



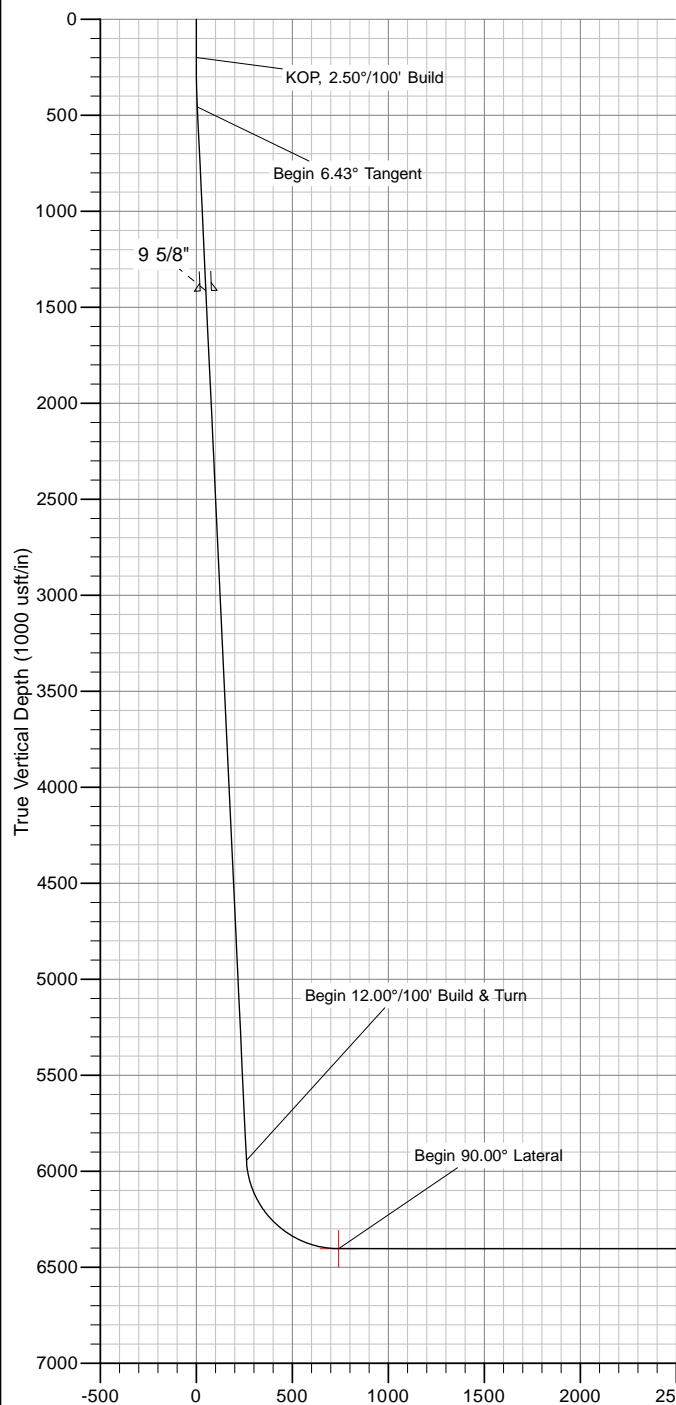
Company: Carrizo Oil & Gas
Site: Slick Rock
Well: 19-14-7-60
Project: Weld County, Colorado (NAD83)
Rig Name: Xtreme 19



Planning: 936.442.2510 Fax: 936.442.2515
Operations: 936.442.2500 Fax: 936.442.2599

