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Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

Farmington Field Office

5. Lease Serial No
SF-078138

SUNDRY NOTICES AND REPORTS ON WELLS

6. If Indian, Allottee or Tribe Name

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 page 2

1. Type of Well
 Oil Well Gas Well Other

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

2. Name of Operator
Burlington Resources Oil & Gas Company LP

8. Well Name and No.
Hartman 23 1P

3a. Address
PO Box 4289, Farmington, NM 87499

3b. Phone No. (include area code)
(505) 326-9700

9. API Well No
30-045-35323

4. Location of Well (Footage, Sec., T.R.M., or Survey Description)
Surface Unit K (SESW), 1930' FSL & 2091' FWL, Section 23, T30N, R11W
Bottomhole Unit K (SESW), 1700' FSL & 1927' FWL, Section 23, T30N, R11W

10. Field and Pool or Exploratory Area
Blanco MV/Basin DK

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			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Move Location and add BHL
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 would like to move the staked surface location from 1537' FSL & 1783' FWL to 1930' FSL & 2091' FWL with a 1700' FSL & 1927' FWL bottomhole location making this a directional drill location. Attached please find a revised plat, well pad diagram, cut/fill diagram, topo, driving directions, project proposal, directional drill plan/plot and pipeline plat.

Hold C104
for Directional Survey
and "As Drilled" plat

RCVD JUN 15 '12
OIL CONS. DIV.
DIST. 3

Hold C104
for Directional
and "As Drilled"

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
Arleen Kellywood

Date
5/2/12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by
[Signature]

Title
AFA
Date
6/14/12

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
FPO

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

PC

DISTRICT I
1625 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

RECEIVED

Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr. MAY 02 2012
Santa Fe, N.M. 87505

Farmington Field Office
Bureau of Land Management

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35323	² Pool Code 72319/71599	³ Pool Name BLANCO MESA VERDE / DAKOTA BASIN
⁴ Property Code 7099	⁵ Property Name HARTMAN 23	⁶ Well Number IP
⁷ OGRID No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY LP	⁹ Elevation 5964

