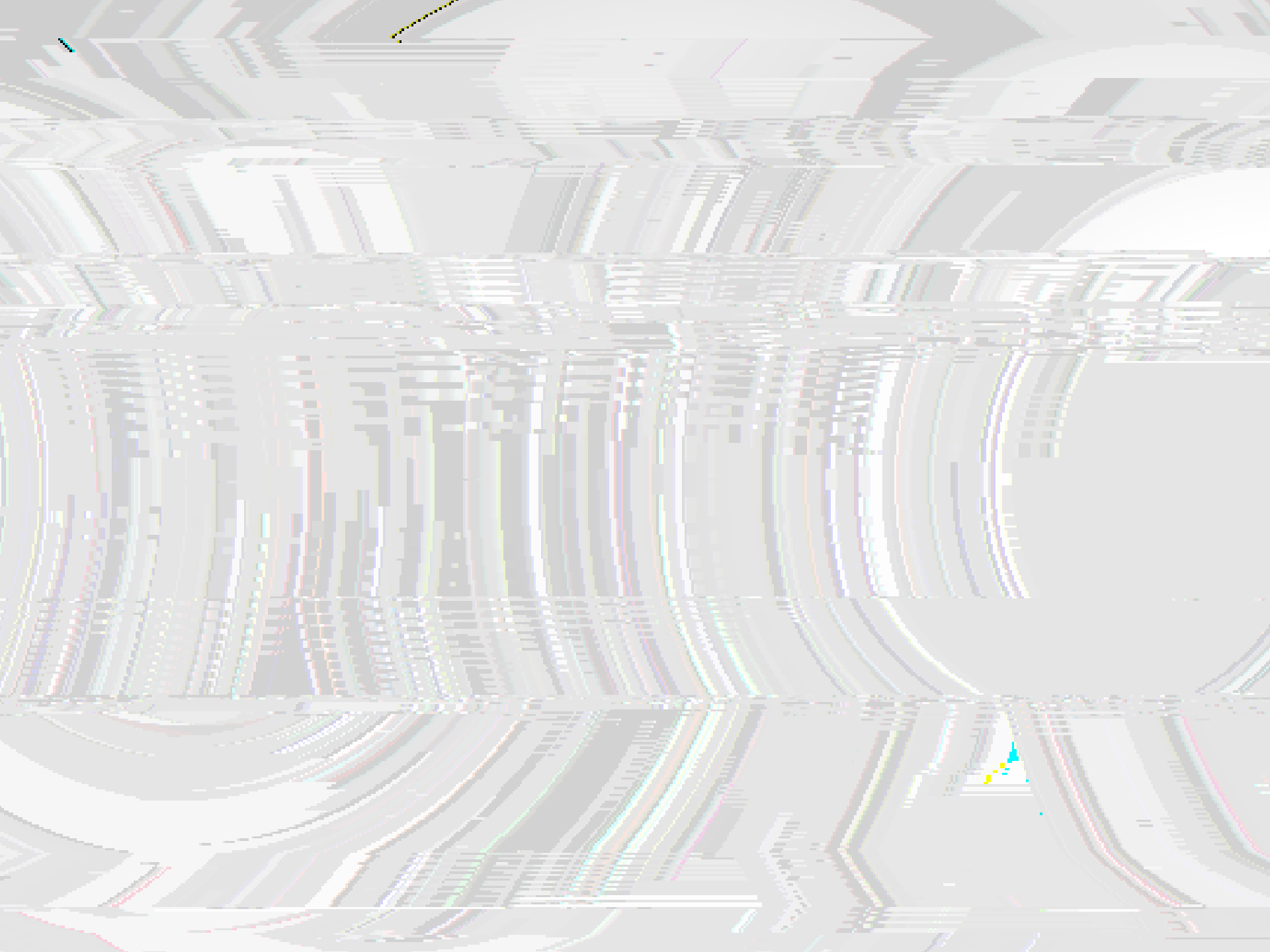


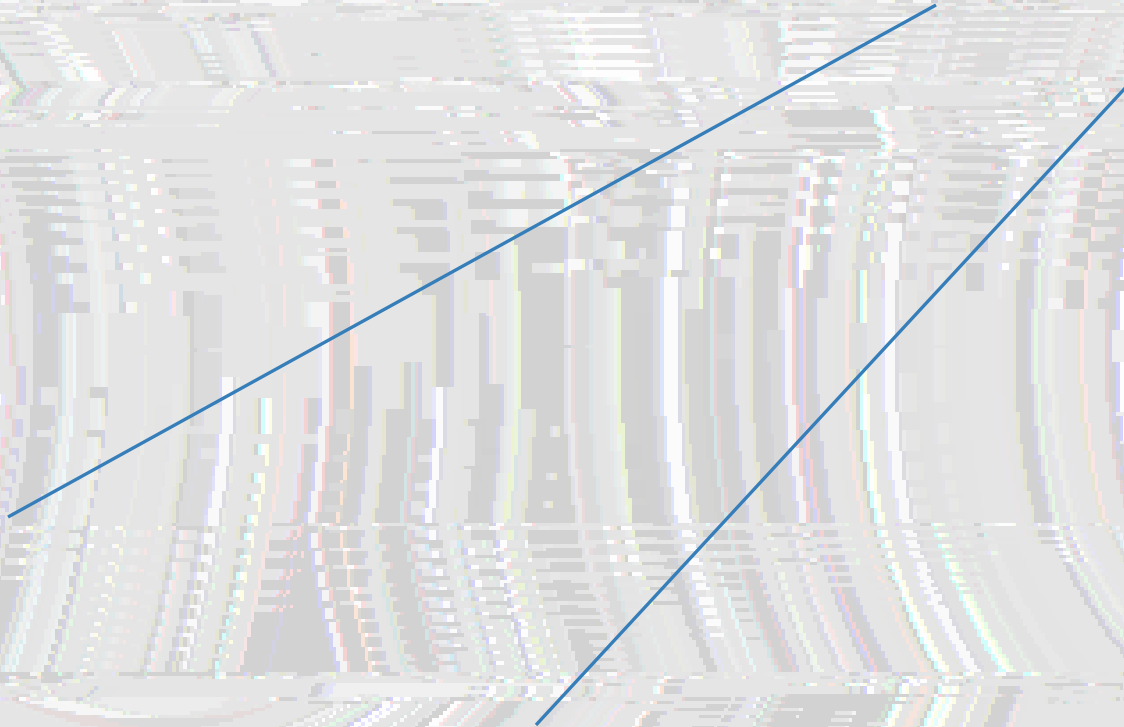
*Geothermal Potential
of Oil and Gas Wells
on the Fort Peck Reservation
in*

