

NSL 3/4/98

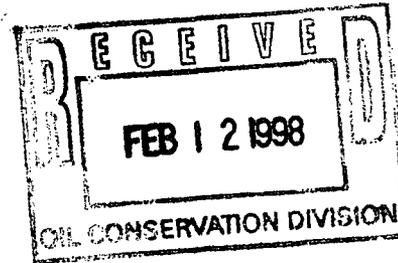
# BURLINGTON RESOURCES

SAN JUAN DIVISION

February 10, 1998

Sent Federal Express

New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505



Re: Ute Mountain Ute #54  
970'FSL, 1330'FEL, Section 21, T-32-N, R-14-W, San Juan County, New Mexico  
API # 30-045-(not yet assigned)

Gentlemen:

Burlington Resources is applying for administrative approval of a non-standard location for the above location in the Paradox formation. This application for the referenced location is due to pipelines, terrain, archaeology and at the request of the Ute Mountain Ute Tribe.

Production from the Barker Dome Paradox pool is to be included in a standard gas spacing and proration unit comprising all of Section 21, T-32-N, R-14-W.

The following attachments are for your review:

1. Application for Permit to Drill.
2. Completed C-102 at referenced location.
3. Offset operators/owners plat - Burlington is the offset operator
4. 7.5 minute topographic map showing the orthodox windows, and enlargement of the map to define topographic features.

We appreciate your earliest consideration of this application.

Sincerely,

A handwritten signature in cursive script that reads "Peggy Bradfield".

Peggy Bradfield  
Regulatory/Compliance Administrator

xc: Bureau of Land Management  
NMOCD - Aztec District Office

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number I-22-IND-2772 Unit Reporting Number	
1b. Type of Well GAS	6. If Indian, All. or Tribe Ute Mountain Ute	
2. Operator <b>BURLINGTON RESOURCES</b> Oil & Gas Company	7. Unit Agreement Name	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499  (505) 326-9700	8. Farm or Lease Name Ute Mountain Ute 9. Well Number 54	
4. Location of Well 970' FSL, 1330' FEL  Latitude 36° 58.1, Longitude 108° 18.6	10. Field, Pool, Wildcat Wildcat Hermosa Barker Dome Ismay Barker Dome Desert Creek BarkerDomeAkah/U.Brkr Crk Barker Dome L.Barker Crk 11. Sec., Twn, Rge, Mer. (NMPM) Sec 21, T-32-N, R-14-W API # 30-045-	
14. Distance in Miles from Nearest Town 6 miles to LaPlata	12. County SJ	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 970'	17. Acres Assigned to Well 320, 160, 640	
16. Acres in Lease	18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 1200'	
19. Proposed Depth 8758	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6183'	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by:  Regulatory/Compliance Administrator	<u>2/6/98</u> Date	

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Archaeological Report submitted

Threatened and Endangered Species Report submitted

NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-1  
Revised February 21, 19  
Instructions on B  
Submit to Appropriate District Off:  
State Lease - 4 Cop:  
Fee Lease - 3 Cop:

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

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

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

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

AMENDED REPOF

WELL LOCATION AND ACREAGE DEDICATION PLAT

Wildcat Herm

*API Number 30-045		*Pool Code 96352, 96353, 71560		*Pool Name Barker Dome-Desert Creek, Barker Dome-Par Barker Dome-Akan/Upper Barker Creek	
*Property Code 18725	*Property Name UTE MOUNTAIN UTE			*Well Number 54	
*OGRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			*Elevation 6183'	

10 Surface Location

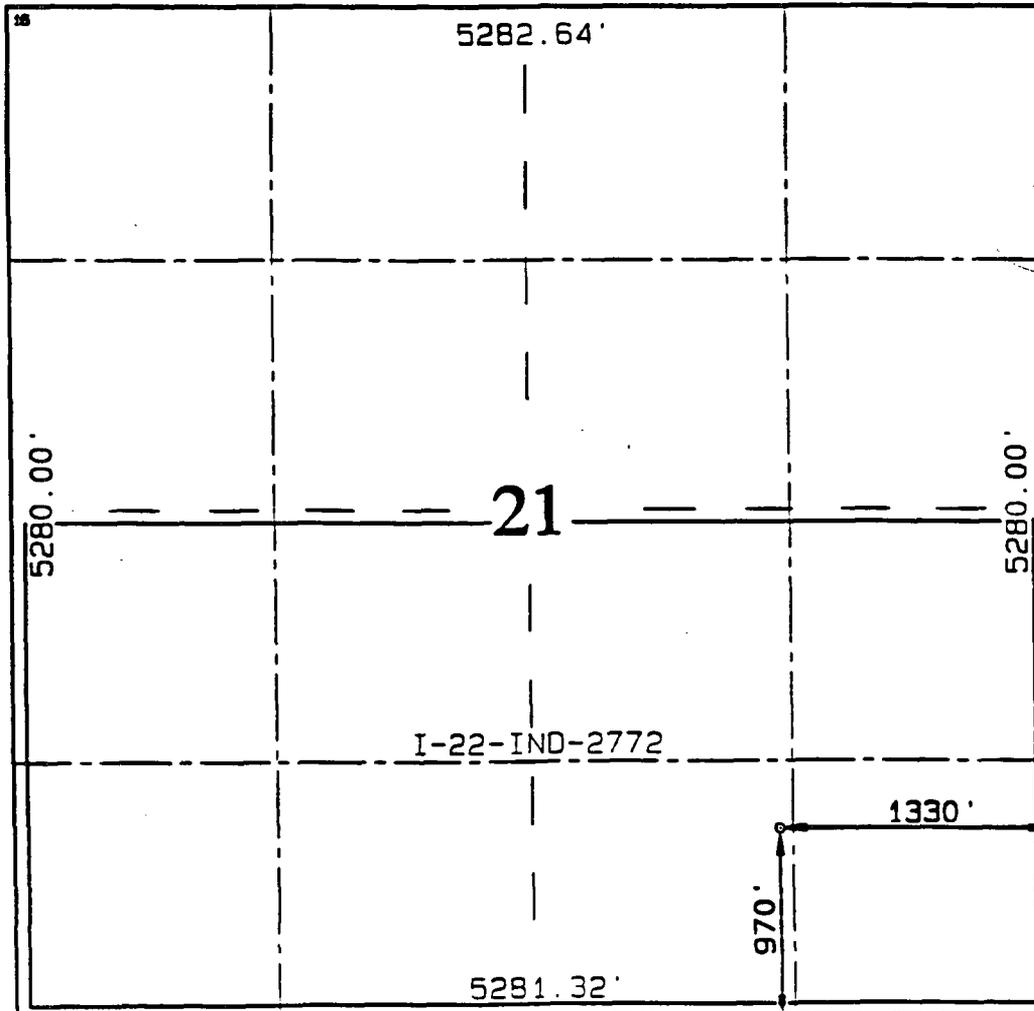
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	21	32N	14W		970	South	1330	East	SAN JUA

11 Bottom Hole Location If Different From Surface

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

12 Dedicated Acres S-320, 160, 640	13 Joint or Infill	14 Consolidation Code	15 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



17 OPERATOR CERTIFICATION

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

*Peggy Bradfield*  
Signature  
Peggy Bradfield  
Printed Name  
Regulatory Administrator  
Title  
2/6/98  
Date

18 SURVEYOR CERTIFICATION

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

NOVEMBER 21, 1997

Date of Survey

Signature and Seal of Surveyor

NEALE C. EDWARDS  
NEW MEXICO  
6857  
6857  
Certificate Number

February 6, 1998

OPERATIONS PLAN

Well Name: Ute Mtn Ute #54  
 Location: 970' FSL, 1330' FEL Section 21, T-32-N, R-14-W  
 San Juan County, NM  
 Formation: Wildcat Hermosa; Barker Dome Desert Creek; Barker Dome Ismay;  
 Barker Dome Akah/Upper Barker Creek; Barker Dome Lower Barker  
 Creek  
 Elevation: 6183' GR

Formation:	Top	Bottom	Contents
Surface	Pt Lookout	1179'	
Mancos	148'	1337'	
Niobrara	1337'	2057'	
Greenhorn	2057'	2114'	
Graneros	2114'	2169'	
Dakota	2169'	2387'	gas
Morrison	2387'	3297'	fresh water
Summerville	3297'	3379'	
Todilto	3379'	3390'	
Entrada	3390'	4024'	salt water
Chinle	4024'	4933'	
Cutler	4933'	6577'	
Hermosa	6577'	7705'	
Ismay	7705'	7875'	gas (potentially 100-1580 ppm H <sub>2</sub> S)
Desert Creek	7875'	8009'	gas (potentially 4-11,900 ppm H <sub>2</sub> S)
Akah	8009'	8177'	
Upper Barker Creek	8177'	8279'	gas (potentially 0-12,000 ppm H <sub>2</sub> S)
Lower Barker Creek	8279'	8386'	
Upper Alkali Gulch	8386'	8572'	
Lower Alkali Gulch	8572'	8758'	
Molas	8758'		
Total Depth		8775'	

Logging Program:

Mud logs - Niobrara to Total Depth  
 Wireline Logs - AIT-SP-GR-Cal, Micro-SP-GR-Cal, FMI TD to surface csg

Mud Program:

Interval	Type	Weight	Vis	Fluid Loss
0 - SCP	Spud	8.4-8.9	40	No Control
SCP-T. Ismay	Fresh Water	8.4-8.6	26-30	No Control
T. Ismay-TD	LSND/Dispersed	8.4-9.0	36-50	Less than 12

Casing Program: (all casing will be new)

Hole Size	Depth Interval	Csq. Size	Wt.	Grade
12 1/4"	0' - 398'	8 5/8"	24.0#	K-55 LT&C
7 7/8"	0' - 8775'	5 1/2"	17.0#	L-80 LT&C

Tubing Program: 0' - 8775' 2 7/8" tubing

Pressure Control Program:

12 1/4" hole - diversion only

7 7/8" hole - a 3000 psi WP casinghead will be installed on the surface casing. A 3000 psi WP annulus preventer, a 3000 psi WP double gate preventer equipped with blind and pipe rams, and a 3000 psi x 3000 psi WP drilling spool with kill and choke lines will be nipped up on the casinghead. The annulus preventer will be tested to 500 psi low, 1500 psi high w/test plug for 15 minutes. Pipe and blind rams, choke line, and manifold will be tested at 500 psi low and 3000 psi high with a test plug for 15 minutes. Casing will be tested to 2200 psi (75% burst) prior to drilling the shoe.

Completion - a 5000 psi WP tubinghead will be installed on the production casing. A 5000 psi WP double gate preventer equipped with blind and pipe rams and a 5000 psi drilling spool equipped with kill and choke lines will be nipped up on the tubinghead. One 7" blooie line will be nipped up above the BOP's. A rotating head will be nipped up on top of the blooie line. Pipe and blind rams, choke line, and manifold will be tested at 500 psi and 4000 psi against casing. Casing will be tested to 4000 psi prior to completing well.

BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blow out preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. All tests will be reported on the daily drilling report. Preventers will be tested before drilling casing cement plugs.

In the event that a kick is taken while drilling, the following procedure will be followed:

1. Pick up kelly and raise the tool joint above floor.
2. Shut down the mud pump.
3. Close the annular preventer.
4. Record standpipe pressure (SIDPP) after it stabilizes and pit gain.
5. Calculate Initial Circulating Pressure=Slow Circulating Pressure+ SIDPP.
6. Calculate kill mud weight required.
7. Complete kill sheet.
8. Decide whether to raise mud weight or drill under-balanced.

BOP Configuration:

12 1/4" surface hole - 0' - 398' - diverter only

**3000 psi system**

7 7/8" production hole - 398' - 8775' - Figures #1 & #2

Operations Plan  
Ute Mtn Ute #54

Float Equipment:

Surface casing - guide shoe, float collar, centralizers every 4th joint.  
Production casing - float shoe, float collar, centralizers every 4th joint.

Wellhead Equipment (sour gas service):

11" 3000 psi x 8 5/8" female thread casinghead  
11" 3000 psi x 7 1/16" 5000 psi tubinghead  
7 1/16" 5000 psi x 2 7/8" 5000 psi adapter  
Tree assembly for single completion gas service.

Cementing:

8 5/8" surface casing - Cement with 250 sx Class "B" with 0.25 pps flocele and 2% calcium chloride (15.6 ppg weight; 328 cu.ft. of slurry), 100% excess circulated to surface.

5 1/2" production - 963 sx 50/50 Class "B" blended Silicalite, 3 pps gilsonite, 0.375 pps flocele (11.45 ppg, 2244 cu.ft. of slurry.) Tail with 603 sx Class "G" 50/50 Poz with 2% gel, 5 pps gilsonite, 0.25 pps flocele, and 0.4% Halad-344 (13.5 ppg, 796 cu.ft. of slurry), 100% excess circulated to surface.

5 1/2" production (Alternative two stage cement job) - Cement with stage tool @ 6477'. First stage - cement with 669 sx Class "G" with 0.2% FRC-3, 0.25 pps flocele, 0.3% Halad-344 (15.8 ppg, 796 cu.ft. of slurry), 100% excess to top of stage tool. Second stage - cement with 1268 sx 65/35 Class "B" Pozmix with 6% gel, 5 pps gilsonite, 1.25 pps flocele (12.6 ppg, 2244 cu.ft. of slurry), 100% excess circulated to surface.

Coring & Drill Stem Test Program: none.

