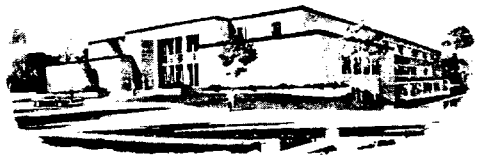
State of New Mexico



Commissioner of Public Lands

JIM BACA
COMMISSIONER

P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148
Express Mail Delivery Use:
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

June 3, 1985

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

Re: Application by Moroil Co. to convert West Guajalote State Well No. 2, located 660 feet from the south line and 1980 feet from the east line, Section 5, Township 19 S., Range 29 E.

Gentlemen:

The Land Commissioner enters no objection at this time as to the issuance of the above application. However, notwithstanding, the outcome of this application, the Land Commissioner reserves the right to refuse to grant an easement when to do so would be detrimental to the trust and until such time as it can be determined which prior rights, if any, have been conveyed to or contracted for by third parties which would limit or prohibit the Commissioner from issuing a salt water disposal site easement.

Yours truly,

JIM BACA
COMMISSIONER OF PUBLIC LANDS

BY:
Floyd O. Prando
Assistant Director
Oil and Gas Division
A/C 505-827-5744

JB:FOP:mig

PHONE (505) 748-2194
PHONE (505) 748-2385

MorOilCo, Inc.

DRAWER I
ARTESIA, NEW MEXICO 88210

CORRECTED VERSION

April 22, 1985

New Mexico Oil Conservation Commission
Energy and Minerals Department
P.O. Box 2088
Santa Fe, NM 87501

Re: Application for Authorization to Inject
Guajalote State #2
NW SE Section 5, T19S, R29E
Eddy County, New Mexico

Gentlemen:

MorOilCo, Inc., is seeking authorization to convert the above referenced well to produced water disposal in the Penrose and Grayburg Formation. The attached injection well data sheet shows the proposed mechanical configuration. The enclosed map shows a circle of a one-half mile radius around our proposed injector. A brief description of the wells within this radius is given below:

SE NW Section 5: Miller Brothers Oil Co., Jones & Watkins State #1 - Spud 1/20/51. Completed 8/21/51. TD 2785'. PBTD 2797'. 8-5/8" casing at 450', mudded 7" casing, set to 2745' with 40 sx cement. Perforations from 2735' to 2745' with 20 holes. Hydrofrac with 1500 gal. chemical. Well was abandoned (see plugging schematic).

SW NE Section 5: Lubbock Machine Co., Inc. Spud 4/16/51. Completed 10/17/51. TD 3007'. PBTD 2713'. 8-5/8" casing at 385' with 50 sx cement. 7" casing set to 3000' and cemented with 85 sx cement. Well was abandoned (see plugging schematic).

NW SW Section 5: MorOilCo, Inc., Guajalote "A" State #1. Former Amoco State "EW Com. #1. Re-entered 5/24/84. Completed 6/1/84. TD 3000'. 13-3/8" 48# casing set to 422' and cemented with 400 sx Cl "C". 9-5/8" 36E casing set to 3190' and cemented with 1615 sx Howco Lite and 200 sx Cl "H". Perforations 2586' - 2670'. Acidized with 2000 gal. 20% DS-30; frac with 6000 gal. gel water, 110,000# 20-40 sand. Well is producing.

NW SE Section 5: MorOilCo, Inc., Guajalote State #1 Spud 3/19/84. Completed 3/28/84. TD 3000'. PBTD 2948'. 8-5/8" 23# casing set to 350' with 240 sx Cl "C" cement. 5-1/2" 15.5# casing set to 2980' with 500 sx Cl "C" cement. Perforations 2576' - 2658'. Frac with 60,000 gal. gel. KCl and 100,000# 20/40 sand. Producing.

SW NE Section 5: MorOilCo, Inc., Guajalote State #3. Spud 11/8/84. Completed 11/14/84. TD 2830'. 8-5/8" 24# casing set to 345' and cemented with 270 sx Cl "C" 2% CaCl and circulate. 4-1/2" 9.5# casing set to 2827' and cemented with 450 sx Cl "C" 5% CF-1, 2% AFS, 2% KCl. Perforations 2026' - 2223', 2352' - 2715' and acidize with 1000 gal. each 10% DS-30. Frac with 60,000 gal. 20# gel, 1% KCl and 100,000# 20/40 sand. Producing.

NE NW Section 8: Stanley L. Jones, Continental Delaware #1. Spud 4/10/49. Completed 5/25/49. TD 3045'. 13-3/8" casing set to 305' and cemented with 250 sx Howco Cl "C". Well was not shot or acidized. Well was abandoned (see plugging schematic).

The proposed injection well will dispose of produced water from the Grayburg and Penrose formation, primarily from MorOilCo, Inc.'s Guajalote lease, as well as produced water from nearby operators. Our average injection rate into the well will be ½ BPM, with an average daily total of 350 barrels. The maximum rate we anticipate is 1 BPM, with a maximum daily total of 500 barrels. We expect an average injection pressure of 250 #'s psi, and request an operating maximum of 1100#'s.

The interval between 2570' - 2650' will be perforated with approximately 60 .42 holes. These perforations will be acidized to break down and clean the well bore. MorOilCo, Inc., feels that further stimulation will not be warranted at this time.

Copies of this application have been sent by registered mail to the following:

Conoco, Inc.
Mondo Oil & Gas Company
Husky Oil
Depco
Yates Petroleum Corporation
Anadarko Production Company

All of the above operators are within the area of review. Delivery receipts will be forwarded when received.

Sincerely,

Frank S. Morgan

Frank S. Morgan
MorOilCo, Inc.

FSM/rlm

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

Case 8617

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no

II. Operator: MorOilCo, Inc.

Address: P.O. Drawer I Artesia, NM 88210

Contact party: Frank S. Morgan Phone: (505) 748-2194

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 ☒ no
If yes, give the Division order number authorizing the project _____.

V. 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:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. 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.

* X. 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 to the best of my knowledge and belief.

Name: Frank S. Morgan Title Vice-President

Signature: Frank S Morgan Date: April 22, 1985

* 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. SNL - DLL Logs, Cement Bond Log and test were submitted when the well was drilled.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may subrit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that 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.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

PHONE (505) 748-2194
PHONE (505) 748-2325

MorOilCo.
INC.

DRAWER I
ARTESIA, NEW MEXICO 88210

April 22, 1985

New Mexico Oil Conservation Commission
Energy and Minerals Department
P.O. Box 2088
Santa Fe, NM 87501

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Sincerely,

Frank S. Morgan

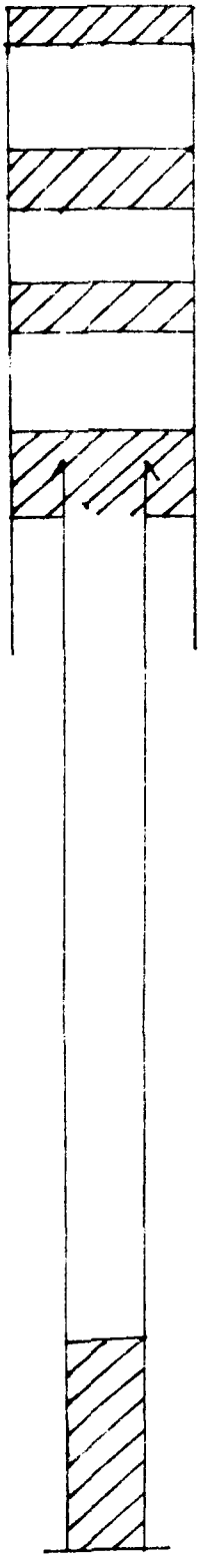
Frank S. Morgan
MorOilCo, Inc.

FSM/rlm

PHONE (505) 748-2194
PHONE (505) 748-2325

MORDILCO.
INC.

DRAWER I
ARTESIA, NEW MEXICO 88210



5 sx at surface

Mud filled between plugs

10 sx plug at 400'

Mud filled between plugs

5 sx plug at 800'

Mud filled between plugs

7" casing cut-off at 1750'
5 sx cement plug at 1750'

15' cement plug 2733' to 2748'

T.D. 2745'

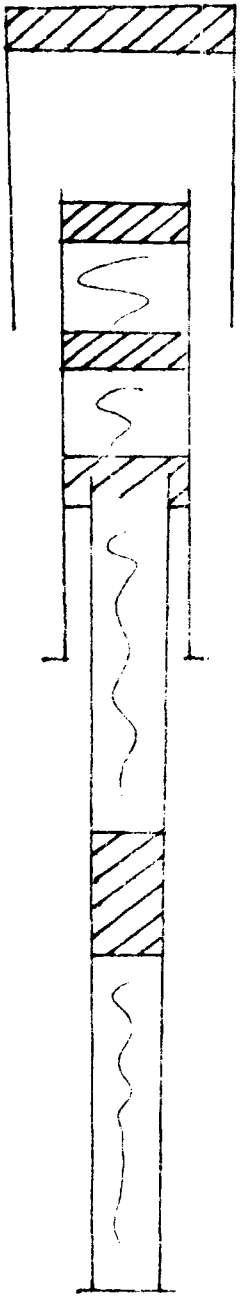
PLUGGING DETAIL

Miller Brothers Oil Co.
Jones & Watkins State #1
SE¼ NW¼
Section 5 T19S R29E
Eddy County, New Mexico

