

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-077652 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 East 9. Well Number #5B
4. Location of Well 2245' FSL, 780' FWL Latitude 36° 53.0'N, Longitude 108° 03.4'W	10. Field, Pool, Wildcat Blanco Mesaverde 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 24, T-31-N, R-12-W API # 30-045-30444
14. Distance in Miles from Nearest Town 7 miles from Aztec, NM P.O.	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 780'	
16. Acres in Lease	17. Acres Assigned to Well 320
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 0.5 miles	
19. Proposed Depth 5320'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6145' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"
24. Authorized by: <u>[Signature]</u> Regulatory/Compliance Supervisor	Date <u>12-8-00</u>

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY /s/ Jim Lovato TITLE _____ DATE FEB - 2

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.

100-443887-100

DISTRICT I
1825 N. French Dr., Hobbs, N.M. 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 15, 2000

DISTRICT II
811 South First, Artesia, N.M. 88210

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT III
1000 Rio Brazos Rd., Artec, N.M. 87410

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, NM 87505

☐ AMENDED REPORT

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-30464	*Pool Code 72319	*Pool Name Blanco Mesaverde
*Property Code 18517	*Property Name EAST	*Well Number 5B
*OGRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL AND GAS, INC.	*Elevation 6145'

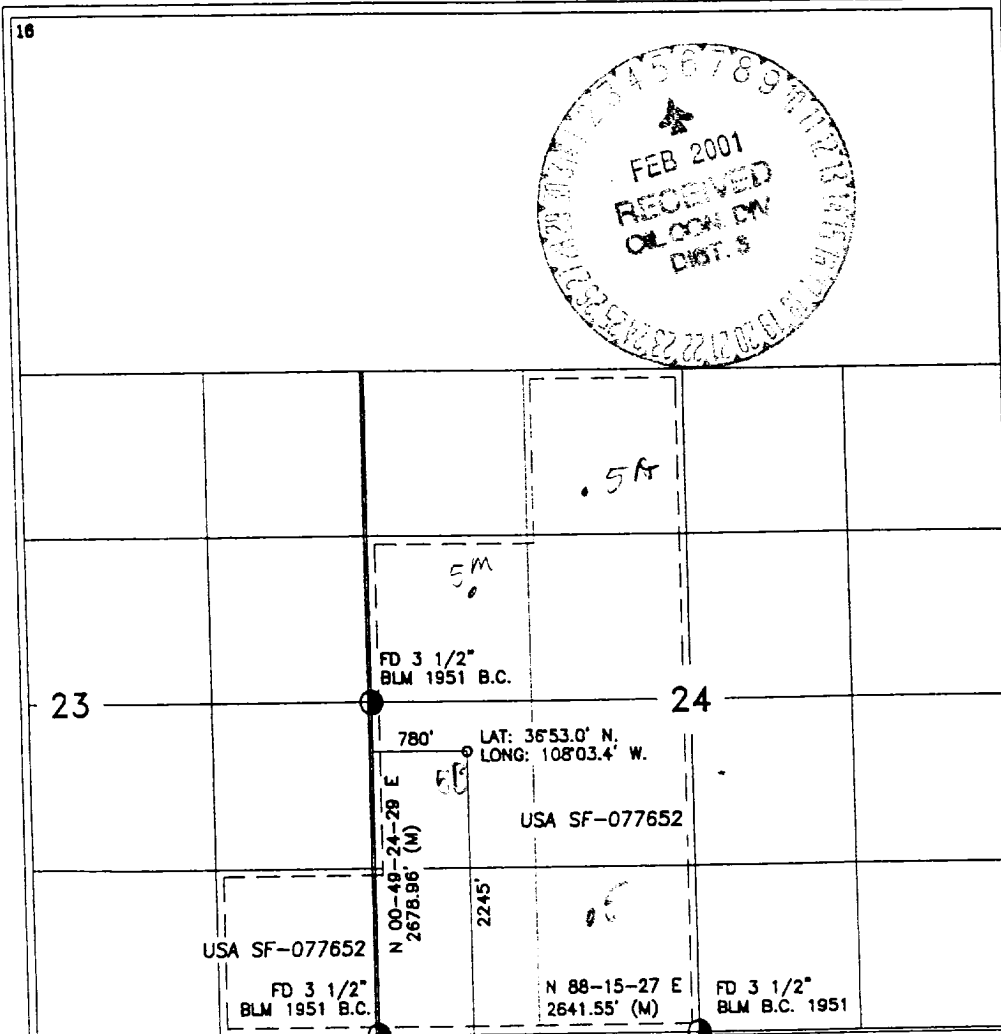
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	24	31-N	12-W		2245'	SOUTH	780'	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 320			*Joint or Infill		*Consolidation Code		*Order No. A-NWV 37		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



17 OPERATOR CERTIFICATION

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

Peggy Cole
Signature
Peggy Cole
Printed Name
Regulatory Supervisor
Title
12-8-00
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 knowledge and belief

[Signature]
Date of Survey
Signature and Seal of Professional Surveyor
8894
Certificate Number

BURLINGTON RESOURCES OIL & GAS, INC.

