

RECEIVED
Form 3160-3
(August 2007)

JUL 13 2012

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010

Farmington Field Office
Bureau of Land Management
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.

5 Lease Serial No
SF-079658, SF-080456, NM-0433
6 If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7 If Unit of CA/Agreement, Name and/or No Huerfano Unit
1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other		8 Well Name and No Huerfano Unit HZMC 1H
2 Name of Operator Burlington Resources Oil & Gas Company LP		9 API Well No 30-045-35370
3a Address PO Box 4289, Farmington, NM 87499	3b Phone No (include area code) (505) 326-9700	10 Field and Pool or Exploratory Area Angel Peak Gallup
4 Location of Well (Footage, Sec., T, R, M., or Survey Description) Surface Unit M (SWSW), 645' FSL & 615' FWL, Section 9, T26N, R10W Bottomhole Unit K (NESW), 1563' FSL & 1537' FWL, Section 10, T26N, R10W		11. Country or Parish, State San Juan, New Mexico

12. CHECK THE 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 Change of Plans
	☐ 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 must 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 must be filed once Testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection)

Burlington Resources requests permission to change the build rate to curve to 12 deg/100'. The Hole/Casing program changes as such: Intermediate Hole Section to 5509' (TVD) and Production Hole Section to 12,146' (MD). Attached is the revised Technial Plan, Standard Planning Report and Plot.

RCVD JUL 26 '12
OIL CONS. DIV.
DIST. 3

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

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

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Arleen Kellywood	Title Staff Regulatory Tech
Signature <i>Arleen Kellywood</i>	Date 7/13/12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Troy L. Solvers	Title Petroleum Engineer	Date 7/24/12
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	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

(Instruction on page 2)

NMOCD

dlb

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

Technical Plan

1. Location

Huerfano Unit HZMC 1H

SHL: 645' FSL, 615' FWL -- T 26N, R 10W, Sec 09

BHL: 1563' FSL, 1537' FWL -- T 26N, R 10W, Sec 10

GL: 6669'

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	Water
Ojo Alamo	1186'	Possible Water
Kirtland	1391'	
Fruitland	1549'	Possible Gas
Pictured Cliffs	1734'	
Lewis	2370'	
Huerfanito Bentonite	2590'	
Chacra	3081'	
Cliffhouse	3768'	Gas
Menefee	3810'	
Point Lookout	4607'	
Mancos	4894'	
El Vado	5689'	Oil/Gas
Basal Niobrara	6064'	

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 and exceed 2M standards.
- 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	Depth
Surface	12-1/4"	9-5/8"	32.3#, H-40, STC, New	0' - 800' (TVD)
Intermediate	8-3/4"	7"	26.0#, L-80, LTC, New	0' - 5509' (TVD)
Production Liner	6-1/8"	4-1/2"	11.6#, P-110, BTC, New	5509' - 12146' (MD)

The intermediate casing may be set deeper if hole conditions allow.

The production liner will be tied back into the intermediate casing string with a liner hanger with a pack-off element.

A 4-1/2", 11.6#, P-110, BTC (new) 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				Planned Cement Top
Interval	Depth (TVD)	Volume	Slurry	
Surface	800'	582 ft ³	Lead Cmt: Type III Cmt 0.25 pps Celloflake 1.25 ft ³ /sk -- 5.75 gal/sk 15.2 ppg	Surface
Intermediate	5509'	1211 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: Type III 1% CaCl, 0.25 pps celloflake, 0.2% FL-52 1.38 ft ³ /sk -- 6.64 gal/sk 14.6 ppg	Surface
Production	N/A	N/A	N/A – Sliding sleeves and external swellable casing packers will be utilized	N/A

For the intermediate hole, a 2-stage cement job may be performed if hole conditions indicate during operations. Stage tool will be placed appropriately as conditions indicate.

C) The proposed centralizer program is shown below:

Centralizer Program	
Interval	Centralizers
Surface	1 per joint on bottom 3 joints
Intermediate	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
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	LSND / Gel system	8.4 - 10	6 - 14	
Production	Oil Based Mud	7.0 - 8.5	4 - 12	70/30 - 90/10

Oil based mud will be an Invert Mud. Base fluid will be diesel. Brine fluid will be CaCl or KCl.

