

GM 61573

REPORT ON THE HOTISH DIAMOND EXPLORATION PROJECT

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DIOS
EXPLORATION

DIOS EXPLORATION INC

REPORT ON THE HOTISH DIAMOND EXPLORATION PROJECT

DRILLING CAMPAIGN

GEOLOGICAL MAPPING CAMPAIGN

SUMMER 2003

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August – September 2003

MRNF-GÉOINFORMATION 2005

GM 61573



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INTRODUCTION

The Hotish property was map-staked by Dios Exploration Inc. in the 2001 summer-fall. The Hotish project is a diamond exploration project in the region of the Proterozoic Otish and Papaskwasati sedimentary basins. It is located within the influence area of the Beaver Lake, H-1-2 & H-3-4 kimberlites (figure1) and **along the same Mistassini-Lemoyne corridor that hosts the Ashton-Soquem recent discoveries**. The latter are located about 100 km further north where a staking rush took place in the fall of 2001 (including Ashton-Soquem, Majescor-Canabrava, Dios-Sirios, Plexmar, Ditem). Few data are available, but there are several evidences that this area was discreetly under investigation for the last two years and that several indicator minerals dispersion trains have been uncovered. This summary report aims at describing the Hotish project and the 2003 summer diamond drilling program and geological mapping campaign. completed.

DIAMOND EXPLORATION MAIN PRINCIPLES

Dios properties were staked for its diamond potential. Strategies and principles for diamond exploration differ from the conventional metal exploration, a brief review follows.

Primary diamond sources are limited to particular and unusual intrusive rocks that include kimberlites, orangeites and lamproites. They are perpotassic alkaline ultramafic rocks, usually set in hypabyssal dykes or shallow diatremes. Among those, orangeites are only known in Southern Africa, and diamond-bearing lamproites are limited to Australia. So far, kimberlitic diatremes remain the only economical target in diamond exploration.

Diatremes are pipe-shaped intrusions in which the kimberlitic magma enclosed original mantle fragments as well as supracrustal wallrocks. Diamonds are scattered as xenocrysts or as inclusions within the mantle-xenoliths. They are not create within the kimberlite, but are simply carried by it, from the superior mantle to the earth surface.

The setting of diatremes is not influenced by local geology and shallow structures. Its control is associated with wide-scale geotectonic processes that are linked to deep lithospheric structures.

Particular pressure and temperature (only found in sub-cratonic lithosphere) are necessary for the formation of diamond. These conditions for the formation and preservations of diamond can be found within the cratons which act as a thermal shield that preserve a cool and rigid lithosphere keel in the superior mantle. Diamonds are transported to the earth surface by the explosive kimberlitic magmatism. On continental scale, the fertile chimneys are limited to older (Archean) cratons of the Canadian Shield: the Slave structural province (NWT), the Superior province (Northern Ontario and Quebec) as well as the Nain province (Labrador).

Diverse large-scale tectonic breaks may make easier the setting of kimberlites. Usually, they are lithosphere root structures, as grabens, transcurrent faults, intracratonic wrench faults, and extensive mafic dyke swarms. Numerous exploration models are known and each has its own followers.

An important fact is that kimberlites are usually set in swarms. These swarms may contain between 1 and 40 diatremes, usually associated with numerous hypabyssal dykes in a radius up to 30 kilometers. Clusters (100-200km diameter) of swarms may also occur. Numerous works suggest that the swarm distribution show some periodicity, with an average spacing of 400 kilometers (Moorhead and al., 1999).

The diamond potential of kimberlitic intrusive is controlled by two main parameters. First, the adjacent lithosphere must be fertile, i.e. it must be formed within favorable diamond-forming rocks (mainly harzburgites and eclogites) and pressure-temperature conditions. Even if the physico-chemical states are constants in a same mantle region, its diamond content may vary a lot. Secondly, conditions within the kimberlitic intrusive and its dynamic setting conditions must allow diamond preservation i.e. short residence time, low oxygen fugacity, minimum dilution within the diatreme, etc. These confirm that the conditions associated with a specific kimberlites are not necessary the same as it's the ones on Dios properties.

HOTISH PROJECT OVERLOOK

Dios Exploration is the third largest ground holder in this diamond play and is holding a strong position in the center of the area of interest of Majescor and Ashton-Soquem.

This project would consist of a regional exploration campaign that aims to target other kimberlitic intrusions, part of the same dyke swarm that host the Beaver Lake, H-1 and H-2 kimberlites (as well as the Renard cluster?). The Hotish project is composed of the following titles:

DIOS HOTISH PROJECT-MINING TITLES:

Block	Cells	NTS Sheet	Area Sq. km	Longitude.	Latitude.
Papaskwasati	330	32P/10	174.9	72 30'-48'	51 30'-45'
	46	32P/09	24.4		
Extr�mit�	286	32P/15	151.6	72 23'-39'	51 45'-52 00'
	129	32P/16	68.4		
Hyppo	119	32P/16	63.0	72 21'-26'	51 47'-57'
A-1	4	32P/15	54.6	72 51'-54'	51 50'
A-2	12	32P/15	6.4	72 47'-52'	51 45'-47'
Total	926		543.3		

Plus a number of cells under the name of Docuscience held for DIOS (77).

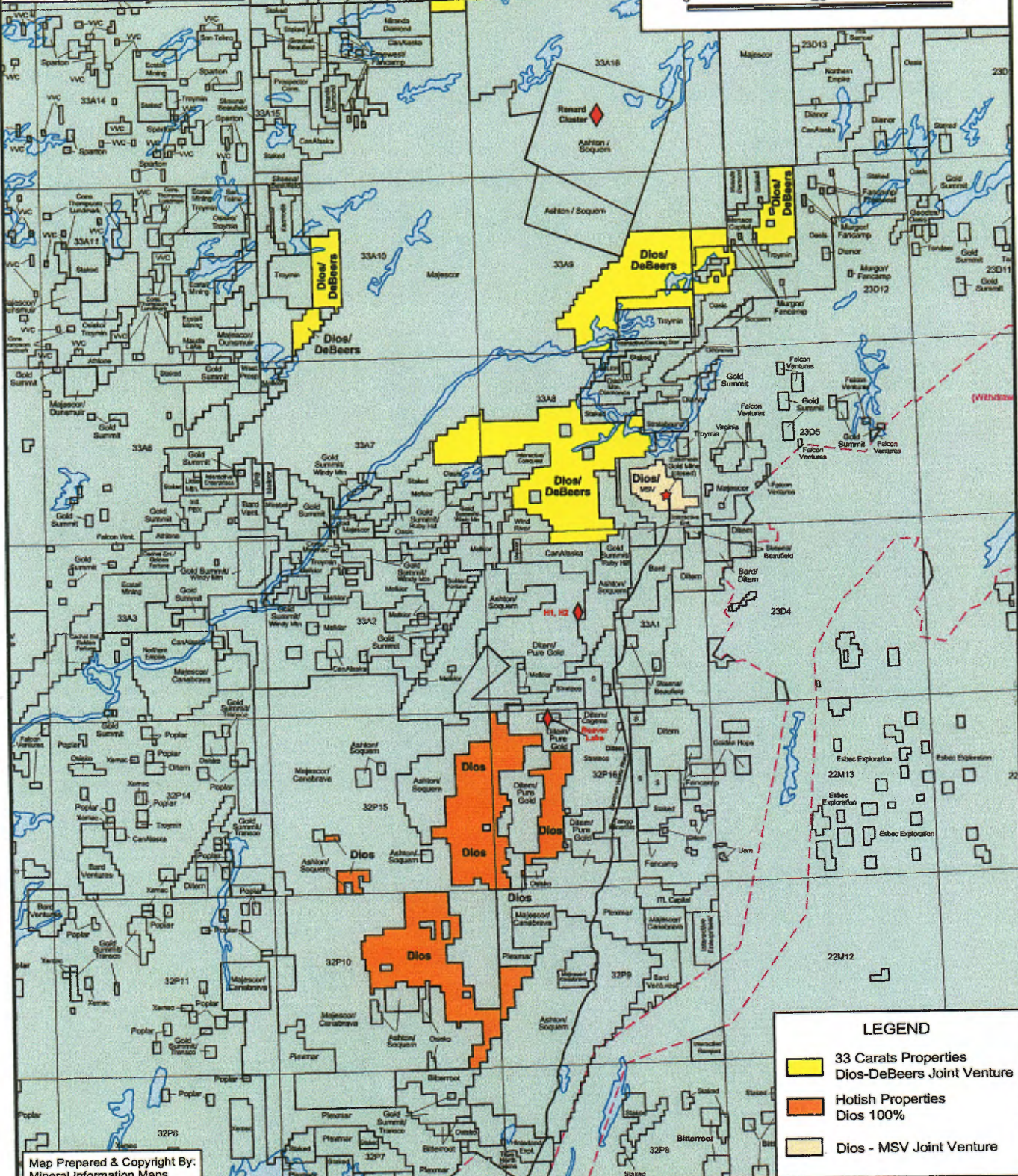


DIOS
EXPLORATION

OTISH MOUNTAINS EXPLORATION AREA

QUEBEC, CANADA

0 20 40 km



LEGEND

- 33 Carats Properties
Dios-DeBeers Joint Venture
- Hotish Properties
Dios 100%
- Dios - MSV Joint Venture

Map Prepared & Copyright By:
Mineral Information Maps

Papaskwasati Block:

The Papaskwasati property is composed of 231 registered cells located within the eastern-half of the 32P/10-(09) NTS sheet, townships 1832,1931 and 1932 (figure3). It is situated between 51 30' - 51 45' latitudes, and 72 30'-72 48'. It is almost completely surrounded (80%) by Majescor/ Canabrava Mistassini property and limited to the southwest by a small and a large Ashton-SOQUEM property. To the south, it is bordered by a small Osisko Exploration property. The Papaskwasati property also enclosed four (4) small Majescor properties (totaling 18 cells).

The property is situated north-east of Mistassini Lake, on the territory of the James Bay municipality, Quebec, Canada. Under the James Bay convention, the area is classified in the #2 category, *i.e.* that no specific restrictions for the exploration or the exploitation are attached to these mining titles except the normal environmental and Hydro-Quebec requirements.

The Papaskwasati property is located on the undulating lowlands northeast of Mistassini Lake. It is drain by the Papaskwasati, Cheno and Kapaquatche Rivers, all are tributaries of the Mistassini Lake. Access to the property is difficult as few lakes are deep (or long) enough for float-equipped planes. Magyar Lake is the closest accessible lake (a few km to the northeast). In winter, this property may also be access by snowmobile via the Mistassini Lake.

Most of the Papaskwasati block is underlain by Archean gneissic basement and its western portion covers the Mistassini Gr. Papaskwasati Fm sandstones and conglomerates (Chown, 1971). These sanstones are interpreted as a proterozoic epicontinental siliclastic sequence, in discordance with the Archean basement. Locally, a regolith is developed over the surface of the basement. In the western vicinities of the block, some diabase dykes are reported and a north-south one reaches several hundred meters thick.

Once filtered, the federal airborne magnetic survey outlines seventeen (17) punctual anomalies (figure 4). These anomalies have similar signatures as the one observed at the Beaver Lake kimberlite. Between 1969 and 1980, Pancontinental (Cominco) and Uranerz prospected the region for uranium.

Extr mit  Block:

The Extr mit  property is composed of 407 registered cells totaling 215,7 sq. kilometers located within the western-half of the 32P15/16 NTS sheets, townships 2032, 2132 and 2133 (figure3). It is situated between 51 45' - 52 0'' latitudes, and 72 23'-72 38'30''. It is limited to the northwest and north by a large property owned by Ashton-SOQUEM, and to the east by a staking park surrounding several Ditem small blocks, as well as two small Majescor properties, and to the south by a property owned by Majescor.

The Extr mit  property located on Otish Mtns rippled high plains and on Eastmain River lowlands. It is drained by the Techigami River (north), the

Papaskwasati and the Kapaquatche Rivers (south), all are tributaries of the Mistassini Lake. Access to the property is difficult as few lakes are deep (or long) enough for float-equipped planes. La Recherche Lake (a few km to the west) and Magyar Lake (at the southern limit) are the closest accessible lakes.

The Extrémité block is underlain by the (eastern portion) of Otish Gr. Indicator Fm sandstones (Chown, 1971). These sandstones are interpreted as a Proterozoic epicontinental siliclastic sequence, in discordance with the Archean basement. Locally, a regolith is developed over the surface of the basement. Outcrops are scattered, but boulders fields are abundant. The area was intensely work by Uranerz between 1969 and 1980.

Once filtered, the federal airborne magnetic survey outlines eleven (11) punctual anomalies (figure 4). These anomalies have similar signatures as the one observed at the Beaver Lake kimberlite.

Hyppo Block:

The Hyppo property is composed of 119 recorded cells located within the western-half of the 32P16 NTS sheet, township 2033 and 2133 (figure 3). It is situated between 51 47' - 51 56' 30" latitudes, and 72 21' 30" - 72 26'. It is limited to the east by a property (Cardinal) owned by Strateco Resources and a staking park, and to the west and north by a staking park, and to the south by a property owned by Plexmar and a small one owned by Osisko Exploration. The staking parks surrounded numerous Ditem Exploration small blocks.

The Hyppo property located on Otish Mtns rippled high plains. It is drained by the Techigami River, a tributary of the Mistassini Lake. Access to the property is difficult as few lakes are deep (or long) enough for float-equipped planes. Hipocampe Lake is the closest accessible lake (a few km to the east). The Eastmain mine winter road is about 20 km east of this property.

The Indicator Fm sandstones (Otish Gr) underlain the Hyppo block (Chown, 1971) and are interpreted as a Proterozoic epicontinental siliclastic sequence, in discordance with the Archean basement. Locally, a regolith is developed over the surface of the basement. Outcrops are scattered, but boulders fields are abundant.

Once filtered, the federal airborne magnetic survey outlined five punctual anomalies (figure 4). These anomalies have similar signatures as the one observed at the Beaver Lake kimberlite. Similar magnetic anomalies are also present on the adjacent Ditem blocks. Between 1969 and 1980, the whole area was intensely prospected for uranium by Uranerz.

A-1 and A-2 Blocks:

The A-1 (A for Ashton) block is composed of 4 recorded cells located within the southeast part of the 32P15 NTS sheet, township 2030, 2031 and 2131 (figure 3). It is situated at the 51 50' latitudes, and 72 51' - 72 54' 30" longitudes. It is limited to the southeast by a small Ashton property, which is surrounded by Majescor /Canabrava Mistassini property.

The A-2 block is composed of 27 recorded cells located in the southern part of the 32P15 NTS sheet, township 2030 (figure 30). It is situated between 51 45' - 51 47' latitudes and 72 47' - 72 51' 30" longitudes. It is almost completely surrounded by an Ashton-SOQUEM property, which itself is enclosed within Majescor/Canabrava Mistassini property.

The A-1 property is located on a hill of the Techigami Mtns. The A-2 property is located between two platforms of the Techigami Mts. Both areas are drain by the Memeshquasati

River, which is a tributary of the Techigami River and the Mistassini Lake. The Mantouchiche Lake is the closest plane-accessible lake (about 5-10 km to the southeast).

HOTISH GEOLOGICAL CONTEXT

The region is located on the southern limit of the Superior craton, a few kilometers northwest of the Grenville front. The area is centered on the Mantouchiche arch, a stratigraphic promontory for the basement that limits the Otish and Mistassini(Gr.) sedimentary basins. In the area of the Mantouchiche Lake, some small sandstone relics are preserved within this arch. Both groups are described as sedimentary sequence with similar stratigraphy including sandstones at the base. These sandstones pass toward an evaporitic complex on the top in the Otish Group, and toward passive continental margin sequences in the Mistassini Group. The Paspaskwasati basin is located nearby the Mistassini Group, as well as the Mistassini dyke swarm are interpreted as an aulacogen root.

Between the 1960-80's, the area was strongly prospected for uranium, looking for Elliot-Lake type (pyritic conglomerate), Key-Lake type (discordance) as well for Lisbon Valley type (epithermal). However, few of the works may be used for diamond exploration. Various companies completed geological mapping, airborne and ground spectrometry, radiometry, magnetometry and electromagnetometry, Line-cutting, lake sediment and stream geochemical survey, as well as stratigraphic and exploration drilling. Hundred of reports are indexed in the assessment work and their compilation should be completed soon. However, the author has previously compiled all the diamond drill holes and none host alkaline ultramafic rock in the area, except for the Beaver Lake kimberlite (Uranerz).

HOTISH PREVIOUS WORK

In the 1960's, the Quebec Natural Resources ministry carried out regional mapping (at the 1": 1mile scale). Hashimoto (1961) and Chown (1971, 1971b) mapped the vicinities of the Papaskwasati block (32P16). Numerous academic and regional studies were completed on the Otish Group (Genest, 1989).

Numerous exploration work (c.f. annex 2) were completed over the Hotish property by Uranerz Exploration and SOQUEM. Those works included geological mapping, spectrometrical, magnetometrical, I.P., and EM surveys, as well as lake sediment and stream geochemical surveys. Airborne radiometric and magnetic-electromagnetic surveys were also carried out. All these works were compiled, and no kimberlite indicator minerals were previously uncovered in the till (Huss, 2002).

GLACIAL GEOLOGY

Nature and distribution of the Quaternary deposits:

Glacial landforms are common and well developed throughout the Caniapiscou-Eastmain region. Being the product of the erosion of metamorphosed and volcano-sedimentary rocks, the regional till located east of the James Bay is generally sandy, pebble-rich and non-calcareous. Although the till thickness may reach 10-15 meters, it is generally much thinner (a few meters). In its upper oxidized portion (B2 horizon, usually less than one meter-thick), the till is characterized by a brownish to beige color; and is grey (C horizon) below the oxidized level. Extensive areas are covered by till shaped in drumlins or crags and tails (behind the protected (down-ice) side of a rocky hill). Going eastward from the Hudson Bay, the dominant drumlins fields progressively change to ribbed or fluted moraines fields, and further away to hummocky moraines (Vincent, 1989).

