

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

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

2. Name of Operator
ConocoPhillips Company

3a. Address
4001 Penbrook, Odessa, TX 79762

3b. Phone No. (include area code)
432-368-1230

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface: SENE of Section 35, T31N, R8W 1840' FNL - 660' FEL
Bottom Hole: SENE of Section 35, T31N, R8W 2500' FNL - 760' FEL

5. Lease Serial No.

NM-12641 012441

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

Blanco #9B

9. API Well No.

30-045-32023 33023

10. Field and Pool, or Exploratory Area

Blanco Mesaverde

11. County or Parish, State

San Juan County, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Move Bottom Hole & drill directionally
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

ConocoPhillips requests to move the bottom hole for this well and drill directionally from the originally requested surface location. The new Bottom Hole location will be at 2500' FNL - 760' FEL of Section 35, T31N, R8W.

An APD has been approved for a vertical well at the original surface location.

Revised C102, well plan, directional plan and cement calculations are attached as supporting documents.

HOLD C104 FOR directional survey

2006 JAN 5 AM 11 48
RECEIVED
OTO FARMINGTON NM

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Peggy James

Title **Sr. Associate**

Signature

Peggy James

Date

01/04/2006

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Pet. Eng

Date

1/9/06

Office

FFO

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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 representations as to any matter within its jurisdiction.

(Instructions on page 2)

NMOCD

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer 00, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number		*Pool Code 72319	*Pool Name BLANCO MESAVERDE	
*Property Code 31323	*Property Name BLANCO			*Well Number 98
*OGRID No. 217817	*Operator Name CONOCOPHILLIPS COMPANY			*Elevation 6319'

¹⁰ Surface Location

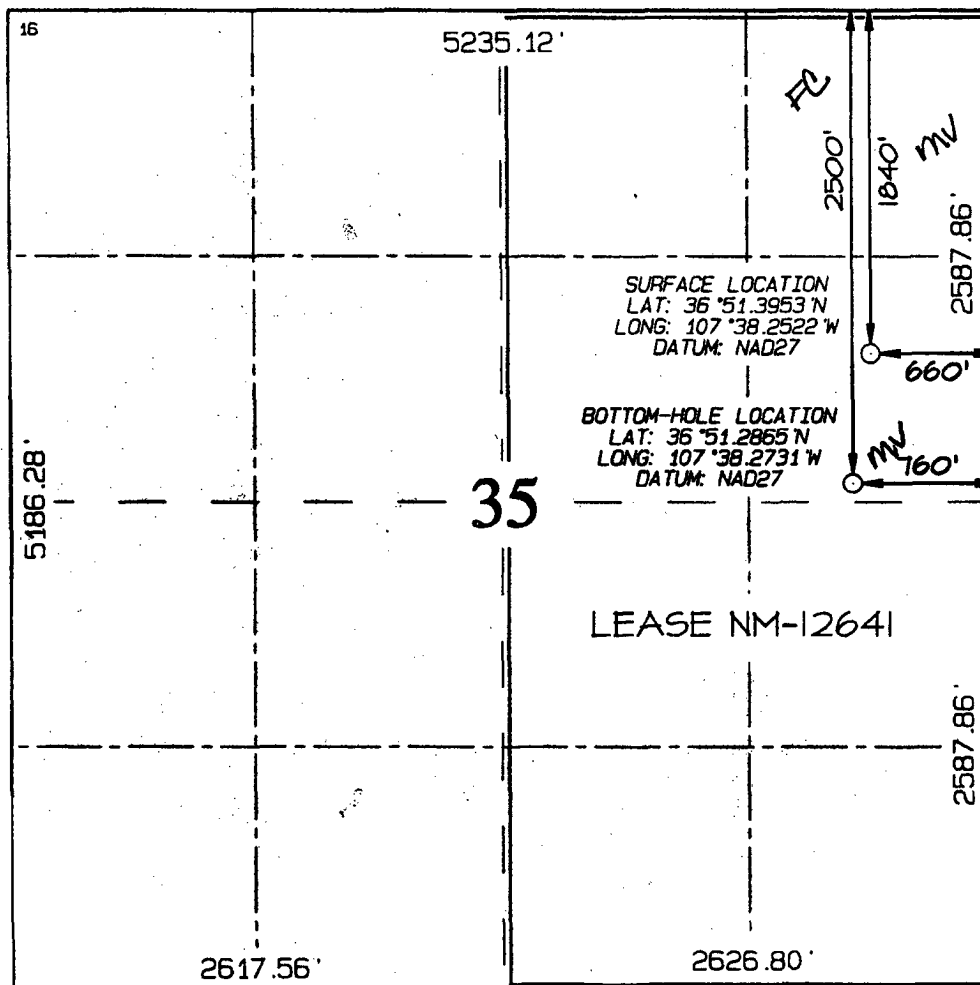
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	35	31N	8W		1840	NORTH	660	EAST	SAN JUAN

