

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 13-T3N-R66W

BROTEMARKLE 3C-13HZ

Plan A Rev 0

Plan: Plan A Rev 0 Permit

Sperry Drilling Services

Proposal Report

26 September, 2012

Well Coordinates: 1,323,501.95 N, 3,215,765.60 E (40° 13' 07.79" N, 104° 43' 38.43" W)

Ground Level: 5,034.00 ft

Local Coordinate Origin: Centered on Well BROTEMARKLE 3C-13HZ

Viewing Datum: RKB=16 @ 5050.00ft (Drilling Rig)

TVDs to System: N

North Reference: True

Unit System: API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 43I

HALLIBURTON

Project: Weld County, CO (NAD 83)
Site: Sec. 13-T3N-R66W
Well: BROTEMARKLE 3C-13HZ
Wellbore: Plan A Rev 0
Design: Plan A Rev 0 Permit

Anadarko Petroleum Corp.

HALLIBURTON
Sperry Drilling

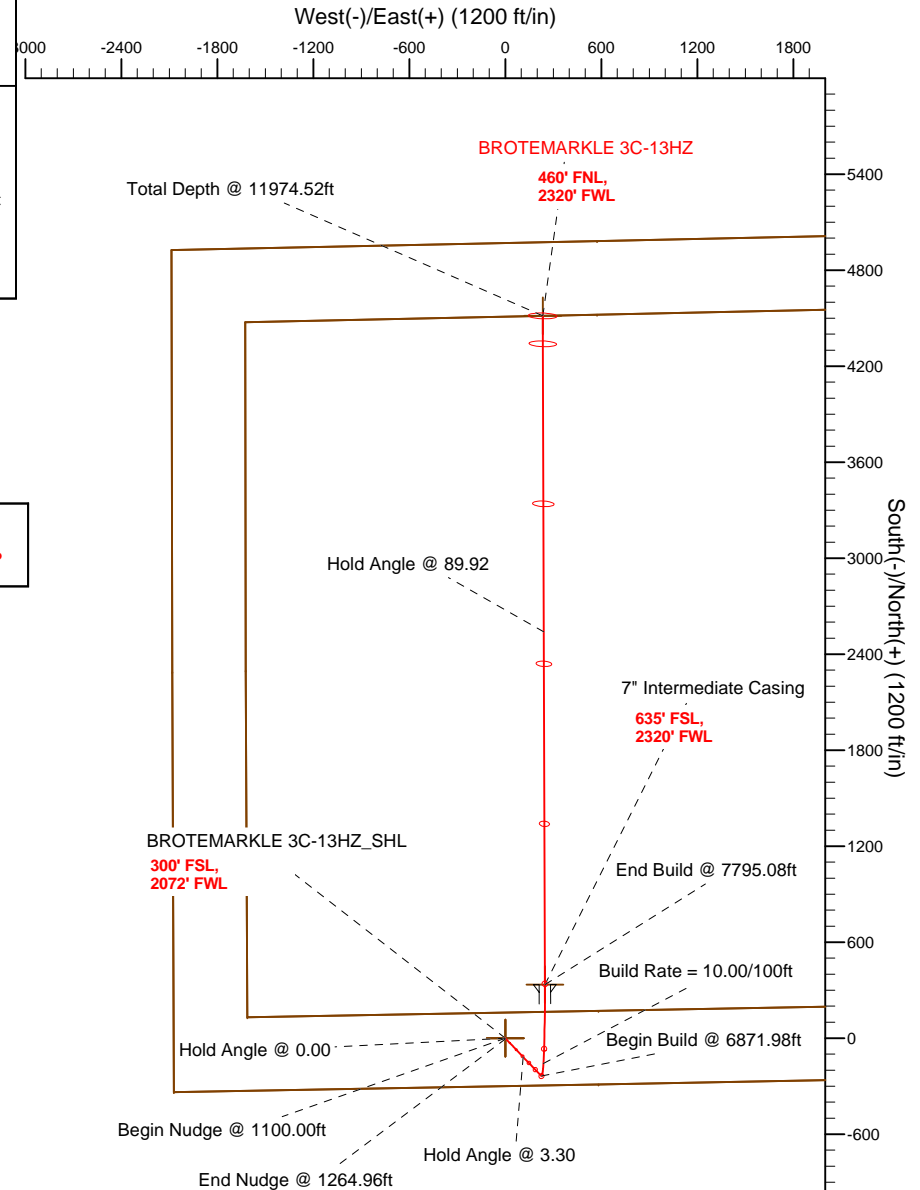
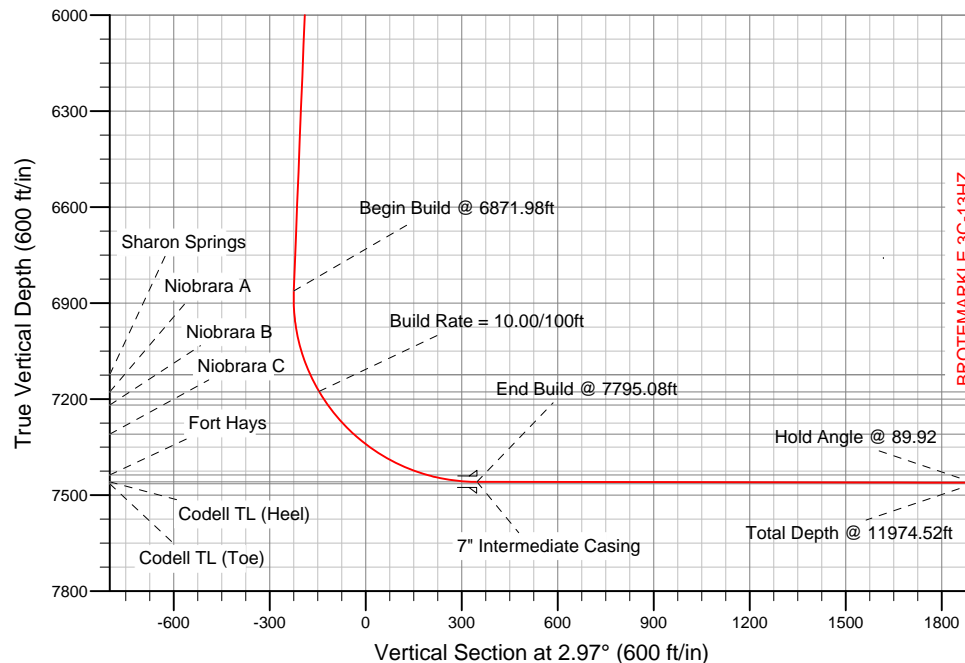
SECTION DETAILS

