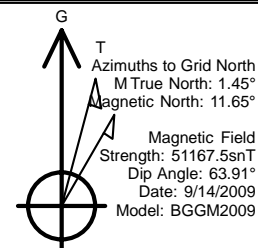


SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.0	
350.0	6.00	90.00	349.6	0.0	10.5	3.00	90.00	9.1	
430.0	6.00	90.00	429.2	0.0	18.8	0.00	0.00	16.3	
1149.6	41.01	58.95	1080.0	125.9	266.9	5.00	-35.18	294.1	
2995.5	41.01	58.95	2473.0	750.7	1304.6	0.00	0.00	1505.2	PC CLARY 4
3227.4	41.01	58.95	2648.0	829.2	1435.0	0.00	0.00	1657.3	PBHL CLARY 4

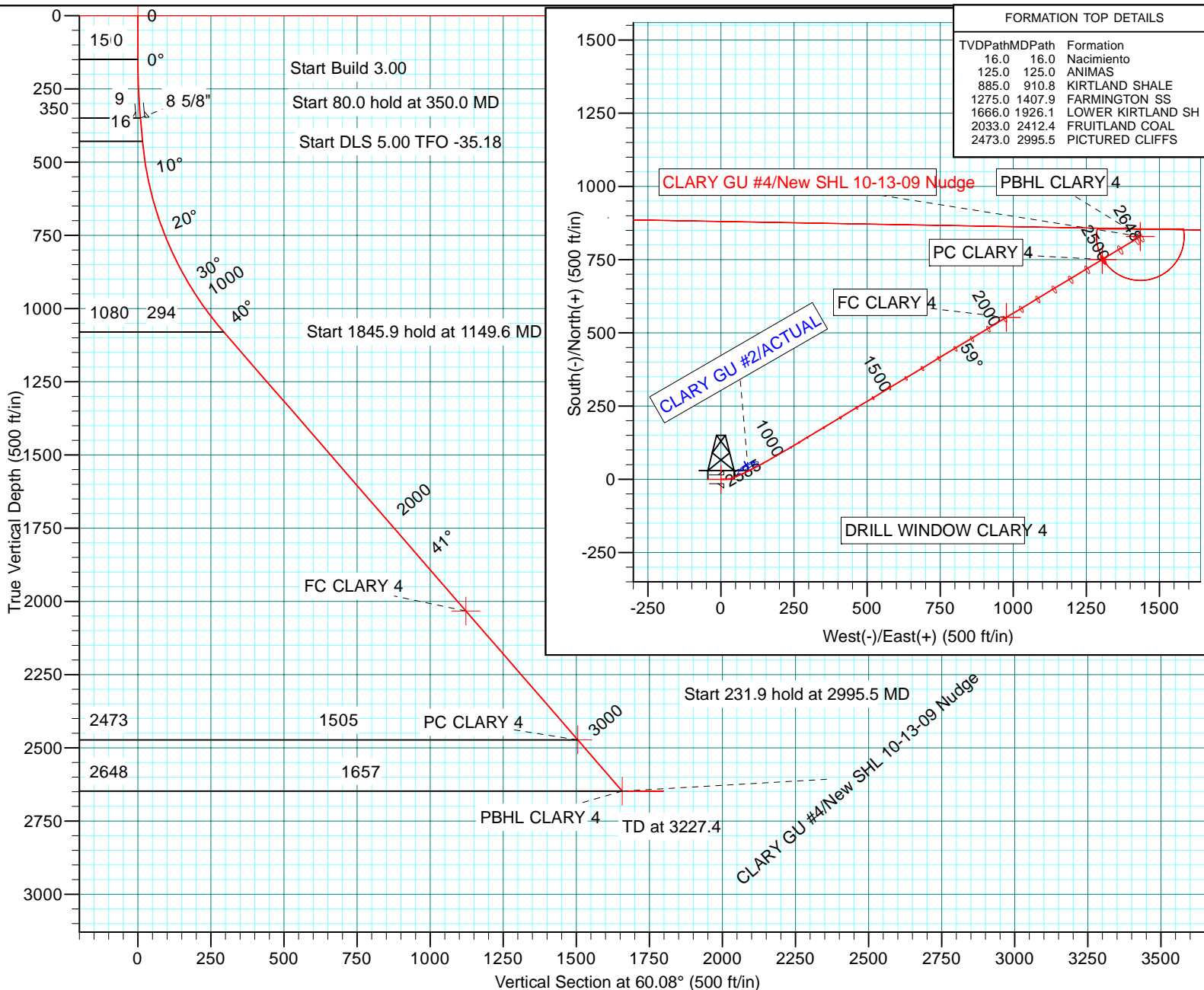


WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
DRILL WINDOW CLARY 4				1198173.44	2310729.62	Polygon
FC CLARY 4	2033.0	553.4	976.8	1198726.85	2311706.43	Point
PC CLARY 4	2473.0	750.7	1304.6	1198924.15	2312034.23	Point
PBHL CLARY 4	2648.0	829.2	1435.0	1199002.65	2312164.63	Circle (Radius: 150.0)

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
16.0	16.0	Nacimiento
125.0	125.0	ANIMAS
885.0	910.8	KIRTLAND SHALE
1275.0	1407.9	FARMINGTON SS
1666.0	1926.1	LOWER KIRTLAND SH
2033.0	2412.4	FRUITLAND COAL
2473.0	2995.5	PICTURED CLIFFS



Plan: New SHL 10-13-09 Nudge (CLARY GU #4/Wellbore #1)

Created By: Masoud Khodadad 3/30/2007

Checked: _____

Reviewed: _____

PROJECT DETAILS:

Western - San Juan North (NAD 83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone

System Datum: Mean Sea Level

WELL DETAILS: CLARY GU #4

Ground Level: 6377.0
Northing 1198173.44 Easting 2310729.62 37° 11' 12.984 N 107° 51' 58.644 W Longitude

North America - Onshore US - BP

Western - San Juan North (NAD 83)

SEC 18-T34N-R9W

CLARY GU #4

Wellbore #1

Plan: New SHL 10-13-09 Nudge

Standard Planning Report

14 October, 2009

IT&S Drilling and Completions

Planning Report

Database:	EDM .16 Hou Prod - WH21P	Local Co-ordinate Reference:	Well CLARY GU #4
Company:	North America - Onshore US - BP	TVD Reference:	RKB MSL @ 6393.0ft (H&P 291)
Project:	Western - San Juan North (NAD 83)	MD Reference:	RKB MSL @ 6393.0ft (H&P 291)
