

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD AZTEC, NEW MEXICO B7410 (505) 334-6178

OIL CONSERVATION DIVISION BOX 2088 SANTA FE, NEW MEXICO 87501	
DATE <u>&-18 - 8 C</u>	
RE: Proposed MC Proposed DHC Proposed NSL Proposed SWD Proposed WFX Proposed PMX	
Gentlemen:	
I have examined the application dated JANG	ARY 29 1100
for the MERCHAN CHE GAS COOP. CHITT	Well No. Unit, S-T-R
and my recommendations are as follows:	
PARRONE	
Yours truly,	
Butter & State	

MERRION OIL & GAS CORPORATION

P. O. Box 840
FARMINGTON, New Mexico 87499

January 24, 1986

Oil Conservation Division Aztec Division Office 1000 Rio Brazos Road Aztec, New Mexico 87410

Re: Application for Authorization to Inject Chittum Penistaja #1

Gentlemen:

Merrion Oil and Gas Corporation requests administrative approval to dispose of produced water from the Entrada formation by subsurface injection. Attached for your consideration is our "Application for Authorization to Inject".

The proposed disposal well is the Chittum Penistaja #1. The proposed injection zone is the Gallup.

Respectfully,

T. Greg Merrion Production Engineer

TGM/ljm

EEB 11 1986
OIL CON. DIV.

MERRION OIL & GAS CORPORATION

P. O. Box 840 FARMINGTON, NEW MEXICO 87499

January 24, 1986

Oil Conservation Division State Land Office Building P. O. Box 2088 Santa Fe, New Mexico 87501

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FEB 1 1 1986
OIL CON. DIV.
DIST. 3

OIL CONSERVATION DIVISION

POST OFFICE BOX 20HB STATE LAND OFFICE BUILDING BANTA SE NEW ME BUILDING FORM C-108 Revised 7-1-81

Production Engineer

January 24, 1986

	BANTA FE NEW MERICO 87501
APPLIC	ATION FOR AUTHORIZATION TO INJECT
I.	Purpose: Secondary Recovery Pressure Maintenance Disposal Storage Application qualifies for administrative approval? Xyes no
II.	Operator: Merrion Oil and Gas Corporation
	Address: P. O. Box 840, Farmington, New Mexico 87499
	Contact party: T. Greq Merrion Phone: (505)-325-5093
III.	Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
IV.	Is this an expansion of an existing project? yes ino If yes, give the Division order number authorizing the project
٧.	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
* VI.	Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
VII.	Attach data on the proposed operation, including:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
·VIII.	Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
IX.	Describe the proposed stimulation program, if any.
х.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
XI.	Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
XII.	Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
XIII.	Applicants must complete the "Proof of Notice" section on the reverse side of this form.
XIV.	Certification
	I hereby certify that the information submitted with this application is true and correct

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

Title

Date:

to the best of my knowledge and belief.

Name: T. Greg Merrion

Signature: 1

January 24, 1986

Addendum to Application for Authorization to Inject

- IIIA. (1) Chittum Penistaja #1
 Section 36, I2ON, R5W
 990' FSL; 990' FEL
 - (2) 9-5/8", 36#/ft., K-55 surface casing run to 237' and cemented to surface w/260 sx. Hole size to 237' is 14-3/4".

7", 23# & 32#/ft., K-55 & C-75 production casing run to 3100' & cemented w/ 200 sx. Top of cement is at 2438' (from CBL). Hole size to 3100' is 8-3/4".

4-1/2", 10.5#/ft., J-55 liner run from 2927' to 3600' and cemented w/70 sx. Top of cement at 2927' (calculated). Hole size to 3600' is 6-1/4".

- (3) 3-1/2", 9.3#/ft, J-55 plastic-coated tubing to 2900' and 2-7/8", 6.5#/ft, J-55 plastic-coated tubing to 3200'.
- (4) Baker Lok-Set packer (internally plastic-coated) set at 3200'.
- B. (1) Gallup formation.
 - (2) 3270'-3328' (1 JSPF).
 - (3) The subject well was originally drilled as a Gallup producer.
 - (4) See wellbore sketch for details on perforated intervals and squeeze information.
 - (5) There are no oil or gas zones above the Gallup. The Entrada is the next lower oil zone in the area.
- VI. The wells within a one-half mile radius of the proposed Chittum Penistaja #1 are the State 36A-1 and the Arena Blanca #1.

Addendum to Application for Authorization to Inject Page Two

Well: State 36A-1

Type: Plugged and abandoned (See Figure 1).

Date Drilled: 10-8-75

Location: 1650' FSL; 500' FEL

Section 36, T20N, R5W

McKinley County, New Mexico

Depth: 5740'

Completed Interval: Did not complete. Entrada DST'd

wet.

Well: Arena Blanca #1 Type: Producing oil well.

Date Drilled: 7-14-85

Location: 2360' FSL; 1200' FEL Section 36, T20N, R5W

McKinley County, New Mexico

Depth: 5569'

Completed Interval: Entrada (5714'-15')

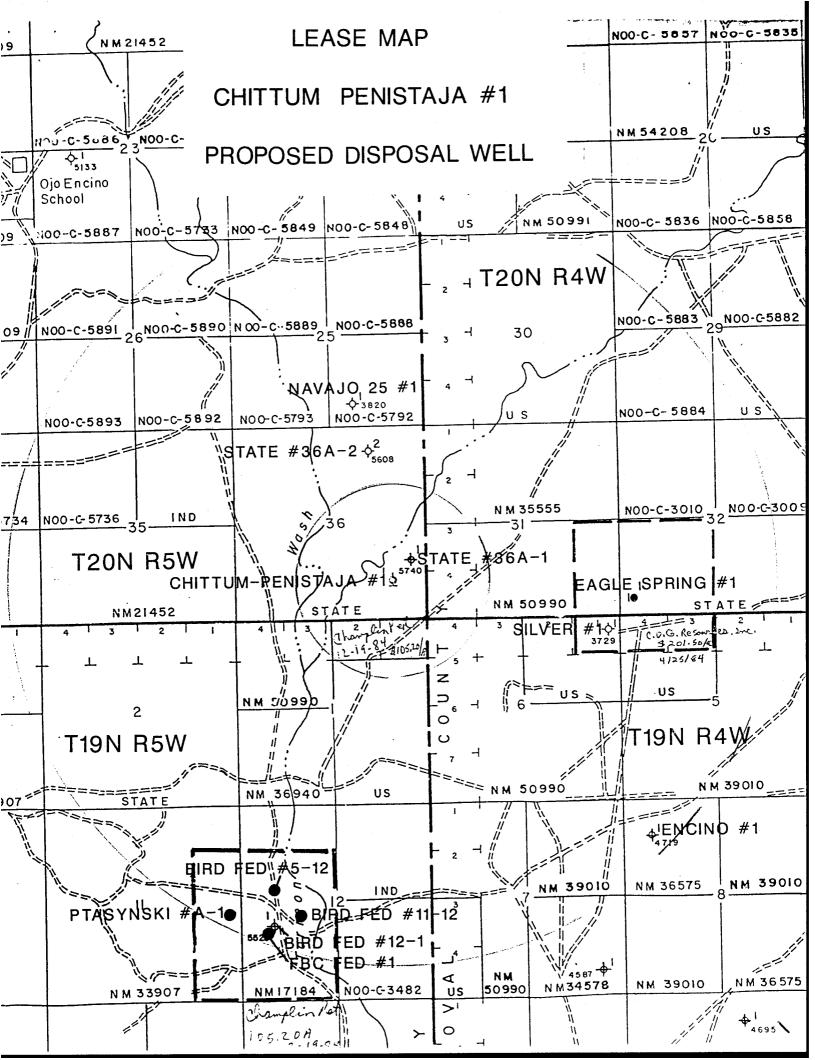
- VII. (1) Average Injection Rate: 4000 BWPD Maximum Injection Rate: 6000 BWPD
 - (2) The injection system is closed.
 - (3) Average Surface Injection Pressure: 500 PSIG Maximum Surface Injection Pressure: 650 PSIG
 - (4) The Entrada is the source of the produced water. A water analysis is attached.
 - (5) An analysis of the Gallup formation water is attached.
- VIII. The injection interval is the Cretaceous Gallup formation. The Gallup is a very fine grained, shaley, regressive marine siltstone. The Gallup top is at 3211' and the formation is 420' thick.

The base of the Ojo Alamo is generally considered the bottom of all underground sources of drinking water. The Ojo Alamo outcrops north of this area and therefore no sources of drinking water are present in the proposed injection well.

- IX. No stimulation is proposed at this time.
- X. The well logs have been submitted.
- XI. There are no fresh water wells within one mile of the injection well.

Addendum to Application for Authorization To Inject Page Three

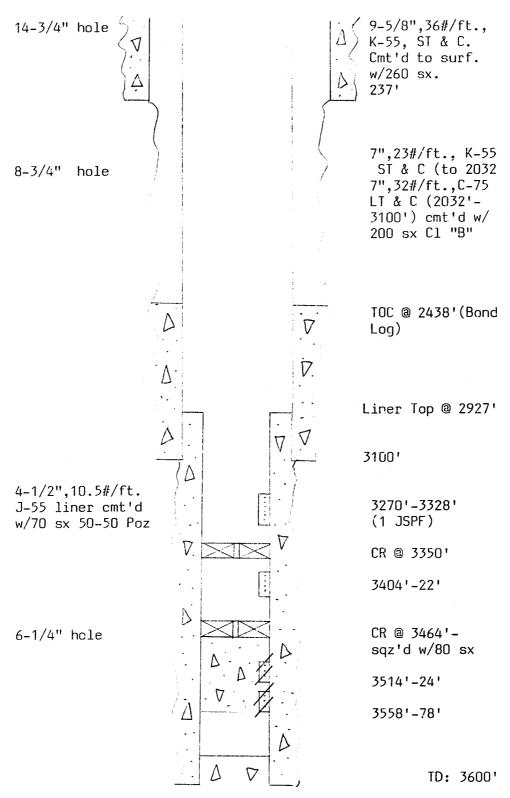
- XII. Available engineering and geologic data has been examined and there is no evidence of a hydrologic connection between the disposal zone and a source of drinking water.
- XIII. Leasehold operators within a one-half mile radius include Santa Fe Energy and Champlin. Both operators have been notified by registered mail of the proposed disposal well. A legal advertisement was published in McKinley County, New Mexico and is attached.



MERRION OIL & GAS CORPORATION

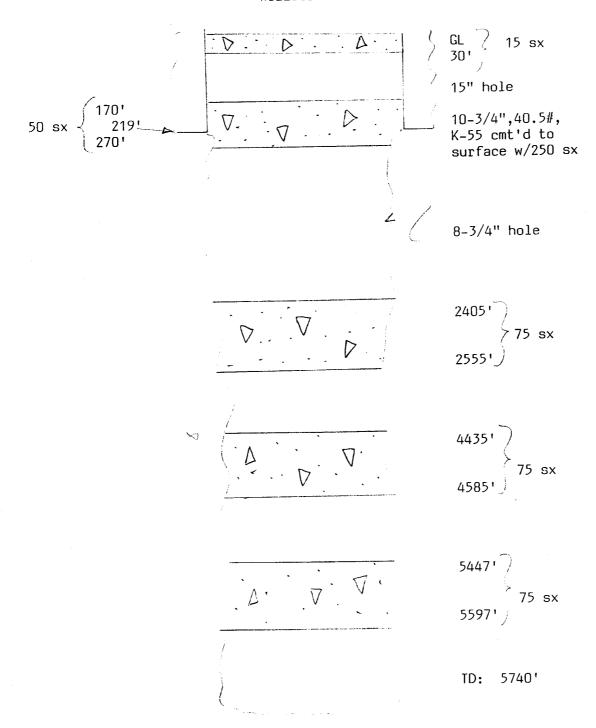
CHITTUM PENISTAJA #1

MCKINLEY COUNTY, NEW MEXICO Wellbore Schematic



STATE 36A - 1

Wellbore Schematic



E1 E1 D	DECEIPT	no.	

API FORM 45-1

API WATER ANALYSIS REPORT FORM

Company Morria () u d (6A)	Sample No.	Date Sampled
Field 7	Legal Description	County of Survey	over 1 MM
Lease or light -	Well 77-1	Depth Formation	Water, B/D
Type of Water (Produc	ed, Supply, etc.) Sampling	Point	Sampled By

DISSCLVED SCLIDS		
CATIONS Sodium, Na (calc.) Calcium, Ca Magnesium, Mg Earium, Ba Potassium, K	194 605	441.8 4.0 /6.0
MNIONS Chloride, Cl Sulfate, SO4 Carbonate, CO3 Bicarbonate, HCO3	jlo54, <u>≤ z5</u> <u>564</u>	467.3 = 3.5 -3- -9.4
Total Dissolved Solids	(calc.) 28 15/	
Iron Fe (total) Fet		6~

REMARKS & RECOMMENDATIONS:

Sulfide, 23 H:S

OTHER PROPERTIES

pH Specific Gravity, 60/60 F. Resistivity (ohm-meters) 7 F. Total hardness	1.124

WATER PATTERNS - me/l

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ANALYST:

THE WESTERN COMPANY OF NORTH AMERICA, FARMINGTON. III (505) 327-6222

Please refer any questions to: Clay Terry. District Engineer or Tom Burris, Field Engineer

5-8000 MAK CL.
ALLOWABLE FOR PECC.