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
H	35	31N	8W		2500	NORTH	760	EAST	SAN JUAN

¹² Dedicated Acres 320.0 Acres - E/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Virgil E. Chavez
Signature
Virgil E. Chavez
Printed Name

Projects & Operations Lead
Title
November 17, 2005
Date

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.

Date Revised: OCTOBER 26, 2005
Survey Date: SEPTEMBER 23, 2004

Signature and Seal of Professional Surveyor



Jason C. Edwards
Certificate Number 15269

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

BLANCO 9B

Lease:		AFE #: WAN.CNV.5158		AFE \$:	
Field Name: NEW MEXICO-NORTH	Rig: H&P 281	State: NM	County: SAN JUAN	API #: 3004533023	
Geoscientist: Brain, Ted H.	Phone: 832-486-2592	Prod. Engineer: Piotrowicz, Greg M.	Phone: +1 832-486-3486		
Res. Engineer: Skinner, Steve E	Phone: 832 486-2651	Proj. Field Lead: Fransen, Eric E.	Phone:		

Primary Objective (Zones):

Zone	Zone Name
R20002	MESAVERDE(R20002)

Location - Surface					Deviated	
Latitude: 36.86	Longitude: -107.64	X:	Y:	Section: 35	Range: 8W	
Footage X: 660 FEL	Footage Y: 1840 FNL	Elevation: 6319	(FT)	Township: 31N		
Tolerance:						

Location - Bottom Hole					Deviated	
Latitude: 36.85	Longitude: -107.64	X:	Y:	Section: 35	Range: 8W	
Footage X: 760 FEL	Footage Y: 2500 FNL	Elevation:	(FT)	Township: 31N		
Tolerance:						

Location Type: Year Round	Start Date (Est.):	Completion Date:	Date In Operation:
Formation Data: Assume KB = 6332 Units = FT			

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	213	6119	☐			12-1/4 hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
NCMT	582	5750	☐			
CJAM	2082	4250	☐			Possible water flows.
KRLD	2222	4110	☐			
FRLD	2922	3410	☐			Possible gas.
PCCF	3232	3100	☐			
LEWS	3432	2900	☐			
Intermediate Casing	3532	2800	☐			8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Circulate cement to surface.
CHRA	4327	2005	☐			
CLFH	5102	1230	☐			Gas; possibly wet
MENF	5172	1160	☐			Gas.
PTLK	5482	850	☐			Gas.
MNCS	5732	600	☐			
Total Depth	5832	500	☐			6-1/4" Hole. 4-1/2", 10.5 ppf, J-55, STC casing. Circulate cement a minimum of 100' inside the previous casing string. No open hole logs. Cased hole TDT with GR to surface.

2500

Reference Wells		
Reference Type	Well Name	Comments

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

BLANCO 9B

Logging Program:

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

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

Additional Information:

Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks
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Comments: Location/Tops/Logging - Well changed from straight hole to deviated hole due to surface restrictions and well spacing considerations.

Zones - Drilling Mud Program:

Surface: spud mud

Intermediate: fresh water mud with bentonite and polymer as needed

Below Intermediate: air/mist/nitrogen drilling media with foamer, polymer, & corrosion inhibitor as needed

Centralizer Program:

Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 3rd, & 4th joints

Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th joints

Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

Below Intermediate: no centralizers used in air holes. In mud holes centralizers are spaced out appropriately