PHONE (505) 748-2194
PHONE (505) 748-2325

MOR OIL CO. INC

DRAWER I
ARTESIA, NEW MEXICO 88210



5 sx at surface

Top of 8-5/8" casing 175'

10 sx cement plug set at top of salt 385' & base of 8-5/8" casing

5 sx cement plug set at base of salt 725'

10 sx plug set on stub of 7" casing at 1375'

Mud filled between plugs

Cement plug from 2440' to 2400'

Mud filled between plugs

T.D. 3000'

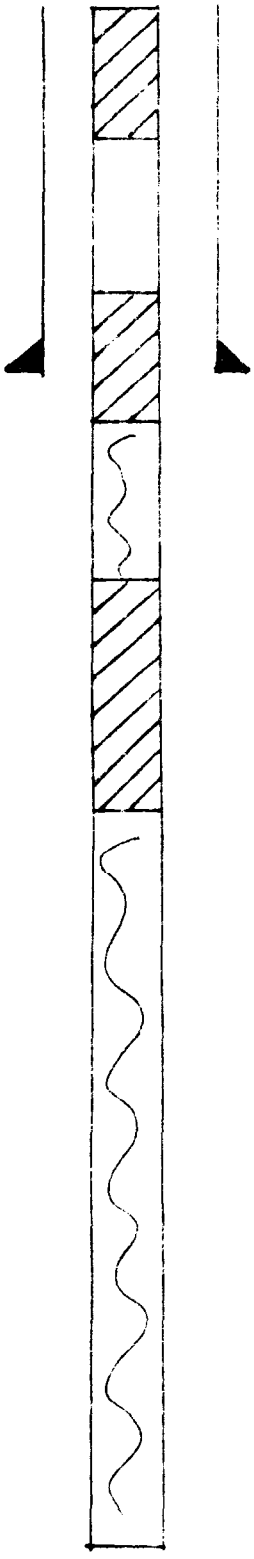
PLUGGING DETAIL

Lubbock Machine Co., Inc.
Continental State #1
SW¼ NE¼
Section 5 T19S R29E
Eddy County, New Mexico

PHONE (505) 748-2194
PHONE (505) 748-2325

MORDILCO.
INC.

DRAWER I
ARTESIA, NEW MEXICO 88210



50' cement plug on top

13-3/8" casing set to 305' to circulate cement

Cement Plug from 365' to 255'

Cement plug from 820' to 720'

12# mud placed from 3045' to 820'

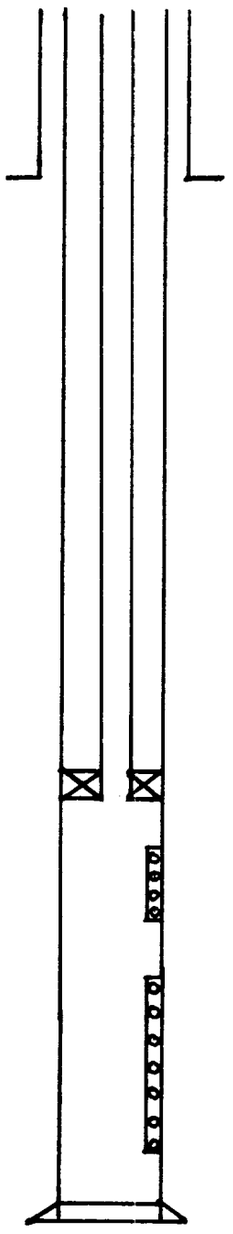
T.D. 3045'

PLUGGING DETAIL

Stanley L. Jones
Continental Delaware #1
NE¼ NW¼
Section 8 T19S R29E
Eddy County, New Mexico

OPERATOR	LEASE			
MorOilCo, Inc.	Guajalote State			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
#2	660 FSL 1980 FEL	5	19S	29E

Schematic



Tubular Data

Surface Casing

Size 8-5/8" Cemented with 400 sx.

TOC Surface feet determined by Circulating

Hole Size 12-1/4"

Long String

Size 4-1/2", 9.5# Cemented with 400 sx.

TOC 1200' feet determined by Bond Log

Hole Size 7-7/8"

Total Depth 2877'

Injection interval

2264' feet to 2650' feet

(perforated ~~or open hole~~)

Tubing size 2-3/8" lined with plastic set in a

Halliburton Model "R" packer at 2250' feet.

(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Lower Penrose & Grayburg Formations.
2. Name of Field or Pool (if applicable) _____
3. Is this a new well drilled for injection? / / Yes /X/ No

   If no, for what purpose was the well originally drilled? Oil & Gas
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Perforations 1231' - 1272' will be squeezed-off and drilled out before any disposing of water takes place.
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (wells) in this area. See exhibits.