



New

Mine Development

▷ᵇᶜ▷ᵀᶜ: 8676889227, ᵀᵇᶜᵀᶜ:

DΔÄŒÇ: De Beers Canada Inc. (De Beers) cherche à construire une mine de diamants sur le site d'exploration de Chidliak, dans la péninsule Hall, sur l'île de Baffin. Cette mine de diamants proposée (le Projet) est actuellement aux premiers stades de la planification. Le Projet est

censé intégrer une approche minière «FutureSmart» qui suit un ensemble de principes clés qui minimiseront les impacts environnementaux et permettant l'exploitation de kimberlites (formations rocheuses diamantifères) relativement petites. Les principes clés de «FutureSmart» sont les suivants: •Énergie faible en carbone •Empreinte modeste •Consommation d'eau minimale •Infrastructures modulaires, automatisées, fiables et connectées •Surveillance à distance •Modèle d'exploitation moderne axé sur les employé(e)s

De Beers est actuellement en voie d'achever l'étude de pré faisabilité pour soutenir le Projet. À ce stade de l'étude, nous évaluons un ensemble d'options dans chaque domaine clé du Projet, notamment l'exploitation minière, l'infrastructure, le traitement, la technologie de l'information, la logistique et les modèles de travail des employé(e)s. On s'attend à ce que l'option privilégiée dans chaque domaine clé soit identifiée au cours de la prochaine phase. Des options alternatives peuvent continuer à être envisagées dans certains domaines si des études supplémentaires sont nécessaires avant une décision finale. L'achèvement de l'étude de pré faisabilité est prévu en 2023. Les études de faisabilité sur les options sélectionnées commenceront par la suite, et un résumé des alternatives sera préparé. De Beers mènera également des études préliminaires en vue d'alimenter une évaluation des impacts qui sera soumise à la Commission du Nunavut chargée de l'examen des répercussions (CNER). Contrairement à d'autres projets qui ont commencé leurs études de base sur l'environnement au stade de la faisabilité, ce projet a commencé les études de base sur l'environnement très tôt et dispose déjà de 13 ans de données de base sur l'environnement dans la région. Le Projet présente plusieurs défis importants, chacun d'entre eux offrant une opportunité d'innovation. Les kimberlites dans le réseau de Chidliak sont très petites comparativement à celles qui sont exploitées ailleurs à l'aide de méthodes d'extraction conventionnelles. Le climat nordique extrême et l'emplacement éloigné de Chidliak représentent également un défi. Cet défi logistique est compliqué par le manque d'infrastructures comme des routes ou un réseau de distribution d'électricité dans la région. En outre, la population humaine sur l'île de Baffin est très petite et largement dispersée, ce qui complique la dotation en ressources pour une éventuelle mine. De Beers voit ces défis comme des opportunités d'innovation et la raison de trouver des solutions créatives, à faible coût et à faible impact. De même, en présentant cette proposition de projet tôt dans le processus de planification et en fournissant un éventail complet d'options, De Beers sollicite la contribution de la collectivité en vue de cerner toute synergie technique et toute possibilité de collaboration régionale avec les communautés d'accueil, le gouvernement territorial, le gouvernement fédéral, les entreprises locales et les organisations/entreprises inuites. À ce stade du processus de planification, la mine est envisagée comme une série de puits longues et étroites ou de mines souterraines de taille relativement modeste, probablement exploités en séquence. Chaque groupe aurait un amas adjacent de roches et une zone de kimberlite traitée avec infrastructures connexes. Il est voulu que l'usine de traitement prenne la forme d'installations mobiles et modulaires pouvant être déplacées d'un groupe de kimberlites à un autre selon les besoins. On prévoit également un campement petit et modulaire, où logeraient uniquement les membres du personnel devant se trouver sur place pour s'acquitter de leurs tâches. Des employé(e)s de soutien additionnels travailleront hors site et pourraient commander des équipements à distance. De Beers étudie divers systèmes d'énergie faible en carbone – diesel synthétique, microréacteurs, hydroélectricité, énergie éolienne et solaire – en vue d'un déploiement sur place. Cependant, pour réaliser cette vision, de nombreuses conditions doivent être réunies. Le site doit être soutenu par une ligne satellite ou à fibre optique adéquate pour assurer une bonne connectivité. Les technologies minières doivent être suffisamment développées pour réduire au minimum les stériles et exploiter efficacement la kimberlite. Surtout, les citoyens du Nunavut doivent voir la valeur du projet et agir comme des partenaires dans le développement de cette mine «FutureSmart». De Beers a fourni dans le présent document une proposition de projet aux fins d'analyse par la Commission d'aménagement du Nunavut (CAN) et la CNER. De Beers collaborera avec la CNER afin d'établir la portée et les lignes directrices visant l'évaluation au cours de l'année 2022. Il est entendu que la proposition de projet sera retravaillée ultérieurement, une fois l'étude de pré faisabilité achevée, et qu'une description de projet détaillée sera transmise à ce moment à la CNER dans le cadre de l'évaluation des impacts.

