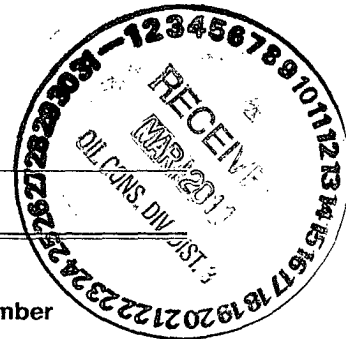


UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK



RECEIVED

DEC 15 2009

Bureau of Land Management
Farmington Field Office

1a. Type of Work DRILL	5. Lease Number NM-03560 Unit Reporting Number	
1b. Type of Well GAS	6. If Indian, All. or Tribe	
2. Operator ConocoPhillips Company	7. Unit Agreement Name NMNM-78413C-DK NMNM-78413A-MV San Juan 28-7 Unit	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name 9. Well Number 100N	
4. Location of Well Surf: Unit O(SWSE), 965' FSL & 1825' FEL Surf: Latitude: 36.539365° N (NAD83) Longitude: 107.613747° W	10. Field, Pool, Wildcat Blanco MV / Basin DK 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 30, T27N, R7W API # 30-039-30880	
14. Distance in Miles from Nearest Town 27 miles / Blanco	12. County Rio Arriba	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 965'	17. Acres Assigned to Well 320.00 E/2 (MV/DK)	
16. Acres in Lease 1,281.44	18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 953' from San Juan 28-7 Unit 100M	
19. Proposed Depth 7463'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6644' GL	22. Approx. Date Work will Start 12/15/2009	
23. Proposed Casing and Cementing Program See Operations Plan attached	24. Authorized by: Crystal Tafoya (Regulatory Technician) Date	

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY: [Signature] TITLE: Acting ARM DATE: 3/4/11
Minerals

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.

Example Master Plan Type 3 Bond Numbers NMB-000015 and NMB-000089

NMCCD MAR 16 2011

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised October 12, 2005

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

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

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039- 30880		² Pool Code 71599/72319	³ Pool Name BASIN DAKOTA/BLANCO MESAVERDE
⁴ Property Code 31739	⁵ Property Name SAN JUAN 28 - 7 UNIT		⁶ Well Number 100N
⁷ GRID No. 217817	⁸ Operator Name CONOCOPHILLIPS COMPANY		⁹ Elevation 6644'

¹⁰ Surface Location

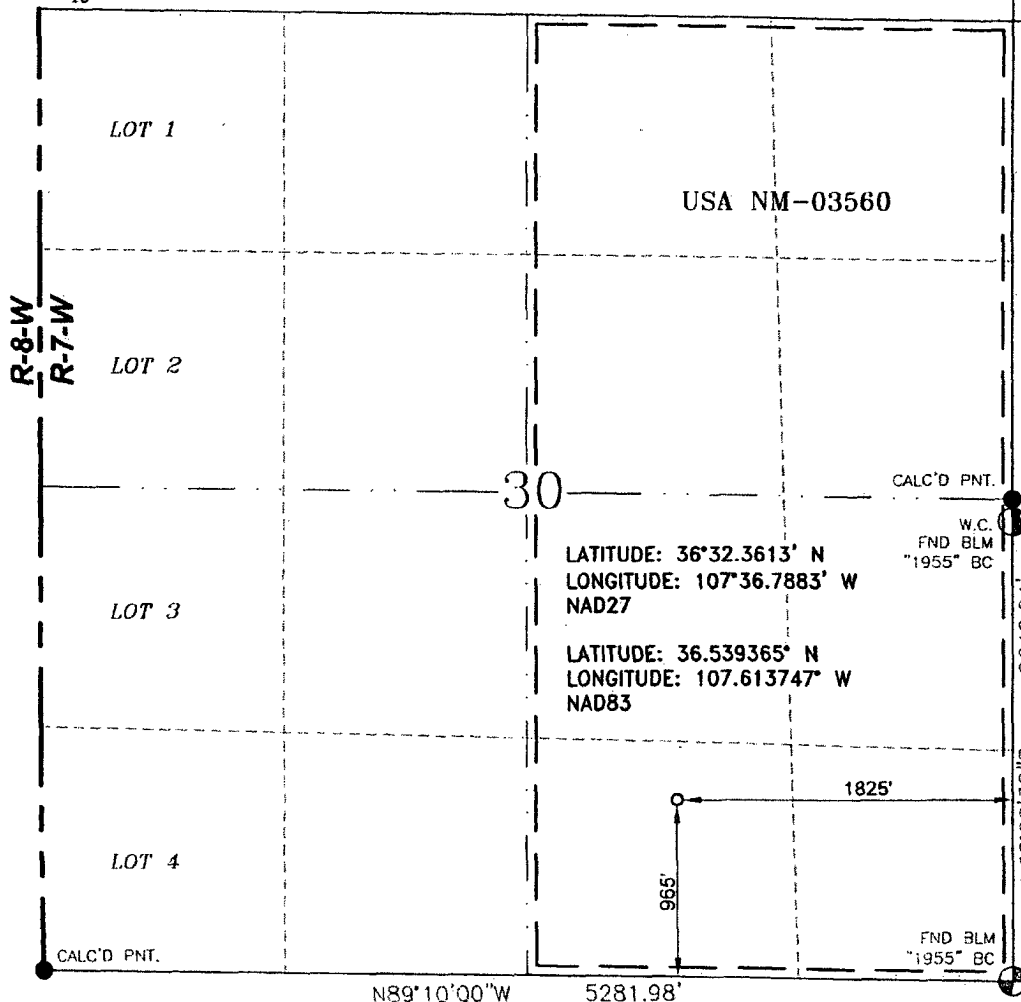
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	30	27-N	7-W		965	SOUTH	1825	EAST	RIO ARriba

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
0									
¹³ Dedicated Acres			¹² Joint or Infill		¹⁴ Consolidation Code		¹⁰ Order No.		
DK 320.00 ACRES E/2									
MV 320.00 ACRES E/2									

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



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 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.

