

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 <b>BURLINGTON RESOURCES</b> Oil & Gas Company	7. Unit Agreement Name 7467
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 # 30-045-29744
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'	17. Acres Assigned to Well W/ 320.00
16. Acres in Lease	
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	THE LAND OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"
24. Authorized by: <u>Karen Bradfield</u> Regulatory/Compliance Administrator	<u>6-11-99</u> Date

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
APPROVED BY WAYNE TOWNSEND TITLE A.T.L. DATE 9-30-99

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.

NSL-4353 (E)

44000

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

1 API Number 30-045-29944		2 Pool Code 72319		3 Pool Name Blanco Mesaverde					
4 Property Code 7407		5 Property Name QUINN						6 Well Number 1C	
7 OGRID No. 14538		8 Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY						9 Elevation 6513'	
10 Surface Location									
UL or lot no. K	Section 20	Township 31N	Range 8W	Lot Idn	Feet from the 2245	North/South line SOUTH	Feet from the 2280	East/West line WEST	County 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.			

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						17 OPERATOR CERTIFICATION			
<p>5235.12'</p> <p>5233.14'</p> <p>NMSF-078511</p> <p>2280'</p> <p>20</p> <p>2245'</p> <p>5221.92'</p> <p>5212.68'</p>						I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.			
						Signature <i>Peggy Bradfield</i>			
						Printed Name Peggy Bradfield			
						Regulatory Administrator Title			
Date 6-11-99						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.			
						Date of Survey MAY 6, 1999			
						Signature and Seal of Professional Surveyor <p>NEALE C. EDWARDS NEW MEXICO 6857</p>			
						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'	
<b>Intermediate TD</b>	<b>3602'</b>		
Mesa Verde	4135'	4508'	
Chacra	4508'	5281'	
Massive Cliff House	5281'	5322'	
Menefee	5322'	5672'	
Massive Point Lookout	5672'		
<b>TD</b>	<b>6072'</b>		

