

5D Plan Report**Kinder Morgan****Field Name:** *Kinder Morgan Montezuma Co., CO (NAD 83 COS)***Site Name:** *Goodman Point #27***Well Name:** *Goodman Point #27***Plan:** *P1:V1*

31 March 2014



Goodman Point #27
Montezuma Co, CO

Plan Data for Goodman Point #27

Site: Goodman Point #27
Unit: USFeet TVD Reference:
Company Name: Kinder Morgan
Position: Northing: 1273981.56USft Latitude: 37°22'25.2"
Easting: 2052323.72USft Longitude: -108°45'42.7"
North Reference: True Grid Convergence: -2.00°
Elevation Above VRD: 0.00USft

Plan Data for Goodman Point #27

Target Set Information:
Name: Goodman Point #27 Target
Position offsets from Slot centre
Name TVD +N/-S +E/-W Northing Easting
(USft) (USft) (USft) (USft) (USft)
PBHL 7920.00 2119.23 -2118.24 1276173.45 2050280.76

Plan Data for Goodman Point #27

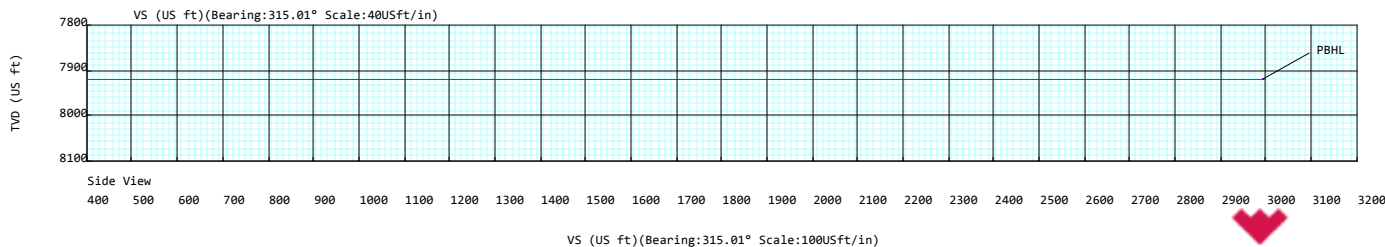
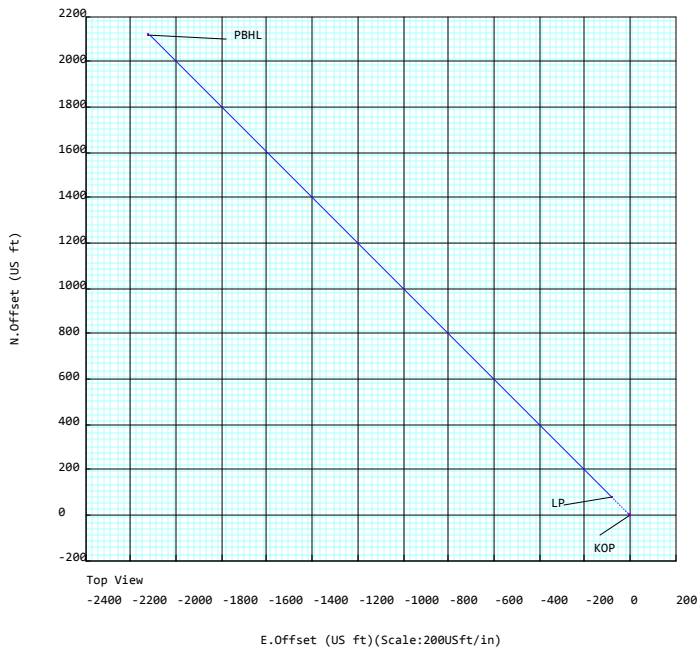
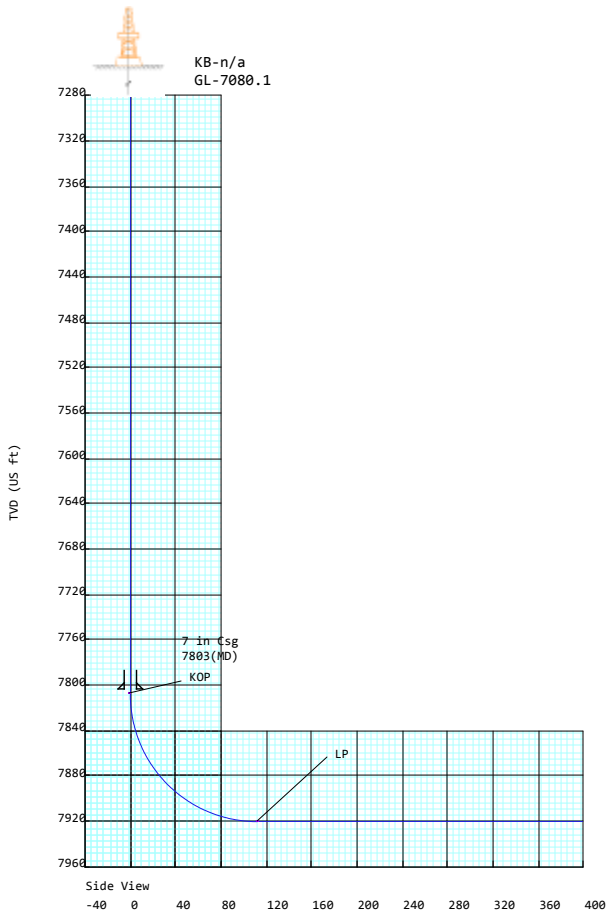
Slot: Goodman Point #27

Position:
Offset is from Site centre
+N/-S: 0.00USft Northing: 1273981.56USft Latitude: 37°22'25.2"
+E/-W: 0.00USft Easting: 2052323.72USft Longitude: -108°45'42.7"
Elevation Above VRD: 7080.10USft

Plan Point Information:

DogLeg Severity Unit: °/100.00ft Position offsets from Slot centre

MD	Inc	Az	TVD	+N/-S	+E/-W	Northing	Easting	VSec	DLS
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(DLSU)
0.00	0.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	0.00	0.00
7808.00	0.00	0.00	7808.00	0.00	0.00	1273981.56	2052323.72	0.00	0.00
7983.93	90.00	315.01	7920.00	79.21	-79.18	1274063.49	2052247.36	112.00	51.16
10868.27	90.00	315.01	7920.00	2119.23	-2118.24	1276173.45	2050280.76	2996.34	0.00



Sign Off: Patrick Rudolph

Goodman Point #27

Field Name Kinder Morgan Montezuma Co., CO (NAD 83 COS)	Map Units : US ft		Company Name : Kinder Morgan	
	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD83 / Colorado South (ftUS)			
	Comment :			
Site Name Goodman Point #27	Units : US ft	North Reference : True		Convergence Angle : -2.00
	Position	Northing : 1273981.56 US ft		Latitude : 37° 22' 25.21"
		Easting : 2052323.72 US ft		Longitude : -108° 45' 42.73"
	Elevation above Mean Sea Level:7080.10 US ft			
Comment :				
Slot Name Goodman Point #27	Position (Offsets relative to Site Centre)			
	+N / -S : 0.00 US ft	Northing :1273981.56 US ft		Latitude : 37°22'25.21"
	+E / -W : 0.00 US ft	Easting :2052323.72 US ft		Longitude : -108°45'42.73"
	Slot TVD Reference : Ground Elevation			
	Elevation above Mean Sea Level : 7080.10 US ft			
	Comment :			
Well Name Goodman Point #27	Type : Main well		UWI :	Plan : P1:V1
	Rig Height <i>Drill Floor</i> : 0.00 US ft		Comment :	
	Relative to Mean Sea Level: 7080.10 US ft			
	Closure Distance : 2996.34 US ft		Closure Azimuth : 315.013°	
	Vertical Section (Position of Origin Relative to Slot)			
	+N / -S : 0.00 US ft		+E / -W : 0.00 US ft	Az :315.01°
	Magnetic Parameters			
	Model : BGGM	Field Strength : 50636.0nT	Dec : 10.09°	Dip : 63.76°

Target Set

Name : Goodman Point #27 **Number of Targets** : 1
Target

Comment :

Target Name:	Position (Relative to Slot centre)			
	+N / -S : 2119.23US ft		Northing : 1276173.45 US ft	Latitude : 37°22'46.16"
	PBHL +E / -W : -2118.24 US ft		Easting : 2050280.76US ft	Longitude : -108°46'8.98"
	TVD (Drill Floor) : 7920.00 US ft			
Shape:				
	Cuboid			
	Orientation	Azimuth : 0.00°	Inclination : 0.00°	
	Dimensions	Length : 0.00 US ft	Breadth : 0.00 US ft	Height : 0.00 US ft

Casing Points (Relative to Slot centre, TVD relative to Drill Floor)

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Name
7803.00	0.00	0.00	7803.00	0.00	0.00	1273981.56	2052323.72	Csg 7 in

5D Plan Report

Well path created using minimum curvature

Salient Points (Relative to Slot centre, TVD relative to Drill Floor)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100 US ft)	VS (US ft)	B.Rate (°/100 US ft)	T.Rate (°/100 US ft)	T.Face (°)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7803.00	0.00	0.00	7803.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7 in Csg
7808.00	0.00	0.00	7808.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP
7983.93	90.00	315.01	7920.00	79.21	-79.18	51.16	112.00	51.16	0.00	315.01	LP
10868.27	90.00	315.01	7920.00	2119.23	-2118.24	0.00	2996.34	0.00	0.00	0.00	PBHL

Interpolated Points (Relative to Slot centre, TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
2599.99	0.00	0.00	2599.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
2699.99	0.00	0.00	2699.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
2799.99	0.00	0.00	2799.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
2899.99	0.00	0.00	2899.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
2999.99	0.00	0.00	2999.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
3099.99	0.00	0.00	3099.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
3199.99	0.00	0.00	3199.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
3299.99	0.00	0.00	3299.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
3399.99	0.00	0.00	3399.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
3499.99	0.00	0.00	3499.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
3599.99	0.00	0.00	3599.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
3699.99	0.00	0.00	3699.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
3799.99	0.00	0.00	3799.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
3899.99	0.00	0.00	3899.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
3999.99	0.00	0.00	3999.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
4099.99	0.00	0.00	4099.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
4199.99	0.00	0.00	4199.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
4299.99	0.00	0.00	4299.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
4399.99	0.00	0.00	4399.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
4499.99	0.00	0.00	4499.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
4599.99	0.00	0.00	4599.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	

5D Plan Report

Interpolated Points (Relative to Slot centre, TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
4699.99	0.00	0.00	4699.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
4799.99	0.00	0.00	4799.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
4899.99	0.00	0.00	4899.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
4999.99	0.00	0.00	4999.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
5099.99	0.00	0.00	5099.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
5199.99	0.00	0.00	5199.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
5299.99	0.00	0.00	5299.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
5399.99	0.00	0.00	5399.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
5499.99	0.00	0.00	5499.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
5599.99	0.00	0.00	5599.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
5699.99	0.00	0.00	5699.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
5799.99	0.00	0.00	5799.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
5899.99	0.00	0.00	5899.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
5999.99	0.00	0.00	5999.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
6099.99	0.00	0.00	6099.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
6199.99	0.00	0.00	6199.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
6299.99	0.00	0.00	6299.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
6399.99	0.00	0.00	6399.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
6499.99	0.00	0.00	6499.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
6599.99	0.00	0.00	6599.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
6699.99	0.00	0.00	6699.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
6799.99	0.00	0.00	6799.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
6899.99	0.00	0.00	6899.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
6999.99	0.00	0.00	6999.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
7099.99	0.00	0.00	7099.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
7199.99	0.00	0.00	7199.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
7299.99	0.00	0.00	7299.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
7399.99	0.00	0.00	7399.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
7499.99	0.00	0.00	7499.99	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
7599.98	0.00	0.00	7599.98	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
7699.98	0.00	0.00	7699.98	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
7799.98	0.00	0.00	7799.98	0.00	0.00	0.00	0.00	1273981.56	2052323.72	
7803.00	0.00	0.00	7803.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	7 in Csg
7808.00	0.00	0.00	7808.00	0.00	0.00	0.00	0.00	1273981.56	2052323.72	KOP
7899.98	47.06	315.01	7889.99	25.25	-25.24	35.70	51.16	1274007.67	2052299.38	
7983.93	90.00	315.01	7920.00	79.21	-79.18	112.00	51.16	1274063.49	2052247.36	LP
7999.98	90.00	315.01	7920.00	90.57	-90.53	128.05	0.00	1274075.24	2052236.41	
8099.98	90.00	315.01	7920.00	161.30	-161.22	228.05	0.00	1274148.39	2052168.23	
8199.98	90.00	315.01	7920.00	232.02	-231.92	328.05	0.00	1274221.54	2052100.04	
8299.98	90.00	315.01	7920.00	302.75	-302.61	428.05	0.00	1274294.69	2052031.86	
8399.98	90.00	315.01	7920.00	373.48	-373.30	528.05	0.00	1274367.84	2051963.68	
8499.98	90.00	315.01	7920.00	444.20	-444.00	628.05	0.00	1274441.00	2051895.50	
8599.98	90.00	315.01	7920.00	514.93	-514.69	728.05	0.00	1274514.15	2051827.32	
8699.98	90.00	315.01	7920.00	585.66	-585.39	828.05	0.00	1274587.30	2051759.14	
8799.98	90.00	315.01	7920.00	656.39	-656.08	928.05	0.00	1274660.45	2051690.95	
8899.98	90.00	315.01	7920.00	727.11	-726.77	1028.05	0.00	1274733.60	2051622.77	
8999.98	90.00	315.01	7920.00	797.84	-797.47	1128.05	0.00	1274806.76	2051554.59	
9099.98	90.00	315.01	7920.00	868.57	-868.16	1228.05	0.00	1274879.91	2051486.41	
9199.98	90.00	315.01	7920.00	939.29	-938.86	1328.05	0.00	1274953.06	2051418.23	
9299.98	90.00	315.01	7920.00	1010.02	-1009.55	1428.05	0.00	1275026.21	2051350.04	
9399.98	90.00	315.01	7920.00	1080.75	-1080.24	1528.05	0.00	1275099.36	2051281.86	
9499.98	90.00	315.01	7920.00	1151.47	-1150.94	1628.05	0.00	1275172.52	2051213.68	
9599.98	90.00	315.01	7920.00	1222.20	-1221.63	1728.05	0.00	1275245.67	2051145.50	
9699.98	90.00	315.01	7920.00	1292.93	-1292.33	1828.05	0.00	1275318.82	2051077.32	
9799.98	90.00	315.01	7920.00	1363.65	-1363.02	1928.05	0.00	1275391.97	2051009.14	
9899.98	90.00	315.01	7920.00	1434.38	-1433.71	2028.05	0.00	1275465.12	2050940.95	
9999.98	90.00	315.01	7920.00	1505.11	-1504.41	2128.05	0.00	1275538.28	2050872.77	
10099.98	90.00	315.01	7920.00	1575.84	-1575.10	2228.05	0.00	1275611.43	2050804.59	
10199.98	90.00	315.01	7920.00	1646.56	-1645.80	2328.05	0.00	1275684.58	2050736.41	

5D Plan Report

Interpolated Points (Relative to Slot centre, TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
10299.98	90.00	315.01	7920.00	1717.29	-1716.49	2428.05	0.00	1275757.73	2050668.23	
10399.98	90.00	315.01	7920.00	1788.02	-1787.19	2528.05	0.00	1275830.88	2050600.05	
10499.98	90.00	315.01	7920.00	1858.74	-1857.88	2628.05	0.00	1275904.04	2050531.86	
10599.98	90.00	315.01	7920.00	1929.47	-1928.57	2728.05	0.00	1275977.19	2050463.68	
10699.98	90.00	315.01	7920.00	2000.20	-1999.27	2828.05	0.00	1276050.34	2050395.50	
10799.98	90.00	315.01	7920.00	2070.92	-2069.96	2928.05	0.00	1276123.49	2050327.32	
10868.27	90.00	315.01	7920.00	2119.23	-2118.24	2996.34	0.00	1276173.45	2050280.76	PBHL



Weatherford

Weatherford Drilling Services

GeoDec4 v2.0.0.3

Report Date: March 31, 2014

Job Number: _____

Customer: Kinder Morgan

Well Name: Goodman Point #27

API Number: _____

Rig Name: _____

Location: _____

Block: _____

Engineer: Patrick Rudolph

NAD83 (1986)

Geodetic Coordinate System

Datum: North American Datum 1983 (1986)

Ellipsoid: GRS 1980

EPSG: 4269

Latitude: 37.37367 Degree

Longitude: -108.76187 Degree

Datum Transformation: none

NAD83 (1986)

Geodetic Coordinate System

Datum: North American Datum 1983 (1986)

Ellipsoid: GRS 1980

EPSG: 4269

Latitude: 37.37367 Degree

Longitude: -108.76187 Degree

Geodetic Location WGS84

MSL Elevation = 7080.1 usft

Latitude = 37° 22' 25.21" N

Longitude = 108° 45' 42.73" W

Magnetic Declination = 10.08 deg

[True North Offset]

Local Gravity = .9993 g

Checksum = 5811

Local Field Strength = 50581 nT

Magnetic Vector X = 22021 nT

Magnetic Dip = 63.76 deg

Magnetic Vector Y = 3915 nT

Magnetic Model = bggm2013.bgs

Magnetic Vector Z = 45367 nT

Run Date = June 15, 2014

Magnetic Vector H = 22366 nT

Signed: _____

Date: _____