¹⁰ Surface Location

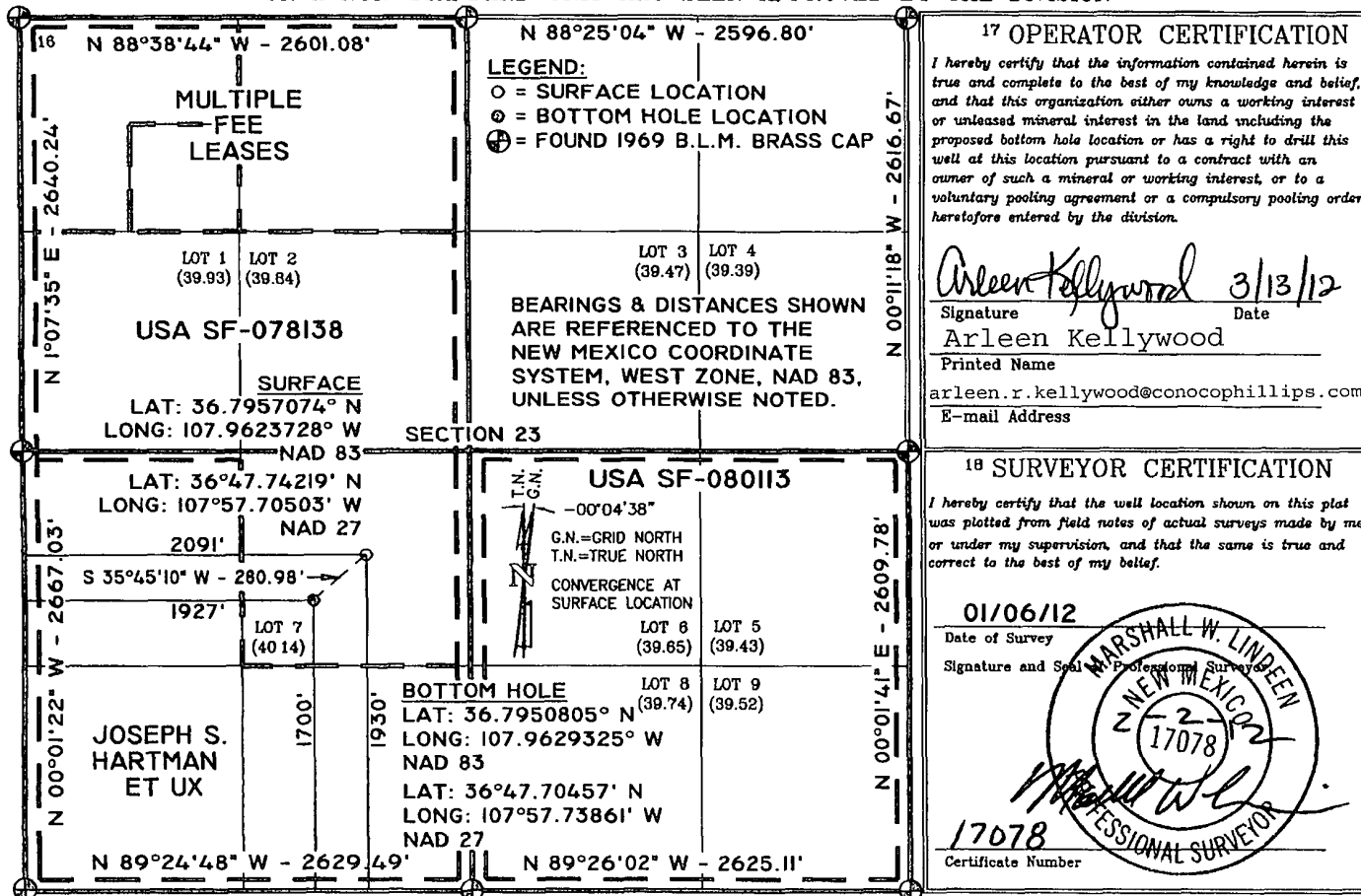
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	23	30 N	11 W	LOT 7	1930	SOUTH	2091	WEST	SAN JUAN

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	23	30 N	11 W	LOT 7	1700	SOUTH	1927	WEST	SAN JUAN

¹² Dedicated Acres 318.48 (S/2) MV 320.00 (W/2) DK	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



BURLINGTON RESOURCES OIL & GAS COMPANY LP

HARTMAN 23 1P

1930' FSL & 2091' FWL (SURFACE)

1700' FSL & 1927' FWL (BOTTOM HOLE)

LATITUDE: 36.7957074° N

LONGITUDE: 107.9623728° W

NAD 83

SECTION 23, T-30-N, R-11-W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO

FROM THE INTERSECTION OF NEW MEXICO STATE HIGHWAY 516 AND MAIN STREET (U.S. HIGHWAY 550) IN AZTEC, NEW MEXICO.

TRAVEL SOUTHERLY ON U.S. HIGHWAY 550 FOR 3.9 MILES.

TURN LEFT AND TRAVEL 0.2 MILE NORTHEASTERLY.

TURN RIGHT AT "Y" IN ROAD AND TRAVEL SOUTHEASTERLY 0.2 MILE.

TURN LEFT AT "Y" IN ROAD AND

TRAVEL EASTERLY, THEN NORTHEASTERLY 0.8 MILE.

TURN LEFT AT "4-WAY" INTERSECTION AND

TRAVEL NORTHWESTERLY 0.4 MILE.

CONTINUE NORTHWESTERLY THROUGH "4-WAY" INTERSECTION 0.4 MILE.

TURN RIGHT AT TEE IN ROAD AND

TRAVEL NORTHEASTERLY 0.4 MILE TO EXISTING

HARTMAN 3R WELL LOCATION AND PROPOSED ACCESS ROAD.

CONTINUE ON PROPOSED ACCESS ROAD TO PROPOSED

HARTMAN 23 1P WELL LOCATION.

