

***Lower Klamath Lake Valley  
Terramagnetic Survey:  
Interpretation***

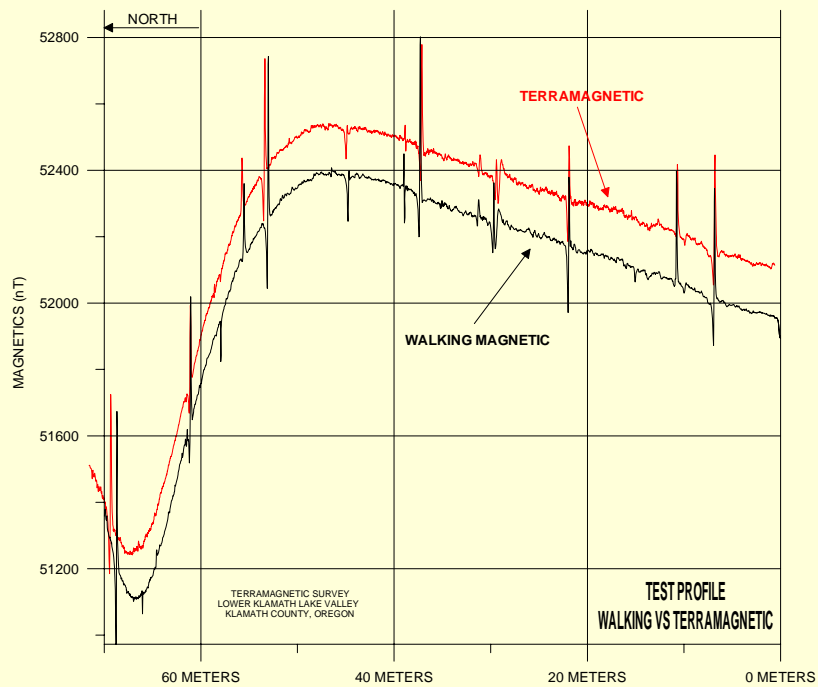
By  
Ralph Soule &  
Nikos Tzetos  
GeoPotential, Inc.

# ***WHAT IS A TERRAMAGNETIC SURVEY?***

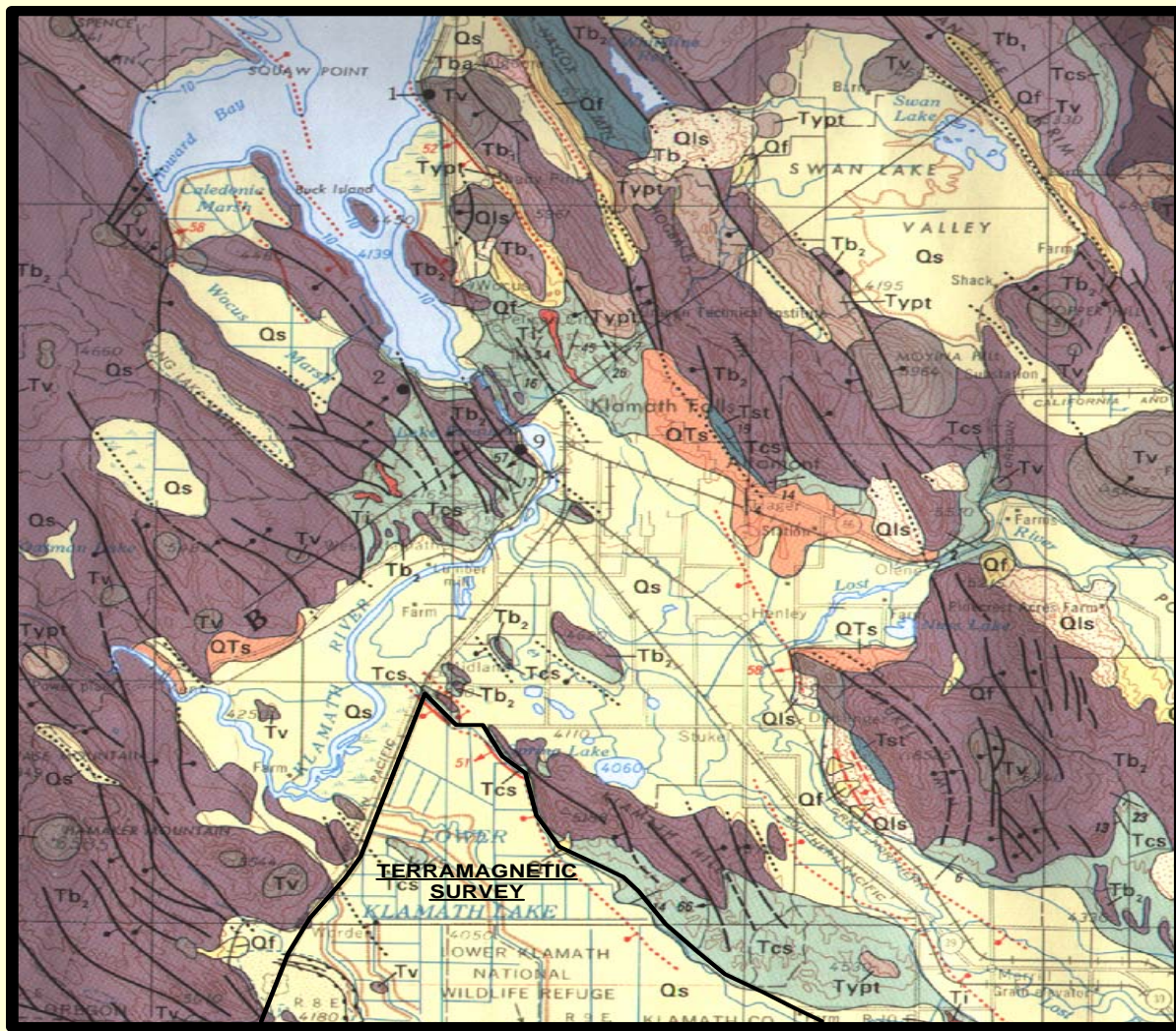
A Magnetic Survey  
acquired from a land  
vehicle moving across  
the Earth's surface.



