

TMAC Resources Inc.

**MADRID ADVANCED EXPLORATION
PROGRAM**

**Type B Water Licence Application
Supplemental Information Report (Dec 2014) -
ADDENDUM**

January 2015

Project #0194097-0007

To accompany:

ERM Rescan. 2014. *Madrid Advanced Exploration Program: Type B Water Licence Application Supplemental Information Report*. Prepared for TMAC Resources Inc. by ERM Consultants Canada Ltd.: Vancouver, British Columbia.

ERM Rescan

ERM Rescan Building, 15th Floor
1111 West Hastings Street
Vancouver, BC
Canada V6E 2J3
T: (604) 689-9460
F: (604) 687-4277

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MADRID ADVANCED EXPLORATION PROGRAM

Type B Water Licence Application Supplemental Information Report

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2. MINIMUM APPLICATION REQUIREMENTS

Section 2 of this Technical Report addresses Section 2.0 – “Minimum Application Requirements (Application Checklist)” of the **Nunavut Water Board information Requirements for a Type B General Water Licence Application**.

2.1 GENERAL WATER LICENCE APPLICATION

The application form for a Type B Water Licence is presented as a preamble to this document.

2.1.1 Scope of the Type B Water Licence

This Licence will authorize TMAC to use water and deposit waste in support of an advanced exploration program for the Madrid area.

The Project includes all bulk sample infrastructure and exploration activities at the Madrid area. The exploration plan for the Project is an estimated 10 years and includes diamond drilling on surface and underground, bulk sampling through underground mining methods, field mapping, airborne/ground/downhole geophysics and associated air and road access and associated transportation of goods, supplies and mined material, and support infrastructure such as access portals, ramps, waste and ore stockpiles, water and waste management structures.

The Madrid area is located at the general geographical coordinates shown in Table 2.1-1 and Figure 3.5-2.

Table 2.1-1. Geographic Coordinates of Madrid Advanced Exploration Program

	Latitude / Longitude		UTM	
NE	68° 06' 34" N	106° 32' 22" W	7555864	435954
NW	68° 08' 07" N	106° 37' 44" W	7555840	432309
SE	68° 00' 13" N	106° 29' 00" W	7544000	438000
SW	68° 00' 07" N	106° 40' 29" W	7544000	430000

Under this Madrid Advanced Exploration Program Type B water licence, TMAC will be allowed to undertake construction, operations, and closure including reclamation, of exploration drilling and bulk sampling. The activities and facilities under the scope of this Type B Water Licence will include the following:

- water supply for domestic uses and industrial purposes including water uses such as diamond drilling underground and surface, construction and maintenance of roads, emergency and temporary camp, water crossings, diversions and storage;
- site drainage, surface water management, and underground water management for Madrid North and Madrid South and surficial drilling as warranted;

- oily water treatment facilities for wastewater and oily storm water treatment for maintenance facilities and fuel storage berms at Madrid North and Madrid South;
- contact water collected in Pollution Control Ponds, will be discharged to the tundra at a distance greater than, or equal to, 31m from local waterways;
- temporary storage and management of hazardous materials at Madrid North and Madrid South;
- fuel tanks, dispensing storage facilities and associated containment areas or berms for the Bulk Fuel Storage Facilities and day tanks at Madrid North and Madrid South;
- containment for fuel storage and hazardous materials (if any) at Madrid North and Madrid South;
- containment areas for temporary storage of hazardous/nonhazardous waste (waste transfer areas) and new product storage for drums and totes at Madrid North and Madrid South;
- waste sorting facilities and temporary storage facilities for hazardous wastes at Madrid North and Madrid South;
- waste rock storage areas for permanent storage of mine waste and waste rock pile runoff management at Madrid North and Madrid South;
- ore stockpile for temporary storage and runoff management at Madrid North and Madrid South;
- minor watercourse crossings, culverts and associated erosion control;
- diversions, alteration of flow or storage by means of dykes or dams at Madrid North and Madrid South;
- regular inspection and maintenance of all watercourse crossings and associated infrastructure;
- construction and ongoing maintenance of all-weather roads within Madrid North and Madrid South areas;
- ongoing advanced exploration diamond drilling subsurface and on surface;
- ongoing activities in support of engineering and scientific studies for the Madrid area;
- ongoing maintenance to project infrastructure; and
- construction and operation of winter ice roads.

