



GEO-HEAT CENTER

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KLDJ-5-55052-02: Task 1 – Graphical Plots of Herald & News Temperature Logs

The Geo-Heat Center conducted two temperature logs of the Herald & News new geothermal well. The first temperature log was done in November 2005 when the well was an exploratory test hole being drilled to explore for a usable geothermal resource. The second temperature log was done on the completed well in April 2006.

When the first temperature log was done (November 2005), the well was only cased to about 25 ft (to seal the well from surface runoff) and was approximately 417 ft deep. Since that time, the well was deepened to 442 ft, the casing was advanced to 198 ft, and a well yield test was conducted. The well yield test (January 2006) consisted of pumping the well at about 100 gpm for approximately 4 hours. The discharge groundwater temperature was measured at 212°F, and the water was flashing to steam in the well casing. The boiling point of water at Klamath Falls' elevation is about 204°F.

This well is anticipated to be the supply well for the geothermal system, but this decision is not final, pending observations made during injection well drilling. An injection well permit has been filed at the Oregon Water Resources Department, and the Herald & News should be notified of its acceptance or denial within the next few months.

The second temperature log of the well was done in April 2006, about three months after the well yield test. For comparison purposes, both temperature logs are plotted on the same graph (attached). As seen from the April 2006 log, the well looks excellent for direct-use heating purposes. Below about 375 ft, groundwater temperatures were measured at 206°F, exceeding the boiling point of water at this elevation. From the temperature logs, the static water level is about 75 ft below grade. The well driller estimated the static water level at about 80 ft deep and estimated the well yield at 300 gpm from an air-lift test.

Herald & News Geothermal Well Temperature Log

Depth	Test Well	Depth	Completed
	Temperature		Well
	11/14/2005		Temperature
(ft)	(°F)	(ft)	(°F)
0	60	0	65
50	74	50	71
75	134	75	134
100	143	100	150
125	144	125	155
150	146	150	161
175	146	175	166
200	146	200	175
225	148	225	179
250	148	250	186
275	150	275	189
300	150	300	193
325	152	325	197
350	152	350	200
375	153	375	206
400	155	400	206
417	193	425	206
		440	206