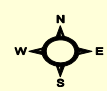
# WHY A TERRAMAGNETIC SURVEY?



**QUALITY**  
**COST**  
**TERRAIN**  
**OBJECTIVES**



42°00'  
122°00'

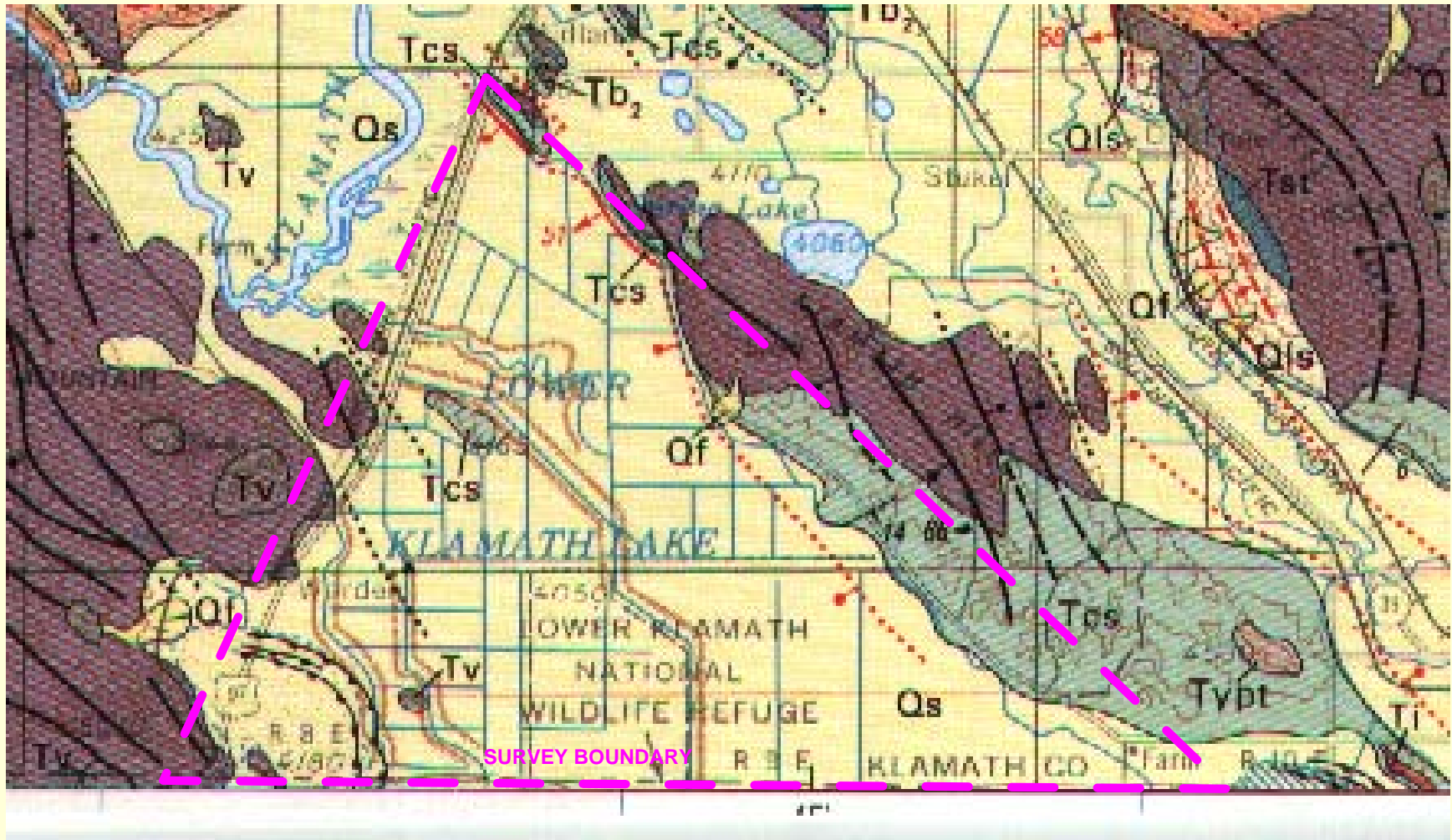


5 KILOMETERS

### TERRAMAGNETIC SURVEY GEOLOGIC MAP

LOWER KLAMATH LAKE VALLEY  
KLAMATH COUNTY, OREGON





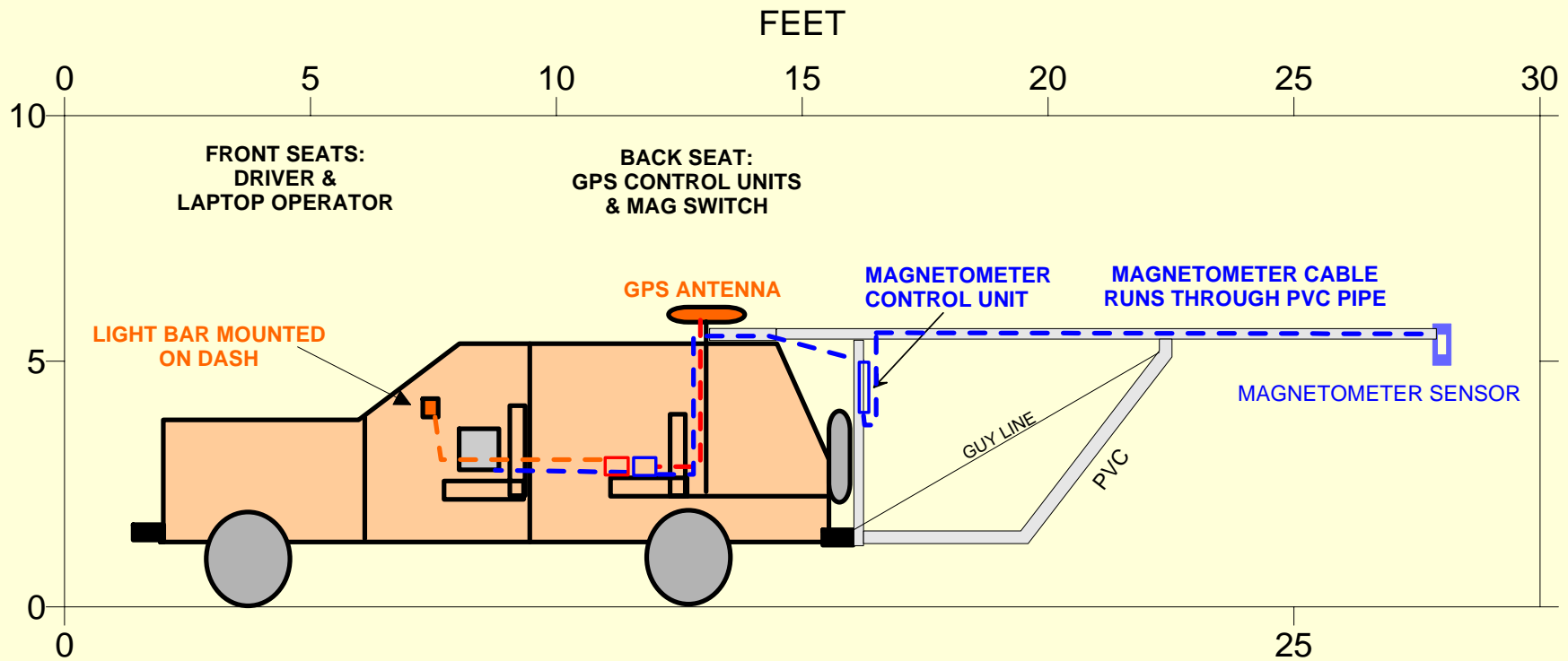