Site:	SEC 18-T34N-R9W	North Reference:	Grid
Well:	CLARY GU #4	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	New SHL 10-13-09 Nudge		

Project	Western - San Juan North (NAD 83), LAPLATA COUNTY COLORADO, USA		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Southern Zone		Using geodetic scale factor

Site		SEC 18-T34N-R9W			
Site Position:		Northing:	1,198,176.86 ft	Latitude:	37° 11' 13.020 N
From:	Lat/Long	Easting:	2,310,738.45 ft	Longitude:	107° 51' 58.536 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	-1.45 °

Well	CLARY GU #4					
Well Position	+N/-S	0.0 ft	Northing:	1,198,173.44 ft	Latitude:	37° 11' 12.984 N
	+E/-W	0.0 ft	Easting:	2,310,729.62 ft	Longitude:	107° 51' 58.644 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	6,393.0 ft	Ground Level:	6,377.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2007	2/10/2009	10.34	63.89	51,196

Design	New SHL 10-13-09 Nudge			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	60.08

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	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.00	0.00	
350.0	6.00	90.00	349.6	0.0	10.5	3.00	3.00	0.00	90.00	
430.0	6.00	90.00	429.2	0.0	18.8	0.00	0.00	0.00	0.00	
1,149.6	41.01	58.95	1,080.0	125.9	266.9	5.00	4.87	-4.32	-35.18	
2,995.5	41.01	58.95	2,473.0	750.7	1,304.6	0.00	0.00	0.00	0.00	PC CLARY 4
3,227.4	41.01	58.95	2,648.0	829.2	1,435.0	0.00	0.00	0.00	0.00	PBHL CLARY 4

IT&S Drilling and Completions

Planning Report

Database:	EDM .16 Hou Prod - WH21P	Local Co-ordinate Reference:	Well CLARY GU #4
Company:	North America - Onshore US - BP	TVD Reference:	RKB MSL @ 6393.0ft (H&P 291)
Project:	Western - San Juan North (NAD 83)	MD Reference:	RKB MSL @ 6393.0ft (H&P 291)
Site:	SEC 18-T34N-R9W	North Reference:	Grid
Well:	CLARY GU #4	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	New SHL 10-13-09 Nudge		

