# STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY FOR A DAKOTA INFILL PILOT PROJECT FOR ITS CULPEPPER MARTIN PROJECT SAN JUAN EDDY COUNTY, NEW MEXICO

**CASE 12509** 

#### AFFIDAVIT OF BILL BABCOCK

STATE OF NEW MEXICO	)
	) SS
COUNTY OF SAN JUAN	)

Before me, the undersigned authority, personally appeared Bill Babcock, who being first duly sworn, stated:

- A. My name is Bill Babcock. I am over the age of majority and am competent to make this Affidavit.
- B. I am a petroleum geologist for Burlington Resources Oil & Gas Company. I testified before the New Mexico Oil Conservation Division at the hearing held on October 19, 2000 for this case. I addition, I am part of the technical team responsible for selecting the well locations for the six (6) Dakota infill pilot wells:
  - 1. Davis Well #7F 180' FNL, 2465' FWL, W/2 C 11-31N-12W
  - 2. Davis Well #8R 2270' FSL, 2140' FEL, E/2 J 11-31N-12W
  - 3. East Well #7F 1510' FNL, 2100' FWL, W/2 F 14-31N-12W
  - 4. Grenier #11F 965' FNL, 500' FWL, W/2 D 13-31N-12W

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- 5. Harper #2F 2020' FSL, 1585' FEL. E/2 J 14-31N-12W
- 6. Richardson #8F 2510' FSL, 1915' FEL, E/2 J 10-31N-12W
- C. Attached are copies of the C-l02s for all six (6) infill pilot wells.
- D. Each well is predicated on being located among existing Dakota wells in such a way as to complete an appropriate pattern to obtain additional data for reservoir simulation modeling. It is necessary to locate them at locations not currently permitted by the pool rules because:
  - (a) the infill pilot wells are to be located among existing wells at locations in the reservoir which have not been adequately drained by existing wells in order (i) to properly test for interference between and among wells; and (ii) to obtain appropriate pressure data;
  - (b) the pilot wells are necessary in order to obtain pressure data which will be used to future refine the simulation and allow Burlington to then accurately predict the proper well density and well locations requirements for this area of the pool; and
  - (c) because there is a general north-south orientation to the drainage patterns of existing wells, each of the proposed infill pilot wells is located so as to minimize the effect that those existing drainage patterns will have on the pilot wells.
  - E. In addition, five (5) of these locations had to be further adjusted in order to comply with BLM requirements or satisfy topographical limitations. See attached topography map. The following reasons support these location exceptions:
    - (1) Davis 7F well has been moved three times for archeological reasons and there is no suitable standard location available for this well:
    - (2) Grenier 11F well location is unorthodox due to road restrictions and there is no suitable standard location available;

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- (3) Davis 8R well's location in the northeast portion of its drill block was not available due to a lack of roads in that quarter-quarter section. The location was moved further north because of archaeological reasons and there is no suitable standard location available;
- (4) Harper 2F well: there is no suitable standard location available for this well; and
- (5) Richardson 8F well is located on an existing road and there is no suitable standard location available.

FURTHER AFFIANT SAYETH NOT:

Bell Balrock

TATE OF NEW MEXICO

)SS

COUNTY OF SAN JUAN

SUBSCILLED AND SWORN to before me this \_\_th day of December, 2000.

Notary Public

My Commission Expires:

5-16-62

(SEAL)

ISTRICT

UL or lot no.

.O. Box 1980, Hobbs, N.M. 88241-1980

State of New Mexico Energy, Minerals & Natural Resources Department

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East/West line

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County

DISTRICT II P.O. Drawer DD, Artesia, N.M. 88211-0719

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

DISTRICT IV PO Box 2088, Santa Fe, NM 87504-2088

Section

Township

Ronge

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

'API Number	<sup>2</sup> Pool Code	•	<sup>3</sup> Pool Name
0-045-	71599	Basin Dako	ta
Property Code	3	* Well Number	
8509		7F	
70GRID No.		* Elevation	
4538	-BURLINGTON RES	OURCES OIL & GAS INC.	6259'

North/South line

Feet from the

Lot Idn

Feet from the

С	11	31-N	12-W		180	- NORTH	2465	WEST	SAN JUAN	
			<sup>11</sup> Bott	om Hole	Location	If Different Fr	om Surface			
ML or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
Dedicated Acres	Dedicated Acres 13 Joint or Infill				<sup>14</sup> Consolidation C	ode	<sup>19</sup> Order No.			
W/305.4										

