

**TECHNICAL REPORT ON THE  
GOLDEN PROMISE PROPERTY,  
CENTRAL NEWFOUNDLAND (REVISED)**

**Prepared For:**

**GREAT ATLANTIC RESOURCES CORP.**

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**NATIONAL INSTRUMENT 43-101 REPORT**

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## TABLE OF CONTENTS

<b>1</b>	<b>SUMMARY .....</b>	<b>10</b>
<b>2</b>	<b>INTRODUCTION .....</b>	<b>14</b>
2.1	Terms of Reference .....	14
2.2	Technical Summary .....	14
2.3	Sources of Information .....	20
<b>3</b>	<b>RELIANCE ON OTHER EXPERTS .....</b>	<b>21</b>
<b>4</b>	<b>PROPERTY DESCRIPTION AND LOCATION .....</b>	<b>22</b>
4.1	Claims Acquisition, Ownership and Status .....	22
4.2	Property Option Agreements .....	23
4.2.1	Mercer Option Agreement .....	23
4.2.2	Unity Resources Inc. Option Agreement .....	25
<b>5</b>	<b>ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY .....</b>	<b>28</b>
5.1	Property Access .....	28
5.2	Climate .....	28
5.3	Local Resources and Infrastructure .....	28
5.4	Physiography .....	29
<b>6</b>	<b>HISTORY .....</b>	<b>33</b>
6.1	Northeastern Golden Promise Property area (2002-2010) .....	34
6.1.1	Rubicon Minerals Corp. (2002-2003) .....	34
6.1.2	Rubicon Minerals Corp./Placer Dome Canada Ltd (2003-2005) .....	37
6.1.3	Rubicon Minerals Corp./Crosshair Exploration & Mining Corp. (2006) .....	54
6.1.4	Paragon Minerals Corp./Crosshair Exploration & Mining Corp. (2007) .....	56
6.1.5	Crosshair Exploration & Mining Corp./Paragon Minerals Corp. (2010) .....	57
6.2	Southwestern Golden Promise Property Area (2002-2010) .....	60
6.2.1	Rubicon Minerals Corp./Crosshair Exploration & Mining Corp. (2003-2010) .....	60
<b>7</b>	<b>GEOLOGY SETTING AND MINERALIZATION .....</b>	<b>81</b>
7.1.1	Victoria Lake Supergroup .....	81

<b>7.2</b>	<b>Property Geology .....</b>	<b>87</b>
7.2.1	VLSG Sedimentary Rocks of the Property Area.....	88
7.2.2	Silurian-Devonian Dyke/Sill Intrusives.....	92
7.2.3	Structure.....	92
<b>8</b>	<b>DEPOSIT TYPES .....</b>	<b>96</b>
8.1	JACLYN MAIN ZONE (JMZ).....	98
8.2	JACLYN NORTH ZONE (JNZ).....	99
8.3	JACLYN SOUTH ZONE (JSZ).....	100
8.4	SHAWN'S SHOT PROSPECT .....	100
8.5	OTTER BROOK SHOWING .....	100
8.6	CHRISTOPHER VEIN .....	101
8.7	NORTHWEST ZONE (NWZ).....	101
8.8	LINDA/SNOW WHITE PROSPECT.....	102
8.9	GABBRO OCCURRENCE.....	102
8.10	AURIFEROUS QUARTZ BOULDER OCCURRENCES .....	102
<b>9</b>	<b>EXPLORATION .....</b>	<b>104</b>
9.1	2017 Exploration .....	104
9.2	2018 Exploration .....	123
<b>10</b>	<b>DRILLING .....</b>	<b>130</b>
<b>11</b>	<b>SAMPLE PREPARATION, ANALYSES AND SECURITY .....</b>	<b>131</b>
11.1	2017 Sampling Methodology and Approach.....	131
11.2	2017 Sampling Program .....	132
11.3	2018 Sampling Program .....	133
11.4	Historical Sampling Program .....	134
11.5	Quality Assurance / Quality Control Programs for Drill Core .....	137
<b>12</b>	<b>DATA VERIFICATION .....</b>	<b>142</b>

<b>13</b>	<b>MINERAL PROCESSING AND METALLURGICAL TESTING .....</b>	<b>144</b>
13.1	2010 Bulk Sample Program Jaclyn Main Zone.....	144
<b>14</b>	<b>MINERAL RESOURCE ESTIMATES.....</b>	<b>149</b>
14.1	Introduction.....	149
14.2	Exploratory Data Analysis .....	149
14.3	Capping.....	150
14.4	Composites .....	151
14.5	Bulk Density .....	151
14.6	Geological Interpretation.....	151
14.7	Spatial Analysis .....	151
14.8	Block Model .....	153
14.9	Interpolation Plan .....	153
14.10	Mineral Resource Classification .....	154
14.11	Reasonable Prospects of Eventual Economic Extraction.....	154
14.12	Mineral Resource Tabulation .....	154
14.13	Block Model Validation .....	157
14.14	Comparison With Previous Estimates.....	159
<b>15</b>	<b>MINERAL RESERVE ESTIMATES.....</b>	<b>160</b>
<b>16</b>	<b>MINING METHODS .....</b>	<b>161</b>
<b>17</b>	<b>RECOVERY METHODS .....</b>	<b>162</b>
<b>18</b>	<b>PROJECT INFRASTRUCTURE .....</b>	<b>163</b>
<b>19</b>	<b>MARKET STUDIES AND CONTRACTS .....</b>	<b>164</b>
<b>20</b>	<b>ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT .....</b>	<b>165</b>



<b>21</b>	<b>CAPITAL AND OPERATING COSTS .....</b>	<b>166</b>
<b>22</b>	<b>ECONOMIC ANALYSIS .....</b>	<b>167</b>
<b>23</b>	<b>ADJACENT PROPERTIES .....</b>	<b>168</b>
<b>24</b>	<b>OTHER RELEVANT DATA AND INFORAMTION .....</b>	<b>169</b>
<b>25</b>	<b>INTERPRETATION AND CONCLUSIONS .....</b>	<b>170</b>
25.1	General .....	170
25.2	Conclusions and Interpretations relating to the 2017 Trenching Program.....	172
25.3	Jaclyn Main Zone Mineral Resource Estimate .....	172
<b>26</b>	<b>RECOMMENDATIONS .....</b>	<b>174</b>
26.1	Mineral Licence 24015M .....	174
26.2	Mineral Licence 24017M .....	175
26.3	Mineral Licence 21281M .....	175
26.3.1	Jaclyn Zone .....	175
26.3.2	Jaclyn West Area .....	176
26.4	General Recommendations .....	180
<b>27</b>	<b>REFERENCES.....</b>	<b>183</b>
<b>28</b>	<b>CERTIFICATES OF QUALIFIED PERSONS .....</b>	<b>191</b>
28.1	Larry Pilgrim P.Geo.....	191
28.2	Gregory Z Mosher, P. Geo. ....	193

## TABLE OF FIGURES

Figure 2.1 - Property Location Map .....	15
Figure 2.2 - Map showing Mineral Licences and Quartz Vein gold prospects of the Golden Promise Property.....	16
Figure 2.3 - Original Golden Promise Property staked by Rubicon, in 2003, following acquisition of the Mercer Property Option. ....	17
Figure 5.1 - Property Location and Access. ....	29
Figure 5.2- Topographic image of the Golden Promise Property area showing the main gold occurrences (image <i>after</i> Google Maps). ....	31
Figure 5.3 - Glacial features showing ice-flow directions for the NTS 12A/16 area.....	32
Figure 6.1 - Location of gold-bearing quartz-float (glacial dispersion) trains, trench sites, quartz vein systems and 2002-2007 drill holes in the Jaclyn Zone (gold prospect) area. ....	35
Figure 6.2 - Diamond drill plan of the Jaclyn Zone showing all drill holes from 2002 to 2010).....	38
Figure 6.3 - 2003 Airborne Survey Resistivity response over the central northeastern Golden Promise Property area ( <i>After</i> Copeland & Newport, 2004). ....	39
Figure 6.4 - Geological units and gold occurrences of the Golden Promise Property area.....	40
Figure 6.5 - Diamond Drill-hole Sections of the Jaclyn Zone showing the various quartz vein prospects ( <i>After</i> Tettelaar, 2010).....	41
Figure 6.6 - Distribution of soil sample gold concentrations over the Jaclyn Zone – Justin’s Hope trend (overlain onto 5500Hz resistivity response)( <i>After</i> Copeland & Newport, 2004).....	45
Figure 6.7 - Location of trench, boulder train, soil anomalies and diamond drill holes, Justin’s Hope area.....	46
Figure 6.8 - Branden quartz float occurrence, reconnaissance soil grid gold anomalies and trench sites ( <i>After</i> Copeland & Newport, 2004, 2005).....	47
Figure 6.9 - Location of the 2004 soil sample survey, related anomalies, quartz boulder trains and diamond drill holes, Jaclyn West area. ....	48
Figure 6.10 - Location of 2004 Diamond Drill Holes (GP04-45 & 46), Shawn’s Shot Gold Occurrence.....	53
Figure 6.11 - Longitudinal Section of the Jaclyn Main Quartz Vein Gold Deposit.....	59
Figure 6.12 - Airborne geophysical survey Images and geological interpretation map for former Mineral Licence 9050M. ....	62
Figure 6.13- Shadogram image of Total Magnetic Field response over former Licence 9050-GeoScott Exploration Consultants Inc. ( <i>After</i> Froude, 2004). ....	63
Figure 6.14 - 2004 Reconnaissance grid over former Lic. 9050M, showing soil and rock sample gold results ( <i>After</i> Froude, 2004). ....	65
Figure 6.15 - Trench exposure of the Linda-Snow White Quartz Vein Prospect.....	66
Figure 6.16 - Follow-up geochemical survey grids showing Au and As anomalies and location of the Linda/Snow White Gold Prospect ( <i>After</i> Froude, 2005 & Morgan et al., 2006)..	67
Figure 6.17 - 2006 Sampling results for the Linda-Snow White Prospect and adjacent areas. ....	69

Figure 6.18 - Channel and grab sample locations and results - Linda-Snow White Prospect trench site. ....	73
Figure 6.19 - 2006 Diamond Drill Plan – Linda/Snow White Quartz Vein Gold Prospect.....	74
Figure 6.20 - Reconnaissance soil sampling and trenching follow-up in the general area of the Linda Snow White Gold Prospect.....	76
Figure 6.21 - 2010 Biogeochemical sampling surveys - Linda-Snow White Prospect Area. ....	78
Figure 6.22 - Reconnaissance soil and rock sample survey results, Noel’s Brook-Gabbro Occurrence area.....	80
Figure 7.1- Tectonostratigraphic Elements of Newfoundland Geology and the Appalachian Orogen. ....	82
Figure 7.2 - Middle Ordovician–Early Silurian tectonic evolution of the peri-Laurentian and peri-Gondwanan terranes associated with closure of the Iapetus Ocean Basin (Modified <i>after</i> van Staal & Barr, 2012). ....	83
Figure 7.3 - Geology of the Victoria Lake Supergroup and adjacent stratigraphy, Central Dunnage Zone region, Newfoundland ( <i>After</i> Rogers et al., 2006). ....	85
Figure 7.4 - Structural elements and base metal/gold prospects of the Victoria Lake Supergroup ( <i>Modified after</i> Pollock et al., 2002).....	86
Figure 7.5 - Structural setting of the Bendigo and Meguma type gold deposits. ....	87
Figure 7.6 - Geology of the Golden Promise Property area, based on mapping by Kean et al. (1982).....	88
Figure 7.7 - Distribution of the Victoria Lake Supergroup and Badger Group sediments, Golden Promise Property area, based on interpretations derived from the 2003 Fugro Airborne EM/Mag Survey. ....	89
Figure 7.8 - Electromagnetic features/trends defined by the 1966 Airborne EM Survey by Selco Exploration Co. Ltd/ McIntyre Porcupine Mines Ltd ( <i>After</i> Lazenby, 1966).....	90
Figure 7.9 - Airborne EM(Resistivity) and Magnetic Features of the general Golden Promise Property area (Fugro Airborne Surveys Corp. (2003).....	91
Figure 7.10 - Variable fold geometries and structures encountered on the Golden Promise Property. ....	93
Figure 7.11 - Diagrams showing the main structural elements of the Golden Promise Property area ( <i>After</i> McNeill, 2005). ....	95
Figure 8.1 - Typical turbidite-hosted, gold-bearing, quartz vein structures, at Bendigo, Australia. .	97
Figure 9.1 - 2017 Sample Location Map for the northern portion of Mineral Lic. 24015M. ....	106
Figure 9.2 - 2017 Sample Location Map for the east-central portion of Mineral Lic. 24015M. ....	108
Figure 9.3 – 2017 Sample Location Map for Mineral Licence 24017M. ....	110
Figure 9.4 - 2017 Sample Location Map for Mineral Licences 24018M, 24021M and 21474M. ....	112
Figure 9.5 - 2017 Sample Location Map for Mineral Licences 21970M and 24305M.....	113
Figure 9.6 - Map showing Location of 2017 trenches in relation to historical trenches and drill holes, <i>Jaclyn Zone</i> area.....	114
Figure 9.7 - Trench Geology and Sample Location Map - Trenches 1–3, <i>Jaclyn North Zone</i> .....	118

Figure 9.8 - Trench Geology and Sample Location Map - Trench 4, Jaclyn North Zone.....	121
Figure 9.9 - Trench and Sample Location Map - Trenches 5 & 6, Jaclyn South Zone.....	122
Figure 9.10 - 2018 Soil Sample Location Map for Mineral Licence 25156M.....	124
Figure 9.11 - 2018 Rock Sample Location Map for Mineral Licences 24021M and 25156M .....	125
Figure 9.12 - 2018 Rock Sample Location Map for Mineral Licences 25156M and 25161M .....	126
Figure 9.13 - 2018 Rock Sample Location Map for Mineral Licences 22161M and 25162M .....	127
Figure 9.14 - 2018 Rock Sample Location Map for Mineral Licences 24305M and 25161M .....	128
Figure 9.15 - 2018 Soil Sample Location Map for Mineral Licences 24305M and 25161M .....	129
Figure 11.1 - Eastern Analytical Standard L Control Plot .....	138
Figure 11.2 - Eastern Analytical Standard M Control Plot .....	139
Figure 11.3 - ALS Rubicon – Paragon Duplicate Pairs XY Plot .....	140
Figure 11.4 - ALS Crosshair Duplicate Pairs XY Plot .....	140
Figure 11.5 - Accurassay Crosshair Duplicate Pairs XY Plot.....	141
Figure 13.1 - Trench plan of 2010 Bulk Sample site showing channel sample locations and results. ....	146
Figure 14.1 - Jaclyn Main Zone Gold Assay Cumulative Frequency Curve.....	150
Figure 14.2 - Jaclyn Main Zone Vertical Long Section Contoured Gold Grades .....	152
Figure 14.3 - Jaclyn Main Zone Search Ellipse .....	153
Figure 14.4 - Jaclyn Main Zone Block Model Long Section View.....	156
Figure 14.5 - Jaclyn Main Zone Capped Gold Swath Plot.....	158
Figure 26.1 - Airborne Resistivity images of the Jaclyn Zone area, showing the outline of the Jaclyn Anticlinal Fold Structure and Resistivity features.....	179

## LIST OF TABLES

Table 1.1 - Jaclyn Main Zone Inferred Mineral Resource.....	13
Table 4.1 – Mineral Licence Status Golden Promise Property .....	23
Table 6.1 - Rubicon Minerals Corp. - 2002 Drilling Program.....	37
Table 6.2 - Rubicon Minerals Corp./Placer Dome Canada Ltd - 2003 Drilling Program. ....	42
Table 6.3 - Rubicon Minerals Corp./Placer Dome Canada Ltd - 2004 Drilling Program .....	50
Table 6.4 - Rubicon Minerals Corp./Crosshair Exploration & Mining - 2006 Drilling Program.....	55
Table 6.5 - Paragon Minerals Corp./Crosshair Exploration & Mining Corp. - 2007 Drilling Program .....	57
Table 6.6 - Crosshair Exploration & Mining Corp./Paragon Minerals Corp. - 2010 Drilling Program .....	58
Table 6.7 - 2006 Rock Sample Results - General Area of the Linda-Snow White Quartz Vein Prospect .....	70
Table 6.8 - Rock Sample Gold and Arsenic Assay Results – Linda/Snow White Prospect .....	71
Table 6.9 - 2006 Diamond Drill Hole (Gold) Results, Linda-Snow White Prospect.....	75
Table 9.1 - Rock & Soil Samples – 2017 Exploration Program – Great Atlantic Resources Corp....	105
Table 9.2 - Rock Sample Au Results – 2017 Trenching Program, Mineral Licence 21281 .....	115
Table 11.1 - General Information on Analytical Methods.....	132
Table 11.2 - Sample Preparation and Assay Procedures at Eastern Analytical Ltd.....	135
Table 11.3 - Summary of Jaclyn Main Zone QA/QC Programs and Samples .....	138
Table 12.1 - Jaclyn Main Zone Verification Assay Results.....	142
Table 13.1 - Bulk Sample Trench Site Channel Sample Data and Gold Results, Jaclyn Main Zone .	147
Table 13.2 - 2010 Bulk Sample Site Drill Chip Sample Gold Results .....	148
Table 14.1 - Jaclyn Main Zone Assay Descriptive Statistics.....	149
Table 14.2 - Jaclyn Main Zone Assays in Quartz Veins Descriptive Statistics.....	149
Table 14.3 - Jaclyn Main Zone Capped Assay Descriptive Statistics.....	151
Table 14.4 - Jaclyn Main Zone Search Ellipse Parameters .....	152
Table 14.5 - Jaclyn Main Zone Block Model Parameters .....	153
Table 14.6 - Conceptual Pit Parameters.....	154
Table 14.7 - Jaclyn Main Zone Pit-Constrained Inferred Mineral Resource Estimate.....	155
Table 14.8 - Jaclyn Main Zone Underground Inferred Mineral Resource Estimate .....	155
Table 14.9 - Jaclyn Main Zone Total Inferred Mineral Resource Estimate .....	156
Table 14.10 - Jaclyn Main Zone Assay, Composite and Block Model Descriptive Statistics.....	157
Table 25.1 - Jaclyn Main Zone Inferred Mineral Resource.....	173
Table 26.1 - Budget for Proposed Work.....	181

## 1 SUMMARY

The authors have been retained by Great Atlantic Resources Corp. (Great Atlantic) to prepare an independent Technical Report on the Company's Golden Promise Property (the "Property") located in the central region of Newfoundland, in the province of Newfoundland and Labrador, Canada. The Property consists of 16 Mineral Licences, totalling 661 claims, which cover a significant trend of structurally-controlled, auriferous quartz vein occurrences and prospects within sedimentary units of the Victoria Lake Supergroup.

This report provides a summary of all exploration and development work performed, and results obtained, on the property to date, with recommendations for future work, based on the property's perceived gold exploration potential. The report was prepared in compliance with the reporting standards as set forth under National Instrument Policy NI 43-101 – *Standards of Disclosure for Mineral Projects*. Co-authors Larry Pilgrim (B.Sc., P.Geo.) and Greg Z. Mosher (P.Geo., M.Sc.App.) are considered a "Qualified Persons" as defined under this policy.

### Historical Work

Historical exploration work conducted over the area now contained by the present *Golden Promise Property* was, collectively, carried out by Rubicon Minerals Corp. (Rubicon), and joint venture partners Placer Dome Canada Ltd (Placer Dome), Paragon Minerals Corp. (Paragon) and Crosshair Exploration & Mining Corp. (Crosshair), between 2002 and 2011. Work programs, consisting of prospecting, soil sampling, trenching and diamond drilling (totalling 152 drill holes), culminated in the discovery and partial delineation of several structurally-controlled, auriferous, quartz vein systems, the more significant (or explored) of which, is the *Jaclyn Main Prospect*. Two other prospects, having significant drilling to date, are the *Jaclyn North* and *Linda-Snow White Prospects*.

A mineral resource estimate pertaining to the *Jaclyn Main Zone* prospect, prepared by Crosshair, in 2008, provided an Inferred estimate of 921,000 tonnes averaging 3.02 g/t gold or 89,500 ounces of contained gold (Pilgrim & Giroux, 2008). This mineral resource estimate was based on diamond drilling programs conducted from 2002 to 2007. Subsequent and final drilling on the *Jaclyn Main Zone* took place in 2010. The results of that drill program are incorporated into the updated mineral resource estimate that is described in Section 14 of this report.

In 2010, Crosshair extracted a 2,241tonne bulk sample (from the trenched surface expression of the zone) which produced an average grade of 4.47 g/t gold (Wallis, 2010). A longitudinal representation of the *Jaclyn Main Zone*, based on all drilling to date (2010), is included in Section 6.1.5.1 of this report.

During the late spring to early summer of 2017, Great Atlantic contracted geologist, David Martin (P.Geo) and assistant/pro prospector, Bruce Stewart, both of New Brunswick, to conduct preliminary/reconnaissance assessment work on various mineral licences of the property, and to implement a mechanical trenching program (on Mineral Licence 21281M). The latter program was designed to evaluate further east-northeastward extension of the historical *Jaclyn North* and *Jaclyn South* quartz vein systems. A third objective of the property visit was to provide a due diligence assessment – by a Qualified Person (David Martin, P. Geo) – as to the nature the property's gold mineralization, host geology and exploration potential. In addition to general reconnaissance prospecting and sampling work, visits were made, by D. Martin, to the sites of the

earlier-discovered, gold-bearing, quartz vein systems and high-grade (gold-mineralized) quartz float occurrences.

Work was successful in locating several new gold-bearing quartz float occurrences as well as several single-station to multi-station gold (Au) and arsenic (As) soil anomalies for which follow-up investigations are recommended. Further to this, the author (W. Jacobs) was contracted to prepare assessment reports on the mineral licences investigated by D. Martin, and to assist with the trenching program by conducting geological mapping and sampling.

Results of the trenching program proved interesting, although, deep glacial till cover precluded access to bedrock for the most part. The program was successful in exposing one of the *Jaclyn North* quartz veins (at one locality) while elsewhere along the projected trend, numerous auriferous quartz boulders (up to 0.7 metres in size) were exposed, several of which contained visible gold (VG). The angularity and local clustering of these boulders, at some localities – at 2.0-3.0 m depths – suggest likely proximity to bedrock sources. Further investigation, by drilling, is warranted.

Great Atlantic conducted additional reconnaissance prospecting and soil / rock geochemical sampling during 2018 on the property within multiple mineral licences, of which partial analytical results have been received. The program was conducted by Paul Delaney (P.Geo.) and assistant Art Clarke. David Martin (P.Geo.) conducted a portion of the prospecting / rock sampling. The program identified an area of gold soil anomalies within mineral licence 25161M in the southern region of the property, northeast of the Linda - Snow White prospect.

Most of the drilling conducted on the property, to date, has been directed at evaluation of the *Jaclyn Main Zone* where common gold grades – citing narrow to wide (core length) intercepts – include: 44.59 g/t over 0.30m (GP03-31); 15.23 g/t over 0.30m (GP06-47); 68.95 g/t over 0.40m (GP02-21); 23.14 g/t over 0.90m (GP02-14); 93.71 g/t over 1.40m (GP06-52); 9.47 g/t over 1.40m (GP06-61); 20.65 g/t over 1.60m (GP06-65); 43.83 g/t over 1.45m (GP07-91); 5.24 g/t over 1.70m (GP06-51); 16.57 g/t Au over 2.55m (GP02-01); 6.51 g/t over 3.10m (GP06-56); and 10.41 g/t Au over 4.70m (GP07-92). Local, exceptionally high, grades include up to 327.97 g/t Au/0.2m (GP06-52).

### Geological Setting

Regional geology maps, by government, show the Golden Promise Property to be underlain by dominantly arc-related, rift-basinal, volcanogenic and turbiditic clastic to argillitic sedimentary rocks of the Victoria Lake Supergroup. The latter comprises a significant portion of Newfoundland's central Dunnage Zone, a major tectonostratigraphic division of the Appalachian Orogen, composed of remnants of Cambrian-Ordovician, ophiolitic and volcanic, arc terranes of the ancient Iapetus Ocean basin. During subduction of the Iapetus crust and, thus, eventual closure of the basin – an event synonymous with the collision of the Laurentian (proto North American) and Gondwanan (proto northwest Africa/Amazonian) continental land masses – these terranes were tectonically assembled and accreted to Laurentia, which developments lasted from the Ordovician (Taconic) Orogeny to the Silurian (Salinic) Orogeny.

Volcanic arc elements of the peri-Laurentian and peri-Gondwanan domains are now represented by the Notre Dame and Exploits Subzone divisions of the Dunnage Zone, respectively. The same were juxtaposed together along a major (Appalachian-scale) collisional boundary, and suture zone,

known as the Red Indian Line (RIL). This structure lies proximal to, and, in part, contiguous with, the northwestern margin of the *Golden Promise Property*.

The development of the RIL, and related southeastward-directed thrust-fault panels, represent a plausible deep-rooted source zone and mechanism (fault-dominated conduit system) for gold-bearing, hydrothermal, fluids responsible for the development of quartz vein systems on the property. Given the 1) uniformity, or similarity, of the property's favorable geology throughout – being underlain by structurally-prepared (folded and thrust-faulted) turbiditic sedimentary sequences, 2) the widespread occurrence of gold-bearing quartz float and gold-in-soil anomalies (for which there are, yet, no confirmed bedrock sources) and 3) the success rate by which trenching and drill hole testing have, thus far, led to the discovery of significant gold occurrences (despite deep glacial till cover), it can, therefore, be reasonably surmised that much potential remains for further significant gold discovery. As well, none of the presently-known auriferous quartz vein occurrences have, yet, been fully evaluated, or delineated, by drilling. These, therefore, remain as 'open-ended' targets for further investigation and expansion. The potential for economic gold mineralization on the property is further highlighted by the fact that its geological setting equates with that of other turbidite-hosted/slate-belt gold districts world-wide (eg. the Bendigo district of Victoria, Australia, and the Meguma district of Nova Scotia, Canada), which have been long-term, significant, gold producers.

#### Current Resource Estimate

The current mineral resource estimate for the Jaclyn Main Zone is based on assays from 107 drillholes. The zone was modelled as a single quartz vein that strikes east-west and dips steeply to the south. Modelled vein thickness was based on true thickness derived from quartz vein intercepts. The estimate is based on 220 assays that were composited to 135 one-meter long composites. A bulk density of 2.7 g/cm<sup>3</sup> was used. Blocks in the model measured 15 meters east-west, 1-meter north-south and 10 meters vertically. The block model was not rotated. Grades were interpolated using inverse-distance squared (ID<sup>2</sup>) weighting and a search ellipse that measured 100 meters along strike, two meters across strike and 50 meters vertically. Grades were interpolated based on a minimum of two and a maximum of 10 composites with a maximum of one composite per hole so the grade of each block is based on at least two drillholes thereby demonstrating continuity of mineralization. All resources were classified as Inferred because of the relatively wide spacing of drillholes through most of the zone.

Because part of the vein is near surface the resource estimate was constrained by a conceptual open pit to demonstrate reasonable prospects of eventual economic extraction. Generic mining costs of US\$2.50/tonne and processing costs of US\$25.00/tonne were used together with a gold price of US\$1,300/ounce. A pit slope of 45° was assumed with no allowance for mining loss or dilution. Based on the combined hypothetical mining and processing costs and the assumed price of gold, a pit-constrained cutoff grade of 0.6 g/t was adopted. For the underground portion of the resource a cutoff of 1.5 g/t was assumed.

Table 1.1 is a summary of the estimated mineral resource for the Jaclyn Main Zone. The table shows the total resource together with the pit-constrained and underground portions. Note that the cutoff grade for the total resource is the weighted average of the pit-constrained and underground cutoff grades.



Table 1.1 - Jaclyn Main Zone Inferred Mineral Resource

Resource	Cutoff Au g/t	Au Cap g/t	Au Uncap g/t	As_ppm	Tonnes	Au Ounces Capped	Au Ounces Uncapped
Total	1.1	9.3	10.4	2,023	357,500	106,400	119,900
Pit-Constrained	0.6	11.4	14.1	1,783	157,300	57,800	71,200
Underground	1.5	7.5	7.6	2,211	200,200	48,600	48,700

- Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
- There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- Mineral resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding.
- Mineral resource tonnage and grades are reported as undiluted.
- Contained Au ounces are in-situ and do not include recovery losses.

### Recommendations

#### **Mineral Licence 21218M**

Drilling of 10 holes, six on the Jaclyn Main Zone and four on Jaclyn North. Budget: \$207,535.

Jaclyn Main Zone: The near-surface portion of eastern end of the zone has been tested by few drillholes and can reasonably be regarded as a valid exploration target. Six (6) holes with an aggregate length of 900 meters are recommended to test this portion of the zone at depths of approximately 100 and 150 meters below surface to establish whether the vein is present at these depths and if present, whether it is mineralized.

If successful, this drill program will enlarge the Jaclyn Main Zone but regardless will establish the reasonable limits of the zone.

#### **Mineral Licence 24015M**

Reconnaissance soil sampling. Budget \$75,505.

#### **Mineral Licence 24017M**

Reconnaissance soil sampling. Budget \$33,325.

The total recommended budget for all three licences is \$316,365.

## 2 INTRODUCTION

### 2.1 Terms of Reference

The authors have been retained by Great Atlantic Resources Corp. (Great Atlantic), to prepare an independent National Instrument 43-101-compliant Technical Report on the merits and status of its (gold-prolific, exploration-stage) **Golden Promise Property**, located central Newfoundland (Fig. 2.1). The property consists of 16 contiguous Mineral Licences, totalling 661 claims (16,525 hectares), acquired through various option agreements on existing properties in the area, followed by additional staking of Mineral Licences (consolidation), by Great Atlantic, in 2017 (Fig. 2.1 & Table 4.1).

The Technical Report provides a summary of all assessment work performed on the property, to date – the bulk of which relates to exploration and development work conducted prior to the present property acquisition by Great Atlantic. This work, as covered under Section 6 (Historical Exploration and Results), was carried out by Rubicon Minerals Corp. and various joint venture partners, including Placer Dome Canada Ltd (Placer Dome), Crosshair Exploration & Mining Corp. (Crosshair) and Paragon Minerals Corp. (Paragon), between 2002 and 2011.

W. Jacobs visited the Property on a number of occasions — in company with geologist David Martin, P.Geo., (retained by Great Atlantic to conduct preliminary assessment and due diligence evaluations of the property, during May-June, 2017) and as a geologist contracted to conduct geological mapping and sampling during a mechanical trenching operation on the property, during June-July, 2017. G. Mosher visited the Property on August 30, 2018 for a period of one day.

The portions of this report prepared by W. Jacobs have been reviewed by Larry Pilgrim a “Qualified Person”, as prescribed under NI 43-101 policy, and is independent of Great Atlantic Resources Corp., as per policy Section 1.5. Larry Pilgrim has previously prepared a 43-101 technical report on the Golden Promise Property in 2006 at the request of Rubicon Minerals Corporation and again co-authored has qualifying person on a 43-101 technical report for Crosshair Exploration and Mining Corporation in 2008.

### 2.2 Technical Summary

During 2002, prospecting activities conducted by property vendor, William Mercer, 10 kilometres (km) southwest of the town of Badger and the Trans Canada Highway, resulted in the discovery of several quartz fragments and boulders (also, herein, referred to as “float”), bearing abundant visible gold (VG) mineralization. These discoveries, which indicated the (probable) presence of local, or near-surface, bedrock quartz vein sources, constituted the basis of a property option agreement, between Rubicon and William Mercer, dated May 22, 2002.

Figure 2.1 - Property Location Map

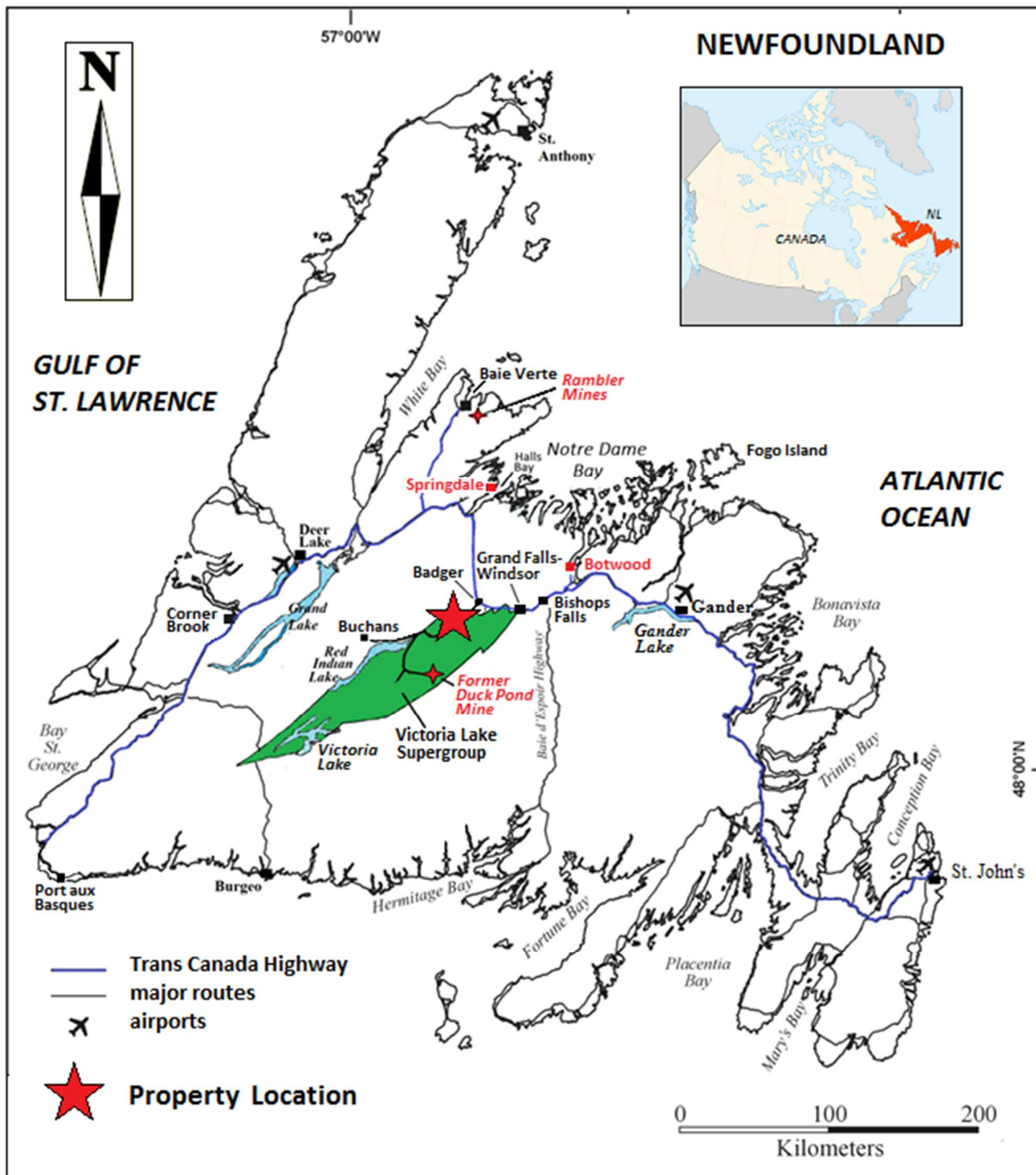
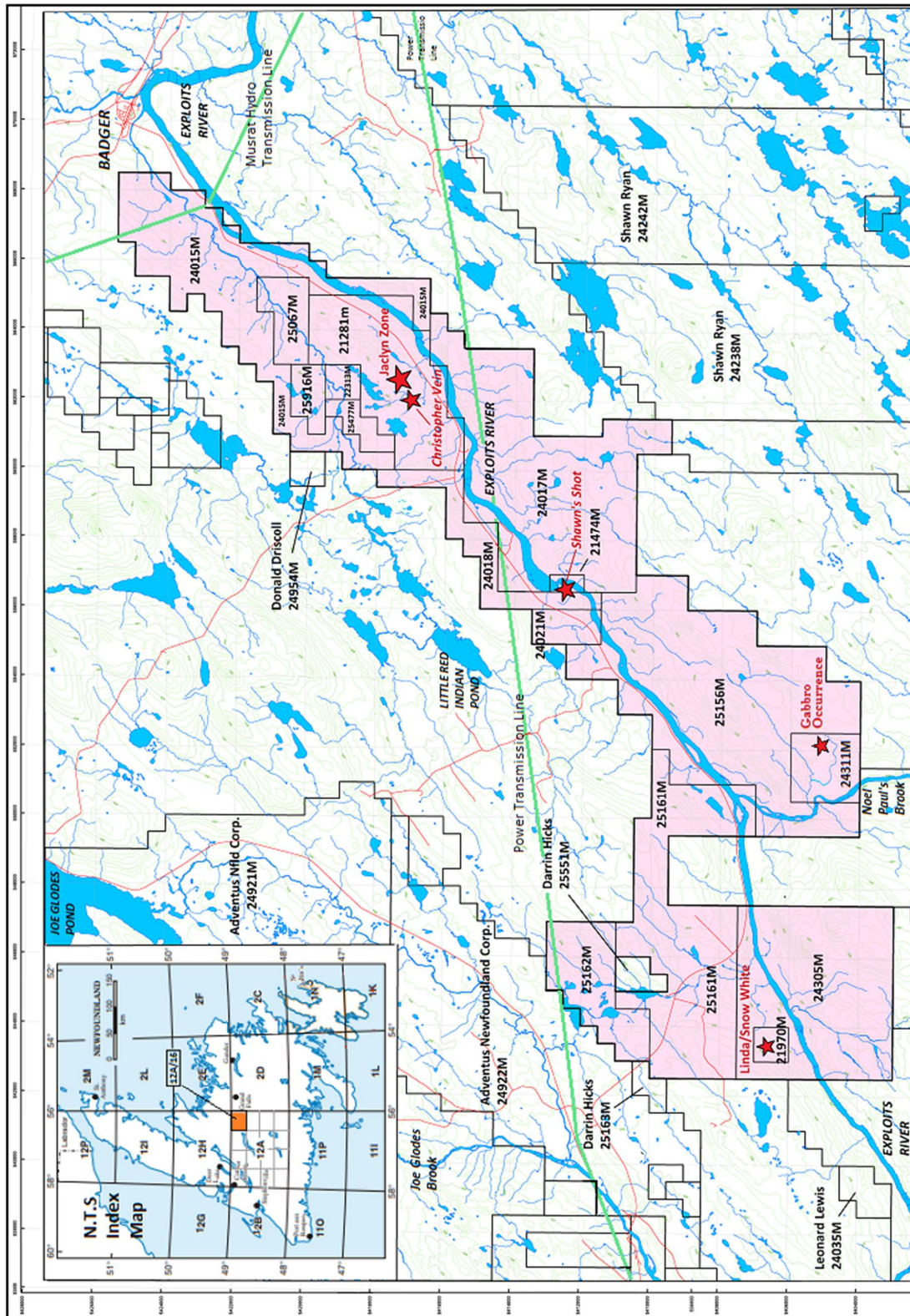


Figure 2.2 - Map showing Mineral Licences and Quartz Vein gold prospects of the Golden Promise Property.

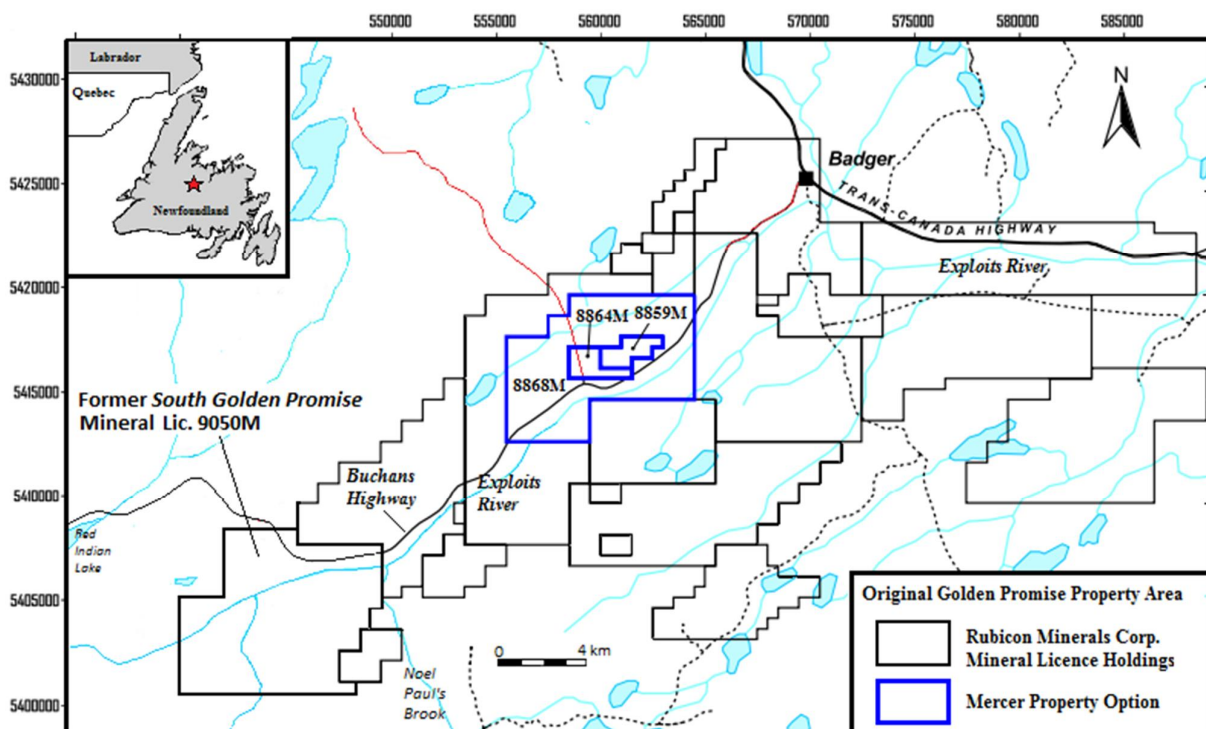




A total of 24 claims (comprising Mineral Licences 8859M & 8864M) were staked by W. Mercer, during May 21 & 22, 2002, to cover the area of interest. This was followed by an additional 168 (peripheral) claims (Lic. 8868M), staked by Rubicon, in which a 3.0 km 'area of interest' was granted to W. Mercer, as part of the option agreement (Fig. 2.3). A program of prospecting and soil geochemical sampling was, shortly, implemented by Rubicon, resulting in the delineation of several gold-bearing quartz boulder/float trends (glacial dispersion trains) and numerous geochemical gold anomalies. Follow-up trenching and diamond drill testing, in 2002, led to the discovery of the *Jaclyn Main Zone* (gold-bearing) quartz vein system, located within the area of the former Mercer Option, since replaced by Mineral Licence 21281M; the latter licence comprises the central portion of the northeastern half of the Golden Promise Property (Figs. 2.2 & 2.3).

During 2003-2005, Rubicon formed a Joint Venture ("JV") partnership with Placer Dome, at which time soil geochemical programs were expanded to cover new areas, albeit, largely within the central Mercer Option. Again, follow-up trenching and/or drilling, conducted in response to geochemical soil and quartz float gold anomalies, resulted in the discoveries of the *Jaclyn North*, *Jaclyn South* and *Christopher* vein systems – the latter, however, having only two drill-hole tests, to date. A number of other auriferous quartz vein and quartz float occurrence, including the *Justin's Hope*, *Shawn's Shot*, and *Northwest Target*, as well as three (un-named) targets in the *Jaclyn West* area, have, likewise, received only cursory drill-hole investigations, with most sites revealing host-rock alteration similar to that occurring at the *Jaclyn Zone*; no drill investigation has, yet, been conducted in the area of the high-grade, gold-bearing *Branden* float occurrences, located 8.5 km northeast of the *Jaclyn Zone*.

Figure 2.3 - Original Golden Promise Property staked by Rubicon, in 2003, following acquisition of the Mercer Property Option.



During October-November, 2003, Fugro Airborne Surveys Corp. was commissioned to conduct an 8,250 line-km airborne Electromagnetic/Magnetic (EM/Mag) survey over the property. High-resolution magnetic and EM conductivity/resistivity responses were evaluated in conjunction with geological mapping information (including that of an earlier regional government study) to provide an informative interpretation of the property's stratigraphic and structural setting (described in Section 7.2).

Continued exploration programs over the central property area, beyond 2005, were conducted under new JV arrangements focusing, mainly, on drill delineation of the *Jaclyn Main Zone*, *Jaclyn East Extension*, *Jaclyn North Zone* and, to a lesser extent, the *Jaclyn South Zone*. Over 50% of the holes drilled in this area encountered visible gold mineralization.

Following termination of the Placer Dome option, in 2005, Rubicon secured a similar agreement, with Crosshair, lasting until the end of 2006, at which time Rubicon's interest in the project was transferred to Paragon Minerals Corp. – a company formed, by Rubicon, for divestment of its Newfoundland exploration assets. Paragon managed additional drilling programs (in partnership with Crosshair) on the *Jaclyn Main* and *Jaclyn North* zones, until 2007. Crosshair then commissioned a mineral resource estimate on the *Jaclyn (Main) Zone*, utilizing all relevant drill hole data covering the period 2002-2007. The same was completed by Larry R. Pilgrim (P.Geo., B.Sc.) and Gary H. Giroux (P.Eng., M.Sc.), on April 30, 2008, which provided an inferred mineral resource calculation of 921,000 tonnes averaging 3.02 g/t Au (89,500 oz. contained gold).

Following a downturn in the exploration industry, beginning in 2007, no further work was conducted over the *Jaclyn Zone* area until drilling was resumed, by Crosshair, in February, 2010; final drilling was completed on the zone in May, 2010. During this time, some infill drilling was conducted along the central part of the *Jaclyn Main Zone* as well as along its projected east-northeasterly extension (*Jaclyn East Zone*). This latest drilling established the auriferous *Jaclyn Main* quartz vein system as having a total 'open-ended' strike dimension of 975 m and an open vertical depth extension of 400 m (Sparkes, 2010). Descriptions of the *Jaclyn Main* and other prospects of the Golden Promise Property are presented in Section 8 (Deposits Types).

The infill drilling, on the *Jaclyn Main*, was carried out in preparation for a planned bulk sample test performed by Crosshair, in November, 2010. The latter operation involved the extraction of a 2,241-tonne bulk sample, from the (trenched) surface expression of the vein system, which returned an average grade of 4.47 g/t Au (Wallis, 2010).

At the time of the 2003 Rubicon/Placer option agreement (on the original *Golden Promise Property*), adjoining claims to the southwest, also staked by Rubicon (in 2002) – comprising the *South Golden Promise Property* – were the subject of a separate option agreement, signed on February 14, 2003, with International Lima Resources Corp. (name changed to Crosshair Exploration & Mining Corp., March 1, 2004). Initial exploration work performed on the latter property area (originally consisting of Mineral Licences 9050M, 9051M & 9052M) was similar to, and concurrent with, that carried out to the northeast, under the Rubicon/Placer JV arrangement. This included an airborne EM/Magnetic survey (totalling 2,382.5 line-kms) flown by Fugro Airborne Surveys, in November, 2003.

As in the case of the former *Golden Promise Property*, reconnaissance prospecting and sampling over the former *South Golden Promise Property*, led to the identification of numerous gold and/or arsenic soil anomalies, as well the discovery of abundant, auriferous, quartz float. Follow-up trenching, at one of the soil anomalies (120 ppb Au), resulted in the discovery of the *Linda/Snow White Gold Occurrence*, in 2004 – a composite quartz vein system, up to 5 m wide, exposed over a 170-metre northeast to east-northeast trend. Grab samples from the site returned numerous Au values in the range of 1.47-9.6 g/t Au, as well as a few exceptionally high values, of 41.67 g/t, 105.28 g/t and 232 g/t Au. Channel sampling results, although not outstandingly high, for the most part, did produce a grade of 29.7 g/t Au over 0.5 m. A 2006 diamond drill program delineated the quartz vein zone over a strike trend of 280 m and to a vertical depth of 115 m, returning a best intercept of 19.5 g/t Au over 1.15 m (incl. 63.3 g/t Au /0.35 m) (Morgan, Pickett & Froude, 2006).

Whereas all of the above-mentioned auriferous quartz vein occurrences are hosted by sedimentary rocks, a second discovery in the (former) *South Golden Promise Property* area, reveals numerous gold-bearing quartz veins cutting a gabbro intrusive. Here a gold showing, known as the *Gabbro Occurrence*, has yielded grab sample results of up to 2.62 g/t and 10.04 g/t Au, thus, highlighting the potential for other prospective gold environments in the general property area.

Initial work, by Great Atlantic, on the *Golden Promise Property*, was carried out during May-June, 2017, by geologist, David Martin (P. Geo) and assistant/pro prospector, Bruce Stewart, both of New Brunswick. The program consisted of preliminary/reconnaissance prospecting, rock and soil sampling, focused mainly around the sites, or general areas, of earlier-discovered (float and bedrock) quartz vein-hosted gold mineralization. The immediate objective of this work was to satisfy assessment requirements due on various mineral licences – 24015M, 24017M, 241018M, 24021M, 21474M, 25067M, 21281M, 24305M & 21970M – while providing some measure of due diligence with respect to verifying earlier-reported gold occurrences and gaining some perspective on the exploration potential of the property geology in general. With respect to the work assessment on Mineral Licence 21281M, a mechanized trenching program was implemented, during June-July, 2017, to ascertain further east-northeastward strike extensions of the *Jaclyn North* and *Jaclyn South* (gold-bearing) quartz vein systems, partially defined by historical drilling.

Project supervision and sampling activities during 2017 were directed by D. Martin, while trench mapping and additional sampling was carried out in 2017 by a co-author (W. Jacobs).

Great Atlantic conducted additional reconnaissance prospecting and soil / rock geochemical sampling during 2018 on the property in multiple mineral licences, of which partial analytical results have been received. The program was conducted by Paul Delaney (P.Geo.) and assistant Art Clarke. David Martin (P.Geo.) conducted a portion of the prospecting / rock sampling. Paul Delaney (P.Geo.) supervised the program.

A summary of the work performed by Great Atlantic, on the *Golden Promise Property*, is presented in Section 9 (Exploration).

Drilling investigations, to date, have focused, mainly, on evaluation of the multiple quartz vein systems comprising the *Jaclyn Zone* (of Mineral Licence 21281M) and the *Linda/Snow White Zone* (Mineral Licence 21970M). These and other targets remain as ‘open-ended’ targets for future investigation; elsewhere, numerous, angular, gold-bearing, quartz fragments and boulders – representing frost-heaved and glacially-transported material – are widespread throughout the

property area, attesting to the high probability of many, yet undiscovered, bedrock sources. Numerous boulder (grab sample) assays include values in the range of 10 g/t to 353.4 g/t Au.

### **2.3 Sources of Information**

The principal sources of information for this report, as listed in Section 27 References are:

- Industry Assessment Reports, as submitted to the Newfoundland and Labrador Department of Natural Resources, for maintenance of Mineral Licences — such records being maintained under the government's Geofile database.
- Technical In-House Reports prepared for Rubicon Minerals Corp. and Crosshair Exploration & Mining Corp.
- Government Publications covering various aspects of the regional geology of central Newfoundland — namely studies/reports by the NL Geological Survey and Geological Survey of Canada (GSC).
- Academic Studies/Journals
- Press Releases obtained from the websites of Marathon Gold Corp. and Antler Gold Inc., as it relates to gold prospects/occurrences being explored in the southern portion of the Victoria Lake Supergroup (quoted in Sections 7.1.1 and 25 of this report).
- Observations made, by the author (Jacobs), during work-related property visits/assessments.
- Personal knowledge of gold occurrences and deposits.



### **3 RELIANCE ON OTHER EXPERTS**

During the preparation of this report, the authors relied, *mainly*, on the sources of information listed above. In relation to the 2017 and 2018 mineral exploration work performed by Great Atlantic, the authors relied on communications with, and field and assay data obtained from, geologist, David Martin (P. Geo.) who had conducted work on a number of mineral licences comprising the Property area during May-June 2017 and 2018. That information/data was obtained for the purpose of preparing assessment reports (filed with the NL Department of Mines) on behalf of Great Atlantic. This assessment work comprises part of the present NI 43-101 report as detailed in Section 9 (2017 Exploration Program).

## 4 PROPERTY DESCRIPTION AND LOCATION

The property consists of 16 Mineral Licenses totaling 661 claims (16,525 hectares), contained within National Topographic Sheet (NTS) area 12A/16 (as shown in Fig. 2.2 and listed in Table 4.1). The claims extend from 1.5 to 34 km southwest of the Trans Canada Highway (TCH) and the town of Badger, located in central Newfoundland.

Any proposed exploration on the property involving any disturbance of the environment, such as trenching, drilling, bulk sampling or line cutting, requires exploration approval from the Department of Natural Resources (through the Application for Mineral Exploration Approval), in which specifics of the proposed program(s) are outlined and submitted. This is routine practice which has covered previous such activities on the Golden Promise Property and exploration, in general, in the province of Newfoundland and Labrador.

There are no known factors or risks that has affected (or is expected to affect) access, title, or the right or ability to perform work on the property.

### 4.1 Claims Acquisition, Ownership and Status

The northeastern section of the *Golden Promise Property* consists of 10 mineral licences (310 claims) under option from William Mercer, of Grand Falls-Windsor, NL. These licences include 022313M, 024015M, 024017M, 024018M, 024021M, 021281M, 021474M, 025067M, 025477M and 025916M. The southwestern portion of the property includes 3 mineral licences – 024305M, 024311M and 021970M (106 claims), under option from Unity Resources Inc. Mineral Licence 021970M (4 claims) was transferred, from Chad Kennedy, to Unity Resources, on July 27, 2018. The remaining 3 licences – 025156M, 025161M and 025162M (245 claims) – were staked by Great Atlantic, in June, 2017, to expand and consolidate the southwestern claims position and render contiguous the entire Mineral Licence assemblage.

Under the Newfoundland & Labrador Provincial Mining Regulations, mineral licences (claims) are acquired through online map-staking under the Mineral Rights Administration System (MIRIAD). Individual claims comprise a 500-metre x 500-metre area (25 hectares), constituting a one-quarter part of a UTM (Universal Transverse Mercator) grid square which, in mid latitudes, measures approx. 1000 metres x 1000 metres (this coordinate grid area diminishes in size with convergence of lines-of-longitude towards the poles).

Under the above regulations, an individual Mineral Licence may consist of any number of contiguous claims (units), up to a maximum of 256, which are issued for a term of five years. However, the same may be held for a maximum period of 30 years provided annual assessment requirements are met and renewal fees are paid.

Minimum assessment requirements or work-related expenditures necessary for maintenance of claims, on an annual basis, are:

\$200 per unit for the first year

\$250 per unit for the second year

\$300 per unit for the third year

\$350 per unit for the fourth year

\$400 per unit in the fifth year

\$600/unit for each year of the first extended term (years 6-10)

\$900/unit for each year of the second extended term (years 11-15)  
 \$1,200/unit for each year of the third extended term (years 16-20)  
 \$2000/unit for each year of the fourth extended term (years 21-25)  
 \$2500/unit each year of the fifth extended term (years 26-30)

(After Ministry of Mines and Energy, Government of Newfoundland and Labrador)

The above-mentioned Mineral Licences, held by William Mercer and Unity Resources Inc., are subject to separate option agreements with Great Atlantic Resources Corp., as described in Section 4.2 below. The present tenure status of all mineral licences comprising the *Golden Promise Property*, including current assessment expenditure requirements as of the completion date of this report, is presented in Table 4.1.

Table 4.1 – Mineral Licence Status Golden Promise Property

Licence No.	No. Claims	Issuance Date	Work-Due-Date	Report-Due-Date	Expenditures Required to Work-Due-Date	Registered Licence Holder
24015M	82	27JUN016	27JUN018	26AUG019	\$14,260.24	William Mercer
24017M	114	27JUN016	27JUN018	26AUG019	\$20,259.20	William Mercer
24018M	21	27JUN016	27JUN018	26AUG019	\$2,281.04	William Mercer
24021M	8	27JUN016	27JUN018	26AUG019	\$206.13	William Mercer
22313M	4	14JUL014	14JUL018	12SEPT019	\$1004.29	William Mercer
25916M	7	16JUL015	16JUL018	14SEPT019	\$1,270.52	William Mercer
21474M	2	26SEPT013	26SEPT019	25NOV019	\$448.87	William Mercer
25477M	6	14OCT014	14OCT019	13DEC018	\$2,308.17	William Mercer
25067M	12	18MAY017	18MAY019	17JUL019	\$2,259.79	William Mercer
21281M	54	21JUN002	21JUN020	20AUG019	\$62,144.96	William Mercer
25156M	132	09JUN017	09JUN018	08AUG019	\$26,400.00	Great Atlantic Res
25161M	85	09JUN017	09JUN018	08AUG019	\$17,000.00	Great Atlantic Res
25162M	28	09JUN017	09JUN018	08AUG019	\$5,600.00	Great Atlantic Res
21970M	4	20MAR014	20MAR019	20MAY019	\$705.00	Unity Resources
24311M	16	14NOV016	14NOV018	15JAN019	\$3,750.00	Unity Resources
24305M	86	14NOV016	14NOV018	15JAN019	\$15,701.00	Unity Resources
Total Claims: 661						

## 4.2 Property Option Agreements

### 4.2.1 Mercer Option Agreement

Under the Mercer agreement, dated July 5, 2016, Great Atlantic Resources Corp. (the Optionee), may acquire a 100% interest in the ten (10) Mineral Licences registered to the Optionor, William Mercer (as per Table 4.1, above), by making certain cash payments and share payments of common shares (of Great Atlantic Resources Corp.) to William Mercer. The terms and amounts of

such shares and cash payments (in Canadian dollars) to be paid to William Mercer are as outlined in Sections 2 and 8 of the Great Atlantic-Mercer Agreement (as follows):

*Sect. 2 of the Great Atlantic Resources Corp.- Mercer Agreement*

2.1 Optionor hereby grants to Optionee the sole and exclusive Option to acquire a 100% right, title and interest in and to the Property on the terms set out herein.

2.2 In order to exercise the Option and to maintain the Option in good standing, Optionee must:

(a) pay to Optionor:

(i) CAD\$35,000 in cash within 3 Business Days of the Effective Date;

(ii) an additional CAD\$65,000 in cash on or before the first anniversary of the Effective Date;

(iii) an additional CAD\$125,000 in cash on or before the second anniversary of the Effective Date;

(iv) an additional CAD\$145,000 in cash on or before the third anniversary of the Effective Date; and

(v) an additional CAD\$150,000 in cash on or before the fourth anniversary of the Effective Date (collectively, the "Option Payments");

(b) issue and deliver to Optionor:

(i) such number of common shares of Optionee equal to CAD\$50,000 on TSX approval on the Effective Date;

(ii) such number of common shares of Optionee equal to CAD\$50,000 on or before each of the first and second anniversaries of the Effective Date;

(iii) such number of common shares of Optionee equal to CAD\$125,000 on or before the third anniversary of the Effective Date;

(iv) such number of common shares of Optionee equal to CAD\$225,000 on or before the fourth anniversary of the Effective Date (collectively, the "Share Issuances"); as determined by the 60-day volume weighted average closing price on the TSXV and in accordance with, and subject to, applicable corporate and securities laws and the policies of the TSXV. If the trading price cannot be calculated on such date in the manner provided above, the trading price shall be the fair market value as determined in good faith by Optionee; and

(c) incur Expenditures as follows:

a minimum of CAD\$500,000 on or before the fourth anniversary of the Effective Date;

all of which such Option Payments, Share Issuances and Expenditures may be accelerated at Optionee's sole discretion.

2.3 Once Optionee has fulfilled the obligations in Section 2.2, Optionee will be deemed to have exercised the Option and to have acquired a 100% right, title and interest in and to the Property.

2.4 Optionee has the right to pay cash in lieu of any portion of the Share Issuances.

*Sect. 8 of the Great Atlantic Resources Corp.- Mercer Agreement – Gross Overriding Royalty*

8.1 In the event Optionee exercises the Option and acquires a 100% right, title and interest in and to the Property, Optionor shall thereafter be entitled to a 2% to 2.5% sliding scale gross overriding royalty with respect to the Property on the terms set out in Schedule "C" (the "Gross Overriding Royalty"), payable upon the commencement of Commercial Production such that at gold prices less than or equal to USD\$1,500 per ounce, the Gross Overriding Royalty is a 2% Gross Overriding Royalty and at gold prices greater than USD\$1,500 per ounce, Gross Overriding Royalty is a 2.5% Gross Overriding Royalty.

8.2 Optionee shall be entitled to buy down 1% of the Gross Overriding Royalty at any time in consideration for the payment of CAD\$1,000,000 to Optionor and the sliding scale under Section 8.1 shall accordingly be adjusted to 1% and 1.5%, respectively.

