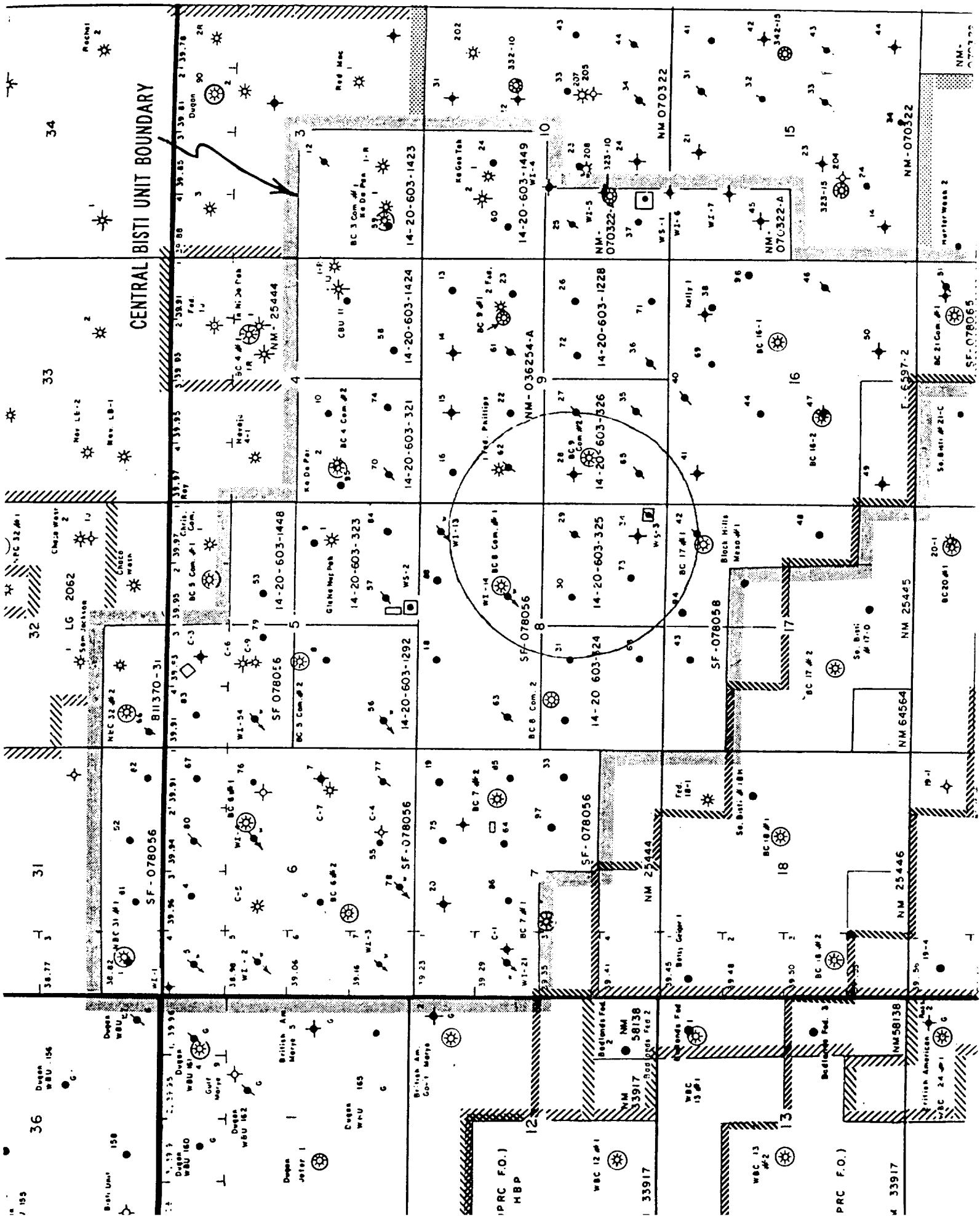


Giant Exploration & Production Company
Application for Authorization to Inject
Form C-108 Supplemental Information

