

Technical (NI43-101) Report

on the

Odd Twins Magnetic Anomaly And Its Industrial Mineral Potential

Long Point, Port au Port Peninsula
Newfoundland and Labrador
NTS 12B/10

License 016508M

prepared for

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3.0 Summary

The Odd Twins property (License 016508M) consists of 313 claims totaling 12,500 Acres (approx. 4,900 Ha) on and offshore Long Point, Port au Port Peninsula, western Newfoundland. The property was staked on September 28, 2009, and is 100% owned by Tectonics Inc. Monarch Energy will purchase a 60-per-cent working interest (subject to a 2-per-cent net smelter royalty) in mineral licence 016508M, comprising 68 claims (approximately 1,700 hectares, 4,352 acres); mineral licence 018019M, comprising 121 claims (approximately 3,025 hectares, 7,744 acres); mineral licence 018035M, comprising 121 claims (approximately 3,025 hectares, 7,744 acres); and mineral licence 018387M, comprising three claims (approximately 75 hectares, 290 acres). Monarch will agree to enter into a joint venture with the holder of the remaining 40-per-cent interest for the exploration, development and exploitation of the licensed area. The consideration payable by Monarch will be the issuance to Tectonics Inc. or its assigns of 39.45 million shares, following a 1-to-1.75 consolidation, at a deemed price of five cents per share. The work described herein was carried out on the property in summer 2010 and the property was staked for its heavy and opaque mineral potential (principally magnetite, ilmenite and chromite). The minerals are found as detrital minerals within sandstone of the Late Ordovician Long Point Group. Its industrial heavy mineral potential was alluded to by Waldron et al (1997) during follow-up of a twin peak magnetic anomaly, first discovered and described by Ruffman and Woodside (1970). The Winterhouse Fm, poorly exposed on land, is dominated by clastic sediments with subordinate limestone conglomerates and a type section of 320 m was described as overlying the Lourdes Fm. The Misty Point formation is composed of red, cross-bedded & parallel laminated sandstones interpreted as marginal marine to terrestrial. The western magnetic anomaly lies within the Misty Point Fm. Two recent heavy mineral beach deposits that are analogous to the Odd Twins palaeoplacer are located in South Maharashtra, Central India (Gujar, et. al, 2010) and the Geelwal Karoo heavy mineral deposit described by MacDonald & Rozendaal (1995) from a South African beach. The exploration concept is to seek economic concentrations of heavy minerals from Long Point Group sandstones. The property is at an early stage of exploration and evaluation. A \$200,000 program to evaluate the industrial mineral potential of Odd Twins is recommended. It will entail industrial mineral testing and drilling of three holes to determine grade, depth and continuity of the heavy mineral-bearing units.

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4.0 Introduction and Terms of Reference

At the request of Michael Turko, director of Monarch Energy Inc., the author has prepared a technical report on the Odd Twins project, on the Port au Port peninsula, western Newfoundland . This technical report was written by Ulrich Kretschmar, PhD, P. Geo. (APGO No.1160), the "Author", in accordance with the requirements of National Instrument 43-101 (NI 43-101 – Standards of Disclosure for Mineral Projects), Companion Policy 43-101CP, and Form 43-101F1 of the Canadian Securities Administrators (CSA). The purpose of the report is to summarize work to date on the property and to make recommendation on how to proceed with its further development.

The following technical report ("The Report") is intended for use by Monarch Energy Ltd. in support of a transaction that will permit a vend-in of the property from Tectonics Inc. The Report describes and assesses the palaeoplacer and industrial mineral potential of the property and provides recommendations including a work plan and budget for future exploration. The main sources of information are Langdon (2010) and Waldron et al. (2002).The author visited the property on January 26, 2011.

4.1 List of Abbreviations

In this report, monetary units are Canadian dollars (C\$) unless specified in United States dollars (US\$). The metric system of measurements and units has been used as defined in Table 4-1.

**Table 4-1 List of Abbreviations
Odd Twins Project Area, Port au Port, Newfoundland**

<u>Abbreviation</u>	<u>Meaning</u>
tonnes or t	metric tonnes
kg	Kilograms
g	Grams
Oz	ounce (31.1035 grams)
g/t	grams per tonne, equivalent to ppm
ppm, ppb	parts per million, parts per billion
m	Meters
km	Kilometers
m ³	cubic Meters
Ha	hectare (2.471 acres)

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5.0 Reliance on Other Experts

The Author has reviewed geological reports and assessment files obtained from Monarch Energy and George Langdon. They contain information on geology, mineralization and historical exploration activities. The Author has verified that the claims are current, but has not examined the underlying agreements between Tectonics Inc. and Monarch Energy Ltd. Subsequent to the work described in The Report, the original property (Licence 016508M) has been expanded by additional staking include four licences (Fig.4.) Although the four licences are part of the transaction contemplated, The Report focuses on Licence 016508M, as this licence is in its second year of the work cycle, and current expenditures discussed pertain to it. The agreement to acquire Licence 016508M and subsequently acquired licences, which is summarized in a Monarch Energy news release dated 6 January 2011 states: *"Monarch will purchase a 60-per-cent working interest (subject to a 2-per-cent net smelter royalty) in mineral licence 016508M, comprising 68 claims (approximately 1,700 hectares, 4,352 acres); mineral licence 018019M, comprising 121 claims (approximately 3,025 hectares, 7,744 acres); mineral licence 018035M, comprising 121 claims (approximately 3,025 hectares, 7,744 acres); and mineral licence 018387M, comprising three claims (approximately 75 hectares, 290 acres). Monarch will agree to enter into a joint venture with the holder of the remaining 40-per-cent interest for the exploration, development and exploitation of the licensed area. The consideration payable by Monarch will be the issuance to Tectonics Inc. or its assigns of 39.45 million shares, following a 1-to-1.75 consolidation, at a deemed price of five cents per share."*

6.0 Property Description and Location

The Odd Twins property consists of 313 claims (License 016508M and Licences 018019M, 018387M, 018035M) on and offshore from Long Point, Port au Port Peninsula, western Newfoundland (Fig. 1) in NTS Sheet 12B/10. The initial property was staked on September 28, 2009. Its NE corner is at UTM Zone 21, NAD 83, 359,000E, and 5 396 500 N, in the northwest portion of Stephenville 1:50,000 topographic sheet. Three additional claims (Licence 018387M) were staked on 13 December 2009. The claims and licence are in the name of Tectonics Inc, which corporation holds 100% of the mineral rights.

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In order to convert to a mining lease, the property must be surveyed and the title to the surface rights must be obtained, which is done by applying to the Newfoundland Department of Mines and Energy.

