

# **MALLARD EXPLORATION**

**WELD COUNTY, COLORADO (NAD 83)**

**NE NW SEC. 21 T8N R60W 6th P.M.**

**GOLDENEYE FED 21-11HC**

**ORIGINAL WELLBORE**

**07 May, 2018**

**Plan: PROPOSAL #1**



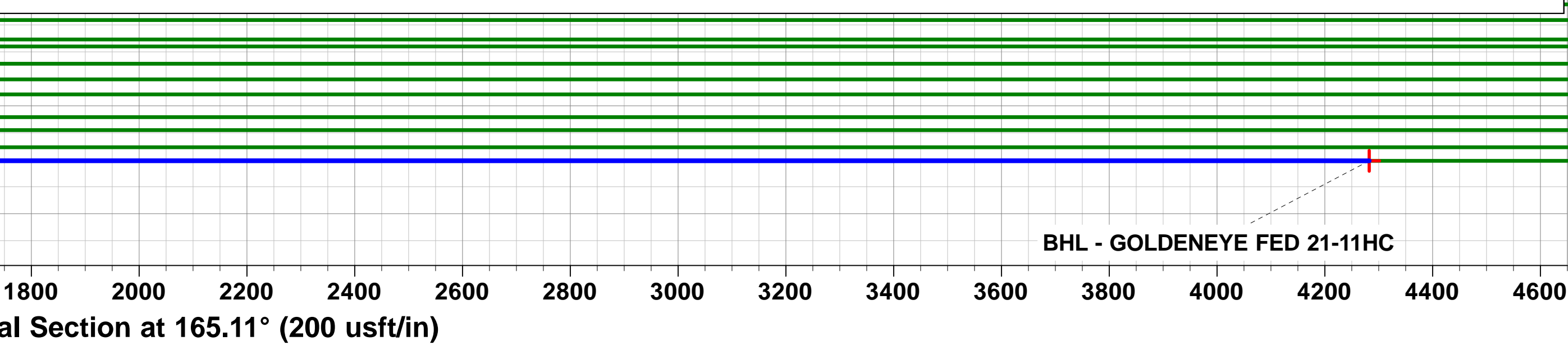
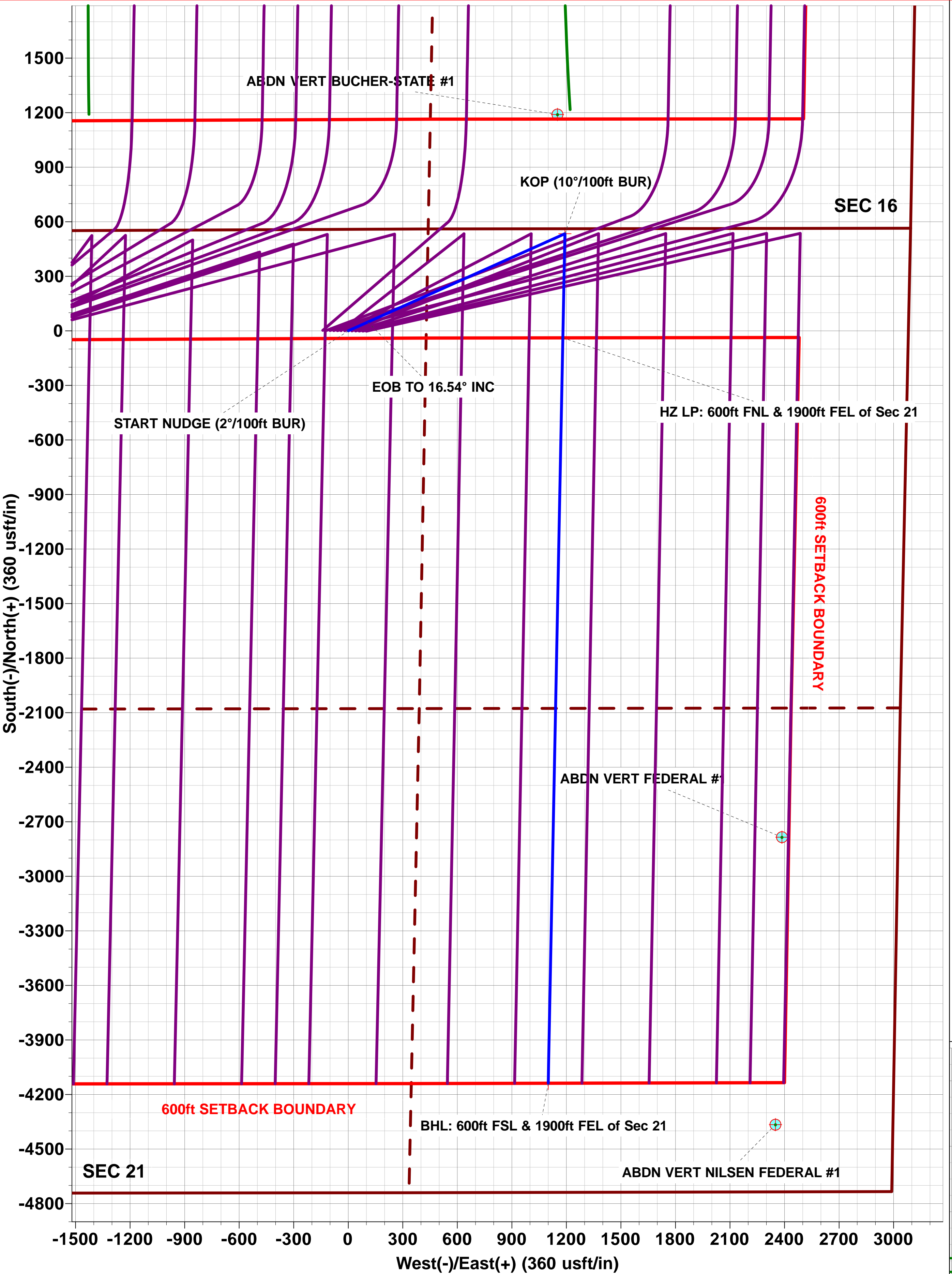
