STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

Carson Unit #21-19
19-25N-11W

RECEIVED
JAN 18 1990
OIL CON. DIV.
DIST. 2

GARREY CARRUTHERS
GOVERNOR

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 EXPAND 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.

(2) Satisfactory information has been provided that all offset operators have been duly notified of the application.

(3) No objection has been received within the waiting period as prescribed by Rule 701(B).

(4) The proposed injection wells are eligible for conversion to water injection under the terms of Rule 701.

(5) 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.

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.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L

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

GARREY CARRUTHERS
GOVERNOR

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

Date: 12-6-89

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

Re: Proposed MC_____
Proposed DHC_____
Proposed NSL_____
Proposed SWD_____
Proposed WFX_____
Proposed PMX X

Gentlemen:

I have examined the application dated 12-4-89
for the Dixon Development Co. Carson Unit #21
Operator Lease & Well No.
C-19-25N-11W and my recommendations are as follows:
Unit, S-T-R

Approve

Yours truly,

Ernie Busch

CB

Hixon Development Company

December 1, 1989

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

Subject: Carson Unit Well No. 21-19
NE/4 NW/4, Sec. 19, 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

Bruce E. Delventhal
Vice President - Operations

BED/das

Enclosures

Post Office Box 2810
Farmington, New Mexico 87499
505/326-3325

ENERGY AND MINERALS DEPARTMENT

STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

RECEIVED
DEC 04 1989
OIL CON. DIV.
DIST. 3

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☒ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: Hixon Development Company

Address: P.O. Box 2810, Farmington, New Mexico 87499

Contact party: Bruce E. Delventhal Phone: (505) 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? ☒ 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 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: Bruce E. Delventhal Title Vice President - Operations

Signature: Bruce E Delventhal Date: December 1, 1989

* 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.

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.

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

Carson Unit Well No. 21-19
NE/4, NW/4, Section 19, 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 operational 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. 14-18
Carson Unit Well No. 23-18
Carson Unit Well No. 24-18
Carson Unit Well No. 34-18
Carson Unit Well No. 11-19
Carson Unit Well No. 12-19
Carson Unit Well No. 22-19
Carson Unit Well No. 23-19
Carson Unit Well No. 31-19
Carson Unit Well No. 32-19
Carson Unit Well No. 41-19
Carson Unit Well No. 41-24

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 800-973 psi range. Maximum injection pressure will be 973 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 51' in thickness with a top of 4860' 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.

