

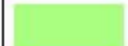











# Prieska Copper Mine

## Legend

-  Mining Right Application Boundary
- PROSPECTING RIGHTS**
-  Bartotrax
-  Repli Trading
-  Vardocube
-  Farm Boundaries
-  Farm Portions
- ROAD NETWORK**
-  Main Road
-  Secondary Road
-  Railway line
- RIVERS & STREAMS**
-  Perennial River
-  Non-Perennial River
-  Inland Water

## REGIONAL LOCALITY

0 25 50 Kilometers

Reviewed: P. Furniss Environmental Scientist	Drawn by: L. Du Plessis GIS Specialist (PGP 1189)
Coordinate System: GCS WGS 1984 Datum: WGS 1984	

 <b>ABS Africa</b> sustainability Advisors	Scale: 1:250 000
	Version: Final
	Date: 2018/08/01

Upington Kimbe

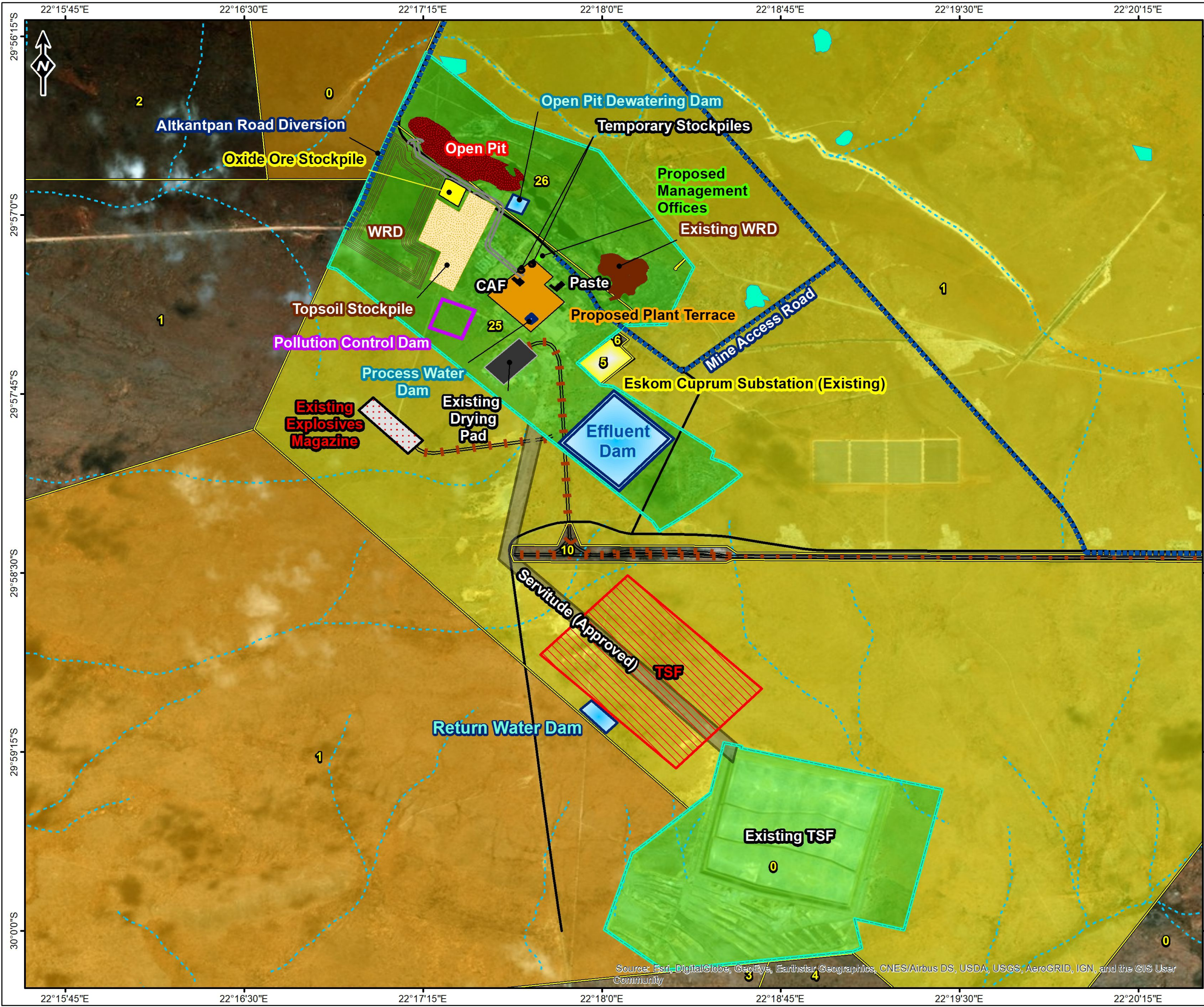
northern Cape South Africa



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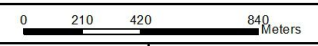




# Prieska Zinc Copper Project

- Access Roads
  - Haul Road
  - Farm Portions
  - Mining Right Application Boundary
- ROAD NETWORK**
- Main Road
  - Secondary Road
  - Railway line
- RIVERS & STREAMS**
- Non-Perennial River
  - Wetlands
- PROSPECTING RIGHTS**
- Bartotrax
  - Repli Trading
  - Vardocube

## FINAL SITE MAP



Reviewed: P. Furniss Environmental Scientist	Drawn by: L. Du Plessis GIS Specialist (PGP 1189)
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Coordinate System: GCS WGS 1984  
Datum: WGS 1984

Scale: 1:27 146  
Version: Final  
Date: 2018/07/26



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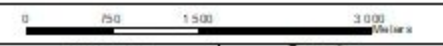


# Prieska Zinc Copper Project

## Legend

-  20m Contours
-  Mining Right Application Boundary
- ROAD NETWORK**
  -  Main Road
  -  Secondary Road
  -  Other Access
  -  Railway line
- RIVERS & STREAMS**
  -  Perennial River
  -  Non-Perennial River
  -  Inland Water
- ELEVATION (masl)**
  - High : 1157
  - Low : 1028

## TOPOGRAPHY

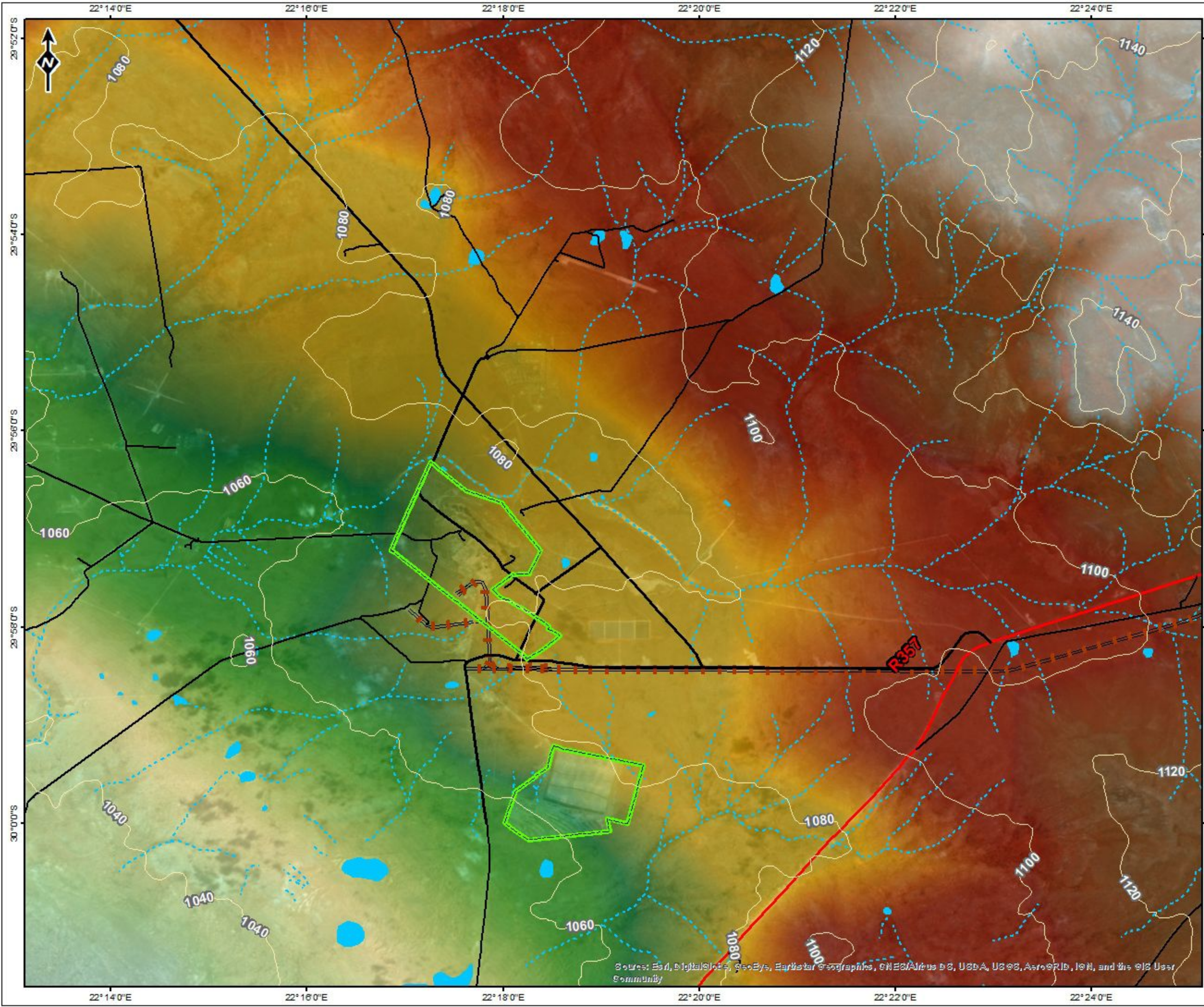


Reviewed: P. Furniss, Environmental Scientist  
 Drawn by: L. Du Plessis, GIS Specialist (PGP 1189)

Coordinate System: GCS WGS 1984  
 Datum: WGS 1984



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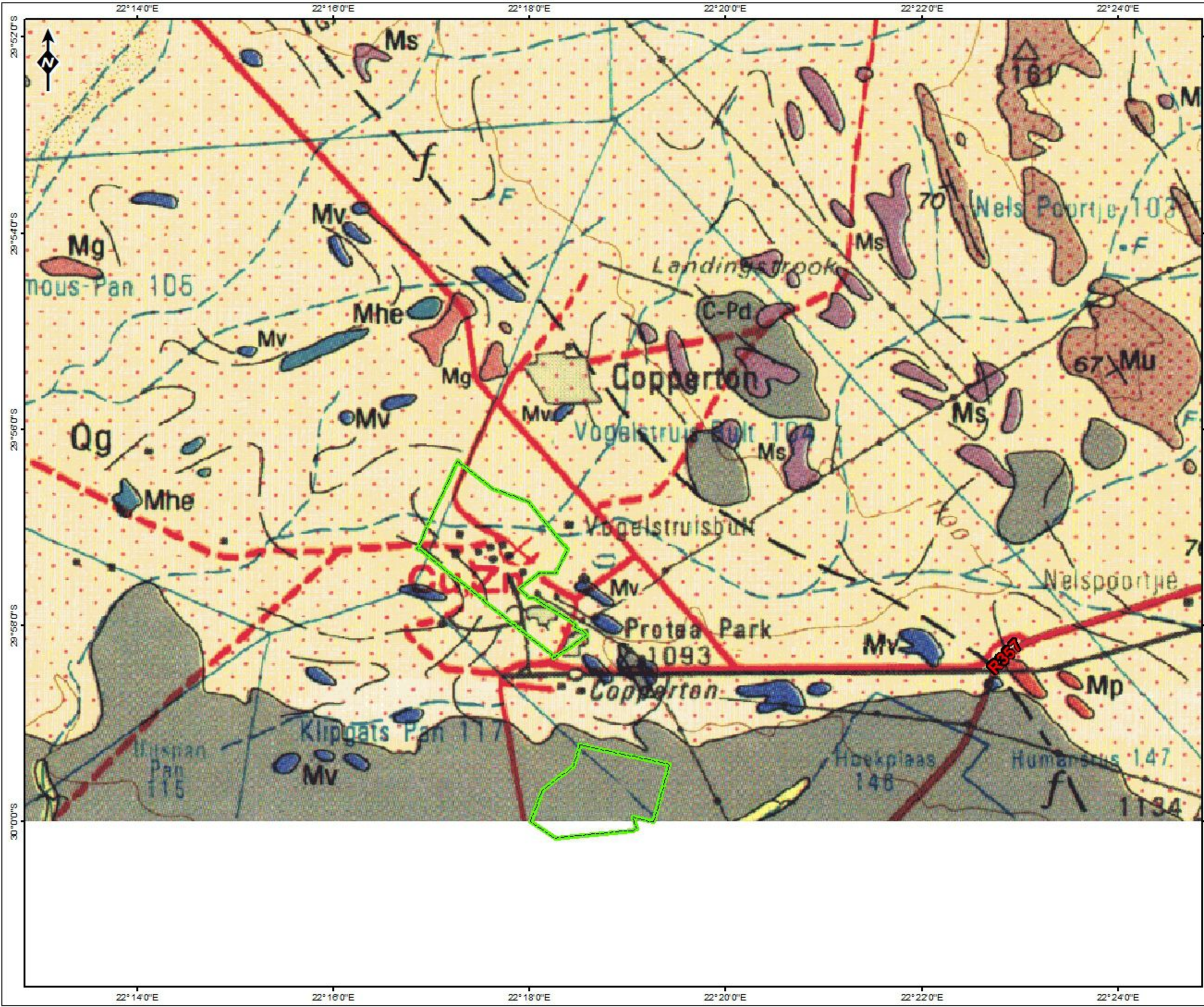
Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



# Prieska Zinc Copper Project

## Legend

-  Mining Right Application Boundary



## GEOLOGY

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# Prieska Zinc Copper Project

## Legend

- Observation Points
- Mining Right Application Boundary
- BROAD SOIL CLASSIFICATION**
- Ag
- Ah
- ROAD NETWORK**
- Main Road
- Secondary Road
- Other Access
- Railway line
- RIVERS & STREAMS**
- Perennial River
- Non-Perennial River
- Wetlands
- SOIL CHARACTERISTICS**
- Avg Soil Depth**
- Clay % Top Soils**
- Water Holding Capacity**