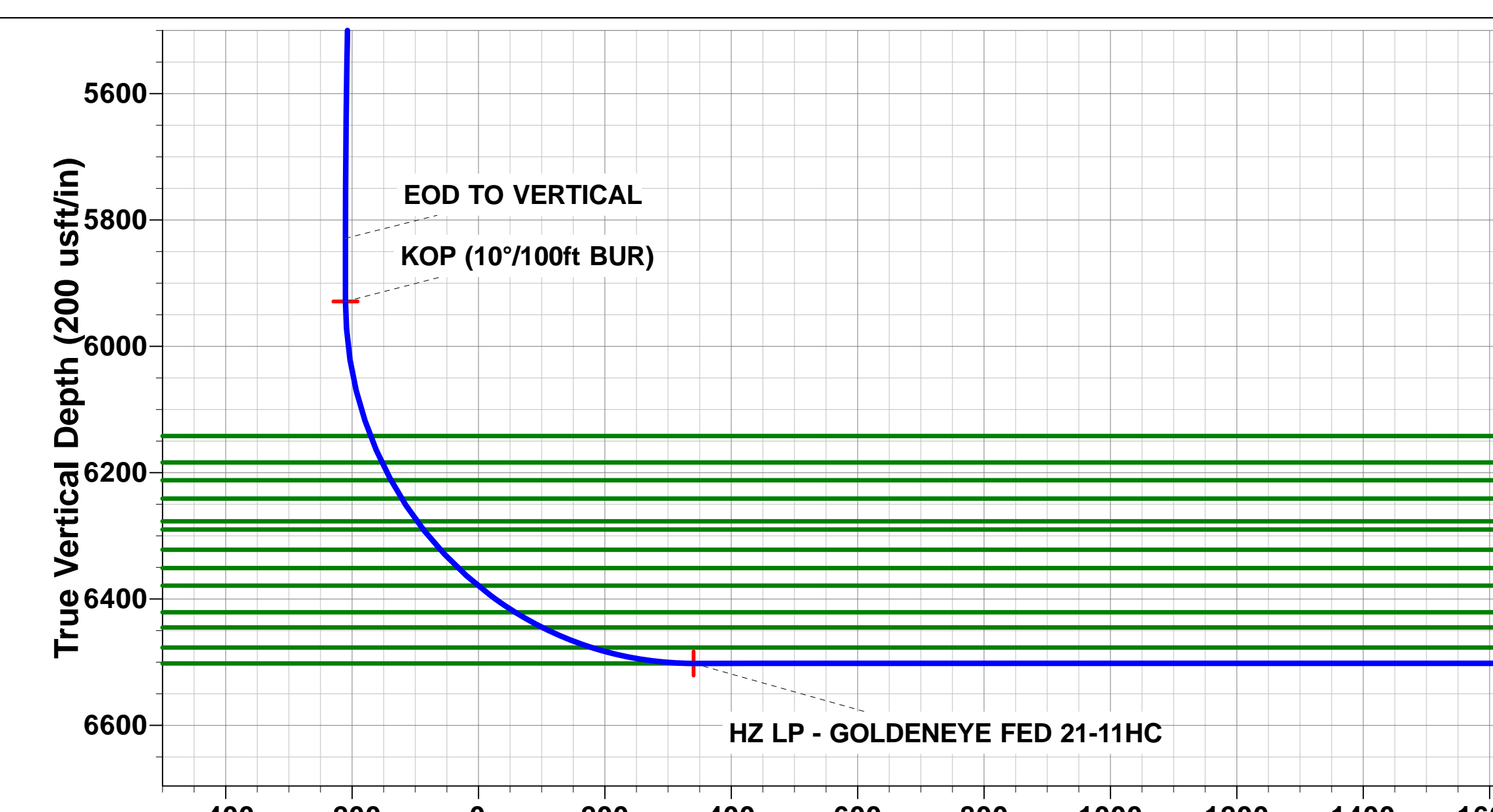
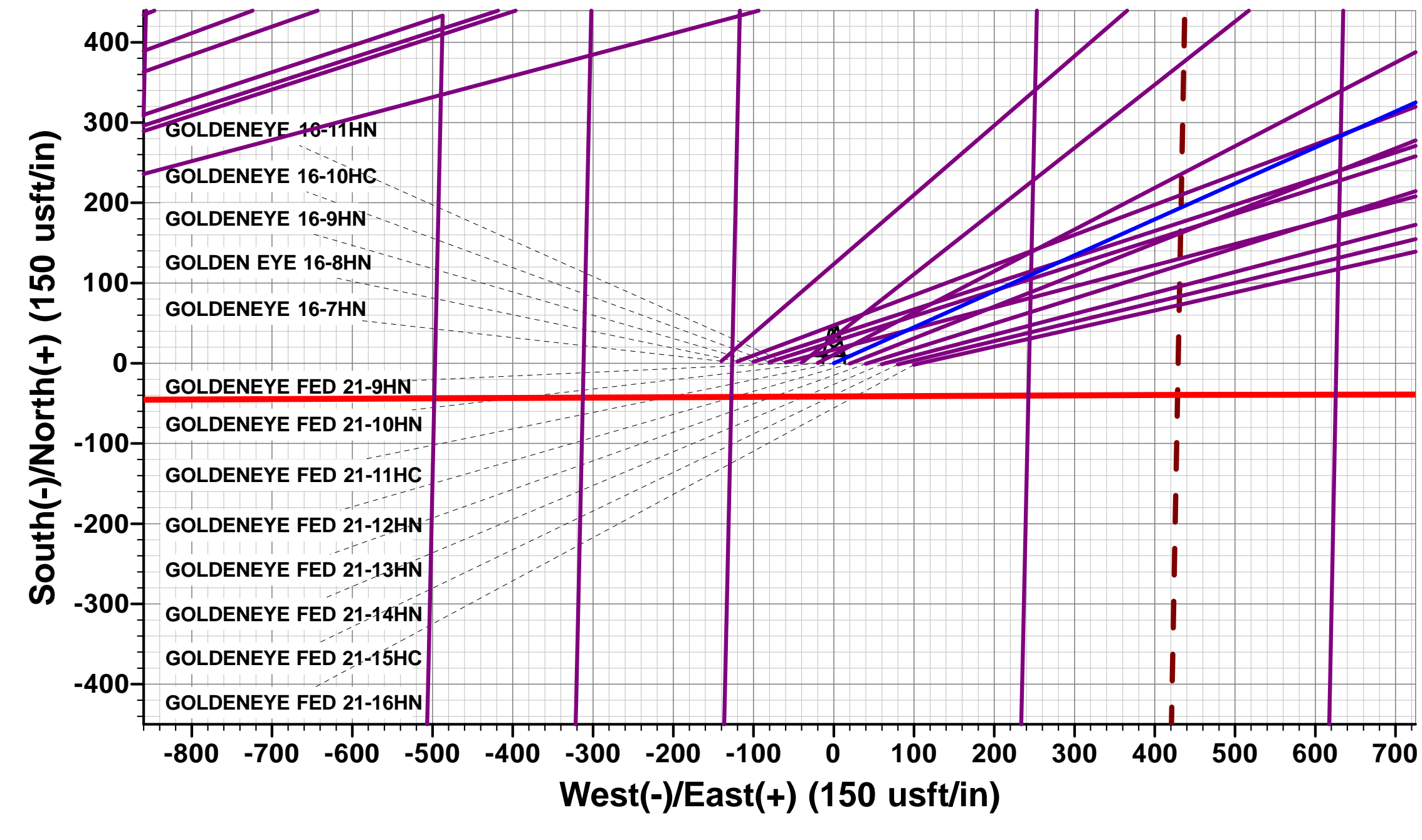
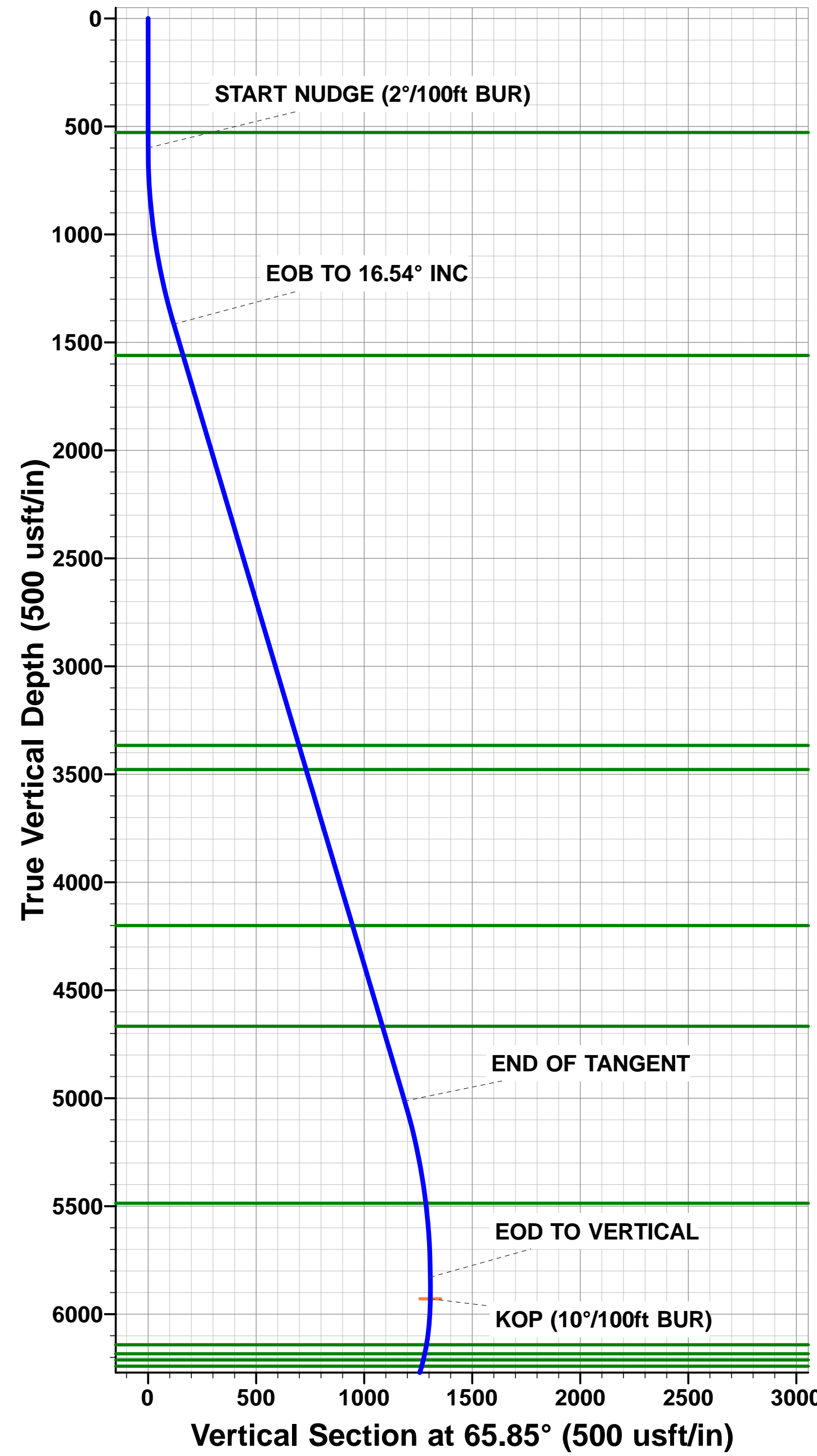


