



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 8 _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated 3-5-85
for the Hicks Oil & Gas S.E. CHACHA Unit #22.34 F-22-28N-13W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Rejected for hearing March 27th

Yours truly,

[Signature]

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 2088
Santa Fe, New Mexico 87501

"Certified Mail-
Return Receipt"

Re: Hicks Oil & Gas
Salt Water Disposal
Section 22, 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 34, located in Unit F of the referenced Section 22 for use of the Gallup formation for disposal.

Please find enclosed two copies of 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,

Original signed by -
W. THOMAS KELLAHIN

W. Thomas Kellahin

RECEIVED

MAR 05 1985

**OIL CON. DIV.
DIST. 3**

WTK:sg
Enc.

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

✓ Amoco
Post Office Box 800
Denver, Colorado 80201
Attn: Mr. Charles Boyce

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

Southland Royalty Company
P. O. Drawer 570
Farmington, NM 87499
Attn: Mr. Robert Fielder

KELLAHIN and KELLAHIN

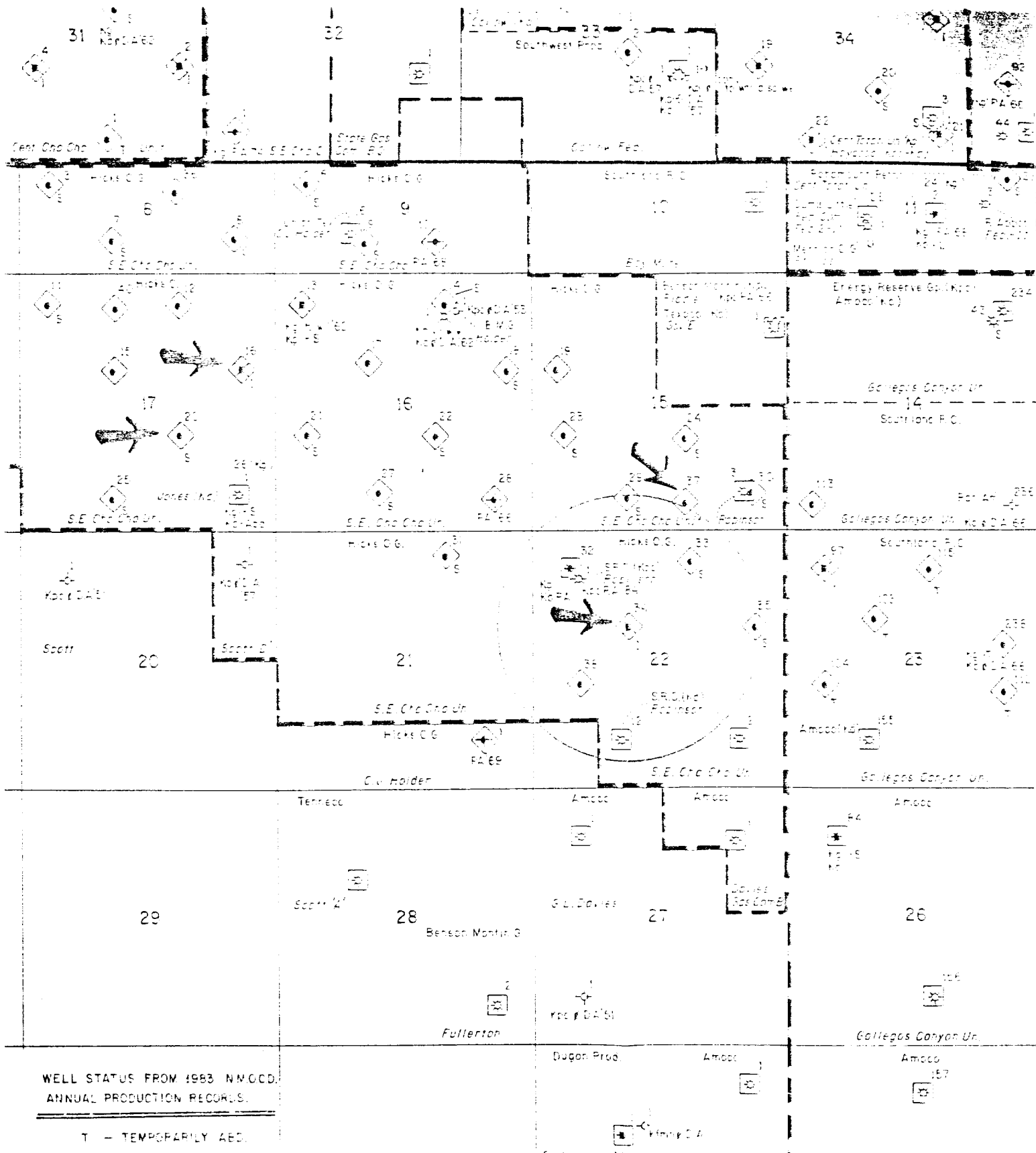
Mr. Richard Stamets
March 4, 1985
Page -2-

cc: Mr. Al Greer
Benson, Montin Greer
Drilling Corporation
221 Petroleum Center Bldg.
Farmington, NM 87401

Bureau of Indian Affairs
Navajo Indian Irrigation Pro.
3539 E. 30th Street
N.W. Energy Bldg., Room 103
Farmington, NM 87401

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ Yes ☒ No
- II. Operator: Hicks Oil & Gas, Inc.
Address: P.O. Drawer 3307, Farmington, N.M. 87499
Contact party: Mike Hicks Phone: 505/327-4902
- 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: Mike Hicks Title: President
Signature: _____ Date: 1/17/85
- 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. _____



INJECTION WELL DATA SHEET

OPERATOR Hicks Oil & Gas, Inc. UNIT S.E. Cha Cha Unit
 1145L
 WELL NO. 34 PRODUCE LOCATION 1980' FNL & 1980' FWL SECTION 22 TOWNSHIP 28N RANGE 13W

Schematic

Tabular Data

Top of Cement 1500'
 Stage Tool @ 1889'
 Cemented w/
 150 sx
 Proposed 2 3/8"
 Plastic Coated
 Steel or Fiberglass
 Tubing
 Top of Cement 3150'
 3121'-3886'
 Casing Failure
 Squeezed w/
 200 sx.
 Top of Cement
 4950'
 Proposed Baker Model D Packer
 Perforations 5689-5696 Gallup
 C.I.B.P. @ 5716
 Perforations 5733-57 Gallup
 4 1/2"-9.5" 64'-5454'
 4 1/2"-11.6" 0-64' + 5454'-5802' Cemented w/250 sx. 1st Stage
 Tubing size 2 3/8" lined with plastic or fiberglass set in a
 (material)
 Baker Model "D"
 (brand and model) packer at 5600 feet.
 (or describe any other casing-tubing seal).

Surface Casing
 Size 8 5/8"-24# " Cemented with 165 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 4 1/2"-9.5&11.6#" Cemented with 400 sx.
 TOC 1st stage 4950'
2nd stage 1500' feet determined by temperature survey
 Hole size 7 7/8"
 Total depth 5802'
 Injection interval
5689 feet to 5696' feet
 (perforated or open-hole, indicate which)

Other Data

- Name of the injection formation Gallup
- Name of field or Pool (if applicable) S.E. Cha Cha
- Is this a new well drilled for injection? ☒ Yes ☒ No
 If no, for what purpose was the well originally drilled? Oil Well
- 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) Gallup perforated
5733-57. Cast Iron Bridge Plug set at 5716'.
- 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 #34

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.

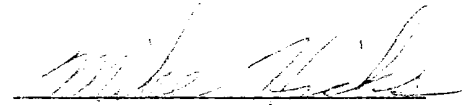
XI No fresh water wells within one mile.

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 630-815' 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.

