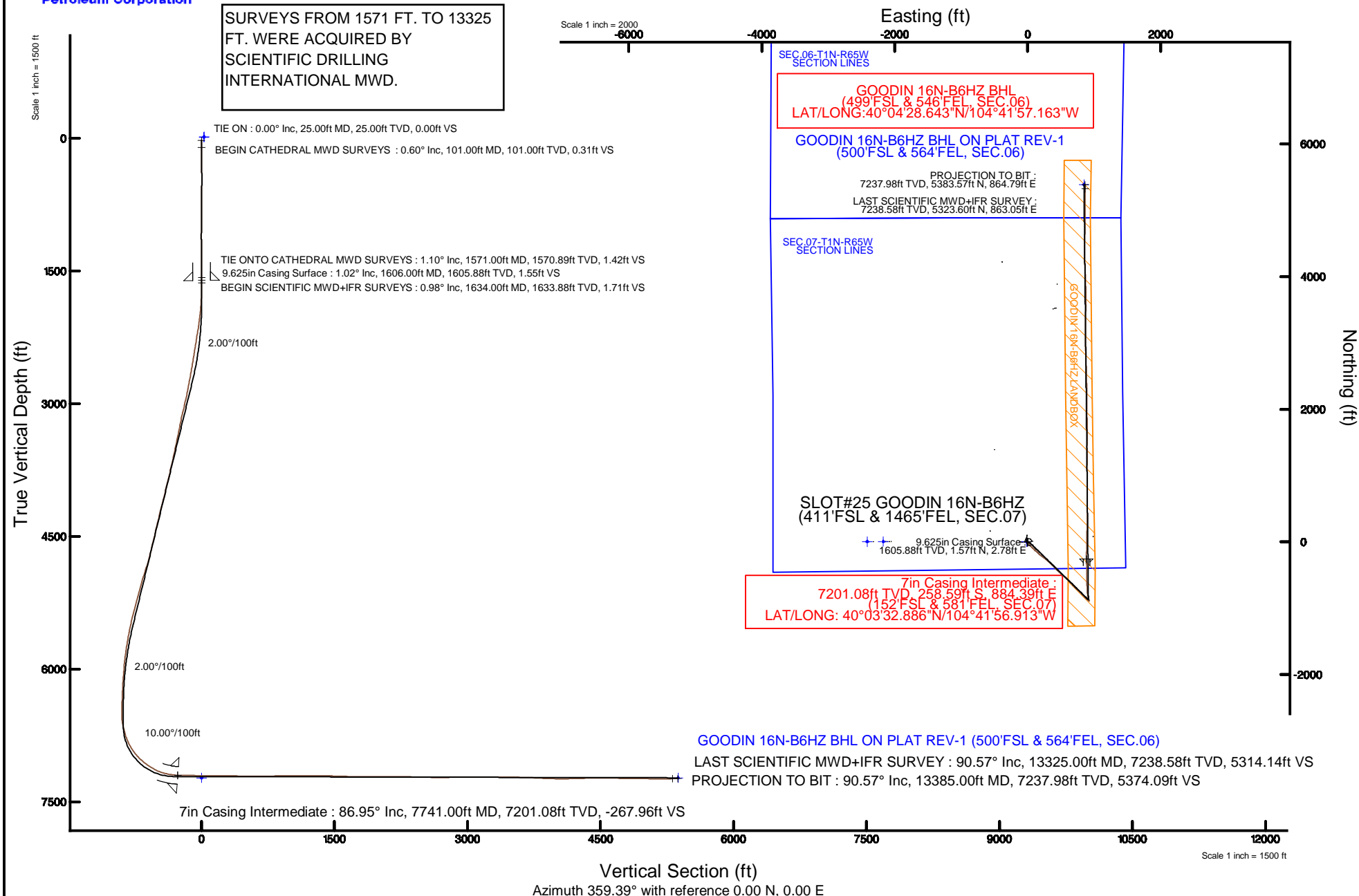


KERR-MCGEE OIL & GAS ONSHORE LP (LAMBERT STATE PLANE COORD)