Drumlins, drumlinoid ridges and crag-and-tail hills consist mainly of lodgment till, but may contain lenses of stratified sand and gravel, many of the drumlins and drumlinoid ridges may prove to have rock cores. The drumlins occur as discrete ridge and are generally 30-3000 meters long, 100-400meters wide and 3-30 meters high. Ribbed-moraine in its most distinctive form consists of arched ridges of bouldery till up to 1600 meters long, 200meters wide and up to 30 meters high. Typically the depressions between the ridges are occupy by elongate or multi-fingered lakes, which serve to accentuate the pattern of ridges. Elongate fields of ribbed moraine occupy shallow depressions in the drift plains or the bottoms of the valleys that cut through the hilly uplands. The hummocky moraine consists of closely spaced, irregularly shaped mounds of bouldery drift, 3 to 15 meters high. Most of the mounds probably consist of ablation (or fusion) till.

The mounds and intervening depressions are profusely littered with boulders, which may averaged 6 meters in diameter. The resulting topography appears as an irregular jumble ridges tending to be oriented normal to the direction of latest ice-movement. Esker complexes are larger features than the simple eskers varying from a few hundred meters to a kilometer or more wide, and up to 40 meters or more high. Typically there is a prominent central ridge, bordered on either side by depressions often occupied by small lakes. In places the central ridge is divided into two or more sub-parallel ridges separated by elongate steep-side depressions.

Glacio-fluvial deposits are frequents in the Upper Eastmain River region; and are mainly present as long (tens of kilometers) and sinuous eskers and their outwash. The simple eskers are considered to have been deposit in the channels of sub-glacial streams and are generally parallel to the last ice-flow direction. Very locally, some eolian deposits remobilized minor parts of the glacio-fluvial deposits. Large areas of poorly-drained terranes (till plains and basement depressions) are filled with shallow organic deposits (bogs).

Quaternary History:

Glacial sediments in the 33 carats project area were mainly the product of the Upper Quaternary deglaciation periods. In the James Bay region (located west of the project), as the ices progressively retreat, the inlandis (Laurentide Ice Sheet) front was in contact with important water masses. The reconstructed ice-flow patterns (fig.9) suggest that the outflow centers or ice-divides that affected the eastern Hudson Bay region were located in north-central Quebec throughout the Wisconsin Glaciation (Parent and al., 1995). Critical evidence for this comes from the fact that even the penultimate regional glacial movement was directed toward the northwest and north-northwest throughout key regions east of Hudson Bay and James Bay. These ice-flow patterns provide an indirect record of migrating outflow centers (fig.10). An early outflow center lying just north of Lake Mistassini migrated subsequently toward the northeast near Lake Bienville, where it may have remained stable during much of the Late Wisconsin maximum. This migration was apparently accompanied by a 90 degrees change of the overall orientation of the ice-divide. Further eastward, migration in Labrador may have occurred during deglaciation. That late-glacial southwestward deflection recorded (and the dominant one in the Upper Eastmain River region) provides further support to earlier interpretations (Hardy, 1976) that the last deglaciation was dynamically controlled by glacial streaming, surging, and calving into Glacial Lake Ojibway, which had extended into James Bay and Southern Hudson Bay prior to marine incursion.

RENARD KIMBERLITES AND KNOWN DISPERSION TRAINS

Hotish project is located about 100-150 km south of Ashton-Soquem Renard kimberlites cluster and Majescor Portage numerous dispersion trains. So far, few assessment work is reported to Quebec Natural Resources. Most information concerning their results from these projects are available on their respective web sites: www.majescor.com and www.ashton.ca.

Majescor Portage project:

In the fall 2000, Majescor Resources staked its firsts exploration permits (PEM) following the positive results of a regional heavy mineral sampling (about 90 esker samples; Kaiser, 2002). Later, it extended its property to the southwest by map-staking. About the same time, Majescor and BHP map-staked (CDC) the area located northeast of the Ashton-SOQUEM property. A subsequent joint-ventureship was contract by Majescor and BHP on June 21, 2001.

Majescor collected more than 1000 heavy mineral samples on its Portage property and its vicinities. It appears that they outlined several indicator minerals dispersion trains. These minerals are characterized by **abundant peridotitic pyropes with a strong G10 (harzburgitic pyropes) / G9 (lherzolitic pyropes) ratio** (figure 9) similar to the ones

observed in the Lac DeGras area, Nunavut. They also observed **picrochromites with composition similar to South African diamonds, as well as Cr-rich diopsides and picroilmenites** (their exact counts remain unknown). In 2002, after completing 14553km of airborne magnetic surveying at 120m line-spacing and collection of 202 glacial sediments, BHP decided to withdraw from the option agreement.

SOQUEM-Ashton Foxtrot project:

SOQUEM and Ashton made an agreement concerning diamond exploration for all the northern portion of Quebec. In the fall 2000, the consortium map-staked (PEM and CDC) a large area, northeast of the initial Majescor Portage property.

Over a thousand (1000) till samples were collected and numerous indicator minerals dispersion trains were outlined (some with indicator minerals count over 1000 grains). These minerals are **mainly peridotitic pyropes associated with Cr-rich diopsides and picroilmenites**. An extensive high-density airborne magnetic survey was completed on the property, and a four(4)-holes diamond drilling discovered two kimberlitic chimneys. A press release by Ashton (17 dec 2001) confirms the presence of macrodiamonds within the intrusions:

At the Renard-1 occurrence, a hypabyssal facies yields 5 macrodiamonds from 205,8 kg and the Renard-2, hypabyssal and diatreme facies yields 29 macrodiamonds from 163,1 kg. Concentrate from this drill core was composed of a significant percentage of high-Cr, low-Ca pyropes (G10) and chromites (diamond-inclusion field).

Further drilling within a two km-radius outlined eight(8) diamond-bearing kimberlitic bodies: Renard-3 (10micros and 9macros /100kg as well as over 2500 diamond fragments); Renard-4(21micros and 14macros/100kg; 64,7 carats /4,81 tons including 3.11carats of diamonds larger than 0,85mm); Renard-5 (15micros and 20macros/100kg); Renard-6 (25micros and 6macros /100kg); Renard-7 (33/101kg) and Renard-8 (9/111,8kg). Additional bulk-sampling of the kimberlitic bodies is in progress.

DIAMOND POTENTIAL OF 33 CARATS-HOTISH REGION

Portage (Majescor) glacial sediments and Beaver lake kimberlite (Ditem) mantle-xenocrysts indicate a fertile underlying lithosphere. Pyrope garnet (G10/G9) ratio about 25% indicates a strong diamond potential for the area. Chemistry of various indicator minerals is similar to the ones observed at the Lac DeGras area or in South Africa. Ashton-SOQUEM recent discovery of eight diamond-bearing kimberlitic chimneys on their Foxtrot property confirms the validity of the indicator minerals chemistry.

Therefore, Dios Hotish project is well located within a probable associated swarm. It is known that kimberlitic intrusives occur in swarms, which extends vary from 10 to 40 km radius.

Exploration of this property in this under-worked but favorable region is fully warranted. Its designation as a favorable zone is based on the following characteristics:

1. **Presence of nine diamond-bearing kimberlites on Ashton-Soquem Foxtrot property;**
2. Chemistry of the indicator minerals associated with this kimberlite shows the lithosphere fertility;
3. Presence of three kimberlitic bodies on Ditem-Pure Gold property;
4. **Located within the NNE oriented Mistassini-Lemoyne Corridor** along which recent discoveries of diamond-bearing kimberlitic diatremes as well as several nepheline syenites (Fontanges and Temiscamie) and carbonatites (Castignon and Lemoyne);
5. The Archean Superior craton is dated about 2,7-2,8 billions years, to abide by the Clifford's rule;
6. Close to a zone where seismic surveys suggest the presence of a lithosphere keel (Moorhead, 1999). A 200 km-thick lithosphere is required to secure the thermodynamic conditions of formation and preservation of diamonds. Fertility of this lithosphere keel is confirmed by the chemistry of Wemindji, Portage and Otish indicator minerals;
7. Mistassini dyke swarm (oriented at N330) and Preissac(oriented at N060) intersect themselves in the area. This situation is similar to the one observed in the favorable Wawa-Hearts-Kapuskasing area, Ontario;
8. Glacial geology is simple and the dispersion trains geometry is known to narrow and very short.

The interest in this sector located in a strong diamond-potential and poorly explored region is mainly based on its strategic location with respect to the general repartition of the known kimberlitic dyke swarms and its geotectonic environment (figure 10). The following facts concerning the area are to be considered:

1. Close to (20km south) a crust weakness along which two kimberlitic swarms (Portage and Otish) are spaced with an 400km-interval. This discontinuity is deeply rooted in the lithosphere;
2. **Located at to the junction of the Mistassini-Lemoyne and Temiscamie-Corvette corridors;**
3. The property is located 400km northeast of Le Tac swarm, 400km south-east of the Wemindji dispersion trains (and Majescor kimberlitic sill), and 100km south of Bienville Lake dispersion trains. This corresponded to the regular spacing between kimberlitic swarms;
4. Close to (20km south) a crust weakness along which two kimberlitic swarms (Portage and Otish) are spaced with an 400km-interval. This discontinuity is deeply rooted in the lithosphere;

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9. The Archean Superior craton is dated about 2,7-2,8 billions years, to abide by the Clifford's rule;
10. Close to a zone where seismic surveys suggest the presence of a lithosphere keel (Moorhead, 1999). A 200 km-thick lithosphere is required to secure the thermodynamic conditions of formation and preservation of diamonds. Fertility of this lithosphere keel is confirmed by the chemistry of Wemindji, Portage and Otish indicator minerals;
11. Mistassini dyke swarm (oriented at N330) and Preissac(oriented at N060) intersect themselves in the area. This situation is similar to the one observed in the favorable Wawa-Hearts-Kapuskasing area, Ontario;

BEAVER LAKE KIMBERLITE

The Otish property is located within the area of influence of a potential kimberlitic dyke swarm associated with the Beaver Lake kimberlitic intrusion (figure 11 and 12). Uranerz discovered it in 1978, drilling for uranium in the western portion of the Otish Mtns (Gerhisch and al., 1979). Although the kimberlite was identified, no diamond exploration was carried out at this time.

Due to the discoveries of diamond-bearing kimberlites in the Northwest Territories in 1991, and to the growing interest to the diamond exploration in Canada, the area was staked in 1993-1994 by Inco Ltd. and allowed to lapse. Following a deal with Uranerz, Ditem drilled the intrusive in 1998 (Bernier and Moorhead, 2000). Ditem centered its works on the evaluation of the Beaver Lake kimberlitic pipe (Brack, 1998). Two drilling campaigns confirm its nature and its extensions (GM-56612) and a 7-tons bulk sample was extracted (GM-56615). The kimberlite was described as a weakly diamond-bearing (4 small macrodiamonds were recovered) deep diatreme facies.

A detailed petrographic study on core samples given by Ditem, was completed by R. Girard (2001) for the Quebec Natural Resources ministry. The latter confirms the kimberlitic nature of the intrusive, suggesting a diatreme root facies. The mineralogy is complex, showing re-equilibrations during matrix phases. The author concluded that the intrusive minerals, (specially the oxides) shows a chemistry corresponding to a kimberlitic magma crystallization, and a favorable potential for the discovery of diamond.

Garnets extracted from Ditem samples were analyzed by microprobe and their G10/G9 ratio is about 25% with a J factor of 1,32 (figure13). Such ratio for harzburgitic pyropes is uncommon and may suggest a strong diamond potential of its source. They also have

similar signature as the ones reported by Majescor (G10/G9=28%; J factor=1,36) on their Portage property, 60 km further north of Beaver Lake. This signature is also comparable with the ones from the Lac de Gras area, and confirms the fertility of the underlying lithosphere.

Sub-chromitic pyropes are abundant, and their titanium and soda contents suggest an eclogitic source in the mantle. Very few chromites were observed but they have similar chemistry to those observed in inclusion in South African diamond. Picroilmenites are abundant and their mantle signature suggests a weak oxygen fugacity.

Beaver Lake kimberlite only yields four (4) small macrodiamonds by caustic fusion. No microdiamond was found. Following these results, a 700 tons test mill sample was completed and no diamond was extracted. Furthermore, R. Girard concluded that present oxidized conditions within the diatreme during its setting brought diamond combustion. Oxidation is suggested by oxides reactions that produce abundant titano-magnetite, and may be linked to crust processes during its setting (oxidized phreatic table, oxidized mineralogy of wallrocks, etc). Therefore, prevailing oxydo-reduction conditions may vary for each one of the kimberlites, and diamond-combustion within one intrusion is not indicative of the others preservation potential.

The Beaver Lake intrusive is associated with uranium mineralizations linked to the Otish Gr. discordance. The described facies are interpreted as kimberlitic diatreme roots younger than the Otish Gr. sedimentary sequence. The Beaver Lake kimberlite was recently dated about 550 MA.

In 2001, Pure Gold/Ditem tandem (test-drilling a small circular magnetic anomaly) outlined the H-1 kimberlite (fine-grained and black-bluish color) on their Tichegami River property (Apr.22 2002, Ditem press release). A second kimberlitic body (H-2) also corresponding to a small magnetic anomaly was later uncovered approximately 350 meters southeast of the H-1 kimberlite. Both the matrix (coarse grained and pale-green color) and fragments of the H-2 kimberlitic breccia are visually very distinct from the H-1 intrusion. Purple pyrope, chrome diopside and ilmenite were observed in the H-2 core (Aug.7 2002, Ditem press release). One microdiamond was recovered from a 23.15kg sample from one of the 3 phases of the complex H-2 kimberlite (Sept.26 2002, Ditem press release).

HOTISH AREA KNOWN DISPERSION TRAINS

Few public data report the presence of indicator minerals dispersion trains in the secondary environment of the Hotish property or its vicinities, however some information is available in the press releases of the various exploration companies:

Majescor/Canabrava Mistassini project:

2001 till sampling by Majescor Resources-Canabrava Diamond Corp. recovered over **500 kimberlite indicator minerals (KIM)** on their Mistassini project. The suite is dominated by ilmenite, with pyrope garnet and chromite being well represented. Rare recoveries of mantle-derived olivine are also reported. Of particular significance is the presence of a good quality **G10 garnets, as well as diamond inclusion chromites (up to 64.2% CR2O3)**. The recovery of **perovskite-mantled ilmenite** also suggests a proximal kimberlite source. The Mistassini indicator mineral chemistry and assemblage confirms derivation from a distinct and local kimberlite cluster than the one associated with the diamond-bearing Beaver Lake kimberlite (Feb.11, 2002 Majescor press release). The partners completed a 9224 line-kilometers airborne geophysical survey (at a 150m line-spacing) in the 2002 Spring. **2002 follow-up works** (294 glacial sediment samples) investigating a large number of geophysical targets outlined **two sites with counts of 507 and 563 KIMs**. A high percentage (up to 90%) of the grains in these samples also bear fragile surface reaction rims indicating proximity to source. A number of other geophysical anomalies also stand out, being closely associated with indicator mineral counts in till as high as 174 and abundant fragile surface textures (Oct.02, 2002, Majescor press release). In the fall 2002, a drilling program was completed. No results are public.

Plexmar Papaskwasati project:

In 2002, Plexmar completed a till program (121 samples processed) on its Papaskwasati property. It recovered **42 pyrope garnets (G9 according Gurney's classification), eclogitic garnets, perovskite-mantled picroilmenites, as well as 11 high-Cr2O3 (up to 63.62%) chromites** (Oct.23, 2002, Plexmar press release).

Ashton-Soquem project:

Informal indications of indicators trains in the sector may be deduced from the positions taken by SOQUEM-Ashton. Following their exploration strategy, they had acquired small blocks of cells several months before the staking rush. The centers of these blocks are suspect of being host to dispersion trains. The chemistry of the indicator minerals is not public. In 2002, Soquem completed detailed heavy mineral sampling on their Otish properties, and no results have been released so far.

HOTISH WORK PROGRAM

To evaluate its Hotish block, DIOS Exploration completed a helicopter-supported till sampling campaign, during June, 2002. A team composed of geologists Harold Desbiens, Alexandre Boudreault, Patrice Gagnon, Robert Gagnon collected 266 till samples (130 on the Papaskwasati block, 101 on the Extr mit  block, 27 on the Hyppo block and 8 on the A-1&2 blocks.). Where possible, a regular sampling mesh (usually rectangular and quincunx) was applied and it varies from 0,25 to 1,0 sample per square kilometer. Based

camp was located on Berry Island in the northeast portion of Mistassini Lake. The sampling sites were reached with a Notor-helicopter (Helimax). Transport to the base camp was done by a Otter-plane (Air Saguenay) from Temiscamie, about 175 north of Chibougameau. When possible the non-oxidized C-horizon (grey-beige color) was sampled between 0,6 and 1,5meters. Samples were collected as part of a reconnaissance program to evaluate the up-ice regional geology. Site locations were chosen based on the availability of glacial material located down-ice of circular magnetic anomalies and to complete the most regular mesh possible. All samples were later processed at the IOS Services Géoscientifiques laboratory in Jonquière, Québec. **In September 2002, Dios announced that they recovered up to 128 kimberlite indicator minerals (KIMs) per sample, numerous Cr & Mg-picroilmenites with perovskite rims, and observed G10/G9 pyropes ratios of 10%(Gurney) and 37%(Dawson & Stephen). In December (2) 2002, Dios announced new samples with high counts (from hundred to thousands) of KIMs including favorable picroilmenites/ perovskites, diamond-inclusion chromites, G9 and G10 pyropes as well as kimberlitic fragments.**

Back in October 2002, an helicopter-supported team composed of geologists Harold Desbiens, Alexandre Boudreault, Patrice Gagnon and Patrice Villeneuve Gagnon collected 39 heavy mineral samples on the Hotish project. Base camp was located at the Temiscamie. An Abitibi Astar B-2 helicopter was used to reach the sampling sites. Samples were collected as a follow-up till sampling survey on the previously detected anomalous areas. Results from these works are still pending.

A high-density airborne magnetic survey was completed over the HOTISH blocks where kimberlite indicator minerals were identified during the winter of 2003. A more detailed till sampling campaign, targeting down-ice area of selected magnetic anomalies was also completed with detailed geophysics in the spring and the summer of 2003 as well as a diamond drilling campaign and a geological mapping campaign.

Detailed diamond drilling logs are presented in the following pages as well as the corresponding sections. Also, a geological map representing the results of the geological mapping campaign is presented in schedule.

Harold Desbiens
M.Sc.geologist
#550 OGQ

2003 GEOLOGICAL MAPPING AND PROSPECTION

Recent airborne and ground geophysical surveys on DIOS Hotish property outlined a great number of magnetic anomalies that potentially may correspond to kimberlitic intrusions (specially with the association of favorable kimberlite indicator minerals). Therefore, a field program that consist of geological mapping as well as prospecting of the erratic blocks was implemented to verify the nature of the most significant magnetic anomalies. First priority was given to the (30's) small geophysical grids (Lambert, 2003 and GEOSIG, 2003). Rivers and creeks were also prospected for outcrops and boulders.

Helicopter-supported geological teams composed of Harold Desbiens, Roger Doucet, Pascal Marchand, Alexandre Boudreault, Patrice Gagnon, Alexandre Aubin carried out the work during the months of July and August, 2003. Mapping was completed with compass and GPS traverses as well as using geophysical ground (flagged) grids. Beep-mat was even used (without much result) on specific targets.

Due to its accidental topography, the Papawkasati block hosts a good number of outcrops, most of them being composed of granitic gneisses and a lesser amount of pegmatites. The dominant granitic gneisses appear as medium to coarse-grained foliated (F=N90-110 with low to medium dips) felsic intrusions composed of K-feldspar (40-60%), plagioclase (20-30%), quartz (10-15%), biotite (1-5%), magnetite (1-5%). Some local phases are more greyish (dioritic) and richer in their biotite-magnetite (5-10%) contents that may create ENE-oriented linear or blobby "formational" magnetic anomalies. The later and smaller pegmatitic bodies are very irregular in shape as well as generally strongly to very strongly magnetic (due to the presence of 3-5% of mm to cm magnetite blobs). The pegmatites are composed of 50-70% K-feldspar, 1-10% plagioclase, 5-20% coarse biotite-phlogopite, 10-20% quartz and are generally characterized by graphitic and pegmatitic textures. Best examples of both lithologies are particularly well shown on grids 22-71-82 and on grid 106, as well as along some parts of the Papawkasati or the Holton Rivers. It must be note that local concentration of strongly magnetic granite boulders may have produced "false" primary magnetic anomalies as it was observed in the vicinities of grid 71. Geological mapping proved to be most useful as it eliminated a great number (the majority) of circular geophysical anomalies corresponding to variations of magnetite contents in the granitic gneisses.

Rare amphibolitic-gabbroic (cm-m) dyke(let)s and sills were also observed in small creeks and along lakes (grids 22- 82, 91 and 94). They are generally oriented N90-110 or N330-000 with very variable dips. An altered peridotitic (strongly magnetic: A14 anomaly) intrusion outcrops about 1km north of grid 82. It is well serpentinized-amphibolitized and has a good foliation at N100 with high dip. However neither exotic fragments nor KIM macrocrysts were observed in outcrop.

The most flat areas (specially to the east part, i.e. grids 31 and 90, as well as the northwest one) of the Papawkasati block are characterized by non-outcropping swampy ground with relatively rare boulders (quartzite or granitic compositions) and shallow to moderate overburden.

The southern portion of the Extrémité block shows the same flat (swampy) topography but is characterized by important NNE-oriented boulders fields (composed mostly of non-magnetic Proterozoic quartzite) and thicker overburden (up to 70 meters in the SE part of Extrémité block). Rare outcrops of magnetic granitic gneisses were observed on the northern and northeastern part of grid 154 indicating strong variations in the basement profile.

In the center of the Extrémité block, the area of grid 177 bears more outcrops, but is still dominated by the magnetic granitic gneisses (F=N10070-80) that are locally intruded by small biotite & magnetite-rich gabbroic intrusions. These gabbros form nice deceiving magnetic bull-eyes. Part of the small intrusions are lightly mineralized in pyrrhotite and pyrite (1-5%). Eastward, the overburden remains shallow to moderate and have a strong boulder component (extensive NNE-oriented block fields are common).

The northern portion of the Extrémité block shows a more accidental topography and thinner overburden. Magnetic granitic gneisses commonly outcrop on the tops of small hills (grids 210-217 as well as their northwestern and southeast extensions). However no outcrop was observed on grids 230, 236 (both are covered by thick overburden) and Tango (flat and swampy ground).

Although the A-2 block lies on the top of a high platform, no outcrop was observed on grids 132 (due to the nearby presence of an esker and its outwash) and 134 (low topo?).

DIOS EXPLORATION INC

**HOTISH DIAMOND
EXPLORATION
PROJECT**

DIAMOND DRILLING CAMPAIGN

SUMMER 2003

DIAMOND DRILLING LOGS

Project : Hotish - Extremite Block		<u>DIOS EXPLORATION INC.</u>	
Drillhole : 363-03-01		Azimuth: - Inclination: 90°	
UTM_North : 5744315		Date begun: 08/07/2003	
UTM_East : 665850		Date finished: 10/07/2003	
Datum : NAD 23 - 18 U		Logged by: H. Desbiens	
Collar elevation :		Contractor : Forage Utika	
		Drilling Method : Conventional Wire Line	
		Core Size : AW	
		EOH depth : 14.6 m	
		Claim # : 1033924	
Purpose : To test magnetic anomaly (Johnston Target 5/177E)			
From (m)	To (m)	Geological Description	
0,00	7,01	Overburden	
7,01	14,60	Biotite Granite	
		- Large grained pinkish felsic intrusive rock, equigranular texture composed of K-Feldspar (pink-reddish), quartz (10%), lightly chloritized biotite (2%) and trace to 1% disseminated magnetite lightly to moderately magnetic, very poorly foliated, locally hematized and factured at 60° and 30° C.A.	
	14,60	End of hole	

Nad 83 N 5744542 E 665874 18

Project : Hotish - Extremite Block		<u>DIOS EXPLORATION INC.</u>	
Drillhole : 363-03-02		Azimuth: - Inclination: 90°	
UTM_North : 5755478		Date begun: 10/07/2003	
UTM_East : 671750		Date finished: 13/07/2003	
Datum : NAD 23 - 18 U		Logged by: H. Desbiens	
Collar elevation :		Contractor : Forage Utika	
		Drilling Method : Conventional Wire Line	
		Core Size : AW	
		EOH depth : 8.53 m	
		Claim # : 1033781	
Purpose : To test magnetic anomaly (Johnston Target /210)			
From (m)	To (m)	Geological Description	
0,00	4,00	Overburden	
4,00	8,53	Lightly hematized granite	
		Medium-grained equigranular pinkish to lightly red felsic intrusive, composed of 60-69% K-Feldspar 20% plagioclase, 15% quartz, 1-3% biotite, locally traces of disseminated magnetite, very lightly foliated @ 75-80° C.A.	
	8,53	End of hole	

Nad 83 5755706 671774 18

Project : Hotish - Extremite Block		DIOS EXPLORATION INC.	
Drillhole : 363-03-03		Azimuth: - Inclination: 90°	
UTM_North : 5756530		Date begun: 13/07/2003	
UTM_East : 676794		Date finished: 16/07/2003	
Datum : NAD 23 - 18 U		Logged by: H. Desbiens	
Collar elevation :		Contractor : Forage Utika	
		Drilling Method : Conventional Wire Line	
		Core Size : AW	
		EOH depth : 16.8 m	
		Claim # : 1035179	
Purpose : To test magnetic anomaly (Johnston Target 19/230)			
From (m)	To (m)	Geological Description	
0,00	11,60	Overburden	
11,60	16,80	Biotite & chlorite granite	
		Medium to coarse grained white-beige felsic granite composed of 15-25% K-Feldspar, 15% quartz, 60% plagioclase, 5-7% biotite partly replaced by chlorite, Tr-1% disseminated magnetite, equigranular texture, unfractured.	
	16,80	End of hole	

Project : Hotish - Extremite Block		<u>DIOS EXPLORATION INC.</u>	
Drillhole : 363-03-04	Azimuth: - Inclination: 90°	Contractor : Forage Utika	
UTM_North : 5744870	Date begun: 16/07/2003	Drilling Method : Conventional Wire Line	
UTM_East : 665000	Date finished: 16/07/2003	Core Size : AW	
Datum : NAD 23 - 18 U	Logged by: H. Desbiens	EOH depth : 6.0 m	
Collar elevation :		Claim # : 1033923	
Purpose : To test magnetic anomaly (Johnston Target 6/177W)			
From (m)	To (m)	Geological Description	
0,00	1,00	Overburden	
1,00	6,00	Gabbro	
		Fine to medium grained light green mafic intrusive rock, epidotized, foliated at 60-70° C.A. with Tr-1% quartz-carbonate-magnetite-pyrite-chalcopyrite cm veinlets pararell to the foliation, strongly magnetic, ~10% plagioclase phenocrysts (0.5-1mm) well-visible, as well as some part with leucoxeme.	
		* Anomaly Explained	
	6,00	End of hole	

No d 23

5745097

655024

18

Project : Hotish - Extremite Block		<u>DIOS EXPLORATION INC.</u>	
Drillhole : 363-03-05	Azimuth: -	Inclination: 90°	Contractor : Forage Utika
UTM_North : 5740150	Date begun: 17/07/2003		Drilling Method : Conventional Wire Line
UTM_East : 673200	Date finished: 17/07/2003		Core Size : AW
Datum : NAD 27 - 18 U	Logged by: H. Desbiens		EOH depth : 11.0 m
Collar elevation :			Claim # : 103561
Purpose : To test magnetic anomaly (154 North Target)			
From (m)	To (m)	Geological Description	
0,00	6,00	Overburden	
6,00	11,00	Gabbro	
		Fine to medium grained dark green mafic intrusive rock, composed of hornblende, pyroxene, biotite, plagioclase, and 1% magnetite (magnetic)	
		* Anomaly explained	
	11,00	End of hole	

Project : Hotish - Extremite Block		DIOS EXPLORATION INC.
Drillhole : 363-03-06		Azimuth: - Inclination: 90°
UTM_North : 5739545		Date begun: 18/07/2003
UTM_East : 673200		Date finished: 20/07/2003
Datum : NAD 27 - 18 U		Logged by: H. Desbiens
Collar elevation :		Contractor : Forage Utika
		Drilling Method : Conventional Wire Line
		Core Size : AW
		EOH depth : 18.3 m
		Claim # : 1035609
Purpose : To test magnetic anomaly (154 South Target)		
From (m)	To (m)	Geological Description
0,00	18,30	Overburden (Sand and large boulders)
		Rods stuck in boulders hole lost

Project : Hotish -Papaskwasati Block		<u>DIOS EXPLORATION INC.</u>	
Drillhole : 363-03-07		Azimuth: - Inclination: 90°	
UTM_North : 5730850		Date begun: 21/07/2003	
UTM_East : 665100		Date finished: 22/07/2003	
Datum : NAD 23- 18 U		Logged by: H. Desbiens	
Collar elevation :		Contractor : Forage Utika	
		Drilling Method : Conventional Wire Line	
		Core Size : AW	
		EOH depth : 14.02 m	
		Claim # : 1039794	
Purpose : To test magnetic anomaly (Johnston Target 11-95 Clown)			
From (m)	To (m)	Geological Description	
0,00	8,20	Overburden	
8,00	14,02	Gabbro (Amphibolite)	
		Medium grained green intrusive rock; composed of hornblende, pyroxene & 2-3 biotite, traces of pyrite-chalcopyrite-magnetite; lightly foliated at 60° C.A., magnetic.	
		* Anomaly Explained	
	14,02	End of hole	

Project : Hotish - Papaskwasati Block

DIOS EXPLORATION INC.

Drillhole : 363-03-08

Azimuth: - Inclination: 90°

Contractor : Forage Utika

UTM_North : 5731250

Date begun: 22/07/2003

Drilling Method : Conventional Wire Line

UTM_East : 664000

Date finished: 23/07/2003

Core Size : AW

Datum : NAD 23 - 18 U

Logged by: H. Desbiens

EOH depth : 7.0 m

Collar elevation :

Claim # : 1039443

Purpose : To test magnetic anomaly (Johnston Target 10/95 Chap-W)

From (m)	To (m)	Geological Description
0,00	3,04	Overburden
3,04	7,00	Foliated fine grained Gabbro
		Dark green fine -grained/ Aphyric mafic intrusive, amphibolitized, strongly foliated at 30° C.A., Tr-2% disseminated pyrite, moderately to strongly magnetic.
	7,00	End of hole

Project : Hotish -Papaskwasati Block

DIOS EXPLORATION INC.

Drillhole : 363-03-09

Azimuth: - Inclination: 90°

Contractor : Forage Utika

UTM_North : 5732742

Date begun: 23/07/2003

Drilling Method : Conventional Wire Line

UTM_East : 662005

Date finished: 23/07/2003

Core Size : AW

Datum : NAD 23 - 18 U

Logged by: H. Desbiens

EOH depth : 7.63 m

Collar elevation :

Claim # : 1039448

Purpose : To test magnetic anomaly (Johnston Target 9/91-C)

From (m)	To (m)	Geological Description
0,00	2,44	Overburden
2,44	7,63	Hematized granitic pegmatite
		Coarse-grained pinkish to reddish felsic intrusive composed of 20-25% quartz, 65% K-feldspar, 5-10% plagioclase; 1-5% biotite partly transformed in chlorite; Tr-1% disseminated magnetic often associated with mica-rich sections,
		5.97-6.02m: V.Qz-CB-CL @ 80° C.A.
		6.65-6.72m: V.Qz-CB-CL @ 70-75° C.A.
		7.16-7.22m: V.Qz-CB-CL @ 80° C.A.
		7.51-7.53m: V.Qz-CB @ 80° C.A.
	7,63	End oh hole

Project : Hotish -Papaskwasati Block

DIOS EXPLORATION INC.

Drillhole : 363-03-10

Azimuth: - Inclination: 90°

Contractor : Forage Utika

UTM_North : 5722735

Date begun: 24/07/2003

Drilling Method : Conventional Wire Line

UTM_East : 666000

Date finished: 26/07/2003

Core Size : AW

Datum : NAD 27 - 18 U

Logged by: R. Doucet

EOH depth : 14.0 m

Collar elevation :

Claim # : 1040372

Purpose : To test magnetic anomaly (31 North)

From (m)	To (m)	Geological Description
0,00	8,00	Casing
8,00	9,30	Pink Granite Coarse grained Slightly Magnetic
9,30	14,00	Gabbro Coarse Grained Epidote Green 30% Fe Mag 30% Calcite 3% Magnetite 2% Moderately magnetic contact @ 9.3m 70° A/C
	14,00	End of hole

Project : Hotish - Extremite Block		<u>DIOS EXPLORATION INC.</u>	
Drillhole : 363-03-11		Azimuth: 000° Inclination: 60°	
UTM_North : 5739515		Date begun: 24/07/2003	
UTM_East : 673200		Date finished: 28/07/2003	
Datum : NAD 23 - 18 U		Logged by: H. Desbiens	
Collar elevation :		Contractor : Teknodrill	
		Drilling Method : Conventional Wire Line	
		Core Size : BW	
		EOH depth : 62 m	
		Claim # : 1035609	
Purpose : To test magnetic anomaly (154 South Target)			
From	To	Geological Description	
(m)	(m)		
0,00	62,00	Overburden	

Project : Hotish -A2 Block		<u>DIOS EXPLORATION INC.</u>	
Drillhole : 363-03-12	Azimuth: - Inclinacion: 90°	Contractor : Forage Utika	
UTM_North : 5738675	Date begun: 26/07/2003	Drilling Method : Conventional Wire Line	
UTM_East : 651900	Date finished: 29/07/2003	Core Size : AW	
Datum : NAD 23 - 18 U	Logged by: H. Desbiens	EOH depth : 9.0 m	
Collar elevation :		Claim # : 1034741	
Purpose : To test magnetic anomaly (132B)			
From (m)	To (m)	Geological Description	
0,00	9,00	Overburden (Sand & Boulders)	
		Rods stuck; hole lost	

Project : Hotish -Papaskwasati Block

DIOS EXPLORATION INC.

Drillhole : 363-03-14

Azimuth: - Inclination: 90°

Contractor : Forage Utika

UTM_North : 5735225

Date begun: 29/07/2003

Drilling Method : Conventional Wire Line

UTM_East : 664200

Date finished: 29/07/2003

Core Size : AW

Datum : NAD 23 - 18 U

Logged by: R. Doucet

EOH depth : 4 m

Collar elevation :

Claim # : 1039476

Purpose : To test magnetic anomaly (90NW)

From (m)	To (m)	Geological Description
0,00	0,30	Overburden
0,30	4,00	Pink granite
		Slightly Magnetic
		Coarse Grained- Foliated 30% A/C
		<1% Mgt
		Lost core 3.6-3.7m
		Fault zone
	4,00	End of hole

Project : Hotish - Papaskwasati Block

DIOS EXPLORATION INC.

