

Company Name: Mak J

WELL DETAILS: McCoy 11-33

Ground Level:		5030.00		
+N/-S	+E/-W	Northing	Easting	Latitude
0.00	0.00	1889583.518	3134824.667	40.27471
		Longitude		Slot
		-105.01689		11-33

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00		Start Build 1.50
3	1133.33	5.00	59.96	1132.91	7.28	12.58	1.50	59.96	7.28		Start 4386.75 hold at 1133.33 MD
4	5520.08	5.00	59.96	5502.97	198.69	343.54	0.00	0.00	198.69		Start Drop -1.50
5	5853.42	0.00	0.00	5835.88	205.97	356.13	1.50	180.00	205.97		Start 164.12 hold at 5853.42 MD
6	7799.54	0.00	0.00	7782.00	205.97	356.13	0.00	0.00	205.97	McCoy 11-33	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
McCoy 11-33	7782.00	205.97	356.13	1889789.490	3135180.793	40.27527	-105.01561	Point

- plan hits target center

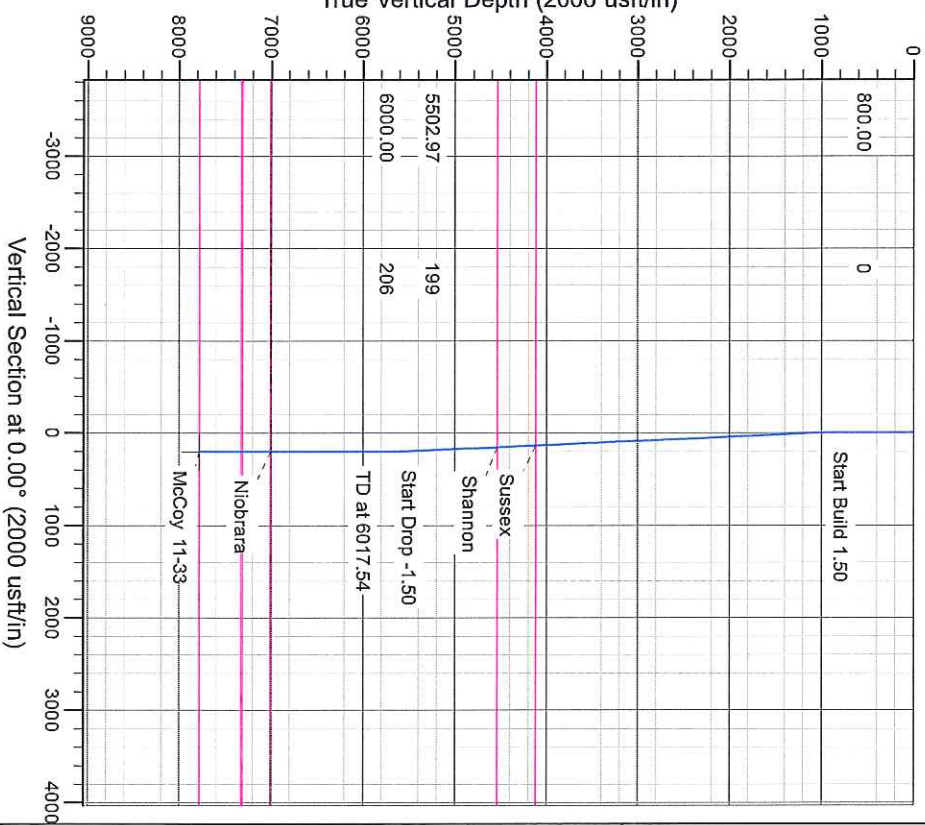
FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
4123.00	4134.84	Sussex	0.00	
4534.00	4547.41	Shannon	0.00	
7017.00	7034.54	Niobrara	0.00	
7311.00	7328.54	Ft Hays	0.00	
7329.00	7346.54	Codell	0.00	
7782.00	7799.54	J Sand	0.00	

