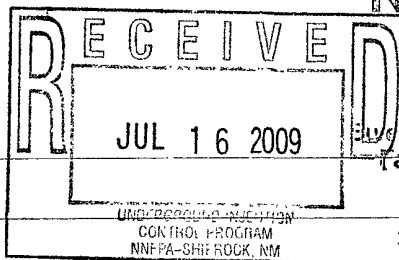


UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells



RECEIVED

JUL 07 2009

Bureau of Land Management
Farmington Field Office

1. Type of Well
GAS

2. Name of Operator
BURLINGTON
RESOURCES OIL & GAS COMPANY LP

3. Address & Phone No. of Operator

PO Box 4289, Farmington, NM 87499 (505) 326-9700

4. Location of Well, Footage, Sec., T, R, M

Surface: Unit F (SEnw), 2640' FNL & 2075' FWL, Section 25, T28N, R5W, NMPM

Bottomhole: Unit E (SWNW), 2080' FNL & 710' FWL, Section 25, T28N, R5W, NMPM

5. Lease Number
SF-078464 079520-A

6. If Indian, All. or
Tribe Name

7. Unit Agreement Name
San Juan 28-5 Unit

8. Well Name & Number
San Juan 28-5 Unit 78N

9. API Well No.

30-039-30368

10. Field and Pool
Basin DK/Blanco MV

11. County and State
Rio Arriba, NM

12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA

Type of Submission

Type of Action

☒

Notice of Intent

☐

Abandonment

☐

Change of Plans

☒

Other -

Move BHL

☐

Subsequent Report

☐

Recompletion

☐

New Construction

☐

Final Abandonment

☐

Plugging

☐

Non-Routine Fracturing

☐

Casing Repair

☐

Water Shut off

☐

Altering Casing

☐

Conversion to Injection

13. Describe Proposed or Completed Operations

Burlington Resources wishes to move the Bottomhole Location of the subject well due to a potential collision with another well bore. The approved footages were Surface: Unit F (SEnw) 2640' FNL & 2075' FWL, Bottomhole: Unit E (SWNW) 1455' FNL & 945' FWL, the new footages for the bottomhole are Unit F (SEnw) 2080' FNL & 710' FWL. The new plat, directional drill plan and project proposal are attached.

E (SWNW)

RCVD JUL 17 '09

OIL CONS. DIV.

DIST. 3

14. I hereby certify that the foregoing is true and correct.

Signed

Crystal Tafoya

Crystal Tafoya

Title Regulatory Technician

Date 7/7/2009

(This space for Federal or State Office use)

APPROVED BY *Troy L. Saliers*

Title Petroleum Engineer

Date 7/15/2009

CONDITION OF APPROVAL, if any:

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

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

NMOCD
7/21

Form C-102
Revised October 12, 2005

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

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

* API Number 30-039-30368		* Pool Code 71599 / 72319	* Pool Name BASIN DAKOTA/ BLANCO MESAVERDE
* Property Code 7460	* Property Name SAN JUAN 28-5 UNIT		* Well Number 78N
* OGRID No. 14538	* Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY LP		* Elevation 6753'

¹⁰ 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	25	28-N	5-W		2640'	NORTH	2075'	WEST	RIO ARRIBA

11 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
E	25	28-N	5-W		2080'	NORTH	710'	WEST	RIO ARriba