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

HARTMAN 23 1P

DEVELOPMENT

Lease:		AFE #: WAN.CDR.0145			AFE \$:		
Field Name: SAN JUAN		Rig: Aztec Rig 730		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						
R20076	DAKOTA(R20076)						
R20002	MESAVERDE(R20002)						
Location: Surface Datum Code: NAD 27 Directional							
Latitude: 36.795703	Longitude: -107.961750	X:	Y:	Section: 23	Range: 011W		
Footage X: 2091 FWL	Footage Y: 1930 FSL	Elevation: 5964	(FT)	Township: 030N			
Tolerance:							
Location: Bottom Hole Datum Code: NAD 27 Directional							
Latitude: 36.795076	Longitude: -107.962310	X:	Y:	Section: 23	Range: 011W		
Footage X: 1927 FWL	Footage Y: 1700 FSL	Elevation:	(FT)	Township: 030N			
Tolerance:							
Location Type: Year Round		Start Date (Est.): 1/1/2012		Completion Date:		Date In Operation:	
Formation Data: Assume KB = 5979 Units = FT							
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	MD (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	200	5779		<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.
OJO ALAMO	980	4999		<input type="checkbox"/>			
KIRTLAND	1111	4868		<input type="checkbox"/>			
FRUITLAND	1799	4180		<input type="checkbox"/>			Possible Gas
PICTURED CLIFFS	2379	3600		<input type="checkbox"/>			
LEWIS	2525	3454		<input type="checkbox"/>			
HUERFANITO BENTONITE	3133	2846		<input type="checkbox"/>			
CHACRA	3394	2585		<input type="checkbox"/>			
UPPER CLIFF HOUSE	3939	2040		<input type="checkbox"/>			Gas; Cliffhouse is wet
MASSIVE CLIFF HOUSE	4088	1891		<input type="checkbox"/>	738		Gas
MENELEE	4158	1821		<input type="checkbox"/>			Est. Top Perf - 4348 (1621)
Intermediate Casing	4308	1671		<input type="checkbox"/>		144	8 3/4" Hole. 7", 20/23 ppf, J-55, STC/LTC Casing. Cement with 975 cuft. Circulate cement to surface.
POINT LOOKOUT	4685	1294		<input type="checkbox"/>			
MANCOS	5082	897		<input type="checkbox"/>			
UPPER GALLUP	5938	41		<input type="checkbox"/>			
GREENHORN	6677	-698		<input type="checkbox"/>			
GRANEROS	6729	-750		<input type="checkbox"/>			
TWO WELLS	6789	-810		<input type="checkbox"/>	1735		Gas
PAGUATE	6859	-880		<input type="checkbox"/>			Est. Btm Perf - 6889 (- 920) based on offset wells
LOWER CUBERO	6909	-930		<input type="checkbox"/>			TD - 20' below T/CBRL

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

HARTMAN 23 1P

DEVELOPMENT

Total Depth	6929	-950	<input type="checkbox"/>	197	6-1/4" hole, 4-1/2" 11.6 ppf, L-80, LTC casing. Cement w/ 347 cuft. Circulate cement a minimum of 100' inside the previous casing string.
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ENCINAL	6962	-983	<input type="checkbox"/>		
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Reference Wells:		
Reference Type	Well Name	Comments
Production	Hartman 1 23	30N 11W 23 SW SW
Production	Ross Fed 1M	30N 11W 23 NW SE SE
Production	Hartman 23 1F	30N 11W 23 NW SE NW

Logging Program:	
Intermediate Logs:	<input type="checkbox"/> Log only if show <input type="checkbox"/> GR/ILD <input type="checkbox"/> Triple Combo

TD Logs:	<input type="checkbox"/> Triple Combo <input type="checkbox"/> Dipmeter <input type="checkbox"/> RFT <input type="checkbox"/> Sonic <input type="checkbox"/> VSP <input type="checkbox"/> TDT <input checked="" type="checkbox"/> Other
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Cased Hole GR / CBL
Mudlog from 100' above top of GLLP to TD - mudlogger will call TD.