Funded by
US Department of Energy
Tribal Energy Program

Grant # DE-EE00052511



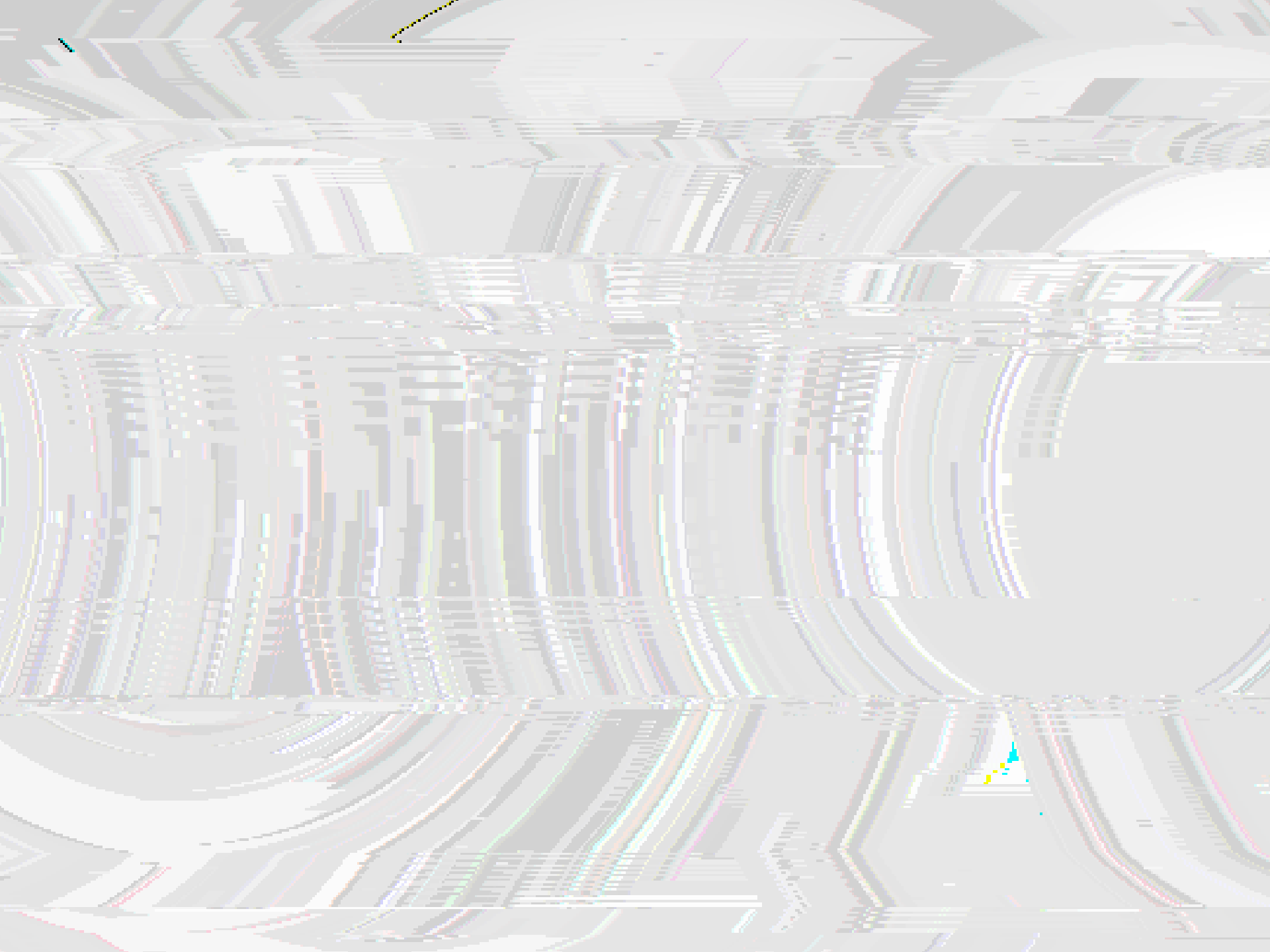
Fort Peck Reservation



WHY IS THIS AREA IMPORTANT?

‡ COPRODUCED OIL AND GAS WELLS

‡ HIGH TEMPERATURE WATER ² many wells



Previous Geothermal Research on the Fort Peck Reservation

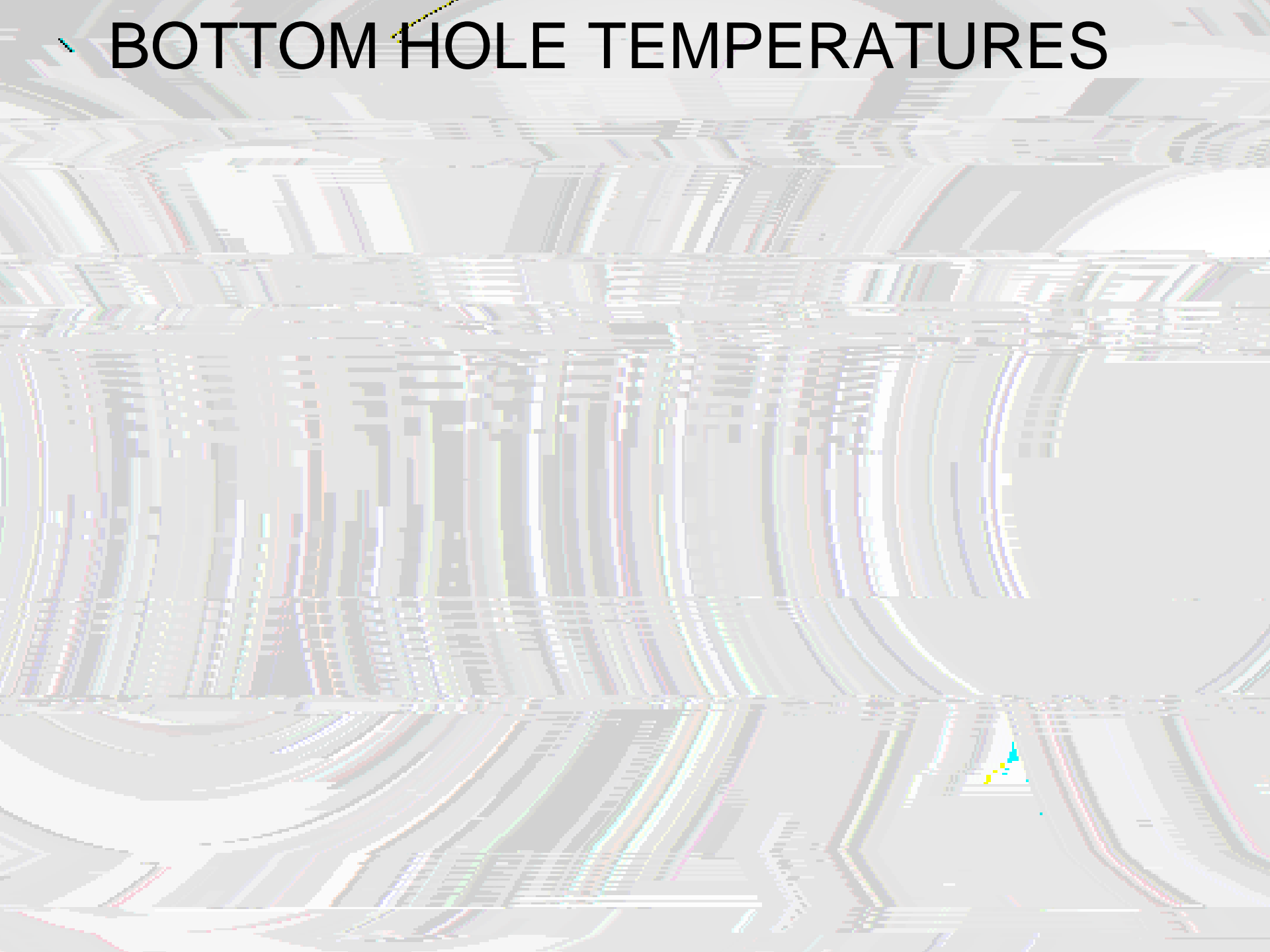
³/₄ 1979 ³ PRC Toups

*Geothermal Space Heating Applications for the
Fort Peck Indian Reservation ²a DOE funded
grant - UHOLHG RQ .V GDWD*

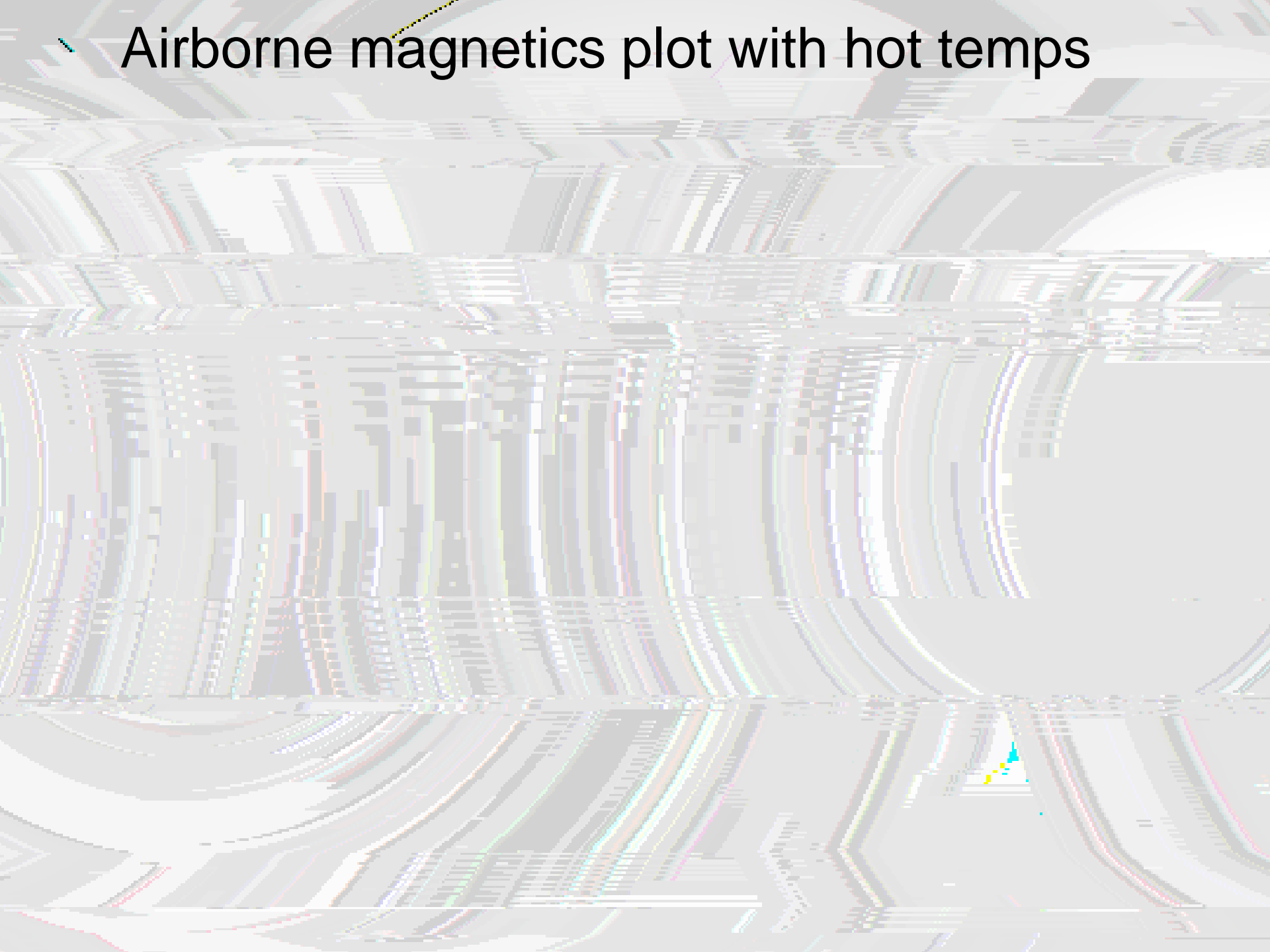
Data Analysis--2012

- 760 bottom hole temperatures*
- Precise location of drill holes*
- Flow rates for existing wells*
- Reinjection well locations*
- Infrastructure near best wells*
- Land Status ² identify favorable land*
- Well intercept stratigraphy*
- Formation thickness*
- Airborne magnetometer and EM data*
- Surface geology and structure map*

✓ BOTTOM HOLE TEMPERATURES



✓ Airborne magnetics plot with hot temps





N

*DOORQV RI :DWHU SHU 0LQXWH

3/27 2) 0\$* 1(7, &) 6 3 2 3/\$5 '20(: (//6 \$1'
(2005)
, 1) 5\$ 6 7 5 8 & 7 8 5 (

+LJKHVW %+7 WHP SHUDWXUH

ZHOO



5HLQMFWLRQ ZHOO DQG VWRUDJH IDFLOLW\

3/4, GHQWLILHG WKH KLJKHVW JHRWKHUPDO
WHP SHUDWXUH HYHU UHFRUGHG LQ 0RQWDQD
)

3/4& RPSLOHG QHDOU\ %RWWRP +ROH
7HP SHUDWXUHV %+7 HTXDO RU JUHDWHU
WKDQ)

3/4, GHQWLILHG LPSRUWDQW QHZ DUHDV RI
JHRWKHUPDO SRWHQWLDO

3/4(YDOXDWHG VLJQLILFDQW DPRXQW RI QHZ
GULOO KROH GDWD DYDLODEOH IURP %DNNHQ
H[SORUDWLRQ



BIRKBY
CONSULTING LTD.

Gradient Geophysics Inc.