

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 19-T2N-65W

Russian Fiddler 35C-18HZ

Plan A Rev 0

Plan: Plan A Rev 0 Permit

Sperry Drilling Services

Proposal Report

28 June, 2012

Well Coordinates: 1,286,629.12 N, 3,220,574.38 E (40° 07' 02.99" N, 104° 42' 40.67" W)

Ground Level: 5,000.00 ft

Local Coordinate Origin: Centered on Well Russian Fiddler 35C-18HZ

Viewing Datum: RKB=17ft @ 5017.00ft (Drilling Rig)

TVDs to System: N

North Reference: True

Unit System: API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 431

HALLIBURTON

Project: Weld County, CO (NAD 83)
 Site: Sec. 19-T2N-65W
 Well: Russian Fiddler 35C-18HZ
 Wellbore: Plan A Rev 0
 Design: Plan A Rev 0 Permit

Anadarko Petroleum Corp.



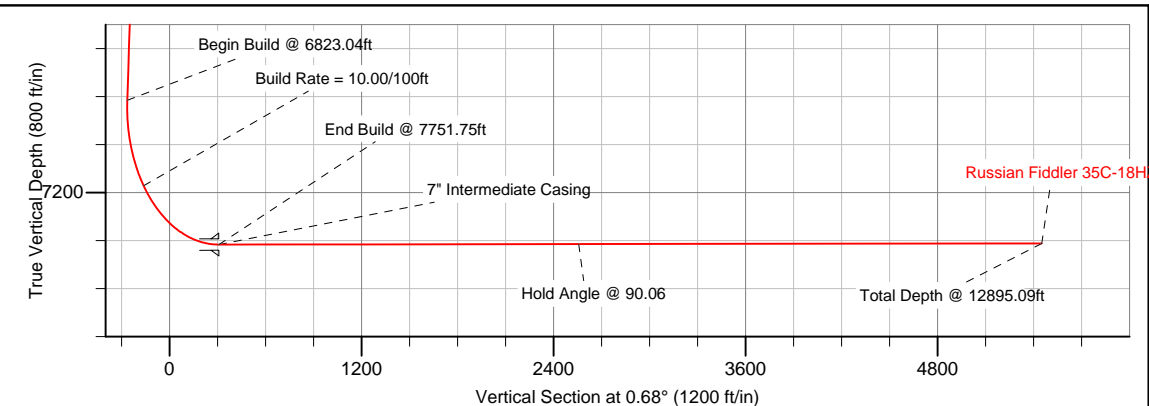
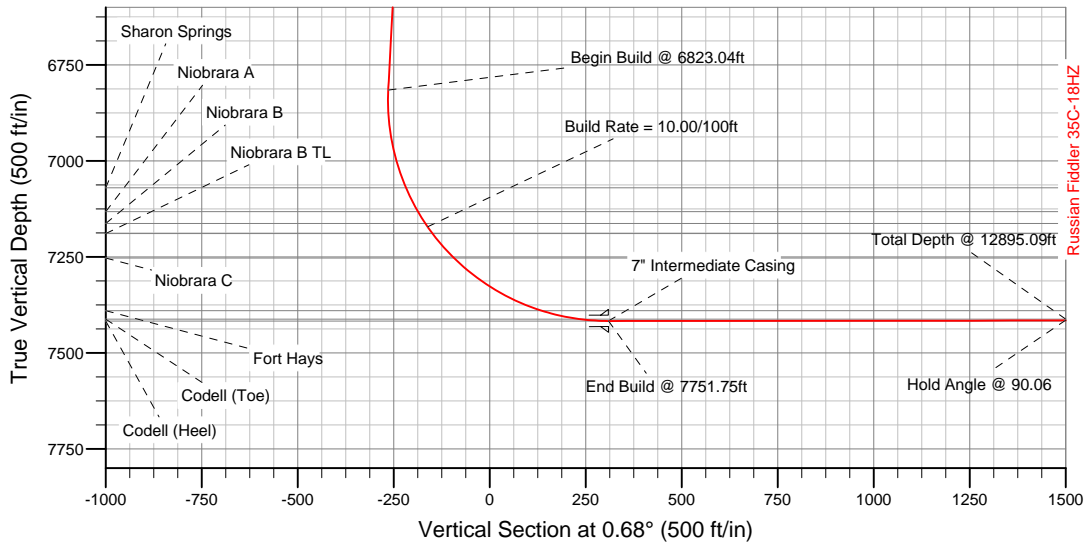
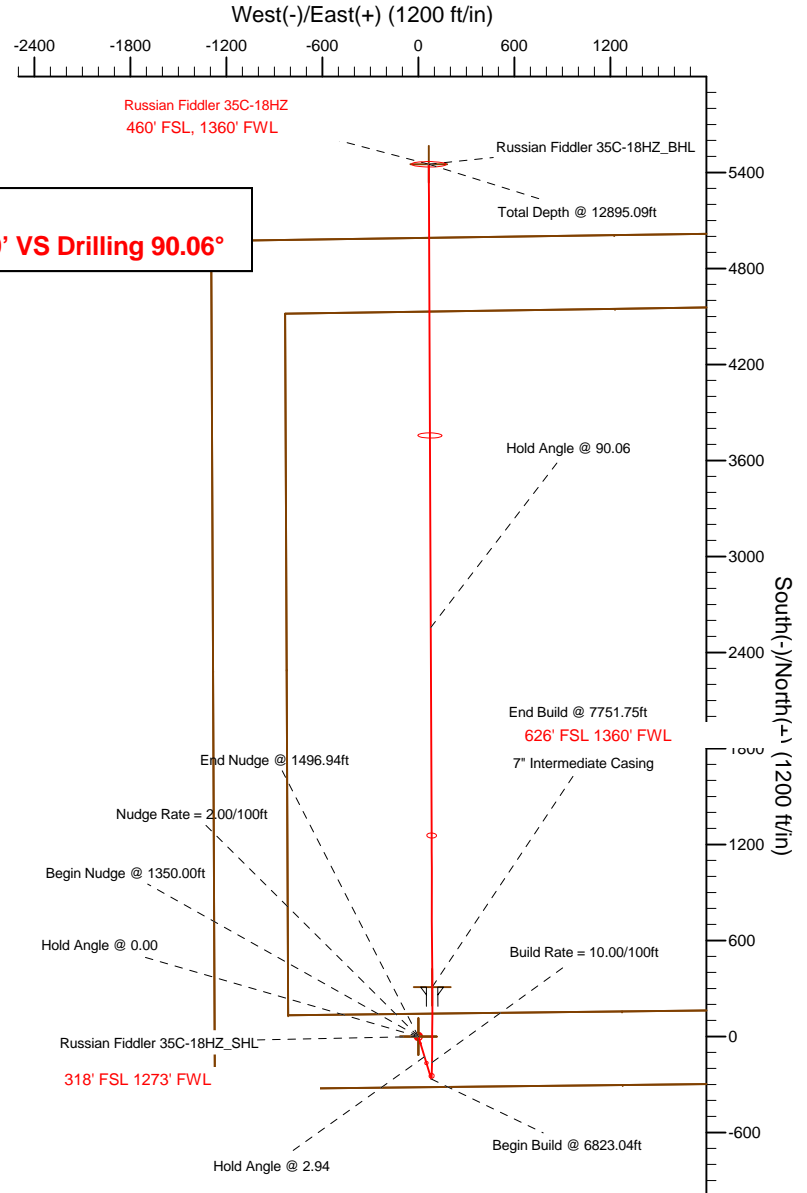
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1350.00	0.00	0.00	1350.00	0.00	0.00	0.00	0.00	0.00	
3	1496.94	2.94	163.08	1496.88	-3.60	1.10	2.00	163.08	-3.59	
4	6823.04	2.94	163.08	6815.97	-264.86	80.57	0.00	0.00	-263.87	
5	7751.75	90.06	359.76	7417.00	308.00	87.00	10.00	-163.30	309.02	Russian Fiddler 35C-18HZ_Casing Point
6	12895.09	90.06	359.76	7412.00	5451.30	65.15	0.00	0.00	5451.69	Russian Fiddler 35C-18HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Russian Fiddler 35C-18HZ_Section Lines	0.00	0.00	0.00	40.117497	-104.711297	Polygon
Russian Fiddler 35C-18HZ_Setback Lines	0.00	0.00	0.00	40.117497	-104.711297	Polygon
Russian Fiddler 35C-18HZ_SHL	0.00	0.00	0.00	40.117497	-104.711297	Point
Russian Fiddler 35C-18HZ_BHL	7412.00	5451.30	65.15	40.132461	-104.711064	Point
Russian Fiddler 35C-18HZ_Casing Point	7417.00	308.00	87.00	40.118342	-104.710986	Point

