

Exploring for Orogenic Gold Deposits in Minnesota's Vermilion Greenstone Belt



Visible gold in quartz vein, Virginia Horn, Minnesota



Vermillion Gold Summary

LEADING GOLD EXPLORER IN MINNESOTA

- ◆ Private Minnesota Limited Corporation originally organized as an LLC to identify and explore gold targets in Minnesota.
- ◆ In business since 2006; still the leading gold explorer in the State with deep knowledge of both geology and management of exploration in the area.
- ◆ Controls +7,300 acres of state and private mineral leases on three target areas
- ◆ Projects include former Newmont, Meridian, Inco Gold and Noranda exploration areas in Minnesota.
- ◆ Vermillion's properties include shear-hosted, iron formation-hosted and porphyry-hosted orogenic gold targets.
- ◆ A total of US\$5.6 million spent on exploration to date
- ◆ Virginia Horn and Lost Lake are Vermillion's most advanced projects and host gold mineralization intersected in drill holes.
- ◆ Centerra Gold – In September 2020, Vermillion entered into an earn-in agreement with Centerra Gold Inc whereby they funded a variety of exploration activities. As of April 30, 2022, Centerra provided USD \$2 million in support but has made the decision not to proceed further and has announced its intention to exit the deal as of August 2022. Vermillion will retain rights to 100% of its projects along with all the new data and benefits of the work undertaken.

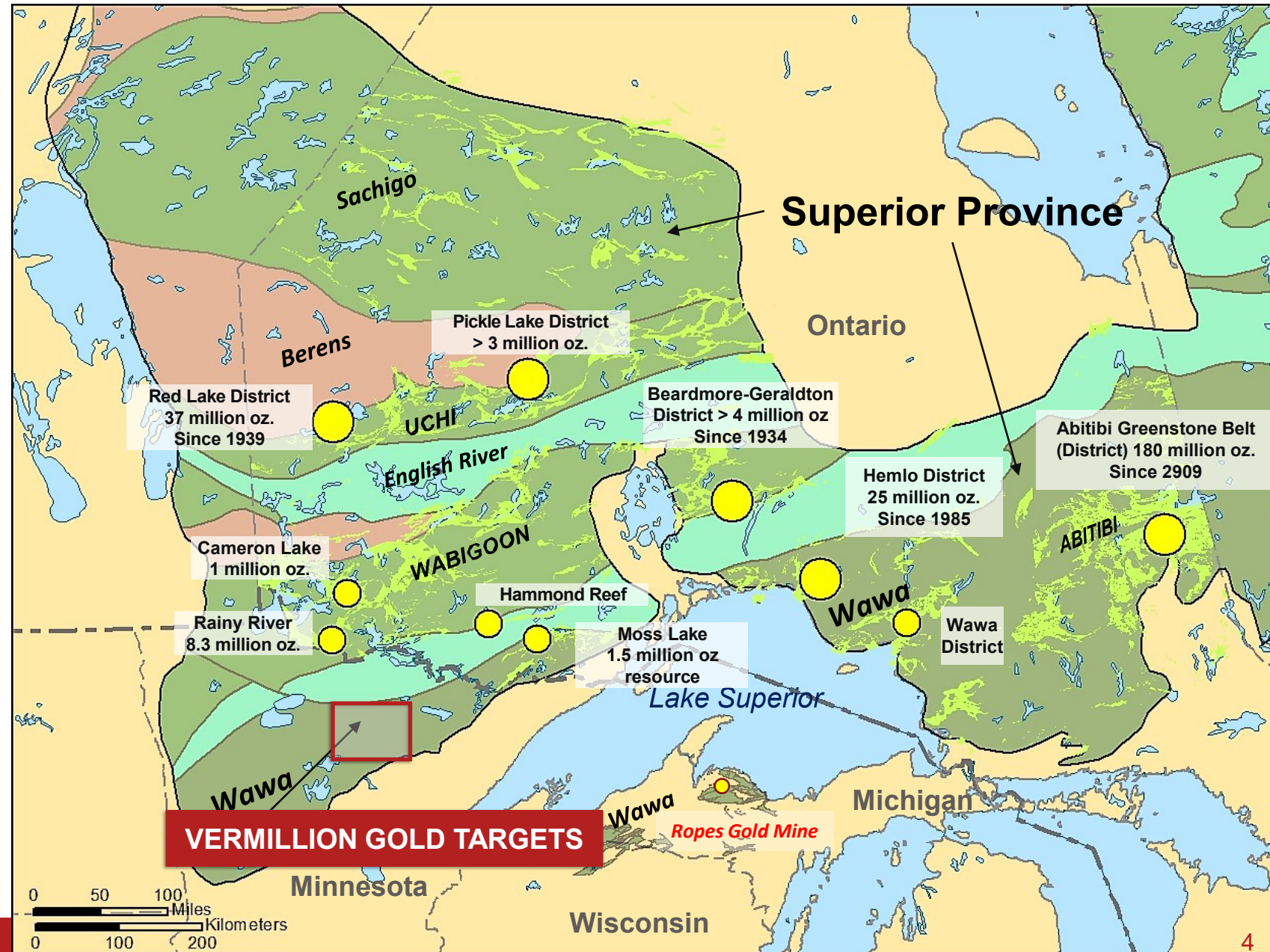
A Long History of Exploration by Vermillion in Minnesota



