Southern
Rockies
Business
Unit

March 21, 1994

Mr. William J. LeMay, Director
New Mexico Oil Conservation Division
310 Old Santa Fe Trail
Santa Fe, NM 87504

10954

Re: Application for Hearing
Approval of San Juan 28-7 Nitrogen Injection Project
San Juan 28-7 Unit
Basin Fruitland Coal Gas Pool
Rio Arriba County, New Mexico

Amoco Production Company hereby makes application for a hearing and resulting order approving a Nitrogen Injection Project in the San Juan 28-7 Unit, Basin Fruitland Coal Gas Pool, Rio Arriba County, New Mexico.

The Nitrogen Injection Project will consist of the injection of nitrogen in the Basin Fruitland Coal Gas Pool in three wells. Attached is the completed Form C-108 Application for Authorization to Inject.

A copy of this application will be sent by certified mail, return receipt requested, to the surface owners and offset operators within 1/2 mile of each injection well as required by Rule 701.B (2).

Amoco respectfully requests that this matter be set for hearing on the April 14, 1994 docket of the NMOCD hearings.

Sincerely,

J. W. Hawkins

JWH/caz

Attachments

cc: Fruitland Coal Team
Lara Kwartin
Julie Talbot

NMOCD District III
100 Rio Brazos Road
Aztec, NM 87410

STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
PO BOX 2088
SANTA FE, NM 87504-2088

Case 10954

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: X Secondary Recovery ____ Pressure Maintenance ____ Disposal ____ Storage
Application qualifies for administrative approval? __Yes _X_No

II. OPERATOR: Amoco Production Company

ADDRESS: P.O. Box 800, Denver, CO 80201

CONTACT PARTY: J. W. Hawkins PHONE: (303) 830-5072

III. WELL DATA: Complete the data required on the reverse side of this form for each well processed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project: ___Yes _x_ 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/1 or less) overlying the proposed injection zone as well as any such sources 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: J. W. Hawkins TITLE: Sr. Petroleum Engr. Assoc.

SIGNATURE: J. W. Hawkins DATE: 3/21/94

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate 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, PO Box 2088, Santa Fe, NM 87504-2088 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.

Application for Authorization to Inject

San Juan 28-7 Unit
N2 Injection Project

III. WELL DATA

A. For Schematic of Wellbore Information see Attachment #1 thru #3, Injection Well Data Sheets.

(1) San Juan 28-7 #414
Section 14, T28N - R07W
910' S 820' W

San Juan 28-7 #427
Section 22, T28N - R07W
2070' N 1440' E

San Juan 28-7 #428
Section 23, T28N - R07W
1060' N 820' E

(2) The proposed wellbore design is as follows:

SJ 28-7 #414
Surface Casing: 250' of 8-5/8", J-55, 32#
Production Casing: 3223' of 5-1/2", J-55, 15.5#

SJ 28-7 #427
Surface Casing: 250' of 8-5/8", J-55, 32#
Production Casing: 3499' of 5-1/2", J-55, 15.5#

SJ 28-7 #428
Surface Casing: 250' of 8-5/8", J-55, 32#
Production Casing: 3400' of 5-1/2", J-55, 15.5#

(3) Tubing: In each of the 3 injection wells, approximately 3200' of 2-3/8", coated with Tuboscope TK69.

(4) Packer: In each of the 3 injection wells, a Baker Model A-3 LOK-SET packer will be set 100' above the Fruitland Coal top.

B. All three wells will be drilled into the Fruitland Coal Gas Pool.

(1) Fruitland Formation, Basin Fruitland Coal Pool.

(2) All three wells will be perforated. Intervals will be determined after logs have been run.

(3) All three wells will be new wells drilled for the purpose of injection.

(4) N/A.

(5) Pictured Cliffs Formation Top at 3200 - 3400'.

V. See Attachment #4, Area of Review.

VI. See Attachment #5, Well Data in Area of Review.

VII. Amoco Production Company's proposed operation is to inject Nitrogen into the Fruitland coal, in three wells, to demonstrate the commercial viability of enhanced coalbed methane recovery technology. Data on the proposed operation is as follows:

(1) Average Injection Rate: 1500 mcfd (per well)
Maximum Injection Rate: 2500 mcfd (per well)

(2) Closed System.

(3) Average Injection Pressure: 2000 psi
Maximum Injection Pressure: 2500 psi

(4) The injection fluid is primarily nitrogen. The source of the nitrogen will be two Niject air separation membrane units, located at a central facility in Section 13, T28N-R7W. The expected composition is approximately 95% N2 and 5% O2. A compositional analysis will be provided prior to initiating operations. The injection fluid is compatible with the Fruitland formation.

(5) N/A.

VIII. The injection zone is the Basin Fruitland Coal Gas Pool which is comprised of two main coalbed seams with four to six coalbed stringers interspersed with sand and shale stringers. The Fruitland Coal interval is approximately 215 feet gross thick, with 90 feet net coal. Individual seams range from 2 feet to 56 feet in thickness. The gross interval is found from 2970' to 3500'.

The underground sources of drinking water in the area are the Nacimiento and Ojo Alamo formations, all above 2800 feet.

IX. The Fruitland coal in the subject wells will be fraced. Upon completion of these wells, completion reports will be filed with the NMOCD.

X. Upon completion of the proposed wells, well logs and test data will be submitted to the NMOCD.

XI. A search of state records with the State Engineers Office did not reveal any fresh water wells within a one mile radius of the subject wells.

XII. I hereby certify that I have examined available geologic and engineering data and can find no evidence of connection between the injection zone and underground drinking water sources.

XIII. See Attachment #6, Proof of Notice.

Injection Well Data Sheets
Attachments 1-3

INJECTION WELL DATA SHEET

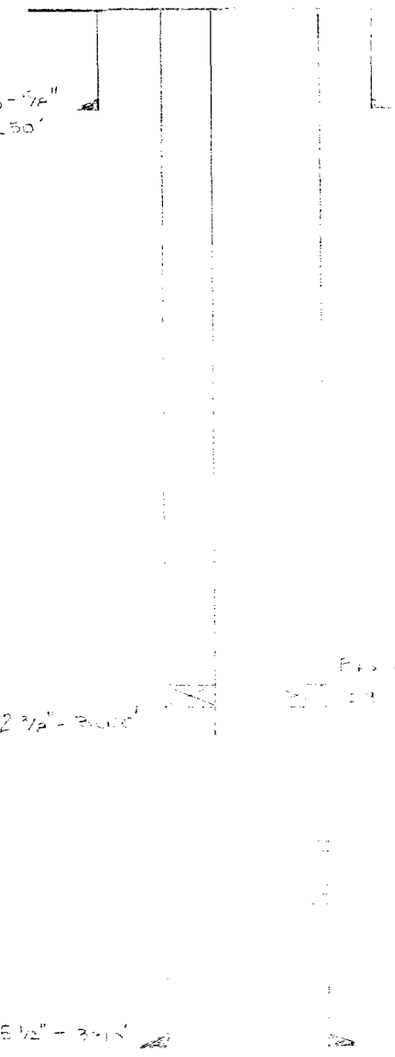
Amoco Production Company — San Juan 28-7 Unit

OPERATOR — LEASE

414	910 FSL, 820 FWL	14	28N	09W
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Rio Arriba County, New Mexico

Schematic



Tabular Data

Surface Casing

Size 8 - 5/8" " Cemented with 200 sx

TOC surface feet determined by _____

Hole size 12 - 1/4"

Intermediate Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5 - 1/2" " Cemented with 950 sx.

TOC surface feet determined by _____

Hole size 7 - 7/8"

Total depth 3310'

Injection Interval

2982' feet to 3235' feet

(perforated or open-hole, indicate which)

Estimated Tops:

OJO Alamo	2335'
Kirtland	2505'
Fruitland	2982'
Pictured Cliffs	3235'
Lewis	3310'

Tubing size 2 - 3/8" lined with tuboscope TK69 set in a

Baker Model A-3 LOK-SET packer at 2900 feet

(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Fruitland formation
2. Name of Field or Pool (if applicable) Basin Fruitland Coal
3. Is this a new well drilled for injection ? X Yes _____ No

   If no, for what purpose was the well originally drilled? N/A
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) N/A
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

   Pictured Cliffs 3235'

Drilling and Completion Schedule

San Juan 28-7 Unit #414

I. Location

Location: 910 FSL, 820 FWL, Section 14, T28N, R07W, Rio Arriba County, New Mexico

Field: Basin Fruitland Coal Elevation: 6513'

II. Geology

A. Formation Tops:

Ojo Alamo	2335'
Kirtland	2505'
Fruitland	2982'
Pictured Cliffs	3235'
Lewis	3310'

B. Logging Program: Triple Combo Log Suite at Total Depth

III. Drilling

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12 1/4"	250'	8 5/8"	32# - j55
7 7/8"	3310'	5 1/2"	15.5# - j55

B. Tubing: 3200' of 2 3/8" internally coated with Tuboscope TK69.

C. Cementing: 8 5/8" Surface Casing - Use 200 cubic feet of cement (100% excess) and circulate to surface. WOC 12 hours. Test casing to 1500# for 30 minutes.

5 1/2" Production Casing - Set stage tool 1000' above top of Fruitland Coal top. Cement in two stages with 950 cubic feet (70% excess) and circulate to surface. RDMORT.

IV. Completion Procedure

A. Perforating: Run gamma ray correlation log and perforate intervals determined by Denver after reviewing logs.

B. Fracturing: Pressure Test casing to 3500#. Breakdown and instablish injection rate into perforations. Nitrogen foam frac at 60 Bbl/min with 250,000# 60/40 sand.

