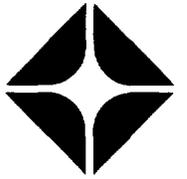


North American Producing Division  
New Mexico-Arizona District  
Post Office Box 1978  
Roswell, New Mexico 88201  
Telephone 505 622 4041



W. P. Tomlinson  
District Engineer

SEP 19 1969  
WFA - 323  
17

September 19, 1969

New Mexico Oil Conservation Commission (3)  
P.O. Box 2088  
Santa Fe, New Mexico 87501

Attention: Mr. A.L. Porter, Jr.

Re: Atlantic Richfield Shugart Panco  
Waterflood Project, Shugart Pool,  
Eddy County, New Mexico

Gentlemen:

In accordance with Rule 701, Atlantic Richfield requests approval to complete the proposed Panco Federal No. 4 as a water injection well. The location of this proposed well (see attached plat) is 2310' FNL and 2310' FWL, Section 23, Township 18 South, Range 31 East. It is planned to set and cement 4 1/2" casing and inject into the Queen formation through perforations at approximately 3430 feet (see attached diagrammatic sketch). The injection is planned to be down 2 3/8" O.P. tubing with a packer set less than 100' above the perforations. Fluid, treated to prevent corrosion, will be placed in the annulus and the casing pressure will be monitored to detect possible leaks. The injection rate is expected to be about 300 BWPD at a surface pressure of 1700 psig. Injection water will be obtained from Double Eagle Corporation and from produced water on the Swearingen and Panco leases.

The Panco Waterflood Project, which was originally authorized by Order No. R-3743, has been expanded in recent months by the drilling and completion of the Panco No. 3 as a producer. It is now necessary to drill an injection well to the east of the Panco No. 3 in order to provide back-up for the waterflood to prevent the sweep of oil

September 19, 1969

Page 2

past the producers. It is equally important that injection begin soon at the proposed location so that the water banks from all injectors will arrive at the producers at approximately the same time. This should prevent waste by allowing a maximum amount of oil to be produced before the water cut becomes too high for continued economic operation. In addition, it is anticipated that this injector will sweep approximately 61.5 MBO of secondary reserves to existing producers that would not otherwise recover this oil. The location of this well is such that it will lead to effective development of the project area. The well is also ideally located to benefit possible future expansion of the project to the east.

Response to waterflooding has been experienced in the Panco No. 1 which directly offsets the location of the proposed injector (see attached form C-116 and production curve). The Panco No. 3, which also offsets the proposed injector, has not yet had time to respond to injection since the Panco No. 2 has been injecting only since June, 1969. Production rates from the Panco No. 1 have declined in recent months due to water break through and the lack of injection back-up to the south. The completion of the proposed well as an injector should increase this well's production rate to its former peak.

We would appreciate approval of this request at your earliest convenience. Please forward a copy of your approval letter to the United States Geological Survey. Upon receipt of your approval, we will submit the proper drilling permits for approval.

Yours very truly,

*W.P. Tomlinson*  
W.P. Tomlinson *MD.*

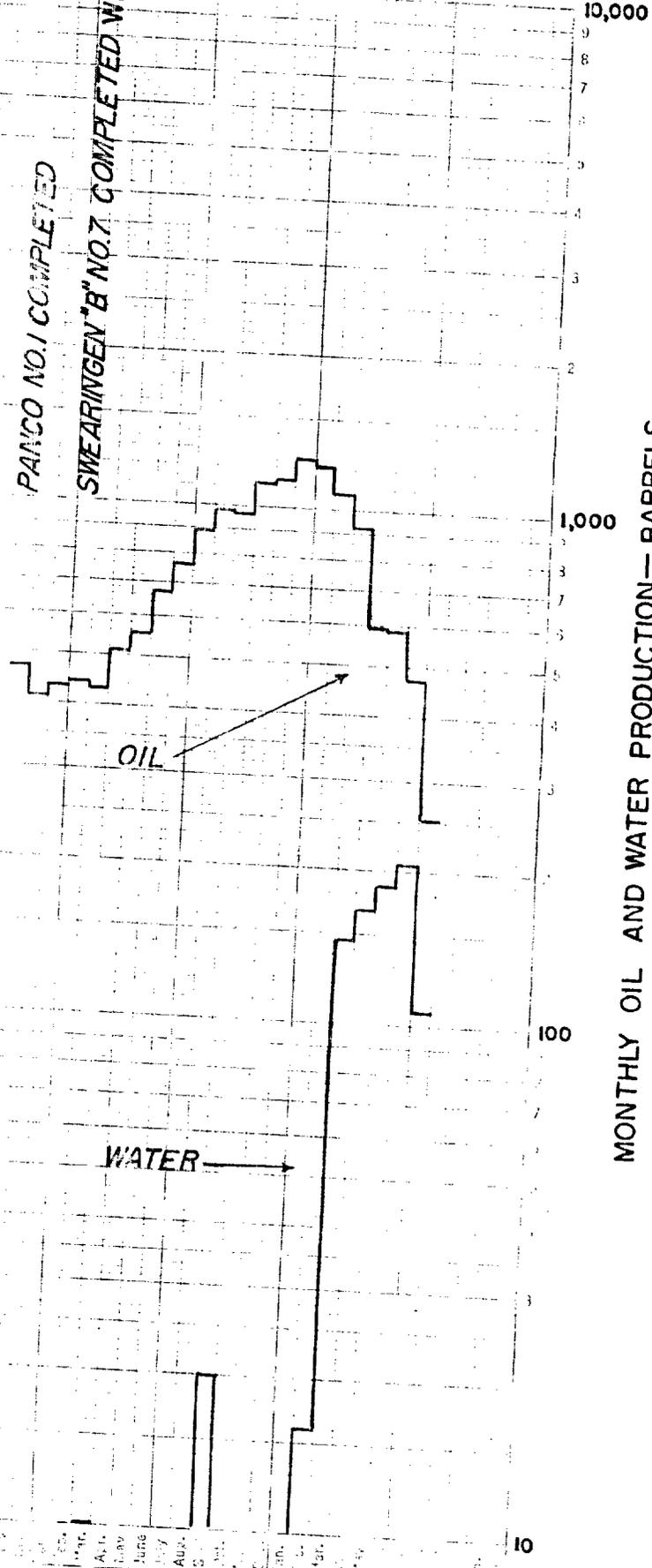
cc: U.S.G.S., Artesia, Marathon Oil Co., Hobbs; Gulf Oil Corp., Roswell; Maxwell Oil Co., Fort Worth; Mr. B.M. Keohane, Roswell

PRODUCTION HISTORY  
 PANCO FEDERAL NO.1  
 STUART QUEEN POOL  
 SECTION 7-13-S, R-31-E  
 HOOBY CO. NEW MEXICO

PANCO NO.1 COMPLETED  
 SWEARINGEN "B" NO.7 COMPLETED W/W

MONTHLY OIL AND WATER PRODUCTION — BARRELS

19 65  
 19 66  
 19 67  
 19 68  
 19 69



NEW MEXICO OIL CONSERVATION COMMISSION  
GAS-OIL RATIO TESTS

C-116  
Revised 1-1-65

Operator		Pool		County																												
Atlantic Richfield Company		Shugart Queen		Eddy																												
Address		TYPE OF TEST - (X)		Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>																										
P. O. Box 1978, Roswell, New Mexico		S P		WATER BBLs.		GAS M.C.F.																										
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKES SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT./BBL.																			
		U	S	T						R	GRAV. OIL	OIL BBLs.		GAS M.C.F.																		
Panco Federal	1	C	23	18S	31E	P	---	21	24	0	34.2	17	21	1235																		
															P	---	17	24	1	34.2	17	12	706									
																								P	---	17	24	1	37.0	17	12	705
																								P	---	45	24	0	39.1	40	7	175

No well will be assigned an allowable greater than the amount of oil produced on the official test.  
 During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.  
 Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.  
 Report casing pressure in lieu of tubing pressure for any well producing through casing.  
 Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

(Signature)

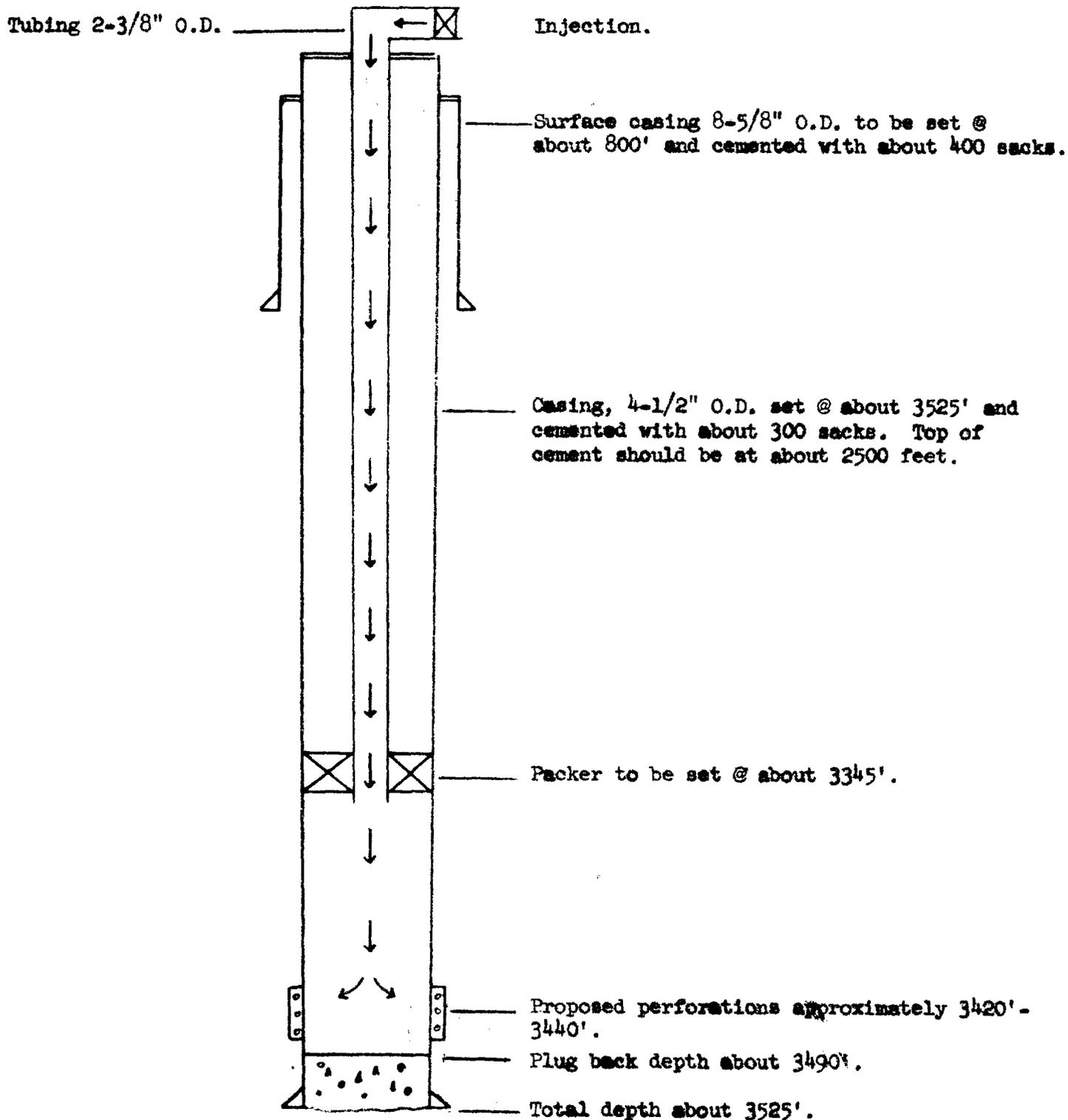
District Engineer

(Title)

September 18, 1969

(Date)

ATLANTIC RICHFIELD COMPANY  
 SCHEMATIC DRAWING  
 PROPOSED PANCO FEDERAL NO. 4  
 SHUGART FIELD  
 EDDY COUNTY, NEW MEXICO  
 EXHIBIT NO. \_\_\_\_\_



LARGE FORMAT  
EXHIBIT HAS  
BEEN REMOVED  
AND IS LOCATED  
IN THE NEXT FILE