BISON EXPLORATION

ARAPAHOE COUNTY, COLORADO (NAD 83)
SW NW SEC. 2 T5S R64W 6th P.M.
DALTON 5-64 2-4

ORIGINAL WELLBORE

27 April, 2017

Plan: PROPOSAL #1

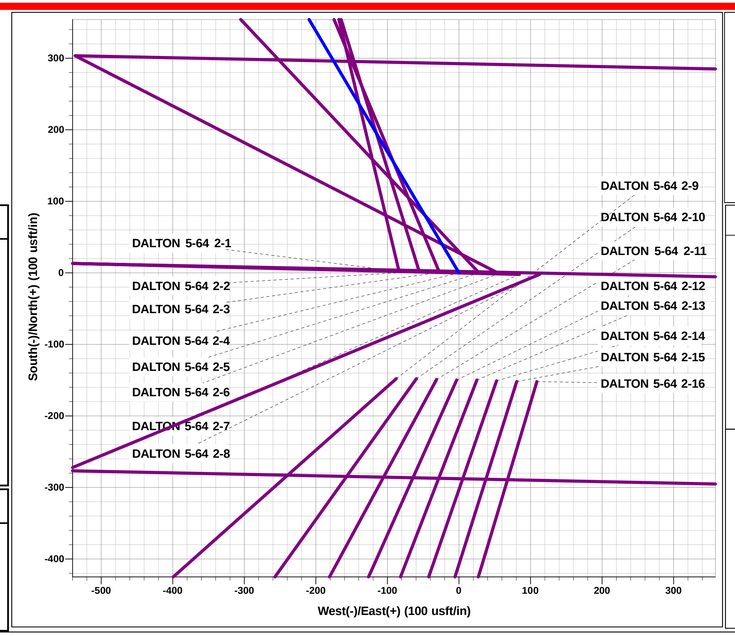
Project: ARAPAHOE COUNTY, COLORADO (NAD 83)
Site: SW NW SEC. 2 T5S R64W 6th P.M.
Well: DALTON 5-64 2-4
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

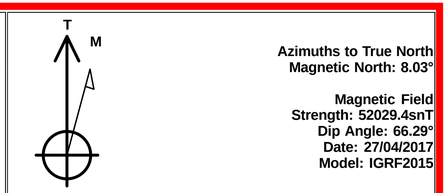
ANNOTATIONS

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: 2202ft FNL & 559ft FWL of Sec 2
400.0	400.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
995.4	999.8	12.00	329.41	53.8	-31.8	-21.6	62.6	EOB TO 12° INC
5236.6	5335.6	12.00	329.41	829.6	-490.5	-332.9	963.7	END OF TANGENT
5832.0	5935.4	0.00	0.00	883.4	-522.3	-354.5	1026.3	EOD TO VERTICAL
7084.0	7187.4	0.00	0.00	883.4	-522.3	-354.5	1026.3	KOP (10°/100ft BUR)
7642.5	7958.4	77.10	91.18	874.2	-77.4	81.5	1471.3	BPI: 1330ft FNL & 460ft FWL of Sec 2
7657.0	8087.4	90.00	91.18	871.6	50.5	206.8	1599.2	HZ LP: 1330ft FNL & 587.9ft FWL of Sec 2
7657.0	12316.7	90.00	91.19	784.3	4278.9	4350.2	5828.4	BHL: 1330ft FNL & 460ft FEL of Sec 2

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - DALTON 5-64 2-4	7084.0	883.4	-522.3	39.647992	-104.528586
BHL - DALTON 5-64 2-4	7657.0	784.3	4278.9	39.647719	-104.511536
HZ LP - DALTON 5-64 2-4	7657.0	871.6	50.5	39.647960	-104.526552





Azimuths to True North
Magnetic North: 8.03°

Magnetic Field
Strength: 52029.4snT
Dip Angle: 66.29°
Date: 27/04/2017
Model: IGRF2015

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
136.0	136.0	DENVER
1014.0	1018.8	UPPER ARAPAHOE
1835.0	1858.1	LARAMIE - FOX HILLS
2059.0	2087.1	PIERRE SHALE
5129.0	5225.6	SHANNON SANDSTONE MBR
7479.0	7623.3	SHARON SPRINGS SHALE
7519.0	7681.4	NIOBRARA FM
7522.0	7686.0	NIOBRARA A CHALK
7627.0	7901.3	NIOBRARA B CHALK