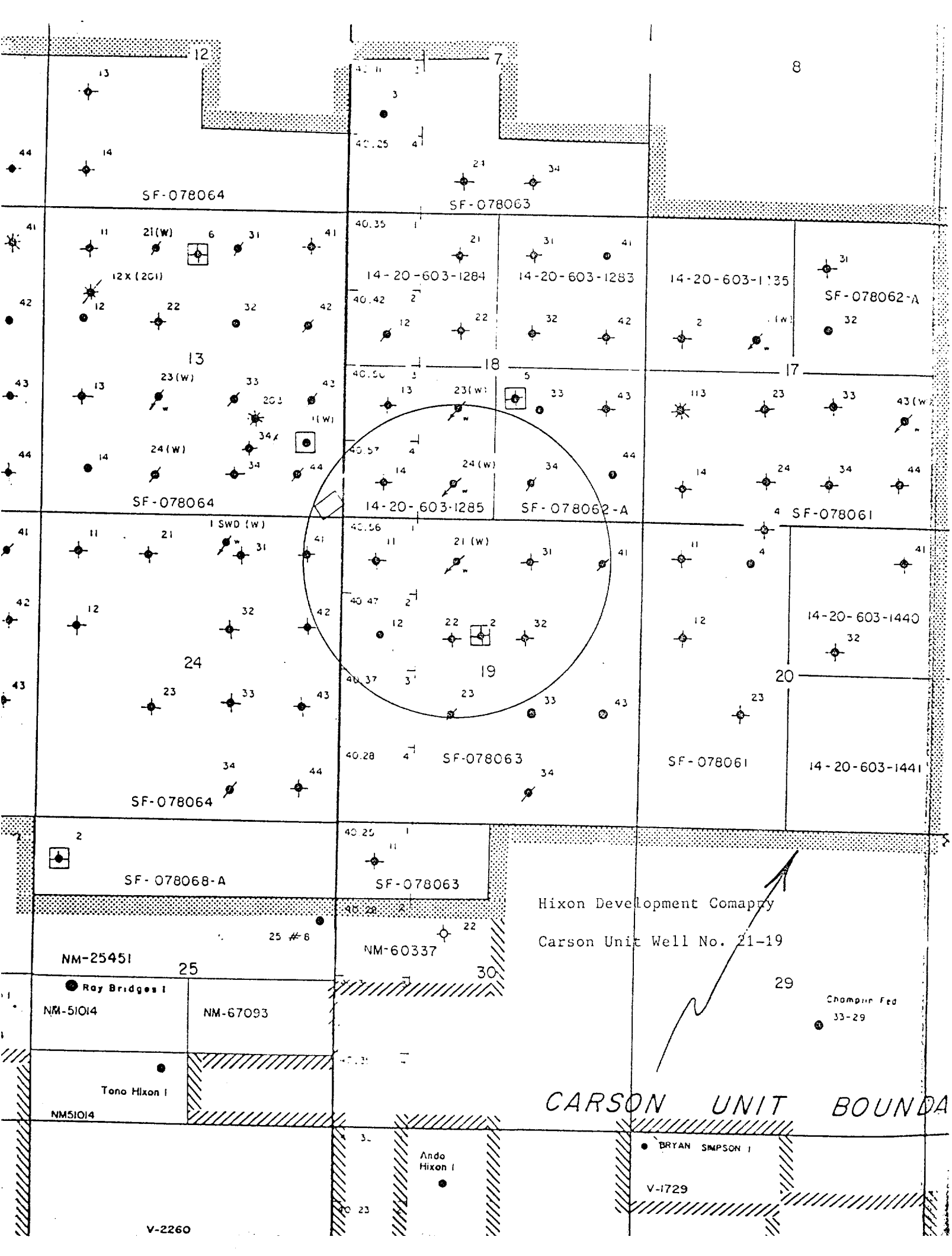
X. Logs were previously submitted.

