

*Senny E. Foust*  
DEPUTY OIL & GAS INSPECTOR

DEC 29 1997

*Approved*

Meter Number:72484

Name:SAN JUAN 28-5 UNIT #34MV

Location:TN-28 RG-05

SC-18 UL-M

4 - Fee

NMOCZ Zone:OUTSIDE

Hazard Ranking Score:00

RECEIVED  
APR 14 1997

OIL FIELD DIV.  
MESA

**RATIONALE FOR RISK-BASED CLOSURE OF PRODUCTION PITS  
LOCATED OUTSIDE OF THE VULNERABLE ZONE  
IN THE SAN JUAN BASIN**

This production pit location was ranked according to the criteria in the New Mexico Oil Conservation Division's Unlined Surface Impoundment Closure Guidelines and received a ranking score of zero. The estimated depth to groundwater is greater than 100-feet beneath ground surface (bgs), the pit is not in a well head protection area, and there are no surface water bodies within 1,000 horizontal feet of the pit location.

The primary source, discharge to the pit has been removed. There has been no discharge to the pits for at least 4 years and the pits have been closed for at least one year.

Each pit was backfilled with clean soil and graded in a manner to divert precipitation away from the excavated area. Minimal infiltration of rainfall is expected. Any rainfall that does infiltrate the ground surface must migrate through clean backfill before reaching the residual hydrocarbons.

There is no source material at the ground surface, so direct contact of hydrocarbons with livestock and the populous is not likely.

In general, outside of the vulnerable area and alluvial valleys, bedrock material is generally encountered within 20 feet of the ground surface. Bedrock material in the San Juan Basin consists of interbedded sandstones, shales and clays. According to Freeze and Cherry, 1979, the hydraulic conductivity of the bedrock material are as follows:

Sandstone	$10^{-9}$ to $10^{-13}$ cm/sec
Shale	$10^{-12}$ to $10^{-16}$ cm/sec
Clay	$10^{-12}$ to $10^{-15}$ cm/sec

Based on this information, the residual hydrocarbons should not migrate to groundwater.

Natural process (bioremediation) are degrading the residual hydrocarbon to carbon dioxide and water and will continue until the source is gone, therefore minimizing any impact to the environment.

Based on the above information, it is highly unlikely that any source material will impact groundwater or ever find an exposure pathway to affect human health and therefore El Paso Field Services Company (EPFS) requests closure of this pit location.