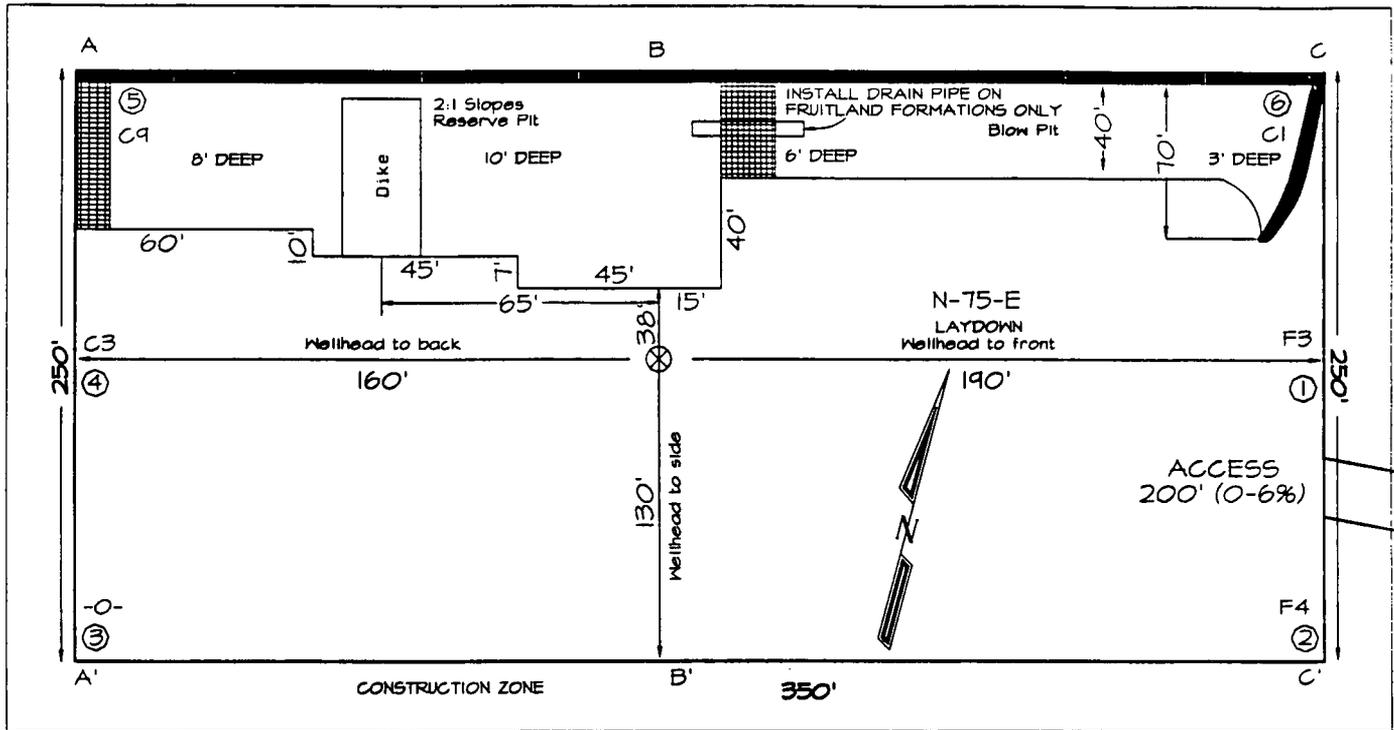
Anticipated abnormal pressures or temperatures: none. Anticipated bottom hole pressure is 3600 psi.

Date: 2/9/98

Drilling Engineer: 

**PLAT #1**

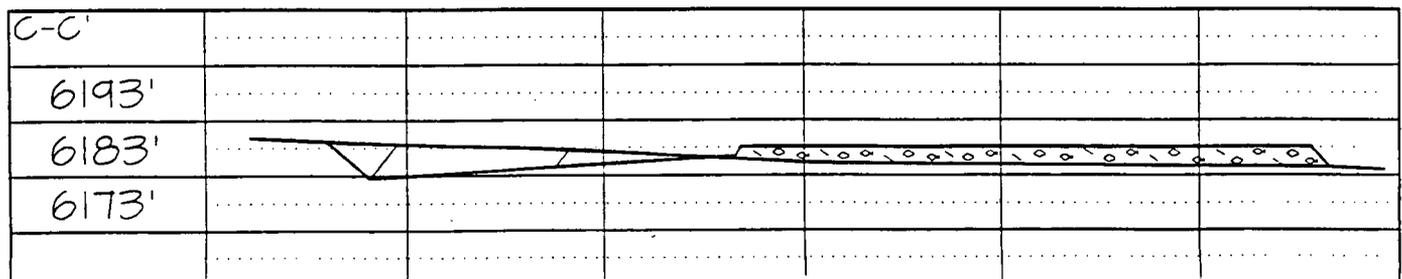
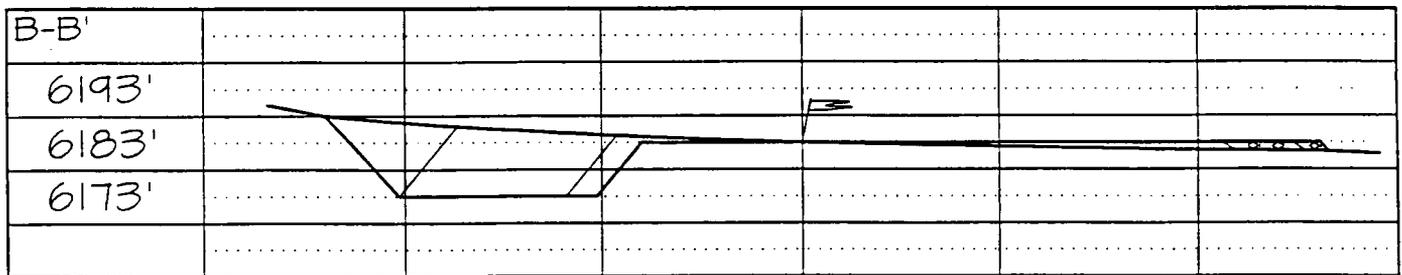
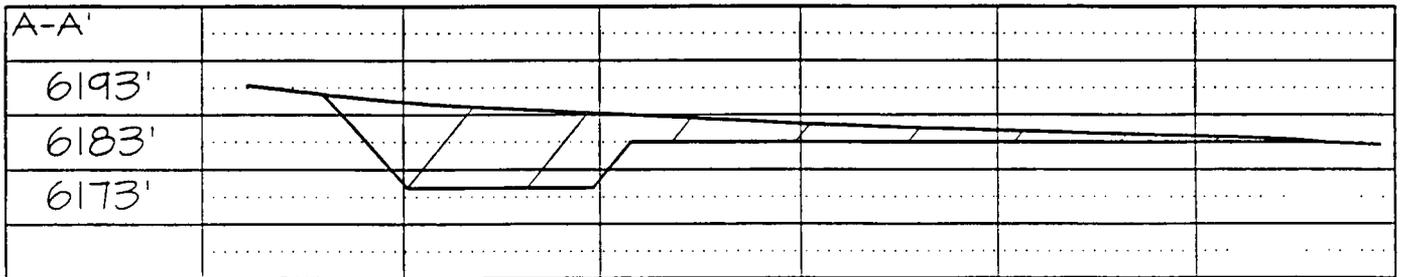
**BURLINGTON RESOURCES OIL & GAS COMPANY**  
**UTE MOUNTAIN UTE #54, 970' FSL & 1330' FEL**  
**SECTION 21, T32N, R14W, NMPM, SAN JUAN COUNTY, NEW MEXICO**  
**GROUND ELEVATION: 6183' DATE: NOVEMBER 21, 1997**



250' x 350'

(350' x 450') = 3.62 ACRES

Reserve Pit Dike: to be 8' above Deep side (overflow - 3' wide and 1' above shallow side).  
 Blow Pit: overflow pipe halfway between top and bottom and to extend over plastic liner and into blow pit.



Note: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction

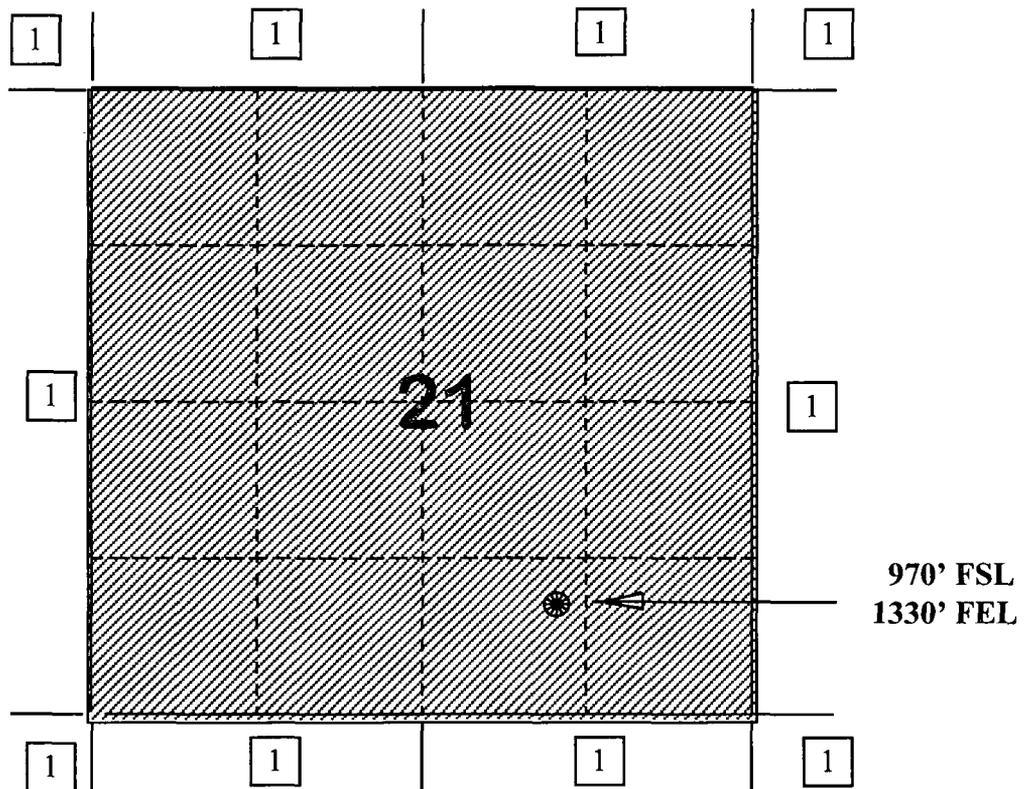
**BURLINGTON RESOURCES OIL AND GAS COMPANY**

**Ute Mountain Ute #54**

**OFFSET OPERATOR/OWNER PLAT**

**Barker Dome Paradox Formation (All)  
Wildcat Hermosa Formation (SE/4)**

**Township 32 North, Range 14 West**



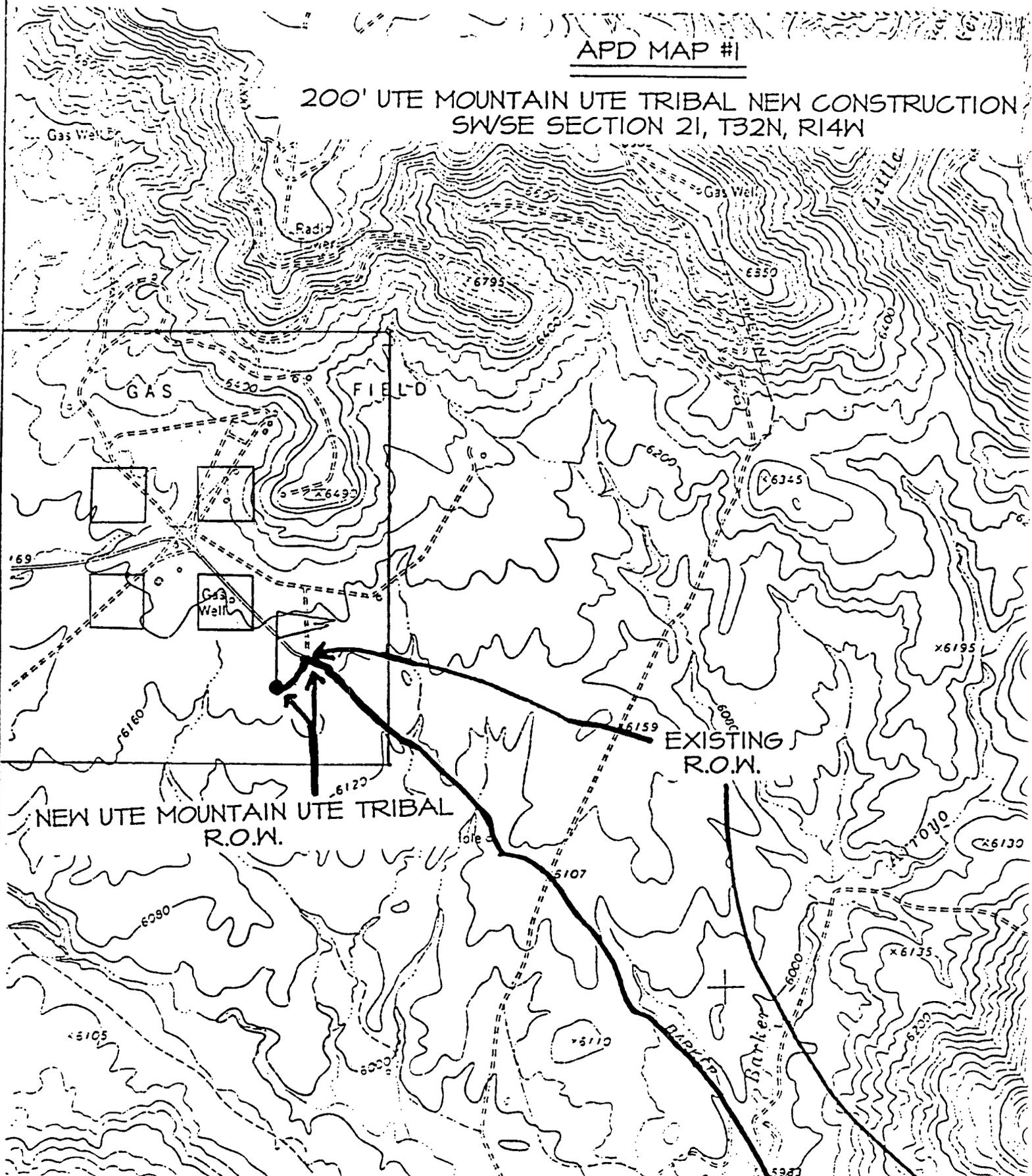
1) Burlington Resources



BURLINGTON RESOURCES OIL & GAS COMPANY UTE MT  
970' FSL 1330' FEL SEC 21, T32N, R14W  
SAN JUAN COUNTY, NEW MEXICO

APD MAP #1

200' UTE MOUNTAIN UTE TRIBAL NEW CONSTRUCTION  
SWSE SECTION 21, T32N, R14W



## **Stogner, Michael**

---

**From:** Stogner, Michael  
**Sent:** Tuesday, February 17, 1998 11:39 AM  
**To:** 'Peggy Bradfield'  
**Cc:** Chavez, Frank; Espy, Becky  
**Subject:** Ute Mountain Ute #54

Peggy:

Your cover letter requested a non-standard location for the Barker Dome-Paradox Pool (640-acre spacing), while the federal APD and NMOCD Form C-102 both indicate that the Wildcat Hermosa, Barker Dome-Ismay, Barker Dome Desert Creek/Upper Barker Creek, and the Barker Dome Lower Barker Creek Pool, whatever this one is, is to be included. My initial review indicates this location is unorthodox for the other intervals. I could be wrong of course. Are these other zones to be included.

So that I may understand exactly what Burlington is requesting in this matter please provide me separate C-102 Forms for each and every interval to be completed in this well (rather the well is standard for that zone or not) and on each plat show the orthodox window allowed for that interval.

Contact me should you have any questions.

Michael

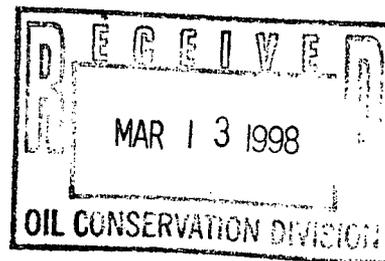
# BURLINGTON RESOURCES

SAN JUAN DIVISION

March 11, 1998

FAXED to 505-827-8177

Mr. Michael Stogner  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505



Re: Ute Mountain Ute #54  
970'FSL, 1330'FEL, Section 21, T-32-N, R-14-W, San Juan County, New Mexico  
API # 30-045-(not yet assigned)

Dear Mr. Stogner:

In response to our telephone conversation and your e-mail message, I have enclosed a C102 well location plat for each individual formation for the referenced well. The C102 plat shows the orthodox window for that particular formation and the dedicated acreage.

