

# **ConocoPhillips SJB**

**San Juan Basin - Colorado**

**Allison Unit Wells**

**Allison Unit Com #138H**

**Original Hole**

**Plan: APD Plan**

## **Standard Planning Report**

**20 January, 2015**

# ConocoPhillips

## Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Well Allison Unit Com #138H
<b>Company:</b>	ConocoPhillips SJB	<b>TVD Reference:</b>	WELL @ 6149.0usft
<b>Project:</b>	San Juan Basin - Colorado	<b>MD Reference:</b>	WELL @ 6149.0usft
<b>Site:</b>	Allison Unit Wells	<b>North Reference:</b>	Grid
<b>Well:</b>	Allison Unit Com #138H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	APD Plan		

<b>Project</b>	San Juan Basin - Colorado, Colorado, Design Work		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Southern Zone		

Site	Allison Unit Wells				
Site Position:		Northing:	28,483,279.79 usft	Latitude:	36° 59' 43.487 N
From:	Lat/Long	Easting:	-24,281,743.50 usft	Longitude:	107° 29' 30.484 E
Position Uncertainty:	30.0 usft	Slot Radius:	12-1/4 "	Grid Convergence:	0.00 °

Well	Allison Unit Com #138H, Dual Lateral Horizontal					
Well Position	+N/-S	0.0 usft	Northing:	1,127,387.72 usft	Latitude:	36° 59' 58.740 N
	+E/-W	0.0 usft	Easting:	2,421,227.38 usft	Longitude:	107° 28' 54.901 W
Position Uncertainty		3.5 usft	Wellhead Elevation:	usft	Ground Level:	6,134.0 usft

<b>Wellbore</b>	Original Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	BGGM2014	1/19/2012	9.77	63.75	50,834

<b>Design</b>	APD Plan			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	314.44

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,397.3	0.00	0.00	1,397.3	0.0	0.0	0.00	0.00	0.00	0.00	
3,247.2	90.00	301.89	2,575.0	622.1	-1,000.0	4.86	4.86	0.00	301.89	
3,247.2	90.00	301.89	2,575.0	622.1	-1,000.0	0.00	0.00	0.00	0.00	Allison #138H Entry P
4,226.6	90.00	321.47	2,575.0	1,270.2	-1,727.9	2.00	0.00	2.00	90.00	Allison #138H - BHL
6,698.4	91.25	321.47	2,548.0	3,203.8	-3,267.4	0.05	0.05	0.00	0.00	Allison #138H - BHL

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<b>Company:</b>	ConocoPhillips SJBU	<b>TVD Reference:</b>	WELL @ 6149.0usft
<b>Project:</b>	San Juan Basin - Colorado	<b>MD Reference:</b>	WELL @ 6149.0usft
<b>Site:</b>	Allison Unit Wells	<b>North Reference:</b>	Grid
<b>Well:</b>	Allison Unit Com #138H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	APD Plan		

