

**KELLAHIN & KELLAHIN**  
**Attorney at Law**

**W. THOMAS KELLAHIN**  
**706 GONZALES ROAD**  
**SANTA FE, NEW MEXICO 87501**

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TKELLAHIN@COMCAST.NET

April 10, 2008

**HAND DELIVERED**

Mr. Mark Fesmire, P.E., Director  
Oil Conservation Division  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

*Case 14119*

RECEIVED  
2008 APR 10 PM 2 13

Re: Application of Burlington Resources Oil & Gas Company LP for an exception to the well density requirements of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool, Rio Arriba County, New Mexico, W/2 Section 26, T29N, R7W including the bottom hole location for the San Juan 29-7 Unit Well No. 58N (surface in Unit F and BHL in Unit K) and the simultaneous dedication of this well with the San Juan 29-7 Unit Wells No. 58A (Unit Letter D), No. 58 (Unit M) and No. 58M (Unit N)

Dear Mr. Fesmire:

On behalf of Burlington Resources Oil & Gas Company LP, please find enclosed our referenced application which we request be set for hearing on the Examiner's docket now scheduled for May 15, 2008. Also enclosed is our proposed advertisement of this case for the NMOCD docket.

Very truly yours,

  
W. Thomas Kellahin

cc: Burlington Resources Oil & Gas Company LP  
Attn: Alan Alexander

**CASE 14119:** Application of Burlington Resources Oil & Gas Company LP for an exception to the well density requirements of the Blanco-Mesaverde Gas Pool,, Rio Arriba County, New Mexico. Applicant seeks an exception to the well density requirements of Rule I.B of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool to permit it to produce the following 3 Mesaverde gas wells in the same quarter section (SW/4) on a standard spacing and proration unit comprised of the W/2 of Section 26, T29N, R7W, NMPM:

(a) the San Juan Unit 29-7 Well No. 58N (API #30-039-2585700) surface location 2485 feet FNL and 2075 feet FWL (Unit F) and sub-surface location 2600 feet FSL and 1990 feet FWL of this section;(The subject wellbore)

(b) the San Juan Unit 29-7 Well No. 58 (API # 30-039-07556) located 840 feet FSL and 890 feet FWL (Unit M); and

(c) the San Juan Unit 29-7 Well No. 58M ( API # 30-039-26618) located 1130 feet FSL and 1845 feet FWL (Unit N).

The forth wellbore is located in the NW/4 section of this spacing unit and is the San Juan 29-7 Unit Well No. 58A (API #30-039-25617) located 790 feet FNL and 790 feet FWL (Unit D) of this section;

These wells are located approximately 5 miles southeast of the Navajo City, New Mexico.

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

**IN THE MATTER OF THE APPLICATION OF  
BURLINGTON RESOURCES OIL & GAS COMPANY LP  
FOR AN EXCEPTIONS TO THE WELL DENSITY  
REQUIREMENTS FOR THE BLANCO-MESAVERDE  
GAS POOL, RIO ARriba COUNTY, NEW MEXICO.**

CASE NO. 14119

**APPLICATION**

Burlington Resources Oil & Gas Company LP. ("Burlington") by its attorneys, Kellahin & Kellahin, seeks an order for approval of an exception to the well density requirements for the Blanco-Mesaverde Gas Pool, Rio Arriba County, New Mexico. Applicant seeks an exception to the well density requirements of Rule I.B of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool to permit it to produce the following 3 Mesaverde gas wells in the same quarter section (SW/4) on a standard spacing and proration unit comprised of the W/2 of Section 26, T29N, R7W, NMPM:

- (a) the San Juan Unit 29-7 Well No. 58N (Mesaverde/Dakota formations) (API #30-039-30314) surface location 2485 feet FNL and 2075 feet FWL (Unit F) and subsurface location 2600 feet FSL and 1990 feet FWL of this section; (The subject wellbore)
- (b) the San Juan Unit 29-7 Well No. 58 (Mesaverde formation) (API # 30-039-07556) located 840 feet FSL and 890 feet FWL (Unit M) and
- (c) the San Juan Unit 29-7 Well No. 58M (Mesaverde/Dakota formations) ( API # 30-039-26618) located 1130 feet FSL and 1845 feet FWL (Unit N).

In support of its application Burlington states:

(1) Burlington is the current operator of the San Juan 29-7 Unit that includes, among other acreage, the W/2 of Section 26, T29N, R7W, Rio Arriba County, New Mexico.

