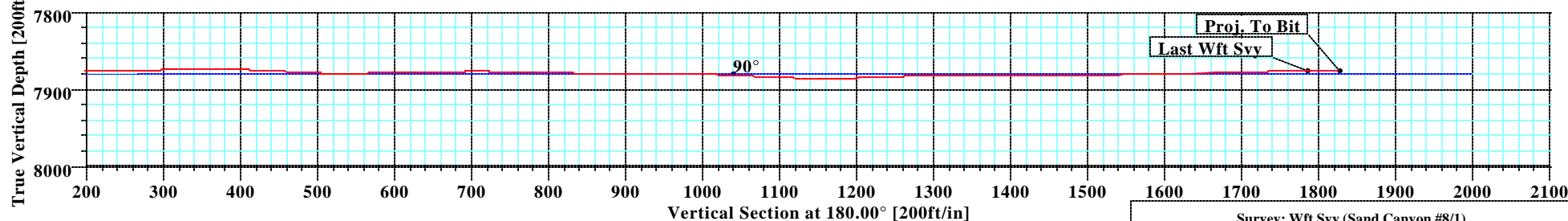
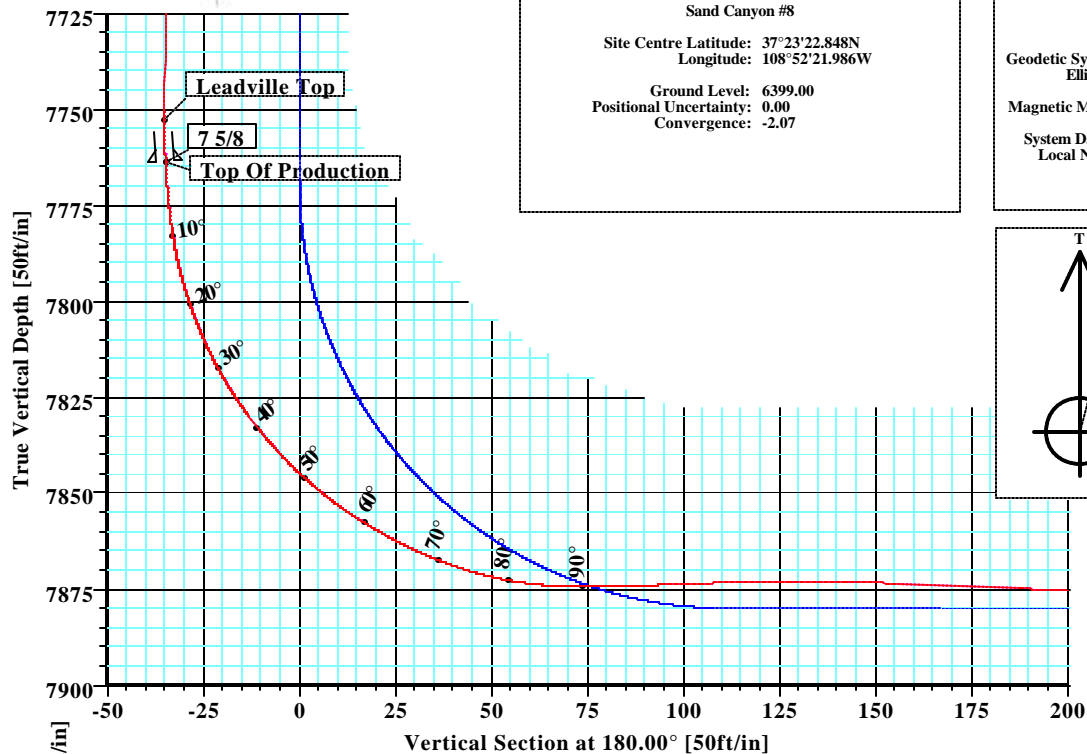


Sand Canyon #8 Montezuma Co., CO



KB ELEV: 6412
GL ELEV: 6399



Survey: Wft Svy (Sand Canyon #8/1)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
76	9700.00	90.63	175.24	7875.46	-1826.39	23.63	0.00	0.00	1826.39

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Sand Canyon #8	0.00	0.00	1280954.06	2020330.88	37°23'22.848N	108°52'21.986W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Pbhl	7880.00	-2000.00	0.00	37°23'03.074N	108°52'21.986W	Point

