

# Yukon Mineral Exploration Program 2017 Update

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## PROGRAM SUMMARY

The Yukon Mineral Exploration Program (YMEP) is a funding program, administered by the Yukon Geological Survey (YGS), and designed to support individual prospectors, partnerships and companies by providing a portion of the risk capital required to locate, explore and develop mineral occurrences in Yukon. YMEP funding has consistently demonstrated its impact as an effective economic incentive by supporting exploration work that has led to numerous discoveries, which in turn, have provided significant long-term economic benefits to the territory.

YMEP funding supports placer and hard rock exploration projects by reimbursing a percentage of approved exploration expenditures. Funding is merit-based; a panel of geologists evaluate submissions using a ranking system designed to score a range of criteria, quantifying the quality of the target, the proposal, the work plan, and the applicant's previous YMEP performance. This scoring system is available from our website at <http://www.geology.gov.yk.ca/ymep.html>.

## UPDATE FOR 2017

The Government of Yukon recognized that economic conditions in 2017 would likely continue to be challenging for the exploration sector, and enhanced the level of YMEP funding to \$1.6M. Interest in the 2017 program was strong, and the YGS received 78 applications seeking more than \$2.5M.

Due to increased interest from the placer mining industry, a placer specific module was added for the 2017 program. There are now four specific modules with different levels of funding available (Table 1).

Fifty-nine applicants were offered funding in 2017. Thirty-eight of the funded applications were for hard rock exploration projects (nine are Focused Regional, one is Grassroots, and twenty-eight are Target Evaluation); and twenty-one placer applications were funded. The majority of unfunded applications were considered eligible for funding, but budget constraints precluded them receiving support. The success rate for funding over the last seven years is shown in Table 2; the enhanced funding for this year allowed a higher than average success rate of over 75%.

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**Table 1.** Summary of YMEP program guidelines. For more detailed information please reference the YMEP guidebook or [www.geology.gov.yk.ca/ymep.html](http://www.geology.gov.yk.ca/ymep.html).

	Grassroots	Focused Regional	Target Evaluation	Placer Module
<b>Funding</b>	max \$15 000	max \$25 000	max \$40 000	max \$40 000
<b>Reimbursement rate</b>	up to 100% of eligible expenses	up to 75% of eligible expenses	up to 50% of eligible expenses	up to 50% of eligible expenses
<b>Scope of work</b>	to generate new targets and advance existing ones	to generate new targets	to evaluate and advance already known targets	to evaluate and advance new and existing placer targets
<b>Who is it for</b>	individual prospectors only (no companies nor anyone working on behalf of a company)	prospectors, companies, partnerships	prospectors, companies, partnerships; projects with total exploration expenditures less than \$300 000	
<b>Work to proceed on</b>	on claims, or crown land	on claims, or crown land	on claims, coal exploration licenses, not crown land	on claims, leases, or quarry leases and crown land
<b>Field time requirements</b>	minimum 30 person-days in field, daily log	no constraints on time in field, final technical report	no constraints on time in field, final technical report	no constraints on time in field, final technical report
<b>Report requirements</b>	daily log and final technical report	final technical report		
<b>Holdback/reporting</b>	15% holdback until submission of final reporting requirements			25% holdback until submission of final reporting
<b>Reporting deadlines</b>	Project proposal: March 31, Status Report: September 30, Final Financial Report and Final Summary/ Technical report and release of funds: January 31 of following calendar year			
<b>Confidentiality</b>	reports will be kept confidential for 5 years	reports will be kept confidential for 2 years		
<b>Module-specific eligible expenses</b>	applicant cannot draw wages but wages for one assistant are eligible		road building costs up to <25% of YMEP contribution if pre-approved, drilling	road building costs up to <10% of YMEP contribution if pre-approved, drilling, trenching, limited bulk sampling, test pitting, sample processing
<b>Eligible expenses</b> (See Rate Schedule for details)	conventional exploration work, travel within Yukon (truck, helicopter, etc.; up to 25% of eligible claim), assays, shipping, wages (applicant not eligible in grassroots module), WCB, contracts, equipment rental, daily field expenses, fuel, claim staking (up to 20% of eligible claim), reclamation			
<b>Reimbursement rate guidelines</b>	Expenses reimbursed according to YG guidelines. Private and commercial rates are provided. Private rates for heavy equipment are 75% of commercial rate as approved by YG.			
<b>Staking</b>	staking costs up to 20% of eligible contribution			
<b>Travel</b>	travel within Yukon (truck, helicopter, etc.) up to 25% of eligible contribution			
<b>Eligible use of machinery</b>	use of light equipment (<5 tons)		use of light or heavy equipment	
<b>Non-eligible expenses</b>	recording fees, management fees, costs of applying for permits or licenses, project planning and compilation, legal fees, promotional expenses, transportation outside Yukon, underground work, preparation for mining, mining, acquisitions, repairs			
<b>Compliance</b>	applicants must ensure that proper permitting is in place and that their work programs satisfy existing laws and regulations			

