MALLARD EXPLORATION

WELD COUNTY, COLORADO (NAD 83)
SE SW SEC. 35 T8N R60W 6th P.M.
CINNAMON TEAL FED 35-1HN

ORIGINAL WELLBORE

17 September, 2017

Plan: PROPOSAL #1

MALLARD EXPLORATION

Project: WELD COUNTY, COLORADO (NAD 83)
Site: SE SW SEC. 35 T8N R60W 6th P.M.
Well: CINNAMON TEAL FED 35-1HN
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 550ft FSL & 1960ft FWL of Sec 35
100.0	100.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
968.1	981.9	17.64	248.82	-48.7	-125.6	-9.7	134.7	EOB TO 17.64° INC
4725.0	4924.2	17.64	248.82	-480.3	-1239.4	-95.9	1329.2	END OF TANGENT
5593.1	5806.2	0.00	0.00	-529.0	-1365.0	-105.6	1463.9	EOD TO VERTICAL
5693.1	5906.2	0.00	0.00	-529.0	-1365.0	-105.6	1463.9	KOP (10°/100ft BUR)
6266.0	6806.0	90.00	1.15	43.8	-1353.5	438.6	2036.8	HZ LP: 600ft FSL & 605ft FWL of Sec 35
6266.0	10909.9	90.00	1.14	4146.8	-1271.4	4337.3	6140.6	BHL: 600ft FNL & 605ft FWL of Sec 35

PROPOSED LOCAL COORDINATES:

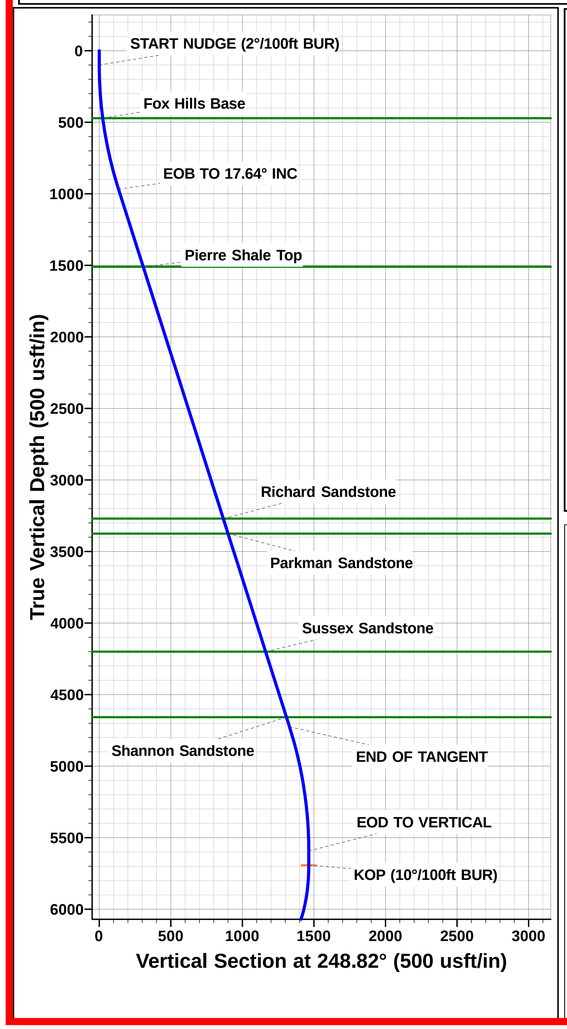
SHL: 550ft FSL & 1960ft FWL Sec 35

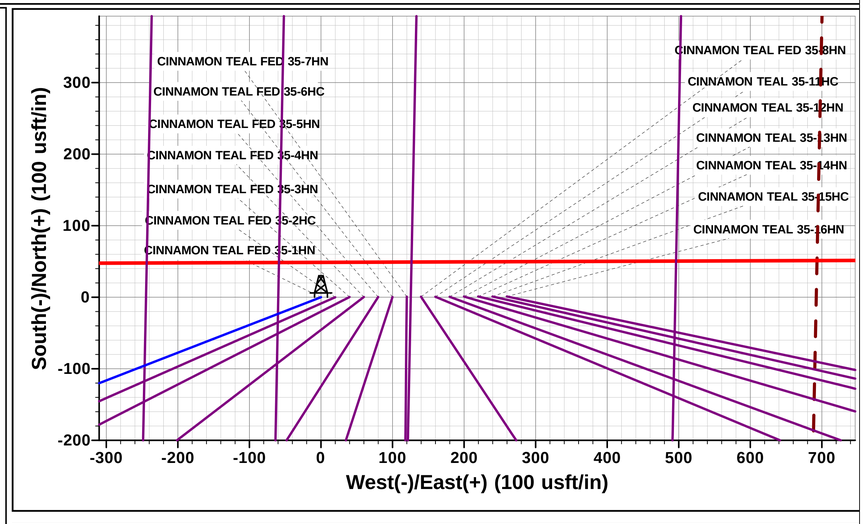
HZ LP: 600ft FSL & 605ft FWL Sec 35

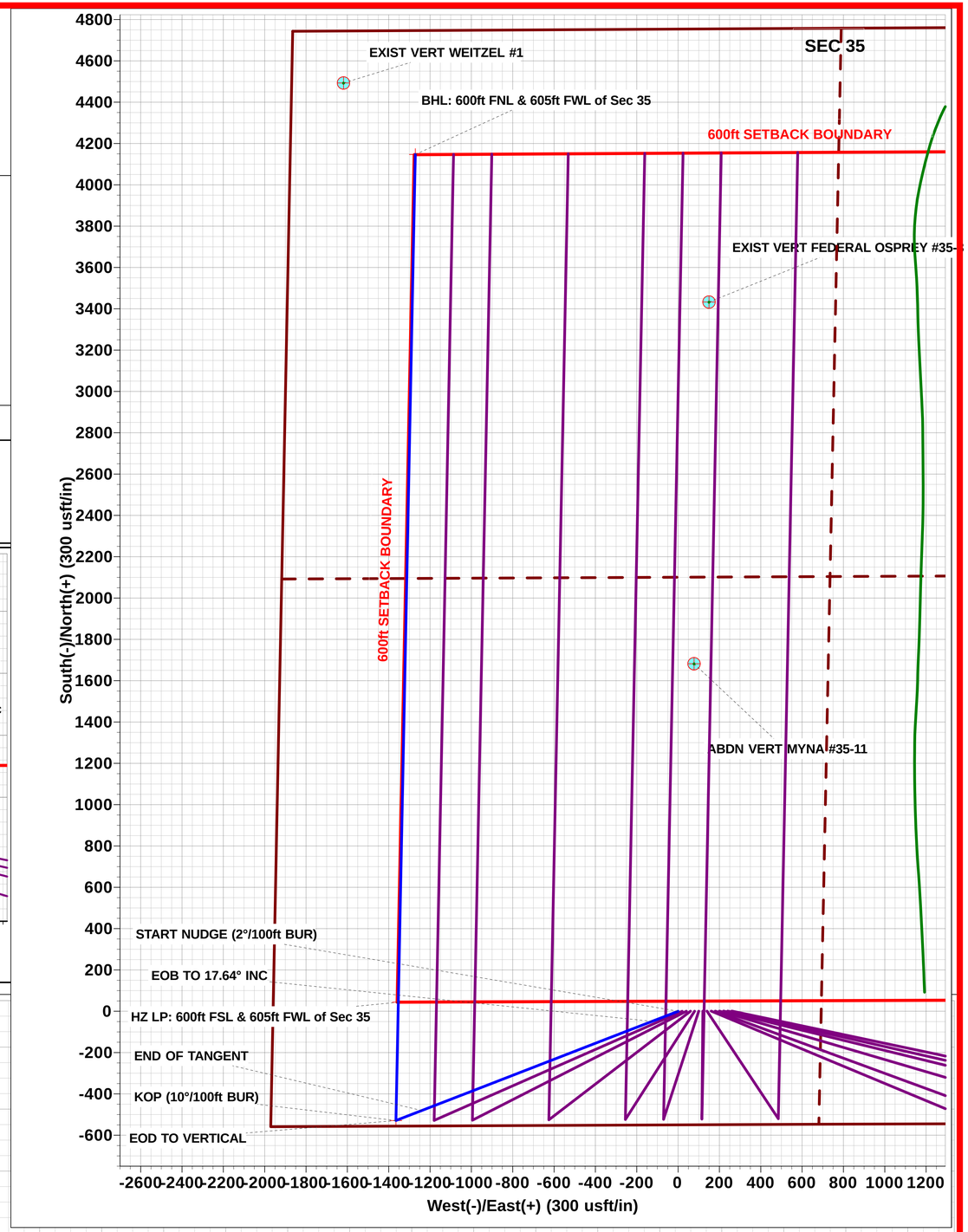
BHL: 600ft FNL & 605ft FWL of Sec 35

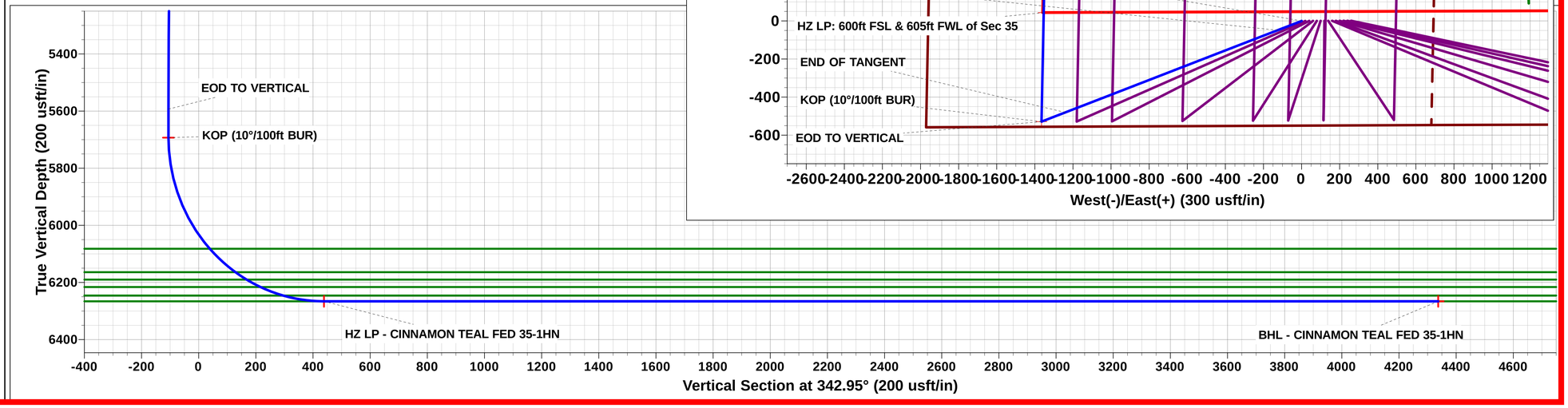
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - CINNAMON TEAL FED 35-1HN	5693.1	-529.0	-1365.0	40.611606	-104.066725
HZ LP - CINNAMON TEAL FED 35-1HN	6266.0	43.8	-1353.5	40.613178	-104.066684
BHL - CINNAMON TEAL FED 35-1HN	6266.0	4146.8	-1271.4	40.624440	-104.066389









Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well CINNAMON TEAL FED 35-1HN
Company:	MALLARD EXPLORATION	**TVD Reference:**	KB-EST @ 4941.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	**MD Reference:**	KB-EST @ 4941.0usft (Original Well Elev)
Site:	SE SW SEC. 35 T8N R60W 6th P.M.	**North Reference:**	True
