



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE 3-20-85

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD X _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated 3-5-85
for the Hicks C&T Gas SECHA CHA UNIT #20 F-17-28N-13W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Docketed for hearing March 27th

Yours truly,

Mike Stogner

Mike Stogner was
apprised of the
problem and will
take corrective action

Jason Kellahin
W. Thomas Kellahin
Karen Aubrey

KELLAHIN and KELLAHIN
Attorneys at Law
El Patio - 117 North Guadalupe
Post Office Box 2265
Santa Fe, New Mexico 87504-2265

Telephone 982-4285
Area Code 505

March 4, 1985

Mr. Richard L. Stamets
Oil Conservation Division
Post Office Box 2086
Santa Fe, New Mexico 87501

"Certified Mail -
Return Receipt"

Re: Hicks Oil & Gas, Inc.
Salt Water Disposal
Section 17, T28N, R13W, NMPM
San Juan County, New Mexico

Dear Mr. Stamets:

On February 18, 1985, on behalf of Hicks Oil & Gas Inc. I filed an application which is set for hearing on March 27, 1985, for approval of the SE Cha Cha Well 20, located in Unit J of the referenced Section 17 for use of the Gallup formation for disposal.

Please find enclosed the required Division Form C-108 and attachments. By copy of this letter we are sending Form C-108 by certified mail-return receipt to the surface owner, the OCD District Office, and all operators within a one-half mile radius.

Very truly yours,


W. Thomas Kellahin

WTK:sg
Enc.

cc: Mr. Frank Chavez
Oil Conservation Div.
1000 Rio Brazos Road
Aztec, NM 87410

Mr. Mike Hicks
Hicks Oil & Gas Inc.
P. O. Drawer 3307
Farmington, NM 87499

Bureau of Indian Affairs
Navajo Indian Irrigation Pro.
3539 E. 36th Street
N.W. Energy Bldg., Room 103
Farmington, NM 87401
Southland Royalty Company
P. O. Box 578
Farmington, NM 87401
Attn: Mr. Robert Fielder

RECEIVED
MAR 05 1985
OIL CON. DIV.
DIST. 3

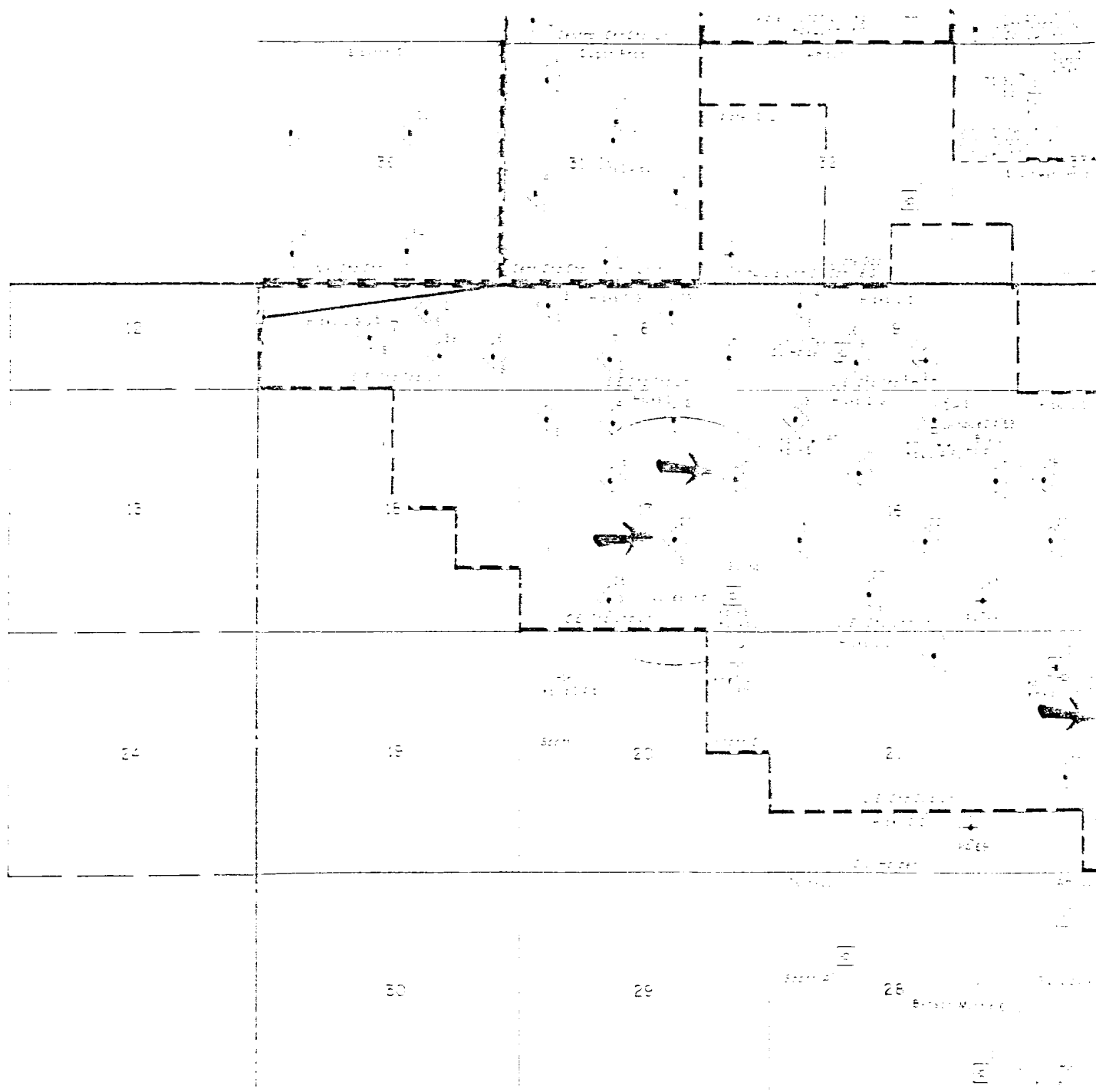
1. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ Yes ☒ No

