

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_BYDALEK 35-20HZ PAD

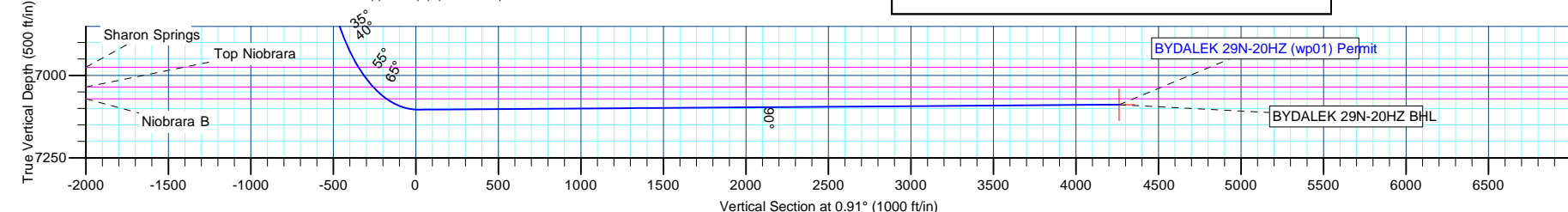
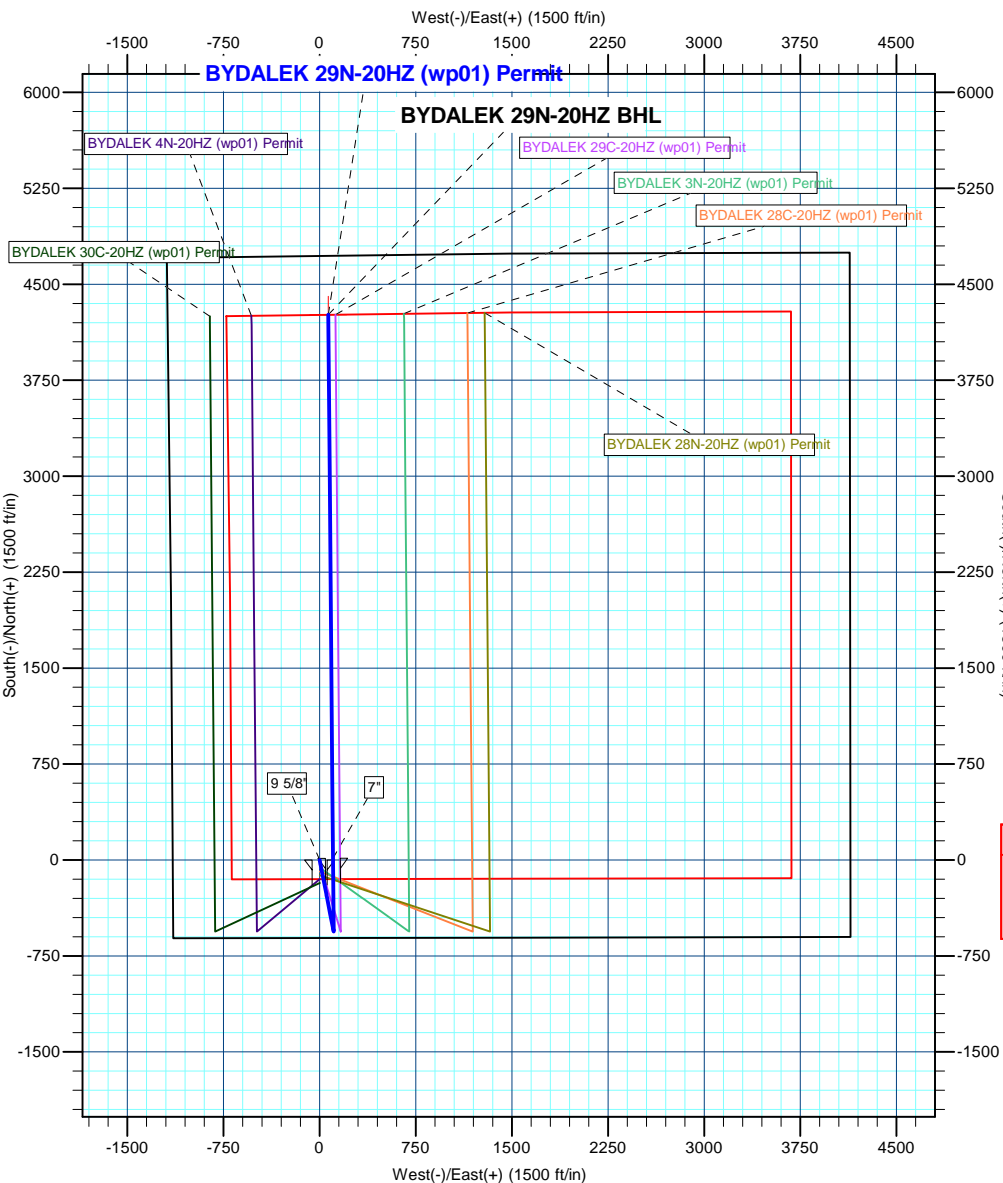
BYDALEK 29N-20HZ