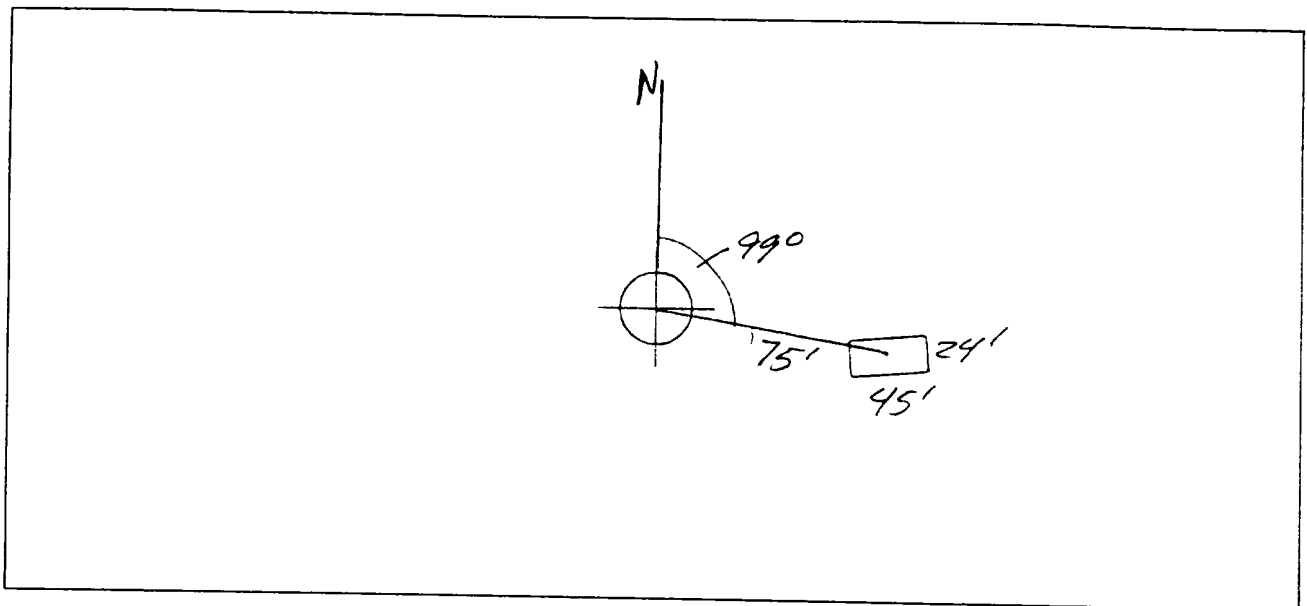
**FIELD PIT SITE ASSESSMENT FORM**

<b>GENERAL</b>	<p>Meter: <u>72484</u> Location: <u>SAN JUAN 28-5 UNIT #34 MV</u></p> <p>Operator #: <u>2999</u> Operator Name: <u>MEDIAN</u> P/L District: <u>BLOOMFIELD</u></p> <p>Coordinates: Letter: <u>M</u> Section <u>18</u> Township: <u>28</u> Range: <u>5</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Pit Type: Dehydrator <input checked="" type="checkbox"/> Location Drip: _____ Line Drip: _____ Other: _____</p> <p>Site Assessment Date: <u>5-14-94</u> Area: <u>10</u> Run: <u>52</u></p>
<b>SITE ASSESSMENT</b>	<p><b>NMOCD Zone:</b> (From NMOCD Maps)</p> <p style="margin-left: 40px;">Inside <input type="checkbox"/> (1)</p> <p style="margin-left: 40px;">Outside <input checked="" type="checkbox"/> (2)</p> <p><b>Land Type:</b></p> <p style="margin-left: 40px;">BLM <input type="checkbox"/> (1)</p> <p style="margin-left: 40px;">State <input type="checkbox"/> (2)</p> <p style="margin-left: 40px;">Fee <input checked="" type="checkbox"/> (3)</p> <p style="margin-left: 40px;">Indian _____</p> <p><b>Depth to Groundwater</b></p> <p>Less Than 50 Feet (20 points) <input type="checkbox"/> (1)</p> <p>50 Ft to 99 Ft (10 points) <input type="checkbox"/> (2)</p> <p>Greater Than 100 Ft (0 points) <input checked="" type="checkbox"/> (3)</p> <p><b>Wellhead Protection Area :</b></p> <p>Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? <input type="checkbox"/> (1) YES (20 points) <input checked="" type="checkbox"/> (2) NO (0 points)</p> <p><b>Horizontal Distance to Surface Water Body</b></p> <p>Less Than 200 Ft (20 points) <input type="checkbox"/> (1)</p> <p>200 Ft to 1000 Ft (10 points) <input type="checkbox"/> (2)</p> <p>Greater Than 1000 Ft (0 points) <input checked="" type="checkbox"/> (3)</p> <p>Name of Surface Water Body _____</p> <p>(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)</p> <p>Distance to Nearest Ephemeral Stream <input type="checkbox"/> (1) &lt; 100' (Navajo Pits Only)</p> <p style="margin-left: 100px;"><input type="checkbox"/> (2) &gt; 100'</p> <p><b>TOTAL HAZARD RANKING SCORE:</b> <u>0</u> POINTS</p>
<b>REMARKS</b>	<p>Remarks : <u>ONE EARTHEN PIT ON LOCATION</u></p>

ORIGINAL PIT LOCATION

**ORIGINAL PIT LOCATION**

Original Pit : a) Degrees from North 99° Footage from Wellhead 75'  
b) Length : 45' Width : 24' Depth : 3'



REMARKS

Remarks :  
PHOTOGRAPHS AH-5 (10-13)

Completed By:

*John A. Harris*  
Signature

5-14-94  
Date

**FIELD PIT REMEDIATION/CLOSURE FORM**

<b>GENERAL</b>	Meter: <u>22484</u> Location: <u>SEN Juan 28-5 unit # 34 MV</u> Coordinates: Letter: <u>M</u> Section <u>18</u> Township: <u>28</u> Range: <u>5</u> Or Latitude _____ Longitude _____ Date Started : <u>6-22-94</u> Area: <u>10</u> Run: <u>52</u>
<b>FIELD OBSERVATIONS</b>	Sample Number(s): <u>MK 24</u> <u>MK 25</u> <u>MK 26</u> _____ Sample Depth: <u>12</u> Feet Final PID Reading <u>160</u> PID Reading Depth <u>12'</u> Feet Yes No Groundwater Encountered <input type="checkbox"/> (1) <input type="checkbox"/> (2) Approximate Depth _____ Feet
<b>CLOSURE</b>	Remediation Method : Excavation <input type="checkbox"/> (1) Approx. Cubic Yards _____ Onsite Bioremediation <input type="checkbox"/> (2) Backfill Pit Without Excavation <input checked="" type="checkbox"/> (3) Soil Disposition: Envirotech <input type="checkbox"/> (1) <input type="checkbox"/> (3) Tierra Other Facility <input type="checkbox"/> (2) Name: _____ Pit Closure Date: <u>6-22-94</u> Pit Closed By: <u>BEI</u>
<b>REMARKS</b>	Remarks : _____ _____ _____
	Signature of Specialist: <u>Morgan Killion</u>



**Natural Gas Company**  
**FIELD SERVICES LABORATORY**  
**ANALYTICAL REPORT**  
**PIT CLOSURE PROJECT - Soil**

**SAMPLE IDENTIFICATION**

	Field ID	Lab ID
SAMPLE NUMBER:	MLK 24	945501
MTR CODE   SITE NAME:	72484	N/A
SAMPLE DATE   TIME (Hrs):	6-22-94	1556
SAMPLED BY:	N/A	
DATE OF TPH EXT.   ANAL.:	6/23/94	6/23/94
DATE OF BTEX EXT.   ANAL.:	N/A	N/A
TYPE   DESCRIPTION:	VG	Brown sand & clay

REMARKS: \_\_\_\_\_

**RESULTS**

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE		MG/KG				
TOLUENE		MG/KG				
ETHYL BENZENE		MG/KG				
TOTAL XYLENES		MG/KG				
TOTAL BTEX		MG/KG				
TPH (418.1)	3220 <del>3200</del>	MG/KG			2.34	28
HEADSPACE PID	140	PPM				
PERCENT SOLIDS	82.3	%				

- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 -

The Surrogate Recovery was at N/A % for this sample All QA/QC was acceptable.  
 Narrative: \_\_\_\_\_

DF = Dilution Factor Used

Date: 7/14/00

\*\*\*\*\*  
 Test Method for  
 Oil and Grease and Petroleum Hydrocarbons  
 in Water and Soil  
 Perkin-Elmer Model 1600 FT-IR  
 Analysis Report  
 \*\*\*\*\*

