

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 NM-03877 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 Duff 9. Well Number 5R
4. Location of Well 840' FSL, 1110' FWL Latitude 36° 45.0, Longitude 108° 01.2	10. Field, Pool, Wildcat Basin Fruitland Coal/ Aztec Pictured Cliffs 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 5, T-29-N, R-11-W API # 30-045-30846
14. Distance in Miles from Nearest Town 6 miles from Bloomfield	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 840'	
16. Acres in Lease	17. Acres Assigned to Well FC: W/307.76 PC: SW/160
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 300'	
19. Proposed Depth 2173'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 5786' 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 Supervisor	Date <u>9-10-01</u>

PERMIT NO. _____ APPROVAL DATE 11/2/01
APPROVED BY [Signature] TITLE AEM minerals DATE 11/2/01

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.

This action is subject to technical and procedural review pursuant to 43 CFR 3105.3 and appeal pursuant to 43 CFR 3105.4.

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- 30846		*Pool Code 71280/71629	*Pool Name Aztec Pictured Cliffs/Basin Fruitland Coal
*Property Code 6962	*Property Name DUFF		*Well Number 5R
*GRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY LP		*Elevation 5786'

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
M	5	29N	11W		840	SOUTH	1110	WEST	SAN JUAN

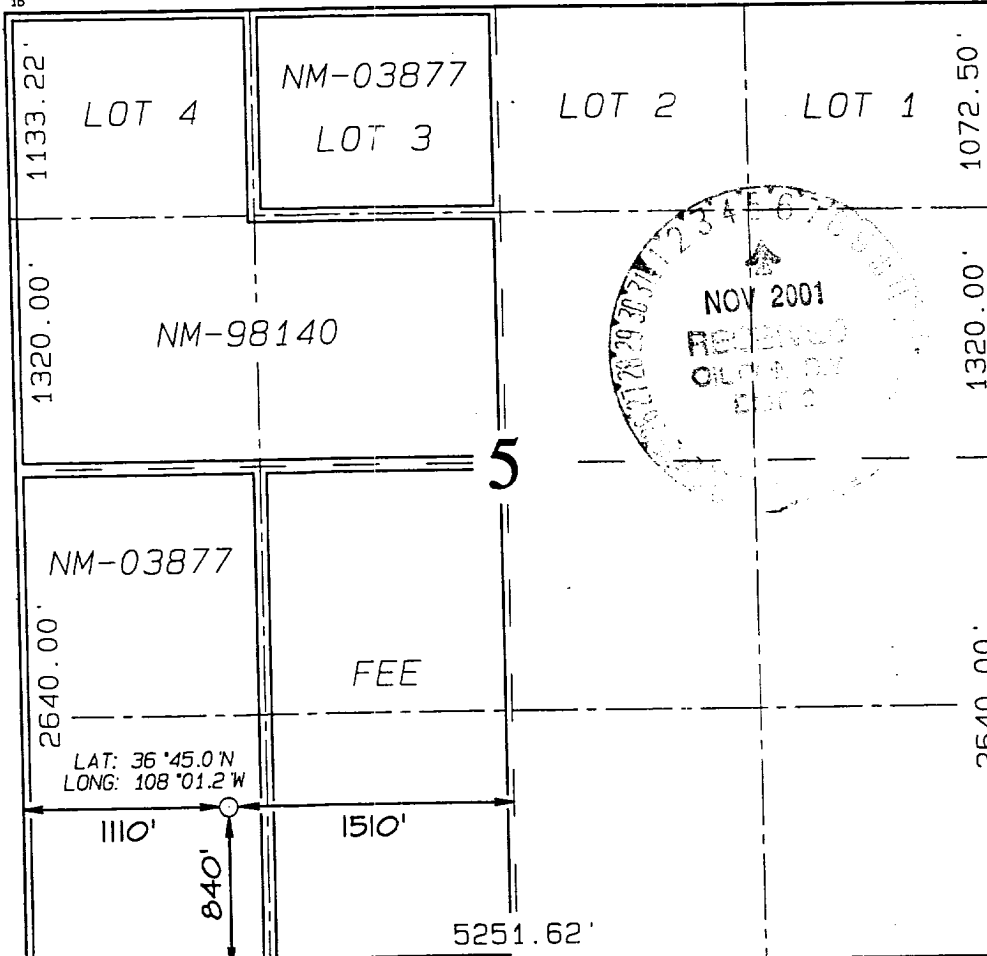
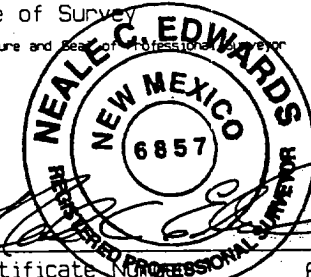
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	5	29N	11W						