8.3 Optionee shall pay to Optionor, as a minimum annual advance royalty, commencing on the seventh anniversary of the Effective Date (and thereafter on or before each subsequent anniversary date of the Effective Date), the sum of CAD\$20,000 (the "Advance Royalty Payments"). All such Advance Royalty Payments paid by Optionee will be credited towards the Gross Overriding Royalty due to Optionor.

8.4 All precious metals removed from the property by the optionee shall be subject to the Gross Overriding Royalty at the current price of the of the precious metals when removed.

**4.2.2 Unity Resources Inc. Option Agreement**

Under the Unity Resources Inc. agreement, dated May 1, 2017, Great Atlantic Resources Corp. (the Optionee), may acquire a 100% interest in the three (3) Mineral Licences registered to the Optionor, Unity Resources Inc. (as per Table 1, above), by making certain cash payments and share payments of common shares (of Great Atlantic Resources Corp.) to Unity Resources Inc. The terms and amounts of such shares and cash payments (in Canadian dollars) to be paid to Unity Resources Inc. are as outlined in Sect. 2 of the Great Atlantic-Unity Resources Agreement (as follows):

*Sect. 2 of the Great Atlantic Resources Corp.- Unity Resources Inc. Agreement*

2.1 Optionor hereby grants to Optionee the sole and exclusive Option to acquire a 100% right, title and interest in and to the Property on the terms set out herein.

2.2 In order to exercise the Option and to maintain the Option in good standing, Optionee must:

- (a) pay to Optionor:
  - (i) 1,000,000 common shares of the Optionee within ten (10) days of the Approval Date;

(ii) CAD\$10,000 in cash and/or common shares of the Optionee at the sole discretion of the Optionee on or before the first anniversary of the Approval Date;

(iii) an additional CAD\$10,000 in cash and/or common shares of the Optionee at the sole discretion of the Optionee on or before the second anniversary of the Approval Date;

(iv) an additional CAD\$10,000 in cash and/or common shares of the Optionee at the sole discretion of the Optionee on or before the third anniversary of the Approval Date;

(v) an additional CAD\$50,000 in cash and/or common shares of the Optionee at the sole discretion of the Optionee on or before the fifth anniversary of the Approval Date; (collectively, the "Option Payments");

all of which Option payments may be accelerated at the Optionee's option. All common shares of the Optionee issued pursuant to this Agreement will be calculated by dividing the cash value by the 10-day volume weighted average price of the common shares of the Optionee on the Exchange or such other principal stock exchange on which the shares are then listed, and subject to a minimum issue price of \$0.05 per share.

2.3 Once Optionee has fulfilled the obligations in Section 2.2 (of this Agreement), Optionee will be deemed to have exercised the Option and to have acquired a 100% right, title and interest in and to the Property. The Optionee may at any time after it has satisfied its obligations under Sect 2.2 (of this Agreement) confirm the exercise of the Option by delivering a notice to the Optionor.

2.4 Optionor hereby acknowledges that Optionee's ability to issue securities is subject to applicable securities laws and to the rules and policies of the stock exchange on which the common shares of Optionee are listed and the securities issuable to Optionor hereunder will be subject to resale restrictions imposed by applicable securities legislation and the rules of any stock exchange on which the common shares of Optionee are listed, which rules may require that a restrictive legend be placed on all certificates delivered to Optionor under this Agreement, and Optionor covenants, and agrees with Optionee to abide by all such resale restrictions

2.5 Optionee shall be entitled to be the Operator for the duration of the Option.

2.6 The Option is an option only and except as specifically provided otherwise, nothing herein contained will be construed as obligating the Optionee to do any acts or make any payments hereunder except as otherwise set forth, and any act or acts or payment or payments as may be made hereunder will not be construed as obligating the Optionee to do any further act or make any further payment or payments.

*Sect. 8 of the Great Atlantic Resources Corp.- Unity Resources Inc. Agreement – Net Smelter Returns Royalty*

8.1 In the event Optionee exercises the Option and acquires a 100% right, title and interest in and to the Property, Optionor shall thereafter be entitled to a 3% net smelter returns royalty with respect to the Property on the terms set out in Schedule "B" (the "NSR Royalty"), payable upon the commencement of Commercial Production.

8.2 Optionee shall be entitled to buy down a maximum of 2% of the NSR Royalty (i.e. 2/3 of the 3% NSR Royalty) from Optionor at any time by payment to Optionor of CAD\$500,000 for each 1% leaving Optionor with a minimum of 1% remaining NSR Royalty.

8.3 Optionee shall pay to Optionor, as a minimum annual advance royalty, commencing on the seventh anniversary of the Approval Date (and thereafter on or before each subsequent anniversary date of the Approval Date), CAD\$10,000 in cash and/or common shares of the Optionee at the sole discretion of the Optionee (the "Advance Royalty Payments") for a maximum period of ten years. All such Advance Royalty Payments paid by Optionee will be credited towards the NSR Royalty due to Optionor.

## **5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **5.1 Property Access**

The Golden Promise Property is quite accessible for the most part, being traversed – for nearly its entire northeast/southwest trend – by the Buchans Highway which exits the TCH at the town of Badger (Fig. 2.2). Also, a number of forestry/logging roads branch from the highway, providing additional access to the northwest. The Exploits River, which flows parallel and adjacent to the highway precludes direct access, by vehicle, to the southeastern claims. Thus, entrance into this area is best gained via logging roads (including network/secondary routes) which extend from the Exploits River bridge, at Grand Falls-Windsor, located roughly 35 km east of the mid-section of the property (Fig. 5.1). The south-southeasternmost claims may be more quickly reached via logging routes extending roughly 15 km northwest from the former Duck Pond Mine road.

### **5.2 Climate**

The climate for Newfoundland is largely moderated by marine conditions of the Atlantic Ocean with, therefore, little incidence of extreme seasonal temperatures. In general, the island of Newfoundland experiences an average summer temperature of 16°C (intermittently up to 20°C) and winter temperature of around 0°C (occasionally down to -20°C). Snowfall can be substantial during more moderate temperatures due to moisture-laden winds off the ocean. Pleasant outdoor working conditions, with occasional rainfall, generally persist from late spring to mid fall.

### **5.3 Local Resources and Infrastructure**

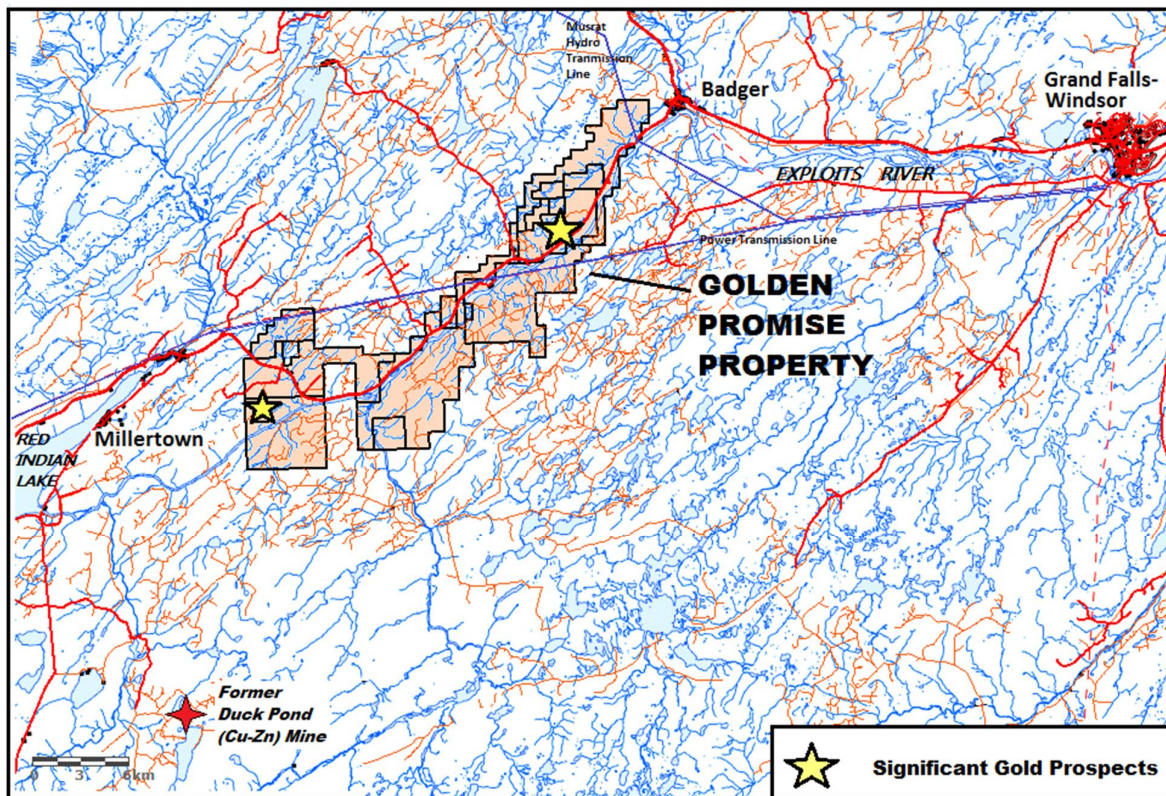
The town of Badger (pop. 700), located on the TCH, 1.5 km east-northeast of the property, is conveniently located with respect to worker accommodations and equipment contract services. Important commercial/industrial centres for the region, however, are represented by the towns of Grand Falls-Windsor (pop. 14,170) and Gander (pop. 11,700), located 25 km and 135 km farther east along the TCH, respectively (Fig. 2.1). Gander is also recognized as an international airport centre.

Exploration services for the region are based in the Springdale-Halls Bay area, roughly 70 km north of Badger, via the TCH (Fig. 2.1). These services include an assay laboratory (Eastern Analytical Ltd), diamond drilling companies, and line-cutting and geochemical sampling contractors. Mining-related infrastructure for the area includes the recently-closed Duck Pond (Cu-Zn) mine/mill facilities (of Teck Resources Ltd), located at a road distance of roughly 42 km south-southwest of the property (Figs. 2.1 & 5.1), and a concentrate storage/shipping facility, at Goodyear's Cove, near Springdale; the latter facility is presently used by Rambler Mines (located on the nearby Baie Verte Peninsula) to ship copper and gold concentrate. The historical mining town of Buchans, located 35 km west of the southwestern end of the property, hosts a large government-run core storage facility.

Two hydro-power transmission lines traverse the property area, including the newly-constructed (2017) Muskrat Falls hydro-electric transmission line which crosses the northeasternmost claims, and an older powerline crossing the central property area, just 2.0 km south of the *Jaclyn Zone* gold prospects (Figs. 2.2 & 5.1).



Figure 5.1 - Property Location and Access.



#### 5.4 Physiography

The entire property area is part of a broad valley system occupied by the northeast-flowing Exploits River (Figs. 2.2 & 5.2) which flows from an elevation of 130 m above sea level (ASL), in the southwest (near Red Indian Lake), to 100 m ASL, in the northeast (at Badger). The topography is characterized by mainly gently to moderately sloping, hilly terrain, with local flat areas, with steep hills present, locally, in the southwestern claims area. The northeastern one-third section of the property exhibits a gentle rise in elevation, to a maximum of 190 m ASL (northwest of the river), while the remaining southwestern section rises to 250 m ASL, northwest of the river, and 290 m ASL to the southeast – the latter area, having locally steep, prominent, hills/ridges just southwest of the confluence of the (large) Noel Paul's Brook with the Exploits River. The course of this brook, within the claims area, is marked by a steeply incised valley cutting north across the above-mentioned hills/ridges (Fig. 2.2). Numerous, other, small to medium sized, brooks and streams enter the Exploits from the northwest and southeast throughout the property area.

The property is heavily-forested, for the most part, with mature spruce and fir and lesser tamarack and birch, albeit with patchy, old to recent, cut-over areas and scattered small to large open bogs. Along the northeastern corner area of Lic. 25162M (far west-southwestern property area), extensive, NE-trending, linear, bogs are present, coinciding with the general trace of the regionally-extensive Red Indian Line tectonic structure.

The northeastern one-third section of the property is largely devoid of forest cover due to a combination of 18-year-old forest fire effects and logging (salvaging) operations. Consequently, only scattered patches of mature forest exist in this area, mainly along streams and/or low valley areas, having been replaced in all other areas, by sparse young tree growth and extensive berry scrub.

Another dominant, though less conspicuous, feature of the property is the presence of extensive glacial (gravel and boulder) till, varying in thickness, from shallow to deep ( $\leq 5\text{m}$ ), thereby, resulting in little bedrock exposure. Glacial striae, craig and tail features, and stoss-and-lee forms indicate the last major ice-flow direction to be northeast (Sparkes & Vanderveer, 1980)(Fig. 5.3). Previous workers to the Golden Promise property have noted a glacial striae orientation of  $058^\circ$  Azimuth (Newport, 2003).



Figure 5.2- Topographic image of the Golden Promise Property area showing the main gold occurrences (image after Google Maps).

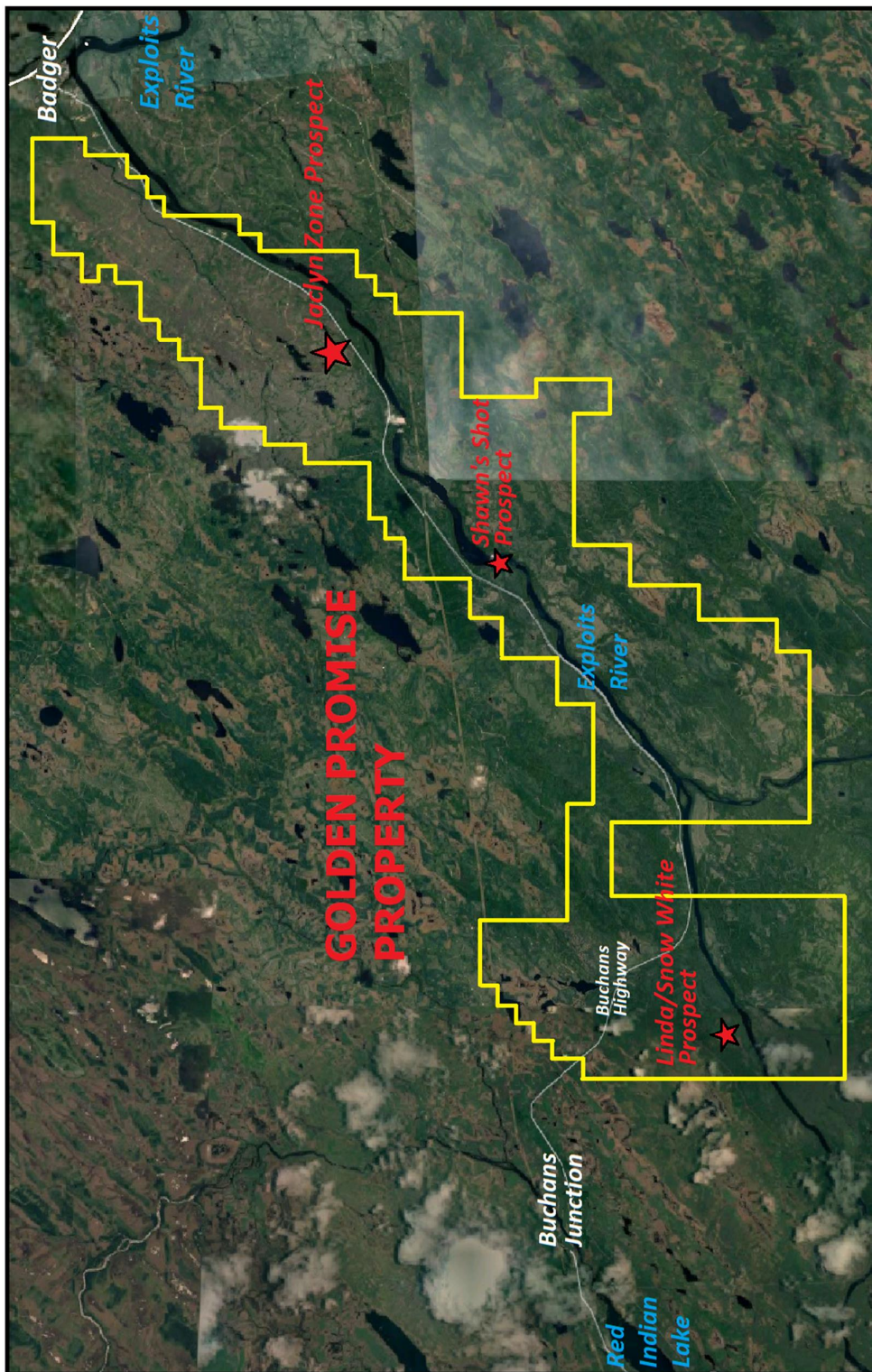
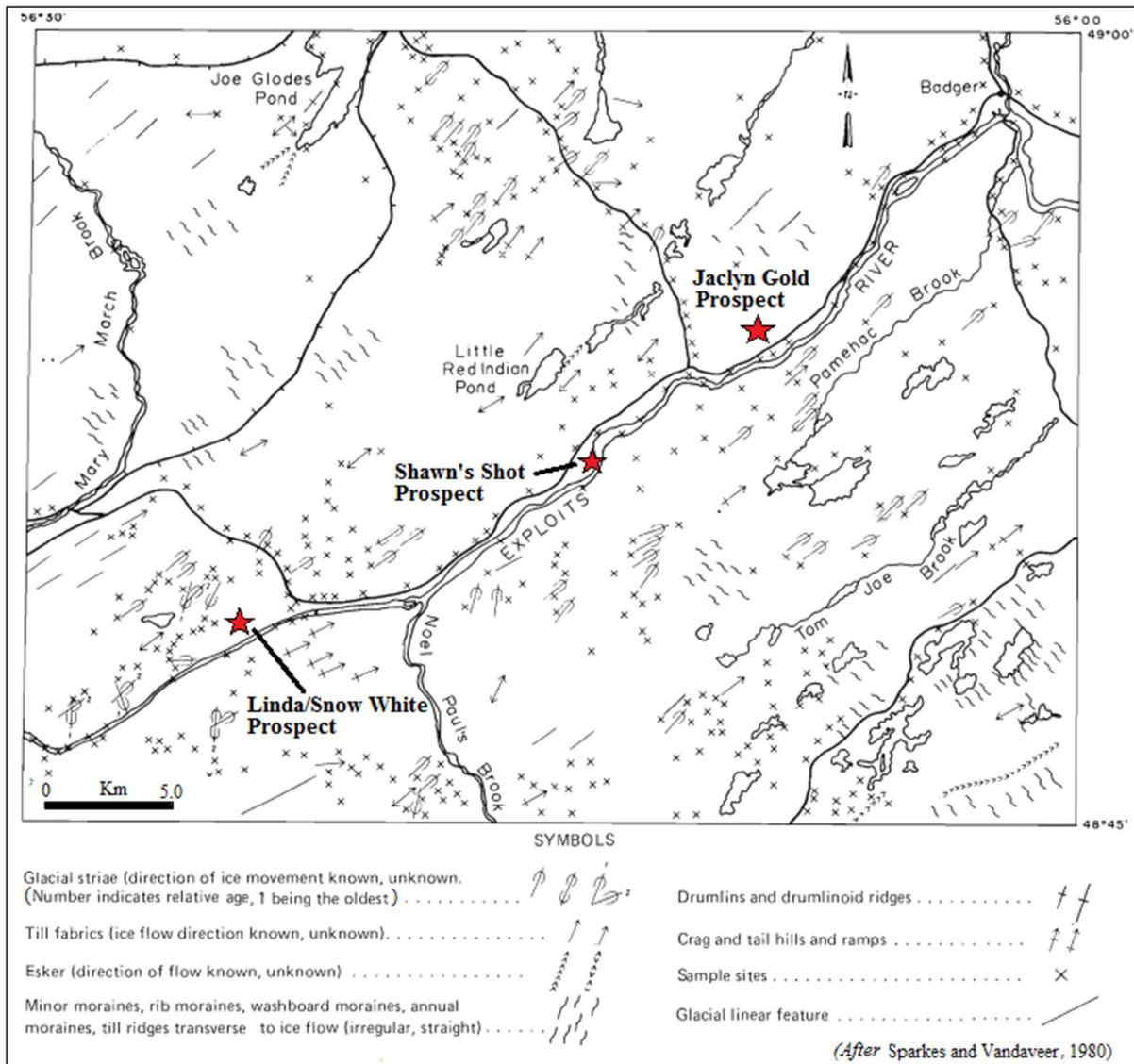


Figure 5.3 - Glacial features showing ice-flow directions for the NTS 12A/16 area.



## 6 HISTORY

Apart from minor prospecting activities, no focused or detailed exploration efforts for gold or base metals were performed over the present property area prior to 2002. However, in 1966, the area was part of a regional (640 sq. mi.) airborne EM/Mag survey, by Selco Exploration Co. Ltd/McIntyre Porcupine Mines Ltd (Lazenby, 1966), that extended from Red Indian Lake (19 km WSW of the present property) to the Grand Falls area, 30 km to the east. The survey was the first to reveal the regional extent and general folded outline of the (conductive) Caradocian shale sequence.

A forest fire which swept the northeastern property area (west of the Buchans Highway), in 1999, followed by several years of timber salvaging operations, resulted in enhanced ground visibility and exposure which favoured prospecting investigations by former Badger resident, and prospector, William Mercer. During mid-May, 2002, W. Mercer reported the discovery of abundant angular quartz float (boulders), containing significant amounts of visible gold, in the immediate area of the later-discovered *Jaclyn Zone* (quartz vein) prospects. A combined sample of several of the float material returned an assay of approx. 30 g/t Au, prompting W. Mercer to stake Mineral Licences 8859M and 8864M (totalling 24 claims) on May 21 and 22, 2002 (Fig. 2.3).

Immediately following the above staking, W. Mercer entered into a "Letter Agreement" with Rubicon Minerals Corp., whereby Rubicon – in exchange for granting W. Mercer certain payments of cash and shares (of Rubicon) – would acquire a 100% interest in the Mercer Licences (8859M & 8864M) and stake a surrounding "area of mutual interest" (subsequently Mineral Licence 8868M); the same would provide W. Mercer a 3 km "area of influence", peripheral to the earlier licences, whereupon all three licences would be subject to the same terms and conditions of the "Letter Agreement". Additional, contiguous, mineral licences were then staked by Rubicon, between June 22, 2002 and October 4, 2002, over the favoured northwestern fringe area of the Victoria Lake Supergroup (Fig. 2.3).

During 2002-2004 a number of gold occurrences were discovered, on the Mercer Option, which underwent preliminary drilling investigations, by Rubicon (2002) and, later, by joint venture (JV) partners Rubicon and Placer Dome Canada Ltd (2003-2004). Further advanced drilling, involving other JV arrangements, took place on the *Jaclyn Zone* prospects between (and inclusive of) 2006 and 2010 (as detailed in the Sections 6.1 and 6.2).

Coinciding with the earlier work on the Mercer Option, Rubicon entered into a separate joint venture agreement (on Feb 14, 2003) with International Lima Resources Corp. (now Crosshair Exploration & Mining Corp., as of Mar 1, 2004), on its southwestern-most claims group (*South Golden Promise Property*). Here, another significant (gold-bearing) quartz vein system, known as the Linda-Snow White prospect, was discovered, by Crosshair, in 2004, and drilled in 2006. Given these separate developments, a chronological account of the historical work performed on the present Golden Promise Property is best presented, separately, for the northeastern and southwestern property areas, as follows.

## **6.1 Northeastern Golden Promise Property area (2002-2010)**

### **6.1.1 Rubicon Minerals Corp. (2002-2003)**

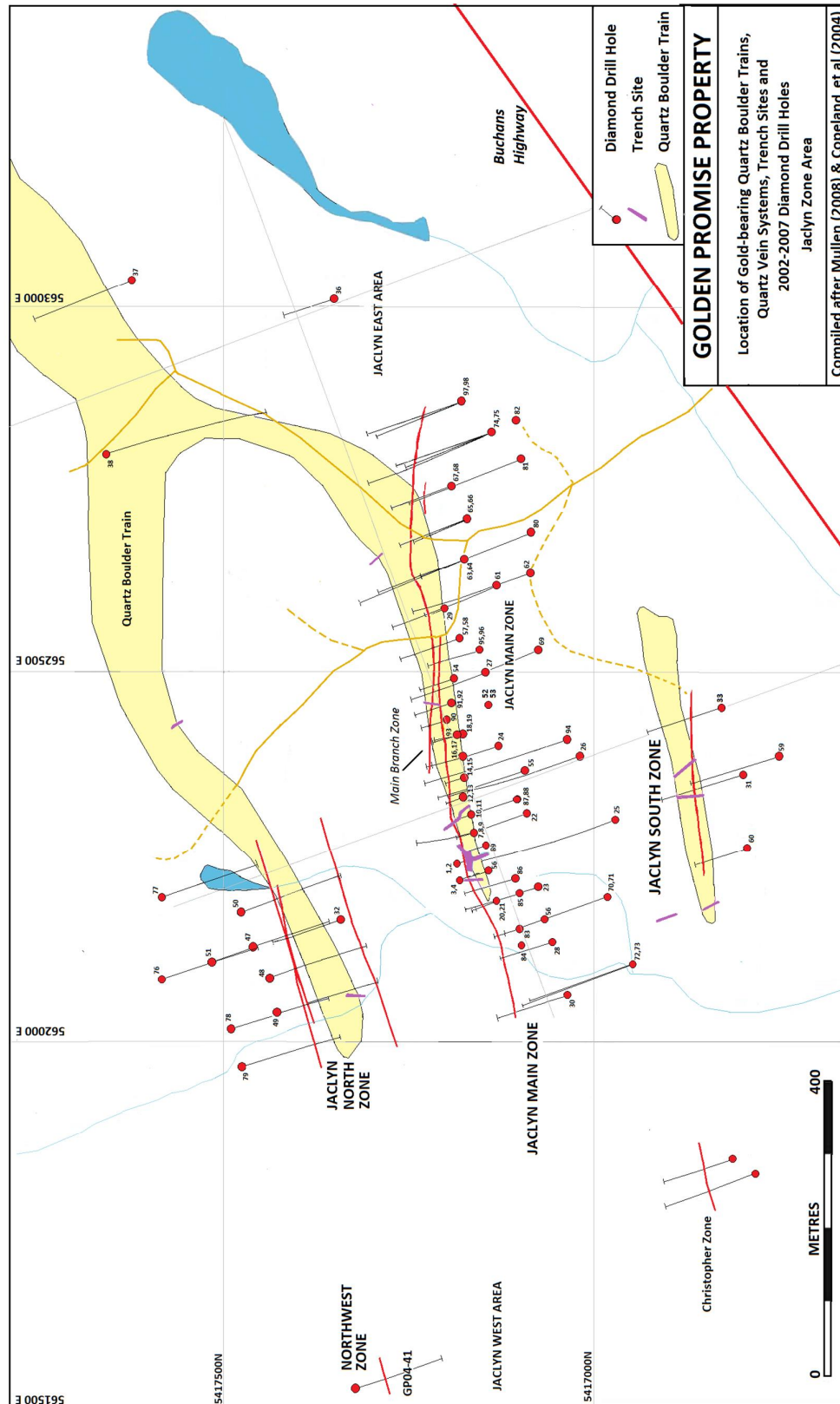
In May, 2002, Rubicon Minerals Corp. acquired an option on the property based on the above-mentioned Mercer discovery. During June and July 2002, the company conducted a property-wide prospecting program to determine the source of the gold-bearing quartz float. This led to the identification, initially, of a 650 m long, ENE-trending, 'glacial quartz-boulder train' coincident with the trace of the later-discovered Jaclyn Main quartz vein system. Grab samples of the surficial quartz float material, measuring up to 1.5 m in size, returned several assays in the range of 10-20 g/t Au and one at 353.4 g/t Au. Subsequently, two sub-parallel, boulder trains of gold  $\pm$  arsenopyrite-bearing quartz were discovered approx. 250 m north and 300 m south of the Jaclyn Main zone, which sites now comprise the Jaclyn North and Jaclyn South quartz vein zones, respectively (Moore, 2003). The overlying boulder trains converge along a common trend 500 m northeast of the prospect area (Fig. 6.1).

Subsequent to the above discoveries, Rubicon conducted a 20 km ground geophysical (magnetic/VLF-EM) survey over the Jaclyn zone area utilizing a 070°-oriented grid baseline (parallel to the trend of the mineralized float) with cross-lines at 50-100 m intervals (Fig. 6.1). A 2.0 km IP survey was also completed within the same grid. The surveys, however, were not considered effective due to limited coverage which precluded sufficiently wide (areal) representation of units and/or structures to enable reliable interpretations.

[**Note**, the above-mentioned terms *Jaclyn North*, *Jaclyn Main* and *Jaclyn South* zones are collectively referred to as the *Jaclyn Zone*. For the sake of brevity (and on account of their numerous mentions in the following sections), these individual zones are, respectively, referred to under the following abbreviations – *JN*, *JM* & *JS* or *JNZ*, *JMZ* & *JSZ*, accordingly].



Figure 6.1 - Location of gold-bearing quartz-float (glacial dispersion) trains, trench sites, quartz vein systems and 2002-2007 drill holes in the Jaclyn Zone (gold prospect) area.



#### 6.1.1.1 2002 Trenching Program

During July, 2002, a total of 9 trenches were excavated over the *Jaclyn Zone* in an attempt to expose a bedrock source for the gold-bearing quartz float. This included 7 trenches, along the *JM* quartz float train, and one, each, at the *JN* and *JS* zones (Mullen, 2003) (Fig. 6.1).

One trench at the *JMZ* exposed a 1-2 m thick quartz vein system (with abundant visible gold) over a distance of 22 m “within a sequence of relatively flat-lying mudstone and greywacke. A narrow mafic dyke was exposed next to the vein” (Mullen, 2003). “Adjacent trenches failed to expose any bedrock due to deep overburden and rapid water inflow” (Copeland & Newport, 2004). The *JS* trench exposed a 6 cm wide quartz-sulphide vein (assaying 38 ppb Au) and a 2 cm quartz-pyrite veinlet (assaying 31 ppb Au) that cut shallow-dipping (10-30°) arkosic sediments. The *JN* trench exposed steeply-dipping (70°), dark grey to black, siliceous sediments with local graphitic seams, and a 17 cm wide zone of semi-massive to nodular pyrite (Mullen, 2003).