Also enclosed is a copy of the offset operators plat showing Burlington as the offset operator.

Production from the Wildcat Hermosa pool is to be included in a gas spacing and proration unit comprising the southeast quarter of Section 21, T-32-N, R-14-W for a total of 160 acres. Production from the Barker Dome Ismay pool is to be included in a gas spacing and proration unit comprising the southeast quarter of Section 21, T-32-N, R-14-W for a total of 160 acres. Production from the Barker Dome Desert Creek pool is to be included in a gas spacing and proration unit comprising the south half of Section 21, T-32-N, R-14-W for a total of 320 acres. Production from the Barker Dome Akah/Upper Barker Creek pool is to be included in a gas spacing and proration unit comprising the south half of Section 21, T-32-N, R-14-W for a total of 320 acres. Production from the Barker Dome Paradox pool is to be included in a gas spacing and proration unit comprising all of Section 21, T-32-N, R-14-W for a total of 640 acres.

I appreciate your assistance in looking at this well with me to clarify that all formations are indeed nonstandard. Please let me know if you have further questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "Peggy Bradfield".

Peggy Bradfield  
Regulatory/Compliance Administrator

xc: Bureau of Land Management  
NMOCD - Aztec District Office

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

State of New Mexico  
 Energy, Minerals & Natural Resources Department

Form C-102  
 Revised February 21, 1994

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

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

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

<sup>1</sup> API Number 30-045-	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name Wildcat Hermosa
<sup>4</sup> Property Code 18725	<sup>5</sup> Property Name UTE MOUNTAIN UTE	<sup>6</sup> Well Number 54
<sup>7</sup> GRID No. 14538	<sup>8</sup> Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY	<sup>9</sup> Elevation 6183'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	21	32N	14W		970	South	1330	East	SAN JUAN

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

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

<sup>12</sup> Dedicated Acres 160	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-46-B
--------------------------------------	-------------------------------	----------------------------------	-----------------------------------

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>

<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

*Peggy Bradfield*  
Signature

Peggy Bradfield  
Regulatory/Compliance  
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.

NOVEMBER 21, 1997  
Date of Survey

Signature and Seal of Professional Surveyor

6857  
Certificate Number

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994

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

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1000 Rio Brazos Rd., Aztec, NM 87410

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

AMENDED REPORT

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name Barker Dome Ismay
<sup>4</sup> Property Code 18725	<sup>5</sup> Property Name UTE MOUNTAIN UTE	
<sup>6</sup> OGRID No. 14538	<sup>7</sup> Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY	<sup>8</sup> Well Number 54
		<sup>9</sup> Elevation 6183'

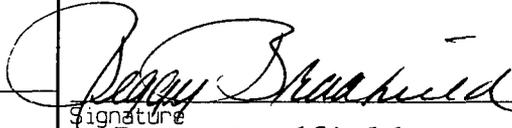
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	21	32N	14W		970	South	1330	East	SAN JUAN

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

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres 160		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No. R-46-B			

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

5280.00'	5282.64'	21	I-22-IND-2772	5280.00'	<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 Peggy Bradfield Printed Name Regulatory/Compliance Title Date
	5281.32'				

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

State of New Mexico  
 Energy, Minerals & Natural Resources Department

Form C-102  
 Revised February 21, 1994

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

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

Instructions on back  
 Submit to Appropriate District Office  
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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 30-045-		*Pool Code	*Pool Name Barker Dome Desert Creek
*Property Code 18725	*Property Name UTE MOUNTAIN UTE		*Well Number 54
*OGRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY		*Elevation 6183'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
0	21	32N	14W		970	South	1330	East	SAN JUAN

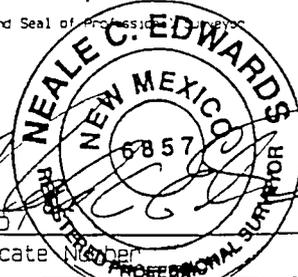
<sup>11</sup> Bottom Hole Location If Different From Surface

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

<sup>12</sup> Dedicated Acres 320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-46-B
--------------------------------------	-------------------------------	----------------------------------	-----------------------------------

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>15</sup> 5282.64'  21  I-22-IND-2772  5281.32' 970' 1330'	<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 Peggy Bradford  Printed Name Regulatory/Compliance 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.  NOVEMBER 21, 1997 Date of Survey Signature and Seal of Professional Surveyor  Certificate Number 6857	

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994

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

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

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AMENDED REPORT

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-		*Pool Code	*Pool Name Barker Dome Akah/Upper Barker Creek	
*Property Code 18725	*Property Name UTE MOUNTAIN UTE		*Well Number 54	
*OGRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY		*Elevation 6183'	

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
0	21	32N	14W		970	South	1330	East	SAN JUAN

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

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

<sup>12</sup> Dedicated Acres 320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-46-B
--------------------------------------	-------------------------------	----------------------------------	-----------------------------------

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>15</sup> 	<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 Peggy Bradfield Printed Name Regulatory/Compliance 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.  NOVEMBER 21, 1997 Date of Survey Signature and Seal of Professional Surveyor  Certificate Number

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994

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

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

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

AMENDED REPORT

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name Barker Dome Paradox
<sup>4</sup> Property Code 18725	<sup>5</sup> Property Name UTE MOUNTAIN UTE	<sup>6</sup> Well Number 54
<sup>7</sup> OGRID No. 14538	<sup>8</sup> Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY	<sup>9</sup> Elevation 6183'

<sup>10</sup> Surface Location

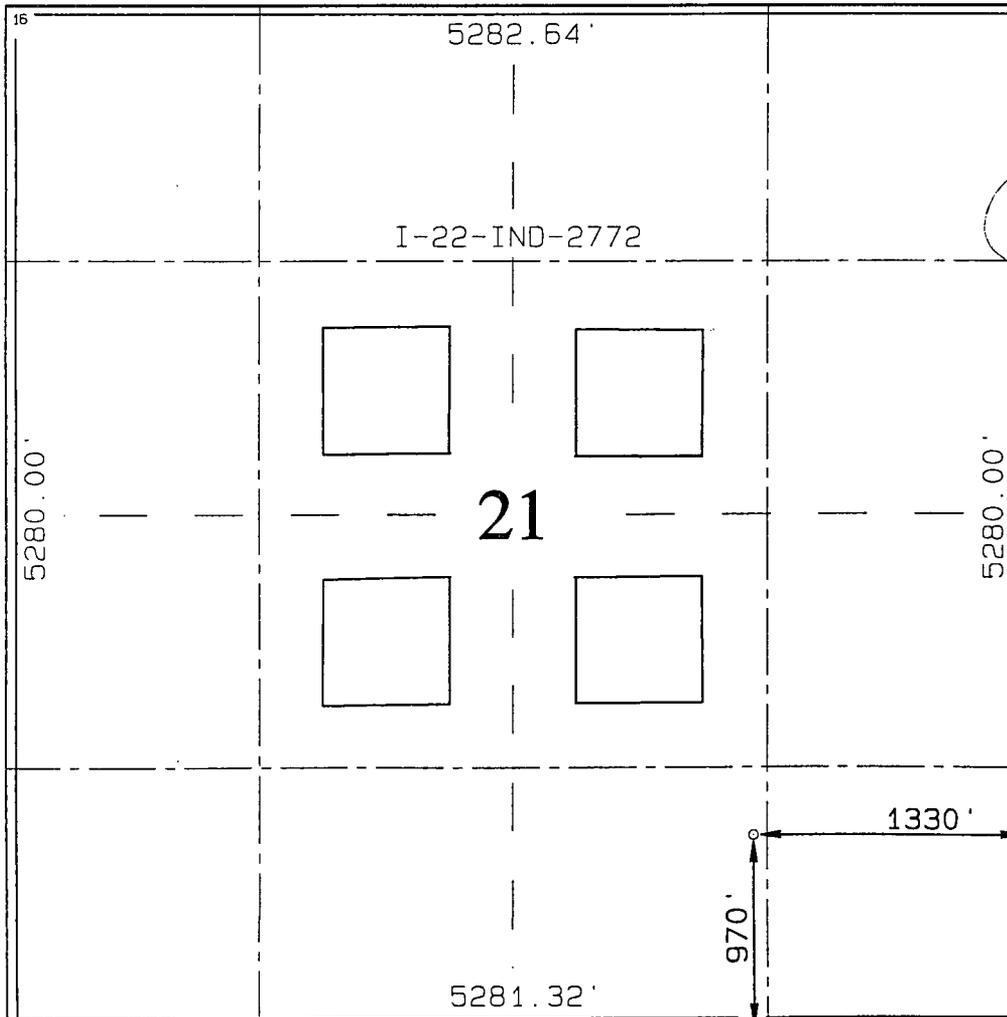
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	21	32N	14W		970	South	1330	East	SAN JUAN

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

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

<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-46-B
--------------------------------------	-------------------------------	----------------------------------	-----------------------------------

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>17</sup> OPERATOR CERTIFICATION

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

*Peggy Bradford*  
Signature

Peggy Bradford  
Printed Name

Regulatory/Compliance  
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.

NOVEMBER 21, 1997  
Date of Survey

Signature and Seal of Professional Surveyor

6857  
Certificate Number

**BURLINGTON RESOURCES OIL AND GAS COMPANY**

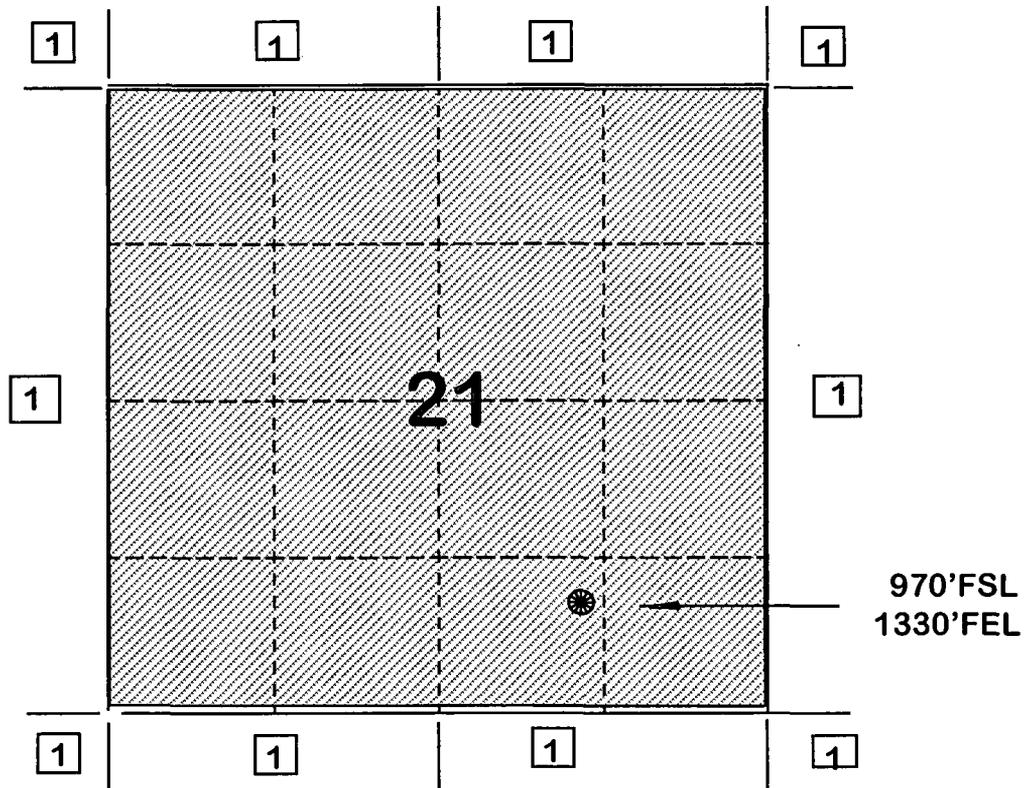
**Ute Mountain Ute #54**

**OFFSET OPERATOR \ OWNER PLAT**

**Non Standard Location**

**Barker Dome Paradox Formation (All)  
Ismay / Wildcat Hermosa Formation (SE/4)  
Desert Creek / Akah / Upper Barker Creek (S/2)**

**Township 32 North, Range 14 West**



**1) Burlington Resources**

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

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

**CASE NO. 11745  
Order No. R-10815**

**APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY TO  
AMEND DIVISION RULES 104.B AND 104.C TO ESTABLISH 640-ACRE  
SPACING, INCLUDING WELL LOCATION REQUIREMENTS FOR GAS  
PRODUCTION BELOW THE BASE OF THE DAKOTA FORMATION IN SAN  
JUAN, SANDOVAL AND MCKINLEY COUNTIES, NEW MEXICO**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on March 19, 1997, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 5th day of June, 1997, the Commission, a quorum being present, having considered the record and being fully advised in the premises,

**FINDS THAT:**

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

(2) On March 19, 1997, the Commission commenced a public hearing based upon the application of Burlington Resources Oil and Gas Company ("Burlington") to consider modifications to Division General Rule 104 which currently provides for 160-acre gas spacing and proration units in the San Juan Basin of New Mexico.

(3) Burlington seeks to allow for 640-acre proration and spacing units, including modification of well location requirements, for deep gas wells in the San Juan Basin by amending Rule 104.B(2)(a) and Rule 104.C(3)(a) and adopting a new Rule 104.B(2)(b) and Rule 104.C(3)(b).

(4) Burlington proposes that:

- (a) the vertical limits of the affected area would be defined as all gas formations below the base of the Cretaceous period (below the Dakota formation); and
- (b) the horizontal limits of the affected area would be defined as within the surface outcrop of the Pictured Cliffs formation.

(5) Burlington presented geologic, land and petroleum engineering evidence which demonstrated that the current 160-acre gas spacing unit size for deep gas has discouraged efforts to develop the deep gas in the San Juan Basin because:

- (a) deep gas wells drain more than 160-acres;
- (b) a 160-acre unit does not provide sufficient gas-in-place to economically justify the drilling and completing of deep gas wells which currently cost in excess of two million dollars to drill and complete;
- (c) operators do not want to assume the risk of either (a) drilling a deep gas well on 160-acre spacing only to have the owners in the adjoining 160-acre drill another deep gas well which is not necessary in order to drain the area or (b) pooling the adjoining tracts into a 640-acre unit after the well is drilled only to have the adjoining owners avoid assuming any of the risk of drilling the deep gas well;
- (d) due to the diversity of ownership, it is extremely difficult to consolidate 640-acres into a voluntary spacing unit for the drilling of wildcat and development deep gas wells;
- (e) royalty interests cannot voluntarily or involuntarily pool their interests for spacing units larger than 160 acres and therefore cannot share in production from wells capable of draining 640 acres; and
- (f) compulsory pooling is available only for spacing units consistent with the well spacing adopted by the Division which is currently limited to 160 acres.