Gold Producing Districts of the Superior Province

EXPLORATION FOR OROGENIC GOLD DEPOSITS IN MINNESOTA'S VERMILION GREENSTONE BELT

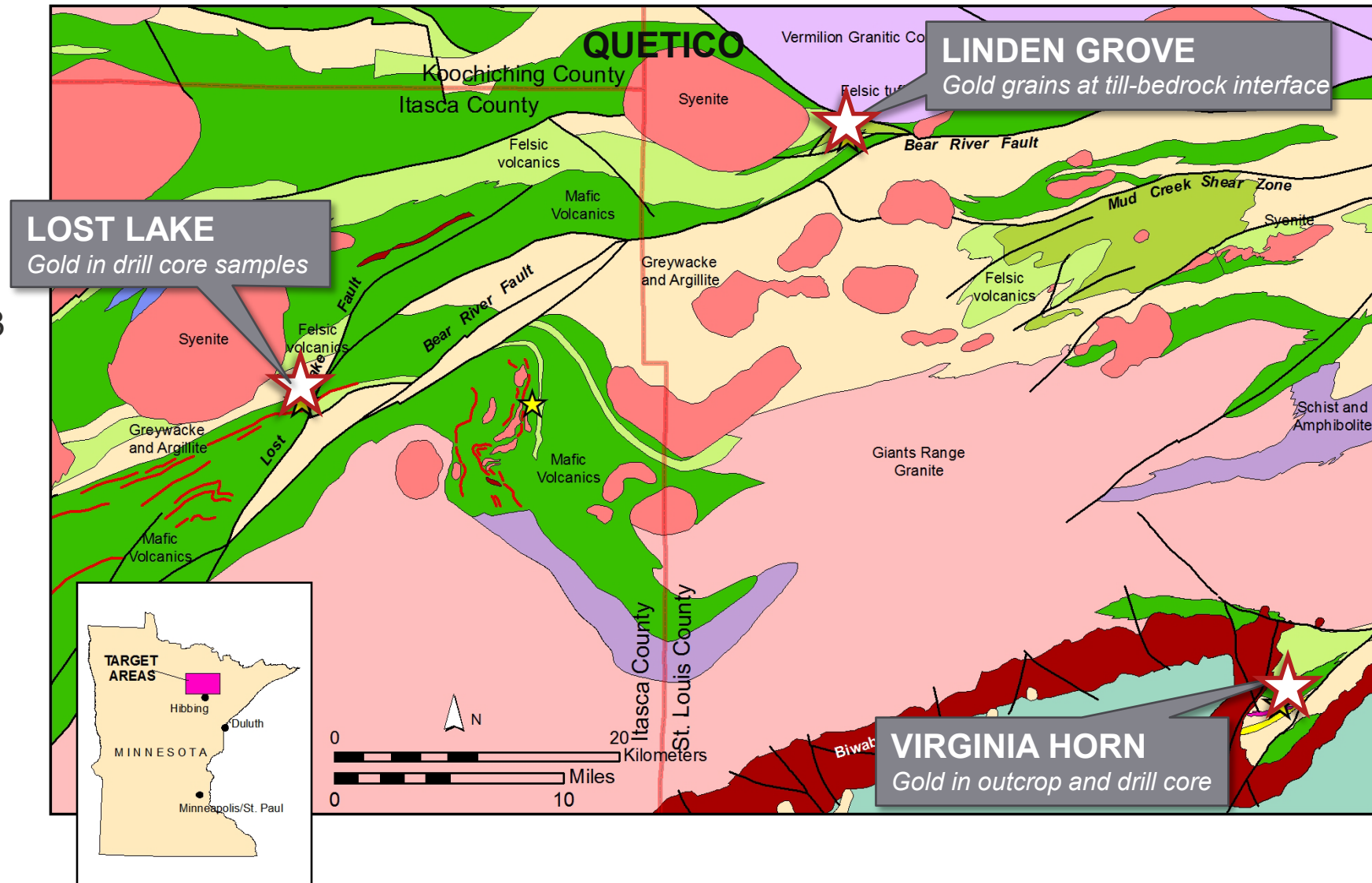
- ◆ During the 2.6-2.7 Ga. Algoman orogeny island arc subprovinces were accreted onto the Superior Province
- ◆ Wawa and Wabigoon subprovinces extend directly into northern Minnesota into the Vermillion Greenstone Belt
- ◆ So far, all gold production is in Canada
- ◆ Vermillion Gold was founded to evaluate the underexplored potential of Minnesota's Vermillion greenstone belt.



Vermillion's Three Main Gold Target Areas

EXPLORATION PROJECT AREAS

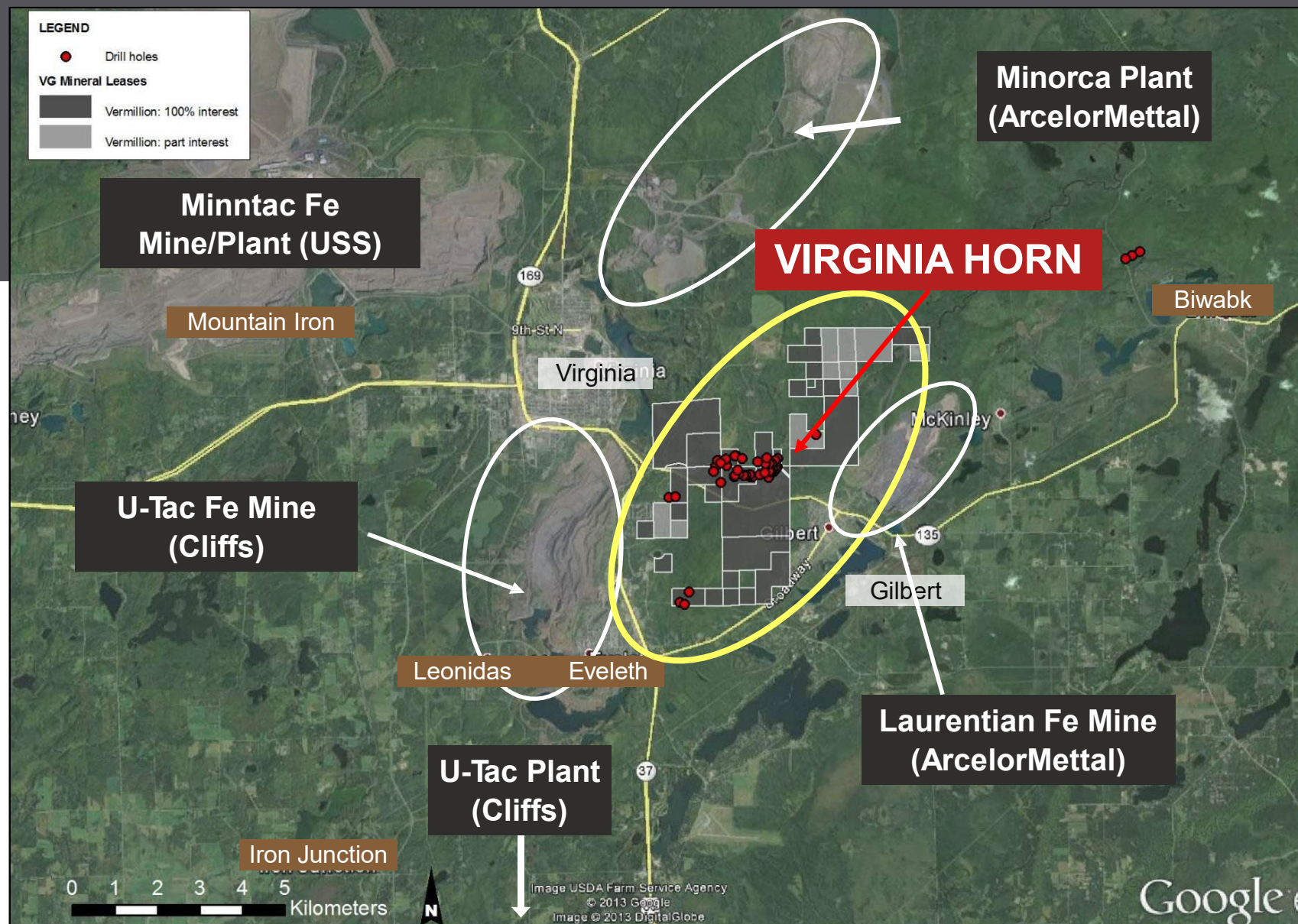
- ◆ Since starting the company in 2006 Vermillion has taken mineral lease positions on 7 targets and conducted exploration activities.
- ◆ Vermillion is now focused on 3 target areas:
 1. Virginia Horn
 2. Linden Grove (on hold)
 3. Lost Lake
- ◆ For the past 18 months, Vermillion has engaged in new rounds of exploratory work in Lost Lake and Virginia Horn.



