CMD : ONGARD 05/23/00 19:40:00 OGOMES -TPEN C101-APPLICATION FOR PERMIT TO DRILL OG6C101 : 14538 API Well No: 30 45 30067 APD Status(A/C/P): A OGRID Idn Opr Name, Addr: BURLINGTON RESOURCES OIL & GAS C Aprvl/Cncl Date : 02-23-2000 801 CHERRY ST FT WORTH, TX 76102 Well No: 5 Prop Idn: 7129 HOWELL J U/L Sec Township Range Lot Idn North/South East/West FTG 540 F N FTG 735 F W Surface Locn : D 11 30N 08W OCD U/L : D API County : 45 Work typ(N/E/D/P/A) : N Well typ(O/G/M/I/S/W/C): G Cable/Rotary (C/R) : F Lease typ(F/S/P/N/J/U/I): F Ground Level Elevation : 6210 Multiple Comp (S/M/C) : N State Lease No: Prpsd Depth : 7820 Prpsd Frmtn : BASIN DAKOTA E0009: Enter data to modify record PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM PF08 PF09 PRINT PF10 C102 PF11 HISTORY PF12 PF07

CMD : ONGARD OG5SECT INQUIRE LAND BY SECTION Sec : 11 Twp : 30N Rng : 08W Section Type : NORMAL			05/23/00 19:39:33 OGOMES -TPEM PAGE NO: 1
D	C	B	A
40.00	40.00	40.00	40.00
Federal owned	   Federal owned	   Federal owned 	   Federal owned
A A		A	A
E	F	G	н
40.00	40.00	40.00	40.00
Fee owned	Fee owned	   Federal owned	Federal owned
PF01 HELP PF02	PF03 EXIT P	F04 GoTo PF05	PF06
PF07 BKWD PF08 FW		F10 SDIV PF11	PF12

CMD : OG5SECT	ONGARD INQUIRE LAND BY SECTION		05/23/00 19:39:38 OGOMES -TPEM PAGE NO: 2
Sec : 11 Twp : 30N	Rng: 08W Section	Type : NORMAL	INGE NO. 2
L	K	J	! I
40.00	40.00	40.00	40.00
Federal owned	Fee owned	Federal owned	Federal owned
AAA	   . 		
M	N	0	P
40.00	40.00	40.00	40.00
Fee owned	Fee owned	Fee owned	Fee owned
		   A 	
PF01 HELP PF02	PF03 EXIT P	F04 GoTo PF05	PF06

PF07 BKWD PF08 FWD PF09 PRINT PF10 SDIV PF11 PF12

# Stogner, Michael

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From:Perrin, CharlieSent:Friday, May 26, 2000 7:30 AMTo:Stogner, MichaelSubject:Burlington Resources Howell J # 5 11-30N-08W Api 30-045-30067

Good Morning Mike:

Bruce Martin looked at this location and recommends approval for the NSL.

Have a great weekend! Charlie

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

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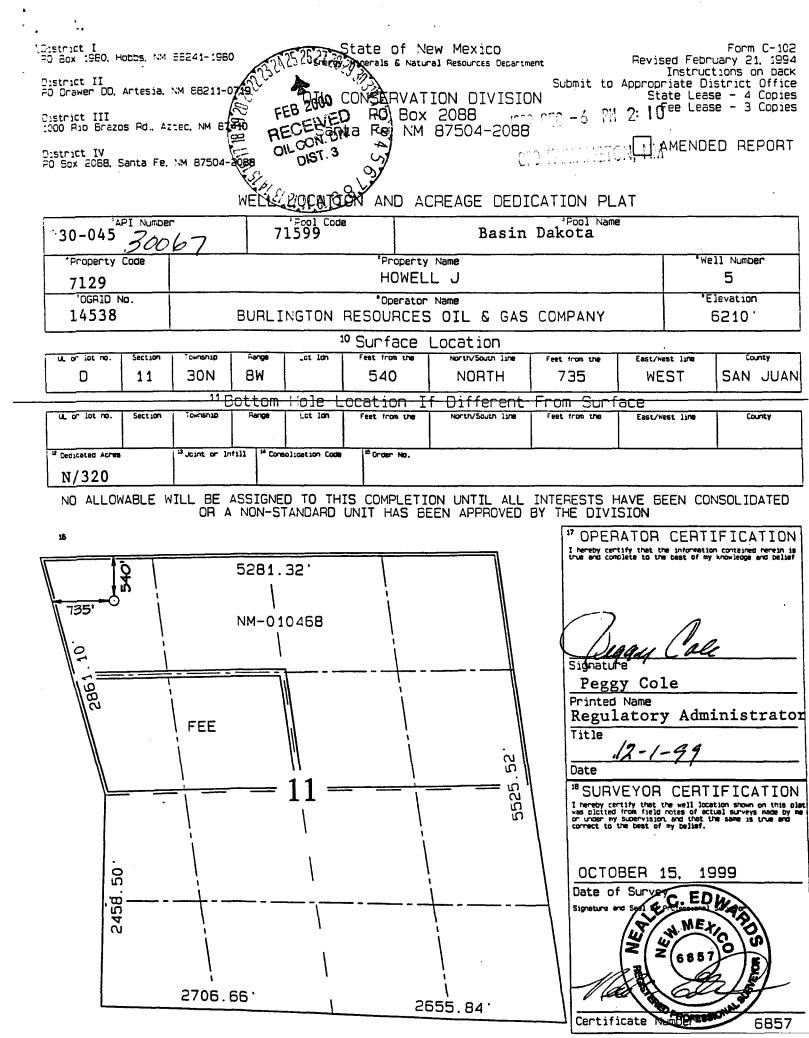
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	APPLICATION FOR PERMIT TO DRILL, DEEPEN	I, OR PLUG BACK
a.	Type of Work DRILL	5. Lease Number NM-010468 Unit Reporting Number
b.	Type of Well GAS Operator	Balf Indian, All. or Tribe
	Operator BURLINGTON RESOURCES Oil & Gas Company 211 11 6	7 Unit Agreement Name
	Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	<ul> <li>8. Farm or Lease Name Howell J</li> <li>9. Well Number 5</li> </ul>
 ,	Location of Well 540'FNL, 735'FWL Latitude 36° 49.8, Longitude 107° 39.1	<b>10. Field, Pool, Wildcat</b> Basin Dakota <b>11. Sec., Twn, Rge, Mer. (NMPM)</b> Sec. 11, T-30-N, R-8-W API# 30-045- ろじっと 7
4.	<b>Distance in Miles from Nearest Town</b> 10 miles from Navajo Dam Post Office	12. County13. StateSan JuanNM
5.	Distance from Proposed Location to Nearest Property or Lease Li 540'	
6.	Acres in Lease	17. Acres Assigned to Well 320 N/2
8.	Distance from Proposed Location to Nearest Well, Drig, Compl, or 75' This action is subject to technioni and	Applied for on this Lease
9.	Proposed Depth Procedural review pursuant to 43 CFR 3165.3 7820' and appeal pursuant to 43 CFR 3165.4.	<b>20. Rotary or Cable Tools</b> Rotary
1.	Elevations (DF, FT, GR, Etc.) 6210′ GR	22. Approx. Date Work will Start
3.	Proposed Casing and Cementing Program See Operations Plan attached	DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHE "GENERAL REQUIREMENTS"
24.	Authorized by:	12-1-99
	Regulatory/Compliance Administrator	C Date
PERM	T NO APPROVAL DA	
APPRO	DVED BY /s/ Charlie Beecham	DATE FEB 2 3 2000
Archae Threat NOTE: Title 18	EVED BY	DATE

