

REGISTERED MAIL 51

February 8, 1990

New Mexico Oil Conservation Division  
State Land Office Building  
P.O. Box 2088  
Santa Fe, New Mexico 87504

Subject: Carson Unit Well No. 24-13  
660' FSL, 1980' FWL  
Sec. 13, T25N, R12W  
San Juan County, New Mexico

Dear Sir:

Enclosed for your approval is our Application for Authorization to Inject for the above referenced well. Upon receipt, an Affidavit of Publication will be forwarded to you.

Very truly yours,

*Bruce E. Delventhal*

Bruce E. Delventhal  
Vice President - Operations

BED/das

Enclosures

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: Aldrich L. Kuchera 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: Aldrich L. Kuchera Title President

Signature: *Aldrich L. Kuchera* Date: February 8, 1990

\* 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.

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**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. 24-13  
SE/4, SW/4, Section 13, T 25N, R 12W  
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 attached as follows:  
  
Carson Unit Well No. 13-13 ✓  
Carson Unit Well No. 14-13 ✓  
Carson Unit Well No. 23-13 ✓  
Carson Unit Well No. 33-13 ✓  
Carson Unit Well No. 34-13 ✓  
Carson Unit Well No. 44-13 ✓  
Carson Unit Well No. 44-14 ✓  
Carson Unit Well No. 1-24 ✓  
Carson Unit Well No. 11-24 ✓  
Carson Unit Well No. 21-24 ✓  
Carson Unit Well No. 31-24 ✓  
Carson Unit Well No. 203 ✓
- 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 973 - 996 psi range. Maximum injection pressure will be 996 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 211' in thickness with a top of 4767' 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 attached.
  
- XIV. Certification shown on Application.

Hixon Development Company  
Well Bore Diagram

WELL NAME Carson Unit Well No. 24-13  
LOCATION 660' FSL, 1980' FWL SECTION 13 T 25 N R 12 W  
COUNTY San Juan STATE New Mexico

**SURFACE CASING**

Hole Size: 12-1/4"  
Casing: 8-5/8", 28#  
Casing Set @ 111' with 100 sks  
of cement

GLE 6407.2'

KBE 6416.4'

DF 6414.9'

**FORMATION TOPS**

Pictured Cliffs 1222'  
Lewis 1392'  
Cliff House 1570'  
Allison-Menefee 2064'  
Point Lookout 3568'  
Mancos 3834'  
Gallup 4767'

**WELL HISTORY**

Spud date: 12/1/59  
Original owner: Shell Oil Co.  
IP 12/25/59 BOPD 264 BWPD 0  
MCFD 218 GOR 825  
Completion Treatment: \_\_\_\_\_  
Fraced with 50,000 gal crude,  
1#/gal sand, and 130 balls

**CURRENT DATA**

Pumping Unit \_\_\_\_\_  
Tubing 2-3/8" set at 4839'  
Pump Size \_\_\_\_\_  
Rod string \_\_\_\_\_  
Remarks \_\_\_\_\_  
Water Injection Schematic  
Set Baker Model "AD-1"  
Packer at 4808'

**CEMENT TOP**

**PERFORATIONS**

4864'-88'  
4897'-4905'  
4932'-38'  
4946'-58'  
4964'-78'

