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108068, 108069, 137517, 201666, 305509 – Oro Lake

ASSESSMENT WORK REPORT

CELL ID: 108068, 108069, 137517, 201666, 305509

Oro Lake

(Legacy Claim 4286811)

Gillies Limit, SE $\frac{1}{2}$ SE $\frac{1}{4}$ of S $\frac{1}{2}$, Block 29

Larder Lake Mining Division

Claim Holder: Graeme S. Bishop – client # 10001492

Report prepared and submitted by Graeme Bishop

November 6, 2019

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Claims Origin History:

The original legacy claim 4286811 is situated in the South East half of the South East quarter of the South half of Block 29 in Gillies Limit, Ontario, within the Larder Lake Mining Division. With conversion to map staking on April 10, 2018, this legacy claim expanded to include six cell claims 108068, 137517, 201665, 108069, 201666, and 305509, located in provincial grid cells 31M05C114, 31M05C115, 31M05C116, 31M05C134, 31M05C135, and 31M05C136 respectively. The original legacy claim was staked on October 23, 2017 by Patrick Harrington, and registered on November 6, 2017 by the holder B.A. (Tony) Bishop. On March 24, 2019 these cell claims were transferred to Graeme Bishop.

Summary of work included in this report:

While no historical mineral exploration information on these claims was identified, the present report includes work initiated by Tony Bishop, as well as subsequent work conducted by Graeme Bishop. Prior to staking the original legacy claim on October 23, 2017, Tony took 3 samples down-ice and off claim on crown land, to determine whether to invest in this prospect, however he decided to stake the claim prior to having the results, as more timely till processing was made difficult by the onset of weather conditions too cold to operate the sluice and GoldCube. The samples were processed and microscopy work completed during July and August 2018, and results presented. Notes on a traverse which occurred on September 24, 2018 by Tony and Shelley Bishop are also included. On October 8, 2019 (Graeme Bishop and Nathan Pullen) and October 11, 2019 (Tony Bishop and Graeme Bishop) two grass roots prospecting traverses were conducted with a total of 15 samples collected.

Means of Access:

Just to the west of the claims runs the Highway 11 corridor, immediately south of the town of Latchford. To access the north part of the claims, above Oro Lake, you can turn onto a pipeline access trail off of highway 11 to park [0591212 E/5239364 N], and then proceed north along the pipeline which here parallels HW 11 [truck park at 0591244 E/5239473 N]. Once at the desired Northing, by proceeding east from the pipeline one enters the forest, climbing a large hill, and accessing the North West area of the Claims and above Oro Lake. To access the south part of the claims, drive south on HW 11 until through the town of Latchford, and turn East onto Roosevelt Forest Road [0591253 E/5239001 N]. Take Roosevelt Forest road until you have passed the train tracks and proceed another short distance to park on the roadside. From here, it is less than a kilometer foot traverse northerly to the south boundary of the claims.

Alienations: [see Figure No. 6 in Appendix]

Alienation ID W-L-58/96, NER Sept 17/96 SRO pipeline: A pipeline runs roughly north-south along the most westerly portions of claims 108068 and 108069.

A License of Occupation which includes both mining and surface rights impinges by a few feet on a portion the north third of the western boundary of claim 108069.

A wind power application was registered in 2008 and continues to show on the MLAS map identified as WP 2008-329. To clarify the status of this alienation, contact was made with the Ministry of Natural

Resources on January 30, 2019, North Bay office, and subsequently verified with ENDM that mining rights are not affected.

Geology and Position of claims:

This claim is one of many originally held by Tony Bishop, all with the intent of finding and identifying Jurassic age kimberlite pipes in the Larder Lake Mining District. The claim was staked based on the criteria of its geological position in the southern province of the Proterozoic rocks around Cobalt, and due to its surficial exhibition as a small rounded lake. Due to their material composition, kimberlite pipes often erode deeper than the country rock that hosts them in post-glaciated landscapes. Geomorphologically, kimberlite pipes often manifest within lake-bodies, whose shape is structurally defined by the kimberlite pipe. The nearest other claims held by the original holder are immediately to the east, around the area of Houndchute Lake.

Geologically, the claims are situated within the Cobalt Embayment, and as such contain multiple constituent lithologies of the Huronian Supergroup sediments, namely the Firstbrooke and Lorrain formations, locally accompanied by intrusive diabase dykes. The target cells are located less than a kilometer to the east of the Montreal River Fault, while the parallel faults of Cross Lake and Temiskaming West Shore lie a short distance to the east. Many smaller local faults affect the structural geology of the area around Latchford and Oro lake. During prospecting, opposing shelving outcrops were observed on the west and east sides of Oro lake, suggesting the small valley in which Oro lies may be a paleovalley or a roughly north-to-south fault.

Structurally, the Cobalt Embayment adjoins the west side of the Lake Temiskaming Structural Zone (LTSZ), an Archean deformation system which was not tectonically active during deposition of Huronian sediments but reactivated numerous times after through Geological time. During the Jurassic period, in conjunction with the spreading of the Atlantic graben and activation of the St. Lawrence system, the LTSZ was also active. Multiple phases of kimberlite-pipe eruption occurred during the Jurassic-age activation of the LTSZ, from Attawapiskat to Temagami. Some of the Jurassic age kimberlite pipes associated with the LTSZ from this time have proven to contain diamonds in economic quantities and qualities. The presence of many smaller faults and cross faults through the heavily deformed Archean basement beneath the Huronian sediments allow for points of weakness which bias the ascent path of erupting kimberlite pipes.

The claims containing the Oro Lake target have the potential to be a favourable position for the existence of a kimberlite pipe, and the assessment work being conducted by the Claim holder should identify a kimberlite pipe, if one is present.

Field sampling methodology and intent

During three days of fieldwork, a number of soil/till samples were collected for the purpose of identifying the presence of any heavy indicator minerals indicative of kimberlite pipes (KIMS – kimberlite indicator minerals). Due to the fact that the claims are situated in a post-glacial landscape (one most recently disturbed by the Laurentide Ice sheet during the late Wisconsin Glaciation) the sampling plans were designed to look forensically for KIMS that have travelled due to ice movement. Oro Lake is the target presumed to be a potential kimberlite pipe. The ‘down-ice’ samples are south of the target and should contain floated kimberlitic materials, if any are present. The ‘up-ice’ samples were collected as a control, and should contain no kimberlitic materials from the target, if any are present; by isolating the lake/target between two sampling fields, the aim is to identify whether or not the target is the source of any materials found down-ice. [See: *Figure No. 4 - Glaciation sampling example*]

Regional overburden studies [ex. Veillette, Paper 89-20, 1989] have shown that there are multiple till layers in the area, with the deepest being from earlier Wisconsin glacial advances, and the surface till resulting from the latest push of the glaciers before deglaciation; each extant glacial till layer evinces a different direction-set of glacial movement. Proglacial lake sediments also blanket much of the district. We are looking for glacially travelled indications of kimberlite within a down-ice corridor, in the direction of most recent glaciation (at this particular location, more or less due south [see: *photo fig. 1 and fig. 2*], with a wider area variance of 10 or 15 degrees each direction). Therefore, glacially deposited samples were collected from near surface, beneath the organic layers that have developed during the Holocene. Because of the proximity of the southern boundary of the claims to the target, Oro Lake, it is likely that a significant element of any KIMs deposited in the down-ice pattern would be in-situ *outside* of the south claim boundary (even though the presumed deposit/pipe is fully within the claims.) Thus, some samples were taken about a kilometer south of the target, not to be applied as full assessment work, but to add to the profile of this target, and more generally to add to the scientific database of regional diamond exploration; if Oro Lake is proven to be a kimberlite pipe, the southern dispersal pattern of its indicators is valuable data, considering that many of the kimberlite pipes in the region have been discovered beneath thick proglacial lake deposits, within eskers, or otherwise buried in areas with deep overburden.

Most data from the Bishop claims centres on KIM dispersal patterns in areas with very little overburden, where bedrock exposure is common [See Bishop Assessment Reports submitted from Lorrain Valley area]. In addition to the factors mentioned above, the presence of proglacial waterbodies, and post-glacial free-water movement have deposited thin lenses of silty clay beneath the Holocene deposits, and above the glacial till. The clay/silt lenses encountered during prospecting and sampling traverses were not substantial and were not present in all sample holes [see Figure No. 14 and also the Traverse 2 section of this report].

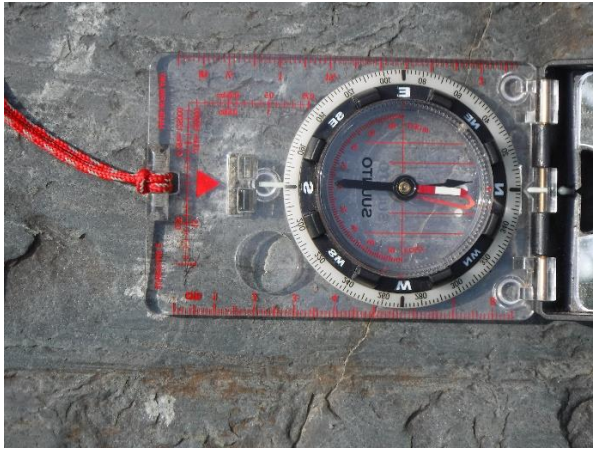
Traverse 0: Reconnaissance
[written by Tony Bishop]

Tony and Shelley Bishop left Kenogami around 7 am on September 30, 2017 to prospect for kimberlite boulders and to gather several till samples down-ice from a suspected kimberlite pipe, in part due to its' topographical features and location relatively nearby to other known pipes.

The dirt access road is ~3 km south of Latchford, turning East off Highway 11.

Approximate UTM coordinates had been pre-selected on Google Earth, and modified as required once we were on site. The actual sampling sites were chosen with regard to finding disturbed, dug out areas from building the road.

In between taking the till samples, prospecting occurred along the road where soil and vegetation had been stripped exposing till and boulders making potential kimberlite boulders relatively easy to spot.



Glacial striae were observed.

No kimberlite boulders were located, but conditions that day were dry. Another trip was tentatively planned for a rainy, wet day which facilitates seeing the greenish colour of kimberlite cobbles and boulders.

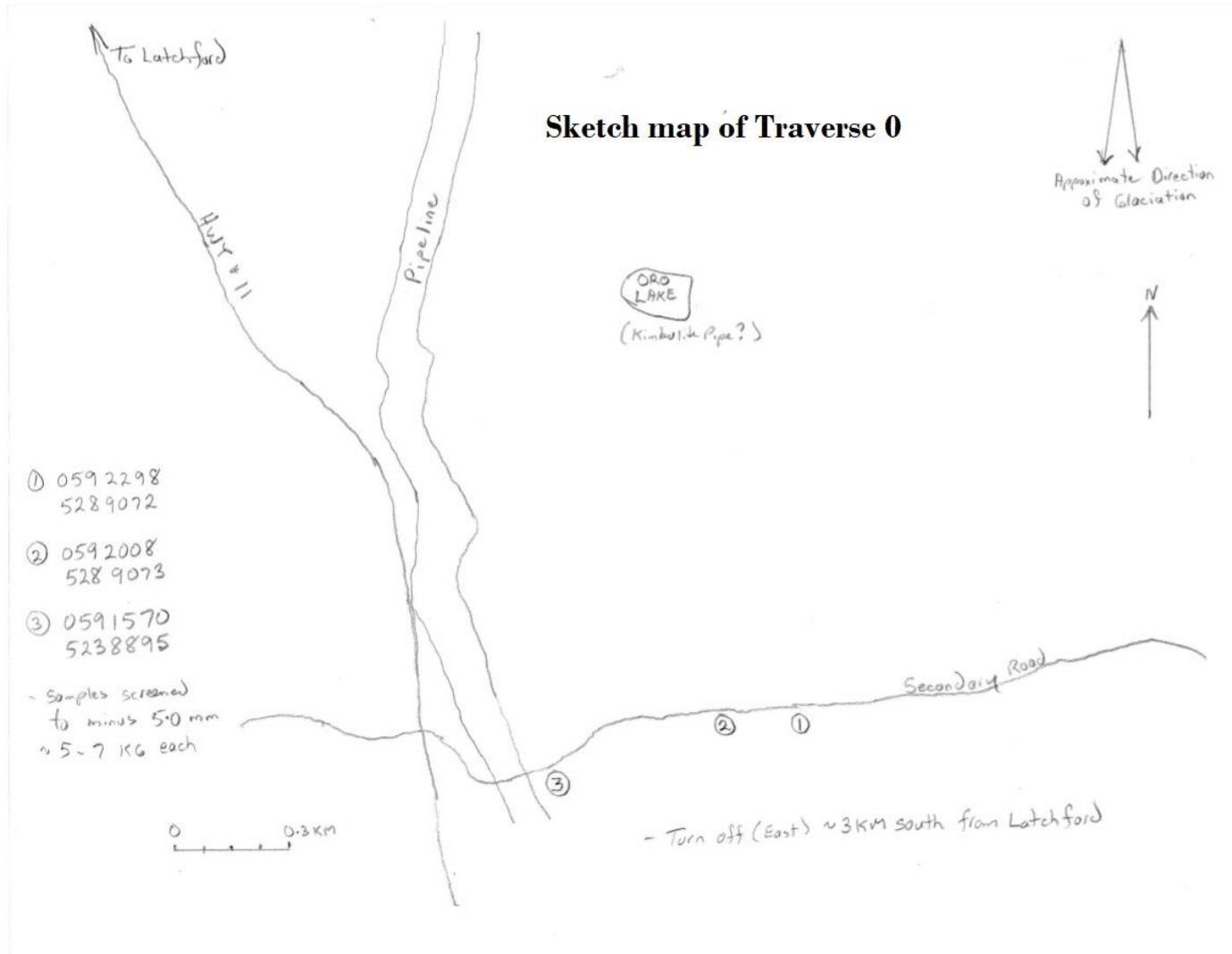
Three till samples screened to -5mm were collected, to be processed for kimberlite indicator minerals at a later date.

In the meantime, we decided to stake the target to get ahead of any possible competition.

Samples:

Sample #	UTMs zone 17	Field weight	Remarks
1	0592298E/5239072N	8.4 kg	Damp, under tree root
2	0592008E/5239073N	9.5 kg	Damp, under tree root
3	0591570E/5238895N	10.9 kg	very wet

Photographs – See: Appendix Fig. No. 10



TRAVERSE No. 1: CELLS: 108068, 108069**Traverse No. 1 Field Notes**

Tony and Shelley Bishop left Kenogami around 7 am on September 24, 2018 to prospect for kimberlite boulders and to gather till samples from the Oro lake target. Turning east onto Rosevelt Forest Road, just south of the town of Latchford, they then turned north onto the pipeline and parked the vehicle on the west side of the railway which crosses the pipeline north of Rosevelt Forest Road.

They collected their gear and hiked north following the pipeline to access the west side of the cells containing Oro lake. After crossing the tracks, they were now travelling north into cell 108069. At 0591214 E/5239786 N, the pipeline climbs an incredibly steep hill for more than a hundred meters, leveling out at 0591228 E/5239911 N. They continued north along the pipeline into cell 108068 and decided to turn east towards Oro lake. The east side of the pipeline was dominated by a steeply rising forested hill, dotted with erratics, which they tried but could not manage to ascend. They returned to the pipeline and travelled further to the north and tried again but were still unable to penetrate deeper into the forest because of their difficulty with the hills.

Deciding it was not safe to try to reach Oro lake from that approach, they backtracked south along the pipeline until they found a spot with a more level grade to enter the forest. The entry point became untenable again, this time due to crowded growth at ground level, and they turned back after about 50 meters of navigating the tangled bush. Once again, they backtracked to the south along the pipeline, descending the massive hill. They were both becoming affected by sore knees and backs after having climbed down the pipeline hill, but were determined to try again. They struck east again, pointed diagonally at 45 degrees into cell 108069, approximately towards Oro lake. Now they were in low ground and were turned back a fourth time, this time due to swampy ground and unsafe footing.

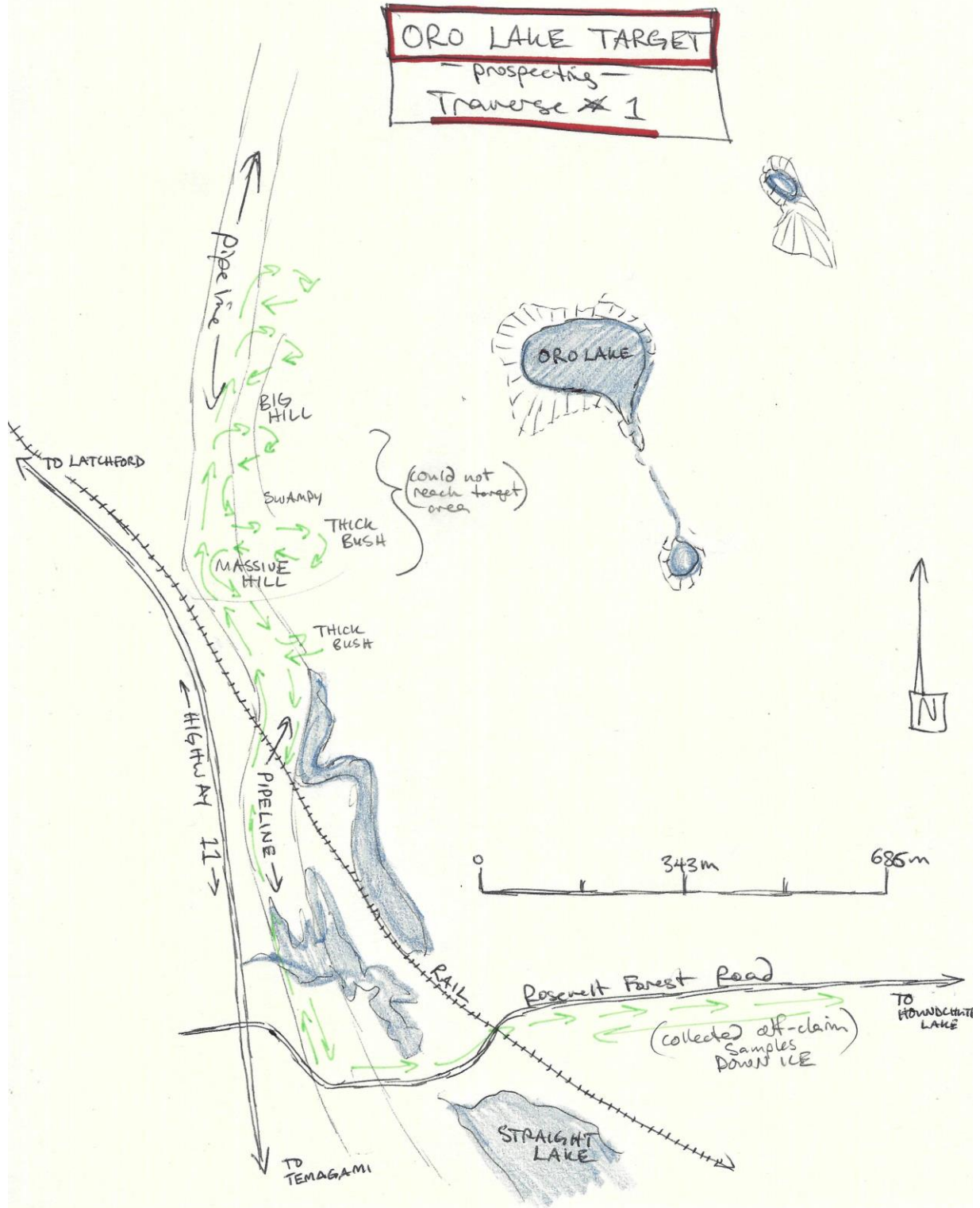
Although they had not reached their intended prospecting area, they decided to egress towards their vehicle. A lot of ground and a lot of climbing had been covered, but no samples had yet been collected. Tired, but still interested in collecting down-ice samples, they drove back onto Rosevelt Forest Road and collected five samples to be examined for scientific interest. These samples are not addressed in this report.

Photographs – See: Appendix Fig. No. 11

SAMPLES Traverse 1: September 24, 2018

Sample	weight	coordinates	remarks (samples not recorded as assessment)
7A	2.5 kg	0592370 E 5239114 N	off-claim sample for science
7B	2.6 kg	0592148 E 5239095 N	off-claim sample for science
8	2.4 kg	0591852 E 5239056 N	off-claim sample for science
9	2.2 kg	0591710 E 5239037 N	off-claim sample for science
10	2.5 kg	0591587 E 5239103 N	off-claim sample for science

Traverse 1 Map: see following page



TRAVERSE No. 2: CELLS 201666, 305509

Traverse No. 2 Field Notes

I left home and picked up my helper Nathan Pullen at 6:30 AM on October 8, 2019. We drove south and arrived at the Traverse area at around 8 AM. The morning was sunny and not very cold. We parked on the shoulder of Rosevelt Forest Road near the transect of the Temiskaming Highlands trail, south of Oro lake, and headed north. Nathan and I walked in conjunction but separated by thirty or forty feet; both of us zigging and zagging to explore any outcrops, large boulders, root walls, and anything of interest, chipping at rocks with 4 lb. hammers when called for. Upon entering the forest on the north side of Rosevelt Forest Road, we encountered gently rising ground populated by mature mixed forest, with many white pine, maple, and birch. Not far north from the truck park, at 0592118 E/5239327 N, we noticed a grove of white pine, some very large, some much younger [by 'grove' we saw at least ten white pine in one place]. We continued north, intending to take a sample within 600 meters of the road, once within claim boundary. The bush was open and good ground, where sunlight reached most of the forest floor and walking was not difficult. There are many erratics, all of which appear to be Gowganda or Lorrain formation. The sample site for OL-1 included several inches of dark loam, then a layer of cobbles, then soil and clay about a foot down. The clay was mixed into the soil by my shovel, but examination of the hole showed the clay was a thin layer beneath the cobbles. Nathan joined me while I took my sample, and recorded notes. We set out again, trending north east. Realizing we had travelled farther north into cell 305509 than planned, we angled back to the southwest into cell 201666 and collected sample OL-2. On the way, we passed an unusually massive erratic (wacke) to the north and east of OL-2. The OL-2 hole exhibited the same stratification as OL-1, again with silty clay deposited in the cobble layer above the till. We traversed due north and collected sample OL-3. At OL-3, there were two lenses of clay, both very thin, and layered against each other, like herringbone and unlike a sandwich. These lenses of clay are very interesting, in that they are not thick and do not blanket the stratigraphy equally. The day after Traverse 2, I researched where the shores of proglacial lake Barlow stood in relation to the Oro lake target [See: Appendix Fig. No. 14, Diagram of proglacial Lake Barlow (modified from Veillette 1988) showing relation of target area to proglacial water]. It is my current theory that the thin lenses of clay represent episodes of wave action over the sample area, but not continued inundation, which would have deposited a more homogenous sediment. From OL-3 we traversed a short distance north and east, noting nothing of interest before turning south and west again to cross between Oro lake and its satellite pond to the south. We hiked downgrade and entered an open grassy swamp south of Oro, which was spotted with large boulders and bleached tree trunks. We picked our way to the west side without getting a soaker. Once we entered the treeline again, the ground began to rise immediately, and we progressed a few dozen paces before deciding to return to the shoulder of the rising ground for a sample, adjacent to the swampy low ground. Sample OL-3.5 was taken in golden brown soil-till with no cobbles. We climbed back up into the higher ground and took sample OL-4 not far away. Sample hole OL-4 showed similar features to OL-1, 2, and 3. Nathan and I looked around a bit to the west of OL-4, then trended south and took OL-5 at a raised root wall. [no root walls were observed in the mature bush on the east side of the low ground]. To collect OL-5, we removed a washed pile of broken wacke from beneath the root wall by hand until we reached till we could sample. We continued south and east, moving through mature forest which was thicker than on the first half of the traverse. We took sample OL-6 without encountering cobbles, and continued southwest. By now we were nearly exiting the south boundary of cell 201666, and we collected OL-7

before leaving, again with few cobbles [meanwhile, plotting shows OL-7 as just south of the boundary]. Travelling south in a trajectory to reach Rosevelt Forest Road efficiently, we ended up travelling through low ground cluttered with underbrush, and covered with cobbles and boulders of angular wacke fragments. Halfway back to the road, we collected OL-8 as a down-ice sample. We reached Rosevelt Forest Road and made our way to the vehicle. We arrived back in Kirkland Lake around 6 pm.

Photographs – See: Appendix Fig. No. 12

Traverse 2: down-ice samples collected on grass roots prospecting traverse October 8, 2019

Sample	weight	coordinates		remarks
OL-1	2.42 kg	0592068 E	5239671 N	rocky beneath soil, clay lenses, till
OL-2	2.87 kg	0592092 E	5239770 N	rocky beneath soil, sandy till
OL-3	2.41 kg	0592059 E	5239895 N	rocky beneath soil, clay lenses, till
OL-3.5	2.50 kg	0591954 E	5239887 N	loam, sandy till
OL-4	2.61 kg	0591908 E	5239905 N	sandy till, clay lenses
OL-5	2.64 kg	0591799 E	5239828 N	rootwall, rocky ground, sandy till
OL-6	2.55 kg	0591878 E	5231730 N	loam, sandy till
OL-7	2.41 kg	0591940 E	5239652 N	sandy till
OL-8	2.62 kg	0591917 E	5239459 N	off-claim sample taken for science

Traverse 2 Map: see following page

TRAVERSE No. 3: CELLS 108068, 108069, 137517

Traverse No. 3 Field Notes

Three days after conducting Traverse 2, I asked Tony Bishop to be my prospecting helper for Traverse 3, as Nathan Pullen was unavailable. I sent him the plan I had drawn up and he agreed. Dad met me in Kirkland Lake, and we took Highway 112 south until it merged with Highway 11. We passed through Latchford and turned east onto a dirt access road for the pipeline at 0591216 E/5239363 N, just north of Roosevelt Forest Road, and parked the truck on the pipeline to the west of the rail line. We were geared up and began walking north on the pipeline around 10 am. This traverse was planned to replicate Traverse 1, and I had to account for the fact that my dad is not able to keep up with my own youthful pace in the bush. We climbed the massive pipeline hill mentioned in Traverse 1 and took some striation photographs with the compass on exposed bedrock [see: Appendix Fig. no. 4] before arriving at the same area that Tony and Shelley Bishop attempted to ascend during their last traverse at Oro. The day was windy and sunny, but a little chilly. I scouted a few times to find a suitable route up the steep forested hill and a short time later Tony and I had reached the high ground at 0591320 E/5240227 N. We photographed an erratic on the way up. Once we had summited the hill, the ground graded gently to the east and we progressed east south east, past a neat collection/dump of wacke erratics at 0591630 E/5240164 N. We took sample OL-9 in cell 108069 and found sandy/gravelly till, but no clay. From OL-9 we headed north and east into cell 137517 towards Oro Lake and photographed it from the west and north shores [see: Appendix Fig. No. 13]. We moved just north of Oro and took sample OL-10, again in sandy/gravelly till with no clay. So far, we had travelled about half a kilometer east from the pipeline and had descended several steps of shelving Lorrain formation outcropping which faced east into the 'valley' of Oro lake [ex. 0591470 E/ 5240441 N]. As we travelled east from OL-10, we began to climb out of it into higher ground again on the other side, this time climbing several steps of shelving outcrop facing west, into the 'valley'. Tony and I walked within close range of each other, picking our way slowly through the sections that were dense. While Tony collected sample OL-11 in the high ground, I ranged out to the east to check out the little pond northeast of Oro, which looks to be within the trend of a fault line. Before I left Tony at OL-11 sample site, we agreed to meet at a pre-determined OL-12 sample location. By the time I returned from the fault-line pond, Tony was finishing OL-12. We were both wearing out and decided to head due west towards our exit. The ground between OL-12 and our next sample at OL-13 was fairly tangled with underbrush and sloped slightly to the north at times. There was a transition in the type of vegetation near OL-13, as we were climbing back into higher ground, the spruce/poplar/jack pine dominated valley changed to maple and birch in the higher ground after OL-13. Sample 13 contained some silty clay, similar to samples from south of Oro mentioned in Traverse 2. We continued east, and a little south, climbing back up the staged shelves of outcrop which are exposed on the east face of the big hill. We collected sample OL-14 in cell 108069 near shelving outcrops at 0591625 E/5240545 N. By the time we navigated our way down the hill and back onto the pipeline, and out from the pipeline to the truck, we were dog tired. We arrived back in the Kirkland Lake area around 6:30 pm.

