

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 2-5-14

Well information;

Operator Burlington, Well Name and Number Huerfanito HZDK #1H

API# 30-045-35516, Section 22, Township 27 N, Range 10 S, E/W

Conditions of Approval:

(See the below checked and handwritten conditions)

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☒ Hold C-104 for directional survey & "As Drilled" Plat
- ☒ Hold C-104 for NSI, NSP, DHC
- ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ☒ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ☐ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ☒ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

NMOCD Approved by Signature

10-16-2014

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

RECEIVED

FEB 06 2014

1a. Type of Work DRILL	5. Lease Number USA NM-011393 Unit Reporting Number
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator BURLINGTON RESOURCES Oil & Gas Company, LP	7. Unit Agreement Name RCVD OCT 7 '14 OIL CONS. DIV. DIST. 3
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name HUERFANITO HZDK 9. Well Number 1H
4. Location of Well Surface: Unit L(NW/SW), 2145' FSL & 598' FWL BHL : Unit L(NW/SW), 1470' FSL & 710' FWL Surface: Latitude: 36.5594278° N (NAD83) Longitude: 107.7827380° W BHL : Latitude: 36.5572394° N (NAD83) Longitude: 107.8002490° W	10. Field, Pool, Wildcat BASIN DAKOTA 11. Sec., Twn, Rge, Mer. (NMPM) Surf: Sec. 22, T27N, R9W BHL: Sec. 21, T27N, R9W API # 30-045-35516
14. Distance in Miles from Nearest Town 28 miles from Bloomfield	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 710'	
16. Acres in Lease 1280.000	17. Acres Assigned to Well 320.00 acres E/2 - Sec. 21 and 320.00 acres E/2 - Sec. 21
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 637 from Huerfanito Unit 43 (FC) (PA)	
19. Proposed Depth 6794'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6377' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Arleen White</u> Arleen White (Staff Regulatory Tech)	<u>2/5/14</u> Date

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 Federal or Indian Lands any false, fictitious or fraudulent statements or presentations as to any matter within its jurisdiction.

Bond Numbers NMB-000015 and NMB-000089

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

NMOCD PV

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

DISTRICT I
1825 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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 August 1, 2011

Submit one copy to appropriate

District Office

FEB 06 2014

Farmington Field Office ☐ AMENDED REPORT

Report of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35516	² Pool Code 71599	³ Pool Name BASIN DAKOTA
⁴ Property Code 313570	⁵ Property Name HUERFANITO HZDK	⁶ Well Number 1H
⁷ GRID No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY LP	⁹ Elevation 6377

¹⁰ Surface Location

RCVD OCT 7 '14

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	22	27 N	9 W		2145	SOUTH	598	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

OIL CONS. DIV.

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	21	27 N	9 W		1470	SOUTH	710	WEST	SAN JUAN

¹² Dedicated Acres 320.00 (E/2) (SECTION 21) 320.00 (W/2) (SECTION 21)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13499	DIST. 3
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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

LEGEND:

- = SURFACE LOCATION
- = BOTTOM HOLE LOCATION
- ⊕ = FOUND 1947 U.S.G.L.O. BRASS CAP
- ☆ = EXISTING WELL

BEARINGS & DISTANCES SHOWN ARE REFERENCED TO THE NEW MEXICO COORDINATE SYSTEM, WEST ZONE, NAD 83, UNLESS OTHERWISE NOTED.

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.

Patsy Clugston 9/20/13
Signature Date
Patsy Clugston

Printed Name
Staff Regulatory Tech.
E-mail Address
Patsy.L.Clugston@COPC

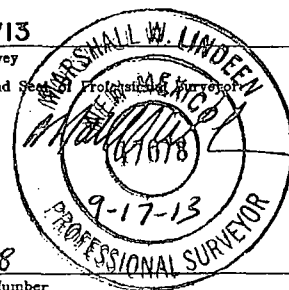
¹⁸ SURVEYOR CERTIFICATION

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.

