

30-039-29443

ConocoPhillips

ConocoPhillips
Field: Rio Arriba County, NM
Site: San Juan 31-6 #13G
Well: Well 31-6 #13G
Wellpath: Original Hole
Plan: Plan #2



Azimuths to Grid North
 True North -0 16"
 Magnetic North. 10 19"
 Magnetic Field
 Strength 51213nT
 Dip Angle 63.48°
 Date 9/26/2006
 Model. igr2005

FIELD DETAILS

Rio Arriba County, NM
 USA

Geodetic System US State Plane Coordinate System 1983
 Ellipsoid GRS 1980
 Zone New Mexico, Western Zone
 Magnetic Model igr2005

System Datum: Mean Sea Level
 Local North: Grid North

SITE DETAILS

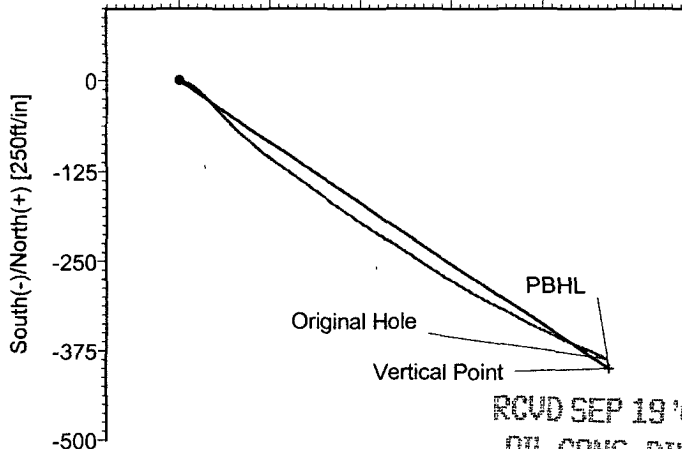
San Juan 31-6 #13G
 Se 4, T30N, R6W
 Rio Arriba County

Water Depth 0.00
 Positional Uncertainty 0.00
 Convergence 0.00

Surface 2100/N 660/W
 BHL 2487/N 1245/W M 18210

West(-)/East(+) [250ft/in] TVD 8095

0 125 250 375 500 625



RCVD SEP 19 '07
 OIL CONS. DIV.

DIST. 3

CASING DETAILS

No.	TVD	MD	Name	Size
1	230.00	230.00	Surface	9 625
2	3693.00	3812.08	Intermediate	7 000

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
Vertical Point	2998.00	-400.00	590.00	Point
PBHL	8018.00	-400.00	590.00	Point

WELLPATH DETAILS

Original Hole

Ref. Datum:	SITE	Origin +N/-S	Origin +E/-W	Starting From TVD
124 14°	0.00ft	0.00	0.00	0.00

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	124.14	0.00	0.00	0.00	0.00	0.00	0.00	
2	350.00	0.00	124.14	350.00	0.00	0.00	0.00	0.00	0.00	
3	1119.04	23.07	124.14	1098.42	-85.72	126.43	3.00	124.14	152.75	
4	1963.52	23.07	124.14	1875.37	-271.42	400.35	0.00	0.00	483.68	
5	3117.08	0.00	124.14	2998.00	-400.00	590.00	2.00	180.00	712.81	Vertical Point
6	8137.08	0.00	124.14	8018.00	-400.00	590.00	0.00	124.14	712.81	PBHL

Vertical Section at 124.14° [1000ft/in]

Ryan Energy Technology
 16510 Oil Center Blvd
 Houston, TX 77073
 Ph 281-443-1414
 Fx 281-443-1676



Ryan The leader in
 UNDERGROUND INTELLIGENCE™

Plan Plan #2 (Well 31-6 #13G/Original Hole)
 Created By Alexis Gonzalez Date 10/23/2009
 Checked _____ Date _____
 Reviewed _____ Date _____
 Approved _____ Date _____

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Ryan Energy Technologied

Survey Report



Company: ConocoPhillips		Date: 10/23/2006		Time: 16:20:15		Page: 1	
Field: Rio Arriba County, NM		Co-ordinate(N/E) Reference:		Site: San Juan 31-6 #13G, Grid North			
Site: San Juan 31-6 #13G		Vertical (TVD) Reference:		SITE: 0.0			
Well: Well 31-6 #13G		Section (VS) Reference:		Well (0.00N,0.00E,124.14Azi)			
Wellpath: Original Hole		Survey Calculation Method:		Minimum Curvature		Db: Sybase	

Field: Rio Arriba County, NM			
USA			
Map System: US State Plane Coordinate System 1983		Map Zone: New Mexico, Western Zone	
Geo Datum: GRS 1980		Coordinate System: Site Centre	
Sys Datum: Mean Sea Level		Geomagnetic Model: igrf2005	

Site: San Juan 31-6 #13G Se. 4, T30N, R6W Rio Arriba County			
Site Position:	From: Local Only	Northing:	ft
Position Uncertainty:	0.00 ft	Easting:	ft
Ground Level:	0.00 ft	Latitude:	
		Longitude:	
		North Reference:	Grid
		Grid Convergence:	deg

Well: Well 31-6 #13G				Slot Name:			
Well Position:	+N/-S	0.00 ft	Northing:	ft	Latitude:		
	+E/-W	0.00 ft	Easting :	ft	Longitude:		
Position Uncertainty:	0.00 ft						

Wellpath: Original Hole				Drilled From: Surface			
Current Datum: SITE				Tie-on Depth: 0.00 ft			
Magnetic Data: 9/26/2006				Above System Datum: Mean Sea Level			
Field Strength: 0 nT				Declination: 0.00 deg			
Vertical Section: Depth From (TVD)				Mag Dip Angle: 0.00 deg			
	ft	+N/-S	ft	+E/-W	ft	Direction	deg
0.00		0.00		0.00		124.14	

Survey Program for Definitive Wellpath			
Date: 10/23/2006		Validated: No	
Actual From		Version: 0	
To		Toolcode	
ft		Tool Name	
267.00	2799.00	Ryan MWD (267.00-2799.00)	
2851.00	2851.00	Survey #2 (2851.00-2851.00)	
		Projection	
		Projection	

Survey										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	Tool/Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
267.00	3.40	108.60	266.84	-2.53	7.51	7.63	1.27	1.27	0.00	
361.00	3.50	111.70	360.67	-4.48	12.81	13.12	0.23	0.11	3.30	
454.00	4.30	123.40	453.46	-7.45	18.36	19.38	1.21	0.86	12.58	
547.00	6.90	130.10	546.01	-12.96	25.55	28.42	2.88	2.80	7.20	
638.00	8.20	134.90	636.22	-21.07	34.33	40.23	1.59	1.43	5.27	
683.00	9.80	135.30	680.66	-26.05	39.29	47.14	3.56	3.56	0.89	
773.00	12.40	137.10	768.97	-38.58	51.26	64.08	2.91	2.89	2.00	
863.00	15.10	135.70	856.38	-54.05	66.03	84.98	3.02	3.00	-1.56	
953.00	17.90	132.10	942.67	-71.72	84.48	110.17	3.31	3.11	-4.00	
1043.00	21.10	130.40	1027.50	-91.49	107.09	139.98	3.61	3.56	-1.89	
1133.00	23.70	126.90	1110.70	-112.86	133.89	174.16	3.25	2.89	-3.89	
1223.00	25.60	126.20	1192.50	-135.20	164.05	211.66	2.14	2.11	-0.78	
1313.00	25.10	125.80	1273.83	-157.85	195.23	250.17	0.59	-0.56	-0.44	
1403.00	24.60	125.20	1355.50	-179.82	226.02	287.98	0.62	-0.56	-0.67	
1493.00	24.10	123.40	1437.50	-200.73	256.66	325.09	0.99	-0.56	-2.00	
1583.00	22.70	121.60	1520.09	-219.95	286.80	360.81	1.75	-1.56	-2.00	
1673.00	22.20	124.80	1603.27	-238.75	315.55	395.16	1.47	-0.56	3.56	
1763.00	21.20	123.40	1686.90	-257.41	343.10	428.44	1.25	-1.11	-1.56	
1853.00	20.30	121.60	1771.06	-274.55	369.98	460.31	1.23	-1.00	-2.00	
1943.00	19.40	120.60	1855.71	-290.34	396.15	490.82	1.07	-1.00	-1.11	
2033.00	18.50	118.80	1940.83	-304.83	421.53	519.96	1.19	-1.00	-2.00	

Ryan Energy Technologied

Survey Report



Company: ConocoPhillips Field: Rio Arriba County, NM Site: San Juan 31-6 #13G Well: Well 31-6 #13G Wellpath: Original Hole	Date: 10/23/2006 Time: 16:20:15 Page: 2 Co-ordinate(N/E) Reference: Site: San Juan 31-6 #13G, Grid North Vertical (TVD) Reference: SITE 0.0 Section (VS) Reference: Well (0.00N,0.00E,124.14Azi) Survey Calculation Method: Minimum Curvature Db: Sybase
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Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
2124.00	17.90	119.20	2027.28	-318.61	446.38	548.27	0.67	-0.66	0.44	
2214.00	17.00	119.20	2113.14	-331.78	469.94	575.15	1.00	-1.00	0.00	
2304.00	16.30	116.70	2199.36	-343.87	492.71	600.79	1.11	-0.78	-2.78	
2349.00	15.40	114.20	2242.65	-349.16	503.80	612.93	2.51	-2.00	-5.56	
2394.00	15.30	114.10	2286.05	-354.03	514.67	624.67	0.23	-0.22	-0.22	
2439.00	14.60	115.30	2329.52	-358.88	525.22	636.12	1.70	-1.56	2.67	
2484.00	13.40	113.60	2373.19	-363.39	535.13	646.85	2.82	-2.67	-3.78	
2529.00	11.70	113.60	2417.11	-367.30	544.09	656.46	3.78	-3.78	0.00	
2574.00	10.80	113.90	2461.24	-370.84	552.12	665.10	2.00	-2.00	0.67	
2619.00	9.90	113.20	2505.51	-374.07	559.53	673.04	2.02	-2.00	-1.56	
2664.00	8.80	113.90	2549.91	-376.99	566.24	680.23	2.46	-2.44	1.56	
2709.00	7.40	116.30	2594.46	-379.67	571.98	686.49	3.20	-3.11	5.33	
2754.00	6.40	118.40	2639.14	-382.15	576.79	691.85	2.29	-2.22	4.67	
2799.00	5.50	119.80	2683.89	-384.41	580.86	696.50	2.03	-2.00	3.11	
2851.00	5.50	119.80	2735.65	-386.89	585.19	701.47	0.00	0.00	0.00	PROJECTED to TD

ConocoPhillips**COP Deviation Report
SAN JUAN 31-6 UNIT #13G****Survey Data**

Date	MD (ftKB)	Incl (°)	Method	Survey Company
10/17/2006	2,709.00	7.40	MWD	RYAN
10/17/2006	2,754.00	6.40	MWD	RYAN
10/17/2006	2,799.00	5.50	MWD	RYAN
10/17/2006	2,851.00	5.50	MWD	RYAN
10/21/2006	3,105.00	3.50	TOTCO	RIG
10/24/2006	3,812.00	1.50	TOTCO	RIG
10/31/2006	7,018.00	0.50	TOTCO	RIG
11/2/2006	7,602.00	0.50	TOTCO	RIG
11/5/2006	8,210.00	5.00	TOTCO	RIG

on bottom laid over *H*

RCVD SEP 19 '07

OIL CONS. DIV.

DIST. 3

I, the undersigned, certify that I acting in my capacity as DRAWING ENGINEER for ConocoPhillips Company, am authorized by said Company to make this report; and that said report was prepared under my supervision and directions, and that the facts stated herein are true to the best of my knowledge and belief.

[Signature]

Subscribed and sworn to me this 17TH DAY OF SEPTEMBER 2007

[Signature]

Notary Public in and for San Juan County, New Mexico

My Commission expires Jan 24, 2011



COP Deviation Report

SAN JUAN 31-6 UNIT #13G

Operator CONOCOPHILLIPS CO	Legal WellName SAN JUAN 31-6 UNIT #13G	API / UWI 300392964300	County RIO ARRIBA	State/Province NEW MEXICO
Surface Legal Location NMPM-30N-06W-04-E	N/S Dist (ft) 2,100.00	N/S Ref N	E/W Dist (ft) 660.00	E/W Ref W

Survey Data				
Date	MD (ftKB)	Incl (°)	Method	Survey Company
10/13/2006	120.00	0.75	TOTCO	
10/2/2006	136.00	0.75	A1 SURSHOT	MOTE
10/2/2006	236.00	2.75	A1 SURSHOT	MOTE
10/13/2006	240.00	0.75	TOTCO	RIG
10/17/2006	267.00	3.40	MWD	RYAN
10/17/2006	361.00	3.50	MWD	RYAN
10/17/2006	454.00	4.30	MWD	RYAN
10/17/2006	547.00	6.90	MWD	RYAN
10/17/2006	638.00	8.20	MWD	RYAN
10/17/2006	683.00	9.80	MWD	RYAN
10/17/2006	773.00	12.40	MWD	RYAN
10/17/2006	863.00	15.10	MWD	RYAN
10/17/2006	953.00	17.90	MWD	RYAN
10/17/2006	1,043.00	21.10	MWD	RYAN
10/17/2006	1,133.00	23.70	MWD	RYAN
10/17/2006	1,223.00	25.60	MWD	RYAN
10/17/2006	1,313.00	25.10	MWD	RYAN
10/17/2006	1,403.00	24.60	MWD	RYAN
10/17/2006	1,493.00	24.10	MWD	RYAN
10/17/2006	1,583.00	22.70	MWD	RYAN
10/17/2006	1,673.00	22.20	MWD	RYAN
10/17/2006	1,763.00	21.20	MWD	RYAN
10/17/2006	1,853.00	20.30	MWD	RYAN
10/17/2006	1,943.00	19.40	MWD	RYAN
10/17/2006	2,033.00	18.50	MWD	RYAN
10/17/2006	2,124.00	17.90	MWD	RYAN
10/17/2006	2,214.00	17.00	MWD	RYAN
10/17/2006	2,304.00	16.30	MWD	RYAN
10/17/2006	2,349.00	15.40	MWD	RYAN
10/17/2006	2,394.00	15.30	MWD	RYAN
10/17/2006	2,439.00	14.60	MWD	RYAN
10/17/2006	2,484.00	13.40	MWD	RYAN
10/17/2006	2,529.00	11.70	MWD	RYAN
10/17/2006	2,574.00	10.80	MWD	RYAN
10/17/2006	2,619.00	9.90	MWD	RYAN
10/17/2006	2,664.00	8.80	MWD	RYAN

I, the undersigned, certify that I acting in my capacity as _____ for ConocoPhillips Company, am authorized by said Company to make this report; and that said report was prepared under my supervision and directions, and that the facts stated herein are true to the best of my knowledge and belief.

Subscribed and sworn to me this _____

Notary Public in and for San Juan County, New Mexico

My Commission expires _____