Capital Oil and Gas Corporation

214 - 983-2081 214 - 983-2082

June 27, 1983

Oil Conservation Division
Energy and Minerals Department
State of New Mexico
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey, Director

Re: Expansion of Capital
Oil and Gas Corporation
Steam Injection Project
McKinley County, N. M.

Gentlemen:

As per your Order No. R-7278, we are requesting administrative approval to expand the subject project. The steam project is to be of a cyclic nature with injection into two wells for a period of approximately eight days. At the end of that period, the injection wells will be placed on production and two producing wells converted to steam injection. In order to conduct our operations in an efficient manner, it will be necessary for us to have your approval to convert, as neccessary, the following additional wells:

(a) The State Well No. 1 located in Unit M, Section 16, Township 16 North, Range 6 West, NMPM, McKinley County, New Mexico

(b) The State Well No. 3 located in Unit N of above described Section 16

(c) The State Well No. 4 located in Unit M of above described Section 16

(d) The State Well No. 5 also located in Unit M of said Section 16.

It is therefore respectively requested that the Division grant administrative approval for the expansion of this steam-enhanced oil recovery project. Our only offset operator is Mr. Lloyd Davidson, Santa Fe, New Mexico.

Yours truly,

C. W. Pickering

CWPms

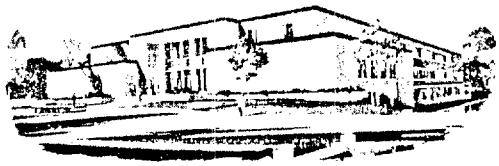
Post Office Box 2130 Suite 202, Pioneer Building Kilgore, Texas 75662

Attachments: C-108
Well Data Sheets (4)

I do hereby waive any and all objections to this expansion project.

Lloyd Davidson

State of New Mexico



Commissioner of Public Lands

JIM BACA
COMMISSIONER

P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

June 29, 1983

Captial Oil and Gas Corporation
P.O. Box 2130
Kilgore, Texas 75662

Re: OCD Case No. 7825,
OCD Order No. R7278
Sec. 16, T16N, R6W
McKinley County, New Mexico

Gentlemen:

We have no objection to the steam injection program as proposed in the above order, also there is no objection to the expansion of this project.

Very truly yours,

JIM BACA
COMMISSIONER OF PUBLIC LANDS

Ray D. Graham

BY: RAY D. GRAHAM
Director
Oil and Gas Division
AC/505-827-5744

JB /RDG/cm

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

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [XX] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [X] yes [ ] no

II. Operator: Capital Oil & Gas Corporation

Address: P. O. Box 2130, Kilgore, Texas 75662

Contact party: Gary Blanks Phone: (214) 983-2081

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? [XX] yes [ ] no
If yes, give the Division order number authorizing the project R-7278.

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: Charles Pickering Title Agent

Signature: Charles Pickering Date: 6/28/83

* 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. March 16, 1983 Hearing - Cas No. 7825

Memo

From
Gilbert P. Quintana
Petroleum Engineer

To File
Order No.

This expansion of the steam flood system was under the same jurisdiction as the order No. R-7278. The date of filing of this application (6/29/83) there still had been no steam injection into the reservoir.

The 750 psi steam limiting figure was based on a step rate test examined by the District and adjusted for the weight of the steam as compared to water.

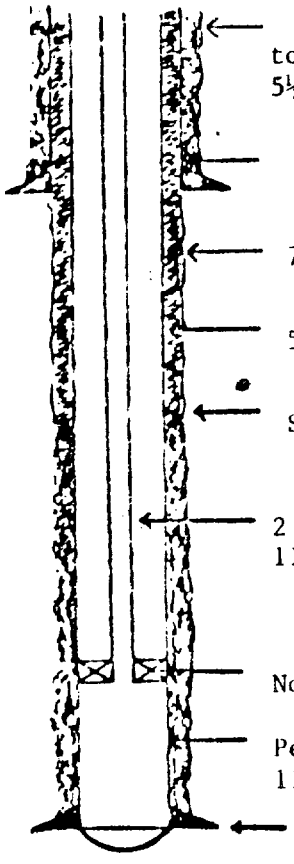
Okd by Frank GPQ

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

6/30/83

OPERATOR	LEASE			
Capital Oil & Gas Corporation	State			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
1	990FWL & 330 FSL	16	16N	6W

Schematic



Tabular Data

Surface Casing

Size None* " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5½ " Cemented with 225 sx.

