

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico
August 22, 1962

File: N-750-501.61

Subject: Application to Dispose of
Salt Water in Pan American
Petroleum Corporation's
United States Government
Section 19 Well No. 13
Hogback Pennsylvanian Field
San Juan County, New Mexico

*Class
3644*

Referring

Mr. A. L. Porter, Jr. (3)
Secretary-Director
Oil Conservation Commission
State of New Mexico
P. O. Box 871
Santa Fe, New Mexico

Dear Sir:

Pan American Petroleum Corporation respectfully requests (1) an exception to requirements of New Mexico Oil Conservation Commission Rule 701 (A) and (2) Administrative approval to dispose of salt water in our U.S.G. Section 19 Well No. 13, located 2050' FNL and 1810' FEL, Section 19, T-29-N, R-16-W, Hogback Pennsylvanian Pool, San Juan County, New Mexico. Attached in triplicate are: (1) Application to Dispose of Salt Water by Injection into a Porous Formation Not Productive of Oil or Gas, (2) pertinent data sheet, (3) log of proposed injection well and (4) plat showing location of proposed injection well, location of other producing wells within a radius of two miles, producing zones of wells within two miles and lease owners within two miles.

The proposed disposal well is presently completed in an oil producing interval in the Pennsylvanian from 6620-32'. The proposed disposal zone (6514-24') is separated from the oil producing zone by a packer and other down the hole equipment. The proposed disposal zone was formerly a gas producing interval in the subject well and in U.S.G. Section 19 Well No. 17 located 1850' FSL and 790' FEL, Section 19, T-29-N, R-16-W. However, both well Nos. 13 and 17 commenced producing water to the extent that they would not deliver sufficient gas to the U. S. Bureau of Mines Helium Plant to continue operation; therefore, the gas producing intervals in both wells were abandoned in 1958.

Abandonment of the gas producing zones was accomplished by bottom hole separation equipment. Pan American proposes to dispose of salt water down the annulus between the tubing and casing through perforations from 6514-24'. The water produced from the interval 6514-24' is of no value for irrigation, stock, domestic, or other general uses as shown by the attached water

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analysis. The water to be disposed of contains 60,900 PPM chlorides as shown by field titration and is unfit for domestic, stock, irrigation, and/or other general uses. The water to be disposed of is being produced from the present oil producing interval from 6620-32' in Well No. 13 and a correlative interval (6643-59') in Well No. 17. Performance of the oil producing interval indicates that the reservoir is in the latter stages of depletion. Therefore, Pan American cannot economically justify a salt water disposal system entailing a sizable expenditure. We have proposed disposal of salt water in the above manner in order to continue producing the wells to depletion.

The State Engineer's Office and the surface owner of the land upon which the subject well is located have been notified by a copy of this letter, with a copy of our application attached, of our intent to dispose of salt water in U.S.G. Section 19 Well No. 13. Pan American is the operator of the off-set acreage. The nearest well completed in the proposed disposal interval is Continental Oil Company's Table Mesa 3-18, located some nine miles to the southwest in Section 3, T-27-N, R-17-W.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION


T. M. Curtis
District Superintendent

JRK:en
Attach.

cc: State Engineer's Office
Santa Fe, New Mexico

United States Geological Survey
Roswell, New Mexico

PERTINENT DATA SHEET
PAN AMERICAN PETROLEUM CORPORATION'S
U.S.G. SECTION 19-29-16 Well NO. 13
SAN JUAN COUNTY, NEW MEXICO

Well Location	2050' FNL & 1810' FEL, Section 19, T-29-N, R-16-W, San Juan County, New Mexico
Date Spudded	May 16, 1952
Date Completed	October 13, 1952
Elevations	GL: 5033' DF: 5044'
Total Depth	7453' (Basement)
Plug Back Depth	6743' (Pennsylvanian)
Casing Program	13-3/8" CSA 1250' w/1300 sacks 9-5/8" CSA 5326' w/400 sacks 5-1/2", 14# CSA 7138' w/660 sacks
Tubing	2-3/8" OD, 1.995" ID, 4.7# set at 6580'
Other Down the Hole Equipment	5-1/2" Baker Model "D" Packer set at 6580' 2-3/8" Otis Side Door Choke Nipple set at 6579'
Formation Tops	See attached well log
Producing Formation	Pennsylvanian
Type of Formation	Limestone
Perforations	6620'-32'
Proposed Water Disposal Zone & Depth	Pennsylvanian 6514-24'
Type of Fluid to be Injected	Salt Water
Anticipated Amount of Fluid to be Injected	1000 barrels per day
Source of Injection Fluid	U.S.G. Section 19 Well No. 13 Pennsylvanian Zone 6620-32' U.S.G. Section 19 Well No. 17 Pennsylvanian Zone 6643-59'