Central Bisti Unit Well No. 29
NE/4, SE/4, Sec. 8, 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. WI-14
 - Central Bisti Unit No. 27
 - Central Bisti Unit No. 28
 - Central Bisti Unit No. 30
 - Central Bisti Unit No. 34
 - Central Bisti Unit No. 42
 - Central Bisti Unit No. WI-62
 - Central Bisti Unit No. 65
 - Central Bisti Unit No. 73
- 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 943 - 956 psi range. Maximum injection pressure will be 956 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 19' in thickness with a top of 4763' 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.



Giant Exploration & Production
Company
Well Bore Diagram

WELL NAME Central Bisti Unit Well No. 29
LOCATION 1980' FSL, 660' FEL SECTION 8 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 @ 330' with 225 sks
cement containing 2% CaCl.

GLE 6216'

KBE 6223'

DF

FORMATION TOPS

CEMENT TOP 3300' (by TS)

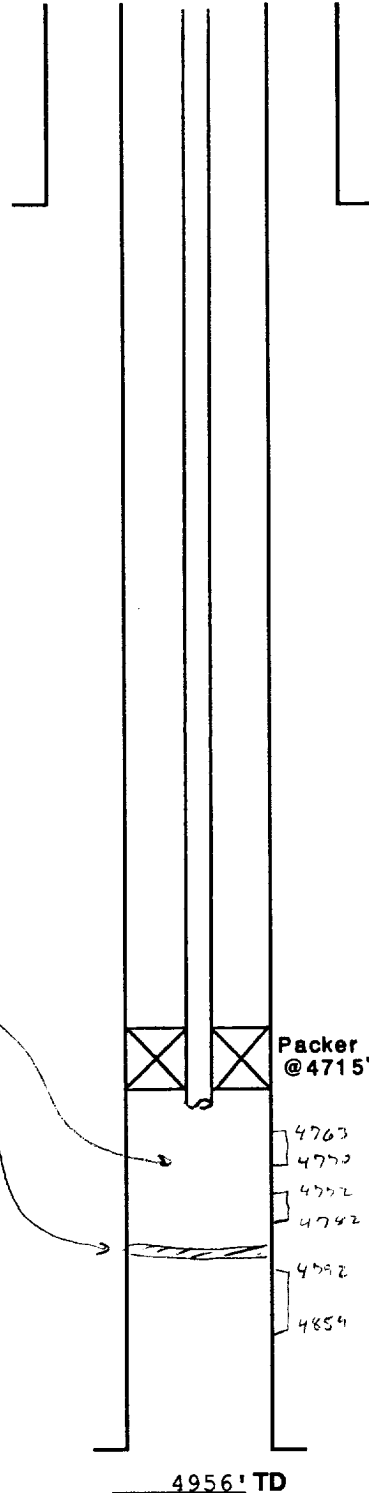
PERFORATIONS

4763'-70'
4782'-82'

PBD 4788' Proposed

PRODUCTION CASING

Hole Size: 7-7/8"
Casing: 4-1/2", 9.5#, J-55
Casing Set @ 4952' with 350 sks
pozmix containing 2% gel.



WELL HISTORY

Spud date: 8/24/59
Original owner: Sunray Mid-Cont.
IP 10/14/59 BOPD 21 BWPD 14
MCFD 68 GOR 3238
Completion Treatment: _____
Frac with 20,000 gal crude and
20,000# 20-40 sand.

CURRENT DATA

Pumping Unit _____
Tubing _____
Pump Size _____
Rod string _____
Remarks _____

Proposed water injection
schematic.

Date Last Revised: 8/18/93

WELL DATA SHEET

Well Name: Central Bisti Unit #29

Legal Description: 1980' FSL, 660' FEL
Sec. 8, T25N, R12W
San Juan County, N.M.