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.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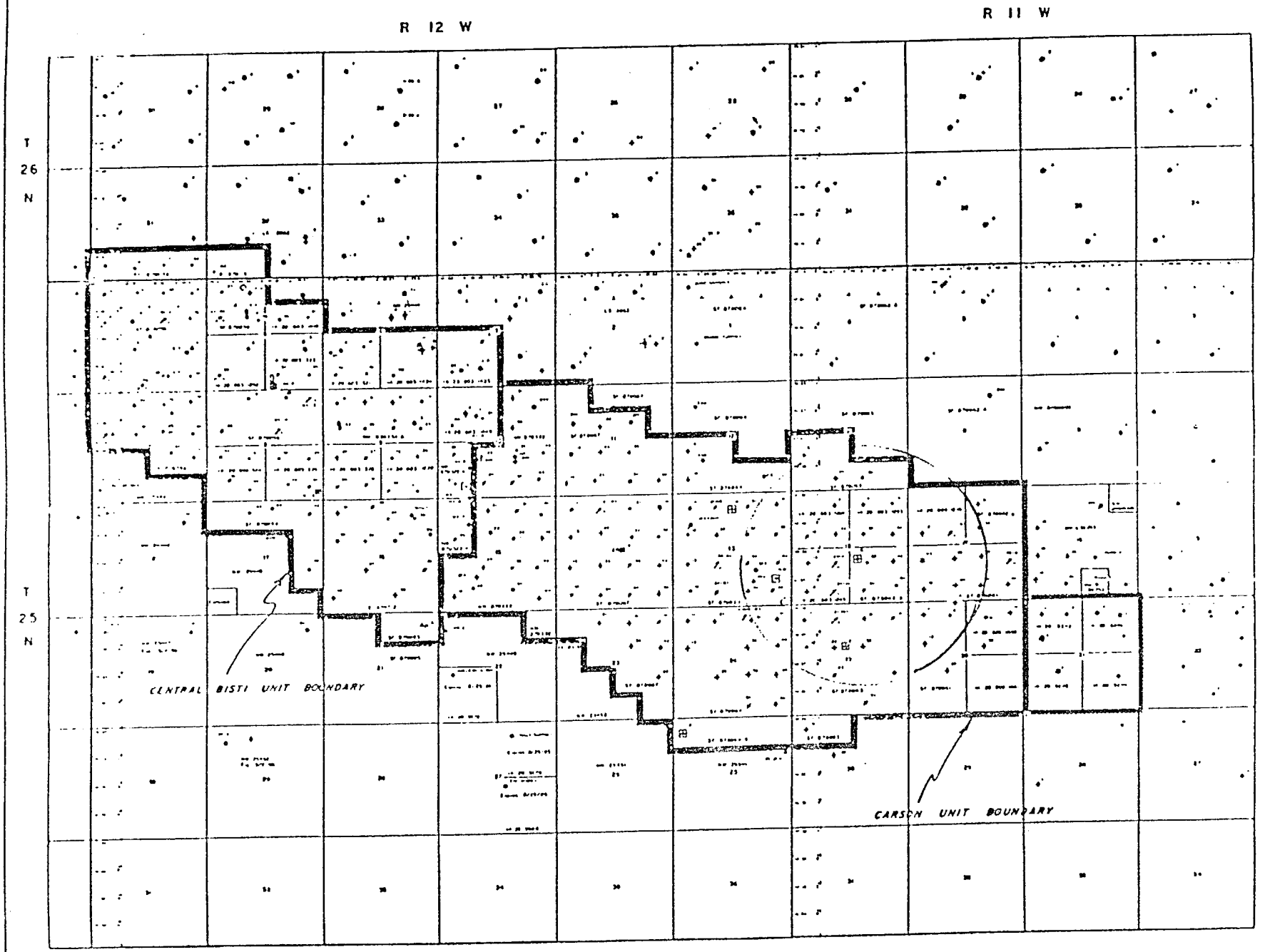
14-20-603-1440
14-20-603-1441
SF-078068-A
NM-25451
NM-60337
NM-51014
NM-67093
Ray Bridges 1
Tono Hixon 1
NM51014
Champlin Fed 33-29
Ando Hixon 1
BRYAN SIMPSON 1
V-1729
V-2260
Hixon Development Comapny
Carson Unit Well No. 21-19
CARSON UNIT BOUNDA



HIXON DEVELOPMENT COMPANY

CENTRAL BISTI - CARSON UNIT AREA

sa. . r testing labo. . r'', inc.

907 WEST APACHE • P O BOX 2079 • FARMINGTON, NEW MEXICO

PHONE
327-4966

Date June 10, 1977

:port to Hixon Development Company

:quested by A. Kuchera, Mgr. Sampled by Hixon Personnel

'oject CBU #5 Location NW NW Sec. 6, T25N, R12W

ource of Material Lower Gallup Produced Water

Lab No. 24509 Water Analysis for Petroleum Engineering

TEST RESULTS

WATER ANALYSIS FOR PETROLEUM ENGINEERING

nstituent	
tal Solids	2263 ppm
	7.25
sistivity	2.94 ohms/meter @70°F
nductivity	3,400 micromhos/cm @ 70°F

Constituents	Meq/L	ppm
Cations		
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

mments

sentially this is a 0.2% sodium
lfate solution.

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

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

Certified by:

22006

INJECTION WELL

DATA SHEET

III. WELL DATA

PART A

1. Carson Unit Well No. 21-19
   660' FNL, 1980' FWL
   Section 19, T 25N, R 11W

2. Surface Casing
   - Hole Size: 12-1/4"
   - Casing: 8-5/8", 24#
   - Setting Depth: 203'

   Production Casing
   - Hole Size: 7-7/8"
   - Casing: 4-1/2"
   - Setting Depth: 5012'

   PBD: 5022'

