



**USAID**  
FROM THE AMERICAN PEOPLE

**SOUTHERN AFRICA**

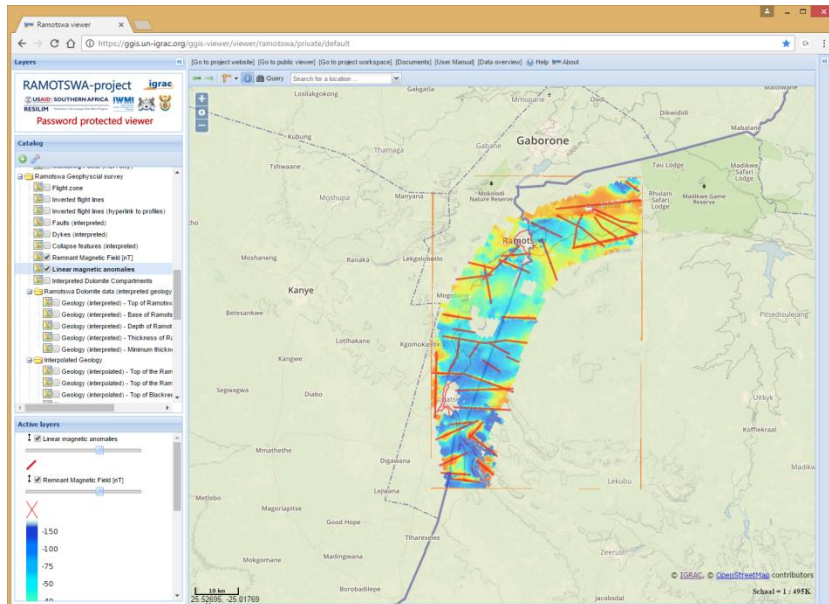
**RESILIM** : Resilience in the Limpopo River Basin Program



Research  
Program on  
Water, Land and  
Ecosystems

# RAMOTSWA project

## The Potential Role of the Transboundary Ramotswa Aquifer



***RIMS 1.0 – GOES PUBLIC !  
Powered by all***

*Geert-Jan Nijsten  
IGRAC - International Groundwater Resources  
Assessment Centre*

*Ramotswa Technical Meeting  
1 December 2016*





# Decisions

- All available map layers have been made available in the public viewer
- Downloading files in public viewer will be limited to excel files only
  - reason is limited user rights of geological maps from council of geoscience.
- For shapefile download user will need to contact RIMS-managers (via IGRAC)



# RIMS 1.0 GOES PUBLIC



**But does it also go live....?**

<http://ramotswa.un-igrac.org/>



# Last improvements in fase 1

- Guide users with download request to RIMS managers
- Improve:
  - Delineation of aquifer indicating extent of aquifer to the East + minimum thickness aquifer + compartments
  - Borehole data overview both countries
- Include:
  - Landuse maps
  - Locations of small dams
  - Location land fill sites (pollution risk)
  - Location Water treatment plants (pollution risk)
- Upload more references / literature into document module
- ...and several minor improvements / clarifications



# Ramotswa fase 2

## Hand-over and future maintenance of RIMS:

- Additional training with RIM-managers+
- Hands-on activities by RIMS-managers+
- Creating a network of users?

## Functionalities:

- Investigate possibilities setting download options per layer rather than per viewer
- Time series?

## Data (to be discussed in fase 2)

- Further harmonisation of some data sets
- Quantify groundwater use?
- Time series?
- Quality data?
- MAR + Flood risks?
- Vulnerability mapping (quality)?
- ...



# DISCUSSION

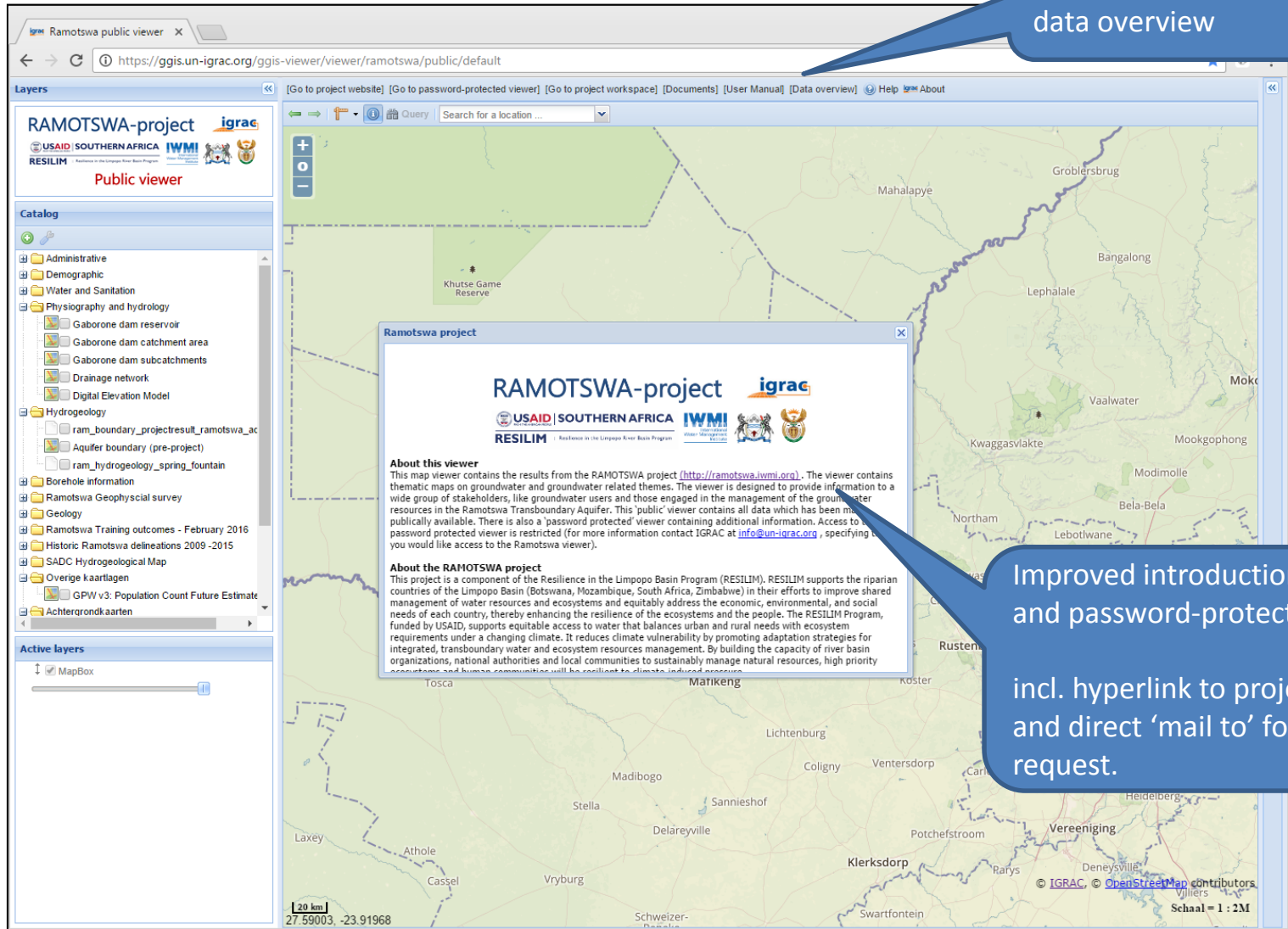


# Latest improvements



# Start screen

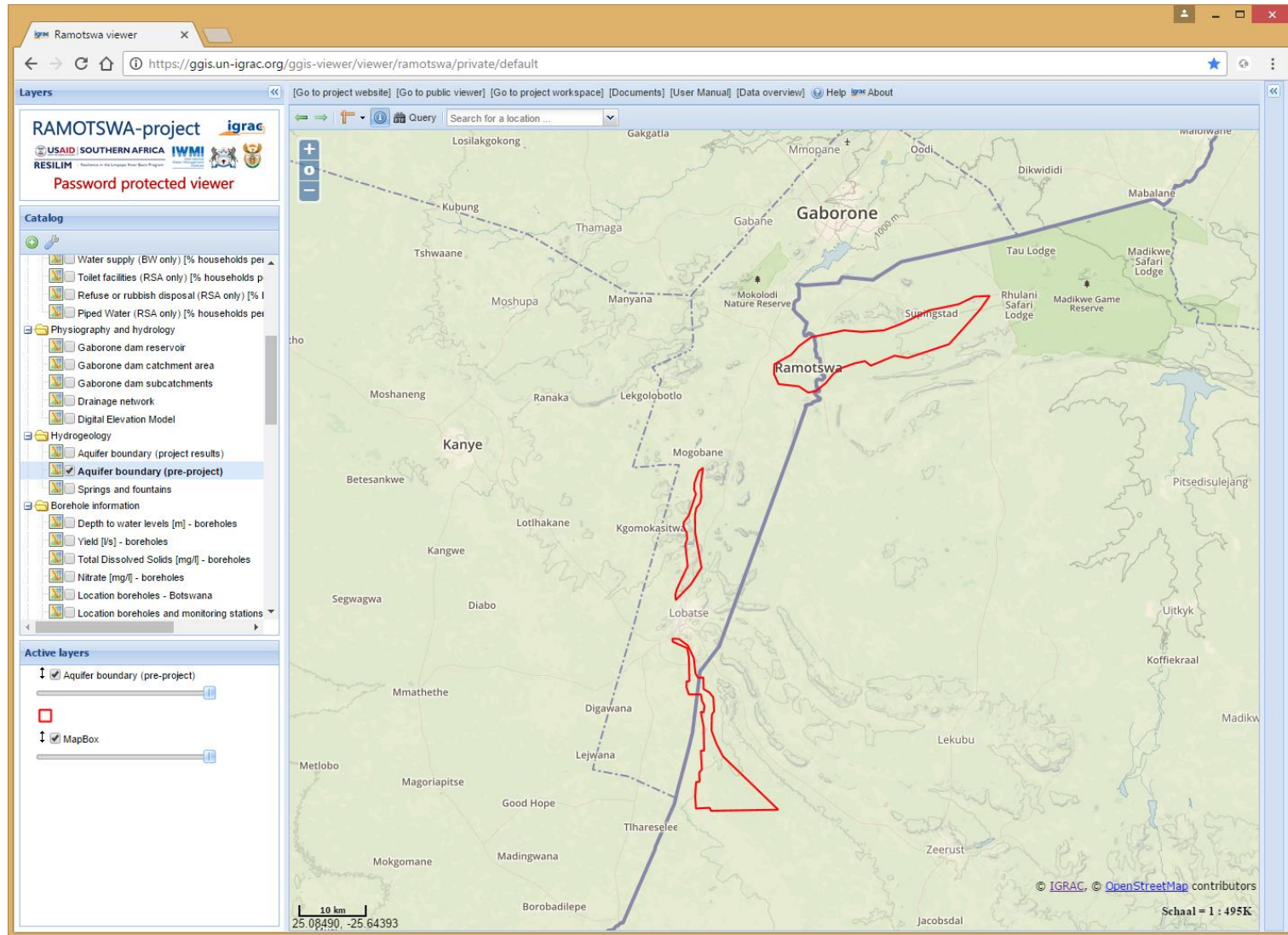
Direct access to user manual and technical data overview



Improved introduction of public and password-protected viewers, incl. hyperlink to project website and direct 'mail to' for login request.

