

The Oil Conservation Division of the State of New Mexico P. O. Box 2088 Santa Fe, NM 87501

RE: State "B" Well No. 2 Section 6, SW/4, SW/4 T17S, R34E, Lea Co., NM Case 8940

Reference is made to the "Application for Authorization to Inject" (Form C-108) submitted June 13, 1986, by Yates Petroleum Corp. That application outlined the proposed re-entry of the abandoned State "B" #2 well located in Section 6, T17S, R34E, Lea Co., New Mexico, for the purpose of conversion to salt water disposal service. Please note that State "B" No. 2 is also located within the boundaries of an active producing mineral lease, the H. L. Brown, Jr.-operated State "B" lease.

H. L. Brown, Jr. strenuously objects to the entire Yates Petroleum proposal because State "B" #2 is a poor disposal candidate and may soon be returned to production. Our objections are based on the extremely poor condition of the State "B" #2 for use as a disposal well and the associated high potential for: 1) pollution of shallow fresh water sands, 2) communication with, and abnormal pressurization of, unprotected shallow beds, and 3) communication with unprotected casing in nearby producing wells causing corrosion, casing collapse and loss of reserves. In addition, H. L. Brown, Jr. has had long-standing plans to re-enter this wellbore for a Queen zone production test within the same interval Yates proposes to inject. We therefore respectfully request that the Yates application be denied.

As illustrated by the attached schematic diagram of State "B" #2, the shallow fresh water sands were protected by 11-3/4" surface casing set at 387 feet and cemented to surface. An 11" hole was then drilled to 4700 feet where 8-5/8" casing was set and cemented with 250 sx of Class 'C' cement. No temperature surveys nor cement bond logs were obtained, but our calculations indicate the top of cement to be between 3402' and 4051' with the most likely TOC to be 3791'. These calculations utilize cementing fill factors suggested by Mr. Craig Floyd, the District Manager for Halliburton in Hobbs, New Mexico and which are based on his 12 years of experience and his intimate knowledge from numerous cement jobs in this area. This uncertain cement top could therefore be well

The Oil Conservation Division June 20, 1986 Page 2

below Yates' intended injection interval of 3770'-3810'. However, even the highest possible cement top would be insufficient to confine injected salt water, especially after injection pressures start increasing. Squeeze cementing behind the 8-5/8" casing is not practical since this casing was shot at 2500', 2000', 1750' and 1500' before being pulled from 1245'. These numerous unsuccessful shots show that the casing is held by settled solids, shale cavings, etc., which would prevent any effective secondary cement job outside the 8-5/8" casing.

It is therefore obvious that the condition of State "B" #2 is technically unsuitable for SWD, especially in a zone as shallow as 3770', and junk in the hole prevent its use for disposal in a deeper, porous zone. In addition, the Queen zone, 3770'-3800', may be productive of oil or gas and waste water injection at this time would likely result in driving reserves off the H. L. Brown, Jr. lease. In the worst case, Yates proposed waste water disposal could even cause a tragic loss of ultimate reserves, if the Queen zone is productive. For these reasons, H. L. Brown, Jr. is violently opposed to such injection and we urge the Commission to deny Yates application in its entirety.

Very truly yours,

George Sutphen

Operations Manager

GS:qr

CC: Yates Petroleum Co. State of New Mexico, Commissioner of Public Lands Williams & Son Cattle Co. SET 10sx PLUG @ SURFACE FROM: SURFACE-20' SET 11³/₄" CSG AT 287'-CMT CIRCULATED SET 60sx PLUG FROM: 3571-4571 CUT OFF $8^5/_8$ " CSG. AT 1245'-SET 60sx THE $8^{5}/_{8}$ " CSG WAS SHOT AT 2500', 2000', 1750', PLUG FROM: 1195'-1295' 1500', AND 1245' DURING ABONDONMENT OPNS. TOC CALC 3791' 2¹/₈" TBG CUT OFF AT 4447'-FILLED WITH CMT -REACHED A MAXIMUM DEPTH OF 4588' WITH WASHPIPE AND MILL 8⁵/₈" CSG PARTED OR COLLAPSED @ 4462' BAKER MODEL 'K' CMT RETAINER SET AT 4650' -PUMPED 75sx PLUG FROM: 4650'-4750' SET $8^{5}/_{8}$ " CSG AT 4700'-TOC CALC TO BE 3364' 5925'-6025' SET 30sx CMT PLUG 7250'-7350' FROM: 9750'-9850' H. L. BROWN, JR. STATE B #2 10,800'-10,900' LEA CO., NEW MEXICO

TD 11,120'

BOREHOLE SKETCH

SCALE: NTS JUNE, 1986

G.W.S.