Signature Crystal Tafoya 3/16/09
 Printed Name Crystal Tafoya 3-16-09

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.

3-17
Date of Survey
Signature and Seal of Professional Surveyor

 *Galen W. Russell*
Certificate Number 15703

submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FEB 23 2011

Sundry Notices and Reports on Wells

1. Type of Well
GAS

2. Name of Operator
ConocoPhillips 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

Surf: Unit K (NESW), 1365' FSL & 2310' FWL, Section 30, T27N, R7W, NMPM
BH: Unit O (SWSE), 1250' FSL & 1930' FEL, Section 30, T27N, R7W, NMPM

5. Lease Number
NM-03560
6. If Indian, All. or
Tribe Name
7. Unit Agreement Name
San Juan 28-7 Unit
8. Well Name & Number
San Juan 28-7 Unit 100N
9. API Well No.
30-039- 30880
10. Field and Pool
Basin DK/ Blanco MV
11. County and State
Rio Arriba Co., NM

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

Type of Submission	Type of Action
☒ Notice of Intent	☐ Abandonment
☐ Subsequent Report	☐ Recompletion
☐ Final Abandonment	☐ Plugging
	☐ Casing Repair
	☐ Altering Casing
	☐ Change of Plans
	☐ New Construction
	☐ Non-Routine Fracturing
	☐ Water Shut off
	☐ Conversion to Injection

13. Describe Proposed or Completed Operations

Per BLM request, ConocoPhillips wishes to request a location move due to location being in an ACEC. This location will now be a directional drill.

Attached is the new plat package along with the directional drill plan and project proposal.

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

Signed Brandie Blakley Brandie Blakley Title Staff Regulatory Technician Date 12/3/10

(This space for Federal or State Office use)

APPROVED BY [Signature] Title Team Lead EPS Date 3/1/11

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.

Hold C104
for Directional Survey
and "As Drilled" plat

NMOCD



DISTRICT I
1025 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 July 16, 2010

Submit One Copy To Appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-	² Pool Code 71599/72319	³ Pool Name BASIN DAKOTA/BLANCO MESAVERDE
⁴ Property Code 31739	⁵ Property Name SAN JUAN 28 - 7 UNIT	⁶ Well Number 100N
⁷ GRID No. 217817	⁸ Operator Name CONOCOPHILLIPS COMPANY	⁹ Elevation 6663'

¹⁰ Surface Location

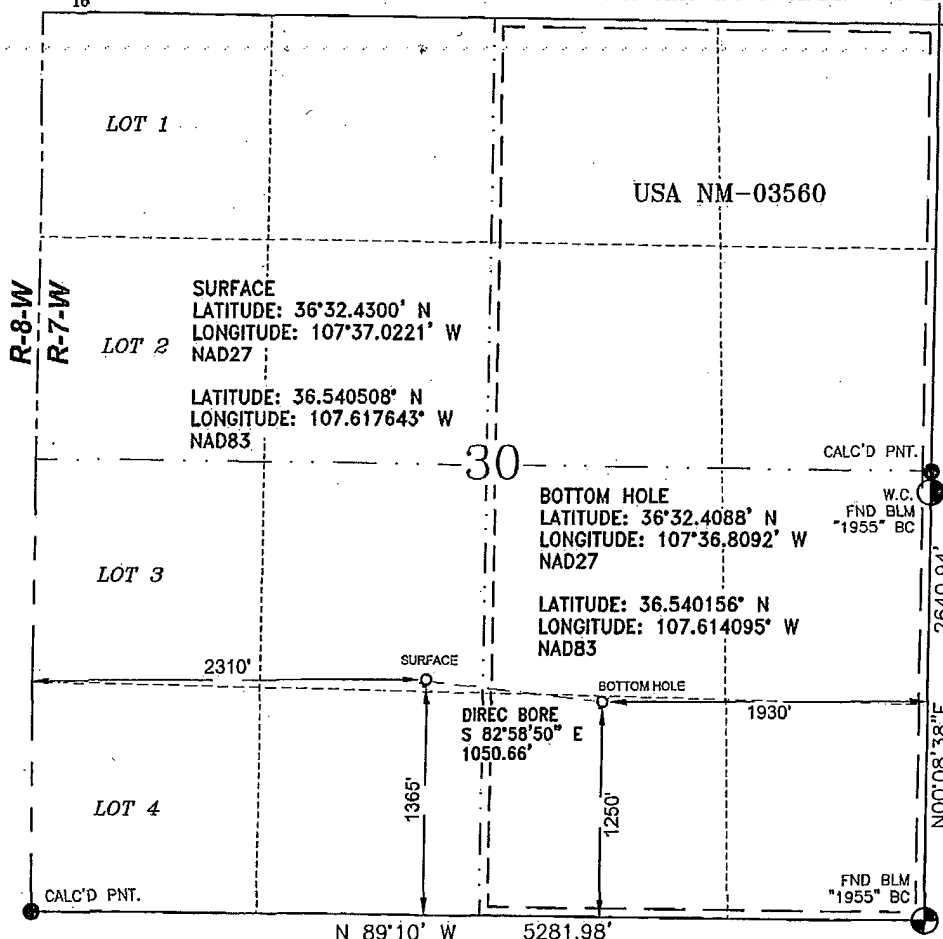
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	30	27-N	7-W		1365	SOUTH	2310	WEST	RIO ARRIBA