74/06/23 14:05

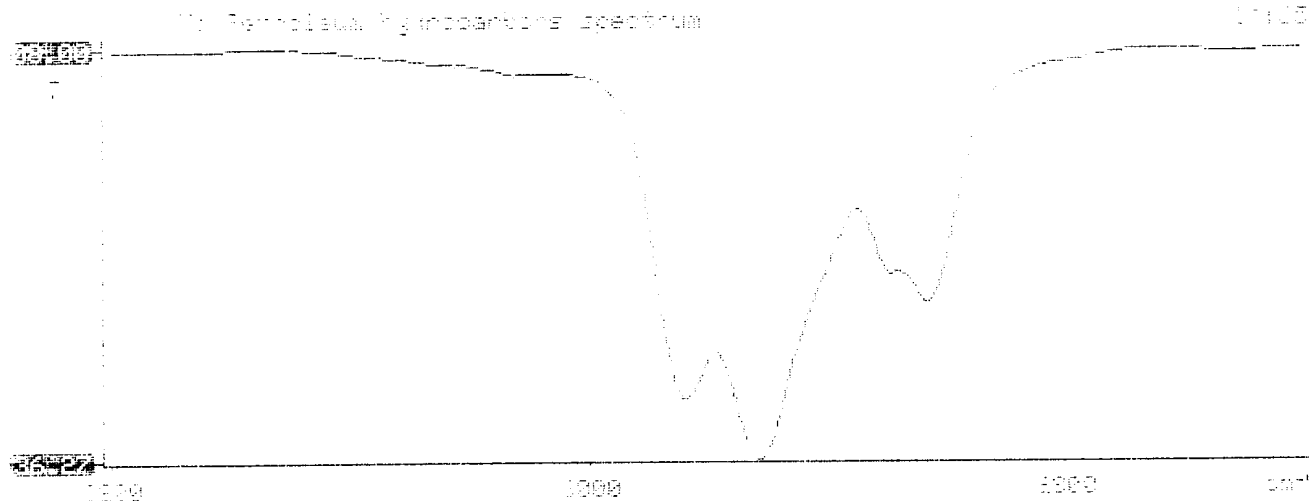
Sample identification  
 #45501

Initial mass of sample, g  
 0.540

Volume of sample after extraction, ml  
 28.000

Petroleum hydrocarbons, ppm  
 1022.040

Net absorbance of hydrocarbons (2730 cm-1)  
 0.175



**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 28-5 Unit #34** Address **M 18-28N-05W** **Rio Arriba**

Lease Well No. Unit Ltr. - Sec - Twp - Rge County  
Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7460 API NO. 30-039-07403 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	Blanco Mesaverde - 72319		Basin Dakota - 71599
2. Top and Bottom of Pay Section (Perforations)	5152'-5686'		7708'-7904'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	(Current) a. 539 psi (see attachment)		a. 456 psi (see attachment)
	(Original) b. 1294 psi (see attachment)		b. 3199 psi (see attachment)
6. Oil Gravity (°API) or Gas BTU Content	BTU 1193		BTU 1042
7. Producing or Shut-In?	Producing		Producing
Production Marginal? (yes or no)	Yes		Yes
* 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 water of recent test (within 60 days)	Date: N/A Rates:		Date: N/A Rates:
	Date: 6/18/98 Rates: 99 mcf/d 0.7 bopd		Date: 6/18/98 Rates: 69 mcf/d 0.0 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). R-10695 attached \_\_\_\_\_
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 Lovel TITLE Production Engineer DATE 07-13-98

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



District I  
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-10:  
Revised February 21, 1997

District II  
PO Drawer 00, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Instructions on back:  
Submit to Appropriate District Office:  
State Lease - 4 Copies  
Fee Lease - 3 Copies

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

AMENDED REPORT

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-07403		*Pool Code 72319/71599	*Pool Name Blanco Mesaverde/Basin Dakota
*Property Code 7460	*Property Name SAN JUAN 28-5 UNIT		*Well Number 34
*GRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY		*Elevation 6525'

<sup>10</sup> Surface Location

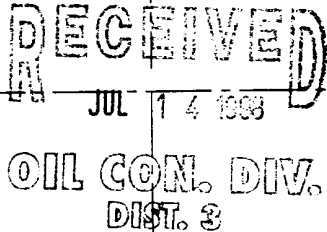

UL or lot no.	Section	Township	Range	Lot Id.	Feet from the	North/South line	Feet from the	East/West line	County
M	18	28N	5W		990	SOUTH	990	WEST	RIO ARriba

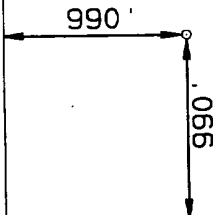
<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Id.	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres MV-S/320 DK-S/320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<sup>16</sup> NOT RESURVEYED, PREPARED FROM A PLAT DATED 11-26-58 BY DAVID O. VILVEN  <div style="text-align: center;">  </div>	<sup>17</sup> 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 _____ Title _____ Date _____
	<sup>18</sup> 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 supervision and that the same is true and correct to the best of my belief.  JUNE 25, 1998 Date of Survey Signature and Seal of Registered Professional Surveyor <div style="text-align: center;">  </div>