Well:	CINNAMON TEAL FED 35-1HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project WELD COUNTY, COLORADO (NAD 83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site SE SW SEC. 35 T8N R60W 6th P.M.

Site Position:		**Northing:**	1,469,416.68 usft	**Latitude:**	40.613058
From:	Lat/Long	**Easting:**	3,399,274.71 usft	**Longitude:**	-104.061809
Position Uncertainty:	0.0 usft	**Slot Radius:**	1.10000 ft	**Grid Convergence:**	0.93 °

Well CINNAMON TEAL FED 35-1HN

Well Position	**+N/-S**	0.0 usft	**Northing:**	1,469,416.68 usft	**Latitude:**	40.613058
	+E/-W	0.0 usft	**Easting:**	3,399,274.71 usft	**Longitude:**	-104.061809
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	4,925.0 usft

Wellbore ORIGINAL WELLBORE

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	17/09/2017	7.82	67.12	52,545

Design PROPOSAL #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	6,266.0	0.0	0.0	342.95

Plan Sections

MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usf	Build Rate (°/100usf	Turn Rate (°/100usf	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,941.0	0.0	0.0	0.00	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	-4,841.0	0.0	0.0	0.00	0.00	0.00	0.00	
981.9	17.64	248.82	968.1	-3,972.9	-48.7	-125.6	2.00	2.00	0.00	248.82	
4,924.2	17.64	248.82	4,725.0	-216.0	-480.3	-1,239.4	0.00	0.00	0.00	0.00	
5,806.2	0.00	0.00	5,593.1	652.1	-529.0	-1,365.0	2.00	-2.00	0.00	180.00	
5,906.2	0.00	0.00	5,693.1	752.1	-529.0	-1,365.0	0.00	0.00	0.00	0.00	KOP - CINNAMON
6,806.0	90.00	1.15	6,266.0	1,325.0	43.8	-1,353.5	10.00	10.00	0.13	1.15	HZ LP - CINNAMOI
10,909.9	90.00	1.14	6,266.0	1,325.0	4,146.8	-1,271.4	0.00	0.00	0.00	-52.75	BHL - CINNAMON