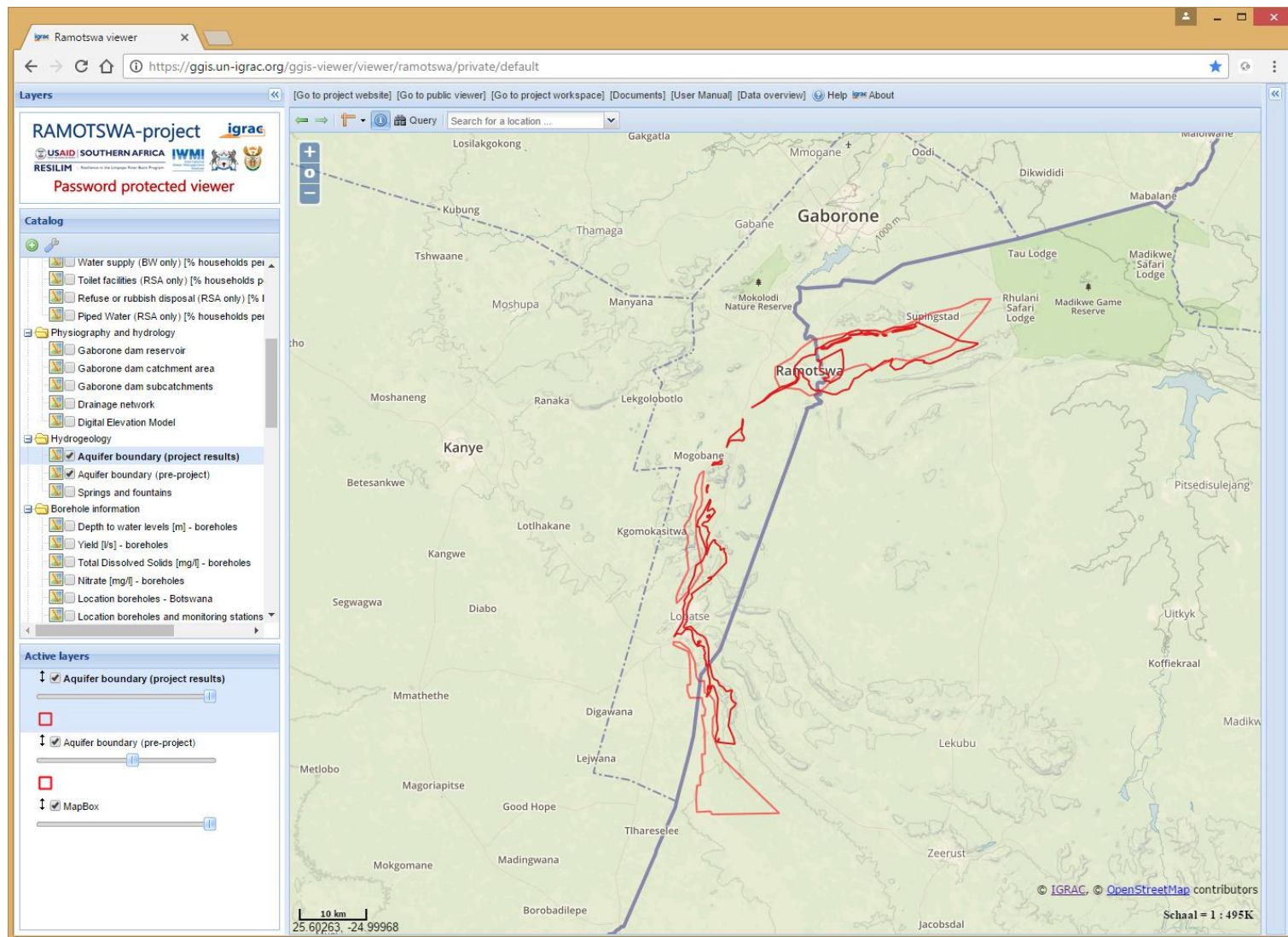


# Old aquifer delineation



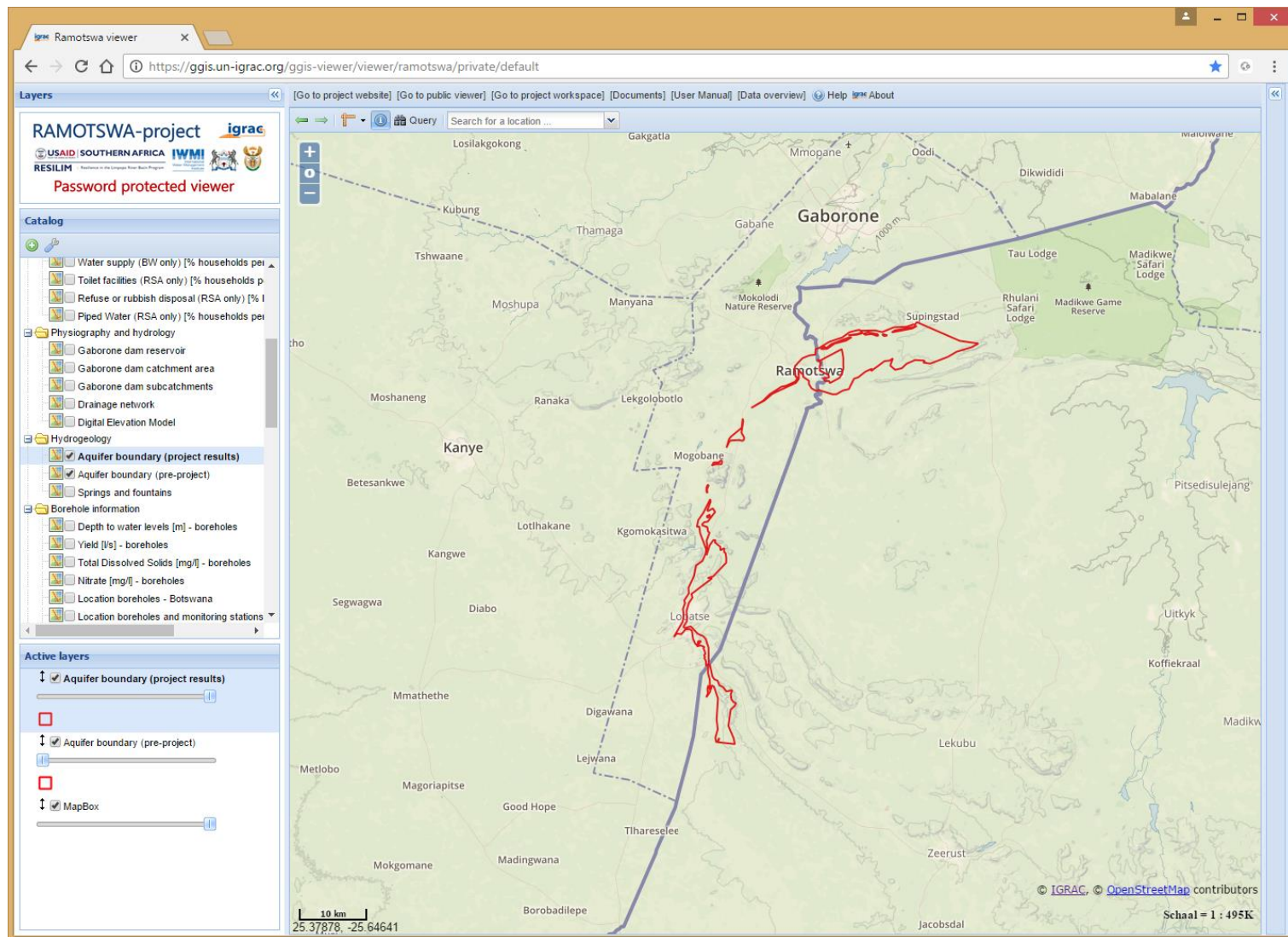


# Improved aquifer delineation



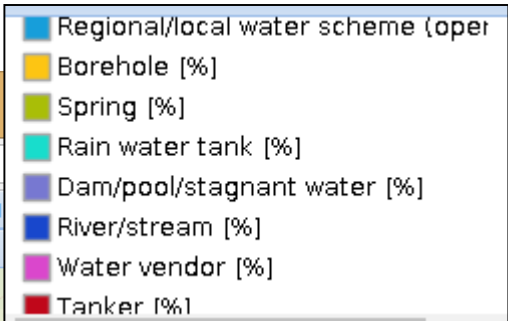


# Improved aquifer delineation



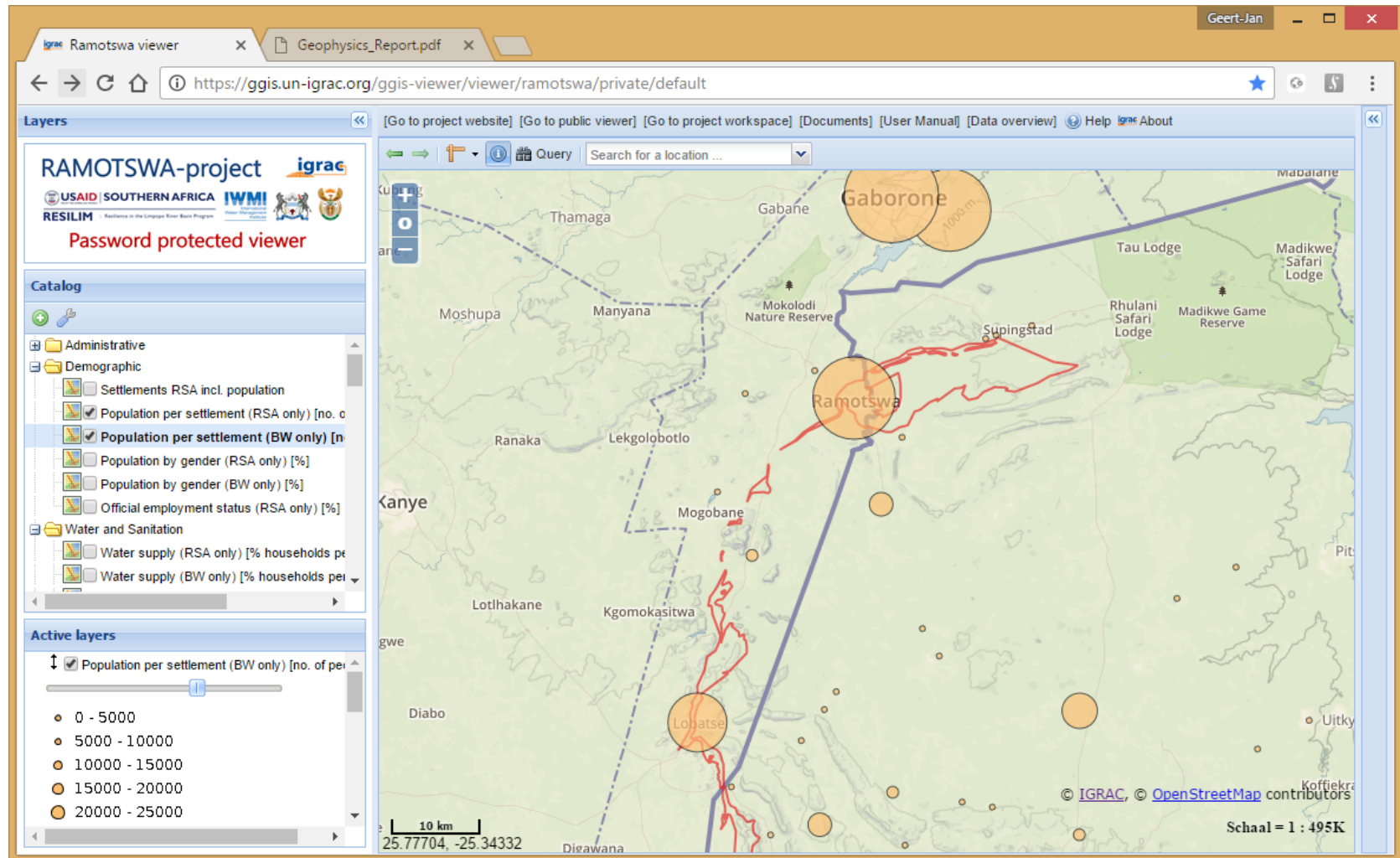


■ Piped water indoors [%]  
■ Piped outdoors [%]  
■ Borehole [%]  
■ Communal tap [%]  
■ Neighbours tap [%]  
■ Tanker/Bousser [%]  
■ Other [%]



