

DATE IN 7/13/99	SUSPENSE 8/2/99	ENGINEER DC	LOGGED KN	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

2408

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
 [DD-Directional Drilling] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling

☐ NSL ☐ NSP ☐ DD ☐ SD

JUL 13 1999

Check One Only for [B] and [C]

[B] Commingling - Storage - Measurement

☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

[A] ☒ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☒ Notification and/or Concurrent Approval by BLM or SLO

U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

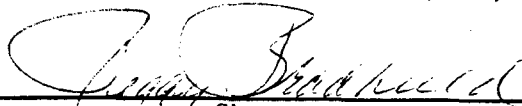
[F] ☐ Waivers are Attached

[3] INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Peggy Bradfield



Regulatory/Compliance Administrator

Print or Type Name

Signature

Title

Date

DISTRICT I

1625 N. French Dr., Hobbs, NM 88240

DISTRICT II

811 South First St., Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410

DISTRICT IV

2040 S. Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

APPLICATION FOR DOWNHOLE COMMINGLING

Form C-107-A
Revised March 17, 1999

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

BURLINGTON RESOURCES OIL & GAS COMPANY

PO Box 4289, Farmington, NM 87499

Operator

Address

San Juan 27-4 Unit

16A

D, Sec 17, T27N, R4W

Rio Arriba

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7452 API NO. 30-039-2137900 Federal ☒ State ☐ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Tapacito Pictured Cliff -85920 <i>PROBABLE GAS</i>		Blanco Mesa Verde - 72319
2. Top and Bottom of Pay Section (Perforations)	3514' - 3604'		5207' - 6072'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure	(Current)		
Oil Zones - Artificial Lift: Estimated Current	a. 472 psia @ 3559'	a.	a. 261 psia @ 5640'
Gas & Oil - Flowing: Measured Current	(Original)		
All Gas Zones: Estimated Or Measured Original	b. 1183 psia @ 3559'	b.	b. 1281 psia @ 5640'
6. Oil Gravity (EAPI) or Gas BTU Content	1216 BTU		1248 BTU
7. Producing or Shut-In?	Producing		Producing
Production Marginal? (yes or no)	Yes		Yes
* If Shut-In, give date and oil/gas/water rates of last production	Date:	Date:	Date:
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Rates:	Rates:	Rates:
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: 05/31/99 Rates: 39 MCFD 0 BOD, 0 BWD	Date: Rates:	Date: 05/31/99 Rates: 166 MCFD, 0.5 BOD, 0 BWD
8. Fixed Percentage Allocation Formula -% for each zone (total of %'s to equal 100%)	Oil: Gas: Will supply for commingling	Oil: % Gas: %	Oil: Gas: Will supply for commingling

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones? ☐ Yes ☒ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ☒ Yes ☐ No
Have all offset operators been given written notice of the proposed downhole commingling? ☒ Yes ☐ No11. Will cross-flow occur? ☒ Yes ☐ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☒ Yes ☐ No (If No, attach explanation)12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No

15. NMOC Reference Cases for Rule 303(D) Exceptions: ORDER NO(S).

16. ATTACHMENTS:

- * C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- * Production curve for each zone for at least one year. (If not available, attach explanation.)
- * For zones with no production history, estimated production rates and supporting data.
- * Data to support allocation method or formula.
- * Notification list of all offset operators.
- * Notification list of working, overriding, and royalty interests for uncommon interest cases.
- * Any additional statements, data, or documents required to support commingling.

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

SIGNATURE Timothy J. Friesenhahn TITLE Operations Engineer DATE 07-06-99TYPE OR PRINT NAME Timothy J. Friesenhahn TELEPHONE NO. (505) 326-9700

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-129
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