3. Tubing: 2-3/8"
   Setting Depth: 4803'

4. Packer: Baker Model "AD-1" Packer
   Set at 4665'

PART B

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

2. Perforated Injection Intervals: 4866'-4892', 4900'-4908', 4939'-4944', 4951'-4962', 4969'-4978'

3. Well was drilled as a producing well.

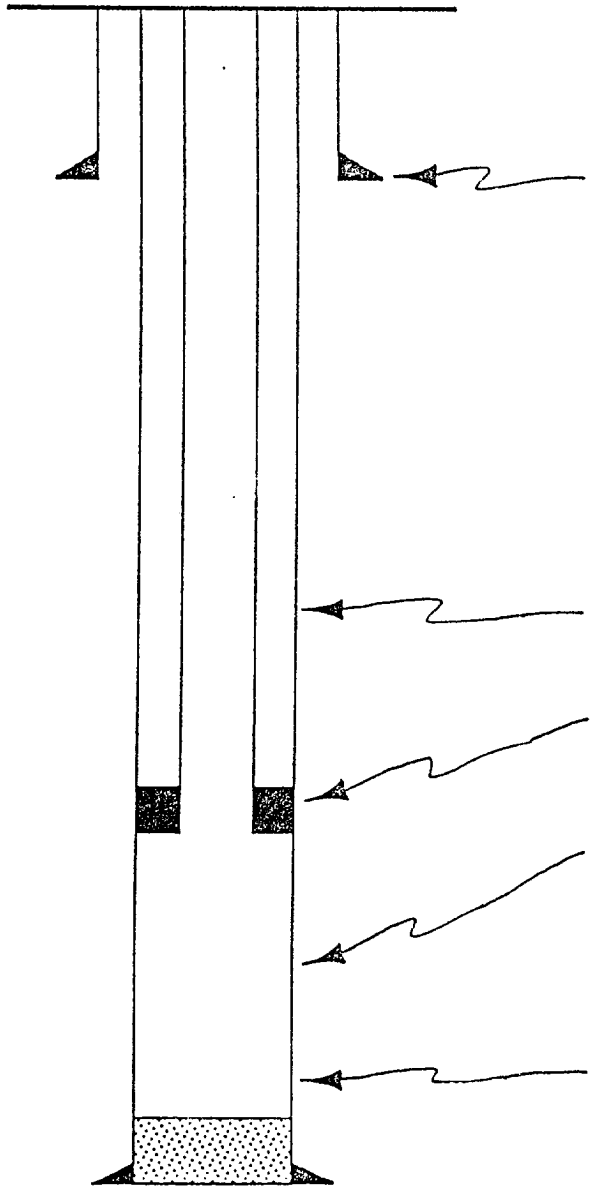
4. None

5. Next Higher Oil and Gas Zone: Pictured Cliffs at 1238'
   Next Lower Oil and Gas Zone: Dakota at Unknown Depth

Hixon Development Company
Injection Well Schematic

Well Name: Carson Unit Well No. 21-19

Legal Location: 660' FNL, 1980' FWL
Section 19, T 25N, R 11W
San Juan County, New Mexico



Surface Casing:

8-5/8", 24#, J-55 casing set at 203' with 100 sacks cement.

Tubing:
2-3/8" tubing set at 4803'

Packer:
Baker Model AD-1 Packer set at 4665'.

Perforations:
4866'-4892', 4900'-4908', 4939'-4944', 4951'- 4962', 4969'- 4978'

TD: 5026' PBD: 5022'