TOC surface feet determined by visual

Hole size 7 7/8

Total depth 1206

Injection interval

1153' feet to 1190 Perf feet

(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with J-55 (material) set in a None (brand and model) packer at None feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Hospah-Gallup

2. Name of Field or Pool (if applicable) Miguel Creek Gallup Ext

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? Production

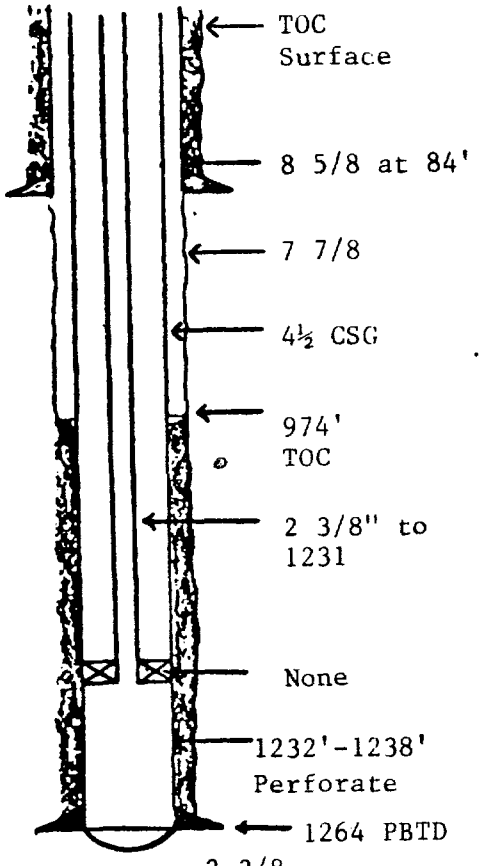
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) None

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. None known in this area

Capital Oil & Gas Corporation — State

WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
3	1650 FWL & 990' FSL	16-16N-6W		

Schematic



Tabular Data

Surface Casing

Size 8 5/8" Cemented with 50 sx.

TOC Surface feet determined by Visual

Hole size 12 1/4

Intermediate Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 4½" Cemented with 75 sx.

TOC 974 feet determined by Calculation

Hole size 7 7/8

Total depth 1266

Injection Interval

1232 feet to 1238 (4JSPF) feet

(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with J-55 (material) set in a None (brand and model) packer at None feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Hospah-Gallup

2. Name of Field or Pool (if applicable) Miguel Creek - Gallup Ext

3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? Production

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) None

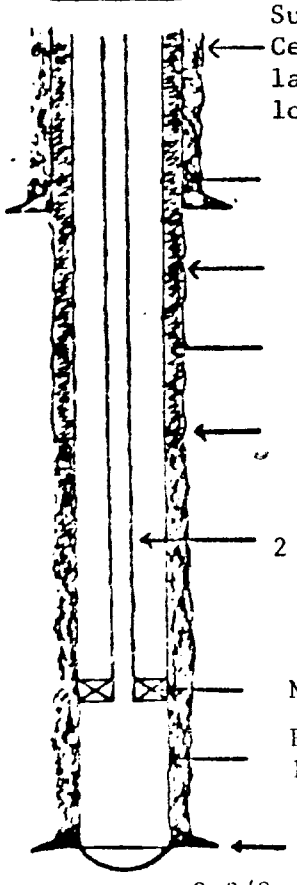
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. None in this area

OPERATOR LEASE

Capital Oil & Gas Corporation State

WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
4	990FWL & 990 FSL	16-16N-6W		

Schematic



Tabular Data

Surface Casing

Size None* " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5½" Cemented with 150 sx.

TOC Surface feet determined by Visual

Hole size 7 7/8

Total depth 1227'

Injection Interval

1189 feet to 1199(4JSPF) feet

(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with J-55 set in a

(material)

_____ packer at _____ feet

(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Hospah-Gallup

2. Name of Field or Pool (if applicable) Miguel Creek Gallup - Ext

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? Production

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) None

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. None in this area

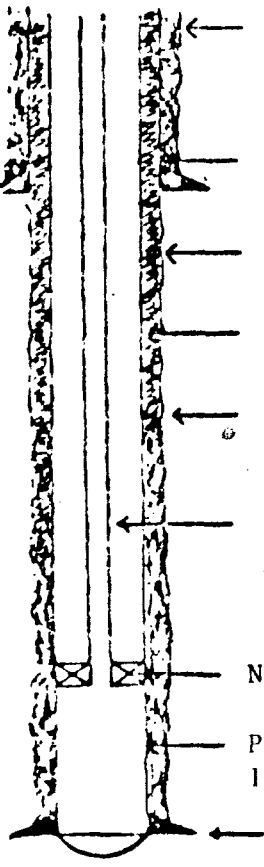
*This well was drilled before surface CSG was required.

OPERATOR LEASE

Capital Oil & Gas Corporation State

WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
5	330'FSL & 330' FWL	16-16N-6W		

Schematic



Tabular Data

Surface Casing

Size 8 5/8" Cemented with 70 sx.

TOC Surf feet determined by Visual

Hole size 12 1/4"

Intermediate Casing

Size None" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 4½" Cemented with 160 sx.

TOC Surf feet determined by Visual

Hole size 7 7/8"

Total depth 1188'

Injection interval

1162 feet to 1172(4JSPF) feet

(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with J-55 (material) set in a

None (brand and model) packer at None feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Hospah-Gallup

2. Name of Field or Pool (if applicable) Miguel Creek - Ext

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? Production

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)

None

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

None in this area.