



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 8/24/05

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX X _____
Proposed PMX _____

Gentlemen:

I have examined the application dated 8/21/87
for the Vision Dev. Co. Carson Unit # 21-19 C-19-250-11W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve

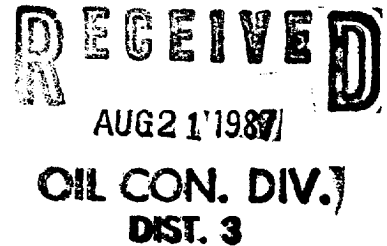
Yours truly,

[Signature]

August 20, 1987

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

Subject: Carson Unit No. 21-19
NE/4 NW/4 Section 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 Authorizaion to Inject has been sent to the New Mexico Oil Conservation Commission in Santa Fe for approval.

Very truly yours,

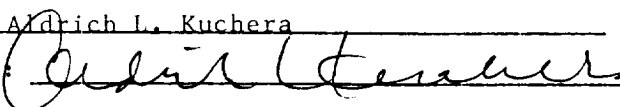
A handwritten signature in cursive script, appearing to read "Aldrich L. Kuchera". The signature is fluid and extends across the width of the text area.

Aldrich L. Kuchera
President

Enclosures

EJB/res

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
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:  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.

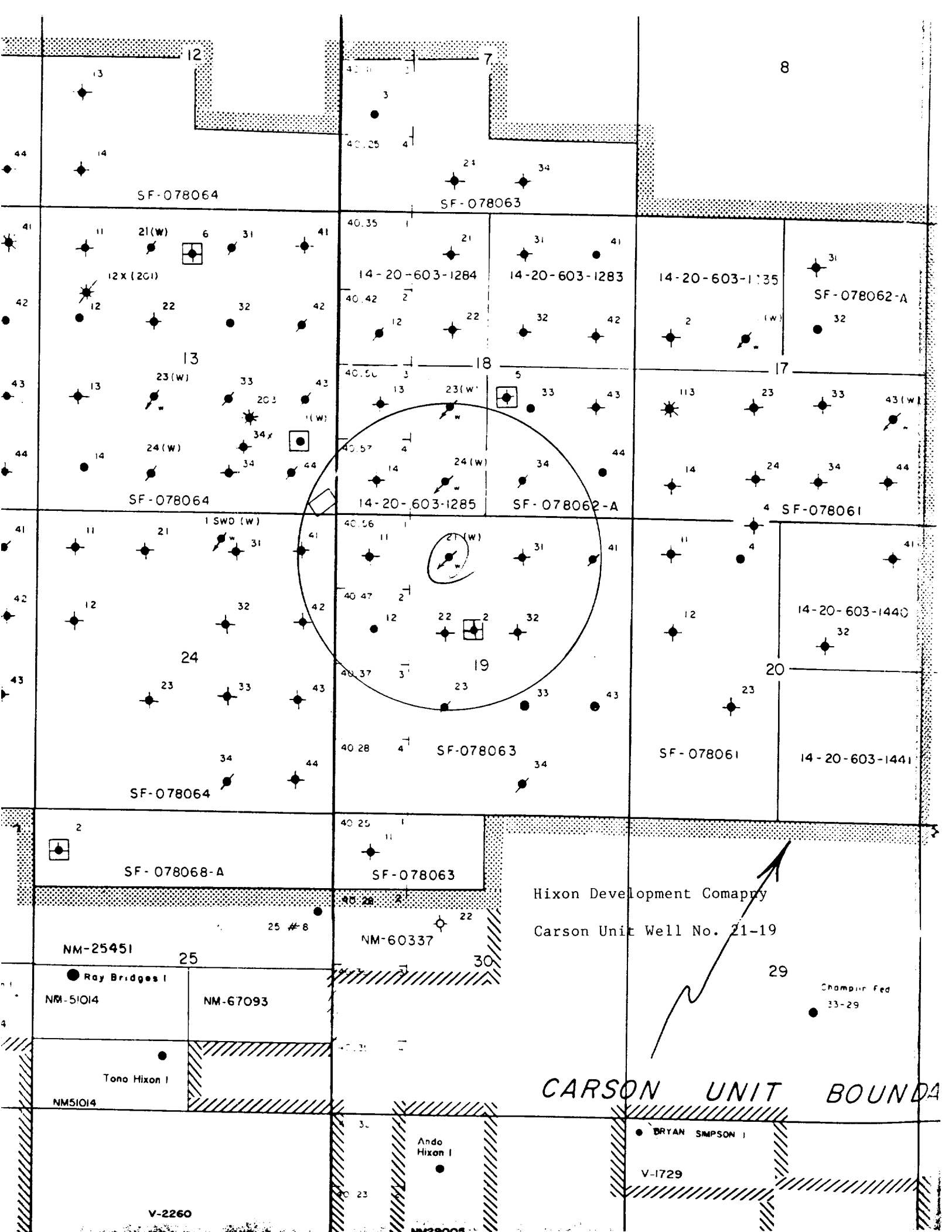
Hixon Development Company
Application for Authorization to Inject
Form C-108 Supplemental Information

