

**HAMMOND REEF GOLD PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL ASSESSMENT REPORT**  
**VERSION 3 – AMENDED**

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**January 2018**  
**1656263**

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In June 2014, Yamana Gold Inc. and Agnico Eagle Mines Limited formed a partnership to acquire all issued and outstanding common shares of Osisko. This acquisition included the Canadian Malartic Mine, the Kirkland Lake Gold Project and the Hammond Reef Gold Project.

The Canadian Malartic Corporation was formed as the successor of Osisko Mining Corporation. All agreements and commitments made by Osisko have been transferred to the Canadian Malartic Corporation, who is now the owner of the Hammond Reef Gold Project.

Management of the Hammond Reef Gold Project is now subject to the following organizational structure.



All references to the Osisko Mining Corporation or Osisko Hammond Reef Gold (OHRG) within this Version 3 EIS/EA Report and its appendices and Technical Supporting Documents (TSDs) should be considered references to the Canadian Malartic Corporation.

Canadian Malartic is committed to enhancing and creating value for all stakeholders by conducting business while respecting the following principles: ensuring the safety of our employees; respecting the environment; contributing to the community; developing our personnel; realize the growth potential; and enhancing the value of the Partnership.

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## AMENDED EIS/EA REPORT VERSION 3



### GLOSSARY OF TERMS

Term	Definition
Abiotic	The absence of living organisms. (U.S. Department of the Interior 2012)
Aeolian	Materials carried, deposited, produced, or eroded by the wind. (U.S. Department of the Interior 2012)
Aggregate	Crushed rock or gravel screened to sizes for use in road surfaces, concrete, or bituminous mixes. A mass or cluster of soil particles, often having a characteristic shape. (U.S. Department of the Interior 2012)
Alkaline	Having a pH of 7.0 or above. The condition of water or soil which contains a sufficient amount of alkali substances to raise the pH above 7.0. The quality of being bitter due to alkaline content. (U.S. Department of the Interior 2012)
Ambient	Surrounding natural conditions or environment at a given place and time. Environmental or surrounding conditions. (U.S. Department of the Interior 2012)
Anoxic	Without oxygen. (U.S. Department of the Interior 2012)
Anthropogenic	Generated by humans. Used to indicate soil conditions, disturbances, or stresses that are created by people. (USDA 2012)
Baseline	Conditions that would prevail if no actions were taken. (U.S. Department of Interior 2012)
Basin	An area having a common outlet for its surface runoff. (NOAA 2012)
Bedrock	The solid rock at the surface or underlying other surface materials. Rock of relatively great thickness and extent in its native location. A general term for any solid rock, not exhibiting soil-like properties, that underlies soil or other unconsolidated surficial materials. As distinguished from boulders. The consolidated body of natural solid mineral matter which underlies the overburden soils. The solid rock that underlies all soil, sand, clay, gravel, and other loose materials on the earth's surface. Any sedimentary, igneous, or metamorphic material represented as a unit in geology; being a sound and solid mass, layer, or ledge of mineral matter; and with shear wave velocities greater than 2500 feet per second. (U.S. Department of the Interior 2012)
Bench	A working level or step in a cut. (U.S. Department of the Interior 2012)
Benthic	Bottom of rivers, lakes, or oceans; organisms that live on the bottom of water bodies. Bottom- or depth-inhabiting. (U.S. Department of the Interior 2012)
Berm	A horizontal strip or shelf built into an embankment or cut to break the continuity of the slope, usually for the purpose of reducing erosion or to increase the thickness of the embankment at a point of change in a slope or defined water surface elevation. A horizontal step in the sloping profile of an embankment dam. A shelf that breaks the continuity of a slope, or artificial ridge of earth. A ledge or shoulder, as along the edge of a road or canal. An artificial ridge of earth. (U.S. Department of Interior 2012)
Biophysics	A branch of biology that applies the methods of physics to the study of biological structures and processes
Biota	Plant and animal life of a region. (U.S. Department of the Interior 2012)
Carcinogen	A substance capable of inducing cancer in an organism. (FAO 2012)
Carnivore	Any flesh-eating or predatory organism. (U.S. Department of the Interior 2012)