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	1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	
3	1264.96	3.30	136.30	1264.87	-3.43	3.28	2.00	136.30	-3.26	
4	6871.98	3.30	136.30	6862.60	-236.71	226.24	0.00	0.00	-224.67	
5	7795.08	89.92	359.81	7459.00	335.00	248.00	10.00	-136.44	347.40	BROTEMARKLE 3C-13HZ_Casing Point
6	11974.52	89.92	359.81	7465.00	4514.41	234.26	0.00	0.00	4520.49	BROTEMARKLE 3C-13HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
BROTEMARKLE 3C-13HZ_Section Lines	0.00	0.00	0.00	40.218830	-104.727342	Polygon
BROTEMARKLE 3C-13HZ_Setback Lines	0.00	0.00	0.00	40.218830	-104.727342	Polygon
BROTEMARKLE 3C-13HZ_SHL	0.00	0.00	0.00	40.218830	-104.727342	Point
BROTEMARKLE 3C-13HZ_Casing Point	7459.00	335.00	248.00	40.219750	-104.726454	Point
BROTEMARKLE 3C-13HZ_BHL	7465.00	4514.41	234.26	40.231222	-104.726503	Point

Target Line:
7458.69' TVDkb @ 0° VS Drilling 89.92°



WELL DETAILS: BROTEMARKLE 3C-13HZ

Ground Level: 5034.00 RKB=16 @ 5050.00ft (Drilling Rig)

Plan: Plan A Rev 0 Permit (BROTEMARKLE 3C-13HZ/Plan A Rev 0)

Created By: Fred Hartmann Date: 09/26/2012
Reviewed: _____ Date: _____

Plan Report for BROTEMARKLE 3C-13HZ - 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 (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BROTEMARKLE 3C-13HZ_SHL - BROTEMARKLE 3C-13HZ_Section Lines - BROTEMARKLE 3C-13HZ_Setback Lines										
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
Hold Angle @ 0.00										
700.00	0.00	0.00	700.00	0.00	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	0.00
801.00	0.00	0.00	801.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills										
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
Begin Nudge @ 1100.00ft										
1,200.00	2.00	136.30	1,199.98	-1.26	1.21	-1.20	2.00	2.00	0.00	136.30
1,264.96	3.30	136.30	1,264.87	-3.43	3.28	-3.26	2.00	2.00	0.00	0.00
End Nudge @ 1264.96ft										
1,300.00	3.30	136.30	1,299.85	-4.89	4.67	-4.64	0.00	0.00	0.00	0.00
1,400.00	3.30	136.30	1,399.69	-9.05	8.65	-8.59	0.00	0.00	0.00	0.00
1,500.00	3.30	136.30	1,499.52	-13.21	12.63	-12.54	0.00	0.00	0.00	0.00
1,600.00	3.30	136.30	1,599.35	-17.37	16.60	-16.49	0.00	0.00	0.00	0.00
1,700.00	3.30	136.30	1,699.19	-21.53	20.58	-20.44	0.00	0.00	0.00	0.00
