

# CIRI – Farewell Mineral Exploration

Presenter: Brendan McCrum

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**Cook Inlet Region, Inc.**

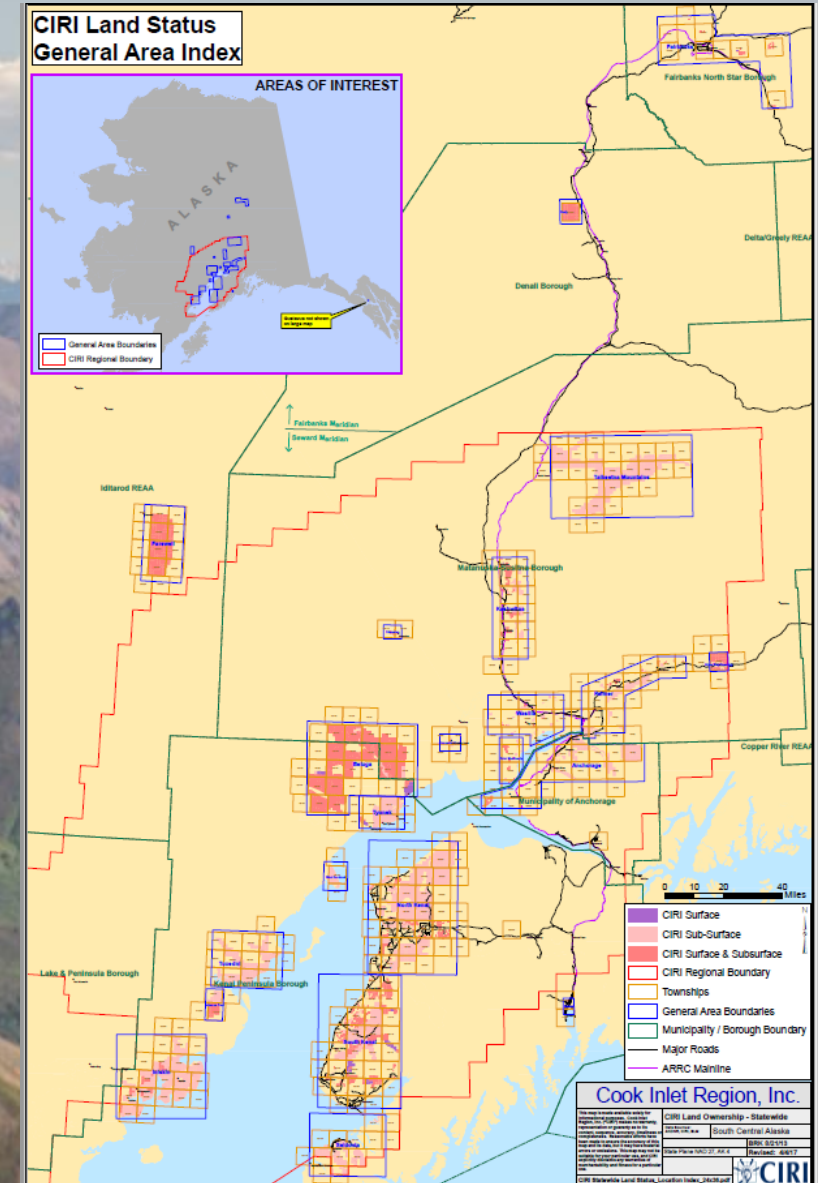


**Alaska Earth  
Sciences**

# Cook Inlet Region, Inc. (CIRI)



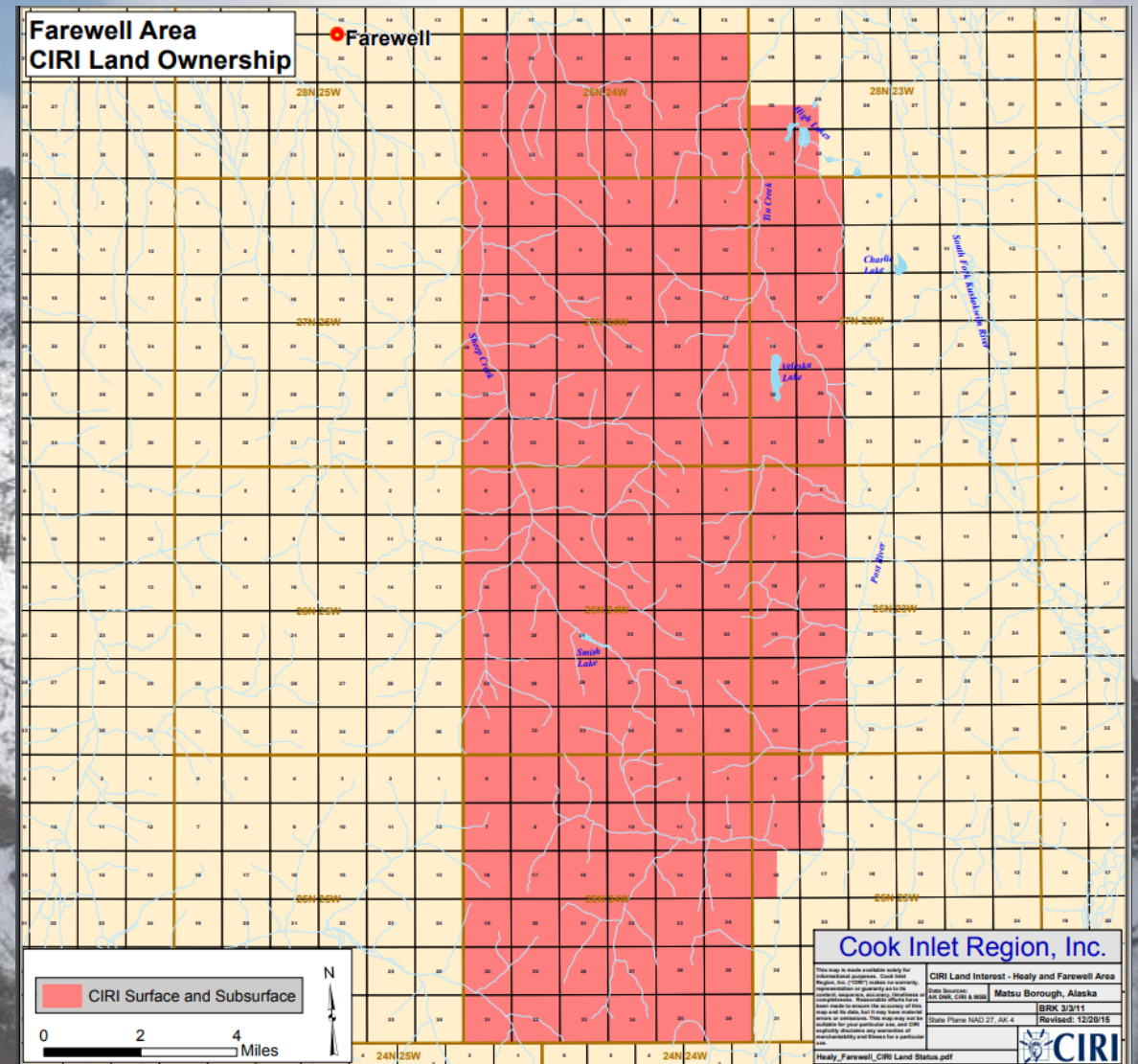
- Established under the Alaska Native Claims Settlement Act (ANCSA)
- Largest private landowner in Southcentral Alaska with 1.6 million acres of surface and subsurface estate
- CIRI is proudly owned by more than 9,300 Shareholders, with 4,700 registered Descendants
- Enhance economic opportunities for its Shareholders and Descendants
- CIRI engages in responsible development of natural resources, including, oil and gas, minerals and other commercial uses





