

*WELL FILE*

August 27, 1993



GIANT EXPLORATION &  
PRODUCTION COMPANY

2200 Bloomfield Highway  
Post Office Box 2810  
Farmington, New Mexico  
87499-2810

	FAX
505	505
326-3325	327-7987

Mr. Frank Chavez  
New Mexico Oil Conservation Division  
1000 Rio Brazos Road  
Aztec, New Mexico 87410

Subject: Central Bisti Unit No. 77  
660' FSL, 660' FEL  
f Sec. 6, T25N, R12W  
San Juan County, New Mexico

**RECEIVED**

AUG 31 1993

**OIL CON. DIV. 1**  
**DIST. 3**

Dear Mr. Chavez:

Enclosed for your information is our Application for Authorization to Inject for the above referenced well. The original Application has been sent to the New Mexico Oil Conservation Division in Santa Fe for approval.

Sincerely,

A handwritten signature in cursive script that reads "Diane G. Jaramillo".

Diane G. Jaramillo  
Administrative Manager

/dgj

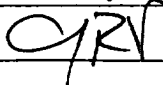
Enclosure

RECEIVED

AUG 31 1993

OIL CON. DIV

APPLICATION FOR AUTHORIZATION TO INJECT DIST. 3

- I. PURPOSE: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage  
Application qualifies for administrative approval? ☐ Yes ☐ No
- II. OPERATOR: Giant Exploration & Production Company  
ADDRESS: P.O. Box 2810, Farmington, New Mexico 87499  
CONTACT PARTY: Jeffrey R. Vaughan PHONE: (505) 326-3325
- III. WELL DATA: Complete the data required on the reverse side of this form for each well processed 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 sources 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: Jeffrey R. Vaughan TITLE: Vice President, Operations  
SIGNATURE:  DATE: \_\_\_\_\_
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstance of the earlier submittal. \_\_\_\_\_

Giant Exploration & Production Company  
Application for Authorization to Inject  
Form C-108 Supplemental Information

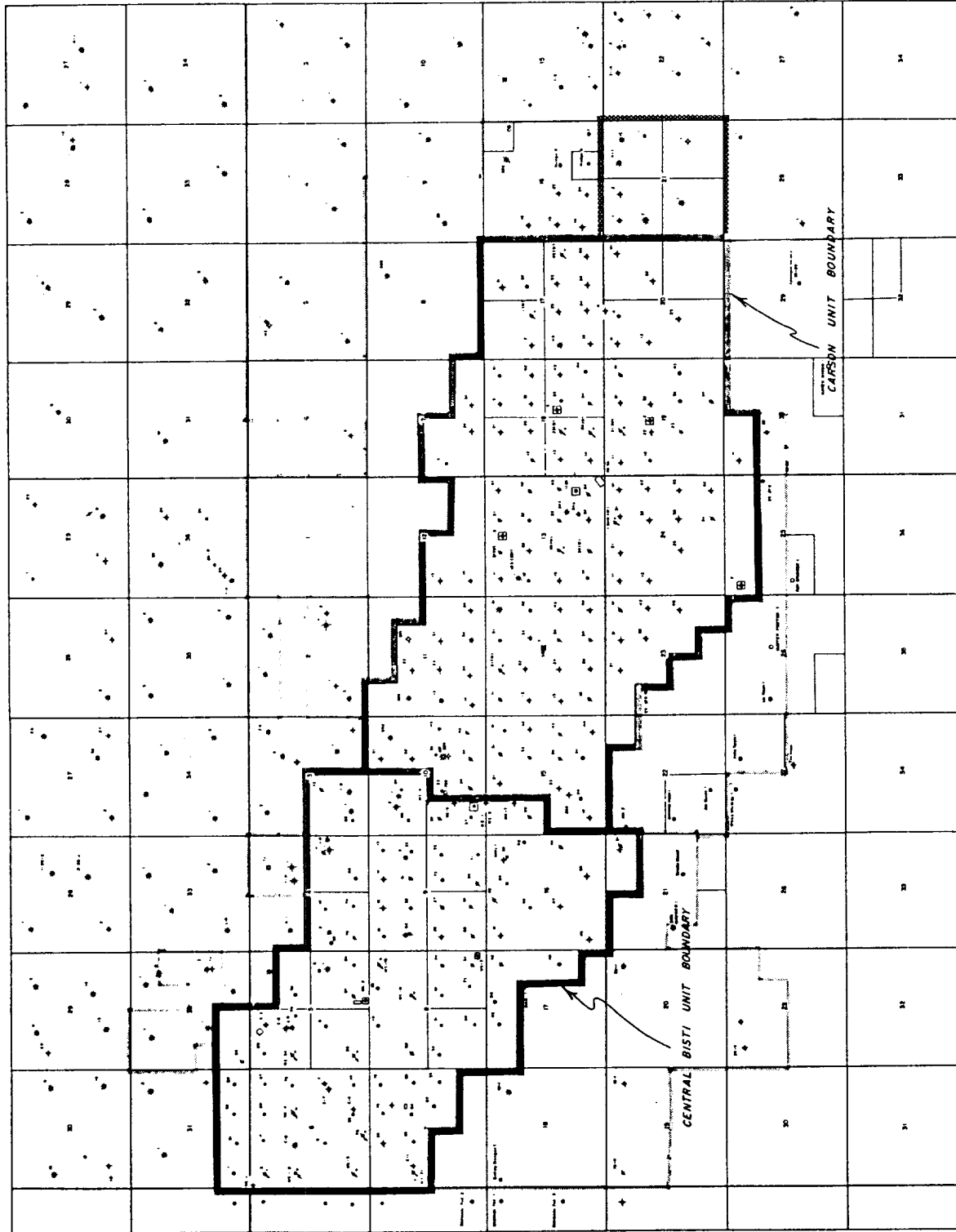
Central Bisti Unit Well No. 77  
SE/4, SE/4, Sec. 6, T25N, R12W  
San Juan County, New Mexico