08/27/13

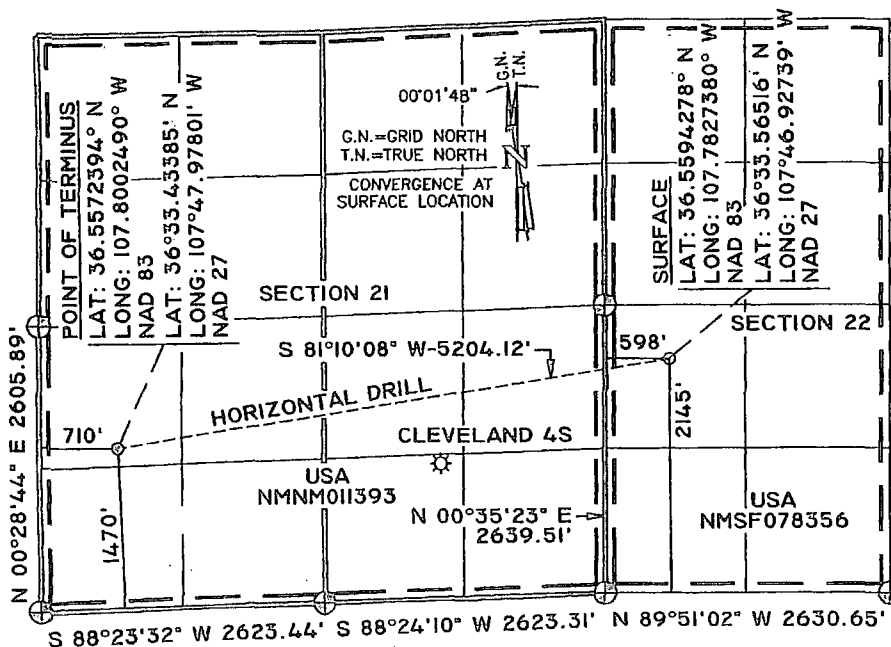
Date of Survey

Signature and Seal



17078

Certificate Number



PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

HUERFANITO HZDK 1H

DEVELOPMENT

Lease:		AFE #: WAN.CDR.3023				AFE \$:	
Field Name: SAN JUAN		Rig: 2014 Rig Program		State: NM	County: SAN JUAN		API #:
Geologist:		Phone:		Geophysicist:		Phone:	
Geoscientist:		Phone:		Prod. Engineer:		Phone:	
Res. Engineer:		Phone:		Proj. Field Lead:		Phone:	
Primary Objective (Zones):							
Zone	Zone Name						
FRR	BASIN DAKOTA (PRORATED GAS)						
Location: Surface		Datum/Code: NAD 27				Horizontal	
Latitude: 36.559419	Longitude: -107.782123	X:	Y:	Section: 22	Range: 009W		
Footage X: 598 FWL	Footage Y: 2145 FSL	Elevation: 6377	(FT)	Township: 027N			
Tolerance:							
Location Type: Year Round		Start Date (Est.): 1/1/2014		Completion Date:		Date In Operation:	
Formation Data: Assume KB = 6392 Units = FT							
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	MD (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
NACIMIENTO	0	6392		☐			Nacimiento will be at surface
OJO ALAMO	1378	5014		☐			
KIRTLAND	1513	4879		☐			
FRUITLAND	1897	4495		☐			Possible Gas
PICTURED CLIFFS	2308	4084		☐	176	94	
LEWIS	2393	3999		☐			
HUERFANITO BENTONITE	2775	3617		☐			
CHACRA	3194	3198		☐			
MASSIVE CLIFF HOUSE	3858	2534		☐	744	126	Gas; Cliffhouse is dry
MENEFEE	3918	2474		☐			
POINT LOOKOUT	4614	1778		☐			
MANCOS	4957	1435		☐			
UPPER GALLUP	5786	606		☐			
GREENHORN	6624	-232		☐			Lateral target depths will be attached
GRANEROS	6669	-277		☐			A smoother wellbore is more critical than where we are in the Paguate sand.
TWO WELLS	6714	-322		☐	1982		Gas
PAGUATE	6774	-382		☐		185	Target a landing about 20' below T/PGTE with a toe about 5' below T/PGTE assuming a sand thickness of about 30'
Total Depth	6794	-402		☐			6-1/4" hole, 4-1/2" 11.6 ppf, J-55/L-80, LTC casing. Cement w/ XXXX cuft. Circulate cement a minimum of 100' inside the previous casing string.
CBRO	6806	-414		☐			
Reference Wells:							
Reference Type	Well Name		Comments				

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

HUERFANITO HZDK 1H

DEVELOPMENT

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

TD Logs:	☐ Triple Combo ☐ Dipmeter ☐ RFT ☐ Sonic ☐ VSP ☐ TDT ☒ Other
Mud log and geosteer with Softrock from a point to be determined. MWD to be decided.	

