



# The Ruby Fields of Montepuez Complex, Mozambique – Detailed Magnetic and Radioelement Interpretation for Target Generation

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Knowledge Factory P/L

# Outline

- General Geology of the area – at regional and prospects level
- Ruby production within the fields – Driving Target generation
- Regional Aeromagnetic and Radiometric Data
- Integration with Geology and Production Information
- Conclude



# Namahumbire Settlement



MONTEPUEZ RUBY MINING LDA

MINE CAMP



2007/06/05 08:15

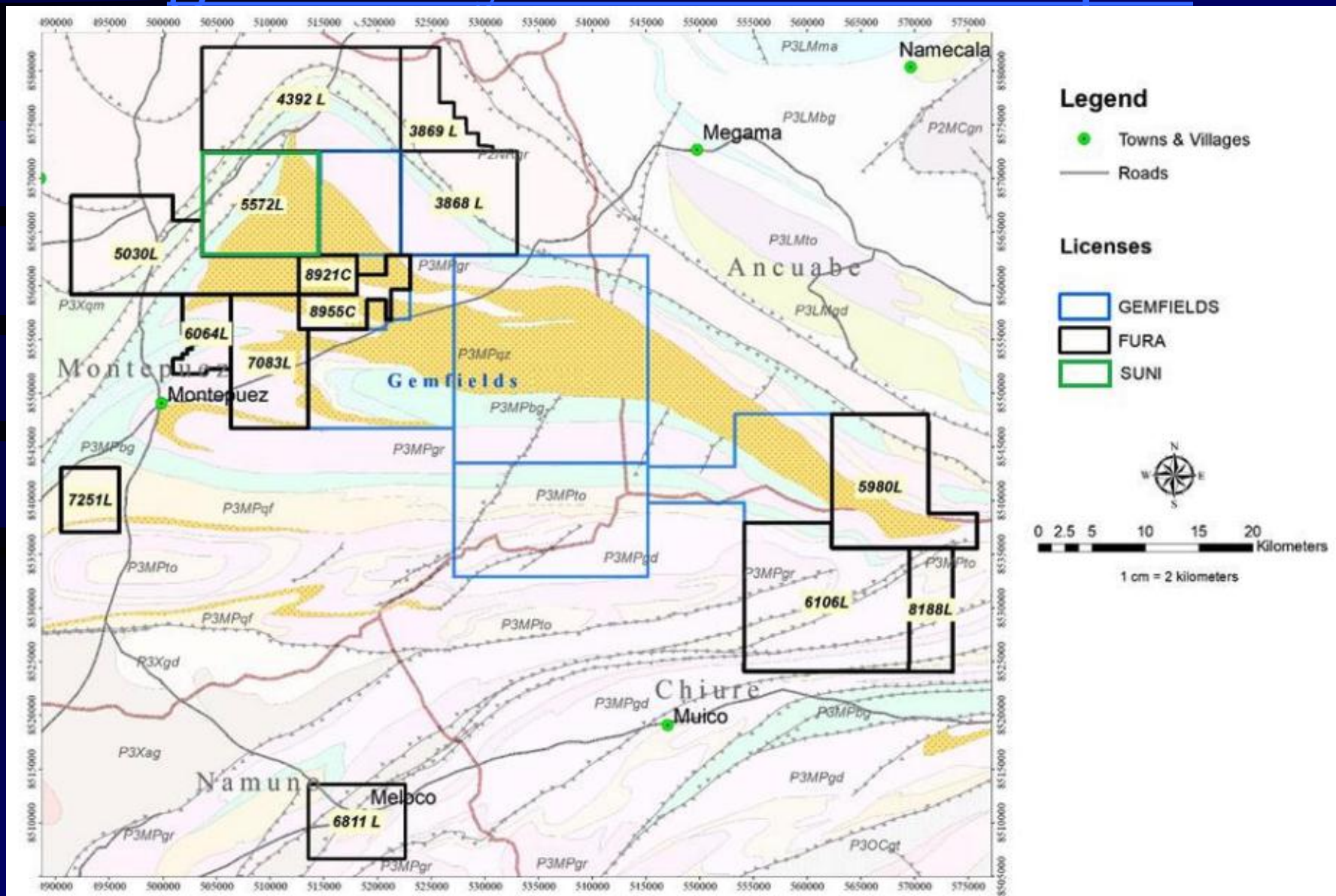
# Transporters



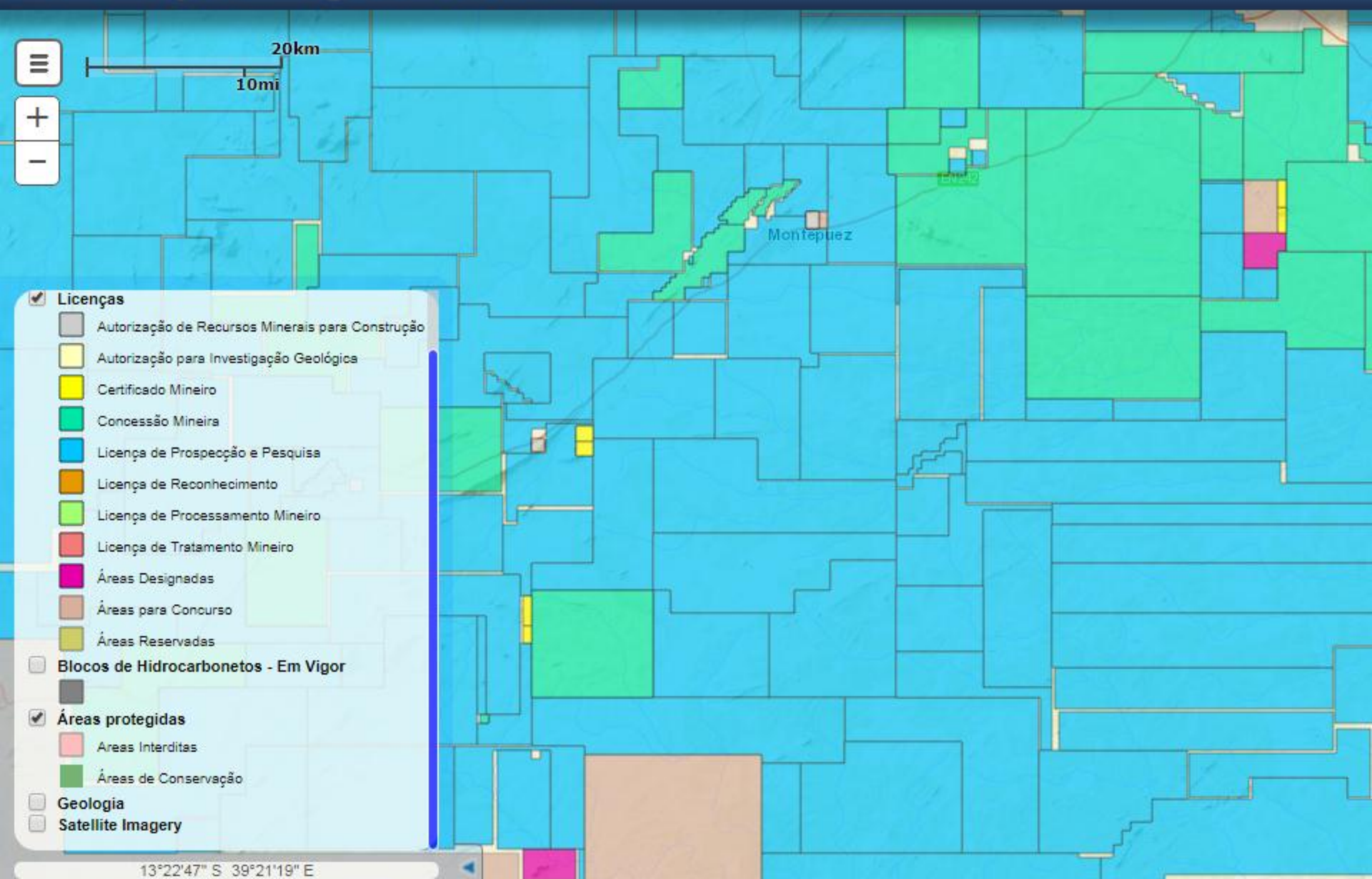
- <http://www.miningweekly.com/article/mozambique-ruby-mining-goes-from-wild-west-to-big-business-2018-08-13>
- In April, [law](#) company [Leigh Day](#) brought a case against [Gemfields](#) in [London](#), claiming more than 100 community members it represents suffered serious human-rights abuses at [Gemfields](#)' operation. Four claimants allege their sons were shot dead by [security](#) forces there.

