APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [X] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [X] yes [ ] no

II. Operator: Hixon Development Company

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

Contact party: Aldrich L. Kuchera Phone: (505) 325-6984

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? [xx] yes [ ] no
If yes, give the Division order number authorizing the project R-1636-A.

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.

RECEIVED
FEB 16 1983
OIL CON. DIV.
DIST. 3

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 Executive Vice President

Signature: Aldrich L. Kuchera Date: December 20, 1982

* 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. Please find attached supplimental information

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office

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 SUPPLIMENTAL INFORMATION

CENTRAL BISTI UNIT WELL NO. 54
SW/4 NW/4, SECTION 5, T25N, R12W
SAN JUAN COUNTY, NEW MEXICO, NMPM

I. Shown on application.

II. Shown on application.

III. Tabular and schematic Wellbore data are attached.

IV. This well is located in a Federal and State approved water flood project operational since 1959.

V. Area of review is shown on attached map.

VI. Information for well's located in the area of review are attached as follows:

Central Bisti Unit Well No. C-3 (C-2)
Central Bisti Unit Well No. 7
Central Bisti Unit Well No. 8
Central Bisti Unit Well No. 54
Central Bisti Unit Well No. 66
Central Bisti Unit Well No. 67
Central Bisti Unit Well No. 76
Central Bisti Unit Well No. 79

VII. 1. Proposed average injection rate is 600 BWPD expected maximum injection rate 1200 BWPD.

2. The injection system will be closed.

3. Average injection pressures are expected to be in the 1000-1200 psi range. Maximum injection pressure will be 1500 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 Central Bisti Unit since 1959. All produced water is re-injected into the oil productive Lower Gallup sand to maintain pressure. Injection into the Lower Gallup Sand is for water flooding not disposal.

VIII. The injection zone is the upper bench of the Lower Gallup sandstone. This zone is shown to be 27' in thickness with a

top of 4802' 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 as required to maintain injection rate and pressure.

X. Logs were previously submitted.

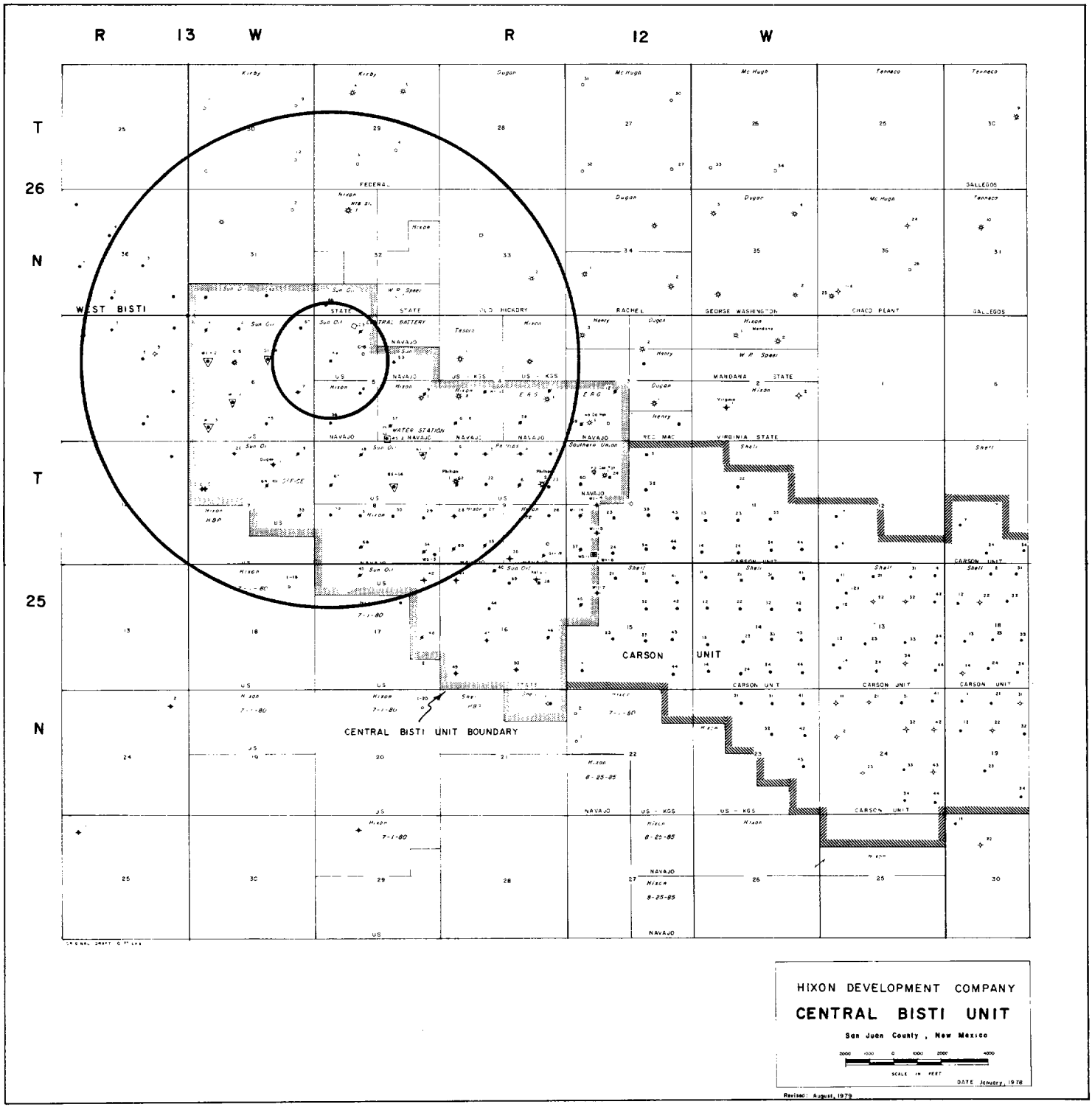
XI. No known sources of drinking water exist in this area.