LOWER KLAMATH LAKE  
 GEOPHYSICAL INTERPRETATION  
 KLAMATH COUNTY, OREGON

## TERRAMAGNETIC SURVEY MAP

# ***TERRAMAGNETIC SURVEY OBJECTIVES***

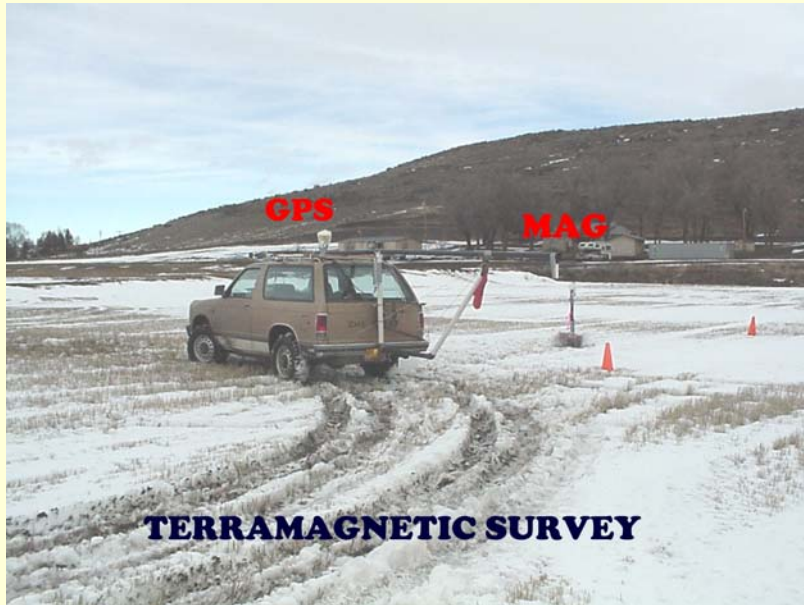
- Map The General Area of Major Fault Zones In The Lower Klamath Lake Valley.
- Provide a Guide to help determine the location for detailed seismic/gravity/magnetic profiles.