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
O	30	27-N	7-W		1250'	SOUTH	1930'	EAST	RIO ARRIBA

¹² Dedicated Acres DK 320.00 ACRES E/2 MV 320.00 ACRES E/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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 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.

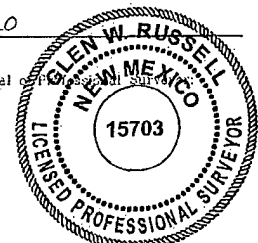
Brandie Blakley
Signature
Brandie Blakley 12/1/10
Printed Name

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.

10/22/2010
Date of Survey

Signature and Seal of



GLEN W. RUSSELL
Certificate Number 15703



PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 28-7 UNIT 100N

DEVELOPMENT

Lease:		AFE #: WAN.CDR.8293				AFE \$: 1,333,098.22	
Field Name: SAN-JUAN		Rig: Aztec Rig 673		State: NM	County: RIO ARRIBA		API #:
Geologist:	Phone:		Geophysicist:		Phone:		
Geoscientist:	Phone:		Prod. Engineer:		Phone:		
Res. Engineer: McKee, Cory J.		Phone: +1 505-326-9826		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				Directional	
Latitude: 36.540499	Longitude: -107.617034	X:	Y:	Section: 30	Range: 007W		
Footage X: 2310 FWL	Footage Y: 1365 FSL	Elevation: 6663	(FT)	Township: 027N			
Tolerance:							
Location: Bottom Hole		Datum Code: NAD 27				Directional	
Latitude: 36.540147	Longitude: -107.613486	X:	Y:	Section: 30	Range: 007W		
Footage X: 1930 FEL	Footage Y: 1250 FSL	Elevation:	(FT)	Township: 027N			
Tolerance:							
Location Type: Restricted		Start Date (Est.): 1/1/2011		Completion Date:		Date In Operation:	
Formation Data: Assume KB = 6678 Units = FT							
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	MD (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	200	6478		☐			12-1/4 hole. 200' 9 5/8" 32.3 ppf, H-40, STC casing. Cement with 159 cuft. Circulate cement to surface.
NACIMIENTO	550	6128		☐			
OJO ALAMO	2076	4602		☐			
KIRTLAND	2237	4441		☐			
FRUITLAND	2483	4195		☐			Possible Gas
PICTURED CLIFFS	2895	3783		☐			
LEWIS	3020	3658		☐			
Intermediate Casing	3220	3458		☐	138		8 3/4" Hole. 7", 23 ppf, J-55, LTC Casing. Cement with 775 cuft. Circulate cement to surface.
HUERFANITO BENTONITE	3373	3305		☐			
CHACRA	3805	2873		☐			
UPPER CLIFF HOUSE	4351	2327		☐			Gas; Cliffhouse is wet
MASSIVE CLIFF HOUSE	4555	2123		☐	298		Gas
MENEFEE	4606	2072		☐			Est. Top Perf - 4806 (1872)
POINT LOOKOUT	5192	1486		☐			
MANCOS	5512	1166		☐			
UPPER GALLUP	6331	347		☐			
GREENHORN	7138	-460		☐			
GRANEROS	7196	-518		☐			
TWO WELLS	7250	-572		☐	2891		Gas
PAGUATE	7255	-577		☐			
UPPER CUBERO	7348	-670		☐			

PROJECT PROPOSAL - New Drill / Sidetrack

SAN JUAN 28-7 UNIT 100N

DEVELOPMENT

LOWER CUBERO	7371	-693	☐	Est. Btm Perf - 7457 (- 779) based on offset wells
ENCINAL	7437	-759	☐	TD - 40' below T/ENCN
Total Depth	7477	-799	☐	192 6-1/4" hole, 4-1/2" 11.6 ppf, J-55/L-80, LTC casing. Cement w/ 580 cuft. Circulate cement a minimum of 100' inside the previous casing string.

Reference Wells:

Reference Type	Well Name	Comments
Production	SJ 28-7 100M	27N-7W30 NW SE SE
Production	SJ 28-7 101F	27N-7W30 SE NE SW
Production	SJ 28-7 101	27N-7W30 SE NW SW

Logging Program:

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

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

Cased Hole GR / CBL

Mudlog from 100' above top of GLLP to TD - mudlogger will call TD.

Additional Information:

Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks
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PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 28-7 UNIT 100N

DEVELOPMENT

Lease:		AFE #: WAN.CDR.8293		AFE \$: 1,333,098.22	
Field Name: SAN JUAN		Rig: XXX 2010 Holding		State: NM	County: RIO ARRIBA
Geologist:		Phone:		Geophysicist:	
Geoscientist:		Phone:		Phone:	
Res. Engineer: McKee, Cory J		Phone: +1 505-326-9826		Prod. Engineer:	
				Phone:	
		Proj. Field Lead:		Phone:	

Primary Objective (Zones):

Zone	Zone Name
FRR	BASIN DAKOTA (PRORATED GAS)
RON	BLANCO MESAVERDE (PRORATED GAS)

Location: Datum Code: NAD 27

Latitude: 36.539356	Longitude: -107.613138	X:	Y:	Section: 30	Range: 007W
Footage X: 1825 FEL	Footage Y: 965 FSL	Elevation: 6644	(FT)	Township: 027N	
Tolerance:					

Location Type: Restricted Start Date (Est.): 1/1/2011 Completion Date: Date In Operation:

Formation Data: Assume KB = 6658 Units = FT

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	200	6458	☐			12-1/4 hole. 200' 9 5/8" 32.3 ppf, H-40, STC casing. Cement with 121 cuft. Circulate cement to surface.
OJO ALAMO	2071	4587	☐			
KIRTLAND	2219	4439	☐			
FRUITLAND	2440	4218	☐			Possible Gas
PICTURED CLIFFS	2880	3778	☐			
LEWIS	3002	3656	☐			
Intermediate Casing	3102	3556	☐			8 3/4" Hole. 7", 20 ppf, J-55, LTC Casing. Cement with 699 cuft. Circulate cement to surface.
HUERFANITO BENTONITE	3360	3298	☐			
CHACRA	3787	2871	☐			
UPPER CLIFF HOUSE	4340	2318	☐			Gas; Est. Top Perf - 4342 (2316) !Cliffhouse possibly wet
MASSIVE CLIFF HOUSE	4533	2125	☐	262		Gas
MENEFEE	4596	2062	☐			
POINT LOOKOUT	5175	1483	☐			
MANCOS	5494	1164	☐			
UPPER GALLUP	6312	346	☐			
GREENHORN	7122	-464	☐			
GRANEROS	7179	-521	☐			
TWO WELLS	7230	-572	☐	3012		Gas
PAGUATE	7275	-617	☐			
UPPER CUBERO	7335	-677	☐			
LOWER CUBERO	7359	-701	☐			TD - 40' Below T/ENCN
ENCINAL	7423	-765	☐			Est. Btm Perf - 7474 (-785) based on offset wells
Total Depth	7463	-805	☐			6-1/4" hole, 4-1/2" 10.5/11.6 ppf, J-55, STC/LTC casing. Cement w/ 593 cuft. Circulate cement a minimum of 100' inside the previous casing string.

Reference Wells:

Reference Type	Well Name	Comments
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PROJECT PROPOSAL - New Drill / Sidetrack

SAN JUAN 28-7 UNIT 100N

DEVELOPMENT

Production	SJ 28-7 100M	27N-7W30 NW SE SE
Production	SJ 28-7 101F	27N-7W30 SE NE SW
Production	SJ 28-7 101	27N-7W30 SE NW SW

Logging Program:

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

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

Cased Hole GR / CBL

Additional Information:

Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks
----------	-------	-----------	---------	----------------	---------

REFERENCE INFORMATION

RIG @ 6678.0ft
Ground Elevation 6663.0
Reference Lat: 36° 32' 25.800 N
Reference Long: 107° 37' 1.326 W

Project: San Juan Basin - New Mexico West W
Site: San Juan 28 Wells
Well: SJ 28-7 #100N
Wellbore: Wellbore #1
Design: APD Plan

