

# UURI

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January 10, 1979

## MEMORANDUM

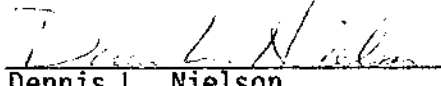
TO: Idaho Files

FROM: D. L. Nielson

SUBJECT: Rumored hot well near Gray's Lake and Big Elk Mtn.

Phillips Petroleum was contacted concerning a rumor of a hot Conoco well (400°F) near Gray's Lake in Idaho. Joe Beal of Phillips indicated that Conoco has a land position north of theirs on the west Shore of Gray's Lake. The well may have been permitted to American Quesar. *Elk Mtn. area*

In the same area, a Pan American Petroleum well on Big Elk Mtn. south of Palisades Reservoir (T2S, R44E, sec. 24) reported a maximum temperature of 288°F at 9722' 6 hours after circulation. This data is also somewhat suspect.

  
Dennis L. Nielson

DLN/smk

cc: Mike Wright  
Duncan Foley  
Debbie Struhsacker

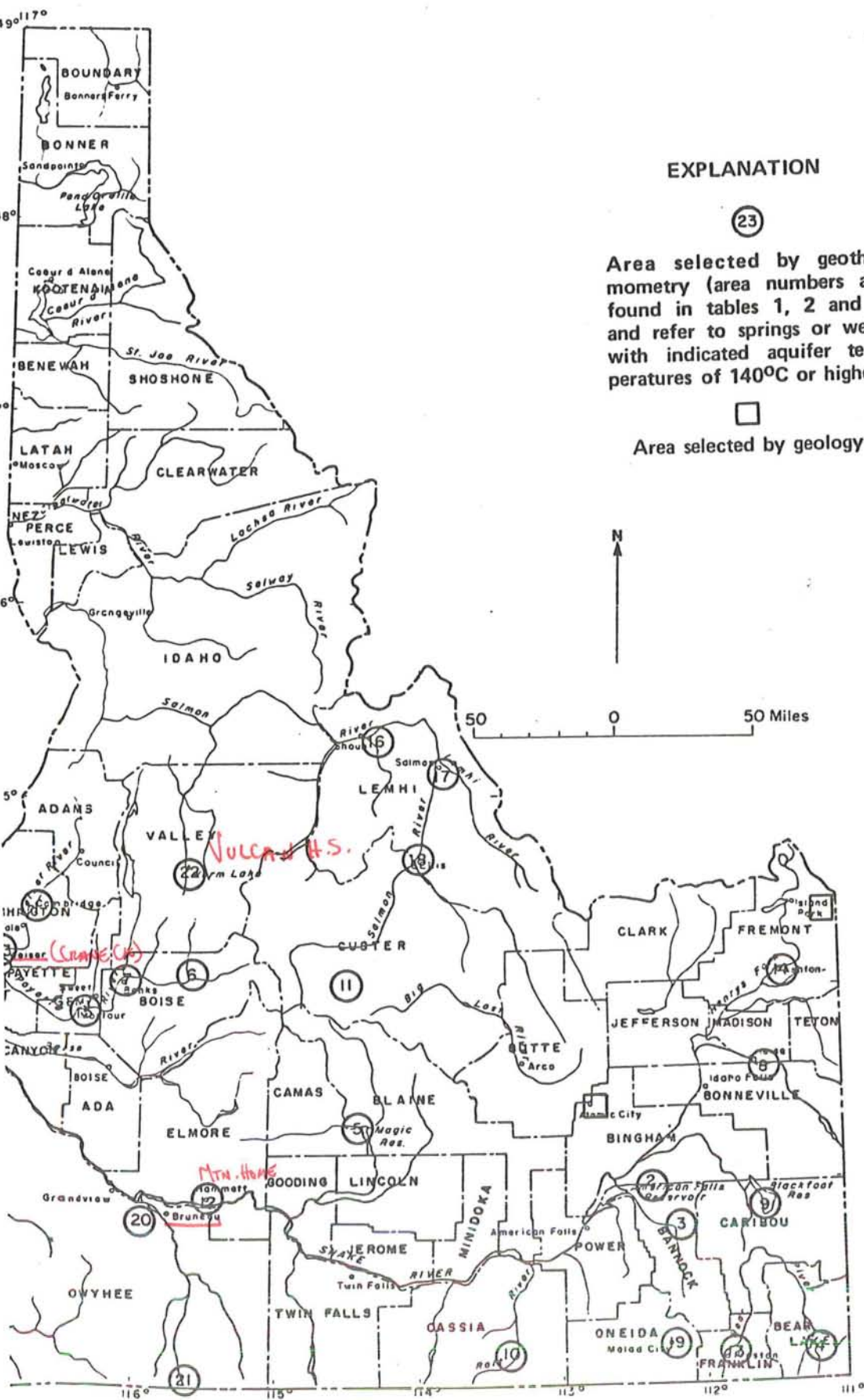


FIGURE 6. Areas selected for future study.

3/19/79

Re: Don Mabe's Talk AT UGA Luncheon

## GEOTHERMAL RESOURCES IN IDAHO

36 known hydrothermal convective systems  $> 90^{\circ}\text{C}$

Greater "low  $T^{\circ}$ " potential than any other state

low =  $< 150^{\circ}\text{C}$

largely concentrated in Brunson-Grandview area

Eastern SRP Drilling Program (Drilled 3 holes)

Purposes:

1) define SRP cold  $\text{H}_2\text{O}$  aquifer system

2) define subsurface geology

Measured gradients (although holes not in EQSM)

$40^{\circ}\text{C}/\text{km}$ ,  $60^{\circ}\text{C}/\text{km}$

Rexburg Caldera Area

Hole near Sugar City

cold aquifer at depth of  $700^{\circ}\text{m}$

### Tectonics of eastern SRP

coincident w/ NE-trending  $\text{pc}$  structure

"Humboldt Zone"

from NW Nevada to Canada?

margins of <sup>eastern</sup> SRP hotter than interior

margins = attractive targets

interior = big unknown

Suggested areas for future exploration

1) Rethburg Caldera - Newdale Area

2) Soda Springs Area

young rhyolite domes

active magma chamber?

3) Margins of Albion Mtns.

R.R.-type settings & systems

Probably no K<sub>1</sub> beneath eastern SRP

Southeast margin of SRP dotted w/ Eocene  
intrusives

Possibility of Eocene, Absaroka-type volcanics  
beneath eastern SRP