Inuinnaqtun: De Beers-kut Kanatami Timiuyuq (De Beers) hanayumayut piniqutikhanik uyaraktaqvikhamik Chidliak-mi qiniqhiavikmi inigiyauyumi Hall-mi Higikyuami Qiqigtaalukmi. Una atulirumayauyuq

pinikutikhanik uyaraktaqvikhaq, uqautauyuq Havaaq-mik, taja ihumagiyauginaqtuq upalugaiyaqniganik. Havaaq tautuuktauyuuq ilaliutiyaagani HivunikhamiAyuqnaitunik Uyaraqtautinik havauhiqnik maligaqaqtumik atautimiuyunik pitquhiuluaqtunik miklilirutauniaqtunik avatauyumik aktuqniganik mikiyuniklu uyaraktaunik (pinikutikhaqaqtunik) uyagaktaqviyuaagani. HivunikhamiAyuqnaitunik pitquhiuluaqtut ilaqaqtut ukuniga:•Puyuuqpalaagitunik aulaqutinik•Mikiyumik inikhamik•Mikiyumik immaqnik atuqniganik•Iviqtillaaqtunik, ilikut aulaniqaqtunik, ihumaluknaitunik, atayunik hanahimayunik iglunik•Ahiqpanit amirilaaqniganik•Nutauniqhanik havaktut aulaniginik atuqtumikDe Beers-kut taja iniqtirivaliayut Hivuani Aulaniquatiaqniaqmagaa Ilituqhauunik (PFS) ikayuqturiagani Havaaq. Iluani uuma ilituqhautip, naunaiyaiyugut naamatiaqmagaa atuqniginik aalatqit atuqtakhanik atuni havauhiqmi Havaami uyaraktaqniqmilu, hanayakhanilu iglunik, uyaqiqijutiniklu, hivunihijutinik nutauniqhanik, ihuaqhainiqmik, havaktulu havauhiinik atuqtakhanik. Nahuriyauyuq atuqtauluarumayut atuqtakhanik atuni havauhiyumi tikuaqtauniaqtut atuliat havauhikhauyuq. Aalanik atuqtakhanik pihimayaulaaqtut ilagini havauhiqni ilagiarutinik naunaiyautit piyariaqaqata kiguliqmik ihumaliuqtnagit. Iniqvikhaa PFS-guyup nahuriyauyuq 2023-mi. Naamaktumik aulaniquaqtumik ilituqhautit atuqtakhauyuni kiguani piniaqtut naitumiklu hunauniginik ahiinik atuqtukhanik ilituqhaqniganik upalugaiyaqtauniaqtut. De Beers-kut iniqhiniaqtulu naunaipkutulanik ikayuqturiagani Aktuqnigagut Ilituqhauunik tuniayuyukhamik Nunavumi Avatiliqiyit Katimayinut. Ajikutarigitaunik aalat havaat atulipaktainik avatiliqinikut naunaipkutulanik uvani aulaniquatiaqniaqmagaa havauhiyumi, Havaaq atuliqhimayut avatiliqinikut naunaipqutinik ilituqhautinik piniriqhugit 13-nilu ukiuni avatiliqinikut naunaipkutiaqtut inigiyauyukhami.Havaaq malruuknik atuqniqaqtunik akhuurutiknik, atuni pipkaijutaayuk atuqtakhanik nutauniqhanik atuliqniginik. Uyaraktaakhat Chidliak-mi atautimiuyuni mikiyut ihumagikpata uyaraktaakhat amuyauyut humiliqaa ahiani atuqhutik uyaraktautinik atuinaqpaktunik humiliqaa. Igataumayut ukiuqtatumi hila ahiqpaniinigalu inigiyauyuq Chidliak-mi uyaraktaqvikhaq atautimiunik akhuurutauyuqlu. Una ihuaqhautini akhuurut hatqititauaalaktuq piqaginiganit hanahimayunik ila apqutinik alruyaqtuutinikluniit atuqtukhanik talvani inigiyauyukhami. Inuulu amigainigit