ConocoPhillips

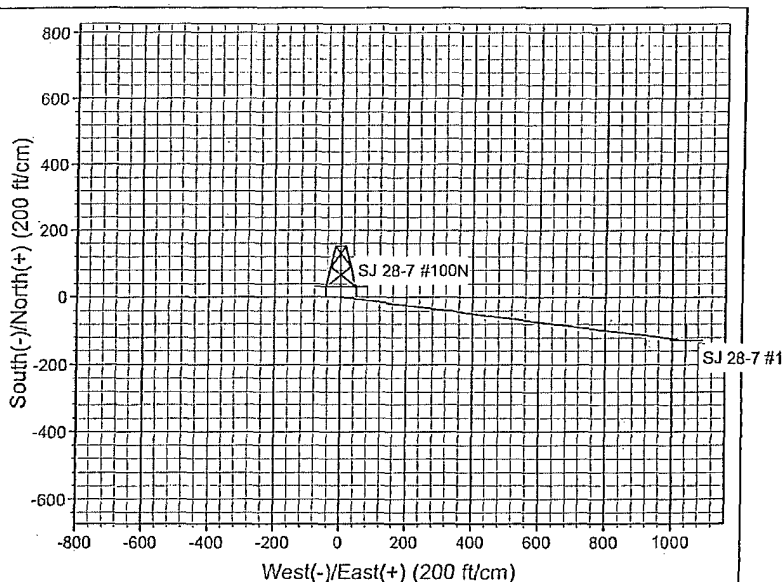
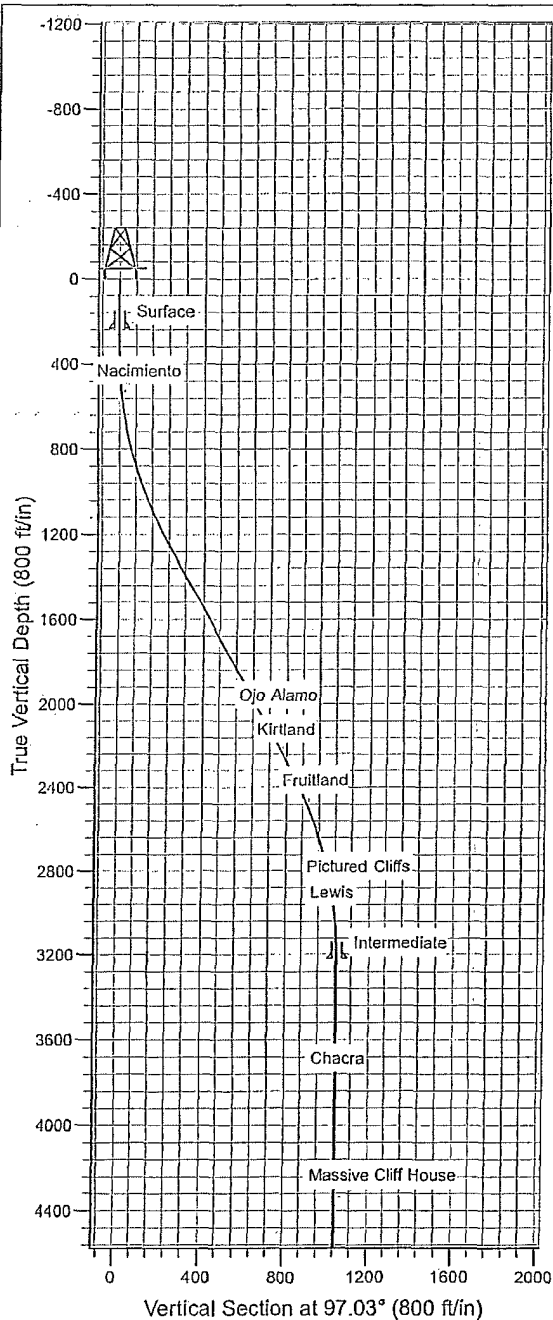
SECTION DETAILS

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	320.0	0.00	0.00	320.0	0.0	0.0	0.00	0.00	0.0	
3	1273.4	28.60	97.03	1234.3	-28.5	231.3	3.00	97.03	233.1	
4	2493.7	28.60	97.03	2305.7	-100.1	811.1	0.00	0.00	817.3	
5	3447.2	0.00	0.00	3220.0	-128.6	1042.5	3.00	180.00	1050.4	SJ 28-7 #100N - ICP
6	7704.2	0.00	0.00	7477.0	-128.6	1042.5	0.00	0.00	1050.4	SJ 28-7 #100N - PCP

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
550.0	550.6	Nacimiento
2076.0	2232.1	Ojo Alamo
2237.0	2415.5	Kirtland
2483.0	2690.5	Fruitland
2895.0	3120.6	Pictured Cliffs
3020.0	3246.8	Lewis
3373.0	3600.2	Huerf. Bent.
3805.0	4032.2	Chacra
4351.0	4578.2	Massive Cliff House
4606.0	4833.2	Menefee
5192.0	5419.2	Pt. Lookout
5512.0	5739.2	Mancos Shale
6331.0	6558.2	Gallup
7138.0	7365.2	Greenhorn
7196.0	7423.2	Graneros
7250.0	7477.2	Two Wells
7348.0	7575.2	Upper Cubero
7371.0	7598.2	Lower Cubero
7437.0	7664.2	Encinal

T
M
Azimuths to True North
Magnetic North: 9.86°
Magnetic Field
Strength: 50692.4snT
Dip Angle: 63.36°
Date: 12/1/2010
Model: BGGM2010



ConocoPhillips or its affiliates Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well SJ 28-7 #100N
Company:	ConocoPhillips SJB	TVD Reference:	RIG @ 6678.0ft
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RIG @ 6678.0ft
Site:	San Juan 28 Wells	North Reference:	True
Well:	SJ 28-7 #100N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD Plan		

Project	San Juan Basin - New Mexico West Wells, New Mexico, Directional "S"		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		Using geodetic scale factor

Site	San Juan 28 Wells		
Site Position:		Northing:	2,042,566.26 ft
From:	Lat/Long	Easting:	563,690.29 ft
Position Uncertainty:	15.0 ft	Slot Radius:	"
		Latitude:	36° 36' 47.901 N
		Longitude:	107° 36' 58.757 W
		Grid Convergence:	0.13 °

Well	SJ 28-7 #100N		
Well Position	+N-S	0.0 ft	Northing:
	+E-W	0.0 ft	Easting:
Position Uncertainty	3.5 ft	Wellhead Elevation:	ft
		Latitude:	36° 32' 25.800 N
		Longitude:	107° 37' 1.326 W
		Ground Level:	6,663.0 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	BGGM2010	12/1/2010	9.86
		Dip Angle	63.36
		Field Strength	50,692

Design	APD Plan		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
		Direction	97.03
		(°)	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
320.0	0.00	0.00	320.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,273.4	28.60	97.03	1,234.3	-28.5	231.3	3.00	3.00	0.00	97.03	
2,493.7	28.60	97.03	2,305.7	-100.1	811.1	0.00	0.00	0.00	0.00	
3,447.2	0.00	0.00	3,220.0	-128.6	1,042.5	3.00	-3.00	0.00	180.00	SJ 28-7 #100N - ICP
7,704.2	0.00	0.00	7,477.0	-128.6	1,042.5	0.00	0.00	0.00	0.00	SJ 28-7 #100N - PCP