## AMENDED EIS/EA REPORT VERSION 3



### GLOSSARY OF TERMS

Term	Definition
Catchment	Unit watershed; an area from which all the drainage water passes into one stream or other body of water. (U.S. Department of the Interior 2012)
Channel	Natural or artificial watercourse of perceptible extent, with a definite bed and banks to confine and conduct continuously or periodically flowing water. Rivers and streams. A general term for any natural or artificial facility for conveying water. (U.S. Department of the Interior 2012)
Conifer	Cone-bearing trees or shrubs, mostly evergreens such as pine, cedar, and spruce. (U.S. Department of the Interior 2012)
Cyanidation	A method of extracting exposed gold or silver grains from crushed or ground ore by dissolving it in a weak solution of sodium- or calcium cyanide. Also known as cyanide leaching. May be carried out in tanks inside a mill or in heaps of ore outdoors. (INAP 2012)
Dam	A barrier built across a watercourse to impound or divert water. A barrier that obstructs, directs, retards, or stores the flow of water. Usually built across a stream. A structure built to hold back a flow of water. (U.S. Department of Interior 2012)
Delta	An alluvial sediment deposit normally formed where a river or stream enters a lake or estuary. Flat land mass of sediment deposit formed at the mouths of streams where they enter larger bodies of water. Sediment deltas are usually triangular in plan view, narrow at the upstream end and relatively wide at the downstream end. The sediment particles deposit because the river velocity and gradient are too low to keep the particles in motion. Active deltas contain diverging multiple channels that continually deposit sediment and migrate back and forth across the delta surface. The sediment particles of the delta deposit are usually well sorted such that the coarser particles (gravel and sand) deposit first at the upstream end, while finer particles (silt and clay) deposit farther downstream. A fan-shaped area at the mouth of a river. (U.S. Department of the Interior 2012)
Discharge	The release or extraction of water from an aquifer. Typical mechanisms of natural discharge are evapotranspiration by phreatophytes, springs, and drains to surface water bodies. Pumping is a man-caused discharge. (University of Idaho 2012)
Drawdown	Lowering of a reservoir's water level; process of depleting a reservoir or ground water storage. The drop in the water table or level of water in the ground when water is being pumped from a well. Vertical distance the free water surface elevation is lowered or the reduction of the pressure head due to the removal of free water. The difference between a water level and a lower water level in a reservoir within a particular time. The amount of water used from a reservoir. (U.S. Department of the Interior 2012)
Dyke (Dike)	A low embankment, usually constructed to close up low areas of the reservoir rim and thus limit the extent of the reservoir. Embankment for restraining a river or a stream. Embankments which contain water within a given course. Usually applied to dams built to protect land from flooding. (U.S. Department of the Interior 2012)
Effluent	Partially or completely treated wastewater flowing out of a treatment facility, reservoir, or basin. (U.S. Department of the Interior 2012)

