



Project: Weld County, CO  
Site: Sec 7-T10N-R57W  
Well: Horsetail #07G-1809  
Wellbore: Hz  
Design: Design #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: 53087.8nT  
Dip Angle: 67.44°  
Date: 1/6/2015  
Model: IGRF2010

WELL DETAILS: Horsetail #07G-1809

+N/-S	+E/-W	Northing	Ground Level:	Easting	Latitude	Longitude	Slot
0.00	0.00	1558382.25	4896.00	3472545.37	40° 51' 13.110 N	103° 47' 30.390 W	

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	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	725.00	8.50	303.00	723.44	17.14	-26.39	2.00	303.00	-15.35	
4	4550.00	8.50	303.00	4506.43	325.06	-500.55	0.00	0.00	-291.13	
5	4975.00	0.00	0.00	4929.87	342.20	-526.94	2.00	180.00	-306.47	
6	5274.26	0.00	0.00	5229.13	342.20	-526.94	0.00	0.00	-306.47	
7	6092.44	90.00	180.00	5750.00	-178.67	-526.97	11.00	180.00	213.25	PBHL 1809A
8	13842.28	90.00	180.00	5750.00	-7928.51	-527.34	0.00	0.00	7946.03	PBHL 1809A

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1550.00	1560.74	Upper Pierre
3500.00	3532.39	Hygiene
3650.00	3684.06	Lower Pierre
5515.00	5576.87	P200 Marker
5530.00	5595.02	P300 Marker
5550.00	5619.95	P350 Marker
5702.00	5867.07	Sharon Springs
5707.00	5879.31	Niobrara
5727.00	5937.08	Top A Chalk

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
300.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	Build 2°/100'
723.44	725.00	8.50	303.00	17.14	-26.39	-15.35	31.47	Hold 8.50° Inc
4506.43	4550.00	8.50	303.00	325.06	-500.55	-291.13	596.84	Drop 2°/100'
4929.87	4975.00	0.00	0.00	342.20	-526.94	-306.47	628.31	Hold Vertical
5229.13	5274.26	0.00	0.00	342.20	-526.94	-306.47	628.31	KOP, Build 11°/100'
5750.00	6092.44	90.00	180.00	-178.67	-526.97	213.25	1149.18	LP @ 90° Inc, Hold
5750.00	13842.28	90.00	180.00	-7928.51	-527.34	7946.03	8899.01	TD at 13842.28' MD

DESIGN TARGET DETAILS

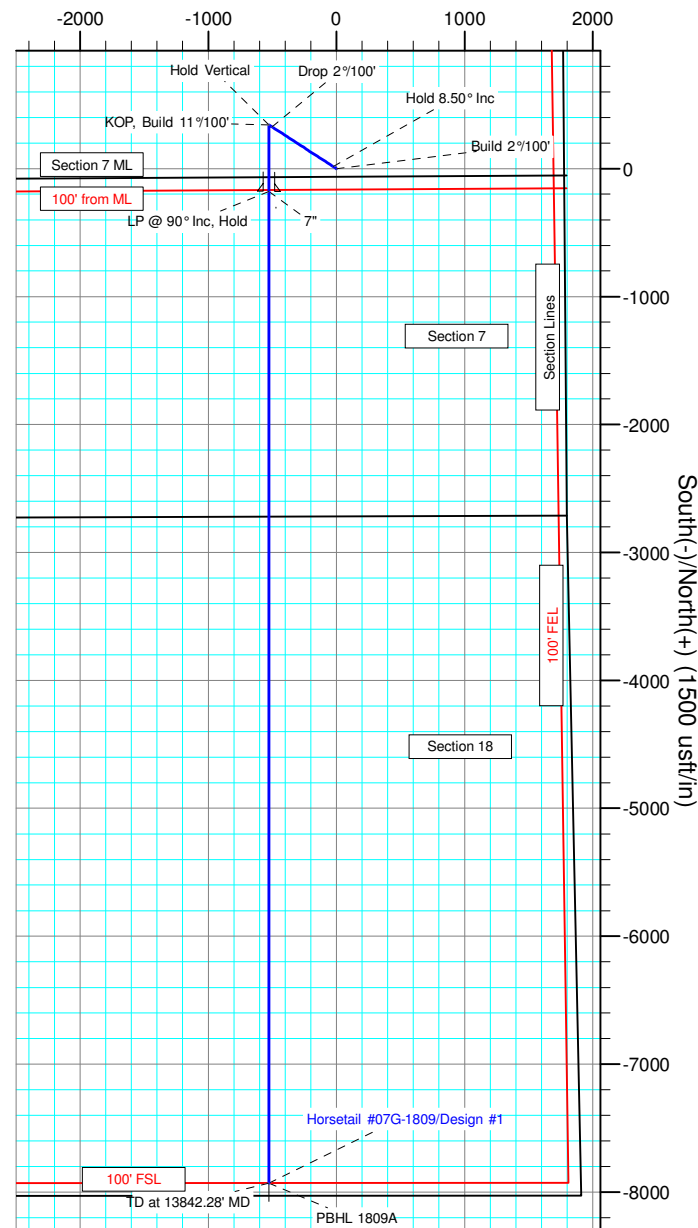
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL 1809A	5750.00	-7928.51	-527.34	1550445.05	3472170.86	40° 49' 54.770 N	03° 47' 37.250 W

SHL:  
2593' FNL, 1795' FEL  
Sec7-T10N-R57W

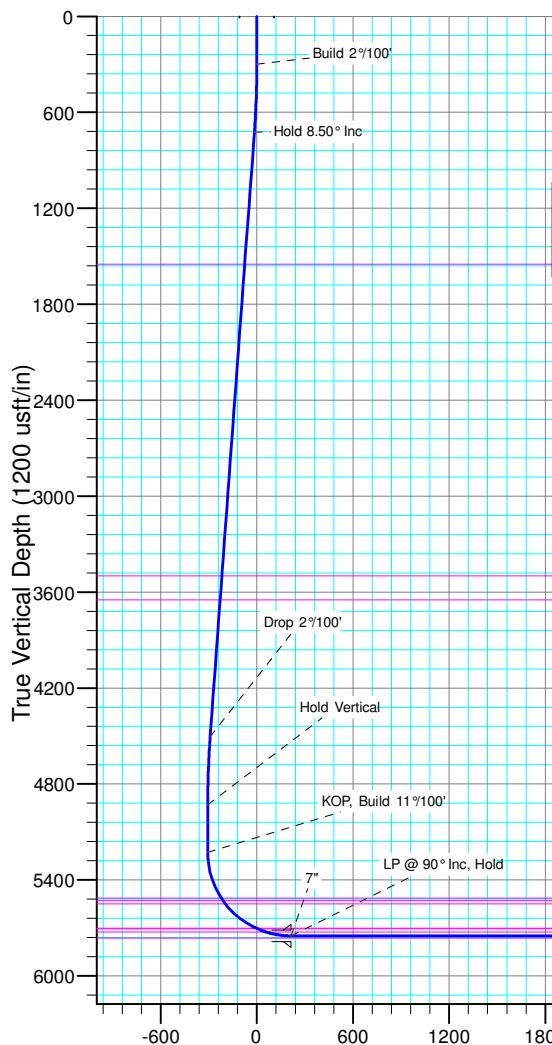
BHL:  
100' FSL, 2435' FEL  
Sec18-T10N-R57W

7":  
2548' FSL, 2322' FEL  
Sec7-T10N-R57W

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



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



Vertical Section at 183.81° (1200 usft/in)