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
277.0	0.00	0.00	277.0	0.0	0.0	0.0	0.00	0.00	0.00
NACIMIENTO									
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
Surface-9-5/8"									
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
1,397.3	0.00	0.00	1,397.3	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.13	301.89	1,400.0	0.0	0.0	0.0	4.86	4.86	0.00
1,500.0	5.00	301.89	1,499.9	2.4	-3.8	4.4	4.86	4.86	0.00
1,600.0	9.86	301.89	1,599.0	9.2	-14.8	17.0	4.86	4.86	0.00
1,700.0	14.73	301.89	1,696.7	20.4	-32.9	37.8	4.86	4.86	0.00
1,800.0	19.59	301.89	1,792.2	36.0	-57.9	66.6	4.86	4.86	0.00
1,833.9	21.24	301.89	1,824.0	42.3	-67.9	78.1	4.86	4.86	0.00
OJO ALAMO									
1,900.0	24.46	301.89	1,884.9	55.8	-89.7	103.2	4.86	4.86	0.00
1,957.9	27.28	301.89	1,937.0	69.2	-111.2	127.8	4.86	4.86	0.00
KIRTLAND									
2,000.0	29.32	301.89	1,974.0	79.7	-128.1	147.3	4.86	4.86	0.00
2,100.0	34.19	301.89	2,059.0	107.5	-172.8	198.6	4.86	4.86	0.00
2,200.0	39.05	301.89	2,139.3	139.0	-223.4	256.8	4.86	4.86	0.00
2,300.0	43.92	301.89	2,214.2	174.0	-279.7	321.5	4.86	4.86	0.00
2,400.0	48.78	301.89	2,283.2	212.2	-341.1	392.1	4.86	4.86	0.00
2,500.0	53.65	301.89	2,345.8	253.4	-407.2	468.2	4.86	4.86	0.00
2,554.4	56.29	301.89	2,377.0	276.9	-445.0	511.6	4.86	4.86	0.00
FRUITLAND									
2,600.0	58.51	301.89	2,401.6	297.2	-477.7	549.1	4.86	4.86	0.00
2,700.0	63.38	301.89	2,450.1	343.3	-551.9	634.4	4.86	4.86	0.00
2,800.0	68.24	301.89	2,491.1	391.5	-629.3	723.4	4.86	4.86	0.00
2,900.0	73.11	301.89	2,524.2	441.3	-709.4	815.5	4.86	4.86	0.00
3,000.0	77.97	301.89	2,549.1	492.5	-791.6	910.0	4.86	4.86	0.00
3,100.0	82.84	301.89	2,565.8	544.5	-875.3	1,006.2	4.86	4.86	0.00
3,200.0	87.70	301.89	2,574.1	597.2	-959.9	1,103.5	4.86	4.86	0.00
3,247.2	90.00	301.89	2,575.0	622.1	-1,000.0	1,149.6	4.86	4.86	0.00
3,249.2	90.00	301.93	2,575.0	623.2	-1,001.7	1,151.5	2.00	0.00	2.00
Intermediate, 7"									
3,300.0	90.00	302.94	2,575.0	650.4	-1,044.5	1,201.2	2.00	0.00	2.00
3,400.0	90.00	304.94	2,575.0	706.2	-1,127.5	1,299.5	2.00	0.00	2.00
3,500.0	90.00	306.94	2,575.0	764.9	-1,208.5	1,398.4	2.00	0.00	2.00
3,600.0	90.00	308.94	2,575.0	826.4	-1,287.3	1,497.8	2.00	0.00	2.00
3,700.0	90.00	310.94	2,575.0	890.6	-1,364.0	1,597.4	2.00	0.00	2.00
3,800.0	90.00	312.94	2,575.0	957.4	-1,438.4	1,697.3	2.00	0.00	2.00
3,900.0	90.00	314.94	2,575.0	1,026.8	-1,510.4	1,797.3	2.00	0.00	2.00

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<b>Project:</b>	San Juan Basin - Colorado	<b>MD Reference:</b>	WELL @ 6149.0usft
<b>Site:</b>	Allison Unit Wells	<b>North Reference:</b>	Grid
<b>Well:</b>	Allison Unit Com #138H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	APD Plan		

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)	
4,000.0	90.00	316.94	2,575.0	1,098.7	-1,579.9	1,897.3	2.00	0.00	2.00	
4,100.0	90.00	318.94	2,575.0	1,172.9	-1,646.9	1,997.1	2.00	0.00	2.00	
4,200.0	90.00	320.94	2,575.0	1,249.5	-1,711.2	2,096.6	2.00	0.00	2.00	
4,226.6	90.00	321.47	2,575.0	1,270.2	-1,727.9	2,123.1	2.00	0.00	2.00	
4,300.0	90.04	321.47	2,575.0	1,327.6	-1,773.6	2,195.9	0.05	0.05	0.00	
4,400.0	90.09	321.47	2,574.9	1,405.9	-1,835.9	2,295.1	0.05	0.05	0.00	
4,500.0	90.14	321.47	2,574.7	1,484.1	-1,898.2	2,394.4	0.05	0.05	0.00	
4,600.0	90.19	321.47	2,574.4	1,562.3	-1,960.5	2,493.6	0.05	0.05	0.00	
4,700.0	90.24	321.47	2,574.0	1,640.6	-2,022.8	2,592.9	0.05	0.05	0.00	
4,800.0	90.29	321.47	2,573.5	1,718.8	-2,085.0	2,692.1	0.05	0.05	0.00	
4,900.0	90.34	321.47	2,573.0	1,797.0	-2,147.3	2,791.4	0.05	0.05	0.00	
5,000.0	90.39	321.47	2,572.4	1,875.3	-2,209.6	2,890.6	0.05	0.05	0.00	
5,100.0	90.44	321.47	2,571.6	1,953.5	-2,271.9	2,989.9	0.05	0.05	0.00	
5,200.0	90.49	321.47	2,570.8	2,031.7	-2,334.2	3,089.1	0.05	0.05	0.00	
5,300.0	90.54	321.47	2,569.9	2,109.9	-2,396.5	3,188.3	0.05	0.05	0.00	
5,400.0	90.59	321.47	2,568.9	2,188.2	-2,458.7	3,287.6	0.05	0.05	0.00	
5,500.0	90.64	321.47	2,567.8	2,266.4	-2,521.0	3,386.8	0.05	0.05	0.00	
5,600.0	90.70	321.47	2,566.7	2,344.6	-2,583.3	3,486.1	0.05	0.05	0.00	
5,700.0	90.75	321.47	2,565.4	2,422.9	-2,645.6	3,585.3	0.05	0.05	0.00	
5,800.0	90.80	321.47	2,564.1	2,501.1	-2,707.9	3,684.5	0.05	0.05	0.00	
5,900.0	90.85	321.47	2,562.6	2,579.3	-2,770.2	3,783.8	0.05	0.05	0.00	
6,000.0	90.90	321.47	2,561.1	2,657.5	-2,832.4	3,883.0	0.05	0.05	0.00	
6,100.0	90.95	321.47	2,559.5	2,735.8	-2,894.7	3,982.3	0.05	0.05	0.00	
6,200.0	91.00	321.47	2,557.8	2,814.0	-2,957.0	4,081.5	0.05	0.05	0.00	
6,300.0	91.05	321.47	2,556.0	2,892.2	-3,019.3	4,180.7	0.05	0.05	0.00	
6,400.0	91.10	321.47	2,554.1	2,970.4	-3,081.5	4,279.9	0.05	0.05	0.00	
6,500.0	91.15	321.47	2,552.2	3,048.6	-3,143.8	4,379.2	0.05	0.05	0.00	
6,600.0	91.20	321.47	2,550.1	3,126.9	-3,206.1	4,478.4	0.05	0.05	0.00	
6,698.4	91.25	321.47	2,548.0	3,203.8	-3,267.4	4,576.0	0.05	0.05	0.00	
Production, 4-1/2"										