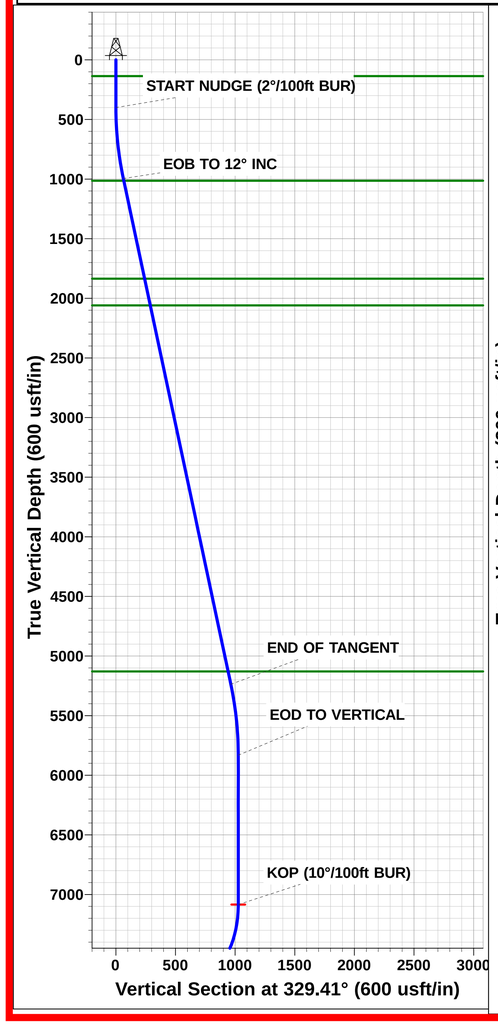
PROPOSED LOCAL COORDINATES:

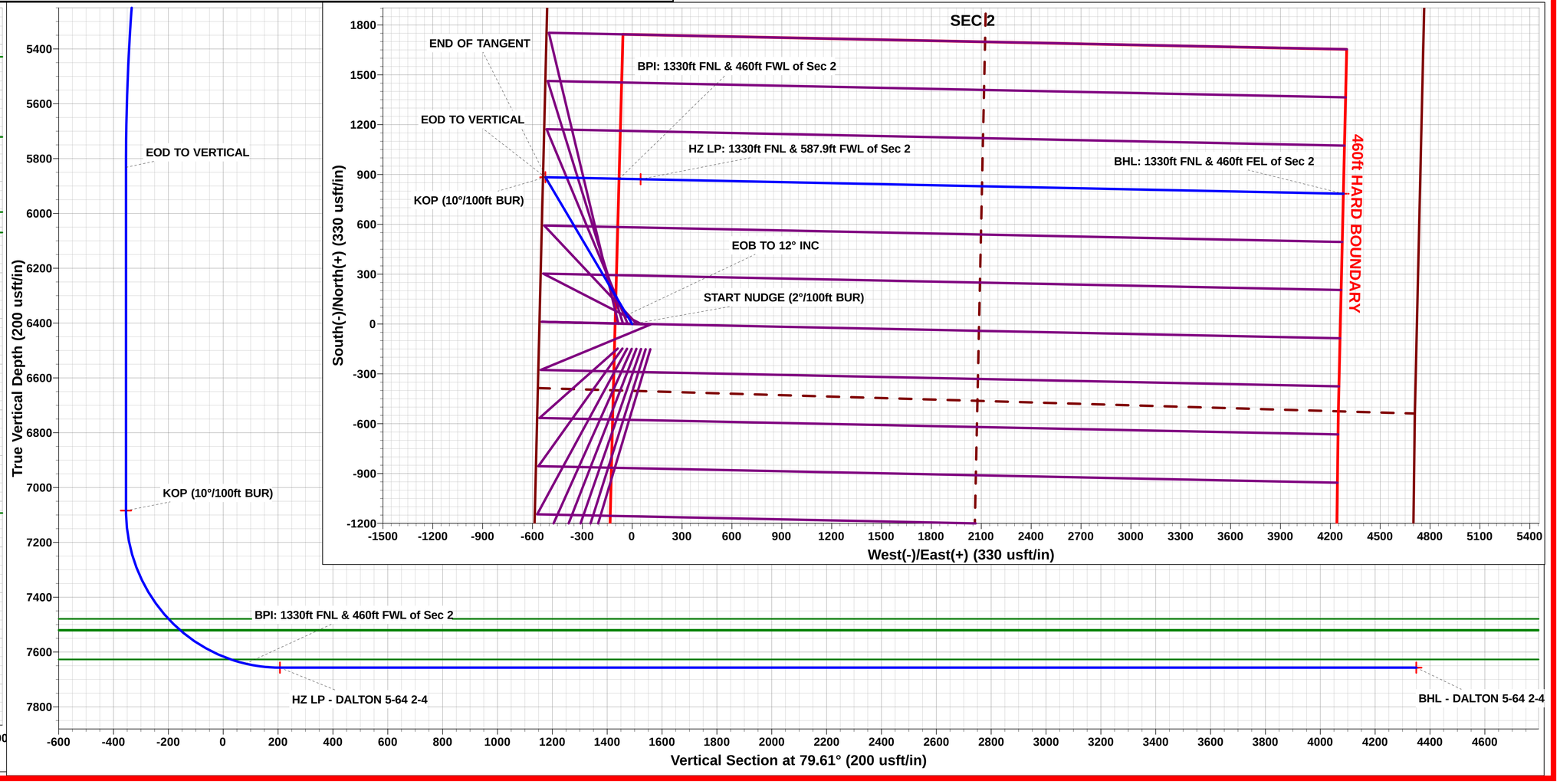
SHL: 2202ft FNL & 559ft FWL of Sec 2

BEGIN PROD INT: 1330ft FNL & 460ft FWL of Sec 2

HZ LP: 1330ft FNL & 587.9ft FWL of Sec 2

BHL: 1330ft FNL & 460ft FEL of Sec 2





Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well DALTON 5-64 2-4
Company:	BISON EXPLORATION	**TVD Reference:**	KB-EST @ 5929.0usft (Original Well Elev)
Project:	ARAPAHOE COUNTY, COLORADO (NAD 83)	**MD Reference:**	KB-EST @ 5929.0usft (Original Well Elev)
Site:	SW NW SEC. 2 T5S R64W 6th P.M.	**North Reference:**	True
Well:	DALTON 5-64 2-4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project ARAPAHOE COUNTY, COLORADO (NAD 83)

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

Site SW NW SEC. 2 T5S R64W 6th P.M.

Site Position:		**Northing:**	1,661,495.36 usft	**Latitude:**	39.645572
From:	Lat/Long	**Easting:**	3,273,984.42 usft	**Longitude:**	-104.527028
Position Uncertainty:	0.0 usft	**Slot Radius:**	1.10000 ft	**Grid Convergence:**	0.61 °

Well DALTON 5-64 2-4

Well Position	**+N/-S**	-1.8 usft	**Northing:**	1,661,494.43 usft	**Latitude:**	39.645567
	+E/-W	83.6 usft	**Easting:**	3,274,068.07 usft	**Longitude:**	-104.526731
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	5,904.0 usft

Wellbore ORIGINAL WELLBORE

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	27/04/2017	8.04	66.29	52,029

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 (°)
	7,657.0	0.0	0.0	79.61

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	-5,929.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	-5,529.0	0.0	0.0	0.00	0.00	0.00	0.00	
999.8	12.00	329.41	995.4	-4,933.6	53.8	-31.8	2.00	2.00	0.00	329.41	
5,335.6	12.00	329.41	5,236.6	-692.4	829.6	-490.5	0.00	0.00	0.00	0.00	
5,935.4	0.00	0.00	5,832.0	-97.0	883.4	-522.3	2.00	-2.00	0.00	180.00	
7,187.4	0.00	0.00	7,084.0	1,155.0	883.4	-522.3	0.00	0.00	0.00	0.00	KOP - DALTON 5-6
8,087.4	90.00	91.18	7,657.0	1,728.0	871.6	50.5	10.00	10.00	0.00	91.18	
12,316.7	90.00	91.19	7,657.0	1,728.0	784.3	4,278.9	0.00	0.00	0.00	99.82	BHL - DALTON 5-6