## SOILS

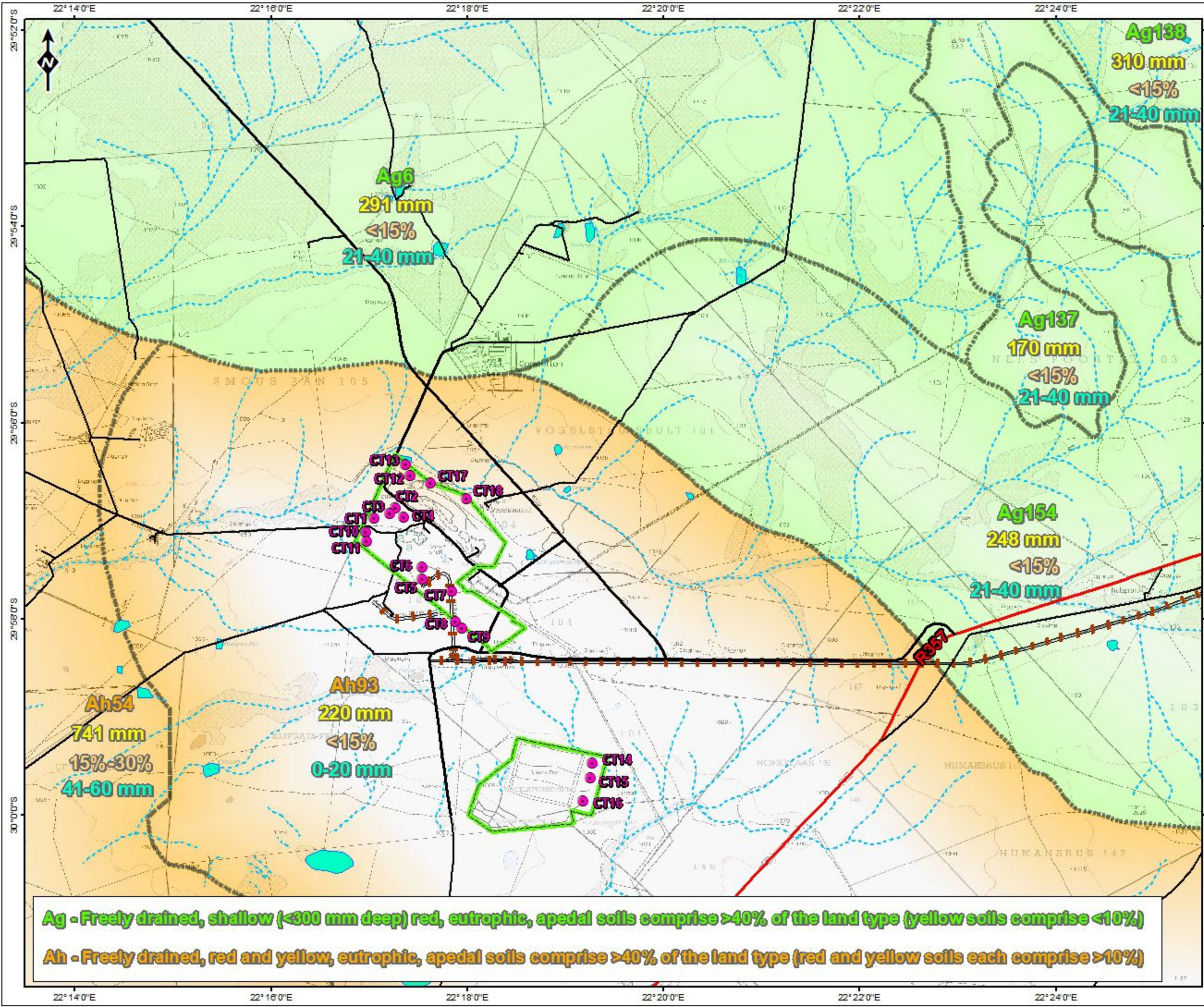
	
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Date: 2018/08/01	



Upington      Kimberley

northern Cape      South Africa

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**Ag - Freely drained, shallow (<300 mm deep) red, eutrophic, apedal soils comprise >40% of the land type (yellow soils comprise <10%)**

**Ah - Freely drained, red and yellow, eutrophic, apedal soils comprise >40% of the land type (red and yellow soils each comprise >10%)**



# Prieska Zinc Copper Project

## Legend

-  Mining Right Application Boundary
  -  Farm Boundaries
- VEGETATION**
-  Bushmanland Arid Grassland
  -  Bushmanland Basin Shrubland
- PROSPECTING RIGHTS**
-  Bartotrax
  -  Repli Trading
  -  Vardocube
- ROAD NETWORK**
-  Main Road
  -  Secondary Road
  -  Other Access
  -  Railway line
- RIVERS & STREAMS**
-  Perennial River
  -  Non-Perennial River
  -  Inland Water

## VEGETATION

0 1000 2000 4000 Meters

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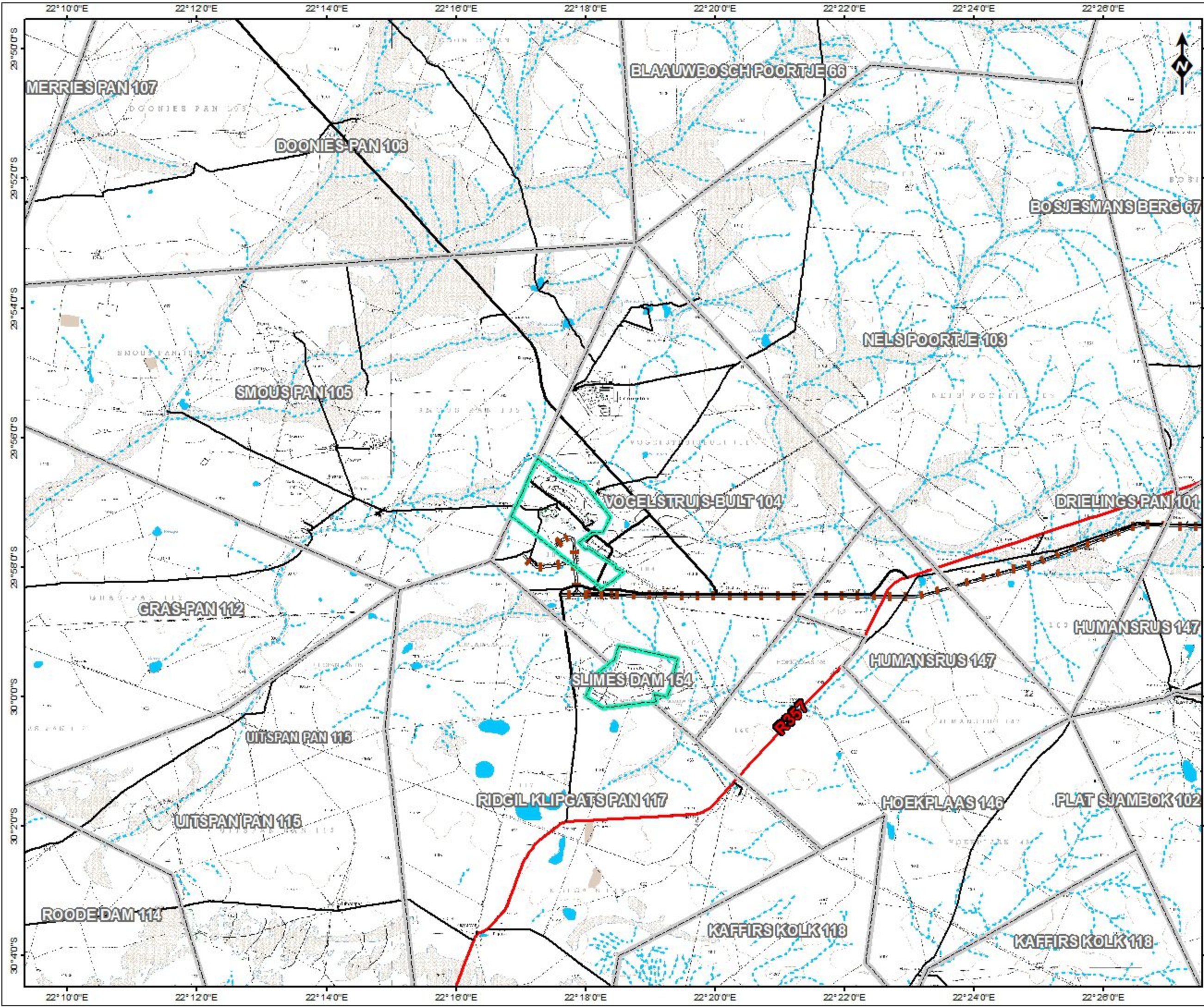
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South Africa



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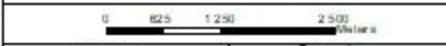


# Prieska Zinc Copper Project

## Legend

-  Mining Right Application Boundary
-  Quaternary Catchments
-  Farm Boundaries
- PROSPECTING RIGHTS**
-  Repli Trading
- ROAD NETWORK**
-  Main Road
-  Secondary Road
-  Other Access
-  Railway line
- RIVERS & STREAMS**
-  Perennial River
-  Non-Perennial River
-  Wetlands