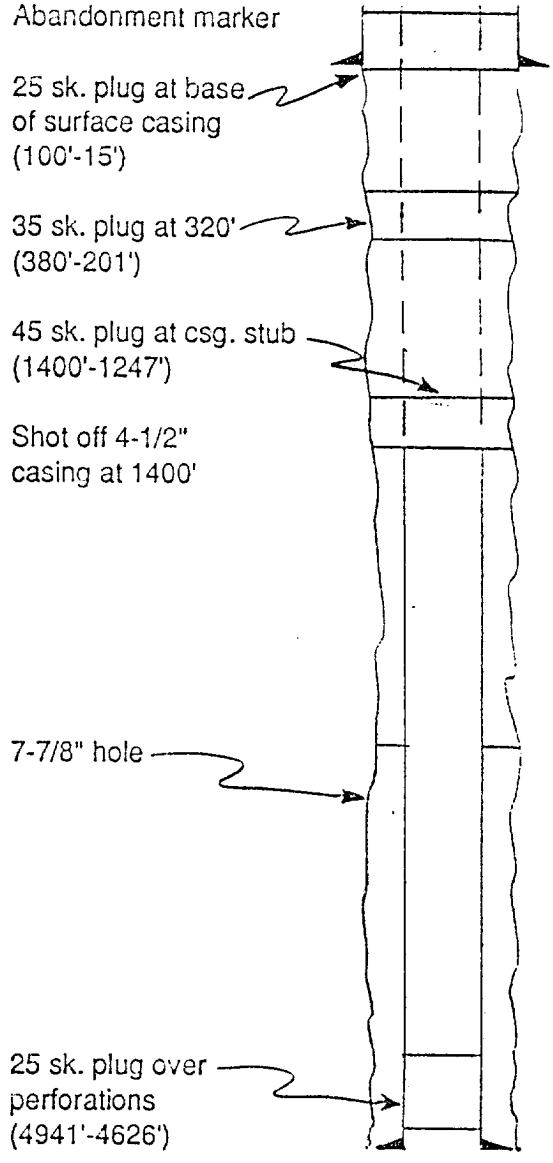
Production Casing:
4-1/2", 9.5# casing set at 5012' with 150 sacks cement.

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 973 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 #21-19, NE/4 NW/4, Sec. 19, T25N, R11W

WELL DATA SHEET

Well Name:	Carson Unit #14-18
Legal Description:	660' FSL, 662.8' FWL Sec. 18, T25N-R11W San Juan County, N.M.
Well Type:	P & A
Spud Date:	01/17/58
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	100.5'
Cementing Record:	100 sx.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	4-1/2"
Production Casing Depth:	5023'
Cementing Record:	150 sx.
Perforations:	4877'-4904' 4911'-4923' 4951'-4957' 4962'-4976' 4980'-4997'
Plug-Back Depth:	5020'
Total Depth:	5025'



WELL DATA SHEET

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 (awaiting approval)
Spud Date:	02/16/58
Surface Casing Hole Size: Surface Casing Size: Surface Casing Depth:	12-1/4" 8-5/8" 102'
Cementing Record:	100 sx.
Production Casing Hole Size: Production Casing Size: Production Casing Depth:	7-7/8" 4-1/2" 5006'
Cementing Record:	150 sx.
Perforations:	4875'-4891' 4901'-4913' 4944'-4951' 4965'-4970' 4974'-4984'
Plug-Back Depth:	5006'
Total Depth:	5010'

WELL DATA SHEET

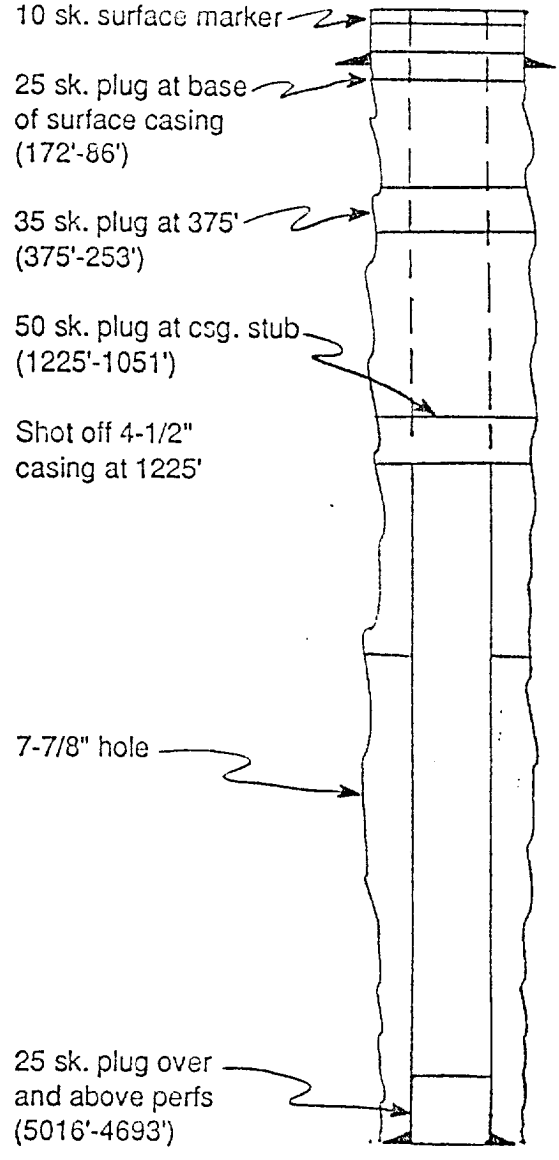
Well Name:	Carson Unit #24-18
Legal Description:	660' FSL, 1930' FWL Sec. 18, T25N-R11W San Juan County, N.M.
Well Type:	Water Injection Well (awaiting approval)
Spud Date:	04/28/59
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	106'
Cementing Record:	100 sx.
Production 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'

