UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT



APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK . Lease Number 1a. Type of Work 5. DRILL NMSF-047017B RECEIVED Unit Reporting Number 070 FARMINGTON NM 1b. Type of Well 6. If Indian, All. or Tribe GAS 2. 7. Unit Agreement Name Operator BURLINGTON RESOURCES Oil & Gas Company, LP 3. 8. Farm or Lease Name Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 Angel Peak B 9. Well Number (505) 326-9700 #20E 4. Location of Well 10. Field, Pool, Wildcat Unit I (NESE), 1880' FSL & 690' FEL, Basin Dakota 11. Sec., Twn, Rgø, Mer. (NMPM) Sec. 24, T280N, R11W Latitude 36° 64574'N Longitude 1070 94854'W API # 30-045-33929 14. 13. State Distance in Miles from Nearest Town 12. County NM San Juan 15. Distance from Proposed Location to Nearest Property or Lease Line 6901 Acres in Lease 16. 17. Acres Assigned to Well 320 E/2 - DK 18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease Twinned wthe the Angel Peak B #4S 19. **Proposed Depth** 20. Rotary or Cable Tools 6519' Rotary 21. Elevations (DF, FT, GR, Etc.) 22. Approx. Date Work will Start 5912' GL 23. **Proposed Casing and Cementing Program** See Operations Plan attached 9/6/06 24. Authorized by: Regulatory Specialist Date PERMIT NO. APPROVAL DATE APPROVED BY Archaeological Report attached Threatened and Endangered Species Report attached 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.

OCD SUBJECT TO "GENERAL RI

DISTRICT I 1625 N. French Dr., Hobbs, N.M. 88240

1301 W. Grand Ave., Artesia, N.M. 88210

1000 Rio Brozos Rd., Aztec, N.M. 87410

1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

6 PM 3 27 2006 SEP

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT DEDICATION PLAT WELL LOCATION ²Pool Code API Number ³ Pool Name Basin Dakota 71599 **30-045** - 33929 ⁵Property Name Well Number *Property Code 6788 ANGEL PEAK B 20E OGRID No. Operator Name Elevation 14538 BURLINGTON RESOURCES OIL & GAS COMPANY LP 5912 ¹⁰ Surface Location UL or lot no. Feet from the North/South line Section Township Ronge Lot Idn Feet from the East/West line County 28-N SOUTH 690 1880 **EAST** 24 SAN JUAN "Bottom Hole Location If Different From Surface UL or lot no. North/South line Section Lot Idn Feet from the Feet from the East/West line Township Range County T Dedicated Acres ¹³ Joint or Infill 14 Consolidation Code 15 Order No. DK 320.00ac 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 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and bellef, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to e contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretafore entered by the USA SF-047017-B Signature Patsy Clugston / Sr. Regulato Printed Name Specialist FD 2 1/2" BC 1913 GLO SURVEYOR. CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me LAT: 36.64574° N. (NAD 83) or under my supervision, and that the same is true and LONG:107.94854° W. (NAD 83) correct to the best of my belief. 690' LAT: 36°38.7439' N. (NAD 27) LONG:107'56.8751' W. (NAD 27) +'27' 49' 00.04"; PROFESSIO' 14831 S 89°53'28" W FD 3 1/2" BC

2639.97'(M)

Certificate Number

1913 GLO

FD 2 1/2" BC

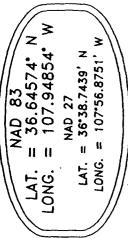
1913 GLO

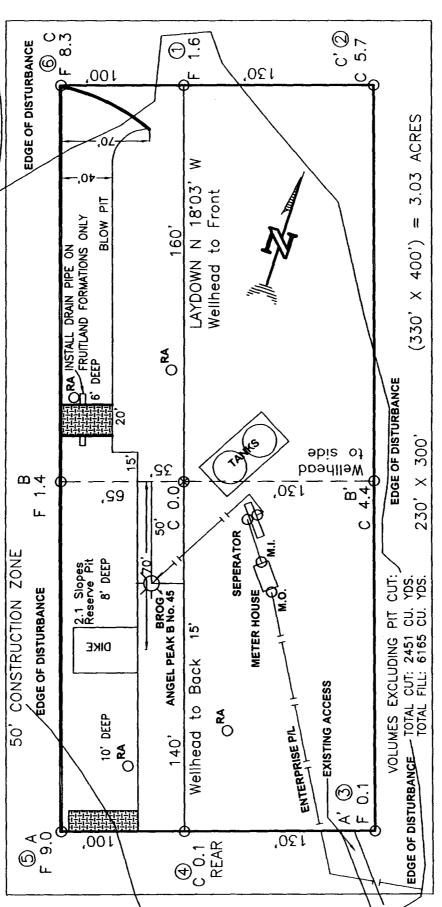
Submit 3 Copies To Appropriate District Office	State of New Mexico	Form C-103
District I	Energy, Minerals and Natural Resources	
1625 N. French Dr., Hobbs, NM 88240		WELL API NO.
District II 1301 W. Grand Ave., Artesia, NM 88210	OIL CONSERVATION DIVISION	30-045- 5. Indicate Type of Lease
District III	1220 South St. Francis Dr.	STATE FEE
1000 Rio Brazos Rd., Aztec, NM 87410	Santa Fe, NM 87505	6. State Oil & Gas Lease No.
District IV	· ·	
1220 S. St. Francis Dr., Santa Fe, NM 873	CES AND REPORTS ON WELLS	SF-047017-B 7. Lease Name or Unit Agreement Name
	S TO DRILL OR TO DEEPEN OR PLUG BACK TO A	7. Lease Name of Onit Agreement Name
DIFFERENT RESERVOIR. USE "APPLICATI	ON FOR PERMIT" (FORM C-101) FOR SUCH	Angel Peak B
PROPOSALS.) 1. Type of Well:		8. Well Number
Oil Well Gas Well X	Other	#20E
2. Name of Operator		9. OGRID Number
	OURCES OIL & GAS COMPANY LP	14538
3. Address of Operator	REET, FARMINGTON, NM 87402	10. Pool name or Wildcat Dakota
4. Well Location	CEET, PARISHINGTON, INM 67402	Dakota
	1880' feet from the South line and	890' feet from the <u>East</u> line
Section 24	Township 28N Rng 11 Elevation (Show whether DR, RKB, RT, GR, etc.)	W NMPM County San Juan
	Selevation (Show whether DR, RRB, R1, GR, etc.)	
Pit or Below-grade Tank Application	or Closure	72001
Pit type new drill Depth to Ground	water >100' Distance from nearest fresh water well	>1000' Distance from nearest surface water 41000'
Pit Liner Thickness: N/A	mil Below-Grade Tank: Volume	bbls; Construction Material
12. Check	Appropriate Box to Indicate Nature of N	otice. Report or Other Data
	NTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK		AL WORK ALTERING CASING
TEMPORARILY ABANDON		NCE DRILLING OPNS. P AND A
PULL OR ALTER CASING	MULTIPLE COMPL CASING	/CEMENT JOB
	-	
OTHER: New	Drill Pit X OTHER:	
13. Describe proposed or comple	ted operations. (Clearly state all pertinent details, and	I give pertinent dates, including estimated date
13. Describe proposed or comple of starting any proposed work		I give pertinent dates, including estimated date
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BURLINGTON RESOURCES OIL & GAS COMPANY LP ANGEL PEAK B No. 20E, 1880 FSL 690 FEL

SECTION 24, T-28-N, R-11-W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO

GROUND ELEVATION: 5912, DATE: MAY 23, 2006





PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW — 3' WIDE AND 1' ABOVE SHALLOW SIDE). : OVERFLOW PIPE HALFWAY BETWEEN TOP AND BOTTOM AND TO EXTEND OVER PLASTIC LINER AND INTO BLOW PIT. RESERVE P BLOW PIT:

NOTE: ESTIMATED VOLUMES CALCULATED BY AVERAGE END AREA AT CROSS—SECTION SHOWN DAGGETT ENTERPRISES, INC. IS-NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION. NOTE:

CONTRACTOR SHOULD CALL ONE—CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION. NOTE:

Daggett Enterprises, Inc.
Surveying and Oil Field Services
P. 0. Box 15068 • farmington, NM 87401
Phore (505) 226-1772 • fax (505) 226-6019
NEW MEXTO L.S. 14831

NEW MEXICO L.S. 1463 CUMPLE BR639PL8 DATE: 08/08/06

BURLINGTON RESOURCES OIL & GAS COMPANY LP ANGEL PEAK B No. 20E, 1880 FSL 690 FEL

LONG. ¥.

NAD 83 = 36.64574° N = 107.94854°

SECTION 24, T-28-N, R-11-W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO

ELEV. 5890 5900 5910 5920 A-A' GROUND ELEVATION: 5912, DATE: MAY 23, 2006 ļ C/L NAD 27 LAT. = 36"38.7439" N = 107.56.8751

5920	ELEV. C-C'	5890	5900	5910	5920	ELEV. B-B'
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NOTE: DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.