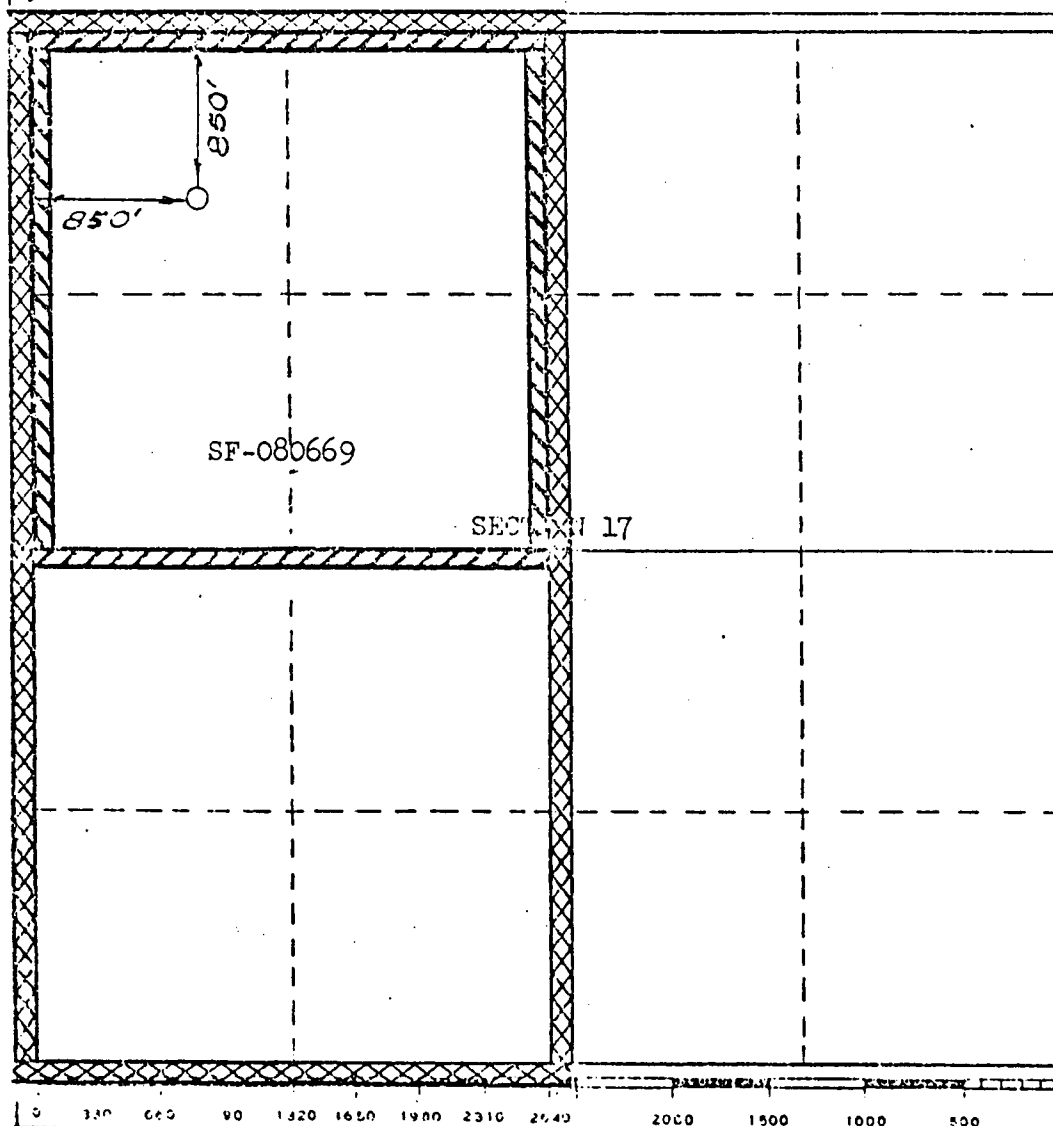
Operator EL PASO NATURAL GAS COMPANY		Lease SAN JUAN 27-4 UNIT (SF-080669)		Well No. 134
Section F	Section 17	Township 27-N	Range 4-W	County RIO ARriba
Actual Well Location of Well:				
850 feet from the NORTH line and		850 feet from the WEST line		
Ground Level Elev. 6665	Producing Formation PICTURED CLIFFS & MESA VERDE	Foot TAPACITO PICTURED CLIFFS BLANCO MESA VERDE		Dedicated Acreage: 160.0 & 320.0 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Unitization

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 interests, has been approved by the Commission. NOTE: THIS PLAT IS REISSUED TO SHOW DUAL COMPLETION. 4-6-77



CERTIFICATION

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

A. J. Duess

Name

Drilling Clerk

Position

El Paso Natural Gas Company

Company

April 11, 1977

Date

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 supervision, and that the same is true and correct to the best of my knowledge and belief.