While the Project is a stand-alone project from the Doris North Project, in order to limit footprint and to enhance Belt-wide efficiency, the Project will utilize some of the existing Doris North Project infrastructure and systems as follows. Test milling and processing of ore will be undertaken at the Doris North Project mill. Portable toilets and/or Pacto units with waste will be transported to Doris North Project camp for inclusion in its sewage treatment plant. Any contact water not meeting discharge criteria will be transported for disposal in Doris North Project – Tailings Impoundment Area (TIA). Hydrocarbon contaminated snow and soil/overburden will be transported to Doris North Project camp for treatment and/or backhaul offsite for appropriate treatment/disposal. Explosives will be managed at the existing Doris North Project storage facility. Wastes will be

disposed of as appropriate at the Doris North Project waste management facilities. Hazardous wastes will be transferred to designated areas at Doris North Project and disposed of offsite in accordance with currently approved waste management plans.

2.2 INFORMATION REQUIRED TO SATISFY THE REQUIREMENTS OF THE SIG

The information required to satisfy the requirement of the Supplemental Information Guideline (SIG) is presented the following Sections and Appendices to this Volume.

The Madrid Advanced Exploration Program is an advanced stage of exploration to establish feasibility of the Project. The design information for the Project is preliminary at this stage. Issued for construction drawings will be submitted to the NWB at least sixty (60) prior to commencement of construction of facilities. Once construction is completed, Construction Summary Reports including as-built drawings will be submitted to the Board within ninety (90) of start-up of the facility. Issued for construction documents and construction summary report will be stamped by a Professional Engineer licenced to practice in Nunavut.

2.3 EXECUTIVE SUMMARY

2.3.1 Executive Summary (English)

TMAC Resources Inc. (TMAC) is proposing to undertake an advanced exploration program within the Madrid area of the Hope Bay Greenstone Belt (the Hope Bay Belt) in the Kitikmeot Region Nunavut. The Madrid area is located approximately 130 km southwest of Cambridge Bay.

Over the past twenty years, the Hope Bay Belt has undergone considerable exploration and development activities by TMAC and previous operators. The Hope Bay Belt has significant existing infrastructure including air strips, roads, fuel storage, a port facility, power plants, administration, geology and lab buildings, and underground development at the Doris and Boston areas.

The Doris North Project (Doris) is known as Phase 1 of the Hope Bay Belt development with gold production planned from an underground mine located near Doris Lake. Doris North is currently fully permitted and partially constructed. TMAC is requesting authorizations for the Madrid Advanced Exploration Program to allow additional work to: further define the Madrid North and South mineral resources; understand deposit variability; support mine planning; and to validate economic feasibility.

The proposed Madrid Advanced Exploration Program includes extracting approximately 50,000 tonne bulk ore samples from each of the Madrid North and Madrid South using underground mining methods that will be trucked to the Doris North Mill for processing. The 10 year Advanced Exploration Program will also include infrastructure and support activities such as diesel power generation, waste rock and ore storage areas, surface and groundwater management, explosives use and storage, quarry activities, all-weather and winter roads, and underground and surface diamond drilling. Camp facilities at Doris North will be used to accommodate the approximately 70 personnel required for the Madrid Advanced Exploration Program. Solid, hazardous and non-hazardous waste

Freshwater for the program will be sourced primarily from Patch and Windy Lakes and used for industrial (mainly surface and subsurface drilling) and domestic uses with a daily peak rate of 295 m³/day. Use of existing infrastructure and access corridors associated with Doris North, and underground mining methods at Madrid, minimizes the affected footprint. The potential for environmental effects from the Madrid Advanced Exploration Program to the physical, biological and traditional resources can be mitigated through incorporation of design considerations and accepted management practices.