The property claims are distributed approximately three quarters offshore and one quarter onshore. [Figs.2, 4](#). Assessment requirements increase progressively from \$200/claim per year in year 1 to \$1,200 per claim per year for years 16-20. In each year of the licence, the minimum assessment work must be completed on or before the anniversary date. The property is free and clear of any encumbrances or environmental liabilities.

7.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Odd Twins property lies approximately 40 kilometres from the town and port of Stephenville along Highways 460 and 463, and approximately 70 kilometres from the Trans-Canada Highway. The property extends for some 8 kilometres along Long Point, between the town of Lourdes on the south and the village of Black Duck Brook on the north. There is an all-season paved road along the shoreline which bisects the property from southwest to northeast. A number of small trails and cart tracks lead from the main road and traverse the property ([Fig 4.](#)).

The terrain is approximately half covered in boreal forest and half covered in bog. Three small brooks (Waterfall, Winterhouse and Black Duck) traverse the property and generally run along the strike of the beds. The property and Long Point in general are low relief with only a small portion of the southeastern edge of the property reaching 10 m (30 feet) above sea level. Photos of outcrop and the terrain on the property are shown as [Fig. 7, 8, 9](#) and [10](#).

The climate is humid marine with moderate summer (June, July: 16.5°C) and mild winter (February, -7.5°C) temperatures on average and a relatively long frost-free period. Fog and strong winds are common in all seasons. Geological mapping and sampling can be carried out from April to December and drilling throughout the year. The area has available adequate power sources, water and mining personnel from nearby Stephenville.

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8.0 History

Work on the property has consisted of academic research led by Dr. John Waldron of St. Mary's University ([Waldron et al. ,2002](#)), geophysical surveys by [Burton \(2010\)](#), and field sampling and assays by Tectonics Inc ([Langdon, 2010](#)).

Waldron [et al. \(op. cit.\)](#) investigated the source of a pair of linear, asymmetric positive magnetic anomalies located offshore of western Newfoundland in the Gulf of St. Lawrence. They were first discovered during a marine survey ([Ruffman and Williams, 1970](#)) and extend over 40 kilometres southward from the Bay of Islands (Fig [3, 4](#)). They traced these "Odd Twins" anomalies to the Port au Port Peninsula and on the basis of outcrop mapping and a hand-held magnetometer, determined that the anomalies result from heavy mineral concentrations in sandstones of the Upper Ordovician Long Point Group. They suggest that the magnetite is of detrital origin and represents heavy mineral concentration in a paleoplacer formed in a marginal marine environment. Their on-land survey of 20 traverses oriented approximately perpendicular to the local strike of the Winterhouse and Misty Point formations found that the peaks of the magnetic anomaly occur within Long Point Group sandstone outcropping in streams and bearing up to 0.58% magnetite. Geophysical modeling of [Waldron et al. \(op. cit.\)](#) combined with their field work, found that dipping sheets of magnetic sandstone can explain both onshore and offshore anomalies. They proposed two magnetite-bearing zones, a lower of 80 metres thickness, and an upper of 54 metres thickness, for a total magnetite-bearing sandstone thickness of 134 metres over a gross interval, varying along strike, of 294 – 506 metres.

9.0 Geological Setting (from [Langdon, 2010](#))

The upper Ordovician Long Point Group lies stratigraphically and structurally above both the upper Cambrian to middle Ordovician carbonate platform rocks and their deepwater equivalents, the Cow Head Group of the Humber Arm Allochthon, on the northern Port au Port Peninsula. The Long Point Group includes clastic sediments derived from uplift of crystalline massifs lying to the east of the ancient Port au Port area at the end of the middle Ordovician Taconian Orogeny which reflect initiation of a foreland basin. These massifs contained suites of heavy minerals which were eroded, transported westward and deposited along an ancestral west coast Newfoundland shoreline. Such bodies of sands with concentrations of heavy

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minerals are commonly found along shorelines in the modern environment ("black sands"). When they are found within lithified rock units they are known as "paleoplacers" and often bear significant quantities of heavy minerals, concentrated in the sandstone by the action of ancient winds, currents and tides, generally along shorelines, and within deltas and rivers. Petrography of the sandstones from Long Point (Waldron et al., 2002) shows the presence of three principal detrital heavy minerals: magnetite, ilmenite, and chromite. These are interpreted to have had their provenance principally in rocks of the Bay of Islands Ophiolite Complex. A preliminary estimate of the concentration of these three minerals from the very limited outcrop is placed at around 5% of the total rock. Other opaque minerals occur in the rock and have not yet been investigated for their economic potential. The Long Point Group lies within the foreland basin succession above and west of the east-verging roof thrust of the "triangle zone" or tectonic wedge which encloses the deformed sediments of the Humber Arm Allochthon, including oil-bearing units of the Green Point Formation. As such, the group is a relatively undeformed unit which dips uniformly north westward about 34 degrees, for about 4 km offshore, where it is seen to flatten to horizontal on offshore seismic profiles at a depth of about 1200 Meters.

Much of the following is extracted from Waldron et. al (op. cit.). The claim block is underlain by Long Point Group clastic rocks, comprised in this area of the Winterhouse Formation and the overlying Misty Point Formation. In this mainly northwest dipping section, Waldron et. al (op. cit.) describe the east magnetic anomaly as being within the Winterhouse Fm and the west anomaly in the Misty Point Fm. The sedimentary section on the claim block strikes NE and faces to the NW. In most of the block, the section is upright and dips moderately NW. However, there is a flexure in the strike pattern just north of Lourdes (in the SW portion of the block) and towards the southwest the section takes on a more west-southwest strike & is overturned with SE dips of 32° to 80°. The magnetic anomalies conform exactly to bedding strike information.

Winterhouse Fm – This formation is poorly exposed on land. A type section of 320 m was described by Quinn et. al. (1999), overlying the Lourdes Fm. The Winterhouse Fm is dominated by clastic sediments with subordinate limestone conglomerates. It is interpreted as representing deposition in a shallow-marine storm dominated environment. A covered interval at the top of the section occupies a belt of marshes & could accommodate an additional 540 m. The eastern magnetic anomaly has by far the more extensive onshore expression of the two anomalies and occurs within this covered

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section. According to Waldron's map, the eastern anomaly is close to the top of the Winterhouse Formation.

Misty Point Fm – This formation is estimated by Quinn et. al. (op. cit.) to be at least 390 m thick, with possibly an additional 100 m exposed on the sea floor offshore. The type section along the coast between Misty Point and Clam Bank Cove has a strike close to that of the shoreline making thickness estimates difficult. The formation is composed of red, cross-bedded & parallel laminated sandstones interpreted as marginal marine to terrestrial. The western magnetic anomaly lies within the Misty Point Fm.

10.0 Deposit Types

Two deposit that are analogous to Odd Twins, but occur in recent sediments are the Geelwal Karoo heavy mineral deposit described by [MacDonald & Rozendaal, \(1995\)](#) and the South Maharashtra, India, placers described by [Gujar et al \(2010\)](#). According to MacDonald and Rozendaal (op. cit.):

The Geelwal Karoo heavy mineral placer is situated in an active beach environment along the rugged southern Namaqualand coast of South Africa. The geomorphology of the coast is controlled by resistant Precambrian and Palaeozoic basement rocks, which also dictate the narrow, elongate geometry and limited 10 km strike length of this strand line deposit. Ore reserves are small compared to the multi-million tonne analogous Quaternary sands elsewhere in the world. However, the locally high, total heavy mineral content and the favourable ore to gangue mineral ratio, coupled with the possibility of replenishment style mining, makes this an attractive resource. Garnet and ilmenite are the dominant heavy minerals followed by pyroxene, zircon, rutile and titaniferous alteration products after ilmenite. The high Ti content of ilmenite (51%) and predominantly almandine garnet suggest metamorphic source rocks, most likely part of the Namaqualand Metamorphic Complex. These rocks are considered to be the primary source. However, after numerous stages of reworking, large quantities of heavy minerals are concentrated in the Neogene marine terraces along the west coast. The 35 m terrace, a local, heavy, mineral-rich palaeo-strandline, acted as a point source and supplied vast quantities to the coastal environment. A J-bay shaped headland to the south prevented excessive dispersion of the minerals by the strong northward-directed littoral drift. This allowed wave action to transport, concentrate and re-deposit the heavy minerals in their present beach environment at Geelwal Karoo.

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Recent heavy mineral beach placer deposits in central west coast of India (formerly Goa) are described by Gujar et al. (op. cit.) as follows:

The heavy mineral placer deposits of the coastal sediments in south Maharashtra stretch for 12.5 km from Pirwadi in the north to Talashil in the south. The area is a sand bar represented by a narrow submergent coastal plain lying between the Achara and Gad Rivers. The sediments in the area are mainly sands which are moderately well sorted to well sorted. The heavy mineral concentration in the surficial sediments ranges between 0.69 and 98.32 wt % (28.73 wt % in average). The heavy mineral concentration shows an increasing trend from north to south. The heavy mineral suite consists predominantly of opaque minerals (ilmenite, magnetite and chromite), garnet, pyroxene, amphibole, zircon, tourmaline, rutile, staurolite, etc. Ilmenite grains are fresh whereas magnetite grains show the effect of weathering and alteration. The chromite grains are rounded to sub-rounded with alteration at the margin of the grains. The surficial textures of the opaque minerals show mechanical breaking that indicates limited distance of transportation.

Ilmenite has TiO₂ in the range between 40.04 and 46.6 wt %. Based on ore microscopy studies, the magnetite grains appear to be of two types: pure magnetite and titano-magnetite. Compositionally, the total magnetite fractions have Fe₂O₃ between 32 and 46 wt %, FeO between 19.0 and 25 wt % and TiO₂ between 14.3 and 23.9 wt %. The chromite grains are an admixture of two varieties, ferro-chromite and magnesio-chromite. The chromite grains have 32.06–47.5 wt % of Cr₂O₃ with total iron between 23.86 wt % (4.73% Fe₂O₃ and 19.13% FeO) and 27.89 wt % (4.36% Fe₂O₃ and 23.53% FeO) and MgO between 12 and 40 wt %.

The observed variations in the distribution of heavy minerals in the area are due to differences in the sediment supply, their specific gravity and oceanographic processes all of which result in a selective sorting of the sediments. The observed mineral assemblages of transparent heavy minerals (pyroxene, amphibole, tourmaline, kyanite, garnet, zircon and olivine) are suggestive of their derivation from a heterogeneous provenance comprising of igneous rocks, high grade metamorphic rocks and reworked Kaladgi sediments. The chromite grains appear to have been derived from ultrabasic rocks present in the upper reaches of the Gad River.

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11.0 Mineralization

Magnetite, ilmenite and chromite from the Odd Twins property has been described by Waldron et al (op. cit. Fig. 7b, pl 1683) who show these minerals in their photomicrograph. No other type of mineralization has been described from the Odd Twins property.

The claim block is underlain by Long Point Group clastic rocks, comprised in this area of the Winterhouse Formation and the overlying Misty Point Formation. These are the units containing heavy minerals. In this mainly northwest dipping section, Waldron et. al (op. cit.) describe the east magnetic anomaly as being within the Winterhouse Fm and the west anomaly in the Misty Point Fm. The sedimentary section on the claim block strikes NE and faces to the NW. In most of the block, the section is upright and dips moderately NW. However, there is a flexure in the strike pattern just north of Lourdes (in the SW portion of the block) and towards the southwest the section takes on a more west-southwest strike & is overturned with SE dips of 32° to 80°. The magnetic anomalies conform exactly to bedding strike information. The mineralized outcrops are found in Waterfall Brook (Fig. 8). Outcropping mineralized stratigraphic units also occur along the beach east of Misty Point and close to the mouth of Black Duck Pond. In this area, the core of the anomaly is on the order of 50 m wide.

12.0 Exploration

The extent of exploration previous to 2002 is described under [8.0 History](#). In 2003, Tectonics, Inc. acquired 52 claim blocks and carried out a small sampling program on the sandstone units to test for Au and Pt. No significant results were obtained and the property was relinquished. The property was restaked in August 2009.

In 2010, three separate work programs were carried out: a reconnaissance survey by Clode Sound Resources, a magnetometer survey by Canadian Seabed Research and an interpretation of the results by George Langdon and Tectonics Inc.

The work by Clode Sound Resources Inc. (2010) consisted of an assessment of the property. The work of Clode Sound confirmed the outcrop extent and stratigraphic and structural aspects of the Long Point Group sandstones. Recommendations were to carry out a magnetometer survey followed by trenching.

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A ground magnetic susceptibility survey was carried out in August 2010, by Canadian Seabed Research Ltd. ([Burton, 2010](#)). Three lines totaling 2.45 km in length were established and a base station was set up. The lines are approximately 300 and 400 m apart. The surveyor took continuous readings along the lines. Maximum readings above regional background were 239 nT on Line 1, 226 nT on Line 2, and 261 nT on Line 3. Location and magnitude of the magnetic anomalies are shown on [Fig. 5](#). The Canadian Seabed Research survey confirmed the magnetometer survey results of Waldron et al. ([op cit](#)).

Results from the previous work programs (Waldron et. al., Clode Sound Resources and Canadian Seabed Research) were used by [Langdon \(2010\)](#) to further confirm the extent of sandstone outcrop, stratigraphy and structure. He estimated vertical thicknesses of 115 Meters and 31 Meters for magnetite-bearing strata and proposed drilling three holes, the location of which is shown on [Fig. 6](#).