Contact party: Mike Hicks Phone: 505/327-4900

- 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 submission.

29
N

T
28
N



INJECTION WELL DATA SHEET

Hicks Oil & Gas, Inc.

S.E. Cha Cha

OPERATOR

LEASE

20
WELL NO.1980' ^S EML & 1980' ^E EML
FOOTAGE LOCATION17
SECTIONT28N
TOWNSHIPR13W
RANGE

Schematic

Tubular Data

Surface Casing

Size 8 5/8"-24# " Cemented with 200 sx.

TOC Surface feet determined by Circulation

Hole size 12 1/4"

Intermediate Casing

Size " Cemented with sx.

TOC feet determined by

Hole size

Long string

Size 5 1/2"-15.5# " Cemented with 175 sx.

TOC Unknown feet determined by

Hole size 7 7/8"

Total depth 5722'

Injection interval

5623' feet to 5627' feet perforated
(perforated or open-hole, indicate which)

Proposed Baker Model 'D' Packer @ 5550'

Perforations 5623-5627 Gallup

C.T.B.P. @ 5640'

Perforations 5660-5676' Gallup

Tubing size 2 3/8" lined with plastic or fiberglass set in a
(material)Baker Model "D" packer at 5550 feet
(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Gallup

2. Name of field or Pool (if applicable) S.E. Cha Cha

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

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

4. Has the well ever been perforated in any other zone(s)? list all such perforated intervals and give plugging detail (blocks of cement or bridge plug(s) used)

Gallup perforated 5660'-5676' Cast Iron Bridge Plug @5640'

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Picture Cliff gas zone approximately 3800' above Dakota Gas zone

approximately 1500' below.

Hicks Oil & Gas, Inc.

1/17/85

P. O. DRAWER 3307
FARMINGTON, NM 87499
505-327-4902

APPLICATION FOR SALT WATER DISPOSAL S.E. CHA CHA UNIT WELL # 20

VII

1. Lease production currently averages 90 BWPD and this volume would be split between other injection wells. Also, we are planning to operate the injection well for commercial salt water disposal. At this time, it is estimated that we will be disposing of 100 bbls of water per day from wells off the lease. We do anticipate this volume to increase as the NMOCD revises it's rules concerning disposal of produced water in unlined pits. From injection records of wells in the field when the unit was actively water flooded it is estimated that 750 BWPD could be injected at 1000 psi.
2. The system will be an open system.
3. Average injection pressure 500 psi. Maximum injection pressure 1000 psi.
4. Sources of injected water.
 1. Produced water from the lease. Water analysis attached.
 2. Produced water from San Juan Basin oil and gas wells. Typical water analysis attached.

IX Stimulation treatment will consist of 500-1000 gallons of 15% Iron Sequestering HCL acid. If necessary the well may be frac treated with approximately 30,000 gallons of gelled water and 30,000# of 20/40 sand.