Drillhole : 363-03-15

Azimuth: - Inclination: 90°

Contractor : Forage Utika

UTM_North : 5734263

Date begun: 30/07/2003

Drilling Method : Conventional Wire Line

UTM_East : 661888

Date finished: 1/08/2003

Core Size : AW

Datum : NAD 23 - 18 U

Logged by: H. Desbiens

EOH depth : 27.0 m

Collar elevation :

Claim # : 1039464

Purpose : To test magnetic anomaly (94B)

From (m)	To (m)	Geological Description
0,00	24,00	Overburden (Sand with some boulders)
24,00	27,00	Foliated hematized granite
		Pinkish to reddish medium grained felsic intrusive rock, equigranular texture showing a 30° C.A. foliation & fracture, locally lightly magnetic (trace to 1% MG), the rock is composed of 10-15% greyish quartz, 40-45% pinkish K-Feldspar, 40% white plagioclase and 3-5% biotite locally chloritized.
	27,00	End of hole

Project : Hotish - Extremite Block		<u>DIOS EXPLORATION INC.</u>	
Drillhole : 363-03-16A		Azimuth: - Inclination: 90°	
UTM_North : 5755435		Date begun: 1/08/2003	
UTM_East : 670512		Date finished: 1/08/2003	
Datum : NAD 27 - 18 U		Logged by: H. Desbiens	
Collar elevation :		Contractor : Teknodrill	
		Drilling Method : Conventional Wire Line	
		Core Size : BW	
		EOH depth : 31 m	
		Claim # : 1033779	
Purpose : To test magnetic anomaly (217A)			
From (m)	To (m)	Geological Description	
0,00	31,00	Overburden (Sand with some boulders)	
		Located on an esker	
		Hole lost; rods stuck at 31m	

Project : Hotish - Extremité Block		<u>DIOS EXPLORATION INC.</u>	
Drillhole : 363-03-16B	Azimuth: -	Inclination: 90°	Contractor : Teknodrill
UTM_North : 5755335	Date begun: 1/08/2003		Drilling Method : Conventional Wire Line
UTM_East : 670513	Date finished: 1/08/2003		Core Size : BW
Datum : NAD 23 - 18 U	Logged by: H. Desbiens		EOH depth : 33.5 m
Collar elevation :			Claim # : 1033775
Purpose : To test magnetic anomaly (217A)			
From (m)	To (m)	Geological Description	
0.00	33.5	Overburden	

Project : Hotish - Extremité Block

DIOS EXPLORATION INC.

Drillhole : 363-03-17

Azimuth: - Inclination: 90°

Contractor : Teknodrill

UTM_North : 5755032

Date begun: 02/08/2003

Drilling Method : Conventional Wire Line

UTM_East : 670526

Date finished: 03/08/2003

Core Size : BW

Datum : NAD 23 - 18 U

Logged by: H. Desbiens

EOH depth : 41.0 m

Collar elevation :

Claim # : 1033775

Purpose : To test magnetic anomaly

From (m)	To (m)	Geological Description
0,00	3,00	Overburden (sand & boulders)
3,00	26,45	Pinkish pegmatitic granite
		Coarse grained biotite(3-5%) pegmatitic felsic intrusive rock composed of K-Feldspar (55-60%), plagioclase (20%) and quartz (20%); Tr-2% disseminated magnetite, very poorly foliated at 80° C.A. injected by greyish biotite dykelets (magnetic) at 80-85° C.A. between 14.21-14.29m; 15.11-17.05m; 17.20-17.57m.
26,45	34,20	Grey biotite diorite
		Grey fine-grained biotite (5-10%) intermediate intrusive rock locally hosting 1-5% grey-white feldspar phenocrysts (mm), 2-3% disseminated magnetite (well magnetic); very lightly foliated at 70-80° C.A. Upper contact at 80°C.A./Lower contact at 90°C.A. 26.45-28.65m and 29.10-29.84 contain 25-30% pegmatitic granite xenoliths (cm)
34,20	41,00	Moderately hematized pegmatitic granite
		idem of 3.0-26.45 section, excepted for stronger hematization
		34.91-35.45m: Grey biotite diorite (magnetic) @ 80° C.A.
		35.58-35.66m: Grey biotite diorite (magnetic) @ 70-50° C.A.
	41,00	End of hole

Project : Hotish - Papaskwasati Block

DIOS EXPLORATION INC.

Drillhole : 363-03-18

Azimuth: - **Inclination:** 90°

Contractor : Forage Utika

UTM_North : 5725634

Date begun: 02/08/2003

Drilling Method : Conventional Wire Line

UTM_East : 659245

Date finished: 03/08/2003

Core Size : AW

Datum : NAD 23 - 18 U

Logged by: H. Desbiens

EOH depth : 22.5 m

Collar elevation :

Claim # : 1039499

Purpose : To test magnetic anomaly (22A)

From (m)	To (m)	Geological Description
0,00	5,80	Overburden
5,80	8,40	Foliated hematized granite Fine-medium grained equigranular pinkish granite (2-5% biotite, Tr-magnetite); foliated at 7.15-7.40m: Pegmatitic dyke @ 80° A.C.
8,40	10,30	Carbonated ultramafic dyke (kimberlite ?) Dark grey to lightly granish aphyric ultramafic magnetic rock, carbonated (bubbled-shaped; segregation?) host 1-5% pelletoid magnetite (frequently oxidized-red); subrounded to subangular serpentine fragment (Tr 1% at 8.66m; at 9.47;9.48m); 1-3% phlogopite layering texture at 80° C.A. upper contact at 85-90° C.A., lower contact at 80° C.A.
10,30	22,50	Granite 10.3-12.4m: light brown to pink fine-medium grained biotite granite not magnetic 12.23-12.24m: altered ultramafic dykelet at 70° C.A. lightly magnetic. Similar to the one observed between 12.4-16.83m: pegmatic phasis, lightly magnetic 16.83-18.35m: whitish biotite-rich (3-7%) granite phasis, magnetic 18.35-22.50m: pegmatite phasis 18.65-18.74m: altered biotite-rich(10-15%) mafic/ultramafic dykelet at 90 and 70° C.A.
	22,50	End of hole

Project : Hotish - Papaskwasati Block		DIOS EXPLORATION INC.		Contractor : Forage Utika	
Drillhole : 363-03-20		Azimuth: 000° Inclination: 90°		Drilling Method : Conventional Wire Line	
UTM_North : 5725681		Date begun: 3/08/2003		Core Size : AW	
UTM_East : 659110		Date finished: 4/08/2003		EOH depth : 11.3 m	
Datum : NAD 27 - 18 U		Logged by: H.DESBIENS		Claim # : 1039499	
Collar elevation :					
Purpose : To test MAGNETIC ANOMALY (22B)					
From (m)	To (m)	Geological Description			
0.00	6.35	CASING			
6.35	11.30	BIOTITE GRANITIC GNEISS pink medium-grained felsic intrusive rock composed of 10-15%quartz, 65%feldspar, 10-20% biotite(mm layers parallel to foliation at 65-70 C.A., 1-3% DISSEMINATED MAGNETITE 8.54-8.64:pegmatitic dykelet at 80 C.A.			
	11.30	END OF HOLE			

Project : Hotish - Papaskwasati Block

DIOS EXPLORATION INC.

Drillhole : 363-03-22

Azimuth: 000° Inclination: 90°

Contractor : Forage Utika

UTM_North : 5744869

Date begun: 6/08/2003

Drilling Method : Conventional Wire Line

UTM_East : 664403

Date finished: 8/08/2003

Core Size : AW

Datum : NAD 27 - 18 U

Logged by: H.DESBIENS

EOH depth : 31 m

Collar elevation :

Claim # : 1033922

Purpose : To test magnetic anomaly (177A).

From (m)	To (m)	Geological Description
0.00	6.00	CASING
6.00	12.25	GREY BIOTITE GRANITE grey medium-grained intermediate to felsic intrusive rock composed of 10%biotite(partly chloritized), 15-20%quartz, 20%k-feldspar, 50% plagioclase, tr-2% magnetite; lightly silicified and locally foliated at 35-40 C.A.
12.25	31.00	LIGHTLY AMPHIBOLITIZED BIOTITE GABBRO green fine to medium -grained mafic intrusive rock composed of 60% amphibole/pyroxene, 20%plagioclase, 10-20%biotite, 1-5% disseminated magnetite, tr-2% pyrite; lightly carbonated and foliated at 40 C.A. 18.70-18.75, 18.85-18.88, 19.36-19.37, 19.58-19.60, 20.19-20.22, 21.19-21.23, 21.65-21.68, 21.94-21.97, 22.09-22.12: V.QZ-CB-AM-MG-PY at 50-60 C.A. 22.55-22.72: pink pegmatitic dykelet at 40-60 C.A., 3-4% magnetite blobs 22.72-23.90, 24.60-25.36: silicified feldspar-biotite phyric felsic dyke hosting 4-5% PO, tr-2%PY, 1-4% MG, contacts at 40 and 80 C.A. strongly magnetic 27.86-27.88:V.QZ-PO(PY) at 85 C.A. 28.36-29.15:TR-2% PO(PY)

Project : Hotish - Papaskwasati Block

DIOS EXPLORATION INC.

Drillhole : 363-03-31

Azimuth: 000° Inclinaton: 90°

Contractor : Technodril

UTM_North : 5725640

Date begun: 28/08/2003

Drilling Method : Conventional Wire Line

UTM_East : 659390

Date finished:30/08/2003

Core Size : BW

Datum : NAD 27 - 18 U

Logged by: R. Doucet

EOH depth : 51.00 m

Collar elevation : 671 m

Claim # : 1039499

Purpose : To test kimberlitic dyke.

From (m)	To (m)	Geological Description
0.00	3.00	CASING (N.B. all the ``footage`` must be added by one meter in the core boxes,except for the casing depth,which is good.)
3.00	5.80	GRANITE pink, coarse grained, 5.8m: contact @ 70° C/A
5.80	12.00	GNEISS Grey color, well foliated @ 70° C/A cut by few qtz veinlet up to 1 cm
12.00	47.78	GRANITIC GNEISS Slightly magnetic from 12.00 to 30.00m Contains few pwegmatitic section -Amphibolitic Dyke from 31.92-32.34 @ 65° C/A Fractured at low angle from 25.5 - 27.5 and from 32.7-40.0 -40.70-40.86 Kimberlitic dyke reddish-yellow,carbonated and non-magnetic -47.0-47.2 Amphobilitic dyke
47.78	48.20	HYPABYSSAL KIMBERLITE Black, fine-grained, magnetic, carbonated (1-2%, mm blobs), 1-3% phlogopite macrocrysts (0.5-1.0mm), 5-15% ilmenite-magnetite xenocryxts (0.5-4mm), 5% subrounded black fragments (1.0-5.0 cm) contacts @ 70-80 C.A.
48.20	48.54	HEMATIZED FRACTURED GRANITE

Project : Hotish - Papaskwasati Block

DIOS EXPLORATION INC.

Drillhole : 363-03-31

Azimuth: 000° **Inclination:** 90°

UTM_North : 5725640

Date begun: 28/08/2003

UTM_East : 659390

Date finished: 30/08/2003

Datum : NAD 27 - 18 U

Logged by: R. Doucet

Collar elevation : 671 m

Contractor : Technodrill

Drilling Method : Conventional Wire Line

Core Size : BW

EOH depth : 51.00 m

Claim # : 1039499

Purpose : To test kimberlitic dyke.

From (m)	To (m)	Geological Description
48.54	49.12	HYPABYSSAL KIMBERLITE Black, fine-grained, magnetic, carbonated (1-2%, mm), 1-2% phlogopite macrocrysts (0.5-1.0 mm) 5-7% ilmenite-magnetite xenocrysts(0.5-2mm), tr-1% elongated black fragments (3-7x1-4mm), foliated contacts @ 40 + 80 C.A.
49.12	49.41	HEMATIZED FRACTURED GRANITE
49.41	49.70	HYPABYSSAL KIMBERLITE IDEM 48.54-49.12, but no fragments contacts @ 50 C.A.
49.70	52.00	GRANITIC GNEISS IDEM 12.00-47.78
		END OF HOLE AT 52.0M

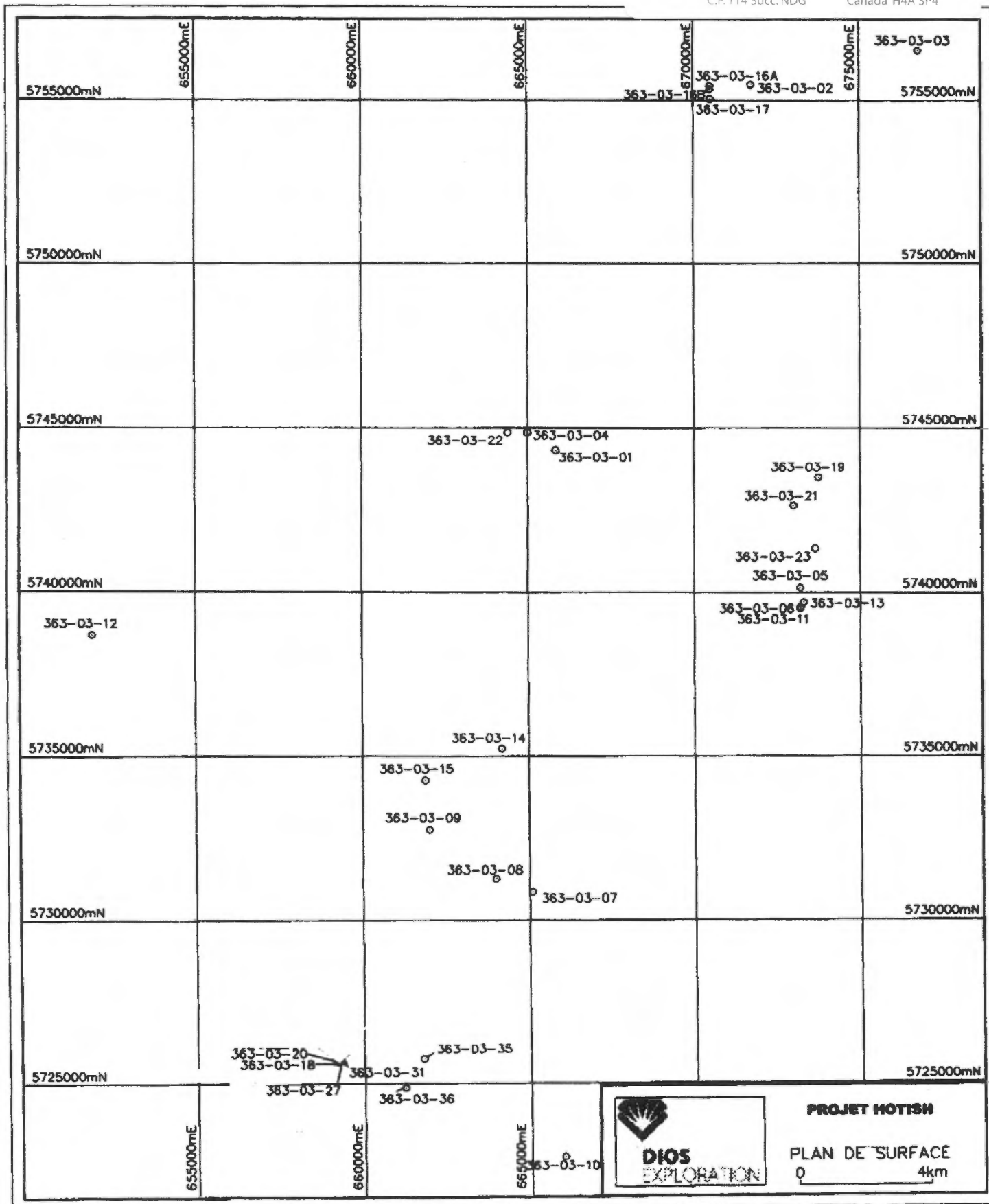
Project : Hotish - Papaskwasati Block		DIOS EXPLORATION INC.	
Drillhole : 363-03-35		Azimuth: 000° Inclination: 90°	
UTM_North : 5725765		Date begun: 01/09/2003	
UTM_East : 661798		Date finished: 02/09/2003	
Datum : NAD 27 - 18 U		Logged by: R. Doucet	
Collar elevation :		Contractor : Technodrill	
		Drilling Method : Conventional Wire Line	
		Core Size : BW	
		EOH depth : 36.60 m	
		Claim # : 1039503	
Purpose : To test anomaly no 71			
From (m)	To (m)	Geological Description	
0.00	3.00	CASING	
3.00	36.60	GRANITIC GNEISS Grey color, foliation @ 65° C/A Contain few mafic section (N.B. The boxes 1 and 2 has been mixed (dropped)) slightly magnetic -17.3-17.5 Mafic Dyke Greenish color, at 20.6 a small (2cm) mafic dyke is highly magnetic -23.65-23.76 KIMBERLITE, Medium olive-green, carbonated(1-2%), slightly magnetic fine-grained, massive, pelletoidal texture (5%, mm);	
		END OF HOLE AT 36.6M	

Project : Hotish - Papaskwasati Block		DIOS EXPLORATION INC.
Drillhole : 363-03-36		Azimuth: 078° Inclination: 82°
UTM_North : 5724863	Date begun: 03/09/2003	Contractor : Technodrill
UTM_East : 661214	Date finished: 04/09/2003	Drilling Method : Conventional Wire Line
Datum : NAD 27 - 18 U	Logged by: R. Doucet	Core Size : BW
Collar elevation : 560 m		EOH depth : 48.00 m
		Claim # : 1039495
Purpose : To test kimberlitic dyke outcrop at 5724862N661166E, Elevation 540m., N330°/28°E, 1.05m thick		
From (m)	To (m)	Geological Description
0.00	1.00	CASING left in the hole ,hole might make water (loss water in drilling after 35m in depth)
1.00	48.00	<p>GRANITIC GNEISS</p> <p>grey and pink(from 1-2.8m.) , coarse grained, some pegmatitic phases slightly magnetic</p> <p>-2.85-3.62 Andesitic dyke , fine grained greenish color @ 70° C/A</p> <p>-4.00-4.10 Andesitic dyke , fine grained greenish color @ 50° C/A</p> <p>Fractured from 2.8-7m.</p> <p>well foliated @ 60° C/A at 28m.</p> <p>-33.00-33.93 KIMBERLITE, black, carbonated, magnetic contact @ 70° C/A at 33.93</p> <p>From 33.93 -36.00 the granite Gneiss is low angle fractured (5-10° C/A) and filled with black material</p> <p>END OF HOLE at 48 m.</p>



DIOS EXPLORATION

Dios Exploration Inc. Montréal, Québec
C.P.114 Succ. NDG Canada H4A 3P4



PROJET HOTISH

PLAN DE SURFACE
0 4km

363-03-01
5744315mN
665850mE



Mort-terrain

Biotite Granite

14.6m
E.O.H.

0m

0m

-20m

-20m

665840mE

665860mE



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-01

SECTION VUE VERS LE NORD
0 ——— 4m

363-03-02
5755478mN
671750mE



Mort-terrain

Lightly hematized granite

8.53m

E.O.H.

0m

671740mE

671760mE

0m


-20m

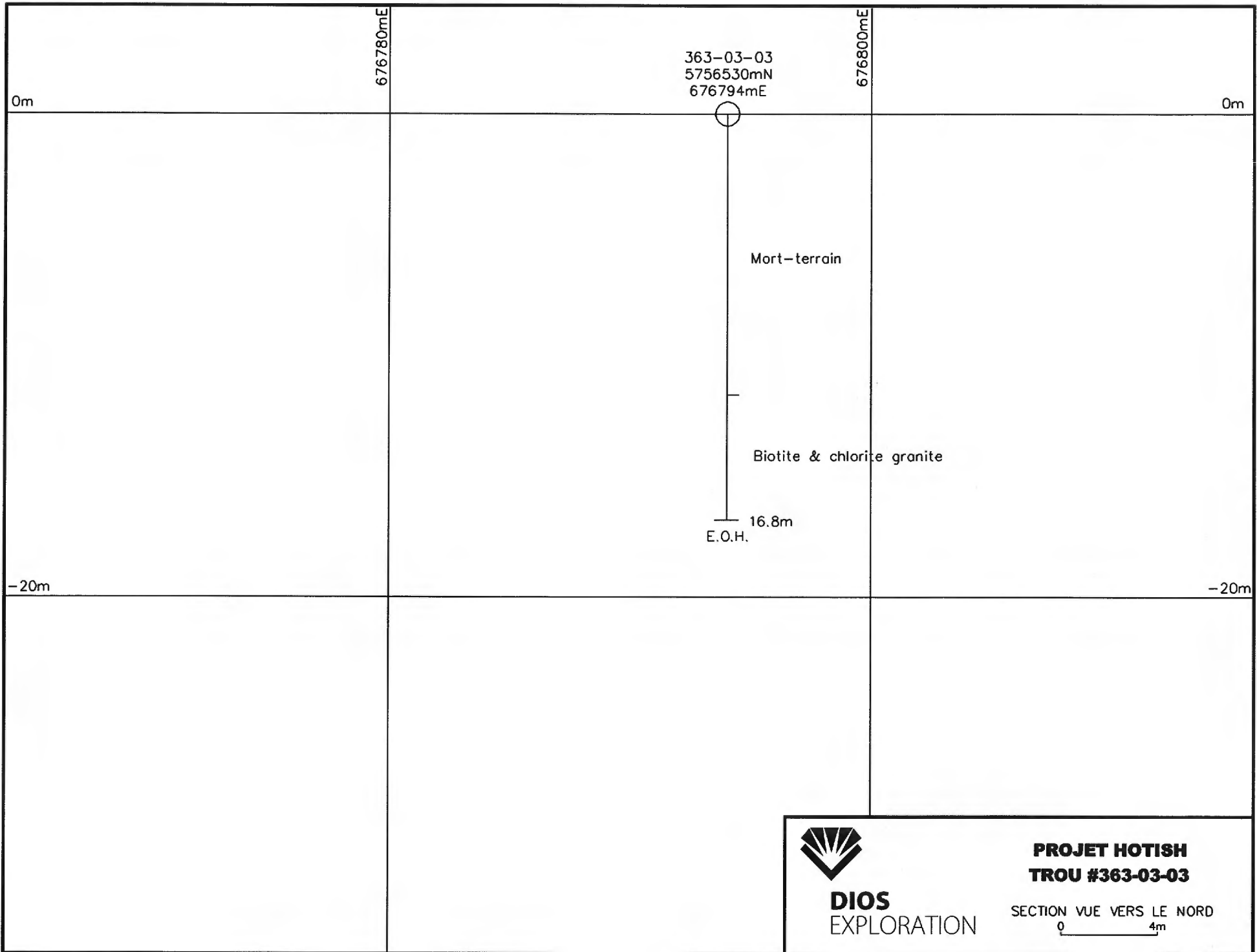
-20m



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-02

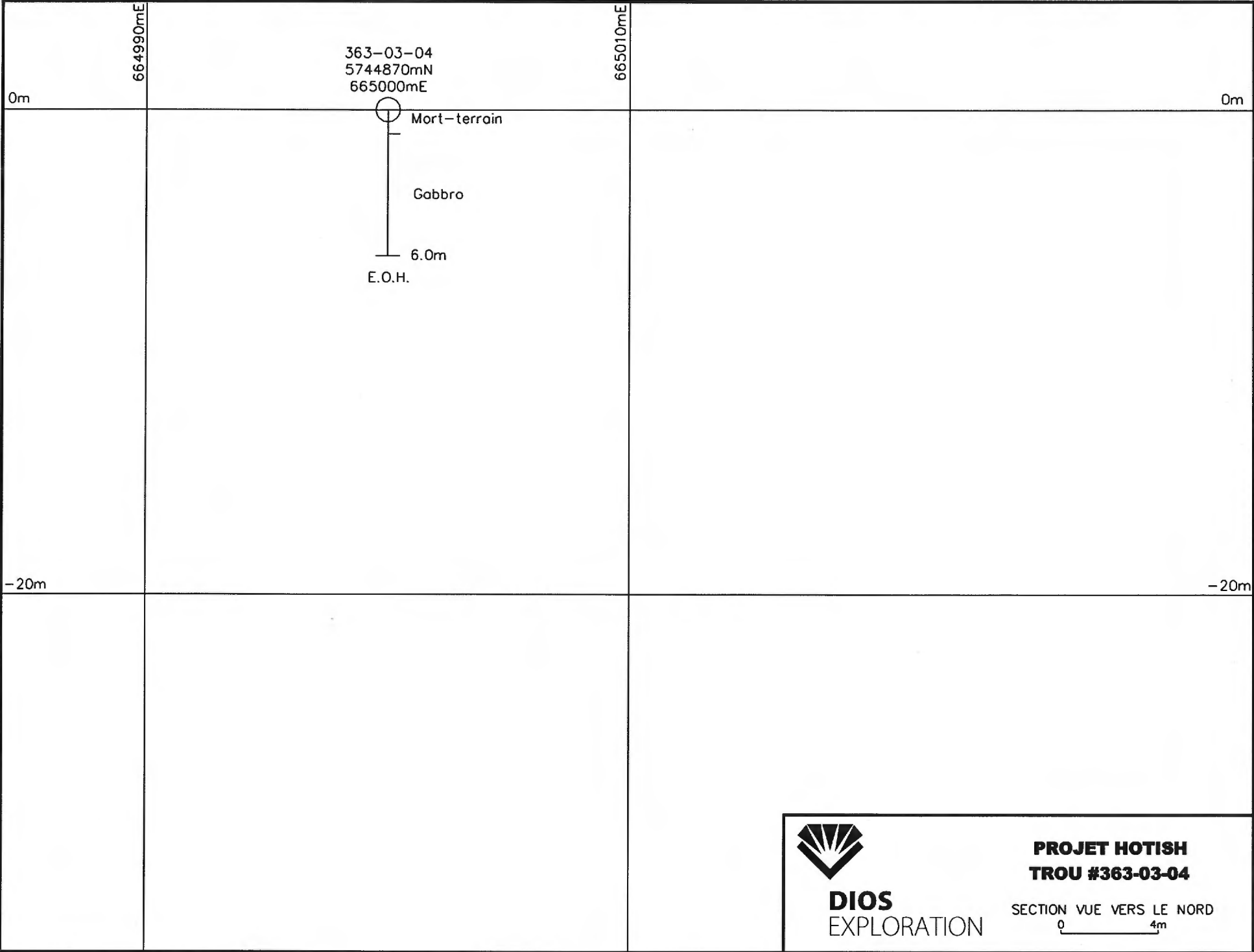
SECTION VUE VERS LE NORD
0  4m



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-03

SECTION VUE VERS LE NORD
0 4m



363-03-04
5744870mN
665000mE

664990mE

665010mE

0m

0m

Mort-terrain

Gabbro

6.0m

E.O.H.

-20m

-20m



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-04

SECTION VUE VERS LE NORD
0 4m

363-03-05
5740150mN
673200mE



Mort-terrain

Gabbro

11.0m

E.O.H.

0m

0m

-20m

-20m

673190mE

673210mE



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-05

SECTION VUE VERS LE NORD
0 4m

363-03-06
5739545mN
673200mE



Mort-terrain

18.3m
E.O.H.

0m

0m

-20m

-20m

673190mE

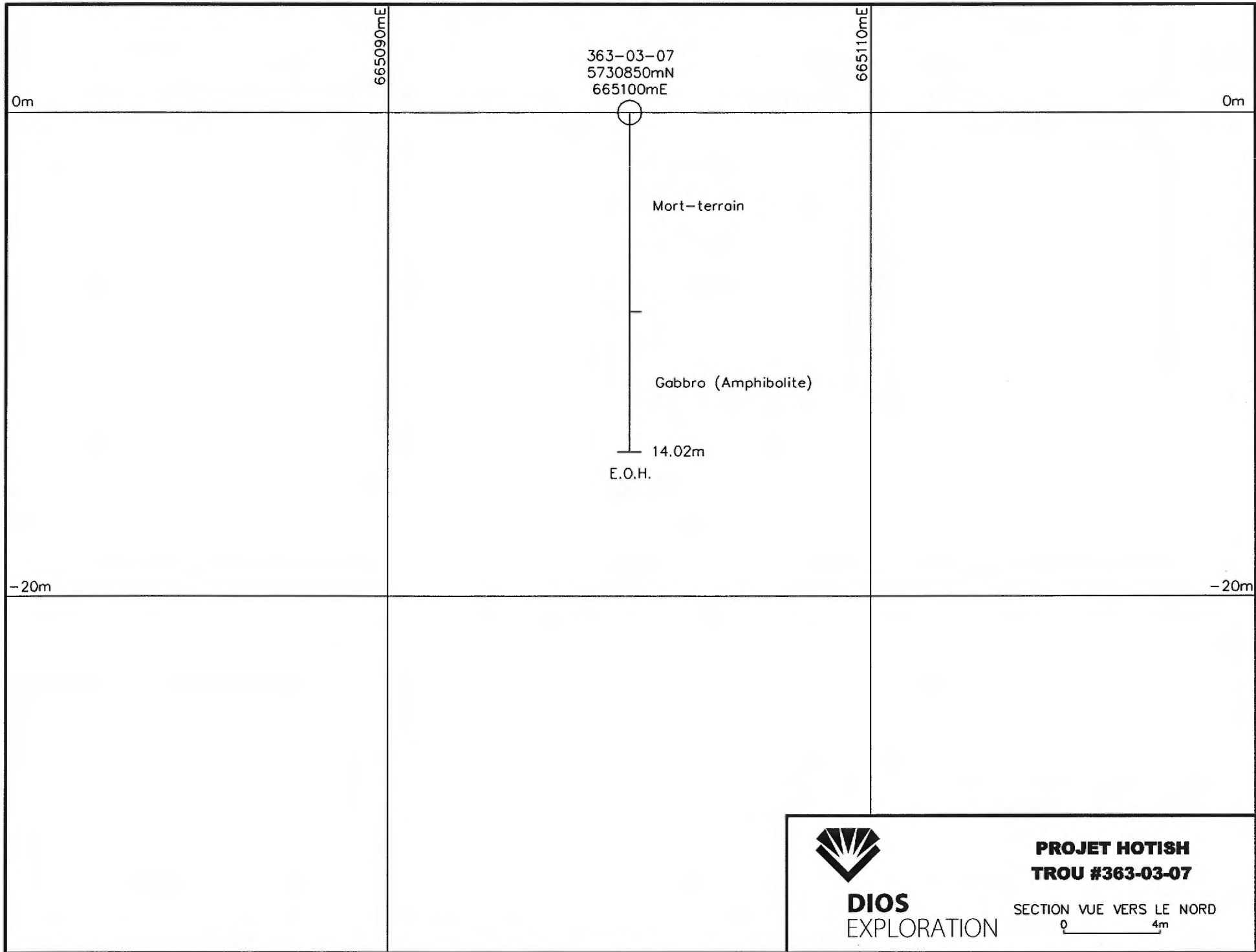
673210mE

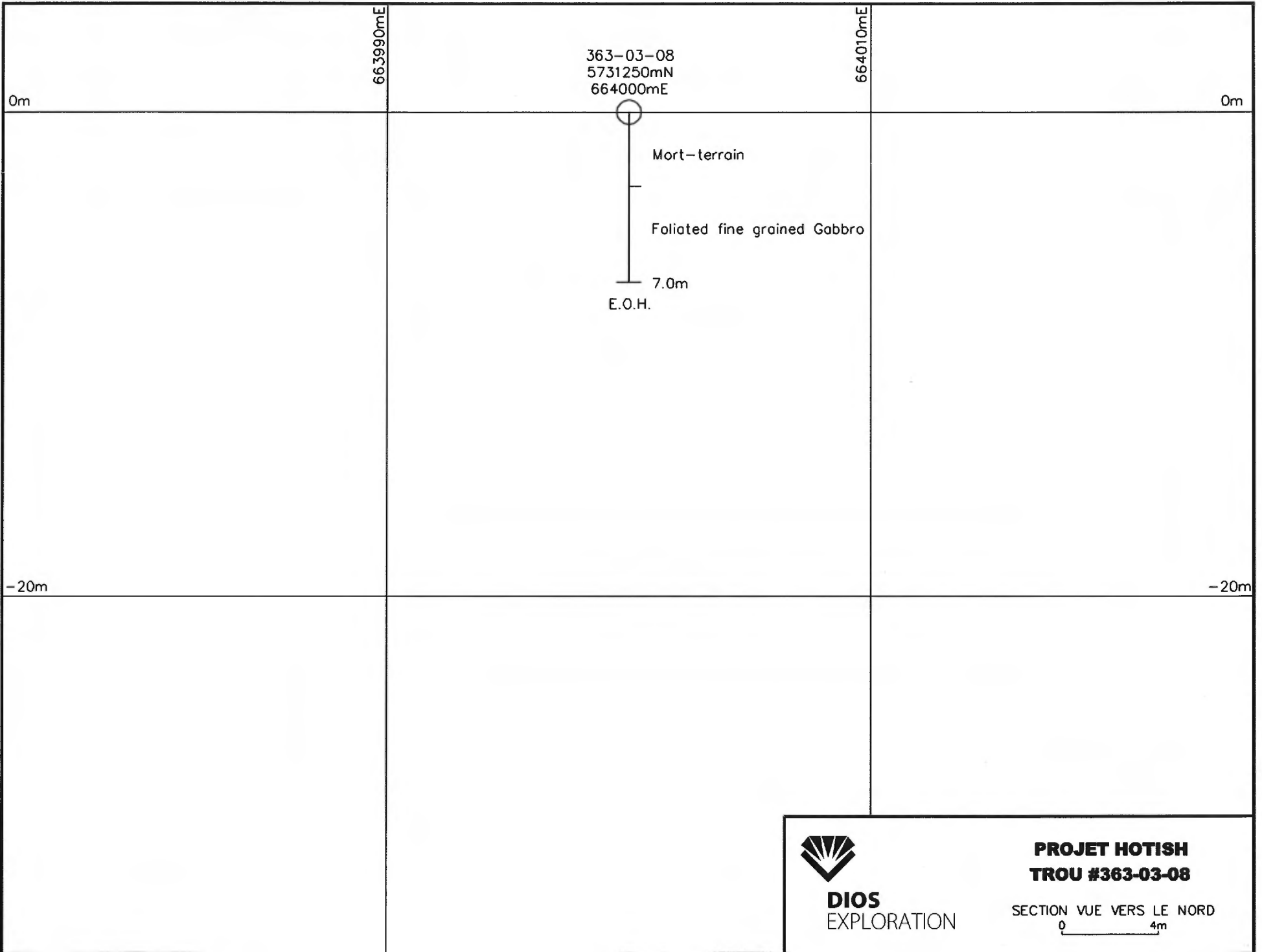


DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-06

SECTION VUE VERS LE NORD
0 4m





662000mE

363-03-09
5732742mN
662005mE

662020mE

0m

0m



Mort-terrain

Hematized granitic pegmatite

14.6m

E.O.H.