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[illegible][illegible]

2.3.3 Havaamik Naetomik Okaohik

TMAC-kon (TMAC) havaakagumayun nalvakheokhimaklotik Madrid-mi Kapihiliktumi Oyagaktaakhanik Nunagiyaoyumi (Kapihiliktuk) Kitikmeoni, Nunavumi. Madrid nuna kanitoani 130 kilamitamik ugahiknikaktok hivugaata oalikheani Ikaloktuteam.

Atukhimayoni 20-ni ukeon, Kapihiliktumi Oyagaktakvikhak nalvakheokveokhaaktok havakveohimalikhonilo TMAC-kunin hivoanilo oyagakheoktinin. Kapihiliktuk pikaktok agiyonik taya napaktikhimayoni ilalo milviknik, apkotinik, okhokyoakakviknik, tulaktakvikhamik, alguyaktutinun ignikotinik, titigakviknik, nunalikiven ilitokhaevelo iglukpaknik, nunan iloanilo oyagaktakviknik Doris-mi Boston-milo.

Doris-mi kaoyimayaoyok Havaak 1-mi Kapihiliktumi Oyagaktakvikhami kulmik nunan iloanun hitileoklotik oyagaktakvikhaan haneani Doris Tatim. Doris Oyagaktakvik taya havakveoginageaniktok ilagalo hanayaohimalikhoni. TMAC-kon tukhiktun agitutinik Madrid-mi Nalvakheogeamikni ila havaligeamikni: naonaeteageagani Madrid-mi Tunungani Hivogaanilo oyagaktaakhanik; tukihealogin oyagaktaakhan kanoginigin; ikayoktoklogo oyagaktakvikhak opalogaeyageagani; nalunaegeaganilo manikhakheogutaoteaknikhaa.

Atoktaoyomayok Madrid-mi Nalvaakheokveokhaaktok Havaak ilakaktok ahivaeyaagani 50-taosan tansnik ukumaetilaagani oyagaktaanik ilitokhagakhanik atuni Madrid Tununganin, Madrid Hivugaanilo nunan iloanun hitileoklotik oyagaktakneaktun akhalutikulo akyaktaolotik Doris-mi Oyakikivikmun hikuptiktaoyaagani. Kulini ukeoni Nalvaakheokveokhaakvikhak Havaak ilakakneaktok pikotini ikayutiniklo havaanik ila alguyaktutinun ignikotini, ikagunik oyakanik ileogaevikhak, kaagani nunan iloanilo imavaloen monaginiginik, kagaktitaotini atoknigin tutkumavelo, oyagaktavikmi havaan, ukeogaalok apkotikhan, nuna iloanilo kaaganilo hitiyonik kigutikaktonik ikutakveoyun. Iglukpakavikmi pikotin Doris-mi hiniktakveoneaktun 70-nin inuknin havageakaktonin Madrid-mi Nalvaakheokveokhaaktukhami. Hitiyun, aneagutaolaktulo aneaknaetulu ikagun Madrid-mi Nalvaakheokveokhaaktukhami akyaktaoneaktun Doris-mun ilaleotiyagani taya monagivoeyoni pikotini.

Imiktaakhan havakvikmi piyaovakneakun Patch-min Windy-milo Tatinin atoktaolotiklo havaami (ila nunami iloanilo ikutaktonin) inuknilo atoktaoyukhak uplotoagaagan 295 m³/uplotoagaagan. Atoknigin taya iglupaken apkotilo Doris-mi, nunam iloanilo oyagaktaotin Madrid-mi.

mikhiyotaoyun aktokniginik oyagaktakveom. Avataoyomik aktoknigilaakta Madrid-mi Nalvaakheokveokhaaktomin nunamik, naoteaniklo taemanilo ihoakotinik ihoakhilaaktun atokniginin ihomagiyaoteaktonin monagiyotinilo pitkuheoyonin.

