STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT A 24-18

OIL CONSERVATION DIVISION

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> OIL CON. Dr. DIST ?

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87504 (505) 827-5800

ORDER NO. WFX-592

APPLICATION OF HIXON DEVELOPMENT COMPANY TO EXFAND ITS WATERFLOOD PROJECT IN THE BISTI LOWER GALLUP OIL POOL IN SAN JUAN COUNTY, NEW MEXICO

### ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-6172, Hixon Development Company has made application to the Division on December 4, 1989 for permission to expand its Carson Unit Waterflood Project in the Bisti-Lower Gallup Oil Pool in San Juan County, New Mexico.

NOW, on this 12th day of January, 1990, the Division Director finds that:

- **(1)** The application has been filed in due form.
- Satisfactory information has been provided that all offset operators have been duly notified of the application.
- No objection has been received within the waiting period as prescribed by Rule 701(B).
- The proposed injection wells are eligible for conversion to water injection under the terms of Rule 701.
- The proposed expansion of the above-referenced waterflood project will not cause waste nor impair correlative rights.
  - (6)The application should be approved.

## IT IS THEREFORE ORDERED THAT:

The applicant, Hixon Development Company, be and the same is hereby authorized to inject water into the Lower Gallup formation through the gross perforated interval from approximately 4861 feet to approximately 4984 feet through 2 3/8-inch plastic lined tubing set in a packer located approximately within 100 feet of the uppermost injection perforation in the wells described in Exhibit A attached to this order.

GARREY CARRUTHERS

GOVERNOR

Administrative Order WFX-592 Hixon Development Company January 12, 1990 Page 2

### IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the wells, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus in each well shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection wells or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no more than 0.2 psi/ft. of depth to the uppermost perforation as described above.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said wells that such higher pressure will not result in migration of the injected fluid from the Lower Gallup formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Aztec district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Aztec district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order No. R-6172 and Rules 701-708 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly progress reports of the project in accordance with Rules 706 and 1115 of the Division Rules and Regulations.

Administrative Order WFX-592 Hixon Development Company January 12, 1990 Page 3

Approved at Santa Fe, New Mexico, on this 12th day of January, 1990.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

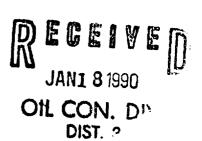
WILLIAM J. LEMAY Director

SEAL

Exhibit "A"

Administrative Order WFX-592

Hixon Development Company



WELL AND LOCATION	MAXIMUM INJECTION SURFACE PRESSURE
Carson Unit Well No. 24-18 660' FSL & 1930' FWL (Unit N) Section 18, T-25 North, R-11 West, NMPM	972 PSIG
Carson Unit Well No. 21-19 660' FNL & 1980' FWL (Unit C) Section 19, T-25 North, R-11 West, NMPM	973 PSIG
Carson Unit Well No. 23-18 1980' FSL & 1888' FWL (Unit K) Section 18, T-25 North, R-11 West, NMPM	975 PSIG

All locations in San Juan County, New Mexico.



## 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 12-6-89	
RE: Proposed MC Proposed DHC Proposed NSL Proposed SWD Proposed WFX Proposed PMX	
Gentlemen:	
I have examined the application dated 12-4-89	
for the HIVON DEVELOPMENT CO. CARSON Will # 34/8, Operator Lease and Well No. Unit	11-18-2544
and my recommendations are as follows:	
Approva	
	· · · · · · · · · · · · · · · · · · ·
Yours truly,	



December 1, 1989



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

Subject: Carson Unit Well No. 24-18

SE/4 SW/4, Sec. 18, T 25N, R 11W

San Juan County, New Mexico

Dear Mr. Chavez:

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

Very truly yours,

Bruce E. Delventhal

Vice President - Operations

Bruce C. Delventhal

BED/das

Enclosures

#### APPLICATION FOR AUTHORIZATION TO INJECT Pressure Maintenance U Secondary Recovery Disposal Application qualifies for administrative approval? XXyes II. Hixon Development Company P.O. Box 2810, Farmington, New Mexico 87499 Aldrich L. Kuchera (505) 326-3325 Contact party: Phone: 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. XX yes Is this an expansion of an existing project? If yes, give the Division order number authorizing the project 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: Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum initial. 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. Χ. 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. XLII. 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: \_ Bruce E. Delventhal Title Vice President - Operations December 1, 1989 Date: \* 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.