**Table 2.** Summary of YMEP funding, application numbers and module funding levels.

Historical funding	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Available funding	\$1.67M	\$570 000	\$570 000	\$1.17M	\$1.4M	\$1.4M	\$1.4M	\$1.6M
No. of applications	165	83	79	81	111	103	100	78
Approved projects	83	34	29	55	51	62	57	59
Max funding level grassroots	\$15 000	\$15 000	\$15 000	\$15 000	\$15 000	\$15 000	\$15 000	\$15 000
Max funding level focused regional	\$25 000	\$15 000	\$15 000	\$15 000	\$25 000	\$25 000	\$25 000	\$25 000
Max funding level target evaluation	\$50 000	\$25 000	\$25 000	\$25 000	\$50 000	\$40 000	\$40 000	\$40 000
Max funding level placer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40 000

Figure 1 illustrates the location of funded YMEP projects. The majority of placer projects (eleven) are centered in the Klondike placer district, two projects are in the Mayo/Keno area, four are in the Mt Nansen area, and individual placer projects are located in the Sixty-Mile, Dawson Range, Clear Creek, and Hess River areas of Yukon. Hard rock projects are evenly distributed throughout the territory. Gold is the most sought-after commodity of hard rock projects, with thirty-one proponents exploring for structurally-controlled, epithermal, Carlin style, intrusion related and orogenic gold. Other targets include vein-hosted silver (two), porphyry copper (two), VMS style mineralization (one), jade (one), and magmatic massive sulphide copper/nickel/PGE prospects (one).

Twenty-six exploration projects focused on soil and silt sampling, and prospecting and geological mapping; six undertook ground-based or airborne geophysical surveys; twenty-five involved drilling and/or trenching; and two undertook hand shafting.

In 2017, hard rock projects accounted for 65% of the successful applications and placer projects accounted for the remaining 35%. Individual prospectors and private companies secured 55% of available funds, while public junior mining/exploration companies received 45% of the funds. The breakdown between the different modules and

the demographics of the applicants over the past six years are outlined in Table 3. Over this period, the funding split between placer and hard rock sectors has been consistent. The biggest change has been the increase in the share granted to placer projects, from a historical average of around 25% to 35% this year. This increase was at the expense of funding to hard rock projects.

As part of the Yukon Geological Survey's footprint project, YMEP reports were added to the database in the summer of 2017 ([http://www.geology.gov.yk.ca/Web\\_map\\_gallery.html](http://www.geology.gov.yk.ca/Web_map_gallery.html)). This online application has been well received. When advanced and significant exploration projects are plotted on a map (Fig. 2) in conjunction with YMEP footprints an argument can be made that the program has generated numerous legitimate exploration projects. Many significant exploration projects have at some point been able to utilize YMEP funding to advance their programs and to leverage additional expenditures.

As of mid-December, most YMEP projects had been successfully completed and preliminary results suggest there are several potentially significant discoveries resulting from the work.