¹⁸ Dedicated Acres

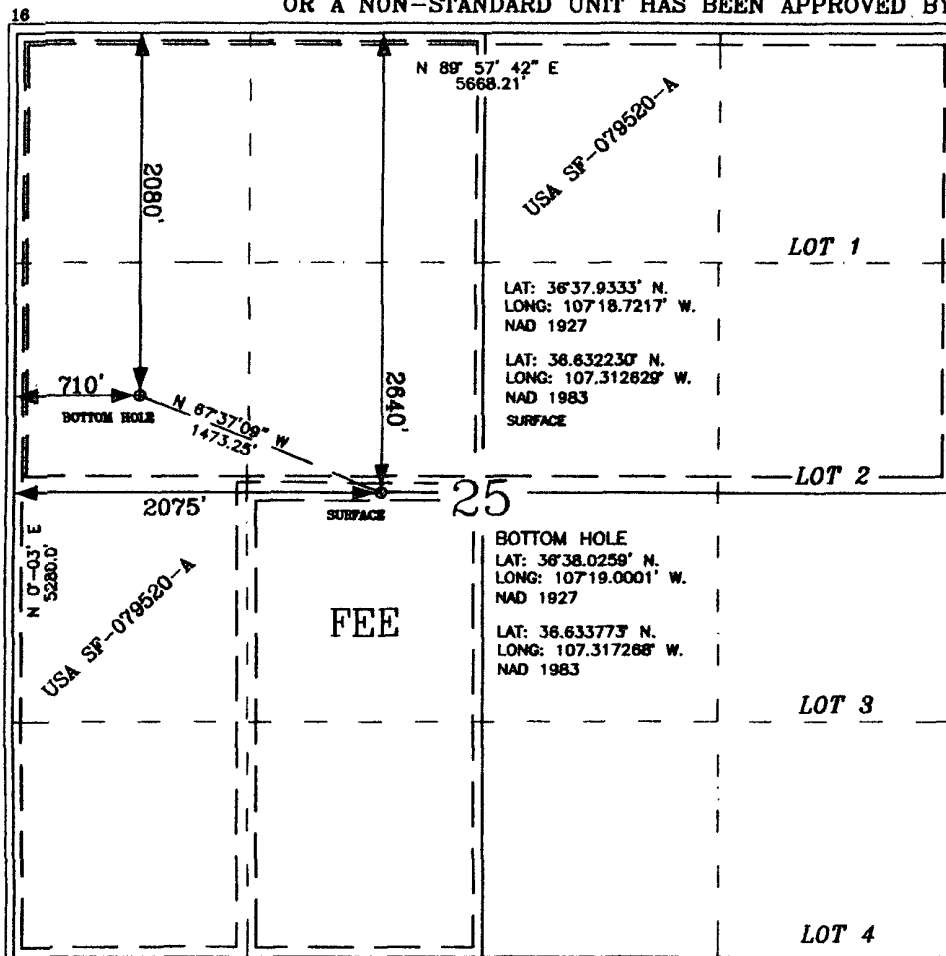
DK 320.0 ACRES W/2
MV 344.64 ACRES N/2

15	Joint or Infill
----	-----------------

14 Consolidation Code

1st Order No.

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



17 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 unless 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 working interest, to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Crystal Tafoya 7-7-09

Signature

Printed Name Enatal 12/20/2007 7/7/07

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 that the same is true and correct to the best of my belief.

JULY 1,
Date of Survey

Signature and Seal of Probationary Surveyor

GLEN W. RUSSELL

Certificate Number 15703

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 28-5 UNIT 78N

DEVELOPMENT

Lease:		AFE #: WAN.ZA2.4513/4514MV				AFE \$: 1,892,065.52	
Field Name: SAN JUAN 28-5 UNIT		Rig: Aztec Rig 673		State: NM	County: RIO ARRIBA		API #: 3003930368
Geologist:		Phone:		Geophysicist:		Phone:	
Geoscientist: Head, Chip F (Charles)		Phone: +1-505-326-9772		Prod. Engineer:		Phone:	
Res. Engineer: Prabowo, Wahyu		Phone: +1-505-326-9797		Proj. Field Lead:		Phone:	
Primary Objective (Zones):							
Zone	Zone Name						
RON	BLANCO MESAVERDE (PRORATED GAS)						
FRR	BASIN DAKOTA (PRORATED GAS)						
Location: Surface Datum Code: NAD 27							
Latitude: 36.632221	Longitude: -107.312029	X: 652935.60	Y: 2049802.00	Section: 25	Range: 005W		
Footage X: 2075 FWL	Footage Y: 2640 FNL	Elevation: 6753	(FT)	Township: 028N			
Tolerance:							
Location: Bottom Hole Datum Code: NAD 27							
Latitude: 36.635480	Longitude: -107.315860	X: 651828.00	Y: 2050975.68	Section: 25	Range: 005W		
Footage X: 710 FWL	Footage Y: 2080 FNL	Elevation:	(FT)	Township: 028N			
Tolerance:							
Location Type: Restricted		Start Date (Est.): 1/1/2009		Completion Date:		Date In Operation:	
Formation Data: Assume KB = 6768 Units = FT							
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks	
Surface Casing	320	6448	☐			12-1/4" hole. 9 5/8" 32.3 ppf, H-40, STC casing. Cement with 244 cu. ft. Circulate cement to surface. ✓	
NACIMIENTO	1770	4998	☐			Surface twinned with SJ 28-5 Unit 78M	
OJO ALAMO	3103	3665	☐				
KIRTLAND	3168	3600	☐			Possible Gas	
FRUITLAND	3515	3253	☐			Possible Gas	
PICTURED CLIFFS	3675	3093	☐				
LEWIS	3858	2910	☐				
HUERFANITO BENTONITE	4270	2498	☐				
CHACRA	4626	2142	☐			Azimuth ~317degrees with a 1617' reach	
Intermediate Casing	4900	1868	☐			8 3/4" Hole. 7", 23.0 ppf, J-55, LTC Casing. Cement with 1160 cu. ft. Circulate cement to surface. ✓	
MASSIVE CLIFF HOUSE	5411	1357	☐			Gas	
MENEFEE	5487	1281	☐			Gas	
MASSIVE POINT LOOKOUT	5807	961	☐	800		Gas	
MANCOS	6293	475	☐				
UPPER GALLUP	7032	-264	☐				
GREENHORN	7778	-1010	☐	2300			
GRANEROS	7837	-1069	☐				
TWO WELLS	7895	-1127	☐			Gas	
UPPER CUBERO	7980	-1212	☐			Gas	
LOWER CUBERO	8032	-1264	☐				
OAK CANYON	8093	-1325	☐			Bottom perf ~8093' TVD (193' below T/Two Wells)	

