WORK REPORT ON SUMMER, 2024, SURFICIAL GEOLOGIC MAPPING, MAGNETIC SURVEY, VLF-EM SURVEY & SAMPLING ON PLACER CLAIMS P527608 (KLA 1) & P527609 (KLA 2) ON AN UNNAMED CREEK SOUTH OF THE KLAZA RIVER, MT. NANSEN AREA, YUKON

Field Work & Report by:
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R0E0C0		**V1T6S3**

Field Work May 27 - June 6, 2024
Report Completed December 23, 2024

- -

Summary of Reported Work:
Geographic Area: NTS 115-I-03-P, Mt. Nansen area
Mineral Dispositions: P527608 (KLA 1) & P527609 (KLA 2)
Target Commodity: placer gold
GPS Flagged Grid: 3.14 line-km, 50m line spacing, 20m station spacing
Surficial Geologic Mapping: 3.14 line-km, 1:2000 scale
Ground TF Mag Survey: 3.14 line-km, 50m line spacing, 10m station spacing
VLF-EM Survey: 3.14 line-km, 50m line spacing, 10m station spacing
Gravels Sampled: 5-bucket sluice sample, 1 site; 1-pan samples: 6 sites
Report Software: Microsoft Office Word, Paint

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SUMMARY

This report describes the results of a small program of flagged grid installation, magnetic and VLF-EM surveying, surficial geologic mapping, and gravel sampling on two placer claims in the Klaza River area. The claims were staked in 2023 to cover prospective placer ground directly downslope from the Klaza bedrock gold deposit. This work on the KLA group of claims is intended to provide baseline geological and geophysical data for future drilling and/or backhoe sampling.

The Mt. Nansen district has had a history of modest placer gold production along Nansen Creek, Victoria Creek and Klaza River, as well as various tributaries. These placer creeks occur in the area of two main bedrock gold vein and porphyry systems, the Mt. Nansen deposit, presently undergoing site rehabilitation, and the Klaza deposit, presently under active exploration. Placer gold exploration in the Mt. Nansen area is complicated by glaciation, which has both covered and redistributed surficial gold, but recent discoveries of significant placer accumulations at depth above weathered bedrock has generated new interest in the area. Both bedrock mineral showings and glacially redistributed material may have shed placer gold into valleys and creeks in the area.

Fluvial gravels were found in two areas, and are believed to underlie much of the lower elevations in the valley. Significant gold specks were found in poorly developed fluvial gravels in a small drainage which crosses the northwestern edge of the claim group. This drainage extends directly downslope from the area of the Klaza gold deposit, presumably the source of the recovered gold grains. A 5-bucket test sample of these gravels recovered 0.03 grams of impure gold, which projects to roughly 0.3 grams in a cubic yard, a near commercial grade. A modest VLF electromagnetic conductor corresponds with this gold-bearing drainage, suggesting a useful exploration technique in this area.

In light of promising results to date, further work, including drilling and bulk sampling is recommended to test the potential for gold-bearing placer gravels in this area.

William C. Hood, P.Geo.
December 23, 2024

INTRODUCTION

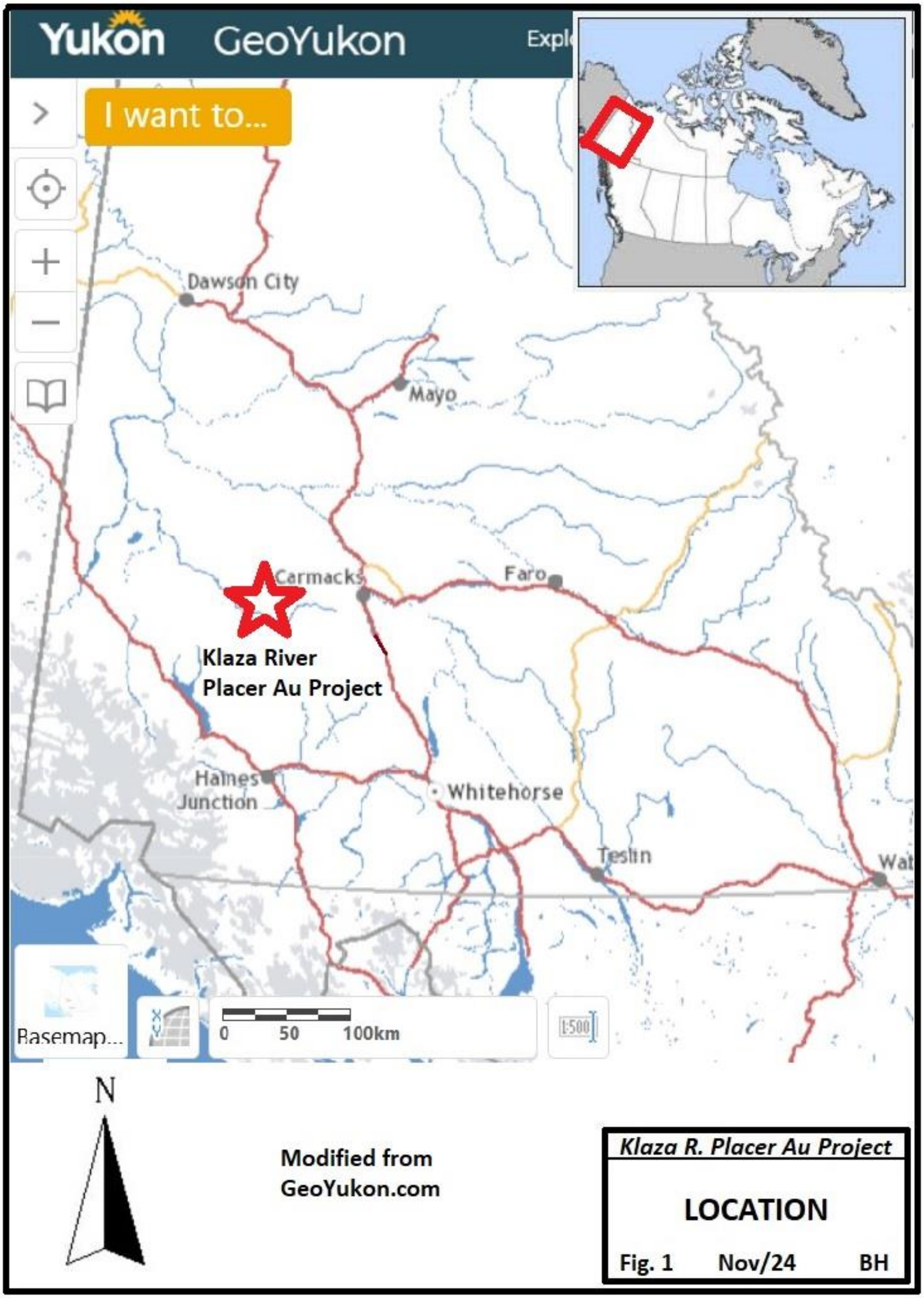
This report describes the results of a small program of flagged grid installation, magnetic and VLF-EM surveying, surficial geologic mapping, and gravel sampling on two placer claims in the Klaza River area. The claims were staked in 2023 to cover prospective placer ground directly downslope from the Klaza bedrock gold deposit.

The Mt. Nansen district has had a history of modest placer gold production along Nansen Creek, Victoria Creek and Klaza River, as well as various tributaries. These placer creeks occur in the area of two main bedrock gold vein and porphyry systems, the Mt. Nansen deposit, presently undergoing site rehabilitation, and the Klaza deposit, presently under active exploration. Placer gold exploration in the Mt. Nansen area is complicated by glaciation, which has both covered and redistributed surficial gold, but recent discoveries of significant placer accumulations at depth above weathered bedrock has generated new interest in the area. Both bedrock mineral showings and glacially redistributed material may have shed placer gold into valleys and creeks in the area.

This work on the KLA group of claims is intended to provide baseline geological and geophysical data for future drilling and/or backhoe sampling.

LOCATION, ACCESS & PHYSIOGRAPHY

The KLA claim group is located in the Klaza River area of the Mt. Nansen district of southwestern Yukon, about 170 km northwest of Whitehorse, and 40 km due west of Carmacks (Fig. 1). Basic groceries, supplies, fuel and accommodations are available in the town of Carmacks. The KLA group of claims are about 10 km north-northwest of the former Mt. Nansen mine, and 1 km east-northeast, and directly downslope, from the Klaza gold deposit. Access to the area is from the Mt. Nansen Road, which is a 1 to 1.5 lane gravel road that is maintained year-


Yukon
GeoYukon
I want to...
Dawson City
Mayo
Carmacks
Faro
Klaza River
Placer Au Project
Haines
Junction
Whitehorse
Teslin
Basemap...
0 50 100km
N
Modified from
GeoYukon.com
Klaza R. Placer Au Project
LOCATION
Fig. 1 Nov/24 BH

round by the Yukon government to provide access to the Mt. Nansen mine rehabilitation project as well as placer mines and exploration projects in the area.

Access to the Klaza River area is from the unmaintained Nansen/Klaza road, which extends to the west and north from the Mt. Nansen mine site. The KLA claims are accessed by driving 2 km west of the Mt. Nansen mine site, and then taking the Klaza road to the north, at the junction with the Nansen Creek road. Camp for this project was on the Nansen/Klaza road at a point 1.5 km west of the Mt. Nansen mine, utilizing camp facilities from a previous mineral project that were not in use in summer, 2024. The driving distance from camp to the KLA claims was 11 km, with 4WD generally recommended. At a point about 2 km north of camp, the Klaza road crosses a ridge locally known as cel phone hill, where connection to the Carmacks cellular telephone tower can occasionally be made. Cel phone hill is also the location of a small concrete statue known locally as the "Nansen Angel".

The KLA placer claims lie at the confluence of a small creek flowing north into the east-west oriented Klaza River valley. Physiography in the area is hilly to mountainous, with Mount Nansen lying several km to the southwest and Victoria Mountain to the east. However, the work area within the KLA claims is relatively flat, with elevations from 1256 meters to 1259 meters along the claim location line, and from 1272 meters along the Klaza road at the east end of the work area, to a high of 1287 meters up the hill toward the Klaza gold deposit in the southwest corner of the work area. The KLA claims are vegetated mainly with sphagnum moss and buckbrush, with minor stunted spruce trees. Buckbrush growth is thin and small in most areas, but very heavy along drainages. Permafrost was found at shallow depths of 0.2 to 0.5 meters along most of the northeast-facing slope along the west side of the claims, although this work was conducted early in the season when snow was still present locally.