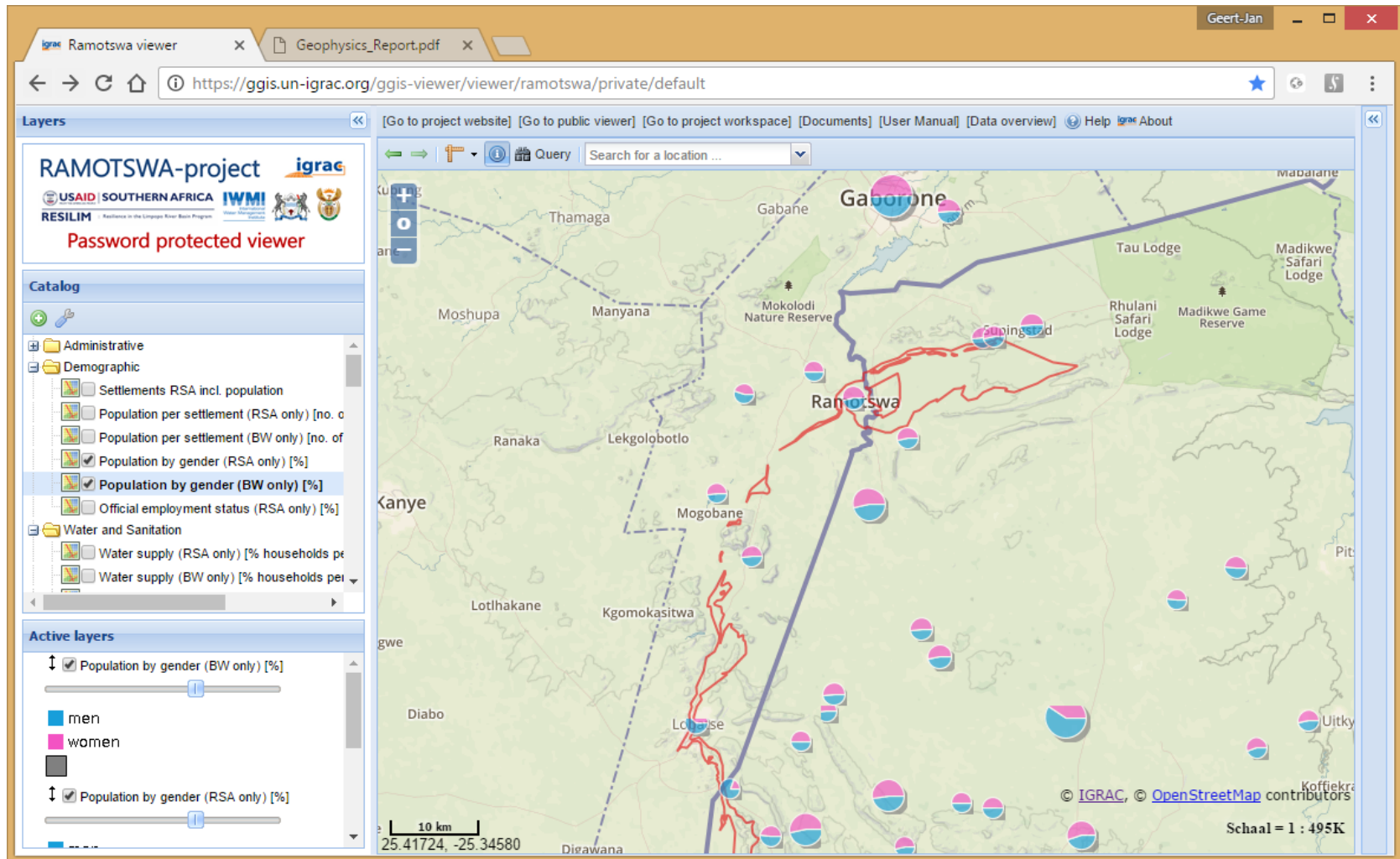


# Scalable Pie charts



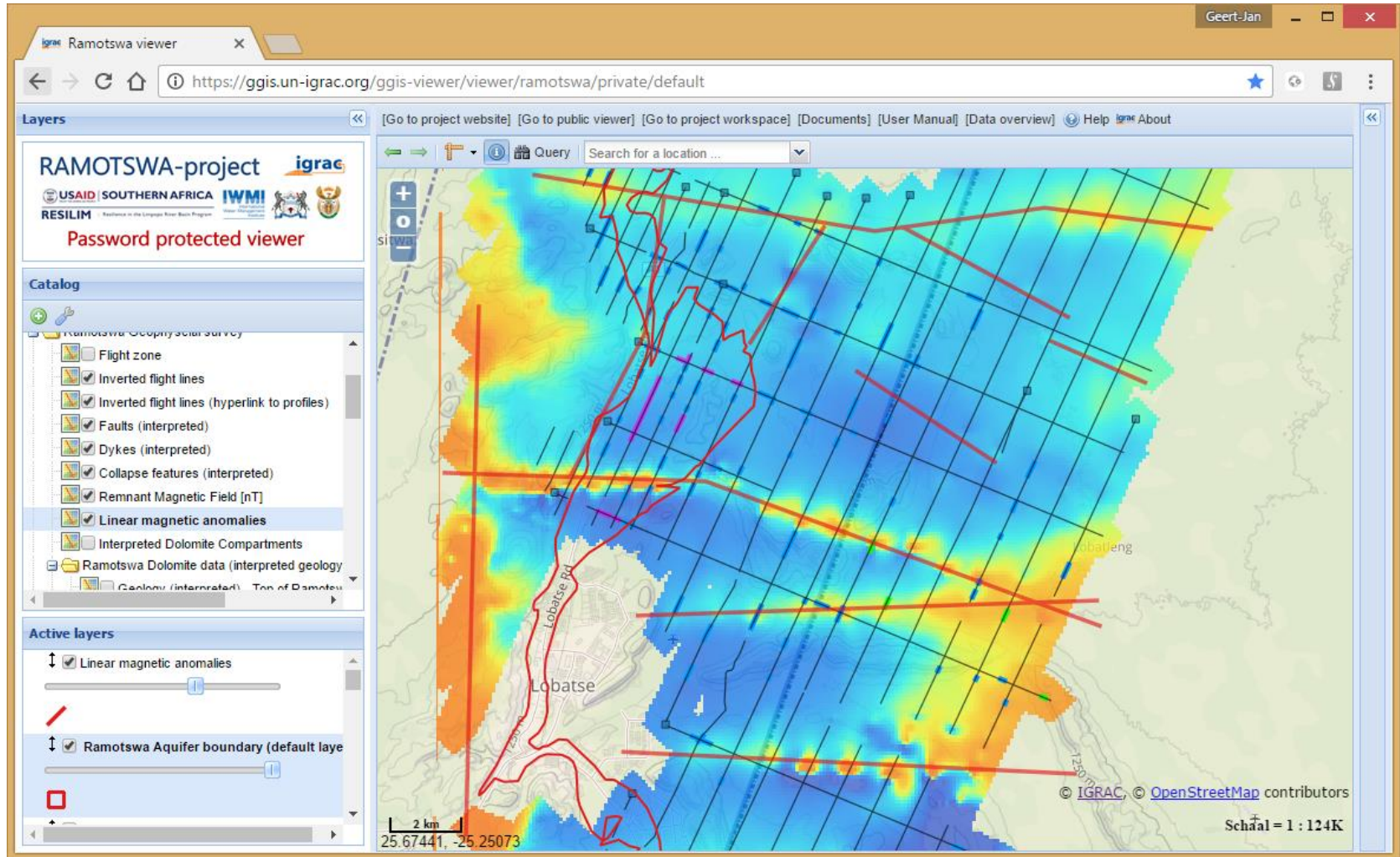


# Gender (and population)



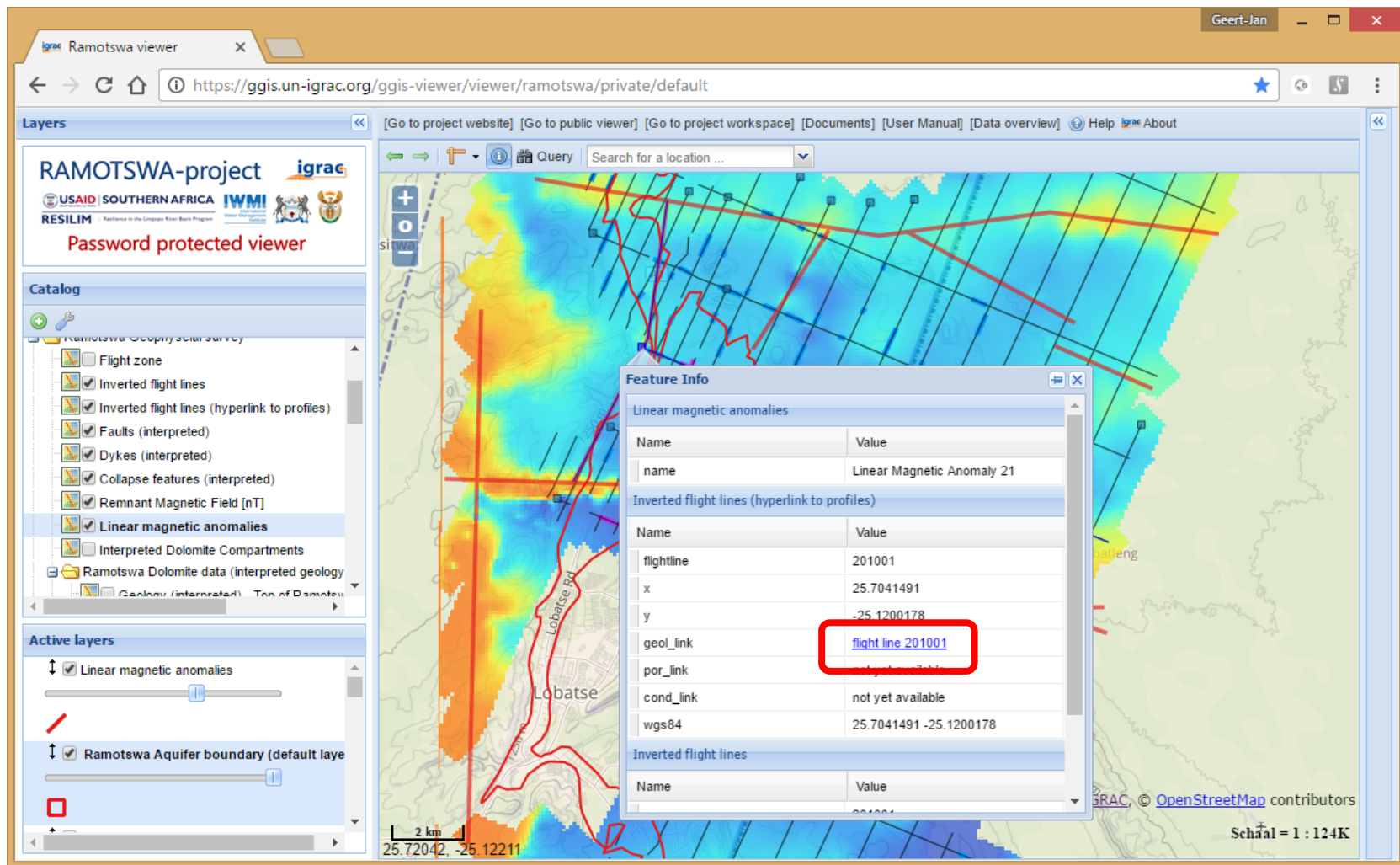


# Hyperlinks in feature table



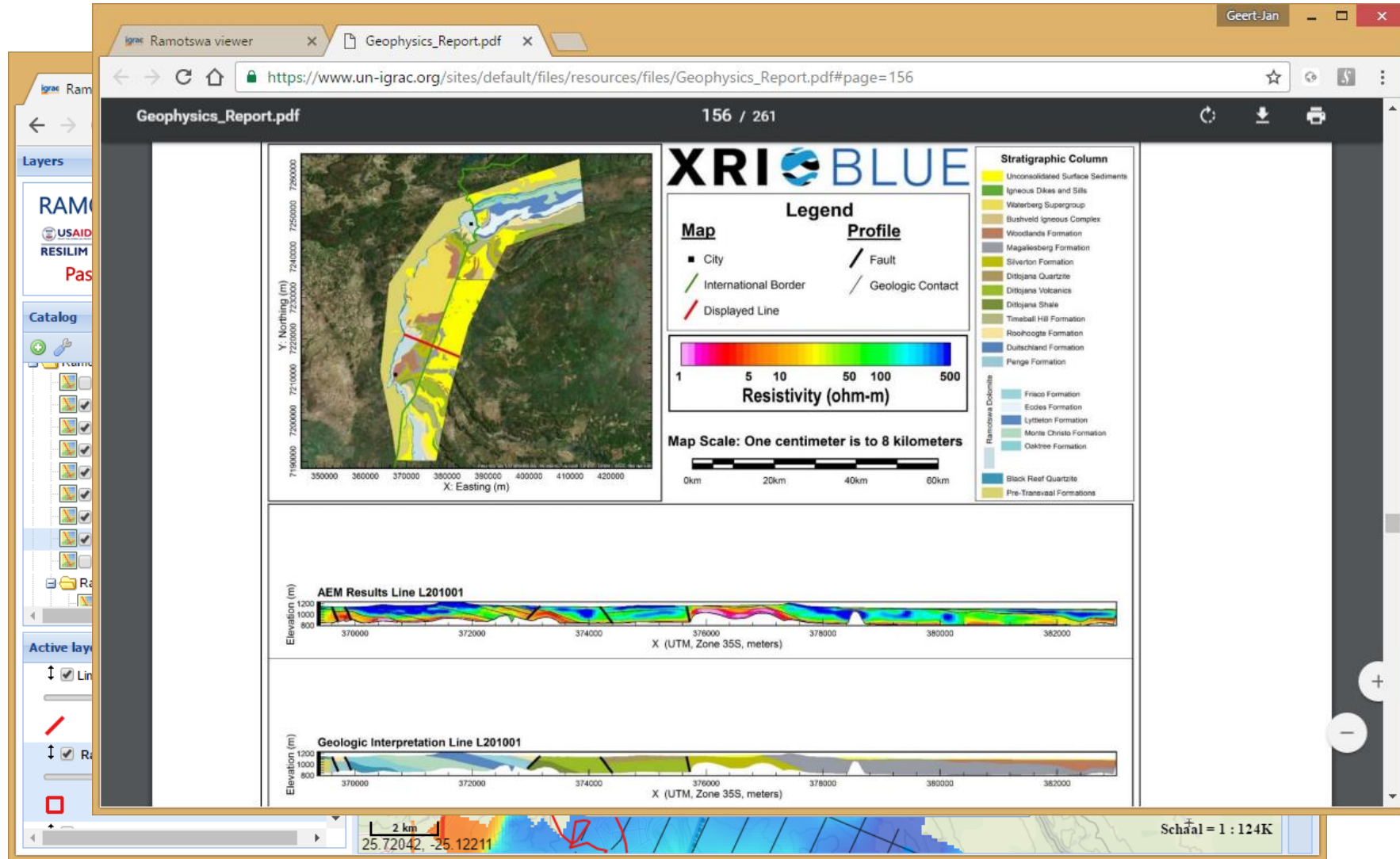


# Hyperlinks in feature table





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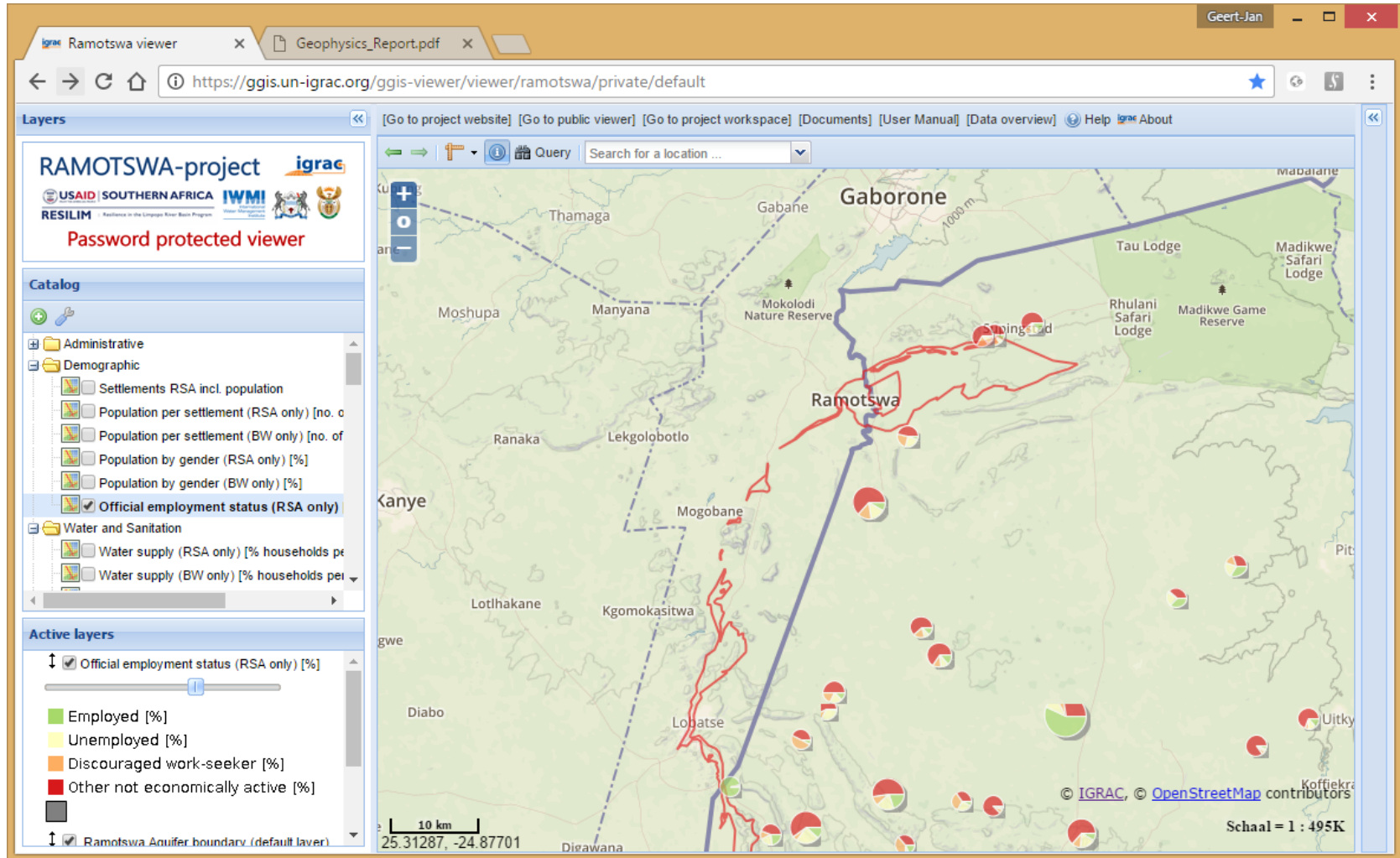




