

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised July 16, 2010

Submit one copy to appropriate

District Office

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-29666	² Pool Code 72319/71599/72920	³ Pool Name Blanco-Mesaverde/Basin-Dakota/BS Mesa Gallup (Gas)
⁴ Property Code 306751	⁵ Property Name Jicarilla Apache 102	⁶ Well Number 14F
⁷ OGRID No. 143199	⁸ Operator Name Enervest Operating, L.L.C.	⁹ Elevation 7111' GR

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	9	26N	4W		120	North	660	West	Rio Arriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	9	26N	4W		218	North	725	West	Rio Arriba

¹² Dedicated Acres MV-N/320ac DK-W/320ac	¹³ Joint or Infill Y	¹⁴ Consolidation Code	¹⁵ Order No. NSL-5294-A
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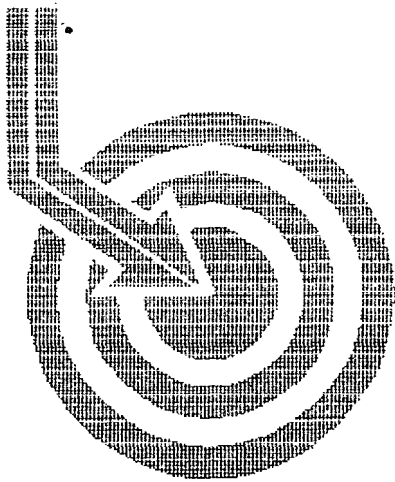
RCVD DEC 22 '10
OIL CONS. DIV.

BS MESA GALLUP-NW/160ac.

DIST. 3

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶ 				¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature Harvey Barney Printed Name hbarney@enervest.net E-mail Address Date 12-17-10
SECTION 9				
¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey Signature and Seal of Professional Surveyor:				
As-Drilled BHL calculated per Directional Report already submitted. Certificate Number				



Scientific Drilling

RECEIVED

AUG 02 2010

Farmington Field Office
Bureau of Land Management

ENERVEST OPERATING

Field: Jicarilla

Site: Rio Arriba County, NM

Well: Jicarilla Apache 102 #14F

Wellpath: VH - Job #33K0510070

Survey: 05/18/10

30-039-296660

RCVD AUG 30 '10

OIL CONS. DIV.

DIST. 3

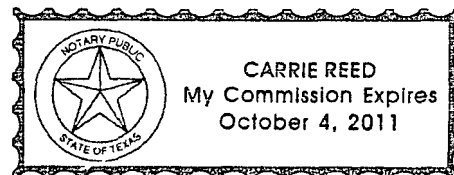
HOLD C104 FOR AS Drilled plot

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

Reharter
Company Representative

Notarized this date 21st of June, 2010.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International, Inc.

Survey Report

Company: ENERVEST OPERATING	Date: 5/31/2010	Time: 21:08:13	Page: 1
Field: Jicarilla	Co-ordinate(NE) Reference:	Site: Rio Arriba County, NM, True North	
Site: Rio Arriba County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Jicarilla Apache 102 #14F	Section (VS) Reference:	Well (0.00N,0.00E,146.69Azi)	
Wellpath: VH - Job #33K0510070	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 05/18/10	Start Date: 5/18/2010
KSRG 0'-5925'	
Company: Scientific Drilling Internatio	Engineer: Buchanan w/Basin
Tool: Keeper,Keeper Gyro	Tied-to: From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.0	0.00
30.0	0.15	355.57	30.0	0.0	0.0	0.0	0.50	0.0	355.57
60.0	0.29	355.57	60.0	-0.1	0.2	0.0	0.47	0.2	355.57
90.0	0.44	355.57	90.0	-0.3	0.3	0.0	0.50	0.3	355.57
120.0	0.43	2.90	120.0	-0.5	0.6	0.0	0.19	0.6	357.01
150.0	0.36	342.34	150.0	-0.7	0.8	-0.1	0.52	0.8	356.10
180.0	0.14	322.16	180.0	-0.8	0.9	-0.1	0.78	0.9	353.36
210.0	0.06	69.70	210.0	-0.8	0.9	-0.1	0.56	0.9	353.14
240.0	0.18	35.15	240.0	-0.8	1.0	-0.1	0.45	1.0	355.89
270.0	0.19	8.90	270.0	-0.9	1.1	0.0	0.28	1.1	358.11
300.0	0.09	14.25	300.0	-1.0	1.1	0.0	0.34	1.1	358.91
330.0	0.05	6.15	330.0	-1.0	1.2	0.0	0.14	1.2	359.30
360.0	0.11	247.60	360.0	-1.0	1.2	0.0	0.47	1.2	358.07
390.0	0.17	254.52	390.0	-1.0	1.1	-0.1	0.21	1.2	354.57
420.0	0.22	251.30	420.0	-1.0	1.1	-0.2	0.17	1.1	349.52
450.0	0.26	217.65	450.0	-1.0	1.0	-0.3	0.48	1.1	343.83
480.0	0.29	195.29	480.0	-1.0	0.9	-0.4	0.37	1.0	338.32
510.0	0.24	176.18	510.0	-0.9	0.8	-0.4	0.34	0.9	334.03
540.0	0.09	139.53	540.0	-0.8	0.7	-0.4	0.59	0.8	332.73
570.0	0.05	359.53	570.0	-0.8	0.7	-0.3	0.44	0.8	333.57
600.0	0.16	269.12	600.0	-0.8	0.7	-0.4	0.56	0.8	331.29
630.0	0.20	246.34	630.0	-0.8	0.7	-0.5	0.27	0.8	325.16
660.0	0.23	216.82	660.0	-0.8	0.6	-0.6	0.38	0.8	317.68
690.0	0.21	188.42	690.0	-0.8	0.5	-0.6	0.37	0.8	310.32
720.0	0.19	163.04	720.0	-0.7	0.4	-0.6	0.30	0.7	304.51
750.0	0.12	150.97	750.0	-0.6	0.3	-0.6	0.26	0.7	300.60
780.0	0.06	109.65	780.0	-0.6	0.3	-0.5	0.28	0.6	299.41
810.0	0.09	112.23	810.0	-0.5	0.3	-0.5	0.10	0.6	299.96
840.0	0.11	112.82	840.0	-0.5	0.3	-0.5	0.07	0.5	300.70
870.0	0.02	235.22	870.0	-0.5	0.3	-0.4	0.41	0.5	300.60
900.0	0.12	257.46	900.0	-0.5	0.2	-0.5	0.34	0.5	297.75
930.0	0.25	222.51	930.0	-0.5	0.2	-0.5	0.55	0.6	289.38
960.0	0.29	203.22	960.0	-0.4	0.1	-0.6	0.33	0.6	276.72
990.0	0.39	190.91	990.0	-0.3	-0.1	-0.7	0.41	0.7	261.66
1020.0	0.35	175.70	1020.0	-0.1	-0.3	-0.7	0.35	0.7	246.89
1050.0	0.21	197.97	1050.0	0.0	-0.4	-0.7	0.58	0.8	237.82
1080.0	0.27	219.34	1080.0	0.0	-0.5	-0.7	0.36	0.9	234.24
1110.0	0.43	217.44	1110.0	0.1	-0.7	-0.9	0.53	1.1	231.60
1140.0	0.48	199.28	1140.0	0.2	-0.9	-1.0	0.51	1.3	227.48
1170.0	0.50	202.79	1170.0	0.4	-1.1	-1.1	0.12	1.6	223.27
1200.0	0.53	204.44	1200.0	0.5	-1.4	-1.2	0.11	1.8	220.40
1230.0	0.45	193.29	1230.0	0.7	-1.6	-1.3	0.41	2.0	217.84
1260.0	0.33	180.82	1260.0	0.8	-1.8	-1.3	0.49	2.2	215.24
1290.0	0.19	185.12	1290.0	0.9	-2.0	-1.3	0.47	2.3	213.43
1320.0	0.20	195.71	1320.0	1.0	-2.1	-1.3	0.12	2.4	212.51
1350.0	0.27	202.65	1350.0	1.1	-2.2	-1.4	0.25	2.6	211.90
1380.0	0.32	217.40	1380.0	1.1	-2.3	-1.4	0.30	2.7	211.83
1410.0	0.30	200.06	1410.0	1.2	-2.4	-1.5	0.32	2.9	211.67
1440.0	0.26	183.69	1440.0	1.3	-2.6	-1.5	0.30	3.0	210.76