Photographs – See: Appendix Fig. No. 9 and Fig. No. 13

Traverse 3: up-ice SAMPLES collected on grass roots prospecting traverse October 11, 2019

Sample	weight	coordinates		remarks
OL-9	2.38 kg	0591506 E	5240128 N	sandy/gravelly till
OL-10	2.40 kg	0591787 E	5240285 N	sandy/gravelly till
OL-11	2.63 kg	0592061 E	5240311 N	sandy/gravelly till
OL-12	2.27 kg	0591828 E	5240500 N	sandy till/clay
OL-13	1.75 kg	0591692 E	5240555 N	sandy/gravelly till/clay
OL-14	2.10 kg	0591492 E	5240441 N	loam/sandy till

Traverse 3 Map: see following page

Overview chronology of sample work

Prior to staking and registering Legacy Claim 4286811 an initial investigation was conducted by Tony and Shelley Bishop on unstaked crown land in September 2017, during which prospecting [see: *Traverse 0*], several soil samples were collected down-ice from a lake which was at that time being considered by Tony Bishop as a potential kimberlite target. On October 23, 2017 Tony Bishop contracted Mike Harrington to stake claim 4286811 around Oro Lake.

Legacy Claim 4286811 was registered November 6, 2017. During July 2018, the samples collected on crown land during *Traverse 0* were processed and concentrated by Tony Bishop into different fractions of collected heavy grains for later investigation with microscopes.

The Bishop family was actively prospecting and sampling a number of other claims in the area through 2018, and Oro Lake was prospected and sampled again on September 24, 2018 by Tony and Shelley Bishop [see: *Traverse 1*]. Due to difficulty with the hills and general terrain on the western side of the Cells staked (cells 108068, 108069) they were unable to reach their intended area for prospecting, and instead travelled south, closer to the access road, and collected more soil samples from down-ice of the target.

Traverse 1 has been included as assessment in this report as a prospecting and reconnaissance expedition. The uncollected samples from *Traverse 1* replicate a similar geographic profile to the samples collected on *Traverse 0* and have been kept for scientific purpose.

The concentrate fractions from the *Traverse 0* soil samples were studied by microscopy and magnetic susceptibility and photographed by Tony Bishop in August 2019.

[On March 24, 2019 these cell claims were transferred to Graeme Bishop.]

Traverse 2 was planned by Graeme Bishop after the results from Tony Bishop's microscopy revealed potential chrome diopside and other kimberlitic grains in the down-ice area of Oro Lake. Graeme Bishop and Nathan Pullen explored and sampled to the south of Oro Lake (in cells 201666, 305509) on October 8, 2019. Multiple soil samples were collected [see: *Traverse 2*].

Traverse 3 included the north and west cells of the Oro Lake target (cells 108068, 108069, 137517) and was conducted by Graeme Bishop and Tony Bishop on October 11, 2019. Multiple soil samples were collected [see: *Traverse 3*].

Statement of future work

A selection of the most likely grains described by Tony Bishop in Appendix fig. no. 1 will be sent to RGC Lab in London, ON for microprobe analysis. The samples collected during *Traverse 2* and *Traverse 3* will be processed and concentrated for microscopy in Spring 2020. If there are KIMS in these concentrates, they will also be sent for analysis at RGC Lab. If the results from the sampling field reveals a positive profile for a potential kimberlite pipe, drone geophysics will be conducted on the target to identify a more concrete position for grid sample SGH analysis at Actlabs [spatiotemporal geochemical hydrocarbon testing]. After assessing the results of soil sampling, airborne geophysics, and SGH testing the target will be suitable for drilling, or not.

Statement of qualifications

I, Graeme Bishop, have the following experience:

In the last seventeen years, I instructed gold panning activities at the opening of the Ecocentre in Elk Lake, and occasionally at the annual Toburn mining heritage days. I spent a lot of my childhood rockhounding and prospecting with my family in Temiskaming District. I have read my way through most of the reports of the GSC from its first century and have read most of the OBM annual reports from the first half of the 20th century. Additionally, I have made an academic study of the history of geology. I have worked cutting lines in Bidgood township and the Munro esker area with a P.Eng. geologist. I have lifted and split core for a P.Eng. geologist. I worked as a helper with a junior mining company, retrieving core from the drills and tagging core boxes. I have worked on foot and clerically as a security guard at the Macassa mine, including shifts assisting the weekly gold pour in the Macassa mill refinery. I worked underground for several years at the Macassa mine. I quit the mine to return to university to work on a Master's degree, including a significant component of geologically oriented research.

More recently, I have spent the last five years assisting my family in claimstaking and prospecting for diamonds in Temiskaming District. I have collected hundreds of till samples from the field, and recently auger sampling for SGH analysis. I have designed scores of work plans for field sampling, and manually created several large Sampling Program maps for later publication. I have project managed the field activities of on-the-ground till sampling for a junior mining company over the summer of 2019, directing the collecting and logging of hundreds of samples. I collaborated with local geologists and produced a graphic sequence outlining the deposition of gold in the Larder Lake-Cadillac fault system for visual display at the Toburn site in Kirkland Lake. I meet regularly with local geologists and the resident geologist to inquire and discuss various topics relevant to diamond prospecting and geology more generally. Collectively, I have spent many weeks grassroots prospecting and chipping at rocks in the field. I try to keep up to date on publications relevant to the geology of the area and will continue to broaden my experience in mineral exploration.

Signed,

Dated: Nov. 6, 19

Graeme S. Bishop

A handwritten signature in black ink, appearing to read "Graeme Bishop". The signature is written in a cursive, flowing style with a long tail on the final letter.

APPENDIX

Item No. 1

Till Sample Processing and Findings: Lab report by Tony Bishop

The original till samples collected down-ice of Oro Lake were processed by first concentrating in a custom built 14" sluice box fitted with miner's moss with a layer of stainless-steel mesh on top.

The concentrates were then wet screened to minus 0.5mm, 0.5 -1.0mm, 1.0 – 2.0mm, and 2.0+mm.

The minus 0.5 wet cons were then GoldCubed to a smaller, heavier fraction. This was repeated for the 0.5-1.0mm fraction.

All fractions were dried in aluminum pans at 150°C in a custom convection oven.

These fractions were then separated into 5 separate magnetic susceptibilities from very magnetic (magnetite) to inert magnetically (kimberlitic Chrome Diopsides), using calibrated magnets.

The first category removed magnetite and most crustal garnets, and so on, to aid in selecting probable kimberlite indicator minerals (KIMs) and possible diamond indicator minerals.

These various fractions, with the exception of the 2.0+mm, were carefully wet-panned with Keene's Engineering ABS gold pans into a denser heavy concentrate.

These were subsequently dried.

The individual fractions were then viewed, and KIMs and other interesting grains picked under a Nikon SMZ-2B binocular microscope with colour correct lighting.

Some of the more important grains were photographed through the microscope, and recorded with comments. Some or all of these grains will be sent to RGC Lab in London, ON for microprobe analysis.

From these preliminary tests, the results dictate that future more extensive till sampling should be planned for both down and off-ice to help pinpoint the target.

RESULTS:

Photographs of some select KIMs from till samples down-ice of Oro Lake: (following page)

