

Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
Geographic Information Systems

A geographic information system (GIS) is a computer system for capturing, storing, checking, and displaying data related to positions on Earth's surface.

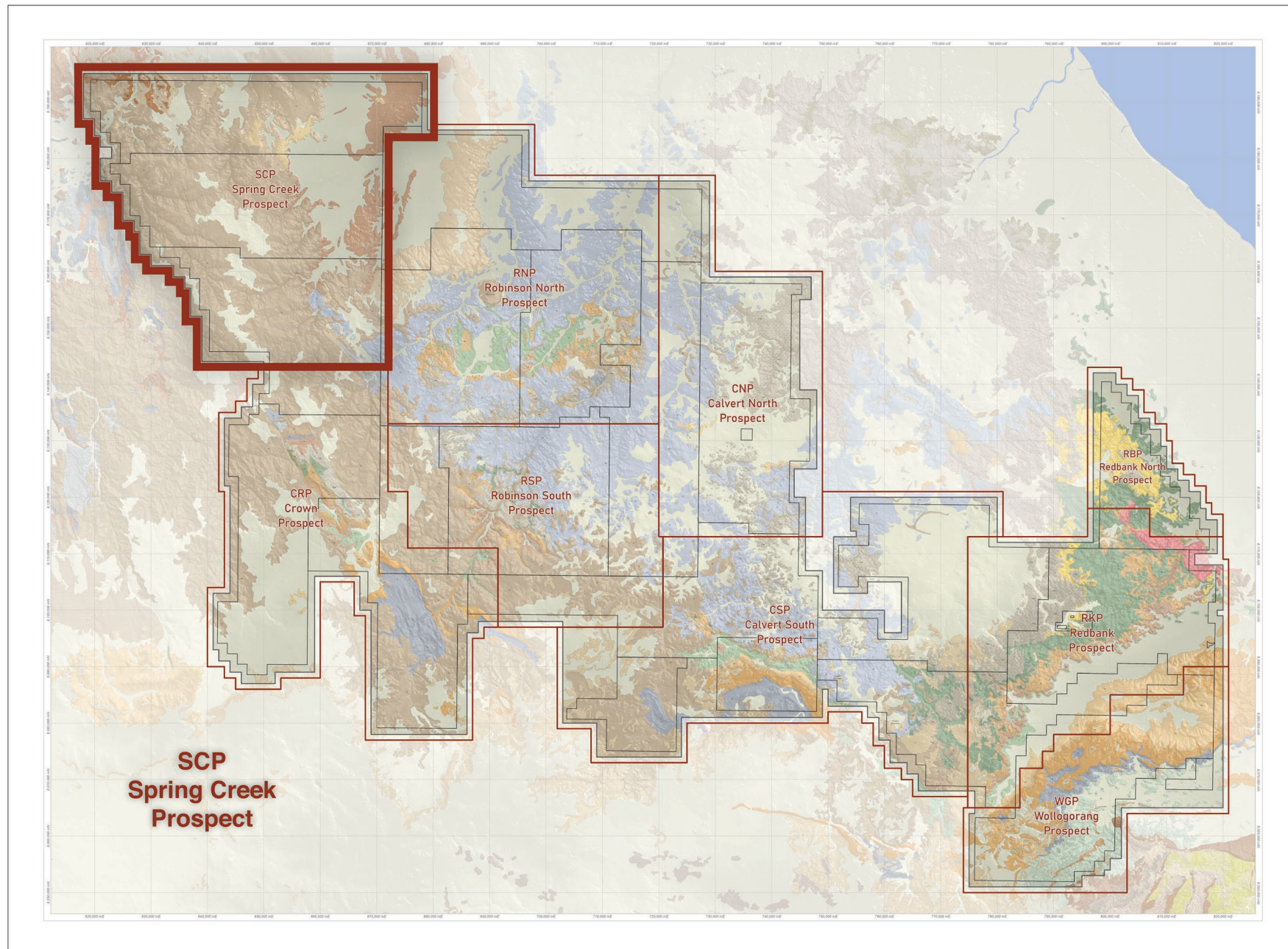
SCP-Spring Creek Prospect
2,523 km²

Geological mapping is fundamental to any exploration project. Effective mineral exploration requires an in-depth understanding of the lithological and structural controls of mineralisation.

These insights must be gained through geological mapping at the early stages of the exploration program. Mapping is a cost-effective exploration tool and a project-generative process that delivers tangible benefits to all exploration programs.

A good geological map not only provides focus to an exploration program, it also clearly communicates the economic potential of a project to stake holders. Geologists strive to know the composition and structure of Earth matter and depict information in GIS format. This provides basis for comparisons and facilitates analysis to offer results that can benefit our future.

The Redbank GIS team are currently focused around the area of Digital Mapping. We understand that at the heart of any Geographical Information System (GIS) is the map database. The efficiency of the GIS is therefore related to the accuracy and reliability of the related map data.



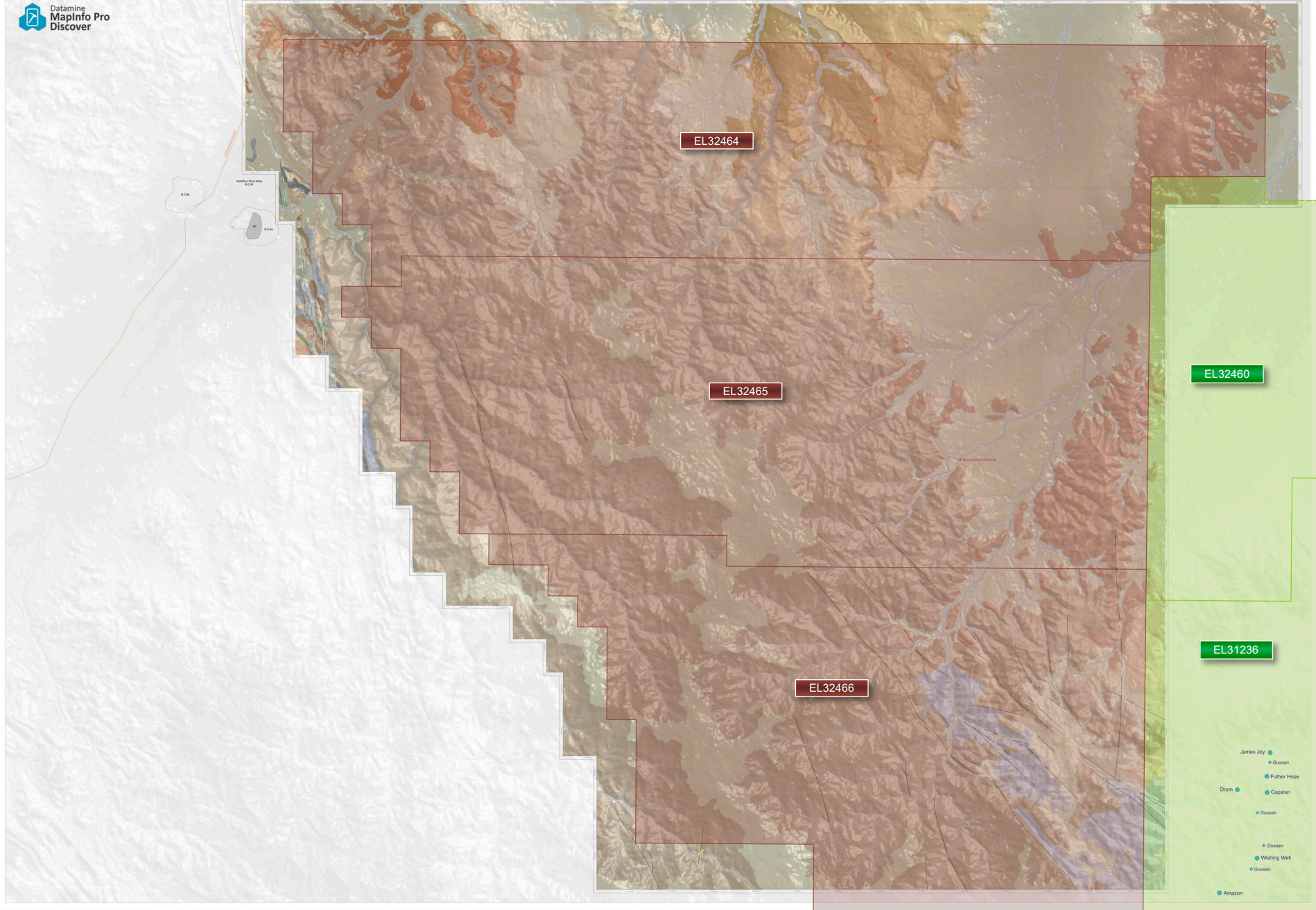
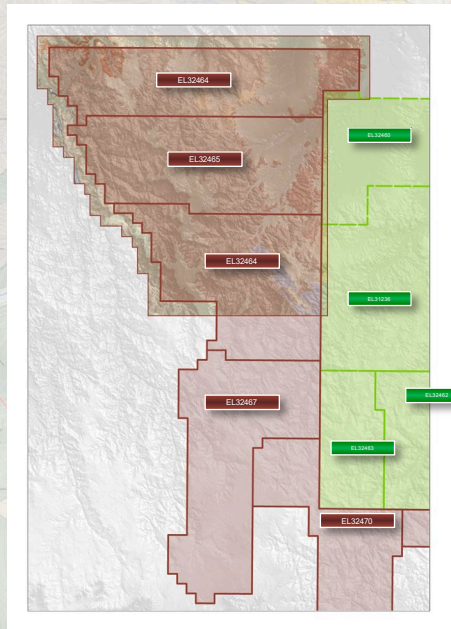
Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
Contents – GIS Layers & Images