#### 6.1.1.2 2002 Drilling Program

During August-Sept, 2002, a 21-hole diamond drill program (GP02-1 to 21) was implemented at the *JM* zone (Figs. 6.1 & 6.2). Seventeen holes intersected quartz veining, fifteen of which encountered visible gold. This first-phase drilling defined the vein system over a minimum strike distance of 225m and to a minimum vertical depth of 50-60m, with intersections of up to 16.57 g/t Au over 2.55m and 68.95 g/t Au over 0.40m (Copeland et al., 2004). The auriferous vein was found to strike generally 080° and dip steeply to the south, cutting siliceous mudstone, siltstone and greywacke. A summary of drill-hole depths and significant mineralized intersections is presented in Table 6.1.

*[Note: for the following drill-core gold (Au) assay grades, presented throughout this report, results are given as the weighted average (fire assay) analysis of the +150 and -150 (screen)-mesh sized sample fractions. As with most all other rock samples herein reported that are strongly suspected of hosting gold – as per criteria outlined in Section 11 or as predetermined by regular fire assay analytical technique – the same are selected for metallics screen preparation whereby the entire sample is pulverized and separated into two size fractions by a standard mesh-size screen/sieve (150 mesh); the separate fractions are specified, for example, as +150 mesh (coarse) and -150 mesh (fine). Following this procedure, each fraction is separately weighed and analyzed by Fire Assay Au, with results then used to calculate a combined (weighted-average) assay result. The two size fractions are separately analyzed to ensure capture of all gold (particularly coarse grains) that may otherwise be excluded (or ‘screened out’) from normal sample mediums prepared for analyses. Also, reported drill-intersection sample widths relate to ‘core lengths’ which do not necessarily reflect ‘true widths’ (TW) – unless a mineralized zone is intersected perpendicularly. Thus, all results are given as ‘core length’ intersections unless otherwise specified as TW].*



Table 6.1 - Rubicon Minerals Corp. - 2002 Drilling Program

Target	Date	DDH (Meters)	Highlights
Jaclyn Main	19AUG-14SEP002	GP02-1 to 21 (1045m)	GP02-01: 16.57 g/t Au/2.55m (incl. 23.4 g/t Au/0.35m) GP02-13: 17.68 g/t Au/2.30m (incl. 65.43 g/t Au/0.60m) GP02-14: 23.14 g/t Au/0.90m GP02-21: 68.95 g/t Au/0.40m (0.21m-TW).
Gold (Au) assay results represent weighted average analyses based on the combined fire assay result of the +150 and -150 mesh sample fractions. TW = True Width.			

### 6.1.2 Rubicon Minerals Corp./Placer Dome Canada Ltd (2003-2005)

On August 29, 2003 Rubicon signed a JV agreement with Placer Dome Canada Ltd (Placer) whereby Placer could earn a 70% interest in the property, albeit, with Rubicon remaining as project operator.

#### 6.1.2.1 2003 Airborne Geophysical Survey

During Oct 21 to Nov 19, 2003, Rubicon and Placer commissioned Fugro Airborne Surveys Corp. to conduct an 8,250 line-km EM/Resistivity/Magnetic airborne survey over the (formerly more expansive) Golden Promise property which extended up to 24 km east beyond the present property boundary (Fig. 7.9).

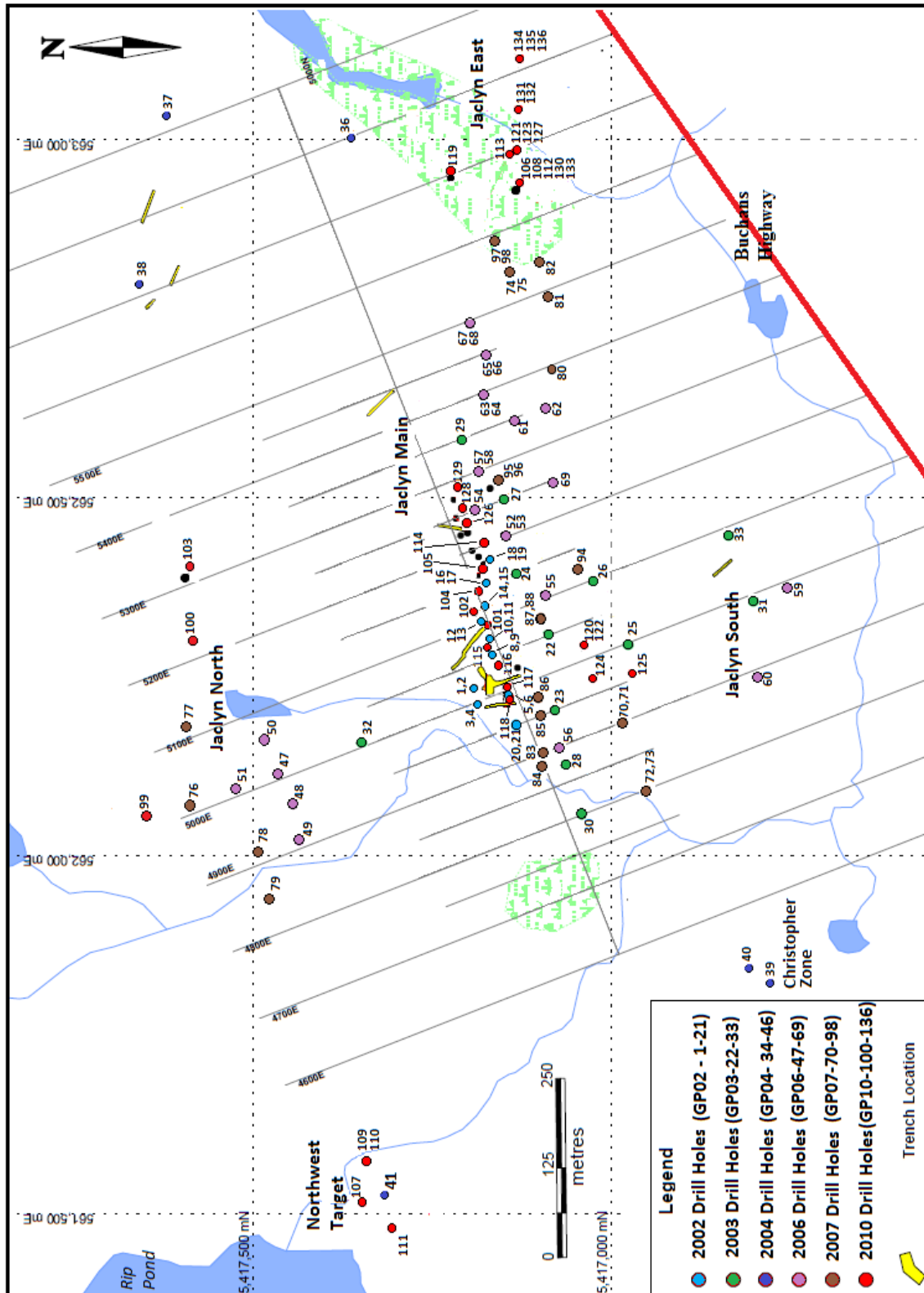
The Resistivity EM survey was useful in outlining the trace of the (conductive) graphitic Caradocian shale sequence which further revealed pronounced NE/SW-trending local and regional-scale fold structures and displacement features representing favorable loci for quartz vein-hosted gold mineralization. "Abrupt transitions from high resistivity to low resistivity units" (as can be seen in Fig. 6.3 ) mark the contact between siliciclastic rocks and the overlying (generally 450 m wide) Caradocian unit (Steele, 2011 & Copeland et al, 2004). Structural discontinuities interpreted from both the airborne EM and magnetic surveys were targeted for follow-up prospecting and sampling activities.

#### 6.1.2.2 2003 Soil Sampling, Prospecting and Rock Sampling

##### ***Jaclyn Zone***

During Oct-Dec, 2003, a soil sampling program, utilizing 100m-spaced lines and 25m sample stations (L47+00E-56+00E, 45+00-55+00N), was implemented over the Jaclyn zone area in advance of further planned drilling. Eleven samples returned strongly anomalous Au assays in the range of 15 ppb to 8995 ppb. Significant multi-station gold anomalies, of greater than 15 ppb, were obtained on all lines crossing the known extent of the *JM*. Anomalous soil assays of up to 102 ppb and 273 ppb Au were obtained over the Jaclyn East area. No anomalous gold geochemistry was obtained over the *JN* and *JS* zones. However, a newly-sampled quartz boulder from the *JN* zone did return an assay of 4 g/t Au (Copeland et al., 2004).

Figure 6.2 - Diamond drill plan of the Jaclyn Zone showing all drill holes from 2002 to 2010).



### Branden, Shawn's Shot & Justin's Hope Occurrences

Property-wide prospecting along the NE/SW structural trend encompassing the *Jaclyn Zone* prospect, led to the discovery of numerous (additional) high-grade gold-bearing quartz boulders up to 8 km 'down-ice' and 'up-ice' from the prospect. However, with the exception of the area of the *Shawn's Shot* (gold) occurrence (located 7.5 km SW of the Jaclyn Zone; Figs. 6.3 & 6.4), the 2003 prospecting program was focused *mainly* to the northeast of the Jaclyn. Approx. 3.5-4.2 km northeast of the latter, several anomalous Au assays were obtained from an extensive quartz float, glacial dispersion, train comprising the **Justin's Hope Occurrence** (Figs. 6.3 & 6.4) – site of a 335.9 g/t Au (9.8 oz/t) assay obtained by W. Mercer. New sample results included 10.2 g/t Au and 116 ppb Au (for quartz float) as well as several values up to 40 ppb Au (for float of quartz and arkosic sediments cut by quartz veins/veinlets). Approx. 0.7 km NE of the 335.9 g/t Au sample site, another quartz float sample returned 99 ppb Au.

Figure 6.3 - 2003 Airborne Survey Resistivity response over the central northeastern Golden Promise Property area (After Copeland & Newport, 2004).

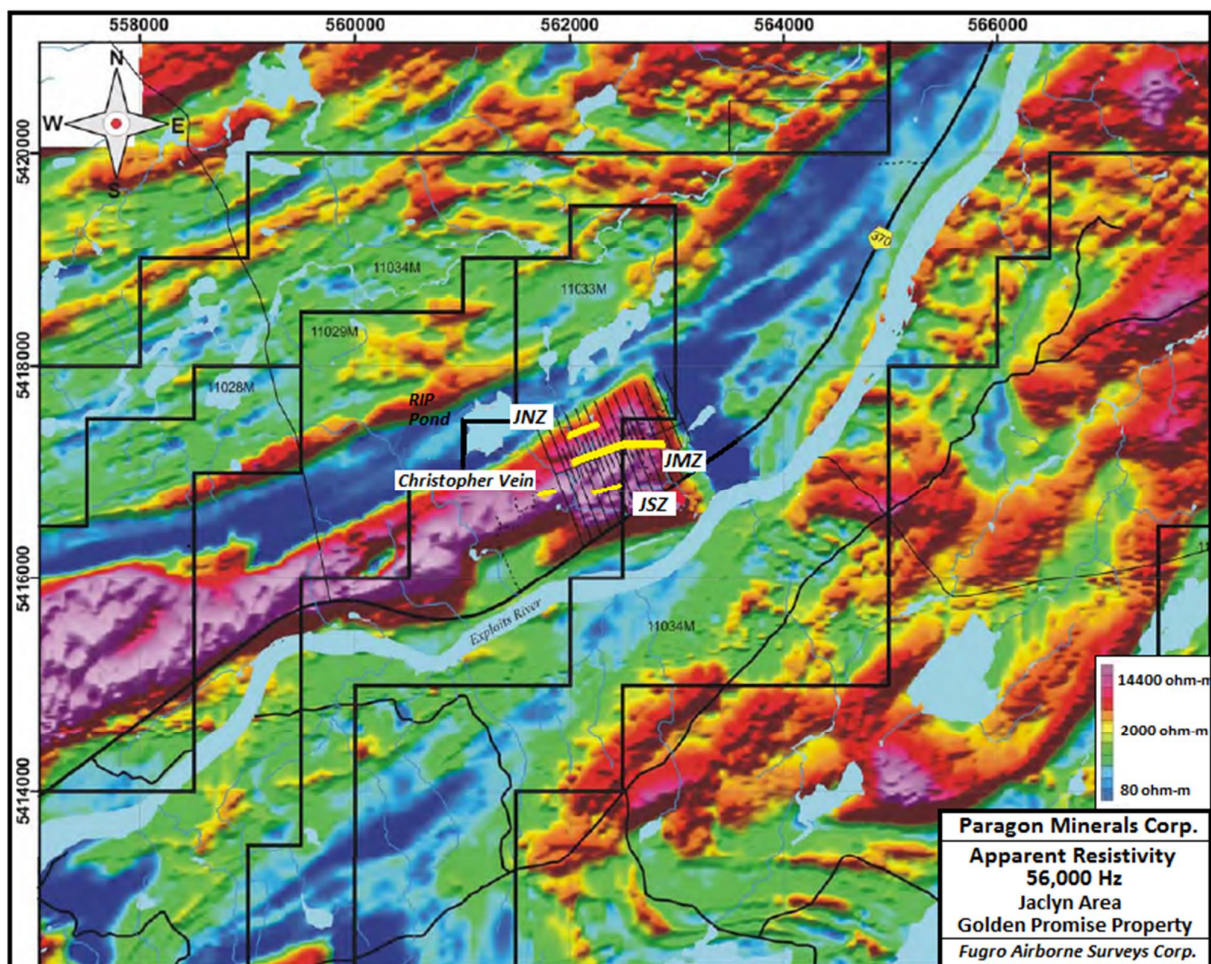
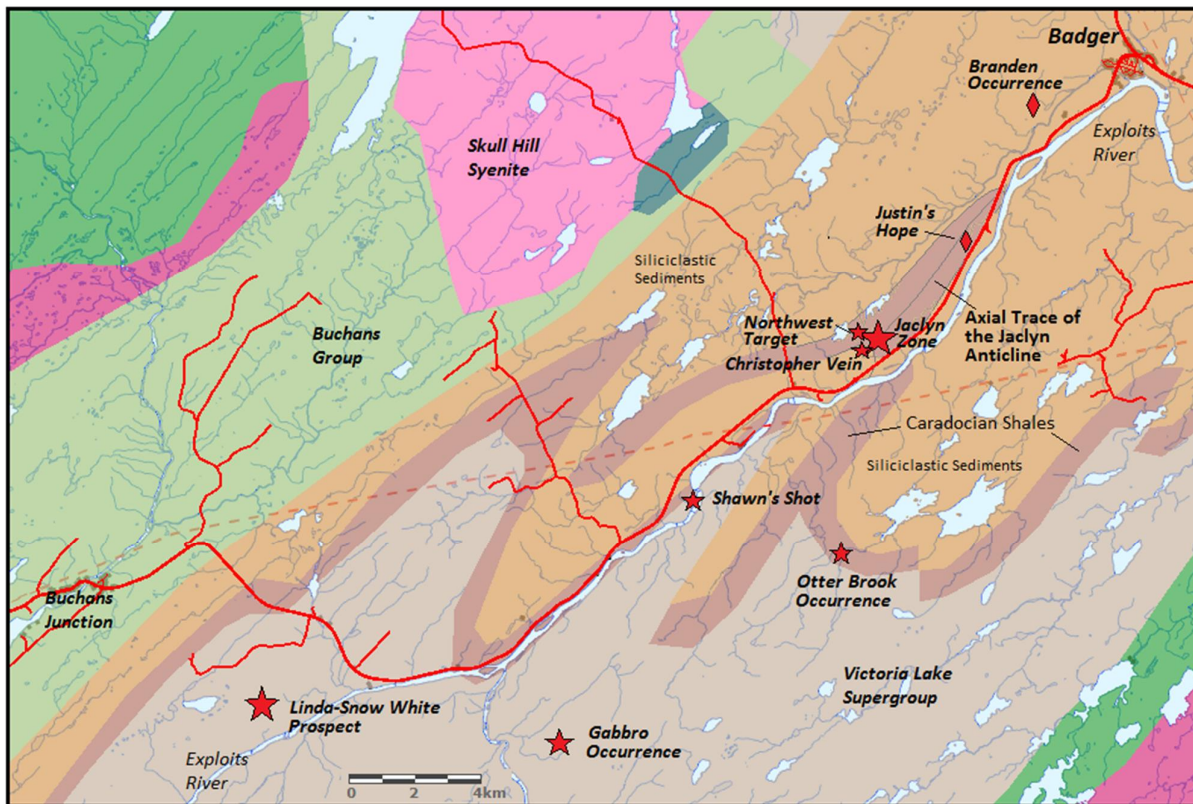




Figure 6.4 - Geological units and gold occurrences of the Golden Promise Property area.



Geological interpretations, based on the 2003 airborne EM survey results (and later drilling results, discussed below) reveal the *Jaclyn-Justin's Hope* trend to be underlain by folded Caradocian shales disposed along the axial trace of the Jaclyn Anticline (Fig. 6.4). In the *Justin's Hope* area, the Caradocian shales are reportedly interbedded with, and overlain by, the Badger Group sediments.

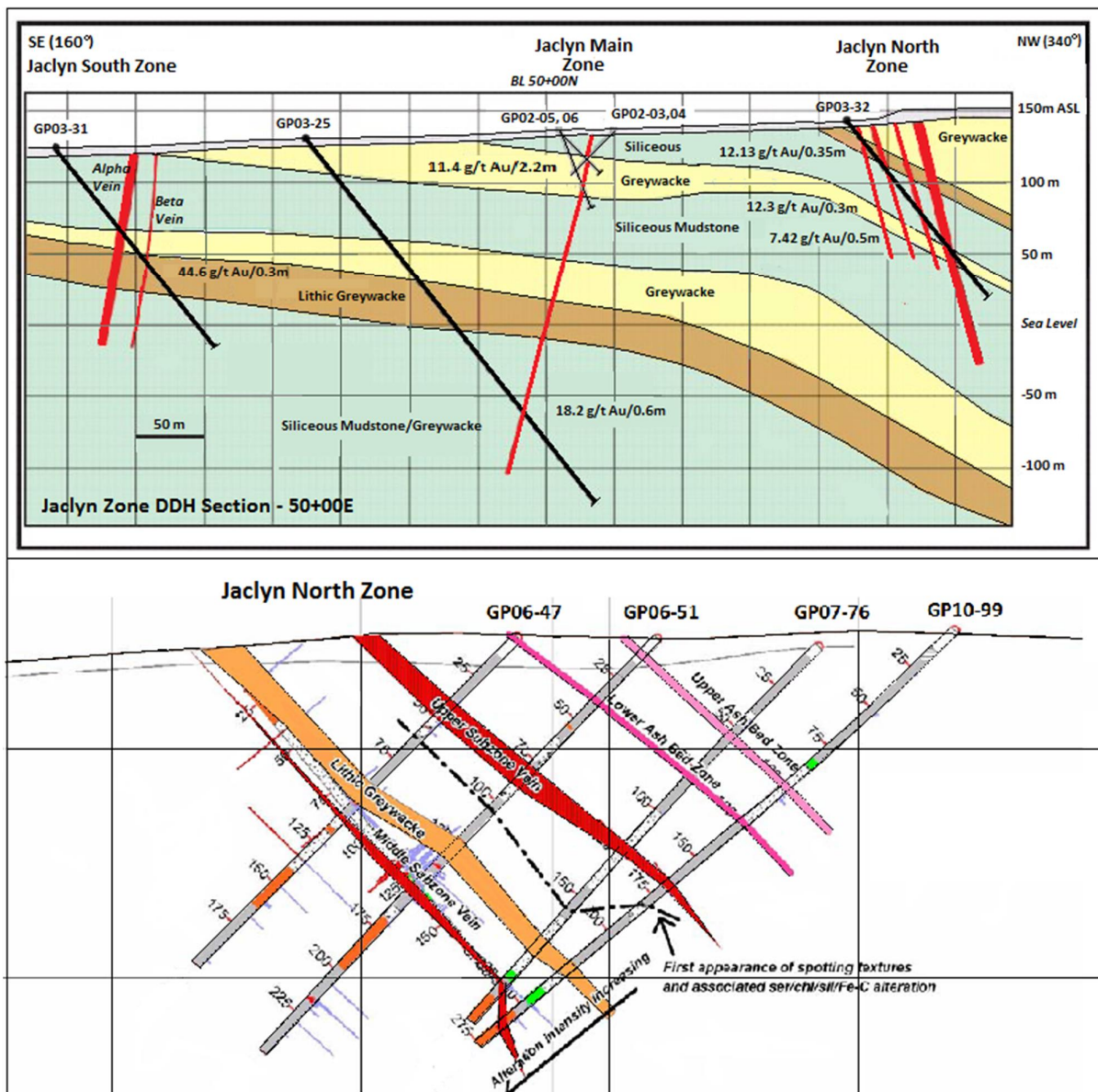
Approx. 4.5 km northeast of the *Justin's Hope Occurrence*, more gold-bearing, quartz float, hosting trace to 1% pyrite & arsenopyrite, were discovered over a 100 m long (040°-oriented) glacial dispersion train known as the ***Branden Occurrence*** (Fig. 6.4). Gold assay results from the quartz float samples include 80.73 g/t, 72.1 g/t, 62.6 g/t, 22.6 g/t and 20.5 g/t Au.

Prospecting carried out by W. Mercer, along the Exploits River, 7.5 SW of the Jaclyn Zone, resulted in the discovery of the ***Shawn's Shot*** (gold-bearing) *quartz vein occurrence* (Fig. 6.4). The occurrence consists of a poorly-exposed, 0.35-0.4 m wide, quartz vein located on the west bank and riverbed where loose subcrop debris (derived from the vein) revealed abundant visible gold and returned an assay of 34 g/t Au.

### 6.1.2.3 2003 Trenching Program

During Oct 28 to Nov 4, 2003, a total of six trenches (GPTR-01 to 06) were collectively emplaced over the **JN** and **JS** (Au-bearing) boulder trains (Figs. 6.1 ). One of two trenches at the **JN** zone (GP-TR-01 & 02) and three of four at the **JS** zone (GP-TR-03 to 05) encountered bedrock, each revealing interbedded black to greenish-grey mudstone, greywacke and arkosic sandstone. At the **JN** zone, a 1.0 m wide quartz vein swarm (with 1-3 cm wide veins) was found associated with a narrow deformation zone within argillite. Although visible gold-bearing quartz boulders were found overlying the trenched bedrock, no gold (or arsenopyrite) were observed in the bedrock veins itself. At the **JS** zone, numerous 1-4 cm wide quartz veins were observed in connection with zones of weak alteration (Copeland et al., 2004).

Figure 6.5 - Diamond Drill-hole Sections of the Jaclyn Zone showing the various quartz vein prospects (After Tettelaar, 2010).



A trenching investigation was also conducted at the *Justin's Hope Occurrence*, where three closely-space pits were excavated near the site of the high-grade (gold-bearing) quartz float site (335.9 g/t Au)(Fig. 6.7). Only one of the pits encountered bedrock revealing unaltered black mudstone with insignificant quartz veining. No trench samples were taken.

#### 6.1.2.4 2003 Drilling Program

During October 2003 - December 2003, twelve holes were drilled by JV partners Rubicon Minerals and Placer Dome in the Jaclyn area, including nine holes (GP03-22 to 30) at the *JMZ*, one hole (GP03-32) at the *JNZ* and two holes (GP03-31 & 33) at the *JSZ* (Figs. 6.1 & 6.2). The *JN* and *JS Zones* are located 250 m north, and 300 m south, of the *JMZ*, respectively. The relative location and attitudes of the three main quartz vein systems, based on the discovery holes, are shown in Fig.6.5. Highlights of the 2003 drilling program are presented in Table 3.

At the *JM* zone, drilling confirmed further extension of the large quartz vein system with newly-revised 'opened-ended' dimensions totalling 375 m of strike length and 192 m of vertical depth. Eight of the twelve holes encountered significant amounts of visible gold with assays up to 18.18 g/t Au /0.6 m (GP03-25) and 11.16 g/t Au /1.6m (GP03-24)(Copeland et al. 2005).

Table 6.2 - Rubicon Minerals Corp./Placer Dome Canada Ltd - 2003 Drilling Program.

Target	Date	DDH (Total Meters)	Highlights
Jaclyn Main	28OCT-11DEC003	GP03-22 to 30 (1992.4m)	GP03-22: 5.72 g/t Au / 0.95 m & 3.48 g/t Au /1.05 m GP03-24: 4.18 g/t Au/5.20m (incl. 11.16 g/t Au/1.60m & 40.35 g/t Au/0.4m) GP03-25: 18.18 g/t Au/ 0.60m & 36.1 g/t Au/0.3m
Jaclyn South	10-17DEC003	GP03-31 & 33 (301.4 m)	GP03-31: 44.59 g/t Au/0.30m (0.26m TW) & 012 g/t/0.5m GP03-33: 0.35 g/t Au/2.0 m & 2.59 g/t/0.3 m
Jaclyn North	12-15DEC003	GP03-32 (157.3m)	GP03-32: 2.13 g/t Au / 0.35 m, 12.30 g/t Au/0.3m 4.6 g/t Au/0.55m & 7.42 g/t Au /0.5 m
Gold (Au) assay results represent weighted average analyses based on the combined fire assay result of the +150 and -150 mesh sample fractions. TW = True Width.			

At the *JN* zone, drill-hole GP03-32 intersected four separate quartz vein zones, three of which contain visible gold, being hosted by silica/sericite-altered greywacke and mudstone. This initial drill hole, however, was determined to have been drilled down-dip, thus, obliquely cross-cutting the north dipping stratigraphy (Fig. 6.6). [The veins were later defined (during the 2006 drilling) as comprising three subzones – the Upper, Middle and Lower Subzones (Fig. 6.5)(see Section 6.1.3.1)]. The widest intersection of quartz was 2.8 m (1.0 m true width) within a 10 m (core length) section of stringer quartz veining. "Three separate veins returned max. assays of 12.13 g/t Au /0.3 m (41.4-41.75m), 12.30 g/t Au/0.3 m (85.35 85.65) and 7.42 g/t Au /0.5 m (119.0-119.5).

At the *JS* zone, drill holes GP03-31 and 33, spaced 100m apart, encountered strongly silicified and sericitized, interbedded, greywacke and mudstone cut by three gold-bearing quartz veins, one of which revealed visible gold. The upper (larger) **Alpha** vein, intersected over a 3.4 m interval (est. 3.0 m true width), at 75.1-78.5 m (GP03-31), returned only low Au values (max. 0.12 g/t Au). Two narrower quartz veins (referred to as the *Beta Veins*), intersected at depths of 25 m and 50 m beyond the *Alpha Vein*, produced assays of: 44.59 g/t Au/0.3 m (or 8.92 g/t Au diluted over 1.5 m)[GP03-31]; 0.35 g/t Au/2.0 m [GP03-33]; and 2.59 g/t/0.3 m [GP03-33].

#### 6.1.2.5 2004 Soil Sampling Program

During early spring of 2004, Rubicon and Placer implemented a soil sampling program over the **Jaclyn - Justin's Hope** structural trend (Fig. 6.6 & 6.7) – an area inferred to be underlain by the Caradocian Shale unit. This inference is based largely on the presence of a pronounced 'resistivity low', as revealed by the 2003 airborne geophysical survey (Figs. 6.3 & 6.6). Furthermore, this trend defines the axial trace of the *Jaclyn Anticline*. Soils were taken along 200 m-spaced lines, utilizing 25m-stations, for a total of 1402 samples. A 32 ppb Au soil sample value was obtained in proximity to quartz float assaying 335.9 g/t Au (Moore, 2003).

At the **Branden** quartz boulder train occurrence, located 4.5 km farther NE, a total of 167 soils were collected on eight, 100m-spaced, recce lines (Fig. 6.8). Five widely spaced elevated to anomalous Au values, of 7 ppb, 8ppb, 18 ppb, 55 ppb and 177 ppb, were obtained (Copeland et al, 2004 & 2005).

During the summer of 2004, an additional 1000 soil samples were collected over the **Jaclyn West** (*JW*) area to assess the possibility of west-southwestward continuation of the *JM*, *JN* and *JS* vein systems (Fig. 6.9 ). Over 17% of the quartz float taken around the general to immediate area of the later-discovered **Christopher Vein** (located 400 m SW of the *JM* zone) produced Au values greater than 150 ppb, with 5.8% yielding greater than 0.5 g/t Au (Copeland et al, 2005). This area was also found to contain abundant quartz subcrop material (discovered by W. Mercer, in 2003) which produced grab sample assays up to 3.8 g/t Au and 4240 ppm As.

#### 6.1.2.6 2004 Prospecting, Rock Sampling and Trenching Program

##### **Jaclyn West Area**

Prospecting carried out in response to anomalous soil geochemistry in the *JW* area, led to the discovery of two ENE-trending (070°) quartz boulder trains, including: an approx. 250m-long, quartz-float trend, located less than 1.0 km WSW of (and aligned with) the *JS* zone; and a 150m-long boulder train located 1.5 km WSW of the *JM* (Fig. 6.9). The latter consists of both subcrop and float of quartz- breccia material hosting up to 10% pyrite and 2% chalcopyrite. These and other quartz float occurrences in the *JW* area reveal common laminated and/or stylolitic textures (typical of vein margins) and vuggy textures (typical of massive quartz vein centers) – similar to that occurring at the Jaclyn Zone.

In addition to the above, large angular boulders of milky white quartz (up to 0.8 x 0.8 m size), with mudstone wallrock fragments enclosed, were discovered roughly 800 m southwest (240°) of the above-mentioned quartz-breccia train. Sample assays of up to 162 ppb Au were obtained from these, though no visible mineralization was observed (Copeland et al., 2005).

During early fall, 2004, a total of 6 trenches (GP-TR-08 to 13) were emplaced in the *Jaclyn West* area, each revealing weakly to strongly altered, interbedded, mudstone, greywacke and arkosic sandstone.

### ***Christopher Zone***

The above-mentioned soil (Au) anomalies and subcroppings of quartz, located 400 m southwest of the *JM* (Fig. 6.9), prompted a trenching investigation which led to the discovery of the *Christopher Vein*. The initial trench (GP-TR-10) revealed a 2 m wide, composite, gold-bearing quartz vein system having an 'exposed' strike trend of 35 m, at 080°/75° S, within silica/carbonate/sericite/chlorite-altered greywacke. It is similar to the *Jaclyn Zone* veins in that it exhibits a generally massive core with laminated/stylolitic-textures along the vein margins. Sulphides consist of up to 2% pyrite and trace to 2% arsenopyrite occurring as "disseminated anhedral masses near angular wallrock inclusions, and as disseminated euhedral grains within, and proximal to, stylolitic laminae" (Copeland et al, 2005). The highest grab sample assay, following trenching, was 1.96 g/t Au from the southern margin of the vein where, in fact, visible gold was noted. Channel sampling, however, produced only slightly elevated to moderately elevated Au results, for the most part (10-90 ppb Au over 0.5-1.0m intervals), with best assays at 280 ppb Au /0.55 m and 620 ppb Au /0.44 m (Copeland et al., 2005).

