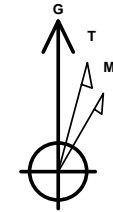




Company: B.P.
Project: Archuleta County, CO NAD83
Site: Cox Pad
Well: Cox 3
Wellbore: Lateral 2
Design: Plan #1

PROJECT DETAILS: Archuleta County, CO NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone
System Datum: Mean Sea Level
Local North: Grid



Azimuths to Grid North
True North: 1.21°
Magnetic North: 10.26°

Magnetic Field
Strength: 49987.6snT
Dip Angle: 63.53°
Date: 5/4/2018
Model: HDGM

WELL DETAILS: Cox 3

GL 6182' & RKB 11' @ 6193.00usft (Aztec 507)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1134035.31	2422538.33	37.0179791	-107.4779111

Plan: Plan #1 (Cox 3/Lateral 2)

Created By: Janie Collins Date: 15:32, May 04 2018

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Cox 3 Lat 2 BHL	2644.00	447.96	4338.59	1134483.27	2426876.92	37.0194604	-107.4630873

SECTION DETAILS

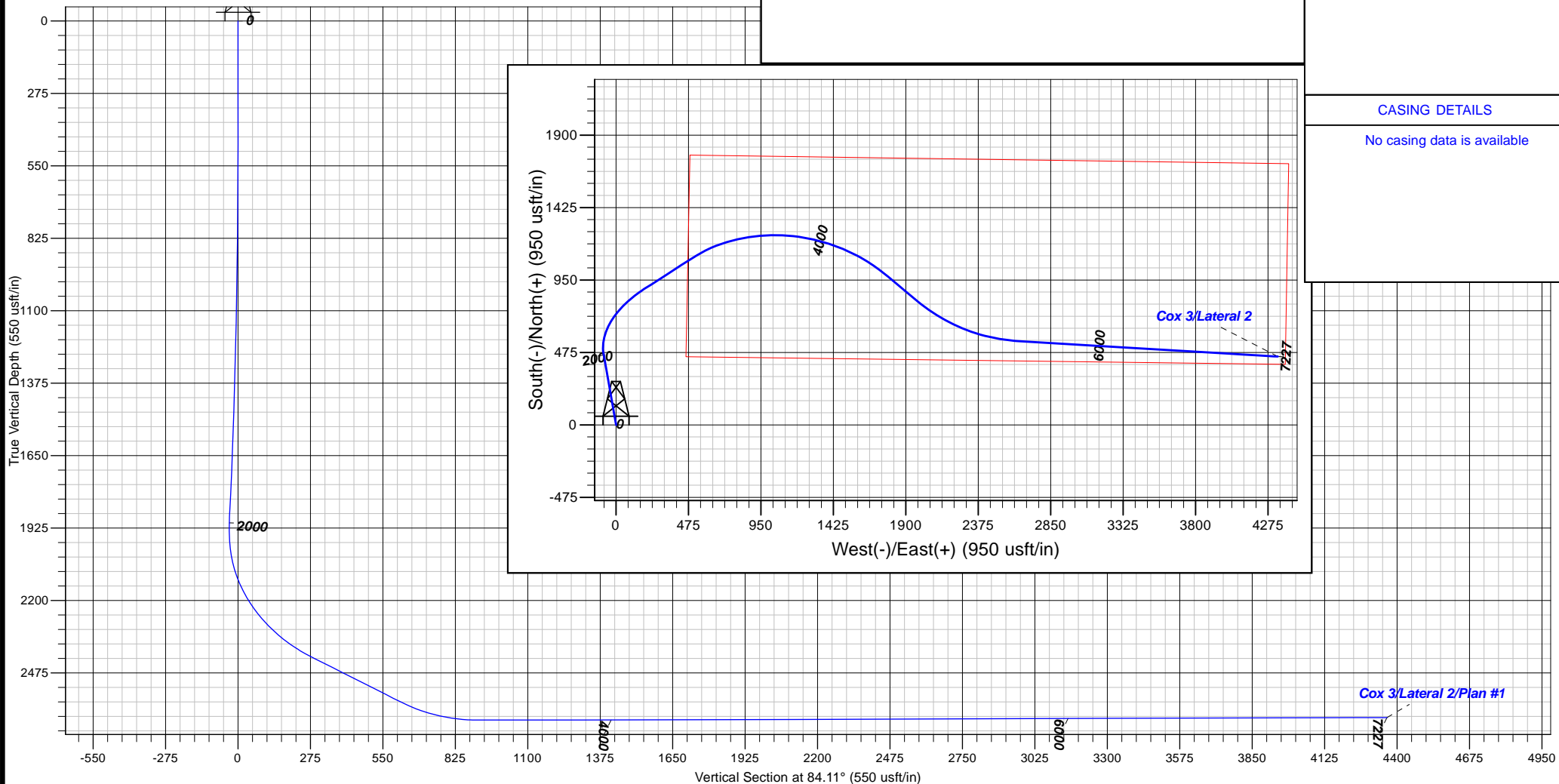
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
3180.84	65.84	57.40	2589.02	1103.42	515.94	0.00	0.00	626.54	
3490.61	90.00	77.40	2654.00	1216.11	792.93	10.00	41.65	913.64	
4542.62	90.17	130.00	2652.32	975.62	1779.49	5.00	89.79	1870.28	
4792.62	90.17	130.00	2651.58	814.92	1971.00	0.00	0.00	2044.27	
5524.65	90.18	93.40	2649.28	548.85	2639.64	5.00	-89.93	2682.05	
7226.59	90.18	93.40	2644.00	447.96	4338.59	0.00	0.00	4361.65	Cox 3 Lat 2 BHL

