



Project: WELD COUNTY, CO
Site: WINDER SOUTH PAD
Well: WINDER SOUTH 9
Wellbore: WINDER SOUTH 9
Design: WINDER SOUTH 9
Latitude: 40° 30' 9.619 N
Longitude: 104° 53' 24.706 W
GL: 4855.00
KB: WELL @ 4880.00ft (Patterson 346)



Azimuths to True North
Magnetic North: 8.36°

Magnetic Field
Strength: 52512.3nT
Dip Angle: 66.93°
Date: 10/03/2016
Model: IGRF2015

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP WINDER SOUTH 9 P3	7058.00	-2149.43	-182.86	1424396.36	3169410.10	40° 29' 48.379 N	104° 53' 27.073 W
PBHL WINDER SOUTH 9	7058.00	-2123.46	-9650.75	1424357.22	3159942.27	40° 29' 48.617 N	104° 55' 29.629 W

WELL DETAILS: WINDER SOUTH 9

+N/-S	+E/-W	Northing	Ground Level:	4855.00	Latitude	Longitude	Slot
0.00	0.00	1426546.99	Easting	3169578.17	40° 30' 9.619 N	104° 53' 24.706 W	

SECTION DETAILS

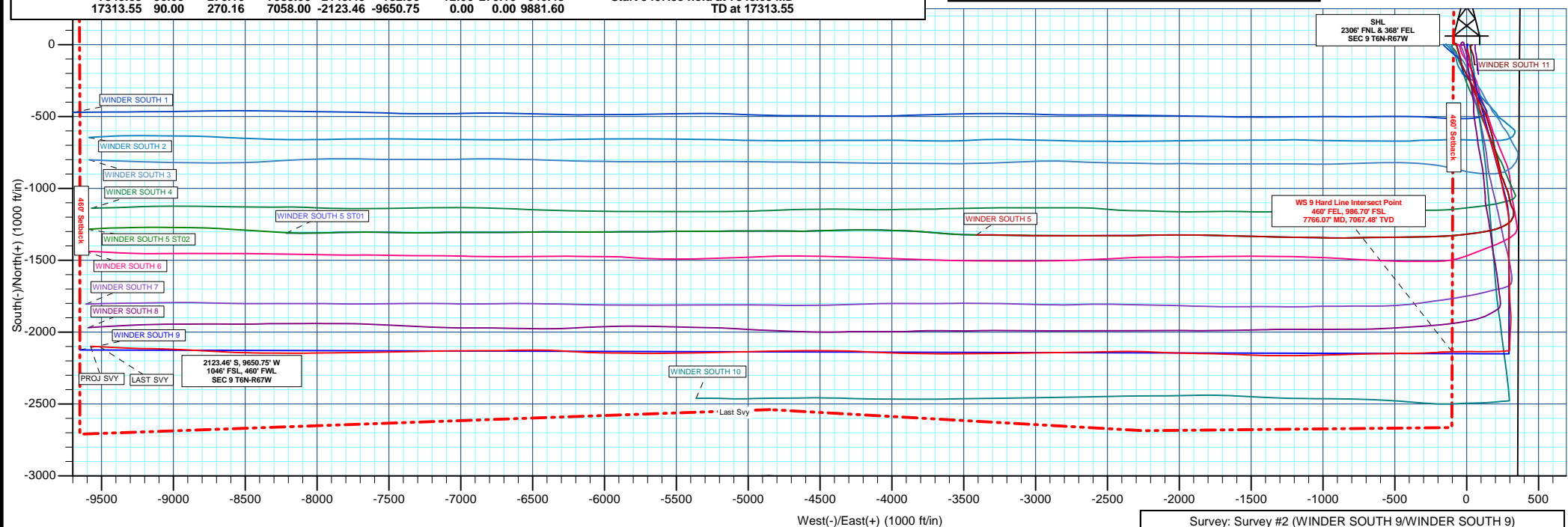
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1527.00	5.70	174.20	1525.31	-31.44	5.79	0.00	0.00	1.11	Start 139.00 hold at 1527.00 MD
1666.00	5.70	174.20	1663.62	-45.18	7.18	0.00	0.00	2.70	Start DLS 2.50 TFO -11.16
2641.55	30.00	165.00	2585.37	-333.32	76.25	2.50	-11.16	-2.84	Start 1500.00 hold at 2641.55 MD
4141.55	30.00	165.00	3884.41	-1057.76	270.36	0.00	0.00	-36.74	Start DLS 2.00 TFO 96.50
4515.75	30.00	180.00	4208.94	-1241.93	294.61	2.00	96.50	-20.84	Start 1050.00 hold at 4515.75 MD
5565.75	30.00	180.00	5118.26	-1766.93	294.61	0.00	0.00	91.97	Start DLS 2.00 TFO 180.00
7065.75	0.00	0.00	6550.66	-2150.74	294.61	2.00	180.00	174.45	Start 29.87 hold at 7065.75 MD
7095.62	0.00	0.00	6580.53	-2150.74	294.61	0.00	0.00	174.45	Start DLS 12.00 TFO 270.16
7845.63	90.00	270.16	7058.00	-2149.43	-182.86	12.00	270.16	640.48	Start 9467.93 hold at 7845.63 MD
17313.55	90.00	270.16	7058.00	-2123.46	-9650.75	0.00	0.00	9881.60	TD at 17313.55

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3580.00	3790.05	PARKMAN
4140.00	4436.21	SUSSEX
4700.00	5082.78	SHANNON
6905.00	7452.37	SHARON SPRINGS
6951.00	7519.68	NIOBRARA
7058.00	7845.63	NIO B TARGET

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



Survey: Survey #2 (WINDER SOUTH 9/WINDER SOUTH 9)

Created By: TRACY WILLIAMS Date: 13:35, December 12 2016