13.0 Drilling

No previous drilling has been carried out.

14.0 Sampling Method and Approach

Sampling was carried out by Waldron et al ([op. cit.](#)) and is described under [History 8.0](#). [Langdon \(2010\)](#) identified magnetite-bearing units in Waterfall Creek and in polished slabs from outcrops in Waterfall Creek.

15.0 Sample Preparation, Analyses and Security

Hand specimens and thin sections were examined by Waldron et al. ([op. cit.](#)) and magnetite, chromite and garnet were identified and analyzed. A hand-held magnet was deflected by rocks outcropping in Waterfall Creek, and magnetite was identified in polished slabs by Tectonics Inc., as described by [Langdon \(2010\)](#).

16.0 Data Verification

The Author visited the property on 26 January 2011 but due to deep snow cover, was unable to collect samples and verify the presence of heavy minerals. The author is relying on the descriptions of Waldron et al. ([op. cit.](#)) and [Langdon \(op. cit\)](#) and has no reason to doubt their mineral identification, since both parties are professional geologists.

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17.0 Adjacent Properties

There are no adjacent mineral properties except as noted in 6.0 Disclaimer.

18.0 Mineral Processing and Metallurgical Testing

No mineral processing or metallurgical testing has been carried out to date.

19.0 Mineral Resource and Mineral Reserve Estimates

This section does not apply.

20.0 Other Relevant Data and Information

It may be of interest that Shoal Point Energy Ltd announced on Jan 17, 2011 the commencement of an oil and gas well project. The Shoal Point 3K-39 well will be directionally drilled from an onshore surface location on the northern tip of Shoal Point (see Fig. 2) to a subsurface target beneath Port au Port Bay and is designed to test the Green Point Oil-in-Shale Resource Play in Exploration Licence 1070.

21.0 Interpretation and Conclusions

The Author concurs that magnetite-bearing sandstones of the Winterhouse and Misty Point Formations of the Long Point Group are most likely responsible for the Odd Twins magnetic anomalies as measured onshore and offshore the Port au Port Peninsula. The author has no reason to doubt the identification of heavy minerals in the rocks outcropping in Waterfall creek, nor the presence of heavy minerals as described from hand specimen by Langdon (2010). The author concurs with Landgon (op.cit.) who concludes that: "*bed attitudes (northwest-dipping, right-side up, to southeast-dipping, overturned) will permit orientation of boreholes both normal and parallel to bedding planes. Drilling will allow a large amount of data to be gathered regarding the distribution of the heavy minerals within the sandstone units. Because bed dips vary from gently-dipping to overturned, subvertical boreholes can be positioned to penetrate beds both normal and parallel to strike.*"

To date, the sample data density is sparse, but given the nature and thickness of the sandstone units in the Long Point Group, the Author considers that it presents an adequate indication of the industrial mineral potential of the property.

The Author concludes that the industrial mineral potential of the property is worth pursuing and investigating in considerable detail, in accordance to the program suggested in the Item 22.0 (Recommendations) and Budget (Item 22.0)

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22.0 Recommendations:

The following initial program is recommended for systematic evaluation of the heavy mineral potential of the Odd Twins Project area:

1. Stripping and trenching of outcropping mineralized stratigraphic unit along the beach east of Misty Point and close to the mouth of Black Duck Pond. In this area, the core of the anomaly is on the order of 50 m wide. Bulk and channel, sampling of outcropping mineralization.
2. Drilling of three holes to evaluate the stratigraphic extent of the heavy mineral potential.
3. Extraction of heavy minerals from bulk sample from core to be tested at the New Brunswick Research Council in Fredericton, NB.
4. Chemical analysis of bulk heavy mineral concentrate.
5. Mineralogical study of heavy minerals and point count of heavy minerals in the concentrate.
6. Metallurgical study: determination of grinding characteristics, beneficiation parameters and industrial mineral potential of the products.

A detailed cost estimate for each budget component has been obtained and is summarized in Item 23.0.

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23.0 Budget

The following budget is proposed for initial evaluation of the industrial mineral potential of the Odd Twins Property:

Item	Details	\$C
Outcrop stripping, sampling and industrial mineral testing		\$20,000
Drilling	1,700 m @ \$100/m	\$170,000
Reporting		\$ 10,000
	TOTAL	\$200,000

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24.0 References Cited

Burton, M., 2010. Magnetometer Survey, Western Newfoundland. Private report by Canadian Seabed Research prepared for Tectonics, Inc.

Clode Sound Resources, 2010. Geological Assessment of Property with Recommendation for Work Program. Private report prepared for Tectonics Inc. 10 pages with diagrams.

Gujar, A.R, Ambre, N.V, Mislankar P.G, Iyer, Sridhar, D.I, (2010). Ilmenite, Magnetite and Chromite Beach Placers from South Maharashtra. Central West Coast of India. *Resource Geology* 60, pp. 71-86.

Langdon, G.S., 2010. First Year Assessment Report on Field Work and Geophysics, Odd Twins Property, Long Point, Port au Port Peninsula License 016508M, Newfoundland and Labrador. Private report submitted to Department of Energy and Mines.

W.G. MacDonald & A. Rozendaal , 1995. The Geelwal Karoo heavy mineral deposit: a modern day beach placer. *Journal of African Earth Sciences*. Volume 21, Issue 1, pp. 187-200.

Quinn, L., Williams, S.H., Harper, D.A.T., and Clarkson, E.N.K. 1999. Late Ordovician foreland basin fill: Long Point Group of onshore western Newfoundland. *Bulletin of Canadian Petroleum Geology*, v. **47**: 63–80.

Ruffman, A., and Woodside, J. 1970. The Odd-twins magnetic anomaly and its possible relationship to the Humber Arm Klippe of Western Newfoundland, Canada. *Canadian Journal of Earth Sciences*, v. **7**: 326–37.

Waldron, J.W.F., DeWolfe, J., Courtney, R., Fox, D. 2002. Origin of the Odd-twins anomaly: magnetic effect of a unique stratigraphic marker in the Appalachian foreland basin, Gulf of St. Lawrence. *Canadian Journal of Earth Sciences*, v. **39**: 1675–1687.

25.0 Author's Certificate and Date

As the author of the report dated 1 February 2011, and entitled: *Technical (NI43-101) Report on the Odd Twins Magnetic Anomaly and its industrial mineral potential, Long Point, Port au Port Peninsula, Newfoundland and Labrador* prepared for Monarch Energy Ltd., and dated 1 March 2011, to which this certificate is attached, I, Ulrich Kretschmar of 408 Bay St, Orillia L3V 3X4, in the Province of Ontario, Canada, hereby certify that:

1. I am a consulting mineral exploration geologist, and have been engaged in the geological profession continuously since graduation. I am familiar with the geology and exploration and evaluation techniques used in Newfoundland and I am familiar with industrial mineral projects. I have had no prior involvement with the Odd Twins Project.