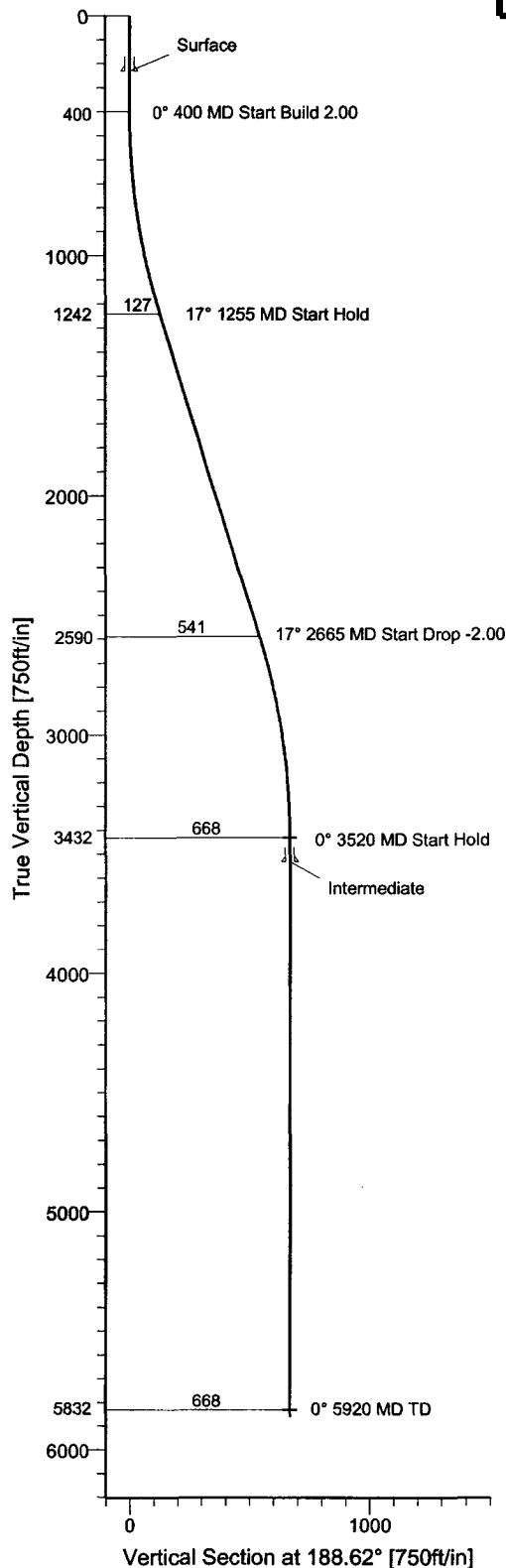
General/Work Description - Funds in the amount of \$943,879 gross (\$773,980 COPC net) are requested to drill and equip the referenced well as an 5,832' MV 80-acre well, to be located 1840' FNL & 660' FWL of Section 35-T31N-R8W, San Juan Co., NM. COPC has 82.0/67.24% in the MV. The pre-drill charge code is WAN.RFE.PDR5.52. The subject well is scheduled to spud in October 2006.

Section 35-T31N-R8W is in an area with well-developed pay in the Point Lookout, Menefee, and Cliffhouse members of the Mesaverde Group. It is estimated that this well will get 1.29 Bcf EUR from the Mesaverde. The Mesaverde flowstream is based on a 60/40% new reserves/acceleration split, with an IP of 345 mcf/d and ceased production at the end of 40 years. The 13% economic indicators generated are: PI 1.35, NPV \$472M, AARR of 22.9.

The 80-acre Mesaverde flowstream was risked down 40% to the performance of the offset 160-acre drills. The 640-acre section of 35-T31N-R8W has a calculated 17.3 Bcf original gas in-place. This is based off an average net pay of 144' from offset logs, a porosity of 8%, and a calculated Bg of 0.012. That parent and daughter wells in the 640-acre section has a cumulative EUR of 11.8 Bcf. Thus an estimated 5.5 Bcf of recoverable reserves are estimated for development in this 640-Acre section.



ConocoPhillips
Field: San Juan County, NM
Site: Blanco #9B
Well: #9B
Wellpath: Original Hole
Plan: Plan #1



SITE DETAILS

Blanco #9B
Sec 35-T31N-R8W
Water Depth: 0.00
Positional Uncertainty: 0.00
Convergence: 0.00

FIELD DETAILS

San Juan County, NM
New Mexico
USA
Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Western Zone
Magnetic Model: igr12005
System Datum: Mean Sea Level
Local North: Grid North

WELLPATH DETAILS

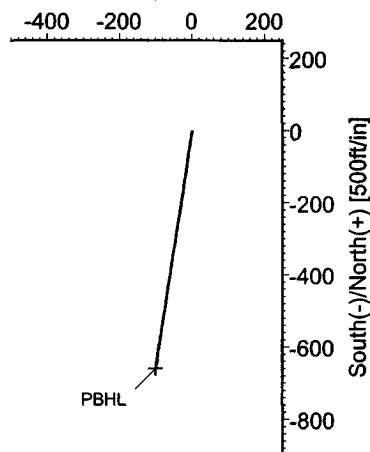
Original Hole

Rig:	SITE		
Ref. Datum:	0.00ft		
V.Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD
188.62°	0.00	0.00	0.00

