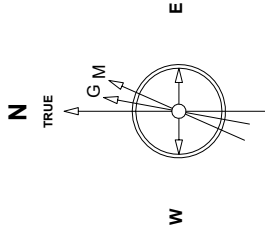


Great Western Operating Company, LLC

Location	Colorado	Slot	S24 - Ottesen LE 06-050HN
Field	Wattenburg	Well	Ottesen LE 06-050HN
Installation	Ottesen	Wellbore	Ottesen LE 06-050HN - Surface Hole

Created by	m-mount
Date plotted	23-Mar-2020
Plot reference is	Ottesen LE 06-050HN - Surface Hole
Ref wellpath is	Ottesen LE 06-050HN (AWP#1).
Coordinates are in	Feet reference S24 - Ottesen LE 06-050HN.
True Vertical Depths are	reference Rig Datum.
Measured Depths are	reference Rig Datum.
Rig Datum:	Actual Datum #1
Rig Datum to Mean Sea Level:	5082.00 ft.
Plot North is aligned to	TRUE North.



Aug8-2016  
IGRF-12 Dip: 66.56 deg Field: 52280.7 nT  
Lat: N40 01 16.500 Long: W104 46 43.1184 Elev: 5076.00 ft  
Magnetic North is 6.28 deg East of TRUE North  
To correct azimuth from Magnetic to TRUE add 6.28 deg

