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TECHNICAL REPORT
2019 Exploration Program

Sheltered Oak Resources Inc., Kerr Property Gold Project

Kerrs Township/Chesney Bay and Rayner Lake Areas Larder Lake
Ontario Canada
NTS 17N- 032D04

Robert Middleton P. Eng

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SUMMARY REPORT AND INTRODUCTION TO REPORT 'UNMANNED AERIAL MAGNETIC SYSTEM – AEROVISION' PREPARED BY ABITIBI GEOPHYSICS, DECEMBER, 2019 ON KERRS GOLD POJECT, SHELTERED OAK RESOURCES INC. KERRS, CHESNEY BAY, RAYNER LAKE AREAS, LARDER LAKE MD by R.S.Middleton

INTRODUCTION

The Kerrs project consists of 79 cells and a mining lease which originally consisted of 12 single claims LEA 108526, now amalgamated under one lease. And all these cells are located in Kerrs, and Rayner Lake Twp. and Chesney Bay area, Larder Lake Mining Division. An additional 8 cells were acquired from Randall Salo which are contiguous and located on the south side of the Lease bringing the 71 original cells that came from the Legacy claims plus the 8 Salo cells to a total of 79 cells. A location map of the property is given on each magnetic map as an inset and on page 18 of the report. The history of the extensive early exploration is given in the 43-101 report by G. Kirkham 2011 located in the assessment files in the Resident Geologist Office in Kirkland Lake. Extensive drilling had been carried out previously resulting in a resource estimate on the Lease.

Details of the drone survey and specifications are given in the attached report prepared by Abitibi Geophysics, December, 2019.

PROPERTY DESCRIPTION

The Property consists of 71 cells plus 8 Salo cells for a total of 79 cells and one Lease LEA 108526. See attached list of cells and map on page 18.

PREVIOUS WORK

The previous work has been described by G. Kirkham in his 43-101 report published in 2011. The previous work has been done by a number of companies including Newmont, Noranda, and Sage Gold.

SURVEY Nov 3-10, 2019

A Drone towing a magnetometer sensor was used to fly this survey at both 50m and 100m spacings but within line of site as per flight rules in place for Drone flights. Tie lines were also completed and a base station magnetometer was also employed to check for diurnal variations. See the specifications in the report.

GEOLOGY

The property is underlain by a large folded ultramafic body, basalts, and a quartz eye porphyry and intense carbonate alteration occurs associated with the gold mineralization. Part of the property is covered by deep overburden due to the presence of the Monroe esker.

CONCLUSIONS

The detailed drone survey successfully mapped the fold structure and a variety of fault and shear structures that are described in the Abitibi Report, and are presented on figures 2 to 8 at the back of the report.

STATEMENT OF QUALIFICATIONS

I, Robert Middleton, of (address) hereby certify that:

1. **I am the author of this report.**

2. **I graduated of Michigan Technological University, with a Bachelor of Science Degree in Applied Geophysics (1968), and MSc. In Geophysics 1969. I am also a graduate of the Provincial Institute of Mining – Haileybury, 1965. Dipl. In Mining**

3. **I possess an Ontario prospector's license and have been practicing my profession in mineral exploration industry for the past 57 years.**

4. **I am a member of the Association of Professional Engineers of Ontario. PEng.**

Thunder Bay, Ontario
March 26, 2021

R. Middleton

Robert Middleton, PEng.

UNMANNED AERIAL MAGNETIC SYSTEM

AEROVISION

LOGISTICS AND INTERPRETATION REPORT

PREPARED FOR

SHELTERED OAK

KERRS TOWNSHIP GOLD PROJECT

KERRS TOWNSHIP / CHESNEY BAY & RAYNER LAKE AREAS, LARDER LAKE, ONTARIO, CANADA

DECEMBER 2019

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Table 1. Maps Produced

Map number	AeroVision (UAV-MAG) Survey	Scale
Kerrs Township Gold Project		
1.2	Total Field Contours (nT)	1:10 000
1.4	Calculated Vertical Gradient Contours (nT/m)	1:10 000
10.0	Geophysical Interpretation	1:10 000

1. GEOPHYSICAL INTERPRETATION

❑ *GEOLOGICAL SETTING*

- Quaternary geology

The Kerrs Township Gold property is entirely covered by thick glacial overburden, comprised of glacial lake sediments as well as tills and esker deposits, up to 80 m thick.

Thirty to sixty meters of glacio-lacustrine sediments were deposited by glacial Lake Ojibway during the Quaternary. The north-south trending Munro Esker covers much of the Property and is composed mainly of sand and gravel.

- Bedrock lithologies

The bedrock geology of the region in the vicinity of the Kerrs Property, is entirely overburden-covered and therefore must be inferred from diamond drill hole core, from regional magnetic survey interpretation, and from the closest relevant outcrop areas in the general vicinity.

The area along strike to the west of the Kerrs Property is underlain by a thick sequence of pillowed and massive, mainly tholeiitic basalts which are south facing and steeply north dipping. Within this sequence are thin units of felsic volcanic rocks – amygdaloidal rhyodacites and a tuff breccia of rhyolite, dacite and andesite.

Data from drill hole information (Dome/Noranda/Sheltered Oak) present a hypothesized geological setting in which the area was initially covered by subaqueous mafic and ultramafic flows, with minor interbedded flow breccias, agglomerates and tuffs, some of which are rhyolitic in composition, and possibly local rhyolitic flows. These rocks were then subjected to emplacement of felsic plutonic rocks, as indicated by the numerous quartz-feldspar porphyries in the region, as well as by the presence of a larger body of fine to medium grained felsic intrusive rocks inferred from sparse drilling and geophysical interpretation to lie 2 km west of the Property

These rocks were subjected to at least two periods of **folding and deformation**. The first event suggests an **isoclinal-fold** event, which tilted the rock layers into a near-vertical position. This was followed by a **second D2 fold event**, as indicated, for instance, by the magnetic patterns on the Property, which folded the rocks further about an axis trending from Az 110° then shifts to Az 165° approaching the anticlinal hinge zone as shown on the magnetic airborne map (Figure 2).

A thick (200 m) ENE-striking diabase dyke cuts through all bedrock units at the north end of Jam Lake, just north of the Property, and across Chesney Bay through Lake Abitibi.

Massive dark green basalts and pillowed amygdaloidal flows were present in drill core. Andesite intervals were also reported in drillholes. This andesite occurs only immediately above and below the quartz-green carbonate alteration zone.

Extrusive and possibly intrusive ultramafic rocks were present in drill core. Intrusive units appeared as thick, massive sections. Extrusive units occurred as thin-bedded units.

Less abundant rock types include banded jasper-chert-magnetite iron formations, which seem to occur between basalt flows. Three types of dykes were encountered: a moderately magnetic diabase dyke, a fine-grained mafic volcanic dyke, and fine-grained felsic dyke.

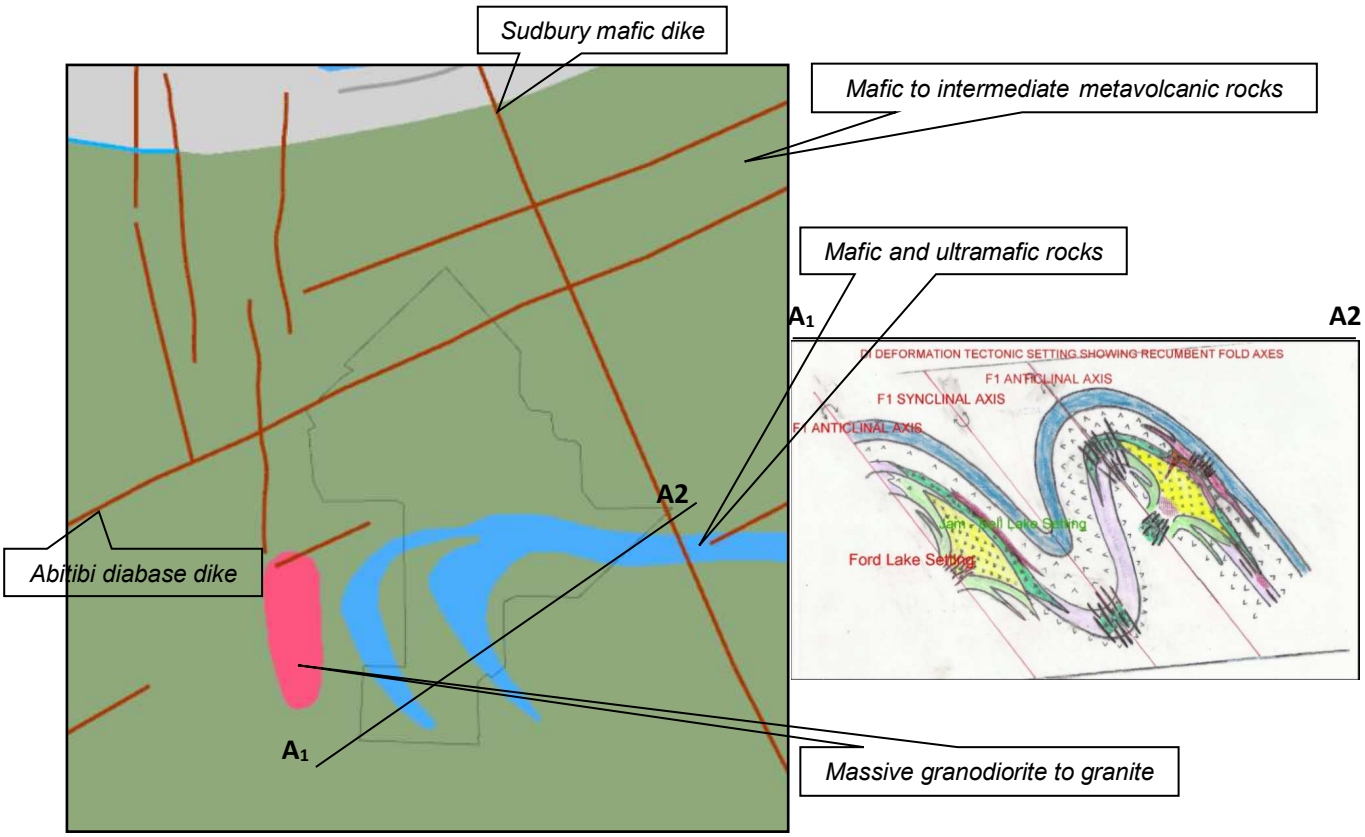


Figure 1. Simplified geological map of the Kerrs Township (left) and Kerrs Gold system and tectonic setting (right).

- Mineralization

The 3D geological model defined by several drillholes, illustrates that the Kerrs quartz carbonate breccia deposit is stratabound occurring at the contact of a thick mafic pillow flow sequence overlying an ultramafic, magnetite-rich flow sequence. In addition, quartz feldspar porphyry sills are spatially located above and below the breccia zones. This stratigraphy is draped on a shallow dipping synclinal fold structure varying from 350m to 425m below surface.

Gold mineralization occurs as pyritized quartz vein replacement breccias enveloped by quartz fuchsite carbonate vein breccias averaging approximately 10 m and alteration envelopes varying up to 40 m in thickness

The stronger alteration envelopes are characterized by sericite/silica/+/- pyrite bounding the high strain quartz-pyrite replacement breccias.

Gold tenure is proportional to the pyrite content ranging up to 10% which is commonly disseminated and crystal aggregates in the sheeted, quartz vein replacement breccias.

Main stage Au mineralization is hosted within green carbonate/quartz/fuchsite/ alteration, interpreted to represent a fluid - generated hydraulic fracturing event of incompetent ultramafic flows, stratigraphically capped by competent thick Fe-rich andesitic flows.

❑ *MAGNETIC INTERPRETATION*

The main objectives expected from the acquired UAV magnetic data over the Kerrs Township Gold property, were to improve the geological understanding of the Kerrs Township Gold property, and delineate new favorable areas for further detailed exploration of gold mineralization. The data interpretation is intended:

- To better characterize the major fold structure containing the ultramafic rocks and iron rich basalts, and porphyry felsic intrusions, which host the Kerrs Gold deposit; therefore, a detailed structural map will be established.
- To clarify the structural control of mineralization (faults, shear zones);
- To identify new favorable target areas (potential gold-bearing structures) for planning subsequent exploration programs.

To achieve the geophysical objectives of this project the following steps were carried out:

- ✓ Processing magnetic data to provide a high quality image of the total magnetic intensity, its reduction to the pole (RTP) and residual anomaly.
- ✓ Generating a range of high resolution normalized derivatives (first vertical derivative, tilt derivative Analytic signal) and illustrate their effectiveness for structural mapping.
- ✓ Outlining of the tectonic features of the Kerrs Township Gold property.
- ✓ Characterizing the delineated magnetic features (estimate their magnetic amplitudes and contents (susceptibility).
- ✓ Highlighting the regions of high structural complexity (lineament detection, magnetic discontinuities, etc.) using a combination of texture analysis and bilateral symmetric feature detection.
- ✓ Generating orientation entropy heat map (areas of junction high density) to highlight favorable zones that are perceived to be prospective.

Before initiating the work, it is useful to examine the existing regional magnetic dataset over a larger scale than the detailed survey area. This is to establish the context and to identify structures that may only be recognized with the benefit of a larger field of view. Thus, a simple, qualitative interpretation of the regional magnetic data is presented in Figure 2.

The regional magnetic survey appears to have mapped the Kerrs fold structure well, which actually extends for more than 23 km. This highly magnetic structure seems crossed by mafic dike swarms (Matachewan and Sudbury mafic dikes) trending NS to NNW. Another system of diabase dike (1141 Ma) striking NE-SW was also identified. One of these diabase dikes has crossed the Kerrs Gold property.

- TARGETING ANALYSIS (HIGHLY FAVOURABLE ZONES)

An attempt of targeting analysis using the regional magnetic data was performed by using an automatic (unsupervised) predictive method known as CET (Centre for Exploration Targeting) Grid Analysis. Originally, this predictive method was intended to search for orogenic gold deposits in greenfield terrains occurring near major fault/shear zones, which acts as conduits for mineralizing

Principle of the method: The proposed method highlights the zones of high structural complexity using lineaments automatically mapped within the total magnetic field reduced to pole. First, it finds regions of magnetic discontinuity using a combination of texture analysis and bilateral symmetric feature detection, where line-like features representing high local magnetic variations are identified. Using skeletal structures of the identified regions of discontinuity, it then analyses structural associations to locate their intersections as well as to find orientation variations of neighbouring structures. Finally, by applying an accumulative Gaussian weighting, it generates *Heat maps* that highlight the areas that are perceived to be prospective.

The results of the CET Grid Analysis obtained on the Kerrs Township are presented in Figure 3. Indeed, Figure 3A shows that the CET method has pointed the Kerrs Township property as a zone of structural complexity, prospective for hosting gold deposits. Several target areas with complex magnetic expressions (magnetic discontinuity, folded / broken structure or crossed by other structures) perceived to be prospective for orogenic gold mineralization were also identified (see Figure 3B). Sheltered OAK geologists can analyse the generated heat map to see if the delineated areas (zones of junction high density) present any significant interest and could be further explored in more detail.

- AEROVISION MAGNETIC SURVEY

The AeroVision (UAV) magnetic data was collected along 83 traverse lines oriented in the NE direction at azimuth N45° and spaced at 100 and 50 m apart (see Figure 10).

During the survey, the multirotor DJI M 600 drone was flown with a mean speed of 12 m/s and at an average ground clearance of 33 m. This allowed for an actual average magnetic sensor clearance of about 28 m. Further information on instrument specifications is included in Appendix B.

The recorded total magnetic field values over the Kerrs Township Gold property, range from 55 014 to 59 583 nT. As shown in Figure 4A, the most dominant features on the total magnetic intensity map are:

- A significant fold structure, dubbed **KT-01,** was highlighted in the southern part of the survey grid. This arch shaped feature shows amplitudes ranging from 2000 to 4000 nT, above a local magnetic background of approximately 55 400 nT (Figure 7A). The identified structure appears disrupted by faults and crossed by mafic dikes trending NS to NNW (Figure 5B), According to the geological map of the study area, the delineated feature corresponds to ultramafic rocks and iron rich basalts.

  Interactive 2D magnetic inversions performed along a few profiles crossing this structure, estimate its magnetic susceptibility to be between 0.05 and 0.2SI and its width varying from 100 to 200 m. High magnetic susceptibility values ranging from 0.3 to 0.5 SI were also calculated on some profiles. Constrained 3D magnetic inversion should be ran to better characterize the 3D geometry of this magnetic structure, particularly its depth-to-top, dip and depth extension.

- A second folded structure lying parallel to the major fold structure **KT-01** was identified in the western part of the Kerrs Township Gold property. This magnetic feature, labelled here **KT-02**, was not completely defined with the present UAV magnetic survey. This delineated structure appears also effected by faults and cut (crossed) by a later mafic dike trending NS.

The magnetic amplitudes over this structure range from 1400 to 2500 nT above a local magnetic background of approximately 55 300 nT. Interactive 2D magnetic inversion performed on its southern section located between TL 5+00N and 10+00N, gives susceptibility values ranging from 0.02 to 0.06 SI, and a width of about 130 m; the causative source of **KT-02** appears dipping to the SW and its depth-to-top is estimated to 75 m.

- A network of magnetic lineaments (dike structures) trending ENE and NS (Figures 5 and 6). The dike structures trending ENE show amplitudes ranging from 350 to 1000 nT, above a magnetic background of approximately 55 300 nT, while the magnetic lineaments (dikes) trending NS exhibit low amplitudes no exceeding 100 nT.

According to the geological map of the Kerrs Township area, the highlighted ENE dikes correspond to diabase dike known as the Abitibi mafic dike (1141 Ma), while the NS dikes could reflect or correspond to the Matachewan mafic dikes (2454 Ma).

To further characterize the highlighted magnetic features on the Kerrs Township Gold property, enhancement techniques consisting of reduction to the pole (RTP) of the total magnetic field, residual anomaly, tilt derivative and total gradient amplitude (analytic signal) were calculated (Figures 4B, 5 and 6). The combination of these products was used to track the high magnetic axes and the major tectonic features presented in Figure 7.

To map variations in rock magnetic units lying within the Kerrs Township Gold property, magnetic susceptibility contours extracted at depth of 100 m from an unconstrained 3D magnetic inversion, were traced and reported on the Geophysical interpretation map 10.0 and on the Figure 7B.

We suggest performing drilling-constrained 3D magnetic inversion to provide a reliable and more consistent picture of the subsurface magnetic susceptibility for the study grid to elucidate the exact geometry, dips and depth extension of the mafic/ultramafic rocks hosting the Kerrs Gold deposit.

2. CONCLUSION AND RECOMMENDATION

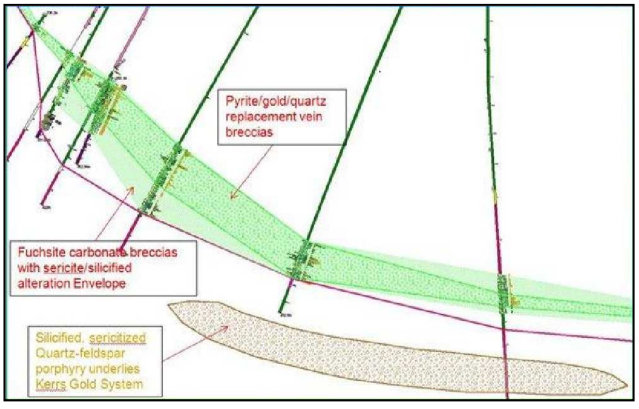
High-resolution ground or airborne magnetic surveys are considered essential components of mineral exploration programs. Magnetic datasets are generally used indirectly to search either for structures or for lithological units that may host the mineralization.

In this project, the interpretation of the AeroVision magnetic survey has well characterized the main fold structure (KT-01), composed of ultramafic rocks and iron rich basalts, which are the main host rocks for the Kerrs Gold deposit. A second fold structure (KT-02) not completely defined was highlighted, as well as a few mafic dikes trending ENE and NS, and a fault network.

- High quality displays of the total magnetic field, its reduction to the pole, and the residual anomaly improve the magnetic picture of the Kerrs Township Gold property.
- Generate and plot a range of high-resolution normalized derivatives (1VD, tilt derivative & analytic signal) to highlight subtle magnetic trends and structures.
- Characterization of the delineated magnetic anomalies was done through interactive 2D magnetic inversions and unconstrained 3D magnetic inversion.
- All major faulting patterns were located mainly using the reduced-to-pole (RTP) total magnetic field, its normalized derivatives (1VD, tilt angle and analytic signal) and the sun shading effect.
- CET grid Analysis, an automatic image processing technique to detect areas of structural complexity was performed and Kerrs Gold deposit has been correctly detected with outlines of several other prospective zones for gold mineralization.

The main recommendations for future follow-up work on the Kerrs Township Gold property are summarized in the following points:

- We suggest performing **drilling-constrained 3D magnetic inversion** to provide a reliable and more consistent picture of the subsurface magnetic susceptibility to elucidate the exact geometry, dips and depth extension of the ultramafic rocks and iron rich basalts hosting the Kerrs Gold deposit.
- Borehole induced polarization survey (H2H-3D-IP) should be conducted to enhance definition of the emplacement of the gold mineralization occurring as pyritized quartz vein replacement breccias as shown in the Figure below, since the dry surface sands of the Munro esker limit the usefulness of the ground induced polarization.



The interpretation of the geophysical data embodied in this report is essentially a geophysical appraisal of the Kerrs Township Gold Project. As such, it incorporates only as much geoscientific information as the author had on hand at the time.

Geologists thoroughly familiar with the studied area may be in a better position to evaluate the geological significance of the various outlined geophysical signatures. Moreover, as time passes and data provided by follow-up programs are compiled, the priority and significance of interpreted magnetic anomalies and structures reported in this study may be downgraded or upgraded.

Respectfully submitted,

Abitibi Geophysics Inc.

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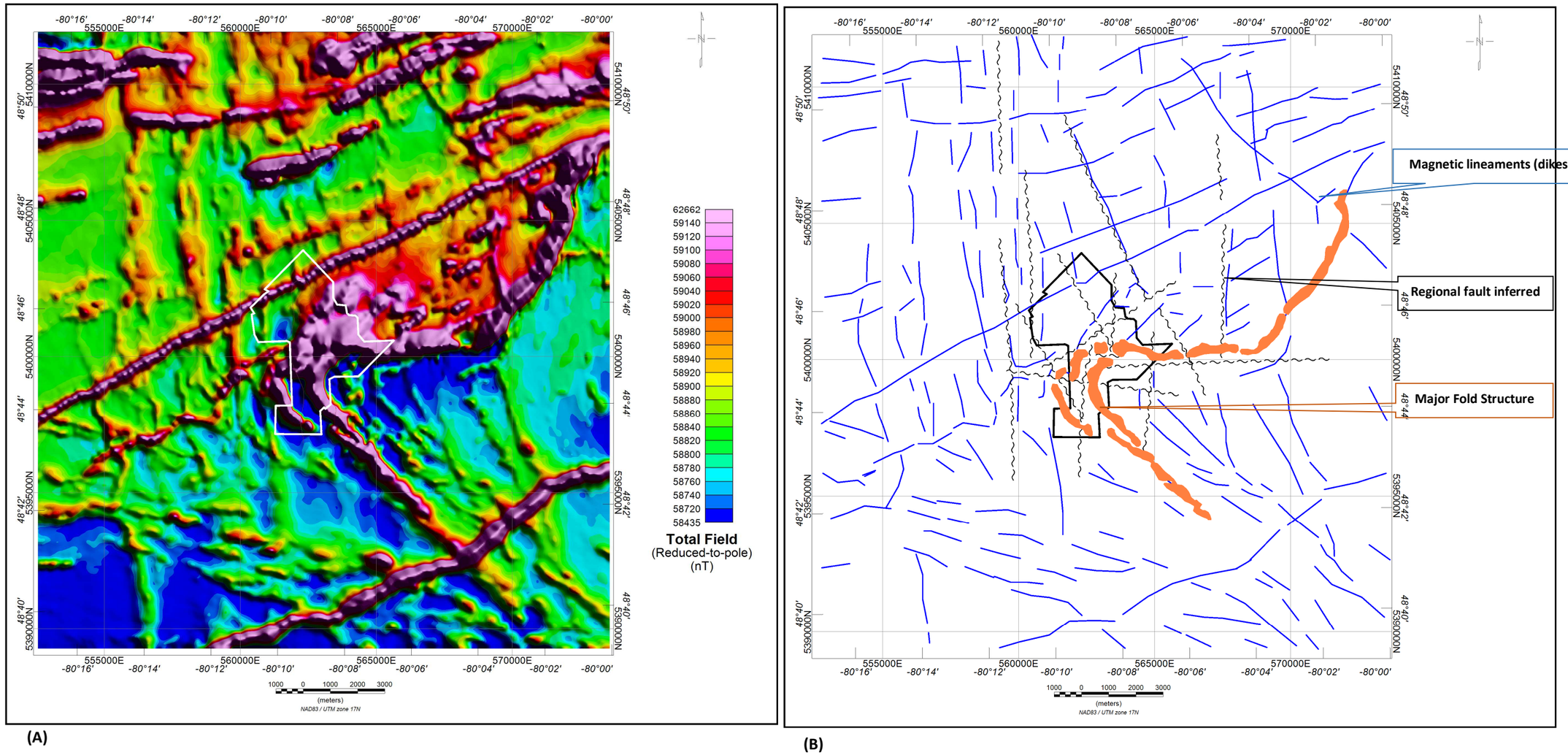
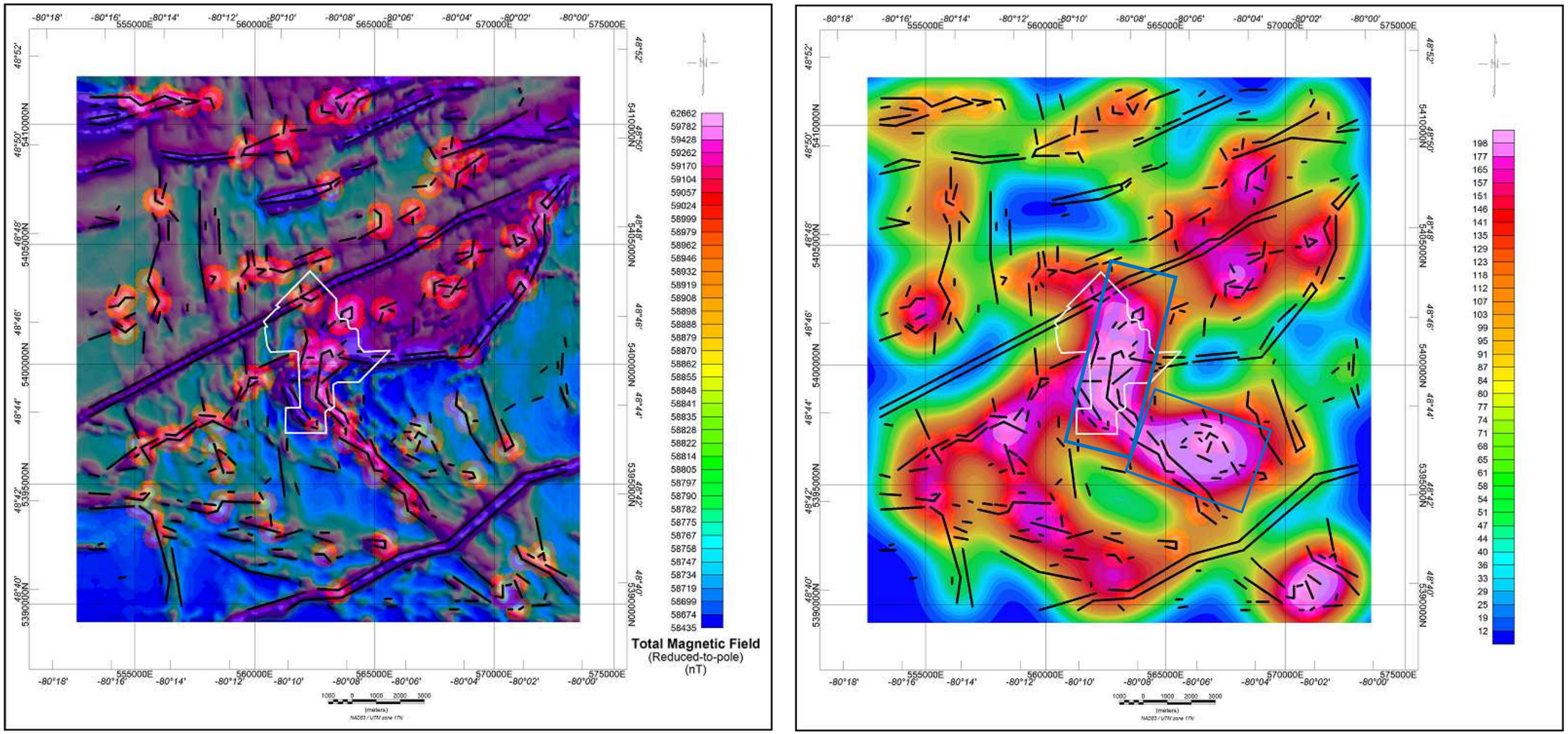
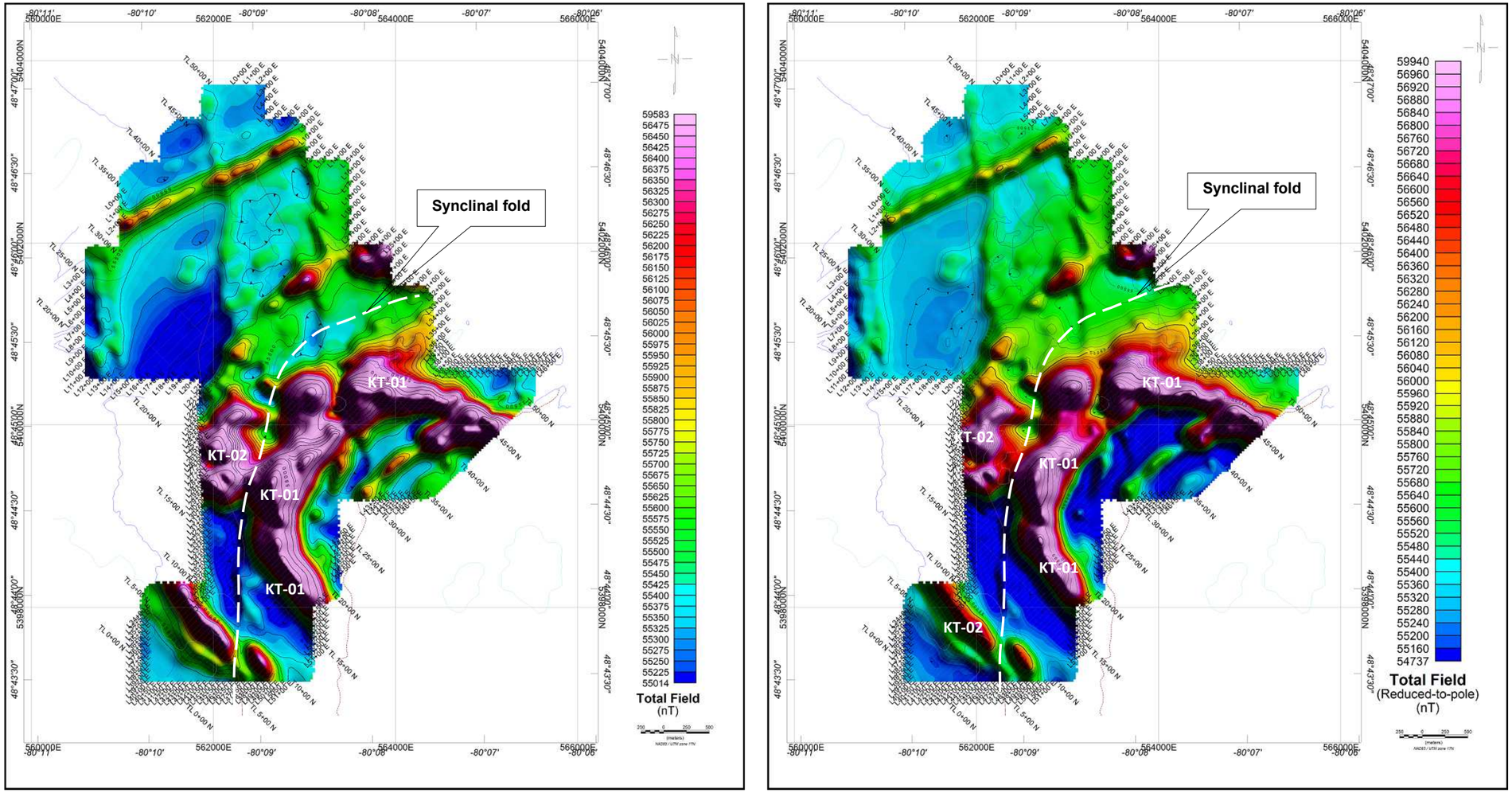


Figure 2. Regional reduced-to-pole total magnetic field (A) versus simplified structural map (B) of the Kerrs township area.



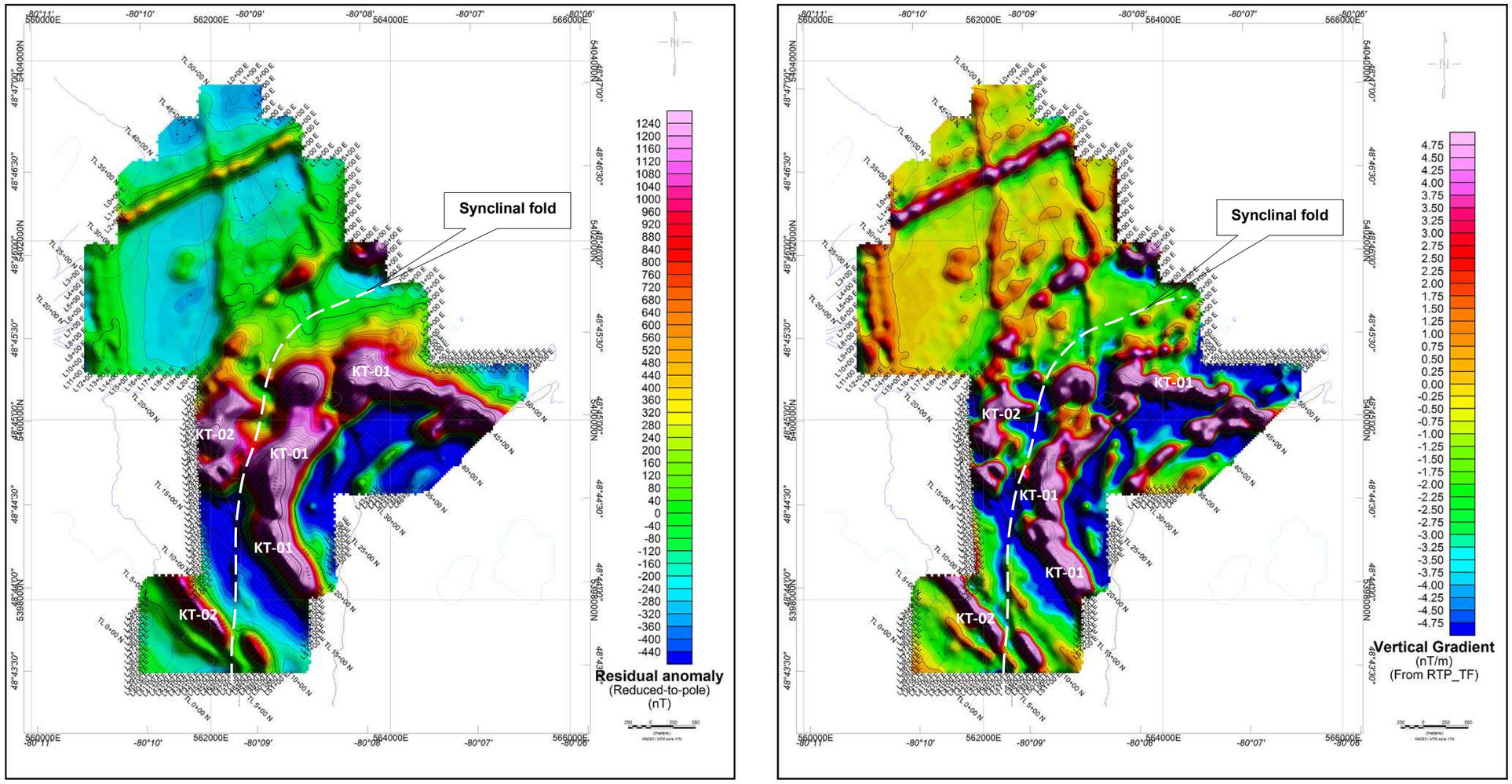
(A) (B)

Figure 3. Predictive targeting: Black features are lineation detection along ridges and edges, small white dots are areas of structural complexity (A); Areas of junction high density (heat map), indicating favorable zones for hosting gold deposits (B).



(A) (B)

Figure 4. High-resolution AeroVision total magnetic field map (A) versus its reduced to the pole (B), Kerrs Township Gold Project.



(A) (B)

Figure 5. Reduced-to pole (RTP) residual magnetic anomaly (A) versus vertical magnetic gradient (B) of the Kerrs Township Gold Project.

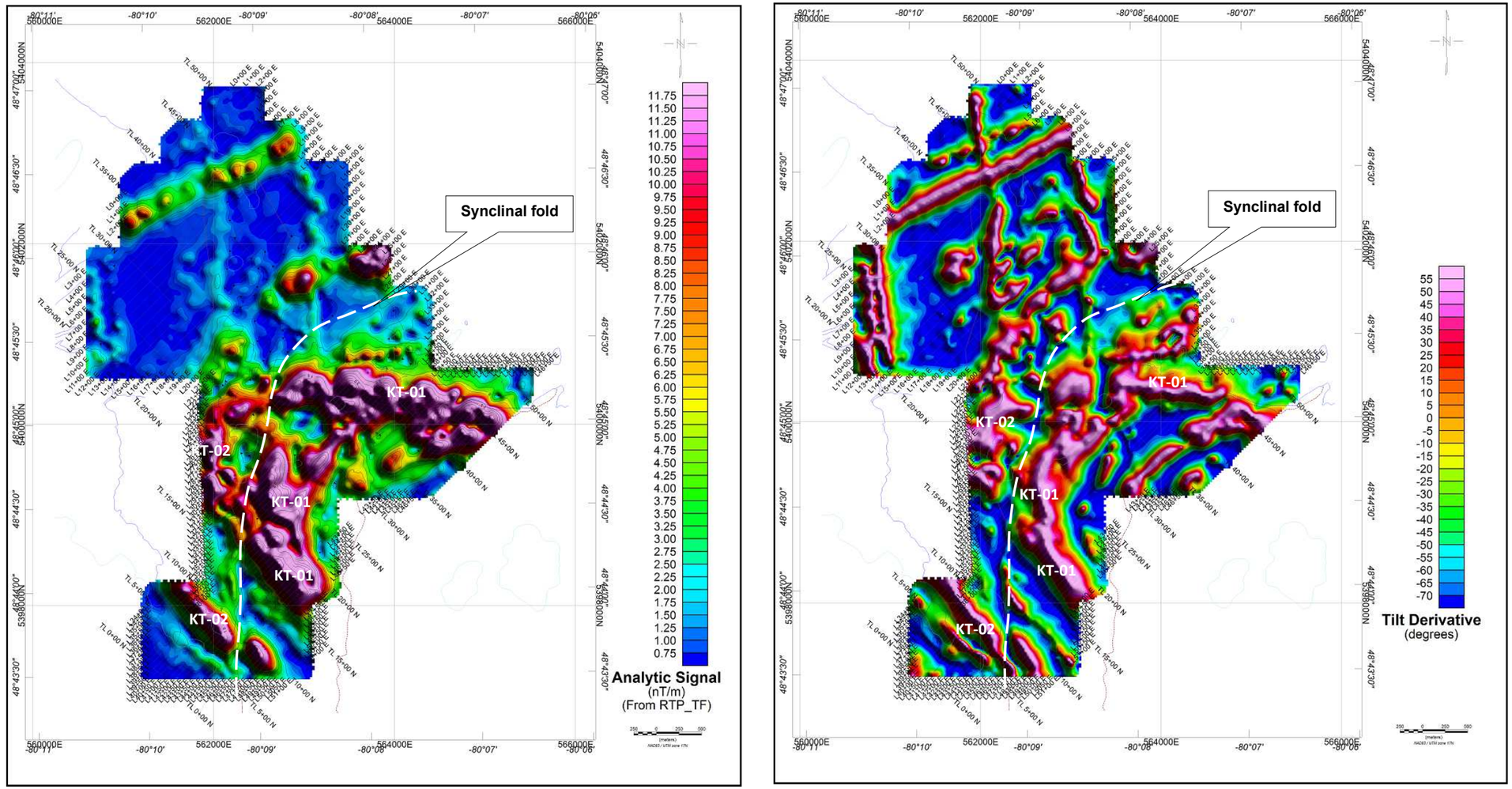
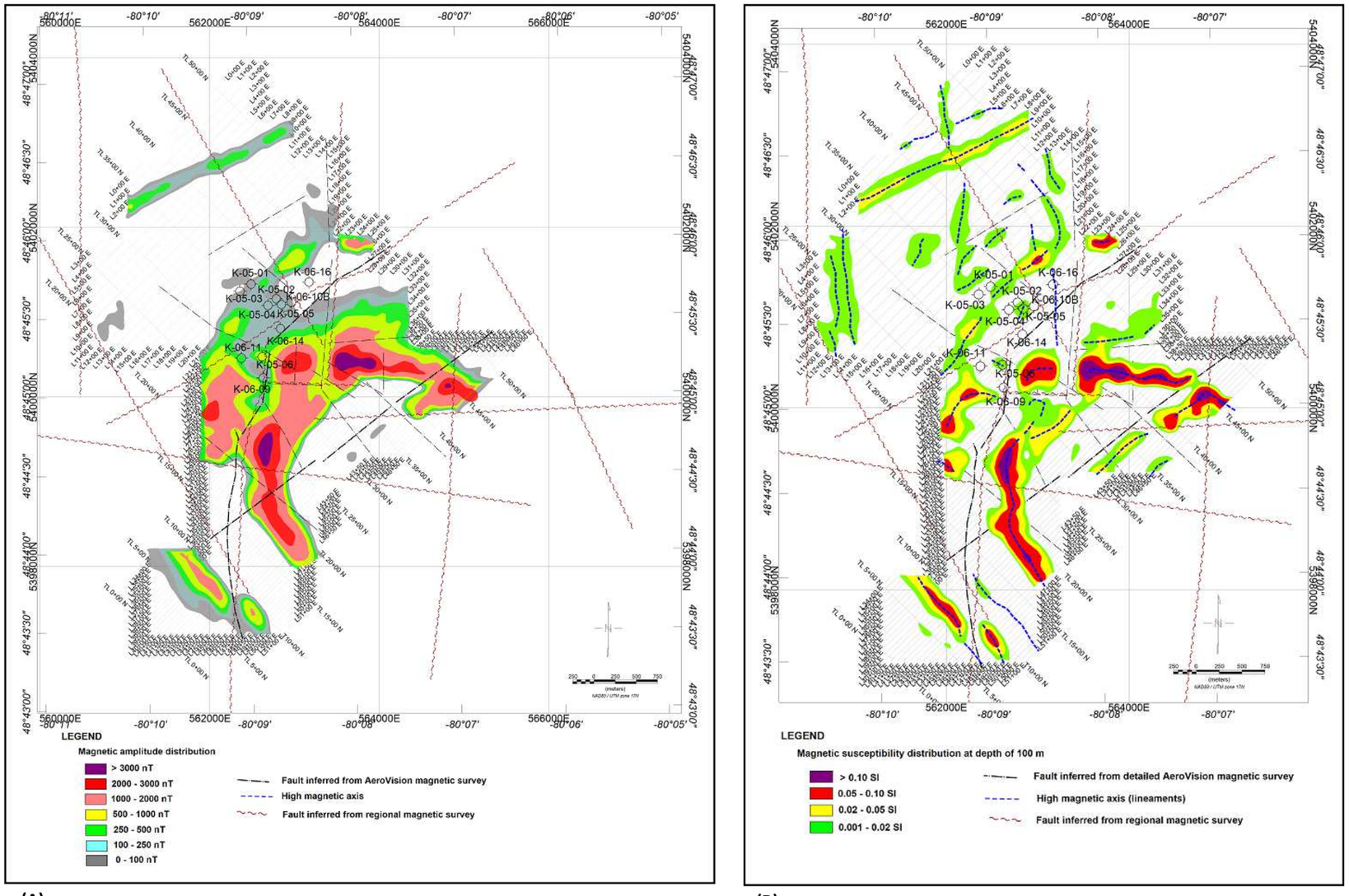


Figure 6. Total gradient amplitude (analytic signal) map (A) versus the tilt derivative (B) of the Kerrs Township Gold Project.



(A) (B)

Figure 7. Recorded residual magnetic amplitudes (A), calculated magnetic suscepibility at a depth of 100 m (B), including inferred faults and old drillhole locations.

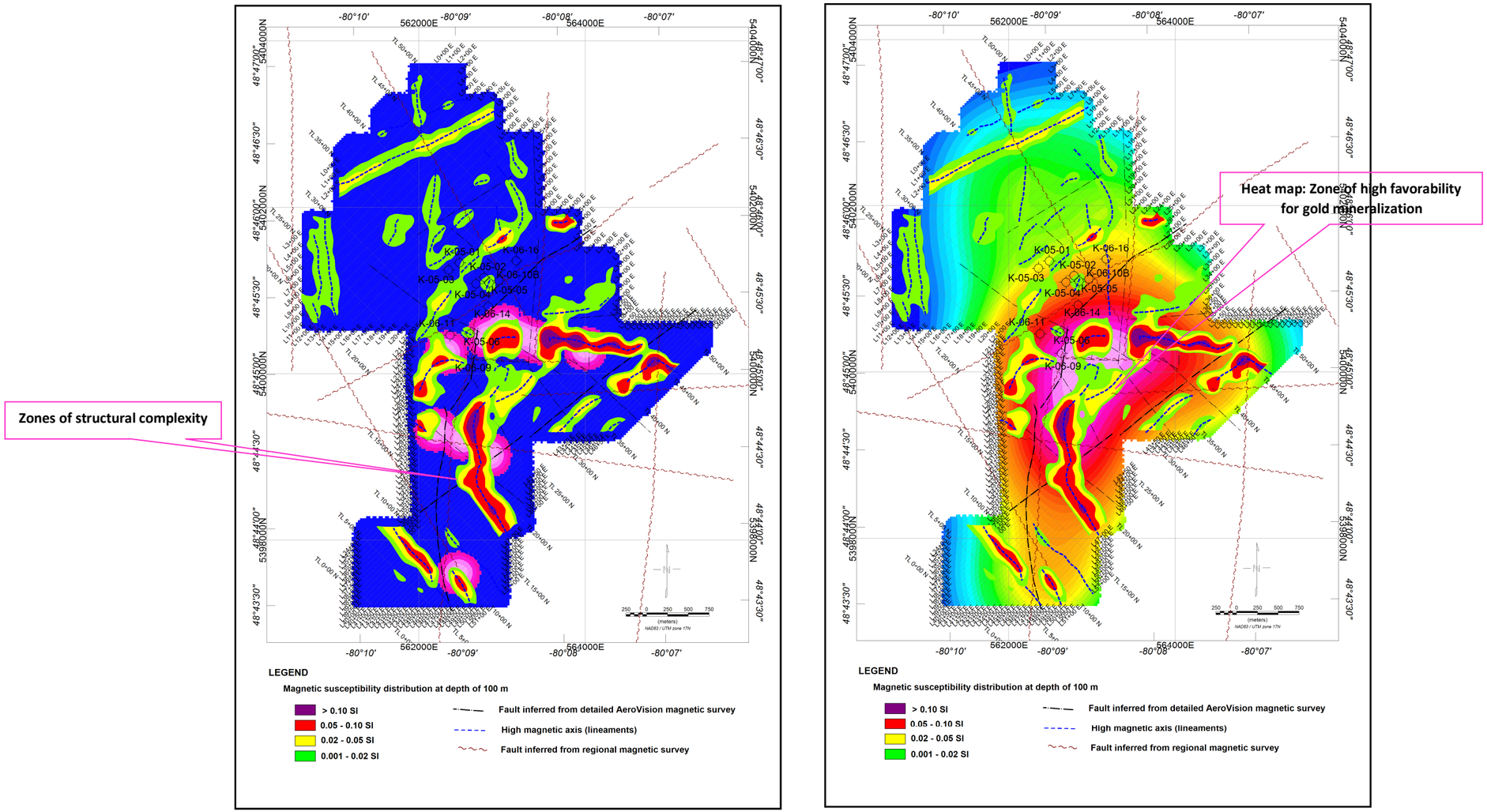


Figure 8. Simplified geophysical interpretation map including the results of the CET Grid Analysis at local scale.

APPENDIX A – FIELDWORK SITE

❑ *PROJECT ID*	**Kerrs Township Gold** (Our reference: **19N051**)
❑ *GENERAL LOCATION*	North of Kirkland Lake, northeastern Ontario, Canada
❑ *CUSTOMER*	**Sheltered Oak Resources Inc.** 82 Richmond St. East Toronto, Ontario M5C 1P1 **Tel**: 416-848-6865 www.shelteredoak.com
❑ *REPRESENTATIVE*	**Mr. Robert Middleton, P. Eng.** Exploration Manager rsmiddleton7@gmail.com **Tel**: (807) 623-3824 **Cell:** (289) 952-3695
❑ *SURVEY TYPE*	**AeroVision (UAV-MAG) Survey**
❑ *GEOPHYSICAL OBJECTIVES*	• To better characterize the major fold structure constituting of ultramafic rocks and iron rich basalt, which are hosting the Kerrs gold deposit. • To identify new favorable areas for gold mineralization.

Figure 9. General location of the Kerrs Township Gold Project.

APPENDIX A – FIELDWORK SITE (CONTINUED)

- ❑ *LOCATION*

Kerrs Township / Chesney Bay & Rayner Lake area, Larder Lake Mining Division, northeastern Ontario, Canada

Centred on 48°45'14'' N, and 80°08'30'' W
NAD83 / UTM zone 17N, 563 100 mE, 5 400 450 mN

NTS sheets: **42A/09** and **42A/16**

- ❑ *NEAREST SETTLEMENTS*

Matheson: approximately 50 km south-west.
Kirkland Lake: 68 km south, as the crow flies.
Timmins: approximately 120 km south-west.

- ❑ *ACCESS*

The Property is accessible by an all-weather gravel road which heads northward along the Munro Esker from provincial Highway 101, 24 km east of the town of Matheson

- ❑ *GEOMORPHOLOGY*

The relief on the Kerrs Township Gold property is moderate to flat, with several small kettle lakes occupying topographic depressions. Elevations from mean sea level range from highs of over 300 m in the central area, to less than 265 m in the west and extreme northeast, near Lake Abitibi. 10 to 80 m thick sand and gravel deposits of the Munro Esker and glacio-lacustrine sediments cover the study property. The property area appears to be devoid of outcrops.

Drainage is largely subterranean and flows towards the Bell River on the west or towards Lake Abitibi to the northeast.

Vegetation consists predominantly of mature jack pine, spruce, and birch that occur along the northern and western extremities of the property. The area around the west boundary of the property is swampy.

- ❑ *CULTURAL FEATURES*

Old steel casing-drilling may be present on the property. According to the recorded magnetic signatures, these cultural features did not have any impact on the quality of the magnetic data.

APPENDIX A – FIELDWORK SITE (CONTINUED)

- ***MINING LAND TENURE***

The covered claims and leases in the present project are primarily owned by Sheltered Oak Resources Inc., with a few claims being registered to Randall Salo (539599 – 539606). These claims are illustrated in Figure 10.

- ***SURVEY GRID***

The AeroVision survey consists of 83 lines (L 0+00E to L 51+00E) regularly spaced at 100 m in the northern part of the study grid, and at 50 m in its southern part. The flight lines were flown in the NE direction at azimuth N45°. These lines vary from 0.1 to 4.5 km in length.

Eleven tie-lines spaced at 500 m (TL 0+00N to TL 50+00N) complete the survey grid.

Refer to Figure 10 for a plan view of the zone covered by the present survey.

- ***COORDINATE SYSTEM***

Local datum: NAD83
Projection type: Universal Transverse Mercator (UTM)
Zone: 17N

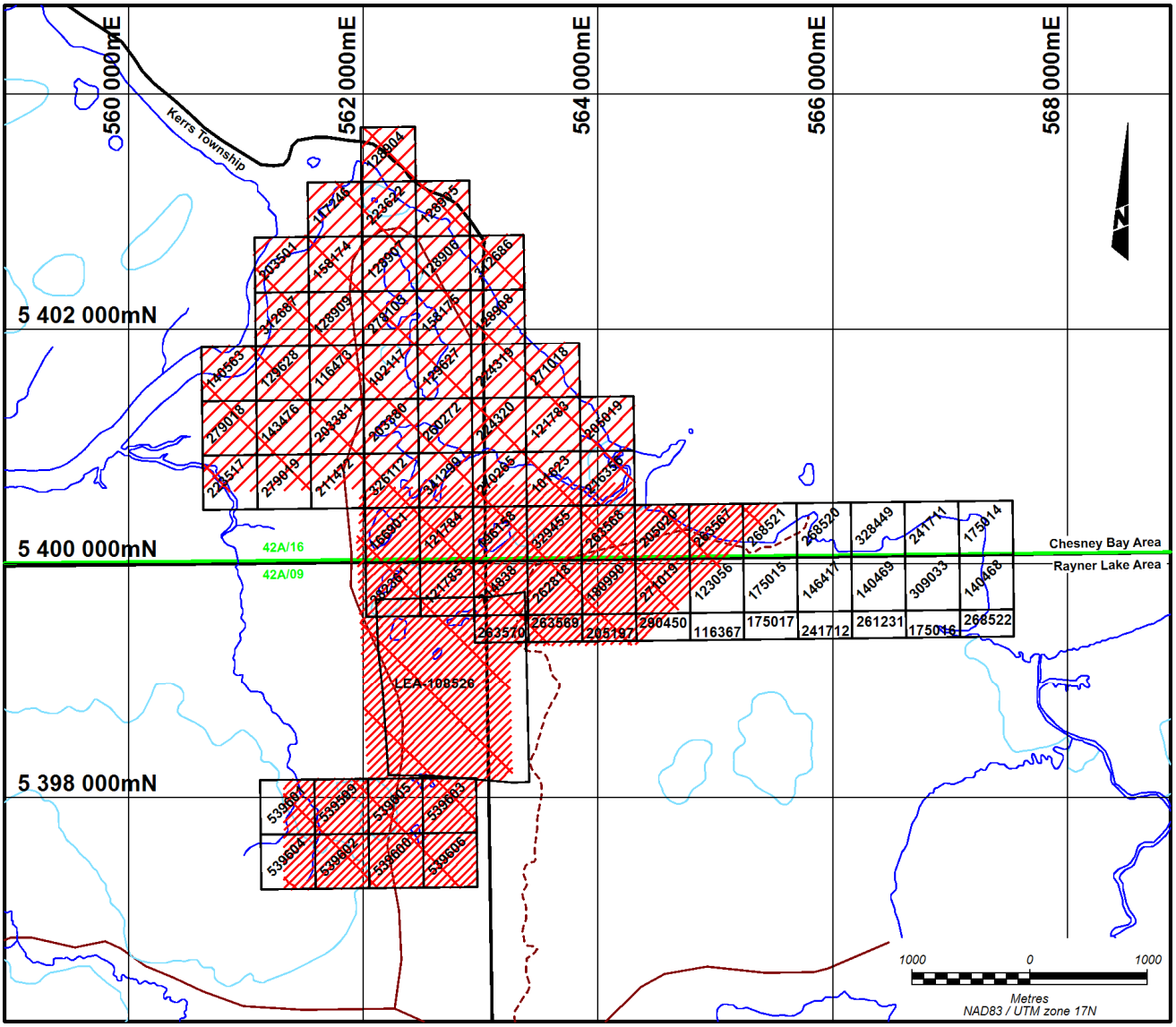


Figure 10. Index of claims and AeroVision flight coverage over the Kerrs Township Gold Project.

APPENDIX B – AEROVISION (UAV-MAG) SURVEY

- ❑ *TYPE OF SURVEY* — Measurement of the total magnetic intensity (TMI) with GPS readings recorded every 0.1 second (10 Hz sample rate) using an unmanned aerial vehicle (UAV). The plotted total magnetic values were corrected for diurnal variations using readings taken every 3 seconds by a synchronized local base station.

- ❑ *DATA OF ACQUISITION* — November 3rd to 10th, 2019

- ❑ *SURVEY COVERAGE* — **238.2 km**

Figure 11. Vision4k UAV-Multirotor with CS-VL magnetometer.

APPENDIX B – AEROVISION (UAV-MAG) SURVEY (CONTINUED)

❑ *TECHNICAL SPECIFICATIONS*

Multirotor DJI M 600 UAV platform equipped with collision avoidance system.

- Diagonal Wheelbase: 1133 mm
- Dimensions 1668 x 1518 x 727 mm
- Weight 9.1 kg
- Max Takeoff Weight 15.5 kg
- Hovering Accuracy (P-GPS) Vertical ±0.5 m, Horiz. ±1.5 m
- Max Angular Velocity Pitch: 300°/s, Yaw: 150°/s.
- Max Pitch Angle 25°
- Max Wind Resistance 8 m/s
- Max Ascent Speed 5 m/s
- Max Descent Speed 3 m/s

- Max Speed 65 km/h / (40 mph), no wind
- Max Service Ceiling ASL 2500 m
- Hovering Time No payload: 38 mn, 5.5 kg payload: 18 mn.
- Flight Control System A3 Pro

- Nacelles DJI compatibles Ronin-MX, ZENMUSETM Z30, Zenmuse X5/X5R, Zenmuse X3,
- Operating Temperature: -10 à 40 °C (14 à 104 °F)

- Remote Controller :

- Operating Frequency 920,6 MHz to 928 MHz (Japon); 5,725 GHz to 5,825 GHz ; 2,400 GHz to 2,483 GHz
- Max Transmission Distance FCC Compliant: 5 km (3,1 miles) ; CE compliant : 3,5 km (2,2 miles) (Unobstructed, free of interference).
- Transmitter Power (EIRP): 10 dBm @ 900 M, 13 dBm @ 5,8 G, 20 dBm @ 2,4 G
- Video Output Port HDMI, SDI, USB
- Operating Temperature 10 à 40 °C (14 à 104 °F)
- Battery 6000 mAh LiPo 2S

- Standard Battery (Model TB48S)

- Capacity 5700 mAh
- Voltage 22.8 V
- Battery Type LiPo 6S
- Energy 129.96 Wh
- Net Weight 680 g
- Max Charging Power 180 W

APPENDIX B – AEROVISION (UAV-MAG) SURVEY (CONTINUED)

❑ *ROVER MAGNETOMETER*

CS-VL from Scintrex,

Sensor: Self-oscillation split-beam Cesium Vapor (non-radioactive Cs-133)

Resolution:	0,001 nT
Sensitivity:	0.0006 nT @ 1Hz
Operating zones:	15° à 75° & 105° à 165°
Noise envelope:	Typically 0.002 nT P-P
Absolute accuracy:	< 2.5 nT
Sampling rate:	0.1 sec (10 Hz)
Gradient tolerance:	> 40 000 nT/m
Operating range:	15 000 – 100 000 nT
Heading error:	± 0,2 nT
Weight:	890 g (3 m cable)

❑ *BASE STATION MAGNETOMETER*

GSM-19W from GEM Systems,

Sampling rate:	3 sec
Reference Field:	55 300 nT
Location (Long, Lat./ WGS 84):	46.7069 N, 80.1399 W

❑ *COLLISION AVOIDANCE SYSTEM*

Devbrio ANCAS

Collision avoidance rate :	50 Hz
Obstacle detection :	Up to 70 m

APPENDIX B – AEROVISION (UAV-MAG) SURVEY (CONTINUED)

❑ *GPS NAVIGATION SYSTEM*

Emlid Reach RTK Positioning
Accuracy : +/- 5 cm

❑ *SURVEY SPECIFICATIONS*

- Nominal survey speed: ~12 m/s
- Average terrain clearance: 28 m
- Flight direction: N 45° E / N225°
- Traverse line interval: 100 and 50 m
- Tie lines: N 135° E / N 315°
- Tie line interval: 500 m

❑ *PERSONNEL*

Pierre Olivier Dostie, Eng. Jr.,	DJI Matrice 600 Pilot
Carole Picard, tech.,	Plotting
Madjid Chemam, P.Geo.,	QA-QC, Processing and Report
Catherine Phaneuf, P.Geo.,	Final validation of product Conformity

❑ *DATA QUALITY CONTROLS*

Before the survey:

✓ All magnetometers were successfully field-tested and automatically synchronized with GPS time.
✓ The pilot uploads the flight plan to the AutoCopter via a laptop computer and ensure no errors in the GPS waypoints.
✓ The pilot estimates the number of lines to survey before switching to the manual mode to return the AutoCopter to the field base operation to change the batteries.

During data acquisition:

✓ The QA/QC geophysicist had to successfully test for any magnetic contamination before each take-off.
✓ The QA/QC geophysicist reviewed (validated) the quality of the recorded data every time the AutoCopter returns to the base of operations.
✓ The QA/QC geophysicist ensure no active geomagnetic activity would be encountered during the survey by visiting the Space Weather Canada website: (www.spaceweather.gc.ca/forecast-prevision)

APPENDIX B – AEROVISION (UAV-MAG) SURVEY (CONTINUED)

- ❑ *DATA QUALITY CONTROLS (CONT'D)*

At the Base of Operations:

- ✓ Field QCs were inspected & validated.
- ✓ The data set was viewed on a line by line basis to check for errors (spikes), doubled measures (overlaps), using a profile editor.
- ✓ Fill in by interpolation of the short missed sections in the raw data.
- ✓ Low-pass / B-spline filter to remove the high frequency noise.
- ✓ Diurnal correction
- ✓ Conventional levelling of the magnetic data using:
  - Statistical levelling: this operation which levels the tie lines to the flight lines of tie lines
  - Full levelling: this operation levels the flight lines to the ties.

APPENDIX C – DELIVERABLES

- *TOTAL FIELD CONTOURS*

The total magnetic field (TMF) was gridded using a minimum curvature algorithm with grid cell size of 25 m. One pass of a 3 x 3 Hanning filter was applied to the resulting grid, which was then re-gridded with a cell size of 5 m to improve the overall appearance of the final map (1.2).

The Oasis Montaj colour table (Clrb64.tbl) was used with linear intervals of 50 nT from 55 000 nT to 58 600 nT.

- *CALCULATED VERTICAL GRADIENT CONTOURS*

Using a convolution filter method, the vertical gradient (first vertical derivative) of the total magnetic field is calculated to enhance the high frequency component of the magnetic data and eliminate long wavelength regional effects. This high frequency enhancement resolves the contacts of magnetic features more accurately than the total field response (map 1.4)

The Oasis Montaj color table (Clra64.tbl) was used with linear intervals of 0.5 nT/m from -10.0 nT/m to +20.5 nT/m.

- *MAPS PRODUCED*

A plot of three (3) magnetic maps at scale 1:10 000, is inserted in pouches at the end of this report.

All plan maps are registered to the NAD83 / UTM zone 17N, grid coordinate system as collected in the field.

Our Quality System requires that at least two qualified persons inspect every final map before being approved and included in a final report.

- *DIGITAL DATA*

The above-described maps are delivered in the Oasis Montaj map file format on DVD-Rom.

A copy of all survey acquisition data (ASCII text format) and processed data (Oasis Montaj databases) are also delivered on DVD-Rom.

561000E 562000E 563000E 564000E 565000E

5404000N 5403000N 5402000N 5401000N 5400000N 5399000N 5398000N 5397000N

Kerrs Township

Chesney Bay Area

Rayner Lake Area

42A/16

42A/09

LEA 108

Legend

AeroVision (UAV-MAG) Survey

Magnetic trends

- Questionable Continuity
- Definite Continuity

Magnetic Susceptibility Distribution

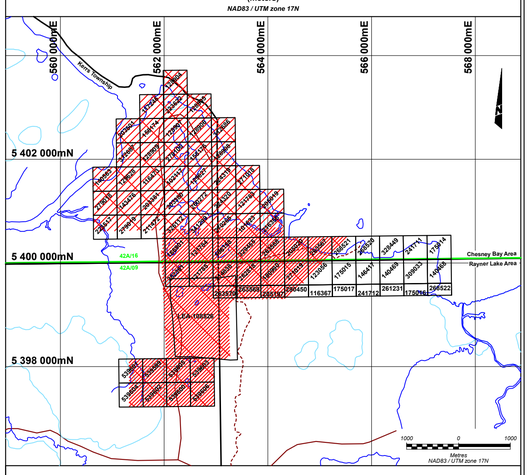
- more than 0.10 SI
- between 0.05 to 0.10 SI
- between 0.02 to 0.05 SI
- between 0.001 to 0.020 SI

Miscellaneous Symbols

- Observed Fault / Shear
- Geophysically Inferred Fault / Shear

Scale 1:10 000

200 0 200 400 600
(meters)
NAD83 / UTM zone 17N



Sheltered Oak Resources Inc.

Kerrs Township Gold Project

Kerrs Township / Chesney Bay & Rayner Lake Areas, Ontario

Geophysical Interpretation

Interpreted by:	M. Chemam, P.Geo.	2019/12
Surveyed by:	Vision 4K	2019/11
Verified by:	P. Coles, P.Geo.	2019/12
Reference maps: 42A/09-16		Scale 1:10 000
Project no: 19N051		Map no: 10.0

ABITIBI GEOPHYSICS

561000E 562000E 563000E 564000E 565000E

5404000N 5403000N 5402000N 5401000N 5400000N 5399000N 5398000N 5397000N

Kerrs Township

42A/16
42A/09

Chesney Bay Area
Rayner Lake Area

20.0
16.5
14.5
13.0
11.5
10.5
9.5
8.5
7.5
7.0
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
-3.5
-4.0
-4.5
-5.0
-5.5
-6.0
-6.5
-7.0
-7.5
-8.0
-8.5
-9.5

Calcultated Vertical Gradient
(nT/m)

Legend

Calculated Vertical Gradient Contours

0.5 2.0 10.0 10.0 2.0 0.5

Unit: nT/m
Survey line instrument:
CS-VL from Scintrex
Base station instrument:
GSM-19W from GEM Systems, cycle of 3 s

Drone: DJI Matrice 600
Nominal terrain clearance: 28 m

Scale 1:10 000

200 0 200 400 600
(meters)
NAD83 / UTM zone 17N

560 000mE 562 000mE 564 000mE 566 000mE 568 000mE

5 402 000mN
5 400 000mN
5 398 000mN

1000 0 1000
Metres
NAD83 / UTM zone 17N

Sheltered Oak Resources Inc.
Kerrs Township Gold Project
Kerrs Township / Chesney Bay & Rayner Lake Areas, Ontario

AeroVision (UAV-MAG) Survey
Calculated Vertical Gradient Contours (nT/m)

Interpreted by:	M. Chemam, P.Geo.	2019/12
Surveyed by:	Vision 4K	2019/11
Verified by:	P. Coles, P.Geo.	2019/12
Reference maps: 42A/09-16		Scale 1:10 000
Project no: 19N051		Map no: 1.4

ABITIBI GEOPHYSICS

561000E 562000E 563000E 564000E 565000E

5404000N 5403000N 5402000N 5401000N 5400000N 5399000N 5398000N 5397000N

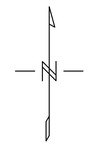
Kerrs Township

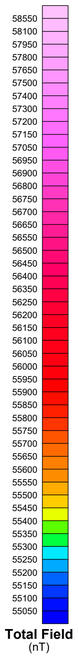
Chesney Bay Area

Rayner Lake Area

42A/16

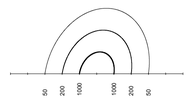
42A/09





Legend

Total Field Contours

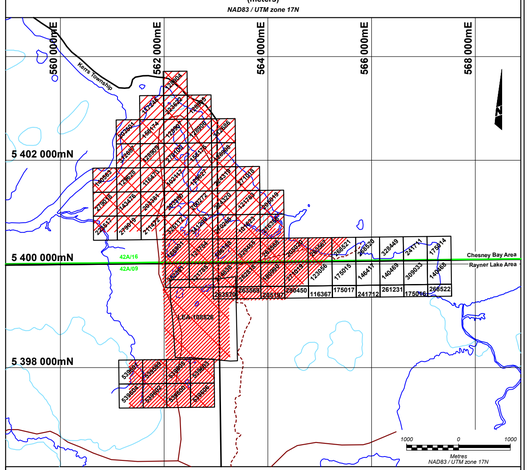


Unit: nT
Survey line instrument:
CS-VL from Scintrex
Base station instrument:
GSM-19W from GEM Systems, cycle of 3 s

Drone: DJI Matrice 600
Nominal terrain clearance: 28 m

Scale 1:10 000

200 0 200 400 600
(meters)
NAD83 / UTM zone 17N



Sheltered Oak Resources Inc.
Kerrs Township Gold Project
Kerrs Township / Chesney Bay & Rayner Lake Areas, Ontario

AeroVision (UAV-MAG) Survey
Total Field Contours
(nT)

Interpreted by:	M. Chemam, P.Geo.	2019/12
Surveyed by:	Vision 4K	2019/11
Verified by:	P. Coles, P.Geo.	2019/12
Reference maps: 42A/09-16		Scale 1:10 000
Project no: 19N051		Map no: 1.2

ABITIBI GEOPHYSICS

Expenditure Breakdown

Expense Verification: 2019 Kerrs Township Gold Project Exploration Activity: Airborne Geophysical Survey Work Total

Date and Days	Work Type Detail/Associated Cost	Unit of Work	#UnitsA	#UnitsB	Cost per Unit	Actual Cost	Ref/Notes
Nov. 3-10, 2019	Work Type- Airborne magnetics	$/km	238.20	1	$145.00	$34,539.00	Invoice 19-4781 Abitibi Geophysics attached. * Invoices 19-4736 and 19-4760 are advances and included with final invoice.
	Work Type- Airborne magnetics Associated Cost: Stand-by, Nov 8-9	Invoice	1	2	$3,280.00	$6,560.00	
	Work Type- Airborne magnetics Associated Cost: Crew Mobilization and Demobilization	Invoice	1	2	$3,280.00	$6,560.00	
	Work Type- Airborne magnetics Associated Cost: Ground Transportation (2 x ATV for line of sight UAV operation)	$/day	4	2	$180.00	$1,440.00	
	Work Type- Airborne magnetics Associated Cost: UAV permit	Invoice	1	1	$475.00	$475.00	
					Work Type: Airborne Magnetics Subtotal:	**$49,574.00**	
	Other Ground Geophysics - Logistics and Report Preparation	Invoice-	1	1	$4,145.00	$4,145.00	
					Other Ground Geophysics Subtotal:	**$4,145.00**	
					Total Ground Geophysical Work	**$53,719.00**	