

DATE IN 6/22/98	SUSPENSE 7/13/98	ENGINEER DC	LOGGED BY MW	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

## NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

2040 South Pacheco, Santa Fe, NM 87505



1999

### ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATION FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

#### 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

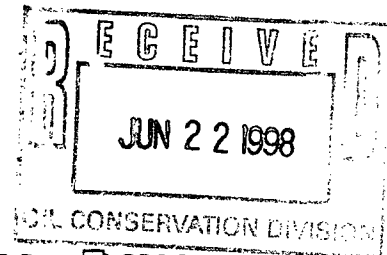
Check One Only for [B] or [C]

[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 - Certification

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 (including API numbers, pool codes, etc.), pertinent information and any required notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Print or Type Name

Signature

Title

Date

6-18-98

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II  
811 South First St., Artesia, NM 88210-2835

DISTRICT III  
1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-107-A  
New 3-12-96

APPROVAL PROCESS :

☒ Administrative  
☐ Hearing

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE

☒ YES ☐ NO

Burlington Resources Oil and Gas

PO Box 4289, Farmington, NM 87499

Operator

San Juan 28-6 Unit #10A

Address

P-25-28N-06W

Rio Arriba

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7462 API NO. 30-039-22236 Federal ☒ , State , Fee

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	S Blanco Pictured Cliffs-72439		Blanco Mesaverde - 72319
2. Top and Bottom of Pay Section (Perforations)	3376'-3436'		5056'-5917'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Artificial Lift
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	(Current) a. 289 psi (see attachment)		a. 445 psi (see attachment)
	(Original) b. 1181 psi (see attachment)		b. 963 psi (see attachment)
6. Oil Gravity (°API) or Gas BTU Content	BTU 1174		BTU 1216
7. Producing or Shut-In?	Producing		Producing
Production Marginal? (yes or no)	Yes		No
* If Shut-In and oil/gas/water rates of last production  Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data  * If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: N/A Rates:		Date: N/A Rates:
	Date: 5/98 Rates: 11 mcf/d 0 bopd		Date: 5/98 Rates: 138 mcf/d 0.6 bopd
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Will be supplied upon completion.		Will be supplied upon completion.

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 ☐ No

11. 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 ☐ No

13. 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. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). Reference Order #R-10696

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 J. Tom Loveland TITLE Production Engineer DATE 06-18-98

TYPE OR PRINT NAME Tom Loveland TELEPHONE NO. (505) 326-9700

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

Operator <b>EL PASO NATURAL GAS COMPANY</b>			Lease <b>SAN JUAN 28-6 UNIT (SF-080505)</b>		Well No. <b>10A</b>
Unit Letter <b>P</b>	Section <b>25</b>	Township <b>28N</b>	Range <b>6W</b>	County <b>Rio Arriba</b>	
Actual Footage Location of Well: <b>910</b> feet from the <b>South</b> line and <b>1040</b> feet from the <b>East</b> line					
Ground Level Elev. <b>6539</b>	Producing Formation <b>MESA VERDE PICTURED CLIFFS</b>		Pool <b>BLANCO MESA VERDE SO. BLANCO PICTURED CLIFFS EXT.</b>		Dedicated Acreage: <b>160.0 &amp; 320.0</b> 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 interests of all owners been consolidated by communitization, unitization, force-pooling, etc?  