# Lots of new or improved layers since September

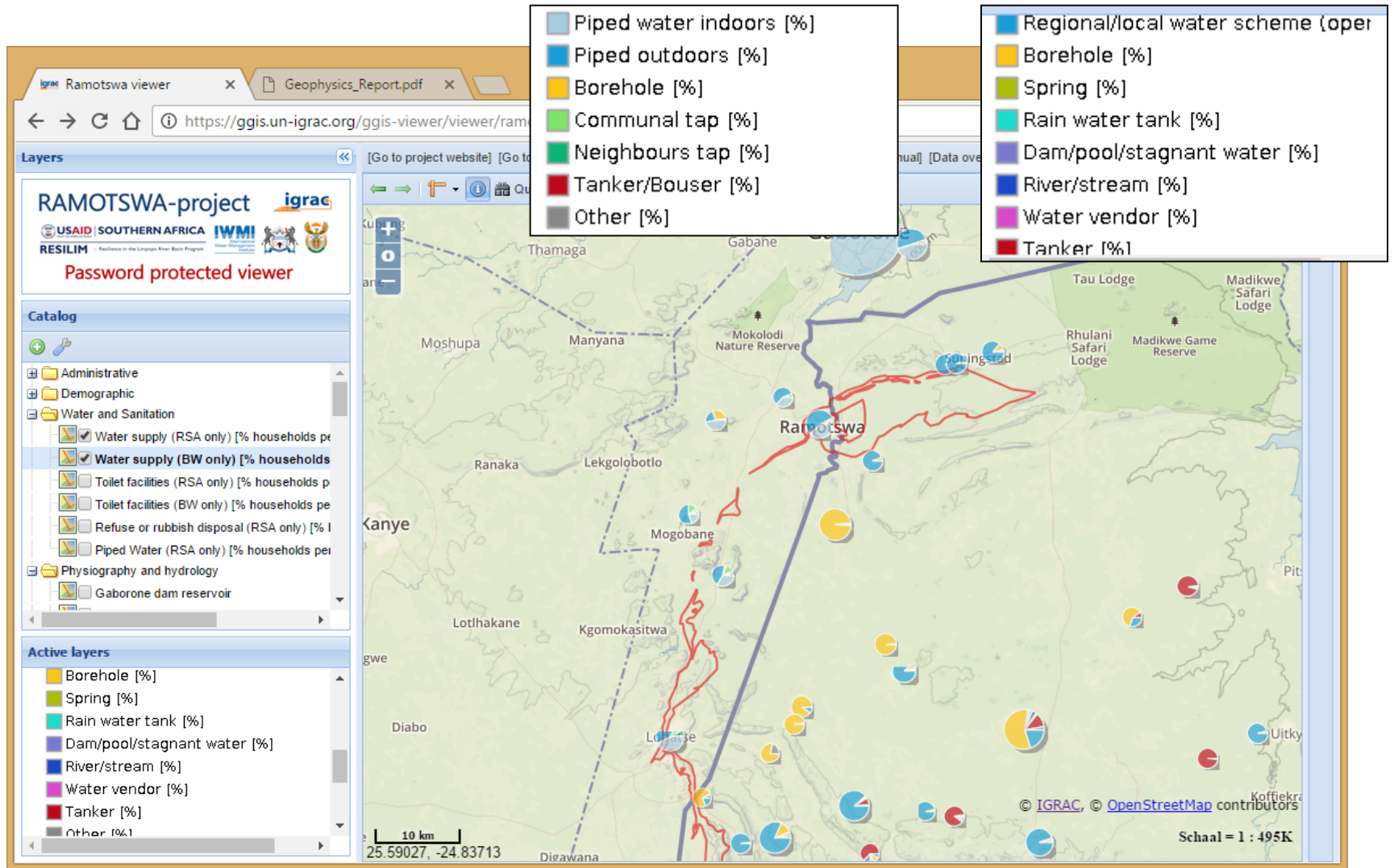


# Employment (RSA only)



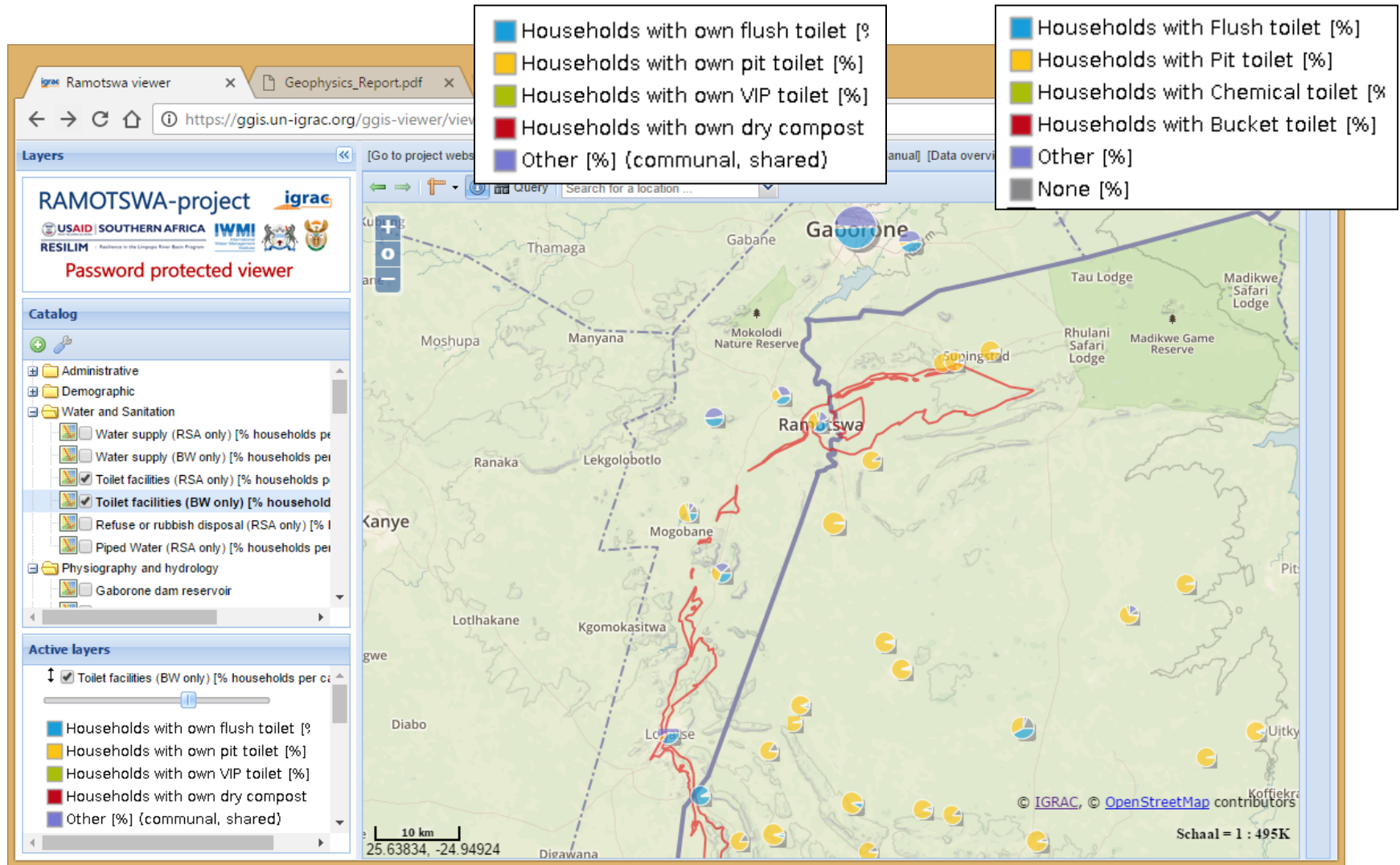


## Water supply categories (households)



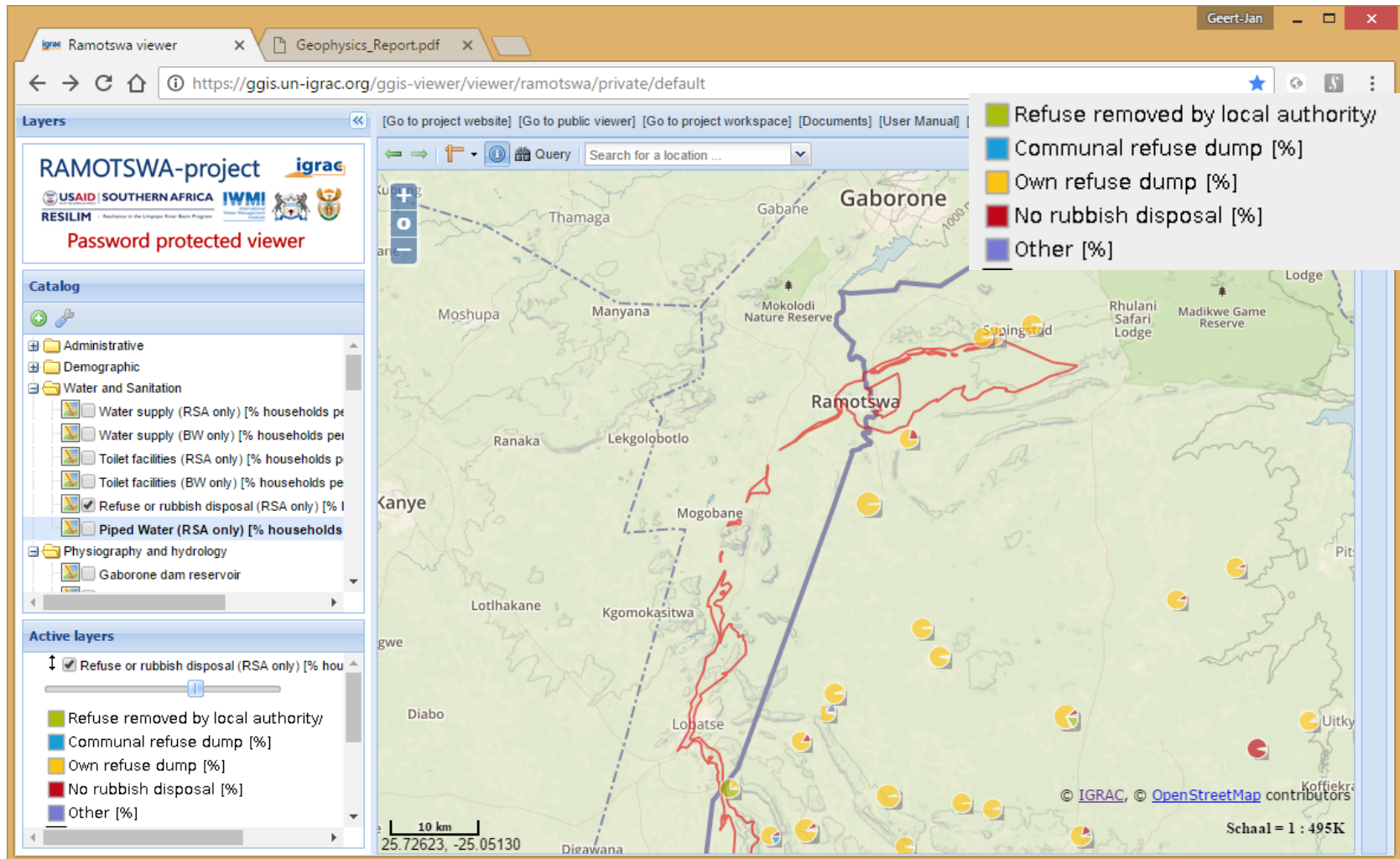


# Toilet facilities



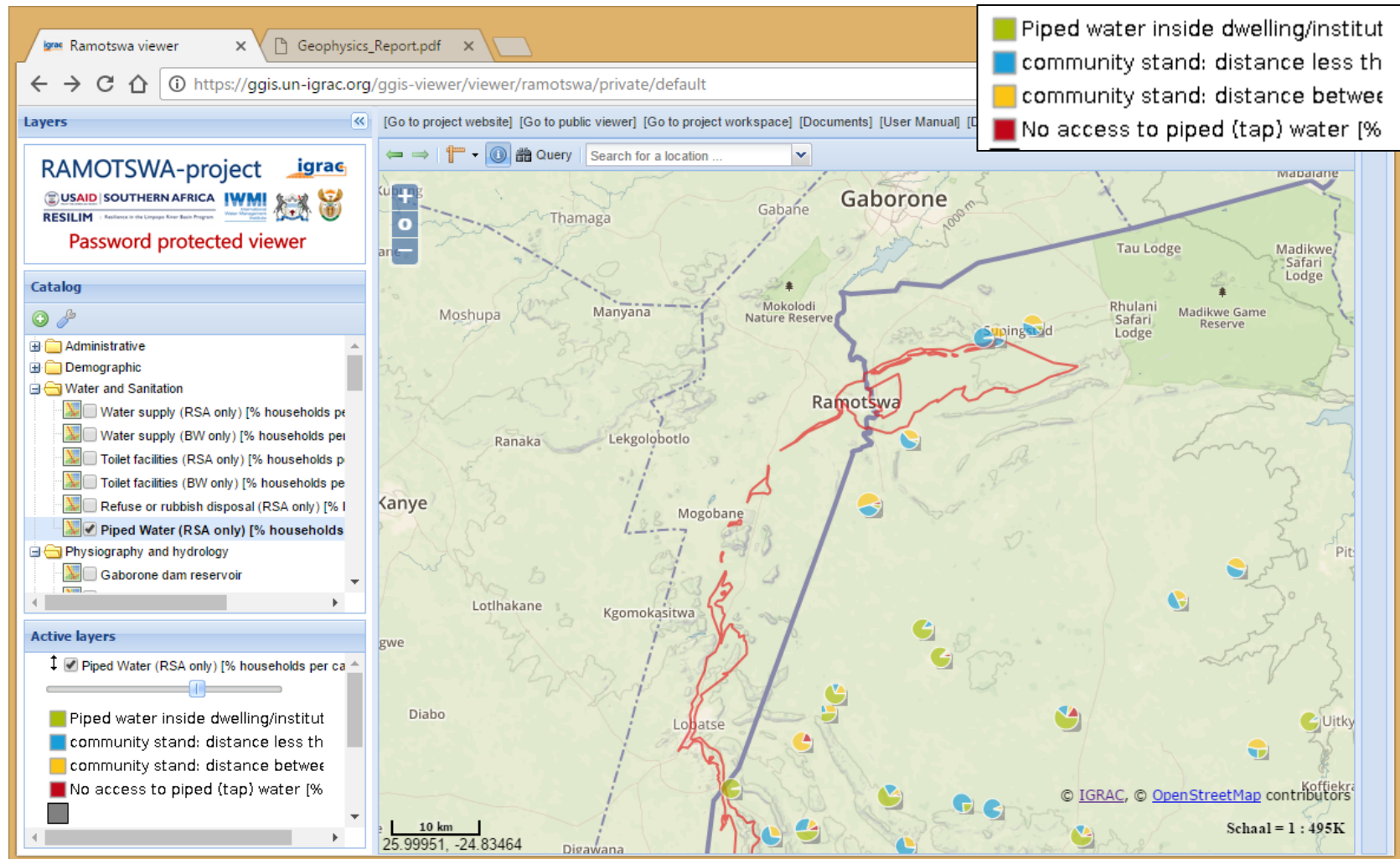


# Waste disposal (RSA only)



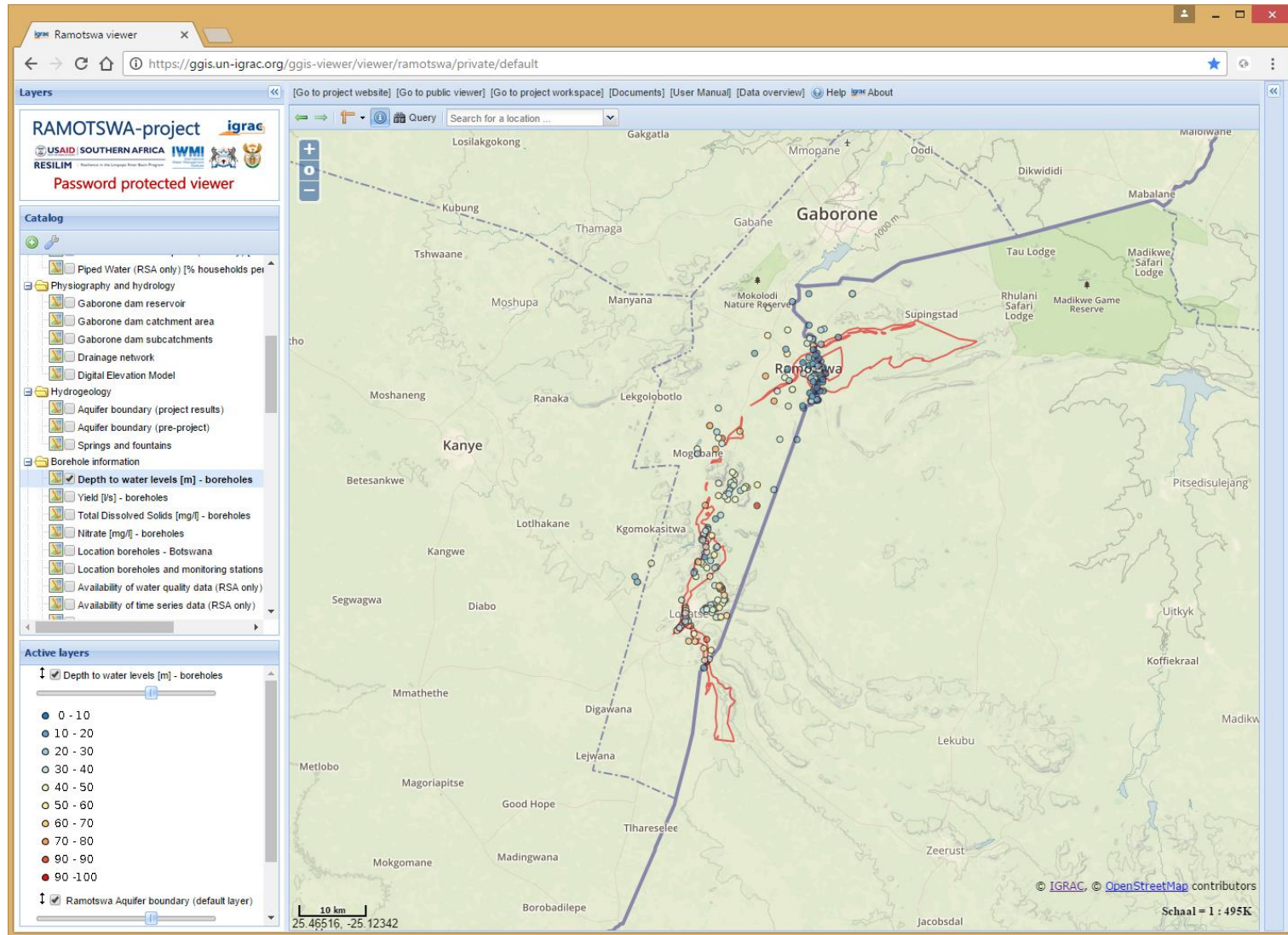


## Access to piped water (RSA only)



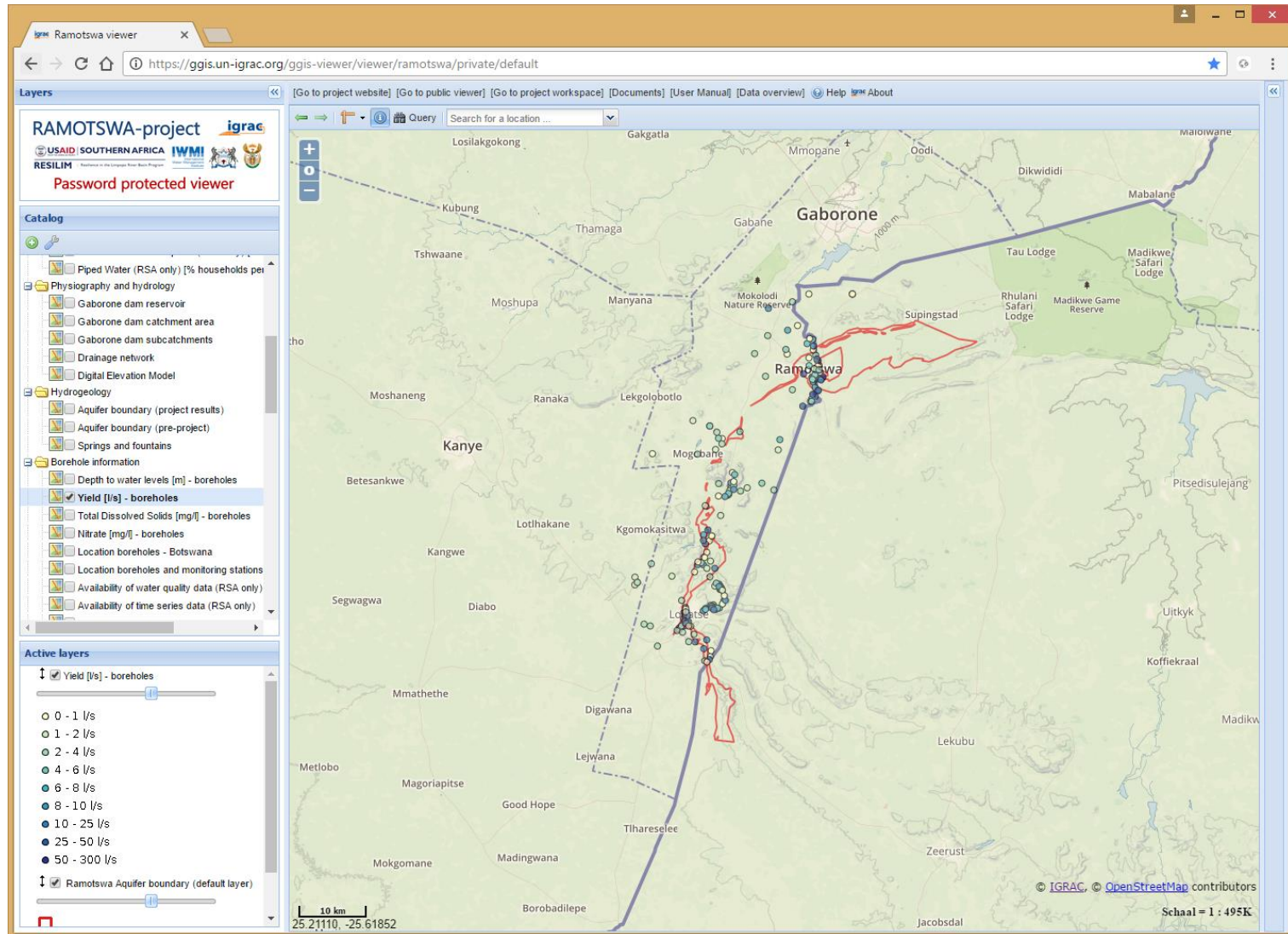