A trench (GP-TR-11), emplaced 100 m east of the *Christopher Vein*, revealed sandstone transitioning southwards to greywacke, with coincident increasing silicification and minor pyrite-arsenopyrite mineralization. No eastward extension of the vein was encountered in the trench, though the aforementioned 'southward increasing alteration' was considered as a possible indication of the vein being located farther south (no trenching was done to test this possibility). Three grab samples taken of the silicified (trench) exposure returned a best assay of 19 ppb Au. [Discovery of the *Christopher* is said to "potentially extend the *Jaclyn Zone* to over 775 m in strike length" (Copeland et al, 2005)].

A second trench site (GP-TR-08), located 50 m to the west of the *Christopher* vein exposure, revealed Fe-carbonate altered greywacke with quartz-carbonate veins ( $\leq 3$ cm wide) "similar to that exposed at *Christopher*" (Copeland et al, 2005). Little investigation of the trench could be carried out due to flooding which precluded bedrock mapping and sampling.



Figure 6.6 - Distribution of soil sample gold concentrations over the Jaclyn Zone – Justin's Hope trend (overlain onto 5500Hz resistivity response)(After Copeland & Newport, 2004).

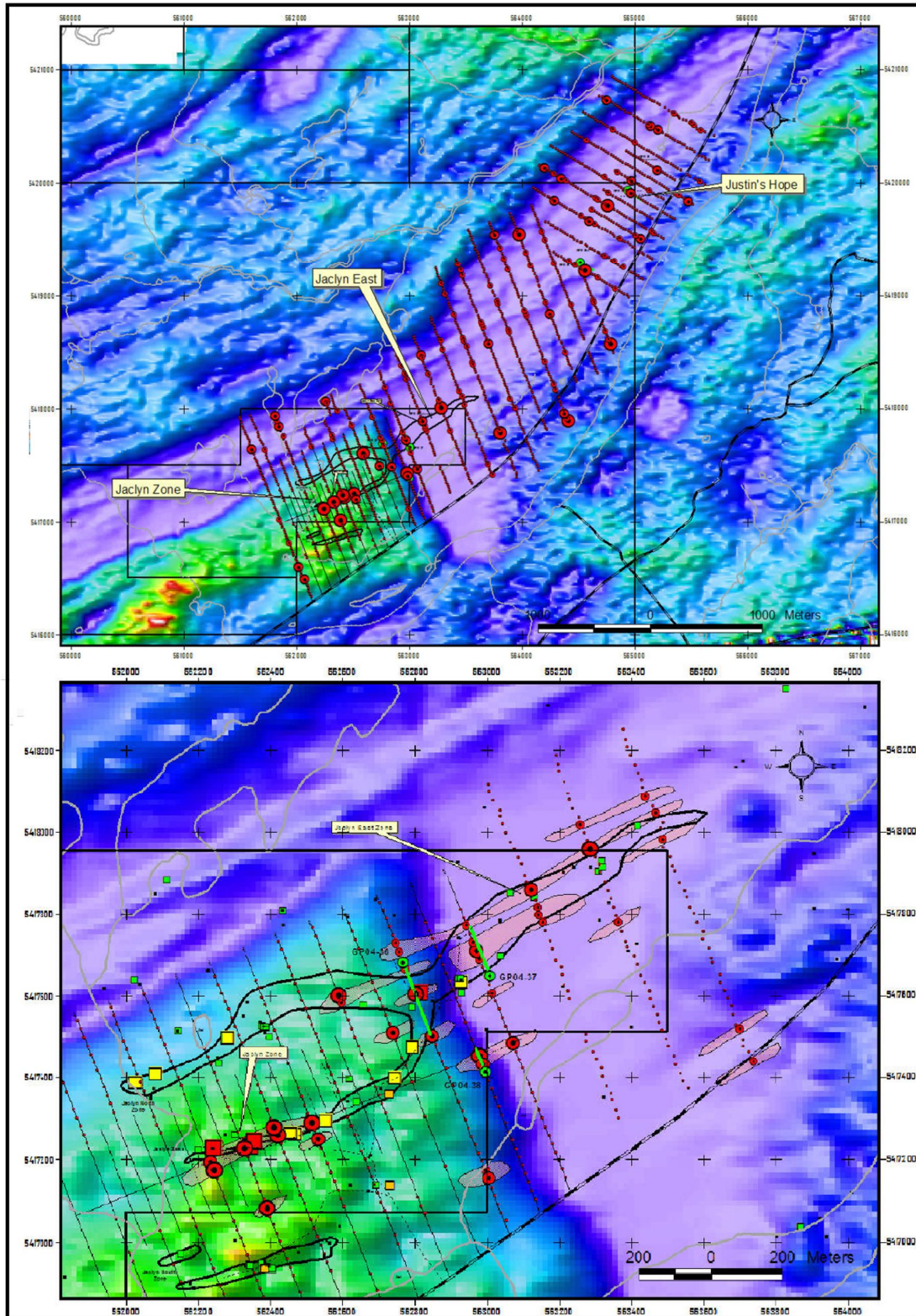
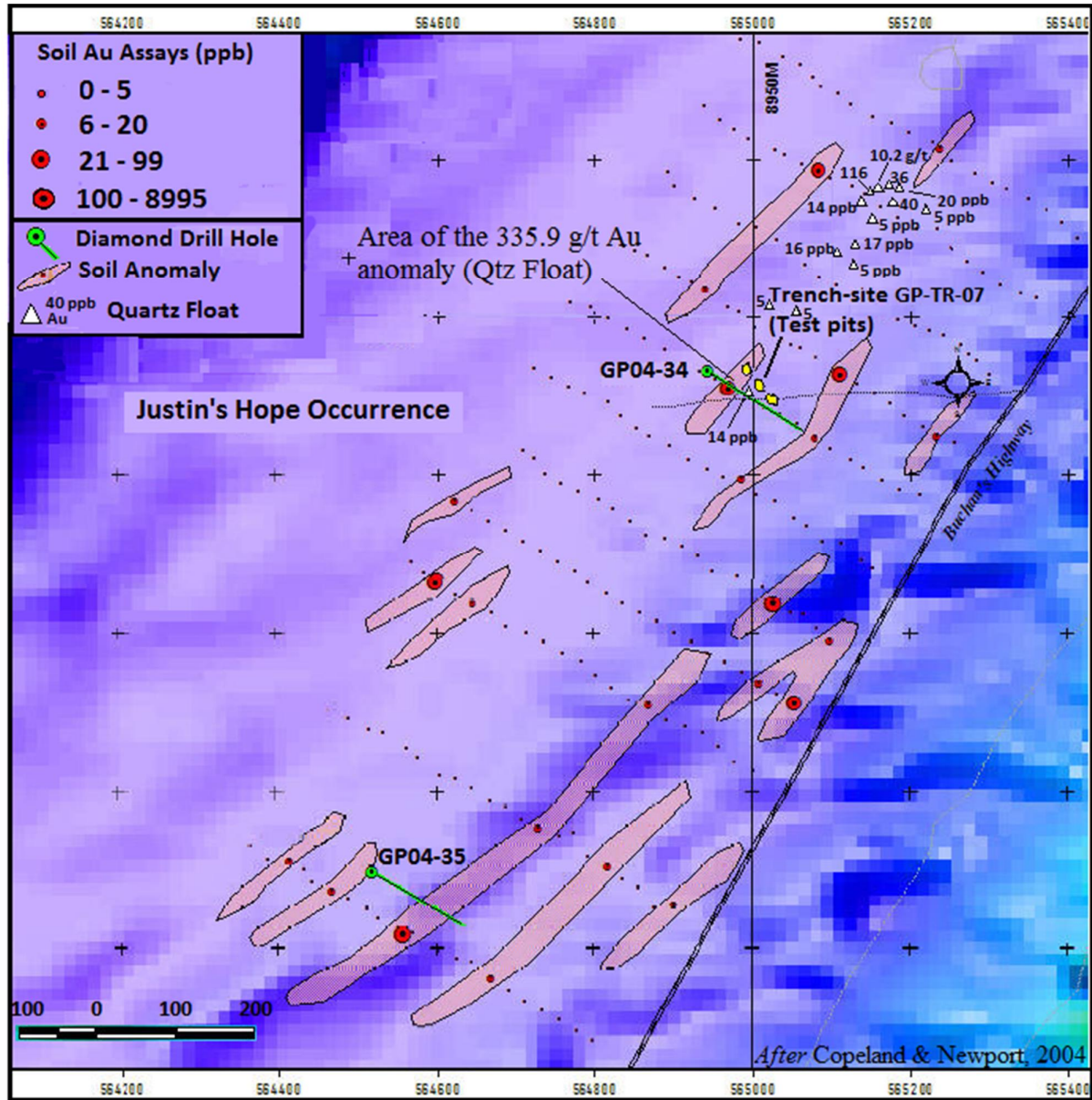




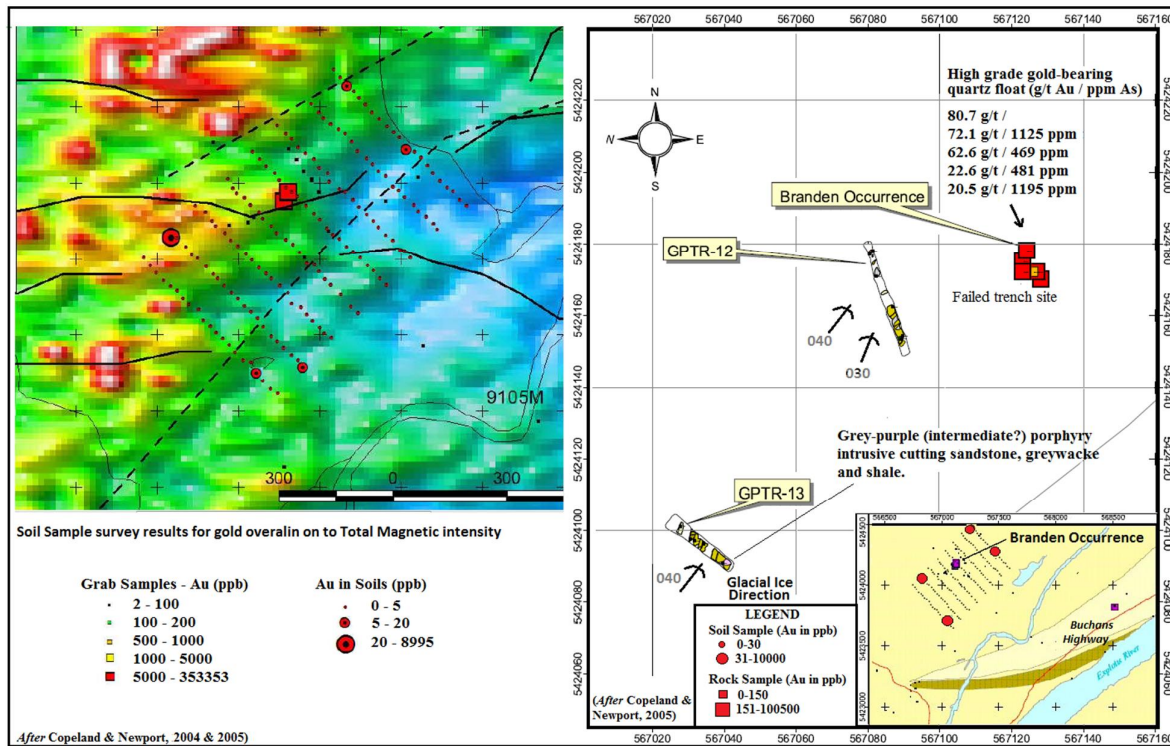
Figure 6.7 - Location of trench, boulder train, soil anomalies and diamond drill holes, Justin's Hope area.



### Rip Pond

At the eastern side of **Rip Pond** (approx. 700 m NNW of the Christopher Vein)(Fig. 6.9), quartz float containing up to 20% chalcopryite, pyrite and arsenopyrite, were found hosted by graphitic shales, thereby, suggesting potential for vein-hosted gold within the Caradocian shale unit as well as in the usual underlying siliciclastic/turbiditic units. Six of nine samples collected of the shale-hosted quartz vein material returned values of >150 ppb Au, the highest being 1.4 g/t Au. Other (associated) elevated to anomalous metal concentrations included up to 2.74% Cu, 1565 ppm Co, 4450 ppm As, 11 ppm Sb, 6.2 ppm Ag and 37 ppm Bi.

Figure 6.8 - Branden quartz float occurrence, reconnaissance soil grid gold anomalies and trench sites (After Copeland & Newport, 2004, 2005).



### Northwest Zone

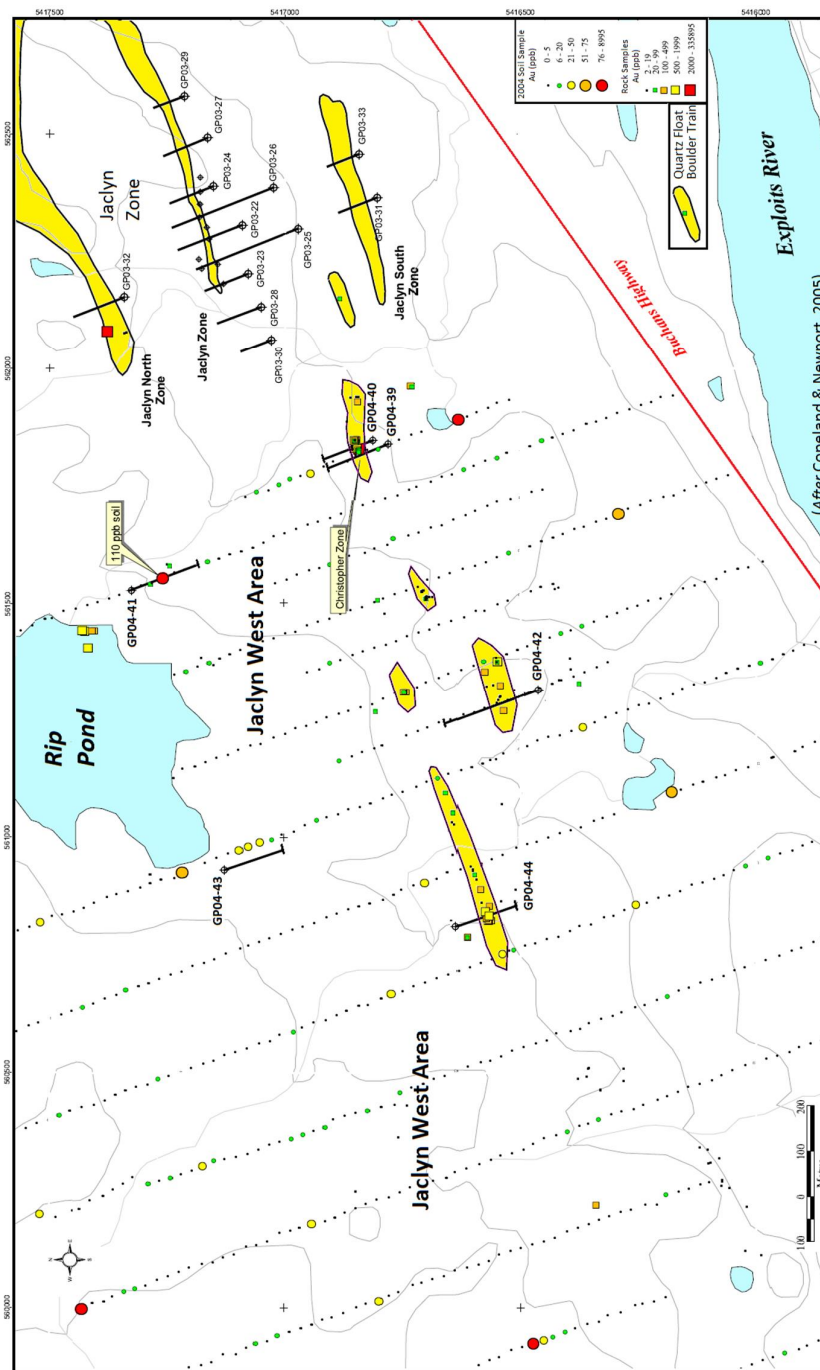
The *Northwest Zone* lies roughly 175 m southeast of Rip Pond, at a distance of 450 m west of (along strike from) the *JN Zone* (Fig. 6.9 ). Here, abundant, laminated-textured, quartz float, bearing up to 3% arsenopyrite, was found along the contact zone between the Caradocian graphitic shale and the underlying siliciclastics (on the northern limb of the Jaclyn Anticline). Of the nine samples collected here, eight produced elevated to anomalous Au values, the highest being 98 ppb, 34 ppb and two values at 25 ppb Au. Soil sample results from the area included Au values up to 110 ppb.

### Shawn's Shot Occurrence

Prospecting and sampling were also carried out in the area of the *Shawn's Shot* gold-bearing quartz vein located on the Exploits River, 7.5 km southwest of the Christopher zone. Geologically, it lies on the northwestern limb of the NE-plunging Exploits Anticline (Fig. 6.4). The vein, which outcrops along the west-side riverbank (and riverbed), was first discovered by W. Mercer, in 2002 – its exposure, then consisting of loose subcrop quartz material hosting abundant visible gold on laminated/banded surfaces. A grab sample collected by Mercer yielded an assay of 34 g/t Au (resampling of the same, in 2003, produced assays of 14 g/t and 30 g/t Au). Hand trenching, in 2004, helped to determine a more clearly-defined vein having a width of 0.3-0.4 m and an 'exposed' trend of 2.0m, at 110°/67-78°S, before disappearing into the deeper section of the river. Four grab samples of the vein, taken in 2004, produced assays of >150 ppb Au, the highest being 100.5 g/t Au; elevated Ag and As up to 4.5 ppm and 1230 ppm, respectively, were associated. An outcrop of black shale was reported 1.5 m from the occurrence, having fractures which trend sub-parallel to the vein. Other (1-15 cm wide) quartz veins were located 250 m northeast of the

occurrence within “tightly chevron-folded, graphitic, black shale and sandstone” showing “small scale examples of breached anticlines” (i.e., quartz veins occupying breaks developed along anticlinal hinges). These also trend sub-parallel to the Shawn’s Shot vein occurrence (Copeland et al, 2005).

Figure 6.9 - Location of the 2004 soil sample survey, related anomalies, quartz boulder trains and diamond drill holes, Jaclyn West area.



### **Otter Brook Showing**

Approx. 5.0 km southeast of the *Shawn's Shot Occurrence*, another 0.3 m wide quartz breccia vein, named the *Otter Brook showing* (Fig. 6.4 ) – first discovered by S. Courtney, in 1996 – lies at the contact/transition zone between siliciclastic sediments and overlying Caradocian shales. A grab sample assay of 880 ppb Au was obtained by Courtney at that time. Sampling of the occurrence, by Rubicon, in 2002 (at which time a property option was acquired), produced grades of 3.2 g/t and 1.183 g/t Au. Reports by Rubicon describe the occurrence as consisting of a 5-20 cm wide quartz breccia vein, oriented 060/65°SE, that was traced for approx. 10 m within rust-stained, siliceous, mudstone and chert. The zone contains angular wallrock inclusions and, locally, vuggy textures with 1-5% pyrite, up to 2% chalcopyrite and trace arsenopyrite associated. Further sampling of the occurrence, in 2004, returned grades of up to 2.2 g/t Au (Copeland, 2004).

### **Branden Occurrence**

A revisit of the *Branden* glacial quartz boulder train, in 2004, yielded grab sample (Au) assays of 72.1 g/t, 62.6 g/t, 22.6 g/t and 20.5 g/t Au, with corresponding arsenic (As) values of 1125 ppm, 469 ppm, 481 ppm & 1195 ppm). Three trenches were emplaced over the site (Fig. 25) – the first targeting “the centre and high-grade part of the boulder train where quartz float assayed up to 80.7 g/t Au in 2003” (Copeland et al, 2005). Unfortunately, rapid water inflow forced the abandonment of this trench before bedrock could be assessed. The two other trenches were excavated 40 and 120 m farther up-ice (230°), respectively, each revealing interlayered, fine to coarse grained, sandstone-greywacke and shale with a bedding orientation of 020/40°W. A 1.5 m wide mafic dyke, trending 088°, intrudes the sedimentary units in the trench nearest the Branden, while a pyrite-bearing, greyish-purple, porphyry intrusive (of undisclosed composition) was reported to be present in the southwestern trench (Copeland et al., 2005). Glacial striations (020-030°) noted in each of the latter two trenches indicate each to be off-trend with respect to the ‘up-ice’ source direction for the high grade, gold-bearing Branden boulder train (Fig. 6.8). Any future trenching attempt to assess the possibility of a local bedrock source for the boulders should, therefore, be situated farther east to align with the projected ‘up-ice’ trend.

Copeland et al (2005) suggested that the *Branden* trench exposures are representative of VLSG-type rocks and may, therefore, constitute an erosional ‘window’ by which the same are exposed through the younger, overlying, Badger Group sediments. Based on the structural interpretations of McNeill (2005), he suggests such exposure may be facilitated by a ‘doming’ effect created by a doubly-plunging F1 anticlinal feature that underlies the area (See Figs. 7.10d & e).

### **Jaclyn Zone**

Although minor prospecting was carried out in the *Jaclyn* area, in 2004, three new quartz float samples were discovered less than 500 m to the NE of the zone, yielding assays of 45.5 g/t Au, 24.5 g/t and 16.3 g/t Au (Copeland et al, 2005).

### 6.1.2.7 2004 Drilling Program

The 2004 drilling (final drilling under the Rubicon/Placer JV partnership) consisted of two phases – a 5-hole program targeting the Justin's Hope and Jaclyn East areas, during April-May, and a 8-hole program covering the Christopher, Northwest Zone, Jaclyn West and Shawn's Shot areas, during November-December, 2004.

Table 6.3 - Rubicon Minerals Corp./Placer Dome Canada Ltd - 2004 Drilling Program

Target	Date	DDH (Total Meters)	Highlights
Justin's Hope	05-20APR004	GP04-34 & 35 (395 m)	No significant results
Jaclyn East	26APR-06MAY004	GP04-36 to 38 (603.06 m)	No significant results
Christopher Zone	12-17Nov004	GP04-39 & 40 (315.1 m)	GP04-39: 0.03 g/t Au/ 0.7 m GP04-40: 0.025 g/t Au/1.10m
Northwest Target		GP04-41 (175.9 m)	0.10 g/t Au/1.35 m 0.16 g/t Au/0.3 m 0.711 g/t Au/0.7 m (incl. 3.42 g/t Au/0.4 m)
Jaclyn West	17NOV-02DEC004	GP04-42 to 44 (700 m)	GP04-42: 0.24 g/t Au/ 0.5m, 0.16 g/t Au/0.4m & 0.65 g/t Au/0.5m
Shawn's Shot	08-13DEC004	GP04-45 & 46 (387.1 m)	GP04-45: 0.6 g/t Au/0.30m GP04-46: No significant results
Gold (Au) assay results represent weighted average analyses based on the combined fire assay result of the +150 and -150 mesh sample fractions. TW = True Width.			

#### *Justin's Hope*

Two holes (GP04-34 & 35) were drilled approx. 750 m apart (along a SW/NE trend) over the general area of the *Justin's Hope* boulder train site (Fig. 6.7). Both holes encountered mainly black (Caradocian) shales with lesser greywacke, however, with several intrusions of quartz-feldspar porphyry (QFP) in GP04-34 (located to the SW) and several mafic dykes in GP04-35 (to the NE). The QFP units ranged mainly between <1.0m to > 4.0m in width, with the exception of a 60.6 m wide unit at 68.9-129.5 m depth. Only one (0.3m-wide) quartz-calcite vein was intersected in this hole. Hole GP04-35 encountered several quartz-calcite veins (0.55-1.9m in width) cutting shale, however, no pyrite or arsenopyrite were found associated with the veins; assays returned only slightly elevated to 'detection limit' values for Au (Copeland et al., 2004). Drilling revealed very deep overburden at the sites, (over 15 m true depth), thus, precluding the likelihood of a local bedrock source for the mineralized quartz float. The mineralized float is, therefore, considered to



have been transported from the southwest – possibly from as far as the *Jaclyn* Zone, although a closer source is also likely.

### ***Jaclyn East***

The three holes at the *Jaclyn East* area (GP04-36 to 38) (Fig. 6.1) encountered results similar to the above, an exception being a 662 ppb Au /0.9m obtained from a quartz-veined/Fe-carbonate altered section (72.4-73.3 m) in hole GP04-36” (Copeland et al, 2005).

### ***Christopher Zone***

The second phase drilling for 2004 began with 2 holes (GP04-39 & 40) at the *Christopher Zone* (*Jaclyn West* area) (Figs. 6.2 & 6.9). These were positioned to test the down dip and easterly projection of the 2.0 m wide vein exposed by the 2004 trenching.

Drill-hole GP04-39, drilled beneath the trench, intersected altered lithic/arkosic greywacke with minor lenses/layers of mudstone cut by mainly 1-3 cm wide quartz-calcite veins and occasional 2-7 cm quartz veins. Alteration consists of patchy or spotted ankerite (Fe-carbonate) and chlorite with associated minor pyrite and arsenopyrite mineralization. A quartz vein breccia/fault zone, intersected at a depth of 73 m (vertical depth of 28m), was interpreted as a possible continuation of the *Christopher Vein/Zone*, given the vein’s down-dip projection based on its indicated 75°S dip at surface. The zone consists of a 0.7 m section of brecciated greywacke, with angular quartz vein fragments, cut by later-generation quartz-calcite-chlorite veins/veinlets; it returned an assay of 0.03 g/t Au/0.7 m (73.2-73.9m). The later-generation quartz-calcite-chlorite veins, however, continue throughout the remainder of hole (to 178.9 m) in association with variably sericite/carbonate-altered and pyritized mudstone, thereby indicating an alteration zone marginal to the *Christopher Zone*/structure.

Hole GP04-40 was located 35 m NE of GP04-39 (closer to the trend of the vein) to test for further eastward continuation of the same at a shallower depth (Fig. 6.9 ). The hole cut weakly altered and quartz/calcite-veined greywacke before intersecting the vein at a depth of 40.2-41.3 m. A 1.1 m wide massive quartz vein, with adjacent, 3-4 cm wide, pyrite-arsenopyrite-bearing, stylolitic, quartz veins, was intersected over a width of 1.5 m (however, a 40 cm interval of core reported lost immediately above the intercept, possibly corresponding with the fault/shear zone observed adjacent to the vein at surface). Best assay reported for the quartz vein zone was 0.025 g/t Au/1.10m. Continuing at depth beyond, variably sericitized, chloritized and iron-carbonate altered siltstone, mudstone and greywacke, hosting trace pyrite and arsenopyrite, persist with minor cross-cutting, cm-scale, quartz-calcite veins/veinlets.

### ***Northwest Zone***

The *Northwest Zone*, located approx. 600 m NNW of the *Christopher Vein*, was investigated by hole GP04-41 (Figs. 6.2 & 6.9) to test the inferred siliciclastics/Caradocian shale contact zone beneath a 110 ppb Au soil anomaly and arsenopyrite-bearing, stylolitic, quartz float. The hole was “oriented to cut the underlying north-dipping stratigraphy” and assess the “potential for north-dipping quartz veins” that may represent a continuation of the *JNZ* vein system located 450 m along strike to the east. Highly graphitic, pyritic, shale was encountered to a depth of approx. 40 m where it transitions to siliceous mudstone. Within the shale, however, a moderately NW-dipping, stylolitic, arsenopyrite-pyrite bearing, quartz vein system, composed of at least four, 10-15 cm wide,

laminated veins, was intersected between 26.1 and 30.35 m depth; the interval returned elevated Au values throughout – the highest being 0.10 g/t Au/1.35 m and 0.16 g/t Au/0.3 m.

A second quartz vein zone was intersected at 87.3-88.0m, marking another shale/mudstone-greywacke contact, where a graded assay of 0.71 g/t Au/0.7 m (including 3.42 g/t Au/0.4 m) was obtained. The zone is described as a composite structure consisting (in contiguous sequence) of: a 20 cm wide a laminated, vuggy, quartz vein; a 10 cm wide breccia zone containing fragments of mafic dyke; a 40 cm wide, ankerite-altered, mafic dyke; and a 60 cm wide, pyrite-arsenopyrite-chalcopryrite bearing, massive to laminated/stylolitic, quartz vein. Patchy, sericite-chlorite altered mudstone and greywacke exist throughout remainder of hole, to 175.9 m (EOH). The mineralized quartz vein system at 26.1-30.35 m, was reported to be very similar to that encountered in GP03-32 at the JNZ (Fig. 6.9).

### **Jaclyn West Area**

Following drill-hole investigations of the *Christopher* and *Northwest Target* zones, three additional zones of interest were investigated in the Jaclyn West area, each involving single drill-hole tests.

Hole GP04-42 was positioned approx. 600 m SW of the Christopher Zone (Fig. 6.9) to test the site of a 075°-trending zone of arsenopyrite-bearing quartz boulders, all of which assayed between 200 and 750 ppb Au. The hole intersected a sequence of weakly to strongly (Fe-carb/sericite/chlorite-) altered mudstone and greywacke, having associated minor pyrite, pyrrhotite, arsenopyrite and trace chalcopryrite, and several (generally) narrow quartz vein/breccia zones. At 59.8-65.5 m, two (10 & 40 cm wide) quartz vein zones were found separated (intruded) by a 0.4 m wide mafic dyke, thus indicating, either, two previously separate veins or a single vein obliquely cross-cut by the dyke. [Note, similar contiguous quartz vein/mafic dyke zones were encountered at the JMZ, *Northwest Target* and *Shawn's Shot Occurrences*]. Between 127.4 and 176.4 m, three 10-20 cm wide quartz breccia/sulphide veins were intersected; the sulphides occur as 3-5 cm wide semi-massive pyrite bands with trace to minor pyrrhotite and chalcopryrite. Assay results for these quartz breccia zones (within inclusion of some wallrock veining) include 0.24 g/t Au /0.5 m (127.1-127.6m), 0.16 g/t Au/0.4m (146.0-146.4m) and 0.65 g/t Au/0.4 m (176.0-176.4m).