ConocoPhillips or its affiliates

Planning Report

Database: EDM Central Planning	Local Co-ordinate Reference: Well SJ 28-7 #100N	
Company: ConocoPhillips SJBU	TVD Reference: RIG @ 6678.0ft	
Project: San Juan Basin - New Mexico West Wells	MD Reference: RIG @ 6678.0ft	
Site: San Juan 28 Wells	North Reference: True	
Well: SJ 28-7 #100N	Survey Calculation Method: Minimum Curvature	
Wellbore: Wellbore #1		
Design: APD Plan		

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
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
230.0	0.00	0.00	230.0	0.0	0.0	0.0	0.00	0.00	0.00
Surface									
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
400.0	2.40	97.03	400.0	-0.2	1.7	1.7	3.00	3.00	0.00
500.0	5.40	97.03	499.7	-1.0	8.4	8.5	3.00	3.00	0.00
550.6	6.92	97.03	550.0	-1.7	13.8	13.9	3.00	3.00	0.00
Nacimiento									
600.0	8.40	97.03	599.0	-2.5	20.3	20.5	3.00	3.00	0.00
700.0	11.40	97.03	697.5	-4.6	37.4	37.7	3.00	3.00	0.00
800.0	14.40	97.03	795.0	-7.3	59.6	60.0	3.00	3.00	0.00
900.0	17.40	97.03	891.1	-10.7	86.7	87.4	3.00	3.00	0.00
1,000.0	20.40	97.03	985.7	-14.7	118.9	119.8	3.00	3.00	0.00
1,100.0	23.40	97.03	1,078.5	-19.2	155.9	157.1	3.00	3.00	0.00
1,200.0	26.40	97.03	1,169.2	-24.4	197.7	199.2	3.00	3.00	0.00
1,273.4	28.60	97.03	1,234.3	-28.5	231.3	233.1	3.00	3.00	0.00
1,300.0	28.60	97.03	1,257.6	-30.1	244.0	245.8	0.00	0.00	0.00
1,400.0	28.60	97.03	1,345.4	-36.0	291.5	293.7	0.00	0.00	0.00
1,500.0	28.60	97.03	1,433.2	-41.8	339.0	341.5	0.00	0.00	0.00
1,600.0	28.60	97.03	1,521.0	-47.7	386.5	389.4	0.00	0.00	0.00
1,700.0	28.60	97.03	1,608.8	-53.5	434.0	437.3	0.00	0.00	0.00
1,800.0	28.60	97.03	1,696.6	-59.4	481.5	485.2	0.00	0.00	0.00
1,900.0	28.60	97.03	1,784.4	-65.3	529.0	533.0	0.00	0.00	0.00
2,000.0	28.60	97.03	1,872.2	-71.1	576.5	580.9	0.00	0.00	0.00
2,100.0	28.60	97.03	1,960.0	-77.0	624.1	628.8	0.00	0.00	0.00
2,200.0	28.60	97.03	2,047.8	-82.9	671.6	676.7	0.00	0.00	0.00
2,232.1	28.60	97.03	2,076.0	-84.7	686.8	692.0	0.00	0.00	0.00
Ojo Alamo									
2,300.0	28.60	97.03	2,135.6	-88.7	719.1	724.5	0.00	0.00	0.00
2,400.0	28.60	97.03	2,223.4	-94.6	766.6	772.4	0.00	0.00	0.00
2,415.5	28.60	97.03	2,237.0	-95.5	774.0	779.8	0.00	0.00	0.00
Kirtland									
2,493.7	28.60	97.03	2,305.7	-100.1	811.1	817.3	0.00	0.00	0.00
2,500.0	28.41	97.03	2,311.2	-100.4	814.1	820.3	3.00	-3.00	0.00
2,600.0	25.41	97.03	2,400.4	-106.0	859.0	865.5	3.00	-3.00	0.00
2,690.5	22.70	97.03	2,483.0	-110.5	895.6	902.4	3.00	-3.00	0.00
Fruitland									
2,700.0	22.41	97.03	2,491.8	-110.9	899.3	906.1	3.00	-3.00	0.00
2,800.0	19.41	97.03	2,585.2	-115.3	934.7	941.8	3.00	-3.00	0.00
2,900.0	16.41	97.03	2,680.3	-119.1	965.2	972.5	3.00	-3.00	0.00
3,000.0	13.41	97.03	2,776.9	-122.2	990.7	998.3	3.00	-3.00	0.00
3,100.0	10.41	97.03	2,874.8	-124.8	1,011.2	1,018.9	3.00	-3.00	0.00
3,120.6	9.80	97.03	2,895.0	-125.2	1,014.8	1,022.5	3.00	-3.00	0.00
Pictured Cliffs									
3,200.0	7.41	97.03	2,973.5	-126.7	1,028.6	1,034.4	3.00	-3.00	0.00
3,246.8	6.01	97.03	3,020.0	-127.3	1,032.0	1,039.9	3.00	-3.00	0.00
Lewis									
3,300.0	4.41	97.03	3,073.0	-127.9	1,036.8	1,044.7	3.00	-3.00	0.00
3,400.0	1.41	97.03	3,172.9	-128.5	1,041.9	1,049.8	3.00	-3.00	0.00
3,447.2	0.00	0.00	3,220.0	-128.6	1,042.5	1,050.4	3.00	-3.00	-205.80