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Site:	SW NW SEC. 2 T5S R64W 6th P.M.	**North Reference:**	True
Well:	DALTON 5-64 2-4	**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: 2202ft FNL & 559ft FWL of Sec 2										
0.0	***0.00***	***0.00***	***0.0***	***5,929.00***	***0.0***	***0.0***	***0.0***	***0.00***	***0.00***	***0.00***
100.0	0.00	0.00	100.0	5,829.00	0.0	0.0	0.0	0.00	0.00	0.00
DENVER										
136.0	***0.00***	***0.00***	***136.0***	***5,793.00***	***0.0***	***0.0***	***0.0***	***0.00***	***0.00***	***0.00***
200.0	0.00	0.00	200.0	5,729.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	5,629.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
400.0	***0.00***	***0.00***	***400.0***	***5,529.00***	***0.0***	***0.0***	***0.0***	***0.00***	***0.00***	***0.00***
500.0	2.00	329.41	500.0	5,429.02	1.5	-0.9	-0.6	2.00	2.00	0.00
600.0	4.00	329.41	599.8	5,329.16	6.0	-3.6	-2.4	2.00	2.00	0.00
700.0	6.00	329.41	699.5	5,229.55	13.5	-8.0	-5.4	2.00	2.00	0.00
800.0	8.00	329.41	798.7	5,130.30	24.0	-14.2	-9.6	2.00	2.00	0.00
900.0	10.00	329.41	897.5	5,031.53	37.5	-22.2	-15.0	2.00	2.00	0.00
EOB TO 12° INC										
999.8	***12.00***	***329.41***	***995.4***	***4,933.60***	***53.8***	***-31.8***	***-21.6***	***2.00***	***2.00***	***0.00***
1,000.0	12.00	329.41	995.6	4,933.38	53.9	-31.9	-21.6	0.00	0.00	0.00
UPPER ARAPAHOE										
1,018.8	***12.00***	***329.41***	***1,014.0***	***4,915.00***	***57.2***	***-33.8***	***-23.0***	***0.00***	***0.00***	***0.00***
1,100.0	12.00	329.41	1,093.4	4,835.56	71.8	-42.4	-28.8	0.00	0.00	0.00
1,200.0	12.00	329.41	1,191.3	4,737.74	89.7	-53.0	-36.0	0.00	0.00	0.00
1,300.0	12.00	329.41	1,289.1	4,639.93	107.6	-63.6	-43.2	0.00	0.00	0.00
1,400.0	12.00	329.41	1,386.9	4,542.11	125.4	-74.2	-50.3	0.00	0.00	0.00
1,500.0	12.00	329.41	1,484.7	4,444.29	143.3	-84.7	-57.5	0.00	0.00	0.00
1,600.0	12.00	329.41	1,582.5	4,346.48	161.2	-95.3	-64.7	0.00	0.00	0.00
1,700.0	12.00	329.41	1,680.3	4,248.66	179.1	-105.9	-71.9	0.00	0.00	0.00
1,800.0	12.00	329.41	1,778.2	4,150.85	197.0	-116.5	-79.1	0.00	0.00	0.00
LARAMIE - FOX HILLS										
1,858.1	***12.00***	***329.41***	***1,835.0***	***4,094.00***	***207.4***	***-122.6***	***-83.2***	***0.00***	***0.00***	***0.00***
1,900.0	12.00	329.41	1,876.0	4,053.03	214.9	-127.1	-86.2	0.00	0.00	0.00
2,000.0	12.00	329.41	1,973.8	3,955.21	232.8	-137.6	-93.4	0.00	0.00	0.00
PIERRE SHALE (BASE FOX HILLS)										
2,087.1	***12.00***	***329.41***	***2,059.0***	***3,870.00***	***248.4***	***-146.9***	***-99.7***	***0.00***	***0.00***	***0.00***
2,100.0	12.00	329.41	2,071.6	3,857.40	250.7	-148.2	-100.6	0.00	0.00	0.00
2,200.0	12.00	329.41	2,169.4	3,759.58	268.6	-158.8	-107.8	0.00	0.00	0.00
2,300.0	12.00	329.41	2,267.2	3,661.76	286.5	-169.4	-114.9	0.00	0.00	0.00
2,400.0	12.00	329.41	2,365.1	3,563.95	304.4	-179.9	-122.1	0.00	0.00	0.00
2,500.0	12.00	329.41	2,462.9	3,466.13	322.2	-190.5	-129.3	0.00	0.00	0.00
2,600.0	12.00	329.41	2,560.7	3,368.31	340.1	-201.1	-136.5	0.00	0.00	0.00
2,700.0	12.00	329.41	2,658.5	3,270.50	358.0	-211.7	-143.7	0.00	0.00	0.00
2,800.0	12.00	329.41	2,756.3	3,172.68	375.9	-222.3	-150.8	0.00	0.00	0.00
