

# **MALLARD EXPLORATION**

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

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

**GOLDENEYE FED 21-13HN**

**ORIGINAL WELLBORE**

**07 May, 2018**

**Plan: PROPOSAL #1**



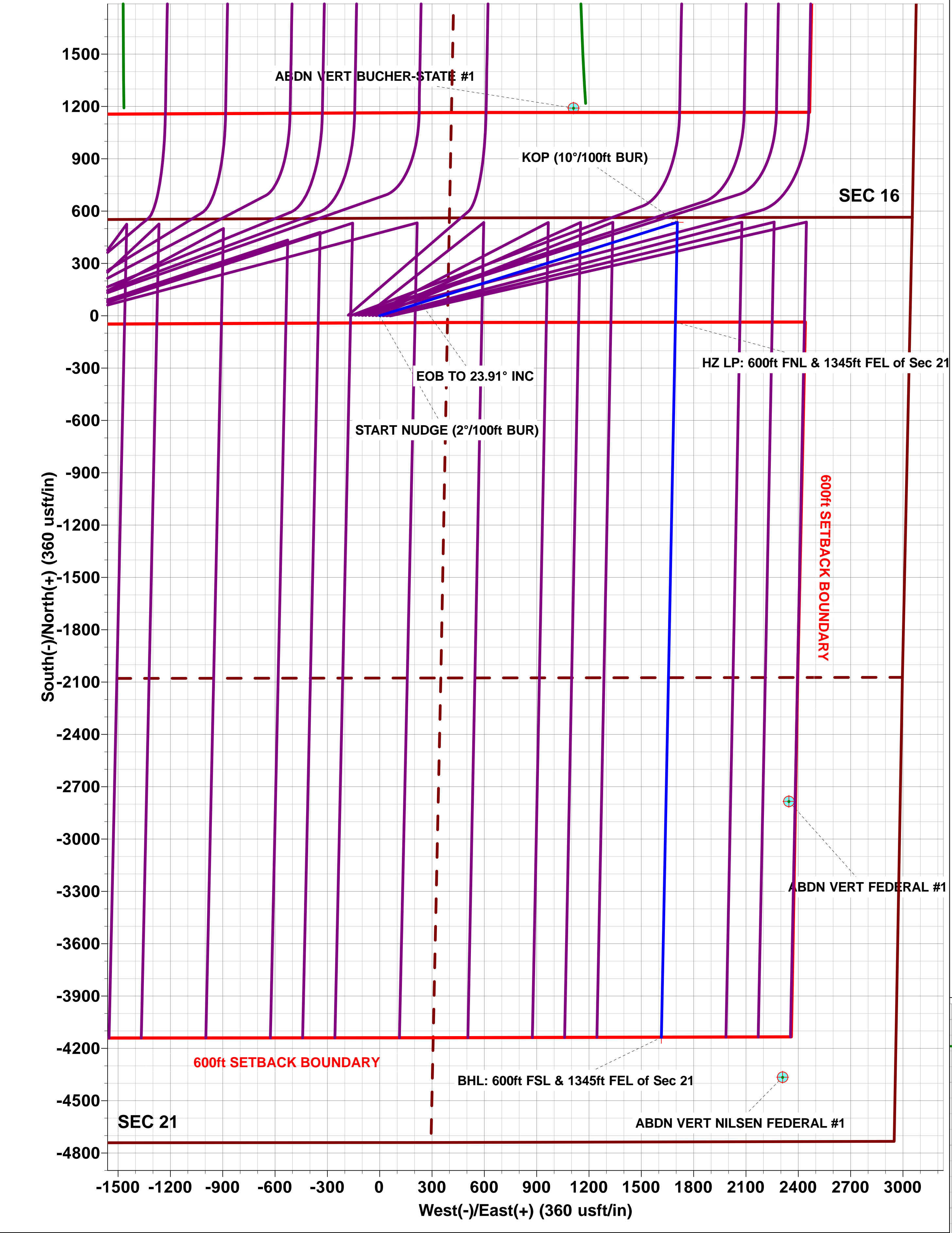