Qigiqtaalukmi ikitut hiamayaumavlutiklu, akhuurutauyuq havaktikhaqhiuqnigmi hivunikhami uyaraktaqvikhami. De Beers-kut tautuktuut ukuniga akhuurutinik atuqtakhanik nutauniqhanik atuliriagani pigiarutauvlutiklu hanatuqnirutaayunik, akikitunik, mikiyuniklu aktuniqaqtunik ihauqhautinik. Ajikutaunik, uqauhiriniganik una havaaq atulirumayauyuq hivuani upalugaiyailugit pipkainiqmiklu tamainik atulaaqtunik, De Beers-kut piyumayut nunagiyauyumit uqauhiinik kagiqhiyaagani nutauniqhanik havaqatiriigutinik nunaniluniit havaqatiriigutinik aulaipkaiyinit nunagiyauyunit, Ukiuqtaqtumi kavamanit, Kanatami Kavamanit, nunagiyauyuni manikhaqhiurutiaqtunit Inuuluniit Timigiyaunit/Kuapariisiuyunilu.Talvani upalugaiyainiqmi havauhiqmi, uyaraktaqvikhaq tautuktuuyaaqtauyuuq ilagiinik mikiyuuyaaqtunik qaimaluriktunik uyaraqtaqviknik algaklutik anmut nunapluniit iluanit uyaraktaqviit, uyaraktaqviuniaqtut kiguliriiklutik. Atuni atautimiuyut haniani uyaraktaunik uhiyaqviqaqniaqtut uyaqiqilutulu uyaraktaat inikhaa ikayuutinik napaqtikhimayunit piqaqat. Uyaqiqivik tautuktuuyaaqtauyuuq nuulaaqniganik, iviqtitaakhamik iglumik nuulaaqtumik atuni atautimiuyunik uyaraktaanut piyariaqaliraagat. Igluqpaqavik nahuriyauyuq mikiniganik nuulaaqniganiklu, iglumiuyuqaqlutik ukuniga havaktunik inikhamiitariaqaqtut havaaqariagini havaariyakhamiknik. Ilagiarutit ikayuqtut havaktut inikhaqaqniaqtut ahiani inigiyauyup aulapkailutiklu piqutinik ahiqpani. De Beers-kut ilituqhaiyut puyuuqpalaagitunik aulaqutinik atuqtukhanik talvani inikhami, ukualu hanahimayut uqhuquuat, mikiyut aulaqutijutit, immaqnik alruyaqtuutinik, anuqimik hiqinikmiklu. Takuyaagani una tautuktuuyaaqtauyuuq kihiani, amihut pijutaayuuq atautimugiaqaqtut. Inigiyauyuq ikayuqtauyariaqaqtuq naamaktunik qilainaguqtunik hikulianikluniit alruyaqtuutinik naamatiariagani ilaliutijutaayut. Uyaraktaqniqmi nunauniqhanik pivaliayariaqaqtut ihuaqtumik mikiniqhauyaagani uyaqat iqagut ihuaqtumiklu uyaraktaqvigiyaagani uyaraktaqvikhaq talvani inikhami. Atuqniqaqluaqtuq una, inuit Nunavumi takuyariaqaqtut naqurutauniganik Havaap ikayuqtigiyaulutiklu pivalianiganiklu uuma HivunikhamiAyuqnaitunik Uyaraktaqvikhap.De Beers-kut pipkaiyut talvani havaamik atulirumayamiknik atuqtauyaagani ihivriuqtauniganik Nunavumi Paqnaiaiyinit Kamisiyumit, Nunavumilu Avatiliqiyinit Katimayinit (NIRB). De Beers-kut havaqatiquaqtut NIRB-kunik havaariyaagani qanurinihaagut maliruagakhaniklu havauhiqmi ilituqhaqniganik atuqtilugu 2022-mi ukiuq. Kagiqhimayauyuq Havaaq Atulirumayauyuq kiguani ihuaqhaqtautiaqniaqtut iniqtaaqat PFS-guyuuq naunaitiaqhimayuuqlu Havaap Qanurinihaagut

