Occurrence Details

Occurrence Number: 115I 107
Occurrence Name: Nucleus
Occurrence Type: Hard-rock
Status: Deposit
Date printed: 8/5/2025 4:06:18 PM

General Information

Primary Commodities: copper, gold, silver
Secondary Commodities: molybdenum, tungsten
Aliases: Golden Revenue, Freegold
Deposit Type(s): Porphyry Cu-Mo-Au
Location(s): 62°20'3" N - -137°20'9" W
NTS Mapsheet(s): 115I06
Location Comments: Coordinates provided by Triumph Gold in 2020.
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

Staked as Revenue cl 1-22 (Y24021) by Yukon Revenue Mines Ltd in 1968 and optioned in 1970 by Kaiser Resources Ltd, which carried out bulldozer trenching and drilling of 5 percussion holes (428 m) and 4 core holes (639 m).

In 1980, the Nat Joint Venture (Armco Mineral Exploration Ltd. and Chevron Canada Ltd.) tied on Nucleus cl 1-34 (YA51189) to the northwest and carried out grid soil geochemical sampling, prospecting and geological mapping from 1980-1982; staked Nucleus cl 35-50 (YA60256) in 1981; magnetometer surveying in 1981; bulldozer trenching, geochemical sampling and geological mapping in 1983-1984; and drilled 3 holes (315.2 m) in 1984. The Joint Venture staked Nucleus cl 51-141 (YA82735) to the north and west of the existing claim block in 1984; ERL cl 1-268 (YA92344) to the south in 1985; and ERL cl 269-274 (YA93132) and MEC cl 1-8 (YA93679) also to the south in 1985. Geological mapping, prospecting and geochemical soil sampling was carried out during 1985 on the newly staked claims. In 1986, the joint venture carried out additional bulldozer trenching, geological mapping and geochemical sampling on the main showing.

The Big Creek Joint Venture optioned the Nucleus property in 1987 and carried out rotary drilling of 35 shallow holes (1 312 m) to prove up near surface reserves suitable for test heap leach mining. In 1989, Big Creek purchased Rexford's and Chevron's interests and carried out bulldozer trenching and drilled 6 holes (591.9 m) that year and a further five holes (738.5 m) in 1991.

In 1995, Nucleus cl 1-40 (YA51189) were sold to Amarc Resources Ltd., which sold them to W4 Joint Venture in 1997. In 1999, ATAC Resources purchased the claims from the joint venture group, optioned the adjoining Revenue claims from YKR International Resources Ltd. (formerly Yukon Revenue) and tied on Nuc cl 1-7 (YC09279) to the north later in 1999, consolidating a total of 151 claims in the area to form a single contiguous block, which they named the Golden Revenue property.

ATAC carried out geological mapping, prospecting, soil sampling, magnetometer surveying and hand trenching during 1999 and linecutting, road building and excavator trenching in 2000. In 2001, the company carried out IP and HLEM geophysical surveying, minor prospecting, excavator trenching and drilled 6 holes (1 202 m), all in the vicinity of the Nucleus zone.

In 2004, Yale Resources Ltd. optioned the Golden Revenue property and drilled 14 diamond drill holes (1 832 m) later that year, before dropping its option without earning any interest in 2005.

In 2006, Northern Freegold Resources Ltd. optioned the Nucleus claims from ATAC Resources. The company spent most of 2006 acquiring and consolidating a large land package measuring in excess of 166 square kilometers of claims, which they named the Freegold Mountain project. The company carried out prospecting, geologically mapping and sampling programs and flew extensive airborne geophysical surveys. The company also drilled 26 diamond drill holes (4 798 m) and completed extensive rotary blast drilling on the Nucleus zone. In 2007, the company drilled 27 diamond drill holes (6 313 m) over 3 months on the Nucleus zone. In 2008, Northern Freegold drilled 53 diamond drill holes (13 287 m) on the Nucleus zone.