Scientific
Drilling

Scientific Drilling International, Inc.

Survey Report

Company: ENERVEST OPERATING	Date: 5/31/2010	Time: 21:08:13	Page: 2
Field: Jicarilla	Co-ordinate(NE) Reference:	Site: Rio Arriba County, NM, True North	
Site: Rio Arriba County, NM	Vertical (TVD) Reference:	SITE: 0.0	
Well: Jicarilla Apache 102 #14F	Section (VS) Reference:	Well: (0.00N,0.00E,146.69Azi)	
Wellpath: VH - Job #33K0510070	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
1470.0	0.30	175.93	1470.0	1.4	-2.7	-1.5	0.18	3.1	209.37
1500.0	0.32	164.60	1500.0	1.6	-2.9	-1.5	0.21	3.3	207.58
1530.0	0.38	161.06	1530.0	1.8	-3.1	-1.5	0.21	3.4	205.39
1560.0	0.38	162.87	1560.0	2.0	-3.3	-1.4	0.04	3.5	203.18
1590.0	0.39	165.64	1590.0	2.1	-3.4	-1.3	0.07	3.7	201.22
1620.0	0.48	169.14	1620.0	2.4	-3.7	-1.3	0.31	3.9	199.36
1650.0	0.50	165.65	1650.0	2.6	-3.9	-1.2	0.12	4.1	197.47
1680.0	0.54	174.41	1680.0	2.8	-4.2	-1.2	0.30	4.4	195.83
1710.0	0.60	177.29	1710.0	3.1	-4.5	-1.2	0.22	4.6	194.57
1740.0	0.62	173.41	1740.0	3.4	-4.8	-1.1	0.15	4.9	193.35
1770.0	0.65	172.48	1770.0	3.7	-5.1	-1.1	0.11	5.3	192.09
1800.0	0.74	176.39	1800.0	4.0	-5.5	-1.1	0.34	5.6	190.97
1830.0	0.84	177.45	1830.0	4.4	-5.9	-1.0	0.34	6.0	190.01
1860.0	0.95	174.64	1860.0	4.8	-6.4	-1.0	0.39	6.5	189.00
1890.0	1.02	172.16	1890.0	5.2	-6.9	-1.0	0.27	7.0	187.85
1920.0	1.12	164.17	1920.0	5.8	-7.4	-0.8	0.60	7.5	186.40
1950.0	1.14	164.02	1949.9	6.3	-8.0	-0.7	0.07	8.0	184.80
1980.0	1.21	158.55	1979.9	6.9	-8.6	-0.5	0.44	8.6	183.16
2010.0	1.29	157.47	2009.9	7.6	-9.2	-0.2	0.28	9.2	181.42
2040.0	1.32	155.15	2039.9	8.2	-9.8	0.0	0.20	9.8	179.73
2070.0	1.38	153.64	2069.9	8.9	-10.5	0.4	0.23	10.5	178.07
2100.0	1.62	151.41	2099.9	9.7	-11.2	0.7	0.82	11.2	176.33
2130.0	1.93	152.00	2129.9	10.6	-12.0	1.2	1.04	12.0	174.49
2160.0	2.08	153.04	2159.9	11.7	-12.9	1.6	0.51	13.0	172.76
2190.0	2.05	153.45	2189.9	12.8	-13.9	2.1	0.11	14.0	171.28
2220.0	2.13	154.64	2219.8	13.8	-14.9	2.6	0.30	15.1	170.05
2250.0	2.12	155.13	2249.8	14.9	-15.9	3.1	0.07	16.2	169.02
2280.0	2.12	156.10	2279.8	16.0	-16.9	3.5	0.12	17.2	168.17
2310.0	2.13	155.73	2309.8	17.1	-17.9	4.0	0.06	18.3	167.43
2340.0	2.15	154.26	2339.8	18.2	-18.9	4.5	0.19	19.4	166.72
2370.0	2.10	156.52	2369.7	19.3	-19.9	4.9	0.33	20.5	166.10
2400.0	2.06	157.97	2399.7	20.4	-20.9	5.3	0.22	21.6	165.66
2430.0	2.16	155.10	2429.7	21.5	-21.9	5.8	0.48	22.7	165.22
2460.0	2.31	153.56	2459.7	22.7	-23.0	6.3	0.54	23.8	164.68
2490.0	2.46	152.73	2489.6	23.9	-24.1	6.9	0.51	25.1	164.11
2520.0	2.55	152.11	2519.6	25.2	-25.3	7.5	0.31	26.3	163.53
2550.0	2.64	150.57	2549.6	26.6	-26.4	8.1	0.38	27.7	162.94
2580.0	2.87	149.03	2579.6	28.0	-27.7	8.8	0.81	29.1	162.29
2610.0	2.92	147.63	2609.5	29.5	-29.0	9.6	0.29	30.5	161.60
2640.0	2.97	146.03	2639.5	31.1	-30.3	10.5	0.32	32.0	160.90
2670.0	2.96	146.19	2669.4	32.6	-31.6	11.3	0.04	33.5	160.22
2700.0	3.04	144.90	2699.4	34.2	-32.9	12.2	0.35	35.1	159.57
2730.0	3.12	144.40	2729.3	35.8	-34.2	13.2	0.28	36.6	158.92
2760.0	2.98	143.00	2759.3	37.4	-35.5	14.1	0.53	38.2	158.30
2790.0	2.97	141.81	2789.3	38.9	-36.7	15.1	0.21	39.7	157.68
2820.0	2.98	141.05	2819.2	40.5	-37.9	16.0	0.14	41.2	157.07
2850.0	3.00	141.78	2849.2	42.0	-39.1	17.0	0.14	42.7	156.51
2880.0	2.88	141.78	2879.1	43.6	-40.3	18.0	0.40	44.2	156.00
2910.0	2.81	142.00	2909.1	45.1	-41.5	18.9	0.24	45.6	155.54
2940.0	2.71	143.04	2939.1	46.5	-42.7	19.8	0.37	47.0	155.15
2970.0	2.62	144.28	2969.0	47.9	-43.8	20.6	0.36	48.4	154.82
3000.0	2.51	143.35	2999.0	49.2	-44.9	21.4	0.39	49.7	154.52



Scientific
Drilling

Scientific Drilling International, Inc.

Survey Report

Company: ENERVEST OPERATING
Field: Jicarilla
Site: Rio Arriba County, NM
Well: Jicarilla Apache 102 #14F
Wellpath: VH - Job #33K0510070

Date: 5/31/2010 Time: 21:08:13 Page: 3
Co-ordinate(NE) Reference: Site: Rio Arriba County, NM, True North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,146.69Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
3030.0	2.51	141.96	3029.0	50.5	-45.9	22.2	0.20	51.0	154.22
3060.0	2.48	139.74	3059.0	51.8	-46.9	23.0	0.34	52.3	153.89
3090.0	2.54	140.96	3088.9	53.2	-47.9	23.8	0.27	53.5	153.56
3120.0	2.42	141.09	3118.9	54.4	-48.9	24.7	0.40	54.8	153.26
3150.0	2.43	138.18	3148.9	55.7	-49.9	25.5	0.41	56.0	152.96
3180.0	2.73	140.40	3178.8	57.0	-50.9	26.4	1.05	57.3	152.64
3210.0	2.72	140.30	3208.8	58.5	-52.0	27.3	0.04	58.7	152.34
3240.0	2.72	139.30	3238.8	59.9	-53.1	28.2	0.16	60.1	152.05
3270.0	2.62	137.25	3268.7	61.3	-54.2	29.1	0.46	61.5	151.74
3300.0	2.57	135.79	3298.7	62.6	-55.1	30.0	0.28	62.8	151.42
3330.0	2.63	135.82	3328.7	63.9	-56.1	31.0	0.20	64.1	151.09
3360.0	2.64	135.55	3358.6	65.3	-57.1	32.0	0.05	65.4	150.77
3390.0	2.65	135.00	3388.6	66.6	-58.1	32.9	0.09	66.8	150.45
3420.0	2.68	134.09	3418.6	68.0	-59.1	33.9	0.17	68.1	150.13
3450.0	2.65	134.51	3448.5	69.4	-60.0	34.9	0.12	69.5	149.81
3480.0	2.73	135.01	3478.5	70.7	-61.0	35.9	0.28	70.8	149.52
3510.0	2.80	134.93	3508.5	72.2	-62.1	37.0	0.23	72.2	149.23
3540.0	2.84	133.30	3538.4	73.6	-63.1	38.0	0.30	73.7	148.93
3570.0	2.75	132.57	3568.4	75.0	-64.1	39.1	0.32	75.1	148.62
3600.0	2.64	131.85	3598.4	76.4	-65.0	40.1	0.38	76.4	148.32
3630.0	2.44	132.58	3628.3	77.7	-65.9	41.1	0.68	77.7	148.05
3660.0	2.43	131.64	3658.3	78.9	-66.8	42.1	0.14	78.9	147.80
3690.0	2.45	131.37	3688.3	80.1	-67.6	43.0	0.08	80.1	147.54
3720.0	2.23	132.14	3718.3	81.3	-68.4	43.9	0.74	81.3	147.31
3750.0	2.33	131.45	3748.2	82.5	-69.2	44.8	0.35	82.5	147.09
3780.0	2.37	129.60	3778.2	83.7	-70.0	45.8	0.29	83.7	146.84
3810.0	2.26	130.05	3808.2	84.8	-70.8	46.7	0.37	84.8	146.61
3840.0	2.19	130.92	3838.2	85.9	-71.6	47.6	0.26	85.9	146.39
3870.0	2.04	132.98	3868.2	87.0	-72.3	48.4	0.56	87.0	146.21
3900.0	2.13	132.43	3898.1	88.1	-73.0	49.2	0.31	88.1	146.04
3930.0	2.07	132.55	3928.1	89.1	-73.8	50.0	0.20	89.1	145.88
3960.0	2.02	132.50	3958.1	90.2	-74.5	50.8	0.17	90.2	145.72
3990.0	2.01	131.75	3988.1	91.2	-75.2	51.6	0.09	91.2	145.56
4020.0	2.04	131.48	4018.1	92.2	-75.9	52.4	0.10	92.2	145.40
4050.0	2.05	130.87	4048.0	93.2	-76.6	53.2	0.08	93.3	145.24
4080.0	2.05	130.93	4078.0	94.3	-77.3	54.0	0.01	94.3	145.08
4110.0	2.03	131.38	4108.0	95.3	-78.0	54.8	0.09	95.4	144.93
4140.0	1.91	131.25	4138.0	96.3	-78.7	55.6	0.40	96.4	144.78
4170.0	1.92	131.10	4168.0	97.3	-79.4	56.3	0.04	97.3	144.64
4200.0	1.82	131.47	4197.9	98.2	-80.0	57.1	0.34	98.3	144.51
4230.0	1.90	129.95	4227.9	99.1	-80.7	57.8	0.31	99.2	144.38
4260.0	1.75	130.57	4257.9	100.1	-81.3	58.5	0.50	100.2	144.24
4290.0	1.63	131.24	4287.9	100.9	-81.9	59.2	0.41	101.0	144.13
4320.0	1.49	135.24	4317.9	101.7	-82.4	59.8	0.59	101.8	144.04
4350.0	1.55	132.18	4347.9	102.5	-83.0	60.4	0.34	102.6	143.96
4380.0	1.31	135.74	4377.9	103.2	-83.5	60.9	0.85	103.3	143.89
4410.0	1.23	138.71	4407.9	103.9	-84.0	61.4	0.35	104.0	143.84
4440.0	1.19	140.05	4437.9	104.5	-84.4	61.8	0.16	104.6	143.82
4470.0	1.07	144.28	4467.9	105.1	-84.9	62.1	0.49	105.2	143.81
4500.0	0.96	149.77	4497.8	105.6	-85.4	62.4	0.49	105.7	143.82
4530.0	0.94	146.62	4527.8	106.1	-85.8	62.7	0.19	106.2	143.84
4560.0	0.89	149.45	4557.8	106.6	-86.2	62.9	0.22	106.7	143.86
4590.0	0.83	149.70	4587.8	107.0	-86.6	63.2	0.20	107.2	143.89



Scientific Drilling International, Inc.

Survey Report

Company: ENERVEST OPERATING	Date: 5/31/2010	Time: 21:08:13	Page: 4
Field: Jicarilla	Co-ordinate(NE) Reference:	Site: Rio Arriba County, NM, True North	
Site: Rio Arriba County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Jicarilla Apache 102 #14F	Section (VS) Reference:	Well (0.00N,0.00E,146.69Azi)	
Wellpath: VH - Job #33K0510070	Survey Calculation Method:	Minimum Curvature	Db: Sybase

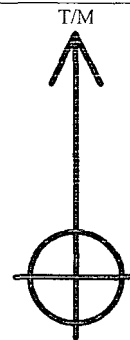
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4620.0	0.79	152.29	4617.8	107.5	-86.9	63.4	0.18	107.6	143.91
4650.0	0.75	151.14	4647.8	107.9	-87.3	63.6	0.14	108.0	143.94
4680.0	0.71	151.21	4677.8	108.2	-87.6	63.7	0.13	108.4	143.97
4710.0	0.62	140.31	4707.8	108.6	-87.9	63.9	0.52	108.7	143.98
4740.0	0.44	145.34	4737.8	108.9	-88.1	64.1	0.62	109.0	143.97
4770.0	0.39	158.23	4767.8	109.1	-88.3	64.2	0.35	109.2	143.99
4800.0	0.53	164.74	4797.8	109.3	-88.6	64.3	0.50	109.4	144.03
4830.0	0.56	160.03	4827.8	109.6	-88.8	64.4	0.18	109.7	144.07
4860.0	0.56	164.05	4857.8	109.9	-89.1	64.5	0.13	110.0	144.12
4890.0	0.53	160.70	4887.8	110.1	-89.4	64.5	0.15	110.3	144.17
4920.0	0.56	164.75	4917.8	110.4	-89.7	64.6	0.16	110.5	144.21
4950.0	0.56	164.39	4947.8	110.7	-89.9	64.7	0.01	110.8	144.27
4980.0	0.56	160.46	4977.8	111.0	-90.2	64.8	0.13	111.1	144.31
5010.0	0.57	163.61	5007.8	111.3	-90.5	64.9	0.11	111.4	144.36
5040.0	0.53	159.90	5037.8	111.5	-90.8	65.0	0.18	111.6	144.40
5070.0	0.51	156.80	5067.8	111.8	-91.0	65.1	0.12	111.9	144.44
5100.0	0.45	155.26	5097.8	112.1	-91.3	65.2	0.20	112.1	144.46
5130.0	0.44	157.56	5127.8	112.3	-91.5	65.3	0.07	112.4	144.49
5160.0	0.47	162.90	5157.8	112.5	-91.7	65.4	0.17	112.6	144.52
5190.0	0.46	168.28	5187.8	112.8	-91.9	65.4	0.15	112.8	144.56
5220.0	0.48	176.63	5217.8	113.0	-92.2	65.4	0.24	113.0	144.62
5250.0	0.45	180.29	5247.8	113.2	-92.4	65.5	0.14	113.2	144.69
5280.0	0.54	182.66	5277.8	113.4	-92.7	65.4	0.31	113.5	144.77
5310.0	0.50	185.83	5307.8	113.6	-92.9	65.4	0.16	113.7	144.86
5340.0	0.57	187.97	5337.8	113.8	-93.2	65.4	0.24	113.9	144.95
5370.0	0.63	192.14	5367.8	114.0	-93.5	65.3	0.25	114.1	145.06
5400.0	0.65	192.45	5397.8	114.3	-93.9	65.3	0.07	114.3	145.19
5430.0	0.67	191.75	5427.8	114.5	-94.2	65.2	0.07	114.6	145.31
5460.0	0.73	198.48	5457.8	114.8	-94.6	65.1	0.34	114.8	145.45
5490.0	0.74	195.75	5487.8	115.0	-94.9	65.0	0.12	115.0	145.60
5520.0	0.68	190.46	5517.8	115.3	-95.3	64.9	0.30	115.3	145.74
5550.0	0.71	184.94	5547.8	115.5	-95.6	64.9	0.24	115.6	145.86
5580.0	0.66	187.95	5577.8	115.8	-96.0	64.8	0.21	115.8	145.97
5610.0	0.62	175.07	5607.8	116.1	-96.3	64.8	0.50	116.1	146.07
5640.0	0.62	184.76	5637.8	116.4	-96.7	64.8	0.35	116.4	146.16
5670.0	0.48	199.83	5667.8	116.6	-96.9	64.7	0.67	116.6	146.26
5700.0	0.38	181.03	5697.8	116.7	-97.2	64.7	0.57	116.7	146.34
5730.0	0.24	173.76	5727.8	116.9	-97.3	64.7	0.48	116.9	146.38
5760.0	0.38	151.83	5757.8	117.0	-97.5	64.8	0.60	117.0	146.40
5790.0	0.38	181.13	5787.8	117.2	-97.7	64.8	0.64	117.2	146.43
5820.0	0.25	137.43	5817.8	117.3	-97.8	64.8	0.88	117.3	146.45
5850.0	0.34	191.36	5847.8	117.5	-97.9	64.9	0.93	117.5	146.48
5880.0	0.35	238.89	5877.8	117.5	-98.1	64.8	0.93	117.5	146.55
5910.0	0.40	257.47	5907.8	117.5	-98.1	64.6	0.44	117.5	146.65
5925.0	0.33	234.53	5922.8	117.5	-98.2	64.5	1.07	117.5	146.69



Scientific
Drilling

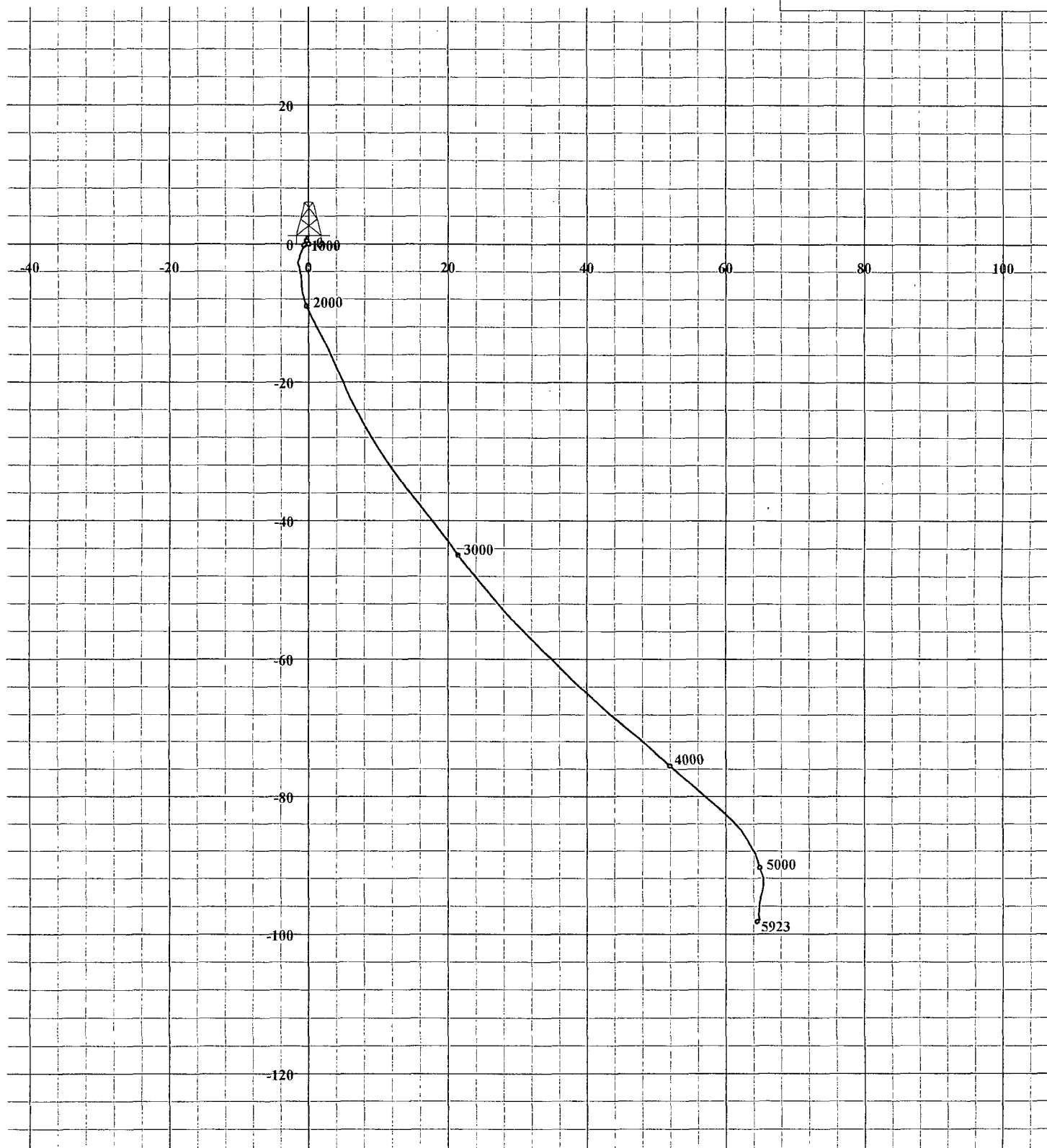
Field: Jicarilla
Site: Rio Arriba County, NM
Well: Jicarilla Apache 102 #14F
Survey: 05/18/10



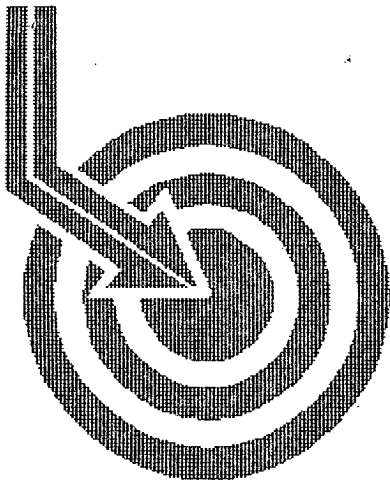
Azimuths to True North
Magnetic North: 0.00°

Strength: 0nT
Date: 5/31/2010
Model: igrf2000

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



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



Scientific Drilling

ENERVEST OPERATING

Field: Jicarilla
Site: Rio Arriba County, NM
Well: Jicarilla Apache 102 #14F
Wellpath: VH - Job #33K0510070
Survey: 05/18/10

RCVD AUG 2 '10

OIL CONS. DIV.

DIST. 3

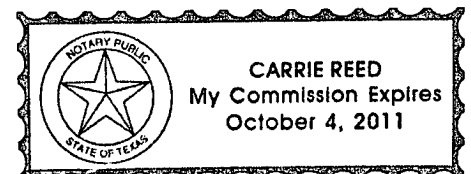
NSL 5294-A

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

[Signature]
Company Representative

Notarized this date 21st of June, 2010.

[Signature]
Notary Signature
County of Midland
State of Texas





Scientific Drilling International, Inc.

Survey Report

Company: ENERVEST OPERATING	Date: 5/31/2010	Time: 21:08:13	Page: 1
Field: Jicarilla	Co-ordinate(NE) Reference: Site: Rio Arriba County, NM, True North		
Site: Rio Arriba County, NM	Vertical (TVD) Reference: SITE 0.0		
Well: Jicarilla Apache 102 #14F	Section (VS) Reference: Well (0.00N,0.00E,146.69Azi)		
Wellpath: VH - Job #33K0510070	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: 05/18/10	Start Date: 5/18/2010
Company: Scientific Drilling Internatio	Engineer: Buchanan w/Basin
Tool: Keeper,Keeper Gyro	Tied-to: From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.0	0.00
30.0	0.15	355.57	30.0	0.0	0.0	0.0	0.50	0.0	355.57
60.0	0.29	355.57	60.0	-0.1	0.2	0.0	0.47	0.2	355.57
90.0	0.44	355.57	90.0	-0.3	0.3	0.0	0.50	0.3	355.57
120.0	0.43	2.90	120.0	-0.5	0.6	0.0	0.19	0.6	357.01
150.0	0.36	342.34	150.0	-0.7	0.8	-0.1	0.52	0.8	356.10
180.0	0.14	322.16	180.0	-0.8	0.9	-0.1	0.78	0.9	353.36
210.0	0.06	69.70	210.0	-0.8	0.9	-0.1	0.56	0.9	353.14
240.0	0.18	35.15	240.0	-0.8	1.0	-0.1	0.45	1.0	355.89
270.0	0.19	8.90	270.0	-0.9	1.1	0.0	0.28	1.1	358.11
300.0	0.09	14.25	300.0	-1.0	1.1	0.0	0.34	1.1	358.91
330.0	0.05	6.15	330.0	-1.0	1.2	0.0	0.14	1.2	359.30
360.0	0.11	247.60	360.0	-1.0	1.2	0.0	0.47	1.2	358.07
390.0	0.17	254.52	390.0	-1.0	1.1	-0.1	0.21	1.2	354.57
420.0	0.22	251.30	420.0	-1.0	1.1	-0.2	0.17	1.1	349.52
450.0	0.26	217.65	450.0	-1.0	1.0	-0.3	0.48	1.1	343.83
480.0	0.29	195.29	480.0	-1.0	0.9	-0.4	0.37	1.0	338.32
510.0	0.24	176.18	510.0	-0.9	0.8	-0.4	0.34	0.9	334.03
540.0	0.09	139.53	540.0	-0.8	0.7	-0.4	0.59	0.8	332.73
570.0	0.05	359.53	570.0	-0.8	0.7	-0.3	0.44	0.8	333.57
600.0	0.16	269.12	600.0	-0.8	0.7	-0.4	0.56	0.8	331.29
630.0	0.20	246.34	630.0	-0.8	0.7	-0.5	0.27	0.8	325.16
660.0	0.23	216.82	660.0	-0.8	0.6	-0.6	0.38	0.8	317.68
690.0	0.21	188.42	690.0	-0.8	0.5	-0.6	0.37	0.8	310.32
720.0	0.19	163.04	720.0	-0.7	0.4	-0.6	0.30	0.7	304.51
750.0	0.12	150.97	750.0	-0.6	0.3	-0.6	0.26	0.7	300.60
780.0	0.06	109.65	780.0	-0.6	0.3	-0.5	0.28	0.6	299.41
810.0	0.09	112.23	810.0	-0.5	0.3	-0.5	0.10	0.6	299.96
840.0	0.11	112.82	840.0	-0.5	0.3	-0.5	0.07	0.5	300.70
870.0	0.02	235.22	870.0	-0.5	0.3	-0.4	0.41	0.5	300.60
900.0	0.12	257.46	900.0	-0.5	0.2	-0.5	0.34	0.5	297.75
930.0	0.25	222.51	930.0	-0.5	0.2	-0.5	0.55	0.6	289.38
960.0	0.29	203.22	960.0	-0.4	0.1	-0.6	0.33	0.6	276.72
990.0	0.39	190.91	990.0	-0.3	-0.1	-0.7	0.41	0.7	261.66
1020.0	0.35	175.70	1020.0	-0.1	-0.3	-0.7	0.35	0.7	246.89
1050.0	0.21	197.97	1050.0	0.0	-0.4	-0.7	0.58	0.8	237.82
1080.0	0.27	219.34	1080.0	0.0	-0.5	-0.7	0.36	0.9	234.24
1110.0	0.43	217.44	1110.0	0.1	-0.7	-0.9	0.53	1.1	231.60
1140.0	0.48	199.28	1140.0	0.2	-0.9	-1.0	0.51	1.3	227.48
1170.0	0.50	202.79	1170.0	0.4	-1.1	-1.1	0.12	1.6	223.27
1200.0	0.53	204.44	1200.0	0.5	-1.4	-1.2	0.11	1.8	220.40
1230.0	0.45	193.29	1230.0	0.7	-1.6	-1.3	0.41	2.0	217.84
1260.0	0.33	180.82	1260.0	0.8	-1.8	-1.3	0.49	2.2	215.24
1290.0	0.19	185.12	1290.0	0.9	-2.0	-1.3	0.47	2.3	213.43
1320.0	0.20	195.71	1320.0	1.0	-2.1	-1.3	0.12	2.4	212.51
1350.0	0.27	202.65	1350.0	1.1	-2.2	-1.4	0.25	2.6	211.90
1380.0	0.32	217.40	1380.0	1.1	-2.3	-1.4	0.30	2.7	211.83
1410.0	0.30	200.06	1410.0	1.2	-2.4	-1.5	0.32	2.9	211.67
1440.0	0.26	183.69	1440.0	1.3	-2.6	-1.5	0.30	3.0	210.76



Scientific Drilling International, Inc.

Survey Report

Company: ENERVEST OPERATING	Date: 5/31/2010	Time: 21:08:13	Page: 2
Field: Jicarilla	Co-ordinate(NE) Reference:	Site: Rio Arriba County, NM, True North	
Site: Rio Arriba County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Jicarilla Apache 102 #14F	Section (VS) Reference:	Well (0.00N,0.00E,146.69Azi)	
Wellpath: VH - Job #33K0510070	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
1470.0	0.30	175.93	1470.0	1.4	-2.7	-1.5	0.18	3.1	209.37
1500.0	0.32	164.60	1500.0	1.6	-2.9	-1.5	0.21	3.3	207.58
1530.0	0.38	161.06	1530.0	1.8	-3.1	-1.5	0.21	3.4	205.39
1560.0	0.38	162.87	1560.0	2.0	-3.3	-1.4	0.04	3.5	203.18
1590.0	0.39	165.64	1590.0	2.1	-3.4	-1.3	0.07	3.7	201.22
1620.0	0.48	169.14	1620.0	2.4	-3.7	-1.3	0.31	3.9	199.36
1650.0	0.50	165.65	1650.0	2.6	-3.9	-1.2	0.12	4.1	197.47
1680.0	0.54	174.41	1680.0	2.8	-4.2	-1.2	0.30	4.4	195.83
1710.0	0.60	177.29	1710.0	3.1	-4.5	-1.2	0.22	4.6	194.57
1740.0	0.62	173.41	1740.0	3.4	-4.8	-1.1	0.15	4.9	193.35
1770.0	0.65	172.48	1770.0	3.7	-5.1	-1.1	0.11	5.3	192.09
1800.0	0.74	176.39	1800.0	4.0	-5.5	-1.1	0.34	5.6	190.97
1830.0	0.84	177.45	1830.0	4.4	-5.9	-1.0	0.34	6.0	190.01
1860.0	0.95	174.64	1860.0	4.8	-6.4	-1.0	0.39	6.5	189.00
1890.0	1.02	172.16	1890.0	5.2	-6.9	-1.0	0.27	7.0	187.85
1920.0	1.12	164.17	1920.0	5.8	-7.4	-0.8	0.60	7.5	186.40
1950.0	1.14	164.02	1949.9	6.3	-8.0	-0.7	0.07	8.0	184.80
1980.0	1.21	158.55	1979.9	6.9	-8.6	-0.5	0.44	8.6	183.16
2010.0	1.29	157.47	2009.9	7.6	-9.2	-0.2	0.28	9.2	181.42
2040.0	1.32	155.15	2039.9	8.2	-9.8	0.0	0.20	9.8	179.73
2070.0	1.38	153.64	2069.9	8.9	-10.5	0.4	0.23	10.5	178.07
2100.0	1.62	151.41	2099.9	9.7	-11.2	0.7	0.82	11.2	176.33
2130.0	1.93	152.00	2129.9	10.6	-12.0	1.2	1.04	12.0	174.49
2160.0	2.08	153.04	2159.9	11.7	-12.9	1.6	0.51	13.0	172.76
2190.0	2.05	153.45	2189.9	12.8	-13.9	2.1	0.11	14.0	171.28
2220.0	2.13	154.64	2219.8	13.8	-14.9	2.6	0.30	15.1	170.05
2250.0	2.12	155.13	2249.8	14.9	-15.9	3.1	0.07	16.2	169.02
2280.0	2.12	156.10	2279.8	16.0	-16.9	3.5	0.12	17.2	168.17
2310.0	2.13	155.73	2309.8	17.1	-17.9	4.0	0.06	18.3	167.43
2340.0	2.15	154.26	2339.8	18.2	-18.9	4.5	0.19	19.4	166.72
2370.0	2.10	156.52	2369.7	19.3	-19.9	4.9	0.33	20.5	166.10
2400.0	2.06	157.97	2399.7	20.4	-20.9	5.3	0.22	21.6	165.66
2430.0	2.16	155.10	2429.7	21.5	-21.9	5.8	0.48	22.7	165.22
2460.0	2.31	153.56	2459.7	22.7	-23.0	6.3	0.54	23.8	164.68
2490.0	2.46	152.73	2489.6	23.9	-24.1	6.9	0.51	25.1	164.11
2520.0	2.55	152.11	2519.6	25.2	-25.3	7.5	0.31	26.3	163.53
2550.0	2.64	150.57	2549.6	26.6	-26.4	8.1	0.38	27.7	162.94
2580.0	2.87	149.03	2579.6	28.0	-27.7	8.8	0.81	29.1	162.29
2610.0	2.92	147.63	2609.5	29.5	-29.0	9.6	0.29	30.5	161.60
2640.0	2.97	146.03	2639.5	31.1	-30.3	10.5	0.32	32.0	160.90
2670.0	2.96	146.19	2669.4	32.6	-31.6	11.3	0.04	33.5	160.22
2700.0	3.04	144.90	2699.4	34.2	-32.9	12.2	0.35	35.1	159.57
2730.0	3.12	144.40	2729.3	35.8	-34.2	13.2	0.28	36.6	158.92
2760.0	2.98	143.00	2759.3	37.4	-35.5	14.1	0.53	38.2	158.30
2790.0	2.97	141.81	2789.3	38.9	-36.7	15.1	0.21	39.7	157.68
2820.0	2.98	141.05	2819.2	40.5	-37.9	16.0	0.14	41.2	157.07
2850.0	3.00	141.78	2849.2	42.0	-39.1	17.0	0.14	42.7	156.51
2880.0	2.88	141.78	2879.1	43.6	-40.3	18.0	0.40	44.2	156.00
2910.0	2.81	142.00	2909.1	45.1	-41.5	18.9	0.24	45.6	155.54
2940.0	2.71	143.04	2939.1	46.5	-42.7	19.8	0.37	47.0	155.15
2970.0	2.62	144.28	2969.0	47.9	-43.8	20.6	0.36	48.4	154.82
3000.0	2.51	143.35	2999.0	49.2	-44.9	21.4	0.39	49.7	154.52



Scientific Drilling International, Inc.

Survey Report

Company: ENERVEST OPERATING	Date: 5/31/2010	Time: 21:08:13	Page: 3
Field: Jicarilla	Co-ordinate(NE) Reference:	Site: Rio Arriba County, NM, True North	
Site: Rio Arriba County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Jicarilla Apache 102 #14F	Section (VS) Reference:	Well (0.00N,0.00E,146.69Azi)	
Wellpath: VH - Job #33K0510070	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
3030.0	2.51	141.96	3029.0	50.5	-45.9	22.2	0.20	51.0	154.22
3060.0	2.48	139.74	3059.0	51.8	-46.9	23.0	0.34	52.3	153.89
3090.0	2.54	140.96	3088.9	53.2	-47.9	23.8	0.27	53.5	153.56
3120.0	2.42	141.09	3118.9	54.4	-48.9	24.7	0.40	54.8	153.26
3150.0	2.43	138.18	3148.9	55.7	-49.9	25.5	0.41	56.0	152.96
3180.0	2.73	140.40	3178.8	57.0	-50.9	26.4	1.05	57.3	152.64
3210.0	2.72	140.30	3208.8	58.5	-52.0	27.3	0.04	58.7	152.34
3240.0	2.72	139.30	3238.8	59.9	-53.1	28.2	0.16	60.1	152.05
3270.0	2.62	137.25	3268.7	61.3	-54.2	29.1	0.46	61.5	151.74
3300.0	2.57	135.79	3298.7	62.6	-55.1	30.0	0.28	62.8	151.42
3330.0	2.63	135.82	3328.7	63.9	-56.1	31.0	0.20	64.1	151.09
3360.0	2.64	135.55	3358.6	65.3	-57.1	32.0	0.05	65.4	150.77
3390.0	2.65	135.00	3388.6	66.6	-58.1	32.9	0.09	66.8	150.45
3420.0	2.68	134.09	3418.6	68.0	-59.1	33.9	0.17	68.1	150.13
3450.0	2.65	134.51	3448.5	69.4	-60.0	34.9	0.12	69.5	149.81
3480.0	2.73	135.01	3478.5	70.7	-61.0	35.9	0.28	70.8	149.52
3510.0	2.80	134.93	3508.5	72.2	-62.1	37.0	0.23	72.2	149.23
3540.0	2.84	133.30	3538.4	73.6	-63.1	38.0	0.30	73.7	148.93
3570.0	2.75	132.57	3568.4	75.0	-64.1	39.1	0.32	75.1	148.62
3600.0	2.64	131.85	3598.4	76.4	-65.0	40.1	0.38	76.4	148.32
3630.0	2.44	132.58	3628.3	77.7	-65.9	41.1	0.68	77.7	148.05
3660.0	2.43	131.64	3658.3	78.9	-66.8	42.1	0.14	78.9	147.80
3690.0	2.45	131.37	3688.3	80.1	-67.6	43.0	0.08	80.1	147.54
3720.0	2.23	132.14	3718.3	81.3	-68.4	43.9	0.74	81.3	147.31
3750.0	2.33	131.45	3748.2	82.5	-69.2	44.8	0.35	82.5	147.09
3780.0	2.37	129.60	3778.2	83.7	-70.0	45.8	0.29	83.7	146.84
3810.0	2.26	130.05	3808.2	84.8	-70.8	46.7	0.37	84.8	146.61
3840.0	2.19	130.92	3838.2	85.9	-71.6	47.6	0.26	85.9	146.39
3870.0	2.04	132.98	3868.2	87.0	-72.3	48.4	0.56	87.0	146.21
3900.0	2.13	132.43	3898.1	88.1	-73.0	49.2	0.31	88.1	146.04
3930.0	2.07	132.55	3928.1	89.1	-73.8	50.0	0.20	89.1	145.88
3960.0	2.02	132.50	3958.1	90.2	-74.5	50.8	0.17	90.2	145.72
3990.0	2.01	131.75	3988.1	91.2	-75.2	51.6	0.09	91.2	145.56
4020.0	2.04	131.48	4018.1	92.2	-75.9	52.4	0.10	92.2	145.40
4050.0	2.05	130.87	4048.0	93.2	-76.6	53.2	0.08	93.3	145.24
4080.0	2.05	130.93	4078.0	94.3	-77.3	54.0	0.01	94.3	145.08
4110.0	2.03	131.38	4108.0	95.3	-78.0	54.8	0.09	95.4	144.93
4140.0	1.91	131.25	4138.0	96.3	-78.7	55.6	0.40	96.4	144.78
4170.0	1.92	131.10	4168.0	97.3	-79.4	56.3	0.04	97.3	144.64
4200.0	1.82	131.47	4197.9	98.2	-80.0	57.1	0.34	98.3	144.51
4230.0	1.90	129.95	4227.9	99.1	-80.7	57.8	0.31	99.2	144.38
4260.0	1.75	130.57	4257.9	100.1	-81.3	58.5	0.50	100.2	144.24
4290.0	1.63	131.24	4287.9	100.9	-81.9	59.2	0.41	101.0	144.13
4320.0	1.49	135.24	4317.9	101.7	-82.4	59.8	0.59	101.8	144.04
4350.0	1.55	132.18	4347.9	102.5	-83.0	60.4	0.34	102.6	143.96
4380.0	1.31	135.74	4377.9	103.2	-83.5	60.9	0.85	103.3	143.89
4410.0	1.23	138.71	4407.9	103.9	-84.0	61.4	0.35	104.0	143.84
4440.0	1.19	140.05	4437.9	104.5	-84.4	61.8	0.16	104.6	143.82
4470.0	1.07	144.28	4467.9	105.1	-84.9	62.1	0.49	105.2	143.81
4500.0	0.96	149.77	4497.8	105.6	-85.4	62.4	0.49	105.7	143.82
4530.0	0.94	146.62	4527.8	106.1	-85.8	62.7	0.19	106.2	143.84
4560.0	0.89	149.45	4557.8	106.6	-86.2	62.9	0.22	106.7	143.86
4590.0	0.83	149.70	4587.8	107.0	-86.6	63.2	0.20	107.2	143.89



Scientific
Drilling

Scientific Drilling International, Inc.

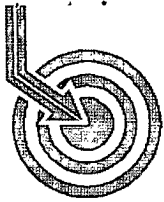
Survey Report

Company: ENERVEST OPERATING
Field: Jicarilla
Site: Rio Arriba County, NM
Well: Jicarilla Apache 102 #14F
Wellpath: VH - Job #33K0510070

Date: 5/31/2010 Time: 21:08:13 Page: 4
Co-ordinate(NE) Reference: Site: Rio Arriba County, NM, True North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,146.69Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

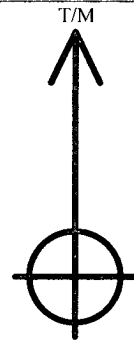
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4620.0	0.79	152.29	4617.8	107.5	-86.9	63.4	0.18	107.6	143.91
4650.0	0.75	151.14	4647.8	107.9	-87.3	63.6	0.14	108.0	143.94
4680.0	0.71	151.21	4677.8	108.2	-87.6	63.7	0.13	108.4	143.97
4710.0	0.62	140.31	4707.8	108.6	-87.9	63.9	0.52	108.7	143.98
4740.0	0.44	145.34	4737.8	108.9	-88.1	64.1	0.62	109.0	143.97
4770.0	0.39	158.23	4767.8	109.1	-88.3	64.2	0.35	109.2	143.99
4800.0	0.53	164.74	4797.8	109.3	-88.6	64.3	0.50	109.4	144.03
4830.0	0.56	160.03	4827.8	109.6	-88.8	64.4	0.18	109.7	144.07
4860.0	0.56	164.05	4857.8	109.9	-89.1	64.5	0.13	110.0	144.12
4890.0	0.53	160.70	4887.8	110.1	-89.4	64.5	0.15	110.3	144.17
4920.0	0.56	164.75	4917.8	110.4	-89.7	64.6	0.16	110.5	144.21
4950.0	0.56	164.39	4947.8	110.7	-89.9	64.7	0.01	110.8	144.27
4980.0	0.56	160.46	4977.8	111.0	-90.2	64.8	0.13	111.1	144.31
5010.0	0.57	163.61	5007.8	111.3	-90.5	64.9	0.11	111.4	144.36
5040.0	0.53	159.90	5037.8	111.5	-90.8	65.0	0.18	111.6	144.40
5070.0	0.51	156.80	5067.8	111.8	-91.0	65.1	0.12	111.9	144.44
5100.0	0.45	155.26	5097.8	112.1	-91.3	65.2	0.20	112.1	144.46
5130.0	0.44	157.56	5127.8	112.3	-91.5	65.3	0.07	112.4	144.49
5160.0	0.47	162.90	5157.8	112.5	-91.7	65.4	0.17	112.6	144.52
5190.0	0.46	168.28	5187.8	112.8	-91.9	65.4	0.15	112.8	144.56
5220.0	0.48	176.63	5217.8	113.0	-92.2	65.4	0.24	113.0	144.62
5250.0	0.45	180.29	5247.8	113.2	-92.4	65.5	0.14	113.2	144.69
5280.0	0.54	182.66	5277.8	113.4	-92.7	65.4	0.31	113.5	144.77
5310.0	0.50	185.83	5307.8	113.6	-92.9	65.4	0.16	113.7	144.86
5340.0	0.57	187.97	5337.8	113.8	-93.2	65.4	0.24	113.9	144.95
5370.0	0.63	192.14	5367.8	114.0	-93.5	65.3	0.25	114.1	145.06
5400.0	0.65	192.45	5397.8	114.3	-93.9	65.3	0.07	114.3	145.19
5430.0	0.67	191.75	5427.8	114.5	-94.2	65.2	0.07	114.6	145.31
5460.0	0.73	198.48	5457.8	114.8	-94.6	65.1	0.34	114.8	145.45
5490.0	0.74	195.75	5487.8	115.0	-94.9	65.0	0.12	115.0	145.60
5520.0	0.68	190.46	5517.8	115.3	-95.3	64.9	0.30	115.3	145.74
5550.0	0.71	184.94	5547.8	115.5	-95.6	64.9	0.24	115.6	145.86
5580.0	0.66	187.95	5577.8	115.8	-96.0	64.8	0.21	115.8	145.97
5610.0	0.62	175.07	5607.8	116.1	-96.3	64.8	0.50	116.1	146.07
5640.0	0.62	184.76	5637.8	116.4	-96.7	64.8	0.35	116.4	146.16
5670.0	0.48	199.83	5667.8	116.6	-96.9	64.7	0.67	116.6	146.26
5700.0	0.38	181.03	5697.8	116.7	-97.2	64.7	0.57	116.7	146.34
5730.0	0.24	173.76	5727.8	116.9	-97.3	64.7	0.48	116.9	146.38
5760.0	0.38	151.83	5757.8	117.0	-97.5	64.8	0.60	117.0	146.40
5790.0	0.38	181.13	5787.8	117.2	-97.7	64.8	0.64	117.2	146.43
5820.0	0.25	137.43	5817.8	117.3	-97.8	64.8	0.88	117.3	146.45
5850.0	0.34	191.36	5847.8	117.5	-97.9	64.9	0.93	117.5	146.48
5880.0	0.35	238.89	5877.8	117.5	-98.1	64.8	0.93	117.5	146.55
5910.0	0.40	257.47	5907.8	117.5	-98.1	64.6	0.44	117.5	146.65
5925.0	0.33	234.53	5922.8	117.5	-98.2	64.5	1.07	117.5	146.69



Scientific
Drilling

Field: Jicarilla
Site: Rio Arriba County, NM
Well: Jicarilla Apache 102 #14F
Survey: 05/18/10



Azimuths to True North
Magnetic North: 0.00°

Strength: 0nT
Date: 5/31/2010
Model: igrf2000