(2) This spacing unit currently contains four wells completed in the Blanco-Mesaverde Gas Pool (See locator map attached as Exhibit "A")

(a) the San Juan 29-7 Unit Well No. 58A (API #30-039-25617) located 790 feet FNL and 790 feet FWL (Unit D) of this section; and

(b) the San Juan Unit 29-7 Well No. 58N (API #30-039-30314) surface location 2485 feet FNL and 2075 feet FWL (Unit F) and subsurface location 2600 feet FSL and 1990 feet FWL of this section (Unit K) (The subject wellbore);

(c) the San Juan Unit 29-7 Well No. 58 (API # 30-039-07556) located 840 feet FSL and 890 feet FWL (Unit M)

(d) the San Juan Unit 29-7 Well No. 58M ( API # 30-039-26618) located 1130 feet FSL and 1845 feet FWL (Unit N)

(3) The Blanco-Mesaverde Gas Pool is governed by Special Rules and Regulations which provide for 320-acre spacing and proration units on which as many as four wells may be drilled. See Order R-8170, as superseded by Order R-10987-A, effective February 1, 1999 and amended by Order R-10987-A (1), effective December 2, 2002. These Special Pool Rules and Regulations provide, among other things, that no more than two infill wells shall be located within the same quarter section (160-acre tract).

(4) On October 24, 2007, Burlington spud the San Juan 29-7 Unit Well No. 58N well at a standard surface location in Unit F of Section 26 (See Division form C-102 attached as Exhibit "B")

(5) On October 27-28, 2007, while using a RWD assembly ("Reaming While Drilling") to drill the intermediate hole, the RWD assembly caused the bit to walk and the hole become deviated. Burlington then ran a Teledrift survey at 829 feet to determine the location of the hole but there was a faulty reading that showed 1 degree of deviation instead of what was later determined to be between 9 and 10 degrees of deviation. (See Division form C-103, dated 1/11/08, attached as Exhibit "C")

(6) After various attempt to correct the deviation, the wellbore finally reach a bottom hole location 2600 feet FSL and 1990 feet FWL in Unit F approximately 190 feet southwest of the original surface location. See Deviation survey attached as Exhibit "D"

(7) Burlington has shut-in the No. 58 wellbore since completing the No. 58N wellbore .

(8) While the rules for both pools allow four well producing in the spacing unit, the Well No. 58N, Well No. 58 and Well No. 58M are located in the same quarter section and therefore are in violation of the density requirements of this Special Pool Rules.

(9) Burlington therefore requests that the Division enter its order granting approval of this exception to the well density requirements of Rule I.B of the Special Rules and Regulations of the Blanco-Mesaverde Gas Pool approving the location of the San Juan 29-7 Unit Well No. 58N in the same quarter section as the San Juan 29-7 Well Nos. 58 and 58M and authoring Burlington to simultaneously produce all four wells in the spacing unit.

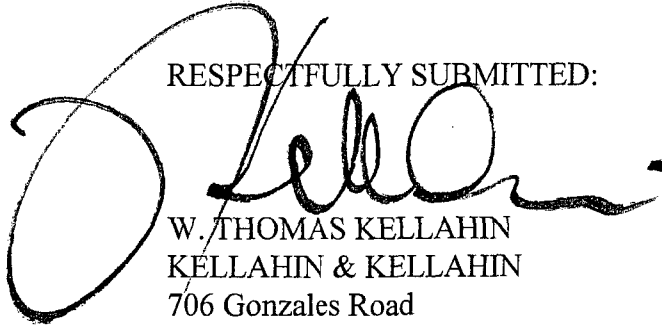
(10) Approval of this application will not impair the correlative rights of any other interest owner in the Blanco-Mesaverde Gas Pool and will afford Burlington the opportunity to utilize the existing wells to produce the reserves from this GPU.

(11) This spacing unit is within the participating area for the Mesaverde Pool and the ownership interests are common between the spacing units and all adjoining spacing units, therefore no notice has been sent.