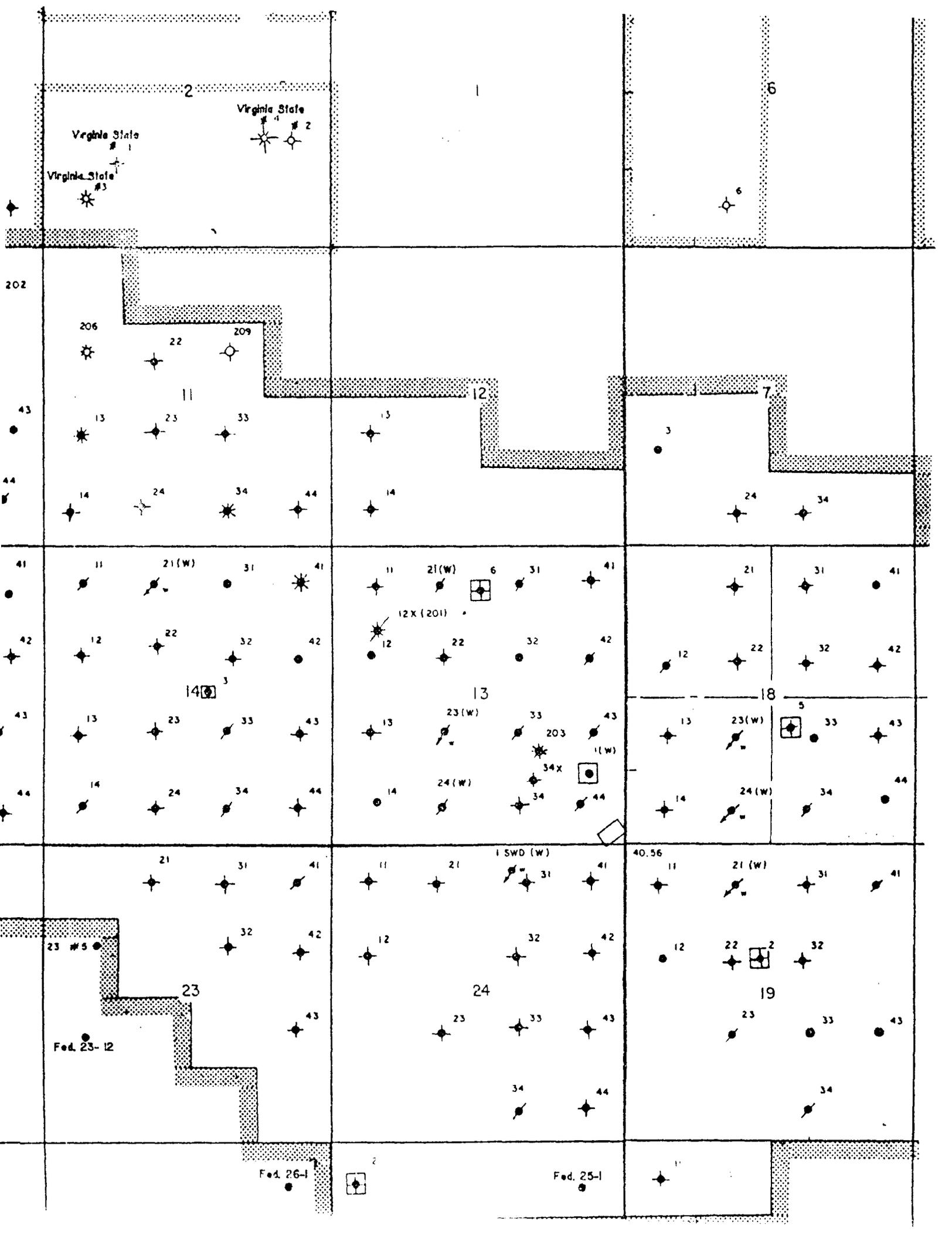
**PBD**

**PRODUCTION CASING**

Hole Size: 7-7/8"  
Casing: 4-1/2", 9.5#  
Casing Set @ 5031' with 150  
sks of cement

