



Directional Survey Certification

2948 I-70 Business Loop
Grand Junction, CO 81504
(970)-245-9447 Fax (970)-245-9454

Operator	<u>WPX Energy Rocky Mountain, LLC.</u>
Well Name & No.	<u>RU 444-7</u>
County & State	<u>Garfield County, CO</u>
SDI Job No.	<u>420415DEFK274258</u>
Rig	<u>Nabors 576</u>

I, Mel Mireles Jr., having personal knowledge of all the facts, hereby certify that the attached directional survey run from a measured depth of 0 feet to a measured depth of 10,030 feet is true and correct as determined from all available records.

Signature

04-May-15

Date

Mel Mireles Jr.
Grand Junction Assistant Well Planner
Scientific Drilling - Colorado District

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well RU 444-7 - Slot B07
Project:	Garfield County, CO NAD83	TVD Reference:	KELLY BUSHING @ 7943.02ft (Nabors 576 (26' RKB) kjs)
Site:	RU 44-7 Pad	MD Reference:	KELLY BUSHING @ 7943.02ft (Nabors 576 (26' RKB) kjs)
Well:	RU 444-7	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Project	Garfield County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	RU 44-7 Pad				
Site Position:		Northing:	1,598,795.69 usft	Latitude:	39.4546828
From:	Map	Easting:	2,347,575.10 usft	Longitude:	-107.8108128
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.46 °

Well	RU 444-7 - Slot B07					
Well Position	+N/-S	0.00 ft	Northing:	1,598,830.59 usft	Latitude:	39.4547787
	+E/-W	0.00 ft	Easting:	2,347,577.30 usft	Longitude:	-107.8108082
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	7,917.02 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/18/2015	9.78	65.64	51,857

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	142.18	

Survey Program	Date	5/4/2015			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
84.00	358.00	Survey #1 - Gyro MWD (Wellbore #1)	SDI Gyro MWD 104	SDI Gyro MWD Error Model Ver 1.0.4	
428.00	1,317.00	Survey #2 - Surface MWD (Wellbore #1)	MWD SDI	MWD - Standard ver 1.0.1	
1,446.00	10,030.00	Survey #3 - Production MWD (Wellbore #1)	MWD SDI	MWD - Standard ver 1.0.1	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84.00	0.70	101.34	84.00	-0.10	0.50	0.39	0.83	0.83	0.00	
First SDI Gyro MWD Survey										
177.00	1.94	141.33	176.97	-1.44	2.04	2.39	1.58	1.33	43.00	
268.00	3.61	145.72	267.86	-5.01	4.62	6.79	1.85	1.84	4.82	
358.00	4.75	145.28	357.62	-10.42	8.34	13.34	1.27	1.27	-0.49	
Last SDI Gyro MWD Survey										