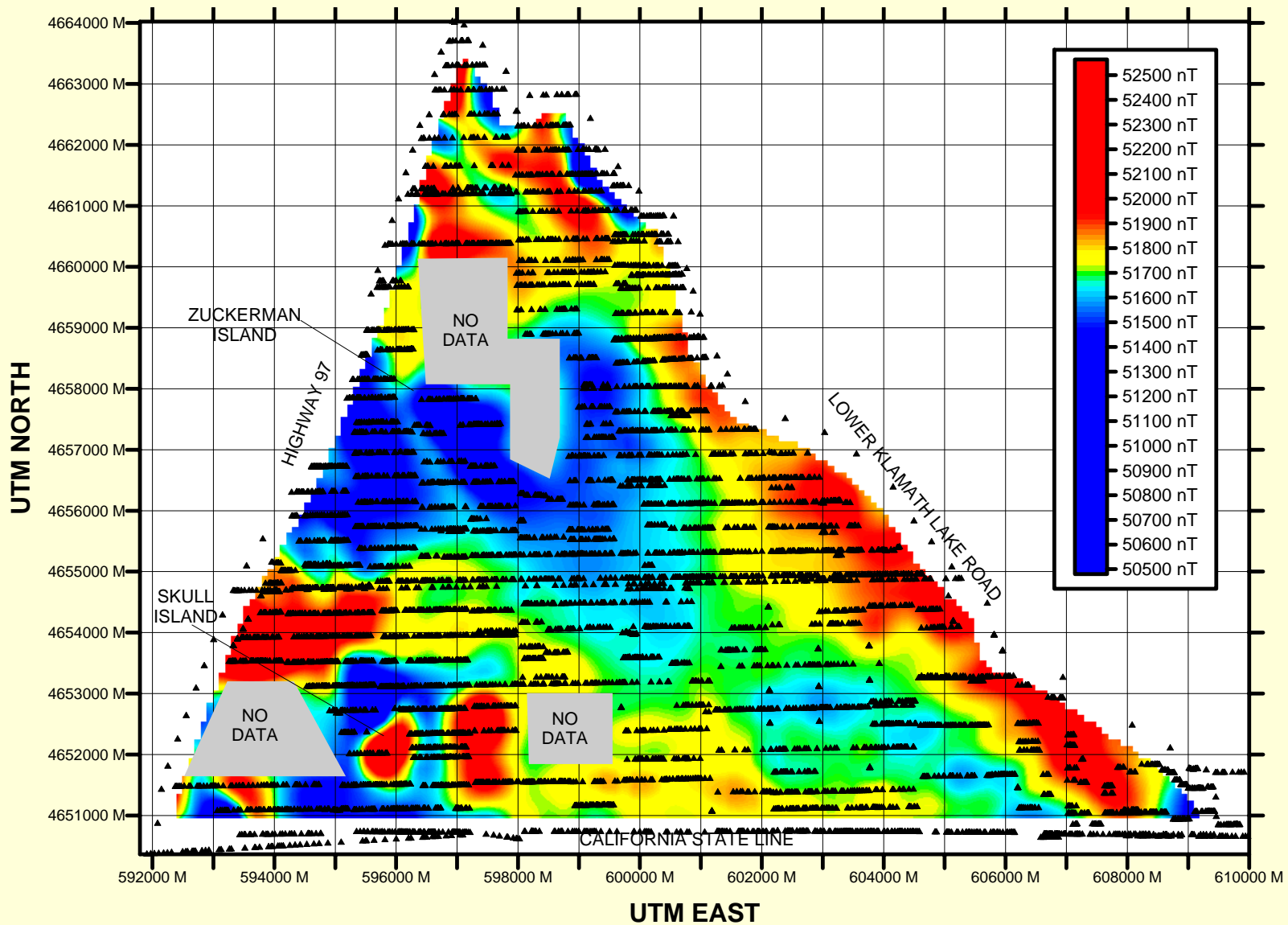
# ***SURVEY VEHICLE***



LOWER KLAMATH LAKE VALLEY  
KLAMATH COUNTY, OREGON

## **TERRAMAGNETIC SURVEY VEHICLE SCHEMATIC**