SAN JUAN 28-5 UNIT : 34 : MESAVERDE

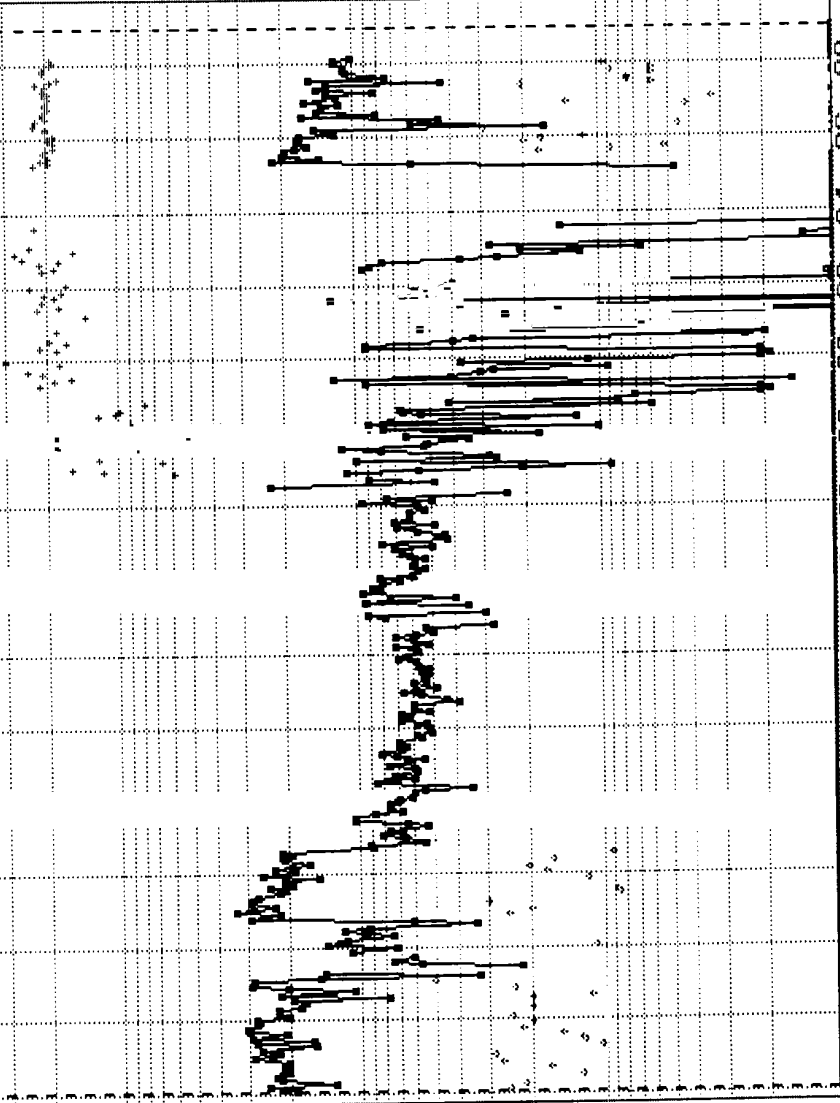
Prop 161

\* OIL  
\* WATER/GAS  
\* GAS

— DAILY RATE  
— TBG PRESSURE

○ \* WATER Bbls/d  
● \* GAS Mcf/d  
○ \* WATER/GAS  
○ \* OIL Bbl/d

RateTime  
Semi Log



Major = GAS

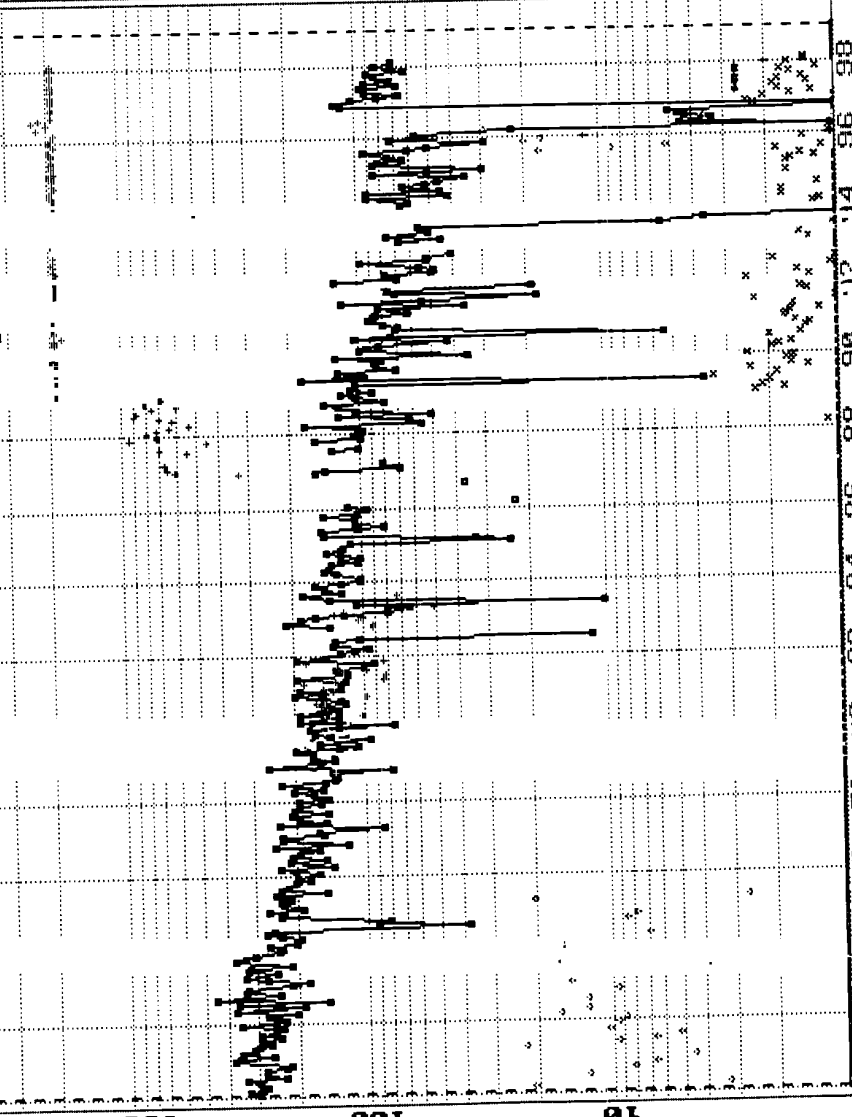
SAN JUAN 28-5 UNIT : 34 : DAKOTA

Prop 162 \*

\* OIL 100  
 \* WATER/GAS 10  
 \* GAS 1000  
 \* WATER 1000  
 \* OIL 10  
 \* WATER/GAS 10  
 \* GAS 100  
 \* WATER 100

