



Scientific Drilling
Directional Drilling Operations

RD# AUG 11

DL CONS. DIV.

DIST. 3

Enervest Operating, LLC

Rio Arriba County, NM (NAD83 NME)

SEC 25-T26N-R2W

Enervest Federal #1

Original Hole

Design: As Drilled

Standard Survey Report

15 March, 2011

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

[Signature]

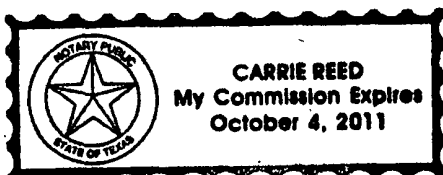
Notarized this date 15th of March, 2011.

Carrie Reed

Notary Signature

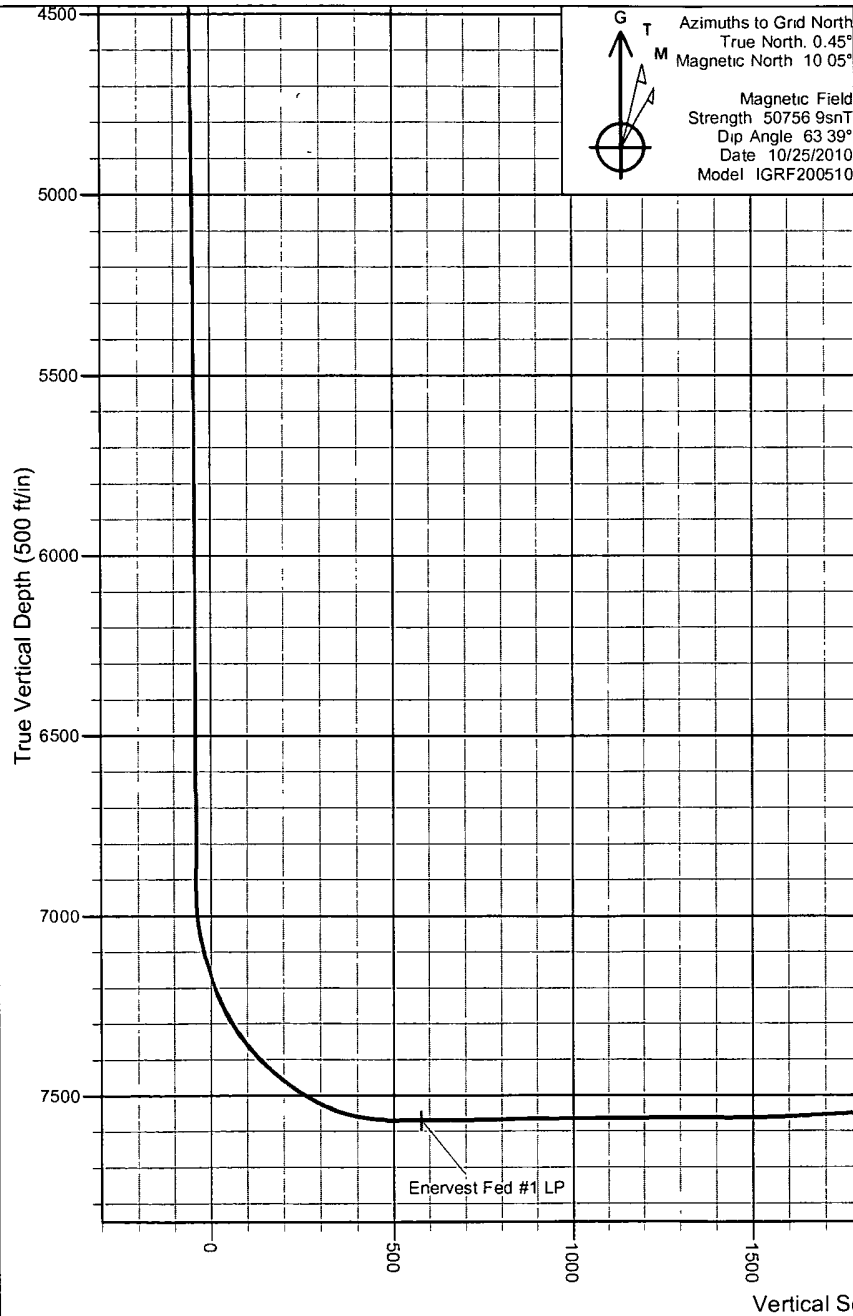
County of Midland

State of Texas





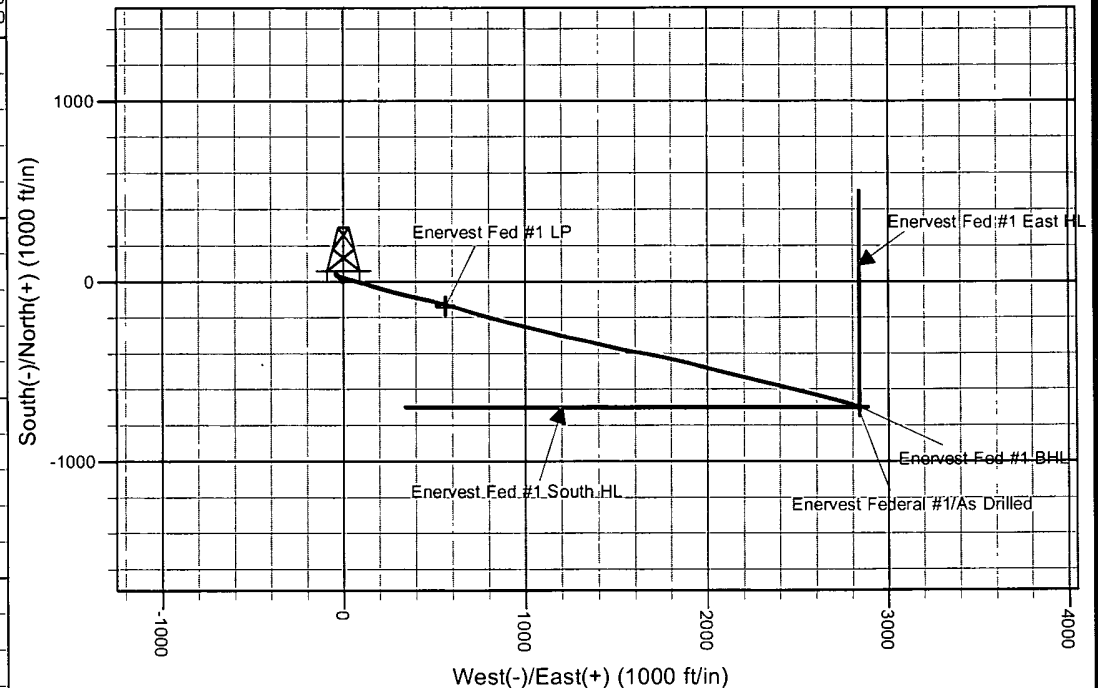
Project: Rio Arriba County, NM (NAD83 NME)
 Site: SEC 25-T26N-R2W
 Well: Enervest Federal #1
 Wellbore: Original Hole
 Design: As Drilled



Azimuths to Grid North
 True North 0.45°
 Magnetic North 10.05°
 Magnetic Field
 Strength 50756.9 nT
 Dip Angle 63.39°
 Date 10/25/2010
 Model IGRF200510

WELL DETAILS: Enervest Federal #1
 AWS 222 @ 7737.0ft (12' DF + 7725' GL)
 Ground Level: 7725.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1984952.00	1417526.00	36° 27' 9.937 N	107° 0' 28.484 W	



REFERENCE INFORMATION
 Co-ordinate (N/E) Reference: Well Enervest Federal #1, Grid North
 Vertical (TVD) Reference: AWS 222 @ 7737.0ft (12' DF + 7725' GL)
 Section (VS) Reference: Slot - (0.0N, 0.0E)
 Measured Depth Reference: AWS 222 @ 7737.0ft (12' DF + 7725' GL)
 Calculation Method: Minimum Curvature

Enervest Fed #1 BHL
 Enervest Federal #1/As Drilled

Company:	Enervest Operating, LLC	Local Co-ordinate Reference:	Well Enervest Federal #1
Project:	Rio Arriba County, NM (NAD83 NME)	TVD Reference:	AWS 222 @ 7737.0ft (12' DF + 7725' GL)
Site:	SEC 25-T26N-R2W	MD Reference:	AWS 222 @ 7737.0ft (12' DF + 7725' GL)
Well:	Enervest Federal #1	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	EDM 5000 1 Single User Db

Project	Rio Arriba County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		Using geodetic scale factor

Site	SEC 25-T26N-R2W
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Site Position:		Northing:	1,985,160 97 usft	Latitude:	36° 27' 12 000 N
From:	Lat/Long	Easting:	1,417,485 50 usft	Longitude:	107° 0' 29.000 W
Position Uncertainty:	0 0 ft	Slot Radius:	6-1/8 "	Grid Convergence:	-0 45 °

Well	Enervest Federal #1					
Well Position	+N/-S	0 0 ft	Northing:	1,984,952 00 usft	Latitude:	36° 27' 9.937 N
	+E/-W	0 0 ft	Easting:	1,417,526 00 usft	Longitude:	107° 0' 28.484 W
Position Uncertainty		3.5 ft	Wellhead Elevation:	ft	Ground Level:	7,725.0 ft

Wellbore	Original Hole
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/25/10	9.60	63 39	50,757

Design	As Drilled
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0 0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 0	0.0	0.0	103.85

Survey Program		Date	03/15/11		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100 0	4,200 0	SDI Gyro (Original Hole)	Standard Keeper 103	Standard Wireline Keeper ver 1 0 3	
4,255 0	10,275.0	SDI MWD (Original Hole)	SDI MWD	SDI MWD - Standard ver 1 0 1	

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0 0	0 0	0.0	0 00	0 00	0.00
100.0	0.70	217.43	100 0	-0.5	-0.4	-0.2	0.70	0.70	0 00
200.0	0.68	204.69	200 0	-1.5	-1.0	-0.6	0.15	-0.02	-12 74
300.0	0.78	302.36	300 0	-1.7	-1.8	-1.4	1.10	0.10	97 67
400.0	1.23	251.33	400.0	-1.7	-3.4	-2.9	0.96	0.45	-51.03
500.0	0.44	288.60	500.0	-1.9	-4.8	-4.2	0.92	-0.79	37 27
600.0	0.90	313.82	600 0	-1.2	-5.7	-5.3	0.54	0.46	25 22
700.0	1.19	272.94	699.9	-0.6	-7.3	-7.0	0.78	0.29	-40 88
800.0	1.01	341.77	799.9	0.3	-8.6	-8.4	1.25	-0.18	68 83
900.0	1.47	318.74	899.9	2.1	-9.8	-10.0	0.67	0.46	-23.03

Company:	Enervest Operating, LLC	Local Co-ordinate Reference:	Well Enervest Federal #1
Project:	Rio Arriba County, NM (NAD83 NME)	TVD Reference:	AWS 222 @ 7737.0ft (12' DF + 7725' GL)
Site:	SEC 25-T26N-R2W	MD Reference:	AWS 222 @ 7737.0ft (12' DF + 7725' GL)
Well:	Enervest Federal #1	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	EDM 5000 1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.0	0.74	297.63	999.9	3.3	-11.2	-11.6	0.82	-0.73	-21.11
1,100.0	1.18	344.37	1,099.9	4.6	-12.0	-12.8	0.86	0.44	46.74
1,200.0	1.47	329.23	1,199.8	6.7	-13.0	-14.2	0.45	0.29	-15.14
1,300.0	1.20	296.14	1,299.8	8.3	-14.6	-16.1	0.80	-0.27	-33.09
1,400.0	0.97	343.96	1,399.8	9.6	-15.7	-17.6	0.90	-0.23	47.82
1,500.0	1.66	317.15	1,499.8	11.4	-16.9	-19.2	0.91	0.69	-26.81
1,600.0	1.24	343.58	1,599.7	13.5	-18.2	-20.9	0.78	-0.42	26.43
1,700.0	1.28	307.20	1,699.7	15.2	-19.4	-22.5	0.79	0.04	-36.38
1,800.0	1.57	340.58	1,799.7	17.2	-20.8	-24.3	0.86	0.29	33.38
1,900.0	1.48	300.56	1,899.7	19.2	-22.3	-26.3	1.05	-0.09	-40.02
2,000.0	1.22	343.04	1,999.6	20.8	-23.8	-28.1	1.01	-0.26	42.48
2,100.0	1.55	324.13	2,099.6	23.0	-24.9	-29.6	0.56	0.33	-18.91
2,200.0	0.74	352.97	2,199.6	24.7	-25.7	-30.9	0.97	-0.81	28.84
2,300.0	1.29	343.70	2,299.6	26.4	-26.1	-31.7	0.57	0.55	-9.27
2,400.0	0.65	315.10	2,399.6	27.9	-26.9	-32.7	0.78	-0.64	-28.60
2,500.0	0.71	323.68	2,499.5	28.8	-27.6	-33.7	0.12	0.06	8.58
2,600.0	1.28	339.95	2,599.5	30.3	-28.4	-34.8	0.63	0.57	16.27
2,700.0	1.75	323.29	2,699.5	32.6	-29.7	-36.6	0.64	0.47	-16.66
2,800.0	1.28	301.81	2,799.5	34.4	-31.5	-38.9	0.73	-0.47	-21.48
2,900.0	1.20	344.87	2,899.4	36.0	-32.7	-40.4	0.91	-0.08	43.06
3,000.0	1.59	328.09	2,999.4	38.2	-33.8	-41.9	0.56	0.39	-16.78
3,100.0	1.50	323.79	3,099.4	40.4	-35.3	-43.9	0.15	-0.09	-4.30
3,200.0	1.43	304.36	3,199.3	42.2	-37.1	-46.1	0.50	-0.07	-19.43
3,300.0	0.68	344.19	3,299.3	43.5	-38.3	-47.6	1.01	-0.75	39.83
3,400.0	1.16	344.75	3,399.3	45.0	-38.7	-48.3	0.48	0.48	0.56
3,500.0	1.11	341.86	3,499.3	46.9	-39.3	-49.3	0.08	-0.05	-2.89
3,600.0	1.18	327.16	3,599.3	48.7	-40.1	-50.6	0.30	0.07	-14.70
3,700.0	0.99	287.49	3,699.3	49.8	-41.5	-52.2	0.76	-0.19	-39.67
3,800.0	0.72	1.48	3,799.2	50.7	-42.3	-53.2	1.05	-0.27	73.99
3,900.0	0.60	325.28	3,899.2	51.8	-42.6	-53.7	0.43	-0.12	-36.20
4,000.0	0.62	322.65	3,999.2	52.6	-43.2	-54.6	0.03	0.02	-2.63
4,100.0	0.44	305.38	4,099.2	53.3	-43.9	-55.3	0.24	-0.18	-17.27
4,200.0	0.28	249.16	4,199.2	53.4	-44.4	-55.9	0.37	-0.16	-56.22
4,255.0	0.36	171.68	4,254.2	53.2	-44.5	-55.9	0.74	0.15	-140.87
4,317.0	0.93	163.30	4,316.2	52.5	-44.3	-55.6	0.93	0.92	-13.52
4,380.0	1.35	164.66	4,379.2	51.3	-44.0	-55.0	0.67	0.67	2.16
4,443.0	1.87	167.94	4,442.2	49.6	-43.6	-54.2	0.84	0.83	5.21
4,507.0	1.91	170.64	4,506.2	47.5	-43.2	-53.3	0.15	0.06	4.22
4,570.0	1.63	171.19	4,569.1	45.6	-42.9	-52.5	0.45	-0.44	0.87
4,634.0	1.45	170.85	4,633.1	43.9	-42.6	-51.9	0.28	-0.28	-0.53
4,697.0	1.42	167.97	4,696.1	42.4	-42.3	-51.2	0.12	-0.05	-4.57
4,761.0	1.31	165.12	4,760.1	40.9	-42.0	-50.5	0.20	-0.17	-4.45
4,824.0	1.15	161.97	4,823.0	39.6	-41.6	-49.8	0.28	-0.25	-5.00

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Site:	SEC 25-T26N-R2W	MD Reference:	AWS 222 @ 7737.0ft (12' DF + 7725' GL)
Well:	Enervest Federal #1	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,888.0	1.12	160.34	4,887.0	38.4	-41.2	-49.2	0.07	-0.05	-2.55
4,949.0	1.16	161.62	4,948.0	37.2	-40.8	-48.5	0.08	0.07	2.10
5,011.0	1.08	155.82	5,010.0	36.1	-40.3	-47.8	0.22	-0.13	-9.35
5,074.0	1.10	147.12	5,073.0	35.1	-39.8	-47.0	0.26	0.03	-13.81
5,137.0	0.87	146.71	5,136.0	34.2	-39.2	-46.2	0.37	-0.37	-0.65
5,200.0	0.39	128.92	5,199.0	33.6	-38.7	-45.7	0.81	-0.76	-28.24
5,262.0	0.36	138.81	5,261.0	33.3	-38.5	-45.3	0.11	-0.05	15.95
5,325.0	0.70	186.11	5,324.0	32.8	-38.4	-45.1	0.84	0.54	75.08
5,388.0	0.59	172.82	5,387.0	32.1	-38.4	-44.9	0.29	-0.17	-21.10
5,450.0	0.50	172.42	5,449.0	31.5	-38.3	-44.7	0.15	-0.15	-0.65
5,513.0	0.42	171.63	5,512.0	31.0	-38.2	-44.5	0.13	-0.13	-1.25
5,576.0	0.34	156.10	5,575.0	30.6	-38.1	-44.3	0.21	-0.13	-24.65
5,639.0	0.27	132.16	5,638.0	30.4	-37.9	-44.1	0.23	-0.11	-38.00
5,702.0	0.33	142.93	5,701.0	30.1	-37.7	-43.8	0.13	0.10	17.10
5,766.0	0.47	152.43	5,765.0	29.7	-37.5	-43.5	0.24	0.22	14.84
5,829.0	0.24	153.63	5,828.0	29.4	-37.3	-43.2	0.37	-0.37	1.90
5,892.0	0.08	97.07	5,891.0	29.3	-37.2	-43.1	0.33	-0.25	-89.78
5,956.0	0.29	133.67	5,955.0	29.1	-37.0	-42.9	0.36	0.33	57.19
6,019.0	0.24	115.32	6,018.0	29.0	-36.8	-42.7	0.16	-0.08	-29.13
6,082.0	0.20	137.35	6,081.0	28.8	-36.6	-42.4	0.15	-0.06	34.97
6,145.0	0.14	123.22	6,144.0	28.7	-36.5	-42.3	0.12	-0.10	-22.43
6,209.0	0.20	113.56	6,208.0	28.6	-36.3	-42.1	0.10	0.09	-15.09
6,272.0	0.31	116.79	6,271.0	28.5	-36.0	-41.8	0.18	0.17	5.13
6,335.0	0.38	136.69	6,334.0	28.3	-35.7	-41.5	0.22	0.11	31.59
6,399.0	0.17	100.62	6,398.0	28.1	-35.5	-41.2	0.41	-0.33	-56.36
6,462.0	0.19	104.98	6,461.0	28.1	-35.3	-41.0	0.04	0.03	6.92
6,525.0	0.27	111.03	6,524.0	28.0	-35.1	-40.8	0.13	0.13	9.60
6,587.0	0.29	71.90	6,586.0	28.0	-34.8	-40.5	0.30	0.03	-63.11
6,649.0	0.20	58.97	6,648.0	28.1	-34.5	-40.3	0.17	-0.15	-20.85
6,713.0	0.17	48.00	6,712.0	28.2	-34.4	-40.1	0.07	-0.05	-17.14
6,776.0	0.17	99.84	6,775.0	28.2	-34.2	-40.0	0.24	0.00	82.29
6,839.0	0.19	5.24	6,838.0	28.3	-34.1	-39.9	0.42	0.03	-150.16
6,901.0	0.19	279.19	6,900.0	28.5	-34.2	-40.0	0.42	0.00	-138.79
6,963.0	1.19	101.85	6,962.0	28.3	-33.7	-39.5	2.23	1.61	-286.03
6,994.0	4.71	100.55	6,992.9	28.0	-32.1	-37.9	11.36	11.35	-4.19
7,026.0	8.26	102.00	7,024.7	27.3	-28.6	-34.3	11.10	11.09	4.53
7,057.0	11.17	103.12	7,055.3	26.2	-23.5	-29.1	9.41	9.39	3.61
7,088.0	13.29	104.26	7,085.5	24.6	-17.1	-22.5	6.88	6.84	3.68
7,120.0	15.24	106.38	7,116.6	22.5	-9.5	-14.6	6.31	6.09	6.63
7,152.0	16.42	106.74	7,147.3	20.0	-1.1	-5.9	3.70	3.69	1.13
7,182.0	17.82	106.63	7,176.0	17.5	7.3	2.9	4.67	4.67	-0.37
7,214.0	20.69	105.92	7,206.2	14.5	17.5	13.5	9.00	8.97	-2.22
7,246.0	23.50	105.45	7,235.9	11.3	29.1	25.5	8.80	8.78	-1.47

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Well:	Enervest Federal #1	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,277.0	26.90	105.34	7,263.9	7.8	41.8	38.7	10.97	10.97	-0.35
7,308.0	29.65	105.51	7,291.2	3.9	55.9	53.4	8.87	8.87	0.55
7,339.0	32.91	106.35	7,317.7	-0.5	71.4	69.5	10.61	10.52	2.71
7,371.0	36.61	106.31	7,344.0	-5.7	88.9	87.7	11.56	11.56	-0.13
7,402.0	39.81	106.28	7,368.3	-11.0	107.3	106.8	10.32	10.32	-0.10
7,433.0	42.80	106.43	7,391.6	-16.8	126.9	127.3	9.65	9.65	0.48
7,465.0	45.43	106.92	7,414.6	-23.2	148.3	149.5	8.29	8.22	1.53
7,494.0	47.92	106.92	7,434.5	-29.3	168.5	170.6	8.59	8.59	0.00
7,526.0	50.61	106.70	7,455.4	-36.3	191.7	194.8	8.42	8.41	-0.69
7,556.0	53.89	106.80	7,473.7	-43.2	214.4	218.5	10.94	10.93	0.33
7,588.0	55.86	105.28	7,492.2	-50.4	239.5	244.6	7.28	6.16	-4.75
7,620.0	59.41	104.42	7,509.3	-57.3	265.7	271.7	11.32	11.09	-2.69
7,649.0	63.28	104.25	7,523.2	-63.6	290.3	297.1	13.35	13.34	-0.59
7,681.0	67.63	104.14	7,536.5	-70.8	318.5	326.2	13.60	13.59	-0.34
7,713.0	71.91	103.49	7,547.5	-77.9	347.7	356.2	13.51	13.38	-2.03
7,744.0	76.08	103.05	7,556.1	-84.8	376.7	386.0	13.52	13.45	-1.42
7,775.0	80.40	103.30	7,562.4	-91.7	406.2	416.4	13.96	13.94	0.81
7,874.0	91.51	103.13	7,569.4	-114.2	502.2	514.9	11.22	11.22	-0.17
7,906.0	92.09	105.29	7,568.4	-122.1	533.2	546.9	6.99	1.81	6.75
7,938.0	90.97	105.69	7,567.5	-130.6	564.0	578.9	3.72	-3.50	1.25
7,970.0	89.73	105.26	7,567.3	-139.2	594.9	610.9	4.10	-3.88	-1.34
8,002.0	89.53	106.11	7,567.5	-147.8	625.7	642.9	2.73	-0.63	2.66
8,035.0	89.63	106.59	7,567.8	-157.1	657.3	675.8	1.49	0.30	1.45
8,067.0	90.03	107.34	7,567.9	-166.4	687.9	707.8	2.66	1.25	2.34
8,099.0	90.30	107.66	7,567.8	-176.1	718.5	739.7	1.31	0.84	1.00
8,130.0	90.88	106.12	7,567.4	-185.1	748.1	770.7	5.31	1.87	-4.97
8,163.0	90.98	105.10	7,566.9	-193.9	779.9	803.7	3.11	0.30	-3.09
8,194.0	90.87	106.82	7,566.4	-202.5	809.7	834.6	5.56	-0.35	5.55
8,227.0	91.04	105.10	7,565.9	-211.5	841.4	867.6	5.24	0.52	-5.21
8,259.0	90.50	104.32	7,565.4	-219.7	872.4	899.6	2.96	-1.69	-2.44
8,286.0	90.10	106.01	7,565.3	-226.7	898.4	926.6	6.43	-1.48	6.26
8,318.0	90.20	104.80	7,565.2	-235.2	929.3	958.6	3.79	0.31	-3.78
8,350.0	90.40	104.23	7,565.0	-243.2	960.3	990.6	1.89	0.63	-1.78
8,382.0	90.64	103.54	7,564.7	-250.9	991.3	1,022.6	2.28	0.75	-2.16
8,414.0	91.21	102.98	7,564.2	-258.3	1,022.5	1,054.6	2.50	1.78	-1.75
8,446.0	90.77	102.65	7,563.7	-265.4	1,053.7	1,086.6	1.72	-1.38	-1.03
8,478.0	90.64	102.57	7,563.3	-272.3	1,084.9	1,118.5	0.48	-0.41	-0.25
8,510.0	90.40	104.37	7,563.0	-279.8	1,116.0	1,150.5	5.67	-0.75	5.63
8,542.0	90.47	105.43	7,562.8	-288.0	1,146.9	1,182.5	3.32	0.22	3.31
8,574.0	90.30	105.14	7,562.5	-296.5	1,177.8	1,214.5	1.05	-0.53	-0.91
8,606.0	90.57	103.84	7,562.3	-304.5	1,208.8	1,246.5	4.15	0.84	-4.06
8,638.0	90.81	102.69	7,561.9	-311.8	1,239.9	1,278.5	3.67	0.75	-3.59
8,672.0	90.17	102.30	7,561.6	-319.2	1,273.1	1,312.5	2.20	-1.88	-1.15
8,704.0	89.16	101.33	7,561.8	-325.7	1,304.4	1,344.5	4.38	-3.16	-3.03

Company:	Enervest Operating, LLC	Local Co-ordinate Reference:	Well Enervest Federal #1
Project:	Rio Arriba County, NM (NAD83 NME)	TVD Reference:	AWS 222 @ 7737.0ft (12' DF + 7725' GL)
Site:	SEC 25-T26N-R2W	MD Reference:	AWS 222 @ 7737.0ft (12' DF + 7725' GL)
Well:	Enervest Federal #1	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,736.0	89.46	102.15	7,562.2	-332.2	1,335.8	1,376.5	2.73	0.94	2.56
8,768.0	90.03	103.89	7,562.3	-339.4	1,366.9	1,408.5	5.72	1.78	5.44
8,800.0	90.07	104.36	7,562.3	-347.2	1,398.0	1,440.5	1.47	0.13	1.47
8,831.0	90.17	104.70	7,562.2	-355.0	1,428.0	1,471.5	1.14	0.32	1.10
8,863.0	90.64	103.23	7,562.0	-362.7	1,459.0	1,503.4	4.82	1.47	-4.59
8,895.0	91.88	101.82	7,561.3	-369.7	1,490.3	1,535.4	5.87	3.88	-4.41
8,925.0	92.76	100.99	7,560.1	-375.6	1,519.6	1,565.4	4.03	2.93	-2.77
8,957.0	92.62	101.11	7,558.6	-381.7	1,551.0	1,597.3	0.58	-0.44	0.38
8,988.0	92.55	101.19	7,557.2	-387.7	1,581.4	1,628.2	0.34	-0.23	0.26
9,020.0	92.69	101.12	7,555.7	-393.9	1,612.8	1,660.2	0.49	0.44	-0.22
9,051.0	92.93	100.80	7,554.2	-399.8	1,643.2	1,691.1	1.29	0.77	-1.03
9,083.0	93.10	101.09	7,552.5	-405.9	1,674.5	1,723.0	1.05	0.53	0.91
9,116.0	93.53	101.10	7,550.6	-412.2	1,706.9	1,755.9	1.30	1.30	0.03
9,147.0	92.20	102.38	7,549.1	-418.5	1,737.2	1,786.9	5.95	-4.29	4.13
9,179.0	92.15	102.67	7,547.9	-425.4	1,768.4	1,818.8	0.92	-0.16	0.91
9,210.0	92.56	102.57	7,546.6	-432.2	1,798.6	1,849.8	1.36	1.32	-0.32
9,241.0	90.61	103.44	7,545.7	-439.2	1,828.8	1,880.8	6.89	-6.29	2.81
9,271.0	88.52	103.55	7,546.0	-446.2	1,858.0	1,910.8	6.98	-6.97	0.37
9,303.0	88.26	103.80	7,546.9	-453.7	1,889.1	1,942.8	1.13	-0.81	0.78
9,335.0	89.03	104.02	7,547.6	-461.4	1,920.1	1,974.7	2.50	2.41	0.69
9,366.0	89.13	104.17	7,548.1	-469.0	1,950.2	2,005.7	0.58	0.32	0.48
9,398.0	90.00	104.64	7,548.4	-476.9	1,981.2	2,037.7	3.09	2.72	1.47
9,429.0	90.44	104.57	7,548.2	-484.8	2,011.2	2,068.7	1.44	1.42	-0.23
9,461.0	90.77	104.65	7,547.9	-492.8	2,042.1	2,100.7	1.06	1.03	0.25
9,493.0	91.38	104.64	7,547.3	-500.9	2,073.1	2,132.7	1.91	1.91	-0.03
9,526.0	91.68	105.03	7,546.4	-509.4	2,105.0	2,165.7	1.49	0.91	1.18
9,558.0	90.94	103.96	7,545.7	-517.4	2,135.9	2,197.7	4.06	-2.31	-3.34
9,590.0	91.18	103.99	7,545.1	-525.1	2,167.0	2,229.7	0.76	0.75	0.09
9,621.0	90.64	103.20	7,544.6	-532.4	2,197.1	2,260.7	3.09	-1.74	-2.55
9,653.0	90.47	103.45	7,544.3	-539.8	2,228.3	2,292.7	0.94	-0.53	0.78
9,684.0	90.27	103.56	7,544.1	-547.0	2,258.4	2,323.7	0.74	-0.65	0.35
9,715.0	90.44	103.46	7,543.9	-554.2	2,288.5	2,354.7	0.64	0.55	-0.32
9,748.0	90.40	103.75	7,543.7	-562.0	2,320.6	2,387.7	0.89	-0.12	0.88
9,779.0	90.44	103.83	7,543.4	-569.4	2,350.7	2,418.7	0.29	0.13	0.26
9,811.0	90.81	103.96	7,543.1	-577.1	2,381.8	2,450.7	1.23	1.16	0.41
9,843.0	91.45	104.20	7,542.4	-584.9	2,412.8	2,482.7	2.14	2.00	0.75
9,874.0	91.75	104.31	7,541.6	-592.5	2,442.8	2,513.7	1.03	0.97	0.35
9,906.0	90.00	103.90	7,541.1	-600.3	2,473.9	2,545.7	5.62	-5.47	-1.28
9,937.0	89.63	104.08	7,541.2	-607.8	2,504.0	2,576.7	1.33	-1.19	0.58
9,969.0	89.83	103.90	7,541.3	-615.5	2,535.0	2,608.6	0.84	0.63	-0.56
10,001.0	90.10	103.94	7,541.4	-623.2	2,566.1	2,640.6	0.85	0.84	0.13
10,032.0	89.70	104.42	7,541.4	-630.8	2,596.1	2,671.6	2.02	-1.29	1.55
10,064.0	89.09	104.60	7,541.8	-638.8	2,627.1	2,703.6	1.99	-1.91	0.56

Company:	Enervest Operating, LLC	Local Co-ordinate Reference:	Well Enervest Federal #1
Project:	Rio Arriba County, NM (NAD83 NME)	TVD Reference:	AWS 222 @ 7737 0ft (12' DF + 7725' GL)
Site:	SEC 25-T26N-R2W	MD Reference:	AWS 222 @ 7737 0ft (12' DF + 7725' GL)
Well:	Enervest Federal #1	North Reference:	Gnd
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	EDM 5000 1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,096.0	89.73	104.63	7,542.1	-646.9	2,658.1	2,735.6	2.00	2.00	0.09
10,128.0	90.20	104.33	7,542.1	-654.9	2,689.0	2,767.6	1.74	1.47	-0.94
10,178.0	90.50	104.60	7,541.8	-667.4	2,737.5	2,817.6	0.81	0.60	0.54
Projection									
10,275.0	90.50	112.00	7,540.9	-697.8	2,829.5	2,914.3	7.63	0.00	7.63
Projectoin to TD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Enervest Fed #1 Sout	0.00	360.00	0.0	-700.0	2,839.0	1,984,252.04	1,420,364.87	36° 27' 3.234 N	106° 59' 53.669 W
- actual wellpath misses target center by 2924 0ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			0.0	0.0	0.0	1,984,252.03	1,420,364.87		
Point 2			0.0	0.0	-2,500.0	1,984,252.03	1,417,864.98		
Enervest Fed #1 East	0.00	360.00	0.0	-700.0	2,839.0	1,984,252.04	1,420,364.87	36° 27' 3.234 N	106° 59' 53.669 W
- actual wellpath misses target center by 2924 0ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			0.0	1,200.0	0.0	1,985,451.98	1,420,364.87		
Point 2			0.0	0.0	0.0	1,984,252.03	1,420,364.87		
Enervest Fed #1 BHL	0.00	360.00	7,550.0	-700.0	2,839.0	1,984,252.04	1,420,364.87	36° 27' 3.234 N	106° 59' 53.669 W
- actual wellpath misses target center by 13.3ft at 10275 0ft MD (7540.9 TVD, -697.8 N, 2829.5 E)									
- Point									
Enervest Fed #1 LP	0.00	357.82	7,570.0	-138.3	561.0	1,984,813.71	1,418,086.98	36° 27' 8.613 N	107° 0' 21.604 W
- actual wellpath misses target center by 8.6ft at 7937.1ft MD (7567.5 TVD, -130.4 N, 563.1 E)									
- Point									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
10,178.0	7,541.8	-667.4	2,737.5	Projection
10,275.0	7,540.9	-697.8	2,829.5	Projectoin to TD

Checked By: _____ Approved By: _____ Date: _____