CASING DETAILS

No.	TVD	MD	Name	Size
1	230.00	230.00	Surface	9.625
2	3532.00	3619.52	Intermediate	7.000

West(-)/East(+) [500ft/in]



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
EOD	3432.00	-660.00	-100.00	0.00	0.00	Point
PBHL	5832.00	-660.00	-100.00	0.00	0.00	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	188.62	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	188.62	400.00	0.00	0.00	0.00	188.62	0.00	
3	1254.55	17.09	188.62	1241.94	-125.08	-18.95	2.00	188.62	126.51	
4	2664.97	17.09	188.62	2560.06	-534.92	-81.05	0.00	0.00	541.02	
5	3519.52	0.00	188.62	3432.00	-660.00	-100.00	2.00	180.00	667.53	EOD
6	5919.52	0.00	188.62	5832.00	-660.00	-100.00	0.00	0.00	667.53	PBHL

Ryan Energy Technologies

Planning Report



Company: ConocoPhillips		Date: 12/29/2005		Time: 18:51:38		Page: 1	
Field: San Juan County, NM		Co-ordinate (NE) Reference:		Site: Blanco #9B, Grid North			
Site: Blanco #9B		Vertical (TVD) Reference:		SITE 0.0			
Well: #9B		Section (VS) Reference:		Well (0.00N, 0.00E, 188.62Azi)			
Wellpath: Original Hole		Plan:		Plan #1			

Field: San Juan County, NM New Mexico USA		Map System: US State Plane Coordinate System 1927		Map Zone: New Mexico, Western Zone	
Geo Datum: NAD27 (Clarke 1866)		Coordinate System: Site Centre		Geomagnetic Model: igr2005	
Sys Datum: Mean Sea Level					

Site: Blanco #9B					
Sec 35-T31N-R8W					
Site Position:		Northing:	ft	Latitude:	
From: Local Only		Easting:	ft	Longitude:	
Position Uncertainty:	0.00 ft			North Reference:	Grid
Ground Level:	0.00 ft			Grid Convergence:	deg

Well: #9B		Slot Name:	
Well Position:	+N/-S 0.00 ft	Northing:	ft
	+E/-W 0.00 ft	Easting:	ft
Position Uncertainty:	0.00 ft	Latitude:	
		Longitude:	

Wellpath: Original Hole		Drilled From: Surface	
Current Datum: SITE	Height 0.00 ft	Tie-on Depth:	0.00 ft
Magnetic Data: 12/29/2005		Above System Datum:	Mean Sea Level
Field Strength: 0 nT		Declination:	0.00 deg
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle:	0.00 deg
ft	ft	+E/-W	Direction
		ft	deg
0.00	0.00	0.00	188.62

Plan: Plan #1		Date Composed: 12/29/2005	
Principal: Yes		Version: 1	
		Tied-to: From Surface	

Plan Section Information										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	188.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	188.62	400.00	0.00	0.00	0.00	0.00	0.00	188.62	
1254.55	17.09	188.62	1241.94	-125.08	-18.95	2.00	2.00	0.00	188.62	
2664.97	17.09	188.62	2590.06	-534.92	-81.05	0.00	0.00	0.00	0.00	
3519.52	0.00	188.62	3432.00	-660.00	-100.00	2.00	-2.00	0.00	180.00	EOD
5919.52	0.00	188.62	5832.00	-660.00	-100.00	0.00	0.00	0.00	0.00	PBHL

Survey										
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	188.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	188.62	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	188.62	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
230.00	0.00	188.62	230.00	0.00	0.00	0.00	0.00	0.00	0.00	Surface
300.00	0.00	188.62	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	188.62	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	2.00	188.62	499.98	-1.73	-0.26	1.75	2.00	2.00	0.00	
600.00	4.00	188.62	599.84	-6.90	-1.05	6.98	2.00	2.00	0.00	
700.00	6.00	188.62	699.45	-15.52	-2.35	15.69	2.00	2.00	0.00	
800.00	8.00	188.62	798.70	-27.57	-4.18	27.88	2.00	2.00	0.00	
900.00	10.00	188.62	897.47	-43.03	-6.52	43.52	2.00	2.00	0.00	
1000.00	12.00	188.62	995.62	-61.90	-9.38	62.60	2.00	2.00	0.00	
1100.00	14.00	188.62	1093.06	-84.14	-12.75	85.10	2.00	2.00	0.00	
1200.00	16.00	188.62	1189.64	-109.72	-16.62	110.98	2.00	2.00	0.00	
1254.55	17.09	188.62	1241.94	-125.08	-18.95	126.51	2.00	2.00	0.00	