— DAILY RATE  
 — TBG PRESSURE

- WATER Bbls/d
- GAS Mcf/d
- WATER/GAS
- OIL Bbl/d
- ▣ RateTime
- ▣ Semi Log



Major = GAS

**San Juan 28-5 Unit #34**  
**Bottom Hole Pressures**  
**Flowing and Static BHP**  
**Cullender and Smith Method**

Version 1.0 1/14/98

<b>Mesaverde</b>	<b>Dakota</b>																																																
<b><u>MV-Current</u></b>	<b><u>DK-Current</u></b>																																																
<table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">GAS GRAVITY</td><td style="text-align: right; border-bottom: 1px solid black;">0.706</td></tr> <tr><td>COND. OR MISC. (C/M)</td><td style="text-align: right; border-bottom: 1px solid black;">C</td></tr> <tr><td>%N2</td><td style="text-align: right; border-bottom: 1px solid black;">0.16</td></tr> <tr><td>%CO2</td><td style="text-align: right; border-bottom: 1px solid black;">0.98</td></tr> <tr><td>%H2S</td><td style="text-align: right; border-bottom: 1px solid black;">0</td></tr> <tr><td>DIAMETER (IN)</td><td style="text-align: right; border-bottom: 1px solid black;">7</td></tr> <tr><td>DEPTH (FT)</td><td style="text-align: right; border-bottom: 1px solid black;">5419</td></tr> <tr><td>SURFACE TEMPERATURE (DEG F)</td><td style="text-align: right; border-bottom: 1px solid black;">60</td></tr> <tr><td>BOTTOMHOLE TEMPERATURE (DEG F)</td><td style="text-align: right; border-bottom: 1px solid black;">121</td></tr> <tr><td>FLOWRATE (MCFPD)</td><td style="text-align: right; border-bottom: 1px solid black;">0</td></tr> <tr><td>SURFACE PRESSURE (PSIA)</td><td style="text-align: right; border-bottom: 1px solid black;">467</td></tr> <tr><td>BOTTOMHOLE PRESSURE (PSIA)</td><td style="text-align: right; border: 1px solid black;">538.6</td></tr> </table>	GAS GRAVITY	0.706	COND. OR MISC. (C/M)	C	%N2	0.16	%CO2	0.98	%H2S	0	DIAMETER (IN)	7	DEPTH (FT)	5419	SURFACE TEMPERATURE (DEG F)	60	BOTTOMHOLE TEMPERATURE (DEG F)	121	FLOWRATE (MCFPD)	0	SURFACE PRESSURE (PSIA)	467	BOTTOMHOLE PRESSURE (PSIA)	538.6	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">GAS GRAVITY</td><td style="text-align: right; border-bottom: 1px solid black;">0.61</td></tr> <tr><td>COND. OR MISC. (C/M)</td><td style="text-align: right; border-bottom: 1px solid black;">C</td></tr> <tr><td>%N2</td><td style="text-align: right; border-bottom: 1px solid black;">0.45</td></tr> <tr><td>%CO2</td><td style="text-align: right; border-bottom: 1px solid black;">1.56</td></tr> <tr><td>%H2S</td><td style="text-align: right; border-bottom: 1px solid black;">0</td></tr> <tr><td>DIAMETER (IN)</td><td style="text-align: right; border-bottom: 1px solid black;">2.375</td></tr> <tr><td>DEPTH (FT)</td><td style="text-align: right; border-bottom: 1px solid black;">7806</td></tr> <tr><td>SURFACE TEMPERATURE (DEG F)</td><td style="text-align: right; border-bottom: 1px solid black;">60</td></tr> <tr><td>BOTTOMHOLE TEMPERATURE (DEG F)</td><td style="text-align: right; border-bottom: 1px solid black;">168</td></tr> <tr><td>FLOWRATE (MCFPD)</td><td style="text-align: right; border-bottom: 1px solid black;">0</td></tr> <tr><td>SURFACE PRESSURE (PSIA)</td><td style="text-align: right; border-bottom: 1px solid black;">387</td></tr> <tr><td>BOTTOMHOLE PRESSURE (PSIA)</td><td style="text-align: right; border: 1px solid black;">456.1</td></tr> </table>	GAS GRAVITY	0.61	COND. OR MISC. (C/M)	C	%N2	0.45	%CO2	1.56	%H2S	0	DIAMETER (IN)	2.375	DEPTH (FT)	7806	SURFACE TEMPERATURE (DEG F)	60	BOTTOMHOLE TEMPERATURE (DEG F)	168	FLOWRATE (MCFPD)	0	SURFACE PRESSURE (PSIA)	387	BOTTOMHOLE PRESSURE (PSIA)	456.1
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<table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">GAS GRAVITY</td><td style="text-align: right; border-bottom: 1px solid black;">0.706</td></tr> <tr><td>COND. OR MISC. (C/M)</td><td style="text-align: right; border-bottom: 1px solid black;">C</td></tr> <tr><td>%N2</td><td style="text-align: right; border-bottom: 1px solid black;">0.16</td></tr> <tr><td>%CO2</td><td style="text-align: right; border-bottom: 1px solid black;">0.98</td></tr> <tr><td>%H2S</td><td style="text-align: right; border-bottom: 1px solid black;">0</td></tr> <tr><td>DIAMETER (IN)</td><td style="text-align: right; border-bottom: 1px solid black;">7</td></tr> <tr><td>DEPTH (FT)</td><td style="text-align: right; border-bottom: 1px solid black;">5419</td></tr> <tr><td>SURFACE TEMPERATURE (DEG F)</td><td style="text-align: right; border-bottom: 1px solid black;">60</td></tr> <tr><td>BOTTOMHOLE TEMPERATURE (DEG F)</td><td style="text-align: right; border-bottom: 1px solid black;">121</td></tr> <tr><td>FLOWRATE (MCFPD)</td><td style="text-align: right; border-bottom: 1px solid black;">0</td></tr> <tr><td>SURFACE PRESSURE (PSIA)</td><td style="text-align: right; border-bottom: 1px solid black;">1101</td></tr> <tr><td>BOTTOMHOLE PRESSURE (PSIA)</td><td style="text-align: right; border: 1px solid black;">1294.0</td></tr> </table>	GAS GRAVITY	0.706	COND. OR MISC. (C/M)	C	%N2	0.16	%CO2	0.98	%H2S	0	DIAMETER (IN)	7	DEPTH (FT)	5419	SURFACE TEMPERATURE (DEG F)	60	BOTTOMHOLE TEMPERATURE (DEG F)	121	FLOWRATE (MCFPD)	0	SURFACE PRESSURE (PSIA)	1101	BOTTOMHOLE PRESSURE (PSIA)	1294.0	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">GAS GRAVITY</td><td style="text-align: right; border-bottom: 1px solid black;">0.61</td></tr> <tr><td>COND. OR MISC. (C/M)</td><td style="text-align: right; border-bottom: 1px solid black;">C</td></tr> <tr><td>%N2</td><td style="text-align: right; border-bottom: 1px solid black;">0.45</td></tr> <tr><td>%CO2</td><td style="text-align: right; border-bottom: 1px solid black;">1.56</td></tr> <tr><td>%H2S</td><td style="text-align: right; border-bottom: 1px solid black;">0</td></tr> <tr><td>DIAMETER (IN)</td><td style="text-align: right; border-bottom: 1px solid black;">2.375</td></tr> <tr><td>DEPTH (FT)</td><td style="text-align: right; border-bottom: 1px solid black;">7806</td></tr> <tr><td>SURFACE TEMPERATURE (DEG F)</td><td style="text-align: right; border-bottom: 1px solid black;">60</td></tr> <tr><td>BOTTOMHOLE TEMPERATURE (DEG F)</td><td style="text-align: right; border-bottom: 1px solid black;">168</td></tr> <tr><td>FLOWRATE (MCFPD)</td><td style="text-align: right; border-bottom: 1px solid black;">0</td></tr> <tr><td>SURFACE PRESSURE (PSIA)</td><td style="text-align: right; border-bottom: 1px solid black;">2652</td></tr> <tr><td>BOTTOMHOLE PRESSURE (PSIA)</td><td style="text-align: right; border: 1px solid black;">3199.0</td></tr> </table>	GAS GRAVITY	0.61	COND. OR MISC. (C/M)	C	%N2	0.45	%CO2	1.56	%H2S	0	DIAMETER (IN)	2.375	DEPTH (FT)	7806	SURFACE TEMPERATURE (DEG F)	60	BOTTOMHOLE TEMPERATURE (DEG F)	168	FLOWRATE (MCFPD)	0	SURFACE PRESSURE (PSIA)	2652	BOTTOMHOLE PRESSURE (PSIA)	3199.0
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Page No.: 1