## AMENDED EIS/EA REPORT VERSION 3



### GLOSSARY OF TERMS

Term	Definition
Erosion	A gradual wearing away of soil or rock by running water, waves, or wind. Concrete surface disturbance caused by cavitation, abrasion from moving particles in water, impact of pedestrian or vehicular traffic, or impact of ice floes. Surface displacement of soil caused by weathering, dissolution, abrasion, or other transporting. The gradual wearing away of material as a result of abrasive action. (U.S. Department of Interior 2012)
Evaporation	Water vapor losses from water surfaces, sprinkler irrigation, and other related factors. Loss of water to the atmosphere. The process by which water is changed from a liquid into a vapor. Water from land areas, bodies of water, and all other moist surfaces is absorbed into the atmosphere as a vapor. (U.S. Department of the Interior 2012)
Faulting	The movement which produces relative displacement along a fracture in rock. (U.S. Department of the Interior 2012)
Flocculant	A chemical agent that causes small particles to aggregate. (FAO 2012)
Flotation	A milling process using surface active chemicals to selectively modify some mineral surfaces causing them to become attached to air bubbles and float, while others do not and sink. This process allows the selective concentration and recovery of the valuable minerals. Pre-treatments include grinding and addition of the reagents. (INAP 2012)
Fluvial	Pertains to streams and stream processes. (U.S. Department of the Interior 2012)
Forage	Vegetation used for animal consumption. (U.S. Department of the Interior 2012)
Geochemistry	A science that deals with the chemical composition of and chemical changes in the solid matter of the earth.
Grubbing	Removal of stumps, roots, and vegetable matter from the ground surface after clearing and prior to excavation. (U.S. Department of Interior 2012)
Headwater	The source and upper part of a stream; water upstream of a dam or powerhouse. (U.S. Department of the Interior 2012)
Herbivore	Animal that feeds on plants. (U.S. Department of the Interior 2012)
Hummock	A hillock of broken ice which has been forced upward by pressure. (NOAA 2012)
Hydraulic Conductivity	A quantitative measure of how easily water flows through soil. (USDA 2012)
Hydrogeology	The geology of ground water, with particular emphasis on the chemistry and movement of water. (U.S. Department of the Interior 2012)
Hydrograph	A graphical representation of the stage or discharge as a function of time at a particular point on a watercourse; a time-discharge curve of the unsteady flow of water. A graph showing, for a given point on a stream, river, or conduit, the discharge, stage, velocity, available power, rate of runoff, or other property of water with respect to time. This can be measured or modeled. (U.S. Department of the Interior 2012)
Impermeable	Having a texture that does not permit water to move through quickly. Not easily penetrated. The property of a material or soil that does not allow, or allows only with great difficulty, the movement or passage of water. (U.S. Department of Interior 2012)

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### GLOSSARY OF TERMS

Term	Definition
Inflow	Water that flows into a body of water. The amount of water entering a reservoir expressed in acre-feet per day or cubic feet per second. (U.S. Department of the Interior 2012)
Invertebrate	All animals without a vertebral column. (U.S. Department of the Interior 2012)
Leach	To remove components from the soil by the action of water trickling through. (U.S. Department of the Interior 2012)
Leachate	A liquid that results from water collecting contaminants as it trickles through wastes, agricultural pesticides or fertilizers. Leachate may occur in farming areas, feedlots, and landfills, and may result in hazardous substances entering surface water, ground water, or soil. (U.S. Department of the Interior 2012)
Leaching	Removal of soluble material from soil or other permeable material by the passage of water through it. The removal of soluble soil material and colloids by percolating water. The process by which soluble substances are dissolved and transported down through the soil by recharge. (U.S. Department of the Interior 2012)
Lentic	Standing waters, such as lakes, ponds, and marshes. (U.S. Department of the Interior 2012)
Lichen	A composite of fungi and algae or cyanobacteria. The fungi capture and cultivate photosynthetic organisms which together provide themselves needed water and nutrients. Lichen species occur in many colors including black, brown, dark olive green, red, yellow and white. (USDA 2012)
Lineament	A rectilinear topographic feature. (U.S. Department of the Interior 2012)
Littoral	Pertaining to the shore. (U.S. Department of the Interior 2012)
Lotic	Flowing water, such as rivers and streams. (U.S. Department of the Interior 2012)
Low-grade ore	Extracted ore with a lower gold content.
Mineralization	The process by which minerals of interest are geologically or organically formed.
Mulch	Material spread on the ground to reduce soil erosion and evaporation of water. Any substance spread or allowed to remain on the soil surface to conserve soil moisture and shield soil particles from the erosive forces of raindrops and runoff. (U.S. Department of Interior 2012)
Oligotrophic	Reservoirs and lakes which are nutrient poor and contain little aquatic plant or animal life. (U.S. Department of the Interior 2012)
Ore	Rock or earth containing workable quantities of a mineral or minerals of commercial value. (U.S. Department of the Interior 2012)
Overburden	Soil or other unconsolidated materials overlying bedrock.
Pathogenic	A disease-causing organism (generally microbial: bacteria, fungi, viruses; but can extend to other organisms: e.g. nematodes etc.). (FAO 2012)
Peat	A fibrous mass of organic matter in various stages of decomposition, generally dark brown to black in color and of spongy consistency. A soft light swamp soil consisting mostly of decayed vegetation. (U.S. Department of the Interior 2012)
Perennial	A plant that flowers continuously for several years. (FAO 2012)