# Borehole data – depth to water level



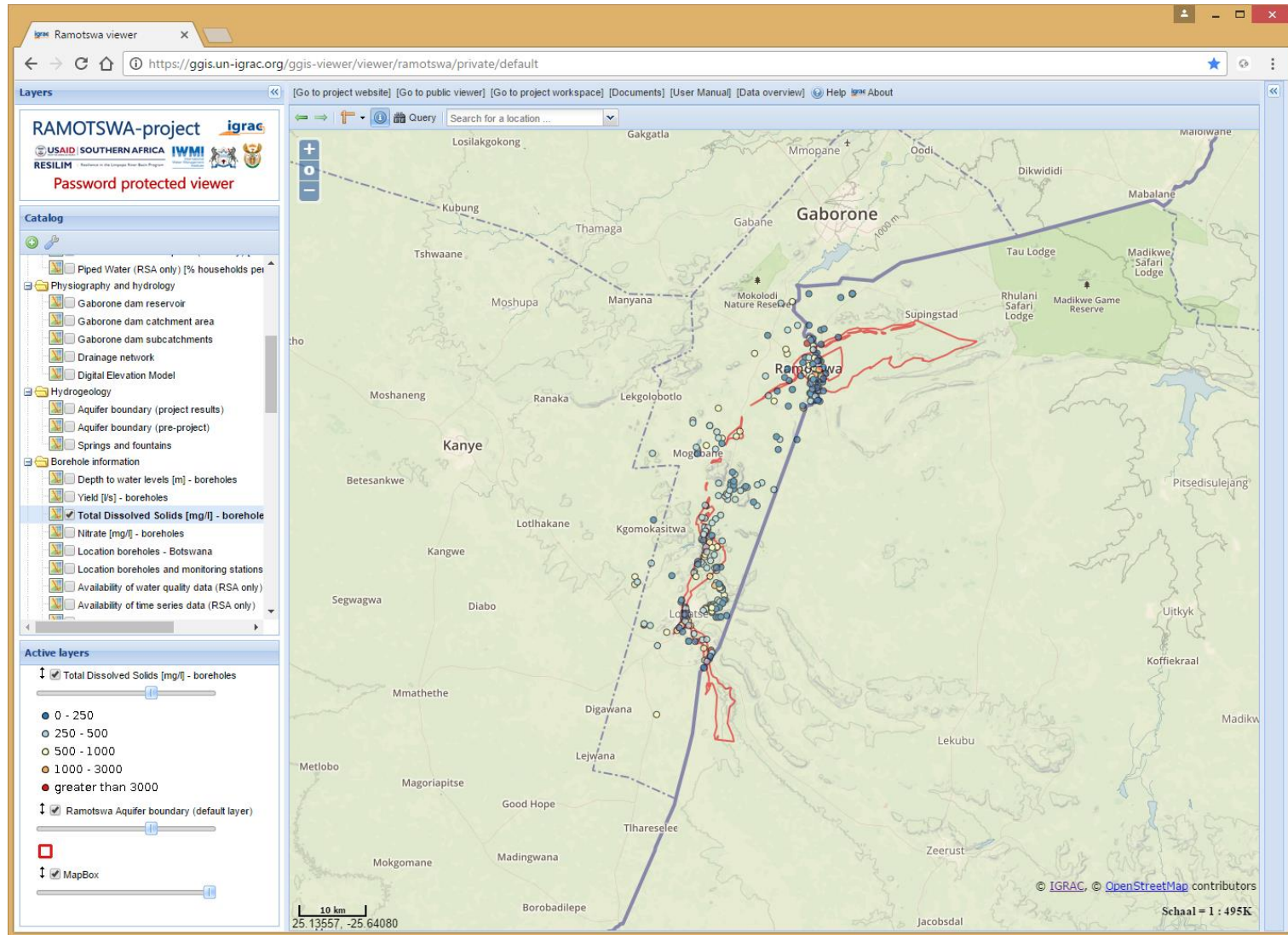


# Borehole data – Yield



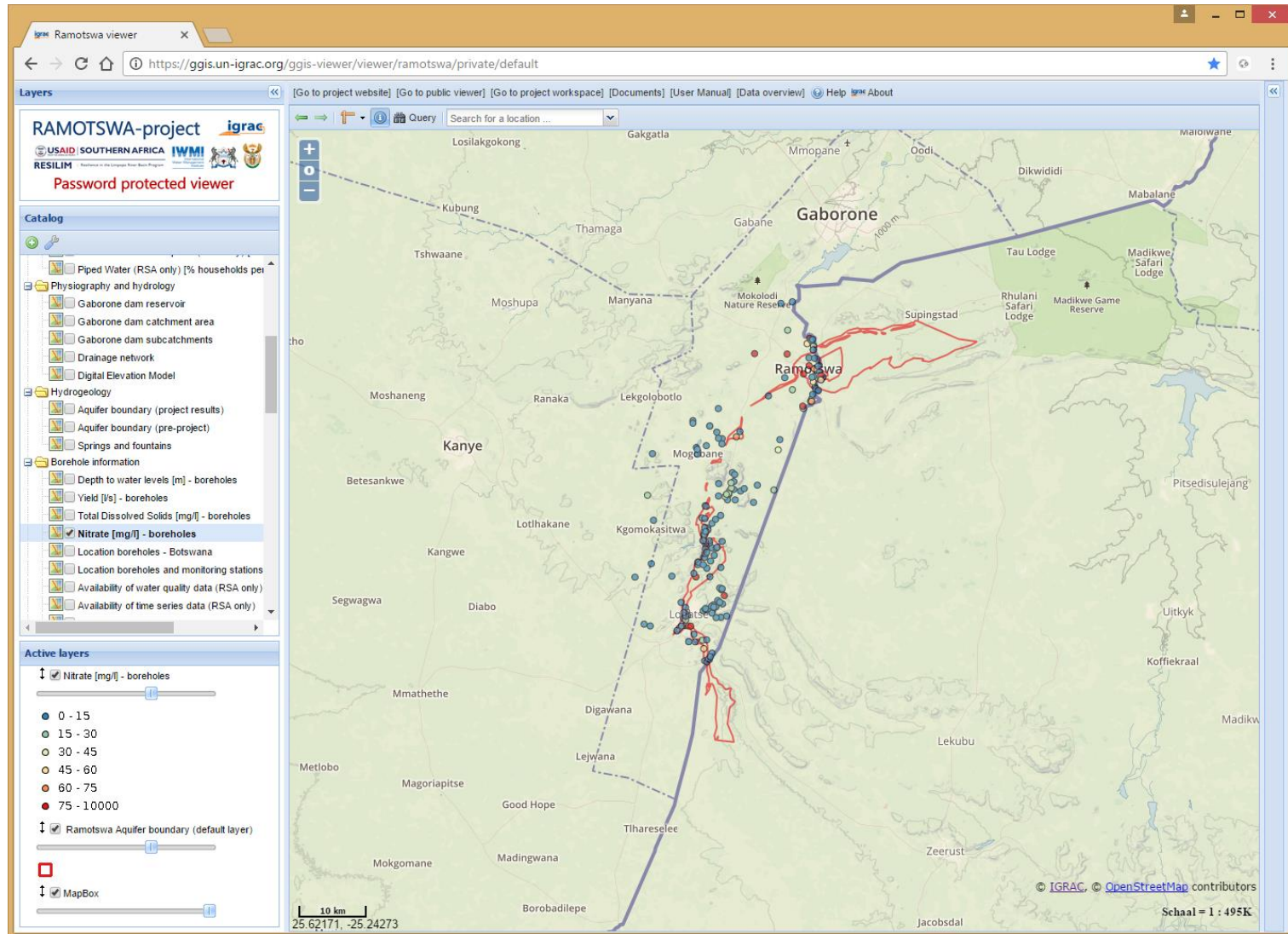


# Borehole data – TDS



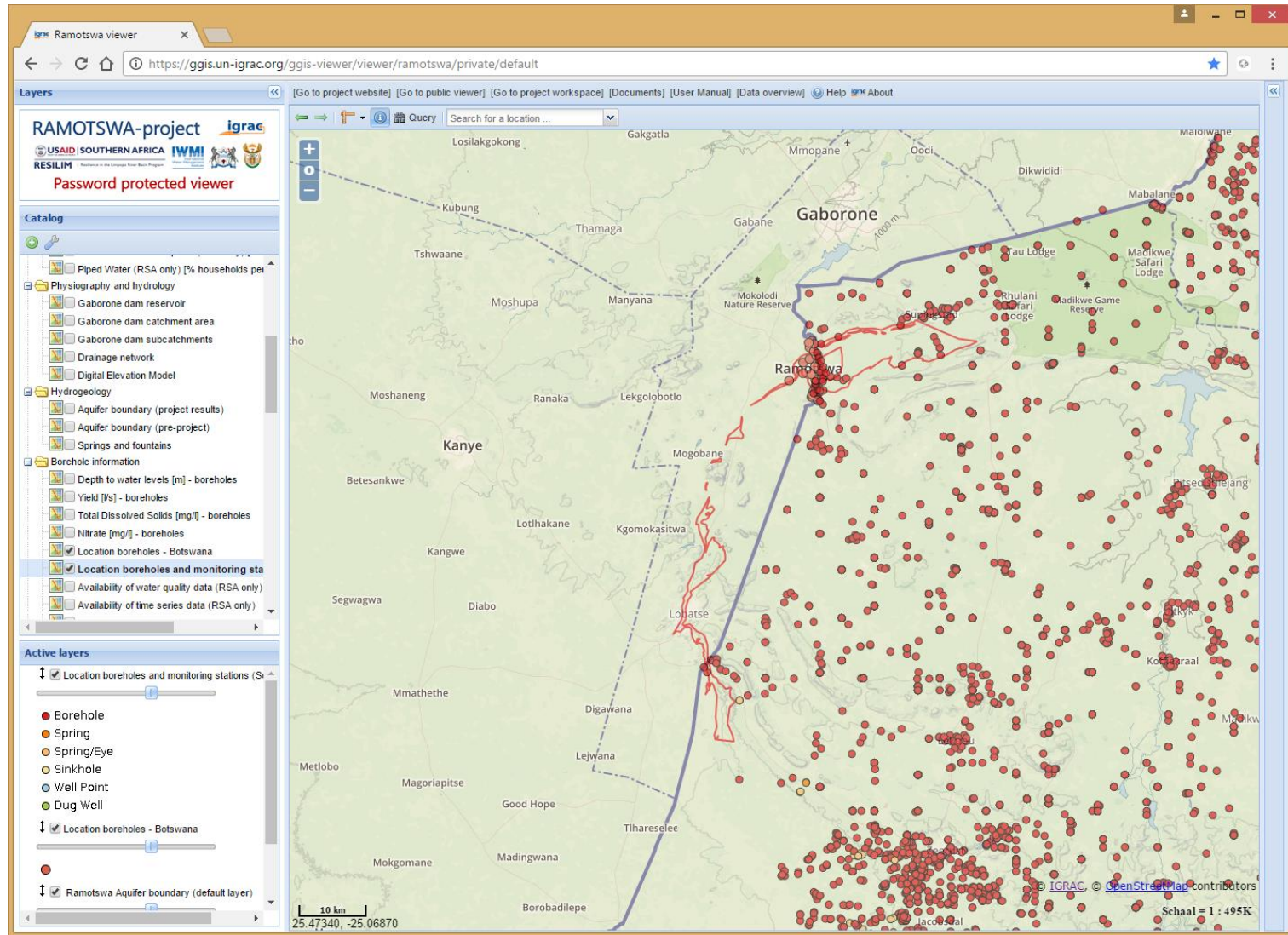


# Borehole data – Nitrate



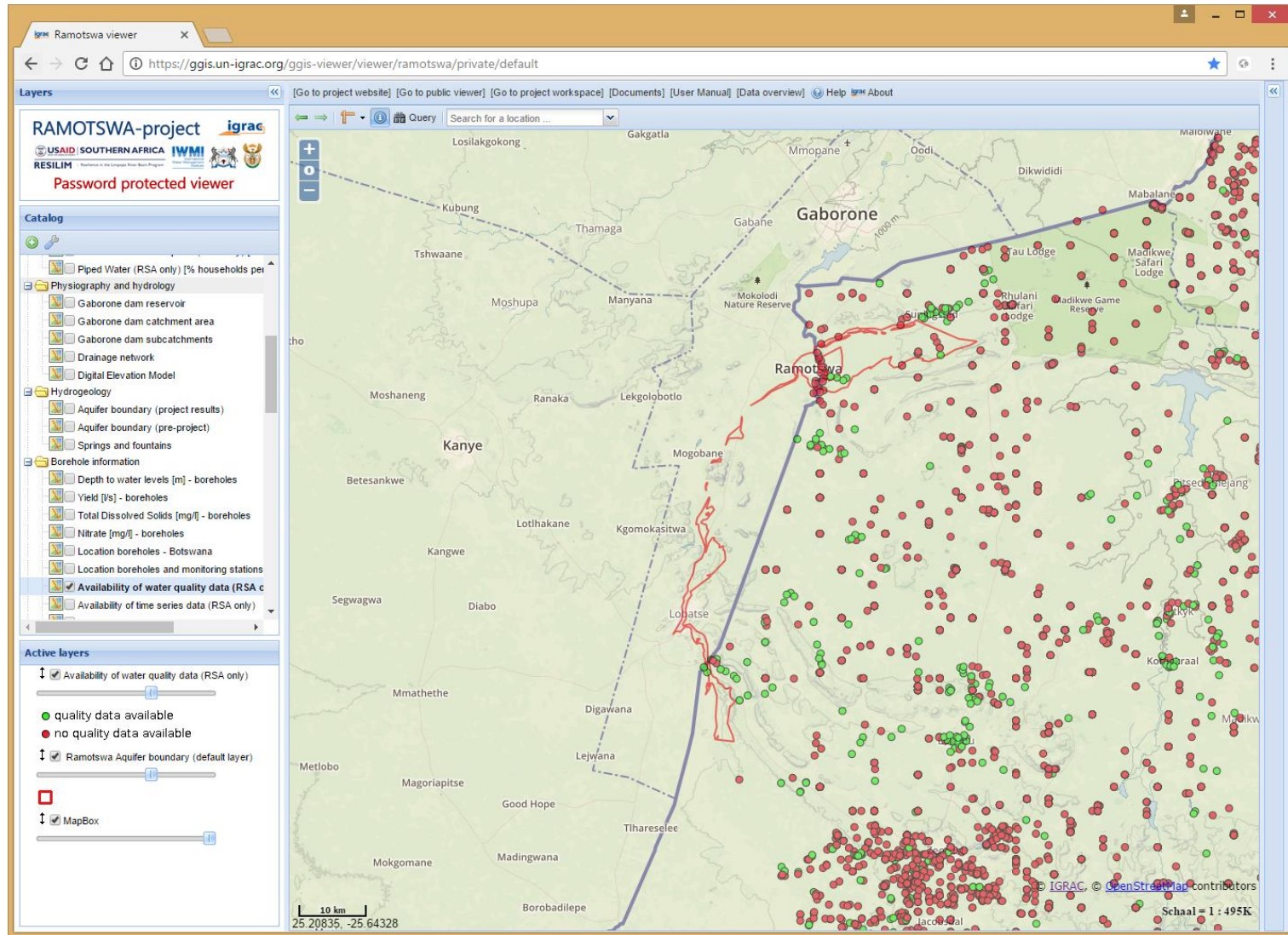


# Borehole data – locations of boreholes



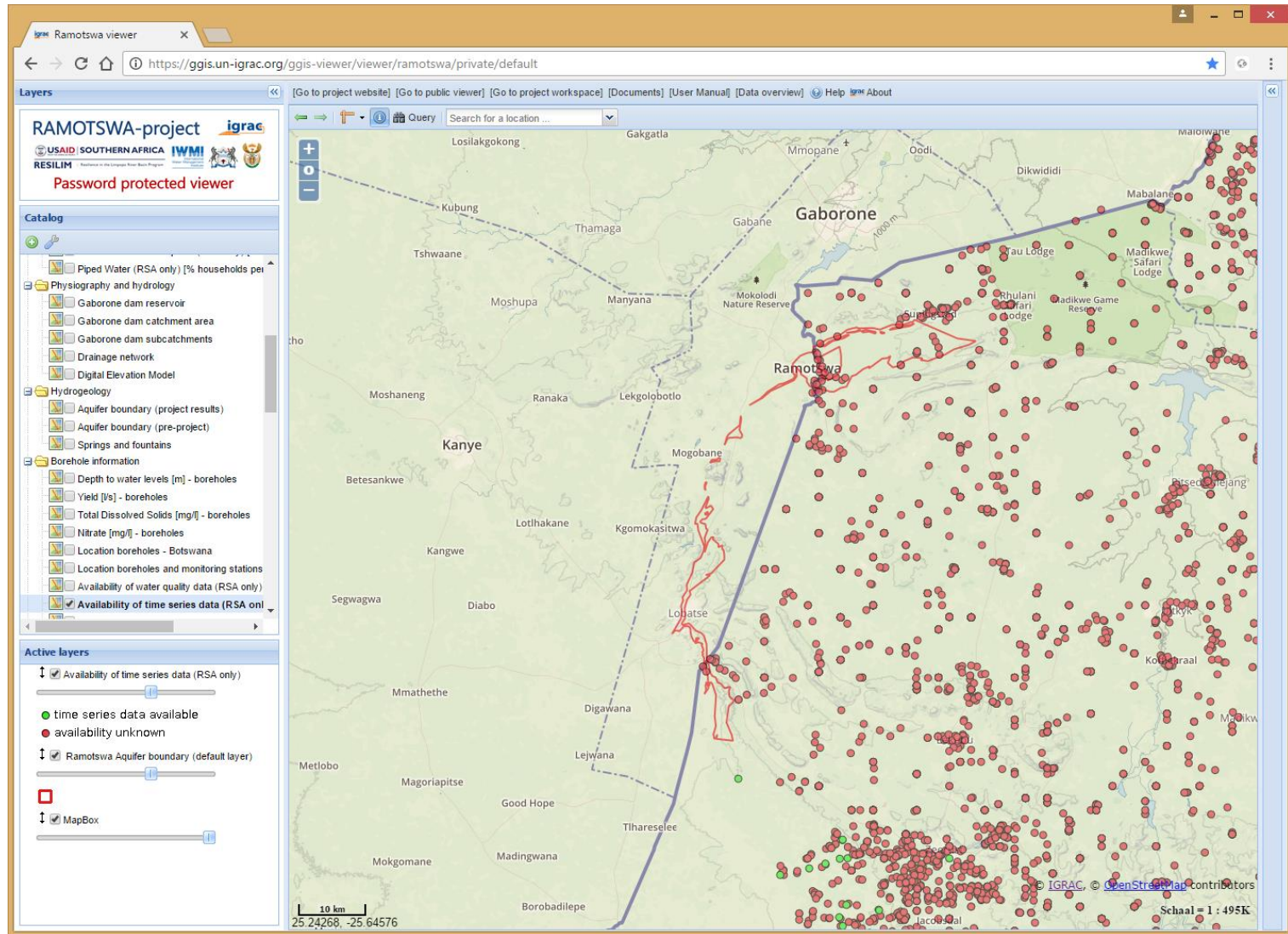