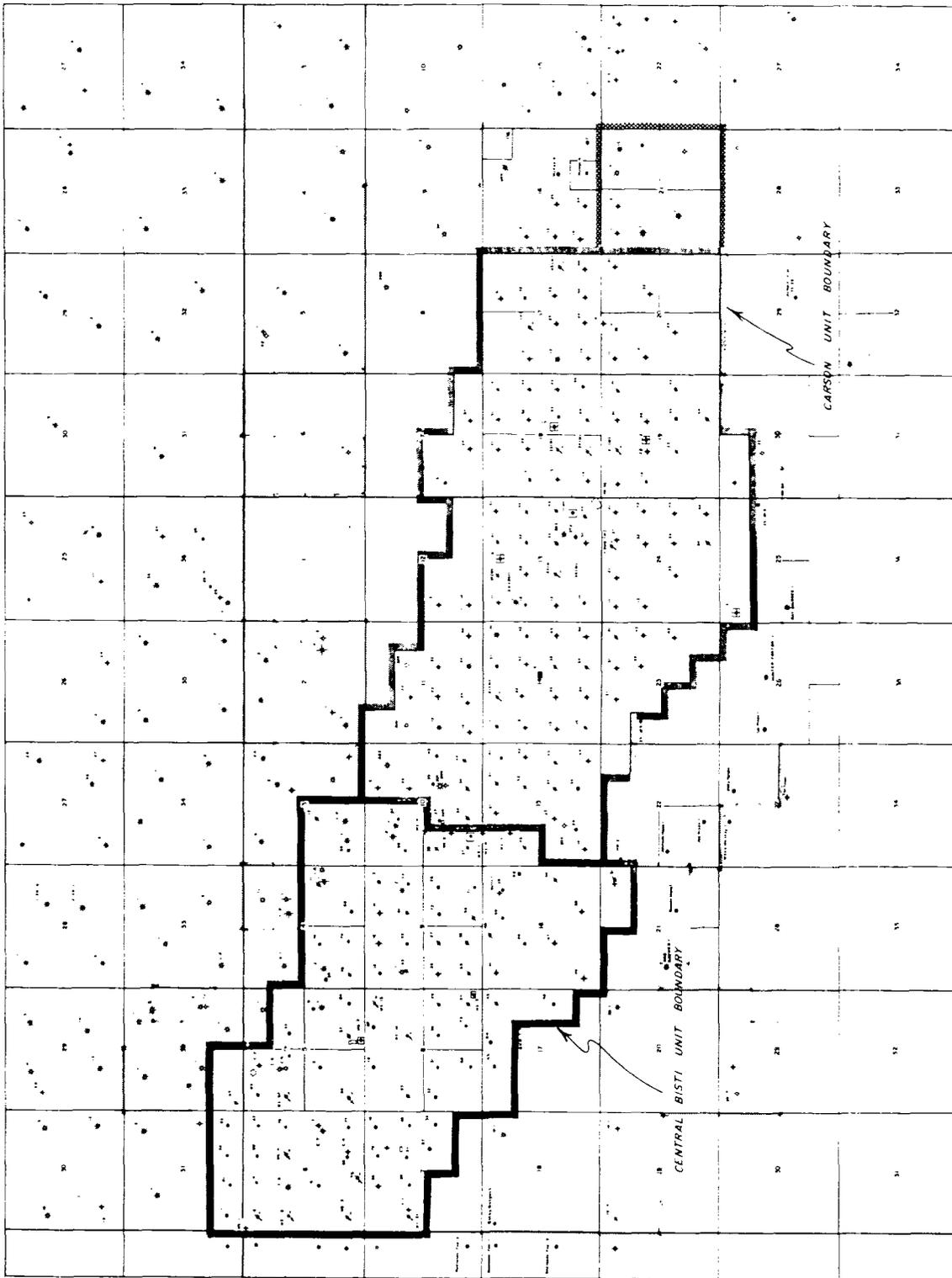
5035' TD

Date Last Revised: 2/2/90



R 11 W

R 12 W



T 26 N

T 25 N

HIXON DEVELOPMENT COMPANY

CENTRAL BISTI - CARSON UNIT AREA

San Juan County, New Mexico



PLANNED BY HIXON DEVELOPMENT COMPANY, 1971

San. & testing labo. 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

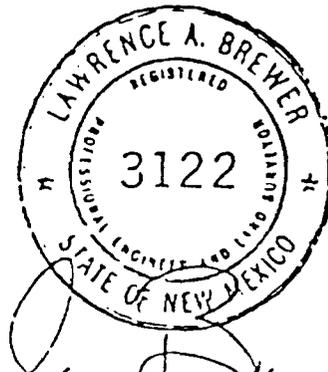
**TEST RESULTS**

WATER ANALYSIS FOR PETROLEUM  
ENGINEERING

<u>Constituent</u>		<u>Constituents</u>		
Total Solids	2263 ppm	<u>Cations</u>	<u>Meg/L</u>	<u>ppm</u>
pH	7.25	Sodium	29.3	674
Resistivity	2.94 ohms/meter @70°F	Calcium	2.3	45
Conductivity	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:  

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. Injection will be into the Lower Gallup perforated interval from 4864' to 4978'. Maximum rate will be 1200 BWPD at less than 996 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 No. 24-13  
SE/4 SW/4  
Sec. 13, T25N, R12W

# Hixon Development Company

## Well Bore Diagram

**WELL NAME** Carson Unit Well No. 13-13  
**LOCATION** 1930' FSL, 660' FWL **SECTION** 13 **T** 25 **N** **R** 12 **W**  
**COUNTY** San Juan **STATE** New Mexico

**SURFACE CASING**

Hole Size: \_\_\_\_\_  
 Casing: \_\_\_\_\_  
 Casing Set @ \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**GLE** 6400'  
**KBE** 6409.5'  
**DF** 6408'

**FORMATION TOPS**

Pictured Cliffs 1216'  
Lewis 1434'  
Cliff House 1580'  
Allison-Menefee 2067'  
Point Lookout 3692'  
Mancos 3843'  
Gallup 4771'  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**CEMENT TOP** \_\_\_\_\_

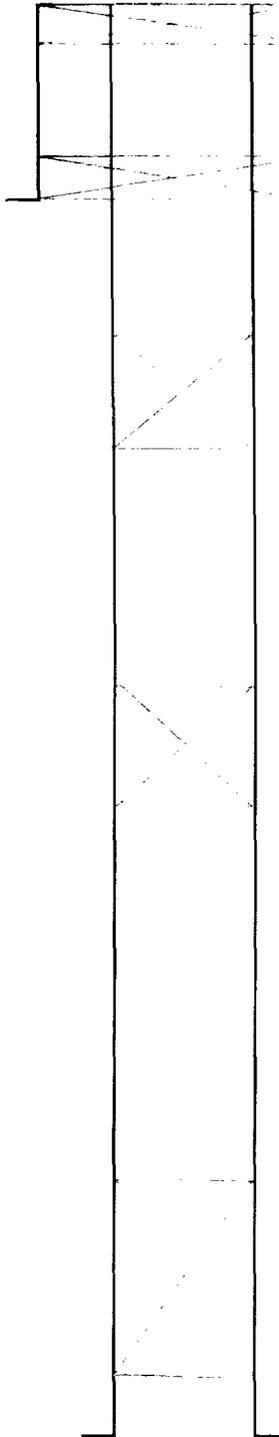
**PERFORATIONS**

4866'-92'  
4898'-4906'  
4936'-40'  
4949'-57'  
4967'-75'  
 \_\_\_\_\_  
 \_\_\_\_\_

**PBD** \_\_\_\_\_

**PRODUCTION CASING**

Hole Size: \_\_\_\_\_  
 Casing: \_\_\_\_\_  
 Casing Set @ \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**WELL HISTORY**