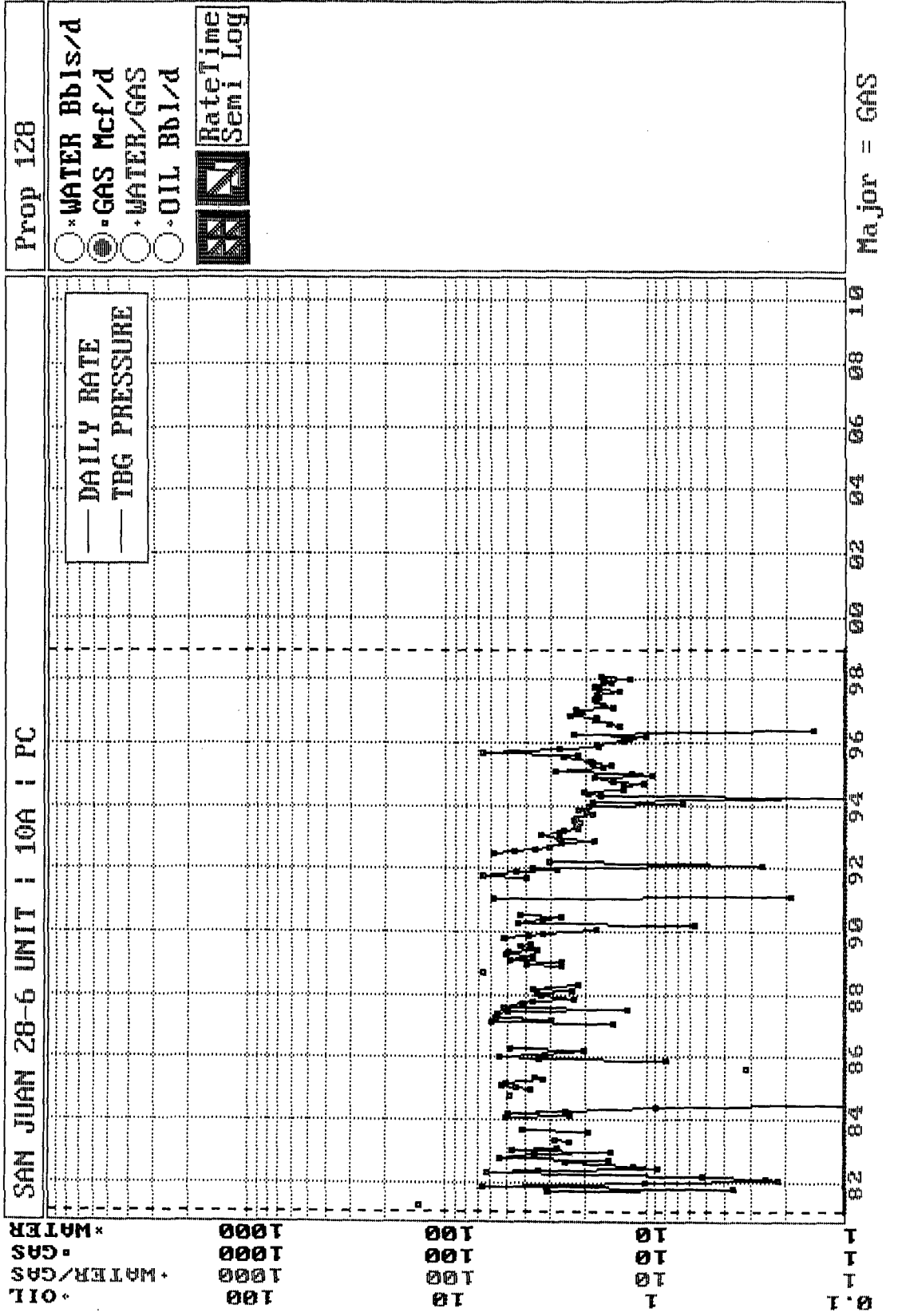
Unitization

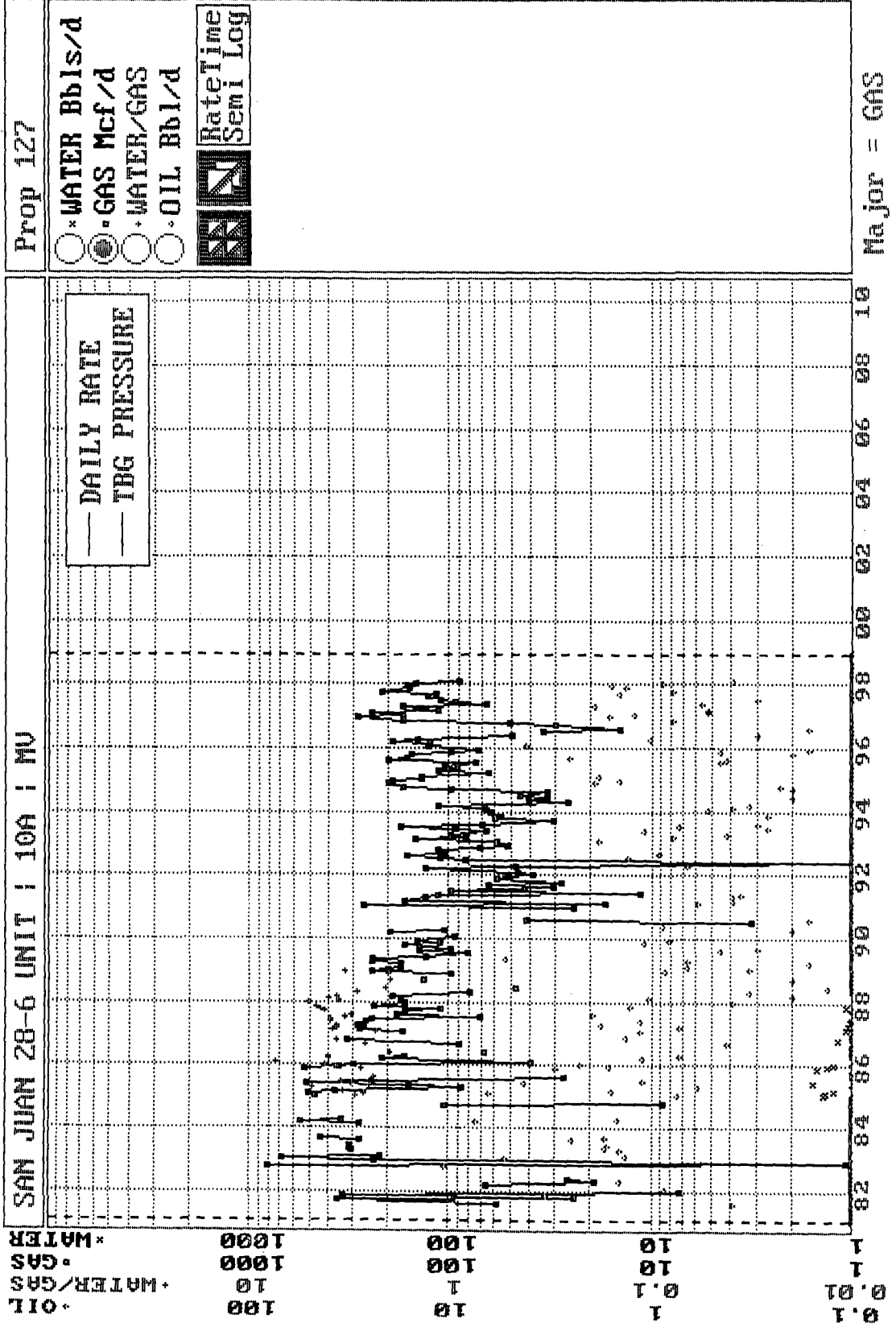
☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

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 interests, has been approved by the Commission.

	<b>CERTIFICATION</b>  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <i>D. B. Guisco</i> <b>Drilling Clerk</b> <b>El Paso Natural Gas Co.</b> <b>October 18, 1979</b> 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 <b>AUGUST 22 1979</b> Registered Professional Engineer and/or Land Surveyor <i>[Signature]</i> <b>Fred B. [Name]</b> Certificate No. <b>3950</b>





**San Juan 28-6 Unit #10A**  
**Bottom Hole Pressures**  
**Flowing and Static BHP**  
**Cullender and Smith Method**

Version 1.0 1/14/98

<b>Pictured Cliffs</b>		<b>Mesaverde</b>	
<b><u>PC-Current</u></b>		<b><u>MV-Current</u></b>	
GAS GRAVITY	0.669	GAS GRAVITY	0.703
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.43	%N2	0.21
%CO2	0.44	%CO2	1.05
%H2S	0	%H2S	0
DIAMETER (IN)	7	DIAMETER (IN)	2.375
DEPTH (FT)	3406	DEPTH (FT)	5487
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	116	BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	266	SURFACE PRESSURE (PSIA)	388
BOTTOMHOLE PRESSURE (PSIA)	288.6	BOTTOMHOLE PRESSURE (PSIA)	445.1
<b><u>PC-Original</u></b>		<b><u>MV-Original</u></b>	
GAS GRAVITY	0.669	GAS GRAVITY	0.703
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.43	%N2	0.21
%CO2	0.44	%CO2	1.05
%H2S	0	%H2S	0
DIAMETER (IN)	7	DIAMETER (IN)	2.375
DEPTH (FT)	3406	DEPTH (FT)	5487
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	116	BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1075	SURFACE PRESSURE (PSIA)	830
BOTTOMHOLE PRESSURE (PSIA)	1181.2	BOTTOMHOLE PRESSURE (PSIA)	962.7

Page No.: 11

Print Time: Tue May 12 13:48:40 1998

Property ID: 207

Property Name: SAN JUAN 28-6 UNIT | 10A | MESAVERDE

Table Name: S:\ARIES\78LTL\TEST.DBF

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

01/28/81		0	830.0
09/25/81		12769	603.0
11/04/82		52030	604.0
09/19/83		137230	474.0
05/01/84		173138	463.0
03/03/87		334638	312.0
05/09/89		453189	557.0
03/18/91		507748	458.0
06/09/91		515512	470.0
04/01/98		763875	388.0

Original

Current estimated from P/z data

Page No.: 10

Print Time: Tue May 12 13:48:39 1998

Property ID: 206

Property Name: SAN JUAN 28-6 UNIT | 10A | PICTURED CLIFFS

Table Name: S:\ARIES\78LTL\TEST.DBF

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

01/28/81		0	1075.0
09/25/81		5477	623.0
05/28/82		10848	425.0
09/19/83		21761	456.0
04/16/84		26325	536.0
11/01/84		28092	659.0
05/17/85		35936	568.0
10/09/88		62016	604.0
07/31/90		81919	508.0
03/29/92		91182	611.0
03/01/94		109434	424.0
04/01/98		134965	266.0

Original

Current estimated from P/z data

## Package Preparation Volume Data

**Compressor:** No

Print Form

5/27/98

## Package Preparation Volume Data

DPNo: 53426B

SAN JUAN 28-6 UNIT

10A

Form: MV

Supt: 60 KEN RAYBON

FF: 335 LARY BYARS

MS: 378 GARY NELSON

Pipeline: WFS

Plunger: Yes

Dual: Yes

Compressor: No

<u>Ownership (No Trust)</u>			<u>Prior Year</u>			<u>Current Year</u>			
	<u>Gas</u>	<u>Oil</u>			<u>Days</u>			<u>Days</u>	
				<u>MCF/M</u>	<u>BOPM</u>	<u>On</u>	<u>MCF/M</u>	<u>BOPM</u>	<u>On</u>
GWl:	37.1949%	37.1949%	Jan	5,108	37.0	26.2	4,455	27.0	31
GNI:	29.3156%	29.3156%	Feb	7,474	16.0	27.7	2,686	12.0	28
			Mar	3,421	16.0	31	4,420	9.0	31
			Apr	5,151	59.0	30	0	0.0	30
			May	1,891	17.0	31	0	0.0	0
			Jun	2,780	0.0	30	0	0.0	0
			Jul	3,282	9.0	31	0	0.0	0
			Aug	3,815	0.0	27	0	0.0	0
			Sept	3,488	44.0	30	0	0.0	0
			Oct	6,557	24.0	31	0	0.0	0
			Nov	4,755	41.0	30	0	0.0	0
			Dec	4,909	49.0	31	0	0.0	0
			Total	52,631	312.0		11,561	48.0	
<u>Volumes</u>									
<u>(Days On)</u>	<u>MCFD</u>	<u>BOPD</u>							
7 Day Avg	131	8.3							
30 Day Avg	138	0.6							
60 Day Avg	140	0.5							
3 Mo Avg	128	0.5							
6 Mo Avg	153	0.9							
12 MoAvg	133	0.8							
<u>Volumes</u>									
<u>(Days in Month)</u>	<u>MCFD</u>	<u>BOPD</u>							
30 Day Avg	138	0.6							
60 Day Avg	140	0.5							
3 Mo Avg	128	0.5							
6 Mo Avg	152	0.9							
12 Mo Avg	132	0.8							

