

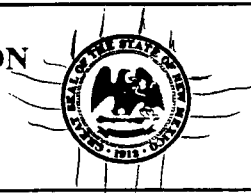
DATE IN 3/23/99	SUSPENSE 4/12/99	ENGINEER MS	LOGGED BY KV	TYPE NSL
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

2040 South Pacheco, Santa Fe, NM 87505



MV-10K

ADMINISTRATIVE APPLICATION COVERSHEET

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

Application Acronyms:

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

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

[A] Location - Spacing Unit - Directional Drilling

☒ NSL ☐ NSP ☐ DD ☐ SD

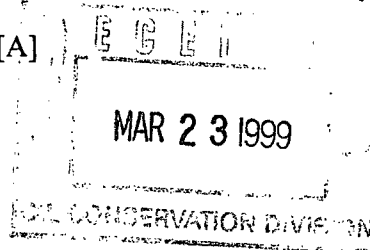
Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

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

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR



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

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

[B] ☒ Offset Operators, Leaseholders or Surface Owner

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

[D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

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

[F] ☐ Waivers are Attached

[3] INFORMATION / DATA SUBMITTED IS COMPLETE - Certification

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

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

Print or Type Name

Signature

Title

Date

BURLINGTON RESOURCES

SAN JUAN DIVISION

Sent Federal Express

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

Re: San Juan 27-4 Unit #46M
1875'FNL, 405'FWL Section 31, T-27-N, R-4-W, Rio Arriba County
30-039-not assigned

Dear Mr. Stogner:

Burlington Resources is applying for administrative approval of an unorthodox gas well location for the Mesa Verde and Dakota pools. This location is at the request of the Carson National Forest (see attached letter) due to topography and proximity to threatened/endangered species habitat at a standard location and to utilize part of an existing well pad and the access road for the San Juan 27-4 Unit #66, Pictured Cliffs, located at 1930'FNL, 430'FWL, Section 31. This well is proposed to be drilled as a Mesa Verde-Dakota commingle and DHC-2224 has been issued.

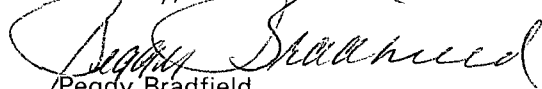
Production from the Dakota pool is to be included in a 321.16 acre gas spacing and proration unit for the north half (N/2) in Section 31 and is to be dedicated to the San Juan 27-4 Unit #46 (30-039-20128) located at 1750'FNL, 850'FEL of Section 31. Production from the Mesa Verde pool is to be included in a 323.16 acre gas spacing and proration unit for the west half (W/2) in Section 31 and is to be dedicated to the San Juan 27-4 Unit #26 (30-039-06771) located at 860'FSL, 790'FWL of Section 31.

The following attachments are for your review:

- Application for Permit to Drill.
- Completed C-102 at referenced location.
- Offset operators/owners plat
- 7.5 minute topographic map.

Three copies of this application are being submitted to offset operators by certified mail with a request that they furnish you with a Waiver of Objection, keep one copy for their files and return one copy to this office. We appreciate your earliest consideration of this application.

Sincerely,



Peggy Bradfield
Regulatory/Compliance Administrator

xc: NMOCD - Aztec District Office
Bureau of Land Management

WAIVER

_____ hereby waives objection to Burlington Resources' application for a non-standard location for the San Juan 27-4 Unit #46M as proposed above.

By: _____ Date: _____

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 SF-080670 Unit Reporting Number
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator BURLINGTON RESOURCES Oil & Gas Company	7. Unit Agreement Name San Juan 27-4 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name San Juan 27-4 Unit 9. Well Number 46M
4. Location of Well 1875' FNL, 405' FWL Latitude 36° 31'55", Longitude 107° 17'55"	10. Field, Pool, Wildcat Blanco MV/Basin DK 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 31, T-27-N, R-4-W API # 30-039-
14. Distance in Miles from Nearest Town 70 miles to Bloomfield	12. County Rio Arriba 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 405'	17. Acres Assigned to Well 323.16 W/2, 321.16 N/2
16. Acres in Lease	
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 50'	20. Rotary or Cable Tools Rotary
19. Proposed Depth 8545'	
21. Elevations (DF, FT, GR, Etc.) 7308' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Gregory Todd Hines</u> Regulatory/Compliance Administrator	<u>10-23-98</u> Date

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

Archaeological Report to be submitted

Threatened and Endangered Species Report to be submitted

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

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or presentations as to any matter within its jurisdiction.

District I
PO Box 1980, Hobbs NM 88241-1980
District II
PO Drawer KK, Artesia, NM 87211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 20-039-	² Pool Code 71599/72319	³ Pool Name Basin Dakota/Blanco Mesaverde
⁴ Property Code 7452	⁵ Property Name SAN JUAN 27-4 UNIT	⁶ Well Number # 46M
⁷ OGRID No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY	⁹ Elevation 7308