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 28-5 UNIT 78N

DEVELOPMENT

TOTAL DEPTH DK	8111	-1343	☐	2300	6-1/4" Hole. 4-1/2", 11.6 ppf, L-80/J-55 LTC casing. Cement with 475 cu. ft. Circulate cement a minimum of 100' above top of Chacra. Cased hole TDT with GR to surface.
Total Depth	8111	-1343	☐		
ENCINAL	8111	-1343	☐		TD is ~216' below T/Paguate

Reference Wells:

Reference Type	Well Name	Comments
Production	SJ 28-5 Unit 94 & 78M	25-28N-05W

Logging Program:

Intermediate Logs: ☐ Log only if show ☐ GR/ILD ☐ Triple Combo

TD Logs: ☐ Triple Combo ☐ Dipmeter ☐ RFT ☐ Sonic ☐ VSP ☐ TDT ☒ Other

GR/CBL

Mudlog from 100' above Grenhorn to TD - mudlogger will call TD.

Additional Information:

Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks
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Scientific Drilling
Directional Drilling Operations

RECEIVED

JUL 15 2009

Bureau of Land Management
Farmington Field Office

ConocoPhillips

**SAN JUAN BASIN
SEC 25-T28N-R5W
SJ 28-5 #78N**

Original Hole

Plan: Plan #3

Standard Planning Report

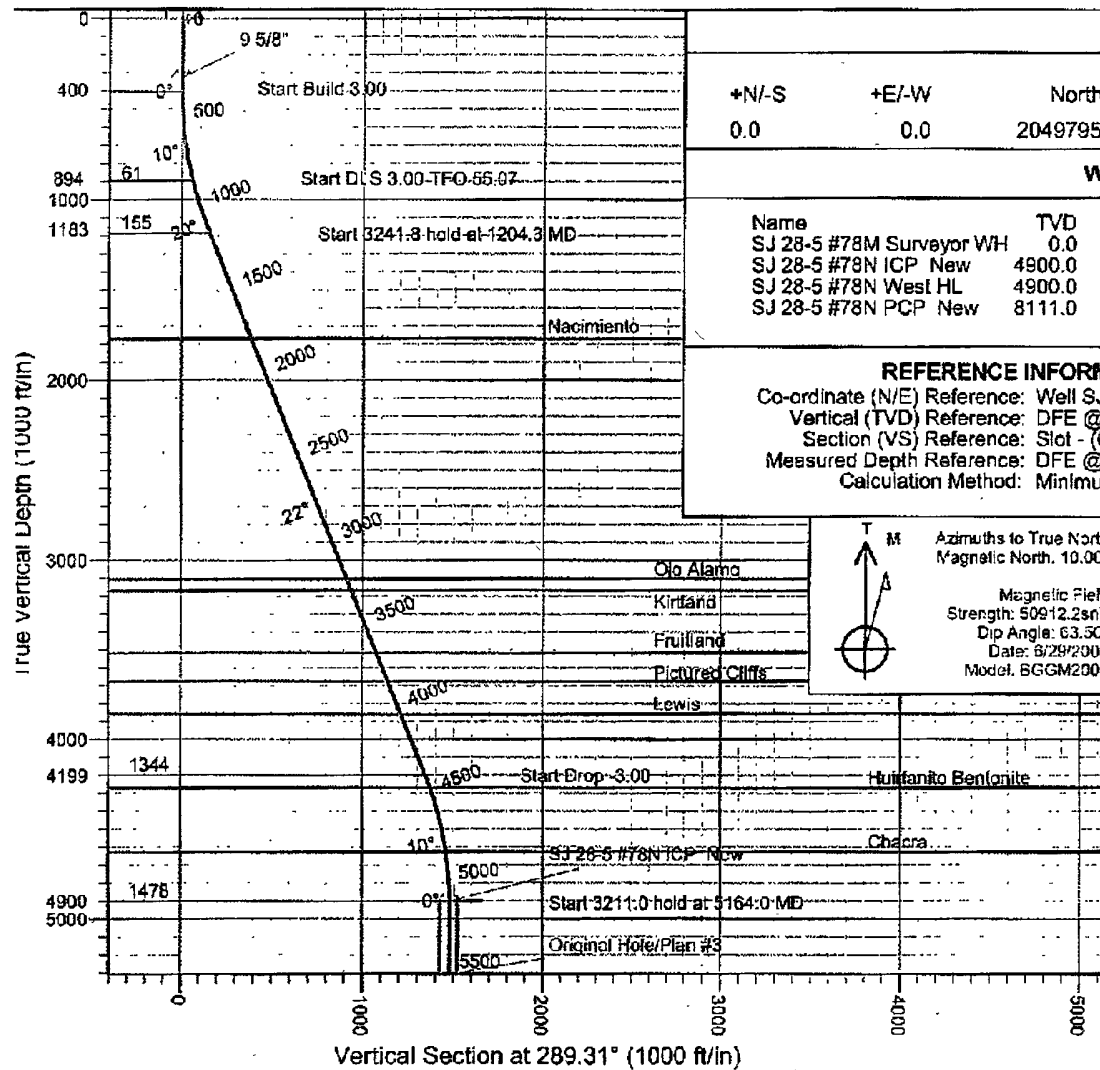
01 July, 2009


ConocoPhillips



Project: SAN JUAN BASIN
Site: SEC 25-T28N-R5W
Well: SJ 28-5 #78N
Wellbore: Original Hole
Design: Plan #3

ConocoPhillips



WELL DETAILS: SJ 28-5 #78N

Ground Level: 6753.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	2049795.59	652959.62	36° 37' 55.998 N	107° 18' 43.302 W

WELLBORE TARGET DETAILS (LAT/LONG)

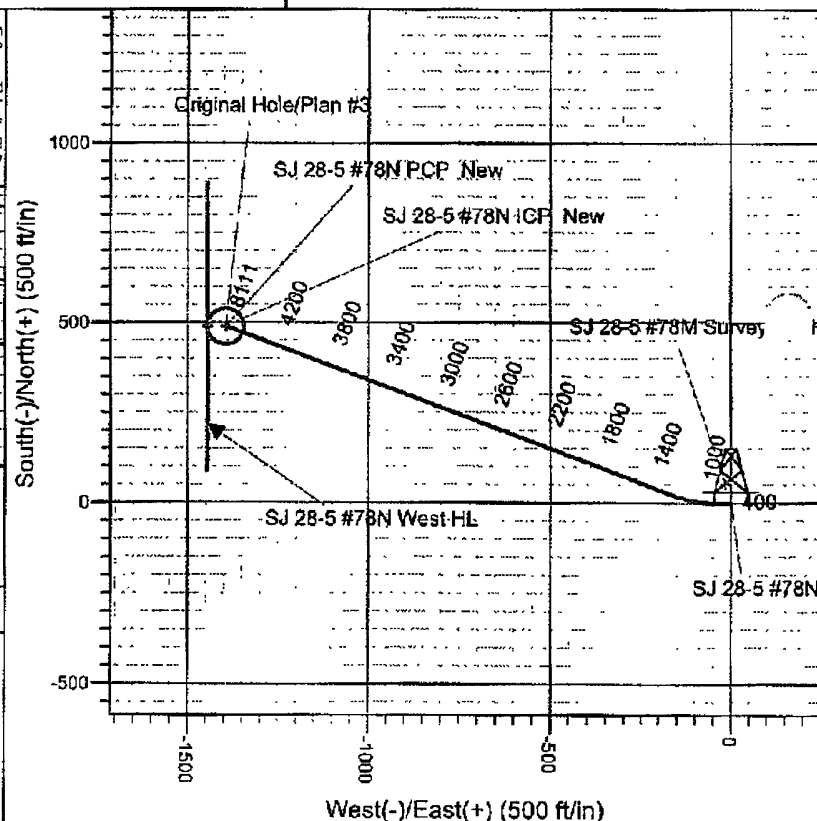
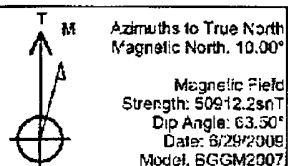
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SJ 28-5 #78M Surveyor WH	0.0	51.0	-14.2	36° 37' 55.502 N	107° 18' 43.476 W	Point
SJ 28-5 #78N ICP New	4900.0	488.7	-1394.5	36° 38' 0.830 N	107° 19' 0.410 W	Circle (Radius: 50.0)
SJ 28-5 #78N West HL	4900.0	488.7	-1444.5	36° 38' 0.830 N	107° 19' 1.024 W	Polygon
SJ 28-5 #78N PCP New	8111.0	488.7	-1394.5	36° 38' 0.830 N	107° 19' 0.410 W	Point

