



November 12, 2019

Lime Rock Resources
Brainard 12 #2H
County/Parish: Eddy County, NM

LEAM MWD: (OH) from 200' MD to 9,344' MD
Projection: 9,405' MD.

This Borehole Survey taken between 08/12/19 and 08/20/19 had been conducted and calculated according to the highest professional standards and complies with all known State and Federal requirements.

Reviewed and Approved:

Date: November 12, 2019



Survey Certification Form

State of New Mexico

Eddy County

I, Brandon Hall, certify that; I am employed by LEAM Drilling Services, that I did on the day(s) of 08/12/2019 through 08/20/2019, conduct or supervise the taking of MWD Survey from a depth of 200' MD to 9,405' MD; that the data is true, correct, complete and within the limitations of the tools as set forth by LEAM Drilling Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Lime Rock Resources for the Brainard 12 #2H in Eddy County, New Mexico; and that I reviewed this report and find that it conforms to the principals and procedures as set forth by LEAM Drilling Services.

A handwritten signature in black ink that reads 'Brandon Hall'. The signature is written in a cursive, flowing style. Below the signature is a solid horizontal line.

Brandon Hall
MWD Operations Coordinator

LEAM Drilling Systems

Survey Report

Company:	LIME ROCK RESOURCES	Local Co-ordinate Reference:	Well: 12 2H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	GE 3295.5' + KB 17.5' @ 3313.00usft
Site:	Brainard	MD Reference:	GE 3295.5' + KB 17.5' @ 3313.00usft
Well:	12 2H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	LEAM Multi_User Db

Project: Eddy County, NM (NAD 83)			
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Brainard				
Site Position:		Northing:	640,046.85 usft	Latitude:	32° 45' 34.287 N
From:	Lat/Long	Easting:	539,620.04 usft	Longitude:	104° 20' 20.113 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.00 °

Well		12 2H				
Well Position	+N/-S	0.00 usft	Northing:	640,046.85 usft	Latitude:	32° 45' 34.287 N
	+E/-W	0.00 usft	Easting:	539,620.04 usft	Longitude:	104° 20' 20.113 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,295.50 usft	

Wellbore						OH
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength	
			(°)	(°)	(nT)	
	HDGM	11/12/2019	7.13	60.47	47,937.50000000	

Design:	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	274.93	

Survey Program		Date	11/12/2019		
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
200.00	9,344.00	Survey #1 (OH)	LEAM_MWD+HDGM	LEAM MWD + HDGM	
9,405.00	9,405.00	Survey #2 (OH)	Project	Projection	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.30	63.80	200.00	0.23	0.47	-0.45	0.15	0.15	0.00
390.00	0.90	32.80	389.99	1.71	1.72	-1.57	0.35	0.32	-16.32
573.00	1.50	4.00	572.95	5.30	2.67	-2.20	0.46	0.33	-15.74
755.00	1.60	22.30	754.88	10.03	3.80	-2.92	0.28	0.05	10.05
942.00	1.30	212.60	941.86	10.66	3.65	-2.72	1.54	-0.16	-90.75
1,130.00	0.70	264.20	1,129.84	8.75	1.36	-0.60	0.54	-0.32	27.45
1,197.00	0.70	263.10	1,196.83	8.65	0.54	0.20	0.02	0.00	-1.64
1,371.00	0.80	268.90	1,370.82	8.50	-1.73	2.45	0.07	0.06	3.33
1,560.00	0.60	237.80	1,559.80	7.95	-3.88	4.55	0.22	-0.11	-16.46

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Site:	Brainard	MD Reference:	GE 3295.5' + KB 17.5' @ 3313.00usft
Well:	12 2H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	LEAM Multi_User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,748.00	1.10	186.60	1,747.78	5.63	-4.92	5.39	0.46	0.27	-27.23
1,843.00	0.20	226.40	1,842.78	4.61	-5.15	5.53	1.01	-0.95	41.89
1,937.00	2.60	332.50	1,936.75	6.39	-6.25	6.78	2.83	2.55	112.87
1,969.00	5.60	330.60	1,968.66	8.40	-7.35	8.05	9.38	9.38	-5.94
2,000.00	8.30	329.40	1,999.43	11.64	-9.24	10.20	8.72	8.71	-3.87
2,032.00	11.10	328.80	2,030.97	16.26	-12.01	13.36	8.76	8.75	-1.88
2,063.00	14.20	329.00	2,061.21	22.08	-15.51	17.35	10.00	10.00	0.65
2,094.00	17.40	328.70	2,091.04	29.30	-19.88	22.32	10.33	10.32	-0.97
2,126.00	20.40	327.40	2,121.31	38.09	-25.37	28.55	9.47	9.38	-4.06
2,157.00	23.70	326.40	2,150.04	47.83	-31.73	35.73	10.71	10.65	-3.23
2,188.00	26.60	325.70	2,178.10	58.76	-39.09	44.00	9.40	9.35	-2.26
2,220.00	29.90	325.10	2,206.28	71.22	-47.70	53.64	10.35	10.31	-1.88
2,251.00	33.00	325.90	2,232.72	84.55	-56.85	63.91	10.09	10.00	2.58
2,282.00	36.10	326.90	2,258.25	99.20	-66.57	74.85	10.17	10.00	3.23
2,314.00	39.10	328.00	2,283.60	115.65	-77.07	86.73	9.61	9.38	3.44
2,346.00	42.30	329.20	2,307.86	133.47	-87.94	99.08	10.29	10.00	3.75
2,377.00	45.50	329.50	2,330.20	151.96	-98.89	111.58	10.34	10.32	0.97
2,409.00	49.00	329.00	2,351.91	172.15	-110.91	125.29	11.00	10.94	-1.56
2,441.00	52.20	329.20	2,372.22	193.36	-123.60	139.76	10.01	10.00	0.63
2,472.00	55.10	329.20	2,390.59	214.81	-136.39	154.34	9.35	9.35	0.00
2,504.00	55.90	329.20	2,408.72	237.46	-149.89	169.74	2.50	2.50	0.00
2,536.00	56.20	329.50	2,426.59	260.29	-163.42	185.19	1.22	0.94	0.94
2,567.00	56.20	329.40	2,443.84	282.48	-176.52	200.14	0.27	0.00	-0.32
2,598.00	56.50	329.50	2,461.01	304.70	-189.63	215.12	1.00	0.97	0.32
2,630.00	56.60	329.70	2,478.65	327.73	-203.14	230.56	0.61	0.31	0.63
2,661.00	56.90	329.50	2,495.65	350.09	-216.26	245.55	1.11	0.97	-0.65
2,693.00	57.90	327.80	2,512.89	373.11	-230.29	261.50	5.46	3.13	-5.31
2,725.00	59.30	323.70	2,529.57	395.68	-245.66	278.76	11.78	4.38	-12.81
2,756.00	60.40	320.80	2,545.14	416.87	-262.07	296.93	8.83	3.55	-9.35
2,787.00	62.60	317.40	2,559.93	437.45	-279.91	316.47	11.97	7.10	-10.97
2,818.00	64.30	315.10	2,573.79	457.47	-299.09	337.30	8.61	5.48	-7.42
2,850.00	66.00	312.10	2,587.24	477.49	-320.12	359.97	10.03	5.31	-9.38
2,881.00	67.30	309.20	2,599.53	496.03	-341.71	383.07	9.56	4.19	-9.35
2,912.00	68.10	305.50	2,611.30	513.42	-364.50	407.28	11.34	2.58	-11.94
2,944.00	69.00	302.10	2,623.00	529.98	-389.25	433.36	10.28	2.81	-10.63
2,975.00	70.00	299.00	2,633.86	544.74	-414.25	459.54	9.91	3.23	-10.00
3,007.00	70.50	295.60	2,644.68	558.55	-441.01	487.38	10.12	1.56	-10.63
3,038.00	71.00	292.30	2,654.90	570.42	-467.76	515.05	10.18	1.61	-10.65
3,070.00	71.70	289.10	2,665.13	581.14	-496.11	544.22	9.72	2.19	-10.00
3,101.00	73.00	286.70	2,674.53	590.21	-524.22	573.01	8.49	4.19	-7.74
3,132.00	74.90	283.80	2,683.11	598.05	-552.96	602.31	10.88	6.13	-9.35
3,164.00	76.90	281.60	2,690.90	604.87	-583.23	633.06	9.14	6.25	-6.88
3,195.00	78.80	280.30	2,697.43	610.62	-612.99	663.19	7.37	6.13	-4.19