In 2009, the company announced a initial National Instrument (NI) 43-101 mineral resource estimate for the Nucleus zone and drilled 44 holes for a total of 10 440 m in the Nucleus zone, as well as 1 241 m of rotary air blast drilling in 21 holes. They also performed stream sediment sampling, geological mapping, and ground magnetic and radiometric surveys.

An updated resource estimate was released for the Freegold Mountain project in a report by Campbell, Armitage and Barnes, dated April 19, 2010. Northern Freegold also drilled 11 diamond drill holes (3 105.92 m), 6 RC holes (862.59 m) and carried out rock and soil geochemistry and a TITAN IP ground survey.

A revised resource estimate on the Nucleus deposit was released in a report by GeoVector Management dated April 07, 2011. Work in 2012 at Nucleus consisted of 5 diamond drill holes (2 452 m) and preliminary metallurgical testing.

An updated resource estimate was released for both Nucleus and Revenue deposits by Northern Freegold in a February 22, 2013 report by GeoVector Management.

Northern Freegold then released the technical report for the Preliminary Economic Assessmment (NI 43-101 compliant) for both the Nucleus and Revenue deposits on April 09 2013. The resource estimate is based on a conceptual optimized open pit mining plan.

A revised resource estimate was released by Northern Freegold in a February 28, 2015 report by GeoVector Management Inc.

Triumph Gold acquired Northern Freegold Resources in 2015 and carried out a re-logging program in 2016 at Nucleus. Triumph carried out diamond drilling (16 holes, 5 258 m) and rock geochemistry in 2017 and 21 diamond drill holes (4 159 m) and rock sampling in 2018. In 2020, Triumph released an updated, NI 43-101 compliant resource estimate on March 27, 2020 prepared by R. Sim and B. Davis.

Regional & Property Geology

The occurrence is partly underlain by Yukon-Tanana Terrane (YTT). The rocks of the YTT in this region consist of Early Mississippian metamorphic rocks separated into meta-sedimentary and meta-igneous suites. The meta-sedimentary suite consists of micaceous quartz-feldspar gneiss, schist and quartzite. The meta-igneous package is composed of biotite-hornblende feldspar gneiss and coarse-grained granodiorite orthogneiss with lesser amphibolite.

The YTT basement rocks are cut by numerous plutonic and volcanic events from the Mesozoic (Allan & Friend, 2018), including:
1. Early Jurassic Long Lake monzonite to syenite plutonic suites;
2. Mid-Cretaceous Mount Nansen Suite andesite to diorite;
3. Mid-Cretaceous Whitehorse granodiorite, quartz monzonite and granite;
4. Late Cretaceous Casino quartz monzonite;

5. Late Cretaceous Prospector Mountain syenite; and,
6. Quartz feldspar and feldspar hornblende porphyry dykes and plugs.

The Nucleus deposit is hosted in the tightly-folded, sheared and brecciated Paleozoic schists and gneisses of the YTT basement rock Snowcap assemblage. Cutting them are east trending Late Cretaceous quartz-feldspar porphyry dykes. The dykes are directly associated with increased mineralization at the Nucleus deposit and are thought to represent rocks which have infilled zones of dilation and/or tension gashes resulting from brittle tectonism. The structural system containing the Nucleus deposit is dominated mainly by the steeply dipping, northwest-trending North and South faults (Davis & Sim, 2020).

Mineralization & Results

The Nucleus gold-silver-copper deposit consists of polyphase quartz-chalcopyrite-pyrite-arsenopyrite veins, infill breccia and semi- to massive-sulphide lenses consistent with multiple phases of skarn and epithermal gold mineralization. The host schists and gneisses (of greenschist origin) have been overprinted by dominantly phyllic alteration (especially near veins and structures) with local pervasive actinolite skarn. In places, the skarns have been replaced with sulphides. Mineralization at the contact between the gneisses and the granite is gold ± copper bearing pyrrhotite ± chalcopyrite ± pyrite lenses. (Davis & Sim, 2020).