X Well logs on file with NMOCD.

XI No fresh water wells within one mile.

Hicks Oil & Gas, Inc.

P. O. DRAWER 3307
FARMINGTON, NM 87499
505-327-4902

XII Affirmative Statement

I, Mike Hicks, 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.

A handwritten signature in cursive script, reading "Mike Hicks", is written over a horizontal line.

Mike Hicks
President
Hicks Oil & Gas, Inc.

ROY L. PRITCHARD - PETROLEUM GEOLOGIST

Petroleum Club Plaza Suite 103 • P.O. Box 2372 • Farmington, New Mexico 87499 • Telephone: (505) 325-2209

CHA CHA GALLUP

Producing sandstone of the Cha Cha Gallup Oil Pool are the result of the transition of the regressive Carlile Seas, leaving the Gallup sandstones and the transgressive Niobrara Seas. The advancing seas caused truncation of the Gallup and deposition of new sands, silts and muds. The lower sands are cleaner and generally thought to be offshore bars deposited by currents parallel to the shore line. These basal Niobrara sandstones are oil bearing as are some of the cleaner Gallup sandstones.

The entire complex of upper Carlile-lower Niobrara sandstones has been known as "the Gallup" since the late nineteen fifties when production began along the Bisti-Horseshoe Canyon trend.

Several of the basal Niobrara sandstones are present in the Cha Cha Gallup Pool.

These sandstones have been described as follows:

Light-gray to gray-brown, fine to coarse grained quartz sandstone with minor chert, feldspar and rock fragments. Traces of glauconite and mica are present. Cement is primarily calcite with some secondary quartz. There is porosity present and oil staining is evident.

DRINKING WATER SOURCES

Considerable effort was made to obtain chemical analyses of the water bearing rocks in Township 28 North, Range 13 West, San Juan County, N.M. These efforts failed but analyses were observed of waters taken from sources outside the township which had similar ages and depositional histories.

The analyses showed the following:

1. There is no known source of potable* water immediately below the Cha Cha Gallup producing zones.
2. The only potable water aquifers found above the injection zones (Cha Cha Gallup) are:
 - a. the Cretaceous Kirtland (Farmington Sandstone) at depths of 630-915' in section 21. (This information obtained from Ed Welder, U.S.G.S., Albuquerque.

ROY L. PRITCHARD - PETROLEUM GEOLOGIST

Petroleum Club Plaza Suite 103 • P.O. Box 2372 • Farmington, New Mexico 87499 • Telephone: (505) 325-2209

DRINKING WATER SOURCES cont.

- b. the Ojo Alamo (Tertiary Period) has water with very low solids (350-850 mg/l). This is found to a depth of 350-450' in the area of interest.

*All references herein to potable or drinking water are based on dissolved solids of 10,000 mg/l or less as found in item VIII of Application for Authorization to Inject.

TABULATION OF WELLS
WITHIN $\frac{1}{2}$ MILE RADIUS
OF PROPOSED SALT WATER DISPOSAL WELL
S.E. CHA CHA UNIT WELL # 20

SURFACE CASING	CEMENT	T.O.C.	PRODUCTION CASING	CEMENT	I.O.C.	PRODUCING INTERVAL	ID	LINER
3	8 5/8 @272	235sx	surface	4 $\frac{1}{2}$ @5821'	175sx sq.600sx	4260' 2750'	5824	3 $\frac{1}{2}$ @4582' w/75sx T.O.C. Unk.
3	8 5/8 @234	200sx	surface	4 $\frac{1}{2}$ @5748	175sx sq.200sx	4450' 3650'	5748	3 $\frac{1}{2}$ @4502 w/115sx T.O.C. surf.
3	8 5/8 @249	225sx	surface	4 $\frac{1}{2}$ @5824'	175sx	4350	5817	
3	8 5/8 @214'	175sx	surface	4 $\frac{1}{2}$ @5856	225sx	unknown	5860	
3	8 5/8 @283'	225sx	surface	4 $\frac{1}{2}$ @5699	200sx	unknown	5700'	
3	8 5/8 @212'	150sx	surface	5 $\frac{1}{2}$ @6356	375sx	4500'	6358'	
						Dakota P&A 6234-6318 Gallup 5655-65		

S.E. Cha Cha Unit Well #26

Unit P- Sec. 17, Twn 28N, Rge 13W

Well Schematic