XII. This well is part of the existing approved waterflood operation for the Central Bisti Lower Gallup Sand Unit, it is not a disposal well.

XIII. Proof of Notification attached.

XIV. Certification shown on Application.

CBU WELL NO. 54



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

Constituent	
Total Solids	2263 ppm
pH	7.25
Resistivity	2.94 ohms/meter @70°F
Conductivity	3,400 micromhos/cm @ 70°F

Comments

Essentially this is a 0.2% sodium sulfate solution.

Constituents			
	Cations	Meg/L	ppm
	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

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

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

Certified by:

TEST NO. 22096

Form 360-7

WELL NAME CBU Well No. 7

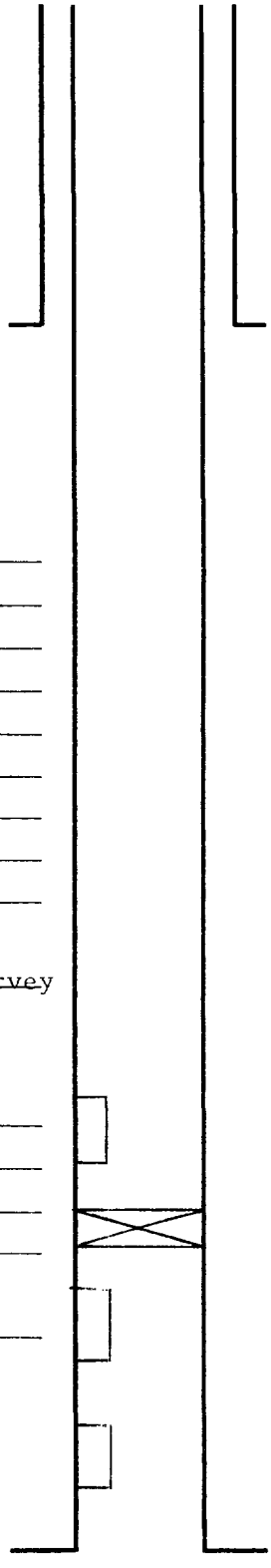
LOCATION 1980' FSL, 660' FEL **SECTION** 6 **T** 25N **R** 12W

CURRENT STATUS: Plugged and Abandoned

GLE 6194'

RBM

DF



SURFACE CASING

Hole size: 12-1/4"

