

DATA FROM ESL FILES

Library: Well #1 33,000 ppm
 $T_{max} = 261^{\circ}F @ 9065 \text{ ft}$

Well #2 $T_{max} = 363^{\circ}F @ 10,454$
 $Cl^- \sim 18k \text{ ppm}$

HPR notes - seis. not likely (exon?)
 (but ends up recc.)

22-141 50 SHEETS
 22-142 100 SHEETS
 22-144 200 SHEETS


	<u>ft</u>	<u>m</u>		
c	12,000	3,658	} - 472	} 895
b	10,454	3186		
a	9,065	2763		

$a - c = 895 \text{ m}$

$218 - 196 = 22^{\circ}C = 25^{\circ}C / \text{km}$

$b - c = 472 \text{ m} = 85^{\circ}C / \text{km}$
 $40^{\circ}C$

20°C mat

$196^{\circ}C / @ 2763 \text{ m}$
 $-20^{\circ}C$

$176^{\circ}C$

RFP - USAF options - air cond 3320 tons peak
 elec. 12.3 MW
 combination 3320 + 9.2 MW

GKI - no cost share } want free ride
 no risk

reject binary as un-econ. (Rogers has even done binary?)

build 25 MWe, sell rest off-base

call for 425°F @ 12k', vs 360°F @ 9k'
 $\Delta T \approx 36^{\circ}\text{C}/\text{km}$, i.e. on OK grad., maybe, in tuffs

2 levels of gambles -

- Temp will go up as predicted
- Fractures will be encountered that are open + have H₂O - i.e. skin damage vs lack of permeab.

USAF puts in \$1 mil, & if success not met (3 MWe), then who gets the well
 USAF should have 1st right to utilize (cooling water) that comes from any lease by GKI, or any future assignees of lease blocks

Phase program

- log 2 wells now for Temp, etc.
- drilling, logging
- testing
- determine success

detailed cost breakdown

gamble 1 Probs -

1. are the rks the same @ depth (?)
 proposal implies so; seis sections don't!

2. what about conductivities
 (increase in ~~probability~~ ^{may not be} reasonable $(360^{\circ}\text{F} - 182^{\circ}\text{C}) \rightarrow 218^{\circ}\text{C}$
 @ 10k ft. in #2

overall - < 425 @ f.d., prob range of 400°F , tds $> 40\text{k}$

1600 ft, i.e. 1/2 km increase in depth for 36°C increase in Temp grad.: $72^{\circ}\text{C}/\text{km}$

gamble 2 Probs

1. \$1 mil is buying better completion (if negotiated successfully, & detailed properly)
 i.e. if fracs are encountered, & if they have H₂O, this H₂O will be able to be produced

- fracs prob. exist, if rks continue, but alt may have closed
- what will rx be (?)

p2-4 - no monitoring of mud temp, etc
 no traditional logging
 " sample program
 " safety program } on 2-7 no OSHA
 " environ. program

2-6 injection into PR #2 may not work, for same reasons that it isn't a producer - why do they think it will work

finam. statement - hmmm

2-12 Success if you produce 3 MWe - this should be specified in more detail - what if not a success, but still gets 2 MWe (i.e. 2 tons AC?)

Temps reported (p9 of geol rept.) - 150-220°C Mins in core - could be @ equilib.
- 350-400°C Fe-Chlorite (i.e. emplacement cooling?)

p12 of geol Powers wells on N flank of basin

Geol rept (p13)

#1

#2

196°C 9k ft. (79)

178°C (10,454) (73)

128°C 9k (73)

was this new meas.

was equilb really that far off (?)
maybe temps are reasonable

HR

Contractor estims. to back up costs

What depth ~~production~~ inject. in PR #2 (less saline aquifer, environ. probs.)
30%

maybe pE; target a plan for alt. drilling to volcs

~~inspect~~ inspect T log (79) - isothermal or not

key idea

why not well 2

1. get log from 6-7

submit detailed well plans

TRW REDA PUMP

A Division of TRW Inc., Bartlesville, Oklahoma 74003

0.9 mil acre ft recoverable ^{Hahman estims for basin} H₂O in volcs
(43560 ft³ in 1 acre) 1 gal = 3.0688853 × 10⁻⁶ ac ft
= 3.25851 × 10⁵ gal/ac ft

= 2.9326628 × 10¹¹ gal in volcs

15.768 mil minutes in 30 yrs

air cond needs ~ 1200 gpm elec needs 5100 gpm

i.e. 18599 gpm avail for prod. from 2 volcs
in entire basin -

adjacent to transition zone

Proposal

talk of double flash 400°F 25 MWe from 8 prod., 4 inj. wells
GKI - demands 1 mil upfront - ulp - i.e. not a shared risk, but another free ride (?) - no table
if wells are damaged, how could fluids be put dn #2

wells drilled on 20 ac centers
no statement of justification for this - what are avg centers @ Rts

δ - 20 ac spacings
deep gradient (?)



? - is predicted T reasonable
no expln (?)
alt products - ok
cost of new well, listed as too high 10k' @ 3.2 mil
eval. prelim cost breakdown

sales - 10% < 3.1¢/kwh
(not scaled w/ amt. of purchase)

Stress- phased completions
what could 7" diam well produce

what rk is likely to be encountered @ depth?
how much land does GKI have in lease block -
envt. for 20ac spacings?
what are conditions of wells now

eberly + stanley interp. of pre cenozo basmt mined under Power Ranches -
not discussed in geol. anywhere
i.e. - what is target unit in area

avail seis from Exxon (?)

lab tests #1 power TDS @ 8997 244k tds
also > 1500 ppm sulphates
F⁻ 6.8 ppm

HPR - evaluate costs

WMS-

Guide to the Geol. of Cent. Az. Az Bu6+MT Sp Pap. 2 p85-96
Sheridan article

GSA v 80 p257-282

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS

