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UNMANNED AERIAL MAGNETIC

AEROVISION

&

GPS-POSITIONED GROUND MAGNETIC FIELD SURVEYS

LOGISTICS AND ADVANCED INTERPRETATION REPORT

PREPARED FOR

TROJAN GOLD INC.

WATERSHED PROJECT

THUNDER BAY MINING DISTRICT, ONTARIO, CANADA

MAY 2022

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22NT006-MG

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1. RESEARCH OBJECTIVES

The Watershed property is within/on the boundary of the western part of the Shebandowan Greenstone Belt of the Wawa Abitibi Subprovince, the world's second largest historic gold producing terrane. The western part of the Shebandowan Greenstone Belt (SGB) is bounded by clastic metasedimentary rocks of the Quetico Subprovince to the northwest and to the southeast by a granitic batholith complex. The SGB itself consists primarily of mafic to felsic tholeiitic to calc-alkaline volcanic rocks.

Gold deposits are well defined in a multitude of locations within the area, including three former mines: North Coldstream, Ardeen (now called Huronian) and Shebandowan. Other deposits and occurrences include the Shebandowan West Zone, East Coldstream, Moss Lake, Vanguard, JF West Zone, Band-ore, etc. (Figure 1).

The Watershed property is mostly covered in metasedimentary rocks of the Quetico Subprovince. This geological unit is composed of wacke, siltstone, arkose, argillite, slate, mudstone, marble, chert and iron formation, and is sporadically intruded by some felsic to intermediate metavolcanics (dacite and andesitic flows, tuffs and breccias). South of the metasedimentary rocks are found the mafic to intermediate metavolcanic rocks (Basaltic and andesitic flows, tuffs and breccias, chert and iron formation) and the felsic metavolcanic rocks (Rhyolitic, rhyodacitic flows, tuffs and breccias), of the SGB of the Wawa Subprovince (Figures 2 and 3). The south-western part of the property claims is intruded by a late granite to granodiorite suite (Burchell Lake pluton). Minor felsic intrusive rocks (porphyry) are also present over a small area south of metasediments. In the southeastern corner of the survey grid, mafic metavolcanic and mafic-ultramafic rocks (gabbro, anorthosite, ultramafic rocks) are observed (Figure 3).

The Watershed property has historically been virtually unexplored for its gold potential although previous companies like Noranda, Inco and Cominco explored for base metals in the volcanic rocks and associated iron formations. The under-explored prospective sedimentary terrain has real likelihood to host gold mineralization. The odds of this are increased and its potentially prospective for copper, nickel, zinc, cobalt, platinum group elements as it hosts other east-northeast trending shear/fault zones that traverse the property.

The adjacent LaRose property includes the LaRose Shear Zone (LSZ), which is 40 m wide in the P1/P2 area, traced for 4 km along strike and altogether runs for approximately 9 km across the property and probably another 4-5 km through the Echo Ridge property. Drilling on trenches near LSZ on the LaRose property intersected an "unexpected" high grade gold bearing zone, including 5.65 grams of gold per tonne (g/T Au) over 3.00 metres from 42.00 to 45.00 m downhole, including 0.50 m of 27.69 g/t Au. If adjacent samples with lower gold contents are included, a section from 38.50 to 46.00 m, averaged 2.84 g/t Au over 7.50 m. A possible northern extension of this prospective shear zone, within the Watershed property, is highly possible and should be investigated.

In the fall of 2021, Trojan's exploration team performed a due diligence review of previous exploration work undertaken at the property and came up with four prospective target areas. In January of 2022, Abitibi Geophysics was retained to conduct a ground magnetic survey to assist in selecting a trenching program to be followed by a drill program covering the target areas (Figure 3).

The above information was taken from the Trojan's and Tashoha Resource's websites, and from *NI43-101 Technical Report - Sungold Project.*

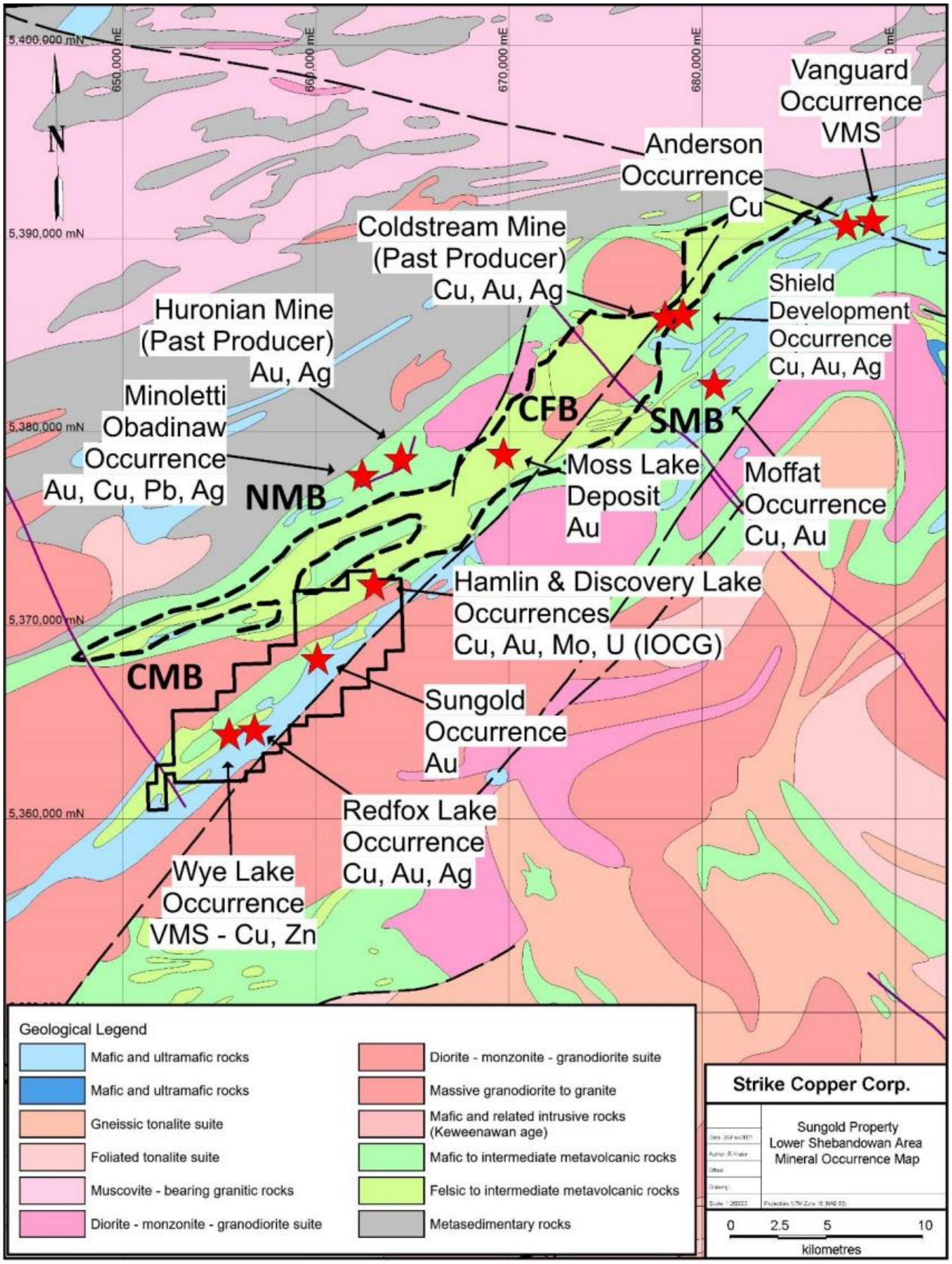

Figure 1. Geologic map of the western part of the Shebandowan Greenstone Belt with main mineral deposits and occurrences.