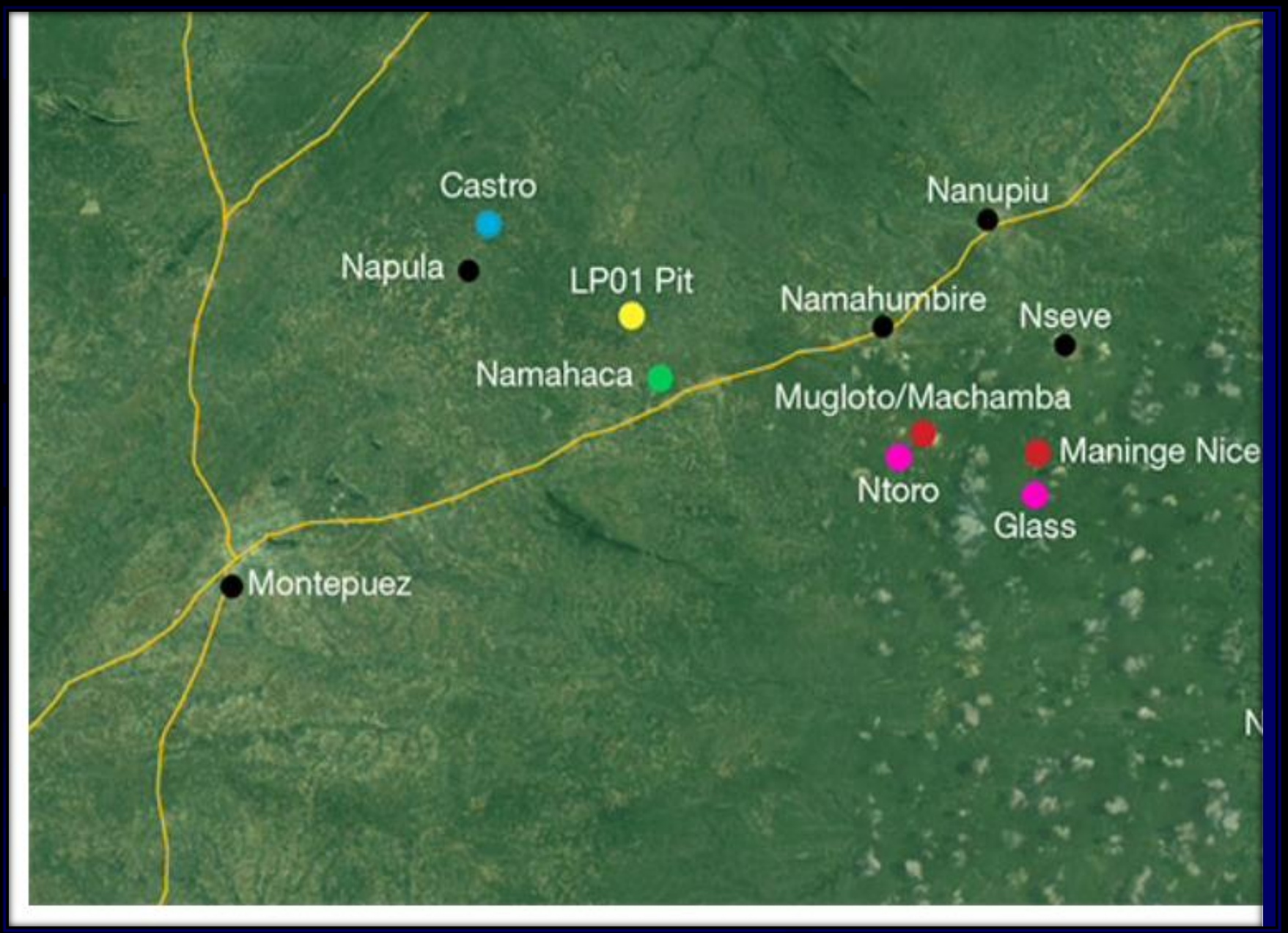
- <http://www.mining.com/fura-gems-grabs-ruby-assets-mozambique/>
- <http://www.miningweekly.com/article/mustang-on-track-to-sell-200-000-ct-of-rubies-in-october-2017-06-28>
- <http://www.miningweekly.com/article/ruby-auction-nets-54m-in-revenue-gemfields-2017-06-15/>
- <http://www.miningweekly.com/article/mozambiques-ruby-sector-advances-2017-02-03>

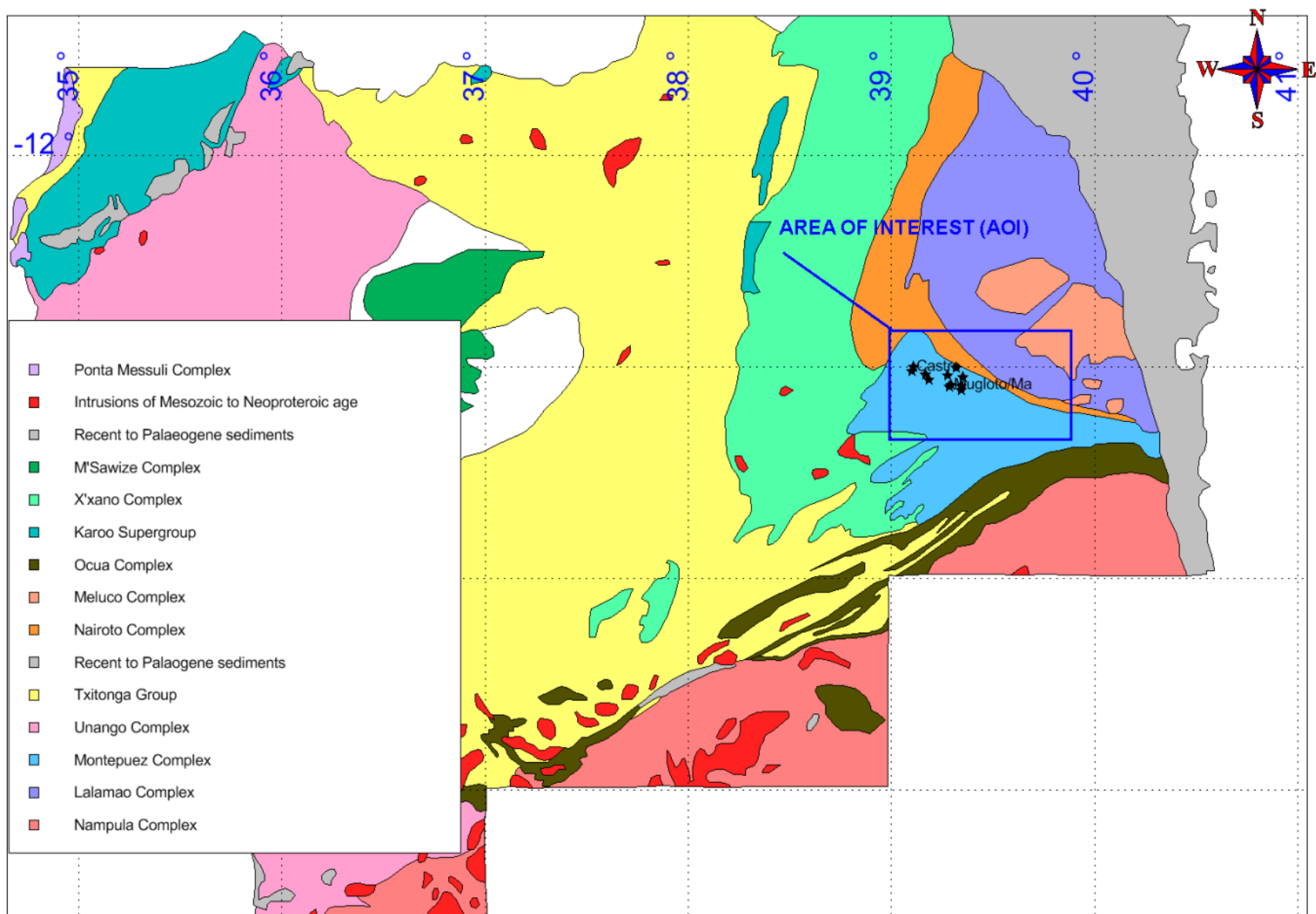
<http://www.mining.com/fura-gems-grabs-ruby-assets-mozambique/>

