

Results of Directional Survey

30-025-37018-02

SAGE ENERGY CO
NORTH VACUUM ABO NORTH UNIT # 123

	MD	N/S	E/W	VD
	8734	-40.51	-38.97	8733.15
TOP PERFS/OH	8742	-42.97	-35.13	8741.04
	8746	-44.20	-33.21	8744.99
	10455	-1131.18	1204.76	8883.71
BOT PERFS/OH	10502	-1162.98	1239.35	8882.80
	10502	-1162.98	1239.35	8882.80

NEXT TO LAST	10455	-1131.18	1204.76	8883.71
LAST READING	10502	-1162.98	1239.35	8882.80
TD	10502	-1162.98	1239.35	8882.80

Surface Location	608	FS	1777	FE
Projected BHL	555	FN	538	FE
Location of				
Top Perfs/OH	565	FS	1812	FE
Bottom Perfs/OH	555	FN	538	FE

SUMMARY of Subsurface Locations

Surface Location	O-36-16S-34E	608	FS	1777	FE	Vert. Depth
Top Perfs/OH	O-36-16S-34E	565	FS	1812	FE	8741.04
Bottom Perfs/OH	A-01-17S-34E	555	FN	538	FE	8882.80
Projected TD	A-01-17S-34E	555	FN	538	FE	8882.80

STRATA DIRECTIONAL TECHNOLOGY, INC.

SURVEY SHEET

Calculation Method - MINIMUM CURVATURE

CURRENT TARGET: 8854 KBTVD

START: 03-Jun-05

CURRENT DIP: 1.28° Dn Dip

FINISH: 11-Jun-05

COMPANY NAME : Sage Energy Company

JOB No.: MJ05206

WELL NAME & No.: NVANU # 123 Sdk # 2 COUNTY: Lea County, NM

V.S. AZ.= 133.27

KBTVD= 8854.0 +N./-S.= -1233.79
@ "0" V.S.