# Borehole data – RSA quality data available (off line)



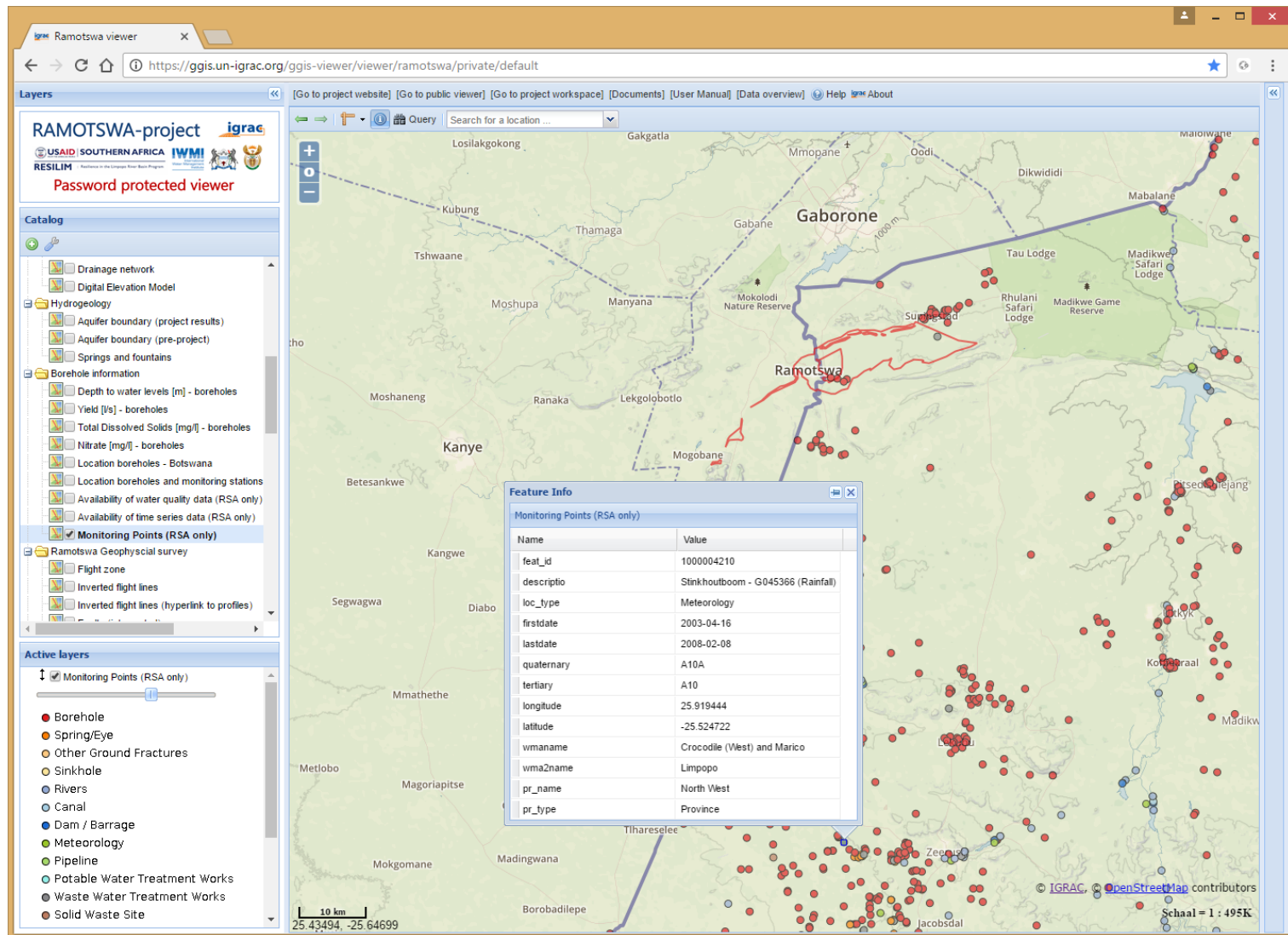


# Borehole data – time series available (off-line)



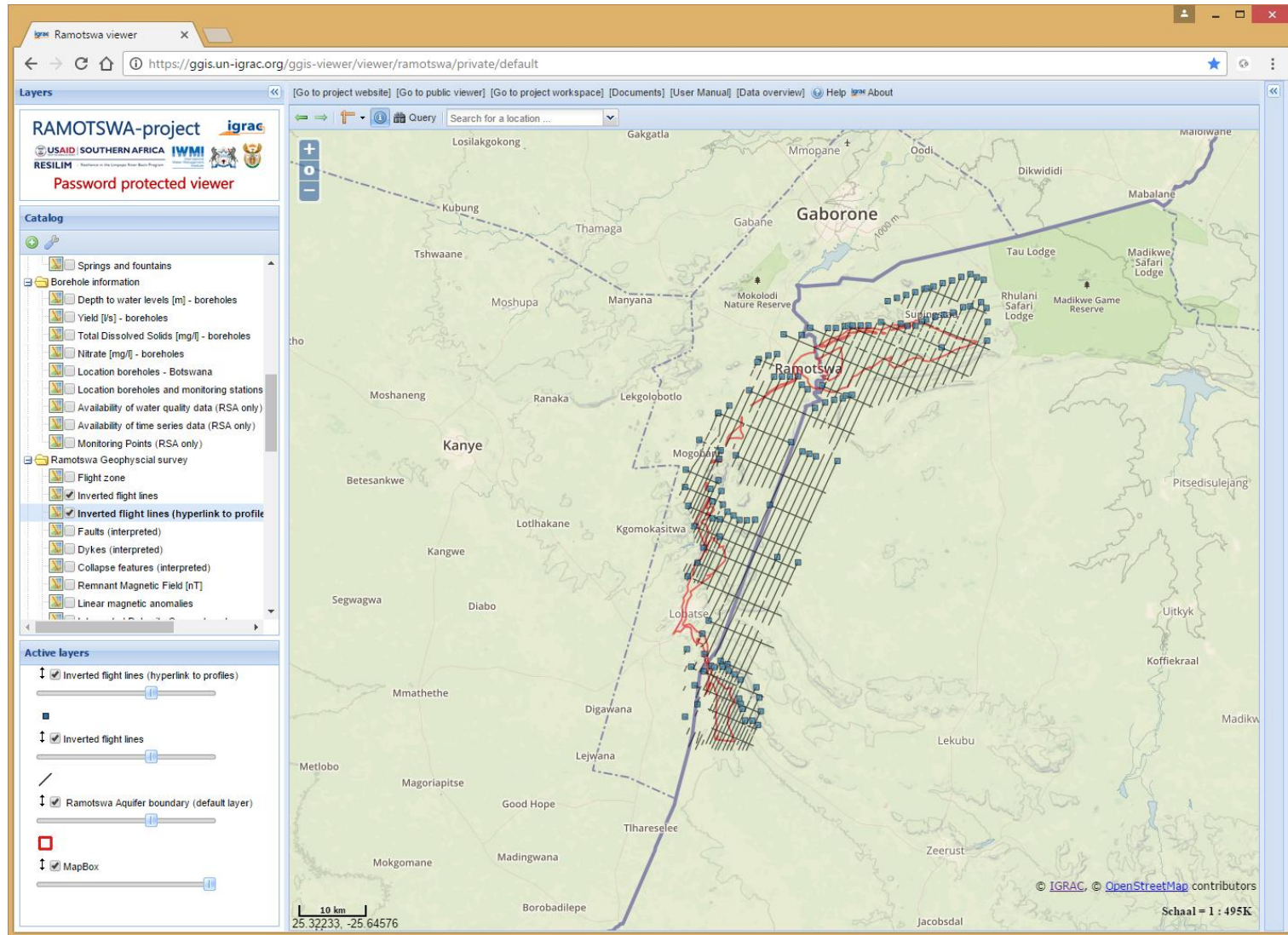


# Monitoring points RSA – also non groundwater



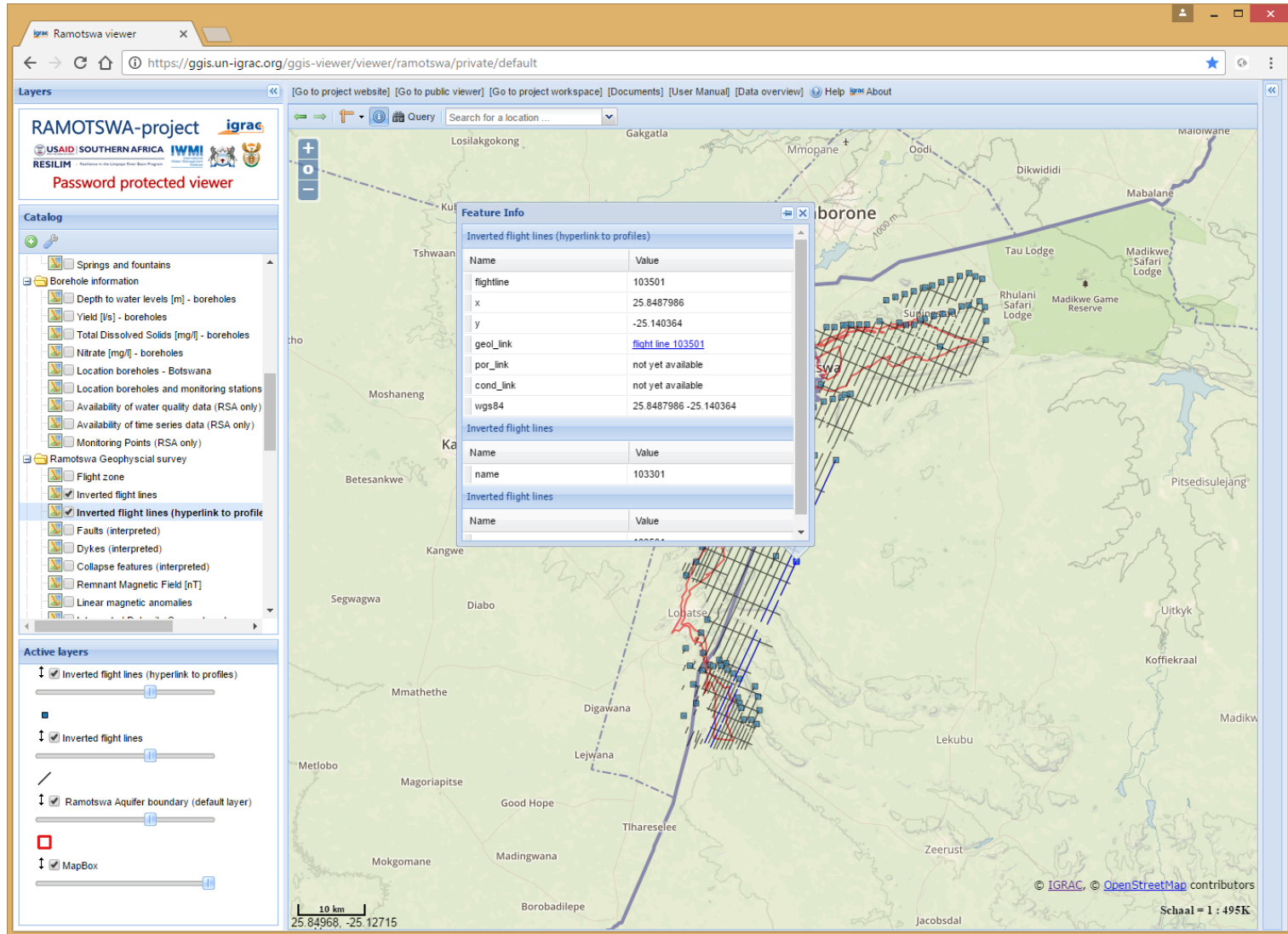


# Geophysics





# Geophysics



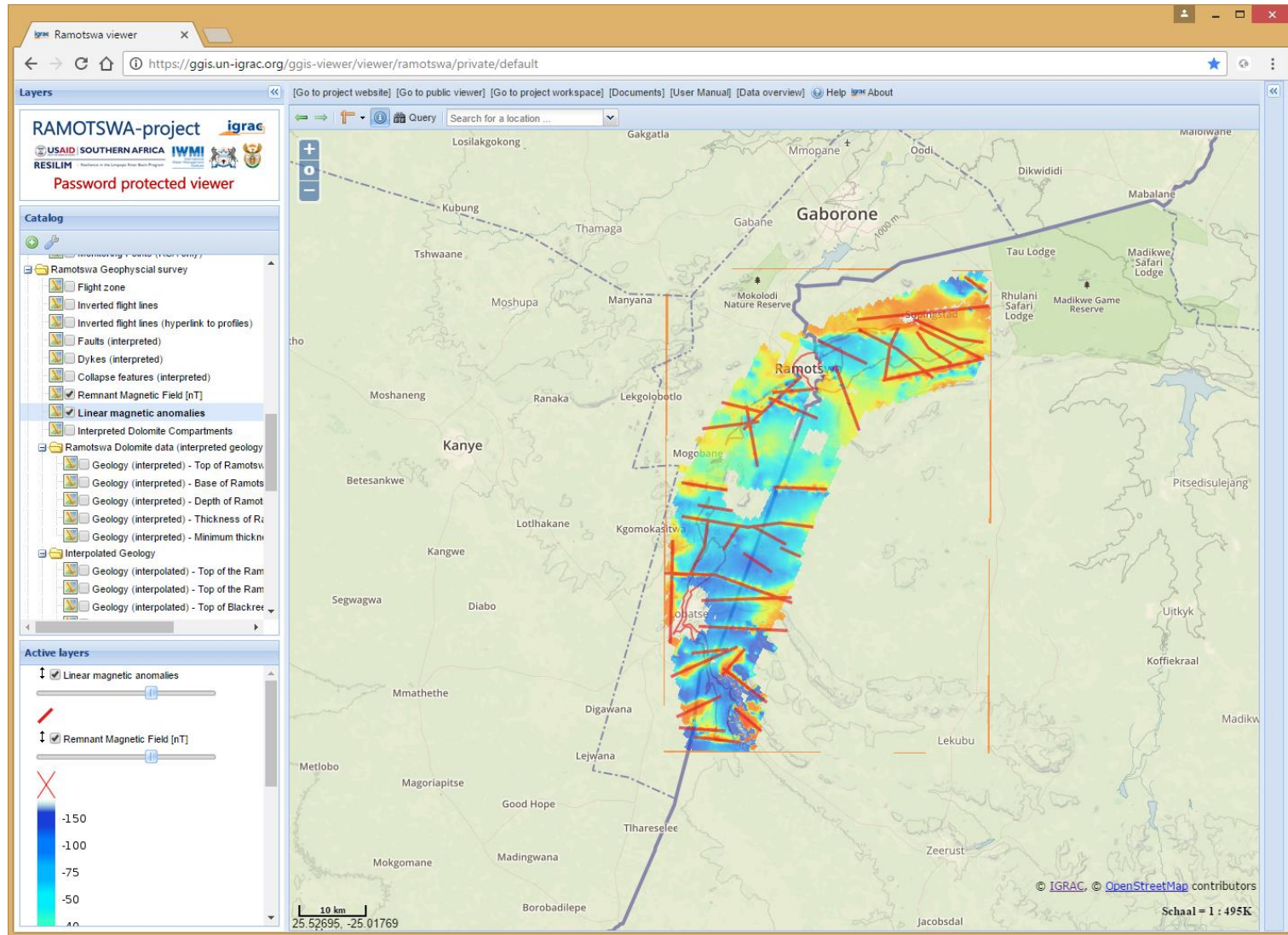


# Geophysics



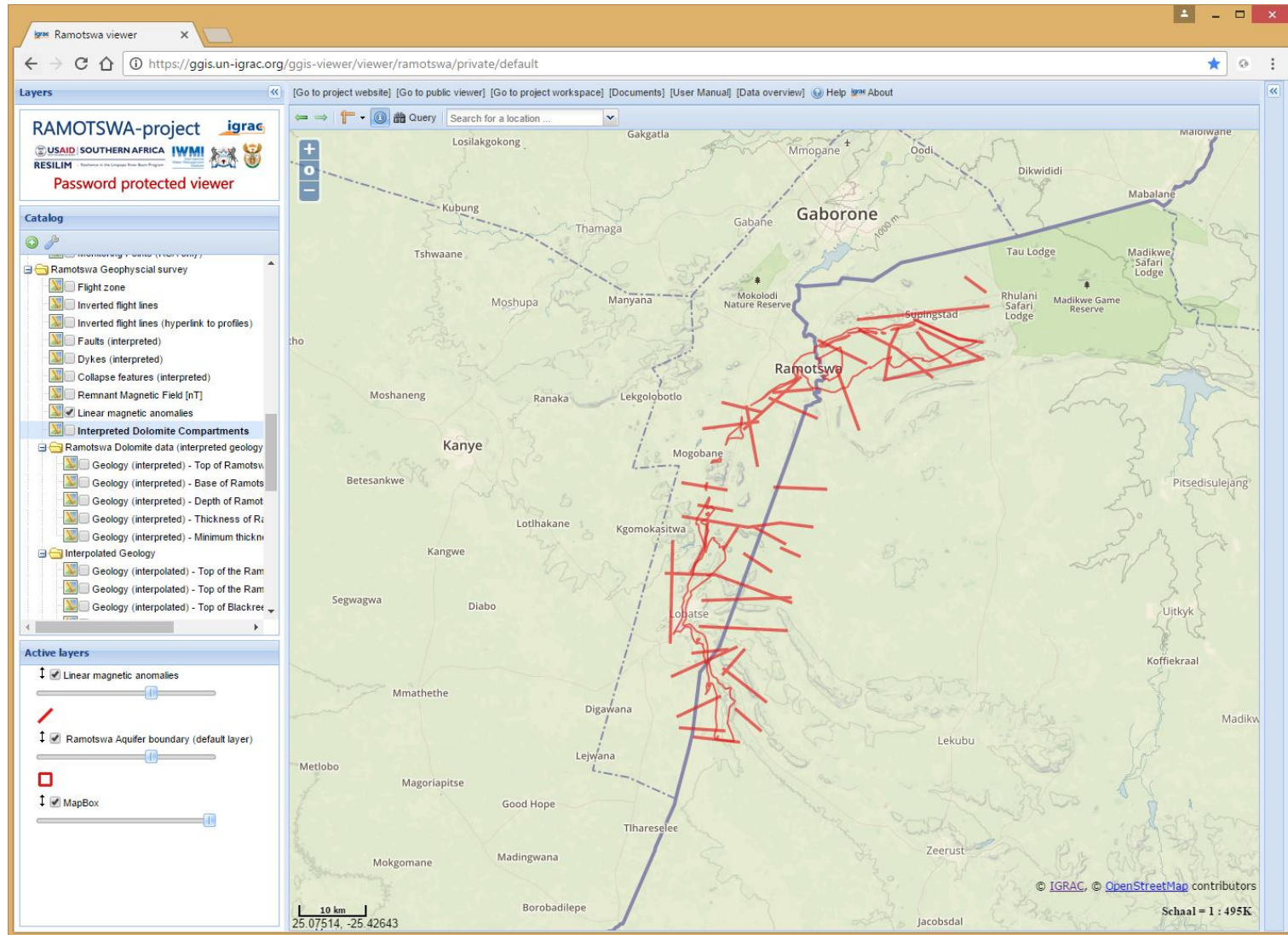


# Geophysics



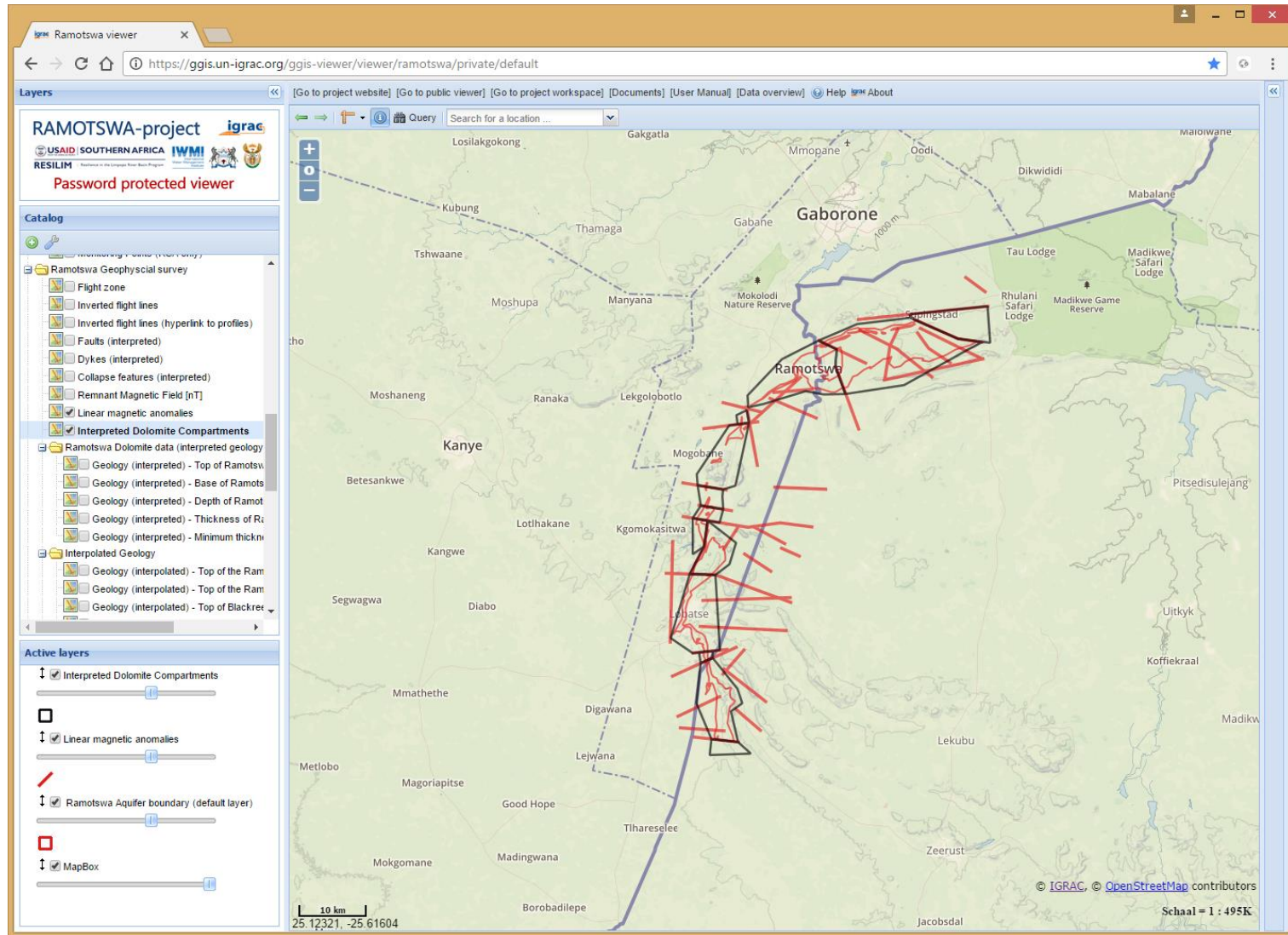


# Geophysics



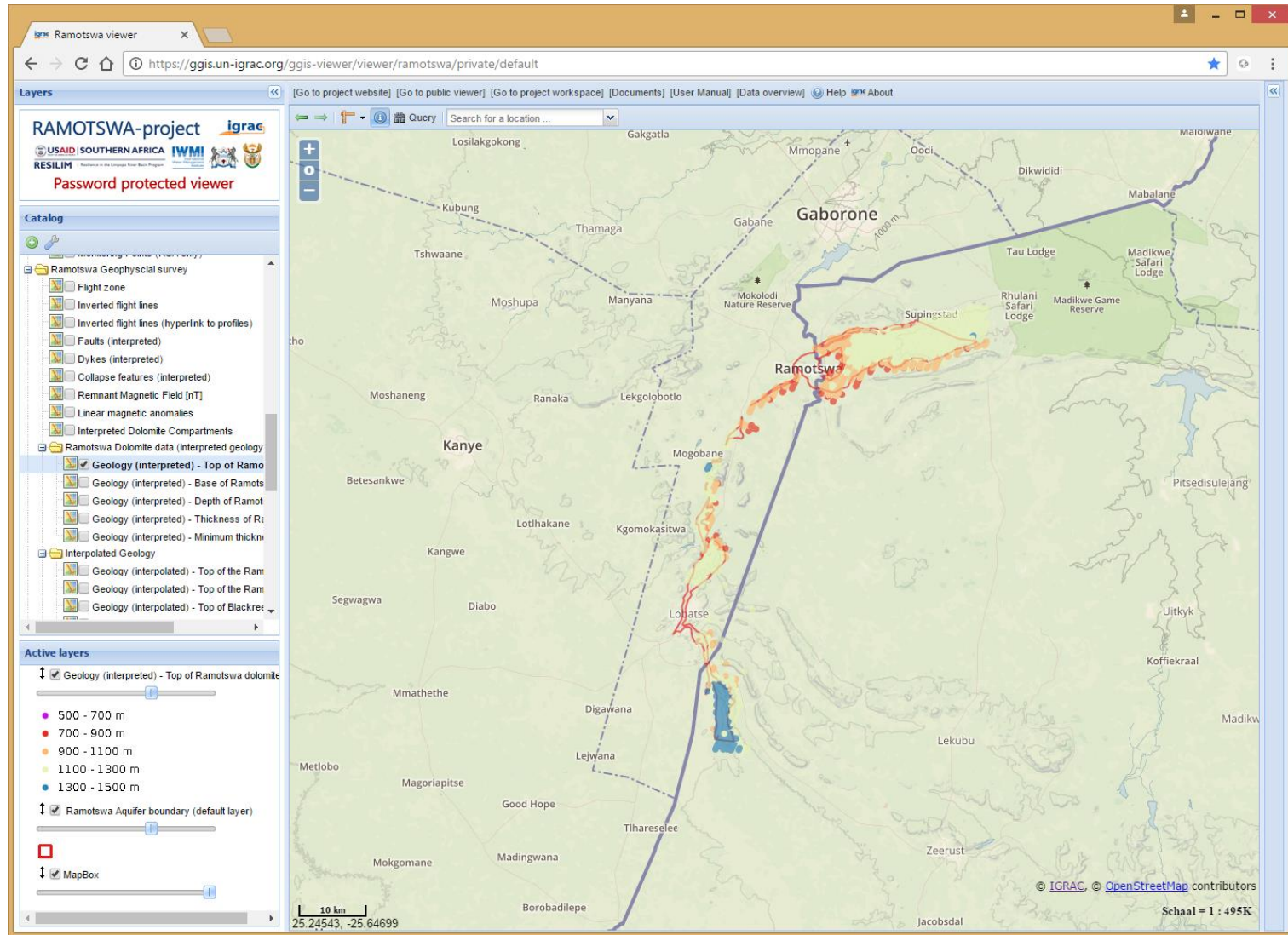


# Geophysics



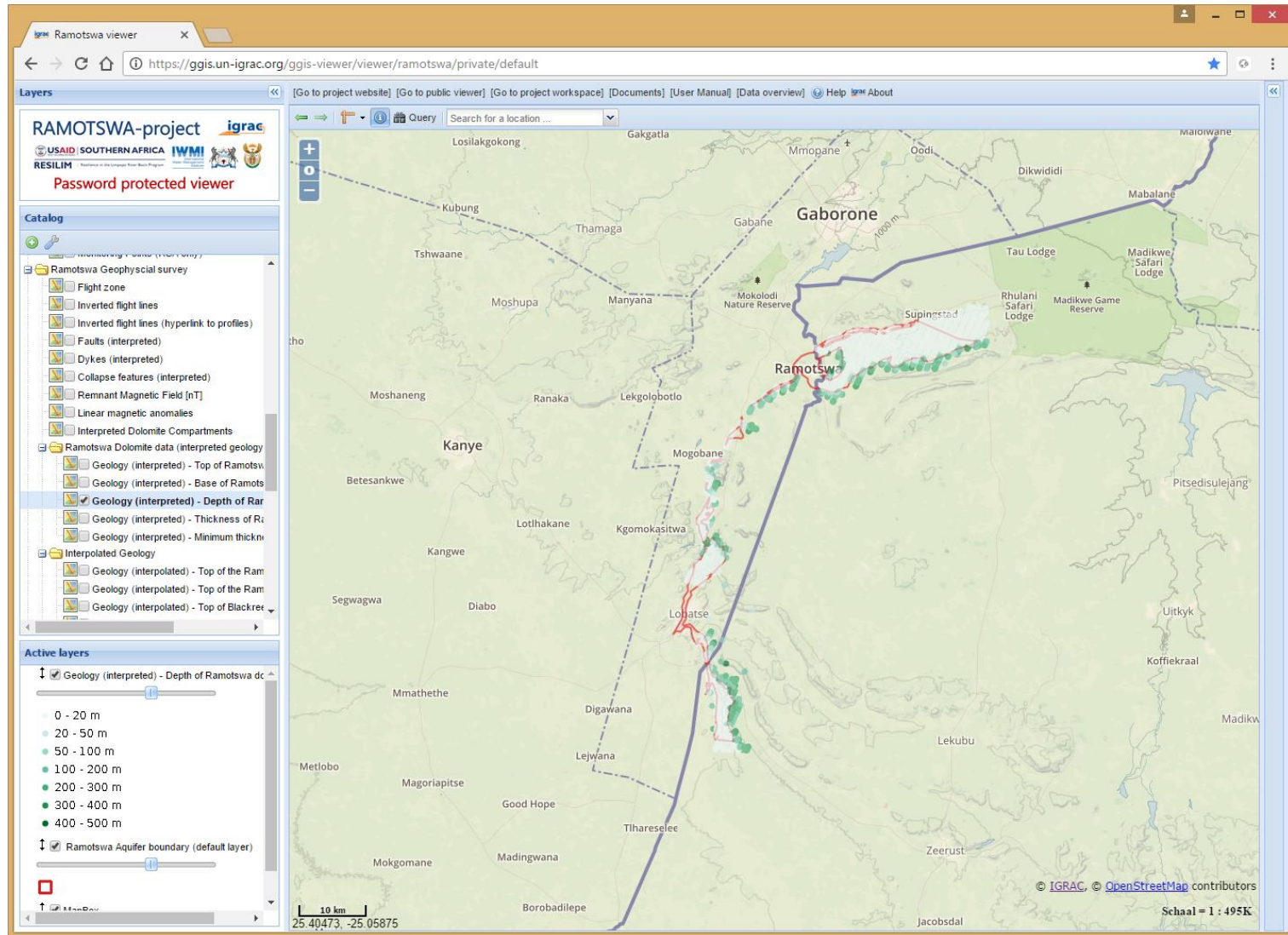


# Geophysics



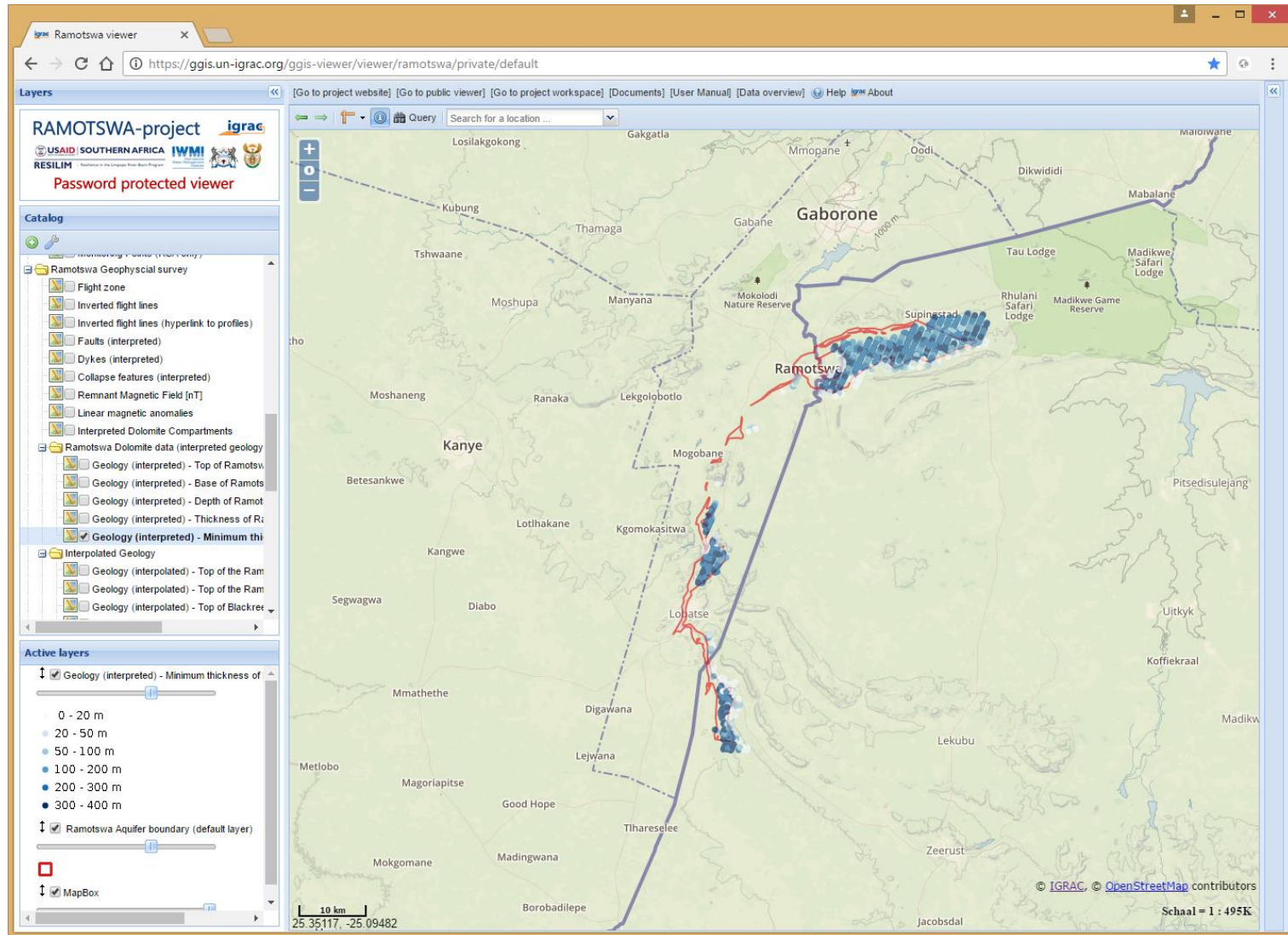


# Geophysics



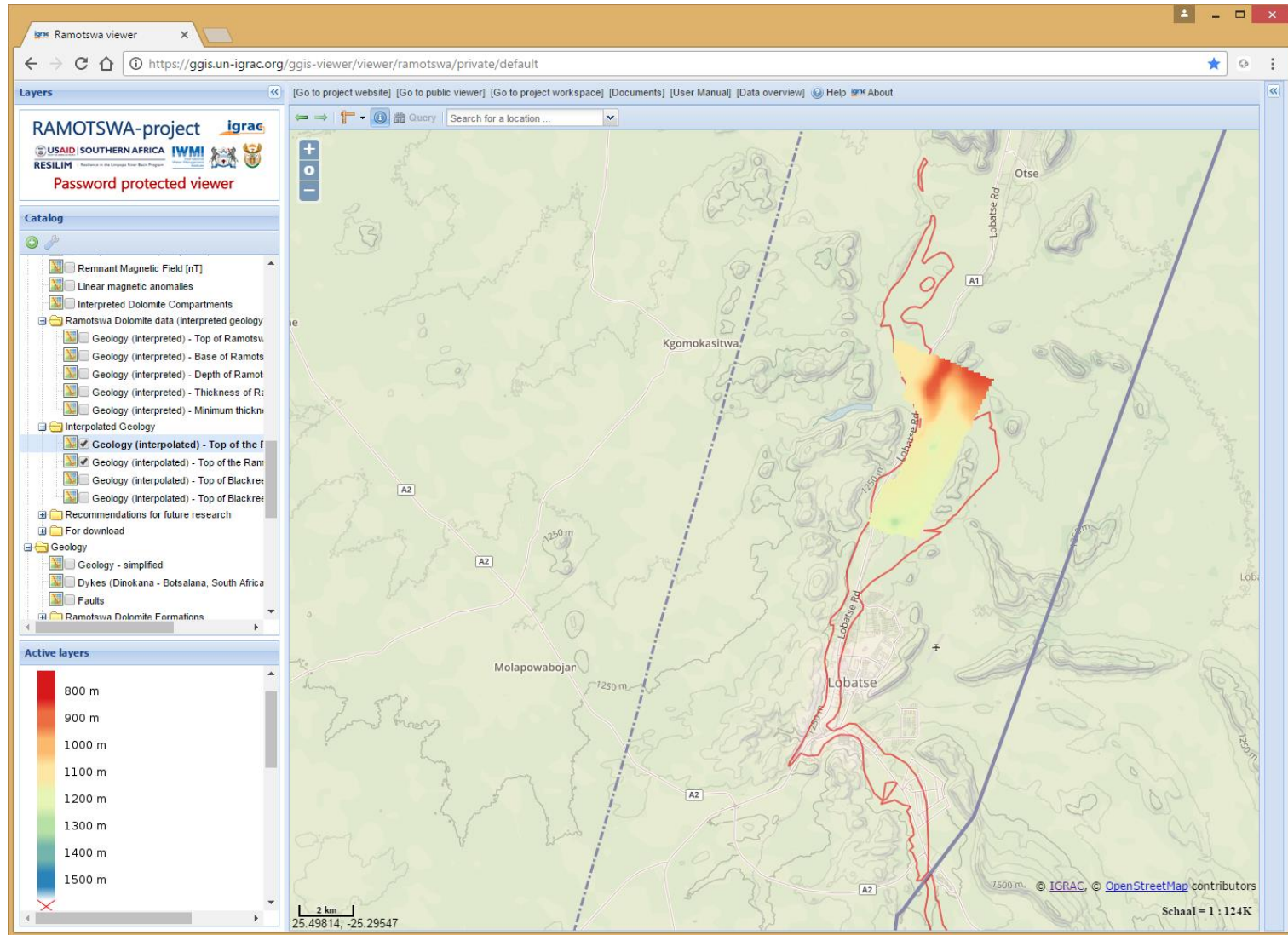


# Geophysics



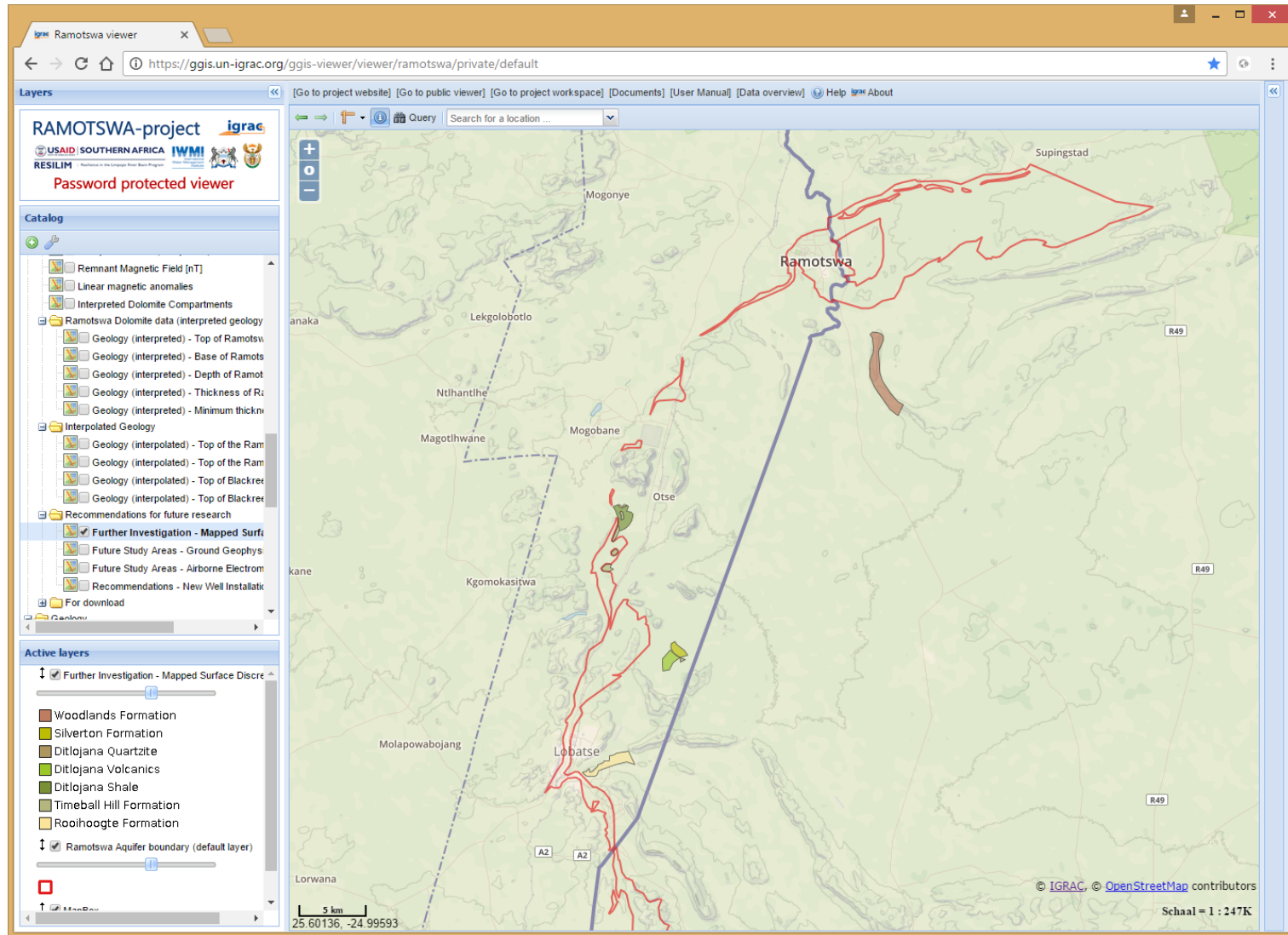


# Geophysics



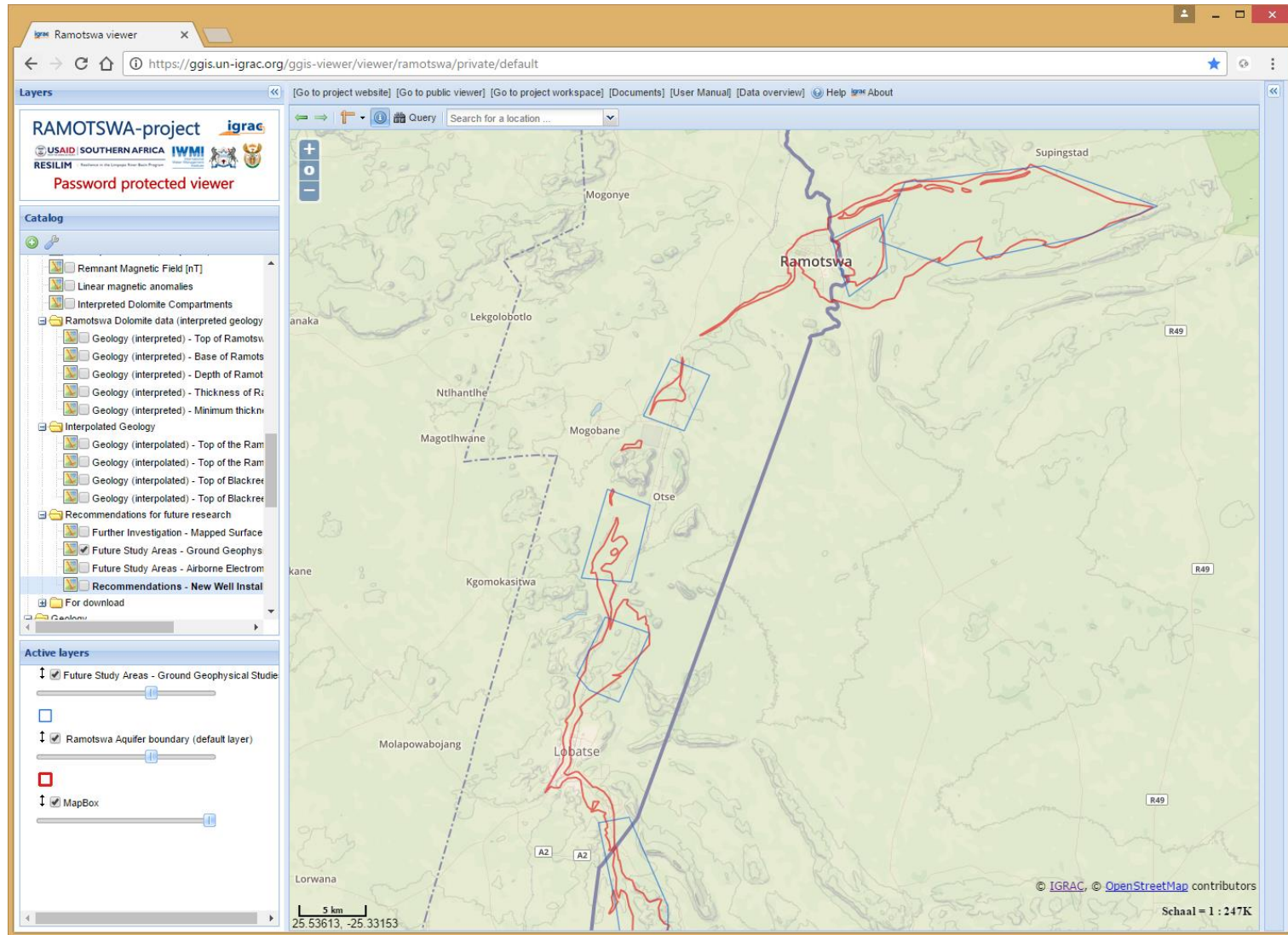


# Geophysics



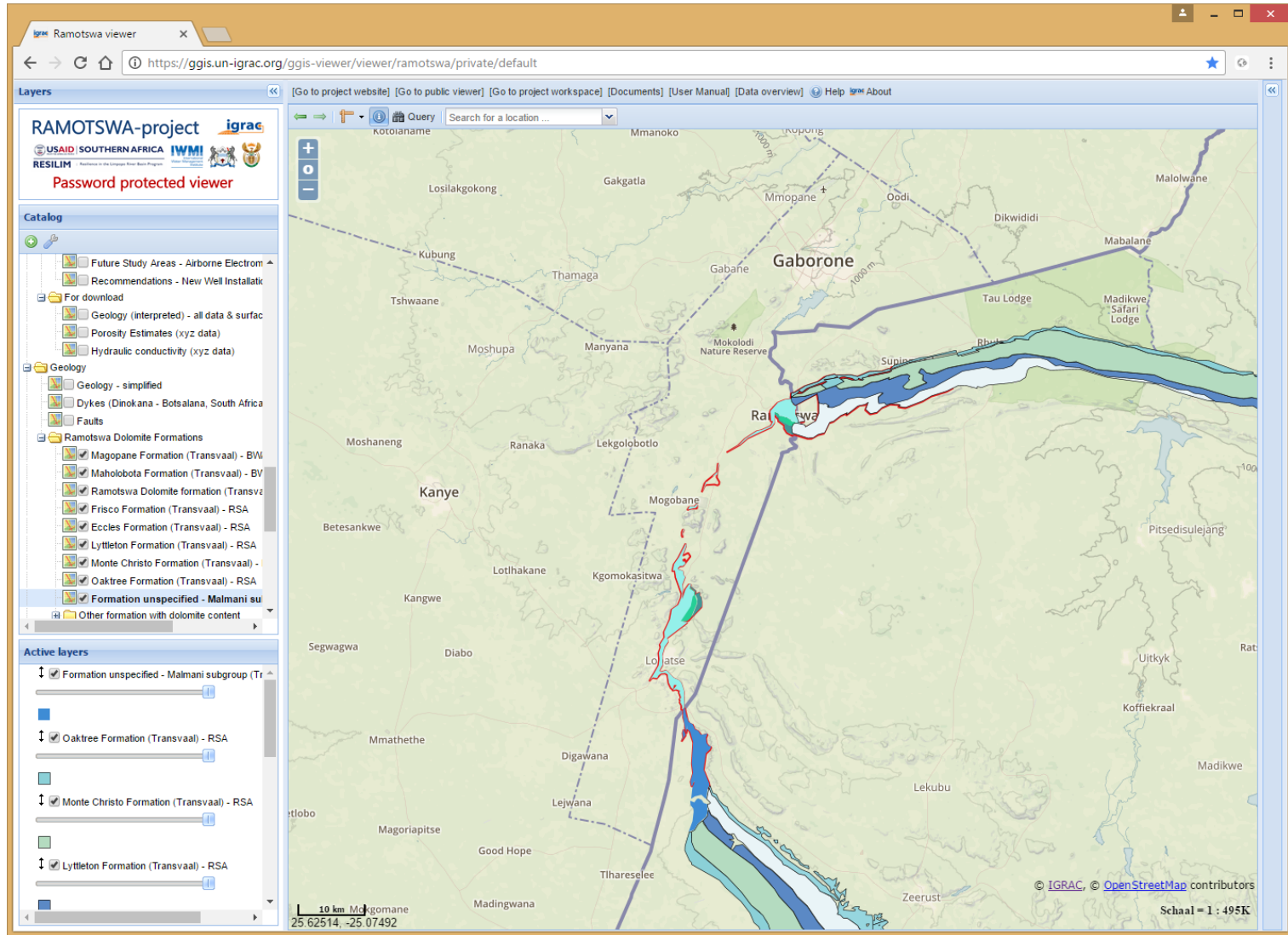


# Geophysics



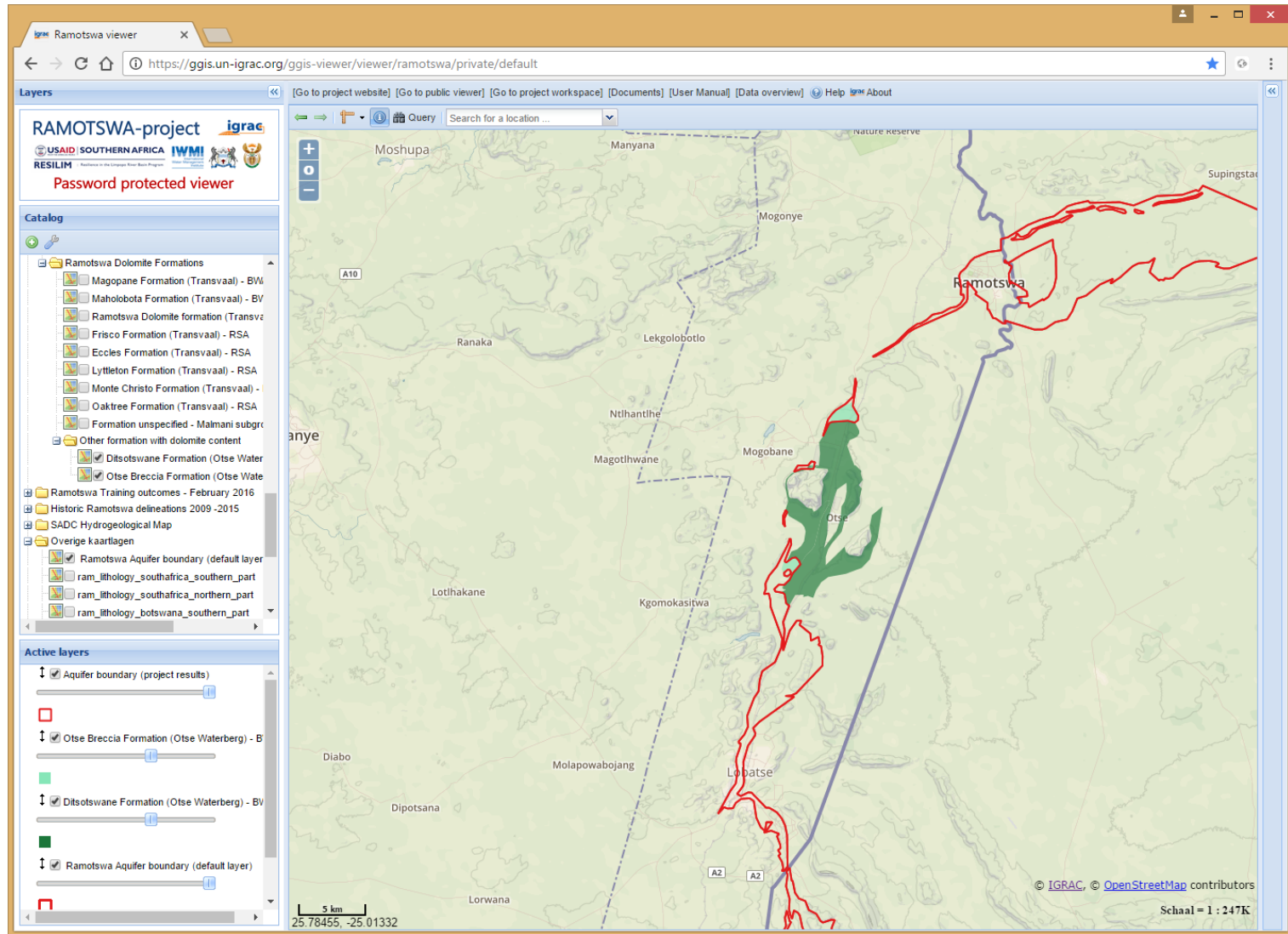


# Geology





# Geology - DISCUSS





# Thank you for your attention



International Groundwater Resources Assessment Centre



United Nations  
Educational, Scientific and  
Cultural Organization



International  
Hydrological  
Programme



World Meteorological  
Organization



Government of  
The Netherlands

## RAMOTSWA project



International Groundwater Resources Assessment Centre