BYDALEK 29N-20HZ

Plan: BYDALEK 29N-20HZ (wp01) Permit

Standard Planning Report

18 September, 2012



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Azimuths to True North

Magnetic North: 8.63°

Magnetic Field

Strength: 52857.5snT

Dip Angle: 66.79°

Date: 9/17/2012

Model: IGRF2010



Project: COLORADO NORTHERN ZONE - 83

Site: WELD BYDALEK 35-20HZ PAD

Well: BYDALEK 29N-20HZ

Wellbore: BYDALEK 29N-20HZ

Section:

SHL:

Design: BYDALEK 29N-20HZ (wp01) Permit

Latitude: 40.118427

Longitude: -104.693213

GL: 4932.00

KB: 17' RKB + 4932' GL @ 4949.00ft

WELL DETAILS: BYDALEK 29N-20HZ						
+N/-S	+E/-W	Northing	Ground Level: Easting	4932.00 Latitude	Longitude	Slot
0.00	0.00	1287013.38	3225628.66	40.118427	-104.693213	

SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1125.00	0.00	0.00	1125.00	0.00	0.00	0.00	0.00	0.00
1496.99	7.44	169.04	1495.94	-23.68	4.59	2.00	169.04	-23.60
5535.04	7.44	169.04	5500.00	-537.00	104.00	0.00	0.00	-535.29
5907.03	0.00	0.00	5870.94	-560.68	108.59	2.00	180.00	-558.89
6567.13	0.00	0.00	6531.04	-560.68	108.59	0.00	0.00	-558.89
7467.13	90.00	359.51	7104.00	12.26	103.69	10.00	359.51	13.90
7610.27	90.21	359.51	7103.75	155.39	102.46	0.14	0.16	156.99
11716.41	90.21	359.51	7089.00	4261.36	67.39	0.00	0.00	4261.89

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
BYDALEK 29N-20HZ BHL	7089.00	4261.36	67.39	40.130125	-104.692972	Point

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4125.00	4148.36	Parkman
4479.00	4505.37	Sussex
6975.00	7075.04	Sharon Springs
7035.00	7183.03	Top Niobrara
7071.00	7271.71	Niobrara B

CASING DETAILS			
TVD	MD	Name	Size
975.00	975.00	9 5/8"	9-5/8
7104.00	7467.13	7"	7

Andarko Petroleum Corporation

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well BYDALEK 29N-20HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4932' GL @ 4949.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4932' GL @ 4949.00ft
Site:	WELD_BYDALEK 35-20HZ PAD	North Reference:	True
Well:	BYDALEK 29N-20HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BYDALEK 29N-20HZ		
Design:	BYDALEK 29N-20HZ (wp01) Permit		

