

OIL CONVERSION DIVISION
dugan production corp.

90 NOV 13 AM 8 49

November 9, 1990

New Mexico Oil Conversation Division
P.O. Box 2008
Santa Fe, N.M 87501

Re: Application to Convert West Bisti Unit No. 127 to Injection

Gentlemen:

You are in possession of an application to convert the following well to injection:

West Bisti Unit No. 127
1980' FNL & 1980' FEL
28-26N-13W

The application did not include two wells that are within the area of review.

Attached for inclusion in the application is information on those two wells.

Sincerely,

John Alexander
Petroleum Engineer

cc: NMOCD, Aztec

DUGAN PRODUCTION CORE.

DATA ON WELLS OFFSET TO WEST BISTI UNIT NO. 127
No. VI on Form C-108

ADDITIONAL WELLS IN AREA OF REVIEW OF WBU 127

WELL	LOCATION	TYPE	DRILLED	DEPTH	DATA
WBU 128	1980' FNL & 660' FWL 28-26N-13W	T.A	5-57	5200	9-5/8" 25.4 LB. CASING @ 214' - CEMENTED W/ 200 SKS. - CIRCULATED TO SURFACE. 5 1/2" 14 LB. CASING @ 5200' - CEMENTED W/ 100 SKS. + 3% GEL. CEMENT TOP @ 4500' BY TEMPERATURE SURVEY GALLUP PERFORATED 5074-92. FRACTURED WITH 12,098 GAL. LEASE OIL AND 5,000 LB. 10-20 SAND.

WELL	LOCATION	TYPE	DRILLED	DEPTH	DATA
WBU 126	1980' FNL & 60' FWL 27-26N-13W	PRODUCER	PRODUCER	5165	9-5/8" 25.4 LB. CASING @ 214' - CEMENTED W/ 200 SKS. - CIRCULATED TO SURFACE. 5 1/2" 14 LB. CASING @ 5164' - CEMENTED W/ 100 SKS. + 3% GEL. CEMENT TOP @ 4660' BY TEMPERATURE SURVEY GALLUP PERFORATED 5084-94. FRACTURED WITH 29,476 GAL. LEASE OIL AND 30,000 LB. 10-20 SAND AND 30,000 LB. 20-40 SAND. PERFORATED GALLUP 4970-90.

DUGAN PRODUCTION CORP.

DATA ON WELLS OFFSET TO WEST BISTI UNIT NO. 127
No. VI on Form C-108

ADDITIONAL WELLS IN AREA OF REVIEW OF WBU 127

WELL	LOCATION	TYPE	DRILLED	DEPTH	DATA
WBU 128	1980' PNL & 660' FWL 28-26N-13W	T.A	5-57	5200	9-5/8" 25.4 LB. CASING @ 214' - CEMENTED W/ 200 SKS. - CIRCULATED TO SURFACE. 5 1/2" 14 LB. CASING @ 5200' - CEMENTED W/ 100 SKS. + 3% GBL. CEMENT TOP @ 4500' BY TEMPERATURE SURVEY GALLOP PERFORATED 5074-92. FRACTURED WITH 12,098 GAL. LEASE OIL AND 5,000 LB. 10-20 SAND.
WBU 126	1980' PNL & 60' FWL 27-26N-13W	PRODUCER	PRODUCER	5165	9-5/8" 25.4 LB. CASING @ 214' - CEMENTED W/ 200 SKS. - CIRCULATED TO SURFACE. 5 1/2" 14 LB. CASING @ 5164' - CEMENTED W/ 100 SKS. + 3% GBL. CEMENT TOP @ 4660' BY TEMPERATURE SURVEY GALLOP PERFORATED 5024-34. FRACTURED WITH 29,476 GAL. LEASE OIL AND 30,000 LB. 10-20 SAND AND 30,000 LB. 20-40 SAND. PERFORATED GALLOP 4970-90.