(6) All parties appearing before the Commission support modifying current Rule 104 to provide for 640-acre "deep gas" spacing.

(7) Amoco Producing Company appeared in support of 640-acre deep gas spacing but requested that this modification include provision for obtaining 640-acre spacing, after notice and hearing, on a temporary basis prior to drilling the well and for an area not to exceed nine sections and then requiring another hearing after the well was completed in order to determine actual drainage areas and adopt "final" spacing units.

(8) Burlington opposed Amoco's request on the grounds that such a complicated procedure would lead to the drilling of unnecessary wells and would discourage deep gas drilling because the participating working interest owners would have to assume the risk of uncertain "final spacing".

(9) The Commission finds that Rule 104 should be modified on a permanent basis to provide for 640-acre gas spacing units, including modified well location requirements for the deep gas formations of the San Juan Basin for the following reasons:

- (a) On December 1, 1950, the Commission revised its Rules and Regulations including amending Rule 104 to designate 160-acre gas well spacing for San Juan, Rio Arriba and Sandoval Counties, New Mexico, with well locations 990 feet to the outer boundary.
- (b) Burlington has developed Barker Creek-Barker Dome and Alkali Gulch areas on 640-acre spacing and has projected similar geologic and reservoir engineering data for the deeper formations underlying the subject area of San Juan Basin.
- (c) The "deep gas" reservoirs from the base of the Dakota formation to the base of the Pennsylvanian formation in the San Juan Basin have not been effectively explored because operators have generally confined exploration to the shallow, less risky Cretaceous gas reservoirs.
- (d) The current rules have discouraged "deep gas" well exploration because an operator is required to risk the drilling of a deep gas well on 160-acre spacing with the "hope" that larger spacing units can be obtained after production is encountered.

- (e) The Pennsylvanian-aged strata in the San Juan Basin lie much deeper than in the Baker Dome, Alkali Gulch and Ute Dome pools. As a result, anticipated pressure in reservoirs below the base of the Dakota formation are projected to be high enough to enable one well per 640 acres to efficiently drain the reservoir with adequate porosity and permeability.
- (f) Drilling wells according to the current 160-acre gas spacing rules would result in economic and physical waste. The impact on the surface, including topographic, geologic and archeological concerns will also be reduced under 640-acre gas spacing rules which include well locations not closer than 1200 to the outer boundary, 130 feet to a quarter line or closer than 10 feet to any quarter-quarter line.
- (g) Wells drilled to formations below the base of the Dakota formation are "high-risk" and "high-cost" ventures. Establishment of 640-acre gas spacing will encourage deep exploration by allowing the formation of 640 acre compulsory pooling units.
- (h) By making this modification permanent, it will create the opportunity for operators to drill these high risk wells and obtain reservoir data from which to determine if "infill" drilling may be appropriate at some future time.
- (i) The requested modification of Rule 104 should be made on a permanent basis which still affords any operator the opportunity to petition the Division to grant exceptions to General Rule 104 for the creation of individual pools with their own unique special rules and regulations when and where appropriate.
- (j) The amendments of Rule 104 as set forth in Exhibit "A", will prevent the economic loss caused by the drilling of unnecessary wells, will avoid the risks associated with the drilling of an excessive number of wells, will increase the opportunity to drill for "deep gas" by the consolidation of tracts into larger spacing units and will otherwise prevent waste and protect correlative rights.
- (k) The vertical limits subjected to 640 acre gas spacing should be the interval below the base of the Cretaceous period (below the Dakota formation); and the horizontal limits of the affected area should be the area within the surface outcrop of the Pictured Cliffs formation as shown on Exhibit "B".

(10) There exists a substantial opportunity for operators in the San Juan Basin to commence a significant exploration efforts to explore the deeper gas potential in the San Juan Basin and adoption of 640-acre deep gas spacing will encourage this exploration effort.

(11) The Commission further **FINDS** that:

- (a) the adoption of these amendments to Rule 104 will provide a more flexible method for the timely and efficient drilling of deep gas wells while providing for the orderly and proper regulations of well locations and spacing units thereby protecting correlative rights and preventing waste;
- (b) the adoption of these amendments to Rule 104 will prevent waste of valuable hydrocarbons, the drilling of unnecessary wells and the protection of the correlative rights of the owners of that production.

**IT IS THEREFORE ORDERED THAT:**

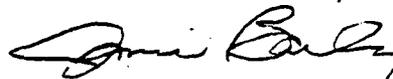
(1) Division Rule 104 is hereby amended to conform to the rule changes hereby adopted by the Commission and as set forth on Exhibit "A" attached hereto and made part of this order.

(2) Rule 104 as amended shall be effective on the date of its publications in the New Mexico Register.

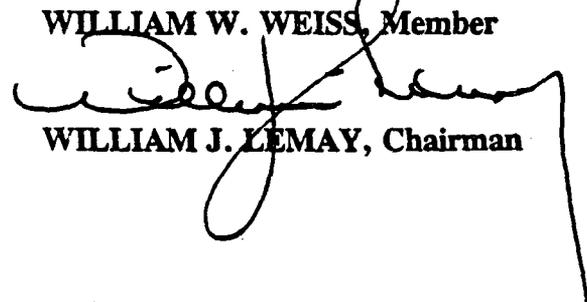
(3) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
JAMI BAILEY, Member

  
WILLIAM W. WEISS, Member

  
WILLIAM J. LEMAY, Chairman

S E A L

CASE NO. 11745  
ORDER NO. R-10815  
EXHIBIT "A"

**For wildcat wells - Rule 104.B(2)**

(a) **Shallow Wildcat Gas Wells.** In San Juan, Rio Arriba, Sandoval and McKinley Counties, a wildcat well which is projected to a gas-producing horizon in a formation younger than the Dakota formation, or in the Dakota formation, which was created and defined by the Division after March 1, 1997, shall be located on a designated drilling tract consisting of 160 contiguous surface acres, more or less, substantially in the form of a square which is a quarter section, being a legal subdivision of the U.S. Public Land Survey, and shall be located not closer than 790 feet to any outer boundary of the tract nor closer than 130 feet to any quarter-quarter section line or subdivision inner boundary.

(b) **Deep Wildcat Gas Wells.**

In San Juan, Rio Arriba, Sandoval and McKinley Counties, a wildcat well which is projected to a gas-producing formation in a formation older than the Dakota formation (below the base of the Cretaceous period) and

(i) located within the surface outcrop of the Pictured Cliffs formations (i.e., the "San Juan Basin") shall be located on a designated drilling tract consisting of 640 contiguous surface acres, more or less, substantially in the form of a square which is a section, being a legal subdivision of the U.S. Public Land Survey, and shall be located not closer than 1200 feet to any outer boundary of the tract nor closer than 130 feet to any quarter section line nor closer than 10 feet to any quarter-quarter section line or subdivision inner boundary; or

(ii) located outside the surface outcrop of the Pictured Cliffs formations (i.e., the "San Juan Basin") shall be located on a designated drilling tract consisting of 160 contiguous surface acres, more or less, substantially in the form of a square which is a section, being a legal subdivision of the U.S. Public Land Survey, and shall be located not closer than 790 feet to any outer boundary of the tract nor closer than 130 feet to any quarter section line, quarter-quarter section line or subdivision inner boundary.

(c) Current Rules 104.B(2)(b), (c) and (d) shall be renumbered as Rule 104.B(2) (c), (d) and (e) respectively.

**For Development Wells - Rule 104.C(3)**

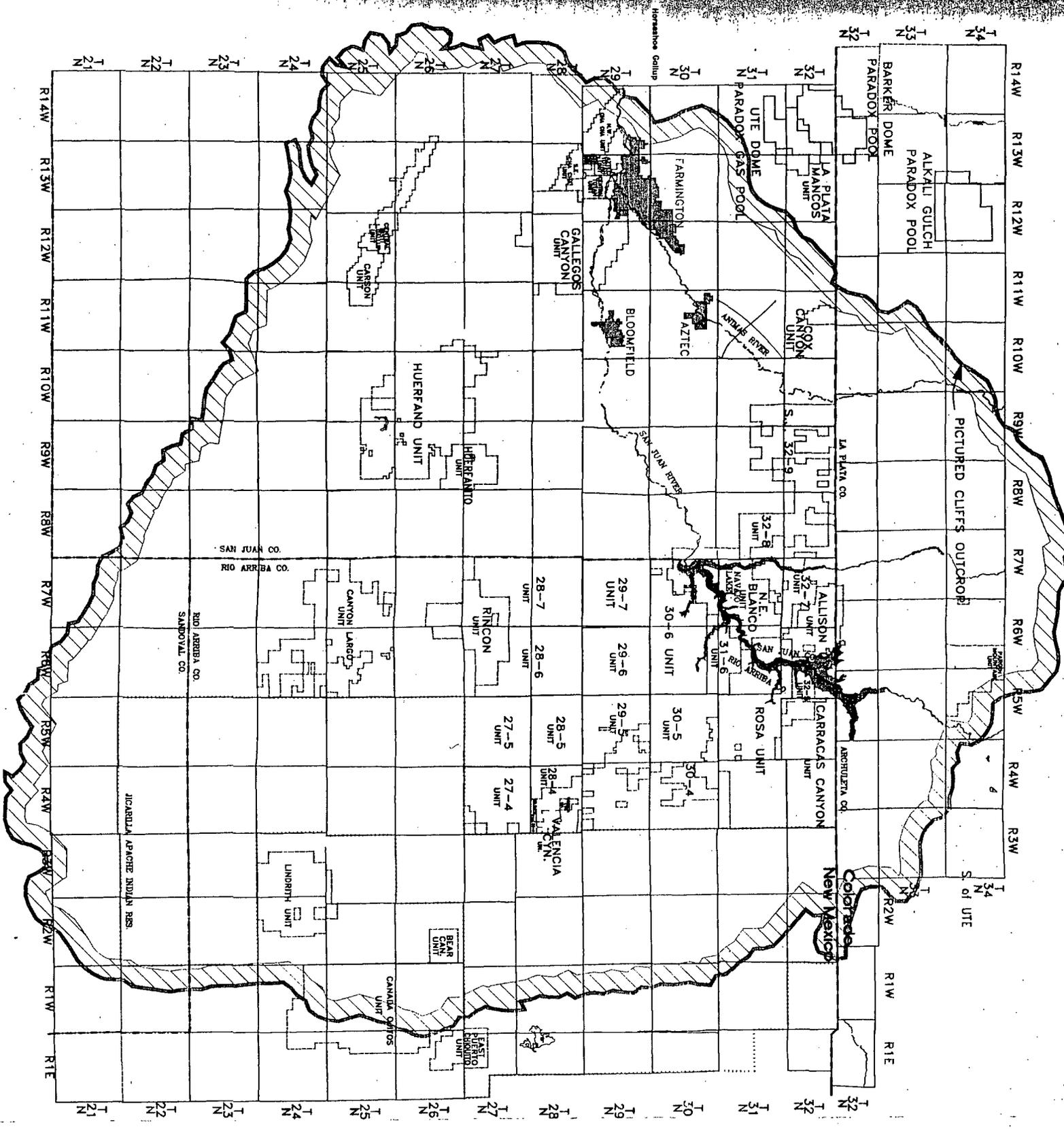
- (a) **Shallow Gas Wells.** Unless otherwise provided in special pool rules, each development well for a defined gas pool in a formation younger than the Dakota formation, or in the Dakota formation, which was created and defined by the Division after March 1, 1997, shall be located on a designated drilling tract consisting of 160 contiguous surface acres, more or less, substantially in the form of a square which is a quarter section, being a legal subdivision of the U.S. Public Land Survey, and shall be located not closer than 790 feet to any outer boundary of the tract nor closer than 130 feet to any quarter-quarter section line or subdivision inner boundary.
- (b) **Deep Gas Wells.** Unless otherwise provided in special pool rules, each development well for a defined gas pool in a formation older than the Dakota formation (below the base of the Cretaceous period) and
- (i) is located within the surface outcrop of the Pictured Cliffs formations (i.e., the "San Juan Basin") which pool was created and defined by the Division after June 1, 1997, shall be located on a designated drilling tract consisting of 640 contiguous surface acres, more or less, substantially in the form of a square which is a section, being a legal subdivision of the U.S. Public Land Survey, and shall be located not closer than 1200 feet to any outer boundary of the tract nor closer than 130 feet to any quarter section line nor closer than 10 feet to any quarter-quarter section line or subdivision inner boundary; or
- (ii) is located outside the surface outcrop of the Pictured Cliffs formations (i.e., the "San Juan Basin") which pool was created and defined by the Division after June 1, 1997, shall be located on a designated drilling tract consisting of 160 contiguous surface acres, more or less, substantially in the form of a square which is a section, being a legal subdivision of the U.S. Public Land Survey, and shall be located not closer than 790 feet to any outer boundary of the tract nor closer than 130 feet to any quarter section line, quarter-quarter section line or subdivision inner boundary.