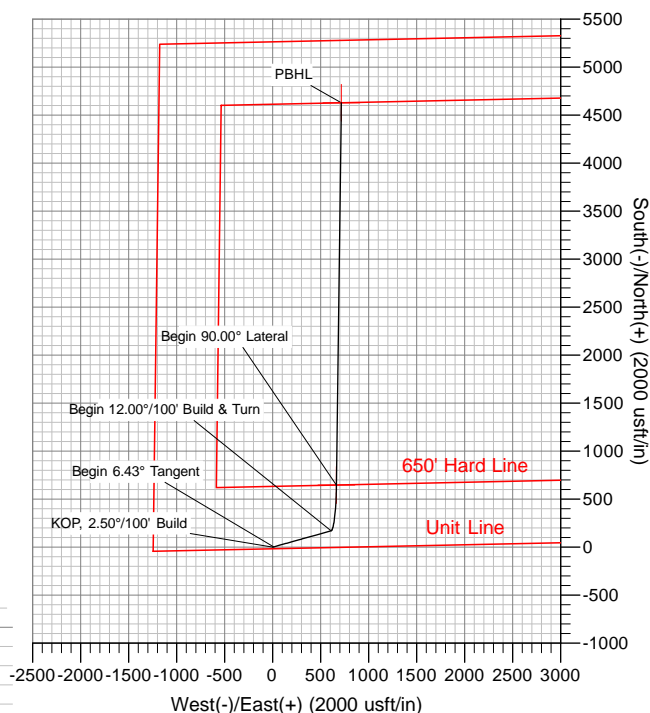
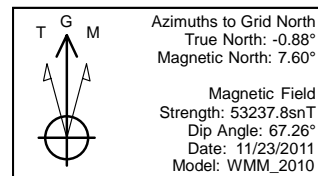
ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	KOP, 2.50°/100' Build
457.40	6.44	74.40	456.86	3.88	13.91	5.97	14.44	Begin 6.43° Tangent
5978.60	6.44	74.40	5943.27	170.34	609.90	261.63	633.24	Begin 12.00°/100' Build & Turn
6713.54	90.00	0.73	6403.00	646.89	665.75	741.12	1117.77	Begin 90.00° Lateral
10696.40	90.00	0.73	6403.00	4629.42	716.61	4684.56	5100.63	PBHL



US State Plane 1983
Colorado Northern Zone

Created By: Vanessa Thom
Date: 15:03, November 23 2011
Plan: Design #2



Vertical Section at 8.80° (1000 usft/in)



Carrizo Oil & Gas

Weld County, Colorado (NAD83)

Slick Rock

19-14-7-60

Wellbore #1

Plan: Design #2

Standard Planning Report

23 November, 2011

Database:	Southern Region	Local Co-ordinate Reference:	Well 19-14-7-60
Company:	Carrizo Oil & Gas	TVD Reference:	WELL @ 5038.30usft (Xtreme 19)
Project:	Weld County, Colorado (NAD83)	MD Reference:	WELL @ 5038.30usft (Xtreme 19)
Site:	Slick Rock	North Reference:	Grid
Well:	19-14-7-60	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Project	Weld County, Colorado (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Well	19-14-7-60			
Well Position	+N/-S	1,447,336.43 usft	Northing:	1,447,336.43 usft
	+E/-W	3,377,222.63 usft	Easting:	3,377,222.63 usft
Position Uncertainty		0.00 usft	Wellhead Elevation:	Latitude: 40° 33' 12.2826 N
				Longitude: 104° 8' 32.804 W
				Ground Level: 5,021.30 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM_2010	11/23/2011	8.47	67.26	53,238

Design	Design #2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	8.80

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
457.40	6.44	74.40	456.86	3.88	13.91	2.50	2.50	0.00	74.40	
5,978.60	6.44	74.40	5,943.27	170.34	609.90	0.00	0.00	0.00	0.00	
6,713.54	90.00	0.73	6,403.00	646.89	665.75	12.00	11.37	-10.02	-73.76	LPv2 - Slick Rock 19-
10,696.40	90.00	0.73	6,403.00	4,629.42	716.61	0.00	0.00	0.00	0.00	PBHL v2 - Slick Rock