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well SJ 28-5 #78N, True North
Vertical (TVD) Reference: DFE @ 6768.0ft (AWS 673)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: DFE @ 6768.0ft (AWS 673)
Calculation Method: Minimum Curvature

PROJECT DETAILS: SAN JUAN BASIN

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico West 3003
System Datum: Mean Sea Level



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	900.0	15.00	270.00	894.3	0.0	-65.1	3.00	270.00	61.4	
4	1204.3	21.54	290.75	1183.4	19.8	-156.9	3.00	55.07	154.6	
5	4446.1	21.54	290.75	4198.9	441.5	-1269.8	0.00	0.00	1344.3	
6	5164.0	0.00	0.00	4900.0	488.7	-1394.5	3.00	180.00	1477.6	SJ 28-5 #78N ICP New
7	8375.0	0.00	0.00	8111.0	488.7	-1394.5	0.00	0.00	1477.6	SJ 28-5 #78N PCP New



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well SJ 28-5 #78N
Company:	ConocoPhillips	TVD Reference:	DFE @ 6768.0ft (AWS 873)
Project:	SAN JUAN BASIN	MD Reference:	DFE @ 6768.0ft (AWS 673)
Site:	SEC 25-T28N-R5W	North Reference:	True
Well:	SJ 28-5 #78N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #3		

Project:	SAN JUAN BASIN, NEW MEXICO		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		Using Well Reference Point
Map Zone:	New Mexico West 3003		Using geodetic scale factor

Site:	SEC 25-T28N-R5W		
Site Position:		Northing:	2,048,080.93 ft
From:	Map	Easting:	651,841.11 ft
Position Uncertainty:	0.0 ft	Grid Radius:	6-1/8"
		Latitude:	36° 37' 39.102 N
		Longitude:	107° 18' 57.138 W
		Grid Convergence:	0.31 °

Well:	SJ 28-5 #78N, S-Type MV/DK Well		
Well Position	+N/-S	1,708.7 ft	Northing:
	+E/-W	1,427.9 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	36° 37' 55.998 N
		Longitude:	107° 18' 43.302 W
		Ground Level:	6,753.0 ft

Wellbore:	Original Hole		
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Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	BGGM2007	6/29/2009	(°)	(°)	(nT)
			10.00	63.50	50,912

Design:	Plan #3		
---------	---------	--	--

Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0

Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	289.31

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
900.0	15.00	270.00	894.3	0.0	-65.1	3.00	3.00	0.00	270.00	
1,204.3	21.54	290.75	1,183.4	19.8	-156.9	3.00	2.15	6.82	55.07	
4,446.1	21.54	290.75	4,198.9	441.5	-1,269.8	0.00	0.00	0.00	0.00	
5,164.0	0.00	0.00	4,900.0	488.7	-1,394.5	3.00	-3.00	0.00	180.00	SJ 28-5 #78N ICP
8,375.0	0.00	0.00	8,111.0	488.7	-1,394.5	0.00	0.00	0.00	0.00	SJ 28-5 #78N PCP