Additional Information:					
Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks

ConocoPhillips SJB

San Juan Basin - New Mexico West Wells

Huerfano / Huerfanito Wells

Huerfanito HZDK #1H

Wellbore #1

Plan: Desing #1 - APD

Standard Planning Report

29 January, 2014

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Huerfanito HZDK #1H
Company:	ConocoPhillips SJBH	TVD Reference:	Well @ 6392.0usft (15' KB)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	Well @ 6392.0usft (15' KB)
Site:	Huerfano / Huerfanito Wells	North Reference:	True
Well:	Huerfanito HZDK #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Desing #1 - APD		

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

Site	Huerfano / Huerfanito Wells				
Site Position:		Northing:	2,010,379.32 usft	Latitude:	36° 31' 30.309 N
From:	Lat/Long	Easting:	498,854.34 usft	Longitude:	107° 50' 14.037 W
Position Uncertainty:	0.0 usft	Slot Radius:	11 "	Grid Convergence:	0.00 °

Well	Huerfanito HZDK #1H					
Well Position	+N/-S	12,504.2 usft	Northing:	2,022,881.78 usft	Latitude:	36° 33' 33.910 N
	+E/-W	16,186.5 usft	Easting:	515,039.99 usft	Longitude:	107° 46' 55.643 W
Position Uncertainty	3.5 usft	Wellhead Elevation:		Ground Level:	6,377.0 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	1/28/2014	9.60	63.25	50,305

Design	Desing #1 - APD			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	261.20

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,224.0	0.00	0.00	6,224.0	0.0	0.0	0.00	0.00	0.00	0.00	
7,124.0	90.00	261.20	6,797.0	-87.7	-566.2	10.00	10.00	0.00	261.20	
7,874.0	90.00	261.20	6,797.0	-202.4	-1,307.4	0.00	0.00	0.00	0.00	
7,926.7	91.05	261.20	6,796.5	-210.5	-1,359.5	2.00	2.00	0.00	0.00	
11,756.2	91.05	261.20	6,726.0	-796.3	-5,143.2	0.00	0.00	0.00	0.00	Huerfanito HZDK #1H

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Huerfanito HZDK #1H
Company:	ConocoPhillips SJB	TVD Reference:	Well @ 6392.0usft (15' KB)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	Well @ 6392.0usft (15' KB)
Site:	Huerfano / Huerfanito Wells	North Reference:	True
Well:	Huerfanito HZDK #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Desing #1 - APD		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
13 3/8" Surface Casing									
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,378.0	0.00	0.00	1,378.0	0.0	0.0	0.0	0.00	0.00	0.00
OJO ALAMO									
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,513.0	0.00	0.00	1,513.0	0.0	0.0	0.0	0.00	0.00	0.00
KRTLAND									
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,897.0	0.00	0.00	1,897.0	0.0	0.0	0.0	0.00	0.00	0.00
FRUITLAND									
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,308.0	0.00	0.00	2,308.0	0.0	0.0	0.0	0.00	0.00	0.00
PICTURED CLIFFS									
2,393.0	0.00	0.00	2,393.0	0.0	0.0	0.0	0.00	0.00	0.00
LEWIS									
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,775.0	0.00	0.00	2,775.0	0.0	0.0	0.0	0.00	0.00	0.00
HUEFANITO BENTONITE									
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,194.0	0.00	0.00	3,194.0	0.0	0.0	0.0	0.00	0.00	0.00
CHACRA									
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Huerfanito HZDK #1H
Company:	ConocoPhillips SJB	TVD Reference:	Well @ 6392.0usft (15' KB)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	Well @ 6392.0usft (15' KB)
Site:	Huerfano / Huerfanito Wells	North Reference:	True
Well:	Huerfanito HZDK #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Desing #1 - APD		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,858.0	0.00	0.00	3,858.0	0.0	0.0	0.0	0.00	0.00	0.00
MASSIVE CLIFFHOUSE									
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,918.0	0.00	0.00	3,918.0	0.0	0.0	0.0	0.00	0.00	0.00
MENELEE									
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,614.0	0.00	0.00	4,614.0	0.0	0.0	0.0	0.00	0.00	0.00
POINTLOOKOUT									
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,957.0	0.00	0.00	4,957.0	0.0	0.0	0.0	0.00	0.00	0.00
MANCOS									
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,070.0	0.00	0.00	6,070.0	0.0	0.0	0.0	0.00	0.00	0.00
9 5/8" Intermediate 1 Casing									
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,224.0	0.00	0.00	6,224.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	7.60	261.20	6,299.8	-0.8	-5.0	5.0	10.00	10.00	0.00
6,400.0	17.60	261.20	6,397.2	-4.1	-26.5	26.8	10.00	10.00	0.00
6,500.0	27.60	261.20	6,489.4	-10.0	-64.4	65.2	10.00	10.00	0.00
6,600.0	37.60	261.20	6,573.6	-18.2	-117.6	119.0	10.00	10.00	0.00
6,666.8	44.28	261.20	6,624.0	-24.9	-160.8	162.7	10.00	10.00	0.00
GREENHORN									
6,700.0	47.60	261.20	6,647.1	-28.6	-184.4	186.6	10.00	10.00	0.00
6,733.6	50.96	261.20	6,669.0	-32.4	-209.6	212.0	10.00	10.00	0.00
GRANEROS									
6,800.0	57.60	261.20	6,707.8	-40.7	-262.8	266.0	10.00	10.00	0.00
6,811.8	58.78	261.20	6,714.0	-42.2	-272.8	276.0	10.00	10.00	0.00
DAKOTA									
6,900.0	67.60	261.20	6,753.7	-54.3	-350.4	354.6	10.00	10.00	0.00
7,000.0	77.60	261.20	6,783.6	-68.8	-444.6	449.9	10.00	10.00	0.00
7,100.0	87.60	261.20	6,796.5	-84.0	-542.5	549.0	10.00	10.00	0.00
7,124.0	90.00	261.20	6,797.0	-87.7	-566.2	573.0	10.00	10.00	0.00
7,200.0	90.00	261.20	6,797.0	-99.3	-641.3	649.0	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database: EDM Central Planning
 Company: ConocoPhillips SJB
 Project: San Juan Basin - New Mexico West Wells
 Site: Huerfano / Huerfanito Wells
 Well: Huerfanito HZDK #1H
 Wellbore: Wellbore #1
 Design: Desing #1 - APD