FORMATION TOP DETAILS

No formation data is available

CASING DETAILS

No casing data is available



B.P.

Archuleta County, CO NAD83

Cox Pad

Cox 3

Lateral 2

Plan: Plan #1

Standard Planning Report

04 May, 2018



Scientific Drilling, Intl

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Cox 3
Company:	B.P.	TVD Reference:	GL 6182' & RKB 11' @ 6193.00usft (Aztec 507)
Project:	Archuleta County, CO NAD83	MD Reference:	GL 6182' & RKB 11' @ 6193.00usft (Aztec 507)
Site:	Cox Pad	North Reference:	Grid
Well:	Cox 3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 2		
Design:	Plan #1		

Project	Archuleta County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Southern Zone		

Site		Cox Pad			
Site Position:		Northing:	1,134,035.31 usft	Latitude:	37.0179790
From:	Map	Easting:	2,422,538.33 usft	Longitude:	-107.4779112
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.21 °

Well	Cox 3					
Well Position	+N/-S	0.00 usft	Northing:	1,134,035.31 usft	Latitude:	37.0179790
	+E/-W	0.00 usft	Easting:	2,422,538.33 usft	Longitude:	-107.4779112
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,182.00 usft

Wellbore	Lateral 2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/4/2018	9.05	63.53	49,988

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	3,180.84
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	84.11

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
3,180.84	65.84	57.40	2,589.02	1,103.42	515.94	0.00	0.00	0.00	0.00	
3,490.61	90.00	77.40	2,654.00	1,216.11	792.93	10.00	7.80	6.46	41.65	
4,542.62	90.17	130.00	2,652.32	975.62	1,779.49	5.00	0.02	5.00	89.79	
4,792.62	90.17	130.00	2,651.58	814.92	1,971.00	0.00	0.00	0.00	0.00	
5,524.65	90.18	93.40	2,649.28	548.85	2,639.64	5.00	0.00	-5.00	-89.93	
7,226.59	90.18	93.40	2,644.00	447.96	4,338.59	0.00	0.00	0.00	0.00	Cox 3 Lat 2 BHL

Scientific Drilling, Intl

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Cox 3
Company:	B.P.	TVD Reference:	GL 6182' & RKB 11' @ 6193.00usft (Aztec 507)
Project:	Archuleta County, CO NAD83	MD Reference:	GL 6182' & RKB 11' @ 6193.00usft (Aztec 507)
Site:	Cox Pad	North Reference:	Grid
Well:	Cox 3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 2		
Design:	Plan #1		

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)
3,180.84	65.84	57.40	2,589.02	1,103.42	515.94	626.54	0.00	0.00	0.00
3,200.00	67.28	58.78	2,596.64	1,112.71	530.87	642.34	10.00	7.50	7.20
3,300.00	74.95	65.57	2,629.02	1,156.70	614.48	730.03	10.00	7.67	6.79
3,400.00	82.81	71.88	2,648.31	1,192.20	705.81	824.53	10.00	7.86	6.31
3,490.61	90.00	77.40	2,654.00	1,216.11	792.93	913.64	10.00	7.94	6.10
3,500.00	90.00	77.87	2,654.00	1,218.12	802.10	922.97	5.00	0.02	5.00
3,600.00	90.02	82.87	2,653.98	1,234.85	900.66	1,022.72	5.00	0.02	5.00
3,700.00	90.04	87.87	2,653.93	1,242.92	1,000.30	1,122.67	5.00	0.02	5.00
3,800.00	90.06	92.87	2,653.84	1,242.28	1,100.27	1,222.04	5.00	0.02	5.00
3,900.00	90.07	97.87	2,653.73	1,232.92	1,199.80	1,320.08	5.00	0.02	5.00
4,000.00	90.09	102.87	2,653.58	1,214.93	1,298.13	1,416.05	5.00	0.02	5.00
4,100.00	90.11	107.87	2,653.41	1,188.43	1,394.53	1,509.21	5.00	0.02	5.00
4,200.00	90.12	112.87	2,653.20	1,153.64	1,488.24	1,598.86	5.00	0.02	5.00
4,300.00	90.14	117.87	2,652.97	1,110.80	1,578.57	1,684.31	5.00	0.01	5.00
4,400.00	90.15	122.87	2,652.72	1,060.26	1,664.82	1,764.91	5.00	0.01	5.00
4,500.00	90.17	127.87	2,652.44	1,002.40	1,746.34	1,840.06	5.00	0.01	5.00
4,542.62	90.17	130.00	2,652.32	975.62	1,779.49	1,870.28	5.00	0.01	5.00
4,600.00	90.17	130.00	2,652.15	938.73	1,823.45	1,910.21	0.00	0.00	0.00
4,700.00	90.17	130.00	2,651.85	874.45	1,900.05	1,979.81	0.00	0.00	0.00
4,792.62	90.17	130.00	2,651.58	814.92	1,971.00	2,044.27	0.00	0.00	0.00
4,800.00	90.17	129.63	2,651.55	810.19	1,976.67	2,049.43	5.00	0.01	-5.00
4,900.00	90.18	124.63	2,651.25	749.85	2,056.37	2,122.51	5.00	0.01	-5.00
5,000.00	90.18	119.63	2,650.94	696.68	2,141.03	2,201.26	5.00	0.00	-5.00
5,100.00	90.18	114.63	2,650.63	651.09	2,229.99	2,285.07	5.00	0.00	-5.00
5,200.00	90.18	109.63	2,650.31	613.43	2,322.60	2,373.32	5.00	0.00	-5.00
5,300.00	90.18	104.63	2,649.99	583.99	2,418.13	2,465.32	5.00	0.00	-5.00
5,400.00	90.18	99.63	2,649.67	562.98	2,515.87	2,560.38	5.00	0.00	-5.00
5,500.00	90.18	94.63	2,649.35	550.57	2,615.06	2,657.78	5.00	0.00	-5.00
5,524.65	90.18	93.40	2,649.28	548.85	2,639.64	2,682.05	5.00	0.00	-5.00
5,600.00	90.18	93.40	2,649.04	544.38	2,714.87	2,756.42	0.00	0.00	0.00
5,700.00	90.18	93.40	2,648.73	538.45	2,814.69	2,855.11	0.00	0.00	0.00
5,800.00	90.18	93.40	2,648.42	532.52	2,914.51	2,953.79	0.00	0.00	0.00
5,900.00	90.18	93.40	2,648.11	526.60	3,014.34	3,052.48	0.00	0.00	0.00
6,000.00	90.18	93.40	2,647.80	520.67	3,114.16	3,151.17	0.00	0.00	0.00
6,100.00	90.18	93.40	2,647.49	514.74	3,213.98	3,249.85	0.00	0.00	0.00
6,200.00	90.18	93.40	2,647.18	508.81	3,313.81	3,348.54	0.00	0.00	0.00
6,300.00	90.18	93.40	2,646.87	502.89	3,413.63	3,447.23	0.00	0.00	0.00
6,400.00	90.18	93.40	2,646.56	496.96	3,513.46	3,545.92	0.00	0.00	0.00
6,500.00	90.18	93.40	2,646.25	491.03	3,613.28	3,644.60	0.00	0.00	0.00
6,600.00	90.18	93.40	2,645.94	485.10	3,713.10	3,743.29	0.00	0.00	0.00
6,700.00	90.18	93.40	2,645.63	479.18	3,812.93	3,841.98	0.00	0.00	0.00
6,800.00	90.18	93.40	2,645.32	473.25	3,912.75	3,940.66	0.00	0.00	0.00
6,900.00	90.18	93.40	2,645.01	467.32	4,012.57	4,039.35	0.00	0.00	0.00
7,000.00	90.18	93.40	2,644.70	461.39	4,112.40	4,138.04	0.00	0.00	0.00
7,100.00	90.18	93.40	2,644.39	455.46	4,212.22	4,236.72	0.00	0.00	0.00
7,200.00	90.18	93.40	2,644.08	449.54	4,312.04	4,335.41	0.00	0.00	0.00
7,226.59	90.18	93.40	2,644.00	447.96	4,338.59	4,361.65	0.00	0.00	0.00
Cox 3 Lat 2 BHL									

Scientific Drilling, Intl

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Cox 3
Company:	B.P.	TVD Reference:	GL 6182' & RKB 11' @ 6193.00usft (Aztec 507)
Project:	Archuleta County, CO NAD83	MD Reference:	GL 6182' & RKB 11' @ 6193.00usft (Aztec 507)
Site:	Cox Pad	North Reference:	Grid
Well:	Cox 3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 2		
Design:	Plan #1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Cox 3 Lat 2 BHL	0.00	0.01	2,644.00	447.96	4,338.59	1,134,483.27	2,426,876.92	37.0194604	-107.4630873
- plan hits target center									
- Point									