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2	GE	
3	RE	
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ILLEGIBLE

ATTACHMENT

6930-55' squeezed w/150 sacks; 6166-78' and 6198-6214' squeezed w/200 sacks; 6330-42' and 6380-6400' squeezed w/100 sacks; 6330-42' squeezed w/200 sacks; 6166-78' squeezed w/150 sacks; 6330-60' squeezed w/150 sacks; 6191-97' and 6198-6214' squeezed w/150 sacks; 6380-6400' squeezed w/150 sacks; 5590-5600' squeezed w/100 sacks; 5542-52' squeezed w/250 sacks; 5388-95' squeezed w/250 sacks.

Case 2644

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

APPLICATION
TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION
NOT PRODUCTIVE OF OIL OR GAS

Operator Pan American Petroleum Corporation Address Box 480, Farmington, New Mexico

Lease U.S.G. Section 19 Well No. 13 County San Juan

Unit G Section 19 Township 29-N Range 16-W

This is an application to dispose of salt water produced from the following pool(s):

Hogback Pennsylvanian Pool

Name of Injection Formation(s): Pennsylvanian

Top of injection zone: 6514' Bottom of injection zone: 6524'

Give operator, lease, well no., and location of any other well in this area using this same

zone for disposal purposes: None

CASING PROGRAM

	Diameter	Setting Depth	Sacks Cement	Top of Cement
Surface	13-3/8"	1250'	1300	Surface
Intermediate	9-5/8"	5326'	400	4200'
Long String	5-1/2"	7138'	660	4930'

Will injection be through tubing, casing, or annulus? Annulus between casing and tubing

Size tubing 2-3/8" Setting depth: 6580' Packer set at. 6580'

Name and Model No. of packer: Baker Model "D" Production Packer

Will injection be through perforations or open hole? Perforations

Proposed interval(s) of injection: 6514-24'

Well was originally drilled for what purpose? Producing oil and/or gas

Has well ever been perforated in any zone other than the proposed injection zone? Yes

List all such perforated intervals and sacks of cement used to seal off or squeeze each:

(See Attached Sheet)

6930-7030' squeezed w/200 sacks; 6930-80' squeezed w/630 sacks; 7050-54' squeezed w/200 sacks;

Give depth of bottom of next higher zone which produces oil or gas: 882'

Give depth of top of next lower zone which produces oil or gas: 6620'

Give depth of bottom of deepest fresh water zone in area: No fresh water in area. Morrison at 870-1977' produces brackish water.

Expected volume of salt water to be injected daily (barrels): 1000

Will injection be by gravity or pump pressure? Pump Estimated pressure: 1800 psig

Is system open or close type? Open Is filtration or chemical treatment necessary? No

Is the water to be disposed of mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use? Yes

Is any water occurring naturally within the proposed disposal formation mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use? Yes

List all offset operators to the lease on which this well is located and their mailing address
None

Name and address of surface owner _____

Have copies of this application been sent by registered mail or given to all offset operators, surface owners, and to the New Mexico State Engineer? Yes

Is a complete electrical log of this well attached? Yes

Operator: Pan American Petroleum Corporation

By: T. M. Curtis

Title: District Superintendent

STATE OF New Mexico)
) ss.
County of San Juan)

BEFORE ME, The undersigned authority, on this day personally appeared T. M. Curtis known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein and that said report is true and correct.

SUBSCRIBED AND SWORN TO before me this the _____ day of August, 19 62

Notary Public in and for the County of _____

My Commission Expires _____

NOTE: Should waiters from all offset operators, the surface owner, and the State Engineer not accompany an application, the New Mexico Oil Conservation Commission will hold the application for a period of fifteen (15) days from date of receipt by the Commission's Santa Fe office. If at the end of said fifteen-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.