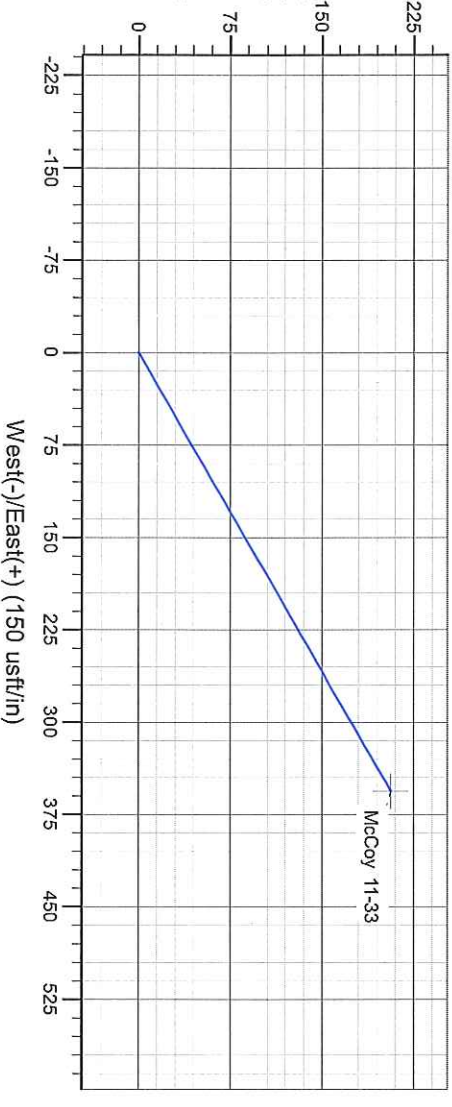
REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well McCoy 11-33 - Slot 11-33, Grid North
Vertical (TVD) Reference: WELL @ 5030.00usft (Original Well Elev)
Section (VS) Reference: Slot - 11-33(0.00N, 0.00E)
Measured Depth Reference: WELL @ 5030.00usft (Original Well Elev)
Calculation Method: Minimum Curvature

True Vertical Depth (2000 usft/in)



South(-)/North(+) (150 usft/in)





Mak J

McCoy 11-33 Pad

11-33

McCoy 11-33 - Slot 11-33

McCoy 11-33

Plan: Design #1

Standard Planning Report

21 December, 2012

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well McCoy 11-33 - Slot 11-33
Company:	Mak J	TVD Reference:	WELL @ 5030.00usft (Original Well Elev)
Project:	McCoy 11-33 Pad	MD Reference:	WELL @ 5030.00usft (Original Well Elev)
Site:	11-33	North Reference:	Grid
Well:	McCoy 11-33	Survey Calculation Method:	Minimum Curvature
Wellbore:	McCoy 11-33		
Design:	Design #1		

Project	McCoy 11-33 Pad		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	11-33				
Site Position:		Northing:	1,889,583.551 usft	Latitude:	40.27471
From:	Lat/Long	Easting:	3,134,824.666 usft	Longitude:	-105.01689
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.30 °

Well	McCoy 11-33 - Slot 11-33					
Well Position	+N/-S	-0.03 usft	Northing:	1,889,583.518 usft	Latitude:	40.27471
	+E/-W	0.00 usft	Easting:	3,134,824.667 usft	Longitude:	-105.01689
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,030.00 usft

Wellbore	McCoy 11-33				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/19/2012	8.78	66.86	52,878

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	0.00

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,133.33	5.00	59.96	1,132.91	7.28	12.58	1.50	1.50	0.00	59.96	
5,520.08	5.00	59.96	5,502.97	198.69	343.54	0.00	0.00	0.00	0.00	
5,853.42	0.00	0.00	5,835.88	205.97	356.13	1.50	-1.50	0.00	180.00	
7,799.54	0.00	0.00	7,782.00	205.97	356.13	0.00	0.00	0.00	0.00	McCoy 11-33

