

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

Form C-102
Revised October 12, 2005

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-30123	² Pool Code 72319/71599	³ Pool Name Blanco Mesaverde/Dakota
⁴ Property Code 21949	⁵ Property Name Jicarilla 152W	⁶ Well Number # 4N
⁷ OGRID No. 162928	⁸ Operator Name Energen Resources Corporation	⁹ Elevation 6571'

¹⁰ Surface Location

UL or lot no. M	Section 05	Township 26N	Range 05W	Lot. Idn.	Feet from the 1130	North/South line South	Feet from the 1100	East/West line West	County Rio Arriba
--------------------	---------------	-----------------	--------------	-----------	-----------------------	---------------------------	-----------------------	------------------------	----------------------

¹¹ Bottom Hole Location If Different From Surface

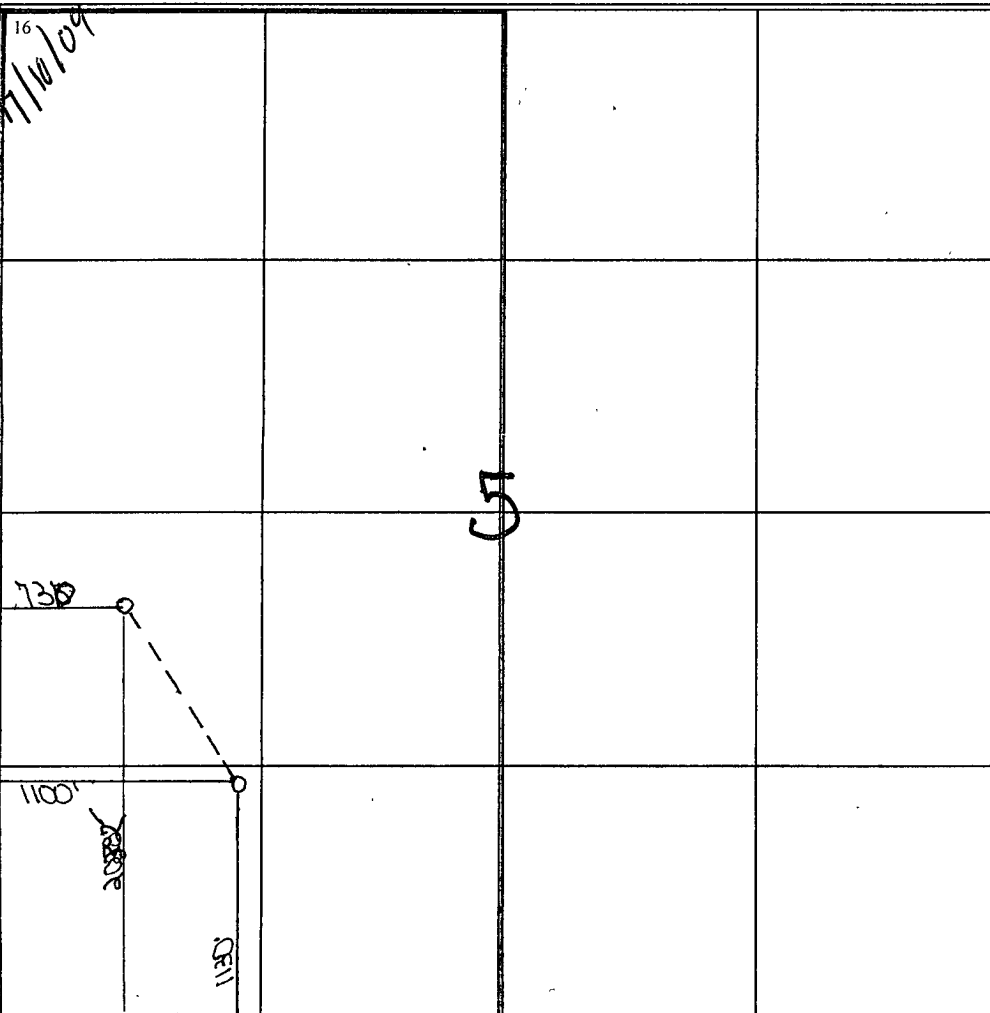
UL or lot no. L	Section 05	Township 26N	Range 05W	Lot. Idn.	Feet from the 2032	North/South line South	Feet from the 730	East/West line West	County Rio Arriba
--------------------	---------------	-----------------	--------------	-----------	-----------------------	---------------------------	----------------------	------------------------	----------------------

¹² Dedicated Acres 319.61 W/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
---	-------------------------------	----------------------------------	-------------------------

RCVD JUN 26 '09
OIL CONS. DIV.

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 7/10/09 	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: Vicki Donaghey Date: 06/25/09 Printed Name: Vicki Donaghey
	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 November 18, 2006 Date of Survey Signature and Seal of Professional Surveyer Original survey conducted and recorded by: David Russell 10201 Certificate Number

57/13



Energen Resources Corp.