Print Form

Exit Volumes Data

Print Form

Exit Volumes Data

5/27/98

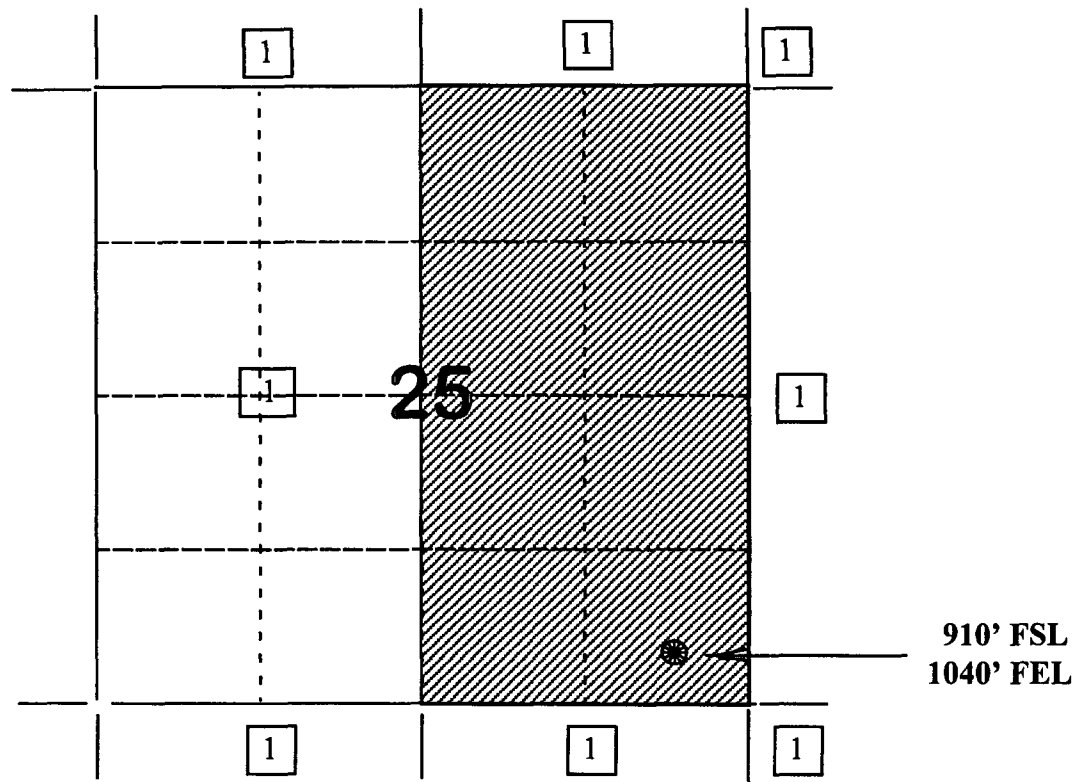
***BURLINGTON RESOURCES OIL AND GAS COMPANY***

**San Juan 28-6 Unit #10A**

**OFFSET OPERATOR/OWNER PLAT**

**Pictured Cliffs (SE/4) / Mesaverde (E/2) Formations Commingle Well**

**Township 28 North, Range 6 West**



1) Burlington Resources

23 58A ●	24 18 ● 65A ●	19 35 ●	
45 ●	10 ●	59M ● 32 ●	
4 26 ● 162 ☀	8 25 ● ☀ SJ 28-6 Unit #10A	20 30 ●	9 ●
☀ 97 173 ●	174 ● ☀	☀ 51 51A ●	
35 172 ☀ 88 97A ●	36 93 ● 94A ●	31 95 ● 42 ●	38 ●
188 ☀ 92 ●	☀ 78 ● 108	45A 59 148 ● ● 62	53A ●

PLH 5/27/98

*San J uan 28-6 Unit #10A*  
*Sec. 25, T28N, R8W*  
*Pictured Cliffs/Mesaverde*

**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 11628  
ORDER NO. R-10696**

**APPLICATION OF BURLINGTON RESOURCES  
OIL & GAS COMPANY FOR THE ESTABLISHMENT  
OF A DOWNHOLE COMMINGLING "REFERENCE  
CASE" FOR ITS SAN JUAN 28-6 UNIT PURSUANT  
TO DIVISION RULE 303.E. AND THE ADOPTION  
OF SPECIAL ADMINISTRATIVE RULES THEREFOR,  
SAN JUAN COUNTY, NEW MEXICO..**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on October 17 and November 7, 1996, at Santa Fe, New Mexico, before Examiners David R. Catanach and Michael E. Stogner, respectively.