T. INC= 88.72 +E./-W.= 1310.64 ENTER TRGT. +HI/-LO=

SUR: O-36-16s-34e, 608/S & 1777/E

BHL: A-01-17s-34e, 555/N & 538/E

API # 30-025-37018

HORIZONTAL POSITIONING ONLY

NO.	MD	INC	AZM	TVD	VS	+N/-S	+E/-W	DGLG	TEMP	BURN	+RT/-LT	AZM>TAR	HD>TAR	+HI/-LO	KBTVD	BUR	PINC	PAZM
TIE-IN	8644	1.43	215.13	8643.19	0.61	-39.76	-36.59	0.00		25.9	54.0	131.6	1800.2	210.8	8643.2		@ BIT	@ BIT
Multi Shot MWD	8746	6.00	129.50	8744.99	6.12	-44.20	-33.21	5.94		45.9	54.9	131.5	1794.7	109.1	8744.9	4.5	8.1	90.0
2	8756	10.10	117.40	8754.89	7.48	-44.93	-32.02	44.14		46.3	54.7	131.5	1793.4	99.3	8754.7	41.0	29.4	60.5
3	8766	15.30	111.20	8764.64	9.55	-45.81	-30.01	53.68		45.7	53.9	131.5	1791.3	89.6	8764.4	52.0	39.7	82.1
4	8776	21.50	108.80	8774.13	12.44	-46.88	-27.05	62.45		43.8	52.7	131.6	1788.3	80.2	8773.8	62.0	50.6	97.5
5	8786	25.10	112.40	8783.31	16.09	-48.28	-23.35	38.70		44.8	51.2	131.6	1784.6	71.0	8783.0	36.0	42.0	129.3
6	8796	29.70	119.70	8792.19	20.49	-50.32	-19.23	56.89		44.7	49.8	131.7	1780.2	62.3	8791.7	46.0	51.3	154.0
7	8806	35.40	121.30	8800.61	25.73	-53.05	-14.60	57.64		42.8	48.6	131.7	1774.9	54.0	8800.0	57.0	62.2	128.8
8	8814	40.40	121.70	8806.92	30.54	-55.62	-10.41	62.58		40.2	47.6	131.7	1770.1	47.8	8806.2	62.5	69.8	124.1
9	8824	45.80	122.10	8814.22	37.24	-59.23	-4.62	54.07		37.8	46.3	131.8	1763.4	40.6	8813.4	54.0	71.2	124.0
10	8834	51.10	122.80	8820.85	44.59	-63.25	1.70	53.26		34.9	44.9	131.8	1756.0	34.1	8819.9	53.0	76.0	126.1
11	8845	58.50	123.30	8827.19	53.43	-68.15	9.22	67.38		27.8	43.3	131.8	1747.1	28.0	8826.0	67.3	90.1	125.4
12	8855	63.20	123.40	8832.06	62.03	-72.95	16.52	47.01		24.0	41.8	131.9	1738.5	23.3	8830.7	47.0	85.3	123.9
13	8865	66.00	123.30	8836.35	70.93	-77.91	24.06	28.02		23.1	40.2	131.9	1729.5	19.2	8834.8	28.0	79.2	122.8
14	8875	67.80	123.50	8840.27	79.99	-82.98	31.74	18.09		24.3	38.7	132.0	1720.5	15.5	8838.5	18.0	76.3	124.4
15	8885	69.40	123.60	8843.92	89.16	-88.12	39.50	16.03		26.7	37.1	132.0	1711.2	12.1	8841.9	16.0	76.9	124.1
16	8895	70.90	123.80	8847.32	98.44	-93.34	47.33	15.12		31.0	35.5	132.1	1701.9	8.9	8845.1	15.0	77.9	124.7
17	8905	72.50	124.10	8850.46	107.81	-98.64	55.20	16.25		38.3	34.0	132.1	1692.5	6.0	8848.0	16.0	80.0	125.5
18	8915	74.70	124.40	8853.28	117.28	-104.04	63.13	22.19		51.1	32.5	132.2	1683.0	3.3	8850.7	22.0	85.0	125.8
19	8925	76.60	124.70	8855.76	126.86	-109.54	71.11	19.22		118.6	31.0	132.2	1673.4	1.1	8852.9	19.0	85.5	126.1
20	8935	78.00	125.00	8857.96	136.51	-115.11	79.11	14.30		-110.4	29.6	132.3	1663.8	-0.9	8854.9	14.0	84.6	126.4
21	8945	79.80	125.40	8859.88	146.22	-120.77	87.13	18.42		-26.5	28.2	132.3	1654.0	-2.6	8856.6	18.0	88.3	127.3
22	8955	81.30	125.90	8861.52	156.00	-126.52	95.15	15.79		-11.9	26.9	132.3	1644.2	-4.0	8858.0	15.0	88.3	128.3
23	8971	82.40	126.50	8863.79	171.72	-135.87	107.93	7.81		-5.8	25.0	132.4	1628.5	-6.0	8860.0	6.9	85.6	128.3
Halliburton MWD	9006	81.30	131.67	8868.76	206.26	-157.70	134.81	14.96	137 °F	-4.7	22.4	132.5	1593.9	-10.1	8864.1	-3.1	79.8	138.6
25	9038	85.15	136.56	8872.53	238.01	-179.82	157.61	19.36	141 °F	-0.8	22.9	132.4	1562.2	-13.2	8867.2	12.0	90.8	143.7
26	9069	92.38	137.94	8873.20	268.91	-202.56	178.63	23.74	142 °F	-0.9	25.0	132.3	1531.3	-13.2	8867.2	23.3	103.3	140.0
27	9100	94.20	138.07	8871.42	299.75	-225.56	199.34	5.89	142 °F	-2.4	27.6	132.2	1500.5	-10.7	8864.7	5.9	97.0	138.3
28	9132	93.91	137.65	8869.16	331.57	-249.23	220.76	1.59	142 °F	-3.0	30.2	132.1	1468.7	-7.8	8861.8	-0.9	93.5	137.0
29	9163	92.41	136.82	8867.45	362.45	-271.95	241.77	5.53	142 °F	-2.2	32.3	132.0	1437.9	-5.4	8859.4	-4.8	90.1	135.6



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SURVEY SHEET

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FINISH: 11-Jun-05

COMPANY NAME : Sage Energy Company

JOB No.: MJ05206

WELL NAME & No.: NVANU # 123 Sdk # 2 COUNTY: Lea County, NM

V.S. AZ.= 133.27

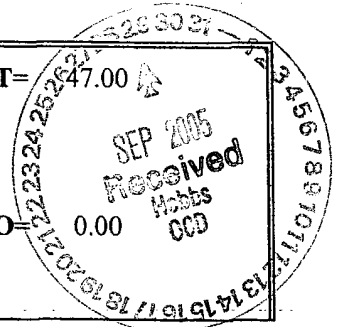
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@ "0" V.S.

PROJ. TO BIT= 47.00

T. INC= 88.72 +E./-W.= 1310.64 ENTER TRGT. +HI/-LO= 0.00

HORIZONTAL POSITIONING ONLY

NO.	MD	INC	AZM	TVD	VS	+N/-S	+E/-W	DGLG	TEMP	BURN	+RT/-LT	AZM>TAR	HD>TAR	+HI/-LO	KBTVD	BUR	PINC	PAZM
30	9194	92.44	137.40	8866.14	393.35	-294.64	262.85	1.87	142 °F	-3.6	34.4	131.9	1407.1	-3.3	8857.3	0.1	92.5	138.3
31	9226	89.54	135.90	8865.59	425.29	-317.91	284.81	10.20	142 °F	-0.3	36.3	131.8	1375.2	-2.1	8856.1	-9.1	85.3	133.7
32	9258	89.26	135.27	8865.92	457.26	-340.76	307.21	2.16	142 °F	-0.1	37.5	131.7	1343.3	-1.7	8855.7	-0.9	88.8	134.3
33	9321	89.11	135.40	8866.82	520.21	-385.56	351.49	0.32	142 °F	-0.1	39.8	131.5	1280.4	-1.2	8855.2	-0.2	89.0	135.5
34	9384	90.13	132.75	8867.23	583.20	-429.38	396.74	4.51	142 °F	-8.5	40.7	131.4	1217.5	-0.2	8854.2	1.6	90.9	130.8
35	9447	88.89	132.16	8867.77	646.19	-471.91	443.22	2.18	142 °F	0.0	39.8	131.3	1154.5	0.7	8853.3	-2.0	88.0	131.7
36	9479	89.84	132.18	8868.13	678.18	-493.39	466.94	2.97	146 °F	1.1	39.2	131.3	1122.5	1.0	8853.0	3.0	91.2	132.2
37	9511	91.11	132.02	8867.86	710.17	-514.84	490.68	4.00	142 °F	2.5	38.5	131.2	1090.5	2.0	8852.0	4.0	93.0	131.8
38	9542	89.53	131.49	8867.69	741.16	-535.48	513.81	5.38	146 °F	0.2	37.7	131.2	1059.5	2.9	8851.1	-5.1	87.1	130.7
39	9573	86.51	130.66	8868.76	772.11	-555.84	537.16	10.10	145 °F	1.7	36.5	131.2	1028.5	2.5	8851.5	-9.7	81.9	129.4
40	9605	86.20	130.44	8870.79	804.01	-576.60	561.42	1.19	142 °F	4.7	35.0	131.3	996.6	1.2	8852.8	-1.0	85.7	130.1
41	9637	91.89	130.82	8871.33	835.96	-597.42	585.70	17.82	142 °F	6.5	33.5	131.3	964.6	1.4	8852.6	17.8	100.2	131.4
42	9668	90.62	130.13	8870.65	866.91	-617.54	609.27	4.66	146 °F	1.2	32.0	131.3	933.6	2.7	8851.3	-4.1	88.7	129.1
43	9700	90.00	129.95	8870.48	898.86	-638.13	633.77	2.02	146 °F	0.4	30.2	131.3	901.6	3.6	8850.4	-1.9	89.1	129.7
44	9731	87.72	129.01	8871.09	929.79	-657.83	657.69	7.96	142 °F	0.2	28.2	131.4	870.7	3.7	8850.3	-7.4	84.3	127.6
45	9763	87.38	128.76	8872.46	961.66	-677.90	682.58	1.32	142 °F	0.5	25.7	131.5	838.7	3.0	8851.0	-1.1	86.9	128.4
46	9794	90.96	129.13	8872.91	992.57	-697.38	706.68	11.61	142 °F	1.3	23.4	131.6	807.8	3.3	8850.7	11.5	96.4	129.7
47	9826	89.53	129.39	8872.77	1024.49	-717.63	731.46	4.54	142 °F	0.1	21.2	131.7	775.8	4.1	8849.9	-4.5	87.4	129.8
48	9857	88.39	128.68	8873.34	1055.40	-737.15	755.53	4.33	142 °F	0.0	18.9	131.8	744.8	4.2	8849.8	-3.7	86.7	127.6
49	9889	87.53	128.70	8874.47	1087.28	-757.14	780.49	2.69	142 °F	0.3	16.3	132.0	712.9	3.8	8850.2	-2.7	86.3	128.7
50	9921	90.89	131.12	8874.92	1119.21	-777.67	805.03	12.94	142 °F	1.0	14.4	132.1	680.9	4.1	8849.9	10.5	95.8	134.7
51	9952	88.32	129.28	8875.13	1150.16	-797.67	828.70	10.20	142 °F	0.0	12.8	132.1	650.0	4.6	8849.4	-8.3	84.4	126.5
52	10015	89.91	130.80	8876.10	1213.05	-838.19	876.93	3.49	142 °F	0.2	9.2	132.4	587.0	5.0	8849.0	2.5	91.1	131.9
53	10078	88.92	130.78	8876.75	1275.99	-879.35	924.62	1.57	146 °F	0.0	6.5	132.6	524.1	5.8	8848.2	-1.6	88.2	130.8
54	10141	88.51	130.57	8878.16	1338.91	-920.40	972.39	0.73	142 °F	0.0	3.7	132.8	461.1	5.8	8848.2	-0.7	88.2	130.4
55	10204	92.88	132.07	8877.39	1401.85	-961.98	1019.69	7.33	142 °F	1.9	1.5	133.1	398.2	7.9	8846.1	6.9	96.1	133.2
56	10235	91.98	131.88	8876.08	1432.81	-982.70	1042.72	2.97	142 °F	0.9	0.8	133.1	367.2	9.9	8844.1	-2.9	90.6	131.6
57	10266	88.72	132.78	8875.89	1463.80	-1003.57	1065.63	10.91	142 °F	0.0	0.3	133.2	336.2	10.8	8843.2	-10.5	83.8	134.1
58	10329	86.38	132.46	8878.58	1526.74	-1046.19	1111.94	3.75	142 °F	0.5	-0.4	133.4	273.3	9.5	8844.5	-3.7	84.6	132.2
59	10392	86.59	132.44	8882.45	1589.61	-1088.63	1158.34	0.34	142 °F	0.6	-1.3	133.6	210.4	7.1	8846.9	0.3	86.7	132.4



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60	10455	91.11	132.59	8883.71	1652.58	-1131.18	1204.76	7.18	142 °F	0.7	-2.1	134.1	147.4	7.2	8846.8	7.2	94.5	132.7
Projected to TD	10502	91.11	132.59	8882.80	1699.56	-1162.98	1239.35	0.00		0.5	-2.7	134.8	100.5	9.2	8844.8	0.0	91.1	132.6