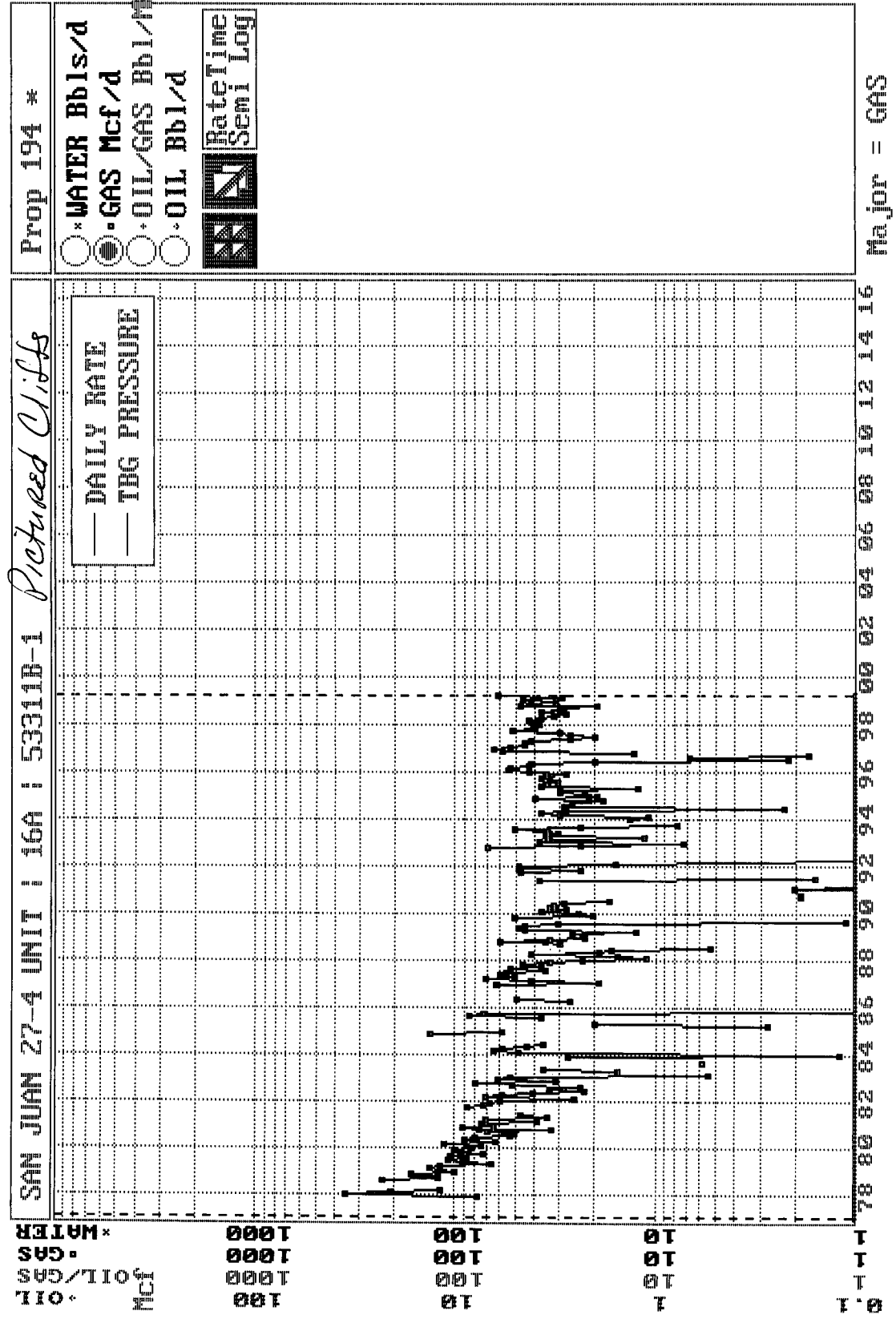
Date Surveyed

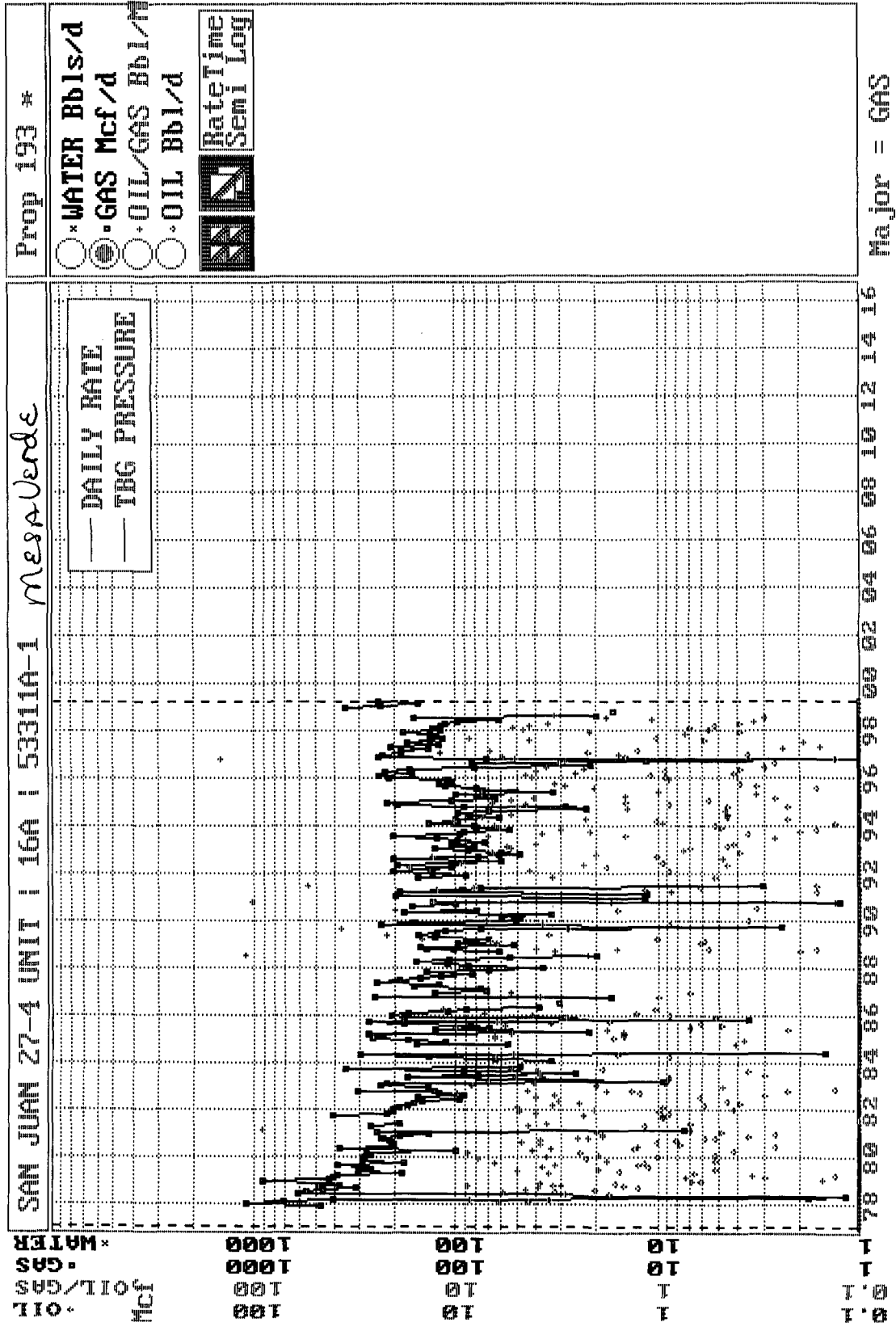
MARCH 4, 1977

Registered Professional Engineer
and/or Land Surveyor

Emil O'Brien

Certificate No. 1760





Page No.: 1

Print Time: Mon Jun 07 07:44:36 1999

Property ID: 193

Property Name: SAN JUAN 27-4 UNIT | 16A | 53311A-1 *Mesa Verde*

Table Name: S:\JSMITH\ARIES\99WORK\TEST.DBF

--DATE--	---CUM GAS--	M SIWHP
	Mcf	Psi

08/05/77	0	1062.0
01/10/78	48161	669.0
12/08/78	209285	524.0
10/03/79	305134	483.0
10/02/80	394101	476.0
11/01/82	505743	514.0
05/03/84	565158	549.0
10/21/86	660887	544.0
08/22/89	767852	454.0
03/07/91	818623	582.0
03/18/91	818623	570.0
05/03/93	891193	509.0
06/19/97	1130701	0.0
05/18/98	1345201	0.0

3/99	1141617	353
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Initial

Current

Based on Cum Gas vs Pressure Curve

Page No.: 2

Print Time: Mon Jun 07 07:44:36 1999

Property ID: 194

Property Name: SAN JUAN 27-4 UNIT | 16A | 53311B-1

Table Name: S:\JSMITH\ARIES\99WORK\TEST.DBF

Pictured Cliffs

<u>--DATE--</u>	<u>---CUM GAS---</u>	<u>M SIWHP</u>
	<u>Mcf</u>	<u>Psi</u>

11/30/77	0	1083.0	<i>Initial</i>
----------	---	--------	----------------

01/10/78	19512	646.0	
----------	-------	-------	--

08/02/78	33902	636.0	
----------	-------	-------	--

05/01/79	66684	495.0	
----------	-------	-------	--

06/04/80	101131	444.0	
----------	--------	-------	--

11/01/82	143121	499.0	
----------	--------	-------	--

05/03/84	157160	529.0	
----------	--------	-------	--

04/18/86	172065	530.0	
----------	--------	-------	--

08/22/89	206103	484.0	
----------	--------	-------	--

08/30/91	215893	600.0	
----------	--------	-------	--

05/03/93	229172	503.0	
----------	--------	-------	--

3/99

295,606

336

Current

Based on Cum Gas vs Pressure Curve

San Juan 27-4 Unit #16A
Bottom Hole Pressures
Flowing and Static BHP
Cullender and Smith Method
Version 1.0 3/13/94

