

DATE IN 7/9/99	SUSPENSE 7/29/99	ENGINEER MS	LOGGED KW	TYPE NSL
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

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

Application Acronyms:

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

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

[A] Location - Spacing Unit - Directional Drilling
☒ NSL ☐ NSP ☐ DD ☐ SD

Check One Only for [B] and [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

JUL - 9 1999

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

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

[B] ☒ Offset Operators, Leaseholders or Surface Owner

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

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

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

[F] ☐ Waivers are Attached

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

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

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

Peggy Bradfield



Regulatory/Compliance Administrator

Print or Type Name

Signature

Title

Date

BURLINGTON RESOURCES

SAN JUAN DIVISION

Sent Federal Express July 8, 1999

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

Re: Quinn #1C
2245'FSL, 2280'FWL Section 20, T-31-N, R-8-W, San Juan County
30-045-not assigned

Dear Mr. Stogner:

Burlington Resources is applying for administrative approval of an unorthodox gas well location for the Mesa Verde pool. This application for the referenced location is for geological reasons as referenced in the attached geological explanation and maps. This location falls outside the windows established for the Mesa Verde by R-10987A.

Production from the Mesa Verde pool is to be included in a 320 acre gas spacing and proration unit for the west half (W/2) in Section 20 and is to be dedicated to the Quinn #1 (30-045-10484) located at 1650'FSL, 990'FWL in Section 20, the Quinn #1A (30-045-26762) located at 1850'FNL, 1850'FWL, and the Quinn #1B (30-045-not assigned) located at 660'FNL, 660'FWL in Section 20 which is proposed to be drilled this year.

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
- Geologic explanation and maps

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.

We appreciate your earliest consideration of this application.

Sincerely,



Peggy Bradfield
Regulatory/Compliance Administrator

xc: NMOCD - Aztec District Office
Bureau of Land Management

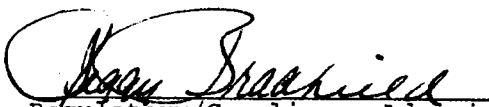
WAIVER

_____ hereby waives objection to Burlington Resources' application for a non-standard location for the Quinn #1C 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-078511 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
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Quinn 9. Well Number 1C
4. Location of Well 2245' FSL, 2280' FWL Latitude 36° 52.9, Longitude 107° 42.0	10. Field, Pool, Wildcat Blanco Mesaverde 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 20, T-31-N, R-8-W API # 30-045-
14. Distance in Miles from Nearest Town 5 miles to Navajo Dam Post Office	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 2245'	
16. Acres in Lease	17. Acres Assigned to Well 320.00
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 1000'	
19. Proposed Depth 6072'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6513' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u></u> Regulatory/Compliance Administrator <u>6-11-99</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 DD, Artesia, NM 88211-0719

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

API Number 30-045-		Pool Code 72319	Pool Name Blanco Mesaverde
Property Code 7407	Property Name QUINN		Well Number 1C
GRID No. 14538	Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY		Elevation 6513'

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
K	20	31N	8W		2245	SOUTH	2280	WEST	SAN JUAN

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
Dedicated Acres W/320		Joint or Infill		Consolidation Code		Order No.			

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. Signature Peggy Bradfield Printed Name Regulatory Administrator Title 6-11-99 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. MAY 6, 1999 Date of Survey Signature and Seal of Professional Surveyor Certificate Number 6857

OPERATIONS PLAN

Well Name: Quinn #1C
 Location: 2245' FSL, 2280' FWL, Sec. 20, T-31-N, R-8-W
 San Juan County, NM
 Latitude 36° 52.9 Longitude 107° 42.0
 Formation: Blanco Mesa Verde
 Elevation: 6513'GR

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2138'	
Ojo Alamo	2138'	2248'	
Kirtland	2248'	2877'	
Fruitland	2877'	3385'	
Pictured Cliffs	3385'	3502'	
Lewis	3502'	4135'	
Intermediate TD	3602'		
Mesa Verde	4135'	4508'	
Chacra	4508'	5281'	
Massive Cliff House	5281'	5322'	
Menefee	5322'	5672'	
Massive Point Lookout	5672'		
TD	6072'		

Logging Program:

Cased hole - GR/CBL - surface to TD

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
200-3602'	LSND	8.4-9.0	30-60	no control
3602-6072'	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>Csq. Size</u>	<u>Wt</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	H-40
8 3/4"	0' - 3602'	7"	20.0#	J-55
6 1/4"	3502' - 6072'	4 1/2"	10.5#	J-55

Tubing Program:

0' - 6072' 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.