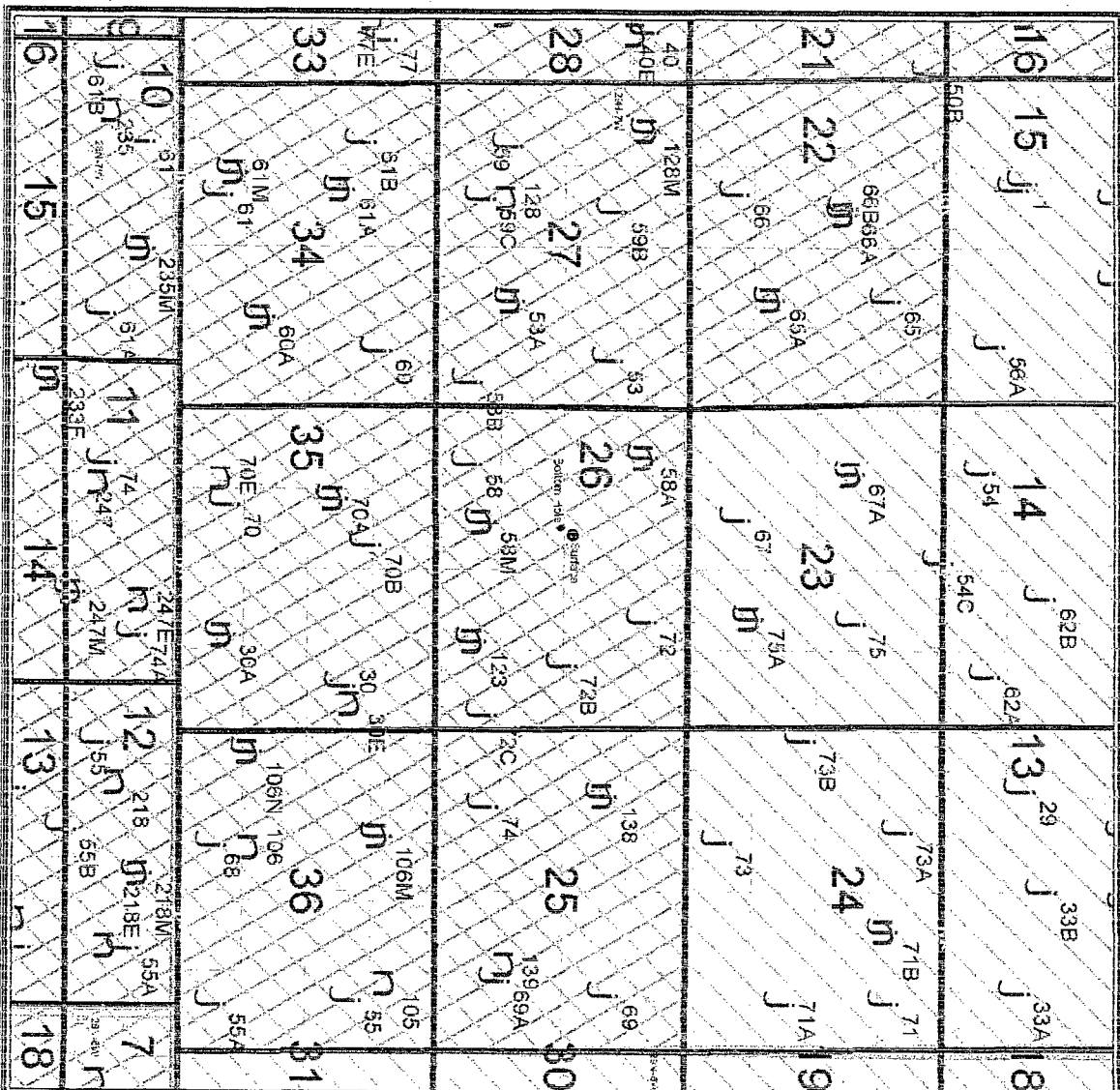
(12) Approval of this application will be in the best interests of conservation, the prevention of waste and the protection of correlative rights.

WHEREFORE, Burlington Resources Oil & Gas Company LP requests that this application be set for hearing before an Examiner of the Oil Conservation Division on May 15, 2008 and after notice and hearing as required by law, the Division enter its order granting an exception to the well density requirements of Rule 1.B of the Special Rules and Regulations of the Blanco-Mesaverde Gas Pool and authorizing Burlington to simultaneously produced all four wells in this spacing unit

RESPECTFULLY SUBMITTED:

A large, stylized handwritten signature in black ink, appearing to read 'W. Thomas Kellahin', is written over the typed name and company information.

W. THOMAS KELLAHIN  
KELLAHIN & KELLAHIN  
706 Gonzales Road  
Santa Fe, New Mexico 87501  
(505) 982-4285



**Legend**

- CRETACEOUS
- MORROW
- MEVETEE
- MESAVERTIDE
- GRANITE
- DAKOTA
- DAKOTA-ALCOHOL D. SANDS AND

**Faulting: Arrows**

**FORMATION**

**DAKOTA**

**MESAVERTIDE**

**DAKOTA**

**BURLINGTON RESOURCES**

**San Juan**

**San Juan 29-7 Unit # 58N**

**Section 26-29N-7W**

**Mesavertide / Dakota Commingle**

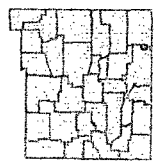
**Prepared by: Alan Anderson**

**File Number: 11/23/2005**

**Revised Date: 11/23/2005**

**1" equals 2,235'**

**0 100 200 300 400 500 600 700 800 900 1000 Feet**



PENGAD 800-631-6989

**EXHIBIT**

**A**

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

DISTRICT II  
1301 West Grand Avenue, Artesia, N.M. 88210

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

DISTRICT IV  
1220 S. 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

Form C-102  
Revised October 12, 2005

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

RCVD JAN 25 '08

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

OIL CONS. DIV.  
DIST. 3

*API Number 30-039-30314		*Pool Code 71599/72319	*Pool Name BASIN DAKOTA/BLANCO MESAVERDE
*Property Code 7465	*Property Name SAN JUAN 29-7 UNIT		*Well Number 58N
*OGRD No. 14538	*Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP		*Elevation 6334'

