

HIXON DEVELOPMENT COMPANY
P. O. BOX 2810
FARMINGTON, NEW MEXICO 87499

September 15, 1983

Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

4840-4856
PBTB-5067
PKR-4713

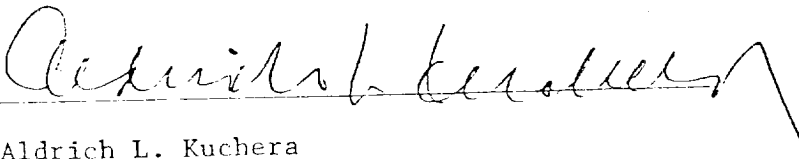
Subject: CBU No. 78, SE/4 SW/4, Section 6, T25N, R12W

Gentlemen:

Attached for your approval is our Application for Authorization to Inject for the subject well.

Very truly yours,

Hixon Development Company

by 

Aldrich L. Kuchera
Executive Vice President

ALK:cb

Attachments

cc: Mr. Frank Chavez
Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

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OIL CON. DIV.
DIST. 3

HIXON DEVELOPMENT COMPANY
P. O. BOX 2810
FARMINGTON, NEW MEXICO 87499

September 15, 1983

Bureau of Indian Affairs
Navajo Area Office
Minerals Department
Box 146
Window Rock, Arizona 86515

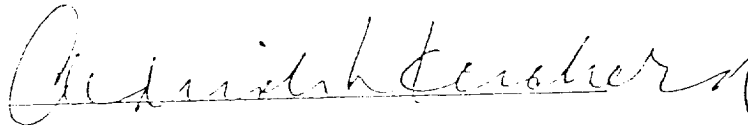
Subject: CBU Well No. 78, SE/4 SW/4, Section 6, T25N, R12W

Gentlemen:

Attached is our Application for Authorization to Inject for the subject well. We are required by the Oil Conservation Division to furnish copies of these applications to the surface owners.

Very truly yours,

Hixon Development Company

by 

Aldrich L. Kuchera
Executive Vice President

ALK:cb

Attachments

Certified Mail No. 933722

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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) 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? ☒ 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.
- 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: Petroleum Engineer
Signature: *Aldrich L. Kuchera* Date: September 15, 1983
- * 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.

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OIL CON. DIV.

DIST. 3

HIXON DEVELOPMENT COMPANY
APPLICATION FOR AUTHORIZATION TO INJECT
FORM C-108 SUPPLEMENTAL INFORMATION

CBU WELL NO. 78
SE/4 SW/4, SECTION 6, T25N, R12W
SAN JUAN COUNTY, NEW MEXICO, NMPM

- I. Shown on application.
- II. Shown on application.
- III. Tubular and Schematic Wellbore data are attached.
- IV. This well is located in a 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 the area of review are attached as follows:

CBU Well No. 7
CBU Well No. 77
Federal "C" No. 4
Federal "C" No. 7
CBU Well No. 55
CBU Well No. 6
CBU Well No. WI-3
CBU Well No. 20
CBU Well No. 75
CBU Well No. 19
CBU Well No. 64

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- VII.
 - 1. Proposed average injection rate is 600 BWPD, expected maximum injection rate is 1200 BWPD.
 - 2. The injection system will be closed.
 - 3. Average injection pressures are expected to be in the 840-965 psi range. Maximum injection pressure will be 965 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 waterflooding not disposal.

- VIII. The injection zone is the upper bench of the Lower Gallup sandstone. This zone is shown to be 16' in thickness with a top of 4840' 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 Central Bisti Lower Gallup Sand Unit. It is not a disposal well.
- XIII. Proof of Notification attached.
- XIV. Certification shown on application.