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well Huerfanito HZDK #1H
 Well @ 6392.0usft (15' KB)
 Well @ 6392.0usft (15' KB)
 True
 Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,300.0	90.00	261.20	6,797.0	-114.6	-740.1	749.0	0.00	0.00	0.00
7,400.0	90.00	261.20	6,797.0	-129.9	-839.0	849.0	0.00	0.00	0.00
7,500.0	90.00	261.20	6,797.0	-145.2	-937.8	949.0	0.00	0.00	0.00
7,600.0	90.00	261.20	6,797.0	-160.5	-1,036.6	1,049.0	0.00	0.00	0.00
7,700.0	90.00	261.20	6,797.0	-175.8	-1,135.4	1,149.0	0.00	0.00	0.00
7,800.0	90.00	261.20	6,797.0	-191.1	-1,234.3	1,249.0	0.00	0.00	0.00
7,830.0	90.00	261.20	6,797.0	-195.7	-1,263.9	1,279.0	0.00	0.00	0.00
7" Intermediate 2 Casing									
7,874.0	90.00	261.20	6,797.0	-202.4	-1,307.4	1,323.0	0.00	0.00	0.00
7,900.0	90.52	261.20	6,796.8	-206.4	-1,333.1	1,349.0	2.00	2.00	0.00
7,926.7	91.05	261.20	6,796.5	-210.5	-1,359.5	1,375.7	2.00	2.00	0.00
8,000.0	91.05	261.20	6,795.1	-221.7	-1,431.9	1,448.9	0.00	0.00	0.00
8,100.0	91.05	261.20	6,793.3	-237.0	-1,530.7	1,548.9	0.00	0.00	0.00
8,200.0	91.05	261.20	6,791.4	-252.3	-1,629.5	1,648.9	0.00	0.00	0.00
8,300.0	91.05	261.20	6,789.6	-267.6	-1,728.3	1,748.9	0.00	0.00	0.00
8,400.0	91.05	261.20	6,787.8	-282.9	-1,827.1	1,848.9	0.00	0.00	0.00
8,500.0	91.05	261.20	6,785.9	-298.2	-1,925.9	1,948.9	0.00	0.00	0.00
8,600.0	91.05	261.20	6,784.1	-313.5	-2,024.7	2,048.8	0.00	0.00	0.00
8,700.0	91.05	261.20	6,782.2	-328.8	-2,123.5	2,148.8	0.00	0.00	0.00
8,800.0	91.05	261.20	6,780.4	-344.1	-2,222.3	2,248.8	0.00	0.00	0.00
8,900.0	91.05	261.20	6,778.6	-359.4	-2,321.1	2,348.8	0.00	0.00	0.00
9,000.0	91.05	261.20	6,776.7	-374.7	-2,419.9	2,448.8	0.00	0.00	0.00
9,100.0	91.05	261.20	6,774.9	-390.0	-2,518.7	2,548.8	0.00	0.00	0.00
9,200.0	91.05	261.20	6,773.0	-405.3	-2,617.6	2,648.7	0.00	0.00	0.00
9,300.0	91.05	261.20	6,771.2	-420.6	-2,716.4	2,748.7	0.00	0.00	0.00
9,400.0	91.05	261.20	6,769.4	-435.9	-2,815.2	2,848.7	0.00	0.00	0.00
9,500.0	91.05	261.20	6,767.5	-451.1	-2,914.0	2,948.7	0.00	0.00	0.00
9,600.0	91.05	261.20	6,765.7	-466.4	-3,012.8	3,048.7	0.00	0.00	0.00
9,700.0	91.05	261.20	6,763.8	-481.7	-3,111.6	3,148.7	0.00	0.00	0.00
9,800.0	91.05	261.20	6,762.0	-497.0	-3,210.4	3,248.6	0.00	0.00	0.00
9,900.0	91.05	261.20	6,760.2	-512.3	-3,309.2	3,348.6	0.00	0.00	0.00
