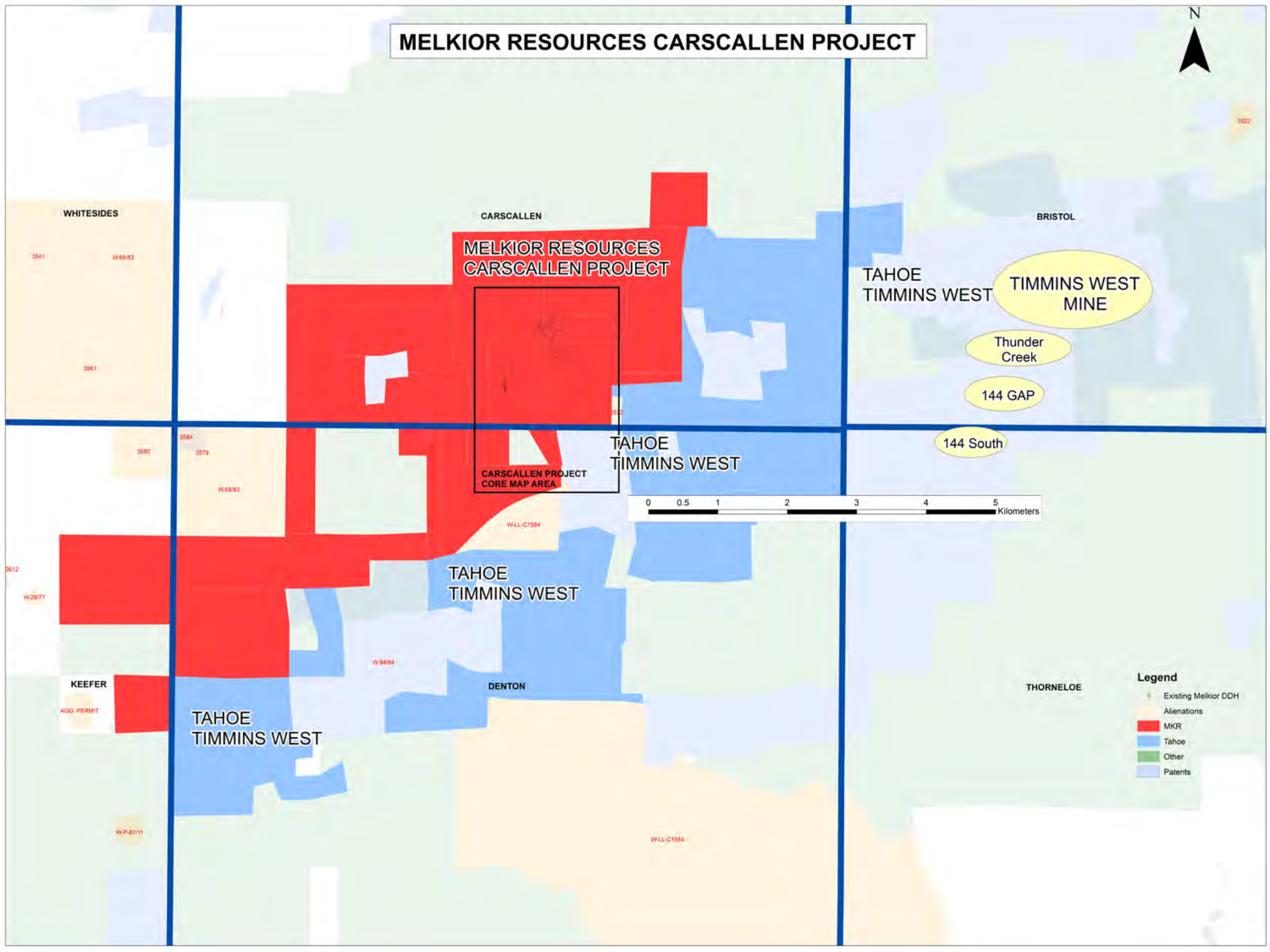

MELKIOR RESOURCES CARSCALLEN PROJECT
N
WHITESIDES
CARSCALLEN
BRISTOL
MELKIOR RESOURCES
CARSCALLEN PROJECT
TAHOE
TIMMINS WEST
TIMMINS WEST
MINE
Thunder
Creek
144 GAP
144 South
TAHOE
TIMMINS WEST
CARSCALLEN PROJECT
CORE MAP AREA
0 0.5 1 2 3 4 5
Kilometers
TAHOE
TIMMINS WEST
KEEFER
DENTON
THORNELOE
TAHOE
TIMMINS WEST
Legend
Existing Melkior DDH
Alienations
MKR
Tahoe
Other
Patents

**MELKIOR 2017 – GOING FORWARD**

Melkior is pleased to announce that the corporate management restructure is moving smoothly and strongly ahead under the solid direction of the newly elected CEO Jim Kieth Deluce. With this change in management comes new directives and a new aggressive approach to exploration.

Melkior Resources head office has been relocated to Timmins Ontario, thus bringing us in closer proximity to both our current and upcoming major exploration sites. By doing so, we have reduced overhead costs by $25,000 per month. Dollars that will be wisely invested in exploration projects and thereby enhancing value for our shareholders.

In keeping with Melkior Resources Management New Years Resolution, there is the promise to bring transparency, passion, dedication and above all, to bring the highest value and profit to all our investors.

The 2017 exploration plan will de-focus from detailed drilling on the currently defined gold zones and expand the area of exploration on the Carscallen Project within the confines of supporting historical exploration data. Because Melkior has the advantage of ten years of data generation for review and re-interpretation we can minimize risk and maximize our exploration dollars to generate positive exploration results. The integration of different facets of the historical exploration has yielded some extraordinary opportunities to advance multiple new target areas to the drill stage without additional ground work or geophysical surveys. With a greater selection of available exploration centers exploration expenditures can be more effectively used to advance the project and ultimately enhance shareholder value.

The defined gold mineralization on the Carscallen Project is associated with north-south trending structures within granite. Historical exploration on the Carscallen Project has been focused on a couple mineralized structures. The Carscallen Project area hosts other faults and inferred faults and structures in the granite that merit evaluation for their gold bearing potential. The evaluation of these companion structures is the focus of the 2017 exploration plan. The continued focus on the granitic terrain looking for similar gold mineralization will leverage existing data and increase shareholder value with reduced cost and risk.

Timmins area gold deposits are generally associated with east-west structures. No east-west trending gold mineralized systems have been identified on the Carscallen Project to date. There is a potential for identifying east-west structures through the Carscallen project. The 2017 exploration program is going to be designed and implemented to develop drill targets in areas proximal to these potential east-west zones to enhance our knowledge of these areas. Exploration drilling will attempt to advance a north-south trending target areas through potential east-west structures. The identification of a mineralized east-west structure crosscutting the known gold zones would be a significant development for the Carscallen Project.

North-south gold bearing structures on the Carscallen Project that have been offset have locally been observed to have an associated enhanced asymmetrical dilatation and fracturing proximal to the offset. These enhanced hydrothermal conduits are important exploration targets. In the event that an east-west structure is determined to be mineralized with gold, the intersection any north-south gold systems with this structure will become a high priority target.

# 2017 Exploration Plan Target Selection

**Expanding exploration focus, Leveraging existing data, Minimizing drilling risk**

The Melkior 2017 Exploration Plan returns the company to a more aggressive exploration stance. Melkior has the advantage of ten years of data generation for review and re-interpretation. The integration of different facets of the historical exploration has yielded some extraordinary opportunities to immediately advance multiple new target areas to the drilling stage. Risk is minimized by co-locating new Target Areas with positive exploration results from the historical dataset. Drill holes will be collared where possible less than 50 meters away from a proven gold data point ( soil , surficial rock or drill hole assay). Priority targets will have multiple sources of supporting information to justify drilling.

The important gold bearing structures on the Carscallen Project are north-south trending and located in the granite. Geophysical methods have been demonstrated to not have a positive correlation with the known gold bearing systems within the granite. The lack of positive correlation with the defined gold zones reduces the scope of geophysics as an effective primary targeting tool for gold exploration within the granitic terrain of Carscallen. Gold in soil, rock or drill core will be given priority importance, but evaluated in the context of all of the available information.

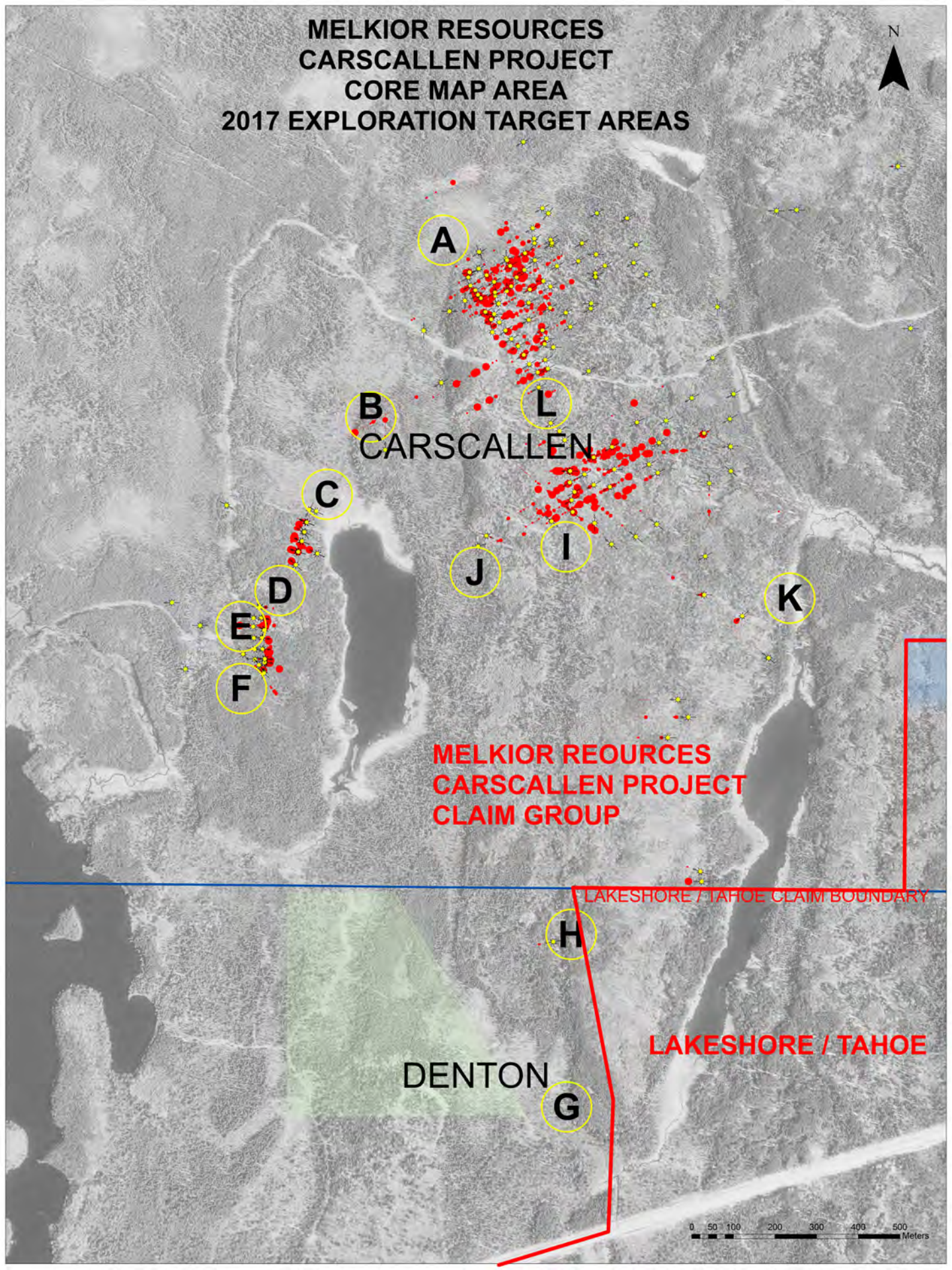
Highest priority will be given to those targets that have an associated:

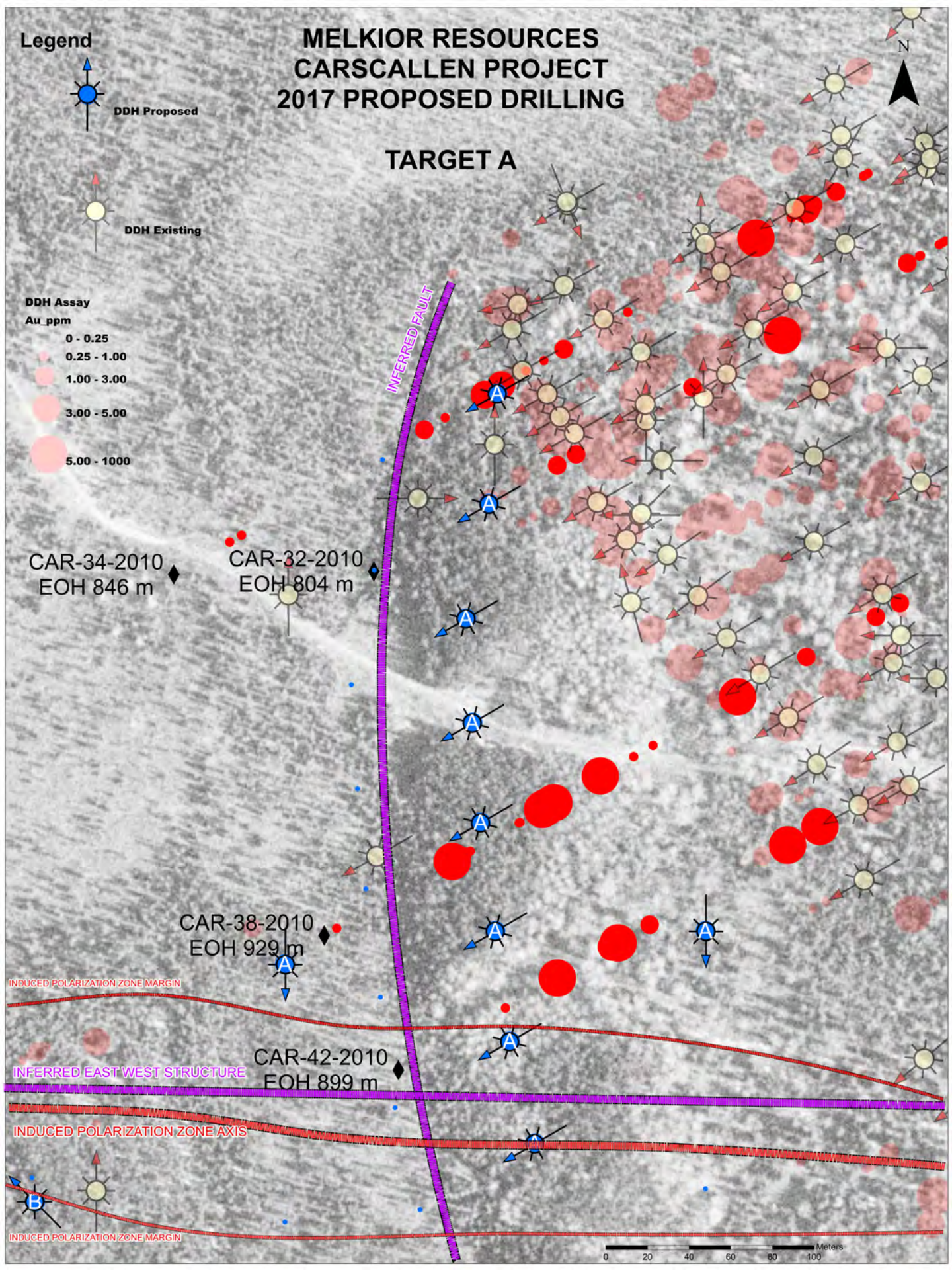
- Existing surface gold showing
- Drill hole intercept with significant gold assay
- Gold in soil anomaly
- Co-incident north-south trending fault or interpreted fault/structure
- associated IP anomaly
- Aids in evaluating an adjacent Target or the lateral evaluation of the Target leads into an intersecting structural feature

**2017 Exploration Plan – Target Area Proposed Drill Holes**

| Target Area | Easting* | Northing* | Azimuth | Dip | Depth (m) |
|---|---|---|---|---|---|
| A | 451428 | 5358226 | 240 | -45 | 90 |
| A | 451432 | 5358178 | 240 | -45 | 90 |
| A | 451439 | 5358126 | 240 | -45 | 90 |
| A | 451446 | 5358073 | 240 | -45 | 90 |
| A | 451458 | 5358024 | 240 | -45 | 90 |
| A | 451425 | 5358276 | 240 | -45 | 90 |
| A | 451436 | 5358331 | 240 | -45 | 90 |
| A | 451440 | 5358384 | 240 | -45 | 90 |
| A | 451540 | 5358126 | 180 | -45 | 175 |
| A | 451338 | 5358110 | 180 | -45 | 175 |
| B | 451218 | 5357996 | 315 | -45 | 175 |
| B | 451129 | 5358095 | 135 | -45 | 175 |
| C | Data | dependant | | | deferred |
| D | 451050 | 5357690 | 270 | -45 | 250 |
| E | 450931 | 5357597 | 270 | -45 | 100 |
| E | 450930 | 5357576 | 270 | -45 | 100 |
| E | 450931 | 5357549 | 270 | -45 | 100 |
| E | 450933 | 5357522 | 270 | -45 | 100 |
| F | 451000 | 5357430 | 270 | -45 | 200 |
| G | Data | dependant | | | deferred |
| H | 451700 | 5356835 | 260 | -45 | 100 |
| I | Data | dependant | | | deferred |
| J | Data | dependant | | | deferred |
| K | 452145 | 5357740 | 90 | -45 | 200 |
| K | 452076 | 5358043 | 90 | -45 | 200 |
| | | | | | Total 2,770 m |

*NAD 83 Zone 17


MELKIOR RESOURCES
CARSCALLEN PROJECT
CORE MAP AREA
2017 EXPLORATION TARGET AREAS
N
A
B
L
CARSCALLEN
C
I
J
D
K
E
F
MELKIOR REOURCES
CARSCALLEN PROJECT
CLAIM GROUP
LAKESHORE / TAHOE CLAIM BOUNDARY
H
LAKESHORE / TAHOE
DENTON
G
0 50 100 200 300 400 500
Meters


Legend
DDH Proposed
DDH Existing
DDH Assay
Au_ppm
0 - 0.25
0.25 - 1.00
1.00 - 3.00
3.00 - 5.00
5.00 - 1000
MELKIOR RESOURCES
CARSCALLEN PROJECT
2017 PROPOSED DRILLING
TARGET A
N
INFERRED FAULT
CAR-34-2010
EOH 846 m
CAR-32-2010
EOH 804 m
CAR-38-2010
EOH 929 m
CAR-42-2010
EOH 899 m
INDUCED POLARIZATION ZONE MARGIN
INFERRED EAST WEST STRUCTURE
INDUCED POLARIZATION ZONE AXIS
INDUCED POLARIZATION ZONE MARGIN
A
B
0
20
40
60
80
100
Meters

**Target A**

Target A is a composite target of priority importance immediately west of the Zamzam Zone.

The target has three components:

***First***

There is an inferred north-south trending fault about 75 meters west of the Zamzam zone that has not been directly targeted by drilling or surficial work. The location of the inferred fault, it's potential to host significant gold mineralization, it's extension to depth and the presence of gold directly associated with the fault is at present a working hypothesis. The location of the fault is inferred through drill logs, topographic expression, transition in overburden depth, strong linear representation of these changes in air photographs.

There is gold in soil anomaly of 25 ppb on the fault at surface. Gold bearing down dip potential extensions of this fault zone have been encountered in several drill holes. CAR-38-2010, CAR-42-2010, CAR-34-2010 encountered gold mineralization within both the granite and underlying mafic volcanic bedrock at vertical depths ranging from 400 to 500 m.

The structures within the area of the Zamzam Zone have been observed to have a pronounced easterly dip. A fault with a easterly dip would be projected to have an increasing horizontal offset east of the surface expression of the fault at depth. CAR-38-2010, CAR-42-2010 and CAR-34-2010 all intersected significant gold assays that could be associated within the projected down dip extension area of this inferred fault.

Mineralization was encountered in CAR-38-2010, CAR-42-2010 and CAR-34-2010 predominantly within quartz veins located within granitic and volcanic rock. This gold mineralization may be directly related to the Target A fault and include the following synopsis of drill core assay results:

| CAR-34-2010 (Az 240, -50) | From (m) | To (m) | Width(m) | Assay (ppm Au) |
|---|---|---|---|---|
| | 563.45 | 564.00 | 0.55 | 3.03 |
| | 566.24 | 566.78 | 0.54 | 1.24 |
| | 567.90 | 568.52 | 0.62 | 0.64 |
| | 577.63 | 578.57 | 0.94 | 4.95 |
| | 611.86 | 612.65 | 0.79 | 0.81 |
| | 629.75 | 631.00 | 1.25 | 2.23 |
| CAR-38-2010 (Az 240, -50) | 690.75 | 691.25 | 0.50 | 5.67 |
| | 730.80 | 731.40 | 0.60 | 10.00 |
| | 737.78 | 738.50 | 0.72 | 10.00 |
| | 738.50 | 739.20 | 0.70 | 4.26 |
| | 740.75 | 741.25 | 0.50 | 8.47 |
| | 818.00 | 818.50 | 0.50 | 7.61 |
| CAR-42-2010 (Az 240, -50) | 704.80 | 705.30 | 0.50 | 2.64 |
| | 709.25 | 710.00 | 0.75 | 5.35 |
| | 713.40 | 713.9 | 0.50 | 2.67 |
| | 714.40 | 715.00 | 0.60 | 1.58 |
| | 715.00 | 716.00 | 1.00 | 3.80 |
| | 716.00 | 716.75 | 0.75 | 1.26 |
| | 761.70 | 762.30 | 0.60 | 7.88 |

If significant shallow gold mineralization is encountered in this structure, there is 500 m of vertical potential to be evaluated. Delineation drilling following the Target A structure to the north may help extend the parallel Zamzam Zone to the North and into volcanic mafic volcanic terrain. If the working hypothesis is validated the northern extension of the fault into volcanic terrain will be aggressively followed up with additional drill holes.

***Secondly***

The progression of drilling Target A to the south leads into Target B and Target L , both of which are potentially related to the same east-west structure. The evaluation of this structure is important if it is gold bearing or not as it will provide a better understanding of the structural context of the gold deposition in Carscallen. The shallow drill holes proposed on Target A will progress southerly and cross the inferred east-west structure. These drill holes will maintain focus on the Target A fault but will provide information to target the structure with a perpendicular drill hole that crosses the inferred structure. Observations in Carscallen have shown that mineralized north-south faults proximal to offsetting structures can contain areas of enhanced dilation and mineralization. These types of dilatational targets are one of the objectives of the exploration campaign.

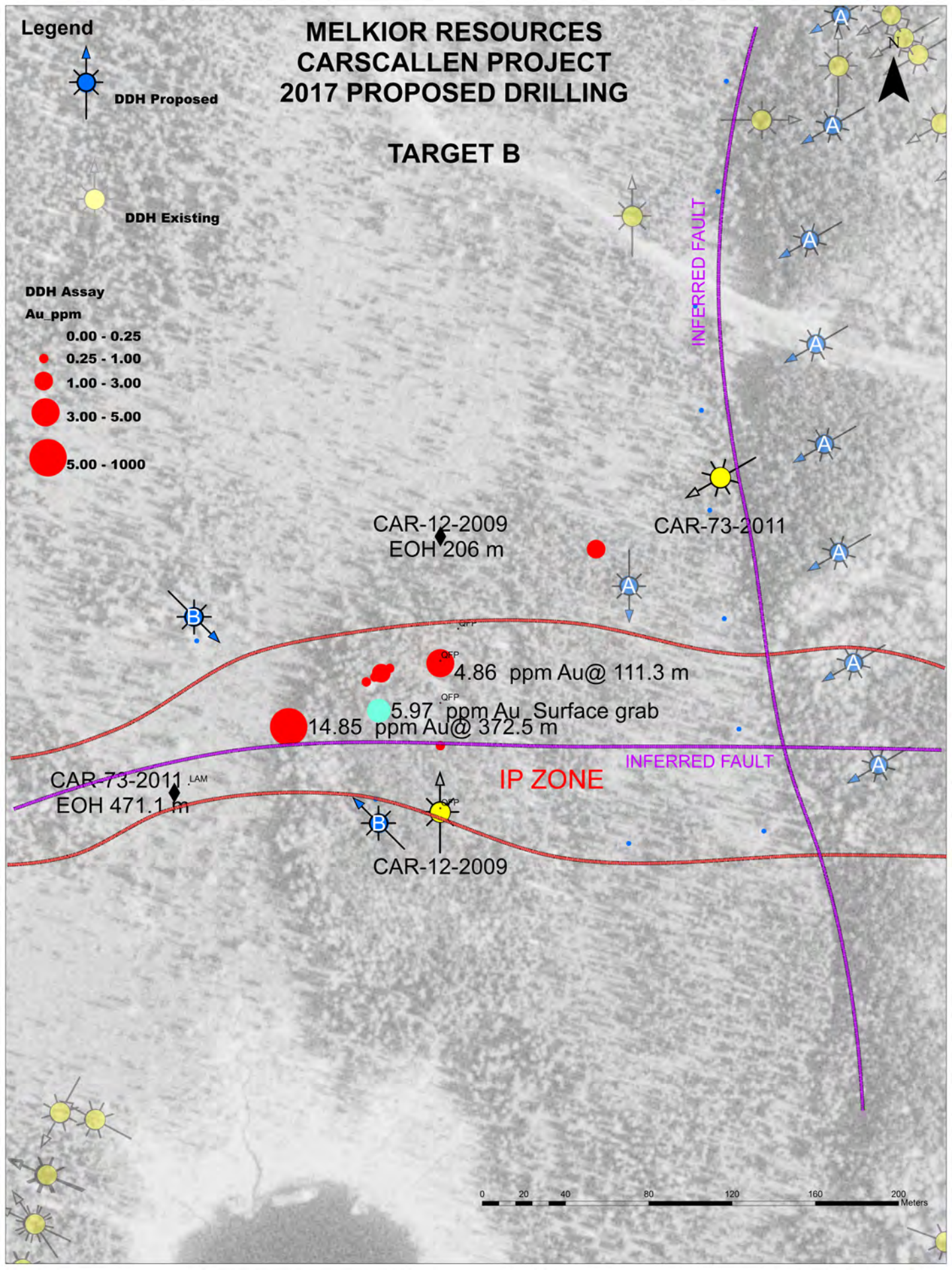
Of note is that the east-west structure is collocated with an IP Zone. This IP Zone could represent a gold mineralized zone or could have acted as a redox trap for the hydrothermal fluids within the north-south fault zones. It should be noted that some of the most spectacular gold assays in Carscallen come from massive pyrite seams/veins. These pyrite rich seams can return hundreds of grams per ton, and may represent remobilized mineralization from a nearby source. High grade pyrite rich seams are present in the drill holes beneath Target A and in the adjacent Zamzam and Jowsey Zones.

Drill holes across the inferred east-west structure would be targeted when sufficient information has been gathered from the initial Target A proposed drill holes. The results of drilling this inferred east-west structure/IP anomaly will directly impact the evaluation of Target B and Target L by better defining the location and Target characteristics.

In the event that the east-west structure is found to be mineralized with gold it will become a high priority target for follow up drilling. This inferred east-west structure crosses between the Zamzam and Shenkman Zones and extends to the triple junction of the Mahoney Lake and Mahoney Creek Faults that may be hydrothermal feeder systems off of the Porcupine Destor Fault Zone. This information will help define the drilling of Target K which is located adjacent the Mahoney Creek Fault north and south of this triple junction.