# Farewell Tract

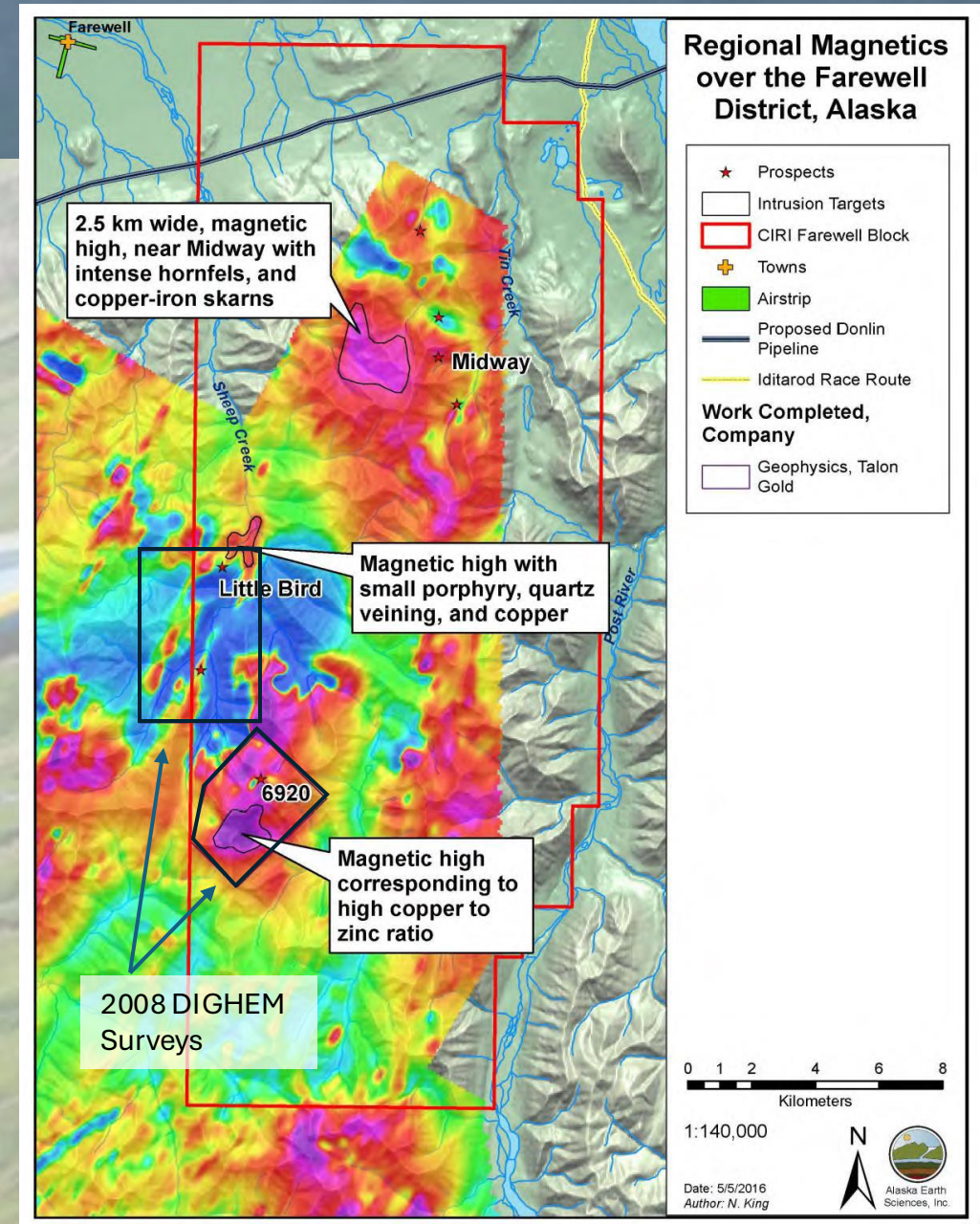
- One of CIRI's out of region selections
- Approximately 98,000 acres of simple fee title ownership
- Hosts a variety of precious and base metals, including gold, silver, copper, zinc, lead, nickel and cobalt
- Historical exploration in the 1980's identified high-grade skarn and manto-style mineralization





# Historical Work

- Anaconda exploration (early 1980s)
- North Pacific Mining Co. (early 1990s)
- Talon Gold (2008)
  - 2008 DIGHEM (50m line spacing) detailed airborne survey
- DGGs - DIGHEM (2014; 400m line spacing) regional airborne survey
- Abundant magnetic bodies throughout land selection
- Phase 1: Desktop Study (2021)
  - Ranking for all known mineralization occurrences