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

GARREY CARRUTHERS
 GOVERNOR

1600 THE PLAZAS ROAD
 AZTEC, NEW MEXICO 87410
 (505) 334-0170

Date: 11-20-90

91 JAN 7 AM 9 59
 DAVE CATANACH

Oil Conservation Division
 P.O. Box 2088
 Santa Fe, NM 87504-2088

PMK-163

Re: Proposed HC _____
 Proposed DHC _____
 Proposed NSL _____
 Proposed SWD ~~_____~~
 Proposed WFX _____
 Proposed PMX X

Gentlemen:

I have examined the application dated 11-6-90
 for the DUGAN PROD CORP. WB4 #127
 Operator Lease & Well No.

G-28-26N-13W and my recommendations are as follows:
 Unit, S-T-R

Approval - with the stipulation that
yearly METs be conducted on this well
to 300 PSI for 315 min.

Yours truly,

[Handwritten Signature]

APPLICATION FOR AUTHORIZATION TO INJECT

CONSERVATION DIVISION
8 59

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

II. Operator: DUGAN PRODUCTION CORP.

Address: P.O. Box 420, Farmington, NM 87499

Contact party: John Alexander Phone: (505) 325-1821

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 R-1638.

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: John Alexander Title: Operations Manager

Signature: John Alexander Date: 8-29-80

* 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. logs submitted 11-56 on completion.

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.

Nos. III, VII, VIII, IX, XI, XIV on Form C-108

Dugan Production Corp.
P.O. Box 420
Farmington, N.M. 87499

III A. Injection Well Information:

1. West Bisti Unit No. 127
1980' FNL & 1980' FEL
28-26N-13W
2. 9-5/8" 25.4 lb. set @ 214' in 13-3/4" hole. Cemented with 175 sks. "Regular" + 2% CaCl₂. Circulated to surface.

5 1/2" 14 and 15.5 lb. set @ 5201' in 7-7/8" hole. Cemented with 100 sks. + 3% gel. Cement top @ 4400' by temperature survey.
3. Tubing will be 2-3/8" 4.7 lb. EUE 8rd., plastic lined. Setting depth will be ±4950'.
4. Packer will be a Baker Model "FH" Hydostatic Set, plastic coated internally and externally. Setting depth will be ±4950'.

III B. Formation Information:

1. Gallup Sandstone. Bisti Lower Gallup Field.
2. Injection interval perforated 5028-5048.
3. Originally drilled as a production well.
4. There are no other zones perforated in this well.
5. Next highest production zone: Pictured Cliffs - 1343'.
Next lower production zone: Dakota - 5700' (estimate)

VII Data On Proposed Operation:

1. Average daily injection rate is expected to be 400 bwpd, with a maximum rate expected to be 1,000 bwpd.
2. The system is closed.
3. The average injection pressure will be 650 psi, with a maximum of 750 psi.
4. Injected water will that produced from the Gallup formation, and re-injected into the Gallup formation.
5. This is not a disposal well.

VIII Geologic Information:

Injection will be into the Gallup sandstone. Top of the Gallup is at 4938' with a total thickness of 240'. There are no known underground sources of drinking water above or below the Gallup in this well.

IX Stimulation:

No stimulation is proposed.

XI Fresh Water Analysis:

There are no active water wells in the area.

XIV Proof Of Notice:

Attached are copies of the certified mail receipts notifying The Navajo Tribe as surface owner, and BLM as offset lease owner. A copy of the letter provided is attached. Dugan Production is the unit operator and owns the N/2 N/2 of section 27, leaving only the unleased SE/4 of section 21 not operated by Dugan.

A certified copy of the legal notice published in The Farmington Daily Times is attached.