CASE NO. 11745 – ORDER NO. R-10815

EXHIBIT "B"

640-Acre Deep Gas Acreage Boundary  
(Pictured Cliffs Pool Outline)

TOWNSHIP	RANGE	SECTION
21 North	2 West	1 - 24, 26 - 33
21 North	3 West - 5 West	All
21 North	6 West	All
21 North	7 West	1 - 18, 23 - 25
22 North	1 West	4 - 9, 17 - 20, 30, 31
22 North	2 West - 7 West	All
22 North	8 West	1 - 30, 34 - 36
22 North	9 West	1 - 18, 23 - 25
23 North	1 West	5 - 8, 17 - 20, 29 - 32
23 North	2 West - 9 West	All
23 North	10 West	1 - 17, 21 - 26
23 North	11 West	1 - 6, 9 - 13
24 North	1 West	2 - 10, 14 - 20, 24 - 32
24 North	2 West - 14 West	All
25 North	1 West	1 - 11, 14 - 23, 24 - 35
25 North	2 West - 14 West	All
26 North	1 West - 14 West	All
27 North	1 West	7 - 10, 15 - 22, 27 - 34
27 North	2 West - 14 West	All
28 North	1 West	4 - 9, 16 - 21, 28 - 34
28 North	2 West - 14 West	All
29 North	1 West	4 - 9, 16 - 21, 28 - 34
29 North	2 West - 13 West	All
29 North	14 West	1 - 4, 8 - 17, 19 - 36
30 North	1 West	5 - 8, 17 - 20, 24 - 32
30 North	2 West - 13 West	All
30 North	14 West	1 - 4, 9 - 16, 21 - 27, 33 - 36
31 North	2 West - 12 West	All
31 North	13 West	1, 12 - 14, 21 - 36
31 North	14 West	25, 26, 34 - 36
32 North	2 West	12 - 22, 28 - 34
32 North	3 West - 11 West	All
32 North	12 West	10 - 15, 21 - 29, 31 - 36



BURLINGT  
 FARMING  
 LOCATIO

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

✓  
CASE NO. 237  
ORDER NO. R-46

THE APPLICATION OF THE OIL  
CONSERVATION COMMISSION UPON  
ITS OWN MOTION FOR ESTABLISHING  
A WELL SPACING PATTERN FOR  
EACH OF THE DESIGNATED GAS  
POOLS IN THE COUNTIES OF SAN  
JUAN AND RIO ARRIBA, STATE OF  
NEW MEXICO PRODUCING OR CAPABLE  
OF PRODUCING GAS FROM PICTURED  
CLIFFS FORMATION, EXCEPT KUTZ  
CANYON-FULCHER BASIN, MESAVERDE  
FORMATION (EXCEPT BLANCO POOL)  
AND ANY OF THE PENNSYLVANIAN  
FORMATIONS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on regularly for hearing at 10:00 o'clock A.M.,  
November 21, 1950, at Santa Fe, New Mexico, before the Oil Conservation  
Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 29th day of December, 1950, the Commission having con-  
sidered the whole matter including the testimony adduced at said hearing,

FINDS:

1. That due public notice having been given as required by law, the  
Commission has jurisdiction of this cause and the subject matter thereof.
2. That for purposes of orderly development, protection of correlative  
rights and the prevention of waste, the following pools in San Juan and Rio  
Arriba Counties, New Mexico heretofore by the Commission named, defined  
and classified as gas pools, as the respective boundaries thereof may be

changed by extension or otherwise, should be provided with proper spacing pattern and production units;

- Aztec (Pictured Cliffs) pool, 160-acre spacing;
- Barker Creek, Paradox (Pennsylvanian) pool, 640-acre spacing;
- Blanco (Pictured Cliffs) pool, 160-acre spacing;
- Gavilan (Pictured Cliffs) pool, 160-acre spacing;
- La Plata (Mesaverde) pool, 320-acre spacing;
- NW La Plata (Mesaverde) pool, 320-acre spacing;
- South La Plata (Mesaverde) pool, 320-acre spacing;
- South Kutz Canyon (Pictured Cliffs) pool, 160-acre spacing;
- West Kutz Canyon (Pictured Cliffs) pool, 160-acre spacing;
- Ute Dome (Paradox) pool, 640-acre spacing.

3. That for La Plata, NW La Plata and South La Plata pools, wells should be orthodox locations on NW/4 and SE/4 of each section in said pools.

4. Under 160-acre spacing for Aztec, Blanco (Pictured Cliffs), Gavilan, South Kutz Canyon and West Kutz Canyon pools, orthodox locations should be required as stated in Rule 104 (or 330' from inner and 660' from outer boundaries of the respective quarter section);

5. For those pools appearing to require 640-acre spacing in Pennsylvanian formation, orthodox locations should be required to be not closer than 330' to center and 1650' from boundary of each section in the Barker Creek (Paradox-Pennsylvanian) and Ute Dome (Paradox-Pennsylvanian) pools.

6. That existing Commission Orders 748 and 815, relating to the Kutz Canyon-Fulcher Basin pool, and Order No. 799 relating to the Blanco pool should be and remain in full effect and undisturbed hereby.

IT IS THEREFORE ORDERED:

1. That for purposes of orderly development, protection of correlative rights, and the prevention of waste, a spacing and production unit pattern is hereby provided for each of the following heretofore named, defined and classified pools, as the respective boundaries thereof may from time to time be changed:

<u>POOL</u>	<u>FORMATION</u>	<u>SPACING</u>
Aztec	Pictured Cliffs	160-acre
Barker Creek	Paradox-Pennsylvanian	640-acre
Blanco	Pictured Cliffs	160-acre
Gavilan	Pictured Cliffs	160-acre
La Plata	Mesaverde	320-acre
NW La Plata	Mesaverde	320-acre

<u>POOL</u>	<u>FORMATION</u>	<u>SPACING</u>
South LaPlata	Mesaverde	320-acre
South Kutz Canyon	Pictured Cliffs	160-acre
West Kutz Canyon	Pictured Cliffs	160-acre
Ute Dome	Paradox	640-acre

2. That orthodox locations shall be in the approximate center of the NW/4 and SE/4 of each section within the confines of LaPlata, Northwest LaPlata, and south LaPlata pools, under 320 acre spacing for Mesaverde production.

3. That orthodox locations shall be as in Rule 104 (or 330' from inner and 660' from outer boundaries of the respective quarter section) within the boundaries of the Aztec, Blanco, Gavilan, South Kutz Canyon and West Kutz Canyon pools for 160-acre spacing for Pictured Cliffs production.

4. That orthodox locations shall be not closer than 330' to center of the respective sections and 1650' from boundaries within the boundaries of Barker Creek and Ute Dome pools for 640-acre spacing for Paradox-Pennsylvanian production.

5. That Orders Nos. 748, 815, relative to Kutz Canyon- Fulcher Basin Pool, and 799, relating to Blanco Mesaverde, shall remain in full force and effect.

6. That wells now drilled or drilling are excepted.

IT IS FURTHER ORDERED:

1. That for the purpose of preventing inequities and impairment of correlative rights the Commission upon its own motion or upon its own motion or upon application of any interested person, after notice and hearing grant exceptions in proper cases.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

THOMAS J. MABRY, CHAIRMAN

GUY SHEPARD, MEMBER

R. R. SPURRIER, SECRETARY

SEAL

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:

NOMENCLATURE  
CASE NO. 11089  
Order No. R-46-A

APPLICATION OF MERIDIAN OIL INC. TO  
CONTRACT THE VERTICAL LIMITS OF THE  
BARKER CREEK-PARADOX (PENNSYLVANIAN)  
POOL, THE AMENDMENT OF DIVISION ORDER  
NO. R-46, AND THE CONCOMITANT CREATION  
OF THREE GAS POOLS EACH WITH SPECIAL  
RULES AND REGULATIONS 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 November 10, 1994, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 13th day of February, 1995, 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) By Order No. R-13 issued in Case No. 213 on March 15, 1950, the Division created and defined the Barker Creek-Paradox (Pennsylvanian) Gas Pool, San Juan County, New Mexico.

(3) By Order No. R-46 issued in Case No. 237 on December 29, 1950, the Division promulgated Special Rules and Regulations for the Barker Creek-Paradox (Pennsylvanian) Gas Pool including 640-acre gas spacing with wells to be located no closer than 1650 feet from the outer boundary of the proration unit nor closer than 330 feet from the center of the proration unit. The vertical limits of the Barker Creek-Paradox (Pennsylvanian) Gas Pool currently comprise all of the Pennsylvanian formation.

(4) The Barker Creek-Paradox (Pennsylvanian) Gas Pool currently comprises the following described area in San Juan County, New Mexico all as projected into the unsurveyed Ute Mountain Indian Reservation:

TOWNSHIP 32 NORTH, RANGE 14 WEST, NMPM

Sections 9 through 11: All  
Sections 14 through 16: All  
Section 17: E/2  
Sections 19 through 22: All  
Section 23: NW/4  
Section 27: NW/4  
Section 28: N/2  
Section 29: All

(5) The applicant, Meridian Oil Inc., seeks to contract the vertical limits of the Barker Creek-Paradox (Pennsylvanian) Gas Pool to include only the Lower Barker Creek and Alkali Gulch members of the Paradox interval, and the concomitant creation of three new gas pools comprising, respectively, the Upper and Lower Ismay members, the Desert Creek member, and the Akah and Upper Barker Creek members of the Paradox interval.

(6) The applicant further seeks:

- a) to expand the pool boundaries of the Barker Creek-Paradox (Pennsylvanian) Gas Pool to include the following described area as projected into the unsurveyed Ute Mountain Indian Reservation in San Juan County, New Mexico:

TOWNSHIP 32 NORTH, RANGE 14 WEST, NMPM

Sections 7 and 8: All  
Section 17: W/2  
Section 18: All  
Section 28: S/2  
Section 30: All

- b) to establish pool boundaries for the three proposed new gas pools similar to those for the Barker Creek-Paradox (Pennsylvanian) Gas Pool;
- c) to promulgate special rules and regulations for the proposed gas pools as follows:

<u>PROPOSED POOL</u>	<u>WELL SPACING</u>	<u>SETBACK REQUIREMENTS</u>
Ismay	160-acres	No closer than 330 feet from the outer boundary of the spacing unit nor closer than 20 feet from any governmental quarter-quarter section line or subdivision inner boundary.
Desert Creek	320-acres	No closer than 790 feet from the outer boundary of the spacing unit nor closer than 130 feet from any governmental quarter-quarter section line or subdivision inner boundary.
Akah/Upper Barker Creek	320-acres	No closer than 790 feet from the outer boundary of the spacing unit nor closer than 130 feet from any governmental quarter-quarter section line or subdivision inner boundary.

- d) to amend the well location requirements for the Barker Creek-Paradox (Pennsylvanian) Gas Pool such that wells can be located no closer than 790 feet from the outer boundary of the spacing unit nor closer than 130 feet from any governmental quarter-quarter section line or subdivision inner boundary.

(7) The applicant proposes that the vertical limits of each of the subject pools comprise the following described intervals as found on the log run on the Meridian Oil Inc. Ute Well No. 16 located in Unit I, Section 22, Township 32 North, Range 13 1/2 West, La Plata County, Colorado:

<u>INTERVAL</u>	<u>VERTICAL LIMITS</u>
Ismay (Includes Upper and Lower Ismay)	8502'-8693'
Desert Creek	8693'-8809'
Akah/Upper Barker Creek	8809'-9134'
Barker Creek (Includes Lower Barker Creek and Alkali Gulch)	9134'-9430'

(8) According to applicant's evidence, there have been eleven wells drilled in the subject pool subsequent to its discovery in 1945. The vast majority of the cumulative gas production from the subject pool, which according to applicant's testimony is some 230 BCFG, has originated from the Lower Barker Creek interval.

(9) Within the subject pool, there are currently eight active wells, four of which are producing from the Lower Barker Creek/Alkali Gulch interval, two of which are producing from the Desert Creek interval, and two of which are producing from the Ismay interval.

(10) The applicant's geologic evidence and testimony in this case indicates that there are four separate and distinct intervals within the Paradox member of the Pennsylvanian formation each of which constitutes one or more separate productive reservoirs.

(11) The Pennsylvanian formation in this area is characterized by occasionally porous limestone and dolomite, anhydrides and black shales.

(12) Meridian presented geologic and engineering evidence and testimony which indicates that each of the proposed pools are:

- a) associated with a structural dome centered approximately in the center of Section 15 which is of limited extent. The trap of each reservoir is formed by a down-dip structural limit of effective porosity;
- b) a single structure feature geologically separated both vertically and horizontally from any other pool;
- c) a single source of common supply ("reservoir") separated from and not in communication with any other pool in this area.

(13) The applicant has grouped the producing intervals into the four proposed pools based upon their similar geologic characteristics. In addition, the proposed gas pools appear to be continuous and correlatable across the entire proposed pool boundaries.

(14) Meridian's engineering evidence and testimony indicates that each of the proposed pools are gas pools, and that while this is a complex reservoir with limited data, there is a reasonable engineering probability that the behavior of the gas wells will be similar to the established behavior of the gas wells in the existing Barker Creek-Paradox (Pennsylvanian) Gas Pool.

(15) The evidence presented in this case indicates that the vertical limits and the Special Rules and Regulations for the Barker Creek-Paradox (Pennsylvanian) Gas Pool are not conducive to continuous and orderly development of the pool for the following reasons:

- a) long term production of the Lower Barker Creek/Alkali Gulch interval has resulted in a significant pressure differential between this interval and the Ismay and Desert Creek intervals. This significant pressure differential precludes downhole commingling of these intervals at the present time;
- b) depletion of the Lower Barker Creek/Alkali Gulch interval in those wells producing from this interval will not occur for several years;
- c) the Special Rules and Regulations for the Barker Creek- Paradox (Pennsylvanian) Gas Pool and current Division policy (Division Memorandum dated July 27, 1988) severely limit the ability of an operator to drill and operate more than one well on a standard gas proration unit in this non-prorated gas pool;

(16) Applicant's plan of development for the subject pool(s) includes the drilling of additional conventional, downhole commingled and/or dually completed wells, whichever is applicable, in order to maximize the recovery of gas from each of the subject reservoirs.

(17) The evidence indicates that Meridian Oil Inc. is the only leasehold owner in the Barker Creek-Paradox (Pennsylvanian) Gas Pool, and that the royalty interest ownership is owned entirely by the Ute Mountain Ute Tribe.

(18) No other offset operators and/or interest owners appeared at the hearing in opposition to the application.

(19) Approval of the contraction of the Barker Creek-Paradox (Pennsylvanian) Gas Pool and concomitant creation of three new gas pools will allow the applicant the opportunity to drill additional wells and recover additional gas reserves from the Ismay, Desert Creek and Akah/Upper Barker Creek intervals, will prevent the premature abandonment of production within the Lower Barker Creek/Alkali Gulch interval, thereby preventing waste, and will not violate correlative rights.

(20) The Barker Creek-Paradox (Pennsylvanian) Gas Pool should be redesignated the Barker Dome-Paradox Pool. The remaining pools should be designated the Barker Dome-Akah/Upper Barker Creek Pool, the Barker Dome-Desert Creek, and the Barker Dome-Ismay Pools. The vertical limits of the subject pools should comprise those intervals as described in Finding No. (7) above.

(21) The applicant's proposed pool boundaries, which include an extension of the Barker Creek-Paradox (Pennsylvanian) Gas Pool, are not reasonable inasmuch as the proposed extension area does not currently contain production.

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(22) The horizontal boundaries of the Barker Dome-Paradox, Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek and Barker Dome-Ismay Pools should comprise the area currently contained within the Barker Creek-Paradox (Pennsylvanian) Gas Pool.

(23) The engineering evidence indicates that 640-acre spacing is appropriate for the Barker Creek-Paradox (Pennsylvanian) Gas Pool (Barker Dome-Paradox Pool).

(24) The engineering evidence currently available indicates that wells in the Barker Dome-Akah/Upper Barker Creek and Barker Dome-Desert Creek Pools should be capable of draining an area of approximately 320 acres. The preliminary evidence further indicates that the Barker Dome-Ismay Pool should be spaced on 160 acres.

(25) In order to prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, special rules and regulations should be promulgated for the Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek and Barker Dome-Ismay Pools.

(26) The applicant proposed that the well setback requirements for the Barker Creek-Paradox (Pennsylvanian) Gas Pool (Barker Dome-Paradox Pool) be amended such that a well can be located no closer than 790 feet from the outer boundary of the spacing unit nor closer than 130 feet from any governmental quarter-quarter section line or subdivision inner boundary. In addition, the applicant requested that the well setback requirements for the Barker Dome-Ismay Pool be established such that a well can be located no closer than 330 feet from the outer boundary of the spacing unit nor closer than 20 feet from any governmental quarter-quarter section line or subdivision inner boundary.

