



Project: Weld County, CO
Site: Sec 7-T10N-R57W
Well: Horsetail #07E-1804
Wellbore: Hz
Design: Plan #1

PROJECT DETAILS: Weld County, CO
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level



Azimuths to True North
Magnetic North: 7.88°
Magnetic Field
Strength: 53087.1snT
Dip Angle: 67.44°
Date: 1/5/2015
Model: IGRF2010

WELL DETAILS: Horsetail #07E-1804

+N/-S	+E/-W	Northing	Ground Level:	4925.70	Easting	3470040.06	Latitude	40° 51' 14.270 N	Longitude	103° 48' 2.968 W	Slot
0.00	0.00	1558451.53									

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	650.00	5.00	66.50	649.68	4.35	10.00	2.00	66.50	-3.91	
4	4800.00	5.00	66.50	4783.89	148.57	341.69	0.00	0.00	-133.54	
5	5050.00	0.00	0.00	5033.57	152.92	351.69	2.00	180.00	-137.45	
6	5332.56	0.00	0.00	5316.13	152.92	351.69	0.00	0.00	-137.45	
7	6150.74	90.00	180.00	5837.00	-367.95	351.65	11.00	180.00	382.92	PBHL 1804B
8	13829.70	90.00	180.00	5837.00	-8046.91	351.00	0.00	0.00	8054.56	PBHL 1804B

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1550.00	1553.76	Upper Pierre
3500.00	3511.20	Hygiene
3650.00	3661.78	Lower Pierre
5515.00	5536.61	P200 Marker
5530.00	5552.94	P300 Marker
5550.00	5575.10	P350 Marker
5702.00	5767.11	Sharon Springs
5707.00	5774.61	Niobrara
5727.00	5805.96	Top A Chalk
5764.00	5871.64	Top A Marl
5783.00	5911.46	A Marl
5792.00	5932.63	Top Upper B
5820.00	6017.29	Base Upper B
5837.00	6148.89	Top Lower B

ANNOTATIONS

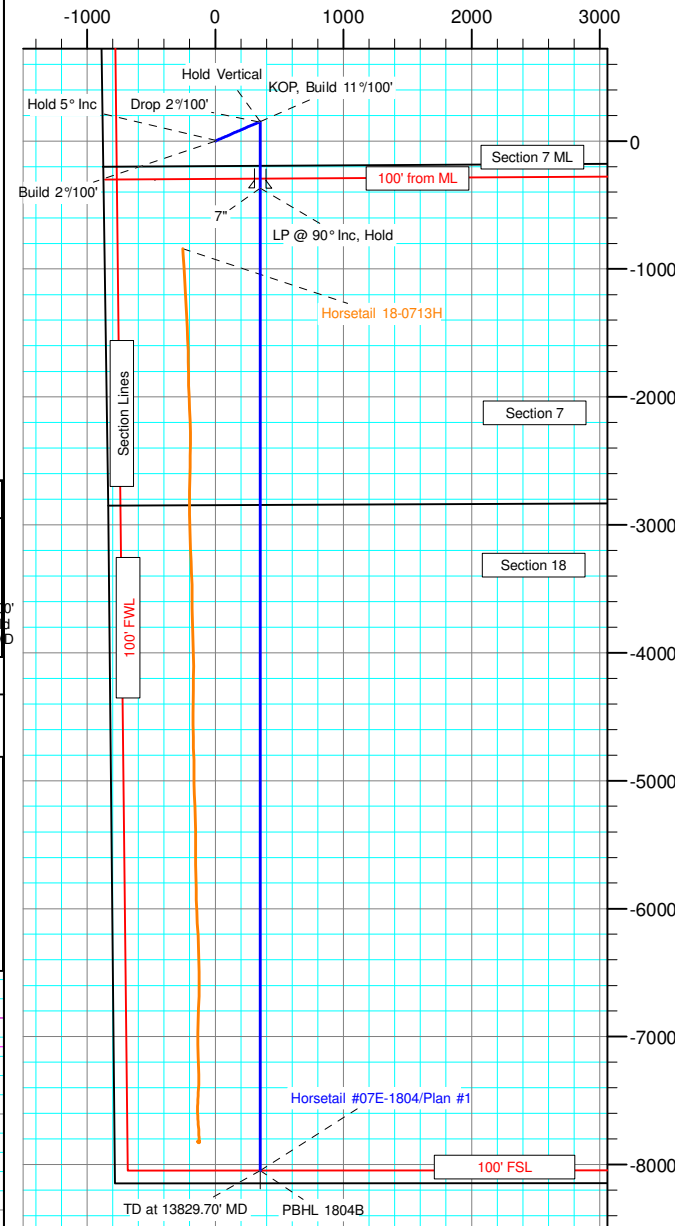
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
400.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	Build 2°/100'
649.68	650.00	5.00	66.50	4.35	10.00	-3.91	10.90	Hold 5° Inc
4783.89	4800.00	5.00	66.50	148.57	341.69	-133.54	372.60	Drop 2°/100'
5033.57	5050.00	0.00	0.00	152.92	351.69	-137.45	383.50	Hold Vertical
5316.13	5332.56	0.00	0.00	152.92	351.69	-137.45	383.50	KOP, Build 11°/100'
5837.00	6150.74	90.00	180.00	-367.95	351.65	382.92	904.37	LP @ 90° Inc, Hold
5837.00	13829.70	90.00	180.00	-8046.91	351.00	8054.56	8583.33	TD at 13829.70' MD