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### GLOSSARY OF TERMS

Term	Definition
Permeability	The measure of the flow of water through soil. The ease (or measurable rate) with which gasses, liquids, or plant roots penetrate or pass through a layer of soil or porous media. The capacity or ability of a porous rock, sediment, or soil to allow the movement of water through its pores. (U.S. Department of the Interior 2012)
Permeable	Having pores or openings that permit liquids or gasses to pass through. (U.S. Department of the Interior 2012)
Potable water	Water that is safe and satisfactory for drinking and cooking. (U.S. Department of Interior 2012)
Precipitation	As used in hydrology, precipitation is the discharge of water, in a liquid or solid state, out of the atmosphere, generally onto a land or water surface. It is the common process by which atmospheric water becomes surface, or subsurface water. The term "precipitation" is also commonly used to designate the quantity of water that is precipitated. Precipitation includes rainfall, snow, hail, and sleet, and is therefore a more general term than rainfall. (NOAA 2012)
Profundal	Deepest part of the ocean or lake where light does not penetrate. This layer usually has fewer nutrients, more silt, and fewer organisms than the surface. (U.S. Department of the Interior 2012)
Propane farm	A designated area used for the storage of propane tanks
Recharge	Mechanisms of inflow to the aquifer. Typical sources of recharge are precipitation, applied irrigation water, underflow from tributary basins and seepage from surface water bodies. (University of Idaho 2012)
Reservoir	A body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use. Dam design and reservoir operation utilize reservoir capacity and water surface elevation data. To ensure uniformity in the establishment, use, and publication of these data, the following standard definitions of water surface elevations shall be used. (U.S. Department of the Interior 2012)
Runoff	The portion of precipitation, snow melt, or irrigation that flows over the soil, eventually making its way to surface water supplies. Liquid water that travels over the surface of the Earth, moving downward due to the law of gravity; runoff is one way in which water that falls as precipitation returns to the ocean. (U.S. Department of Interior 2012)
Sedimentation	Deposition of waterborne sediments due to a decrease in velocity and corresponding reduction in the size and amount of sediment which can be carried. (U.S. Department of the Interior 2012)
Seep	A spot where ground water oozes slowly to the surface, usually forming a pool. (U.S. Department of the Interior 2012)

## AMENDED EIS/EA REPORT VERSION 3



### GLOSSARY OF TERMS

Term	Definition
Seepage	The slow movement or percolation of water through soil or rock. Movement of water through soil without formation of definite channels. The movement of water into and through the soil from unlined canals, ditches, and water storage facilities. The slow movement or percolation of water through small cracks, pores, interstices, etc., from an embankment, abutment, or foundation. (U.S. Department of the Interior 2012)
Sluiceway	An opening in a diversion dam used to discharge heavy floating debris safely past the dam. (U.S. Department of the Interior 2012)
Slurry	Watery mixture of insoluble matter which is pumped beneath a dam to form an impervious barrier. Cement grout. (U.S. Department of Interior 2012)
Spawning	To lay eggs, refers mostly to fish. (U.S. Department of the Interior 2012)
Spillway	A structure that passes normal and/or flood flows in a manner that protects the structural integrity of the dam. Overflow channel of a dam or impoundment structure. A structure over or through which flow is discharged from a reservoir. If the rate of flow is controlled by mechanical means such as gates, it is considered a controlled spillway. If the geometry of the spillway is the only control, it is considered an uncontrolled spillway. Any passageway, channel, or structure designed to discharge surplus water from a reservoir. (U.S. Department of Interior 2012)
Stratification	Thermal layering of water in lakes and streams. Lakes usually have three zones of varying temperature, the epilimnion, the metalimnion, and the hypolimnion. The formation of separate layers (of temperature, plant, or animal life) in a lake or reservoir. (U.S. Department of the Interior 2012)
Substrate	Surface on which a plant or animal grows or is attached. The base on which an organism lives; a substance acted upon. (U.S. Department of the Interior 2012)
Tailings	Second grade or waste material separated from pay material during screening or processing. (U.S. Department of the Interior 2012)
Thermocline	The middle layer of a lake, separating the upper, warmer portion (epilimnion) from the lower, colder portion (hypolimnion). The middle layer in a thermally stratified lake or reservoir. In this layer there is a rapid decrease in temperature with depth. (U.S. Department of the Interior 2012)
Till	A deposit of sediment formed under a glacier, consisting of an unlayered mixture of clay, silt, sand, and gravel ranging widely in size and shape. (U.S. Department of the Interior 2012)
Topsoil	The topmost layer of soil, usually containing organic matter. Usually refers to soil containing humus which is capable of supporting plant growth. (U.S. Department of the Interior 2012)
Transmissivity	The ability of an aquifer to transmit water. (U.S. Department of the Interior 2012)
Tributary	River or stream flowing into a larger river or stream. (U.S. Department of the Interior 2012)
Trophic Level	Levels of the food chain. The first trophic level includes photosynthesizers that get energy from the sun. Organisms that eat photosynthesizers make up the second trophic level. Third trophic level organisms eat those in the second level, and so on. It is a simplified way of thinking of the food web. In fact, some organisms eat members of several trophic levels. (USDA 2012)

## AMENDED EIS/EA REPORT VERSION 3



### GLOSSARY OF TERMS

Term	Definition
Vascular	Plant tissue specialized for the conduction of water or nutrients. (U.S. Department of the Interior 2012)
Waste rock	Rock that does not contain economically recoverable gold that must be fractured and removed in order to gain access to ore.
Watercourse	An open conduit either naturally or artificially created which periodically, or continuously contains moving water, or forms a connecting link between two bodies of water. (NOAA 2012)
Watershed	Surface drainage area above a specified point on a stream. Area which drains into or past a point. A geographical portion of the Earth's surface from which water drains or runs off to a single place like a river. The area of land that drains its water into a stream or river. All the land and water within the confines of a certain drainage area. Vertically, it extends from the top of the vegetation to the underlying rock layers that confine water movement. An area of land that contributes runoff to one specific delivery point. (U.S. Department of the Interior 2012)
Wetland	Lands including swamps, marshes, bogs, and similar areas such as wet meadows, river overflows, mudflats, and natural ponds. An area characterized by periodic inundation or saturation, hydric soils, and vegetation adapted for life in saturated soil conditions. Any number of tidal and nontidal areas characterized by saturated or nearly saturated soils most of the year that form an interface between terrestrial and aquatic environments; including freshwater marshes around ponds and channels, and brackish and salt marshes. (U.S. Department of Interior 2012)



## AMENDED EIS/EA REPORT VERSION 3



### LIST OF ABBREVIATIONS, ACRONYMS AND INITIALISMS

Acronym	Definition
AANDC	Aboriginal Affairs and Northern Development Canada
ABA	Acid-Base Accounting
ADMGO	Air Dispersion Modelling Guideline for Ontario
AEDC	Atikokan Economic Development Corporation
AERMOD	An Air Emissions Dispersion Modeling Software
AGS	Atikokan Generating Station
ALS	ALS Environmental
AMIRA	AMIRA International Ltd
ANFO	Ammonium Nitrate Fuel Oil
AP	Acid Potential
API	Area of Potential Impact
ARD	Acid Rock Drainage
ATSDR	Agency for Toxic Substances and Disease Registry
ATV	All-Terrain Vehicle
AUT	Atikokan ON Airport
BCR	Bird Conservation Region
BIC	Benthic Invertebrate Community
BLM	Biotia Ligand Model
BRH	Borehole
BSC	Bird Studies Canada
CAA Process	Connection Assessment and Approval Process
CAMA	Canadian Aboriginal Minerals Association
CCME	Canadian Council of Ministers of the Environment
CDA	Canadian Dam Association
CEA Agency	Canadian Environmental Assessment Agency
CEAA	Canadian Environmental Assessment Act
CEAC	Cooperative Environmental Assessment Committee
CHER	Cultural Heritage Evaluation Report
CIM	Canadian Institute of Mining
CIP	Carbon in Pulp
CIPRP	Critical Incident Preparedness and Response Plan
CO	Carbon Monoxide
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
COSSARO	Committee on the Status of Species at Risk in Ontario
CPP	Canadian Pension Plan
CWQG	Canadian Water Quality Guidelines
DEM	Digital Elevation Model

## AMENDED EIS/EA REPORT VERSION 3



### LIST OF ABBREVIATIONS, ACRONYMS AND INITIALISMS

Acronym	Definition
DFO	Fisheries and Oceans Canada
DNA	Deoxyribonucleic Acid
DO	Dissolved Oxygen
DOC	Dissolved Organic Carbon
DPM	Diesel Particulate Matter
EA	Environmental Assessment
EAA	Ontario Environmental Assessment Act
EAB	Environmental Approvals Branch
EC	Environment Canada ( <i>now ECCC</i> )
<i>ECCC</i>	<i>Environment and Climate Change Canada</i>
ECA	Environmental Compliance Approval
EDS	Environmental Storm Design
EEM	Environment Effects Monitoring
EH&S	Environmental Health and Safety
EI	Employment Insurance
EIS	Environmental Impact Statement
ELC	Ecological Land Classification
EMP	Environmental Management Plan
END	Endangered
EPA	US Environmental Protection Agency
EPRP	Emergency Preparedness and Response Plan
EPT	Ephemeroptera, Plecoptera, and Trichoptera
ERA	Ecological Risk Assessment
ESA	Electrical Safety Authority
ESMP	Environmental and Social Management Plan
ETP	Effluent Treatment Plant
EW	Electrowinning
FFCS	Fort Frances Chiefs Secretariat
FMP	Forest Management Plans
FN	First Nations
FTE	Full-Time Equivalent
FWCA	Fish and Wildlife Conservation Act
GIS	Geographical Information System
GMS	G Mining Services Inc.
GDP	Gross Domestic Product
GNP	Gross National Product
GPS	Global Positioning System

## AMENDED EIS/EA REPORT VERSION 3



### LIST OF ABBREVIATIONS, ACRONYMS AND INITIALISMS

Acronym	Definition
GRT	Government Review Team
GS	Generating Station
HA	Highly Annoyed
HADD	Harmful Alteration, Disruption or Destruction ( <i>now 'Serious Harm' under current Fisheries Act</i> )
HC	Hydrocarbons
HCII	Specific Critical Noise Level
HCN	Hydrogen Cyanide
HCS	Highway Capacity Software
HHERA	Human Health and Ecological Risk Assessment
HHRA	Human Health Risk Assessment
HQ	Hazard Quotient
HRWQ	Hammond Reef Gold Project surface water/sediment stations
HRWQP	Hammond Reef Gold Project water column profile stations
HS&E	Health, Safety and Environment
ICP	Inductively Coupled Plasma Mass Spectrometry
IESNA	Illuminating Engineering Society of North America
IESO	Independent Electricity System Operator
ILCR	Incremental Lifetime Cancer Risks
IR	Information Request
IRS	Internal Responsibility System
ISO	International Organization for Standardization
ITIS	Integrated Taxonomic Information System
JHSC	Joint Health and Safety Committees
ISQG	Interim Sediment Quality Guideline
LDMLFN	Lac de Milles Lacs First Nations
LEL	Lowest Effect Level
LIO	Land Information Ontario
LISA	Linear Infrastructure Study Area
LOS	Level of Service
LP	Limited Partnership
LSA	Local Study Area
MAC	Mining Association of Canada
MDC	Marmion Deformation Corridor
MDL	Minimum Detection Limit
MIBC	Methyl Isobutyl Carbinol
MISA	Municipal Information Systems Association
ML	Metal Leaching