Virginia Horn:

IN THE HEART OF
MINING COUNTRY

- ◆ Orogenic Gold Prospect
- ◆ Located between mining towns of Virginia and Gilbert
- ◆ Surrounded by iron ore pits and processing plants
- ◆ Several previous drilling programs identified significant gold mineralization
- ◆ First class infrastructure



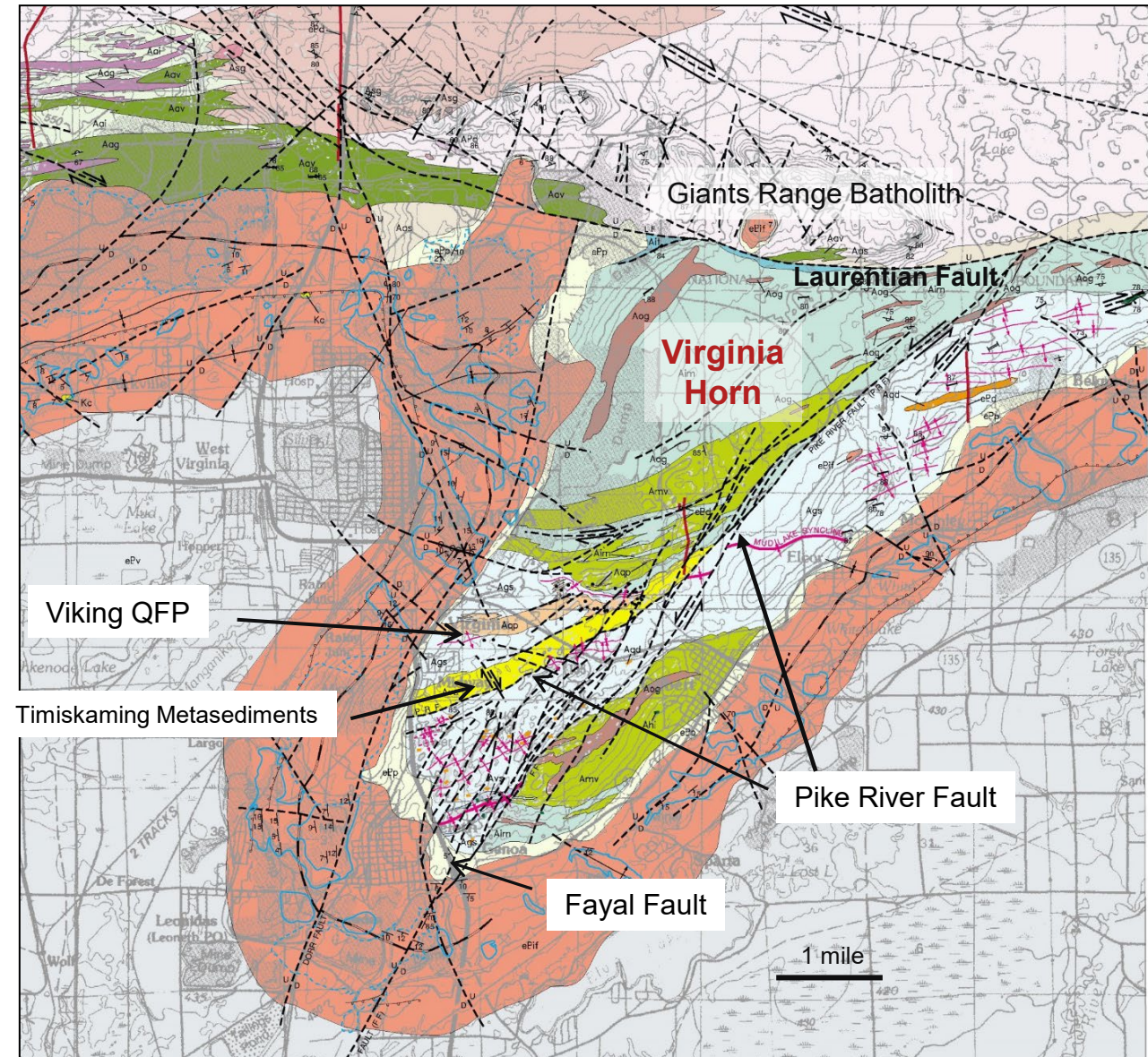
Virginia Horn

EXPLORATION HISTORY & GEOLOGY

- ◆ In the 1930s gold was discovered in outcrop along a railroad cutting the Virginia Horn
- ◆ Substantial exploration from the mid 1980s to early 1990s by Newmont Mining, Resources Exploration and Rhude and Fryberger
- ◆ Diamond drilling programs by Vermillion in 2009, 2010, 2015 and 2022

GEOLOGY

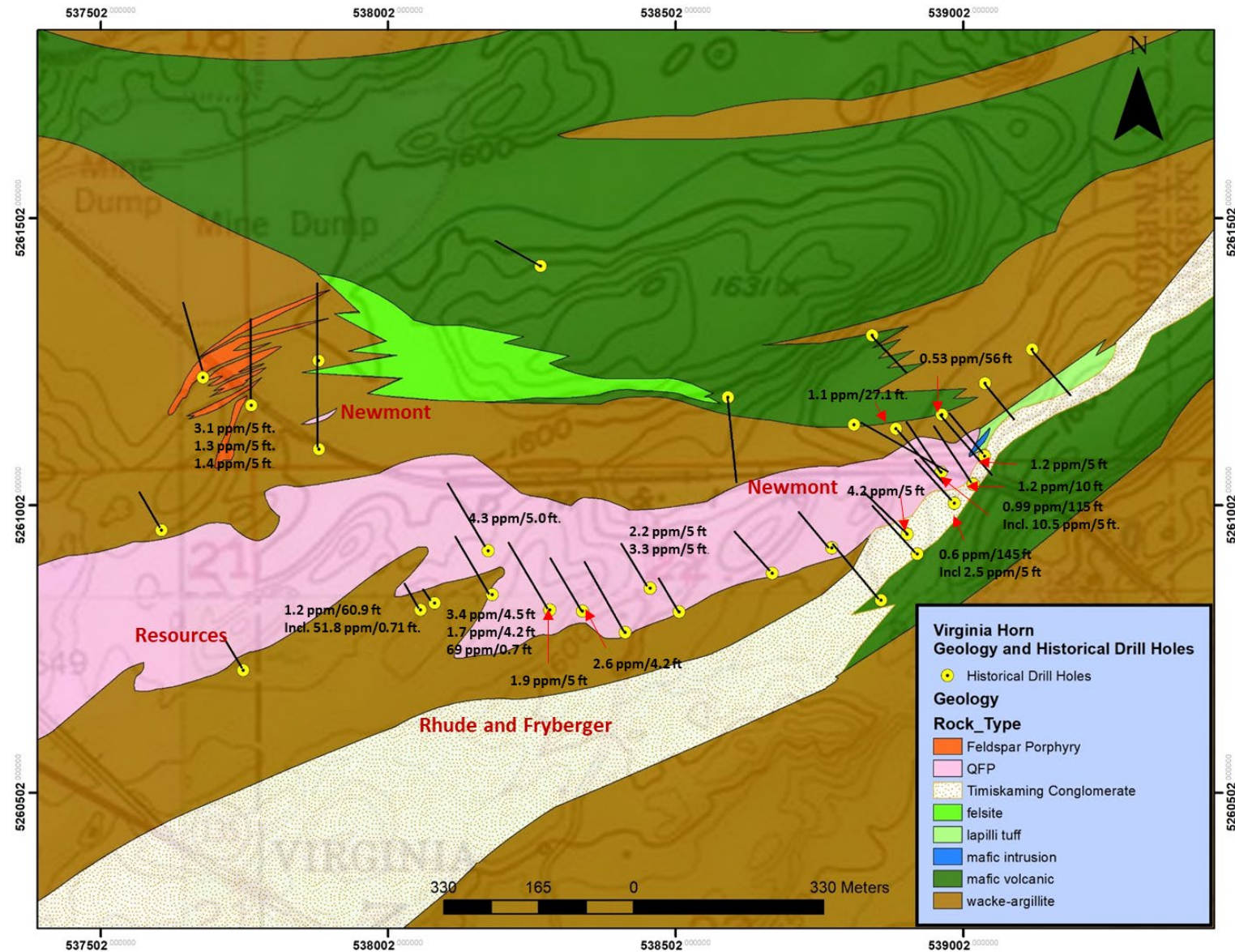
- ◆ Bordered to the north by the Neoproterozoic Giants Range Batholith
- ◆ Rimmed by the Paleoproterozoic Biwabik Iron Formation
- ◆ Two volcanic-sedimentary sequences separated by the Laurentian Fault:
 - Minntac Sequence (amphibolite)
 - Mudlake and Midway Sequences (lower to mid greenschist)
- ◆ Three deformation episodes
- ◆ Timiskaming-type Midway metasediments and trachyandesites deposited between D1 and D2 deformation
- ◆ Qtz-carbonate-sericite alteration and gold deposition associated with D2 and D3 deformation
- ◆ Most known gold mineralization hosted by the Viking quartz-feldspar porphyry;
- ◆ Gold mineralization also in sheared metasediments in the southern part of the Horn



Virginia Horn

EXTENSIVE GOLD MINERALIZATION

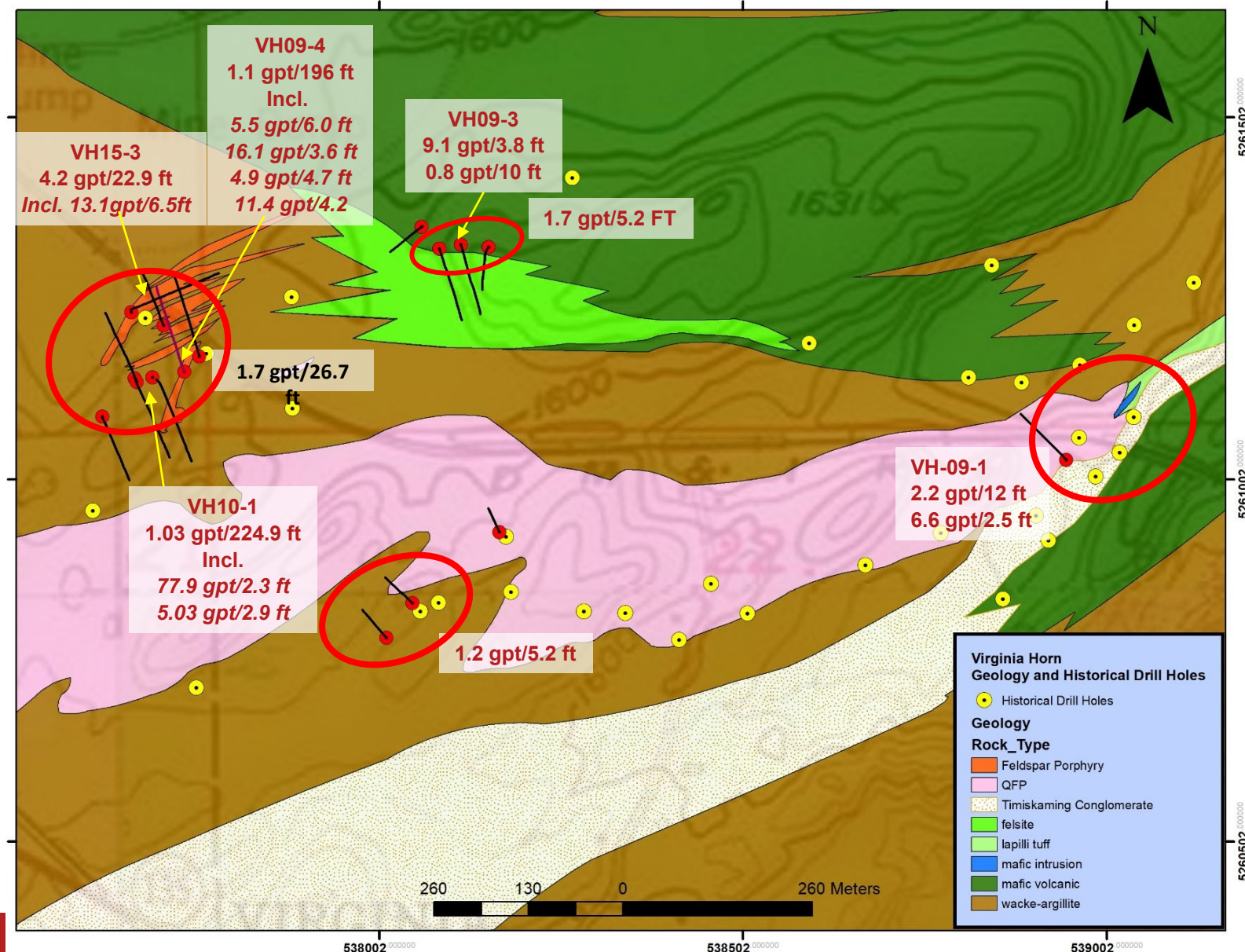
- ◆ In outcrop gold is primarily concentrated at the eastern end of the Viking QFP and dacite outcrops 1.2 km to the west
- ◆ Anomalous gold mineralization is also hosted in Mud Lake tuffs and metasediments
- ◆ 31 drill holes primarily focused on gold mineralization in the Viking quartz-feldspar porphyry.
- ◆ Gold intersected in most drill holes with highest values from eastern end of the porphyry.



Virginia Horn

GOLD MINERALIZATION IN MORE RECENT HOLES DRILLED BY VERMILLION

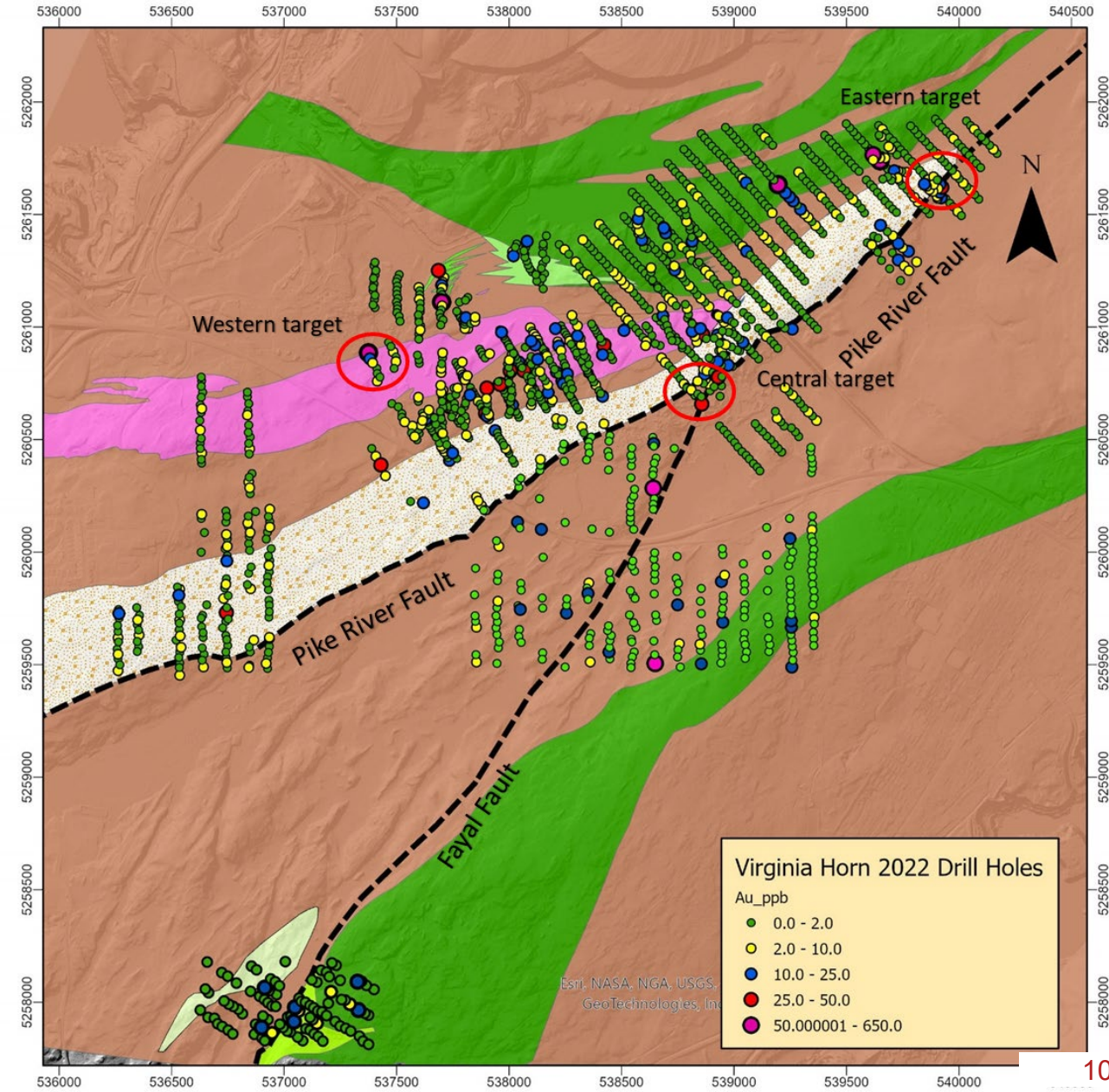
- ◆ Vermillion Drill Programs in 2009, 2010, 2015
- ◆ Vermillion drilling focused on gold mineralization in dacite with known gold mineralization in outcrop.
- ◆ 1.5 X 0.6 km area with gold mineralization in outcrop and drill holes
- ◆ Highest grade gold values concentrated in 4 zones
- ◆ Gold intersections of :
 - 1.1 gpt/196 ft. and
 - 1.03 gpt/224.9 ft.
- ◆ Intersections include:
 - 16.1 gpt/3.6 ft.
 - 13.1 gpt/6.5 ft.
 - 11.4 gpt/4.2 ft.



Virginia Horn

SOIL ANOMALIES FOR FOLLOW UP

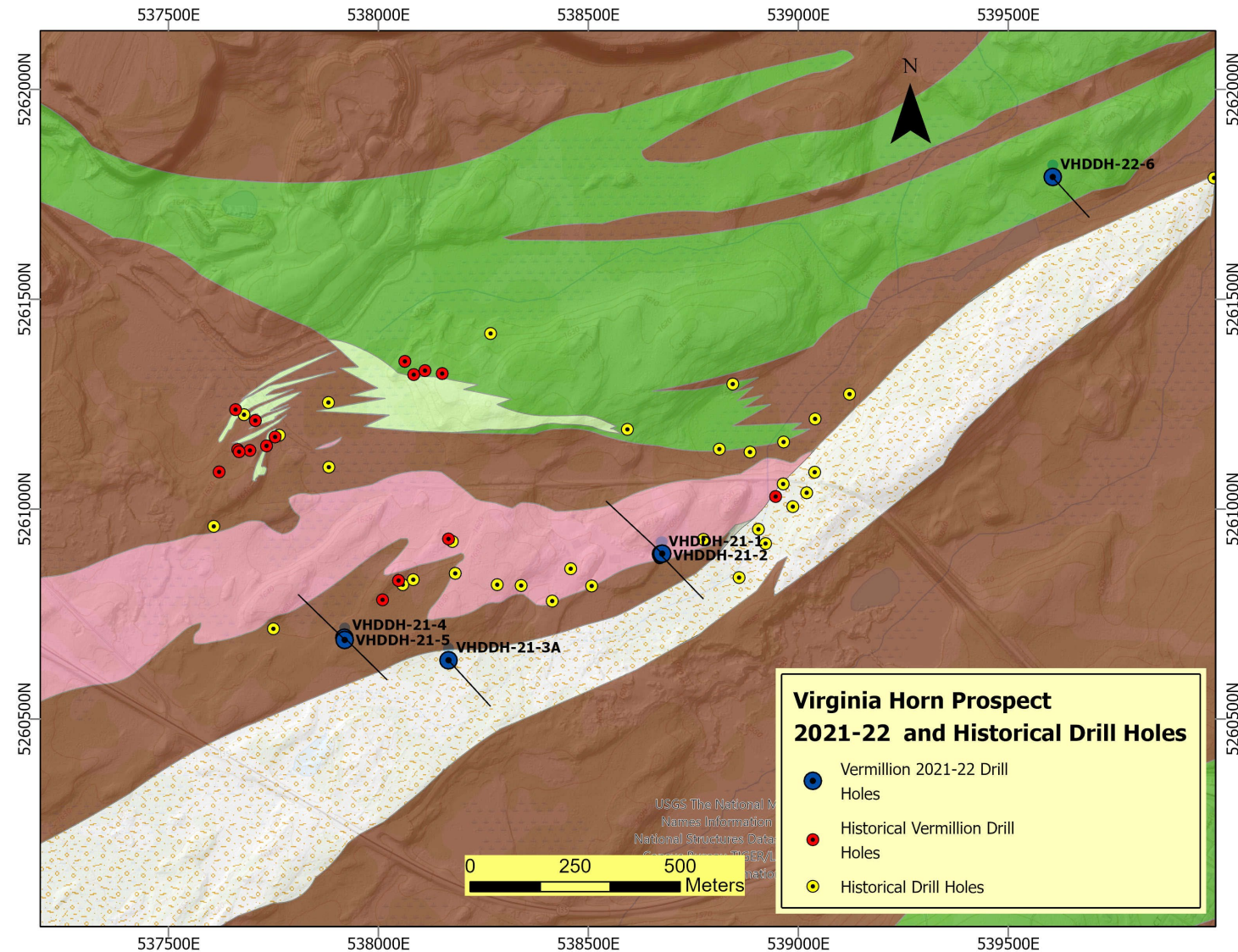
- ◆ B-horizon and humus soil geochemistry surveys have been done by Newmont and Rhude and Fryberger and, more recently, by Vermillion Gold
- ◆ Three areas with B-horizon soil anomalies are associated with structures favorable for gold mineralization but have not been tested by drill holes
 - **Eastern** - The untested eastern target is a cluster of anomalous B-horizon soil samples associated with a distinct magnetic low proximal to the Pike River fault
 - **Central** - The central target is anomalous soil values located within the area where the Pike River fault and Fayal fault diverge
 - **Western** - Untested 320 ppb soil anomaly located along a NNW striking fault and the QFP-metasediment contact



Virginia Horn

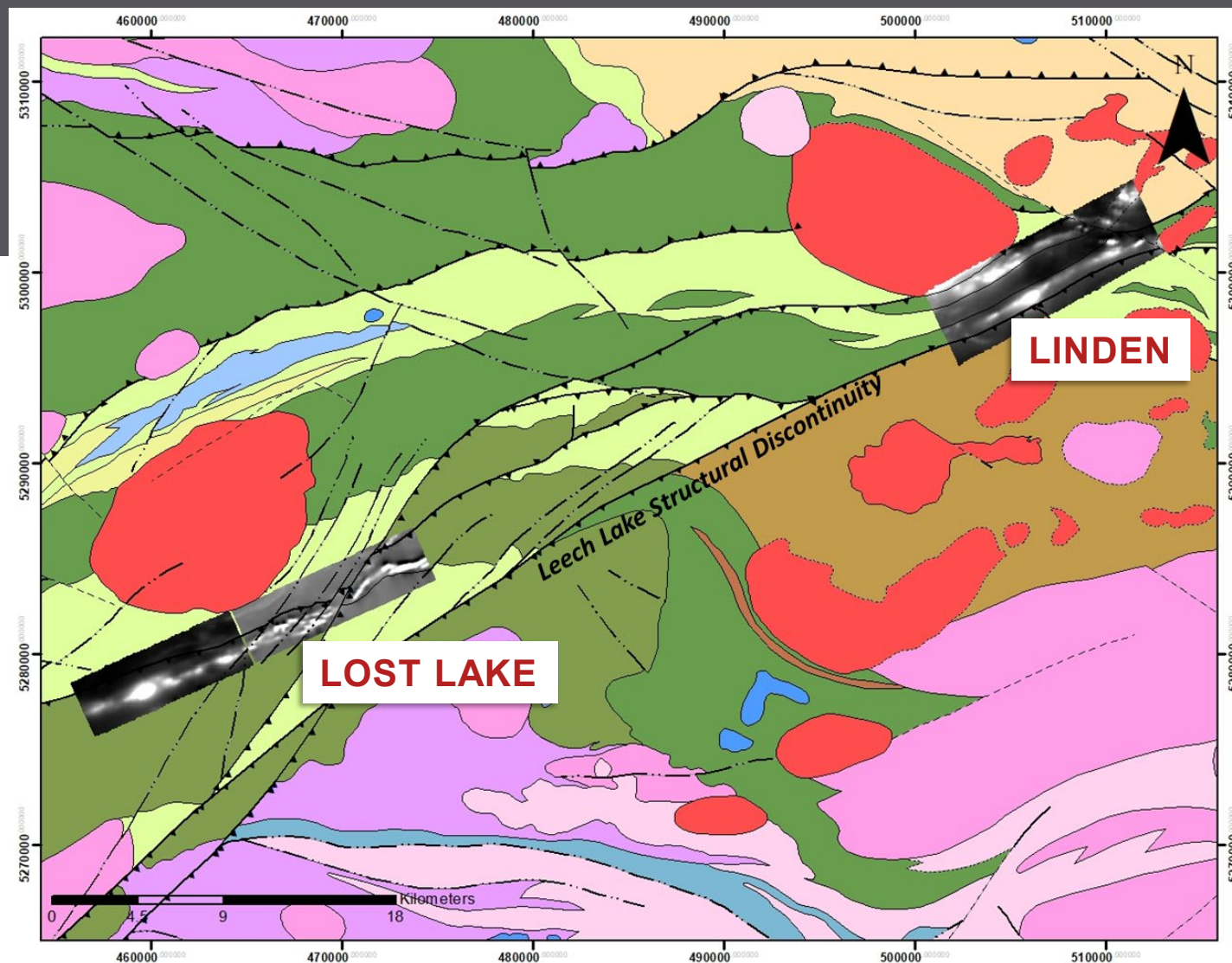
RECENT DIAMOND DRILLING

- ◆ During fall-winter of 2021-22 Vermillion completed six diamond drill holes primarily testing I.P. anomalies in quartz-feldspar porphyry and metasediments. Hole locations were directed by Centerra's geologists.
- ◆ Quartz-feldspar porphyry with anomalous gold values was intersected in two drill holes.
- ◆ Anomalous gold values were obtained from Timiskaming-type metasediments intersected in VHDDH-22-06.
- ◆ The overall negative results were not surprising because the I.P. survey did not detect the areas with extensive known gold mineralization: conclusion is the IP is not very useful in finding this style of gold mineralization.



Linden and Lost Lake Projects

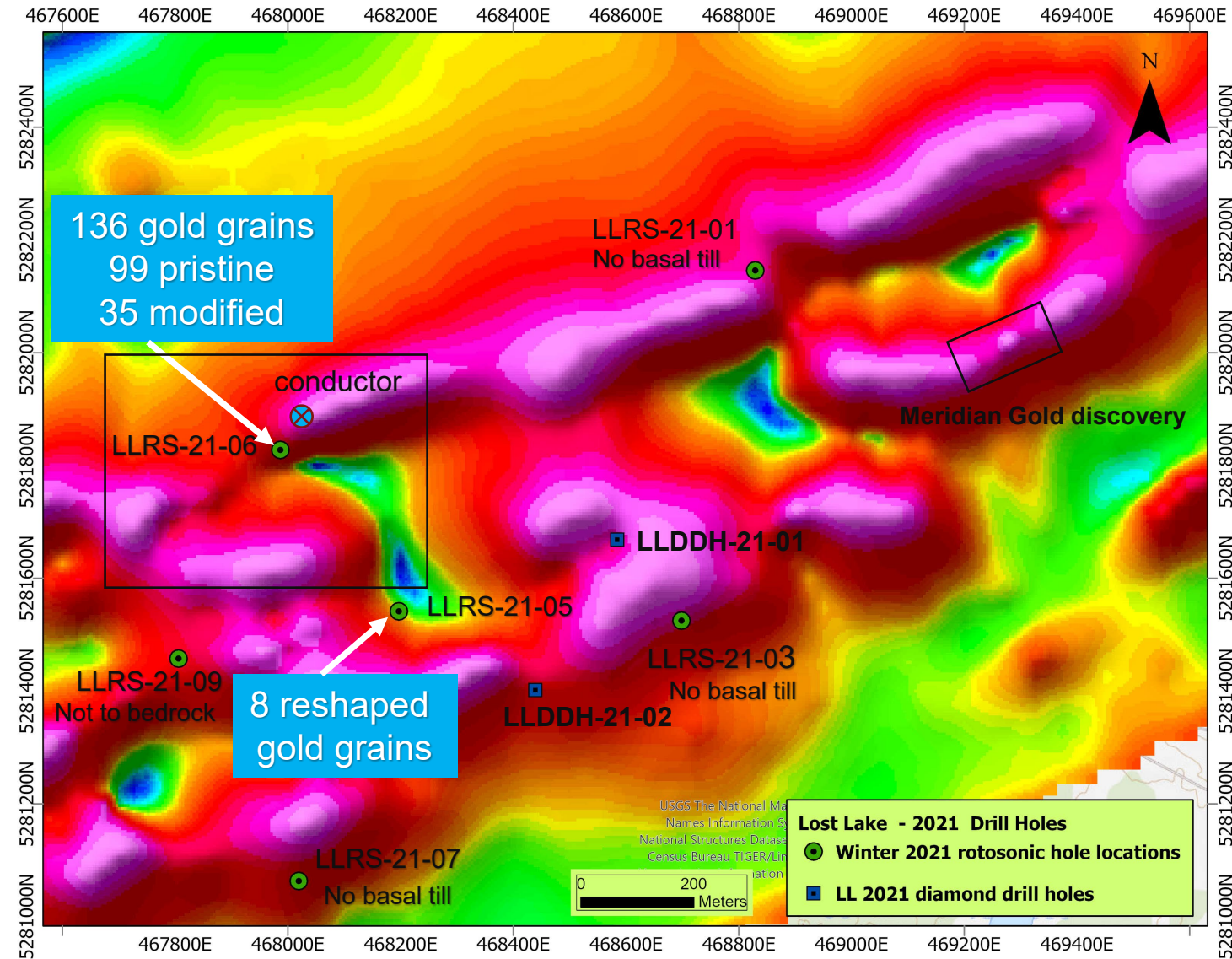
- ◆ Both properties are located proximal to the Leech Lake Structural Discontinuity.
- ◆ Glacial till cover thickens from east to west across the Vermilion greenstone belt. Without outcrop, geophysics becomes a very important exploration tool.
- ◆ 2009 and 2010 Vermillion conducted airborne magnetic/VTEM geophysical surveys focused on the Linden and Lost Lake-Gale Brook target areas.