Hole GP04-43 targeted a three-station soil anomaly (of 24-36 ppb Au) located 600 m WSW of the *Northwest Zone*. Black graphitic, locally pyritic, shale was encountered to a depth of 103.9 m showing local, small-scale, fold structures with thin, bedding-parallel and axial planar (cross-cutting) quartz veins/veinlets. At 61.0-68.4 m, stylolitic, laminated, quartz veining (including stockwork) comprises 40% of the rock, with an example of saddle-reef type vein-filling exhibited in one instance. Mudstone, cut by minor, thin, quartz-calcite veins/veinlets, persists beyond the shale contact to 171.5 m (EOH). No significant assays were obtained. The drill intersection indicated a moderate NW-dipping stratigraphy consistent with the northern limb of the Jaclyn (anticlinal) fold structure.

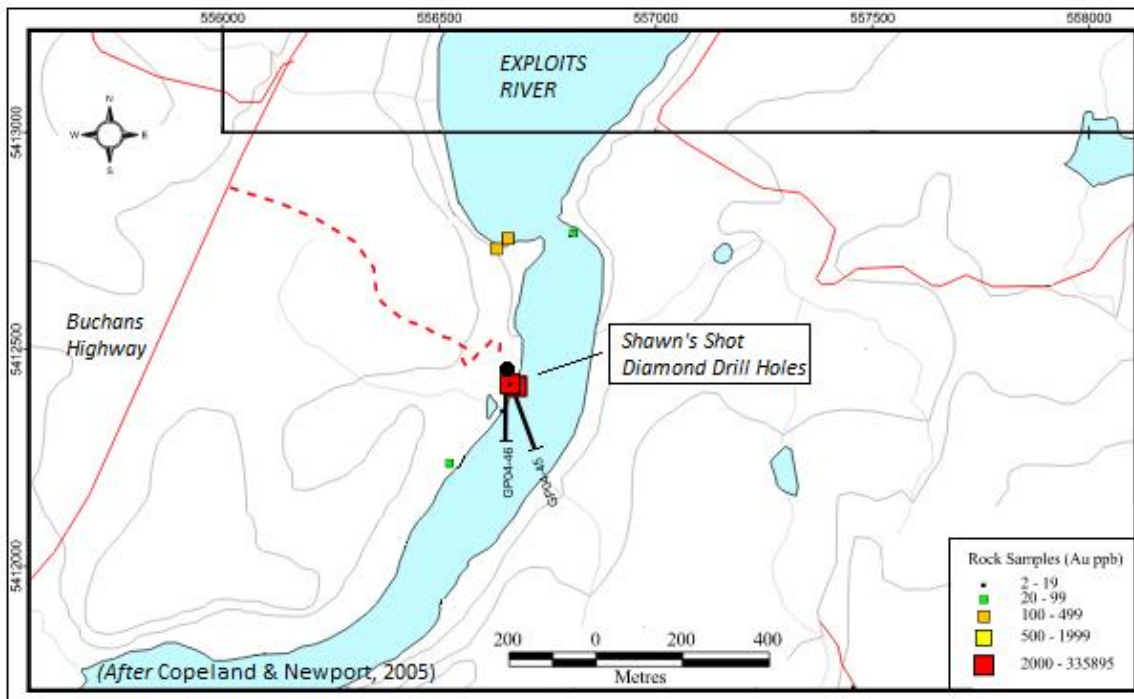
Hole GP04-44 was collared 450 m WNW of GP04-42 (Fig. 6.9) to test a 1.0 m wide subcropping of quartz breccia that assayed up to 1 g/t Au. The hole intersected a sequence of variably altered mudstone and greywacke throughout, with associated, local, silica ± Fe-carbonate ± sericite alteration and minor to trace pyrite; trace chalcopryrite and sphalerite were noted in a couple of instances. No significant assays were obtained.



### Shawn's Shot Showing

Drilling at the *Shawn's Shot Occurrence* (GP04-45 & 46) consisted of 2 holes (Fig. 6.10) designed to test the gold-bearing quartz vein exposed at the river, and ascertain the possible occurrence of other veins in the vicinity. Dominantly mudstone and (lesser) greywacke were encountered throughout – the same showing variable, spotted to patchy and fracture-controlled, sericite/chlorite alteration, with trace to 1% pyrite, cut by several 10-30 cm wide, stylolitic, quartz veins and mafic dykes. The dykes occur adjacent to the quartz veins (obviously occupying the same zones of structural weakness) and indicate a post-veining relationship based on chilled contact margins. Most quartz veins returned low Au values. Several quartz vein zones, with (individual) veins up to 0.3 m wide, were intersected in each of the holes, at depths of between 82 m and 85 m, returning assays of 0.6 g/t Au/0.30m (GP04-45) and 0.43 g/t Au/0.3 (GP04-46). However, the projected depth extension of the *Shawn's Shot* vein, itself, was believed to have been intersected at the targeted depth of 136.5 to 137 m, in GP04-45, where a quartz breccia vein, bearing minor pyrite, and trace arsenopyrite and chalcopyrite, was encountered. However, this intersection returned only 30 ppb Au/0.5 m.

Figure 6.10 - Location of 2004 Diamond Drill Holes (GP04-45 & 46), Shawn's Shot Gold Occurrence.



### **6.1.3 Rubicon Minerals Corp./Crosshair Exploration & Mining Corp. (2006)**

#### **6.1.3.1 2006 Drilling Program**

Following a one and half year period of inactivity on the property (i.e., excluding the area represented by the former *South Golden Promise Property*) drilling resumed at the *JN*, *JM* and *JS* Zones under Crosshair. Placer Dome's option agreement terminated in March, 2005, after which Rubicon entered into a joint venture (JV) agreement with Crosshair, in May 2006. Under this arrangement Crosshair could earn a 60% interest in the property, albeit, with Rubicon, again, acting as operator of the project. During June-December, another 22 holes (GP06-47 to 68) were drilled to investigate further expansion of the *JN*, *JM* and *JS* zones (Fig. 6.1 & 6.2 and Table 6.4).

#### ***JM* Zone**

The 2006 drilling on the *JM* zone was reported to be "very successful, as potential ore-grade, visible gold-bearing, quartz veins continued to be intersected"... extending the *JM* Zone "to a strike length of 750 m and, locally, to 225 m below surface" (Mullen, 2008). In fact, visible gold, was observed in most of the drill-holes, in association with stylolitic/laminated quartz veining. Significant intersections are listed in Table 6.4 .

In addition to establishing significant eastward extension of the *JM* zone, drilling also confirmed the existence of a new (albeit, narrow) high grade, VG-bearing quartz vein system – named the *Main Prime Zone* – located in the structural hanging wall of the main zone (Steele, 2011). The zone, as intersected in drill-holes GP06-52 and GP06-61 is situated 5 m from, and trending parallel to, the main zone. [This high-grade 'peripheral' zone, is herein, referred to as the ***JM Satellite Zone*** (as preferred to be called by the author (Jacobs)) since *Main Prime Zone* sounds synonymous with the *Jaclyn Main Zone*].

The *JM Satellite Zone*, encountered in GP06-52, consists of a zone of non-stylolitic, diffusive, silica flooding to discrete quartz veining, from which an oblique core length interval of 0.4 m (0.2 m True Width) was cut, revealing a total of 115 visible gold specks; the same returned an assay of 327.97 g/t Au. Hole GP06-61, collared approx. 160 m farther east, intersected a narrower (silica flooded) section hosting two (0.5-1.0 cm wide) VG-bearing quartz veins. Again, a wider sample width is recorded (due to angle of drilling) producing an assay of 10.37 g/t Au/1.75m.

#### ***JN* and *JS* Zones**

The 2006 drilling at the *JN* and *JS* zones helped further outline the (VG-bearing) multiple-vein systems (Upper, Middle & Lower Sub-zones) previously encountered in GP03-32 (Sect. 6.1.2.4), proving up a minimum strike length of 150 m (Steele, 2011). The veins were noted to dip moderately (at 40-45°) to the NNW, obliquely cross-cutting (in sub-parallel fashion) the more gently NNW-dipping stratigraphy of greywacke and mudstone. This contrasts with the steeper (SSE-dipping) vein systems at the *JMZ* and *JSZ* where the veins cross-cut the bedding more perpendicularly (see Fig. 6.5).

The ‘better-developed’ *Upper Sub-zone* vein system consists of two to four, 0.25-0.7m, wide quartz veins, with many smaller (1-10 cm) quartz veins associated. However, the ‘lesser-developed’ *Middle Sub-zone* and ‘weakly developed’ *Lower Sub-zone* gave the best assay/grades, with hole GP06-51 returning up to 5.24 g/t Au/1.70m (*Middle Sub-zone*) and hole GP06-47 returning one significant intersection of 15.23 g/t Au/0.30 (*Lower Sub-zone*). In comparison, the *Upper Sub-zone* yielded low to modest gold grades at 0.09-2.04 g/t Au/0.30-0.55m. The *Middle Sub-zone*, however, was reported to be, apparently, “strengthening at depth” while both the *Middle* and *Lower Subzones* were reportedly accompanied by strong to intense silica-sericite alteration that also appear to be increasing at depth (Steele, 2011).

Table 6.4 - Rubicon Minerals Corp./Crosshair Exploration & Mining - 2006 Drilling Program

Target	Date	DDH	Highlights
Jaclyn North	14JUN-06JUL006	GP06-47 to 51 (1039.69 m)	GP06-47: 15.24 g/t Au/0.30 GP06-49: 2.04 g/t Au/0.5m GP06-50: 1.57 g/t Au/0.65m, 1.89 g/t Au/0.35m GP06-51: 5.24 g/t Au/1.70m, 0.35 g/t Au/0.45m
Jaclyn Main	10-30JUL006	GP06-52 to 58 (884.85 m)	GP06-52: 327.97 g/t Au/0.40m (0.2m TW)(Satellite Zone) 7.21 g/t Au/0.55m GP06-53: 5.40 g/t Au/1.75m (incl. 16.00 g/t Au/0.35m) GP06-54: 5.35 g/t Au/1.35m (incl. 13.56 g/t Au/0.45m) 1.48 g/t Au/0.5m GP06-55: 5.96 g/t Au/1.40m (incl. 15.00 g/t Au/0.45m) 3.13 g/t Au/0.5m GP06-56: 6.51 g/t Au/3.10m (incl. 39.56 g/t Au/0.50m) GP06-57: 17.05 g/t Au/0.3m GP06-58: 4.93 g/t Au/0.4m, 13.94 g/t Au/0.55m 2.04 g/t Au/0.4m
Jaclyn South	31JUL-09AUG006	GP06-59 & 60 (305.71 m)	GP06-59: 0.19 g/t Au/0.3m GP06-60: 0.19 g/t Au/0.3m
Jaclyn Main	09AUG-12DEC006	GP06-61 to 68	GP06-61: 9.47 g/t Au/1.40m (incl. 27.67 g/t Au/0.45m) 10.37 g/t Au/1.75m (incl. 30.92 g/t Au/0.30m & 17.73 g/t Au/0.50m) (JM Satellite Zone) GP06-62: 8.31 g/t Au/1.20m (incl. 21.50 g/t Au/0.45m) GP06-65: 20.65 g/t Au/1.60m incl. 55.03 g/t Au/0.60m GP06-66: 1.88 g/t Au/6.85m incl. 21.87 g/t Au/0.55m GP06-68: 4.74 g/t Au/1.45m incl. 11.57 g/t Au/0.55m
Gold (Au) assay results represent weighted average analyses based on the combined fire assay result of the +150 and -150 mesh sample fractions. TW = True Width.			

At the *JS Zone*, two holes (GP06-59 & 60), drilled approx. 125 m apart (Fig. 6.1), were reported to have “intersected the thicker *Alpha Vein* but may not have cored the higher-grade *Beta Veins*” (Steele, 2011). Assay grades for the *Alpha Vein* included 0.19 g/t Au/0.3 m for each of the drill holes. As mentioned in Section 6.1.2.4, the latter veins were previously intersected at a depth of 25-45 m into the structural footwall of the *Alpha Vein* (Holes GP03-31 & 33) (Figs. 6.1 & 6.5). Present drill hole GP-06-60, collared to the west of GP03-31, confirmed an additional 100 m of westward.

#### **6.1.4 Paragon Minerals Corp./Crosshair Exploration & Mining Corp. (2007)**

At the end of the 2006 drilling program (Dec 12, 2006), Rubicon arranged for the creation of a new company, Paragon Minerals Corp., into which its Newfoundland assets (including the *Golden Promise Property*) were transferred by way of a *Plan of Arrangement*. Subsequent to Paragon's acquired interest, Crosshair renewed its former option agreement by which it would, and subsequently did, acquire a majority interest (60%) in the *Golden Promise Property*.

##### **6.1.4.1 2007 Drilling Program**

Under the Paragon Minerals/Crosshair partnership, two drilling phases were implemented for the Jaclyn Zone area, including a 7-hole program at the *JMZ*, during December, 2006 to February, 2007, and a 23-hole program at both the *JMZ* (19 holes) and the *JNZ* (4 holes), during June to December, 2007 (Fig. 6.3)(Table 6.5).

The 26-hole program (GP07-69 to 75 & 80 to 98), at the *JMZ*, involved both infill and exploratory drilling – the latter aimed at testing further strike and depth extensions of the zone, both to the east and west (Fig. 6.2 ). The program confirmed a total (minimum) strike length of 800 m and a (minimum) depth extension of 265 m for the *JMZ* (Wallis, 2010). Drilling encountered stylolitic/laminated quartz veining, throughout, with abundant VG present. In addition, the *JM Satellite Zone* – a high grade, non-stylolitic, quartz vein/silica-flooded, zone that had been previously intersected in GP06-52 and GP06-61 (Section 6.1.3.1) – was encountered again, in hole GP07-92, at a depth of 92.6-93.5 m. The intersection returned an assay of 64.49 g/t Au /0.5 m (with 1340 ppm As associated).

The four holes drilled at the *JNZ* (GP07-76 to 79; Fig. 6.2 ) were positioned to test further westerly and easterly extensions of the quartz vein system while also providing deeper (down-dip) evaluation of the zone. Each of the holes intersected the *Upper* and *Middle (quartz vein) Sub-zones* with one hole (GP07-76) intersecting the *Upper Sub-zone* as well. The latter intersection contained VG, returning an assay of 2.63 g/t Au/1.30m (incl. 11.28 g/t Au/ 0.3 m). Drilling extended the gold-bearing zones from its previously determined strike length of 150 m, to 250 m, and from its previous depth of 100 m, to 160 m (Wallis, 2010). Highlights of the entire 2007 drilling program are presented in Table 6.5.

Table 6.5 - Paragon Minerals Corp./Crosshair Exploration & Mining Corp. - 2007 Drilling Program

Target	Date	DDH	Highlights
Jaclyn Main	12DEC006-12FEB007	GP07-69 to 75	GP07-70: 4.66 g/t Au/1.35m (incl. 15.49 g/t Au/0.40m)
Jaclyn North	30JUN-15JUL007	GP07-76 to 79	GP07-76: 2.63 g/t Au/1.3 m (incl. 11.28 g/t Au/ 0.3 m) GP07-77: 0.54 g/t Au/2.15 m (incl. 1.95 g/t Au/0.4 m) GP07-78: 1.13 g/t Au/0.4m GP07-79: 0.11 g/t Au/0.3 m
Jaclyn Main	16JUL-18DEC007	GP07-80 to 98	GP07-83: 6.51 g/t Au/1.40m ( incl. 14.94 g/t Au/0.45m) GP07-84: 2.10 g/t Au/1.82m (incl. 7.12 g/t Au/0.40m) GP07-85: 7.23 g/t Au/0.80m (incl. 12.81 g/t Au/0.40m) GP07-88: 4.37 g/t Au/1.45m (incl. 20.89 g/t Au/0.30m) GP07-89: 4.33 g/t Au/1.05m (incl. 9.07 g/t Au/0.50m) GP07-90: 10.14 g/t Au/1.40m (incl. 35.35 g/t Au/0.40m) GP07-91: 43.8 g/t Au/1.45m (incl. 141.21 g/t Au/0.45m) GP07-92: 10.41 g/t Au/4.70m (incl. 64.49 g/t Au/0.50m, 26.59 g/t Au/0.35m & 5.51 g/t Au/0.7m) GP07-93: 20.89 g/t Au/1.90m (incl. 44.74 g/t Au/0.65m) GP07-98: 6.87 g/t Au/1.70m (incl. 18.59 g/t Au/0.45m)
Gold (Au) assay results represent weighted average analyses based on the combined fire assay result of the +150 and -150 mesh sample fractions. TW = True Width.			

### 6.1.5 Crosshair Exploration & Mining Corp./Paragon Minerals Corp. (2010)

#### 6.1.5.1 2010 Drilling Program

Following a period of market decline, beginning in 2007, there was relative inactivity on the Golden Promise property – with the exception of some prospecting, rock and geochemical sampling on the southwestern claims group (as discussed in Section 6.2). Thus, drilling operations ceased for a time, but was resumed again, in the *Jaclyn Zone* and *Northwest Target* area, during February-May, 2010, by JV partners, Crosshair Exploration and Paragon Minerals. This program consisted of 3 drill holes on the *JN Zone*, 4 holes at the *Northwest Target* and 31 holes on the *JM Zone* (including its *Jaclyn East* extension) thus, comprising the final drilling, to date, performed on the Golden Promise property (see Fig. 6.2 & Table 6.6).

Drilling began at the *JN* site with all three holes (GP10-99, 100 & 103) intersecting the two well-developed *Middle & Lower Subzone* quartz vein systems, as identified by earlier drilling (see Sect. 6.1.3.1). Present drilling continued to reveal high grade gold, albeit, over narrow widths, including 4.68 g/t Au/0.3 m (GP10-99) and 2.08 g/t Au /0.38 m (GP10-100). An additional 200 m of strike length and 60 m of vertical depth was proven up for the zone, giving total ‘open-ended’ lateral and down-dip dimensions of 470 m and 185 m, respectively. Drilling continued to confirm the sub-parallel relationship of the quartz vein systems to bedding (Fig. 6.5).

Drilling at the *Northwest Target* (GP10-107, 109 to 111; Fig. 6.2) was directed at testing further extension of the mineralization encountered in hole GP04-41 (3.43 g/t Au/0.4 m). “All four holes (GP10-107 & 109-111) intersected variably tectonized, variably mineralized, and locally stylolitic, quartz veining, similar to that observed at the *JNZ*, located approx. 400 m grid-east” (Wallis, 2010). No significant results were reported.

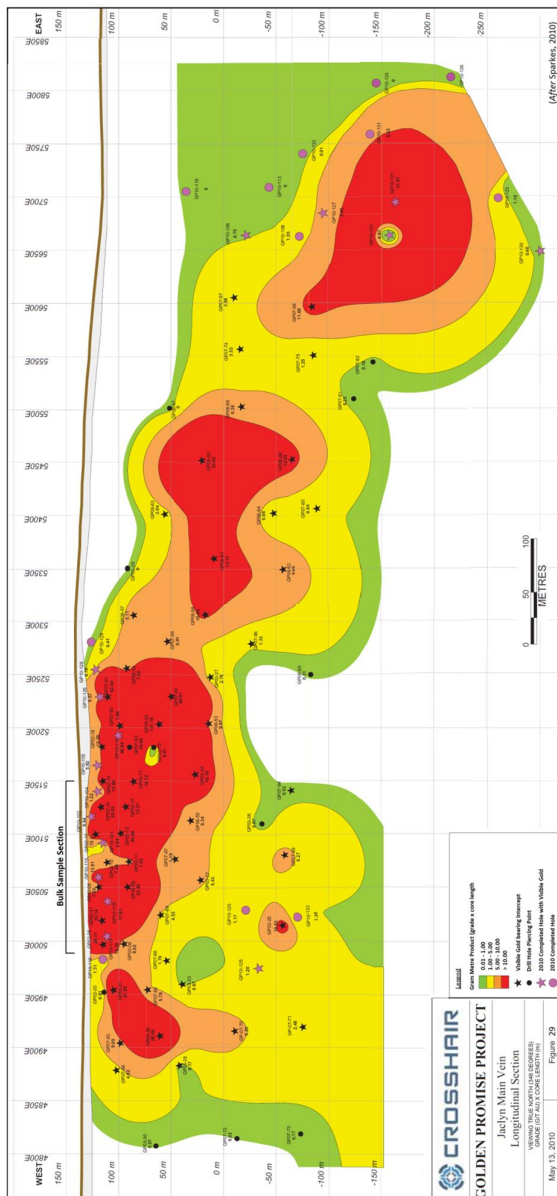
Table 6.6 - Crosshair Exploration & Mining Corp./Paragon Minerals Corp. - 2010 Drilling Program

Target	Date	DDH	Highlights
Jaclyn North	04-16FEB010	GP10-99, 100 & 103 (657 m)	GP10-99: 4.68 g/t Au /0.3m GP10-100: 2.08 g/t Au /0.38m GP10-103: 6.19 g/t (0.18 oz/t) Au /0.35 m
Jaclyn Main	11-29MAR010	GP10-101, 102, 104 105, 114-118, 120, 124, 125, 126, 128 & 129 (1157.1 m)	GP10-102: 19.9 g/t Au/0.5m GP10-114: 11.1 g/t Au/0.9m (incl. 19.9 g/t /0.4m & 78.1 g/t Au/0.6m) GP10-115: 6.1 g/t Au/2.3m (incl. 16.7 g/t Au/0.8m & 34.2 g/t Au/0.3 m) GP10-116: 3.9 g/t Au/4.6m (incl. 12.9 g/t Au/1.0m & 32.7 g/t Au/0.3m) GP10-117: 6.1 g/t Au/2.0m (incl. 32.5 g/t Au/0.3m & 4.1 g/t Au/0.6m) GP10-126: 20.8 g/t Au/0.5m
Northwest Target	18-28FEB010	GP10-107, 109 to 111 (572 m)	No significant results
Jaclyn East	16FEB -30APR010	GP10-106, 108, 112, 113, 119, 121, 122, 123, 27 & 130 to 136 (4,833.5 m)	GP10-127: 8.49 g/t Au (0.25 opt)/0.35 m (TW) (incl. 5.601 g/t Au (0.16 opt)/0.35m (TW) & 1.507 g/t Au (0.04 opt)/0.35m (TW)) GP10-130: 1.989 g/t Au (0.06 opt)/0.3m (TW) GP10-131: 5.97 g/t Au (0.17 opt)/0.35m (TW) GP10-132: No Significant Results GP10-133: 2.76 g/t Au (0.08 opt)/0.35m (TW) GP10-134: Abandoned Hole GP10-135: No Significant Results GP10-136: No Significant Results
<i>Gold (Au) assay results represent weighted average analyses based on the combined fire assay result of the +150 and -150 mesh sample fractions. TW = True Width.</i>			

Additional drilling was carried out on the *JMZ* to assess further down-dip extension of the quartz vein system in its western section (holes GP10-120, 124 & 125) and to ascertain further lateral (eastward) and down-dip continuity in the Jaclyn East area (16 holes; see Fig. 6.2 & Table 6.6). The latter drilling was successful in tracing the known limits of the Jaclyn Main vein system for another 175 m eastwards, for a total strike length of 975 m, and to a newly-determined depth of 400 m (Sparkes, 2010). Highlights or best assay intercepts for all zones are outlined in Table 6.6.

A longitudinal (grade x assay width) representation of the *JMZ* is shown in Fig. 6.11. As can be seen from this section, the higher-grade portions of the *JM* vein system is relatively shallow for the most part, with an apparent (ore shoot) plunge to the east.

Figure 6.11 - Longitudinal Section of the Jaclyn Main Quartz Vein Gold Deposit.



An important objective of the 2010 drill program was to provide detailed (shallow) infill-drilling along a 300 m section of the central deposit area of the *JM Zone* in preparation for a bulk sampling program planned for the fall of 2010. This involved the drilling of 12 holes to better determine the structural and grade continuity of the *JMZ* and to provide a sample medium for metallurgical testing. The bulk sample test was proposed on the rationale that it provides for a more representative gold grade determination of the resource, as a whole, by circumventing the unreliability of gold grades as obtained from drill core samples – this ‘unreliability or unpredictability’ being due to the ‘nuggety’ or spotty nature of the gold mineralization (in quartz) which lends itself to highly variable and inconsistent results. Furthermore, it was determined that a bulk sample test would “provide information on recovery and processing of the ore” (Steele, 2011). A description of the bulk sampling program is presented in Section 13.

An interesting result of the infill-drilling, along the central *JMZ*, was the confirmation of visible gold in over 80% of the new drill holes. Also, it was revealed that “previous drill holes, GP02-18 and GP02-19, had stopped short of the more northerly, en echelon, *Main Branch Zone*” (Steele, 2011)(see Fig. 6.1).

## **6.2 Southwestern Golden Promise Property Area (2002-2010)**

The southwesternmost claims area of the (present) *Golden Promise Property* area was initially contained, in large part, by former Mineral Licence 9050M (Fig. 6.12), one of three mineral licences comprising the former *South Golden Promise Property* – the others being 9051M and 9052M, located well beyond to the southwest. The area formerly encompassed by 9050M is now largely contained by Mineral Licences 24305M and 25161M. Thus, for the purpose of this report, only that area contained by former Mineral Licences 9050M, and later-acquired Mineral Licences 11057M and 11058M (adjoining to the east), are considered with respect to inclusion of historical work coverage. The areas formerly contained by the latter two licences, staked in Sept, 2004, are now contained, for the most part, by present Mineral Licences 25156M and 24311M, respectively.

The former three licences, mentioned above, were staked by Rubicon Minerals, on July 19, 2002, and optioned to International Lima Resources Corp. (now Crosshair Exploration & Mining Corp.), on February 14, 2003. [The name change from Lima Resources to Crosshair transpired on March 1, 2004]. The ensuing JV program, between Rubicon and Crosshair, was undertaken concurrently with the Rubicon/Placer Dome JV program covering the greater *Golden Promise Property* area, to the northeast.

### **6.2.1 Rubicon Minerals Corp./Crosshair Exploration & Mining Corp. (2003-2010)**

#### **6.2.1.1 2003 Reconnaissance Prospecting, Soil Sampling & Rock Sampling**

During 2003, Rubicon Minerals performed reconnaissance mapping, prospecting and sampling over the southwestern portion of the *present* Golden Promise Property (former *South Golden Promise* Mineral Lic. 9050M) resulting in the collection of 118 rock samples and 21 soil samples. “Massive to brecciated quartz veins and altered gabbro”, containing anomalous Au (107-480 ppb) and As (100 ppm), were reported “within 500 m of brittle, 070°-trending, fault zones – particularly in the north-central and southwest corners of former Mineral Licence 9050M (Copeland & Newport, 2004). The highest rock sample Au value obtained, during this work, was a 480 ppb Au for a piece of quartz float located on the western boundary of the licence (Fig. 6.12a). None of the soil samples collected by Rubicon, at that time, returned anomalous gold (Froude, 2004).



#### 6.2.1.2 2003 Airborne Geophysical Surveying and Interpretations

During November, 2003, a 2,382.5 line-km airborne EM/Magnetics survey was flown, by Fugro Airborne Surveys Corp., over the former mineral licence areas of 9050M, 9051M & 9052M. The survey portion relevant to the present property area is shown in Fig. 6.12 .

As in the case of the larger Fugro Airborne survey area, to the northeast, magnetic and EM/Resistivity results were used to provide geological interpretations, outlining stratigraphic and structural features of the property area. Interpretations were aided and/or supported by geological field observations and information gleaned from the government geological map compilation (NTS Area 12A/16), of Evans, Kean and Jayasinghe (1994). The southern part of the area was shown to be “dominated by low-resistivity, relatively highly-magnetic, black shales”, conformably overlain, to the northeast and north, by “siltstones and mudstones”; these are, in turn, overlain by sandstone, greywacke and felsic volcanics (Copeland et al., 2004) (Fig. 6.12). As elsewhere on the property, stratigraphic trends are controlled by NE-plunging F1 folds cut by brittle fault zones striking NE (035°), ENE (070°) and ESE (110°-120°)(Copeland et al., 2004; Geofile 12A/1146).

During 2004, Crosshair obtained the services of GeoScott Exploration Consultants Inc., of St. John's, NL, to provide an interpretation on the Fugro airborne survey results. A graphical representation of (apparent) NE and ENE-trending structural breaks, considered favorable for gold deposition, is shown, by GeoScott, in Fig. 6.13. A discussion of these features is presented below, as excerpts from the Geoscott report (contained within the report of Froude, 2004)(Geofile 12A/1138); insertions by the writer are contained in parentheses and brackets.

#### GeoScott Exploration Consultants Inc.

“Results of the electromagnetic part of the airborne survey are dominated by formational conductors, with very long strike lengths, which trend generally north-northeast, in agreement with the dominant magnetic trend direction and known geology. (However), the Fugro report identifies some airborne electromagnetic conductors which do not conform to this general outcome”.

“Within a few hundred metres of the (Linda) showing, intersecting structural trends of 090°, 045° and 320° have been identified in the magnetic shadowing (Fig. 6.13 ). These directions appear to represent structural features which could control mineralization”.

“All of the gold occurrences ... lie on intersections of the magnetic trends indicated in the shadogram. In addition, several of the showings (occur) in close proximity to locations of non-formational EM anomalies”.

“In the south-central part of the block, near 544000E, 5401500N, a complex of intersecting structural trends lies near a high gold anomaly in soil. This area obviously should be given priority for follow-up”.

“Intersections of linear magnetic feature are ubiquitous. If these intersections represent the best locations to look for auriferous deposits, then the whole property has potential” (GeoScott Exploration Consultants Inc., *after* Froude, 2004).

Figure 6.12 - Airborne geophysical survey Images and geological interpretation map for former Mineral Licence 9050M.

