

PAN AMERICAN PETROLEUM CORPORATION

Post Office Box 68
Hobbs, New Mexico

August 26, 1968

File: VES-343-986.510

Subject: Application for Salt Water Disposal
Cato San Andres Field
Chaves County, New Mexico

Mr. A. L. Porter
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

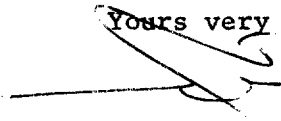
Dear Sir:

This has reference to our previous letter application dated July 15, 1968, File: VES-282-986.51, and a telephone conversation between Mr. John Runyan of your Hobbs office and Mr. Al Klaar of our office. Mr. Runyan indicated that our application to dispose of produced water from the Cato Field into the Rustler formation in the Sellers No. 1 was being held in suspense until such time as we would submit a water analysis of water from the proposed injection interval. Attached is a copy of this water analysis. Also attached are an updated Form C-108 and a diagrammatic sketch of the Sellers No. 1.

In order to obtain this water sample, we spotted a 25 sack plug from 3378 to 3100 feet and a 20 sack plug from 1700 to 1350 feet, cut the 4-1/2 inch casing at 1258 feet, reciprocated the pipe and established circulation in the annulus. We then proceeded to cement the 4-1/2 inch casing back to the surface utilizing 200 sacks of Incor with 12 percent gel and 225 sacks of Incor Neat.

We respectfully request administrative approval to dispose of produced water in the Rustler formation of the Sellers No. 1.

Yours very truly,


V. E. Staley
Area Superintendent

AK/jt

cc: New Mexico Oil Conservation Commission-Hobbs
Mrs. Bob Crosby-Roswell, New Mexico
Union Texas Petroleum-Midland, Texas
Mr. R. H. Fulton-Lubbock, Texas
Mr. N. S. Whitmore-Fort Worth, Texas

Attachments

33 AUG 29 1968

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Pan American Petroleum Corporation		ADDRESS P.O. Box 68, Hobbs, New Mexico 88240	
LEASE NAME Sellers	WELL NO. 1	FIELD Cato	COUNTY Chaves
LOCATION UNIT LETTER M ; WELL IS LOCATED 660 FEET FROM THE South LINE AND 660 FEET FROM THE West LINE, SECTION 3 TOWNSHIP 8-S RANGE 30-E NMPM.			
CASING AND TUBING DATA			
NAME OF STRING SURFACE CASING	SIZE 8-5/8"	SETTING DEPTH 450'	SACKS CEMENT 300
TOP OF CEMENT Circulated		TOP DETERMINED BY 800 sxs initially-top cmt est @ 1440. Cut 4-1/2" pipe @	
NAME OF STRING NONE	SIZE	SETTING DEPTH	SACKS CEMENT
TOP OF CEMENT		TOP DETERMINED BY 1260' reciprocated pipe and cemented with total of 425 sxs cmt. Circulated 10 sxs cmt.	
NAME OF STRING LONG STRING	SIZE 4-1/2"	SETTING DEPTH 3402	SACKS CEMENT 800 & 425
TOP OF CEMENT Circulated *		TOP DETERMINED BY	
NAME OF STRING TUBING	SIZE 2-3/8"	SETTING DEPTH 980	SACKS CEMENT
NAME, MODEL AND DEPTH OF TUBING PACKER Baker Model "AK" or equal at 950'		TOP DETERMINED BY	
NAME OF PROPOSED INJECTION FORMATION Rustler		TOP OF FORMATION 1003	BOTTOM OF FORMATION 1005
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES Perforations	PROPOSED INTERVAL(S) OF INJECTION 1005-1035
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? As a producing well in Cato Field	
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 3252-53, 65-69, 72-74, 75-80, 3320-37, 45-49, 55-63 x 2 JSPE. 3378 (PBD) to 3100'. Spotted 25 sxs plug from	
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 240		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA None	
DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA 2540		ANTICIPATED DAILY INJECTION VOLUME (BBLS.) 1000	
MINIMUM 800		MAXIMUM 2300	
OPEN OR CLOSED TYPE SYSTEM Closed		IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	
APPROX. PRESSURE (PSI) 0-1100 PSI		ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE — Yes	
WATER TO BE DISPOSED OF Yes		NATURAL WATER IN DISPOSAL ZONE Yes	
ARE WATER ANALYSES ATTACHED? Yes-San Andres x Rustler		NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Mrs. Bob Crosby, Attn: Mr. W. C. Schauer, Box 341, Roswell, New Mexico 88201	
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Pan American Petroleum Corporation, P. O. Box 68, Hobbs, New Mexico 88240 Union Texas Petroleum, P. O. Box 1859, Midland, Texas 79701 R. H. Fulton, 2323 Erskine Road, Lubbock, Texas 79400			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? Yes		SURFACE OWNER Yes	
EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes		THE NEW MEXICO STATE ENGINEER XXXXXXXXXXXXXXXXXXXX	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) Submitted with previous application		ELECTRICAL LOG Submitted with previous application	
DIAGRAMMATIC SKETCH OF WELL Yes			