Lost Lake Project

ENCOURAGING 2021 TILL SAMPLING

- ◆ Magnetic images reveal complex folding and faulting and potential locations for gold mineralization
- ◆ In early 2021 Vermillion conducted a basal till sampling program designed to evaluate deformed iron formation outside of the Meridian discovery area
- ◆ Only two of the nine drill holes recovered basal till
- ◆ A six kg basal till sample from hole LLRS-21-06 contained 136 gold grains
 - 99 pristine grains
 - 35 modified grains

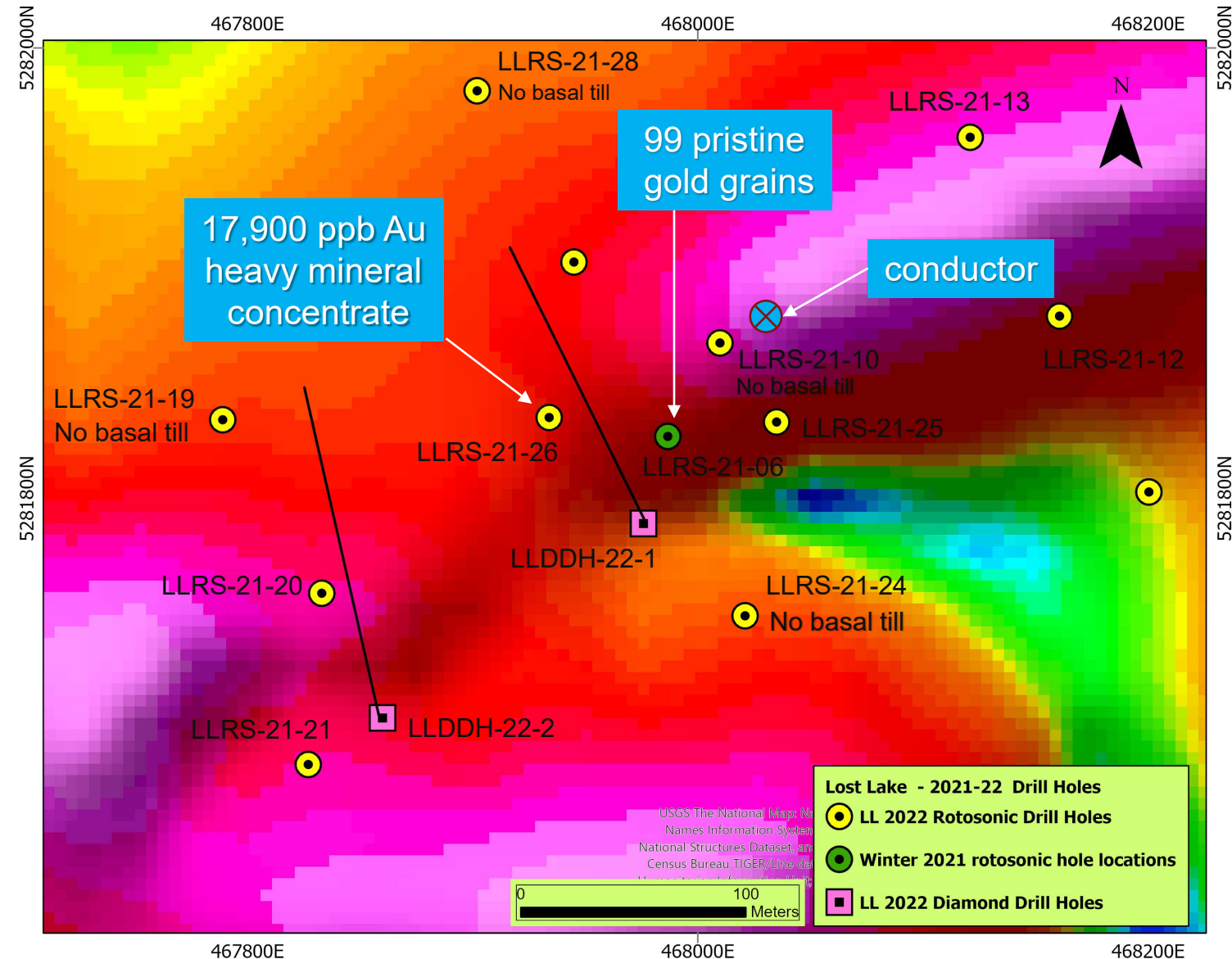


1st Vertical Derivative Magnetics Image with Till Results

Lost Lake Project

DEVELOPING A STRONG TARGET

- During the fall and winter of 2021-22 Vermillion completed an additional 22 rotosonic drill holes and 2 diamond drill holes.
- Basal till samples from 12 rotosonic holes were sent to Overburden Drilling Management for gold grain and heavy mineral analyses
- A gold value of **17,900 ppb** was obtained from heavy mineral concentrate from drill hole LLRS-22-26 located 50 m west of LLRS-21-06
- The highly anomalous gold enrichment in both basal till samples is convincing evidence of proximal up-ice bedrock gold mineralization

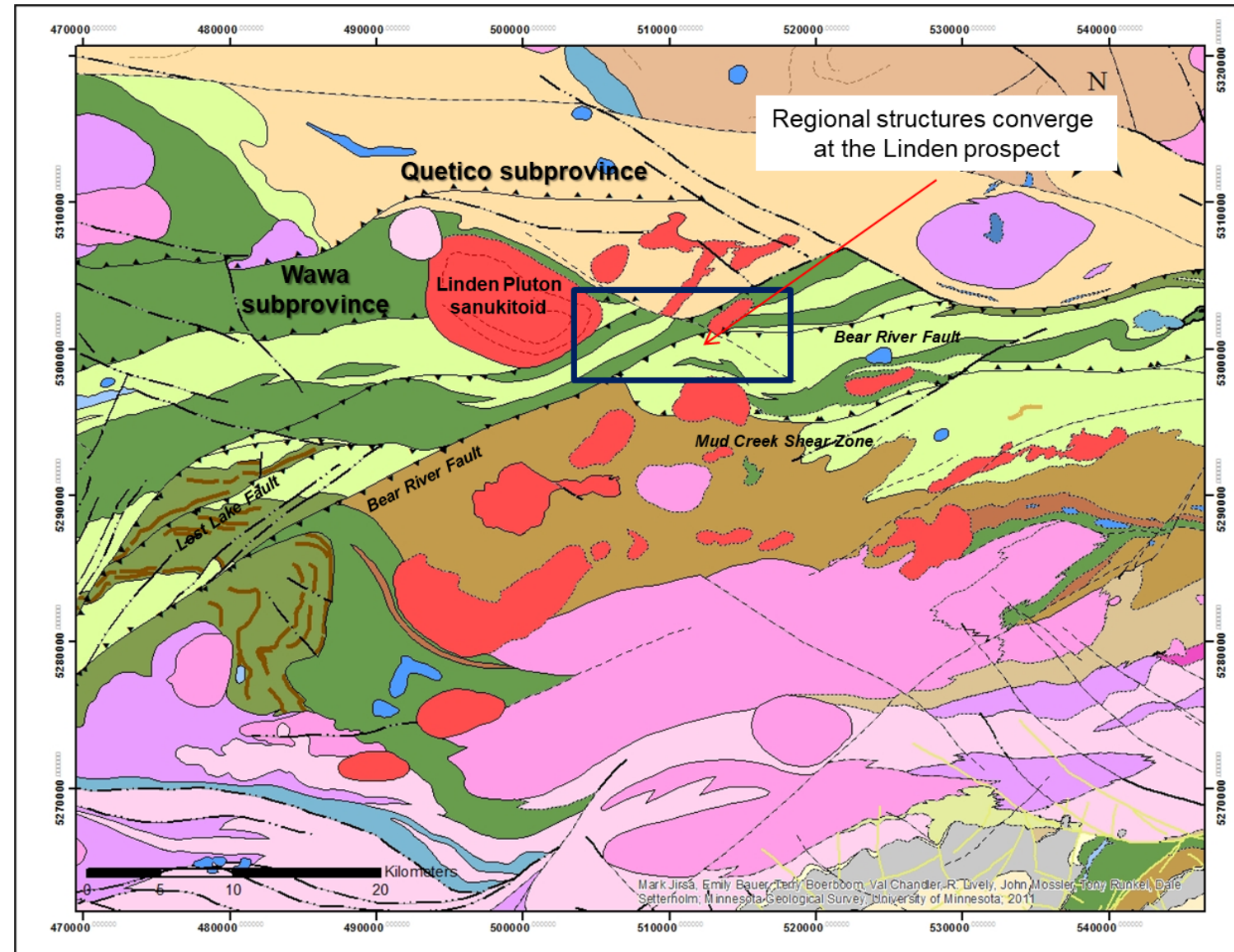


Magnetics mage with 2021-22 Drill Holes

Linden Grove Project Area

STRUCTURAL TARGET WITH GOLD IN TILL

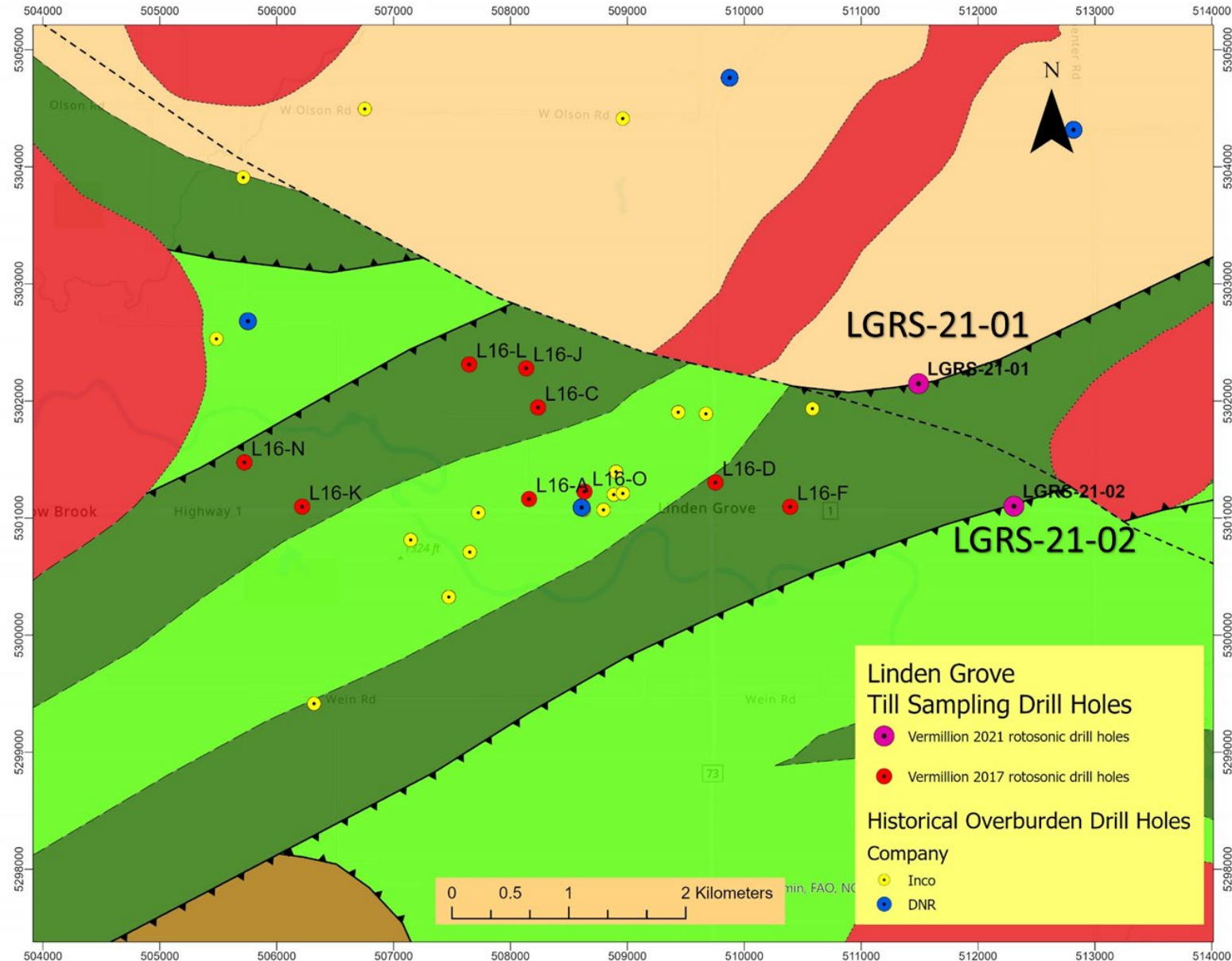
- ◆ Geologic setting has the prerequisite characteristics for large orogenic gold deposits
- ◆ Intersection of major regional structures and subsidiary faults that are deflected around the Linden Pluton.
- ◆ Historical drill holes have shown that it is underlain by rock types and alteration minerals that are characteristic of gold deposits



Linden Grove Project Area

2021 ROTOSONIC DRILL HOLES

- ◆ In 2017 Vermillion conducted a basal till sampling program with nine roto sonic drill holes.
- ◆ Results were similar to ACNC with elevated gold, base metal and trace element values in heavy mineral concentrates.
- ◆ In March of 2021 Vermillion Gold completed two roto sonic drill holes located to the east of historical drill holes.
- ◆ Although heavy mineral concentrates have anomalous Au, Ag, As and Cu values, Linden Grove is currently a lower priority than Lost Lake and the Virginia Horn.



Vermillion's Future

WELL POSITIONED TO TAKE ADVANTAGE OF THE OPPORTUNITIES IN MINNESOTA

- ◆ Vermillion is seeking financing to help grow the company in order to ensure it is well positioned to take advantage of the opportunities in Minnesota.
- ◆ Vermillion is inviting deal proposals to be acquired and/or merge its assets with those of another exploration company, with an emphasis on a listed company.
- ◆ A win-win deal should be the goal where the combined entity improves the overall asset base, knowledge and skills base, while adding critical mass and improving the ability to fund exploration projects going forward.
- ◆ Vermillion seeks a deal where its established position as a leading explorer in Minnesota, its advancing lead gold projects and knowledge base of many other exploration opportunities in Minnesota, both gold and non-gold, is fully recognized.



Visible gold in quartz from 2010 drill core, Virginia Horn, Minnesota

TO LEARN MORE ABOUT VERMILLION GOLD, PLEASE CONTACT:

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