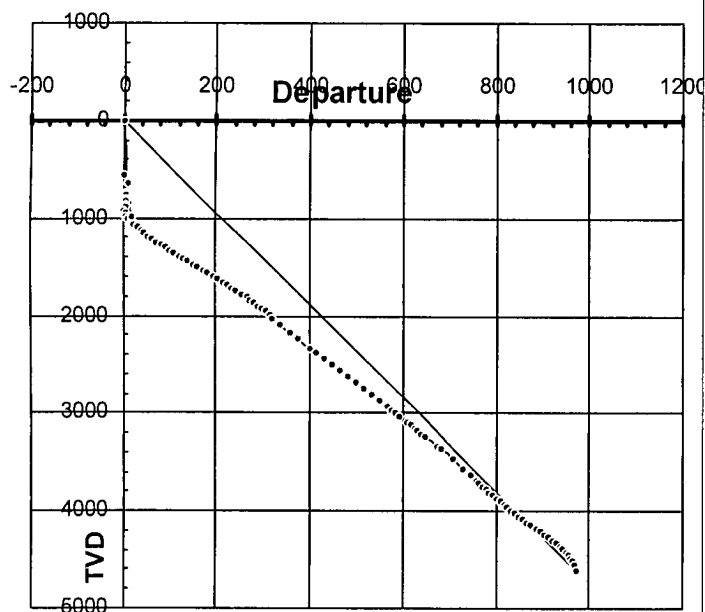
605 Richard Arrington Blvd
Birmingham, AL 35205
(800) 292-4005

Drilling Survey Report

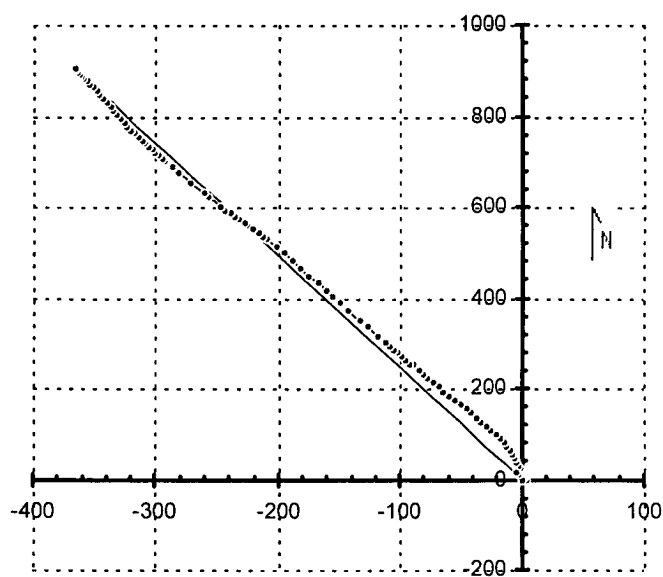
Well Name: JICARILLA 152 W 4N DK

Field Name:	DK/MV	S/T/R:	5/26N/5W	County, State:	RIO ARRIBA, NM
Operator:	ergen Resources Corporat	Location Desc:	(W/2)	District:	San Juan

Vertical View



Horizontal View



Sur No	Date	Tie In	Meas Dep	Inclination	Azimuth	Desired Az	TVD	Vert Sect	N/S(+/-)	E/W(+/-)	DLS
1	11/5/2008	✓	94	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	11/5/2008	✓	219	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11/5/2008	✓	550	0.53	159.47	0.00	549.99	-2.54	-2.38	0.89	0.00
4	11/5/2008	✓	672	0.85	119.67	0.00	671.98	-3.82	-3.36	1.88	0.00
5	11/5/2008	✓	733	0.71	124.12	0.00	732.98	-4.49	-3.79	2.58	0.00
6	11/5/2008	✓	764	0.92	117.87	0.00	763.97	-4.84	-4.02	2.96	0.00
7	11/5/2008	✓	795	0.72	81.78	0.00	794.97	-5.08	-4.11	3.37	0.00
8	11/5/2008	✓	825	0.91	3.14	0.00	824.97	-4.91	-3.84	3.57	0.00
9	11/5/2008	✓	856	2.03	349.98	0.00	855.96	-4.16	-3.06	3.49	0.00
10	11/10/2008	✓	886	3.25	342.31	0.00	885.93	-2.79	-1.72	3.14	0.00
11	11/10/2008	✓	916	4.60	344.18	0.00	915.86	-0.75	0.25	2.55	0.00
12	11/10/2008	✓	946	5.94	349.07	0.00	945.73	1.97	2.93	1.93	0.00
13	11/10/2008	✓	977	7.71	351.12	0.00	976.51	5.56	6.56	1.31	0.00
14	11/10/2008	✓	1007	9.51	350.82	0.00	1006.17	9.93	10.99	-0.60	0.00
15	11/10/2008	✓	1038	11.21	351.30	0.00	1036.66	15.35	16.50	-0.26	0.00
16	11/10/2008	✓	1069	12.78	350.28	0.00	1066.98	21.63	22.86	-1.30	0.00
17	11/10/2008	✓	1099	14.24	349.74	0.00	1096.15	28.47	29.76	-2.52	0.00
18	11/10/2008	✓	1130	14.96	349.82	0.00	1126.15	36.11	37.45	-3.90	0.00
19	11/10/2008	✓	1161	15.62	348.10	0.00	1156.05	45.47	44.13	-5.47	0.00
20	11/10/2008	✓	1191	16.18	346.68	0.00	1184.91	52.22	53.49	-7.27	0.00
21	11/10/2008	✓	1222	16.82	344.78	0.00	1214.63	60.94	62.02	-9.44	0.00
22	11/10/2008	✓	1252	16.82	344.78	0.00	1243.33	69.64	70.43	-11.86	0.00
23	11/10/2008	✓	1283	17.63	342.80	0.00	1272.91	78.85	79.28	-14.57	0.00
24	11/10/2008	✓	1314	18.15	340.29	0.00	1302.41	88.35	88.31	-17.58	0.00