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

(Signature)

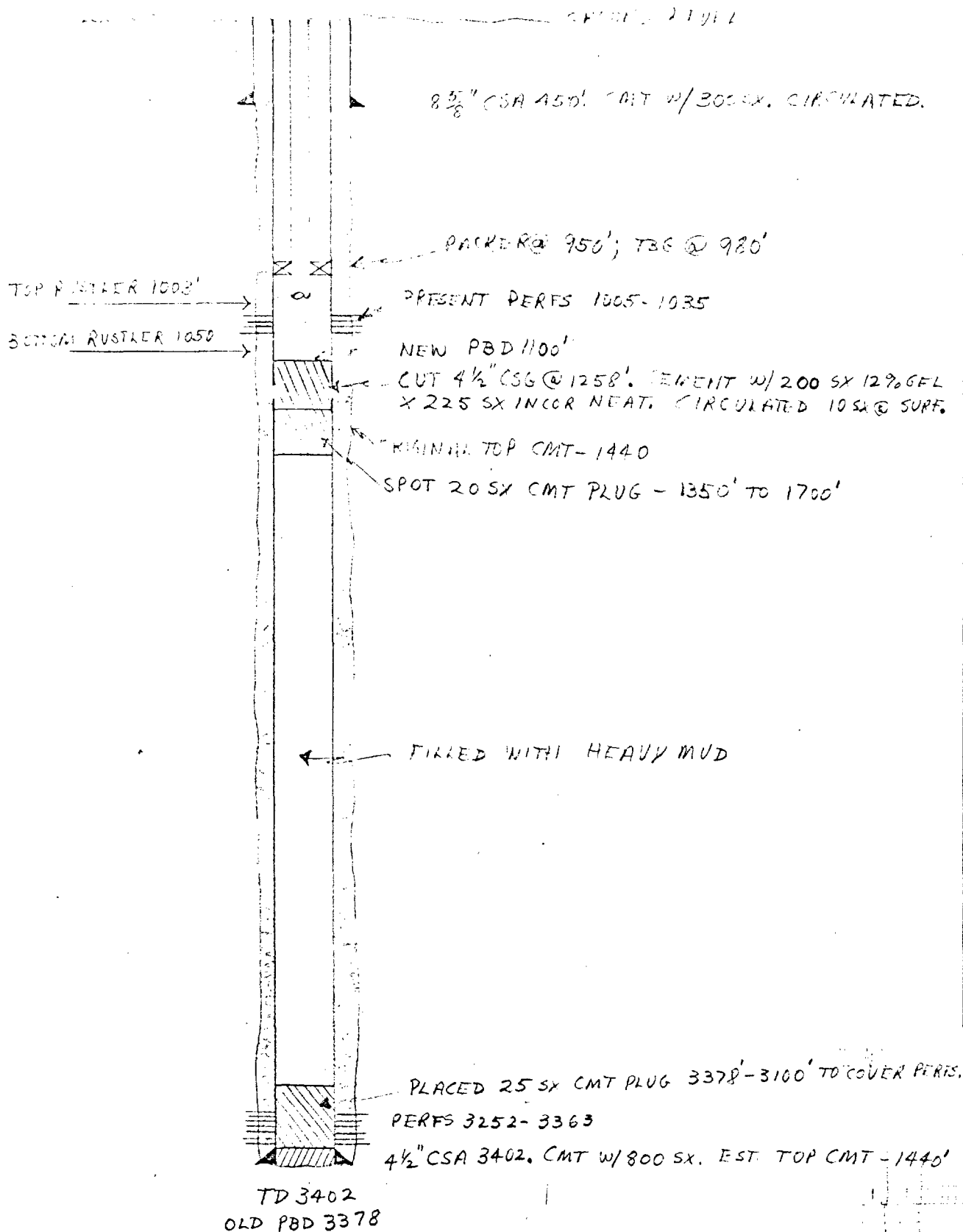
Area Superintendent

(Title)

August 26, 1968

(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.



PAN AMERICAN PETROLEUM CORPORATION

SCALE: 1" = 100'

SELLERS No. 1 - CATO SAN ANDRES FIELD.

DRG.
NO.



Byron Jackson Inc.

SUBJECT:
DEPTH:
FORMATION: Rustler

Company Pan American Petroleum Corporation Farm Sellers Well No. 1
Location Cato County Chaves State New Mexico Date 8/21/68
Pool _____ Date Sampled _____ Submitted by Don Jones

SPECIFIC GRAVITY: 1.088

pH: 5.9

PRINCIPAL CONSTITUENTS

RADICAL	PARTS PER MILLION	REACTING VALUE		PER CENT
		EQUIVALENTS PER MILLION		
SODIUM	37,400	37,400	1,628.87	44.78
CALCIUM	2,165	2,050	108.00	2.97
MAGNESIUM	994	1,988	81.70	2.25
CHLORIDE	61,000	61,000	1,720.00	47.30
SULPHATE	4,510	2,255	94.00	2.58
BICARBONATE	274	76	4.57	.12
PRIMARY SALINITY:	82.56	PER CENT TOTAL REACTING VALUE		
SECONDARY SALINITY:	10.20	PER CENT TOTAL REACTING VALUE		
SECONDARY ALKALINITY:	.24	PER CENT TOTAL REACTING VALUE		

General Remarks: Sample Number 1

LAB. NO. 1025DISTRICT HobbsANALYZED BY CF

DISTRIBUTION _____

Signed

Guinn Ferguson

A B J Laboratory Report

Bioscience Resource Project

SUBJECT

TITLE

DATE

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Bioscience Resource Project



Byron Jackson Inc.

SUBJECT:
DEPTH:
FORMATION: Russler

Company Pan American Petroleum Corporation Farm Sellers Well No. 1
Location Cato County Chaves State New Mexico Date 8/22/68
Pool _____ Date Sampled _____ Submitted by Al Klaar

SPECIFIC GRAVITY: 1.084

pH: 5.9

PRINCIPAL CONSTITUENTS

RADICAL	PARTS PER MILLION	REACTING VALUE		PER CENT
		EQUIVALENTS PER MILLION		
SODIUM	37,100	37,100	1,613.10	44.50
CALCIUM	2,260	2,140	112.50	3.11
MAGNESIUM	1,055	2,110	86.70	2.39
CHLORIDE	60,700	60,700	1,712.00	47.24
SULPHATE	4,540	2,270	94.20	2.60
BICARBONATE	372	100	6.10	.16

PRIMARY SALINITY: 39.00 PER CENT TOTAL REACTING VALUE
SECONDARY SALINITY: 10.68 PER CENT TOTAL REACTING VALUE
SECONDARY ALKALINITY: .32 PER CENT TOTAL REACTING VALUE

General Remarks: Sample Number 2

LAB. NO. 1026DISTRICT HobbsANALYZED BY CF

DISTRIBUTION _____

Signed

Guinn Ferguson
Guinn Ferguson



By: [Name]

SUBJECT

DATE

PERFORMED BY

1. [Text]

2. [Text]

3. [Text]

TESTING GRAVITY

PERFORMED BY

REMARKS

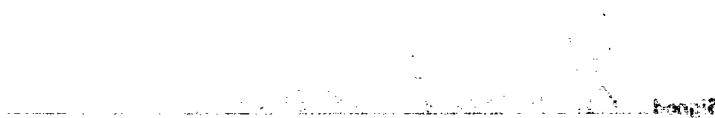
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TESTING GRAVITY

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REMARKS

TESTING GRAVITY





Corporation

UNION TEXAS PETROLEUM DIVISION

1300 WILCO BUILDING • MIDLAND, TEXAS 79701 • AREA CODE, 915, 682-0515

September 6, 1968

Mr. A. L. Porter
New Mexico Oil Conversation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Sir:

We are in receipt of an application by Pan American Petroleum Corporation to dispose of salt water into the Rustler Formation, in their Sellers #1, located in the Cato Field, Chaves County, New Mexico.

Union Texas Petroleum does not object to Pan American disposing of produced salt water into the Rustler Formation. However, it should be pointed out that the casing in surrounding producing wells is not protected with cement adjacent to the Rustler Formation. Injection of salt water into this zone could create future external casing corrosion problems and/or induce sufficient pressure to collapse unprotected casing in nearby producing wells.

Although we do not object to Pan American's proposal, we feel that it is necessary to document some of the possible hazards of this operation.

Very truly yours,

UNION TEXAS PETROLEUM

A handwritten signature in cursive script, appearing to read "R. L. Stover".

R. L. Stover
District Production Manager

RLS/ss

cc: Mr. V. E. Staley
Area Superintendent
Pan American Petroleum Corporation
P. O. Box 68
Hobbs, New Mexico 88240