pipkagauniaqniganik talvuuna ihumagiyauyukhamik Nunavumi Avatiliqiyinit Katimayinit
ilagiyaanik Aktuqnigagut Ilituqhaunmi.

Personnel

Personnel on site: 300

Days on site: 365

Total Person days: 109500

Operations Phase: from 2026-03-24 to 2029-12-24

Operations Phase: from 2029-12-25 to 2045-12-23

Closure Phase: from 2045-12-24 to 2047-12-24

Post-Closure Phase: from 2047-12-25 to 2049-12-24

$$\Lambda \subset \mathbb{N} \triangleleft \mathbb{N} \xrightarrow{\sigma} \mathbb{N}^{\mathbb{N}} \supset \mathbb{C}$$
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			currently on site, however landfills will be required as part of the Chidliak Project.	studies will be utilized to support the Project Impact Assessment	Pangnirtung, is located 200 km to the North of the Project
Chidliak Leases	Quarry/Borrow pit	Crown	The main lease block includes temporary structures only. Quarries and borrow pits will be required to support construction of additional infrastructure including site roads and pads.	Extensive archaeological studies have been conducted throughout the Project area. These studies will be utilized to support the Project Impact Assessment.	The nearest community is Iqaluit, located 120km to the southwest. Pangnirtung, is located 200 km to the North of the Project
Chidliak Leases	Site Cleanup/Remediation	Crown	The main lease block includes some physical disturbance including three camps, drill sites, sumps and other associated infrastructure. Remediation activities will proceed following completion of the Project.	Extensive archaeological studies have been conducted throughout the Project area. These studies will be utilized to support the Project Impact Assessment.	The nearest community is Iqaluit, located 120km to the southwest. Pangnirtung, is located 200 km to the North of the Project
Chidliak Leases	Airstrip use or construction	Crown	The main lease block includes an unimproved landing strip. An airstrip with apron, sump, and associated infrastructure will be constructed to facilitate passenger and cargo air travel to site. A landing pad for airships may also be constructed at site and in Iqaluit.	Extensive archaeological studies have been conducted throughout the Project area. These studies will be utilized to support the Project Impact Assessment.	The nearest community is Iqaluit, located 120km to the southwest. Pangnirtung, is located 200 km to the North of the Project.
Chidliak Leases	Advanced Mineral Exploration	Crown	The Project is authorized for advanced mineral exploration under LUP #2018C0002. Exploration, drilling, trenching, bulk sample collection, and associated activities will continue as part of the Project.	Extensive archaeological studies have been conducted throughout the Project area. These studies will be utilized to support the Project Impact Assessment.	The nearest community is Iqaluit, located 120km to the southwest. Pangnirtung, is located 200 km to the North of the Project.
Chidliak Leases	Aerial surveys	Crown	Aerial surveys have been conducted to gather environmental baseline data to date. Various aerial surveys	Extensive archaeological studies have been conducted throughout the	The nearest community is Iqaluit, located 120km to the