Well Type: Oil Well

Spud Date: 08-24-59

Surface Casing Hole Size: 12-1/4"
Surface Casing Size: 8-5/8"
Surface Casing Depth: 330'

Cementing Record: 225 sks.

Production Casing Hole Size: 7-7/8"
Production Casing Size: 4-1/2"
Production Casing Depth: 4952'

Cementing Record: 350 sks.

Perforation: 4763' - 4770'
4772' - 4782'
4792' - 4802'
4808' - 4815'
4819' - 4825'
4833' - 4844'
4848' - 4859'

Plug Back Depth: 4920'

Total Depth: 4957'

WELL DATA SHEET

Well Name: Central Bisti Unit WI-14

Legal Description: 1980' FNL, 1980' FEL
Sec. 8, T25N, R12W
San Juan County, N.M.

Well Type: Water Injection

Spud Date: 06-15-56

Surface Casing Hole Size: 12-1/4"
Surface Casing Size: 8-5/8"
Surface Casing Depth: 198'

Cementing Record: 175 sks.

Production Casing Hole Size: 7-7/8"
Production Casing Size: 5-1/2"
Production Casing Depth: 4938'

Cementing Record: 200 sks.

Perforation: 4772' - 4784'
4809' - 4815'
4845' - 4850'
4857' - 4861'

Plug Back Depth: 4893'

Total Depth: 4940'

WELL DATA SHEET

Well Name:	Central Bisti Unit #27
Legal Description:	1980' FSL, 1980' FWL Sec. 9, T25N, R12W San Juan County, N.M.
Well Type:	Oil Well
Spud Date:	09-02-59
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	315'
Cementing Record:	225 sks.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	4-1/2"
Production Casing Depth:	4958'
Cementing Record:	300 sks.
Perforation:	4753' - 4772' 4783' - 4793' 4798' - 4806' 4814' - 4821' 4827' - 4835' 4841' - 4848'
Plug Back Depth:	4924'
Total Depth:	4953'

WELL DATA SHEET

Well Name: Central Bisti Unit #30

Legal Description: 1980' FSL, 1980' FEL
Sec. 8, T25N, R12W
San Juan County, N.M.

Well Type: Oil Well

Spud Date: 05-19-56

Surface Casing Hole Size: 12-1/4"
Surface Casing Size: 8-5/8"
Surface Casing Depth: 298'

Cementing Record: 125 sks.

Production Casing Hole Size: 7-7/8"
Production Casing Size: 5-1/2"
Production Casing Depth: 4940'

Cementing Record: 450 sks.

Perforation: 4772' - 4782'
4806' - 4828'
4840' - 4848'

Plug Back Depth: 4930'

Total Depth: 4940'

WELL DATA SHEET

Well Name:	Central Bisti Unit WI-62
Legal Description:	1980' FNL, 660' FWL Sec. 9, T25N, R12W San Juan County, N.M.
Well Type:	Water Injection
Spud Date:	09-06-56
Surface Casing Hole Size:	11"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	228'
Cementing Record:	100 sks.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	5-1/2"
Production Casing Depth:	4891'
Cementing Record:	200 sks.
Perforation:	4754' - 4776' 4827' - 4833' 4841' - 4850'
Plug Back Depth:	4856'
Total Depth:	4900'

WELL DATA SHEET

Well Name: Central Bisti Unit #65

Legal Description: 660' FSL, 660' FWL
Sec. 9, T25N, R12W
San Juan County, N.M.

Well Type: Oil Well

Spud Date: 07-27-59

Surface Casing Hole Size: 12-1/4"
Surface Casing Size: 8-5/8"
Surface Casing Depth: 285'

Cementing Record: 175 sks.

Production Casing Hole Size: 7-7/8"
Production Casing Size: 5-1/2"
Production Casing Depth: 4930'

Cementing Record: 225 sks.

Perforation: 4742' - 4758'
4772' - 4806'
4815' - 4826'
4830' - 4842'

Plug Back Depth: 4896'

Total Depth: 4931'

WELL DATA SHEET

Well Name: Central Bisti Unit #73

Legal Description: 790' FSL, 1650' FEL
Sec. 8, T25N, R12W
San Juan County, N.M.

Well Type: Oil Well

Spud Date: 11-06-80

Surface Casing Hole Size: 12-1/4"
Surface Casing Size: 8-5/8"
Surface Casing Depth: 242'

Cementing Record: 175 sks.

Production Casing Hole Size: 7-7/8"
Production Casing Size: 4-1/2"
Production Casing Depth: 4985'

Cementing Record: 425 sks.

Perforation: 4772' - 4778'
4794' - 4802'
4816' - 4822'
4834' - 4942'
4850' - 4856'

Plug Back Depth: 4947'

Total Depth: 5000'

Giant Exploration & Production
Company
Well Bore Diagram

WELL NAME Central Bisti Unit Well No. 28
LOCATION 1980' FSL, 660' FWL SECTION 9 T 25 N R 12 W
COUNTY San Juan STATE New Mexico

SURFACE CASING

Hole Size: 12-1/4"
Casing: 8-5/8", 24#
Casing Set @ 298' with 125 sks
of cement.

FORMATION TOPS

Pictured Cliffs	1132'
Lewis	1280'
La Ventana	1842'
Cliffhouse	2963'
Menefee	3020'
Point Lookout	3564'
Mancos	3714'
Gallup	4647'
Lower Gallup	4738'
Lower Mancos	4898'

CEMENT TOP 3040' (by T.S.)

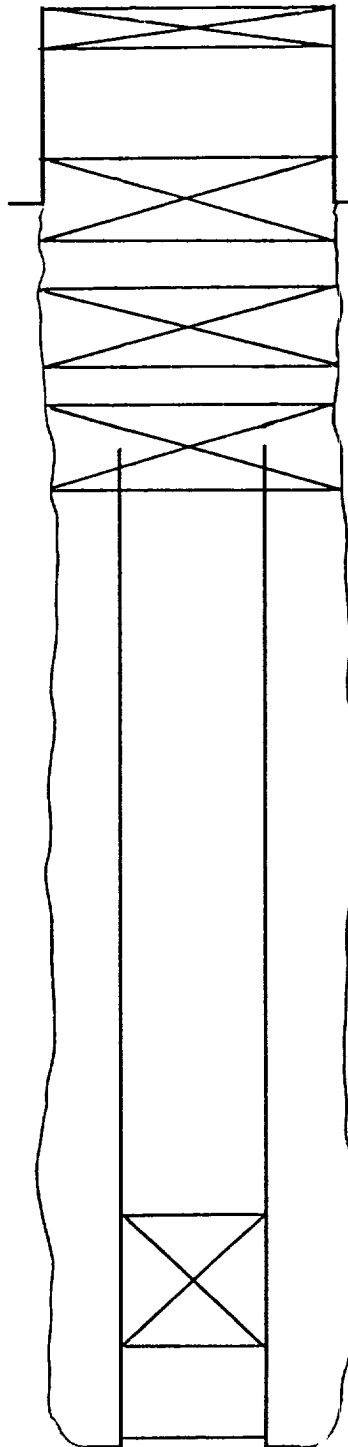
PERFORATIONS

4739'-66'
4786'-96'
4805'-12'
4821'-30'
4835'-48'

PBD 4920'

PRODUCTION CASING

Hole Size: 7-7/8"
Casing: 5-1/2", 15.5#, J-55
Casing Set @ 4935' with 450 sks
of cement.