WELL DATA SHEET

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:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	176'
Cementing Record:	100 sx.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	4-1/2"
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 DATA SHEET

Well Name:	Carson Unit #11-19
Legal Description:	660' FNL, 662.8' FWL Sec. 19, T25N-R11W San Juan County, N.M.
Well Type:	P & A
Spud Date:	06/09/59
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	103'
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.
Perforations:	4854'-4880' 4889'-4896' 4927'-4932' 4940'-4952' 4959'-4970'
Plug-Back Depth:	5016'
Total Depth:	5020'

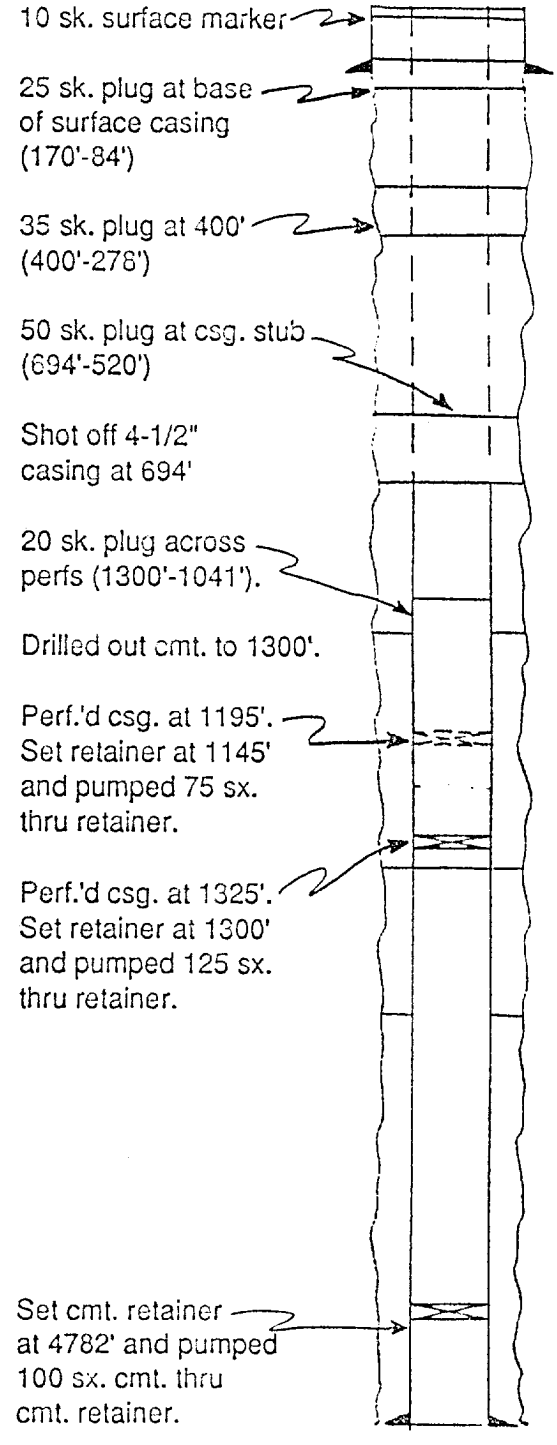


WELL DATA SHEET

Well Name:	Carson Unit #12-19
Legal Description:	1977' FNL, 660' FWL Sec. 19, T25N-R11W San Juan County, N.M.
Well Type:	Oil Well
Spud Date:	08/25/57
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	173'
Cementing Record:	100 sx.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	4-1/2"
Production Casing Depth:	5022'
Cementing Record:	150 sx.
Perforations:	4866'-4881' 4897'-4903' 4932'-4939' 4947'-4959' 4965'-4974'
Plug-Back Depth:	4980'
Total Depth:	5030'