The 1970 drilling cut minor chalcopyrite and traces of molybdenite associated with weakly pyritized quartz veining. The best intersection was 0.074% Cu from 30 to 67 m in percussion hole 70-9.

The Nat Joint Venture work was directed toward the gold potential of the property. The bulldozer trenching explored a 400 x 400 m area with erratic anomalous gold soil values and associated anomalous values in arsenic, copper, tungsten and silver. Minor sulphides, including tetrahedrite, are associated with the dykes.

The 1988 drilling identified a high grade zone with reserves of 211 925 tonnes grading 3.16 g/t Au (uncut) with a 4.6:1 waste: ore ratio. One drill hole intersected 34.9 g/t Au over 13.7 m, but this was not confirmed by nearby drill holes. This zone (formerly Anomaly #2) comprises the core of what is now referred to as the Nucleus zone.

The 1989 surface work showed that the highest grades are associated with gouge zones and quartz stockworks adjacent to porphyry dykes. Multi-element analysis showed a strong correlation between gold, silver, arsenic and bismuth. The best trench results came from the south side of the deposit, where samples of quartz-veined breccia and gouge in a series of NNW faults averaged 1.90 g/t Au across 20 m. The 1989 drilling confirmed the presence of a well defined, gold-bearing leached cap 60-100 m thick. Two holes that extended beneath the cap discovered a supergene sulphide zone containing copper and gold. Hole 89-1 intersected 38 m of supergene sulphide mineralization that averaged 0.87 g/t Au and 0.52% Cu.

Drilling in 1991 tested the Nucleus zone at depth below the leached cap. Hole DN91-2 returned 1.01 g/t Au and 0.04% Cu over 117 m in the leached cap and 0.86 g/t Au, 0.24% Cu over 28.7 m in the underlying supergene zone (AR 092995).

Interpretation of the 2001 drill data appears to indicate that gold distribution within the stockwork system comprising the core of the Nucleus zone is primarily controlled by proximity to a series of en echelon, moderately east dipping quartz-feldspar porphyry dykes and that most of the gold occurs in a series of broad bands approximately paralleling the trend of the dykes. The best intersection grades 1.32 g/t Au over 57.76 m from Hole DN01-03, which tested an area of chargeability highs identified northwest of the mineralized area previously outlined by trenching.

Trenching in 2001 tested targets on the periphery of the Nucleus zone and exposed an area, located 300 m south of the most recent drilling, which produced high grade assays from quartz veins. Channel sampling of the northernmost trench returned 8.89 g/t Au over 3.3 m, while sampling of a second trench located 120 m further south returned 3.63 g/t Au over 9.5 m (AR 094539).

Northern Freegold's 2006 through 2008 diamond drill programs were aimed at identifying a low grade bulk tonnage near surface gold target. In mid-2008 diamond drilling encountered high grade gold bearing ± chalcopyrite ± pyrite veins and gold bearing infill in breccias and gold -rich ± copper skarns that appear to follow the east-west orientation of the foliation within the metasediments. In addition, the company identified a set of gold bearing quartz + chalcopyrite +/- pyrite veins that also trend east-west in addition to the traditionally targeted north-south trending vein system.

Step-out drilling to the south of the calculated resource area in 2009 intersected 25.38 m of 1.25 g/t Au (DDH GRD-128) (Campbell et al., 2010).

Drilling in 2010 intersected porphyry style mineralization with long zones of copper mineralization that returned significant intervals of 0.86 g/t Au, 1.64 g/t Ag and 0.02% Cu over 204.6 m, including 29.6 m of 0.19% Cu in GRD10-64, and 0.12 g/t Au, 1.13 g/t Ag and 0.1% Cu over 81.03 m, including 15.0 m of 0.41 g/t Au, 2.24 g/t Ag and 0.2% Cu (AR 095374).

Results of the 2012 drilling program at Nucleus intersected high grade gold mineralization where moderately south dipping stratabound sulphides hosted in biotite schist are crosscut by feldspar porphyry dykes, breccia zones and shear zones. Drill holes intersected significant intervals of up to 0.95 g/t Au, 4.91 g/t Ag, and 0.26% Cu over 35.3 m in GRD12-175 and 0.4 g/t Au, 0.99 g/t Ag and 0.26% Cu over 45.55 m in GRD12-176 (Triumph Gold, MD&A, 26 Nov/2012).

The most significant intercepts encountered in 2017 drilling are from N17-10, which graded 2.09 g/t Au over 1.53 m within a larger zone grading 0.567 g/t Au over 21.53 m (Triumph Gold, MD&A, 27 Apr/2018). Further drilling by Triumph in 2019 intersected up significant intervals, including: 19.8 g/t Au over 0.84 m in N18-06; 15.93 g/t Au, 5.0 g/t Ag and 0.551% Cu over 1.0 m in N18-17; 13.67 g/t Au, 10.0 g/t Ag and 0.542% Cu over 1.67 m in N18-04; and 9.13 g/t Au over 2.0 m in N18-16 (Triumph Gold, MD&A, 23 Apr/2019).

Work History

Date	Work Type	Comment
9/4/2009	Studies	Fonseca and Giroux, 2009. Nucleus and Tinta zones.
4/9/2013	Studies	Geovector Management Inc, April 2013. Report includes both Nucleus and Revenue (Minfile 115I 042) deposits.
4/7/2011	Studies	GeoVector Management, Armitage and Campbell, April 07 2011. Nucleus only.
4/19/2010	Studies	Campbell, Armitage and Barnes, April 19 2010. Nucleus deposit only.
2/22/2013	Studies	GeoVector Management Inc, Feb 22 2013. Nucleus and Revenue (Minfile 115I 042) deposits.
12/31/2009	Drilling	Forty-four holes, 10,400 m.
12/31/2009	Drilling	Twenty-one holes, 1,241 m.
12/31/2009	Geochemistry	
12/31/2009	Ground Geophysics	Also radiometric surve.
12/31/2008	Drilling	Fifty-three holes, 13,287 m. Drill logs for two holes filed for assessment.
12/31/2007	Drilling	Twenty-seven holes, 6,313 m. Drill logs for two holes filed for assessment.
12/31/2006	Airborne Geophysics	Company flew its entire land package.
12/31/2006	Drilling	Twenty-six holes, 4,798 m. No drill logs were filed.
12/31/2006	Pre-existing Data	Company compiled all previous data, consolidated claims into large land package.
12/31/2004	Drilling	Fourteen holes, 1,832 m. Assessment report pending, drill statistics derived from company press releases.

12/31/2001	Drilling	Six holes, 1,202 m.
12/31/2001	Ground Geophysics	Also HLEM survey.
12/31/2001	Trenching	
12/31/2001	Other	
12/31/2000	Trenching	
12/31/2000	Other	
12/31/2000	Development, Surface	
12/31/1999	Geology	
12/31/1999	Geochemistry	
12/31/1999	Ground Geophysics	Also HLEM survey.
12/31/1999	Trenching	
12/31/1999	Other	
12/31/1991	Drilling	Five holes, 738.5 m. Continuation of 1989 drill program. Work carried out by Big Creek.
12/31/1989	Drilling	Six holes, 595.4 m.
12/31/1989	Trenching	
12/31/1988	Drilling	Thirty-five holes, 1,312 m.
12/31/1987	Trenching	
12/31/1985	Geochemistry	
12/31/1985	Trenching	1300 m of excavator trenching.
12/31/1984	Drilling	Three holes, 312 m.
12/31/1984	Trenching	
12/31/1983	Trenching	
12/31/1982	Geology	
12/31/1982	Geochemistry	
12/31/1982	Other	
12/31/1981	Geology	
12/31/1981	Geochemistry	
12/31/1981	Ground Geophysics	
12/31/1981	Other	
12/31/1980	Geology	
12/31/1980	Geochemistry	
12/31/1980	Other	
12/31/1970	Drilling	Four holes, 639 m.
12/31/1970	Drilling	Five holes, 428 m.
12/31/1970	Trenching	
12/13/2020	Studies	Updated resource estimate prepared by R. Sim and B. Davis, March 27, 2020.
12/13/2018	Geochemistry	Grab sampling.
12/13/2018	Drilling	Twenty-one holes, 4159 m.
12/13/2017	Geochemistry	Grab sampling.
12/13/2017	Drilling	Sixteen holes, 5258 m.
12/13/2016	Geochemistry	
12/13/2016	Other	Core relogging program.
12/13/2015	Studies	Updated resource estimate. GeoVector Management Inc, Feb 28, 2015.
12/13/2012	Drilling	Five holes, 2452 m.
12/13/2012	Lab Work/Physical Studies	