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator	Lease	Well No.
AMOCO PRODUCTION COMPANY	SAN JUAN 28-7 UNIT	# 414

Unit Letter	Section	Township	Range	County
M	14	28 NORTH	7 WEST NMPM	RIO ARRIBA

Actual Footage Location of Well:
910 feet from the SOUTH line and 820 feet from the WEST line

Ground level Elev.	Producing Formation	Pool	Dedicated Acreage:
6513			Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

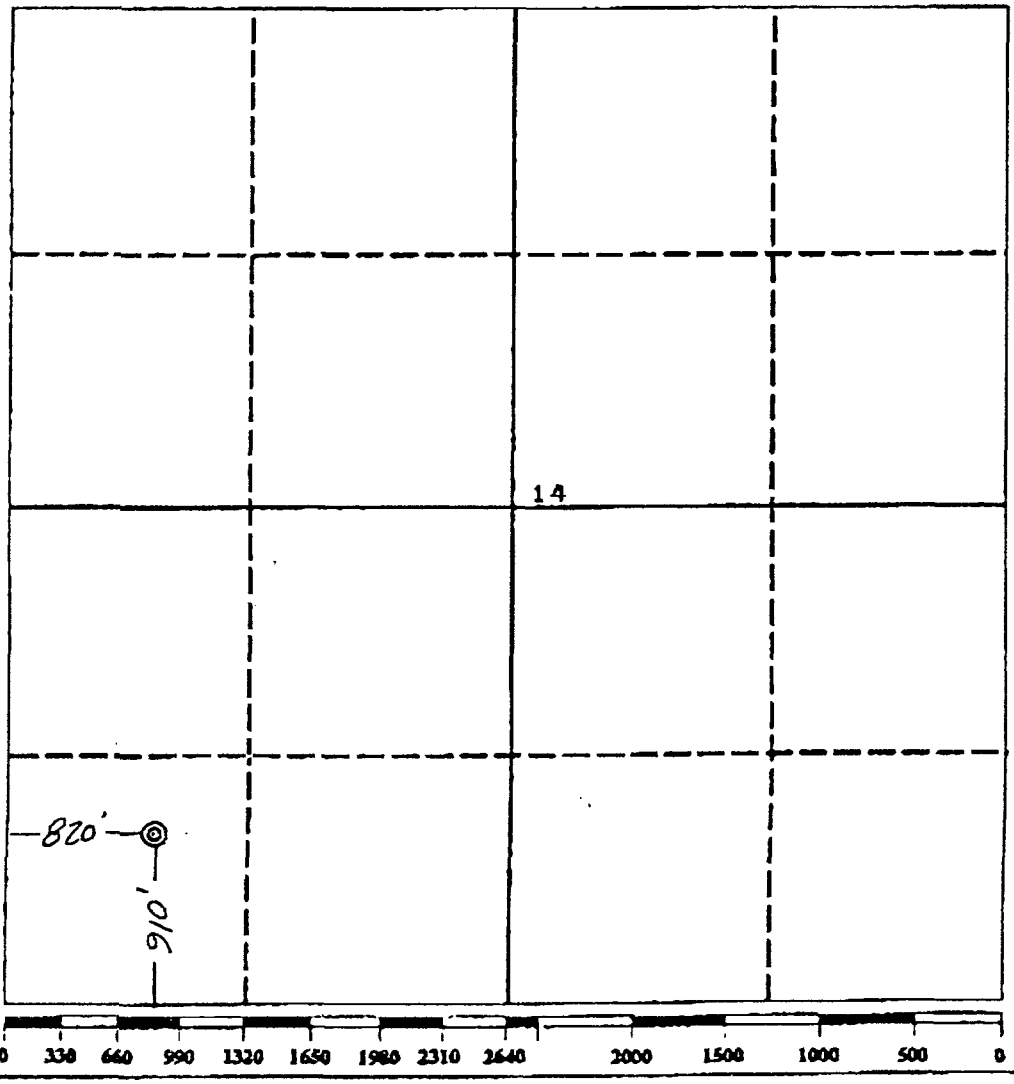
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?

☐ Yes ☐ No If answer is "yes" type of consolidation _____

If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary. _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Printed Name

Position

Company

Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
October 1, 1990

Signature & Seal of Professional Surveyor
GARY D. VANN NEW MEXICO 7016 REGISTERED PROFESSIONAL LAND SURVEYOR

Gary Vann

Certificate No. 7016

INJECTION WELL DATA SHEET

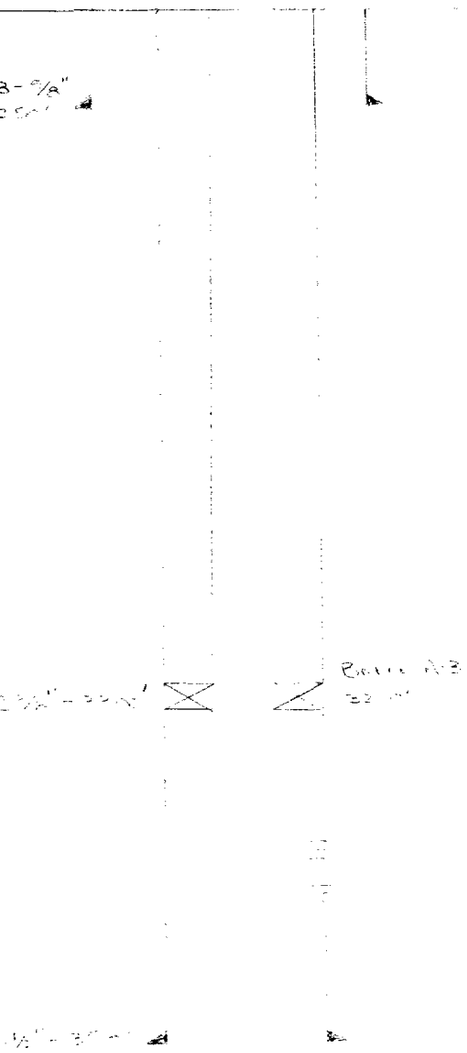
Amoco Production Company — San Juan 28-7 Unit

OPERATOR — LEASE

427	2070 FNL, 1440 FEL	22	28N	07W
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Rio Arriba County, New Mexico

Schematic



Tabular Data

Surface Casing

Size 8 - 5/8" " Cemented with 200 sx

TOC surface feet determined by _____

Hole size 12 - 1/4"

Intermediate Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5 - 1/2" " Cemented with 950 sx.

TOC surface feet determined by _____

Hole size 7 - 7/8"

Total depth 3580'

Injection Interval

3267' feet to 3511' feet

(perforated or open-hole, indicate which)

Estimated Tops:

OJO Alamo	2638'
Kirtland	2798'
Fruitland	3267'
Pictured Cliffs	3511'
Lewis	3580'

Tubing size 2 - 3/8" lined with tuboscope TK69 set in a

Baker Model A-3 LOK-SET packer at 3200 feet

(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Fruitland formation
2. Name of Field or Pool (if applicable) Basin Fruitland Coal
3. Is this a new well drilled for injection ? X Yes _____ No

   If no, for what purpose was the well originally drilled? N/A
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) N/A
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

   Pictured Cliffs 3511'

Drilling and Completion Schedule

San Juan 28-7 Unit #427

I. Location

Location: 2070 FNL, 1440 FEL, Section 22, T28N, R07W, Rio Arriba County, New Mexico

Field: Basin Fruitland Coal Elevation: 6812'

II. Geology

A. Formation Tops:

Ojo Alamo	2638'
Kirtland	2798'
Fruitland	3267'
Pictured Cliffs	3511'
Lewis	3580'

B. Logging Program: Triple Combo Log Suite at Total Depth

III. Drilling

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12 1/4"	250'	8 5/8"	32# - j55
7 7/8"	3580'	5 1/2"	15.5# - j55

B. Tubing: 3200' of 2 3/8" internally coated with Tuboscope TK69.

C. Cementing: 8 5/8" Surface Casing - Use 200 cubic feet of cement (100% excess) and circulate to surface. WOC 12 hours. Test casing to 1500# for 30 minutes.

5 1/2" Production Casing - Set stage tool 1000' above top of Fruitland Coal top. Cement in two stages with 950 cubic feet (70% excess) and circulate to surface. RDMORT.

IV. Completion Procedure

A. Perforating: Run gamma ray correlation log and perforate intervals determined by Denver after reviewing logs.

B. Fracturing: Pressure Test casing to 3500#. Breakdown and instablish injection rate into perforations. Nitrogen foam frac at 60 Bbl/min with 250,000# 60/40 sand.

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator	Lease	Well No.
AMOCO PRODUCTION COMPANY		427

Unit Letter	Section	Township	Range	County
G	22	28 NORTH	7 WEST NMPM	RIO ARRIBA

Actual Footage Location of Well:
2070 feet from the NORTH line and 1440 feet from the EAST line

Ground level Elev.	Producing Formation	Pool	Dedicated Acreage:
6812			Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

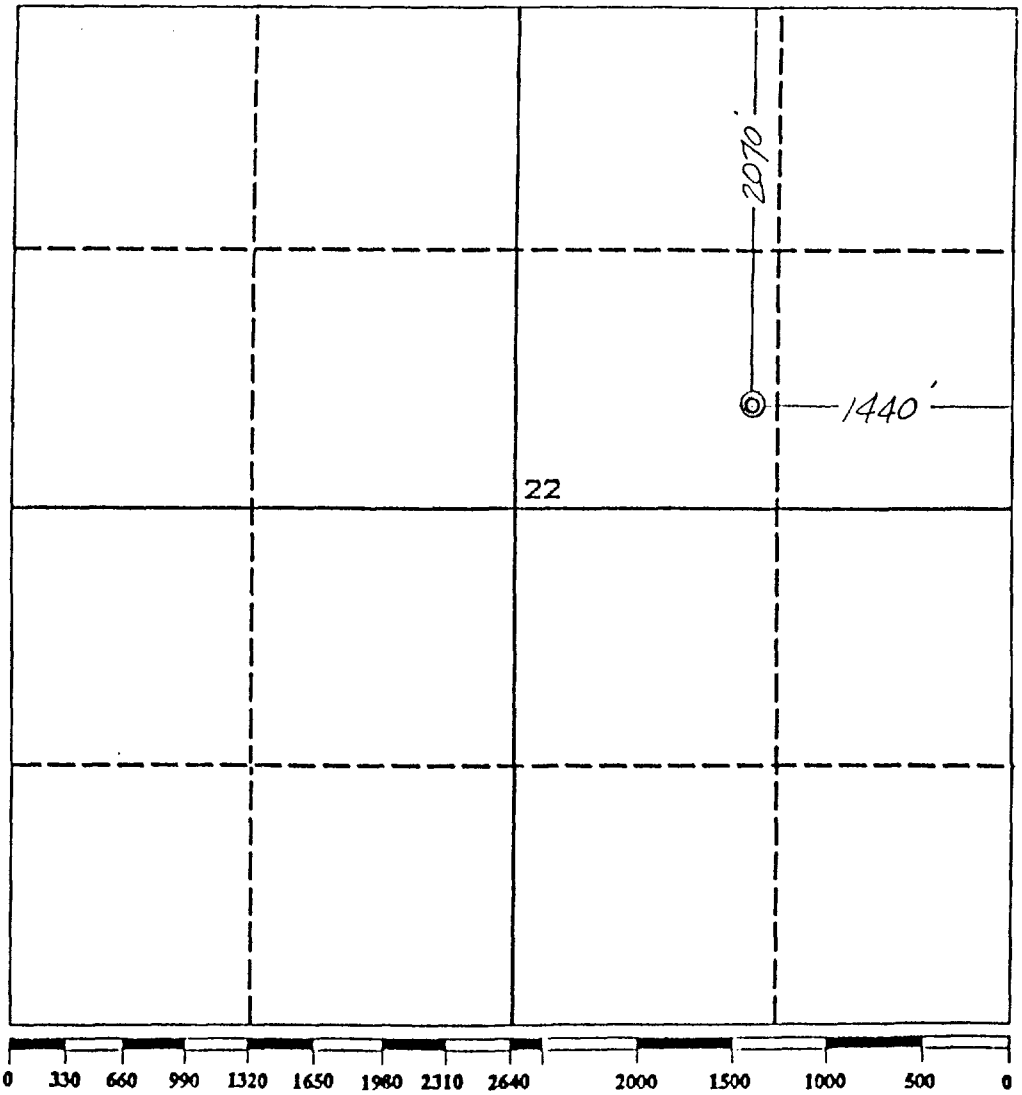
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?