			will continue to be conducted as part of the baseline data collection and planned monitoring Programs.	Project area. These studies will be utilized to support the Project Impact Assessment.	southwest. Pangnirtung, is located 200 km to the North of the Project.
Potential Winter Trail Route to Chidliak	Access Road	Crown	Access to the site has occurred periodically via a winter trail. The Project will include use of a winter trail from Iqaluit to the site to transport cargo. The specific alignment of the winter trail is yet to be determined.	Extensive archaeological studies have been conducted throughout the Project area. These studies will be utilized to support the Project Impact Assessment.	The nearest community is Iqaluit, located 120km to the southwest. Pangnirtung, is located 200 km to the North of the Project
Potential Transmission Line to Chidliak	Other	Crown	There is currently no hydro-electric transmission to the site. The Project may include an electric transmission line from a power plant located closer to Iqaluit to the site.	Extensive archaeological studies have been conducted throughout the Project area. These studies will be utilized to support the Project Impact Assessment.	The nearest community is Iqaluit, located 120km to the southwest. Pangnirtung, is located 200 km to the North of the Project.
Chidliak Leases	Other	Crown	The site has operated as an advanced exploration site. As part of the Project an energy source will be required. This may include conventional diesel or alternative, and or solar panels, wind turbines, micro-nuclear reactor, hydrogen fuel cells or hydroelectricity.	Extensive archaeological studies have been conducted throughout the Project area. These studies will be utilized to support the Project Impact Assessment.	The nearest community is Iqaluit, located 120km to the southwest. Pangnirtung, is located 200 km to the North of the Project
Chidliak Leases	Mine Development/Bulk Sampling	Crown	The site operates as an advanced exploration site. As part of the Project it will be transformed into a Diamond Mine. Facilities may include a process plant, processed kimberlite storage facilities, mine rock storage facilities, backfilled pits, dykes and berms, water storage ponds and	Extensive archaeological studies have been conducted throughout the Project area. These studies will be utilized to support the Project Impact Assessment.	The nearest community is Iqaluit, located 120km to the southwest. Pangnirtung, is located 200 km to the North of the Project.

			tanks, ditches, pipes, pumps, and temporary buildings and associated infrastructure. The mine is expected to include open pits, vertical mining and/or underground mining methods.		
Chidliak Leases	Other	Crown	The site is fairly isolated. As part of the Project, communication linkages will be established via satellite technologies, physical towers, radio-communication, cable and or fiber links.	Extensive archaeological studies have been conducted throughout the Project area. These studies will be utilized to support the Project Impact Assessment.	The nearest community is Iqaluit, located 120km to the southwest. Pangnirtung, is located 200 km to the North of the Project.
Chidliak Local Study Area	Equipment installation	Crown	The Local Study Area will be the focus of Impact Assessment. The main activities associated with the mine will be located within the LSA (e.g. camp, pits, waste rock storage areas etc.). Research, environmental sampling, and some surface infrastructure (e.g. access roads, pipelines) may extend beyond the LSA.	Extensive archaeological studies have been conducted throughout the Project area. These studies will be utilized to support the Project Impact Assessment.	The nearest community is Iqaluit, located 120km to the southwest. Pangnirtung, is located 200 km to the North of the Project.

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ᐃᖃᑲᐅᐅᑦ	De Beers has engaged with several organizations and individuals regarding the Project. Key organizations include the City of Iqaluit, Amaruq HTO, QIA Lands and Resources, GN, Nunavut Arctic College, NPC, Nunavut Research Institute, CIRNAC and others.	For a summary of key engagements, please see Appendix A to the Project Proposal.	2021-01-01
ᑕᖅᓂᖃᑦᐅᖅ	De Beers has engaged with several	For a summary of key engagements, please see	2021-01-01

	organizations and individuals regarding the Project. Key organizations include the Hamlet of Pangnirtung, Pangnirtung HTO, GN - ED&T, Pangnirtung Working Group, Pangnirtung Health Centre, QIA-CLARC, employees and others	Appendix A to the Project Proposal	
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South Baffin