2. I am a university graduate with the following geology degrees. McMaster University: B.Sc. and M.Sc. (1968); McGill University and University of Toronto; Ph.D. (1973).

3. I have been an elected Fellow of the Geological Association of Canada since 1975 (Membership No. 0270); an elected Fellow of the Society of Economic Geologists since 1984 and a Member of the Canadian Institute of Mining and Metallurgy since 1984 and that the memberships are in good standing.

4. My knowledge of the Odd Twins project area was acquired by 1) carrying out field work in Newfoundland intermittently since 1975 and a field visit on 26 January 2011, 2) from a study of the publications and information sources cited as described in References of the report to which this certificate is attached, and 3) information and reports supplied by Tectonics Inc. and Monarch Energy Ltd.

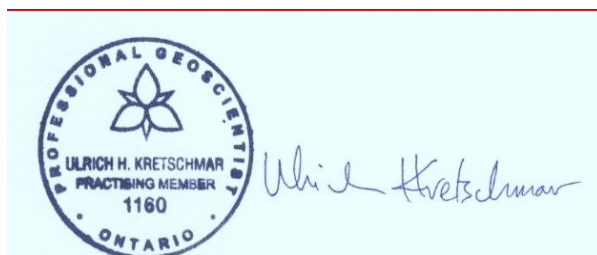
5. I have read NI43-101 and Form 43-101F1, the report is in compliance with the Instrument, and I take responsibility for each portion of the report to which this certificate is attached in accordance with Section 8.1 of the Instrument.

6. I am a member in good standing of the Association of Professional Geologists of Ontario. (A.P.G.O. # 1160) and am a "qualified person" for purposes of Instrument NI43-101. I am independent of the issuer, Monarch Energy as defined in Section 1 (1.4) of the Instrument.

7. As of the date of the certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

8. I hereby consent to the use of this report to satisfy the requirements of any Securities Commission or Stock Exchange anywhere.

Dated at Orillia, Ontario this 1st day of February, 2011 (amended 1 March 2011).



26.0 Illustrations

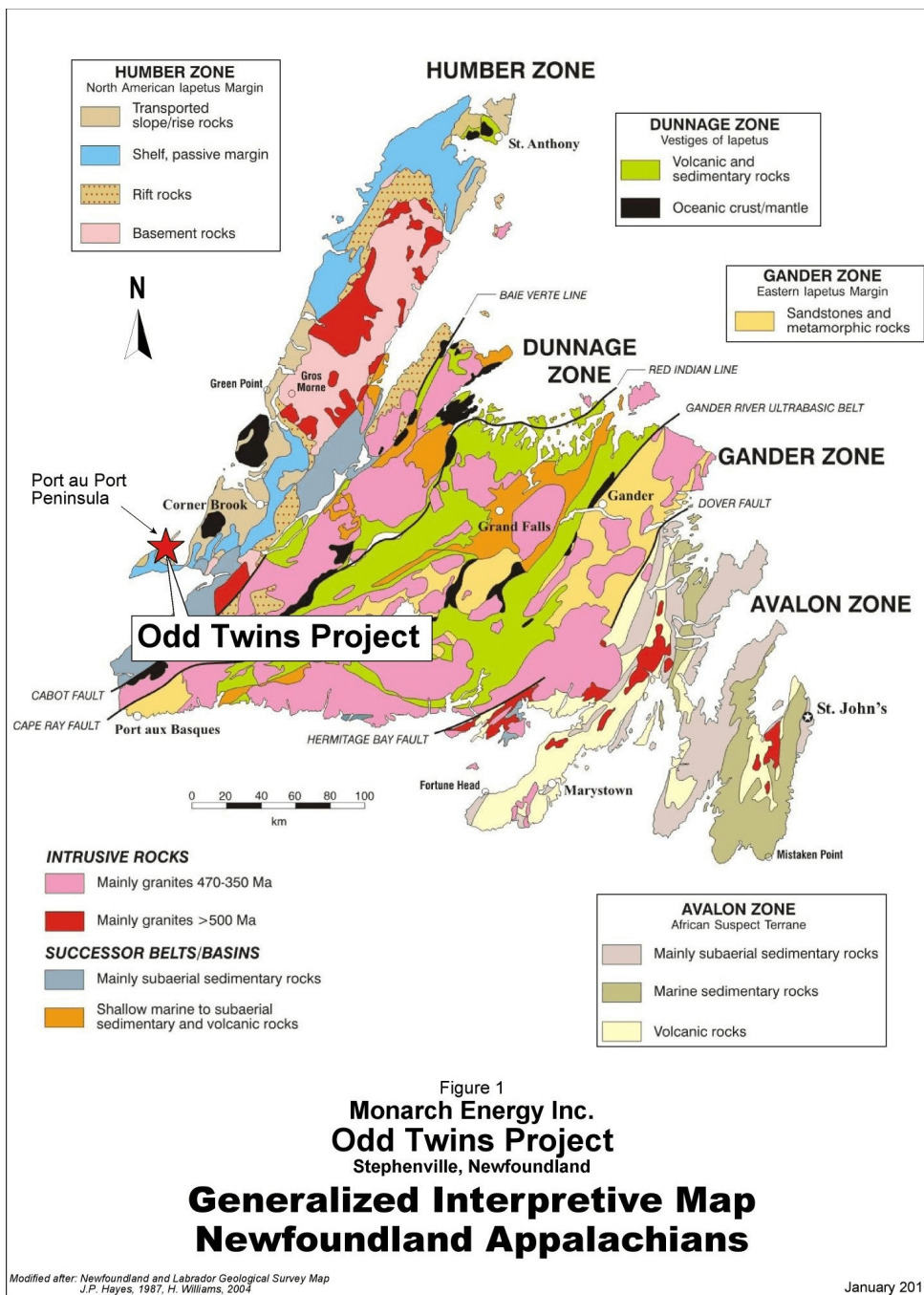


Fig. 1: Location of the Odd Twins Project, west coast of Newfoundland.

