

**BAKER  
HUGHES**



**Baker Atlas**

FILE NO: \_\_\_\_\_ COMPANY: **SIERRA GEOTHERMAL POWER, INC.**  
 WELL: **ALUM 25-29**  
 API NO: \_\_\_\_\_ FIELD: **ALUM**  
 27-008-90074 COUNTY: **ESMERALDA** STATE: **NEVADA**

Ver. 3.07 LOCATION: \_\_\_\_\_  
 TIGHT HOLE SHL: 2235.18' FSL & 938.11' FNL  
 SEC 29 TWP 1N RGE 38.5 E  
 SW/C

PERMANENT DATUM G.L. \_\_\_\_\_ ELEVATION **4903.57 FT**  
 LOG MEASURED FROM K.B. \_\_\_\_\_ 18.0 FT ABOVE P.D.  
 DRILL MEAS. FROM K.B. \_\_\_\_\_

OTHER SERVICES  
 HDL \_\_\_\_\_  
 ZL/CL \_\_\_\_\_  
 STAR/DBL \_\_\_\_\_  
 TEMP \_\_\_\_\_  
 YRAC \_\_\_\_\_

ELEVATIONS:  
 KB **4919.57 FT**  
 DF \_\_\_\_\_  
 OL **4903.57 FT**

DATE	TRIP	25-NOV-2008	2
SERVICE ORDER		572896	
DEPTH DRILLER		3314 FT	
DEPTH LOGGER		3313 FT	
BOTTOM LOGGED INTERVAL		3301 FT	
TOP LOGGED INTERVAL		2100 FT	
CASING DRILLER		10.75 IN	Ø 2300 FT
CASING LOGGER		2280 FT	
BIT SIZE		9.875 IN	
TYPE OF FLUID IN HOLE		LSND	
DENSITY	VISCOSITY	8.8 LB/G	40 S
PH	FLUID LOSS	9.7	6 G3
SOURCE OF SAMPLE	FLUORINE		
RM AT MEAS. TEMP.		0.885 G/HM	Ø 67.72 DEGF
RMF AT MEAS. TEMP.		0.826 G/HM	Ø 87.54 DEGF
RMG AT MEAS. TEMP.		1.018 G/HM	Ø 88.90 DEGF
SOURCE OF RMF	MEASURED		MEASURED
RM AT BHT		0.286 G/HM	Ø 218 DEGF
TIME SINCE CIRCULATION		14.5 HOURS	
MAX. RECORDED TEMP.		216 DEGF	
EQUIP. NO.	LOCATION	M-4232	FALLON, NV
RECORDED BY		C. PEAVEY	
WITNESSED BY		J. HAMBLEN	

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE CUSTOMER THE BENEFIT OF THEIR BEST JUDGEMENT. BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COST, DAMAGES, OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

