HIXON DEVELOPMENT COMPANY
P. O. BOX 2810
FARMINGTON, NEW MEXICO 87499

April 21, 1986

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

Subject: CBU Well No. 88
NW/4 NE/4 Section 8, T 25N, R 12W
San Juan County, New Mexico

Dear Mr. Chavez:

Attached for your Administrative Approval is our Application for Authorization to Inject for the the subject well.

Very truly yours,

Aldrich L. Kuchera
President

Enclosures

EJB:jab

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

II. Operator: Hixon Development Company

Address: P.O. Box 2810, Farmington, NM 87499

Contact party: Aldrich L. Kuchera Phone: 326-3325

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 1636-A.

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: Aldrich L. Kuchera Title President

Signature: Aldrich L. Kuchera Date: 4/17/86

* 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.

RECEIVED
APR 22 1986
OIL CON. DIV
DIST. 3

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells:

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

NOTICE

Hixon Development Company, P.O. Box 2810, Farmington, New Mexico 87499, (505) 326-3325 whose agent is Aldrich L. Kuchera hereby notifies interested parties that the following well is to be converted to a water injection well. Maximum rate will be 1200 BWPD at less than 956 psi. Any request for information or objections should be filed with the Oil Conservation Division, 1000 Rio Brazos Road, Aztec, NM 87410 within 15 days.

Central Bisti Unit Well No. 88 NW/4 NE/e Section 8, T 25N, R 12W

To be published: 4-18-86

Legal No.: 18209

HIXON DEVELOPMENT COMPANY
Application for Authorization to Inject
Form C-108 Supplemental Information

CBU Well No. 88
Section 8, T 25N, R 12W
San Juan County, New Mexico

I. Shown on Application.

II. Shown on Application.

III. Well data attached

IV. This well is located in a Federal and State approved Waterflood project operational since 1959.

V. Area of review is shown on attached map.

VI. Information for well's located in the area of review are attached as follows:

CBU Well No. WI 13
CBU Well No. WI 14
CBU Well No. 16
CBU Well No. 18
CBU Well No. WI 57
CBU Well No. 70
CBU Well No. 84

VII. 1. Proposed average injection rate is 600 BWPD, expected maximum injection rate is 1200 BWPD.

2. The injection system will be closed.

3. Average injection pressures are expected to be in the 820-956 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 Central Bisti Unit since 1959. All produced water is re-injected 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 shown to be 34' in thickness with a top of 4779' KBE as shown on SP log previously submitted. No known

sources of underground drinking water exist in this area. Water well drilling in the area has shown the Ojo Alamo to be dry.

IX. The well will be acidized if required to maintain injection rate and pressures.

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 Central Bisti Lower Gallup Sand Unit. It is not a disposal well.

XIII. Proof of notification attached.

XIV. Certification shown on application.

INJECTION WELL

DATA SHEET

III. WELL DATA

PART A

1. Central Bisti Unit No. 88
   380' FNL & 1650' FEL
   Section 8, T 25N, R 12W

2. Surface Casing
   Hole Size: 12-1/4"
   Casing: 8-5/8", 24#
   Setting Depth: 296' K.B. with 175 sks (206.5 cu.ft.)
   Note: Cement was circulated to surface.

   Production Casing
   Hole Size: 7-7/8" @ 4990' K.B.
   Casing: 5-1/2", 15.50#
   Setting Depth: 4982.71' K.B. with 600 sks (1812 cu.ft.)
   Note: Cement was circulated to surface
   PBD: 4947' K.B.