Location: COLORADO Slot: SLOT#25 GOODIN 16N-B6HZ (411'FSL & 1465'FEL, SEC.07)
 Field: WELD COUNTY (KERR MCGEE) Well: GOODIN 16N-B6HZ
 Facility: SEC.07-T1N-R65W Wellbore: GOODIN 16N-B6HZ PWB



Plot reference wellpath is GOODIN 16N-B6HZ (REV-A.1) PWP	
True vertical depths are referenced to H&P 307 (25KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to H&P 307 (25KB) (RKB)	North Reference: True north
H&P 307 (25KB) (RKB) to Mean Sea Level: 5004 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#25 GOODIN 16N-B6HZ (411'FSL & 1465'FEL, SEC.07)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: amarcar on 25/Jun/2015



ABADARKO E&P ONSHORE LLC

SURVEY REPORT

GOODIN 16N-B6HZ

H&P 307

2/7/2015



The **Ultimate Partner** In Wellbore Placement

CUSTOMER	ABADARKO E&P ONSHORE LLC	SDI JOB NO.	253781
PROJECT	GOODIN 16N-B6HZ	SDI DISTRICT	Casper
FIELD	WATTENBERG	SDI KIT/UNIT	C11-EM#70 / 77-MP-42

SITE INFORMATION

Site Name	GOODIN PAD	Section	07
Lat/Long	40° 3' 36.23" N, 104° 41' 55.637" W	Township	1N
Northing	1,265,739.76 ft	Range	65W
Easting	3,224,261.66 ft		

MAP INFORMATION

North Reference True North
Grid Correction
System US State Plane 1983
Datum North American Datum 1983 (GRS 1980)
Map Zone LAMBERT COLORADO SP NORTH ERN ZONE (501) FEET



WELL INFORMATION

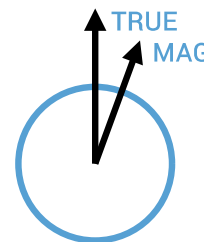
Lat/Long 40° 3' 35.442" N, 104° 42' 8.287" W
Northing 1,265,651.16 ft
Easting 3,223,278.86 ft
UWI 05-123-40750

DEPTH AND ELEVATION REFERENCE

Ground Level 5004 ft above Mean Sea Level
Reference Datum RKB
Reference Height 25 ft above G.L.
Reference Elevation 5029 ft

VERTICAL SECTION REFERENCE

+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 359.39°
Calculation Method Minimum Curvature



GEOMAGNETIC REFERENCE INFORMATION

Local Gravity: 999.032 mG [computed]

MD	MODEL	DATE	DECLINATION	MAG TO TRUE
0-5490 ft			8.14°	add 8.14°
5490-8725 ft	MAG-VAR IFR	06 Feb 2015	8.08°	add 8.08°
8725-13325 ft	MAG-VAR IFR	06 Feb 2015	8.06°	add 8.06°

WELL NOTES

SURVEYS FROM 0 FT. TO 1571 FT. WERE ACQUIRED BY CATHEDRAL MWD.

SURVEYS FROM 1571 FT. TO 13325 FT. WERE ACQUIRED BY SCIENTIFIC DRILLING INTERNATIONAL MWD.

OPERATORS

C. COLLINS, S. WAXLER

SDI Operator Name (Printed)