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WELL NAME 011 011 71

LOCATION 130' TSL, 1300' FWT SECTION T R

CURRENT STATUS:

GLE 6238'

REM

DF

SURFACE CASING

Hole size: 12 1/4"

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

Casing set @ 215.79' with 200 sacks

FORMATION TOPS

Frontland

Pictured Cliffs 1199'

Lewis 1348'

Cliffhouse 1521'

Menafes 2603'

Point Lockout 3651'

Maricos 3833'

Upper Gallup 4741'

Lower Gallup 4829'

CEMENT TOP

PERFORATIONS 4840-56'

PBD 5067'

PRODUCTION CASING

Hole size: 7 7/8"

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

Casing set @ 5110' with 525 sacks TD 5115'

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WELL HISTORY

Spud date: 4/12/82

Original owner: Hixon Development

IP 5/82 BOPD 14 BWPD 96

GOR

Completion treatment: 54,967 gal %

slick water & 50,000# 20-40 and

CURRENT DATA

Pumping Unit

Tubing 2-3/8" @ 4869'

Pump size

Rod string

Remarks

PHONE
327-4966

907 WEST ATACHE

P.O. BOX 2810

FARMINGTON, NEW MEXICO

Date June 10, 1977

Report to Hixon Development Company
Requested by A. Kuchera, Mgr. Sampled by Hixon Personnel
Object CBM #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

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Constituent
Total Solids
Resistivity
Conductivity

2263 ppm
7.25
2.94 ohms/meter @ 70°F
3,400 micromhos/cm @ 70°F

Constituents

Cations

Sodium
Calcium
Magnesium
Iron
Barium

Meq/L
29.3
2.3
0.5
neg.
0

ppm
674
45
6
3
0

Comments

Essentially this is a 0.2% sodium sulfate solution.

Anions

Chloride
Bicarbonate
Carbonate
Hydroxide
Sulfate

4.1
4.0
0
0
24.0

145
244
0
0
1150

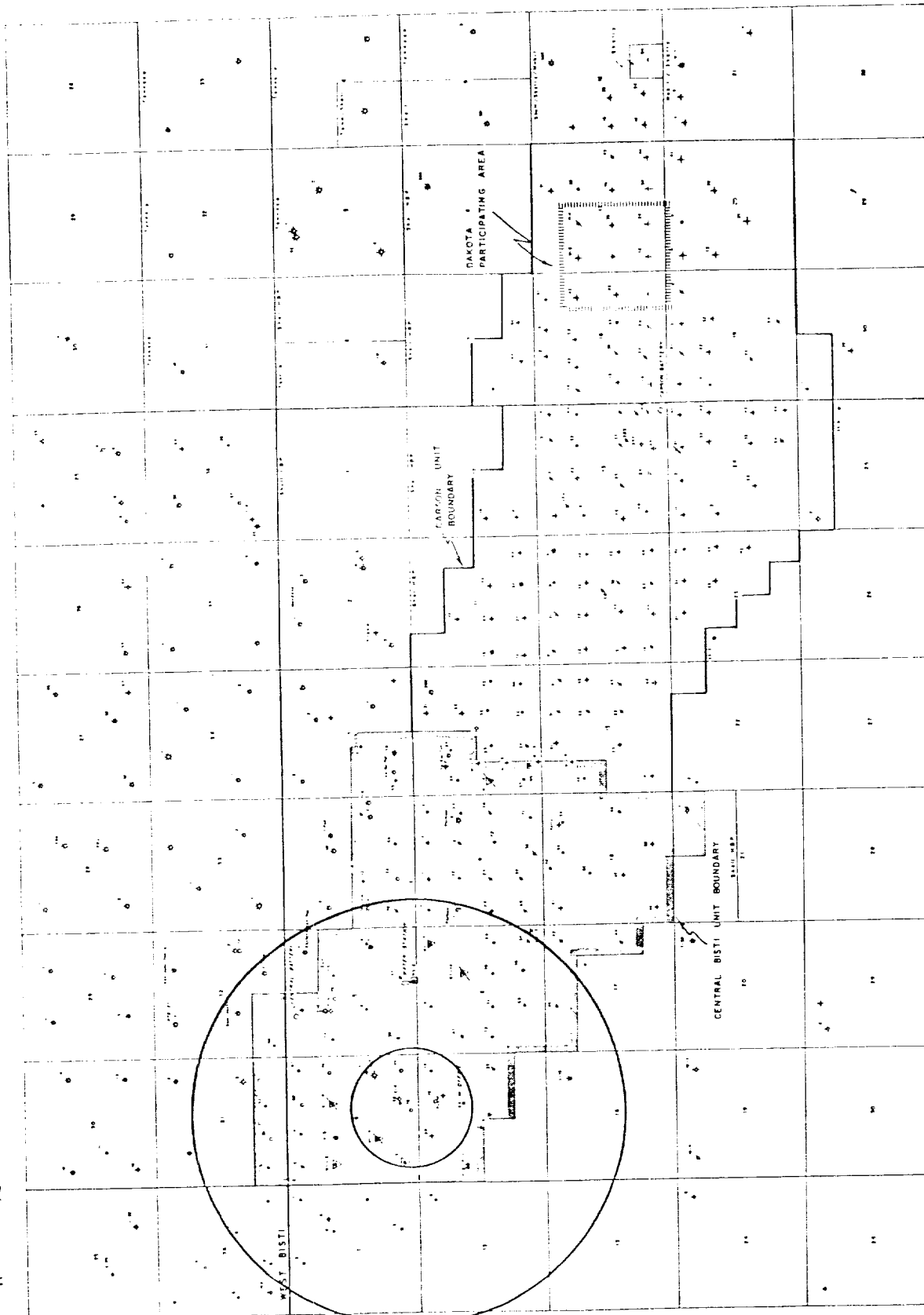
Copies to Hixon Development Co. (3)
P.O. Box 2810
Farmington, New Mexico 87401