<sup>10</sup> Surface Location

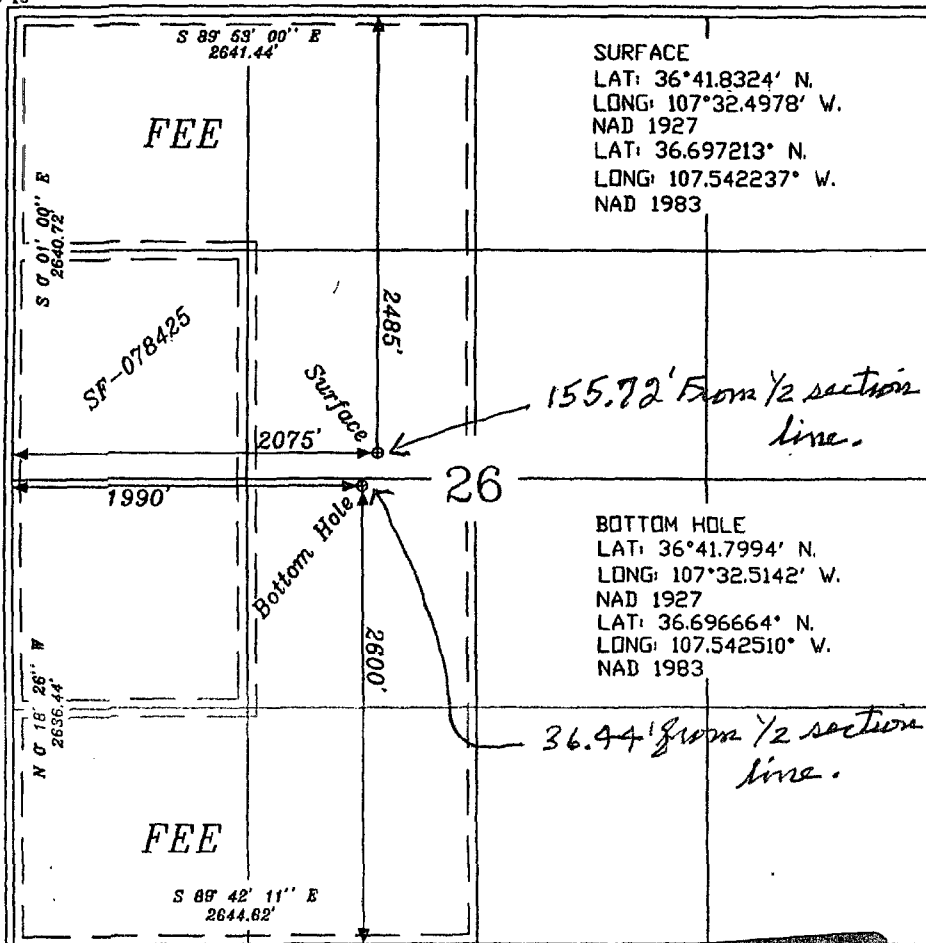
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	26	29-N	7-W		2485'	NORTH	2075'	WEST	RIO ARriba

<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
K	26	29-N	7-W		2800'	SOUTH	1990'	WEST	RIO ARriba

<sup>12</sup> Dedicated Acres BD 320.0 ACRES W/2 MV 320.0 ACRES W/2		<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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



<sup>17</sup> OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, 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 a contract with an owner of such a mineral or a working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Tamra Sessions*  
Signature

Tamra Sessions  
Printed Name

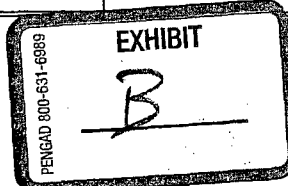
1-24-08

<sup>18</sup> 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 belief.

1-24-08  
Date of Survey  
Signature and Seal of Professional Surveyor:  
15703

*Calvin W. Russell*  
Certificate Number 15703





Submit 3 Copies To Appropriate District Office  
District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
March 4, 2004

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

WELL API NO. <b>30-039-30314</b>
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No. <b>RCVD JAN 25 '08</b>
7. Lease Name or Unit Agreement Name <b>OIL CONS. DIV. San Juan 29-7 Unit</b>
8. Well Number <b>DIST. 3 #58N</b>
9. OGRID Number <b>14538</b>
10. Pool name or Wildcat <b>Blanco MV/Basin DK</b>

**SUNDRY NOTICES AND REPORTS ON WELLS**  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:  
Oil Well ☐ Gas Well ☒ Other

2. Name of Operator  
**Burlington Resources**

3. Address of Operator  
**P.O. Box 4289, Farmington, NM 87499-4289**

4. Well Location  
Unit Letter **F** : **2485** feet from the **North** line and **2075** feet from the **West** line  
Section **26** Township **29N** Range **7W** NMPM Rio Arriba County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
**6334'**

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/> PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPLETION <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>
OTHER: <input checked="" type="checkbox"/> Deviation Explanation	OTHER: <input type="checkbox"/>

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.  
Since this well deviated into Unit Letter K, the San Juan 29-7 Unit 58 (API 30-039-07556, Sec. 26-29N-07W, M 840 FSL & 890 FWL) will be shut in.