Target Line:
7417.71' TVDkb @ 0' VS Drilling 90.06°



WELL DETAILS: Russian Fiddler 35C-18HZ	
Ground Level: 5000.00	RKB=17ft @ 5017.00ft (Drilling Rig)
Plan: Plan A Rev 0 Permit (Russian Fiddler 35C-18HZ/Plan A Rev 0)	
Created By: Fred Hartmann	Date: 06/28/2012
Reviewed: _____	Date: _____

Plan Report for Russian Fiddler 35C-18HZ - Plan A Rev 0 Permit

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Tooface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tie-On to Surface @ 0.00ft - Russian Fiddler 35C-18HZ_SHL - Russian Fiddler 35C-18HZ_Section Lines - Russian Fiddler 35C-18										
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	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	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hold Angle @ 0.00										
800.00	0.00	0.00	800.00	0.00	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	0.00
1,000.00	0.00	0.00	1,000.00	0.00	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	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,350.00	0.00	0.00	1,350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 1350.00ft										
1,400.00	1.00	163.08	1,400.00	-0.42	0.13	-0.42	2.00	2.00	0.00	163.08
Nudge Rate = 2.00/100ft										
1,496.94	2.94	163.08	1,496.88	-3.60	1.10	-3.59	2.00	2.00	0.00	0.00
End Nudge @ 1496.94ft										
1,500.00	2.94	163.08	1,499.93	-3.75	1.14	-3.74	0.00	0.00	0.00	0.00
1,600.00	2.94	163.08	1,599.80	-8.66	2.63	-8.63	0.00	0.00	0.00	0.00
1,700.00	2.94	163.08	1,699.67	-13.56	4.13	-13.51	0.00	0.00	0.00	0.00
1,800.00	2.94	163.08	1,799.54	-18.47	5.62	-18.40	0.00	0.00	0.00	0.00
1,900.00	2.94	163.08	1,899.41	-23.38	7.11	-23.29	0.00	0.00	0.00	0.00
2,000.00	2.94	163.08	1,999.27	-28.28	8.60	-28.18	0.00	0.00	0.00	0.00
2,100.00	2.94	163.08	2,099.14	-33.19	10.10	-33.06	0.00	0.00	0.00	0.00
2,200.00	2.94	163.08	2,199.01	-38.09	11.59	-37.95	0.00	0.00	0.00	0.00
2,300.00	2.94	163.08	2,298.88	-43.00	13.08	-42.84	0.00	0.00	0.00	0.00
2,400.00	2.94	163.08	2,398.75	-47.90	14.57	-47.72	0.00	0.00	0.00	0.00
2,500.00	2.94	163.08	2,498.62	-52.81	16.06	-52.61	0.00	0.00	0.00	0.00
2,600.00	2.94	163.08	2,598.48	-57.71	17.56	-57.50	0.00	0.00	0.00	0.00
2,700.00	2.94	163.08	2,698.35	-62.62	19.05	-62.38	0.00	0.00	0.00	0.00
2,800.00	2.94	163.08	2,798.22	-67.52	20.54	-67.27	0.00	0.00	0.00	0.00
2,900.00	2.94	163.08	2,898.09	-72.43	22.03	-72.16	0.00	0.00	0.00	0.00
3,000.00	2.94	163.08	2,997.96	-77.33	23.52	-77.04	0.00	0.00	0.00	0.00
3,100.00	2.94	163.08	3,097.83	-82.24	25.02	-81.93	0.00	0.00	0.00	0.00
3,200.00	2.94	163.08	3,197.70	-87.14	26.51	-86.82	0.00	0.00	0.00	0.00
3,300.00	2.94	163.08	3,297.56	-92.05	28.00	-91.71	0.00	0.00	0.00	0.00
3,400.00	2.94	163.08	3,397.43	-96.95	29.49	-96.59	0.00	0.00	0.00	0.00
3,500.00	2.94	163.08	3,497.30	-101.86	30.99	-101.48	0.00	0.00	0.00	0.00
3,600.00	2.94	163.08	3,597.17	-106.76	32.48	-106.37	0.00	0.00	0.00	0.00
3,700.00	2.94	163.08	3,697.04	-111.67	33.97	-111.25	0.00	0.00	0.00	0.00
3,800.00	2.94	163.08	3,796.91	-116.57	35.46	-116.14	0.00	0.00	0.00	0.00
3,900.00	2.94	163.08	3,896.78	-121.48	36.95	-121.03	0.00	0.00	0.00	0.00
4,000.00	2.94	163.08	3,996.64	-126.38	38.45	-125.91	0.00	0.00	0.00	0.00
Hold Angle @ 2.94										
4,085.47	2.94	163.08	4,082.00	-130.57	39.72	-130.09	0.00	0.00	0.00	0.00
Parkman										
4,100.00	2.94	163.08	4,096.51	-131.29	39.94	-130.80	0.00	0.00	0.00	0.00
4,200.00	2.94	163.08	4,196.38	-136.19	41.43	-135.69	0.00	0.00	0.00	0.00
4,300.00	2.94	163.08	4,296.25	-141.10	42.92	-140.57	0.00	0.00	0.00	0.00
4,400.00	2.94	163.08	4,396.12	-146.00	44.41	-145.46	0.00	0.00	0.00	0.00
4,500.00	2.94	163.08	4,495.99	-150.91	45.91	-150.35	0.00	0.00	0.00	0.00
4,600.00	2.94	163.08	4,595.85	-155.81	47.40	-155.24	0.00	0.00	0.00	0.00