12/13/2010	Geochemistry	Grab sampling.
12/13/2010	Drilling	Eleven holes, 3105.2 m.
12/13/2010	Geochemistry	
12/13/2010	Drilling	Six holes, 862.59 m.
12/13/2010	Ground Geophysics	TITAN survey.
12/13/2010	Geochemistry	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
095374	2010	2010 Drilling Assessment Report on the REVENUE and NUCLEUS Properties, Free Gold Mountain Project, Yukon	Diamond - Drilling, Reverse Circulation - Drilling, Drill Core - Geochemistry, Drill Cuttings - Geochemistry, Rock - Geochemistry, Soil - Geochemistry, IP - Ground Geophysics	28	6984.43
095151	2009	2009 Drilling Assessment Report on the NUCLEUS Property-FREEGOLD MOUNTAIN Project	Diamond - Drilling, Rotary - Drilling, Drill Core - Geochemistry, Drill Cuttings - Geochemistry	64	11672.24
095250	2009	2009 Drilling Report on the Nucleus Property with Assessment Applied to the Caribou Creek Claims, Yukon	Diamond - Drilling, Rotary - Drilling, Silt - Geochemistry, Regional Bedrock Mapping - Geology	64	2482.72
094745	2006	2006 Geophysical Assessment Report on the Freegold Mountain Property	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics		
094539	2004	Diamond Drilling at the Golden Revenue Property Big Creek, Nucleus, and Revenue Claim Blocks	Diamond - Drilling, Drill Core - Geochemistry	14	1832
094256	2001	Diamond Drilling, Excavator Trenching, and Geophysical Surveys on the Golden Revenue Property	Diamond - Drilling, Drill Core - Geochemistry, IP - Ground Geophysics, Prospecting - Other, Mechanical - Trenching	6	1202
094102	1999	Geological Mapping, Prospecting, Soil Geochemistry, Hand Trenching, and Ground Magnetic Surveys on the Golden Revenue Property	Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Magnetics - Ground Geophysics, Prospecting - Other, Hand - Trenching		
092831	1989	Nucleus Property 1989 Final Report Big Creek Area	Diamond - Drilling, Rock - Geochemistry, Soil - Geochemistry, Mechanical - Trenching	6	591.90
092703	1988	Report on Drilling and Trenching Program Nucleus Property	All Weather Road - Development, Surface, Rotary - Drilling	35	1312
092131	1987	Report on Trenching Program and Geophysical Survey Revenue Property Revenue Creek	Rock - Geochemistry, Soil - Geochemistry, EM - Ground Geophysics, Magnetics - Ground Geophysics, Mechanical - Trenching		
091882	1986	Report on Bulldozer and Excavator Trenching Done at Nat Joint Venture's Nucleus 1-141 Claims	Soil - Geochemistry, Bedrock Mapping - Geology, Mechanical - Trenching		
091804	1985	Geological and Geochemical Report on the NUCLEUS Property	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Property Evaluation - Other, Prospecting - Other, Mechanical - Trenching		
091600	1984	Geological, Geochemical, and Geophysical Report for Bulldozer Trenching and Diamond Drilling Program at Nat Joint Venture's Nucleus 1-141	All Weather Road - Development, Surface, Diamond - Drilling, Soil - Geochemistry, EM - Ground Geophysics, Line Cutting - Other, Mechanical - Trenching	3	315.20
062183	1983	Preliminary Evaluation Report on the Revenue Creek Property	Preliminary Economic Assessment - Studies		
091439	1982	Nat Joint Venture Geological, and Geochemical Report Nucleus 1-50 Claims	Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology		
090973	1981	Nat Joint Venture Geological, Geochemical, and Geophysical Report Nucleus 1-50 Claims	Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Magnetics - Ground Geophysics, Line Cutting - Other, Data Compilation - Pre-existing Data		
090739	1980	Geochemical and Geological Report Nat Joint Venture Nucleus 1-34 Claims	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Regional Bedrock Mapping - Geology, Prospecting - Other		
090087	1975	Geological Mapping, Geochemical and Magnetometer Surveys - Big Creek West, Big Creek East, Bow Creek Properties	Soil - Geochemistry, Regional Bedrock Mapping - Geology, Magnetics - Ground Geophysics, Line Cutting - Other, Prospecting - Other, Surveying - Other		
060200	1970	Report on the Geophysical and Geochemical Surveys Ram and Bow Claim Groups	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics, Rock - Geochemistry, Soil - Geochemistry		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC008517	Fact sheet - Revenue-nucleus Cu+Au porphyry		Property File Collection	News Release
ARMC012155	Report on induced polarization survey, Carmacks area, Yukon - On behalf of Yukon Revenue Mines Ltd.		Property File Collection	Report
ARMC012153	1988 diamond drill core logs - 88G-01 to 88G-05 - Grum		Property File Collection	Drill Logs
ARMC016627	Land and disposition and mineral deposits chart - Freegold - Big Creek area		Property File Collection	Geoscience Map (General)
ARMC012156	Geological report on the Yukon Revenue property, Carmacks, Y.T. (formely Revenue Copper)		Property File Collection	Report
ARMC012157	Final report - Revenue Creek prospect		Property File Collection	Report
ARMC016626	Geology and mineralization chart - Freegold - Big Creek area		Property File Collection	Geoscience Map (Geological - Bedrock)

