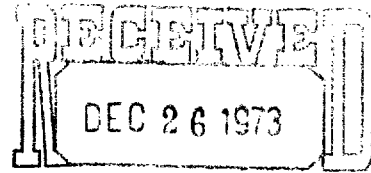


December 19, 1973



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

Santa Fe

Attention: Mr. A. L. Porter

Gentlemen:

Atlantic Richfield respectfully requests administrative approval for an exception to Rule 303 (a) in order to commingle oil produced from the Grayburg Jackson and the Cedar Lake Abo on our Fren Oil Company Lease, the S/2 of Section 19, T-17-S, R-31-E, Eddy County, New Mexico.

The API gravities and values of the oil from the two pools are as follows: Grayburg Jackson, 39.4° API, \$4.18/bbl; and the Cedar Lake Abo, 41.6° API, \$4.31/bbl.

The commercial value of the commingled production, the gravity of which will be 39.6° API, will be \$4.18/bbl. and will be less than the sum of the values of the production from each common source of supply. This loss in revenue amounts to \$1.35 a day on the average and \$40.35 a month on the average. (See analysis in this request).

The rationale for the proposed commingling is based solely on the economics of the situation. At present our Grayburg battery cannot handle the volume of water and oil that is moving through the system. But, at the Abo battery there is ample storage space plus a salt water disposal pump. We propose to install one heater treater besides the existing one on the Abo Battery. One will handle the combined Abo and Grayburg production, and the other will serve as a test facility for ten wells. We anticipate that the lone Abo well will be depleted in the near future.

It is further requested that the commingling be allowed without metering as the production from all sources is marginal, and the ownership of all zones is identical. Production from each pool will be determined from well tests conducted periodically as prescribed by the NMOCC order permitting commingling.

New Mexico Oil Conservation Commission

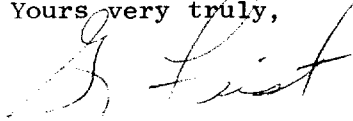
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December 19, 1973

Data illustrating the marginal nature of each well can be found in the production history section of this request. The daily average oil production per well from the Grayburg Jackson was 14.68 barrels, and from the Cedar Lake Abo was 10.35 barrels. None of the wells are producing top allowable and none of the wells are capable of producing top allowable at this time. In the future if any well produces top allowable due to the effects of the waterflood, metering facilities will be installed to measure the oil from the lone Abo well. We propose to utilize the subtraction method to determine the production from the Grayburg zone.

A plat showing the location of all wells on the lease and the pool, and a diagram depicting the proposed installation is also included in this request.

Yours very truly,

A handwritten signature in cursive script, appearing to read "G. Feist".

G. Feist
Junior Engineer

GF:rm

Attachments

Production Status
For Grayburg Jackson and Cedar Lake Abo Wells
Average BOPD By Month 1973

Grayburg-Jackson

	September	October
Fren Oil Company #3	17.0	15.3
Fren Oil Company #4	3.2	2.1
Fren Oil Company #6	10.0	9.7
Fren Oil Company #7	35.0	30.6
Fren Oil Company #8	21.2	18.7
Fren Oil Company #9	3.7	6.0
Fren Oil Company #10	21.2	16.1
Fren Oil Company #12	12.5	12.5
	<u>123.8</u> bbl.	<u>111.0</u> bbl.

Average Daily Production per well - 14.68 bbls.

Cedar Lake Abo

Fren Oil Company #19	10.6 bbls.	10.1 bbls.
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Average Daily Production per well - 10.35 bbls.

Top Allowable

Grayburg Jackson	80 bbls.
Cedar Lake Abo	187 bbls.

Gravity Determinations

Grayburg-Jackson	39.4°API	Specific Gravity	0.828	\$4.18/bbl.
Cedar Lake Abo	41.6°API	Specific Gravity	0.817	\$4.31/bbl.

September

Grayburg-Jackson 123.8 bbl. x 0.828 = 102.506

Cedar Lake Abo	<u>10.6 bbl.</u>	x 0.817 =	<u>8.660</u>
Combined	<u>134.4</u>		<u>111.166</u>

Specific Gravity of Combined = $\frac{111.116}{134.4} = 0.827 = 39.6^{\circ}\text{API}$