ConocoPhillips or its affiliates
Planning Report

Database: EDM Central Planning	Local Co-ordinate Reference: Well SJ 28-7 #100N	
Company: ConocoPhillips SJB	TVD Reference: RIG @ 6678.0ft	
Project: San Juan Basin - New Mexico West Wells	MD Reference: RIG @ 6678.0ft	
Site: San Juan 28 Wells	North Reference: True	
Well: SJ 28-7 #100N	Survey Calculation Method: Minimum Curvature	
Wellbore: Wellbore #1		
Design: APD Plan		

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)
Intermediato - SJ 28-7 #100N - ICP									
3,500.0	0.00	0.00	3,272.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
3,600.0	0.00	0.00	3,372.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
3,600.2	0.00	0.00	3,373.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Huerf. Bent.									
3,700.0	0.00	0.00	3,472.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
3,800.0	0.00	0.00	3,572.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
3,900.0	0.00	0.00	3,672.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
4,000.0	0.00	0.00	3,772.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
4,032.2	0.00	0.00	3,805.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Chacra									
4,100.0	0.00	0.00	3,872.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
4,200.0	0.00	0.00	3,972.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
4,300.0	0.00	0.00	4,072.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
4,400.0	0.00	0.00	4,172.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
4,500.0	0.00	0.00	4,272.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
4,578.2	0.00	0.00	4,351.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Massive Cliff House									
4,600.0	0.00	0.00	4,372.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
4,700.0	0.00	0.00	4,472.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
4,800.0	0.00	0.00	4,572.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
4,833.2	0.00	0.00	4,606.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Menefee									
4,900.0	0.00	0.00	4,672.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
5,000.0	0.00	0.00	4,772.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
5,100.0	0.00	0.00	4,872.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
5,200.0	0.00	0.00	4,972.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
5,300.0	0.00	0.00	5,072.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,172.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
5,419.2	0.00	0.00	5,192.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Pt. Lookout									
5,500.0	0.00	0.00	5,272.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,372.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
5,700.0	0.00	0.00	5,472.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
5,739.2	0.00	0.00	5,512.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Manco's Shale									
5,800.0	0.00	0.00	5,572.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
5,900.0	0.00	0.00	5,672.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,772.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
6,100.0	0.00	0.00	5,872.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
6,200.0	0.00	0.00	5,972.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
6,300.0	0.00	0.00	6,072.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,172.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
6,500.0	0.00	0.00	6,272.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
6,558.2	0.00	0.00	6,331.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Gallup									
6,600.0	0.00	0.00	6,372.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
6,700.0	0.00	0.00	6,472.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,572.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
6,900.0	0.00	0.00	6,672.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
7,000.0	0.00	0.00	6,772.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
7,100.0	0.00	0.00	6,872.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00

ConocoPhillips or its affiliates
Planning Report

Database: EDM Central Planning
Company: ConocoPhillips SJBU
Project: San Juan Basin - New Mexico West Wells
Site: San Juan 28 Wells
Well: SJ 28-7 #100N
Wellbore: Wellbore #1
Design: APD Plan

Local Co-ordinate Reference: Well SJ 28-7 #100N
TVD Reference: RIG @ 6678.0ft
MD Reference: RIG @ 6678.0ft
North Reference: True
Survey Calculation Method: Minimum Curvature

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)
7,200.0	0.00	0.00	6,972.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
7,300.0	0.00	0.00	7,072.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
7,365.2	0.00	0.00	7,138.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Greenhorn									
7,400.0	0.00	0.00	7,172.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
7,423.2	0.00	0.00	7,196.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Graneros									
7,477.2	0.00	0.00	7,250.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Two Wells									
7,500.0	0.00	0.00	7,272.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
7,575.2	0.00	0.00	7,348.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Upper Cubero									
7,598.2	0.00	0.00	7,371.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Lower Cubero									
7,600.0	0.00	0.00	7,372.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
7,664.2	0.00	0.00	7,437.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Encinal									
7,700.0	0.00	0.00	7,472.8	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
7,704.2	0.00	0.00	7,477.0	-128.6	1,042.5	1,050.4	0.00	0.00	0.00
Production - SJ 28-7 #100N - PCP									

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 28-7 #100N - PCP - plan hits target center - Point	0.00	0.00	7,477.0	-128.6	1,042.5	2,015,935.67	564,583.14	36° 32' 24.528 N	107° 36' 48.552 W
SJ 28-7 #100N - ICP - plan hits target center - Point	0.00	0.00	3,220.0	-128.6	1,042.5	2,015,935.67	564,583.14	36° 32' 24.528 N	107° 36' 48.552 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
230.0	230.0	Surface	9-5/8	12-1/4
3,447.2	3,220.0	Intermediate	7	8-3/4
7,704.2	7,477.0	Production	4-1/2	6-1/4

ConocoPhillips or its affiliates
Planning Report

Database: EDM Central Planning
Company: ConocoPhillips SJBU
Project: San Juan Basin - New Mexico West Wells
Site: San Juan 28 Wells
Well: SJ 28-7 #100N
Wellbore: Wellbore #1
Design: APD Plan