Print Time: Tue May 12 10:20:08 1998

Property ID: 161

Property Name: SAN JUAN 28-5 UNIT | 34 | MV

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

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

07/11/59		0	1101.0
11/09/70		900326	640.0
06/22/71		952832	611.0
06/07/72		1040016	620.0
07/23/73		1098382	626.0
01/11/74		1110197	608.0
11/11/74		1146274	608.0
04/29/76		1271938	488.0
05/23/78		1343476	659.0
05/20/82		1431859	689.0
07/20/84		1478872	678.0
09/19/86		1527665	621.0
11/28/89		1579030	612.0
08/26/91		1595303	532.0
06/19/95		1626718	531.0
04/01/98		1753814	467.0

*Original*

*Current Estimated from P/z data*

Page No.: 3

Print Time: Fri May 08 08:28:38 1998

Property ID: 162

Property Name: SAN JUAN 28-5 UNIT | 34 | DAKOTA

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

--DATE-- --CUM\_OIL- ---CUM\_GAS-- M SIWHP  
Bbl Mcf Psi

07/11/59	0	2652.0	<i>Original</i>
08/05/59	0	2651.0	
10/29/59	47000	1838.0	
09/22/60	297000	1130.0	
06/13/61	423000	1133.0	
09/09/62	538000	1287.0	
07/16/63	610000	1268.0	
01/24/64	643000	1373.0	
09/01/65	863000	1038.0	
08/19/66	971000	1112.0	
03/07/67	1038000	1000.0	
03/01/68	1140000	1058.0	
07/28/70	1359073	838.0	
06/22/71	1458158	707.0	
06/07/72	1555805	662.0	
07/23/73	1671515	606.0	
12/20/74	1788002	695.0	
05/05/75	1822787	332.0	
07/05/77	1973385	636.0	
10/04/79	2107669	572.0	
08/12/81	2206797	577.0	
02/03/84	2311723	535.0	
11/20/85	2385271	514.0	
10/04/88	2457897	432.0	
04/22/90	2527297	430.0	
04/01/98	2672850	387.0	<i>Current Estimated from P/z data</i>

# Package Preparation Volume Data

DPNo: 53416A      SAN JUAN 28-6 UNIT      Form: MV

Supt: 60    KEN RAYBON      FF: 335    LARY BYARS      MS: 319    STEVE BAIRD  
 Pipeline: EPNG      Plunger: No      Dual: Yes      Compressor: No

<u>Ownership (No Trust)</u>			<u>Prior Year</u>			<u>Current Year</u>			
	<u>Gas</u>	<u>Oil</u>		<u>MCF/M</u>	<u>BOPM</u>	<u>Days On</u>	<u>MCF/M</u>	<u>BOPM</u>	<u>Days On</u>
GWI:	73.1659%	73.1659%	Jan	3,622	10.0	31	3,770	0.0	31
GNI:	62.3562%	62.3562%	Feb	4,063	0.0	28	3,126	0.0	28
			Mar	2,544	0.0	31	3,306	0.0	31
<u>Volumes (Days On)</u>	<u>MCFD</u>	<u>BOPD</u>	Apr	4,405	0.0	30	3,422	0.0	30
7 Day Avg	108	6.5	May	3,995	63.0	31	0	0.0	27.9
30 Day Avg	111	0.8	Jun	1,339	18.0	21	0	0.0	0
60 Day Avg	112	0.4	Jul	4,701	23.0	31	0	0.0	0
3 Mo Avg	111	0.0	Aug	2,255	23.0	31	0	0.0	0
6 Mo Avg	114	0.3	Sept	3,306	18.0	30	0	0.0	0
12 MoAvg	112	0.6	Oct	3,421	27.0	31	0	0.0	0
			Nov	3,396	18.0	30	0	0.0	0
<u>Volumes (Days in Month)</u>	<u>MCFD</u>	<u>BOPD</u>	Dec	3,699	29.0	31	0	0.0	0
30 Day Avg	99	0.7	Total	40,746	229.0		13,624	0.0	
60 Day Avg	106	0.4							
3 Mo Avg	111	0.0							
6 Mo Avg	114	0.3							
12 Mo Avg	109	0.6							