CLAIM STATUS

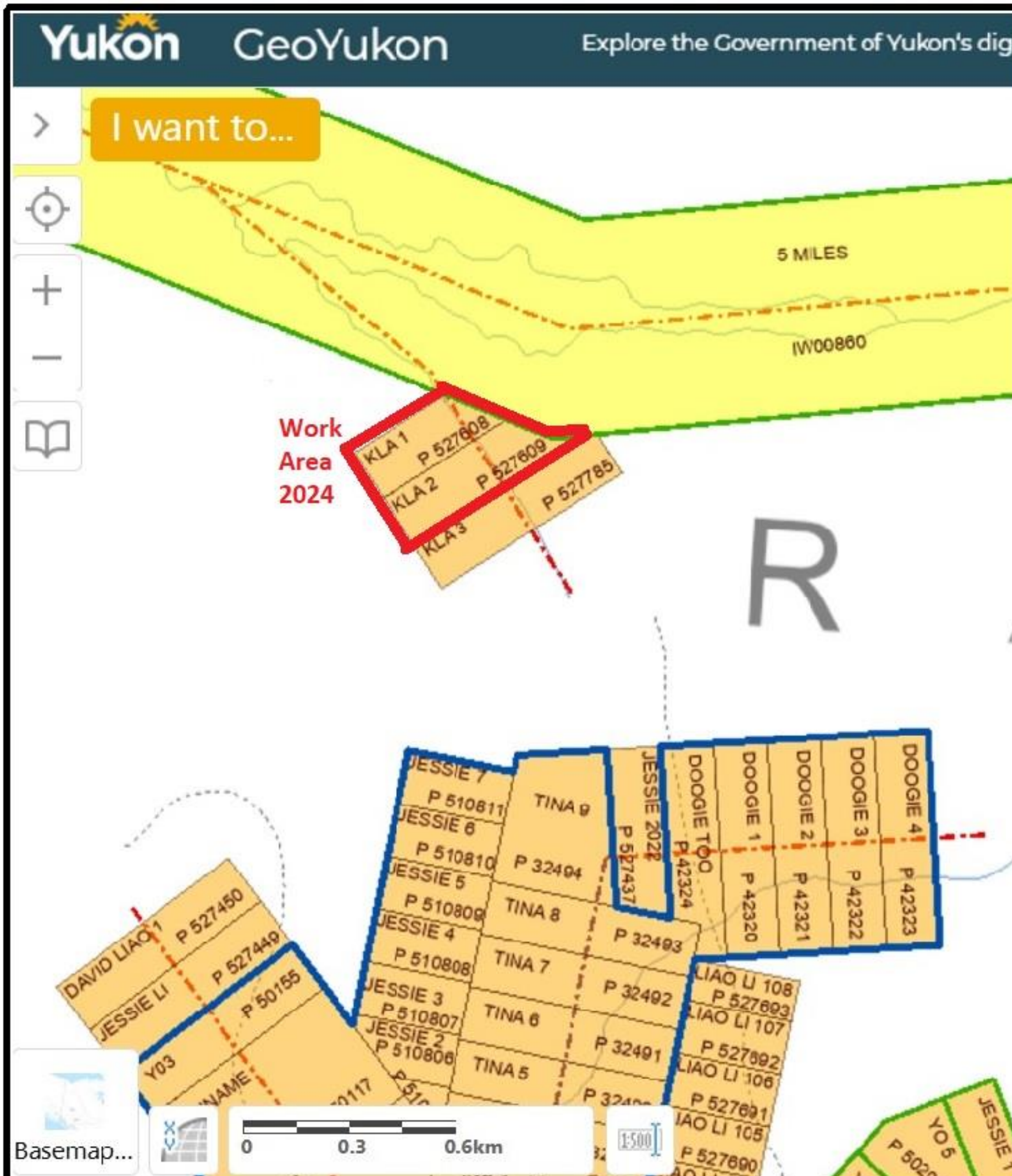
The KLA placer gold property comprises three claims, P527608 (KLA 1), P527609 (KLA 2) and P527785 (KLA 3), staked during 2023. The claims are shown on map 115I03P. The central location line trends about 325° to 145° azimuth along a small intermittent creek flowing north into the Klaza River. The claims are held by William C Hood of Beausejour, Manitoba, the author of this report, and Donald A. Hood of Vernon, British Columbia. The claim map, and 2024 work area on claims KLA 1 and KLA 2, is shown in Figure 2.

GEOLOGY

The Mt. Nansen area lies within the Yukon Tanana terrane, which is interpreted to have formed in an island-arc, back-arc basin environment associated with Mesozoic era continental accretion. Basement rocks in this terrane comprise assorted schists and gneisses of Proterozoic through Paleozoic age. These rocks are cut by a range of intrusive and volcanic rocks of Jurassic to Cretaceous age (Fig. 3).

The Mt. Nansen area is underlain by older metamorphic rocks of the Yukon Group to the south and east, cut by younger Cretaceous intrusive and volcanic rocks to the northwest, including the southeast end of the Dawson Range Batholith. These rocks are intruded by numerous late porphyritic dikes throughout the area, with associated gold-bearing veins and porphyry systems, including the formerly producing Mt. Nansen mine and the Klaza deposit, presently under active exploration (Fig. 4).

The area of the KLA placer gold project is underlain by early Cretaceous granodiorite of the Dawson Range Batholith. Rocks to the east and west, at higher elevations, comprise Cretaceous to Paleocene andesite volcanics. These rocks have been intruded by younger porphyritic dikes and plugs. The Klaza gold



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115 I 03 P

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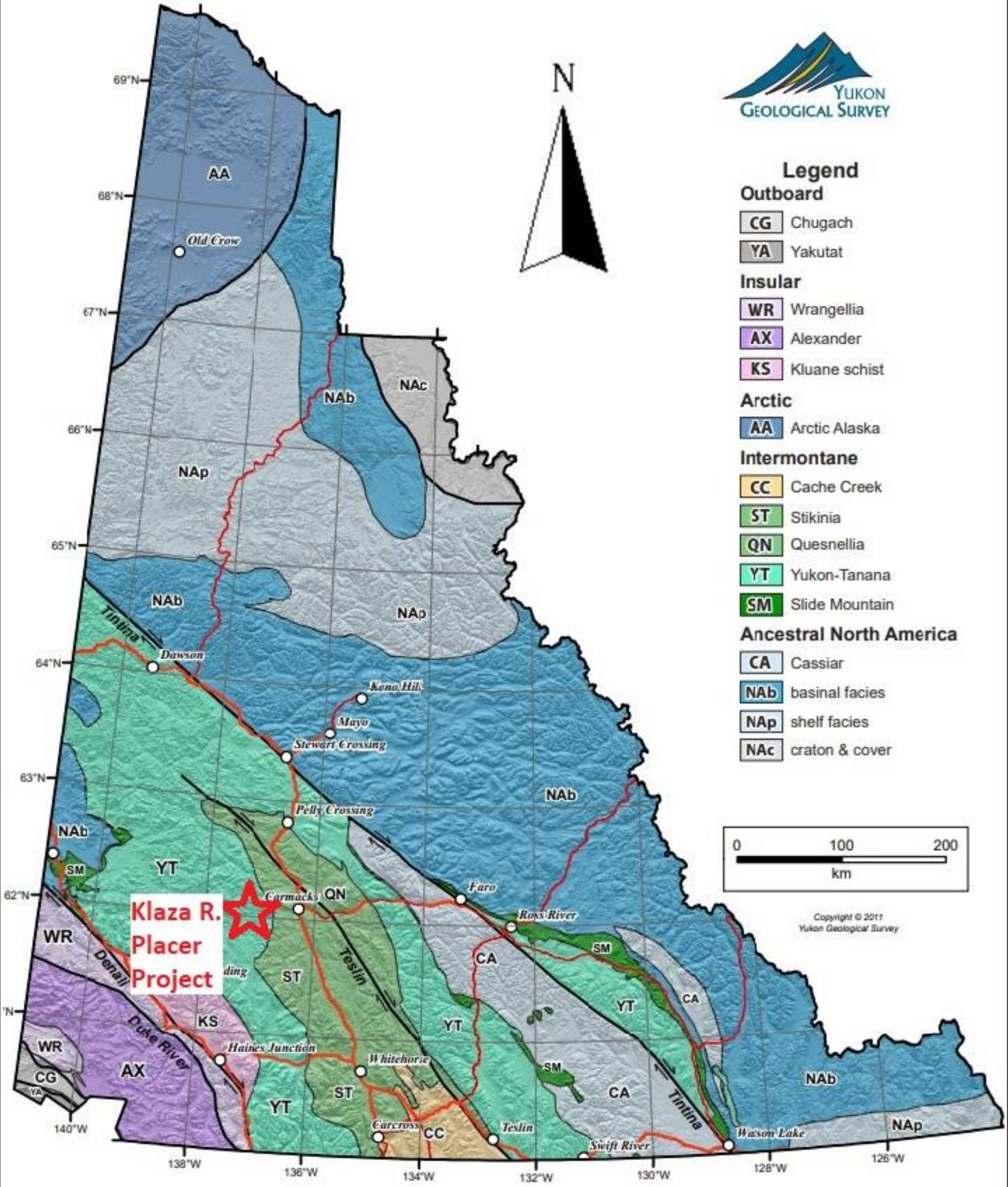
CLAIM MAP
& WORK AREA