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

B) Closed loop equipment will be utilized for solids control. A lined cutting pit will be utilized for water based cutting from upper hole sections. Cuttings from production hole will be hauled off to approved disposal site.

6. Abnormal Pressures & Hazards

- No over-pressured intervals expected.
- Estimated Reservoir Pressure = 1650 psi. The reservoir pressure is anticipated to be similar to the Angle's Peak Gallup field (a Tociito sand development just north of the well). Initial estimated reservoir pressure from the Angel Peak Field was 1650 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

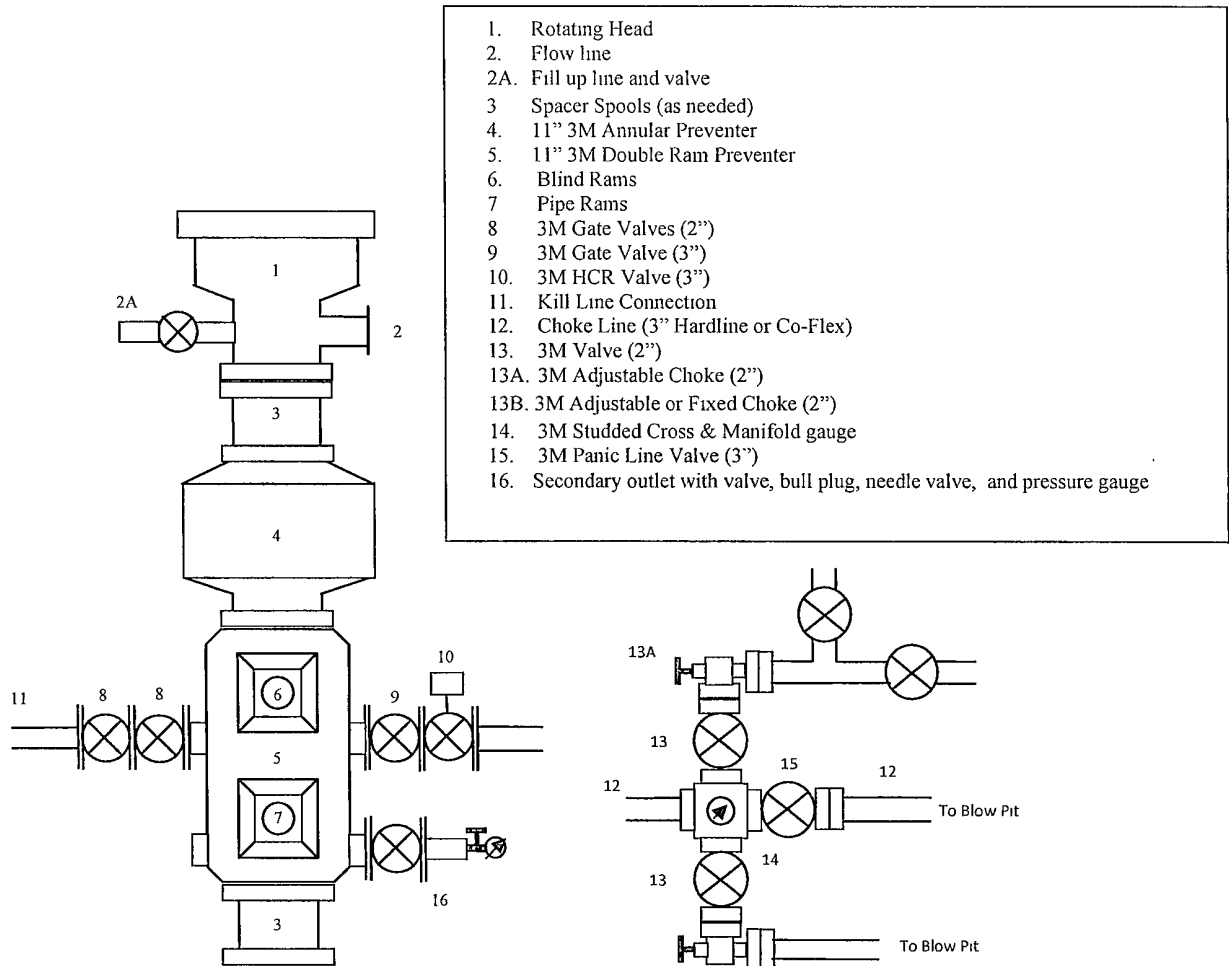
- Mud Logs: Mud loggers will be rigged up from KOP to production hole TD.
- MWD: Directional tools from KOP to production hole TD.
- LWD: Gamma Ray and Resistivity will be utilized in production hole for well placement.
- Logs: No planned open hole logs (other than the previously identified LWD logs) will be ran.
- Cased Hole Logs: A Temp Survey or CBL will be ran on the intermediate hole if cement is not circulated to surface during intermediate cement job.