NOW, on this 12th day of November, 1996, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS THAT:**

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Burlington Resources Oil & Gas Company (Burlington), pursuant to the provisions of Division Rule 303.E., seeks to establish a downhole commingling "reference case" to provide exceptions for (a) marginal economic criteria, (b) pressure criteria, (c) allocation formulas and (d) modification of notification rules on a unit-wide basis for downhole commingling of Dakota, Mesaverde, Fruitland Coal and Pictured Cliffs gas production within existing or future drilled wells within the San Juan 28-6 Unit, San Juan County, New Mexico.

(3) Division Rule No. 303.E., amended by Order No. R-10470-A, currently states:

- c) establish a "reference case" whereby the Division utilizes the data presented in the immediate case to endorse or approve certain methods of allocating production whereby the applicant need not submit additional data or justification when proposing a certain method of allocating production on Form C-107-A's subsequently filed for wells within the San Juan 28-6 Unit; and,
- d) establish a "reference case" or an administrative procedure for authorizing the downhole commingling of existing or future drilled wells within the San Juan 28-6 Unit without additional notice to each affected interest owner as required by Division Rule No. 303.D.

(7) In support of its request to except marginal economic criteria, the applicant presented geologic and engineering evidence and testimony which indicates that within the San Juan 28-6 Unit:

- a) the structure and thickness of the Dakota and Pictured Cliffs formations are very consistent;
- b) the average recoverable Dakota and Pictured Cliffs gas reserves underlying an undeveloped drill block are approximately 449 MMCFG and 186 MMCFG, respectively;
- c) the average initial producing rate for a newly drilled or recompleted Dakota and Pictured Cliffs gas well is approximately 254 MCFGD and 216 MCFGD, respectively; and,
- d) the estimated ultimate gas recoveries and initial producing rates from the Dakota and Pictured Cliffs formations are insufficient to justify drilling stand alone wells and/or dually completed wells to recover such gas reserves.

(8) The evidence and testimony presented by the applicant indicates that the Dakota and Pictured Cliffs formations within the San Juan 28-6 Unit should be properly classified as "marginal".

(9) In support of its request to except pressure criteria within the Dakota and Pictured Cliffs formations within the San Juan 28-6 Unit, the applicant presented engineering evidence and testimony which indicates that:

- c) providing notice to each interest owner within the San Juan 28-6 Unit of subsequent downhole comminglings is unnecessary and is an excessive burden on the applicant;
- d) the downhole commingling of wells within the San Juan 28-6 Unit Area will benefit working, royalty, and overriding royalty interest owners. In addition, the downhole commingling of wells within the San Juan 28-6 Unit should not violate the correlative rights of any interest owner;
- e) no interest owner appeared at the hearing in opposition to the establishment of a "reference case" or administrative procedure for notice.

(14) An administrative procedure should be established within the San Juan 28-6 Unit for obtaining approval for subsequent downhole commingled wells without notice to Unit interest owners, provided however that, all other provisions contained within Division Rule No. 303.C. are complied with.

(15) Approval of the proposed "reference cases" for marginal economic criteria, pressure criteria, allocation formulas and notice will lessen the burden on the applicant insofar as providing the data required pursuant to Division Rule No. 303.D. and Form C-107-A. will provide the applicant a streamlined method for obtaining downhole commingling approvals within the San Juan 28-6 Unit, and will not violate correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Burlington Resources Oil & Gas Company to establish a "reference case" for (a) marginal economic criteria, (b) pressure criteria, (c) allocation formulas and (d) modification of notification rules on a unit-wide basis for downhole commingling of Dakota, Mesaverde, Fruitland Coal and Pictured Cliffs gas production within existing or future drilled wells within the San Juan 28-6 Unit, San Juan County, New Mexico, is hereby approved.