Pictured Cliffs		Mesa Verde	
<u>PC-Current</u>		<u>MV-Current</u>	
GAS GRAVITY	0.698	GAS GRAVITY	0.706
COND. OR MISC. (C/M)	M	COND. OR MISC. (C/M)	M
%N2	0.8	%N2	0.39
%CO2	0.23	%CO2	0.86
%H2S	0	%H2S	0
DIAMETER (IN)	6.456	DIAMETER (IN)	4.052
DEPTH (FT)	3559	DEPTH (FT)	5640
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	115	BOTTOMHOLE TEMPERATURE (DEG F)	147
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	430	SURFACE PRESSURE (PSIA)	227
BOTTOMHOLE PRESSURE (PSIA)	471.8	BOTTOMHOLE PRESSURE (PSIA)	260.7
<u>PC-Original</u>		<u>MV-Original</u>	
GAS GRAVITY	0.698	GAS GRAVITY	0.706
COND. OR MISC. (C/M)	M	COND. OR MISC. (C/M)	M
%N2	0.8	%N2	0.39
%CO2	0.23	%CO2	0.86
%H2S	0	%H2S	0
DIAMETER (IN)	6.456	DIAMETER (IN)	4.052
DEPTH (FT)	3559	DEPTH (FT)	5640
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	115	BOTTOMHOLE TEMPERATURE (DEG F)	147
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1064	SURFACE PRESSURE (PSIA)	1088
BOTTOMHOLE PRESSURE (PSIA)	1182.6	BOTTOMHOLE PRESSURE (PSIA)	1280.5

October 1998 -- June 1999

Report Number : R_290

Last Update

.. : 06/28/1999, 10:45:44

Completion	Date	Cur Oil	Cum Oil	Cur Gas	Cum Gas	Cur Wat	Cum Wat
SAN JUAN 27-4 UNIT	16A						
	11/30/1998	0.00	0.00	0.00	0.00	0.00	0.00
	12/31/1998	5.79	5.79	10,656.58	10,656.58	0.00	0.00
	01/31/1999	64.50	70.29	7,044.91	17,701.49	18.60	18.60
	02/28/1999	26.60	96.89	4,575.37	22,276.86	16.28	34.88
	03/31/1999	0.00	96.89	7,162.55	29,439.41	6.95	41.83
	04/30/1999	32.43	129.32	5,614.56	35,053.97	23.25	65.08
	05/31/1999	16.20	145.52	5,153.78	40,207.75	0.00	65.08
	06/30/1999	0.00	145.52	0.00	40,207.75	0.00	65.08
	11/30/1998	0.00	0.00	1,313.28	1,313.28	0.00	0.00
	12/31/1998	0.00	0.00	1,003.51	2,316.79	0.00	0.00
	01/31/1999	0.00	0.00	1,438.79	3,755.58	0.00	0.00
	02/28/1999	0.00	0.00	936.79	4,692.37	0.00	0.00
	03/31/1999	0.00	0.00	1,893.68	6,586.05	0.00	0.00
	04/30/1999	0.00	0.00	1,444.66	8,030.71	0.00	0.00
	05/31/1999	0.00	0.00	1,206.45	9,237.16	0.00	0.00
	06/30/1999	0.00	0.00	0.00	9,237.16	0.00	0.00

FARMINGTON

ANNUAL PRODUCTION FOR 53311A

PHS020M1

SAN JUAN 27-4 UNIT 16A

BLANCO MESAVERDE (PRORATED GAS FIELD

MESAVERDE ZONE

===== OIL CUM =====

===== GAS CUM =====

===== WATER CUM =====

PC DATE

BBLs

PC DATE

MCF

DATE

BBLs

```
=====
YEAR      OIL      OIL CUM      GAS      GAS CUM      WATER  WATER CUM
1997      189      3957      55665    1090056
1998       63      4020      22122    1112178
```

POSITION CURSOR BY YEAR AND PRESS ENTER TO DISPLAY MONTHLY PRODUCTION

ENTER - CONTINUES ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF6 - RETURN TO WELL-INFO DISPLAY

PF9 - ANNUAL INJECTION DISPLAY

PF10 - HELP INFORMATION

FARMINGTON

1998 MONTHLY PRODUCTION FOR 53311A

PHS030M1

SAN JUAN 27-4 UNIT 16A

BLANCO MESAVERDE (PRORATED GAS FIELD

MESAVERDE ZONE

DAYS =====			OIL =====			===== GAS =====								
MO	T	S	ON	PC	PROD	GRV	PC	PROD	ON	BTU	PRESS	WATER	PROD	C
1	2	F	31	02	21		01	4041	31	1200	15.025			
2	2	F	28	02	16		01	3669	28	1200	15.025			
3	2	F	31	02	12		01	3482	31	1200	15.025			
4	2	F	25	02	1		01	2974	25	1200	15.025			
5	2	F	29	02	2		01	1857	29	1200	15.025			
6	2	F	30	02	9		01	4970	30	1200	15.025			
7	2	S	4	02	2		01	619	4	1196	15.025			
8	2	S		02		57.8	01				15.025			
9	2	S	1	02			01	510	1	1196	15.025			
10	2	S		02			01				15.025			
11	2	S					01				15.025			
12														

PF6 - RETURNS TO ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF10 - HELP INFORMATION

PF9 - DISPLAY MONTHLY INJECTION

00/00/00 00:00:00:0

PRS 01/06/99

FARMINGTON

ANNUAL PRODUCTION FOR 53311B

PHS020M1

SAN JUAN 27-4 UNIT 16A

TAPACITO (PICTURED CLIFFS) FIELD

PICTURED CLIFFS ZONE

===== OIL CUM =====

===== GAS CUM =====

===== WATER CUM =====

PC DATE

BBLs

PC DATE

MCF

DATE

BBLs

```
=====
YEAR      OIL      OIL CUM      GAS      GAS CUM      WATER      WATER CUM
1997                14061      278522
1998                10498      289020
=====
```

POSITION CURSOR BY YEAR AND PRESS ENTER TO DISPLAY MONTHLY PRODUCTION

ENTER - CONTINUES ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF6 - RETURN TO WELL-INFO DISPLAY

PF9 - ANNUAL INJECTION DISPLAY

PF10 - HELP INFORMATION

FARMINGTON

1998 MONTHLY PRODUCTION FOR 53311B

PHS030M1

SAN JUAN 27-4 UNIT 16A

TAPACITO (PICTURED CLIFFS) FIELD

PICTURED CLIFFS ZONE

DAYS =====			OIL =====		=====		GAS =====							
MO	T	S	ON	PC	PROD	GRV	PC	PROD	ON	BTU	PRESS	WATER	PROD	C
1	2	S					01	1218	19	1196	15.025			
2	2	F					01	1310	26	1196	15.025			
3	2	F					01	1148	31	1196	15.025			
4	2	F					01	984	27	1196	15.025			
5	2	F					01	863	29	1196	15.025			
6	2	F					01	1151	30	1221	15.025			
7	2	F					01	921	31	1221	15.025			
8	2	F					01	869	31	1221	15.025			
9	2	F					01	607	30	1221	15.025			
10	2	F					01	1427	31	1221	15.025			
11														
12														

PF6 - RETURNS TO ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF10 - HELP INFORMATION

PF9 - DISPLAY MONTHLY INJECTION

00/00/00 00:00:00:0

PRS 12/05/98

BURLINGTON RESOURCES OIL AND GAS COMPANY

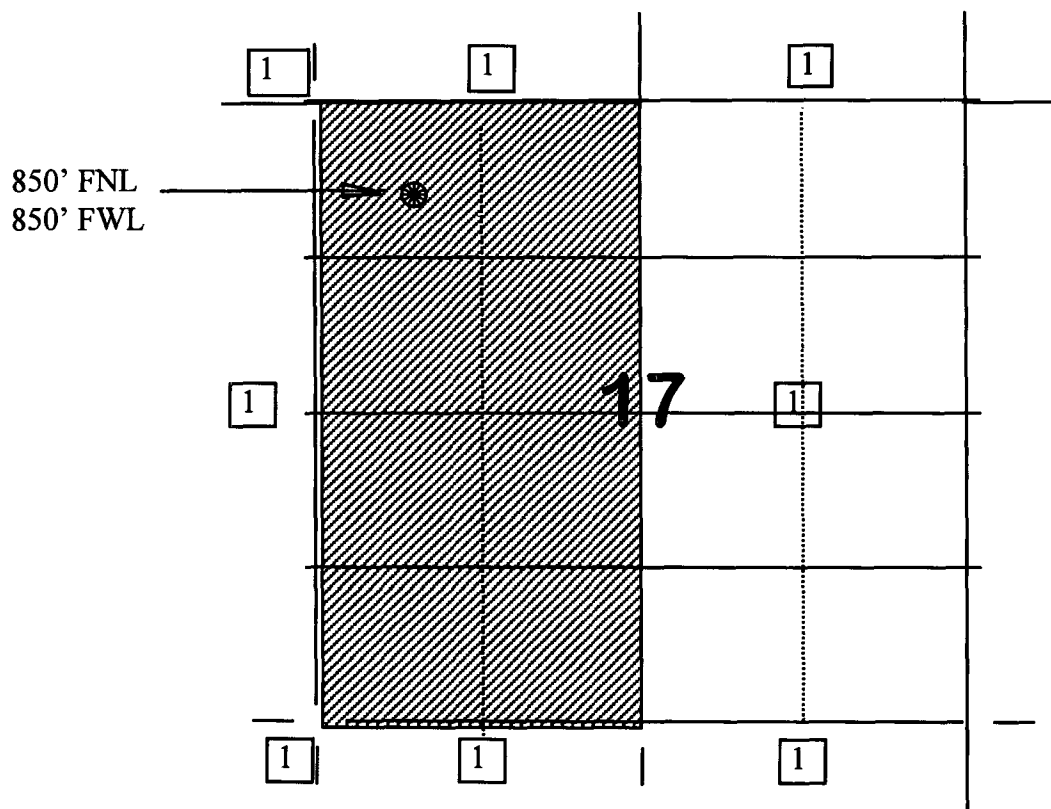
San Juan 27-4 Unit #16A

OFFSET OPERATOR/OWNER PLAT

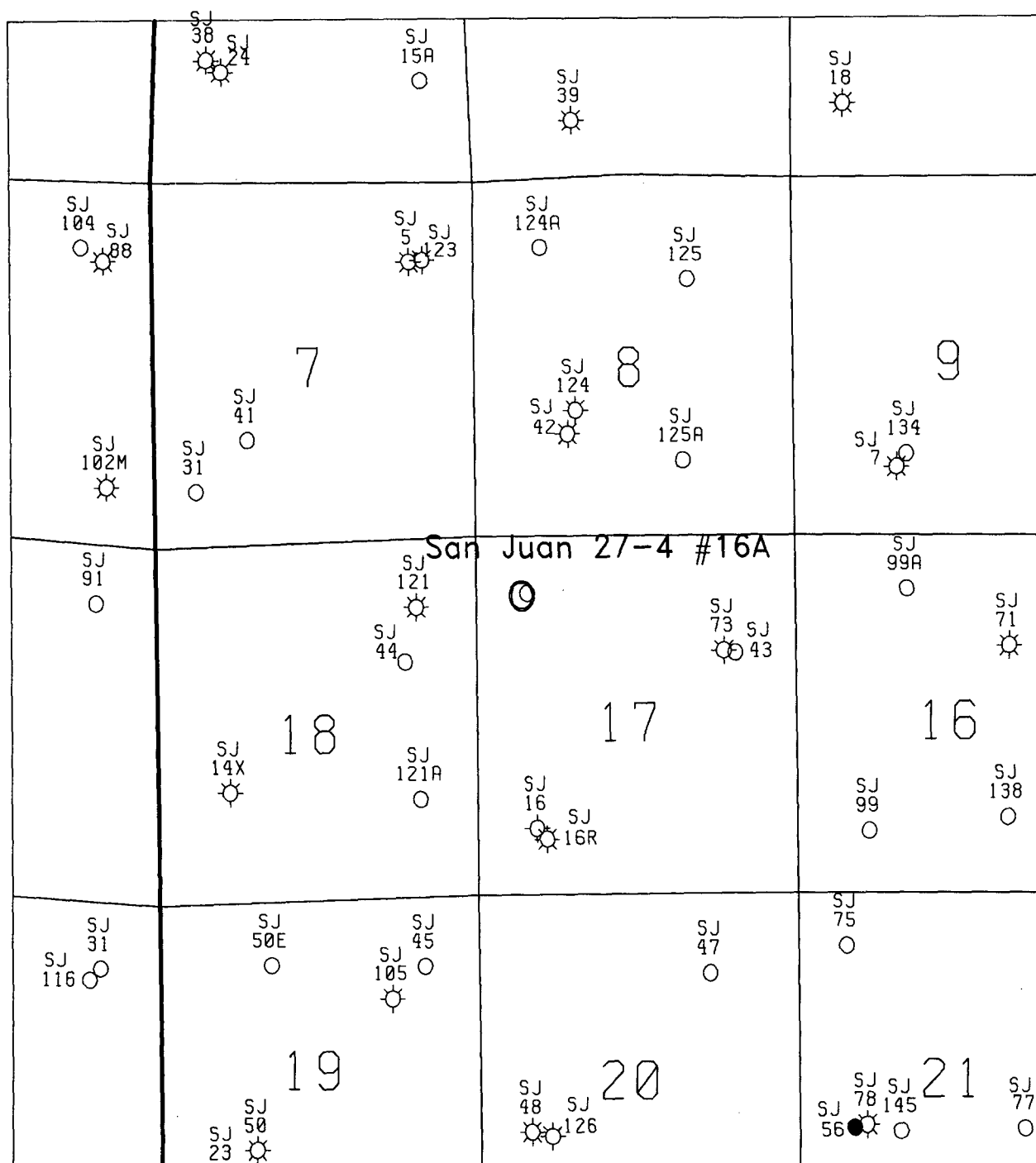
Pictured Cliffs (NW/4) & Mesaverde (W/2) Formations