## AMENDED EIS/EA REPORT VERSION 3



### LIST OF ABBREVIATIONS, ACRONYMS AND INITIALISMS

Acronym	Definition
MMER	Metal Mining Effluent Regulation
MNDM	Ministry of Northern Development and Mines
MNDMF	Mines and Forestry's Project Definition Template for Advanced Exploration and Mine Development Projects
MNO	Métis Nation of Ontario
MNR	Ontario Ministry of Natural Resources ( <i>now MNRF</i> )
MODFLOW	3d Groundwater Flow Modelling System
<i>MNRF</i>	<i>Ontario Ministry of Natural Resources and Forestry</i>
MOE	Ontario Ministry of the Environment ( <i>now MOECC</i> )
MOEE	Ministry of Energy and the Environment ( <i>now MOECC</i> )
<i>MOECC</i>	<i>Ontario Ministry of the Environment and Climate Change</i>
MOL	Ontario Ministry of Labour
MPMO	Major Projects Management Office
MSA	Mine Study Area
MSDS	Material Safety Data Sheets
MTC	Ontario Ministry of Culture, Tourism and Sport ( <i>now MTCS</i> )
MTCS	Ministry of Tourism, Culture and Sport
MTO	Ministry of Transportation of Ontario
NAG	Net Acid Generation
NAPS	National Air Pollutant Surveillance
NNLP	No Net Loss Plan ( <i>now Offsetting Plan under current Fisheries Act</i> )
NOX	Oxides of Nitrogen
NP	Neutralization Potential
NPR	Neutralization Potential Ratio
NRVIS	Natural Resources and Values Information System
NWHU	Northwest Health Unit
NWTAB	Northwest Training and Adjustment Board
OBBA	Ontario Breeding Bird Atlas
OCAP	Ontario Coalition of Aboriginal People
ODWS	Ontario Drinking Water Quality Standards
OFAH	Ontario Federation of Anglers and Hunters
OHRG	Osisko Hammond Reef Gold Ltd
OMA	Ontario Mining Association
OMEDG	Ontario Ministry of Economic Development and Growth
OMNR	Ontario Ministry of Natural Resources ( <i>now MNRF</i> )
OMOE	Ontario Ministry of the Environment ( <i>now MOECC</i> )
OMS	Operations Management and Surveillance
OPP	Ontario Provincial Police

## AMENDED EIS/EA REPORT VERSION 3



### LIST OF ABBREVIATIONS, ACRONYMS AND INITIALISMS

Acronym	Definition
ORP	Oxygen-Reduction Potential
OSHA	Occupational Health and Safety Act
OSK	Osisko Mining Corporation
Osisko	Osisko Mining Corporation
OTR	Ontario Typical Range
PAH	Polycyclic aromatic hydrocarbons
PAX	Potassium Amyl Xanthate
PDAC	Prospectors and Developers Association of Canada
PEL	Probable effect level
PIF	Partners in Flight
POI	Point of Impingement
POR	Points of Reception
PPCP	Process Plant Collection Pond
PPV	Peak Particle Velocity
Project	Hammond Reef Gold Project
PSQG	Ontario Provincial Sediment Quality Guidelines
PTTW	Permit to Take Water
PWQO	Provincial Water Quality Objectives
QA/QC	Quality Assurance/Quality Control
RRDSB	Rainy River District School Board
RRDSSAB	Rainy River District Social Services Administration Board
RRSA	Resource Sharing Agreement
RSA	Regional Study Area
SAG	Semi-autogenous Grinding
SAR	Species at Risk
SARA	Canada Species at Risk Act
SDI	Simpsons Diversity Index
SEI	Simpsons Evenness Index
SEL	Severe Effect Level
SFE	Shake Flask Extraction
SMP	Social Management Plan
SOCC	Species Of Conservation Concern
SPM	Suspended Particulate Matter
SSWQO	Site-Specific Water Quality Objective
STP	Sewage Treatment Plant
TBRHSC	Thunder Bay Regional Health Sciences Centre
TGS	Thermal Generating Station