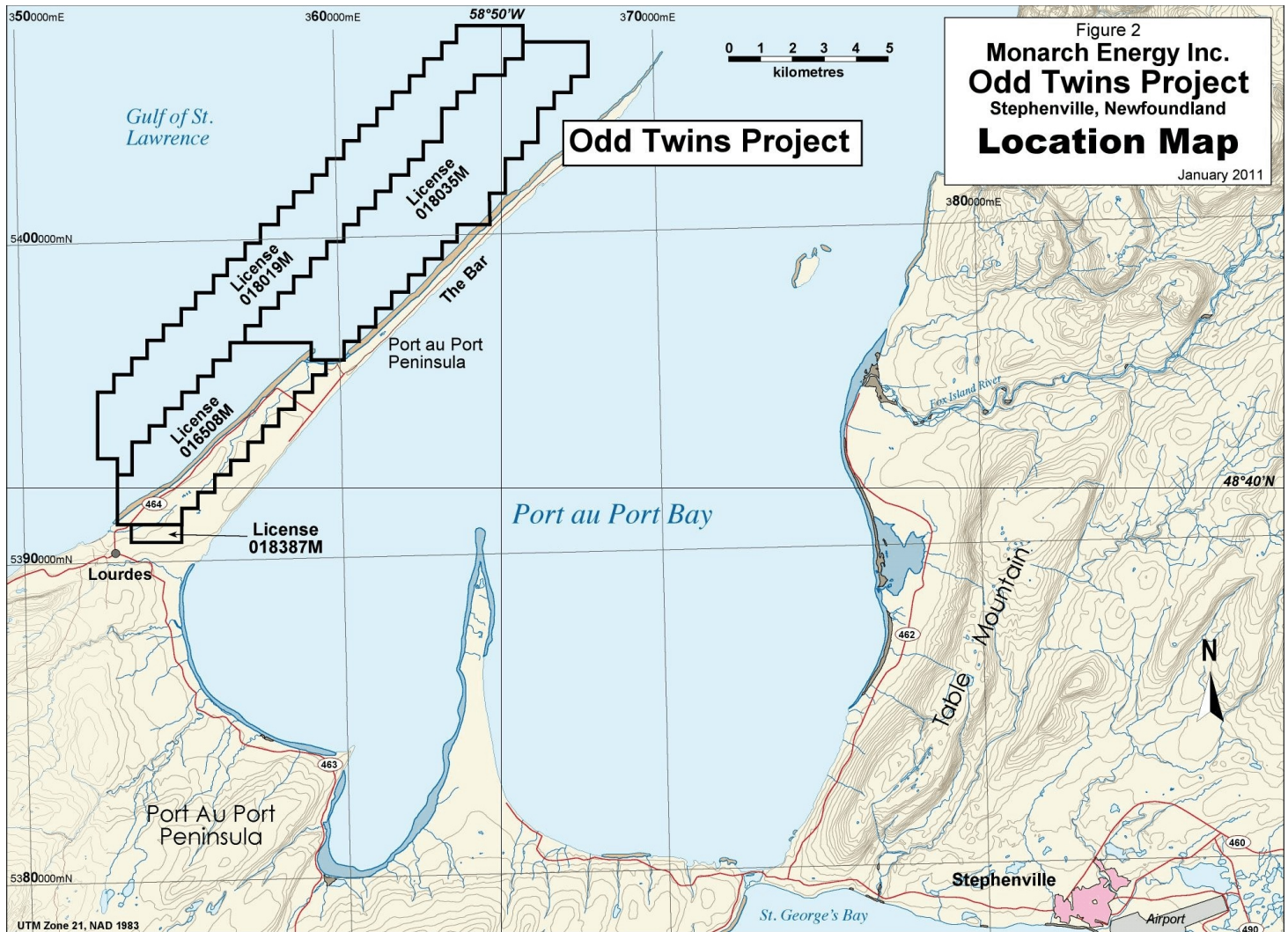


Fig. 2: Location of Odd Twins Project area, west of Stephenville, Newfoundland. (N.T.S. 12B).

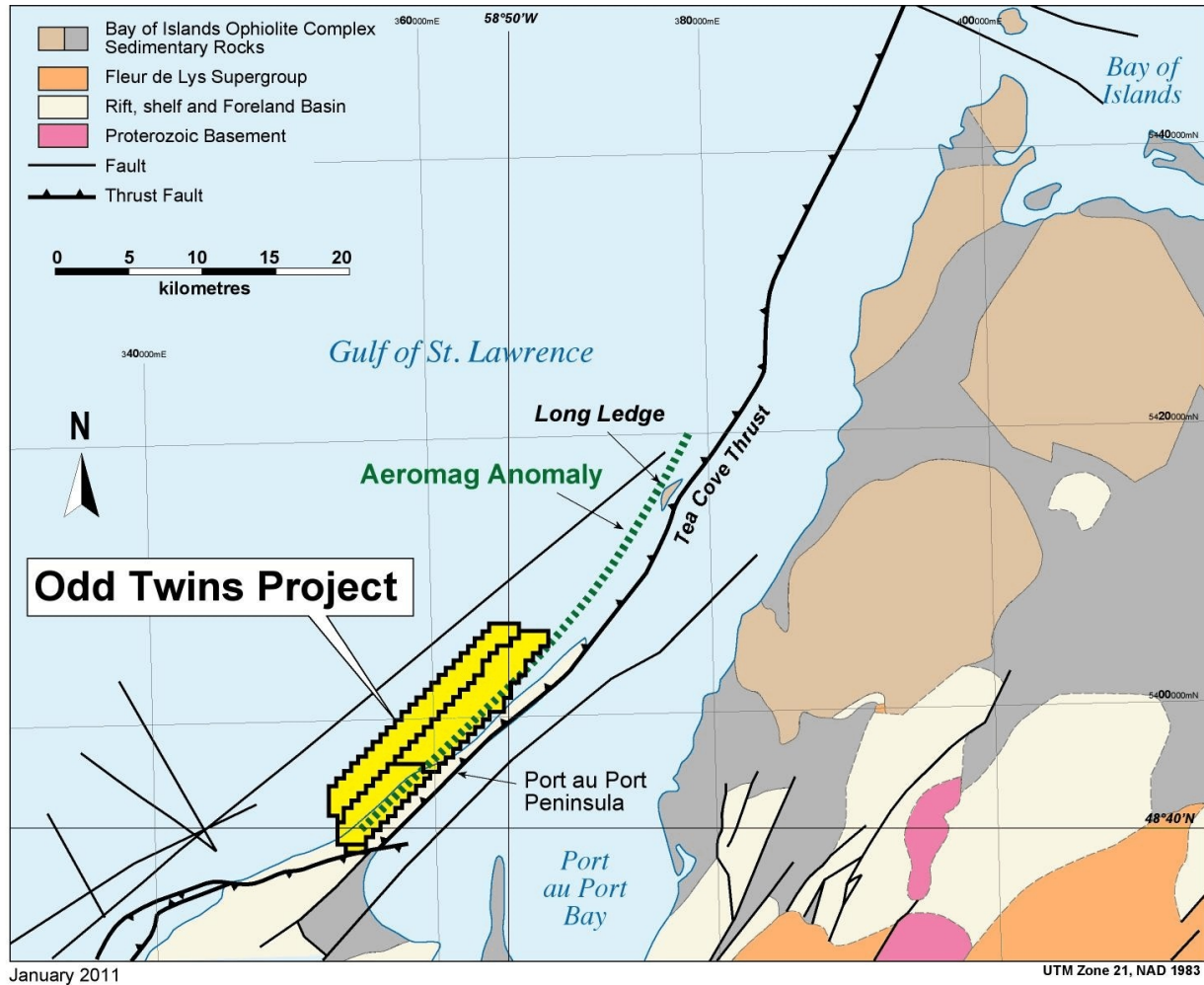


Figure 3
Monarch Energy Inc.
Odd Twins Project
Stephenville, Newfoundland
**Regional Geology
and Location of
Odd Twins Magnetic Anomaly**

Fig. 3. Regional Geology and location of Odd Twins magnetic anomaly north of Port au Port Bay.