1,800.00	3.30	136.30	1,799.02	-25.69	24.56	-24.39	0.00	0.00	0.00	0.00
1,900.00	3.30	136.30	1,898.86	-29.85	28.53	-28.33	0.00	0.00	0.00	0.00
2,000.00	3.30	136.30	1,998.69	-34.01	32.51	-32.28	0.00	0.00	0.00	0.00
2,100.00	3.30	136.30	2,098.52	-38.17	36.49	-36.23	0.00	0.00	0.00	0.00
2,200.00	3.30	136.30	2,198.36	-42.33	40.46	-40.18	0.00	0.00	0.00	0.00
2,300.00	3.30	136.30	2,298.19	-46.50	44.44	-44.13	0.00	0.00	0.00	0.00
2,400.00	3.30	136.30	2,398.03	-50.66	48.41	-48.08	0.00	0.00	0.00	0.00
2,500.00	3.30	136.30	2,497.86	-54.82	52.39	-52.03	0.00	0.00	0.00	0.00
2,600.00	3.30	136.30	2,597.70	-58.98	56.37	-55.98	0.00	0.00	0.00	0.00
2,700.00	3.30	136.30	2,697.53	-63.14	60.34	-59.92	0.00	0.00	0.00	0.00
2,800.00	3.30	136.30	2,797.36	-67.30	64.32	-63.87	0.00	0.00	0.00	0.00
2,900.00	3.30	136.30	2,897.20	-71.46	68.30	-67.82	0.00	0.00	0.00	0.00
3,000.00	3.30	136.30	2,997.03	-75.62	72.27	-71.77	0.00	0.00	0.00	0.00
3,100.00	3.30	136.30	3,096.87	-79.78	76.25	-75.72	0.00	0.00	0.00	0.00
3,200.00	3.30	136.30	3,196.70	-83.94	80.23	-79.67	0.00	0.00	0.00	0.00
3,300.00	3.30	136.30	3,296.54	-88.10	84.20	-83.62	0.00	0.00	0.00	0.00
3,400.00	3.30	136.30	3,396.37	-92.26	88.18	-87.57	0.00	0.00	0.00	0.00
3,500.00	3.30	136.30	3,496.20	-96.42	92.16	-91.52	0.00	0.00	0.00	0.00
3,600.00	3.30	136.30	3,596.04	-100.58	96.13	-95.46	0.00	0.00	0.00	0.00
3,700.00	3.30	136.30	3,695.87	-104.74	100.11	-99.41	0.00	0.00	0.00	0.00
3,800.00	3.30	136.30	3,795.71	-108.90	104.08	-103.36	0.00	0.00	0.00	0.00
3,900.00	3.30	136.30	3,895.54	-113.06	108.06	-107.31	0.00	0.00	0.00	0.00
4,000.00	3.30	136.30	3,995.38	-117.22	112.04	-111.26	0.00	0.00	0.00	0.00
Hold Angle @ 3.30										
4,008.64	3.30	136.30	4,004.00	-117.58	112.38	-111.60	0.00	0.00	0.00	0.00
Parkman										
4,100.00	3.30	136.30	4,095.21	-121.38	116.01	-115.21	0.00	0.00	0.00	0.00
4,200.00	3.30	136.30	4,195.04	-125.54	119.99	-119.16	0.00	0.00	0.00	0.00
4,300.00	3.30	136.30	4,294.88	-129.70	123.97	-123.11	0.00	0.00	0.00	0.00
4,400.00	3.30	136.30	4,394.71	-133.87	127.94	-127.05	0.00	0.00	0.00	0.00
4,500.00	3.30	136.30	4,494.55	-138.03	131.92	-131.00	0.00	0.00	0.00	0.00
4,538.52	3.30	136.30	4,533.00	-139.63	133.45	-132.52	0.00	0.00	0.00	0.00
Sussex										