**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>Csg. 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:**

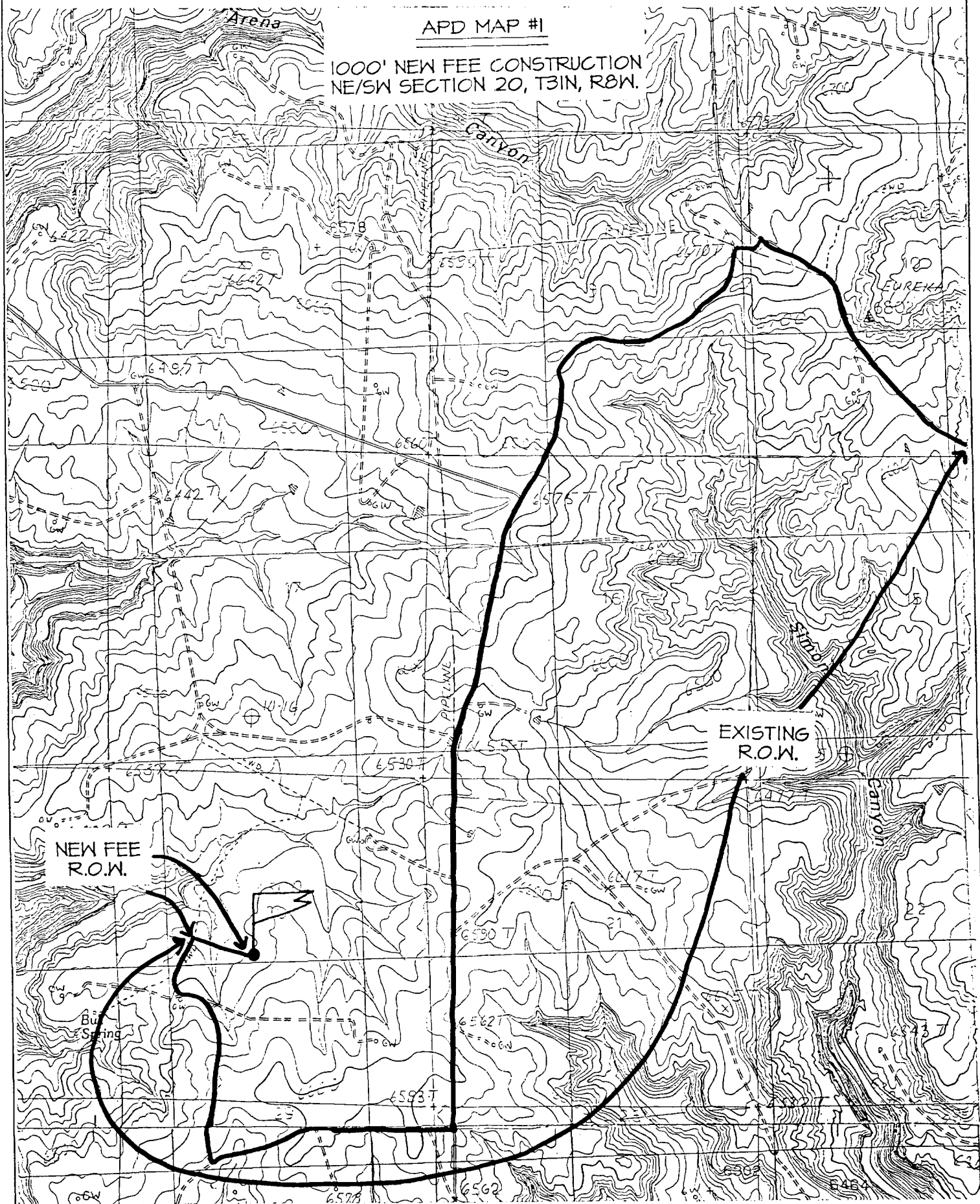
0' - 6072'      2 3/8"      4.70# EUE

**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.

2245' FSL & 2280' FWL, SECTION 20, T31N, R8W, N.M.P.M.  
SAN JUAN COUNTY, NEW MEXICO

1000' NEW FEE CONSTRUCTION  
NE/SW SECTION 20, T31N, R8W.

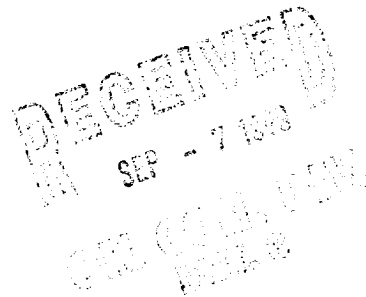




**NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

September 1, 1999



**Burlington Resources Oil & Gas Company  
P. O. Box 4289  
Farmington, New Mexico 87499-4289  
Attention: Peggy Bradfield**

**Administrative Order NSL-4353**

Dear Ms. Bradfield:

Reference is made to the following: (i) your application submitted to the New Mexico Oil Conservation Division ("Division") on July 9, 1999; and (ii) the records of the Division in Santa Fe: all concerning Burlington Resources Oil & Gas Company's ("Burlington") request for an exception to the well location requirements provided within the "*Special Rules for the Blanco-Mesaverde Pool*," as promulgated by Division Order No. R-10987-A, for a non-standard Blanco-Mesaverde infill gas well location in an existing standard 320-acre stand-up gas spacing and proration unit ("GPU") for the Blanco-Mesaverde Pool comprising the W/2 of Section 20, Township 31 North, Range 8 West, NMPM, San Juan County, New Mexico. This GPU is currently dedicated to Burlington's: (i) Quinn Well No. 1 (API No. 30-045-10484), located at a standard gas well location 1650 feet from the South line and 990 feet from the West line (Unit L) of Section 20; and (ii) Quinn Well No. 1-A (API No. 30-045-26762), located at a standard gas well location 1850 feet from the North and West lines (Unit F) of Section 20.