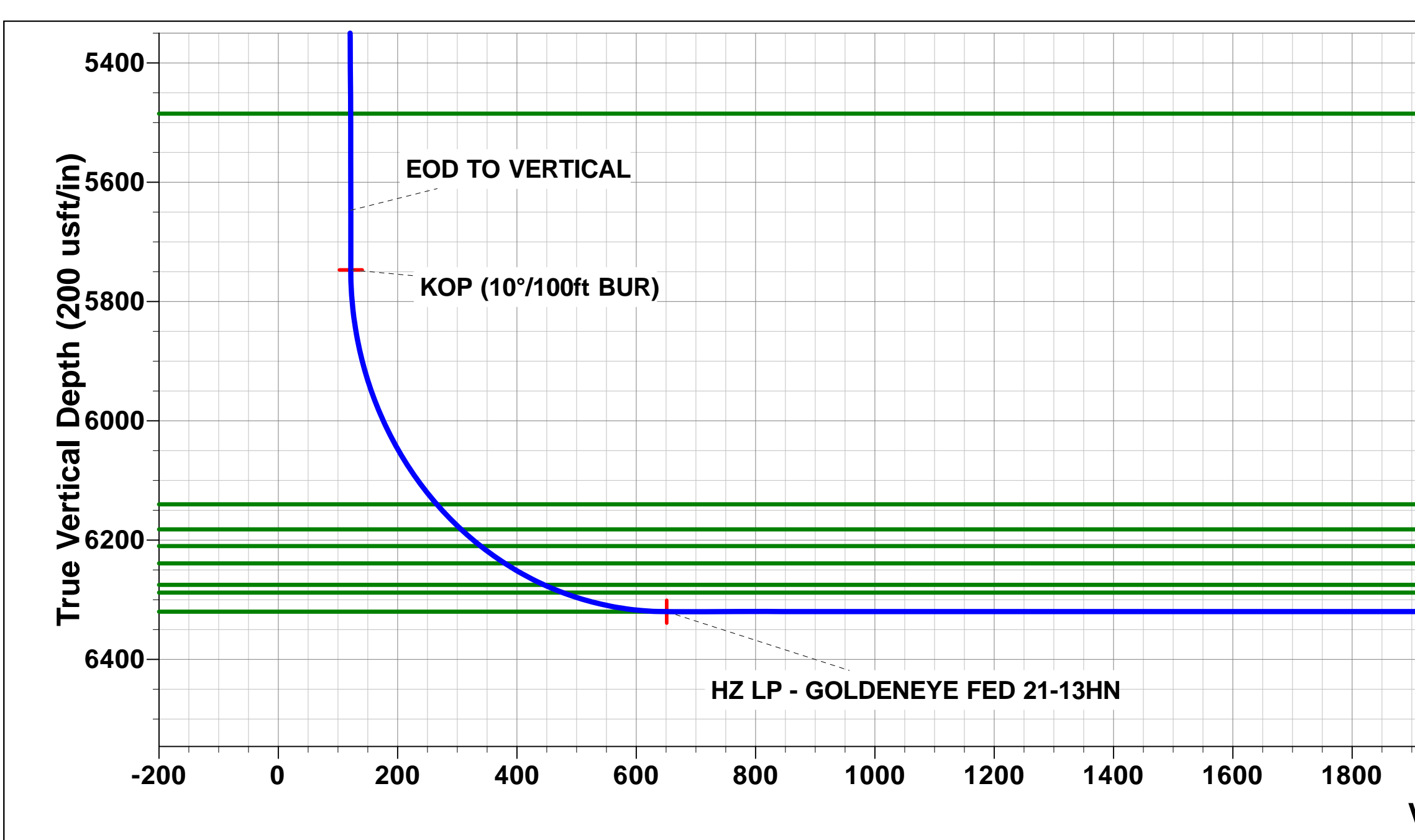
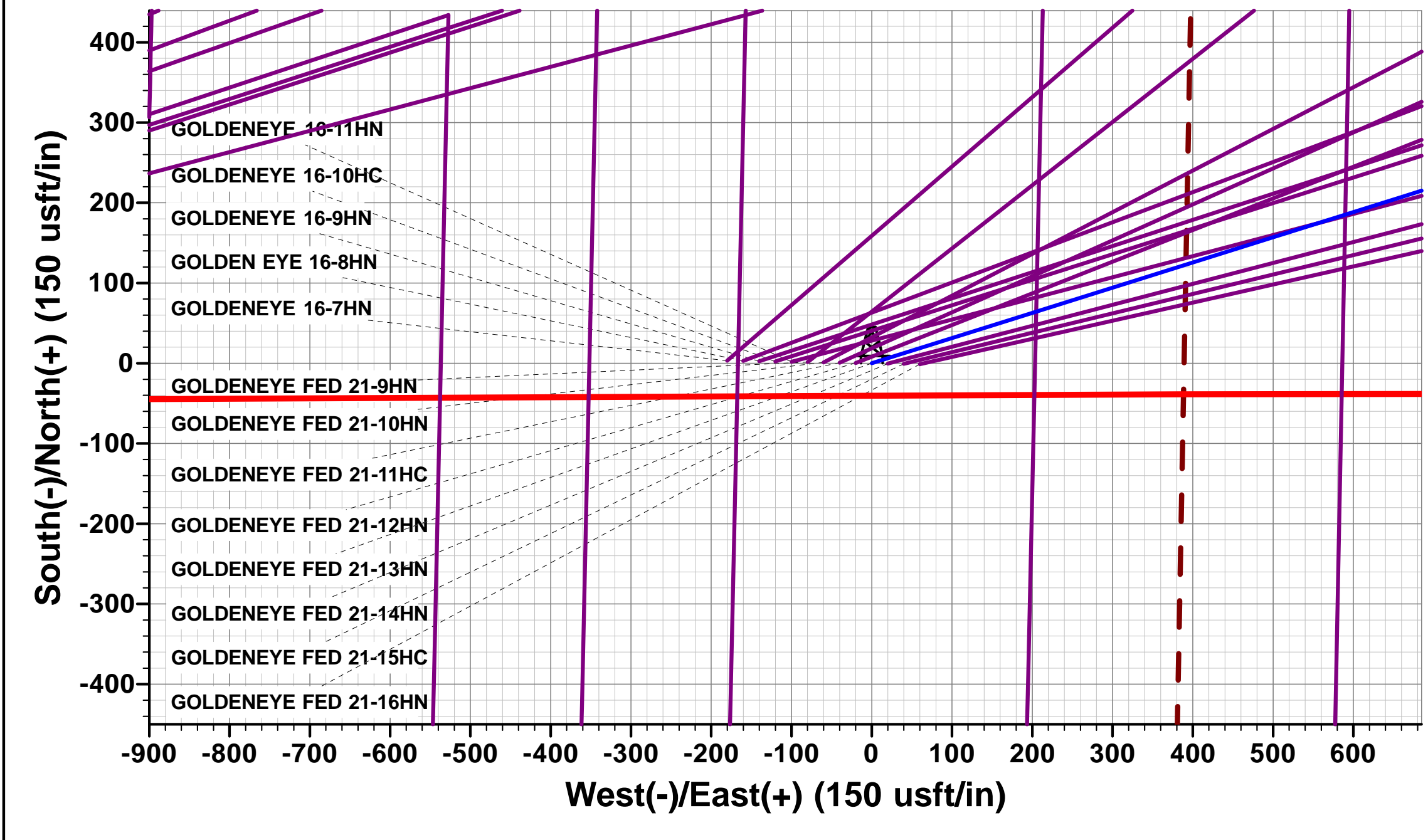
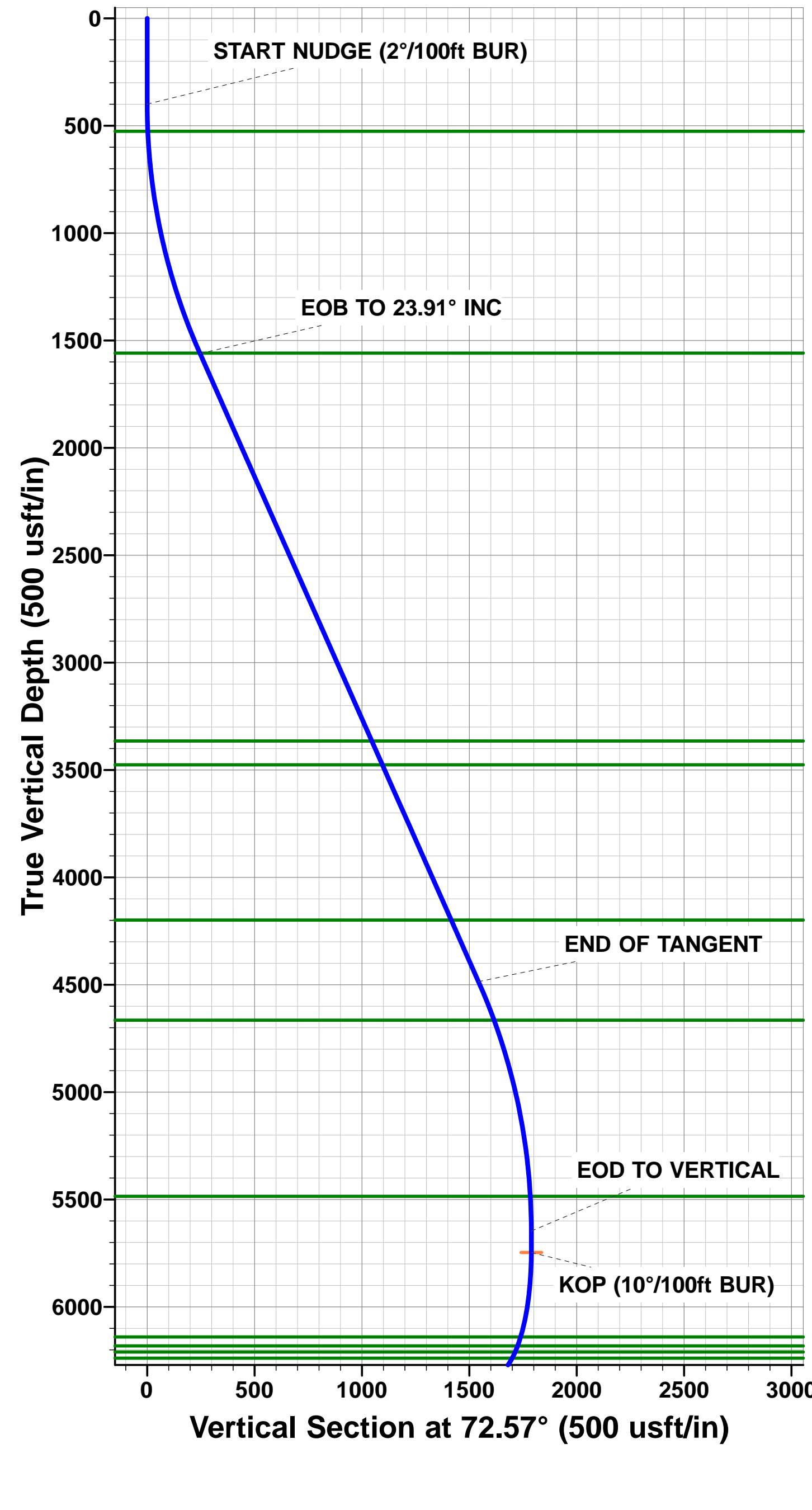


Project: WELD COUNTY, COLORADO (NAD 83)  
Site: NE NW SEC. 21 T8N R60W 6th P.M.  
Well: GOLDENEYE FED 21-13HN  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

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: 559ft FNL & 2252ft FWL of Sec 21	
400.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)	
1561.31	1595.73	23.91	72.57	73.67	234.65	16.73	245.94	EOB TO 23.91° INC	
4485.73	4794.78	23.91	72.57	462.09	1471.92	104.93	1542.75	END OF TANGENT	
5647.04	5990.51	0.00	0.00	535.76	1706.57	121.65	1788.69	EOD TO VERTICAL	
5747.04	6090.51	0.00	0.00	535.76	1706.57	121.65	1788.69	KOP (10°/100ft BUR)	
6320.00	6990.52	90.00	181.12	-37.09	1695.37	651.20	2361.66	HZ LP: 600ft FNL & 1345ft FEL of Sec 21	
6320.00	11090.71	90.00	181.12	-4136.51	1615.17	4440.66	6461.85	BHL: 600ft FSL & 1345ft FEL of Sec 21	

PROPOSED LOCAL COORDINATES:  
  
SHL: 559ft FNL & 2252ft FWL Sec 21  
HZ LP: 600ft FNL & 1345ft FEL Sec 21  
  
BHL: 600ft FSL & 1345ft FEL of Sec 21

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - GOLDENEYE FED 21-13HN	5747.04	535.76	1706.57	40.655017	-104.091695
HZ LP - GOLDENEYE FED 21-13HN	6320.00	-37.09	1695.37	40.653445	-104.091736
BHL - GOLDENEYE FED 21-13HN	6320.00	-4136.51	1615.17	40.642193	-104.092026



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOLDENEYE FED 21-13HN
<b>Company:</b>	MALLARD EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4952.00usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4952.00usft (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 21-13HN	<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

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

Well	GOLDENEYE FED 21-13HN					
Well Position	+N/-S	1.09 usft	Northing:	1,484,005.49 usft	Latitude:	40.653547
	+E/-W	-59.93 usft	Easting:	3,389,037.63 usft	Longitude:	-104.097846
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,932.00 usft

<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	158.67

<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	-4,952.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	-4,552.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,595.73	23.91	72.57	1,561.31	-3,390.69	73.67	234.65	2.00	2.00	0.00	72.57	
4,794.78	23.91	72.57	4,485.73	-466.27	462.09	1,471.92	0.00	0.00	0.00	0.00	
5,990.51	0.00	0.00	5,647.04	695.04	535.76	1,706.57	2.00	-2.00	0.00	180.00	
6,090.51	0.00	0.00	5,747.04	795.04	535.76	1,706.57	0.00	0.00	0.00	0.00	KOP - GOLDENEYE
6,990.52	90.00	181.12	6,320.00	1,368.00	-37.09	1,695.37	10.00	10.00	-19.88	181.12	HZ LP - GOLDENEYE
11,090.71	90.00	181.12	6,320.00	1,368.00	-4,136.51	1,615.17	0.00	0.00	0.00	0.00	BHL - GOLDENEYE