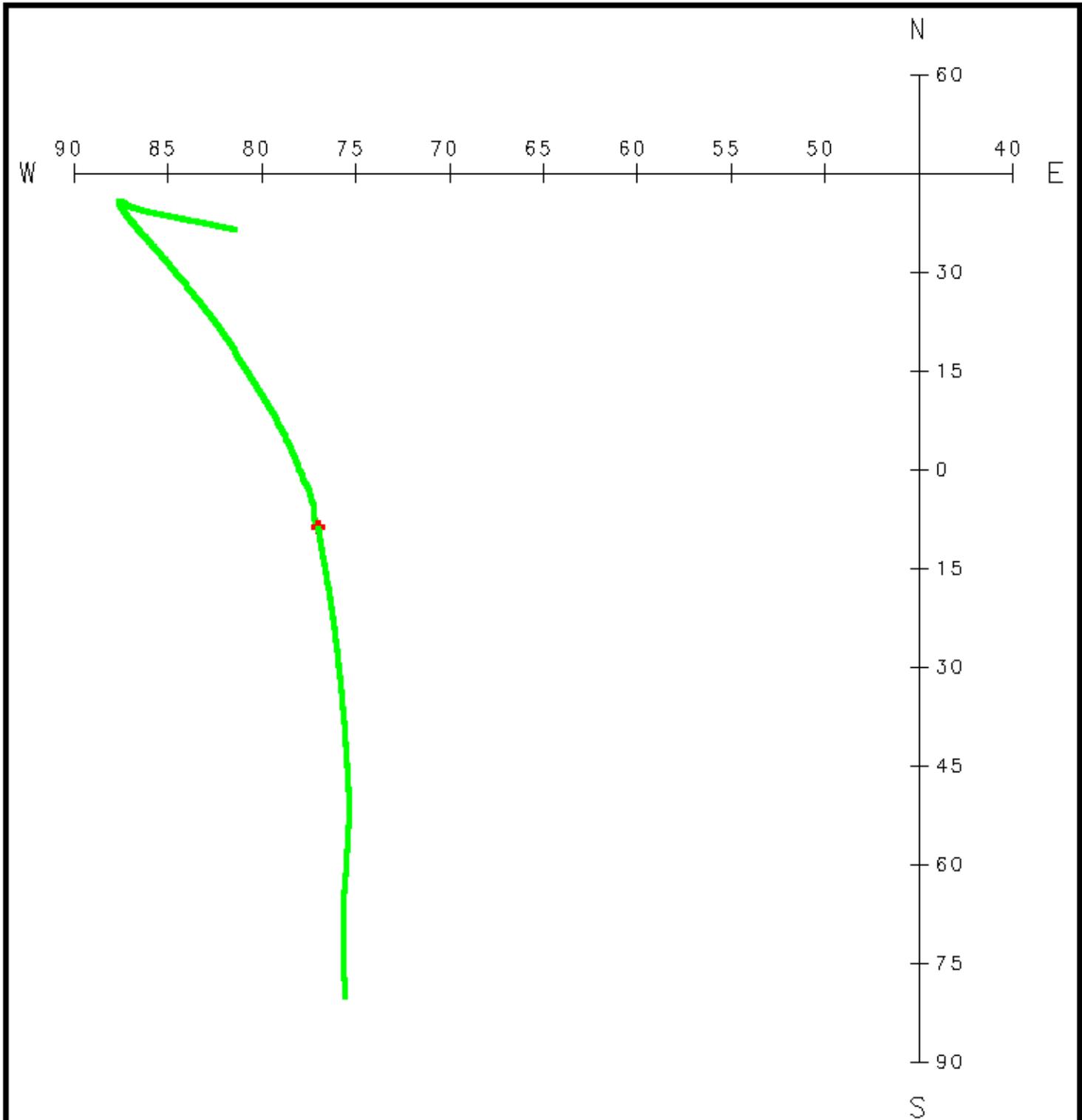
**REMARKS**

RUN 2 TRIP 2 : DIRECTIONAL DATA TIED IN WITH BAKER ATLAS RUN 1 DIRECTIONAL DATA AT:  
 MD: 2278.0' INCL: 3.0 TVD: 2275.60' N/S: 36.52 N E/W: 81.37 W  
 HOWEVER THIS POINT IS WELL WITHIN CASING, SO THE WELL BORE HAS TO BE ASSUMED TO BE VERTICAL FROM THERE TO THE ACTUAL TIE IN POINT THAT IS LOCATED IN OPEN HOLE. THEREFORE THE NEW TIE IN POINT FOR THE DIRECTIONAL SURVEY IS:  
 MD: 2325.0' INCL: 3.0 TVD: 2322.60' N/S: 36.52 N E/W: 81.37 W  
 MAGNETIC DECLINATION: 13.50 DEGREES

THANK YOU FOR CHOOSING BAKER ATLAS!  
 CREW: R. DANKLEFSEN AND J. HAYCOCK  
 RIG: ENSIGN 561

EQUIPMENT DATA						
RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION	
2	2	SNVL	3844KD	10165844		FREE
2	2	TRM	881XA	10217216		FREE
2	2	SRM	1514XB	10200358		FREE

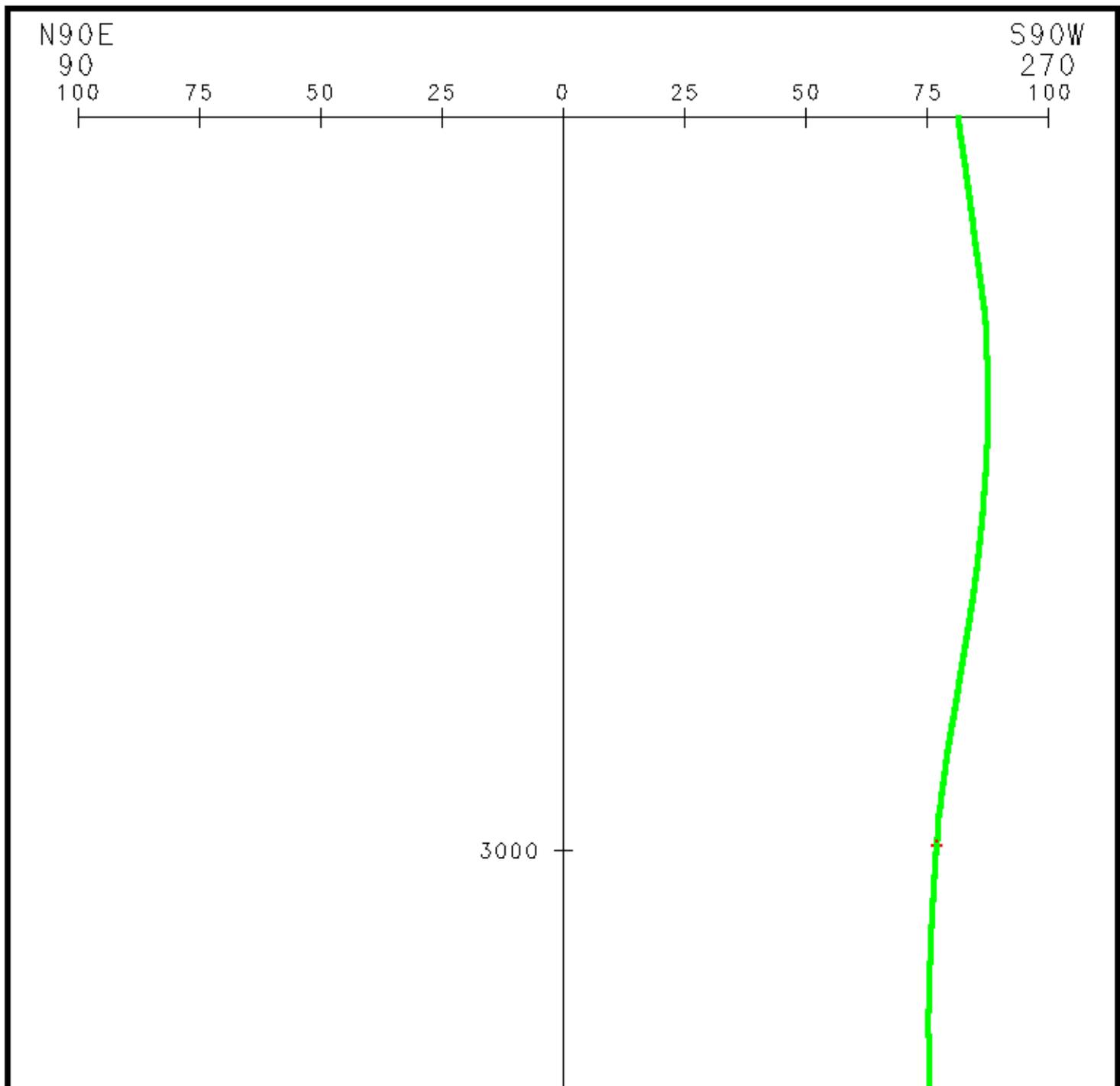
2	2	ISL	1320KA	10203000	FREE
2	2	HDL	1515EA/VA	10088826/10088832	STAND-OFF
2	2	CENT	4341XA	10211527	FREE
2	2	ORT	4401KB	10165246	CENTRALIZED
2	2	XMAC	1877EA/1878MC	10337374/370238	CENTRALIZED
2	2	ISD	1878PB	10213112	CENTRALIZED
2	2	XMAC XTR	1878EA/1878FA	370234/10188888	CENTRALIZED
2	2	CENT	4341XA	10162851	FREE



PLAN VIEW

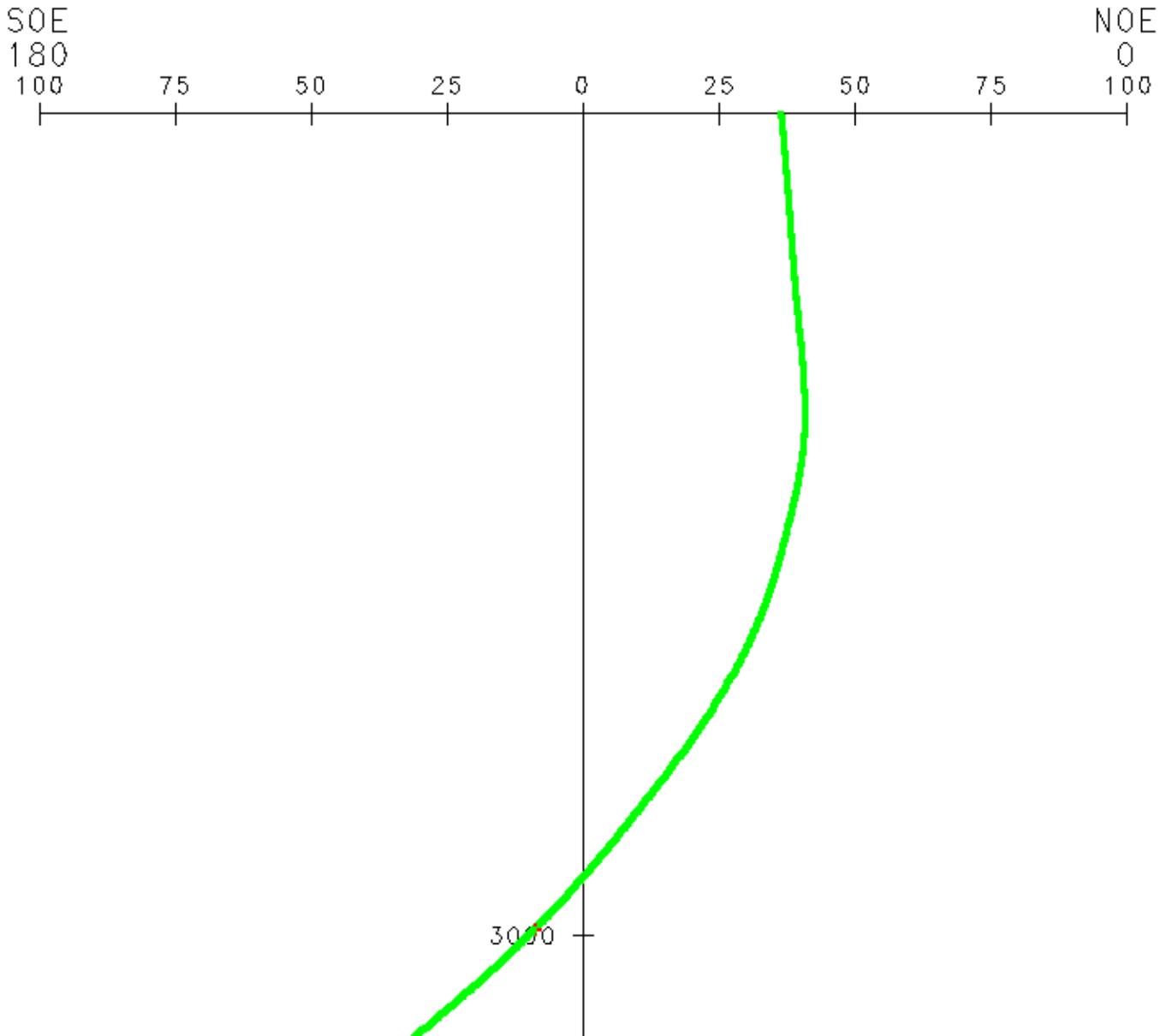
# PLAN VIEW

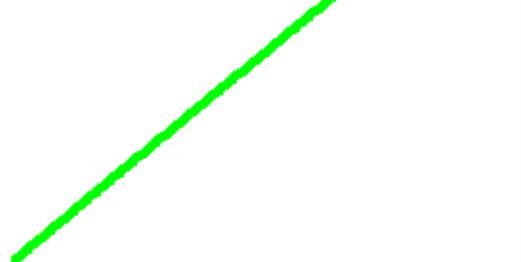
 : WELLBORE COURSE	FINAL EAST-WEST DRIFT	75.53 FT WEST
 : MEASURED DEPTH TIE-IN	FINAL NORTH-SOUTH DRIFT	80.05 FT SOUTH
 : WELLHEAD POSITION	FINAL DRIFT DISTANCE	110.06 FT
	FINAL DRIFT DIRECTION	S 43.34 W
	DRIFT UNITS	FEET
	DEPTH UNITS	FEET



# SIDE VIEW FROM AZIMUTH 0

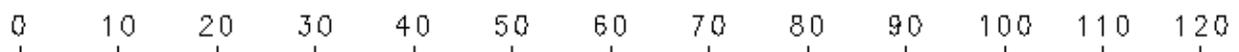
	: WELLBORE COURSE	MAX. DRIFT N90E	0.00 FT
	: MEASURED DEPTH TIE-IN	MAX. DRIFT S90W	87.54 FT
	: WELLHEAD POSITION	BOTTOM TVD THIS INTERVAL	3285.37 FT
		DRIFT UNITS	FEET
		DEPTH UNITS	FEET



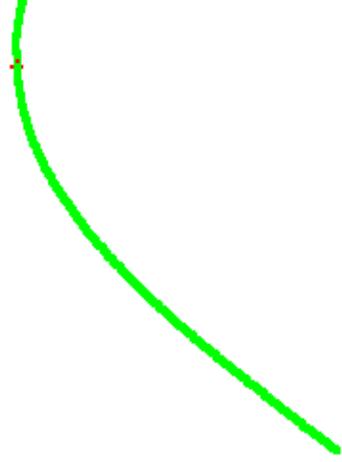


SIDE VIEW FROM AZIMUTH 90

↘	: WELLBORE COURSE	MAX. DRIFT SOE	80.05 FT
+	: MEASURED DEPTH TIE-IN	MAX. DRIFT NOE	40.85 FT
*	: WELLHEAD POSITION	BOTTOM TVD THIS INTERVAL	3285.37 FT
		DRIFT UNITS	FEET
		DEPTH UNITS	FEET



3000



### DEPTH VS. DRIFT

	: WELLBORE COURSE	MAX. DRIFT FROM WELLHEAD	110.06 FT
	: MEASURED DEPTH TIE-IN	BOTTOM TVD THIS INTERVAL	3285.37 FT
	: WELLHEAD POSITION	DRIFT UNITS	FEET
		DEPTH UNITS	FEET

SIERRA GEOTHERMAL POWER, INC.  
ALUM 25-29

DEPTH	DEVIATION		T.V.D.	DRIFT COORDINATES			
	ANGLE	AZIMUTH		STATION	TOTAL		
				N-S	E-W	N-S	E-W
2325.00	2.4	300.4	2322.60	36.52N	81.37W	36.52N	81.37W
2375.00	2.1	299.0	2372.58	0.99N	1.69W	37.51N	83.06W
2425.00	1.9	300.3	2422.53	0.86N	1.48W	38.37N	84.54W
2475.00	2.1	305.3	2472.50	0.86N	1.48W	39.24N	86.02W
2525.00	1.3	332.9	2522.47	1.13N	1.18W	40.37N	87.20W
2575.00	0.2	249.5	2572.47	0.48N	0.31W	40.85N	87.51W
2625.00	2.4	167.8	2622.45	1.10S	0.11E	39.76N	87.40W
2675.00	3.5	162.7	2672.38	2.58S	0.67E	37.17N	86.72W
2725.00	4.9	163.1	2722.28	3.27S	1.02E	35.90N	85.70W
2775.00	6.8	163.3	2772.01	4.83S	1.45E	29.07N	84.26W
2825.00	8.5	165.4	2821.54	6.55S	1.80E	22.52N	82.46W
2875.00	10.0	167.9	2870.87	7.94S	1.83E	14.58N	80.63W
2925.00	10.5	170.1	2920.08	8.67S	1.80E	5.91N	78.83W
2975.00	11.6	175.2	2969.16	9.45S	1.44E	3.53S	77.39W
3025.00	13.4	178.3	3017.96	10.83S	0.78E	14.36S	76.81W
3075.00	14.8	177.6	3066.45	12.18S	0.63E	26.54S	75.98W
3125.00	15.2	178.5	3114.72	13.01S	0.44E	39.55S	75.54W
3175.00	15.1	180.9	3162.98	13.08S	0.23E	52.63S	75.31W
3225.00	15.0	180.7	3211.27	12.98S	0.26W	65.61S	75.58W
3275.00	14.9	179.4	3259.58	12.90S	0.04E	78.51S	75.65W
3281.00	14.9	179.4	3265.37	1.54S	0.02E	80.05S	75.63W

## THE FIRST POINT INFORMATION:

2325.00 2.4 300.4 2322.60 36.52N 81.37W 36.52N 81.37W

## THE LAST POINT INFORMATION:

3281.00 14.9 179.4 3265.37 1.54S 0.02E 80.05S 75.63W

FINAL EAST-WEST DRIFT = 75.53 W  
 FINAL NORTH-SOUTH DRIFT = 80.05 S  
 FINAL DRIFT DISTANCE = 110.06 FT  
 FINAL DRIFT DIRECTION = S 43.34 W

 <b>BAKER HUGHES</b>	<b>COMPANY</b> <u>SIERRA GEOTHERMAL POWER, INC.</u>	<b>FILE NO:</b> _____
	<b>WELL</b> <u>ALUM 25-29</u>	<b>API NO:</b> _____
<b>FIELD</b> <u>ALUM</u>	<b>COUNTY</b> <u>ESMERALDA</u> <b>STATE</b> <u>NEVADA</u>	<b>27-009-90074</b>
<b>Baker Atlas</b> 	<b>LOCATION:</b> SHL: 2235.18' FSL & 938.11' FWL SW/C	<b>ELEVATIONS:</b> KB 4919.57 FT DF GL 4903.57 FT
<b>SEC</b> <u>29</u> <b>TWP</b> <u>1N</u> <b>RGE</b> <u>38.5 E</u>	<b>DATE</b> <u>25-NOV-2009</u>	<b>TIGHT HOLE</b>