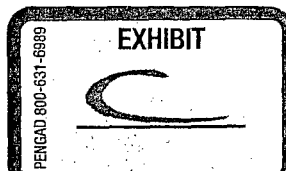
We used a 'reaming while drilling' assembly to drill the intermediate hole on this well from 234'-1016'. The RWD assembly was supposed to open the 8-3/4" wellbore up to 9-7/8". We wanted to open the intermediate hole up on this well because we had trouble getting 7" casing to intermediate TD in offset wells in that area due to swelling formations. This particular RWD assembly caused the bit to walk, and the hole became deviated. We ran a Teledrift survey at 829' and surveyed 1 deg, however, this was a faulty reading from the Teledrift. We drilled to 1016' and took another Teledrift survey and got six degrees of inclination. We then shot a Totco at 1016' and got a deviation of between 9 and 10 deg. At that point they pulled the drill string up to 835' and shot another Totco, resulting in a survey of 6 deg. It was then confirmed that the hole had deviated significantly and we decided to pull the RWD assembly and run in with a tri-cone bit to get the hole to drop back to vertical. Had the Teledrift read 5 degrees or greater at 829' we probably would have pulled the RWD assembly at that point rather than drilling ahead. Therefore, the two contributing factors for the deviation on this well were the faulty readings from the Teledrift at 829' and the use of the RWD assembly.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOC guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Tamra Sessions TITLE Regulatory Technician DATE 1/11/2008

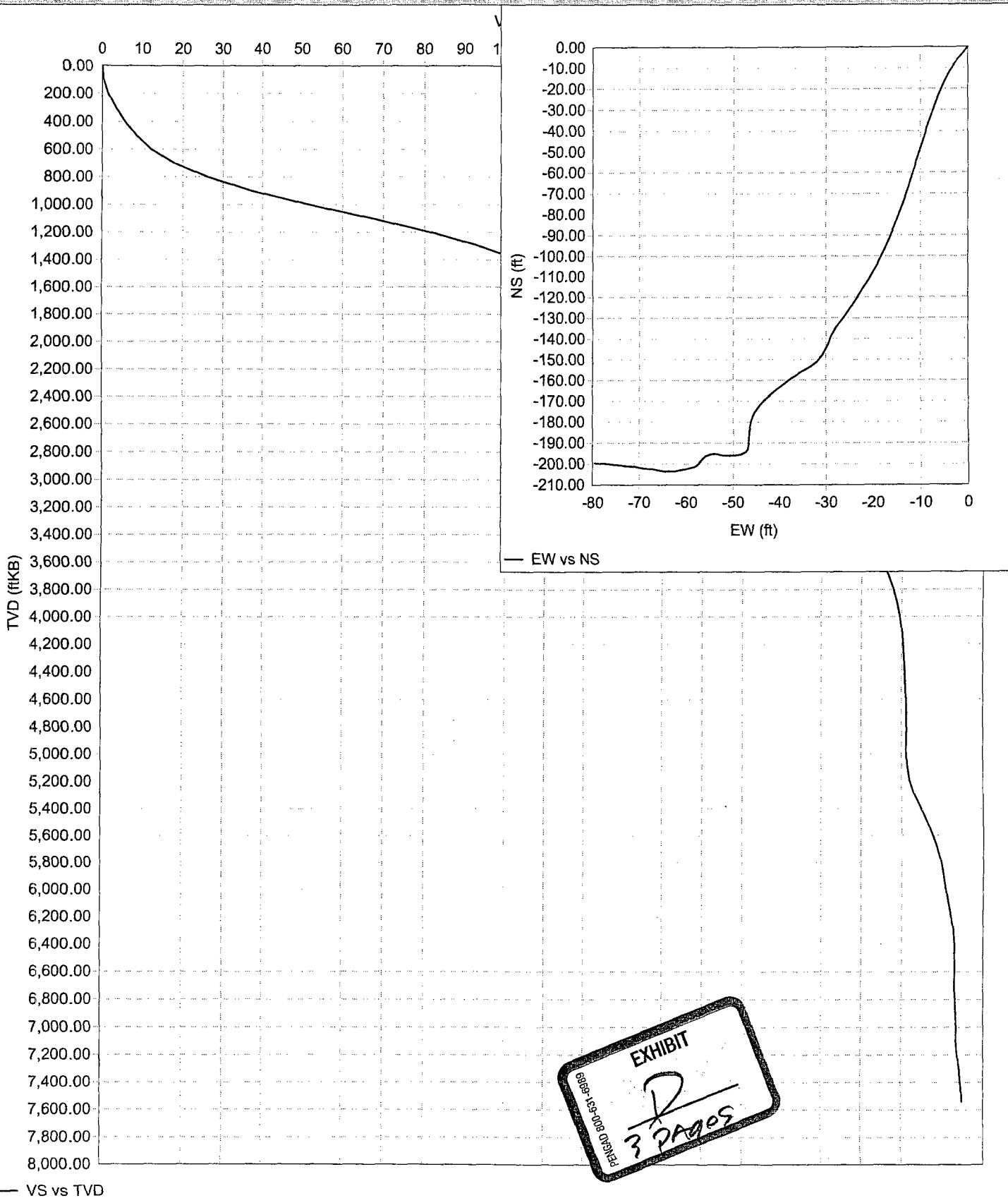
Type or print name Tamra Sessions Telephone No. 505-326-9834 (This space for State use)