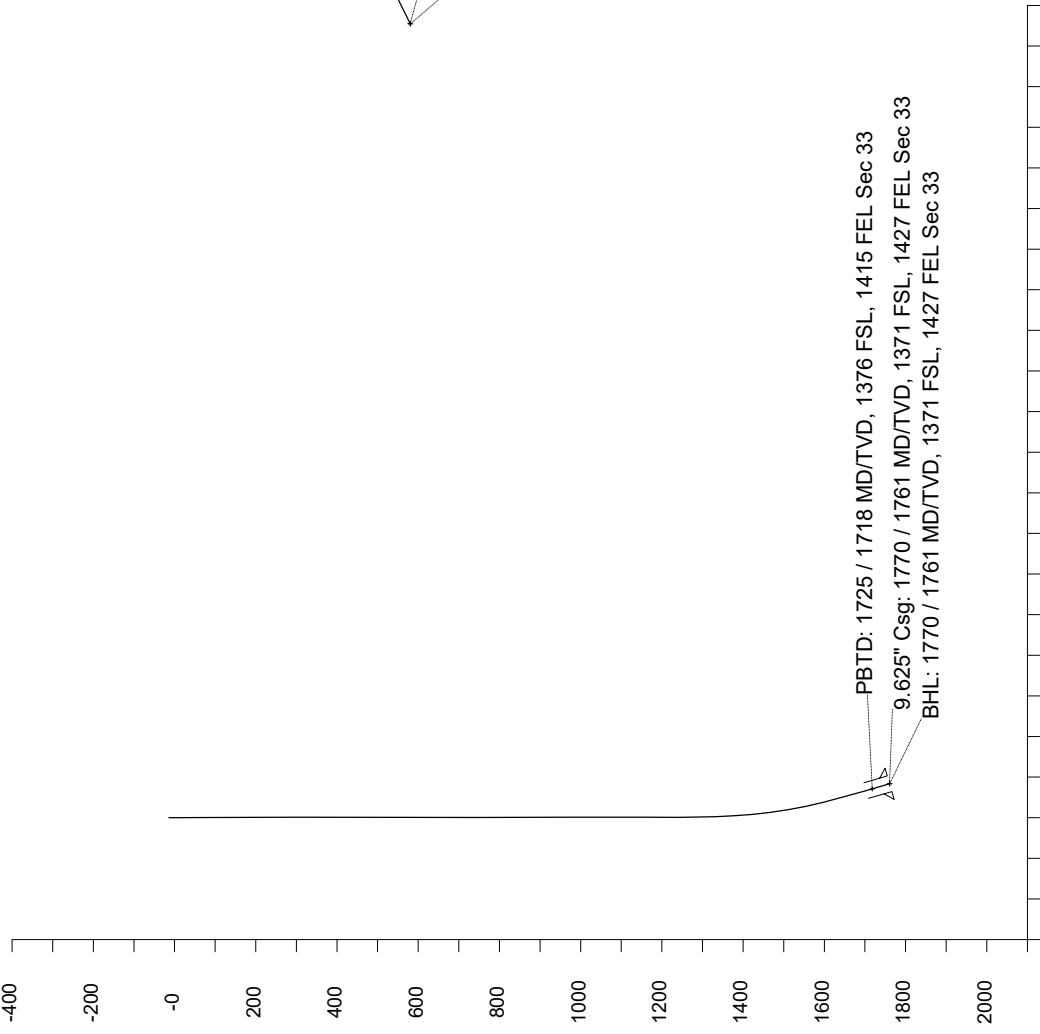
Scale 1 cm = 4 ft

East (Feet) ->



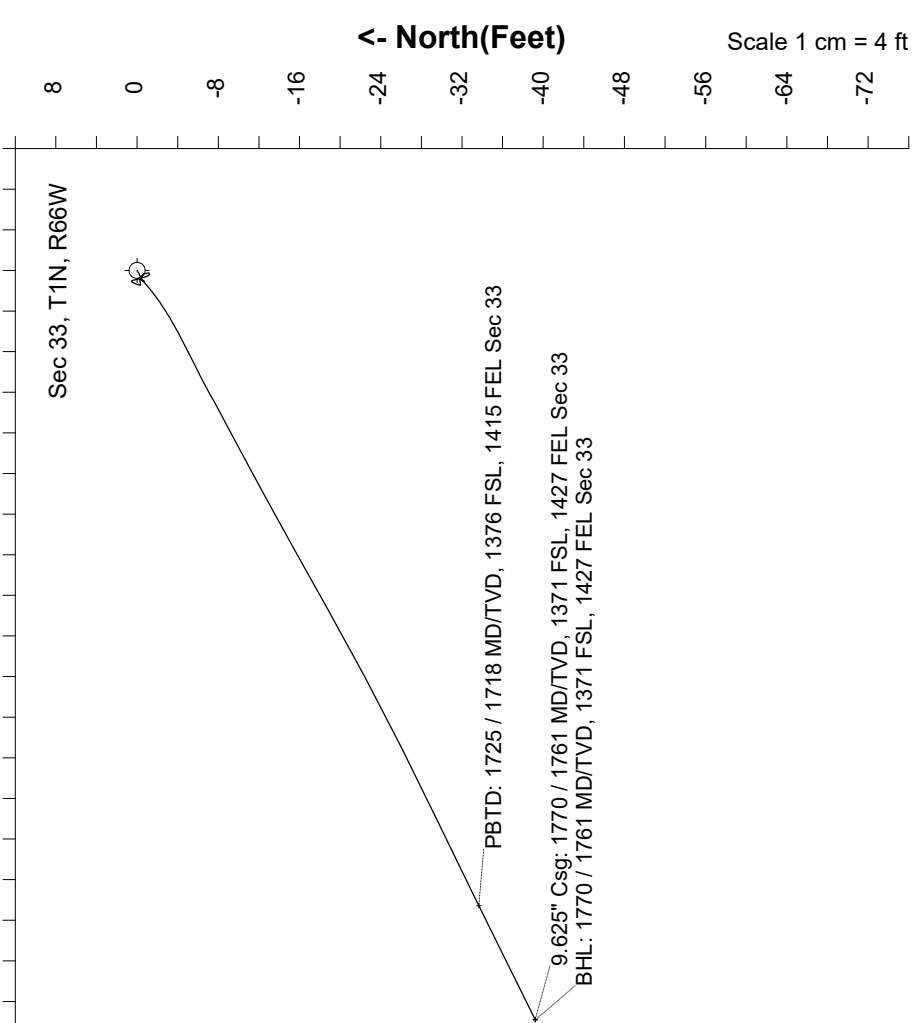
Aug8-2016  
IGRF-12 Dip: 66.56 deg Field: 52280.7 nT  
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Magnetic North is 6.28 deg East of TRUE North  
To correct azimuth from Magnetic to TRUE add 6.28 deg

<- True Vertical Depth (Feet)  
Scale 1 cm = 100 ft



<- North(Feet)

Scale 1 cm = 4 ft



Sec 33, T1N, R66W

PBTD: 1725 / 1718 MD/TVD, 1376 FSL, 1415 FEL Sec 33

9.625" Csg: 1770 / 1761 MD/TVD, 1371 FSL, 1427 FEL Sec 33

BHL: 1770 / 1761 MD/TVD, 1371 FSL, 1427 FEL Sec 33

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BHL: 1770 / 1761 MD/TVD, 1371 FSL, 1427 FEL Sec 33

Scale 1 cm = 100 ft

Vertical Section (Feet) ->

Azimuth 242.02 with reference 0.00 N, 0.00 E from S24 - Ottesen LE 06-050HN

Great Western Operating Co, LLC Directional Survey Report Wellpath: Ottesen LE 06-050HN MDs and TVDs are from Rig Floor 5082.0ft above Mean Sea Level
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Wellbore Information

Date Created	Date Revised	API #	RKB above GL	Well Name
Mar-23-2020	Mar-23-2020	05-001-48286	6.00	Ottesen LE 06-050HN - Surface Hole

Slot Coordinates

Latitude	Longitude
40.00432700	-104.77751900

Pad Information

Pad Name	Ground Elev.
Ottesen	5076.00

Field

Name
Wattenburg

Wellpath Report

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	DLS [deg/100ft]	Vertical Section[ft]	Lat - NAD 83	Long - NAD 83
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00432700	-104.77751900
78.00	0.48	238.10	78.00	-0.17	-0.28	0.00	0.33	40.00432653	-104.77751999
165.00	0.26	263.85	165.00	-0.39	-0.78	0.00	0.87	40.00432594	-104.77752180
251.00	0.31	200.74	251.00	-0.62	-1.06	0.00	1.23	40.00432528	-104.77752278
343.00	0.44	23.11	343.00	-0.53	-1.01	0.00	1.14	40.00432554	-104.77752260
433.00	0.26	114.43	432.99	-0.30	-0.69	0.00	0.75	40.00432618	-104.77752145
523.00	0.40	146.16	522.99	-0.64	-0.33	0.00	0.59	40.00432523	-104.77752017
613.00	0.35	199.78	612.99	-1.16	-0.24	0.00	0.76	40.00432380	-104.77751987
703.00	0.66	330.64	702.99	-0.97	-0.59	0.00	0.98	40.00432433	-104.77752111
793.00	0.75	354.55	792.98	0.07	-0.90	0.00	0.76	40.00432718	-104.77752222
883.00	0.22	239.50	882.98	0.57	-1.11	0.00	0.71	40.00432855	-104.77752295
973.00	0.48	193.10	972.98	0.11	-1.34	0.00	1.13	40.00432730	-104.77752379
1063.00	0.09	198.02	1062.98	-0.32	-1.45	0.00	1.43	40.00432611	-104.77752417
1153.00	0.40	77.08	1152.98	-0.32	-1.16	0.00	1.18	40.00432612	-104.77752315
1242.00	0.22	72.86	1241.98	-0.20	-0.70	0.00	0.71	40.00432645	-104.77752149
1332.00	2.33	229.04	1331.95	-1.35	-1.91	0.00	2.32	40.00432330	-104.77752583
1422.00	5.14	242.49	1421.75	-4.41	-6.87	0.00	8.14	40.00431489	-104.77754353
1512.00	9.71	241.96	1510.98	-9.84	-17.15	0.00	19.77	40.00429998	-104.77758023
1602.00	14.19	240.56	1599.00	-18.84	-33.47	0.00	38.39	40.00427529	-104.77763846
1692.00	16.00	244.42	1685.90	-29.62	-54.26	0.00	61.82	40.00424570	-104.77771270
1720.00	16.26	243.72	1712.79	-33.02	-61.26	0.00	69.59	40.00423636	-104.77773767
1770.00	16.26	243.72	1760.79	-39.22	-73.81	0.00	83.58	40.00421934	-104.77778248

Comments

MD[ft]	TVD[ft]	North[ft]	East[ft]	Lat - NAD 83	Long - NAD 83	Comment
1725.20	1717.79	-33.66	-62.56	40.00423459	-104.77774233	PBTD: 1725 / 1718 MD/TVD, 1376 FSL, 1415 FEL Sec 33
1770.00	1760.79	-39.22	-73.81	40.00421934	-104.77778248	9.625" Csg: 1770 / 1761 MD/TVD, 1371 FSL, 1427 FEL Sec 33
1770.00	1760.79	-39.22	-73.81	40.00421934	-104.77778248	BHL: 1770 / 1761 MD/TVD, 1371 FSL, 1427 FEL Sec 33

Hole Sections

Diameter [in]	Start MD[ft]	Start TVD[ft]	Start North[ft]	Start East[ft]	End MD[ft]	End TVD[ft]	End North[ft]	End East[ft]
13.500	0.00	0.00	0.00	0.00	1770.00	1760.79	-39.22	-73.81

Casings

Name	Top MD[ft]	Top TVD[ft]	Top North[ft]	Top East[ft]	Shoe MD[ft]	Shoe TVD[ft]	Shoe North[ft]	Shoe East[ft]
9 5/8in Casing	0.00	0.00	0.00	0.00	1770.00	1760.79	-39.22	-73.81

Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool
810674	Surface Hole - 20200323	1770.00	1760.79	MWD

Coordinates are from Slot  
MD's and TVD's are from Rig Floor 5082.0ft above Mean Sea Level  
Vertical Section is from Wellhead on azimuth 242.02 degrees  
Bottom hole distance is 83.58 Feet on azimuth 242.02 degrees from Wellhead  
Survey calculation uses Minimum Curvature method