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 well's 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 1000 BWPD.
 2. The injection 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.

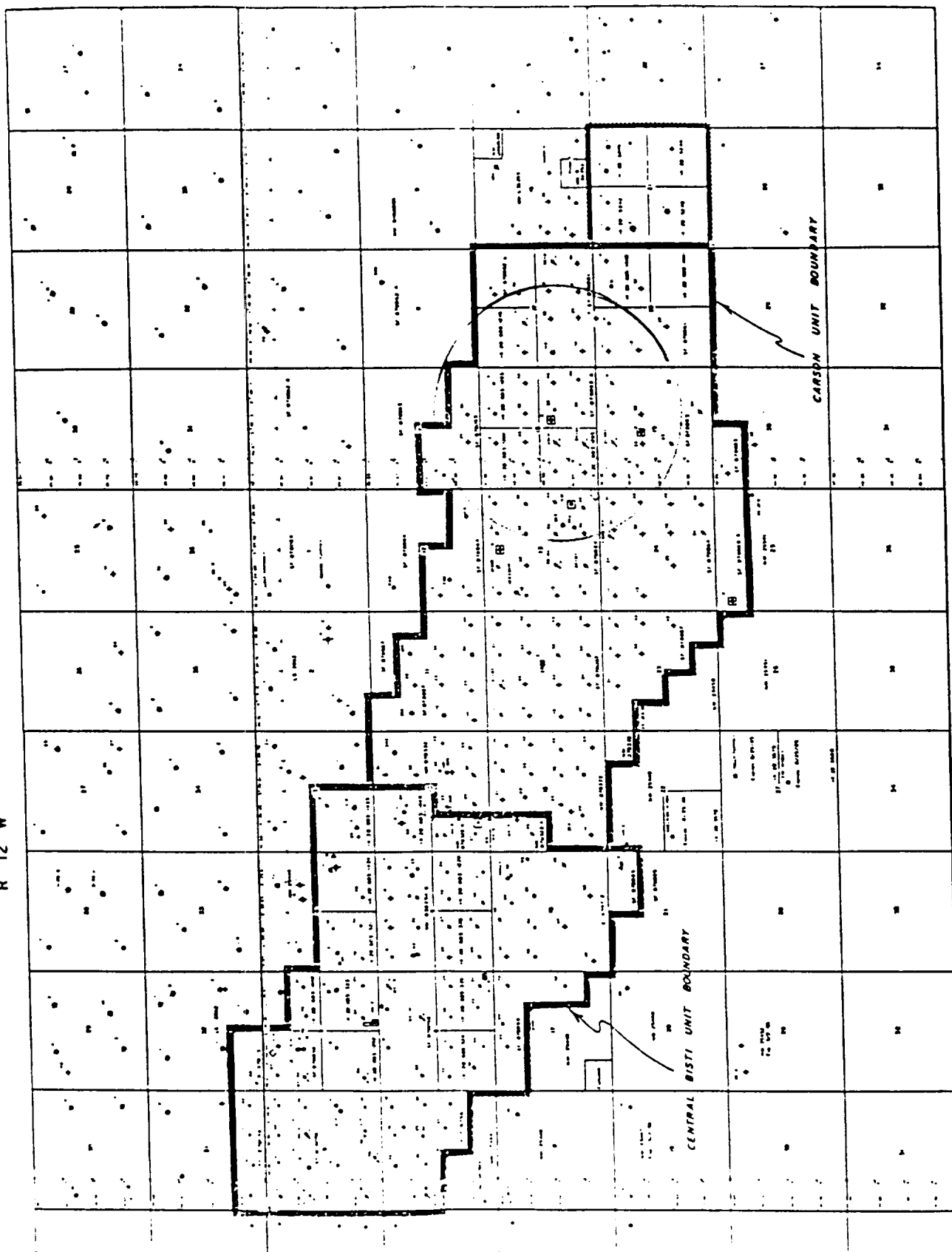
5. This well is part of an extensive waterflood project active in the Carson Unit since 1959. All produced water is reinjected into the oil productive Lower Gallup sand to maintain pressure. Injection into the Lower Gallup sand is for waterflooding not disposal.
- VIII. The injection zone is the Lower Gallup sandstone. This zone is shown to be 51' in thickness with a top of 4860' KBE as shown on SP log previously submitted. No known sources of underground drinking water exist in this area. Water well drilling in the area has shown the Ojo Alamo to be dry.
- IX. The well will be acidized if required to maintain injection rate and 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.



R 12 W

Y 26 N

T 25 N



NIXON DEVELOPMENT COMPANY

CENTRAL DISTRICT - CARSON UNIT AREA



100

San Juan testing laboratory, inc.

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

PHONE
327-4966

Date June 10, 1977

Report to Hixon Development Company
Requested by A. Kuchera, Mgr. Sampled by Hixon Personnel
Project CBU #5 Location NW NW Sec. 6, T25N, R12W
Source of Material Lower Gallup Produced Water

Lab No. 24509 Water Analysis for Petroleum Engineering

TEST RESULTS

WATER ANALYSIS FOR PETROLEUM
ENGINEERING

<u>Constituent</u>		<u>Constituents</u>		
Total Solids	2263 ppm	<u>Cations</u>	<u>Meg/L</u>	<u>ppm</u>
	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

TEST NO. 22096

Certified by:



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'

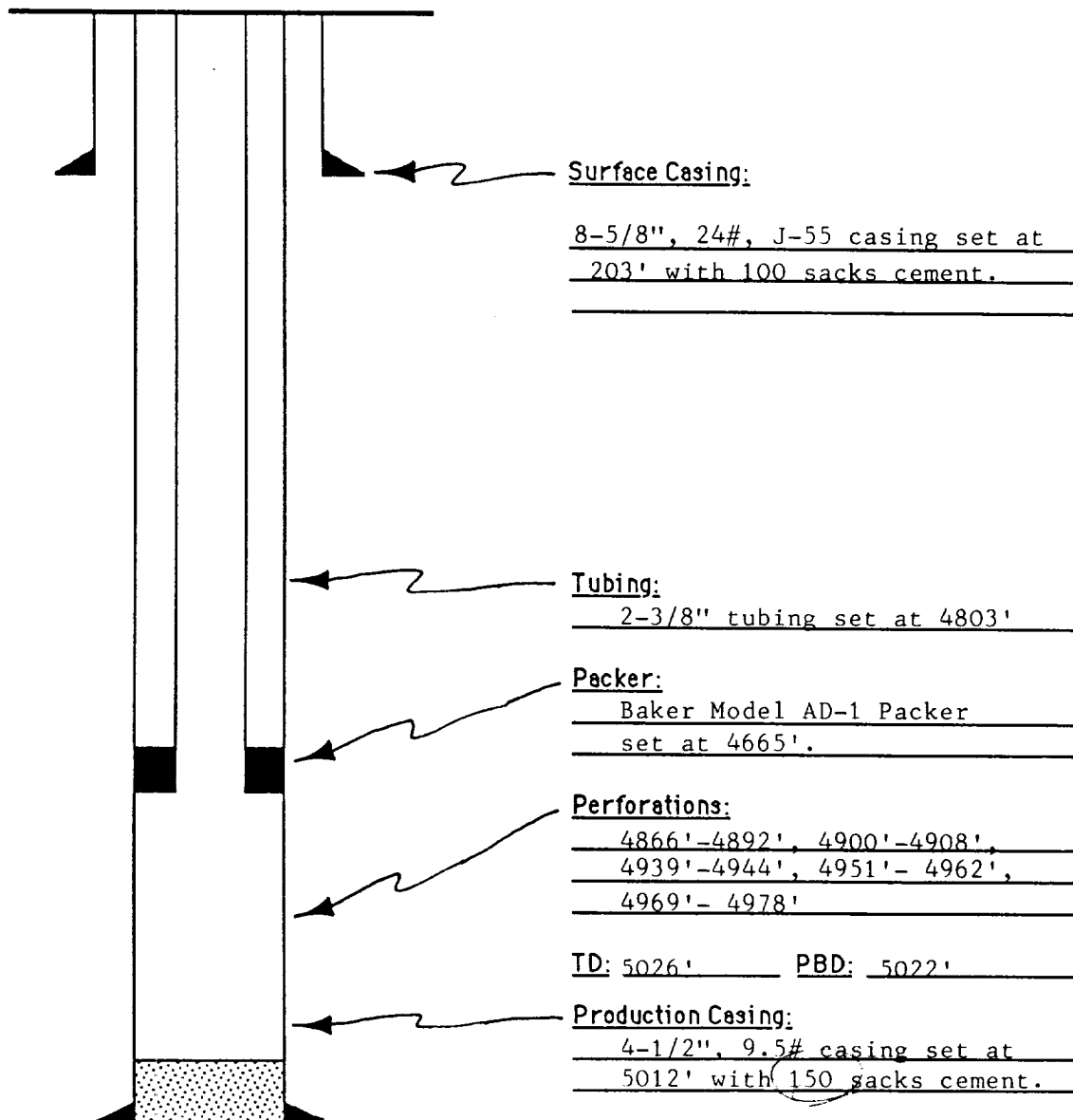
PART B

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



NOTICE

Hixon Development Company, P.O. Box 2810, Farmington, New Mexico 87499, (505) 326-3325 whose agent is Aldrich L. Kuchera hereby notifies interested parties that the following well is to be converted to a water injection well. Maximum rate will be 1000 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 87501 within 15 days.

Carson Unit Well 21-19, NE/4 NW/4, Section 19, T 25N, R 11W

This Legal notice will be published in the Farmington Daily Times on Friday August 21, 1987. The Affidavit of Publication will be forwarded to your office as soon as received.

Legal No. :

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'

Abandonment marker

25 sk. plug at base
of surface casing
(100'-15')

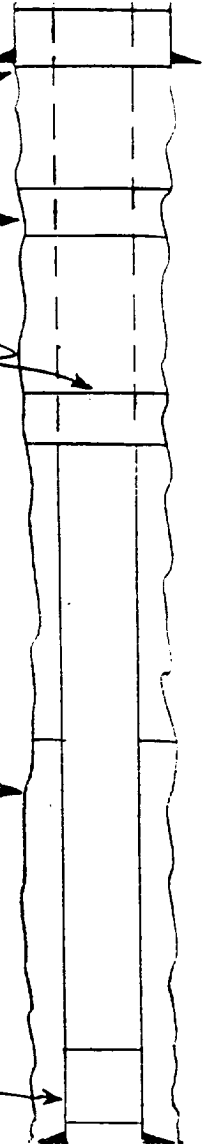
35 sk. plug at 320'
(380'-201')

45 sk. plug at csg. stub
(1400'-1247')

Shot off 4-1/2"
casing at 1400'

7-7/8" hole

25 sk. plug over
perforations
(4941'-4626')