***Thirdly***

The northerly evaluation of Target A will naturally progress towards the contact of the granitic pluton with mafic volcanic terrain. This area is up dip from one of Melkiors most positive holes within the volcanic rocks (CAR-34-2010, see table above). These gold mineralized intersections may be directly related to the northern extension of the Target A fault zone and its extension to depth. A shallow drill intercept up dip from these gold intercepts in the underlying volcanic bedrock would allow for a methodological drilling program to follow the mineralization down from surface. With the orientation of the fault determined and its continuity established additional shallow lateral drilling would be warranted especially northward to the limit of the granite and the transition to volcanic terrain.


Legend
DDH Proposed
DDH Existing
DDH Assay
Au_ppm
0.00 - 0.25
0.25 - 1.00
1.00 - 3.00
3.00 - 5.00
5.00 - 1000
MELKIOR RESOURCES
CARSCALLEN PROJECT
2017 PROPOSED DRILLING
TARGET B
INFERRED FAULT
CAR-12-2009
EOH 206 m
CAR-73-2011
4.86 ppm Au@ 111.3 m
5.97 ppm Au Surface grab
14.85 ppm Au@ 372.5 m
INFERRED FAULT
IP ZONE
CAR-73-2011
EOH 471.1 m
CAR-12-2009
QFP
LAM
N
0 20 40 80 120 160 200
Meters

**Target B**

Target B is located about 400 m southwest of the Zamzam Zone and is a composite target in that it has elements of both a north-south and east-west trending structural systems. Target B hosts three independent gold assay points (two in drill intersections and one surficial grab sample) within an east-west trending IP Zone. Target B is located north of the 1010 Zone and may be the offset northerly extension of the 1010 North mineralized zone (Target C).

This target is located in a swampy area with very little outcrop, a surface bedrock grab sample collected in 2008 returned a gold assay of 5.97 ppm from a quartz vein.

CAR-73-2011, intersected 15 g/t gold over 0.65 m at a downhole depth of 372.50m within a 16 cm wide quartz vein. Lamprophyre dykes were noted in the log at 460m. Lamprophyres are deep seated intrusive dykes that are intimately associated with the 1010 Zone on the Carscallen property, where they trend north-south.

CAR-12-2009 intersected two, twenty-meter-wide feldspar porphyries. The margin of one of these dykes assayed 4.86 g/t over one meter, two quartz veins were noted in the log in this sample interval. The east-west trending IP Zone may reflect disseminate pyrite within the feldspar porphyries and thus an east-west trending intrusive. This potential east-west porphyry granite contact and associated gold mineralized structure merits follow-up.

The proposed drill holes on Target B will scissor the IP Zone above the CAR-73-2011 intercept of 15 g/t gold over 0.65 m. Additional drilling may result from evaluation of the initial results.

**Target C - 1010 North Extension Area**

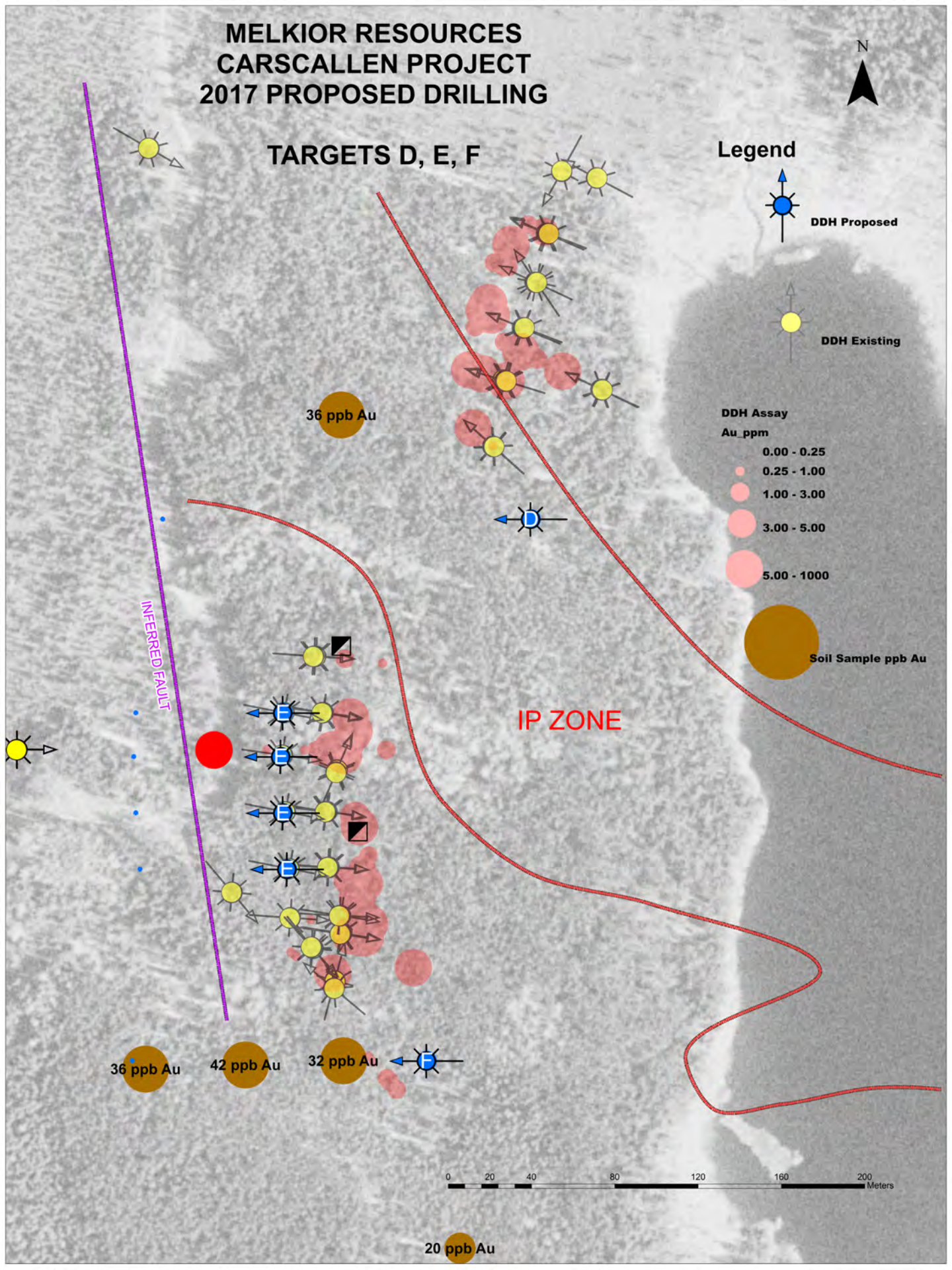
Targeting of this area is deferred until adjoining target areas ‘B’ and ’D ‘are evaluated. The evaluation of Target B could result in a north-south mineralized structure that could be followed towards the Target C area located 200 m to the southeast.