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Site:	RU 44-7 Pad	MD Reference:	KELLY BUSHING @ 7943.02ft (Nabors 576 (26' RKB) kjs)
Well:	RU 444-7	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
428.00	5.37	142.62	427.35	-15.40	11.98	19.51	0.95	0.89	-3.80	
First SDI Surface MWD Survey										
519.00	6.19	144.59	517.89	-22.78	17.41	28.67	0.93	0.90	2.16	
611.00	7.18	146.69	609.26	-31.63	23.44	39.36	1.11	1.08	2.28	
702.00	8.13	144.16	699.45	-41.60	30.33	51.46	1.11	1.04	-2.78	
792.00	7.29	136.01	788.64	-50.87	38.02	63.50	1.53	-0.93	-9.06	
884.00	5.88	135.98	880.03	-58.46	45.35	73.98	1.53	-1.53	-0.03	
974.00	5.88	137.55	969.55	-65.17	51.66	83.16	0.18	0.00	1.74	
1,066.00	6.80	135.51	1,060.99	-72.54	58.66	93.27	1.03	1.00	-2.22	
1,161.00	6.53	146.14	1,155.35	-81.03	65.61	104.25	1.33	-0.28	11.19	
1,256.00	6.92	146.64	1,249.70	-90.30	71.77	115.34	0.42	0.41	0.53	
1,317.00	7.50	144.52	1,310.21	-96.61	76.10	122.98	1.05	0.95	-3.48	
Last SDI Surface MWD Survey										
1,446.00	8.38	145.55	1,437.98	-111.22	86.31	140.78	0.69	0.68	0.80	
First SDI Production MWD Survey										
1,540.00	6.70	146.32	1,531.16	-121.43	93.22	153.09	1.79	-1.79	0.82	
1,636.00	6.52	145.77	1,626.52	-130.60	99.39	164.11	0.20	-0.19	-0.57	
1,731.00	6.47	147.34	1,720.91	-139.56	105.32	174.82	0.19	-0.05	1.65	
1,826.00	6.49	138.39	1,815.31	-148.08	111.77	185.51	1.06	0.02	-9.42	
1,922.00	6.36	139.88	1,910.71	-156.21	118.80	196.24	0.22	-0.14	1.55	
2,017.00	6.48	139.24	2,005.11	-164.29	125.69	206.85	0.15	0.13	-0.67	
2,112.00	6.53	138.81	2,099.50	-172.42	132.75	217.60	0.07	0.05	-0.45	
2,207.00	6.77	138.56	2,193.86	-180.68	140.01	228.58	0.25	0.25	-0.26	
2,303.00	6.22	138.13	2,289.24	-188.79	147.23	239.41	0.58	-0.57	-0.45	
2,397.00	6.19	139.78	2,382.69	-196.45	153.90	249.56	0.19	-0.03	1.76	
2,492.00	6.16	138.81	2,477.14	-204.20	160.56	259.76	0.11	-0.03	-1.02	
2,587.00	6.08	139.02	2,571.60	-211.83	167.22	269.87	0.09	-0.08	0.22	
2,682.00	6.16	139.58	2,666.06	-219.51	173.82	279.99	0.11	0.08	0.59	
2,778.00	6.08	138.69	2,761.51	-227.25	180.52	290.21	0.13	-0.08	-0.93	
2,873.00	5.70	139.37	2,856.01	-234.61	186.91	299.94	0.41	-0.40	0.72	
2,969.00	5.65	141.33	2,951.54	-241.92	192.97	309.43	0.21	-0.05	2.04	
3,064.00	5.51	140.60	3,046.09	-249.10	198.79	318.66	0.17	-0.15	-0.77	
3,159.00	7.04	142.86	3,140.52	-257.26	205.20	329.04	1.63	1.61	2.38	
3,254.00	6.76	143.34	3,234.83	-266.39	212.05	340.46	0.30	-0.29	0.51	
3,349.00	6.98	144.32	3,329.15	-275.56	218.75	351.81	0.26	0.23	1.03	
3,445.00	6.76	143.60	3,424.46	-284.85	225.51	363.29	0.25	-0.23	-0.75	
3,540.00	6.93	143.72	3,518.78	-293.97	232.22	374.61	0.18	0.18	0.13	
3,636.00	6.58	144.32	3,614.11	-303.11	238.85	385.90	0.37	-0.36	0.63	
3,731.00	6.57	144.51	3,708.49	-311.95	245.18	396.77	0.03	-0.01	0.20	
3,825.00	6.51	146.44	3,801.88	-320.77	251.25	407.45	0.24	-0.06	2.05	
3,918.00	6.23	149.43	3,894.30	-329.51	256.73	417.72	0.47	-0.30	3.22	
4,014.00	6.40	138.40	3,989.72	-338.00	262.93	428.22	1.27	0.18	-11.49	
4,109.00	6.44	140.15	4,084.13	-346.04	269.86	438.83	0.21	0.04	1.84	