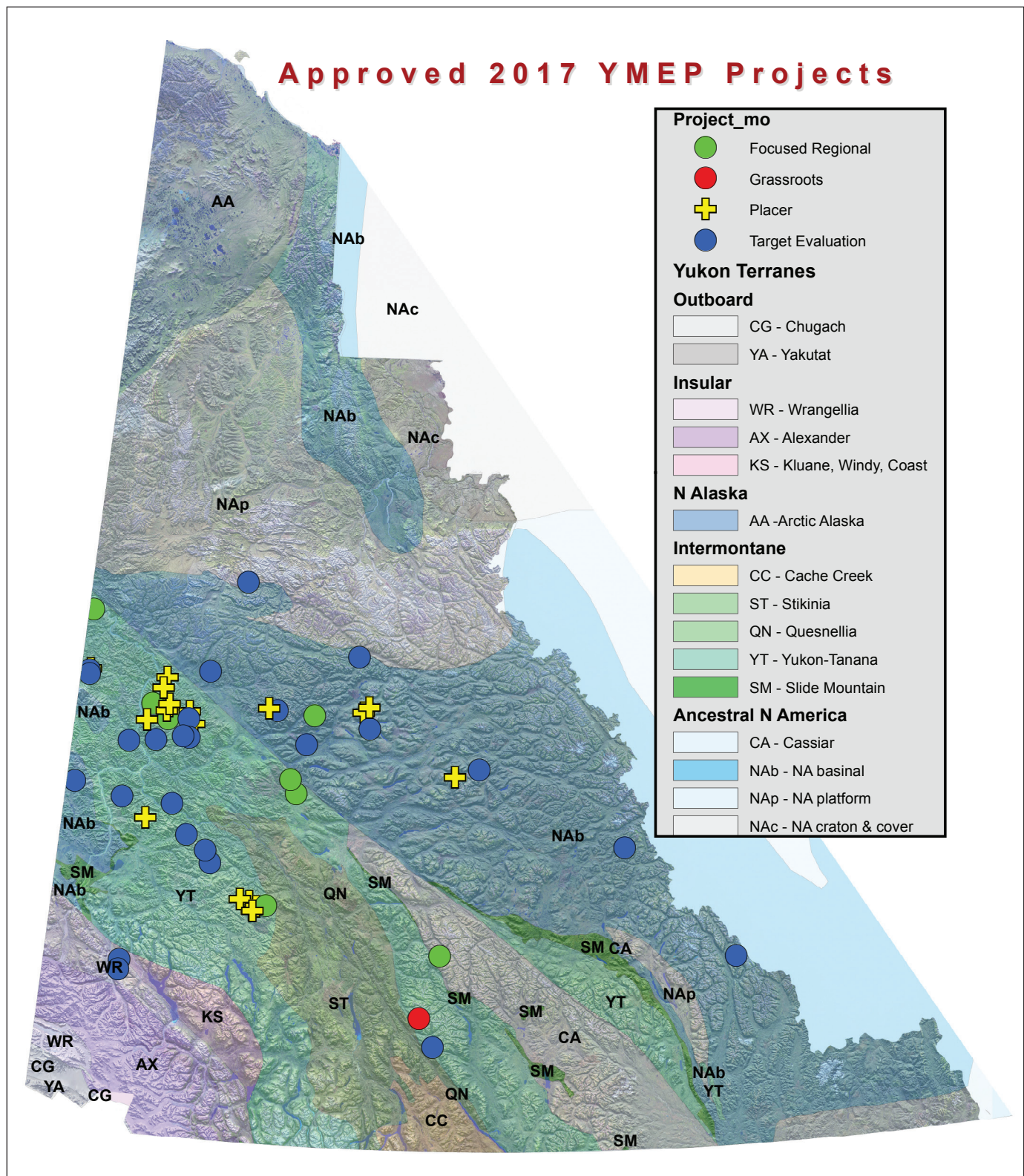


Figure 1. Location of approved YMEP 2017 projects.

**Table 3.** Allocation of YMEP funds between sectors for the last 6 years.

	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	No. of projects	% of funding	No. of projects	% of funding	No. of projects	% of funding	No. of projects	% of funding	No. of projects	% of funding	No. of projects	% of funding
<b>Placer</b>	7	28%	7	15%	14	22%	15	28%	15	26%	21	35%
<b>Hard rock</b>	22	72%	48	85%	29	78%	47	72%	34	74%	38	65%
<b>Total projects</b>	29		55		51		62		57		59	
<b>Prospectors/ individuals</b>	17	59%	28	36%	20	30%	24	34%	24	39%	18	29%
<b>Private companies</b>	8	27%	16	33%	12	29%	21	32%	16	30%	22	26%
<b>Public companies</b>	4	14%	13	31%	19	41%	17	34%	17	31%	19	45%

YMEP plays a very important role in helping to advance grassroots programs, to de-risk early stage exploration and to support exploration in financially lean years. The mandate of YMEP is to keep a variety of projects at various stages of advancement operating in Yukon. A number of projects have progressed through YMEP and have advanced beyond the intended scope of the program. Three of the main projects that now have deposit resource estimates are the Coffee, Andrew and Red Mountain projects. These projects stand out as having stimulated significant investment beyond their initial YMEP-funded expenditures. Collectively the projects represent a total investment in excess of \$147M; they have combined resources of 7.14 M oz. gold, 990 M lb zinc, and 238 M lb lead with a contained value in excess of \$12.1B. The total YMEP investment in these projects was \$396K, corresponding to a leveraging ratio of 371:1.