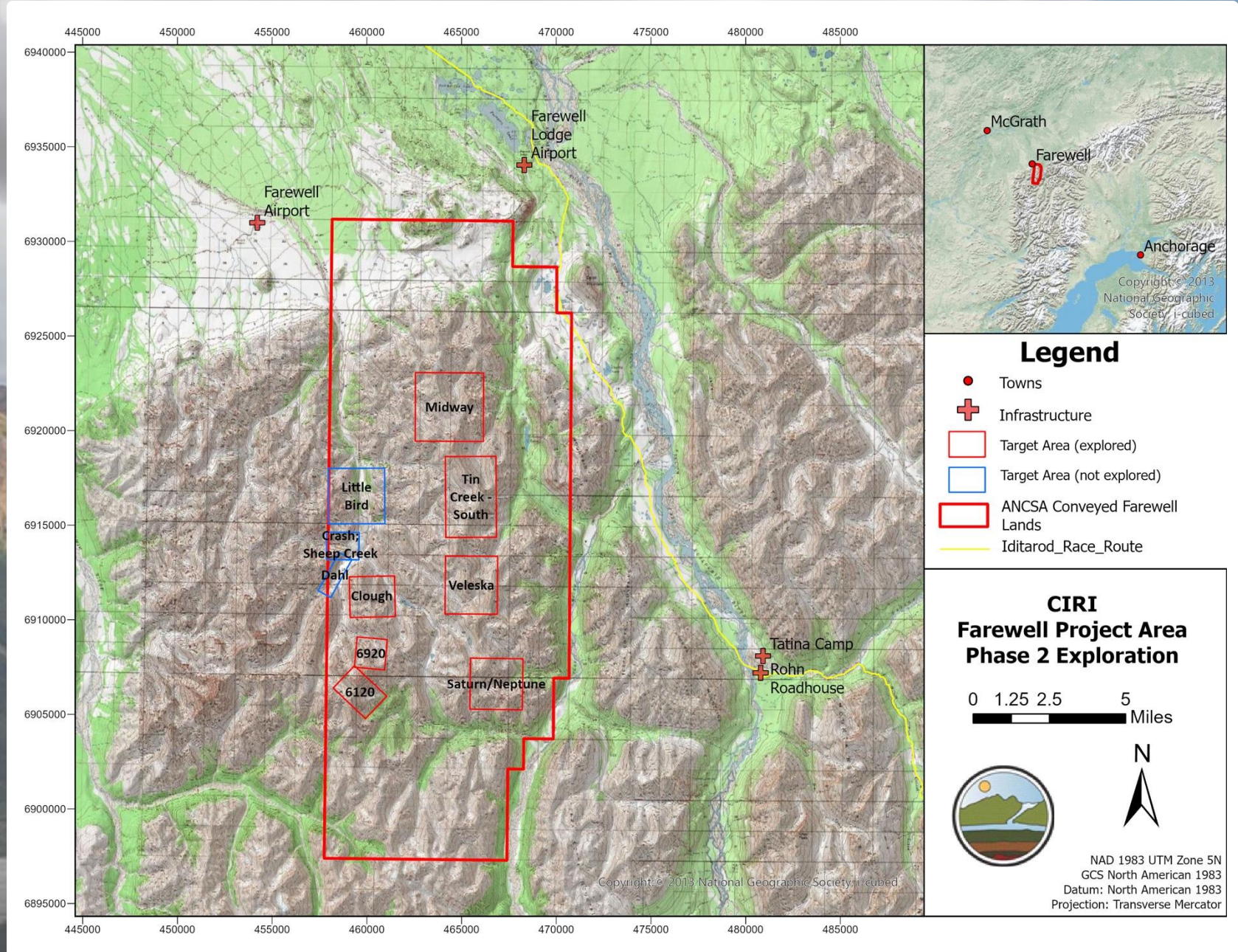


Map from the Phase 1 Report, credit to Jeff Kase



# Field Target Locations

- Farewell Airport for primary access and mobilization
- Exploration efforts were based out of the Tatina Camp (R&R Hunting & Outdoor Adventures, Hesperus Air Service; Rob Jones)
- Helicopter supported efforts (Pollux Aviation)
- Multiple flight paths for each target