3. Tubing: 2-3/8", 4.7# with plastic coated I.D.
   Setting Depth: 4655' K.B.

4. Packer: Baker AD-1 set at 4655' K.B.

PART B

1. Injection Formation: Bisti Lower Gallup
   Field or Pool Name: Bisti Lower Gallup

2. Perforated Injection Intervals: 4782'-4798', 4848'-4856', and 4862'-4872'

3. Well was drilled as a producing well.

4. None

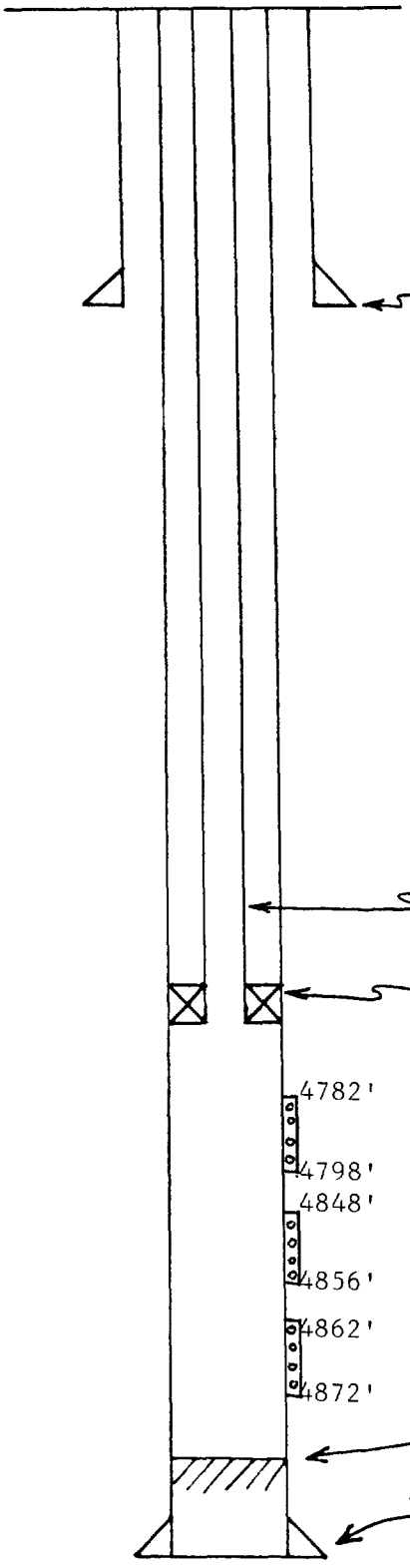
5. Next Higher Oil and Gas Zone: Pictured Cliffs @ 1129'
   Next Lower Oil and Gas Zone: Dakota @ Unknown Depth