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well CINNAMON TEAL FED 35-1HN
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Project:	WELD COUNTY, COLORADO (NAD 83)	**MD Reference:**	KB-EST @ 4941.0usft (Original Well Elev)
Site:	SE SW SEC. 35 T8N R60W 6th P.M.	**North Reference:**	True
Well:	CINNAMON TEAL FED 35-1HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
SHL: 550ft FSL & 1960ft FWL of Sec 35										
0.0	***0.00***	***0.00***	***0.0***	***4,941.00***	***0.0***	***0.0***	***0.0***	***0.00***	***0.00***	***0.00***
START NUDGE (2°/100ft BUR)										
100.0	***0.00***	***0.00***	***100.0***	***4,841.00***	***0.0***	***0.0***	***0.0***	***0.00***	***0.00***	***0.00***
200.0	2.00	248.82	200.0	4,741.02	-0.6	-1.6	-0.1	2.00	2.00	0.00
300.0	4.00	248.82	299.8	4,641.16	-2.5	-6.5	-0.5	2.00	2.00	0.00
400.0	6.00	248.82	399.5	4,541.55	-5.7	-14.6	-1.1	2.00	2.00	0.00
Fox Hills Base										
473.1	***7.46***	***248.82***	***472.0***	***4,469.00***	***-8.8***	***-22.6***	***-1.8***	***2.00***	***2.00***	***0.00***
500.0	8.00	248.82	498.7	4,442.30	-10.1	-26.0	-2.0	2.00	2.00	0.00
600.0	10.00	248.82	597.5	4,343.53	-15.7	-40.6	-3.1	2.00	2.00	0.00
700.0	12.00	248.82	695.6	4,245.38	-22.6	-58.4	-4.5	2.00	2.00	0.00
800.0	14.00	248.82	793.1	4,147.94	-30.8	-79.3	-6.1	2.00	2.00	0.00
900.0	16.00	248.82	889.6	4,051.36	-40.1	-103.5	-8.0	2.00	2.00	0.00
EOB TO 17.64° INC										
981.9	***17.64***	***248.82***	***968.1***	***3,972.94***	***-48.7***	***-125.6***	***-9.7***	***2.00***	***2.00***	***0.00***
1,000.0	17.64	248.82	985.3	3,955.71	-50.6	-130.7	-10.1	0.00	0.00	0.00
1,100.0	17.64	248.82	1,080.6	3,860.42	-61.6	-158.9	-12.3	0.00	0.00	0.00
1,200.0	17.64	248.82	1,175.9	3,765.12	-72.5	-187.2	-14.5	0.00	0.00	0.00
1,300.0	17.64	248.82	1,271.2	3,669.82	-83.5	-215.4	-16.7	0.00	0.00	0.00
1,400.0	17.64	248.82	1,366.5	3,574.52	-94.4	-243.7	-18.9	0.00	0.00	0.00
1,500.0	17.64	248.82	1,461.8	3,479.22	-105.4	-272.0	-21.0	0.00	0.00	0.00
Pierre Shale Top										
1,550.6	***17.64***	***248.82***	***1,510.0***	***3,431.00***	***-110.9***	***-286.3***	***-22.2***	***0.00***	***0.00***	***0.00***
1,600.0	17.64	248.82	1,557.1	3,383.92	-116.3	-300.2	-23.2	0.00	0.00	0.00
1,700.0	17.64	248.82	1,652.4	3,288.62	-127.3	-328.5	-25.4	0.00	0.00	0.00
1,800.0	17.64	248.82	1,747.7	3,193.32	-138.2	-356.7	-27.6	0.00	0.00	0.00
1,900.0	17.64	248.82	1,843.0	3,098.03	-149.2	-385.0	-29.8	0.00	0.00	0.00
2,000.0	17.64	248.82	1,938.3	3,002.73	-160.1	-413.2	-32.0	0.00	0.00	0.00
2,100.0	17.64	248.82	2,033.6	2,907.43	-171.1	-441.5	-34.2	0.00	0.00	0.00
2,200.0	17.64	248.82	2,128.9	2,812.13	-182.0	-469.7	-36.4	0.00	0.00	0.00
2,300.0	17.64	248.82	2,224.2	2,716.83	-193.0	-498.0	-38.5	0.00	0.00	0.00
2,400.0	17.64	248.82	2,319.5	2,621.53	-203.9	-526.2	-40.7	0.00	0.00	0.00
2,500.0	17.64	248.82	2,414.8	2,526.23	-214.9	-554.5	-42.9	0.00	0.00	0.00
2,600.0	17.64	248.82	2,510.1	2,430.93	-225.8	-582.7	-45.1	0.00	0.00	0.00
2,700.0	17.64	248.82	2,605.4	2,335.64	-236.8	-611.0	-47.3	0.00	0.00	0.00
2,800.0	17.64	248.82	2,700.7	2,240.34	-247.7	-639.2	-49.5	0.00	0.00	0.00
2,900.0	17.64	248.82	2,796.0	2,145.04	-258.7	-667.5	-51.7	0.00	0.00	0.00
3,000.0	17.64	248.82	2,891.3	2,049.74	-269.6	-695.8	-53.8	0.00	0.00	0.00
3,100.0	17.64	248.82	2,986.6	1,954.44	-280.6	-724.0	-56.0	0.00	0.00	0.00
3,200.0	17.64	248.82	3,081.9	1,859.14	-291.5	-752.3	-58.2	0.00	0.00	0.00
3,300.0	17.64	248.82	3,177.2	1,763.84	-302.5	-780.5	-60.4	0.00	0.00	0.00
Richard Sandstone										
3,397.4	***17.64***	***248.82***	***3,270.0***	***1,671.00***	***-313.2***	***-808.0***	***-62.5***	***0.00***	***0.00***	***0.00***
3,400.0	17.64	248.82	3,272.5	1,668.54	-313.4	-808.8	-62.6	0.00	0.00	0.00
3,500.0	17.64	248.82	3,367.8	1,573.25	-324.4	-837.0	-64.8	0.00	0.00	0.00
Parkman Sandstone										
3,507.6	***17.64***	***248.82***	***3,375.0***	***1,566.00***	***-325.2***	***-839.2***	***-64.9***	***0.00***	***0.00***	***0.00***
3,600.0	17.64	248.82	3,463.1	1,477.95	-335.3	-865.3	-67.0	0.00	0.00	0.00
3,700.0	17.64	248.82	3,558.4	1,382.65	-346.3	-893.5	-69.2	0.00	0.00	0.00
3,800.0	17.64	248.82	3,653.7	1,287.35	-357.2	-921.8	-71.3	0.00	0.00	0.00
3,900.0	17.64	248.82	3,748.9	1,192.05	-368.2	-950.0	-73.5	0.00	0.00	0.00
4,000.0	17.64	248.82	3,844.2	1,096.75	-379.1	-978.3	-75.7	0.00	0.00	0.00