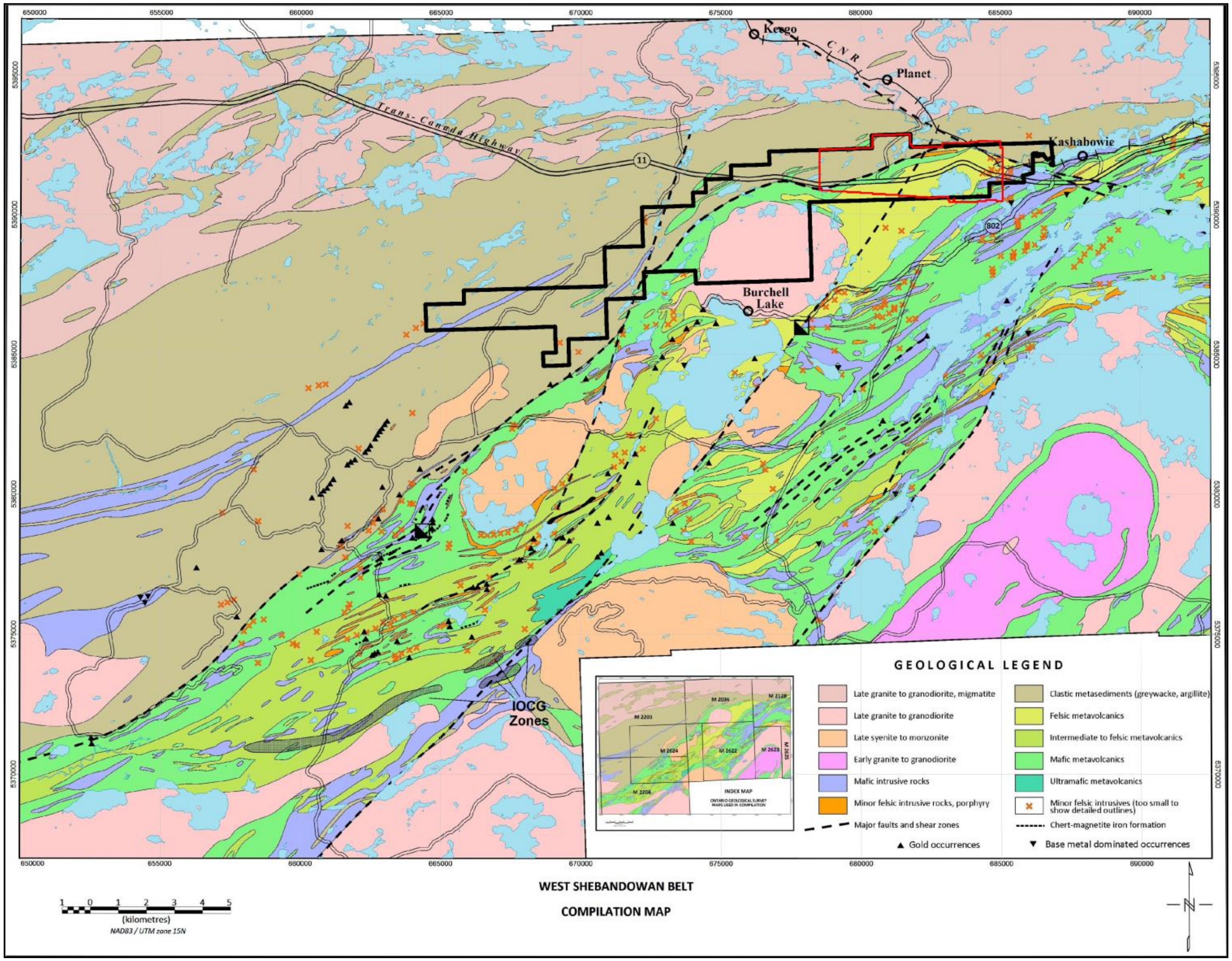

Figure 2. Geologic map of the western part of the Shebandowan Greenstone Belt with the Watershed property outline.

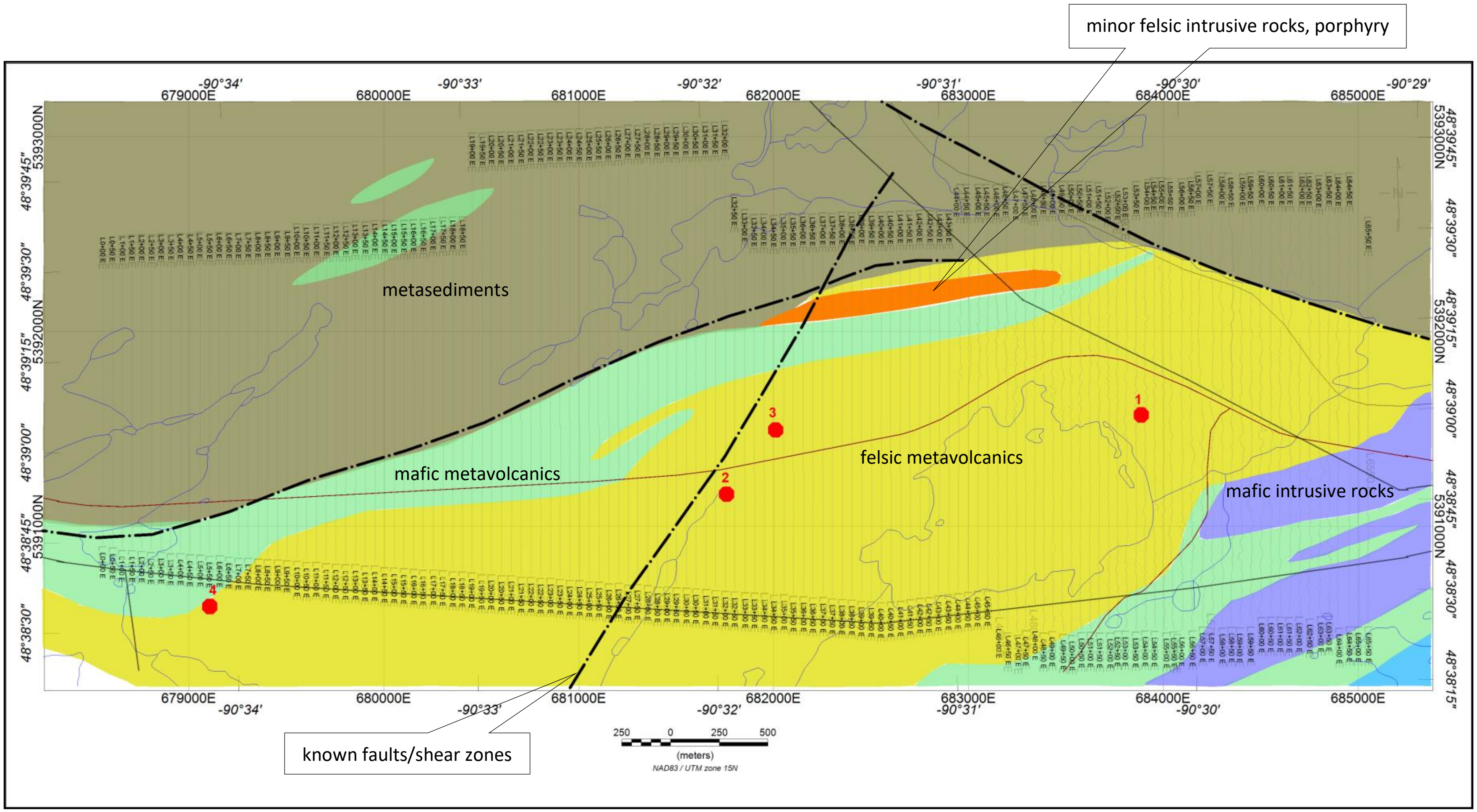

Figure 3. Geologic map of the Watershed property with the four Trojan prospective target areas (red dots).

2. Implemented Solution

The magnetic method is one of the most commonly applied techniques in mineral exploration, mainly because of its sensitivity to lithologic and structural variations in igneous and metamorphic terranes that commonly host mineral deposits. In addition, the method can be readily applied using aircraft /or drones for aeromagnetic surveying, thereby allowing large areas to be covered rapidly and efficiently.

Based on the fact that the gold mineralization at the Watershed property occurs within or adjacent faults/shear zones or is associated with Fe-rich rocks (Iron-Oxide Copper Gold (IOCG) type), the magnetic method can play a key role in mapping these structures (faults/shear zones) and in characterizing strong magnetic anomalies.

In January 2022, Trojan Gold Inc. commissioned Abitibi Geophysics Inc. to conduct a high-resolution, GPS-positioned ground magnetic field survey over the northeast part of the Watershed claims using regular line intervals of 50 m. The difficult conditions (thick snow cover and very cold weather) in the early 2022 winter period caused some difficulties and delays in the ground survey. After the acquisition of approximately 100 km of ground magnetic data, the survey was completed using Abitibi Geophysics' AeroVision® approach.

With the AeroVision® drone-magnetic survey, Abitibi Geophysics offers a high-end geophysical survey with unmatched resolution, relying on a ground-breaking flight control system, unique in North America. The *AimLow™* navigation and obstacle avoidance system, developed in close collaboration with Devbrio Geophysics, allows us to maintain the lowest achievable altitude throughout the survey, even in the most rugged conditions. With advanced control algorithms the UAV can maintain a constant *At Ground Level* (AGL) altitude while continuously avoiding occasional obstacles, like higher trees or structures. The resulting data has the resolution of a ground survey but is collected with the effectiveness of an airborne survey.

The interpretation of the high-resolution magnetic data intends to improve the Watershed geological knowledge and eventually locate new targets for planning subsequent exploration programs (future drilling).

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-pole (RTP) and residual anomaly.
- Generating a range of high-resolution normalized derivatives (first vertical derivative and tilt angle) and illustrating their effectiveness
- Outlining the tectonic features of the Watershed property.
- Performing 3D magnetic inversion to characterize the delineated magnetic features (estimate their magnetic contents (susceptibility) and their geometrical parameters).
- Highlighting the regions of high structural complexity and generation orientation entropy (OE) heat map to pick the areas that are perceived to be prospective for gold mineralization.

3. Geophysical Interpretation

❑ *Analysis of the Regional Geophysical Data*

Before initiating analysis of the AeroVision® magnetic data combined with the ground data, it is useful to examine the existing regional airborne 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.

As shown in Figure 4A, the airborne magnetic survey revealed two distinctive magnetic features (WD-R01 and WD-R02) and a large elliptical-shaped magnetic anomaly (WD-R03) measuring 6.7 x 4.8 km within the Watershed claims.

- Magnetic feature WD-R01, which is 1.7 km long and oriented NE, is identified in the center of the Watershed claims at coordinates [679 655 E, 5 391 055 N]. Amplitudes of this anomaly range from 260 to 320 nT above a magnetic background of approximately 59 400 nT. According to the geological map of the study area (Figure 2), WD-R01 reflects the mafic metavolcanic rocks. Note that the WD-R01 anomaly is located inside a large magnetic structure of 1.1 km width and oriented towards the NE. Amplitudes of this broad structure range approximately from 100 to 200 nT.

- Magnetic feature WD-R02 is the highest anomaly in amplitude within the Watershed claims and is identified at coordinates [682 780 E, 5 391 895 N]. This anomaly appears composed of three magnetic highs whose amplitudes vary from 380 to 820 nT above the magnetic background. According to the geological map of the study area, WD-R02 anomaly is outlined at the contact of mafic metavolcanics with felsic metavolcanic rocks. The magnetic signature of WD-R02 appears to be affected by brittle faults, which explains the complex shape of this anomaly.

- The elliptical-shaped WD-R03 magnetic feature corresponds to the known Burchell Lake pluton. The amplitude of this feature varies from 80 to 160 nT above the magnetic background.

From the calculated vertical gradient anomaly shown in Figure 4B, a NW-SE dike structure was identified. This dike structure is not mentioned on the geologic map. Another magnetic lineament trending NE-SW is observed to the north of the WD-R01 anomaly. This lineament reflects the mafic metavolcanic rocks. Finally, several faults/shear zones have been identified, thanks to the vertical gradient and tilt angle maps (Figures 4B and 4C).

To determine which target areas are good candidates to host gold (Au) mineralization within the Watershed claims, an automatic predictive method known as CET grid analysis was performed on the regional total field reduced to the pole (RTP). The proposed method is based on an image processing technique for the prospectivity analysis of Archaean lode-gold deposits.