Print Form  
Exit Volumes Data

# Package Preparation Volume Data

DP No: 53415B      SAN JUAN 28-5 UNIT      34      Form: DK

Supt: 60    KEN RAYBON      FF: 335    LARY BYARS      MS: 319    STEVE BAIRD  
 Pipeline: EPNG      Plunger: No      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>
GWI:	69.6124%	69.6124%	Jan	3,181	0.0	31	2,048	0.0	31
GNI:	58.8960%	58.8960%	Feb	2,434	0.0	28	2,082	0.0	28
			Mar	1,945	0.0	31	2,085	0.0	31
<u>Volumes</u>			Apr	2,739	0.0	30	2,654	0.0	30
<u>(Days On)</u>	<u>MCFD</u>	<u>BOPD</u>	May	2,863	0.0	31	0	0.0	27.9
7 Day Avg	103	0.0	Jun	2,025	0.0	23.1	0	0.0	0
30 Day Avg	77	0.0	Jul	2,750	0.0	31	0	0.0	0
60 Day Avg	83	0.0	Aug	2,126	0.0	31	0	0.0	0
3 Mo Avg	77	0.0	Sept	2,460	0.0	30	0	0.0	0
6 Mo Avg	73	0.0	Oct	2,655	0.0	31	0	0.0	0
12 MoAvg	78	0.0	Nov	1,852	0.0	30	0	0.0	0
			Dec	2,474	0.0	31	0	0.0	0
<u>Volumes</u>			Total	29,504	0.0		8,869	0.0	
<u>(Days in Month)</u>	<u>MCFD</u>	<u>BOPD</u>							
30 Day Avg	69	0.0							
60 Day Avg	78	0.0							
3 Mo Avg	77	0.0							
6 Mo Avg	72	0.0							
12 Mo Avg	77	0.0							

**Print Form**

**Exit Volumes Data**



	9 107	41A	38 53M
136	20 12 20R	12 7 79	12A 7 79E 85E 8 85
5 101	71 57A 106 13 57 100 71A	29A 29 61 61E 18 34 34A 34E	28A 75 33 17 33A
58A	99M 24 152 18 65A	57 4 57M 19 35	54E 63 14 14A 20 63E 54 17
102	10 114	59M 32 59	60 1

PLH 5/7/98

*SJ 28-5 Unit 34*  
*Sec. 18, T28N, R5W*  
*Mesaverde/Dakota*

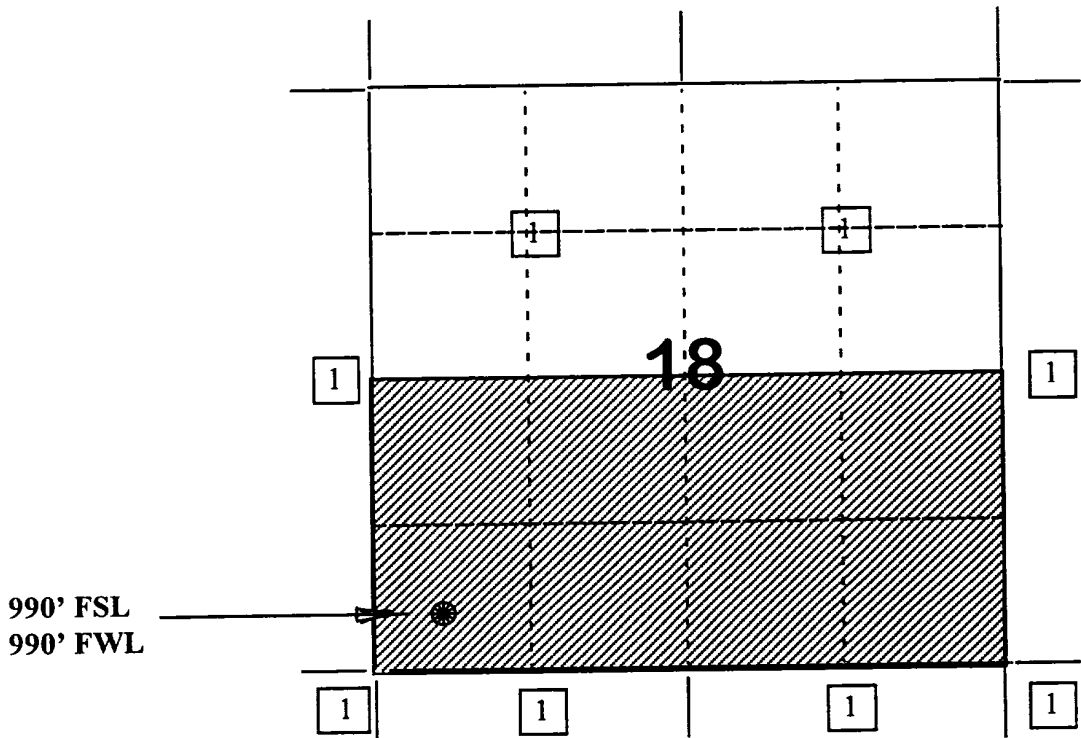
***BURLINGTON RESOURCES OIL AND GAS COMPANY***

**San Juan 28-5 Unit #34**

**OFFSET OPERATOR/OWNER PLAT**

**Mesaverde / Dakota Formations Commingle Well**

**Township 28 North, Range 5 West**



1) Burlington Resources

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. 11627  
ORDER NO. R-10695

APPLICATION OF BURLINGTON RESOURCES  
OIL & GAS COMPANY FOR THE ESTABLISHMENT  
OF A DOWNHOLE COMMINGLING "REFERENCE  
CASE" FOR ITS SAN JUAN 28-5 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 28-5 Unit, San Juan County, New Mexico.