Database:	Southern Region	Local Co-ordinate Reference:	Well 19-14-7-60
Company:	Carrizo Oil & Gas	TVD Reference:	WELL @ 5038.30usft (Xtreme 19)
Project:	Weld County, Colorado (NAD83)	MD Reference:	WELL @ 5038.30usft (Xtreme 19)
Site:	Slick Rock	North Reference:	Grid
Well:	19-14-7-60	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 2.50°/100' Build									
300.00	2.50	74.40	299.97	0.59	2.10	0.90	2.50	2.50	0.00
400.00	5.00	74.40	399.75	2.35	8.40	3.60	2.50	2.50	0.00
457.40	6.44	74.40	456.86	3.88	13.91	5.97	2.50	2.50	0.00
Begin 6.43° Tangent									
500.00	6.44	74.40	499.19	5.17	18.51	7.94	0.00	0.00	0.00
600.00	6.44	74.40	598.56	8.18	29.30	12.57	0.00	0.00	0.00
700.00	6.44	74.40	697.93	11.20	40.09	17.20	0.00	0.00	0.00
800.00	6.44	74.40	797.30	14.21	50.89	21.83	0.00	0.00	0.00
900.00	6.44	74.40	896.67	17.23	61.68	26.46	0.00	0.00	0.00
1,000.00	6.44	74.40	996.04	20.24	72.48	31.09	0.00	0.00	0.00
1,100.00	6.44	74.40	1,095.41	23.26	83.27	35.72	0.00	0.00	0.00
1,200.00	6.44	74.40	1,194.78	26.27	94.07	40.35	0.00	0.00	0.00
1,300.00	6.44	74.40	1,294.15	29.29	104.86	44.98	0.00	0.00	0.00
1,400.00	6.44	74.40	1,393.52	32.30	115.66	49.61	0.00	0.00	0.00
1,420.61	6.44	74.40	1,414.00	32.92	117.88	50.57	0.00	0.00	0.00
9 5/8"									
1,500.00	6.44	74.40	1,492.89	35.32	126.45	54.24	0.00	0.00	0.00
1,600.00	6.44	74.40	1,592.26	38.33	137.25	58.88	0.00	0.00	0.00
1,700.00	6.44	74.40	1,691.63	41.35	148.04	63.51	0.00	0.00	0.00
1,800.00	6.44	74.40	1,791.00	44.36	158.84	68.14	0.00	0.00	0.00
1,900.00	6.44	74.40	1,890.37	47.38	169.63	72.77	0.00	0.00	0.00
2,000.00	6.44	74.40	1,989.74	50.39	180.43	77.40	0.00	0.00	0.00
2,100.00	6.44	74.40	2,089.11	53.41	191.22	82.03	0.00	0.00	0.00
2,200.00	6.44	74.40	2,188.48	56.42	202.01	86.66	0.00	0.00	0.00
2,300.00	6.44	74.40	2,287.85	59.43	212.81	91.29	0.00	0.00	0.00
2,400.00	6.44	74.40	2,387.22	62.45	223.60	95.92	0.00	0.00	0.00
2,500.00	6.44	74.40	2,486.59	65.46	234.40	100.55	0.00	0.00	0.00
2,600.00	6.44	74.40	2,585.96	68.48	245.19	105.18	0.00	0.00	0.00
2,700.00	6.44	74.40	2,685.33	71.49	255.99	109.81	0.00	0.00	0.00
2,800.00	6.44	74.40	2,784.70	74.51	266.78	114.44	0.00	0.00	0.00
2,900.00	6.44	74.40	2,884.07	77.52	277.58	119.07	0.00	0.00	0.00
3,000.00	6.44	74.40	2,983.44	80.54	288.37	123.70	0.00	0.00	0.00
3,100.00	6.44	74.40	3,082.81	83.55	299.17	128.33	0.00	0.00	0.00
3,200.00	6.44	74.40	3,182.18	86.57	309.96	132.96	0.00	0.00	0.00
3,300.00	6.44	74.40	3,281.55	89.58	320.76	137.60	0.00	0.00	0.00
3,400.00	6.44	74.40	3,380.92	92.60	331.55	142.23	0.00	0.00	0.00
3,500.00	6.44	74.40	3,480.29	95.61	342.34	146.86	0.00	0.00	0.00
3,600.00	6.44	74.40	3,579.66	98.63	353.14	151.49	0.00	0.00	0.00
3,700.00	6.44	74.40	3,679.03	101.64	363.93	156.12	0.00	0.00	0.00
3,800.00	6.44	74.40	3,778.40	104.66	374.73	160.75	0.00	0.00	0.00
3,900.00	6.44	74.40	3,877.77	107.67	385.52	165.38	0.00	0.00	0.00
4,000.00	6.44	74.40	3,977.14	110.69	396.32	170.01	0.00	0.00	0.00
4,100.00	6.44	74.40	4,076.51	113.70	407.11	174.64	0.00	0.00	0.00
4,200.00	6.44	74.40	4,175.88	116.72	417.91	179.27	0.00	0.00	0.00
4,300.00	6.44	74.40	4,275.25	119.73	428.70	183.90	0.00	0.00	0.00
4,400.00	6.44	74.40	4,374.62	122.75	439.50	188.53	0.00	0.00	0.00
4,500.00	6.44	74.40	4,473.99	125.76	450.29	193.16	0.00	0.00	0.00
4,600.00	6.44	74.40	4,573.36	128.78	461.09	197.79	0.00	0.00	0.00
4,700.00	6.44	74.40	4,672.73	131.79	471.88	202.42	0.00	0.00	0.00
4,800.00	6.44	74.40	4,772.10	134.80	482.67	207.05	0.00	0.00	0.00