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Site:	SE SW SEC. 35 T8N R60W 6th P.M.	**North Reference:**	True
Well:	CINNAMON TEAL FED 35-1HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,100.0	17.64	248.82	3,939.5	1,001.45	-390.1	-1,006.5	-77.9	0.00	0.00	0.00
4,200.0	17.64	248.82	4,034.8	906.15	-401.0	-1,034.8	-80.1	0.00	0.00	0.00
4,300.0	17.64	248.82	4,130.1	810.85	-412.0	-1,063.0	-82.3	0.00	0.00	0.00
Sussex Sandstone										
4,373.3	***17.64***	***248.82***	***4,200.0***	***741.00***	***-420.0***	***-1,083.8***	***-83.9***	***0.00***	***0.00***	***0.00***
4,400.0	17.64	248.82	4,225.4	715.56	-422.9	-1,091.3	-84.5	0.00	0.00	0.00
4,500.0	17.64	248.82	4,320.7	620.26	-433.9	-1,119.6	-86.6	0.00	0.00	0.00
4,600.0	17.64	248.82	4,416.0	524.96	-444.8	-1,147.8	-88.8	0.00	0.00	0.00
4,700.0	17.64	248.82	4,511.3	429.66	-455.8	-1,176.1	-91.0	0.00	0.00	0.00
4,800.0	17.64	248.82	4,606.6	334.36	-466.7	-1,204.3	-93.2	0.00	0.00	0.00
Shannon Sandstone										
4,853.9	***17.64***	***248.82***	***4,658.0***	***283.00***	***-472.6***	***-1,219.5***	***-94.4***	***0.00***	***0.00***	***0.00***
4,900.0	17.64	248.82	4,701.9	239.06	-477.7	-1,232.6	-95.4	0.00	0.00	0.00
END OF TANGENT										
4,924.2	***17.64***	***248.82***	***4,725.0***	***215.96***	***-480.3***	***-1,239.4***	***-95.9***	***0.00***	***0.00***	***0.00***
5,000.0	16.12	248.82	4,797.5	143.47	-488.3	-1,259.9	-97.5	2.00	-2.00	0.00
5,100.0	14.12	248.82	4,894.1	46.94	-497.7	-1,284.3	-99.4	2.00	-2.00	0.00
5,200.0	12.12	248.82	4,991.4	-50.45	-505.9	-1,305.4	-101.0	2.00	-2.00	0.00
5,300.0	10.12	248.82	5,089.6	-148.56	-512.9	-1,323.4	-102.4	2.00	-2.00	0.00
5,400.0	8.12	248.82	5,188.3	-247.29	-518.6	-1,338.2	-103.6	2.00	-2.00	0.00
5,500.0	6.12	248.82	5,287.5	-346.52	-523.1	-1,349.8	-104.5	2.00	-2.00	0.00
5,600.0	4.12	248.82	5,387.1	-446.11	-526.3	-1,358.1	-105.1	2.00	-2.00	0.00
5,700.0	2.12	248.82	5,487.0	-545.96	-528.3	-1,363.2	-105.5	2.00	-2.00	0.00
5,800.0	0.12	248.82	5,586.9	-645.93	-529.0	-1,365.0	-105.6	2.00	-2.00	0.00
EOD TO VERTICAL										
5,806.2	***0.00***	***0.00***	***5,593.1***	***-652.10***	***-529.0***	***-1,365.0***	***-105.6***	***2.00***	***-2.00***	***0.00***
5,900.0	0.00	0.00	5,686.9	-745.93	-529.0	-1,365.0	-105.6	0.00	0.00	0.00
KOP (10°/100ft BUR)										
5,906.2	***0.00***	***0.00***	***5,693.1***	***-752.10***	***-529.0***	***-1,365.0***	***-105.6***	***0.00***	***0.00***	***0.00***
6,000.0	9.38	1.15	5,786.5	-845.51	-521.3	-1,364.8	-98.4	10.00	10.00	0.00
6,100.0	19.39	1.15	5,883.3	-942.26	-496.5	-1,364.3	-74.8	10.00	10.00	0.00
6,200.0	29.39	1.15	5,974.2	-1,033.22	-455.3	-1,363.5	-35.6	10.00	10.00	0.00
6,300.0	39.39	1.15	6,056.6	-1,115.64	-398.9	-1,362.4	18.0	10.00	10.00	0.00
Sharon Springs										
6,333.6	***42.75***	***1.15***	***6,082.0***	***-1,141.00***	***-376.8***	***-1,361.9***	***39.0***	***10.00***	***10.00***	***0.00***
6,400.0	49.39	1.15	6,128.0	-1,187.01	-329.1	-1,361.0	84.3	10.00	10.00	0.00
Niobrara A Chalk										
6,458.9	***55.28***	***1.15***	***6,164.0***	***-1,223.00***	***-282.4***	***-1,360.0***	***128.6***	***10.00***	***10.00***	***0.00***
6,500.0	59.39	1.15	6,186.2	-1,245.16	-247.9	-1,359.4	161.5	10.00	10.00	0.00
Niobrara A Chalk Base										
6,507.6	***60.15***	***1.15***	***6,190.0***	***-1,249.00***	***-241.3***	***-1,359.2***	***167.7***	***10.00***	***10.00***	***0.00***
Niobrara B1 Chalk Top										
6,564.9	***65.88***	***1.15***	***6,216.0***	***-1,275.00***	***-190.2***	***-1,358.2***	***216.2***	***10.00***	***10.00***	***0.00***
6,600.0	69.39	1.15	6,229.3	-1,288.33	-157.8	-1,357.5	247.0	10.00	10.00	0.00
Niobrara B1 Chalk Base										
6,654.3	***74.82***	***1.15***	***6,246.0***	***-1,305.00***	***-106.2***	***-1,356.5***	***296.1***	***10.00***	***10.00***	***0.00***
6,700.0	79.39	1.15	6,256.2	-1,315.21	-61.7	-1,355.6	338.4	10.00	10.00	0.00
6,800.0	89.39	1.15	6,266.0	-1,324.97	37.7	-1,353.6	432.8	10.00	10.00	0.00
Niobrara B2 Chalk Top (Target)										
6,803.0	***89.39***	***1.15***	***6,266.0***	***-1,325.00***	***40.7***	***-1,353.6***	***435.7***	***0.00***	***0.00***	***0.00***
HZ LP: 600ft FSL & 605ft FWL of Sec 35										
6,806.0	***90.00***	***1.15***	***6,266.0***	***-1,325.00***	***43.8***	***-1,353.5***	***438.6***	***20.10***	***20.10***	***0.00***