Plan Report for Russian Fiddler 35C-18HZ - Plan A Rev 0 Permit

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
4,613.16	2.94	163.08	4,609.00	-156.46	47.60	-155.88	0.00	0.00	0.00	0.00
Sussex										
4,700.00	2.94	163.08	4,695.72	-160.72	48.89	-160.12	0.00	0.00	0.00	0.00
4,800.00	2.94	163.08	4,795.59	-165.62	50.38	-165.01	0.00	0.00	0.00	0.00
4,900.00	2.94	163.08	4,895.46	-170.53	51.88	-169.90	0.00	0.00	0.00	0.00
5,000.00	2.94	163.08	4,995.33	-175.43	53.37	-174.78	0.00	0.00	0.00	0.00
5,100.00	2.94	163.08	5,095.20	-180.34	54.86	-179.67	0.00	0.00	0.00	0.00
5,200.00	2.94	163.08	5,195.07	-185.24	56.35	-184.56	0.00	0.00	0.00	0.00
5,300.00	2.94	163.08	5,294.93	-190.15	57.84	-189.44	0.00	0.00	0.00	0.00
5,400.00	2.94	163.08	5,394.80	-195.05	59.34	-194.33	0.00	0.00	0.00	0.00
5,500.00	2.94	163.08	5,494.67	-199.96	60.83	-199.22	0.00	0.00	0.00	0.00
5,600.00	2.94	163.08	5,594.54	-204.86	62.32	-204.10	0.00	0.00	0.00	0.00
5,700.00	2.94	163.08	5,694.41	-209.77	63.81	-208.99	0.00	0.00	0.00	0.00
5,800.00	2.94	163.08	5,794.28	-214.67	65.30	-213.88	0.00	0.00	0.00	0.00
5,900.00	2.94	163.08	5,894.14	-219.58	66.80	-218.77	0.00	0.00	0.00	0.00
6,000.00	2.94	163.08	5,994.01	-224.48	68.29	-223.65	0.00	0.00	0.00	0.00
6,100.00	2.94	163.08	6,093.88	-229.39	69.78	-228.54	0.00	0.00	0.00	0.00
6,200.00	2.94	163.08	6,193.75	-234.30	71.27	-233.43	0.00	0.00	0.00	0.00
6,300.00	2.94	163.08	6,293.62	-239.20	72.77	-238.31	0.00	0.00	0.00	0.00
6,400.00	2.94	163.08	6,393.49	-244.11	74.26	-243.20	0.00	0.00	0.00	0.00
6,500.00	2.94	163.08	6,493.36	-249.01	75.75	-248.09	0.00	0.00	0.00	0.00
6,600.00	2.94	163.08	6,593.22	-253.92	77.24	-252.97	0.00	0.00	0.00	0.00
6,700.00	2.94	163.08	6,693.09	-258.82	78.73	-257.86	0.00	0.00	0.00	0.00
6,800.00	2.94	163.08	6,792.96	-263.73	80.23	-262.75	0.00	0.00	0.00	0.00
6,823.04	2.94	163.08	6,815.97	-264.86	80.57	-263.87	0.00	0.00	0.00	0.00
Begin Build @ 6823.04ft										
6,900.00	4.95	9.54	6,892.85	-263.46	81.70	-262.47	10.00	2.62	-199.50	-163.30
7,000.00	14.90	2.93	6,991.23	-246.32	83.07	-245.31	10.00	9.95	-6.61	-9.82
7,083.41	23.24	1.72	7,070.00	-219.11	84.12	-218.09	10.00	9.99	-1.45	-3.28
Sharon Springs										
7,100.00	24.89	1.58	7,085.14	-212.35	84.31	-211.33	10.00	9.99	-0.89	-2.14
7,152.86	30.18	1.21	7,132.00	-187.93	84.90	-186.90	10.00	9.99	-0.70	-2.01
Niobrara A										
7,189.42	33.83	1.02	7,163.00	-168.56	85.28	-167.53	10.00	10.00	-0.53	-1.68
Niobrara B										
7,200.00	34.89	0.97	7,171.73	-162.59	85.38	-161.56	10.00	10.00	-0.46	-1.52
Build Rate = 10.00/100ft										
7,221.34	37.02	0.88	7,189.00	-150.06	85.58	-149.03	10.00	10.00	-0.43	-1.48
Niobrara B TL										
7,300.00	44.89	0.60	7,248.36	-98.55	86.24	-97.51	10.00	10.00	-0.35	-1.40
7,306.58	45.55	0.59	7,253.00	-93.87	86.29	-92.83	10.00	10.00	-0.29	-1.20
Niobrara C										
7,400.00	54.89	0.35	7,312.71	-22.17	86.86	-21.13	10.00	10.00	-0.25	-1.18
7,500.00	64.88	0.15	7,362.82	64.22	87.23	65.26	10.00	10.00	-0.20	-1.03
7,574.58	72.34	0.03	7,390.00	133.62	87.34	134.65	10.00	10.00	-0.17	-0.93
Fort Hays										
7,600.00	74.88	359.99	7,397.17	158.00	87.34	159.04	10.00	10.00	-0.16	-0.89
7,700.00	84.88	359.83	7,414.72	256.32	87.19	257.35	10.00	10.00	-0.15	-0.87
7,750.63	89.94	359.76	7,417.00	306.88	87.00	307.90	10.00	10.00	-0.15	-0.85
Codell (Heel)										
7,751.75	90.06	359.76	7,417.00	308.00	87.00	309.02	9.96	9.96	-0.15	-0.84
End Build @ 7751.75ft - 7" Intermediate Casing - Russian Fiddler 35C-18HZ_Casing Point										
7,800.00	90.06	359.76	7,416.95	356.25	86.80	357.27	0.00	0.00	0.00	-0.84
7,900.00	90.06	359.76	7,416.86	456.25	86.37	457.25	0.00	0.00	0.00	0.00
8,000.00	90.06	359.76	7,416.76	556.25	85.95	557.24	0.00	0.00	0.00	0.00
8,100.00	90.06	359.76	7,416.66	656.25	85.52	657.23	0.00	0.00	0.00	0.00
8,200.00	90.06	359.76	7,416.56	756.25	85.10	757.21	0.00	0.00	0.00	0.00
8,300.00	90.06	359.76	7,416.47	856.25	84.67	857.20	0.00	0.00	0.00	0.00

Plan Report for Russian Fiddler 35C-18HZ - Plan A Rev 0 Permit

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Tooface Azimuth (°)
8,400.00	90.06	359.76	7,416.37	956.25	84.25	957.19	0.00	0.00	0.00	0.00
8,500.00	90.06	359.76	7,416.27	1,056.25	83.82	1,057.17	0.00	0.00	0.00	0.00
8,600.00	90.06	359.76	7,416.18	1,156.25	83.40	1,157.16	0.00	0.00	0.00	0.00
8,700.00	90.06	359.76	7,416.08	1,256.25	82.97	1,257.15	0.00	0.00	0.00	0.00
8,800.00	90.06	359.76	7,415.98	1,356.24	82.55	1,357.13	0.00	0.00	0.00	0.00
8,900.00	90.06	359.76	7,415.88	1,456.24	82.12	1,457.12	0.00	0.00	0.00	0.00
9,000.00	90.06	359.76	7,415.79	1,556.24	81.70	1,557.11	0.00	0.00	0.00	0.00
9,100.00	90.06	359.76	7,415.69	1,656.24	81.27	1,657.09	0.00	0.00	0.00	0.00
9,200.00	90.06	359.76	7,415.59	1,756.24	80.85	1,757.08	0.00	0.00	0.00	0.00
9,300.00	90.06	359.76	7,415.49	1,856.24	80.42	1,857.07	0.00	0.00	0.00	0.00
9,400.00	90.06	359.76	7,415.40	1,956.24	80.00	1,957.06	0.00	0.00	0.00	0.00
9,500.00	90.06	359.76	7,415.30	2,056.24	79.57	2,057.04	0.00	0.00	0.00	0.00
9,600.00	90.06	359.76	7,415.20	2,156.24	79.15	2,157.03	0.00	0.00	0.00	0.00
9,700.00	90.06	359.76	7,415.11	2,256.24	78.72	2,257.02	0.00	0.00	0.00	0.00
9,800.00	90.06	359.76	7,415.01	2,356.24	78.30	2,357.00	0.00	0.00	0.00	0.00
9,900.00	90.06	359.76	7,414.91	2,456.23	77.87	2,456.99	0.00	0.00	0.00	0.00
10,000.00	90.06	359.76	7,414.81	2,556.23	77.45	2,556.98	0.00	0.00	0.00	0.00
Hold Angle @ 90.06										
10,100.00	90.06	359.76	7,414.72	2,656.23	77.02	2,656.96	0.00	0.00	0.00	0.00
10,200.00	90.06	359.76	7,414.62	2,756.23	76.60	2,756.95	0.00	0.00	0.00	0.00
10,300.00	90.06	359.76	7,414.52	2,856.23	76.18	2,856.94	0.00	0.00	0.00	0.00
10,400.00	90.06	359.76	7,414.43	2,956.23	75.75	2,956.92	0.00	0.00	0.00	0.00
10,500.00	90.06	359.76	7,414.33	3,056.23	75.33	3,056.91	0.00	0.00	0.00	0.00
10,600.00	90.06	359.76	7,414.23	3,156.23	74.90	3,156.90	0.00	0.00	0.00	0.00
10,700.00	90.06	359.76	7,414.13	3,256.23	74.48	3,256.88	0.00	0.00	0.00	0.00
10,800.00	90.06	359.76	7,414.04	3,356.23	74.05	3,356.87	0.00	0.00	0.00	0.00
10,900.00	90.06	359.76	7,413.94	3,456.22	73.63	3,456.86	0.00	0.00	0.00	0.00
11,000.00	90.06	359.76	7,413.84	3,556.22	73.20	3,556.84	0.00	0.00	0.00	0.00
11,100.00	90.06	359.76	7,413.75	3,656.22	72.78	3,656.83	0.00	0.00	0.00	0.00
11,200.00	90.06	359.76	7,413.65	3,756.22	72.35	3,756.82	0.00	0.00	0.00	0.00
11,300.00	90.06	359.76	7,413.55	3,856.22	71.93	3,856.81	0.00	0.00	0.00	0.00
11,400.00	90.06	359.76	7,413.45	3,956.22	71.50	3,956.79	0.00	0.00	0.00	0.00
11,500.00	90.06	359.76	7,413.36	4,056.22	71.08	4,056.78	0.00	0.00	0.00	0.00
11,600.00	90.06	359.76	7,413.26	4,156.22	70.65	4,156.77	0.00	0.00	0.00	0.00
11,700.00	90.06	359.76	7,413.16	4,256.22	70.23	4,256.75	0.00	0.00	0.00	0.00
11,800.00	90.06	359.76	7,413.06	4,356.22	69.80	4,356.74	0.00	0.00	0.00	0.00
11,900.00	90.06	359.76	7,412.97	4,456.22	69.38	4,456.73	0.00	0.00	0.00	0.00
12,000.00	90.06	359.76	7,412.87	4,556.21	68.95	4,556.71	0.00	0.00	0.00	0.00
12,100.00	90.06	359.76	7,412.77	4,656.21	68.53	4,656.70	0.00	0.00	0.00	0.00
12,200.00	90.06	359.76	7,412.68	4,756.21	68.10	4,756.69	0.00	0.00	0.00	0.00
12,300.00	90.06	359.76	7,412.58	4,856.21	67.68	4,856.67	0.00	0.00	0.00	0.00
12,400.00	90.06	359.76	7,412.48	4,956.21	67.25	4,956.66	0.00	0.00	0.00	0.00
12,500.00	90.06	359.76	7,412.38	5,056.21	66.83	5,056.65	0.00	0.00	0.00	0.00
12,600.00	90.06	359.76	7,412.29	5,156.21	66.41	5,156.63	0.00	0.00	0.00	0.00
12,700.00	90.06	359.76	7,412.19	5,256.21	65.98	5,256.62	0.00	0.00	0.00	0.00
12,800.00	90.06	359.76	7,412.09	5,356.21	65.56	5,356.61	0.00	0.00	0.00	0.00
12,895.09	90.06	359.76	7,412.00	5,451.30	65.15	5,451.69	0.00	0.00	0.00	0.00
Total Depth @ 12895.09ft - Codell (Toe) - Russian Fiddler 35C-18HZ_BHL										

Plan Report for Russian Fiddler 35C-18HZ - Plan A Rev 0 Permit**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
0.00	0.00	0.00	0.00	Tie-On to Surface @ 0.00ft
700.00	700.00	0.00	0.00	Hold Angle @ 0.00
1,350.00	1,350.00	0.00	0.00	Begin Nudge @ 1350.00ft
1,400.00	1,400.00	-0.42	0.13	Nudge Rate = 2.00/100ft
1,496.94	1,496.88	-3.60	1.10	End Nudge @ 1496.94ft
4,000.00	3,996.64	-126.38	38.45	Hold Angle @ 2.94
6,823.04	6,815.97	-264.86	80.57	Begin Build @ 6823.04ft
7,200.00	7,171.73	-162.59	85.38	Build Rate = 10.00/100ft
7,751.75	7,417.00	308.00	87.00	End Build @ 7751.75ft
10,000.00	7,414.81	2,556.23	77.45	Hold Angle @ 90.06
12,895.09	7,412.00	5,451.30	65.15	Total Depth @ 12895.09ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N_S (ft)	Origin +E-W (ft)	Start TVD (ft)
Target	Russian Fiddler 35C-18HZ_BHL	0.68	Slot	0.00	0.00	7,412.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	12,895.09	Plan A Rev 0 Permit	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,751.75	7,417.00	7" Intermediate Casing	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,085.47	4,082.00	Parkman		0.00	
4,613.16	4,609.00	Sussex		0.00	
7,083.41	7,070.00	Sharon Springs		0.00	
7,152.86	7,132.00	Niobrara A		0.00	
7,189.42	7,163.00	Niobrara B		0.00	
7,221.34	7,189.00	Niobrara B TL		0.00	
7,306.58	7,253.00	Niobrara C		0.00	
7,574.58	7,390.00	Fort Hays		0.00	
7,750.63	7,417.00	Codell (Heel)		0.00	
12,895.09	7,412.00	Codell (Toe)		0.00	

Plan Report for Russian Fiddler 35C-18HZ - Plan A Rev 0 Permit

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Russian Fiddler 35C-18HZ_BHL	7,412.00	5,451.30	65.15	Point
Russian Fiddler 35C-18HZ_Casing Point	7,417.00	308.00	87.00	Point
Russian Fiddler 35C-18HZ_SHL	0.00	0.00	0.00	Point
Russian Fiddler 35C-18HZ_Setback Lines	0.00	0.00	0.00	Polygon
Russian Fiddler 35C-18HZ_Section Lines	0.00	0.00	0.00	Polygon

North Reference Sheet for Sec. 19-T2N-65W - Russian Fiddler 35C-18HZ - Plan A Rev 0

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to RKB=17ft @ 5017.00ft (Drilling Rig). Northing and Easting are relative to Russian Fiddler 35C-18HZ

Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is -105.50°, Longitude Origin:0.000000°, Latitude Origin:40.783333°

False Easting: 3,000,000.000644ft, False Northing: 1,000,000.001308ft, Scale Reduction: 0.99995954

Grid Coordinates of Well: 1,286,629.124920 ft N, 3,220,574.380377 ft E

Geographical Coordinates of Well: 40° 07' 02.99" N, 104° 42' 40.67" W

Grid Convergence at Surface is: 0.51°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,895.09ft
the Bottom Hole Displacement is 5,451.69ft in the Direction of 0.68° (True).

Magnetic Convergence at surface is: -8.16° (21 June 2012, , BGGM2011)