A number of high profile projects have recently benefited from YMEP investment and have now generated enough success and momentum to secure financing on equity markets. These projects include the 3 Aces, Plateau and Wellesley Lake projects.

### **GOLDEN PREDATOR: 3 ACES PROJECT**

The 3 Aces project received YMEP funding between 2001 and 2014 (2001-017, 2010-118, 2014-010). Work included prospecting, geological mapping, soil sampling, airborne geophysics, and bulk sampling. In 2010 chip sampling at the Main zone returned extremely high gold values of up to 1013 g/t Au with 50.19 g/t Ag across 1.1 m. Chip sampling on the Sleeping Giant zone returned numerous high grade gold values to 11.34 g/t Au across 6.0 m. Work in 2010 by Golden Predator Mining initiated and completed metallurgical tests on three large volume samples collected from the Sleeping Giant vein zone (600-800 kg). The program was designed to help understand the coarse gold in the vein system. Results from the 2014 program provided very important data regarding appropriate assay techniques, gold recoverability, and detailed mineralogy of the free gold grains. Results to date from subsequent drilling and sampling programs has yielded numerous high grade gold discoveries throughout the 3 Aces claim package.

Since the 2014 YMEP program Golden Predator has invested in excess of \$12M for exploration on the 3 Aces property. In 2017 Golden Predator completed a \$17.25M financing to continue to advance the project towards commercial production (<http://www.goldenpredator.com/>).

