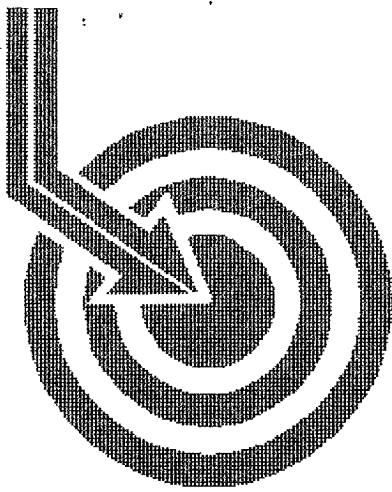




Scientific Drilling

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MAY 27 2010

HOBBSOCD

MARSHALL & WINSTON

Field: Wildcat
Site: Chaves County, NM
Well: Medlin 9 Federal Com #1H
Wellpath: VH - Job #32K0210085
Survey: 02/06/10

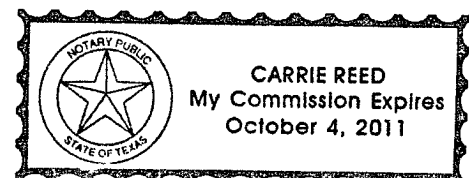
SUR: L-9-15s-31e, 2110/S & 370/W
BHL: I-9-15s-31e, 2005/S & 4916/W
API # 30-005-29113

This survey is correct to the best of my knowledge and is supported by actual field data.

Shepherd
Company Representative

Notorized this date 11th of March, 2010.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Inc.

Survey Report

Company: MARSHALL & WINSTON
Field: Wildcat
Site: Chaves County, NM
Well: Medlin 9 Federal Com #1H
Wellpath: VH - Job #32K0210085

Date: 2/10/2010
Co-ordinate(NE) Reference: Site: Chaves County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,91.36Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

Page: 1

Survey: 02/06/10
Company: Scientific Drilling Internatio
Tool: KSRG, Keeper Gyro

Start Date: 2/6/2010
Engineer: Guebara/Williams/Renteria
Tied-to: From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.0	0.00
100.0	0.05	309.19	100.0	0.0	0.0	0.0	0.05	0.0	309.19
200.0	0.07	54.59	200.0	0.0	0.1	0.0	0.10	0.1	348.85
300.0	0.02	2.08	300.0	0.0	0.1	0.0	0.06	0.1	12.80
400.0	0.08	66.91	400.0	0.1	0.2	0.1	0.07	0.2	27.37
500.0	0.00	59.53	500.0	0.2	0.2	0.2	0.08	0.3	36.86
600.0	0.08	112.06	600.0	0.2	0.2	0.2	0.08	0.3	50.09
700.0	0.09	248.20	700.0	0.2	0.1	0.2	0.16	0.3	58.44
800.0	0.17	175.76	800.0	0.2	0.0	0.2	0.17	0.2	105.44
900.0	0.06	289.13	900.0	0.1	-0.2	0.1	0.20	0.2	145.92
1000.0	0.20	203.95	1000.0	0.0	-0.3	0.0	0.20	0.3	180.48
1100.0	0.13	220.66	1100.0	-0.1	-0.6	-0.1	0.08	0.6	194.70
1200.0	0.21	236.41	1200.0	-0.4	-0.7	-0.4	0.09	0.8	206.52
1300.0	0.25	212.62	1300.0	-0.6	-1.0	-0.6	0.10	1.2	211.91
1400.0	0.07	170.18	1400.0	-0.7	-1.3	-0.8	0.20	1.5	210.45
1500.0	0.25	60.75	1500.0	-0.5	-1.2	-0.6	0.28	1.3	204.08
1600.0	0.35	33.55	1600.0	-0.2	-0.9	-0.2	0.17	0.9	192.40
1700.0	0.47	47.85	1700.0	0.3	-0.3	0.3	0.16	0.4	140.48
1800.0	0.48	58.64	1800.0	0.9	0.2	0.9	0.09	1.0	80.83
1900.0	0.69	58.89	1900.0	1.8	0.7	1.8	0.21	1.9	69.44
2000.0	0.68	55.79	2000.0	2.8	1.3	2.8	0.04	3.1	64.84
2100.0	0.74	61.47	2100.0	3.8	2.0	3.9	0.09	4.4	63.11
2200.0	0.72	56.76	2200.0	4.9	2.6	5.0	0.06	5.6	62.21
2300.0	0.71	63.53	2300.0	6.0	3.2	6.1	0.09	6.9	61.83
2400.0	0.64	52.23	2399.9	7.0	3.9	7.0	0.15	8.0	61.30
2500.0	0.56	33.88	2499.9	7.7	4.6	7.8	0.21	9.0	59.31
2600.0	0.55	45.55	2599.9	8.2	5.3	8.4	0.11	9.9	57.44
2700.0	0.41	20.77	2699.9	8.7	6.0	8.8	0.25	10.7	55.77
2800.0	0.39	29.22	2799.9	9.0	6.7	9.1	0.06	11.3	53.96
2900.0	0.40	28.04	2899.9	9.3	7.3	9.5	0.01	11.9	52.54
3000.0	0.43	31.04	2999.9	9.6	7.9	9.8	0.04	12.6	51.26
3100.0	0.28	26.13	3099.9	9.9	8.4	10.1	0.15	13.2	50.24
3200.0	0.27	10.46	3199.9	10.1	8.9	10.3	0.08	13.6	49.19
3300.0	0.26	1.74	3299.9	10.1	9.3	10.3	0.04	13.9	47.89
3400.0	0.34	347.59	3399.9	10.0	9.9	10.3	0.11	14.2	46.20
3500.0	0.28	347.25	3499.9	9.9	10.4	10.2	0.06	14.5	44.37
3600.0	0.26	318.13	3599.9	9.7	10.8	10.0	0.14	14.7	42.68
3700.0	0.38	294.23	3699.9	9.2	11.1	9.5	0.18	14.6	40.56
3800.0	0.44	301.88	3799.9	8.6	11.4	8.9	0.08	14.5	37.80
3900.0	0.49	282.46	3899.9	7.8	11.7	8.1	0.16	14.3	34.71
4000.0	0.56	287.34	3999.9	7.0	12.0	7.2	0.08	14.0	31.18
4100.0	0.56	276.12	4099.9	6.0	12.2	6.3	0.11	13.7	27.34
4200.0	0.51	290.10	4199.9	5.1	12.4	5.4	0.14	13.5	23.52
4300.0	0.61	287.61	4299.9	4.2	12.7	4.5	0.10	13.4	19.37
4400.0	0.70	274.79	4399.9	3.0	12.9	3.3	0.17	13.3	14.53
4500.0	0.84	274.95	4499.9	1.7	13.0	2.0	0.14	13.2	8.76
4600.0	0.84	278.11	4599.9	0.2	13.2	0.5	0.05	13.2	2.38
4700.0	1.01	277.67	4699.9	-1.4	13.4	-1.1	0.17	13.4	355.51
4800.0	1.05	282.46	4799.8	-3.1	13.7	-2.8	0.09	14.0	348.38



Scientific Drilling International Inc.

Survey Report

Company: MARSHALL & WINSTON
 Field: Wildcat
 Site: Chaves County, NM
 Well: Medlin 9 Federal Com #1H
 Wellpath: VH - Job #32K0210085

Date: 2/10/2010 Time: 16:18:08 Page: 2
 Co-ordinate(NE) Reference: Site: Chaves County, NM, Grid North
 Vertical (TVD) Reference: SITE 0.0
 Section (VS) Reference: Well (0.00N,0.00E,91.36Azi)
 Survey Calculation Method: Minimum Curvature Db: Sybase

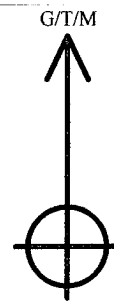
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.0	1.52	292.93	4899.8	-5.3	14.4	-4.9	0.52	15.2	341.11
5000.0	1.81	295.46	4999.8	-8.0	15.6	-7.6	0.30	17.4	334.11
5100.0	1.97	291.95	5099.7	-11.0	16.9	-10.6	0.20	20.0	327.96
5200.0	2.09	292.56	5199.7	-14.3	18.3	-13.9	0.12	23.0	322.80
5300.0	2.16	291.51	5299.6	-17.8	19.7	-17.3	0.08	26.2	318.65
5400.0	2.12	283.86	5399.5	-21.4	20.8	-20.9	0.29	29.5	314.92
5500.0	2.20	286.50	5499.4	-25.0	21.8	-24.5	0.13	32.8	311.66
5600.0	2.40	286.67	5599.4	-28.9	22.9	-28.3	0.20	36.5	308.98
5700.0	2.43	287.57	5699.3	-32.9	24.2	-32.4	0.05	40.4	306.76
5800.0	2.61	287.12	5799.2	-37.2	25.5	-36.6	0.18	44.6	304.88
5900.0	2.61	286.77	5899.1	-41.6	26.8	-40.9	0.02	48.9	303.24
6000.0	2.61	286.74	5999.0	-45.9	28.1	-45.3	0.00	53.3	301.85
6100.0	2.69	286.80	6098.9	-50.4	29.5	-49.7	0.08	57.8	300.66
6200.0	2.79	286.05	6198.7	-55.0	30.8	-54.3	0.11	62.4	299.58
6300.0	2.84	286.09	6298.6	-59.8	32.2	-59.0	0.05	67.2	298.60
6400.0	2.81	286.18	6398.5	-64.5	33.5	-63.8	0.03	72.0	297.75
6500.0	2.88	288.36	6498.4	-69.3	35.0	-68.5	0.13	76.9	297.08
6600.0	3.05	286.47	6598.2	-74.3	36.6	-73.4	0.20	82.0	296.47
6700.0	3.00	291.12	6698.1	-79.3	38.3	-78.4	0.25	87.3	296.01
6800.0	2.83	286.98	6798.0	-84.1	39.9	-83.2	0.27	92.3	295.63
6900.0	2.67	285.95	6897.9	-88.8	41.3	-87.8	0.17	97.0	295.18
7000.0	2.65	289.63	6997.8	-93.2	42.7	-92.2	0.17	101.6	294.84
7100.0	2.61	287.85	7097.7	-97.6	44.2	-96.6	0.09	106.2	294.58
7200.0	2.78	291.66	7197.5	-102.1	45.8	-101.0	0.25	110.9	294.38
7300.0	2.75	290.84	7297.4	-106.6	47.5	-105.5	0.05	115.7	294.25
7400.0	2.45	293.99	7397.3	-110.8	49.2	-109.7	0.33	120.2	294.18
7500.0	2.22	294.02	7497.2	-114.6	50.9	-113.4	0.23	124.3	294.17
7600.0	1.63	308.02	7597.2	-117.5	52.6	-116.3	0.75	127.6	294.32
7700.0	1.54	290.30	7697.1	-119.9	53.9	-118.7	0.50	130.4	294.43
7800.0	1.71	299.28	7797.1	-122.5	55.1	-121.3	0.31	133.2	294.44
7900.0	1.34	299.53	7897.1	-124.9	56.4	-123.6	0.37	135.8	294.54
8000.0	1.14	307.10	7997.0	-126.7	57.6	-125.4	0.26	138.0	294.67
8100.0	1.21	322.20	8097.0	-128.2	59.0	-126.8	0.32	139.9	294.96
8200.0	0.98	337.51	8197.0	-129.2	60.6	-127.8	0.37	141.5	295.39
8300.0	0.85	7.69	8297.0	-129.5	62.2	-128.0	0.49	142.3	295.90
8345.0	0.88	28.35	8342.0	-129.3	62.8	-127.8	0.69	142.4	296.17