The application has been duly filed under the provisions of Division Rules 104.F and 605.B.

The geologic interpretation submitted with this application indicates that the proposed unorthodox infill gas well location will be at a more favorable geologic position within the Blanco-Mesaverde Pool underlying the SW/4 of Section 20. Topographic conditions further restrict placement of the subject well. Further, all of Section 20 is included within a single Federal Lease (United States Government Lease No. SF-078511) in which Burlington is the leasehold operator; therefore, there are no effected offsets to the subject 320-acre GPU other than Burlington.


By the authority granted me under the provisions of Division Rule 104.F(2), the following described well to be drilled as the second infill well on this GPU at an unorthodox gas well location in Section 20 is hereby approved:

**Quinn Well No. 1-C      30-045-29944**  
**2245' FSL & 2280' FWL (Unit K)**

*30-045-29944*

Further, all three of the aforementioned Quinn Well Nos. 1, 1-A, and 1-C and existing GPU will be subject to all existing rules, regulations, policies, and procedures applicable to prorated gas pools in Northwest, New Mexico and to the Blanco-Mesaverde Pool.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lori Wrotenbery".

Lori Wrotenbery  
Director  
LW/MES/kv

cc: New Mexico Oil Conservation Division - Aztec /  
U. S. Bureau of Land Management - Farmington  
W. Thomas Kellahin, Legal Counsel for Burlington - Santa Fe

# 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

RECEIVED  
JUL 12 1999

OIL CON. DIV.  
DIST. 3

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

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1b. Type of Well GAS	6. If Indian, All. or Tribe	
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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-	
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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	6-11-99 Date	

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

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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'

<sup>10</sup> Surface Location



UL or lot no.	Section	Township	Range	Lot 10n	Feet from the	North/South line	Feet from the	East/West line	County
K	20	31N	8W		2245	SOUTH	2280	WEST	SAN JUAN

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

UL or lot no.	Section	Township	Range	Lot 10n	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres W/320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p><sup>16</sup> 5235.12'</p> <p>NMSF-078511</p> <p>20</p> <p>2280'</p> <p>2245'</p> <p>5221.92'</p>	<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Peggy Bradfield</i> Signature Peggy Bradfield Printed Name Regulatory Administrator Title 6-11-99 Date</p> <p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this was plotted from field notes of actual surveys made in or under my supervision and that the same is true and correct to the best of my belief.</p> <p>MAY 6, 1999 Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p> Neale C. Edwards NEW MEXICO 6857 Professional Surveyor</p> <p>Certification Number 685</p>
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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>Csg. 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# floccle/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.

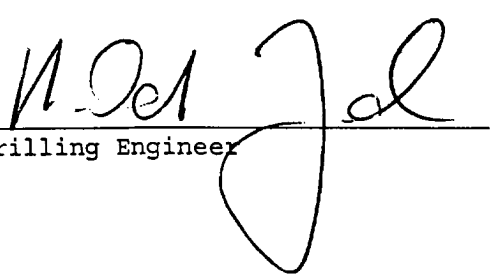
Special Drilling Operations (Gas/Mist Drilling):

- 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.