4935' TD

GLE

KBE 6209'

DF

WELL HISTORY

Spud date: 6/4/56
Original owner: Amerada Petr.
IP BOPD 126 BWPD -
MCFD 817 GOR 644
Completion Treatment:
Frac'd with 100,000 gal crude
and 100,000# sand

CURRENT DATA

Pumping Unit
Tubing
Pump Size
Rod string
Remarks
Formerly Joan White Well #2
P & A'd 3/71 as follows:
Plugged Gallup perfs with 20
sks of cement from 4700' to
4800'.
Shot off casing at 1102'. Set
40 sks plug across casing
stub from 1052' to 1152'.
Set 60 sks plug from 1070' to
1220'.
Set 40 sks plug from 275' to
375'.
Set 2 sks plug at surface.
Date Last Revised: 8/19/93

**Giant Exploration & Production
Company**
Well Bore Diagram

WELL NAME Central Bisti Unit Well No. 34
LOCATION 660' FSL, 660' FEL SECTION 8 T 25 N R 12 W
COUNTY San Juan STATE New Mexico

SURFACE CASING

Hole Size: 12-1/4"
Casing: 8-5/8", 24#
Casing Set @ 286' with 100 sks
containing 2% gel.

FORMATION TOPS

Pictured Cliffs 1136'
Point Lookout 3578'
Upper Gallup 4658'
Lower Gallup 4745'

CEMENT TOP 2870' (by T.S.)

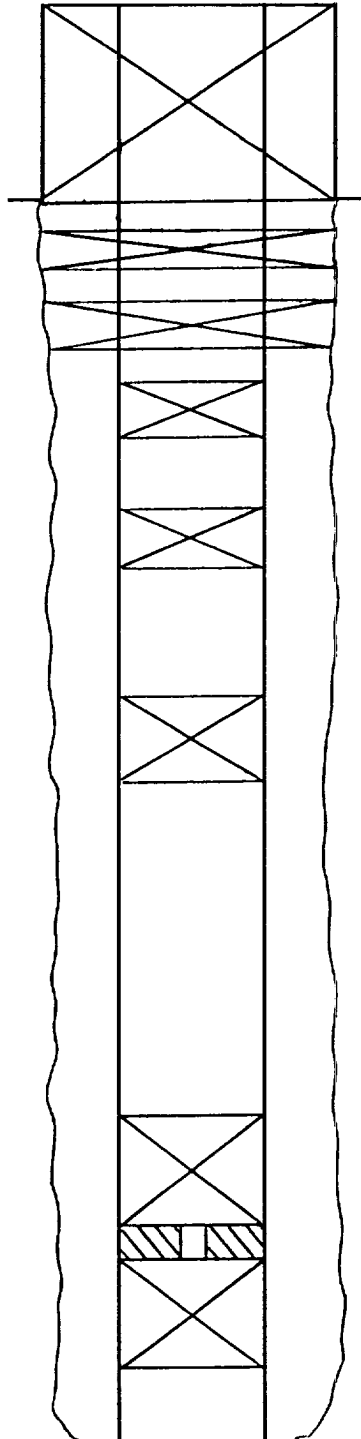
PERFORATIONS

3733'-3737'

PBD

PRODUCTION CASING

Hole Size: 7-7/8"
Casing: 5-1/2", 15.5#
Casing Set @ 4918' with 450 sks
cement containing 2% gel.



GLE 6229'

KBE 6239'

DF 6238'

WELL HISTORY

Spud date: 5/3/56
Original owner: Amerada Petr.
IP 5/24/93 BOPD 219 BWPD -
MCFD 316 GOR 1444
Completion Treatment: -
Frac'd with 100,000 gal crude
and 100,000# sand.

CURRENT DATA

Pumping Unit -
Tubing -
Pump Size -
Rod string -
Remarks -
Formerly Na Des Pah #1
Well P & A'd as follows:
Permanent packer at 4740'.
Squeezed Gallup perms with
50 sks cement. Spotted
50 sks cement on packer.
Set 25 sk plug 3458'-3721'.
Set 15 sk plug at 2572'.
Set 15 sk plug at 1522'.
Perf'd at 1210'. Placed 30 sx
inside and outside casing.
Perf'd at 877'. Placed 30 sx
inside and outside casing.
Perf'd at 520'. Filled
inside and outside casing.
Date Last Revised: 8/18/93

Giant Exploration & Production Co.

