

TEC-25

Union Geothermal Division

Union Oil Company of California

Union Oil Center, Box 7600, Los Angeles, California 90051

NJS8-180



June 18, 1978

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E & ME DIVISION

Mr. William H. Dolan
AMAX Exploration, Inc.
4707 Harlan Street
Denver, Colorado 80212

Dear Mr. Dolan:

In accordance with our geothermal unit agreement, please find enclosed final copies of the ten surveys conducted between May 9 and 19, 1978, in the Cove Fort-Sulphurdale Unit Well No. 42-7. These surveys are:

GO, differential temperature log, run 1	100'-6040'
GO, differential temperature log, run 2	1200'-6919'
GO, injection profile survey	3000'-6700'
Union, pressure/temperature survey (5/9/78)	0'-6030'
Union, temperature survey (5/17/78)	0'-6900'
Union, injection gradient and pressure fall-off survey (5/18/78)	0'-6000'
Union, pressure/temperature survey (5/19/78)	1000'-6000'

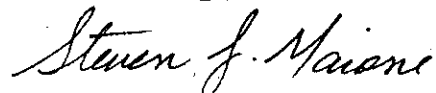
Prior to the flow test Union's survey on 5/9/78 and GO's temperature log, run 1, were conducted. A bridge was encountered at 6040'. A spinner tool was hung at several points in the well and no flow was detected.

Open ended coiled tubing was run into the well on 5/16/78 at ±50 feet/min, circulating nitrogen at 1500 cubic feet per minute. An obstruction was encountered at 591 feet. When an attempt was made to back off 50', the tubing parted and 591 feet was lost down hole. Coiled tubing was again run into the well with a 3" washing jet on the end to act as a guide shoe. The tubing was run at the same speed and nitrogen rate as above, past the bridge at 6040', until it tagged bottom at 7211'. Several attempts were made to get past 7211' but all were unsuccessful. The well was lifted on nitrogen assist

for six hours. At times, the well produced a small amount of black, sandy grit. Flow continued unassisted at a rate of $\pm 48,000$ lb/hr at 3 psig of wellhead pressure and decreased gradually over the next 7 hours to 43,000 lb/hr. The well was shut in at 7:00 A.M. on 5/17/78. Shortly after shut in a 3" valve was opened on the wellhead, a noncondensable gas head was bled off and the wellhead pressure dropped to 0 psi.

Twelve hours after shut in, GO's temperature log, run 2, and Union's temperature survey (5/17/78) were conducted. This was followed by injection of the produced water into the well for 17 hours at an average rate of 53,000 lb/hr on a vacuum. A spinner survey was run but the results were inconclusive. A radioactive tracer survey was run during injection. These data are found on GO's injection profile log. No tracer shots were made below 5800' due to temperature limitations on the tool. The injection flowing bottom hole pressure and pressure fall-off were measured with Kuster tools. A final temperature/pressure survey was conducted on May 19.

Yours truly,



Steven J. Maione

SJM/la
Enclosures