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

16	\$ 90_	29-35 E	DARD UNIT HAS B	EEN APPROVED E	of the Division
	S 55 FD 3 1/2* 2552.3 BLM 1951 B.C. 246	77' (M) 180 7	FD 3 1/2" BLM 1951 B.C.		17 OPERATOR CERTIFICATION  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief
1-80-41 W.	2668.92' (M)	LOT 3	LOT 2	LOT 1	
	LOT 5	LOT 6	LOT 7	LOT B	Signature Peggy Cole Printed Name Regulatory Supervisor Title  Date
		LOT 11	LOT 10	LOT 9 <sub>.</sub>	18 SURVEYOR CERTIFICATION  1 hereby-certify-that the well location shown on this plat was platted 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 ballety.  Date of Surveys
A STATE OF THE PROPERTY OF THE	LOT 13   	LOT 14	LOT 15	LOT 15	Signature and seed of Predesignad Surveyor:

SISTRICT | F.Q. Box 1980, Hobbs, N.M. 88241-1980 State of New Mexico Energy, Minerals & Natural Resources Department Form C-102
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Santa Fe, NM 87504-2088

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1600 Rio Brazos Rd., Aztec, N.M. 87410

SISTRICT IV PC Box 2088, Santa Fe, NM 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number	<sup>2</sup> Pool Code	³Pool Name					
30-045-	71599	- Basin Dakota					
Property Code		<sup>6</sup> Well Number					
18509		DAVIS	8R				
OGRID No. 4538		* Elevation					
	BURLINGT	ON OIL AND GAS, INC.	6309,				

Lot Idn Feet from the North/South line Feet from the East/West line Township Range UL or lot no. Section County SOUTH 31-N 12-W 2270' 2140' **EAST** SAN JUAN J 11

<sup>11</sup> 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
	<sup>2</sup> Dedicated Acres		13 Ja	oint or Infill		<sup>14</sup> Consolidation Co	de	™ Order No.		
-	E/305.96	ó								

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

16 LOT 4	LOT 3	LOT 2	LOT 1	17 OPERATOR CERTIFICATION  I hereby certify that the information contained herein is true and complete to the best of my inneredge and belief
LOT 5	.сот б	USA SF-	-077648 LOT 8 FD 3 1/2° BC B.L.M. 1951	<b>^</b>
LOT 12	LOT 11	LONG. 108"03.8"W	. 04-51-52 6 LOT 6	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 tript the same is true and correct to the best of my builds. Russell.  Date of Surveys
LOT 13	LOT 14 FD 3 1/2° BC B.L.M. 1951	COT 15	LOT 16	8894

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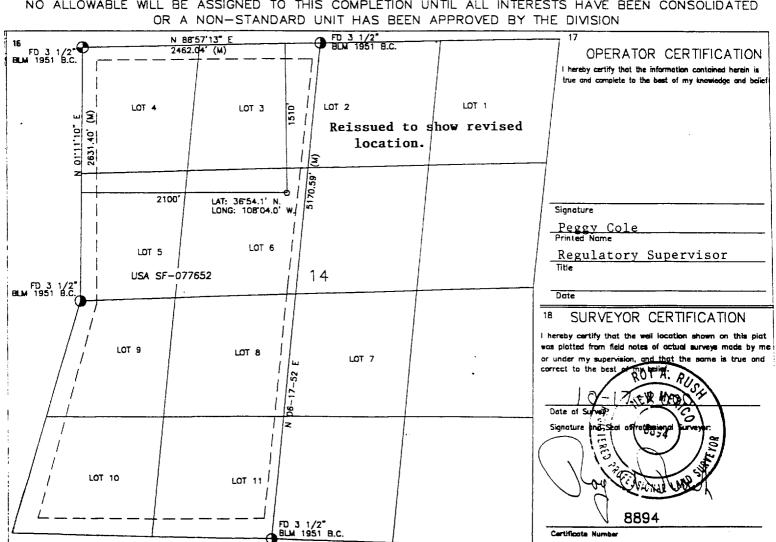
DISTRICT IV PO Box 2088, Santa Fe, NM 87504-2088

WELL	LOCATION	AND	ACREAGE	DEDICATION	PLAT

<sup>1</sup> API Number 30-045-	<sup>2</sup> Pool Code 71599	. Basin Dakota	e	
*Property Code 18517	5 P.	<sup>a</sup> Well Number 7F		
<sup>7</sup> OGRID No.		perator Name URCES OIL & GAS INC.	<sup>1</sup> Elevation 6276	
	<sup>10</sup> Sui	face Location		
UL or lot no. Section Towns	snio Ronge Lot Idn Feet from	n the North/South line   Feet from the	East /West line County	

F	. 14	31-N	12-W		1510	NORTH	2100	WEST	SAN JUAN
			<sup>11</sup> Bott	om Hole	Location	lf Different Fr	om 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		13 )	aint or Infill		<sup>14</sup> Consolidation Co	ode	<sup>15</sup> Order No.		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED



MSTRACT .O. Box 1980, Hobbs, N.M. 88241-1980

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☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT 1 API Number Basin Dakota 71599 30-045-\* Well Number <sup>4</sup>Property Code SProperty Name **GRENIER** 11F 18530 \*Operator Name 7 OGRID No.

\* Elevation 14538 BURLINGTON RESOURCES OIL & GAS INC. 6231 <sup>10</sup> Surface Location Feet from the North/South line Feet from the East/West line UL or lot no. Section Township Range Lat Idn County 12-W NORTH 500 WEST 31-N 965 D 13 SAN JUAN 11 Bottom Hole Location If Different From Surface North/South line Feet from the UL or lot no. Section Township Range Lat Idn Feet from the East/West line County 13 Joint or Infill 14 Consolidation Code Dedicated Acres 13 Order No. W/314.53NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED FD 3 1/2° BLM 1951 B.C. OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION -N 89-36-15 E

FD 3 1/2" BLM 1951 B.C. OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief LOT 1 LOT 2 LOT 4 10T 3 500 USA SF-078115 LAT: 36'54.2' N. LONG: 108'03.4' W. 45-07 2584 z Signature Peggy Cole MCGRAIL, M.H. LOT 5 Printed Name Regulatory Supervisor FD 3 1/2" BLM 1951 B.C. Date SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was platted from field nates of actual surveys made by me or under my supervision, and LOT 6 me is true and bell ROY correct to the best of HARPER, M.L. MCGRAIL, M.H. Signature and LOT 7 8894 Certificate Nue

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Energy, Minerals & Natural Resources Department

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STRICT IV ) Box 2088, Sont	a Fe, NW 8	7504-2088		So	inta Fe, NM 8.	7504-2088		☐ AMEN	IDED REPORT		
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7 OGRIO No.	.				*Operator h	lame			Elevation		
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					10 Surface	Location	-				
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	<b></b>		11 Botto	m Hole	Location	If Different F	rom Surface	2			
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USA SF-077652 Signature Peggy Cole MCGRAIL, M.H. LOT 5 LOT 6 Printed Name Regulatory Supervisor Title FD B.L.M. BC 1951 USA SF-078115 Date Ш LAT. 36'53.8'N SURVEYOR CERTIFICATION LONG. 108'03.8'W 1585 LOT 9 LOT 8 LOT 7 HARPER, M.I. 01-08-55 2020 LOT 10 LOT 11 8894 FD. B.L.M. BC 1951 N 88-39-59 W 5350.87

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STRICT IV	u., 24144, 11			Sc	enta Fe, NM 8					AMEN	IDED RE	POR!
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7 OGRIÐ No.					*Operator N	lame					Elevation	
14538				BURL	INGTON OIL A	ND GAS, INC.			÷		6170'	
					<sup>10</sup> Surface	Location						
L or let na. J	Section 10	Township -31N	Ronge 12-W	Lot idn	feet from the 2510	North/South line SOUTH	Foot	from the 1915	East/Wes	i line AST	County SAN	JUAN
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	VABLE V					ION UNTIL ALL				BEEN	CONSOL	.IDAT
								1 heraby certif	OPERAT by that the infe	ormation co	ntained herein	•
					CC 077654		   	Signature Pegg	zy Cole	2		<u> </u>

USA SF-077651 Regulatory Supervisor FO. 3 1/2" BC. B.L.M. 1951 Date 1915 LAT. = 36'54.8' N. LONG. = 108'04.8' W. SURVEYOR CERTIFICATION was plotted from field notes of actual surveys made by m-2633.90 N 0-54-19 2510' PAONAL KNO 8894 FD. 3 1/2" BC. B.L.M. 1951 2640.35' (M) FD. 3 1/2" BC. B.L.M. 1951 N 88-52-47 W