Scientific Drilling International Planning Report

ConocoPhillips

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well SJ 28-5 #78N
Company:	ConocoPhillips	TVD Reference:	DFE @ 6768.0ft (AWS 673)
Project:	SAN JUAN BASIN	MD Reference:	DFE @ 6768.0ft (AWS 673)
Site:	SEC 25-T28N-R5W	North Reference:	True
Well:	SJ 28-5 #78N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
SJ 28-5 #78M Surveyor WH									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
9 5/8"									
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	3.00	270.00	500.0	0.0	-2.6	2.5	3.00	3.00	0.00
600.0	6.00	270.00	599.6	0.0	-10.5	9.9	3.00	3.00	0.00
700.0	9.00	270.00	698.8	0.0	-23.5	22.2	3.00	3.00	0.00
800.0	12.00	270.00	797.1	0.0	-41.7	39.4	3.00	3.00	0.00
900.0	15.00	270.00	894.3	0.0	-65.1	61.4	3.00	3.00	0.00
1,000.0	18.89	278.48	990.5	2.1	-92.4	87.9	3.00	1.89	8.49
1,100.0	19.07	285.21	1,085.6	8.6	-122.5	118.5	3.00	2.17	6.72
1,204.3	21.54	290.75	1,183.4	19.8	-156.9	154.6	3.00	2.37	5.31
1,300.0	21.54	290.75	1,272.4	32.3	-189.7	189.7	0.00	0.00	0.00
1,400.0	21.54	290.75	1,365.4	45.3	-224.1	226.4	0.00	0.00	0.00
1,500.0	21.54	290.75	1,458.5	58.3	-258.4	263.1	0.00	0.00	0.00
1,600.0	21.54	290.75	1,551.5	71.3	-292.7	299.8	0.00	0.00	0.00
1,700.0	21.54	290.75	1,644.5	84.3	-327.1	336.5	0.00	0.00	0.00
1,800.0	21.54	290.75	1,737.5	97.3	-361.4	373.2	0.00	0.00	0.00
1,834.9	21.54	290.75	1,770.0	101.8	-373.4	386.0	0.00	0.00	0.00
Nacimiento									
1,900.0	21.54	290.75	1,830.5	110.3	-395.7	409.9	0.00	0.00	0.00
2,000.0	21.54	290.75	1,923.6	123.3	-430.0	446.6	0.00	0.00	0.00
2,100.0	21.54	290.75	2,016.6	136.3	-464.4	483.3	0.00	0.00	0.00
2,200.0	21.54	290.75	2,109.6	149.3	-498.7	520.0	0.00	0.00	0.00
2,300.0	21.54	290.75	2,202.6	162.3	-533.0	556.7	0.00	0.00	0.00
2,400.0	21.54	290.75	2,295.6	175.3	-567.4	593.4	0.00	0.00	0.00
2,500.0	21.54	290.75	2,388.6	188.3	-601.7	630.1	0.00	0.00	0.00
2,600.0	21.54	290.75	2,481.7	201.4	-636.0	666.8	0.00	0.00	0.00
2,700.0	21.54	290.75	2,574.7	214.4	-670.3	703.5	0.00	0.00	0.00
2,800.0	21.54	290.75	2,667.7	227.4	-704.7	740.2	0.00	0.00	0.00
2,900.0	21.54	290.75	2,760.7	240.4	-739.0	776.9	0.00	0.00	0.00
3,000.0	21.54	290.75	2,853.7	253.4	-773.3	813.6	0.00	0.00	0.00
3,100.0	21.54	290.75	2,946.8	266.4	-807.7	850.3	0.00	0.00	0.00
3,200.0	21.54	290.75	3,039.8	279.4	-842.0	887.0	0.00	0.00	0.00
3,268.0	21.54	290.75	3,103.0	288.2	-865.3	912.0	0.00	0.00	0.00
Ojo Alamo									
3,300.0	21.54	290.75	3,132.8	292.4	-876.3	923.7	0.00	0.00	0.00
3,337.9	21.54	290.75	3,168.0	297.3	-888.3	937.6	0.00	0.00	0.00
Kirtland									
3,400.0	21.54	290.75	3,225.8	305.4	-910.7	960.4	0.00	0.00	0.00
3,500.0	21.54	290.75	3,318.8	318.4	-945.0	997.1	0.00	0.00	0.00
3,600.0	21.54	290.75	3,411.8	331.4	-979.3	1,033.8	0.00	0.00	0.00
3,700.0	21.54	290.75	3,504.9	344.4	-1,013.6	1,070.5	0.00	0.00	0.00
3,710.9	21.54	290.75	3,515.0	345.8	-1,017.4	1,074.5	0.00	0.00	0.00
Fruitland									
3,800.0	21.54	290.75	3,597.9	357.4	-1,048.0	1,107.2	0.00	0.00	0.00
3,882.9	21.54	290.75	3,675.0	368.2	-1,076.4	1,137.6	0.00	0.00	0.00
Pictured Cliffs									
3,900.0	21.54	290.75	3,690.9	370.4	-1,082.3	1,143.9	0.00	0.00	0.00