Casing: 8-5/8" 24# J-55

Casing set @ 186' with 175 sacks

FORMATION TOPS

Fruitland	
Pictured Cliffs	1115'
Lewis	
Cliffhouse	
Menefee	
Point Lookout	3631'
Mancos	3840'
Upper Gallup	4687'
Lower Gallup	4795'

CEMENT TOP 4024' temp survey

PERFORATIONS 4812'-28'
4878'-84'
4892'-98'

PBD 4962'

PRODUCTION CASING

Hole size: 7-7/8"

Casing: 5-1/2" 14# J-55

Casing set @ 4993'

TD 4995'

WELL HISTORY

Spud date: 6/19/56

Original owner:

IP BOPD 411 BWPD

GOR

Completion treatment: 20,000# SOF (1956)
70,000# SOF (1963)

CURRENT DATA

Pumping Unit

Tubing

Pump size

Rod string

Remarks Plugging details not available from operator records.

WELL NAME Federal "C" Well NO. 5

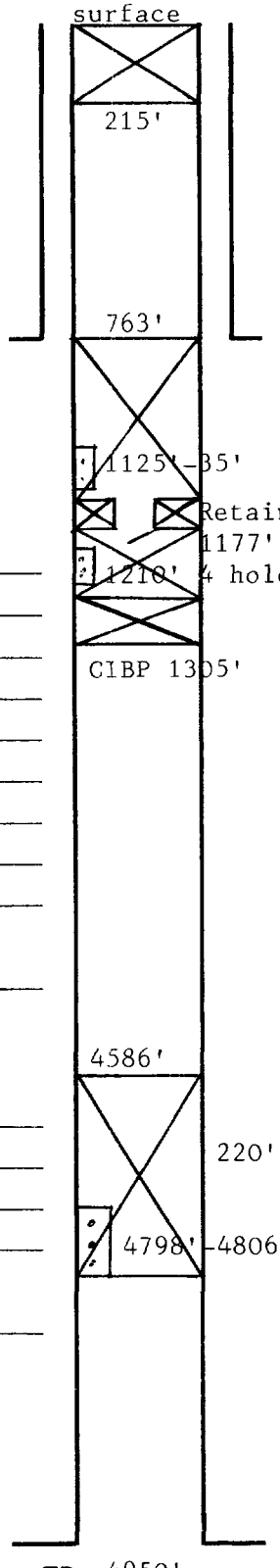
LOCATION 660' FNL, 1980' FWL **SECTION** 5 **T** 25N **R** 12W

CURRENT STATUS: Plugged and Abandoned

GLE 6145'

RBM 6154'

DF



SURFACE CASING

Hole size: 12-1/4"

Casing: 8-5/8" 24# J-55

Casing set @ 299' with 175 sacks

FORMATION TOPS

Fruitland

Pictured Cliffs 1040'

Lewis

Cliffhouse

Menefee

Point Lookout 3580'

Mancos

Upper Gallup

Lower Gallup

CEMENT TOP

3600' temp survey

664' CBL

PERFORATIONS

4798'-4806'

1210' (squeeze)

1125'-1135'

PBD

PRODUCTION CASING

Hole size: 7-7/8"

Casing: 5-1/2" 14# J-55

Casing set @ 4947' **TD** 4950'

WELL HISTORY

Spud date: 7/5/58

Original owner:

IP BOPD 35 BWPD 0

GOR

Completion treatment: 15,000# SOF

CURRENT DATA

Pumping Unit

Tubing

Pump size

Rod string

Remarks

220' plug spotted over lower Gallup

WELL NAME CBU Well No. 8

LOCATION 1980' FSL, 1980' FWL SECTION SE SW 5 T 25N R 12W

CURRENT STATUS:

GLE 6168'

RBM

DF

SURFACE CASING

Hole size:

Casing: 10 3/4" 32.75# H-40

Casing set @ 209'

FORMATION TOPS

Fruitland

Pictured Cliffs 1118'

Lewis

Cliffhouse

Menefee

Point Lookout

Mancos

Upper Gallup 4616'

Lower Gallup

CEMENT TOP

Liner cement job circulated to surface.