- 1. SCP-Spring Creek Prospect Regional location**
SCP-Spring Creek Prospect 2,523 km²
- 2. Contents**
SCP-Spring Creek Prospect Map Book content.
- 3. Exploration Licences**
The SCP-Spring Creek Prospect covers several exploration licences, the mapping has included a 2km buffer zone around the CSP-Exploration Licence area
- 4. Geological Map**
SCP-Spring Creek Prospect digitisation and attribution of Geological layers available in the exploration folder.
- 5. Hydrocarbons Map**
Hydrocarbon classifications have been completed by John Beeson, these layers are fully attributed and available on our server for further investigations.
- 6. Satellite Imagery**
The highest quality satellite imagery for the SCP, pix50cm World Imagery tiles have merged and then clipped to the SCP prospect boundary
- 7. Digital Elevation Model (DEM)**
This DEM is available in the workspace, there has been a contour layer extracted at 5m intervals, this DEM is also available for the "Discover 3D" module within MapInfo .
- 8. Hydrology and 2021 Stream Sediments**
Detailed hydrology, Rivers, Creeks and Catchment layers are fully attributed and these layers have been supplied as individual catchment areas, as well as a combined hydrology layer..
- 9. 2021-Stream Sediments – Heatmap Cu-ppm**
71 Stream Sample locations. . A MapInfo Heatmap layer has been extracted for the Cu-ppm layer.
- 10. NTGS-Stream Sediments (Heat Map)**
337 Stream Sediment sample locations , NTGS Database
- 11. Drillholes (Historical)**
2 Historical drillholes with Attribution table
- 12. Geophysics Image (TMIRTP-Tilt)**
Total magnetic intensity (TMI) -reduced to pole - Tilt filter
- 13. Geophysics Image (TMIRTP)**
Total magnetic intensity (TMI) -reduced to pole
- 14. Geophysics Image (TMIRTP-1VD)**
Total magnetic intensity (TMI) -reduced to pole First vertical derivative.
- 15. Geophysics Image (KThUr-Ternary)**
Ternary radioelement potassium(K)-thorium(Th)-uranium(U) channel data. The image is a red-green-blue (RGB) composite using a histogram-equalised colour-stretch for each of the three channels..
- 16. Areas of Interest**
Detailed Areas of Interest from John Beeson, Mat Cooper , 2021 stream sediments , NTGS and the digitising process (David Hantke).
- 17. Areas of Interest (AEM-ET)**
Regional Government and Historical Open File Airborne Electromagnetic (AEM) Early Time Channel AEM Composite (ET) Time Domain Surveys Only
- 18. Areas of Interest (AEM-MT)**
Regional Government and Historical Open File Airborne Electromagnetic (AEM) Middle Time Channel AEM Composite (MT) Time Domain Surveys Only
- 19. Areas of Interest (AEM-LT)**
Regional Government and Historical Open File Airborne Electromagnetic (AEM) Late Time Channel AEM Composite (LT) Time Domain Surveys Only
- 20. MapInfo Workspace**
The SCP MapInfo Workspace has been set-up and available in the **RBK-Exploration Folder**, this workspace is our **Exploration Database Master** for the Spring Creek Prospect.

Redbank Exploration Project NT
25k Geological Map Series
**SCP-Spring Creek Prospect
Exploration Licences**

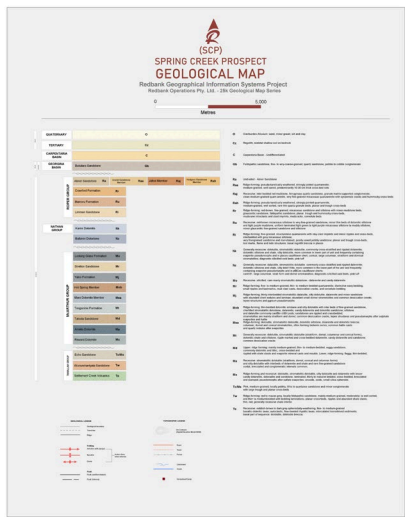
The SCP-Prospect covers several exploration licences, the mapping has included a 2km buffer zone around the SCP-Exploration Licence area

Granted
Application

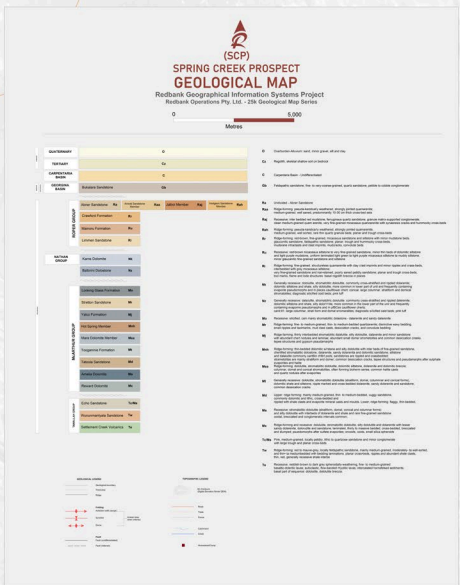


Redbank Exploration Project NT 25k Geological Map Series SCP-Spring Creek Prospect Geological Map

The SCP-Spring Creek Prospect has now been totally digitised and has been placed on our server. This map has a very high level of detail including Geology, Geo Physics, Satellite Imagery, Hydrology, Topography and DEM.



Geological units have been fully attributed in all individual layers, there is also a combined Geology layer with our Redbank codes and hydrocarbon classifications
Contact boundaries are approximate and will be updated as field data becomes available.



Redbank Operations Pty. Ltd.

GEOLOGICAL MAP
25k Geological Map Series

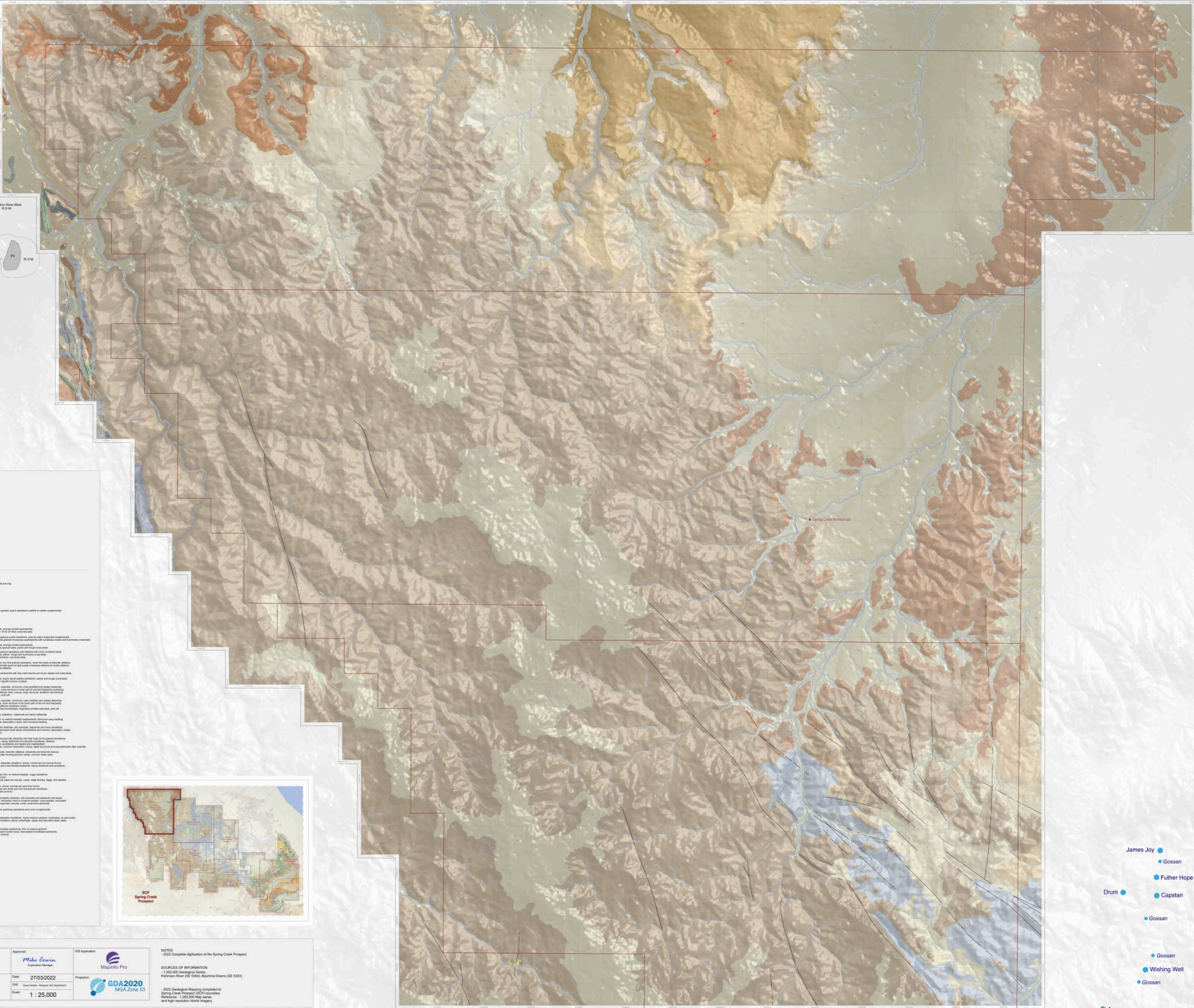
SCP-SPRING CREEK PROSPECT
Redbank Project - Northern Territory - Australia

Author: **Mike Cowan**, Executive Manager
Date: 27/03/2022
Scale: 1:25,000

Software: **MapInfo Pro**
Projection: **GDA2020 MGA Zone 53**

Notes: 2022 Complete digitisation of the Spring Creek Prospect
SOURCES OF INFORMATION: 1:25,000 Geological Map, Australian Map (SR 546), Bathymetry Data (SR 546)

© 2022 Geological Information Systems Project
Spring Creek Prospect of 2011 (formerly Spring Creek Prospect) is a registered trademark of Redbank Operations Pty. Ltd. All rights reserved.



- James Joy
- Gossan
- Futher Hope
- Drum
- Capstan
- Gossan
- Gossan
- Wishing Well
- Gossan
- Amazon

Redbank Exploration Project NT
 25k Geological Map Series
SCP-Spring Creek Prospect
Hydrocarbon Map

Hydrocarbon classifications have been completed by John Beeson, these layers are fully attributed and available on our server for further investigations.

Spring Creek Prospect (SCP) HYDROCARBONS MAP
 Redbank Geographical Information Systems Project
 Redbank Operations Pty. Ltd. (an unlisted company)

0 5000 Meters

Hydrocarbon	Color	Description
Oil	Light Blue	Oil
Gas	Dark Blue	Gas
Coal	Red	Coal
Unconformity	Yellow	Unconformity
Structural	Green	Structural
Other	Grey	Other

Hydrocarbons have been fully attributed in the map database.
 Contact boundaries are approximate and will be updated as field data becomes available



Spring Creek Prospect (SCP) HYDROCARBONS MAP
 Redbank Geographical Information Systems Project
 Redbank Operations Pty. Ltd. (an unlisted company)

0 5000 Meters

Hydrocarbon	Color	Description
Oil	Light Blue	Oil
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Other	Grey	Other

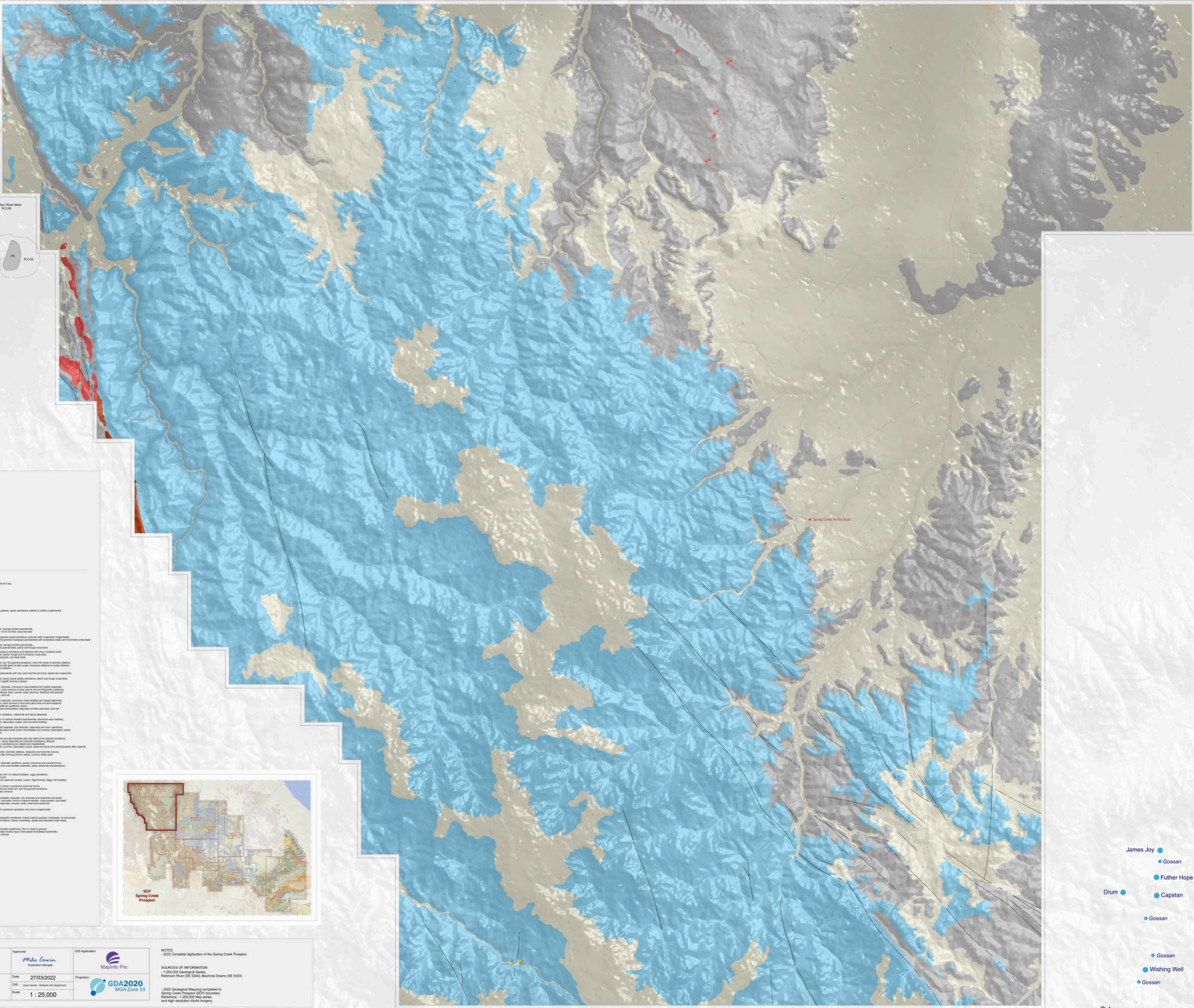
HYDROCARBON MAP
 25k Geological Map Series

SCP-SPRING CREEK PROSPECT
 Redbank Project - Northern Territory - Australia

Author: Mike Cowan, Project Manager
 Date: 27/03/2022
 Scale: 1:25,000

Software: MapInfo Pro
 GDA2020 MGA Zone 53

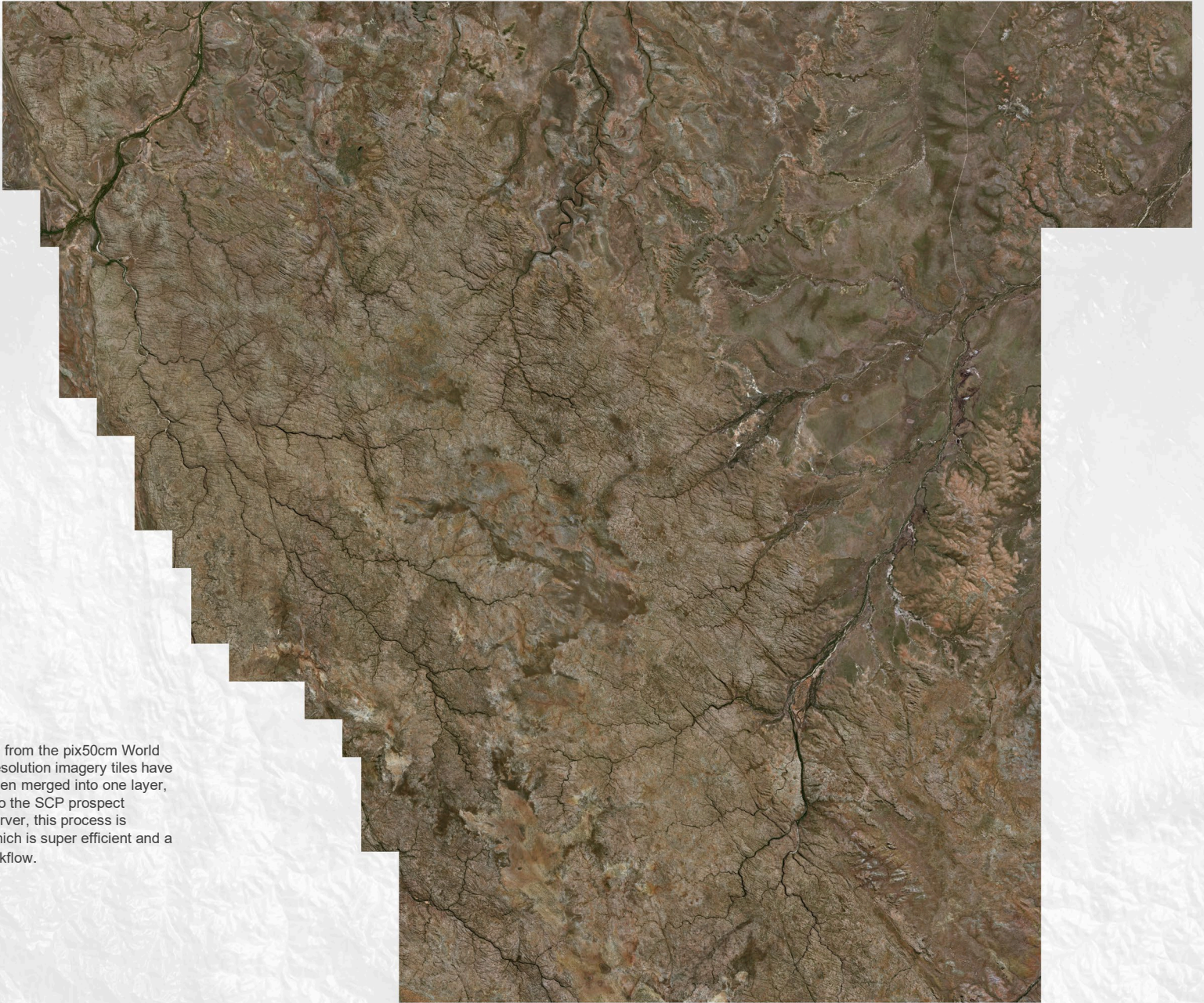
NOTES: 2022 Complete digitization of the Spring Creek Prospect
 RELEASE OF INFORMATION: 2022/03/27
 INFORMATION: 2022/03/27
 PROJECT: SCP-Spring Creek Prospect
 Spring Creek Prospect (SCP) is a wholly owned subsidiary of Redbank Operations Pty. Ltd. and is not a public company.



- James Joy
- Gossan
- Fulmer Hope
- Drum
- Capstan
- Gossan
- Gossan
- Wishing Well
- Gossan
- Amazon

Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
Satellite Imagery

The highest quality satellite imagery has been clipped to SCP boundary and available on our server.