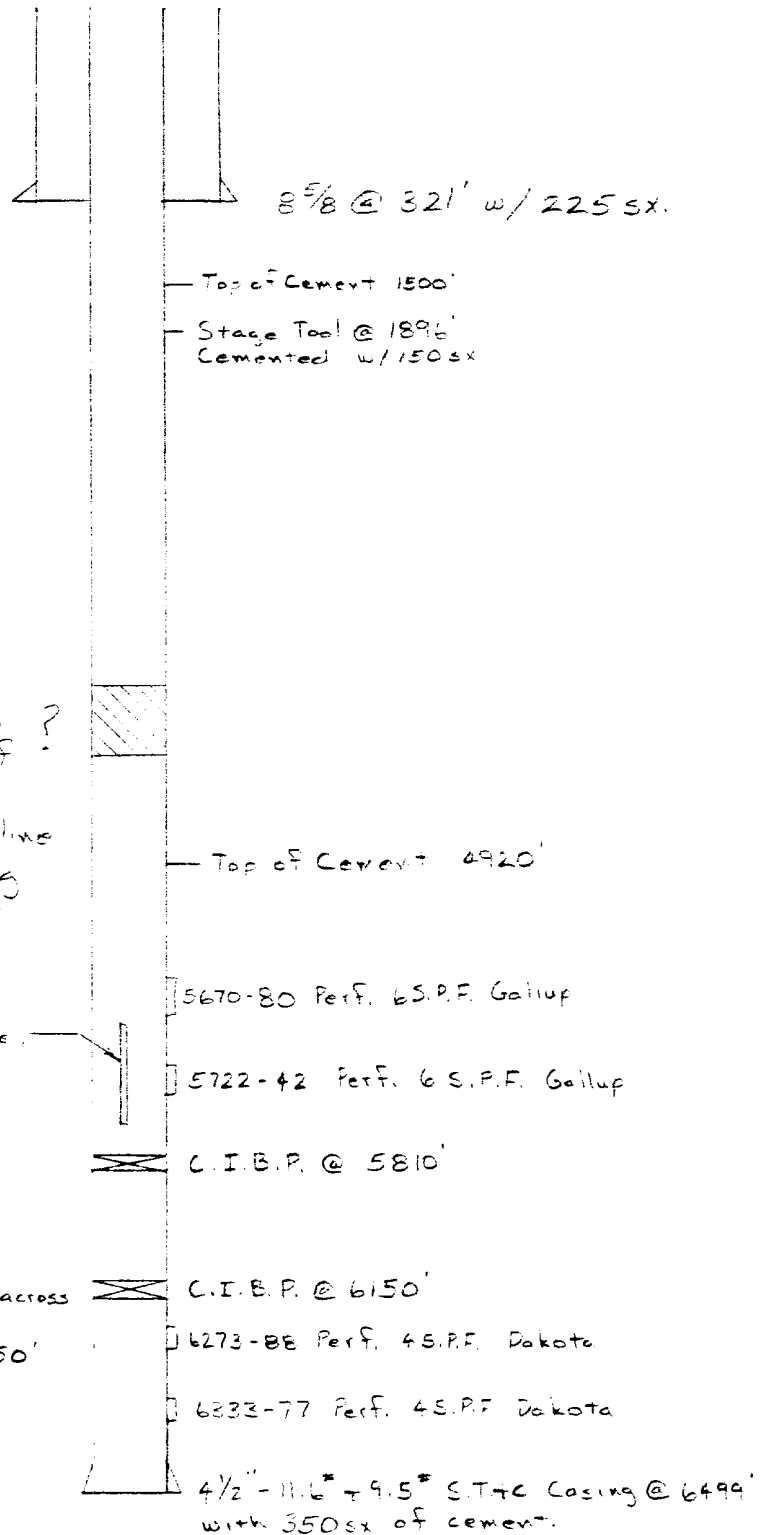
- b. the Ojo Alamo (Tertiary Period) has water with very low solids (350-850 mg/l). This is found to a depth of 350-450' in the area of interest.

*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 # 34

WELL	LOCATION	SURFACE CASING	CEMENT	T.O.C.	PRODUCTION CASING	CEMENT	T.O.C.	PRODUCING INTERVAL	TID
S.E. Cha Cha Unit 32	D-22-28-13	8 5/8 @321	225sx	Surface	4 $\frac{1}{2}$ @6499	500sx 2 stage	1500' 4920'	Dakota P&A 6273-6377 Gallup	6500'
S.E. Cha Cha Unit 33	B-22-28-13	8 5/8 @202	160sx	Surface	4 $\frac{1}{2}$ @5864	400sx 2 stage	1670' 4620'	5670-5742 Gallup 5758-5770	5865'
S.E. Cha Cha Unit 35	H-22-28-13	8 5/8 @200	170sx	Surface	4 $\frac{1}{2}$ @5855	400sx 2 stage	1680' 5020'	Gallup 5764-5835	5856'
S.E. Cha Cha Unit 38	L-22-28-13	8 5/8 @457	300sx	Surface	5 $\frac{1}{2}$ @5860 Stage tool @4640'	1210sx	800'	Gallup	5862
Robinson 12	L-22-28-13	8 5/8 @310'	200sx	Surface	4 $\frac{1}{2}$ @6423 2 stage 5843 3 stage 1887	150sx 475sx 220sx		Dakota 6316-32	6426

S.E. Cha Cha Unit Well #32
Unit D - Sec. 22, T28N, R13W
Well Schematic



In April, 1971 the well was squeezed for casing leaks. Drilled cement from 2858' to 3467' and bit bad pipe. Milled casing to 3482'. Drilled to 3499' + unable to get tools? to rotate. Pulled tubing out of the well and shut in. There is reference to wireline plugs being set in the casing prior to the squeeze job, but no record of depths or type.

71' - 2 3/8" Tubing, Seat Nipple,
+ 6' - Perforated Sub
Cut off at 5681'

M/K