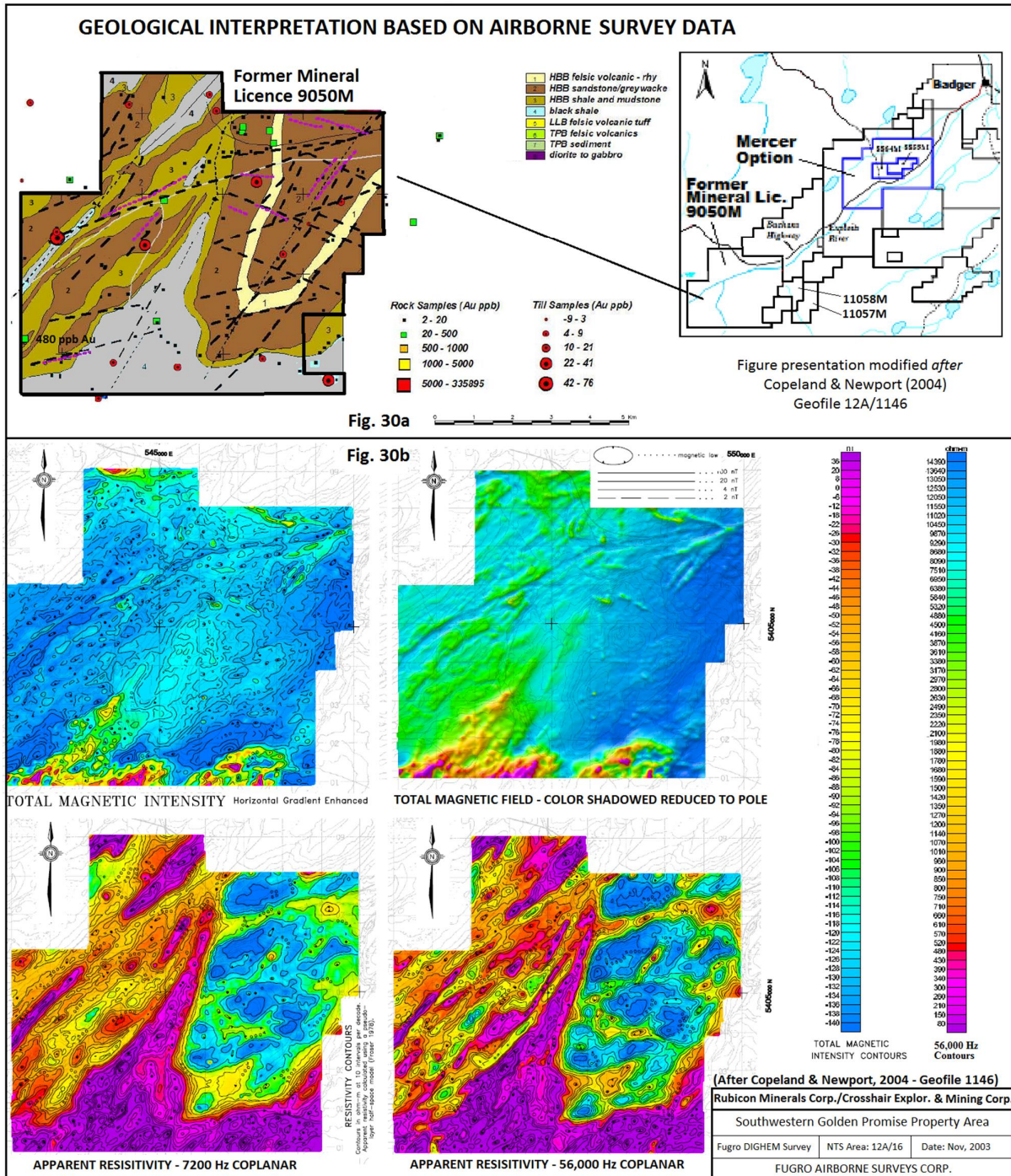
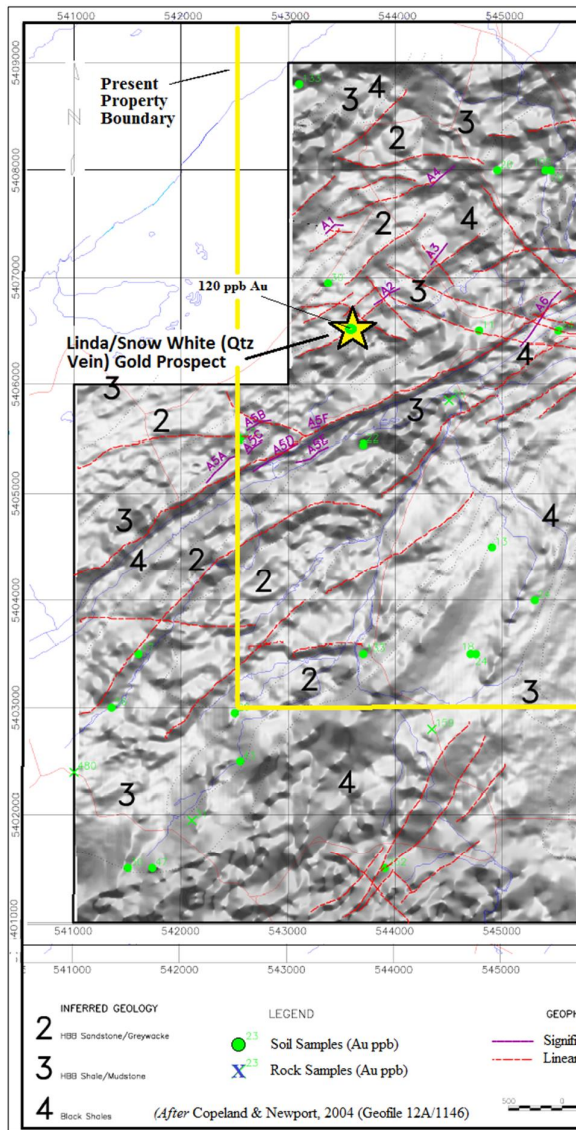


Figure 6.13- Shadogram image of Total Magnetic Field response over former Licence 9050- GeoScott Exploration Consultants Inc. (After Froude, 2004).



### 6.2.1.3 2004 Reconnaissance Soil Sampling, Rock Sampling and Trenching

Also during 2004, a total of 4,077 soil samples were collected from a 106 line-km reconnaissance grid consisting of E/W-trending, 500m-spaced, lines, covering the whole of (former) Lic. 9050M (Fig. 6.14). Samples were taken at 25m-spaced stations. A total of 35 widely-scattered Au anomalies were identified, including 8 sample results in the range of 105-252 ppb Au, 18 in the range of 22-56 ppb Au, and two at 68 ppb and 70 ppb Au (Froude, 2004). Nine of the anomalous sites were selected for local-area geochemical follow-up, however, with only one site (120 ppb Au) yielding further anomalous gold. Here, two adjacent (follow-up) soils returned 42 ppb and 490 ppb Au (with up to 578 ppm As). Hand-trenching at the site led to the discovery of visible gold - bearing quartz veins, named the *Snow White Occurrence*. Prospecting, nearby, to the southwest revealed a similar showing, named the *Linda Occurrence* (Froude, 2004, 2005). Later trenching, with use of an excavator, in 2005, showed the two occurrences to be part of a single, composite, quartz vein system, exposed over a strike distance of 170 m and a width of up to 5 m (Fig. 6.15). See Section 6.2.1.5 for description of the vein.

Grab samples collected during the initial hand-trenching investigations, at the *Linda* and *Snow White* quartz vein occurrences, returned a number of Au assays ranging from 1.284 g/t to 105.25 g/t (weighted average analyses (see Sect. 6.2.1.5 & Table 6.7).

Follow-up investigations at the site of two soil anomalies (79 ppb & 105 ppb Au) at Valley Brook, located 2.5 km northeast of the *Linda/Snow White* prospect (Fig. 6.14 ), revealed a zone of dark grey, fine grained, partially silicified, sediment, cut by 1 cm-wide sulphide veins. Two bedrock samples returned an interesting correlation of elevated to anomalous elements including up to 23 ppb Au, 325 ppm As, >220 ppm Mo, 264 ppm Cu, 99 ppm Pb, 166 ppm Ni, 235 ppm Zn and 129 ppm Ce. A third, nearby, sample, consisting of silicified (questionable) sediment or volcanics, hosting trace sulphides and cut by minor quartz veins, produced a >220 ppm Sr (strontium). Three quartz vein samples separately yielded >2200 ppm As, 2611 ppm Cu and 2154 ppm Cu (Fig. 6.14).



Figure 6.14 - 2004 Reconnaissance grid over former Lic. 9050M, showing soil and rock sample gold results (After Froude, 2004).

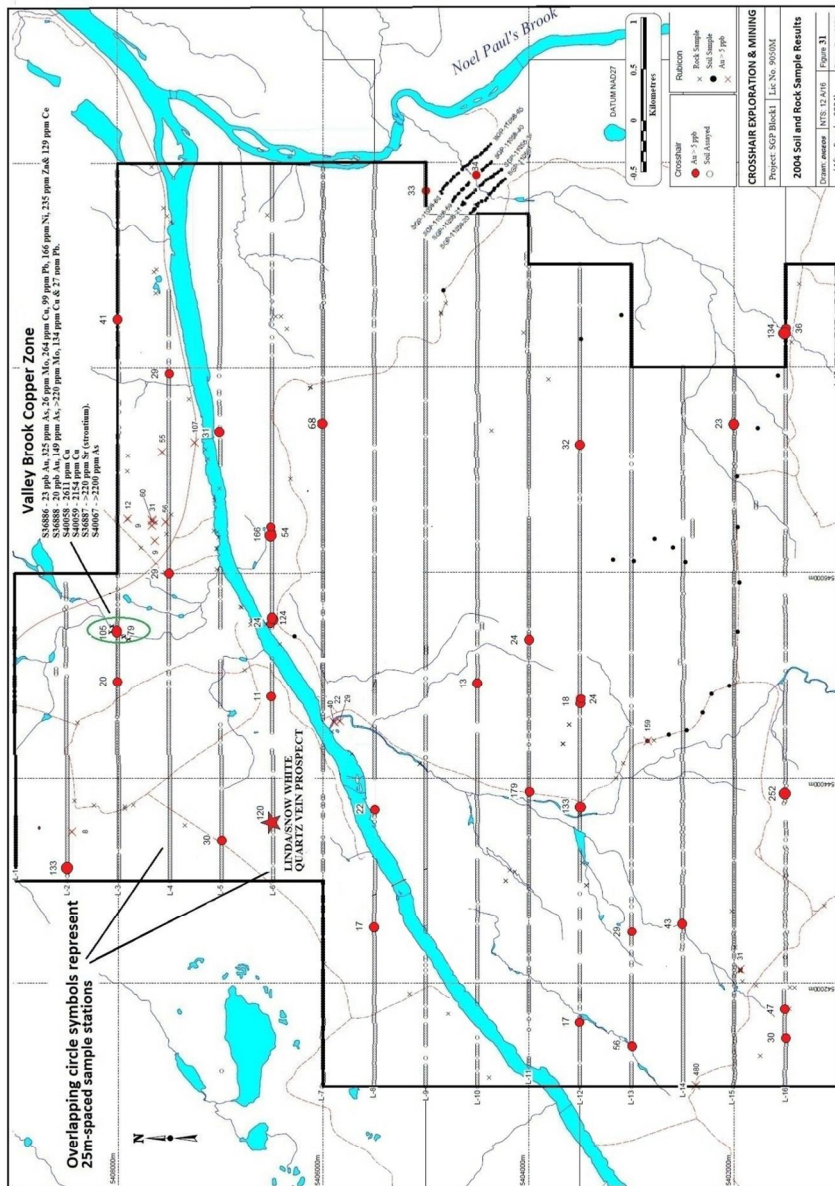
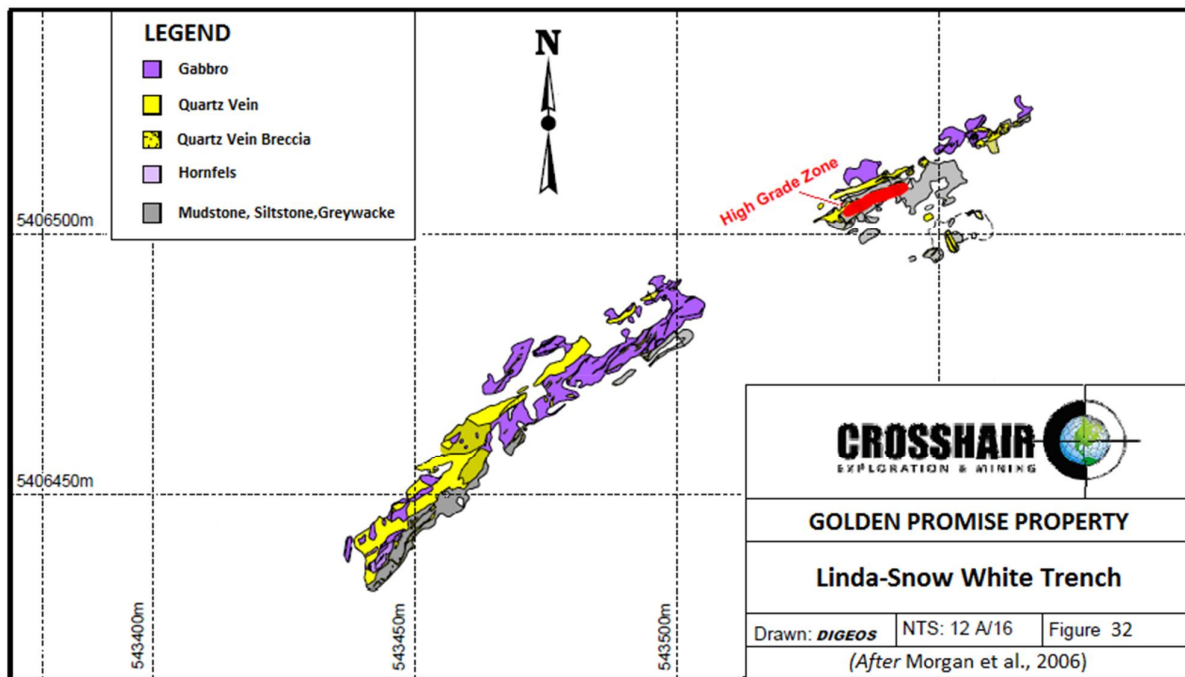


Figure 6.15 - Trench exposure of the Linda-Snow White Quartz Vein Prospect.



#### 6.2.1.4 2005-2006 Soil Geochemistry and Rock Sampling

During the spring of 2005, a 41.35 line-km soil grid, with a baseline orientation of 049°, was completed over part of the northwestern corner area of (former) Lic. 9050M and the 2004 reconnaissance soil grid (Fig. 6.16). The new grid consisted of 50m-spaced lines designed to follow up on geochemical anomalies broadly coincident with the newly-discovered Linda/Snow White quartz vein system and the projected trend of the vein system, itself. Baseline orientation was, thus, coincident with the general strike of the host stratigraphy.

The grid consisted of two parts – a 400 m long section to the northeast (near the Buchans Highway) and a 2.0 km section, located 1.6 km farther southwest (the Linda Grid) – linked by a common baseline (see inset map in Fig. 6.16 ). Another 650 m of baseline extended beyond to the southwest. Samples were collected at 25m-spacings, along the baseline as well as along the 50m-spaced grid lines, resulting in a total of 1,348 soils (Froude, 2005).

Elevated to anomalous Au-in-soils were found to be widely scattered over the Linda Grid section where 14 samples returned values in the range of 16-71 ppb Au, and 6 in the range of 130-455 ppb Au. Seven of the elevated to anomalous Au values occurred in the general vicinity of the *Linda/Snow White* prospect, including 359 ppb Au and 8,164 ppb Au. Elevated to highly anomalous Arsenic (As) was found to be considerably more pervasive, with significant concentrations of the element exhibiting a wide NE/SW trend through the prospect area (Fig. 6.16 ). Here, five soils returned arsenic (As) values between 300 ppm and >2200 ppm (the latter being the max. detection limit). On the smaller northeastern grid section, only one elevated Au (20 ppb) and two anomalous As values (50 ppm & 69 ppm) were obtained. A 75 ppm As was obtained on the baseline roughly 470 m farther southwest.

Figure 33a is a map of the Linda/Snow White Prospect area. It shows a grid of soil samples with coordinates ranging from 5407000m to 5406000m and 105+00N to 97+50N. The Exploits River is shown in blue, and the Linda/Snow White Prospect is outlined in red. An inset map shows the location of the area within the larger context of the project area. The legend indicates that red dots represent Au > 5 ppb and black dots represent soil assayed.

**Legend:**

- Au in Soils
- Au > 5 ppb
- Soil Assayed

**CROSSHAIR EXPLORATION & MINING**

Project: South Golden Promise

**Au in Soils - Grid South**  
Licences 9050M, 10387M

Drawn: *DIGEOS* NTS: 12 A/16 Figure  
(After Froude, 2005)

Fig 33a

Figure 33b is a map of the 2005 Till Sample Survey Area and 2005 Soil Sample Grid. It shows the distribution of arsenic (As) in soils, with a legend indicating concentrations of > 300 ppm (yellow), 100 to 300 ppm (orange), and 50 to 100 ppm (light orange). The map includes a north arrow, a scale bar, and a legend for As in Soils. The legend indicates that yellow dots represent As > 300 ppm, orange dots represent As 100 to 300 ppm, and light orange dots represent As 50 to 100 ppm. The map shows a grid of soil samples with coordinates ranging from 5406000m to 5403000m and 105+00N to 97+50N. The Exploits River is shown in blue, and the 2005 Till Sample Survey Area is outlined in red. An inset map shows the location of the area within the larger context of the project area.

**Legend:**

- As in Soils
- > 300
- 100 to 300
- 50 to 100

**CROSSHAIR EXPLORATION & MINING**

Project: South Golden Promise

**As in Soils - Grid South**  
Licences 9050M, 10387M

Drawn: *DIGEOS* NTS: 12 A/16 Figure 33  
(After Froude, 2005 & Morgan et al., 2006)

Fig 33b

Also in 2005, a section of the Linda grid was extended 500 m southeast (to the Exploits River) to expand soil sample coverage. The extended survey included Lines 70+50E-75+00E from which a total of 188 soils were collected (Fig. 6.16 ) (Morgan, Pickett & Froude, 2006). Sample results, however, did not reveal any gold values greater than the 5 ppb detection limit. Surprisingly, one anomalous As value (193 ppm) was obtained, its location being the northeastern corner of the survey area. Along the southeastern margin of the grid, one sample site returned elevated for several elements – Co (190 ppm), Pb (33 ppm), Ba (141 ppm) and Cu (42 ppm) – that may be worthy of investigation. However, this enrichment may be due to a scavenging effect by manganese, given the latter's very high concentration (15530 ppm Mn). As well, three elevated to anomalous Zn values (96-123 ppm) were reported by Morgan et al. (2006) for soils collected between 70+50E-71+50E and 93+00-94+00N (southern part of the grid) (Fig. 6.16 ).

In addition to the soil survey, a small (100 x 150 m) basal till sample grid, utilizing 25m-space lines, was superimposed over the baseline area of the Linda grid, immediately east of the prospect. A total of 43 till samples were collected between (and inclusive of) Lines 72+00E to 73+00E. The tills returned a Au value of 109 ppb as well as five in the range of 18-39 ppb (>2200 ppm As was associated with the 39 ppb Au value). Assay results also revealed two anomalous Cu values (109 ppm & 181 ppm Cu) in association with two of the elevated Au values at, and near, the baseline location of 72+00E. Two anomalous zinc (Zn) results – 107 ppm & 103 ppm Zn – were also obtained from grid locations 73+00E/101+00N and L72+00E/101+00N, respectively (Morgan et al., 2006).

Prior to mechanical trenching, a total of 18 random soil sample checks were made over a roughly 10 x 30 m area comprising what became the northeastern section of the Linda trench exposure. All samples returned elevated to anomalous results for Au (up to 8,313 ppb) and As (up to >2200 ppm) (Fig. 6.17 ). In addition, a reconnaissance soil sample site located 1.9 km east of the prospect (SE side of the Exploits River) returned Au values of 124 ppb Au (Fig. 6.17 ).

Rock sampling conducted in the vicinity of the Linda/Snow White quartz vein, in 2006, produced a number of elevated to anomalous Au results, including a 2995 ppb Au (obtained roughly 150 m southeast of the prospect) and values of 49 ppb, 78 ppb and 129 ppb Au (150-250 m northeast of the prospect) (Morgan et al., 2006). [These results, however, relate to the +150 mesh-size sample fractions, with corresponding “weighted average” assay results returning 25 ppb, 5 ppb, 16 ppb & 6 ppb Au, respectively] (Fig. 6.17)].

Approximately 1.0 km along strike, to the southwest of the Linda-Snow White prospect, four quartz float samples returned elevated to anomalous results of up to 85 ppb Au, >2200 ppm As and 213 ppm Cu), while four other samples taken along the Exploits River, 0.8 km south and 1.3 km SE of the prospect (collectively) produced anomalous results of up to 35 ppb Au, 497 ppm Cu, 262 ppm Pb and 299 ppm Zn (Table 6.7 & Fig 6.17).



**Linda Trench**

**CROSSHAIR EXPLORATION & MINING**

**GOLDEN PROMISE PROPERTY**

**Soil Sample Location with Au (ppb)**

Sample	Au (ppb)	As (ppm)
66301	29	31
66302	58	114
66303	5	22
66310	8313	>2200
66311	124	>2200
66312	116	>2200
66313	1565	>2200
66314	95	1572
66315	335	>2200
66316	632	>2200
66317	100	1274
66318	719	698
66319	594	851
66320	47	160
66321	59	>2200
66322	306	339
66323	1032	1443
66324	82	182

**Values in ppm except for Au (ppb)**

**S77601 - 35 Au, 219 As, 497 Cu & 38 Pb**

**Values in ppm except for Au (ppb)**

**S43347 - 10 Au & 2054 As**

**S43348 - 83 Au, >2200 As & 82 Cu**

**S43349 - 35 Au, 762 As & 213 Cu**

**Values in ppm except for Au (ppb)**

**S60051 - 27 Cu, 214 Zn & 262 Pb**

**S60052 - 31 Cu, 299 Zn & 105 Pb**

**S60053 - 144 Zn (values in ppm)**

**Soil Sample**

- Sample No. (Au ppb)

**Rock Sample**

- × Sample No. (Au ppb)

**CROSSHAIR EXPLORATION & MINING**

**GOLDEN PROMISE PROPERTY**

**Rock & Soil Sample Location with Au (ppb)**

Drawn: DIGEOS NTS: 12 A Figure 34b  
(After Morgan et al., 2006)

Table 6.7 - 2006 Rock Sample Results - General Area of the Linda-Snow White Quartz Vein Prospect

Quartz float samples located 1.0 m SW of the Linda-Snow White prospect	
Rock Samples	Assay Results
43347	10 ppb Au & 2054 ppm As
43348	83 ppb Au, > 2200 ppm As & 82 ppm Cu
43349	35 ppb Au, 762 ppm As & 213 ppm Cu
64651	1284 ppm As
*Samples located 0.8 km south and 1.3 km ESE of the prospect (north & south side of the Exploits River)	
77601	35 ppb Au, 219 ppm As, 497 ppm Cu & 38 ppm Pb
60051	27 ppm Cu, 214 ppm Zn & 262 ppm Pb
60052	31 ppm Cu, 299 ppm Zn & 105 ppb Pb
60053	144 ppm Zn
*The report, by Morgan et al. (2006), does not disclose whether samples 60051-60053 are bedrock or float; neither does it disclose the type of rock sampled.	

#### 6.2.1.5 2005 Trench Sampling – Linda/Snow White Prospect

A number of grab samples, collected during the initial hand-trenching investigations at the *Linda* and *Snow White* quartz vein occurrences, returned many highly anomalous (weighted average) Au assay results ranging from 1.284 g/t to 105.25 g/t, with generally highly anomalous arsenic as well (Table 6.8 ). Also, anomalous concentrations of Ag (8.9 g/t), Pb (72 ppm) and Bi (24 ppm) were obtained in association with the 105.28 g/t Au assay. Other, nearby, samples of quartz vein material produced sporadic elevated to anomalous Au and As values up to several hundred ppb and >2200 ppm, respectively (Froude, 2004, 2005).

Following completion of the mechanical trenching at the *Linda-Snow White Occurrence*, a total of 182 channel samples and 79 grab samples (including from adjacent areas) were collected from the site (Fig. 6.18). Assay results include up to 232 g/t Au for grabs (Table 6.8) and up to 29.7 g/t Au/0.5 m for channels. [Note: Channel samples listed in Fig. 6.18, as presented in the Crosshair Exploration & Mining report, by Morgan et al. (2006), do not indicate sample lengths or intervals in connection with the assay results].

Trenching revealed the *Linda-Snow White* occurrence to consist of a composite zone of quartz veining, up to 5 m in width, with an (exposed) strike trend of 170 m, hosted within a mix of gabbro, mudstone, siltstone and greywacke. Wall rock alteration consists of minor iron-carbonate, sericite and local chlorite. The veins contain variable, though generally minor pyrite, arsenopyrite and trace galena, with gold occurring in “free-style form (as specks or nuggets) associated with dark stylolitic bands, on or close to vein margins (Froude, 2005 & Pilgrim et al., 2008). The veining was reported to be similar to that at the *Jaclyn Zone*, to the northeast.

Table 6.8 - Rock Sample Gold and Arsenic Assay Results – Linda/Snow White Prospect

Rock Samples (Grabs)	Assay Analyses for <b>Au (ppb)</b> –Screen Metallica/Fire Assay				ICP
	+150 Mesh	-150 Mesh	Wt. Ave	Regular Fire Assay Au	As (ppm)
Samples collected in 2004 ( <i>After Froude, 2005</i> )					
40119	712962	8735	9465		654
40120	208274	1554	1699		358
40125	5823	49	63		1378
40222	1168871	1770	3651		172
40223	340823	863	1472		97
36895	2256344	5495	9597		103
50454	4024080	1305	2094		374
50455	7406	210	233		1101
50457	20412000	44569	105280		598
50458	2738	5169	5152		>2200
50459	17877068	34344	41668		>2200
50460	71627	92	160		255
50467	38	431	428		469
50468	51	1396	1388		>2200
50469	1325	1282	1284		2043
50472	266	477	475		105
Samples collected in 2005 ( <i>After Morgan et al., 2006</i> )					
Snow1	34662	3048	3429		309
Snow2	5575	128	277		273
Snow3	42353	2660	2859		709
66325	30003958	44488	61721		1215
66326	2574	32575	37359		>2200
66327	54299	4339	5845		563
66328	97385	3842	3938		>2200
66332	1425	90	97		273
66333	256	879	868		560
66348	1065	778	785		410
77001	395	76	84		55
77002	23613	1259	2155		138
77003				468	87
77005				2886	>2200
77008				213	1222
77010	5	2938	2934	2700	>2200
77011				555	>2200
77012				735	>2200
77013	49140	1557	1828		5
77018	1915613	113200	185433	172025	>2200
77020				625	>2200
77013				1735	>2200

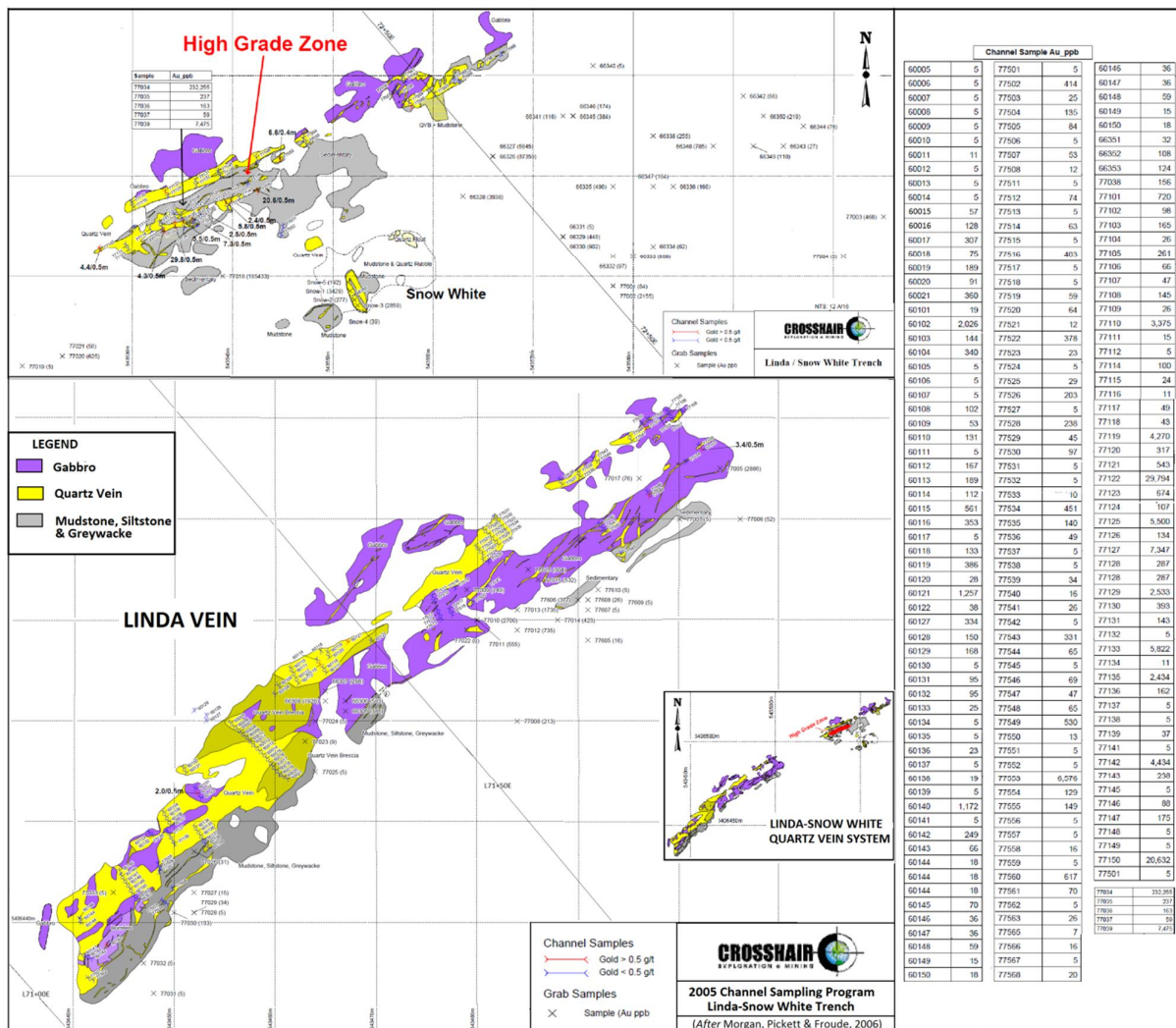
<b>Table 6.8 – Rock Sample Gold and Arsenic Assay Results – Linda/Snow White Prospect (Continued)</b>					
Rock Samples (Grabs)	Assay Analyses for Au (ppb) –Screen Metallics/Fire Assay				ICP
	+150 Mesh	-150 Mesh	Wt. Ave	Regular Fire Assay Au	As (ppm)
77014				423	>2200
77016				532	>2200
77029	4901	29	34		135
77034	5501227	103850	232255		>2200
77035	2658	223	237		>2200
77038	28	157	156		137
77039	273648	4431	7475		578

### 6.2.1.6 2006 Diamond Drilling

In 2006, Crosshair drilled 16 holes (SGP-01 to 16), totaling 1016 m, to investigate the *Linda/Snow White* quartz vein system (Fig. 6.19 ). The zone was tested to vertical depths of 30 m to 110 m, and over a strike distance of 230 m. Holes were spaced at approx. 25 m over the northeastern portion of the vein system, and at 50 m, to the southwest (Morgan et al., 2006).