BOP Specifications, Wellhead and Tests:**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 Fig #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 2000 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 159 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/331 sx Class "B" w/3% sodium metasilicate, 10# gilsonite/sx and 1/2# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/2% calcium chloride, 1/2# flocele/sx, 10# gilsonite/sx (1083 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.

Alternate two-stage cement job. Stage tool @ 2777'. Cement 1st stage w/120 sx 50/50 Class "B" poz w/2% calcium chloride, 1/2# flocele/sx, 10# gilsonite/sx. Cement 2nd stage w/287 sx Class "B" cement w/3% sodium metasilicate, 10# gilsonite/sx, 1/2# flocele/sx (1081 cu.ft. of slurry, 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 2248'. Two turbolating centralizers at the base of the Ojo Alamo at 2248'. 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. Cement with 280 sx 50/50 Class "B" Poz with 2% gel, 1/4# flocele/sx, 5# gilsonite/sx, and 0.4% fluid loss additive (370 cu.ft., 40% 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.

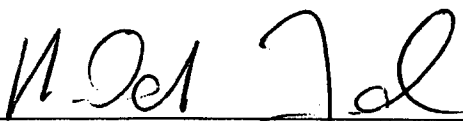
Special Drilling Operations (Gas/Mist Drilling):

- 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 Mesa Verde formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	300 psi
Pictured Cliffs	500 psi
Mesa Verde	700 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.
- The west half is dedicated to the Mesa Verde in this well.
- This gas is dedicated.


Drilling Engineer

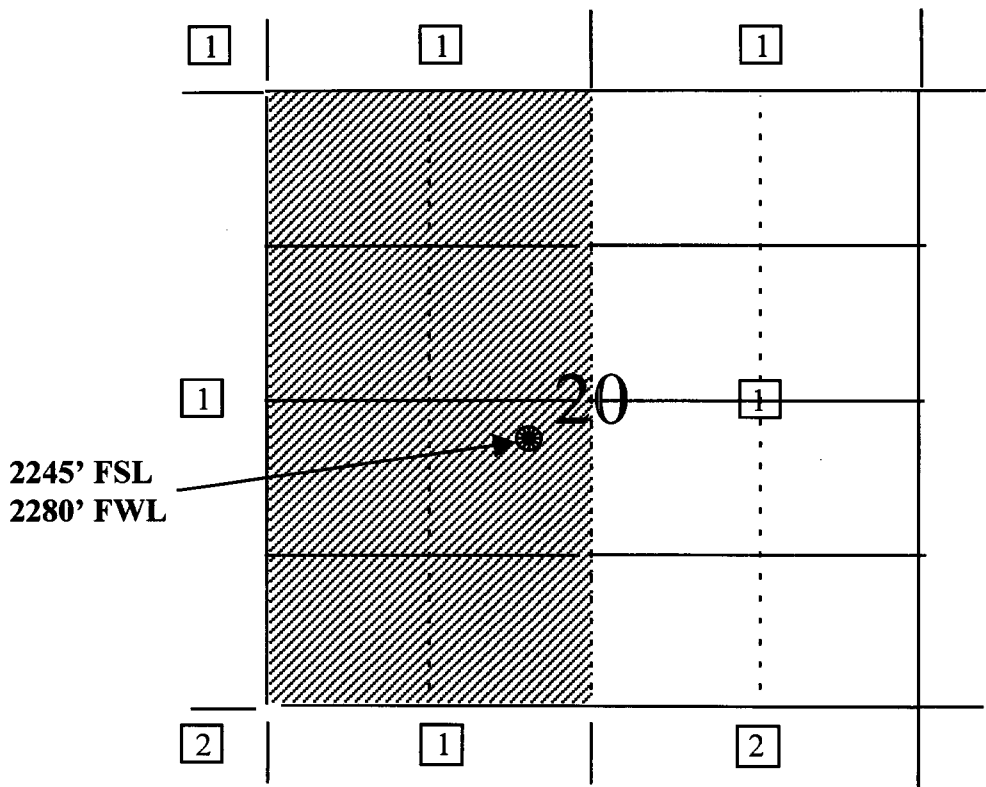
6-16-99
Date

BURLINGTON RESOURCES OIL AND GAS COMPANY

**Quinn #1C
OFFSET OPERATOR / OWNER PLAT
Nonstandard Location**

Mesaverde Formation Well

Township 31 North, Range 8 West



- 1) Burlington Resources
- 2) Amoco Production Company
Attn: Don Duhrkopf
501 West Lake Park Blvd.
Houston, TX 77079-2696