☐ Yes ☐ No If answer is "yes" type of consolidation _____

If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if neccessary. _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein in true and complete to the best of my knowledge and belief.

Signature

Printed Name

Position

Company

Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
June 24, 1993

Signature & Seal of Professional Surveyor
GARY D. VANN
NEW MEXICO
7016
REGISTERED PROFESSIONAL LAND SURVEYOR

Gary Vann

Certificate No.
7016

INJECTION WELL DATA SHEET

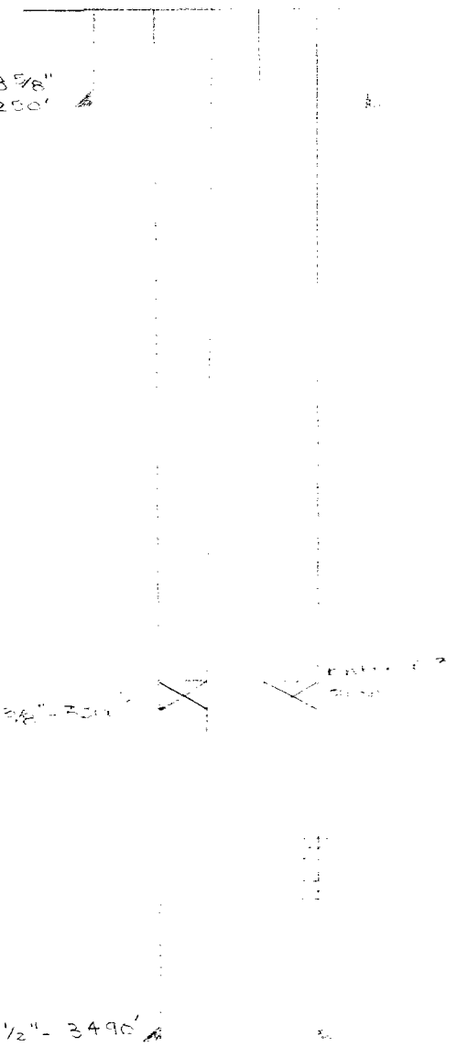
Amoco Production Company — San Juan 28-7 Unit

OPERATOR — LEASE

WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
428	1060 FNL, 820 FEL	23	28N	07W

Rio Arriba County, New Mexico

Schematic



Tabular Data

Surface Casing

Size 8 - 5/8" " Cemented with 200 sx

TOC surface feet determined by _____

Hole size 12 - 1/4"

Intermediate Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5 - 1/2" " Cemented with 950 sx.

TOC surface feet determined by _____

Hole size 7 - 7/8"

Total depth 3490'

Injection Interval

3163' feet to 3412' feet

(perforated or open-hole, indicate which)

Estimated Tops:

OJO Alamo	2530'
Kirtland	2691'
Fruitland	3163'
Pictured Cliffs	3412'
Lewis	3490'

Tubing size 2 - 3/8" lined with tuboscope TK69 set in a

Baker Model A-3 LOK-SET packer at 3100 feet

(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Fruitland formation
2. Name of Field or Pool (if applicable) Basin Fruitland Coal
3. Is this a new well drilled for injection ? X Yes _____ No

   If no, for what purpose was the well originally drilled? N/A
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) N/A
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

   Pictured Cliffs 3412'

Drilling and Completion Schedule

San Juan 28-7 Unit #428

I. Location

Location: 1060 FNL, 820 FEL, Section 23, T28N, R07W, Rio Arriba County, New Mexico

Field: Basin Fruitland Coal Elevation: 6682'

II. Geology

A. Formation Tops:

Ojo Alamo	2530'
Kirtland	2691'
Fruitland	3163'
Pictured Cliffs	3412'
Lewis	3490'

B. Logging Program: Triple Combo Log Suite at Total Depth

III. Drilling

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12 1/4"	250'	8 5/8"	32# - j55
7 7/8"	3490'	5 1/2"	15.5# - j55

B. Tubing: 3200' of 2 3/8" internally coated with Tuboscope TK69.

C. Cementing: 8 5/8" Surface Casing - Use 200 cubic feet of cement (100% excess) and circulate to surface. WOC 12 hours. Test casing to 1500# for 30 minutes.

5 1/2" Production Casing - Set stage tool 1000' above top of Fruitland Coal top. Cement in two stages with 950 cubic feet (70% excess) and circulate to surface. WOC 18 hours.

IV. Completion Procedure

A. Perforating: Run gamma ray correlation log and perforate intervals determined by Denver after reviewing logs.

B. Fracturing: Pressure Test casing to 3500#. Breakdown and instablish injection rate into perforations. Nitrogen foam frac at 60 Bbl/min with 250,000# 60/40 sand.

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator	Lease	Well No.
AMOCO PRODUCTION COMPANY		428

Unit Letter	Section	Township	Range	County
A	23	28 NORTH	7 WEST NMPM	RIO ARRIBA

Actual Footage Location of Well:
1060 feet from the NORTH line and 820 feet from the EAST line

Ground level Elev.	Producing Formation	Pool	Dedicated Acreage:
6682			Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

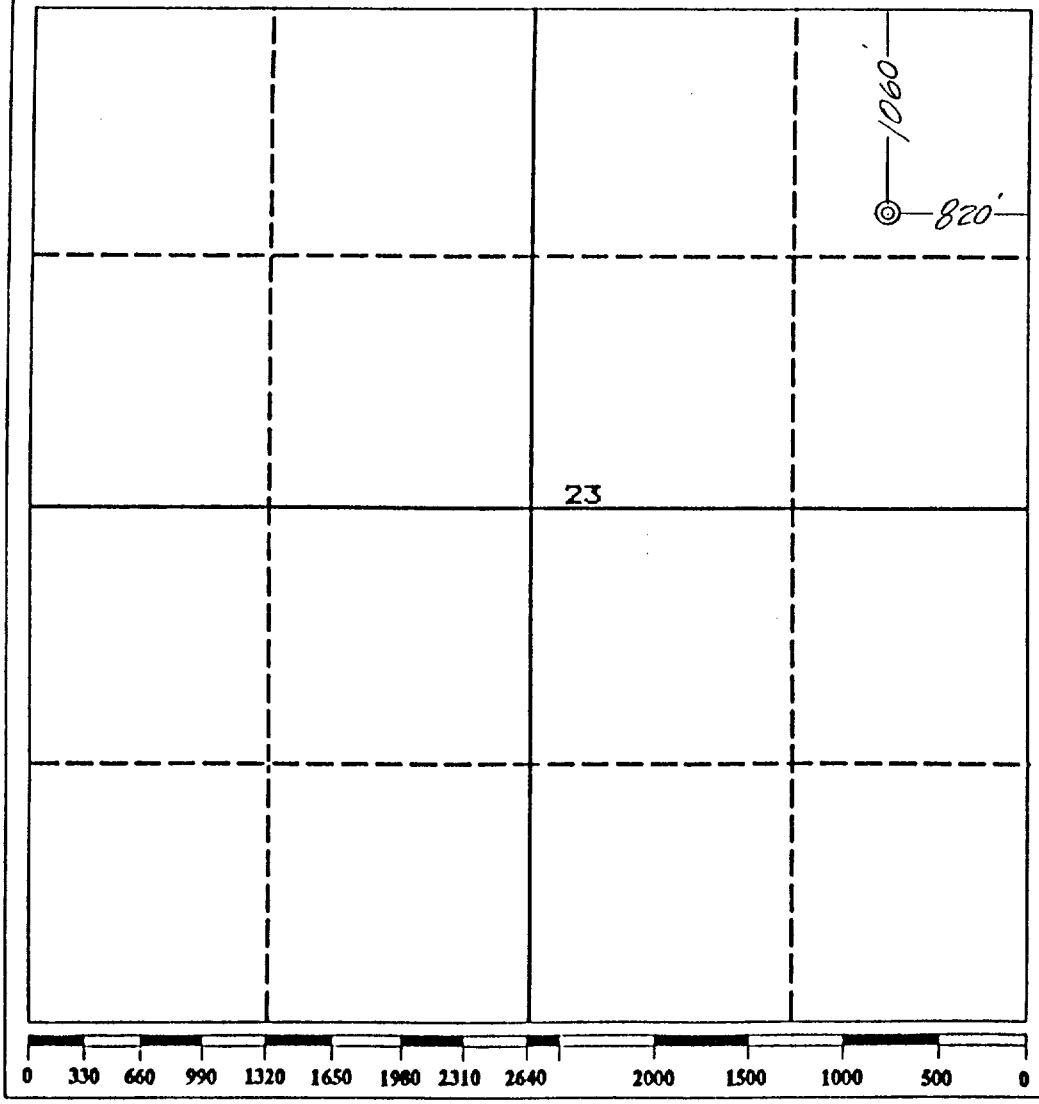
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?

☐ Yes ☐ No If answer is "yes" type of consolidation _____

If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if neccessary. _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein in true and complete to the best of my knowledge and belief.

Signature

Printed Name

Position

Company

Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my knowledge and belief.