Ryan Energy Technologies

Planning Report



Company:	CorocoPhillips	Date:	12/29/2005	Time:	18:51:36	Page:	2
Field:	San Juan County, NM	Co-ordinate(NE) Reference:	Site: Blanco #9B, Grid North				
Site:	Blanco #9B	Vertical (TVD) Reference:	SITE 0.0				
Well:	#9B	Section (YS) Reference:	Well (0.00N,0.00E,188.62Azi)				
Wellpath:	Original Hole	Plan:	Plan #1				

Survey

MD ft	Incl deg	Azin deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Buila deg/100ft	Turn deg/100ft	Tool/Comment
1300.00	17.09	188.62	1285.38	-138.29	-20.95	139.87	0.00	0.00	0.00	
1400.00	17.09	188.62	1380.96	-167.35	-25.36	169.26	0.00	0.00	0.00	
1500.00	17.09	188.62	1476.54	-196.41	-29.76	198.65	0.00	0.00	0.00	
1600.00	17.09	188.62	1572.13	-225.46	-34.16	228.04	0.00	0.00	0.00	
1700.00	17.09	188.62	1667.71	-254.52	-38.56	257.43	0.00	0.00	0.00	
1800.00	17.09	188.62	1763.30	-283.58	-42.97	286.81	0.00	0.00	0.00	
1900.00	17.09	188.62	1858.88	-312.64	-47.37	316.20	0.00	0.00	0.00	
2000.00	17.09	188.62	1954.46	-341.69	-51.77	345.59	0.00	0.00	0.00	
2100.00	17.09	188.62	2050.05	-370.75	-56.17	374.98	0.00	0.00	0.00	
2200.00	17.09	188.62	2145.63	-399.81	-60.58	404.37	0.00	0.00	0.00	
2300.00	17.09	188.62	2241.22	-428.87	-64.98	433.76	0.00	0.00	0.00	
2400.00	17.09	188.62	2336.80	-457.92	-69.38	463.15	0.00	0.00	0.00	
2500.00	17.09	188.62	2432.38	-486.98	-73.78	492.54	0.00	0.00	0.00	
2600.00	17.09	188.62	2527.97	-516.04	-78.19	521.93	0.00	0.00	0.00	
2664.97	17.09	188.62	2590.06	-534.92	-81.05	541.02	0.00	0.00	0.00	
2700.00	16.39	188.62	2623.61	-544.89	-82.56	551.11	2.00	-2.00	0.00	
2800.00	14.39	188.62	2720.02	-571.13	-86.54	577.65	2.00	-2.00	0.00	
2900.00	12.39	188.62	2817.30	-594.03	-90.00	600.81	2.00	-2.00	0.00	
3000.00	10.39	188.62	2915.32	-613.55	-92.96	620.56	2.00	-2.00	0.00	
3100.00	8.39	188.62	3013.98	-629.68	-95.41	636.87	2.00	-2.00	0.00	
3200.00	6.39	188.62	3113.14	-642.40	-97.33	649.73	2.00	-2.00	0.00	
3300.00	4.39	188.62	3212.70	-651.69	-98.74	659.13	2.00	-2.00	0.00	
3400.00	2.39	188.62	3312.52	-657.54	-99.63	665.04	2.00	-2.00	0.00	
3500.00	0.39	188.62	3412.48	-659.93	-99.99	667.47	2.00	-2.00	0.00	
3519.52	0.00	188.62	3432.00	-660.00	-100.00	667.53	2.00	-2.00	0.00	EOD
3600.00	0.00	188.62	3512.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
3619.52	0.00	188.62	3532.00	-660.00	-100.00	667.53	0.00	0.00	0.00	Intermediate
3700.00	0.00	188.62	3612.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
3800.00	0.00	188.62	3712.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
3900.00	0.00	188.62	3812.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
4000.00	0.00	188.62	3912.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
4100.00	0.00	188.62	4012.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
4200.00	0.00	188.62	4112.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
4300.00	0.00	188.62	4212.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
4400.00	0.00	188.62	4312.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
4500.00	0.00	188.62	4412.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
4600.00	0.00	188.62	4512.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
4700.00	0.00	188.62	4612.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
4800.00	0.00	188.62	4712.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
4900.00	0.00	188.62	4812.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
5000.00	0.00	188.62	4912.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
5100.00	0.00	188.62	5012.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
5200.00	0.00	188.62	5112.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
5300.00	0.00	188.62	5212.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
5400.00	0.00	188.62	5312.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
5500.00	0.00	188.62	5412.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
5600.00	0.00	188.62	5512.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
5700.00	0.00	188.62	5612.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
5800.00	0.00	188.62	5712.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
5900.00	0.00	188.62	5812.48	-660.00	-100.00	667.53	0.00	0.00	0.00	
5919.52	0.00	188.62	5832.00	-660.00	-100.00	667.53	0.00	0.00	0.00	PBHL

Ryan Energy Technologies

Planning Report



Company:	ConocoPhillips	Date:	12/29/2005	Time:	18:51:36	Page:	3
Field:	San Juan County NM	Co-ordinate(NE) Reference:	Site Blanco #9B, Grid North				
Site:	Blanco #9B	Vertical (TVD) Reference:	SITE 0.0				
Well:	#9B	Section (VS) Reference:	Well (0.00N:0.00E:188.62Azi)				
Wellpath:	Original Hole	Plan:	Plan #1				

Targets

Name	Description	Dip	TVD ft	+N-S ft	+E-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec	Longitude Deg Min Sec
EOD			3432.00	-660.00	-100.00			30 59 24.607 N	109 25 36.428 W
-Plan hit target									
PBHL			5832.00	-660.00	-100.00			30 59 24.607 N	109 25 36.428 W
-Plan hit target									

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
230.00	230.00	9.625	13.500	Surface
3619.52	3532.00	7.000	8.750	Intermediate

Blanco #9B

Formation	TVD	MD
San Jose	13	13
Surface Casing	213	213
NCMT	582	582.16
OJAM	2082	2133.43
KRLD	2222	2279.89
FRLD	2922	3006.77
PCCF	3232	3600.00
Lewis	3432	3520.00
Intermediate Casing	3532	<u>3620.00</u>
Chacra	4327	4414.52
Cliffhouse	5102	5500.00
Menefee	5172	5259.52
Point Lookout	5482	5569.52
Mancos	5732	5900.00
TD	5832	<u>5920.00</u>

Blanco #9B
Halliburton Cementing Program

SURFACE CASING :

Drill Bit Diameter	8 1/2"	
Casing Outside Diameter	9 5/8"	Casing Inside Diam. 8 1/2"
Casing Weight	32.3	ppf
Casing Grade	H-40	
Shoe Depth	235'	
Cement Yield	125	cuft/sk
Excess Cement	125	%
Cement Required	125	sx

SHOE 235 ', 9.625 ", 32.3 ppf, H-40 STC

INTERMEDIATE CASING :

Drill Bit Diameter	8 1/2"	
Casing Outside Diameter	9 5/8"	Casing Inside Diam. 8 1/2"
Casing Weight	20	ppf
Casing Grade	J-55	
Shoe Depth	3620'	
Lead Cement Yield	288	cuft/sk
Lead Cement Excess	150	%
Tail Cement Length	7'24"	
Tail Cement Yield	133	cuft/sk
Tail Cement Excess	150	%
Lead Cement Required	361	sx
Tail Cement Required	242	sx

SHOE 3620 ', 7 ", 20 ppf, J-55 STC

PRODUCTION CASING :

Drill Bit Diameter	6 1/2"	
Casing Outside Diameter	4 1/2"	Casing Inside Diam. 4.052"
Casing Weight	10.5	ppf
Casing Grade	J-55	
Top of Cement		200' inside intermediate casing
Shoe Depth	5920'	
Cement Yield		cuft/sk
Cement Excess	50	%
Cement Required	28	sx

SHOE 5920 ', 4.5 ", 10.5 ppf, J-55 STC

HALLIBURTON OPTION

9-5/8 Surface Casing	
Cement Recipe	Class C Standard Cement
	+ 3% Calcium Chloride
	+0.25 lb/sx Flocele
Cement Volume	141 sx
Cement Yield	1.21 cuft/sx
Slurry Volume	172.1 cuft
	30.6 bbls
Cement Density	15.6 ppg
Water Required	5.29 gal/sx

7" Intermediate Casing	
Lead Slurry	
Cement Recipe	Standard Cement
	+ 3% Econolite (extender)
	+ 10 lb/sx Pheno Seal
Cement Required	361 sx
Cement Yield	2.88 cuft/sx
Slurry Volume	1038.9 cuft
	185.0 bbls
Cement Density	11.5 ppg
Water Required	16.91 gal/sx