Plan Report for BROTEMARKLE 3C-13HZ - 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 (°)
4,600.00	3.30	136.30	4,594.38	-142.19	135.90	-134.95	0.00	0.00	0.00	0.00
4,700.00	3.30	136.30	4,694.22	-146.35	139.87	-138.90	0.00	0.00	0.00	0.00
4,800.00	3.30	136.30	4,794.05	-150.51	143.85	-142.85	0.00	0.00	0.00	0.00
4,900.00	3.30	136.30	4,893.88	-154.67	147.83	-146.80	0.00	0.00	0.00	0.00
5,000.00	3.30	136.30	4,993.72	-158.83	151.80	-150.75	0.00	0.00	0.00	0.00
5,100.00	3.30	136.30	5,093.55	-162.99	155.78	-154.70	0.00	0.00	0.00	0.00
5,200.00	3.30	136.30	5,193.39	-167.15	159.75	-158.65	0.00	0.00	0.00	0.00
5,300.00	3.30	136.30	5,293.22	-171.31	163.73	-162.59	0.00	0.00	0.00	0.00
5,400.00	3.30	136.30	5,393.06	-175.47	167.71	-166.54	0.00	0.00	0.00	0.00
5,500.00	3.30	136.30	5,492.89	-179.63	171.68	-170.49	0.00	0.00	0.00	0.00
5,600.00	3.30	136.30	5,592.72	-183.79	175.66	-174.44	0.00	0.00	0.00	0.00
5,700.00	3.30	136.30	5,692.56	-187.95	179.64	-178.39	0.00	0.00	0.00	0.00
5,800.00	3.30	136.30	5,792.39	-192.11	183.61	-182.34	0.00	0.00	0.00	0.00
5,900.00	3.30	136.30	5,892.23	-196.27	187.59	-186.29	0.00	0.00	0.00	0.00
6,000.00	3.30	136.30	5,992.06	-200.43	191.57	-190.24	0.00	0.00	0.00	0.00
6,100.00	3.30	136.30	6,091.90	-204.59	195.54	-194.18	0.00	0.00	0.00	0.00
6,200.00	3.30	136.30	6,191.73	-208.75	199.52	-198.13	0.00	0.00	0.00	0.00
6,300.00	3.30	136.30	6,291.56	-212.91	203.50	-202.08	0.00	0.00	0.00	0.00
6,400.00	3.30	136.30	6,391.40	-217.07	207.47	-206.03	0.00	0.00	0.00	0.00
6,500.00	3.30	136.30	6,491.23	-221.24	211.45	-209.98	0.00	0.00	0.00	0.00
6,600.00	3.30	136.30	6,591.07	-225.40	215.42	-213.93	0.00	0.00	0.00	0.00
6,700.00	3.30	136.30	6,690.90	-229.56	219.40	-217.88	0.00	0.00	0.00	0.00
6,800.00	3.30	136.30	6,790.73	-233.72	223.38	-221.83	0.00	0.00	0.00	0.00
6,871.98	3.30	136.30	6,862.60	-236.71	226.24	-224.67	0.00	0.00	0.00	0.00
Begin Build @ 6871.98ft										
6,900.00	2.31	79.59	6,890.59	-237.19	227.35	-225.09	10.00	-3.53	-202.38	-136.44
7,000.00	10.65	11.99	6,989.94	-227.76	231.26	-215.47	10.00	8.34	-67.60	-79.79
7,100.00	20.53	5.89	7,086.14	-201.21	234.99	-188.76	10.00	9.88	-6.10	-12.39
7,141.00	24.61	4.78	7,124.00	-185.55	236.44	-173.04	10.00	9.95	-2.71	-6.49
Sharon Springs										
7,200.00	30.49	3.67	7,176.28	-158.35	238.43	-145.78	10.00	9.96	-1.87	-5.47
Build Rate = 10.00/100ft										
7,201.99	30.69	3.64	7,178.00	-157.33	238.49	-144.76	10.00	9.97	-1.53	-4.48
Niobrara A										
7,250.97	35.57	2.99	7,219.00	-130.62	240.03	-118.01	10.00	9.97	-1.33	-4.46
Niobrara B										
7,300.00	40.46	2.48	7,257.62	-100.47	241.46	-87.82	10.00	9.98	-1.05	-3.91
7,373.00	47.75	1.87	7,310.00	-49.73	243.37	-37.05	10.00	9.98	-0.82	-3.50
Niobrara C										
7,400.00	50.45	1.69	7,327.68	-29.34	244.01	-16.65	10.00	9.99	-0.69	-3.07
7,500.00	60.44	1.10	7,384.33	52.89	245.98	65.57	10.00	9.99	-0.59	-2.95
7,600.00	70.43	0.62	7,425.86	143.71	247.32	156.33	10.00	9.99	-0.48	-2.61
7,636.55	74.08	0.46	7,437.00	178.51	247.65	191.11	10.00	9.99	-0.44	-2.41
Fort Hays										
7,700.00	80.42	0.19	7,451.00	240.37	248.00	252.89	10.00	9.99	-0.42	-2.36
7,795.08	89.92	359.81	7,459.00	335.00	248.00	347.40	10.00	9.99	-0.40	-2.31
End Build @ 7795.08ft - Codell TL (Heel) - 7" Intermediate Casing - BROTEMARKLE 3C-13HZ_Casing Point										
7,800.00	89.92	359.81	7,459.01	339.92	247.98	352.31	0.00	0.00	0.00	-2.27
7,900.00	89.92	359.81	7,459.15	439.92	247.66	452.16	0.00	0.00	0.00	0.00
8,000.00	89.92	359.81	7,459.29	539.92	247.33	552.01	0.00	0.00	0.00	0.00
8,100.00	89.92	359.81	7,459.44	639.92	247.00	651.86	0.00	0.00	0.00	0.00
8,200.00	89.92	359.81	7,459.58	739.92	246.67	751.71	0.00	0.00	0.00	0.00
8,300.00	89.92	359.81	7,459.72	839.92	246.34	851.55	0.00	0.00	0.00	0.00
8,400.00	89.92	359.81	7,459.87	939.92	246.01	951.40	0.00	0.00	0.00	0.00
8,500.00	89.92	359.81	7,460.01	1,039.91	245.68	1,051.25	0.00	0.00	0.00	0.00
8,600.00	89.92	359.81	7,460.16	1,139.91	245.35	1,151.10	0.00	0.00	0.00	0.00
8,700.00	89.92	359.81	7,460.30	1,239.91	245.03	1,250.95	0.00	0.00	0.00	0.00
8,800.00	89.92	359.81	7,460.44	1,339.91	244.70	1,350.79	0.00	0.00	0.00	0.00

Plan Report for BROTEMARKLE 3C-13HZ - 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 (°)
8,900.00	89.92	359.81	7,460.59	1,439.91	244.37	1,450.64	0.00	0.00	0.00	0.00
9,000.00	89.92	359.81	7,460.73	1,539.91	244.04	1,550.49	0.00	0.00	0.00	0.00
9,100.00	89.92	359.81	7,460.87	1,639.91	243.71	1,650.34	0.00	0.00	0.00	0.00
9,200.00	89.92	359.81	7,461.02	1,739.91	243.38	1,750.18	0.00	0.00	0.00	0.00
9,300.00	89.92	359.81	7,461.16	1,839.91	243.05	1,850.03	0.00	0.00	0.00	0.00
9,400.00	89.92	359.81	7,461.30	1,939.91	242.72	1,949.88	0.00	0.00	0.00	0.00
9,500.00	89.92	359.81	7,461.45	2,039.91	242.40	2,049.73	0.00	0.00	0.00	0.00
9,600.00	89.92	359.81	7,461.59	2,139.91	242.07	2,149.58	0.00	0.00	0.00	0.00
9,700.00	89.92	359.81	7,461.73	2,239.91	241.74	2,249.42	0.00	0.00	0.00	0.00
9,800.00	89.92	359.81	7,461.88	2,339.91	241.41	2,349.27	0.00	0.00	0.00	0.00
9,900.00	89.92	359.81	7,462.02	2,439.91	241.08	2,449.12	0.00	0.00	0.00	0.00
10,000.00	89.92	359.81	7,462.17	2,539.91	240.75	2,548.97	0.00	0.00	0.00	0.00
Hold Angle @ 89.92										
10,100.00	89.92	359.81	7,462.31	2,639.90	240.42	2,648.82	0.00	0.00	0.00	0.00
10,200.00	89.92	359.81	7,462.45	2,739.90	240.09	2,748.66	0.00	0.00	0.00	0.00
10,300.00	89.92	359.81	7,462.60	2,839.90	239.77	2,848.51	0.00	0.00	0.00	0.00
10,400.00	89.92	359.81	7,462.74	2,939.90	239.44	2,948.36	0.00	0.00	0.00	0.00
10,500.00	89.92	359.81	7,462.88	3,039.90	239.11	3,048.21	0.00	0.00	0.00	0.00
10,600.00	89.92	359.81	7,463.03	3,139.90	238.78	3,148.06	0.00	0.00	0.00	0.00
10,700.00	89.92	359.81	7,463.17	3,239.90	238.45	3,247.90	0.00	0.00	0.00	0.00
10,800.00	89.92	359.81	7,463.31	3,339.90	238.12	3,347.75	0.00	0.00	0.00	0.00
10,900.00	89.92	359.81	7,463.46	3,439.90	237.79	3,447.60	0.00	0.00	0.00	0.00
11,000.00	89.92	359.81	7,463.60	3,539.90	237.47	3,547.45	0.00	0.00	0.00	0.00
11,100.00	89.92	359.81	7,463.74	3,639.90	237.14	3,647.30	0.00	0.00	0.00	0.00
11,200.00	89.92	359.81	7,463.89	3,739.90	236.81	3,747.14	0.00	0.00	0.00	0.00
11,300.00	89.92	359.81	7,464.03	3,839.90	236.48	3,846.99	0.00	0.00	0.00	0.00
11,400.00	89.92	359.81	7,464.18	3,939.90	236.15	3,946.84	0.00	0.00	0.00	0.00
11,500.00	89.92	359.81	7,464.32	4,039.90	235.82	4,046.69	0.00	0.00	0.00	0.00
11,600.00	89.92	359.81	7,464.46	4,139.89	235.49	4,146.54	0.00	0.00	0.00	0.00
11,700.00	89.92	359.81	7,464.61	4,239.89	235.16	4,246.38	0.00	0.00	0.00	0.00
11,800.00	89.92	359.81	7,464.75	4,339.89	234.84	4,346.23	0.00	0.00	0.00	0.00
11,900.00	89.92	359.81	7,464.89	4,439.89	234.51	4,446.08	0.00	0.00	0.00	0.00
11,974.52	89.92	359.81	7,465.00	4,514.41	234.26	4,520.49	0.00	0.00	0.00	0.00
Total Depth @ 11974.52ft - BROTEMARKLE 3C-13HZ_BHL										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
600.00	600.00	0.00	0.00	Hold Angle @ 0.00
1,100.00	1,100.00	0.00	0.00	Begin Nudge @ 1100.00ft
1,264.96	1,264.87	-3.43	3.28	End Nudge @ 1264.96ft
4,000.00	3,995.38	-117.22	112.04	Hold Angle @ 3.30
6,871.98	6,862.60	-236.71	226.24	Begin Build @ 6871.98ft
7,200.00	7,176.28	-158.35	238.43	Build Rate = 10.00/100ft
7,795.08	7,459.00	335.00	248.00	End Build @ 7795.08ft
10,000.00	7,462.17	2,539.91	240.75	Hold Angle @ 89.92
11,974.52	7,465.00	4,514.41	234.26	Total Depth @ 11974.52ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	BROTEMARKLE 3C-13HZ_BHL	2.97	Slot	0.00	0.00	0.00

Plan Report for BROTEMARKLE 3C-13HZ - Plan A Rev 0 Permit

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	11,974.52	Plan A Rev 0 Permit	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,795.08	7,459.00	7" Intermediate Casing	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
801.00	801.00	Fox Hills			
4,008.64	4,004.00	Parkman			
4,538.52	4,533.00	Sussex			
7,141.00	7,124.00	Sharon Springs			
7,201.99	7,178.00	Niobrara A			
7,250.97	7,219.00	Niobrara B			
7,373.00	7,310.00	Niobrara C			
7,636.55	7,437.00	Fort Hays			
7,795.08	7,459.00	Codell TL (Heel)			
11,974.52	7,465.00	Codell TL (Toe)			

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
BROTEMARKLE 3C-13HZ_Casing Point	7,459.00	335.00	248.00	Point
BROTEMARKLE 3C-13HZ_SHL	0.00	0.00	0.00	Point
BROTEMARKLE 3C-13HZ_BHL	7,465.00	4,514.41	234.26	Point
BROTEMARKLE 3C-13HZ_Setback Lines	0.00	0.00	0.00	Polygon
BROTEMARKLE 3C-13HZ_Section Lines	0.00	0.00	0.00	Polygon

North Reference Sheet for Sec. 13-T3N-R66W - BROTEMARKLE 3C-13HZ - 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=16 @ 5050.00ft (Drilling Rig). Northing and Easting are relative to BROTEMARKLE 3C-13HZ
 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: 3,000,000.00ft, False Northing: 1,000,000.00ft, Scale Reduction: 0.99995700

Grid Coordinates of Well: 1,323,501.95 ft N, 3,215,765.60 ft E
 Geographical Coordinates of Well: 40° 13' 07.79" N, 104° 43' 38.43" W
 Grid Convergence at Surface is: 0.50°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,974.52ft
 the Bottom Hole Displacement is 4,520.49ft in the Direction of 2.97° (True).

Magnetic Convergence at surface is: -8.20° (26 September 2012, , BGGM2012)

