UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

		5.	Lease Number
			SF-079050A
. Type of Well GAS		6.	If Indian, All. or Tribe Name
GAS		7	Unit Agreement Name
. Name of Operator		1	Onic Agreement Name
BURLINGTON	Est 001 1 4 1990		
RESOURCES OIL & GAS COM	PANY	В.	San Juan 28-6 Unit Well Name & Number
. Address & Phone No. of Operator		7 原色	San Juan 28-6 U #148
PO Box 4289, Farmington, NM 87499 (5	505) 326-9700 இயில் එ	9.	API Well No. 30-039-26140
. Location of Well, Footage, Sec., T, R	, M	10.	Field and Pool
895'FSL, 990'FEL, Sec.28, T-28-N, R-6-	-W, NMPM / F	11.	Blanco MV/Basin DK County and State
DHC-2235			Rio Arriba Co, NM
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Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



OPERATIONS PLAN

Well Name: San Juan 28-6 Unit #148M

Location: 895'FSL, 990'FEL, Sec 28, T-28-N, R-6-W

Rio Arriba County, NM

Latitude 36° 37.6, Longitude 107° 28.0

Formation: Blanco Mesa Verde/ Basin Dakota

Elevation: 6577' GL

Formation Tops:	Top	Bottom	Contents
Surface	San Jose	2596'	
Ojo Alamo	2596 '	2720 ′	aquifer
Kirtland	2720 ′	2961 '	gas
Fruitland	2961'	3 362'	gas
Pictured Cliffs	3362 '	3503 '	gas
Lewis	3503 '	3905'	gas
Intermediate TD	3603'		
Mesa Verde	3905 ′	4295 ′	gas
Chacra	4295 ′	5017 '	gas
Massive Cliff House	5017'	5164'	gas
Menefee	5164'	5 535′	gas
Massive Point Lookout	5535 '	6049'	gas
Mancos	6049 '	6753 '	gas
Gallup	6753 ′	7504 ′	gas
Greenhorn	7504'	75 63'	gas
Graneros	7563 '	7694'	gas
Dakota	7694 ′		gas
TD (4 1/2"liner)	7839'		-

Logging Program:

Mud Logs/Coring/DST -

Coring - 1500' in Mancos formation

Electric logs - PEX, FMI, NGT, Dipole Sonic

Cased Hole - CBL-CCL-GR

Mud Program:

			_	
Interva	al Type	Weight	Vis.	Fluid Loss
0- 20		8.4-9.0	40-50	no control
200- 36	603' LSND			no control
3603- 60	000' Gas	n/a	n/a	n/a
6000- 78	339' LSND	8.4-9.0	30-60	10-12

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

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

Hole Size	Depth Interval	Csg.Size	Wt.	<u>Grade</u>
17 1/2"	0' - 200'	13 3/8"	54.0#	J - 55
10 5/8"	0' - 3603'	8 5/8"	24.0#	K-55
7 7/8"	3503' - 7839'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 7839' 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 -

13 3/8" x 8 5/8" 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:

 $\overline{13}$ 3/8" surface casing - cement with 353 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (417 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.

8 5/8" intermediate casing -

Lead $w/470~\rm sx$ Class "B" w/3% sodium metasilicate, 5# Kolite/sx and 1/4% flocele/sx. Tail $w/85~\rm sx$ Class "B" w/2% sodium metasilicate, 2% calcium chloride, 0.25 pps Cellophane (1513 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.

8 5/8" intermediate casing alternative two stage: Stage collar at 2861'. First stage: cement with 181 sx Class "B" cmt with 7 pps Kolite, 1/4 pps cellophane, 2% sodium metasilicate, 2% calcium chloride. Second stage: 413 sx Class "B" with 3% sodium metasilicate, 1/4 pps Cellophane, 7 pps Kolite (1513 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 2720'. Two turbolating centralizers at the base of the Ojo Alamo at 2720'. 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 8 5/8" overlap. Lead with 938 sx 50/50 Class "B" Poz with 2% gel, 0.25 flocele/sx, 5# Kolite/sx, 0.2% retardant and 0.4% fluid loss additive (1481 cu.ft.), 50% excess to cement 4 1/2" x 8 5/8" overlap). WOC a minimum of 18 hrs prior to completing.

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

- To facilitate higher hydraulic stimulation completion Note: 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 8 5/8" casing strings. After completion of the well, a 4 $1/2^{\prime\prime}$ retrievable bridge plug will be set below the top of cement in the 4 1/2" x 8 5/8" overlap. The 4 1/2" casing will then be backed off above the top of cement in the 4 1/2" x 8 5/8"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:

800 psi 800 psi Fruitland Coal Pictured Cliffs 700 psi Mesa Verde 2500 psi Dakota

- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.
- The east half of Section 28 is dedicated to the Mesaverde and Dakota in this well.

This gas is dedicated

Lymy Drilling Engineer