## AMENDED EIS/EA REPORT VERSION 3



### LIST OF ABBREVIATIONS, ACRONYMS AND INITIALISMS

Acronym	Definition
TIA	Tailings Impoundment Area
TIS	Traffic Impact Study
TKN	Total Kjehldahl Nitrogen
TMF	Tailings Management Facility
TOC	Total Organic Carbon
TSD	Technical Support Document
TSE	Toronto Stock Exchange
TSP	Total Suspended Particulates
TSS	Total Suspended Solids
TSX	Toronto Stock Exchange
TUS	Traditional Use Study
ULR	Upward Light Ratio
UTM	Universal Transverse Mercator (coordinate system)
VEC	Valued Ecosystem Component
VSC	Valued Social Component
WHMIS	Workplace Hazardous Materials Information System
WHO	World Health Organization
WMU	Wildlife Management Unit
WQ	Water Quality
WRMF	Waste Rock Management Facility
WRS	Waste Rock Stockpile
WTF	Water Treatment Facility
YOY	Young of the Year

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### LIST OF UNITS

Unit	Abbreviation
centimetre	cm
cubic megametre	Mm <sup>3</sup>
cubic megametres per year	Mm <sup>3</sup> /yr
cubic metre	m <sup>3</sup>
cubic metres per day	m <sup>3</sup> /day
cubic metres per day	m <sup>3</sup> /d
cubic metres per hour	m <sup>3</sup> /hr
cubic metres per second	m <sup>3</sup> /s
cubic metres per year	m <sup>3</sup> /y
days per year	d/y
decibel	dB
decibel A	dBA
degrees Celsius	°C
grams	g
grams per cubic centimetre	g/cm <sup>3</sup>
grams per cubic metre	g/m <sup>3</sup>
grams per second	g/s
grams per square metre per year	g/m <sup>2</sup> /y
grams per tonne	g/t
hectare	ha
horsepower	hp
Hounsfield Unit	HU
hour	hr
hours per day	h/d
kilogram	kg
kilograms per cubic metre	kg/m <sup>3</sup>
kilograms per tonne	kg/t
kilometre	km
kilometres per hour	km/hr
kilopascal	kPa
kilovolt	kV
kilowatt	kW
linear decibel	dBL
litres per day	L/day

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### LIST OF UNITS

Unit	Abbreviation
litres per second	L/s
litres per second per square kilometre	L/s/km <sup>2</sup>
megatonne	Mt
megawatt	MW
metre	m
metres above sea level	masl
metres below ground surface	mbgs
metres per kilometre	m/km
metres per second	m/s
micrograms per cubic metre	µg/m <sup>3</sup>
micrograms per gram	µg/g
micrograms per litre	µg/L
micrometre	µm
microSiemens per centimetre	µS/cm
milligrams	mg
milligrams per cubic metre	mg/m <sup>3</sup>
milligrams per kilogram	mg/kg
milligrams per kilogram per day	mg/kg/d
milligrams per litre	mg/L
milligrams per litre as calcium carbonate	mg(CaCO <sub>3</sub> )/L
millilitre	mL
millimetre	mm
millimetres per second	mm/s
ounce	oz
parts per million	ppm
percent	%
square kilometres	km <sup>2</sup>
square metre	m <sup>2</sup>
square metres per day	m <sup>2</sup> /d
thousand	k
thousand per year	K/yr
tonne	t
tonnes of calcium carbonate equivalent per thousand tonnes	t CaCO <sub>3</sub> /1000t
tonnes per cubic metre	t/m <sup>3</sup>



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### LIST OF UNITS

Unit	Abbreviation
tonnes per day	tpd
Tonnes per year	t/y
volt	V
weight percent	wt %
weight percentage	wt %
year	y
year	yr
years	yrs