Fig. 2 Nov/24 BH



Modified from Colpron & Nelson, YGS, 2011

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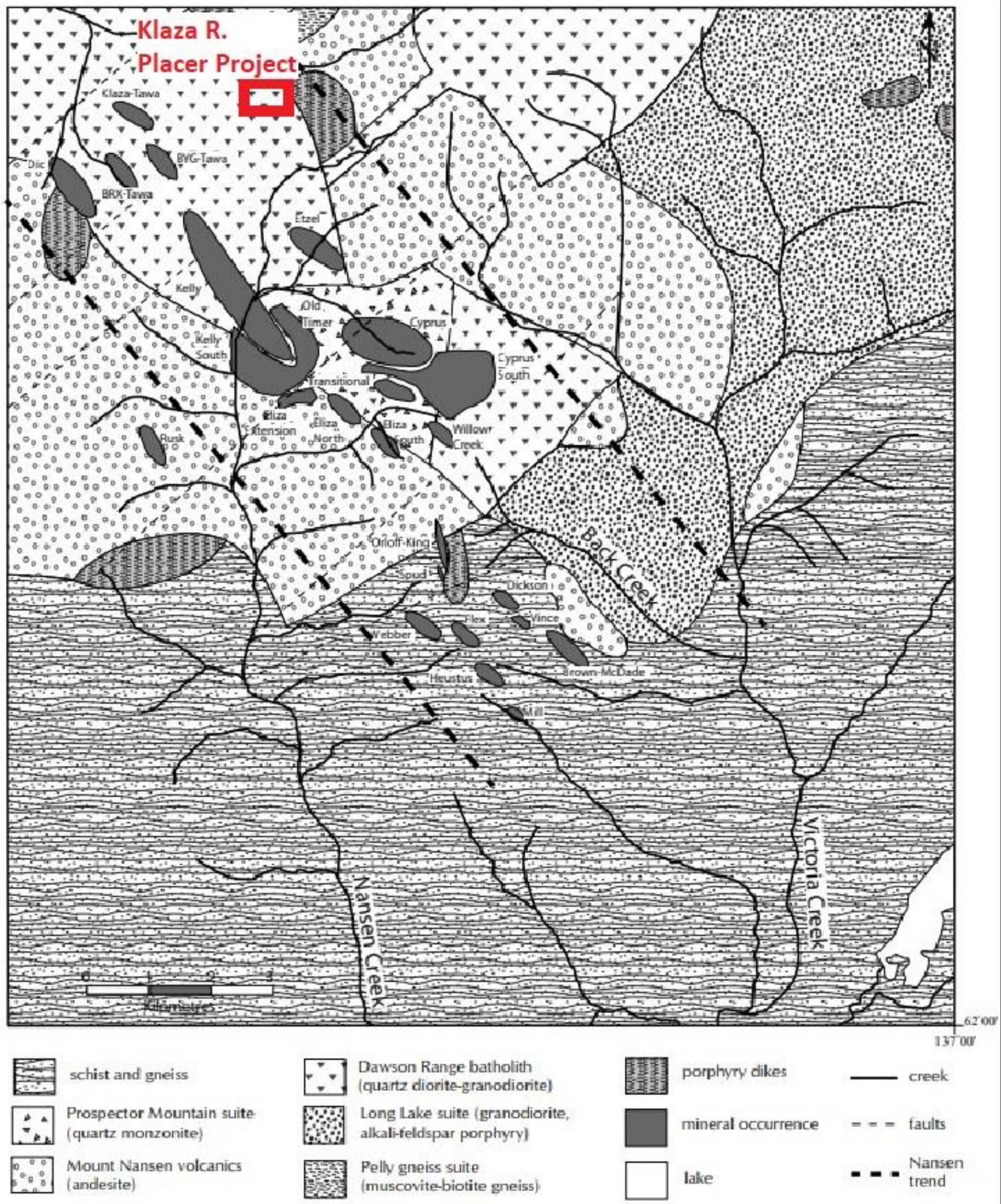
YUKON GEOLOGY

Fig. 3 Nov/24 BH



From Englehardt et al, 2015, as modified from Hart & Langdon, 1998

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MT. NANSEN GEOLOGY
Fig. 4 Nov/24 BH

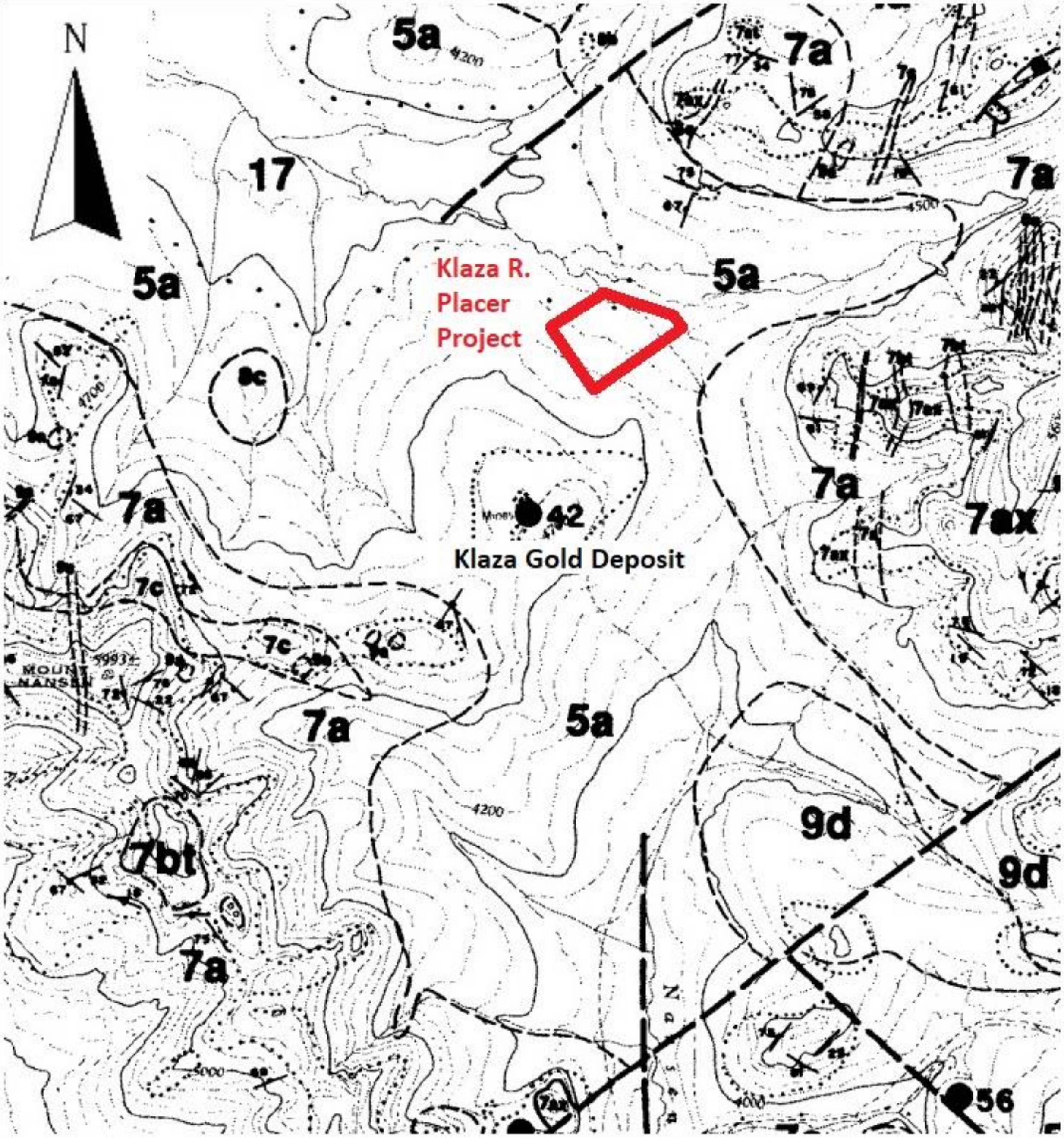
deposit, comprising both vein and porphyry style mineralization, lies directly upslope to the southwest from the KLA group of claims (Fig. 5).

Placer gold production, and the interpretation of potential target areas for additional production, has been complicated by glaciation which has both redistributed gold grains and covered pay gravels with till (Fig. 6). Most historical production has been from surface gravels, and above the “false bedrock” of clay-bearing glacial till units, but recent work has indicated that significant gold can be recovered from deep gravels above weathered bedrock, though with high stripping ratios.

WORK PROGRAM; SUMMER, 2024

The summer, 2024, work program was intended to follow up on 2023 prospecting which located gold specks in near surface gravels from a shallow pit near the #1 post of the KLA 1 claim.

Eight lines of east-west flagged grid totalling 3.14 line km was installed at 50 m line spacing and 20 m station spacing, covering the KLA 1 and KLA 2 placer claims. The flagged grid was installed by GPS using a Garmin 66S instrument. Specifications for this instrument indicate 3 m accuracy, but where visible over a distance, accuracies appear to be better than 2 m. This flagged grid provided control for subsequent mapping, sampling and geophysics. Lines and stations were numbered with the last three or four digits of the NAD83, Zone 8, UTM coordinates, so grid northing plus 6,890,000 equals true UTM northing, while grid easting plus 380,000 equals true UTM easting. Flags on 100 m stations were marked with both line number and station coordinates, while the 20, 40, 60 and 80 m stations were only marked with the grid easting. Locations for readings taken at 10 m points were estimated between flagged stations.