SIGNATURE

DATE

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	BUILD RATE
ft	deg	deg	ft	ft	ft	ft	°/100ft	°/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	Invalid
101.00	0.60	319.50	101.00	0.41	0.40	-0.34	0.59	0.59
179.00	0.60	318.10	178.99	1.03	1.02	-0.88	0.02	0.00
257.00	0.70	335.80	256.99	1.77	1.76	-1.35	0.29	0.13
338.00	0.70	337.40	337.98	2.68	2.66	-1.74	0.02	0.00
418.00	0.50	300.60	417.98	3.32	3.29	-2.23	0.53	-0.25
498.00	0.30	167.60	497.98	3.29	3.27	-2.49	0.92	-0.25
578.00	0.40	167.40	577.98	2.81	2.79	-2.38	0.13	0.12
658.00	0.40	162.20	657.97	2.27	2.25	-2.23	0.05	0.00
738.00	0.50	164.50	737.97	1.67	1.65	-2.06	0.13	0.12
818.00	0.70	171.00	817.97	0.85	0.83	-1.89	0.26	0.25
898.00	0.70	179.40	897.96	-0.12	-0.14	-1.80	0.13	0.00
978.00	0.50	161.00	977.96	-0.94	-0.96	-1.69	0.34	-0.25
1058.00	0.70	176.00	1057.95	-1.76	-1.78	-1.54	0.32	0.25
1138.00	0.70	317.30	1137.95	-1.89	-1.91	-1.83	1.65	0.00
1218.00	0.90	317.20	1217.94	-1.06	-1.09	-2.59	0.25	0.25
1298.00	1.10	35.40	1297.93	0.03	0.00	-2.58	1.59	0.25
1378.00	1.00	73.70	1377.92	0.84	0.82	-1.46	0.87	-0.13
1458.00	1.00	78.60	1457.91	1.16	1.16	-0.11	0.11	0.00
1538.00	1.20	79.70	1537.89	1.43	1.44	1.40	0.25	0.25
1571.00	1.10	82.70	1570.89	1.52	1.55	2.06	0.35	-0.30
1634.00	0.98	66.20	1633.88	1.80	1.84	3.15	0.51	-0.20
1726.00	1.95	127.02	1725.85	1.16	1.21	5.11	1.85	1.06
1818.00	3.46	145.87	1817.75	-2.11	-2.02	7.92	1.89	1.64
1910.00	5.15	151.62	1909.48	-8.08	-7.96	11.44	1.89	1.84
2003.00	7.38	157.84	2001.93	-17.32	-17.16	15.67	2.50	2.40
2097.00	8.96	155.46	2094.97	-29.63	-29.40	20.99	1.72	1.68
2191.00	10.43	148.42	2187.63	-43.61	-43.31	28.48	2.00	1.56
2286.00	11.76	141.54	2280.85	-58.63	-58.22	39.01	1.98	1.41
2380.00	12.51	133.79	2372.76	-73.32	-72.77	52.32	1.90	0.79
2474.00	13.35	131.53	2464.38	-87.72	-87.00	67.79	1.05	0.90
2569.00	13.30	132.54	2556.82	-102.56	-101.67	84.06	0.25	-0.05