LEAM Drilling Systems

Survey Report

Company:	LIME ROCK RESOURCES	Local Co-ordinate Reference:	Well 12 2H
Project:	Eddy County NM (NAD 83)	TVD Reference:	GE 3295.5' + KB 17.5' @ 3313.00usft
Site:	Brainard	MD Reference:	GE 3295.5' + KB 17.5' @ 3313.00usft
Well:	12 2H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	LEAM Multi User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,227.00	79.80	278.70	2,703.37	615.81	-644.00	694.54	5.82	3.13	-5.00
3,258.00	82.00	276.80	2,708.27	619.94	-674.32	725.11	9.33	7.10	-6.13
3,290.00	83.70	274.20	2,712.26	622.98	-705.93	756.85	9.65	5.31	-8.13
3,321.00	86.20	272.90	2,714.98	624.89	-736.74	787.72	9.08	8.06	-4.19
3,384.00	87.10	268.00	2,718.67	625.38	-799.61	850.40	7.89	1.43	-7.78
3,446.00	87.70	267.00	2,721.48	622.68	-861.49	911.81	1.88	0.97	-1.61
3,496.00	90.00	267.30	2,722.48	620.19	-911.41	961.34	4.64	4.60	0.60
3,558.00	90.10	267.30	2,722.43	617.27	-973.35	1,022.79	0.16	0.16	0.00
3,620.00	90.40	267.30	2,722.16	614.35	-1,035.28	1,084.24	0.48	0.48	0.00
3,683.00	90.70	267.30	2,721.55	611.38	-1,098.20	1,146.68	0.48	0.48	0.00
3,746.00	90.70	268.70	2,720.79	609.19	-1,161.16	1,209.22	2.22	0.00	2.22
3,809.00	90.70	268.90	2,720.02	607.87	-1,224.14	1,271.85	0.32	0.00	0.32
3,872.00	91.40	269.10	2,718.86	606.77	-1,287.12	1,334.50	1.16	1.11	0.32
3,934.00	91.20	268.90	2,717.45	605.69	-1,349.09	1,396.15	0.46	-0.32	-0.32
3,997.00	90.90	268.70	2,716.30	604.37	-1,412.07	1,458.78	0.57	-0.48	-0.32
4,060.00	90.70	268.70	2,715.42	602.94	-1,475.05	1,521.41	0.32	-0.32	0.00
4,123.00	90.70	268.50	2,714.65	601.40	-1,538.02	1,584.02	0.32	0.00	-0.32
4,186.00	91.10	268.50	2,713.66	599.75	-1,600.99	1,646.61	0.63	0.63	0.00
4,249.00	90.70	268.90	2,712.67	598.32	-1,663.97	1,709.23	0.90	-0.63	0.63
4,312.00	90.70	269.10	2,711.90	597.22	-1,726.96	1,771.89	0.32	0.00	0.32
4,374.00	90.30	268.70	2,711.36	596.03	-1,788.94	1,833.55	0.91	-0.65	-0.65
4,437.00	90.00	268.90	2,711.20	594.71	-1,851.93	1,896.18	0.57	-0.48	0.32
4,500.00	90.50	269.60	2,710.92	593.89	-1,914.92	1,958.87	1.37	0.79	1.11
4,562.00	90.50	268.70	2,710.38	592.97	-1,976.91	2,020.56	1.45	0.00	-1.45
4,625.00	90.00	267.50	2,710.10	590.88	-2,039.87	2,083.11	2.06	-0.79	-1.90
4,688.00	90.00	267.00	2,710.10	587.86	-2,102.80	2,145.54	0.79	0.00	-0.79
4,752.00	90.60	268.20	2,709.77	585.18	-2,166.74	2,209.02	2.10	0.94	1.88
4,815.00	90.20	267.30	2,709.33	582.70	-2,229.69	2,271.52	1.56	-0.63	-1.43
4,878.00	90.70	268.20	2,708.84	580.23	-2,292.64	2,334.02	1.63	0.79	1.43
4,941.00	90.10	267.30	2,708.40	577.76	-2,355.59	2,396.53	1.72	-0.95	-1.43
5,002.00	90.20	268.20	2,708.24	575.36	-2,416.54	2,457.05	1.48	0.16	1.48
5,063.00	90.20	270.50	2,708.02	574.67	-2,477.53	2,517.75	3.77	0.00	3.77
5,126.00	89.90	270.00	2,707.97	574.94	-2,540.53	2,580.54	0.93	-0.48	-0.79
5,189.00	91.30	271.40	2,707.31	575.71	-2,603.52	2,643.37	3.14	2.22	2.22
5,252.00	91.70	271.70	2,705.66	577.42	-2,666.48	2,706.23	0.79	0.63	0.48
5,315.00	91.50	271.40	2,703.90	579.12	-2,729.43	2,769.10	0.57	-0.32	-0.48
5,378.00	91.00	271.40	2,702.53	580.66	-2,792.39	2,831.97	0.79	-0.79	0.00
5,441.00	90.60	271.00	2,701.65	581.98	-2,855.37	2,894.83	0.90	-0.63	-0.63
5,504.00	90.50	271.00	2,701.04	583.08	-2,918.36	2,957.67	0.16	-0.16	0.00
5,567.00	90.70	270.30	2,700.38	583.79	-2,981.35	3,020.49	1.16	0.32	-1.11
5,630.00	90.30	270.00	2,699.83	583.96	-3,044.35	3,083.27	0.79	-0.63	-0.48
5,693.00	90.00	270.00	2,699.67	583.96	-3,107.35	3,146.04	0.48	-0.48	0.00
5,756.00	89.90	269.80	2,699.72	583.85	-3,170.35	3,208.80	0.35	-0.16	-0.32