-20m

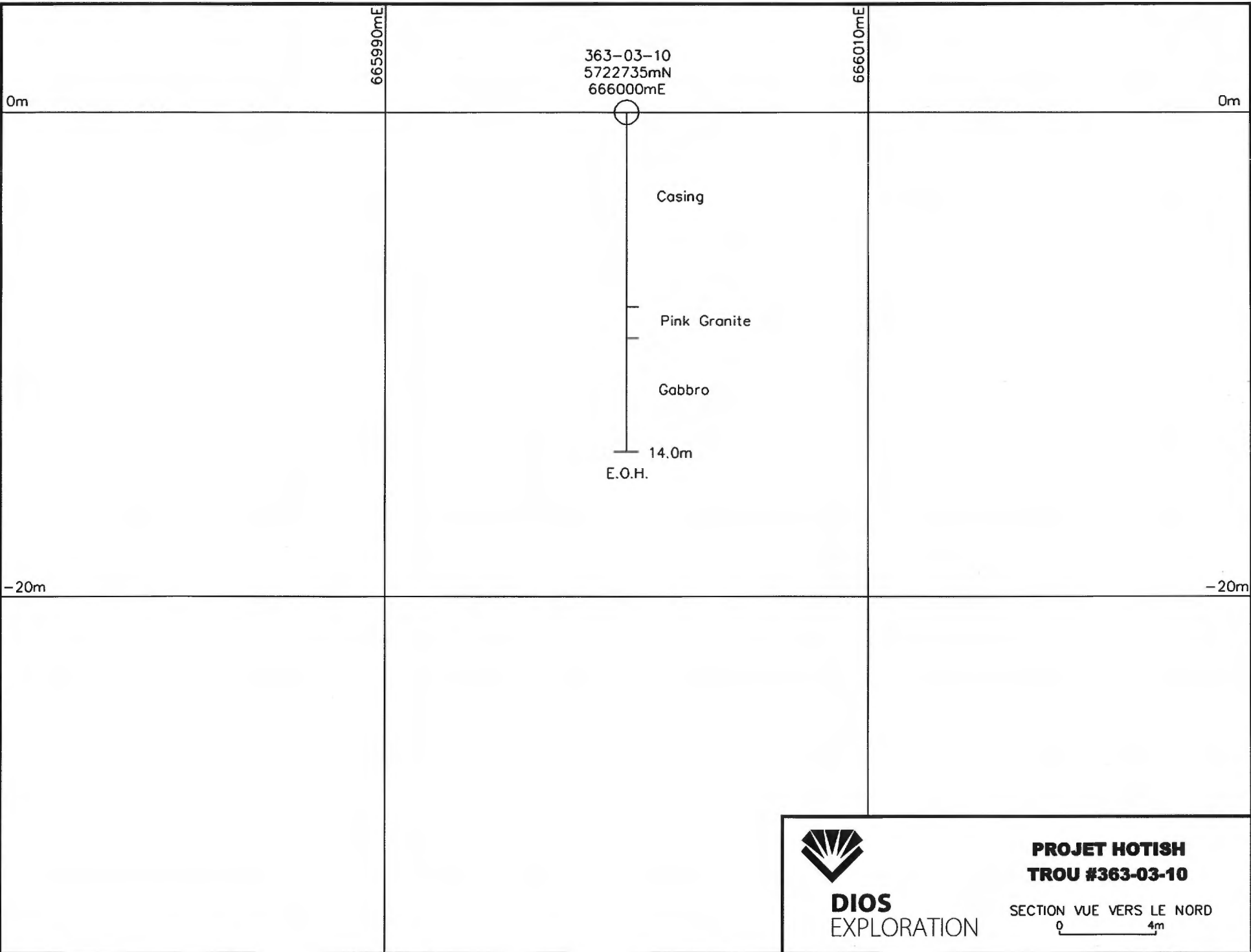
-20m



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-09

SECTION VUE VERS LE NORD
0 4m



363-03-10
5722735mN
666000mE

0m

0m

665990mE

666010mE



Casing

Pink Granite

Gabbro

14.0m
E.O.H.

-20m

-20m



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-10

SECTION VUE VERS LE NORD
0 4m

363-03-11
5739515mN
673200mE

0m

0m

-40m

-40m

5739500mN

5739540mN

62.0m
E.O.H.



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-11

SECTION VUE VERS L'OUEST
0 8m

363-03-12
5738675mN
651900mE



Mort-terrain

9.0m
E.O.H.

0m

0m

-20m

-20m

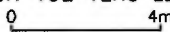
651890mE

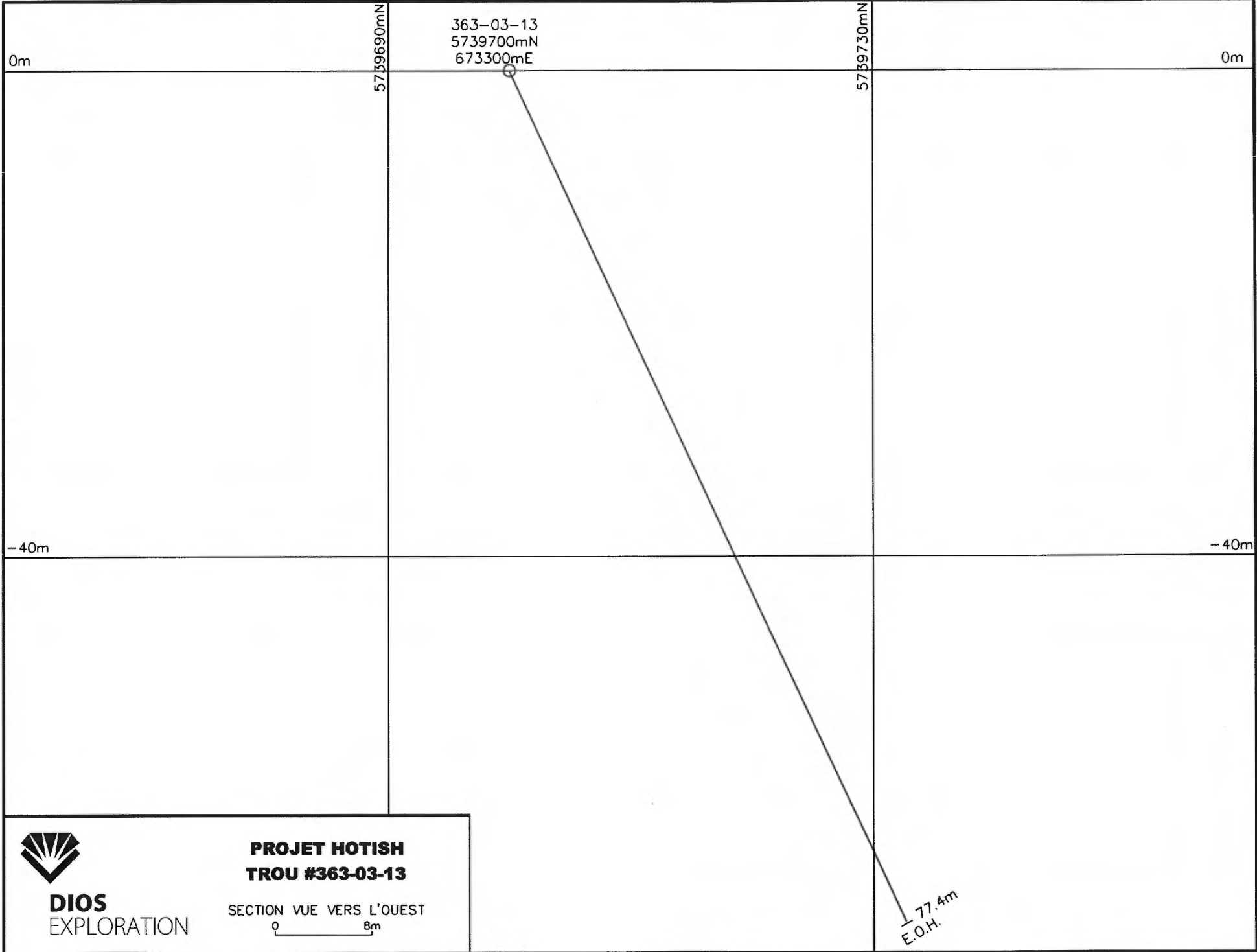
651910mE



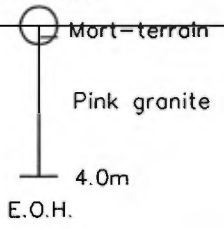
DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-12

SECTION VUE VERS LE NORD
0  4m



363-03-14
5735225mN
664200mE



0m

0m

-20m

-20m

664190mE

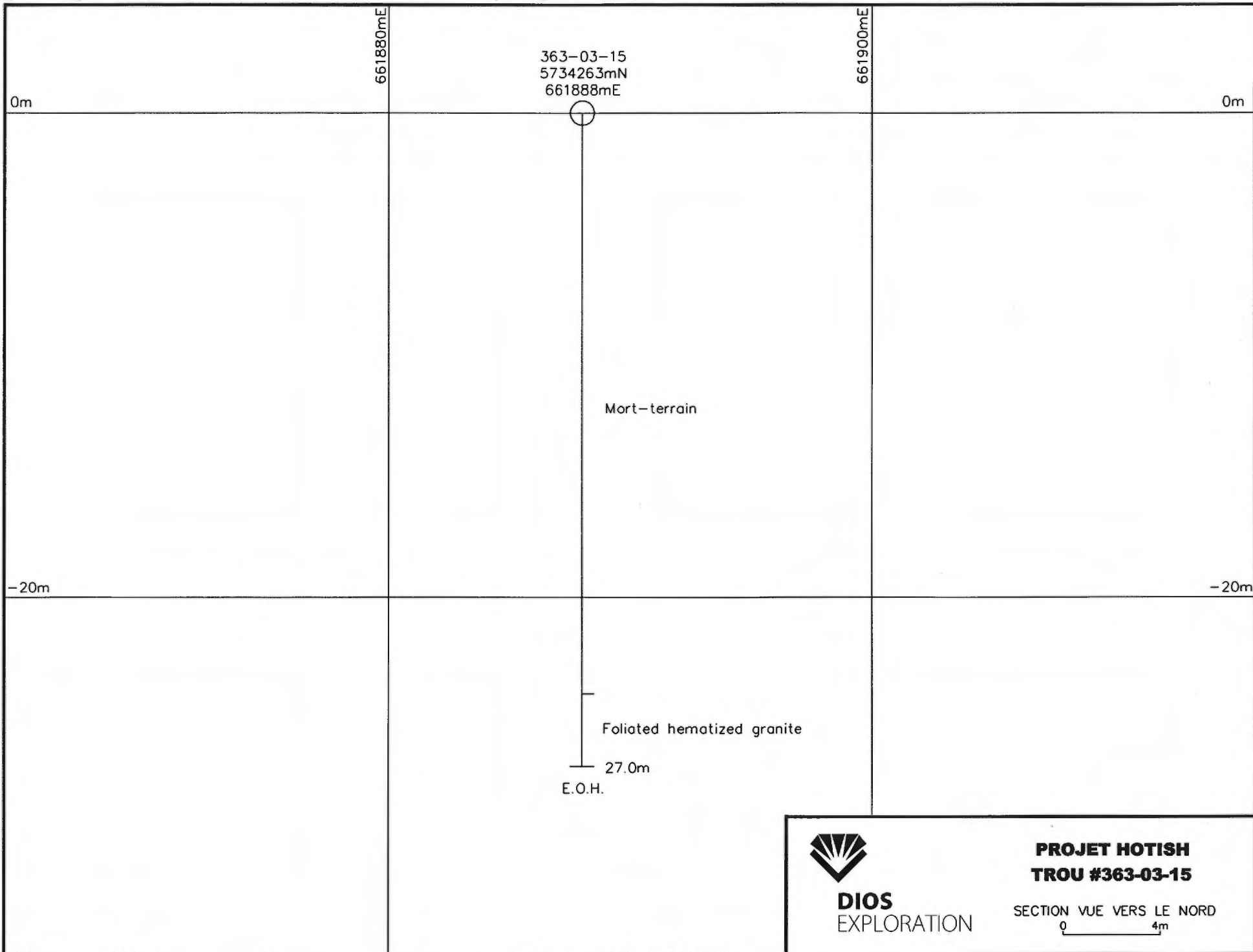
664210mE

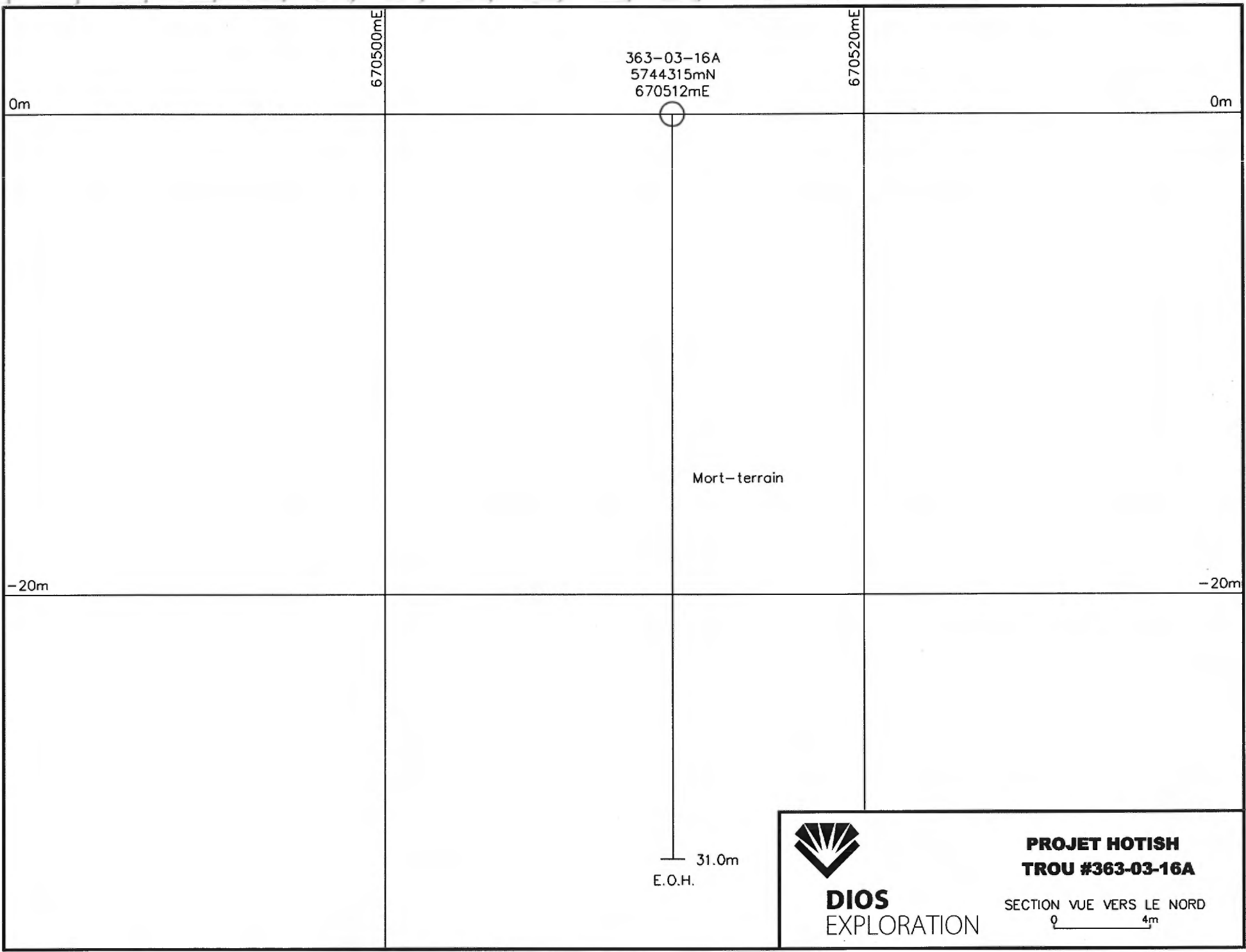


DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-14

SECTION VUE VERS LE NORD
0 4m





363-03-16A
5744315mN
670512mE

Mort-terrain

31.0m
E.O.H.



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-16A

SECTION VUE VERS LE NORD
0 4m

670500mE

670520mE

0m

0m

363-03-16B
5755335mN
670513mE



-20m

-20m

31.0m
E.O.H.



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-16B

SECTION VUE VERS LE NORD
0 ——— 4m

670520mE

670540mE

363-03-17
5755032mN
670526mE

0m

0m



Mort-terrain

Pinkish pegmatitic granite

-20m

-20m

Grey biotite diorite

Moderately hematized pegmatitic granite

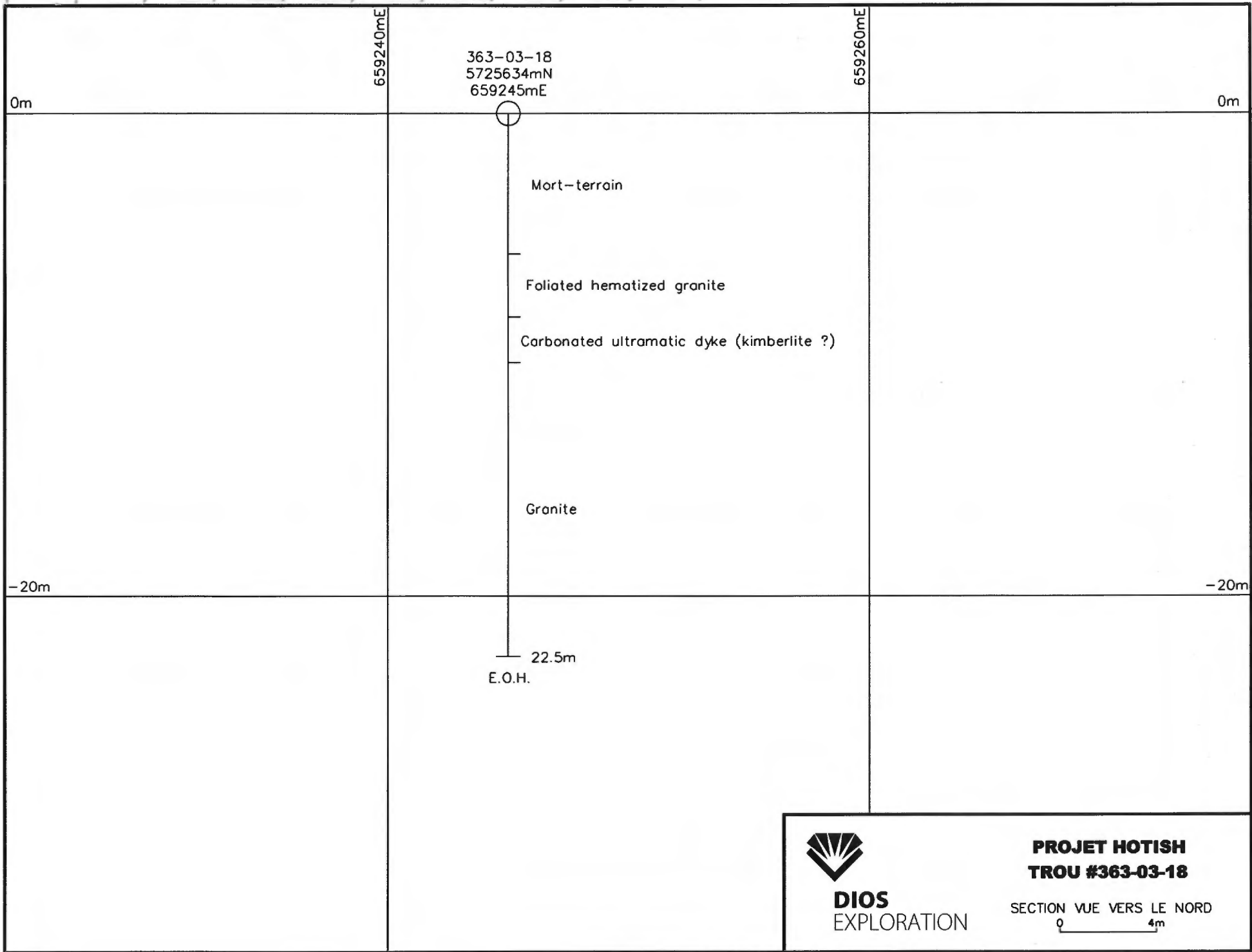
41.0m
E.O.H.



