Elevation:		
TD:	3,627 ft MD	
PBTD:		
Surface Casing:	8 5/8" OD, 24 lb/ft – J55 - set @ 323 ft.	
Surface Casing Properties:	ID:	8.097"
	Drift ID:	7.972"
	Collapse:	1,370 psig
	Burst:	2,950 psig
	Joint Yield Strength:	244,000 lb
	Capacity:	0.0636 BBL/ft
	Capacity 8 5/8" casing x 12 1/2" hole:	0.0795 BBL/ft
Production Casing:	5 1/2" OD, 15.5 lb/ft, J-55, set at 3,670 ft.	
Production Casing Properties:	ID:	4.950"
	Drift ID:	4.825"
	Collapse:	4,040 psig
	Burst:	4,810 psig
	Joint Yield Strength:	217,000 lb
	Capacity:	0.0238 BBL/ft
	Capacity 5 1/2" casing x 8 5/8" casing:	0.0343 BBL/ft
	Capacity 5 1/2" casing x 7 7/8" hole:	0.0309 BBL/ft
Tubing:	2 7/8" OD, 6.5 lb/ft, J-55, set at 3,552 ft (possible tubing anchor at 3,549 ft).	
Tubing properties:	ID:	2.441"
	Drift ID:	2.347"
	Coupling OD:	3.668"
	Collapse:	7,680 psig
	Burst:	7,260 psig
	Joint Yield Strength:	99,660 lb
	Capacity:	0.00579 BBL/ft
	Capacity 2 7/8" tubing x 5 1/2" 15.5 lb/ft casing:	0.0158 BBL/ft
Perfs:	3564' to 3611'	
TOC:	Surface cement at surface (report). Production cement at 2,818 ft.	

Perforation details shown in Attachment #1.

Objective

Plug and abandon the Federal 2-21.

Background

The Federal 2-21 is a vertical well that was drilled in May 1990. The well has produced a low rate of gas since that time, and a moderate amount of oil. C&J Field Services is no longer interested in producing this well..

Safety

Safety meetings are to be held with all service company personnel prior to each job. Wellsite supervisor must notify contractors as to known hazards of which the contractors may be unaware. Well site supervisor must ensure that all workers are aware of their responsibilities and duties under the EH&S guidelines. All safety meetings will be recorded on the C&J Field Services daily reports.

Regulations

All verbal notifications and approval from government regulatory agencies will be recorded on the C&J Field Services daily report. The name of the individual contacted and the subject matter of approval or notification will be recorded.

Plug & Abandon Procedure

1. Notify the Meeker BLM office and COGCC at least 48 hours before plugging operations commence.
2. Hold a pre-job safety meeting. Discuss all aspects of the procedure with any involved personnel. Identify and address any safety concerns before the job begins.
3. MIRU pulling unit.
4. ND wellhead, NU BOP.
5. TOH with tubing. LD any bad joints.
6. Load hole.
7. RU wireline
8. RIH with Cement retainer and set at 3,514 ft. ROH with wireline.
9. Pressure test casing to 350 PSI. If test fails, prep to pick up packer and locate holes. If test is good, proceed to Step 10.
10. TIH with tubing and sting into retainer @ 3514'.
11. Mix & pump 15 sacks (3 BBL) cement below retainer. Sting out of retainer and place 10 sacks (2BBL) cement on top of retainer at 3,514 ft.
12. TOH.
13. RIH with wireline and shoot perfs @ at 373 ft. ROH with wireline & rig down wireline.
14. TIH with tubing to 373 ft.
15. Attempt to establish circulation to surface.
16. Fill casing annulus and casing to surface with cement (estimated volume is a total of 110 sacks (22 BBL; 12 BBL cement in annulus and 10 BBL) cement in casing.
17. TOH.
18. Cut off casing 4 ft below ground level and weld on plate.
19. RDMO workover rig.