10,000.0	91.05	261.20	6,758.3	-527.6	-3,408.0	3,448.6	0.00	0.00	0.00
10,100.0	91.05	261.20	6,756.5	-542.9	-3,506.8	3,548.6	0.00	0.00	0.00
10,200.0	91.05	261.20	6,754.6	-558.2	-3,605.6	3,648.6	0.00	0.00	0.00
10,300.0	91.05	261.20	6,752.8	-573.5	-3,704.4	3,748.6	0.00	0.00	0.00
10,400.0	91.05	261.20	6,751.0	-588.8	-3,803.2	3,848.5	0.00	0.00	0.00
10,500.0	91.05	261.20	6,749.1	-604.1	-3,902.0	3,948.5	0.00	0.00	0.00
10,600.0	91.05	261.20	6,747.3	-619.4	-4,000.8	4,048.5	0.00	0.00	0.00
10,700.0	91.05	261.20	6,745.4	-634.7	-4,099.6	4,148.5	0.00	0.00	0.00
10,800.0	91.05	261.20	6,743.6	-650.0	-4,198.4	4,248.5	0.00	0.00	0.00
10,900.0	91.05	261.20	6,741.8	-665.3	-4,297.3	4,348.5	0.00	0.00	0.00
11,000.0	91.05	261.20	6,739.9	-680.6	-4,396.1	4,448.4	0.00	0.00	0.00
11,100.0	91.05	261.20	6,738.1	-695.9	-4,494.9	4,548.4	0.00	0.00	0.00
11,200.0	91.05	261.20	6,736.2	-711.2	-4,593.7	4,648.4	0.00	0.00	0.00
11,300.0	91.05	261.20	6,734.4	-726.5	-4,692.5	4,748.4	0.00	0.00	0.00
11,400.0	91.05	261.20	6,732.6	-741.8	-4,791.3	4,848.4	0.00	0.00	0.00
11,500.0	91.05	261.20	6,730.7	-757.1	-4,890.1	4,948.3	0.00	0.00	0.00
11,600.0	91.05	261.20	6,728.9	-772.4	-4,988.9	5,048.3	0.00	0.00	0.00
11,700.0	91.05	261.20	6,727.0	-787.7	-5,087.7	5,148.3	0.00	0.00	0.00
11,756.0	91.05	261.20	6,726.0	-796.3	-5,143.0	5,204.3	0.00	0.00	0.00
4 1/2" Production Liner									
11,756.2	91.05	261.20	6,726.0	-796.3	-5,143.2	5,204.5	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Huerfanito HZDK #1H
Company:	ConocoPhillips SJBU	TVD Reference:	Well @ 6392.0usft (15' KB)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	Well @ 6392.0usft (15' KB)
Site:	Huerfano / Huerfanito Wells	North Reference:	True
Well:	Huerfanito HZDK #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Desing #1 - APD		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Huerfanito HZDK #1H - I	0.00	0.00	6,726.0	-796.3	-5,143.2	2,022,082.82	509,897.63	36° 33' 26.031 N	107° 47' 58.681 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
(usft)	(usft)		(")	(")	
500.0	500.0	13 3/8" Surface Casing	13-3/8	17-1/2	
6,070.0	6,070.0	9 5/8" Intermediate 1 Casing	9-5/8	12-1/4	
7,830.0	6,797.0	7" Intermediate 2 Casing	7	8-3/4	
11,756.0	6,726.0	4 1/2" Production Liner	4-1/2	6-1/8	