- I. Shown on Application
- II. Shown on Application
- III. Well data attached
- IV. Shown on Application
- V. Area of review is shown on attached map
- VI. Information for wells located in area of review are as follows:
  - Central Bisti Unit No. 7
  - Central Bisti Unit No. 19
  - Central Bisti Unit No. 55
  - Central Bisti Unit No. WI-56
  - Central Bisti Unit No. WI-75
  - Central Bisti Unit No. WI-78
- VII.
  - 1. Proposed average injection rate is 600 bwpd, expected maximum injection rate is 1200 bwpd.
  - 2. This system will be closed.
  - 3. Average injection pressures are expected to be in the 961 - 966 psi range. Maximum injection pressure will be 966 psi.
  - 4. Refer to the attached water analysis report. Since the formation water to be encountered is primarily previously injected water, no problems are expected in mixing the two waters.
  - 5. This well is part of an extensive waterflood project active in the Carson Unit since 1959. All produced water is reinjected into the oil productive Lower Gallup sand to maintain pressure. Injection into the Lower Gallup sand is for waterflooding, not disposal.

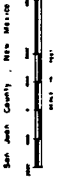
- VIII. The injection zone is the Lower Gallup sandstone. This zone is to be 18' in thickness with a top of 4812' as shown on the SP log previously submitted. No known sources of drinking water exist in this area. Water well drilling in this area has shown the Ojo Alamo to be dry.
- IX. The well will be acidized if required to maintain injection rate and pressure.
- X. Logs were previously submitted.
- XI. No known sources of drinking water exist in this area.
- XII. This well is part of the existing approved waterflood operation for the Carson Unit. It is not a disposal well.
- XIII. Proof of notification is attached.
- XIV. Certification shown on Application.