¹² Dedicated Acres FC 307.76 W/2 PC 160/SW	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

5270.10'

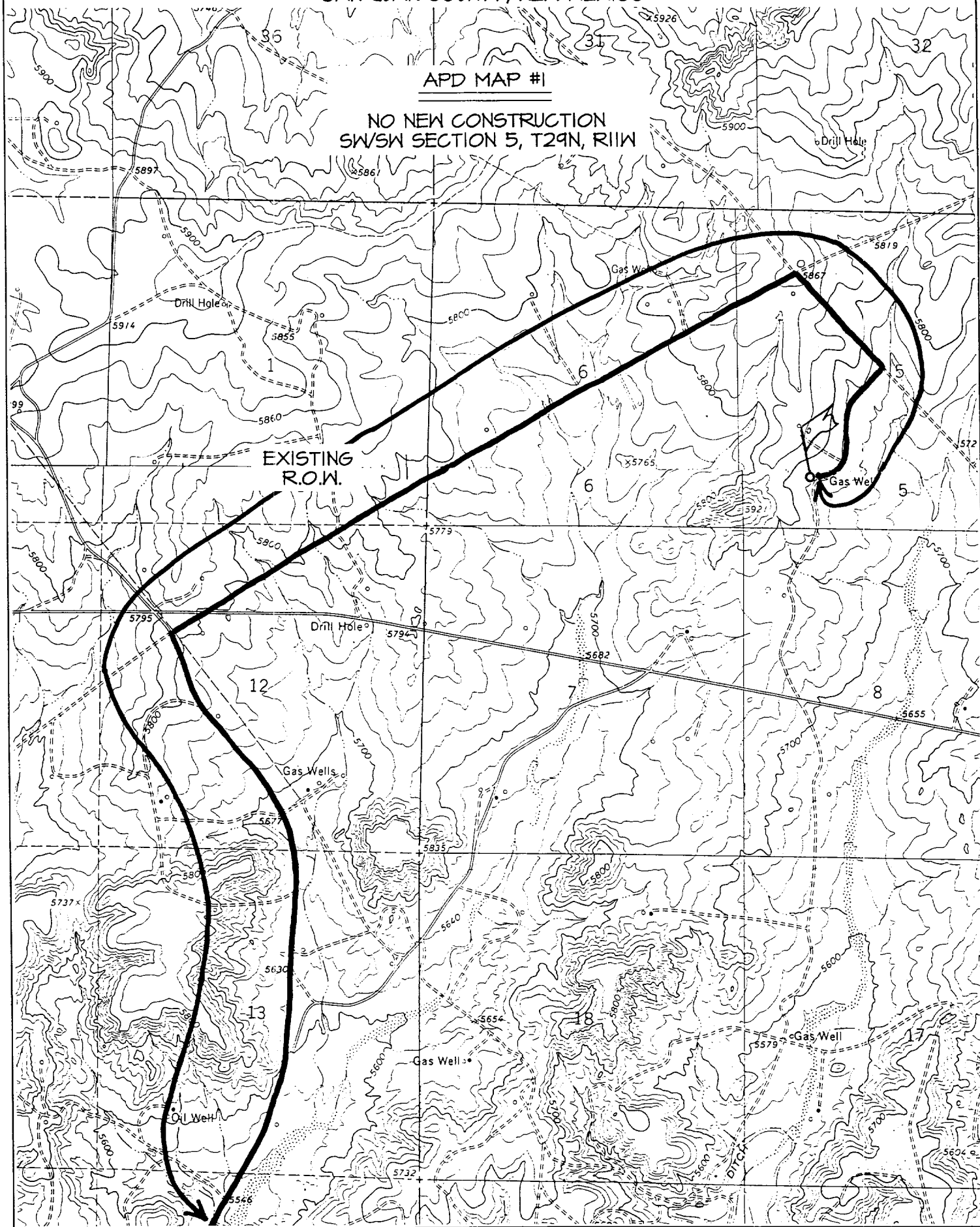
¹⁶		¹⁷ OPERATOR CERTIFICATION	
		I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief	
		Signature <i>Peggy Cole</i>	
		Printed Name Peggy Cole	
		Regulatory Supervisor Title	
		Date 9-10-01	
		¹⁸ SURVEYOR CERTIFICATION	
		I hereby certify 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 29, 2001	
		Signature and Seal of Professional Surveyor 	
		Certificate No. 6857	