8. Directional Plan

The planned wellbore directional plan and plot is attached.

The planned 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.

BOPE & Choke Manifold Schematic



ConocoPhillips SJBU

San Juan Basin - New Mexico West Wells

Huerfano / Huerfanito Wells

Huerfano #1H - APD

Original Hole

Plan: 12 degree build - APD Plan #1

Standard Planning Report

12 July, 2012

ConocoPhillips or its affiliates

Planning Report

Database: EDM Central Planning
Company: ConocoPhillips SJB
Project: San Juan Basin - New Mexico West Wells
Site: Huerfano / Huerfanito Wells
Well: Huerfano #1H - APD
Wellbore: Original Hole
Design: 12 degree build - APD Plan #1

Local Co-ordinate Reference: Well Huerfano #1H - APD
TVD Reference: KB @ 6684.0ft (AWS920)
MD Reference: KB @ 6684 0ft (AWS920)
North Reference: True
Survey Calculation Method: Minimum Curvature

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: 2,010,379.31 ft Latitude: 36° 31' 30.309 N
From: Lat/Long Easting: 498,854.34 ft Longitude: 107° 50' 14.037 W
Position Uncertainty: 15.0 ft Slot Radius: " Grid Convergence: 0.00 °

Well Huerfano #1H - APD

Well Position +N/-S 0.0 ft Northing: 2,000,265.90 ft Latitude: 36° 29' 50.211 N
 +E/-W 0.0 ft Easting: 478,109.05 ft Longitude: 107° 54' 28.120 W
Position Uncertainty 0.0 ft Wellhead Elevation: 15.0 ft Ground Level: 6,669.0 ft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2011	4/10/2012	9.82	63.20	50,460

Design 12 degree build - APD Plan #1

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	81.84

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	
5,608.1	0.00	0.00	5,608.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,363.1	90.60	81.84	6,085.6	68.5	477.6	12.00	12.00	0.00	81.84	
12,146.3	90.60	81.84	6,025.0	889.0	6,201.9	0.00	0.00	0.00	0.00	Huerfano HZMC 1H

ConocoPhillips or its affiliates

Planning Report

Database: EDM Central Planning
Company: ConocoPhillips SJBU
Project: San Juan Basin - New Mexico West Wells
Site: Huerfano / Huerfanito Wells
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MD Reference: KB @ 6684 0ft (AWS920)
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)
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
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
850.0	0.00	0.00	850.0	0.0	0.0	0.0	0.00	0.00	0.00
9 5/8" Surface Casing									
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
1,186.0	0.00	0.00	1,186.0	0.0	0.0	0.0	0.00	0.00	0.00
Ojo Alamo									
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
1,391.0	0.00	0.00	1,391.0	0.0	0.0	0.0	0.00	0.00	0.00
Kirtland									
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
1,549.0	0.00	0.00	1,549.0	0.0	0.0	0.0	0.00	0.00	0.00
Farmington Sands									
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
1,734.0	0.00	0.00	1,734.0	0.0	0.0	0.0	0.00	0.00	0.00
Fruitland									
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
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
2,205.0	0.00	0.00	2,205.0	0.0	0.0	0.0	0.00	0.00	0.00
Picture Cliff									
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,370.0	0.00	0.00	2,370.0	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
2,590.0	0.00	0.00	2,590.0	0.0	0.0	0.0	0.00	0.00	0.00
Huerfanito Bentonite									
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
2,800.0	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
3,081.0	0.00	0.00	3,081.0	0.0	0.0	0.0	0.00	0.00	0.00
Chacra									
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
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