Spud date: 3/25/59  
 Original owner: Shell Oil Co.  
 IP 9/12/59 BOPD 144 BWPD 0  
 MCFD 320 GOR 2220  
 Completion Treatment: \_\_\_\_\_  
Fraced with 50,000 gal crude,  
1#/gal sand, 200 rubber balls

**CURRENT DATA**

Pumping Unit \_\_\_\_\_  
 Tubing \_\_\_\_\_  
 Pump Size \_\_\_\_\_  
 Rod string \_\_\_\_\_  
 Remarks \_\_\_\_\_  
Plug and abandoned 9/3/77  
 \_\_\_\_\_  
10 sk cmt plug at surface  
20 sk cmt plug set at 180'  
35 sk cmt plug set at 350'  
50 sk cmt plug set at 1220'  
15 sk cmt plug set across  
perforations (4866'-4975')

TD

Date Last Revised: 1/31/90

WELL DATA SHEET

Well Name: Carson Unit #14-13

Legal Description: 660' FSL. 660' FWL  
Sec. 13, T25N, R12W  
San Juan County, N.M.

Well Type: Oil Well

Spud Date: 04-12-57

Surface Casing Hole Size: 12-1/4"  
Surface Casing Size: 8-5/8"  
Surface Casing Depth: 222'

Cementing Record: 130 sks.

Production Casing Hole Size: 7-7/8"  
Production Casing Size: 5-1/2"  
Production Casing Depth: 5040'

Cementing Record: 200 sks.

Perforations: 4876' - 4891'  
4943' - 4949'  
4954' - 4966'  
4972' - 4986'

Plug Back Depth: 5003'

Total Depth: 5040'

WELL DATA SHEET

Well Name: Carson Unit #23-13

Legal Description: 1980' FSL, 1980' FWL  
Sec. 13, T25N, R12W  
San Juan County, N.M.

Well Type: Water Injection Well

Spud Date: 01-31-58

Surface Casing Hole Size: 12-1/4"  
Surface Casing Size: 8-5/8"  
Surface Casing Depth: 92'

Cementing Record: 100 sks.

Production Casing Hole Size: 7-7/8"  
Production Casing Size: 4-1/2"  
Production Casing Depth: 5001'

Cementing Record: 150 sks.

Perforations: 4871' - 4900'  
4907' - 4916'  
4946' - 4951'  
4956' - 4970'  
4974' - 4984'

Plug Back Depth: 5004'

Total Depth: 5010'

WELL DATA SHEET

Well Name: Carson Unit #33-13

Legal Description: 1980' FSL, 1980' FEL  
Sec. 13, T25N, R12W  
San Juan County, N.M.

Well Type: Oil Well

Spud Date: 07-03-59

Surface Casing Hole Size: 12-1/4"  
Surface Casing Size: 8-5/8"  
Surface Casing Depth: 100'

Cementing Record: 104 sks.

Production Casing Hole Size: 7-7/8"  
Production Casing Size: 4-1/2"  
Production Casing Depth: 5038'

Cementing Record: 150 sks.

Perforations: 4876' - 4898'  
4907' - 4914'  
4945' - 4951'  
4959' - 4968'  
4978' - 4982'

Plug Back Depth: ---

Total Depth: 5040'

WELL DATA SHEET

Well Name: Carson Unit #34-13

Legal Description: 660' FSL, 1976' FEL  
Sec. 13, T25N, R12W  
San Juan County, N.M.

Well Type: Oil Well

Spud Date: 05-13-57

Surface Casing Hole Size: 12-1/4"  
Surface Casing Size: 8-5/8"  
Surface Casing Depth: 218'

Cementing Record: 130 sks.

Production Casing Hole Size: 7-7/8"  
Production Casing Size: 4-1/2"  
Production Casing Depth: 5096'

Cementing Record: 150 sks.

Perforations: 4876' - 4900'  
4908' - 4916'  
4944' - 4952'  
4958' - 4972'  
4976' - 4994'

Plug Back Depth: 5060'

Total Depth: 5100'

WELL DATA SHEET

Well Name: Carson Unit #44-13

Legal Description: 735 FSL, 735' FEL  
Sec. 13, T25N, R12W  
San Juan County, N.M.

Well Type: Oil Well

Spud Date: 07-11-59

Surface Casing Hole Size: 12-1/4"  
Surface Casing Size: 8-5/8"  
Surface Casing Depth: 105'

Cementing Record: 100 sks.

Production Casing Hole Size: 7-7/8"  
Production Casing Size: 4-1/2"  
Production Casing Depth: 5013'

Cementing Record: 150 sks.