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Indigenous and Northern Affairs Canada	Class A Land Use Permit	Active	2017-12-01	2024-11-30
ᓴᓂᓴᓂᓄᓇᓂᓪᓗ ᓴᓂᓴᓂᓄᓇᓂᓪᓗ	Class B Water Use Licence	Active	2018-04-30	2023-05-31
ᓴᓂᓴᓂᓄᓇᓂᓪᓗ, ᓴᓂᓴᓂᓄᓇᓂᓪᓗ	Nunavut Research Permit	Active	2020-06-09	2022-12-31
Indigenous and Northern Affairs Canada	Mining Leases.	Active	2019-08-17	2040-08-17
ᓴᓂᓴᓂᓄᓇᓂᓪᓗ	GN - Workers Safety and Compensation Commission Detonator Magazine Permit and Explosives Magazine Permit	Active	2021-11-23	2026-11-23
ᓴᓂᓴᓂᓄᓇᓂᓪᓗ	Mining Recorder - NWT Corporate Prospectors Llcence	Active	2021-04-01	2023-03-31

Project transportation types

Transportation Type		Length of Use
Air	Regular Flights using conventional aircraft and airships. Use of helicopters for short range travel .	
Water	Water Use, Treatment, Disposal for the purposes of supporting the Chidliak Diamond Mine	
Land	Exploration, Construction, Operations and Closure of a Diamond Mine enabling future use	

Project accomodation types

Temporary Camp

Permanent Camp

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Mining Equipment	TBD	TBD	Drills, Haul Trucks, Conveyors, Light Vehicles, Large front-end Loaders, Dozers, Shovels, Processing Plant, Monitoring equipment, Drill and Blast equipment, Graders, pumps, pipelines, cutters and multiple other types of heavy machinery required for mining operations. Transportation to site will require an aerodrome as well as potentially an all-weather road and/or winter trail and potentially a transmission line. Monitoring will require several meteorological towers and various instrumentation.
Airships	TBD	TBD	Cargo transport to site
Aircraft	TBD	TBC	Cargo and Personnel Transport

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Material	Hazardous	Quantity	Weight	Volume	Metric Tons	Description
Ammonium Nitrate	hazardous	1	16000	16000	Metric Tons	Ammonium Nitrate-fuel oil (emulsion/ANFO blend) will be utilized in drill and blast operations. Sodium nitrate, sulfamic acid, mineral oil, detonator caps and delays, and pentex boosters will also be utilized. Smaller quantities of a wide variety of other chemicals,

						including propylene glycol and ethylene glycol, may also be utilized. Material Data Sheets will be maintained for all chemicals stored on site. No. Containers and volumes of each expected is TBD.
Small modular nuclear reactor	hazardous	1	10	10	Lbs	A small or micro modular nuclear reactor is under consideration for use at the Project. Nuclear waste associated with the reactor would be transported off site for disposal at an approved facility. No. Containers and capacity are not yet determined.
Diesel	fuel	20	500	10000	Liters	Re-fueling mobile and fixed equipment
Diesel	fuel	10	50000	500000	Liters	refueling mobile and fixed equipment
Diesel	fuel	2	12000000	24000000	Liters	Mobile and non-mobile equipment
Gasoline	fuel	10	500	5000	Liters	Fueling snowmobiles, boats, other small craft
Aviation fuel	fuel	3	10000	30000	Liters	re-fueling aircraft
Diesel	fuel	200	208	41600	Liters	storage for remote field programs

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10000	The daily amount has not yet been determined. Water for industrial use will be re-cycled to the extent possible and water for domestic use will be treated and discharged.	Qamaniruluk Y Lake, Qamanialuk [McKeand] Lake, Sunrise Lake, Glacier Lake, McKeand River, and other water bodies

$\triangleleft^b C d^c$
$$\Delta^b C d_{\sigma} \sim \sigma \Delta^a \sigma^a$$
[illegible]

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

De Beers Canada Inc. (De Beers) is seeking to build a diamond mine at the Chidliak exploration site on the Hall Peninsula of Baffin Island. The Project is envisioned to incorporate a FutureSmart Mining approach which adheres to a set of key principles that will minimize environmental impacts and enable relatively small kimberlites (diamond bearing rock formations) to be mined.