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	BUILD RATE
ft	deg	deg	ft	ft	ft	ft	°/100ft	°/100ft
2663.00	14.77	136.23	2648.01	-118.70	-117.64	100.32	1.83	1.56
2758.00	15.66	130.74	2739.68	-136.01	-134.75	118.42	1.78	0.94
2852.00	16.09	129.53	2830.09	-152.79	-151.33	138.08	0.58	0.46
2946.00	16.74	135.00	2920.27	-170.86	-169.19	157.70	1.78	0.68
3041.00	18.92	132.46	3010.70	-191.16	-189.27	178.73	2.44	2.30
3135.00	20.22	129.21	3099.27	-211.97	-209.83	202.57	1.80	1.38
3230.00	18.75	125.20	3188.83	-231.42	-229.01	227.77	2.09	-1.55
3324.00	18.69	125.29	3277.86	-249.10	-246.42	252.41	0.08	-0.07
3418.00	17.63	132.06	3367.18	-267.58	-264.66	275.27	2.51	-1.12
3512.00	17.57	129.84	3456.79	-286.43	-283.29	296.73	0.72	-0.07
3607.00	18.41	128.47	3547.14	-305.19	-301.81	319.49	1.00	0.89
3701.00	17.86	133.24	3636.48	-324.54	-320.92	341.61	1.69	-0.59
3796.00	17.42	136.95	3727.01	-345.13	-341.30	361.94	1.27	-0.47
3889.00	17.64	136.93	3815.69	-365.80	-361.77	381.07	0.24	0.24
3983.00	17.88	138.11	3905.21	-387.15	-382.91	400.43	0.46	0.25
4078.00	19.24	136.11	3995.27	-409.51	-405.05	421.02	1.59	1.44
4172.00	18.56	134.15	4084.20	-431.32	-426.63	442.49	1.00	-0.73
4266.00	19.61	132.89	4173.03	-452.71	-447.79	464.78	1.20	1.12
4360.00	20.98	132.29	4261.20	-475.02	-469.85	488.78	1.48	1.46
4454.00	18.92	131.94	4349.55	-496.79	-491.36	512.57	2.19	-2.19
4549.00	18.36	133.38	4439.57	-517.59	-511.93	534.90	0.76	-0.59
4643.00	19.53	131.53	4528.48	-538.42	-532.51	557.43	1.40	1.25
4737.00	20.04	130.24	4616.93	-559.50	-553.34	581.48	0.71	0.54
4831.00	20.93	131.63	4704.98	-581.32	-574.90	606.33	1.08	0.95
4925.00	21.62	134.93	4792.58	-604.97	-598.28	631.14	1.47	0.73
5019.00	23.35	137.96	4879.43	-631.30	-624.35	655.88	2.21	1.84
5113.00	21.61	138.77	4966.29	-658.40	-651.20	679.76	1.88	-1.85
5208.00	21.10	138.34	5054.76	-684.58	-677.13	702.66	0.57	-0.54
5302.00	21.36	131.94	5142.40	-708.91	-701.22	726.64	2.48	0.28
5396.00	21.21	132.82	5229.99	-732.18	-724.21	751.84	0.37	-0.16
5491.00	20.79	133.41	5318.68	-755.70	-747.48	776.69	0.50	-0.45
5585.00	18.20	135.39	5407.29	-777.85	-769.39	799.12	2.84	-2.76

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	BUILD RATE
ft	deg	deg	ft	ft	ft	ft	°/100ft	°/100ft
5679.00	16.40	135.09	5497.03	-797.91	-789.24	818.80	1.91	-1.91
5773.00	15.53	138.23	5587.41	-816.88	-808.02	836.55	1.30	-0.92
5867.00	13.06	136.25	5678.49	-834.11	-825.08	852.28	2.68	-2.63
5961.00	11.43	135.52	5770.35	-848.57	-839.40	866.15	1.73	-1.73
6055.00	10.58	133.15	5862.62	-861.26	-851.95	878.98	1.03	-0.91
6150.00	7.88	124.90	5956.38	-871.08	-861.65	890.69	3.15	-2.84
6244.00	7.84	127.89	6049.50	-878.82	-869.27	901.03	0.44	-0.05
6338.00	5.33	125.50	6142.87	-885.38	-875.74	909.65	2.69	-2.67
6432.00	4.27	136.44	6236.54	-890.51	-880.81	915.61	1.48	-1.12
6526.00	3.00	130.90	6330.35	-894.70	-884.96	919.88	1.40	-1.35
6621.00	1.44	155.82	6425.28	-897.44	-887.68	922.25	1.90	-1.65
6668.00	0.59	196.30	6472.27	-898.21	-888.44	922.42	2.26	-1.81
6715.00	1.08	329.65	6519.27	-898.06	-888.29	922.13	3.29	1.05
6762.00	4.66	348.00	6566.20	-895.80	-886.04	921.51	7.76	7.61
6810.00	8.81	349.75	6613.86	-890.27	-880.52	920.45	8.65	8.64
6857.00	12.28	345.32	6660.06	-881.87	-872.14	918.54	7.59	7.40
6904.00	16.66	341.18	6705.56	-870.61	-860.92	915.10	9.57	9.32
6951.00	19.14	342.69	6750.28	-856.83	-847.18	910.63	5.35	5.26
6998.00	22.07	346.91	6794.28	-840.83	-831.22	906.34	6.99	6.24
7045.00	25.39	351.53	6837.30	-822.22	-812.65	902.85	8.10	7.08
7093.00	30.81	353.67	6879.63	-799.77	-790.24	899.98	11.48	11.28
7140.00	34.22	354.91	6919.25	-774.61	-765.10	897.48	7.39	7.25
7187.00	39.51	355.24	6956.84	-746.50	-737.02	895.06	11.27	11.27
7234.00	42.77	358.33	6992.24	-715.62	-706.15	893.36	8.16	6.93
7281.00	47.07	357.99	7025.51	-682.45	-672.99	892.29	9.16	9.15
7328.00	51.39	358.88	7056.19	-646.87	-637.42	891.32	9.30	9.19
7376.00	55.45	359.89	7084.79	-608.34	-598.88	890.92	8.62	8.45
7423.00	58.21	1.28	7110.51	-569.01	-559.55	891.33	6.37	5.87
7470.00	62.30	359.65	7133.83	-528.22	-518.76	891.65	9.21	8.70
7517.00	67.55	358.61	7153.74	-485.67	-476.21	890.99	11.36	11.18
7564.00	72.91	356.90	7169.63	-441.48	-432.03	889.25	11.89	11.39
7611.00	75.39	357.77	7182.47	-396.30	-386.87	887.15	5.58	5.29

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	BUILD RATE
ft	deg	deg	ft	ft	ft	ft	°/100ft	°/100ft
7658.00	80.22	358.14	7192.40	-350.38	-340.98	885.52	10.30	10.27
7689.00	83.54	359.06	7196.77	-319.70	-310.30	884.77	11.10	10.71
7790.00	90.17	0.69	7202.32	-218.92	-209.51	884.55	6.76	6.56
7882.00	89.12	0.73	7202.88	-126.95	-117.52	885.70	1.13	-1.13
7974.00	89.16	1.12	7204.26	-34.99	-25.55	887.18	0.42	0.04
8066.00	90.30	1.75	7204.69	56.95	66.42	889.48	1.42	1.24
8159.00	89.60	1.09	7204.78	149.89	159.39	891.79	1.04	-0.76
8253.00	90.37	0.76	7204.80	243.86	253.38	893.31	0.89	0.82
8348.00	87.61	0.29	7206.48	338.81	348.35	894.18	2.94	-2.90
8442.00	89.03	0.81	7209.24	432.75	442.30	895.08	1.60	1.50
8536.00	89.26	359.96	7210.64	526.72	536.29	895.71	0.94	0.25
8631.00	90.20	359.99	7211.09	621.72	631.29	895.67	0.99	0.99
8725.00	90.84	358.77	7210.24	715.71	725.28	894.65	1.46	0.68
8820.00	90.94	359.86	7208.76	810.70	820.26	893.52	1.15	0.11
8915.00	90.91	359.51	7207.23	905.68	915.24	893.00	0.37	-0.04
9009.00	89.60	359.74	7206.82	999.68	1009.24	892.39	1.41	-1.39
9104.00	89.67	359.84	7207.43	1094.68	1104.24	892.04	0.13	0.07
9198.00	90.57	0.50	7207.24	1188.67	1198.23	892.32	1.19	0.96
9293.00	90.07	359.82	7206.71	1283.65	1293.23	892.59	0.89	-0.53
9388.00	89.87	359.65	7206.76	1378.65	1388.23	892.15	0.28	-0.21
9482.00	87.85	0.47	7208.64	1472.62	1482.21	892.25	2.32	-2.15
9577.00	88.18	359.77	7211.93	1567.56	1577.15	892.44	0.82	0.36
9671.00	89.40	0.26	7213.91	1661.53	1671.12	892.46	1.39	1.29
9766.00	90.24	0.24	7214.22	1756.52	1766.12	892.87	0.88	0.88
9860.00	88.93	359.14	7214.90	1850.51	1860.11	892.36	1.81	-1.39
9955.00	89.63	359.14	7216.10	1945.50	1955.10	890.94	0.74	0.74
10049.00	90.03	359.60	7216.38	2039.50	2049.09	889.90	0.65	0.43
10144.00	89.29	359.28	7216.93	2134.50	2144.08	888.97	0.85	-0.78
10238.00	90.23	358.92	7217.32	2228.49	2238.07	887.50	1.07	1.00
10333.00	89.06	359.75	7217.90	2323.49	2333.06	886.40	1.51	-1.24
10428.00	88.59	358.20	7219.85	2418.46	2428.02	884.70	1.70	-0.49
10522.00	88.32	358.29	7222.39	2512.41	2521.94	881.83	0.30	-0.29

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	BUILD RATE
ft	deg	deg	ft	ft	ft	ft	°/100ft	°/100ft
10616.00	89.90	358.75	7223.85	2606.39	2615.90	879.40	1.75	1.68
10709.00	90.00	358.45	7223.93	2699.38	2708.87	877.13	0.35	0.11
10803.00	90.27	357.88	7223.71	2793.35	2802.82	874.12	0.67	0.29
10897.00	90.57	358.63	7223.02	2887.33	2896.77	871.25	0.86	0.32
10992.00	91.04	359.44	7221.69	2982.32	2991.75	869.65	0.99	0.49
11086.00	90.27	0.17	7220.62	3076.31	3085.74	869.33	1.13	-0.82
11180.00	89.43	0.37	7220.86	3170.30	3179.74	869.77	0.92	-0.89
11274.00	90.47	359.57	7220.95	3264.29	3273.74	869.71	1.40	1.11
11369.00	89.46	0.67	7221.00	3359.28	3368.73	869.91	1.57	-1.06
11463.00	90.34	1.67	7221.17	3453.23	3462.71	871.82	1.41	0.93
11557.00	88.19	0.76	7222.38	3547.17	3556.68	873.81	2.48	-2.28
11651.00	88.09	0.06	7225.43	3641.11	3650.62	874.48	0.76	-0.11
11745.00	88.09	359.07	7228.57	3735.05	3744.57	873.77	1.05	0.00
11840.00	87.12	359.25	7232.54	3829.97	3839.47	872.38	1.04	-1.02
11935.00	87.68	357.58	7236.84	3924.85	3934.34	869.76	1.86	0.59
12029.00	89.73	357.13	7238.96	4018.76	4028.21	865.41	2.23	2.18
12124.00	90.20	357.57	7239.02	4113.70	4123.10	861.02	0.68	0.49
12218.00	91.37	357.67	7237.73	4207.65	4217.01	857.12	1.25	1.25
12312.00	92.25	359.94	7234.76	4301.59	4310.94	855.15	2.58	0.93
12406.00	90.77	0.54	7232.28	4395.54	4404.90	855.54	1.70	-1.57
12501.00	89.50	0.91	7232.06	4490.51	4499.89	856.74	1.40	-1.34
12595.00	89.90	0.86	7232.55	4584.48	4593.88	858.20	0.43	0.43
12689.00	89.13	0.92	7233.34	4678.44	4687.86	859.66	0.82	-0.82
12783.00	90.10	1.93	7233.97	4772.38	4781.83	862.00	1.49	1.03
12878.00	88.66	359.15	7235.00	4867.34	4876.81	862.90	3.30	-1.52
12972.00	88.72	358.93	7237.15	4961.32	4970.77	861.32	0.24	0.07
13066.00	89.30	359.78	7238.77	5055.30	5064.75	860.26	1.10	0.61
13161.00	89.83	359.71	7239.49	5150.30	5159.74	859.84	0.57	0.56
13255.00	90.47	1.62	7239.24	5244.27	5253.73	860.94	2.14	0.68
13325.00	90.57	1.66	7238.61	5314.21	5323.70	862.94	0.15	0.14