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:	29-Aug-16 15:30	**Well Bore:**	Original Well Bore
Job Type:	PRIMARY	**String OD (ins):**	4.500
Well Section:	PROD	**String Type:**	FULL
Cementing Co:	MAJOR	**Cementing Engineer:**	

Primary Job Detail

	Volume (bbls)	Pump Time	Rate (bbls/min)	Pressure (psi)
Conditioning Data:				
Cement Data:	5.0			
Displacement Data:	12.1			580
Calc. Displacement Vol:	12.1			

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

Returns to Surface: FULL ☐ **Cement at Surface?**

Calc Top of Cement (ft): 0 **Excess (%):** 50.00 % **Avg. Hole Size (ins):** 4.850

Slurry Information

Type	Density	Yield	Sacks	Volume	Rate	Additives
LEAD	13.50	4.16	28	5.0		Thermolite HT + 2 pints retarder

Post Job Information

Liner Top Test (lbs/gal):		**Job Success?**	No
Actual Top of Cmt (ft):		**CBL Bond Quality:**	

Misc. Comments: Mix 2 ea. 14 sack (ft3) slurries in mix tubs: 4.16 gallons /sack with 1 pint of retarder in each batch. Cement wt 13.5 ppg. Pump slurry into casing, install plug, pump down with 510 gallons of water. Pump pressure at displacement: 580 psi. Full returns during cement job, only saw cement colored water at return - no cement. Immediately flushed the annulus with 75 gallons of fresh water. Shut in pressure of annulus: 120 psi.