17 Quaternary; unconsolidated alluvium

9 Cretaceous to Paleocene; Mt Nansen Ste;

d) porphyritic granodiorite to quartz monzonite stocks

7 Cretaceous to Paleocene; Mt Nansen Ste;

a) andesite to latite massive flows & feeders

5 Early Cretaceous; Dawson Range Plutonic Ste;

a) Casino granodiorite

From G.G. Carlson, OF 1987-2

Miles 1 0

Metres 1000 0

Yards 1000 0

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PROPERTY GEOLOGY

Fig. 5 Nov/24 BH

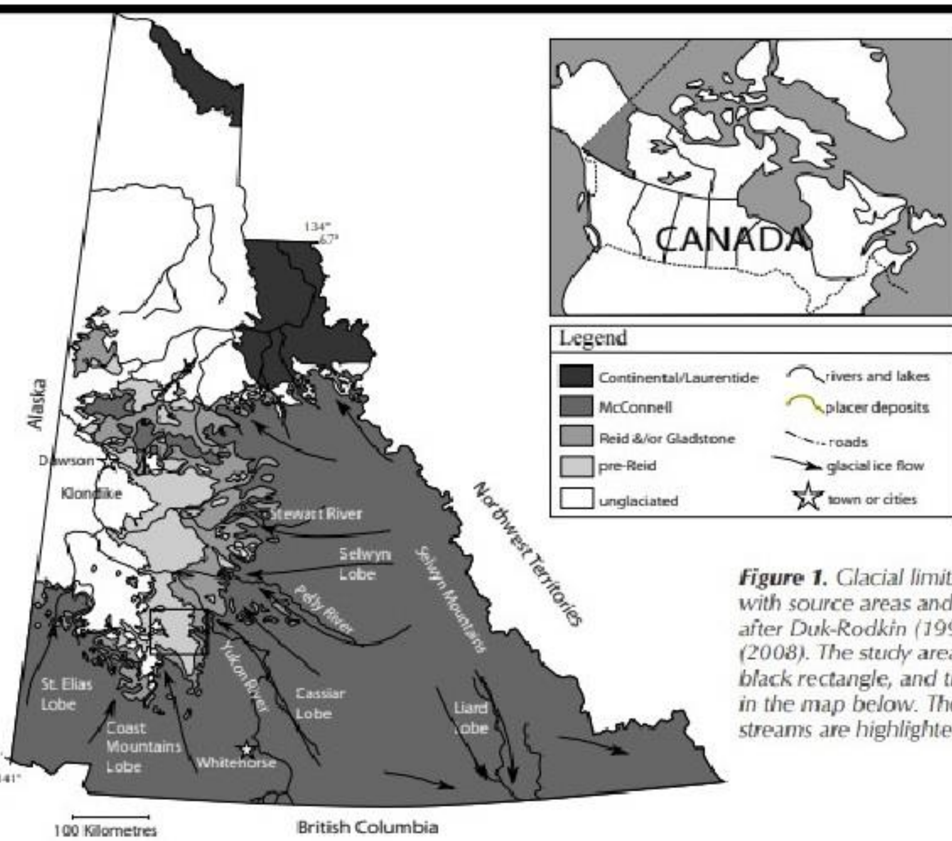
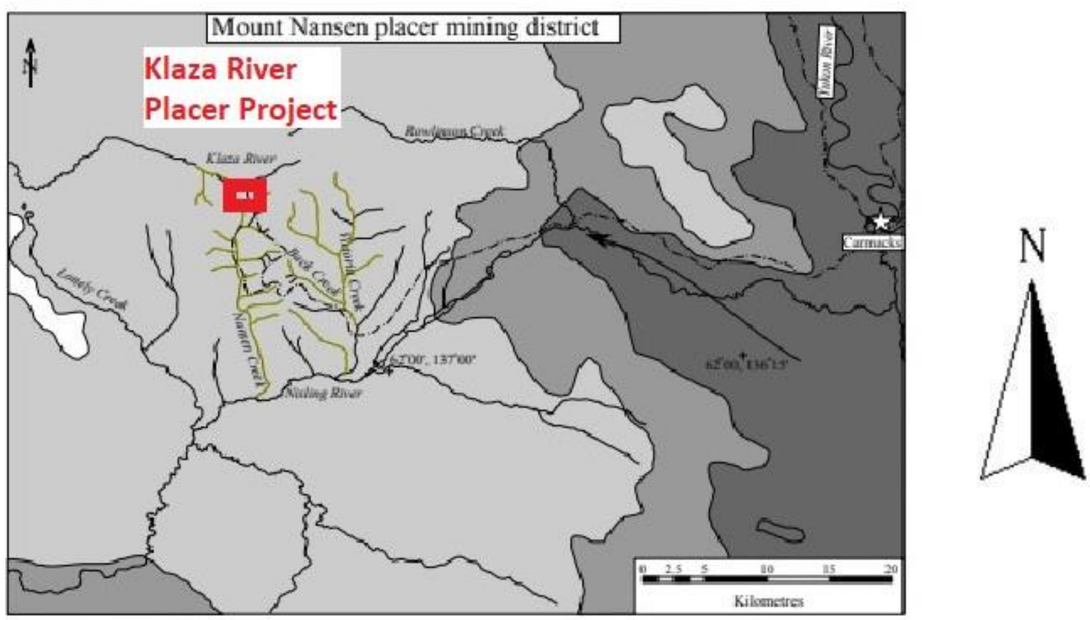


Figure 1. Glacial limits map of Yukon with source areas and ice flow modified after Duk-Rodkin (1999) and Ward et al. (2008). The study area is indicated by a black rectangle, and the area is enlarged in the map below. The placer gold bearing streams are highlighted in yellow.



From Englehardt et al, 2015, YGS

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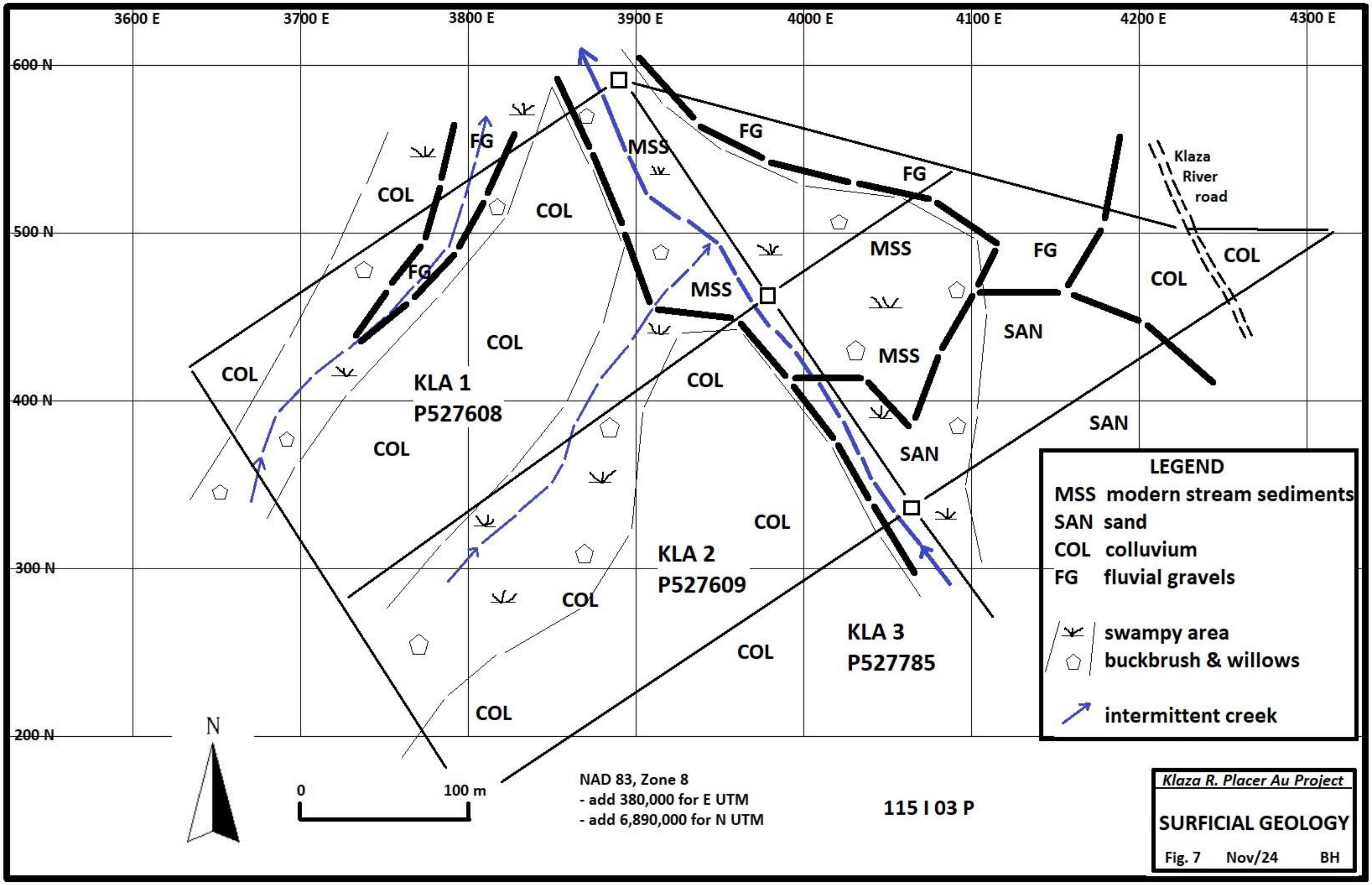
GLACIATION		
Fig. 6	**Nov/24**	**BH**

Detailed mapping of the surficial materials was completed by the author at a scale of 1:2000. Detailed magnetic and VLF electromagnetic surveys were completed by the author using instruments owned by the author. Field assistance for this work was from D. Hood. The objective of this work was to characterize the surficial materials, and determine whether the creek had any distinctive geophysical characteristics which could relate to placer gold mineralization. In the course of this work, prospective gravels were sampled, screened, and either panned or sluiced. Field notes from the mapping are included in Appendix I. Several photographs from this work are in Appendix II.

The results from surficial geologic mapping of the KLA 1 and KLA 2 claims are shown on Figure 7. Organic deposits, mainly brown sphagnum peat moss and black humus, typically about 30 cm thick, but thicker along creeks and swampy areas, is ignored in this mapping. Also ignored is the ubiquitous white to grey White River tephra ash deposit, typically 5 to 10 cm thick, immediately underlying the organics. Permafrost was commonly found throughout the area at shallow depths ranging from 0.3 to 1 m, though this work was conducted early in the summer field season. Old excavator tracks and several shallow pits were found locally, but no significant work appears to have been conducted on the claims. Photograph #1 in Appendix II shows a view of most of the terrain that was mapped.

The youngest surficial lithology in the map area was a unit of modern stream sediments (unit MSS) in the lowest area of the grid, along the swampy area adjacent to the creek and location line through the center of the claims. These sediments ranged from dark brown, organic-rich clay-silt near the #1 post of the KLA 1 claim (Photo #2, Appendix II), to light brown silt-sand in the center of the KLA 2 claim. This MSS unit is thin, probably not much more than 1 m in thickness.

Unit SAN is a clean, well-sorted, light tan brown coloured silt-sand deposit, exposed at low elevation in the valley, at the southeast corner of the grid. This sand is just above, and appears gradational with the lower MSS sediments. This sand is locally rusty, and contains up to 5% pebble-cobble clasts, commonly fine-


3600 E
3700 E
3800 E
3900 E
4000 E
4100 E
4200 E
4300 E
600 N
500 N
400 N
300 N
200 N
Klaza River road
COL
FG
MSS
SAN
KLA 1
P527608
KLA 2
P527609
KLA 3
P527785
N
0
100 m
NAD 83, Zone 8
- add 380,000 for E UTM
- add 6,890,000 for N UTM
115 I 03 P
LEGEND
MSS modern stream sediments
SAN sand
COL colluvium
FG fluvial gravels
swampy area
buckbrush & willows
intermittent creek
Klaza R. Placer Au Project
SURFICIAL GEOLOGY
Fig. 7 Nov/24 BH

to medium-grained, weakly porphyritic grey granodiorite. From hand augering in the center of the KLA 2 claim, this sand unit was found to be at least 1 m thick before permafrost was encountered. This type of young sand deposit is common in the lower portions of valleys throughout the Mt. Nansen district.

The most common surficial lithology in the map area was colluvium (unit COL), derived from erosion of upslope materials to the east and west. A small area of colluvium is exposed along the Klaza River road at the east end of lines 450 and 500N (Photo #3, Appendix II). This colluvium is rusty brown coloured, and matrix supported with about 70% clay-silt matrix. The 30% clasts are mainly pebbles and cobbles of subangular, grey, fine- to medium-grained granodiorite that is weakly porphyritic with common small white plagioclase phenocrysts, and minor black amphibole and pink K-feldspar phenocrysts.