WELL DATA SHEET

Well Name:	Carson Unit #22-19
Legal Description:	1980' FNL, 1980' FWL Sec. 19, T25N-R11W San Juan County, N.M.
Well Type:	P & A
Spud Date:	03/11/60
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	108'
Cementing Record:	100 sx.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	4-1/2"
Production Casing Depth:	5027'
Cementing Record:	150 sx.
Perforations:	4868'-4888' 4898'-4905' 4934'-4942' 4952'-4962' 4968'-4980' January 1976 1218'-1224' 1234'-1244'
Plug-Back Depth:	5027'
Total Depth:	5030'

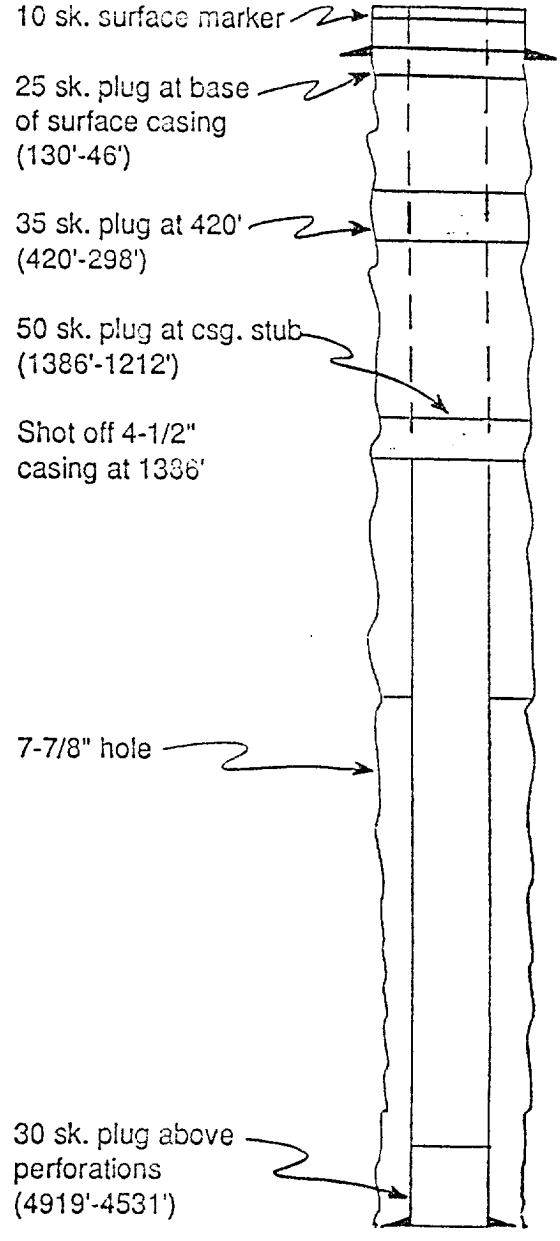


WELL DATA SHEET

Well Name:	Carson Unit #23-19
Legal Description:	1980' FSL, 1980' FWL Sec. 19, T25N-R11W San Juan County, N.M.
Well Type:	Oil Well
Spud Date:	12/12/58
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	101'
Cementing Record:	100 sx.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	4-1/2"
Production Casing Depth:	4974'
Cementing Record:	150 sx.
Perforations:	4842'-4863' 4908'-4920' 4926'-4940' 4944'-4955'
Plug-Back Depth:	4974'
Total Depth:	4975'