The method first finds regions of magnetic discontinuity that correspond to both lithological boundaries and shear zones using a combination of texture analysis and symmetry feature detection techniques. Secondly, it examines the data using fractal analysis to find nearby areas of complex magnetic expression (zones of structural complexity). The most prospective areas are those where inferred structural complexity occurs adjacent to the regions of magnetic discontinuity.

Figure 4D, shows that the CET method has identified **2 target zones** within the Watershed claims with a significant structural complexity that could be favorable for hosting gold deposits.

The first target zone (CET-01) is located in the eastern part of the Watershed claims in the vicinity of Trojan's targets 1, 2 and 3 and coincides with the WD-R02 anomaly. It should be noted that geological target 4 has also identified as a zone of interest.

The second target zone (CET-02) is located at the Burchell Lake pluton. Three zones with significant structural complexity were depicted as shown in Figure 4D.

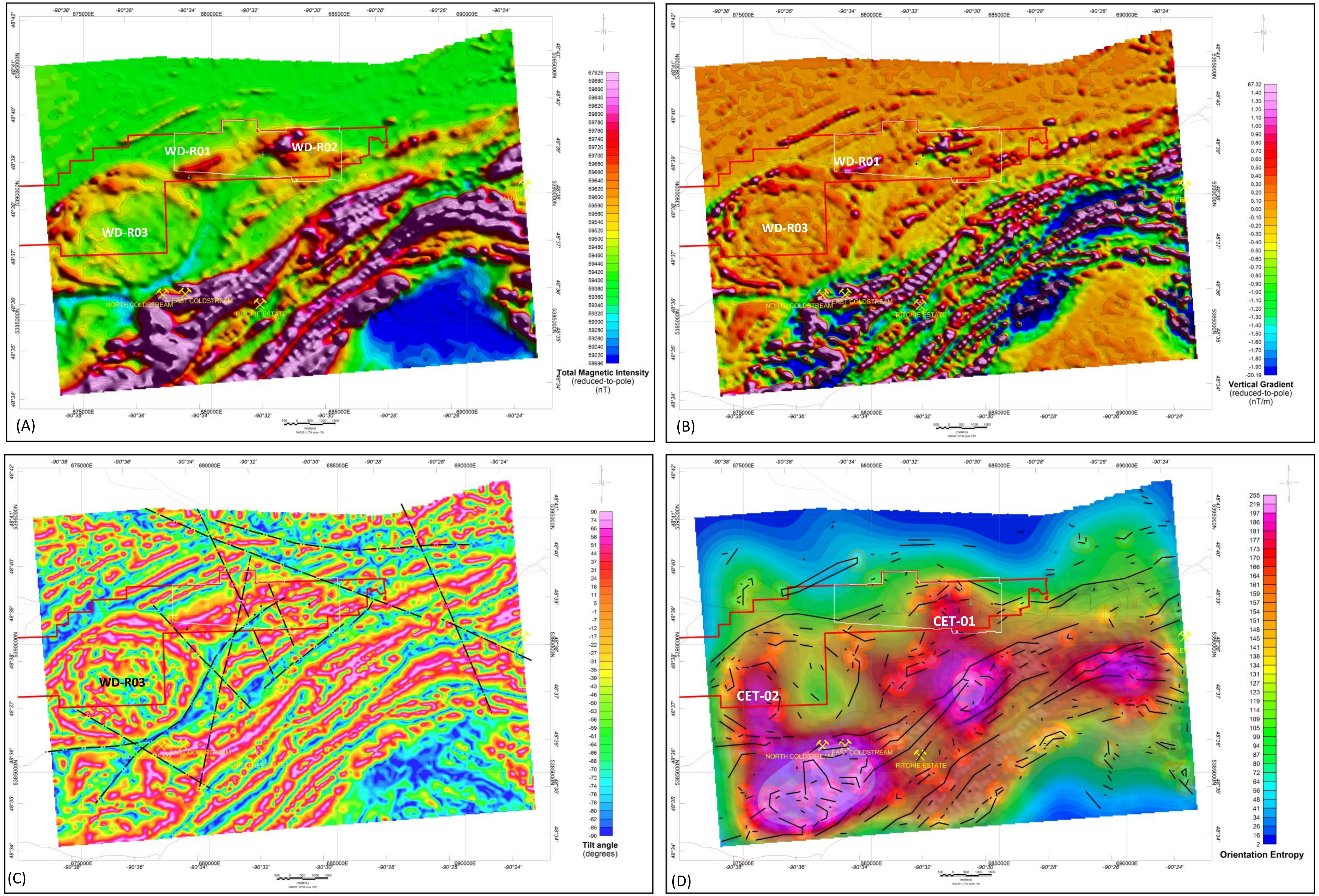

Figure 4. Airborne RTP-total magnetic field (A), its vertical gradient (B), tilt angle (C), and the predictive targeting heat map (D) of the Watershed area.

❑ *ANALYSIS OF THE AEROVISION® SURVEY*

The ground GPS-positioned and AeroVision® magnetic data over the Watershed property were collected along 132 lines. The lines were surveyed in the NS direction and spaced 50 m apart for both surveys (see map 1.2 and Figure 13). The ground magnetic survey was conducted in the eastern part of the grid from L 44+00E to L 65+50E, while the DJI drone flew over the center and the western part of the study grid from L0+00E to L 45+50E.

To facilitate merging the ground magnetic data with the acquired drone data, the total magnetic field acquired from the ground survey was upward continued to an altitude of 27 m, thus maintaining almost the same altitude as the drone survey.

The total magnetic values over the Watershed property range from 55 368 nT to 57 388 nT, with an average of approximately 55 957 nT. The highest magnetic value (57 388.71 nT) was recorded on L 49+00E, at coordinates [683 433 E, 5 392 212 N]. At this place (magnetic high), the ground magnetic survey showed a magnetic peak of 66 268 nT. This peak coincides with mafic metavolcanic rocks according to the geological map of the study area.

The resulting total magnetic intensity map and its reduction-to-pole are presented in Figures 5 and 6A. As seen, the high-quality magnetic maps resulting from the combined ground-drone magnetic surveys, have successfully mapped the magnetic properties of the different geological formations lying within the Watershed property, mainly the metasedimentary rocks and the mafic metavolcanics as well as the mafic intrusive rocks located in the SE portion of the study site.

Several moderate wavelength magnetic anomalies have been identified on the Watershed property. Some of these anomalies have linear shapes (magnetic trends) with a NE orientation, and others show irregular and complex shapes. The most dominant features on the total magnetic intensity map are described below:

❑ WD-1

WD-1 is a NE-trending magnetic lineament of 1.5 km long identified between L 4+00E and L 19+00E. This lineament could extend until L 37+00E but deeper. Between L 19+00E and L 39+00E, WD-1 shows a discontinuous character probably shaped by tectonic events that affected the region. The delineated magnetic feature shows various amplitudes ranging from 130 to 700 nT, above a local magnetic background of approximately 56 050 nT. According to the geological map of the Watershed property, the WD-1 feature corresponds to mafic metavolcanic rocks.

❑ WD-2

WD-2 is a second magnetic lineament identified 100 – 150 m south of the WD-1 anomaly. The shape of this lineament is very similar to that of WD-1, especially in the central part of the grid (discontinued). Amplitudes of the WD-2 feature vary approximately from 100 to 200 nT above the magnetic background. Magnetic lineaments WD-1 and WD-2 seem to meet at line 39+00E.

According to the geological map of the study area, the western part of the WD-2 lineament is associated with felsic metavolcanic rocks, its central part is at the contact of felsic metavolcanics with mafic metavolcanic rocks, while its eastern section coincides with mafic metavolcanic rocks. We believe that the source of the WD-2 anomaly is a mafic metavolcanic unit, and the geological map of the Watershed property should be updated.

- **WD-3**

The WD-3 magnetic feature is a complex shaped anomaly composed of 4 magnetic highs, one of which is linear in shape. Anomaly WD-3 is disrupted by at least three faults. The amplitude of this anomaly ranges from 400 to more than 1100 nT. This anomaly is identified within felsic metavolcanic rocks, but its real source could be of mafic-ultramafic type rich in magnetite (iron formation). The WD-3 anomaly may be a good target to host IOCG mineralization.

- **WD-4**

The magnetic feature WD-4 is also a complex shaped anomaly disrupted by a fault. This anomaly could be of the same type as the WD-3 anomaly. Its amplitude is estimated to be between 375 and 430 nT. Magnetic anomaly WD-4 appears located within a lake in felsic metavolcanic rocks, according to the geological map of the study area.

- **WD-5**

WD-5 is a magnetic lineament of 1.65 km long identified north of the WD-3 anomaly. This feature seems affected by two faults. The nature of the WD-5 magnetic trend could be of the same type as the WD-3 anomaly. The amplitudes of the WD-5 feature range from about 140 to over 1400 nT according to the residual anomaly map (Figure 6B). The highest amplitude is recorded within this anomaly at L 49+00E. Geologically, the delineated anomaly corresponds to mafic metavolcanic rocks. The WD-5 anomaly may be a good target for hosting IOCG-type mineralization.

Other magnetic lineaments (WD-6 and WD-7) worth mentioning are identified in the south-eastern part of the study grid. These lineaments appear trending NE and their amplitudes are estimated to be between 180 and 500 nT. According to the geological map of the Watershed property, the source of these lineaments is either mafic intrusives or mafic metavolcanics.

Two other magnetic lineaments (WD-8 and WD-9) of low amplitudes (50 - 100 nT) also deserve to be mentioned. The magnetic lineament WD-8 is the only one with a NW-SE orientation. This feature is not mentioned on the geological map. The WD-8 feature could correspond to mafic dike (diabase dike). As for the NE-trending WD-9 lineament, this magnetic structure reflects mafic to intermediate metavolcanic rocks (dacitic and andesitic flows, tuffs and breccias).

To further characterize the highlighted magnetic features within the Watershed property, enhancement techniques consisting of residual anomaly, first vertical derivative and tilt angle, all using reduced-to-pole, were calculated (Figures 6B, 6C and 6D). These products were used to better understand the distribution of the magnetic amplitudes and emphasize near-surface geological features (subtle anomalies) and help to track the tectonic features (fault/shear) that affected the study grid.

A special colour bar was also applied to the residual anomaly as shown in Figure 7A. This type of image allows us to recognize and clearly distinguish strong magnetic anomalies and sometimes to differentiate or map directly the different geological units if their magnetic properties (intensities) are known.

By comparing or superimposing the geological map on the residual magnetic map (Figure 7), it appears that the metasediment rocks and the mafic metavolcanic rocks are the two units easily recognizable and well mapped by the magnetic method.

❑ *3D MAGNETIC INVERSIONS*

To extract further information about the delineated magnetic anomalies, their depth-to-top, widths, depth extensions and magnetic susceptibility contrasts, an unconstrained 3D magnetic inversion was performed on the residual grid using the VOXI Earth Modelling technology of Seequent.

A mesh of 329 x 122 x40 cells (without padding) with cell widths of 20 m in easting and northing, and 10 m in thickness (downward) was used. From the depth of 70 m, the thickness of the cells increases with an expansion factor of 1.08. This initial block model allows us to investigate to a depth of approximately 1000 m.

The final inversion result is illustrated in Figure 8, as voxel and 3D isosurfaces of the magnetic susceptibility contrast cut-off at 0.002, 0.01, and 0.04 SI. All the geometrical parameters and magnetic properties of the detected magnetic sources can be taken directly from the voxel model delivered with this report.

Complementary information is presented as horizontal slices as shown in Figure 9, and as vertical sections (Figure 10) to bring to light the magnetic properties or signatures of the Trojan's identified targets (targets 1 to 3). As seen, Target 1 appears to be associated with a magnetic contact and a probable fault striking NE. Target 2 seems located within a fault/shear zone, and Target 3 appears associated with a short wavelength positive magnetic anomaly very close to a fault/shear zone.

It's important to note that because of the unconstrained character of the 3D magnetic inversion and the non-uniqueness in potential field inversion, any parametric calculation resulting from this interpretation is only one possible solution, and sampling by drilling through the rock formations is necessary to give the final answer to the real geometry of the delineated anomalies.

❑ *PREDICTIVE TARGETING ANALYSIS*

To determine which target areas are good candidates to host gold mineralization on the Watershed property, an analysis was made using an automatic predictive method known as Centre for Exploration Targeting (CET) grid analysis. The CET grid image analysis technique was applied to the RTP-total magnetic field (Figure 6A) to rapidly locate regions perceived to be favorable for gold deposits. Note that the proposed method does not require knowledge of the location of existing deposits, which is the case for other techniques such as machine learning (neural network).

Gold mineralization is known to occur near major crustal breaks manifesting as large-scale shear zones, which act as conduits for mineralizing fluids. The mineralization occurs in the regions of structural complexity adjacent to the shear zones. Within this framework, the Centre for Exploration Targeting (CET) grid analysis was specifically designed to locate Archaean lode-gold occurrences in such regions.

Figure 11B shows that the CET method has identified **several target zones** with a significant structural complexity that could be favorable for hosting gold deposits. Trojan Gold Inc., geologists can analyze the generated heat map to see if the outlined areas present any significant interest and could be further explored in more detail.

To conclude, a simplified structural map was generated based on the magnetic susceptibility depth slice extracted at an elevation of 425 m from the 3D magnetic model, including the main inferred faults, the highlighted magnetic axes, and the favorable sites (contact occurrence density) for hosting gold deposits resulted from CET grid analysis (Figure 11A).

4. Conclusion and Recommendations

High-resolution airborne magnetic datasets are considered essential components of mineral exploration programs. Generally, they are indirectly used to map structures (feeder faults/shears and folds) and lithological units where gold mineralization could be located.

As part of this project, the interpretation of the drone magnetic data combined with the ground data has provided a better understanding of the geological setting of the Watershed property. The metasedimentary rocks, the mafic metavolcanic rocks observed in the center of the grid, and the mafic intrusive rocks located in the south-eastern part of the grid were successfully mapped.

Thanks to this survey, three prominent magnetic anomalies WD-03, WD-04 and WD-05 were identified. Magnetic amplitudes of the WD-03 and WD-05 anomalies exceed 1000 nT, while the amplitude of the WD-4 anomaly is estimated to be about 380 nT. The sources of these features could be mafic-ultramafic rich in magnetite. The delineated anomalies WD-03 and WD-05 may be good candidates to host IOCG-type mineralization.

As for the Trojan targets (1 to 3), the characterization of these target areas (their magnetic properties) was done by 3D magnetic inversion. Target 1 appears to be associated with a magnetic contact and a NE fault. Target 2 is identified within a fault/shear zone, and Target 3 coincides with a short wavelength positive magnetic anomaly very close to a fault/shear zone.

The interpretation and inversion of the magnetic data, have provided:

- Various high-resolution magnetic maps for the Watershed property.
- 3D magnetic susceptibility model. This model will help to understand the subsurface architecture (geometry) of the magnetic sources lying within the study area.
- A predictive targeting map (heat map) where several target zones perceived as potential zones to host gold deposits were identified.
- A detailed structural map includes the outlines of a few known and unknown faults/shear zones that may play a key role in the control of gold mineralization.

It should be noted that the magnetic method alone cannot directly identify the gold mineralization and the support of other geophysical methods such as Induced Polarization is paramount, as the gold mineralization is known to be often associated with disseminated sulphides (pyrite, pyrrhotite and arsenopyrite).

Thus, the main recommendations for future follow-up work on the Watershed Project are summarized in the following points:

- Geological mapping: the target zones identified with the CET method should be geologically mapped. Lithogeochemical prospecting should be carried out over these anomalies to prioritize exploration targets.
- A deep Induced Polarization survey such as OreVision (n=37.5, a=1 to 30) should be performed to detect any possible disseminated sulphides associated with gold mineralization.

The author is confident that the Watershed Project offers potential for discovering new mineralized zones and our investigation of the anomalous sources identified by the present survey will be positive.

However, our knowledge of the property's geology is not as thorough as the geologist of Trojan Gold. Our interpretation is mainly based on the observed geophysical responses.

To maximize the outcome of the present results, Trojan Gold. should ensure all available geoscience information is compiled, assessed, and, if necessary, redefine the priority and nature of the interpretation proposed in this report.

Respectfully submitted,
Abitibi Geophysics Inc.

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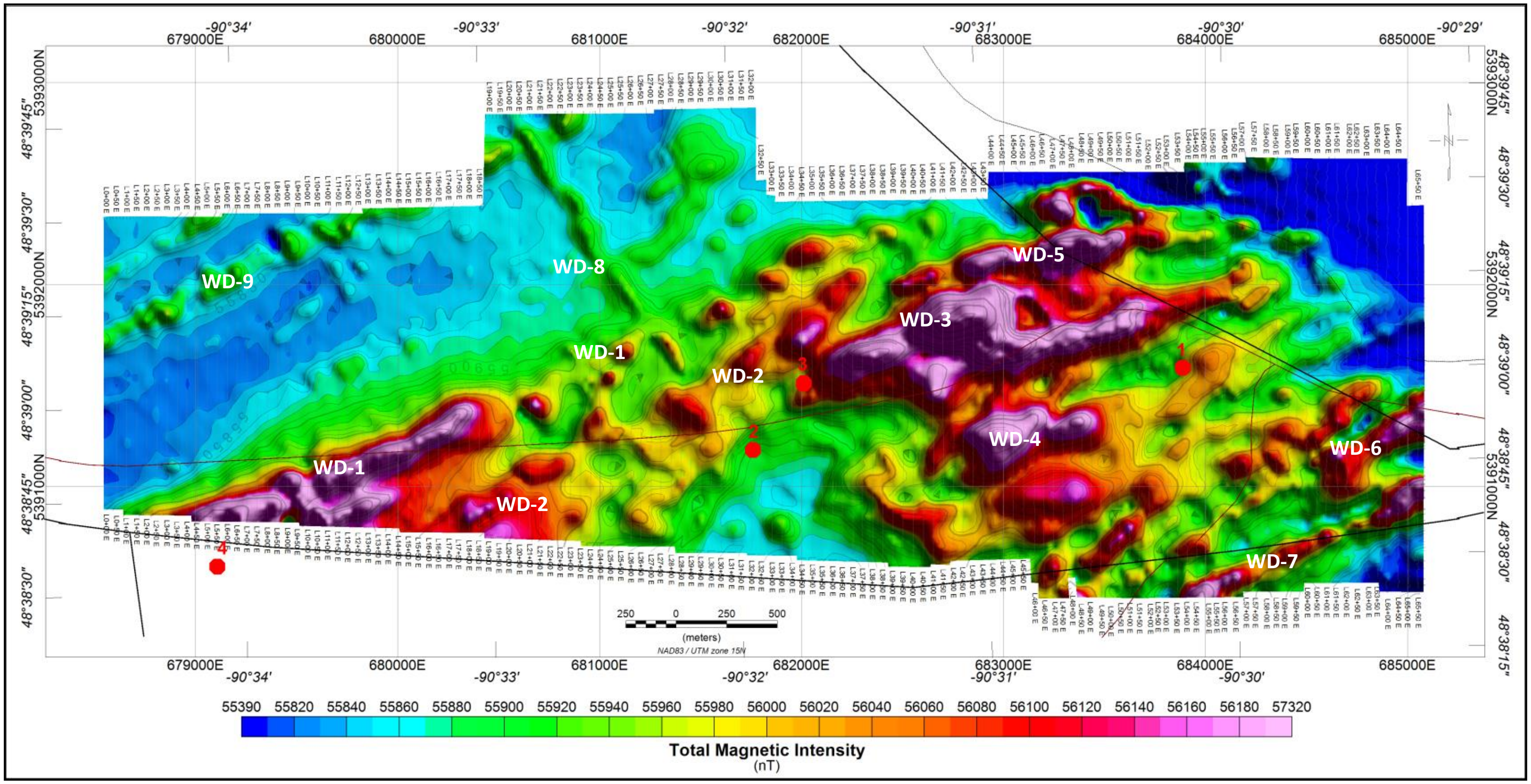

Figure 5. High-resolution total magnetic intensity map of the Watershed property, including the delineated anomalies.

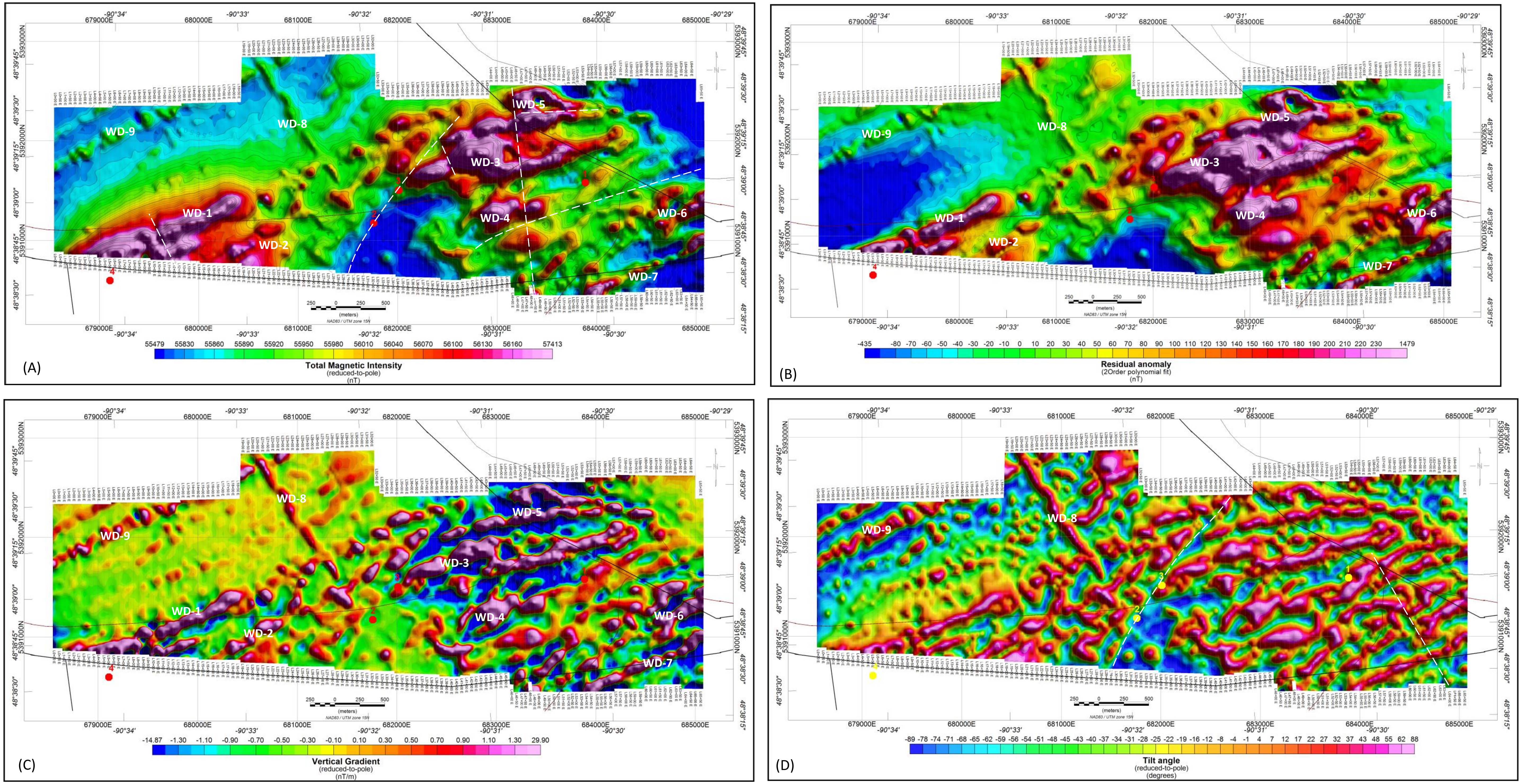

Figure 6. RTP-total magnetic field (A), its residual anomaly (B), vertical gradient (C), and tilt angle (D), Watershed Project.

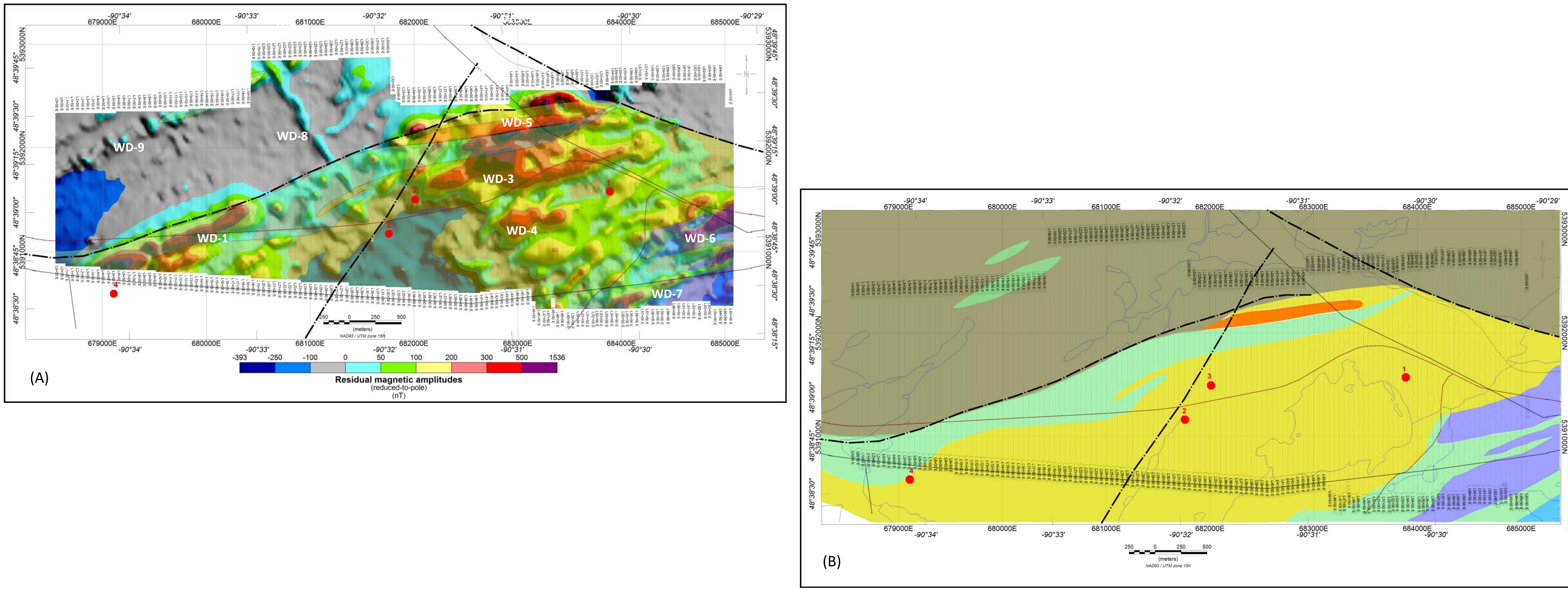

Figure 7. Distribution of the residual magnetic amplitudes (A) versus the geological map of the survey grid (B), including the known geological fault/shear zones.

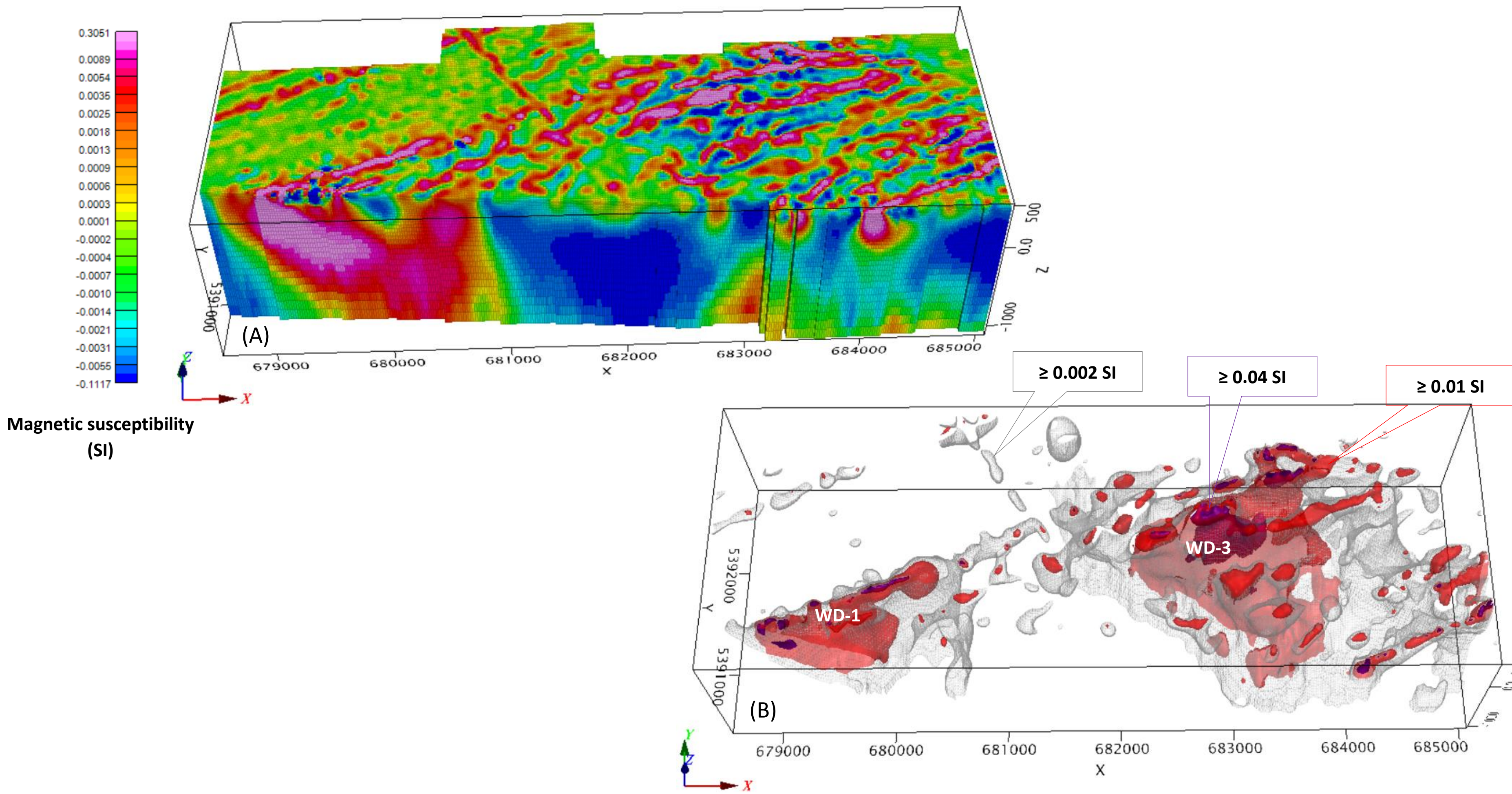

Figure 8. Perspective view of the recovered magnetic susceptibility model plotted as 3D voxel (A) and as isosurfaces, rendered at 0.002, 0.01 and 0.04 SI (B).

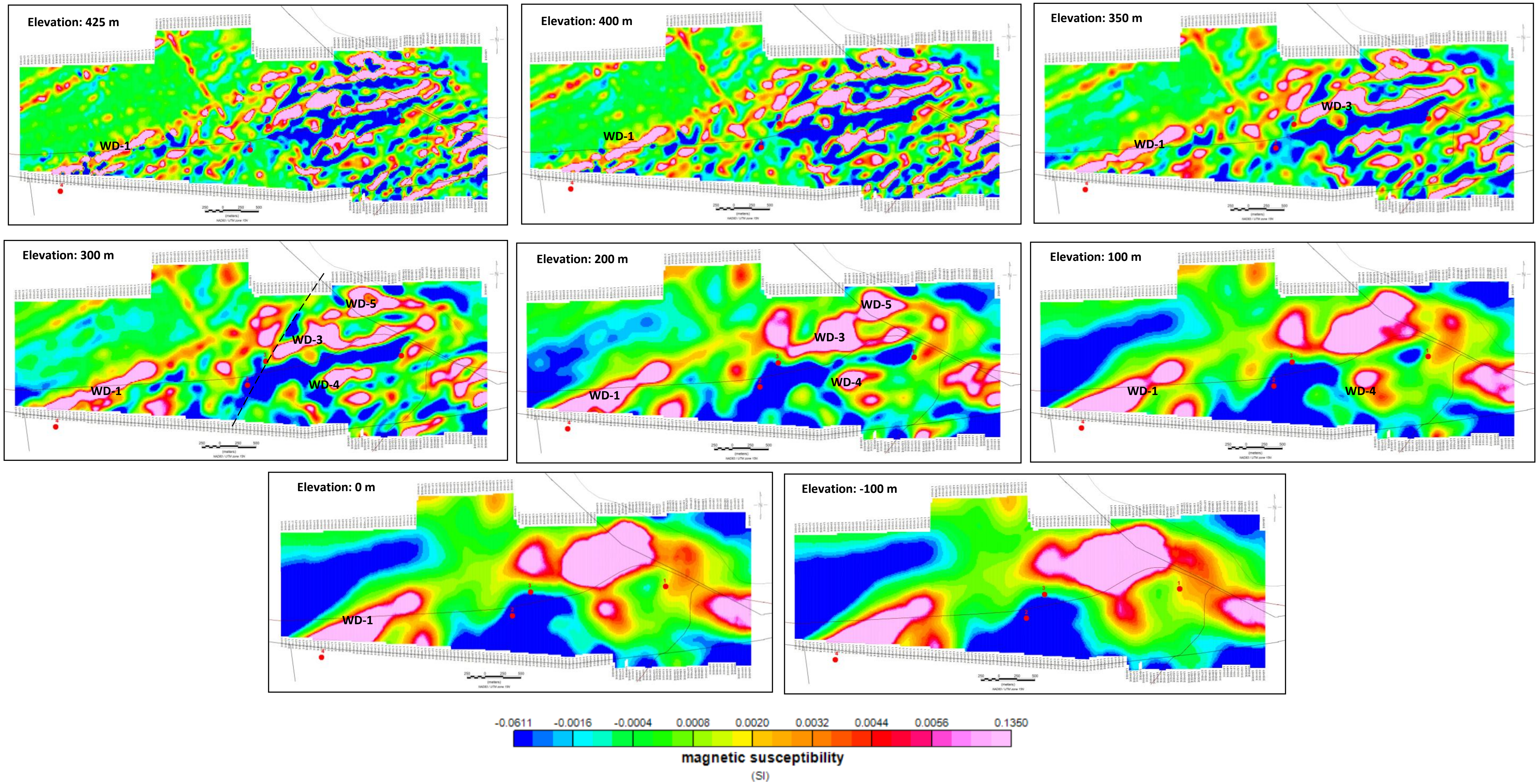

Figure 9. Horizontal slices of the magnetic susceptibility distributions at levels of 425 m, 400 m, 350 m, 300 m, 200 m, 100 m, 0 m, and -100 m, Watershed Project.

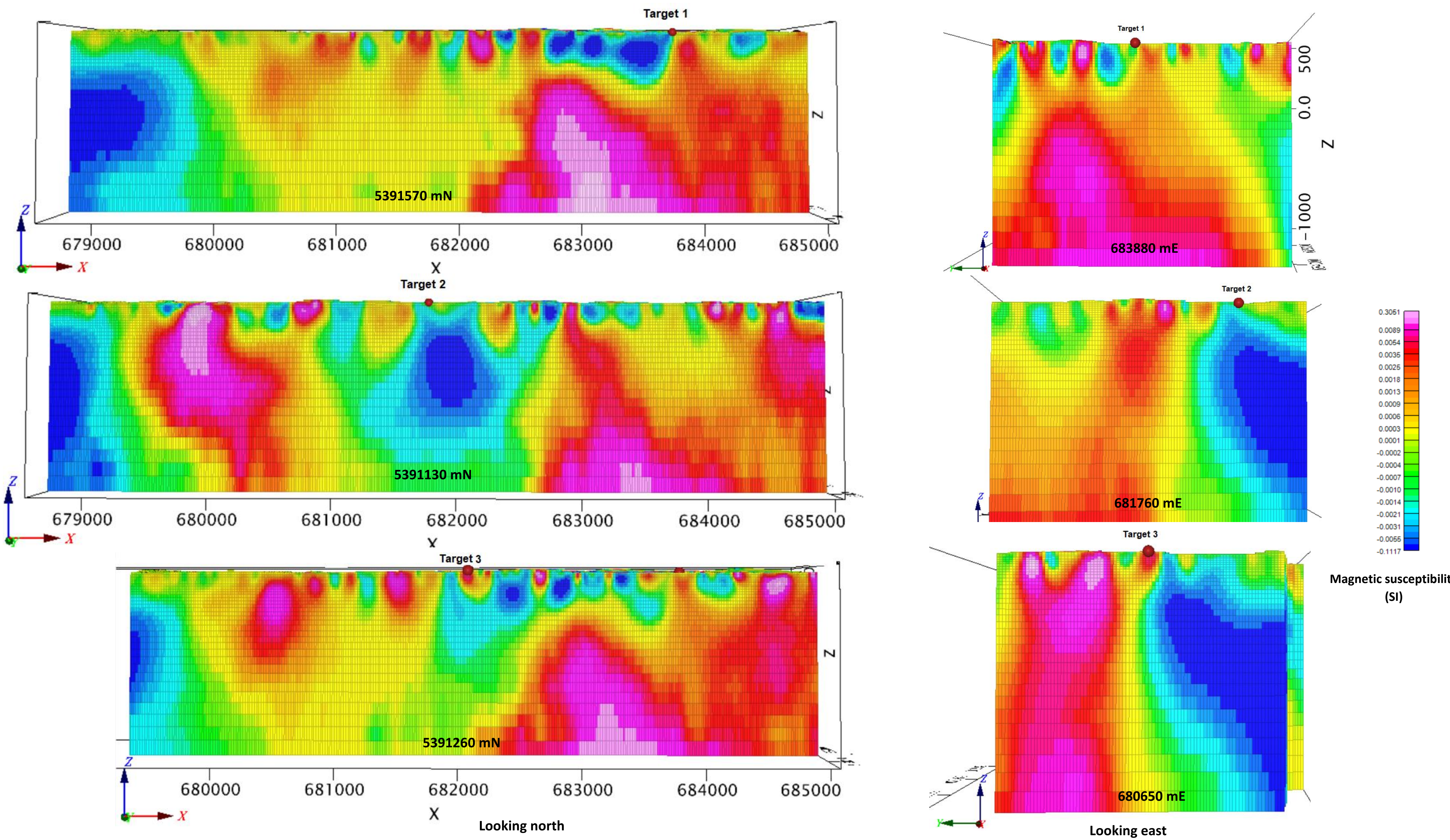

Figure 10. Vertical sections of the magnetic susceptibility distributions through the Trojan's prospective target zones, Watershed Project.

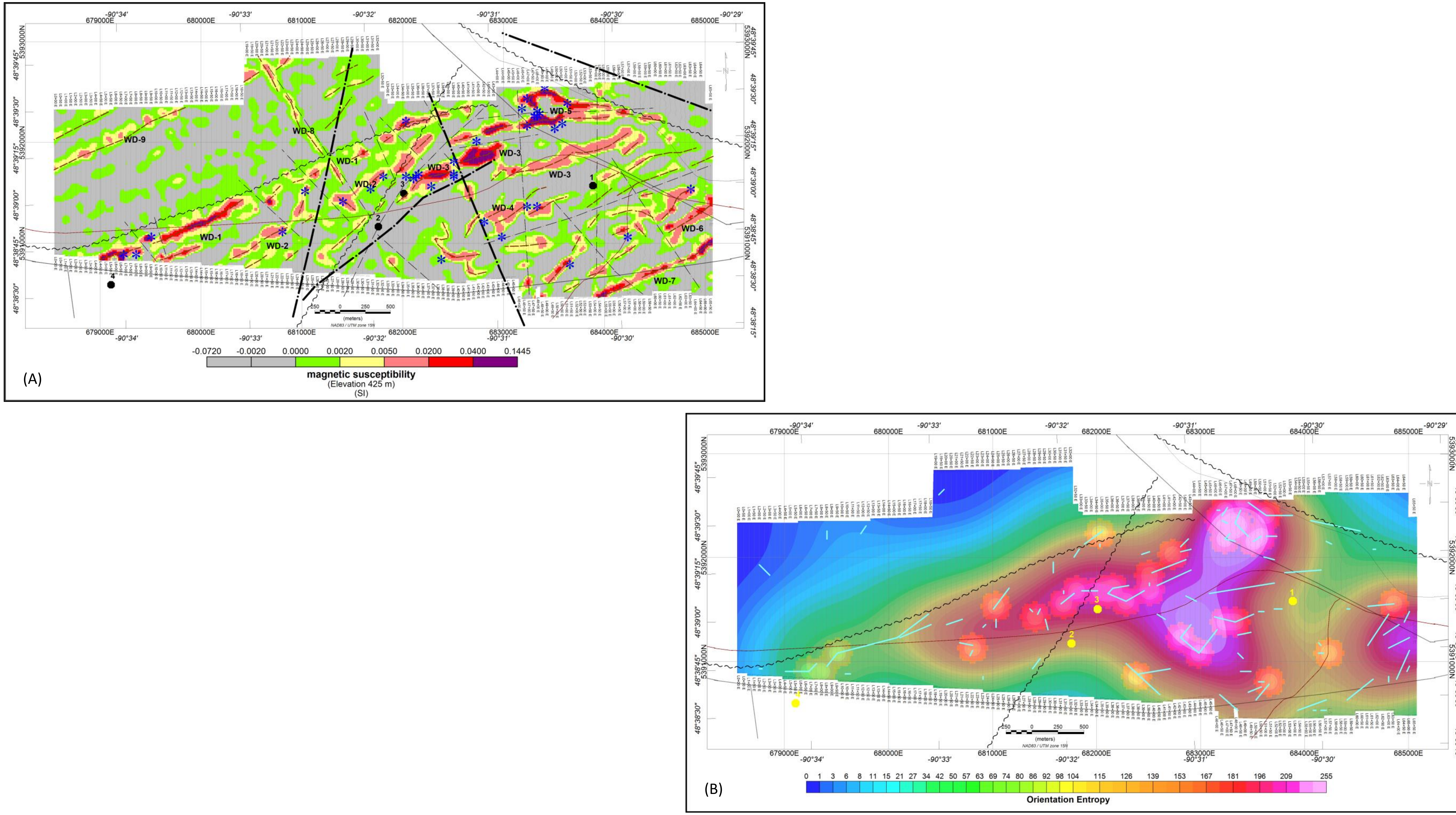

Figure 11. Simplified structural interpretation map (A) versus the orientation entropy (OE) heat map (B), including inferred faults/shear zones, outlined magnetic axes and zones of high structural complexity (target areas); Watershed Project.

APPENDIX A – PROJECT OVERVIEW

- *PROJECT ID* — **Watershed Project**
  (Our reference: **22NT006-MG**)

- *GENERAL LOCATION* — West of Thunder Bay, Ontario, Canada

- *CUSTOMER* — **Trojan Gold Inc.**
  82 Richmond St. E. Suite 401
  Toronto, ON M5C 1P1
  647-350-6122
  www.trojangold.com

- *REPRESENTATIVES* — **Mr. Charles J. Elbourne, B.Comm., M.B.A.**
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- *SURVEY METHODS* — **AeroVision® (UAV-MAG)**
  GPS-positioned Ground Magnetic Field

- *GEOPHYSICAL OBJECTIVES* — To improve the geological understanding of the property.
  To help identify gold bearing structures for further exploration.

Figure 12. General location of the Watershed Project.

❑ *LOCATION*	Ames Township, Crayfish Lake and Kashabowie Lake Areas **Thunder Bay Mining District, Ontario, Canada** Centred on 48°39'05'' N, and 90°31'54'' W NAD83 / UTM zone 15N 681 790 mE, 5 391 660 mN NTS sheets: **52B/09-10**
❑ *NEAREST SETTLEMENT*	**Thunder Bay:** approximately 100 km east
❑ *ACCESS*	The Watershed property is directly accessible from the Trans-Canada Highway #11 which traverses the survey grid.
❑ *PHYSIOGRAPHY*	The topography of the project area is relatively flat to gently rolling with elevations ranging from 450 to 550 m above sea level. Hydrographically, a few small lakes, rivers and ponds are encountered within the survey area.
❑ *CULTURAL FEATURES*	Canada Highway #11, and other side roads and trails were encountered throughout the survey grid. An electrical transmission line passes south of the survey grid. Another powerline crosses the northeast corner of the grid.
❑ *MINING LAND TENURE*	The covered claims in the present project are wholly (100%) owned by Trojan Gold Inc. These claims are illustrated in Figure 11.
❑ *SURVEY DETAILS*	**AeroVision® (UAV-MAG)** consists of 92 lines (L 0+00E to L 45+50E) regularly spaced at 50 m and oriented N0°. The survey lines vary from 1.075 to 2.175 km in length. Five tie lines (TL 0+00N to TL 20+00N) spaced every 500 m complete the survey grid. **GPS-positioned Ground Magnetic Field** consists of 44 lines (L 44+00E to L 65+50E) varying from 0.775 to 2.1 km in length. The northern parts of L41+00E to L 43+50E with the southern parts of L44+50E and 45+00E were surveyed with both methods to merge the data. Refer to Figure 13 for a plan view of the zone covered by the present survey.
❑ *COORDINATE SYSTEM*	Local datum: NAD83 Projection type: Universal Transverse Mercator (UTM) Zone: 15N

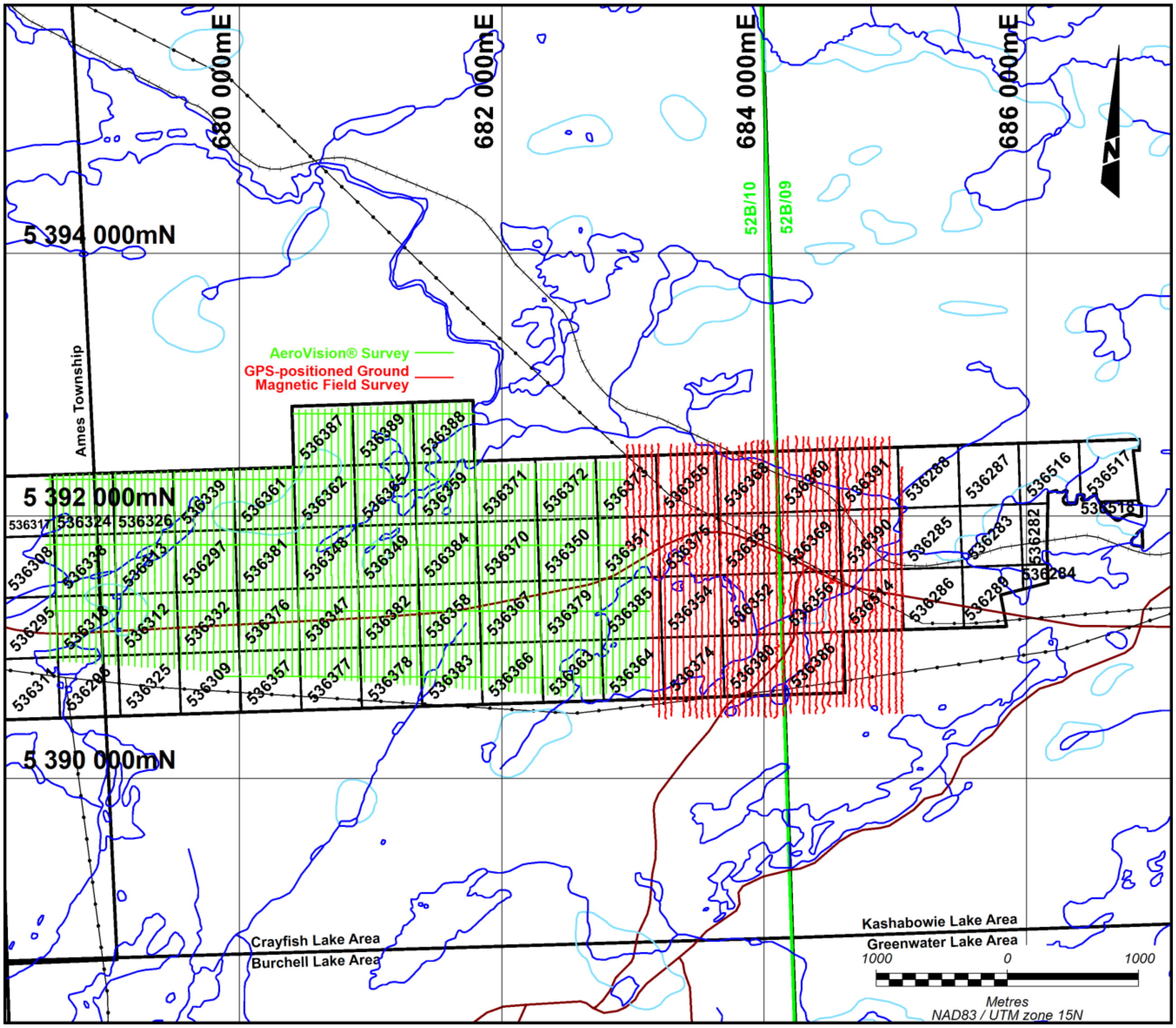

Figure 13. Index of claims, AeroVision® (UAV-MAG) and GPS-positioned Ground Magnetic Field surveys coverage within the Watershed Project.