API WATER ANALYSIS REPORT FORM

Company MERRION OIL	, & GAS		Sample No.	Date Sampico
Field Wildcat Entrada	Legai	Description 2.36, T2ON, R5W	County or Par McKinley	! им
Lease or Unit Arena Blanco	Well #1	Depth 5575	Formation Entrada	Water, B/D water
Type of Water (Produce produced	d. Supply, esc.)	Sampling Point wellhead		Sampled By RD

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CATIONS Sedium, Na (cala)	292	me/l 12.7
Calcium, Ca Magnesium, Mg		<u>11.4</u> 27.6
Potassium, K	23.0	588

NIONS

Sulfate, SO ₄ Carbonate, CO ₃	 15.6
Bicarbonate, ECOx	

Total Dissolved Solids (calc.)

3055

 Iron. Fe (total)
 -0

 Sulfide, as H:S
 -0

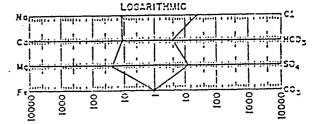
REMARES & RECOMMENDATIONS:

OTHER PROPERTIES

pE	$\frac{7.3}{1.016}$		
Specific Gravity, 60/60 F. Resizivity (ohm-metern) 69°F. Total hardness	0.80 1950		

WATER PATTERNS - me/l

STANDARD 10 0 10 20



ANALYST: Russ Pyeatt/
Clay Terry

THE WESTERN COMPANY OF NORTH AMERICA, FARMINGTON. NM (505) 327-6222

Please refer any questions to: Clay Terry. District Engineer or Tom Burris, Field Engineer

MERRION OIL & GAS CORPORATION 205 PETROEUM CLUB BUILDING P.O. BOX 840 FARMINGTON, NEW MEXICO 87499 505/325-5093 Propose to convert to Water Injection Well chittum Penistaja #1, 990' FSL & 990' FEL Section 38, TioN, R5W, McKinley County, New Mexico. Injection zoneGallup, Depth - 3270' - 3328' Maximum Rate - 6000 BWPD. Maximum Pressure650PSIG. Interested parties must file objections or requests for hearing with the Oil conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

Legal #012418 Published in The Gallup Independent Wednesday January 29, Thursday January 30, 1986

Affidavit of Publication

ATE OF NEW MEXICO,				
OUNTY OF McKINLEY				
Cecilia Paiz			being duly sw	orn upon
th, deposes and says:				
As Legal CLer dependent, a newspaper publisher cKinley County, New Mexico, an fiant makes this affidavit based upworn to. That the publication, a ched in said newspaper during the otice was published in the newspapar	ed in and d in the oon person copy of w e period	having City of the nal know hich is the and time	Gallup, therein: dedge of the factoried e of publication	ulation in that this cts herein was pub- and said
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That such newspaper, in whished, is now and has been at all to purpose, and to publish legal notion of Chapter 12, of the statutes of the	hich such times mate ices and a e State of	notice of erial hero advertise	or advertisemen eto, duly qualifi ments within th exico, 1941 con	ed for such the meaning tipilation.
Sworn and subscribed to bef	ore me thi	s	4th	day of
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My commission expires	_			
8-27-89				

reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) Put your address in the "RETURN TO" space on the P064-536-382 Always obtain signature of addressee or agent and DATE DELIVERED. 1. 🏹 Show to whom, date and address of delivery. B. Addressee's Address (ONLY if requested and 80150 Article Number Champlin Petroleum Company SENDER: Complete items 1, 2, 3 and 4. 1 130 Englewood, Colorado Chittum Penistaia □ Insured □ COD Signature – Addressee 2.

Restricted Delivery. P. 0. Box 1257 3. Article Addressed to: for service(s) requested. 7. Date of Delivery 4. Type of Service: Signature – Aq A Kegistered
Contified
Express Mail Form 3811, July 1983

Addressee's Address (ONLY if requested and fee paid) being returned to you. The return receipt fee will provide reverse side. Failure to do this will prevent this card from you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) Put your address in the "RETURN TO" space on the Always obtain signature of addressee or agent and DATE DELIVERED. 1. [X Show to whom, date and address of delivery. P064-536-383 Article Number SENDER: Complete items 1, 2, 3 and 4. 80202 CHITTUM PENISIAJA 1 1616 Glenharm Place Denver, Colorado Insured COD Santa Fe Energy 5. Signature - Addressee ☐ Restricted Delivery. Article Addressed to: ニスジー for service(s) requested. 7. Date of Delivery Suite 2600 4. Type of Service: | Aegistered |X Certified | Express Mail Signature က် RETURN RECEIPT Form 3811, July