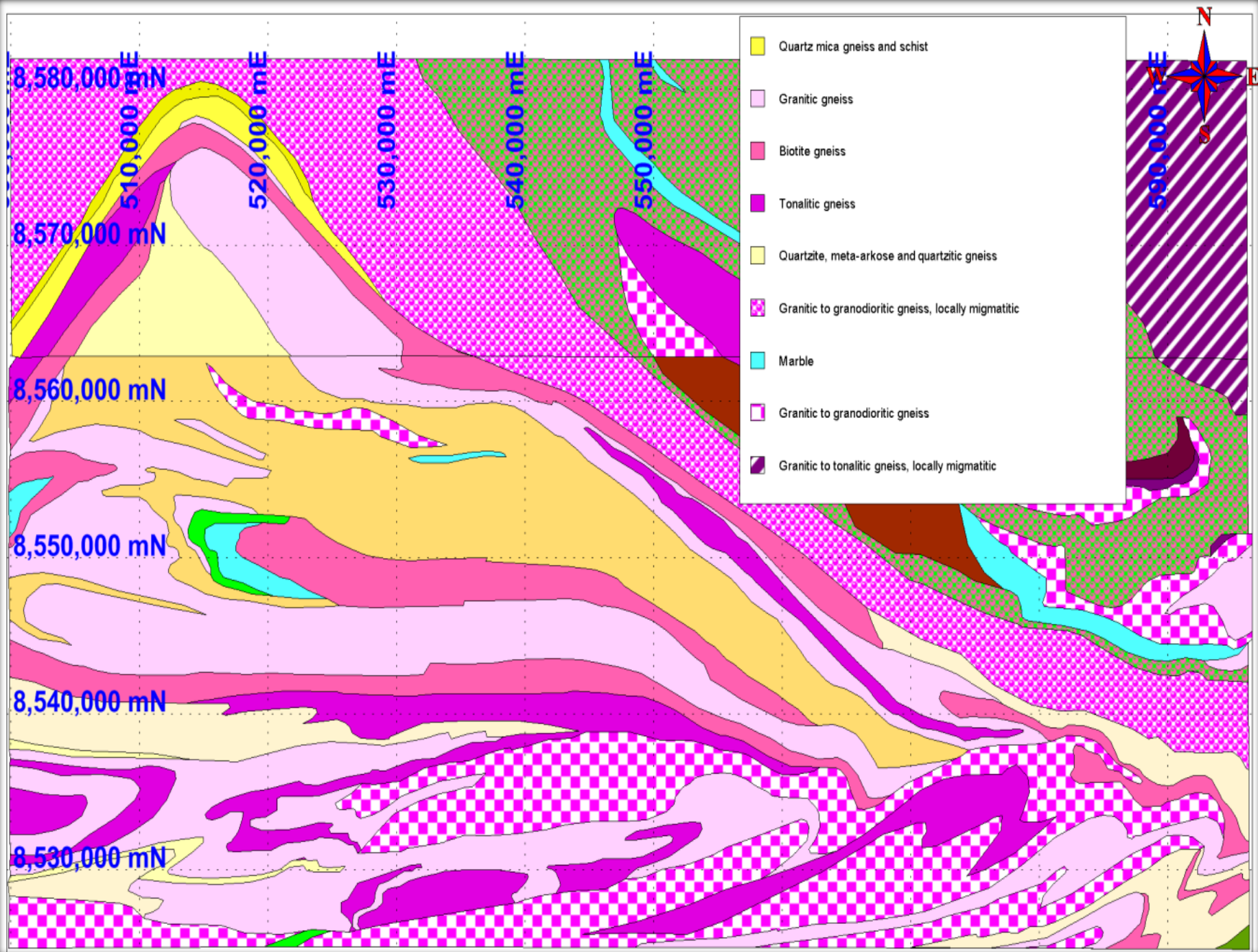


# Mozambique Mining Cadastre Portal









- Eponymous tectonic unit (Boyd et al).
- Mainly composed of strongly deformed gneiss and quartzite.
- Few marble lenses
- Amphibolitic gneisses are host to the rubies, rhodolites
- Generally more magnetic than the other gneisses