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

ConocoPhillips or its affiliates

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Hartman 23 1P
Company:	ConocoPhillips SJBW	TVD Reference:	RKB @ 5979 0ft (Original Well Elev)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 5979 0ft (Original Well Elev)
Site:	Other Named Wells	North Reference:	True
Well:	Hartman 23 1P	Survey Calculation Method:	Minimum Curvature
Wellbore:	Principal Wellbore		
Design:	Plan #1		

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	Other Named Wells				
Site Position:	Northing:	2,063,826.04 ft	Latitude:	36° 40' 18.848 N	
From:	Lat/Long	Easting:	504,691.02 ft	Longitude:	107° 49' 2.415 W
Position Uncertainty:	15.0 ft	Slot Radius:	6-1/8"	Grid Convergence:	0.01 °

Well	Hartman 23 1P					
Well Position	+N/-S	0.0 ft	Northing:	2,108,919.84 ft	Latitude:	36° 47' 44.531 N
	+E/-W	0.0 ft	Easting:	462,400.14 ft	Longitude:	107° 57' 42.302 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,964.0 ft

Wellbore	Principal Wellbore				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	BGGM2011	4/26/2012	(°)	(°)	(nT)
			9.88	63.45	50,622

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	215.68

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	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,702.6	16.05	215.68	1,692.1	-90.7	-65.1	2.00	2.00	0.00	215.68	
2,045.7	16.05	215.68	2,021.9	-167.8	-120.5	0.00	0.00	0.00	0.00	
2,580.8	0.00	0.00	2,550.0	-228.3	-163.9	3.00	-3.00	0.00	180.00	Hartman 23 1P Vertic
4,338.8	0.00	0.00	4,308.0	-228.3	-163.9	0.00	0.00	0.00	0.00	Hartman 23 1P Int Cs
6,959.8	0.00	0.00	6,929.0	-228.3	-163.9	0.00	0.00	0.00	0.00	Hartman 23 1P Prod

ConocoPhillips or its affiliates
Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Hartman 23 1P
Company:	ConocoPhillips SJB	TVD Reference:	RKB @ 5979.0ft (Original Well Elev)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 5979.0ft (Original Well Elev)
Site:	Other Named Wells	North Reference:	True
Well:	Hartman 23 1P	Survey Calculation Method:	Minimum Curvature
Wellbore:	Principal Wellbore		
Design:	Plan #1		