# 6120/6920 – High Priority Target

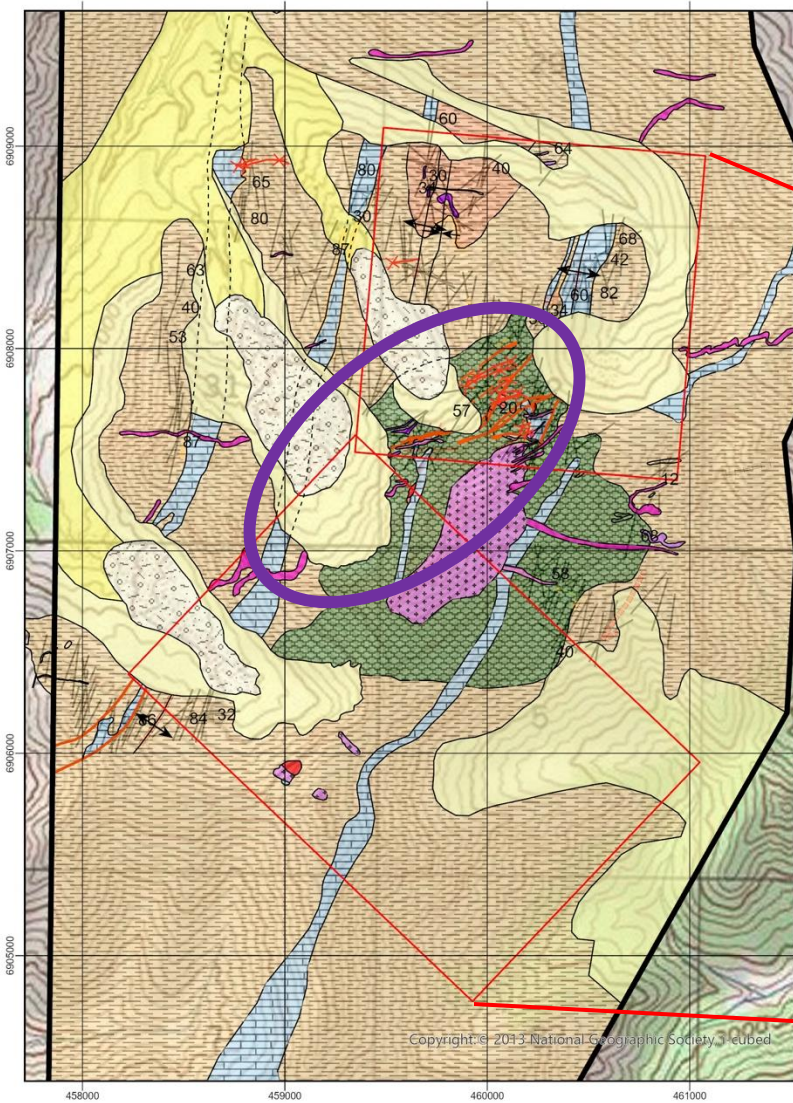
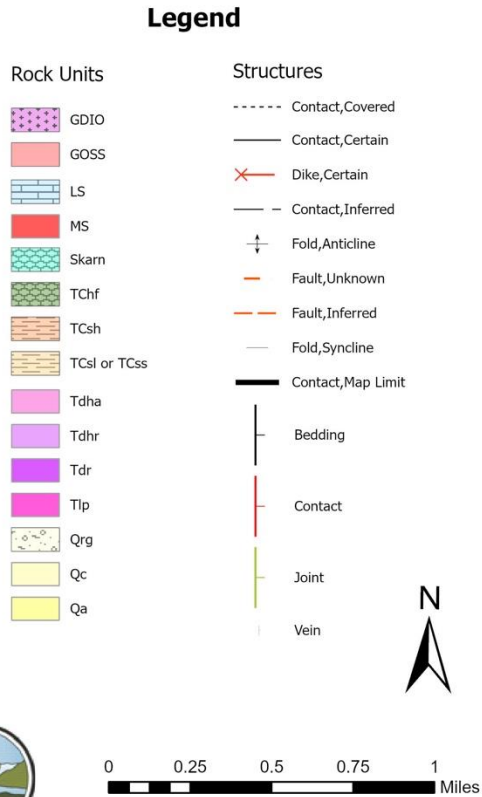


- Ground based IP/MT (SJ Geophysics)
  - 3DIP variable array at 6120
    - Several highly chargeable bodies identified
    - Strong conductors adjacent to observed highly chargeable and magnetic bodies
  - 2DIP line north of 6920
    - Buried highly chargeable body spatially related to magnetics
- Geological and Structural Mapping
  - Identification of A, B and D type veining
  - Mineralized structures dipping towards magnetics
  - Extension of known mineralization into Clough area