PERFORATIONS

4787-4818'
4855-4864'
4869-84'
4 holes/ft

PBD 4886'

Bottom of liner 4661.86' KBU

PRODUCTION CASING

Hole size:

Casing: 5 1/2' 14#J-55

Casing set @ 4921'

TD 4944'

WELL HISTORY

Spud date:

Original owner:

IP 321 BOPD BWPD

GOR

Completion treatment: 2-5-57 39 API

CURRENT DATA

Pumping Unit 320 Lufkin (2-1-80-C320D/ 246 86)

Tubing

Pump size 2½x2¼x11x13x16 THEC

Rod string

Remarks 2 7/8' 6.5# EUE TBG tbg @ 4814.82' SN @ 4778.87' tbg anchor 5 jts above SN

10-22-81 Run 4 1/2" 10.23# Atlas Bradford 4LFS flush joint liner to 4661.86' and cement with 125 sacks 50:50 POZ and 125 sacks class B. Cement circulated to surface.

POWERED BY: Ajax 8-1/2" x 10

2-1-80 Core analysis - Reservoir data

WELL NAME CBU WELL NO. 54

LOCATION 1980' FNL, 660' FWL **SECTION** 5 **T** 25N **R** 12W

CURRENT STATUS: Pumping

GLE

RBM 6168'

DF

SURFACE CASING

Hole size: 12-1/4"

Casing: 8-5/8" 24#

Casing set @ 192' w/ 175 sx

FORMATION TOPS

Fruitland	
Pictured Cliffs	1102'
Lewis	
Cliffhouse	
Menefee	
Point Lookout	3607'
Mancos	
Upper Gallup	4676'
Lower Gallup	4788'

CEMENT TOP 3880' (temp survey)

PERFORATIONS 4810'-22', 4862'-70', 4876'-82'

PBD 4969'

PRODUCTION CASING

Hole size: 7-7/8"

Casing: 5-1/2" 14# J-55

Casing set @ 5000' w/ 200 sx **TD** 5003'

WELL HISTORY

Spud date: 6-26-56

Original owner: Sunray Mid-Continent

IP 255 BOPD _____ BWPD ____

GOR

Completion treatment: 2 stage frac with 15,000# and 15,000# 20-40 sand

CURRENT DATA

Pumping Unit Parkersburg 80D

Tubing 2-3/8"

Pump size 2 x 1-1/2 x 16

Rod string 189 of 3/4"

Remarks 2/7/64 pumped mud-csg-leak 2662' to 2693' (2708')
Baker BP @ 4780' Squeezed with 200 sacks, cleaned out
Model D packer drilled and driven to 4893' 12/22/63
Well fraced with 30,000# sand/oil 12/2/64.

WELL NAME CBU WELL NO. 66 (GI-20)

LOCATION 330' FSL, 330' FWL **SECTION** 32 **T** 26N **R** 12W

CURRENT STATUS: Flowing

GLE 6149'

RBM 6158'

DF 6156'

KB 9'

SURFACE CASING

Hole size: 12-1/4"

Casing: 8-5/8" 24# J-55

Casing set @ 146' w/ 150 sx

FORMATION TOPS

Fruitland	
Pictured Cliffs	1146'
Lewis	
Cliffhouse	
Menefee	
Point Lookout	3615'
Mancos	
Upper Gallup	4700'
Lower Gallup	4807'

CEMENT TOP 4000' (est)

PERFORATIONS 4804'-26', 4864'-68', 4874'-84', (4 BPF)

PBD 4924'

PRODUCTION CASING

Hole size: 7-5/8"

Casing: 4-1/2" 9.5# J-55

Casing set @ 4925' w/ 150 sx **TD** 4925'

WELL HISTORY

Spud date: 12-13-57

Original owner: Val R. Reese

IP 192 BOPD _____ BWPD ____

GOR _____

Completion treatment: 20,000# sand
2200 psi BD

CURRENT DATA

Pumping Unit 160 API

Tubing _____

Pump size _____

Rod string _____

Remarks Originally ran 153 jts 2-3/8" 4.7# rector slip type tubing hanger 4-1/2" x 2". Baker Model DA packer at 4757'. Last pulling record shows 149 joints 2-3/8" 4.7# tbg (4736') set inside Model D packer - tailpipe is type "E" packer seal assembly.