(27) The setback requirements described above are significantly more flexible than the normal setback requirements for 640-acre and 160-acre gas pools. According to applicant's testimony, this flexibility is needed due to the topography in this area and due to the numerous archaeological sites thus far encountered in this area.

(28) The Division's rules and procedures for obtaining approval of unorthodox locations due to topography, including archaeological sites, are flexible and do not represent an excessive burden on the applicant. In addition, setback requirements are necessary in order to assure that wells are situated on their proration units such that effective and efficient drainage of gas occurs.

(29) Applicant's request to amend the well location requirements for the Barker Creek-Paradox (Pennsylvanian) Gas Pool (Barker Dome-Paradox Pool) should be denied.

(30) The Special Rules and Regulations for the Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek, and Barker Dome-Ismay Pools should provide for designated well locations such that a well cannot be located closer than 790 feet from the outer boundary of the spacing unit nor closer than 130 feet from any governmental quarter-quarter section line or subdivision inner boundary.

(31) At the request of the applicant, the Special Rules and Regulations for the Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek and Barker Dome-Ismay Pools should be established for a temporary period of two years in order to allow the operators in the subject pools the opportunity to gather sufficient reservoir information to show that the spacing established herein for the subject pools is appropriate.

(32) This case should be reopened at an examiner hearing in February, 1997, at which time the operators in the subject pools should be prepared to appear and show cause why the Temporary Special Rules and Regulations for the Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek and Barker Dome-Ismay Pools should not be rescinded.

**IT IS THEREFORE ORDERED THAT:**

(1) The Barker Creek-Paradox (Pennsylvanian) Gas Pool, created by Division Order No. R-13, is hereby redesignated the Barker Dome-Paradox Pool.

(2) The vertical limits of the Barker Dome-Paradox Pool are hereby contracted to include only the Lower Barker Creek and Alkali Gulch intervals of the Paradox formation as found from a depth of 9134 feet to 9430 feet on the log run on the Meridian Oil Inc. Ute Well No. 16 located in Unit I of Section 22, Township 32 North, Range 13 1/2 West, La Plata County, Colorado.

(3) Three new gas pools for the production of gas from the Paradox member of the Pennsylvanian formation are hereby created and designated the Barker Dome-Akah/Upper Barker Creek Pool, the Barker Dome-Desert Creek Pool, and the Barker Dome-Ismay Pool.

(4) The vertical limits of the Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek and Barker Dome-Ismay Pools shall comprise the following described intervals as found on the log run on the Meridian Oil Inc. Ute Well No. 16 located in Unit I of Section 22, Township 32 North, Range 13 1/2 West, La Plata County, Colorado.

<u>POOL</u>	<u>VERTICAL LIMITS</u>
Barker Dome-Akah/Upper Barker Creek Pool	8809'-9134'
Barker Dome-Desert Creek Pool	8693'-8809'
Barker Dome-Ismay Pool	8502'-8693'

(5) The horizontal limits of the Barker Dome-Paradox, Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek and Barker Dome-Ismay Pools shall comprise the following described area in San Juan County, New Mexico all as projected into the unsurveyed Ute Mountain Indian Reservation:

TOWNSHIP 32 NORTH, RANGE 14 WEST, NMPM

Sections 9 through 11: All  
Sections 14 through 16: All  
Section 17: E/2  
Sections 19 through 22: All  
Section 23: NW/4  
Section 27: NW/4  
Section 28: N/2  
Section 29: All

(6) Temporary Special Rules and Regulations for the Barker Dome-Akah/Upper Barker Creek Pool are hereby promulgated as follows:

**SPECIAL RULES AND REGULATIONS  
FOR THE  
BARKER DOME-AKAH/UPPER BARKER CREEK POOL**

**RULE 1.** Each well completed in or recompleted in the Barker Dome-Akah/Upper Barker Creek Pool or in the equivalent vertical limits thereof within one mile of the pool boundary, shall be spaced, drilled, operated, and produced in accordance with the Special Rules hereinafter set forth.

**RULE 2.** Each well completed or recompleted in the Barker Dome-Akah/Upper Barker Creek Pool shall be located on a unit containing 320 acres, more or less, which consists of the N/2, S/2, E/2 or W/2 of a single governmental section.

**RULE 3.** The Director of the Oil Conservation Division, hereinafter referred to as the "Division" may grant an exception to the requirements of Rule 2 without hearing when an application has been filed for a non-standard unit consisting of less than 320 acres or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Lands Survey. All operators offsetting the

proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Director has received the application.

**RULE 4.** Each well shall be located no closer than 790 feet from the outer boundary of the proration unit nor closer than 130 feet from any governmental quarter-quarter section line or subdivision inner boundary.

**RULE 5.** The Division Director may grant an exception to the requirements of Rule 4 without hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to a deeper horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Director has received the application.

(7) Temporary Special Rules and Regulations for the Barker Dome-Desert Creek Pool are hereby promulgated as follows:

**SPECIAL RULES AND REGULATIONS  
FOR THE  
BARKER DOME-DESERT CREEK POOL**

**RULE 1.** Each well completed in or recompleted in the Barker Dome-Desert Creek Pool or in the equivalent vertical limits thereof within one mile of the pool boundary, shall be spaced, drilled, operated, and produced in accordance with the Special Rules hereinafter set forth.

**RULE 2.** Each well completed or recompleted in the Barker Dome-Desert Creek Pool shall be located on a unit containing 320 acres, more or less, which consists of the N/2, S/2, E/2 or W/2 of a single governmental section.

**RULE 3.** The Director of the Oil Conservation Division, hereinafter referred to as the "Division" may grant an exception to the requirements of Rule 2 without hearing when an application has been filed for a non-standard unit consisting of less than 320 acres or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Lands Survey. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified

mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Director has received the application.

**RULE 4.** Each well shall be located no closer than 790 feet from the outer boundary of the proration unit nor closer than 130 feet from any governmental quarter-quarter section line or subdivision inner boundary.

**RULE 5.** The Division Director may grant an exception to the requirements of Rule 4 without hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to a deeper horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Director has received the application.

(8) Temporary Special Rules and Regulations for the Barker Dome-Ismay Pool are hereby promulgated as follows:

**SPECIAL RULES AND REGULATIONS  
FOR THE  
BARKER DOME-ISMAY POOL**

**RULE 1.** Each well completed in or recompleted in the Barker Dome-Ismay Pool or in the equivalent vertical limits thereof within one mile of the pool boundary, shall be spaced, drilled, operated, and produced in accordance with the Special Rules hereinafter set forth.

**RULE 2.** Each well completed or recompleted in the Barker Dome-Ismay Pool shall be located on a unit containing 160 acres, more or less, which consists of the NE/4, SE/4, NW/4 or SW/4 of a single governmental section.

**RULE 3.** The Director of the Oil Conservation Division, hereinafter referred to as the "Division", may grant an exception to the requirements of Rule 2 without hearing when an application has been filed for a non-standard unit consisting of less than 160 acres or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Lands Survey. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified

mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Director has received the application.

RULE 4. Each well shall be located no closer than 790 feet from the outer boundary of the proration unit nor closer than 130 feet from any governmental quarter-quarter section line or subdivision inner boundary.

RULE 5. The Division Director may grant an exception to the requirements of Rule 4 without hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to a deeper horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Director has received the application.

**IT IS FURTHER ORDERED THAT:**

(9) The location of all wells presently drilling to or completed in the Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek, or Barker Dome-Ismay Pool or in the respective vertical limits thereof within one mile thereof are hereby approved; the operator of any well having an unorthodox location shall notify the Aztec District Office of the Division in writing of the name and location of the well within 30 days from the date of this order.

(10) Pursuant to Paragraph A of Section 70-2-18, N.M.S.A. 1978 Comp., contained in Laws of 1969, Chapter 271, existing gas wells in the Barker Dome-Akah/Upper Barker Creek and Barker Dome-Desert Creek Pool shall have dedicated thereto 320 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C of said Section 70-2-18, existing wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

Failure to file new Forms C-102 with the Division dedicating 320 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this order shall subject the well to cancellation of allowable until a non-standard spacing unit has been approved and, subject to said 60-day limitation, each well presently drilling to or completed in the Barker Dome-Akah/Upper Barker Creek or Barker Dome-Desert Creek Pool or in its corresponding vertical limits as described in Ordering Paragraph No. (4) above, or within one mile thereof, shall receive no more than one-fourth of a standard allowable for said pool(s)

(11) Pursuant to Paragraph A of Section 70-2-18, N.M.S.A. 1978 Comp., contained in Laws of 1969, Chapter 271, existing gas wells in the Barker Dome-Ismay Pool shall have dedicated thereto 160 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C of said Section 70-2-18, existing wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

Failure to file new Forms C-102 with the Division dedicating 160 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this order shall subject the well to cancellation of allowable until a non-standard spacing unit has been approved and, subject to said 60-day limitation, each well presently drilling to or completed in the Barker Dome-Ismay Pool or in its corresponding vertical limits as described in Ordering Paragraph No. (4) above, or within one mile thereof, shall receive no more than one-fourth of a standard allowable for said pool.

(12) The applicant's request to amend the Special Rules and Regulations for the Barker Dome-Paradox Pool, as promulgated by Division Order No. R-46, is hereby denied.

(13) The Barker Dome-Paradox Pool shall continue to be subject to the Special Rules and Regulations as contained within Division Order No. R-46 until further order of the Division.

(14) The applicant's request to extend the horizontal boundaries of the Barker Dome-Paradox Pool to include the acreage described in Finding No. (6) above, is hereby denied. In addition, the applicant's request to include this acreage within the Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek and Barker Dome-Ismay Pools is hereby denied.

(15) This case shall be reopened at an examiner hearing in February, 1997, at which time the operators in the subject pools should be prepared to appear and show cause why the Temporary Special Rules and Regulations for the Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek and Barker Dome-Ismay Pools should not be rescinded.

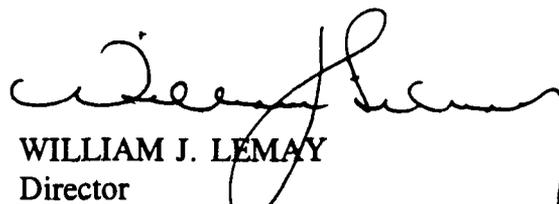
(16) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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Case No. 11089  
Order No. R-46-A  
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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

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. 11089 (Reopened)  
Order No. R-46-B

APPLICATION OF BURLINGTON RESOURCES  
OIL & GAS COMPANY TO REOPEN CASE NO.  
11089 AND AMEND ORDER NO. R-46-A TO  
CONFORM TO BLM ORDER NO. UMU-1, 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, 1996, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 6th 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) By Order No. R-46-A issued in Case No. 11089 on February 13, 1995, the Division, upon application of Meridian Oil Inc., redesignated the Barker Creek Paradox (Pennsylvanian) Gas Pool as the Barker Dome-Paradox Pool and created three new pools for the production of gas from the Paradox member of the Pennsylvanian formation, all described as follows, and all hereinafter referred to collectively as the "Barker Dome Field":

<u>POOL NAME</u>	<u>VERTICAL LIMITS</u>
Barker Dome-Paradox Pool	9,134'-9,430'
Barker Dome-Akah/Upper Barker Creek Pool	8,809'-9,134'
Barker Dome-Desert Creek Pool	8,693'-8,809'
Barker Dome-Ismay Pool	8,502'-8,693'

(Note: All depths as found on the log run on the Meridian Oil Inc. Ute Well No. 16 located in Unit I of Section 22, Township 32 North, Range 13 ½ West, La Plata County, Colorado)

(3) Order No. R-46-A further left in place the Special Rules and Regulations for the Barker Dome-Paradox Pool as promulgated by Order No. R-46, and promulgated special rules and regulations for each of the newly created gas pools all summarized as follows:

<u>POOL NAME</u>	<u>SPACING</u>	<u>WELL LOCATION REQUIREMENTS</u>
Barker Dome-Paradox Pool	640-acres	No closer than 330 feet to the center of the section and no closer than 1650 feet to the outer boundary of the section.
Barker Dome-Akah/Upper Barker Creek Pool & Barker Dome-Desert Creek Pool	320-acres	No closer than 790 feet to the outer boundary of the proration unit nor closer than 130 feet from any governmental quarter-quarter section line or subdivision inner boundary.
Barker Dome-Ismay Pool	160-acres	No closer than 790 feet to the outer boundary of the proration unit nor closer than 130 feet from any governmental quarter-quarter section line or subdivision inner boundary.

(4) On June 9, 1995, the United States Bureau of Land Management (BLM), San Juan Resource Area, issued Order No. UMU-1, effective March 20, 1995, which order promulgated rules and regulations for each of the pools within the Barker Dome Field in La Plata and Montezuma Counties, Colorado, and San Juan County, New Mexico.

(5) Order No. UMU-1 declared that the BLM has jurisdiction to set well spacing on lands which are held in trust by the United States for Tribes or individual members of a Tribe notwithstanding decisions and orders of the State of New Mexico.

(6) The BLM relied upon and utilized the Division's hearing process in Case No. 11089 to promulgate the rules and regulations for the Barker Dome Field. The rules and regulations for the Barker Dome Field as promulgated by BLM Order No. UMU-1 and Division Order No. R-46-A are similar in some respects and different in others.

(7) The applicant, Burlington Resources Oil & Gas Company (formerly known as Meridian Oil Inc.) seeks to amend Division Order No. R-46-A to conform to BLM Order No. UMU-1 in the following manner:

- a) amend the pool names to reflect the nomenclature contained within Order No. UMU-1;
- b) amend the vertical limits of the Barker Dome-Paradox Pool to reflect the vertical pool limits contained within Order No. UMU-1. In addition, applicant seeks to add the wording "stratigraphic equivalent" to aid in the definition of vertical pool limits; and,
- c) expand the horizontal pool boundaries to those contained within Order No. UMU-1.