ARMC012158	Diamond drill logs - T-1, 68-1 to 68-5; 69-1 to 69-4 - Yukon Revenue property		Property File Collection	Drill Logs

Resource/Reserve

Year	Zone	Type	Commodity	Grade	Tonnage	Amount	Reported Amount	43-101 Compliant	Cut-off
2013	Nucleus- in pit (Open Pit)	Inferred	copper	.011 %	2,724,000	329800	Yes	Yes	pit-optimized
GeoVector Management Inc, PEA, April 09 2013. See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2013	Nucleus- In pit (Open Pit)	Indicated	copper	.052 %	52,474,000	27319000	Yes	Yes	pit optimized
GeoVector Management Inc, PEA, April 09 2013. See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2013	Nucleus- in pit (Open Pit)	Inferred	silver	.79 g/t	2,724,000	2115000	Yes	Yes	pit optimized
GeoVector Management Inc, PEA, April 09 2013. See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2013	Nucleus- in pit (Open Pit)	Indicated	silver	.8 g/t	52,474,000	40745500	Yes	Yes	pit-optimized
GeoVector Management Inc, PEA, April 09 2013. See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2013	Nucleus- in pit (Open Pit)	Inferred	gold	.434 g/t	2,724,000	1182000	Yes	Yes	Pit-optimized
GeoVector Management Inc, PEA, April 09 2013. See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2013	Nucleus- in pit (Open Pit)	Indicated	gold	.607 g/t	52,474,000	31850000	Yes	Yes	pit-optimized
GeoVector Management Inc, PEA, April 09 2013. See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2013	Nucleus (Open Pit)	Inferred	copper	.04 %	59,071,068	22583950	Yes	Yes	0.25g/t AuEq
GeoVector Management, Feb 2013. Tonnage quoted from table (p. 49), not from text (p.3,46). Error in Cu grade p. 49.									
2013	Nucleus (Open Pit)	Indicated	copper	.06 %	71,904,900	40162990	Yes	Yes	0.25g/t AuEq
GeoVector Management, Feb 2013. Error in Cu grade in table p.49. See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2013	Nucleus (Open Pit)	Inferred	silver	1.5 g/t	59,071,068	89117600	Yes	Yes	0.25g/t AuEq
GeoVector Management, Feb 2013. See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2013	Nucleus (Open Pit)	Inferred	silver	1.5 g/t	59,071,068	89117000	Yes	Yes	0.25g/t AuEq
GeoVector Management, Feb 2013. Tonnage quoted from table (p. 49), not from text (p.3,46). See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2013	Nucleus (Open Pit)	Indicated	silver	.851 g/t	71,904,900	61205000	Yes	Yes	0.25 AuEq
GeoVector Management, Feb 2013. See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2013	Nucleus (Open Pit)	Inferred	gold	.417 g/t	59,071,068	24659000	Yes	Yes	0.25g/t AuEq
GeoVector Management, Feb 2013. Tonnage quoted from table (p. 49), not from text (p.3,46). See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2013	Nucleus (Open Pit)	Indicated	gold	.567 g/t	71,904,900	40746000	Yes	Yes	0.25g/t AuEq
GeoVector Management, Feb 2013. See Minfile 115I 042 for Inferred resource for Revenue deposit.									
2011	Nucleus (Open Pit)	Inferred	copper	.07 %	41,448,797	28134513	Yes	Yes	0.4g/t AuEq
GeoVector Management, April 2011.									
2011	Nucleus (Open Pit)	Indicated	copper	.06 %	48,498,512	30732065	Yes	Yes	0.4g/t AuEq
GeoVector Management, April 2011.									
2011	Nucleus (Open Pit)	Inferred	silver	.98 g/t	41,448,797	40646000	Yes	Yes	0.4g/t AuEq
GeoVector Management, April 2011.									
2011	Nucleus (Open Pit)	Indicated	silver	.9 g/t	48,498,512	43497000	Yes	Yes	0.4g/t AuEq
GeoVector Management, April 2011.									
2011	Nucleus (Open Pit)	Inferred	gold	.47 g/t	41,448,797	19499400	Yes	Yes	0.4g/t AuEq
GeoVector Management, April 2011.									
2011	Nucleus (Open Pit)	Indicated	gold	.7 g/t	48,498,512	34076000	Yes	Yes	0.4g/t AuEq
GeoVector Management, April 2011.									
2010	Nucleus- total low and high grade (Open Pit)	Inferred	gold	.87 g/t	35,820,842	31242100	Yes	Yes	0.4g/t Au
Campbell, Armitage and Barnes, April 2010.									
2009	Nucleus (Open Pit)	Inferred	gold	.63 g/t	36,210,000	22798000	Yes	Yes	0.4g/t Au
Fonseca and Giroux, 2009.									
2009	NUCLEUS (OPEN PIT)	Inferred	gold	.5 g/t	67,570,000		No	Yes	0.3g/t Au
Estimate released July 27, 2009 on Northern Freegold's website.									
1989	NUCLEUS (OPEN PIT)	Historical Estimate	gold	3.16 g/t	211,925		No	No	Unknown
Calculated using a 1 g/t cut-off grade.; Assessment Report #092703 by C.A. Main.									

Drill core at YGS core library

Number	Property	Year Drilled	Core Size	Photos	Data
N84-1	Nucleus	1984	HQ	14	4
N84-2	Nucleus	1984	HQ	22	4
N84-2A	Nucleus	1984	HQ	2	0
N84-3	Nucleus	1984	HQ	16	4
D-70-5	Revenue	1970	NQ	22	1
D-70-6	Revenue	1970	NQ	19	1