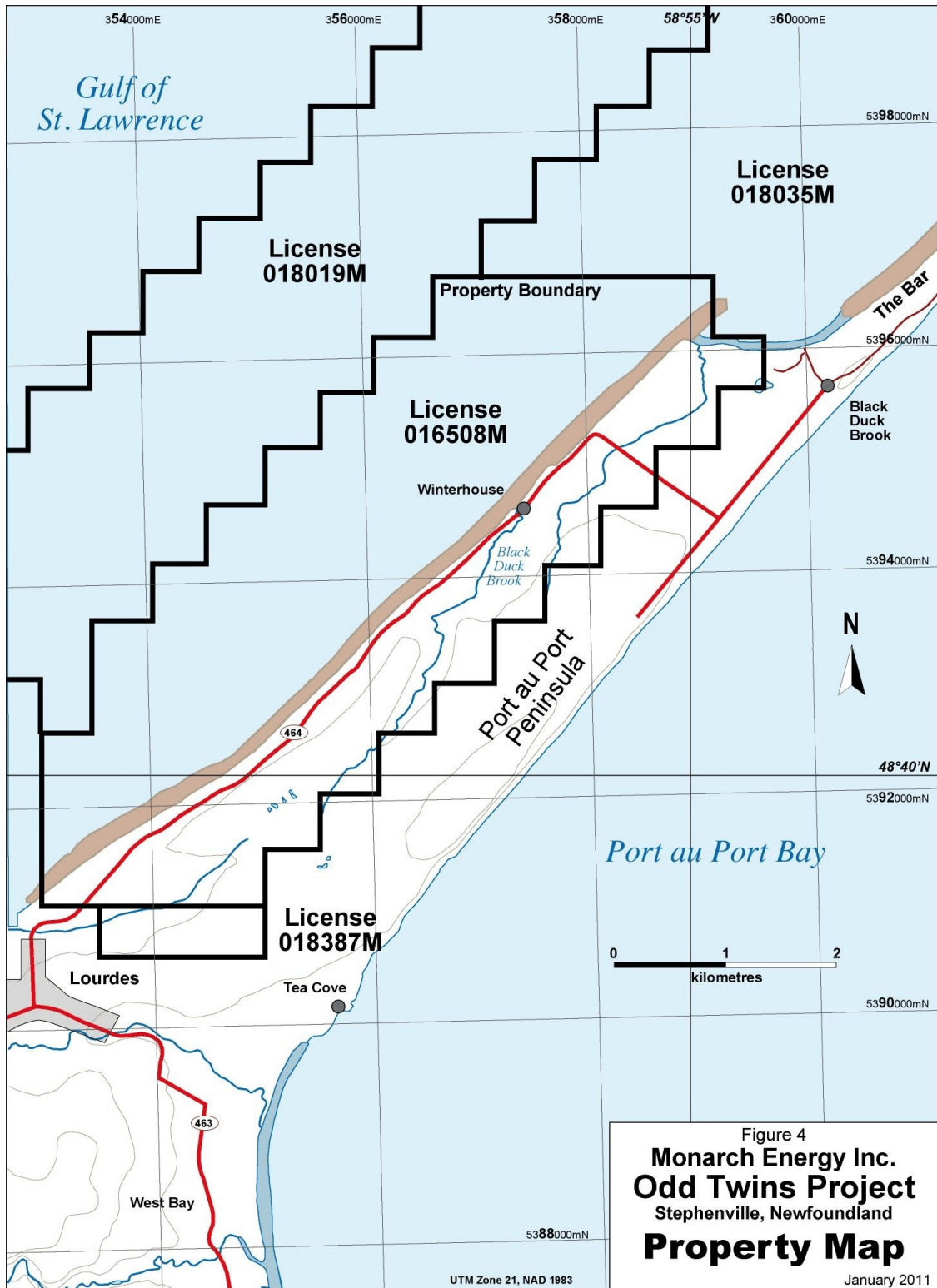


Fig. 4. Location of Licence 016508M, Winterhouse area, Port au Port Peninsula.