2,900.0	12.00	329.41	2,854.1	3,074.86	393.8	-232.8	-158.0	0.00	0.00	0.00
3,000.0	12.00	329.41	2,952.0	2,977.05	411.7	-243.4	-165.2	0.00	0.00	0.00
3,100.0	12.00	329.41	3,049.8	2,879.23	429.6	-254.0	-172.4	0.00	0.00	0.00
3,200.0	12.00	329.41	3,147.6	2,781.42	447.5	-264.6	-179.6	0.00	0.00	0.00
3,300.0	12.00	329.41	3,245.4	2,683.60	465.4	-275.1	-186.7	0.00	0.00	0.00
3,400.0	12.00	329.41	3,343.2	2,585.78	483.3	-285.7	-193.9	0.00	0.00	0.00
3,500.0	12.00	329.41	3,441.0	2,487.97	501.1	-296.3	-201.1	0.00	0.00	0.00
3,600.0	12.00	329.41	3,538.8	2,390.15	519.0	-306.9	-208.3	0.00	0.00	0.00
3,700.0	12.00	329.41	3,636.7	2,292.33	536.9	-317.5	-215.5	0.00	0.00	0.00
3,800.0	12.00	329.41	3,734.5	2,194.52	554.8	-328.0	-222.6	0.00	0.00	0.00
3,900.0	12.00	329.41	3,832.3	2,096.70	572.7	-338.6	-229.8	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well DALTON 5-64 2-4
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Site:	SW NW SEC. 2 T5S R64W 6th P.M.	**North Reference:**	True
Well:	DALTON 5-64 2-4	**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)
4,000.0	12.00	329.41	3,930.1	1,998.88	590.6	-349.2	-237.0	0.00	0.00	0.00
4,100.0	12.00	329.41	4,027.9	1,901.07	608.5	-359.8	-244.2	0.00	0.00	0.00
4,200.0	12.00	329.41	4,125.7	1,803.25	626.4	-370.3	-251.3	0.00	0.00	0.00
4,300.0	12.00	329.41	4,223.6	1,705.44	644.3	-380.9	-258.5	0.00	0.00	0.00
4,400.0	12.00	329.41	4,321.4	1,607.62	662.2	-391.5	-265.7	0.00	0.00	0.00
4,500.0	12.00	329.41	4,419.2	1,509.80	680.1	-402.1	-272.9	0.00	0.00	0.00
4,600.0	12.00	329.41	4,517.0	1,411.99	697.9	-412.7	-280.1	0.00	0.00	0.00
4,700.0	12.00	329.41	4,614.8	1,314.17	715.8	-423.2	-287.2	0.00	0.00	0.00
4,800.0	12.00	329.41	4,712.6	1,216.35	733.7	-433.8	-294.4	0.00	0.00	0.00
4,900.0	12.00	329.41	4,810.5	1,118.54	751.6	-444.4	-301.6	0.00	0.00	0.00
5,000.0	12.00	329.41	4,908.3	1,020.72	769.5	-455.0	-308.8	0.00	0.00	0.00
5,100.0	12.00	329.41	5,006.1	922.90	787.4	-465.5	-316.0	0.00	0.00	0.00
5,200.0	12.00	329.41	5,103.9	825.09	805.3	-476.1	-323.1	0.00	0.00	0.00
SHANNON SANDSTONE MBR										
5,225.6	***12.00***	***329.41***	***5,129.0***	***800.00***	***809.9***	***-478.8***	***-325.0***	***0.00***	***0.00***	***0.00***
5,300.0	12.00	329.41	5,201.7	727.27	823.2	-486.7	-330.3	0.00	0.00	0.00
END OF TANGENT										
5,335.6	***12.00***	***329.41***	***5,236.6***	***692.40***	***829.6***	***-490.5***	***-332.9***	***0.00***	***0.00***	***0.00***
5,400.0	10.71	329.41	5,299.7	629.31	840.5	-496.9	-337.2	2.00	-2.00	0.00
5,500.0	8.71	329.41	5,398.3	530.75	855.0	-505.5	-343.1	2.00	-2.00	0.00
5,600.0	6.71	329.41	5,497.3	431.66	866.5	-512.3	-347.7	2.00	-2.00	0.00
5,700.0	4.71	329.41	5,596.8	332.16	875.1	-517.4	-351.1	2.00	-2.00	0.00
5,800.0	2.71	329.41	5,696.6	232.37	880.6	-520.7	-353.4	2.00	-2.00	0.00
5,900.0	0.71	329.41	5,796.6	132.42	883.2	-522.2	-354.4	2.00	-2.00	0.00
EOD TO VERTICAL										
5,935.4	***0.00***	***0.00***	***5,832.0***	***97.00***	***883.4***	***-522.3***	***-354.5***	***2.00***	***-2.00***	***0.00***
6,000.0	0.00	0.00	5,896.6	32.42	883.4	-522.3	-354.5	0.00	0.00	0.00
6,100.0	0.00	0.00	5,996.6	-67.58	883.4	-522.3	-354.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,096.6	-167.58	883.4	-522.3	-354.5	0.00	0.00	0.00