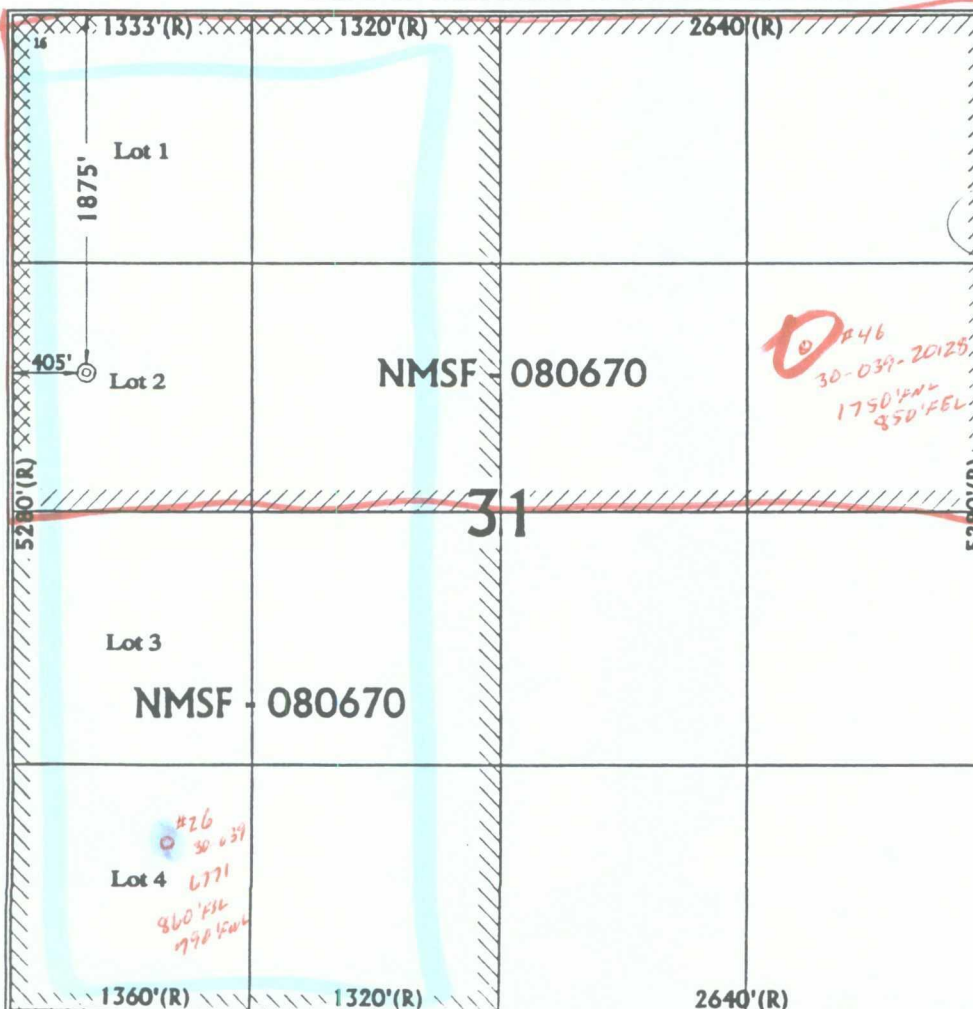
¹⁰ Surface Location

UL or Lot No. E	Section 31	Township 27 N	Range 4 W	Lot Idn	Feet from the 1875	North/South line NORTH	Feet from the 405	East/West line WEST	County RIO ARriba
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¹¹ Bottom Hole Location If Different From Surface

¹ 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 DK: N/321.16 MV: W/323.16	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTEREST 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
10-25-98
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 me or under my supervision, and that the same is true and correct to the best of my belief.

August 11, 1998
Date of Survey
Signature and Seal of Professional Surveyor



7016
Certificate Number

OPERATIONS PLAN

Well Name: San Juan 27-4 Unit #46M
Location: 1875' FNL, 405' FWL, Sec 31, T-27-N, R-4-W
Rio Arriba County, NM
Latitude 36° 31' 55", Longitude 107° 17' 55"
Formation: Blanco Mesa Verde/Basin Dakota
Elevation: 7308' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	3518'	
Ojo Alamo	3518'	3641'	aquifer
Kirtland	3641'	3724'	gas
Fruitland	3724'	4092'	gas
Pictured Cliffs	4092'	4164'	gas
Lewis	4164'	4570'	gas
Intermediate TD	4264'		
Mesa Verde	4570'	5063'	gas
Chacra	5063'	5781'	gas
Massive Cliff House	5781'	5917'	gas
Menefee	5917'	6253'	gas
Massive Point Lookout	6253'	6760'	gas
Mancos	6760'	7415'	gas
Gallup	7415'	8217'	gas
Greenhorn	8217'	8274'	gas
Graneros	8274'	8429'	gas
Dakota	8429'		gas
TD (4 1/2" liner)	8545'		

Logging Program:

Cased hole - CBL - TD to 200' above TOC, GR/CNL across MV/DK

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 200'	Spud	8.4-9.0	40-50	no control
200-4264'	LSND	8.4-9.0	30-60	no control
4264-8545'	Gas	n/a	n/a	n/a

Pit levels will be visually monitored to detect gain or loss of fluid control.

Casing Program (as listed, the equivalent, or better):

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	K-55
8 3/4"	0' - 4264'	7"	20.0#	J-55
6 1/4"	4164' - 8545'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 8545' 2 3/8" 4.70# EUE

BOP Specifications, Wellhead and Tests:**Surface to Intermediate TD -**

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out surface casing, rams and casing will be tested to 600 psi for 30 minutes.

Intermediate TD to Total Depth -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out intermediate casing, rams and casing will be tested to 1500 psi for 30 minutes.

Surface to Total Depth -

2" nominal, 2000 psi minimum choke manifold (Reference Figure #3).

Completion Operations -

7 1/16" 2000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams, casing and liner top will be tested to 2000 psi for 15 minutes.

Wellhead -

9 5/8" x 7" x 2 3/8" x 3000 psi tree assembly.

General -

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper Kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- BOP pit level drill will be conducted weekly for each drilling crew.
- All BOP tests and drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

Cementing:

9 5/8" surface casing - cement with 163 sx Class "B" cement with 1/4# flocele/sx and 2% calcium chloride (188 cu.ft. of slurry, 200% excess to circulate to surface). WOC 8 hrs. Test casing to 600 psi for 30 minutes.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

7" intermediate casing -

Lead w/397 sx Class "B" w/3% sodium metasilicate, 7# gilsonite/sx and 1/2# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/2% calcium chloride (1282 cu.ft. of slurry, 100% excess to circulate to surface.) WOC minimum of 8 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL will be run during completion operations to determine TOC. Test casing to 1500 psi for 30 minutes.

7" intermediate casing alternative two stage: Stage collar at 2132'. First stage: cement with 177 sx Class "B" cmt with 7 pps gilsonite, 1/2 pps cellophane, 3% sodium metasilicate. Tailed w/90 sx Class "B" 50/50 poz w/2% gel, 2% calcium chloride, 0.5 pps Cellophane. Second stage: 220 sx Class "B" with 3% sodium metasilicate, 1/2 pps Cellophane, 7 pps Gilsonite (1282 cu.ft., 100% excess to circulate to surface).

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every other joint off bottom, to the base of the Ojo Alamo at 3641'. Two turbolating centralizers at the base of the Ojo Alamo at 3641'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Liner -

Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Lead with 511 sx 50/50 Class "B" Poz with 2% gel, 0.25 flocele/sx, 5# gilsonite/sx, and 0.3% fluid loss additive (674 cu.ft.), 50% excess to cement 4 1/2" x 7" overlap). WOC a minimum of 18 hrs prior to completing.

Cement float shoe on bottom with float collar spaced on top of shoe joint.

Note: To facilitate higher hydraulic stimulation completion work, no liner hanger will be used. In its place, a long string of 4 1/2" casing will be run and cemented with a minimum of 100' of cement overlap between the 4 1/2" x 7" casing strings. After completion of the well, a 4 1/2" retrievable bridge plug will be set below the top of cement in the 4 1/2" x 7" overlap. The 4 1/2" casing will then be backed off above the top of cement in the 4 1/2" x 7" overlap and laid down. The 4 1/2" bridge plug will then be retrieved and the production tubing will be run to produce the well.

- If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydration.
- The pipe will be rotated and/or reciprocated, if hole conditions permit.

Special Drilling Operations (Gas/Mist Drilling):

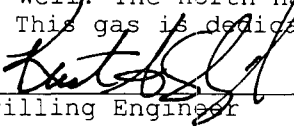
The following equipment will be operational while gas/mist drilling:

- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.
- Deduster equipment will be utilized.
- The rotating head will be properly lubricated and maintained.
- A float valve will be utilized above the bit.
- Mud circulating equipment, water, and mud materials will be sufficient to maintain control of the well.

Additional Information:

- The Dakota and Mesa Verde formations will be completed and commingled.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	800 psi
Pictured Cliffs	800 psi
Mesa Verde	700 psi
Dakota	2500 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.
- The east half of Section 31 is dedicated to the Mesa Verde in this well. The north half is dedicated to the Dakota in this well.
- This gas is dedicated.



Drilling Engineer10/26/98

Date

BURLINGTON RESOURCES OIL AND GAS COMPANY

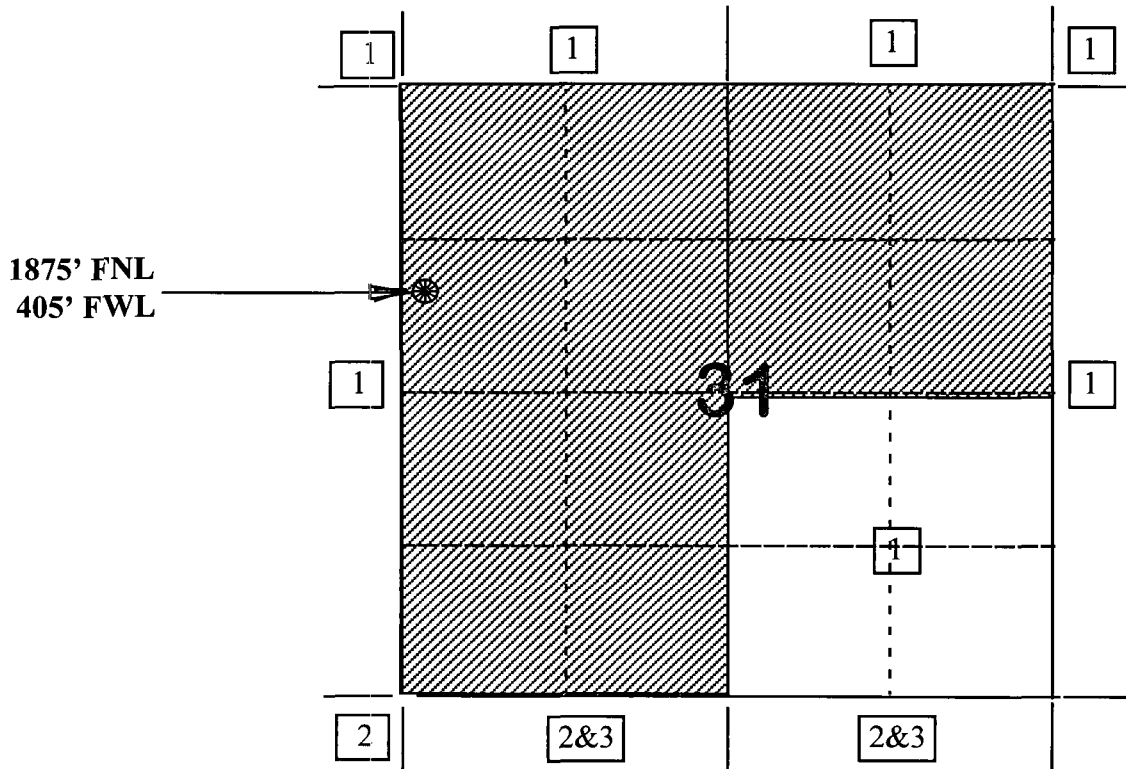
San Juan 27-4 Unit #46M

OFFSET OPERATOR/OWNER PLAT

Mesaverde (W/2) / Dakota (N/2) Formations

Nonstandard Location

Township 27 North, Range 4 West



1) Burlington Resources

2) Taurus Exploration USA, Inc
Attn: Ms. Kathy Clayton
2101 Sixth Ave. North
Birmingham, Alabama 35203

3) Chateau Oil & Gas, Inc.
5950 Berkshire Lane, Ste 275
Dallas, TX 75225

Re: San Juan 27-4 Unit #46M
1875'FNL, 405'FWL Section 31, T-27-N, R-4-W, Rio Arriba County
30-039-not assigned

I hereby certify that the following offset operators/owners have been mailed notification of our application for non-standard location to drill the referenced well.

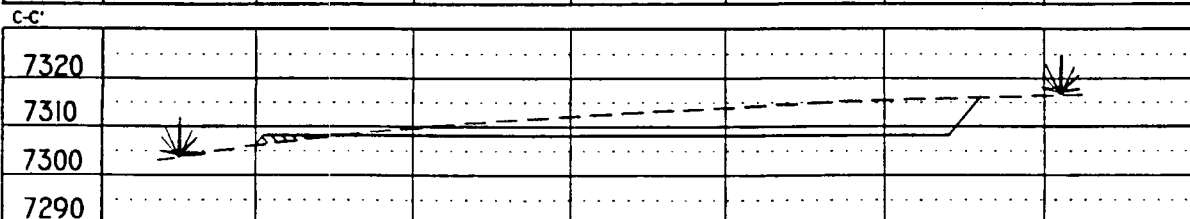
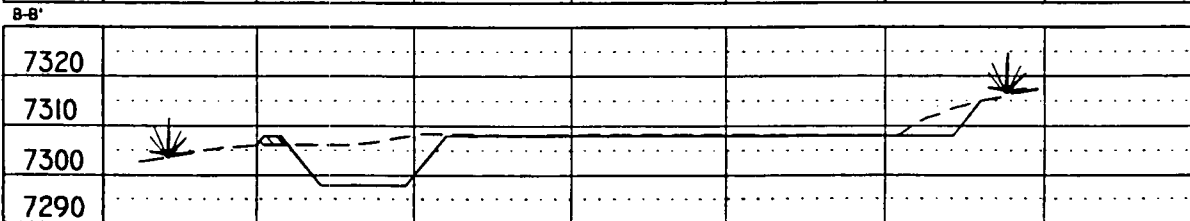
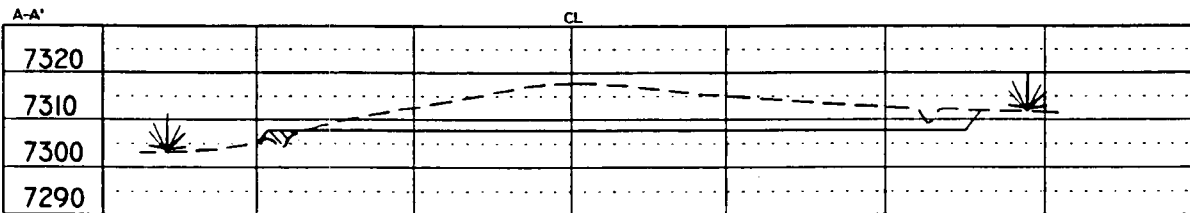
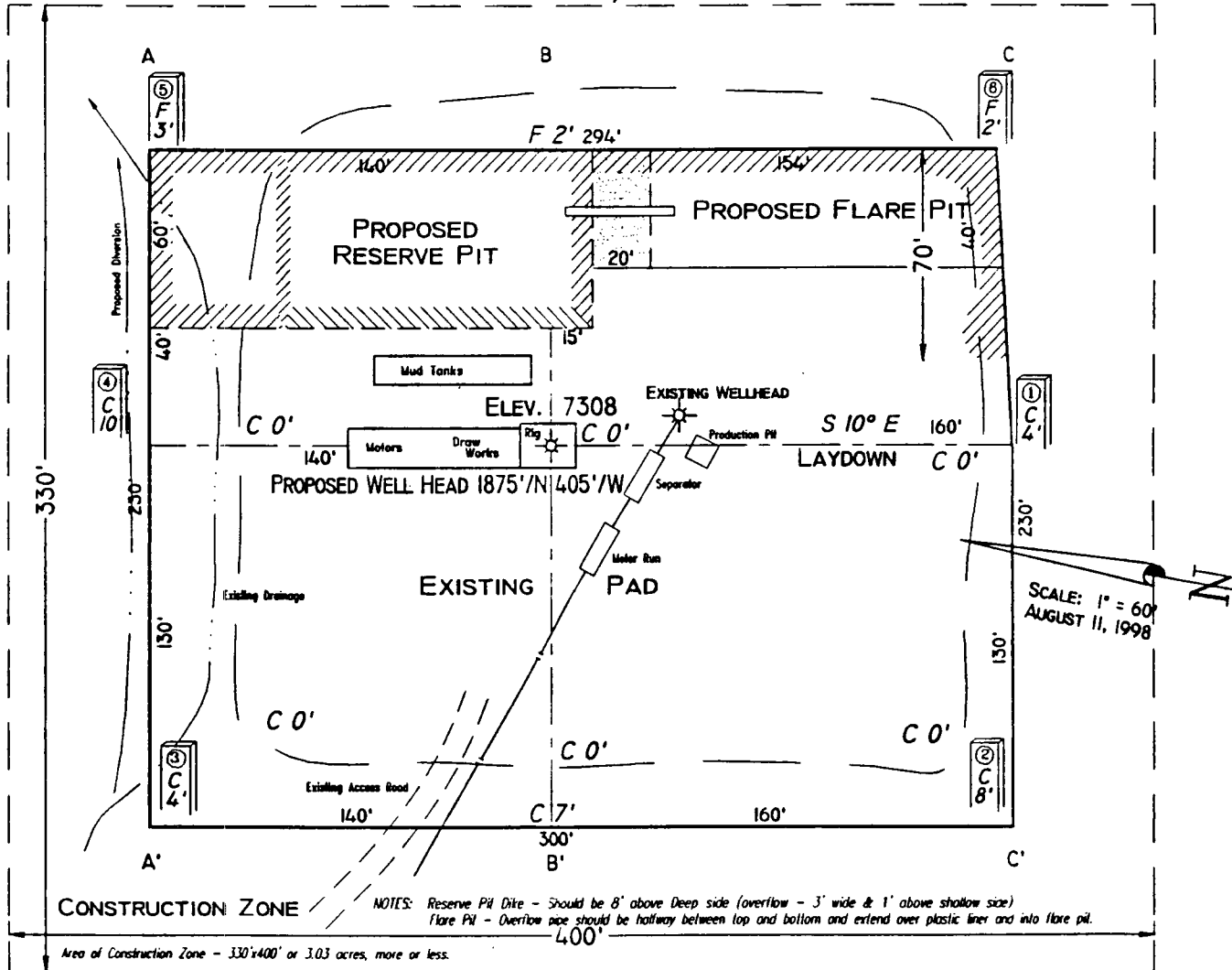
Chateau Oil & Gas Inc.
5950 Berkshire Lane, Suite 275
Dallas, TX 75225