EAST #5B

SW/4 SEC. 24, T-31-N, R-12-W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO

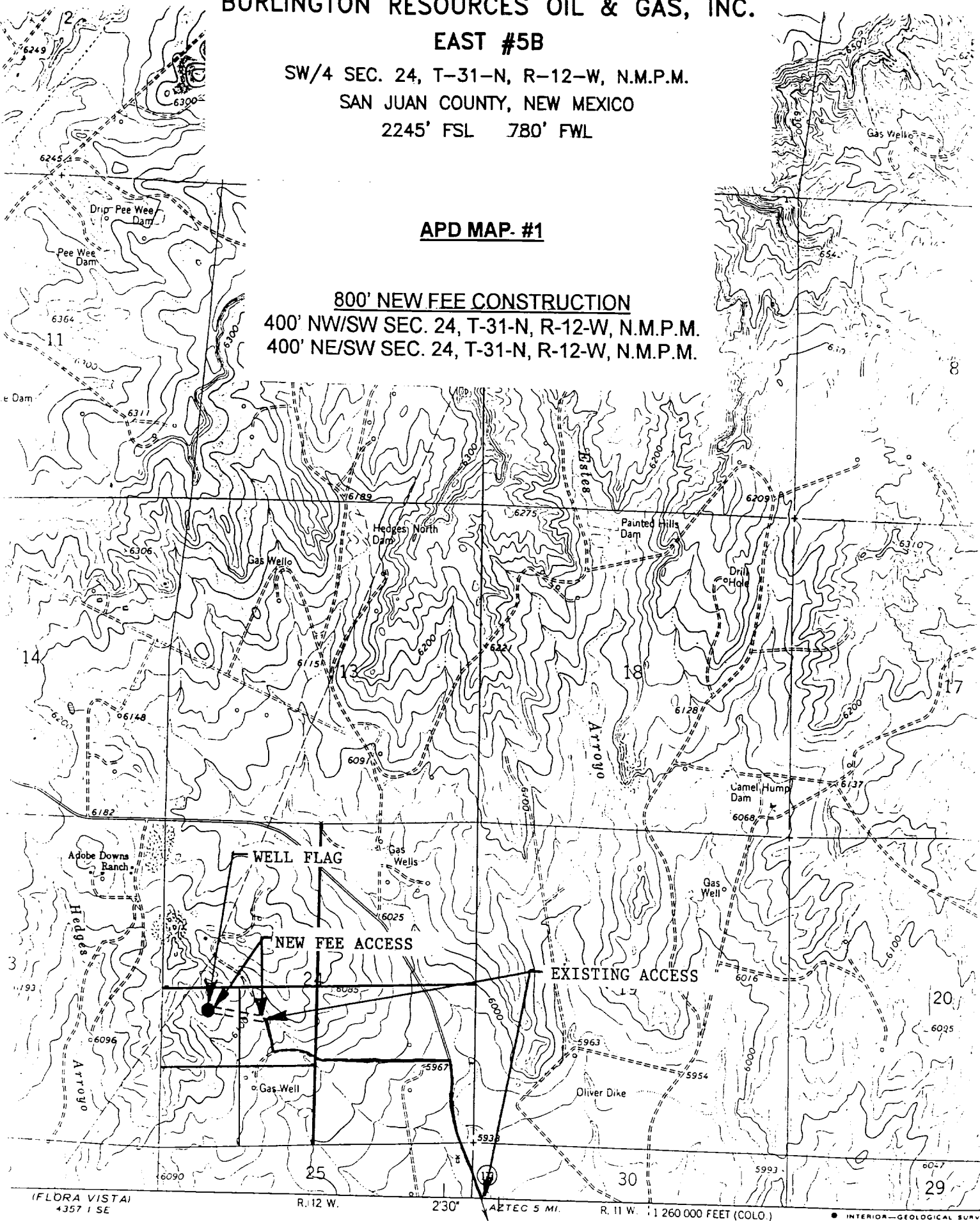
2245' FSL 780' FWL

APD MAP. #1

800' NEW FEE CONSTRUCTION

400' NW/SW SEC. 24, T-31-N, R-12-W, N.M.P.M.