ConocoPhillips or its affiliates

Planning Report

Database: EDM Central Planning
Company: ConocoPhillips SJB
Project: San Juan Basin - New Mexico West Wells
Site: Huerfano / Huerfano Wells
Well: Huerfano #1H - APD
Wellbore: Original Hole
Design: 12 degree build - APD Plan #1

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TVD Reference: KB @ 6684 0ft (AWS920)
MD Reference: KB @ 6684 0ft (AWS920)
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)
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
3,768.0	0.00	0.00	3,768.0	0.0	0.0	0.0	0.00	0.00	0.00
Cliffhouse									
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,810.0	0.00	0.00	3,810.0	0.0	0.0	0.0	0.00	0.00	0.00
Menefee									
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
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
4,607.0	0.00	0.00	4,607.0	0.0	0.0	0.0	0.00	0.00	0.00
Point Lookout									
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
4,894.0	0.00	0.00	4,894.0	0.0	0.0	0.0	0.00	0.00	0.00
Mancos									
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
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
5,509.0	0.00	0.00	5,509.0	0.0	0.0	0.0	0.00	0.00	0.00
7" Production Casing									
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,608.1	0.00	0.00	5,608.1	0.0	0.0	0.0	0.00	0.00	0.00
5,689.4	9.75	81.84	5,689.0	1.0	6.8	6.9	12.00	12.00	0.00
El Vado									
5,700.0	11.03	81.84	5,699.4	1.3	8.7	8.8	12.00	12.00	0.00
5,800.0	23.03	81.84	5,794.9	5.4	37.7	38.0	12.00	12.00	0.00
5,900.0	35.03	81.84	5,882.2	12.3	85.6	86.5	12.00	12.00	0.00
6,000.0	47.03	81.84	5,957.5	21.6	150.5	152.0	12.00	12.00	0.00
6,100.0	59.03	81.84	6,017.5	32.9	229.4	231.7	12.00	12.00	0.00
6,200.0	71.03	81.84	6,059.6	45.7	319.0	322.2	12.00	12.00	0.00
6,300.0	83.03	81.84	6,082.1	59.5	415.2	419.5	12.00	12.00	0.00
6,363.1	90.60	81.84	6,085.6	68.5	477.6	482.5	12.00	12.00	0.00
6,400.0	90.60	81.84	6,085.2	73.7	514.1	519.3	0.00	0.00	0.00
6,500.0	90.60	81.84	6,084.1	87.9	613.1	619.3	0.00	0.00	0.00
6,600.0	90.60	81.84	6,083.1	102.1	712.1	719.3	0.00	0.00	0.00
6,700.0	90.60	81.84	6,082.0	116.3	811.0	819.3	0.00	0.00	0.00
6,800.0	90.60	81.84	6,081.0	130.4	910.0	919.3	0.00	0.00	0.00
6,900.0	90.60	81.84	6,079.9	144.6	1,009.0	1,019.3	0.00	0.00	0.00
7,000.0	90.60	81.84	6,078.9	158.8	1,108.0	1,119.3	0.00	0.00	0.00
7,100.0	90.60	81.84	6,077.8	173.0	1,207.0	1,219.3	0.00	0.00	0.00
7,200.0	90.60	81.84	6,076.8	187.2	1,305.9	1,319.3	0.00	0.00	0.00

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Planning Report

Database: EDM Central Planning
 Company: ConocoPhillips SJB
 Project: San Juan Basin - New Mexico West Wells
 Site: Huerfano / Huerfanito Wells
 Well: Huerfano #1H - APD
 Wellbore: Original Hole
 Design: 12 degree build - APD Plan #1