Energen Resources Corp.

605 Richard Arrington Blvd.
Birmingham, AL 35205
(800) 292-4005

Drilling Survey Report

25	11/10/2008	✓	1344	18.88	337.92	0.00	1330.86	97.87	97.21	-20.98	0.00
26	11/10/2008	✓	1375	19.33	336.39	0.00	1360.15	108.01	106.55	-24.92	0.00
27	11/10/2008	✓	1405	19.82	336.46	0.00	1388.42	118.06	115.77	-28.94	0.00
28	11/10/2008	✓	1436	19.93	336.74	0.00	1417.57	128.60	125.44	-33.13	0.00
29	11/10/2008	✓	1467	20.28	336.98	0.00	1446.68	139.25	135.24	-37.32	0.00
30	11/10/2008	✓	1498	20.48	337.29	0.00	1475.74	150.05	145.18	-41.51	0.00
31	11/10/2008	✓	1528	20.08	335.85	0.00	1503.88	160.44	154.73	-45.64	0.00
32	11/10/2008	✓	1560	20.07	335.09	0.00	1533.94	171.42	164.72	-50.20	0.00
33	11/10/2008	✓	1592	19.51	334.01	0.00	1564.05	182.24	174.50	-54.86	0.00
34	11/10/2008	✓	1624	19.21	333.60	0.00	1594.24	192.82	184.02	-59.54	0.00
35	11/10/2008	✓	1655	18.92	334.43	0.00	1623.54	202.93	193.12	-63.98	0.00
36	11/10/2008	✓	1687	18.54	334.40	0.00	1653.85	213.19	202.39	-68.41	0.00
37	11/10/2008	✓	1719	18.02	334.94	0.00	1684.23	223.21	211.46	-72.71	0.00
38	11/10/2008	✓	1751	17.59	335.18	0.00	1714.70	232.99	220.33	-76.84	0.00
39	11/10/2008	✓	1783	17.19	335.63	0.00	1745.24	242.55	229.03	-80.82	0.00
40	11/10/2008	✓	1815	16.54	335.87	0.00	1775.86	251.82	237.49	-84.63	0.00
41	11/10/2008	✓	1847	16.16	336.70	0.00	1806.57	260.83	253.87	-88.25	0.00
42	11/10/2008	✓	1879	15.89	337.23	0.00	1837.32	296.66	253.87	-91.71	0.00
43	11/10/2008	✓	1911	15.65	337.13	0.00	1868.12	278.36	261.89	-95.08	0.00
44	11/10/2008	✓	1942	15.26	336.85	0.00	1898.00	286.62	269.49	-98.31	0.00
45	11/10/2008	✓	1974	15.38	337.54	0.00	1928.86	295.07	277.28	-101.59	0.00
46	11/10/2008	✓	2005	15.12	336.69	0.00	1958.77	303.23	284.80	-104.76	0.00
47	11/10/2008	✓	2037	14.57	335.33	0.00	1989.70	311.42	292.29	-108.09	0.00
48	11/10/2008	✓	2069	14.37	335.13	0.00	2020.68	319.41	299.55	-111.44	0.00
49	11/10/2008	✓	2133	14.21	336.40	0.00	2082.70	335.20	313.95	-117.93	0.00
50	11/10/2008	✓	2227	14.30	336.97	0.00	2173.81	358.34	335.21	-127.09	0.00
51	11/10/2008	✓	2291	14.30	338.86	0.00	2235.83	374.15	349.85	-133.03	0.00
52	11/10/2008	✓	2387	14.87	336.49	0.00	2328.73	398.32	372.21	-142.22	0.00
53	11/10/2008	✓	2449	14.90	336.63	0.00	2388.65	414.24	386.82	-148.55	0.00
54	11/10/2008	✓	2512	14.84	337.25	0.00	2449.54	430.41	401.69	-154.89	0.00
55	11/10/2008	✓	2576	15.22	338.11	0.00	2511.35	447.00	417.05	-161.19	0.00
56	11/10/2008	✓	2640	15.27	335.85	0.00	2573.10	463.83	432.53	-167.77	0.00
57	11/10/2008	✓	2704	15.51	336.80	0.00	2634.81	480.81	448.09	-174.59	0.00
58	11/10/2008	✓	2767	16.09	336.97	0.00	2695.43	497.96	463.87	-181.32	0.00
59	11/10/2008	✓	2831	16.36	337.41	0.00	2756.88	515.84	480.35	-188.25	0.00
60	11/10/2008	✓	2895	16.12	338.13	0.00	2818.32	533.74	496.92	-195.03	0.00
61	11/10/2008	✓	2958	15.77	336.33	0.00	2878.90	551.05	512.87	-201.72	0.00
62	11/10/2008	✓	3022	15.55	333.96	0.00	2940.53	568.30	528.55	-208.98	0.00
63	11/10/2008	✓	3053	15.20	332.62	0.00	2970.42	576.50	535.89	-212.67	0.00
64	11/10/2008	✓	3085	14.94	331.95	0.00	3001.32	584.78	543.25	-216.54	0.00
65	11/10/2008	✓	3117	14.66	331.38	0.00	3032.25	592.91	550.45	-220.42	0.00
66	11/10/2008	✓	3181	14.32	331.56	0.00	3094.22	608.83	564.52	-228.07	0.00
67	11/10/2008	✓	3213	14.35	331.74	0.00	3125.22	616.71	571.49	-231.83	0.00
68	11/10/2008	✓	3245	14.38	331.81	0.00	3156.22	624.61	578.49	-235.58	0.00
69	11/10/2008	✓	3276	14.52	332.30	0.00	3186.24	632.31	585.32	-239.21	0.00
70	11/10/2008	✓	3308	14.95	333.65	0.00	3217.19	640.42	592.57	-242.91	0.00
71	11/10/2008	✓	3340	15.08	334.62	0.00	3248.10	648.70	600.03	-246.52	0.00
72	11/10/2008	✓	3435	14.98	334.91	0.00	3339.85	673.30	622.31	-257.03	0.00
73	11/10/2008	✓	3467	14.84	334.99	0.00	3370.77	681.53	629.77	-260.51	0.00
74	11/10/2008	✓	3563	14.69	335.57	0.00	3463.60	705.97	652.00	-270.74	0.00
75	11/10/2008	✓	3659	13.93	335.93	0.00	3556.62	729.69	673.63	-280.49	0.00
76	11/10/2008	✓	3723	13.03	336.82	0.00	3618.86	744.60	687.30	-286.47	0.00



Energen Resources Corp.

605 Richard Arrington Blvd.

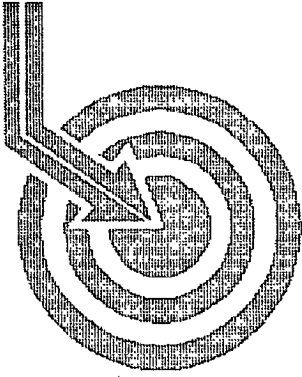
Birmingham, AL 35205

(800) 292-4005

R E S O U R C E S

Drilling Survey
Report

77	11/10/2008	☒	3786	12.30	336.21	0.00	3680.32	758.41	699.97	-291.98	0.00
78	11/10/2008	☒	3818	12.08	336.74	0.00	3711.60	765.17	706.16	-294.67	0.00
79	11/10/2008	☒	3850	12.46	337.31	0.00	3742.87	771.97	712.42	-297.33	0.00
80	11/10/2008	☒	3881	13.28	338.27	0.00	3773.09	778.87	718.82	-299.94	0.00
81	11/10/2008	☒	3914	13.42	338.37	0.00	3805.20	786.49	725.90	-302.75	0.00
82	11/10/2008	☒	3945	13.57	338.77	0.00	3835.34	793.73	732.63	-305.39	0.00
83	11/10/2008	☒	3978	13.86	339.21	0.00	3867.40	801.55	739.93	-308.20	0.00
84	11/11/2008	☒	4010	14.20	339.26	0.00	3898.45	809.30	747.19	-310.95	0.00
85	11/11/2008	☒	4042	14.48	336.98	0.00	3929.45	817.23	754.54	-313.90	0.00
86	11/11/2008	☒	4073	14.65	338.32	0.00	3959.45	825.02	761.75	-316.87	0.00
87	11/11/2008	☒	4104	14.94	338.79	0.00	3989.43	832.94	769.12	-319.76	0.00
88	11/11/2008	☒	4136	15.36	339.13	0.00	4020.31	841.30	776.92	-322.76	0.00
89	11/11/2008	☒	4168	15.62	339.73	0.00	4051.15	849.84	784.93	-325.76	0.00
90	11/11/2008	☒	4199	16.31	341.59	0.00	4080.96	858.35	792.97	-328.59	0.00
91	11/11/2008	☒	4231	16.88	342.06	0.00	4111.62	867.47	801.65	-331.44	0.00
92	11/11/2008	☒	4263	16.93	342.38	0.00	4142.24	876.74	810.52	-334.28	0.00
93	11/11/2008	☒	4295	17.16	342.46	0.00	4172.84	886.09	819.46	-337.11	0.00
94	11/11/2008	☒	4326	17.07	342.27	0.00	4202.46	895.18	828.15	-339.87	0.00
95	11/11/2008	☒	4358	16.84	342.72	0.00	4233.07	904.48	837.05	-342.68	0.00
96	11/11/2008	☒	4390	16.47	342.32	0.00	4263.73	913.62	845.80	-345.44	0.00
97	11/11/2008	☒	4422	15.70	340.69	0.00	4294.48	922.46	854.21	-348.24	0.00
98	11/12/2008	☒	4453	14.68	339.23	0.00	4324.39	930.57	861.84	-351.02	0.00
99	11/12/2008	☒	4485	12.96	337.27	0.00	4355.47	938.22	868.94	-353.85	0.00
100	11/12/2008	☒	4516	11.81	335.00	0.00	4385.74	944.86	875.02	-356.53	0.00
101	11/12/2008	☒	4548	10.89	335.43	0.00	4417.12	951.15	880.74	-359.17	0.00
102	11/12/2008	☒	4580	9.63	337.69	0.00	4448.61	956.85	885.96	-361.45	0.00
103	11/12/2008	☒	4612	8.50	340.17	0.00	4480.21	961.89	890.67	-363.27	0.00
104	11/12/2008	☒	4644	7.31	343.03	0.00	4511.90	966.28	894.84	-364.66	0.00
105	11/12/2008	☒	4675	5.76	347.81	0.00	4542.70	969.77	898.24	-365.57	0.00
106	11/12/2008	☒	4735	1.93	347.81	0.00	4602.55	973.73	902.18	-366.42	0.00
107	11/18/2008	☒	4911	2.50	347.81	0.00	0.00	0.00	0.00	0.00	0.00
108	11/18/2008	☒	5143	2.00	347.81	0.00	0.00	0.00	0.00	0.00	0.00
109	11/18/2008	☒	5323	1.25	347.81	0.00	0.00	0.00	0.00	0.00	0.00
110	11/18/2008	☒	5801	1.50	347.81	0.00	0.00	0.00	0.00	0.00	0.00
111	11/18/2008	☒	6381	0.75	347.81	0.00	0.00	0.00	0.00	0.00	0.00
112	11/18/2008	☒	6853	1.00	347.81	0.00	0.00	0.00	0.00	0.00	0.00
113	11/24/2008	☐	7499	1.00	347.81	0.00	645.90	11.02	11.02	-2.38	0.00
114	12/3/2008	☐	7847	1.00	347.81	0.00	993.85	16.96	16.96	-3.66	0.00



Scientific Drilling

RCVD JUN 26 '09

OIL CONS. DIV.

DIST. 3

ENERGEN RESOURCES

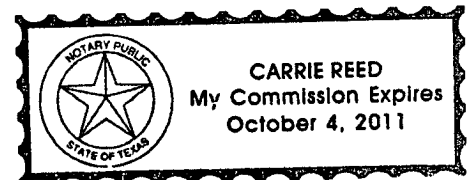
Field: Jicarrilla
Site: Rio Arriba County, NM
Well: Jicarilla 152 W #4N
Wellpath: DH - Job #33D1008259
Survey: 11/05/08-11/12/08

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

.....*L. Wharton*..... Company Representative

Notorized this date 11th of January, 2009.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: ENERGEN RESOURCES	Date: 01/16/2009	Time: 10:30:42	Page: 1
Field: Jicarilla	Co-ordinate(NE) Reference:	Site: Rio Arriba County, NM, Grid North	
Site: Rio Arriba County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Jicarilla 152 W #4N	Section (VS) Reference:	Well (0.00N,0.00E,337.60Azi)	
Wellpath: DH - Job #33D1008259	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 11/05/08-11/12/08	Start Date: 11/05/2008
E-field 0'-4675'	
Company: Scientific Drilling Internatio	Engineer: Webb/Drake/Fisher/Lanier
Tool: E-field;E-field	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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
550.00	0.53	159.47	549.99	-2.54	-2.38	0.89	0.10	2.54	159.47
672.00	0.85	119.67	671.98	-3.82	-3.36	1.88	0.46	3.85	150.81
733.00	0.71	124.12	732.98	-4.49	-3.79	2.58	0.25	4.59	145.76
764.00	0.92	117.87	763.97	-4.84	-4.02	2.96	0.73	4.99	143.61
795.00	0.72	81.78	794.97	-5.08	-4.11	3.37	1.75	5.32	140.60
825.00	0.91	3.14	824.97	-4.91	-3.84	3.57	3.48	5.25	137.07
856.00	2.03	349.98	855.96	-4.16	-3.06	3.49	3.75	4.64	131.19
886.00	3.25	342.31	885.93	-2.79	-1.72	3.14	4.22	3.58	118.74
916.00	4.60	344.18	915.86	-0.75	0.25	2.55	4.52	2.57	84.51
946.00	5.94	349.07	945.73	1.97	2.93	1.93	4.71	3.51	33.43
977.00	7.71	351.12	976.51	5.56	6.56	1.31	5.76	6.69	11.27
1007.00	9.51	350.82	1006.17	9.93	10.99	0.60	6.00	11.01	3.13
1038.00	11.21	351.30	1036.66	15.35	16.50	-0.26	5.49	16.50	359.08
1069.00	12.78	350.28	1066.98	21.63	22.86	-1.30	5.11	22.89	356.75
1099.00	14.24	349.74	1096.15	28.47	29.76	-2.52	4.88	29.87	355.17
1130.00	14.96	349.82	1126.15	36.11	37.45	-3.90	2.32	37.65	354.05
1161.00	15.62	348.10	1156.05	44.13	45.47	-5.47	2.58	45.80	353.14
1191.00	16.18	346.68	1184.91	52.22	53.49	-7.27	2.27	53.98	352.26
1222.00	16.82	344.78	1214.63	60.94	62.02	-9.44	2.70	62.74	351.35
1252.00	17.10	343.15	1243.33	69.64	70.43	-11.86	1.84	71.42	350.44
1283.00	17.63	342.80	1272.91	78.85	79.28	-14.57	1.74	80.61	349.59
1314.00	18.15	340.29	1302.41	88.35	88.31	-17.58	3.00	90.04	348.74
1344.00	18.88	337.92	1330.86	97.87	97.21	-20.98	3.49	99.44	347.82
1375.00	19.33	336.39	1360.15	108.01	106.55	-24.92	2.17	109.43	346.84
1405.00	19.82	336.46	1388.42	118.06	115.77	-28.94	1.64	119.33	345.96
1436.00	19.93	336.74	1417.57	128.60	125.44	-33.13	0.47	129.74	345.21
1467.00	20.28	336.98	1446.68	139.25	135.24	-37.32	1.16	140.29	344.57
1498.00	20.48	337.29	1475.74	150.05	145.18	-41.51	0.73	151.00	344.04
1528.00	20.08	335.85	1503.88	160.44	154.73	-45.64	2.13	161.32	343.56
1560.00	20.07	335.09	1533.94	171.42	164.72	-50.20	0.82	172.20	343.05
1592.00	19.51	334.01	1564.05	182.24	174.50	-54.86	2.09	182.92	342.55
1624.00	19.21	333.60	1594.24	192.82	184.02	-59.54	1.03	193.41	342.07
1655.00	18.92	334.43	1623.54	202.93	193.12	-63.98	1.28	203.44	341.67
1687.00	18.54	334.40	1653.85	213.19	202.39	-68.41	1.19	213.64	341.32
1719.00	18.02	334.94	1684.23	223.21	211.46	-72.71	1.71	223.61	341.02
1751.00	17.59	335.18	1714.70	232.99	220.33	-76.84	1.36	233.35	340.78
1783.00	17.19	335.63	1745.24	242.55	229.03	-80.82	1.32	242.87	340.56
1815.00	16.54	335.87	1775.86	251.82	237.49	-84.63	2.04	252.12	340.39
1847.00	16.16	336.70	1806.57	260.83	245.74	-88.25	1.39	261.11	340.25
1879.00	15.89	337.23	1837.32	269.66	253.87	-91.71	0.96	269.93	340.14
1911.00	15.65	337.13	1868.12	278.36	261.89	-95.08	0.75	278.61	340.05
1942.00	15.26	336.85	1898.00	286.62	269.49	-98.31	1.28	286.86	339.96
1974.00	15.38	337.54	1928.86	295.07	277.28	-101.59	0.68	295.31	339.88
2005.00	15.12	336.69	1958.77	303.23	284.80	-104.76	1.11	303.45	339.80
2037.00	14.57	335.33	1989.70	311.42	292.29	-108.09	2.03	311.63	339.71
2069.00	14.37	335.13	2020.68	319.41	299.55	-111.44	0.64	319.60	339.59
2133.00	14.21	336.40	2082.70	335.20	313.95	-117.93	0.55	335.37	339.41
2227.00	14.30	336.97	2173.81	358.34	335.21	-127.09	0.18	358.49	339.24



Scientific Drilling International

Survey Report

Company: ENERGEN RESOURCES	Date: 01/16/2009	Time: 10:30:42	Page: 2
Field: Jicarilla	Co-ordinate(NE) Reference:	Site: Rio Arriba County, NM, Grid North	
Site: Rio Arriba County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Jicarilla 152 W #4N	Section (VS) Reference:	Well (0.00N,0.00E,337.60Azi)	
Wellpath: DH - Job #33D1008259	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
2291.00	14.30	338.86	2235.83	374.15	349.85	-133.03	0.73	374.29	339.18
2387.00	14.87	336.49	2328.73	398.32	372.21	-142.22	0.86	398.45	339.09
2449.00	14.90	336.63	2388.65	414.24	386.82	-148.55	0.08	414.36	338.99
2512.00	14.84	337.25	2449.54	430.41	401.69	-154.89	0.27	430.52	338.91
2576.00	15.22	338.11	2511.35	447.00	417.05	-161.19	0.69	447.11	338.87
2640.00	15.27	335.85	2573.10	463.83	432.53	-167.77	0.93	463.93	338.80
2704.00	15.51	336.80	2634.81	480.81	448.09	-174.59	0.54	480.90	338.71
2767.00	16.09	336.97	2695.43	497.96	463.87	-181.32	0.92	498.04	338.65
2831.00	16.36	337.41	2756.88	515.84	480.35	-188.25	0.46	515.92	338.60
2895.00	16.12	338.13	2818.32	533.74	496.92	-195.03	0.49	533.82	338.57
2958.00	15.77	336.33	2878.90	551.05	512.87	-201.72	0.96	551.12	338.53
3022.00	15.55	333.96	2940.53	568.30	528.55	-208.98	1.06	568.36	338.43
3053.00	15.20	332.62	2970.42	576.50	535.89	-212.67	1.61	576.55	338.35
3085.00	14.94	331.95	3001.32	584.78	543.25	-216.54	0.98	584.82	338.27
3117.00	14.66	331.38	3032.25	592.91	550.45	-220.42	0.99	592.94	338.18
3181.00	14.32	331.56	3094.22	608.83	564.52	-228.07	0.54	608.85	338.00
3213.00	14.35	331.74	3125.22	616.71	571.49	-231.83	0.17	616.72	337.92
3245.00	14.38	331.81	3156.22	624.61	578.49	-235.58	0.11	624.62	337.84
3276.00	14.52	332.30	3186.24	632.31	585.32	-239.21	0.60	632.31	337.77
3308.00	14.95	333.65	3217.19	640.42	592.57	-242.91	1.72	640.42	337.71
3340.00	15.08	334.62	3248.10	648.70	600.03	-246.52	0.88	648.70	337.66
3435.00	14.98	334.91	3339.85	673.30	622.31	-257.03	0.13	673.30	337.56
3467.00	14.84	334.99	3370.77	681.53	629.77	-260.51	0.44	681.53	337.53
3563.00	14.69	335.57	3463.60	705.97	652.00	-270.74	0.22	705.98	337.45
3659.00	13.93	335.93	3556.62	729.69	673.63	-280.49	0.80	729.69	337.39
3723.00	13.03	336.82	3618.86	744.60	687.30	-286.47	1.44	744.61	337.37
3786.00	12.30	336.21	3680.32	758.41	699.97	-291.98	1.18	758.42	337.36
3818.00	12.08	336.74	3711.60	765.17	706.16	-294.67	0.77	765.18	337.35
3850.00	12.46	337.31	3742.87	771.97	712.42	-297.33	1.25	771.98	337.35
3881.00	13.28	338.27	3773.09	778.87	718.82	-299.94	2.73	778.88	337.35
3914.00	13.42	338.37	3805.20	786.49	725.90	-302.75	0.43	786.50	337.36
3945.00	13.57	338.77	3835.34	793.73	732.63	-305.39	0.57	793.73	337.37
3978.00	13.86	339.21	3867.40	801.55	739.93	-308.20	0.93	801.55	337.39
4010.00	14.20	339.26	3898.45	809.30	747.19	-310.95	1.06	809.31	337.40
4042.00	14.48	336.98	3929.45	817.23	754.54	-313.90	1.97	817.23	337.41
4073.00	14.65	338.32	3959.45	825.02	761.75	-316.87	1.22	825.03	337.41
4104.00	14.94	338.79	3989.43	832.94	769.12	-319.76	1.01	832.94	337.42
4136.00	15.36	339.13	4020.31	841.30	776.92	-322.76	1.34	841.30	337.44
4168.00	15.62	339.73	4051.15	849.84	784.93	-325.76	0.95	849.84	337.46
4199.00	16.31	341.59	4080.96	858.35	792.97	-328.59	2.77	858.35	337.49
4231.00	16.88	342.06	4111.62	867.47	801.65	-331.44	1.83	867.47	337.54
4263.00	16.93	342.38	4142.24	876.74	810.52	-334.28	0.33	876.74	337.59
4295.00	17.16	342.46	4172.84	886.09	819.46	-337.11	0.72	886.09	337.64
4326.00	17.07	342.27	4202.46	895.18	828.15	-339.87	0.34	895.18	337.69
4358.00	16.84	342.72	4233.07	904.48	837.05	-342.68	0.83	904.48	337.74
4390.00	16.47	342.32	4263.73	913.62	845.80	-345.44	1.21	913.62	337.78
4422.00	15.70	340.69	4294.48	922.46	854.21	-348.24	2.79	922.47	337.82
4453.00	14.68	339.23	4324.39	930.57	861.84	-351.02	3.51	930.58	337.84
4485.00	12.96	337.27	4355.47	938.22	868.94	-353.85	5.57	938.22	337.84
4516.00	11.81	335.00	4385.74	944.86	875.02	-356.53	4.03	944.87	337.83
4548.00	10.89	335.43	4417.12	951.15	880.74	-359.17	2.89	951.16	337.81
4580.00	9.63	337.69	4448.61	956.85	885.96	-361.45	4.13	956.86	337.81



Scientific Drilling International Survey Report

Company: ENERGEN RESOURCES
Field: Jicarilla
Site: Rio Arriba County, NM
Well: Jicarilla 152 W #4N
Wellpath: DH - Job #33D1008259

Date: 01/16/2009 Time: 10:30:42 Page: 3
Co-ordinate(NE) Reference: Site: Rio Arriba County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,337.60Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

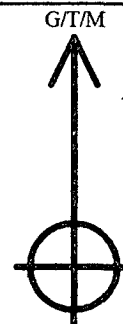
MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4612.00	8.50	340.17	4480.21	961.89	890.67	-363.27	3.74	961.90	337.81
4644.00	7.31	343.03	4511.90	966.28	894.84	-364.66	3.92	966.29	337.83
4675.00	5.76	347.81	4542.70	969.77	898.24	-365.57	5.29	969.78	337.85

TD is 7847'



**Scientific
Drilling**

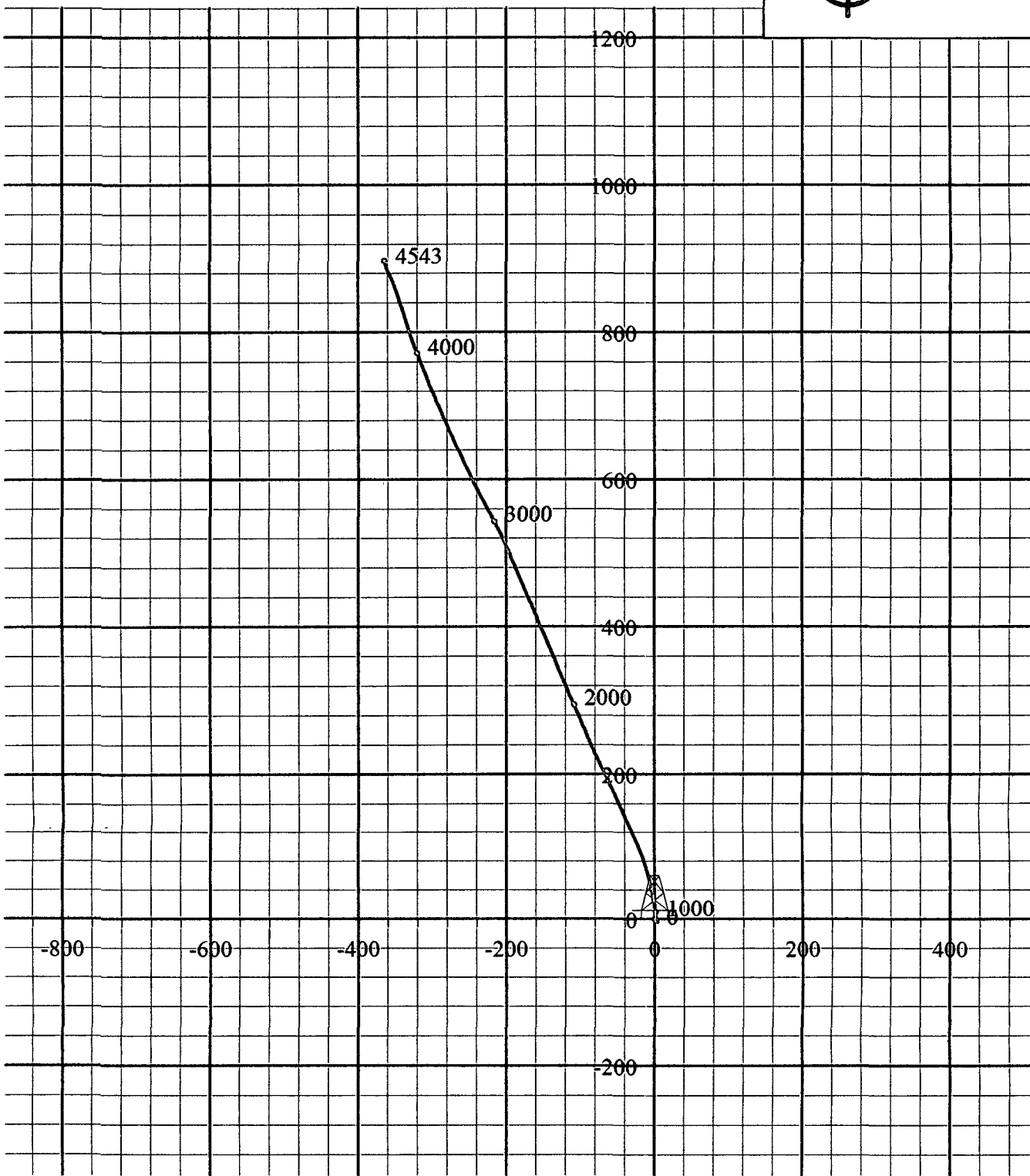
Field: Jicarrilla
Site: Rio Arriba County, NM
Well: Jicarilla 152 W #4N
Wellpath: DH - Job #33D1008259
Survey: 11/05/08-11/12/08



Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 12/01/2008
Model: igr2000

South(-)/North(+) [200ft/in]



West(-)/East(+) [200ft/in]