7" Intermediate Casing	
Tail Slurry	
Cement Slurry	50 / 50 POZ:Standard Cement
	+ 2% Bentonite
	+ 6 lb/sx Pheno Seal
Cement Required	212 sx
Cement Yield	1.33 cuft/sx
Slurry Volume	281.8 cuft
	50.2 bbls
Cement Density	13.5 ppg
Water Required	5.52 gal/sx

4-1/2" Production Casing	
Cement Recipe	50 / 50 POZ:Standard Cement
	+ 3% Bentonite
	+ 3.5 lb/sx PhenoSeal
	+ 0.2% CFR-3 Friction Reducer
	+ 0.1% HR-5 Retarder
	+ 0.8% Halad-9 Fluid Loss Additive
Cement Quantity	260 sx
Cement Yield	1.45 cuft/sx
Cement Volume	377.5 cuft
	67.2
Cement Density	13.1 ppg
Water Required	6.47 gal/sx

SCHLUMBERGER OPTION 1

9-5/8 Surface Casing	
Cement Recipe	Class G Standard Cement
	+ 2% S001 Calcium Chloride
	+0.25 lb/sx D029 Cellophane Flakes
Cement Volume	141 sx
Cement Yield	1.16 cuft/sx
Cement Volume	163.8 cuft
Cement Density	15.8 ppg
Water Required	4.983 gal/sx

7" Intermediate Casing	
Lead Slurry	
Cement Recipe	Class G Standard Cement
	+0.25 lb/sx D029 Cellophane Flakes
	+ 3% D079 Extender
	+ 0.20% D046 Antifoam
	+ 10 lb/sx Pheno Seal
Cement Required	382 sx
Cement Yield	2.72 cuft/sx
Slurry Volume	1040.2 cuft
	185.3 bbls
Cement Density	11.7 ppg
Water Required	15.74 gal/sx

7" Intermediate Casing	
Tail Slurry	
Cement Slurry	50 / 50 POZ:Standard Cement
	+0.25 lb/sx D029 Cellophane Flakes
	+ 2% D020 Bentonite
	+ 1.5 lb/sx D024 Gilsonite Extender
	+ 2% S001 Calcium Chloride
	+ 0.10% D046 Antifoam
	+ 6 lb/sx Pheno Seal
Cement Required	215 sx
Cement Yield	1.31 cuft/sx
Slurry Volume	281.6 cuft
	50.2 bbls
Cement Density	13.5 ppg
Water Required	5.317 gal/sx

4-1/2" Production Casing	
Cement Recipe	50 / 50 POZ:Class G Standard Cement
	+0.25 lb/sx D029 Cellophane Flakes
	+ 3% D020 Bentonite
	+ 1.0 lb/sx D024 Gilsonite Extender
	+ 0.25% D167 Fluid Loss
	+ 0.15% D065 Dispersant
	+ 0.1% D800 Retarder
	+ 0.1% D046 Antifoamer
	+ 3.5 lb/sx PhenoSeal
Cement Quantity	262 sx
Cement Yield	1.44 cuft/sx
Cement Volume	377.4 cuft
	67.2
Cement Density	13 ppg
Water Required	6.43 gal/sx

SCHLUMBERGER OPTION 2

9-5/8 Surface Casing	
Cement Recipe	Type III Cement
	+ 2% S001 Calcium Chloride
	+ 0.25 lb/sx D029 Cellophane Flakes
	+ 0.20% D046 Antifoam
Cement Volume	130 sx
Cement Yield	1.33 cuft/sx
Cement Volume	172.9 cuft
Cement Density	14.8 ppg
Water Required	6.095 gal/sx

7" Intermediate Casing	
Lead Slurry	
Cement Recipe	75% Type XI / 25% Class G Cement
	+ 0.25 lb/sx D029 Cellophane Flakes
	+ 3% D079 Extender
	+ 0.20% D046 Antifoam
Cement Required	496 sx
Cement Yield	2.1 cuft/sx
Slurry Volume	1041.5 cuft
	185.5 bbls
Cement Density	11.7 ppg
Water Required	11.724 gal/sx

7" Intermediate Casing	
Tail Slurry	
Cement Slurry	50 / 50 POZ: Class G Cement
	+ 0.25 lb/sx D029 Cellophane Flakes
	+ 2% D020 Bentonite
	+ 1.5 lb/sx D024 Gilsonite Extender
	+ 2% S001 Calcium Chloride
	+ 0.10% D046 Antifoam
	+ 6 lb/sx Pheno Seal
Cement Required	215 sx
Cement Yield	1.31 cuft/sx
Slurry Volume	281.8 cuft
	50.2 bbls
Cement Density	13.5 ppg
Water Required	5.317 gal/sx