Project	COLORADO NORTHERN ZONE - 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	WELD_BYDALEK 35-20HZ PAD			
Site Position:		Northing:	1,286,833.46 usft	Latitude: 40.117933
From:	Lat/Long	Easting:	3,225,631.42 usft	Longitude: -104.693209
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence: 0.52 °

Well	BYDALEK 29N-20HZ			
Well Position	+N/-S	179.94 ft	Northing:	1,287,013.38 usft
	+E/-W	-1.12 ft	Easting:	3,225,628.66 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Latitude: 40.118427
				Longitude: -104.693213
				Ground Level: 4,932.00 ft

Wellbore	BYDALEK 29N-20HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/17/2012	8.63	66.79	52,857

Design	BYDALEK 29N-20HZ (wp01) Permit			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	0.91

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,125.00	0.00	0.00	1,125.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,496.99	7.44	169.04	1,495.94	-23.68	4.59	2.00	2.00	45.44	169.04	
5,535.04	7.44	169.04	5,500.00	-537.00	104.00	0.00	0.00	0.00	0.00	
5,907.03	0.00	0.00	5,870.94	-560.68	108.59	2.00	-2.00	0.00	180.00	
6,567.13	0.00	0.00	6,531.04	-560.68	108.59	0.00	0.00	0.00	0.00	
7,467.13	90.00	359.51	7,104.00	12.26	103.69	10.00	10.00	0.00	359.51	
7,610.27	90.21	359.51	7,103.75	155.39	102.46	0.14	0.14	0.00	0.16	
11,716.41	90.21	359.51	7,089.00	4,261.36	67.39	0.00	0.00	0.00	0.00	BYDALEK 29N-20HZ

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Site:	WELD_BYDALEK 35-20HZ PAD	North Reference:	True
Well:	BYDALEK 29N-20HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BYDALEK 29N-20HZ		
Design:	BYDALEK 29N-20HZ (wp01) Permit		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
975.00	0.00	0.00	975.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,125.00	0.00	0.00	1,125.00	0.00	0.00	0.00	0.00	0.00	0.00
Start DLS 2.00 TFO 169.04									
1,200.00	1.50	169.04	1,199.99	-0.96	0.19	-0.96	2.00	2.00	0.00
1,300.00	3.50	169.04	1,299.89	-5.25	1.02	-5.23	2.00	2.00	0.00
1,400.00	5.50	169.04	1,399.58	-12.95	2.51	-12.91	2.00	2.00	0.00
1,496.99	7.44	169.04	1,495.94	-23.68	4.59	-23.60	2.00	2.00	0.00
Start 4038.05 hold at 1496.99 MD									
1,500.00	7.44	169.04	1,498.93	-24.06	4.66	-23.98	0.00	0.00	0.00
1,600.00	7.44	169.04	1,598.09	-36.77	7.12	-36.65	0.00	0.00	0.00
1,700.00	7.44	169.04	1,697.25	-49.48	9.58	-49.33	0.00	0.00	0.00
1,800.00	7.44	169.04	1,796.40	-62.20	12.05	-62.00	0.00	0.00	0.00
1,900.00	7.44	169.04	1,895.56	-74.91	14.51	-74.67	0.00	0.00	0.00
2,000.00	7.44	169.04	1,994.72	-87.62	16.97	-87.34	0.00	0.00	0.00
2,100.00	7.44	169.04	2,093.88	-100.33	19.43	-100.01	0.00	0.00	0.00
2,200.00	7.44	169.04	2,193.04	-113.05	21.89	-112.68	0.00	0.00	0.00
2,300.00	7.44	169.04	2,292.20	-125.76	24.36	-125.36	0.00	0.00	0.00
2,400.00	7.44	169.04	2,391.35	-138.47	26.82	-138.03	0.00	0.00	0.00
2,500.00	7.44	169.04	2,490.51	-151.18	29.28	-150.70	0.00	0.00	0.00
2,600.00	7.44	169.04	2,589.67	-163.89	31.74	-163.37	0.00	0.00	0.00
2,700.00	7.44	169.04	2,688.83	-176.61	34.20	-176.04	0.00	0.00	0.00
2,800.00	7.44	169.04	2,787.99	-189.32	36.66	-188.71	0.00	0.00	0.00
2,900.00	7.44	169.04	2,887.14	-202.03	39.13	-201.39	0.00	0.00	0.00
3,000.00	7.44	169.04	2,986.30	-214.74	41.59	-214.06	0.00	0.00	0.00
3,100.00	7.44	169.04	3,085.46	-227.45	44.05	-226.73	0.00	0.00	0.00
3,200.00	7.44	169.04	3,184.62	-240.17	46.51	-239.40	0.00	0.00	0.00
3,300.00	7.44	169.04	3,283.78	-252.88	48.97	-252.07	0.00	0.00	0.00
3,400.00	7.44	169.04	3,382.94	-265.59	51.44	-264.74	0.00	0.00	0.00
3,500.00	7.44	169.04	3,482.09	-278.30	53.90	-277.42	0.00	0.00	0.00
3,600.00	7.44	169.04	3,581.25	-291.02	56.36	-290.09	0.00	0.00	0.00
3,700.00	7.44	169.04	3,680.41	-303.73	58.82	-302.76	0.00	0.00	0.00
3,800.00	7.44	169.04	3,779.57	-316.44	61.28	-315.43	0.00	0.00	0.00
3,900.00	7.44	169.04	3,878.73	-329.15	63.75	-328.10	0.00	0.00	0.00
4,000.00	7.44	169.04	3,977.88	-341.86	66.21	-340.77	0.00	0.00	0.00
4,100.00	7.44	169.04	4,077.04	-354.58	68.67	-353.45	0.00	0.00	0.00
4,148.36	7.44	169.04	4,125.00	-360.72	69.86	-359.57	0.00	0.00	0.00
Parkman									
4,200.00	7.44	169.04	4,176.20	-367.29	71.13	-366.12	0.00	0.00	0.00
4,300.00	7.44	169.04	4,275.36	-380.00	73.59	-378.79	0.00	0.00	0.00
4,400.00	7.44	169.04	4,374.52	-392.71	76.06	-391.46	0.00	0.00	0.00
4,500.00	7.44	169.04	4,473.68	-405.42	78.52	-404.13	0.00	0.00	0.00

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Planning Report

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4932' GL @ 4949.00ft
Site:	WELD_BYDALEK 35-20HZ PAD	North Reference:	True
Well:	BYDALEK 29N-20HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BYDALEK 29N-20HZ		
Design:	BYDALEK 29N-20HZ (wp01) Permit		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,505.37	7.44	169.04	4,479.00	-406.11	78.65	-404.81	0.00	0.00	0.00
Sussex									
4,600.00	7.44	169.04	4,572.83	-418.14	80.98	-416.80	0.00	0.00	0.00
4,700.00	7.44	169.04	4,671.99	-430.85	83.44	-429.48	0.00	0.00	0.00
4,800.00	7.44	169.04	4,771.15	-443.56	85.90	-442.15	0.00	0.00	0.00
4,900.00	7.44	169.04	4,870.31	-456.27	88.37	-454.82	0.00	0.00	0.00
5,000.00	7.44	169.04	4,969.47	-468.99	90.83	-467.49	0.00	0.00	0.00
5,100.00	7.44	169.04	5,068.62	-481.70	93.29	-480.16	0.00	0.00	0.00
5,200.00	7.44	169.04	5,167.78	-494.41	95.75	-492.83	0.00	0.00	0.00
5,300.00	7.44	169.04	5,266.94	-507.12	98.21	-505.51	0.00	0.00	0.00
5,400.00	7.44	169.04	5,366.10	-519.83	100.68	-518.18	0.00	0.00	0.00
5,500.00	7.44	169.04	5,465.26	-532.55	103.14	-530.85	0.00	0.00	0.00
5,535.04	7.44	169.04	5,500.00	-537.00	104.00	-535.29	0.00	0.00	0.00
Start Drop -2.00									
5,600.00	6.14	169.04	5,564.50	-544.54	105.46	-542.80	2.00	-2.00	0.00
5,700.00	4.14	169.04	5,664.10	-553.34	107.16	-551.57	2.00	-2.00	0.00
5,800.00	2.14	169.04	5,763.94	-558.71	108.21	-556.93	2.00	-2.00	0.00
5,907.03	0.00	0.00	5,870.94	-560.68	108.59	-558.89	2.00	-2.00	0.00
Start 660.10 hold at 5907.03 MD									
6,000.00	0.00	0.00	5,963.92	-560.68	108.59	-558.89	0.00	0.00	0.00
6,100.00	0.00	0.00	6,063.92	-560.68	108.59	-558.89	0.00	0.00	0.00
6,200.00	0.00	0.00	6,163.92	-560.68	108.59	-558.89	0.00	0.00	0.00
6,300.00	0.00	0.00	6,263.92	-560.68	108.59	-558.89	0.00	0.00	0.00
6,400.00	0.00	0.00	6,363.92	-560.68	108.59	-558.89	0.00	0.00	0.00
6,500.00	0.00	0.00	6,463.92	-560.68	108.59	-558.89	0.00	0.00	0.00
6,567.13	0.00	0.00	6,531.04	-560.68	108.59	-558.89	0.00	0.00	0.00
Start Build 10.00									
6,600.00	3.29	359.51	6,563.90	-559.73	108.58	-557.95	10.00	10.00	0.00
6,650.00	8.29	359.51	6,613.63	-554.69	108.53	-552.91	10.00	10.00	0.00
6,700.00	13.29	359.51	6,662.73	-545.34	108.45	-543.56	10.00	10.00	0.00
6,750.00	18.29	359.51	6,710.83	-531.74	108.34	-529.96	10.00	10.00	0.00
6,800.00	23.29	359.51	6,757.56	-514.00	108.19	-512.23	10.00	10.00	0.00
6,850.00	28.29	359.51	6,802.56	-492.26	108.00	-490.49	10.00	10.00	0.00
6,900.00	33.29	359.51	6,845.51	-466.67	107.78	-464.91	10.00	10.00	0.00
6,950.00	38.29	359.51	6,886.05	-437.45	107.53	-435.69	10.00	10.00	0.00
7,000.00	43.29	359.51	6,923.90	-404.80	107.25	-403.05	10.00	10.00	0.00
7,050.00	48.29	359.51	6,958.75	-368.97	106.95	-367.23	10.00	10.00	0.00
7,075.04	50.79	359.51	6,975.00	-349.92	106.78	-348.19	10.00	10.00	0.00
Sharon Springs									
7,100.00	53.29	359.51	6,990.35	-330.24	106.61	-328.52	10.00	10.00	0.00
7,150.00	58.29	359.51	7,018.46	-288.91	106.26	-287.19	10.00	10.00	0.00
7,183.03	61.59	359.51	7,035.00	-260.33	106.02	-258.62	10.00	10.00	0.00
Top Niobrara									
7,200.00	63.29	359.51	7,042.85	-245.29	105.89	-243.58	10.00	10.00	0.00
7,250.00	68.29	359.51	7,063.35	-199.70	105.50	-198.01	10.00	10.00	0.00
7,271.71	70.46	359.51	7,071.00	-179.38	105.32	-177.69	10.00	10.00	0.00
Niobrara B									
7,300.00	73.29	359.51	7,079.80	-152.50	105.09	-150.82	10.00	10.00	0.00
7,350.00	78.29	359.51	7,092.07	-104.05	104.68	-102.38	10.00	10.00	0.00
7,400.00	83.29	359.51	7,100.07	-54.71	104.26	-53.06	10.00	10.00	0.00
7,450.00	88.29	359.51	7,103.75	-4.86	103.83	-3.22	10.00	10.00	0.00
7,467.13	90.00	359.51	7,104.00	12.26	103.69	13.90	10.00	10.00	0.00
Start DLS 0.14 TFO 0.16 - 7"									

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4932' GL @ 4949.00ft
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7,500.00	90.05	359.51	7,103.99	45.13	103.40	46.76	0.14	0.14	0.00
7,600.00	90.19	359.51	7,103.78	145.13	102.55	146.73	0.14	0.14	0.00
7,610.27	90.21	359.51	7,103.75	155.39	102.46	156.99	0.14	0.14	0.00
Start 4106.14 hold at 7610.27 MD									
7,700.00	90.21	359.51	7,103.42	245.12	101.70	246.70	0.00	0.00	0.00
7,800.00	90.21	359.51	7,103.06	345.12	100.84	346.67	0.00	0.00	0.00
7,900.00	90.21	359.51	7,102.71	445.11	99.99	446.64	0.00	0.00	0.00
8,000.00	90.21	359.51	7,102.35	545.11	99.13	546.61	0.00	0.00	0.00
8,100.00	90.21	359.51	7,101.99	645.11	98.28	646.58	0.00	0.00	0.00
8,200.00	90.21	359.51	7,101.63	745.10	97.42	746.55	0.00	0.00	0.00
8,300.00	90.21	359.51	7,101.27	845.10	96.57	846.52	0.00	0.00	0.00
8,400.00	90.21	359.51	7,100.91	945.09	95.72	946.49	0.00	0.00	0.00
8,500.00	90.21	359.51	7,100.55	1,045.09	94.86	1,046.46	0.00	0.00	0.00
8,600.00	90.21	359.51	7,100.19	1,145.08	94.01	1,146.43	0.00	0.00	0.00
8,700.00	90.21	359.51	7,099.83	1,245.08	93.15	1,246.40	0.00	0.00	0.00
8,800.00	90.21	359.51	7,099.47	1,345.08	92.30	1,346.37	0.00	0.00	0.00
8,900.00	90.21	359.51	7,099.11	1,445.07	91.45	1,446.34	0.00	0.00	0.00
9,000.00	90.21	359.51	7,098.76	1,545.07	90.59	1,546.31	0.00	0.00	0.00
9,100.00	90.21	359.51	7,098.40	1,645.06	89.74	1,646.28	0.00	0.00	0.00
9,200.00	90.21	359.51	7,098.04	1,745.06	88.88	1,746.25	0.00	0.00	0.00
9,300.00	90.21	359.51	7,097.68	1,845.05	88.03	1,846.22	0.00	0.00	0.00
9,400.00	90.21	359.51	7,097.32	1,945.05	87.17	1,946.19	0.00	0.00	0.00
9,500.00	90.21	359.51	7,096.96	2,045.05	86.32	2,046.16	0.00	0.00	0.00
9,600.00	90.21	359.51	7,096.60	2,145.04	85.47	2,146.12	0.00	0.00	0.00
9,700.00	90.21	359.51	7,096.24	2,245.04	84.61	2,246.09	0.00	0.00	0.00
9,800.00	90.21	359.51	7,095.88	2,345.03	83.76	2,346.06	0.00	0.00	0.00
9,900.00	90.21	359.51	7,095.52	2,445.03	82.90	2,446.03	0.00	0.00	0.00
10,000.00	90.21	359.51	7,095.16	2,545.02	82.05	2,546.00	0.00	0.00	0.00
10,100.00	90.21	359.51	7,094.80	2,645.02	81.20	2,645.97	0.00	0.00	0.00
10,200.00	90.21	359.51	7,094.45	2,745.02	80.34	2,745.94	0.00	0.00	0.00
10,300.00	90.21	359.51	7,094.09	2,845.01	79.49	2,845.91	0.00	0.00	0.00
10,400.00	90.21	359.51	7,093.73	2,945.01	78.63	2,945.88	0.00	0.00	0.00
10,500.00	90.21	359.51	7,093.37	3,045.00	77.78	3,045.85	0.00	0.00	0.00
10,600.00	90.21	359.51	7,093.01	3,145.00	76.92	3,145.82	0.00	0.00	0.00
10,700.00	90.21	359.51	7,092.65	3,244.99	76.07	3,245.79	0.00	0.00	0.00
10,800.00	90.21	359.51	7,092.29	3,344.99	75.22	3,345.76	0.00	0.00	0.00
10,900.00	90.21	359.51	7,091.93	3,444.99	74.36	3,445.73	0.00	0.00	0.00
11,000.00	90.21	359.51	7,091.57	3,544.98	73.51	3,545.70	0.00	0.00	0.00
11,100.00	90.21	359.51	7,091.21	3,644.98	72.65	3,645.67	0.00	0.00	0.00
11,200.00	90.21	359.51	7,090.85	3,744.97	71.80	3,745.64	0.00	0.00	0.00
11,300.00	90.21	359.51	7,090.50	3,844.97	70.95	3,845.61	0.00	0.00	0.00
11,400.00	90.21	359.51	7,090.14	3,944.96	70.09	3,945.58	0.00	0.00	0.00
11,500.00	90.21	359.51	7,089.78	4,044.96	69.24	4,045.55	0.00	0.00	0.00
11,600.00	90.21	359.51	7,089.42	4,144.96	68.38	4,145.52	0.00	0.00	0.00
11,700.00	90.21	359.51	7,089.06	4,244.95	67.53	4,245.49	0.00	0.00	0.00
11,716.41	90.21	359.51	7,089.00	4,261.36	67.39	4,261.89	0.00	0.00	0.00
TD at 11716.41 - BYDALEK 29N-20HZ BHL									

Andarko Petroleum Corporation

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well BYDALEK 29N-20HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4932' GL @ 4949.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4932' GL @ 4949.00ft
Site:	WELD_BYDALEK 35-20HZ PAD	North Reference:	True
Well:	BYDALEK 29N-20HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BYDALEK 29N-20HZ		
Design:	BYDALEK 29N-20HZ (wp01) Permit		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
BYDALEK 29N-20HZ Bl	0.00	0.00	7,089.00	4,261.36	67.39	1,291,275.17	3,225,657.28	40.130125	-104.692972
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
975.00	975.00	9 5/8"		9-5/8	12-1/4
7,467.13	7,104.00	7"		7	8-3/4

Formations					
Measured Depth	Vertical Depth	Name		Dip	Dip Direction
(ft)	(ft)			(°)	(°)
4,148.36	4,125.00	Parkman			
4,505.37	4,479.00	Sussex			
7,075.04	6,975.00	Sharon Springs			
7,183.03	7,035.00	Top Niobrara			
7,271.71	7,071.00	Niobrara B			

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
(ft)	(ft)	(ft)	(ft)		
1,125.00	1,125.00	0.00	0.00	Start DLS 2.00 TFO 169.04	
1,496.99	1,495.94	-23.68	4.59	Start 4038.05 hold at 1496.99 MD	
5,535.04	5,500.00	-537.00	104.00	Start Drop -2.00	
5,907.03	5,870.94	-560.68	108.59	Start 660.10 hold at 5907.03 MD	
6,567.13	6,531.04	-560.68	108.59	Start Build 10.00	
7,467.13	7,104.00	12.26	103.69	Start DLS 0.14 TFO 0.16	
7,610.27	7,103.75	155.39	102.46	Start 4106.14 hold at 7610.27 MD	
11,716.41	7,089.00	4,261.36	67.39	TD at 11716.41	