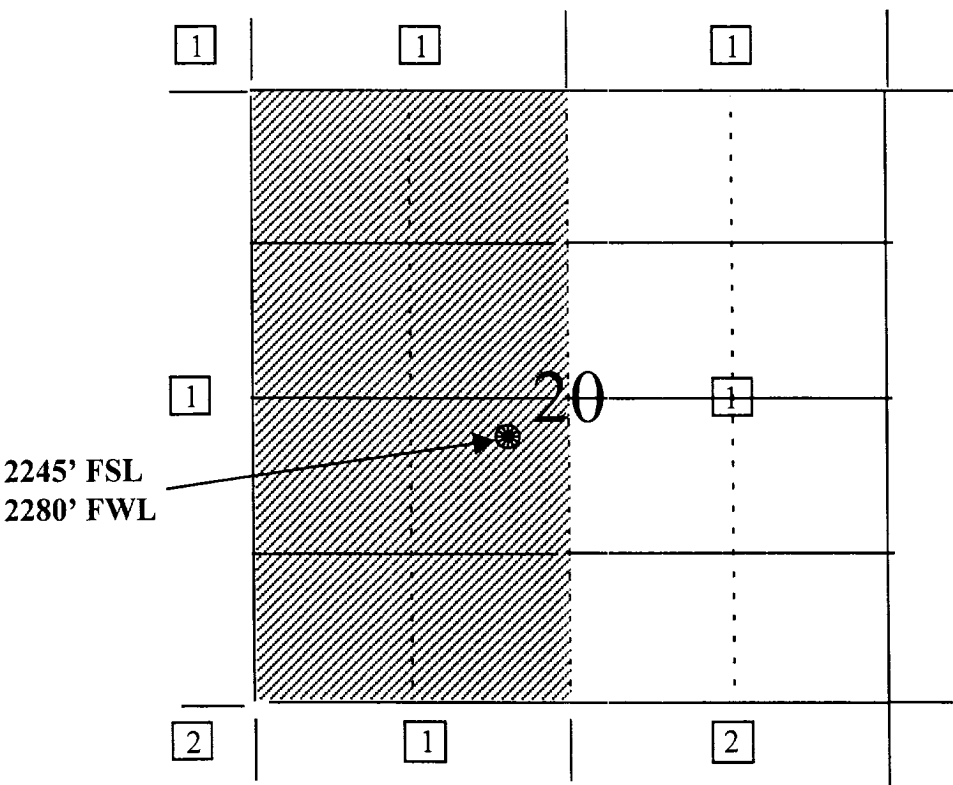
  
Drilling Engineer

6-16-99  
Date

**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

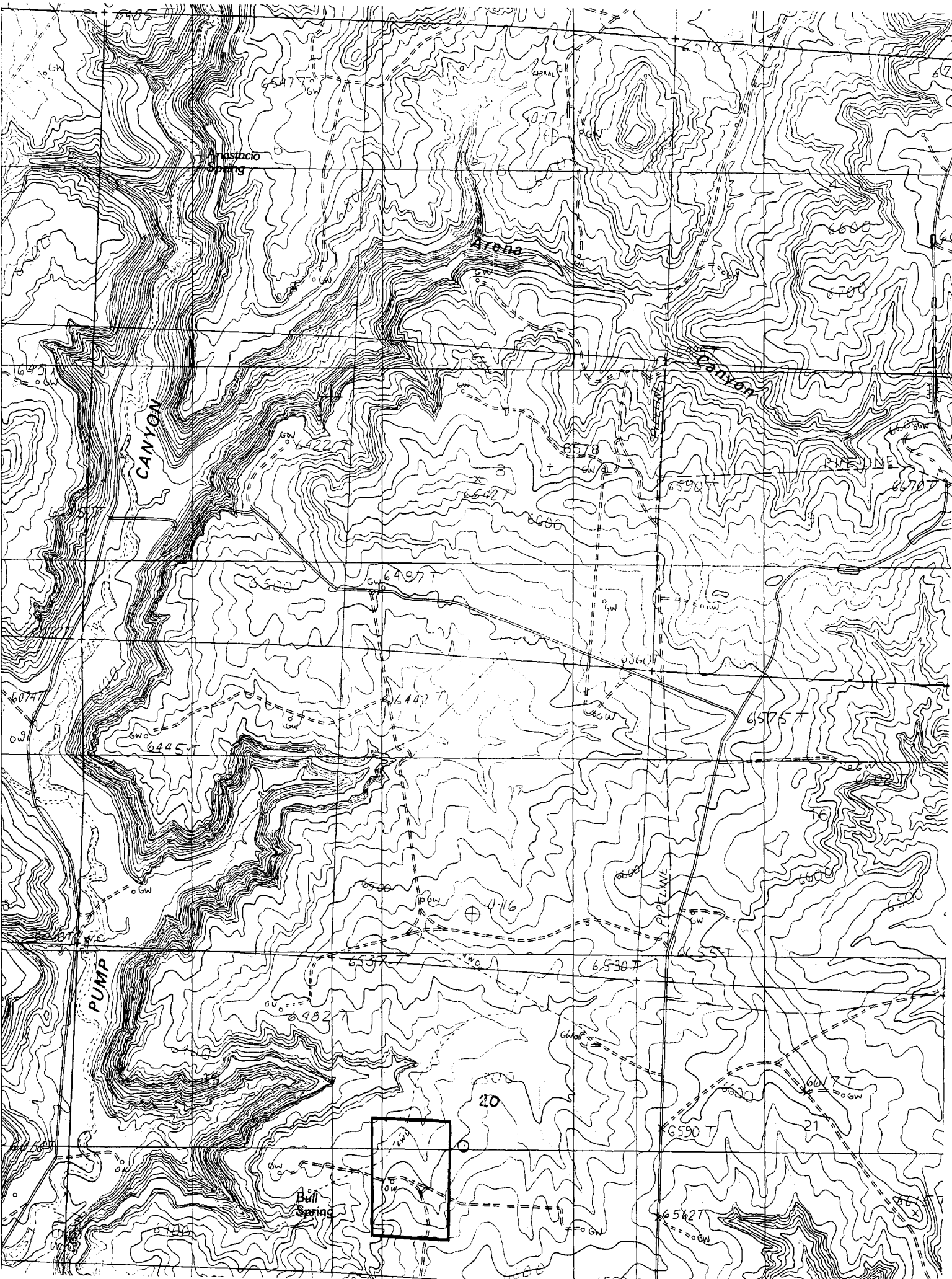
Re: Quinn #1C  
2245'FSL, 2280'FWL Section 20, T-31-N, R-8-W, San Juan County  
30-045-not assigned

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

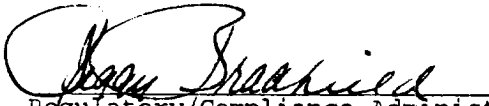
A handwritten signature in black ink, reading "Peggy Bradfield 7/8/99". The signature is written in a cursive style.

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

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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	6-11-99 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 86241-1980

District II  
PO Drawer 00, Artesia, NM 86211-0719

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 30-045-		2 Pool Code 72319		3 Pool Name Blanco Mesaverde	
4 Property Code 7407		5 Property Name QUINN			6 Well Number 1C
7 OGRID No. 14538		8 Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			9 Elevation 6513'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot 10n	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 10n	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 <i>Peggy Bradfield</i>	
				Printed Name Peggy Bradfield	
				Regulatory Administrator Title	
				Date 6-11-99	
				18 SURVEYOR CERTIFICATION	
				I hereby certify that the well location shown on this 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.	
				Date of Survey MAY 6, 1999	
				Signature and Seal of Professional Surveyor NEALE C. EDWARDS NEW MEXICO 6857	
5233.14'		2280'		5212.68'	
NMSF-078511		20			
		2245'			
		5221.92'			

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.

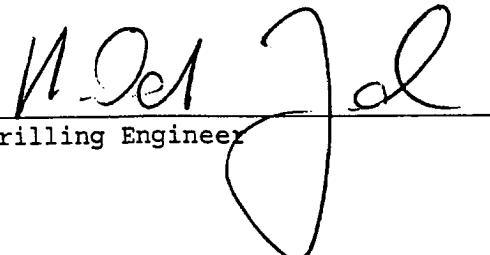
Special Drilling Operations (Gas/Mist Drilling):

- 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

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