Database:	Southern Region	Local Co-ordinate Reference:	Well 19-14-7-60
Company:	Carrizo Oil & Gas	TVD Reference:	WELL @ 5038.30usft (Xtreme 19)
Project:	Weld County, Colorado (NAD83)	MD Reference:	WELL @ 5038.30usft (Xtreme 19)
Site:	Slick Rock	North Reference:	Grid
Well:	19-14-7-60	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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)
4,900.00	6.44	74.40	4,871.47	137.82	493.47	211.68	0.00	0.00	0.00
5,000.00	6.44	74.40	4,970.84	140.83	504.26	216.32	0.00	0.00	0.00
5,100.00	6.44	74.40	5,070.21	143.85	515.06	220.95	0.00	0.00	0.00
5,200.00	6.44	74.40	5,169.58	146.86	525.85	225.58	0.00	0.00	0.00
5,300.00	6.44	74.40	5,268.95	149.88	536.65	230.21	0.00	0.00	0.00
5,400.00	6.44	74.40	5,368.32	152.89	547.44	234.84	0.00	0.00	0.00
5,500.00	6.44	74.40	5,467.69	155.91	558.24	239.47	0.00	0.00	0.00
5,600.00	6.44	74.40	5,567.06	158.92	569.03	244.10	0.00	0.00	0.00
5,700.00	6.44	74.40	5,666.43	161.94	579.83	248.73	0.00	0.00	0.00
5,800.00	6.44	74.40	5,765.80	164.95	590.62	253.36	0.00	0.00	0.00
5,900.00	6.44	74.40	5,865.17	167.97	601.42	257.99	0.00	0.00	0.00
5,978.60	6.44	74.40	5,943.27	170.34	609.90	261.63	0.00	0.00	0.00
Begin 12.00°/100° Build & Turn									
6,000.00	7.56	55.32	5,964.52	171.46	612.21	263.10	12.00	5.28	-89.13
6,100.00	17.47	20.85	6,062.13	189.30	623.01	282.38	12.00	9.91	-34.48
6,200.00	28.98	12.00	6,153.90	227.17	633.42	321.39	12.00	11.51	-8.85
6,300.00	40.76	7.94	6,235.81	283.41	643.01	378.43	12.00	11.78	-4.05
6,400.00	52.63	5.47	6,304.27	355.56	651.34	451.01	12.00	11.87	-2.47
6,500.00	64.53	3.69	6,356.31	440.48	658.06	535.96	12.00	11.90	-1.79
6,600.00	76.46	2.23	6,389.64	534.44	662.87	629.55	12.00	11.92	-1.46
6,700.00	88.38	0.91	6,402.81	633.35	665.55	727.71	12.00	11.93	-1.32
6,713.54	90.00	0.73	6,403.00	646.89	665.75	741.12	12.00	11.93	-1.29
Begin 90.00° Lateral									
6,800.00	90.00	0.73	6,403.00	733.34	666.85	826.72	0.00	0.00	0.00
6,900.00	90.00	0.73	6,403.00	833.33	668.13	925.73	0.00	0.00	0.00
7,000.00	90.00	0.73	6,403.00	933.32	669.41	1,024.74	0.00	0.00	0.00
7,100.00	90.00	0.73	6,403.00	1,033.31	670.68	1,123.75	0.00	0.00	0.00
7,200.00	90.00	0.73	6,403.00	1,133.31	671.96	1,222.76	0.00	0.00	0.00
7,300.00	90.00	0.73	6,403.00	1,233.30	673.24	1,321.77	0.00	0.00	0.00
7,400.00	90.00	0.73	6,403.00	1,333.29	674.51	1,420.78	0.00	0.00	0.00
7,500.00	90.00	0.73	6,403.00	1,433.28	675.79	1,519.79	0.00	0.00	0.00
7,600.00	90.00	0.73	6,403.00	1,533.27	677.07	1,618.80	0.00	0.00	0.00
7,700.00	90.00	0.73	6,403.00	1,633.27	678.35	1,717.81	0.00	0.00	0.00
7,800.00	90.00	0.73	6,403.00	1,733.26	679.62	1,816.82	0.00	0.00	0.00
7,900.00	90.00	0.73	6,403.00	1,833.25	680.90	1,915.83	0.00	0.00	0.00
8,000.00	90.00	0.73	6,403.00	1,933.24	682.18	2,014.84	0.00	0.00	0.00
8,100.00	90.00	0.73	6,403.00	2,033.23	683.45	2,113.85	0.00	0.00	0.00
8,200.00	90.00	0.73	6,403.00	2,133.22	684.73	2,212.86	0.00	0.00	0.00
8,300.00	90.00	0.73	6,403.00	2,233.22	686.01	2,311.87	0.00	0.00	0.00
8,400.00	90.00	0.73	6,403.00	2,333.21	687.28	2,410.88	0.00	0.00	0.00
8,500.00	90.00	0.73	6,403.00	2,433.20	688.56	2,509.89	0.00	0.00	0.00
8,600.00	90.00	0.73	6,403.00	2,533.19	689.84	2,608.90	0.00	0.00	0.00
8,700.00	90.00	0.73	6,403.00	2,633.18	691.12	2,707.91	0.00	0.00	0.00
8,800.00	90.00	0.73	6,403.00	2,733.18	692.39	2,806.92	0.00	0.00	0.00
8,900.00	90.00	0.73	6,403.00	2,833.17	693.67	2,905.93	0.00	0.00	0.00
9,000.00	90.00	0.73	6,403.00	2,933.16	694.95	3,004.95	0.00	0.00	0.00
9,100.00	90.00	0.73	6,403.00	3,033.15	696.22	3,103.96	0.00	0.00	0.00
9,200.00	90.00	0.73	6,403.00	3,133.14	697.50	3,202.97	0.00	0.00	0.00
9,300.00	90.00	0.73	6,403.00	3,233.13	698.78	3,301.98	0.00	0.00	0.00
9,400.00	90.00	0.73	6,403.00	3,333.13	700.05	3,400.99	0.00	0.00	0.00
9,500.00	90.00	0.73	6,403.00	3,433.12	701.33	3,500.00	0.00	0.00	0.00
9,600.00	90.00	0.73	6,403.00	3,533.11	702.61	3,599.01	0.00	0.00	0.00
9,700.00	90.00	0.73	6,403.00	3,633.10	703.89	3,698.02	0.00	0.00	0.00
9,800.00	90.00	0.73	6,403.00	3,733.09	705.16	3,797.03	0.00	0.00	0.00

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Project:	Weld County, Colorado (NAD83)	MD Reference:	WELL @ 5038.30usft (Xtreme 19)
Site:	Slick Rock	North Reference:	Grid
Well:	19-14-7-60	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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)	
9,900.00	90.00	0.73	6,403.00	3,833.09	706.44	3,896.04	0.00	0.00	0.00	
10,000.00	90.00	0.73	6,403.00	3,933.08	707.72	3,995.05	0.00	0.00	0.00	
10,100.00	90.00	0.73	6,403.00	4,033.07	708.99	4,094.06	0.00	0.00	0.00	
10,200.00	90.00	0.73	6,403.00	4,133.06	710.27	4,193.07	0.00	0.00	0.00	
10,300.00	90.00	0.73	6,403.00	4,233.05	711.55	4,292.08	0.00	0.00	0.00	
10,400.00	90.00	0.73	6,403.00	4,333.05	712.82	4,391.09	0.00	0.00	0.00	
10,500.00	90.00	0.73	6,403.00	4,433.04	714.10	4,490.10	0.00	0.00	0.00	
10,600.00	90.00	0.73	6,403.00	4,533.03	715.38	4,589.11	0.00	0.00	0.00	
10,696.40	90.00	0.73	6,403.00	4,629.42	716.61	4,684.56	0.00	0.00	0.00	
PBHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
PBHL v2 - Slick Rock 19	0.00	0.00	6,403.00	4,629.42	716.61	1,451,965.85	3,377,939.24	40° 33' 57.9151 N	104° 8' 22.601 W	
- plan hits target center										
- Point										
LPv2 - Slick Rock 19-14	0.00	0.00	6,403.00	646.89	665.75	1,447,983.32	3,377,888.37	40° 33' 18.5734 N	104° 8' 24.051 W	
- plan hits target center										
- Point										

Casing Points									
Measured Depth (usft)	Vertical Depth (usft)	Name				Casing Diameter (")	Hole Diameter (")		
1,420.61	1,414.00	9 5/8"				9-5/8	12-1/4		

Plan Annotations									
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates				Comment			
		+N/-S (usft)	+E/-W (usft)						
200.00	200.00	0.00	0.00			KOP, 2.50°/100' Build			
457.40	456.86	3.88	13.91			Begin 6.43° Tangent			
5,978.60	5,943.27	170.34	609.90			Begin 12.00°/100' Build & Turn			
6,713.54	6,403.00	646.89	665.75			Begin 90.00° Lateral			
10,696.40	6,403.00	4,629.42	716.61			PBHL			