Scientific Drilling International
Planning Report

ConocoPhillips

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well SJ 28-5 #78N
Company:	ConocoPhillips	TVD Reference:	DFE @ 6768.0ft (AWS 673)
Project:	SAN JUAN BASIN	MD Reference:	DFE @ 6768.0ft (AWS 673)
Site:	SEC 25-T28N-R5W	North Reference:	True
Well:	SJ 28-5 #78N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #3		

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	N-S (ft)	E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,000.0	21.54	290.75	3,763.9	383.4	-1,116.6	1,180.6	0.00	0.00	0.00
4,079.6	21.54	290.75	3,858.0	393.8	-1,144.0	1,209.8	0.00	0.00	0.00
Lewis									
4,100.0	21.54	290.75	3,876.9	396.4	-1,151.0	1,217.3	0.00	0.00	0.00
4,200.0	21.54	290.75	3,970.0	409.4	-1,185.3	1,254.0	0.00	0.00	0.00
4,300.0	21.54	290.75	4,063.0	422.5	-1,219.6	1,290.7	0.00	0.00	0.00
4,400.0	21.54	290.75	4,156.0	435.5	-1,253.9	1,327.4	0.00	0.00	0.00
4,446.1	21.54	290.75	4,198.9	441.5	-1,269.8	1,344.3	0.00	0.00	0.00
4,500.0	19.92	290.75	4,249.3	448.2	-1,287.6	1,363.4	3.00	-3.00	0.00
4,522.0	19.26	290.75	4,270.0	450.8	-1,294.5	1,370.8	3.00	-3.00	0.00
Huirfanito Bentonite									
4,600.0	16.92	290.75	4,344.1	459.4	-1,317.2	1,395.0	3.00	-3.00	0.00
4,700.0	13.92	290.75	4,440.5	468.8	-1,342.0	1,421.5	3.00	-3.00	0.00
4,800.0	10.92	290.75	4,538.2	476.4	-1,362.1	1,443.0	3.00	-3.00	0.00
4,889.1	8.25	290.75	4,626.0	481.7	-1,376.0	1,457.9	3.00	-3.00	0.00
Chacra									
4,900.0	7.92	290.75	4,636.8	482.2	-1,377.4	1,459.4	3.00	-3.00	0.00
5,000.0	4.92	290.75	4,736.2	486.2	-1,387.9	1,470.6	3.00	-3.00	0.00
5,100.0	1.92	290.75	4,836.0	488.3	-1,393.5	1,476.6	3.00	-3.00	0.00
5,183.9	0.00	290.75	4,899.9	488.7	-1,394.5	1,477.6	3.00	-3.00	0.00
SJ 28-5 #78N ICP									
5,184.0	0.00	0.00	4,900.0	488.7	-1,394.5	1,477.6	3.00	-3.00	0.00
7" - SJ 28-5 #78N ICP New - SJ 28-5 #78N West HL									
5,200.0	0.00	0.00	4,936.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
5,300.0	0.00	0.00	5,036.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
5,400.0	0.00	0.00	5,136.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
5,500.0	0.00	0.00	5,236.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
5,600.0	0.00	0.00	5,336.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
5,675.0	0.00	0.00	5,411.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
Massive Cliff House									
5,700.0	0.00	0.00	5,436.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
5,751.0	0.00	0.00	5,487.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
Menafae									
5,800.0	0.00	0.00	5,536.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
5,900.0	0.00	0.00	5,636.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,736.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
6,071.0	0.00	0.00	5,807.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
Massive Point Lookout									
6,100.0	0.00	0.00	5,836.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
6,200.0	0.00	0.00	5,936.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
6,300.0	0.00	0.00	6,036.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
6,400.0	0.00	0.00	6,136.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
6,500.0	0.00	0.00	6,236.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
6,557.0	0.00	0.00	6,293.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
Mancos									
6,600.0	0.00	0.00	6,336.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
6,700.0	0.00	0.00	6,436.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,536.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
6,900.0	0.00	0.00	6,636.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,736.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
7,100.0	0.00	0.00	6,836.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
7,200.0	0.00	0.00	6,936.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
7,296.0	0.00	0.00	7,032.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00