Fig. no. 1

Fig. no. 2

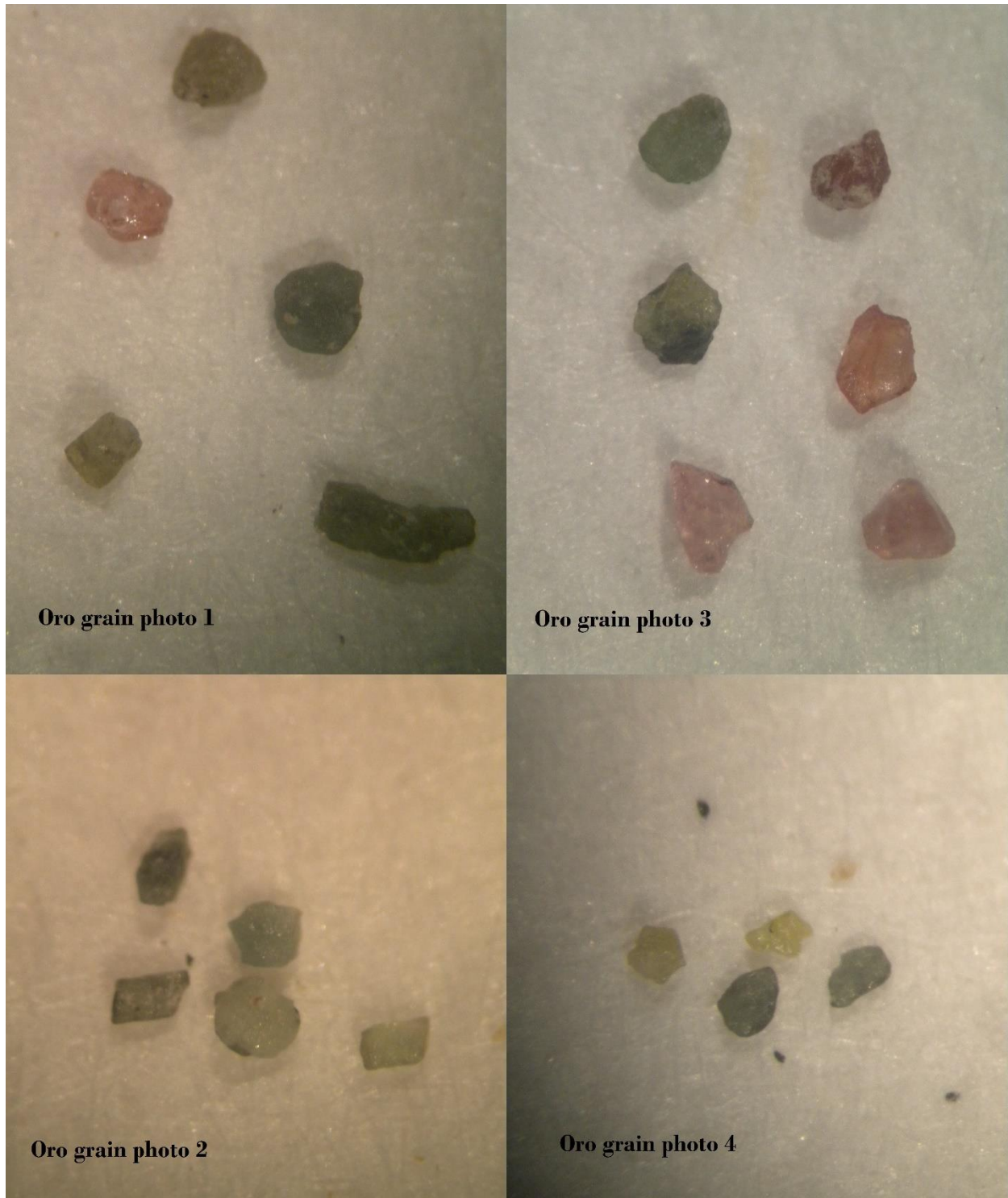


Figure No. 1: Photos 1-4 picked KIM grains from Oro Lake to accompany descriptions by Tony Bishop

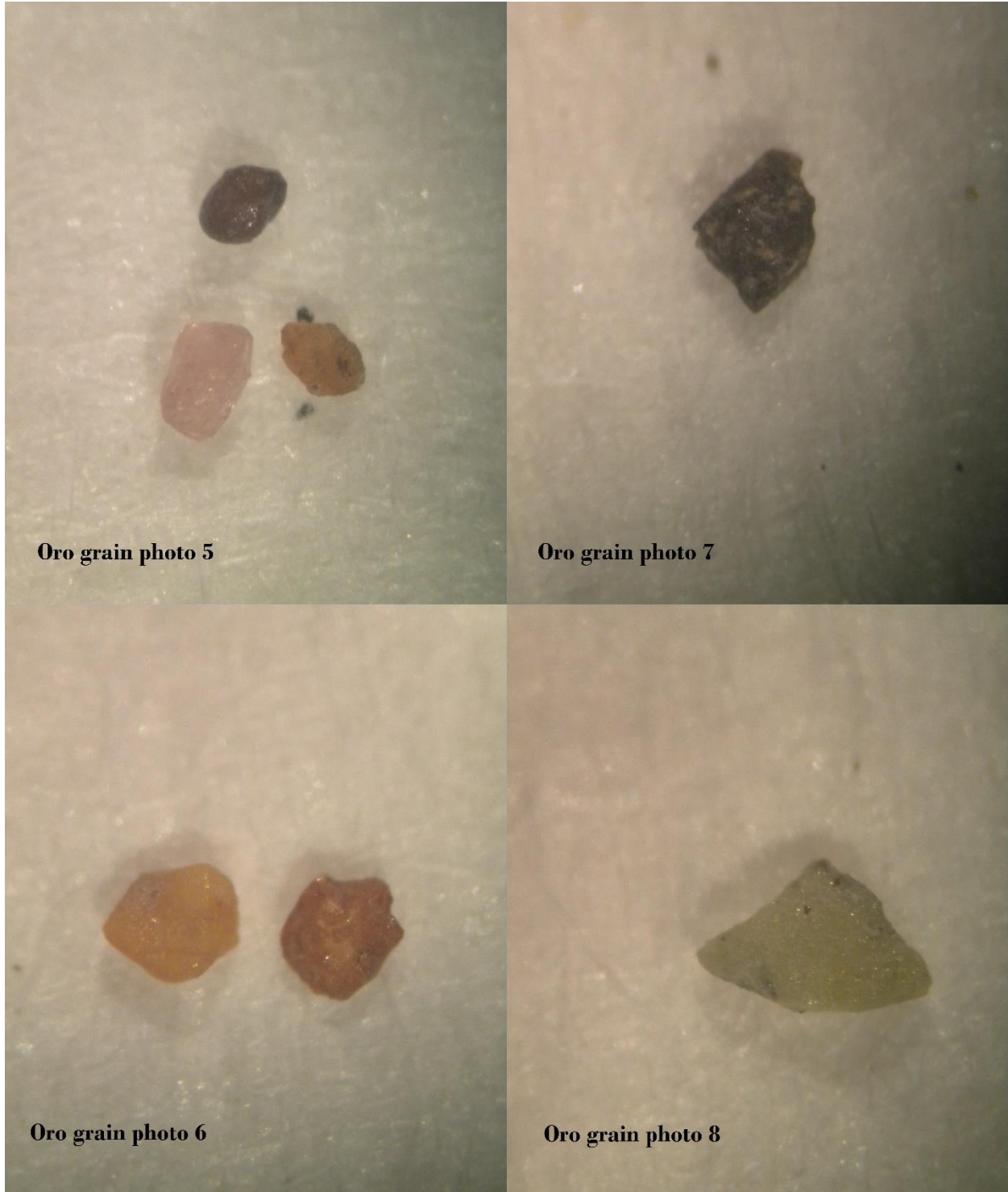


Figure No. 2: Photos 5-8 picked KIM grains from Oro Lake to accompany descriptions by Tony Bishop

Photo descriptions:

Oro prelim assessment **Photo 1:** Traverse 0, combined sample 1 & 2

- ~0.5+ mm
- 4 Cr Diopsides (DC)
- 1 Garnet – pink
- tested N-52 inert
- stored in vial & bag for EMP analysis

Oro prelim assessment **Photo 2:** Traverse 0, combined sample 1 & 2

- ~0.25 mm
- 2 Cr Diopsides
- Garnets: 1 red orange with kelyphite rim, 1 light orange, 2 light pink with subkelyphite frosted surface
- tested N-52 pick up and light shake off
- stored in vial & bag for EMP analysis

Oro prelim assessment **Photo 3:** Traverse 0, combined sample 1 & 2

- ~0.25mm
- 5 Cr Diopsides
- tested N-52 inert
- stored in vial & bag for EMP analysis

Oro prelim assessment **Photo 4:** Traverse 0, combined sample 1 & 2

- ~0.25mm
- 4 Cr Diopsides
- tested N-52 pick up and light shake off
- stored in vial & bag for EMP analysis

Oro prelim assessment **Photo 5:** Traverse 0, combined sample 1 & 2

- ~0.25mm
- Garnets: 1 deep purple, 1 pink, 1 medium light orange with subkelyphite orange peel texture
- tested N-52 inert
- stored in vial & bag for EMP analysis

Oro prelim assessment **Photo 6:** Traverse 0, combined sample 1 & 2

- ~0.5mm
- Garnets: 1 dark orange red, 1 medium light orange, both exhibit subkelyphite orange peel texture
- tested N-52 inert
- stored in vial & bag for EMP analysis

Oro prelim assessment **Photo 7**: Traverse 0, combined sample 1 & 2

- ~0.6mm
- possible very dark purple garnet with kelyphite rim
- tested N-52 inert
- stored in vial & bag for EMP analysis

Oro prelim assessment **Photo 8**: Traverse 0, combined sample 1 & 2

- 0.9mm
- Cr Diopside, frosted surface
- tested N-52 inert
- stored in vial & bag for EMP analysis

Recommendations:

These photos represent grains that are highly interesting KIMs and in some cases are possibly DIMs. Other KIMs and potential KIMs were picked and stored but not photographed.

These grains were recovered from a relatively small volume of till some distance down-ice of a potential kimberlite target, and the collection of additional samples during prospecting traverses further up ice and closer to the target is recommended. These new samples will be processed by gravity and heavy liquid separation, and checked for kimberlite indicators and the results to be presented in a follow-up report.

Further, the number of and relatively large size grains of Cr Diopsides strongly suggest minimal travel distance from source. The only known kimberlite pipes are nearly 20 km north in the area west of Haileybury, and are therefore highly unlikely to be the source of these KIMs. Large Cr Diopsides are known to break down quickly in transport, and are generally proximal to their source.