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-17

SECTION VUE VERS LE NORD
0 4m



659240mE

363-03-18
5725634mN
659245mE

659260mE

0m

0m

Mort-terrain

Foliated hematized granite

Carbonated ultramafic dyke (kimberlite ?)

Granite

-20m

-20m

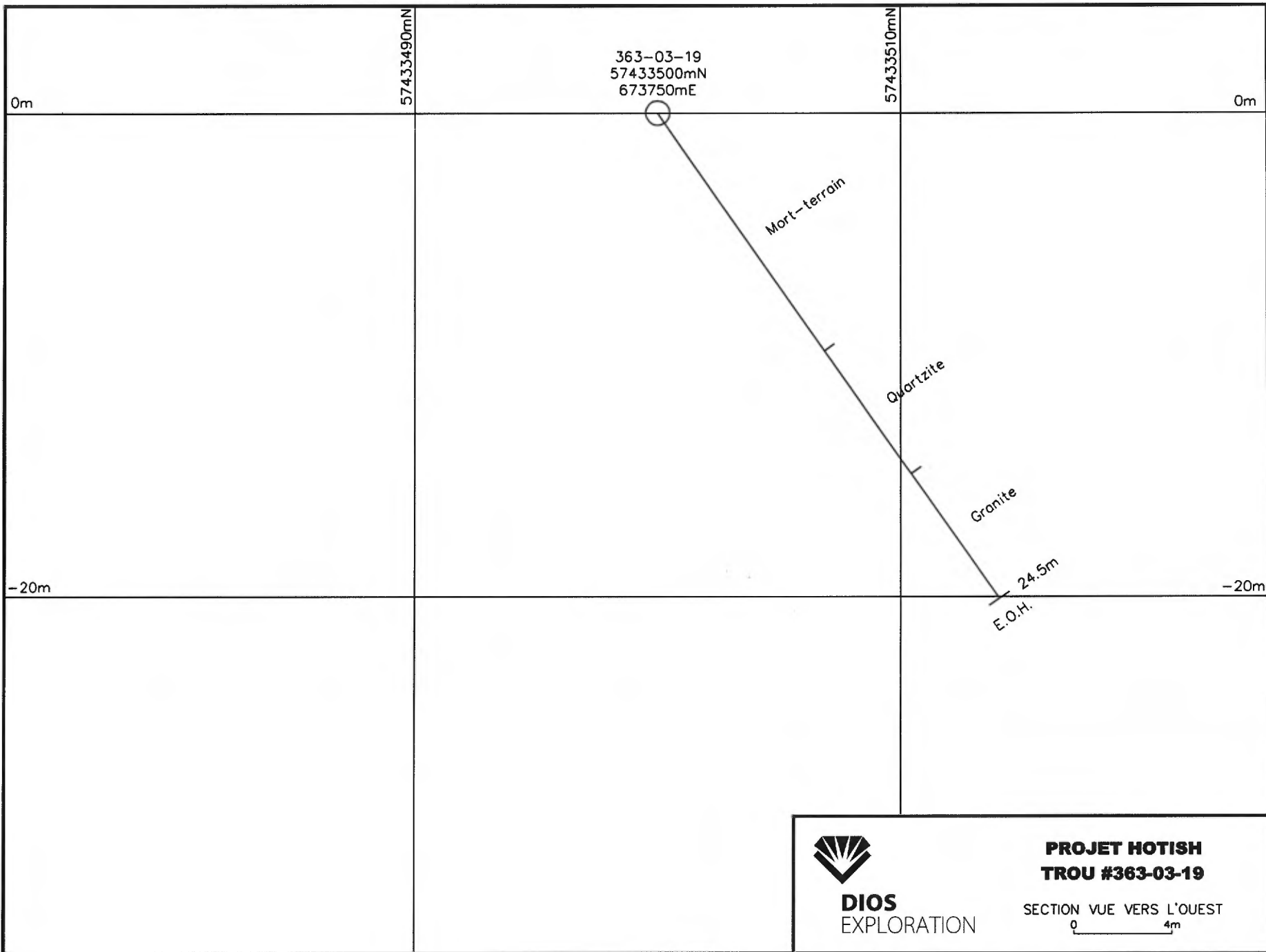
22.5m
E.O.H.