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
1,378.0	1,378.0	OJO ALAMO		0.00		
1,513.0	1,513.0	KRTLAND		0.00		
1,897.0	1,897.0	FRUITLAND		0.00		
2,308.0	2,308.0	PICTURED CLIFFS		0.00		
2,393.0	2,393.0	LEWIS		0.00		
2,775.0	2,775.0	HUERFANITO BENTONITE		0.00		
3,194.0	3,194.0	CHACRA		0.00		
3,858.0	3,858.0	MASSIVE CLIFFHOUSE		0.00		
3,918.0	3,918.0	MENEFEE		0.00		
4,614.0	4,614.0	POINTLOOKOUT		0.00		
4,957.0	4,957.0	MANCOS		0.00		
6,666.8	6,624.0	GREENHORN		0.00		
6,733.6	6,669.0	GRANEROS		0.00		
6,811.8	6,714.0	DAKOTA		0.00		

REFERENCE INFORMATION

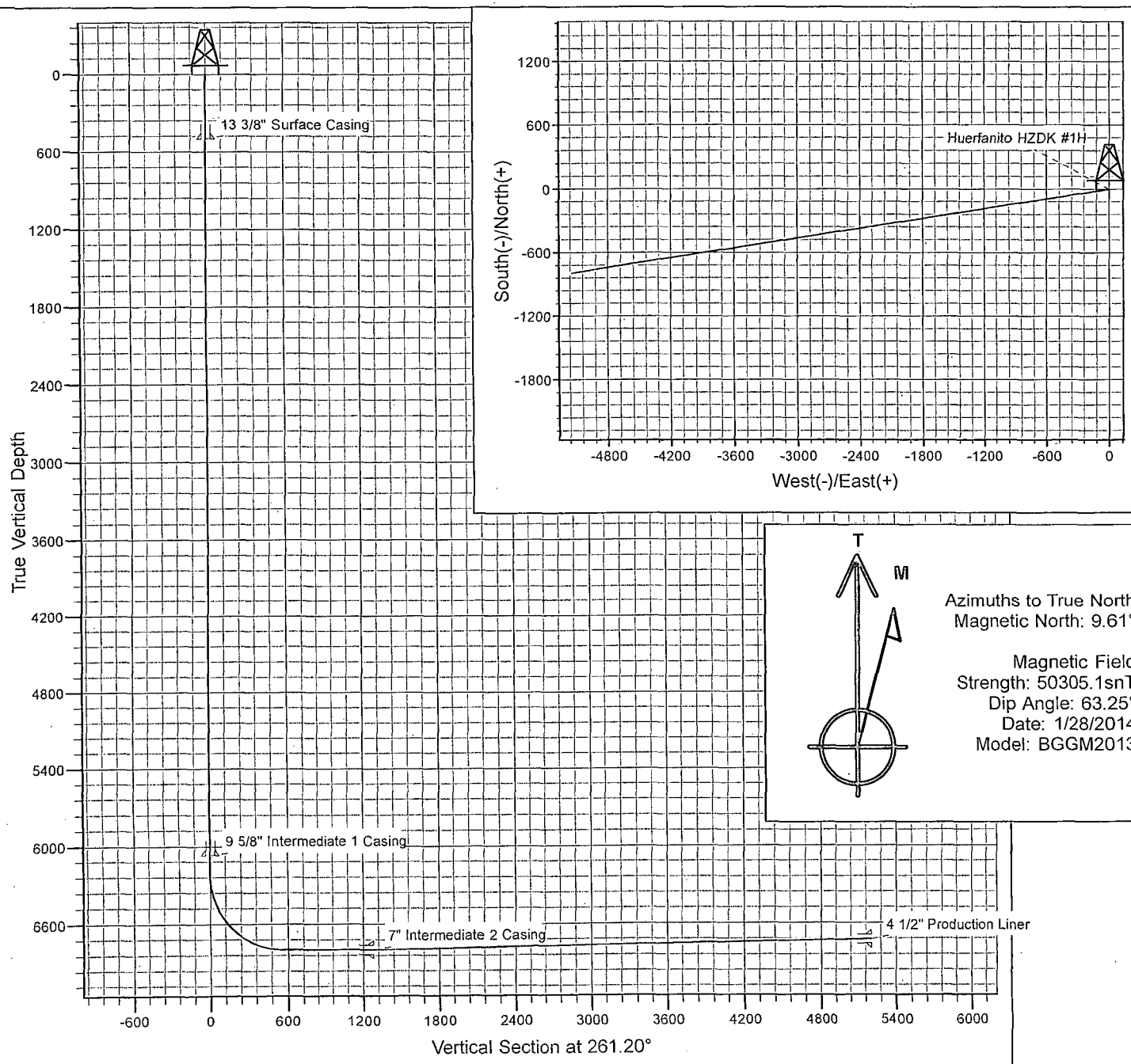
Well @ 6392.0usft (15' KB)
Ground Elevation 6377.0
Reference Lat: 36° 33' 33.910 N
Reference Long: 107° 46' 55.643 W

Project: San Juan Basin - New Mexico West We
Site: Huerfano / Huerfanito Wells
Well: Huerfanito HZDK #1H
Wellbore: Wellbore #1
Design: Desing #1 - APD

ConocoPhillips

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	6224.0	0.00	0.00	6224.0	0.0	0.0	0.00	0.00	0.0
3	7124.0	90.00	261.20	6797.0	-87.7	-566.2	10.00	261.20	573.0
4	7874.0	90.00	261.20	6797.0	-202.4	-1307.4	0.00	0.00	1323.0
5	7926.7	91.05	261.20	6796.5	-210.5	-1359.5	2.00	0.00	1375.7
6	11756.2	91.05	261.20	6726.0	-796.3	-5143.2	0.00	0.00	5204.5



Burlington Resources Oil & Gas Company LP, a subsidiary of ConocoPhillips proposes to drill and complete the referenced horizontal well targeting a zone within the Dakota formation.