APPROVED BY H. Villanueva TITLE Deputy Oil & Gas Inspector DATE JAN 25 2008  
Conditions of approval, if any:



**Directional Plot**  
**SAN JUAN 29-7 UNIT #58N**

API / UWI 3003930314	Surface Legal Location SEC.26;TWN:029N;RNG:007W	Field Name MV/DK COM	BU/JV LOWER 48 - SJBU	Latitude (DMS) 36° 41' 49.942" N	Longitude (DMS) 107° 32' 33.792" W
Well Type Development	Well Configuration Type VERTICAL	Original KB Elevation (ft) 6,350.00	KB-Ground Distance (ft) 16.00	KB-CF (ft)	ConocoPhillips WI (%) 59.77



**EXHIBIT**  
*D*  
**3 PAGES**



**Directional Survey**  
**SAN JUAN 29-7 UNIT #58N**

Wellbore Name Original Hole		Parent Wellbore Original Hole		Kick Off Depth (ftKB)		Vertical Section Direction (°)	
Date 10/24/2007		Definitive? No		Description DEVIATION SURVEYS		Proposed? No	
MD Tie In (ftKB)	TVD Tie In (ftKB)	Inclination Tie In (°)		Azimuth Tie In (°)	NSTie In (ft)	EWTie In (ft)	

**Survey Data**

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Method	Survey Company
10/24/2007	130.00	0.75							A1SureShot	Mo-Te Drilling Inc.
10/24/2007	230.00	1.25							A1SureShot	Mo-Te Drilling Inc.
11/1/2007	421.00	1.00	0.00						TEL	
11/2/2007	624.00	2.00	0.00						TEL	
11/2/2007	829.00	1.00	0.00						TEL	
11/2/2007	835.00	6.00	0.00						Incl	TOTCO
11/2/2007	1,016.00	10.00	0.00						Incl	TOTCO
11/3/2007	1,195.00	8.00	0.00						Incl	TOTCO
11/3/2007	1,420.00	6.00	0.00						Incl	TOTCO
11/3/2007	1,528.00	5.00	0.00						Incl	TOTCO
11/3/2007	1,598.00	4.00	0.00						Incl	TOTCO
11/4/2007	1,819.00	3.00	0.00						TEL	
11/4/2007	2,175.00	2.00	0.00						TEL	
11/4/2007	2,446.00	2.00	0.00						TEL	
11/4/2007	2,665.00	2.00	0.00						TEL	
11/5/2007	2,848.00	2.00	0.00						TEL	
11/5/2007	3,025.00	2.00	0.00						TEL	
11/5/2007	3,430.00	2.00	0.00						TEL	

Date 11/13/2007		Definitive?		Description GYRO		Proposed?	
MD Tie In (ftKB)	TVD Tie In (ftKB)	Inclination Tie In (°)		Azimuth Tie In (°)	NSTie In (ft)	EWTie In (ft)	

**Survey Data**

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Method	Survey Company
11/13/2007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Gyro MS	Scientific Drilling
11/13/2007	100.00	0.44	198.26	100.00	0.38	-0.36	-0.12	0.44	Gyro MS	Scientific Drilling
11/13/2007	200.00	0.87	198.26	199.99	1.52	-1.45	-0.48	0.43	Gyro MS	Scientific Drilling
11/13/2007	300.00	1.31	198.26	299.97	3.42	-3.26	-1.07	0.44	Gyro MS	Scientific Drilling
11/13/2007	400.00	1.34	203.93	399.95	5.73	-5.41	-1.91	0.13	Gyro MS	Scientific Drilling
11/13/2007	500.00	1.79	196.17	499.91	8.46	-7.98	-2.82	0.50	Gyro MS	Scientific Drilling
11/13/2007	600.00	2.53	195.07	599.84	12.20	-11.61	-3.83	0.74	Gyro MS	Scientific Drilling
11/13/2007	700.00	3.96	191.21	699.68	17.79	-17.13	-5.07	1.45	Gyro MS	Scientific Drilling
11/13/2007	800.00	5.58	189.93	799.33	25.94	-25.31	-6.58	1.62	Gyro MS	Scientific Drilling
11/13/2007	900.00	7.52	188.29	898.67	37.07	-36.57	-8.36	1.95	Gyro MS	Scientific Drilling
11/13/2007	1,000.00	9.44	187.62	997.57	51.39	-51.18	-10.39	1.92	Gyro MS	Scientific Drilling
11/13/2007	1,100.00	8.84	187.68	1,096.30	66.79	-66.92	-12.51	0.60	Gyro MS	Scientific Drilling
11/13/2007	1,200.00	7.70	190.09	1,195.26	80.81	-81.13	-14.71	1.19	Gyro MS	Scientific Drilling
11/13/2007	1,300.00	6.50	190.18	1,294.49	92.92	-93.30	-16.88	1.20	Gyro MS	Scientific Drilling
11/13/2007	1,400.00	5.46	193.22	1,393.95	103.17	-103.50	-18.97	1.09	Gyro MS	Scientific Drilling
11/13/2007	1,500.00	4.60	193.83	1,493.56	111.85	-112.03	-21.02	0.86	Gyro MS	Scientific Drilling
11/13/2007	1,600.00	3.72	197.43	1,593.30	119.05	-119.02	-22.95	0.92	Gyro MS	Scientific Drilling
11/13/2007	1,700.00	3.37	196.43	1,693.10	125.21	-124.93	-24.75	0.36	Gyro MS	Scientific Drilling
11/13/2007	1,800.00	3.09	197.83	1,792.94	130.83	-130.31	-26.41	0.29	Gyro MS	Scientific Drilling
11/13/2007	1,900.00	2.59	199.00	1,892.82	135.78	-135.02	-27.97	0.50	Gyro MS	Scientific Drilling
11/13/2007	2,000.00	2.03	188.37	1,992.74	139.76	-138.91	-28.96	0.70	Gyro MS	Scientific Drilling
11/13/2007	2,100.00	1.79	190.37	2,092.68	143.01	-142.19	-29.50	0.25	Gyro MS	Scientific Drilling
11/13/2007	2,200.00	1.71	192.73	2,192.64	146.01	-145.19	-30.11	0.11	Gyro MS	Scientific Drilling
11/13/2007	2,300.00	1.72	195.35	2,292.59	148.98	-148.09	-30.84	0.08	Gyro MS	Scientific Drilling
11/13/2007	2,400.00	1.74	202.34	2,392.55	151.99	-150.94	-31.81	0.21	Gyro MS	Scientific Drilling
11/13/2007	2,500.00	1.87	218.59	2,492.50	155.07	-153.62	-33.41	0.53	Gyro MS	Scientific Drilling
11/13/2007	2,600.00	2.04	218.91	2,592.44	158.33	-156.28	-35.54	0.17	Gyro MS	Scientific Drilling
11/13/2007	2,700.00	1.72	209.43	2,692.39	161.52	-158.97	-37.40	0.45	Gyro MS	Scientific Drilling
11/13/2007	2,800.00	1.74	210.63	2,792.34	164.51	-161.58	-38.91	0.04	Gyro MS	Scientific Drilling
11/13/2007	2,900.00	1.92	207.92	2,892.29	167.67	-164.37	-40.47	0.20	Gyro MS	Scientific Drilling
11/13/2007	3,000.00	2.34	208.01	2,992.22	171.37	-167.65	-42.21	0.42	Gyro MS	Scientific Drilling
11/13/2007	3,100.00	2.43	202.76	3,092.13	175.51	-171.41	-43.99	0.24	Gyro MS	Scientific Drilling
11/13/2007	3,200.00	2.39	193.96	3,192.05	179.70	-175.39	-45.31	0.37	Gyro MS	Scientific Drilling
11/13/2007	3,300.00	2.44	187.35	3,291.96	183.83	-179.52	-46.09	0.28	Gyro MS	Scientific Drilling