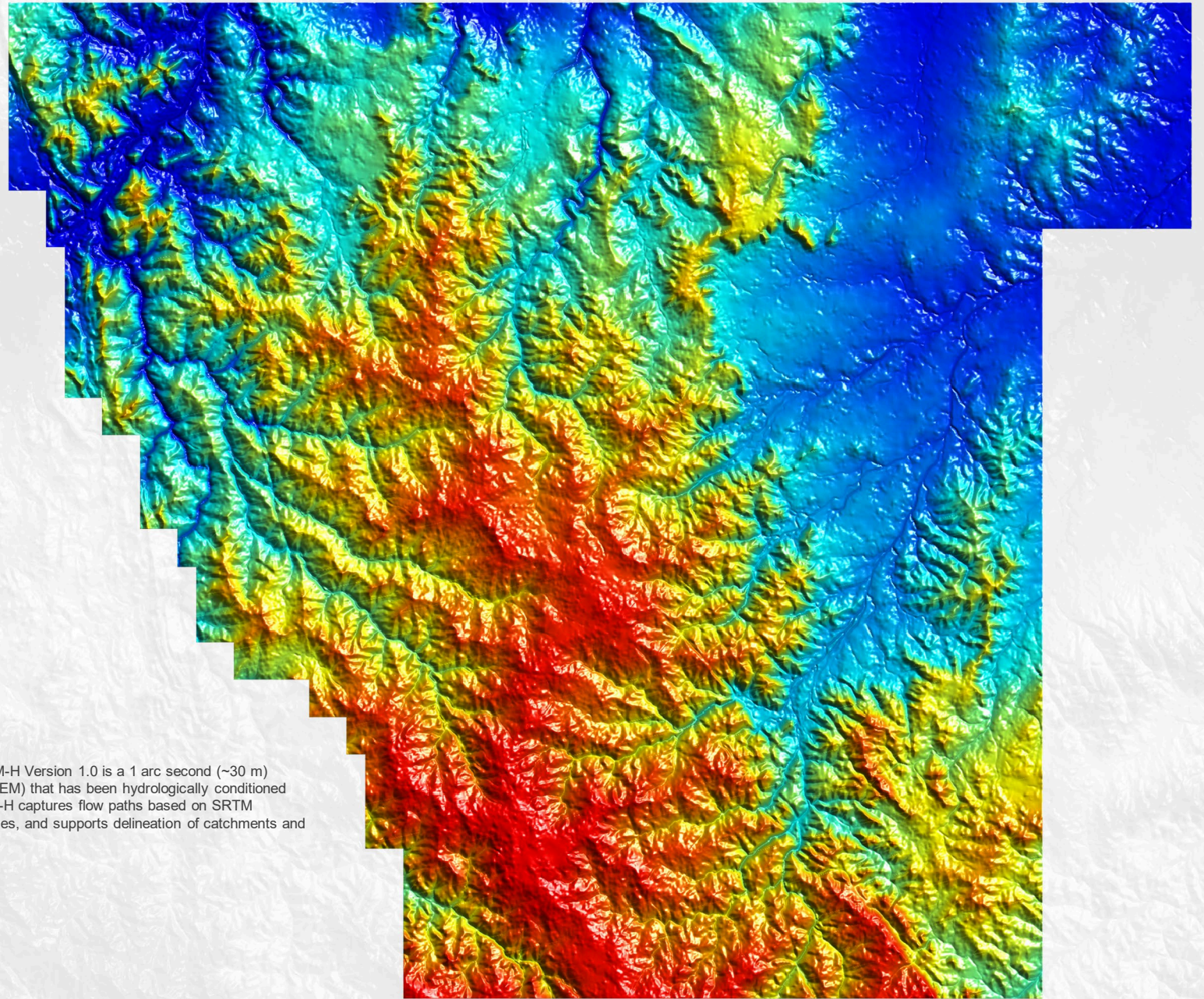
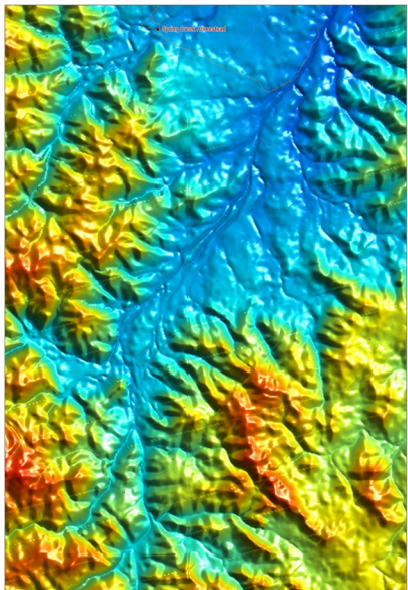


SCP-Imagery has been extracted from the pix50cm World Imagery tiles, these super high resolution imagery tiles have been extracted to the SCP and then merged into one layer, this layer has then been clipped to the SCP prospect boundary and available on our server, this process is supplied in a MapInfo .mrr file, which is super efficient and a processor friendly system for workflow.

25k-Geological Map Series
Satellite Imagery

Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
Digital Elevation Model

This DEM is available in the workspace, there has been a contour layer extracted at 5m intervals, this DEM is also available for the "Discover 3D" module within MapInfo.



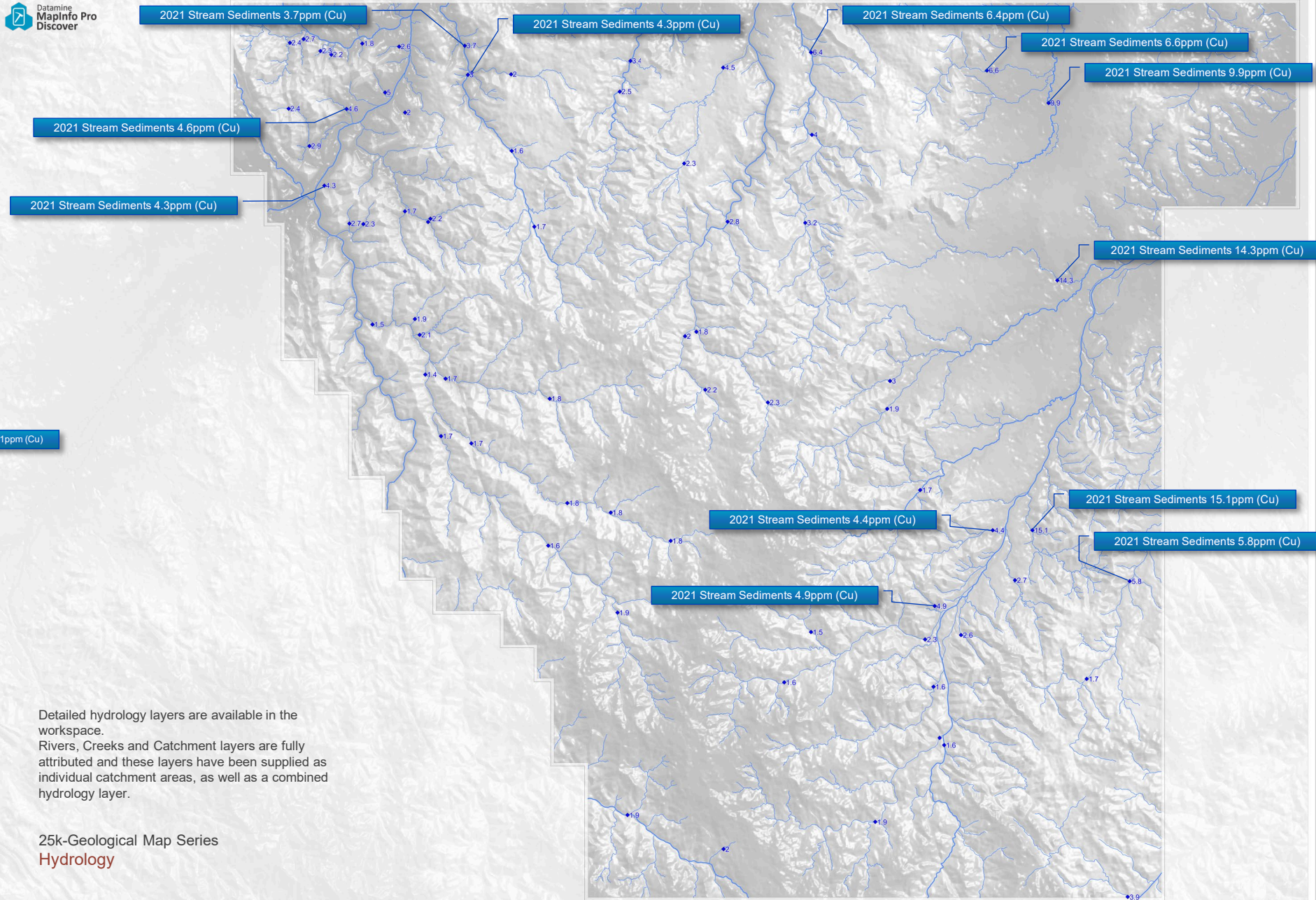
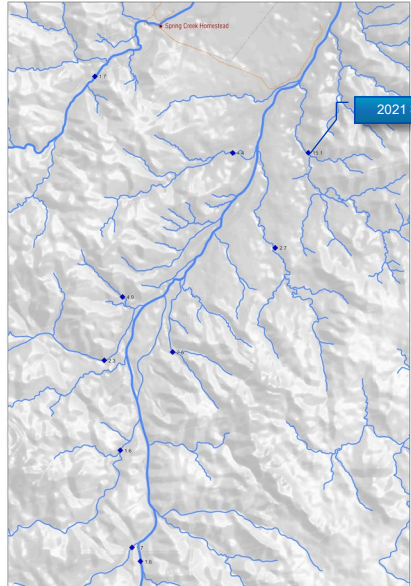
The 1 second SRTM derived DEM-H Version 1.0 is a 1 arc second (~30 m) gridded digital elevation model (DEM) that has been hydrologically conditioned and drainage enforced. The DEM-H captures flow paths based on SRTM elevations and mapped stream lines, and supports delineation of catchments and related hydrological attributes

25k-Geological Map Series
Digital Elevation Model

Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
Hydrology and
2021 Stream Sediments

Allan Ronk collected 71 Stream sediment samples in the SCP in season 2021

Insert Map



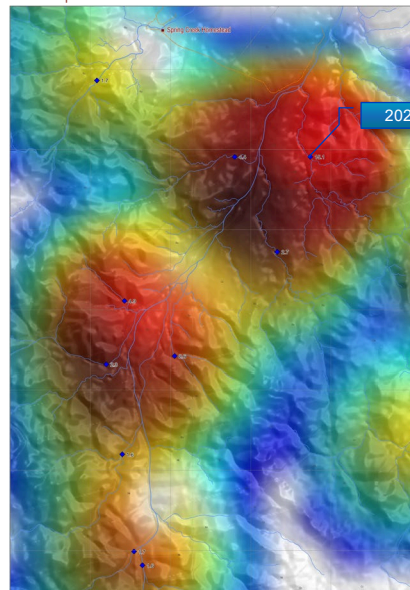
Detailed hydrology layers are available in the workspace.
Rivers, Creeks and Catchment layers are fully attributed and these layers have been supplied as individual catchment areas, as well as a combined hydrology layer.

25k-Geological Map Series
Hydrology

Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
2021-Stream Sediments
Heatmap with Cu-ppm

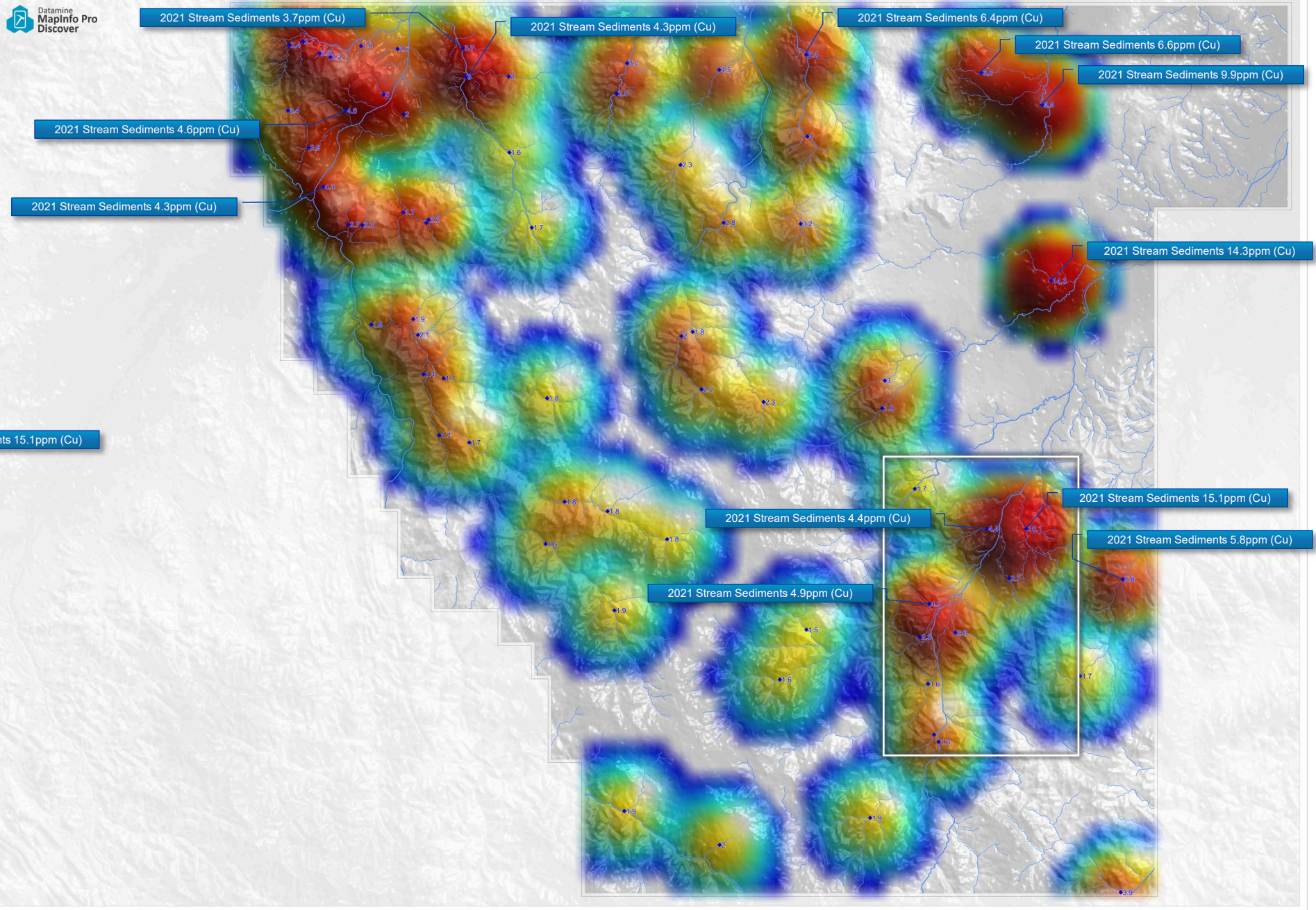
Allan Ronk collected 71 Stream sediment samples in the SCP in season 2021

Insert Map



2021 Stream Sediments 15.1ppm (Cu)

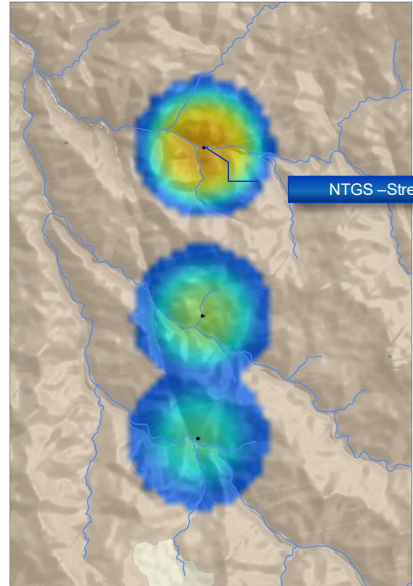
Datamine
MapInfo Pro
Discover



Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
NTGS-Stream Sediments

337 Stream Sediment samples available in the SCP from the NTGS database

Insert Map



NTGS –Stream Sediments 17ppm (Cu)

NTGS –Stream Sediments 11ppm (Cu)

NTGS –Stream Sediments 16ppm (Cu)

NTGS –Stream Sediments 10ppm (Cu)

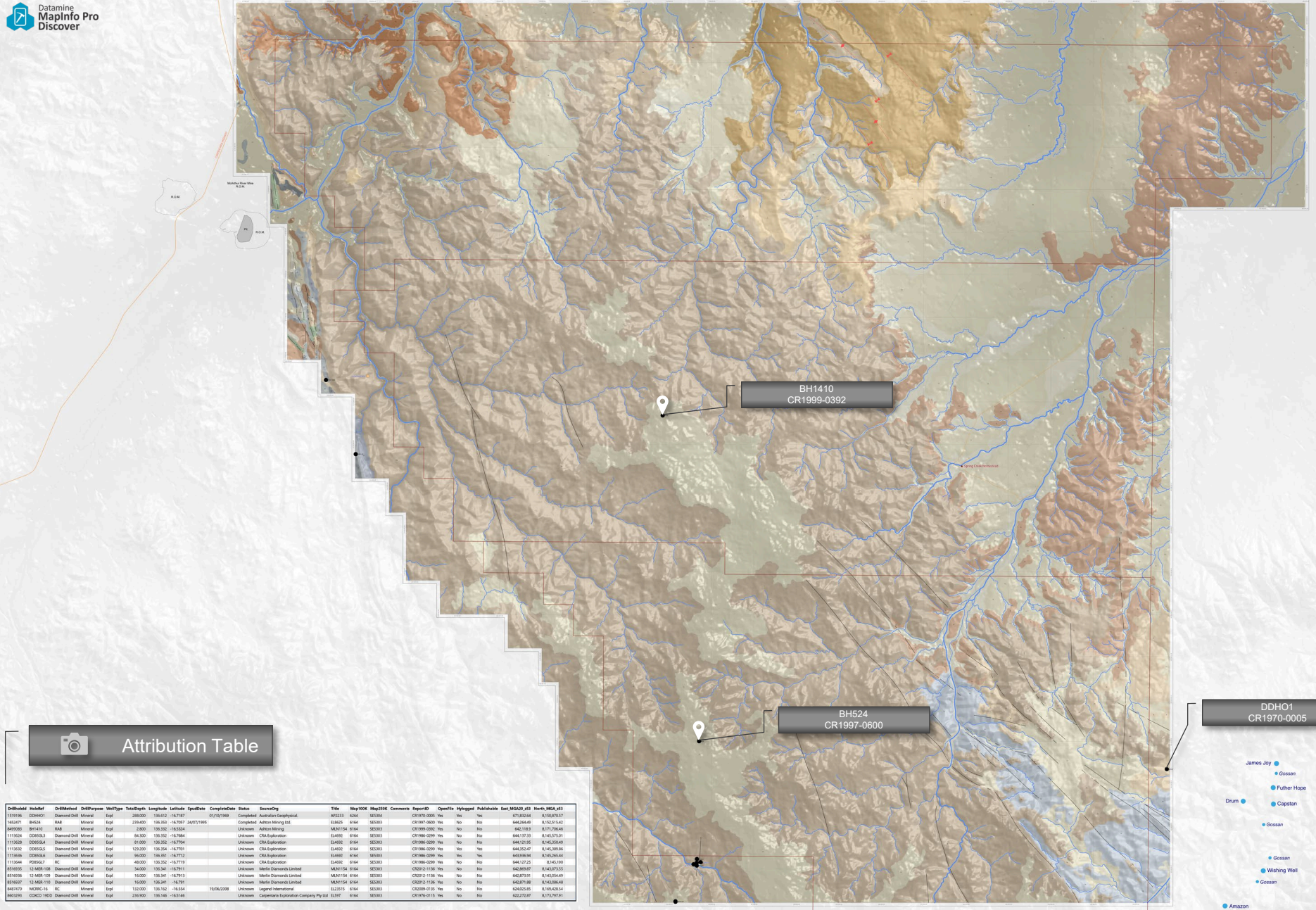
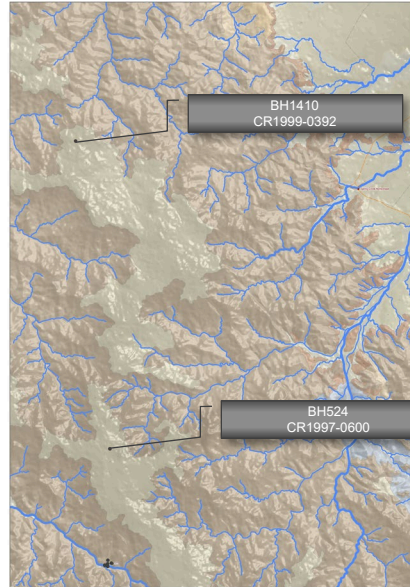
NTGS –Stream Sediments 17ppm (Cu)

- James Joy
- Gossan
- Father Hope
- Drum
- Capstan
- Gossan
- Gossan
- Wishing Well
- Gossan
- Amazon

Redbank Exploration Project NT
 25k Geological Map Series
**SCP-Spring Creek Prospect
 Drillholes (Historical)**

There are 2 historical drillholes in the SCP exploration licence area
 (Please see table contents for details)

Insert Map



Attribution Table

Wellhead	Wellid	Datamine	Datatype	WellType	WellDepth	Longitude	Latitude	SpdRate	Completion	Status	Source	Title	Mag100K	Mag25K	Comments	Reported	OpenTo	WellOpen	Publicable	East	Mag10K	North	Mag10K
1519190	DDHO1	Diamond Drill	Mineral	Egfr	280.00	130.612	-16.797			Completed	Activeline Geophysical	AP2213	6264	623564	CR1970-0005	Yes	No	Yes	671,872.64	8,152,195.17			
1602471	BH524	HAH	Mineral	Egfr	279.600	130.393	-16.707	20/07/1995		Completed	Adrian Mining Ltd	EL6025	6164	583001	CR1997-0000	Yes	No	No	642,264.49	8,152,114.42			
8899268	BH1410	HAH	Mineral	Egfr	278.000	130.312	-16.524			Unknown	Adrian Mining	NA31154	6164	583001	CR1999-0392	Yes	No	No	642,119.87	8,170,706.49			
1113024	DDH053	Diamond Drill	Mineral	Egfr	84.900	130.392	-16.788			Unknown	CHA Exploration	EL4802	6164	583001	CR1986-0209	Yes	No	No	644,137.33	8,145,370.21			
1113026	DDH054	Diamond Drill	Mineral	Egfr	81.000	130.312	-16.754			Unknown	CHA Exploration	EL4802	6164	583001	CR1986-0209	Yes	No	No	644,212.91	8,148,352.81			
1113033	DDH055	Diamond Drill	Mineral	Egfr	129.200	130.354	-16.701			Unknown	CHA Exploration	EL4802	6164	583001	CR1986-0209	Yes	Yes	Yes	644,182.87	8,145,989.85			
1113036	DDH056	Diamond Drill	Mineral	Egfr	90.000	130.391	-16.772			Unknown	CHA Exploration	EL4802	6164	583001	CR1986-0209	Yes	Yes	Yes	643,936.94	8,142,325.44			
1113044	DDH057	HC	Mineral	Egfr	80.000	130.320	-16.778			Unknown	CHA Exploration	EL4802	6164	583001	CR1986-0209	Yes	No	No	644,122.23	8,144,119.0			
8516959	12-MER-108	Diamond Drill	Mineral	Egfr	84.000	130.341	-16.791			Unknown	Martin Diamonds Limited	NA31154	6164	583001	CR2012-1136	Yes	No	No	642,889.87	8,143,073.55			
8516970	12-MER-109	Diamond Drill	Mineral	Egfr	16.000	130.341	-16.791			Unknown	Martin Diamonds Limited	NA31154	6164	583001	CR2012-1136	Yes	No	No	642,871.88	8,142,654.83			
8516971	12-MER-110	Diamond Drill	Mineral	Egfr	16.000	130.341	-16.791			Unknown	Martin Diamonds Limited	NA31154	6164	583001	CR2012-1136	Yes	No	No	642,871.88	8,142,654.83			
8487470	MCORC-10	HC	Mineral	Egfr	132.000	130.520	-16.534			Unknown	Legend International	EL2219	6164	583001	CR2009-0715	Yes	No	No	626,020.81	8,168,438.24			
8892261	DDH01900	Diamond Drill	Mineral	Egfr	238.900	130.546	-16.546			Unknown	Cartamex Exploration Company Pty Ltd	EL3097	6164	583001	CR1970-0115	Yes	No	No	622,272.87	8,170,705.61			

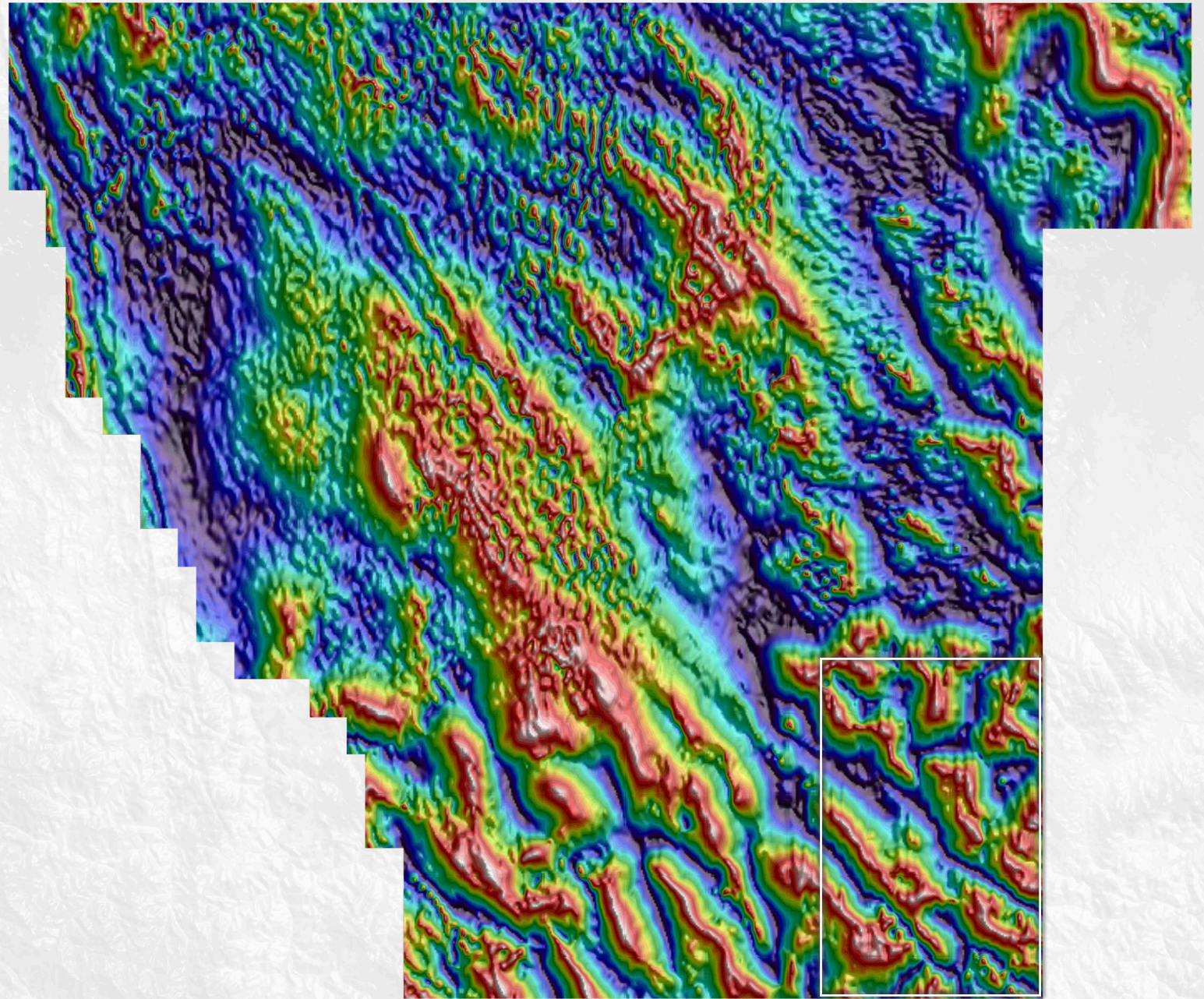
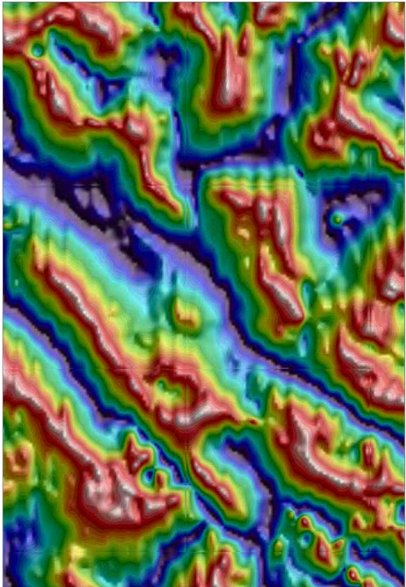
DDHO1
CR1970-0005

- James Joy
- Gossan
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- Wishing Well
- Gossan
- Amazon

Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
Geophysics Images

Derived from NTGS Government Aeromagnetic Surveys
Total magnetic intensity (TMI) - reduced to pole
Tilt filter

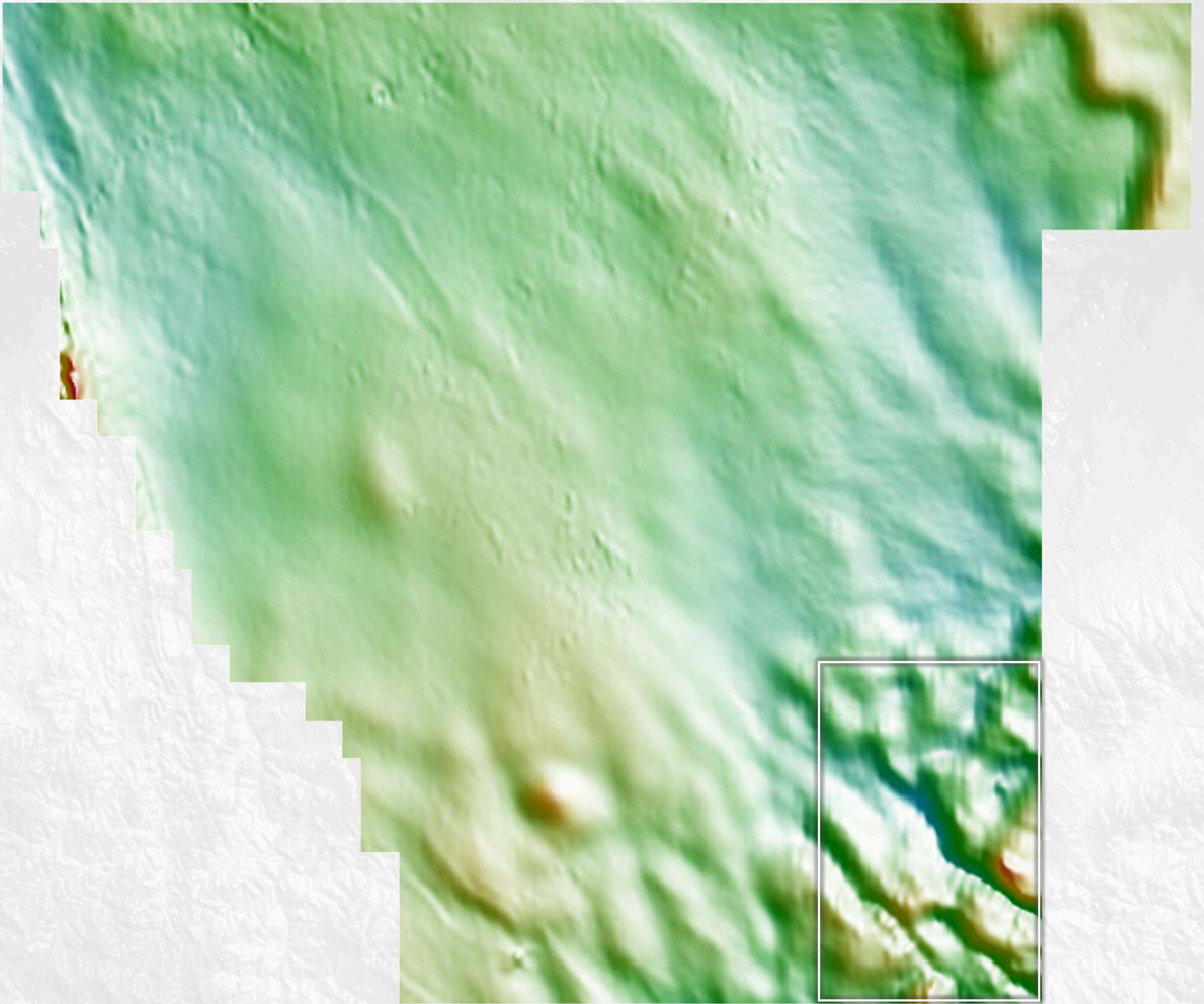
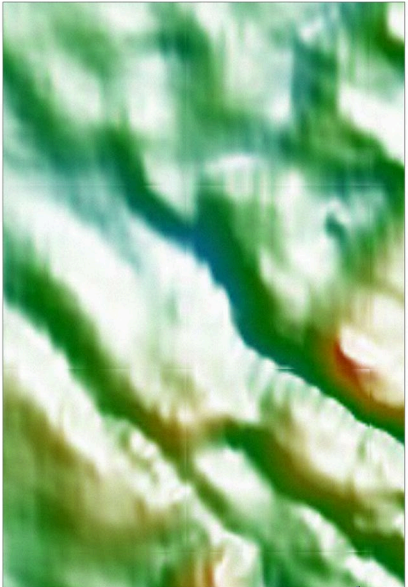
Insert Map



Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
Geophysics Images

Derived from NTGS Government Aeromagnetic Surveys
Total magnetic intensity (TMI) - reduced to pole

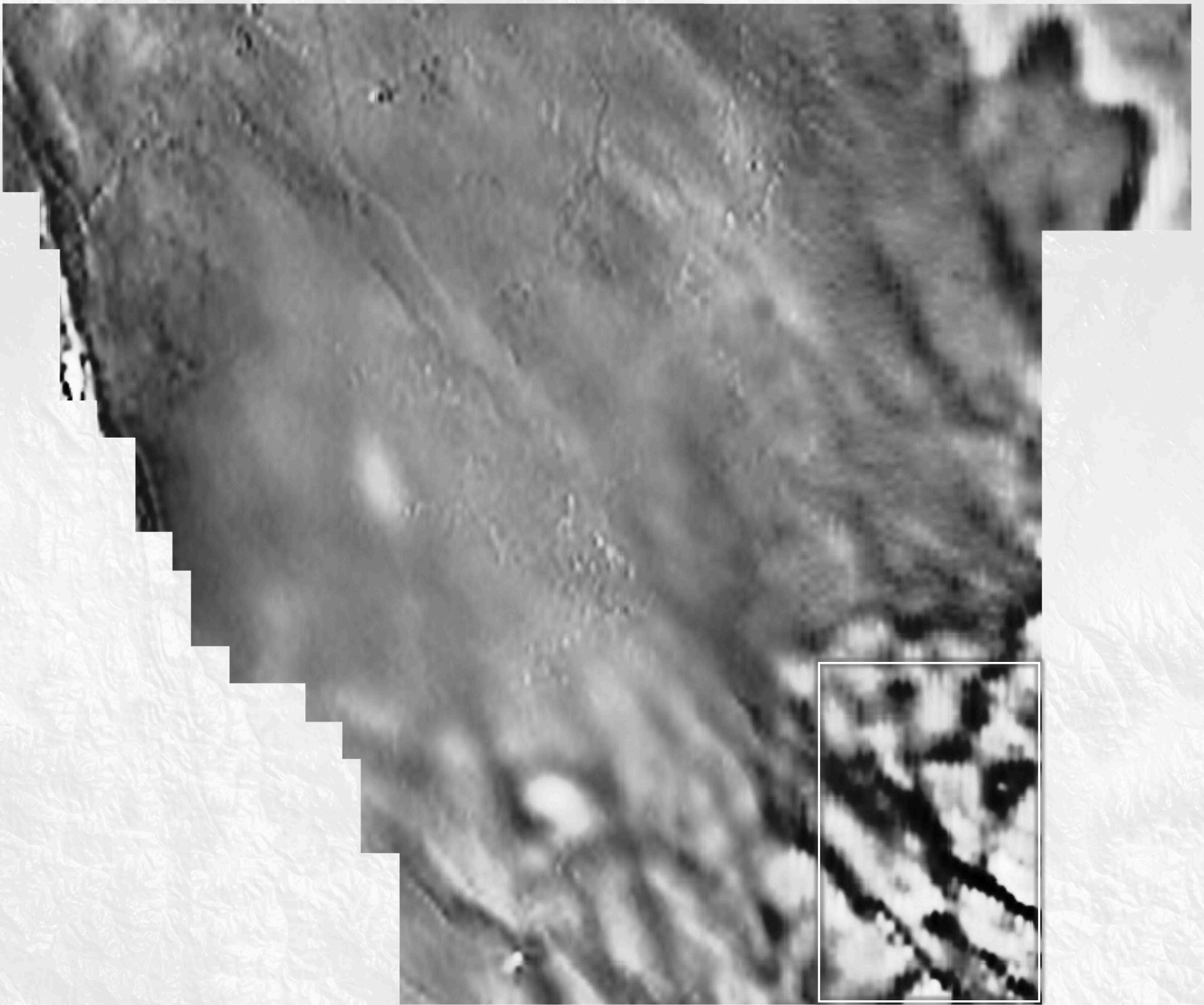
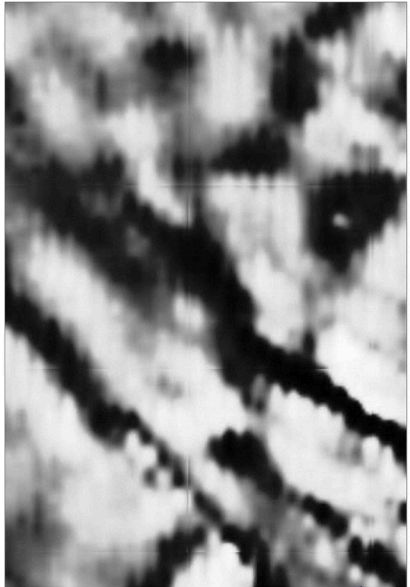
Insert Map



Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
Geophysics Images

Derived from NTGS Government Aeromagnetic Surveys
Total magnetic intensity (TMI) - reduced to pole
First vertical derivative

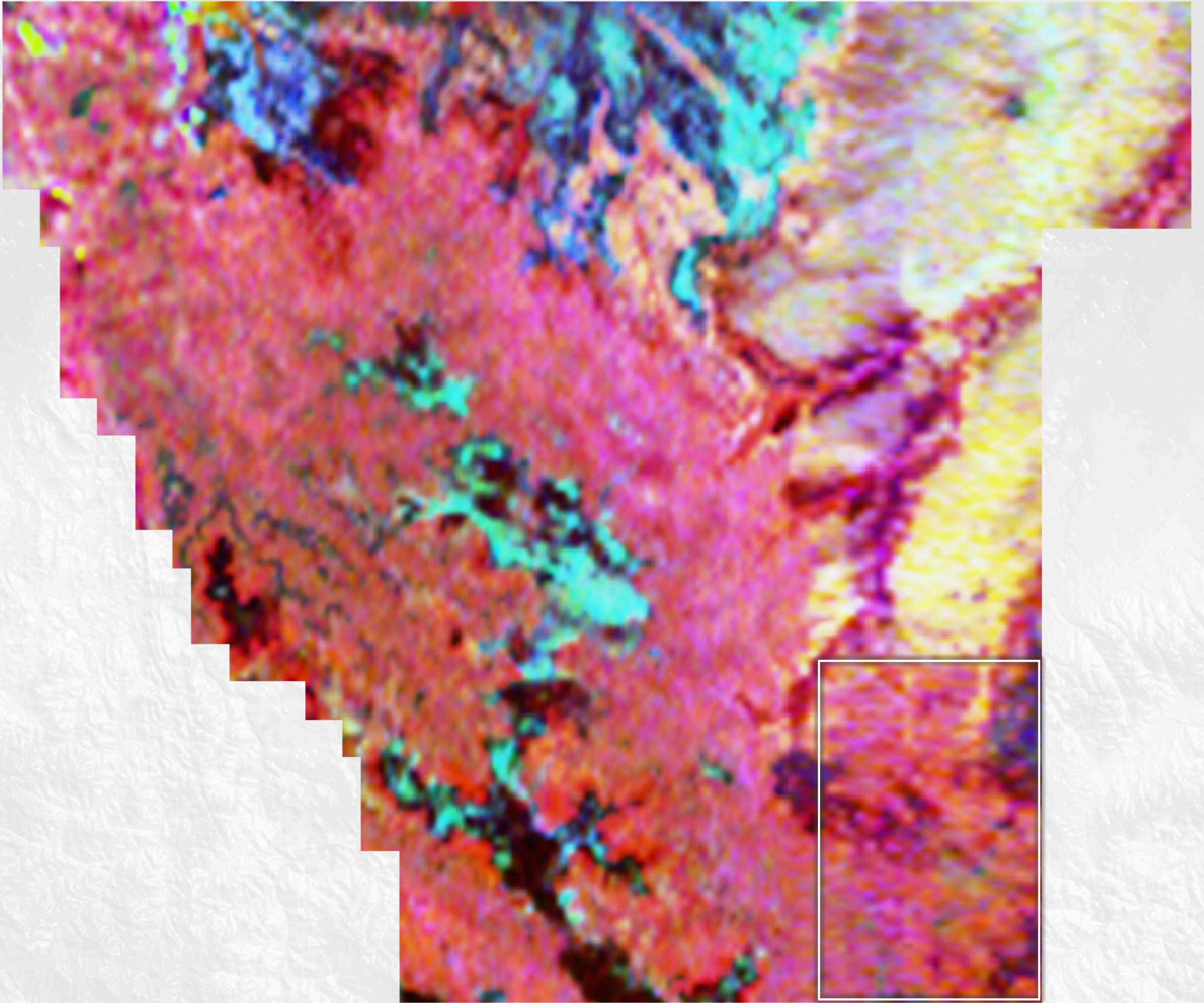
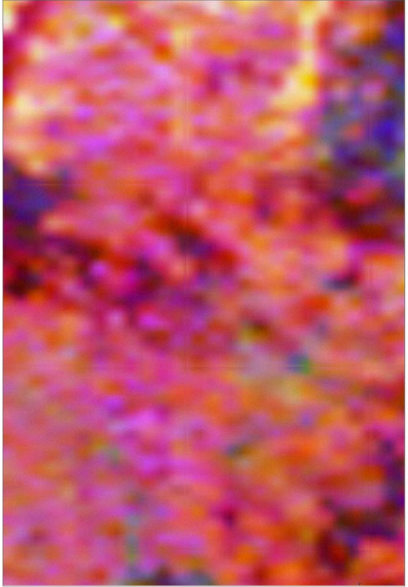
Insert Map



Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
Geophysics Images

Derived from NTGS Government Aeromagnetic Surveys Ternary radioelement potassium(K)-thorium(Th)-uranium(U) channel data. The image is a red-green-blue (RGB) composite using a histogram-equalised colour-stretch for each of the three channels.

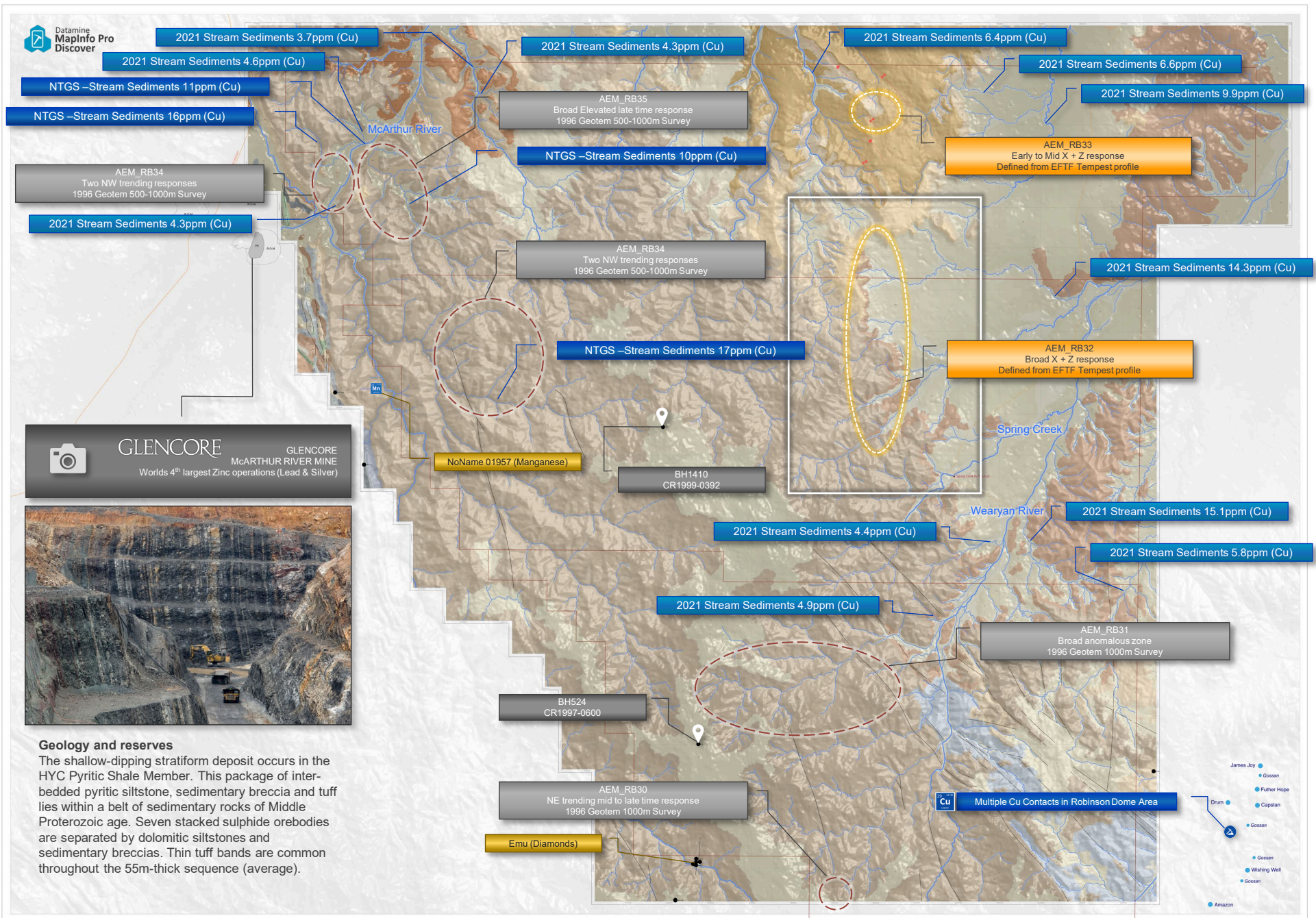
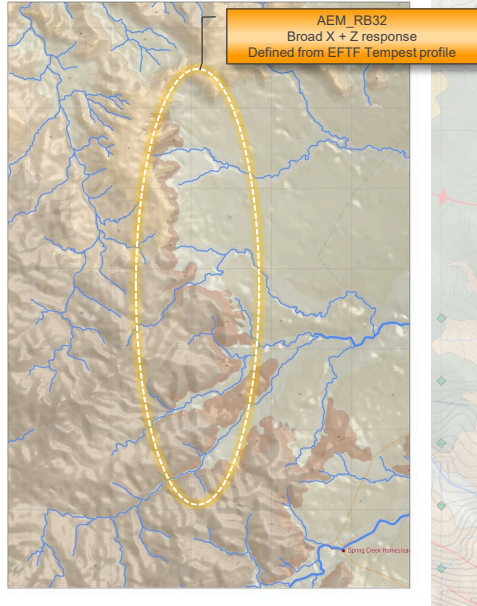
Insert Map



Redbank Exploration Project NT
 25k Geological Map Series
SCP-Spring Creek Prospect
Areas of Interest (AOI)

- AOI's available in the workspace include
- Airborne Electromagnetics (Mat Cooper)
 - 2021-Stream Sediments (top 12 –Cu-ppm)
 - NTGS Stream Sediments
 - NTGS Mineral Occurrences

Insert Map

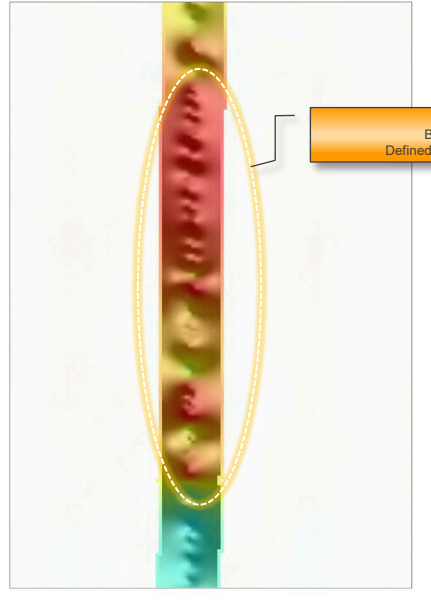


Geology and reserves
 The shallow-dipping stratiform deposit occurs in the HYC Pyritic Shale Member. This package of inter-bedded pyritic siltstone, sedimentary breccia and tuff lies within a belt of sedimentary rocks of Middle Proterozoic age. Seven stacked sulphide orebodies are separated by dolomitic siltstones and sedimentary breccias. Thin tuff bands are common throughout the 55m-thick sequence (average).



Redbank Exploration Project NT
 25k Geological Map Series
SCP-Spring Creek Prospect
Areas of Interest (AOI)
 Regional Government and Historical Open File
Airborne Electromagnetic (AEM)
 Early Time Channel AEM Composite (ET)
 Time Domain Surveys Only

Insert Map



AEM_RB32
 Broad X + Z response
 Defined from EFTF Tempest profile

AEM_RB34
 Two NW trending responses
 1996 Geotem 500-1000m Survey

AEM_RB35
 Broad Elevated late time response
 1996 Geotem 500-1000m Survey

AEM_RB34
 Two NW trending responses
 1996 Geotem 500-1000m Survey

AEM_RB33
 Early to Mid X + Z response
 Defined from EFTF Tempest profile

AEM_RB32
 Broad X + Z response
 Defined from EFTF Tempest profile

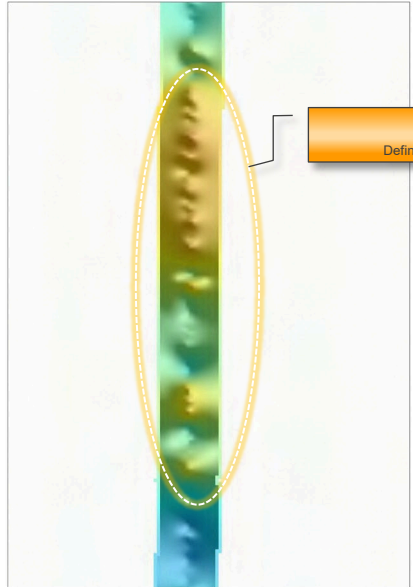
AEM_RB31
 Broad anomalous zone
 1996 Geotem 1000m Survey

AEM_RB30
 NE trending mid to late time response
 1996 Geotem 1000m Survey

Redbank Exploration Project NT
25k Geological Map Series
SCP-Spring Creek Prospect
Areas of Interest (AOI)

Regional Government and Historical Open File
Airborne Electromagnetic (AEM)
Middle Time Channel AEM Composite (MT)
Time Domain Surveys Only

Insert Map



AEM_RB32
Broad X + Z response
Defined from EFTF Tempest profile

AEM_RB34
Two NW trending responses
1996 Geotem 500-1000m Survey

AEM_RB35
Broad Elevated late time response
1996 Geotem 500-1000m Survey

AEM_RB34
Two NW trending responses
1996 Geotem 500-1000m Survey

AEM_RB33
Early to Mid X + Z response
Defined from EFTF Tempest profile

AEM_RB32
Broad X + Z response
Defined from EFTF Tempest profile

AEM_RB31
Broad anomalous zone
1996 Geotem 1000m Survey

AEM_RB30
NE trending mid to late time response
1996 Geotem 1000m Survey

Redbank Exploration Project NT
 25k Geological Map Series
SCP-Spring Creek Prospect
MapInfo Workspace

The SCP MapInfo Workspace has been set-up and available in the **RBK-Exploration** Folder, this workspace is our base dataset for the SCP

25k-Geological Map Series
MapInfo Workspace Location

Network > per-fp1.rc.local > GROUPS > GIS > GIS-NT-Northern Territory > RBO-GIS-Redbank Operations > RBK-Redbank Project > RBK-Exploration > SCP-Spring Creek Prospect > SCP-25k-WorkPro

Name	Date modified	Type	Size
SCP-25k-Geology Map Workspace.WOR	16/03/2022 7:48 AM	MapInfo Workspace	47 KB
SCP-25k-Geology Map Workspace.wox	16/03/2022 7:48 AM	MapInfo Workspa...	4 KB