Perforations: 4869' - 4895'  
4904' - 4912'  
4942' - 4945'  
4956' - 4962'  
4972' - 4973'

Plug Back Depth: ---

Total Depth: 5025'

Hixon Development Company  
Well Bore Diagram

WELL NAME Carson Unit Well No. 44-14  
LOCATION 660' FSL, 660' FEL SECTION 14 T 25 N R 12 W  
COUNTY San Juan STATE New Mexico

**SURFACE CASING**

Hole Size: \_\_\_\_\_  
Casing: 8-5/8", 24#  
Casing Set @ 104' 50 SX

GLE 6411.9'  
KBE 6421.0'  
DF 6419.8'

**FORMATION TOPS**

Pictured Cliffs 1224'  
Lewis 1408'  
Cliff House 1584'  
Allison-Menefee 2075'  
Point Lookout 3690'  
Mancos 3862'  
Gallup 4773'

**CEMENT TOP** \_\_\_\_\_

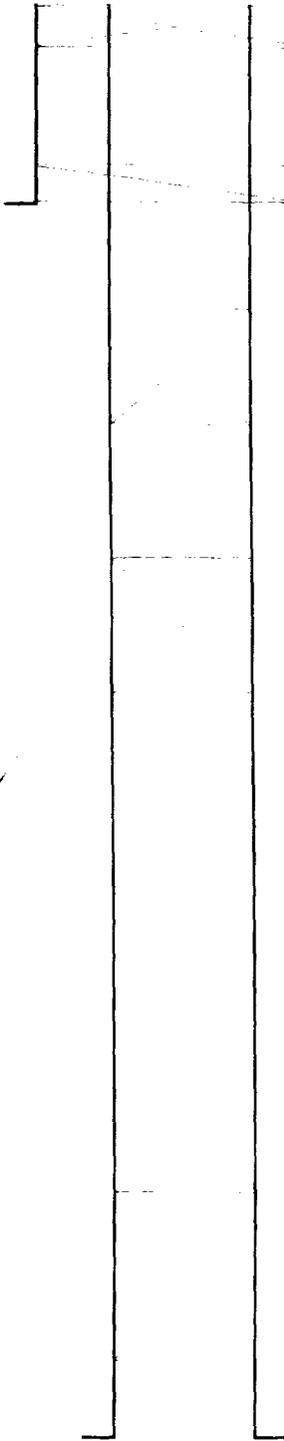
**PERFORATIONS**

4869'-92'  
4937'-46'  
4952'-65'  
4970'-85'

**PBD** \_\_\_\_\_

**PRODUCTION CASING**

Hole Size: \_\_\_\_\_  
Casing: 4-1/2", 9.5#  
Casing Set @ 4999'  
150 SX



**WELL HISTORY**

Spud date: 12/23/57  
Original owner: Shell Oil Co.  
IP 2/10/58 BOPD 372 BWPD 0  
MCFD 96 GOR 260  
Completion Treatment: \_\_\_\_\_  
Fraced with 50,000 gal crude  
and 1 #/gal 20-40 mesh sand.

**CURRENT DATA**

Pumping Unit \_\_\_\_\_  
Tubing \_\_\_\_\_  
Pump Size \_\_\_\_\_  
Rod string \_\_\_\_\_  
Remarks Plug and abandoned 10/19/77  
10 sk cmt plug at surface  
25 sk cmt plug set at 175'  
55 sk cmt plug set at 360'  
70 sk cmt plug set at 1200'  
25 sk cmt plug set across  
perforations (4869'-4985')

5001' TD

Date Last Revised: 2/1/90

WELL DATA SHEET

Well Name: Carson Unit #1-24

Legal Description: 454' FNL, 2174' FEL  
Sec. 24, T23N, R12W  
San Juan County, N.M.

Well Type: Salt Water Disposal

Soud Date: 09-06-60

Surface Casing Hole Size: 17-1/2"  
Surface Casing Size: 13-3/8"  
Surface Casing Depth: 70

Cementing Record: 70 sks.

Intermediate Casing Hole Size: 12-1/4"  
Intermediate Casing Size: 8-5/8"  
Intermediate Casing Depth: 2835'

Cementing Record: 750 sks.

Liner Size: 6-5/8"  
Liner Depth: 3815'

Cementing Record: None - Gravel Packed

Perforations: 2835' - 3815'

Plug Back Depth: ---

Total Depth: 3825'

# Hixon Development Company

## Well Bore Diagram

**WELL NAME** Carson Unit Well No. 11-24  
**LOCATION** 660' FNL, 660' FWL **SECTION** 24 T 25 N R 12 W  
**COUNTY** San Juan **STATE** New Mexico

### SURFACE CASING

Hole Size: \_\_\_\_\_  
Casing: 8-5/8", 24#  
Casing Set @ 112' 100 SF

**GLE** 6428.9'

**KBE** 6437.9'

**DF** 6436.4

### FORMATION TOPS

Pictured Cliffs 1264'  
Lewis 1408'  
Cliff House 1587'  
Allison-Menefee 2121'  
Point Lookout 3686'  
Mancos 3842'  
Gallup 4778'