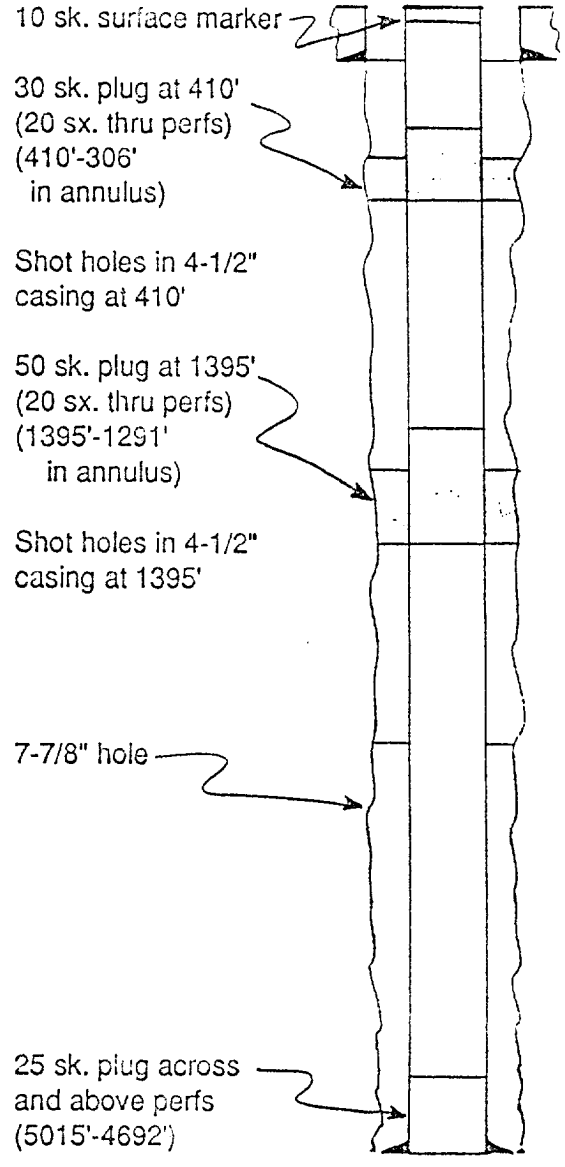
WELL DATA SHEET

Well Name:	Carson Unit #31-19
Legal Description:	660' FNL, 1973.5' FEL Sec. 19, T25N-R11W San Juan County, N.M.
Well Type:	P & A
Spud Date:	12/08/59
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	105'
Cementing Record:	100 sx.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	4-1/2"
Production Casing Depth:	5029'
Cementing Record:	150 sx.
Perforations:	4867'-4895' 4900'-4910' 4922'-4926' 4940'-4944' 4952'-4958' 4964'-4970' 4976'-4982'
Plug-Back Depth:	5029'
Total Depth:	5030'



WELL DATA SHEET

Well Name:	Carson Unit #32-19
Legal Description:	1980' FNL, 1980' FEL Sec. 19, T25N-R11W San Juan County, N.M.
Well Type:	P & A
Spud Date:	03/03/58
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	108'
Cementing Record:	100 sx.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	4-1/2"
Production Casing Depth:	5015'
Cementing Record:	150 sx.
Perforations:	4873'-4900' 4908'-4918' 4947'-4954' 4961'-4976' 4981'-4991'
Plug-Back Depth:	5015'
Total Depth:	5015'



WELL DATA SHEET

Well Name:	Carson Unit #41-19
Legal Description:	660' FNL, 660' FEL Sec. 19, T25N-R11W San Juan County, N.M.
Well Type:	Oil Well
Spud Date:	02/24/58
Surface Casing Hole Size:	12-1/4"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	107'
Cementing Record:	100 sx.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	4-1/2"
Production Casing Depth:	4986'
Cementing Record:	150 sx.
Perforations:	4865'-4880' 4885'-4892' 4900'-4910' 4941'-4946' 4951'-4968' 4972'-4982'
Plug-Back Depth:	4985'
Total Depth:	4990'

WELL DATA SHEET

Well Name:	Carson Unit #41-24
Legal Description:	660' FNL, 660' FEL Sec. 24, T25N-R12W San Juan County, N.M.
Well Type:	P & A
Spud Date:	07/19/56
Surface Casing Hole Size:	11"
Surface Casing Size:	8-5/8"
Surface Casing Depth:	228'
Cementing Record:	100 sx.
Production Casing Hole Size:	7-7/8"
Production Casing Size:	5-1/2"
Production Casing Depth:	5967'
Cementing Record:	300 sx.
Perforations:	5585'-5587' (Dakota) 4875'-4895' (Gallup) 3860'-3900' (Mancos)
Plug-Back Depth:	5924'
Total Depth:	5983'