Local Co-ordinate Reference: Well Huerfano #1H - APD
 TVD Reference: KB @ 6684.0ft (AWS920)
 MD Reference: KB @ 6684.0ft (AWS920)
 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)
7,300.0	90.60	81.84	6,075.7	201.4	1,404.9	1,419.3	0.00	0.00	0.00
7,400.0	90.60	81.84	6,074.7	215.6	1,503.9	1,519.3	0.00	0.00	0.00
7,500.0	90.60	81.84	6,073.7	229.8	1,602.9	1,619.3	0.00	0.00	0.00
7,600.0	90.60	81.84	6,072.6	243.9	1,701.9	1,719.3	0.00	0.00	0.00
7,700.0	90.60	81.84	6,071.6	258.1	1,800.9	1,819.3	0.00	0.00	0.00
7,800.0	90.60	81.84	6,070.5	272.3	1,899.8	1,919.3	0.00	0.00	0.00
7,900.0	90.60	81.84	6,069.5	286.5	1,998.8	2,019.3	0.00	0.00	0.00
8,000.0	90.60	81.84	6,068.4	300.7	2,097.8	2,119.3	0.00	0.00	0.00
8,100.0	90.60	81.84	6,067.4	314.9	2,196.8	2,219.2	0.00	0.00	0.00
8,200.0	90.60	81.84	6,066.3	329.1	2,295.8	2,319.2	0.00	0.00	0.00
8,300.0	90.60	81.84	6,065.3	343.3	2,394.8	2,419.2	0.00	0.00	0.00
8,400.0	90.60	81.84	6,064.2	357.5	2,493.7	2,519.2	0.00	0.00	0.00
8,500.0	90.60	81.84	6,063.2	371.6	2,592.7	2,619.2	0.00	0.00	0.00
8,600.0	90.60	81.84	6,062.1	385.8	2,691.7	2,719.2	0.00	0.00	0.00
8,700.0	90.60	81.84	6,061.1	400.0	2,790.7	2,819.2	0.00	0.00	0.00
8,800.0	90.60	81.84	6,060.0	414.2	2,889.7	2,919.2	0.00	0.00	0.00
8,900.0	90.60	81.84	6,059.0	428.4	2,988.7	3,019.2	0.00	0.00	0.00
9,000.0	90.60	81.84	6,057.9	442.6	3,087.6	3,119.2	0.00	0.00	0.00
9,100.0	90.60	81.84	6,056.9	456.8	3,186.6	3,219.2	0.00	0.00	0.00
9,200.0	90.60	81.84	6,055.9	471.0	3,285.6	3,319.2	0.00	0.00	0.00
9,300.0	90.60	81.84	6,054.8	485.1	3,384.6	3,419.2	0.00	0.00	0.00
9,400.0	90.60	81.84	6,053.8	499.3	3,483.6	3,519.2	0.00	0.00	0.00
9,500.0	90.60	81.84	6,052.7	513.5	3,582.6	3,619.2	0.00	0.00	0.00
9,600.0	90.60	81.84	6,051.7	527.7	3,681.5	3,719.2	0.00	0.00	0.00
9,700.0	90.60	81.84	6,050.6	541.9	3,780.5	3,819.2	0.00	0.00	0.00
9,800.0	90.60	81.84	6,049.6	556.1	3,879.5	3,919.2	0.00	0.00	0.00
9,900.0	90.60	81.84	6,048.5	570.3	3,978.5	4,019.1	0.00	0.00	0.00
10,000.0	90.60	81.84	6,047.5	584.5	4,077.5	4,119.1	0.00	0.00	0.00
10,100.0	90.60	81.84	6,046.4	598.7	4,176.5	4,219.1	0.00	0.00	0.00
10,200.0	90.60	81.84	6,045.4	612.8	4,275.4	4,319.1	0.00	0.00	0.00
10,300.0	90.60	81.84	6,044.3	627.0	4,374.4	4,419.1	0.00	0.00	0.00
10,400.0	90.60	81.84	6,043.3	641.2	4,473.4	4,519.1	0.00	0.00	0.00
10,500.0	90.60	81.84	6,042.2	655.4	4,572.4	4,619.1	0.00	0.00	0.00
10,600.0	90.60	81.84	6,041.2	669.6	4,671.4	4,719.1	0.00	0.00	0.00
10,700.0	90.60	81.84	6,040.1	683.8	4,770.3	4,819.1	0.00	0.00	0.00
10,800.0	90.60	81.84	6,039.1	698.0	4,869.3	4,919.1	0.00	0.00	0.00
10,900.0	90.60	81.84	6,038.1	712.2	4,968.3	5,019.1	0.00	0.00	0.00
11,000.0	90.60	81.84	6,037.0	726.3	5,067.3	5,119.1	0.00	0.00	0.00
11,100.0	90.60	81.84	6,036.0	740.5	5,166.3	5,219.1	0.00	0.00	0.00
11,200.0	90.60	81.84	6,034.9	754.7	5,265.3	5,319.1	0.00	0.00	0.00
11,300.0	90.60	81.84	6,033.9	768.9	5,364.2	5,419.1	0.00	0.00	0.00
11,400.0	90.60	81.84	6,032.8	783.1	5,463.2	5,519.1	0.00	0.00	0.00
11,500.0	90.60	81.84	6,031.8	797.3	5,562.2	5,619.1	0.00	0.00	0.00
11,600.0	90.60	81.84	6,030.7	811.5	5,661.2	5,719.1	0.00	0.00	0.00
11,700.0	90.60	81.84	6,029.7	825.7	5,760.2	5,819.1	0.00	0.00	0.00
11,800.0	90.60	81.84	6,028.6	839.9	5,859.2	5,919.0	0.00	0.00	0.00
11,900.0	90.60	81.84	6,027.6	854.0	5,958.1	6,019.0	0.00	0.00	0.00
12,000.0	90.60	81.84	6,026.5	868.2	6,057.1	6,119.0	0.00	0.00	0.00
12,100.0	90.60	81.84	6,025.5	882.4	6,156.1	6,219.0	0.00	0.00	0.00
12,146.0	90.60	81.84	6,025.0	888.9	6,201.6	6,265.0	0.00	0.00	0.00
4 1/2" Production Liner									
12,146.3	90.60	81.84	6,025.0	889.0	6,201.9	6,265.3	0.00	0.00	0.00
Huerfano HZMC 1H - BHL									