Project: WELD COUNTY, COLORADO (NAD 83)  
Site: NE NW SEC. 21 T8N R60W 6th P.M.  
Well: GOLDENEYE FED 21-11HC  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Dep	Annotation	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 558ft FNL & 2212ft FWL of Sec 21	
600.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)	
1415.78	1427.22	16.54	65.85	48.52	108.22	-19.10	118.61	EOB TO 16.54° INC	
5013.26	5180.08	16.54	65.85	485.75	1083.36	-191.15	1187.27	END OF TANGENT	
5829.04	6007.31	0.00	0.00	534.27	1191.58	-210.24	1305.87	EOD TO VERTICAL	
5929.04	6107.31	0.00	0.00	534.27	1191.58	-210.24	1305.87	KOP (10°/100ft BUR)	
6502.00	7007.31	90.00	181.12	-38.58	1180.38	340.51	1878.84	HZ LP: 600ft FNL & 1900ft FEL of Sec 21	
6502.00	11108.24	90.00	181.12	-4138.72	1100.09	4282.43	5979.76	BHL: 600ft FSL & 1900ft FEL of Sec 21	

PROPOSED LOCAL COORDINATES:  
  
SHL: 558ft FNL & 2212ft FWL Sec 21  
HZ LP: 600ft FNL & 1900ft FEL Sec 21  
  
BHL: 600ft FSL & 1900ft FEL of Sec 21

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - GOLDENEYE FED 21-11HC	5929.04	534.27	1191.58	40.655015	-104.093696
HZ LP - GOLDENEYE FED 21-11HC	6502.00	-38.58	1180.38	40.653443	-104.093736
BHL - GOLDENEYE FED 21-11HC	6502.00	-4138.72	1100.09	40.642189	-104.094026



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOLDENEYE FED 21-11HC
<b>Company:</b>	MALLARD EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4954.00usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4954.00usft (Original Well Elev)
<b>Site:</b>	NE NW SEC. 21 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	GOLDENEYE FED 21-11HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

<b>Project</b>	WELD COUNTY, COLORADO (NAD 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	NE NW SEC. 21 T8N R60W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,484,005.35 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,389,097.57 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.653544
		<b>Longitude:</b>	-104.097630
		<b>Grid Convergence:</b>	0.91 °

<b>Well</b>	GOLDENEYE FED 21-11HC		
<b>Well Position</b>	<b>+N-S</b>	1.81 usft	<b>Northing:</b>
	<b>+E-W</b>	-99.89 usft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<b>Wellbore</b>	ORIGINAL WELLBORE				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	07/05/2018	7.78	67.13	52,489

<b>Design</b>	PROPOSAL #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N-S (usft)</b>	<b>+E-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	165.11

<b>Plan Sections</b>											
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
0.00	0.00	0.00	0.00	-4,954.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	-4,354.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,427.22	16.54	65.85	1,415.78	-3,538.22	48.52	108.22	2.00	2.00	0.00	65.85	
5,180.08	16.54	65.85	5,013.26	59.26	485.75	1,083.36	0.00	0.00	0.00	0.00	
6,007.31	0.00	0.00	5,829.04	875.04	534.27	1,191.58	2.00	-2.00	0.00	180.00	
6,107.31	0.00	0.00	5,929.04	975.04	534.27	1,191.58	0.00	0.00	0.00	0.00	KOP - GOLDENEYE
7,007.31	90.00	181.12	6,502.00	1,548.00	-38.58	1,180.38	10.00	10.00	-19.88	181.12	HZ LP - GOLDENEYE
11,108.24	90.00	181.12	6,502.00	1,548.00	-4,138.72	1,100.09	0.00	0.00	0.00	98.97	BHL - GOLDENEYE