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
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
Surf Casing Pt									
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
980.0	1.60	215.68	980.0	-0.9	-0.7	1.1	2.00	2.00	0.00
Ojo Alamo									
1,000.0	2.00	215.68	1,000.0	-1.4	-1.0	1.7	2.00	2.00	0.00
1,100.0	4.00	215.68	1,099.8	-5.7	-4.1	7.0	2.00	2.00	0.00
1,111.2	4.22	215.68	1,111.0	-6.3	-4.5	7.8	2.00	2.00	0.00
Kirtland									
1,200.0	6.00	215.68	1,199.5	-12.7	-9.2	15.7	2.00	2.00	0.00
1,300.0	8.00	215.68	1,298.7	-22.6	-16.3	27.9	2.00	2.00	0.00
1,400.0	10.00	215.68	1,397.5	-35.4	-25.4	43.5	2.00	2.00	0.00
1,500.0	12.00	215.68	1,495.6	-50.9	-36.5	62.6	2.00	2.00	0.00
1,600.0	14.00	215.68	1,593.1	-69.1	-49.6	85.1	2.00	2.00	0.00
1,700.0	16.00	215.68	1,689.6	-90.2	-64.7	111.0	2.00	2.00	0.00
1,702.6	16.05	215.68	1,692.1	-90.7	-65.1	111.7	2.00	2.00	0.00
1,800.0	16.05	215.68	1,785.7	-112.6	-80.8	138.6	0.00	0.00	0.00
1,813.8	16.05	215.68	1,799.0	-115.7	-83.1	142.4	0.00	0.00	0.00
Fruitland									
1,900.0	16.05	215.68	1,881.8	-135.1	-97.0	166.3	0.00	0.00	0.00
2,000.0	16.05	215.68	1,977.9	-157.5	-113.1	193.9	0.00	0.00	0.00
2,045.7	16.05	215.68	2,021.9	-167.8	-120.5	206.6	0.00	0.00	0.00
2,100.0	14.42	215.68	2,074.3	-179.4	-128.8	220.8	3.00	-3.00	0.00
2,200.0	11.42	215.68	2,171.7	-197.6	-141.8	243.2	3.00	-3.00	0.00
2,300.0	8.42	215.68	2,270.2	-211.6	-151.9	260.4	3.00	-3.00	0.00
2,400.0	5.42	215.68	2,369.5	-221.4	-158.9	272.5	3.00	-3.00	0.00
2,409.6	5.14	215.68	2,379.0	-222.1	-159.4	273.4	3.00	-3.00	0.00
Pictured Cliffs									
2,500.0	2.42	215.68	2,469.2	-226.9	-162.9	279.3	3.00	-3.00	0.00
2,555.8	0.75	215.68	2,525.0	-228.2	-163.8	280.9	3.00	-3.00	0.00
Lewis									
2,580.8	0.00	0.00	2,550.0	-228.3	-163.9	281.0	3.00	-3.00	577.28
Hartman 23 1P Vertical Pt									
3,163.8	0.00	0.00	3,133.0	-228.3	-163.9	281.0	0.00	0.00	0.00
Huerfanito Bentonite									
3,424.8	0.00	0.00	3,394.0	-228.3	-163.9	281.0	0.00	0.00	0.00
Chacra									
3,969.8	0.00	0.00	3,939.0	-228.3	-163.9	281.0	0.00	0.00	0.00
Upper Cliff House									
4,118.8	0.00	0.00	4,088.0	-228.3	-163.9	281.0	0.00	0.00	0.00
Massive Cliff House									
4,188.8	0.00	0.00	4,158.0	-228.3	-163.9	281.0	0.00	0.00	0.00
Menefee									
4,338.8	0.00	0.00	4,308.0	-228.3	-163.9	281.0	0.00	0.00	0.00
Int Casing Pt - Hartman 23 1P Int Csg Pt									
4,715.8	0.00	0.00	4,685.0	-228.3	-163.9	281.0	0.00	0.00	0.00
Pt. Lookout									
5,112.8	0.00	0.00	5,082.0	-228.3	-163.9	281.0	0.00	0.00	0.00
Mancos Shale									
5,968.8	0.00	0.00	5,938.0	-228.3	-163.9	281.0	0.00	0.00	0.00
Gallup									

ConocoPhillips or its affiliates
Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Hartman 23 1P
Company:	ConocoPhillips SJBU	TVD Reference:	RKB @ 5979 0ft (Original Well Elev)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 5979 0ft (Original Well Elev)
Site:	Other Named Wells	North Reference:	True
Well:	Hartman 23 1P	Survey Calculation Method:	Minimum Curvature
Wellbore:	Principal Wellbore		
Design:	Plan #1		

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)	
6,707.8	0.00	0.00	6,677.0	-228.3	-163.9	281.0	0.00	0.00	0.00	
Greenhorn										
6,759.8	0.00	0.00	6,729.0	-228.3	-163.9	281.0	0.00	0.00	0.00	
Graneros										
6,819.8	0.00	0.00	6,789.0	-228.3	-163.9	281.0	0.00	0.00	0.00	
Two Wells										
6,869.8	0.00	0.00	6,859.0	-228.3	-163.9	281.0	0.00	0.00	0.00	
Pauguate										
6,939.8	0.00	0.00	6,909.0	-228.3	-163.9	281.0	0.00	0.00	0.00	
Cubero										
6,959.8	0.00	0.00	6,929.0	-228.3	-163.9	281.0	0.00	0.00	0.00	
Prod Casing Pt - Hartman 23 1P Prod Csg Pt										

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
Hartman 23 1P Int Csg F - hit/miss target - Shape - Point	0.00	0.00	4,308.0	-228.3	-163.9	2,108,691.81	462,235.96	36° 47' 42.274 N	107° 57' 44.317 W	
Hartman 23 1P Vertical I - plan hits target center - Point	0.00	0.00	2,550.0	-228.3	-163.9	2,108,691.78	462,235.95	36° 47' 42.274 N	107° 57' 44.317 W	
Hartman 23 1P Prod Csg - plan hits target center - Point	0.00	0.00	6,929.0	-228.3	-163.9	2,108,691.78	462,235.95	36° 47' 42.274 N	107° 57' 44.317 W	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")		
4,338.8	4,308.0	Int Casing Pt	7	8-3/4		
200.0	200.0	Surf Casing Pt	9-5/8	12-1/4		
6,959.8	6,929.0	Prod Casing Pt	4-1/2	6-1/4		

ConocoPhillips or its affiliates

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Hartman 23 1P
Company:	ConocoPhillips SJB	TVD Reference:	RKB @ 5979.0ft (Original Well Elev)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 5979.0ft (Original Well Elev)
Site:	Other Named Wells	North Reference:	True
Well:	Hartman 23 1P	Survey Calculation Method:	Minimum Curvature
Wellbore:	Principal Wellbore		
Design:	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,759.8	6,729.0	Graneros		0.00		
6,707.8	6,677.0	Greenhorn		0.00		
3,969.8	3,939.0	Upper Cliff House		0.00		
	6,962.0	Encinal		0.00		
1,111.2	1,111.0	Kirtland		0.00		
4,715.8	4,685.0	Pt Lookout		0.00		
4,188.8	4,158.0	Menefee		0.00		
2,409.6	2,379.0	Pictured Cliffs		0.00		
6,889.8	6,859.0	Pauguate		0.00		
2,555.8	2,525.0	Lewis		0.00		
5,112.8	5,082.0	Mancos Shale		0.00		
980.0	980.0	Ojo Alamo		0.00		
6,819.8	6,789.0	Two Wells		0.00		
3,424.8	3,394.0	Chacara		0.00		
4,118.8	4,088.0	Massive Cliff House		0.00		
6,939.8	6,909.0	Cubero		0.00		
1,813.8	1,799.0	Fruitland		0.00		
5,968.8	5,938.0	Gallup		0.00		
3,163.8	3,133.0	Huerfanito Bentonite		0.00		

REFERENCE INFORMATION	Project: San Juan Basin - New Mexico West V
RKB @ 5979.0ft (Original Well Elev) Ground Elevation 5964.0 Reference Lat: 36° 47' 44.531 N Reference Long: 107° 57' 42.302 W	Site: Other Named Wells Well: Hartman 23 1P Wellbore: Principal Wellbore Design: 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	900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.0	
3	1702.6	16.05	215.68	1692.1	-90.7	-65.1	2.00	215.68	111.7	
4	2045.7	16.05	215.68	2021.9	-167.8	-120.5	0.00	0.00	206.6	
5	2580.8	0.00	0.00	2550.0	-228.3	-163.9	3.00	180.00	281.0	Hartman 23 1P Vertical Pt
6	4338.8	0.00	0.00	4308.0	-228.3	-163.9	0.00	0.00	281.0	Hartman 23 1P Int Csg Pt
7	6959.8	0.00	0.00	6929.0	-228.3	-163.9	0.00	0.00	281.0	Hartman 23 1P Prod Csg Pt

FORMATION TOP DETAILS

VDPPath	MDPath	Formation
		Encinal
980.0	980.0	Ojo Alamo
1111.0	1111.2	Kirtland
1799.0	1813.8	Fruitland
2379.0	2409.6	Pictured Cliffs
2525.0	2555.8	Lewis
3133.0	3163.8	Huerfanito Bentonite
3394.0	3424.8	Chacra
3939.0	3969.8	Upper Cliff House
4088.0	4118.8	Massive Cliff House
4158.0	4188.8	Menefee
4685.0	4715.8	Pt. Lookout
5082.0	5112.8	Mancos Shale
5938.0	5968.8	Gallup
6677.0	6707.8	Greenhorn
6729.0	6759.8	Graneros
6789.0	6819.8	Two Wells
6859.0	6889.8	Pauguate
6909.0	6939.8	Cubero