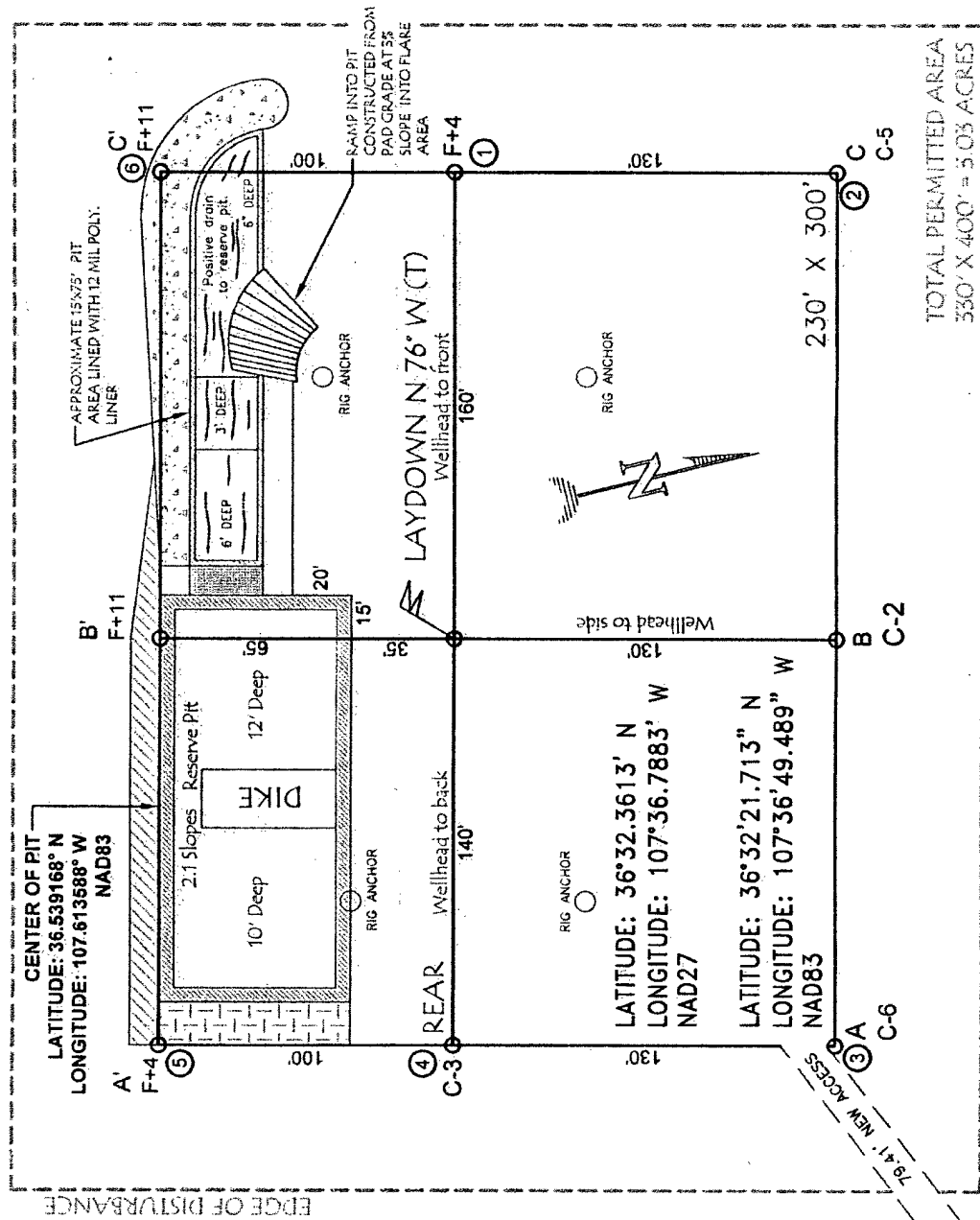
Local Co-ordinate Reference: Well SJ 28-7 #100N
TVD Reference: RIG @ 6678.0ft
MD Reference: RIG @ 6678.0ft
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,120.6	2,895.0	Pictured Cliffs		0.00	
7,664.2	7,437.0	Encinal		0.00	
7,598.2	7,371.0	Lower Cubero		0.00	
7,477.2	7,250.0	Two Wells		0.00	
3,600.2	3,373.0	Huerf. Bent.		0.00	
5,739.2	5,512.0	Mancos Shale		0.00	
7,575.2	7,348.0	Upper Cubero		0.00	
2,415.5	2,237.0	Kirtland		0.00	
4,032.2	3,805.0	Chacra		0.00	
2,232.1	2,076.0	Ojo Alamo		0.00	
550.6	550.0	Nacimiento		0.00	
3,246.8	3,020.0	Lewis		0.00	
2,690.5	2,483.0	Fruitland		0.00	
5,419.2	5,192.0	Pt. Lookout		0.00	
6,558.2	6,331.0	Gallup		0.00	
7,423.2	7,196.0	Graneros		0.00	
4,833.2	4,606.0	Menefee		0.00	
4,578.2	4,351.0	Massive Cliff House		0.00	
7,365.2	7,138.0	Greenhorn		0.00	

CONOCOPHILLIPS COMPANY

SAN JUAN 28-7 UNIT #100N, 965' FSL & 1825' FEL
SECTION 30, T-27-N, R-7-W, NMPM, RIO ARriba COUNTY, NM
GROUND ELEVATION: 6644', DATE: FEBRUARY 5, 2009



NOTES:

1. VECTOR SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. 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.
2. RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (COVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE).