HIXON DEVELOPMENT COMPANY

INJECTION WELL SCHEMATIC

Well Name: Central Bisti Unit No. 88

Location: 380' FNL & 1650' FEL
Section 8, T 25N, R 12W



Surface Casing:
8-5/8", 24# casing set at 296' K.B. with 175 sacks of cement

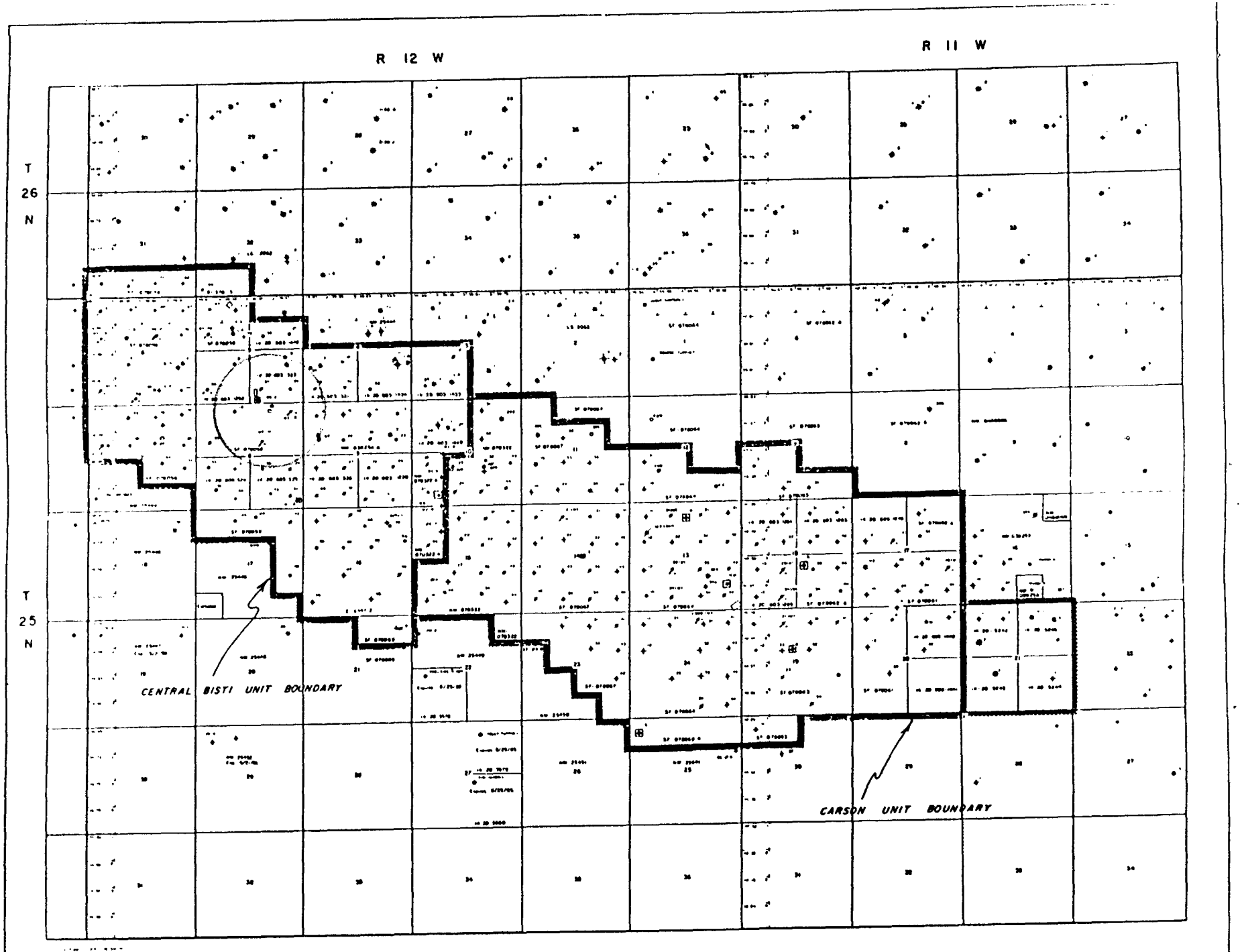
Tubing: 2-3/8", 4.70# tubing with plastic coated I.D. set at 4655'

Packer: Baker AD-1 set at 4655' K.B.

Perforations: 4782'-4798', 4848'-4856', and 4862'-4872'

TD: 4990' K.B.
PBD: 4947' K.B.

Production Casing:
5-1/2", 15.5# casing set at 4982.71' K.B. with 600 sacks of cement.



HIXON DEVELOPMENT COMPANY

CENTRAL BISTI - CARSON UNIT AREA

San Juan County, New Mexico

San Juan testing laboratory, 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
pH	7.25
Resistivity	2.94 ohms/meter @70°F
Conductivity	3,400 micromhos/cm @ 70°F

Comments

Essentially this is a 0.2% sodium sulfate solution.

Constituents		
Cations	Meg/L	ppm
Sodium	29.3	674
Calcium	2.3	45
Magnesium	0.5	6
Iron	neg.	3
Barium	0	0
Anions		
Chloride	4.1	145
Bicarbonate	4.0	244
Carbonate	0	0
Hydroxide	0	0
Sulfate	24.0	1150

LAWRENCE A. BREWER REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR 3122 STATE OF NEW MEXICO

Copies to Hixon Development Co. (3)
P.O. Box 2810
Farmington, New Mexico 87401

Certified by:

TEST NO. 22096

Form 360-7

WELL DATA

WELL NAME: Central Bisti Unit Well No. WI - 13
LOCATION: 660' FNL, 660' FEL, Section 8, T 25N, R 12W
WELL TYPE: Injection Well

SPUD DATE: 8-18-56

SURFACE CASING HOLE SIZE: 12-1/4"
SURFACE CASING: 8-5/8"
SURFACE CASING SET AT: 350'
CEMENTING RECORD: 225 Sacks

PRODUCTION CASING HOLE SIZE: 7-7/8"
PRODUCTION CASING: 5-1/2"
PRODUCTION CASING SET AT: 4926'
CEMENTING RECORD: 200 Sacks

TOC calc @ 3972'

TOTAL DEPTH: 4930'
PLUG BACK DEPTH: 4890'