SITE DETAILS

Sand Canyon #8
Site Centre Latitude: 37°23'22.848N
Longitude: 108°52'21.986W
Ground Level: 6399.00
Positional Uncertainty: 0.00
Convergence: -2.07

FIELD DETAILS

Montezuma Co., CO (NAD83)
Colorado
Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: Colorado, Southern Zone
Magnetic Model: IGRF2010
System Datum: Mean Sea Level
Local North: True North



Azimuths to True North
Magnetic North: 10.54°
Magnetic Field
Strength: 51081nT
Dip Angle: 63.82°
Date: 8/24/2010
Model: IGRF2010

Total Correction to True North: 10.54°

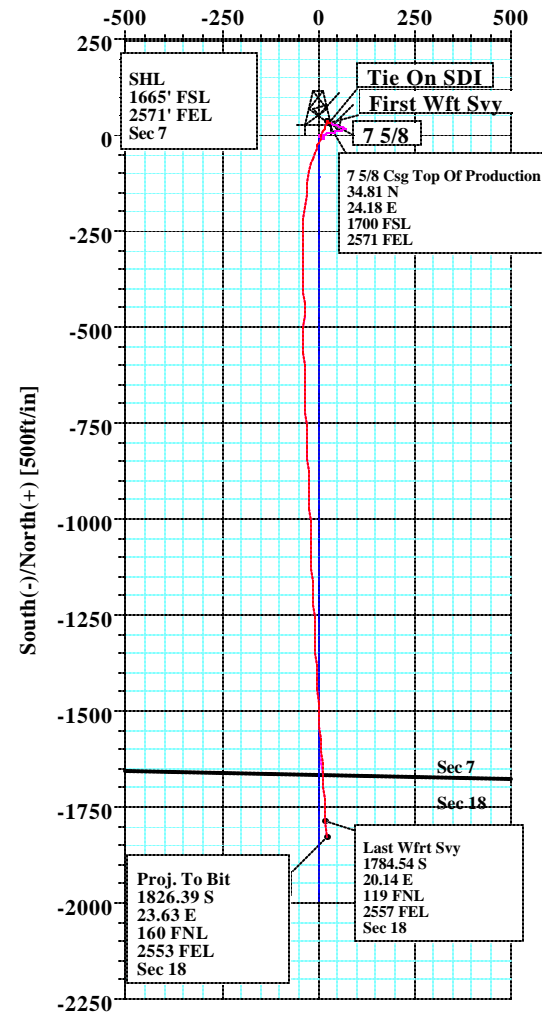
LEGEND

Blue line: Sand Canyon #8,1,Plan #4
Red line: Sand Canyon #8,1,Gyro
Black line: Wft Svy



Weatherford

West(-)/East(+) [500ft/in]



Survey: Wft Svy (Sand Canyon #8/1)

Created By: Russell W. Joyner

Date: 9/15/2010

Company: Kinder Morgan			Date: 9/15/2010			Time: 15:23:58			Page: 1		
Field: Montezuma Co., CO (NAD83)			Co-ordinate(NE) Reference:			Well: Sand Canyon #8, True North					
Site: Sand Canyon #8			Vertical (TVD) Reference:			SITE 6412.0					
Well: Sand Canyon #8			Section (VS) Reference:			Well (0.00N,0.00E,180.00Azi)					
Wellpath: 1			Survey Calculation Method:			Minimum Curvature			Db: Sybase		
Survey: Wft Svy			Start Date:			9/1/2010					
Company: Weatherford International Ltd.			Engineer:			Russell W. Joyner					
Tool: MWD;MWD - Standard			Tied-to:			User Defined					
Field: Montezuma Co., CO (NAD83) Colorado											
Map System: US State Plane Coordinate System 1983			Map Zone:			Colorado, Southern Zone					
Geo Datum: GRS 1980			Coordinate System:			Well Centre					
Sys Datum: Mean Sea Level			Geomagnetic Model:			IGRF2010					
Site: Sand Canyon #8											
Site Position:			Northing: 1280954.06 ft			Latitude: 37 23 22.848 N					
From: Geographic			Easting: 2020330.88 ft			Longitude: 108 52 21.986 W					
Position Uncertainty: 0.00 ft						North Reference: True					
Ground Level: 6399.00 ft						Grid Convergence: -2.07 deg					
Well: Sand Canyon #8			Slot Name:								
Well Position: +N/-S 0.00 ft			Northing: 1280954.06 ft			Latitude: 37 23 22.848 N					
+E/-W 0.00 ft			Easting : 2020330.88 ft			Longitude: 108 52 21.986 W					
Position Uncertainty: 0.00 ft											
Wellpath: 1			Drilled From: Surface								
Current Datum: SITE			Tie-on Depth: 0.00 ft								
Magnetic Data: 8/24/2010			Above System Datum: Mean Sea Level								
Field Strength: 51081 nT			Declination: 10.54 deg								
Vertical Section: Depth From (TVD) ft			Mag Dip Angle: 63.82 deg								
			+N/-S ft			Direction deg					

Company: Kinder Morgan
Field: Montezuma Co., CO (NAD83)
Site: Sand Canyon #8
Well: Sand Canyon #8
Wellpath: 1

Date: 9/15/2010 **Time:** 15:23:58 **Page:** 2

Co-ordinate(NE) Reference: Well: Sand Canyon #8, True North

Vertical (TVD) Reference: SITE 6412.0

Section (VS) Reference: Well (0.00N,0.00E,180.00Azi)

Survey Calculation Method: Minimum Curvature **Db:** Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
8059.00	87.63	186.42	7874.87	-187.59	-34.52	2.35	187.59	1280767.84	2020289.61	
8091.00	88.44	182.92	7875.97	-219.46	-37.12	11.22	219.46	1280736.09	2020285.86	
8123.00	90.69	179.42	7876.21	-251.44	-37.78	13.00	251.44	1280704.14	2020284.05	
8156.00	92.25	179.04	7875.36	-284.43	-37.33	4.87	284.43	1280671.17	2020283.31	
8188.00	90.06	179.29	7874.72	-316.42	-36.87	6.89	316.42	1280639.18	2020282.62	
8219.00	90.44	180.04	7874.58	-347.42	-36.69	2.71	347.42	1280608.20	2020281.68	
8250.00	89.94	179.92	7874.48	-378.42	-36.67	1.66	378.42	1280577.22	2020280.57	
8281.00	88.19	179.42	7874.99	-409.41	-36.50	5.87	409.41	1280546.24	2020279.63	
8311.00	87.44	179.79	7876.13	-439.39	-36.29	2.79	439.39	1280516.27	2020278.76	
8343.00	87.06	180.17	7877.67	-471.35	-36.28	1.68	471.35	1280484.33	2020277.61	
8374.00	87.69	180.79	7879.09	-502.32	-36.54	2.85	502.32	1280453.39	2020276.24	
8405.00	90.19	180.29	7879.66	-533.31	-36.83	8.22	533.31	1280422.43	2020274.83	
8438.00	91.63	180.29	7879.13	-566.30	-37.00	4.36	566.30	1280389.46	2020273.47	
8469.00	91.69	176.79	7878.24	-597.27	-36.21	11.29	597.27	1280358.48	2020273.14	
8501.00	90.00	177.67	7877.76	-629.23	-34.66	5.95	629.23	1280326.49	2020273.53	
8532.00	90.58	178.49	7877.61	-660.21	-33.62	3.24	660.21	1280295.49	2020273.45	
8563.00	91.26	178.10	7877.11	-691.20	-32.70	2.53	691.20	1280264.50	2020273.25	
8595.00	88.81	178.04	7877.09	-723.17	-31.62	7.66	723.17	1280232.50	2020273.17	
8627.00	88.81	177.29	7877.76	-755.14	-30.32	2.34	755.14	1280200.51	2020273.32	
8656.00	88.94	178.67	7878.32	-784.12	-29.30	4.78	784.12	1280171.51	2020273.30	
8687.00	88.94	178.29	7878.90	-815.10	-28.48	1.23	815.10	1280140.52	2020273.00	
8718.00	89.31	177.42	7879.37	-846.07	-27.32	3.05	846.07	1280109.52	2020273.04	
8749.00	89.25	177.29	7879.76	-877.04	-25.88	0.46	877.04	1280078.53	2020273.35	
8780.00	89.50	177.17	7880.10	-908.00	-24.39	0.89	908.00	1280047.53	2020273.73	
8812.00	89.75	177.54	7880.31	-939.97	-22.91	1.40	939.97	1280015.53	2020274.06	
8844.00	89.13	177.41	7880.62	-971.93	-21.50	1.98	971.93	1279983.54	2020274.31	
8876.00	89.56	178.29	7880.99	-1003.91	-20.30	3.06	1003.91	1279951.54	2020274.36	
8906.00	87.63	177.79	7881.72	-1033.88	-19.27	6.65	1033.88	1279921.55	2020274.30	
8937.00	87.02	178.14	7883.17	-1064.83	-18.17	2.27	1064.83	1279890.58	2020274.28	
8970.00	87.63	177.67	7884.71	-1097.77	-16.97	2.33	1097.77	1279857.62	2020274.30	
9001.00	88.63	178.04	7885.72	-1128.73	-15.81	3.44	1128.73	1279826.64	2020274.34	
9033.00	89.94	177.63	7886.12	-1160.70	-14.60	4.29	1160.70	1279794.64	2020274.39	
9064.00	91.75	176.92	7885.66	-1191.66	-13.13	6.27	1191.66	1279763.65	2020274.75	
9096.00	91.97	176.49	7884.62	-1223.59	-11.29	1.51	1223.59	1279731.67	2020275.43	
9128.00	91.94	176.16	7883.53	-1255.51	-9.24	1.03	1255.51	1279699.70	2020276.33	
9160.00	92.38	177.79	7882.33	-1287.44	-7.55	5.27	1287.44	1279667.73	2020276.86	
9191.00	89.75	178.67	7881.75	-1318.42	-6.59	8.95	1318.42	1279636.74	2020276.70	
9223.00	89.06	176.42	7882.08	-1350.38	-5.22	7.35	1350.38	1279604.75	2020276.91	
9255.00	89.50	177.29	7882.49	-1382.33	-3.47	3.05	1382.33	1279572.75	2020277.52	
9287.00	90.06	177.04	7882.61	-1414.29	-1.89	1.92	1414.29	1279540.76	2020277.94	
9318.00	90.19	176.80	7882.54	-1445.25	-0.22	0.88	1445.25	1279509.76	2020278.49	
9350.00	90.31	176.92	7882.40	-1477.20	1.53	0.53	1477.20	1279477.77	2020279.09	
9382.00	91.00	176.57	7882.04	-1509.15	3.35	2.42	1509.15	1279445.78	2020279.75	
9413.00	91.63	176.79	7881.32	-1540.09	5.14	2.15	1540.09	1279414.79	2020280.43	
9445.00	91.75	176.42	7880.38	-1572.02	7.04	1.22	1572.02	1279382.82	2020281.17	
9477.00	90.44	177.29	7879.77	-1603.96	8.79	4.91	1603.96	1279350.83	2020281.77	
9509.00	90.69	176.79	7879.45	-1635.92	10.45	1.75	1635.92	1279318.83	2020282.27	
9540.00	90.63	176.54	7879.10	-1666.86	12.25	0.83	1666.86	1279287.84	2020282.95	
9572.00	92.13	177.29	7878.33	-1698.81	13.97	5.24	1698.81	1279255.86	2020283.52	
9604.00	92.06	176.17	7877.16	-1730.73	15.79	3.50	1730.73	1279223.89	2020284.19	
9636.00	91.14	174.97	7876.26	-1762.62	18.27	4.72	1762.62	1279191.93	2020285.51	
9658.00	90.63	175.24	7875.92	-1784.54	20.14	2.62	1784.54	1279169.96	2020286.59	Last Wft Svy



Company: Kinder Morgan	Date: 9/15/2010	Time: 15:23:58	Page: 3
Field: Montezuma Co., CO (NAD83)	Co-ordinate(NE) Reference: Well: Sand Canyon #8, True North		
Site: Sand Canyon #8	Vertical (TVD) Reference: SITE 6412.0		
Well: Sand Canyon #8	Section (VS) Reference: Well (0.00N,0.00E,180.00Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
9700.00	90.63	175.24	7875.46	-1826.39	23.63	0.00	1826.39	1279128.01	2020288.56	Proj. To Bit

Annotation

MD ft	TVD ft	
7643.00	7641.05	Tie On SDI
7651.00	7649.04	First Wft Svy
7766.04	7764.00	Top Of Production
9658.00	7875.92	Last Wft Svy
9700.00	7875.46	Proj. To Bit