Given that till sampling for a potential kimberlite source involves examining till from a distance down ice, it is apparent that the purpose of concentrating and examining this till has been to further investigate the hypothesis of Oro Lake being a kimberlite target, and therefore the value of this work should be assigned to Claim numbers 137517 and 201666 on which the target occurs.



**Bedrock Glacial Striations
on south side of Roosevelt Forest Road between Oro Lake and Houndchute Lake**

Figure No. 3



Bedrock Glacial Striations on hill at pipeline in Cell 108068

**Compass and striations
0591205 E
5240211 N**

**Compass and striations
0591199 E
5240191 N**

**Compass and striations
0591251 E
5239911**

Figure No. 4

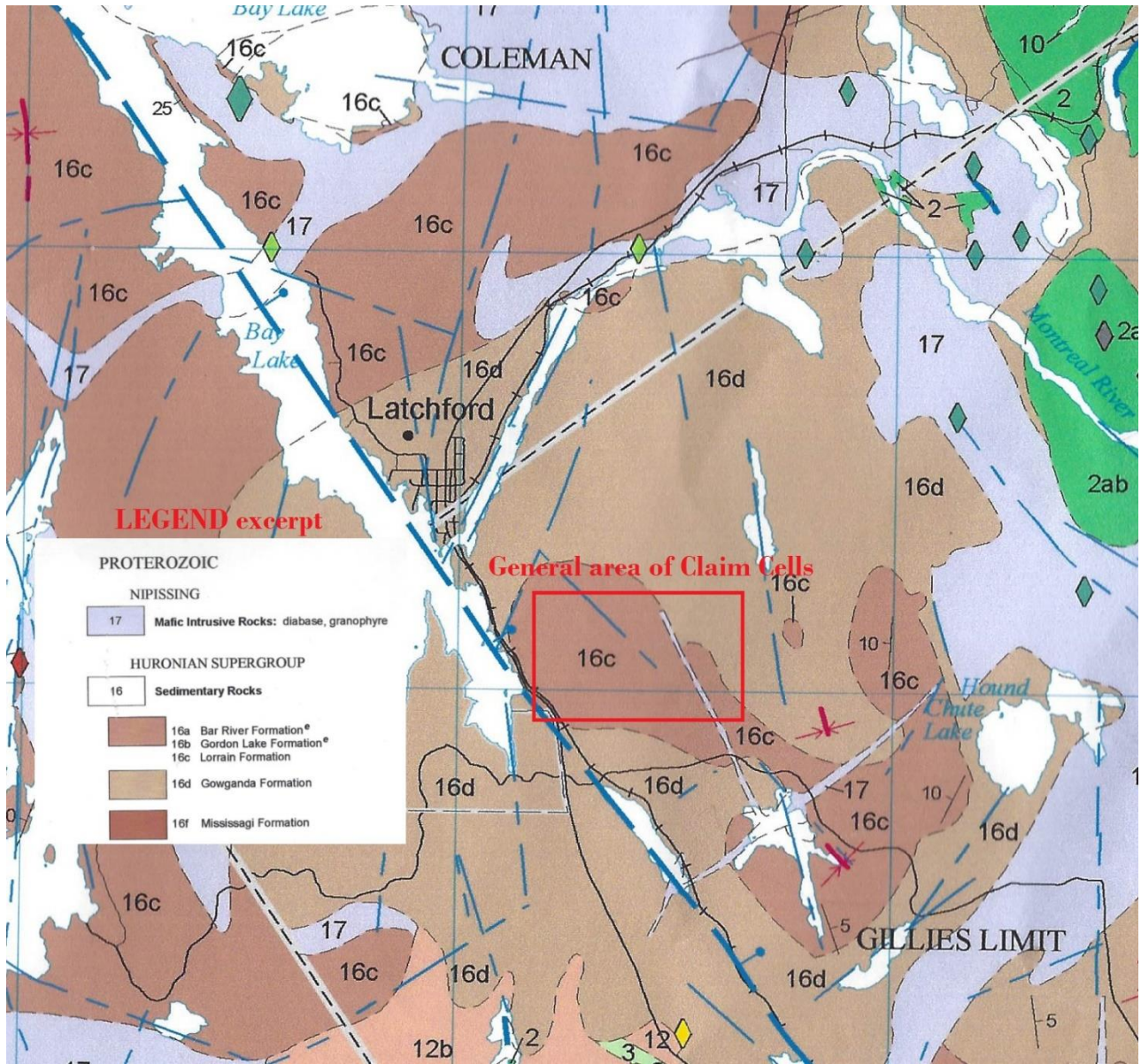


Figure No. 5: Section of Geological Compilation Map P.3581

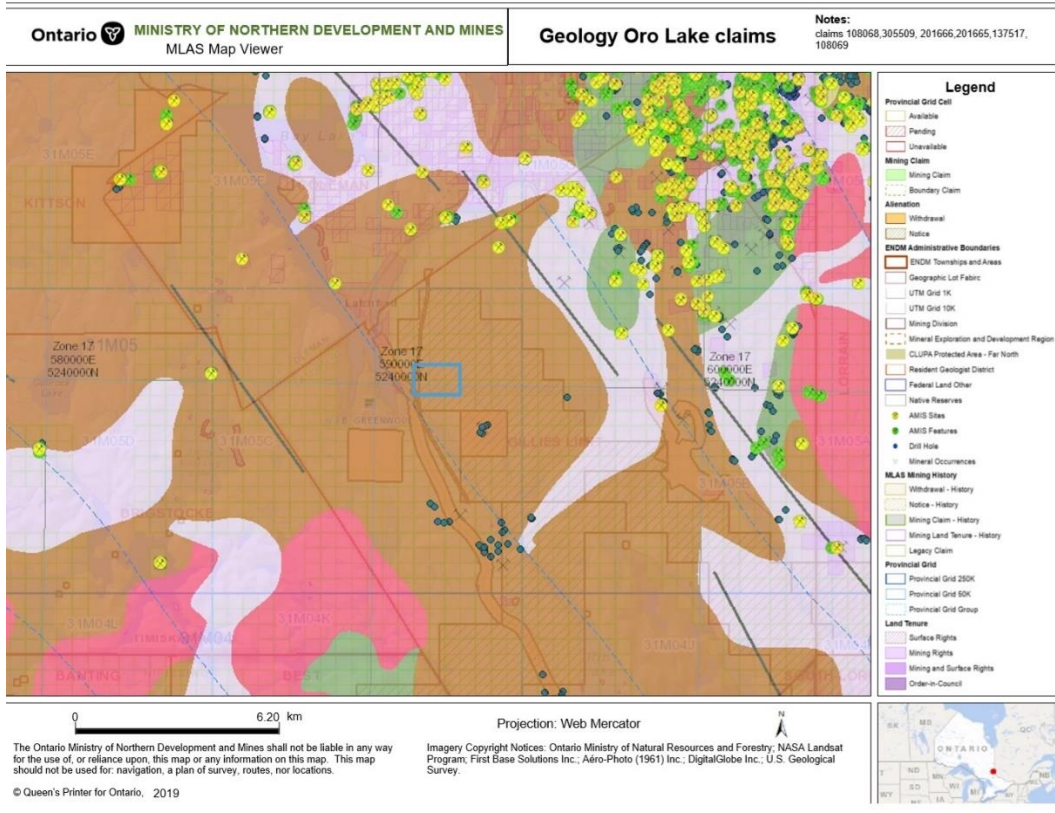
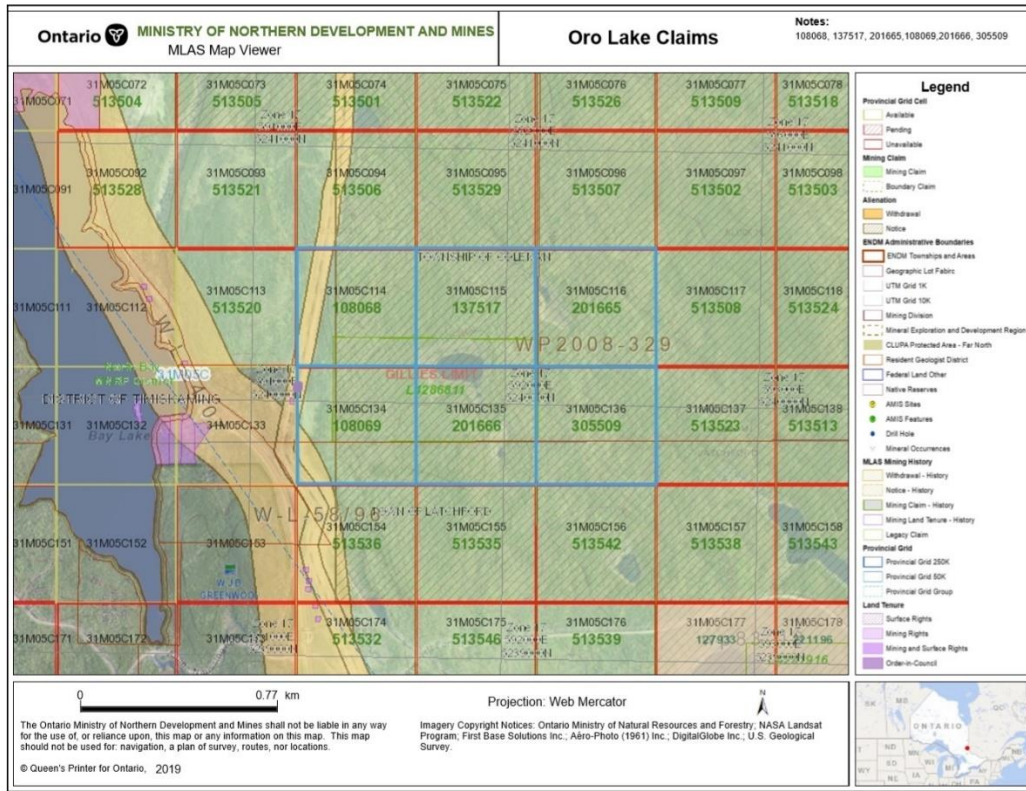