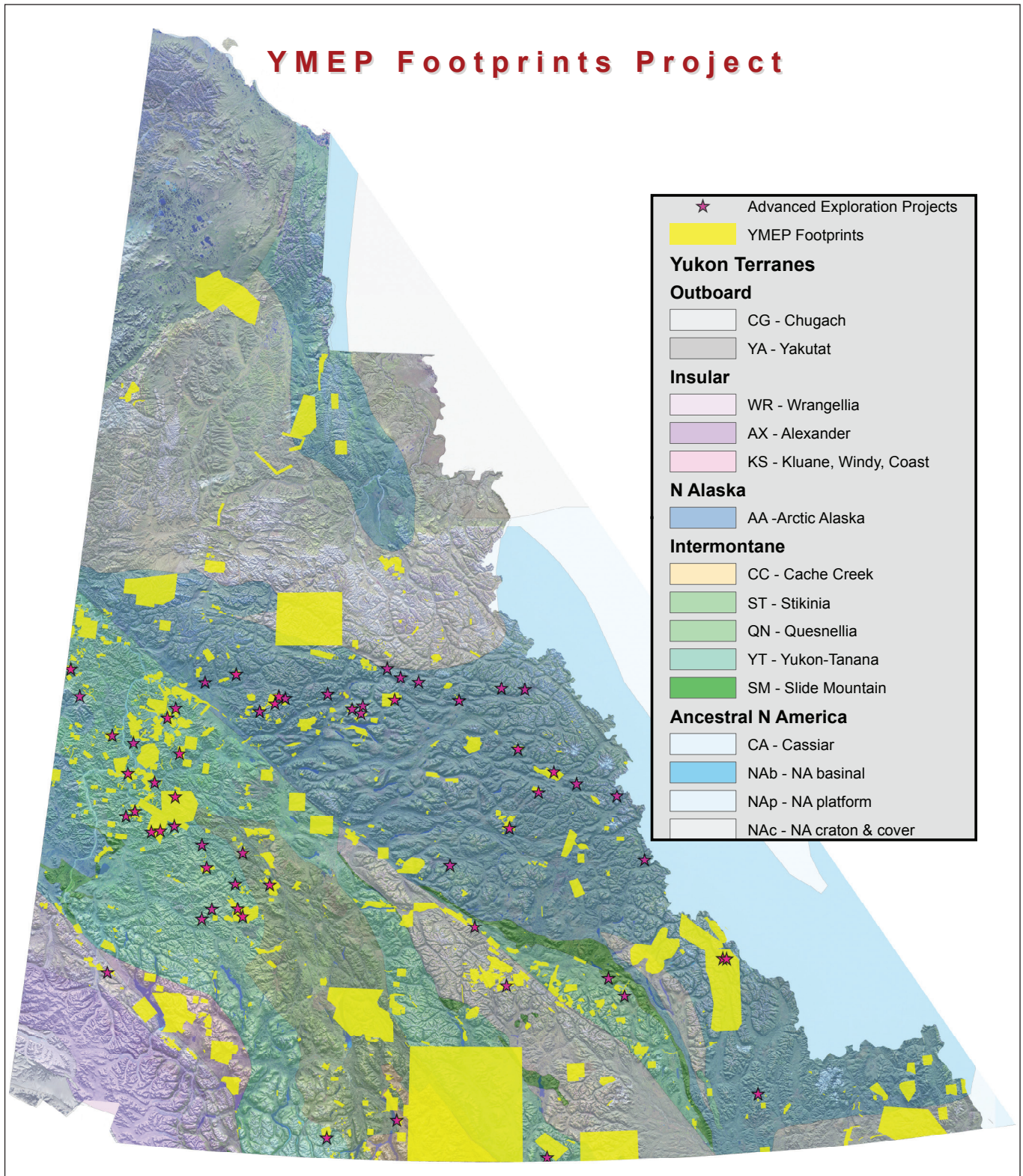


Figure 2. YMEP report footprints.

## GOLDSTRIKE RESOURCES: PLATEAU PROPERTY

Goldstrike Resources received a YMEP grant (2014-014) for its Plateau property in 2014 to conduct 3D resistivity and chargeability surveys, and to gather samples from the VG, Ben and SW zones for rock physics measurements. Results of the field work indicate that the resistivity structure in the near-surface zone consists of a strong NW-SE lineament defined by alternating bands of conductive and resistive rock. A crosscutting secondary structure is observed to offset the NW-SE lineament. Chargeability is generally low in the upper zone but areas of moderate chargeability correlated strongly with anomalous geochemistry. The conclusion is that zones of gold and arsenic corresponded to high resistivity, and low to moderate chargeability and low magnetic susceptibility.

Since the 2014, YMEP grant the Plateau project has seen exploration expenditures in excess of \$10.2M. In March of 2017, Goldstrike announced that it had formed a strategic alliance with Newmont Mining to acquire the Plateau property in a deal worth \$53M. Newmont has recently announced it will conduct a 10000 m drill program at the Plateau property in 2018 ([http://www.goldstrikeresources.com/main/home.php?page\\_id=1](http://www.goldstrikeresources.com/main/home.php?page_id=1)).

## K2GOLD: WELLESLEY LAKE GOLD

The Wellesley Lake project received YMEP funding between 2011 and 2015 (2011-046, 2012-024, 2014-006, 2015-083). During this time, YMEP helped to fund programs of soil sampling, prospecting, geological mapping, airborne geophysics, trenching and diamond drilling. The first pass of this work outlined a 1250 by 200 m east-west trending gold + arsenic + antimony + silver + tungsten in soil anomaly with values ranging from 34.6 to 3082 ppb Au. Follow up trenching and prospecting returned grab sample values up to 149.5 g/t Au and trench samples of 9.15 g/t Au over 40.5 m. The first diamond drilling campaign on the property was in 2015. Significant results included 97.5 m of 0.76 g/t Au, including 3.11 g/t Au over 19.5 m and 5.71 g/t Au over 9 m. In 2016, the project was optioned to West Melville Metals, which became K2Gold. In 2017 K2Gold conducted a \$1.2M exploration program which included prospecting and additional diamond drilling which returned intercepts of 28.5 m of 2.37 g/t Au, 12.5 m of 5.08 g/t Au and 144 m of 0.28 g/t Au. It was noted that visible gold was logged in 3 of the 10 drillholes. K2Gold has recently conducted additional staking to help solidify its land package (<http://k2gold.com/>).

## YMEP PROGRAM REVIEW

In 2014, YGS undertook a client survey to measure how applicants perceive the program. Sixty-seven responses were received from both successful and unsuccessful applicants. Responses indicated that the program has a significant impact on exploration, with a majority of recipients (91%) indicating that their grant contributed to their exploration success. The majority of respondents felt the funding levels and the proportion of matching funds required for each module were appropriate, and that evaluation criteria were fair. Responses varied regarding “fair share” between sectors, with placer sector respondents suggesting that placer applicants should receive an equal share (50%) of the funds.