Most of the left limit of the claims, upslope to the west on the grid, is believed to be underlain by colluvium (unit COL), although extensive permafrost limited the number of observation points in that area. Colluvium in this area was brown to locally grey, and matrix supported with about 70% variable clay-silt-sand matrix that locally had the appearance of a granite-derived arkosic sand. Clasts were mainly subangular, grey to pink granite and granodiorite that were occasionally mineralized with pyrite. Water flowing downslope on top of permafrost in this area was frequently rusty, especially on L300N, probably reflecting mineralized bedrock zones farther upslope. Areas with downslope slump of organic sediments on top of permafrost were noted around L400N/3950E.

Fluvial gravels (unit FG) are exposed in two areas along the north side of the map area. Fluvial gravels are well exposed at surface on the northeast side of the grid on lines 500 and 550N to the northeast of the claim location line. In this area, surface exposures of fluvial gravels are readily recognized by a distinctive white lichen growth, as opposed to green sphagnum moss where gravels are not exposed near surface. These gravels are brown to locally rusty, and matrix supported with 60 to 70% variable silt-sand matrix. Clasts are subangular to rounded, comprising about half pebbles and cobbles of granite-granodiorite and half black schist fragments with minor pyrite. These right-limit gravels are believed to be deposited from a meander of the Klaza River to the north, and are much more extensive under the thin unit of modern stream sediments (unit MSS).

A local unit of poorly developed fluvial gravels (unit FG) has been mapped across lines 450, 500 and 550N between 3760 and 3820E in the northwest area of the grid. These gravels are exposed along an eroded drainage channel, where overlying organic sediments have been removed along a roughly 1m deep channel up to 10m wide (Photo #4, Appendix II). These gravels that are locally exposed along the bottom of this eroded channel are marginal between a true fluvial gravel and a lightly washed colluvium. These gravels are brown coloured and mostly clast supported with about 55% pebbles, cobbles and boulders of subangular to subrounded granite & granodiorite with minor schist. Minor pyrite mineralization is noted in these clasts.

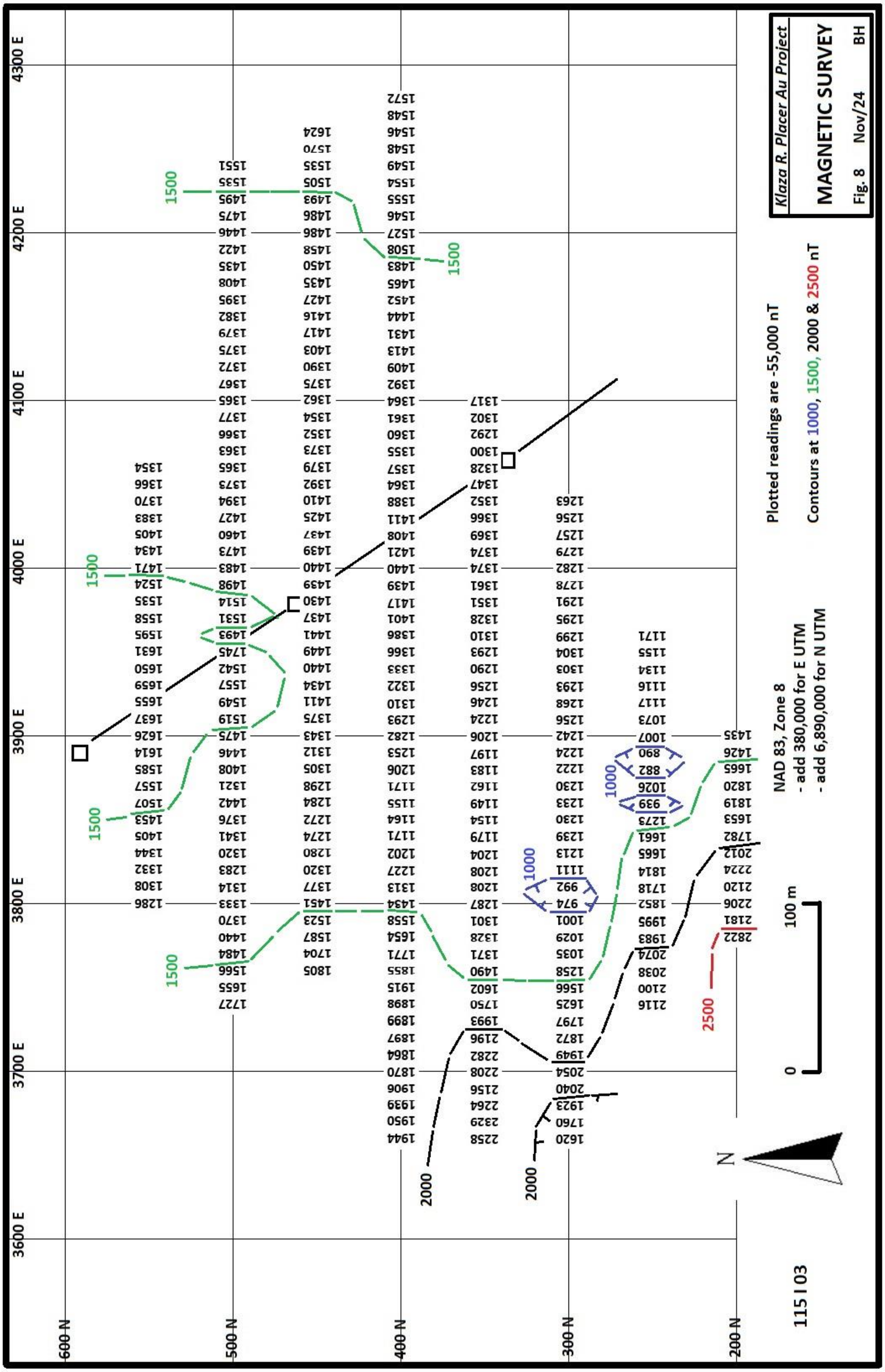
Initial sampling during prospecting in 2023 located minor gold specks in gravels near the #1 post of the present KLA 1 claim. Followup sampling in 2024 of a 3-foot-deep hand auger hole at this location intersected a mix of clay, silt, sand and pebbles that was panned, with no gold specks recovered. A pan sample of boulder gravels was dug from below modern stream sediments near the #2 post of KLA 1 and #1 post of KLA 2, with no gold specks recovered. The well exposed fluvial gravel unit along the northeast side of the mapped area was sampled at L560N/4010E, with no gold specks recovered (Photo #5, Appendix II).

Poorly developed fluvial gravels were sampled along a small drainage at 545N/3815E along the northwest edge of the KLA 1 claim, recovering 5 gold specks from a pan. As a result, these gravels were sampled upslope along this drainage at 500N/3790E, recovering 4 specks from a pan. A sample farther upslope at 460N/3765E returned 1 gold speck. It can be noted that this small drainage channel crossing the west end of the KLA 1 claim originates in the area of the Klaza gold deposit upslope to the southwest. As a result of these promising indications, a 5-bucket sample was dug from these gravels at 545N/3815E (Photo #6, Appendix II). These gravels were yellowish-brown coloured and matrix supported, with a 60% matrix of silt-sand-pebble gravel. The 40% clasts were mainly cobble-sized, subangular to subrounded, medium-grained granite, with minor granodiorite and rare schist fragments. The 5-bucket sample returned 0.03 grams of impure gold, or roughly 0.3 grams if projected to a 1-yard sample. This gravel may be close to a viable commercial grade and is accessible near surface with minimal stripping.

The total field magnetic survey was completed using a Geometrics G-856 proton precession magnetometer. Details and specifications on this instrument are included in Appendix III. All field readings were looped from a base station location near the #1 post of the KLA 1 claim (Photo #7, Appendix II). All data was leveled relative to this point, which averaged at 56,676 nT, in direct proportion to elapsed time. The magnetic survey was run on days when solar activity and geomagnetic disturbance was minimal, as monitored in daily reports on shortwave station WWV. The maximum drift within a loop was 14 nT. Data error is expected to fall within a plus/minus 5 nT bracket, which is adequate for this survey.

The results from the total field magnetic survey are shown on Figure 8, contoured at 500 nT intervals to show gross lithology. A northwest-southeast trending unit, about 1000 nT above background, extends across lines 400N through 200N at the southwest corner of the grid, with adjacent magnetic dipole lows to the northeast on lines 250 and 300N. This magnetic anomaly is perpendicular to drainage features in the area, and is believed to be caused by a bedrock feature. A weak magnetic high anomaly extends across the KLA 1 claim along the location line and creek at the bottom of the valley, weakening across the KLA 2 claim. This may reflect an accumulation of magnetite, with associated placer gold, within the sediments at the bottom of the valley. A second weak magnetic high anomaly is present at the east end of the grid in the area of the Klaza River road, and may reflect an older buried channel in that area.

The VLF electromagnetic survey was completed using a Geonics EM-16 instrument tuned to NPM, Hawaii, 21.4 khz (Photo #8, Appendix II). Details on this instrument are included in Appendix III. Although not optimum in terms of field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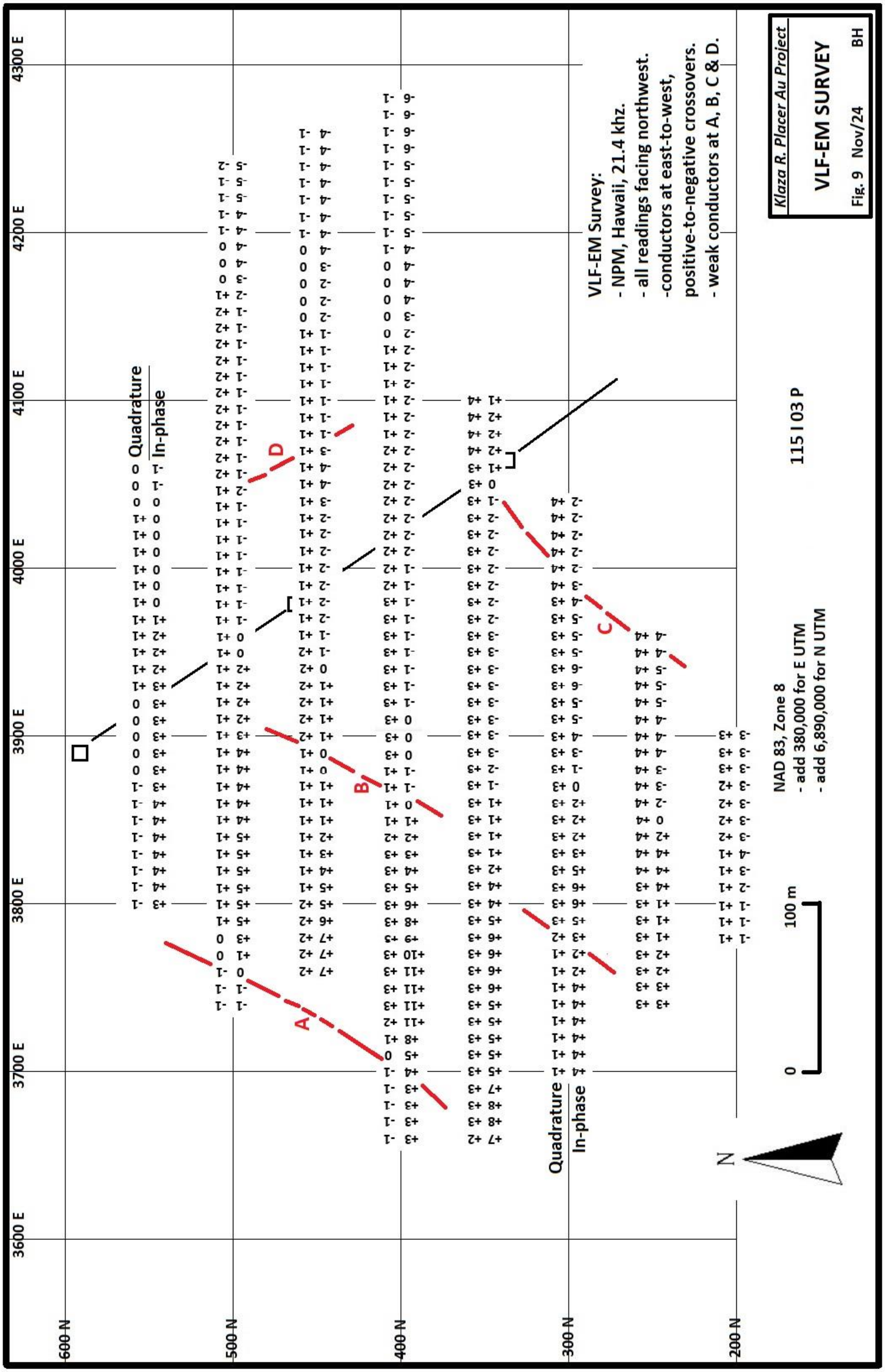
MAGNETIC SURVEY
Fig. 8 Nov/24 BH
Plotted readings are -55,000 nT
Contours at 1000, 1500, 2000 & 2500 nT
NAD 83, Zone 8
- add 380,000 for E UTM
- add 6,890,000 for N UTM
0 100 m
N
115 I 03
3600 E
3700 E
3800 E
3900 E
4000 E
4100 E
4200 E
4300 E
600 N
500 N
400 N
300 N
200 N

orientation, NPM had the best combination of signal strength, null clarity and field orientation of the available stations. All VLF readings were taken facing northwest, with east-to-west, plus-to-minus (or sometimes less positive/more negative) in-phase crossovers marking conductive horizons.

VLF responses were relatively flat across the grid area, but four weak conductive units, marked A to D, are suggested (Fig. 9). Conductors A, B and C are oriented southwest to northeast and appear to correspond with downslope drainages. These drainages are characterized by intermittent water flow, areas where organic materials are eroded away, and zones of heavy buckbrush growth. Conductor A is of interest, because it is the strongest conductor, and corresponds with a unit of gold-bearing fluvial gravels. Conductor A could be better defined if the grid was extended to the west in that area. These results suggest that conductors B and C may also be prospective for gold-bearing fluvial gravels, similar to conductor A. Weak anomaly D is believed to be caused by conductive clay sediments in a marshy area that extends across lines 450 and 500N to the east of the creek and location line.

CONCLUSIONS & RECOMMENDATIONS

A small program of flagged grid installation, surficial geologic mapping, magnetic and VLF-EM geophysics, and gravel sampling was completed during May and June, 2024, across the KLA 1 and KLA 2 placer claims. Fluvial gravels were found in two areas, and are believed to underlie much of the lower elevations in the valley. Significant gold specks were found in poorly developed fluvial gravels in a small drainage which crosses the northwestern edge of the claim group. This drainage extends directly downslope from the area of the Klaza gold deposit, presumably the source of the recovered gold grains. A 5-bucket test sample of these gravels recovered 0.03 grams of impure gold, which projects to roughly 0.3 grams in a cubic yard, a near commercial grade. A modest VLF electromagnetic conductor


Klaza R. Placer Au Project
VLF-EM SURVEY
Fig. 9 Nov/24 BH
VLF-EM Survey:
- NPM, Hawaii, 21.4 khz.
- all readings facing northwest.
-conductors at east-to-west,
positive-to-negative crossovers.
- weak conductors at A, B, C & D.
115 I 03 P
NAD 83, Zone 8
- add 380,000 for E UTM
- add 6,890,000 for N UTM
0
100 m
N
Quadrature
In-phase
A
B
C
D
3600 E
3700 E
3800 E
3900 E
4000 E
4100 E
4200 E
4300 E
200 N
300 N
400 N
500 N
600 N

corresponds with this gold-bearing drainage, suggesting a useful exploration technique in this area.

In light of promising results to date, further work, including drilling and bulk sampling is recommended to test the potential for gold-bearing placer gravels in this area.

William C. Hood, P.Geo.
December 23, 2024

CERTIFICATE

For: William C. Hood, P.Geo.
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(204)268-3455
bhood@mts.net

1) I am a graduate of the University of Manitoba (1979) with a B.Sc. (Honours) Degree in Science (Geology) and I have practiced my profession since that time.

2) I am a Registered Professional Geoscientist with the Association of Professional Engineers and Geoscientists of Manitoba since 1982.

3) I have been employed by Tantalum Mining Corporation (1979-1983), Province of Manitoba Departments of Labour (1992 – 1995) & Energy and Mines (1995 - 1997), and ProAm Exploration Corporation (1997 – 2000), as well as operating my own business as W.C. Hood, Consulting Geologist (1983 – 1992 & 2000 – present).

4) I have researched, conducted and supervised a wide range of exploration programs for hydrothermal and placer gold, volcanogenic copper-zinc, magmatic nickel-copper-PGE, pegmatitic tantalum-lithium-cesium, kimberlitic diamonds and various industrial mineral commodities.

William C. Hood, P.Geo.
December 23, 2024

APPENDIX I – 2024 FIELD NOTES

Line 550 N:
545N/3815E: small creek; heavy buckbrush; local exposed fluvial gravels or washed colluvium; brown; clast supported; granite pebbles & cobbles are angular to subrounded; matrix is sand-pebble gravel.
555N/3855E: moderate buckbrush; 10 cm sphagnum moss; into permafrost.
560N/3890E: swampy buckbrush area; shallow pit with fine light brown silt-sand; clean & well sorted.
540N/3910E: same as @ 560N/3890E; into permafrost at 30 cm.
550N/3940E: 30 cm sphagnum moss; into ash & permafrost.
545N/3955E: open area with low buckbrush; 30cm sphagnum moss; into brown possible till or fluvial gravel; matrix supported; 40% pebble-cobble clasts; 60% clay-silt-sand matrix; clasts are about 1/2 rounded cobbles of granodiorite & 1/2 angular pebbles of light brown to green-brown schist.
550N/3975E: same as @ 545N/3955E but sandier matrix with less clay.
550N/4000E: 30cm sphagnum moss; into permafrost.
560N/4010E: patch of white lichen over gravels; 10cm humus; 5cm ash; probable fluvial gravels; rusty brown colour; matrix supported with 55% sandy matrix; 45% pebble to cobble clasts with 1/2 granite-granodiorite & 1/2 schist.
550N/4030E: same as at 560N/4010E but not rusty; black schist cobbles have disseminated pyrite.
550N/4040E: same as at 545N/3955E but with clay-silt matrix with no sand; pebbles & cobbles are about 1/2 granite-granodiorite & 1/2 schist.
550N/4060E: 30cm sphagnum moss; into permafrost.
550N/4080E: 30cm sphagnum moss; into permafrost.

Line 500N:
500N/3740E: swampy area with heavy buckbrush; coarse hummocky sphagnum moss underlain by permafrost.
500N/3790E: fluvial gravels and/or washed colluvium are exposed along a 1m deep by 20m wide eroded channel in a swampy buckbrush area that generally has

about 0.5m of coarse hummocky sphagnum moss & black organics; gravels are brown & clast supported with 55% angular to subrounded pebbles & cobbles; 45% matrix of silt, sand & pebbles; clasts are 95% medium-grained granite & granodiorite with about 5% schist fragments.
500N/3840E: 30cm sphagnum moss; into permafrost.
500N/3920E: moderate buckbrush; 30cm sphagnum moss; minor ash; 30cm fine well-sorted silt-sand; then into permafrost.
490N/3950E: same as 500N/3920E.
500N/3970E: same as 500N/3920E.
490N/3995E: same as 500N/3920E.
500N/4040E: swampy area with heavy buckbrush; 30cm sphagnum moss & black humus; into permafrost.
500N/4095E: same as 500N/4040E.
505N/4120E: moderate buckbrush; 30cm sphagnum moss; 10cm white to light grey ash; then into permafrost.
500N/4150E: 30cm sphagnum moss; 10cm ash; into 30cm+ of rusty fluvial gravels; matrix supported with 60% silt-sand matrix; about 40% pebbles & cobbles of mainly grey granodiorite; minor schist pebbles.
500N/4160E: 30cm sphagnum moss; minor ash; 10cm light brown sand; into permafrost.
500N/4220E: 30cm sphagnum moss; into permafrost.

Line 450N:
455N/3645E: 30cm sphagnum moss; into 20cm+ of gravelly angular probable colluvium with 70% sandy-pebbly matrix that is similar to arkose sand; 30% pebble & cobble clasts are entirely granite-granodiorite.
450N/3680E: low sparse buckbrush; about 30cm hummocky sphagnum moss; 5cm light grey ash; into permafrost & possible colluvium with cobbles of altered granite in fine sand matrix.
460N/3765E: poorly developed fluvial gravel and/or washed colluvium; same as 500N/3790E; clast supported; all granite-granodiorite; matrix is clay-silt-sand-pebble.
450N/3800E: 30cm sphagnum moss; into permafrost.