DUGAN PRODUCTION CORP.
West Bisti Unit

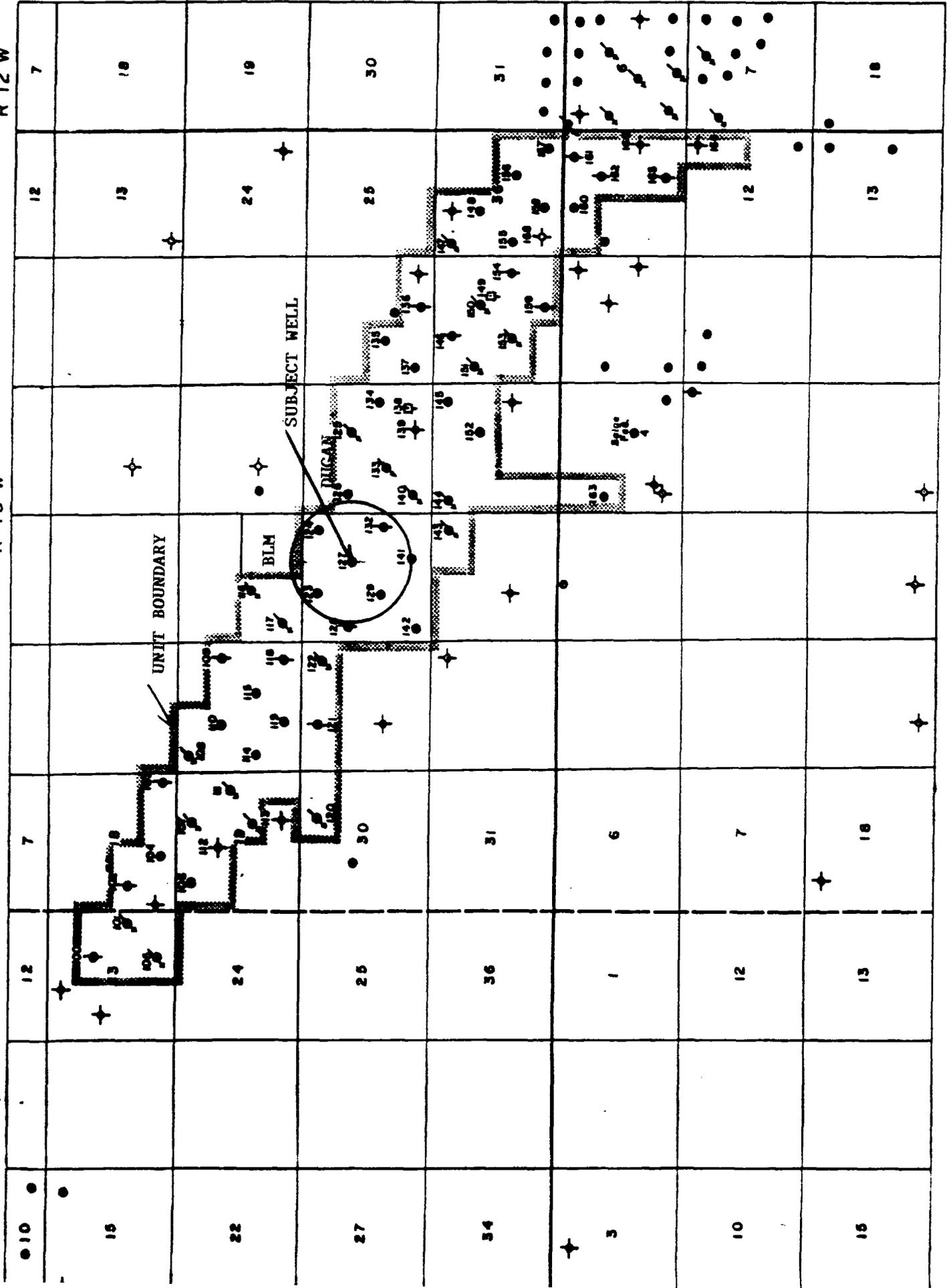
R 14 W

R 13 W

R 12 W

T 26 N

T 25 N



DUGAN PRODUCTION CORP.

DATA ON WELLS OFFSET TO WEST DISTI UNIT NO. 127

No. VI on Form C-108

WELL	LOCATION	TYPE	DRILLED	DEPTH	DATA
WDU 124	660' FNL & 660' FEL 28-26N-13W	PRODUCER	6-57	5176	9-5/8" 25.4 LB. CASING @ 214' - CEMENTED W/ 200 SKS. - CIRCULATED TO SURFACE.

5 1/2" 14 LB. CASING @ 5176' - CEMENTED W/ 100 SKS. + 3% GEL.
CEMENT TOP @ 4600' BY TEMPERATURE SURVEY

GALLUP PERFORATED 5020-30; 5070-86 SAND-OIL FRAC W/ 25,000 GAL.
OIL & 30,000 LB. SAND. RE-FRAC 76,250 GAL. WATER & 131,000 LB.
SAND

WELL	LOCATION	TYPE	DRILLED	DEPTH	DATA
WDU 123	660' FNL & 1980' FNL 28-26N-13W	PRODUCER	4-57	5229	9-5/8" 25.4 LB. CASING @ 214' - CEMENTED W/ 175 SKS. - CIRCULATED TO SURFACE.

5 1/2" 14 LB. CASING @ 5229' - CEMENTED W/ 100 SKS. + 3% GEL.
CEMENT TOP @ 4600' BY TEMPERATURE SURVEY

GALLUP PERFORATED 5080-99. SAND-OIL FRAC W/ 50,000 GAL. OIL &
50,000 LB. SAND

WELL	LOCATION	TYPE	DRILLED	DEPTH	DATA
WDU 141	660' FNL & 1980' FNL 28-26N-13W	PRODUCER	4-57	5122	9-5/8" 25.4 LB. CASING @ 214' - CEMENTED W/ 200 SKS. - CIRCULATED TO SURFACE.

5 1/2" 14 LB. CASING @ 5229' - CEMENTED W/ 100 SKS. + 3% GEL.
CEMENT TOP @ 4400' BY TEMPERATURE SURVEY

GALLUP PERFORATED 4994-5008; 5026-34; 5040-44; 5052-66.
SAND-OIL FRAC W/ 7700 GAL. OIL & 1500 LB. SAND.

WELL	LOCATION	TYPE	DRILLED	DEPTH	DATA
WDU 132	1980' FNL & 660' FEL 28-26N-13W	PRODUCER (TA)	3-57	5114	9-5/8" 25.4 LB. CASING @ 214' - CEMENTED W/ 200 SKS. - CIRCULATED TO SURFACE.

5 1/2" 14 LB. CASING @ 5114' - CEMENTED W/ 100 SKS. + 3% GEL.
CEMENT TOP @ 4365' BY TEMPERATURE SURVEY

GALLUP PERFORATED 5026-38; 4968-88. SAND-OIL FRAC W/ 20,000
GAL. OIL & 20,000 LB. SAND.

CAST IRON BRIDGE PLUG SET @ 4918 W/ 29.5 CU. FT. CEMENT ON TOP.
PACKER FLUID SPOTTED ABOVE CEMENT.

DUGAN PRODUCTION CORP.

DATA ON WELLS OFFSET TO WEST DISTI UNIT NO. 127

No. VI on Form C-108

WELL	LOCATION	TYPE	DRILLED	DEPTH	DATA
WDU 129	1980' FSL & 1980' FWL 28-26N-13W	PRODUCER	5-57	5174	9-5/8" 25.4 LB. CASING @ 214' - CEMENTED W/ 200 SKS. - CIRCULATED TO SURFACE. 5 1/2" 14 LB. CASING @ 5174' - CEMENTED W/ 100 SKS. + 3% GEL. CEMENT TOP @ 4400' BY TEMPERATURE SURVEY GALLUP PERFORATED 5038-54; 5072-80; 5096-5110. SAND-OIL FRAC W/ 40,000 GAL. OIL & 40,000 LB. SAND. RE-FRAC PERFORATIONS 5038-54 W/ 30,000 GAL. WATER & 30,000 LB. SAND.