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well CINNAMON TEAL FED 35-1HN
Company:	MALLARD EXPLORATION	**TVD Reference:**	KB-EST @ 4941.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	**MD Reference:**	KB-EST @ 4941.0usft (Original Well Elev)
Site:	SE SW SEC. 35 T8N R60W 6th P.M.	**North Reference:**	True
Well:	CINNAMON TEAL FED 35-1HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,900.0	90.00	1.15	6,266.0	-1,325.00	137.7	-1,351.6	527.8	0.00	0.00	0.00
7,000.0	90.00	1.15	6,266.0	-1,325.01	237.7	-1,349.6	622.8	0.00	0.00	0.00
7,100.0	90.00	1.15	6,266.0	-1,325.01	337.6	-1,347.6	717.8	0.00	0.00	0.00
7,200.0	90.00	1.15	6,266.0	-1,325.02	437.6	-1,345.6	812.8	0.00	0.00	0.00
7,300.0	90.00	1.15	6,266.0	-1,325.02	537.6	-1,343.6	907.8	0.00	0.00	0.00
7,400.0	90.00	1.15	6,266.0	-1,325.03	637.6	-1,341.6	1,002.8	0.00	0.00	0.00
7,500.0	90.00	1.15	6,266.0	-1,325.03	737.6	-1,339.6	1,097.8	0.00	0.00	0.00
7,600.0	90.00	1.15	6,266.0	-1,325.03	837.5	-1,337.6	1,192.8	0.00	0.00	0.00
7,700.0	90.00	1.15	6,266.0	-1,325.03	937.5	-1,335.6	1,287.8	0.00	0.00	0.00
7,800.0	90.00	1.15	6,266.0	-1,325.04	1,037.5	-1,333.6	1,382.8	0.00	0.00	0.00
7,900.0	90.00	1.15	6,266.0	-1,325.04	1,137.5	-1,331.6	1,477.8	0.00	0.00	0.00
8,000.0	90.00	1.15	6,266.0	-1,325.04	1,237.5	-1,329.6	1,572.8	0.00	0.00	0.00
8,100.0	90.00	1.15	6,266.0	-1,325.04	1,337.4	-1,327.6	1,667.8	0.00	0.00	0.00
8,200.0	90.00	1.15	6,266.0	-1,325.05	1,437.4	-1,325.5	1,762.8	0.00	0.00	0.00
8,300.0	90.00	1.15	6,266.0	-1,325.05	1,537.4	-1,323.5	1,857.8	0.00	0.00	0.00
8,400.0	90.00	1.15	6,266.0	-1,325.05	1,637.4	-1,321.5	1,952.8	0.00	0.00	0.00
8,500.0	90.00	1.15	6,266.0	-1,325.05	1,737.4	-1,319.5	2,047.8	0.00	0.00	0.00
8,600.0	90.00	1.15	6,266.1	-1,325.05	1,837.3	-1,317.5	2,142.8	0.00	0.00	0.00
8,700.0	90.00	1.15	6,266.1	-1,325.05	1,937.3	-1,315.5	2,237.8	0.00	0.00	0.00
8,800.0	90.00	1.15	6,266.1	-1,325.05	2,037.3	-1,313.5	2,332.8	0.00	0.00	0.00
8,900.0	90.00	1.15	6,266.1	-1,325.05	2,137.3	-1,311.5	2,427.9	0.00	0.00	0.00
9,000.0	90.00	1.15	6,266.1	-1,325.05	2,237.3	-1,309.5	2,522.9	0.00	0.00	0.00
9,100.0	90.00	1.15	6,266.1	-1,325.05	2,337.2	-1,307.5	2,617.9	0.00	0.00	0.00
9,200.0	90.00	1.15	6,266.0	-1,325.05	2,437.2	-1,305.5	2,712.9	0.00	0.00	0.00
9,300.0	90.00	1.15	6,266.0	-1,325.05	2,537.2	-1,303.5	2,807.9	0.00	0.00	0.00
9,400.0	90.00	1.15	6,266.0	-1,325.05	2,637.2	-1,301.5	2,902.9	0.00	0.00	0.00
9,500.0	90.00	1.15	6,266.0	-1,325.05	2,737.2	-1,299.5	2,997.9	0.00	0.00	0.00
9,600.0	90.00	1.15	6,266.0	-1,325.04	2,837.1	-1,297.5	3,092.9	0.00	0.00	0.00
9,700.0	90.00	1.15	6,266.0	-1,325.04	2,937.1	-1,295.5	3,187.9	0.00	0.00	0.00
9,800.0	90.00	1.14	6,266.0	-1,325.04	3,037.1	-1,293.5	3,282.9	0.00	0.00	0.00
9,900.0	90.00	1.14	6,266.0	-1,325.04	3,137.1	-1,291.5	3,377.9	0.00	0.00	0.00
10,000.0	90.00	1.14	6,266.0	-1,325.04	3,237.1	-1,289.5	3,472.9	0.00	0.00	0.00
10,100.0	90.00	1.14	6,266.0	-1,325.03	3,337.0	-1,287.5	3,567.9	0.00	0.00	0.00
10,200.0	90.00	1.14	6,266.0	-1,325.03	3,437.0	-1,285.6	3,662.9	0.00	0.00	0.00
10,300.0	90.00	1.14	6,266.0	-1,325.03	3,537.0	-1,283.6	3,757.9	0.00	0.00	0.00
10,400.0	90.00	1.14	6,266.0	-1,325.02	3,637.0	-1,281.6	3,852.9	0.00	0.00	0.00
10,500.0	90.00	1.14	6,266.0	-1,325.02	3,737.0	-1,279.6	3,947.9	0.00	0.00	0.00
10,600.0	90.00	1.14	6,266.0	-1,325.01	3,836.9	-1,277.6	4,042.9	0.00	0.00	0.00
10,700.0	90.00	1.14	6,266.0	-1,325.01	3,936.9	-1,275.6	4,137.9	0.00	0.00	0.00
10,800.0	90.00	1.14	6,266.0	-1,325.01	4,036.9	-1,273.6	4,232.9	0.00	0.00	0.00
10,900.0	90.00	1.14	6,266.0	-1,325.00	4,136.9	-1,271.6	4,327.9	0.00	0.00	0.00
BHL: 600ft FNL & 605ft FWL of Sec 35										
10,909.9	***90.00***	***1.14***	***6,266.0***	***-1,325.00***	***4,146.8***	***-1,271.4***	***4,337.3***	***0.00***	***0.00***	***0.00***