<u>450N/3880E</u>: 30cm sphagnum moss; into permafrost.
<u>450N/3920E</u>: 30cm sphagnum moss; into permafrost.
<u>450N/3940E</u>: local rusty drainage on top of permafrost at base of moss.
<u>450N/4000E</u>: grassy area with light buckbrush; water drainage is rusty in this area; 20cm light brown sand; then into permafrost.
<u>450N/4100E</u>: thick buckbrush; 30cm sphagnum moss; minor ash; into permafrost.
<u>450N/4140E</u>: open mossy area; 30cm sphagnum moss; 5cm light grey ash; then into permafrost.
<u>450N/4160E</u>: open mossy area; 30cm sphagnum moss; 5cm brown sand; 5cm ash; then 5cm sand with one cobble of decomposed granite; then into permafrost.
<u>450N/4190E</u>: open mossy area; 30cm sphagnum moss; 10cm ash; into brown to rusty brown silt-sand with numerous subangular cobbles of weathered grey granodiorite that is weakly porphyritic with numerous white feldspar phenocrysts up to 3mm size; possible colluvium.
<u>445N/4230E</u>: open mossy area; 30cm sphagnum moss; 10cm ash; into 30cm of probably colluvium with 60% matrix of brown to rusty silt & 40% cobbles of subangular granodiorite to diorite clasts; clasts are porphyritic with mainly white to light grey plagioclase phenocrysts, frequent black amphibole crystals up to 2x6mm size & minor k-feldspar crystals up to 1cm size; then into permafrost.
<u>450N/4290E</u>: Klaza River road.
<u>450N/4295E</u>: east ditch along road has good profile of surficial geology; heavy buckbrush along edge of Klaza River road; 30cm sphagnum moss; 10cm ash; into 1m+ of very rusty colluvium that is same as at 445N/4230E.

Line 400N:
<u>400N/3660E</u>: 30cm sphagnum moss; into permafrost.
<u>400N/3690E</u>: heavy buckbrush along small drainage; probably colluvium; brown arkosic looking mixture of sand, pebbles & cobbles derived from granite-granodiorite; mostly angular; matrix supported with 25% cobbles & boulders.
<u>400N/3720E</u>: small stream in area of heavy buckbrush & 50cm thick hummocky moss; 20cm of rusty gravels & then into permafrost; gravels are entirely granite-granodiorite; 20% matrix of arkosic looking sand-pebbles; cobbles are mainly

angular with minor subrounded; probably lightly washed colluvium but marginal to fluvial gravel.

400N/3800E: light buckbrush; 30cm sphagnum moss; the into permafrost.

400N/3900E: 30cm sphagnum moss; then into permafrost.

400N/3910E: open mossy area; 30cm sphagnum moss & black humus; then into permafrost.

400N/3975E: same as @ 400N/3910E.

395N/4020E: grassy hummocky area with heavy buckbrush; 30cm sphagnum moss & black humus; 10cm sand; then into permafrost.

395N/4055E: swampy area with heavy buckbrush & locally grassy & hummocky; common rusty surface drainage; 30cm black humus; into 30cm+ of grey-brown silt.

395N/4105E: swampy area with heavy buckbrush; 30cm sphagnum moss; 20cm slightly rusty sand; then into permafrost.

400N/4120E: rusty zone at the base of the sphagnum moss; 10cm ash; into 20cm of brown sand with minor subangular grey granodiorite clasts; then into 20cm+ of rusty sand with pebbles; then into permafrost.

405N/4195E: open mossy area; 30cm sphagnum moss; minor ash; into silt-sand with minor pebbles for 20cm; then into permafrost.

395N/4240E: open mossy area; 30cm sphagnum moss; 10cm ash; into 20cm of brown silty colluvium with minor pebbles; then into permafrost.

400N/4265E: open mossy area; 30cm sphagnum moss; minor ash; into brown probable colluvium for 30cm & then into permafrost; about 40% subangular to subrounded cobbles of grey porphyritic granodiorite, coarse-grained granodiorite to diorite, & fine- to medium-grained granite; matrix is brown silt.

400N/4290E: Klaza River road.

Line 350N:

350N/3660E: hummocky grassy area with heavy buckbrush; 40cm sphagnum moss & black humus; into 20cm grey-brown clay; then into rock/cobbles; probable colluvium.

350N/3700E: open mossy area; 30cm sphagnum moss; then into permafrost.

350N/3750E: open mossy area; 30cm sphagnum moss; into 5cm ash; then into permafrost.
360N/3820E: open mossy area; 30cm sphagnum moss; then into permafrost.
350N/3830E: open mossy area; 30cm sphagnum moss; into 20cm light grey ash; then into permafrost.
350N/3880E: open mossy area; 30cm sphagnum moss; then into permafrost.
350N/3950E: open mossy area; 30cm sphagnum moss; into 5cm ash; then into permafrost.
350N/4040E: grassy area with heavy buckbrush in creek bottom; 30cm sphagnum moss & black humus; into 10cm mixed ash & clay; then into permafrost.
350N/4065E: grassy hummocky area with heavy buckbrush; 40cm sphagnum moss & black humus with rusty drainage at the base of the organics; at 40cm to 80cm into grey-brown clay-silt sediment with 10% pebbles of decomposed subangular to subrounded granite/granodiorite & fine-grained schist; then into rock at 80cm.
345N/4075E: well-sorted light tan brown sand down to 0.5m; then into permafrost.

Line 300N:
300N/3700E: open mossy area; 30cm sphagnum moss; then into permafrost.
295N/3750E: open mossy area; 30cm sphagnum moss; 10 cm ash; then into rock & permafrost.
295N/3785E: swampy area with heavy buckbrush; some sections of moss & humus appear to have slumped down on top of permafrost layer; mostly 40cm of sphagnum moss & black humus; very rusty drainage at base of moss; then into 10cm ash; then into permafrost; ash has minor grey granodiorite cobbles.
295N/3870E: hummocky slumped area with moderate buckbrush; 40cm sphagnum moss & black humus; into 20cm brown-grey clay-silt (probable colluvium); then into permafrost.
300N/3900E: open mossy area; 30cm sphagnum moss; then into permafrost.
295N/3965E: open mossy area; 30cm sphagnum moss; into about 5cm of light grey ash; then into permafrost.
305N/4025E: very rusty drainage at base of organics above permafrost.

290N/4045E: open mossy area; 30cm sphagnum moss; into 5cm light grey ash; then into permafrost.

Line 250N:

245N/3735E: moderate buckbrush; 30cm sphagnum moss, then into permafrost.
255N/3775E: same as 245N/3735E.
260N/3820E: grassy area with heavy buckbrush; 30cm sphagnum moss & black humus; into 20cm of rusty silt-sand; then into permafrost.
250N/3900E: moderate buckbrush; 30cm sphagnum moss; minor ash, then into permafrost.
240N/3930E: heavy buckbrush in eroded area along small drainage; locally grassy & hummocky; generally, about 40cm sphagnum moss & black humus; then into 10cm of ash & brown sand; into 20cm+ of grey colluvium with 70% clay-silt matrix; clasts are cobbles & boulders of mainly grey granodiorite which is often porphyritic & with minor fine-grained granite with disseminated pyrite.
250N/3960E: grassy area with heavy buckbrush; 40cm sphagnum moss & black humus; minor ash; then into permafrost.

Line 200N:

200N/3780E: moderate buckbrush; 30cm sphagnum moss; then into permafrost.
200N/3800E: same as at 200N/3780E but with 5cm of grey to rusty ash under the moss and above permafrost.
190N/3855E: open mossy area with minor buckbrush; 30cm sphagnum moss; into 20cm of brown-grey colluvium; colluvium is matrix supported with 80% clay-silt with minor angular pebbles; 20% clasts are cobble sized grey angular to subangular granodiorite; then into permafrost.
210N/3890E: open mossy area with light buckbrush; 30cm sphagnum moss; minor ash; then into cobble sized rocks frozen into permafrost.

APPENDIX II – PHOTOGRAPHS

Photo 1. W. Hood, surficial geologic mapping at L200N/3900E, looking northeast across KLA 2 & KLA 1 claims toward small placer operation north of Klaza River.

Photo 2. Looking southwest near Post #1 of KLA 1 claim, showing cobble fluvial gravels overlain by dark brown organic-rich clay-silt modern stream sediments.

Photo 3. Looking east at rusty colluvium in east ditch of Klaza River road at L450N/4295E on KLA 2 claim.

Photo 4. W. Hood sampling gravels along creek at L500N/3795E on KLA 1 claim, looking east toward Victoria Mountain.

Photo 5. Looking northeast at W. Hood sampling rusty gravels at L560N/4010E on KLA 1 claim during surficial geologic mapping.

Photo 6. Looking southwest at D. Hood digging fluvial gravels at 545N/3815E on KLA 1 claim for 5-bucket test.

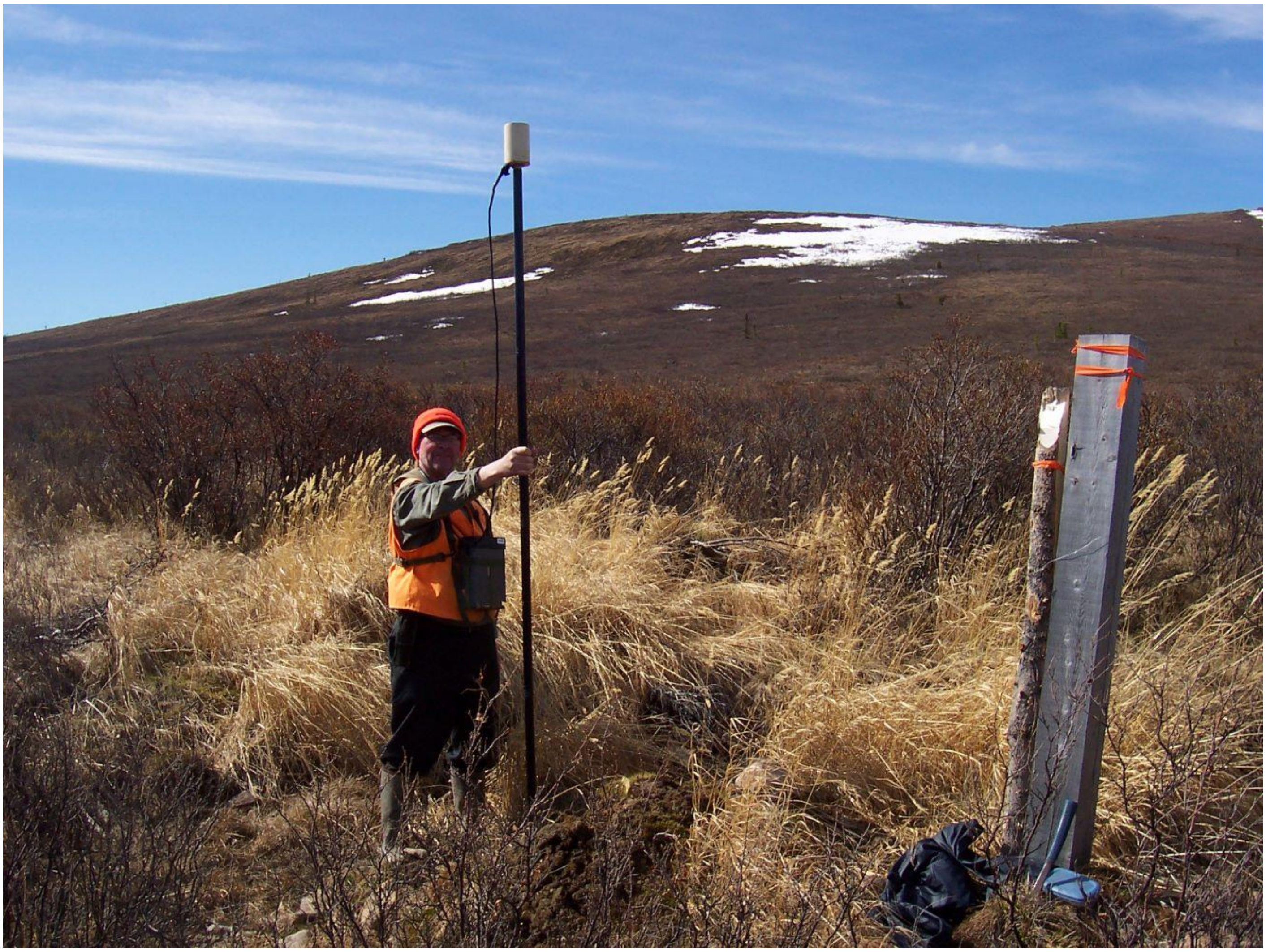


Photo 7. Looking southwest at W. Hood at base station for magnetic survey near Post #1 of KLA 1 claim. Klaza gold deposit is on snow-covered hill in background.