WELL NAME CBU WELL NO. 67 (WIW-10)

LOCATION 660' FNL, 660' FEL **SECTION** 6 **T** 25N **R** 12W

CURRENT STATUS: Pumping

GLE 6158'

RBM 6170'

DF

SURFACE CASING

Hole size: 12-1/4"

Casing: 8-5/8" 24#

Casing set @ 200' w/ 175 sx

FORMATION TOPS

Fruitland	
Pictured Cliffs	1161'
Lewis	
Cliffhouse	
Menefee	
Point Lookout	3622'
Mancos	
Upper Gallup	4712'
Lower Gallup	4815'

CEMENT TOP 3613' (temp survey)

PERFORATIONS 4816'-32'
4873'-80'
4885'-90'

PBD 4848'

PRODUCTION CASING

Hole size: 7-7/8"

Casing: 5-1/2" 14#

Casing set @ 4998' w/ 200 sx **TD** 5000'

WELL HISTORY

Spud date: 6-13-56

Original owner: Sunray Mid-Continent

IP 323 BOPD 0 BWPD

GOR

Completion treatment: 7/56

CURRENT DATA

Pumping Unit Emsco 80D

Tubing 2-3/8"

Pump size 2" x 1-1/4" x 12'

Rod string 189 of 3/4"

Remarks 5/65 Plugged off 2nd & 3rd Lower Gallup.

WELL NAME CBU Well No. 76

LOCATION 1700' FNL, 660' FEL SECTION 6 T 25N R 12W

CURRENT STATUS:

GLE 6205'

RBM 13'

DF

SURFACE CASING

Hole size: 12-1/4"

Casing: 8-5/8" 24# K-55 8rd

Casing set @ 217.12' with 130 sacks

FORMATION TOPS

Fruitland	1127'
Pictured Cliffs	1167'
Lewis	1369'
Cliffhouse	1523'
Menefee	2581'
Point Lookout	3673'
Mancos	3813'
Upper Gallup	4727'
Lower Gallup	4812'

CEMENT TOP

PERFORATIONS 4829'-4857'

PBD 5039.08'

PRODUCTION CASING

Hole size: 7-7/8"

Casing: 4-1/2" 10.5# K-55 8rd

Casing set @ 5081.96' w/ 525 sacks TD 5120'

WELL HISTORY

Spud date: 5/19/82

Original owner: Hixon Development Company

IP _____ BOPD _____ BWPD _____

GOR

Completion treatment:

CURRENT DATA

Pumping Unit

Tubing

Pump size

Rod string

Remarks

WELL NAME CBU Well No. 79

LOCATION 1980' FNL, 2100' FWL SECTION 5 T 25N R 12W

CURRENT STATUS:

GLE 6155'

RBM

DF

SURFACE CASING

Hole size: 12-1/4"

Casing: 8-5/8" 24# K-55 8rd

Casing set @ 216' with 135 sx

FORMATION TOPS

Fruitland	1080'
Pictured Cliffs	1135'
Lewis	1363'
Cliffhouse	1475'
Menefee	2551'
Point Lookout	3591'
Mancos	3772'
Upper Gallup	4682'
Lower Gallup	4769'

CEMENT TOP

PERFORATIONS

4784'-4810'

PBD 5010'

PRODUCTION CASING

Hole size: 7-7/8"

Casing: 4-1/2" 10.5# K-55 8rd

Casing set @ 5056.57 with 525 sx TD 5060'

WELL HISTORY

Spud date: 5/13/82

Original owner: Hixon Development Co.

IP BOPD BWPD

GOR

Completion treatment:

CURRENT DATA

Pumping Unit

Tubing

Pump size

Rod string

Remarks

NOTICE

HIXON DEVELOPMENT COMPANY, P.O. Box 2810, Farmington, New Mexico 87499, (505) 325-6984, whoes agent is Aldrich L. Kuchera hereby notifies interested parties that the CBU Well No. 1, 5 and 54 located in the SW/4 SW/4 Section 31, T26N, R12W, NW/4 NW/4 Section 6 and SW/4 NW/4 Section 5, T25N, R12W respectively are to be converted to water injection wells. Maximum rate will be 1200 BWPD at less than 1500 psi. Any request or objection should be filed with Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

LEGAL NOTICE NUMBER 12755 TO BE PUBLISHED 2/16/83

HIXON DEVELOPMENT COMPANY
P. O. BOX 2810
FARMINGTON, NEW MEXICO 87401

July 29, 1983

Mr. Gilbert Quintana
Energy and Minerals Department
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Subject: CBU Well No. 54
1980' FNL, 660 FWL
Section 5, T25N, R12W
San Juan County, New Mexico

Dear Mr. Quintana:

Enclosed is the requested schematic for the subject well. If I can be of further help please feel free to contact me at Hixon Development Company (325-6984).

Very truly yours,

Hixon Development Company

by Bruce E. Delventhal
Bruce E. Delventhal

WELL NAME CBU Well No. 54

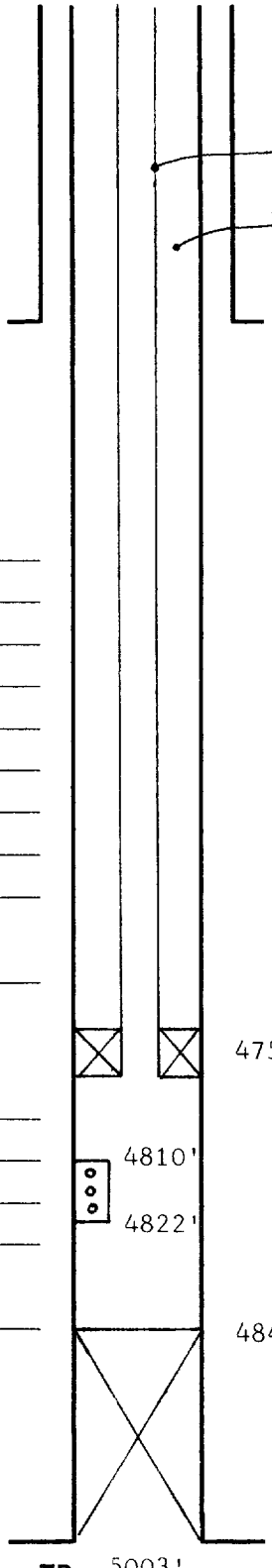
LOCATION 1980' FNL, 660 FWL **SECTION** 5 **T** 25N **R** 12W

CURRENT STATUS:

GLE

RBM 6168'

DF



SURFACE CASING

Hole size: 12-1/4"

Casing: 8-5/8" 24#

Casing set @ 192' w/ 175 sks.

FORMATION TOPS

Fruitland

Pictured Cliffs 1102'

Lewis

Cliffhouse

Menefee

Point Lookout 3607'

Mancos

Upper Gallup 4676

Lower Gallup 4788

CEMENT TOP 3880'

PERFORATIONS 4810'-4822'

PBD 4844'

PRODUCTION CASING

Hole size: 7-7/8"

Casing: 5-1/2", 14#, J-55

Casing set @ 5000' w/200 sks

TD 5003'

WELL HISTORY

Spud date: 6-26-56

Original owner: Sunray Mid-Continent

IP 255 BOPD BWPD

GOR

Completion treatment:

CURRENT DATA

Pumping Unit

Tubing

Pump size

Rod string

Remarks

4751' Baker Model AD-1 J slot packer set at 4751'.

4844' Plug back depth at 4844'

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

RECEIVED
FEB 22 1983
OIL CONSERVATION DIVISION
SANTA FE

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

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE 2-17-83

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

Gentlemen:

I have examined the application dated 2-16-83

for the Hixon Devel. Co. (Operator) CBU #54 (Lease and Well No.) E-5-25N-12W (Unit, S-T-R)

and my recommendations are as follows:

Approve, with a pressure limit to 960 psi, unless a step rate test is ran to validate a higher injection pressure

Yours truly,

Jeff A. Edmiston