### CEMENT TOP

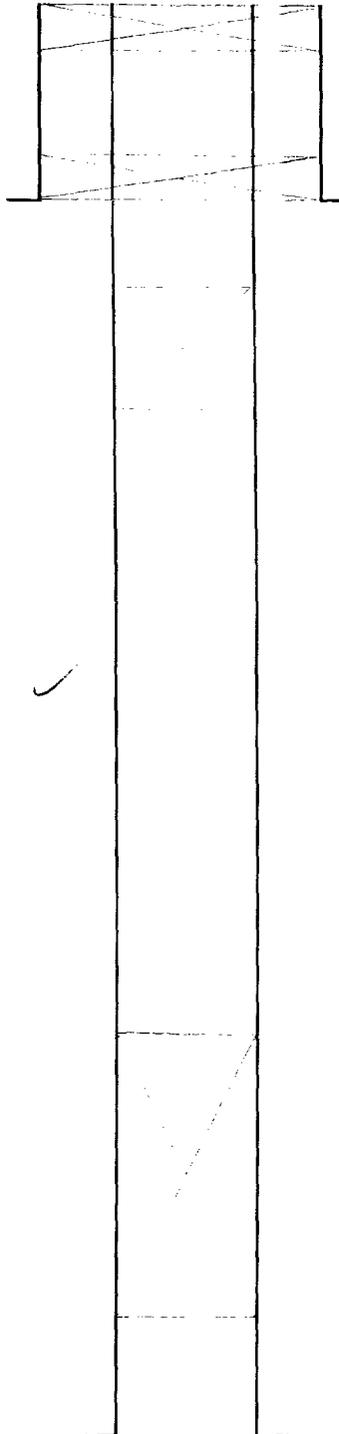
### PERFORATIONS

4874'-93'  
4907'-25'  
4934'-49'  
4955'-69'  
4973'-89'

### PBD

### PRODUCTION CASING

Hole Size: \_\_\_\_\_  
Casing: 4-1/2", 9.5"  
Casing Set @ 5013' 150 SF



### WELL HISTORY

Spud date: 4/13/59  
Original owner: Shell Oil Co.  
IP 5/8/59 BOPD 71 BWPD 0  
MCFD 40 GOR 560  
Completion Treatment: \_\_\_\_\_  
Fraced with 50,000 gal crude,  
2#/gal sand, 320 rubber balls

### CURRENT DATA

Pumping Unit \_\_\_\_\_  
Tubing \_\_\_\_\_  
Pump Size \_\_\_\_\_  
Rod string \_\_\_\_\_  
Remarks \_\_\_\_\_  
Plug and abandoned 10/3/75  
10 sk cmt plug at surface  
35 sk cmt plug set at 182'  
55 sk cmt plug set at 386'  
20 sk cmt plug set across  
perforations (4874'-4898')

5015' TD

Date Last Revised: 2/1/90

# Hixon Development Company

## Well Bore Diagram

**WELL NAME** Carson Unit Well No. 21-24  
**LOCATION** 660' FNL, 1881' FWL **SECTION** 24 **T** 25 **N** **R** 12 **W**  
**COUNTY** San Juan **STATE** New Mexico

**SURFACE CASING**

Hole Size: \_\_\_\_\_  
 Casing: 8-5/8", 24#  
 Casing Set @ 107' /00SK

**GLE** 6428.2'  
**KBE** 6436.7'  
**DF** 6435.7'

**FORMATION TOPS**

Pictured Cliffs 1332'  
Lewis 1415'  
Cliff House 1582'  
Allison-Menefee 2081'  
Point Lookout 3716'  
Mancos 3862'  
Gallup 4779'

**CEMENT TOP** \_\_\_\_\_

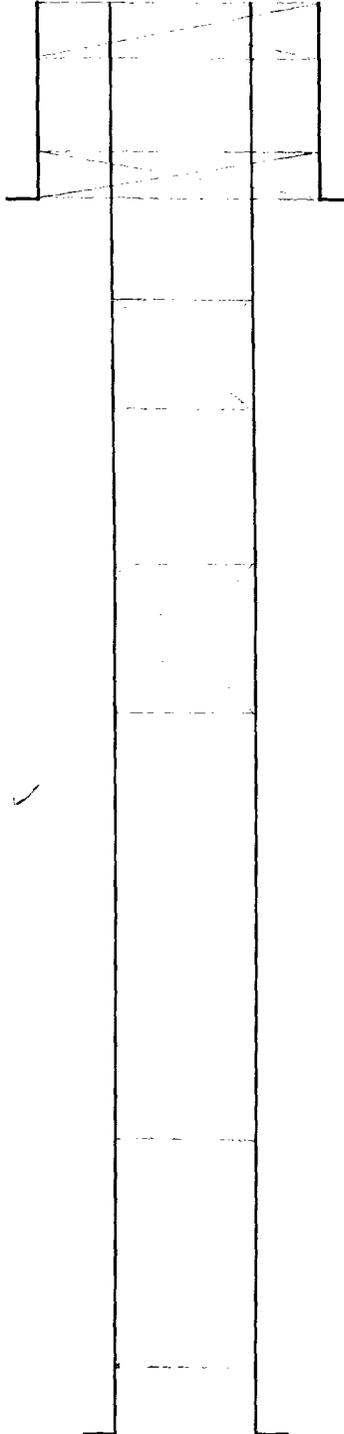
**PERFORATIONS**

4876'-4904'  
4939'-50'  
4956'-68'  
4973'-90'

**PBD** 5002'

**PRODUCTION CASING**

Hole Size: \_\_\_\_\_  
 Casing: 4-1/2", 9.5#  
 Casing Set @ 5013 /50 SK



**WELL HISTORY**

Spud date: 3/29/58  
 Original owner: Shell Oil Co.  
 IP 6/27/58 BOPD 146 BWPD 0  
 MCFD 31 GOR 210  
 Completion Treatment: \_\_\_\_\_  
Fraced with 72,000 gal crude,  
1 #/gal 20/40 sand.