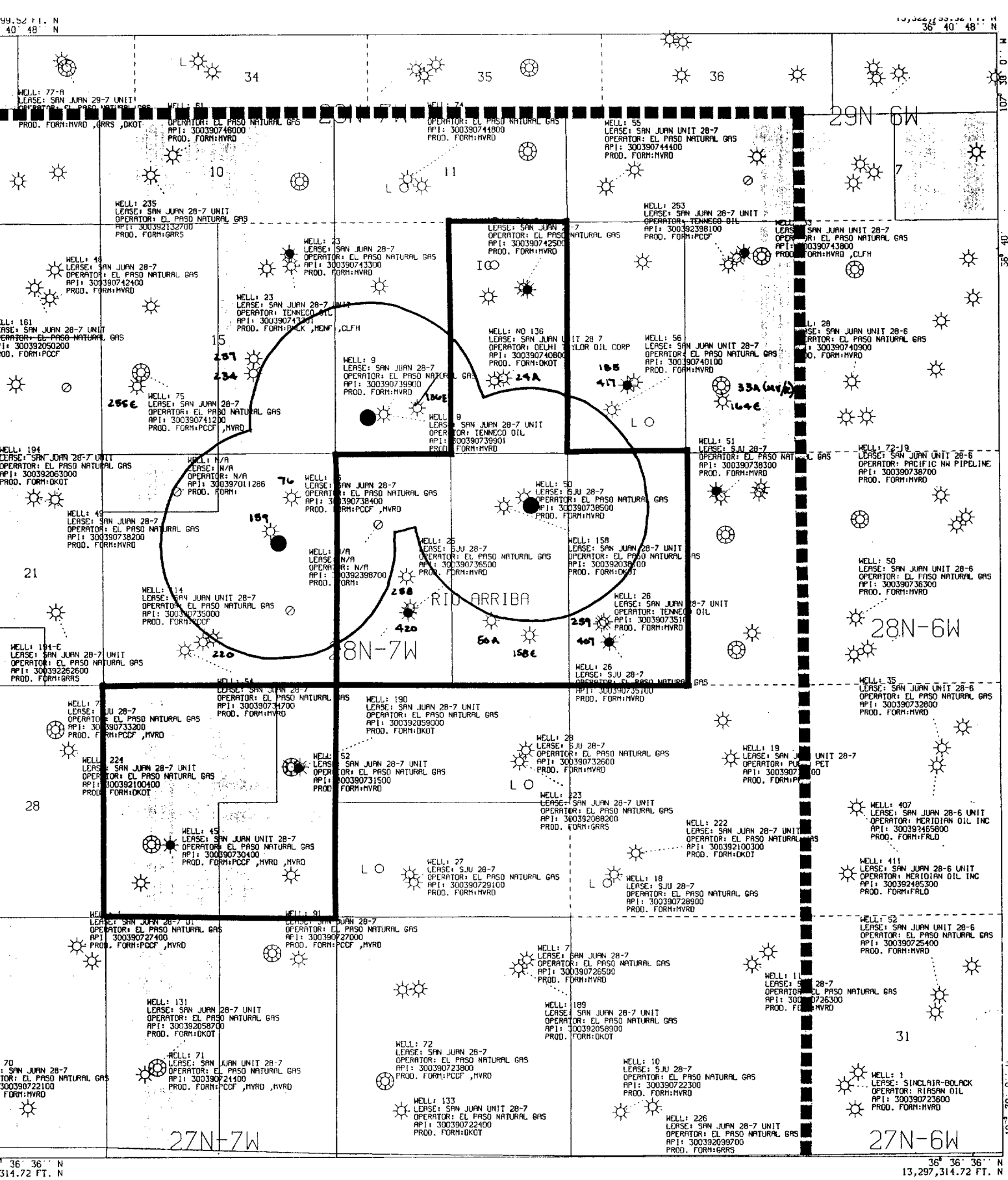
Date Surveyed
June 24, 1993

Signature & Seal of Professional Surveyor
GARY D. VANN
NEW MEXICO
7016
REGISTERED PROFESSIONAL LAND SURVEYOR

Gary Vann

Certificate No.
7016

Area of Review
Attachment 4



Frontland Corp. Wells

Wells Injectors

AMOCO PRODUCTION COMPANY
PLAT MAP

SAN JUAN 28-7
SOUTHERN ROCKIES
SCALE 1 IN. = 2,000 FT. FEB 9, 1994

IC CENTRAL MERIDIAN - 107° 32' 24" W LON
D - 6

HORIZONTAL DATUM NAD27

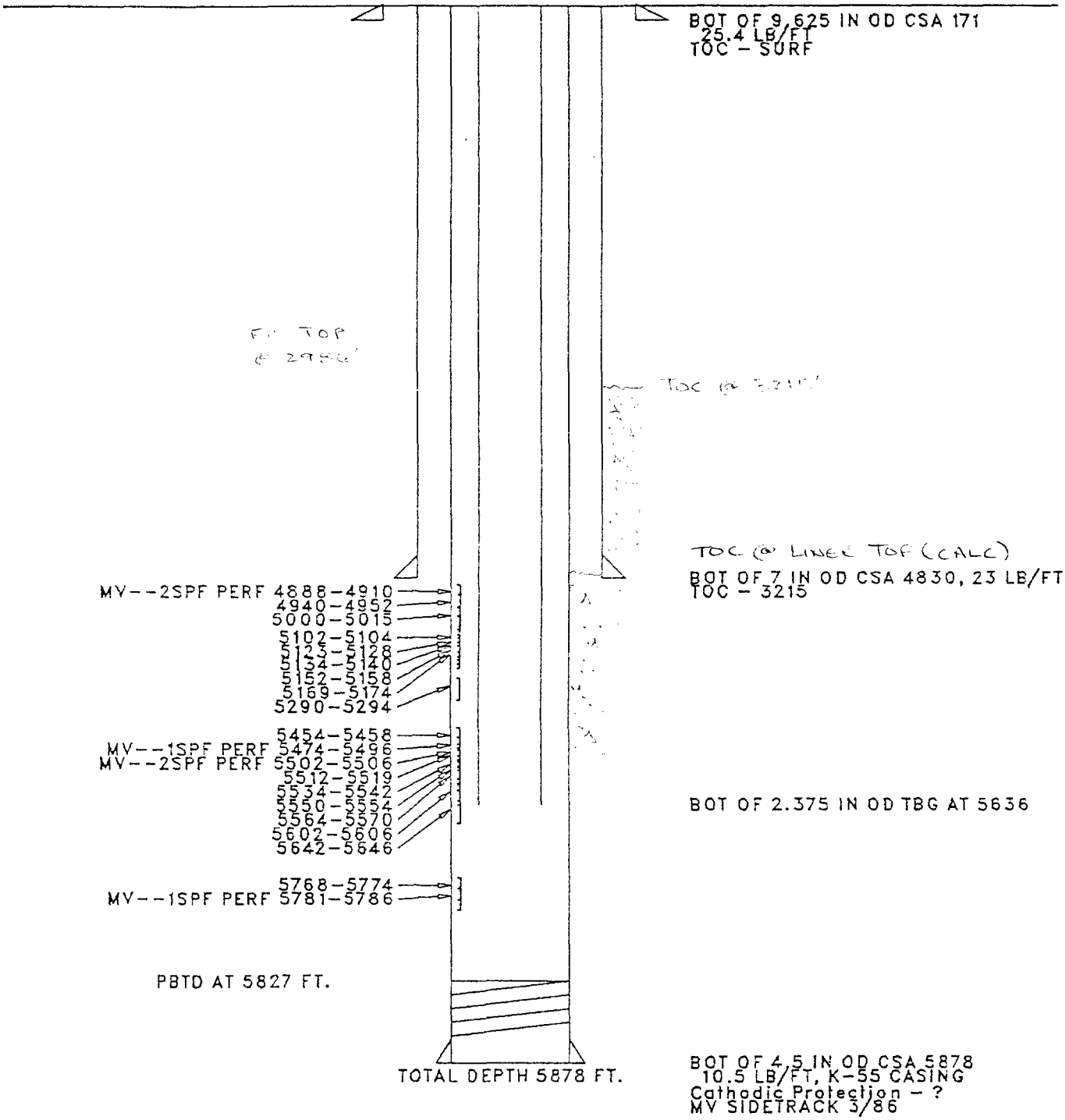
Well Data in Area of Review
Attachment 5

San Juan 28-7 Unit N2 Project
Area of Review

Well Name	Form	API #	Location					Comp Date	TD	PBTD	Wellbore Description							Test used for	Plugged Descrip	Comments
			Sec	T	R	N/S	E/W				Surf Csg	TOC	Int Csg	TOC	Long String/Liner	TOC	Tbg	TOC		
San Juan 28-7 Unit 9	MV	30-039-07399-00	14M	28N	07W	890S	1090W	7/8/53	5878	5827	9 5/8" - 171'	Surf	7" - 4830'	3215	4 1/2" - 5878'		2 3/8" - 5636'			PB from original TD of 5629 to 4840 and sidetracked
San Juan 28-7 Unit 136E	DK	30-039-23752-00	14N	28N	07W	1030S	1850W	9/24/85	7671	7661	9 5/8" - 223'	Surf	7" - 3479'	2200	4 1/2" - 7671'	3100	1 1/4" - 7628'	Temp Survey	N/A	
San Juan 28-7 Unit 76	MV/PC	30-039-07384-00	22A	28N	07W	990N	990E	7/3/57	5875	5820	10 3/4" - 175'	Surf	7 5/8" - 3649'	2945	5 1/2" - 3603-5870'	3603	2 3/8" - 5822'	Temp Survey	N/A	Commingled Well
San Juan 28-7 Unit 159	DK	30-039-20384-00	22G	28N	07W	1750N	1460E	7/13/71	7992	7962	9 5/8" - 233'	Surf	7" - 3801'	2410	4 1/2" - 7992'	3400	1 1/2" - 7912'	Temp Survey	N/A	
San Juan 28-7 Unit 220	DK	30-039-20865-00	22N	28N	07W	1080S	2480W	6/13/74	7987	7979	9 5/8" - 233'	Surf	7" - 3738'	2900	4 1/2" - 7987'	2150	2 1/16" - 7910'	Temp Survey	N/A	
San Juan 28-7 Unit 50	MV	30-039-07385-00	23A	28N	07W	990N	990E	6/16/56	5828	5730	10 3/4" - 172'	Surf	7 5/8" - 3582'	3200	5 1/2" - 5828'	4230	2" - 5716'	Temp Survey	N/A	
San Juan 28-7 Unit 158	DK	30-039-20381-00	23B	28N	07W	1190N	1450E	7/2/71	7985	7943	9 5/8" - 235'	Surf	7" - 3724'	2630	4 1/2" - 7985'	4310	1 1/2" - 7882'	Temp Survey	N/A	

Well Name	Form	API #	Location					Formation Tops									
			Sec	T	R	N/S	E/W	Ojo Alamo	Kirtland	Fruitland	PC	Lewis	MV	Pt Lkout	Cliff Hse	Menefee	Dakota
San Juan 28-7 Unit 9	MV	30-039-07399-00	14M	28N	07W	890S	1090W		2057	2986	3239	3310		5420	4888	4993	
San Juan 28-7 Unit 136E	DK	30-039-23752-00	14N	28N	07W	1030S	1850W						4850	5392		4983	7548
San Juan 28-7 Unit 76	MV/PC	30-039-07384-00	22A	28N	07W	990N	990E	2617	2780	3293	3488	3569		5664	5140	5275	
San Juan 28-7 Unit 159	DK	30-039-20384-00	22G	28N	07W	1750N	1460E						5044	5672			7835
San Juan 28-7 Unit 220	DK	30-039-20865-00	22N	28N	07W	1080S	2480W						5110	5690			7812
San Juan 28-7 Unit 50	MV	30-039-07385-00	23A	28N	07W	990N	990E		2635	3172	3404			5582	5064	5213	
San Juan 28-7 Unit 158	DK	30-039-20381-00	23B	28N	07W	1190N	1450E						5070	5600			7767

SJ 28-7 UNIT 009 1929
Location - 14M- 28N- 7W
SINGLE MV
Orig.Completion - 6/53
Last File Update - 1/89 by DDM



State : New Mexico NM Merid 28N - 7W - 14 ne sw sw

County: RIO ARRIBA Oper: TENNECO OIL CO

Field : BLANCO MV Compl: 07/08/1953 D G GAS

Well: SAN JUAN 28-7 UNIT #9 Last Info: 05/12/1992
Ftg: 890 fsl 1090 fwl
Lat-Long by GITI: 36.656326 - 107.547485
Oper Address: 6162 S Willow Dr, PO Box 3249, Englewood CO 80155
Obj: Permit #: API: 30-039-0739900
Elev: 6531DF