LEAM Drilling Systems

Survey Report

Company:	LIME ROCK RESOURCES	Local Co-ordinate Reference:	Well: 12 2H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	GE 3295.5' + KB 17.5' @ 3313.00usft
Site:	Brainard	MD Reference:	GE 3295.5' + KB 17.5' @ 3313.00usft
Well:	12 2H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	LEAM Multi User Db

Survey									
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5,818.00	90.00	270.80	2,699.78	584.17	-3,232.35	3,270.59	1.62	0.16	1.61
5,881.00	89.70	270.70	2,699.94	585.00	-3,295.34	3,333.43	0.50	-0.48	-0.16
5,944.00	90.80	271.00	2,699.67	585.93	-3,358.34	3,396.26	1.81	1.75	0.48
6,007.00	90.50	270.70	2,698.95	586.87	-3,421.32	3,459.10	0.67	-0.48	-0.48
6,069.00	92.10	271.00	2,697.54	587.79	-3,483.30	3,520.93	2.63	2.58	0.48
6,132.00	91.80	271.00	2,695.40	588.88	-3,546.25	3,583.74	0.48	-0.48	0.00
6,195.00	91.20	271.00	2,693.75	589.98	-3,609.22	3,646.57	0.95	-0.95	0.00
6,257.00	90.70	270.70	2,692.72	590.90	-3,671.21	3,708.41	0.94	-0.81	-0.48
6,321.00	90.10	270.10	2,692.28	591.35	-3,735.20	3,772.20	1.33	-0.94	-0.94
6,383.00	90.20	270.10	2,692.11	591.46	-3,797.20	3,833.98	0.16	0.16	0.00
6,443.00	90.70	270.00	2,691.64	591.51	-3,857.20	3,893.76	0.85	0.83	-0.17
6,504.00	90.70	269.80	2,690.90	591.40	-3,918.20	3,954.52	0.33	0.00	-0.33
6,565.00	90.20	269.90	2,690.42	591.24	-3,979.19	4,015.28	0.84	-0.82	0.16
6,626.00	89.70	269.20	2,690.47	590.77	-4,040.19	4,076.01	1.41	-0.82	-1.15
6,688.00	90.10	268.90	2,690.58	589.74	-4,102.18	4,137.69	0.81	0.65	-0.48
6,748.00	90.60	268.20	2,690.21	588.22	-4,162.16	4,197.31	1.43	0.83	-1.17
6,809.00	91.10	268.00	2,689.31	586.20	-4,223.12	4,257.87	0.88	0.82	-0.33
6,871.00	91.90	267.70	2,687.69	583.87	-4,285.05	4,319.38	1.38	1.29	-0.48
6,932.00	90.20	268.00	2,686.57	581.58	-4,346.00	4,379.90	2.83	-2.79	0.49
6,991.00	90.70	268.00	2,686.10	579.52	-4,404.96	4,438.47	0.85	0.85	0.00
7,053.00	89.70	268.90	2,685.89	577.85	-4,466.94	4,500.07	2.17	-1.61	1.45
7,114.00	90.60	268.90	2,685.73	576.68	-4,527.92	4,560.73	1.48	1.48	0.00
7,175.00	91.30	268.50	2,684.72	575.29	-4,588.90	4,621.36	1.32	1.15	-0.66
7,237.00	91.30	268.00	2,683.31	573.40	-4,650.86	4,682.93	0.81	0.00	-0.81
7,298.00	89.40	268.70	2,682.94	571.64	-4,711.83	4,743.52	3.32	-3.11	1.15
7,358.00	89.90	268.50	2,683.30	570.18	-4,771.81	4,803.15	0.90	0.83	-0.33
7,418.00	90.40	268.50	2,683.15	568.61	-4,831.79	4,862.78	0.83	0.83	0.00
7,479.00	89.30	270.10	2,683.31	567.86	-4,892.78	4,923.48	3.18	-1.80	2.62
7,540.00	89.70	269.80	2,683.84	567.81	-4,953.78	4,984.24	0.82	0.66	-0.49
7,602.00	90.40	270.00	2,683.79	567.70	-5,015.77	5,046.01	1.17	1.13	0.32
7,662.00	89.30	270.70	2,683.94	568.07	-5,075.77	5,105.81	2.17	-1.83	1.17
7,723.00	89.60	270.10	2,684.53	568.49	-5,136.77	5,166.62	1.10	0.49	-0.98
7,784.00	90.00	270.00	2,684.74	568.55	-5,197.77	5,227.40	0.68	0.66	-0.16
7,845.00	89.70	271.40	2,684.90	569.29	-5,258.76	5,288.23	2.35	-0.49	2.30
7,905.00	90.00	270.50	2,685.06	570.29	-5,318.75	5,348.08	1.58	0.50	-1.50
7,966.00	90.10	269.40	2,685.00	570.23	-5,379.75	5,408.85	1.81	0.16	-1.80
8,027.00	90.60	268.70	2,684.63	569.22	-5,440.74	5,469.53	1.41	0.82	-1.15
8,088.00	91.10	268.20	2,683.73	567.57	-5,501.71	5,530.13	1.16	0.82	-0.82
8,150.00	91.70	268.20	2,682.21	565.62	-5,563.66	5,591.69	0.97	0.97	0.00
8,210.00	91.70	268.20	2,680.43	563.74	-5,623.61	5,651.25	0.00	0.00	0.00
8,242.00	91.90	267.70	2,679.43	562.60	-5,655.57	5,682.99	1.68	0.63	-1.56
8,302.00	90.90	268.70	2,677.96	560.71	-5,715.52	5,742.56	2.36	-1.67	1.67
8,362.00	91.40	268.90	2,676.76	559.46	-5,775.49	5,802.21	0.90	0.83	0.33
8,423.00	91.90	268.90	2,675.00	558.29	-5,836.46	5,862.84	0.82	0.82	0.00

LEAM Drilling Systems

Survey Report

Company:	LIME ROCK RESOURCES	Local Co-ordinate Reference:	Well: 12 2H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	GE 3295.5' + KB 17.5' @ 3313.00usft
Site:	Brainard	MD Reference:	GE 3295.5' + KB 17.5' @ 3313.00usft
Well:	12 2H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	LEAM Multi_User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,483.00	91.90	268.70	2,673.01	557.03	-5,896.41	5,922.47	0.33	0.00	-0.33
8,545.00	88.90	269.40	2,672.58	556.00	-5,958.39	5,984.13	4.97	-4.84	1.13
8,606.00	89.30	269.40	2,673.54	555.36	-6,019.38	6,044.84	0.66	0.66	0.00
8,667.00	89.30	270.80	2,674.28	555.47	-6,080.38	6,105.62	2.29	0.00	2.30
8,728.00	89.70	270.80	2,674.81	556.32	-6,141.37	6,166.46	0.66	0.66	0.00
8,789.00	89.70	272.80	2,675.13	558.24	-6,202.33	6,227.36	3.28	0.00	3.28
8,851.00	90.10	273.50	2,675.24	561.64	-6,264.24	6,289.33	1.30	0.65	1.13
8,911.00	90.40	272.40	2,674.98	564.73	-6,324.16	6,349.29	1.90	0.50	-1.83
8,971.00	90.70	272.10	2,674.40	567.09	-6,384.11	6,409.23	0.71	0.50	-0.50
9,032.00	90.70	272.20	2,673.66	569.38	-6,445.06	6,470.15	0.16	0.00	0.16
9,094.00	90.60	272.60	2,672.96	571.97	-6,507.00	6,532.09	0.66	-0.16	0.65
9,155.00	90.80	272.20	2,672.21	574.53	-6,567.95	6,593.02	0.73	0.33	-0.66
9,216.00	91.30	271.70	2,671.09	576.60	-6,628.90	6,653.93	1.16	0.82	-0.82
9,277.00	91.40	271.20	2,669.66	578.15	-6,689.86	6,714.80	0.84	0.16	-0.82
9,336.00	91.50	270.50	2,668.16	579.02	-6,748.84	6,773.63	1.20	0.17	-1.19
9,344.00	91.70	270.50	2,667.94	579.09	-6,756.83	6,781.60	2.50	2.50	0.00
9,405.00	91.70	270.50	2,666.13	579.62	-6,817.80	6,842.39	0.00	0.00	0.00
Projection									

COMPANY LIME ROCK RESOURCES
 FIELD Eddy County, NM (NAD 83)
 SITE Brainard
 WELL 12 2H
 WELLPATH OH
 DESIGN OH
 DEPTHUNT (usft)

WELL INFO

MAP DATUM North American Datum 1983
 MAP SYSTEM US State Plane 1983
 MAP ZONE New Mexico Eastern Zone
 WELL LAT 32.759524
 WELL LON -104.33892
 WELL EW MAI 539620.04
 WELL NS MAP 640046.85
 CONVERGENC 0
 MAGMODEL HDGM
 DECLINATION 7.13
 NORTH REF True
 GROUND ELEV 3295.5
 KB ELEV 3313
 VS AZI 274.86

SURVEY PROGRAM

- 1 200.00 - 9344.00 SURVEY #1 : LEAM_MWD+HDGM
- 2 9405.00 - 9405.00 SURVEY #2 : PROJECT

SURVEY LIST

Measured Depth	Inclination	Azimuth	Course Length	True Vertical	SubSea TVD	Local N/-S	Local E/-W	Easting	Northing	Latitude	Longitude	Dogleg Severit	Build Rate	Turn Rate	Vertical Section
MD	INC	AZI	CL	TVD	SSTVD	NS	EW	X	Y	LAT	LON	DLS	BLD	TRN	VS
0.00	0.00	0.00	0.00	0.00	3313.00	0.00	0.00	539620.04	640046.85	32.759524	-104.338920	0.00	0.00	0.00	0.00
200.00	0.30	63.80	200.00	200.00	3113.00	0.23	0.47	539620.51	640047.08	32.759525	-104.338919	0.15	0.15	0.00	-0.45
390.00	0.90	32.80	190.00	389.99	2923.01	1.71	1.72	539621.77	640048.55	32.759529	-104.338915	0.35	0.32	-16.32	-1.57
573.00	1.50	4.00	183.00	572.95	2740.05	5.30	2.67	539622.71	640052.15	32.759539	-104.338912	0.46	0.33	-15.74	-2.21
755.00	1.60	22.30	182.00	754.88	2558.12	10.03	3.80	539623.84	640056.88	32.759552	-104.338908	0.28	0.05	10.05	-2.94
942.00	1.30	212.60	187.00	941.86	2371.14	10.66	3.65	539623.69	640057.50	32.759553	-104.338908	1.55	-0.16	-90.75	-2.73
1130.00	0.70	264.20	188.00	1129.84	2183.16	8.75	1.36	539621.40	640055.59	32.759548	-104.338916	0.55	-0.32	27.45	-0.61
1197.00	0.70	263.10	67.00	1196.83	2116.17	8.66	0.54	539620.59	640055.50	32.759548	-104.338919	0.02	0.00	-1.64	0.19
1371.00	0.80	268.90	174.00	1370.82	1942.18	8.50	-1.73	539618.32	640055.35	32.759548	-104.338926	0.07	0.06	3.33	2.44
1560.00	0.60	237.80	189.00	1559.80	1753.20	7.95	-3.88	539616.16	640054.80	32.759546	-104.338933	0.22	-0.11	-16.46	4.54
1748.00	1.10	186.60	188.00	1747.78	1565.22	5.63	-4.92	539615.12	640052.48	32.759540	-104.338936	0.46	0.27	-27.23	5.38
1843.00	0.20	226.40	95.00	1842.78	1470.22	4.61	-5.15	539614.89	640051.46	32.759537	-104.338937	1.01	-0.95	41.89	5.52
1937.00	2.60	332.50	94.00	1936.75	1376.26	6.39	-6.25	539613.79	640053.24	32.759542	-104.338941	2.83	2.55	112.87	6.77
1969.00	5.60	330.60	32.00	1968.66	1344.34	8.40	-7.35	539612.69	640055.24	32.759547	-104.338944	9.38	9.37	-5.94	8.04
2000.00	8.30	329.40	31.00	1999.43	1313.57	11.64	-9.24	539610.81	640058.49	32.759556	-104.338950	8.72	8.71	-3.87	10.19
2032.00	11.10	328.80	32.00	2030.97	1282.03	16.27	-12.01	539608.04	640063.11	32.759569	-104.338959	8.76	8.75	-1.87	13.34
2063.00	14.20	329.00	31.00	2061.21	1251.79	22.08	-15.51	539604.53	640068.93	32.759585	-104.338971	10.00	10.00	0.65	17.33
2094.00	17.40	328.70	31.00	2091.04	1221.96	29.30	-19.88	539600.16	640076.15	32.759605	-104.338985	10.33	10.32	-0.97	22.29
2126.00	20.40	327.40	32.00	2121.31	1191.69	38.09	-25.37	539594.67	640084.94	32.759629	-104.339003	9.47	9.37	-4.06	28.51
2157.00	23.70	326.40	31.00	2150.04	1162.96	47.83	-31.73	539588.31	640094.68	32.759656	-104.339024	10.71	10.65	-3.23	35.67
2188.00	26.60	325.70	31.00	2178.10	1134.91	58.76	-39.09	539580.95	640105.61	32.759686	-104.339047	9.40	9.35	-2.26	43.93

2220.00	29.90	325.10	32.00	2206.28	1106.72	71.22	-47.70	539572.35	640118.07	32.759720	-104.339075	10.35	10.31	-1.87	53.56
2251.00	33.00	325.90	31.00	2232.72	1080.28	84.55	-56.85	539563.20	640131.40	32.759757	-104.339105	10.09	10.00	2.58	63.81
2282.00	36.10	326.90	31.00	2258.25	1054.75	99.20	-66.57	539553.47	640146.05	32.759797	-104.339137	10.17	10.00	3.23	74.74
2314.00	39.10	328.00	32.00	2283.60	1029.40	115.65	-77.07	539542.98	640162.50	32.759842	-104.339171	9.61	9.37	3.44	86.59
2346.00	42.30	329.20	32.00	2307.86	1005.14	133.47	-87.94	539532.11	640180.32	32.759891	-104.339206	10.29	10.00	3.75	98.93
2377.00	45.50	329.50	31.00	2330.20	982.81	151.96	-98.89	539521.16	640198.81	32.759942	-104.339242	10.34	10.32	0.97	111.41
2409.00	49.00	329.00	32.00	2351.91	961.09	172.15	-110.91	539509.15	640219.00	32.759997	-104.339281	11.00	10.94	-1.56	125.09
2441.00	52.20	329.20	32.00	2372.22	940.78	193.36	-123.60	539496.45	640240.21	32.760056	-104.339322	10.01	10.00	0.62	139.54
2472.00	55.10	329.20	31.00	2390.59	922.41	214.81	-136.39	539483.67	640261.66	32.760115	-104.339364	9.36	9.35	0.00	154.09
2504.00	55.90	329.20	32.00	2408.72	904.28	237.46	-149.89	539470.17	640284.31	32.760177	-104.339408	2.50	2.50	0.00	169.47
2536.00	56.20	329.50	32.00	2426.59	886.41	260.30	-163.42	539456.64	640307.15	32.760240	-104.339452	1.22	0.94	0.94	184.88
2567.00	56.20	329.40	31.00	2443.84	869.17	282.48	-176.52	539443.54	640329.34	32.760301	-104.339494	0.27	0.00	-0.32	199.81
2598.00	56.50	329.50	31.00	2461.01	851.99	304.70	-189.63	539430.43	640351.56	32.760362	-104.339537	1.00	0.97	0.32	214.76
2630.00	56.60	329.70	32.00	2478.65	834.35	327.73	-203.14	539416.92	640374.59	32.760425	-104.339581	0.61	0.31	0.62	230.18
2661.00	56.90	329.50	31.00	2495.65	817.35	350.09	-216.26	539403.80	640396.95	32.760486	-104.339624	1.11	0.97	-0.65	245.14
2693.00	57.90	327.80	32.00	2512.89	800.11	373.11	-230.29	539389.77	640419.97	32.760550	-104.339669	5.46	3.12	-5.31	261.07
2725.00	59.30	323.70	32.00	2529.57	783.43	395.68	-245.66	539374.40	640442.54	32.760612	-104.339719	11.78	4.37	-12.81	278.30
2756.00	60.40	320.80	31.00	2545.14	767.86	416.87	-262.07	539357.99	640463.73	32.760670	-104.339773	8.83	3.55	-9.35	296.44
2787.00	62.60	317.40	31.00	2559.93	753.07	437.45	-279.91	539340.15	640484.31	32.760727	-104.339831	11.97	7.10	-10.97	315.96
2818.00	64.30	315.10	31.00	2573.79	739.21	457.47	-299.09	539320.98	640504.34	32.760782	-104.339893	8.61	5.48	-7.42	336.77
2850.00	66.00	312.10	32.00	2587.24	725.76	477.49	-320.12	539299.95	640524.35	32.760837	-104.339962	10.03	5.31	-9.37	359.41
2881.00	67.30	309.20	31.00	2599.53	713.47	496.03	-341.71	539278.36	640542.89	32.760888	-104.340032	9.56	4.19	-9.35	382.50
2912.00	68.10	305.50	31.00	2611.30	701.70	513.42	-364.50	539255.57	640560.29	32.760935	-104.340106	11.34	2.58	-11.94	406.69
2944.00	69.00	302.10	32.00	2623.00	690.00	529.98	-389.25	539230.82	640576.85	32.760981	-104.340187	10.28	2.81	-10.62	432.75
2975.00	70.00	299.00	31.00	2633.86	679.14	544.74	-414.25	539205.82	640591.61	32.761021	-104.340268	9.91	3.23	-10.00	458.91
3007.00	70.50	295.60	32.00	2644.68	668.32	558.55	-441.01	539179.06	640605.42	32.761059	-104.340355	10.12	1.56	-10.62	486.74
3038.00	71.00	292.30	31.00	2654.90	658.10	570.42	-467.76	539152.32	640617.30	32.761092	-104.340442	10.18	1.61	-10.65	514.40
3070.00	71.70	289.10	32.00	2665.13	647.87	581.14	-496.11	539123.96	640628.01	32.761122	-104.340534	9.72	2.19	-10.00	543.56
3101.00	73.00	286.70	31.00	2674.54	638.47	590.22	-524.22	539095.85	640637.09	32.761146	-104.340626	8.49	4.19	-7.74	572.34
3132.00	74.90	283.80	31.00	2683.11	629.89	598.05	-552.96	539067.11	640644.92	32.761168	-104.340719	10.88	6.13	-9.35	601.63
3164.00	76.90	281.60	32.00	2690.90	622.10	604.87	-583.24	539036.84	640651.74	32.761187	-104.340818	9.14	6.25	-6.87	632.38
3195.00	78.80	280.30	31.00	2697.43	615.57	610.62	-612.99	539007.09	640657.50	32.761203	-104.340914	7.37	6.13	-4.19	662.51
3227.00	79.80	278.70	32.00	2703.37	609.63	615.81	-644.00	538976.08	640662.69	32.761217	-104.341015	5.82	3.12	-5.00	693.85
3258.00	82.00	276.80	31.00	2708.27	604.73	619.94	-674.33	538945.75	640666.82	32.761228	-104.341114	9.33	7.10	-6.13	724.42
3290.00	83.70	274.20	32.00	2712.26	600.74	622.98	-705.93	538914.15	640669.86	32.761237	-104.341217	9.66	5.31	-8.12	756.16
3321.00	86.20	272.90	31.00	2714.98	598.02	624.89	-736.74	538883.33	640671.77	32.761242	-104.341317	9.08	8.06	-4.19	787.03
3384.00	87.10	268.00	63.00	2718.67	594.33	625.38	-799.61	538820.46	640672.27	32.761243	-104.341521	7.90	1.43	-7.78	849.72
3446.00	87.70	267.00	62.00	2721.48	591.52	622.68	-861.49	538758.59	640669.57	32.761236	-104.341723	1.88	0.97	-1.61	911.14
3496.00	90.00	267.30	50.00	2722.48	590.52	620.19	-911.42	538708.66	640667.09	32.761229	-104.341885	4.64	4.60	0.60	960.68
3558.00	90.10	267.30	62.00	2722.43	590.57	617.27	-973.35	538646.73	640664.17	32.761221	-104.342087	0.16	0.16	0.00	1022.14
3620.00	90.40	267.30	62.00	2722.16	590.84	614.35	-1035.28	538584.80	640661.25	32.761213	-104.342288	0.48	0.48	0.00	1083.60
3683.00	90.70	267.30	63.00	2721.56	591.45	611.39	-1098.20	538521.87	640658.29	32.761205	-104.342493	0.48	0.48	0.00	1146.05
3746.00	90.70	268.70	63.00	2720.79	592.22	609.19	-1161.16	538458.92	640656.09	32.761199	-104.342698	2.22	0.00	2.22	1208.59
3809.00	90.70	268.90	63.00	2720.02	592.99	607.87	-1224.14	538395.93	640654.78	32.761195	-104.342903	0.32	0.00	0.32	1271.23
3872.00	91.40	269.10	63.00	2718.86	594.14	606.77	-1287.12	538332.96	640653.68	32.761192	-104.343107	1.16	1.11	0.32	1333.89
3934.00	91.20	268.90	62.00	2717.45	595.55	605.69	-1349.09	538270.98	640652.60	32.761189	-104.343309	0.46	-0.32	-0.32	1395.55
3997.00	90.90	268.70	63.00	2716.30	596.70	604.37	-1412.07	538208.01	640651.29	32.761185	-104.343514	0.57	-0.48	-0.32	1458.19
4060.00	90.70	268.70	63.00	2715.42	597.58	602.94	-1475.05	538145.03	640649.86	32.761181	-104.343719	0.32	-0.32	0.00	1520.82
4123.00	90.70	268.50	63.00	2714.65	598.35	601.40	-1538.02	538082.05	640648.33	32.761177	-104.343924	0.32	0.00	-0.32	1583.44
4186.00	91.10	268.50	63.00	2713.66	599.34	599.75	-1600.99	538019.08	640646.68	32.761173	-104.344128	0.64	0.63	0.00	1646.05
4249.00	90.70	268.90	63.00	2712.67	600.33	598.32	-1663.97	537956.10	640645.25	32.761169	-104.344333	0.90	-0.63	0.63	1708.67
4312.00	90.70	269.10	63.00	2711.90	601.10	597.22	-1726.96	537893.12	640644.16	32.761166	-104.344538	0.32	0.00	0.32	1771.34

4374.00	90.30	268.70	62.00	2711.36	601.64	596.03	-1788.94	537831.13	640642.97	32.761162	-104.344740	0.91	-0.65	-0.65	1833.00
4437.00	90.00	268.90	63.00	2711.20	601.80	594.71	-1851.93	537768.15	640641.66	32.761159	-104.344945	0.57	-0.48	0.32	1895.65
4500.00	90.50	269.60	63.00	2710.92	602.08	593.89	-1914.92	537705.15	640640.83	32.761156	-104.345150	1.37	0.79	1.11	1958.35
4562.00	90.50	268.70	62.00	2710.38	602.62	592.97	-1976.91	537643.16	640639.92	32.761154	-104.345351	1.45	0.00	-1.45	2020.04
4625.00	90.00	267.50	63.00	2710.11	602.90	590.88	-2039.87	537580.20	640637.83	32.761148	-104.345556	2.06	-0.79	-1.90	2082.60
4688.00	90.00	267.00	63.00	2710.11	602.90	587.86	-2102.80	537517.27	640634.81	32.761140	-104.345761	0.79	0.00	-0.79	2145.04
4752.00	90.60	268.20	64.00	2709.77	603.23	585.18	-2166.74	537453.33	640632.14	32.761132	-104.345969	2.10	0.94	1.87	2208.53
4815.00	90.20	267.30	63.00	2709.33	603.67	582.70	-2229.69	537390.38	640629.67	32.761126	-104.346174	1.56	-0.63	-1.43	2271.04
4878.00	90.70	268.20	63.00	2708.84	604.17	580.23	-2292.64	537327.43	640627.20	32.761119	-104.346378	1.63	0.79	1.43	2333.55
4941.00	90.10	267.30	63.00	2708.40	604.61	577.76	-2355.59	537264.48	640624.73	32.761112	-104.346583	1.72	-0.95	-1.43	2396.07
5002.00	90.20	268.20	61.00	2708.24	604.76	575.36	-2416.54	537203.53	640622.33	32.761105	-104.346782	1.48	0.16	1.48	2456.60
5063.00	90.20	270.50	61.00	2708.02	604.98	574.67	-2477.53	537142.54	640621.65	32.761103	-104.346980	3.77	0.00	3.77	2517.31
5126.00	89.90	270.00	63.00	2707.97	605.03	574.94	-2540.53	537079.54	640621.92	32.761104	-104.347185	0.93	-0.48	-0.79	2580.11
5189.00	91.30	271.40	63.00	2707.31	605.69	575.71	-2603.52	537016.55	640622.70	32.761106	-104.347390	3.14	2.22	2.22	2642.93
5252.00	91.70	271.70	63.00	2705.66	607.34	577.42	-2666.48	536953.60	640624.40	32.761111	-104.347595	0.79	0.63	0.48	2705.81
5315.00	91.50	271.40	63.00	2703.90	609.10	579.12	-2729.43	536890.64	640626.11	32.761116	-104.347799	0.57	-0.32	-0.48	2768.68
5378.00	91.00	271.40	63.00	2702.53	610.48	580.66	-2792.40	536827.68	640627.65	32.761120	-104.348004	0.79	-0.79	0.00	2831.55
5441.00	90.60	271.00	63.00	2701.65	611.35	581.98	-2855.38	536764.70	640628.98	32.761123	-104.348209	0.90	-0.63	-0.63	2894.41
5504.00	90.50	271.00	63.00	2701.04	611.96	583.08	-2918.36	536701.71	640630.08	32.761126	-104.348414	0.16	-0.16	0.00	2957.27
5567.00	90.70	270.30	63.00	2700.38	612.62	583.79	-2981.35	536638.72	640630.80	32.761128	-104.348619	1.16	0.32	-1.11	3020.09
5630.00	90.30	270.00	63.00	2699.83	613.17	583.96	-3044.35	536575.72	640630.96	32.761129	-104.348824	0.79	-0.63	-0.48	3082.88
5693.00	90.00	270.00	63.00	2699.67	613.33	583.96	-3107.35	536512.72	640630.97	32.761129	-104.349029	0.48	-0.48	0.00	3145.65
5756.00	89.90	269.80	63.00	2699.72	613.28	583.85	-3170.35	536449.72	640630.86	32.761129	-104.349234	0.36	-0.16	-0.32	3208.41
5818.00	90.00	270.80	62.00	2699.78	613.22	584.17	-3232.35	536387.72	640631.19	32.761129	-104.349435	1.62	0.16	1.61	3270.22
5881.00	89.70	270.70	63.00	2699.94	613.06	585.00	-3295.34	536324.73	640632.02	32.761132	-104.349640	0.50	-0.48	-0.16	3333.05
5944.00	90.80	271.00	63.00	2699.67	613.33	585.93	-3358.34	536261.74	640632.95	32.761134	-104.349845	1.81	1.75	0.48	3395.90
6007.00	90.50	270.70	63.00	2698.95	614.05	586.87	-3421.32	536198.75	640633.89	32.761137	-104.350050	0.67	-0.48	-0.48	3458.74
6069.00	92.10	271.00	62.00	2697.54	615.46	587.79	-3483.30	536136.77	640634.82	32.761139	-104.350252	2.63	2.58	0.48	3520.57
6132.00	91.80	271.00	63.00	2695.40	617.60	588.88	-3546.25	536073.82	640635.92	32.761142	-104.350457	0.48	-0.48	0.00	3583.39
6195.00	91.20	271.00	63.00	2693.75	619.25	589.98	-3609.22	536010.85	640637.02	32.761145	-104.350661	0.95	-0.95	0.00	3646.23
6257.00	90.70	270.70	62.00	2692.72	620.28	590.90	-3671.21	535948.87	640637.94	32.761148	-104.350863	0.94	-0.81	-0.48	3708.07
6321.00	90.10	270.10	64.00	2692.28	620.72	591.35	-3735.20	535884.87	640638.39	32.761149	-104.351071	1.33	-0.94	-0.94	3771.87
6383.00	90.20	270.10	62.00	2692.11	620.89	591.46	-3797.20	535822.87	640638.50	32.761149	-104.351273	0.16	0.16	0.00	3833.66
6443.00	90.70	270.00	60.00	2691.64	621.36	591.51	-3857.20	535762.87	640638.56	32.761149	-104.351468	0.85	0.83	-0.17	3893.44
6504.00	90.70	269.80	61.00	2690.90	622.10	591.40	-3918.20	535701.88	640638.46	32.761149	-104.351667	0.33	0.00	-0.33	3954.21
6565.00	90.20	269.90	61.00	2690.42	622.58	591.24	-3979.19	535640.88	640638.30	32.761149	-104.351865	0.84	-0.82	0.16	4014.98
6626.00	89.70	269.20	61.00	2690.47	622.53	590.77	-4040.19	535579.88	640637.82	32.761147	-104.352063	1.41	-0.82	-1.15	4075.71
6688.00	90.10	268.90	62.00	2690.58	622.42	589.74	-4102.18	535517.89	640636.80	32.761144	-104.352265	0.81	0.65	-0.48	4137.39
6748.00	90.60	268.20	60.00	2690.21	622.79	588.22	-4162.16	535457.91	640635.28	32.761140	-104.352460	1.43	0.83	-1.17	4197.03
6809.00	91.10	268.00	61.00	2689.31	623.69	586.20	-4223.12	535396.95	640633.27	32.761135	-104.352658	0.88	0.82	-0.33	4257.60
6871.00	91.90	267.70	62.00	2687.69	625.31	583.87	-4285.06	535335.02	640630.94	32.761128	-104.352860	1.38	1.29	-0.48	4319.11
6932.00	90.20	268.00	61.00	2686.57	626.43	581.58	-4346.00	535274.07	640628.66	32.761122	-104.353058	2.83	-2.79	0.49	4379.64
6991.00	90.70	268.00	59.00	2686.11	626.90	579.53	-4404.96	535215.11	640626.60	32.761116	-104.353250	0.85	0.85	0.00	4438.22
7053.00	89.70	268.90	62.00	2685.89	627.11	577.85	-4466.94	535153.14	640624.93	32.761112	-104.353452	2.17	-1.61	1.45	4499.83
7114.00	90.60	268.90	61.00	2685.73	627.27	576.68	-4527.93	535092.15	640623.76	32.761108	-104.353650	1.48	1.48	0.00	4560.50
7175.00	91.30	268.50	61.00	2684.72	628.28	575.29	-4588.90	535031.17	640622.38	32.761105	-104.353848	1.32	1.15	-0.66	4621.14
7237.00	91.30	268.00	62.00	2683.31	629.69	573.40	-4650.86	534969.22	640620.49	32.761099	-104.354050	0.81	0.00	-0.81	4682.71
7298.00	89.40	268.70	61.00	2682.94	630.06	571.64	-4711.83	534908.25	640618.74	32.761094	-104.354248	3.32	-3.11	1.15	4743.31
7358.00	89.90	268.50	60.00	2683.31	629.70	570.18	-4771.81	534848.27	640617.28	32.761090	-104.354443	0.90	0.83	-0.33	4802.95
7418.00	90.40	268.50	60.00	2683.15	629.85	568.61	-4831.79	534788.29	640615.71	32.761086	-104.354639	0.83	0.83	0.00	4862.59
7479.00	89.30	270.10	61.00	2683.31	629.69	567.86	-4892.78	534727.30	640614.97	32.761084	-104.354837	3.18	-1.80	2.62	4923.30
7540.00	89.70	269.80	61.00	2683.84	629.16	567.81	-4953.78	534666.30	640614.92	32.761084	-104.355035	0.82	0.66	-0.49	4984.07

7602.00	90.40	270.00	62.00	2683.79	629.22	567.70	-5015.77	534604.30	640614.81	32.761084	-104.355237	1.17	1.13	0.32	5045.84
7662.00	89.30	270.70	60.00	2683.94	629.06	568.07	-5075.77	534544.30	640615.18	32.761085	-104.355432	2.17	-1.83	1.17	5105.65
7723.00	89.60	270.10	61.00	2684.53	628.47	568.49	-5136.77	534483.31	640615.61	32.761086	-104.355631	1.10	0.49	-0.98	5166.46
7784.00	90.00	270.00	61.00	2684.74	628.26	568.55	-5197.77	534422.31	640615.67	32.761086	-104.355829	0.68	0.66	-0.16	5227.25
7845.00	89.70	271.40	61.00	2684.90	628.10	569.29	-5258.76	534361.31	640616.42	32.761088	-104.356027	2.35	-0.49	2.30	5288.08
7905.00	90.00	270.50	60.00	2685.06	627.94	570.29	-5318.75	534301.32	640617.41	32.761091	-104.356223	1.58	0.50	-1.50	5347.94
7966.00	90.10	269.40	61.00	2685.01	628.00	570.23	-5379.75	534240.32	640617.36	32.761090	-104.356421	1.81	0.16	-1.80	5408.72
8027.00	90.60	268.70	61.00	2684.63	628.37	569.22	-5440.74	534179.33	640616.35	32.761088	-104.356619	1.41	0.82	-1.15	5469.40
8088.00	91.10	268.20	61.00	2683.73	629.27	567.57	-5501.71	534118.36	640614.71	32.761083	-104.356818	1.16	0.82	-0.82	5530.02
8150.00	91.70	268.20	62.00	2682.21	630.79	565.63	-5563.66	534056.41	640612.76	32.761078	-104.357019	0.97	0.97	0.00	5591.58
8210.00	91.70	268.20	60.00	2680.43	632.57	563.74	-5623.61	533996.47	640610.88	32.761072	-104.357214	0.00	0.00	0.00	5651.15
8242.00	91.90	267.70	32.00	2679.43	633.57	562.60	-5655.57	533964.50	640609.74	32.761069	-104.357318	1.68	0.62	-1.56	5682.90
8302.00	90.90	268.70	60.00	2677.96	635.04	560.71	-5715.52	533904.55	640607.86	32.761064	-104.357513	2.36	-1.67	1.67	5742.47
8362.00	91.40	268.90	60.00	2676.76	636.24	559.46	-5775.49	533844.58	640606.61	32.761061	-104.357708	0.90	0.83	0.33	5802.13
8423.00	91.90	268.90	61.00	2675.00	638.00	558.29	-5836.46	533783.61	640605.44	32.761057	-104.357907	0.82	0.82	0.00	5862.77
8483.00	91.90	268.70	60.00	2673.01	639.99	557.03	-5896.41	533723.66	640604.19	32.761054	-104.358102	0.33	0.00	-0.33	5922.40
8545.00	88.90	269.40	62.00	2672.58	640.42	556.00	-5958.39	533661.68	640603.16	32.761051	-104.358303	4.97	-4.84	1.13	5984.08
8606.00	89.30	269.40	61.00	2673.54	639.46	555.36	-6019.38	533600.69	640602.53	32.761049	-104.358502	0.66	0.66	0.00	6044.79
8667.00	89.30	270.80	61.00	2674.28	638.72	555.47	-6080.38	533539.70	640602.64	32.761049	-104.358700	2.30	0.00	2.30	6105.58
8728.00	89.70	270.80	61.00	2674.81	638.19	556.32	-6141.37	533478.70	640603.49	32.761052	-104.358899	0.66	0.66	0.00	6166.42
8789.00	89.70	272.80	61.00	2675.13	637.87	558.24	-6202.33	533417.74	640605.41	32.761057	-104.359097	3.28	0.00	3.28	6227.33
8851.00	90.10	273.50	62.00	2675.24	637.76	561.65	-6264.24	533355.83	640608.82	32.761066	-104.359298	1.30	0.65	1.13	6289.30
8911.00	90.40	272.40	60.00	2674.98	638.02	564.73	-6324.16	533295.91	640611.91	32.761075	-104.359493	1.90	0.50	-1.83	6349.27
8971.00	90.70	272.10	60.00	2674.40	638.60	567.09	-6384.11	533235.96	640614.27	32.761081	-104.359688	0.71	0.50	-0.50	6409.20
9032.00	90.70	272.20	61.00	2673.66	639.34	569.38	-6445.06	533175.01	640616.56	32.761087	-104.359887	0.16	0.00	0.16	6470.13
9094.00	90.60	272.60	62.00	2672.96	640.05	571.97	-6507.00	533113.07	640619.16	32.761095	-104.360088	0.67	-0.16	0.65	6532.07
9155.00	90.80	272.20	61.00	2672.21	640.79	574.53	-6567.95	533052.13	640621.72	32.761102	-104.360286	0.73	0.33	-0.66	6593.01
9216.00	91.30	271.70	61.00	2671.09	641.91	576.60	-6628.90	532991.17	640623.80	32.761107	-104.360485	1.16	0.82	-0.82	6653.92
9277.00	91.40	271.20	61.00	2669.66	643.35	578.15	-6689.86	532930.21	640625.34	32.761111	-104.360683	0.84	0.16	-0.82	6714.79
9336.00	91.50	270.50	59.00	2668.16	644.84	579.02	-6748.84	532871.24	640626.22	32.761114	-104.360875	1.20	0.17	-1.19	6773.63
9344.00	91.70	270.50	8.00	2667.94	645.06	579.09	-6756.83	532863.24	640626.29	32.761114	-104.360901	2.50	2.50	0.00	6781.60
9405.00	91.70	270.50	61.00	2666.13	646.87	579.62	-6817.81	532802.27	640626.83	32.761115	-104.361099	0.00	0.00	0.00	6842.40