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

"If sufficient data exists on a lease, pool, formation, geographic area, etc., so as to render it unnecessary to repeatedly provide such data on Form C-107-A, an operator may except any of the various criteria required under Paragraph 303.D. of this rule by establishing a "reference case". The Division, upon its own motion, or by application from an operator, may establish "reference cases" either administratively or by hearing. Upon Division approval of such "reference cases" for specific criteria, subsequent applications to downhole commingle (Form C-107-A) will be required only to cite the Division order number which established such exceptions and shall not be required to submit data for those criteria."

(4) The applicant is the current operator of the San Juan 28-5 Unit which encompasses some 17,399 acres in Township 28 North, Range 5 West, NMPM, San Juan County, New Mexico.

(5) Within the San Juan 28-5 Unit, the applicant currently operates sixty-seven (67) Basin-Dakota Gas Pool wells, seventy-one (71) Blanco-Mesaverde Gas Pool wells, sixteen (16) Gobernador-Pictured Cliffs, Oso-Pictured Cliffs and Tapacito-Pictured Cliffs Gas Pool wells, and nineteen (19) Basin-Fruitland Coal Gas Pool wells.

(6) According to its evidence and testimony, Burlington seeks to:

- a) establish a "reference case" for marginal economic criteria in the Dakota and Pictured Cliffs formations whereby these formations and/or pools may be identified as "marginal" on Form C-107-A's subsequently filed for wells within the San Juan 28-5 Unit. The applicant further proposes that the data provided in the immediate case serve as supplemental data or confirmation that these formations and/or pools should be classified as "marginal";
- b) establish a "reference case" for pressure criteria in the Dakota and Pictured Cliffs formations whereby the Division may utilize data provided in the immediate case to verify the pressure data provided on Form C-107-A's subsequently filed for wells within the San Juan 28-5 Unit;

- 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 28-5 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 28-5 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 28-5 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 1,258 MMCFG and 77 MMCFG, respectively;
- c) the average initial producing rate for a newly drilled or recompleted Dakota and Pictured Cliffs gas well is approximately 276 MCFGD and 136 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 28-5 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 28-5 Unit, the applicant presented engineering evidence and testimony which indicates that:

- a) the average shut-in bottomhole pressure within the Dakota and Pictured Cliffs formations at the time of initial development were approximately 3,149 psi and 1,143 psi, respectively; and,
- b) the average current shut-in bottomhole pressure within the Dakota and Pictured Cliffs formations are approximately 1,059 psi and 714 psi, respectively.

(10) There is sufficient pressure data available within the San Juan 28-5 Unit so as to except pressure criteria as proposed by the applicant.

(11) The applicant testified that various allocation methods will be utilized for downhole commingled wells within the San Juan 28-5 Unit depending on the circumstances. Some of the methods and circumstances are described as follows:

- a) the subtraction method will likely be utilized in those instances involving the Basin-Fruitland Coal Gas Pool and in those instances where a zone with a well established decline rate is commingled with a newly completed zone;
- b) a fixed allocation formula will be utilized in those instances where production history for both zones is available, or in those instances where newly completed zones are tested and stabilized flow rates obtained.

(12) The allocation methods proposed by the applicant are routinely utilized by industry and approved by the Division and therefore, the proposal to except allocation formulas should be approved.

(13) In support of its request to establish a "reference case" or administrative procedure for providing notice within the San Juan 28-5 Unit the applicant presented evidence and testimony which indicates that:

- a) the interest ownership between two zones within a given wellbore in the San Juan 28-5 Unit is generally not common;
- b) pursuant to Division Rule No. 303.D., applicant is currently required to notify all interest owners within the San Juan 28-5 Unit every time a Form C-107-A is submitted to the Division. There are a considerable number of such interest owners within the unit;

- c) providing notice to each interest owner within the San Juan 28-5 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 28-5 Unit Area will benefit working, royalty, and overriding royalty interest owners. In addition, the downhole commingling of wells within the San Juan 28-5 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 28-5 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 28-5 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 28-5 Unit, San Juan County, New Mexico, is hereby approved.

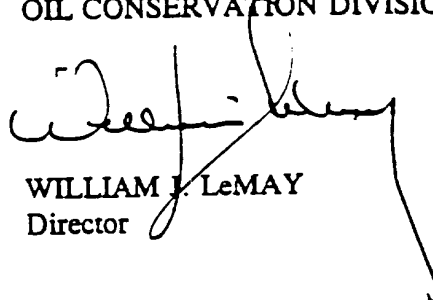
(2) Upon filing of Division Form No. C-107-A's for wells subsequently downhole commingled within the San Juan 28-5 Unit Area, the applicant shall not be required to submit supporting data to justify the classification of the Pictured Cliffs and Dakota formations as "marginal", supporting data to verify the Pictured Cliffs and Dakota pressure information provided, and support or justification for utilizing a given method or formula for allocation of production, provided however, in the event any of the data described above appearing on Form C-107-A appears to be beyond the data range provided in this case, the Division may require the submittal of additional supporting data.

(3) In order to obtain Division authorization to downhole commingle wells within the San Juan 28-5 Unit, the applicant shall file a Form C-107-A with the Santa Fe and Aztec Offices of the Division. Such application shall contain all the information required under Rule No. 303.C. of the Division Rules and Regulations, provided however that the applicant shall not be required to provide notice to all interest owners within the San Juan 28-5 Unit of such proposed commingling.

(4) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LeMAY  
Director

S E A L