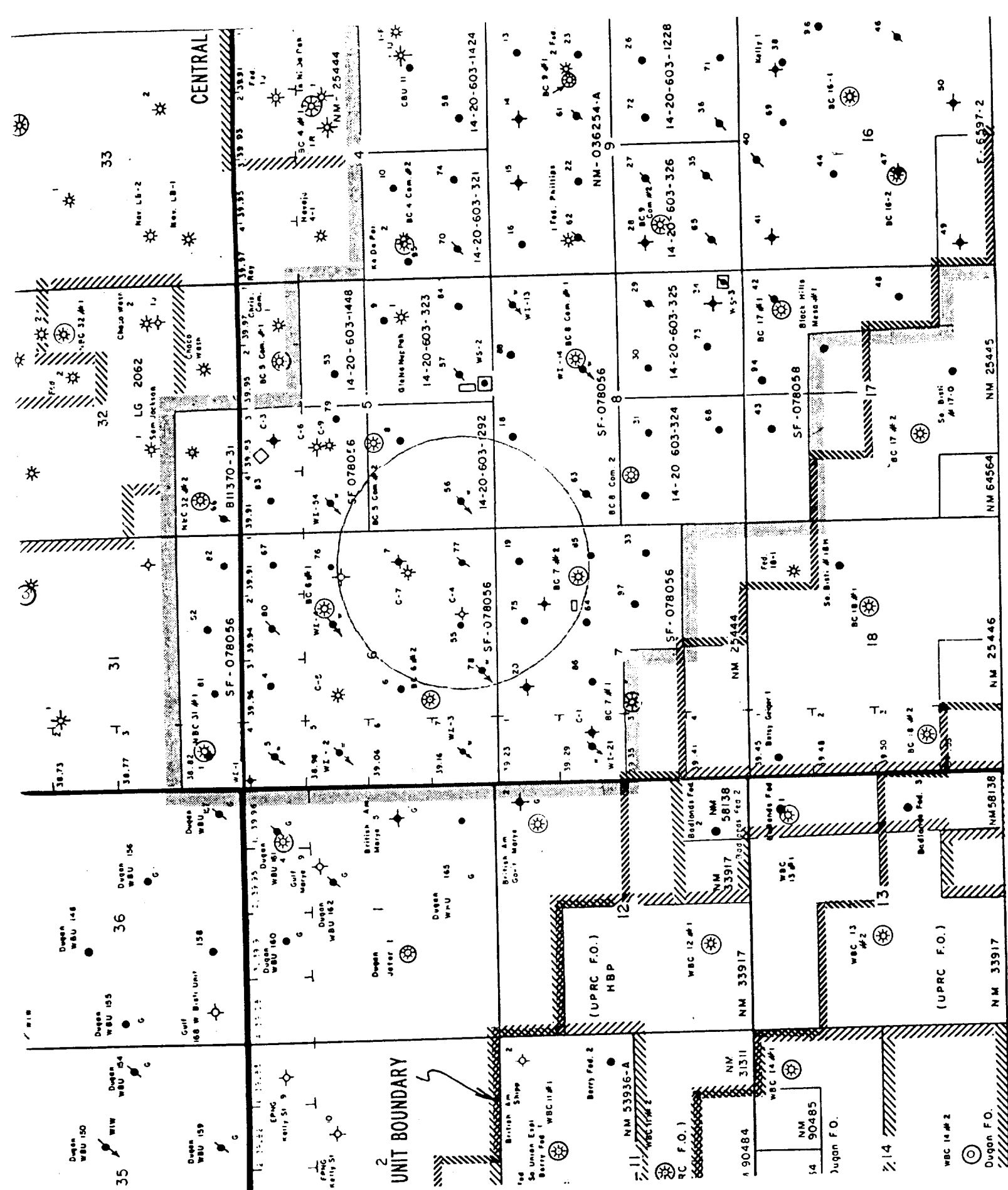
R 11 W

R 12 W



HIXON DEVELOPMENT COMPANY  
CENTRAL BISTI - CARSON UNIT AREA





Giant Exploration & Production  
Company  
Well Bore Diagram

WELL NAME Central Bisti Unit Well No. 77  
LOCATION 660' FSL, 660' FEL SECTION 6 T 25 N R 12 W  
COUNTY San Juan STATE New Mexico

**SURFACE CASING**

Hole Size: 12-1/4"  
Casing: 8-5/8", 24#, K-55, 8rd  
Casing Set @ 215.37' with 120  
sk Class B containing  
2% CaCl and 1/4 #/sk  
Flocele.

**FORMATION TOPS**

Fruitland Coal 1128'  
Pictured Cliffs 1150'  
Lewis 1335'  
Cliffhouse 1503'  
Menefee 2591'  
Point Lookout 3648'  
Mancos 3792'  
Upper Gallup 4714'  
Lower Gallup 4803'

**CEMENT TOP** 3200' (by CBL)

**PERFORATIONS**

4812'-30' (2 JSPP)

**PBD** 5021' (tag)

**PRODUCTION CASING**

Hole Size: 7-7/8"  
Casing: 4-1/2", 10.5#, K-55, 8rd  
Casing Set @ 5063.27' with 75 sks  
65:35 Litepoz 6 w/12% gel, 1/4  
#/sk celloflake; 87 bbls mud; 20  
bbls chem (CW-100); 300 sks 50:50  
Litepoz 6 w/6% gel, 2% CaCl, 1/4  
#/sk celloflake; tail in 150 sks  
Class B w/2% CaCl & 1/4 #/sk flake

GLE 6218'

KBE 6231'

DF 6229.5'

**WELL HISTORY**

Spud date: 5/6/82  
Original owner: Hixon Development  
IP 6/28/82 BOPD 23.8 WPD 9.7  
MCFD 7 GOR 291  
Completion Treatment:   
Frac w/54,967 gal. 2% KCl and  
50,000# 20/40 mesh sand.

**CURRENT DATA**

Pumping Unit   
Tubing   
Pump Size   
Rod string   
Remarks

Proposed water injection  
schematic.