Spud: 05/30/1953 Contr: STRAWN DRLG CO
TD: 5878

Elev: 6531DF FORMATION TOPS (Type: L=Log S=Sample V=True Vertical)
(Source: H=Scout,T=Govt,S=Shell,G=USGS,N=NRIS)

Formation	Depth	Elev	T/S	Formation	Depth	Elev	T/S
Kirtland	2057	4474	L S	Cliff House	4888	1643	L S
Koa	2455	4076	L S	Menefee	4993	1538	L S
Fruitland	2986	3545	L S	Point Lookout	5420	1111	L S
Pictured Cliffs	3239	3292	L S	Km	5585	946	L S
Lewis	3310	3221	L S	Kirtland	2057	4474	L T

Notes : (No API # assigned) (Plugged back from original TD of 5629 to 4840 &
sidetracked. Recompleted in Menefee & Cliffhouse April 1986)
Tubing: Sidetracked April 1986: 2 3/8 @ 5636
Perfs : 5454-5786 (Point Lookout)
Sidetracked April 1986: Perf 5454-58 5474-96 5502-06 5512-19 5534-42
5550-54 5564-70 5602-06 5642-46 5768-74 5781-86 w/126 shots - acid
w/2500 gal 15% Hcl - frac w/2380 bbls fluid 102,500# 20/40 sd - BP @
5390
4888-4910 (Cliff House)
4940-4952 (Cliff House)
5000-5115 (Menefee)
5102-5104 (Menefee)
5123-5128 (Menefee)
5134-5140 (Menefee)
5152-5158 (Menefee)
5169-5174 (Menefee)
5290-5294 (Menefee)
w/105 shots - acid 4888-5294 w/2100 gal 15% HCl - frac 4888-5294
w/3092 bbls 1% KCl 144,000# 20/40 sd
PZone :
Sidetracked April 1986:
(Mesaverde)

IP : F 2964 MCFGPD; no oil or wtr rptd; FTP 205, CP 730
Journl: Operator chngd from El Paso Natural Gas Corp.

<< Shell Records >>
Casing: 9 5/8 cmtd @ 173 w/100; 7 cmtd @ 4830 w/300; 2 3/8 @ 5560, set

Continued

State : New Mexico NM Merid 28N - 7W - 14 ne sw sw

County: RIO ARRIBA Oper: TENNECO OIL CO

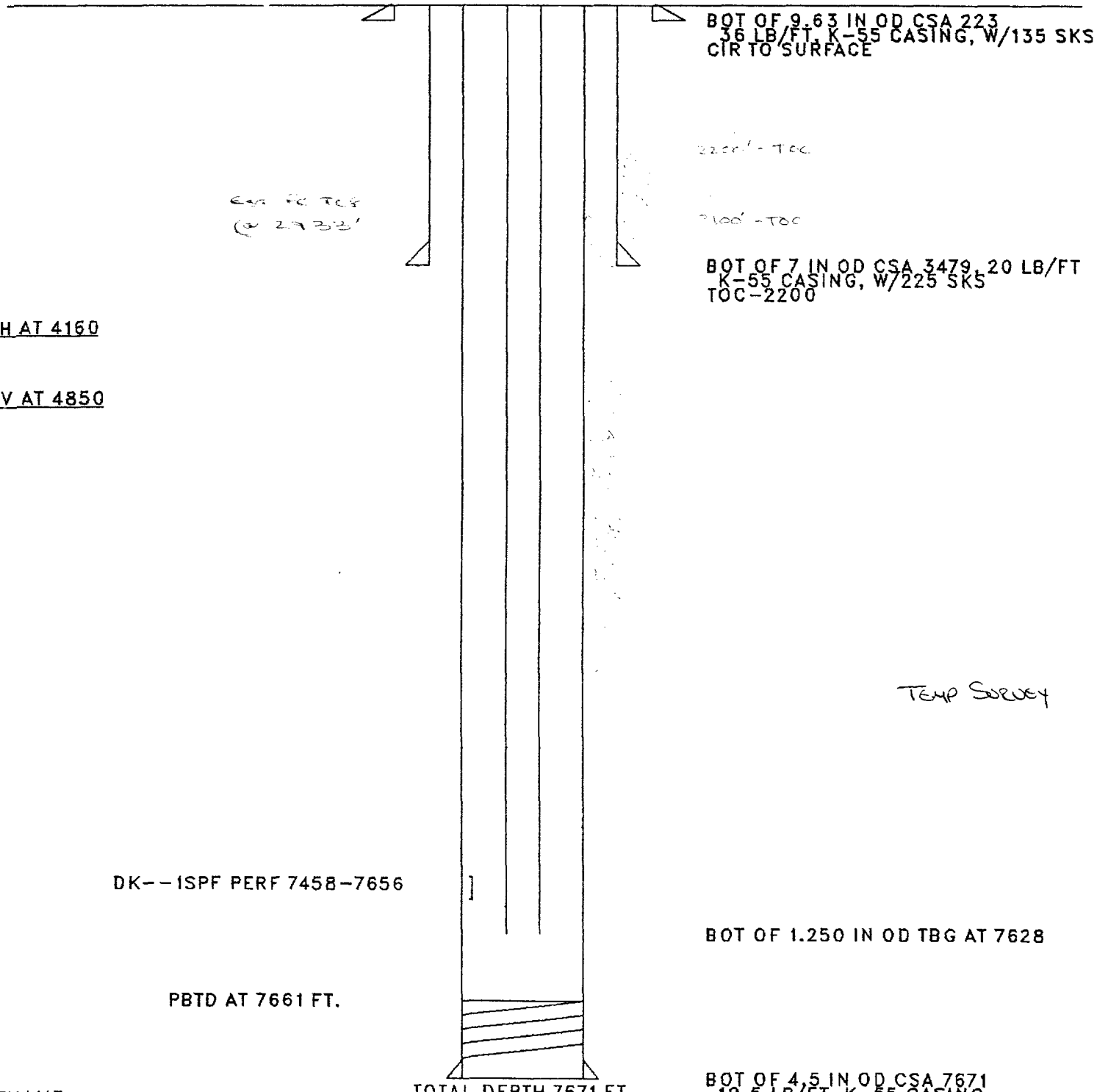
Field : BLANCO MV Compl: 07/08/1953 D G GAS

Continued

PZone : 4830-5629 (Mesaverde)
IP : 768 MCFG/24 hrs SICP 823 lb
Journl: 06/03/53 935 Drlg
06/10/53 3330 Drlg.
06/17/53 4511 Drlg.
06/24/53 4921 Drlg.
07/01/53 5629 TD. Shut in. Ran Schlumberger to TD. Shot 1763 qts./4877-5629 ft.

<< State Records >>
Casing: 9-5/8 @ 173 W/100; 7 @ 4830 W/300; 2 @ 5560
Perfs : 4877-5629
Shot 1763 qts.
IP : 768 MCFPD After 3 Hrs SICP 823 PSI After 10 Days
Journl: 1970-Perf tgb. @ 4864&4892.

SJ 28-7 UNIT 136E
LOCATION - 14N- 28N- 7W
SINGLE DK
ORIG.COMPLETION - 9/85
LAST FILE UPDATE - 2/94 BY CSW



BOT OF 9.63 IN OD CSA 223
36 LB/FT, K-55 CASING, W/135 SKS
CIR TO SURFACE

2200' - TOC

Est TOC @ 2932'

2100' -TOC

BOT OF 7 IN OD CSA 3479, 20 LB/FT
K-55 CASING, W/225 SKS
TOC-2200

CH AT 4160

MV AT 4850

TEMP SURVEY

DK--1SPF PERF 7458-7656

BOT OF 1.250 IN OD TBG AT 7628

PBTD AT 7661 FT.

TOTAL DEPTH 7671 FT.

BOT OF 4.5 IN OD CSA 7671
10.5 LB/FT, K-55 CASING
W/355 SKS
TOC-3100

FILENAME:
03923752

State : New Mexico NM Merid 28N - 7W - 14 se sw

County: RIO ARRIBA Oper: EL PASO NATURAL GAS CO

Field : BASIN DK Compl: 09/24/1985 D G GAS

Well: SAN JUAN 28-7 UNIT #136E Last Info: 11/30/1987
Ftg: 1030 fsl 1850 fwl
Lat-Long by GITI: 36.656693 - 107.544891
Oper Address: Box 4289, Farmington NM 87499 - 505/325-2841
Obj: 7665 Dakota Permit #: 06/17/1985 API: 30-039-2375200
Elev: 6476GR

Spud: 07/19/1985 Contr: Four Corners #12
TD: 7671 on 07/27/1985 Dakota PB: 7661

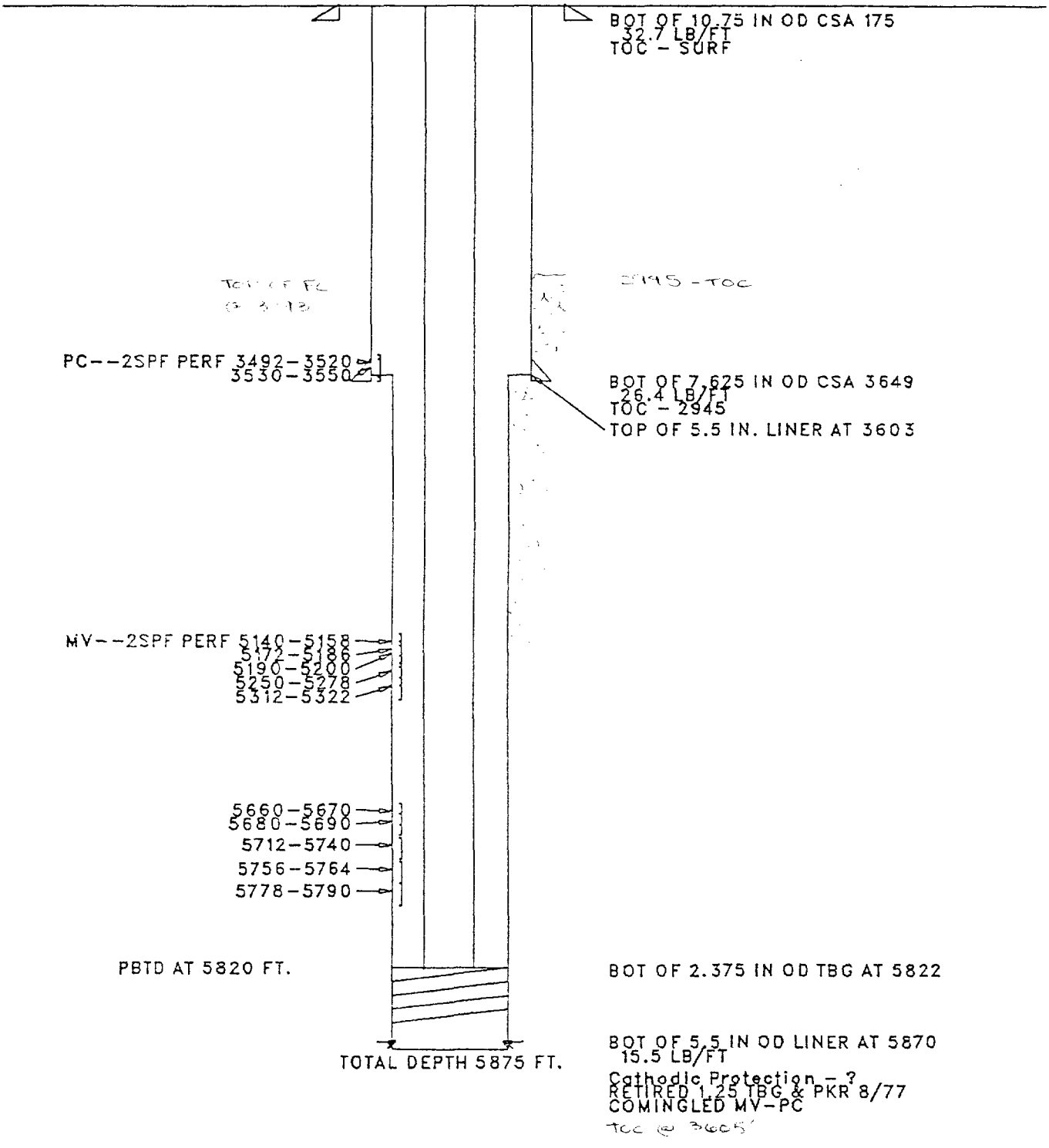
Elev: 6476GR FORMATION TOPS (Type: L=Log S=Sample V=True Vertical)
(Source: H=Scout,T=Govt,S=Shell,G=USGS,N=NRIS)

Formation	Depth	Elev	T/S	Formation	Depth	Elev	T/S
Chacra	4160	2316	L H	Gallup	6445	31	L H
Mesaverde	4850	1626	L H	Greenhorn	7363	-887	L H
Menefee	4983	1493	L H	Graneros	7413	-937	L H
Point Lookout	5392	1084	L H	Dakota	7548	-1072	L H
Mancos	5892	584	L H				

Casing: 7 @ 3478 w/359 CF
- 9 5/8 @ 223 w/159 CF
- 4 1/2 @ 7671 w/643 CF

Core : None
DST : None reported
Logs : DIL FDC Neu
Cyberlook
Tubing: 1 1/2 @ 7628
Perfs : 7458-7656 (Dakota)
w/holes @: 7458 61 69 76 79 93 96 98 7501 52 75 77 79 81 83 85 87 7609
12 56 w/1 SPF - frac w/120,000# 20/40 sd 94,534 gals slk wtr
PZone : (Dakota)
IP : AOF 4019 MCFGPD, F 2866 MCFGPD on 3/4 ck, no oil, no wtr, SICP 2330
Journl: 7/24/85 drlg @ 3290.
7/25/85 drlg ahead.
7/26/85 drlg @ 4596.
7/31/85 WOCT.
9/17/85 WOPT.
9/30/85 completed gas well.

SJ 28-7 UNIT 076 2006
Location – 22A- 28N- 7W
DUAL PC-MV
Orig.Completion – 7/57
Last File Update – 1/89 by DDM



Dwights Well Data System CD-ROM H# R-955330-0 Original
Copyright 1994 Rocky Mountains Run Date: 17-Feb-94

State : New Mexico NM Merid 28N - 7W - 22

County: RIO ARRIBA Oper: EL PASO NATURAL GAS CO

Field : BLANCO SOUTH PC Compl: 07/03/1957 D G GAS

Well: SAN JUAN 28-7 UNIT #76 Last Info: 07/19/1991
Ftg: 990 fnl 990 fel
Lat-Long by GITI: 36.651199 - 107.554565
Oper Address: Box 4289, Farmington NM 87499 - 505/325-2841
Obj: Permit #: 03/25/1957 API: 30-039-0738400
Elev: 6801DF

Spud: 06/20/1957
TD: 5875 Mancos PB: 5820

Elev: 6801DF FORMATION TOPS (Type: L=Log S=Sample V=True Vertical)
(Source: H=Scout,T=Govt,S=Shell,G=USGS,N=NRIS)

Formation	Depth	Elev	T/S	Formation	Depth	Elev	T/S
Kirtland	2780	4021	L T	Menefee	5275	1526	L T
Fruitland	3293	3508	L T	Point Lookout	5664	1137	L T
Pictured Cliffs	3488	3313	L T	Mancos	5818	983	L T
Cliff House	5140	1661	L T				

<< State Records >>
Casing: 10 3/4 @ 175 w/150
7 5/8 @ 3649 w/150
5 1/2 lnr @ 3603-5870 w/175
Core : None reported
DST : None reported
Tubing: 1 1/4 @ 3540
Perfs : 3492-3550 (Pictured Cliffs)
- SWF
PZone : 3492-3550 (Pictured Cliffs)
IP : 1193 MCFGPD SICP 941 after 46 days
Journl: NIT-Commingle 8/22/77. Commingled - 8/31/77. 8%-gas-PC. 0 oil - PC.

State : New Mexico NM Merid 28N - 7W - 22 sw ne ne

County: RIO ARRIBA Oper: EL PASO NATURAL GAS CO

Field : BLANCO MV Compl: 07/03/1957 D G GAS

Well: SAN JUAN 28-7 UNIT #76 Last Info: 05/12/1992
Ftg: 990 fnl 990 fel
Lat-Long by GITI: 36.651199 - 107.554565
Oper Address: Box 4289, Farmington NM 87499 - 505/325-2841
Obj: 5845 Pictured Cliffs Permit #: 03/25/1957 API: 30-039-0738400
Elev: 6801DF

Spud: 06/20/1957
TD: 5875 PB: 5820

Elev: 6801DF FORMATION TOPS (Type: L=Log S=Sample V=True Vertical)
(Source: H=Scout,T=Govt,S=Shell,G=USGS,N=NRIS)

Formation	Depth	Elev	T/S	Formation	Depth	Elev	T/S
Kirtland	2780	4021	L S	Menefee	5275	1526	L S
Fruitland	3293	3508	L S	Point Lookout	5664	1137	L S
Pictured Cliffs	3488	3313	L S	Kirtland	2780	4021	L T
Cliff House	5140	1661	L S				

<< Shell Records >>
Casing: 10 3/4 cmtd @ 175 w/150; 5 1/2 liner @ 3611-5870 w/500; 7 5/8 cmtd @ 3649 w/250; 2 @ 5750, set; 1 1/4 @ 3550, set
PZone : 3492-3556 (Pictured Cliffs)
5142-5790 (Mesaverde)
IP : 1193 MCF/24 hrs 3/4 in ch csg SICP 941 lb/46 days AOF 1204 MCF; 4538 MCF/24 hrs 3/4 in ch tbg SITP 1072 lb/53 days AOF 7529
Journl: 03/27/57 Loc.
06/26/57 3025 Drlg.
07/02/57 4880 Drlg.
07/10/57 5875 Plug 5810. Cleaning out after fracture. Perforated 158 shots 5650-5790 ft. Rubber ball sd wtr fractured at 5650-5790 ft with 60,500 gallons wtr, 60,000 lb sd. Breakdown pressure 1000 lb. I.R. 70.5 barrels per min. Bridge plug 5350 ft. Perforated 156 shots 5142-5322 ft. Rubber ball sd wtr fractured at 5142-5322 ft with 67,700 gallons wtr, 60,000 lb sd. Breakdown pressure 1500 lb. I.R. 72 barrels per min. Bridge plug 3800 lb. Perforated 56 shots 3492-3520 ft; 40 shots 3530-3550 ft. Sd wtr fractured at 3492-3550 ft with 22,600 gallons wtr, 40,000 lb sd. Breakdown pressure 1500 lb. I.R. 59 barrels per min.
07/17/57 5875 Plug 5810 ft. Shut in for gauge. Cleaned out to 5810 ft. Packer at 3665 ft.

<< State Records >>
Casing: 10-3/4 @ 175 W/150; 7-5/8 @ 3649 W/150; 5 1/2 lnr 3603-5870 W/175; 2 @ 5731

State : New Mexico NM Merid 28N - 7W - 22 sw ne ne

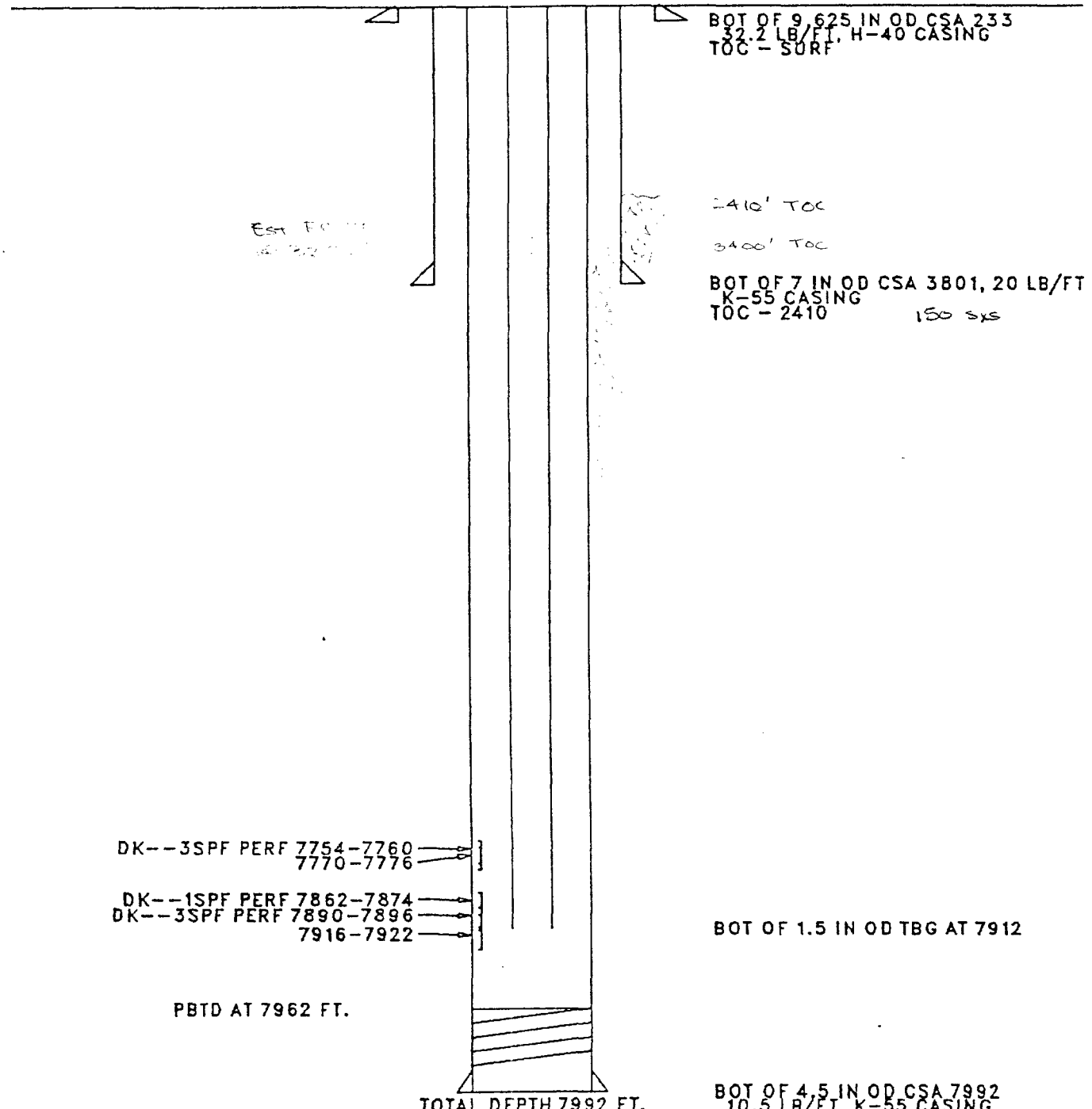
County: RIO ARRIBA Oper: EL PASO NATURAL GAS CO

Field : BLANCO MV Compl: 07/03/1957 D G GAS

Continued

Perfs : 5140-5322
SWF
IP : 7529 AOF 4538 MCFPD After 3 Hrs SITP 1072 PSI
Journl: NIT - Commingle 8/22/77. Commingled 8/31/77. 92% gas MV. 100% oil MV.