(8) The applicant further seeks approval of the following described non-standard gas spacing and proration units, the adoption of an administrative procedure for obtaining approval to drill unorthodox locations within the proposed non-standard gas spacing units, and the authority to drill an optional second (infill) well within the subject non-standard gas spacing units:

**Barker Dome-Paradox Pool**

640-acre Spacing

Township 32 North, Range 14 West, NMPM

<u>Acreage</u>	<u>Description</u>
849-acres	Irregular Section 7: All Section 18: All
847-acres	Irregular Section 8: All Section 17: All
845-acres	Irregular Section 9: All Section 16: All
844-acres	Irregular Section 10: All Section 15: All
842-acres	Irregular Section 11: All Section 14: All

Township 32 North, Range 15 West, NMPM

851-acres	Irregular Section 12: All Section 13: All
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**Barker Dome Akah/Upper Barker Creek Pool  
&  
Barker Dome-Desert Creek Pool  
320-acre Spacing  
Township 32 North, Range 14 West, NMPM**

<u>Acreage</u>	<u>Description</u>
529-acres	Irregular Section 7: All Section 18: N/2
527-acres	Irregular Section 8: All Section 17: N/2
525-acres	Irregular Section 9: All Section 16: N/2
524-acres	Irregular Section 10: all Section 15: N/2
522-acres	Irregular Section 11: All Section 14: N/2

**Township 32 North, Range 15 West, NMPM**

531-acres	Irregular Section 12: All Section 13: N/2
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**Barker Dome-Ismay Pool**

160-acre Spacing

Township 32 North, Range 14 West, NMPM

<u>Acreage</u>	<u>Description</u>
209-acres	Irregular Section 7: All
207-acres	Irregular Section 8: All
205-acres	Irregular Section 9: All
204-acres	Irregular Section 10: All
202-acres	Irregular Section 11: All

Township 32 North, Range 15 West, NMPM

211-acres	Irregular Section 12: All
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(9) At the time of the hearing, applicant testified that the BLM has recently amended its Barker Dome Field nomenclature to reflect the field/pool names utilized by the Division in Order No. R-46-A.

(10) At the time of the hearing applicant further testified that it no longer seeks to expand the horizontal pool boundaries within the Barker Dome Field as currently defined by the Division.

(11) The portion of the application requesting the amendment of Order No. R-46-A to conform to BLM's field nomenclature and expansion of the horizontal boundaries of the pools within the Barker Dome Field should be dismissed.

(12) The geologic evidence presented in Case No. 11089 indicates that the vertical limits of the Barker Dome-Paradox Pool were correctly identified by the Division in Order No. R-46-A.

(13) The vertical limits of the Barker Dome-Paradox Pool should not be amended at this time, however, in order to provide flexibility in identifying vertical pool boundaries, Ordering Paragraph Nos. (2) and (4) of Division Order No. R-46-A should be amended to include the term "or its stratigraphic equivalent".

(14) The evidence presented by the applicant indicates that Sections 7 through 11, Township 32 North, Range 14 West, and Section 12, Township 32 North, Range 15 West, are irregular due to a variation in the legal subdivision of the United States Public Lands Survey.

(15) With the exception of the N/2 of Section 17 which contains the Ute Well No. 22, currently completed in the Barker Dome-Desert Creek Pool, none of the proposed non-standard gas spacing units are developed at this time.

(16) Each of the proposed non-standard gas spacing units are located within or within one mile of each of the pools within the Barker Dome Field.

(17) All of the acreage contained within the proposed non-standard gas spacing units constitutes a single common lease which is operated by the applicant.

(18) There are no offset operators to the proposed non-standard gas spacing units.

(19) The establishment of the proposed non-standard gas spacing units will ensure the orderly development of the gas reserves within the Barker Dome Field.

(20) The applicant further seeks authority to drill a second well on each of the proposed non-standard gas spacing units established herein.

(21) Inasmuch as each of the proposed non-standard gas spacing units are oversized, one well cannot efficiently and effectively drain and develop each of these units.

(22) The applicant should be authorized to drill no more than two wells on each of the non-standard gas proration units established herein.

(23) The applicant further seeks to establish an administrative procedure for obtaining approval to drill unorthodox locations within the proposed non-standard spacing units.

(24) Pursuant to the provisions of Rule No. 104.F. of the Division Rules and Regulations, there already exists an administrative procedure for obtaining approval to drill wells at unorthodox locations within the subject non-standard gas proration units or anywhere within the Barker Dome Field, therefore, applicant's request should be dismissed.

(25) With the exception of the well setback requirements within each of the pools in the Barker Dome Field, there do not exist any requirements as to the location of the infill well within each of the non-standard gas proration units.

(26) The Division Director may require the applicant to furnish additional geologic, engineering or other pertinent data to justify the location (either orthodox or unorthodox) of the infill well in each of the subject non-standard spacing units in order to determine that the location of the infill well is adequate so as to effectively drain and develop the portion of the proration unit(s) not drained by the parent well.

(27) Approval of the proposed amendments to Division Order No. R-46-A and non-standard gas spacing units will allow the applicant to develop the gas reserves in each of the pools in the Barker Dome Field in an orderly fashion, and will not cause waste or violate correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) Ordering Paragraph Nos. (2) and (4) of Division Order No. R-46-A are hereby amended to read in their entirety as follows:

“(2) The vertical limits of the Barker Dome-Paradox Pool are hereby contracted to include only the Lower Barker Creek and Alkali Gulch intervals of the Paradox formation as found from a depth of 9134 feet to 9430 feet, or its stratigraphic equivalent, on the log run on the Meridian Oil Inc. Ute Well No. 16 located in Unit I of Section 22, Township 32 North, Range 13 ½ West, La Plata County, Colorado.”

“(4) The vertical limits of the Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek and Barker Dome-Ismay Pools shall comprise the following described intervals, or their stratigraphic equivalent, as found on the log run on the Meridian Oil Inc. Ute Well No. 16 located in Unit I of Section 22, Township 32 North, Range 13 ½ West, La Plata County, Colorado:

<u>POOL</u>	<u>VERTICAL LIMITS</u>
Barker Dome-Akah/Upper Barker Creek Pool	8809'-9134'
Barker Dome-Desert Creek Pool	8693'-8809'
Barker Dome-Ismay Pool	8502'-8693"

(2) The following described non-standard gas spacing and proration units within the Barker Dome Field are hereby established:

**Barker Dome-Paradox Pool**

640-acre Spacing

Township 32 North, Range 14 West, NMPM

<u>Acreage</u>	<u>Description</u>
849-acres	Irregular Section 7: All Section 18: All
847-acres	Irregular Section 8: All Section 17: All
845-acres	Irregular Section 9: All Section 16: All
844-acres	Irregular Section 10: All Section 15: All
842-acres	Irregular Section 11: All Section 14: All

Township 32 North, Range 15 West, NMPM

851-acres	Irregular Section 12: All Section 13: All
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**Barker Dome Akah/Upper Barker Creek Pool  
&  
Barker Dome-Desert Creek Pool  
320-acre Spacing  
Township 32 North, Range 14 West, NMPM**

<u>Acreage</u>	<u>Description</u>
529-acres	Irregular Section 7: All Section 18: N/2
527-acres	Irregular Section 8: All Section 17: N/2
525-acres	Irregular Section 9: All Section 16: N/2
524-acres	Irregular Section 10: all Section 15: N/2
522-acres	Irregular Section 11: All Section 14: N/2

**Township 32 North, Range 15 West, NMPM**

531-acres	Irregular Section 12: All Section 13: N/2
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**Barker Dome-Ismay Pool**  
160-acre Spacing  
Township 32 North, Range 14 West, NMPM

<u>Acreage</u>	<u>Description</u>
209-acres	Irregular Section 7: All
207-acres	Irregular Section 8: All
205-acres	Irregular Section 9: All
204-acres	Irregular Section 10: All
202-acres	Irregular Section 11: All

Township 32 North, Range 15 West, NMPM

211-acres	Irregular Section 12: All
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(3) The applicant is hereby authorized to drill two wells in each of the pools within the Barker Dome Field within each of the subject non-standard gas proration units established herein.

**PROVIDED HOWEVER THAT** the Division Director may require the applicant to furnish additional geologic, engineering or other pertinent data to justify the location (either orthodox or unorthodox) of the infill well in each of the subject non-standard spacing units in order to determine that the location of the infill well is adequate so as to effectively drain and develop the portion of the proration unit(s) not drained by the parent well.

(4) The portion of the application requesting the amendment of Order No. R-46-A to conform to BLM's field nomenclature and expansion of the horizontal boundaries of the pools within the Barker Dome Field, and to establish an administrative procedure for obtaining approval to drill wells at unorthodox locations within the non-standard gas proration units established herein is hereby dismissed.

(5) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

**Barker Dome-Ismay Pool**  
160-acre Spacing  
Township 32 North, Range 14 West, NMPM

<u>Acreage</u>	<u>Description</u>
209-acres	Irregular Section 7: All
207-acres	Irregular Section 8: All
205-acres	Irregular Section 9: All
204-acres	Irregular Section 10: All
202-acres	Irregular Section 11: All
Township 32 North, Range 15 West, NMPM	
211-acres	Irregular Section 12: All

(3) The applicant is hereby authorized to drill two wells in each of the pools within the Barker Dome Field within each of the subject non-standard gas proration units established herein.

**PROVIDED HOWEVER THAT** the Division Director may require the applicant to furnish additional geologic, engineering or other pertinent data to justify the location (either orthodox or unorthodox) of the infill well in each of the subject non-standard spacing units in order to determine that the location of the infill well is adequate so as to effectively drain and develop the portion of the proration unit(s) not drained by the parent well.

(4) The portion of the application requesting the amendment of Order No. R-46-A to conform to BLM's field nomenclature and expansion of the horizontal boundaries of the pools within the Barker Dome Field, and to establish an administrative procedure for obtaining approval to drill wells at unorthodox locations within the non-standard gas proration units established herein is hereby dismissed.

(5) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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. 11089 (Reopened)  
Order No. R-46-C

IN THE MATTER OF CASE NO. 11089 BEING REOPENED PURSUANT TO THE PROVISIONS OF DIVISION ORDER NO. R-46-A, WHICH ORDER PROMULGATED TEMPORARY SPECIAL POOL RULES AND REGULATIONS FOR THE BARKER DOME-AKAH/UPPER BARKER CREEK, BARKER DOME-DESERT CREEK, AND BARKER DOME-ISMAI POOLS IN SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on March 20, 1997, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 3rd day of April, 1997, 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) By Order No. R-46-A issued in Case No. 11089 on February 13, 1995, the Division, upon application of Meridian Oil Inc., redesignated the Barker Creek-Paradox (Pennsylvanian) Gas Pool as the Barker Dome-Paradox Pool and created three new pools for the production of gas from the Paradox member of the Pennsylvanian formation, said pools being designated as the Barker Dome-Akah/Upper Barker Creek Pool, the Barker Dome-Desert Creek Pool and the Barker Dome-Ismai Pool.

(3) Order No. R-46-A further promulgated Temporary Special Rules and Regulations for the Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek and Barker Dome-Ismai Pools, summarized as follows:

<u>POOL NAME</u>	<u>VERTICAL LIMITS</u>	<u>SPACING</u>	<u>WELL LOCATION REQUIREMENTS</u>
Barker Dome-Akah/Upper	8,809'-9,134'*	320-acres	No closer than 790 feet to the outer boundary of the proration unit nor closer than 130 feet from any Pool governmental quarter-quarter section line or subdivision inner boundary.
Barker Dome-Desert Creek	8,693'-8,809'*	320-acres	No closer than 790 feet to the outer boundary of the proration unit nor closer than 130 feet from any Pool governmental quarter-quarter section line or subdivision inner boundary.
Barker Dome-Ismay Pool	8,502'-8,693'*	160-acres	No closer than 790 feet to the outer boundary of the proration unit nor closer than 130 feet from any governmental quarter-quarter section line or subdivision inner boundary.

(\* -Or its stratigraphic equivalent)

(Note: All depths as found on the log run on the Meridian Oil Inc. Ute Well No. 16 located in Unit I of Section 22, Township 32 North, Range 13 ½ West, La Plata County, Colorado)

(4) Pursuant to the provisions of Division Order No. R-46-A, this case is being reopened to allow the operators in the subject pools to appear and show cause why the Temporary Special Rules and Regulations for the Barker Dome-Akah/Upper Barker Creek, Barker Dome-Desert Creek and Barker Dome-Ismay Pools should not be rescinded.

(5) Burlington Resources Oil & Gas Company (Burlington), being the successor operator to Meridian Oil Inc., appeared at the hearing and presented evidence and testimony in support of permanently adopting the temporary rules and regulations for the subject pools.

(6) With regards to the Barker Dome-Akah/Upper Barker Creek Pool, Burlington's engineering evidence and testimony indicate that:

- a) during 1996, the applicant drilled and completed three wells in the Barker Dome-Akah/Upper Barker Creek Pool, these being the Ute Mountain Ute Well Nos. 40 and 42, located, respectively, in Sections 20 and 30, and its Ute Well No. 22 located in Section 17, all in Township 32 North, Range 14 West, NMPM;
- b) no wells produced from this interval prior to the drilling of the aforesaid Ute Mountain Ute Well Nos. 40 and 42 and the Ute Well No. 22;

- c) there is insufficient production history at the present time from the aforesaid wells to determine the permanent spacing in the Barker Dome-Akah/Upper Barker Creek Pool.

(7) With regards to the Barker Dome-Desert Creek Pool, Burlington's engineering and geologic evidence and testimony indicate that:

- a) there are currently nine wells completed in the Barker Dome-Desert Creek Pool. In addition, the applicant currently operates five Desert Creek wells located directly to the north in La Plata County, Colorado. Of the nine wells within the Barker Dome-Desert Creek Pool, one was drilled and completed prior to the issuance of Division Order No. R-46-A, and eight were drilled and completed subsequent to the entry of Division Order No. R-46-A;
- b) there is insufficient production history data available at the present time on four of the wells drilled subsequent to the entry of Division Order No. R-46-A to calculate the drainage area of these wells;
- c) the production history and engineering data currently available from the remaining wells completed in the Barker Dome-Desert Creek Pool, or in the Desert Creek formation within La Plata County, Colorado, indicates drainage areas ranging from a minimum of 11 acres to a maximum of 324 acres;
- d) the wide range in drainage areas for wells completed in the Desert Creek formation is attributable to differences in permeability within the reservoir.

(7) With regards to the Barker Dome-Ismay Pool, Burlington's engineering and geologic evidence and testimony indicate that:

- a) there are currently four wells completed in and producing from the Barker Dome-Ismay Pool. In addition, the applicant currently operates five Ismay producing wells located directly to the north in La Plata County, Colorado. Of the four wells completed in the Barker Dome-Ismay Pool, two were drilled and completed prior to the issuance of Division Order No. R-46-A, and two were drilled during 1996, subsequent to the entry of Division Order No. R-46-A;
- b) production history and engineering data were presented by the applicant for the Ute Well No. 16, an Ismay producing well located in Section 22, Township 32 North, Range 13 ½ West, La Plata County, Colorado. This data indicates a drainage area of approximately 30 acres for this well.

(8) The geologic and engineering evidence and testimony presented by the applicant in this case indicate that:

- a) the Temporary Special Rules and Regulations for the Barker Dome-Akah/Upper Barker Creek Pool should remain in effect for an additional two year period to allow the applicant the opportunity to gather sufficient engineering data in order to determine the proper permanent well spacing in this pool;
- b) the Temporary Special Rules and Regulations for the Barker Dome-Desert Creek Pool should be made permanent; and,
- c) the Temporary Special Rules and Regulations for the Barker Dome-Ismay Pool should be made permanent.

(9) No other offset operator and/or interest owner appeared at the hearing to present evidence or testimony.