SECTION B2: Exploration Activity

Exploration in the Project area has been focused on a cluster of kimberlite bodies referred to as the Chidliak kimberlite field. The field consists of 74 kimberlites (the type of rock known to often contain diamonds) within an 80km by 60km area. The first kimberlite was discovered in 2008 and the most recent kimberlite to be discovered was in 2014. The kimberlites in this region are generally small in size (average <1 ha) and can be found both at surface and sub-surface. In 2019, 39 of these 74 kimberlites were surrendered to the Nunavut Mining Recorder and 35 were kept within the Project mining leases. De Beers maintains 41 mining leases with an area of approximately 42,000 hectares in the Project area. Exploration will continue as part of the Project.

SECTION B3: Geosciences

SECTION B4: Drilling

Drilling to delineate the kimberlite resources is anticipated to continue as part of the Project.

SECTION B5: Stripping

Stripping of overburden will be required to access the ore

SECTION B6: Underground Activity

Kimberlite ore bodies are likely to be mined using underground techniques.

SECTION B7: Waste Rock

Waste Rock will be generated as a waste product of mining

SECTION B8: Stockpiles

Stockpiles of kimberlite to be processed will be maintained.

SECTION B9: Mine Development

Waste rock and processed kimberlite facilities will be constructed and maintained.

SECTION B10: Geology

SECTION B11: Mine

The mine is envisioned as a series of open pits and/or underground mines at each of the economically viable kimberlites. There are 35 kimberlites located within the Project Area which could be mined, however Phase 1 of mining will focus on just 6 high priority kimberlites.

SECTION B12: Mill

The process plant is envisioned to be a mobile, modular, facility which could be relocated to each cluster of kimberlites as required

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION 11: Municipal Development

$\dot{L}^{\infty}_t \nabla \varphi \cap L^6_t \nabla \varphi \subset L^6_{\text{weak}, t} \nabla \varphi$; moreover $L^6_{\text{weak}, t} \nabla \varphi \subset L^6_t \nabla \varphi$

The Project is located on the Hall Peninsula, southern Baffin Island, within the Northern Arctic Ecozone. This ecozone is approximately 1.5 million square kilometers spanning from the very north of Quebec to northwest Keewatin, Baffin Island (excepting the eastern coast) and is one of the largest ecosystems in the world. The landscape is dominated by low relief plains with occasional hills and plateaus; these can be barren or covered with variable (but often thin) quaternary deposits. The Project area is generally about

600 to 900 m in elevation with higher land to the east and covered by glaciers

[illegible]

The Hall Peninsula contains three ecoregions: Hall Peninsula Upland Ecoregion; Pangnirtung Upland Ecoregion; and Meta Incognita Ecoregion. The Project is located within the Hall Peninsula Upland Ecoregion with the other two ecoregions adjacent to the Project. Due to low productivity, the ecoregion supports low populations of terrestrial mammals and birds. Overall, the available habitat for the majority of breeding bird species is considered unproductive. Waterfowl and waterbirds were widely distributed across the study area and occupied lakes, small ponds, and the McKeand River and its larger tributaries (and the adjacent uplands) in low densities. Arctic char is the dominant fish in the region. It has been the only fish captured in most years (Tetra Tech 2016). Fish sampling and fish habitat classification has occurred at the McKeand River, Sunrise Lake and Qamanialuk Lake. Fish sampling has included biometrics, fish health, fish tissue analysis, aging, and parasite presence. A large portion of the fish sampled over the years have been infected with parasites.

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The communities of Iqaluit and Pangnirtung have the closest ties to the Project, having a demonstrated use of the Project area and surrounding area. Iqaluit is 120 km to the west and Pangnirtung is 200 km to the North. Nunavut has a population of just 38,000 people, approximately 8,000 of whom live in Iqaluit. Pangnirtung has a population of approximately 1,500 people. The population in Nunavut is young when compared to Canada as a whole; 32.5% of the population is between 0 to 14 years old in Nunavut as compared to 16.6% in Canada (Statistics Canada, 2016 Census). Approximately 63.7% of the population in Nunavut is aged 15 to 64 (approximately 24,206 people) and therefore of working age. Many of these people live in smaller communities located far from the Project site.