chit Manager MSL



# OPERATIONS PLAN

<u>Well Name:</u>	Howell J #5
Location:	540'FNL, 735'FWL, Sec 11, T-30-N, R-8-W
	San Juan County, NM Latitude 36 <sup>0</sup> 49.8, Longitude 107 <sup>0</sup> 39.1
Formation:	Basin Dakota
Elevation:	6210' GL

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Formation Tops:	Top	Bottom	<u>Contents</u>
Surface	San Jose	1923'	
Ojo Alamo	1923'	2109'	aquifer
Kirtland	2109'	2842'	gas
Fruitland	2842'	3202'	gas
Pictured Cliffs	3202'	3362'	gas
Lewis	3362'	3468'	gas
Intermediate TD	3462'		2
Mesa Verde	3468′	4185'	gas
Chacra	4185'	4959'	gas
Massive Cliff House	4959'	5005'	qas
Menefee	50 <b>05'</b>	5346'	gas
Massive Point Lookout	5346'	5705'	gas
Mancos	5705 <b>'</b>	6628′	gas
Gallup	6628 <b>′</b>	7364′	gas
Greenhorn	7364'	7422'	gas
Graneros	7422'	7505'	gas
Dakota	7505 <b>'</b>		gas
TD (4 1/2"liner)	7820'		-

Logging Program: Open hole - IEL-GR, CNL-CDL, ML Cased hole - CBL-CCL-GR - TD to surface Cores - none

#### Mud Program:

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Interval	Type	Weight	Vis.	Fluid Loss
0- 200'	Spud	8.4-9.0	40-50	no control
200- 3462'	LSND	8.4-9.0	30-60	no control
3462- 7820'	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):

Hole Size	Depth Interval	Csg.Size	Wt.	Grade
12 1/4"	0' - 200'	9 5/8"	<u>32.</u> 3#	WC-50
8 3/4"	0' - 3462'	7"	20.0#	J-55
6 1/4"	3362' - 7820'	4 1/2"	10.5#	K-55

#### Tubing Program:

0' - 7820' 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.

### 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 -

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9 5/8" x 7" 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:

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/314 sx Class "B" w/3% sodium metasilicate, 7# gilsonite/sx and 1/2# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/2% calcium chloride, 2% gel (1041 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.

7" intermediate casing alternative two stage: Stage collar at 2742'. First stage: cement with w/153 sx Class "B" 50/50 poz w/2% gel, 2% calcium chloride, 0.5 pps Cellophane. Second stage: 283 sx Class "B" with 3% sodium metasilicate, 1/2 pps Cellophane, 10 pps Gilsonite (1041 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 2752'. Two turbolating centralizers at the base of the Ojo Alamo at 2752'. 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  $1/2" \ge 7"$  overlap. Lead with 504 sx 50/50 Class "H" Poz with 2% gel, 0.25# flocele/sx, 5# gilsonite/sx, 0.2% retardant and 0.4% fluid loss additive (641 cu.ft.), 40% excess to cement 4  $1/2" \ge 7"$  overlap). WOC a minimum of 18 hrs prior to completing.

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

Operations Plan - Howell J #5

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- Note: To facilitate higher hydraulic stimulation completion 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  $1/2" \times 7"$ casing strings. After completion of the well, a 4 1/2"retrievable bridge plug will be set below the top of cement in the 4  $1/2" \times 7"$  overlap. The 4 1/2" casing will then be backed off above the top of cement in the 4  $1/2" \times 7"$  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.

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

Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	700 psi
Dakota	2500 psi

- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.
- The north half of Section 11 is dedicated to the Dakota in this well.
  This gas is dedicated.

Drilling Engineer

12/3/99 Date