Technical Plan

1. Location

Huerfanito HZDK 1H

SHL: 2,145' FSL, 598' FWL -- T 27N, R 09W, Sec 22

BHL: 1,470' FSL, 710' FWL -- T 27N, R 09W, Sec 21

GL: 6,377'

2. Geological Markers

Anticipated formation tops with comments of any possible water, gas, or oil shows are indicated below:

Formation	Depth (TVD)	Remarks
Nacimiento	Surface	
Ojo Alamo	1,378'	Possible Water
Kirtland	1,513'	
Fruitland	1,897'	Possible Gas
Pictured Cliffs	2,308'	
Lewis	2,393'	
Huerfanito Bentonite	2,775'	
Chacra	3,194'	
Cliffhouse	3,858'	Gas
Menefee	3,918'	
Point Lookout	4,614'	
Mancos	4,914'	Gas
Greenhorn	6,624'	
Graneros	6,669'	
Dakota	6,714'	Gas

See attached directional plan for anticipated formation tops in measure depth.

3. Pressure Control Equipment

See Attached BOPE & Choke Manifold Schematic for a diagram of pressure control equipment.

- BOPE will be nipped up on top of wellhead after surface casing is set and cemented.
- Pressure control configuration will be designed to meet the minimum 2M standard.
- All equipment will have 3M pressure ratings.
- A rotating head will be rigged up on top of annular as seen in attached diagram.

4. Casing & Cement Program

A) The proposed casing program is outlined below:

Proposed Casing				
Casing	Hole Size	Casing Size	Weight/Grade	Set Depth TVD / MD
Surface	17-1/2"	13-3/8"	54.5#, J-55, STC, New	500' TVD/MD
Intermediate 1	12-1/4"	9-5/8"	36#, J-55, LTC, New	6,070' TVD/MD
Intermediate 2	8-3/4"	7"	26.0#, L-80, LTC/BTC, New	6,797' TVD / 7,830' MD
Production Liner	6-1/8"	4-1/2"	11.6#, P-110, BTC, New	6,726' TVD / 11,756' MD

The production liner will be landed back into the intermediate casing string by means of a liner hanger with a pack-off element.

A 4-1/2", 11.6#, P-110, BTC frac string will be ran and tied into liner hanger for the stimulation.

If the 6-1/8" hole is not drilled to total MD, the production liner setting depth and length will be adjusted accordingly.

B) The proposed cement program is shown below:

Cement Program				
Interval	Depth (MD)	Volume	Slurry	Planned Cement Top
Surface	500'	506 ft ³	Lead Cmt: Type III Cmt 0.25 pps celloflake	Surface
Intermediate 1	6,070'	2,823 ft ³	Lead Cmt: Premium Lite 3% CaCl, 0.25 pps celloflake, 5 ppm LCM-1, 0.4% FL-52, 8% Bentonite, 0.4% SMS 2.13 ft ³ /sk -- 11.29 gal/sk 12.1 ppg Tail Cmt: Premium Lite HS FM 0.25 pps celloflake, 0.3% CD-32, 6.25 pps LCM-1, 1% FL-52 1.98 ft ³ /sk -- 9.80 gal/sk 12.5 ppg	Surface
Intermediate 2	7,830'	374 ft ³	Tail Cmt: Premium Lite HS FM 0.25 pps celloflake, 0.3% CD-32, 6.25 pps LCM-1, 1% FL-52 1.98 ft ³ /sk -- 9.80 gal/sk 12.5 ppg	100' inside 9-5/8" casing string
Production	N/A	N/A	N/A –External swellable casing packers will be utilized.	N/A

For the 1st intermediate hole section a 2-stage cement job may be performed if hole conditions indicate during operations. Stage tool will be placed appropriately as conditions indicate. Slurry additives may be adjusted as needed to accommodate required pump and compressive test times.

C) The proposed centralizer program is shown below:

Centralizer Program	
Interval	Centralizers
Surface	1 per joint on bottom 3 joints
Intermediate 1	10' above shoe jnt w/ collar clamp On top of 2 nd , 4 th , 6 th , 8 th , 10 th jnts 1 every 4 th jnt to Ojo Alamo 1 Turbolizer at base of Ojo Alamo 1 every joint thru Ojo Alamo 1 Turbolizer will be placed mid way into Ojo Alamo 1 every 4 th jnt from top of Ojo Alamo up to surface shoe 1 inside surface casing
Intermediate 2	10' above shoe jnt w/ collar clamp 1 every 2 jnts (at min) to Intermediate 1 casing shoe 1 inside Intermediate 1 casing
Production	N/A

To allow adequate time for cement to achieve a minimum of 500 psi compressive strength, a minimum of 8 hours wait on cement time for each hole section will be observed. The wellhead will not be installed, casing will not be tested, and the prior casing shoe will not be drilled out until adequate wait on cement time is achieved.