Packer  
@4760'

5090' TD

Date Last Revised: 8/18/93

WELL DATA SHEET

Well Name: Central Bisti Unit #77

Legal Description: 660' FSL, 660' FEL  
Sec. 6, T25N, R12W  
San Juan County, N.M.

Well Type: Water Injection Well  
(Waiting on Approval)

Spud Date: 05-06-82

Surface Casing Hole Size: 12-1/4"  
Surface Casing Size: 8-5/8"  
Surface Casing Depth: 215'

Cementing Record: 120 sks.

Production Casing Hole Size: 7-7/8"  
Production Casing Size: 4-1/2"  
Production Casing Depth: 5063'

Cementing Record: 525 sks.

Perforation: 4812' - 4830'

Plug Back Depth: 5021'

Total Depth: 5090'



# WELL DATA SHEET

Well Name:	Central Bisti Unit #19
Legal Description:	660' FNL, 660' FEL Sec. 7, T25N, R12W San Juan County, N.M.
Well Type:	Oil Well
Spud Date:	07-02-56
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	192'
Cementing Record:	175 sks.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	5-1/2"
Production Casing Depth:	5000'
Cementing Record:	200 sks.
Perforation:	4804' - 4818' 4833' - 4840' 4852' - 4858' 4871' - 4977' 4886' - 4895'
Plug Back Depth:	4969'
Total Depth:	5000'

# WELL DATA SHEET

Well Name: Central Bisti Unit #55

Legal Description: 660' FSL, 1980' FEL  
Sec. 6, T25N, R12W  
San Juan County, N.M.

Well Type: Oil Well

Spud Date: 06-04-56

Surface Casing Hole Size: 12-1/4"  
Surface Casing Size: 8-5/8"  
Surface Casing Depth: 191'

Cementing Record: 175 sx.

Production Casing Hole Size: 7-7/8"  
Production Casing Size: 5-1/2"  
Production Casing Depth: 4998'

Cementing Record: 225 sx.

Perforation: 4816' - 4828'  
4863' - 4869'  
4885' - 4892'  
4898' - 4905'

Plug Back Depth: 4915'

Total Depth: 5000'

WELL DATA SHEET

Well Name:	Central Bisti Unit WI-56
Legal Description:	660' FSL, 660' FWL Sec. 5, T25N, R12W San Juan County, N.M.
Well Type:	Water Injection
Spud Date:	08-23-56
Surface Casing Hole Size:	15"
Surface Casing Size:	10-3/4"
Surface Casing Depth:	208'
Cementing Record:	175 sks.
Production Casing Hole Size:	8-3/4"
Production Casing Size:	5-1/2"
Production Casing Depth:	4997'
Cementing Record:	250 sks.
Perforation:	4808' - 4832'
Plug Back Depth:	4848'
Total Depth:	5027'

# WELL DATA SHEET

Well Name:	Central Bisti Unit WI-75
Legal Description:	660' FNL, 1980' FEL Sec. 7, T25N, R12W San Juan County, N.M.
Well Type:	Water Injection
Spud Date:	04-29-82
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	219'
Cementing Record:	120 sks.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	4-1/2"
Production Casing Depth:	5088'
Cementing Record:	500 sks.
Perforation:	4832' - 4846' 4882' - 4890' 4902' - 4906' 4918' - 4922'
Plug Back Depth:	5044'
Total Depth:	5100'

WELL DATA SHEET

Well Name: Central Bisti Unit WI-78

Legal Description: 330' FSL, 2300' FWL  
Sec. 6, T25N, R12W  
San Juan County, N.M.

Well Type: Water Injection

Spud Date: 04-21-82

Surface Casing Hole Size: 12-1/4"  
Surface Casing Size: 8-5/8"  
Surface Casing Depth: 216'

Cementing Record: 200 sks.

Production Casing Hole Size: 7-7/8"  
Production Casing Size: 4-1/2"  
Production Casing Depth: 5110'

Cementing Record: 525 sks.

Perforation: 4840' - 4856'

Plug Back Depth: 5067'

Total Depth: 5115'

Giant Exploration & Production  
Company  
Well Bore Diagram

WELL NAME Central Bisti Unit Well No. 7  
LOCATION 1980' FSL, 660' FEL SECTION 6 T 25 N R 12 W  
COUNTY San Juan STATE New Mexico

**SURFACE CASING**

Hole Size: 12-1/4"  
Casing: 8-5/8", 24#, J-55  
Casing Set @ 186' with 175 sks  
cement with 2% gel.