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well McCoy 11-33 - Slot 11-33
Company:	Mak J	TVD Reference:	WELL @ 5030.00usft (Original Well Elev)
Project:	McCoy 11-33 Pad	MD Reference:	WELL @ 5030.00usft (Original Well Elev)
Site:	11-33	North Reference:	Grid
Well:	McCoy 11-33	Survey Calculation Method:	Minimum Curvature
Wellbore:	McCoy 11-33		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	1.50	59.96	899.99	0.66	1.13	0.66	1.50	1.50	0.00
1,000.00	3.00	59.96	999.91	2.62	4.53	2.62	1.50	1.50	0.00
1,100.00	4.50	59.96	1,099.69	5.90	10.19	5.90	1.50	1.50	0.00
1,133.33	5.00	59.96	1,132.91	7.28	12.58	7.28	1.50	1.50	0.00
1,200.00	5.00	59.96	1,199.32	10.19	17.61	10.19	0.00	0.00	0.00
1,300.00	5.00	59.96	1,298.94	14.55	25.16	14.55	0.00	0.00	0.00
1,400.00	5.00	59.96	1,398.56	18.91	32.70	18.91	0.00	0.00	0.00
1,500.00	5.00	59.96	1,498.18	23.28	40.25	23.28	0.00	0.00	0.00
1,600.00	5.00	59.96	1,597.80	27.64	47.79	27.64	0.00	0.00	0.00
1,700.00	5.00	59.96	1,697.42	32.00	55.33	32.00	0.00	0.00	0.00
1,800.00	5.00	59.96	1,797.04	36.37	62.88	36.37	0.00	0.00	0.00
1,900.00	5.00	59.96	1,896.66	40.73	70.42	40.73	0.00	0.00	0.00
2,000.00	5.00	59.96	1,996.28	45.09	77.97	45.09	0.00	0.00	0.00
2,100.00	5.00	59.96	2,095.90	49.46	85.51	49.46	0.00	0.00	0.00
2,200.00	5.00	59.96	2,195.52	53.82	93.06	53.82	0.00	0.00	0.00
2,300.00	5.00	59.96	2,295.14	58.19	100.60	58.19	0.00	0.00	0.00
2,400.00	5.00	59.96	2,394.76	62.55	108.15	62.55	0.00	0.00	0.00
2,500.00	5.00	59.96	2,494.38	66.91	115.69	66.91	0.00	0.00	0.00
2,600.00	5.00	59.96	2,594.00	71.28	123.24	71.28	0.00	0.00	0.00
2,700.00	5.00	59.96	2,693.62	75.64	130.78	75.64	0.00	0.00	0.00
2,800.00	5.00	59.96	2,793.23	80.00	138.33	80.00	0.00	0.00	0.00
2,900.00	5.00	59.96	2,892.85	84.37	145.87	84.37	0.00	0.00	0.00
3,000.00	5.00	59.96	2,992.47	88.73	153.41	88.73	0.00	0.00	0.00
3,100.00	5.00	59.96	3,092.09	93.09	160.96	93.09	0.00	0.00	0.00
3,200.00	5.00	59.96	3,191.71	97.46	168.50	97.46	0.00	0.00	0.00
3,300.00	5.00	59.96	3,291.33	101.82	176.05	101.82	0.00	0.00	0.00
3,400.00	5.00	59.96	3,390.95	106.18	183.59	106.18	0.00	0.00	0.00
3,500.00	5.00	59.96	3,490.57	110.55	191.14	110.55	0.00	0.00	0.00
3,600.00	5.00	59.96	3,590.19	114.91	198.68	114.91	0.00	0.00	0.00
3,700.00	5.00	59.96	3,689.81	119.27	206.23	119.27	0.00	0.00	0.00
3,800.00	5.00	59.96	3,789.43	123.64	213.77	123.64	0.00	0.00	0.00
3,900.00	5.00	59.96	3,889.05	128.00	221.32	128.00	0.00	0.00	0.00
4,000.00	5.00	59.96	3,988.67	132.37	228.86	132.37	0.00	0.00	0.00
4,100.00	5.00	59.96	4,088.29	136.73	236.40	136.73	0.00	0.00	0.00
4,134.84	5.00	59.96	4,123.00	138.25	239.03	138.25	0.00	0.00	0.00
Sussex									
4,200.00	5.00	59.96	4,187.91	141.09	243.95	141.09	0.00	0.00	0.00
4,300.00	5.00	59.96	4,287.53	145.46	251.49	145.46	0.00	0.00	0.00
4,400.00	5.00	59.96	4,387.15	149.82	259.04	149.82	0.00	0.00	0.00
4,500.00	5.00	59.96	4,486.77	154.18	266.58	154.18	0.00	0.00	0.00
4,547.41	5.00	59.96	4,534.00	156.25	270.16	156.25	0.00	0.00	0.00
Shannon									
4,600.00	5.00	59.96	4,586.39	158.55	274.13	158.55	0.00	0.00	0.00
4,700.00	5.00	59.96	4,686.00	162.91	281.67	162.91	0.00	0.00	0.00
4,800.00	5.00	59.96	4,785.62	167.27	289.22	167.27	0.00	0.00	0.00

Native Navigation Planning Report

Database: EDM 5000.1 Single User Db
Company: Mak J
Project: McCoy 11-33 Pad
Site: 11-33
Well: McCoy 11-33
Wellbore: McCoy 11-33
Design: Design #1

Local Co-ordinate Reference: Well McCoy 11-33 - Slot 11-33
TVD Reference: WELL @ 5030.00usft (Original Well Elev)
MD Reference: WELL @ 5030.00usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.00	5.00	59.96	4,885.24	171.64	296.76	171.64	0.00	0.00	0.00
5,000.00	5.00	59.96	4,984.86	176.00	304.31	176.00	0.00	0.00	0.00
5,100.00	5.00	59.96	5,084.48	180.36	311.85	180.36	0.00	0.00	0.00
5,200.00	5.00	59.96	5,184.10	184.73	319.40	184.73	0.00	0.00	0.00
5,300.00	5.00	59.96	5,283.72	189.09	326.94	189.09	0.00	0.00	0.00
5,400.00	5.00	59.96	5,383.34	193.46	334.48	193.46	0.00	0.00	0.00
5,500.00	5.00	59.96	5,482.96	197.82	342.03	197.82	0.00	0.00	0.00
5,520.08	5.00	59.96	5,502.97	198.69	343.54	198.69	0.00	0.00	0.00
5,600.00	3.80	59.96	5,582.65	201.76	348.85	201.76	1.50	-1.50	0.00
5,700.00	2.30	59.96	5,682.50	204.43	353.46	204.43	1.50	-1.50	0.00
5,800.00	0.80	59.96	5,782.46	205.79	355.80	205.79	1.50	-1.50	0.00
5,853.42	0.00	0.00	5,835.88	205.97	356.13	205.97	1.50	-1.50	0.00
5,900.00	0.00	0.00	5,882.46	205.97	356.13	205.97	0.00	0.00	0.00
6,000.00	0.00	0.00	5,982.46	205.97	356.13	205.97	0.00	0.00	0.00
6,100.00	0.00	0.00	6,082.46	205.97	356.13	205.97	0.00	0.00	0.00
6,200.00	0.00	0.00	6,182.46	205.97	356.13	205.97	0.00	0.00	0.00
6,300.00	0.00	0.00	6,282.46	205.97	356.13	205.97	0.00	0.00	0.00
6,400.00	0.00	0.00	6,382.46	205.97	356.13	205.97	0.00	0.00	0.00
6,500.00	0.00	0.00	6,482.46	205.97	356.13	205.97	0.00	0.00	0.00
6,600.00	0.00	0.00	6,582.46	205.97	356.13	205.97	0.00	0.00	0.00
6,700.00	0.00	0.00	6,682.46	205.97	356.13	205.97	0.00	0.00	0.00
6,800.00	0.00	0.00	6,782.46	205.97	356.13	205.97	0.00	0.00	0.00
6,900.00	0.00	0.00	6,882.46	205.97	356.13	205.97	0.00	0.00	0.00
7,000.00	0.00	0.00	6,982.46	205.97	356.13	205.97	0.00	0.00	0.00
7,034.54	0.00	0.00	7,017.00	205.97	356.13	205.97	0.00	0.00	0.00
Niobrara									
7,100.00	0.00	0.00	7,082.46	205.97	356.13	205.97	0.00	0.00	0.00
7,200.00	0.00	0.00	7,182.46	205.97	356.13	205.97	0.00	0.00	0.00
7,300.00	0.00	0.00	7,282.46	205.97	356.13	205.97	0.00	0.00	0.00
7,328.54	0.00	0.00	7,311.00	205.97	356.13	205.97	0.00	0.00	0.00
Ft Hays									
7,346.54	0.00	0.00	7,329.00	205.97	356.13	205.97	0.00	0.00	0.00
Codell									
7,400.00	0.00	0.00	7,382.46	205.97	356.13	205.97	0.00	0.00	0.00
7,500.00	0.00	0.00	7,482.46	205.97	356.13	205.97	0.00	0.00	0.00
7,600.00	0.00	0.00	7,582.46	205.97	356.13	205.97	0.00	0.00	0.00
7,700.00	0.00	0.00	7,682.46	205.97	356.13	205.97	0.00	0.00	0.00
7,799.54	0.00	0.00	7,782.00	205.97	356.13	205.97	0.00	0.00	0.00
J Sand									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
McCoy 11-33 - plan hits target center - Point	0.00	0.00	7,782.00	205.97	356.13	1,889,789.490	3,135,180.793	40.27527	-105.01561

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well McCoy 11-33 - Slot 11-33
Company:	Mak J	TVD Reference:	WELL @ 5030.00usft (Original Well Elev)
Project:	McCoy 11-33 Pad	MD Reference:	WELL @ 5030.00usft (Original Well Elev)
Site:	11-33	North Reference:	Grid
Well:	McCoy 11-33	Survey Calculation Method:	Minimum Curvature
Wellbore:	McCoy 11-33		
Design:	Design #1		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,134.84	4,123.00	Sussex		0.00	
4,547.41	4,534.00	Shannon		0.00	
7,034.54	7,017.00	Niobrara		0.00	
7,328.54	7,311.00	Ft Hays		0.00	
7,346.54	7,329.00	Codell		0.00	
7,799.54	7,782.00	J Sand		0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
800.00	800.00	0.00	0.00	Start Build 1.50	
1,133.33	1,132.91	7.28	12.58	Start 4386.75 hold at 1133.33 MD	
5,520.08	5,502.97	198.69	343.54	Start Drop -1.50	
5,853.42	5,835.88	205.97	356.13	Start 164.12 hold at 5853.42 MD	
6,017.54	6,000.00	205.97	356.13	TD at 6017.54	