

BLM Sundry Notice  
Amoco-Federal #1 Saltwater Disposal Conversion

- 17) Purpose of project is to dispose of saltwater produced as a by-product of oil and gas production from the Amoco-Federal lease. The proposed disposal interval zone is the Cherry Canyon sands located between 4022 and 4206' (KB). The proposed disposal well is presently an economically marginal oil producing well. The anticipated starting date for the conversion is November 1, 1989

Plans for conversion to saltwater disposal are as follows:

- 1) Set 4 1/2" cast iron bridge plug on wireline at 4800' (Above present "Williamson Sd" producing perforations 4984-5004'). Load casing with water and pressure test casing and bridge plug to 1500 psi for 15 minutes.
- 2) Perforate squeeze holes 4300-02' with four shots per foot. Trip in hole with 4 1/2" packer on 2 3/8" tubing to 4350', set packer and pressure test tubing to 1500 psi for 15 minutes. Release packer and pick up to 4250', set packer and inject water into squeeze holes, to circulate through Bradenhead. Increase rate and circulate annulus with 200 Bbl water.
- 3) Release packer and trip out of hole. Trip in hole with 4 1/2" cement retainer and 2 3/8" tubing. Set retainer at 4280' and establish circulation with water. Pump 300 Ft<sup>3</sup> 35/65 poz 'A' + 0.5% dispersant followed by 180 ft<sup>3</sup> Class 'A' + 2% bentonite + 0.5% dispersant. Displace cement to retainer, sting out of retainer and reverse circulate tubing with 30 Bbl fresh water. TOH with tubing and shut well in.
- 4) Run cement bond log from PBD to above cement top. Perforate proposed injection intervals, 4022-34', 4036-40', 4050-60', 4092-4102', 4106-24' 4134-54', 4165-4208' with 2 SPF. TIH with packer and tubing to 4300' set packer and pressure test retainer with 1000 psi for 15 minutes. Raise packer to 4200' and spot 150 gallons acid across perforations. Raise packer and set at 3970', acidize perforations with a total of 2500 gallons 15% HCl with 150 l.3 S.G. perf balls. Backwash balls off of perforations and allow to settle.
- 5) Conduct step rate injection test. Release packer TOH.
- 6) TIH with 2 3/8" tubing, internally coated with TK-75 or equivalent, with 4 1/2" injection packer internally nickle coated. Circulate tubing-casing annulus with biocide/oxygen scavenger mixture, set packer. Nipple-up well head with pressure gauges on tubing and casing and commence injection. Average injection rate is anticipated to be 800 BWPD, maximum rate 1600 BWPD. Average injection pressure is anticipated to be 300 psi with maximum pressure at 804 psi.