# Garimperios – weathered amphibolitic gneiss





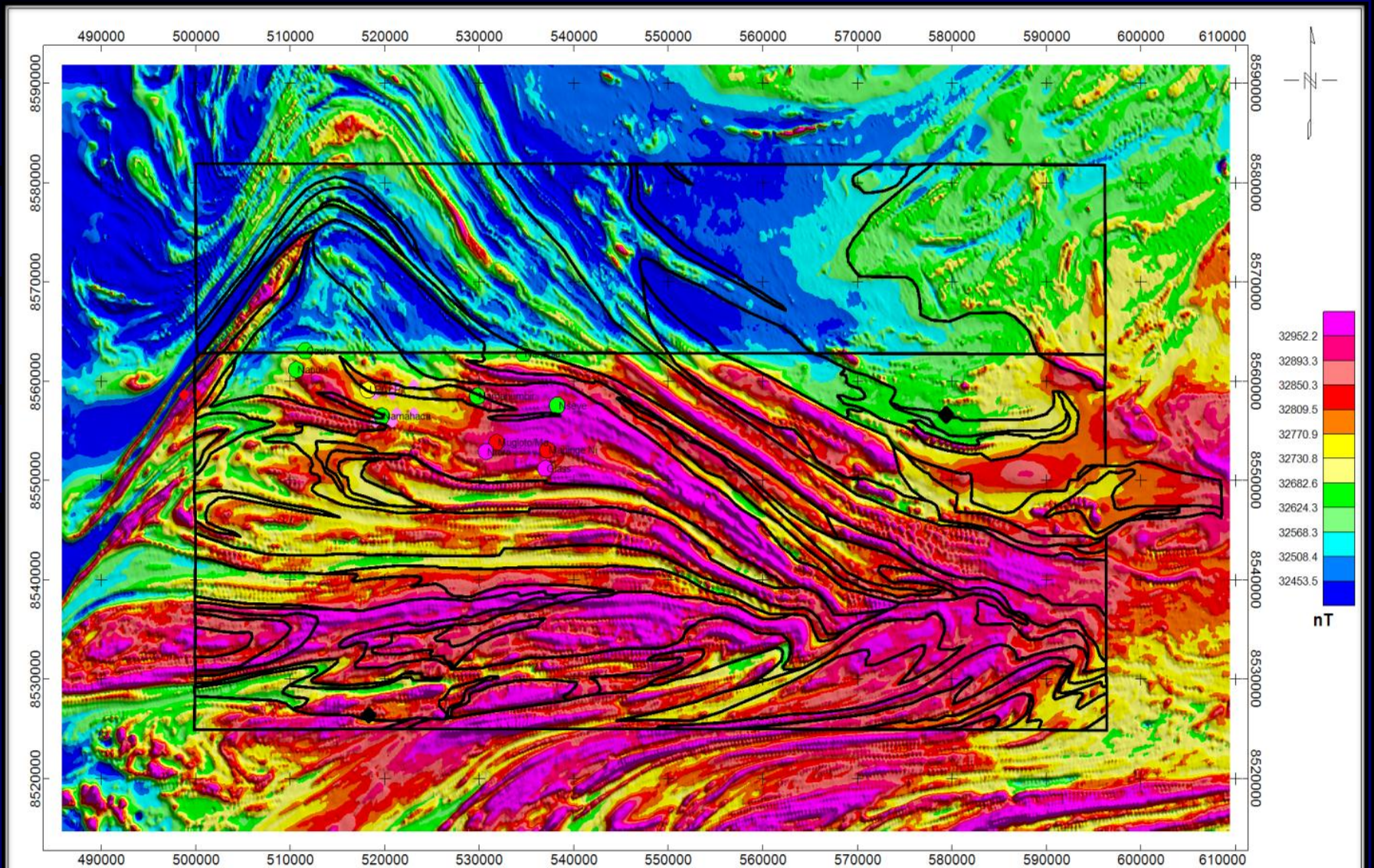


# Commerical Operations

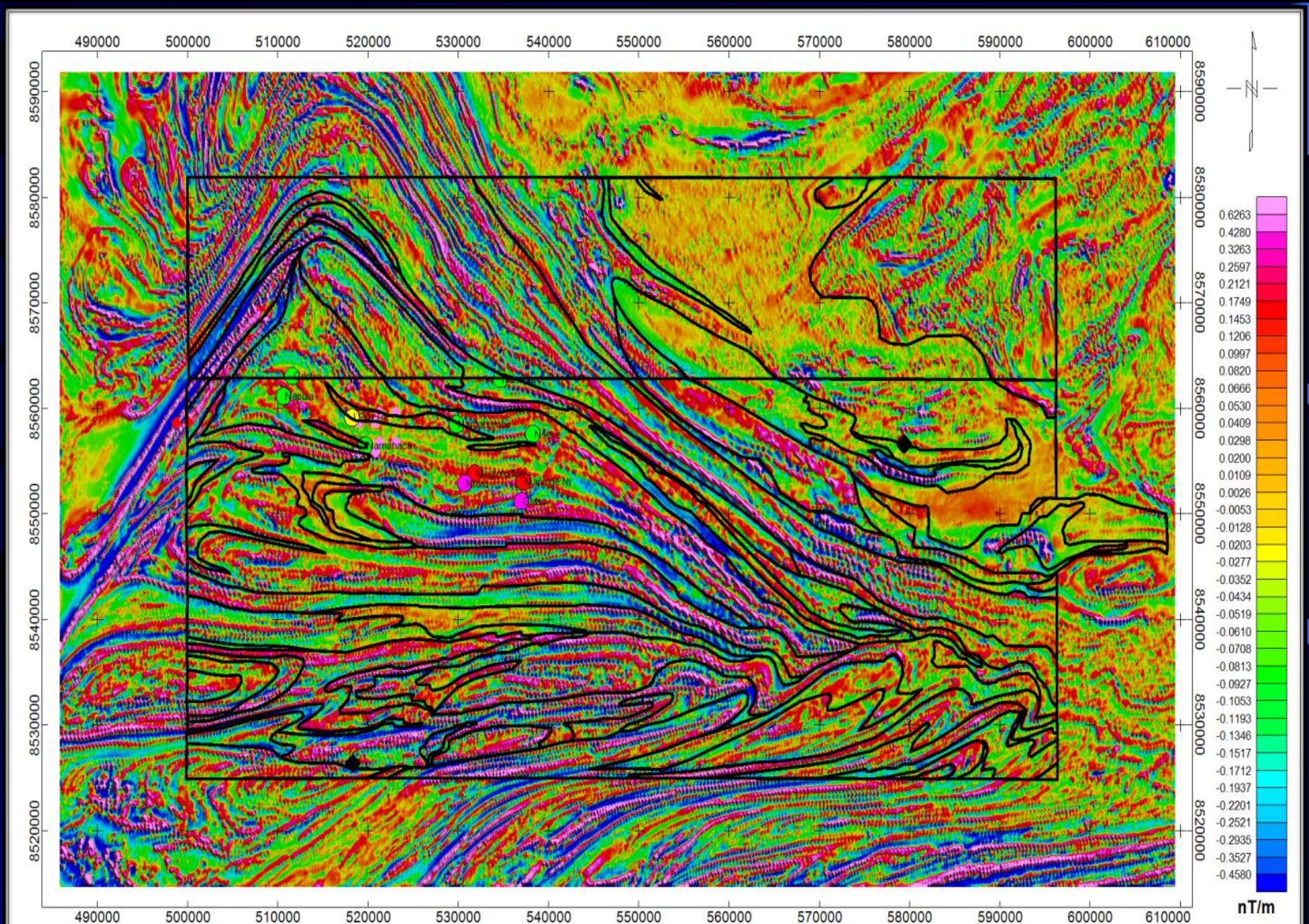