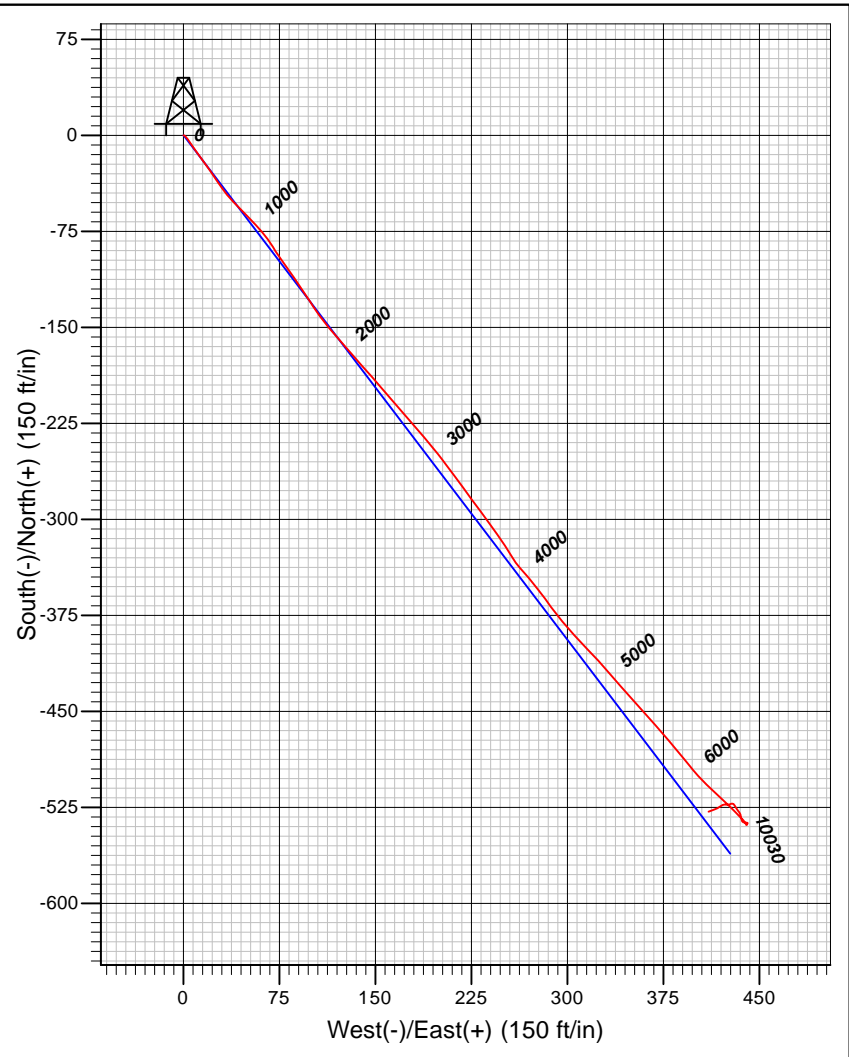
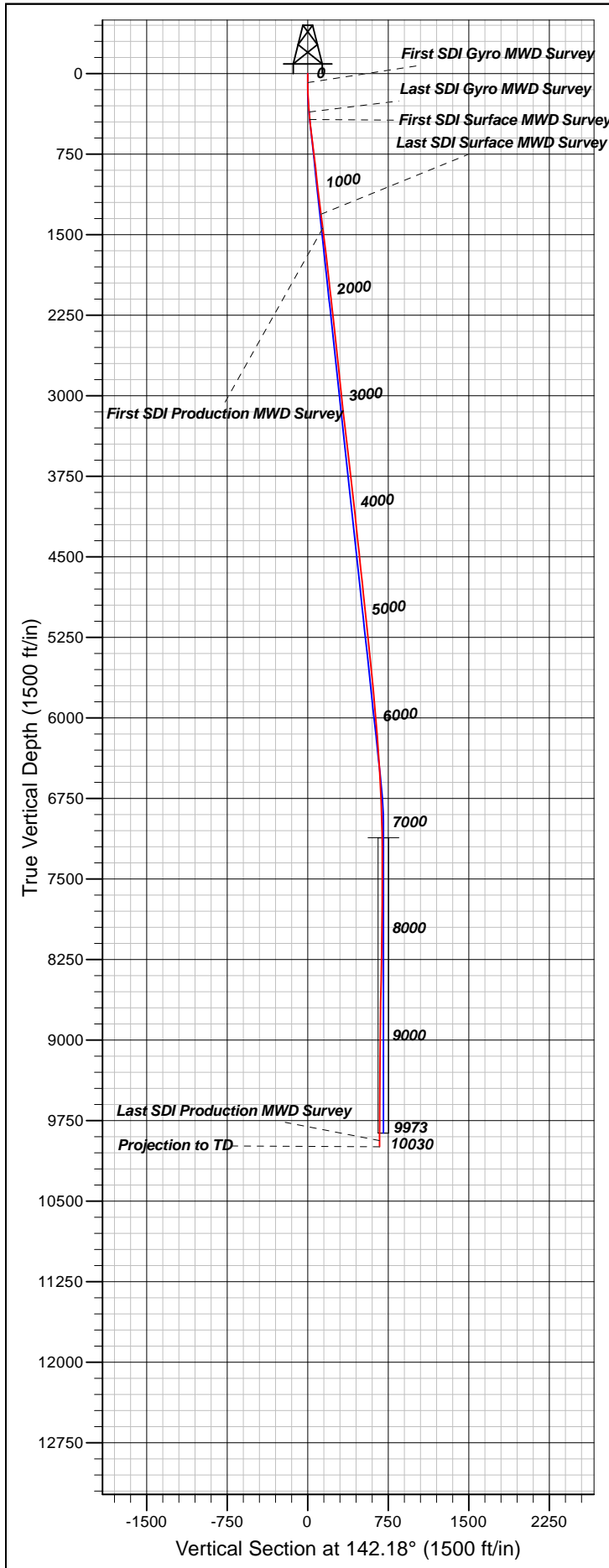
Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well RU 444-7 - Slot B07
Project:	Garfield County, CO NAD83	TVD Reference:	KELLY BUSHING @ 7943.02ft (Nabors 576 (26' RKB) kjs)
Site:	RU 44-7 Pad	MD Reference:	KELLY BUSHING @ 7943.02ft (Nabors 576 (26' RKB) kjs)
Well:	RU 444-7	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,204.00	6.07	141.51	4,178.56	-354.07	276.40	449.18	0.42	-0.39	1.43
4,299.00	5.92	143.29	4,273.04	-361.93	282.46	459.10	0.25	-0.16	1.87
4,394.00	5.99	142.64	4,367.53	-369.79	288.39	468.95	0.10	0.07	-0.68
4,488.00	5.60	144.71	4,461.05	-377.43	294.02	478.44	0.47	-0.41	2.20
4,583.00	6.43	137.03	4,555.53	-385.11	300.32	488.37	1.22	0.87	-8.08
4,679.00	6.03	136.68	4,650.96	-392.71	307.45	498.74	0.42	-0.42	-0.36
4,775.00	5.98	138.18	4,746.43	-400.11	314.24	508.75	0.17	-0.05	1.56
4,870.00	5.54	134.75	4,840.95	-407.02	320.80	518.23	0.59	-0.46	-3.61
4,965.00	6.40	139.87	4,935.44	-414.30	327.47	528.07	1.06	0.91	5.39
5,061.00	6.29	138.70	5,030.85	-422.34	334.39	538.67	0.18	-0.11	-1.22
5,156.00	6.14	139.71	5,125.29	-430.13	341.11	548.94	0.20	-0.16	1.06
5,252.00	6.15	136.61	5,220.74	-437.78	347.96	559.18	0.35	0.01	-3.23
5,348.00	5.72	138.33	5,316.23	-445.09	354.67	569.07	0.48	-0.45	1.79
5,444.00	5.55	138.03	5,411.76	-452.12	360.96	578.48	0.18	-0.18	-0.31
5,539.00	5.72	139.61	5,506.30	-459.14	367.10	587.79	0.24	0.18	1.66
5,635.00	5.72	137.62	5,601.83	-466.32	373.42	597.34	0.21	0.00	-2.07
5,730.00	5.45	140.15	5,696.37	-473.28	379.50	606.57	0.38	-0.28	2.66
5,825.00	5.28	140.29	5,790.96	-480.10	385.19	615.44	0.18	-0.18	0.15
5,920.00	5.11	141.03	5,885.57	-486.75	390.64	624.04	0.19	-0.18	0.78
6,015.00	5.02	139.72	5,980.20	-493.21	395.99	632.42	0.15	-0.09	-1.38
6,110.00	4.71	139.27	6,074.85	-499.34	401.22	640.47	0.33	-0.33	-0.47
6,205.00	4.40	136.25	6,169.55	-504.93	406.29	647.99	0.41	-0.33	-3.18
6,300.00	3.97	131.97	6,264.30	-509.76	411.25	654.85	0.56	-0.45	-4.51
6,395.00	3.54	133.62	6,359.10	-513.98	415.82	660.99	0.47	-0.45	1.74
6,490.00	3.42	132.77	6,453.92	-517.93	420.02	666.68	0.14	-0.13	-0.89
6,585.00	3.52	133.85	6,548.75	-521.88	424.21	672.37	0.13	0.11	1.14
6,681.00	3.10	135.95	6,644.59	-525.78	428.14	677.86	0.46	-0.44	2.19
6,775.00	2.85	134.46	6,738.46	-529.25	431.57	682.70	0.28	-0.27	-1.59
6,871.00	2.52	134.76	6,834.36	-532.40	434.77	687.16	0.34	-0.34	0.31
6,966.00	1.81	139.48	6,929.29	-535.02	437.23	690.73	0.77	-0.75	4.97
7,061.00	1.32	148.02	7,024.25	-537.08	438.79	693.32	0.57	-0.52	8.99
7,157.00	1.02	153.87	7,120.23	-538.79	439.75	695.26	0.34	-0.31	6.09
7,252.00	1.30	15.34	7,215.22	-538.51	440.41	695.44	2.29	0.29	-145.82
7,348.00	0.08	8.73	7,311.21	-537.39	440.70	694.74	1.27	-1.27	-6.89
7,443.00	0.00	331.63	7,406.21	-537.33	440.71	694.69	0.08	-0.08	0.00
7,539.00	0.23	341.12	7,502.21	-537.14	440.65	694.51	0.24	0.24	0.00
7,634.00	0.33	263.42	7,597.21	-537.00	440.32	694.19	0.38	0.11	-81.79
7,730.00	0.18	275.54	7,693.21	-537.01	439.89	693.94	0.17	-0.16	12.63
7,825.00	0.44	275.38	7,788.21	-536.96	439.38	693.59	0.27	0.27	-0.17
7,921.00	0.62	276.61	7,884.21	-536.87	438.50	692.97	0.19	0.19	1.28
8,017.00	0.79	279.77	7,980.20	-536.70	437.33	692.12	0.18	0.18	3.29
8,112.00	0.78	331.98	8,075.19	-536.02	436.38	691.00	0.73	-0.01	54.96

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,207.00	1.17	353.15	8,170.18	-534.48	435.96	689.53	0.55	0.41	22.28	
8,303.00	1.37	345.19	8,266.15	-532.40	435.55	687.64	0.28	0.21	-8.29	
8,398.00	0.97	343.40	8,361.13	-530.53	435.03	685.84	0.42	-0.42	-1.88	
8,493.00	1.25	323.02	8,456.12	-528.93	434.18	684.05	0.51	0.29	-21.45	
8,588.00	1.26	324.14	8,551.09	-527.26	432.94	681.97	0.03	0.01	1.18	
8,684.00	1.32	328.37	8,647.07	-525.46	431.74	679.82	0.12	0.06	4.41	
8,779.00	1.38	327.26	8,742.04	-523.57	430.55	677.59	0.07	0.06	-1.17	
8,874.00	0.35	291.99	8,837.03	-522.50	429.66	676.20	1.17	-1.08	-37.13	
8,969.00	0.50	289.87	8,932.03	-522.25	429.01	675.60	0.16	0.16	-2.23	
9,064.00	0.71	253.73	9,027.02	-522.27	428.05	675.04	0.45	0.22	-38.04	
9,160.00	0.79	256.48	9,123.02	-522.59	426.84	674.54	0.09	0.08	2.86	
9,255.00	0.79	256.22	9,218.01	-522.90	425.56	674.01	0.00	0.00	-0.27	
9,351.00	0.93	281.61	9,314.00	-522.90	424.16	673.15	0.42	0.15	26.45	
9,446.00	0.79	262.19	9,408.99	-522.84	422.75	672.23	0.34	-0.15	-20.44	
9,541.00	1.14	248.66	9,503.97	-523.27	421.22	671.64	0.44	0.37	-14.24	
9,636.00	1.48	234.08	9,598.95	-524.33	419.35	671.33	0.50	0.36	-15.35	
9,732.00	1.45	245.00	9,694.92	-525.57	417.25	671.02	0.29	-0.03	11.38	
9,827.00	1.43	247.12	9,789.89	-526.54	415.06	670.45	0.06	-0.02	2.23	
9,923.00	1.45	249.83	9,885.86	-527.43	412.82	669.77	0.07	0.02	2.82	
9,973.00	1.55	247.48	9,935.84	-527.90	411.60	669.40	0.23	0.20	-4.70	
Last SDI Production MWD Survey										
10,030.00	1.55	247.48	9,992.82	-528.49	410.18	668.99	0.00	0.00	0.00	
Projection to TD										

Checked By: _____ Approved By: _____ Date: _____



Well Details: RU 444-7

TVD Reference: KELLY BUSHING @ 7943.02ft (Nabors 576 (26' RKB) kjs) Level: 7917.02						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1598830.60	2347577.30	39.4547787	-107.8108081	B07

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well RU 444-7 - Slot B07, True North
 Vertical (TVD) Reference: KELLY BUSHING @ 7943.02ft (Nabors 576 (26' RKB) kjs)
 Section (VS) Reference: Slot - B07(0.00N, 0.00E)
 Measured Depth Reference: KELLY BUSHING @ 7943.02ft (Nabors 576 (26' RKB) kjs)
 Calculation Method: Minimum Curvature

PROJECT DETAILS: Garfield County, CO NAD83

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Colorado Central Zone

System Datum: Mean Sea Level

Plan: Wellbore #1

11:37, May 04 2015
 Created By: Mel Mireles