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOLDENEYE FED 21-13HN
<b>Company:</b>	MALLARD EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4952.00usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4952.00usft (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 21-13HN	<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: 559ft FNL &amp; 2252ft FWL of Sec 21</b>										
0.00	0.00	0.00	0.00	4,952.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,852.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,752.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	4,652.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
400.00	0.00	0.00	400.00	4,552.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	2.00	72.57	499.98	4,452.02	0.52	1.67	0.12	2.00	2.00	0.00
<b>Fox Hills Base</b>										
526.04	2.52	72.57	526.00	4,426.00	0.83	2.64	0.19	2.00	2.00	0.00
600.00	4.00	72.57	599.84	4,352.16	2.09	6.66	0.47	2.00	2.00	0.00
700.00	6.00	72.57	699.45	4,252.55	4.70	14.97	1.07	2.00	2.00	0.00
800.00	8.00	72.57	798.70	4,153.30	8.35	26.60	1.90	2.00	2.00	0.00
900.00	10.00	72.57	897.47	4,054.53	13.04	41.52	2.96	2.00	2.00	0.00
1,000.00	12.00	72.57	995.62	3,956.38	18.75	59.73	4.26	2.00	2.00	0.00
1,100.00	14.00	72.57	1,093.06	3,858.94	25.49	81.19	5.79	2.00	2.00	0.00
1,200.00	16.00	72.57	1,189.64	3,762.36	33.24	105.88	7.55	2.00	2.00	0.00
1,300.00	18.00	72.57	1,285.27	3,666.73	42.00	133.78	9.54	2.00	2.00	0.00
1,400.00	20.00	72.57	1,379.82	3,572.18	51.75	164.84	11.75	2.00	2.00	0.00
1,500.00	22.00	72.57	1,473.17	3,478.83	62.48	199.03	14.19	2.00	2.00	0.00
<b>Pierre Shale Top</b>										
1,593.20	23.86	72.57	1,559.00	3,393.00	73.36	233.67	16.66	2.00	2.00	0.00
<b>EOB TO 23.91° INC</b>										
1,595.73	23.91	72.57	1,561.31	3,390.69	73.67	234.65	16.73	2.00	2.00	0.00
1,600.00	23.91	72.57	1,565.22	3,386.78	74.18	236.30	16.84	0.00	0.00	0.00
1,700.00	23.91	72.57	1,656.63	3,295.37	86.33	274.98	19.60	0.00	0.00	0.00
1,800.00	23.91	72.57	1,748.05	3,203.95	98.47	313.65	22.36	0.00	0.00	0.00
1,900.00	23.91	72.57	1,839.46	3,112.54	110.61	352.33	25.12	0.00	0.00	0.00
2,000.00	23.91	72.57	1,930.88	3,021.12	122.75	391.01	27.87	0.00	0.00	0.00
2,100.00	23.91	72.57	2,022.29	2,929.71	134.89	429.68	30.63	0.00	0.00	0.00
2,200.00	23.91	72.57	2,113.71	2,838.29	147.04	468.36	33.39	0.00	0.00	0.00
2,300.00	23.91	72.57	2,205.12	2,746.88	159.18	507.03	36.14	0.00	0.00	0.00
2,400.00	23.91	72.57	2,296.54	2,655.46	171.32	545.71	38.90	0.00	0.00	0.00
2,500.00	23.91	72.57	2,387.95	2,564.05	183.46	584.39	41.66	0.00	0.00	0.00
2,600.00	23.91	72.57	2,479.37	2,472.63	195.60	623.06	44.42	0.00	0.00	0.00
2,700.00	23.91	72.57	2,570.78	2,381.22	207.75	661.74	47.17	0.00	0.00	0.00
2,800.00	23.91	72.57	2,662.20	2,289.80	219.89	700.42	49.93	0.00	0.00	0.00
2,900.00	23.91	72.57	2,753.61	2,198.39	232.03	739.09	52.69	0.00	0.00	0.00
3,000.00	23.91	72.57	2,845.03	2,106.97	244.17	777.77	55.44	0.00	0.00	0.00
3,100.00	23.91	72.57	2,936.44	2,015.56	256.31	816.44	58.20	0.00	0.00	0.00
3,200.00	23.91	72.57	3,027.86	1,924.14	268.46	855.12	60.96	0.00	0.00	0.00
3,300.00	23.91	72.57	3,119.27	1,832.73	280.60	893.80	63.72	0.00	0.00	0.00
3,400.00	23.91	72.57	3,210.69	1,741.31	292.74	932.47	66.47	0.00	0.00	0.00
3,500.00	23.91	72.57	3,302.10	1,649.90	304.88	971.15	69.23	0.00	0.00	0.00
<b>Richard Sandstone</b>										
3,568.80	23.91	72.57	3,365.00	1,587.00	313.24	997.76	71.13	0.00	0.00	0.00
3,600.00	23.91	72.57	3,393.52	1,558.48	317.02	1,009.83	71.99	0.00	0.00	0.00
<b>Parkman Sandstone</b>										
3,690.23	23.91	72.57	3,476.00	1,476.00	327.98	1,044.72	74.47	0.00	0.00	0.00