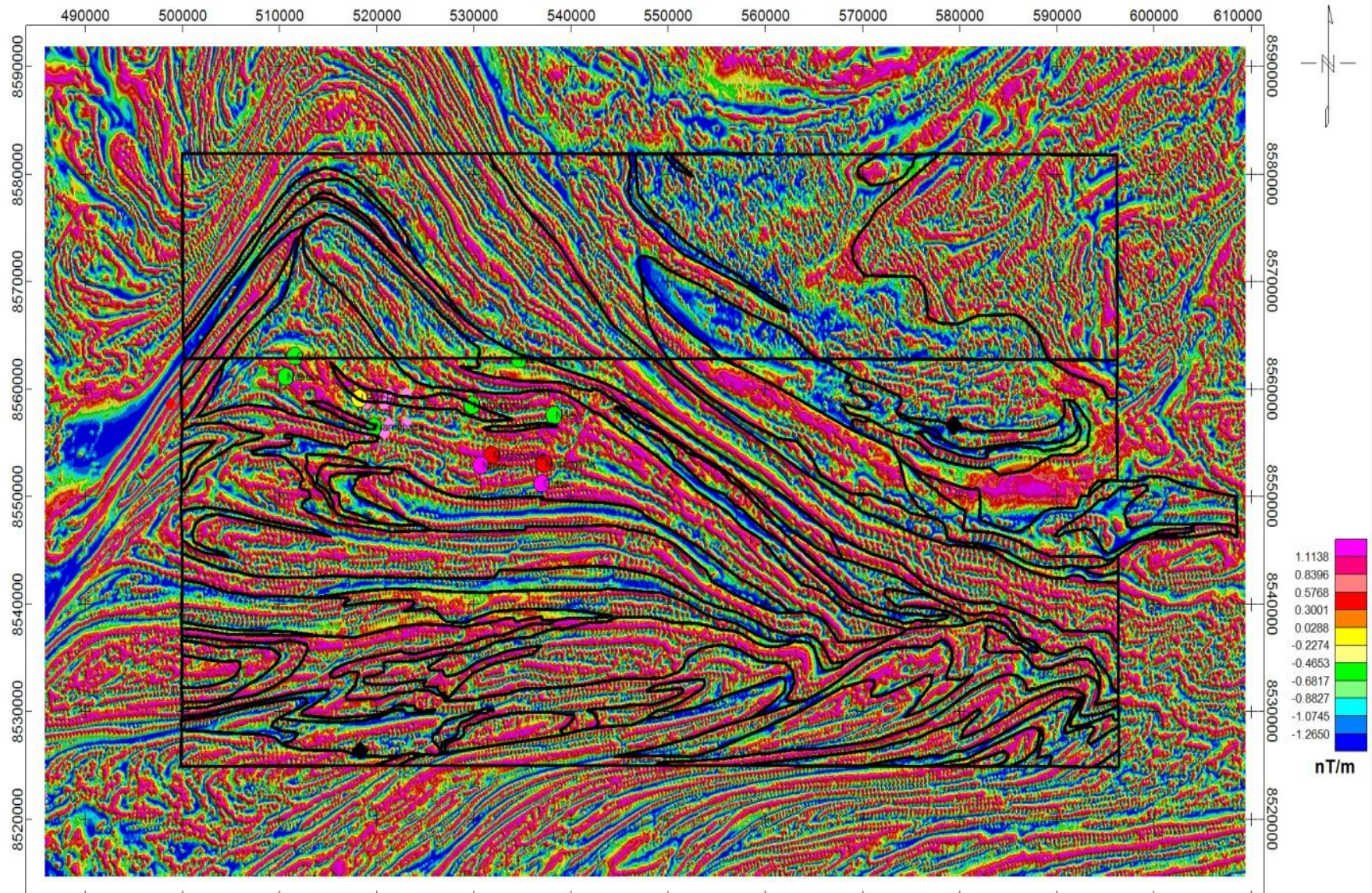
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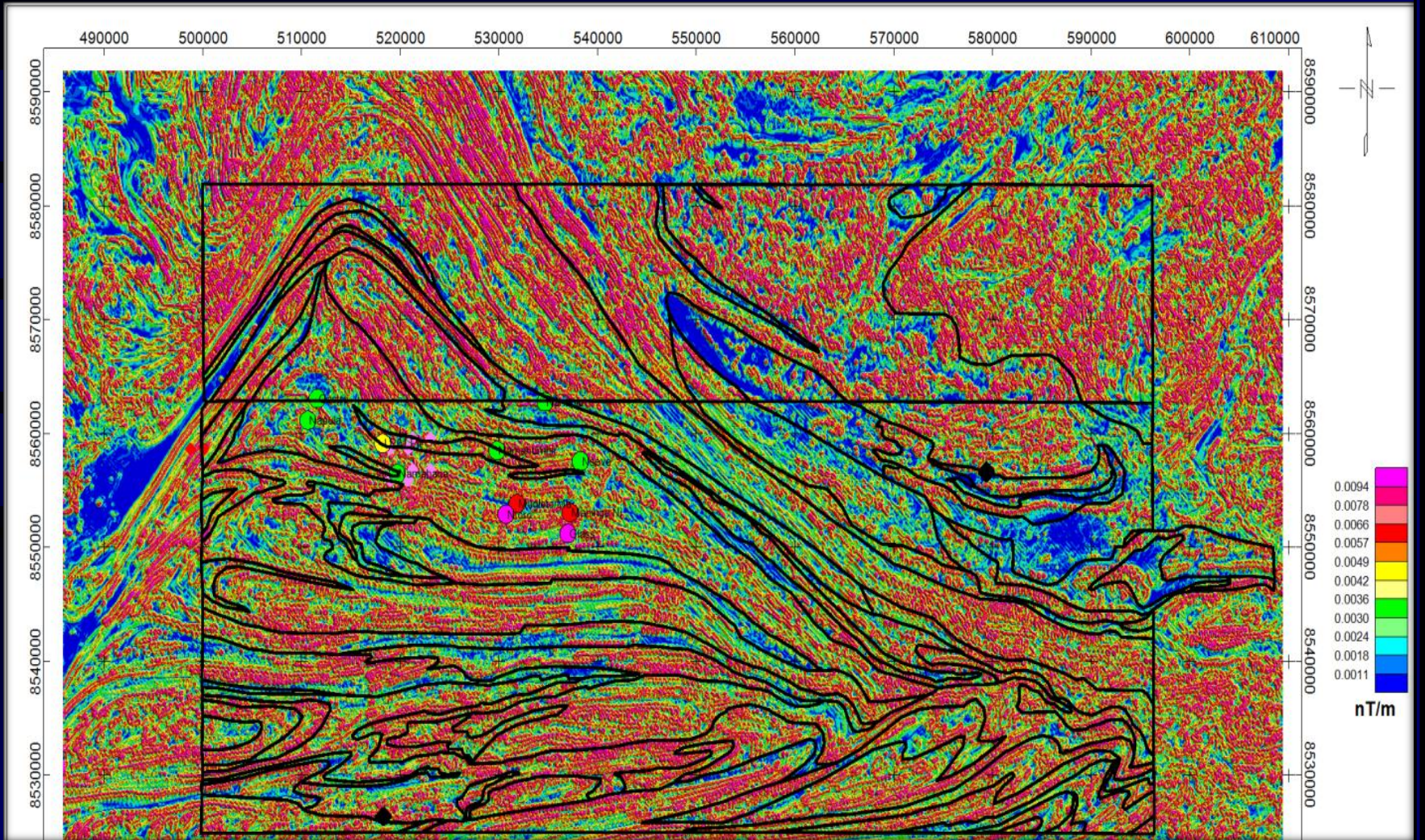
# VERTICAL DERIVATIVE