SJ 28-7 UNIT 159 2079
Location - 22G- 28N- 7W
SINGLE DK
Orig.Completion - 7/71
Last File Update - 1/89 by DDM



State : New Mexico NM Merid 28N - 7W - 22 ne sw ne

County: RIO ARRIBA Oper: EL PASO NATURAL GAS CO

Field : BASIN DK Compl: 07/13/1971 D G GAS

Well: SAN JUAN 28-7 UNIT #159 Last Info: 05/12/1992
Ftg: 1750 fnl 1460 fel
Lat-Long by GITI: 36.649109 - 107.556168
Oper Address: Box 4289, Farmington NM 87499 - 505/325-2841
Obj: 8060 Dakota Permit #: 06/11/1971 API: 30-039-2038400
Elev: 6809GL

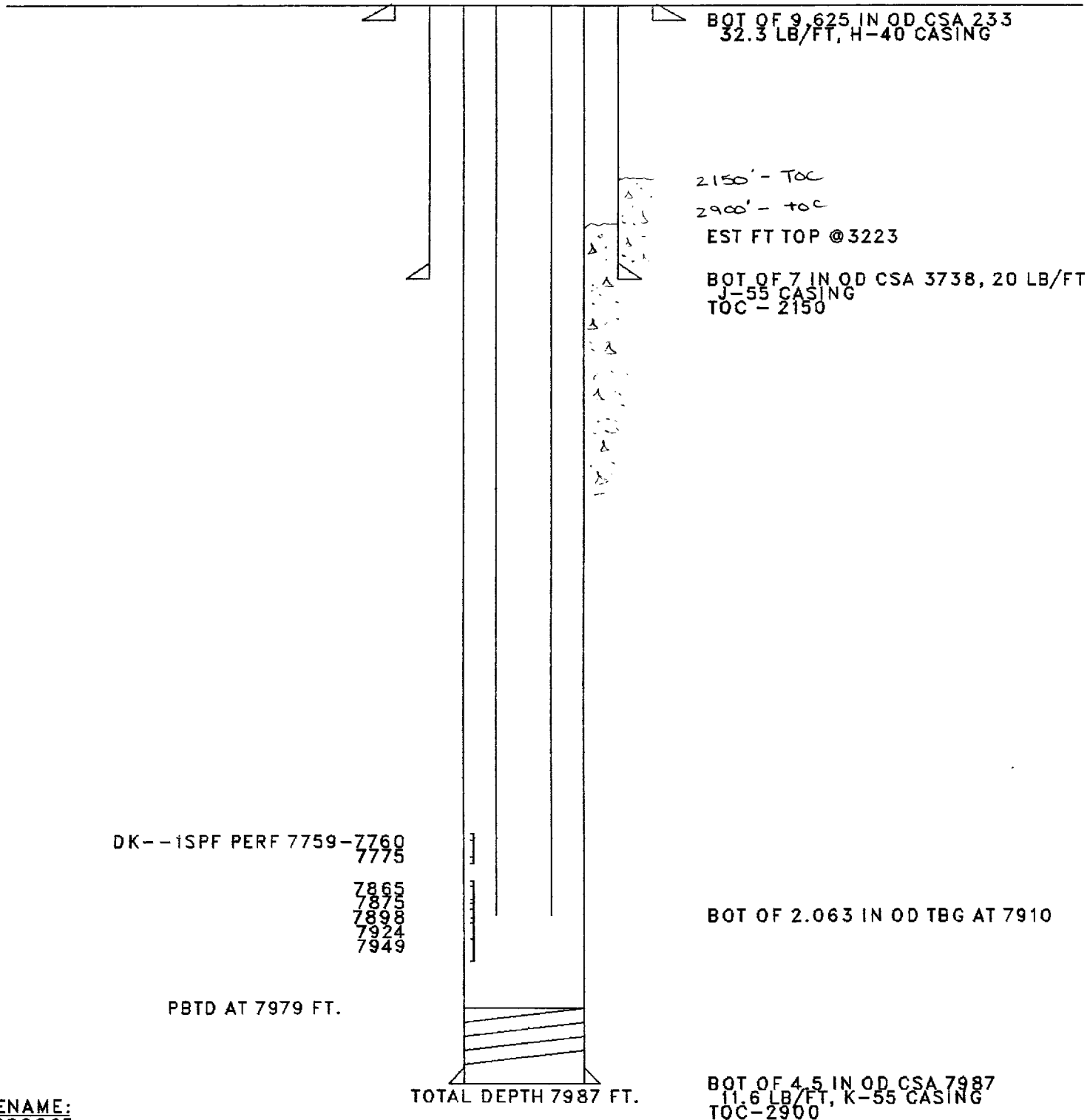
Spud: 06/21/1971
TD: 7992 PB: 7962

Elev: 6809GL FORMATION TOPS (Type: L=Log S=Sample V=True Vertical)
(Source: H=Scout,T=Govt,S=Shell,G=USGS,N=NRIS)

Formation	Depth	Elev	T/S	Formation	Depth	Elev	T/S
Mesaverde	5044	1765	L T	Greenhorn	7641	-832	L T
Point Lookout	5672	1137	L T	Graneros	7706	-897	L T
Gallup	6732	77	L T	Dakota	7835	-1026	L T

<< State Records >>
Casing: 9 5/8 @ 233 w/190 - 7 @ 3801 w/150 - 4 1/2 @ 7992 w/330
Core : None
Logs : FDC GR 1GR TS
Tubing: 1 1/2 @ 7912
Perfs : 7754-7922
w/18 SPZ - frac w/54000 lb sd 55 110 gal w
PZone : 7754-7922 (Dakota)
IP : F 3662 MCFG PD on 3/4 ck, CP 2236 TP 1738
Journl: Perf tbg 7081-7884 10/8/71.

SJ 28-7 UNIT 220
LOCATION - 22N-28N- 7W
SINGLE DK
Orig.Completion - 6/74
LAST FILE UPDATE - 3/94 BY CSW



FILENAME:
03920865

Dwights Well Data System CD-ROM H# R-955335-0 Original
Copyright 1994 Rocky Mountains Run Date: 17-Feb-94

State : New Mexico NM Merid 28N - 7W - 22 ne se sw

County: RIO ARRIBA Oper: EL PASO NATURAL GAS CO

Field : BASIN DK Compl: 06/13/1974 D G GAS

Well: SAN JUAN 28-7 UNIT #220 Last Info: 05/12/1992
Ftg: 1080 fsl 2480 fwl
Lat-Long by GITI: 36.642319 - 107.560806
Oper Address: Box 4289, Farmington NM 87499 - 505/325-2841
Obj: 7950 Dakota Permit #: 04/08/1974 API: 30-039-2086500
Elev: 6780GL

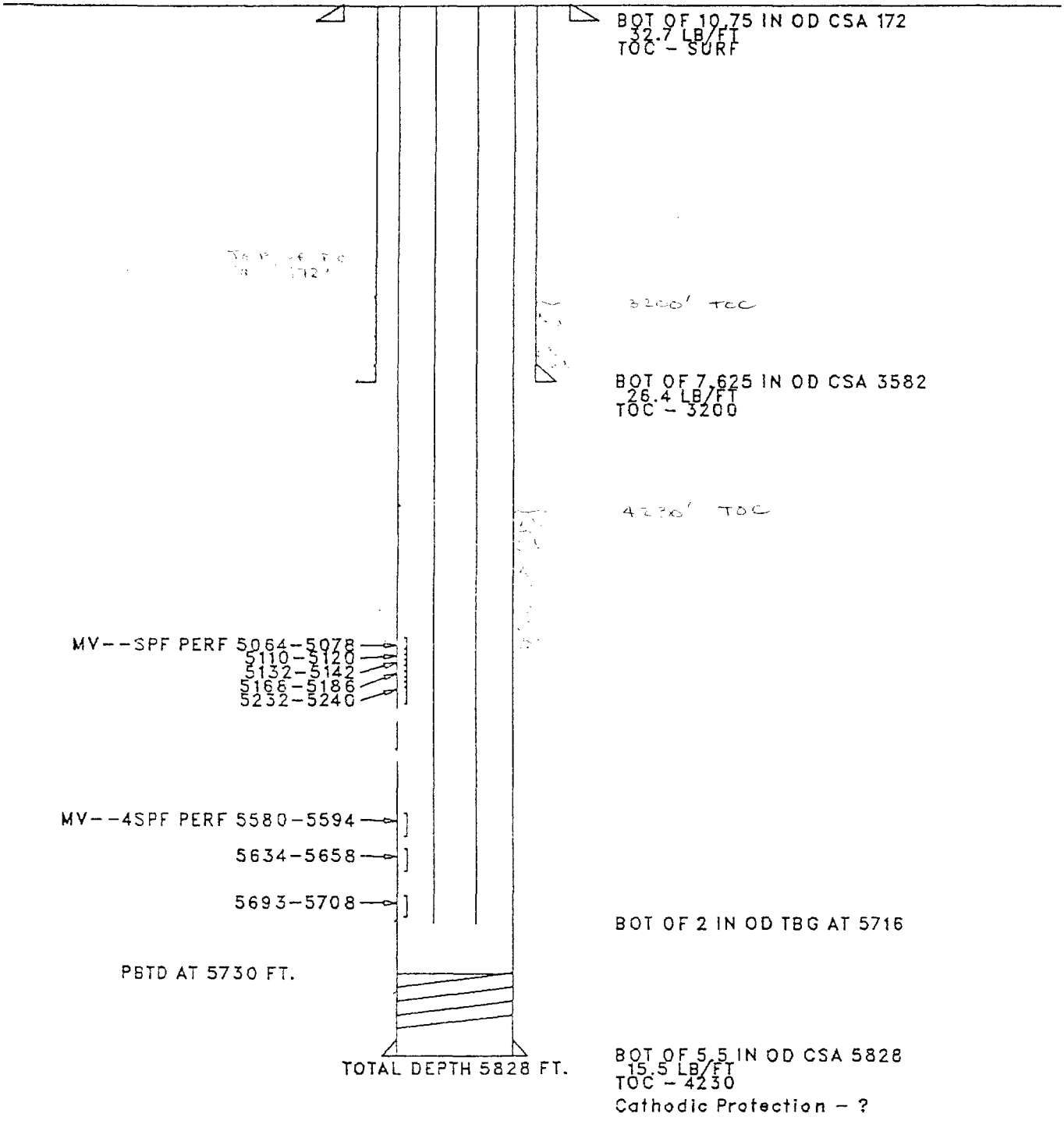
Spud: 05/23/1974
TD: 7987 PB: 7979

Elev: 6780GL FORMATION TOPS (Type: L=Log S=Sample V=True Vertical)
(Source: H=Scout,T=Govt,S=Shell,G=USGS,N=NRIS)