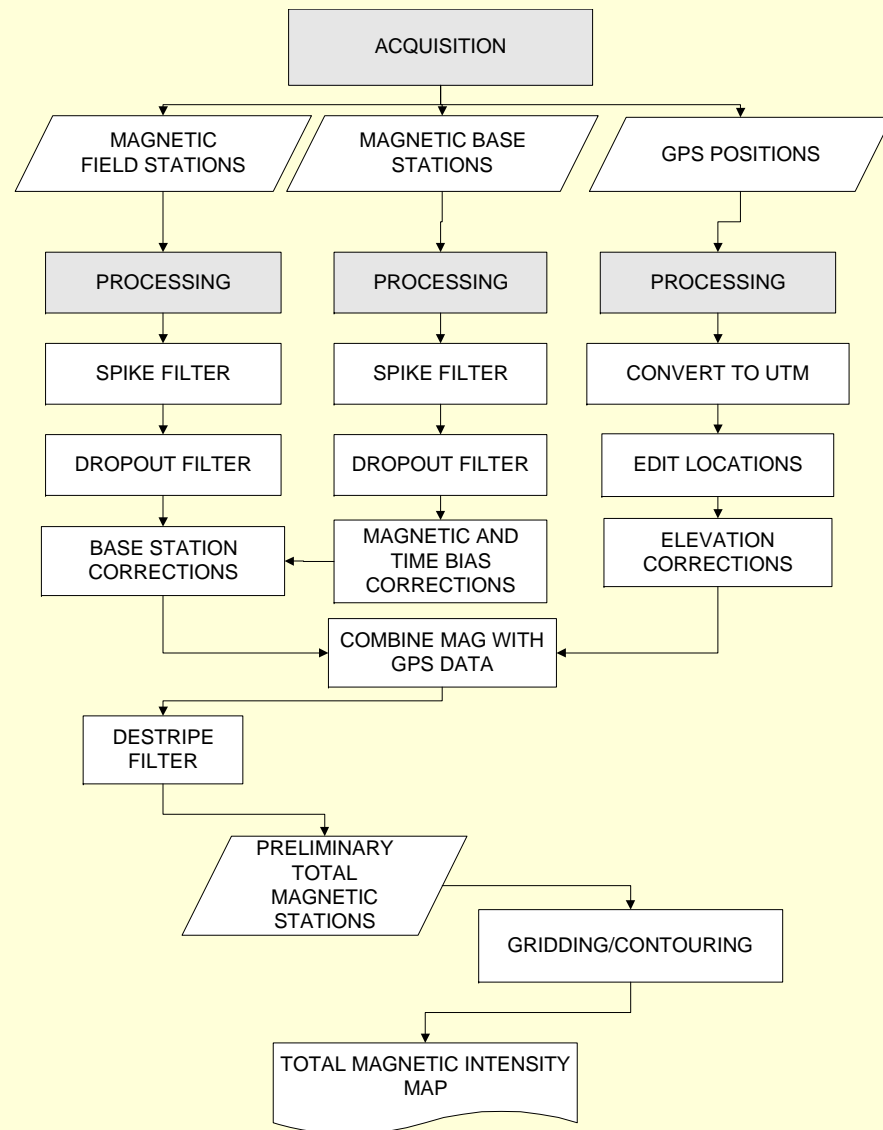




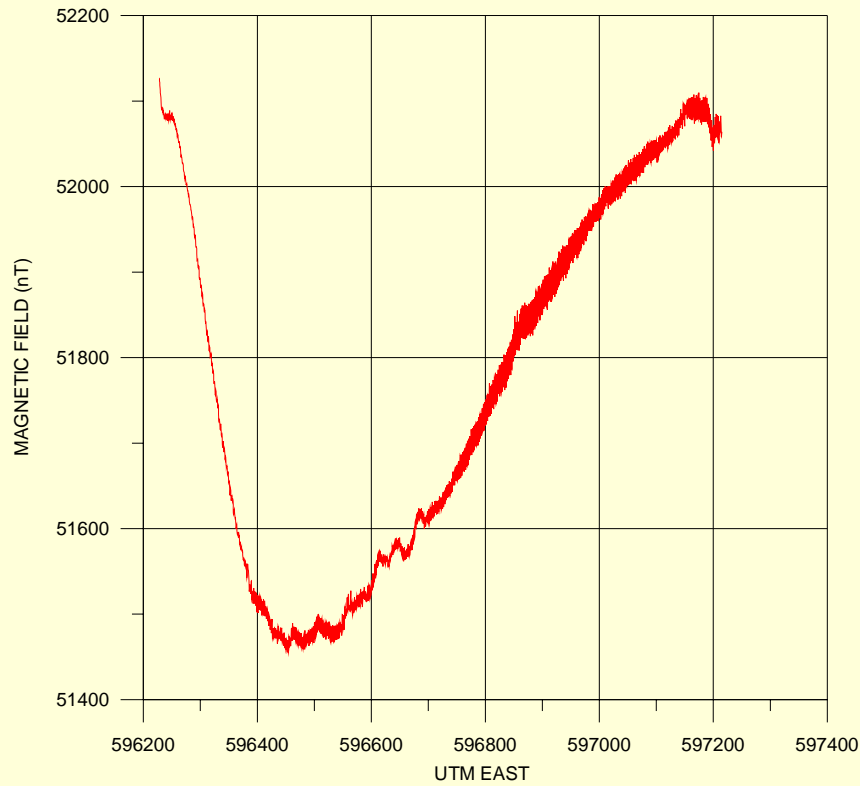
LOWER KLAMATH LAKE VALLEY  
KLAMATH COUNTY, OREGON

STATION LOCATION MAP  
(EVERY 100TH STATION SHOWN)

# Acquisition & Processing Flowchart

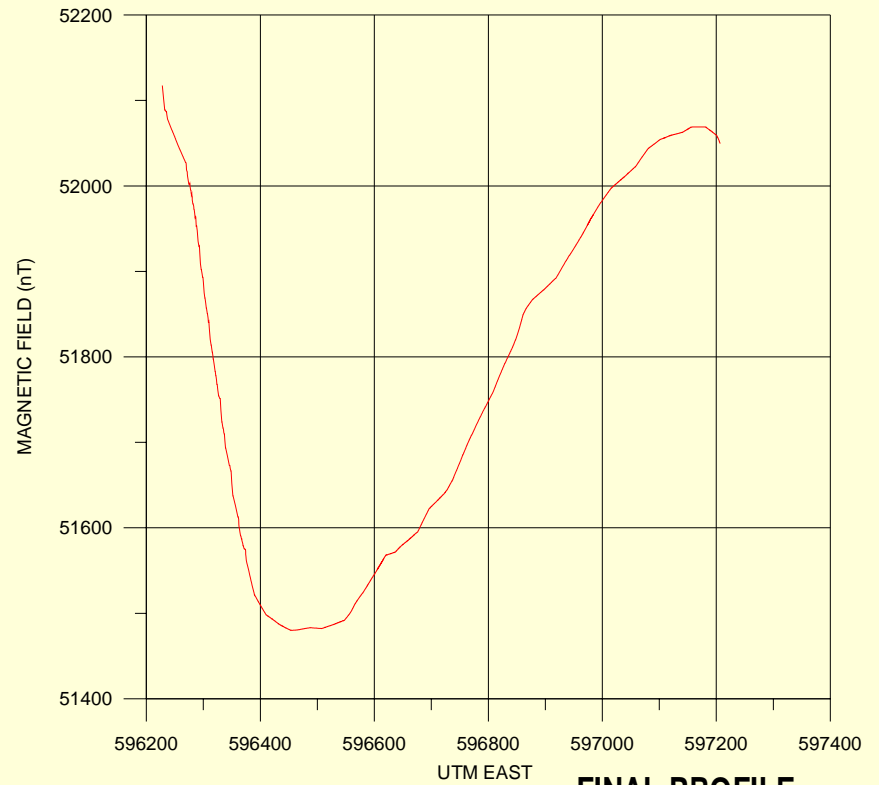


# *Magnetic Profiles*



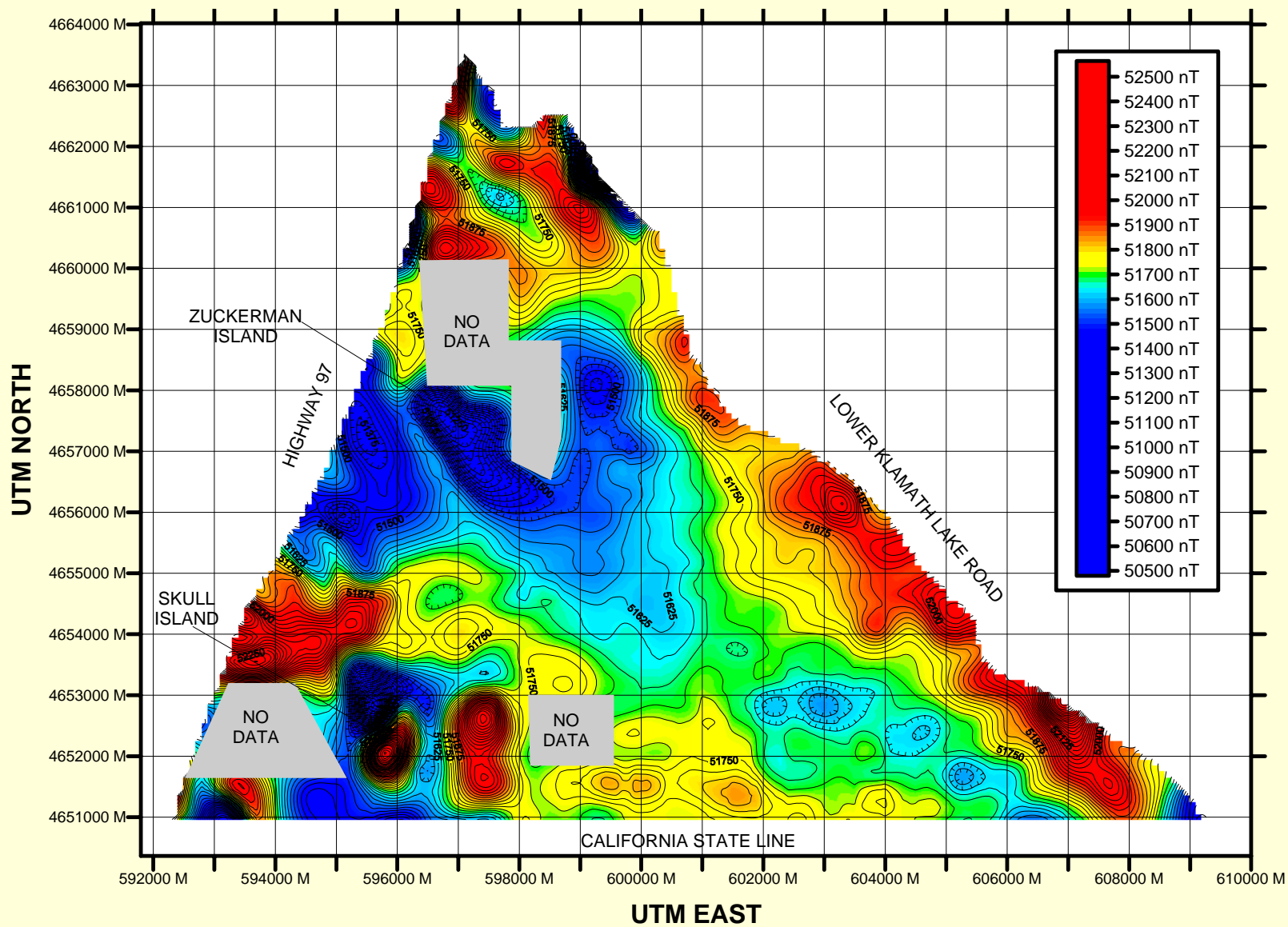
LOWER KLAMATH LAKE VALLEY  
KLAMATH COUNTY, OREGON

**RAW PROFILE**



LOWER KLAMATH LAKE VALLEY  
KLAMATH COUNTY, OREGON

**FINAL PROFILE**



LOWER KLAMATH LAKE VALLEY  
 KLAMATH COUNTY, OREGON

TOTAL MAGNETIC INTENSITY MAP  
 (CONTOUR INTERVAL = 25 nT)

# ***INTERPRETATION***

Two-dimensional

GRADIENT  
GEOPHYSICS  
MAGCAD

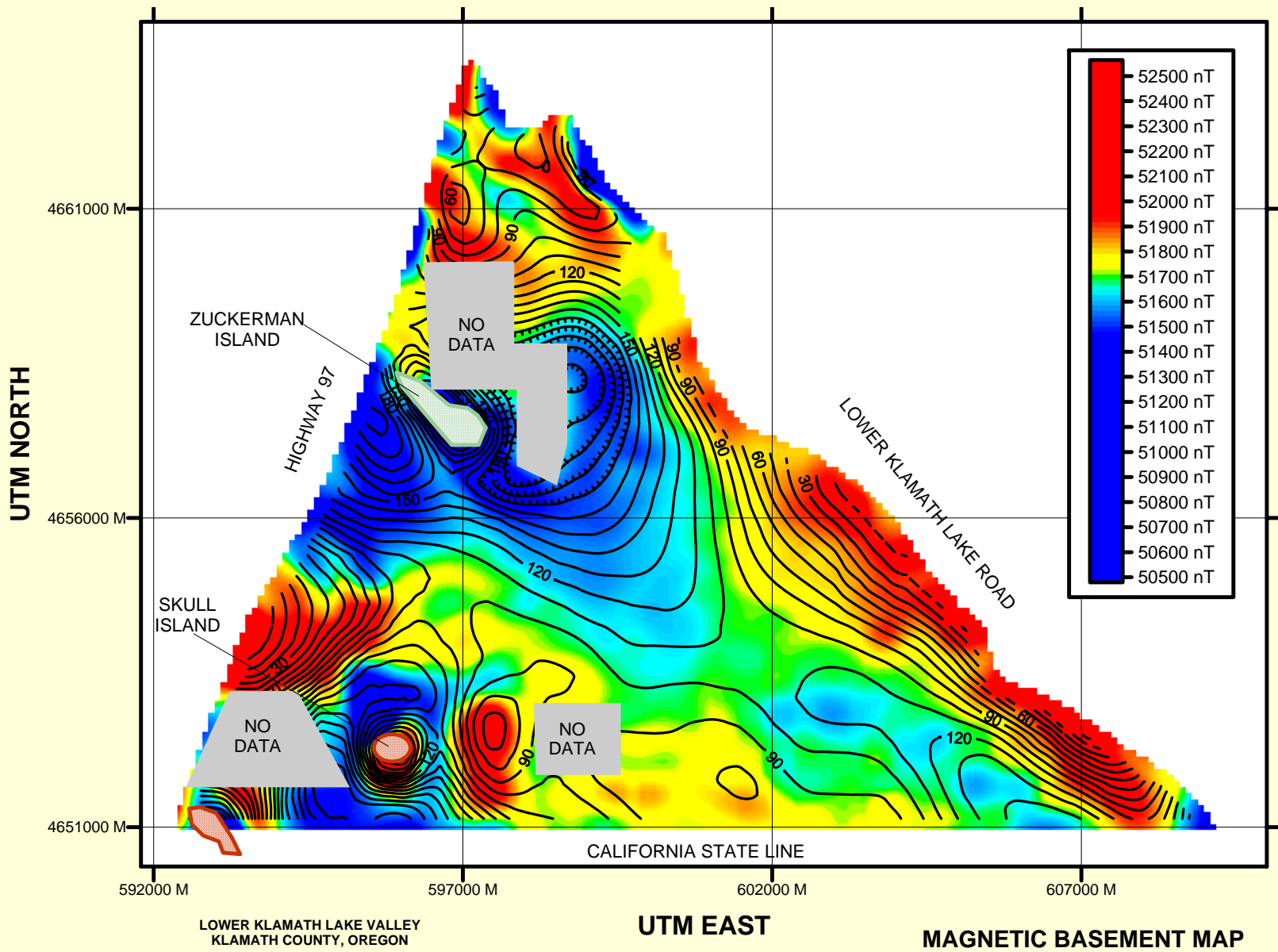
Depths to Magnetic  
Basement

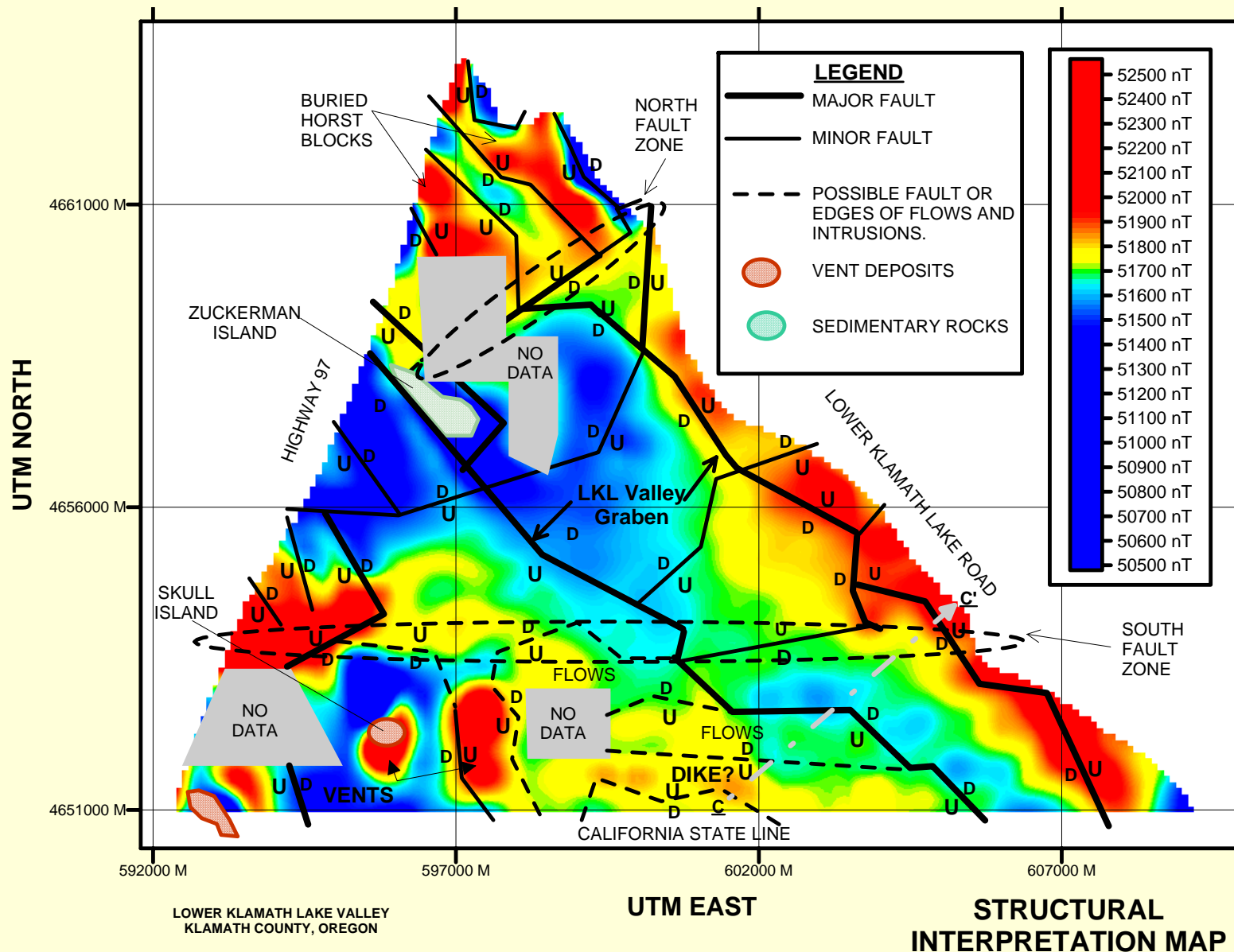
Three-dimensional

USGS BOUNDARY  
USGS GI3

Edges of Magnetic  
Bodies

Magnetic Basement  
Shape Map





# ***CONCLUSIONS***

- OBJECTIVES ACCOMPLISHED; THE APPROXIMATE LOCATIONS OF MAJOR FAULT ZONES WERE MAPPED IN THE LKL VALLEY.
- TERRAMAGNETIC SURVEYS ARE A VIABLE WAY TO CONDUCT LOW QUALITY MAGNETIC SURVEYS.