PERFORATIONS: 4760'-4777'
4828'-4834'
4841'-4852'

WELL DATA

WELL NAME: Central Bisti Unit Well No. WI - 14
LOCATION: 1980' FNL, 1980' FEL, Section 8, T 25N, R 12W
WELL TYPE: Injection Well

SPUD DATE: 6-15-56

SURFACE CASING HOLE SIZE:	12-1/4"
SURFACE CASING:	8-5/8"
SURFACE CASING SET AT:	198'
CEMENTING RECORD:	175 Sacks
PRODUCTION CASING HOLE SIZE:	7-7/8"
PRODUCTION CASING:	5-1/2"
PRODUCTION CASING SET AT:	4938'
CEMENTING RECORD:	200 Sacks
TOTAL DEPTH:	4940'
PLUG BACK DEPTH:	4800'
PERFORATIONS:	4772'-4784'
	4809'-4815'
	4845'-4850'
	4857'-4861'

TOC calc @ 3954

WELL DATA

WELL NAME:	Central Bisti Unit Well No. 16
LOCATION:	610' FNL, 660' FWL, Section 9, T 25N, R 12W
WELL TYPE:	Oil
SPUD DATE:	7-8-56
SURFACE CASING HOLE SIZE:	12-1/4"
SURFACE CASING:	8-5/8"
SURFACE CASING SET AT:	105'
CEMENTING RECORD:	100 Sacks
PRODUCTION CASING HOLE SIZE:	7-7/8"
PRODUCTION CASING:	4-1/2"
PRODUCTION CASING SET AT:	4877'
CEMENTING RECORD:	150 Sacks
TOTAL DEPTH:	4884'
PLUG BACK DEPTH:	4878'
PERFORATIONS:	4762'-4786' 4833'-4842' 4848'-4862'

TOC @ 4330.

WELL DATA

WELL NAME:	Central Bisti Unit Well No. 18
LOCATION:	660' FNL, 1980' FWL Section 8, T 25N, R 12W
WELL TYPE:	Oil
SPUD DATE:	7-8-56
SURFACE CASING HOLE SIZE:	12-1/4"
SURFACE CASING:	8-5/8"
SURFACE CASING SET AT:	204'
CEMENTING RECORD:	175 Sacks
PRODUCTION CASING HOLE SIZE:	7-7/8"
PRODUCTION CASING:	5-1/2"
PRODUCTION CASING SET AT:	4960'
CEMENTING RECORD:	200 Sacks
TOTAL DEPTH:	4960'
PLUG BACK DEPTH:	4925'
PERFORATIONS:	4796'-4808' 4862'-4870' 4878'-4884' 4823'-4831'

TOC @ 4006'

WELL DATA

WELL NAME:	CENTRAL BISTI UNIT WELL NO. WI 57
LOCATION:	660' FSL, 1980' FEL Section 5, T 25N, R 12W
WELL TYPE:	Water Injection
SPUD DATE:	7-29-56
SURFACE CASING HOLE SIZE:	12-1/4"
SURFACE CASING:	8-5/8"
SURFACE CASING SET AT:	305' KB
CEMENTING RECORD:	150 Sacks
PRODUCTION CASING HOLE SIZE:	7-7/8"
PRODUCTION CASING:	5-1/2"
PRODUCTION CASING SET AT:	5060' KB
CEMENTING RECORD:	400 Sacks
TOTAL DEPTH:	5060'
PLUG BACK DEPTH:	4825'
PERFORATIONS:	4780'-4800' 4846'-4854' 4861'-4872'

TOC @ 3153'

WELL DATA

WELL NAME:	Central Bisti Unit Well No. 70
LOCATION:	660' FSL, 660' FWL Section 4, T 25N, R 12W
WELL TYPE:	Oil
SPUD DATE:	9-2-56
SURFACE CASING HOLE SIZE:	12-1/4"
SURFACE CASING:	8-5/8"
SURFACE CASING SET AT:	295'
CEMENTING RECORD:	150 Sacks
PRODUCTION CASING HOLE SIZE:	7-7/8"
PRODUCTION CASING:	5-1/2"
PRODUCTION CASING SET AT:	4971'
CEMENTING RECORD:	400 Sacks
TOTAL DEPTH:	4972'
PLUG BACK DEPTH:	4952'
PERFORATIONS:	4928'-4936' 4843'-4857' 4828'-4838' 4792'-4796' 4764'-4782'

TOC @ 3000'

WELL DATA

WELL NAME:	Central Bisti Unit Well No. 84
LOCATION:	1200' FSL, 720' FEL Section 5, T 25N, R 12W
WELL TYPE:	Oil
SPUD DATE:	10-8-83
SURFACE CASING HOLE SIZE:	12-1/4"
SURFACE CASING:	8-5/8"
SURFACE CASING SET AT:	216.5'
CEMENTING RECORD:	135 Sacks
PRODUCTION CASING HOLE SIZE:	7-7/8"
PRODUCTION CASING:	5-1/2"
PRODUCTION CASING SET AT:	4977.78'
CEMENTING RECORD:	400 Sacks 200 Sacks
TOTAL DEPTH:	4975'
PLUG BACK DEPTH:	4954'
PERFORATIONS:	4790'-4810' 4850'-4858' 4864'-4876'

TOC @ 2116'

HIXON DEVELOPMENT COMPANY
P. O. BOX 2810
FARMINGTON, NEW MEXICO 87499

RECEIVED
APR 30 1986
OIL CON. DIV.
DIST. 3

April 23, 1986

Bureau of Indian Affairs
Navajo Area Office
Minerals Department
Box 146
Window Rock, Arizona 86515

Subject: CBU Well No. 88
NW/4 NE/4 Section 8, T 25N, R 12W
San Juan County, New Mexico

Gentlemen:

Attached is our Application for Authorization to Inject for the subject well. We are required by the Oil Conservation Division to furnish copies of these applications to the surface owners.

Very truly yours,

Hixon Development Company

Aldrich L. Kuchera
President

EJB:jab

Attachments

Certified Mail No. P 553 442 347

P 553 442 347

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to BIA	
Street and No. BOX 146	
P.O., State and ZIP Code WINDOWROCK AZ 86515	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	APR 23 1986

★ U.S.G.P.O. 1983-403-517

PS Form 3800, Feb. 1982

AFFIDAVIT OF PUBLICATION

No. 18235

STATE OF NEW MEXICO,
County of San Juan:

Margaret Billingsley being duly sworn, says: That he is the Sec. to the Publisher of THE FARMINGTON DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached legal notice

was published in a regular and entire issue of the said FARMINGTON DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for one ~~consecutive~~ (days) (weeks) on the same day as follows:

First Publication Wednesday, April 23, 1986

Second Publication

Third Publication

Fourth Publication

and that payment therefor in the amount of $ 6.77 has been made.

Margaret Billingsley

Subscribed and sworn to before me this 24th day of April, 19 86.

Virginia L. Leach

NOTARY PUBLIC, SAN JUAN COUNTY, NEW MEXICO

My Commission expires: Jan 1989

Copy of Publication

NOTICE

Hixon Development Company, PO Box 2810, Farmington, New Mexico 87499, (505) 326-3325 whose agent is Aldrich L. Kuchera hereby notifies interested parties that the following well is to be converted to a water injection well. Maximum rate will be 1200 BWPD at less than 980 psi. Any request for information or objections should be filed with the Oil Conservation Division, State Land Office Building, PO Box 2088, Santa Fe, New Mexico 87501 within 15 days.

Carson Unit Wel 33-18, NW/4 SE/4, Section 18, T25N, R12W
CBU Well No. 88, NW/4 NE/4 Sec. 8, T25N, R12W

Legal No. 18235 published in the Farmington Daily Times, Farmington, New Mexico on Wednesday, April 23, 1986.

RECEIVED
APR 30 1986
OIL CON. DIV.
DIST. 3

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 April 23, 1986

RE: Proposed MC_____
Proposed DHC_____
Proposed NSL_____
Proposed SWD_____
Proposed WFX ✓
Proposed PMX_____

Gentlemen:

I have examined the application dated April 21, 1986

for the Hixon Development Co. Central Bisti Unit #88 B-8-23N-12W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve.

Yours truly,

Carolyn J. Inglin