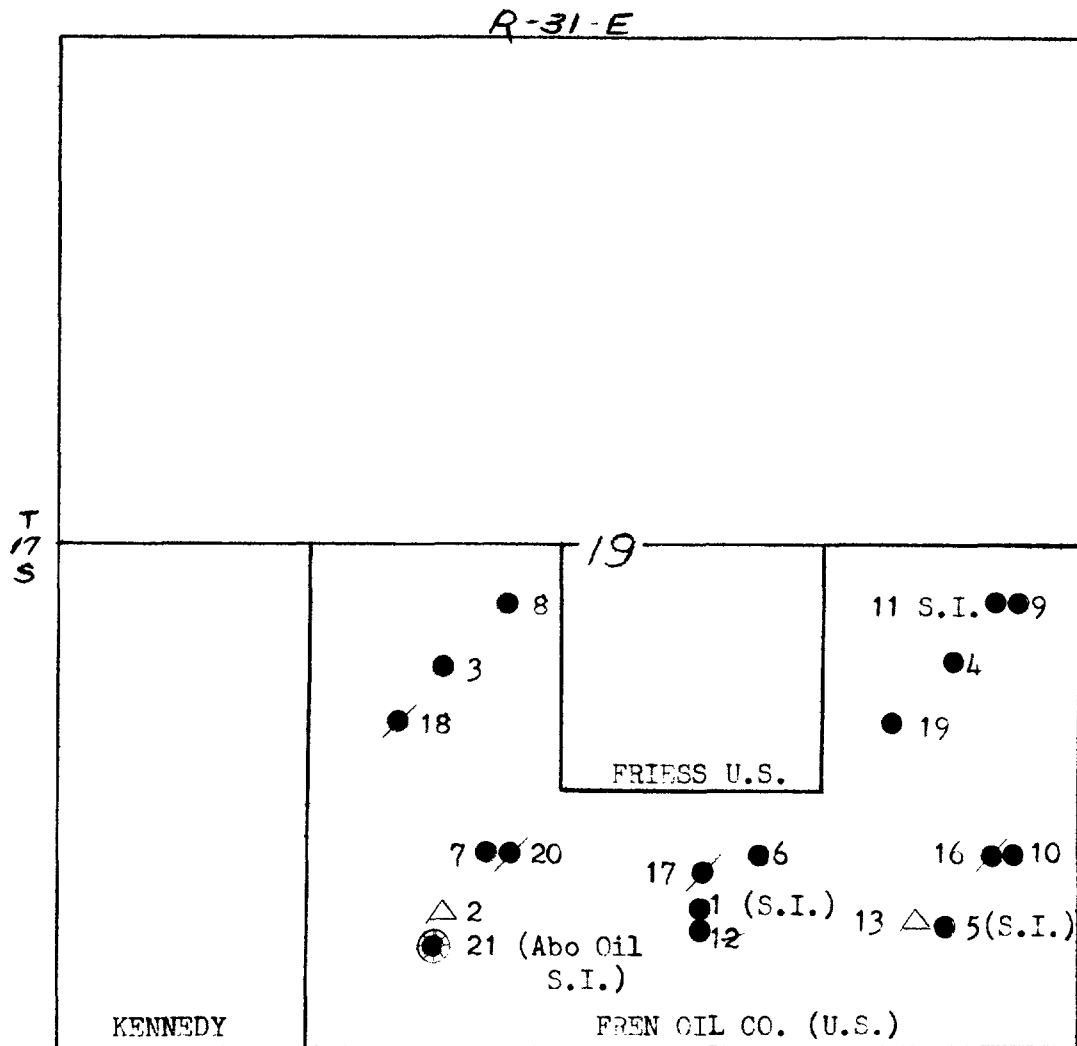
October

Grayburg-Jackson 111.0 bbl. x 0.828 = 91.908

Cedar Lake Abo	<u>10.1 bbl.</u>	x 0.817 =	<u>8.252</u>
Combined	<u>121.1</u>		<u>100.160</u>

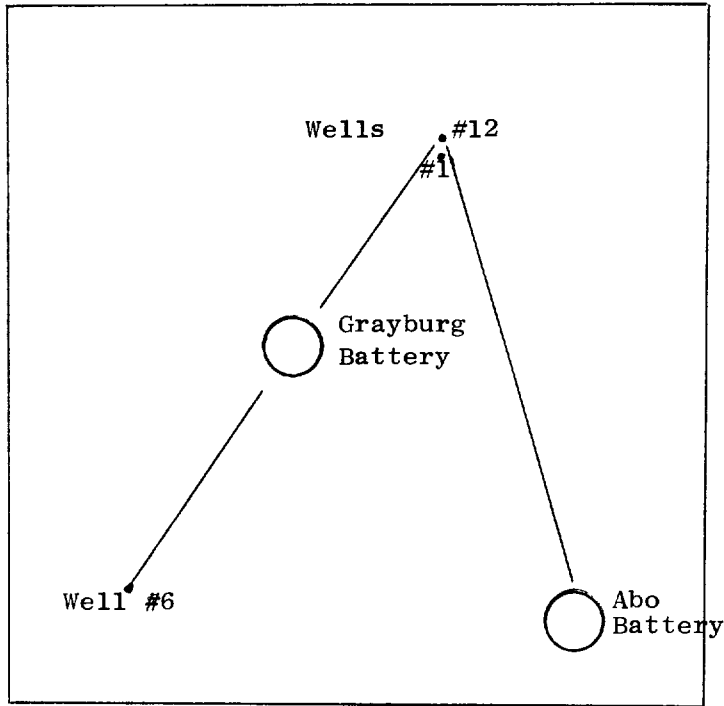
Specific Gravity of Combined = $\frac{100.16}{121.10} = 0.827 = 39.6^{\circ}\text{API}$

ATLANTIC RICHFIELD COMPANY
Proposed Commingling of Cedar Lake
Abo and Grayburg Jackson Production
Well Locations
S/2 of Section 19, T-17-S, R-31-E,
Eddy County, New Mexico



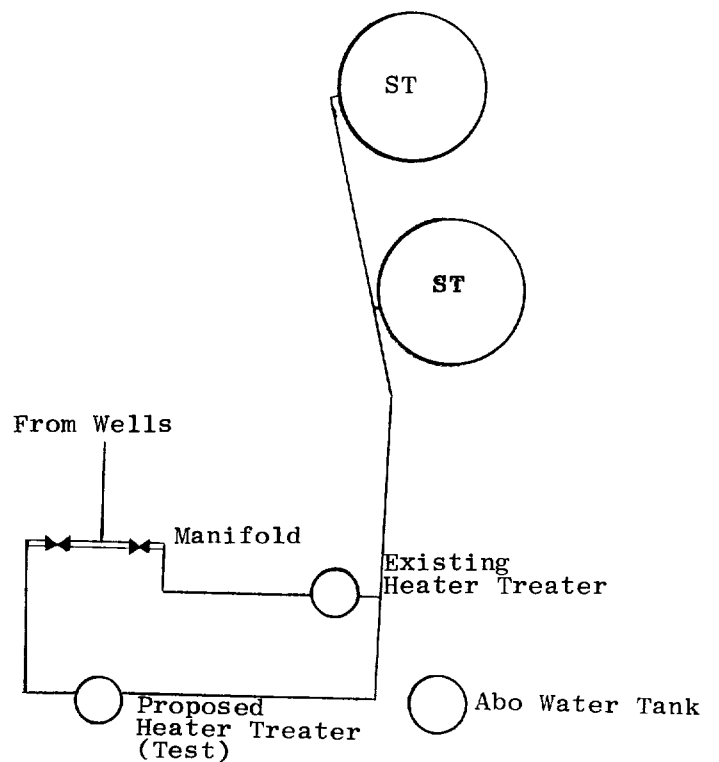
Code

- Oil Well, (Producing unless otherwise stated on map)
- Temporarily Abandoned
- △ Injection Well
- Oil and Gas (Dual)



Schematic Diagram of
Installation for Proposed
Commingling

Note:
This manifold will
be for 10 wells.
This was drawn for
one well for
simplicity.



September Pool	Number of Wells	Daily Production	Type Crude	Gravity °API	Price Per Bbl.	SELLING PRICE COMPARISON Separately	Comming
Grayburg-Jackson	8	123.8	Sweet	39.4	\$ 4.18	\$517.48	39.6°API @ \$4.18/bbl. = \$561.79
Cedar Lake Abo	1	<u>10.6</u> 134.4	Sweet	41.6	\$ 4.31	<u>\$ 45.69</u> \$563.17	<u>\$561.79</u>
				Decrease/Day by Commingling			\$ 1.38
				Decrease/Month by Commingling			\$ 41.40
October							
Grayburg-Jackson	8	111.0	Sweet	39.4	\$ 4.18	\$463.98	39.6°API @ \$4.18/bbl. = \$506.20
Cedar Lake Abo	1	<u>10.1</u> 121.1 bbls.	Sweet	41.6	\$ 4.31	<u>\$ 43.53</u> \$507.51	<u>\$506.20</u>
				Totals			
				Decrease/Day by Commingling			\$ 1.31
				Decrease/Month by Commingling			\$ 39.30
				Average Decrease/Day by Commingling			\$ 1.35
				Average Decrease/Month by Commingling			\$ 40.35