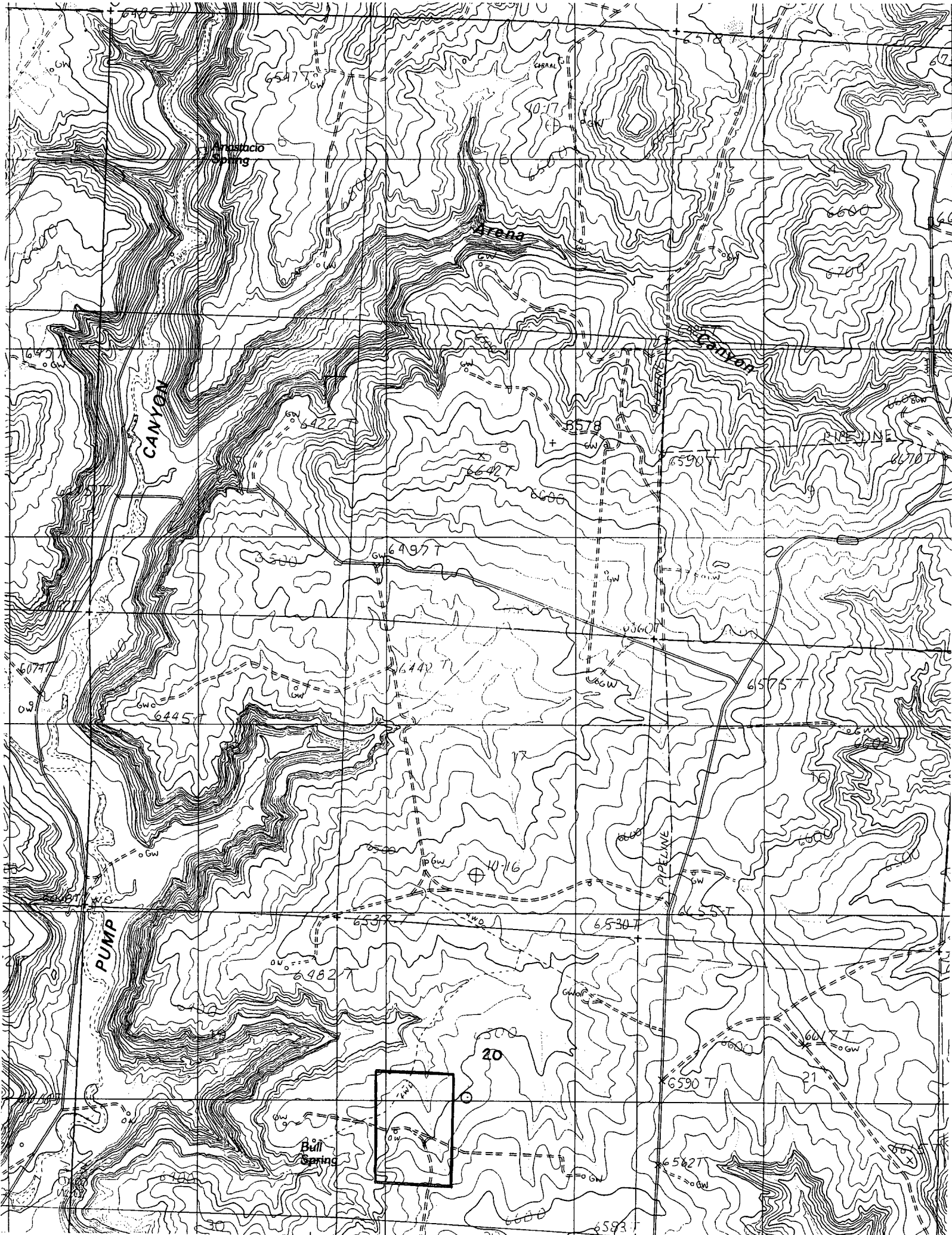
Re: Quinn #1C
2245'FSL, 2280'FWL Section 20, T-31-N, R-8-W, San Juan County
30-045-not assigned

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.

Amoco Production
Att: Don Duhrkopf
501 WestLake Park Boulevard
Houston, TX 77079-2696


A handwritten signature in black ink, reading "Peggy Bradfield 7/8/99". The signature is written in a cursive style with a large initial "P".