5890

5900

5910

1

NOTE: CONTRACTOR SHOULD CALL ONE—CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION

Daggett Enterprises, Inc. Surveying and Oil Field Services Phone (505) 326-1772 · Fax (505) 326-6019 P. O. Box 15068 • Formington, NM 87401

MEXICO L.S. 14831 DATE: 06/08/06

OPERATIONS PLAN

Well Name:

ANGEL PEAK B 20E

Location:

1880' FSL & 690' FEL, Section 24 T28N R11W

San Juan County, New Mexico

Formation: Elevation:

Basin Dakota

5912' GL

Formation Tops:	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	870'	
Ojo Alamo	870'	927'	aquifer
Kirtland	927'	1637'	gas
Fruitland Coal	1637'	1900'	gas
Pictured Cliffs	1900'	2010'	gas
Lewis	2010'	2436'	
Huerfanito Bentonite	2436'		
Chacra	2847'	3473'	gas
Massive Cliff House	3473'	3598'	gas
Menefee	3598'	4255'	gas
Massive Point Lookout	4255'	4564'	gas
Mancos Shale	4564'	5454'	
Upper Gallup	5454'	6222'	gas
Greenhorn	6222'	6280'	gas
Graneros	6280'	6315'	gas
Two Wells	6315'	6399'	gas
Paguate	6399'	6469'	gas
Cubero	6469'	6519'	gas
Encinal	6519'	6519'	gas
Total Depth:	6519'		gas

Logging Program:

Mud Logs/Coring/DST

Mud logs - none

Coring - none

DST - none

Open hole - none

Cased hole - Gamma Ray, CBL - surface to TD

Mud Program:

<u>Interval</u>	<u>Type</u>	Weight	<u>Vis.</u>	<u>Fluid Loss</u>
0 - 120'	Spud MUD/Air/Air Mist	8.4 - 9.0	40 - 50	no control
120'- 2110'	LSND	8.4 - 9.0	30 - 60	no control
2110' - 6519'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

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' - 120'	9 5/8"	32.3#	H-40
8 3/4"	0' - 2110'	7"	20#	J-55
6 1/4"	0' - 6519'	4 1/2"	10.5#	J-55

Tubing Program:

Depth Interval	<u>Csg.Size</u>	Wt.	<u>Grade</u>
0' - 6519'	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, BOPE 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, BOPE 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 4 $\frac{1}{2}$ " 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 -

Pre-Set Drilled - Cement with 23 sx Type I, II cement with 20% flyash mixed at 14.5 ppg, 1.61 cu ft per sack yield. (38 cu ft of slurry, bring cement to surface) Wait on cement for 24 hours for pre-set holes before pressure testing or drilling out from under surface.

Conventionally Drilled - Cement with 88 sx Type III cement with 0.25 pps Celloflake, 2% CaCl. (113 cu ft of slurry, 200% excess, bring cement to surface) Wait on cement for 8 hrs for conventionally set holes before pressure testing or drilling out from under surface. Wait on cement appropriate time until cement achieves 250 psi compressive strength at 60 degrees F. prior to nipple up of BOPE. Wait on cement for 8 hrs for conventionally set holes before pressure testing or drilling out from under surface. 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 with 162 sacks Premium Lite cement with 3% calcium chloride, 0.25 pps Celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate. Tail w/90 sacks Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss (124 cu ft 50% excess to circulate to surface). WOC minimum of 8 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL or a temperature survey will be run to determine TOC. Test casing to 1500 psi for 30 minutes.

7" intermediate casing alternative two stage -

Stage collar set 300' above the top of the Fruitland. First stage: Lead w/23 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss. Tail w/90 sxs Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss. Second stage: 138 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate (469 cu ft - 50% 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 @ 927'. Two turbolating centralizers at the base of the Ojo Alamo @ 927'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Casing -

Pump 289 sxs Premium Lite HS FM w/0.25 pps celloflake, 0.3% CD-32, 6.25 pps LCM-1, 1% fluid loss, 6% gel, 7 pps CSE (572 cu.ft., 30% excess to achieve 100' overlap in $4-1/2" \times 7"$ annulus). WOC a minimum of 18 hrs prior to completing.

Cementing: Continued

Cement float collar stacked on top of float shoe.

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 air/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:

- This will be a Dakota only.
- 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	2000 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 East half of Section 24 is dedicated to the Dakota formation.
- This gas is dedicated.



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resure double gate BOP to be equipped with blind and persons. A stripping head to be installed on the top of

Figure #3

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Figure 64

Ine BOP. All BOP equipment is 2000 pel working prosoure or greeter excluding 500 pel ethipting head.

Figure #2