ConocoPhillips or its affiliates

Planning Report

Database: EDM Central Planning
Company: ConocoPhillips SJB
Project: San Juan Basin - New Mexico West Wells
Site: Huerfano / Huerfanito Wells
Well: Huerfano #1H - APD
Wellbore: Original Hole
Design: 12 degree build - APD Plan #1

Local Co-ordinate Reference: Well Huerfano #1H - APD
TVD Reference: KB @ 6684.0ft (AWS920)
MD Reference: KB @ 6684 0ft (AWS920)
North Reference: True
Survey Calculation Method: Minimum Curvature

Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Huerfano HZMC 1H -	0.00	0.00	6,025.0	889.0	6,201.9	2,001,150.01	484,311.15	36° 29' 58.995 N	107° 53' 12.163 W
- plan hits target center									
- Circle (radius 1.0)									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
850.0	850.0	9 5/8" Surface Casing	9-5/8	12-1/4
5,509.0	5,509.0	7" Production Casing	7	8-3/4
12,146.0	6,025.0	4 1/2" Production Liner	4-1/2	6-1/8

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,734.0	1,734.0	Fruitland		0.00	
5,689.4	5,689.0	El Vado		0.00	
1,549.0	1,549.0	Farmington Sands		0.00	
1,391.0	1,391.0	Kirtland		0.00	
3,081.0	3,081.0	Chacra		0.00	
4,607.0	4,607.0	Point Lookout		0.00	
2,590.0	2,590.0	Huerfanito Bentonite		0.00	
3,810.0	3,810.0	Menefee		0.00	
3,768.0	3,768.0	Cliffhouse		0.00	
2,205.0	2,205.0	Picture Cliff		0.00	
4,894.0	4,894.0	Mancos		0.00	
1,186.0	1,186.0	Ojo Alamo		0.00	
2,370.0	2,370.0	Lewis		0.00	