## QUATERNARY CATCHMENTS

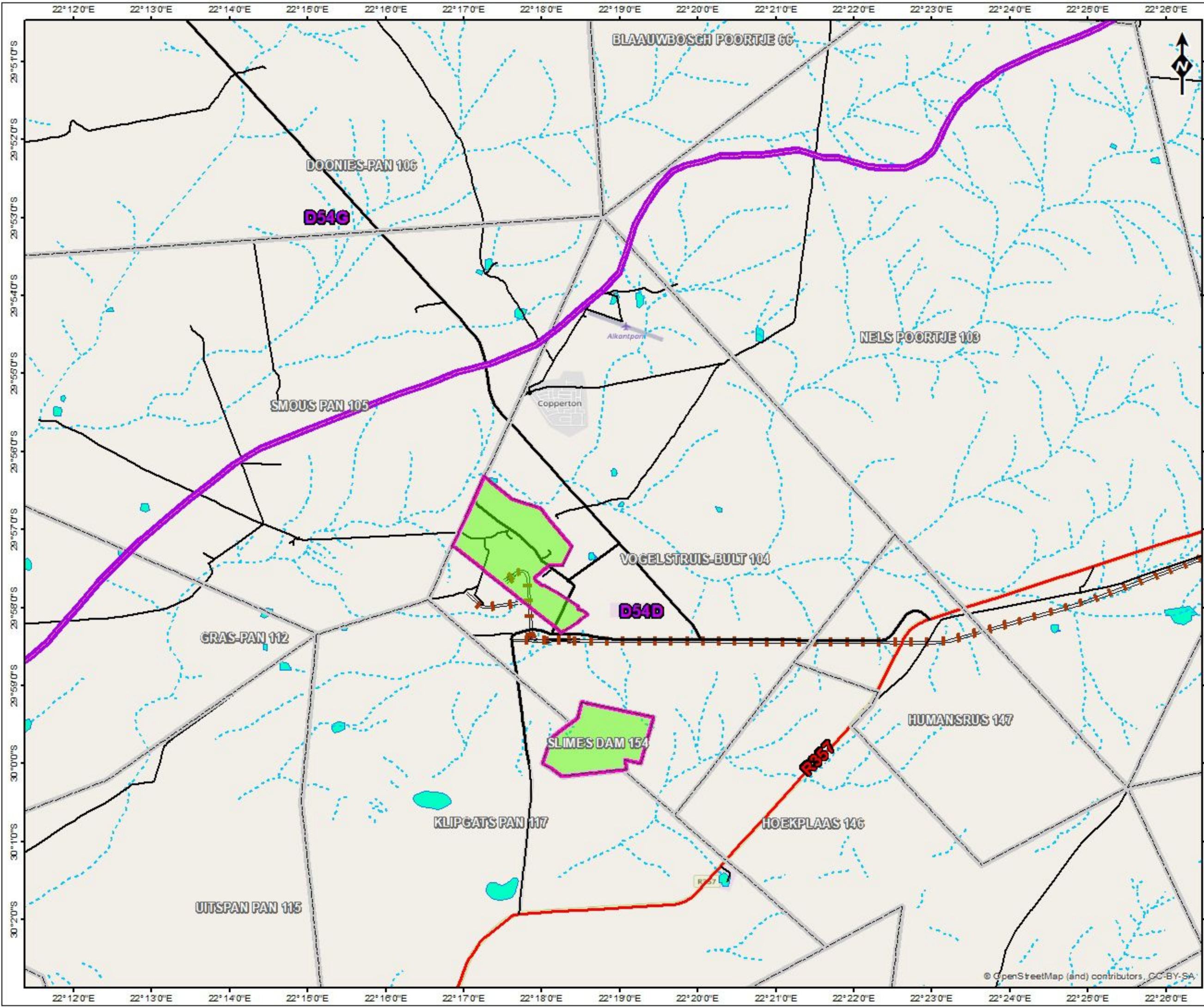


Reviewed: P. Furniss Environmental Scientist	Drawn by: L. Du Plessis GIS Specialist (PGP 1189)
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Coordinate System: GCS WGS 1984  
Datum: WGS 1984



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Version: Final  
Date: 2018/08/01















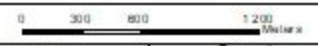
# Prieska Zinc Copper Project

**ALL STORMWATER BERMS TO BE REINSTATED TO 2.5M ABOVE CHANNEL INVERT  
ALL CHANNELS AND CULVERTS TO BE CLEARED OF SEDIMENTATION**

## LEGEND

-  Berms
  -  Mining Right Application Boundary
  -  Mining Infrastructure
- ### ROAD NETWORK
-  Main Road
  -  Secondary Road
  -  Railway line
- ### RIVERS & STREAMS
-  Non-Perennial River
- ### FLOODLINES BASED ON REINSTATED CHANNELS & BERMS
-  100 Year Floodlines
  -  Dam 100 Yr Floodline
  -  Wetlands

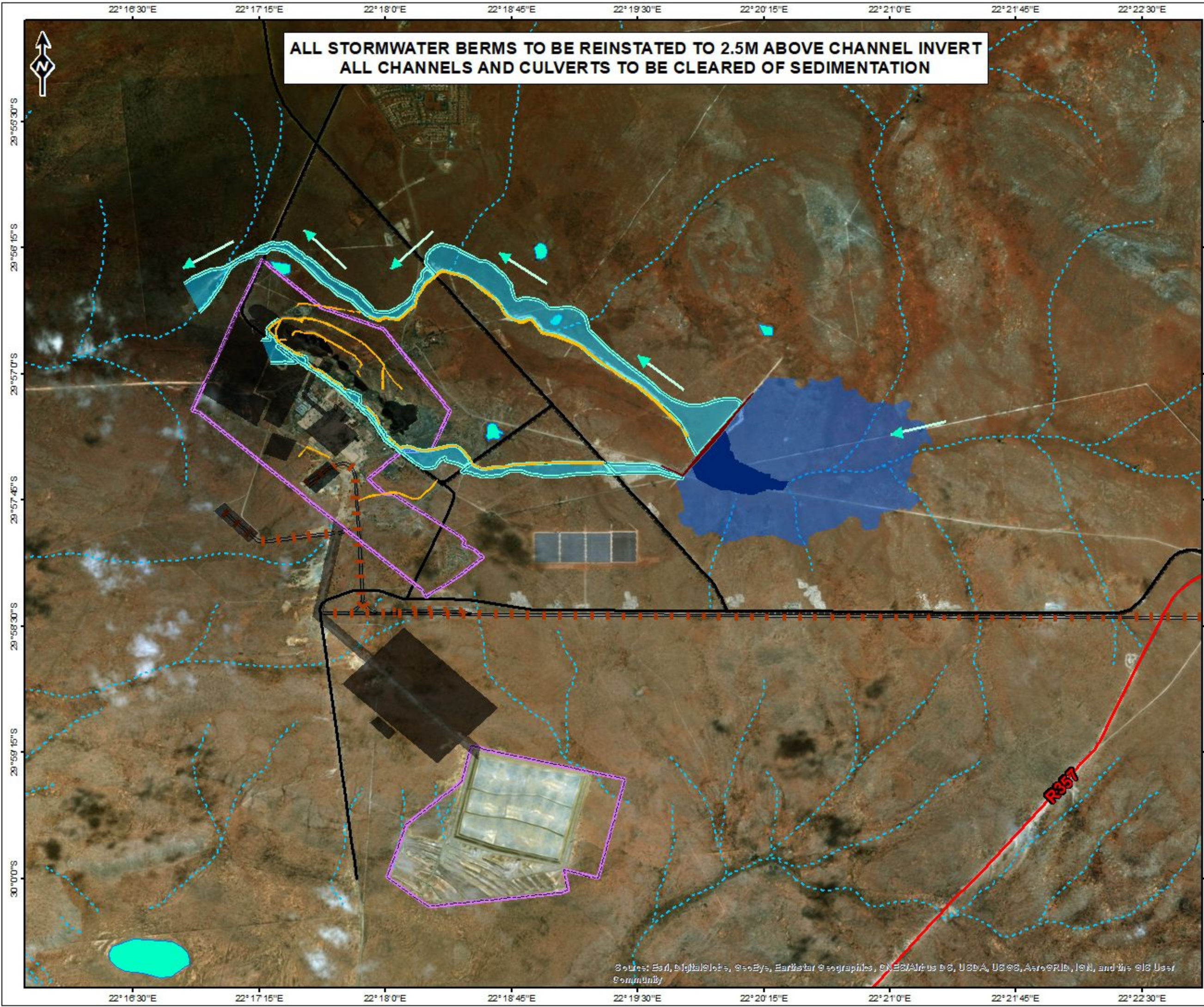
## HYDROLOGY



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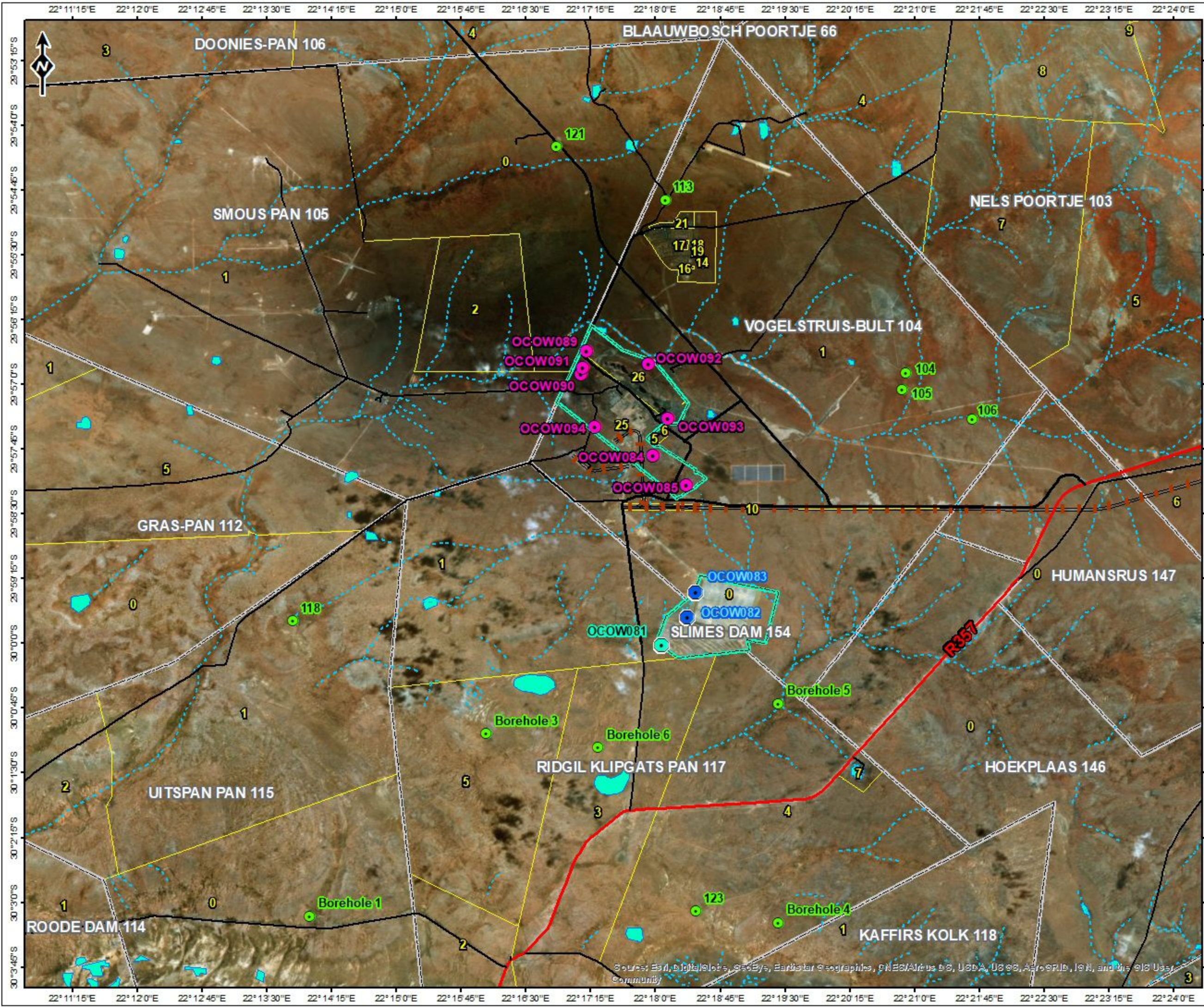
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	Version: Final
	Date: 2018/08/01



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community





# PCM ZN Copper Project

## Legend

- Mining Right Application Boundary
- Hydrocensus Boreholes
- PROPOSED DFS MONITORING BOREHOLES**
- 80m
- PROPOSED MONITORING BOREHOLES**
- 80m
- 150m
- ROAD NETWORK**
- Main Road
- Secondary Road
- Other Access
- Railway line
- RIVERS & STREAMS**
- Non-Perennial River
- Wetlands

## MONITORING & BOREHOLE HYDROCENSUS

Reviewed: P. Furniss, Environmental Scientist  
 Drawn by: L. Du Plessis, GIS Specialist (PGP 1189)

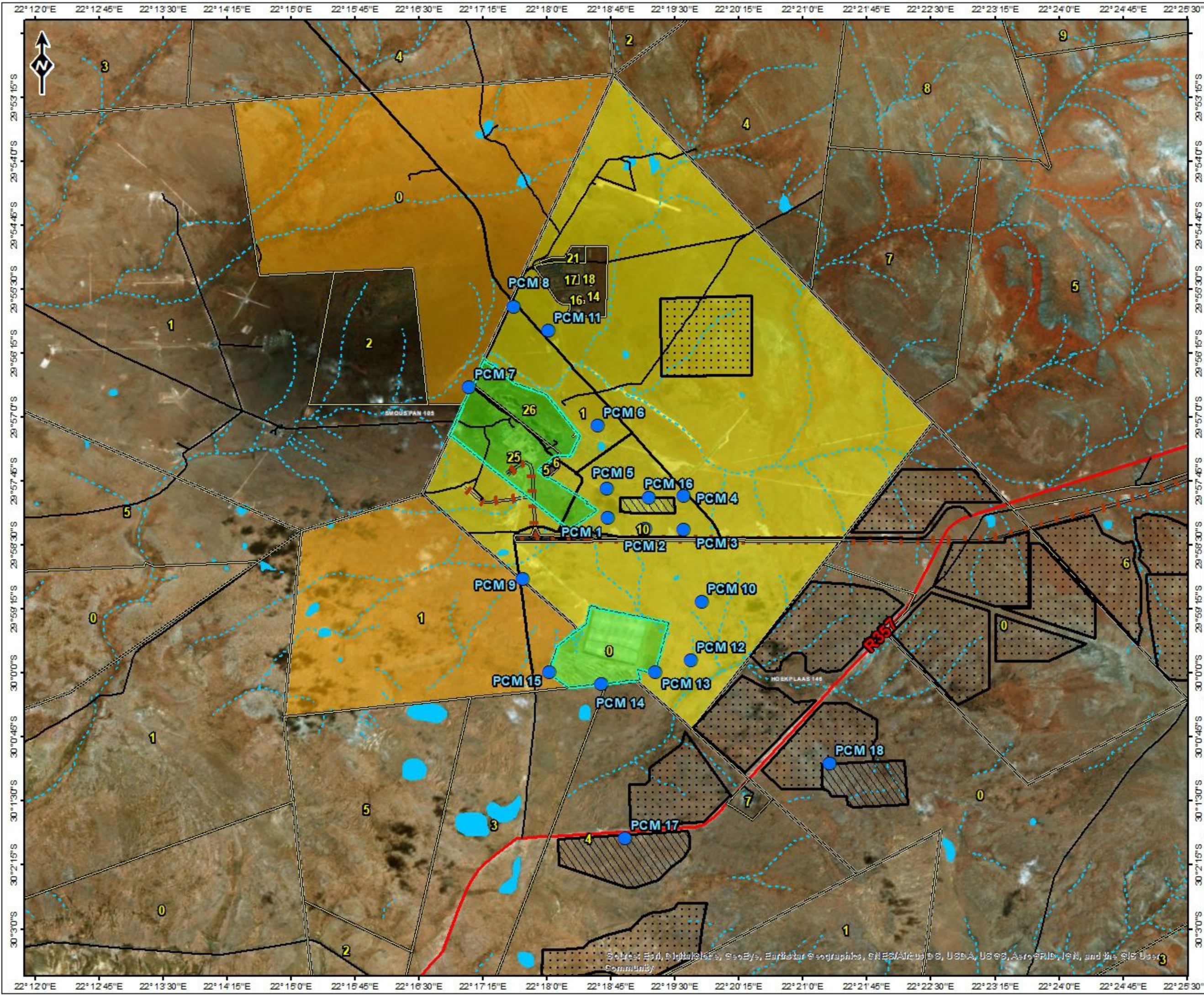
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### PCM ZN Copper Project

- Dust Bucket Monitoring Positions
- Farm Boundaries
- Farm Portions
- Mining Right Application Boundary

#### SOLAR INSTALLATIONS

- Operating
- Proposed

#### PROSPECTING RIGHTS

- Bartotrax
- Repli Trading
- Vardocube

#### ROAD NETWORK

- Main Road
- Secondary Road
- Other Access
- +—+—+—+— Railway line

#### RIVERS & STREAMS

- - - Non-Perennial River
- Inland Water Area

#### DUSTFALL MONITORING NETWORK

0 500 1 100 2 200 Meters

Reviewed: P. Furniss Environmental Scientist	Drawn by: L. Du Plessis GIS Specialist (PGP 1189)
Coordinate System: GCS WGS 1984 Datum: WGS 1984	
Scale: 1:75 000	
Version: <b>Final</b>	
Date: 2018/08/01	








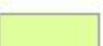


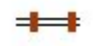

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# Prieska Zinc Copper Project

-  Farm Portions
  -  Mining Right Application Boundary
  -  Mining Infrastructure
- CRITICAL BIODIVERSITY ASSESSMENT**
-  Protected Area
  -  Critical Biodiversity Area One
  -  Critical Biodiversity Area Two
  -  Ecological Support Area
  -  Other Natural Areas
- ROAD NETWORK**
-  Main Road
  -  Secondary Road
  -  Railway line
- RIVERS & STREAMS**
-  Non-Perennial River

## NC CRITICAL BIODIVERSITY AREAS

0 250 500 1 000 Meters

Reviewed: P. Furniss Environmental Scientist	Drawn by: L. Du Plessis GIS Specialist (PGP 1189)
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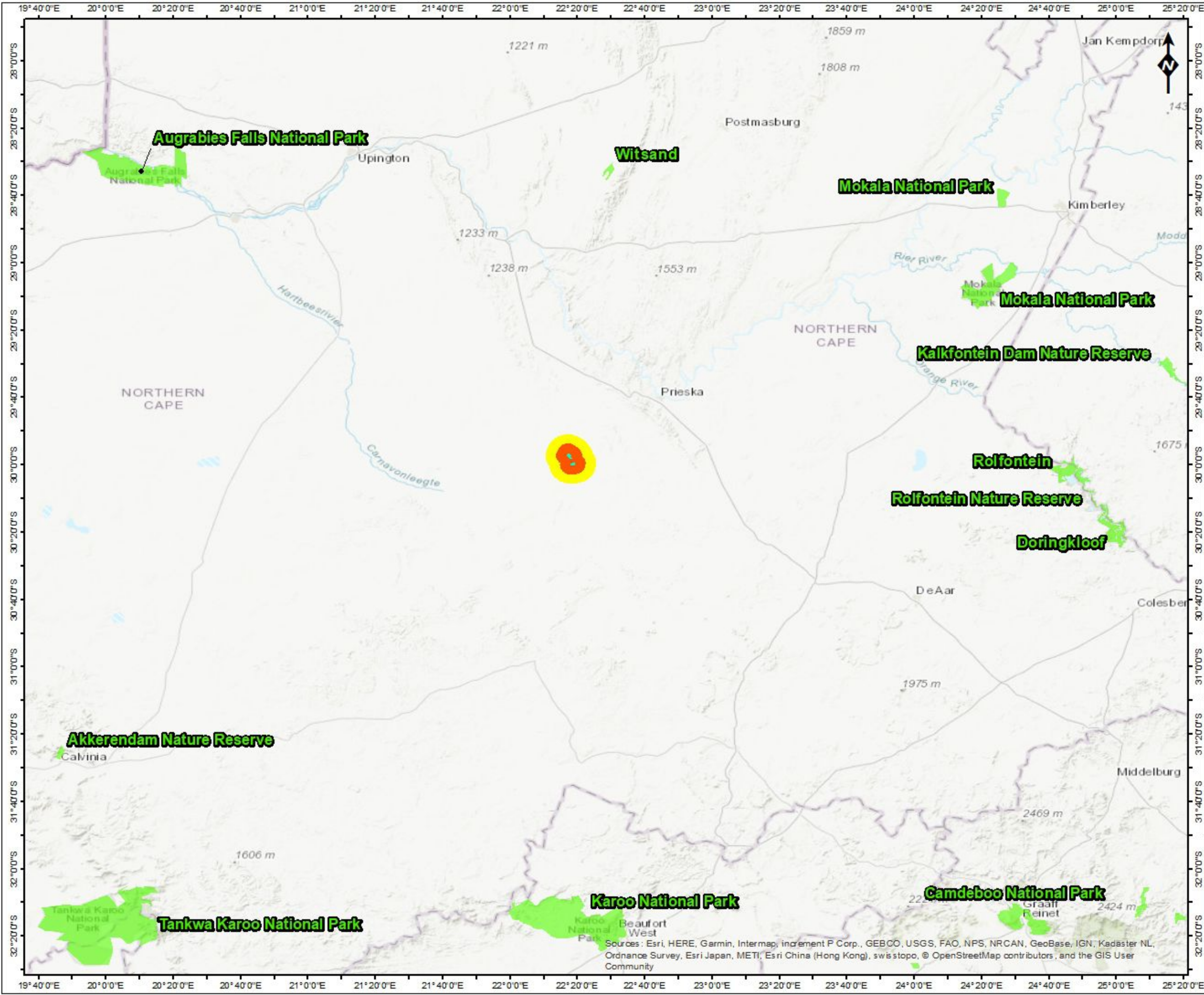
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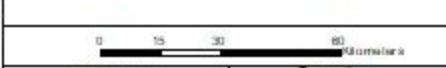


# Prieska Zinc Copper Project

## Legend

- 5km Radius
  - 10km Radius
  - Protected Areas
  - Mining Right Application Boundary
- RIVERS & STREAMS**
- Perennial River
  - Inland Water

## PROTECTED AREAS



Reviewed: P. Furniss, Environmental Scientist  
 Drawn by: L. Du Plessis, GIS Specialist (PGP 1189)

Coordinate System: GCS WGS 1984  
 Datum: WGS 1984

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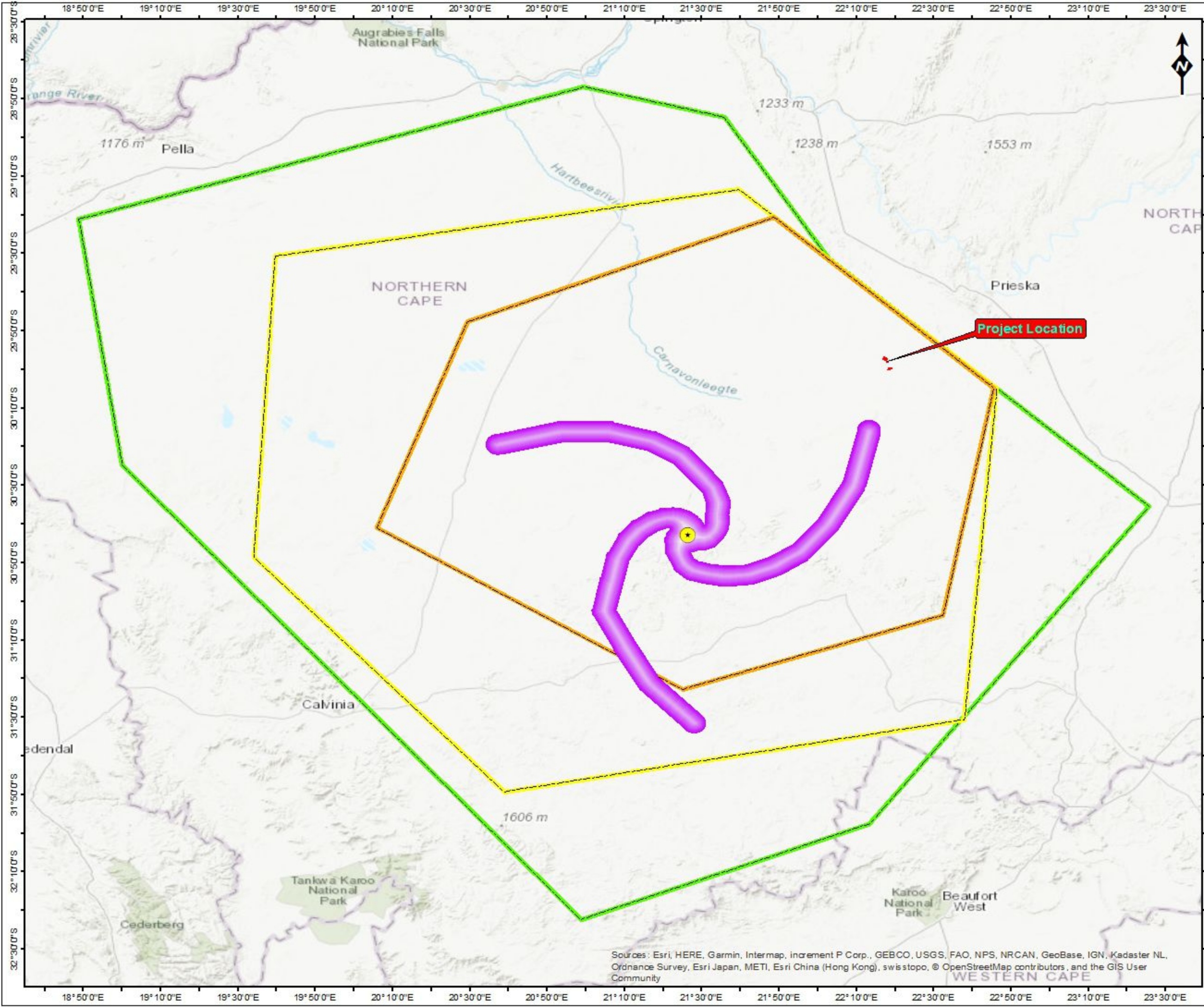
## Legend

-  SKA Virtual Center
-  Mining Right Application Boundary
- SKA AREAS**
-  Central Astronomy Advantage Area 1
-  Central Astronomy Advantage Area 2
-  Central Astronomy Advantage Area 3
-  SKA Phase 1 Corridors
- RIVERS & STREAMS**
-  Perennial River
-  Inland Water

## PCM IN RELATION TO KAROO AAA

0 10 20 30 Kilometers

Reviewed: P. Furniss Environmental Scientist	Drawn by: L. Du Plessis GIS Specialist (PGP 1189)
Coordinate System: GCS WGS 1984 Datum: WGS 1984	
Scale: 1:1 675 000	
Version: Final	
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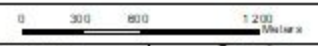
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community



# Prieska Zinc Copper Project

- Decline Shaft
  - Concrete reservoirs
  - Hutchings Shaft
  - Sinkholes
  - Mining Infrastructure
  - Farm Portions
  - Disturbed Areas
- ROAD NETWORK**
- Main Road
  - Secondary Road
  - Railway line
- RIVERS & STREAMS**
- Non-Perennial River
  - Wetlands

## Disturbed Areas

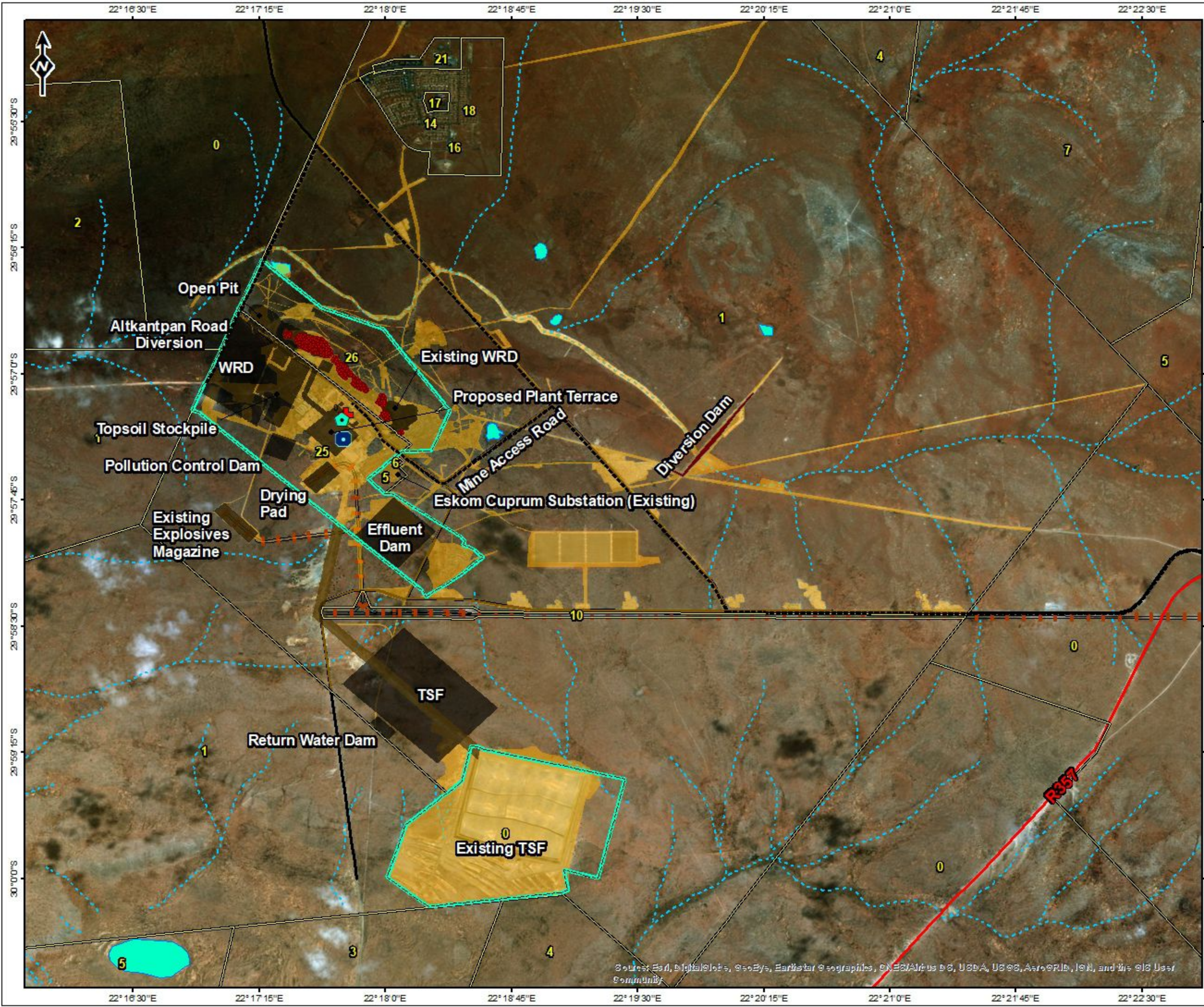


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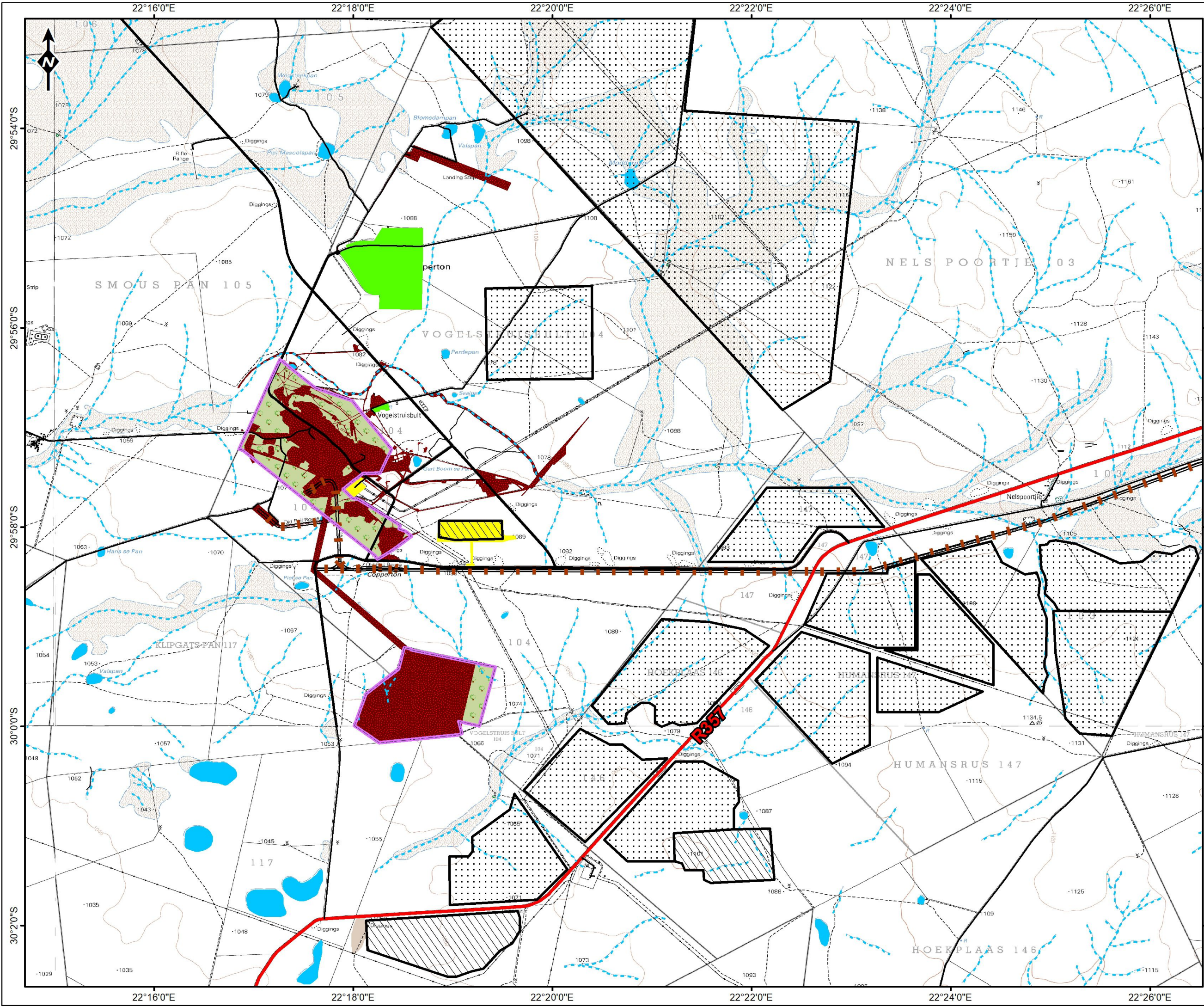
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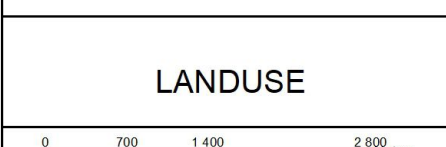




# Prieska Zinc Copper Project

## Legend

- Mining Right Application Boundary
- Operating
- Proposed
- LANDUSE**
- Agriculture – grazing
- Historical mining and related infrastructure
- Power infrastructure
- Residential
- ROAD NETWORK**
- Main Road
- Secondary Road
- Other Access
- Railway line
- RIVERS & STREAMS**
- Perennial River
- Non-Perennial River
- Inland Water



Reviewed: P. Furniss  
Environmental Scientist

Drawn by: L. Du Plessis  
GIS Specialist (PGP 1189)

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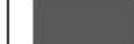




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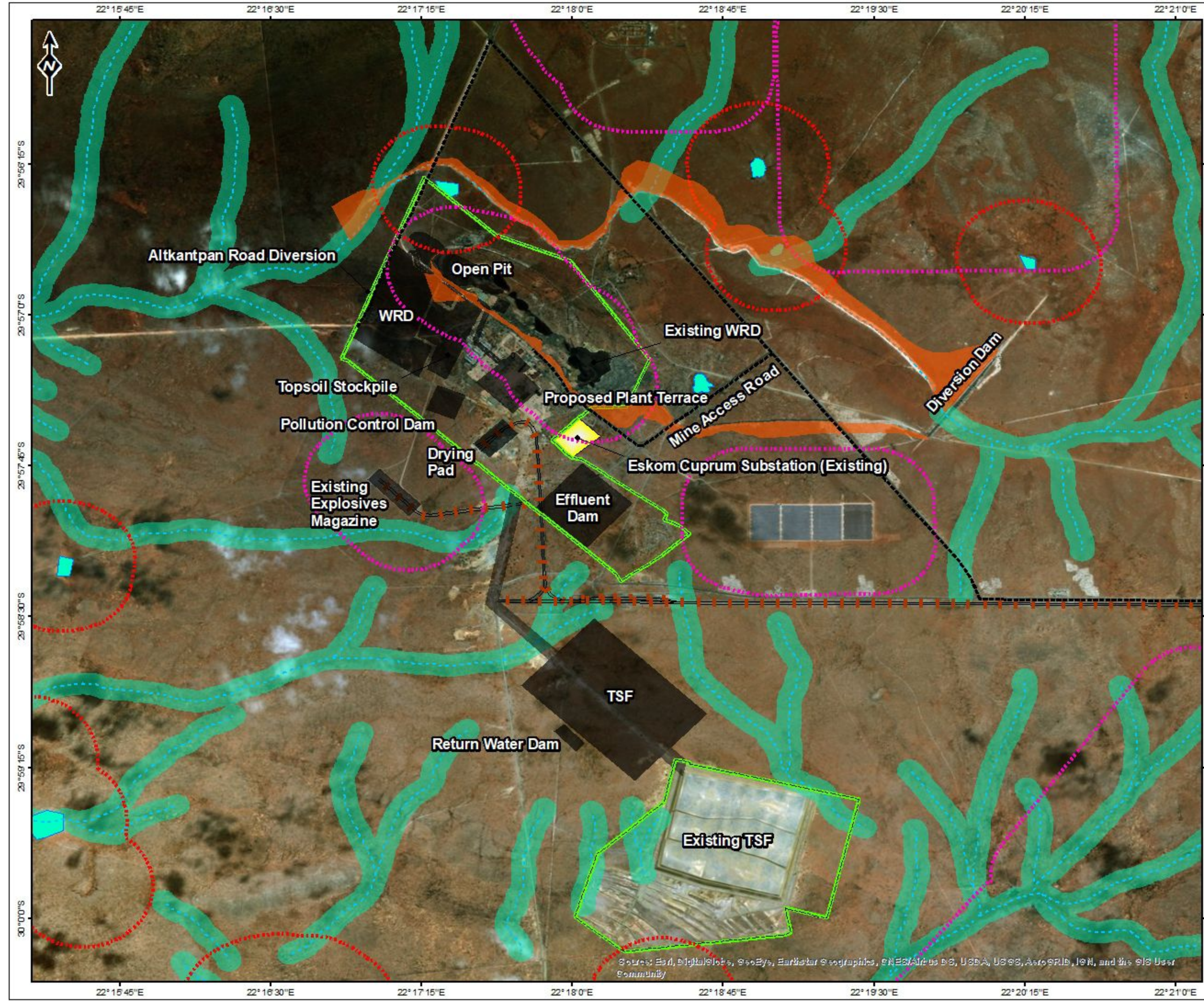




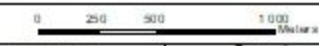
# PRIESKA ZINC COPPER PROJECT

## Legend

-  500m Buffer
  -  500m C&I Buffer
  -  Railway line
  -  Mining Right Application Boundary
  -  Mining Infrastructure
- RIVERS & STREAMS**
-  Non-Perennial River
  -  100m GN704 Buffer
  -  Wetlands
  -  1:100 Year Floodline



## Sensitivity Map



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Datum: WGS 1984

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