4-1/2" Production Casing	
Cement Recipe	50 / 50 POZ:Class G Cement
	+ 0.25 lb/sx D029 Cellophane Flakes
	+ 3% D020 Bentonite
	+ 1.0 lb/sx D024 Gilsonite Extender
	+ 0.25% D167 Fluid Loss
	+ 0.15% D065 Dispersant
	+ 0.1% D800 Retarder
	+ 0.1% D046 Antifoamer
	+ 3.5 lb/sx PhenoSeal
Cement Quantity	262 sx
Cement Yield	1.44 cuft/sx
Cement Volume	377.5 cuft
	67.2
Cement Density	13 ppg
Water Required	6.47 gal/sx

Casing Design Worksheet - ConocoPhillips Co., Blanco 9B
SENE Section 35-31N-8W

Surface Casing

Size	Grade	#/foot	Collapse	Yield	Tensile	Coupling	Length	Weight	Mud Wt
9.625	H-40	32.3	1400	2270	254	ST&C	230	7,429	9

Intermediate Casing

Size	Grade	#/foot	Collapse	Yield	Tensile	Coupling	Length	Weight	Mud Wt
7	J-55	20	2270	3740	234	ST&C	3,620	72,400	9
								-	
								-	
								-	
Totals:							3,620	72,400	

Production/Liner Casing

Size	Grade	#/foot	Collapse	Yield	Tensile	Coupling	Length/TD	Weight	Mud Wt
4.5	J-55	10.5	4010	4790	132	ST&C	5,920	24,150	4.2
								-	Air/Gas
								-	
								-	
Totals:								24,150	**

* Difference between TD and the Intermediate Casing shoe and/or liner top = 2,300

** Weight of liner string

Casing Parameters
Tensile

$SF_t = \text{Tensile} / ; \text{ Must Exceed 1.8 for Dry or 1.6 for Bouyant}$

9.625	Surf.	254000 /	7,429	=	34.2
7	Int.	234000 /	72,400	=	3.2
4.5	Prod.	132000 /	24,150	=	5.5

Collapse

$SF_c = \text{Collapse} / (\text{Maximum Formation Pressure}) \text{ or } (\text{Mud Gradient X T. V. D.}); \text{ Must Exceed 1.125}$

9.625	Surf.	1400 /	107.52	=	13.0
7	Int.	2270 /	1,692.21	=	1.3
4.5	Prod.	4010 /	1,291.44	=	3.1

Burst

$SF_b = \text{Burst} / (\text{Maximum Formation Pressure}) \text{ or } (\text{Mud Gradient X T. V. D.}); \text{ Must Exceed 1.0}$

9.625	Surf.	2270 /	107.52	=	21.1
7	Int.	3740 /	1,692.21	=	2.2
4.5	Prod.	4790 /	1,291.436	=	3.7

Anticipated Bottom Hole Pressure (ABHP) = 2500 psi
T.V.D. X Mud Wt. X 0.05194 = Hydrostatic Head :

Mud Weight at the Casing Shoe:

Surface	107.52
Intermediate	1,692.21
Production	1,291.44

Excess Cement Volumes:

Surface	136.00435 %
Intermediate	142.742873 %
Production	59.7496522 %

Excess to cement into 4 1/2" X 7" overlap.

Blowout Preventer Equipment (BOPE)

ABHP = 2500 PSI; TVD = 5,920 Feet; Mud Weight = 4.2 Gas Drilled Equivalent Mud Weight

*Air drilled hole for production casing.

Operator's Gradient (ABHP / TVD) = 0.422 PSI/Ft is ~~is not~~ appropriate and does / ~~does not~~ coincide with the Anticipated Mud Weight for each drilled interval.

The most credible pressure gradient is: 0.422 psi/ft

$$\text{ABHP} - (0.22 \times \text{TVD}) = \text{ASP}$$

$$\underline{2500} - (\underline{0.22} \times \underline{5920}) = \underline{1198} \text{ psi}$$

Operator's proposed BOPE of 2 M exceeds / ~~does not exceed~~ the ASP and is therefore adequate / ~~not adequate~~.

Note ASP - Anticipated Surface Pressure

ABHP - Anticipated Bottom Hole Pressure

Remarks:

Cement slurry design should provide adequate isolation of usable water supplies and other mineral bearing zones. No conflicts identified. SMA is BLM.

Adrienne Brumley,

AB 1/9/04
Petroleum Engineer