



00061478

vessels Oil & Gas
Vessels Minerals #30-4
Weld County, Colorado

Plane of Vertical Section: N 62 46 W

Radius of Curvature Calculations

Measured Depth Feet	B O R E - H O L E Inclination Deg	Direction Deg	TRUE Vertical Depth Feet	RECTANGULAR COORDINATES North/South Feet	East/West Feet	VERTICAL SECTION Feet	CLOSURES Distance Feet	Direction Deg	DLS Deg/100'
4129.54	0.00	0.00	4129.54	0.00	0.00	0.00	0.00	0.00	0.00
Start build	3.00								
4962.87	25.00	297.23	4936.68	81.88N	159.10W	178.94	178.94	297.23	3.00
End build									
6569.59	25.00	297.23	6392.86	392.61N	762.86W	857.97	857.97	297.23	0.00
Start drop	3.00								
7402.92	0.00	0.00	7200.00	474.50N	921.97W	1036.91	1036.91	297.23	3.00
NIOBRARA									
8202.92	0.00	0.00	8000.00	474.50N	921.97W	1036.91	1036.91	297.23	0.00
PBHL									

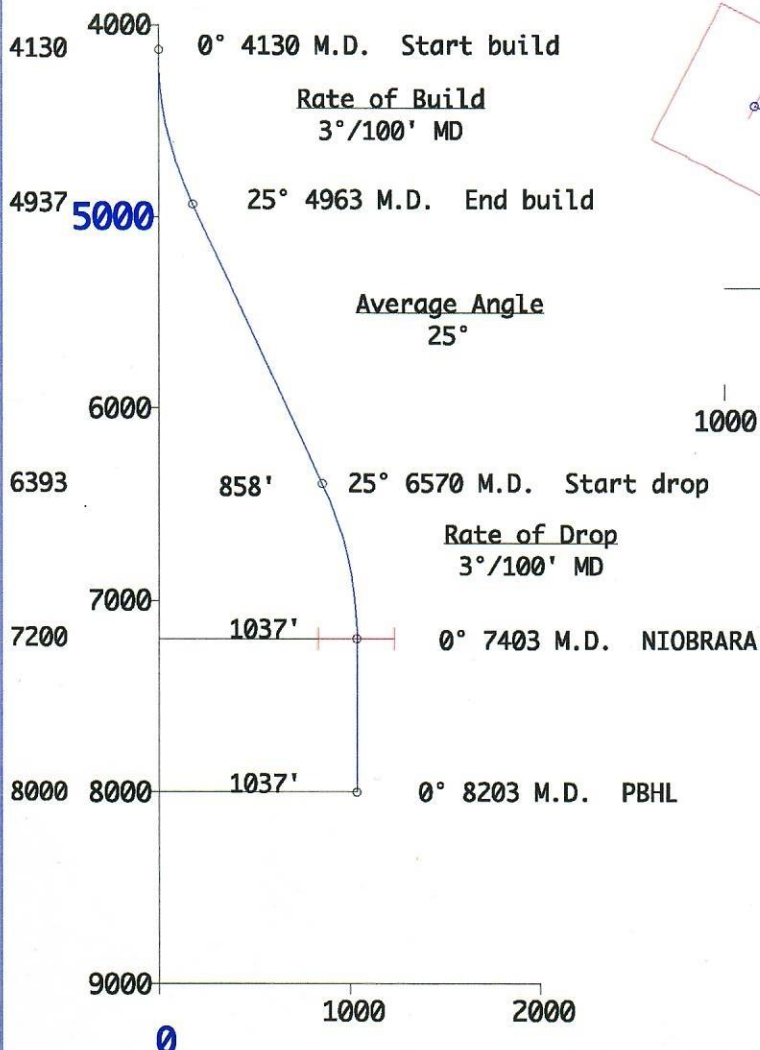
Final Station Closure Distance: 1036.91 Feet; Direction: 297.23

PLANE OF PROPOSAL

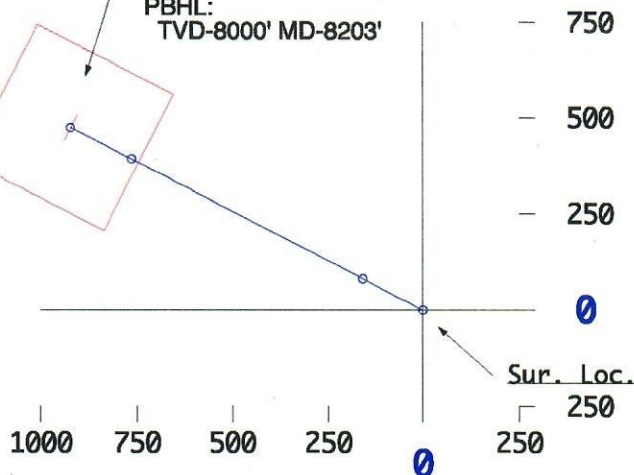
297.23°

VERTICAL SECTION

Scale 1" = 1000'