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

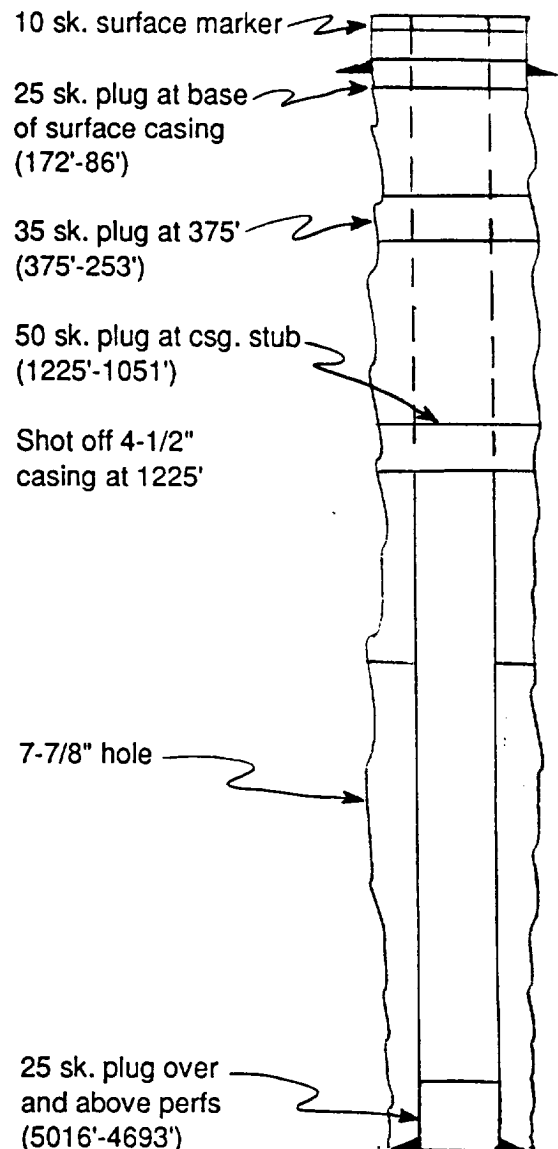
Production Casing Hole Size: 7-7/8"
Production Casing Size: 4-1/2"
Production Casing Depth: 5016'

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	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' (400'-278")	
Spud Date:	03/11/60	50 sk. plug at csg. stub (694'-520")	
Surface Casing Hole Size:	12-1/4"	Shot off 4-1/2" casing at 694'	
Surface Casing Size:	8-5/8"	20 sk. plug across perms (1300'-1041").	
Surface Casing Depth:	108'	Drilled out cmt. to 1300'.	
Cementing Record:	100 sx.	Perf.'d csg. at 1195'. Set retainer at 1145' and pumped 75 sx. thru retainer.	
Production Casing Hole Size:	7-7/8"	Perf.'d csg. at 1325'. Set retainer at 1300' and pumped 125 sx. thru retainer.	
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'		
	<u>January 1976</u> 1218'-1224' 1234'-1244'		
Plug-Back Depth:	5027'	Set cmt. retainer at 4782' and pumped 100 sx. cmt. thru cmt. retainer.	
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.