Federal 2-21

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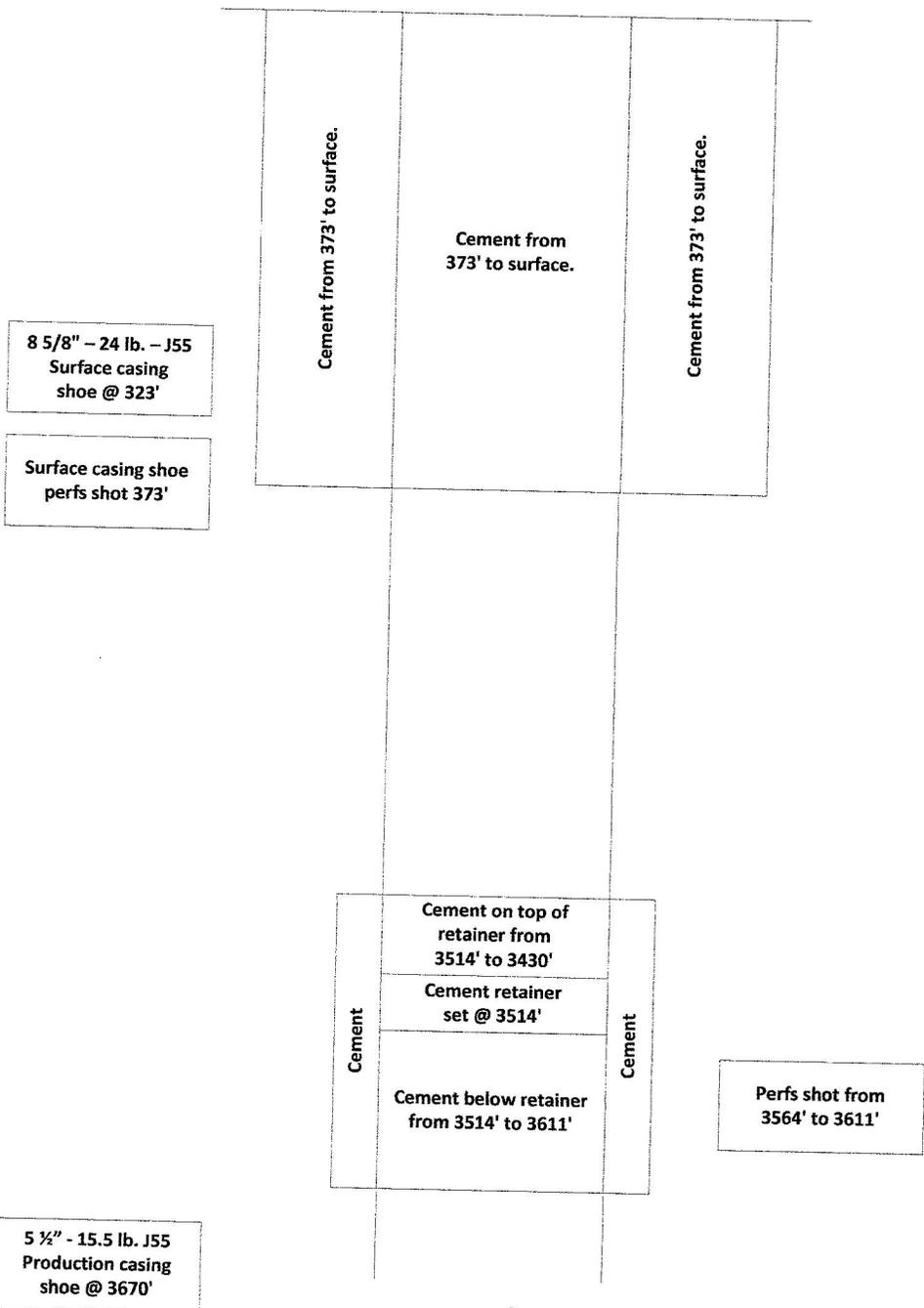
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Proposed wellbore diagram.



Attachment #1 – Production Trend