

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number SF-078049-A Unit Reporting Number
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator ConocoPhillips Company	7. Unit Agreement Name
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Hardie 9. Well Number 2N
4. Location of Well Surf: Unit K (NESW), 2363' FSL & 1694' FWL Surf: Latitude: 36.6962102° N (NAD83) Longitude: 107.6849739° W	10. Field, Pool, Wildcat Blanco MV / Basin DK 11. Sec., Twn, Rge, Mer. (NMPM) K Sec. 28, T29N, R8W API # 30-045-35070
14. Distance in Miles from Nearest Town 21 miles / Bloomfield	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1694'	
16. Acres in Lease 640.00	17. Acres Assigned to Well 320.00 W/2 (MV/DK)
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 72' fro Hardie B 212 (FC)	
19. Proposed Depth 7569'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6399' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS
24. Authorized by: <i>Crystal Tafoya</i> Crystal Tafoya (Regulatory Technician)	Date: 12/15/2009

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

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

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

NMOCD

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

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
DISTRICT II
1301 W. 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, N.M. 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-045-35070		2 Pool Code 71599 / 72319		3 Pool Name BLANCO BASIN DAKOTA / MESA VERDE	
4 Property Code 31728		5 Property Name HARDIE			6 Well Number 2N
7 OGRID No. 217817		8 Operator Name CONOCOPHILLIPS COMPANY			9 Elevation 6399

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	28	29 N	8 W		2363	SOUTH	1694	WEST	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
K									

12 Dedicated Acres 320 (W/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

16 N 89°12'37" E 2603.55'		N 89°18' E 2605.68' (R)		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 working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <u>Crystal Tafuya</u> 5/22/09 Date: <u>5-22-09</u> Printed Name: <u>Crystal Tafuya</u>
USA SF-078049-A		USA SF-078049		
SECTION 28				
1694'				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 of Survey: <u>4/29/09</u> Signature and Seal of Professional Surveyor: <u>[Signature]</u> Certificate Number: <u>17078</u>
NAD 83 LAT: 36.6962102° N LONG: 107.6849739° W NAD 27 LAT: 36°41.77222' N LONG: 107°41.06170' W				
2598.52'		2614.96'		
N 2°19'36" E		N 1°47'40" E		
S 89°36'33" W		5256.13'		

PROJECT PROPOSAL - New Drill / Sidetrack

HARDIE 2N

DEVELOPMENT

Lease:		AFE #: WAN.CDR.9068		AFE \$: 737,429.82	
Field Name: SAN JUAN		Rig: XXX 2010 Holding		State: NM	County: SAN JUAN
Geologist:		Phone:		Geophysicist:	
Geoscientist:		Phone:		Prod. Engineer:	
Res. Engineer:		Phone:		Proj. Field Lead:	

Primary Objective (Zones):

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

Location: Surface Datum Code: NAD 27

Latitude: 36.696204	Longitude: -107.684362	X:	Y:	Section: 28	Range: 08W
Footage X: 1694 FWL	Footage Y: 2363 FSL	Elevation: 6399 (FT)	Township: 029N		

Tolerance:

Location Type: Year Round	Start Date (Est.): 1/1/2011	Completion Date:	Date In Operation:
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Formation Data: Assume KB = 6413	Units = FT
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Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	200	6213	<input type="checkbox"/>			12-1/4 hole. 200' 9 5/8" 32.3 ppf, H-40, STC casing. Cement with 121 cuft. Circulate cement to surface.
NACIMIENTO	625	5788	<input type="checkbox"/>			
OJO ALAMO	1919	4494	<input type="checkbox"/>			
KIRTLAND	2075	4338	<input type="checkbox"/>			
FRUITLAND	2509	3904	<input type="checkbox"/>			Possible Gas
PICTURED CLIFFS	2965	3448	<input type="checkbox"/>			
LEWIS	3095	3318	<input type="checkbox"/>			
Intermediate Casing	3195	3218	<input type="checkbox"/>			8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Cement with 720 cuft. Circulate cement to surface.
HUERFANITO BENTONITE	3561	2852	<input type="checkbox"/>			
CHACRA	3934	2479	<input type="checkbox"/>			
UPPER CLIFF HOUSE	4307	2106	<input type="checkbox"/>			Gas; Est. Top Perf - 4309 (2104)
MASSIVE CLIFF HOUSE	4581	1832	<input type="checkbox"/>	296		Gas
MENEFEE	4720	1693	<input type="checkbox"/>			
POINT LOOKOUT	5183	1230	<input type="checkbox"/>			
MANCOS	5614	799	<input type="checkbox"/>			
UPPER GALLUP	6393	20	<input type="checkbox"/>			
GREENHORN	7144	-731	<input type="checkbox"/>			
GRANEROS	7207	-794	<input type="checkbox"/>			
TWO WELLS	7251	-838	<input type="checkbox"/>	2318		Gas
PAGUATE	7351	-938	<input type="checkbox"/>			
UPPER CUBERO	7387	-974	<input type="checkbox"/>			
LOWER CUBERO	7415	-1002	<input type="checkbox"/>			Est. Btm Perf - 7554 (-1141) based on offset wells
ENCINAL	7474	-1061	<input type="checkbox"/>			TD - 95' below T/ENCN
Total Depth	7569	-1156	<input type="checkbox"/>			6-1/4" hole, 4-1/2" 10.5/11.6 ppf, J-55, STC/LTC casing. Cement w/ 598 cuft. Circulate cement a minimum of 100' inside the previous casing string.

Reference Wells:

PROJECT PROPOSAL - New Drill / Sidetrack

HARDIE 2N

DEVELOPMENT

Reference Type	Well Name	Comments
Production	Hardie 2	29N 8W 28 NW NW
Production	Hardie B 3	29N 8W 28 SW NE SW
Production	Hardie B 212	29N 8W 28 NW NE SW
Production	Hardie 2-E	29N 8W 28 NE SW SW

Logging Program:

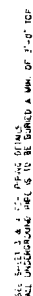
Intermediate Logs: ☐ Log only if show ☐ GR/ILD ☐ Triple Combo

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
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ConocoPhillips

SAN JUAN BUSINESS JNT.

2-5- PRESSURE 3 PHASE
ACTIVITY DIAGRAM- SEE LAYOUT

[illegible]

CONOCOPHILLIPS COMPANY

HARDIE 2N

2363' FSL & 1694' FWL

LATITUDE: 36.6962102° N

LONGITUDE: 107.6849739° W

NAD 83

SECTION 28, T-29-N, R-8-W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO

FROM THE INTERSECTION OF U.S. HIGHWAY 64 AND U.S. HIGHWAY 550
IN BLOOMFIELD, NEW MEXICO.

TRAVEL EASTERLY 17.8 MILES ON U.S. HIGHWAY 64
TURN RIGHT AND TRAVEL SOUTHERLY 0.7 MILE ON DIRT ROAD
TURN RIGHT & PROCEED NORTHWESTERLY 0.1 MILE
TURN LEFT AND PROCEED SOUTHERLY 1.0 MILE
TURN RIGHT AND PROCEED SOUTHERLY 1.1 MILES ON DIRT ROAD
TURN LEFT AND PROCEED EASTERLY 0.2 MILE
UNTIL REACHING EXISTING HARDIE B 212 WELL LOCATION &
PROPOSED LOCATION OF HARDIE 2N WELL.