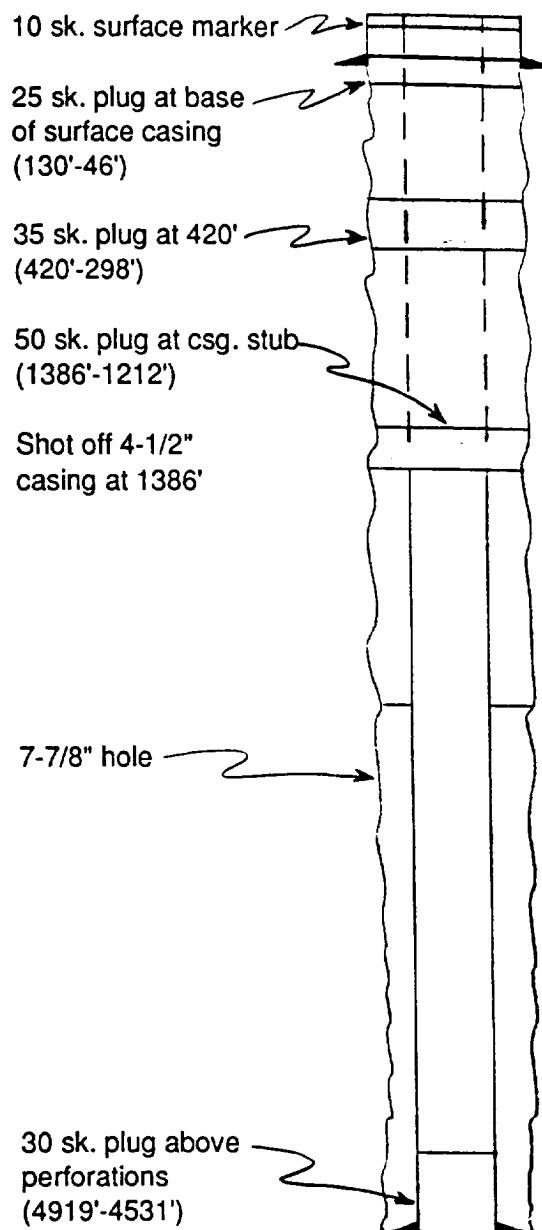
Production Casing Hole Size: 7-7/8"
Production Casing Size: 4-1/2"
Production Casing Depth: 5029'

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.

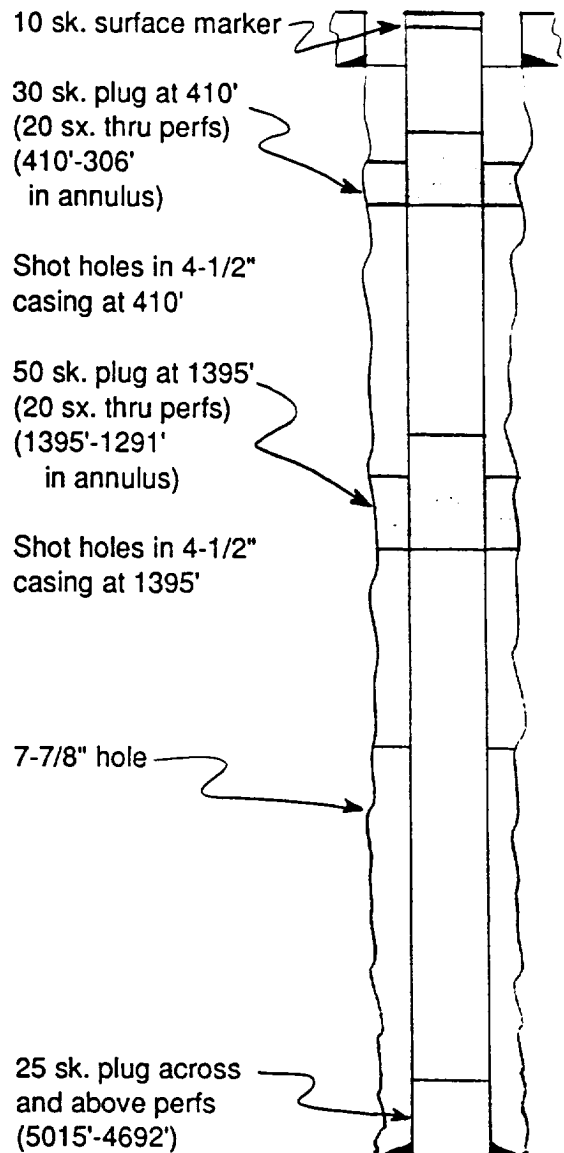
Production Casing Hole Size: 7-7/8"
Production Casing Size: 4-1/2"
Production Casing Depth: 5015'

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'

10 sk. surface marker

50 sk. plug at perfs
(380'-122')

Perf'd 5-1/2"
casing at 380'

50 sk. plug at perfs
(1247'-989')

Perf'd 5-1/2"
casing at 1247'

35 sk. plug at 3918'
(3918'-3479')

90 sk. plug at 4738'
(4738'-3963')

Set CICR @ 4758'.
Sqz'd Gallup perfs
through CICR
with 150 sx. cmt.

Set CIBP @ 5100'.
Capped with 1
sack cement.