Proposed Objectives
1037' Displacement
@ 297.23° Azimuth
North-475' West-922'
Target:
TVD-7200' MD-7403'
Target Area-400' Square
PBHL:
TVD-8000' MD-8203'



HORIZONTAL PLAN

Scale 1" = 500'

PDSPERFORMANCE
DRILLING
SPECIALISTS INC.

PERFORMANCE DRILLING SPECIALISTS

VESSELS OIL & GAS
VESSELS MINERALS #30-4
WELD COUNTY, COLORADO

Slot Elevation: 0.00

Plane of Vertical Section: N 62 46 W

Radius of Curvature Calculations

Measured Depth Feet	B O R E - H O L E Inclination Deg	D I R E C T I O N Direction Deg	TRUE Vertical Depth Feet	R E C T A N G U L A R C O O R D I N A T E S North/South Feet	E a s t / W e s t East/West Feet	V E R T I C A L SECTION Feet	C L O S U R E S Distance Feet	D I R E C T I O N Direction Deg	D L S Deg/100'
4129.54	0.00	0.00	4129.54	0.00	0.00	0.00	0.00	0.00	0.00
Start build	3.00								
4229.54	3.00	297.23	4229.50	1.20N	2.33W	2.62	2.62	297.24	3.00
4329.54	6.00	297.23	4329.17	4.79N	9.30W	10.46	10.46	297.23	3.00
4429.54	9.00	297.23	4428.31	10.76N	20.91W	23.51	23.51	297.23	3.00
4529.54	12.00	297.23	4526.62	19.10N	37.11W	41.74	41.74	297.23	3.00
4629.54	15.00	297.23	4623.85	29.78N	57.86W	65.08	65.08	297.23	3.00
4729.54	18.00	297.23	4719.72	42.78N	83.11W	93.47	93.47	297.23	3.00
4829.54	21.00	297.23	4813.97	58.05N	112.79W	126.85	126.85	297.23	3.00
4929.54	24.00	297.23	4906.35	75.56N	146.81W	165.12	165.12	297.23	3.00
4962.87	25.00	297.23	4936.68	81.88N	159.10W	178.94	178.94	297.23	3.00
End build									
5462.87	25.00	297.23	5389.83	178.58N	346.99W	390.25	390.24	297.23	0.00
5962.87	25.00	297.23	5842.98	275.28N	534.87W	601.55	601.55	297.23	0.00
6462.87	25.00	297.23	6296.14	371.98N	722.76W	812.86	812.86	297.23	0.00
6569.59	25.00	297.23	6392.86	392.61N	762.86W	857.97	857.97	297.23	0.00
Start drop	3.00								
6669.59	22.00	297.23	6484.56	410.86N	798.31W	897.84	897.84	297.23	3.00
6769.59	19.00	297.23	6578.21	426.88N	829.45W	932.85	932.85	297.23	3.00
6869.59	16.00	297.23	6673.57	440.64N	856.18W	962.92	962.92	297.23	3.00
6969.59	13.00	297.23	6770.38	452.10N	878.44W	987.96	987.96	297.23	3.00
7069.59	10.00	297.23	6868.36	461.22N	896.17W	1007.89	1007.89	297.23	3.00
7169.59	7.00	297.23	6967.25	467.98N	909.31W	1022.67	1022.67	297.23	3.00

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Measured Depth Feet	B O R E - Inclination Deg	H O L E Direction Deg	TRUE Vertical Depth Feet	R E C T A N G U L A R C O O R D I N A T E S		VERTICAL SECTION Feet	C L O S U R E S		DLS Deg/100'
				North/South Feet	East/West Feet		Distance Feet	Direction Deg	
7269.59	4.00	297.23	7066.78	472.37N	917.83W	1032.25	1032.25	297.23	3.00
7369.59	1.00	297.23	7166.67	474.36N	921.71W	1036.61	1036.61	297.23	3.00
7402.92	0.00	0.00	7200.00	474.50N	921.97W	1036.91	1036.91	297.23	3.00
NIOBRARA									
8202.92	0.00	0.00	8000.00	474.50N	921.97W	1036.91	1036.91	297.23	0.00
PBHL									

Final Station Closure Distance: 1036.91 Feet; Direction: 297.23