PRELIMINARY WORK REPORT ON SUMMER, 2021, SURFICIAL GEOLOGIC MAPPING, MAGNETIC SURVEY, VLF ELECTROMAGNETIC SURVEY & SAMPLING OVER PLACER CLAIM P513343, BRI 1, & PROSPECTING LEASE IW00749, MONTGOMERY CREEK, MT. NANSEN AREA, YUKON

Field Work & Report by:
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Beausejour, Manitoba

Property Holder:
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Beausejour, Manitoba R0E0C0

Field Work June 15 – July1; 2021
Report Completed July 4, 2021

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Summary of Reported Work:

Geographic Area: NTS 115-I-03-P, Mt. Nansen area
Mineral Dispositions: P513343 (BRI 1), Placer Lease IW00749
Target Commodity: placer gold
GPS Flagged Grid: 2.2 line km, 100m line spacing, 20m station spacing
Surficial Geologic Mapping: 2.2 line km, 1:2000 scale
Ground VLF-EM Survey: 2.2 line km, 100m line spacing, 10m station spacing
Ground TF Mag Survey: 2.2 line km, 100m line spacing, 10m station spacing
Samples: 5 samples screened & panned
Report Software: Microsoft Office Word, Excel, Paint

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SUMMARY

This report describes the results of a small program of flagged grid installation, surficial geological mapping, magnetic and VLF-EM surveying, and sampling over one placer mining claim and a portion of a one-mile prospecting lease on Montgomery Creek (MONT project) in the Mt. Nansen area of the Yukon. The claim and prospecting lease were staked in August, 2020, by the author to cover ground believed prospective for placer gold. This report is being prepared for the purpose of submitting representation work on the claim and lease, and these results will be incorporated into a larger report to be prepared later in 2021.

The Mt. Nansen district has had a history of modest placer gold production along Nansen Creek and Victoria Creek, as well as various tributaries. These placer creeks occur in the area of two main bedrock gold vein 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.

The lower section of Montgomery creek was subjected to previous placer examination, as evidenced by local stripping, pits and muck piles. Mapping determined that most of the area is overlain by a thick sand deposit, as is common in many creeks in the Mt. Nansen district. However, a fluvial gravel that may be prospective for placer gold was located in the lower area of the creek, below the area of sand cover. Limited sampling has returned gold specks from panning of this gravel.

VLF-EM and magnetic surveys returned very flat results, indicating that the underlying rocks and surficial materials are neither significantly magnetic nor conductive. More work will be needed along the balance of the valley to evaluate the utility these geophysical techniques.

Additional work is recommended to evaluate the upper portions of the Montgomery Creek valley. Further sampling, with larger volumes, needs to be done on the fluvial gravels (FG unit) on the BRI 1. Ultimately, drilling or deeper backhoe sampling will be needed to evaluate the deeper placer gold potential in this creek.

William C. Hood, P.Geo.
July 4, 2021

INTRODUCTION

This report describes the results of a small program of flagged grid installation, surficial geological mapping, magnetic and VLF-EM surveying, and sampling over one placer mining claim and a portion of a one-mile prospecting lease on Montgomery Creek (MONT project) in the Mt. Nansen area of the Yukon. The claim and prospecting lease were staked in August, 2020, by the author to cover ground believed prospective for placer gold. This report is being prepared for the purpose of submitting representation work on the claim and lease, and these results will be incorporated into a larger report to be prepared later in 2021.

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This work on Montgomery Creek is intended to provide baseline geological and geophysical data for future drilling and/or backhoe sampling.

LOCATION, ACCESS & PHYSIOGRAPHY

The MONT property is situated in southwestern Yukon, about 170 km northwest of Whitehorse, and 40 km due west of Carmacks (Fig. 1). The property is 3 km northeast of the Mt. Nansen mine, which is presently undergoing site rehabilitation. Basic groceries, supplies, fuel and accommodations are available in Carmacks.

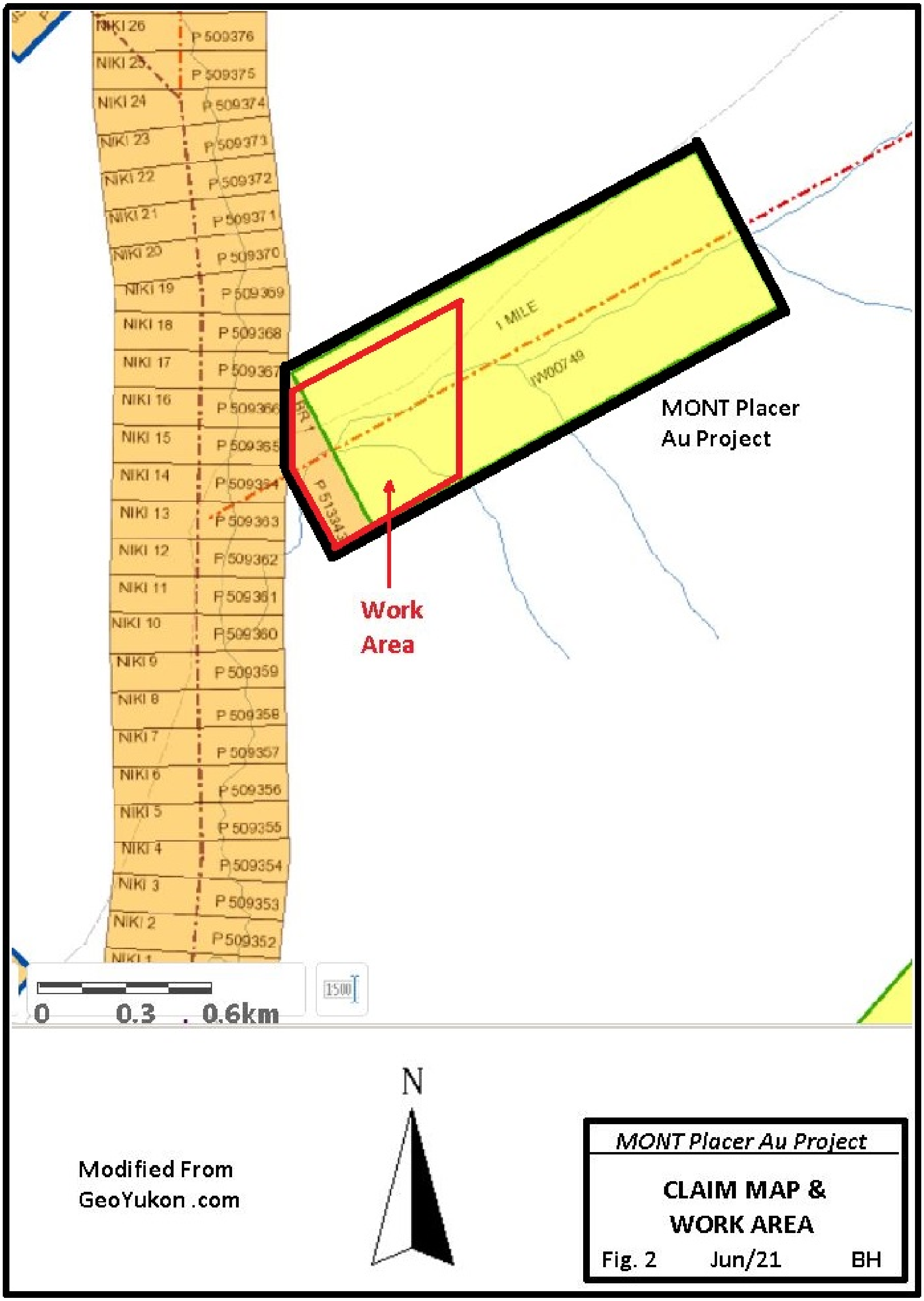

Dawson City
Mayo
Carmacks
Faro
MONT Placer
Au Project
Haines Junction
Whitehorse
Teslin
0 50 100km
N
Modified From
GeoYukon .com
MONT Placer Au Project
LOCATION
Fig. 1 Jun/21 BH

Access to the property is from the Mt. Nansen road, which is a one-lane gravel road that is maintained year-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. The driving distance from Carmacks to Back Creek is 60 km, with the last 2.7 km to Montgomery Creek requiring ATV travel to the north on the old Freegold road up the west side of Victoria Creek. The Freegold road crosses the northeast corner of the MONT project claims. Camp location for this project was on Back Creek, at the intersection of the Back Creek placer mine road and the Freegold road.

Physiography in the Montgomery Creek area is hilly, with ridges flanking both the north and south sides of the valley, which trends about 060 by 240 degrees azimuth. Elevations within the work area ranged from a low of 1055m at the west end of the BRI 1 claim in the bottom of the valley to a high of 1105m in the northeast corner of the work area. The south-facing, north side of the valley and valley bottom of Montgomery Creek is well treed with spruce and minor poplar. The north-facing, south side of the valley is sparsely vegetated with hummocky moss and brush, with local permafrost. Creek bottoms are brushy with willows.

CLAIM STATUS

The Montgomery Creek placer gold property (MONT Project) comprises one 500' placer claim, P513343, BRI 1, in the lower section of the creek, and a one mile prospecting lease, IW00749, extending up-creek from the placer claim. The central location line trends about 060 by 240 degrees azimuth along Montgomery Creek. The claim and prospecting lease were staked in early August, 2020, and are presently in good standing until dates in August, 2021. The placer claim and prospecting lease are both held by the author of this report, William C. Hood, of Beausejour, Manitoba. The claim map and present work area are shown in Figure 2.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P 509364
NIKI 13
P 509363
NIKI 12
P 509362
NIKI 11
P 509361
NIKI 10
P 509360
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NIKI 8
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NIKI 7
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NIKI 4
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NIKI 3
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NIKI 2
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NIKI 1
1 MILE
IW00749
P 513343
MONT Placer
Au Project
Work
Area
0 0.3 . 0.6km
1500
N
Modified From
GeoYukon .com
MONT Placer Au Project
CLAIM MAP &
WORK AREA
Fig. 2 Jun/21 BH

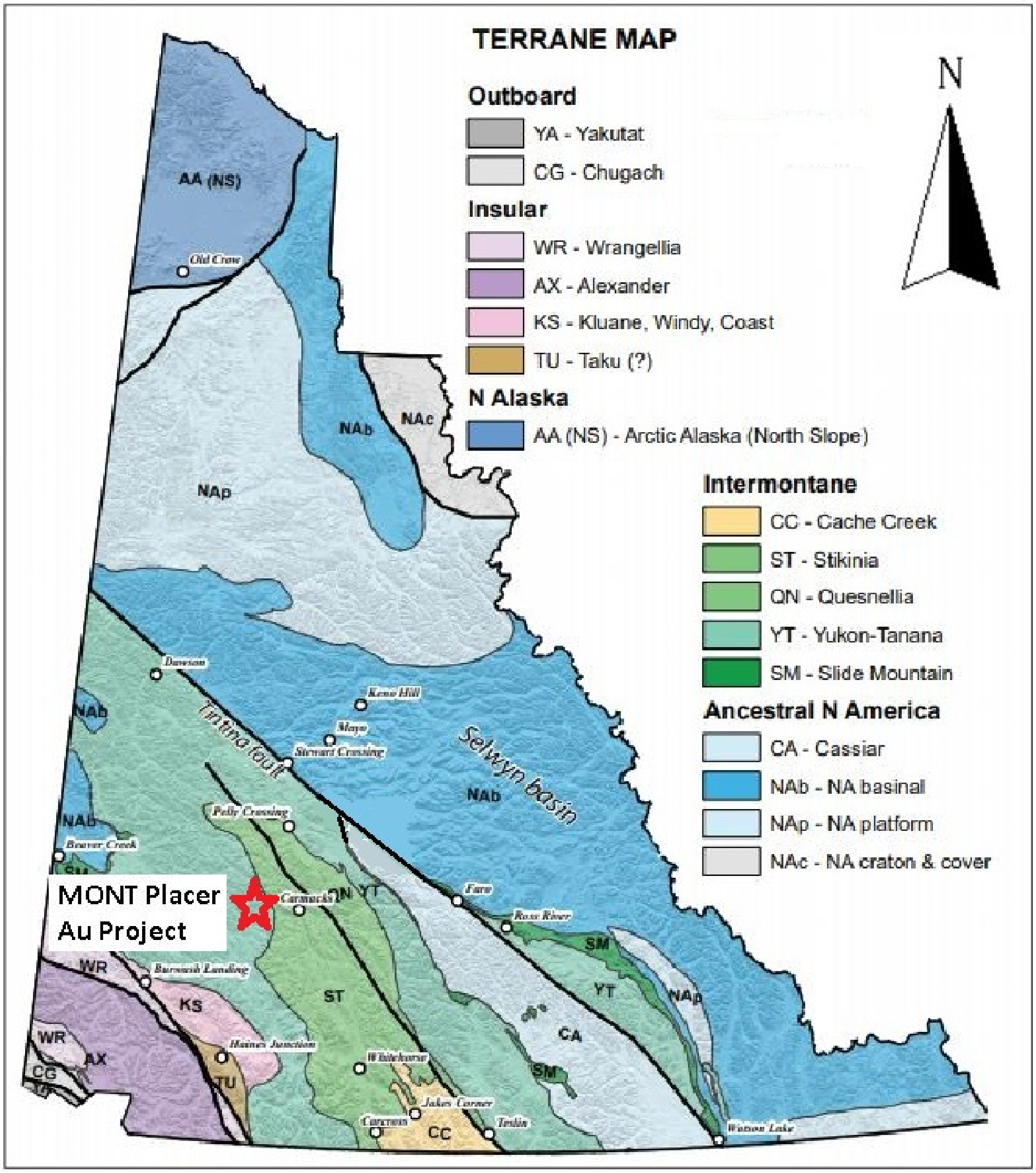
GEOLOGY

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, cut by younger Cretaceous intrusive and volcanic rocks to the north, 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).

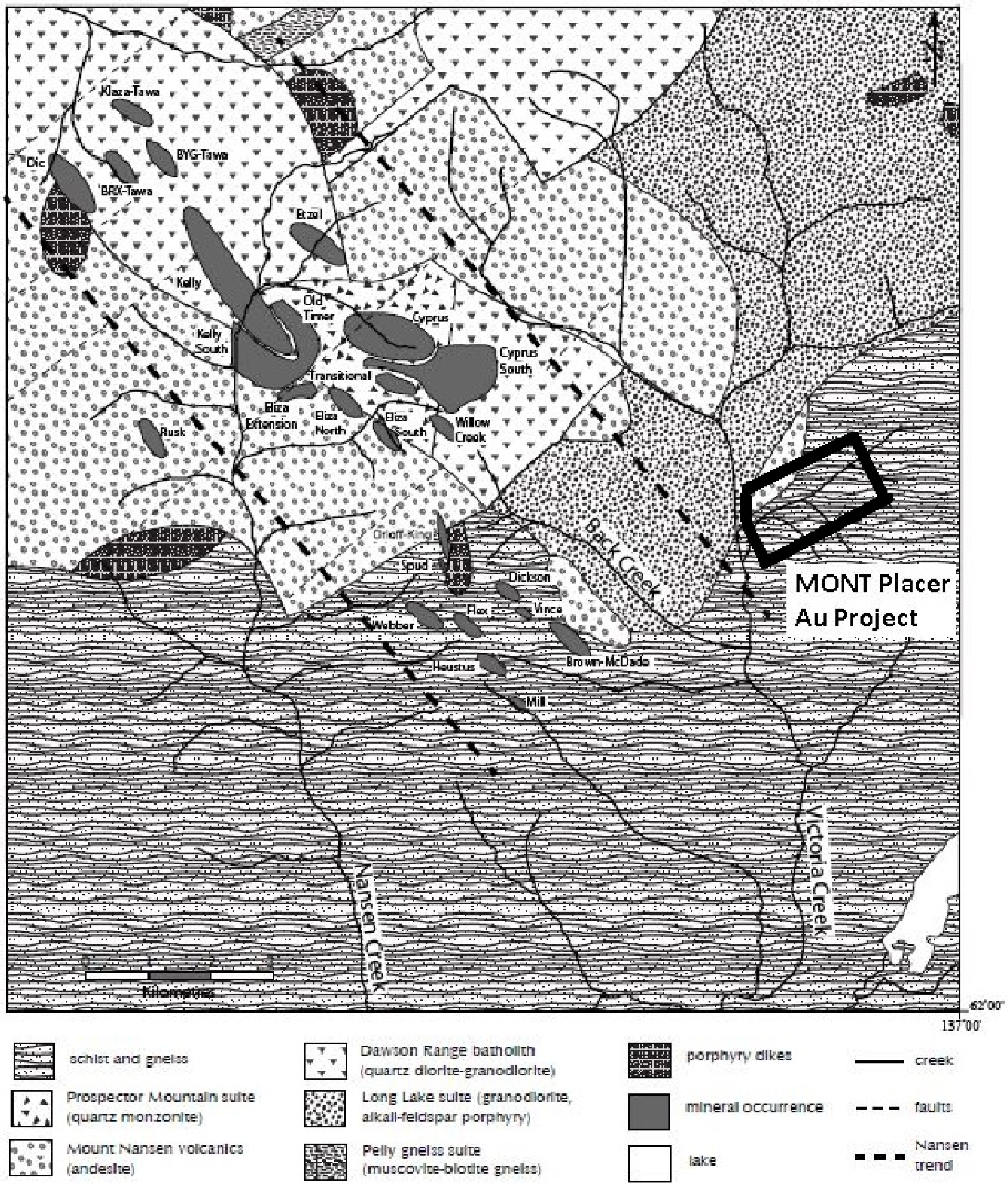
The area of the MONT project is underlain by older schist, gneiss and amphibolite to the southeast, intruded by younger granite, granodiorite and monzonite to the northwest. Late porphyry dikes, associated with gold-bearing veins, are believed to intrude parallel to this contact, and may extend across the Montgomery Creek valley (Fig. 5). The Ang vein, south of Montgomery Creek, the Wind occurrence near the headwaters of Montgomery Creek, as well as the high-grade Montgomery vein float boulder, lying within the MONT project prospecting lease, all indicate bedrock sources to feed gold into the surficial sediments.

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.



Modified from
Colpron & Nelson,
2011

MONT Placer Au Project
YUKON GEOLOGY
Fig. 3 Jun/21 BH

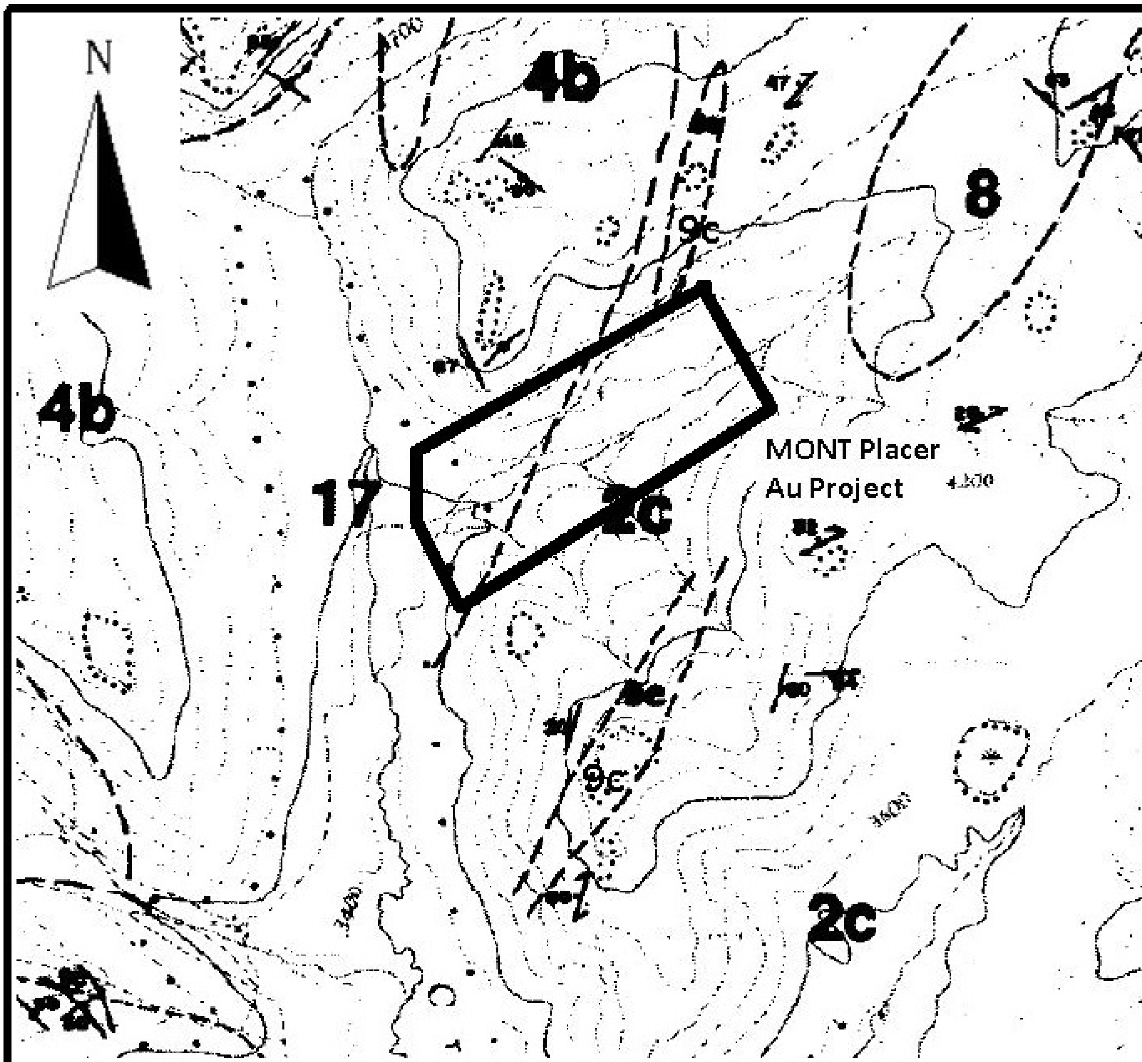


From Englehardt et al, 2015, as modified from Hart & Langdon, 1998

MONT Placer Au Project

MT. NANSEN GEOLOGY

Fig. 4 Jun/21 BH



17 Quaternary: unconsolodated alluvium
9c Cretaceous to Paleocene; Mt. Nansen Ste; quarts-feldspar peophyry dikes, white wx, pyritic
8c Cretaceous to Paleocene; Bow Ck Granite; pink wx dikes & border phases; quartz-feldspar porphyritic
4b Early Jurassic; Mt Freegold meta-plutonic ste; plagioclese-hornblende monzonite
2c Paleozoic; schist & gneiss; biotite-quartz-feldspar schist; feldspar augen gneiss; minor amphibolite

From G.G. Carlson, Open File 1987-2

MONT Placer Au Project

PROPERTY GEOLOGY

Fig. 5 Jun/21 BH

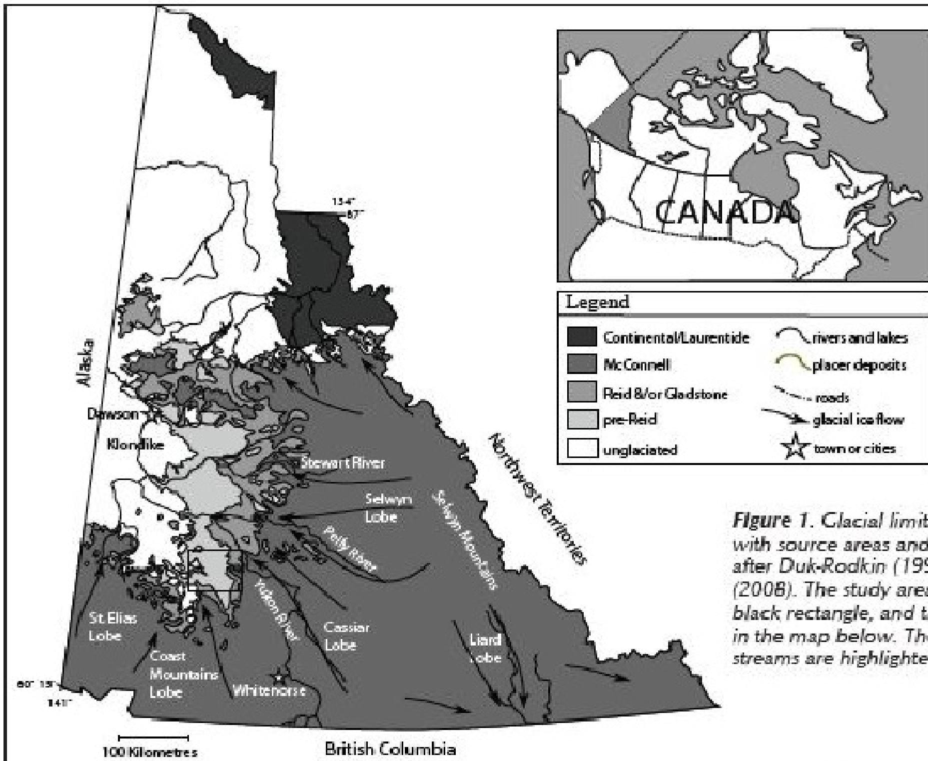
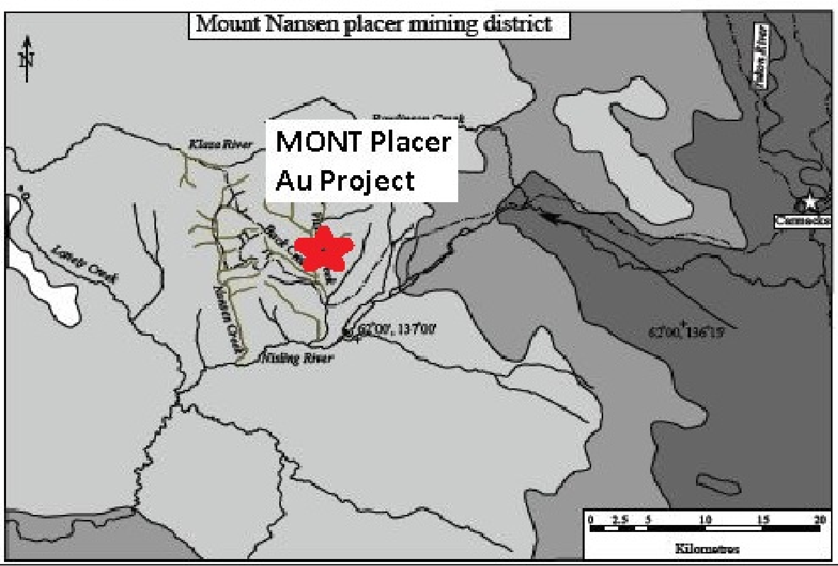


Figure 1. Glacial limits map of Yukon with source areas and ice flow modified after Duk-Rodkin (1999) and Ward et al. (2008). The study area is indicated by a black rectangle, and the area is enlarged in the map below. The placer gold bearing streams are highlighted in yellow.



From Englehardt et al, 2015

MONT Placer Au Project

GLACIATION

Fig. 6 Jun/21 BH

WORK PROGRAM; SUMMER, 2021

A small program of flagged grid installation, surficial geologic mapping, magnetic surveying, VLF-EM surveying and sampling was completed over 17 days from June 15 to July 1, 2021. Two days were lost due to rain, and one day was spent going to Carmacks for gas, groceries and supplies. This initial phase of the work program was focused on the lower portion of Montgomery Creek where stripping, pits and muck piles provided evidence of previous interest in the placer gold potential of this creek. This preliminary report summarizes the results from the first six lines of work, and this data will be incorporated into a final report on project completion later in 2021.

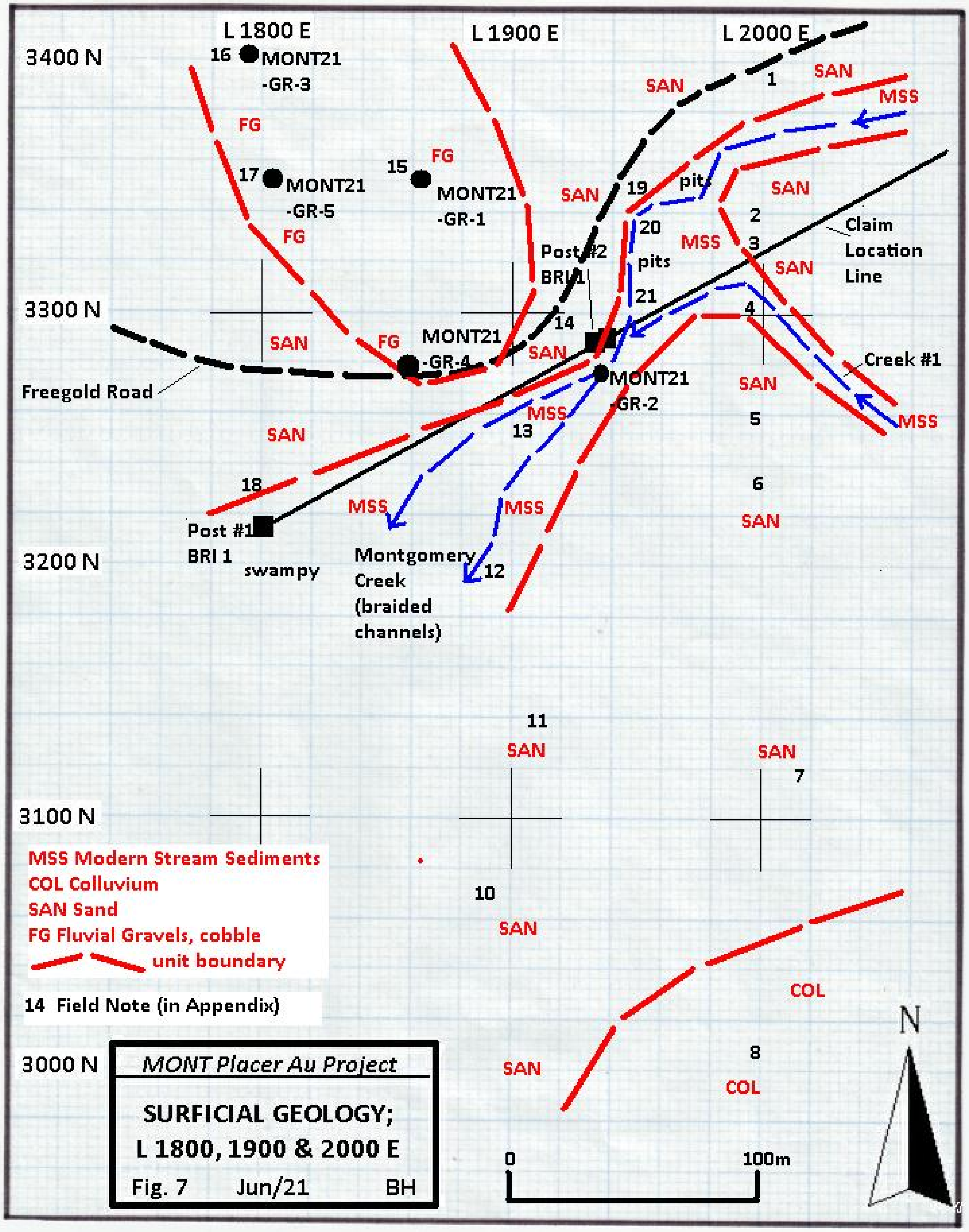
A flagged grid was installed over portions of the BRI 1 placer claim and lower section of the prospecting lease to provide control for subsequent work. Lines were spaced at 100m with stations marked at 20m intervals along lines. Grid stations were located by GPS, using a Garmin 64S instrument. Specifications for this instrument indicate 3m accuracy, but where visible over a distance, accuracies appear to be better than 2m. Lines were run north-south on UTM coordinates, with lines mostly 400m long. Lines and stations were numbered with the last four digits of the NAD83, Zone 8, UTM coordinates, so grid easting plus 340,000 equals true UTM easting, while grid northing plus 6,880,000 equals true UTM northing. Stations at 20m marks were flagged with pink flagging, with northing coordinate marked, while stations at 100m locations were marked with line number and northing, and were done with orange flagging. Locations for readings taken at 10m points were estimated between flagged stations. The grid for this phase of the work totaled 2.2 line km. Lines 1900 and 2000E were run from 3000N to 3400N, while line 1800E, the first line in the BRI 1 claim, was only 200m long, from 3200N to 3400N, due to the orientation of the claim. Lines 2100, 2200 and 2300E were offset by 200m to the north, running from 3200N to 3600N, in order to stay roughly centered on the prospective area of the valley.

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. The objective was to characterize the surficial materials, determine whether the known creeks had any distinctive geophysical characteristics, attempt to project those signatures into other overburden covered area, and compare those features with other placer creeks in the area, especially nearby Back Creek. In the course of this work, any prospective gravels would be sampled, screened and panned/sluiced. Sample descriptions and field notes from the mapping are included in Appendix I. Several photographs are in Appendix II.

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 at L2000E/3400N. All data was leveled relative to this point, which averaged at 56,367 nT, in direct proportion to elapsed time. Minimal solar activity and variations in the geomagnetic field were noted on survey days. The maximum drift within a loop was 13 nT. Data error is expected to fall within a plus/minus 5 nT bracket, which is adequate for this survey.

The VLF electromagnetic survey was completed using a Geonics EM-16 instrument tuned to NPM, Hawaii, 21.4 khz. Details on this instrument are included in Appendix III. Although not optimum in terms of field 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 south-to-north, plus-to-minus (or sometimes more negative) in-phase crossovers marking conductive horizons.

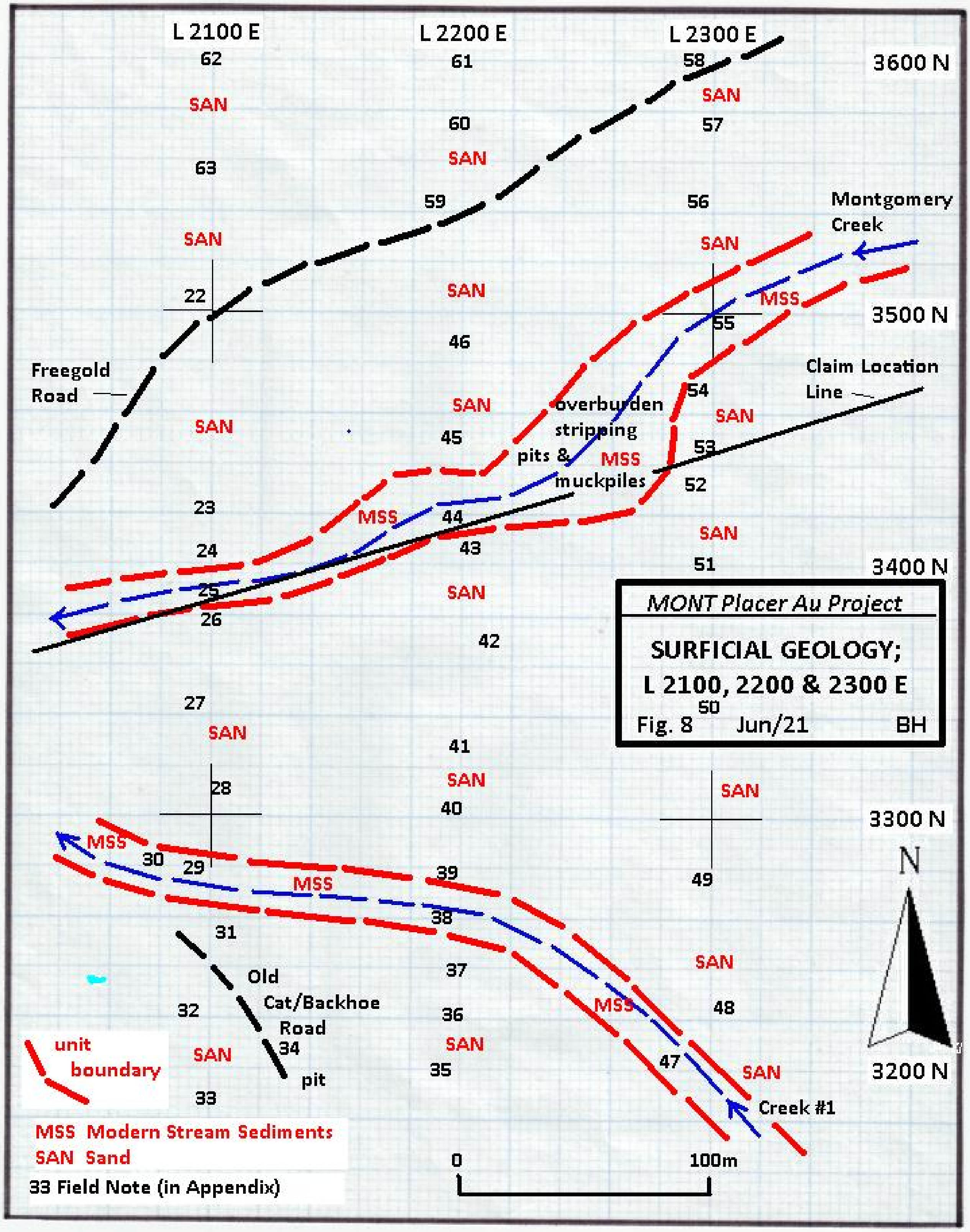
Results for surficial geologic mapping are shown on Figure 7 for lines 1800, 1900 and 2000E, and Figure 8 for lines 2100, 2200 and 2300E. Organic material, mainly brown sphagnum and black humus, typically about 10 cm thick but thicker along creeks and low flat areas, is ignored in this mapping. Also ignored is the ubiquitous white to grey White River tephra deposit, typically 5 to 10 cm thick, immediately underlying the organics.



MONT Placer Au Project

SURFICIAL GEOLOGY;
L 1800, 1900 & 2000 E

Fig. 7 Jun/21 BH


L 2100 E
L 2200 E
L 2300 E
3600 N
3500 N
3400 N
3300 N
3200 N
62
61
58
SAN
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59
56
Montgomery Creek
22
MSS
55
46
Freegold Road
Claim Location Line
54
overburden stripping pits & muckpiles
45
53
52
23
MSS
44
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42
MONT Placer Au Project
SURFICIAL GEOLOGY;
L 2100, 2200 & 2300 E
Fig. 8 Jun/21 BH
50
27
41
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49
38
31
37
Old Cat/Backhoe Road
32
36
48
34
35
47
pit
33
Creek #1
unit boundary
MSS Modern Stream Sediments
SAN Sand
33 Field Note (in Appendix)
0
100m
N

By far the most common surficial lithology in the map area was sand, shown as unit SAN. This sand is brown when wet, but light tan-brown when dry. At the bottom of the valley this sand unit is about 10 to 15 meters thick, as evidenced along a scarp at the bottom of the valley which diagonals across line 1900E from north-northeast to south-southwest, separating low ground along Victoria Creek from higher ground up Montgomery Creek valley. It is possible that this sand unit was deposited as a late glacial outwash deposit against remnant valley glacier ice in Victoria Creek, resulting in this scarp at the west edge of the SAN unit. Montgomery Creek and its tributary, shown as Creek #1, have incised small valleys into this sand. This sand unit fines upward, as evidenced by silt at the north ends of lines 2100, 2200 and 2300E, the highest elevation in this work area, and to the west, as suggested by clay-silt on line 1800E, just north of Montgomery Creek. This sand contains from 5% to 30% clasts, ranging from pebbles to cobbles, increasing in amount and angularity with depth. Sand along the Freegold road on lines 2000E to 2300E generally has only 5% subrounded pebbles, while sand along Montgomery Creek and in trench muck piles from lower elevations has up to 30% subangular pebbles and cobbles. Clast lithologies are about half granite/granodiorite/porphyry, probably derived from younger intrusive rocks to the northwest, and half schistose rocks, ranging from sericite schist and black biotite-amphibole schist, to diorite-gabbro, probably derived from old basement rocks to the southeast.

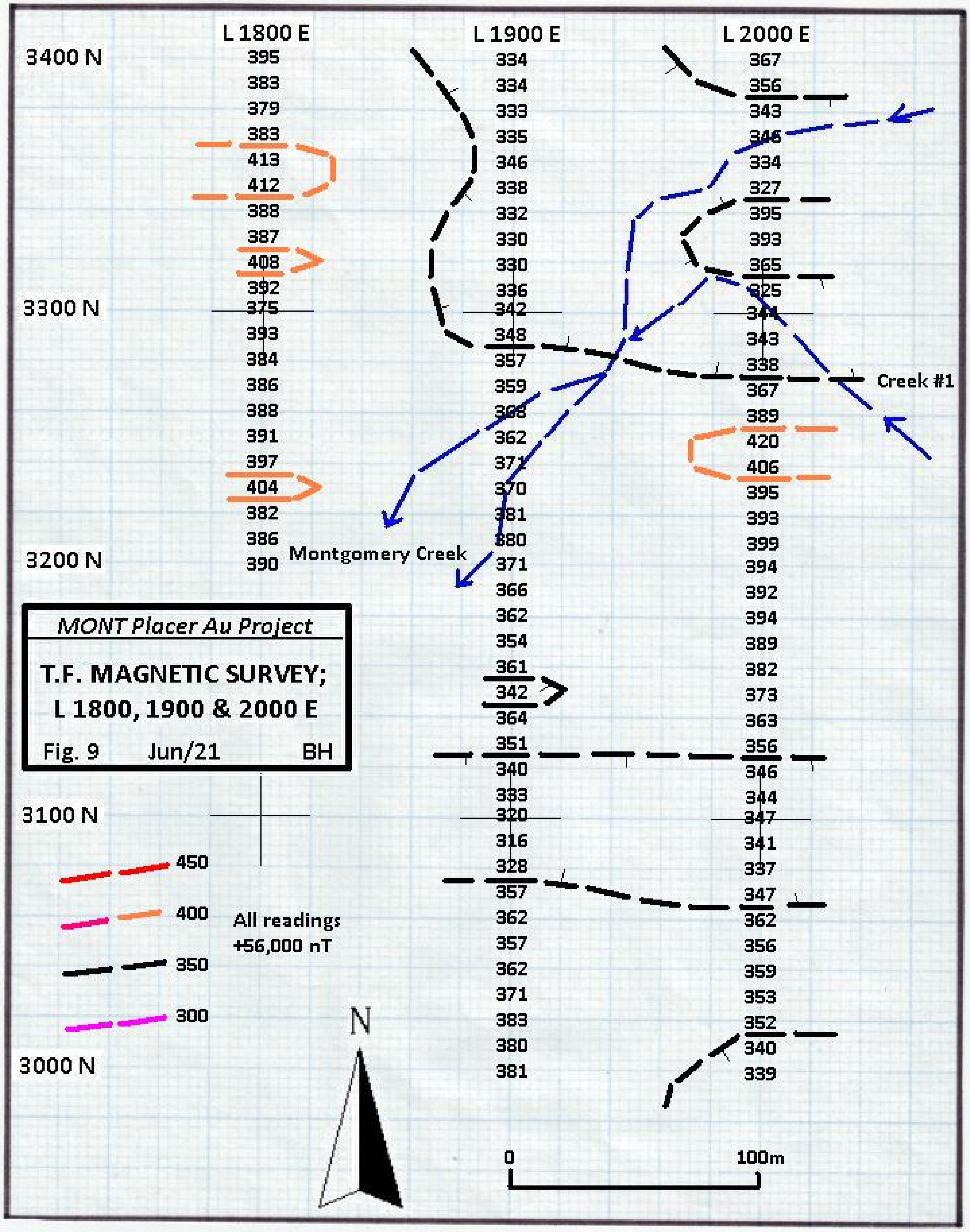
An interesting feature of this sand unit is that it appears to contain significant fine magnetite, which probably explains the rusty nature of the water and gravels along Montgomery Creek. Streaks of black magnetite are noted in the sands along Montgomery Creek and Creek #1. The top 10 to 30 cm of the SAN unit is typically weathered with yellowish-brown (limonite?) oxidation, and locally reddish-brown (hematitic?) rusting.

Colluvium (unit COL) was only noted in one area at the south end of line 2000E. This material was brown, with 30% angular clasts of schist and diorite, probably derived from immediately upslope, in a clay-silt-sand matrix.

Modern stream gravels (unit MSG) are present within the bottom of the incised valleys of Montgomery Creek and Creek #1. These gravels are generally coated with rust. These creek channels are typically filled with pebble to cobble sized subrounded to angular clasts, with silt-sand overflow material adjacent to the channels in the narrow flat creek bottoms. In the braided channels of lower Montgomery Creek on lines 1800 and 1900E only pebble gravels are present, but cobble sizes and rare boulders are present on lines 2000E through 2300E. Clast lithologies roughly match those in the sand (SAN) unit from which these sediments are derived, with roughly half being granite, granodiorite and porphyry, while the other half tend to be more angular clasts of schist and diorite. Clasts of andesite/basalt start to appear in the lower part of Montgomery Creek, with a probable Victoria Creek provenance, but are not generally present higher on Montgomery Creek.

An area of rounded fluvial gravels (unit FG) was found in the low ground at the north ends of lines 1800E and 1900E on the BRI 1 claim. At 1854E/3272N, just north of the Freegold road, these fluvial gravels were found to be overlain by about 30 cm of sand (SAN unit), clearly indicating that they are an older deposit. These gravels are brown coloured and clast supported, with about 60% pebbles, cobbles and minor boulders, with 40% sand. These clasts are about 60% granite, granodiorite and aplite, with 40% fine-grained dark andesite/basalt. This fluvial gravel unit is clearly different from the Montgomery Creek clast lithologies, and is believed to be a Victoria Creek deposit, perhaps from a cut-off meander. Of interest is that these gravels are visually identical to gravels on nearby Back Creek which host significant gold values.

The total field magnetic survey results are shown on Figures 9 and 10. Magnetic readings in this work area were very flat, falling within a 200 nT range, from 56,294 nT to 56,482 nT. Ironically, one of the premises of using this survey in this work, was that magnetite, associated with gold, might be detected in concentrations along creeks, but along Montgomery Creek, precisely the opposite was found. The creeks in this work area show a slight magnetic low, of about 50 nT. This is believed to be due to the fact that the creeks have incised small valleys


L 1800 E
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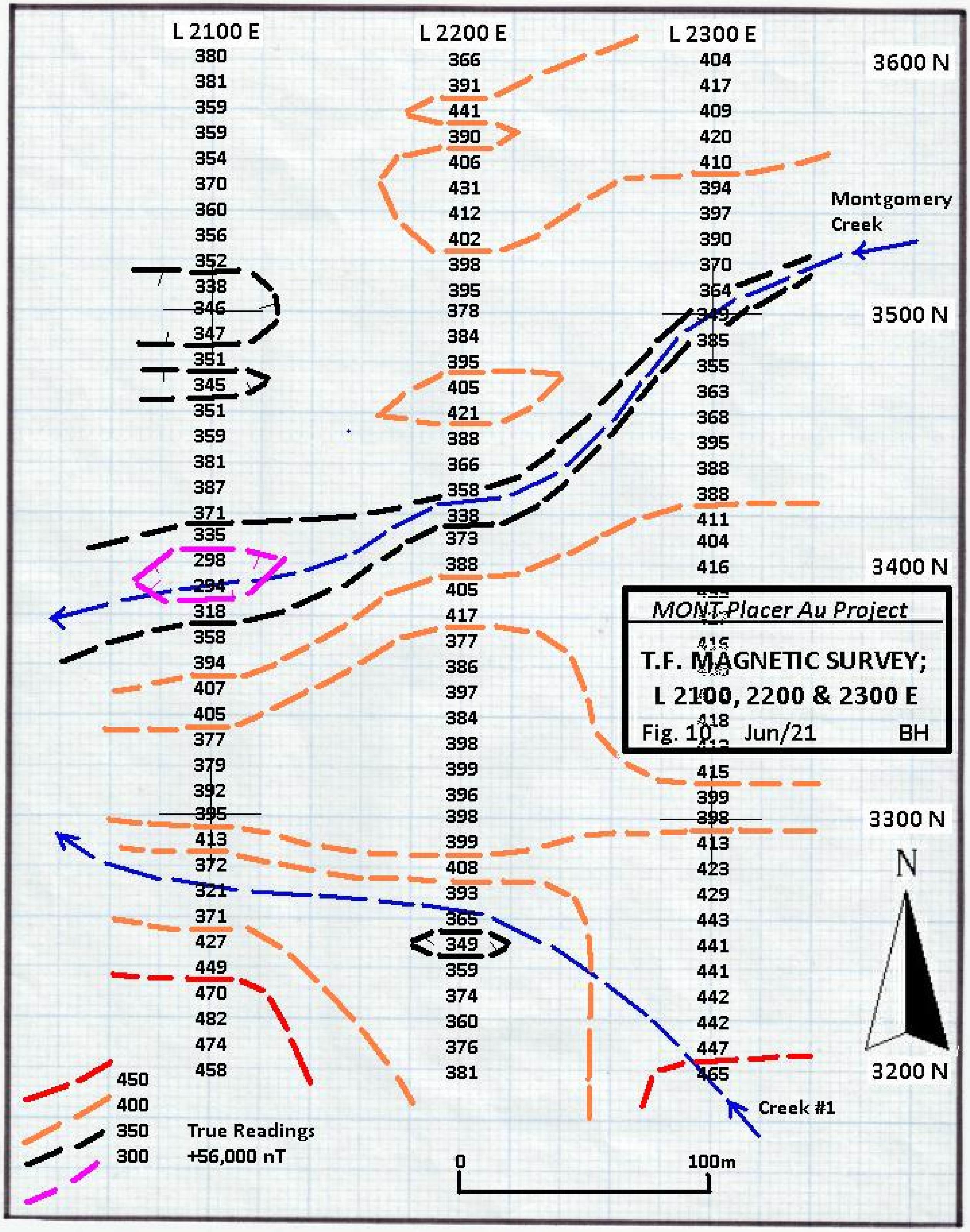
Creek #1
Montgomery Creek
MONT Placer Au Project
T.F. MAGNETIC SURVEY;
L 1800, 1900 & 2000 E
Fig. 9
Jun/21
BH
450
400
350
300
All readings
+56,000 nT
N
0
100m


L 2100 E
L 2200 E
L 2300 E
380 381 359 359 354 370 360 356 352 338 346 347 351 345 351 359 381 387 371 335 298 294 318 358 394 407 405 377 379 392 395 413 372 321 371 427 449 470 482 474 458
366 391 441 390 406 431 412 402 398 395 378 384 395 405 421 388 366 358 338 373 388 405 417 377 386 397 384 398 399 396 398 399 408 393 365 349 359 374 360 376 381
404 417 409 420 410 394 397 390 370 364 349 385 355 363 368 395 388 388 411 404 416
415 399 398 413 423 429 443 441 441 442 442 447 465
3600 N
3500 N
3400 N
3300 N
3200 N
Montgomery Creek
Creek #1
N
MONT Placer Au Project
T.F. MAGNETIC SURVEY;
L 2100, 2200 & 2300 E
Fig. 10 Jun/21 BH
450
400
350
300
True Readings
+56,000 nT
0
100m

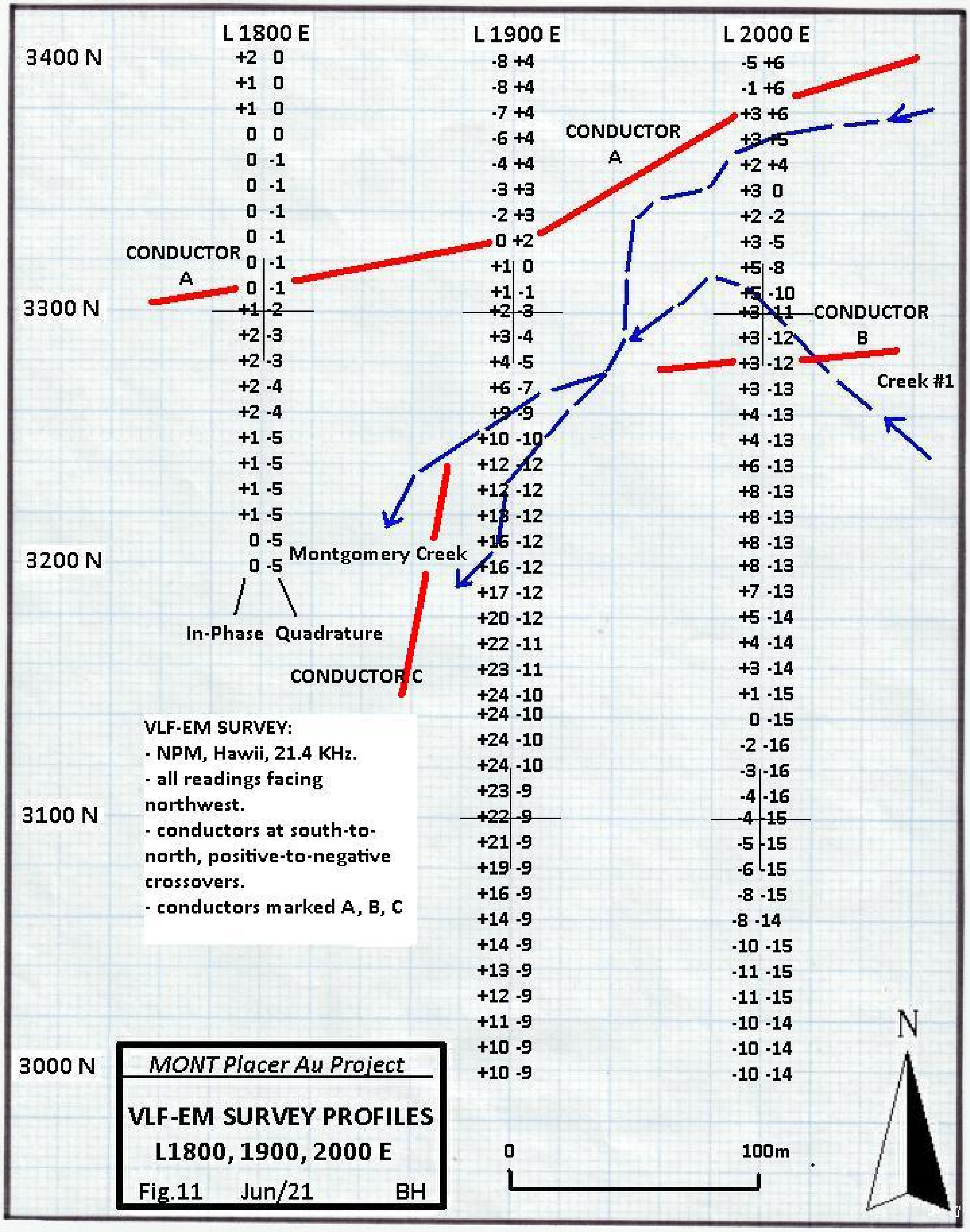
into the overlying SAN unit, removing a volume of the magnetite-bearing sands, lowering the magnetic field intensity over the creeks.

As with the magnetic survey, the VLF-EM survey returned very flat results, indicating a lack of significantly conductive rocks or surficial materials in the subsurface (Figures 11 and 12). Only line 1900E showed an anomaly believed due to conductive materials, conductor C. However, given its location between lines 1800E and 1900E along the braided channels of Montgomery Creek, and below the SAN unit scarp where fine sediments are present, this conductor is believed to be due to water-bearing clays along the creek. Most of the other conductive anomalies show an association with creeks, where conductive sediments would be expected to be found, but the amplitude of the anomalies is so small that it is questionable whether this will be a useful technique.

Five samples were collected from locations on the BRI 1 claim. Donald Hood (author's brother) assisted with sampling. Sample locations are shown on Figure 7 as MONT21-GR-1 through -5. Sample descriptions are in Appendix I. Sample MONT21-GR-2 was collected from the modern stream gravels (MSG unit) of Montgomery Creek near the #2 post of the BRI 1 claim. About 4 gallons of gross sample was collected from this material, screened at 0.25" to about 1 gallon, and panned, recovering 3 small specks of gold. A 4 gallon sample was also collected at MONT21-GR-4 in the FG unit fluvial gravels, screened at 0.25" to about 1 gallon, and panned, recovering 2 nice specks of gold. The remaining samples were 2 gallons, with only MONT21-GR-3 returning 1 speck of gold.

CONCLUSIONS & RECOMMENDATIONS

A preliminary program of flagged grid installation, mapping and sampling of surficial materials, magnetic surveying and VLF-EM surveying was completed over the lower portion of Montgomery Creek during June and early July, 2021. This section of the creek was subjected to previous placer examination, as evidenced by local stripping, pits and muck piles. Mapping determined that most of the area



L 1800 E
L 1900 E
L 2000 E
3400 N
3300 N
3200 N
3100 N
3000 N
+2 0
+1 0
+1 0
0 0
0 -1
0 -1
0 -1
0 -1
0 -1
0 -1
+1 -2
+2 -3
+2 -3
+2 -4
+2 -4
+1 -5
+1 -5
+1 -5
+1 -5
0 -5
0 -5
-8 +4
-8 +4
-7 +4
-6 +4
-4 +4
-3 +3
-2 +3
0 +2
+1 0
+1 -1
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+14 -9
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+11 -9
+10 -9
+10 -9
-5 +6
-1 +6
+3 +6
+3 +5
+2 +4
+3 0
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+7 -13
+5 -14
+4 -14
+3 -14
+1 -15
0 -15
-2 -16
-3 -16
-4 -16
-4 -15
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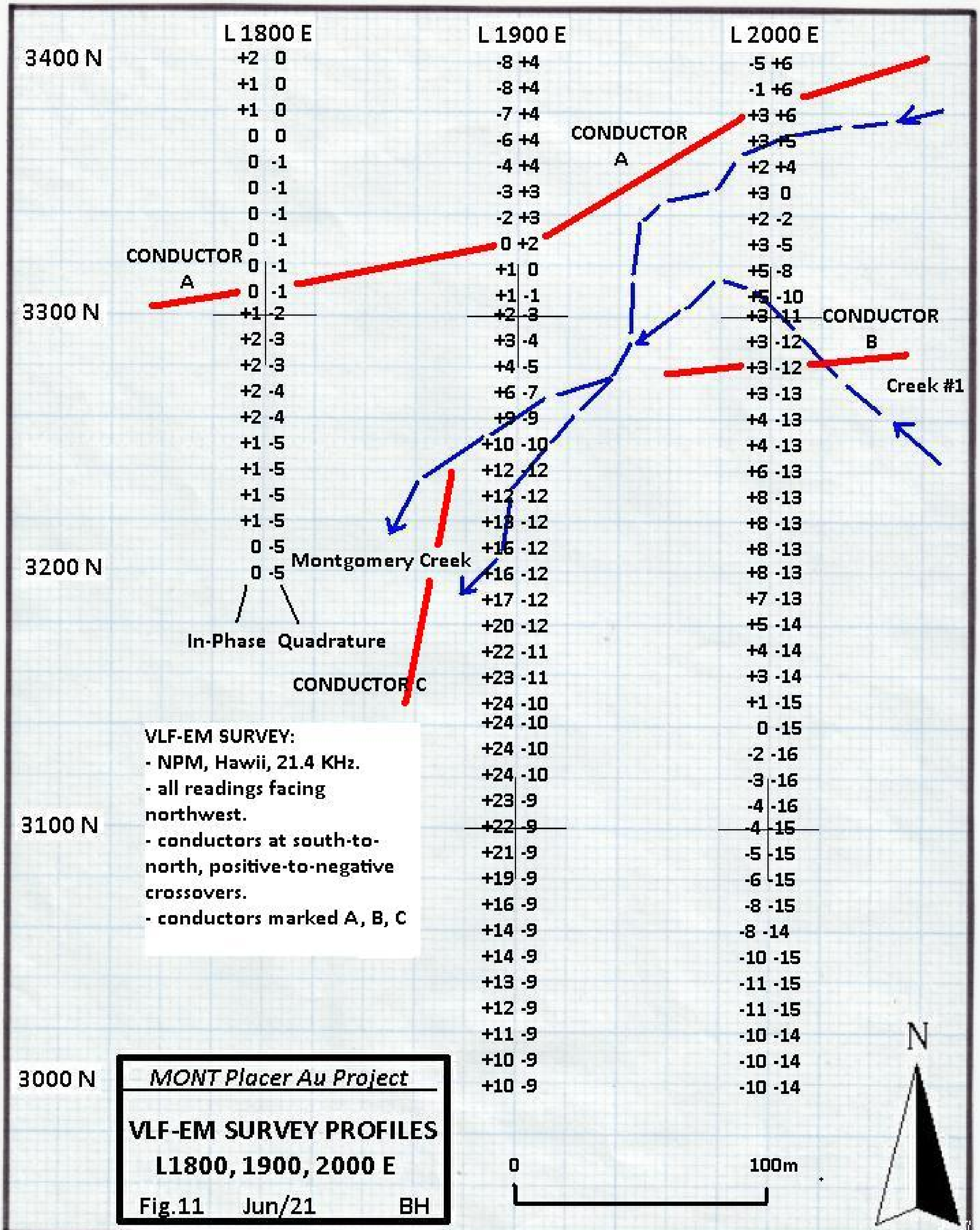
-6 -15
-8 -15
-8 -14
-10 -15
-11 -15
-11 -15
-10 -14
-10 -14
-10 -14
CONDUCTOR A
CONDUCTOR A
CONDUCTOR B
CONDUCTOR C
Creek #1
Montgomery Creek
In-Phase
Quadrature
VLF-EM SURVEY:
- NPM, Hawii, 21.4 KHz.
- all readings facing northwest.
- conductors at south-to-north, positive-to-negative crossovers.
- conductors marked A, B, C
MONT Placer Au Project
VLF-EM SURVEY PROFILES
L1800, 1900, 2000 E
Fig.11 Jun/21 BH
0
100m
N



L 1800 E
L 1900 E
L 2000 E
3400 N
3300 N
3200 N
3100 N
3000 N
+2 0
+1 0
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+1 -5
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0 -5
0 -5
In-Phase
Quadrature
-8 +4
-8 +4
-7 +4
-6 +4
-4 +4
-3 +3
-2 +3
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CONDUCTOR A
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- conductors marked A, B, C
MONT Placer Au Project
VLF-EM SURVEY PROFILES
L1800, 1900, 2000 E
Fig.11 Jun/21 BH
0
100m
N

was overlain by a thick sand deposit, as is common in many creeks in the Mt. Nansen district. However, a fluvial gravel that may be prospective for placer gold was located in the lower area of the creek, below the area of sand cover. Limited sampling has returned gold specks from panning.
VLF-EM and magnetic surveys returned very flat results, indicating that the underlying rocks and surficial materials are neither significantly magnetic nor conductive. More work will be needed along the balance of the valley to evaluate the utility these geophysical techniques.

Additional work is recommended to evaluate the upper portions of the Montgomery Creek valley. Further sampling, with larger volumes, needs to be done on the fluvial gravels (FG unit) on the BRI 1. Ultimately, drilling or deeper backhoe sampling will be needed to evaluate the deeper placer gold potential in this creek.

William C. Hood, P.Geo.
July 4, 2021

CERTIFICATE

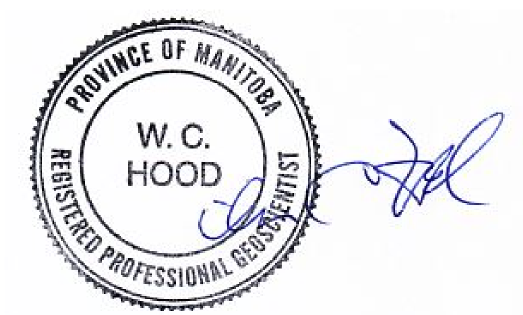
For: William C. Hood, P.Geo.
P.O. Box 1722; 508 Elm Ave.
Beausejour, Manitoba
Canada R0E0C0
(204)268-3455
bhood @ mts.net

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 gold, volcanogenic copper-zinc, magmatic nickel-copper-PGE, pegmatitic tantalum-lithium-cesium, kimberlitic diamonds and various industrial mineral commodities.



William C. Hood, P.Geo.
July 4, 2021

APPENDIX I
SAMPLE DESCRIPTIONS & FIELD NOTES

SAMPLES:

MONT21-GR-1: 1865E/3350N; probable fluvial stream gravel; brown gravels; subrounded; sand to cobble size; 60% granite/granodiorite, 40% fine-grained andesite/basalt, minor diorite; collected 2.5 gallon sample; screened to about 0.5 gallon of -0.25”; panned – no gold.

MONT21-GR-2: 1933E/3272N; modern stream gravels in Montgomery Ck near #2 post of BRI 1 & #1 post of prospecting lease; rusty brown gravels; mostly subangular; silt-sand to cobble size; 70% granite/granodiorite, 30% schist; minor diorite; collected 4.5 gallon sample; screened to about 1 gallon of 0.25”; panned – 3 small specks.

MONT21-GR-3: 1790E/3405N; probable fluvial stream gravel; brown gravels; subrounded; 60% granite/granodiorite, 40% fine-grained andesite-basalt, minor diorite; collected 2.5 gallon sample; screened to about 0.5 gallon of -0.25”; panned – 1 speck gold.

MONT21-GR-4: 1854E/3272N; fluvial stream gravel under about 30 cm of fine sand; brown gravels; subrounded to rounded; sand to boulder size; clast supported with about 25% sand, 40% pebble-cobble & 35% rounded boulders; collected 4 gallon sample; screened to about 1 gallon of -0.25”; panned – 2 nice specks gold.

FIELD NOTES:

1) 1995E/3402N; 1m section on north side of Freegold Road; 15 cm of organics/ash/fine sand, then 10 cm of reddish-brown rusty (hematitic?) sand;

then 55 cm+ of fine tan/light brown sand with minor pebbles; pebbles are multiple lithologies.

2) 1995E/3338N; 5 cm organics; then 20 cm rusty brown sand; then 20 cm+ of tan/light brown pebbly sand.

3) 2000E/3325N; excellent exposure of tan/light brown pebbly sand with 5% pebbles mainly granite with minor schistose diorite.

4) 1990E/3315N; Creek #1; modern stream deposits; 50% brown silt-sand, 50% pebbles-cobbles mostly rust-covered; clasts are mainly light brown schist with minor diorite, granite & quartz.

5) 2002E/3265N; 5 cm organics; 5 cm light grey ash; 10 cm yellowish-brown rusty (limonitic?) sand; then into 20 cm+ of tan-brown sand with minor pebbles.

6) wide area of hummocky moss with brush & few trees.

7) thin organics around spruce tree; 10 cm organics; 5 cm ash; then into 30 cm+ of brown probable colluviums with 30% clay-silt, 40% brown sand & 30% angular pebbles-cobbles of variable schist.

8) 20 cm mixed organics, ash & fine sand; then into 30 cm+ of brown colluviums with 20% clay-silt, 50% brown sand & 30% variable schist & diorite pebbles-cobbles.

9) 1900E/2030N; 15 cm mixed organics, ash & sand; into 30 cm dark yellowish-brown sand; then into 5 cm+ of light tan/brown sand; minor pebbles.

10) 1895E/2075N; 10 cm organics; then 20 cm brown sand; then into ice/permafrost.

11) 1910E/3140N; 5 cm organics; 20 cm dark yellowish-brown sand; then into 10 cm+ of tan-brown pebbly sand.

12) 1895E/3220N; modern stream sediments; light brown silt-sand overlain by 20 cm organics.

13) 1900E/3260N; braided stream channels; large trees; brown silt-sand overflow sediments over organics; fine gravels with clasts up to 5 cm in channels; clasts are angular to subrounded brown slightly rusty schist fragments; minor quartz.

14) 1920E/3295N; south side of Freegold road; pebbly brown sand with 30% pebbles to cobbles; mainly brown angular schist fragments with other minor lithologies.

15) approx 1850E/3350N; along southeast side of very small creek; area of distinct white moss/lichen; 5 cm organics; into 30 cm+ of brown clast-supported rounded fluvial gravels; pebbles to cobbles; multiple lithologies; 75% granite/granodiorite/diorite, 25% dark intermediate to mafic volcanics; look similar to fluvial pay gravels on Back Creek.
16) 1795E/3410N; same fluvial gravels as at 15).
17) 1805E/3355N; 11110 cm organics; 10 cm fine light brown sand; 20 cm+ of rounded gravels as at 15) & 16) with silt-sand matrix.
18) 1800E/3230N; 10 cm organics, 10 cm ash; then into 30 cm+ of mucky clay-silt; little sand & no pebbles; modern stream sediment or fine facies of sand?
19) 1955E/3330N; between creek & road; 10 cm organics; 10cm ash; then into 50 cm+ of brown sand with 20% pebbles to cobbles angular to subrounded with various lithologies.
20) 1960E/3325N; modern stream gravels; pebbles to cobbles to minor boulders; subangular to subrounded; sitting on clay-silt base; 75% granite & porphyry, 15% dark grey-black basalt, 10% assorted granodiorite/diorite & sericite schist.
21) 1957E/3315N; top of backhoed trench muck pile; possible fluvial stream gravels from bottom (?) of adjacent pit about 3m deep; about 50% sand & 50% pebbles to cobbles; 60% granite/granodiorite/porphyry, 20% basalt, 20% assorted diorite & schist.
22) 2090E/3500N; north side of Freegold road cut; 10 cm organics; 10 cm ash & fine sand; then into 30 cm+ of well-sorted fine sand which was light brown wet & light tan-brown dry with minor rounded pebbles.
23) 2102E/3420N; same as 22).
24) 2100E/3407N; 5 cm organics; 10 cm reddish-brown (hematitic?) oxidized fine sand; then into 30 cm+ of tan-brown fine sand with 5% pebbles; pebbles are mix of angular schist & subrounded granite.
25) 2100E/3390N; 30 cm organics; then into sand along creek; no gravels.
26) 2103E/3380N; 10 cm organics; then 10 cm yellowish-brown (limonitic?) oxidized sand; then into 30 cm+ of tan-brown sand with 10% pebbles to cobbles with 50% angular schist & 50% subrounded granite.
27) 2098E/3343N; 10 cm organics; 10 cm ash; then into 20 cm+ of yellowish-brown oxidized sand with 10% pebbles to cobbles with 50% granite & 50% schist.

28) 2105E/3310N; 10 cm organics; 10 cm ash; into 20 cm+ of fine tan-brown sand with minor pebbles & minor organic layers.
29) 2095E/3285N; no organics on this slope; 5 cm light tan-brown sand with pebble lag on surface; into 30 cm reddish-brown sand with 10% pebbles to cobbles with 50% schist & 50% granite; then into 5 cm+ of tan-brown sand.
30) about 2075E/3285N; 20 cm size white quartz float with rusty fracture fillings.
31) 2102E/3253N; 10 cm organics; 5 cm ash; 5 cm yellowish-brown sand; into 20 cm+ of tan-brown sand with minor pebbles.
32) 2095E/3220N; 20 cm organics; 10 cm+ of fine tan-brown sand.
33) 2100E/3194N; open hummocky moss & lichen, few trees; 20 cm organics; then into ice/permafrost.
34) about 2125E/3200N; line of bushes going downslope appears to be old road or shallow trench; 30 cm+ of tan-brown fine sand with minor pebbles.
35) 2195E/3200N; open treeless area; 10 cm organics; 15 cm ash; 10 cm clay-silt; then into ice/permafrost.
36) 2200E/3225N; 10 cm organics; 5 cm ash; then into 20 cm+ of fine brown silt.
37) 2205E/3240N; 20 cm organics; 5 cm ash; then into ice/permafrost.
38) 2190E/3255N; modern stream sediments here are fine light brown silt-sand.
39) 2200E/3270N; north bank of creek; 10 cm mixed organics & ash; then 20 cm yellowish-brown fine sand; then into 10 cm+ of tan-brown sand with rare pebbles.
40) 2200E/3300N; 10 cm organics; 5 cm ash; 5 cm yellowish-brown silt; the into ice/permafrost.
41) 2200E/3330N; 10 cm organics; 5 cm ash; 20 cm+ of yellowish-brown fine sand with 20% pebbles with 50% angular schist & 50% subrounded granite.
42) 2210E/3375N; 10 cm organics; 5 cm reddish-brown sand; 10 cm yellowish-brown sand; then into 20 cm+ of tan-brown sand with 10% pebbles to cobbles with 50% schist & 50% granite.
43) 2203E/3412N; 10 cm organics; 10 cm ash; then 2 cm black organic layer; then into 20 cm+ of brown fine sand with minor pebbles.
44) 2200E/3425N; valley bottom is sand with overlying organics; braided channels of the creek filled with subangular pebbles to cobbles with 40% schist, 40% granite & 20% diorite & minor quartz.

45) 2200E/3453N; 5 cm organics; minor ash; 10 cm reddish-brown fine sand; then grades into 30 cm+ of yellowish-brown fine sand with 30% cobbles with 60% granite, 20% schist & 20% diorite.
46) 2200E/3490N; 10 cm organics; 5 cm ash; 20 cm+ of light tan-brownsilt with no pebbles.
47) 2295E/3195N; modern stream sediments mainly fine sand washed down from eroding banks; sand is brown when wet & light tan when dry; 5% pebbles; pebbles are 60% granite/granodiorite, 20% sericite schist & 20% black amphibole schist; lots of magnetite in streaks in creek.
48) 2303E/3225N; open treeless area; 10 cm organics; then into same fine sand as at 47).
49) 2298E/3278N; open mossy brushy area with a few scattered small spruce; 10 cm organics; 10 cm ash; 20 cm+ of rusty yellowish-brown fine sand with a few pebbles.
50) 2300E/3340N; open mossy area; 15 cm organics; 10 cm ash; then a single rounded granite cobble sitting on top of ice/permafrost in fine brown sand.
51) 2297E/3400N; open mossy area; 10 cm organics; 5 cm ash; 20 cm fine brown sand with minor pebbles; ; into ice/permafrost at 35 cm.
52) 2295E/3435N; north facing bank in open mossy brushy area; 30 cm of organics & sphagnum moss/peat moss; into fine sand & ice/permafrost at 30 cm.
53) 2300E/3445N; very small creek flowing northwest into Montgomery Creek; 2m wide deposit of sand with small pebbles; pebbles are 50% granite/granodiorite, 30% sericite schist, 20% black biotite-amphibole schist & minor white to yellowy-brown stained quartz.
54) 2295E/3450N; 10 cm organics; 10 cm ash; then into 20 cm+ of rusty brown fine sand with minor pebbles.
55) 2300E/3500N; modern stream sediments in Montgomery Creek are rusty with about 50% sand & 50% pebbles/cobbles/boulders; clasts are mainly angular but minor rounded; about 60% granite/granodiorite, 30% sericite schist; 5% diorite & 5% black biotite-amphibole schist.
56) 2295E/3545N; moderate slope, well-treed with spruce, minor poplar & one lone pine; 10 cm organics; 10 cm ash; into yellowish-brown fine sand with minor pebbles.

57) 2300E/3575N; 10 cm organics & ash; into 15 cm light tan-brown sand; then into 10 cm+ of 70% sand & 30% angular sheared rusty granite.
58) 2297E/3595N; on north side of Freegold road cut; 10 cm organics; 10 cm ash; into 40 cm of fine sand with minor pebbles; then into 10 cm+ of 70% sand & 30% angular pebbles-cobbles with 60% granite, 20% felsic schist, 20% diorite/gabbro & minor porphyry.
59) 2195E/3540N; on north side of Freegold road cut; 10 cm organics; 15 cm ash & fine sand; 20 cm reddish-brown sand; then 30 cm+ of light brown fine sand with few pebbles.
60) 2200E/3575N; 5 cm organics; 10 cm light grey ash; into 15 cm+ of fine rusty brown silt.
61) 2200E/3600N; 10 cm organics; 15 cm ash; into 5 cm+ of fine rusty silt.
62) 2100E/3600N; 10 cm organics; 15 cm ash; into 10 cm+ of brown clay-silt.
63) 2097E/3558N; 10 cm organics; 15 cm ash; into 10 cm+ of yellowish-brown fine silt.

APPENDIX II – PHOTOGRAPHS

Photo 1. Camp on Freegold road at lower Back Creek (June, 2021).

Photo 2: Donald Hood ATVing up the Freegold “road” along Victoria Creek near Montgomery Creek (June, 2021).

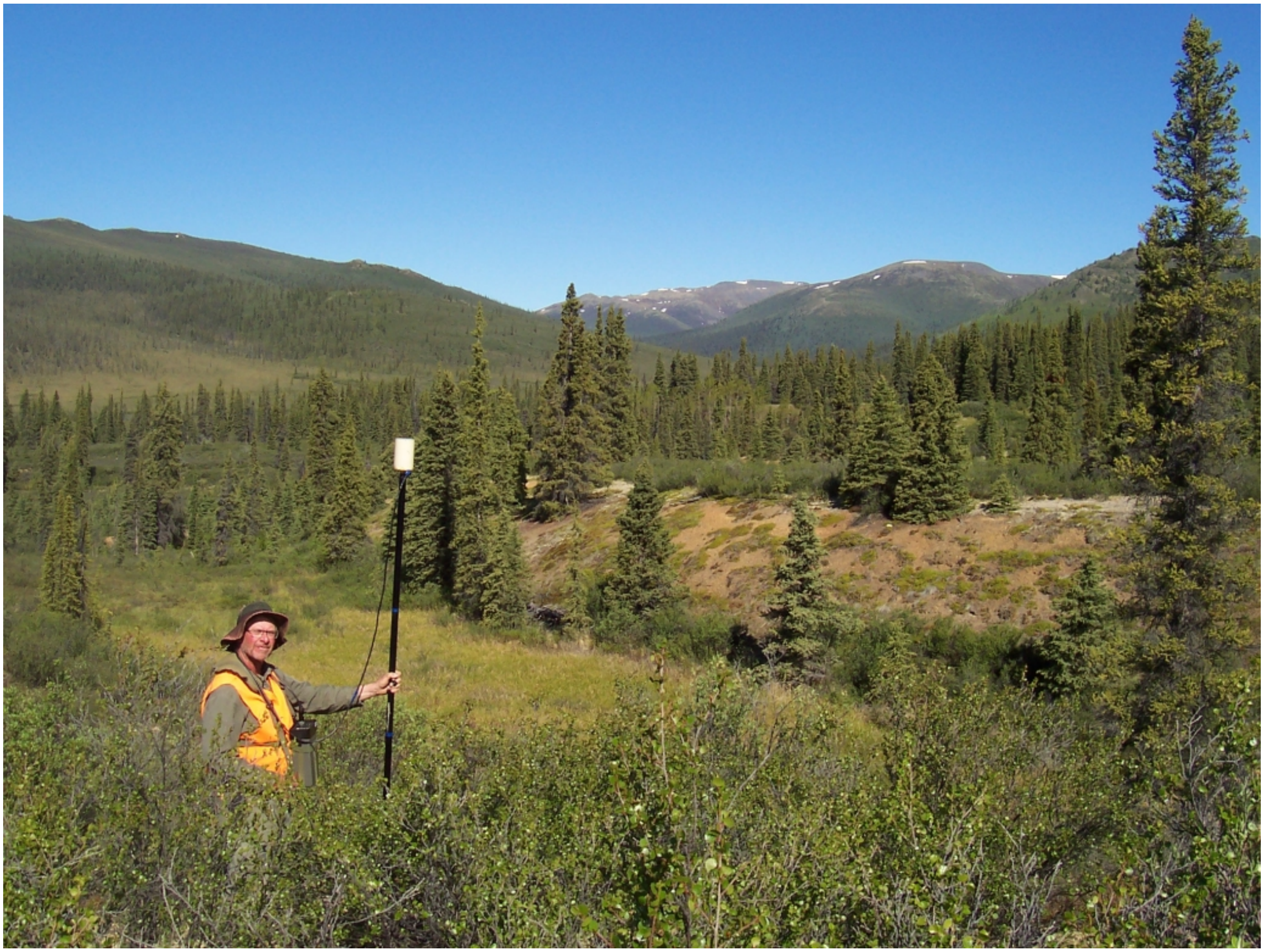


Photo 3. Looking northwest across Montgomery Creek toward Victoria Creek. William Hood doing total field magnetic survey (June, 2021).

Photo 4. Looking northeast across Creek #1 toward upper Montgomery Creek. William Hood doing VLF-EM survey (June, 2021).

Photo 5. Donald Hood sampling rusty gravels along Montgomery Creek near #2 post of BRI 1 claim (July, 2021).

Photo 6. William Hood sampling fluvial gravels on BRI 1 claim (July, 2021).

APPENDIX III

Specifications For

Geometrics G-856 Magnetometer &

Geonics EM-16 VLF Receiver

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

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- VLF Systems
- Borehole Probes
- Data Acquisition
- Software
- Third Party Software

Downloads

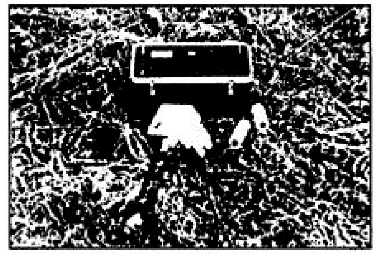
Catalogue

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