Taurus Exploration USA Inc.
Att: Ms. Kathy Clayton
2101 Sixth Avenue North
Birmingham, Alabama 35203



Peggy Bradfield

PAD LAYOUT PLAN & PROFILE
BURLINGTON RESOURCES OIL & GAS COMPANY
SAN JUAN 27-4 UNIT # 46M
1875' F/NL 405' F/WL
SEC. 31, T27N, R4W, N.M.P.M.
RIO ARriba COUNTY, NEW MEXICO



SCALE: 1"=60'-HORIZ.
1"=40'-VERT.

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.

VANN SURVEYS
 304 N. Locke
 Farmington, NM



United States
Department of
Agriculture

Forest
Service , Jicarilla
Ranger District

664 East Broadway
Bloomfield, NM 87413
(505) 632-2956
Fax: (505) 632-3173

File Code: 2820

Date: 8/31/98

Chuck Smith
Burlington Resources
POB 4289
Farmington, NM 87499

RE: Unorthodox location for wells: San Juan 27-4 #39M
 San Juan 27-4 #46M
 San Juan 27-4 #52M
 Carson SRC #2A

Dear Mr. Smith,

The Jicarilla Ranger District, Carson National Forest is requesting you apply for an unorthodox location as follows, as discussed by your company representative and Camela Hooley of this office:

SJ 27-4 #39M, T27N R4W Sec.5, 2250'FNL/910'FWL
SJ 27-4 #46M, T27N R4W Sec.31, 1875'FN:/405'FWL
SJ 27-4 #52M, T27n R4W Sec.29, 1040'FNL/1370'FWL
Carson SRC #2A, T30N R5W Sec.1, 1850'FSL/1270'FEL

The mineral operator is required to comply with other other applicable regulations such as the Endangered Species Act and the Archeological Resources Protection Act under 36CFR228.112(c). The operator is also required under 36CFR228.108(c) to minimize or prevent damage to surface resources. The Carson National Forest Management Plan states that surface resource impacts will be minimized when administering mineral resources.

The following conditions apply which require an unorthodox location:

52M Archeological resources prevent locating the well in an orthodox location.

2A,

39M, 46M Topography prevents locating the well in an orthodox location.

46M Threatened/endangered species concerns prevent locating the well in an orthodox location.

52M,

39M, 46M Prevention of unnecessary resource damage requires the location be unorthodox. (Such as a previously disturbed area or existing road available outside the drilling window.)

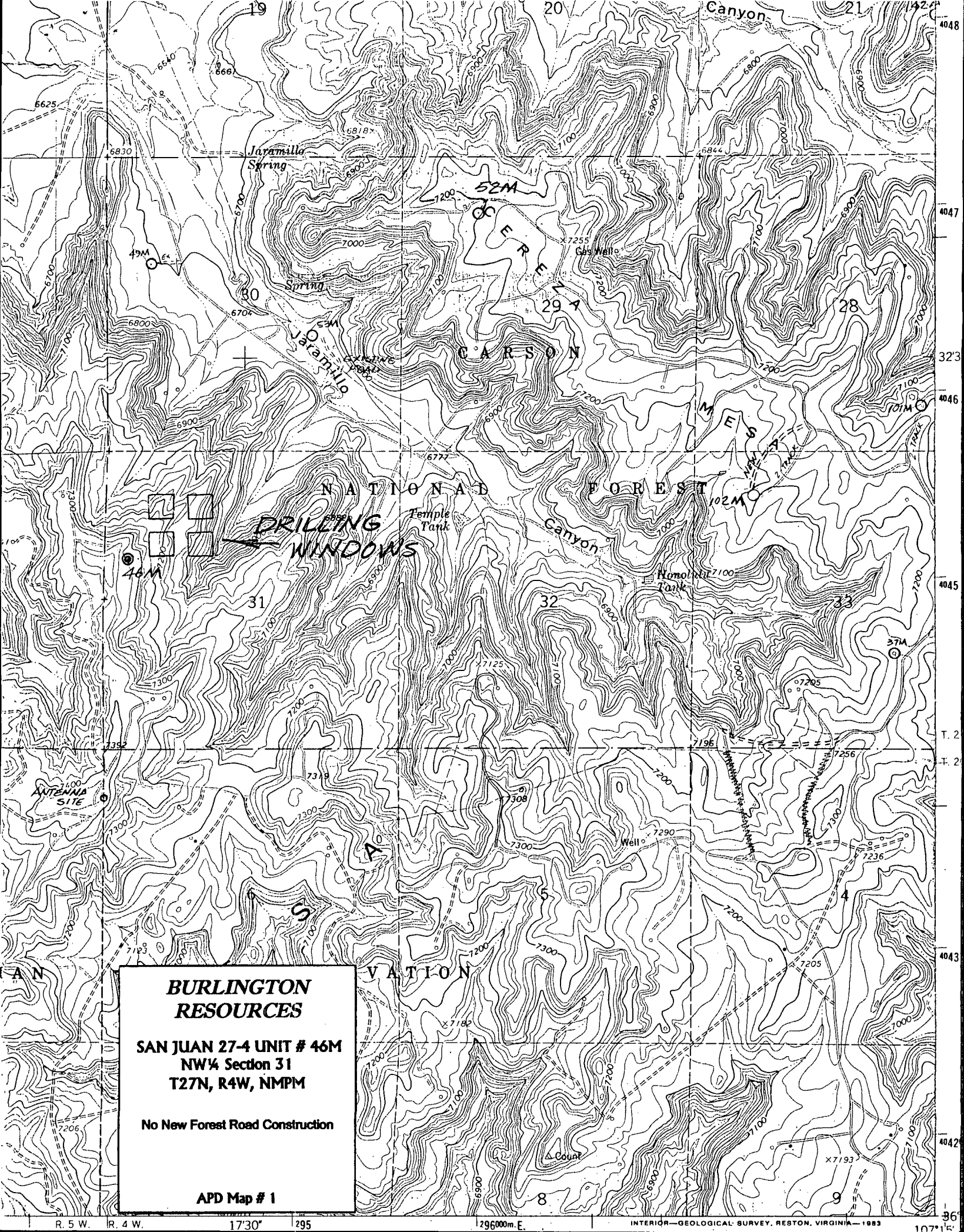
Thank you for your cooperation in this matter.