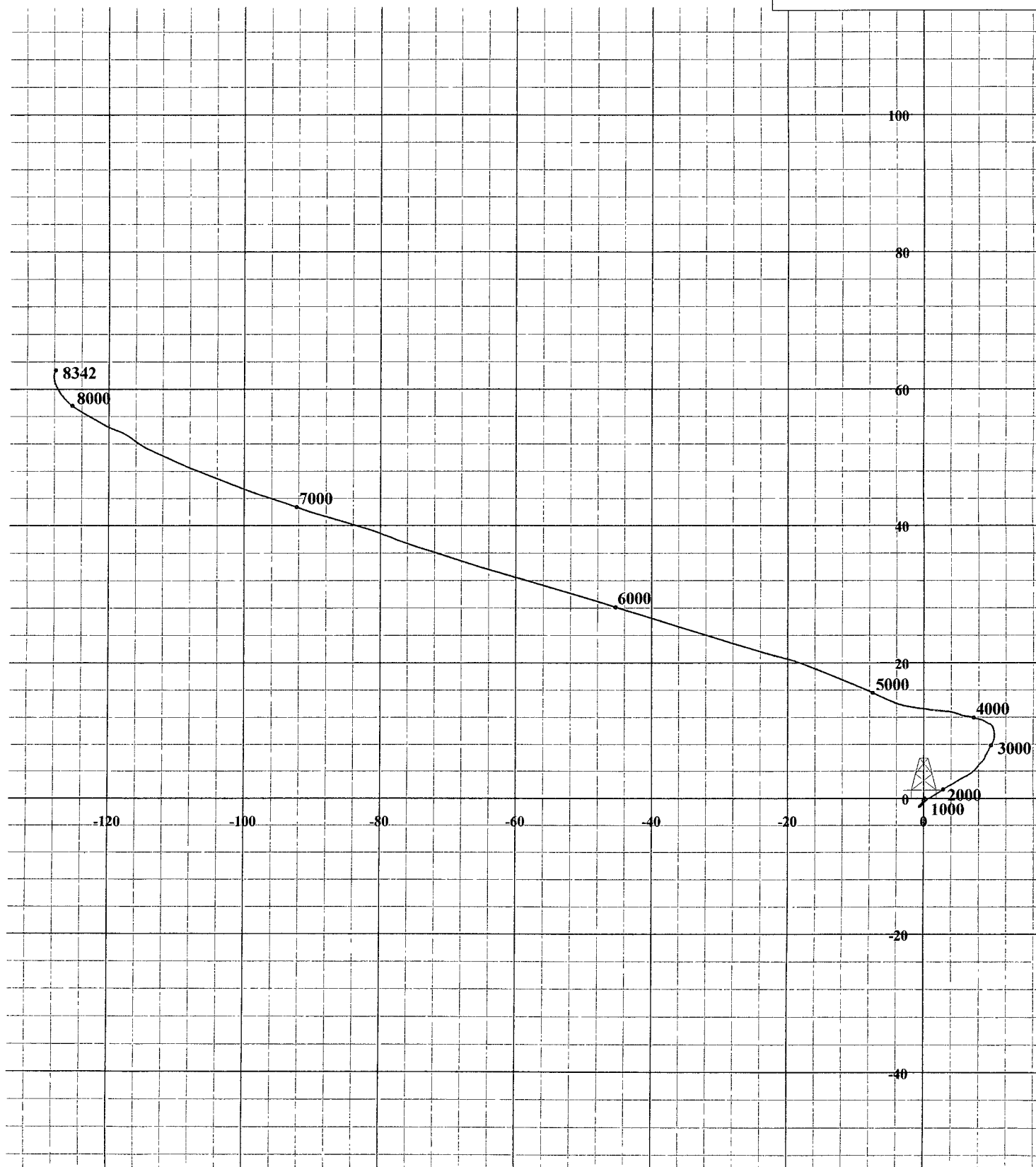
Scientific
Drilling

Field: Wildcat
Site: Chaves County, NM
Well: Medlin 9 Federal Com #1H
Survey: 02/06/10



Azimuths to Grid North
True North 0 00°
Magnetic North 0 00°
Magnetic Field
Dip Angle: 0 00°
Date 2/10/2010
Model igrf2000

South(-)/North(+) [20ft/in]



West(-)/East(+) [20ft/in]

ACTUAL WELLPATH REPORT (CSV version)

Prepared by Baker Hughes INTEQ

Software System: WellArchitect@2.0

REFERENCE WELLPATH IDENTIFICATION

Operator Marshall & Winston, INC
 Area Chaves County, NM
 Field (Medlin 9) Sec 9, T15S, R31E
 Facility Medlin Fed Com 9 No. 1H
 Slot No. 1H SHL
 Well No. 1H
 Wellbore No. 1H AWB
 Wellpath No. 1H AWP
 Sidetrack (none)

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REPORT SETUP INFORMATION

Projection : NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet

North Refe Grid

Scale 0.999936

Convergen 0.27° East

Software S WellArchitect®

User Victor Hernandez

Report Ger 2/24/2010 at 11:37:28 AM

DataBase/ WA_Midland/ev120121.xml

WELLPATH	Local North	Local East	Grid East	Grid North	Latitude	Longitude
	[ft]	[ft]	[ft]	[ft]		
Slot Location	0	0	653128.8	738359.8	33°01'43.7	103°50'01.337"W
Facility Ref			653128.8	738359.8	33°01'43.7	103°50'01.337"W
Field Refer			653095.5	736910	33°01'29.3	103°50'01.809"W

WELLPATH DATUM

Calculation Minimum curvature

Horizontal Facility Center

Vertical Re Patterson 511 on No. 1H SHL (RT)

MD Refere Patterson 511 on No. 1H SHL (RT)

Field Vertic Mean Sea Level

Patterson $\pm$ 18.00ft

Patterson $\pm$ 4450.00ft

Facility Ver 0.00ft

Section Ori 0.00ft

Section Ori 0.00ft

Section Azi 91.36°

WELLPATH DATA		Wellbore: No. 1H AWB		Wellpath: No. 1H AWP		† = interpolated/extrap		
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[srv ft]	
0	0	309.19	0	0	0	0	653128.8	
100	0.05	309.19	100	-0.03	0.03	-0.03	653128.8	
200	0.07	54.59	200	-0.02	0.09	-0.02	653128.8	
300	0.02	2.08	300	0.03	0.14	0.03	653128.8	

400	0.08	66.91	400	0.09	0.19	0.1	653128.9
500	0	59.53	500	0.16	0.22	0.16	653129
600	0.08	112.06	600	0.22	0.19	0.23	653129
700	0.09	248.2	700	0.21	0.13	0.22	653129
800	0.17	175.76	800	0.16	-0.04	0.16	653129
900	0.06	289.13	900	0.12	-0.17	0.12	653128.9
1000	0.2	203.95	1000	0	-0.32	0	653128.8
1100	0.13	220.66	1100	-0.13	-0.56	-0.15	653128.7
1200	0.21	236.41	1200	-0.36	-0.75	-0.37	653128.4
1300	0.25	212.62	1300	-0.62	-1.03	-0.64	653128.2
1400	0.07	170.18	1400	-0.72	-1.28	-0.75	653128.1
1500	0.25	60.75	1500	-0.52	-1.23	-0.55	653128.3
1600	0.35	33.55	1600	-0.17	-0.87	-0.19	653128.6
1700	0.47	47.85	1699.99	0.29	-0.34	0.28	653129.1
1800	0.48	58.64	1799.99	0.94	0.15	0.94	653129.7
1900	0.69	58.89	1899.98	1.8	0.68	1.82	653130.6
2000	0.68	55.79	1999.98	2.79	1.33	2.82	653131.6
2100	0.74	61.47	2099.97	3.83	1.97	3.88	653132.7
2200	0.72	56.76	2199.96	4.91	2.62	4.97	653133.8
2300	0.71	63.53	2299.95	5.97	3.24	6.05	653134.9
2400	0.64	52.23	2399.95	6.96	3.86	7.05	653135.9
2500	0.56	33.88	2499.94	7.65	4.61	7.76	653136.6
2600	0.55	45.55	2599.94	8.25	5.35	8.38	653137.2
2700	0.41	20.77	2699.93	8.7	6.02	8.85	653137.7
2800	0.39	29.22	2799.93	8.98	6.65	9.14	653137.9
2900	0.4	28.04	2899.93	9.3	7.26	9.47	653138.3
3000	0.43	31.04	2999.93	9.64	7.89	9.83	653138.6
3100	0.28	26.13	3099.92	9.93	8.43	10.13	653138.9
3200	0.27	10.46	3199.92	10.07	8.88	10.28	653139.1
3300	0.26	1.74	3299.92	10.1	9.34	10.33	653139.1
3400	0.34	347.59	3399.92	10.04	9.85	10.27	653139.1
3500	0.28	347.25	3499.92	9.91	10.38	10.16	653139
3600	0.26	318.13	3599.92	9.69	10.79	9.95	653138.8
3700	0.38	294.23	3699.92	9.23	11.09	9.5	653138.3
3800	0.44	301.88	3799.91	8.59	11.43	8.87	653137.7
3900	0.49	282.46	3899.91	7.84	11.73	8.12	653136.9
4000	0.56	287.34	3999.91	6.95	11.97	7.24	653136
4100	0.56	276.12	4099.9	6	12.16	6.29	653135.1
4200	0.51	290.1	4199.9	5.09	12.37	5.38	653134.2
4300	0.61	287.61	4299.89	4.16	12.68	4.46	653133.3
4400	0.7	274.79	4399.89	3.03	12.89	3.34	653132.1
4500	0.84	274.95	4499.88	1.69	13.01	2	653130.8
4600	0.84	278.11	4599.87	0.23	13.18	0.55	653129.4
4700	1.01	277.67	4699.85	-1.37	13.4	-1.05	653127.8
4800	1.05	282.46	4799.84	-3.15	13.71	-2.82	653126
4900	1.52	292.93	4899.81	-5.28	14.43	-4.94	653123.9
5000	1.81	295.46	4999.77	-7.95	15.62	-7.58	653121.2
5100	1.97	291.95	5099.71	-11	16.94	-10.6	653118.2
5200	2.09	292.56	5199.65	-14.31	18.29	-13.88	653114.9
5300	2.16	291.51	5299.58	-17.78	19.68	-17.32	653111.5
5400	2.12	283.86	5399.51	-21.36	20.81	-20.87	653107.9
5500	2.2	286.5	5499.44	-25.02	21.8	-24.5	653104.3

5600	2.4	286.67	5599.36	-28.89	22.94	-28.35	653100.5
5700	2.43	287.57	5699.27	-32.94	24.18	-32.38	653096.4
5800	2.61	287.12	5799.18	-37.17	25.49	-36.57	653092.2
5900	2.61	286.77	5899.07	-41.56	26.82	-40.93	653087.9
6000	2.61	286.74	5998.97	-45.95	28.13	-45.29	653083.5
6100	2.69	286.8	6098.86	-50.4	29.47	-49.72	653079.1
6200	2.79	286.05	6198.75	-55.02	30.82	-54.3	653074.5
6300	2.84	286.09	6298.63	-59.77	32.18	-59.02	653069.8
6400	2.81	286.18	6398.51	-64.54	33.55	-63.76	653065.1
6500	2.88	288.36	6498.38	-69.31	35.02	-68.49	653060.3
6600	3.05	286.47	6598.25	-74.28	36.57	-73.43	653055.4
6700	3	291.12	6698.11	-79.31	38.27	-78.42	653050.4
6800	2.83	286.98	6797.98	-84.15	39.93	-83.22	653045.6
6900	2.67	285.95	6897.86	-88.78	41.29	-87.82	653041
7000	2.65	289.63	6997.76	-93.23	42.71	-92.24	653036.6
7100	2.61	287.85	7097.65	-97.61	44.18	-96.59	653032.2
7200	2.78	291.66	7197.54	-102.07	45.77	-101.01	653027.8
7300	2.75	290.84	7297.42	-106.6	47.52	-105.5	653023.3
7400	2.45	293.99	7397.32	-110.84	49.25	-109.7	653019.1
7500	2.22	294.02	7497.24	-114.6	50.9	-113.42	653015.4
7600	1.63	308.02	7597.18	-117.53	52.57	-116.31	653012.5
7700	1.54	290.3	7697.14	-119.94	53.91	-118.69	653010.1
7800	1.71	299.28	7797.1	-122.53	55.11	-121.25	653007.6
7900	1.34	299.53	7897.07	-124.88	56.41	-123.57	653005.2
8000	1.14	307.1	7997.05	-126.72	57.59	-125.38	653003.4
8100	1.21	322.2	8097.02	-128.19	59.02	-126.82	653002
8200	0.98	337.51	8197.01	-129.2	60.65	-127.8	653001
8300	0.85	7.69	8296.99	-129.47	62.17	-128.02	653000.8
8345	0.88	28.35	8341.99	-129.27	62.81	-127.82	653001
8357	0.8	45.07	8353.99	-129.17	62.95	-127.71	653001.1
8389	2.8	81.5	8385.97	-128.25	63.22	-126.78	653002
8420	6.6	88.8	8416.86	-125.72	63.37	-124.25	653004.6
8453	11.2	89.4	8449.46	-120.62	63.44	-119.15	653009.7
8484	16.2	89.4	8479.56	-113.29	63.52	-111.81	653017
8515	22	89.7	8508.85	-103.15	63.6	-101.67	653027.1
8547	29	88.9	8537.71	-89.4	63.78	-87.9	653040.9
8579	35.4	87.3	8564.77	-72.38	64.36	-70.87	653057.9
8611	40.8	88.2	8589.95	-52.68	65.13	-51.15	653077.7
8643	46.6	89.2	8613.07	-30.61	65.62	-29.05	653099.8
8674	52	89.1	8633.28	-7.13	65.97	-5.56	653123.2
8706	56.9	92	8651.88	18.89	65.7	20.46	653149.3
8737	62.2	93.3	8667.59	45.59	64.46	47.14	653175.9
8770	67.6	93.9	8681.58	75.44	62.58	76.96	653205.8
8802	72.4	93.6	8692.52	105.48	60.61	106.95	653235.8
8834	74.9	93	8701.53	136.17	58.84	137.61	653266.4
8865	77.2	92.3	8709	166.24	57.45	167.66	653296.5
8897	79.8	92.1	8715.38	197.59	56.25	198.99	653327.8
8929	82.6	92.2	8720.28	229.21	55.07	230.59	653359.4
8961	83.6	92.1	8724.12	260.97	53.87	262.33	653391.1
8992	86.4	92.3	8726.82	291.85	52.69	293.19	653422
9087	90	90.7	8729.81	386.78	50.2	388.09	653516.9
9119	90.1	91	8729.78	418.78	49.73	420.09	653548.9

9151	89.9	90.7	8729.78	450.78	49.25	452.08	653580.9
9183	89.9	90.8	8729.84	482.78	48.84	484.08	653612.9
9215	89.9	90.8	8729.89	514.78	48.39	516.08	653644.8
9247	89.5	91.2	8730.06	546.78	47.83	548.07	653676.8
9278	89.5	91.7	8730.33	577.78	47.05	579.06	653707.8
9310	89.5	92.2	8730.61	609.77	45.96	611.04	653739.8
9342	89.5	92.3	8730.89	641.77	44.7	643.01	653771.8
9374	89.5	92.4	8731.17	673.76	43.39	674.99	653803.7
9405	89.5	92.4	8731.44	704.76	42.09	705.96	653834.7
9437	89.6	92.2	8731.69	736.75	40.81	737.93	653866.7
9469	89.6	92.5	8731.91	768.74	39.49	769.9	653898.7
9500	89.5	92.5	8732.16	799.74	38.14	800.87	653929.6
9532	88.6	93.2	8732.69	831.72	36.55	832.83	653961.6
9564	88.6	93.7	8733.47	863.69	34.63	864.76	653993.5
9596	88.6	93.5	8734.25	895.66	32.62	896.69	654025.4
9628	88.6	92.9	8735.03	927.63	30.83	928.63	654057.4
9660	88.6	93.1	8735.81	959.61	29.16	960.58	654089.3
9691	88.6	93	8736.57	990.59	27.51	991.52	654120.3
9723	88.5	93.6	8737.38	1022.56	25.67	1023.46	654152.2
9755	88.8	91.8	8738.13	1054.54	24.16	1055.41	654184.1
9787	87.9	89.1	8739.06	1086.52	23.91	1087.4	654216.1
9819	88.1	88.1	8740.17	1118.46	24.69	1119.37	654248.1
9851	88	88.6	8741.26	1150.4	25.61	1151.33	654280.1
9883	88.2	89.2	8742.32	1182.35	26.23	1183.31	654312
9915	88	88.8	8743.38	1214.31	26.78	1215.29	654344
9946	88	88.8	8744.47	1245.26	27.43	1246.26	654375
9977	88.1	88.9	8745.52	1276.21	28.05	1277.24	654406
10009	88.2	89.8	8746.55	1308.17	28.42	1309.22	654437.9
10041	88	90.1	8747.61	1340.14	28.44	1341.2	654469.9
10072	88	89.8	8748.7	1371.12	28.47	1372.18	654500.9
10104	88.1	90	8749.79	1403.09	28.53	1404.16	654532.9
10136	87.9	90	8750.9	1435.06	28.53	1436.14	654564.9
10167	87.2	89.9	8752.23	1466.02	28.55	1467.12	654595.8
10199	86.5	90	8753.99	1497.96	28.58	1499.07	654627.8
10231	86.1	89.5	8756.05	1529.88	28.72	1531	654659.7
10263	85.8	89.6	8758.31	1561.79	28.97	1562.92	654691.6
10294	86.8	90.1	8760.31	1592.71	29.05	1593.85	654722.6
10326	88.1	90.7	8761.73	1624.67	28.83	1625.82	654754.5
10358	90	91.1	8762.27	1656.67	28.33	1657.81	654786.5
10390	90.8	91.4	8762.04	1688.66	27.63	1689.8	654818.5
10421	89.4	90	8761.99	1719.66	27.25	1720.8	654849.5
10453	89.2	89.4	8762.38	1751.65	27.42	1752.79	654881.5
10485	89.2	89.1	8762.83	1783.62	27.84	1784.79	654913.5
10516	89.3	88.6	8763.23	1814.59	28.46	1815.78	654944.5
10548	89.3	88.3	8763.62	1846.54	29.32	1847.77	654976.4
10580	89.4	87.9	8763.99	1878.49	30.39	1879.75	655008.4
10611	89.3	88.5	8764.34	1909.44	31.36	1910.73	655039.4
10643	89.3	89.5	8764.73	1941.41	31.92	1942.72	655071.4
10675	89.3	90.5	8765.12	1973.4	31.92	1974.72	655103.4
10706	89.3	91.7	8765.5	2004.4	31.32	2005.71	655134.4
10738	89.3	92.5	8765.89	2036.39	30.15	2037.69	655166.4
10769	89.3	93.6	8766.27	2067.37	28.5	2068.64	655197.3

10801	90.3	94	8766.38	2099.34	26.38	2100.57	655229.2
10833	90.3	93.9	8766.21	2131.31	24.18	2132.49	655261.2
10864	90.4	93.7	8766.02	2162.28	22.12	2163.42	655292.1
10896	90.3	93.9	8765.83	2194.25	20	2195.35	655324
10928	90.3	93.8	8765.66	2226.22	17.85	2227.28	655355.9
10960	90.3	93.7	8765.49	2258.19	15.76	2259.21	655387.9
10992	90.3	93.8	8765.32	2290.17	13.67	2291.14	655419.8
11023	90.3	93.4	8765.16	2321.14	11.72	2322.08	655450.7
11055	90.3	93.4	8764.99	2353.12	9.82	2354.02	655482.7
11087	90.3	93.2	8764.83	2385.1	7.98	2385.97	655514.6
11119	90.3	93	8764.66	2417.09	6.25	2417.92	655546.6
11150	90.4	92.8	8764.47	2448.08	4.68	2448.88	655577.5
11182	90.5	92.7	8764.22	2480.07	3.15	2480.84	655609.5
11214	90.4	92.5	8763.97	2512.06	1.69	2512.81	655641.4
11246	90.4	92.7	8763.74	2544.05	0.24	2544.78	655673.4
11277	90.4	92.5	8763.53	2575.04	-1.16	2575.74	655704.4
11309	90.4	92.4	8763.3	2607.03	-2.53	2607.71	655736.3
11340	90.4	92.7	8763.09	2638.03	-3.91	2638.68	655767.3
11372	90.3	92.8	8762.89	2670.02	-5.45	2670.64	655799.3
11404	90.4	93.6	8762.7	2702	-7.23	2702.59	655831.2
11435	90.3	94.2	8762.51	2732.97	-9.34	2733.52	655862.1
11467	90.3	94.8	8762.34	2764.92	-11.85	2765.42	655894
11499	90.4	95.4	8762.14	2796.85	-14.7	2797.29	655925.9
11531	90.4	95.8	8761.92	2828.76	-17.82	2829.14	655957.8
11563	90.2	95.8	8761.75	2860.67	-21.05	2860.98	655989.6
11594	89.7	95.2	8761.78	2891.59	-24.02	2891.83	656020.4
11625	89.8	93.9	8761.92	2922.54	-26.48	2922.73	656051.3
11657	89.8	93.1	8762.03	2954.51	-28.44	2954.67	656083.3
11689	89.9	92.3	8762.11	2986.51	-29.94	2986.64	656115.2
11721	89.8	92.3	8762.19	3018.5	-31.23	3018.61	656147.2
11752	89.8	92	8762.3	3049.5	-32.39	3049.59	656178.2
11784	89.9	91.9	8762.39	3081.5	-33.48	3081.57	656210.2
11816	89.9	92.3	8762.44	3113.49	-34.65	3113.55	656242.2
11848	89.8	92.6	8762.53	3145.49	-36.02	3145.52	656274.1
11912	89.8	92.5	8762.75	3209.47	-38.87	3209.46	656338.1
11943	89.9	92.3	8762.83	3240.47	-40.17	3240.43	656369
11975	89.8	92	8762.91	3272.46	-41.37	3272.41	656401
12038	89.8	91.7	8763.13	3335.46	-43.4	3335.37	656464
12101	89.9	91.3	8763.3	3398.46	-45.05	3398.35	656526.9
12165	89.9	91.4	8763.41	3462.46	-46.56	3462.33	656590.9
12228	89.9	91.2	8763.52	3525.46	-47.99	3525.32	656653.9
12292	89.9	92.9	8763.63	3589.45	-50.28	3589.27	656717.8
12355	89.9	93.1	8763.74	3652.43	-53.57	3652.19	656780.8
12418	90	92.8	8763.8	3715.4	-56.81	3715.1	656843.7
12482	89.7	93.2	8763.97	3779.38	-60.16	3779.02	656907.6
12546	89.8	93.3	8764.24	3843.34	-63.79	3842.91	656971.5
12609	89.7	93.3	8764.52	3906.31	-67.42	3905.81	657034.4
12673	89.7	93.2	8764.85	3970.27	-71.05	3969.7	657098.2
12736	89.7	93.2	8765.18	4033.24	-74.56	4032.6	657161.1
12799	89.8	93.4	8765.46	4096.2	-78.19	4095.5	657224
12862	89.7	93.5	8765.73	4159.16	-81.98	4158.39	657286.9
12926	89.8	93.3	8766.01	4223.12	-85.78	4222.27	657350.8

12989	89.8	93.6	8766.23	4286.07	-89.57	4285.16	657413.7
13052	89.7	93.3	8766.51	4349.03	-93.36	4348.04	657476.6
13115	89.9	93.4	8766.73	4411.99	-97.04	4410.93	657539.4
13179	89.8	93.5	8766.9	4475.95	-100.89	4474.82	657603.3
13210	89.8	93.4	8767	4506.93	-102.76	4505.76	657634.3
13250	89.8	93.4	8767.14	4546.91	-105.13	4545.69	657674.2

T A R G E T S

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude
No. 1H PBHL		8730	-109.11	4581	657709.5	738250.7	33°01'42.4	103°49'07.3

WELLPATH COMPOSITION Ref Wellbore: No. 1H AWB Ref Wellpath: No. 1H AWP

Log Name/	Start MD [ft]	End MD [ft]	Pos Unc	Model
GYRO - <1	0	8345		Generic gyro - continuous (Standard)
MWD - <8	8345	13210		NaviTrak (Standard)
Projection	13210	13250		Blind Drilling (std)

olated station

Grid North	Latitude	Longitude	DLS
[svt ft]			[°/100ft]
738359.8	33°01'43.7	103°50'01.1	0
738359.8	33°01'43.7	103°50'01.1	0.05
738359.9	33°01'43.7	103°50'01.1	0.1
738359.9	33°01'43.7	103°50'01.1	0.06

738360 33°01'43.7 103°50'01..	0.07
738360 33°01'43.7 103°50'01..	0.08
738360 33°01'43.7 103°50'01..	0.08
738359.9 33°01'43.7 103°50'01..	0.16
738359.8 33°01'43.7 103°50'01..	0.17
738359.6 33°01'43.7 103°50'01..	0.2
738359.5 33°01'43.7 103°50'01..	0.2
738359.2 33°01'43.7 103°50'01..	0.08
738359.1 33°01'43.7 103°50'01..	0.09
738358.8 33°01'43.7 103°50'01..	0.1
738358.5 33°01'43.7 103°50'01..	0.2
738358.6 33°01'43.7 103°50'01..	0.28
738358.9 33°01'43.7 103°50'01..	0.17
738359.5 33°01'43.7 103°50'01..	0.16
738360 33°01'43.7 103°50'01..	0.09
738360.5 33°01'43.7 103°50'01..	0.21
738361.1 33°01'43.7 103°50'01..	0.04
738361.8 33°01'43.7 103°50'01..	0.09
738362.4 33°01'43.7 103°50'01..	0.06
738363 33°01'43.7 103°50'01..	0.09
738363.7 33°01'43.7 103°50'01..	0.15
738364.4 33°01'43.7 103°50'01..	0.21
738365.2 33°01'43.7 103°50'01..	0.11
738365.8 33°01'43.7 103°50'01..	0.25
738366.5 33°01'43.7 103°50'01..	0.06
738367.1 33°01'43.8 103°50'01..	0.01
738367.7 33°01'43.8 103°50'01..	0.04
738368.2 33°01'43.8 103°50'01..	0.15
738368.7 33°01'43.8 103°50'01..	0.08
738369.1 33°01'43.8 103°50'01..	0.04
738369.7 33°01'43.8 103°50'01..	0.11
738370.2 33°01'43.8 103°50'01..	0.06
738370.6 33°01'43.8 103°50'01..	0.14
738370.9 33°01'43.8 103°50'01..	0.18
738371.2 33°01'43.8 103°50'01..	0.08
738371.5 33°01'43.8 103°50'01..	0.16
738371.8 33°01'43.8 103°50'01..	0.08
738372 33°01'43.8 103°50'01..	0.11
738372.2 33°01'43.8 103°50'01..	0.14
738372.5 33°01'43.8 103°50'01..	0.1
738372.7 33°01'43.8 103°50'01..	0.17
738372.8 33°01'43.8 103°50'01..	0.14
738373 33°01'43.8 103°50'01..	0.05
738373.2 33°01'43.8 103°50'01..	0.17
738373.5 33°01'43.8 103°50'01..	0.09
738374.2 33°01'43.8 103°50'01..	0.52
738375.4 33°01'43.8 103°50'01..	0.3
738376.7 33°01'43.9 103°50'01..	0.2
738378.1 33°01'43.9 103°50'01..	0.12
738379.5 33°01'43.9 103°50'01..	0.08
738380.6 33°01'43.9 103°50'01..	0.29
738381.6 33°01'43.9 103°50'01..	0.13

738382.7	33°01'43.9"	103°50'01."	0.2
738384	33°01'43.9"	103°50'01."	0.05
738385.3	33°01'43.9"	103°50'01."	0.18
738386.6	33°01'43.9"	103°50'01."	0.02
738387.9	33°01'44.0"	103°50'01."	0
738389.3	33°01'44.0"	103°50'01."	0.08
738390.6	33°01'44.0"	103°50'01."	0.11
738392	33°01'44.0"	103°50'02."	0.05
738393.4	33°01'44.0"	103°50'02."	0.03
738394.8	33°01'44.0"	103°50'02."	0.13
738396.4	33°01'44.0"	103°50'02."	0.2
738398.1	33°01'44.1"	103°50'02."	0.25
738399.7	33°01'44.1"	103°50'02."	0.27
738401.1	33°01'44.1"	103°50'02."	0.17
738402.5	33°01'44.1"	103°50'02."	0.17
738404	33°01'44.1"	103°50'02."	0.09
738405.6	33°01'44.1"	103°50'02."	0.25
738407.3	33°01'44.2"	103°50'02."	0.05
738409	33°01'44.2"	103°50'02."	0.33
738410.7	33°01'44.2"	103°50'02."	0.23
738412.4	33°01'44.2"	103°50'02."	0.75
738413.7	33°01'44.2"	103°50'02."	0.5
738414.9	33°01'44.2"	103°50'02."	0.31
738416.2	33°01'44.2"	103°50'02."	0.37
738417.4	33°01'44.3"	103°50'02."	0.26
738418.8	33°01'44.3"	103°50'02."	0.32
738420.4	33°01'44.3"	103°50'02."	0.37
738422	33°01'44.3"	103°50'02."	0.49
738422.6	33°01'44.3"	103°50'02."	0.69
738422.7	33°01'44.3"	103°50'02."	2.14
738423	33°01'44.3"	103°50'02."	6.9
738423.2	33°01'44.3"	103°50'02."	12.38
738423.2	33°01'44.3"	103°50'02."	13.94
738423.3	33°01'44.3"	103°50'02."	16.13
738423.4	33°01'44.3"	103°50'02."	18.71
738423.6	33°01'44.3"	103°50'02."	21.9
738424.2	33°01'44.3"	103°50'02."	20.18
738424.9	33°01'44.3"	103°50'01."	16.96
738425.4	33°01'44.3"	103°50'01."	18.25
738425.8	33°01'44.3"	103°50'01."	17.42
738425.5	33°01'44.3"	103°50'01."	16.99
738424.3	33°01'44.3"	103°50'00."	17.47
738422.4	33°01'44.3"	103°50'00."	16.45
738420.4	33°01'44.3"	103°50'00."	15.03
738418.6	33°01'44.3"	103°49'59."	8.02
738417.3	33°01'44.2"	103°49'59."	7.74
738416.1	33°01'44.2"	103°49'58."	8.15
738414.9	33°01'44.2"	103°49'58."	8.76
738413.7	33°01'44.2"	103°49'58."	3.14
738412.5	33°01'44.2"	103°49'57."	9.06
738410	33°01'44.2"	103°49'56."	4.15
738409.5	33°01'44.2"	103°49'56."	0.99

738409.1	33°01'44.1	103°49'56.0	1.13
738408.6	33°01'44.1	103°49'55.0	0.31
738408.2	33°01'44.1	103°49'55.0	0
738407.6	33°01'44.1	103°49'54.0	1.77
738406.8	33°01'44.1	103°49'54.0	1.61
738405.8	33°01'44.1	103°49'54.0	1.56
738404.5	33°01'44.1	103°49'53.0	0.31
738403.2	33°01'44.1	103°49'53.0	0.31
738401.9	33°01'44.1	103°49'53.0	0
738400.6	33°01'44.1	103°49'52.0	0.7
738399.3	33°01'44.0	103°49'52.0	0.94
738397.9	33°01'44.0	103°49'51.0	0.32
738396.4	33°01'44.0	103°49'51.0	3.56
738394.4	33°01'44.0	103°49'51.0	1.56
738392.4	33°01'44.0	103°49'50.0	0.62
738390.6	33°01'43.9	103°49'50.0	1.87
738389	33°01'43.9	103°49'50.0	0.62
738387.3	33°01'43.9	103°49'49.0	0.32
738385.5	33°01'43.9	103°49'49.0	1.9
738384	33°01'43.9	103°49'48.0	5.7
738383.7	33°01'43.9	103°49'48.0	8.89
738384.5	33°01'43.9	103°49'48.0	3.19
738385.4	33°01'43.9	103°49'47.0	1.59
738386	33°01'43.9	103°49'47.0	1.98
738386.6	33°01'43.9	103°49'47.0	1.4
738387.2	33°01'43.9	103°49'46.0	0
738387.9	33°01'43.9	103°49'46.0	0.46
738388.2	33°01'43.9	103°49'45.0	2.83
738388.2	33°01'43.9	103°49'45.0	1.13
738388.3	33°01'43.9	103°49'45.0	0.97
738388.3	33°01'43.9	103°49'44.0	0.7
738388.3	33°01'43.9	103°49'44.0	0.62
738388.4	33°01'43.9	103°49'44.0	2.28
738388.4	33°01'43.9	103°49'43.0	2.21
738388.5	33°01'43.9	103°49'43.0	2
738388.8	33°01'43.9	103°49'42.0	0.99
738388.9	33°01'43.9	103°49'42.0	3.61
738388.6	33°01'43.9	103°49'42.0	4.47
738388.1	33°01'43.9	103°49'41.0	6.07
738387.4	33°01'43.9	103°49'41.0	2.67
738387.1	33°01'43.9	103°49'41.0	6.39
738387.2	33°01'43.9	103°49'40.0	1.98
738387.6	33°01'43.9	103°49'40.0	0.94
738388.3	33°01'43.9	103°49'40.0	1.64
738389.1	33°01'43.9	103°49'39.0	0.94
738390.2	33°01'43.9	103°49'39.0	1.29
738391.2	33°01'43.9	103°49'38.0	1.96
738391.7	33°01'43.9	103°49'38.0	3.12
738391.7	33°01'43.9	103°49'38.0	3.12
738391.1	33°01'43.9	103°49'37.0	3.87
738390	33°01'43.9	103°49'37.0	2.5
738388.3	33°01'43.9	103°49'37.0	3.55

738386.2	33°01'43.8	103°49'36.0	3.37
738384	33°01'43.8	103°49'36.0	0.31
738381.9	33°01'43.8	103°49'35.0	0.72
738379.8	33°01'43.8	103°49'35.0	0.7
738377.7	33°01'43.8	103°49'35.0	0.31
738375.6	33°01'43.7	103°49'34.0	0.31
738373.5	33°01'43.7	103°49'34.0	0.31
738371.5	33°01'43.7	103°49'34.0	1.29
738369.6	33°01'43.7	103°49'33.0	0
738367.8	33°01'43.6	103°49'33.0	0.62
738366.1	33°01'43.6	103°49'32.0	0.62
738364.5	33°01'43.6	103°49'32.0	0.72
738363	33°01'43.6	103°49'32.0	0.44
738361.5	33°01'43.6	103°49'31.0	0.7
738360	33°01'43.6	103°49'31.0	0.62
738358.6	33°01'43.5	103°49'31.0	0.65
738357.3	33°01'43.5	103°49'30.0	0.31
738355.9	33°01'43.5	103°49'30.0	0.97
738354.4	33°01'43.5	103°49'29.0	0.44
738352.6	33°01'43.5	103°49'29.0	2.52
738350.5	33°01'43.5	103°49'29.0	1.96
738348	33°01'43.4	103°49'28.0	1.87
738345.1	33°01'43.4	103°49'28.0	1.9
738342	33°01'43.4	103°49'28.0	1.25
738338.8	33°01'43.3	103°49'27.0	0.62
738335.8	33°01'43.3	103°49'27.0	2.52
738333.3	33°01'43.3	103°49'27.0	4.21
738331.4	33°01'43.3	103°49'26.0	2.5
738329.9	33°01'43.2	103°49'26.0	2.52
738328.6	33°01'43.2	103°49'25.0	0.31
738327.4	33°01'43.2	103°49'25.0	0.97
738326.3	33°01'43.2	103°49'25.0	0.44
738325.2	33°01'43.2	103°49'24.0	1.25
738323.8	33°01'43.2	103°49'24.0	0.99
738320.9	33°01'43.1	103°49'23.0	0.16
738319.6	33°01'43.1	103°49'23.0	0.72
738318.4	33°01'43.1	103°49'22.0	0.99
738316.4	33°01'43.1	103°49'22.0	0.48
738314.8	33°01'43.1	103°49'21.0	0.65
738313.3	33°01'43.1	103°49'20.0	0.16
738311.8	33°01'43.0	103°49'19.0	0.32
738309.5	33°01'43.0	103°49'19.0	2.66
738306.2	33°01'43.0	103°49'18.0	0.32
738303	33°01'42.9	103°49'17.0	0.5
738299.6	33°01'42.9	103°49'16.0	0.78
738296	33°01'42.9	103°49'16.0	0.22
738292.4	33°01'42.8	103°49'15.0	0.16
738288.8	33°01'42.8	103°49'14.0	0.16
738285.2	33°01'42.8	103°49'13.0	0
738281.6	33°01'42.7	103°49'13.0	0.35
738277.8	33°01'42.7	103°49'12.0	0.22
738274	33°01'42.6	103°49'11.0	0.35

738270.2	33°01'42.6	103°49'11	0.48
738266.5	33°01'42.6	103°49'10.	0.5
738262.8	33°01'42.5	103°49'09.	0.35
738258.9	33°01'42.5	103°49'08.	0.22
738257.1	33°01'42.5	103°49'08.	0.32
738254.7	33°01'42.4	103°49'07.	0

Shape	Comment
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point	
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