**CURRENT DATA**

Pumping Unit \_\_\_\_\_  
 Tubing \_\_\_\_\_  
 Pump Size \_\_\_\_\_  
 Rod string \_\_\_\_\_  
 Remarks \_\_\_\_\_  
Plug and abandoned 9/30/75  
10 sk cmt plug at surface  
40 sk cmt plug set at 170'  
37 sk cmt plug set at 390'  
50 sk cmt plug set at 1519'  
20 sk cmt plug set at 4728'

5015' TD

Date Last Rev sed: 2/1/90

Hixon Development Company  
Well Bore Diagram

WELL NAME Carson Unit Well No. 31-24  
 LOCATION 660' FNL, 1980' FEL SECTION 24 T 25 N R 12 W  
 COUNTY San Juan STATE New Mexico

**SURFACE CASING**

Hole Size: \_\_\_\_\_  
 Casing: 8-5/8", 32#, J-55  
 Casing Set @ 105'  
100 5'

**FORMATION TOPS**

Pictured Cliffs 1227'  
Lewis 1415'  
Cliff House 1587'  
Allison-Menefee 2070'  
Point Lookout 3694'  
Mancos 3859'  
Gallup 4780'

**CEMENT TOP** \_\_\_\_\_

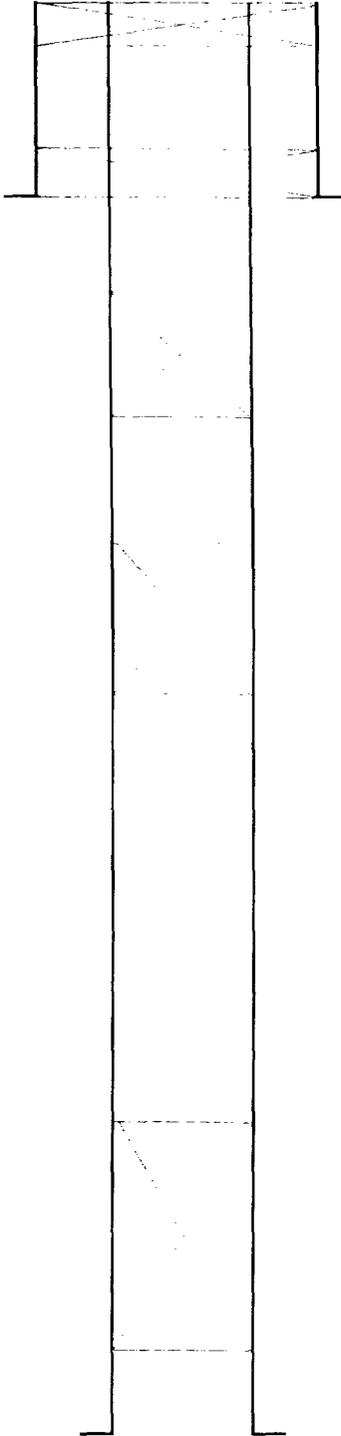
**PERFORATIONS**

4876'-94'  
4919'-24'  
4943'-51'  
4960'-68'  
4976'-86'

**PBD** 5029

**PRODUCTION CASING**

Hole Size: \_\_\_\_\_  
 Casing: 4-1/2", 9.5#  
 Casing Set @ 5029' / 50 5'



GLE 6429.0'

KBE 6438.2'

DF 6436.7'

**WELL HISTORY**

Spud date: 3/21/60  
 Original owner: Shell Oil Co.  
 IP 4/15/60 BOPD 196 BWPD 0  
 MCFD 643 GOR 3280  
 Completion Treatment: \_\_\_\_\_  
Fraced with 50,000 gal crude,  
1#/gal sand, and 100 balls.

**CURRENT DATA**

Pumping Unit \_\_\_\_\_  
 Tubing \_\_\_\_\_  
 Pump Size \_\_\_\_\_  
 Rod string \_\_\_\_\_  
 Remarks \_\_\_\_\_  
Plug and abandoned 8/8/77  
10 sk cmt plug at surface  
35 sk cmt plug set at 177'  
50 sk cmt plug set at 275'  
50 sk cmt plug set at 1182'  
20 sk cmt plug set across  
perforations (4876'-4986')

5030' TD

Date Last Revised: 2/1/90

Hixon Development Company  
Well Bore Diagram

WELL NAME Carson Unit Well No. 203  
LOCATION 1620' FSL, 1630 FEL SECTION 13 T 25 N R 12 W  
COUNTY San Juan STATE New Mexico

**SURFACE CASING**

Hole Size: \_\_\_\_\_  
Casing: 7", 23#, K-55  
Casing Set @ 94' with Class  
"B" containing 2% CaCl.