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## Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Well Allison Unit Com #138H
<b>Company:</b>	ConocoPhillips SJB	<b>TVD Reference:</b>	WELL @ 6149.0usft
<b>Project:</b>	San Juan Basin - Colorado	<b>MD Reference:</b>	WELL @ 6149.0usft
<b>Site:</b>	Allison Unit Wells	<b>North Reference:</b>	Grid
<b>Well:</b>	Allison Unit Com #138H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	APD Plan		

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)		
Allison #138H 660' Setb:	0.00	0.00	0.0	3,816.0	-1,017.5	1,131,203.72	2,420,209.87	37° 0' 36.247 N	107° 29' 8.441 W
- plan misses target center by 3340.8usft at 5812.6usft MD (2563.9 TVD, 2511.0 N, -2715.7 E)									
- Polygon									
Point 1			0.0	0.0	0.0	1,131,203.72	2,420,209.87		
Point 2			0.0	-2,548.1	14.2	1,128,655.62	2,420,224.07		
Point 3			0.0	-3,640.4	19.3	1,127,563.32	2,420,229.17		
Allison Unit 138H Sectic	0.00	0.00	0.0	180.7	980.0	1,127,568.46	2,422,207.39	37° 0' 0.732 N	107° 28' 42.871 W
- plan misses target center by 996.5usft at 0.0usft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			0.0	0.0	0.0	1,127,568.46	2,422,207.39		
Point 2			0.0	3,641.1	-16.6	1,131,209.56	2,422,190.79		
Point 3			0.0	3,629.4	-2,658.4	1,131,197.86	2,419,548.99		
Point 4			0.0	3,628.8	-5,307.3	1,131,197.26	2,416,900.09		
Point 5			0.0	1,007.3	-5,301.2	1,128,575.76	2,416,906.19		
Point 6			0.0	-15.2	-5,324.9	1,127,553.26	2,416,882.49		
Point 7			0.0	-12.9	-4,519.6	1,127,555.56	2,417,687.79		
Allison #138H - BHL	0.00	360.00	2,548.0	3,203.8	-3,267.4	1,130,591.54	2,417,960.01	37° 0' 29.722 N	107° 29' 36.011 W
- plan hits target center									
- Point									
Allison 138H East COM	0.00	0.00	0.0	3,816.0	-357.5	1,131,203.72	2,420,869.87	37° 0' 36.385 N	107° 29' 0.306 W
- plan misses target center by 3696.5usft at 5390.2usft MD (2569.0 TVD, 2180.5 N, -2452.7 E)									
- Polygon									
Point 1			0.0	0.0	0.0	1,131,203.72	2,420,869.87		
Point 2			0.0	-2,548.1	14.2	1,128,655.62	2,420,884.07		
Point 3			0.0	-3,640.4	19.3	1,127,563.32	2,420,889.17		
Allison #138H Entry Poir	0.00	0.00	2,575.0	622.1	-1,000.0	1,128,009.84	2,420,227.38	37° 0' 4.680 N	107° 29' 7.388 W
- plan hits target center									
- Point									

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")		
500.0	500.0	Surface-9-5/8"	9-5/8	12-1/4		
3,249.2	2,575.0	Intermediate, 7"	7	8-3/4		
6,698.4	2,548.0	Production, 4-1/2"	4-1/2	6-1/4		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,957.9	1,937.0	KIRTLAND		0.00		
1,833.9	1,824.0	OJO ALAMO		0.00		
2,554.4	2,377.0	FRUITLAND		0.00		
277.0	277.0	NACIMIENTO		0.00		