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
DRILL WINDOW CLARY 4									
16.0	0.00	0.00	16.0	0.0	0.0	0.0	0.00	0.00	0.00
Nacimiento									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
125.0	0.00	0.00	125.0	0.0	0.0	0.0	0.00	0.00	0.00
ANIMAS									
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 3.00									
200.0	1.50	90.00	200.0	0.0	0.7	0.6	3.00	3.00	0.00
300.0	4.50	90.00	299.8	0.0	5.9	5.1	3.00	3.00	0.00
350.0	6.00	90.00	349.6	0.0	10.5	9.1	3.00	3.00	0.00
Start 80.0 hold at 350.0 MD - 8 5/8"									
400.0	6.00	90.00	399.4	0.0	15.7	13.6	0.00	0.00	0.00
430.0	6.00	90.00	429.2	0.0	18.8	16.3	0.00	0.00	0.00
Start DLS 5.00 TFO -35.18									
500.0	9.09	77.13	498.6	1.2	27.9	24.8	5.00	4.41	-18.38
600.0	13.84	69.15	596.6	7.3	46.8	44.1	5.00	4.75	-7.99
700.0	18.72	65.23	692.5	18.2	72.5	72.0	5.00	4.88	-3.92
800.0	23.65	62.89	785.7	34.1	105.0	108.0	5.00	4.93	-2.34
900.0	28.60	61.32	875.5	54.8	143.8	152.0	5.00	4.95	-1.57
910.8	29.14	61.18	885.0	57.3	148.4	157.2	5.00	4.96	-1.29
KIRTLAND SHALE									
1,000.0	33.57	60.19	961.1	80.0	188.9	203.6	5.00	4.97	-1.12
1,100.0	38.54	59.31	1,041.9	109.7	239.7	262.4	5.00	4.97	-0.87
1,149.6	41.01	58.95	1,080.0	125.9	266.9	294.1	5.00	4.98	-0.74
Start 1845.9 hold at 1149.6 MD									
1,200.0	41.01	58.95	1,118.1	143.0	295.2	327.2	0.00	0.00	0.00
1,300.0	41.01	58.95	1,193.6	176.8	351.5	392.8	0.00	0.00	0.00
1,400.0	41.01	58.95	1,269.0	210.7	407.7	458.4	0.00	0.00	0.00
1,407.9	41.01	58.95	1,275.0	213.4	412.1	463.6	0.00	0.00	0.00
FARMINGTON SS									
1,500.0	41.01	58.95	1,344.5	244.5	463.9	524.0	0.00	0.00	0.00
1,600.0	41.01	58.95	1,419.9	278.4	520.1	589.6	0.00	0.00	0.00
1,700.0	41.01	58.95	1,495.4	312.2	576.3	655.2	0.00	0.00	0.00
1,800.0	41.01	58.95	1,570.9	346.1	632.5	720.9	0.00	0.00	0.00
1,900.0	41.01	58.95	1,646.3	379.9	688.7	786.5	0.00	0.00	0.00
1,926.1	41.01	58.95	1,666.0	388.7	703.4	803.6	0.00	0.00	0.00
LOWER KIRTLAND SH									
2,000.0	41.01	58.95	1,721.8	413.8	745.0	852.1	0.00	0.00	0.00
2,100.0	41.01	58.95	1,797.2	447.6	801.2	917.7	0.00	0.00	0.00
2,200.0	41.01	58.95	1,872.7	481.5	857.4	983.3	0.00	0.00	0.00
2,300.0	41.01	58.95	1,948.2	515.3	913.6	1,048.9	0.00	0.00	0.00
2,400.0	41.01	58.95	2,023.6	549.1	969.8	1,114.5	0.00	0.00	0.00
2,412.4	41.01	58.95	2,033.0	553.4	976.8	1,122.6	0.00	0.00	0.00
FRUITLAND COAL - FC CLARY 4									
2,500.0	41.01	58.95	2,099.1	583.0	1,026.0	1,180.1	0.00	0.00	0.00
2,600.0	41.01	58.95	2,174.5	616.8	1,082.3	1,245.7	0.00	0.00	0.00
2,700.0	41.01	58.95	2,250.0	650.7	1,138.5	1,311.3	0.00	0.00	0.00
2,800.0	41.01	58.95	2,325.5	684.5	1,194.7	1,376.9	0.00	0.00	0.00
2,900.0	41.01	58.95	2,400.9	718.4	1,250.9	1,442.5	0.00	0.00	0.00
2,995.5	41.01	58.95	2,473.0	750.7	1,304.6	1,505.2	0.00	0.00	0.00

IT&S Drilling and Completions

Planning Report

Database:	EDM .16 Hou Prod - WH21P	Local Co-ordinate Reference:	Well CLARY GU #4
Company:	North America - Onshore US - BP	TVD Reference:	RKB MSL @ 6393.0ft (H&P 291)
Project:	Western - San Juan North (NAD 83)	MD Reference:	RKB MSL @ 6393.0ft (H&P 291)
Site:	SEC 18-T34N-R9W	North Reference:	Grid
Well:	CLARY GU #4	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	New SHL 10-13-09 Nudge		

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)
Start 231.9 hold at 2995.5 MD - PICTURED CLIFFS - PC CLARY 4									
3,000.0	41.01	58.95	2,476.4	752.2	1,307.1	1,508.1	0.00	0.00	0.00
3,100.0	41.01	58.95	2,551.8	786.1	1,363.3	1,573.7	0.00	0.00	0.00
3,200.0	41.01	58.95	2,627.3	819.9	1,419.6	1,639.3	0.00	0.00	0.00
3,227.4	41.01	58.95	2,648.0	829.2	1,435.0	1,657.3	0.00	0.00	0.00
TD at 3227.4 - PBHL CLARY 4									

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL CLARY 4 - plan hits target center - Circle (radius 150.0)	0.00	360.00	2,648.0	829.2	1,435.0	1,199,002.65	2,312,164.63	37° 11' 21.539 N	107° 51' 41.175 W
PC CLARY 4 - plan hits target center - Point	0.00	360.00	2,473.0	750.7	1,304.6	1,198,924.15	2,312,034.23	37° 11' 20.730 N	107° 51' 42.762 W
DRILL WINDOW CLARY - plan hits target center - Polygon	0.00	0.00	0.0	0.0	0.0	1,198,173.44	2,310,729.62	37° 11' 12.984 N	107° 51' 58.644 W
Point 1			0.0	848.4	1,825.9	1,199,021.85	2,312,555.54		
Point 2			0.0	917.7	-2,142.2	1,199,091.15	2,308,587.40		
Point 3			0.0	-401.8	-2,184.6	1,197,771.64	2,308,545.00		
Point 4			0.0	-471.2	1,793.6	1,197,702.24	2,312,523.24		
FC CLARY 4 - plan hits target center - Point	0.00	360.00	2,033.0	553.4	976.8	1,198,726.85	2,311,706.43	37° 11' 18.698 N	107° 51' 46.750 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.0	349.6	8 5/8"	8-5/8	8-5/8	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
16.0	16.0	Nacimiento		0.00		
125.0	125.0	ANIMAS		0.00		
910.8	885.0	KIRTLAND SHALE		0.00		
1,407.9	1,275.0	FARMINGTON SS		0.00		
1,926.1	1,666.0	LOWER KIRTLAND SH		0.00		
2,412.4	2,033.0	FRUITLAND COAL		0.00		
2,995.5	2,473.0	ICTURED CLIFFS		0.00		

IT&S Drilling and Completions

Planning Report

Database:	EDM .16 Hou Prod - WH21P	Local Co-ordinate Reference:	Well CLARY GU #4
Company:	North America - Onshore US - BP	TVD Reference:	RKB MSL @ 6393.0ft (H&P 291)
Project:	Western - San Juan North (NAD 83)	MD Reference:	RKB MSL @ 6393.0ft (H&P 291)
Site:	SEC 18-T34N-R9W	North Reference:	Grid
Well:	CLARY GU #4	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	New SHL 10-13-09 Nudge		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
150.0	150.0	0.0	0.0	Start Build 3.00
350.0	349.6	0.0	10.5	Start 80.0 hold at 350.0 MD
430.0	429.2	0.0	18.8	Start DLS 5.00 TFO -35.18
1,149.6	1,080.0	125.9	266.9	Start 1845.9 hold at 1149.6 MD
2,995.5	2,473.0	750.7	1,304.6	Start 231.9 hold at 2995.5 MD
3,227.4	2,648.0	829.2	1,435.0	TD at 3227.4