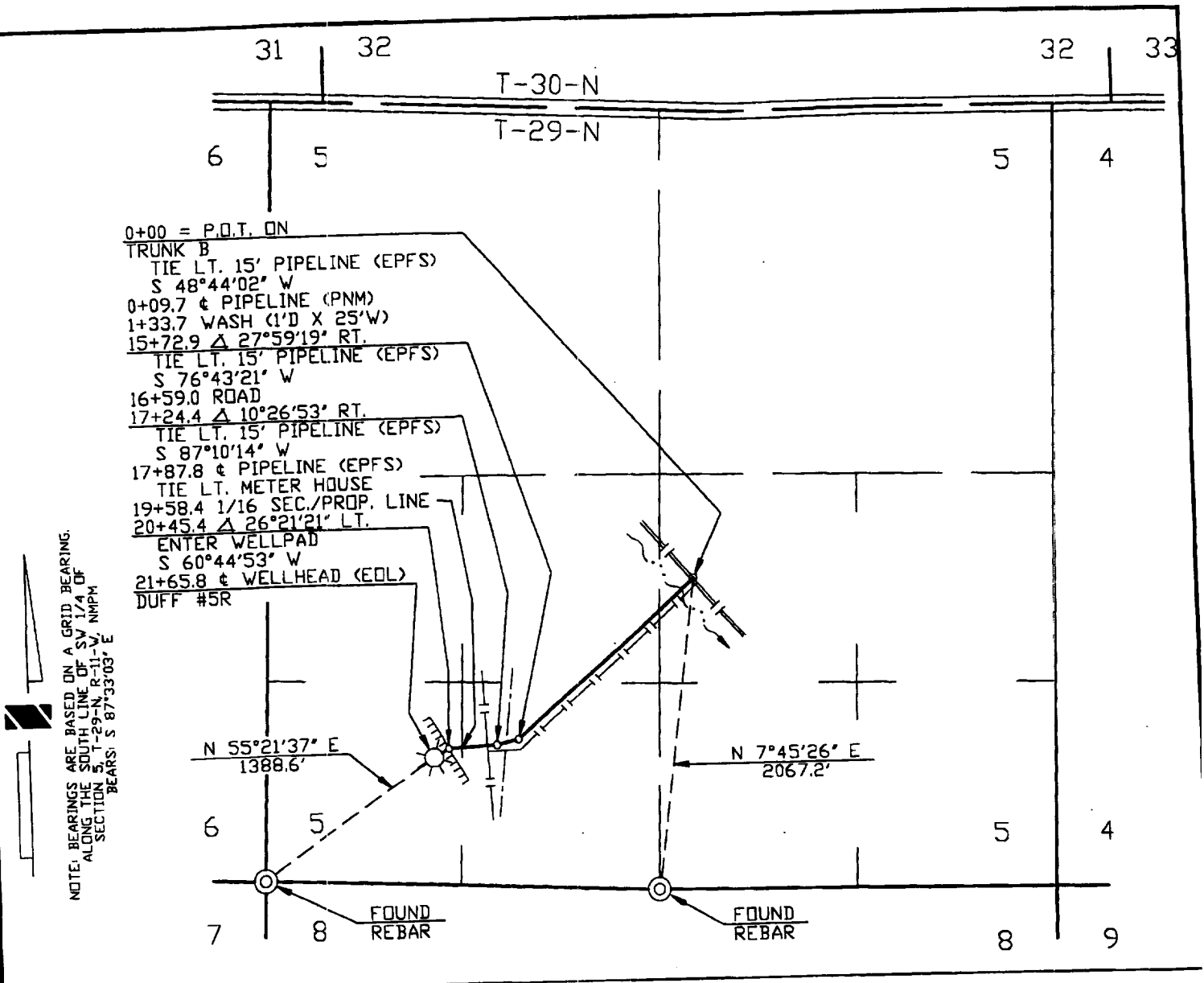
BURLINGTON RESOURCES OIL & GAS COMPANY DUFF #5R

840' FSL & 1110' FWL, SECTION 5, T29N, R11W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO

APD MAP #1

NO NEW CONSTRUCTION
SW/SW SECTION 5, T29N, R11W





PIPE DATA

SUBDIVISION		OWNER	FEET	MILES	ACRES	RODS
0+00 TO 19+58.4		ROBERT EVERETT, JR. et al	1958.4	0.371	1.798	118.691
19+58.4 TO 21+65.8		BUREAU OF LAND MANAGEMENT	207.4	0.039	0.190	12.570

REVISION	NO.	DATE	BY	DESCRIPTION	W.D.N.O.	CHK.	APP.	NO.	DATE	BY	DESCRIPTION	W.D.N.O.	CHK.	AF
1	6/20/01	SRB		ISSUED FOR REVIEW		PB								

INFO		DRAFTING	BY	DATE	STATE: NEW MEXICO		WILLIAMS FIELD SERVICES	
R/W #:	04974	DRAWN BY	SRB	6/20/01	COUNTY: SAN JUAN		ONE OF THE WILLIAMS COMPANIES	
METER #:		CHECKED BY	PB	6/25/01	TORRE ALTA GATHERING SYSTEM BROG - DUFF #5R 0+00 = P.O.T. ON TRUNK B (REF DWG. B799.0-1) SEC. 5, T-29-N, R-11-W, NMPM			
SURVEYED:	6/14/01	APPROVED BY						
		ENGINEER	BY	DATE				
		DESIGNED BY			SCALE: 1" = 1000'	DWG NO.	B799.0-2-1	SHEET 1 R

OPERATIONS PLAN

Well Name: Duff #5R
Location: 840' FSL, 1110' FWL, Section 5, T-29-N, R-11-W
San Juan County, New Mexico
Latitude 36° 45.0', Longitude 108° 01.2'
Formation: Basin Fruitland Coal/Aztec Pictured Cliffs
Elevation: 5785' GR

Formation:	Top	Bottom	Contents
Surface	San Jose	653'	
Ojo Alamo	653'	763'	aquifer
Kirtland	763'	1456'	gas
Fruitland	1456'	1973'	gas
Pictured Cliffs	1973'		gas
Total Depth	2173'		

Logging Program: cased hole - CBL/GR/CCL TD to surface

Coring Program: None

Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 120'	Spud	8.4-9.0	40-50	no control
120-2173'	FW	8.4-9.0	32-45	no control

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

Hole Size	Depth Interval	Csg. Size	Wt.	Grade
9 7/8"	0 - 120'	7"	20#	J-55
6 1/4"	0 - 2173'	4 1/2"	10.5#	K-55

Float Equipment: 7" surface casing - saw tooth guide shoe.
Centralizers will be run in accordance with Onshore Order #2.

4 1/2" production casing - float shoe on bottom. Three centralizers run every other joint above shoe. Seven centralizers run every 3rd joint to the base of the Ojo Alamo @ 763'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 763'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

Wellhead Equipment: 7" x 4 1/2" x 2 3/8" 2000 psi screw on independent wellhead.

Cementing:

7" surface casing - cement with 27 sx Class A, B Portland Type I, II cement (32 cu.ft. of slurry, bring cement to surface through 3/4" line).
WOC 8 hrs. Test casing to 600 psi for 30 minutes.

4 1/2" production casing - Lead w/284 sx Premium Lite cement w/3% calcium chloride, 1/4 pps flocele, 5 pps LCM-1, 0.4% FL-52, and 0.4% SMS. Tail w/90 sx Type III cement w/1% calcium chloride, 1/4 pps flocele, and 0.2% FL-52 (730 cu.ft. of slurry, 100% excess to circulate to surface).

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

BOP and tests:

Surface to TD - 11" 2000 psi (minimum double gate BOP stack (Reference Figure #1). Prior to drilling out surface casing, test rams to 600 psi/30 min.

Completion - 7 1/16" 2000 psi (minimum) double gate BOP stack (Reference Figure #2). Prior to completion operations, test rams and casing to 2000 psi/15 min.

From surface to TD - choke manifold (Reference Figure #3).

Pipe rams will be actuated to least once each day and blind rams actuated once each trip to test proper functioning. An upper kelly cock valve with handle and drill string safety valves to fit each drill string will be maintained and available on the rig floor.

BOP and tests (If a coiled tubing drilling (CTD) rig is utilized.):

Surface to TD: 7-1/16" 2000 psi (minimum) Torus annular BOP stack (Reference Figure #1b). Prior to drilling out surface casing, test annular BOP to 600psi/30 min.

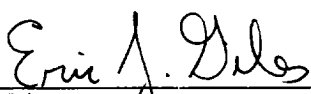
Completion: 7-1/16" 2000 psi (minimum) double gate BOP stack (Reference Figure #2). Prior to completion operations, test blind rams and casing to 1500 psi for 30 minutes; all pipe rams and casing to 1500 psi for 30 minutes each. **Same as in original APD operations plan.**

From surface to TD: choke manifold (Reference Figure #3). **Same as in original APD operations plan.**

The annular BOP will be actuated to close on drill pipe (coiled tubing) at least once each day and to close on open hole once each trip to test proper functioning.

Additional information:

- * The Fruitland Coal and Pictured Cliffs formations will be completed and commingled.
- * Anticipated pore pressure for the Pictured Cliffs is 500 psi.
- * This gas is dedicated.
- * The west half of Section 5 is dedicated to the Fruitland Coal and the southwest quarter of Section 5 is dedicated to the Pictured Cliffs in this well.



Drilling Engineer

9/20/01

Date