(10) The continuation of the Temporary Special Rules and Regulations for the Barker Dome-Akah/Upper Barker Creek Pool and the permanent adoption of the Temporary Special Rules and Regulations for the Barker Dome-Desert Creek and Barker Dome-Ismay Pools will allow the continued and orderly development of these pools and will otherwise not violate correlative rights.

(11) This case should be reopened at an examiner hearing in March, 1999, at which time the operators in the Barker Dome-Akah/Upper Barker Creek Pool should be prepared to appear and show cause why the temporary special rules and regulations for said pool should not be rescinded.

**IT IS THEREFORE ORDERED THAT:**

(1) The Temporary Special Rules and Regulations for the Barker Dome-Akah/Upper Barker Creek Pool, as promulgated by Division Order No. R-46-A, are hereby continued in effect for an additional two year period.

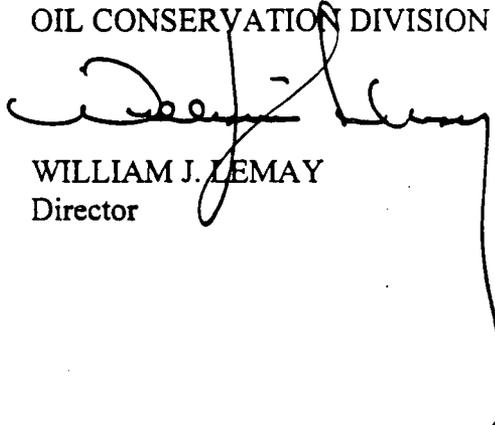
(2) The Temporary Special Rules and Regulations for the Barker Dome-Desert Creek and Barker Dome-Ismay Pools, as promulgated by Division Order No. R-46-A, are hereby permanently adopted.

(3) This case shall be reopened at an examiner hearing in March, 1999, at which time the operators in the Barker Dome-Akah/Upper Barker Creek Pool should be prepared to appear and show cause why the temporary special rules and regulations for said pool should not be rescinded.

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

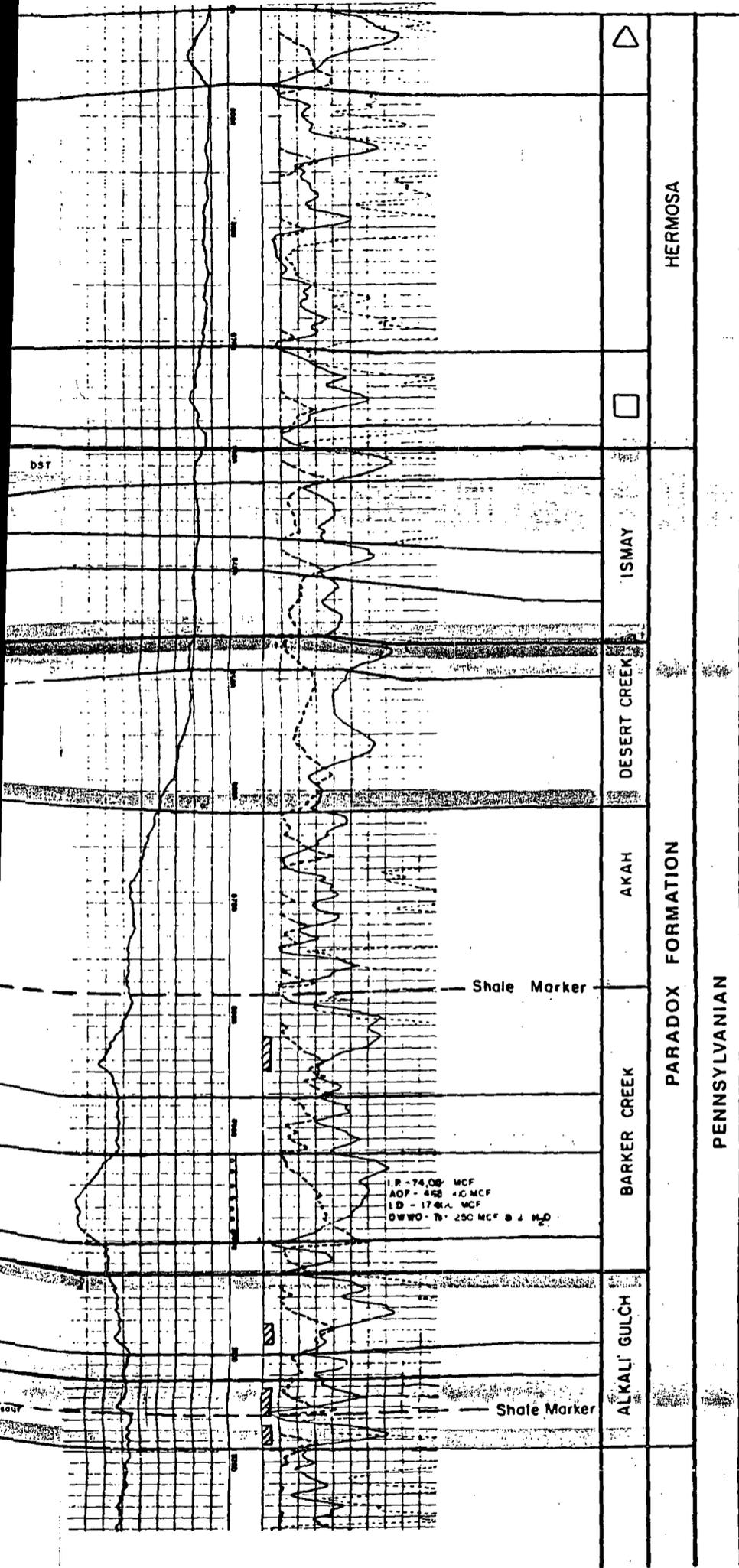
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

S E A L

E.P.N.G. Ute 1  
 (SO UNION Barker 18)  
 SW Sec. 11-T32N-R14W  
 15,064,326 MCF



PERFORATIONS  
 8925-9705 (80')

MERIDIAN OIL



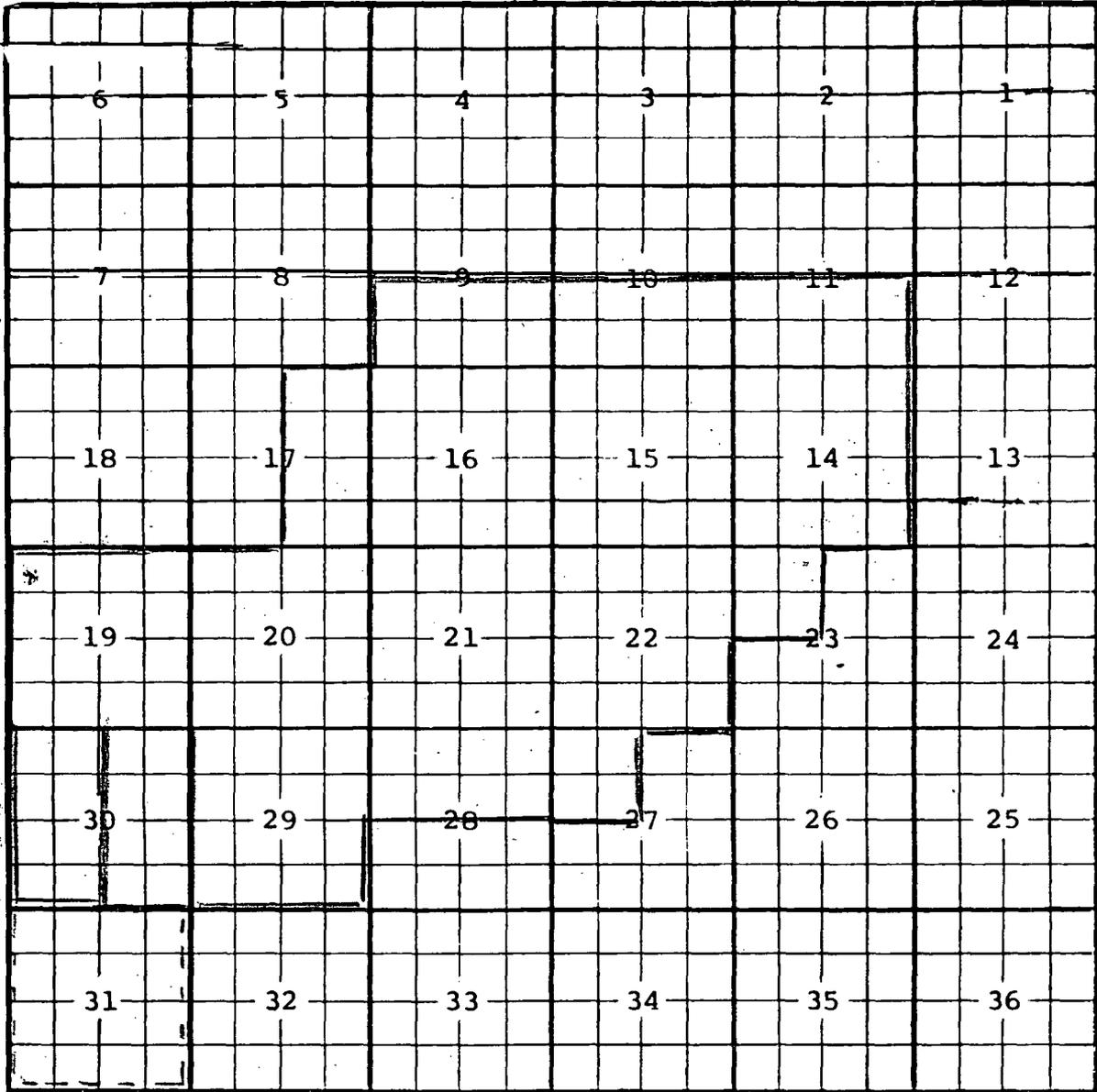
County San Juan Pool Barker Dome-Desert Creek

TOWNSHIP 32 North

Range 14 West

NMPM

Colo  
N.M.



Description: All Secs. 9 through 11, All Secs. 14 through 16,  $\frac{E}{2}$  Sec. 17, All  
Secs. 19 through 22,  $\frac{NW}{4}$  Sec. 23,  $\frac{NW}{4}$  Sec. 27,  $\frac{N}{2}$  Sec. 28, All Sec. 29 (R-46-19, 2-15-95)  
Ext:  $\frac{E}{2}$  Sec. 30 (R-10761, 2-10-97) Ext:  $\frac{W}{2}$  Sec. 30 (R-10902, 10-17-97)

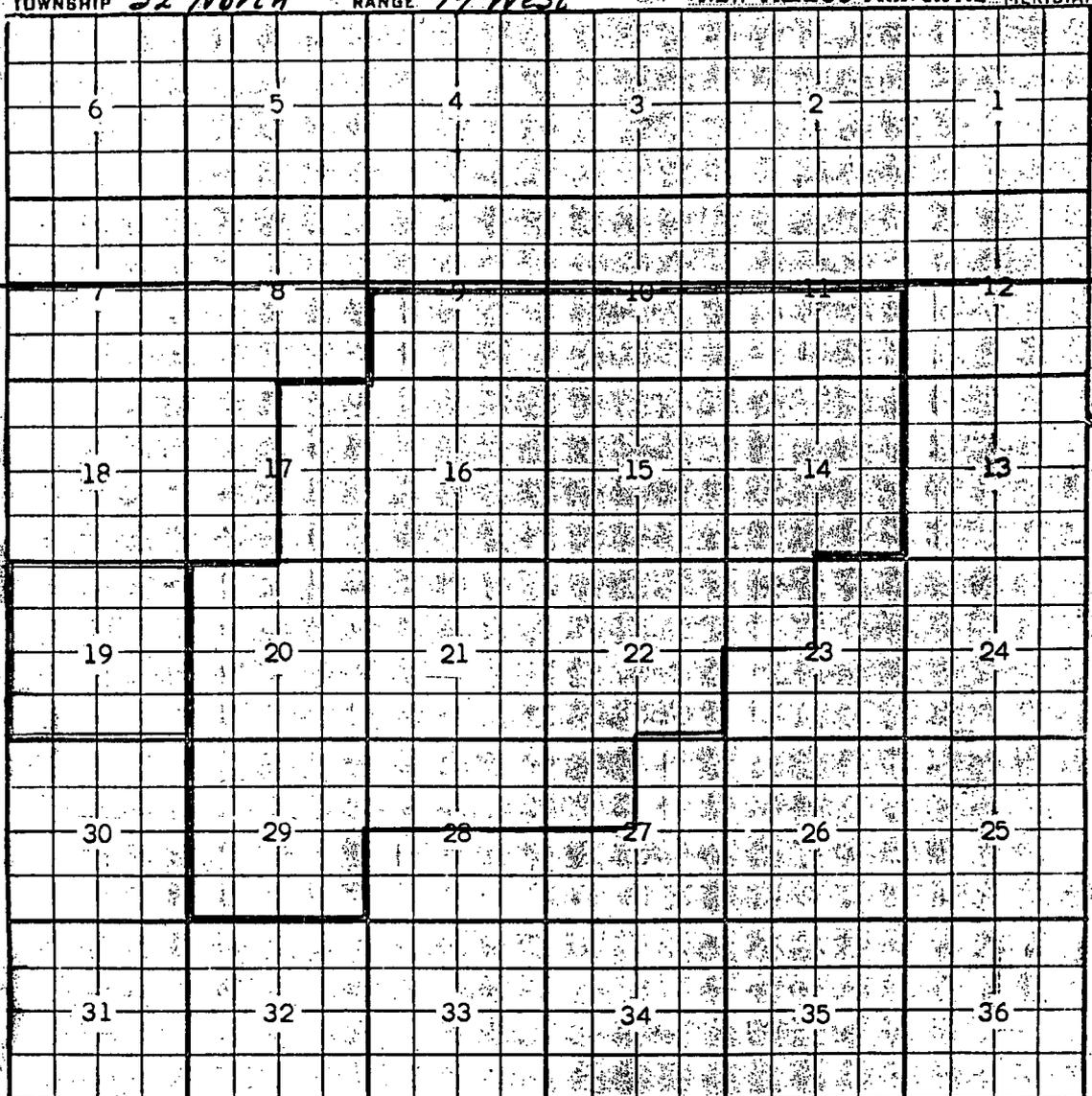


County San Juan Pool Barker Dome - Paradox

TOWNSHIP 32 North RANGE 14 West NEW MEXICO PRINCIPAL MERIDIAN

Colo  
N.M.

Colo  
N.M.



Description: All Sec. 9, 10, 11, 14, 15 & 16; E 1/2 Sec. 17; All Sec. 20, 21 & 22;  
NW 1/4 Sec. 23; NW 1/4 Sec. 27; 1/2 Sec. 28; All Sec. 29.

Ext: All Sec. 19 (R-4418-1-80)

Contract vertical limits to include only the Lower Barker Creek  
and Alkali Gulch intervals of Paradox formation and redesignate  
Barker Creek-Paradox Pool as Barker Dome-Paradox Pool. (R-46A, 2-13-95)