GLE 6400'  
KBE 6405'  
DF \_\_\_\_\_

**FORMATION TOPS**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_

**CEMENT TOP** \_\_\_\_\_

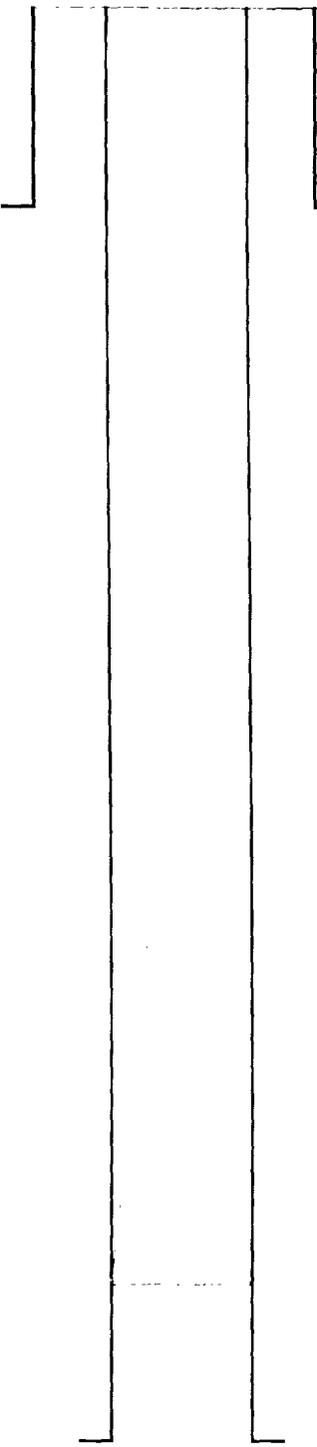
**PERFORATIONS**

1200'-1211'  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PBD** 1236'

**PRODUCTION CASING**

Hole Size: \_\_\_\_\_  
Casing: 2-7/8", 6.5#, J-55  
Casing Set @ 1300' Light  
tail-in with 50:50 pozmix,  
2% gel.



**WELL HISTORY**

Spud date: \_\_\_\_\_  
Original owner: \_\_\_\_\_  
IP \_\_\_\_\_ BOPD \_\_\_\_\_ BWPD \_\_\_\_\_  
MCFD \_\_\_\_\_ GOR \_\_\_\_\_  
Completion Treatment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CURRENT DATA**

Pumping Unit \_\_\_\_\_  
Tubing \_\_\_\_\_  
Pump Size \_\_\_\_\_  
Rod string \_\_\_\_\_  
Remarks \_\_\_\_\_  
Plug and abandoned 10/22/84

35 sk cement plug set at  
1211'.

1305' TD

Date Last Revised: 1/31/90

AFFIDAVIT OF PUBLICATION

Copy of Publication

No. 24778

STATE OF NEW MEXICO,  
County of San Juan:

Betty Shipp being duly

sworn, says: That he is the Nat'l. Adv. Manager 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 Sunday, February 11, 1990

Second Publication \_\_\_\_\_

Third Publication \_\_\_\_\_

Fourth Publication \_\_\_\_\_

and that payment therefor in the amount of \$ 9.40 has been made.

Betty Shipp

Subscribed and sworn to before me this 12th day of February 19 90.

J. Shorter  
NOTARY PUBLIC, SAN JUAN COUNTY, NEW MEXICO

My Commission expires: Jan 23, 1990

NOTICE

Hixon Development Company, P.O. Box 2810, Farmington, New Mexico 87499, (505) 826-3325 whose agent is Aldrich L. Kuchera, hereby notifies interested parties that the following wells to be converted to a water injection well. Injection will be into the Lower Gallup perforated interval from 4864' to 4978'. Maximum rate will be 1200 BWPD at less than 996 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

No. 24-13  
SE/4 SW/4

Sec. 13, T25N, R12W  
Legal No. 24778 published in the Farmington Daily Times, Farmington, New Mexico on Sunday, February 11, 1990.



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

11000 PLO BLAZOS ROAD  
 AZTEC, NEW MEXICO 87410  
 (505) 334-0170

BREY CAL RUTHERS  
 GOVERNOR

Date: 2-26-90

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

Re: Proposed HC \_\_\_\_\_  
 Proposed DHC \_\_\_\_\_  
 Proposed NSL \_\_\_\_\_  
 Proposed SWD \_\_\_\_\_  
 Proposed WFX \_\_\_\_\_  
 Proposed PMX   R  

Gentlemen:

I have examined the application dated 2-9-90

for the Hixon Development Co. CARSON Unit #24-13  
 Operator Lease & Well No.

N-13-25N-12W and my recommendations are as follows:  
 Unit, S-T-R

Approve  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Yours truly,

Ernie Busch