Don Case
Acting District Ranger



Caring for the Land and Serving People

FS-6200-28b(3/92)



**BURLINGTON
RESOURCES**

**SAN JUAN 27-4 UNIT # 46M
NW 1/4 Section 31
T27N, R4W, NMPM**

No New Forest Road Construction

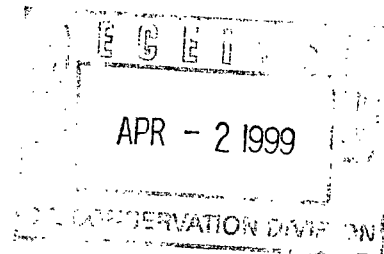
APD Map # 1

BURLINGTON RESOURCES

SAN JUAN DIVISION

Sent Federal Express

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



Re: San Juan 27-4 Unit #46M
1875'FNL, 405'FWL Section 31, T-27-N, R-4-W, Rio Arriba County
30-039-not assigned

Dear Mr. Stogner:

Burlington Resources is applying for administrative approval of an unorthodox gas well location for the Mesa Verde and Dakota pools. This location is at the request of the Carson National Forest (see attached letter) due to topography and proximity to threatened/endangered species habitat at a standard location and to utilize part of an existing well pad and the access road for the San Juan 27-4 Unit #66, Pictured Cliffs, located at 1930'FNL, 430'FWL, Section 31. This well is proposed to be drilled as a Mesa Verde-Dakota commingle and DHC-2224 has been issued.

Production from the Dakota pool is to be included in a 321.16 acre gas spacing and proration unit for the north half (N/2) in Section 31 and is to be dedicated to the San Juan 27-4 Unit #46 (30-039-20128) located at 1750'FNL, 850'FEL of Section 31. Production from the Mesa Verde pool is to be included in a 323.16 acre gas spacing and proration unit for the west half (W/2) in Section 31 and is to be dedicated to the San Juan 27-4 Unit #26 (30-039-06771) located at 860'FSL, 790'FWL of Section 31.

The following attachments are for your review:

- Application for Permit to Drill.
- Completed C-102 at referenced location.
- Offset operators/owners plat
- 7.5 minute topographic map.


Three copies of this application are being submitted to offset operators by certified mail with a request that they furnish you with a Waiver of Objection, keep one copy for their files and return one copy to this office. We appreciate your earliest consideration of this application.

Sincerely,


Peggy Bradfield
Regulatory/Compliance Administrator

xc: NMOCD - Aztec District Office
Bureau of Land Management

WAIVER

 hereby waives objection to Burlington Resources' application for a non-standard location for the San Juan 27-4 Unit #46M as proposed above.

By:  Date: 3-31-99

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 SF-080670 Unit Reporting Number
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator BURLINGTON RESOURCES Oil & Gas Company	7. Unit Agreement Name San Juan 27-4 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name San Juan 27-4 Unit 9. Well Number 46M
4. Location of Well 1875' FNL, 405' FWL Latitude 36° 31' 55", Longitude 107° 17' 55"	10. Field, Pool, Wildcat Blanco MV/Basin DK 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 31, T-27-N, R-4-W API # 30-039-
14. Distance in Miles from Nearest Town 70 miles to Bloomfield	12. County Rio Arriba 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 405'	17. Acres Assigned to Well 323.16 W/2, 321.16 N/2
16. Acres in Lease	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 50'	20. Rotary or Cable Tools Rotary
19. Proposed Depth 8545'	
21. Elevations (DF, FT, GR, Etc.) 7308' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>[Signature]</u> Regulatory/Compliance Administrator	<u>10-23-84</u> Date

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

Archaeological Report to be submitted

Threatened and Endangered Species Report to be submitted

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

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or presentations as to any matter within its jurisdiction.

District I
PO Box 1980, Hobbs NM 88241-1980
District II
PO Drawer KK, Artesia, NM 87211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 20-039-	² Pool Code 71599/72319	³ Pool Name Basin Dakota/Blanco Mesaverde
⁴ Property Code 7452	⁵ Property Name SAN JUAN 27-4 UNIT	⁶ Well Number # 46M
⁷ OGBID No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY	⁹ Elevation 7308

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
E	31	27 N	4 W		1875	NORTH	405	WEST	RIO ARriba

¹¹ Bottom Hole Location If Different From Surface

¹ 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 DK: N/321.16 MV: W/323.16	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTEREST 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. Signature Peggy Bradfield Printed Name Regulatory Administrator Title 10-25-98 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 me or under my supervision, and that the same is true and correct to the best of my belief. August 11, 1998 Date of Survey Signature and Seal of Registered Professional Land Surveyor 7016 Certificate Number	

OPERATIONS PLAN

Well Name: San Juan 27-4 Unit #46M
Location: 1875' FNL, 405' FWL, Sec 31, T-27-N, R-4-W
Rio Arriba County, NM
Latitude 36° 31' 55", Longitude 107° 17' 55"
Formation: Blanco Mesa Verde/Basin Dakota
Elevation: 7308' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	3518'	
Ojo Alamo	3518'	3641'	aquifer
Kirtland	3641'	3724'	gas
Fruitland	3724'	4092'	gas
Pictured Cliffs	4092'	4164'	gas
Lewis	4164'	4570'	gas
Intermediate TD	4264'		
Mesa Verde	4570'	5063'	gas
Chacra	5063'	5781'	gas
Massive Cliff House	5781'	5917'	gas
Menefee	5917'	6253'	gas
Massive Point Lookout	6253'	6760'	gas
Mancos	6760'	7415'	gas
Gallup	7415'	8217'	gas
Greenhorn	8217'	8274'	gas
Graneros	8274'	8429'	gas
Dakota	8429'		gas
TD (4 1/2" liner)	8545'		

Logging Program:

Cased hole - CBL - TD to 200' above TOC, GR/CNL across MV/DK

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 200'	Spud	8.4-9.0	40-50	no control
200-4264'	LSND	8.4-9.0	30-60	no control
4264-8545'	Gas	n/a	n/a	n/a

Pit levels will be visually monitored to detect gain or loss of fluid control.

Casing Program (as listed, the equivalent, or better):

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	K-55
8 3/4"	0' - 4264'	7"	20.0#	J-55
6 1/4"	4164' - 8545'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 8545' 2 3/8" 4.70# EUE

BOP Specifications, Wellhead and Tests:Surface to Intermediate TD -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1).
After nipple-up prior to drilling out surface casing, rams and casing will be tested to 600 psi for 30 minutes.

Intermediate TD to Total Depth -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1).
After nipple-up prior to drilling out intermediate casing, rams and casing will be tested to 1500 psi for 30 minutes.

Surface to Total Depth -

2" nominal, 2000 psi minimum choke manifold (Reference Figure #3).

Completion Operations -

7 1/16" 2000 psi double gate BOP stack (Reference Figure #2).
After nipple-up prior to completion, pipe rams, casing and liner top will be tested to 2000 psi for 15 minutes.

Wellhead -

9 5/8" x 7" x 2 3/8" x 3000 psi tree assembly.

General -

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper Kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- BOP pit level drill will be conducted weekly for each drilling crew.
- All BOP tests and drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

Cementing:

9 5/8" surface casing - cement with 163 sx Class "B" cement with 1/4# flocele/sx and 2% calcium chloride (188 cu.ft. of slurry, 200% excess to circulate to surface). WOC 8 hrs. Test casing to 600 psi for 30 minutes.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

7" intermediate casing -

Lead w/397 sx Class "B" w/3% sodium metasilicate, 7# gilsonite/sx and 1/2# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/2% calcium chloride (1282 cu.ft. of slurry, 100% excess to circulate to surface.) WOC minimum of 8 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL will be run during completion operations to determine TOC. Test casing to 1500 psi for 30 minutes.

7" intermediate casing alternative two stage: Stage collar at 2132'. First stage: cement with 177 sx Class "B" cmt with 7 pps gilsonite, 1/2 pps cellophane, 3% sodium metasilicate. Tailed w/90 sx Class "B" 50/50 poz w/2% gel, 2% calcium chloride, 0.5 pps Cellophane. Second stage: 220 sx Class "B" with 3% sodium metasilicate, 1/2 pps Cellophane, 7 pps Gilsonite (1282 cu.ft., 100% excess to circulate to surface).

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every other joint off bottom, to the base of the Ojo Alamo at 3641'. Two turbolating centralizers at the base of the Ojo Alamo at 3641'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Liner -

Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Lead with 511 sx 50/50 Class "B" Poz with 2% gel, 0.25 flocele/sx, 5# gilsonite/sx, and 0.3% fluid loss additive (674 cu.ft.), 50% excess to cement 4 1/2" x 7" overlap). WOC a minimum of 18 hrs prior to completing.

Cement float shoe on bottom with float collar spaced on top of shoe joint.

Note: To facilitate higher hydraulic stimulation completion work, no liner hanger will be used. In its place, a long string of 4 1/2" casing will be run and cemented with a minimum of 100' of cement overlap between the 4 1/2" x 7" casing strings. After completion of the well, a 4 1/2" retrievable bridge plug will be set below the top of cement in the 4 1/2" x 7" overlap. The 4 1/2" casing will then be backed off above the top of cement in the 4 1/2" x 7" overlap and laid down. The 4 1/2" bridge plug will then be retrieved and the production tubing will be run to produce the well.

- If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydration.
- The pipe will be rotated and/or reciprocated, if hole conditions permit.

Special Drilling Operations (Gas/Mist Drilling):

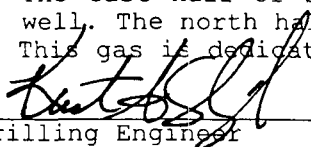
The following equipment will be operational while gas/mist drilling:

- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.
- Deduster equipment will be utilized.
- The rotating head will be properly lubricated and maintained.
- A float valve will be utilized above the bit.
- Mud circulating equipment, water, and mud materials will be sufficient to maintain control of the well.

Additional Information:

- The Dakota and Mesa Verde formations will be completed and commingled.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	800 psi
Pictured Cliffs	800 psi
Mesa Verde	700 psi
Dakota	2500 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.
- The east half of Section 31 is dedicated to the Mesa Verde in this well. The north half is dedicated to the Dakota in this well.
- This gas is dedicated.



Drilling Engineer10/26/98

Date

BURLINGTON RESOURCES OIL AND GAS COMPANY

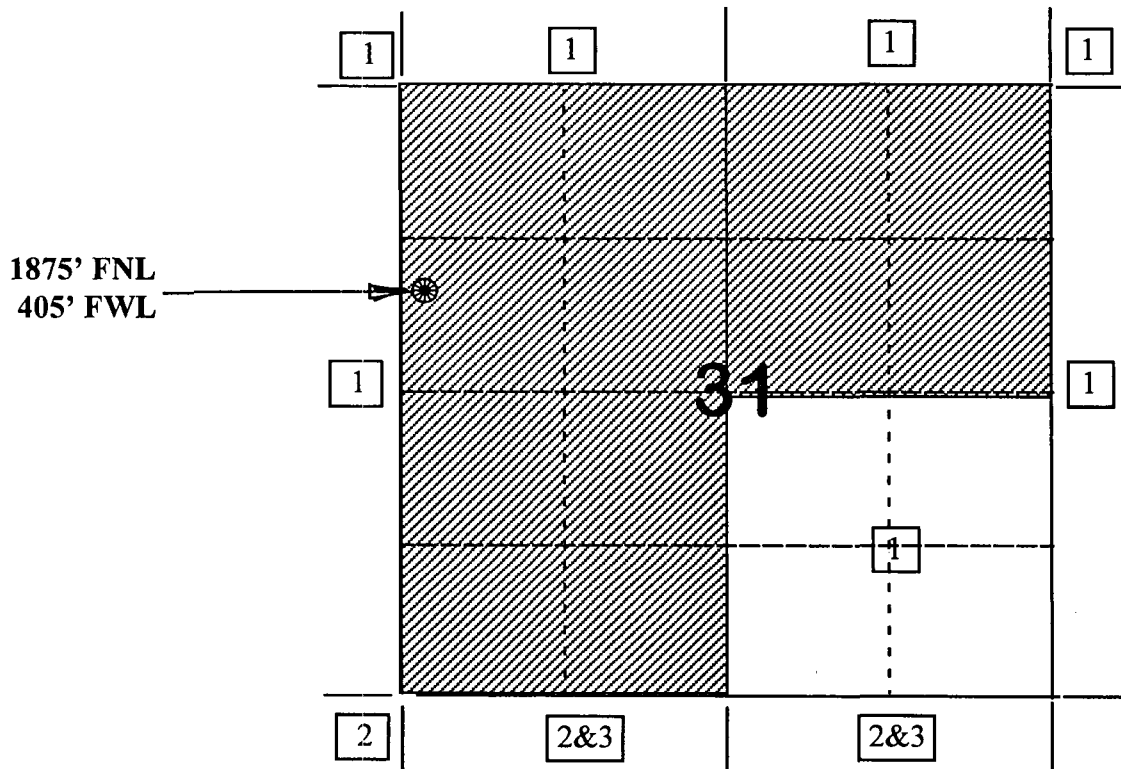
San Juan 27-4 Unit #46M

OFFSET OPERATOR/OWNER PLAT

Mesaverde (W/2) / Dakota (N/2) Formations

Nonstandard Location

Township 27 North, Range 4 West



1) Burlington Resources

2) Taurus Exploration USA, Inc
Attn: Ms. Kathy Clayton
2101 Sixth Ave. North
Birmingham, Alabama 35203

3) Chateau Oil & Gas, Inc.
5950 Berkshire Lane, Ste 275
Dallas, TX 75225

Re: San Juan 27-4 Unit #46M
1875'FNL, 405'FWL Section 31, T-27-N, R-4-W, Rio Arriba County
30-039-not assigned

I hereby certify that the following offset operators/owners have been mailed notification of our application for non-standard location to drill the referenced well.