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-18

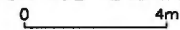
SECTION VUE VERS LE NORD
0 4m

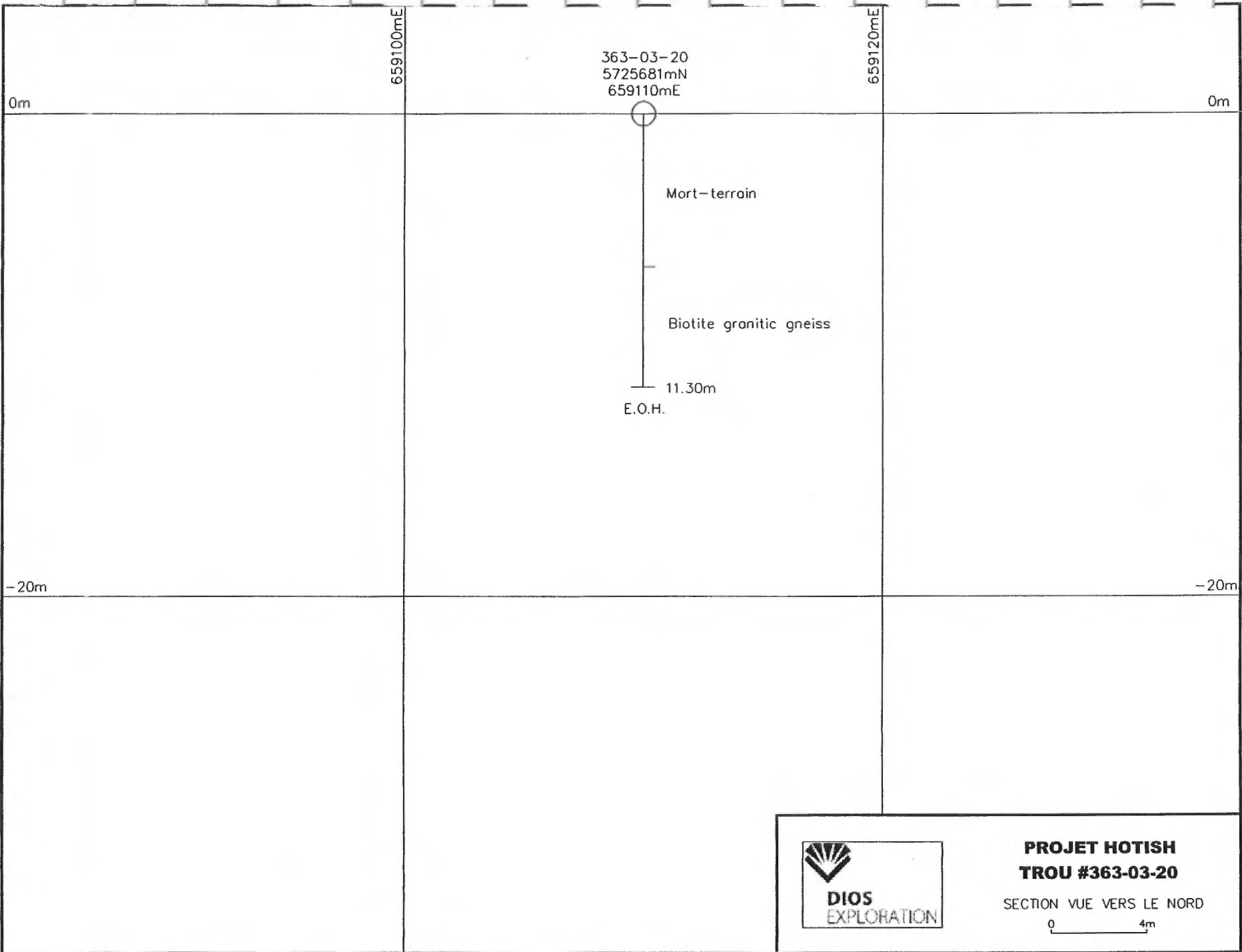


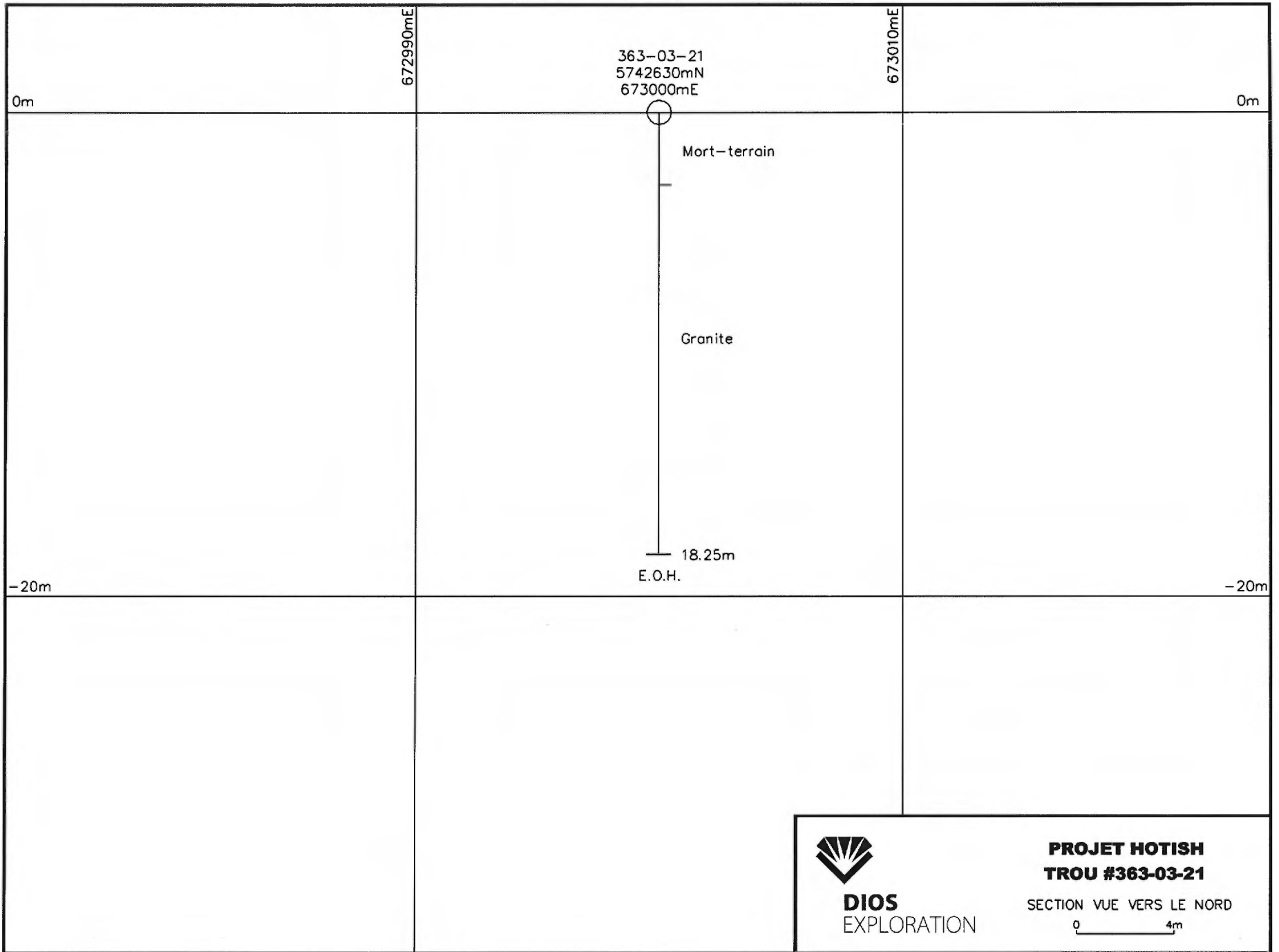
DIOS
EXPLORATION

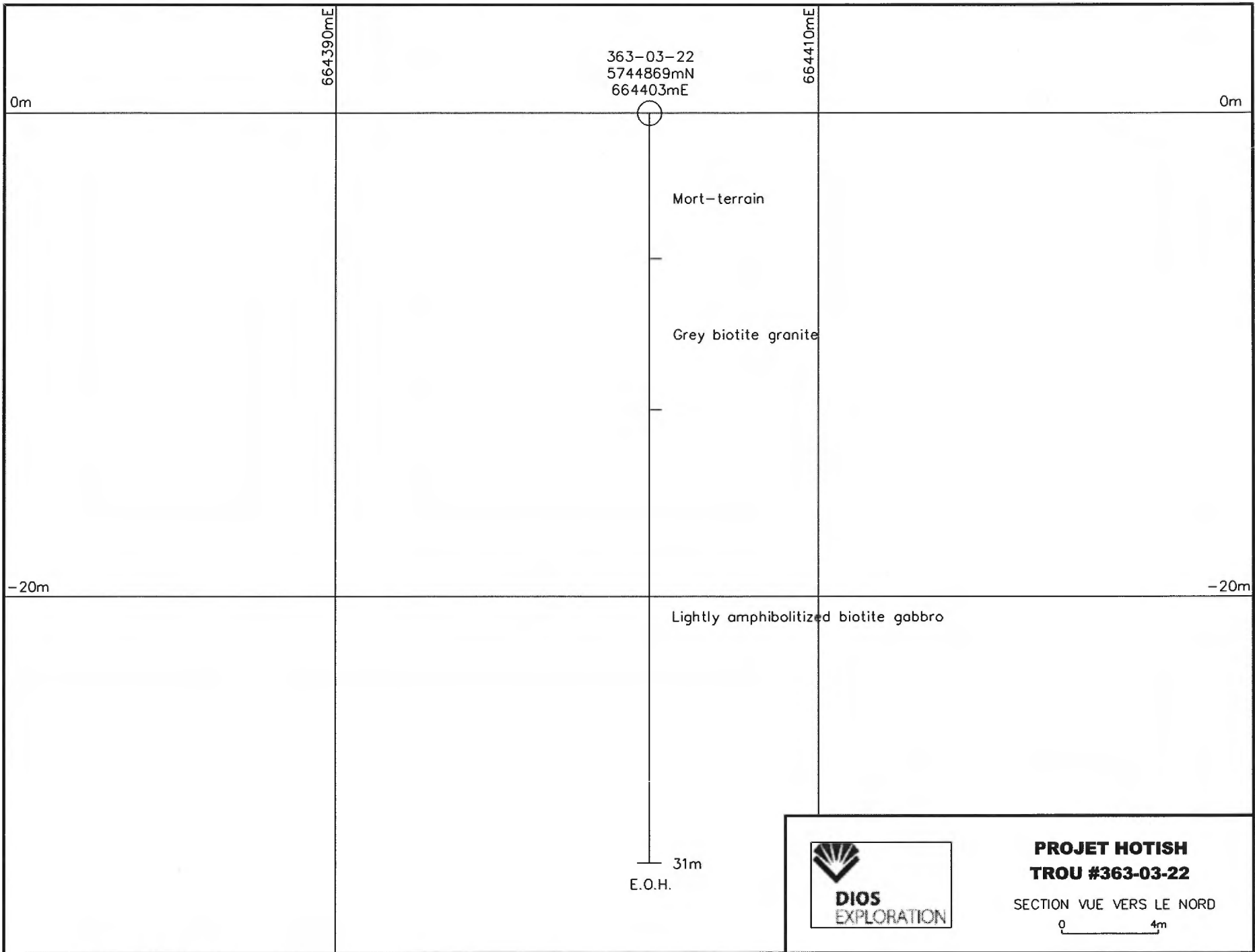
PROJET HOTISH
TROU #363-03-19

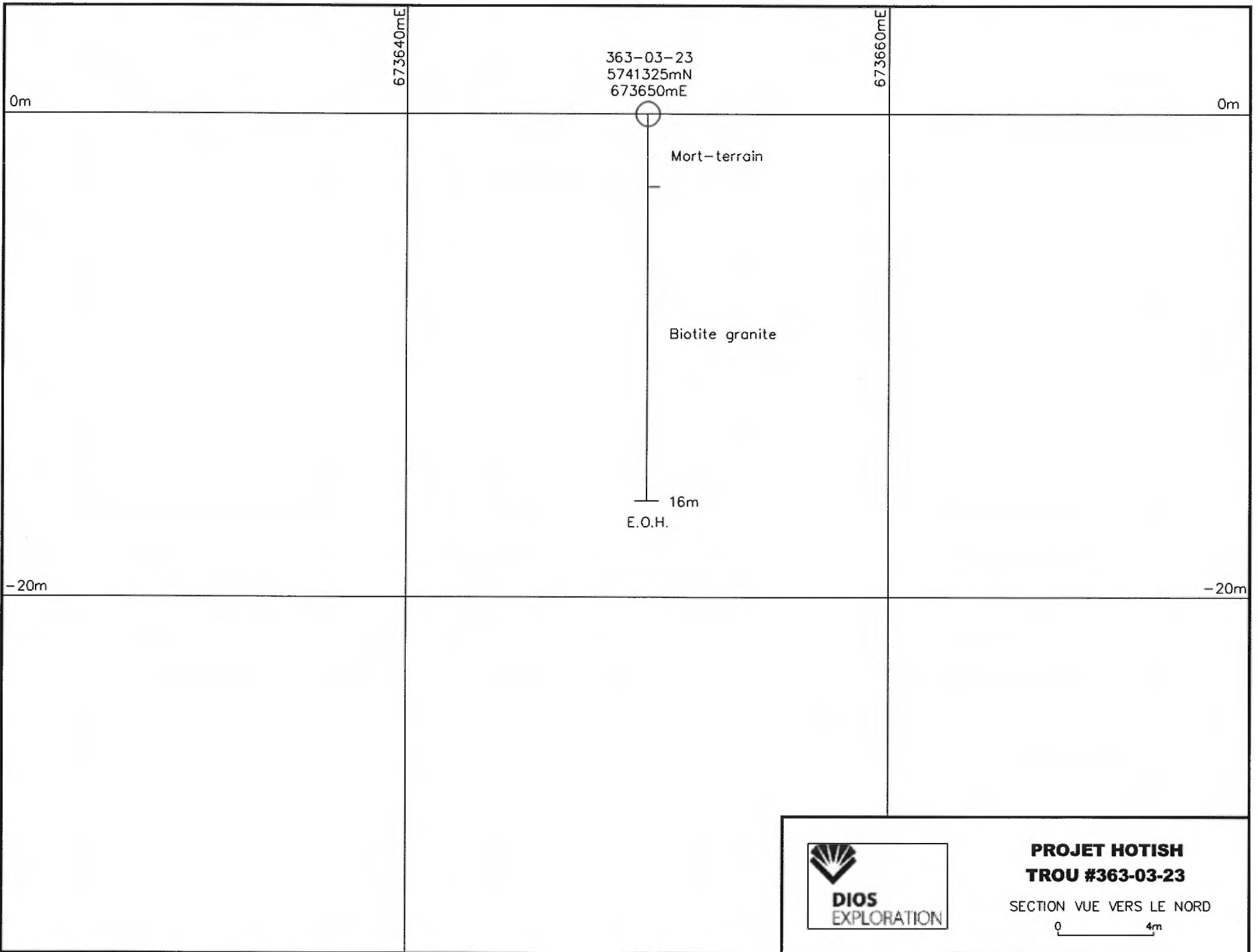
SECTION VUE VERS L'OUEST

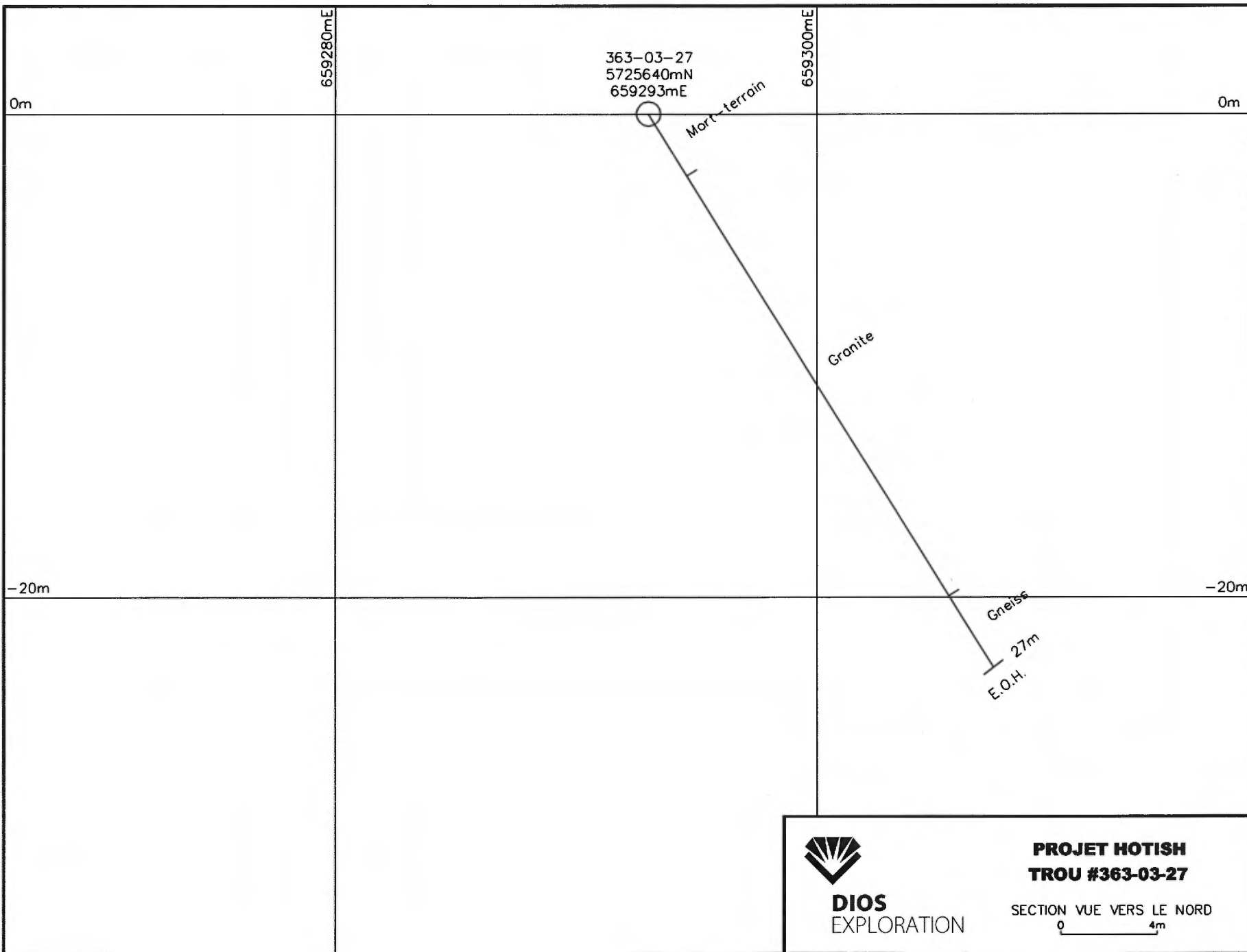












363-03-27
5725640mN
659293mE

Mort-terrain

Granite

Gneiss

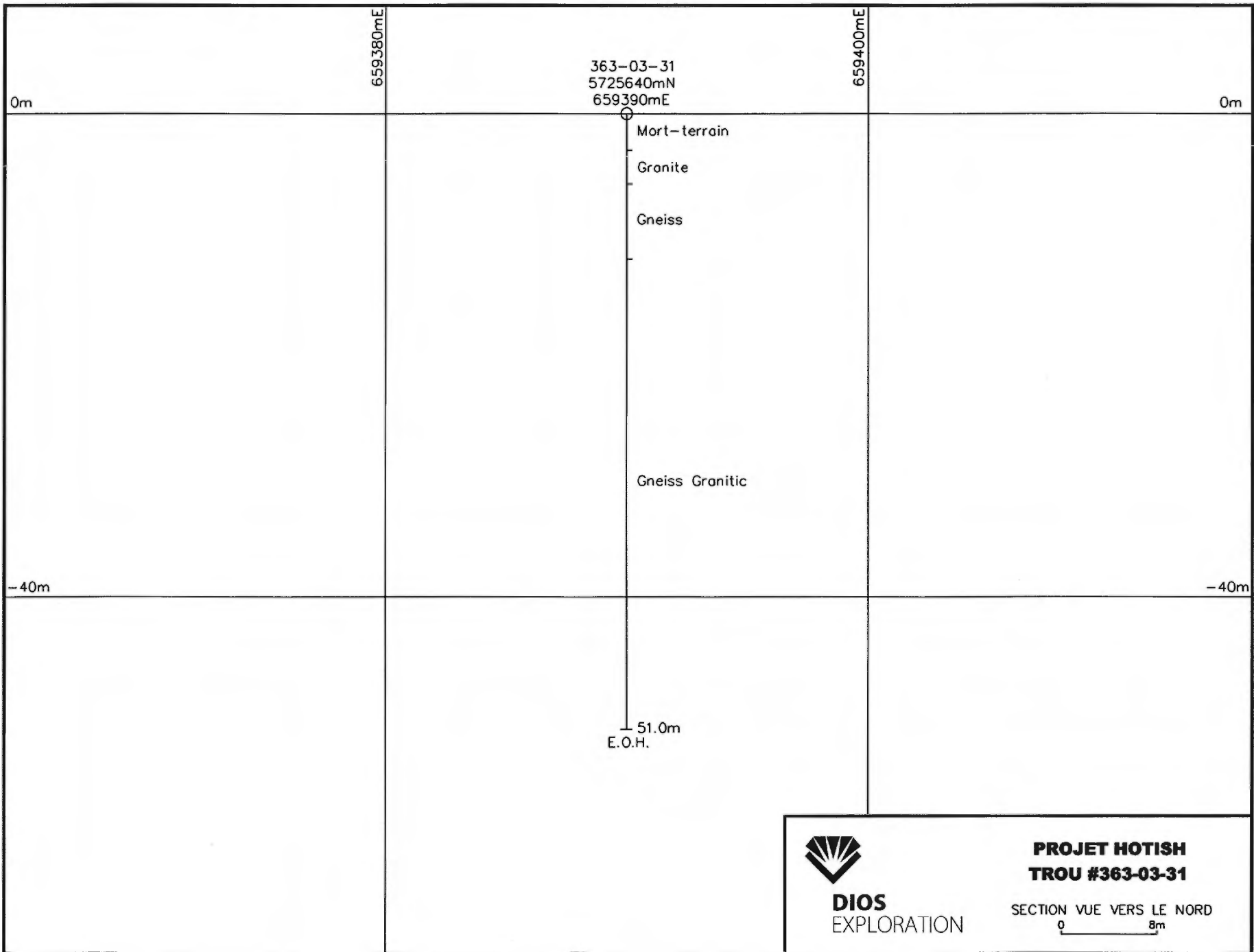
27m
E.O.H.



DIOS
EXPLORATION


PROJET HOTISH
TROU #363-03-27

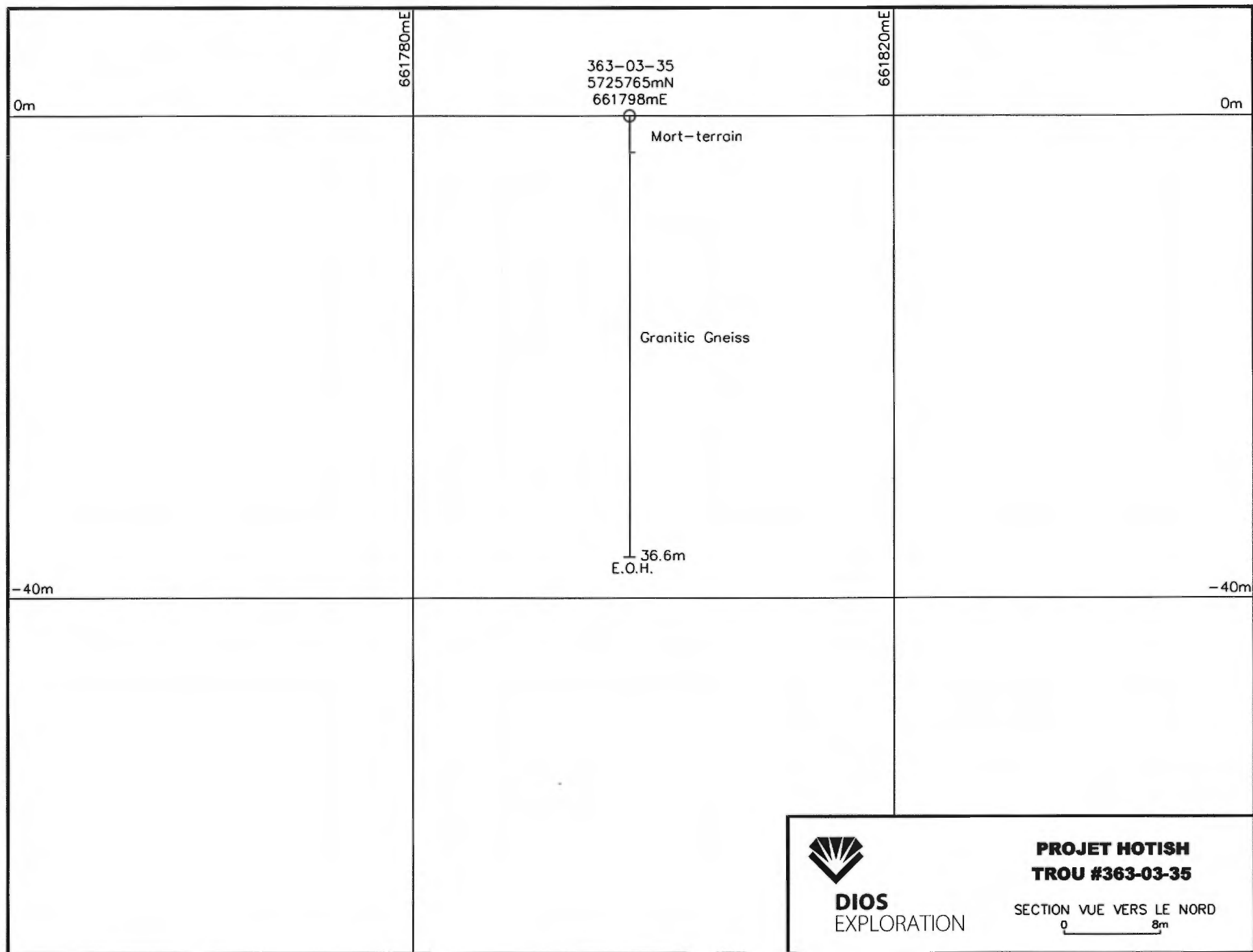
SECTION VUE VERS LE NORD
0 4m



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-31

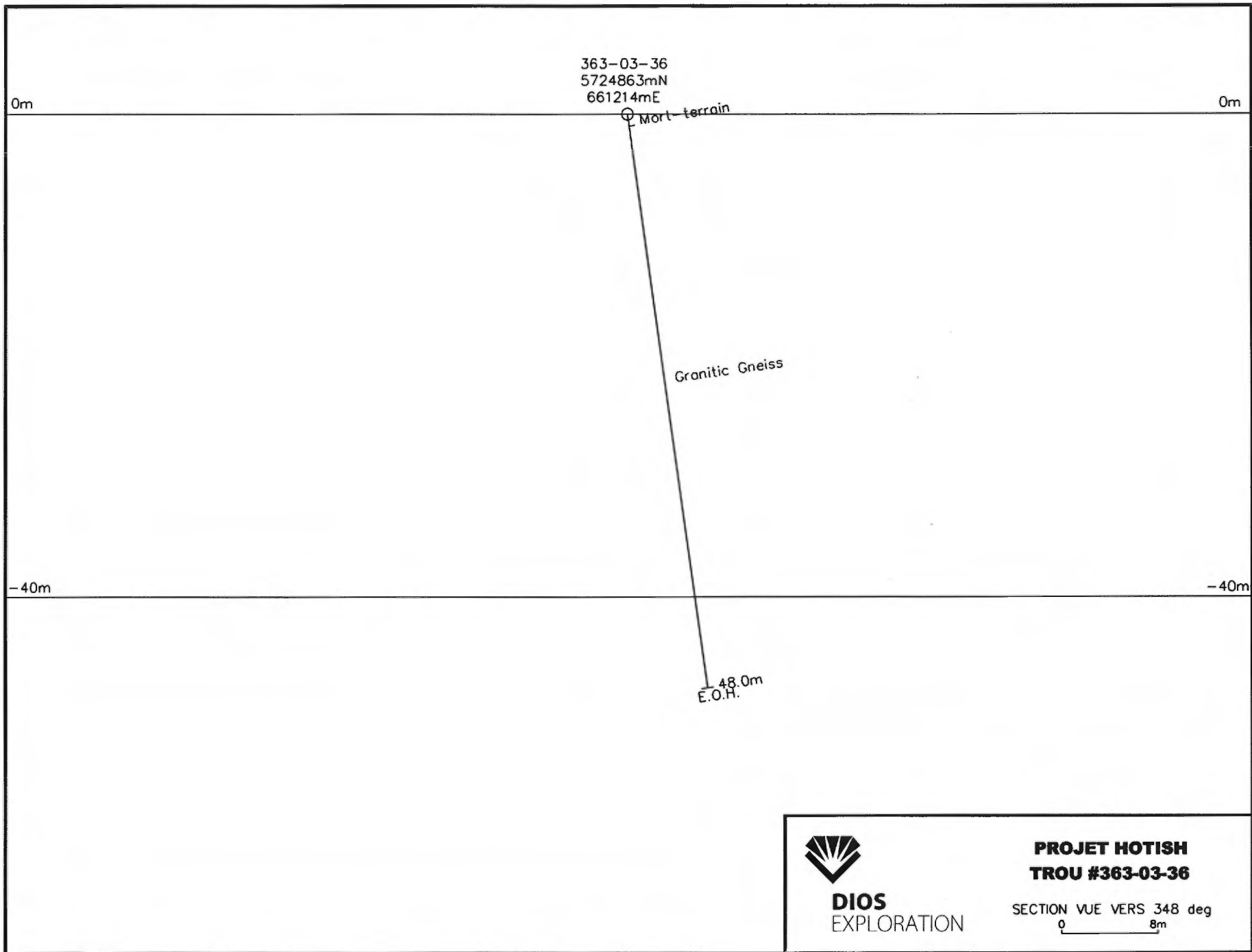
SECTION VUE VERS LE NORD
 0  8m



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-35

SECTION VUE VERS LE NORD
0 8m



DIOS
EXPLORATION

PROJET HOTISH
TROU #363-03-36

SECTION VUE VERS 348 deg
0 8m

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