Scientific Drilling International Planning Report

ConocoPhillips

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well SJ 28-5 #78N
Company:	ConocoPhillips	TVD Reference:	DFE @ 6788.0ft (AWS 673)
Project:	SAN JUAN BASIN	MD Reference:	DFE @ 6788.0ft (AWS 673)
Site:	SEC 25-T28N-R5W	North Reference:	True
Well:	SJ 28-5 #78N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Upper Gallup									
7,300.0	0.00	0.00	7,036.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
7,400.0	0.00	0.00	7,136.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
7,500.0	0.00	0.00	7,236.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
7,600.0	0.00	0.00	7,336.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
7,700.0	0.00	0.00	7,436.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
7,800.0	0.00	0.00	7,536.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
7,900.0	0.00	0.00	7,636.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
8,000.0	0.00	0.00	7,736.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
8,042.0	0.00	0.00	7,778.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
Greenhorn									
8,100.0	0.00	0.00	7,836.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
8,101.0	0.00	0.00	7,837.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
Graneros									
8,159.0	0.00	0.00	7,895.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
Two Wells									
8,200.0	0.00	0.00	7,936.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
8,244.0	0.00	0.00	7,980.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
Upper Cubero									
8,296.0	0.00	0.00	8,032.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
Lower Cubero									
8,300.0	0.00	0.00	8,036.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
8,357.0	0.00	0.00	8,093.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00
Oak Canyon									
8,375.0	0.00	0.00	8,111.0	488.7	-1,394.5	1,477.6	0.00	0.00	0.00

SJ 28-5 #78N PCP - SJ 28-5 #78N PCP New

Design Targets

Target Name	hit/miss target Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
SJ 28-5 #78M Survey	- plan misses target center by 52.9ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E) - Point	0.00	0.31	0.0	51.0	-14.2	2,049,846.48	652,945.16	36° 37' 56.502 N	107° 18' 43.476 W
SJ 28-5 #78N ICP Ne	- plan hits target center - Circle (radius 50.0)	0.00	0.00	4,900.0	488.7	-1,394.5	2,050,276.68	651,562.59	36° 38' 0.830 N	107° 19' 0.410 W
SJ 28-5 #78N West H	- plan misses target center by 50.0ft at 5164.0ft MD (4900.0 TVD, 488.7 N, -1394.5 E) - Polygon Point 1 Point 2	0.00	0.00	4,900.0	488.7	-1,444.5	2,050,276.41	651,512.57	36° 38' 0.830 N	107° 19' 1.024 W
				4,900.0	400.0	0.0	2,050,676.38	651,510.40		
				4,900.0	-400.0	0.0	2,049,876.44	651,514.74		
SJ 28-5 #78N PCP N	- plan hits target center - Point	0.00	0.31	8,111.0	488.7	-1,394.5	2,050,276.68	651,562.59	36° 38' 0.830 N	107° 19' 0.410 W



Scientific Drilling International
Planning Report

ConocoPhillips

Database: EDM 2003.21 Single User Db
Company: ConocoPhillips
Project: SAN JUAN BASIN
Site: SEC 25-T28N-R5W
Well: SJ 28-5 #78N
Wellbore: Original Hole
Design: Plan #3

Local Co-ordinate Reference: Well SJ 28-5 #78N
TVD Reference: DFE @ 6768.0ft (AWS 673)
MD Reference: DFE @ 6768.0ft (AWS 673)
North Reference: True
Survey Calculation Method: Minimum Curvature

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
320.0	320.0	9 5/8"	9-5/8	12-1/4
5,164.0	4,900.0	7"	7	8-3/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,834.9	1,770.0	Nacimiento		0.00	
3,268.0	3,103.0	Ojo Alamo		0.00	
3,337.9	3,168.0	Kirtland		0.00	
3,710.9	3,515.0	Fruitland		0.00	
3,882.9	3,675.0	Pictured Cliffs		0.00	
4,079.6	3,858.0	Lewis		0.00	
4,522.0	4,270.0	Huirfanito Bentonite		0.00	
4,889.1	4,626.0	Chacra		0.00	
5,675.0	5,411.0	Massive Cliff House		0.00	
5,751.0	5,487.0	Menefee		0.00	
6,071.0	5,807.0	Massive Point Lookout		0.00	
6,557.0	6,293.0	Mancos		0.00	
7,296.0	7,032.0	Upper Gallup		0.00	
8,042.0	7,778.0	Greenhorn		0.00	
8,101.0	7,837.0	Graheros		0.00	
8,159.0	7,895.0	Two Wells		0.00	
8,244.0	7,980.0	Upper Cubero		0.00	
8,296.0	8,032.0	Lower Cubero		0.00	
8,357.0	8,093.0	Oak Canyon		0.00	