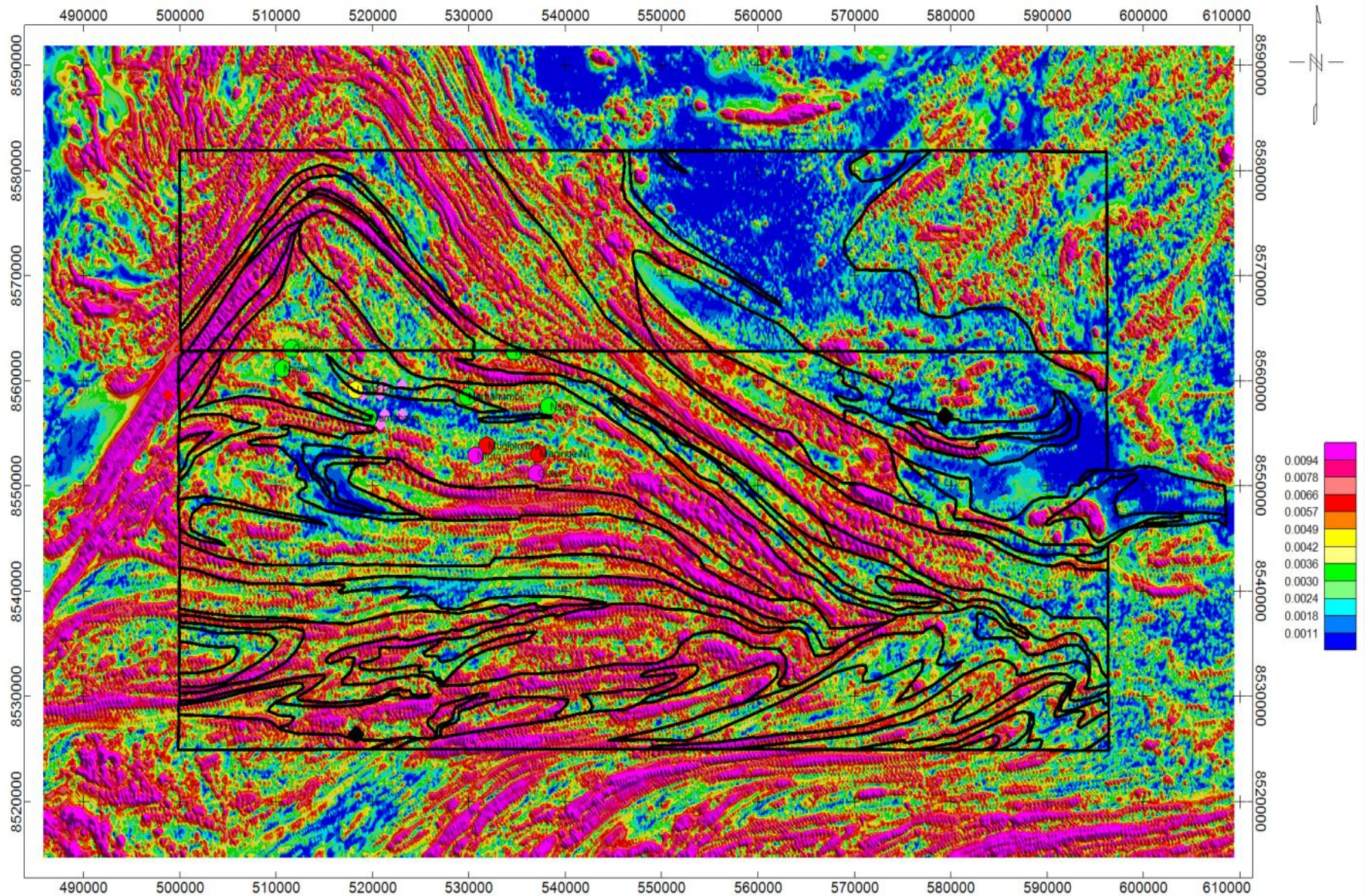
# TILT DERIVATIVE



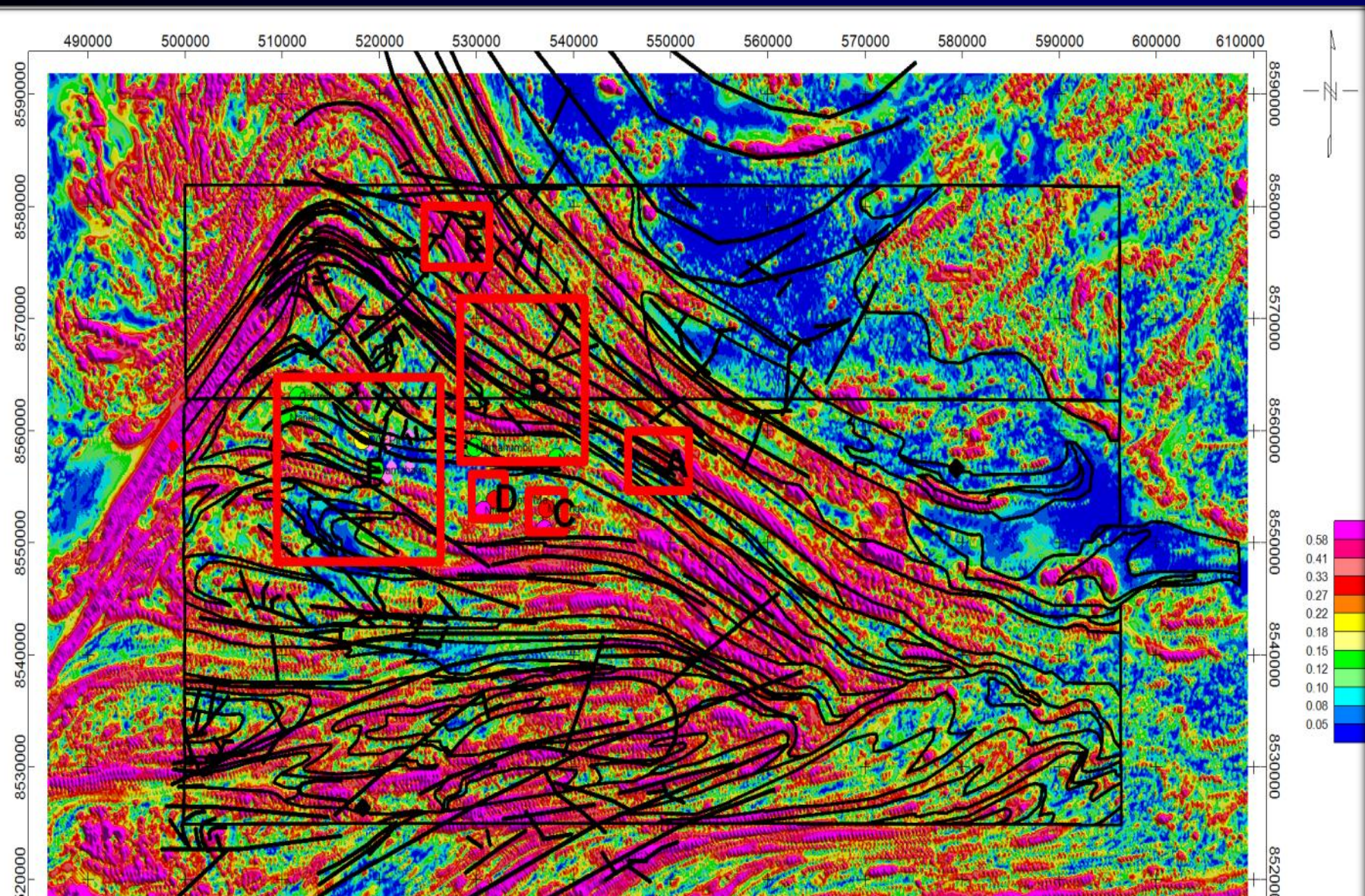
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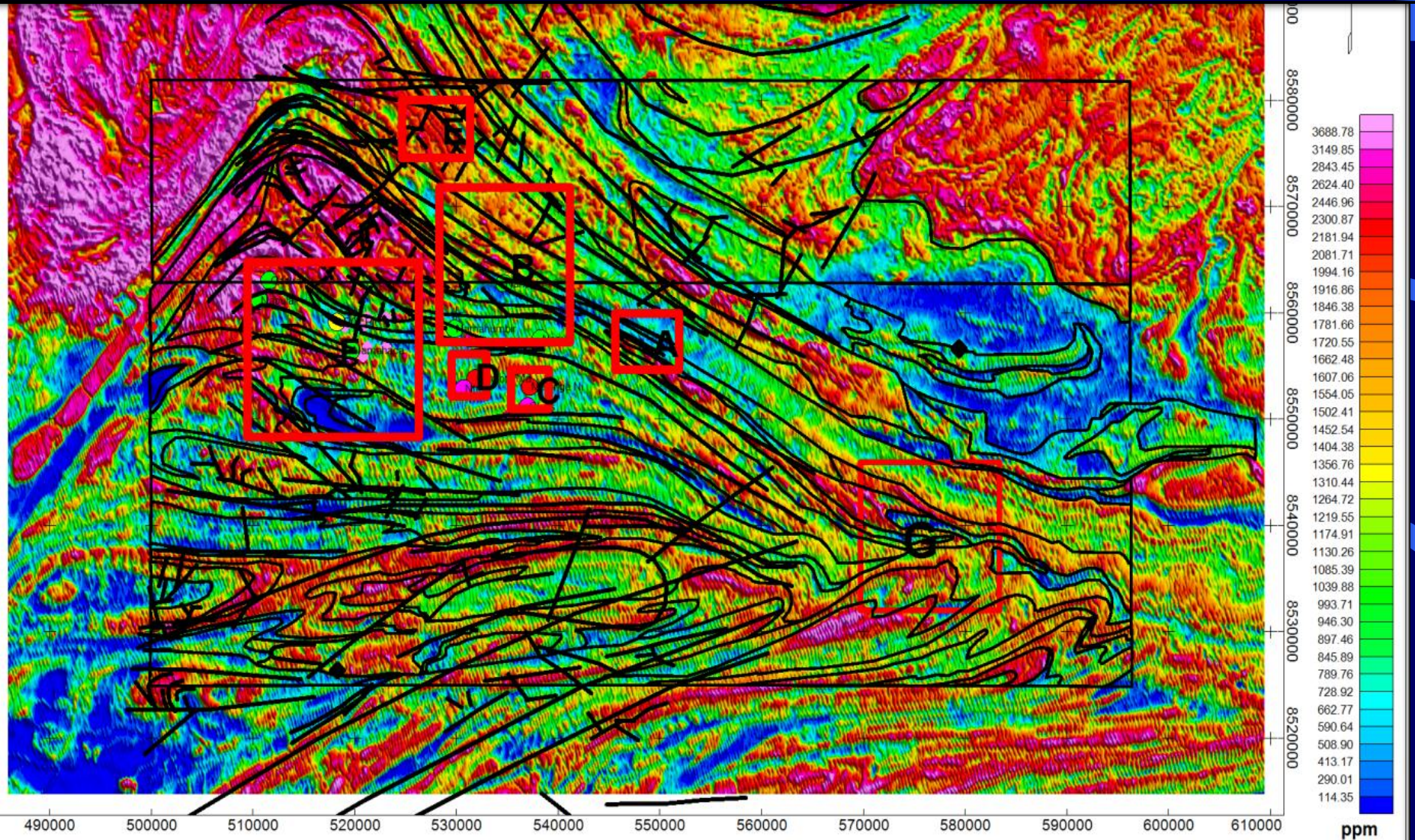
# ANALYTICAL SIGNAL



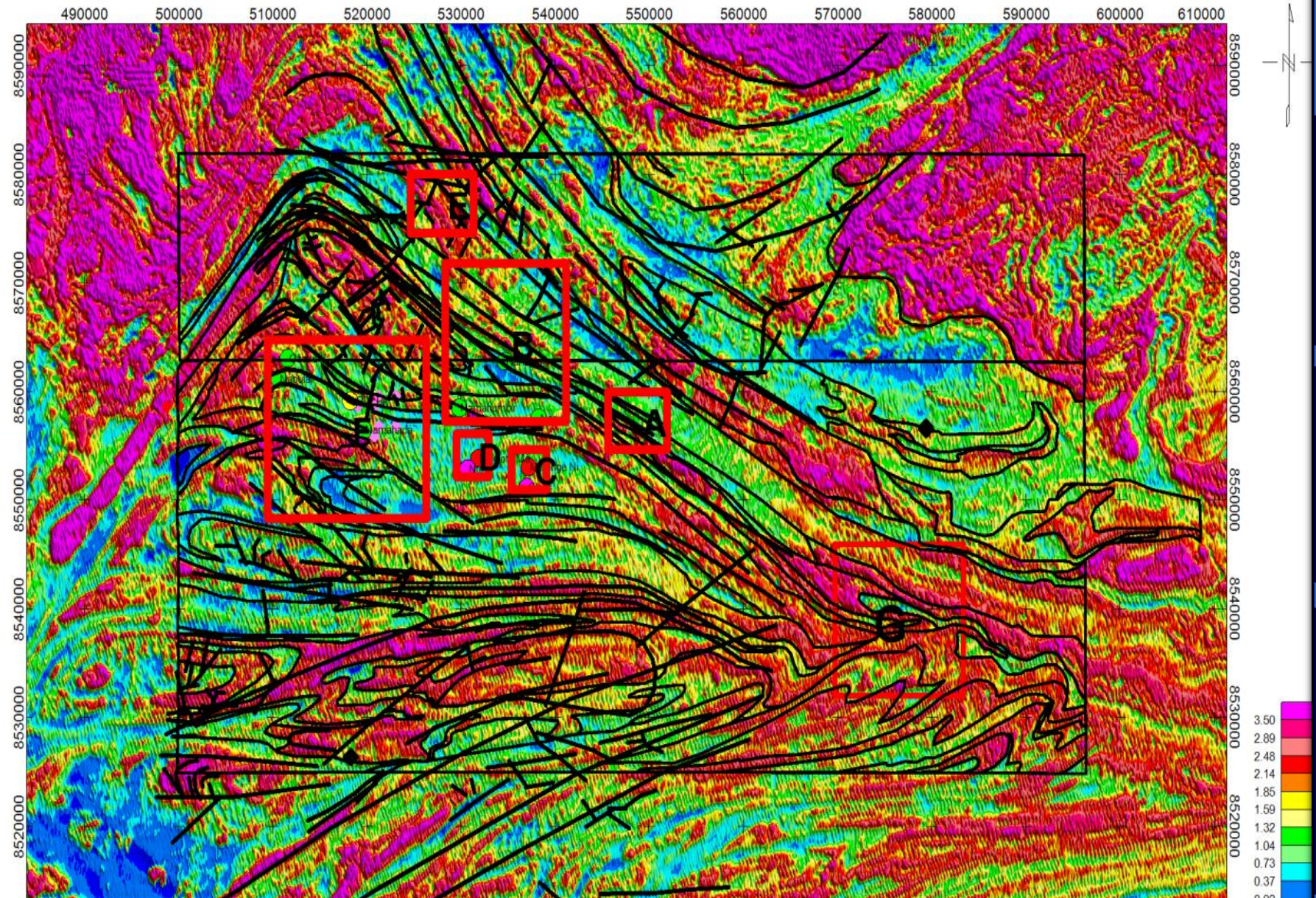
# ANALYTICAL SIGNAL OF MAGNETICS cont.



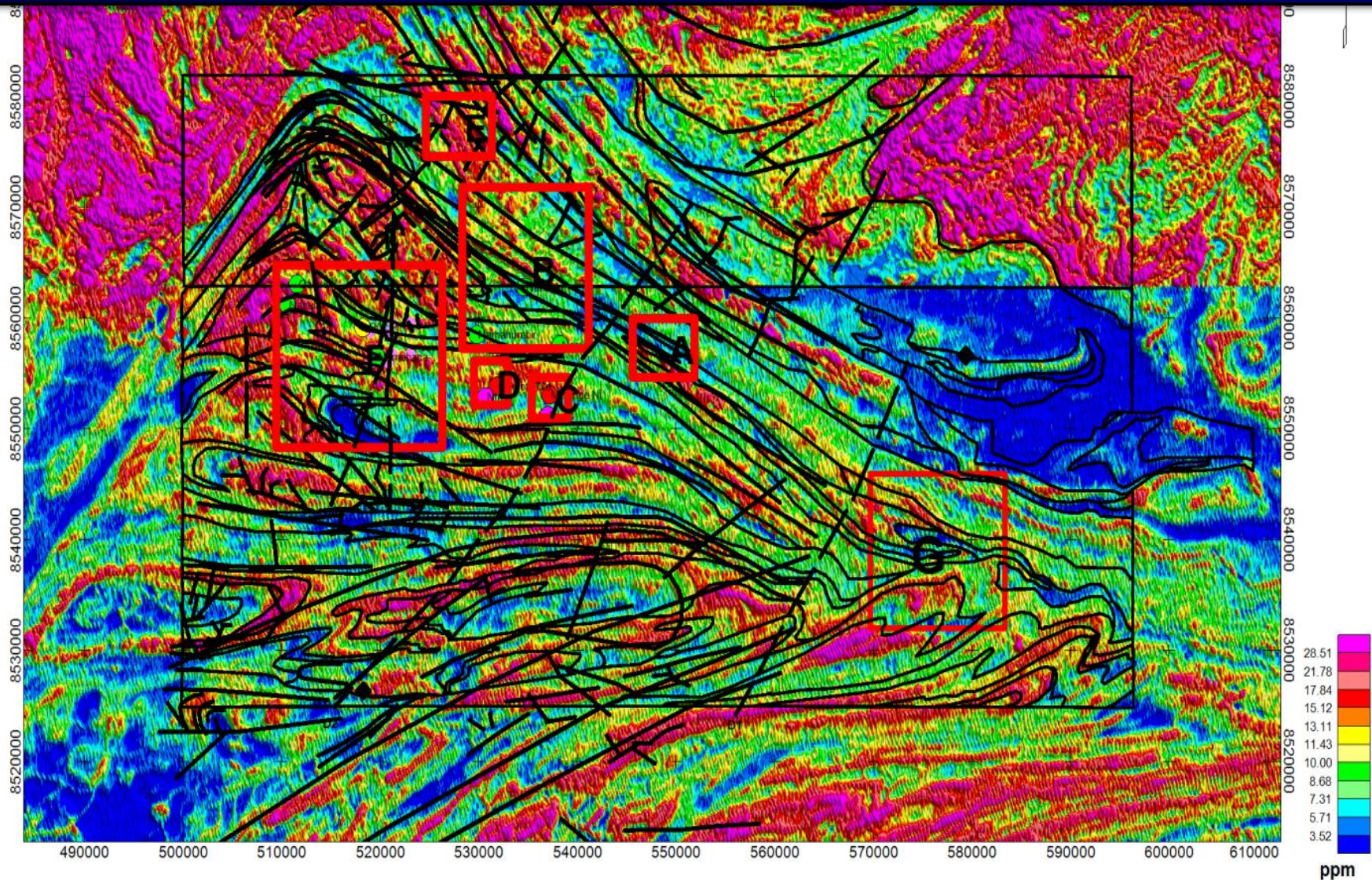
# TOTAL COUNT



# POTASSIUM



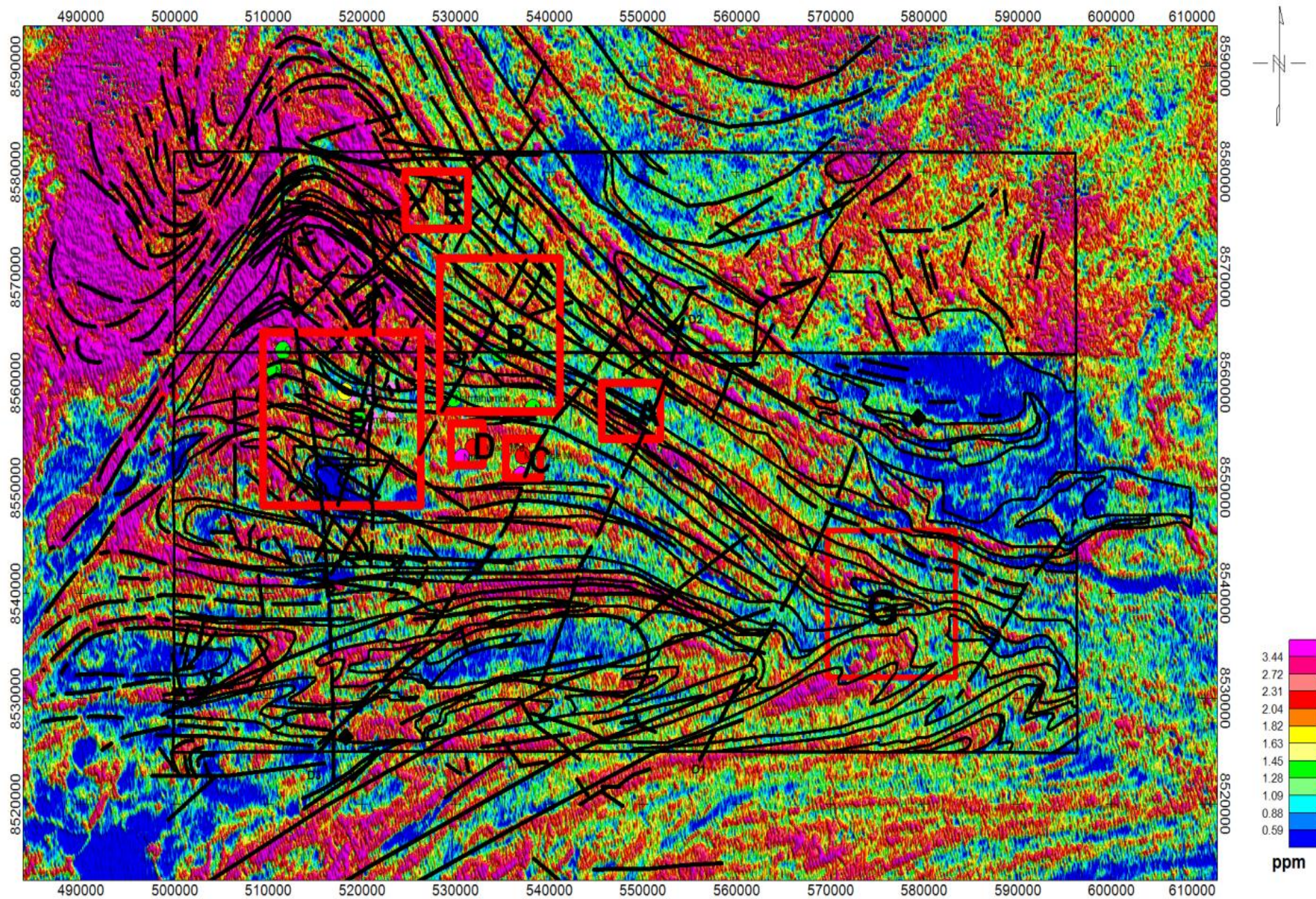
# THORIUM



Ruby Mont Limitada

Thorium Count Map Overlay by Geological Contacts and Ruby Mines

# URANIUM



- The known ruby prospects are associated with NE SW trending regional ductile structures. 5 have been mapped from the magnetic data
- Zones where magnetic lineaments open up are more interesting than where these tend to come together
- Tight folds, parasitic folds have been mapped
- Presence of potential isoclinal folds with folds indicate the level of deformation