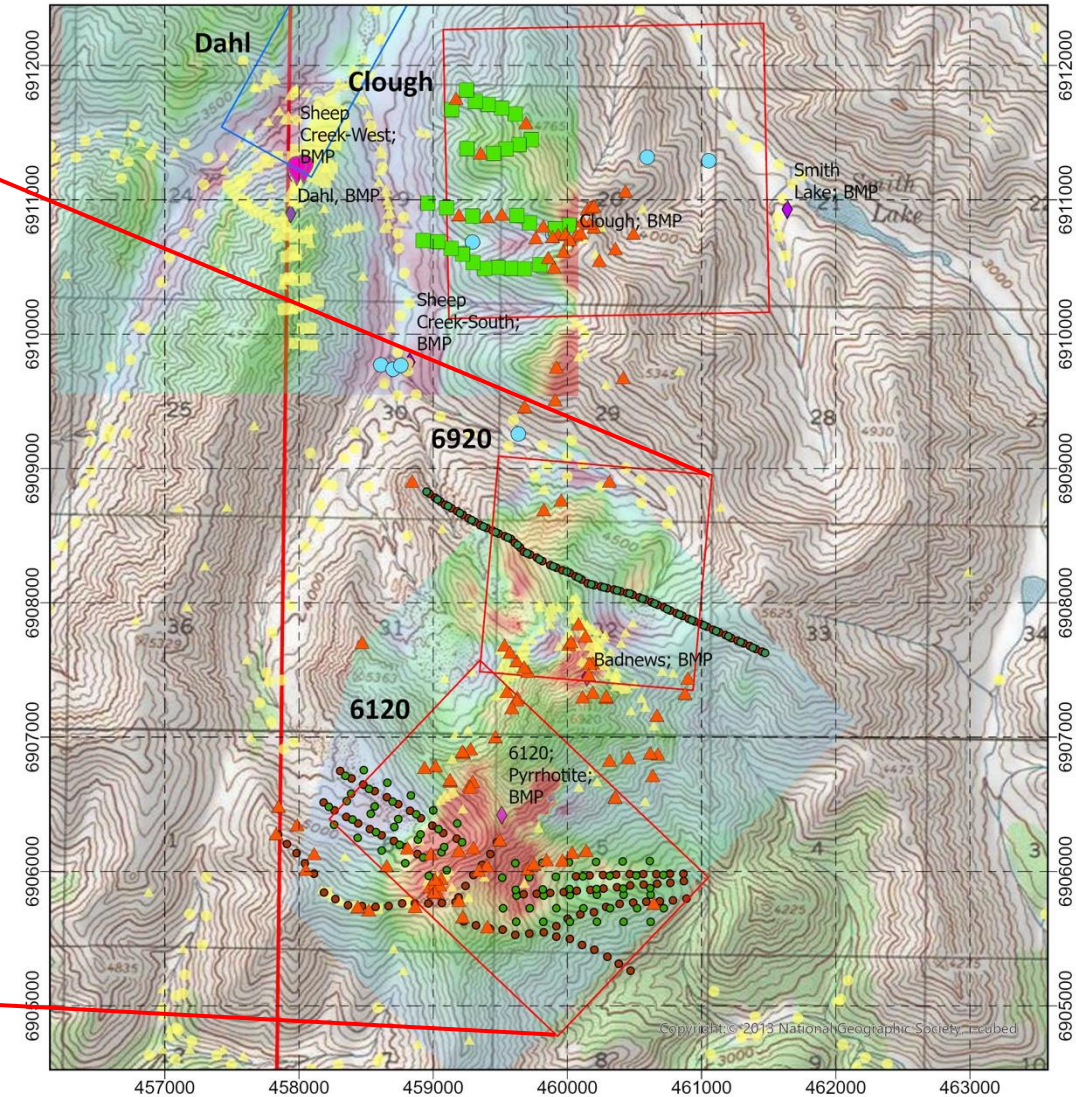
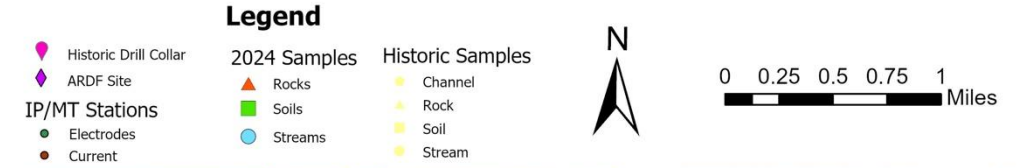


# Mapping and Survey Efforts

## Geology and Structures Targets 6120/6920



## Mapping and IP/MT Surveys with magnetics Targets 6120/6920 and Clough



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# 6120/6920 Feldspar Porphyry Ridge and Structurally Related Mineralization



- Structural trend dips toward magnetic high target under the porphyry ridge
- Mineralized breccias and A, B and D type veins found throughout the ridge, dominantly on the western side





459526.23  
6906263.17  
1733.74  
071.44°/183.28°

# 6120 Target 3DIP Survey

- 3 distinguishable highly chargeable bodies (yellow/red)
- 3 or 4 highly conductive bodies (pink/pruple)
- Surrounding identified magnetics below the 6120 peak
- Pending MT survey results will add information towards structures and offsets

459503.07 (-23.16)  
6905859.31 (-403.86)  
529.12 (-1204.62)  
= 1270.73





# Midway: High Priority Target

- Airborne Geophysical Survey (Precision Geophysics)
  - Magnetic: Higher definition of shape for the buried magnetic high
  - Radiometric: Zonation of surface alteration expressions and regional unit contacts
- Detailed mapping and sampling
  - Preliminary aeromagnetic results redefine focal points
  - Identification of porphyritic mineralized dike outcrops and magnetic characteristics





# Mapping and Airborne Survey

- Better definition of magnetics
- Lithology and alteration from Radiometric Data
- Detailed mapping and sampling
  - Preliminary aeromagnetic results redefine local focus points
  - Identification of porphyritic outcrops and magnetic characteristics