GLE 6186'

KBE \_\_\_\_\_

DF 6193'

**FORMATION TOPS**

<u>Pictured Cliffs</u>	<u>1115'</u>
<u>Point Lockout</u>	<u>3631'</u>
<u>Mancos</u>	<u>3840'</u>
<u>Upper Gallup</u>	<u>4687'</u>
<u>Lower Gallup</u>	<u>4795'</u>

**CEMENT TOP** 4035' (by T.S.)

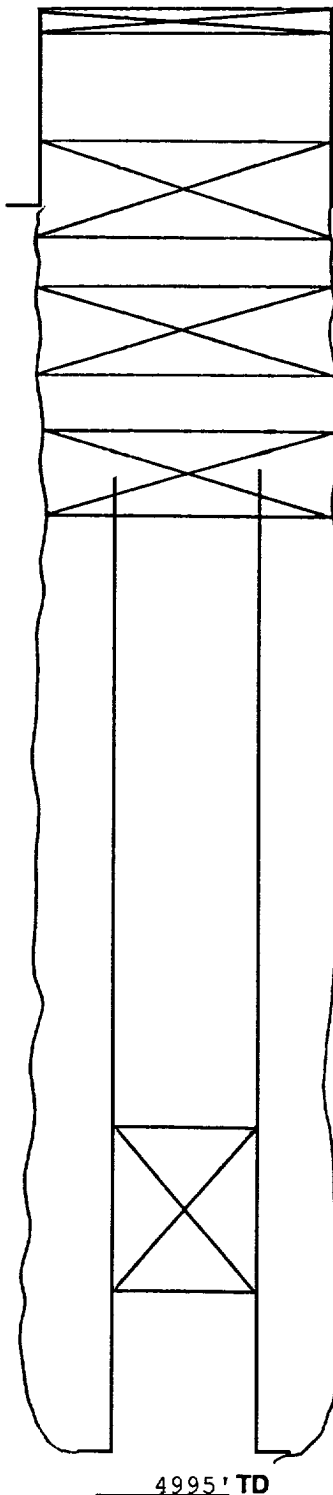
**PERFORATIONS**

4812'-4828'  
4878'-4884'  
4892'-4898'

**PBD** 4960'

**PRODUCTION CASING**

Hole Size: 7-7/8"  
Casing: 5-1/2", 14#, J-55  
Casing Set @ 4993' with 200 sks  
containing 2% CaCl.



**WELL HISTORY**

Spud date: 6/19/56  
Original owner: Sunray Mid-Cont.  
IP 7/8/56 BOPD 480 BWPD -  
MCFD \_\_\_\_\_ GOR \_\_\_\_\_  
Completion Treatment: \_\_\_\_\_  
Frac'd with 35,000 gal crude  
and 35,000# 20/40 sand.

**CURRENT DATA**

Pumping Unit \_\_\_\_\_  
Tubing \_\_\_\_\_  
Pump Size \_\_\_\_\_  
Rod string \_\_\_\_\_  
Remarks \_\_\_\_\_  
Formerly N.M. Fed. 'C' #12  
Well was P & A's as follows:  
Plugged perforations with  
20 sks cement from 4700'  
to 4800'  
Cut off casing at 1530'. Set  
40 sks plug across stub.  
Set 60 sks plug 1110'-1260'.  
Set 40 sks plug 175'-275'.  
Placed 2 sk plug at surface.  
Date Last Revised: 8/18/93

san. in testing labo. y, inc.

907 WEST APACHE

P O BOX 2079

FARMINGTON, NEW MEXICO

PHONE

327-4966

Date June 10, 1977

Report to Hixon Development Company  
Requested by A. Kuchera, Mgr. Sampled by Hixon Personnel  
Project CBU #5 Location NW NW Sec. 6, T25N, R12W  
Source of Material Lower Gallup Produced Water

Lab No. 24509 Water Analysis for Petroleum Engineering

**TEST RESULTS**

**WATER ANALYSIS FOR PETROLEUM  
ENGINEERING**

Constituent

Total Solids 2263 ppm  
Resistivity 7.25  
Conductivity 2.94 ohms/meter @70°F  
3,400 micromhos/cm @ 70°F

Constituents

	Meg/L	ppm
<u>Cations</u>		
Sodium	29.3	674
Calcium	2.3	45
Magnesium	0.5	6
Iron	neg.	3
Barium	0	0

Comments

Essentially this is a 0.2% sodium sulfate solution.

Anions

Chloride	4.1	145
Bicarbonate	4.0	244
Carbonate	0	0
Hydroxide	0	0
Sulfate	24.0	1150

Copies to Hixon Development Co. (3)

P.O. Box 2810

Farmington, New Mexico 87401

Certified by:

