

Results of Directional Survey

30-025-37018-01

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	-40.45	-39.31	8741.14
	8744	-40.43	-39.39	8743.14
	10108	1079.61	-670.27	8855.54
BOT PERFS/OH	10159	1124.81	-693.87	8856.46
	10159	1124.81	-693.87	8856.46

NEXT TO LAST	10108	1079.61	-670.27	8855.54
LAST READING	10159	1124.81	-693.87	8856.46
TD	10159	1124.81	-693.87	8856.46

Surface Location	608	FS	1777	FE
Projected BHL	1733	FS	2471	FE
Location of				
Top Perfs/OH	568	FS	1816	FE
Bottom Perfs/OH	1733	FS	2471	FE

SUMMARY of Subsurface Locations

Surface Location	O-36-16S-34E	608	FS	1777	FE	Vert. Depth
Top Perfs/OH	O-36-16S-34E	568	FS	1816	FE	8741.14
Bottom Perfs/OH	J-36-16S-34E	1733	FS	2471	FE	8856.46
Projected TD	J-36-16S-34E	1733	FS	2471	FE	8856.46

STRATA DIRECTIONAL TECHNOLOGY, INC.

SURVEY SHEET

Calculation Method - MINIMUM CURVATURE

CURRENT TARGET: 8862.9 KBTVD

START: 23-May-05

CURRENT DIP: .41 Up Dip

FINISH:

COMPANY NAME : Sage Energy Company

JOB No.: MJ05206

WELL NAME & No.: NVANU # 123

COUNTY: Lea County, NM

V.S. AZ.= 329.51

KBTVD= 8862.9 +N./-S.= 1551.09
@ "0" V.S.

SUR: O-36-16s-34e, 608/S & 1777/E
BHL: J-36-16s-34e, 1733/S & 2471/E
API # 30-025-37018

T. INC= 90.41 +E./-W.= -913.30 ENTER TRGT. +HI/-LO=

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	-15.70	-39.76	-36.59	0.00		25.6	-51.7	331.1	1816.4	219.8	8643.1		@ BIT	@ BIT
Multi-Shot MWD	8734	2.22	275.46	8733.15	-15.14	-40.51	-38.97	2.18		42.7	-54.1	331.2	1815.9	129.9	8733.0	0.9	2.2	275.5
2	8744	2.63	285.80	8743.14	-14.86	-40.43	-39.39	5.98		46.0	-54.5	331.2	1815.7	119.9	8743.0	4.1	2.6	285.8
3	8754	4.76	306.04	8753.12	-14.31	-40.13	-39.94	24.66		48.2	-54.8	331.2	1815.1	109.9	8753.0	21.3	4.8	306.0
4	8764	7.83	328.22	8763.06	-13.25	-39.30	-40.64	38.63		49.9	-55.0	331.2	1814.1	99.9	8763.0	30.7	7.8	328.2
5	8774	12.80	348.60	8772.90	-11.52	-37.64	-41.21	60.93		50.0	-54.6	331.2	1812.3	90.1	8772.8	49.7	12.8	348.6
6	8784	17.00	353.10	8782.56	-9.13	-35.10	-41.61	43.54		50.9	-53.7	331.2	1809.9	80.4	8782.5	42.0	17.0	353.1
7	8794	20.30	346.90	8792.04	-6.14	-31.95	-42.18	38.46		53.3	-52.6	331.2	1806.9	70.9	8792.0	33.0	20.3	346.9
8	8804	24.20	338.30	8801.29	-2.45	-28.36	-43.33	50.72		55.5	-51.7	331.2	1803.2	61.6	8801.3	39.0	24.2	338.3
9	8814	28.40	335.50	8810.26	1.94	-24.29	-45.07	43.78		57.8	-51.2	331.1	1798.8	52.6	8810.3	42.0	28.4	335.5
10	8824	33.40	336.00	8818.83	7.04	-19.61	-47.18	50.07		59.3	-50.6	331.1	1793.7	44.0	8818.9	50.0	33.4	336.0
11	8834	38.40	336.00	8826.93	12.87	-14.25	-49.57	50.00		61.4	-49.9	331.1	1787.8	35.9	8827.0	50.0	38.4	336.0
12	8844	43.30	335.50	8834.49	19.37	-8.29	-52.25	49.11		64.7	-49.2	331.1	1781.3	28.3	8834.6	49.0	43.3	335.5
13	8854	47.80	334.70	8841.49	26.47	-1.82	-55.26	45.36		71.3	-48.5	331.1	1774.2	21.2	8841.7	45.0	47.8	334.7
14	8864	52.60	334.00	8847.89	34.12	5.11	-58.59	48.30		81.5	-47.9	331.1	1766.5	14.8	8848.1	48.0	52.6	334.0
15	8874	57.90	333.30	8853.59	42.32	12.46	-62.23	53.31		99.7	-47.3	331.1	1758.3	9.0	8853.9	53.0	57.9	333.3
16	8882	61.50	332.70	8857.63	49.21	18.62	-65.37	45.46		145.1	-46.9	331.0	1751.4	4.9	8858.0	45.0	61.5	332.7
17	8892	65.70	331.90	8862.07	58.15	26.55	-69.53	42.61		1274.6	-46.4	331.0	1742.5	0.4	8862.5	42.0	65.7	331.9
18	8902	70.80	332.00	8865.78	67.43	34.74	-73.90	51.01		-98.9	-46.1	331.0	1733.2	-3.4	8866.3	51.0	70.8	332.0
19	8912	75.70	332.10	8868.66	76.99	43.20	-78.38	49.01		-29.8	-45.6	331.0	1723.6	-6.3	8869.2	49.0	75.7	332.1
20	8922	80.00	332.20	8870.76	86.76	51.84	-82.95	43.01		-11.1	-45.2	331.0	1713.8	-8.5	8871.4	43.0	80.0	332.2
21	8932	82.00	331.80	8872.33	96.62	60.56	-87.59	20.39		-6.1	-44.7	331.0	1704.0	-10.1	8873.0	20.0	82.0	331.8
22	8942	82.80	330.60	8873.65	106.53	69.24	-92.36	14.34	133 °F	-4.4	-44.5	331.0	1694.1	-11.5	8874.4	8.0	82.8	330.6
Halfburton MWD	8974	86.31	328.17	8876.69	138.38	96.65	-108.58	13.32	138 °F	-1.0	-44.5	331.0	1662.2	-14.8	8877.7	11.0	86.3	328.2
24	9006	92.84	327.21	8876.92	170.35	123.68	-125.68	20.63	138 °F	-0.3	-45.5	331.1	1630.3	-15.2	8878.1	20.4	92.8	327.2
25	9037	99.67	330.45	8873.55	201.14	150.03	-141.62	24.36	137 °F	-6.2	-45.9	331.2	1599.5	-12.1	8875.0	22.0	99.7	330.5
26	9068	98.30	327.90	8868.70	231.75	176.32	-157.31	9.25	137 °F	-7.3	-46.1	331.2	1568.9	-7.5	8870.4	-4.4	98.3	327.9
27	9099	94.15	328.79	8865.34	262.56	202.54	-173.48	13.69	137 °F	-2.8	-46.7	331.3	1538.2	-4.3	8867.2	-13.4	94.2	328.8
28	9131	91.54	329.30	8863.75	294.51	229.95	-189.92	8.31	137 °F	-0.4	-47.0	331.3	1506.2	-3.0	8865.9	-8.2	91.5	329.3
29	9162	89.16	328.28	8863.57	325.51	256.46	-205.98	8.35	139 °F	-0.5	-47.4	331.3	1475.3	-3.0	8865.9	-7.7	89.2	328.3

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PROJ. TO BIT=

T. INC= 90.41 +E./-W.= -913.30 ENTER TRGT. +HI/-LO=

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	9193	89.40	328.90	8863.96	356.50	282.92	-222.13	2.15	140 °F	-0.2	-47.9	331.4	1444.3	-3.6	8866.5	0.8	89.4	328.9
31	9225	91.14	329.05	8863.80	388.50	310.34	-238.62	5.46	142 °F	-0.1	-48.2	331.5	1412.3	-3.7	8866.6	5.4	91.1	329.1
32	9288	91.14	328.69	8862.55	451.48	364.25	-271.19	0.57	142 °F	-0.2	-48.9	331.6	1349.4	-2.9	8865.8	0.0	91.1	328.7
33	9352	89.88	328.24	8861.98	515.47	418.80	-304.66	2.09	142 °F	-0.1	-50.0	331.7	1285.5	-2.8	8865.7	-2.0	89.9	328.2
34	9383	89.94	328.03	8862.03	546.46	445.13	-321.02	0.71	142 °F	-0.1	-50.8	331.8	1254.6	-3.0	8865.9	0.2	89.9	328.0
35	9415	91.67	328.41	8861.58	578.44	472.33	-337.88	5.54	142 °F	-0.5	-51.5	331.9	1222.6	-2.8	8865.7	5.4	91.7	328.4
36	9446	92.33	328.91	8860.50	609.42	498.79	-353.99	2.67	146 °F	-1.6	-52.0	332.0	1191.7	-2.0	8864.9	2.1	92.3	328.9
37	9477	93.09	328.55	8859.03	640.38	525.25	-370.06	2.71	142 °F	-8.8	-52.4	332.1	1160.8	-0.7	8863.6	2.5	93.1	328.6
38	9509	93.29	328.88	8857.25	672.33	552.56	-386.65	1.21	142 °F	8.6	-52.8	332.2	1128.9	0.8	8862.1	0.6	93.3	328.9
39	9540	91.76	329.05	8855.89	703.30	579.09	-402.62	4.97	142 °F	0.8	-53.1	332.3	1098.0	2.0	8860.9	-4.9	91.8	329.1
40	9572	93.58	329.40	8854.40	735.26	606.56	-418.97	5.79	142 °F	2.7	-53.3	332.4	1066.1	3.2	8859.7	5.7	93.6	329.4
41	9604	93.92	333.41	8852.30	767.17	634.59	-434.25	12.55	142 °F	2.1	-52.2	332.4	1034.1	5.1	8857.8	1.1	93.9	333.4
42	9635	92.65	330.45	8850.53	798.09	661.89	-448.82	10.38	142 °F	0.7	-50.9	332.4	1003.2	6.7	8856.2	-4.1	92.7	330.5
43	9667	90.22	332.16	8849.72	830.06	689.95	-464.17	9.29	145 °F	0.0	-49.9	332.5	971.2	7.2	8855.7	-7.6	90.2	332.2
44	9698	90.29	332.84	8849.59	861.02	717.45	-478.49	2.21	145 °F	0.0	-48.3	332.5	940.2	7.2	8855.7	0.2	90.3	332.8
45	9730	90.48	332.09	8849.37	892.97	745.82	-493.28	2.42	145 °F	0.0	-46.6	332.5	908.2	7.1	8855.8	0.6	90.5	332.1
46	9761	87.01	332.91	8850.05	923.92	773.31	-507.59	11.50	145 °F	1.6	-45.0	332.5	877.2	6.2	8856.7	-11.2	87.0	332.9
47	9793	86.71	331.71	8851.80	955.83	801.60	-522.44	3.86	146 °F	2.8	-43.5	332.5	845.3	4.3	8858.6	-0.9	86.7	331.7
48	9824	85.62	332.03	8853.88	986.73	828.88	-537.02	3.66	146 °F	10.2	-42.2	332.5	814.4	2.0	8860.9	-3.5	85.6	332.0
49	9856	89.04	332.22	8855.37	1018.66	857.13	-551.96	10.70	146 °F	6.7	-40.7	332.5	782.4	0.2	8862.7	10.7	89.0	332.2
50	9888	89.81	331.80	8855.69	1050.63	885.38	-566.98	2.74	146 °F	-1.0	-39.3	332.5	750.4	-0.3	8863.2	2.4	89.8	331.8
51	9919	89.75	331.82	8855.81	1081.60	912.71	-581.62	0.21	146 °F	-0.6	-38.1	332.5	719.4	-0.6	8863.5	-0.2	89.8	331.8
52	9950	89.69	331.86	8855.96	1112.58	940.04	-596.25	0.23	146 °F	-0.4	-36.8	332.6	688.4	-1.0	8863.9	-0.2	89.7	331.9
53	9982	89.48	331.36	8856.19	1144.56	968.19	-611.47	1.70	146 °F	-0.5	-35.7	332.6	656.4	-1.5	8864.4	-0.7	89.5	331.4
54	10013	90.43	332.15	8856.21	1175.53	995.50	-626.14	3.99	146 °F	0.0	-34.5	332.7	625.4	-1.7	8864.6	3.1	90.4	332.2
55	10045	91.59	332.55	8855.65	1207.49	1023.84	-640.99	3.84	150 °F	-0.9	-32.9	332.7	593.4	-1.4	8864.3	3.6	91.6	332.6
56	10076	89.94	332.11	8855.24	1238.45	1051.29	-655.38	5.51	146 °F	-0.2	-31.3	332.7	562.4	-1.2	8864.1	-5.3	89.9	332.1
57	10108	88.97	332.43	8855.54	1270.41	1079.61	-670.27	3.19	150 °F	-1.0	-29.8	332.7	530.4	-1.7	8864.6	-3.0	89.0	332.4
Proj to T.D.	10159	88.97	332.43	8856.46	1321.33	1124.81	-693.87	0.00		-0.6	-27.2	332.8	479.4	-3.0	8865.9	0.0	89.0	332.4