Figure No. 6: MLAS screenshots showing Alienations and Geology

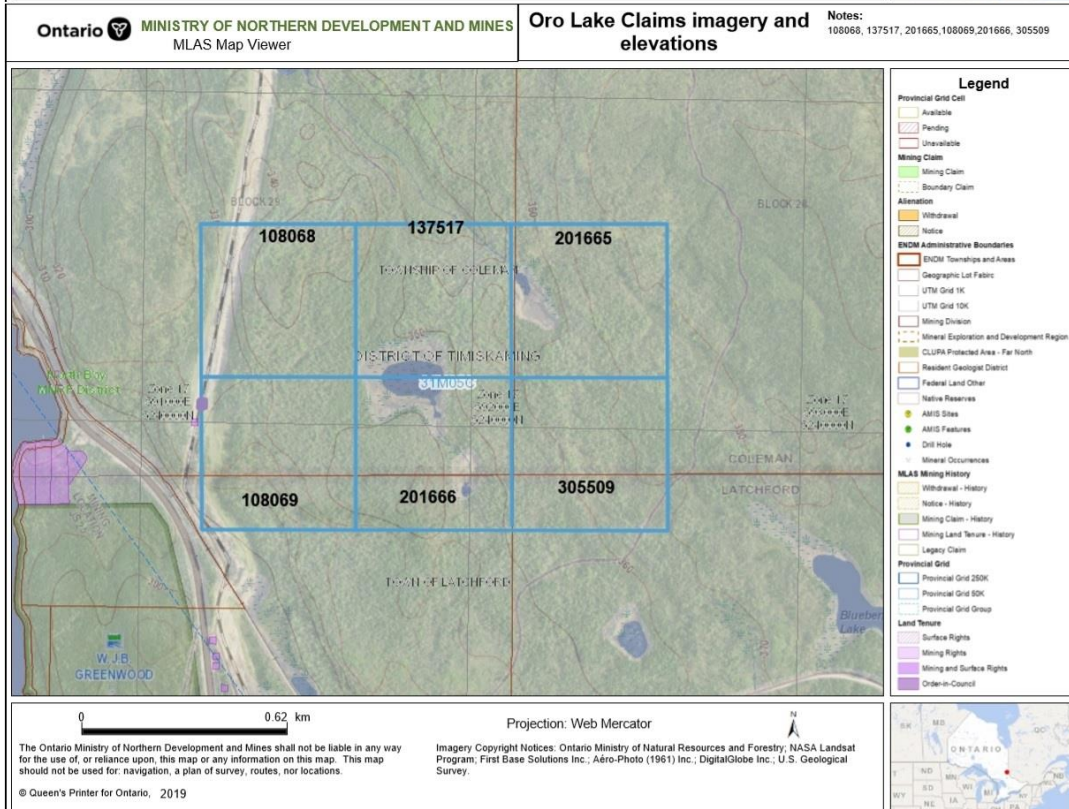
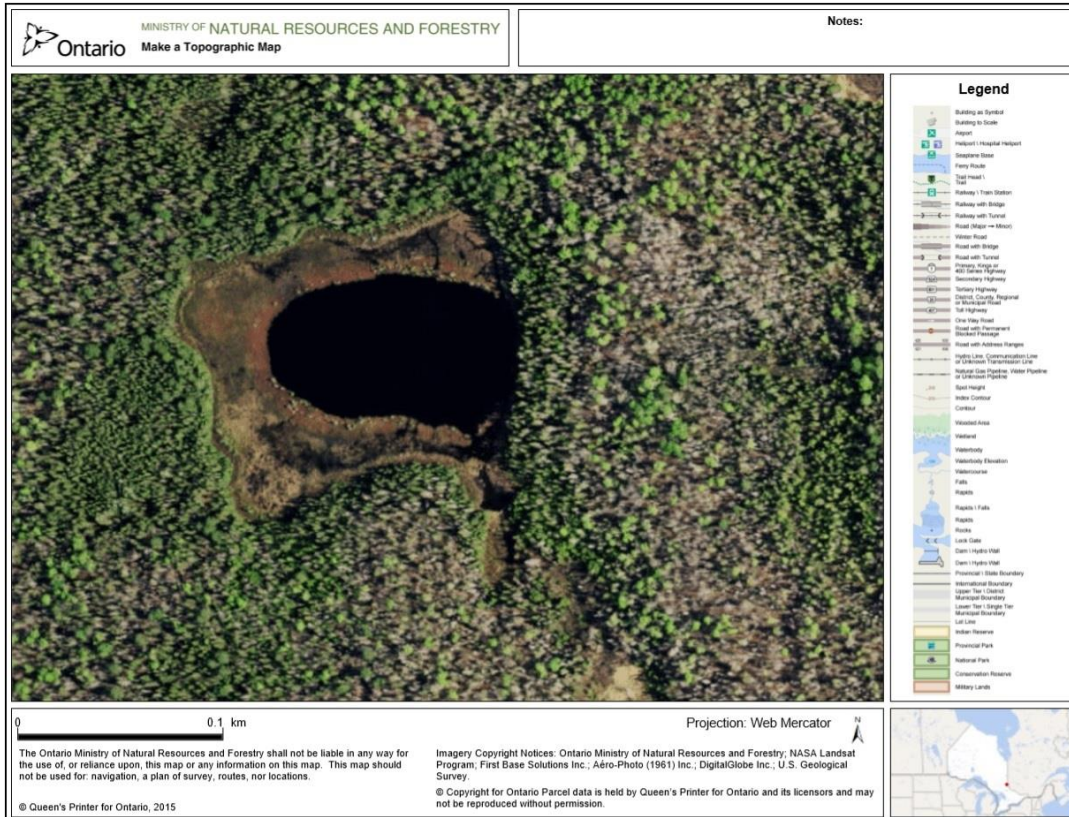