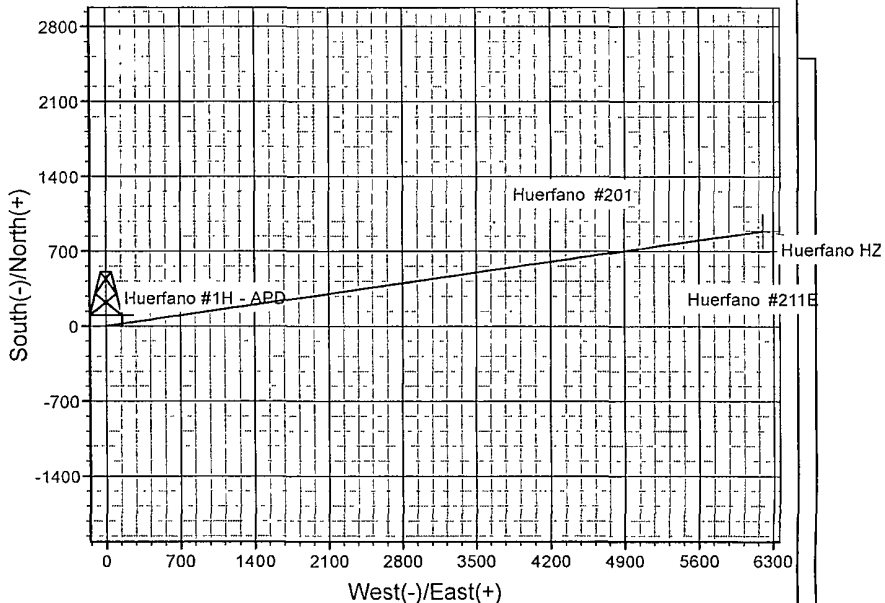
REFERENCE INFORMATION

KB @ 6684.0ft (AWS920)
Ground Elevation 6669.0
Reference Lat 36° 29' 50.211 N
Reference Long. 107° 54' 28.120 W

Project: San Juan Basin - New Mexico West Wells
Site: Huerfano / Huerfanito Wells
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Wellbore: Original Hole
Design: 12 degree build - APD Plan #1

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	5608.1	0.00	0.00	5608.1	0.0	0.0	0.00	0.00	0.0	
3	6363.1	90.60	81.84	6085.6	68.5	477.6	12.00	81.84	482.5	
	412146.3	90.60	81.84	6025.0	889.0	6201.9	0.00	0.00	6265.3	Huerfano HZMC 1H - BHL



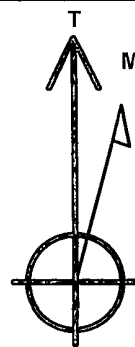
True Vertical Depth

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1186.0	1186.0	Ojo Alamo
1391.0	1391.0	Kirtland
1549.0	1549.0	Farmington Sands
1734.0	1734.0	Fruitland
2205.0	2205.0	Picture Cliff
2370.0	2370.0	Lewis
2590.0	2590.0	Huerfanito Bentonite
3081.0	3081.0	Chacra
3768.0	3768.0	Cliffhouse
3810.0	3810.0	Menefee
4607.0	4607.0	Point Lookout
4894.0	4894.0	Mancos
5689.0	5689.4	El Vado

CASING DETAILS

TVD	MD	Name	Size
850.0	850.0	Surface Casing	9-5/8
5509.0	5509.0	Inter Casing	7
6025.0	12146.0	Prod Liner	4-1/2



Azimuths to True North
Magnetic North: 9.82°

Magnetic Field
Strength: 50460.4snT
Dip Angle: 63.20°
Date: 4/10/2012
Model: BGGM2011

4 1/2" Prod

Vertical Section at 81.84°