2.3.4 Résumé analytique

TMAC Resources Inc. (TMAC) propose d'entreprendre un programme d'exploration approfondie de la zone Madrid de la ceinture de roches vertes de Hope Bay (la ceinture de Hope Bay ou Hope Bay) dans la région de Kitikmeot au Nunavut. La zone Madrid est située à environ 130 km au sud-ouest de Cambridge Bay.

De nombreuses activités d'exploration et de développement dans la ceinture de Hope Bay ont été entreprises par TMAC et d'anciens operateurs depuis les vingt dernières années. La ceinture de Hope Bay dispose d'une infrastructure existante significative y compris des pistes d'atterrissage, des routes, du stockage de carburant, une installation portuaire, des centrales électriques, des bâtiments abritant l'administration, la géologie et les laboratoires, et des aménagements souterrains dans les zones Doris et Boston.

Le projet Doris North (Doris North), reconnu sous la phase 1 du développement de la ceinture Hope Bay, consistera en une production d'or effectuée à partir d'une mine souterraine située près du lac Doris. Doris North est actuellement complètement autorisé et est partiellement construit. TMAC demande l'autorisation pour le programme d'exploration approfondie de la zone Madrid pour effectuer des travaux supplémentaire afin de mieux définir les ressources minérales de Madrid North et de Madrid South, comprendre la variabilité du dépôt, soutenir la planification minière et valider la faisabilité économique.

Le programme d'exploration approfondie proposé de la zone Madrid comprend l'extraction d'échantillons de minerai en vrac d'environ 50 000 tonnes provenant de chacune des zones Madrid North et Madrid South, employant des méthodes d'extraction souterraines. Le minerai sera ensuite acheminé par camion pour traitement à l'usine de Doris North. Le programme d'exploration approfondie, d'une durée de 10 ans, comprendra également des activités reliées à l'infrastructure et au soutien, comme la production d'électricité à partir de diesel, les zones de stockage de stériles et du minerai, la gestion des eaux souterraines et de surface, le stockage et l'utilisation d'explosifs, les activités de carrière, les routes quatre saisons et d'hiver, et les forages au diamant souterrain et de surface. Les installations de camp de Doris North seront utilisées pour accueillir les quelque 70 personnes requises pour le programme d'exploration approfondie de la zone Madrid. Les déchets solides, dangereux et non dangereux générés dans le cadre de ce programme d'exploration seront acheminés vers les installations de gestion existantes de Doris North.

L'eau douce nécessaire pour le programme proviendra principalement des lacs Patch et Windy et sera utilisée pour des fins industrielles (surtout forages de surface et souterrain) et pour usage domestique à un taux de pointe quotidien de 295 m³/jour. L'utilisation de l'infrastructure et les voies d'accès existants à Doris North, et les méthodes d'exploitation minière souterraine à Madrid, minimise l'empreinte concernée. Le potentiel pour des effets environnementaux sur les ressources biologiques, physiques et traditionnelles associées au programme d'exploration approfondie pourra être atténué en intégrant les considérations de conception avec les pratiques de gestion reconnues.

2.4 APPLICATION FEE

The associated \$30 application fee is submitted to the NWB with this application.

2.5 WATER USE FEE

The water use fee of \$30 for this application is submitted with the application fee and the balance will be submitted with the issuance of the water licence.

2.6 SIG CONCORDANCE

The Madrid Advanced Exploration Program SIG has been used to develop the information provided within this report and is presented in Appendix 2.

2.7 STUDIES

Section 2 of the SIG concordance table includes listing all studies completed for the water licence application. To date, studies have been completed within the Hope Bay Belt to determine environmental baseline conditions, develop project activities and components, identify water use and the predicted environmental effects and proposed mitigation measures. The reference lists within this Supplemental Information Report, within Appendix 4 (Project Description) and within Appendix 5 (Environmental Baseline Report) provide a list of studies completed to date used to develop the Madrid Advanced Exploration Program.