DESIGN TARGET DETAILS

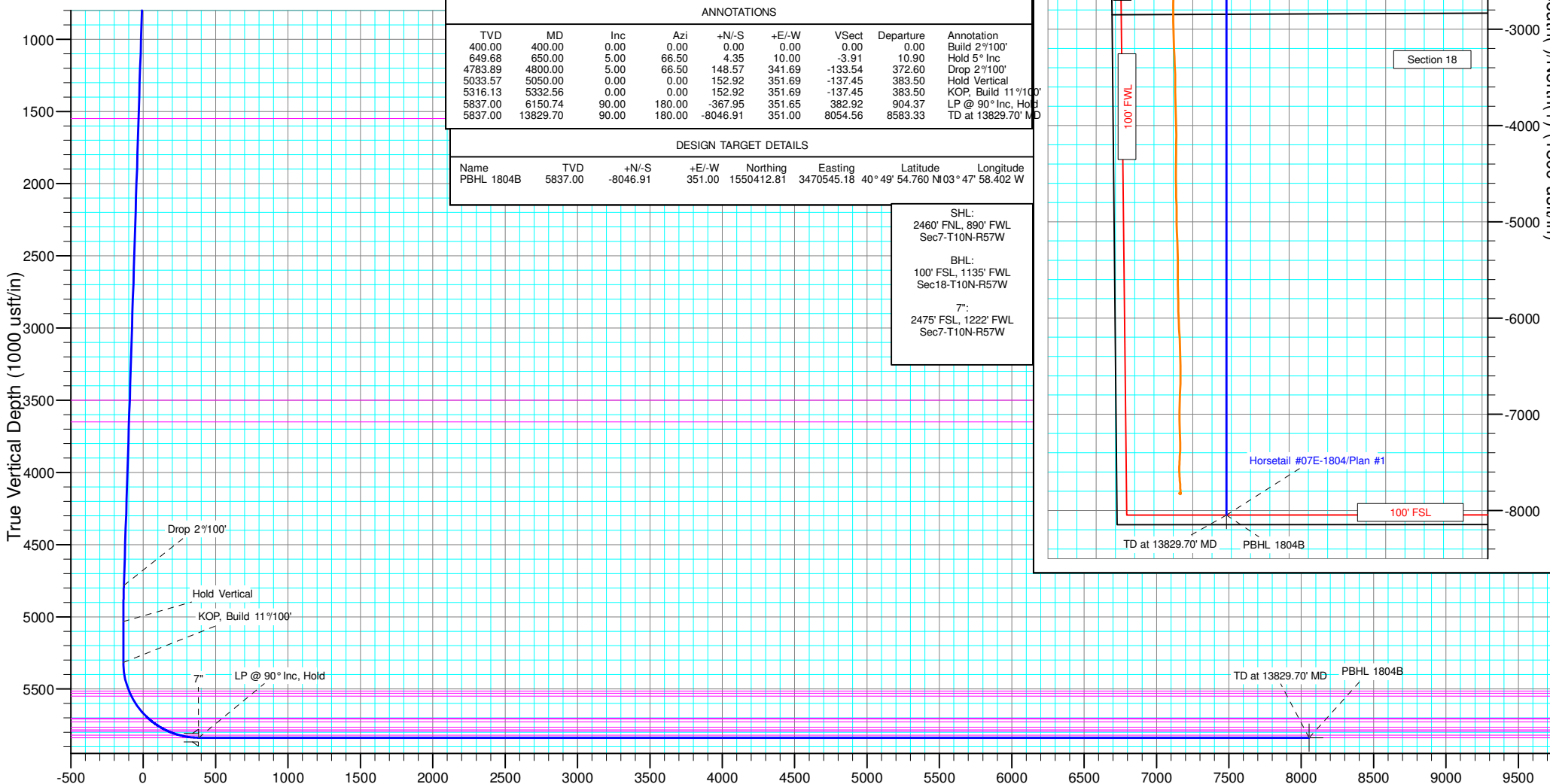
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL 1804B	5837.00	-8046.91	351.00	1550412.81	3470545.18	40° 49' 54.760 N 03° 47' 58.402 W	

SHL:
2460' FNL, 890' FWL
Sec7-T10N-R57W
BHL:
100' FSL, 1135' FWL
Sec18-T10N-R57W
7":
2475' FSL, 1222' FWL
Sec7-T10N-R57W

West(-)/East(+) (1500 usft/in)



South(-)/North(+) (1500 usft/in)



Vertical Section at 177.50° (1000 usft/in)