Formation	Depth	Elev	T/S	Formation	Depth	Elev	T/S
Dakota	782	5998	L T	Gallup	6905	-125	L T
Mesaverde	5110	1670	L T	Greenhorn	7651	-871	L T
Point Lookout	5690	1090	L T	Graneros	7704	-924	L T

<< State Records >>
Casing: 9 5/8 @ 233 - 7 @ 3738 - 4 1/2 @ 7987
Core : None
Logs : I-GR FDC-GR TS
Tubing: 1 1/2 @ 7924
Perfs : 7759-7949
w/7 shots - treat w/ 66300 lb sd 67710 gal W
PZone : 7759-7949 (Dakota)
IP : F 4109 mcfgpd on 3/4 ck, CP 2437 TP 2263

SJ 28-7 UNIT 050 1976
Location - 23A- 28N- 7W
SINGLE MV
Orig.Completion - 6/56
Last File Update - 1/89 by DDM



State : New Mexico NM Merid 28N - 7W - 23 sw ne ne

County: RIO ARRIBA Oper: EL PASO NATURAL GAS CO

Field : BLANCO MV Compl: 06/16/1956 D G GAS

Well: SAN JUAN 28-7 UNIT #50 Last Info: 05/12/1992
Ftg: 990 fnl 990 fel
Lat-Long by GITI: 36.651138 - 107.536560
Oper Address: Box 4289, Farmington NM 87499 - 505/325-2841
Obj: Permit #: API: 30-039-0738500
Elev: 6694DF

Spud: 05/24/1956
TD: 5828 PB: 5730

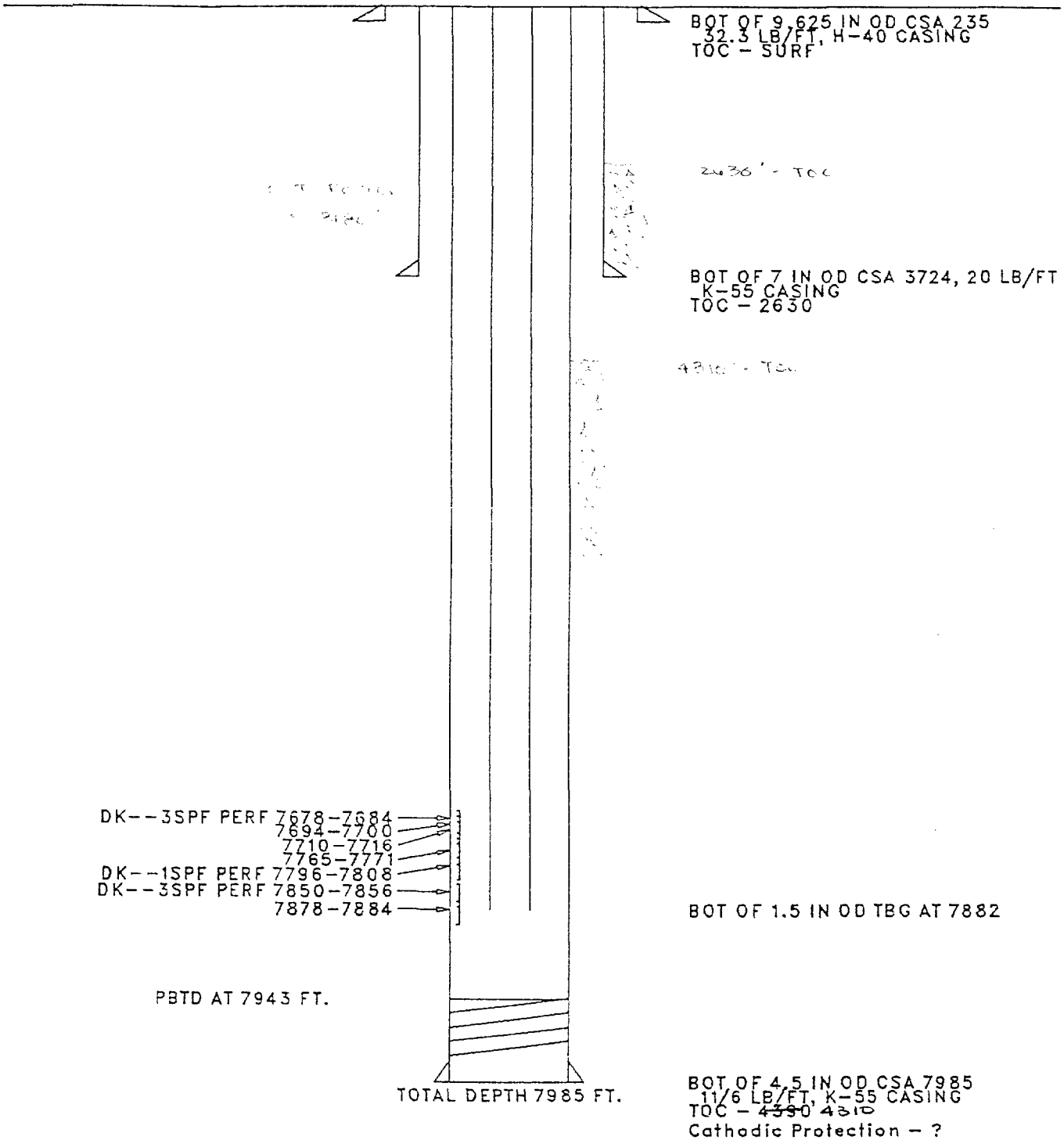
Elev: 6694DF FORMATION TOPS (Type: L=Log S=Sample V=True Vertical)
(Source: H=Scout,T=Govt,S=Shell,G=USGS,N=NRIS)

Formation	Depth	Elev	T/S	Formation	Depth	Elev	T/S
Kirtland	2635	4059	L S	Menefee	5213	1481	L S
Fruitland	3172	3522	L S	Point Lookout	5582	1112	L S
Pictured Cliffs	3404	3290	L S	Kirtland	2635	4059	L T
Cliff House	5064	1630	L S				

<< Shell Records >>
Casing: 10 3/4 cmtd @ 172 w/125; 7 5/8 cmtd @ 3582 w/250; 5 1/2 cmtd @ 5828 w/300; 2 3/8 @ 5725, set
PZone : 5064-5708 (Mesaverde)
IP : F 4372 MCF/24 hr 3/4 in ck SICP 1057 lb/10 days CAF 7472 MCF
Journl: 05/29/56 2600 Drlg.
06/06/56 3582 Drying hole.
06/30/56 5828 Shut in for gauge. Perforated 56 shots 5580-94 ft; 96 shots 5634-58 ft; 60 shots 5693-5708 ft. Sd wtr fractured 5580-5708 ft with 54,342 gallons wtr, 51,000 lb sd. Breakdown pressure 2400 lb. I.R. 37 barrels per min. Bridge plug 5300 lb. Perforated 56 shots 5064-78 ft; 40 shots 5110-20 ft; 40 shots 5132-42 ft; 72 shots 5168-86 ft; 32 shots 5232-40 ft. Sd wtr fractured 5064-5240 ft with 56,740 gallons wtr, 60,000 lb sd. Breakdown pressure 3200 lb. I.R. 42.4 barrels per min.

<< State Records >>
Casing: 10-3/4 @ 163 W/125; 7-5/8 @ 3572 W/250; 5 1/2 @ 5817 W/300; 2 @ 5716
Perfs : 5064-5240
SWF Perfs
IP : 7472 AOF 4372 MCFPD After 3 Hrs SICP 1069 PSI After 10 Days

SJ 28-7 UNIT 158 2078
Location – 23B– 28N– 7W
SINGLE DK
Orig.Completion – 7/71
Last File Update – 1/89 by DDM



Dwights Well Data System CD-ROM H# R-955337-0 Original
Copyright 1994 Rocky Mountains Run Date: 17-Feb-94

State : New Mexico NM Merid 28N - 7W - 23 se nw ne

County: RIO ARRIBA Oper: EL PASO NATURAL GAS CO

Field : BASIN DK Compl: 07/02/1971 D G GAS

Well: SAN JUAN 28-7 UNIT #158 Last Info: 05/12/1992
Ftg: 1190 fnl 1450 fel
Lat-Long by GITI: 36.650604 - 107.538132
Oper Address: Box 4289, Farmington NM 87499 - 505/325-2841
Obj: 7990 Dakota Permit #: 06/09/1971 API: 30-039-2038100
Elev: 6711GL

Spud: 06/08/1971
TD: 7985 PB: 7943

Elev: 6711GL FORMATION TOPS (Type: L=Log S=Sample V=True Vertical)
(Source: H=Scout,T=Govt,S=Shell,G=USGS,N=NRIS)

Formation	Depth	Elev	T/S	Formation	Depth	Elev	T/S
Mesaverde	5070	1641	L T	Greenhorn	7574	-863	L T
Point Lookout	5600	1111	L T	Graneros	7634	-923	L T
Gallup	6574	137	L T	Dakota	7767	-1056	L T

<< State Records >>
Casing: 9 5/8 @ 235 w/190 - 7 @ 3724 w/150 - 4 1/2 @ 7985 w/330
Core : None
Logs : IEL C CDIC-GR TS
Tubing: 1 1/2 @ 7882
Perfs : 7678-7884
w/18 SPZ - treat w/64000 lb sd 64620 gal W
PZone : 7678-7884 (Dakota)
IP : F 2842 MCFGPD on 3/4 ck, CP 2452 TP 2469

Proof of Notice
Attachment 6

San Juan 28-7 Unit N2 Project

Leasehold Operator

Amoco Production Company
(making application)

Surface Owners

Bureau of Land Management
1235 La Plata Highway
Farmington, NM 87401

Manuel Pacheco
Box 445
Blanco, NM 81412