# Directional Survey

## SAN JUAN 29-7 UNIT #58N

### Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Method	Survey Company
11/13/2007	3,400.00	2.59	183.07	3,391.86	188.03	-183.89	-46.48	0.24	Gyro MS	Scientific Drilling
11/13/2007	3,500.00	2.11	181.36	3,491.78	191.90	-187.99	-46.64	0.49	Gyro MS	Scientific Drilling
11/13/2007	3,600.00	1.37	180.17	3,591.73	194.73	-191.02	-46.69	0.74	Gyro MS	Scientific Drilling
11/13/2007	3,700.00	0.88	191.11	3,691.71	196.60	-192.97	-46.84	0.53	Gyro MS	Scientific Drilling
11/13/2007	3,800.00	0.60	212.73	3,791.70	197.87	-194.17	-47.27	0.39	Gyro MS	Scientific Drilling
11/13/2007	3,900.00	0.53	216.99	3,891.70	198.83	-194.98	-47.84	0.08	Gyro MS	Scientific Drilling
11/13/2007	4,000.00	0.37	231.48	3,991.69	199.56	-195.55	-48.37	0.20	Gyro MS	Scientific Drilling
11/13/2007	4,100.00	0.38	258.37	4,091.69	200.02	-195.82	-48.94	0.17	Gyro MS	Scientific Drilling
11/13/2007	4,200.00	0.27	251.72	4,191.69	200.35	-195.96	-49.49	0.12	Gyro MS	Scientific Drilling
11/13/2007	4,300.00	0.30	271.21	4,291.69	200.60	-196.02	-49.98	0.10	Gyro MS	Scientific Drilling
11/13/2007	4,400.00	0.35	280.42	4,391.69	200.75	-195.96	-50.54	0.07	Gyro MS	Scientific Drilling
11/13/2007	4,500.00	0.32	276.42	4,491.69	200.88	-195.88	-51.12	0.04	Gyro MS	Scientific Drilling
11/13/2007	4,600.00	0.35	269.82	4,591.69	201.07	-195.85	-51.70	0.05	Gyro MS	Scientific Drilling
11/13/2007	4,700.00	0.33	285.47	4,691.68	201.21	-195.77	-52.28	0.09	Gyro MS	Scientific Drilling
11/13/2007	4,800.00	0.42	303.43	4,791.68	201.17	-195.49	-52.87	0.15	Gyro MS	Scientific Drilling
11/13/2007	4,900.00	0.35	295.96	4,891.68	201.08	-195.16	-53.45	0.09	Gyro MS	Scientific Drilling
11/13/2007	5,000.00	0.15	255.23	4,991.68	201.13	-195.06	-53.85	0.26	Gyro MS	Scientific Drilling
11/13/2007	5,100.00	0.30	248.28	5,091.68	201.39	-195.19	-54.22	0.15	Gyro MS	Scientific Drilling
11/13/2007	5,200.00	0.61	241.57	5,191.67	201.98	-195.54	-54.93	0.31	Gyro MS	Scientific Drilling
11/13/2007	5,300.00	0.80	218.57	5,291.67	203.05	-196.34	-55.83	0.34	Gyro MS	Scientific Drilling
11/13/2007	5,400.00	1.03	196.07	5,391.65	204.62	-197.75	-56.52	0.42	Gyro MS	Scientific Drilling
11/13/2007	5,500.00	0.76	206.19	5,491.64	206.17	-199.20	-57.06	0.31	Gyro MS	Scientific Drilling
11/13/2007	5,600.00	0.73	204.97	5,591.63	207.47	-200.38	-57.62	0.03	Gyro MS	Scientific Drilling
11/13/2007	5,700.00	0.67	230.13	5,691.63	208.62	-201.33	-58.34	0.31	Gyro MS	Scientific Drilling
11/13/2007	5,800.00	0.57	236.04	5,791.62	209.55	-201.98	-59.20	0.12	Gyro MS	Scientific Drilling
11/13/2007	5,900.00	0.41	247.19	5,891.62	210.21	-202.40	-59.94	0.19	Gyro MS	Scientific Drilling
11/13/2007	6,000.00	0.46	244.78	5,991.61	210.75	-202.71	-60.63	0.05	Gyro MS	Scientific Drilling
11/13/2007	6,100.00	0.48	241.35	6,091.61	211.37	-203.08	-61.37	0.03	Gyro MS	Scientific Drilling
11/13/2007	6,200.00	0.62	253.10	6,191.61	212.03	-203.44	-62.25	0.18	Gyro MS	Scientific Drilling
11/13/2007	6,300.00	0.70	267.89	6,291.60	212.61	-203.62	-63.38	0.19	Gyro MS	Scientific Drilling
11/13/2007	6,400.00	0.61	287.77	6,391.59	212.90	-203.48	-64.50	0.24	Gyro MS	Scientific Drilling
11/13/2007	6,500.00	0.47	290.92	6,491.59	212.94	-203.17	-65.39	0.14	Gyro MS	Scientific Drilling
11/13/2007	6,600.00	0.53	292.65	6,591.58	212.94	-202.84	-66.20	0.06	Gyro MS	Scientific Drilling
11/13/2007	6,700.00	0.47	291.78	6,691.58	212.93	-202.51	-67.00	0.06	Gyro MS	Scientific Drilling
11/13/2007	6,800.00	0.40	272.92	6,791.58	213.04	-202.34	-67.73	0.16	Gyro MS	Scientific Drilling
11/13/2007	6,900.00	0.54	280.43	6,891.57	213.25	-202.24	-68.55	0.15	Gyro MS	Scientific Drilling
11/13/2007	7,000.00	0.82	288.77	6,991.57	213.38	-201.93	-69.69	0.30	Gyro MS	Scientific Drilling
11/13/2007	7,100.00	0.96	297.31	7,091.56	213.33	-201.31	-71.11	0.19	Gyro MS	Scientific Drilling
11/13/2007	7,200.00	1.56	275.59	7,191.53	213.63	-200.79	-73.21	0.76	Gyro MS	Scientific Drilling
11/13/2007	7,300.00	1.36	286.69	7,291.50	214.11	-200.32	-75.70	0.35	Gyro MS	Scientific Drilling
11/13/2007	7,400.00	0.86	277.39	7,391.48	214.40	-199.88	-77.58	0.53	Gyro MS	Scientific Drilling
11/13/2007	7,500.00	0.81	282.50	7,491.47	214.70	-199.63	-79.01	0.09	Gyro MS	Scientific Drilling
11/13/2007	7,550.00	0.44	271.26	7,541.47	214.83	-199.55	-79.55	0.78	Gyro MS	Scientific Drilling