Production hole will be completed/stimulated by means of sliding sleeves spaced out appropriately throughout the production liner. Swellable packers will be placed between sleeves to provide isolation for each stage.

5. Drilling Fluids

A) The proposed drilling fluid program is outlined below:

Mud Program				
Interval	Mud Type	Weight (ppg)	Fluid Loss (cc)	Invert Ratio (Diesel/Brine)
Surface	Air / Water Gel System	Air 8.3 - 9.2	NC	
Intermediate 1	LSND / Gel System	8.4 - 9.5	6 - 16	
Intermediate 2	Oil Based Mud	7.5 - 10	6 - 14	60/40 - 90/10
	LSND/Gel System	8.5 - 10	4 - 14	
Production	Oil Based Mud	7.5 - 10	4 - 14	60/40 - 90/10
	LSND/Gel System	8.5 - 10	4 - 14	

In the 2nd Intermediate hole section and production hole section a water based mud or an oil based mud may be utilized as hole conditions indicate. If oil based mud is utilized it will be an invert mud; the base fluid will be diesel and the brine fluid will be CaCl or KCl.

LCM may be added to the mud system if hole conditions indicate.

- B) If OBM is utilized, closed loop equipment will be utilized for solids control. A lined cutting pit will be utilized for cuttings from water based mud hole sections. If oil based mud is utilized, cuttings will be hauled off to an approved disposal site.

6. Abnormal Pressures & Hazards

- No over-pressured intervals expected.
- Estimated Reservoir Pressure = 2,365 psi.
- Maximum Anticipated Surface Pressure = 1,900 psi.
- No hydrogen sulfide gas is expected based off nearby well production.
- No anticipated loss zones or depleted zones. Well is located outside of Fruitland Coal “fairway” and Mesa Verde production intervals.

7. Testing, Logging, Coring

- Mud Logs: Mud loggers will be rigged up from KOP to production hole TD.
- MWD: Directional tools from KOP to production hole TD.
- LWD: Gamma Ray will be utilized in production hole for well placement.
- Logs: No planned open hole logs (other than the previously identified LWD logs) will be ran.
- Cased Hole Logs: A Temp Survey will be ran on the 2nd intermediate hole to verify TOC.

8. Directional Plan

The planned wellbore directional plan and plot is attached.

The directional plan is built off geological targets from offset wells. The production hole will be landed and drilled within target formation horizontally utilizing LWD equipment to help steer the wellbore. On site adjustments will be made to the directional plan as formation and hole indicates.

N. Construction contractors will call New Mexico One-Call (or equivalent) to identify the location of any marked or unmarked pipeline or cables located in proximity to the proposed resource road and well pad at least two working days prior to ground disturbance.

O. All operations will be conducted in such a manner that full compliance is made with the applicable laws and regulations, the Application for Permit to Drill, and applicable Notice(s) to Lessees.

VII. Methods for Handling Waste

A. Cuttings, Drilling Fluids, and Flowback Water - The drill cuttings, drill water and completion fluids will be placed in a lined reserve pit. The pit will be lined with 20m gage pit liner. The reserve pit will be fenced on three sides away from the pad during drilling and the fourth side fenced as soon as the rig moves out. The free fluids will be removed after completion or may be trucked and reused in drilling operations or trucked to an approved disposal facility as indicated in ConocoPhillips Drilling / Workover Pit Closure Procedure dated August 2, 2004 on file at the NMOCD office in Aztec, NM.

B. Garbage and other waste material - garbage, trash and other waste materials will be collected in a portable, self-contained and fully-enclosed trash container during drilling and completion operations. The accumulated trash will be removed, as needed, and will be disposed of at an authorized sanitary landfill. No trash will be buried or burned on location.

C. Sewage - self-contained, chemical toilets will be provided for human waste disposal. The toilet holding tanks will be pumped, as needed, and the contents thereof disposed of in an approved sewage disposal facility. The toilets will be onsite during all operations.

D. Immediately after drilling and completing activities have ceased, all debris and other waste materials not contained in the trash containers will be cleaned up and removed from the well location.

VIII. Ancillary Facilities

A. The proposed areas and access roads listed below could be utilized for staging of construction, drilling, and completion equipment to facilitate drilling operations. Additionally, staging could occur, within the permitted right-of-way, along the route shown on B-1 and described

BOPE & Choke Manifold Schematic