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well CINNAMON TEAL FED 35-1HN
Company:	MALLARD EXPLORATION	**TVD Reference:**	KB-EST @ 4941.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO (NAD 83)	**MD Reference:**	KB-EST @ 4941.0usft (Original Well Elev)
Site:	SE SW SEC. 35 T8N R60W 6th P.M.	**North Reference:**	True
Well:	CINNAMON TEAL FED 35-1HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
473.1	472.0	Fox Hills Base			
1,550.6	1,510.0	Pierre Shale Top			
3,397.4	3,270.0	Richard Sandstone			
3,507.6	3,375.0	Parkman Sandstone			
4,373.3	4,200.0	Sussex Sandstone			
4,853.9	4,658.0	Shannon Sandstone			
6,333.6	6,082.0	Sharon Springs			
6,458.9	6,164.0	Niobrara A Chalk			
6,507.6	6,190.0	Niobrara A Chalk Base			
6,564.9	6,216.0	Niobrara B1 Chalk Top			
6,654.3	6,246.0	Niobrara B1 Chalk Base			
6,803.0	6,266.0	Niobrara B2 Chalk Top (Target)			

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
0.0	0.0	0.0	0.0	SHL: 550ft FSL & 1960ft FWL of Sec 35
100.0	100.0	0.0	0.0	START NUDGE (2°/100ft BUR)
981.9	968.1	-48.7	-125.6	EOB TO 17.64° INC
4,924.2	4,725.0	-480.3	-1,239.4	END OF TANGENT
5,806.2	5,593.1	-529.0	-1,365.0	EOD TO VERTICAL
5,906.2	5,693.1	-529.0	-1,365.0	KOP (10°/100ft BUR)
6,806.0	6,266.0	43.8	-1,353.5	HZ LP: 600ft FSL & 605ft FWL of Sec 35
10,909.9	6,266.0	4,146.8	-1,271.4	BHL: 600ft FNL & 605ft FWL of Sec 35