Figure No. 7: MLAS screenshots showing Imagery and Cells

ORO LAKE TARGET

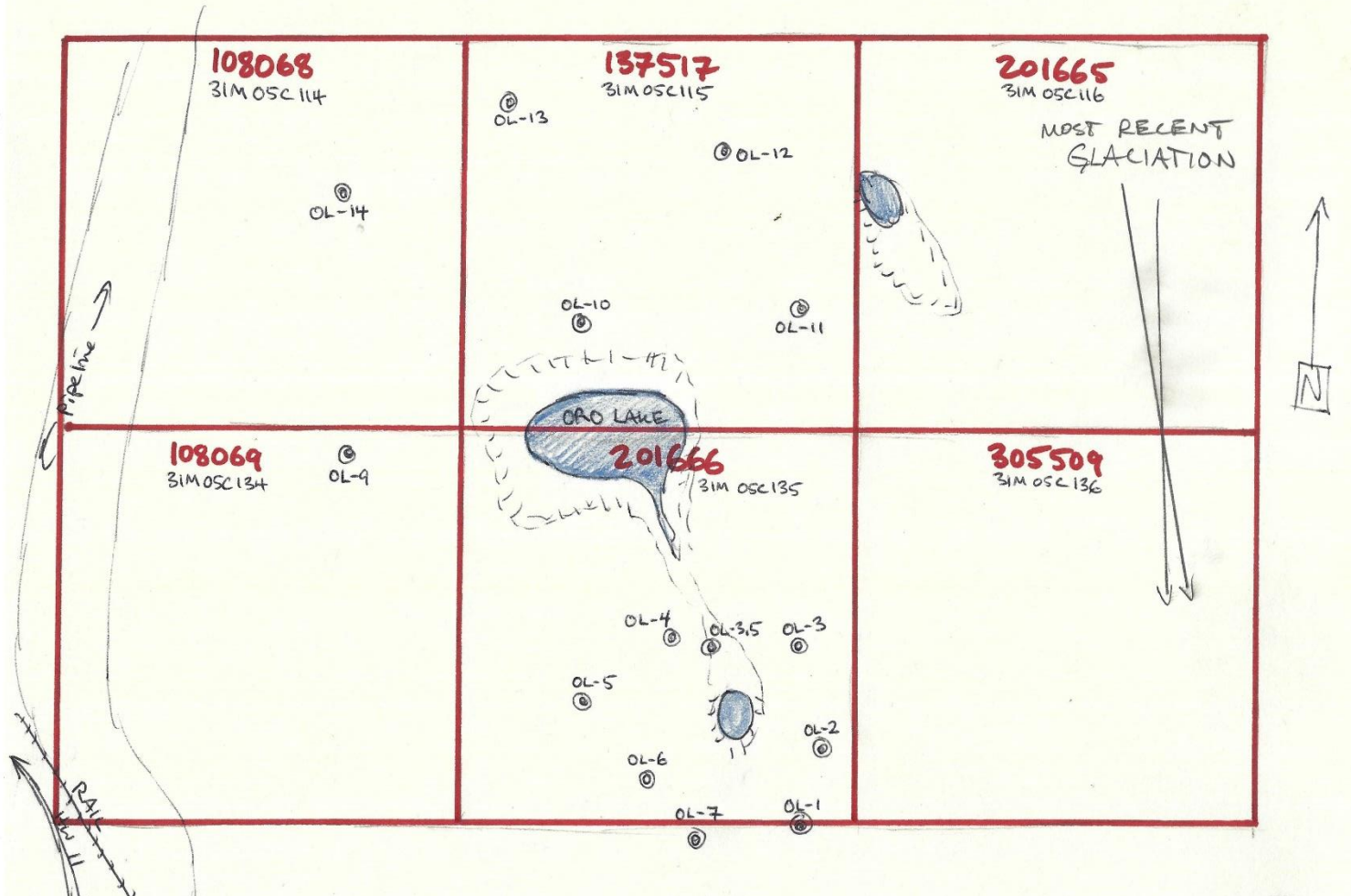


Figure No. 8: Showing sample field from Traverse 2 and Traverse 3



Figure No. 9: Showing wacke glacial erratics, Traverse 3



Figure No. 10: Photos of Tony Bishop sampling during Traverse 0



Figure No. 11: Photos of Tony Bishop sampling during Traverse 1



Figure No. 12: Photo of Nathan Pullen in the field, and one of many wacke erratics. Traverse 2.



Figure No. 13: Photos of Oro Lake taken during Traverse 3

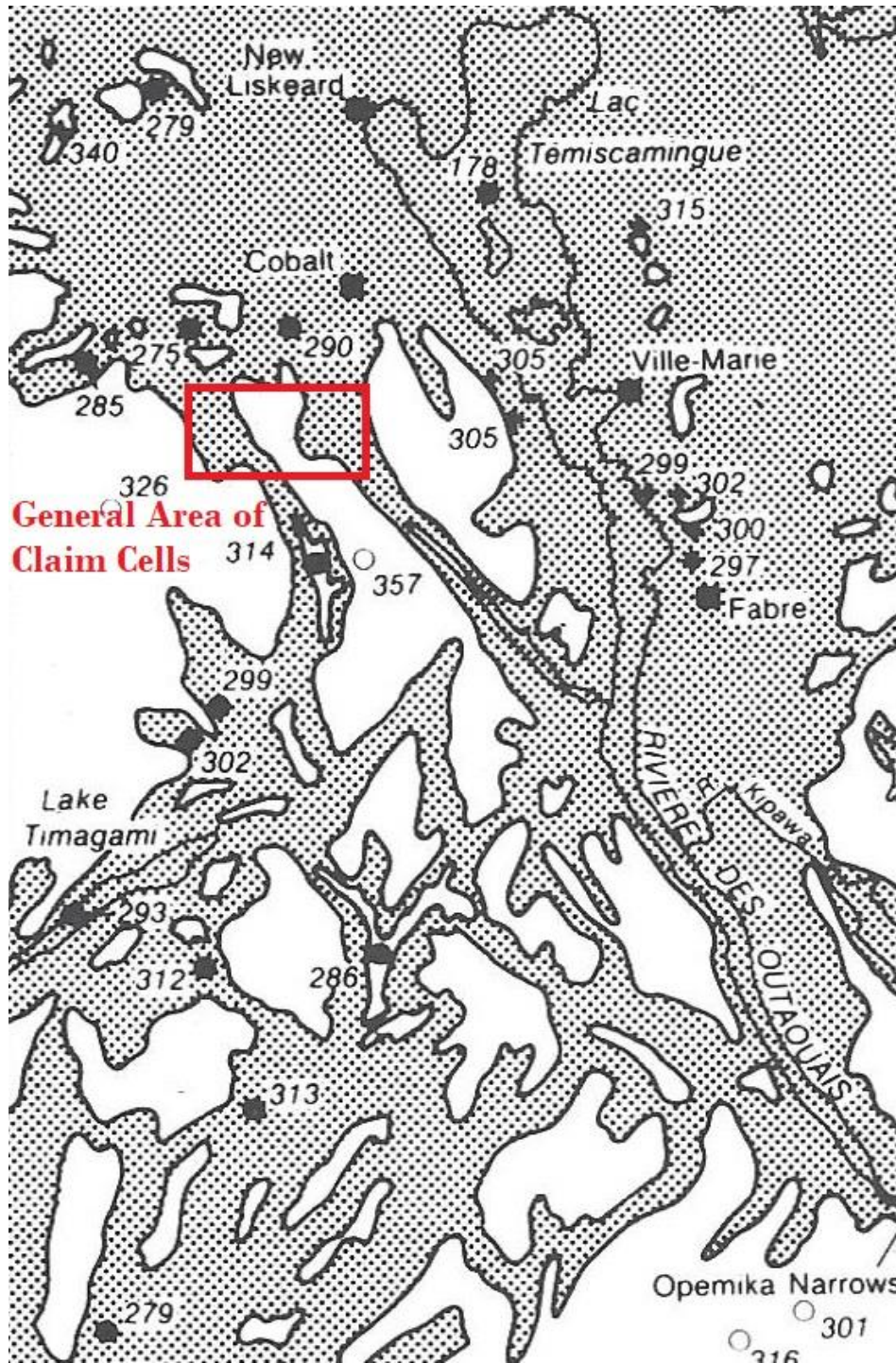


Figure No. 14: Diagram of proglacial Lake Barlow (modified from Veillette 1988) showing relation of target area to proglacial water.

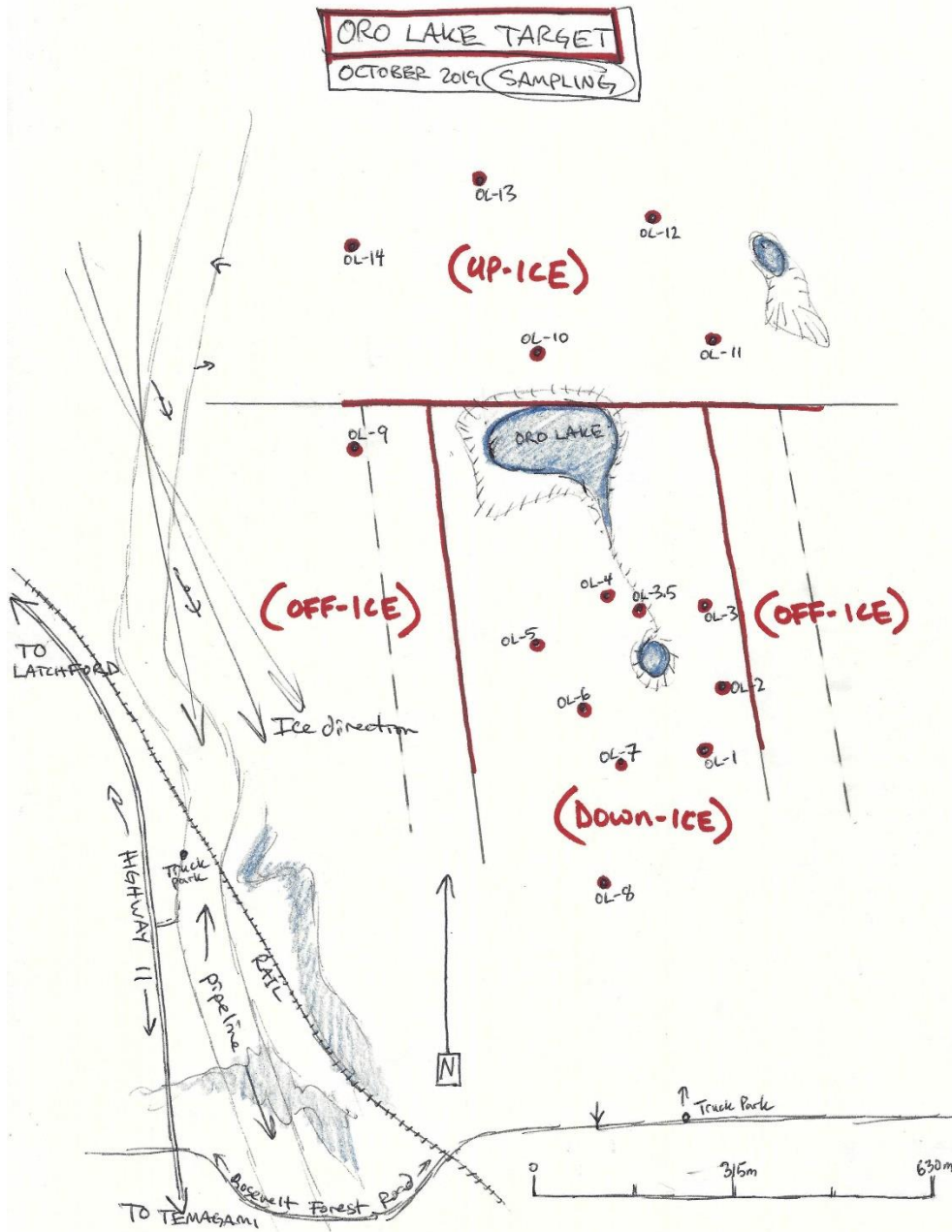


Figure No. 15: Glaciation sampling example