



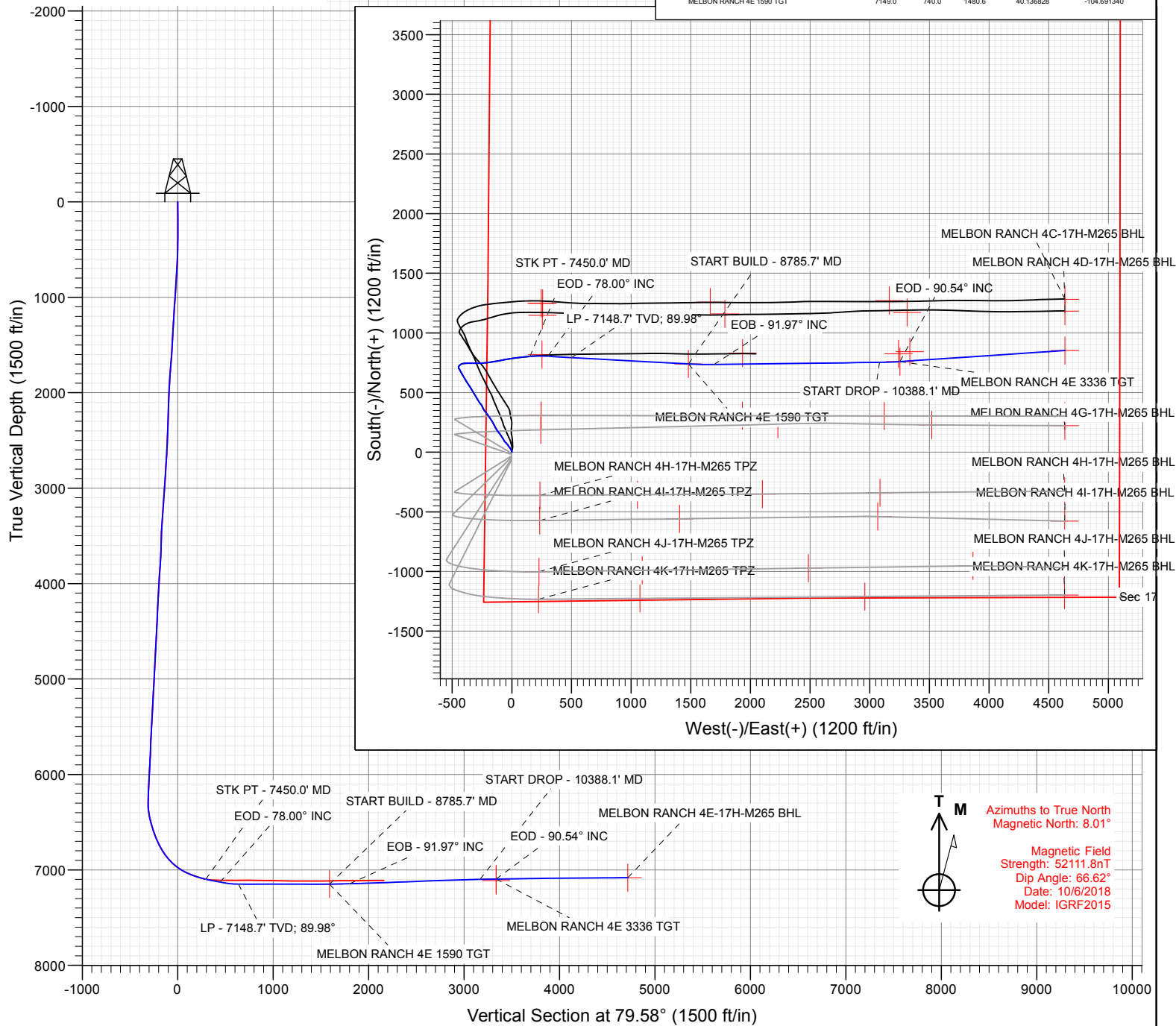
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	7450.0	79.37	84.65	7097.4	803.1	151.3	0.00	0.00	294.1	
2	7604.6	78.00	94.00	7127.8	804.9	302.7	6.00	99.39	443.3	
3	7804.9	89.98	93.08	7148.7	792.6	501.1	6.00	-4.44	636.2	
4	8785.7	89.98	93.08	7149.0	740.0	1480.6	0.00	0.00	1590.0	MELBON RANCH 4E 1590 TGT
5	9000.2	91.97	89.27	7145.4	735.6	1694.9	2.00	-62.43	1800.0	
6	10388.1	91.97	89.27	7097.7	753.2	3081.9	0.00	0.00	3167.3	
7	10558.6	90.54	86.18	7094.0	760.0	3252.2	2.00	-114.75	3336.0	MELBON RANCH 4E 3336 TGT
8	11945.4	90.54	86.18	7081.0	852.5	4635.9	0.00	0.00	4713.6	MELBON RANCH 4E-17H-M265 BHL

Project: Sec 17 T2N-R65W
Site: Melbon Ranch Pad
Well: MELBON RANCH 4E-17H-M265
Wellbore: STK
Design: PLAN #4

PLAN #4
MELBON RANCH 4E-17H-M265
WELL @ 4979.08 (Original Well Elev)
Ground Level @ 4956.0
North American Datum 1983
Well MELBON RANCH 4E-17H-M265, True North

Name	Type	Target	No Target (Freehand)	Azimuth	Origin	Type	N/S	E/W	From	TVD
MELBON RANCH 4E-17H-M265 BHL				79.58	7081.0		N/S	+E/-W	Latitude	Longitude
MELBON RANCH 4E 3336 TGT				852.5	7094.0		N/S	+E/-W	40.137136	-104.680055
MELBON RANCH 4E-17H-M265 STK PLAN #4				760.0	7094.0		N/S	+E/-W	40.136883	-104.685004
MELBON RANCH 4E 1590 TGT				324.3	7149.0		N/S	+E/-W	40.137080	-104.685046
				740.0			N/S	+E/-W	40.136828	-104.691340



Azimuths to True North
Magnetic North: 8.01°

Magnetic Field
Strength: 52111.8nT
Dip Angle: 66.62°
Date: 10/6/2018
Model: IGRF2015



WELL DETAILS: MELBON RANCH 4E-17H-M265

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1292970.33	3224623.87	40.134797	-104.696636



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well MELBON RANCH 4E-17H-M265
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 4979.0ft (Original Well Elev)
Project:	Sec 17 T2N-R65W	MD Reference:	WELL @ 4979.0ft (Original Well Elev)
Site:	Melbon Ranch Pad	North Reference:	True
Well:	MELBON RANCH 4E-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	STK		
Design:	PLAN #4		

Project	Sec 17 T2N-R65W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Melbon Ranch Pad			
Site Position: From: Position Uncertainty:	Map	Northing:	1,292,990.36 ft	Latitude:	40.134852
		Easting:	3,224,623.87 ft	Longitude:	-104.696635
		Slot Radius:	13.200 in	Grid Convergence:	0.52 °

Well	MELBON RANCH 4E-17H-M265					
Well Position	+N/-S	0.0 ft	Northing:	1,292,970.33 ft	Latitude:	40.134797
	+E/-W	0.0 ft	Easting:	3,224,623.87 ft	Longitude:	-104.696636
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,956.0 ft

Wellbore	STK				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2015	10/6/2018	8.01	66.62	52,111.83448060

Design	PLAN #4				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	7,450.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	79.58	

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
7,450.0	79.37	84.65	7,097.4	803.1	151.3	0.00	0.00	0.00	0.00	
7,604.6	78.00	94.00	7,127.8	804.9	302.7	6.00	-0.89	6.05	99.39	
7,804.9	89.98	93.08	7,148.7	792.6	501.1	6.00	5.98	-0.46	-4.44	
8,785.7	89.98	93.08	7,149.0	740.0	1,480.6	0.00	0.00	0.00	0.00	MELBON RANCH 4E
9,000.2	91.97	89.27	7,145.4	735.6	1,694.9	2.00	0.92	-1.77	-62.43	
10,388.1	91.97	89.27	7,097.7	753.2	3,081.9	0.00	0.00	0.00	0.00	
10,558.6	90.54	86.18	7,094.0	760.0	3,252.2	2.00	-0.84	-1.82	-114.75	MELBON RANCH 4E
11,945.4	90.54	86.18	7,081.0	852.5	4,635.9	0.00	0.00	0.00	0.00	MELBON RANCH 4E

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well MELBON RANCH 4E-17H-M265
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 4979.0ft (Original Well Elev)
Project:	Sec 17 T2N-R65W	MD Reference:	WELL @ 4979.0ft (Original Well Elev)
Site:	Melbon Ranch Pad	North Reference:	True
Well:	MELBON RANCH 4E-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	STK		
Design:	PLAN #4		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
7,450.0	79.37	84.65	7,097.4	803.1	151.3	294.1	0.00	0.00	STK PT - 7450.0' MD
7,500.0	78.89	87.66	7,106.8	806.4	200.3	342.8	6.00	-0.95	
7,600.0	78.04	93.72	7,126.8	805.2	298.2	438.9	6.00	-0.86	
7,604.6	78.00	94.00	7,127.8	804.9	302.7	443.3	6.00	-0.79	EOD - 78.00° INC
7,700.0	83.71	93.55	7,142.9	798.7	396.7	534.6	6.00	5.98	
7,800.0	89.69	93.10	7,148.7	792.9	496.3	631.5	6.00	5.98	
7,804.9	89.98	93.08	7,148.7	792.6	501.1	636.2	6.00	5.98	LP - 7148.7' TVD; 89.98°
7,900.0	89.98	93.08	7,148.7	787.5	596.1	728.7	0.00	0.00	
8,000.0	89.98	93.08	7,148.8	782.2	696.0	826.0	0.00	0.00	
8,100.0	89.98	93.08	7,148.8	776.8	795.9	923.2	0.00	0.00	
8,200.0	89.98	93.08	7,148.8	771.4	895.7	1,020.5	0.00	0.00	
8,300.0	89.98	93.08	7,148.9	766.1	995.6	1,117.7	0.00	0.00	
8,400.0	89.98	93.08	7,148.9	760.7	1,095.4	1,214.9	0.00	0.00	
8,500.0	89.98	93.08	7,148.9	755.3	1,195.3	1,312.2	0.00	0.00	
8,600.0	89.98	93.08	7,148.9	750.0	1,295.1	1,409.4	0.00	0.00	
8,700.0	89.98	93.08	7,149.0	744.6	1,395.0	1,506.7	0.00	0.00	
8,785.7	89.98	93.08	7,149.0	740.0	1,480.6	1,590.0	0.00	0.00	START BUILD - 8785.7' MD - MELBON RANCH
8,800.0	90.11	92.82	7,149.0	739.3	1,494.8	1,603.9	2.00	0.93	
8,900.0	91.04	91.05	7,148.0	735.9	1,594.8	1,701.6	2.00	0.93	
9,000.0	91.96	89.28	7,145.4	735.6	1,694.7	1,799.8	2.00	0.92	
9,000.2	91.97	89.27	7,145.4	735.6	1,694.9	1,800.0	2.00	0.92	EOB - 91.97° INC
9,100.0	91.97	89.27	7,141.9	736.9	1,794.7	1,898.3	0.00	0.00	
9,200.0	91.97	89.27	7,138.5	738.1	1,894.6	1,996.9	0.00	0.00	
9,300.0	91.97	89.27	7,135.1	739.4	1,994.5	2,095.4	0.00	0.00	
9,400.0	91.97	89.27	7,131.6	740.7	2,094.5	2,193.9	0.00	0.00	
9,500.0	91.97	89.27	7,128.2	742.0	2,194.4	2,292.4	0.00	0.00	
9,600.0	91.97	89.27	7,124.8	743.2	2,294.3	2,390.9	0.00	0.00	
9,700.0	91.97	89.27	7,121.3	744.5	2,394.3	2,489.4	0.00	0.00	
9,800.0	91.97	89.27	7,117.9	745.8	2,494.2	2,587.9	0.00	0.00	
9,900.0	91.97	89.27	7,114.5	747.0	2,594.1	2,686.5	0.00	0.00	
10,000.0	91.97	89.27	7,111.0	748.3	2,694.1	2,785.0	0.00	0.00	
10,100.0	91.97	89.27	7,107.6	749.6	2,794.0	2,883.5	0.00	0.00	
10,200.0	91.97	89.27	7,104.2	750.8	2,893.9	2,982.0	0.00	0.00	
10,300.0	91.97	89.27	7,100.7	752.1	2,993.9	3,080.5	0.00	0.00	
10,388.1	91.97	89.27	7,097.7	753.2	3,081.9	3,167.3	0.00	0.00	START DROP - 10388.1' MD
10,400.0	91.87	89.06	7,097.3	753.4	3,093.8	3,179.0	2.00	-0.84	
10,500.0	91.03	87.24	7,094.8	756.6	3,193.7	3,277.9	2.00	-0.84	
10,550.2	90.61	86.33	7,094.1	759.5	3,243.8	3,327.7	2.00	-0.84	Interp @ 7111.0 (MELBON RANCH 4E-17H-M2
10,558.6	90.54	86.18	7,094.0	760.0	3,252.2	3,336.0	2.00	-0.84	EOD - 90.54° INC - MELBON RANCH 4E 3336
10,600.0	90.54	86.18	7,093.6	762.8	3,293.5	3,377.2	0.00	0.00	
10,700.0	90.54	86.18	7,092.7	769.4	3,393.3	3,476.5	0.00	0.00	
10,800.0	90.54	86.18	7,091.7	776.1	3,493.1	3,575.8	0.00	0.00	
10,900.0	90.54	86.18	7,090.8	782.8	3,592.8	3,675.2	0.00	0.00	
11,000.0	90.54	86.18	7,089.9	789.4	3,692.6	3,774.5	0.00	0.00	
11,100.0	90.54	86.18	7,088.9	796.1	3,792.4	3,873.8	0.00	0.00	
11,200.0	90.54	86.18	7,088.0	802.8	3,892.2	3,973.2	0.00	0.00	
11,300.0	90.54	86.18	7,087.1	809.4	3,991.9	4,072.5	0.00	0.00	
11,400.0	90.54	86.18	7,086.1	816.1	4,091.7	4,171.8	0.00	0.00	
11,500.0	90.54	86.18	7,085.2	822.8	4,191.5	4,271.2	0.00	0.00	
11,600.0	90.54	86.18	7,084.2	829.5	4,291.2	4,370.5	0.00	0.00	
11,700.0	90.54	86.18	7,083.3	836.1	4,391.0	4,469.8	0.00	0.00	
11,800.0	90.54	86.18	7,082.4	842.8	4,490.8	4,569.2	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well MELBON RANCH 4E-17H-M265
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 4979.0ft (Original Well Elev)
Project:	Sec 17 T2N-R65W	MD Reference:	WELL @ 4979.0ft (Original Well Elev)
Site:	Melbon Ranch Pad	North Reference:	True
Well:	MELBON RANCH 4E-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	STK		
Design:	PLAN #4		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
11,900.0	90.54	86.18	7,081.4	849.5	4,590.6	4,668.5	0.00	0.00	
11,945.4	90.54	86.18	7,081.0	852.5	4,635.9	4,713.6	0.00	0.00	TD at 11945.4 - MELBON RANCH 4E-17H-M265

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
MELBON RANCH 4E 15' - plan hits target center - Point	0.00	0.00	7,149.0	740.0	1,480.6	1,293,723.71	3,226,097.70	40.136828	-104.691340
Interp @ 7111.0 (MELBON RANCH 4E 17H-M265) - plan misses target center by 67.4ft at 10550.8ft MD (7094.1 TVD, 759.5 N, 3244.4 E) - Point	0.00	0.00	7,111.0	824.6	3,240.3	1,293,824.24	3,227,856.59	40.137060	-104.685046
MELBON RANCH 4E-17H-M265 - plan hits target center - Point	0.00	0.53	7,081.0	852.5	4,635.9	1,293,864.79	3,229,251.84	40.137136	-104.680055
MELBON RANCH 4E 35' - plan hits target center - Point	0.00	0.00	7,094.0	760.0	3,252.2	1,293,759.76	3,227,869.05	40.136883	-104.685004

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
7,450.0	7,097.4	803.1	151.3	STK PT - 7450.0' MD	
7,604.6	7,127.8	804.9	302.7	EOD - 78.00° INC	
7,804.9	7,148.7	792.6	501.1	LP - 7148.7' TVD; 89.98°	
8,785.7	7,149.0	740.0	1,480.6	START BUILD - 8785.7' MD	
9,000.2	7,145.4	735.6	1,694.9	EOB - 91.97° INC	
10,388.1	7,097.7	753.2	3,081.9	START DROP - 10388.1' MD	
10,558.6	7,094.0	760.0	3,252.2	EOD - 90.54° INC	
11,945.4	7,081.0	852.5	4,635.9	TD at 11945.4	