Well Bore Diagram

WELL NAME Central Bisti Unit Well No. 42

LOCATION 660' FNL, 660' FEL SECTION 17 T 25 N R 12 W

COUNTY San Juan STATE New Mexico

SURFACE CASING

Hole Size: 13-3/8"
Casing: 9-5/8", 32.3#
Casing Set @ 240' with 200 sx
of cement

INTERMEDIATE CASING

Hole Size: 8-3/4"
Casing: 7", 20# & 23#
Casing Set @ 4910' with 175 sx
of cement.
(Cmt. at 3575' by T.S.)

FORMATION TOPS

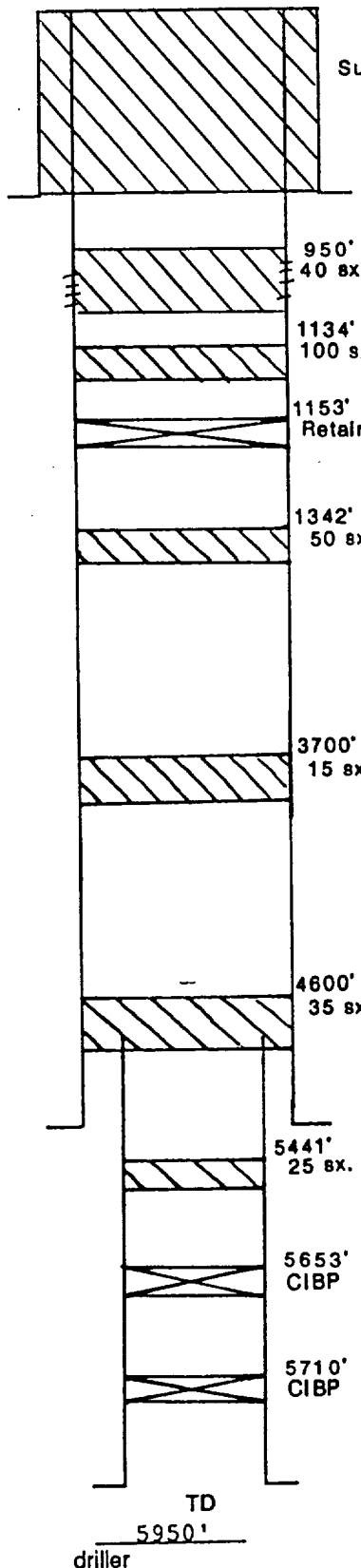
CEMENT TOP 5048' (Calc.)

PERFORATIONS

1106'-16'

PBD 1134' (Present)
PRODUCTION CASING

Hole Size: 6-1/8"
Casing: 4-1/2", 10.5#
Casing Set @ 5948' with 110 sx
cement.



GLE 6228'

RBM 6240'

DF 6238'

WELL HISTORY

Spud date: 3/29/56
Original owner: Sunray Mid-Cont.
RetainerIP BOPD 480 BWPD
GOR MCF
Completion treatment:

CURRENT DATA

Pumping Unit
Tubing
Pump Size
Rod string
Remarks

Well plugged back to 1134'

Perforated in the Fruitland formation.

Well is plugged and abandoned.

Date Last Rev. 9/20/90

san. an testing labo. ry, 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

<u>Constituent</u>		<u>Constituents</u>		
<u>Total Solids</u>	2263 ppm	<u>Cations</u>	<u>Meg/L</u>	<u>ppm</u>
	7.25	Sodium	29.3	674
<u>Resistivity</u>	2.94 ohms/meter @ 70°F	Calcium	2.3	45
<u>Conductivity</u>	3,400 micromhos/cm @ 70°F	Magnesium	0.5	6
		Iron	neg.	3
		Barium	0	0
<u>Comments</u>		<u>Anions</u>		
Essentially this is a 0.2% sodium sulfate solution.		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:

