



AMEREDEV

Project: Lea Co., NM (NAD 83 Grid)
Site: Nandina Fed Com 25-36-31
Well: 125H
Wellbore: ST01
Design: ST01
Lat: 32.080127
Long: -103.303003
GL: 3014.00
KB: RKB=27' @ 3041.00usft (H&P 616)

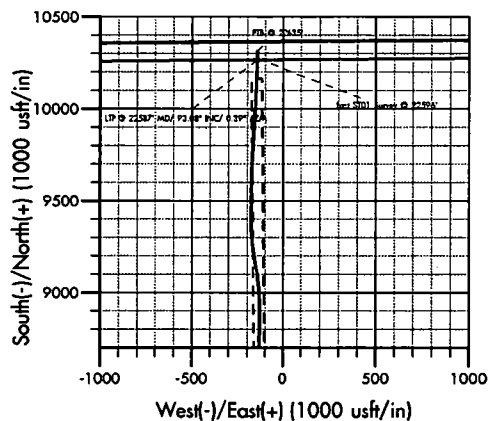


WELL DETAILS: 125H					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	394411.22	860456.94	32.080127	-103.303003

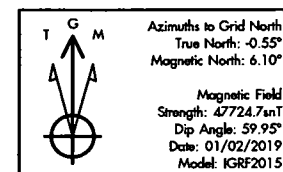
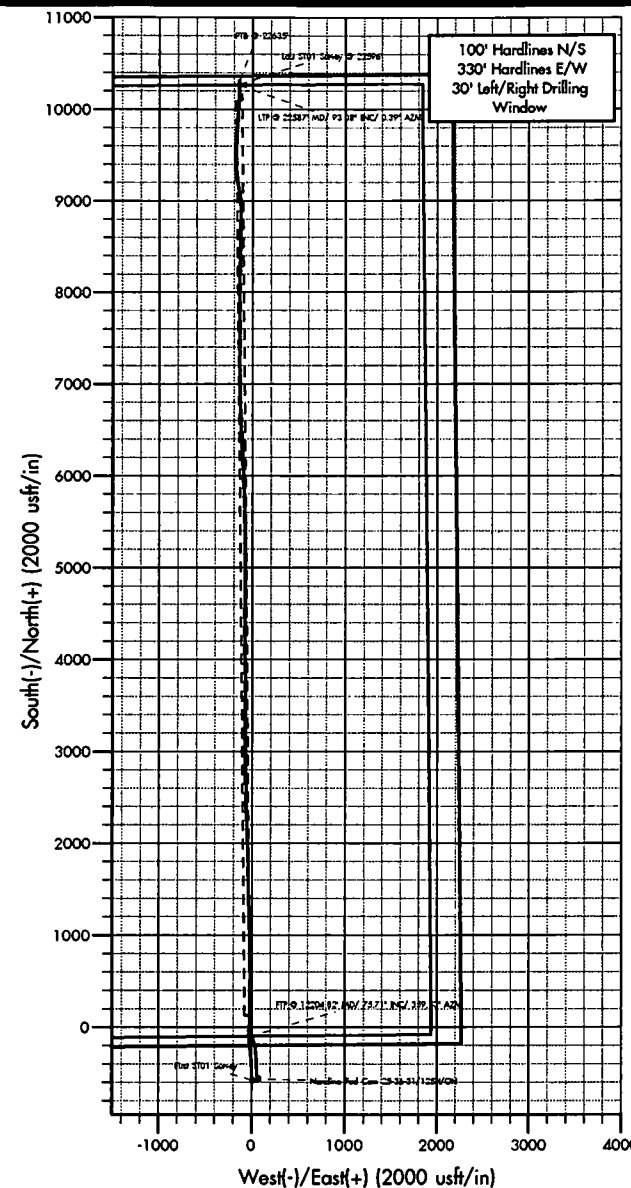
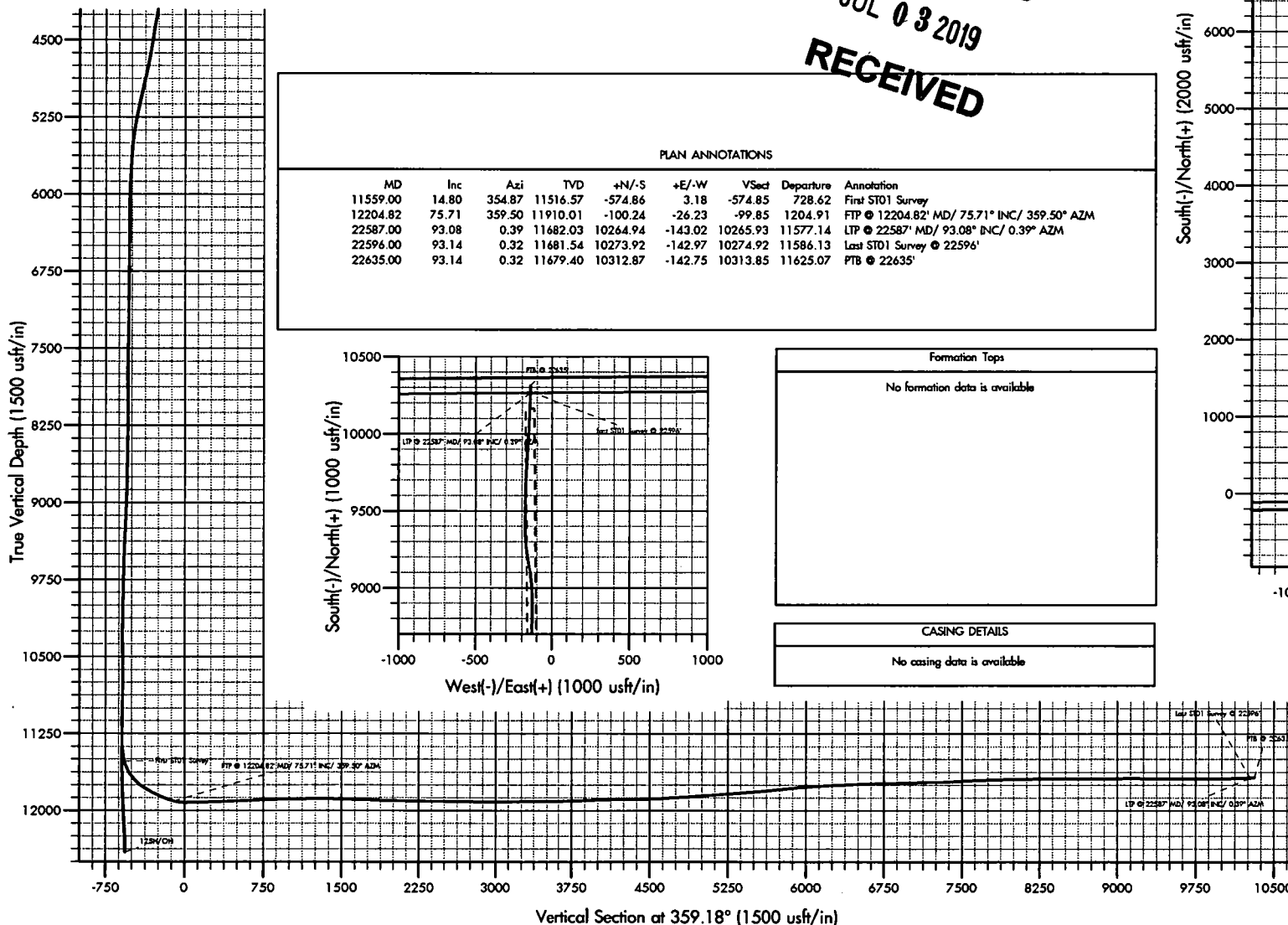
HOBBS OCD
JUL 03 2019
RECEIVED

PLAN ANNOTATIONS

MD	Inc	Azi	TYD	+N/-S	+E/-W	VSec	Departure	Annotation
11559.00	14.80	354.87	11516.57	-574.86	3.18	-574.85	728.62	First ST01 Survey
12204.82	75.71	359.50	11910.01	-100.24	-26.23	-99.85	1204.91	FTP @ 12204.82' MD/ 75.71° INC/ 359.50° AZM
22587.00	93.08	0.39	11682.03	10264.94	-143.02	10265.93	11577.14	LTP @ 22587' MD/ 93.08° INC/ 0.39° AZM
22596.00	93.14	0.32	11681.54	10273.92	-142.97	10274.92	11586.13	Last ST01 Survey @ 22596'
22635.00	93.14	0.32	11679.40	10312.87	-142.75	10313.85	11625.07	PTB @ 22635'



Formation Tops
No formation data is available
CASING DETAILS
No casing data is available



AMEREDEV

Ameredev Operating LLC

**Lea Co., NM (NAD 83 Grid)
Nandina Fed Com 25-36-31
125H**

ST01

Design: ST01

Survey Report - Geographic

27 June, 2019



Company:	Ameredev Operating LLC	Local Co-ordinate Reference:	Well 125H
Project:	Lea Co., NM (NAD 83 Grid)	TVD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Site:	Nandina Fed Com 25-36-31	MD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Well:	125H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.1 Single User Db

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

Site	Nandina Fed Com 25-36-31				
Site Position:		Northing:	394,410.70 usft	Latitude:	32.080127
From:	Map	Easting:	860,406.95 usft	Longitude:	-103.303165
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.55 °

Well	125H				
Well Position	+N/-S	0.00 usft	Northing:	394,411.22 usft	Latitude: 32.080127
	+E/-W	0.00 usft	Easting:	860,456.94 usft	Longitude: -103.303004
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level: 3,014.00 usft

Wellbore	ST01				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	01/02/19	6.65	59.95	47,724.66880523

Design	ST01				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	11,406.42
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.18	

Survey Program	Date	02/13/19			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
159.20	11,406.42	Gyro (OH)	GYRO-NS	OWSG Gyrocompass Gyro	
11,559.00	22,635.00	MWD Survey (ST01)	MWD	OWSG MWD - Standard	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	394,411.22	860,456.94	32.080127	-103.303004	
159.20	0.42	125.39	159.20	-0.34	0.48	394,410.88	860,457.41	32.080126	-103.303002	
253.98	0.54	110.98	253.98	-0.70	1.18	394,410.52	860,458.12	32.080125	-103.303000	
348.76	0.54	107.13	348.75	-0.99	2.02	394,410.23	860,458.96	32.080124	-103.302997	
443.54	0.39	113.77	443.53	-1.25	2.74	394,409.97	860,459.68	32.080123	-103.302995	
538.32	0.26	118.74	538.31	-1.49	3.23	394,409.73	860,460.16	32.080123	-103.302993	
633.10	0.11	261.39	633.09	-1.60	3.32	394,409.62	860,460.26	32.080122	-103.302993	
727.88	0.50	253.46	727.86	-1.73	2.84	394,409.48	860,459.78	32.080122	-103.302995	
791.06	0.62	271.68	791.04	-1.80	2.23	394,409.42	860,459.17	32.080122	-103.302997	
885.84	0.90	237.01	885.81	-2.19	1.09	394,409.03	860,458.03	32.080121	-103.303000	
980.62	1.21	252.93	980.58	-2.89	-0.49	394,408.33	860,456.45	32.080119	-103.303005	

Company:	Ameredev Operating LLC	Local Co-ordinate Reference:	Well 125H
Project:	Lea Co., NM (NAD 83 Grid)	TVD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Site:	Nandina Fed Com 25-36-31	MD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Well:	125H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,075.40	1.27	247.55	1,075.34	-3.59	-2.41	394,407.63	860,454.53	32.080117	-103.303012
1,170.18	1.34	248.33	1,170.09	-4.40	-4.41	394,406.82	860,452.53	32.080115	-103.303018
1,264.96	1.38	241.52	1,264.84	-5.35	-6.45	394,405.87	860,450.49	32.080112	-103.303025
1,359.74	1.40	261.42	1,359.60	-6.07	-8.60	394,405.15	860,448.34	32.080110	-103.303032
1,454.52	1.44	262.60	1,454.35	-6.39	-10.92	394,404.83	860,446.02	32.080109	-103.303039
1,549.30	1.46	261.24	1,549.10	-6.73	-13.30	394,404.49	860,443.64	32.080109	-103.303047
1,644.08	1.44	247.81	1,643.85	-7.36	-15.59	394,403.85	860,441.35	32.080107	-103.303054
1,738.86	1.79	205.23	1,738.59	-9.15	-17.33	394,402.07	860,439.61	32.080102	-103.303060
1,833.64	2.45	186.83	1,833.31	-12.50	-18.20	394,398.71	860,438.74	32.080093	-103.303063
1,928.42	2.58	185.34	1,928.00	-16.64	-18.64	394,394.58	860,438.30	32.080081	-103.303064
2,023.20	3.10	177.26	2,022.66	-21.32	-18.71	394,389.90	860,438.23	32.080069	-103.303065
2,117.98	3.92	171.70	2,117.26	-27.09	-18.12	394,384.13	860,438.82	32.080053	-103.303063
2,212.76	4.09	170.47	2,211.81	-33.63	-17.10	394,377.59	860,439.84	32.080035	-103.303060
2,307.54	4.46	169.55	2,306.33	-40.59	-15.87	394,370.63	860,441.07	32.080016	-103.303056
2,402.32	5.19	167.28	2,400.77	-48.39	-14.25	394,362.83	860,442.68	32.079994	-103.303051
2,497.10	5.36	164.15	2,495.15	-56.83	-12.10	394,354.39	860,444.84	32.079971	-103.303045
2,591.88	5.51	163.27	2,589.50	-65.45	-9.58	394,345.77	860,447.36	32.079947	-103.303037
2,686.66	5.68	163.11	2,683.83	-74.29	-6.91	394,336.93	860,450.03	32.079923	-103.303028
2,781.44	5.90	160.70	2,778.13	-83.38	-3.94	394,327.84	860,453.00	32.079898	-103.303019
2,876.22	6.18	161.34	2,872.38	-92.81	-0.70	394,318.41	860,456.24	32.079872	-103.303009
2,971.00	6.44	162.33	2,966.59	-102.71	2.55	394,308.51	860,459.49	32.079844	-103.302999
3,065.78	6.89	161.70	3,060.73	-113.17	5.95	394,298.05	860,462.89	32.079815	-103.302988
3,160.56	6.99	158.96	3,154.81	-123.95	9.80	394,287.27	860,466.74	32.079786	-103.302976
3,255.34	7.07	159.69	3,248.88	-134.80	13.90	394,276.42	860,470.84	32.079756	-103.302963
3,350.12	7.11	160.34	3,342.94	-145.80	17.90	394,265.42	860,474.84	32.079725	-103.302950
3,444.90	7.14	160.78	3,436.98	-156.88	21.81	394,254.34	860,478.75	32.079695	-103.302938
3,539.68	6.91	167.76	3,531.05	-168.02	24.96	394,243.20	860,481.90	32.079664	-103.302928
3,634.46	7.12	169.13	3,625.12	-179.36	27.27	394,231.86	860,484.21	32.079633	-103.302921
3,729.24	7.40	168.84	3,719.14	-191.11	29.56	394,220.10	860,486.50	32.079601	-103.302914
3,824.02	7.78	166.88	3,813.09	-203.35	32.20	394,207.87	860,489.14	32.079567	-103.302906
3,918.80	8.13	168.81	3,906.96	-216.17	34.96	394,195.05	860,491.90	32.079532	-103.302898
4,013.58	8.19	170.46	4,000.78	-229.41	37.38	394,181.81	860,494.32	32.079495	-103.302890
4,108.36	7.83	171.57	4,094.64	-242.45	39.44	394,168.77	860,496.38	32.079459	-103.302884
4,203.14	8.23	174.91	4,188.49	-255.59	40.99	394,155.63	860,497.93	32.079423	-103.302879
4,297.92	8.51	175.38	4,282.26	-269.34	42.16	394,141.88	860,499.10	32.079385	-103.302876
4,392.70	8.91	175.26	4,375.95	-283.64	43.33	394,127.57	860,500.27	32.079346	-103.302873
4,487.48	9.40	174.19	4,469.52	-298.66	44.72	394,112.56	860,501.66	32.079305	-103.302869
4,582.26	9.88	175.34	4,562.96	-314.46	46.16	394,096.75	860,503.10	32.079261	-103.302864
4,677.04	10.32	175.94	4,656.27	-331.04	47.43	394,080.18	860,504.36	32.079216	-103.302861
4,771.82	11.01	177.33	4,749.41	-348.55	48.45	394,062.67	860,505.39	32.079167	-103.302858
4,866.60	11.62	176.66	4,842.35	-367.12	49.43	394,044.10	860,506.36	32.079116	-103.302856
4,961.38	12.01	178.44	4,935.12	-386.50	50.25	394,024.72	860,507.19	32.079063	-103.302853
5,056.16	12.48	180.38	5,027.75	-406.60	50.45	394,004.62	860,507.39	32.079008	-103.302853
5,150.94	13.05	179.91	5,120.18	-427.54	50.40	393,983.68	860,507.34	32.078950	-103.302854
5,245.72	12.35	179.69	5,212.64	-448.38	50.47	393,962.84	860,507.41	32.078893	-103.302855
5,340.50	10.29	181.49	5,305.58	-466.98	50.31	393,944.24	860,507.25	32.078842	-103.302856
5,435.28	7.32	174.28	5,399.23	-481.45	50.69	393,929.76	860,507.63	32.078802	-103.302855
5,530.06	5.49	170.70	5,493.42	-491.94	52.02	393,919.28	860,508.96	32.078773	-103.302851
5,624.84	4.73	171.95	5,587.82	-500.28	53.30	393,910.94	860,510.24	32.078750	-103.302847
5,719.62	3.06	184.83	5,682.38	-506.67	53.64	393,904.55	860,510.58	32.078733	-103.302846
5,814.40	3.00	180.74	5,777.03	-511.67	53.39	393,899.55	860,510.33	32.078719	-103.302847
5,909.18	2.83	185.86	5,871.68	-516.48	53.12	393,894.74	860,510.06	32.078706	-103.302848
6,003.96	1.90	180.18	5,966.38	-520.38	52.88	393,890.84	860,509.82	32.078695	-103.302849
6,098.74	0.52	132.87	6,061.14	-522.24	53.19	393,888.98	860,510.13	32.078690	-103.302848
6,193.52	0.50	137.56	6,155.92	-522.84	53.78	393,888.38	860,510.72	32.078688	-103.302846

Company:	Ameredev Operating LLC	Local Co-ordinate Reference:	Well 125H
Project:	Lea Co., NM (NAD 83 Grid)	TVD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Site:	Nandina Fed Com 25-36-31	MD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Well:	125H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,288.30	0.52	147.68	6,250.69	-523.51	54.29	393,887.71	860,511.23	32.078686	-103.302845
6,383.08	0.55	149.31	6,345.47	-524.26	54.75	393,886.95	860,511.69	32.078684	-103.302843
6,477.86	0.53	146.59	6,440.24	-525.02	55.23	393,886.20	860,512.17	32.078682	-103.302842
6,572.64	0.58	144.03	6,535.02	-525.78	55.75	393,885.44	860,512.69	32.078680	-103.302840
6,667.42	0.59	127.66	6,629.79	-526.46	56.42	393,884.76	860,513.36	32.078678	-103.302838
6,762.20	0.65	139.18	6,724.57	-527.17	57.15	393,884.05	860,514.09	32.078676	-103.302836
6,856.98	0.64	139.14	6,819.34	-527.97	57.85	393,883.24	860,514.79	32.078674	-103.302833
6,951.76	0.71	144.09	6,914.12	-528.85	58.54	393,882.37	860,515.48	32.078672	-103.302831
7,046.54	0.70	138.79	7,008.89	-529.75	59.28	393,881.47	860,516.22	32.078669	-103.302829
7,141.32	0.69	134.02	7,103.66	-530.57	60.09	393,880.65	860,517.03	32.078667	-103.302826
7,236.10	0.77	136.84	7,198.43	-531.43	60.94	393,879.79	860,517.88	32.078664	-103.302823
7,330.88	1.62	144.96	7,293.19	-532.99	62.14	393,878.23	860,519.08	32.078660	-103.302820
7,425.66	0.89	154.81	7,387.95	-534.75	63.22	393,876.47	860,520.16	32.078655	-103.302816
7,520.44	0.37	228.07	7,482.73	-535.62	63.31	393,875.60	860,520.25	32.078653	-103.302816
7,615.22	0.43	174.84	7,577.50	-536.18	63.11	393,875.04	860,520.05	32.078651	-103.302817
7,710.00	0.85	156.87	7,672.28	-537.18	63.42	393,874.04	860,520.36	32.078649	-103.302816
7,804.78	0.67	167.86	7,767.05	-538.37	63.82	393,872.85	860,520.75	32.078645	-103.302814
7,899.56	0.61	175.80	7,861.82	-539.42	63.97	393,871.80	860,520.91	32.078642	-103.302814
7,994.34	0.28	160.45	7,956.60	-540.14	64.08	393,871.08	860,521.02	32.078640	-103.302814
8,089.12	0.26	41.39	8,051.38	-540.19	64.30	393,871.03	860,521.24	32.078640	-103.302813
8,183.90	0.69	78.66	8,146.16	-539.92	65.00	393,871.30	860,521.94	32.078641	-103.302811
8,278.68	1.86	82.61	8,240.91	-539.61	67.09	393,871.61	860,524.03	32.078642	-103.302804
8,373.46	1.80	92.66	8,335.64	-539.48	70.10	393,871.74	860,527.04	32.078642	-103.302794
8,468.24	1.89	110.40	8,430.37	-540.10	73.05	393,871.12	860,529.99	32.078640	-103.302785
8,563.02	2.00	118.87	8,525.10	-541.44	75.97	393,869.78	860,532.91	32.078637	-103.302775
8,657.80	1.66	118.42	8,619.83	-542.91	78.61	393,868.31	860,535.55	32.078632	-103.302767
8,752.58	1.91	115.32	8,714.57	-544.26	81.23	393,866.96	860,538.17	32.078629	-103.302758
8,847.36	1.71	132.28	8,809.30	-545.89	83.71	393,865.33	860,540.65	32.078624	-103.302750
8,942.14	1.68	144.22	8,904.04	-547.97	85.57	393,863.25	860,542.51	32.078618	-103.302744
9,036.92	2.32	158.38	8,998.76	-550.88	87.09	393,860.34	860,544.03	32.078610	-103.302740
9,131.70	2.50	172.31	9,093.46	-554.71	88.07	393,856.51	860,545.01	32.078600	-103.302737
9,226.48	2.79	183.96	9,188.14	-559.06	88.19	393,852.16	860,545.13	32.078588	-103.302736
9,321.26	3.21	195.32	9,282.79	-563.92	87.33	393,847.30	860,544.27	32.078574	-103.302739
9,416.04	2.73	194.70	9,377.44	-568.66	86.05	393,842.56	860,542.99	32.078561	-103.302743
9,510.82	2.36	197.18	9,472.13	-572.71	84.90	393,838.51	860,541.84	32.078550	-103.302747
9,605.60	2.64	218.55	9,566.82	-576.28	82.97	393,834.94	860,539.91	32.078541	-103.302754
9,700.38	2.30	225.28	9,661.51	-579.33	80.26	393,831.89	860,537.19	32.078532	-103.302763
9,795.16	2.07	230.36	9,756.22	-581.76	77.59	393,829.46	860,534.52	32.078526	-103.302771
9,889.94	1.93	234.85	9,850.94	-583.77	74.96	393,827.45	860,531.90	32.078520	-103.302780
9,984.72	1.97	236.78	9,945.67	-585.58	72.29	393,825.64	860,529.23	32.078515	-103.302788
10,079.50	1.97	237.03	10,040.39	-587.36	69.57	393,823.86	860,526.50	32.078510	-103.302797
10,174.28	2.30	251.90	10,135.11	-588.84	66.39	393,822.38	860,523.33	32.078507	-103.302808
10,269.06	2.42	265.11	10,229.81	-589.60	62.59	393,821.62	860,519.53	32.078505	-103.302820
10,363.84	2.46	270.82	10,324.50	-589.74	58.56	393,821.48	860,515.50	32.078504	-103.302833
10,458.62	2.59	277.93	10,419.19	-589.41	54.41	393,821.80	860,511.35	32.078505	-103.302846
10,553.40	2.94	282.63	10,513.86	-588.59	49.91	393,822.63	860,506.85	32.078508	-103.302861
10,648.18	3.04	279.18	10,608.51	-587.65	45.06	393,823.56	860,502.00	32.078510	-103.302876
10,742.96	2.99	269.78	10,703.16	-587.26	40.11	393,823.96	860,497.05	32.078512	-103.302892
10,837.74	3.15	253.98	10,797.81	-587.99	35.13	393,823.23	860,492.07	32.078510	-103.302908
10,932.52	3.23	253.63	10,892.44	-589.46	30.07	393,821.76	860,487.01	32.078506	-103.302925
11,027.30	3.27	251.24	10,987.07	-591.08	24.95	393,820.13	860,481.89	32.078501	-103.302941
11,122.08	3.01	254.38	11,081.70	-592.62	19.99	393,818.59	860,476.93	32.078497	-103.302957
11,216.86	2.71	257.91	11,176.37	-593.76	15.40	393,817.46	860,472.34	32.078494	-103.302972
11,311.64	2.44	260.48	11,271.05	-594.57	11.22	393,816.65	860,468.16	32.078492	-103.302986
11,406.42	2.00	276.98	11,365.76	-594.70	7.59	393,816.52	860,464.53	32.078492	-103.302998

Company:	Ameredev Operating LLC	Local Co-ordinate Reference:	Well 125H
Project:	Lea Co., NM (NAD 83 Grid)	TVD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Site:	Nandina Fed Com 25-36-31	MD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Well:	125H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,559.00	14.80	354.87	11,516.57	-574.86	3.18	393,836.36	860,460.12	32.078547	-103.303011
First ST01 Survey									
11,591.00	18.10	355.14	11,547.26	-565.83	2.40	393,845.39	860,459.33	32.078571	-103.303013
11,685.00	33.23	1.08	11,631.75	-525.29	1.64	393,885.93	860,458.58	32.078683	-103.303015
11,779.00	41.97	1.03	11,706.15	-468.00	2.69	393,943.22	860,459.63	32.078840	-103.303009
11,811.00	48.19	359.45	11,728.74	-445.36	2.77	393,965.86	860,459.71	32.078903	-103.303009
11,843.00	52.64	357.51	11,749.12	-420.71	2.10	393,990.51	860,459.04	32.078970	-103.303010
11,874.00	54.77	356.45	11,767.47	-395.76	0.78	394,015.46	860,457.72	32.079039	-103.303013
11,906.00	57.13	355.47	11,785.39	-369.32	-1.09	394,041.90	860,455.85	32.079112	-103.303019
11,937.00	58.66	354.66	11,801.87	-343.16	-3.35	394,068.06	860,453.59	32.079184	-103.303025
11,969.00	60.72	353.38	11,818.01	-315.68	-6.23	394,095.53	860,450.71	32.079259	-103.303034
12,000.00	62.78	352.16	11,832.69	-288.60	-9.67	394,122.62	860,447.27	32.079334	-103.303044
12,032.00	64.91	351.41	11,846.79	-260.17	-13.77	394,151.05	860,443.16	32.079412	-103.303056
12,063.00	65.39	352.67	11,859.82	-232.31	-17.67	394,178.91	860,439.27	32.079489	-103.303068
12,095.00	66.16	354.44	11,872.95	-203.32	-20.94	394,207.90	860,436.00	32.079568	-103.303078
12,126.00	68.14	356.04	11,884.99	-174.85	-23.31	394,236.37	860,433.63	32.079647	-103.303084
12,158.00	70.40	357.35	11,896.32	-144.97	-25.03	394,266.25	860,431.91	32.079729	-103.303089
12,189.00	73.78	358.84	11,905.85	-115.50	-26.01	394,295.72	860,430.93	32.079810	-103.303091
12,204.82	75.71	359.50	11,910.01	-100.24	-26.23	394,310.98	860,430.71	32.079852	-103.303092
FTP @ 12204.82' MD/ 75.71° INC/ 359.60° AZM									
12,221.00	77.68	0.16	11,913.73	-84.49	-26.28	394,326.73	860,430.66	32.079895	-103.303091
12,252.00	81.36	0.54	11,919.37	-54.02	-26.09	394,357.20	860,430.85	32.079979	-103.303090
12,284.00	85.99	1.64	11,922.90	-22.23	-25.48	394,388.99	860,431.45	32.080066	-103.303087
12,315.00	89.66	1.82	11,924.07	8.73	-24.55	394,419.95	860,432.39	32.080151	-103.303083
12,347.00	91.49	1.75	11,923.75	40.71	-23.55	394,451.93	860,433.39	32.080239	-103.303079
12,442.00	90.98	2.28	11,921.70	135.63	-20.21	394,546.85	860,436.73	32.080500	-103.303065
12,536.00	93.25	2.05	11,918.24	229.50	-16.66	394,640.71	860,440.27	32.080758	-103.303050
12,631.00	92.61	0.46	11,913.38	324.35	-14.59	394,735.56	860,442.35	32.081019	-103.303041
12,728.00	92.22	359.56	11,909.29	421.26	-14.57	394,832.48	860,442.37	32.081285	-103.303038
12,823.00	92.38	359.47	11,905.48	516.18	-15.37	394,927.40	860,441.57	32.081546	-103.303037
12,917.00	92.33	359.34	11,901.62	610.09	-16.35	395,021.31	860,440.59	32.081804	-103.303038
13,011.00	91.32	359.36	11,898.62	704.04	-17.42	395,115.26	860,439.52	32.082062	-103.303038
13,106.00	91.60	359.56	11,896.20	799.00	-18.31	395,210.22	860,438.63	32.082323	-103.303038
13,201.00	91.60	359.18	11,893.55	893.96	-19.35	395,305.18	860,437.58	32.082584	-103.303039
13,295.00	92.38	359.91	11,890.29	987.90	-20.10	395,399.12	860,436.84	32.082842	-103.303038
13,389.00	91.91	358.66	11,886.77	1,081.82	-21.27	395,493.04	860,435.67	32.083101	-103.303039
13,484.00	90.22	357.43	11,885.00	1,176.75	-24.51	395,587.97	860,432.43	32.083362	-103.303047
13,578.00	89.66	357.30	11,885.10	1,270.65	-28.83	395,681.87	860,428.10	32.083620	-103.303058
13,673.00	88.37	357.63	11,886.73	1,365.54	-33.04	395,776.76	860,423.90	32.083881	-103.303068
13,767.00	88.18	358.32	11,889.56	1,459.44	-36.36	395,870.66	860,420.58	32.084139	-103.303076
13,861.00	88.40	357.46	11,892.37	1,553.33	-39.82	395,964.55	860,417.12	32.084397	-103.303084
13,956.00	88.32	0.18	11,895.09	1,648.26	-41.77	396,059.48	860,415.17	32.084658	-103.303088
14,050.00	89.22	359.81	11,897.11	1,742.24	-41.78	396,153.46	860,415.16	32.084916	-103.303085
14,144.00	87.09	357.15	11,900.13	1,836.14	-44.27	396,247.36	860,412.67	32.085175	-103.303090
14,238.00	88.01	356.43	11,904.15	1,929.91	-49.53	396,341.13	860,407.41	32.085432	-103.303104
14,332.00	90.62	359.43	11,905.27	2,023.82	-52.92	396,435.04	860,404.02	32.085691	-103.303112
14,426.00	89.30	357.82	11,905.34	2,117.79	-55.18	396,529.01	860,401.76	32.085949	-103.303117
14,520.00	89.41	358.09	11,906.40	2,211.72	-58.53	396,622.94	860,398.41	32.086207	-103.303125
14,614.00	89.47	357.34	11,907.32	2,305.64	-62.28	396,716.86	860,394.66	32.086465	-103.303134
14,708.00	89.36	357.27	11,908.28	2,399.53	-66.70	396,810.75	860,390.24	32.086724	-103.303145
14,802.00	88.82	358.99	11,909.77	2,493.47	-69.77	396,904.69	860,387.17	32.086982	-103.303152
14,896.00	88.26	359.94	11,912.16	2,587.43	-70.64	396,998.65	860,386.30	32.087240	-103.303152
14,990.00	88.99	359.85	11,914.42	2,681.41	-70.82	397,092.62	860,386.12	32.087498	-103.303150
15,083.00	87.00	359.54	11,917.67	2,774.34	-71.31	397,185.56	860,385.63	32.087754	-103.303148
15,177.00	89.97	358.39	11,920.16	2,868.28	-73.01	397,279.50	860,383.93	32.088012	-103.303151

Company:	Ameredeve Operating LLC	Local Co-ordinate Reference:	Well 125H
Project:	Lea Co., NM (NAD 83 Grid)	TVD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Site:	Nandina Fed Com 25-36-31	MD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Well:	125H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,272.00	91.34	359.77	11,919.07	2,963.26	-74.53	397,374.48	860,382.41	32.088273	-103.303153
15,366.00	91.74	358.90	11,916.55	3,057.22	-75.62	397,468.44	860,381.32	32.088532	-103.303154
15,460.00	91.85	359.60	11,913.60	3,151.16	-76.85	397,562.38	860,380.09	32.088790	-103.303155
15,554.00	90.34	358.40	11,911.81	3,245.13	-78.49	397,656.35	860,378.45	32.089048	-103.303157
15,648.00	90.36	1.42	11,911.23	3,339.11	-78.64	397,750.33	860,378.30	32.089306	-103.303155
15,741.00	90.56	359.75	11,910.48	3,432.10	-77.69	397,843.32	860,379.25	32.089562	-103.303149
15,836.00	90.34	1.05	11,909.74	3,527.10	-77.03	397,938.31	860,379.91	32.089823	-103.303144
15,931.00	91.29	1.08	11,908.39	3,622.07	-75.26	398,033.29	860,381.68	32.090084	-103.303135
16,025.00	91.40	359.38	11,906.18	3,716.04	-74.89	398,127.26	860,382.05	32.090342	-103.303131
16,120.00	92.02	358.65	11,903.35	3,810.98	-76.52	398,222.20	860,380.42	32.090603	-103.303133
16,215.00	91.77	359.17	11,900.20	3,905.91	-78.32	398,317.13	860,378.61	32.090864	-103.303136
16,309.00	91.65	0.30	11,897.40	3,999.87	-78.76	398,411.09	860,378.18	32.091122	-103.303135
16,404.00	91.91	359.21	11,894.45	4,094.82	-79.17	398,506.04	860,377.77	32.091383	-103.303133
16,498.00	89.72	359.03	11,893.11	4,188.79	-80.61	398,600.01	860,376.33	32.091642	-103.303135
16,593.00	91.68	359.78	11,891.95	4,283.77	-81.60	398,694.99	860,375.34	32.091903	-103.303135
16,687.00	90.48	359.97	11,890.18	4,377.76	-81.80	398,788.97	860,375.14	32.092161	-103.303133
16,782.00	89.19	359.77	11,890.45	4,472.75	-82.02	398,883.97	860,374.92	32.092422	-103.303131
16,877.00	93.67	1.03	11,888.08	4,567.70	-81.35	398,978.91	860,375.59	32.092683	-103.303126
16,972.00	94.09	1.05	11,881.65	4,662.46	-79.63	399,073.68	860,377.31	32.092944	-103.303117
17,067.00	93.84	0.36	11,875.08	4,757.23	-78.47	399,168.45	860,378.47	32.093204	-103.303110
17,161.00	94.09	1.67	11,868.58	4,850.98	-76.81	399,262.20	860,380.13	32.093462	-103.303102
17,256.00	92.78	359.09	11,862.89	4,945.80	-76.18	399,357.02	860,380.76	32.093722	-103.303097
17,351.00	94.04	357.71	11,857.24	5,040.59	-78.83	399,451.81	860,378.11	32.093983	-103.303103
17,445.00	94.91	0.74	11,849.91	5,134.29	-80.10	399,545.50	860,376.84	32.094240	-103.303104
17,540.00	94.74	0.77	11,841.91	5,228.94	-78.85	399,640.16	860,378.09	32.094501	-103.303097
17,634.00	94.46	0.32	11,834.38	5,322.63	-77.96	399,733.85	860,378.98	32.094758	-103.303091
17,728.00	94.46	359.05	11,827.07	5,416.35	-78.47	399,827.56	860,378.47	32.095016	-103.303090
17,823.00	95.45	358.43	11,818.86	5,510.97	-80.55	399,922.18	860,376.39	32.095276	-103.303094
17,917.00	96.07	358.23	11,809.43	5,604.45	-83.28	400,015.67	860,373.66	32.095533	-103.303100
18,012.00	95.62	357.37	11,799.75	5,698.89	-86.91	400,110.10	860,370.03	32.095792	-103.303109
18,107.00	95.75	358.86	11,790.34	5,793.36	-90.02	400,204.58	860,366.92	32.096052	-103.303116
18,201.00	95.44	357.88	11,781.18	5,886.88	-92.68	400,298.10	860,364.26	32.096309	-103.303121
18,296.00	95.22	356.81	11,772.35	5,981.36	-97.06	400,392.58	860,359.88	32.096569	-103.303133
18,390.00	93.95	357.87	11,764.84	6,074.96	-101.41	400,486.18	860,355.53	32.096826	-103.303144
18,485.00	93.03	356.92	11,759.05	6,169.68	-105.72	400,580.90	860,351.22	32.097087	-103.303155
18,580.00	92.94	357.20	11,754.11	6,264.43	-110.58	400,675.65	860,346.36	32.097347	-103.303168
18,674.00	92.75	357.72	11,749.44	6,358.22	-114.74	400,769.44	860,342.20	32.097605	-103.303178
18,769.00	91.88	357.96	11,745.60	6,453.07	-118.32	400,864.29	860,338.62	32.097866	-103.303187
18,863.00	91.40	358.34	11,742.91	6,546.99	-121.35	400,958.21	860,335.59	32.098124	-103.303194
18,958.00	91.03	358.13	11,740.90	6,641.92	-124.28	401,053.14	860,332.66	32.098385	-103.303200
19,052.00	91.70	358.90	11,738.66	6,735.86	-126.71	401,147.08	860,330.22	32.098644	-103.303205
19,147.00	92.13	358.28	11,735.48	6,830.78	-129.05	401,242.00	860,327.89	32.098905	-103.303210
19,241.00	90.45	357.29	11,733.37	6,924.68	-132.68	401,335.90	860,324.26	32.099163	-103.303219
19,336.00	92.24	357.93	11,731.14	7,019.57	-136.64	401,430.79	860,320.30	32.099424	-103.303228
19,431.00	91.82	0.37	11,727.77	7,114.49	-138.05	401,525.71	860,318.89	32.099685	-103.303230
19,525.00	90.58	359.68	11,725.80	7,208.47	-138.01	401,619.68	860,318.93	32.099943	-103.303227
19,620.00	90.92	359.06	11,724.56	7,303.45	-139.06	401,714.67	860,317.88	32.100204	-103.303227
19,714.00	94.93	0.48	11,719.76	7,397.31	-139.43	401,808.53	860,317.51	32.100462	-103.303226
19,809.00	94.06	1.12	11,712.32	7,492.00	-138.11	401,903.22	860,318.83	32.100722	-103.303219
19,903.00	91.93	0.25	11,707.41	7,585.86	-136.99	401,997.08	860,319.95	32.100980	-103.303212
19,998.00	92.61	359.79	11,703.65	7,680.79	-136.96	402,092.01	860,319.98	32.101241	-103.303209
20,093.00	92.01	0.24	11,699.82	7,775.71	-136.93	402,186.93	860,320.01	32.101502	-103.303206
20,188.00	91.23	0.63	11,697.13	7,870.67	-136.21	402,281.89	860,320.73	32.101763	-103.303201
20,282.00	91.48	0.39	11,694.91	7,964.64	-135.37	402,375.86	860,321.57	32.102021	-103.303195
20,377.00	90.89	0.72	11,692.94	8,059.61	-134.45	402,470.83	860,322.49	32.102282	-103.303189

Company:	Ameredeve Operating LLC	Local Co-ordinate Reference:	Well 125H
Project:	Lea Co., NM (NAD 83 Grid)	TVD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Site:	Nandina Fed Com 25-36-31	MD Reference:	RKB=27' @ 3041.00usft (H&P 616)
Well:	125H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
20,472.00	90.42	1.14	11,691.86	8,154.59	-132.91	402,565.81	860,324.03	32.102543	-103.303181
20,566.00	90.67	359.74	11,690.96	8,248.58	-132.19	402,659.80	860,324.75	32.102802	-103.303176
20,661.00	90.30	0.28	11,690.16	8,343.58	-132.17	402,754.80	860,324.77	32.103063	-103.303173
20,756.00	89.83	0.44	11,690.05	8,438.58	-131.58	402,849.80	860,325.36	32.103324	-103.303168
20,851.00	89.55	0.29	11,690.57	8,533.57	-130.97	402,944.79	860,325.97	32.103585	-103.303163
20,945.00	89.66	0.72	11,691.21	8,627.57	-130.14	403,038.79	860,326.80	32.103843	-103.303158
21,040.00	89.72	0.57	11,691.73	8,722.56	-129.07	403,133.78	860,327.87	32.104104	-103.303151
21,135.00	91.29	0.59	11,690.89	8,817.55	-128.11	403,228.77	860,328.83	32.104365	-103.303145
21,231.00	91.60	0.06	11,688.47	8,913.52	-127.57	403,324.73	860,329.37	32.104629	-103.303141
21,325.00	90.56	355.56	11,686.70	9,007.41	-131.16	403,418.62	860,325.78	32.104887	-103.303149
21,420.00	90.50	350.56	11,685.82	9,101.68	-142.63	403,512.89	860,314.31	32.105147	-103.303184
21,515.00	88.09	349.56	11,686.99	9,195.23	-159.03	403,606.45	860,297.91	32.105404	-103.303234
21,609.00	89.02	354.03	11,689.36	9,288.22	-172.44	403,699.44	860,284.50	32.105660	-103.303274
21,703.00	89.83	359.63	11,690.30	9,382.03	-177.63	403,793.25	860,279.31	32.105918	-103.303288
21,798.00	90.06	0.26	11,690.39	9,477.03	-177.72	403,888.25	860,279.22	32.106179	-103.303285
21,893.00	90.64	0.14	11,689.81	9,572.03	-177.39	403,983.25	860,279.55	32.106440	-103.303281
21,987.00	90.39	2.76	11,688.97	9,665.99	-175.01	404,077.20	860,281.93	32.106698	-103.303271
22,081.00	89.75	3.37	11,688.85	9,759.85	-169.99	404,171.07	860,286.95	32.106956	-103.303252
22,176.00	90.08	3.86	11,688.99	9,854.66	-164.00	404,265.88	860,292.94	32.107217	-103.303229
22,269.00	90.11	3.42	11,688.84	9,947.47	-158.09	404,358.69	860,298.85	32.107472	-103.303207
22,364.00	90.92	4.02	11,687.99	10,042.27	-151.93	404,453.49	860,305.01	32.107732	-103.303184
22,458.00	90.67	2.89	11,686.68	10,136.09	-146.26	404,547.30	860,310.67	32.107990	-103.303163
22,553.00	92.83	0.65	11,683.78	10,230.98	-143.33	404,642.20	860,313.61	32.108250	-103.303151
22,587.00	93.08	0.39	11,682.03	10,264.94	-143.02	404,676.16	860,313.92	32.108344	-103.303149
LTP @ 22587' MD/ 93.08° INC/ 0.39° AZM									
22,596.00	93.14	0.32	11,681.54	10,273.92	-142.97	404,685.14	860,313.97	32.108369	-103.303148
Last ST01 Survey @ 22596'									
22,635.00	93.14	0.32	11,679.40	10,312.87	-142.75	404,724.08	860,314.19	32.108476	-103.303147
PTB @ 22635'									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,559.00	11,516.57	-574.86	3.18	First ST01 Survey
12,204.82	11,910.01	-100.24	-26.23	FTP @ 12204.82' MD/ 75.71° INC/ 359.50° AZM
22,587.00	11,682.03	10,264.94	-143.02	LTP @ 22587' MD/ 93.08° INC/ 0.39° AZM
22,596.00	11,681.54	10,273.92	-142.97	Last ST01 Survey @ 22596'
22,635.00	11,679.40	10,312.87	-142.75	PTB @ 22635'

Checked By: _____ Approved By: _____ Date: _____



Directional Survey Report

Company: Ameredev	Well Surface Location	Report Date: Jan 30 2019
Well: Nandina Fed Com 25-36-31-125H	Latitude: 32.080127	Time: 14:01
County: Lea	Longitude: -103.303003	Mag Reference: Grid North
State: New Mexico	Reference: NAD 1927	Mag Correction: 6.10
Field: Lea	Y (Northing): 394411.22	Vert Sect. Azi: 359.18
API: 30-025-45244	X (Easting): 860456.94	Perm Datum: Mean Sea Level
Rig: H&P 616	Field Engr: Ted Montoya	Depth Ref: Rotary Table
Service Co: Gordon Technologies LLC	Johnathan White	RKB Height: 27
Job #: GT 180565		GL Elev: 3041
Survey Calc: Minimum Curvature		

Survey	MD	Inc	Azimuth	TVD	VS	Rectangular Offsets		Course	Closure		Distance		Source
Tie In	0	0	0	0	0	NS	EW	Length	DLS	Temp	Distance	Azimuth	Source
1	159.20	0.42	125.39	159.20	-0.34	-0.34	0.48	159.20	0.26	0.00	0.58	125.39	gyro survey.csv
2	253.98	0.54	110.98	253.98	-0.72	-0.70	1.18	94.78	0.18	0.00	1.37	120.73	gyro survey.csv
3	348.76	0.54	107.13	348.75	-1.02	-0.99	2.02	94.78	0.04	0.00	2.25	116.12	gyro survey.csv
4	443.54	0.39	113.77	443.53	-1.29	-1.25	2.74	94.78	0.17	0.00	3.01	114.54	gyro survey.csv
5	538.32	0.26	118.74	538.31	-1.53	-1.49	3.23	94.78	0.14	0.00	3.55	114.73	gyro survey.csv
6	633.10	0.11	261.39	633.09	-1.65	-1.60	3.32	94.78	0.37	0.00	3.69	115.74	gyro survey.csv
7	727.88	0.50	253.46	727.86	-1.77	-1.73	2.84	94.78	0.41	0.00	3.33	121.42	gyro survey.csv
8	791.06	0.62	271.68	791.04	-1.83	-1.80	2.23	63.18	0.34	0.00	2.87	128.92	gyro survey.csv
9	885.84	0.90	237.01	885.81	-2.21	-2.19	1.09	94.78	0.55	0.00	2.45	153.46	gyro survey.csv
10	980.62	1.21	252.93	980.58	-2.88	-2.89	-0.49	94.78	0.45	0.00	2.93	189.54	gyro survey.csv
11	1075.40	1.27	247.55	1075.34	-3.55	-3.59	-2.41	94.78	0.14	0.00	4.32	213.94	gyro survey.csv
12	1170.18	1.34	248.33	1170.09	-4.33	-4.40	-4.41	94.78	0.08	0.00	6.23	225.11	gyro survey.csv
13	1264.96	1.38	241.52	1264.84	-5.26	-5.35	-6.45	94.78	0.18	0.00	8.38	230.31	gyro survey.csv
14	1359.74	1.40	261.42	1359.60	-5.94	-6.07	-8.60	94.78	0.51	0.00	10.52	234.78	gyro survey.csv
15	1454.52	1.44	262.60	1454.35	-6.24	-6.39	-10.92	94.78	0.05	0.00	12.65	239.65	gyro survey.csv
16	1549.30	1.46	261.24	1549.10	-6.54	-6.73	-13.30	94.78	0.04	0.00	14.90	243.15	gyro survey.csv
17	1644.08	1.44	247.81	1643.85	-7.14	-7.36	-15.59	94.78	0.36	0.00	17.24	244.72	gyro survey.csv
18	1738.86	1.79	205.23	1738.59	-8.90	-9.15	-17.33	94.78	1.28	0.00	19.59	242.15	gyro survey.csv
19	1833.64	2.45	186.83	1833.31	-12.24	-12.50	-18.20	94.78	0.99	0.00	22.08	235.51	gyro survey.csv
20	1928.42	2.58	185.34	1928.00	-16.37	-16.64	-18.64	94.78	0.15	0.00	24.98	228.24	gyro survey.csv
21	2023.20	3.10	177.26	2022.66	-21.05	-21.32	-18.71	94.78	0.69	0.00	28.37	221.27	gyro survey.csv
22	2117.98	3.92	171.70	2117.26	-26.83	-27.09	-18.12	94.78	0.94	0.00	32.59	213.78	gyro survey.csv
23	2212.76	4.09	170.47	2211.81	-33.38	-33.63	-17.10	94.78	0.20	0.00	37.72	206.95	gyro survey.csv
24	2307.54	4.46	169.55	2306.33	-40.35	-40.59	-15.87	94.78	0.40	0.00	43.58	201.35	gyro survey.csv
25	2402.32	5.19	167.28	2400.77	-48.18	-48.39	-14.25	94.78	0.80	0.00	50.45	196.41	gyro survey.csv
26	2497.10	5.36	164.15	2495.15	-56.65	-56.83	-12.10	94.78	0.35	0.00	58.11	192.02	gyro survey.csv
27	2591.88	5.51	163.27	2589.50	-65.30	-65.45	-9.58	94.78	0.18	0.00	66.15	188.33	gyro survey.csv
28	2686.66	5.68	163.11	2683.83	-74.19	-74.29	-6.91	94.78	0.18	0.00	74.61	185.31	gyro survey.csv
29	2781.44	5.90	160.70	2778.13	-83.31	-83.38	-3.94	94.78	0.35	0.00	83.47	182.70	gyro survey.csv
30	2876.22	6.18	161.34	2872.38	-92.79	-92.81	-0.70	94.78	0.30	0.00	92.81	180.43	gyro survey.csv
31	2971.00	6.44	162.33	2966.59	-102.73	-102.71	2.55	94.78	0.30	0.00	102.74	178.58	gyro survey.csv
32	3065.78	6.89	161.70	3060.73	-113.24	-113.17	5.95	94.78	0.48	0.00	113.33	176.99	gyro survey.csv
33	3160.56	6.99	158.96	3154.81	-124.08	-123.95	9.80	94.78	0.36	0.00	124.34	175.48	gyro survey.csv
34	3255.34	7.07	159.69	3248.88	-134.99	-134.80	13.90	94.78	0.13	0.00	135.52	174.11	gyro survey.csv
35	3350.12	7.11	160.34	3342.94	-146.04	-145.80	17.90	94.78	0.09	0.00	146.89	173.00	gyro survey.csv
36	3444.90	7.14	160.78	3436.98	-157.18	-156.88	21.81	94.78	0.07	0.00	158.39	172.09	gyro survey.csv
37	3539.68	6.91	167.76	3531.05	-168.36	-168.02	24.96	94.78	0.93	0.00	169.86	171.55	gyro survey.csv
38	3634.46	7.12	169.13	3625.12	-179.73	-179.36	27.27	94.78	0.28	0.00	181.42	171.35	gyro survey.csv
39	3729.24	7.40	168.84	3719.14	-191.52	-191.11	29.56	94.78	0.30	0.00	193.39	171.21	gyro survey.csv
40	3824.02	7.78	166.88	3813.09	-203.79	-203.35	32.20	94.78	0.49	0.00	205.88	171.00	gyro survey.csv
41	3918.80	8.13	168.81	3906.96	-216.65	-216.17	34.96	94.78	0.46	0.00	218.98	170.81	gyro survey.csv
42	4013.58	8.19	170.46	4000.78	-229.92	-229.41	37.38	94.78	0.26	0.00	232.43	170.75	gyro survey.csv
43	4108.36	7.83	171.57	4094.64	-242.99	-242.45	39.44	94.78	0.41	0.00	245.64	170.76	gyro survey.csv
44	4203.14	8.23	174.91	4188.49	-256.15	-255.59	40.99	94.78	0.65	0.00	258.86	170.89	gyro survey.csv
45	4297.92	8.51	175.38	4282.26	-269.92	-269.34	42.16	94.78	0.30	0.00	272.62	171.10	gyro survey.csv
46	4392.70	8.91	175.26	4375.95	-284.24	-283.64	43.33	94.78	0.42	0.00	286.94	171.31	gyro survey.csv
47	4487.48	9.40	174.19	4469.52	-299.27	-298.66	44.72	94.78	0.55	0.00	301.99	171.48	gyro survey.csv
48	4582.26	9.88	175.34	4562.96	-315.09	-314.46	46.16	94.78	0.55	0.00	317.84	171.65	gyro survey.csv
49	4677.04	10.32	175.94	4656.27	-331.68	-331.04	47.43	94.78	0.48	0.00	334.42	171.85	gyro survey.csv

50	4771.82	11.01	177.33	4749.41	-349.20	-348.55	48.45	94.78	0.78	0.00	351.90	172.09	gyro survey.csv
51	4866.60	11.62	176.66	4842.35	-367.79	-367.12	49.43	94.78	0.66	0.00	370.43	172.33	gyro survey.csv
52	4961.38	12.01	178.44	4935.12	-387.18	-386.50	50.25	94.78	0.56	0.00	389.76	172.59	gyro survey.csv
53	5056.16	12.48	180.38	5027.75	-407.28	-406.60	50.45	94.78	0.66	0.00	409.72	172.93	gyro survey.csv
54	5150.94	13.05	179.91	5120.18	-428.22	-427.54	50.40	94.78	0.61	0.00	430.50	173.28	gyro survey.csv
55	5245.72	12.35	179.69	5212.64	-449.06	-448.38	50.47	94.78	0.74	0.00	451.21	173.58	gyro survey.csv
56	5340.50	10.29	181.49	5305.58	-467.65	-466.98	50.31	94.78	2.20	0.00	469.68	173.85	gyro survey.csv
57	5435.28	7.32	174.28	5399.23	-482.13	-481.45	50.69	94.78	3.34	0.00	484.12	173.99	gyro survey.csv
58	5530.06	5.49	170.70	5493.42	-492.63	-491.94	52.02	94.78	1.98	0.00	494.68	173.96	gyro survey.csv
59	5624.84	4.73	171.95	5587.82	-500.99	-500.28	53.30	94.78	0.81	0.00	503.11	173.92	gyro survey.csv
60	5719.62	3.06	184.83	5682.38	-507.39	-506.67	53.64	94.78	1.98	0.00	509.50	173.96	gyro survey.csv
61	5814.40	3.00	180.74	5777.03	-512.38	-511.67	53.39	94.78	0.24	0.00	514.45	174.04	gyro survey.csv
62	5909.18	2.83	185.86	5871.68	-517.19	-516.48	53.12	94.78	0.33	0.00	519.21	174.13	gyro survey.csv
63	6003.96	1.90	180.18	5966.38	-521.08	-520.38	52.88	94.78	1.01	0.00	523.06	174.20	gyro survey.csv
64	6098.74	0.52	132.87	6061.14	-522.95	-522.24	53.19	94.78	1.68	0.00	524.94	174.18	gyro survey.csv
65	6193.52	0.50	137.56	6155.92	-523.56	-522.84	53.78	94.78	0.05	0.00	525.60	174.13	gyro survey.csv
66	6288.30	0.52	147.68	6250.69	-524.23	-523.51	54.29	94.78	0.10	0.00	526.32	174.08	gyro survey.csv
67	6383.08	0.55	149.31	6345.47	-524.99	-524.26	54.75	94.78	0.04	0.00	527.12	174.04	gyro survey.csv
68	6477.86	0.53	146.59	6440.24	-525.76	-525.02	55.23	94.78	0.03	0.00	527.92	174.00	gyro survey.csv
69	6572.64	0.58	144.03	6535.02	-526.52	-525.78	55.75	94.78	0.06	0.00	528.72	173.95	gyro survey.csv
70	6667.42	0.59	127.66	6629.79	-527.22	-526.46	56.42	94.78	0.18	0.00	529.48	173.88	gyro survey.csv
71	6762.20	0.65	139.18	6724.57	-527.93	-527.17	57.15	94.78	0.15	0.00	530.26	173.81	gyro survey.csv
72	6856.98	0.64	139.14	6819.34	-528.75	-527.97	57.85	94.78	0.01	0.00	531.13	173.75	gyro survey.csv
73	6951.76	0.71	144.09	6914.12	-529.63	-528.85	58.54	94.78	0.10	0.00	532.08	173.68	gyro survey.csv
74	7046.54	0.70	136.79	7008.89	-530.54	-529.75	59.28	94.78	0.10	0.00	533.05	173.61	gyro survey.csv
75	7141.32	0.69	134.02	7103.66	-531.37	-530.57	60.09	94.78	0.04	0.00	533.96	173.54	gyro survey.csv
76	7236.10	0.77	136.84	7198.43	-532.25	-531.43	60.94	94.78	0.09	0.00	534.91	173.46	gyro survey.csv
77	7330.88	1.62	144.96	7293.19	-533.82	-532.99	62.14	94.78	0.91	0.00	536.60	173.35	gyro survey.csv
78	7425.66	0.89	154.81	7387.95	-535.60	-534.75	63.22	94.78	0.80	0.00	538.48	173.26	gyro survey.csv
79	7520.44	0.37	228.07	7482.72	-536.47	-535.62	63.31	94.78	0.91	0.00	539.35	173.26	gyro survey.csv
80	7615.22	0.43	174.84	7577.50	-537.03	-536.18	63.11	94.78	0.38	0.00	539.88	173.29	gyro survey.csv
81	7710.00	0.85	156.87	7672.28	-538.03	-537.18	63.42	94.78	0.49	0.00	540.81	173.27	gyro survey.csv
82	7804.78	0.67	167.86	7767.05	-539.23	-538.37	63.82	94.78	0.24	0.00	542.14	173.24	gyro survey.csv
83	7899.56	0.61	175.80	7861.82	-540.28	-539.42	63.97	94.78	0.11	0.00	543.20	173.24	gyro survey.csv
84	7994.34	0.28	160.45	7956.60	-541.00	-540.14	64.08	94.78	0.37	0.00	543.92	173.23	gyro survey.csv
85	8089.12	0.26	41.39	8051.38	-541.06	-540.19	64.30	94.78	0.49	0.00	544.01	173.21	gyro survey.csv
86	8183.90	0.69	78.66	8146.16	-540.80	-539.92	65.00	94.78	0.54	0.00	543.82	173.13	gyro survey.csv
87	8278.68	1.86	82.61	8240.91	-540.51	-539.61	67.09	94.78	1.24	0.00	543.76	172.91	gyro survey.csv
88	8373.46	1.80	92.66	8335.64	-540.43	-539.48	70.10	94.78	0.34	0.00	544.02	172.60	gyro survey.csv
89	8468.24	1.89	110.40	8430.37	-541.09	-540.10	73.05	94.78	0.61	0.00	545.01	172.30	gyro survey.csv
90	8563.02	2.00	118.87	8525.10	-542.47	-541.44	75.97	94.78	0.32	0.00	546.74	172.01	gyro survey.csv
91	8657.80	1.66	119.42	8619.83	-543.98	-542.91	78.61	94.78	0.36	0.00	548.57	171.76	gyro survey.csv
92	8752.58	1.91	115.32	8714.57	-545.37	-544.26	81.23	94.78	0.30	0.00	550.29	171.51	gyro survey.csv
93	8847.36	1.71	132.28	8809.30	-547.03	-545.89	83.71	94.78	0.60	0.00	552.27	171.28	gyro survey.csv
94	8942.14	1.68	144.22	8904.04	-549.14	-547.97	85.57	94.78	0.37	0.00	554.61	171.12	gyro survey.csv
95	9036.92	2.32	158.38	8998.76	-552.07	-550.88	87.09	94.78	0.85	0.00	557.72	171.02	gyro survey.csv
96	9131.70	2.50	172.31	9093.46	-555.91	-554.71	88.07	94.78	0.64	0.00	561.68	170.98	gyro survey.csv
97	9226.48	2.79	183.96	9188.14	-560.26	-559.06	88.19	94.78	0.64	0.00	565.97	171.04	gyro survey.csv
98	9321.26	3.21	195.32	9282.79	-565.11	-563.92	87.33	94.78	0.77	0.00	570.64	171.20	gyro survey.csv
99	9416.04	2.73	194.70	9377.44	-569.84	-568.66	86.05	94.78	0.51	0.00	575.14	171.39	gyro survey.csv
100	9510.82	2.36	197.18	9472.13	-573.87	-572.71	84.90	94.78	0.41	0.00	578.97	171.57	gyro survey.csv
101	9605.60	2.64	218.55	9566.82	-577.41	-576.28	82.97	94.78	1.02	0.00	582.22	171.81	gyro survey.csv
102	9700.38	2.30	225.28	9661.51	-580.42	-579.33	80.26	94.78	0.47	0.00	584.86	172.11	gyro survey.csv
103	9795.16	2.07	230.36	9756.22	-582.81	-581.76	77.59	94.78	0.32	0.00	586.91	172.40	gyro survey.csv
104	9889.94	1.93	234.85	9850.94	-584.78	-583.77	74.96	94.78	0.22	0.00	588.56	172.68	gyro survey.csv
105	9984.72	1.97	236.78	9945.67	-586.55	-585.58	72.29	94.78	0.08	0.00	590.03	172.96	gyro survey.csv
106	10079.50	1.97	237.03	10040.39	-588.29	-587.36	69.57	94.78	0.01	0.00	591.46	173.25	gyro survey.csv
107	10174.28	2.30	251.90	10135.11	-589.73	-588.84	66.39	94.78	0.68	0.00	592.57	173.57	gyro survey.csv
108	10269.06	2.42	265.11	10229.81	-590.43	-589.60	62.59	94.78	0.59	0.00	592.91	173.94	gyro survey.csv
109	10363.84	2.46	270.82	10324.50	-590.52	-589.74	58.56	94.78	0.26	0.00	592.64	174.33	gyro survey.csv
110	10458.62	2.59	277.93	10419.19	-590.13	-589.41	54.41	94.78	0.36	0.00	591.92	174.73	gyro survey.csv
111	10553.40	2.94	282.83	10513.86	-589.24	-588.59	49.91	94.78	0.44	0.00	590.70	175.15	gyro survey.csv
112	10648.18	3.04	279.18	10608.51	-588.24	-587.65	45.06	94.78	0.22	0.00	589.38	175.62	gyro survey.csv
113	10742.96	2.99	269.78	10703.16	-587.78	-587.26	40.11	94.78	0.52	0.00	588.63	176.09	gyro survey.csv
114	10837.74	3.15	253.98	10797.81	-588.43	-587.99	35.13	94.78	0.91	0.00	589.04	176.58	gyro survey.csv
115	10932.52	3.23	253.63	10892.44	-589.83	-589.46	30.07	94.78	0.09	0.00	590.23	177.08	gyro survey.csv
116	11027.30	3.27	251.24	10987.07	-591.38	-591.08	24.95	94.78	0.15	0.00	591.61	177.58	gyro survey.csv
117	11122.08	3.01	254.38	11081.70	-592.85	-592.62	19.99	94.78	0.33	0.00	592.96	178.07	gyro survey.csv

118	11216.86	2.71	257.91	11176.37	-593.92	-593.76	15.40	94.78	0.37	0.00	593.96	178.51	gyro survey.csv
119	11311.84	2.44	260.48	11271.05	-594.67	-594.57	11.22	94.78	0.31	0.00	594.67	178.92	gyro survey.csv
120	11406.42	2.00	276.98	11365.76	-594.75	-594.70	7.59	94.78	0.81	0.00	594.75	179.27	gyro survey.csv
121	11559.00	14.80	354.87	11516.57	-574.85	-574.86	3.18	152.58	9.51	141.41	574.87	179.68	MWD Run 1
122	11591.00	18.10	355.14	11547.25	-565.81	-565.83	2.40	32.00	10.32	139.65	565.84	179.76	MWD Run 1
123	11685.00	33.23	1.08	11631.75	-525.26	-525.29	1.64	94.00	16.31	143.18	525.29	179.82	MWD Run 1
124	11779.00	41.97	1.03	11706.15	-467.99	-468.00	2.69	94.00	9.30	146.71	468.01	179.67	MWD Run 1
125	11811.00	48.19	359.45	11728.74	-445.35	-445.36	2.77	32.00	19.75	148.47	445.36	179.64	MWD Run 1
126	11843.00	52.64	357.51	11749.12	-420.70	-420.71	2.10	32.00	14.67	148.47	420.72	179.71	MWD Run 1
127	11874.00	54.77	356.45	11767.47	-395.73	-395.76	0.78	31.00	7.40	144.94	395.76	179.89	MWD Run 1
128	11906.00	57.13	355.47	11785.39	-369.26	-369.32	-1.09	32.00	7.80	148.47	369.32	180.17	MWD Run 1
129	11937.00	58.66	354.66	11801.86	-343.07	-343.16	-3.35	31.00	5.41	150.24	343.17	180.56	MWD Run 1
130	11969.00	60.72	353.38	11818.01	-315.56	-315.68	-6.23	32.00	7.31	152.00	315.75	181.13	MWD Run 1
131	12000.00	62.78	352.16	11832.69	-288.43	-288.60	-9.67	31.00	7.49	152.00	288.76	181.92	MWD Run 1
132	12032.00	64.91	351.41	11846.79	-259.95	-260.17	-13.77	32.00	6.98	152.00	260.53	183.03	MWD Run 1
133	12063.00	65.39	352.67	11859.82	-232.04	-232.31	-17.67	31.00	4.00	153.76	232.98	184.35	MWD Run 1
134	12095.00	66.16	354.44	11872.95	-203.00	-203.32	-20.94	32.00	5.59	153.76	204.39	185.88	MWD Run 1
135	12126.00	68.14	356.04	11884.99	-174.50	-174.85	-23.31	31.00	7.96	153.76	176.40	187.59	MWD Run 1
136	12158.00	70.40	357.35	11896.32	-144.60	-144.97	-25.03	32.00	8.03	153.76	147.12	189.80	MWD Run 1
137	12189.00	73.78	358.84	11905.85	-115.11	-115.50	-26.01	31.00	11.82	153.76	118.39	192.69	MWD Run 1
138	12221.00	77.68	0.16	11913.73	-84.11	-84.49	-26.28	32.00	12.83	155.53	88.48	197.28	MWD Run 1
139	12252.00	81.36	0.54	11919.37	-53.64	-54.02	-26.09	31.00	11.93	155.53	59.99	205.78	MWD Run 1
140	12284.00	85.99	1.64	11922.90	-21.86	-22.23	-25.48	32.00	14.87	155.53	33.81	228.91	MWD Run 1
141	12315.00	89.66	1.82	11924.07	9.08	8.73	-24.55	31.00	11.85	157.29	26.06	289.58	MWD Run 1
142	12347.00	91.49	1.75	11923.75	41.05	40.71	-23.55	32.00	5.72	153.76	47.04	329.95	MWD Run 1
143	12442.00	90.98	2.28	11921.70	135.91	135.63	-20.21	95.00	0.77	160.82	137.13	351.52	MWD Run 1
144	12536.00	93.25	2.05	11918.24	229.71	229.50	-16.66	94.00	2.43	160.82	230.10	355.85	MWD Run 1
145	12631.00	92.61	0.46	11913.38	324.52	324.35	-14.59	95.00	1.80	162.59	324.67	357.42	MWD Run 1
146	12728.00	92.22	359.56	11909.29	421.42	421.26	-14.57	97.00	1.01	156.29	421.51	358.02	MWD Run 2
147	12823.00	92.38	359.47	11905.48	516.35	516.18	-15.37	95.00	0.19	156.29	516.41	358.29	MWD Run 2
148	12917.00	92.33	359.34	11901.62	610.27	610.09	-16.35	94.00	0.15	163.43	610.31	358.46	MWD Run 2
149	13011.00	91.32	359.36	11898.62	704.22	704.04	-17.42	94.00	1.07	170.57	704.25	358.58	MWD Run 2
150	13106.00	91.60	359.56	11896.20	799.18	799.00	-18.31	95.00	0.36	170.57	799.21	358.69	MWD Run 2
151	13201.00	91.60	359.18	11893.55	894.15	893.96	-19.35	95.00	0.40	170.57	894.17	358.76	MWD Run 2
152	13295.00	92.38	359.91	11890.29	988.09	987.90	-20.10	94.00	1.14	163.43	988.10	358.83	MWD Run 2
153	13389.00	91.91	358.66	11886.77	1082.02	1081.82	-21.27	94.00	1.42	156.29	1082.03	358.87	MWD Run 3
154	13484.00	90.22	357.43	11885.00	1176.98	1176.75	-24.51	95.00	2.20	163.43	1177.00	358.81	MWD Run 3
155	13578.00	89.66	357.30	11885.10	1270.93	1270.65	-28.83	94.00	0.61	170.57	1270.97	358.70	MWD Run 3
156	13673.00	88.37	357.63	11886.73	1365.87	1365.54	-33.04	95.00	1.40	170.57	1365.94	358.61	MWD Run 3
157	13767.00	88.18	358.32	11889.56	1459.81	1459.44	-36.36	94.00	0.76	170.57	1459.89	358.57	MWD Run 3
158	13861.00	88.40	357.46	11892.37	1553.74	1553.33	-39.82	94.00	0.94	170.57	1553.84	358.53	MWD Run 3
159	13956.00	88.32	0.18	11895.09	1648.69	1648.26	-41.77	95.00	2.86	170.57	1648.79	358.55	MWD Run 3
160	14050.00	89.22	359.81	11897.10	1742.66	1742.24	-41.78	94.00	1.04	170.57	1742.74	358.63	MWD Run 3
161	14144.00	87.09	357.15	11900.13	1836.59	1836.14	-44.27	94.00	3.62	170.57	1836.68	358.62	MWD Run 3
162	14238.00	88.01	356.43	11904.15	1930.42	1929.91	-49.53	94.00	1.24	177.71	1930.54	358.53	MWD Run 3
163	14332.00	90.62	359.43	11905.27	2024.37	2023.82	-52.92	94.00	4.23	177.71	2024.51	358.50	MWD Run 3
164	14426.00	89.30	357.82	11905.34	2118.36	2117.79	-55.18	94.00	2.21	177.71	2118.51	358.51	MWD Run 3
165	14520.00	89.41	358.09	11906.40	2212.33	2211.72	-58.53	94.00	0.31	177.71	2212.50	358.48	MWD Run 3
166	14614.00	89.47	357.34	11907.32	2306.30	2305.64	-62.28	94.00	0.80	177.71	2306.48	358.45	MWD Run 3
167	14708.00	89.36	357.27	11908.28	2400.24	2399.53	-66.70	94.00	0.14	177.71	2400.46	358.41	MWD Run 3
168	14802.00	88.82	358.99	11909.77	2494.21	2493.47	-69.77	94.00	1.92	177.71	2494.44	358.40	MWD Run 3
169	14896.00	88.26	359.94	11912.16	2588.18	2587.43	-70.64	94.00	1.17	177.71	2588.40	358.44	MWD Run 3
170	14990.00	88.99	359.85	11914.42	2682.14	2681.41	-70.82	94.00	0.78	177.71	2682.34	358.49	MWD Run 3
171	15083.00	87.00	359.54	11917.67	2775.08	2774.34	-71.31	93.00	2.17	177.71	2775.26	358.53	MWD Run 3
172	15177.00	89.97	358.39	11920.16	2869.03	2868.28	-73.01	94.00	3.39	177.71	2869.21	358.54	MWD Run 3
173	15272.00	91.34	359.77	11919.07	2964.02	2963.26	-74.53	95.00	2.05	177.71	2964.20	358.56	MWD Run 3
174	15366.00	91.74	358.90	11916.55	3057.99	3057.22	-75.62	94.00	1.02	177.71	3058.15	358.58	MWD Run 3
175	15460.00	91.85	359.60	11913.60	3151.94	3151.16	-76.85	94.00	0.75	184.86	3152.10	358.60	MWD Run 3
176	15554.00	90.34	358.40	11911.81	3245.92	3245.13	-78.49	94.00	2.05	177.71	3246.08	358.61	MWD Run 3
177	15648.00	90.36	1.42	11911.23	3339.90	3339.11	-78.64	94.00	3.21	184.86	3340.04	358.65	MWD Run 3
178	15741.00	90.56	359.75	11910.48	3432.86	3432.10	-77.69	93.00	1.81	184.86	3432.98	358.70	MWD Run 3
179	15836.00	90.34	1.05	11909.74	3527.84	3527.10	-77.03	95.00	1.39	184.86	3527.94	358.75	MWD Run 3
180	15931.00	91.29	1.08	11908.39	3622.77	3622.07	-75.26	95.00	1.00	177.71	3622.85	358.81	MWD Run 3
181	16025.00	91.40	359.38	11906.18	3716.73	3716.04	-74.89	94.00	1.81	184.86	3716.79	358.85	MWD Run 3
182	16120.00	92.02	358.65	11903.35	3811.69	3810.98	-76.52	95.00	1.01	184.86	3811.75	358.85	MWD Run 3
183	16215.00	91.77	359.17	11900.20	3906.63	3905.91	-78.32	95.00	0.61	184.86	3906.70	358.85	MWD Run 3
184	16309.00	91.65	0.30	11897.40	4000.58	3999.87	-78.76	94.00	1.21	184.86	4000.64	358.87	MWD Run 3
185	16404.00	91.91	359.21	11894.45	4095.53	4094.82	-79.17	95.00	1.18	184.86	4095.58	358.89	MWD Run 3

186	16498.00	89.72	359.03	11893.11	4189.52	4188.79	-80.61	94.00	2.34	184.86	4189.57	358.90	MWD Run 3
187	16593.00	91.68	359.78	11891.95	4284.50	4283.77	-81.60	95.00	2.21	184.86	4284.55	358.91	MWD Run 3
188	16687.00	90.48	359.97	11890.18	4378.48	4377.76	-81.80	94.00	1.29	184.86	4378.52	358.93	MWD Run 3
189	16782.00	89.19	359.77	11890.45	4473.47	4472.75	-82.02	95.00	1.37	177.71	4473.51	358.95	MWD Run 3
190	16877.00	93.67	1.03	11888.08	4568.39	4567.70	-81.35	95.00	4.90	170.57	4568.42	358.98	MWD Run 4
191	16972.00	94.09	1.05	11881.65	4663.12	4662.46	-79.63	95.00	0.44	177.71	4663.14	359.02	MWD Run 4
192	17067.00	93.84	0.36	11875.08	4757.86	4757.23	-78.47	95.00	0.77	177.71	4757.87	359.06	MWD Run 4
193	17161.00	94.09	1.67	11868.58	4851.59	4850.98	-76.81	94.00	1.42	177.71	4851.59	359.09	MWD Run 4
194	17256.00	92.78	359.09	11862.89	4946.39	4945.80	-76.18	95.00	3.04	177.71	4946.39	359.12	MWD Run 4
195	17351.00	94.04	357.71	11857.24	5041.20	5040.59	-78.83	95.00	1.97	184.86	5041.21	359.10	MWD Run 4
196	17445.00	94.91	0.74	11849.90	5134.91	5134.29	-80.10	94.00	3.34	177.71	5134.91	359.11	MWD Run 4
197	17540.00	94.74	0.77	11841.91	5229.53	5228.94	-78.85	95.00	0.18	177.71	5229.53	359.14	MWD Run 4
198	17634.00	94.46	0.32	11834.38	5323.20	5322.63	-77.96	94.00	0.56	170.57	5323.20	359.16	MWD Run 5
199	17728.00	94.46	359.05	11827.07	5416.91	5416.34	-78.47	94.00	1.35	170.57	5416.91	359.17	MWD Run 5
200	17823.00	95.45	358.43	11818.86	5511.55	5510.97	-80.55	95.00	1.23	170.57	5511.55	359.16	MWD Run 5
201	17917.00	96.07	358.23	11809.43	5605.07	5604.45	-83.28	94.00	0.69	170.57	5605.07	359.15	MWD Run 5
202	18012.00	95.62	357.37	11799.75	5699.55	5698.89	-86.91	95.00	1.02	177.71	5699.55	359.13	MWD Run 5
203	18107.00	95.75	358.86	11790.34	5794.06	5793.36	-90.02	95.00	1.57	177.71	5794.06	359.11	MWD Run 5
204	18201.00	95.44	357.88	11781.18	5887.60	5886.88	-92.68	94.00	1.09	177.71	5887.61	359.10	MWD Run 5
205	18296.00	95.22	356.81	11772.35	5982.14	5981.36	-97.06	95.00	1.15	177.71	5982.15	359.07	MWD Run 5
206	18390.00	93.95	357.87	11764.84	6075.79	6074.96	-101.41	94.00	1.76	177.71	6075.81	359.04	MWD Run 5
207	18485.00	93.03	356.92	11759.05	6170.56	6169.68	-105.72	95.00	1.39	177.71	6170.59	359.02	MWD Run 5
208	18580.00	92.84	357.20	11754.11	6265.37	6264.43	-110.58	95.00	0.31	177.71	6265.40	358.99	MWD Run 5
209	18674.00	92.75	357.72	11749.44	6359.21	6358.22	-114.74	94.00	0.59	177.71	6359.26	358.97	MWD Run 5
210	18769.00	91.88	357.96	11745.60	6454.11	6453.07	-118.32	95.00	0.95	177.71	6454.16	358.95	MWD Run 5
211	18863.00	91.40	358.34	11742.91	6548.05	6546.99	-121.35	94.00	0.65	177.71	6548.11	358.94	MWD Run 5
212	18958.00	91.03	358.13	11740.90	6643.02	6641.92	-124.28	95.00	0.45	177.71	6643.08	358.93	MWD Run 5
213	19052.00	91.70	358.90	11738.66	6736.98	6735.86	-126.71	94.00	1.09	177.71	6737.05	358.92	MWD Run 5
214	19147.00	92.13	358.28	11735.48	6831.93	6830.78	-129.05	95.00	0.79	177.71	6832.00	358.92	MWD Run 5
215	19241.00	90.45	357.29	11733.37	6925.87	6924.68	-132.68	94.00	2.07	177.71	6925.95	358.90	MWD Run 6
216	19336.00	92.24	357.93	11731.14	7020.80	7019.57	-136.64	95.00	2.00	177.71	7020.90	358.88	MWD Run 6
217	19430.00	91.82	0.37	11727.81	7114.74	7113.49	-138.04	94.00	2.63	177.71	7114.83	358.89	MWD Run 6
218	19525.00	90.59	359.68	11725.81	7209.70	7208.47	-138.00	95.00	1.48	177.71	7209.79	358.90	MWD Run 6
219	19620.00	90.92	359.06	11724.56	7304.69	7303.45	-139.04	95.00	0.74	184.86	7304.77	358.91	MWD Run 6
220	19714.00	94.93	0.48	11719.76	7398.54	7397.31	-139.42	94.00	4.52	184.86	7398.62	358.92	MWD Run 6
221	19809.00	94.06	1.12	11712.32	7493.21	7492.00	-138.10	95.00	1.14	184.86	7493.28	358.94	MWD Run 6
222	19903.00	91.93	0.25	11707.41	7587.05	7585.86	-136.97	94.00	2.45	184.86	7587.10	358.97	MWD Run 6
223	19998.00	92.61	359.79	11703.64	7681.96	7680.79	-136.94	95.00	0.86	177.71	7682.01	358.98	MWD Run 6
224	20093.00	92.01	0.24	11699.81	7776.87	7775.71	-136.92	95.00	0.79	177.71	7776.91	358.99	MWD Run 6
225	20188.00	91.23	0.63	11697.13	7871.81	7870.67	-136.20	95.00	0.92	177.71	7871.85	359.01	MWD Run 6
226	20282.00	91.48	0.39	11694.91	7965.76	7964.64	-135.36	94.00	0.37	177.71	7965.79	359.03	MWD Run 6
227	20377.00	90.89	0.72	11692.94	8060.71	8059.61	-134.44	95.00	0.71	177.71	8060.73	359.04	MWD Run 6
228	20472.00	90.42	1.14	11691.85	8155.66	8154.59	-132.90	95.00	0.66	184.86	8155.68	359.07	MWD Run 6
229	20566.00	90.67	359.74	11690.96	8249.63	8248.58	-132.18	94.00	1.51	177.71	8249.64	359.08	MWD Run 6
230	20661.00	90.30	0.28	11690.16	8344.62	8343.58	-132.16	95.00	0.69	184.86	8344.63	359.09	MWD Run 6
231	20756.00	89.83	0.44	11690.05	8439.60	8438.58	-131.56	95.00	0.52	184.86	8439.60	359.11	MWD Run 6
232	20851.00	89.55	0.29	11690.56	8534.57	8533.57	-130.96	95.00	0.33	177.71	8534.58	359.12	MWD Run 6
233	20945.00	89.66	0.72	11691.21	8628.55	8627.57	-130.13	94.00	0.47	184.86	8628.55	359.14	MWD Run 6
234	21040.00	89.72	0.57	11691.72	8723.51	8722.56	-129.06	95.00	0.17	184.86	8723.51	359.15	MWD Run 6
235	21135.00	91.29	0.59	11690.89	8818.48	8817.55	-128.10	95.00	1.65	184.86	8818.48	359.17	MWD Run 6
236	21231.00	91.60	0.06	11688.47	8914.43	8913.52	-127.55	96.00	0.64	177.71	8914.43	359.18	MWD Run 7
237	21325.00	90.56	355.56	11686.69	9008.36	9007.41	-131.14	94.00	4.91	177.71	9008.36	359.17	MWD Run 7
238	21420.00	90.50	350.56	11685.81	9102.78	9101.68	-142.62	95.00	5.26	177.71	9102.79	359.10	MWD Run 7
239	21515.00	88.09	349.56	11686.98	9196.57	9195.23	-159.01	95.00	2.75	177.71	9196.61	359.01	MWD Run 7
240	21609.00	89.02	354.03	11689.36	9289.73	9288.22	-172.42	94.00	4.86	177.71	9289.82	358.94	MWD Run 7
241	21703.00	89.83	359.63	11690.30	9383.61	9382.03	-177.62	94.00	6.02	184.86	9383.71	358.92	MWD Run 7
242	21798.00	90.06	0.26	11690.39	9478.60	9477.03	-177.71	95.00	0.71	184.86	9478.70	358.93	MWD Run 7
243	21893.00	90.64	0.14	11689.81	9573.59	9572.03	-177.38	95.00	0.62	177.71	9573.67	358.94	MWD Run 7
244	21987.00	90.39	2.76	11688.97	9667.50	9665.99	-175.00	94.00	2.80	184.86	9667.57	358.96	MWD Run 7
245	22081.00	89.75	3.37	11688.85	9761.28	9759.85	-169.97	94.00	0.94	184.86	9761.33	359.00	MWD Run 7
246	22176.00	90.08	3.86	11688.99	9856.00	9854.66	-163.98	95.00	0.62	177.71	9856.02	359.05	MWD Run 7
247	22269.00	90.11	3.42	11688.84	9948.72	9947.47	-158.08	93.00	0.47	184.86	9948.73	359.09	MWD Run 7
248	22364.00	90.92	4.02	11687.98	10043.41	10042.27	-151.91	95.00	1.06	184.86	10043.42	359.13	MWD Run 7
249	22458.00	90.67	2.89	11686.68	10137.14	10136.09	-146.25	94.00	1.23	177.71	10137.14	359.17	MWD Run 7
250	22553.00	92.83	0.65	11683.78	10231.99	10230.98	-143.32	95.00	3.27	184.86	10231.99	359.20	MWD Run 7
251	22596.00	93.14	0.32	11681.54	10274.92	10273.92	-142.95	43.00	1.05	184.86	10274.92	359.20	MWD Run 7
PTB	22635.00	93.14	0.32	11679.40	10313.85	10312.87	-142.74	39.00	0.00	0.00	10313.85	359.21	PTB