Miscellaneous Project Information

Additional information can be found in the Project Proposal.

[illegible]

Potential effects to the biophysical and human environment may include:

- Releases to the environment (air, land, and water) of various substances (e.g., nutrients, metals, carbon) with concomitant increases in concentrations of various constituents in the environmental media (air, soils, water) and biota (vegetation, fish, birds, mammals, humans).
- Changes to the land and terrestrial habitat through clearing, blasting, excavating, waste and process residue deposits and release of emissions.
- Changes in connectivity between shallow and deep groundwater and surface water.
- Changes to aquatic habitat through clearing, blasting, excavating and release of emissions.
- Changes to wildlife harvesting ability.
- Changes to socio-economic opportunities (e.g., employment, compensation, or other human activities on the landscape).

Various mitigations will be utilized to minimize to the extent possible measurable effects. In pursuit of responsible environmental legacy and enduring community benefits, De Beers will:

- Ensure employees, contractors, and agents are aware of our sustainable development commitments and foster a culture of personal accountability based on mutual caring and respect for the environment, our employees and communities in which we operate.
- Responsibly operate our exploration sites and mines and maximize local community capacity by encouraging communities to participate in opportunities provided by our business.
- Provide a safe, secure, and healthy work environment.
- Be responsible and vigilant stewards of the lands and water we occupy through a precautionary approach, pollution prevention, and adaptive management.
- Seek to reduce the environmental footprint of our operations and related activities.
- Maintain compliance with all legal requirements and commitments.
- Set objectives for continuous improvement.
- Develop closure and rehabilitation plans to reduce long-term environmental and community impacts.
- Demonstrate honesty and integrity. De Beers will develop the Project with mitigations and environmental design features to reduce effects to the environment. Mitigations will include, but will not be limited to, the following:
- Minimize extent of the mine footprint.
- Minimize the extent of permanent alteration or destruction of fish habitat.
- Obtain authorizations if required under the Fisheries Act.
- Develop an offsetting plan in consultation with

the local communities and with Fisheries and Oceans Canada. • Complete archaeological surveys of the footprint area. • Avoid or preserve archaeological and/or heritage materials discovered during mine activities. • Minimize land disturbance and potential for effects on permafrost. • Water roads, airstrip, and laydown areas to suppress dust as required. • Enforce speed limits (to reduce dust and vehicle emissions). • Use of low-sulphur diesel or alternative energy sources for vehicles. • Alternative primary power generation. • seek to use autonomous vehicles. • Monitor noise, air quality, water quality, soil quality, wildlife against standards and adaptively manage.

Cumulative Effects

There is very little regional development on Hall Peninsula. Most development is in the immediate vicinity of Iqaluit. De Beers may also require infrastructure in Iqaluit such as housing, equipment and fuel storage, logistics and transport including air shipments and some use of the port mainly during construction. Cumulative Effects of this Project, together with existing developments and potential future developments will be considered as part of the Impact Assessment.

Impacts

[illegible][illegible]

$$(P = \langle b d \bar{a} p n \bar{a} e^{sb} \rangle^C, N = \langle b d^{sb} r' \bar{d} c \bar{d} \bar{a} e^{sb} \rangle^C \langle c d \Gamma' \bar{d} r'^{sb} \rangle^{sb} \langle \bar{d} \bar{a} e^{sf} \rangle^c, M = \langle b d^{sb} r' \bar{d} c \bar{d} \bar{a} e^{sb} \rangle^C \\ \langle c d \Gamma' \bar{d} r'^{sb} \rangle^{sb} \langle \bar{d} \bar{a} e^{sb} \rangle^c, U = {}^{sb} d \bar{r} L e^{sf} \rangle^{sb})$$

1	polygon	Chidliak Leases
2	polygon	Chidliak Local Study Area
3	polygon	Chidliak Local Study Area
4	polyline	Potential All Weather Access Road to Chidliak
5	polyline	Potential Transmission Line to Chidliak
6	polyline	Potential Winter Trail Route to Chidliak

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