### 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.

- 8. 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 MOTICE 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.

### Hixon Development Company Application for Authorization to Inject Form C-108 Supplemental Information

Carson Unit Well No. 24-18 SE/4, SW/4, Section 18, T 25N, R 11W San Juan County, New Mexico

- I. Shown on Application.
- II. Shown on Application.
- III. Well data attached.
  - IV. This well is located in Federal and State approved waterflood project operation since 1959.
  - V. Area of review is shown on attached map.
- VI. Information for wells located in area of review are attached as follows:

Carson Unit Well No. 13-18

Carson Unit Well No. 14-18

Carson Unit Well No. 22-18

Carson Unit Well No. WI 23-18

Carson Unit Well No. WI 33-18

Carson Unit Well No. 34-18

Carson Unit Well No. 11-19

Carson Unit Well No. WI 21-19

Carson Unit Well No. 22-19

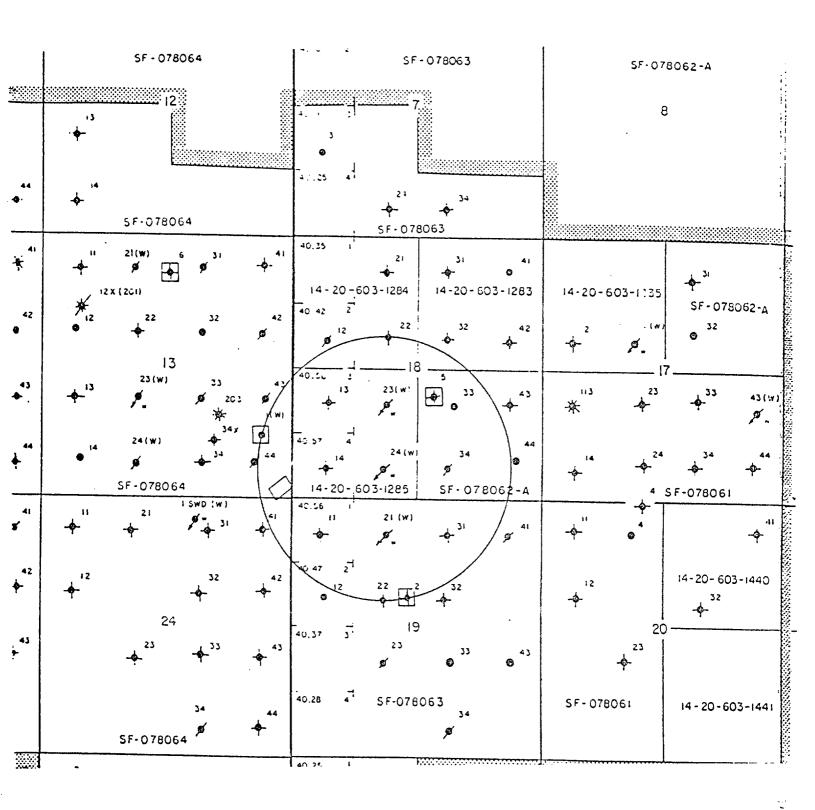
Carson Unit Well No. 31-19

- 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 850-975 psi range. Maximum injection pressure will be 975 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.

Application for Authorization to Inject Page 2

- 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 68' in thickness with a top of 4861' KB as shown on the SP log previously submitted. No known sources of underground 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 attached.
- XIV. Certification shown on Application.

Hixon Development Company Carson Unit Well No. 24-18 T25N-R12W



HIXON DEVELOPMENT COMPANY
CENTRAL BISTI - CARSON UNIT AREA

...

907 WEST APACHE

FARMINGTON, NEW MEXICO

PHONL 327-4966

		Date June 10. 1977
Report to	Hixon Development Co	mpany
		Sompled by <u>Hixon Personnel</u>
Project	CRU #5	Location NW NW Sec. 6, I25N, R12W
Source of Material _	Lower Gallup Produce	d Water
 Lab No	24509 Water Analysi	s for Petroleum Engineering
	TE	ST RESULTS

## WATER ANALYSIS FOR PETROLEUM ENGINEERING

Constituents

onstituent otal Solids H esistivity onductivity	2263 ppm 7.25 2.94 ohms/meter @70°F 3,400 micromhos/cm @ 70°F	Cations Sodium Calcium Magnesium Iron Barium	Meg/L 29.3 2.3 0.5 neg.	ppm 674 45 6 3 0
omments ssentially thi ulfate solutio	s is a 0.2% sodium n.	Anions Chloride Bicarbonate Carbonate Hydroxide Sulfate	4.1 4.0 0 0 24.0	145 244 0 0 1150

Copies to Hixon Development Co. (3) P.O. Box 2810

Farmington, New Mexico 87401



Well Name: Carson Unit #24-18

Legal Description: 660' FSL, 1930' FWL

Sec. 18, T25N-R11W San Juan County, N.M.

Well Type: Water Injection Well

(waiting on approval)

Spud Date: 04/28/59

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

Surface Casing Depth: 106'

Cementing Record: 100 sx.

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

Production Casing Depth: 5007'

Cementing Record: 150 sx.

Perforations: 4861'-4889'

4894'-4902' 4934'-4941' 4946'-4960'

4963'-4976'

Plug-Back Depth: 5007'

Total Depth: 5010'

## Hixon Development Company

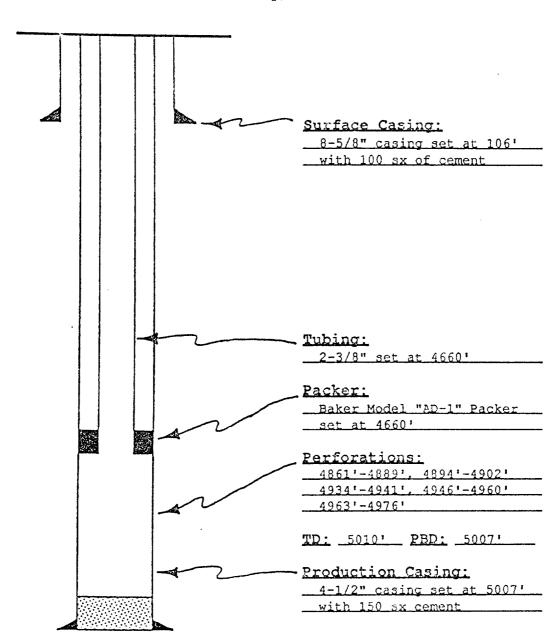
Water Injection Schematic

Well Name: Carson Unit Well No. 24-18

Legal Location: 660' FSL, 1930' FWL

Section 18, T25N-R11W

San Juan County, New Mexico



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 975 psi. Any request for information or objections should be filed with the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504 within 15 days.

Carson Unit Well #24-18, SE/4 SW/4, Sec. 18, T25N, R11W

Well Name:	Carson Unit #13-18	10 sk. surface marker
Legal Description:	1980' FSL, 750' FWL Sec. 18, T25N-R11W San Juan County, N.M.	25 sk. plug at base of surface casing (180'-94')
Weil Type:	P & A	35 sk. plug at 380' 2 1 1 1 (380'-258')
Spud Date:	01/11/60	
Surface Casing Hole Size: Surface Casing Size:	12-1/4 <b>"</b> 8-5/8"	50 sk. plug at csg. stub (1240'-1066')
Surface Casing Depth:	109'	Shot off 4-1/2"
		casing at 1240'
Cementing Record:	100 sx.	
Production Casing Hole Size:	<b>7-</b> 7/8 <b>"</b>	
Production Casing Size:	4-1/2"	
Production Casing Depth:	5038'	
Cementing Record:	150 sx.	7-7/8* hole
Perforations:	4874'-4890'	
	4892'-4898'	
	4904'-4912'	
	4954'-4968'	
	4974'-4984'	
Plug-Back Depth:	5038'	20 sk. plug over and above perfs
Total Depth:	5040'	(5038'-4779')

Well Name:	Carson Unit #14-18	Abandonment marker
Legal Description:	660' FSL, 662.8' FWL Sec. 18, T25N-R11W San Juan County, N.M.	25 sk. plug at base of surface casing (100'-15')
Well Type:	P & A	35 sk. plug at 320' (380'-201')
Spud Date:	01/17/58	
Surface Casing Hole Size: Surface Casing Size: Surface Casing Depth:	12-1/4" 8-5/8"	45 sk. plug at csg. stub (1400'-1247')
Surface Casing Depth:	100.5'	Shot off 4-1/2" casing at 1400'
Cementing Record:	100 sx.	
Production Casing Hole Size: Production Casing Size:	7-7/8" 4-1/2"	. )
Production Casing Depth:	5023'	
Cementing Record:	150 sx.	7-7/8" hole
Perforations:	4877'-4904' 4911'-4923'	
	4951'-4957'	
	4962'-4976'	
	4980'-4997'	}   \
Plug-Back Depth:	5020'	25 sk. plug over perforations
Total Depth:	5025'	(4941'-4626')

Well Name:	Carson Unit #22-18	10 sk. surface marker
Legal Description:	1980' FNL, 1980' FWL Sec. 18, T25N-R11W San Juan County, N.M.	25 sk. plug at base of surface casing (170'-86')
Well Type:	P&A	35 sk. plug at 300' (300'-181')
Spud Date:	01/19/60	)
Surface Casing Hole Size: Surface Casing Size: Surface Casing Depth:	12-1/4* 8-5/8* 109'	45 sk. plug at 1360' (1360'-1207') 30 sk. plug at csg. stub
Cementing Record:	100 sx.	(1802'-1700') Shot off 4-1/2" casing at 1802'
Production Casing Hole Size: Production Casing Size: Production Casing Depth:	7-7/8" 4-1/2" 5024'	
Cementing Record:	150 sx.	7-7/8" hole
Perforations:	4881'-4891' 4895'-4913' 4940'-4944' 4954'-4966' 4972'-4982'	
Plug-Back Depth:	5024'	20 sk. plug over
Total Depth:	5025*	and above perfs (4899'-4647')

Well Name: Carson Unit #23-18

Legal Description: 1980' FSL, 1888' FWL

Sec. 18, T25N-R11W San Juan County, N.M.

Well Type: Water Injection Well

Spud Date: 02/16/58

Surface Casing Hole Size: 12-1/4"
Surface Casing Size: 8-5/3"

Surface Casing Depth: 102'

Cementing Record: 100 sx.

Production Casing Hole Size: 7 - 7 / 8 "
Production Casing Size: 4 - 1 / 2 "
Production Casing Depth: 5006'

Cementing Record: 150 sx.

Perforations: 4875'-4891'

4901'-4913' 4944'-4951' 4965'-4970' 4974'-4984'

Plug-Back Depth: 5006'

Total Depth: 5010'

Well Name: Carson Unit #33-18

Legal Description: 1930' FSL, 1980' FEL

Sec. 18, T25N-R11W San Juan County, N.M.

Well Type: Water Injection Well

Spud Date: 05/06/59

Surface Casing Hole Size: 12-1/4"
Surface Casing Size: 8-5/8"
Surface Casing Depth: 109'

Cementing Record: 100 sx.

Production Casing Hole Size: 7-7/8"
Production Casing Size: 4-1/2"
Production Casing Depth: 5045'

Cementing Record: 150 sx.

Perforations: 4899'-4919'

4928'-4940' 4969'-4975' 4982'-4997' 5001'-5018'

Plug-Back Depth: 5045'

Total Depth: 5050'

Well Name:

Carson Unit #34-18

Legal Description:

660' FSL, 1980' FEL Sec. 18, T25N-R11W San Juan County, N.M.

Well Type:

Oil Well

Spud Date:

08/17/57

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

Surface Casing Depth:

176'

Cementing Record:

100 sx.

Production Casing Hole Size: Production Casing Size:

7-7/8" 4-1/2"

Production Casing Size: Production Casing Depth:

5010'

Cementing Record:

150 sx.

Perforations:

4869'-4886'

4900'-4908'

4952'-4958' 4971'-4978'

Plug-Back Depth:

4995'

Total Depth:

5014'

Well Name:	Carson Unit #11-19	10 sk. surface marker 2
Legal Description:	660' FNL, 662.8' FWL Sec. 19, T25N-R11W San Juan County, N.M.	25 sk. plug at base of surface casing (172'-86')
Well Type:	P & A	35 sk. plug at 375' (375'-253')
Spud Date:	06/09/59	
Surface Casing Hole Size: Surface Casing Size:	12-1/4" 8-5/8"	50 sk. plug at csg. stub (1225'-1051')
Surface Casing Depth:	103'	Shot off 4-1/2"
· •		casing at 1225'
Cementing Record:	100 sx.	. )     /
Production Casing Hole Size:	7-7/8"	
Production Casing Size:	4-1/2*	
Production Casing Depth:	5016'	
Cementing Record:	150 sx.	7-7/8" hole
Perforations:	4854'-4880' 4889'-4896' 4927'-4932' 4940'-4952' 4959'-4970'	
Plug-Back Depth:	5016'	25 sk. plug over
Total Depth:	5020'	(5016'-4693')

Well Name: Carson Unit #21-19

Legal Description: 660' FNL, 1980' FWL

Sec. 19, T25N-R11W

San Juan County, N.M.

Well Type: Water Injection Well

Spud Date: 06/22/57

Surface Casing Hole Size: 12-1/4"

Surface Casing Size: 8 - 5 / 8 "
Surface Casing Depth: 213'

Cementing Record: 130 sx.

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

Production Casing Depth: 5022'

Cementing Record: 150 sx.

Perforations: 4866'-4892'

4900'-4908' 4939'-4944'

4951'-4962'

4969'-4978'

Plug-Back Depth: 5022'

Total Depth: 5026'

Well Name:	Carson Unit #22-19	10 sk. surface marker
Legal Description:	1980' FNL, 1980' FWL Sec. 19, T25N-R11W San Juan County, N.M.	25 sk. plug at base of surface casing (170'-84')
Well Type:	P & A	35 sk. plug at 400' 2 (400'-278')
Spud Date:	03/11/60	
Surface Casing Hole Size: Surface Casing Size: Surface Casing Depth:	12-1/4" 8-5/8" 108'	50 sk. plug at csg. stub (694'-520') Shot off 4-1/2"
Cementing Record:	100 sx.	casing at 694'
		20 sk. plug across perfs (1300'-1041').
		Drilled out cmt. to 1300'.
Production Casing Hole Size: Production Casing Size: Production Casing Depth:	7-7/8" 4-1/2" 5027'	Perf.'d csg. at 1195'.  Set retainer at 1145' and pumped 75 sx. thru retainer.
Cementing Record:	150 sx.	Perf.'d csg. at 1325'. Set retainer at 1300'
Perforations:	4868'-4888' 4898'-4905' 4934'-4942' 4952'-4962' 4968'-4980'	and pumped 125 sx. thru retainer.
	<u>January 1976</u> 1218'-1224' 1234'-1244'	Set emi reteines
Plug-Back Depth:	5027	Set cmt. retainer at 4782' and pumped 100 sx. cmt. thru
Total Depth:	5030'	cmt. retainer.

Weil Name:	Carson Unit #31-19	10 sk. surface marker >
Legal Description:	660' FNL, 1973.5' FEL Sec. 19, T25N-R11W San Juan County, N.M.	25 sk. plug at base of surface casing (130'-46')
Well Type:	P & A	35 sk. plug at 420' (420'-298')
Spud Date:	12/08/59	
Surface Casing Hole Size: Surface Casing Size:	12-1/4" 8-5/8"	50 sk. plug at csg. stub (1386'-1212')
Surface Casing Depth:	105'	Shot off 4-1/2" casing at 1386'
Cementing Record:	100 sx.	
Production Casing Hole Size: Production Casing Size: Production Casing Depth:	7-7/8" 4-1/2" 5029'	
Cementing Record:	150 sx.	7-7/8" hole
Perforations:	4867'-4895' 4900'-4910' 4922'-4926' 4940'-4944' 4952'-4958' 4964'-4970' 4976'-4982'	
Plug-Back Depth:	5029'	30 sk. plug above perforations
Total Depth:	5030'	(4919'-4531')