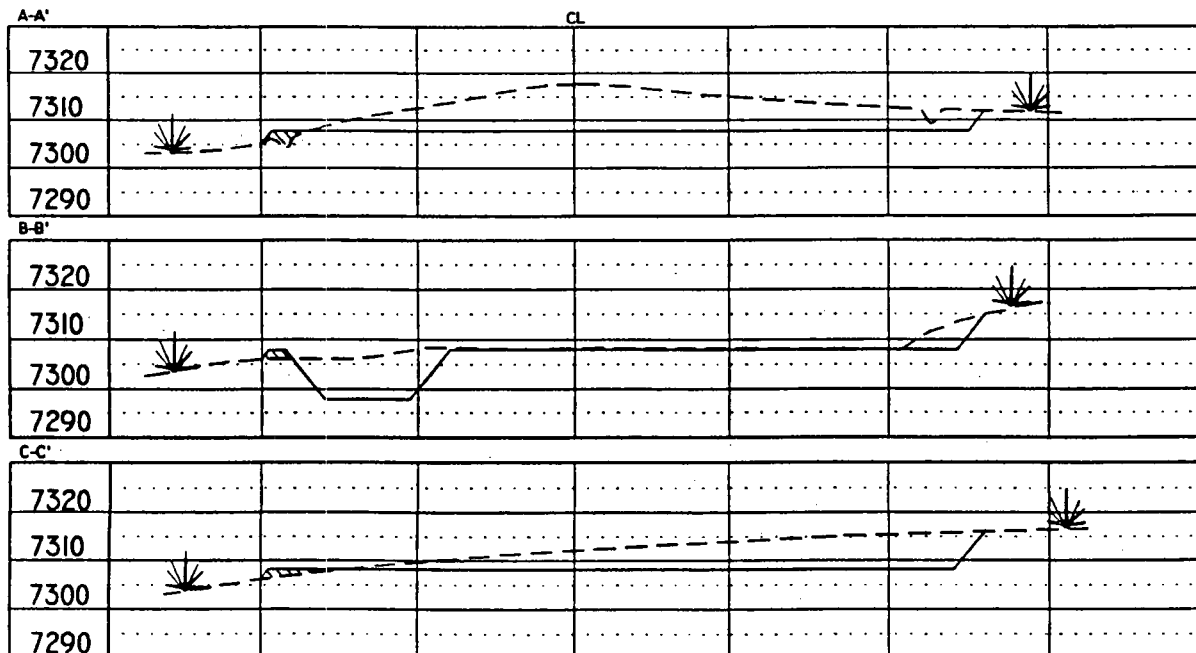
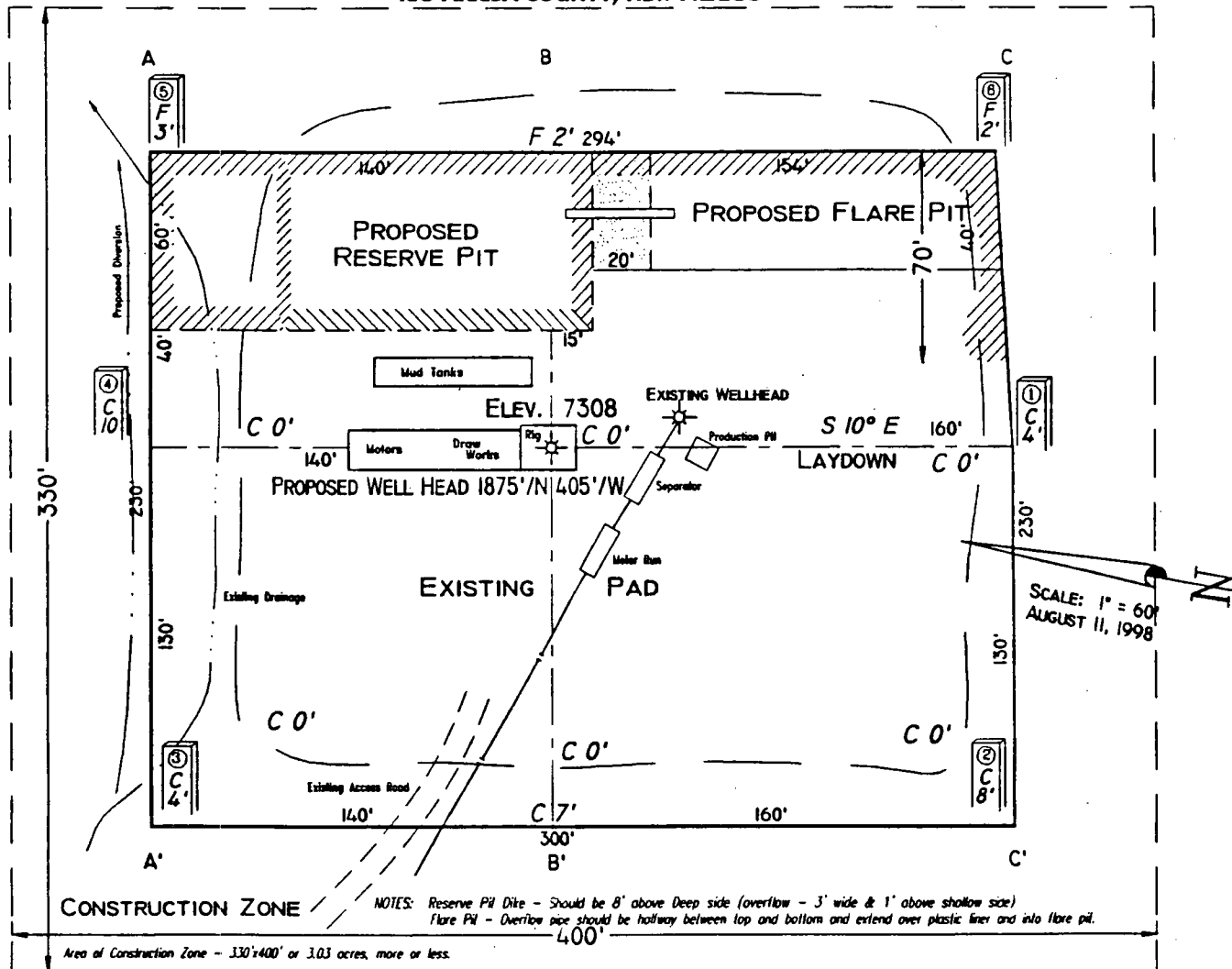
Chateau Oil & Gas Inc.
5950 Berkshire Lane, Suite 275
Dallas, TX 75225

Taurus Exploration USA Inc.
Att: Ms. Kathy Clayton
2101 Sixth Avenue North
Birmingham, Alabama 35203



Peggy Bradfield

PAD LAYOUT PLAN & PROFILE
BURLINGTON RESOURCES OIL & GAS COMPANY
SAN JUAN 27-4 UNIT # 46M
1875' F/NL 405' F/WL
SEC. 31, T27N, R4W, N.M.P.M.
RIO ARriba COUNTY, NEW MEXICO



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.