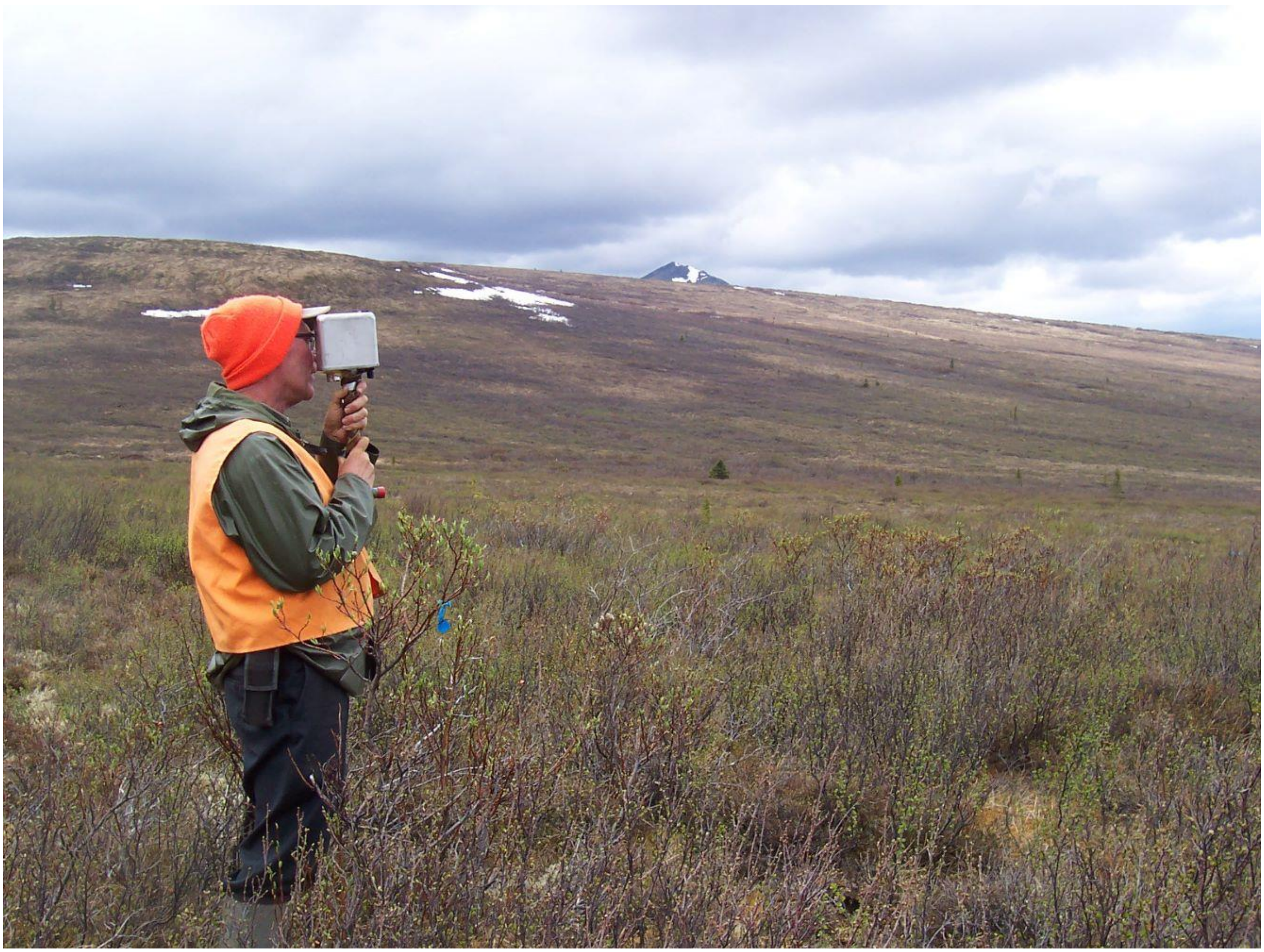


Photo 8. Looking west at W. Hood at L450N/4240E on KLA 2 claim during VLF electromagnetic survey with peak of Mt. Nansen visible in background.

APPENDIX III – INSTRUMENT SPECIFICATIONS

GEOMETRICS

G-856 Memory-MagTM

Proton Precession Magnetometer

MODEL G-856A & AX OP MAN
EDITION 2/2002
REV 02

M. SPECIFICATIONS

Displays	Six digit display of magnetic field to resolution of 0.1 gamma or time to nearest second. Additional three digit display of station, day of year, and line number.
Resolution	Typically 0.1 gamma in average conditions. May degrade to lower resolution in weak fields, noisy conditions or high gradients.
Absolute Accuracy	One gamma, limited by remnant magnetism in sensor and crystal oscillator accuracy.
Clock	Julian clock with stability of 5 seconds per month at room temperature and 5 seconds per day over the temperature range of -20 to +50 degrees Celsius.
Tuning	Push button tuning from keyboard with current value displayed on request. Tuning range 20 to 90 kilogammas.
Gradient Tolerance	Tolerates gradients to 1800 gammas/meter. When high gradients truncate count interval, maintains partial reading to an accuracy consistent with data.
Cycle Time	Complete field measurement in three seconds in normal operation. Internal switch selection for faster cycle (1.5 seconds) at reduced resolution or longer cycles for increased resolution.

Manual Read	Takes reading on command. Will store data in memory on command.
Memory	Stores more than 5000 readings in survey mode, keeping track of time, station number, line number day and magnetic field reading. In base station operation, computes for retrieval but does not store time of recording designated by sample interval, allowing storage of up to 12,000 readings.
Output	Plays data out in standard RS-232 format at selectable baud rates. Also outputs data in real time byte parallel, character serial BCD for use with digital recorders.
Inputs	Will accept an external sample command.
Special Functions	An internal switch allows: 1) adjustment of polarization time and count time to improve performance in marginal areas or to improve resolution or speed operation, 2) three count averaging, 3) choice of lighted displays in auto mode.
Physical	Instrument console: 7 x 10 ½ x 3 ½ inches (18 x 27 x 9 cm) 6 LB (2.7 kg)
Sensor:	3 1/2 x 5 inches (9 x 13 cm) 4 LB (1.8 kg)
Staff:	1 inch x 8 feet (3cm x 2.5m) 2 LB (1kg)
Environmental	Meets specifications from 1 to 40°C. Operates satisfactorily from -20 to 50°C.
Power	Operates from 9 D-cell flashlight batteries (or 13.5 volts external power). May be operated at 18 volts external power to improve resolution. Power failure or replacement of batteries will not cause loss of data stored in memory.

ACCESSORIES

Standard:

Sensor
Staff
Backpack
Two sets of batteries
Carrying case
Applications Manual for Portable Magnetometers
RS-232 Cable

Optional:

Cold weather battery belt
Rechargeable Battery option
50' External power / Sensor cable
Spares Kit

PRODUCTS

- Conductivity Meters
- Metal Detectors
- Time Domain Systems
- VLF Systems
- Borehole Probes
- Data Acquisition
- Software
- Third Party Software

Downloads

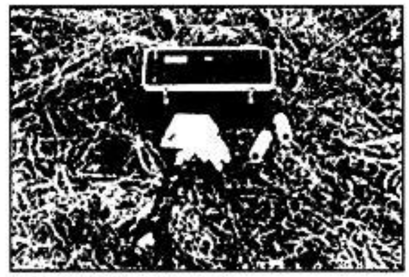
Catalogue

EM16 | EM16R | TX27

The EM16 VLF Receiver is the most widely used electromagnetic geophysical instrument of all time. Local tilt and ellipticity of VLF broadcasts are measured and resolved into inphase and quadrature components of VLF response. The EM16 has discovered several base and precious-metal ore bodies and many water-bearing fractures and faults.

The EM16R Resistivity Attachment uses a pair of electrodes to measure the apparent resistivity of the earth. The combined EM16/16R instrument can detect a second earth layer if the layer occurs within the VLF skin-depth. In addition, the EM16/16R can map resistive alteration for gold exploration.

The TX27 is a portable VLF transmitter supplying a VLF field for surveying with either the EM16 or EM16/16R if remote broadcasts are weak, intermittent or poorly coupled with the target. For EM16 surveys, the TX27 antenna consists of a long (typically 1 km) grounded wire.



Specifications

MEASURED QUANTITIES

EM16: inphase and quadrature components of the secondary VLF field, as percentages of the primary field

EM16R: apparent resistivity in ohm-metres, and phase angle between Ex and Hy

PRIMARY FIELD SOURCE

EM16: ferrite-core coil

EM16R: Stainless-steel electrodes, separated by 10 m: impedence of sensor is 100 MΩ in parallel with 0.5 pf

SENSOR

9.8 kHz

OPERATING FREQUENCY

15 to 25 kHz (optionally to 30kHz) depending on VLF broadcasting station

MEASURING RANGES

EM16: inphase: ±150%
quadrature: ±40%

EM16R: 300,3K,30KΩ-m
phase: 0 - 90°

POWER SUPPLY

EM16/EM16R: 6 alkaline "AA" cells

DIMENSIONS

EM16/EM16R: 53x30x22 cm

WEIGHTS

EM16:1.8 kg;shipping:6.2 kg

EM16R:1.5 kg;shipping:6 kg