6,300.0	0.00	0.00	6,196.6	-267.58	883.4	-522.3	-354.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,296.6	-367.58	883.4	-522.3	-354.5	0.00	0.00	0.00
6,500.0	0.00	0.00	6,396.6	-467.58	883.4	-522.3	-354.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,496.6	-567.58	883.4	-522.3	-354.5	0.00	0.00	0.00
6,700.0	0.00	0.00	6,596.6	-667.58	883.4	-522.3	-354.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,696.6	-767.58	883.4	-522.3	-354.5	0.00	0.00	0.00
6,900.0	0.00	0.00	6,796.6	-867.58	883.4	-522.3	-354.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,896.6	-967.58	883.4	-522.3	-354.5	0.00	0.00	0.00
7,100.0	0.00	0.00	6,996.6	-1,067.58	883.4	-522.3	-354.5	0.00	0.00	0.00
KOP (10°/100ft BUR)										
7,187.4	***0.00***	***0.00***	***7,084.0***	***-1,155.00***	***883.4***	***-522.3***	***-354.5***	***0.00***	***0.00***	***0.00***
7,200.0	1.26	91.18	7,096.6	-1,167.58	883.4	-522.2	-354.3	10.00	10.00	0.00
7,300.0	11.26	91.18	7,195.9	-1,266.86	883.2	-511.3	-343.7	10.00	10.00	0.00
7,400.0	21.26	91.18	7,291.7	-1,362.74	882.6	-483.3	-316.3	10.00	10.00	0.00
7,500.0	31.26	91.18	7,381.3	-1,452.30	881.7	-439.1	-273.0	10.00	10.00	0.00
7,600.0	41.26	91.18	7,461.8	-1,532.84	880.5	-380.1	-215.1	10.00	10.00	0.00
SHARON SPRINGS SHALE										
7,623.3	***43.58***	***91.18***	***7,479.0***	***-1,550.00***	***880.1***	***-364.4***	***-199.8***	***10.00***	***10.00***	***0.00***
NIOBRARA FM										
7,681.4	***49.40***	***91.18***	***7,519.0***	***-1,590.00***	***879.3***	***-322.3***	***-158.5***	***10.00***	***10.00***	***0.00***
NIOBRARA A CHALK										
7,686.0	***49.86***	***91.18***	***7,522.0***	***-1,593.00***	***879.2***	***-318.8***	***-155.0***	***10.00***	***10.00***	***0.00***
7,700.0	51.26	91.18	7,530.9	-1,601.89	879.0	-308.0	-144.4	10.00	10.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well DALTON 5-64 2-4
Company:	BISON EXPLORATION	**TVD Reference:**	KB-EST @ 5929.0usft (Original Well Elev)
Project:	ARAPAHOE COUNTY, COLORADO (NAD 83)	**MD Reference:**	KB-EST @ 5929.0usft (Original Well Elev)
Site:	SW NW SEC. 2 T5S R64W 6th P.M.	**North Reference:**	True
Well:	DALTON 5-64 2-4	**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)
7,800.0	61.26	91.18	7,586.4	-1,657.37	877.3	-224.9	-63.1	10.00	10.00	0.00
7,900.0	71.26	91.18	7,626.6	-1,697.58	875.4	-133.5	26.5	10.00	10.00	0.00
NIOBRARA B CHALK										
7,901.3	***71.39***	***91.18***	***7,627.0***	***-1,698.00***	***875.4***	***-132.3***	***27.7***	***10.00***	***10.00***	***0.00***
BPI: 1330ft FNL & 460ft FWL of Sec 2										
7,958.4	***77.10***	***91.18***	***7,642.5***	***-1,713.49***	***874.2***	***-77.4***	***81.5***	***10.00***	***10.00***	***0.00***
8,000.0	81.26	91.18	7,650.3	-1,721.30	873.4	-36.5	121.5	10.00	10.00	0.00
HZ LP: 1330ft FNL & 587.9ft FWL of Sec 2										
8,087.4	***90.00***	***91.18***	***7,657.0***	***-1,727.96***	***871.6***	***50.5***	***206.8***	***10.00***	***10.00***	***0.00***
8,100.0	90.00	91.18	7,657.0	-1,727.96	871.3	63.1	219.2	0.00	0.00	0.00
8,200.0	90.00	91.18	7,657.0	-1,727.96	869.3	163.1	317.1	0.00	0.00	0.00