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOLDENEYE FED 21-11HC
<b>Company:</b>	MALLARD EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4954.00usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4954.00usft (Original Well Elev)
<b>Site:</b>	NE NW SEC. 21 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	GOLDENEYE FED 21-11HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
<b>SHL: 558ft FNL &amp; 2212ft FWL of Sec 21</b>										
0.00	0.00	0.00	0.00	4,954.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,854.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,754.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	4,654.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	4,554.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	4,454.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Base</b>										
528.00	0.00	0.00	528.00	4,426.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
600.00	0.00	0.00	600.00	4,354.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	2.00	65.85	699.98	4,254.02	0.71	1.59	-0.28	2.00	2.00	0.00
800.00	4.00	65.85	799.84	4,154.16	2.86	6.37	-1.12	2.00	2.00	0.00
900.00	6.00	65.85	899.45	4,054.55	6.42	14.32	-2.53	2.00	2.00	0.00
1,000.00	8.00	65.85	998.70	3,955.30	11.41	25.44	-4.49	2.00	2.00	0.00
1,100.00	10.00	65.85	1,097.47	3,856.53	17.81	39.71	-7.01	2.00	2.00	0.00
1,200.00	12.00	65.85	1,195.62	3,758.38	25.61	57.12	-10.08	2.00	2.00	0.00
1,300.00	14.00	65.85	1,293.06	3,660.94	34.82	77.65	-13.70	2.00	2.00	0.00
1,400.00	16.00	65.85	1,389.64	3,564.36	45.40	101.26	-17.87	2.00	2.00	0.00
<b>EOB TO 16.54° INC</b>										
1,427.22	16.54	65.85	1,415.78	3,538.22	48.52	108.22	-19.10	2.00	2.00	0.00
1,500.00	16.54	65.85	1,485.54	3,468.46	57.00	127.13	-22.43	0.00	0.00	0.00
<b>Pierre Shale Top</b>										
1,578.72	16.54	65.85	1,561.00	3,393.00	66.17	147.59	-26.04	0.00	0.00	0.00
1,600.00	16.54	65.85	1,581.40	3,372.60	68.65	153.12	-27.02	0.00	0.00	0.00
1,700.00	16.54	65.85	1,677.26	3,276.74	80.30	179.10	-31.60	0.00	0.00	0.00
1,800.00	16.54	65.85	1,773.12	3,180.88	91.95	205.09	-36.19	0.00	0.00	0.00
1,900.00	16.54	65.85	1,868.98	3,085.02	103.60	231.07	-40.77	0.00	0.00	0.00
2,000.00	16.54	65.85	1,964.84	2,989.16	115.26	257.05	-45.35	0.00	0.00	0.00
2,100.00	16.54	65.85	2,060.70	2,893.30	126.91	283.04	-49.94	0.00	0.00	0.00
2,200.00	16.54	65.85	2,156.56	2,797.44	138.56	309.02	-54.52	0.00	0.00	0.00
2,300.00	16.54	65.85	2,252.42	2,701.58	150.21	335.00	-59.11	0.00	0.00	0.00
2,400.00	16.54	65.85	2,348.28	2,605.72	161.86	360.99	-63.69	0.00	0.00	0.00
2,500.00	16.54	65.85	2,444.14	2,509.86	173.51	386.97	-68.28	0.00	0.00	0.00
2,600.00	16.54	65.85	2,540.00	2,414.00	185.16	412.95	-72.86	0.00	0.00	0.00
2,700.00	16.54	65.85	2,635.86	2,318.14	196.81	438.94	-77.45	0.00	0.00	0.00
2,800.00	16.54	65.85	2,731.72	2,222.28	208.46	464.92	-82.03	0.00	0.00	0.00
2,900.00	16.54	65.85	2,827.58	2,126.42	220.11	490.91	-86.62	0.00	0.00	0.00
3,000.00	16.54	65.85	2,923.44	2,030.56	231.76	516.89	-91.20	0.00	0.00	0.00
3,100.00	16.54	65.85	3,019.30	1,934.70	243.41	542.87	-95.78	0.00	0.00	0.00
3,200.00	16.54	65.85	3,115.16	1,838.84	255.06	568.86	-100.37	0.00	0.00	0.00
3,300.00	16.54	65.85	3,211.02	1,742.98	266.71	594.84	-104.95	0.00	0.00	0.00
3,400.00	16.54	65.85	3,306.88	1,647.12	278.36	620.82	-109.54	0.00	0.00	0.00
<b>Richard Sandstone</b>										
3,462.72	16.54	65.85	3,367.00	1,587.00	285.67	637.12	-112.41	0.00	0.00	0.00
3,500.00	16.54	65.85	3,402.74	1,551.26	290.01	646.81	-114.12	0.00	0.00	0.00
<b>Parkman Sandstone</b>										
3,578.51	16.54	65.85	3,478.00	1,476.00	299.16	667.21	-117.72	0.00	0.00	0.00
3,600.00	16.54	65.85	3,498.60	1,455.40	301.66	672.79	-118.71	0.00	0.00	0.00
3,700.00	16.54	65.85	3,594.46	1,359.54	313.31	698.78	-123.29	0.00	0.00	0.00
3,800.00	16.54	65.85	3,690.32	1,263.68	324.96	724.76	-127.88	0.00	0.00	0.00
3,900.00	16.54	65.85	3,786.18	1,167.82	336.61	750.74	-132.46	0.00	0.00	0.00
4,000.00	16.54	65.85	3,882.04	1,071.96	348.26	776.73	-137.05	0.00	0.00	0.00



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOLDENEYE FED 21-11HC
<b>Company:</b>	MALLARD EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4954.00usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4954.00usft (Original Well Elev)
<b>Site:</b>	NE NW SEC. 21 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	GOLDENEYE FED 21-11HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
4,100.00	16.54	65.85	3,977.90	976.10	359.91	802.71	-141.63	0.00	0.00	0.00
4,200.00	16.54	65.85	4,073.76	880.24	371.56	828.69	-146.21	0.00	0.00	0.00
4,300.00	16.54	65.85	4,169.62	784.38	383.21	854.68	-150.80	0.00	0.00	0.00
<b>Sussex Sandstone</b>										
<b>4,332.74</b>	<b>16.54</b>	<b>65.85</b>	<b>4,201.00</b>	<b>753.00</b>	<b>387.03</b>	<b>863.18</b>	<b>-152.30</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,400.00	16.54	65.85	4,265.48	688.52	394.86	880.66	-155.38	0.00	0.00	0.00
4,500.00	16.54	65.85	4,361.34	592.66	406.51	906.64	-159.97	0.00	0.00	0.00
4,600.00	16.54	65.85	4,457.20	496.80	418.16	932.63	-164.55	0.00	0.00	0.00
4,700.00	16.54	65.85	4,553.06	400.94	429.81	958.61	-169.14	0.00	0.00	0.00
4,800.00	16.54	65.85	4,648.92	305.08	441.46	984.60	-173.72	0.00	0.00	0.00
<b>Shannon Sandstone</b>										
<b>4,818.87</b>	<b>16.54</b>	<b>65.85</b>	<b>4,667.00</b>	<b>287.00</b>	<b>443.66</b>	<b>989.50</b>	<b>-174.59</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,900.00	16.54	65.85	4,744.78	209.22	453.11	1,010.58	-178.31	0.00	0.00	0.00
5,000.00	16.54	65.85	4,840.64	113.36	464.76	1,036.56	-182.89	0.00	0.00	0.00
5,100.00	16.54	65.85	4,936.50	17.50	476.42	1,062.55	-187.48	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>5,180.08</b>	<b>16.54</b>	<b>65.85</b>	<b>5,013.26</b>	<b>-59.26</b>	<b>485.75</b>	<b>1,083.36</b>	<b>-191.15</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,200.00	16.15	65.85	5,032.37	-78.37	488.04	1,088.47	-192.05	2.00	-2.00	0.00
5,300.00	14.15	65.85	5,128.90	-174.90	498.73	1,112.31	-196.26	2.00	-2.00	0.00
5,400.00	12.15	65.85	5,226.27	-272.27	508.03	1,133.06	-199.92	2.00	-2.00	0.00
5,500.00	10.15	65.85	5,324.38	-370.38	515.94	1,150.70	-203.03	2.00	-2.00	0.00
5,600.00	8.15	65.85	5,423.10	-469.10	522.44	1,165.20	-205.59	2.00	-2.00	0.00
<b>TeePee Buttes</b>										
<b>5,664.45</b>	<b>6.86</b>	<b>65.85</b>	<b>5,487.00</b>	<b>-533.00</b>	<b>525.89</b>	<b>1,172.88</b>	<b>-206.94</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,700.00	6.15	65.85	5,522.32	-568.32	527.53	1,176.55	-207.59	2.00	-2.00	0.00
5,800.00	4.15	65.85	5,621.91	-667.91	531.20	1,184.74	-209.04	2.00	-2.00	0.00
5,900.00	2.15	65.85	5,721.76	-767.76	533.45	1,189.75	-209.92	2.00	-2.00	0.00
6,000.00	0.15	65.85	5,821.73	-867.73	534.27	1,191.57	-210.24	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>6,007.31</b>	<b>0.00</b>	<b>0.00</b>	<b>5,829.04</b>	<b>-875.04</b>	<b>534.27</b>	<b>1,191.58</b>	<b>-210.24</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
6,100.00	0.00	0.00	5,921.73	-967.73	534.27	1,191.58	-210.24	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>6,107.31</b>	<b>0.00</b>	<b>0.00</b>	<b>5,929.04</b>	<b>-975.04</b>	<b>534.27</b>	<b>1,191.58</b>	<b>-210.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,200.00	9.27	181.12	6,021.33	-1,067.33	526.79	1,191.43	-203.05	10.00	10.00	0.00
6,300.00	19.27	181.12	6,118.12	-1,164.12	502.18	1,190.95	-179.39	10.00	10.00	0.00
<b>Sharon Springs</b>										
<b>6,325.50</b>	<b>21.82</b>	<b>181.12</b>	<b>6,142.00</b>	<b>-1,188.00</b>	<b>493.23</b>	<b>1,190.78</b>	<b>-170.79</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>Niobrara Top</b>										
<b>6,371.53</b>	<b>26.42</b>	<b>181.12</b>	<b>6,184.00</b>	<b>-1,230.00</b>	<b>474.43</b>	<b>1,190.41</b>	<b>-152.71</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,400.00	29.27	181.12	6,209.17	-1,255.17	461.14	1,190.15	-139.93	10.00	10.00	0.00
<b>Niobrara A Chalk</b>										
<b>6,403.25</b>	<b>29.59</b>	<b>181.12</b>	<b>6,212.00</b>	<b>-1,258.00</b>	<b>459.54</b>	<b>1,190.12</b>	<b>-138.39</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>Niobrara A Chalk Base</b>										
<b>6,437.19</b>	<b>32.99</b>	<b>181.12</b>	<b>6,241.00</b>	<b>-1,287.00</b>	<b>441.91</b>	<b>1,189.77</b>	<b>-121.45</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>Niobrara B1 Chalk Top</b>										
<b>6,481.26</b>	<b>37.39</b>	<b>181.12</b>	<b>6,277.00</b>	<b>-1,323.00</b>	<b>416.53</b>	<b>1,189.28</b>	<b>-97.05</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>Niobrara B1 Chalk Base</b>										
<b>6,497.80</b>	<b>39.05</b>	<b>181.12</b>	<b>6,290.00</b>	<b>-1,336.00</b>	<b>406.30</b>	<b>1,189.08</b>	<b>-87.21</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,500.00	39.27	181.12	6,291.70	-1,337.70	404.91	1,189.05	-85.87	10.00	10.00	0.00
<b>Niobrara B2 Chalk Top</b>										
<b>6,540.33</b>	<b>43.30</b>	<b>181.12</b>	<b>6,322.00</b>	<b>-1,368.00</b>	<b>378.31</b>	<b>1,188.53</b>	<b>-60.30</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>Niobrara B2 Chalk Base</b>										
<b>6,581.61</b>	<b>47.43</b>	<b>181.12</b>	<b>6,351.00</b>	<b>-1,397.00</b>	<b>348.94</b>	<b>1,187.96</b>	<b>-32.07</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOLDENEYE FED 21-11HC
<b>Company:</b>	MALLARD EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4954.00usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4954.00usft (Original Well Elev)
<b>Site:</b>	NE NW SEC. 21 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	GOLDENEYE FED 21-11HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
6,600.00	49.27	181.12	6,363.22	-1,409.22	335.21	1,187.69	-18.86	10.00	10.00	0.00
<b>Niobrara C Chalk Top</b>										
<b>6,624.82</b>	<b>51.75</b>	<b>181.12</b>	<b>6,379.00</b>	<b>-1,425.00</b>	<b>316.06</b>	<b>1,187.31</b>	<b>-0.45</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>Niobrara C Chalk Base</b>										
<b>6,698.94</b>	<b>59.16</b>	<b>181.12</b>	<b>6,421.00</b>	<b>-1,467.00</b>	<b>255.06</b>	<b>1,186.12</b>	<b>58.19</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,700.00	59.27	181.12	6,421.54	-1,467.54	254.15	1,186.10	59.07	10.00	10.00	0.00
<b>Niobrara D Chalk Top</b>										
<b>6,749.57</b>	<b>64.23</b>	<b>181.12</b>	<b>6,445.00</b>	<b>-1,491.00</b>	<b>210.51</b>	<b>1,185.25</b>	<b>101.03</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,800.00	69.27	181.12	6,464.90	-1,510.90	164.20	1,184.34	145.55	10.00	10.00	0.00
<b>Ft. Hays</b>										
<b>6,837.43</b>	<b>73.01</b>	<b>181.12</b>	<b>6,477.00</b>	<b>-1,523.00</b>	<b>128.79</b>	<b>1,183.65</b>	<b>179.60</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,900.00	79.27	181.12	6,491.98	-1,537.98	68.08	1,182.46	237.96	10.00	10.00	0.00
7,000.00	89.27	181.12	6,501.95	-1,547.95	-31.27	1,180.52	333.48	10.00	10.00	0.00
<b>HZ LP: 600ft FNL &amp; 1900ft FEL of Sec 21 - Codell (Target)</b>										
<b>7,007.31</b>	<b>90.00</b>	<b>181.12</b>	<b>6,502.00</b>	<b>-1,548.00</b>	<b>-38.58</b>	<b>1,180.38</b>	<b>340.51</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,100.00	90.00	181.12	6,502.00	-1,548.00	-131.25	1,178.56	429.60	0.00	0.00	0.00
7,200.00	90.00	181.12	6,502.00	-1,548.00	-231.23	1,176.61	525.72	0.00	0.00	0.00
7,300.00	90.00	181.12	6,502.00	-1,548.00	-331.21	1,174.65	621.85	0.00	0.00	0.00
7,400.00	90.00	181.12	6,502.00	-1,548.00	-431.19	1,172.70	717.97	0.00	0.00	0.00
7,500.00	90.00	181.12	6,502.00	-1,548.00	-531.17	1,170.74	814.09	0.00	0.00	0.00
7,600.00	90.00	181.12	6,502.00	-1,548.00	-631.16	1,168.78	910.22	0.00	0.00	0.00
7,700.00	90.00	181.12	6,502.00	-1,548.00	-731.14	1,166.83	1,006.34	0.00	0.00	0.00
7,800.00	90.00	181.12	6,502.00	-1,548.00	-831.12	1,164.87	1,102.46	0.00	0.00	0.00
7,900.00	90.00	181.12	6,502.00	-1,548.00	-931.10	1,162.91	1,198.59	0.00	0.00	0.00
8,000.00	90.00	181.12	6,502.00	-1,548.00	-1,031.08	1,160.96	1,294.71	0.00	0.00	0.00
8,100.00	90.00	181.12	6,502.00	-1,548.00	-1,131.06	1,159.00	1,390.83	0.00	0.00	0.00
8,200.00	90.00	181.12	6,502.00	-1,548.00	-1,231.04	1,157.04	1,486.96	0.00	0.00	0.00
8,300.00	90.00	181.12	6,502.00	-1,548.00	-1,331.02	1,155.09	1,583.08	0.00	0.00	0.00
8,400.00	90.00	181.12	6,502.00	-1,548.00	-1,431.00	1,153.13	1,679.20	0.00	0.00	0.00
8,500.00	90.00	181.12	6,502.00	-1,548.00	-1,530.98	1,151.17	1,775.33	0.00	0.00	0.00
8,600.00	90.00	181.12	6,502.00	-1,548.00	-1,630.96	1,149.22	1,871.45	0.00	0.00	0.00
8,700.00	90.00	181.12	6,502.00	-1,548.00	-1,730.94	1,147.26	1,967.57	0.00	0.00	0.00
8,800.00	90.00	181.12	6,502.00	-1,548.00	-1,830.93	1,145.30	2,063.69	0.00	0.00	0.00
8,900.00	90.00	181.12	6,502.00	-1,548.00	-1,930.91	1,143.34	2,159.82	0.00	0.00	0.00
9,000.00	90.00	181.12	6,502.00	-1,548.00	-2,030.89	1,141.39	2,255.94	0.00	0.00	0.00
9,100.00	90.00	181.12	6,502.00	-1,548.00	-2,130.87	1,139.43	2,352.06	0.00	0.00	0.00
9,200.00	90.00	181.12	6,502.00	-1,548.00	-2,230.85	1,137.47	2,448.19	0.00	0.00	0.00
9,300.00	90.00	181.12	6,502.00	-1,548.00	-2,330.83	1,135.51	2,544.31	0.00	0.00	0.00
9,400.00	90.00	181.12	6,502.00	-1,548.00	-2,430.81	1,133.56	2,640.43	0.00	0.00	0.00
9,500.00	90.00	181.12	6,502.00	-1,548.00	-2,530.79	1,131.60	2,736.55	0.00	0.00	0.00
9,600.00	90.00	181.12	6,502.00	-1,548.00	-2,630.77	1,129.64	2,832.68	0.00	0.00	0.00
9,700.00	90.00	181.12	6,502.00	-1,548.00	-2,730.75	1,127.68	2,928.80	0.00	0.00	0.00
9,800.00	90.00	181.12	6,502.00	-1,548.00	-2,830.73	1,125.72	3,024.92	0.00	0.00	0.00
9,900.00	90.00	181.12	6,502.00	-1,548.00	-2,930.71	1,123.76	3,121.04	0.00	0.00	0.00
10,000.00	90.00	181.12	6,502.00	-1,548.00	-3,030.70	1,121.80	3,217.17	0.00	0.00	0.00
10,100.00	90.00	181.12	6,502.00	-1,548.00	-3,130.68	1,119.85	3,313.29	0.00	0.00	0.00
10,200.00	90.00	181.12	6,502.00	-1,548.00	-3,230.66	1,117.89	3,409.41	0.00	0.00	0.00
10,300.00	90.00	181.12	6,502.00	-1,548.00	-3,330.64	1,115.93	3,505.53	0.00	0.00	0.00
10,400.00	90.00	181.12	6,502.00	-1,548.00	-3,430.62	1,113.97	3,601.66	0.00	0.00	0.00
10,500.00	90.00	181.12	6,502.00	-1,548.00	-3,530.60	1,112.01	3,697.78	0.00	0.00	0.00
10,600.00	90.00	181.12	6,502.00	-1,548.00	-3,630.58	1,110.05	3,793.90	0.00	0.00	0.00
10,700.00	90.00	181.12	6,502.00	-1,548.00	-3,730.56	1,108.09	3,890.02	0.00	0.00	0.00
10,800.00	90.00	181.12	6,502.00	-1,548.00	-3,830.54	1,106.13	3,986.15	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOLDENEYE FED 21-11HC
<b>Company:</b>	MALLARD EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4954.00usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4954.00usft (Original Well Elev)
<b>Site:</b>	NE NW SEC. 21 T8N R60W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	GOLDENEYE FED 21-11HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
10,900.00	90.00	181.12	6,502.00	-1,548.00	-3,930.52	1,104.17	4,082.27	0.00	0.00	0.00
11,000.00	90.00	181.12	6,502.00	-1,548.00	-4,030.50	1,102.21	4,178.39	0.00	0.00	0.00
11,100.00	90.00	181.12	6,502.00	-1,548.00	-4,130.48	1,100.25	4,274.51	0.00	0.00	0.00
<b>BHL: 600ft FSL &amp; 1900ft FEL of Sec 21</b>										
<b>11,108.24</b>	<b>90.00</b>	<b>181.12</b>	<b>6,502.00</b>	<b>-1,548.00</b>	<b>-4,138.72</b>	<b>1,100.09</b>	<b>4,282.43</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
528.00	528.00	Fox Hills Base				
1,578.72	1,561.00	Pierre Shale Top				
3,462.72	3,367.00	Richard Sandstone				
3,578.51	3,478.00	Parkman Sandstone				
4,332.74	4,201.00	Sussex Sandstone				
4,818.87	4,667.00	Shannon Sandstone				
5,664.45	5,487.00	TeePee Buttes				
6,325.50	6,142.00	Sharon Springs				
6,371.53	6,184.00	Niobrara Top				
6,403.25	6,212.00	Niobrara A Chalk				
6,437.19	6,241.00	Niobrara A Chalk Base				
6,481.26	6,277.00	Niobrara B1 Chalk Top				
6,497.80	6,290.00	Niobrara B1 Chalk Base				
6,540.33	6,322.00	Niobrara B2 Chalk Top				
6,581.61	6,351.00	Niobrara B2 Chalk Base				
6,624.82	6,379.00	Niobrara C Chalk Top				
6,698.94	6,421.00	Niobrara C Chalk Base				
6,749.57	6,445.00	Niobrara D Chalk Top				
6,837.43	6,477.00	Ft. Hays				
7,007.31	6,502.00	Codell (Target)				

Plan Annotations					
MD (usft)	TVD (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
0.00	0.00	0.00	0.00	SHL: 558ft FNL & 2212ft FWL of Sec 21	
600.00	600.00	0.00	0.00	START NUDGE (2°/100ft BUR)	
1,427.22	1,415.78	48.52	108.22	EOB TO 16.54° INC	
5,180.08	5,013.26	485.75	1,083.36	END OF TANGENT	
6,007.31	5,829.04	534.27	1,191.58	EOD TO VERTICAL	
6,107.31	5,929.04	534.27	1,191.58	KOP (10°/100ft BUR)	
7,007.31	6,502.00	-38.58	1,180.38	HZ LP: 600ft FNL & 1900ft FEL of Sec 21	
11,108.24	6,502.00	-4,138.72	1,100.09	BHL: 600ft FSL & 1900ft FEL of Sec 21	