Cementing Report

Geothermal Resource Group

Well ID: AK-3

Well Name: AK-3

Field: Hot Springs Bay Va Sect: 5 Town: 112W Rng: S005 County: Aleutians East State: AK

Cement Job Information

Start Date/Time:	24-Aug-16 19:30	**Well Bore:**	Original Well Bore
Job Type:	PRIMARY	**String OD (ins):**	5.500
Well Section:	SURF	**String Type:**	FULL
Cementing Co:	MAJOR	**Cementing Engineer:**	

Primary Job Detail

	Volume (bbls)	Pump Time	Rate (bbls/min)	Pressure (psi)
Conditioning Data:		30	1.0	30
Cement Data:	16.7	20	0.8	0
Displacement Data:	5.5	3	1.8	50
Calc. Displacement Vol:	5.5			

☐ **Reciprocate Pipe?** ☑ **Batch Mix?** ☑ **Bump Plug?** **Bump Pressure:** 800

Returns to Surface: FULL ☑ **Cement at Surface?** **Volume (bbls):** 0.5

Calc Top of Cement (ft): 0 **Excess (%):** 75.00 % **Avg. Hole Size (ins):** 7.500

Slurry Information

Type	Density	Yield	Sacks	Volume	Rate	Additives
LEAD	14.30	1	52	12.0	1.0	

Post Job Information

Liner Top Test (lbs/gal):		**Job Success?**	Yes
Actual Top of Cmt (ft):	0	**CBL Bond Quality:**	

Misc. Comments: Mixed 4.16 gallons per bag, Major cement tubs held less volume than estimated, cement wt. 14.3 ppg. as weighed from batch. Total returns to surface of cement. continued to top hole with additional cement until shrinkage subsided. volume in secondary cement report.