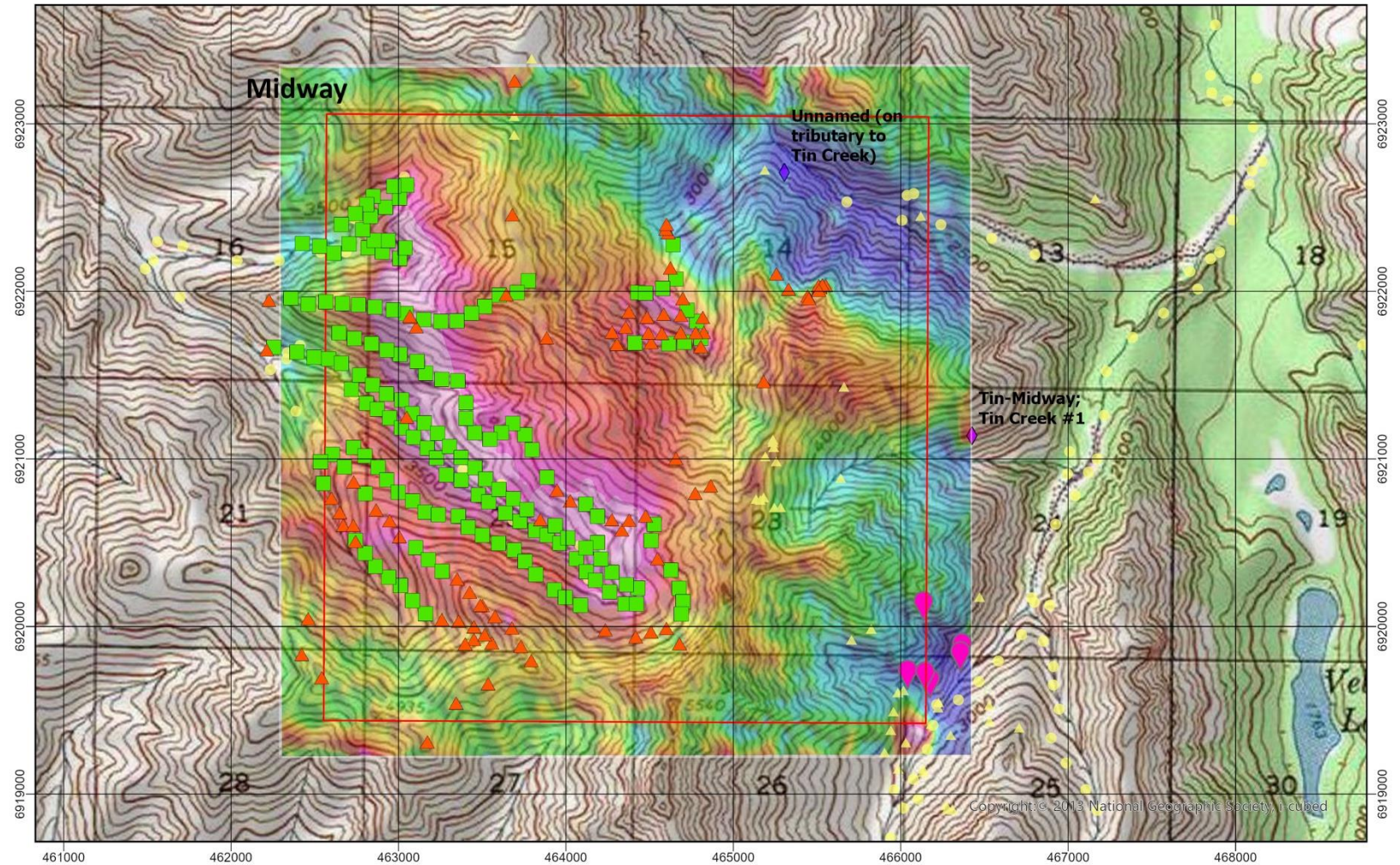
## Mapping and Magnetic Survey Midway Target and Tin Creek Skarns

0 0.25 0.5 0.75 1 Miles



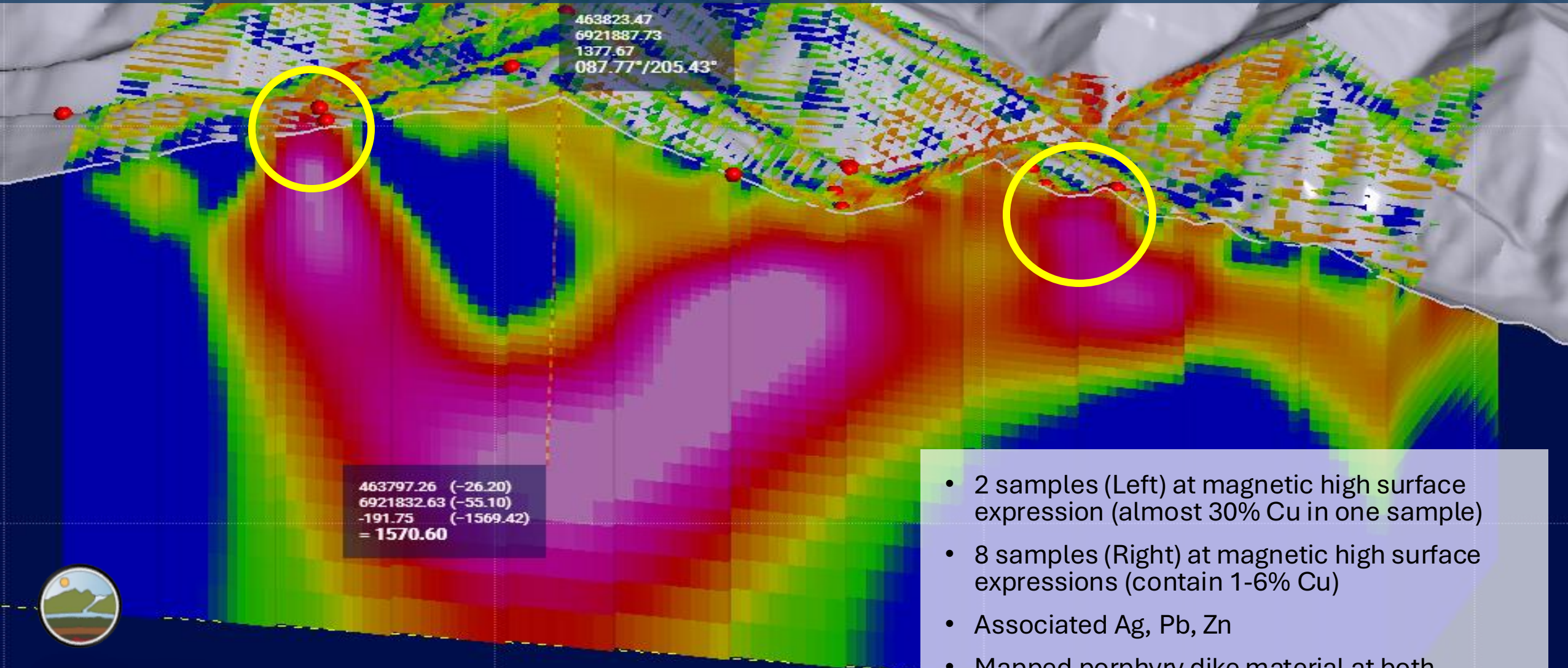
### Legend

- Historic Drill Collar (pink diamond)
- ARDF Site (purple diamond)
- 2024 Samples
  - Rocks (orange triangle)
  - Soils (green square)
- Historic Samples
  - Channel (yellow circle)
  - Rock (yellow triangle)
  - Soil (yellow square)
  - Stream (yellow line)





# 3D Magnetic Inversion Model



- 2 samples (Left) at magnetic high surface expression (almost 30% Cu in one sample)
- 8 samples (Right) at magnetic high surface expressions (contain 1-6% Cu)
- Associated Ag, Pb, Zn
- Mapped porphyry dike material at both locations





# Expanded Areas of Interest

- Lower priority targets: Clough, Tin Creek-South, Veleska-South, and Saturn
- Massive sulfide, skarn and anomalous precious and base metals observed at all locations
- Limited field time, still enough to warrant follow-up





# Finalizing Results and Exploration Plans

- Continuing to observe mineralization “hot spots” and local geological and geophysical relationships
- Adding analytical methods including hyperspectral, thin sections, XRD, and geochemical machine learning analysis
- Development of follow-up exploration plans and advisable drill targets





# Recognition & Collaboration

- **Bureau of Indian Affairs (BIA) – Energy and Mineral Development Program (EMDP) Grant**
- **Chait Borade**, *Director, Land and Resources* at CIRI
- **Chris Benson**, *Geologist* with the DoE
- **Dr. John Proffett**, *Consultant* and Porphyry Expert
- **Steve Masterman**, *Deputy Director, ACMC, Geophysical Institute, UAF*
- **AES Field Crew and Project Team**





Chait Borade  
**Cook Inlet Region, Inc. (CIRI)**  
*Director, Land and Resources*  
[cborade@ciri.com](mailto:cborade@ciri.com)

Phone: 907-263-5553

Stop by the booth downstairs!

**Alaska Earth Sciences**  
12100 Industry Way Unit P-9  
Anchorage, Alaska 99515  
Phone: 907-522-4664  
Fax: 907-349-3557  
[info@alaskaearthsciences.com](mailto:info@alaskaearthsciences.com)