VANN SURVEYS
 304 N. Locke
 Farmington, NM



United States
Department of
Agriculture

Forest
Service

Jicarilla
Ranger District

664 East Broadway
Bloomfield, NM 87413
(505) 632-2956
Fax: (505) 632-3173

File Code: 2820

Date: 8/31/98

Chuck Smith
Burlington Resources
POB 4289
Farmington, NM 87499

RE: Unorthodox location for wells: San Juan 27-4 #39M
 San Juan 27-4 #46M
 San Juan 27-4 #52M
 Carson SRC #2A

Dear Mr. Smith,

The Jicarilla Ranger District, Carson National Forest is requesting you apply for an unorthodox location as follows, as discussed by your company representative and Camela Hooley of this office:

SJ 27-4 #39M, T27N R4W Sec.5, 2250'FNL/910'FWL
SJ 27-4 #46M, T27N R4W Sec.31, 1875'FN:/405'FWL
SJ 27-4 #52M, T27n R4W Sec.29, 1040'FNL/1370'FWL
Carson SRC #2A, T30N R5W Sec.1, 1850'FSL/1270'FEL

The mineral operator is required to comply with other other applicable regulations such as the Endangered Species Act and the Archeological Resources Protection Act under 36CFR228.112(c). The operator is also required under 36CFR228.108(c) to minimize or prevent damage to surface resources. The Carson National Forest Management Plan states that surface resource impacts will be minimized when administering mineral resources.

The following conditions apply which require an unorthodox location:

52M Archeological resources prevent locating the well in an orthodox location.

2A,

39M,46M Topography prevents locating the well in an orthodox location.

46M Threatened/endangered species concerns prevent locating the well in an orthodox location.

52M,

39M,46M Prevention of unnecessary resource damage requires the location be unorthodox. (Such as a previously disturbed area or existing road available outside the drilling window.)

Thank you for your cooperation in this matter.

Don Case
Acting District Ranger



Caring for the Land and Serving People

FS-6200-28b(3/92)

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

04/23/99 13:38:31
OGOMES -TP01
PAGE NO: 1

Sec : 31 Twp : 27N Rng : 04W Section Type : NORMAL

1 40.48 Federal owned	C 40.00 Federal owned	B 40.00 Federal owned	A 40.00 Federal owned A
2 40.68 Federal owned A	F 40.00 Federal owned	G 40.00 Federal owned	H 40.00 Federal owned A A

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07 BKWD	PF08 FWD	PF09 PRINT	PF10 SDIV	PF11	PF12

1 81.16
24
321.16

81.16
8
161.16
162
323.16

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

04/23/99 13:38:35
OGOMES -TP01
PAGE NO: 2

Sec : 31 Twp : 27N Rng : 04W Section Type : NORMAL

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4 41.11 Federal owned A A A	N 40.00 Federal owned	O 40.00 Federal owned A A	P 40.00 Federal owned

PF01 HELP
PF07 BKWD

PF02
PF08 FWD

PF03 EXIT
PF09 PRINT

PF04 GoTo
PF10 SDIV

PF05
PF11

PF06
PF12

82.00
8
162.00

CMD :
OG5SECTONGARD
INQUIRE LAND BY SECTION03/30/99 16:48:37
OGOMES -TPJW
PAGE NO: 2

Sec : 31 Twp : 27N Rng : 04W Section Type : NORMAL

3 40.89 Federal owned	K 40.00 Federal owned	J 40.00 Federal owned	I 40.00 Federal owned
4 41.11 Federal owned A A A	N 40.00 Federal owned	O 40.00 Federal owned A A	P 40.00 Federal owned

PF01 HELP
PF07 BKWDPF02
PF08 FWDPF03 EXIT
PF09 PRINTPF04 GoTo
PF10 SDIVPF05
PF11PF06
PF12

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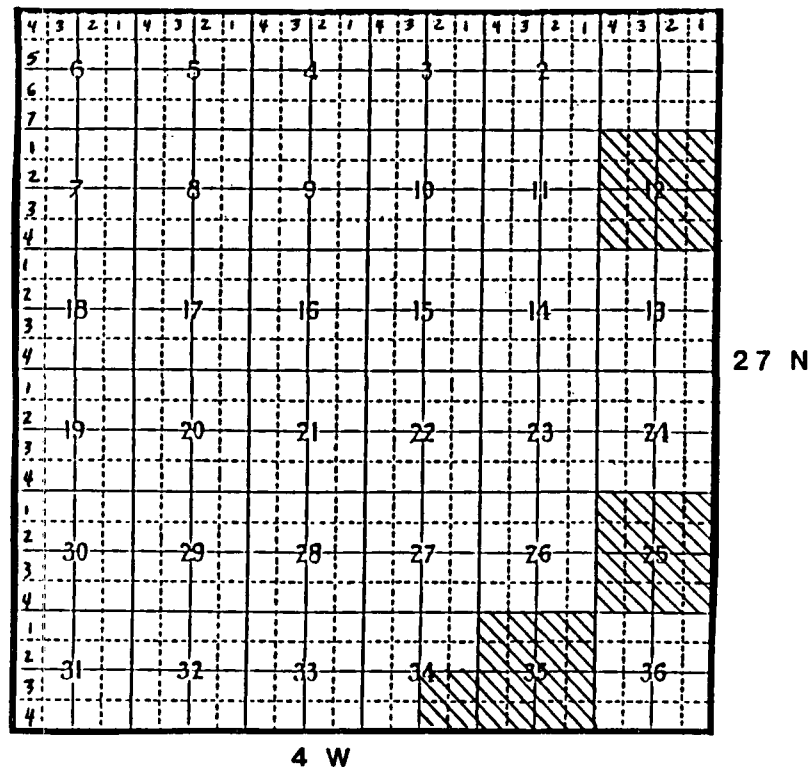
1 40.48 Federal owned	C 40.00 Federal owned	B 40.00 Federal owned	A 40.00 Federal owned A
2 40.68 Federal owned A	F 40.00 Federal owned	G 40.00 Federal owned	H 40.00 Federal owned A A

PF01 HELP
PF07 BKWDPF02
PF08 FWDPF03 EXIT
PF09 PRINTPF04 GoTo
PF10 SDIVPF05
PF11PF06
PF12

SAN JUAN 27 - 4

RIO ARriba COUNTY
NEW MEXICO

No. 14-08-001-1054 EFFECTIVE 9-3-53



 ELIMINATION



gulram, inc.

petroleum engineering and government regulation consultants