

## Proposed P&A Procedure

**Well Name: RICHFOOSE 01**

API 05-123-13946	Original KB Elevation (ft) 4,698	Ground Elevation (ft) 4,689	Total Depth (ftKB) 7,030.0	Current PBTD (mKB)
Section 18	Township 6	Range 64	County/Parish	State/Province COLORADO

### Casing Strings

Csg Des	MD (ftKB)	Run Date	Prop Run?	Cut/Pull Date	Proposed Cut/Pull?	Depth Cut/Pull (ftKB)	OD (in)	ID (in)	Grade	Len (ft)
Surface	317.0	5/16/1988	No		No		8 5/8	8.10		308.00
Production	7,030.0	5/22/1988	No	11/30/1994	No	3,310.0	4 1/2	4.05		7,021.00

### Tubing Strings

Des	Set Depth (ftKB)	Run Date	Prop Run?	String Location	Pull Date	Prop Pull?	Cut/Pull Date	Proposed Cut/Pull?	Depth Cut/Pull (ftKB)

### Perforations

Zone	Type	Date	Prop?	Top (ftKB)	Btm (ftKB)
PARKMAN, ORIGINAL HOLE	Squeeze Holes	4/22/1989	No	3,601.00	3,603.00
CODELL, ORIGINAL HOLE	Perforated	4/22/1989	No	6,917.00	6,927.00

### Other In Hole

Des	Run Date	Prop Run?	Prop Pull?	Top (ftKB)	Btm (ftKB)
Cast Iron Bridge Plug	11/30/1994	No	No	6,850.0	6,855.0

### Cement Stages

Des	Type	Prop?	End Date	Top (ftKB)	Btm (ftKB)
Cement Plug	Plug	Yes		9.0	700.0
Surface Casing Cement	Casing	No	5/16/1988	9.0	317.0
Production Casing Cement	Casing	No	5/22/1988	3,373.0	3,702.0
Production Casing Cement	Casing	No	5/22/1988	6,100.0	7,030.0
Cement Squeeze	Squeeze	No	4/22/1989	3,601.0	3,603.0
Dump Bail	Plug	No	11/30/1994	6,826.0	6,850.0
Stub Plug	Plug	No	11/30/1994	3,220.0	3,310.0
Stub Plug	Plug	No	11/30/1994	3,310.0	3,360.0
Cement Plug	Plug	No	11/30/1994	300.0	340.0
Cement Plug	Plug	No	11/30/1994	9.0	28.0

### P&A PROCESS

Type	Sub Type	Start Date	Engineer	Cell Phone
Abandon	WBI	5/12/2017	David Hughes	513-787-8747

### PROCESS STEPS

Type	Comment

Type	Sub Type	Start Date	Engineer	Cell Phone
Abandon	WBI	5/12/2017	David Hughes	513-787-8747

### PROCESS STEPS

Type	Comment																												
1)	Survey and locate abandoned well, mark with stake and take location photos																												
2)	Excavate to expose top of surface casing																												
3)	Weld 2" collar to top of 8 5/8" surface casing cap. Make up to collar, pneumatic drill with non-sparking bit. Drill out cap venting possible trapped gas.																												
4)	Once verified that no gas exists beneath top of surface casing plate, cut off surface casing below plate with torch, dress up smooth.																												
5)	Butt weld 8 5/8" casing to dressed cut, bringing threaded end of casing to ground level.																												
6)	Make up to 8 5/8" casing, one 8 5/8" collar and 8 5/8" starter well head																												
7)	NU flange adaptor and 5K BOP, test BOP.																												
8)	NU and RIH with 6 1/8" cone bit, PU 2 7/8" drill collars, 2 7/8" 6.5# tubing, and TIW valve																												
9)	Drill out first cement plug inside surface casing (TOC @ surface) and tag cement at 300', roll hole clean.																												
10)	Pressure test surface casing to 200 psi. If pressure bleeds off, set RBP and test again. **If test fails, contact office.**																												
11)	After pressure test of surface casing, continue to drill out second cement plug from 300' to 340'																												
12)	Assume pressure under surface casing shoe, roll hole with kill fluid until well dead, or blow down.																												
13)	Continue RIH, cleaning out with drilling mud or water to 3220' to tag TOC **If unable to tag cement, contact office**																												
14)	TOOH with cone bit, drill collars, and 2 7/8" tubing.																												
15)	PU and RIH with mule shoe and 2 7/8" tubing to 700'. Roll hole with 2X wellbore volume.																												
16)	RU cement crew and pump 250 sxs of 15.8ppg Class G "neat" cement to surface																												
	<table><tr><th>Interval Start</th><th>Interval End</th><th>Length (ft)</th><th>Vol. Factor (ft^3/ft)</th><th>Volume (ft^3)</th><th>Yield (ft^3/sk)</th><th>Cement (sxs)</th></tr><tr><td>700</td><td>317</td><td>383</td><td>0.4418</td><td>169</td><td>1.15</td><td>147</td></tr><tr><td>317</td><td>0</td><td>317</td><td>0.3576</td><td>113</td><td>1.15</td><td>99</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>246</td></tr></table>	Interval Start	Interval End	Length (ft)	Vol. Factor (ft^3/ft)	Volume (ft^3)	Yield (ft^3/sk)	Cement (sxs)	700	317	383	0.4418	169	1.15	147	317	0	317	0.3576	113	1.15	99							246
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17)	POOH with 2 7/8" tubing. Wait 4 hrs, and tag TOC. If cement has fallen, top off back to surface																												
18)	Let cement set over night, verify cement has not settled and is still at surface. RDMO																												
19)	Excavate around wellhead to 8' below grade, cut off 8 5/8" casing, weld on cap																												
20)	Backfill hole and reclaim surface to original conditions																												