

CEMENT JOB REPORT



CUSTOMER NORTHEAST NATURAL ENER	DATE 28-OCT-14	F.R.# 10011112539	SERV. SUPV. Scott J Carson
LEASE & WELL NAME BEACH 6H - API 47061016680000	LOCATION MOORESVILLE		COUNTY-PARISH-BLOCK Monongalia West Virginia
DISTRICT Clarksburg	DRILLING CONTRACTOR RIG # PIONEER 63		TYPE OF JOB Long String

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	MECHANICAL BARRIERS	MD	TVD	HANGER TYPES	MD	TVD
Latch Down Plug & Assembly, 5-1/2	Float Collar, AI Flap, 5-1/2 - 8rd Gulde Shoe, Cement Nose, 5-1/2 i	NONE			NONE		

MATERIALS FURNISHED BY BJ	LAB REPORT NO.	PHYSICAL SLURRY PROPERTIES						
		SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
ULTRAFUSH HV			13				100	
50/50 PREMIUM NE-1 .3% R-3 .3% MPA-170	189101269	3,033	14.5	1.17	5.19	10:02	632	374.79
50# SUGAR H2O			8.34				3	
H2O			8.34				347	
200# SUGAR ON SIDE			0				0	
Available Mix Water <u>750</u> Bbl.		Available Displ. Fluid <u>750</u> Bbl.		TOTAL			1082	374.79

HOLE			TBG-CSG-D.P.						COLLAR DEPTHS			
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
8.5	10	15710	4.778	5.5	20	CSG	15661	8125	J-55	15661	15658	1

LAST CASING				PKR-GMT RET-BR PL-LINER				PERF. DEPTH			TOP CONN		WELL FLUID	
ID	OD	WGT.	TYPE	MD	TVD	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.	
8.8	9.625	40	CSG	2382	2382	NO PACKER				5.5	BUTT	SYNTHETIC MUD	12.5	
12.	12.25		OPEN HOLE	2435	2435									
8.8	8.75		OPEN HOLE	7108	7108									

DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER
VOLUME	UOM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator	
347	BBLS	H2O	8.34	2600	0	0	0	0	10112	6500	TANK

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL						EXPLANATION					
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>					
	PIPE	ANNULUS				TEST LINES 7950 PSI					
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input checked="" type="checkbox"/>					
09:15						ARRIVE AT LOCATION 10-27-2014 LOCATION TIME 10:30					
11:00						PRE-JOB RIG-IN SAFETY MEETING					
11:15						RIG-IN					
00:10						PRE-JOB SAFETY MEETING 10-28-2014					
00:50	300		5	5	H2O	LINE-FILL					
00:52	0				H2O	PRESSURE TEST 7950#					
00:56	680		5.2	100	ULTRA-FL	13.0# PRE-FLUSH					
01:14	1210		5.2	617	SLURRY	14.5# 50/50 PREMIUM NE-1 .3% R-3 .3% MPA-170					
03:12	0		5	10	H2O	SHUT-DOWN WASH-OUT LINES					
03:17	500		2.5	2	SUGAR/H2O	PUMP SUGAR WATER					
03:18	0					SHUT-DOWN RELEASE-PLUG					
03:19	1400		5	1	SUGAR/H2O	PUMP SUGAR WATER					
03:20	2800		5.9	351	H2O	DISPLACEMENT					
04:19	4400					SHUT-DOWN					
04:24	0					BLEED-OFF PRESSURE 5 BARREL RETURN					
04:26	4490		2.6	5	H2O	RE-PUMP TO VERIFY					

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PRESSURE/RATE DETAIL						EXPLANATION		
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE			
	PIPE	ANNULUS						
						SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>		
						TEST LINES 7950 PSI		
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input checked="" type="checkbox"/>		
04:29	4490					SHUT-DOWN		
04:31	0					BLEED-OFF PRESSURE 5 BARREL RETURN		
04:35						POST-JOB RIG-OUT SAFETY MEETING		
04:45						RIG-OUT		
	BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	SERVICE SUPERVISOR SIGNATURE:
	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	2600	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	0	1078	0	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	

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CUSTOMER NORTHEAST NATURAL ENER	DATE 09-AUG-14	F.R. # 10011089832	SERV. SUPV. Brian Lough
LEASE & WELL NAME BEACH 6H - API 47061016680000	LOCATION CLAY		COUNTY-PARISH-BLOCK Monongalia West Virginia
DISTRICT Clarksburg	DRILLING CONTRACTOR RIG #		TYPE OF JOB Intermediate

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	MECHANICAL BARRIERS	MD	TVD	HANGER TYPES	MD	TVD
9-5/8" Top Cem Plug, Nitri cvr, Phen	Guide Shoe, Cement Nose, 9-5/8 I Float Collar, Al Flap, 9-5/8 - 8rd	NONE			NONE		

MATERIALS FURNISHED BY BJ	LAB REPORT NO.	PHYSICAL SLURRY PROPERTIES							
		SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER	
6% GEL W/FLAKE			8.5				25		
FRESH WATER			8.34				10		
PREM NE-1+1.5%CACL		753	15.2	1.26	5.76	03:23	162	99.00	
H2O			8.34				177		
Available Mix Water		500	Bbl.	Available Displ. Fluid		500	Bbl.	TOTAL	374 99.00

HOLE			TBG-CSG-D.P.					COLLAR DEPTHS				
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
12.25	30	2430	8.835	9.625	40	CSG	2370	2370	J-55	2370	2326	

LAST CASING				PKR-CMT RET-BR PL-LINER			PERF. DEPTH		TOP CONN		WELL FLUID		
ID	OD	WGT	TYPE	MD	TVD	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.
13	13.38	55	CSG	1300	1300					9.625	8 RD	OTHER	0

DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER
VOLUME	UOM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator	TANK
175	BBLs	H2O	8.34	838	0	0	0	0	3160	3000	TANK

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL					EXPLANATION		
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES	3400 PSI
						CIRCULATING WELL - RIG	<input type="checkbox"/> BJ <input checked="" type="checkbox"/>
03:00						ARRIVE ON LOCATION. JOB TIME 0300	
03:01						STAGE EQUIPMENT. WAIT ON RIG	
06:15						PRE JOB SAFETY MEETING	
06:35						SPOT EQUIPMENT / RIG INTO WELL	
08:50						SAFETY MEETING WITH RIG CREW	
09:54	180		4	5	H2O	LINE FILL	
09:55					H2O	PRESSURE TEST BHI IRON TO 3400 PSI	
09:56	200		5.8	150	H2O	PUMP PROCESSED H2O AHEAD	
10:22	200		5.8	25	GEL	PUMP 6% GEL W/ CELLO FLAKE	
10:27	200		5.8	10	H2O	PUMP 10 BBL H2O SPACER	
10:30	400		5.8	162	CEMENT	PUMP 753 SKS PREM NE-1+1.5% CACL	
10:37	410		5.8		CEMENT	CIRCULATE WELL AT 43 BBLs INTO CMT.	
10:57	0		0			SHUT DOWN / DROP PLUG	
10:59	200		6.2	178	H2O	DISPLACE W/ PROCESSED H2O	
11:29	850		2.5		H2O	CEMENT RETURNS AT 164 BBLs IN DISPL.	
11:37	1440		2		H2O	LAND PLUG 500 PSI OVER W.P.	
11:43	0					RELEASE PRESSURE / CHECK FLOATS	
11:43						END JOB	
11:44						SAFETY MEETING / CLEAN PUMPER	

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PRESSURE/RATE DETAIL						EXPLANATION	
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES 3400 PSI	
						CIRCULATING WELL - RIG <input type="checkbox"/> BJ <input checked="" type="checkbox"/>	
	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	
BUMPED PLUG						SERVICE SUPERVISOR SIGNATURE:	
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	838	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	19	530	0	<i>BK Lough</i>	
						<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	

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CUSTOMER NORTHEAST NATURAL ENER LEASE & WELL NAME BEACH 6H - API 47061016680000 DISTRICT Clarksburg	DATE 08-AUG-14 F.R. # 10011089043 LOCATION MORGANTOWN DRILLING CONTRACTOR RIG #	SERV. SUPV. COUNTY-PARISH-BLOCK Monongalia West Virginia TYPE OF JOB Surface
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SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	MECHANICAL BARRIERS	MD	TVD	HANGER TYPES	MD	TVD
BJ Cement Plug, Rubber, Top 13-3/8	Guide Shoe, Cement Nose 13-3/8						

MATERIALS FURNISHED BY BJ	LAB REPORT NO.	PHYSICAL SLURRY PROPERTIES						
		SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
500#GEL+25#FLAKE			8.6				25	
PREMIUM NE-1+3%CALCIUM		953	15.2	1.27	5.78	04:31	216.4	131.66
H2O			8.34				197.7	
200# SUGAR			0				0	
Available Mix Water	500 Bbl.	Available Displ. Fluid	500 Bbl.	TOTAL			439.1	131.66

HOLE			TBG-CSG-D.P.						COLLAR DEPTHS			
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
17.5	30	1361	12.62	13.38	54.5	CSG	1323		J-55	1323	1279	

LAST CASING				PKR-CMT RET-BR PL-LINER				PERF. DEPTH		TOP CONN		WELL FLUID	
ID	OD	WGT.	TYPE	MD	TVD	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.
23	24	101	CSG	40	40					13.375	BRD	OTHER	0

DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER
VOLUME	UOM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator	TANK
197.7	BBLs	H2O	8.34	456	0	0	0	0	2184	816	TANK

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL						EXPLANATION	
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW	CO. REP.
	PIPE	ANNULUS				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
06:40							
09:38	121		6	140	H2O		
10:01	127		5	25	GEL		
10:06	143		5.6	39	H2O		
10:13	260		5.1	215	SLURRY		
10:55	0						
10:56	188		7.2		H2O		
11:29	550		3	193.5	H2O		
11:29	816						
11:32	693						
11:32	0						
11:33							

BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	SERVICE SUPERVISOR SIGNATURE:
<input checked="" type="checkbox"/> Y	550	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	32	612.5	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N

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ACTUAL WELLPATH REPORT (CSV version)
 Prepared by Baker Hughes
 Software System: WellArchitect® 4.0.1

REFERENCE WELLPATH IDENTIFICATION

Operator: NORTHEAST NATURAL ENERGY, LLC
 Area: Monongalia County, WV
 Field: Monongalia
 Facility: Beach Pad
 Slot: 6
 Well: Beach 6H
 Wellbore: Beach 6H AWB
 Wellpath: Beach 6H AWP Proj:15711'
 Sidetrack: (none)

REPORT SETUP INFORMATION

Projection System: NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet
 North Reference: Grid
 Scale: 0.999942
 Convergence at slot: 0.42° West
 Software System: WellArchitect® 4.0.1
 User: Steward
 Report Generated: 10/28/2014 at 5:11:49 PM
 DataBase/Source file: WA_Eastern/ew01.xml

WELLPATH LOCATION

Slot Location: 33 72.8 1784988 439334.8 39°42'15.7" 80°09'08.132"W
 Facility Reference Pt: 1784915 439301.8 39°42'15.7" 80°09'09.060"W
 Field Reference Pt: 1777686 440640.7 39°42'28.180" 10°41.690"W

WELLPATH DATUM

Calculation method: Minimum curvature
 Horizontal Reference Point: Slot
 Vertical Reference Point: Pioneer 63 (RKB)
 MD Reference Point: Pioneer 63 (RKB)
 Field Vertical Reference: Mean Sea Level
 Pioneer 63 (RKB) to GL: 18.00ft
 Pioneer 63 (RKB) to Mean Sea Level: 1376.70ft
 Pioneer 63 (RKB) to Mud Line at Slot (06): 18.00ft
 Section Origin: N 0.00, E 0.00 ft
 Section Azimuth: 149.66°

WELLPATH DATA † = interpolated/extrapolated station

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Di	Closure Di	DLS	Build Rate	Turn Rate
(ft)	[°]	[°]	(ft)	(ft)	(ft)	(ft)	[US ft]	[US ft]			(ft)	[°]	[°/100ft]	[°/100ft]	[°/100ft]
0	0	0	7.106	0	0	0	0	1784987.9	439334.8	39°42'15.743"N	80°09'08.132"W	0	0	0	0
18	0	0	7.106	18	0	0	0	1784987.9	439334.8	39°42'15.743"N	80°09'08.132"W	0	0	0	0
108	0.267	7.106	108	-0.17	0.21	0.03	1784987.93	439335.01	39°42'15.745"N	80°09'08.132"W	0.21	7.106	0.3	0.3	0
208	0.13	45.873	208	-0.38	0.52	0.14	1784988.04	439335.32	39°42'15.748"N	80°09'08.130"W	0.54	14.723	0.18	-0.14	38.77
308	0.315	132.265	308	-0.14	0.41	0.42	1784988.32	439335.21	39°42'15.747"N	80°09'08.127"W	0.59	45.595	0.33	0.19	86.39
408	0.312	152.616	408	0.39	-0.01	0.75	1784988.65	439334.79	39°42'15.742"N	80°09'08.122"W	0.75	91.088	0.11	0	20.35
508	0.168	185.458	508	0.78	-0.4	0.86	1784988.76	439334.4	39°42'15.739"N	80°09'08.121"W	0.95	115.025	0.19	-0.14	31.84

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608	0.113	228.676	608	0.87	-0.61	0.77	1784988.67	439334.19	39°42'15.737"N	80°09'08.122"W	0.99	128.415	0.12	-0.06	43.22
708	0.085	317.022	708	0.87	-0.62	0.65	1784988.55	439334.18	39°42'15.736"N	80°09'08.124"W	0.9	133.895	0.14	-0.03	88.35
808	0.084	254.195	808	0.78	-0.59	0.53	1784988.43	439334.21	39°42'15.737"N	80°09'08.125"W	0.79	138.191	0.09	0	-62.83
908	0.083	347.613	908	0.69	-0.54	0.44	1784988.34	439334.26	39°42'15.737"N	80°09'08.126"W	0.7	140.685	0.12	0	93.42
1008	0.022	24.529	1008	0.61	-0.45	0.43	1784988.33	439334.35	39°42'15.738"N	80°09'08.126"W	0.63	136.096	0.07	-0.06	36.92
1108	0.076	300.13	1108	0.54	-0.4	0.38	1784988.28	439334.4	39°42'15.739"N	80°09'08.127"W	0.55	136.136	0.08	0.05	-84.4
1208	0.137	314.459	1208	0.37	-0.28	0.24	1784988.14	439334.52	39°42'15.740"N	80°09'08.129"W	0.37	139.494	0.07	0.06	14.33
1308	0.065	312.217	1308	0.2	-0.16	0.11	1784988.01	439334.64	39°42'15.741"N	80°09'08.131"W	0.2	144.634	0.07	-0.07	-2.24
1408	0.318	282.612	1407.99	-0.05	-0.06	-0.2	1784987.74	439334.74	39°42'15.742"N	80°09'08.135"W	0.21	252.607	0.26	0.25	-29.6
1508	0.31	277.159	1507.99	-0.4	0.03	-0.74	1784987.16	439334.83	39°42'15.743"N	80°09'08.141"W	0.74	272.491	0.03	-0.01	-5.45
1608	0.419	268.324	1607.99	-0.74	0.06	-1.37	1784986.53	439334.86	39°42'15.743"N	80°09'08.150"W	1.37	272.301	0.12	0.11	-8.84
1708	0.546	251.258	1707.99	-1.01	-0.11	-2.19	1784985.71	439334.69	39°42'15.741"N	80°09'08.160"W	2.19	267.157	0.19	0.13	-17.07
1808	0.423	239.704	1807.98	-1.11	-0.45	-2.96	1784984.94	439334.35	39°42'15.738"N	80°09'08.170"W	2.99	261.389	0.16	-0.12	-11.55
1908	0.573	221.849	1907.98	-0.96	-1.01	-3.61	1784984.29	439333.79	39°42'15.732"N	80°09'08.178"W	3.75	254.421	0.21	0.15	-17.86
2008	0.688	208.736	2007.97	-0.49	-1.91	-4.23	1784983.67	439332.89	39°42'15.723"N	80°09'08.186"W	4.64	245.764	0.18	0.12	-13.11
2108	0.992	206.812	2107.96	0.28	-3.2	-4.91	1784982.99	439331.6	39°42'15.710"N	80°09'08.195"W	5.86	236.88	0.31	0.3	-1.92
2208	1.176	207.726	2207.95	1.3	-4.89	-5.78	1784982.12	439329.91	39°42'15.694"N	80°09'08.206"W	7.57	229.793	0.18	0.18	0.91
2308	1.183	196.528	2307.92	2.55	-6.78	-6.55	1784981.35	439328.02	39°42'15.675"N	80°09'08.215"W	9.43	224.001	0.23	0.01	-11.2
2408	1.223	179.024	2407.9	4.18	-8.84	-6.83	1784981.07	439325.96	39°42'15.655"N	80°09'08.219"W	11.17	217.676	0.37	0.04	-17.5
2508	1.145	179.14	2507.88	5.98	-10.91	-6.79	1784981.11	439323.88	39°42'15.634"N	80°09'08.218"W	12.85	211.918	0.08	-0.08	0.12
2608	0.81	198.242	2607.87	7.32	-12.58	-7	1784980.9	439322.22	39°42'15.618"N	80°09'08.220"W	14.39	209.098	0.46	-0.33	19.1
2708	0.596	219.7	2707.86	7.96	-13.65	-7.55	1784980.35	439321.15	39°42'15.607"N	80°09'08.227"W	15.6	208.961	0.34	-0.23	-6.24
2808	0.362	213.463	2807.86	8.28	-14.31	-8.06	1784979.84	439320.49	39°42'15.600"N	80°09'08.234"W	16.43	209.385	0.24	-0.23	-6.24
2908	0.374	187.273	2907.85	8.68	-14.9	-8.28	1784979.63	439319.9	39°42'15.595"N	80°09'08.237"W	17.04	209.048	0.17	0.01	-26.19
3008	0.441	187.348	3007.85	9.24	-15.6	-8.37	1784979.53	439319.2	39°42'15.588"N	80°09'08.238"W	17.71	208.196	0.07	0.07	0.08
3108	0.38	224.599	3107.85	9.63	-16.22	-8.65	1784979.25	439318.58	39°42'15.582"N	80°09'08.241"W	18.38	208.061	0.27	-0.06	37.25
3208	0.184	213.775	3207.85	9.79	-16.59	-8.97	1784978.93	439318.21	39°42'15.578"N	80°09'08.245"W	18.86	208.396	0.2	-0.2	-10.82
3308	0.297	160.676	3307.85	10.11	-16.97	-8.97	1784978.93	439317.37	39°42'15.574"N	80°09'08.245"W	19.2	207.869	0.24	0.11	-55.1
3408	0.254	176.195	3407.85	10.57	-17.44	-8.87	1784979.03	439317.17	39°42'15.570"N	80°09'08.244"W	19.56	206.971	0.09	-0.04	15.52
3508	0.27	91.628	3507.85	10.89	-17.66	-8.62	1784979.28	439317.14	39°42'15.567"N	80°09'08.241"W	19.66	206.019	0.35	0.2	-84.57
3608	0.47	87.709	3607.84	11.21	-17.65	-7.98	1784979.92	439317.15	39°42'15.567"N	80°09'08.232"W	19.37	204.317	0.02	0.02	-3.92
3708	0.532	95.893	3707.84	11.67	-17.69	-7.11	1784980.79	439317.12	39°42'15.567"N	80°09'08.221"W	19.06	201.889	0.09	0.06	8.18
3808	0.339	128.456	3807.84	12.22	-17.92	-6.41	1784981.49	439316.88	39°42'15.565"N	80°09'08.212"W	19.03	199.691	0.31	-0.19	32.56
3908	0.313	95.205	3907.83	12.65	-18.12	-5.91	1784981.99	439316.69	39°42'15.563"N	80°09'08.206"W	19.05	198.061	0.2	-0.03	-35.25
4008	0.245	44.215	4007.83	12.74	-17.98	-5.49	1784982.41	439316.82	39°42'15.564"N	80°09'08.201"W	18.8	196.969	0.24	-0.07	-48.99
4108	0.193	78.949	4107.83	12.74	-17.79	-5.17	1784982.73	439317.01	39°42'15.566"N	80°09'08.197"W	18.53	196.207	0.14	-0.05	34.73
4208	0.093	125.019	4207.83	12.87	-17.81	-4.98	1784982.96	439316.99	39°42'15.566"N	80°09'08.194"W	18.48	195.504	0.14	-0.1	46.07
4308	0.136	293.533	4307.83	12.85	-17.81	-4.98	1784982.74	439317.17	39°42'15.566"N	80°09'08.194"W	18.49	195.631	0.23	0.04	168.51
4408	0.16	332.036	4407.83	12.62	-17.64	-5.16	1784982.72	439317.17	39°42'15.568"N	80°09'08.196"W	18.37	196.298	0.1	0.02	168.51
4508	0.313	346.7	4507.83	12.25	-17.24	-5.21	1784982.74	439317.17	39°42'15.568"N	80°09'08.197"W	18.01	196.801	0.2	0.15	31.43
4608	0.402	0.75	4607.83	11.72	-16.62	-5.18	1784982.72	439318.19	39°42'15.578"N	80°09'08.197"W	17.41	197.328	0.09	0.09	-2.72
4708	0.403	1.528	4707.83	11.12	-15.91	-5.17	1784982.73	439318.89	39°42'15.585"N	80°09'08.197"W	16.73	197.999	0.01	0	0.78
4808	0.532	9.061	4807.82	10.47	-15.1	-5.09	1784982.81	439319.7	39°42'15.593"N	80°09'08.196"W	15.94	198.616	0.14	0.13	7.53
4908	0.738	12.25	4907.82	9.63	-14.02	-4.88	1784983.02	439320.79	39°42'15.604"N	80°09'08.193"W	14.84	199.19	0.21	0.21	3.19
5008	0.9	18.42	5007.81	8.64	-12.64	-4.49	1784983.41	439322.16	39°42'15.617"N	80°09'08.188"W	13.42	199.567	0.18	0.16	6.17
5108	0.95	31.707	5107.79	7.73	-11.19	-3.81	1784984.09	439323.61	39°42'15.632"N	80°09'08.180"W	11.82	198.798	0.22	0.05	13.29
5208	0.856	29.188	5207.78	6.97	-9.83	-3.01	1784984.89	439324.97	39°42'15.645"N	80°09'08.170"W	10.28	197.016	0.1	-0.09	-2.52
5308	0.764	48.754	5307.77	6.47	-8.75	-2.14	1784985.76	439326.05	39°42'15.656"N	80°09'08.159"W	9.01	193.719	0.3	-0.09	20.57
5408	0.606	63.663	5407.77	6.4	-8.09	-1.15	1784986.75	439327.15	39°42'15.663"N	80°09'08.146"W	8.17	188.118	0.23	-0.16	13.91
5508	0.39	54.679	5507.76	6.4	-7.65	-0.4	1784987.5	439327.15	39°42'15.667"N	80°09'08.136"W	7.66	188.005	0.23	-0.22	-12.87
5608	0.356	41.811	5607.76	6.28	-7.23	0.08	1784987.98	439327.57	39°42'15.671"N	80°09'08.130"W	7.23	179.341	0.09	-0.03	-8.98
5708	0.436	39.722	5707.76	6.05	-6.7	0.53	1784988.43	439328.1	39°42'15.676"N	80°09'08.125"W	6.72	175.45	0.08	0.08	-2.09
5808	0.359	36.044	5807.75	5.8	-6.16	0.96	1784988.86	439328.64	39°42'15.682"N	80°09'08.119"W	6.23	171.128	0.08	-0.08	-3.68
5908	0.202	29.695	5907.75	5.58	-5.75	1.23	1784989.13	439329.05	39°42'15.686"N	80°09'08.116"W	5.88	167.9	0.16	-0.16	-6.35

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6008	0.184	63.465	6007.75	5.51	-5.52	1.46	1784989.36	439329.28	39°42'15.688"N	80°09'08.113"W	5.71	165.162	0.11	-0.02	33.77
6108	0.272	48.779	6107.75	5.47	-5.3	1.79	1784989.69	439329.5	39°42'15.690"N	80°09'08.103"W	5.59	161.367	0.1	0.09	60.69
6208	0.365	109.673	6207.75	5.67	-5.25	2.26	1784990.16	439329.55	39°42'15.691"N	80°09'08.105"W	5.71	156.659	0.33	0.09	60.89
6308	0.616	98.18	6307.75	6.25	-5.43	3.1	1784991	439329.37	39°42'15.689"N	80°09'08.092"W	6.25	150.311	0.27	0.25	-11.49
6408	0.461	102.356	6407.74	6.86	-5.59	4.02	1784991.92	439329.21	39°42'15.688"N	80°09'08.080"W	6.89	144.285	0.16	-0.15	4.48
6508	0.432	108.304	6507.74	7.41	-5.8	4.77	1784992.67	439329	39°42'15.686"N	80°09'08.070"W	7.51	140.542	0.05	-0.03	5.95
6608	0.56	97.033	6607.74	7.99	-5.98	5.62	1784993.51	439328.82	39°42'15.684"N	80°09'08.060"W	8.2	136.783	0.16	0.03	-11.27
6708	0.728	116.753	6707.73	8.82	-6.32	6.67	1784994.57	439328.48	39°42'15.681"N	80°09'08.046"W	9.19	133.475	0.28	0.17	19.72
6808	0.712	106.31	6807.72	9.81	-6.78	7.83	1784995.73	439328.02	39°42'15.676"N	80°09'08.031"W	10.36	130.895	0.13	-0.02	-10.44
6908	0.502	82.598	6907.72	10.43	-6.9	8.86	1784996.76	439327.9	39°42'15.675"N	80°09'08.018"W	11.23	127.906	0.32	-0.21	-36.82
7008	0.342	45.778	7007.71	10.53	-6.64	9.51	1784997.41	439328.16	39°42'15.678"N	80°09'08.010"W	11.6	124.905	0.31	-0.16	-36.82
7070	0.22	84.05	7069.71	10.54	-6.49	9.76	1784997.66	439328.33	39°42'15.679"N	80°09'08.007"W	11.72	123.637	0.35	-0.2	61.73
7126	0.33	87.01	7125.71	10.65	-6.47	10.03	1784997.93	439328.33	39°42'15.679"N	80°09'08.003"W	11.94	122.846	0.2	0.2	5.29
7189	2.78	45.1	7188.68	10.35	-5.39	11.29	1784999.19	439329.41	39°42'15.690"N	80°09'07.987"W	12.51	115.501	4.04	3.89	66.52
7252	7.8	34.47	7251.4	8.15	-0.78	14.8	1785002.7	439334.02	39°42'15.736"N	80°09'07.943"W	14.82	93.02	8.08	7.97	-16.87
7316	11.67	37.55	7314.46	3.86	7.93	21.2	1785009.1	439342.73	39°42'15.822"N	80°09'07.861"W	22.64	69.481	6.1	6.05	4.81
7378	15.37	42.65	7374.74	-0.9	18.95	30.59	1785018.49	439353.75	39°42'15.932"N	80°09'07.742"W	35.99	58.221	6.26	5.97	8.23
7442	19.57	45.06	7435.77	-6.09	32.77	43.93	1785031.83	439367.57	39°42'16.070"N	80°09'07.573"W	54.81	53.281	6.66	6.56	3.77
7505	24.6	46.13	7494.13	-11.82	49.32	60.87	1785048.76	439384.12	39°42'16.234"N	80°09'07.358"W	78.34	50.982	8.01	7.98	1.7
7568	29.32	47.51	7550.27	-18.14	68.84	81.71	1785069.6	439403.63	39°42'16.429"N	80°09'07.093"W	106.84	49.885	7.56	7.49	2.19
7631	32.87	49.94	7604.21	-24.27	90.27	106.17	1785094.07	439447.79	39°42'16.869"N	80°09'06.422"W	139.36	49.629	5.98	5.63	3.86
7694	37.5	52.35	7655.69	-29.6	113	134.46	1785122.35	439458.59	39°42'17.512"N	80°09'06.010"W	175.64	49.956	7.67	7.35	3.83
7757	41.51	55.38	7704.29	-33.6	136.58	166.84	1785154.73	439471.36	39°42'17.104"N	80°09'06.010"W	215.62	50.594	7.06	6.37	4.81
7821	40.53	67.93	7752.66	-32.19	156.48	203.63	1785191.51	439491.27	39°42'17.304"N	80°09'05.541"W	256.81	52.459	12.95	-1.53	19.61
7884	41.12	77.26	7800.38	-22.98	168.75	242.84	1785230.72	439503.54	39°42'17.428"N	80°09'05.041"W	295.72	55.204	9.72	0.94	14.81
7947	41.56	79.83	7847.68	-9.51	177.01	283.62	1785271.5	439511.8	39°42'17.512"N	80°09'04.520"W	334.32	58.031	2.78	0.7	4.08
8010	42.93	84.37	7894.33	6.67	182.81	325.55	1785313.43	439517.6	39°42'17.527"N	80°09'03.984"W	373.36	60.684	5.31	2.17	7.21
8073	45.46	92.84	7939.54	27.95	183.8	369.37	1785357.25	439518.59	39°42'17.585"N	80°09'03.423"W	412.57	63.545	10.19	4.02	13.44
8136	48	100.01	7982.75	55.42	178.62	414.89	1785402.76	439513.4	39°42'17.537"N	80°09'02.840"W	451.7	66.707	9.21	4.03	11.38
8198	51.13	105.36	8022.97	87.63	168.21	460.88	1785448.75	439503.94	39°42'17.438"N	80°09'02.251"W	490.62	69.949	8.28	5.05	8.63
8262	55.91	110.56	8051.03	126.07	152.29	509.77	1785497.63	439487.08	39°42'17.284"N	80°09'01.624"W	532.03	73.367	9.92	7.47	8.12
8325	61.69	116.77	8093.67	169.67	130.6	559.03	1785546.89	439465.39	39°42'17.073"N	80°09'00.992"W	574.08	76.85	12.45	9.17	9.86
8388	67.26	122.87	8120.83	218.96	102.3	608.27	1785596.13	439437.09	39°42'16.797"N	80°09'00.359"W	616.81	80.453	12.43	8.84	9.68
8452	72.05	128.95	8143.09	273.86	67.1	656.8	1785644.66	439401.89	39°42'16.453"N	80°08'59.735"W	660.21	84.167	11.63	7.48	9.5
8515	72.75	135.08	8162.16	331.06	26.92	701.38	1785689.24	439361.72	39°42'16.059"N	80°08'59.161"W	701.9	87.802	9.34	1.11	9.73
8578	74.13	139.78	8180.12	390.05	-17.54	742.21	1785730.07	439317.26	39°42'15.622"N	80°08'58.634"W	742.42	91.354	7.48	2.19	7.46
8641	77.41	142.8	8195.61	450.46	-65.19	801.38	1785788.24	439269.62	39°42'15.154"N	80°08'58.142"W	783.1	94.775	6.98	5.21	4.79
8705	82.25	144.64	8206.91	513.09	-115.96	817.64	1785805.49	439218.85	39°42'14.655"N	80°08'57.660"W	825.82	98.072	8.07	7.56	2.87
8767	88.46	146.8	8211.93	574.71	-166.99	852.42	1785840.27	439167.82	39°42'14.153"N	80°08'57.210"W	868.63	101.084	10.6	10.02	3.48
8800	90.06	146.71	8212.35	607.66	-194.59	870.51	1785858.36	439140.22	39°42'13.882"N	80°08'56.976"W	892	102.601	4.86	4.85	-0.27
8831	90.65	147.69	8212.16	638.63	-220.65	887.3	1785875.15	439114.17	39°42'13.625"N	80°08'56.759"W	914.33	103.965	3.69	1.9	3.16
8894	89.82	146.73	8211.9	701.57	-273.61	921.42	1785909.27	439061.21	39°42'13.105"N	80°08'56.318"W	961.19	106.538	2.01	-1.32	-1.52
8955	89.57	146.42	8212.23	762.48	-324.52	955.02	1785942.87	439010.3	39°42'12.604"N	80°08'55.883"W	1008.65	108.768	0.65	-0.41	-0.51
9019	91.82	146.37	8211.45	826.37	-377.81	990.44	1785978.28	438957.01	39°42'12.080"N	80°08'55.425"W	1060.05	110.88	3.52	3.52	-0.08
9083	93.11	146.44	8208.7	890.21	-431.07	1025.82	1786013.66	438903.75	39°42'11.556"N	80°08'54.968"W	1112.71	112.793	2.02	2.02	0.11
9146	94.13	146.6	8204.72	952.99	-483.51	1060.5	1786048.34	438851.31	39°42'11.040"N	80°08'54.519"W	1165.59	114.51	1.64	1.62	0.25
9210	94.25	148.82	8200.04	1016.77	-537.47	1094.6	1786082.43	438797.36	39°42'10.507"N	80°08'54.078"W	1219.43	116.152	3.46	0.19	3.47
9272	93.66	149.38	8195.77	1078.62	-590.54	1126.36	1786114.19	438744.29	39°42'09.987"N	80°08'53.666"W	1271.78	117.668	1.31	-0.95	0.9
9336	94.13	149.21	8191.42	1142.47	-645.44	1158.97	1786146.8	438689.4	39°42'09.447"N	80°08'53.244"W	1326.57	119.114	0.78	0.73	-0.27
9399	93.88	149.32	8187.02	1205.32	-699.46	1191.08	1786178.91	438635.38	39°42'08.915"N	80°08'52.828"W	1381.28	120.423	0.43	-0.4	0.17
9463	92.46	148.82	8183.48	1269.22	-754.41	1223.71	1786211.53	438580.44	39°42'08.515"N	80°08'52.406"W	1437.56	121.654	2.22	-2.22	-0.06
9526	92.31	148.31	8180.86	1332.15	-808.24	1256.32	1786244.14	438526.6	39°42'07.845"N	80°08'51.984"W	1493.85	122.755	1.56	-0.24	-1.54
9589	92.46	152.42	8178.24	1395.08	-862.94	1287.44	1786275.26	438471.91	39°42'07.306"N	80°08'51.581"W	1549.89	123.833	6.52	0.24	6.52
9652	91.26	152.65	8176.19	1457.97	-918.81	1316.48	1786304.3	438416.04	39°42'06.756"N	80°08'51.204"W	1605.41	124.912	1.94	-1.9	0.37

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9715	150.87	8174.87	1520.91	-974.3	1346.28	1786334.1	438360.56	3942'06.210"N	80°08'50.817"W	1661.85	125.893	2.83	-0.19	-2.83
9778	150.34	8173.54	1583.89	-1029.18	1377.19	1786365.01	438365.69	3942'05.670"N	80°08'50.417"W	1719.26	126.771	0.87	0.24	-0.84
9842	148.94	8172.34	1647.87	-1084.36	1409.58	1786397.4	438250.5	3942'05.127"N	80°08'49.997"W	1778.42	127.57	2.44	-0.67	-2.34
9905	89.29	146.34	8172.25	1710.83	1443.35	1786431.16	438197.33	3942'04.604"N	80°08'49.561"W	1837.73	128.243	4.69	-2.49	-3.97
9969	89.88	149.54	8172.72	1774.79	1477.31	1786465.12	438143.1	3942'04.070"N	80°08'49.121"W	1898.1	128.894	5.08	0.92	5
10031	89.78	150.73	8172.9	1836.78	1245.54	1786485.99	438089.34	3942'03.541"N	80°08'48.721"W	1956.01	129.552	1.93	-0.16	1.92
10094	90.4	152.91	8172.8	1899.73	1301.07	1786525.74	438033.81	3942'02.995"N	80°08'48.335"W	2014.45	130.231	3.6	0.98	3.46
10158	90.31	149.52	8172.41	1963.7	1357.15	1786556.55	437977.73	3942'02.442"N	80°08'47.936"W	2074.32	130.864	5.3	-0.14	-5.3
10221	90.34	145.46	8172.05	2026.64	1410.26	1786590.4	437924.62	3942'01.970"N	80°08'47.498"W	2134.75	131.347	6.44	0.05	-6.44
10285	90.22	142.94	8171.73	2090.34	1462.17	1786627.83	437872.72	3942'01.410"N	80°08'47.014"W	2197.19	131.719	3.94	-0.19	-3.94
10348	90.46	146.76	8171.36	2153.11	1513.67	1786664.09	437821.22	3942'00.903"N	80°08'46.546"W	2258.58	132.082	6.08	0.38	6.06
10412	90.34	148.66	8170.91	2217.07	1567.77	1786698.28	437767.13	3942'00.371"N	80°08'46.103"W	2320.27	132.507	2.97	-0.19	2.97
10475	90.46	149.56	8170.47	2280.06	1621.83	1786730.62	437713.07	3941'59.839"N	80°08'45.685"W	2380.71	132.94	1.44	0.19	1.43
10539	90.08	150.97	8170.17	2344.06	1677.4	1786762.36	437657.5	3941'59.292"N	80°08'45.273"W	2441.88	133.388	2.28	-0.58	2.2
10602	90.4	151.24	8169.9	2407.04	1732.56	1786792.8	437602.35	3941'58.749"N	80°08'44.879"W	2501.96	133.827	0.65	0.49	0.43
10665	89.6	152.21	8169.9	2469.99	1788.04	1786822.64	437546.87	3941'58.203"N	80°08'44.492"W	2561.98	134.26	2	-1.27	1.54
10728	89.35	152.89	8170.47	2532.91	1843.94	1786851.68	437490.97	3941'57.653"N	80°08'44.115"W	2621.87	134.692	1.15	-0.4	1.08
10791	89.97	152.82	8170.85	2595.81	1900	1786880.42	437434.91	3941'57.101"N	80°08'43.742"W	2681.8	135.111	0.99	0.98	-0.11
10855	90.15	152.63	8170.78	2659.72	1956.89	1786909.75	437378.03	3941'56.541"N	80°08'43.362"W	2742.87	135.516	0.41	0.28	-0.3
10918	89.57	152.87	8170.94	2722.63	2012.89	1786938.59	437322.03	3941'55.989"N	80°08'42.988"W	2803.11	135.897	1	-0.92	0.88
10981	89.69	154.25	8171.34	2785.48	2069.3	1786966.64	437265.62	3941'55.434"N	80°08'42.624"W	2863.2	136.28	2.2	0.19	2.19
11044	88.71	153.12	8172.91	2911.24	2181.65	1787023.64	437153.28	3941'54.377"N	80°08'41.884"W	2923.46	136.643	3.12	-1.46	-2.76
11170	90.06	152.3	8172.93	2974.15	2237.64	1787052.52	437097.3	3941'53.776"N	80°08'41.510"W	3044.7	137.301	1.32	0.24	-1.3
11233	89.75	150.67	8173.04	3037.11	2293	1787082.4	437041.94	3941'53.231"N	80°08'41.120"W	3105.82	137.586	2.63	-0.49	-2.59
11297	90.03	149.66	8173.55	3164.1	2402.51	1787146.88	436992.43	3941'52.154"N	80°08'40.707"W	3168.31	137.838	1.64	0.44	-1.58
11360	89.26	148.34	8173.55	3164.1	2402.51	1787146.88	436992.43	3941'52.154"N	80°08'40.287"W	3230.14	138.054	2.43	-1.22	-2.1
11422	89.26	146.8	8174.35	3226.05	2454.84	1787180.12	436880.11	3941'51.639"N	80°08'39.857"W	3291.3	138.233	2.48	0	-2.48
11485	90.15	145.56	8174.67	3288.93	2507.17	1787215.18	436827.78	3941'51.124"N	80°08'39.404"W	3353.7	138.382	2.42	1.41	-1.97
11548	89.97	146.82	8174.61	3351.82	2559.52	1787250.23	436775.20	3941'50.609"N	80°08'38.950"W	3416.13	138.525	2.02	-0.29	2
11612	90.03	149.84	8174.61	3415.79	2613.98	1787283.83	436720.96	3941'50.073"N	80°08'38.516"W	3479.2	138.705	4.72	0.09	4.72
11675	89.35	149.5	8174.95	3478.79	2668.36	1787315.64	436666.6	3941'49.538"N	80°08'38.104"W	3541.07	138.898	1.21	-1.08	-0.54
11739	90.62	152.3	8174.97	3542.77	2724.27	1787346.76	436613.8	3941'48.988"N	80°08'37.700"W	3603.69	139.11	4.8	1.98	4.38
11802	89.69	152.5	8174.8	3605.7	2780.1	1787375.95	436554.87	3941'48.438"N	80°08'37.322"W	3665.03	139.336	1.51	-1.48	0.32
11865	89.14	149.92	8175.44	3668.66	2835.31	1787406.28	436499.66	3941'47.895"N	80°08'36.929"W	3726.69	139.536	4.19	-0.87	-4.1
11927	90.12	150.13	8175.84	3730.66	2889.01	1787437.26	436445.96	3941'47.366"N	80°08'36.528"W	3787.67	139.706	1.62	1.58	0.34
11990	90.68	152.38	8175.4	3793.63	2944.24	1787467.55	436390.73	3941'46.823"N	80°08'36.135"W	3849.41	139.894	3.68	0.89	3.57
12054	90.15	152.75	8174.94	3857.55	3001.04	1787497.03	436333.94	3941'46.263"N	80°08'35.753"W	3911.88	140.1	1.01	-0.83	0.58
12117	91.48	154.96	8174.04	3920.37	3057.59	1787524.79	436270.77	3941'45.149"N	80°08'35.392"W	3973.09	140.316	4.09	2.11	3.51
12180	90.74	153.12	8172.82	3983.17	3114.22	1787552.36	436220.77	3941'45.149"N	80°08'35.034"W	4034.3	140.528	3.15	-1.17	-2.92
12243	90.28	146.37	8172.26	4046.13	3168.6	1787584.08	436166.39	3941'44.614"N	80°08'34.624"W	4096.46	140.669	10.74	-0.73	-10.71
12306	89.94	146.82	8172.14	4109.04	3221.19	1787618.76	436113.8	3941'44.096"N	80°08'34.175"W	4159.13	140.759	0.9	-0.54	0.71
12369	92.09	150.33	8171.02	4172	3274.93	1787651.59	436060.06	3941'43.567"N	80°08'33.750"W	4221.53	140.875	6.53	3.41	5.57
12432	91.26	150.93	8169.18	4234.97	3329.81	1787682.48	436005.19	3941'43.027"N	80°08'33.350"W	4283.6	141.018	1.63	-1.32	0.95
12495	90.83	152.17	8168.03	4297.92	3385.19	1787712.48	435949.81	3941'42.482"N	80°08'32.961"W	4345.55	141.169	2.08	-0.68	1.97
12558	91.63	153.78	8166.68	4360.8	3441.3	1787741.1	435893.71	3941'41.930"N	80°08'32.580"W	4407.22	141.337	2.85	1.27	2.56
12622	91.57	154.11	8164.89	4424.59	3498.77	1787769.2	435836.24	3941'41.364"N	80°08'32.225"W	4469.67	141.516	0.52	-0.09	0.52
12685	91.23	156.46	8163.35	4487.27	3555.98	1787795.53	435779.03	3941'40.800"N	80°08'31.883"W	4530.86	141.705	3.77	-0.54	3.73
12748	91.17	154.81	8162.03	4549.91	3613.35	1787821.51	435721.66	3941'40.235"N	80°08'31.545"W	4592.02	141.895	2.62	-0.1	-2.62
12812	90.95	152.88	8160.85	4613.72	3670.79	1787849.71	435664.23	3941'39.669"N	80°08'31.179"W	4654.64	142.058	3.03	-0.34	-3.02
12875	90.58	147.09	8160.01	4676.69	3725.31	1787881.21	435609.71	3941'39.133"N	80°08'30.771"W	4717.01	142.163	9.21	-0.59	-9.19
12938	90.58	139.85	8159.37	4739.28	3775.9	1787918.68	435559.13	3941'38.635"N	80°08'30.287"W	4779.95	142.18	11.49	0	-11.49
13001	90.65	142.91	8158.69	4801.61	3825.11	1787957.99	435509.92	3941'38.152"N	80°08'29.780"W	4842.93	142.17	4.86	0.11	4.86
13065	90.49	145.12	8158.05	4865.29	3876.89	1787995.59	435458.14	3941'37.643"N	80°08'29.294"W	4906.89	142.194	3.46	-0.25	-3.45

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MD	TVD	North	East	Grid East	Grid North	Latitude	Longitude	Shape	Comment
13128	90.52	146.58	8157.5	4928.15	-3929.03	3043.23	1788030.95	435406.01	39°41'37.130"N 80°08'28.837"W
13191	90.62	148.15	8156.87	4991.09	-3982.08	3077.21	1788064.92	435352.96	39°41'36.608"N 80°08'28.398"W
13254	90.58	149.02	8156.21	5054.08	-4035.84	3110.04	1788097.75	435299.21	39°41'36.079"N 80°08'27.973"W
13317	90.49	148.92	8155.62	5117.07	-4089.82	3142.52	1788130.23	435245.23	39°41'35.548"N 80°08'27.552"W
13380	90.62	149.48	8155.01	5180.07	-4143.93	3174.77	1788162.48	435191.12	39°41'35.016"N 80°08'27.135"W
13443	90.55	148.91	8154.37	5243.06	-4198.04	3207.03	1788194.74	435137.01	39°41'34.483"N 80°08'26.717"W
13506	90.62	148.4	8153.73	5306.05	-4251.84	3239.8	1788227.51	435083.31	39°41'33.954"N 80°08'26.293"W
13570	90.74	147.91	8152.97	5370.02	-4306.21	3273.57	1788261.27	435028.85	39°41'33.419"N 80°08'25.856"W
13633	90.06	143.65	8152.53	5432.86	-4358.29	3308.99	1788296.69	434976.78	39°41'32.907"N 80°08'25.398"W
13696	89.69	140.66	8152.67	5495.31	-4408.03	3347.64	1788335.34	434927.04	39°41'32.418"N 80°08'24.899"W
13759	89.91	142.96	8152.88	5557.72	-4457.54	3386.59	1788374.28	434877.53	39°41'31.931"N 80°08'24.397"W
13822	91.72	146.79	8151.99	5620.48	-4509.05	3422.82	1788410.52	434826.02	39°41'31.475"N 80°08'23.928"W
13885	91.23	147.8	8150.37	5683.4	-4562.05	3456.85	1788444.54	434773.76	39°41'30.903"N 80°08'23.488"W
13948	90.52	147.68	8149.4	5746.36	-4615.31	3490.47	1788478.16	434719.76	39°41'30.379"N 80°08'23.053"W
14011	90.98	146.16	8148.58	5809.28	-4668.1	3524.86	1788512.54	434666.99	39°41'29.860"N 80°08'22.609"W
14075	91.05	145.16	8147.45	5873.11	-4720.93	3560.95	1788548.64	434614.15	39°41'29.341"N 80°08'22.142"W
14138	91.98	147.05	8145.78	5935.97	-4773.2	3596.07	1788583.75	434561.88	39°41'28.826"N 80°08'21.688"W
14202	91.48	149.47	8143.85	5999.91	-4827.6	3629.72	1788617.4	434507.49	39°41'28.291"N 80°08'21.253"W
14264	90.74	147.48	8142.65	6061.88	-4880.44	3662.13	1788649.81	434454.65	39°41'27.771"N 80°08'20.833"W
14327	91.02	147.25	8141.68	6124.83	-4933.49	3696.1	1788683.78	434401.61	39°41'27.249"N 80°08'20.394"W
14390	90.62	147.13	8140.78	6187.76	-4986.43	3730.24	1788717.91	434348.67	39°41'26.729"N 80°08'19.953"W
14453	90.4	145.31	8140.22	6250.64	-5038.79	3765.26	1788752.93	434296.31	39°41'26.214"N 80°08'19.500"W
14517	90.4	146.88	8139.77	6314.51	-5091.91	3800.96	1788788.63	434243.2	39°41'25.691"N 80°08'19.038"W
14580	90.49	150.63	8139.28	6377.49	-5145.76	3833.63	1788821.3	434189.35	39°41'25.161"N 80°08'18.615"W
14644	90.52	155.31	8138.72	6441.37	-5202.75	3867.1	1788850.37	434132.36	39°41'24.600"N 80°08'18.238"W
14707	90.4	157.27	8138.21	6503.94	-5260.43	3898.04	1788885.7	434074.69	39°41'24.052"N 80°08'17.909"W
14770	90.37	157.81	8137.79	6566.34	-5318.65	3932.11	1788922.06	434016.47	39°41'23.458"N 80°08'17.596"W
14833	90.52	158.79	8137.3	6628.63	-5377.18	3965.4	1788959.77	433957.95	39°41'22.881"N 80°08'17.293"W
14897	90.77	157.63	8136.58	6691.91	-5436.6	3999.15	1788996.81	433898.53	39°41'22.296"N 80°08'16.983"W
14960	90.74	156.34	8135.75	6754.39	-5494.58	3983.78	1789034.44	433840.55	39°41'21.725"N 80°08'16.663"W
15023	90.74	153.49	8134.93	6817.11	-5551.63	4010.49	1789072.19	433777.61	39°41'21.163"N 80°08'16.316"W
15086	90.58	151.6	8134.21	6880.03	-5607.53	4039.53	1789110.05	433719.61	39°41'20.612"N 80°08'15.940"W
15149	90.65	153.93	8133.53	6942.93	-5663.53	4068.36	1789148.08	433661.61	39°41'20.061"N 80°08'15.566"W
15213	90.55	154.04	8132.86	7006.74	-5721.05	4096.43	1789186.14	433603.63	39°41'19.494"N 80°08'15.202"W
15276	91.29	153.32	8131.85	7069.58	-5777.51	4124.36	1789224.08	433545.52	39°41'18.938"N 80°08'14.839"W
15340	91.05	152.68	8130.54	7133.45	-5834.52	4153.41	1789262.14	433487.64	39°41'18.377"N 80°08'14.462"W
15402	91.05	152.83	8129.41	7195.35	-5889.63	4181.78	1789300.25	433429.39	39°41'17.834"N 80°08'14.094"W
15466	90.46	151.31	8128.56	7259.29	-5946.17	4211.76	1789338.43	433371.61	39°41'17.278"N 80°08'13.706"W
15529	90.58	147.57	8127.99	7322.27	-6000.41	4243.78	1789376.61	433313.75	39°41'16.744"N 80°08'13.291"W
15591	91.26	147.75	8127.33	7384.23	-6052.78	4276.94	1789414.05	433255.52	39°41'16.229"N 80°08'12.862"W
15654	91.48	146.84	8125.49	7447.16	-6105.78	4310.97	1789452.14	433197.61	39°41'15.707"N 80°08'12.422"W
15686	91.45	146.05	8124.67	7479.09	-6132.44	4328.66	1789490.25	433139.79	39°41'15.154"N 80°08'12.013"W
15711	91.45	146.05	8124.04	7504.04	-6153.17	4342.61	1789528.43	433082.05	39°41'14.645"N 80°08'11.645"W

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Beach 6H HL Pt 06	8215	-2460.11	3674.69	1788662	436874.8	39°41'51.1	80°08'20.893"	point
Beach 6H HL Pt 07	8215	-2661.39	3693.03	1788621	436673.6	39°41'49.1	80°08'21.408"	point
Beach 6H HL Pt 08	8215	-2935.9	3493.09	1788481	436399.1	39°41'46.1	80°08'23.173"	point
Beach 6H HL Pt 09	8215	-3017.12	3695.97	1788624	436317.9	39°41'46.1	80°08'21.338"	point
Beach 6H HL Pt 10	8215	-3200.67	3944.29	1788932	436134.3	39°41'44.1	80°08'17.377"	point
Beach 6H HL Pt 11	8215	-3345.45	4185.96	1789174	435989.6	39°41'42.1	80°08'14.272"	point
Beach 6H HL Pt 12	8215	-7117.75	1347	1786335	432217.5	39°41'05.1	80°08'50.242"	point
Beach 6H HL Pt 13	8215	-7244.51	1654.55	1786642	432090.7	39°41'04.1	80°08'46.296"	point
Beach 6H HL Pt 14	8215	-7466.9	2217.17	1787205	431868.4	39°41'02.1	80°08'39.080"	point
Beach 6H HL Pt 15	8215	-7623.45	2527.35	1787515	431711.8	39°41'00.1	80°08'35.098"	point
Beach 6H HL Pt 16	8215	-7650.53	3162.13	1788150	431684.7	39°41'00.1	80°08'26.977"	point
Beach 6H HL Pt 17	8215	-7687.28	3733.97	1788722	431648	39°41'00.1	80°08'19.659"	point
Beach 6H HL Pt 18	8215	-7603.31	4215.66	1789203	431732	39°41'00.1	80°08'13.506"	point
Beach 6H HL Pt 19	8215	-7665.55	4584.84	1789572	431669.7	39°41'00.1	80°08'08.778"	point
Beach 6H HL Pt 20	8215	-7697.67	5194.25	1790182	431697.6	39°41'00.1	80°08'00.986"	point
Beach 6H HL Pt 21	8215	-7245.41	5290.84	1790278	432089.8	39°41'04.1	80°07'59.786"	point
Beach 6H LP Plat	8215	-118.81	831.25	1785819	439216	39°42'14.1	80°08'57.486"	point

WELLPATH COMPOSITION Ref Wellbore: Beach 6H AWB Ref Wellpath: Beach 6H AWP Proj:15711'

Log Name/Comment	Start MD	End MD	Pos Unc Model
	(ft)	(ft)	

02_VES Gyro (100'-7000') GRID NORTH	18	7008	Generic gyro - northseeking (Standard)
03_BH AT Curve 8.5in Section 7070'-15686'	7008	15686	NavitTrak (AT Curve Short Spaced)
Projection to bit	15686	15711	Blind Drilling (std)

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