Peggy Bradfield
Burlington Resources
Regulatory/Compliance Administrator



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-078511 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
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Quinn 9. Well Number 1C
4. Location of Well 2245' FSL, 2280' FWL Latitude 36° 52.9, Longitude 107° 42.0	10. Field, Pool, Wildcat Blanco Mesaverde 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 20, T-31-N, R-8-W API # 30-045-
14. Distance in Miles from Nearest Town 5 miles to Navajo Dam Post Office	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 2245'	
16. Acres in Lease	17. Acres Assigned to Well 320.00
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 1000'	
19. Proposed Depth 6072'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6513' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by:  Regulatory/Compliance Administrator <u>6-11-99</u> Date	

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

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Threatened and Endangered Species Report to be submitted

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Form C-102
Revised February 21, 1994
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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-		*Pool Code 72319		*Pool Name Blanco Mesaverde	
*Property Code 7407		*Property Name QUINN			*Well Number 1C
*OGRID No. 14538		*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			*Elevation 6513'

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
K	20	31N	8W		2245	SOUTH	2280	WEST	SAN JUAN

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 W/320	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



¹⁶		5235.12'		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 6-11-99	
				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.	
				MAY 6, 1999	
				Date of Survey	
				Signature and Seal of Professional Surveyor	
					
				Certificate Number 6857	

Diagram details: A well location diagram showing a grid with dimensions. The well is located at the intersection of a 2280' horizontal line and a 2245' vertical line. The total horizontal distance from the left boundary is 5233.14'. The total vertical distance from the bottom boundary is 5221.92'. The well is labeled 'NMSF-078511' and '20'.

OPERATIONS PLAN

Well Name: Quinn #1C
 Location: 2245' FSL, 2280' FWL, Sec. 20, T-31-N, R-8-W
 San Juan County, NM
 Latitude 36° 52.9 Longitude 107° 42.0
 Formation: Blanco Mesa Verde
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Massive Point Lookout	5672'		
TD	6072'		

Logging Program:

Cased hole - GR/CBL - surface to TD

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
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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>Csq. Size</u>	<u>Wt</u>	<u>Grade</u>
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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.

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

11" 2000 psi minimum double gate BOP stack (Reference Figure #1).
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and casing will be tested to 1500 psi for 30 minutes.

Surface to Total Depth -

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

Completion Operations -

7 1/16" 2000 psi double gate BOP stack (Reference Figure #2).
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Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

7" intermediate casing - Lead w/331 sx Class "B" w/3% sodium metasilicate, 10# gilsonite/sx and 1/2# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/2% calcium chloride, 1/2# flocele/sx, 10# gilsonite/sx (1083 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.

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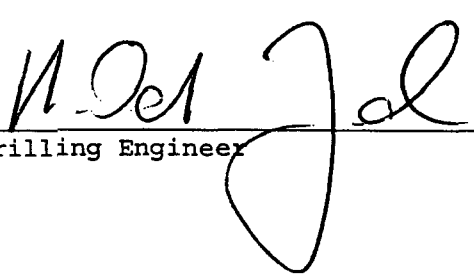
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- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.
- 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 Mesa Verde formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	300 psi
Pictured Cliffs	500 psi
Mesa Verde	700 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.
- The west half is dedicated to the Mesa Verde in this well.
- This gas is dedicated.


Drilling Engineer

6-16-99
Date

Proposed Quinn Well Number 1C
2245' FSL & 2280' FWL
Section 20, T31N, R8W
San Juan County, New Mexico
Blanco Mesaverde Pool
Estimated TD 6072'

The location of the proposed test was selected to optimize recovery from the Mesaverde Group. The primary control on productivity in the Mesaverde is the density of natural fractures. Fracture orientation ranges from due north to north 30 degrees east. Gas drainage areas are elliptical in shape with the long axis parallel to the direction of fracture orientation. A drainage ellipse map of the project vicinity indicates that undeveloped gas reserves remain to be exploited in the E/2SW/4 of Section 20, T31N, R8W. The drainage ellipse map is based upon data derived from a larger study of the entire Blanco Mesaverde Pool (estimated ultimate recovery calculated for all wells in the Blanco Mesaverde Pool, original gas in place values calculated for entire Blanco Mesaverde Pool, etc.). Gross recoverable reserves of 1075 BCFG are projected from the Mesaverde producing interval for the proposed test. Due to topographic and archeological restrictions, it is not possible to exploit the remaining gas reserves in the Mesaverde in E/2SW/4 of Section 20, T31N, R8W from a standard surface location.

Quinn #1C
31N-8W-20
Blanco Mesaverde