Certified by:

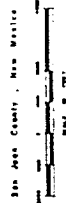


R 13 W R 12 W R 11 W

T 26 N T 25 N



HIXON DEVELOPMENT COMPANY
CENTRAL BISTI - CARSON UNIT AREA



DATE: 1/15/1964

WELL NAME (1) WELL NO. 10-2
LOCATION 660' TSL, 660' FWL SECTION 6 T 13A R 120
CURRENT STATUS: Injection

GLE 6230'

RBM

DF 6241'

SURFACE CASING

Hole size: 12-1/4"

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

Casing set @ 194' w/ 175 sx

FORMATION TOPS

Fruitland

Pictured Cliffs 1208'

Lewis

Cliffhouse

Menefee

Point Lookout 3648'

Mancos 3820'

Upper Gallup 4739'

Lower Gallup

CEMENT TOP

PERFORATIONS 4958'-60, 4936'-42'

4916'-28', 4904'-10'

4889'-95', 4868'-82'

4842'-52' (4 SPF)

PBD

PRODUCTION CASING

Hole size: 7-7/8"

Casing: 5-1/2" 14# 8rd

Casing set @ 4999' w/ 200 sx

TD 5001

WELL HISTORY

Spud date: 5-10-56

Original owner: Sunray Mid Continent

IP 666 BOPD BWPD

GOR

Completion treatment: Fraced with 3-25,000
gal oil & 25,000# 20-40 sand. Jobs
separated by 450# howco 11e 45 compound

CURRENT DATA

Pumping Unit

Tubing 2-3/8"

Pump size

Rod string

Remarks July 11-13, 1977 - Model D
packer was set at 4800' (LW).

5-3-65 Confined water injection to
upper bench of Lower Gallup sand.

Perfs 4842'-52' open.

Packer set at 4694'.