As a follow up to the client survey, YGS is compiling statistics on YMEP to allow the comparison of survey results to actual data (funding levels, success rates, and applicants by sector, etc.). The compilation covers the last sixteen years, which is the period for which robust statistics exist. Since 2000, YMEP has invested \$16.02M in 854 projects leveraging \$40.7M of additional exploration expenditures in the year the grants were awarded. The breakdown of grants by module between 2010 and 2016 are presented in Figure 3.

YMEP is designed to meet the needs of users of the program and to act as an engine for stimulating economic development. Significant effort has been expended to improve the program for clients. Development of the Placer module, creation of YMEP footprints app and the redesign of YMEP forms and guidebooks were done to improve the client experience.

Dollars leveraged, new discoveries and option agreements entered are indicators used to measure success (Table 4). In 2017, YMEP recipients committed ~\$4.8 M in exploration investment, corresponding to a leveraging ratio of 3:1. While easily measured, leveraging ratios are relatively modest indicators of success. Discoveries made, and the further investments they trigger in the medium to long term are of greater impact. While results are pending for the majority of programs it is anticipated that a number of encouraging YMEP discoveries were made in 2017. These discoveries will continue to stimulate exploration expenditures in the years ahead.

YGS intends to carry out further analysis of YMEP data over the next year, to determine whether there are potential adjustments that could improve the program. Updated application forms, scoring criteria and hard rock and placer program guidelines are available for download at <http://www.geology.gov.yk.ca/ymep.html>.

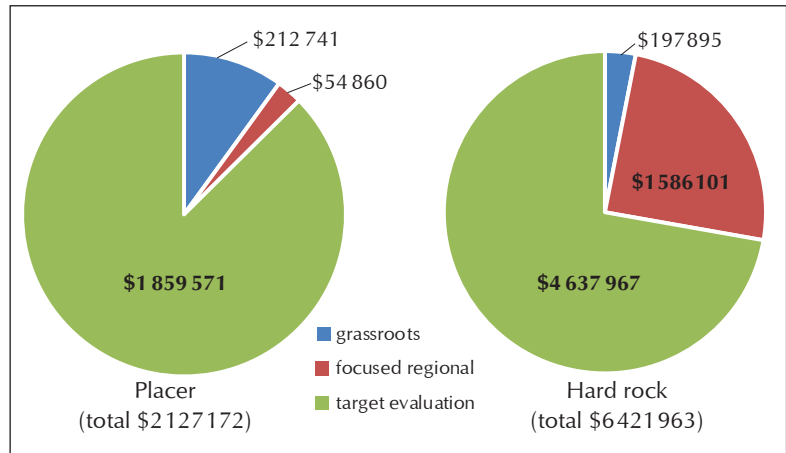


Figure 3. Allocation of YMEP funds from 2010 to 2016.

Table 4. Successful YMEP options from 2000 to 2017.

YMEP#	Property Name	Total YMEP Contribution(s)	Optioned by	Company investment or work commitment
01-011 and 15-030	Ice/Red Mountain	\$52 500	AM Gold	~\$7.7M
03-079	White Gold	\$10 000	Underworld/Kinross	~\$35.2M
04-072 and 05-043	Blende	\$30 000	Blind Creek Resources	\$5M
05-058	Andrew	\$14 400	Overland Resources	~\$16M
06-054	Antimony Creek	\$10 000	Logan Resources/ Golden Predator	~\$0.35M
04-041 and 07-043	Coffee	\$35 000	Kaminak Gold Corp.	~\$144M
07-056, 08-012 and 09-112	Toni/Sixty Mile	\$33 000	Radius Gold	~\$4.5M
03-023, 06-033 and 09-137	Scheelite/Gold Dome	\$75 000	Golden Predator	~\$1.4M
09-015	Clear Creek	\$10 450	Golden Predator	~\$4.1M
09-016 and 017	Ten Mile Creek	\$25 600	Radius Gold	~\$0.63M
09-158	Prospector Mountain	\$30 750	Silverquest Resources	~\$3.85M
09-116	Cynthia	\$15 350	Golden Predator	~\$1.7M
10-118 and 14-010	3ACES	\$93 130	Northern Tiger Golden Predator	~\$20M
10-097	Portland	\$14 320	Taku Gold	~\$1.25M
00-069, 06-005, 06-006 and 15-014	Mariposa	\$76 000	Pacific Ridge	~\$4.9M