Commingle well

Township 27 North, Range 4 West



1) Burlington Resources



San Juan 27-4 #16A
Sec 17, T27N, R4W
Pictured Cliffs/Mesa

DOROTHY A ABRAHAM IND EXEC
JOSEPH R ABRAHAM ESTATE
5517 WILLOW LN
DALLAS TX 75230

GERALD F HARRINGTON
C/O NATIONSBANK
PO BOX 1813
DES MOINES IA 50306-1813

MARY F ROBERTS
PO BOX 15940
SANTA FE NM 87506

PATRICIA ANN ASHBURN
46 CARIBE WAY
VERO BEACH FL 32963

ROBBYE F BAKER
P O BOX 12992
EL PASO TX 79913-0992

MARY JONE CHAPPELL
PO BOX 1865
CORRALES NM 87048

PATRICIA P SCHIEFFER
C/O J THOMAS SCHIEFFER
1000 BALLPARK WAY #300
ARLINGTON TX 76011

STEVE J ABRAHAM PERS REP
MARY F ABRAHAM ESTATE
906 FOUR HILLS RD SE
ALBUQUERQUE NM 87123

MIKE C ABRAHAM TRUSTEE
711 AMHERST DR SE
ALBUQUERQUE NM 87106

JAMES V HARRINGTON
PO BOX 13535
ALBUQUERQUE NM 87192

UW FOSTER MORRELL DECD 11-1065
C/O NORWEST BANK NEW MEXICO NA
PO BOX 5383
DENVER CO 80217

MINERALS MANAGEMENT SERVICE
ROYALTY MANAGEMENT PROGRAM
PO BOX 5810
DENVER CO 80217-5810

UNION OIL CO OF CALIF
ATTN REVENUE ACCOUNTING
PO BOX 841055
DALLAS TX 75284-1055

WILLIAM B GREENE
812 GRANDVIEW DRIVE SE
ALBUQUERQUE NM 87108

EDNA E MORRELL LIV TR 11-1073
C/O NORWEST BANK NEW MEXICO NA
PO BOX 5383
DENVER CO 80217

BANK OF AMERICA

LESLIE C TATUM
PO BOX 7392
KANSAS CITY MO 64116

CINCO GENERAL PARTNERSHIP
PO BOX 451
ALBUQUERQUE NM 87103-0451

LMA ROYALTIES LTD
PO BOX 1778
COLORADO SPRINGS CO 80901-1778

ELEANOR G HAND
9 ANSLEY DR NE
ATLANTA GA 30309

TEMPE LTD PARTNERSHIP
C/O F E & M K HARRINGTON
652 FEARRINGTON POST
PITTSBORO NC 27312

JUAN R MONTANO
PO BOX 247
TIERRA AMARILLA NM 87575-0247

HARCO LTD PARTNERSHIP
PO BOX 216
ROSWELL NM 88202-0216

D A ABRAHAM LLC
C/O KEVIN CHISHOLM CPA
CONCOURSE PLAZA
16051 ADDISON RD STE 212
DALLAS TX 75248

PHILIP O MEADOWS & LEE D
MEADOWS PERS REP
JOHN C MEADOWS ESTATE
6053 ARLINGTON EXPWY
JACKSONVILLE FL 32211

ROBERT S TATUM TRUSTEE
TATUM LIVING TR DTD 12/10/96
NATIONSBANK NA AGENT
LOCK BOX 840738
DALLAS TX 75284-0738

KATHLEEN EARNEST RIOS TRUSTEE
ROBERT P EARNEST & ANNA DOKUS
EARNEST TRUST DTD 5/4/79
2404 LORING #131
SAN DIEGO CA 92109-2347

FIRST NATL BK SANTA FE AGENT
AMALIA SANCHEZ
C/O BANK OF OKLAHOMA AGENT
PO BOX 1588
TULSA OK 74101

FIRST NATIONAL BANK OF SANTA FE
TRUST U/W MANUEL A SANCHEZ
C/O BANK OF OKLAHOMA AGENT
PO BOX 1588
TULSA OK 74101

BANK OF AMERICA
SCOTT ANTHONY VENEZIA
ACCT #02327-02361 (TYPE DDA)
PO BOX 85058
SAN DIEGO CA 92186-5058

BANK OF AMERICA
F/A/O DEREK PETER VENEZIA
ACCT # 02327-02361 (TYPE DDA)
PO BOX 85058
SAN DIEGO CA 92186-5058

San Juan 27-4 Unit #16A
Sec. 17, T27N R4W
Rio Arriba County, New Mexico

Production Allocation Based On Cumulative Production Through 03/99

	Cumulative Production			% Allocation	
	MCF	Bbl Oil		% Gas	% Oil
Mesa Verde	1,141,617	4,149		79.43%	100.00%
Pictured Cliffs	295,606	0		20.57%	0.00%
Total	1,437,223	4,149		100.00%	100.00%

Gas Allocation:

Mesa Verde (Total Mesa Verde Production) 1,141,617 MCF

(Total Combined Production) 1,437,223 MCF = 79.43%

Pictured Cliffs (Total Pictured Cliffs Production) 295606 MCF

(Total Combined Production) 1437223 MCF = 20.57%

Oil Allocation:

Mesa Verde (Total Mesa Verde Production) 4,149 Bbl Oil

(Total Combined Production) 4,149 Bbl Oil = 100.00%

Pictured Cliffs (Total Pictured Cliffs Production) 0 Bbl Oil

(Total Combined Production) 4,149 Bbl Oil = 0.00%