APPENDIX B – TECHNICAL SPECIFICATIONS

- *TYPE OF SURVEYS*

AeroVision® (UAV-MAG)
Measurement of the total magnetic intensity (TMI) with RTK-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.

GPS-positioned Ground Magnetic Field
Measurement of the total magnetic intensity (TMI) with GPS readings recorded every 0.5 second (2 Hz sample rate). The plotted total magnetic values were corrected for diurnal variations using readings taken every 10 seconds by a synchronized local base station.

- *DATA ACQUISITION*

AeroVision® (UAV-MAG): February 21st to 23rd 2022
Ground Magnetic: January 9th to February 18th 2022

- *COVERAGE*

AeroVision® (UAV-MAG):	176 km
Ground Magnetic:	96 km
Total:	272 km

AeroVision® (UAV-MAG) Survey

Figure 14. Devbrio UAV-MGltirotor with CS-VL magnetometer.

❑ *TECHNICAL SPECIFICATIONS*

MGltirotor 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, ZENMGSETM Z30, ZenMGse X5/X5R, ZenMGse 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 (Unobstructed, free	FCC Compliant: 5 km (3,1 miles); CE compliant: 3,5 km (2,2 miles) 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

- *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)

CS-VL CESIUM MAGNETOMETER

- *BASE STATION MAGNETOMETER*

GEM Systems GSM-19W

Sampling rate:	3 seconds
Reference Field:	**55 990 nT**
Location (Long., Lat./ WGS 84):	684 250 E; 5 391 782 N

- *COLLISION AVOIDANCE SYSTEM*

Devbrio ANCAS

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

❑ *GPS NAVIGATION SYSTEM*

ZED-F9P module
u-blox F9 high precision GNSS module / Dual Frequency

- Concurrent reception of GPS, GLONASS, Galileo and BeiDou
- MGlti-band RTK with fast convergence times and reliable performance
- High update rate for highly dynamic applications
- Centimeter accuracy in a small and energy efficient module
- Easy integration of RTK for fast time-to-market

❑ *SURVEY SPECIFICATIONS*

• Nominal survey speed:	12 m/s
• Average terrain clearance:	29 m (AGL)
• Traverse lines direction:	N 000° / N 180°
• Traverse line interval:	50 m
• Tie lines direction:	N 090° / N 270°
• Tie line interval:	500 m

PERSONNEL

Simon Boivin	UAV System Operator
Simon Loiselle	UAV System Operator
Marcel Naud	Ground MAG Operator
Ederson Villamizar	Ground MAG Operator
Guillaume-Olivier Poirier	Ground MAG Operator
Fayth Chambers	Ground MAG Operator
Carole Picard, Tech.	Plotting
Madjid Chemam, P.Geo.	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.
✓ Clover leaf test should show a standard deviation within 1 nT across eight intersections.
✓ 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).

❑ *DATA QUALITY CONTROLS (CONTINUED)*

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
- ✓ Upward continuation of the ground magnetic data to an elevation of 27 m to merge it with the drone magnetic data.
- ✓ For a better fit of the ground magnetic data with the drone data, a level of 32 nT was subtracted from the upward continued ground magnetic data.
- ✓ Conventional microlevelling of the drone 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.

  - Microlevelling: applied to remove persistent low-amplitude components of flight-line noise remaining in the data.

GPS-positioned Ground Magnetic Field Survey

❑ *GROUND MAGNETOMETERS*

GEM Systems GSM-19W v7, s/n: 7052356, 6112165 and 8102971

Proton precession magnetometer with overhauser effect

Resolution:	0.01 nT / 1 m
Absolute accuracy:	0.2 nT / 2-5 m
Range:	10 000 to 120 000 nT
Gradient tolerance:	>10 000 nT / m
Samples at:	60+, 5, 3, 2, 1, 0.5, 0.2 sec
Operating Temperature:	-40C to +55C
TMI sensor elevation:	1.8 m above ground

❑ *BASE STATION MAGNETOMETERS*

GEM Systems GSM-19 v7, s/n 7062390 and 2085540

Proton precession magnetometer with Overhauser effect

Resolution:	0.01 nT
Absolute accuracy:	0.2 nT
Cycle time:	**10 seconds**
Reference Field:	**55 990 nT**
Location (NAD83):	684 250 E, 5 391 790 N

Appendix C – Deliverables

- *Total Field Contours*

The total magnetic field (TMF) was gridded using a Minimum Curvature gridding (RANGRID GX) algorithm with grid cell size of 12.5 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 10 nT from 55 765 nT to 56 300 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 0.25 nT/m from -4.0 nT/m to +4.0 nT/m.

- *Maps Produced*

Three (3) magnetic maps at a scale of 1:5000 are delivered with this report.

All plan maps are registered to the NAD83 / UTM zone 15N 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.

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

Table 1. Maps Produced

Map number	AeroVision® (UAV-MAG) & GPS-positioned Ground Magnetic Field Surveys	Scale
Watershed Project		
1.2	Total Field Contours (nT)	1:5000
1.4	Calculated Vertical Gradient Contours (nT/m)	1:5000
10.0	Geophysical Interpretation	1:5000

List of Claims and Total Line Length

Claim Number	Cell ID	Holder	Township	Total Line Length (km)
536285	52B09E063	(100) TROJAN GOLD INC.	KASHABOWIE LAKE AREA	0.55
536286	52B09E083	(100) TROJAN GOLD INC.	KASHABOWIE LAKE AREA	0.11
536288	52B09E043	(100) TROJAN GOLD INC.	KASHABOWIE LAKE AREA	0.41
536295	52B10H088	(100) TROJAN GOLD INC.	AMES	0.76
536296	52B10H109	(100) TROJAN GOLD INC.	AMES,CRAYFISH LAKE AREA	0.47
536297	52B10H071	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.17
536308	52B10H068	(100) TROJAN GOLD INC.	AMES	0.46
536309	52B10H111	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	1.26
536311	52B10H108	(100) TROJAN GOLD INC.	AMES	0.03
536312	52B10H090	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.17
536313	52B10H070	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.42
536317	52B10H048	(100) TROJAN GOLD INC.	AMES	0.46
536318	52B10H089	(100) TROJAN GOLD INC.	AMES,CRAYFISH LAKE AREA	4.34
536324	52B10H049	(100) TROJAN GOLD INC.	AMES,CRAYFISH LAKE AREA	4.13
536325	52B10H110	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	0.86
536326	52B10H050	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.26
536332	52B10H091	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.17
536338	52B10H069	(100) TROJAN GOLD INC.	AMES,CRAYFISH LAKE AREA	4.39
536339	52B10H051	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.44
536347	52B10H093	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.41
536348	52B10H073	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.23
536349	52B10H074	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.48
536350	52B10H077	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.17
536351	52B10H078	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	5.02
536352	52B10H100	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA,KASHABOWIE LAKE AREA	4.91
536353	52B10H080	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA,KASHABOWIE LAKE AREA	5.70
536354	52B10H099	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.67
536355	52B10H059	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	5.36
536356	52B09E081	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA,KASHABOWIE LAKE AREA	5.05
536357	52B10H112	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	1.82
536358	52B10H095	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.17
536359	52B10H055	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.52
536360	52B09E041	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA,KASHABOWIE LAKE AREA	5.50
536361	52B10H052	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.15
536362	52B10H053	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.17
536363	52B10H117	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	3.77
536364	52B10H118	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	3.74
536365	52B10H054	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.17
536366	52B10H116	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	3.74
536367	52B10H096	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.19
536368	52B10H060	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA,KASHABOWIE LAKE AREA	5.73
536369	52B09E061	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA,KASHABOWIE LAKE AREA	5.43
536370	52B10H076	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.17
536371	52B10H056	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.02
536372	52B10H057	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	3.82
536373	52B10H058	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.61
536374	52B10H119	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.96
536375	52B10H079	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	5.44
536376	52B10H092	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.39
536377	52B10H113	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	2.11
536378	52B10H114	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	2.53
536379	52B10H097	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.53
536380	52B10H120	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA,KASHABOWIE LAKE AREA	5.43
536381	52B10H072	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.17

536382	52B10H094	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.18
536383	52B10H115	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	2.94
536384	52B10H075	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.32
536385	52B10H098	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.32
536386	52B09E101	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA,KASHABOWIE LAKE AREA	5.24
536387	52B10H033	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	3.91
536388	52B10H035	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	4.03
536389	52B10H034	(100) TROJAN GOLD INC.	CRAYFISH LAKE AREA	3.96
536390	52B09E062	(100) TROJAN GOLD INC.	KASHABOWIE LAKE AREA	4.70
536391	52B09E042	(100) TROJAN GOLD INC.	KASHABOWIE LAKE AREA	4.39
536514	52B09E082	(100) TROJAN GOLD INC.	KASHABOWIE LAKE AREA	5.56
				244.73

Expenditure Details (Receipt entries)														Invoice Reference #
Primary Cost Category		Secondary Cost Category	Work Performed		Invoicee	Invoice Reference #	Invoice Date	Billing Unit	Unit Price	# Units	Total Cost (No Tax)	Rounded		
Primary Exploration Activity	Work Subtype	Associated Cost Type	Start Date	End Date										
Ground_Geophysical_Survey_Work	Electromagnetics		January 9, 2022	February 23, 2022	Abitibi Geophysics	21-5220	December 9, 2021	Each	$ 48,765.63	1.00	$ 48,765.63	$ 48,766.00		1
Ground_Geophysical_Survey_Work	Electromagnetics		January 9, 2022	February 23, 2022	Abitibi Geophysics	22-5283	March 22, 2022	Each	$ 41,608.88	1.00	$ 41,608.88	$ 41,609.00		2
Ground_Geophysical_Survey_Work	Electromagnetics		January 9, 2022	February 23, 2022	Abitibi Geophysics	22-5306	May 4, 2022	Each	$ 10,041.62	1.00	$ 10,041.62	$ 10,042.00		3
											$ 100,416.13	$ 100,417.00		