400' NE/SW SEC. 24, T-31-N, R-12-W, N.M.P.M.



OPERATIONS PLAN

Well Name: East #5B
Surface Location: 2245' FSL, 780' FWL, Section 24, T-31-N, R-12-W
San Juan County, New Mexico
Latitude 36° 53.0'N, Longitude 108° 03.4'W

Formation: Blanco Mesa Verde
Elevation: 6145'GR

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	977'	aquifer
Ojo Alamo	977'	1017'	aquifer
Kirtland	1017'	2030'	gas
Fruitland	2030'	2632'	gas
Pictured Cliffs	2632'	2797'	gas
Lewis	2797'	3352'	gas
Intermediate TD	3047'		
Mesa Verde	3352'	3712'	gas
Chacra	3712'	4257'	gas
Massive Cliff House	4257'	4387'	gas
Menefee	4387'	4920'	gas
Point Lookout	4920'		gas
Total Depth	5320'		

Logging Program:

Cased hole logging - Gamma Ray, Cement bond from surface to TD
Open hole logging - none
Mud Logs/Coring/DST - none

Mud Program:

<u>Interval- MD</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- 3047'	LSND	8.4-9.0	30-60	no control
3047- 5320'	Air/Mist	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>Measured Depth</u>	<u>Csg Size</u>	<u>Weight</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	H-40
8 3/4"	0' - 3047'	7"	20.0#	J-55
6 1/4"	2947' - 5320'	4 1/2"	10.5#	J-55

Tubing Program: 0' -5320' 2 3/8" 4.7# J-55

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.

1. The first step in the process of creating a new product is to identify a market need. This involves conducting market research to determine what consumers want and what problems they are trying to solve. Once a need is identified, the next step is to develop a concept that addresses the need. This is often done through brainstorming and sketching. The third step is to create a prototype, which is a physical model of the product. This allows the designer to test the product and make improvements. The fourth step is to conduct a feasibility study, which involves evaluating the technical, financial, and market viability of the product. Finally, the product is launched into the market, and the designer monitors its performance and makes any necessary adjustments.

BOP Specifications, Wellhead and Tests (cont'd):

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 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 drill crew.
- All BOP tests & 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 3% 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/311 sx 50/50 Class "G"/Trinity Light with 2.5% sodium metasilicate, 2% calcium chloride, 10 pps Gilsonite, 0.5 pps Flocele. Tail with 90 sx Class "G" 50/50 poz w/2% gel, 2% calcium chloride, 5 pps Gilsonite, 0.1% antifoam and 0.25 pps Flocele (917 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 to determine TOC. Test casing to 1500 psi for 30 minutes.

See attached Alternative Intermediate Lead Slurry.

7" intermediate casing alternative two stage: Stage collar at 1930'. First stage: cement w/262 sx 50/50 Class "G" poz w/2% gel, 2% calcium chloride, 5 pps Gilsonite, 0.1% antifoam and 0.25 pps Flocele. Second stage: w/225 sx 50/50 Class "G"/Trinity Light with 2.5% sodium metasilicate, 2% calcium chloride, 10 pps Gilsonite, 0.5 pps Flocele (917 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 1017'. Two turbolating centralizers at the base of the Ojo Alamo at 1017'. 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 circulate liner top. Pump 254 sx Class "G" 50/50 poz w/4.5% gel, 0.25 pps Flocele, 5 pps Gilsonite, 0.25% fluid loss, 0.1% retardant (365 cu.ft., 50% excess to circulate liner). WOC a minimum of 18 hrs prior to completing.

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

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. The liner hanger will have a rubber packoff.

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

Special Drilling Operations (Air/Mist Drilling):

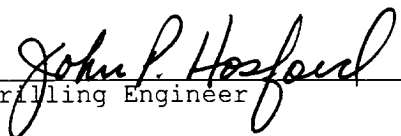
The following equipment will be operational while gas/mist drilling:

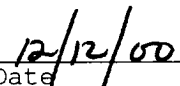
- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.
- 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	150 psi
Pictured Cliffs	260 psi
Mesa Verde	375 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The SESE of Section 23 and the NENW, S2NW, SW of Section 24 is dedicated to the Mesa Verde.
- This gas is dedicated.


Drilling Engineer


Date