Target C has no soil anomaly, no IP anomaly is associated with this target. There is evidence of north-south faulting in the granite adjacent to drilling, as well as an inferred east-west fault where drilling was terminated and TW-08-13 yielded 14.30 g/t over 0.5m.

The Target C area is a swampy low lying area that is barren of outcrop and in close proximity to Deadman Lake. The proximity of the mineralized zones to the lake limited follow up drilling in 2008. TW-08-10-11 encountered the mineralized zone only 8 meters down hole. A step back was not possible due to the lakeshore. A step out to the north was situated as far east as possible but presumed to have overshot the mineralized zone.

CAR-31-2010 attempted to undercut this area from 200 meters to the west, however an easterly component of dip to the mineralized zone likely prevented its intersection.

Targeting of this area is deferred until adjoining target areas ‘B’ and ’D ‘are evaluated.


MELKIOR RESOURCES
CARSCALLEN PROJECT
2017 PROPOSED DRILLING
TARGETS D, E, F
N
Legend
DDH Proposed
DDH Existing
DDH Assay
Au_ppm
0.00 - 0.25
0.25 - 1.00
1.00 - 3.00
3.00 - 5.00
5.00 - 1000
Soil Sample ppb Au
36 ppb Au
INFERRED FAULT
IP ZONE
36 ppb Au
42 ppb Au
32 ppb Au
20 ppb Au
0
20
40
80
120
160
200
Meters

**Target D**

There is a 125m wide gap in drilling between the 1010 Zone and the 1010 North Zone. This gap is situated immediately north of the most northerly historical shaft on the 1010 Zone. This area was bypassed due to target prioritization in 2008 and merits additional drill holes.

There is potentially an offsetting structure crossing the gap that may be have an associated IP Zone and a gold in soil anomaly. The IP Zone was recognized in 2008 but did not have a surface expression in the trenches constructed in this area. It is proposed to collar the drill holes to undercut the northerly strike extension of the 1010 zone, to evaluate the IP Zone under the gap area and continue to construct the drill holes far enough to the west to evaluate any parallel faulting to the west (Target E). This will lead directly into and aid in the evaluation of Target E.

**Target E**

This target is a north-south inferred fault zone, parallel to, and located approximately 100 m west of the 1010 fault and gold zone. There is no IP anomaly associated with this fault zone. There are no supporting gold bearing surface samples.

Re-evaluation of drill hole data indicates that there is one drill hole that supports this inferred fault zone. CAR-29-2010 intersected 18.65 g/t gold over 0.65 meters at a downhole depth of 147.6 meters (100m vertical). This drill intercept is located only 100m west of the 1010 Zone. The gold is situated within a series of fractures and quartz veins along the margin of a QFP intrusive. There is an associated 20 m wide halo of 1 ppm gold within in the QFP. The QFP was encountered from 131 – 218 meters downhole. An unusual number of lamprophyres are noted in drill logs in this area, potentially indicating very deep complex faulting.

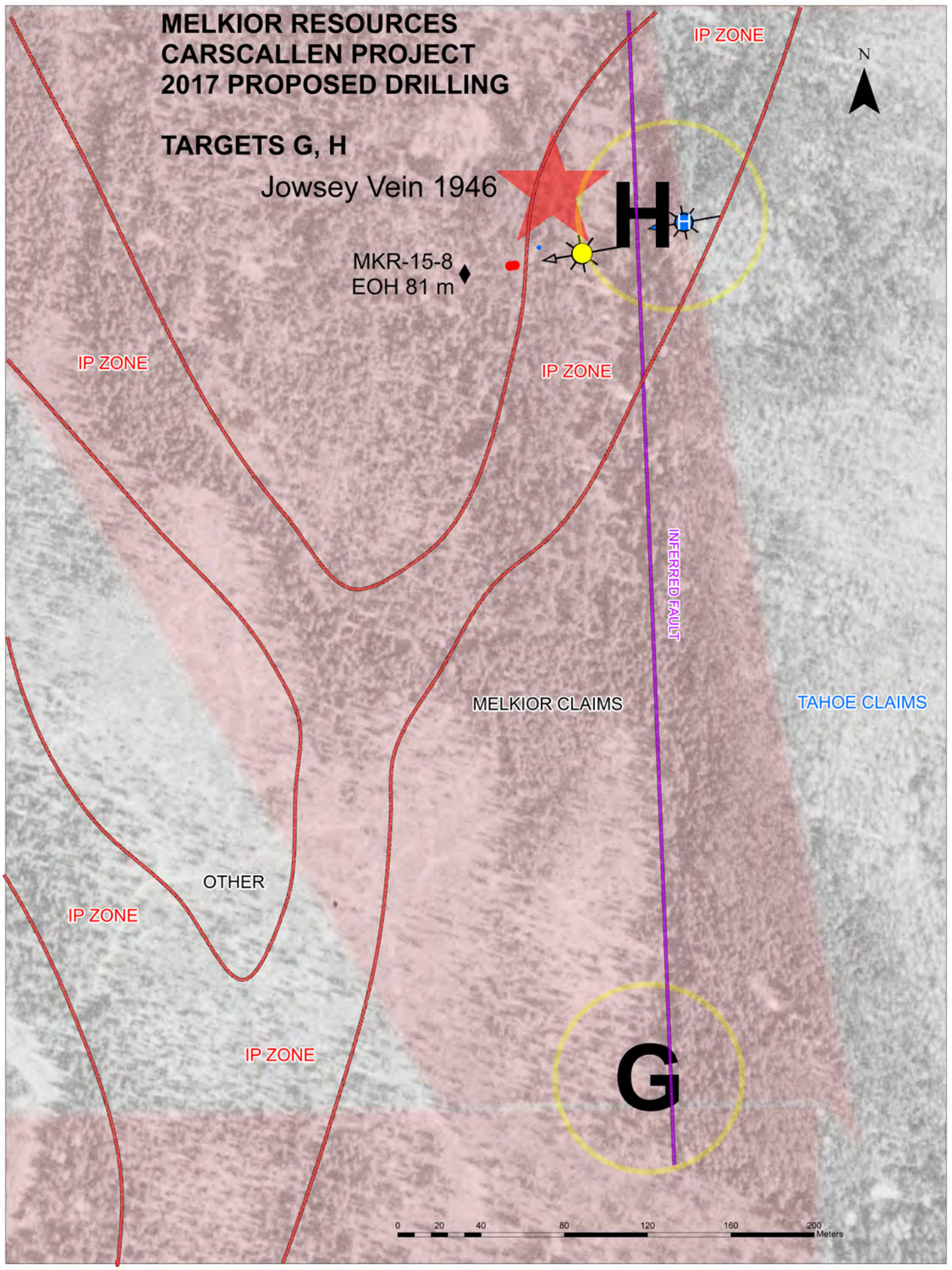
The first proposed drill hole would target the inferred fault 50 m vertically above the CAR-29-2010 intercept of 18.65 g/t gold over 0.65 meters. Based on the results of this first hole a series of holes would be drilled to the south. The southerly evaluation of this target area naturally leads into Target F area located 150 m to the south. The evaluation of this target area to the north would be followed up in future drilling, aided by the results of Target G.

**Target F**

This Target area is located less than 100 m from the southerly extent of the 1010 Zone where trenching shows that the 1010 vein meets an offsetting structure that hosts a gold mineralized porphyry. The porphyry trends to the south west and was followed by surface trenching to the limits of mechanical trenching where a sharp increase in overburden depth and shallow water table was encountered (fault zone?).

Soil sampling has identified three adjacent gold in soil samples immediately south of the limits of historical drilling. This area has not been drill tested.

It is proposed to drill one hole to undercut the three adjacent soil anomalies, co-incidentally also undercutting the area immediately south of and on strike with the 1010 Zone.


MELKIOR RESOURCES
CARSCALLEN PROJECT
2017 PROPOSED DRILLING
TARGETS G, H
Jowsey Vein 1946
MKR-15-8
EOH 81 m
H
G
IP ZONE
IP ZONE
IP ZONE
IP ZONE
IP ZONE
IP ZONE
INFERRED FAULT
MELKIOR CLAIMS
TAHOE CLAIMS
OTHER
N
0
20
40
80
120
160
200
Meters

**Target G**

This area is in the southern most extent of Melkiors claim group in very close proximity to the Tahoe boundary.

The area is in close proximity and on strike with some of the Aumo gold bearing gold veins.

This Target area may present structural targets due to intersecting fault systems. The target area at present lacks sufficient supporting data for targeting. Soil sampling is planned to provide useful exploration data to aid in future target selection.

**Target H**

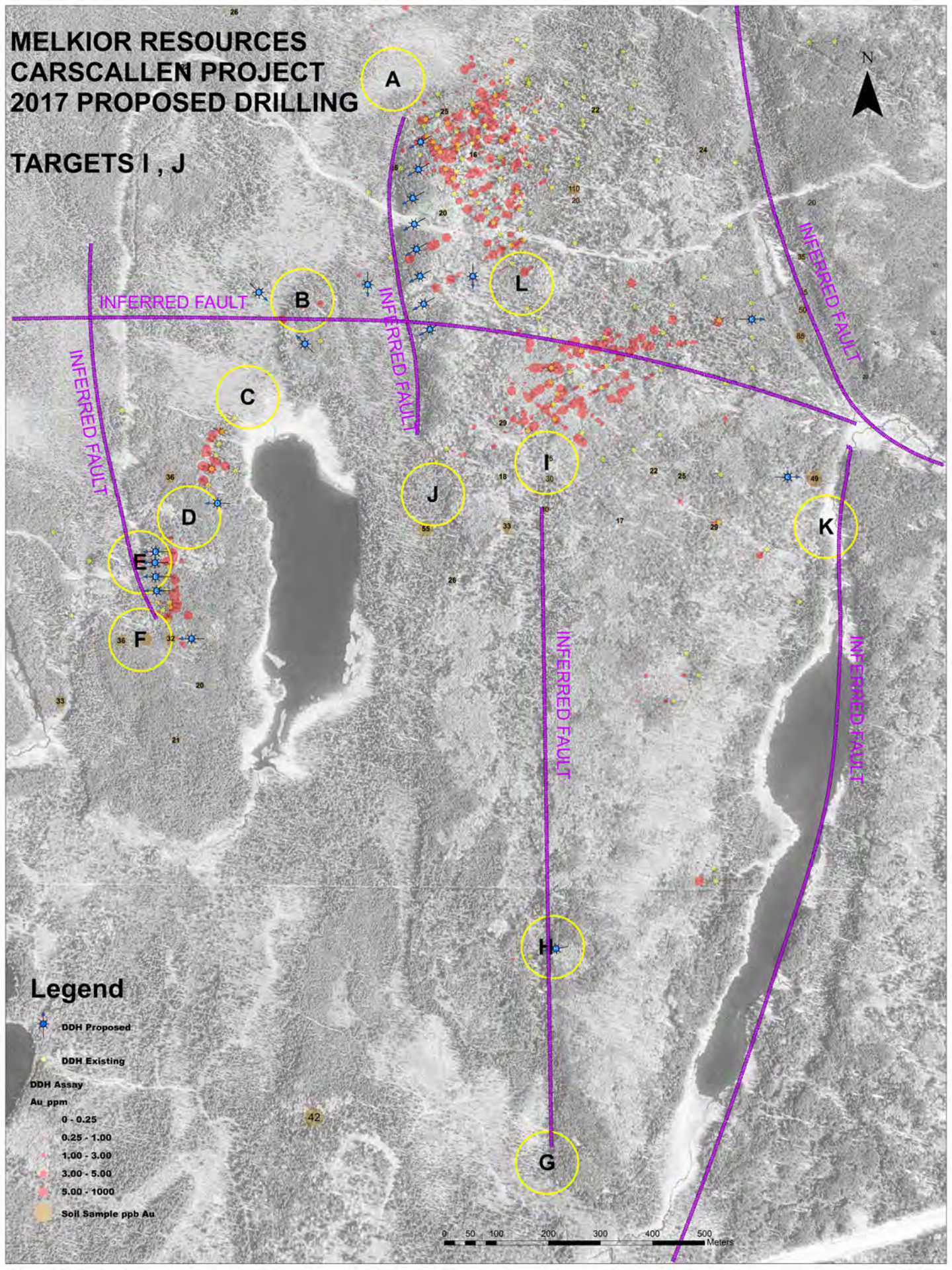
Target H is an inferred north-south fault located along Melkiors easterly border with Tahoe.

The Target area is in very close proximity to the Jowsey 1946 Vein, described as follows:

" MDI42A05SE00040 JOWSEY VEIN - 1946

Discovered before 1946, on the Jowsey Denton Gold Mines property, this discretionary occurrence consists of a vein contained in a north-trending shear in quartz diorite. A 1 inch to 20 ft. trench plan in Timmins assessment file T-10 indicates that the vein yielded gold values up to 0.08 (units unknown) gold in a chip sample."

Melkior drill hole MKR-15-8 tested the Jowsey Vein, but did not encounter any significant values. A review of the area indicates that the drill hole was collared immediately west of a north-south inferred fault and drilled to the west. It is proposed to test the inferred fault that lies with 50m east of this showing and undercut the gold showing at a greater depth.


MELKIOR RESOURCES
CARSCALLEN PROJECT
2017 PROPOSED DRILLING
TARGETS I , J
N
A
B
C
D
E
F
G
H
I
J
K
L
INFERRED FAULT
INFERRED FAULT
INFERRED FAULT
INFERRED FAULT
INFERRED FAULT
Legend
DDH Proposed
DDH Existing
DDH Assay
Au ppm
0 - 0.25
0.25 - 1.00
1.00 - 3.00
3.00 - 5.00
5.00 - 1000
Soil Sample ppb Au
0 50 100 200 300 400 500
Meters

**Target I - Rationale**

This Target area is located at the end southerly end of a north-south lineation / fault within 100m of the Shenkman gold occurrence. There is a gold in soil anomalous value of 33 ppb. A large surficial bedrock alteration zone is present within target area. The results of the Target H drilling should be reviewed before Target I is drilled. Positive results in Target H and follow-up drilling to the north will guide drill selection in Target I.

Additional detailed soil sampling will provide useful exploration data to aid in target selection.

Drilling deferred, more supporting information required.

**Target J - Rationale**

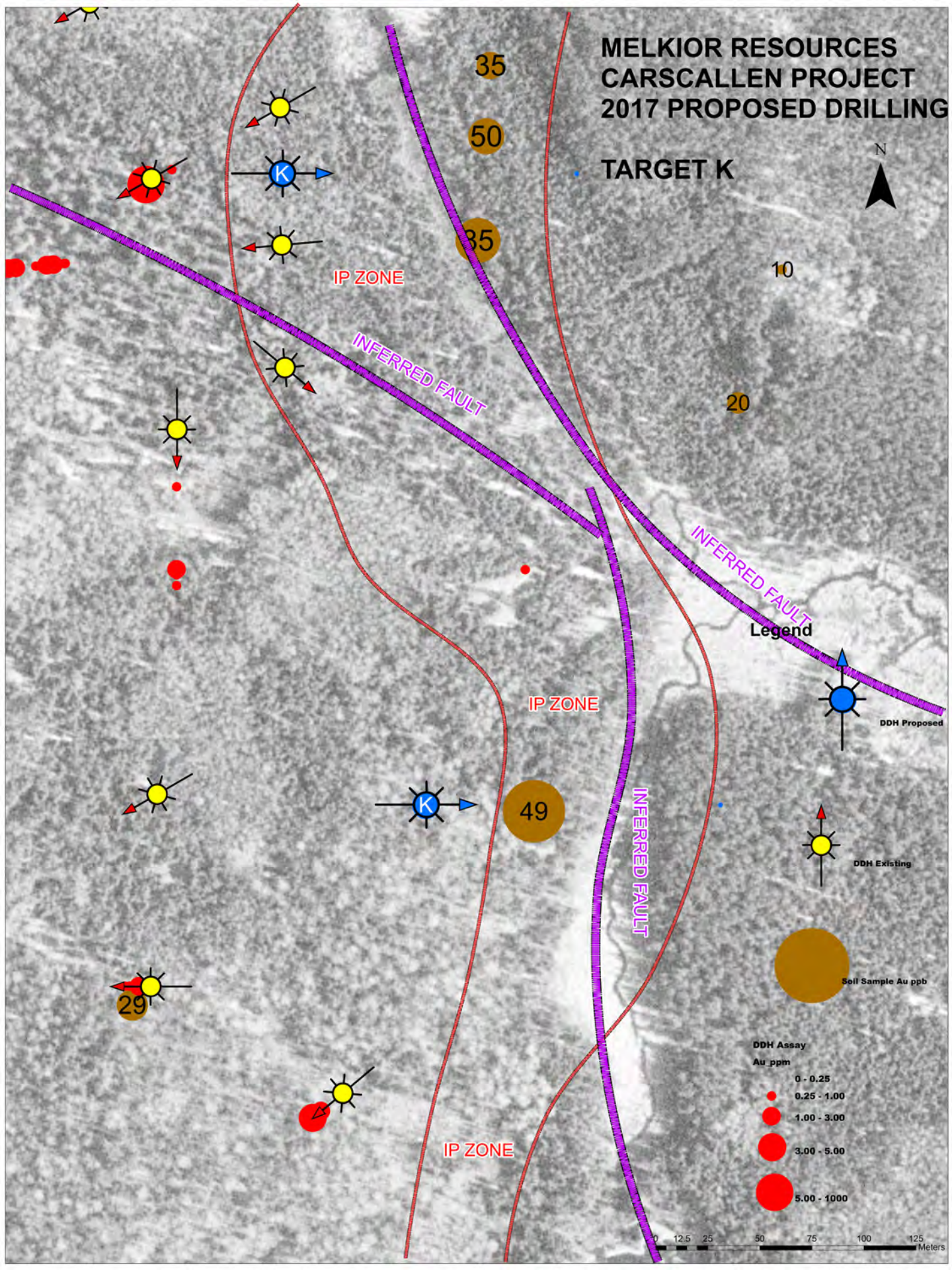
Target J area is located at the end southerly end of a north-south lineation / fault within 100m of the Shenkman gold occurrence. There is an excellent Gold in Soil anomalous area with values up to 55 ppb.

It is interpreted that this is the same fault Target A evaluates. The results of the Target A drilling and any follow up drilling to the south should be reviewed before Target J is drilled. Target J area located 500m to the south of Target A.

No IP anomaly associated with Target J

Additional detailed soil sampling will provide useful exploration data to aid in target selection.

Drilling deferred, more supporting information required.


MELKIOR RESOURCES
CARSCALLEN PROJECT
2017 PROPOSED DRILLING
TARGET K
N
35
50
35
10
20
49
29
IP ZONE
INFERRED FAULT
INFERRED FAULT
IP ZONE
INFERRED FAULT
IP ZONE
Legend
DDH Proposed
DDH Existing
Soil Sample Au ppb
DDH Assay
Au ppm
0 - 0.25
0.25 - 1.00
1.00 - 3.00
3.00 - 5.00
5.00 - 1000
0
12.5
25
50
75
100
125
Meters

**Target K - Rationale**

There is a documented surficial gold showing described as the “Parliament Lake Occurrence” , little information is available on this occurrence.

The area is immediately west of an inferred north-south fault that cuts through Mahoney Lake, a potential feeder from the PDFZ. It is hoped that the evaluation of this target can provide some insight to this potentially mineralized major fault zone.

There is a gold in soil anomaly of 49 ppb less than 50 m from the inferred fault.

There are a series of highly anomalous gold in soil anomalies distributed over 500m of strike to the north that are co-incident with the inferred location of this potential feeder fault (20, 85, 50,35, 120 ppb). In addition this potential feeder from the PDFZ has a prominent and co-incident north-south trending IP anomaly associated with it.

This gold showing/fault/IP Zone/ gold in soil anomaly has not been drill tested.

**Target L “Shenkman Trough” - Rationale**

There is a north-south gap in drilling between the Zamzam Zone and the Shenkman Zones. Topographically this gap zone is represented by a wet, depressed east-west trending trough containing deeper overburden. By comparison the Zamzam and Shenkman are generally high dry areas with shallow overburden.

A review of the drill logs in this area in conjunction with surficial observations suggests that this area may host an east-west trending fault zone. There is a co-incident IP zone that is in close proximity to the potential fault zone.

The goal of the proposed drill holes for Target A and Target B are to evaluate the westerly end of this potential fault and co-incident IP Zone. If the results of Target A and B validated the presence of this structure or identify it as a gold bearing zone it will elevate Target L to a very high priority.

The results of Target A, Target B and Target K need to be reviewed before Target L is drilled to minimize cost and risk. This is a high priority target as it potentially may host the intersection zone of two mineralized structures or host an offset zone of an north-south mineralized gold zone by an east-west structure.