WELL NAME WILKINSON "C" WELL NO. 4
LOCATION 790' FSL, 1850' FEL SECTION 6 T. 25N R. 12E
CURRENT STATUS: P & A

GLE 6206'

RBM

DF

SURFACE CASING

Hole size: 7-7/8"
Casing: 5-1/2" 15.5# J-55
Casing set @ 33'

FORMATION TOPS

Ojo Alamo 76'
Kirtland
Fruitland
Coal 1134'
Pictured Cliffs 1182'
Lewis 1260'

CEMENT TOP 32.5'

PERFORATIONS 1182'-95'
1202'-20'

PBD 1229'

PRODUCTION CASING

Hole size: 4-3/4"
Casing: 2-7/8" 6.5# EUE
Casing set @ 1259'

TD 1275'

WELL HISTORY

Spud date: 3-27-78

IP

Completion treatment:

CURRENT DATA

Tubing

Remarks

WELL NAME CHU No. 6

LOCATION 1980' FSL, 1989' FWL SECTION 6 T 25N R 12W

CURRENT STATUS: Well pumping

GLE _____

RBM _____

DF _____

SURFACE CASING

Hole size: 12-1/2" (195')

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

Casing set @ 192' w/ 175 sx

FORMATION TOPS

Fruitland _____

Pictured Cliffs 1135'

Lewis _____

Cliffhouse _____

Menefee _____

Point Lookout 3632'

Mancos 3834'

Upper Gallup 4721'

Lower Gallup 4810'

CEMENT TOP _____

PERFORATIONS 4824'-40'

4890'-98'

4904'-12'

6 SPF

PBD 4950'

PRODUCTION CASING

Hole size: 7-7/8"

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

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

WELL HISTORY

Spud date: 6/25/56

Original owner: Sunray Mid-Continent

IP _____ BOPD 432 BWPD _____

GOR _____

Completion treatment: _____

CURRENT DATA

Pumping Unit _____

Tubing 2-3/8"

Pump size _____

Rod string _____

Remarks _____

WELL NAME W-11-1 No. 7

LOCATION 1980' FSL, 660' FEL SECTION 5 T 10N R 12W

CURRENT STATUS: Plugged and Abandoned

GLE _____

RBM _____

DF _____

SURFACE CASING

Hole size: 12-1/4"

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

Casing set @ 186' w/ 175 sx

FORMATION TOPS

Fruitland _____

Pictured Cliffs 1115'

Lewis _____

Cliffhouse _____

Menefee _____

Point Lookout 3631'

Manitos 3840'

Upper Gallup 4687'

Lower Gallup 4795'

CEMENT TOP

PERFORATIONS 4812'-4828'

4878'-4884'

4892'-4898'

PBD _____

PRODUCTION CASING

Hole size: 7-7/8"

Casing: 5-1/2" 14# J-55 8rd

Casing set @ 4993' w/ 200 sx

TD 4995'

WELL HISTORY

Spud date: 6/19/56

Original owner: Sunray Mid-Continent

IP _____ BOPD _____ EWPD _____

GOR _____

Completion treatment: 35,000# & 35,000
gallons crude

CURRENT DATA

Pumping Unit _____

Tubing _____

Pump size _____

Rod string _____

Remarks _____

Plugged and Abandoned

20 sks @ 4780'-4800'

40 sks @ 4780'-4800' in

and out of tubing.

60 sks @ 1110'-1260'

40 sks 175' - 275'

2 sks surface

Well plugged because

of excess water -

WELL NAME Federal "C" No. 1
LOCATION 1800' FNL, 790' FEL SECTION 6 T 25N R 12W
COUNTY San Juan STATE New Mexico

GLE 6190'

RBM _____

DF _____

SURFACE CASING

Hole size: 9-7/8"

Casing: 7" 20#

Casing set @ 89.81' w/ 65 sx

FORMATION TOPS

Kirtland	122'
Farmington	325'
Fruitland	630'

CEMENT TOP surface

PERFORATIONS none

PBD _____

PRODUCTION CASING

Hole size: none

Casing: _____

Casing set @ _____

TD 870'

WELL HISTORY

Spud date: 1/7/82

Original owner: _____

IP _____ BOPD _____ BWPD _____

GOR _____ MCF _____

Completion treatment: _____

CURRENT DATA

Pumping Unit _____

Tubing _____

Pump size _____

Rod string _____

Remarks P & A

WELL NAME IN WELL NO. 14
LOCATION 660' FNL, 660' FEL SECTION 7 T 15N R 10W
CURRENT STATUS: Pumping

GLE 6218'
RBM
DF 6238'

SURFACE CASING

Hole size: 12-1/4"
Casing: 8-5/8" 24# 8rd
Casing set @ 192' w/ 175 sx

FORMATION TOPS

Fruitland
Pictured Cliffs 1177'
Lewis
Cliffhouse
Menefee
Point Lockout 3612'
Mancos 3793'
Upper Gallup 4702'
Lower Gallup 4789'

CEMENT TOP

PERFORATIONS 4804'-18', 4833'-40',
4852'-58', 4871'-77',
4886'-95'

PBD

PRODUCTION CASING

Hole size: 7-7/8"
Casing: 5-1/2" 14# 8rd
Casing set @ 5000' w/200 sx

TD 5000'

WELL HISTORY

Spud date: 7-2-56
Original owner: Sunray Mid-Continent
IP 421 BOPD BWPD
GOR
Completion treatment:

CURRENT DATA

Pumping Unit Bethlehem 228
Tubing 2-7/8"
Pump size 2-1/2 x 2 x 16
Rod string 124 of 3/4 & 66 of 7/8"
Remarks SN at 4705'. 2-7/8" is
R-1 (=25')

Tubing
anchor
@ 4656'

SN @
4705'

Tail @
4736'

WELL NAME CBU Well No. 20
LOCATION 660' FNL, 1980' FWL SECTION 7 T 25N R 12W
CURRENT STATUS: P & A

GLE 6244

RBM

DF

SURFACE CASING

Hole size: 12-1/2"

Casing: 8-5/8" 24#

Casing set @ 284' w/ 175 sx

FORMATION TOPS

Fruitland

Pictured Cliffs 1208'

Lewis

Cliffhouse

Manefee

Point Lookout

Marcos 3833'

Upper Gallup

Lower Gallup 4838'

CEMENT TOP

PERFORATIONS 4847'-53'

4892'-98'

4913'-17'

PBD

PRODUCTION CASING

Hole size: 7-7/8"

Casing: 5-1/2" 14#

Casing set @ 5004.45' w/ 200 sx

TD 5004

WELL HISTORY

Spud date: 12-28-57

Original owner:

IP BOPD 30.5 BWPD

GOR 598

Completion treatment: 30,000 gal crude oil and 30,000# sand

CURRENT DATA

Pumping Unit

Tubing @ 4953

Pump size

Rod string

Remarks Plugged and Abandoned

20 SKS @ 4535'-4738'

40 SKS @ 1925'-2025'

in + feet of sand.

60 SKS @ 1150'-1300'

40 SKS @ 260'-360'

20 SKS Surface -

Plugged due to low
oil production.

WELL NAME San Juan 100-13

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

CURRENT STATUS: Pumping

GLE 6209'

RBM 6220'

DF

KB 11'

SURFACE CASING

Hole size: 12-1/4"

Casing: 8-5/8"

Casing set @ 191' w/175 sx

FORMATION TOPS

Fruitland

Pictured Cliffs 1135'

Lewis

Cliffhouse

Menefee

Point Lookout 3630'

Mancos 3820'

Upper Gallup 4710'

Lower Gallup 4804'

CEMENT TOP

PERFORATIONS 4816'-28', 4885'-92'

4898'-4905' (6 JS PF)

(add'l zone) 4863-69'

PBD 4979'

4911' (4-3-68)

PRODUCTION CASING

Hole size: 7-7/8"

Casing: 5-1/2" 14#

Casing set @ 4998' w/ 225 sx TD 5000'

WELL HISTORY

Spud date: 6-4-56

Original owner: Sunray Mid-Continent

IP 125 BOPD BWPD

GOR

Completion treatment: 7/56

CURRENT DATA

Pumping Unit American 160

Tubing 2-3/8"

Pump size 2 x 1-1/2 x 16

Rod string 134 of 3/4" & 58 of 7/8"

Remarks Set Model D packer at 4794'

Model D packer drilled to 4930' 2/21

Spinner Survey core analyses