3,700.00	23.91	72.57	3,484.93	1,467.07	329.17	1,048.50	74.74	0.00	0.00	0.00
3,800.00	23.91	72.57	3,576.35	1,375.65	341.31	1,087.18	77.50	0.00	0.00	0.00
3,900.00	23.91	72.57	3,667.76	1,284.24	353.45	1,125.85	80.26	0.00	0.00	0.00
4,000.00	23.91	72.57	3,759.18	1,192.82	365.59	1,164.53	83.01	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 21-13HN
<b>Company:</b>	MALLARD EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4952.00usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4952.00usft (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 21-13HN	<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	23.91	72.57	3,850.59	1,101.41	377.73	1,203.21	85.77	0.00	0.00	0.00
4,200.00	23.91	72.57	3,942.01	1,009.99	389.88	1,241.88	88.53	0.00	0.00	0.00
4,300.00	23.91	72.57	4,033.42	918.58	402.02	1,280.56	91.29	0.00	0.00	0.00
4,400.00	23.91	72.57	4,124.84	827.16	414.16	1,319.24	94.04	0.00	0.00	0.00
<b>Sussex Sandstone</b>										
<b>4,481.13</b>	<b>23.91</b>	<b>72.57</b>	<b>4,199.00</b>	<b>753.00</b>	<b>424.01</b>	<b>1,350.61</b>	<b>96.28</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,500.00	23.91	72.57	4,216.25	735.75	426.30	1,357.91	96.80	0.00	0.00	0.00
4,600.00	23.91	72.57	4,307.67	644.33	438.44	1,396.59	99.56	0.00	0.00	0.00
4,700.00	23.91	72.57	4,399.08	552.92	450.59	1,435.26	102.31	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>4,794.78</b>	<b>23.91</b>	<b>72.57</b>	<b>4,485.73</b>	<b>466.27</b>	<b>462.09</b>	<b>1,471.92</b>	<b>104.93</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,800.00	23.81	72.57	4,490.50	461.50	462.73	1,473.94	105.07	2.00	-2.00	0.00
4,900.00	21.81	72.57	4,582.68	369.32	474.34	1,510.92	107.71	2.00	-2.00	0.00
<b>Shannon Sandstone</b>										
<b>4,988.14</b>	<b>20.05</b>	<b>72.57</b>	<b>4,665.00</b>	<b>287.00</b>	<b>483.77</b>	<b>1,540.96</b>	<b>109.85</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,000.00	19.81	72.57	4,676.15	275.85	484.98	1,544.82	110.12	2.00	-2.00	0.00
5,100.00	17.81	72.57	4,770.80	181.20	494.64	1,575.58	112.32	2.00	-2.00	0.00
5,200.00	15.81	72.57	4,866.52	85.48	503.30	1,603.17	114.28	2.00	-2.00	0.00
5,300.00	13.81	72.57	4,963.20	-11.20	510.95	1,627.56	116.02	2.00	-2.00	0.00
5,400.00	11.81	72.57	5,060.70	-108.70	517.60	1,648.71	117.53	2.00	-2.00	0.00
5,500.00	9.81	72.57	5,158.92	-206.92	523.21	1,666.60	118.81	2.00	-2.00	0.00
5,600.00	7.81	72.57	5,257.74	-305.74	527.80	1,681.22	119.85	2.00	-2.00	0.00
5,700.00	5.81	72.57	5,357.03	-405.03	531.35	1,692.53	120.65	2.00	-2.00	0.00
5,800.00	3.81	72.57	5,456.67	-504.67	533.86	1,700.53	121.22	2.00	-2.00	0.00
<b>TeePee Buttes</b>										
<b>5,828.38</b>	<b>3.24</b>	<b>72.57</b>	<b>5,485.00</b>	<b>-533.00</b>	<b>534.39</b>	<b>1,702.19</b>	<b>121.34</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,900.00	1.81	72.57	5,556.54	-604.54	535.33	1,705.21	121.56	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>5,990.51</b>	<b>0.00</b>	<b>0.00</b>	<b>5,647.04</b>	<b>-695.04</b>	<b>535.76</b>	<b>1,706.57</b>	<b>121.65</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
6,000.00	0.00	0.00	5,656.53	-704.53	535.76	1,706.57	121.65	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>6,090.51</b>	<b>0.00</b>	<b>0.00</b>	<b>5,747.04</b>	<b>-795.04</b>	<b>535.76</b>	<b>1,706.57</b>	<b>121.65</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,100.00	0.95	181.12	5,756.53	-804.53	535.68	1,706.57	121.73	10.00	10.00	0.00
6,200.00	10.95	181.12	5,855.86	-903.86	525.33	1,706.37	131.29	10.00	10.00	0.00
6,300.00	20.95	181.12	5,951.89	-999.89	497.89	1,705.83	156.66	10.00	10.00	0.00
6,400.00	30.95	181.12	6,041.70	-1,089.70	454.20	1,704.98	197.05	10.00	10.00	0.00
6,500.00	40.95	181.12	6,122.55	-1,170.55	395.58	1,703.83	251.23	10.00	10.00	0.00
<b>Sharon Springs</b>										
<b>6,523.53</b>	<b>43.30</b>	<b>181.12</b>	<b>6,140.00</b>	<b>-1,188.00</b>	<b>379.80</b>	<b>1,703.52</b>	<b>265.82</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>Niobrara Top</b>										
<b>6,584.40</b>	<b>49.39</b>	<b>181.12</b>	<b>6,182.00</b>	<b>-1,230.00</b>	<b>335.79</b>	<b>1,702.66</b>	<b>306.51</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,600.00	50.95	181.12	6,191.99	-1,239.99	323.81	1,702.43	317.58	10.00	10.00	0.00
<b>Niobrara A Chalk</b>										
<b>6,629.54</b>	<b>53.90</b>	<b>181.12</b>	<b>6,210.00</b>	<b>-1,258.00</b>	<b>300.41</b>	<b>1,701.97</b>	<b>339.21</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>Niobrara A Chalk Base</b>										
<b>6,682.14</b>	<b>59.16</b>	<b>181.12</b>	<b>6,239.00</b>	<b>-1,287.00</b>	<b>256.55</b>	<b>1,701.11</b>	<b>379.75</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,700.00	60.95	181.12	6,247.91	-1,295.91	241.08	1,700.81	394.05	10.00	10.00	0.00
<b>Niobrara B1 Chalk Top</b>										
<b>6,761.92</b>	<b>67.14</b>	<b>181.12</b>	<b>6,275.00</b>	<b>-1,323.00</b>	<b>185.45</b>	<b>1,699.72</b>	<b>445.48</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>Niobrara B1 Chalk Base</b>										
<b>6,798.12</b>	<b>70.76</b>	<b>181.12</b>	<b>6,288.00</b>	<b>-1,336.00</b>	<b>151.67</b>	<b>1,699.06</b>	<b>476.70</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,800.00	70.95	181.12	6,288.62	-1,336.62	149.90	1,699.02	478.34	10.00	10.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOLDENEYE FED 21-13HN
<b>Company:</b>	MALLARD EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4952.00usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4952.00usft (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 21-13HN	<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)
6,900.00	80.95	181.12	6,312.87	-1,360.87	53.03	1,697.13	567.89	10.00	10.00	0.00
<b>HZ LP: 600ft FNL &amp; 1345ft FEL of Sec 21 - Niobrara B2 Chalk Top (Target)</b>										
<b>6,990.52</b>	<b>90.00</b>	<b>181.12</b>	<b>6,320.00</b>	<b>-1,368.00</b>	<b>-37.09</b>	<b>1,695.37</b>	<b>651.20</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,000.00	90.00	181.12	6,320.00	-1,368.00	-46.57	1,695.18	659.96	0.00	0.00	0.00
7,100.00	90.00	181.12	6,320.00	-1,368.00	-146.56	1,693.23	752.38	0.00	0.00	0.00
7,200.00	90.00	181.12	6,320.00	-1,368.00	-246.54	1,691.27	844.80	0.00	0.00	0.00
7,300.00	90.00	181.12	6,320.00	-1,368.00	-346.52	1,689.32	937.23	0.00	0.00	0.00
7,400.00	90.00	181.12	6,320.00	-1,368.00	-446.50	1,687.36	1,029.65	0.00	0.00	0.00
7,500.00	90.00	181.12	6,320.00	-1,368.00	-546.48	1,685.41	1,122.07	0.00	0.00	0.00
7,600.00	90.00	181.12	6,320.00	-1,368.00	-646.46	1,683.45	1,214.49	0.00	0.00	0.00
7,700.00	90.00	181.12	6,319.99	-1,367.99	-746.44	1,681.50	1,306.91	0.00	0.00	0.00
7,800.00	90.00	181.12	6,319.99	-1,367.99	-846.42	1,679.54	1,399.34	0.00	0.00	0.00
7,900.00	90.00	181.12	6,319.99	-1,367.99	-946.40	1,677.59	1,491.76	0.00	0.00	0.00
8,000.00	90.00	181.12	6,319.99	-1,367.99	-1,046.38	1,675.63	1,584.18	0.00	0.00	0.00
8,100.00	90.00	181.12	6,319.99	-1,367.99	-1,146.36	1,673.68	1,676.60	0.00	0.00	0.00
8,200.00	90.00	181.12	6,319.99	-1,367.99	-1,246.35	1,671.72	1,769.02	0.00	0.00	0.00
8,300.00	90.00	181.12	6,319.99	-1,367.99	-1,346.33	1,669.77	1,861.44	0.00	0.00	0.00
8,400.00	90.00	181.12	6,319.99	-1,367.99	-1,446.31	1,667.81	1,953.87	0.00	0.00	0.00
8,500.00	90.00	181.12	6,319.99	-1,367.99	-1,546.29	1,665.85	2,046.29	0.00	0.00	0.00
8,600.00	90.00	181.12	6,319.99	-1,367.99	-1,646.27	1,663.90	2,138.71	0.00	0.00	0.00
8,700.00	90.00	181.12	6,319.99	-1,367.99	-1,746.25	1,661.94	2,231.13	0.00	0.00	0.00
8,800.00	90.00	181.12	6,319.99	-1,367.99	-1,846.23	1,659.99	2,323.55	0.00	0.00	0.00
8,900.00	90.00	181.12	6,319.98	-1,367.98	-1,946.21	1,658.03	2,415.98	0.00	0.00	0.00
9,000.00	90.00	181.12	6,319.98	-1,367.98	-2,046.19	1,656.08	2,508.40	0.00	0.00	0.00
9,100.00	90.00	181.12	6,319.98	-1,367.98	-2,146.17	1,654.12	2,600.82	0.00	0.00	0.00
9,200.00	90.00	181.12	6,319.98	-1,367.98	-2,246.15	1,652.17	2,693.24	0.00	0.00	0.00
9,300.00	90.00	181.12	6,319.98	-1,367.98	-2,346.14	1,650.21	2,785.66	0.00	0.00	0.00
9,400.00	90.00	181.12	6,319.98	-1,367.98	-2,446.12	1,648.26	2,878.08	0.00	0.00	0.00
9,500.00	90.00	181.12	6,319.98	-1,367.98	-2,546.10	1,646.30	2,970.51	0.00	0.00	0.00
9,600.00	90.00	181.12	6,319.98	-1,367.98	-2,646.08	1,644.35	3,062.93	0.00	0.00	0.00
9,700.00	90.00	181.12	6,319.98	-1,367.98	-2,746.06	1,642.39	3,155.35	0.00	0.00	0.00
9,800.00	90.00	181.12	6,319.98	-1,367.98	-2,846.04	1,640.44	3,247.77	0.00	0.00	0.00
9,900.00	90.00	181.12	6,319.98	-1,367.98	-2,946.02	1,638.48	3,340.19	0.00	0.00	0.00
10,000.00	90.00	181.12	6,319.98	-1,367.98	-3,046.00	1,636.53	3,432.61	0.00	0.00	0.00
10,100.00	90.00	181.12	6,319.98	-1,367.98	-3,145.98	1,634.57	3,525.04	0.00	0.00	0.00
10,200.00	90.00	181.12	6,319.97	-1,367.97	-3,245.96	1,632.62	3,617.46	0.00	0.00	0.00
10,300.00	90.00	181.12	6,319.97	-1,367.97	-3,345.94	1,630.66	3,709.88	0.00	0.00	0.00
10,400.00	90.00	181.12	6,319.97	-1,367.97	-3,445.92	1,628.71	3,802.30	0.00	0.00	0.00
10,500.00	90.00	181.12	6,319.97	-1,367.97	-3,545.91	1,626.75	3,894.72	0.00	0.00	0.00
10,600.00	90.00	181.12	6,319.97	-1,367.97	-3,645.89	1,624.80	3,987.15	0.00	0.00	0.00
10,700.00	90.00	181.12	6,319.97	-1,367.97	-3,745.87	1,622.84	4,079.57	0.00	0.00	0.00
10,800.00	90.00	181.12	6,319.97	-1,367.97	-3,845.85	1,620.89	4,171.99	0.00	0.00	0.00
10,900.00	90.00	181.12	6,319.97	-1,367.97	-3,945.83	1,618.93	4,264.41	0.00	0.00	0.00
11,000.00	90.00	181.12	6,319.97	-1,367.97	-4,045.81	1,616.98	4,356.83	0.00	0.00	0.00
<b>BHL: 600ft FSL &amp; 1345ft FEL of Sec 21</b>										
<b>11,090.71</b>	<b>90.00</b>	<b>181.12</b>	<b>6,320.00</b>	<b>-1,368.00</b>	<b>-4,136.51</b>	<b>1,615.17</b>	<b>4,440.66</b>	<b>0.00</b>	<b>0.00</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 21-13HN
<b>Company:</b>	MALLARD EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4952.00usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4952.00usft (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 21-13HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
526.04	526.00	Fox Hills Base			
1,593.20	1,559.00	Pierre Shale Top			
3,568.80	3,365.00	Richard Sandstone			
3,690.23	3,476.00	Parkman Sandstone			
4,481.13	4,199.00	Sussex Sandstone			
4,988.14	4,665.00	Shannon Sandstone			
5,828.38	5,485.00	TeePee Buttes			
6,523.53	6,140.00	Sharon Springs			
6,584.40	6,182.00	Niobrara Top			
6,629.54	6,210.00	Niobrara A Chalk			
6,682.14	6,239.00	Niobrara A Chalk Base			
6,761.92	6,275.00	Niobrara B1 Chalk Top			
6,798.12	6,288.00	Niobrara B1 Chalk Base			
6,990.52	6,320.00	Niobrara B2 Chalk Top (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: 559ft FNL & 2252ft FWL of Sec 21
400.00	400.00	0.00	0.00	START NUDGE (2°/100ft BUR)
1,595.73	1,561.31	73.67	234.65	EOB TO 23.91° INC
4,794.78	4,485.73	462.09	1,471.92	END OF TANGENT
5,990.51	5,647.04	535.76	1,706.57	EOD TO VERTICAL
6,090.51	5,747.04	535.76	1,706.57	KOP (10°/100ft BUR)
6,990.52	6,320.00	-37.09	1,695.37	HZ LP: 600ft FNL & 1345ft FEL of Sec 21
11,090.71	6,320.00	-4,136.51	1,615.17	BHL: 600ft FSL & 1345ft FEL of Sec 21