AFFIDAVIT OF PUBLICATION

COPY OF PUBLICATI

No. 26754

STATE OF NEW MEXICO,
County of San Juan:

Christine Hill
BETTY SHIPP being duly
sworn, says: "That she is the
NATIONAL AD MANAGER of
The Farmington Daily Times, a daily
newspaper of general circulation
published in English in 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 quali-
fied for the purpose within the
meaning of Chapter 167 of the 1937
Session Laws of the State of New
Mexico for ONE consecutive
(days) (\\ \\ \\ \\) on the same day as
follows:

- First Publication WEDNESDAY, OCTOBER 31, 1990
- Second Publication _____
- Third Publication _____
- Fourth Publication _____

and that payment therefore in the
amount of \$ 10.00 has been made.

Christine Hill

Subscribed and sworn to before me
this 31ST day of
OCTOBER 1990

J. Shorter
Notary Public, San Juan County,
New Mexico

My Comm expires: July 5, 1994

LEGAL NOTICE
Dugan Production
Corp., P. O. Box 420,
Farmington, N. M.
87499-0420, 1821
(John Alexander) has
made application to con-
vert it's West Bisti Unit
No. 127 to water injec-
tion. The purpose of this
conversion is to enhance
an existing pressure main-
tenance project. The well
is located 1980' FNL &
1980' FEL of Section 28,
Township 26N, Range
13W, San Juan County,
New Mexico. Water injec-
tion will be into the Gallup
Formation at 5028'-
5048'. Maximum injec-
tion pressure is 750 psi,
with maximum rate of
1,000 bbls of water daily.
All interested parties
must file objections with
the Oil Conservation
Division, P. O. Box 2008,
Santa Fe, New Mexico
87501 within 15 days.
Legal No. 26754 pub-
lished in the Farmington
Daily Times, Farmington,
New Mexico on Wednes-
day, October 31, 1990.

PROOF OF NOTICE TO OFFSET LEASE AND SURFACE OWNERS
DUGAN PRODUCTION CORP'S WEST BISTI UNIT NO. 127
APPLICATION TO CONVERT TO INJECTION WELL

<p>● SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.</p> <p>1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. (Extra charge) 2. <input type="checkbox"/> Restricted Delivery (Extra charge)</p>	
<p>3. Article Addressed to:</p> <p>The Navajo Nation Eastern Navajo Land Office P.O. Box 948 Crownpoint, NM 87313</p>	<p>4. Article Number P 551 202 005</p> <p>Type of Service:</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise</p> <p>Always obtain signature of addressee or agent and DATE DELIVERED.</p>
<p>5. Signature - Addressee X</p>	<p>8. Addressee's Address (ONLY if requested and fee paid)</p>
<p>6. Signature - Agent X <i>[Signature]</i></p>	
<p>7. Date of Delivery 10-31-90</p>	
<p>PS Form 3811, Apr. 1989 * U.S.G.P.O. 1988-238-815 DOMESTIC RETURN RECEIPT</p>	

<p>● SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.</p> <p>1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. (Extra charge) 2. <input type="checkbox"/> Restricted Delivery (Extra charge)</p>	
<p>3. Article Addressed to:</p> <p>Bureau of Land Management 1235 La Plata Hwy. Farmington, NM 87401</p>	<p>4. Article Number P 551 202 004</p> <p>Type of Service:</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise</p> <p>Always obtain signature of addressee or agent and DATE DELIVERED.</p>
<p>5. Signature - Addressee X <i>[Signature]</i></p>	<p>8. Addressee's Address (ONLY if requested and fee paid)</p>
<p>6. Signature - Agent X</p>	
<p>7. Date of Delivery 10-30-90</p>	
<p>PS Form 3811, Apr. 1989 * U.S.G.P.O. 1988-238-815 DOMESTIC RETURN RECEIPT</p>	