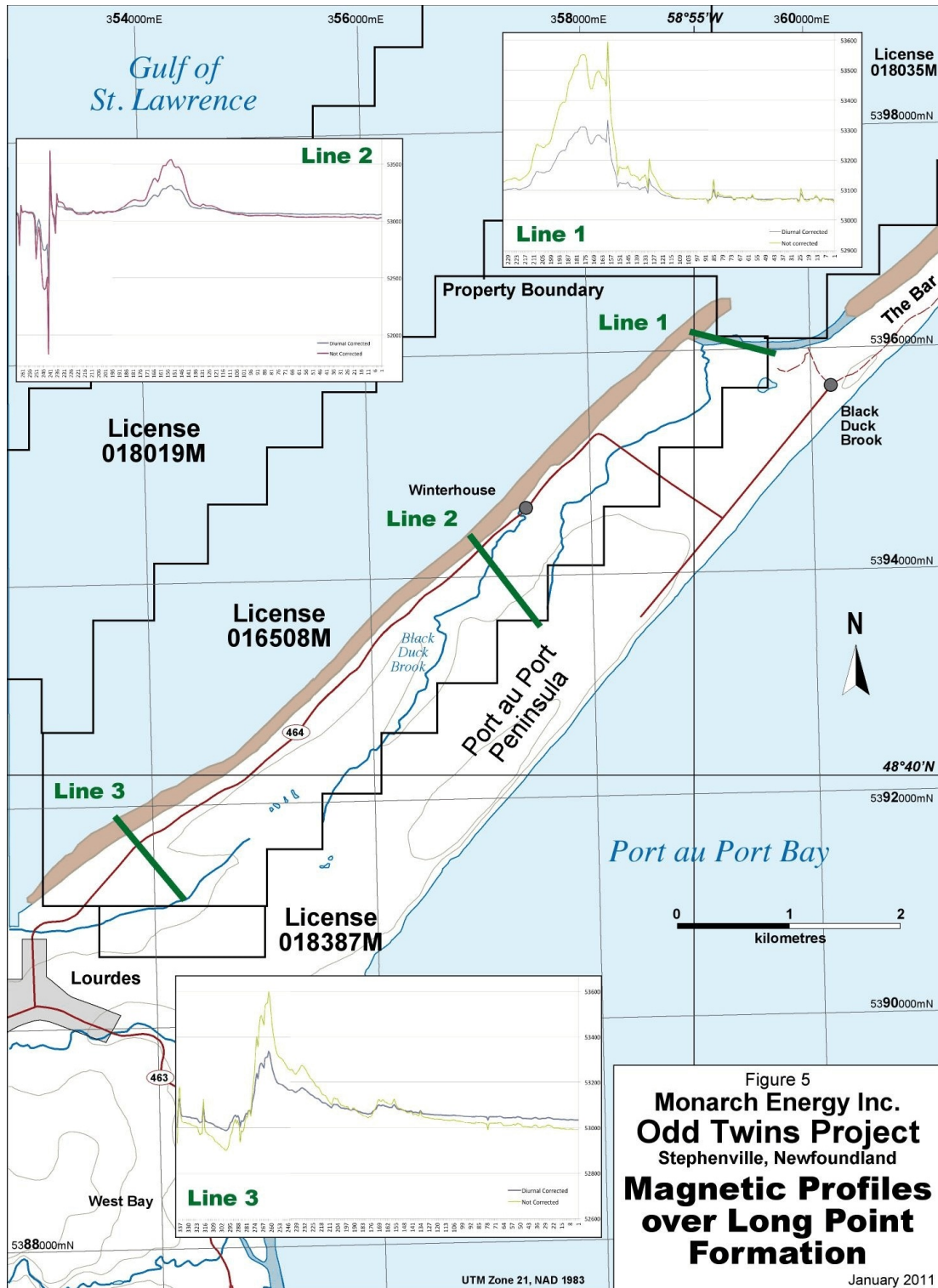


Fig. 5. Magnetic Profiles over the Long Point Formation, Port au Port Peninsula.

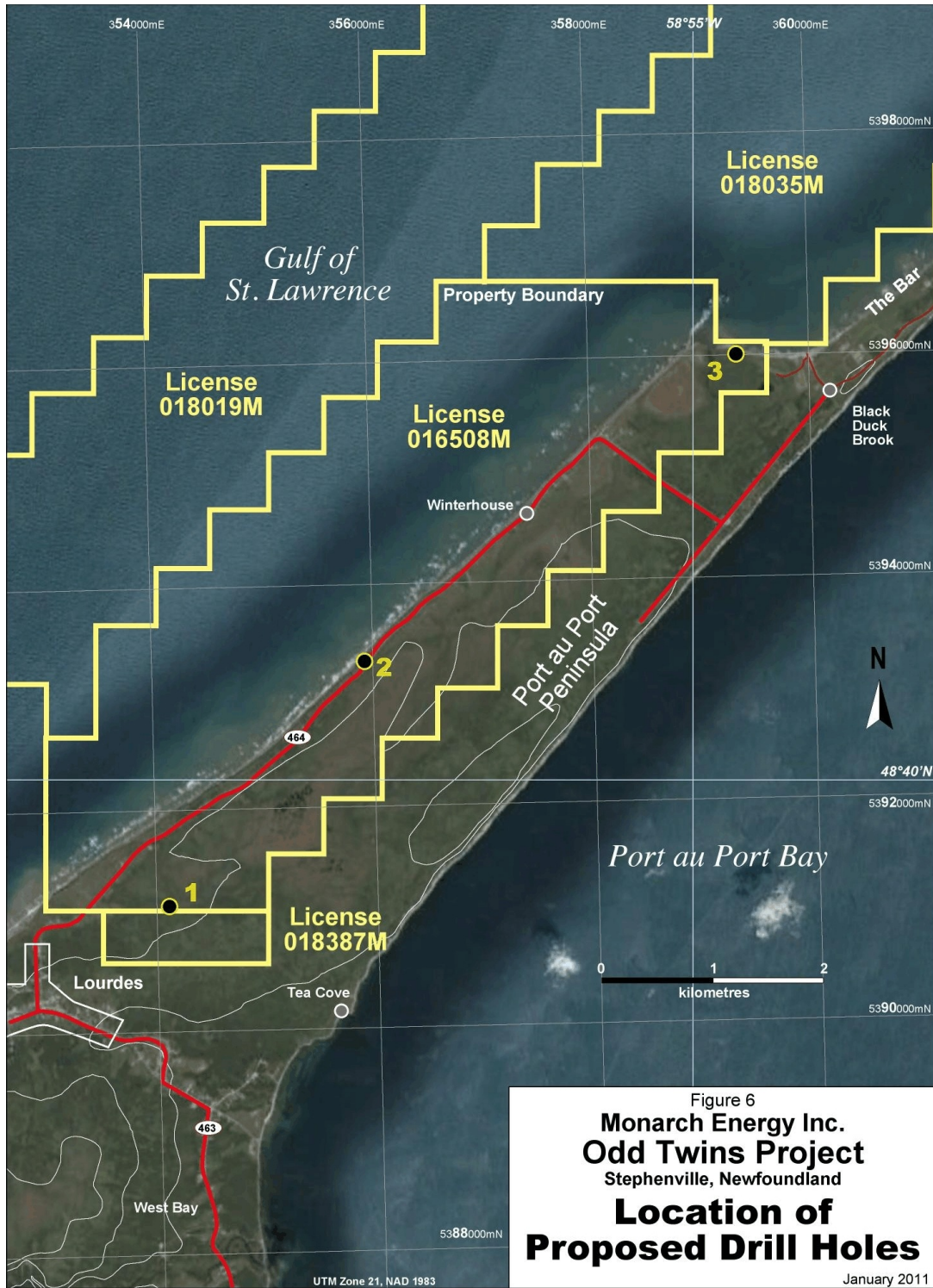


Fig. 6 Location of proposed drill holes (yellow) Odd Twins magnetic anomaly.



Figure 7. Photo OT-1. Waterfall Brook, at southern boundary of property, looking northeast. Steeply dipping to overturned beds in this area illustrate how subvertical drill holes could test lateral extent(at same stratigraphic level) of heavy minerals.(all photos are from Langdon, 2010).



Figure 8. Photo OT-3. Waterfall Brook. Samples from this locality are weakly magnetic and deflect a hand-held, suspended magnet.



Figure 9. Photo OT-2 .Waterfall Brook looking westward to Gulf of St. Lawrence.



Figure 10. Photo OT-4: Waterfall Brook. Port au Port Peninsula.