8,300.0	90.00	91.18	7,657.0	-1,727.96	867.2	263.1	415.1	0.00	0.00	0.00
8,400.0	90.00	91.18	7,657.0	-1,727.96	865.2	363.0	513.1	0.00	0.00	0.00
8,500.0	90.00	91.18	7,657.0	-1,727.96	863.1	463.0	611.0	0.00	0.00	0.00
8,600.0	90.00	91.18	7,657.0	-1,727.96	861.0	563.0	709.0	0.00	0.00	0.00
8,700.0	90.00	91.18	7,657.0	-1,727.96	859.0	663.0	807.0	0.00	0.00	0.00
8,800.0	90.00	91.18	7,657.0	-1,727.96	856.9	763.0	905.0	0.00	0.00	0.00
8,900.0	90.00	91.18	7,657.0	-1,727.96	854.9	862.9	1,002.9	0.00	0.00	0.00
9,000.0	90.00	91.18	7,657.0	-1,727.96	852.8	962.9	1,100.9	0.00	0.00	0.00
9,100.0	90.00	91.18	7,657.0	-1,727.96	850.7	1,062.9	1,198.9	0.00	0.00	0.00
9,200.0	90.00	91.18	7,657.0	-1,727.96	848.7	1,162.9	1,296.8	0.00	0.00	0.00
9,300.0	90.00	91.18	7,657.0	-1,727.96	846.6	1,262.9	1,394.8	0.00	0.00	0.00
9,400.0	90.00	91.18	7,657.0	-1,727.96	844.5	1,362.8	1,492.8	0.00	0.00	0.00
9,500.0	90.00	91.18	7,657.0	-1,727.96	842.5	1,462.8	1,590.7	0.00	0.00	0.00
9,600.0	90.00	91.18	7,657.0	-1,727.96	840.4	1,562.8	1,688.7	0.00	0.00	0.00
9,700.0	90.00	91.18	7,657.0	-1,727.96	838.4	1,662.8	1,786.7	0.00	0.00	0.00
9,800.0	90.00	91.18	7,657.0	-1,727.96	836.3	1,762.8	1,884.6	0.00	0.00	0.00
9,900.0	90.00	91.18	7,657.0	-1,727.97	834.2	1,862.7	1,982.6	0.00	0.00	0.00
10,000.0	90.00	91.18	7,657.0	-1,727.97	832.2	1,962.7	2,080.6	0.00	0.00	0.00
10,100.0	90.00	91.18	7,657.0	-1,727.97	830.1	2,062.7	2,178.5	0.00	0.00	0.00
10,200.0	90.00	91.18	7,657.0	-1,727.97	828.0	2,162.7	2,276.5	0.00	0.00	0.00
10,300.0	90.00	91.18	7,657.0	-1,727.97	826.0	2,262.6	2,374.5	0.00	0.00	0.00
10,400.0	90.00	91.18	7,657.0	-1,727.97	823.9	2,362.6	2,472.4	0.00	0.00	0.00
10,500.0	90.00	91.18	7,657.0	-1,727.97	821.8	2,462.6	2,570.4	0.00	0.00	0.00
10,600.0	90.00	91.18	7,657.0	-1,727.97	819.8	2,562.6	2,668.4	0.00	0.00	0.00
10,700.0	90.00	91.18	7,657.0	-1,727.97	817.7	2,662.6	2,766.4	0.00	0.00	0.00
10,800.0	90.00	91.18	7,657.0	-1,727.98	815.6	2,762.5	2,864.3	0.00	0.00	0.00
10,900.0	90.00	91.18	7,657.0	-1,727.98	813.6	2,862.5	2,962.3	0.00	0.00	0.00
11,000.0	90.00	91.18	7,657.0	-1,727.98	811.5	2,962.5	3,060.3	0.00	0.00	0.00
11,100.0	90.00	91.18	7,657.0	-1,727.98	809.4	3,062.5	3,158.2	0.00	0.00	0.00
11,200.0	90.00	91.18	7,657.0	-1,727.98	807.4	3,162.5	3,256.2	0.00	0.00	0.00
11,300.0	90.00	91.19	7,657.0	-1,727.98	805.3	3,262.4	3,354.2	0.00	0.00	0.00
11,400.0	90.00	91.19	7,657.0	-1,727.98	803.2	3,362.4	3,452.1	0.00	0.00	0.00
11,500.0	90.00	91.19	7,657.0	-1,727.99	801.2	3,462.4	3,550.1	0.00	0.00	0.00
11,600.0	90.00	91.19	7,657.0	-1,727.99	799.1	3,562.4	3,648.1	0.00	0.00	0.00
11,700.0	90.00	91.19	7,657.0	-1,727.99	797.0	3,662.3	3,746.0	0.00	0.00	0.00
11,800.0	90.00	91.19	7,657.0	-1,727.99	795.0	3,762.3	3,844.0	0.00	0.00	0.00
11,900.0	90.00	91.19	7,657.0	-1,727.99	792.9	3,862.3	3,942.0	0.00	0.00	0.00
12,000.0	90.00	91.19	7,657.0	-1,727.99	790.8	3,962.3	4,039.9	0.00	0.00	0.00
12,100.0	90.00	91.19	7,657.0	-1,728.00	788.7	4,062.3	4,137.9	0.00	0.00	0.00
12,200.0	90.00	91.19	7,657.0	-1,728.00	786.7	4,162.2	4,235.9	0.00	0.00	0.00
12,300.0	90.00	91.19	7,657.0	-1,728.00	784.6	4,262.2	4,333.8	0.00	0.00	0.00
BHL: 1330ft FNL & 460ft FEL of Sec 2										

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well DALTON 5-64 2-4
Company:	BISON EXPLORATION	**TVD Reference:**	KB-EST @ 5929.0usft (Original Well Elev)
Project:	ARAPAHOE COUNTY, COLORADO (NAD 83)	**MD Reference:**	KB-EST @ 5929.0usft (Original Well Elev)
Site:	SW NW SEC. 2 T5S R64W 6th P.M.	**North Reference:**	True
Well:	DALTON 5-64 2-4	**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)
12,316.7	***90.00***	***91.19***	***7,657.0***	***-1,728.00***	***784.3***	***4,278.9***	***4,350.2***	***0.00***	***0.00***	***0.00***

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
136.0	136.0	DENVER			
1,018.8	1,014.0	UPPER ARAPAHOE			
1,858.1	1,835.0	LARAMIE - FOX HILLS			
2,087.1	2,059.0	PIERRE SHALE (BASE FOX HILLS			
5,225.6	5,129.0	SHANNON SANDSTONE MBR			
7,623.3	7,479.0	SHARON SPRINGS SHALE			
7,681.4	7,519.0	NIOBRARA FM			
7,686.0	7,522.0	NIOBRARA A CHALK			
7,901.3	7,627.0	NIOBRARA B CHALK			

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: 2202ft FNL & 559ft FWL of Sec 2
400.0	400.0	0.0	0.0	START NUDGE (2°/100ft BUR)
999.8	995.4	53.8	-31.8	EOB TO 12° INC
5,335.6	5,236.6	829.6	-490.5	END OF TANGENT
5,935.4	5,832.0	883.4	-522.3	EOD TO VERTICAL
7,187.4	7,084.0	883.4	-522.3	KOP (10°/100ft BUR)
7,958.4	7,642.5	874.2	-77.4	BPI: 1330ft FNL & 460ft FWL of Sec 2
8,087.4	7,657.0	871.6	50.5	HZ LP: 1330ft FNL & 587.9ft FWL of Sec 2
12,316.7	7,657.0	784.3	4,278.9	BHL: 1330ft FNL & 460ft FEL of Sec 2