Variable (weak to intense) quartz veining was encountered throughout all drill holes, with brecciated host-rock fragments common. Intersections, of both single quartz veins and multiple vein/veinlet systems, were commonly encountered over widths of up to 1.0 m. Elevated to anomalous Au values of >150 ppb (as per the sample width) were encountered in eleven of the drill holes, however, with only one hole (SGP-14) returning any ‘economic-grade type’ results; the latter encountered a mineralized quartz vein zone, between 42.95 m and 43.90 m, producing an intersection of 19.5 g/t Au / 1.15 m (core length) which included a sub-interval of 63.2 g/t Au/0.35 m. The zone was noted to contain pyrite and arsenopyrite and 20 specks of visible gold. A second anomalous interval, at 48.60 - 49.10m, consisted of several narrow quartz veins, cutting gabbro, which returned 1.5 g/t Au/0.50 m (Morgan et al., 2006). The remaining anomalous intersections consisted of assay grades of 131 ppb to 798 ppb Au over (core length) intervals of 0.14 to 1.78 m, though mainly in the range of 0.3 to 0.5 m. A single speck of visible gold was noted in connection with the 798 ppb Au (obtained over a 0.4 m (core length) interval). Significant mineralized intersections are presented in Table 6.9. Drill hole parameter data are outlined in Appendix II.

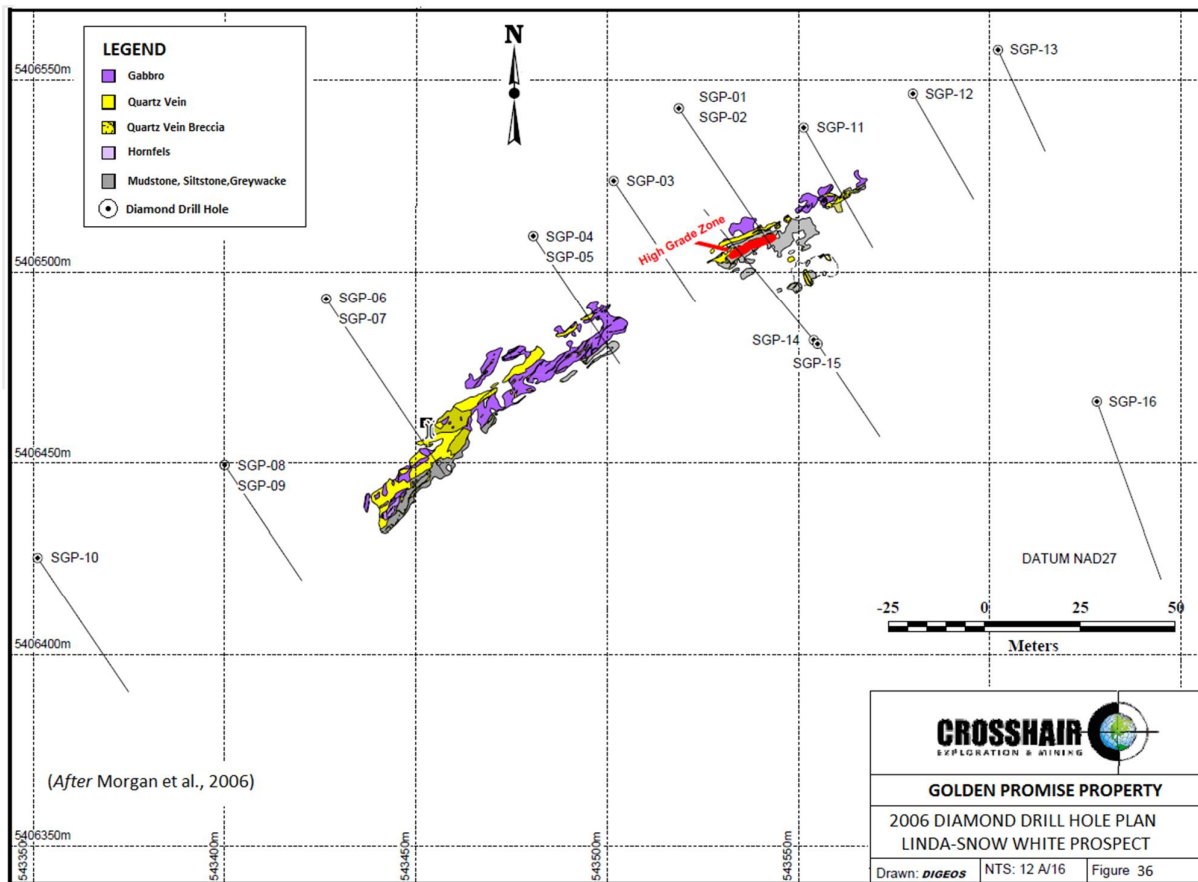
Figure 6.18 - Channel and grab sample locations and results - Linda-Snow White Prospect trench site.



### 6.2.1.7 2007 Trenching and Sampling

During October, 2007, trenching investigations were conducted at three anomalous soil sample sites identified on the Linda Grid, in 2005. Two of the trenches were emplaced at anomaly sites 130 ppb and 308 ppb Au, located 1.0 km southwest of (along strike from) the Linda-Snow White prospect. The third trench was located approx. 650 m NNE of the quartz vein prospect, at the site of a 383 ppb Au anomaly (Fig. 6.20). Trenching at all three sites exposed non-mineralized black shale, with no evidence of quartz veining (Morgan & Pickett, 2008).

Figure 6.19 - 2006 Diamond Drill Plan – Linda/Snow White Quartz Vein Gold Prospect.



#### 6.2.1.8 2008-2009 Soil and Rock Sampling

In January 2008, a reconnaissance soil sampling program was implemented to the west and southwest of the Linda/Snow White Prospect to identify further potential areas for follow-up (Eaton & Morgan, 2008). The survey consisted of four, 500m-spaced, lines, located roughly 500 m west of the prospect, three of which overlapped with the present property area. Two additional lines were located 1.7 km and 3.4 km farther southwest (Fig 6.20).

A total of 289 soils were collected resulting in five anomalous Au assays (at 34 - 55 ppb), three elevated Cu (at 33-35 ppm) and five elevated to anomalous Zn (75-119 ppm).

The highest and most concentrated of the Au, Cu and Zn values were obtained at, or near, the present property boundary (on Lines 2 to 4), immediately west of the Linda/Snow White Prospect (Fig. 6.20 ). However, a follow-up soil survey (during Oct-Nov, 2008), using 100m-spaced (infill) lines, produced only two anomalous Au results for this area. These consisted of a 62 ppb Au, located just WSW of the earlier-reported 40 ppb Au (on L3), and a 14 ppb Au located on the southeastern end of L4.



Table 6.9 - 2006 Diamond Drill Hole (Gold) Results, Linda-Snow White Prospect

Drill Hole	From (m)	To (m)	Width (metres)	Au (weighted Avg.)	Comment
SGP-01	37.00	37.40	0.40	798 ppb Au / 0.40 m	Quartz vein, 1 speck VG
SGP-01	49.45	53.25	3.80	133 ppb Au / 3.80 m	
SGP-02	50.18	50.50	0.32	242 ppb Au / 0.32 m	Quartz veins, py + aspy
SGP-03	36.40	36.65	0.25	131 ppb Au / 0.25 m	Quartz vein, aspy
SGP-04	31.60	32.78	1.18	97 ppb Au / 1.18 m	Quartz veins, py + aspy
SGP-05	---	---	---	<i>no significant results</i>	
SGP-06	69.57	69.97	0.40	154 ppb Au / 0.40 m	Quartz veining
SGP-07	---	---	---	<i>no significant results</i>	
SGP-08	27.27	27.77	0.50	147 ppb Au / 0.50 m	
SGP-09	6.90	7.40	0.50	344 ppb Au / 0.50m	Quartz veins, py + aspy
SGP-10	8.25	8.90	0.65	465 ppb Au / 0.65 m	Quartz veining, aspy
SGP-11	16.00	17.00	1.00	237 ppb Au / 1.00 m	Quartz – carbonate veins
SGP-11	28.00	28.50	0.50	656 ppb Au / 0.50 m	Quartz veins, aspy + py
SGP-11	30.85	31.95	1.10	796 ppb Au / 1.10 m	
SGP-12	10.70	11.68	0.98	185 ppb Au / 0.98 m	Gouge, py + aspy
SGP-13	---	---	---	<i>no significant results</i>	
SGP-14	43.25	44.40	1.15	<b>19.5 g/t Au over 1.15 m</b>	Quartz Veining with 20 specks of VG
<i>including</i>	43.55	43.90	0.35	<b>63.3 g/t Au over 0.35 m</b>	
SGP-14	48.60	49.10	0.50	<b>1515 ppb Au / 0.50 m</b>	Gabbro with quartz veins
SGP-15	---	---	---	<i>no significant results</i>	
SGP-16	31.75	32.25	0.50	316 ppb Au / 0.50 m	Altered gabbro with thin quartz veins, py + aspy

Follow-up soil sampling carried out on, and adjacent to, line (L6), located 4.5 km SW of the prospect, produced a significant cluster of anomalous Au values, including 7,667 ppb, 47 ppb, 45 ppb, 50 ppb and 82 ppb Au (Fig. 6.20). Associated concentrations of 1750 ppm As, 42 ppm Cu and 49 ppm Pb, were obtained with the larger Au value, while up to 94 ppm Cu and 137 ppm Zn occurred with the latter results.

A re-investigation of the anomalous site, in 2009, resulted in the discovery of a poorly-exposed quartz vein system, roughly coincident with the soil anomalies, being outlined by angular quartz float and sparse bedrock occurrences. “Where outcropping, the quartz vein measures 0.30 - 0.70 m wide and consists of bull white quartz with local iron carbonate/chlorite alteration and silicification of adjacent wallrock. Only rare stylolitic remnants of the host sediments/volcanics were observed” (Sparkes, 2009). Sampling of the subcrop/float material assayed only 101 and 56 ppb Au. However, at the site of the 7,667 ppb Au soil anomaly (located at the site of a roadside pit), scattered, angular, fragments of quartz-carbonate float overlying poorly exposed, NE-trending, interbedded siltstone, chert and tuff, returned two assays of 6.78 g/t and 2.44 g/t Au (Fig. 6.20). Panning of soils, at two localities within the general soil anomaly area, revealed several pristine flakes of very fine gold (Sparkes, 2009; Geofile 12A/1462). [While these anomalies are located a significant distance from the present *Golden Promise Property* boundary, they do align with the structural trend of the Linda-Snow White prospect, thereby, highlighting the importance of this trend as a yet-worthwhile exploration target].

(Compilation after Morgan et al., 2008 & Eaton et al., 2008 & Sparkes, 2009)

After Foudé (2005) & Eaton et al. (2008)

#### **6.2.1.9 2010 Biogeochemical Sampling**

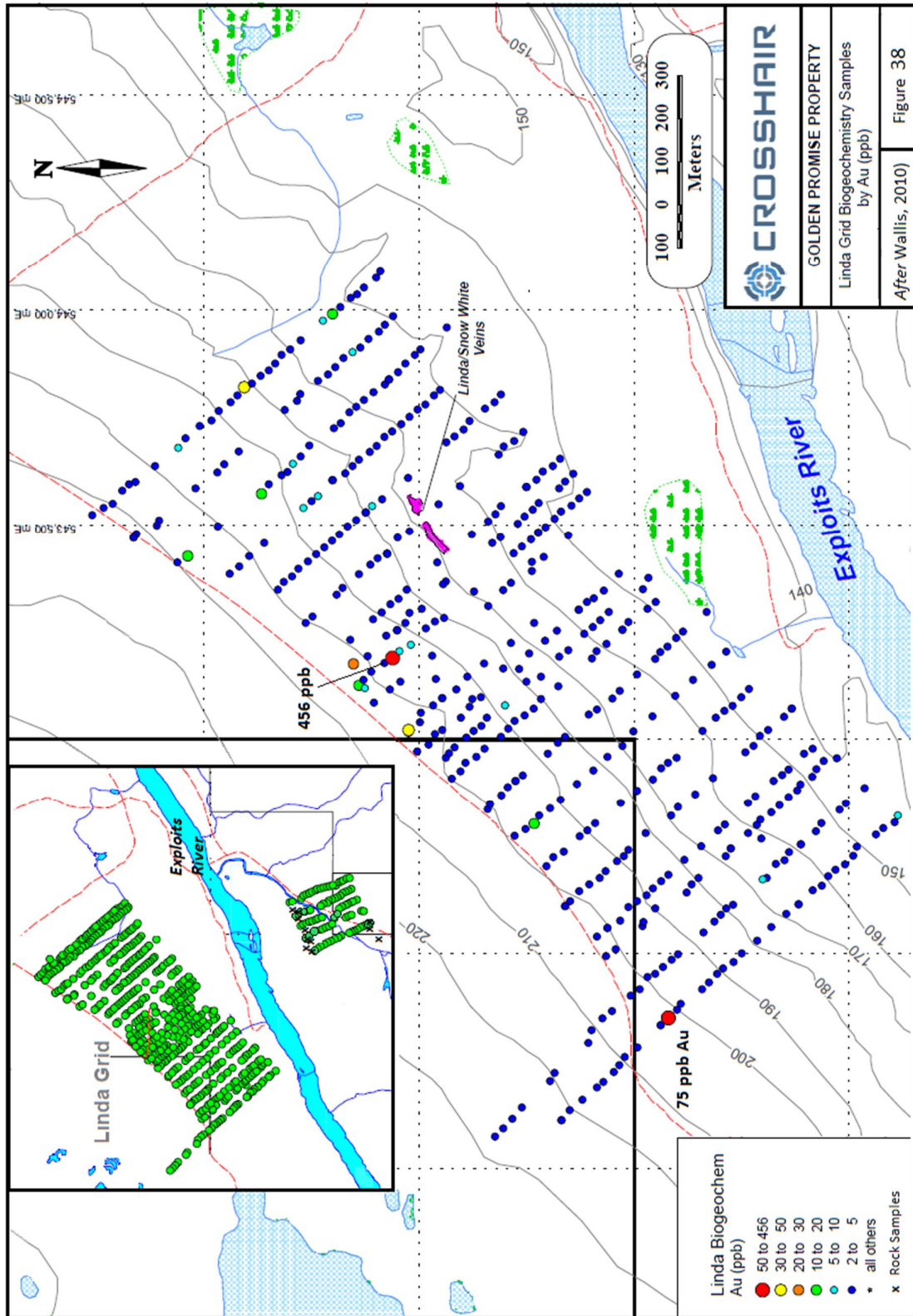
During May-June, 2010, a program of biogeochemical sampling, utilizing the collection of tree needles and twigs, was implemented over the original Linda Grid and a smaller grid to the south of the Exploits River (Fig. 6.21). The purpose of the program was to “better define trends of anomalous gold, arsenic and other pathfinder elements which could be targeted by future trenching and drilling” (Wallis, 2010).

A total of 561 samples (fir tree needles and twigs) were collected from the Linda Grid, while another 85, consisting of spruce bark material, were collected from the smaller southern grid; the latter grid consisted of four lines, spaced 100 m apart, which targeted a 250 m long arsenic anomaly identified (on L9N), during the 2004 reconnaissance soil survey (Wallis, 2010).

Gold results for the Linda Grid included 15 anomalous values ranging from 10 - 456 ppb (over a background of < 5 to 10 ppb). No anomalous Au results were obtained in the vicinity of the Linda-Snow White prospect where, in fact, only a few biochemical samples were taken due to lack of suitable trees. A cluster of 5 samples, with assay values exceeding 10 ppb (including the 456 ppb Au value), was obtained from the northwestern fringe area of the grid (400 m WNW of the prospect)(Fig. 6.21 ); elevated responses of Ag, Ba, Ca, Co, Cu, Fe, Ge (and weaker Mo) were associated. To the NNE of the prospect, 5 sample sites, located within 200 m of the earlier-reported 383 ppb Au (soil) anomaly, produced values ranging from 14 to 37 ppb Au. In addition, a 75 ppb Au value (correlating with elevated Ag, Cu, Pb & Zn responses) was obtained on the southwesternmost line of the grid (L59+50E)(Wallis, 2010).

The southern survey grid produced only one elevated (biochemical) Au value, of 13 ppb. A total of 18 rock samples, also collected from the southern grid, returned no anomalous Au. Three quartz float samples, however, yielded As values of 427 ppm, 428 ppm and 975 ppm (Wallis, 2010).

Figure 6.21 - 2010 Biogeochemical sampling surveys - Linda-Snow White Prospect Area.



#### 6.2.1.2 6.2.10 2005 Rock and Soil Sampling – Noel Paul’s Brook-Gabbro Occurrence Area

In 2005, a small reconnaissance soil grid, consisting of four (100 m-spaced) lines, was sampled just west of the Noel Paul’s Brook, on (former) Lic. 11058M. The survey lines were designed to test a NE-trending topographic lineament (structure) that crosses the brook 0.9 km northeast of the survey area (Froude, 2005). Of the total 85 soils collected, only one anomalous Au value – 34 ppb – was obtained, this being located on the structure, itself (Fig. 6.22).

Approximately 2.0 km east of Noel Paul’s Brook, in the northwestern corner area of (former) Lic. 11057M, additional reconnaissance soil sampling was carried out in conjunction with prospecting and rock sampling, resulting in the discovery of auriferous quartz veins cutting gabbro (the *Gabbro Occurrence*). A number of rock samples produced elevated to highly anomalous gold results, including 152 ppb Au, 153 ppb Au, 661 ppb Au, 955 ppb Au, 10.04 g/t Au and 2.6 g/t Au (Sparkes, 2006). A total of 118 soil samples were collected on three 400m-spaced lines which returned a maximum Au value of 87 ppb Au, and several others in the range of 28 - 45 ppb Au (Fig. 6.22).

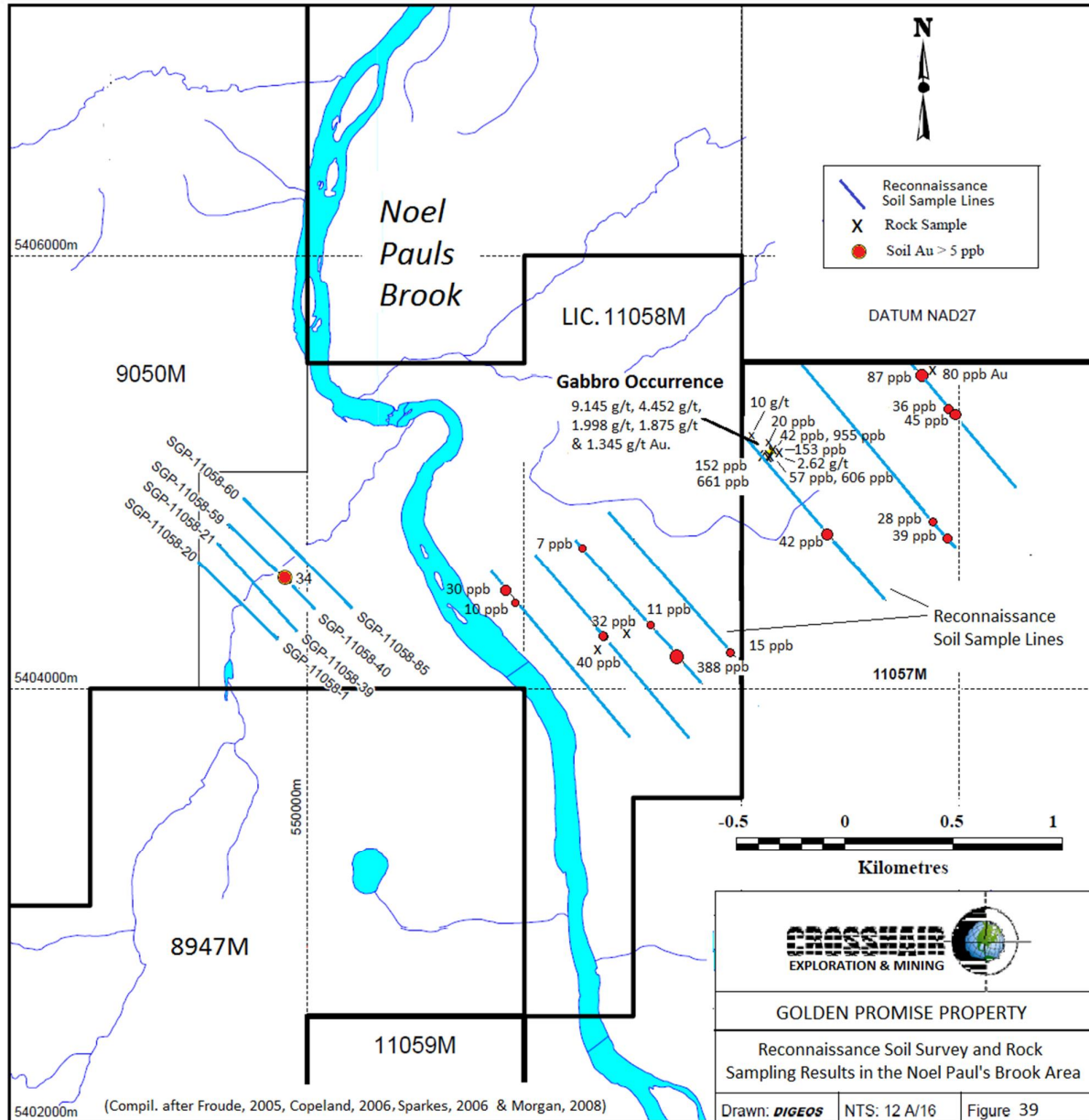
During July-Sept, 2006, a follow-up investigation of the general area of the 10.04 g/t Au occurrence, revealed a 25 x 55 m (exposed) bedrock area consisting of iron-carbonate altered gabbro, cut by a system of narrow (<1 to 4 cm wide) quartz veins, hosting up to 10% pyrite (Copeland, 2006). Five of the 36 samples taken at, or near, the site, returned Au values of 9.15 g/t, 4.45 g/t, 1.99 g/t, 1.88 g/t and 1.35 g/t Au, while another 18 samples assayed between 119 ppb and 922 ppb Au.

During the fall, 2008, a total of 117 soils were collected on four 200m-spaced reconnaissance lines located approx. 1.1 km southwest of the *Gabbro Occurrence* (Fig. 6.22). A total of 9 rock samples were also collected from the grid (Morgan, 2008). The central portion of the survey area revealed numerous outcrops and subcrops of pyrite-bearing quartz veins, striking 090° and 110°, and dipping steeply north. The veins can be intermittently traced for at least 125 metres along strike, the widest, ranging from 0.5 to 1.0 m in width. The report, by Morgan (2008) does not record the type of host rock (in general), except to state – in the case of one 8 cm wide quartz vein – that it cuts “medium grained, weakly/locally magnetic gabbro containing minor pyrite plus pyrrhotite”. Rock sampling, however, produced generally insignificant gold and base metal assays, the maximum being 32 ppb and 40 ppb Au, 119 ppm Cu and 42 ppm Zn. Soil sampling returned 7 elevated to anomalous Au values, including 7 ppb, 10 ppb, 11 ppb, 15 ppb, 30 ppb, 32 ppb and 388 ppb Au (Morgan, 2008; Geofile 12A/1364).

During Sept, 2008, a final program of trenching and rock sampling was carried out at the *Gabbro Occurrence*, where two trenches were excavated and seven rock (grab) samples were collected. The two trench exposures, separately, consisted of chloritized and saussuritized gabbro and strongly fractured siltstone. The gabbro exposure was reported to be cut by local, <1-15 cm wide, quartz veins from which three anomalous Au results were obtained, including 38 ppb, 176 ppb and 504 ppb Au (Sparkes, 2009). No samples were taken from and second trench. The quartz-veined gabbro exposure, however, could not be “washed or channel-sampled due to the lack of a suitable water source in the area” (Sparkes, 2009).



Figure 6.22 - Reconnaissance soil and rock sample survey results, Noel's Brook-Gabbro Occurrence area.



## 7 GEOLOGY SETTING AND MINERALIZATION

The Golden Promise property lies along the north-northwestern fringe of the Victoria Lake Supergroup – a volcanosedimentary terrane comprising a significant portion of Newfoundland’s central Dunnage Zone (Fig. 7.1). The Dunnage is a major tectonostratigraphic division of the Appalachian Orogen composed mainly of remnants of the Cambrian-Ordovician ophiolitic and volcanic arc terranes of the ancient Iapetus Ocean basin. The same were juxtaposed between the Precambrian continental land masses of Laurentia (proto-North America) and Gondwana (proto northwest Amazonia/Africa) during the Early-Mid Ordovician Taconic Orogeny. These terranes are now represented by the Humber and the Avalon-Gander Zones, respectively (Figs. 7.1 & 7.2).

The Taconic Orogeny was followed by the (Silurian) Salinic and (Devonian) Acadian orogenies which resulted in final juxtaposition, accretion and deformation of the oceanic/continental-margin arc sequences along the Laurentian margin (Fig. 7.2). Following these events, more relaxed crustal conditions gave way to a profusion of anorogenic granitoid intrusive events throughout the Dunnage Zone.

The Newfoundland Dunnage Zone is comprised of two major divisions or terranes – the Notre Dame Subzone (NDSZ) and Exploits Subzone (ExSZ) – representing the once widely-separate oceanic realms of peri-Laurentia and peri-Gondwana, respectively (Figs. 7.1 & 7.2). During the convergence of these terranes “several thousand kilometers of oceanic lithosphere were consumed by means of subduction” occurring on opposite sides of the Iapetus Ocean basin (van Staal, 2007). Final disappearance of the main ocean tract brought these domains together along a suture zone known as the Red Indian Line (Fig. 7.1). This major, northeast-trending structural zone marks the west-dipping thrust-fault contact of the peri-Laurentian Red Indian arc sequence (of the NDSZ) with the peri-Gondwanan Victoria arc sequence (of the ExSZ). The same occurs adjacent to the northwestern boundary of the *Golden Promise Property*. Its actual location in this area, however, is obscured by the Mid Ordovician- Silurian Badger Group sedimentary cover sequence.

### 7.1.1 Victoria Lake Supergroup

The Victoria Lake Supergroup (VLSG) dominates the western portion of the ExSZ (Fig. 7.1); it is composed of remnants of the Penobscot Arc (ca. 513-486 Ma) and the later, superimposed, Victoria Arc (ca. 473-454 Ma) sequences, of the peri-Gondwanan realm, which have correlative extensions in northeastern and southern Newfoundland, as well as in the Canadian Maritimes and Maine, USA (van Staal and Barr, 2012).



Figure 7.1- Tectonostratigraphic Elements of Newfoundland Geology and the Appalachian Orogen.

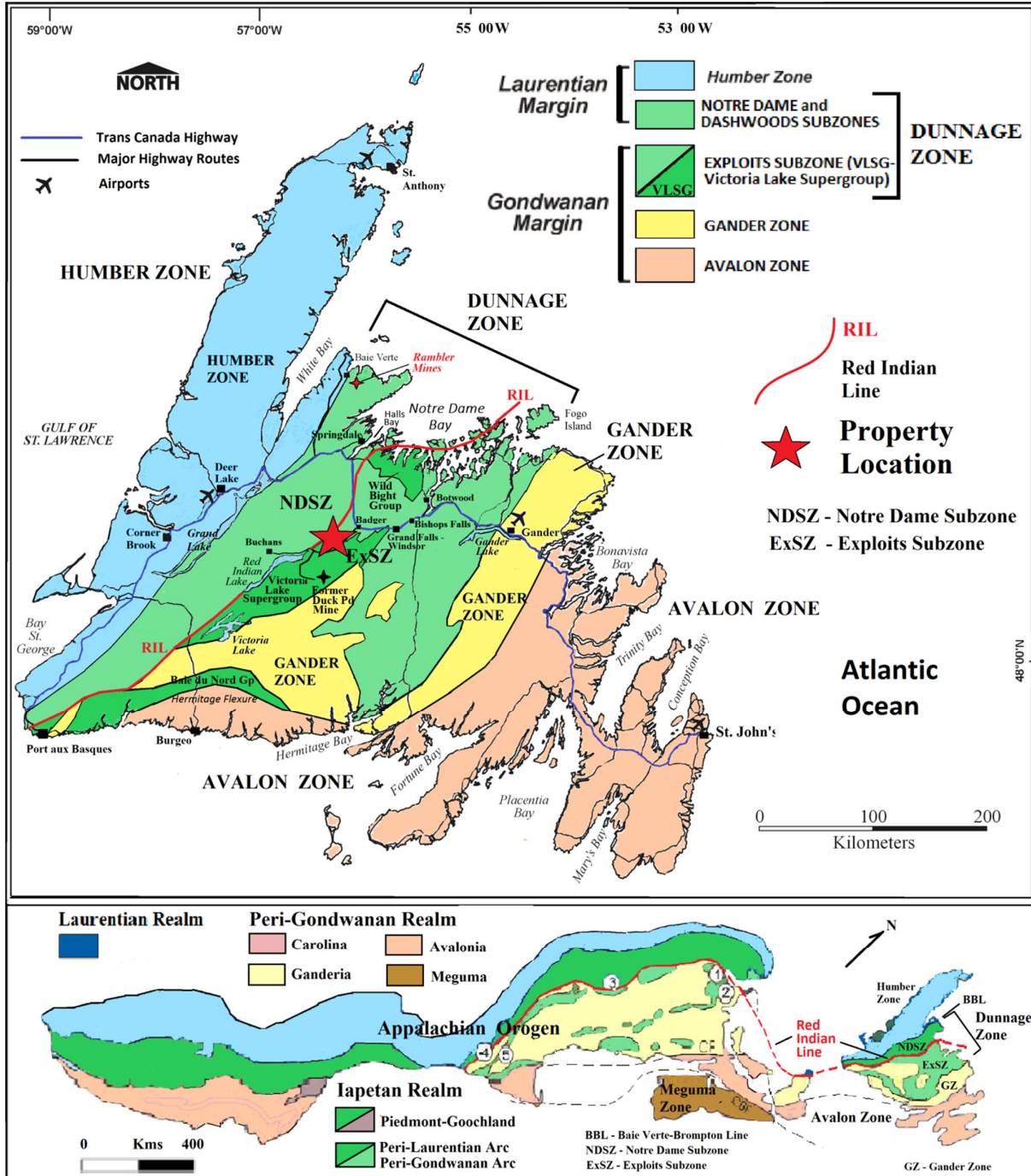
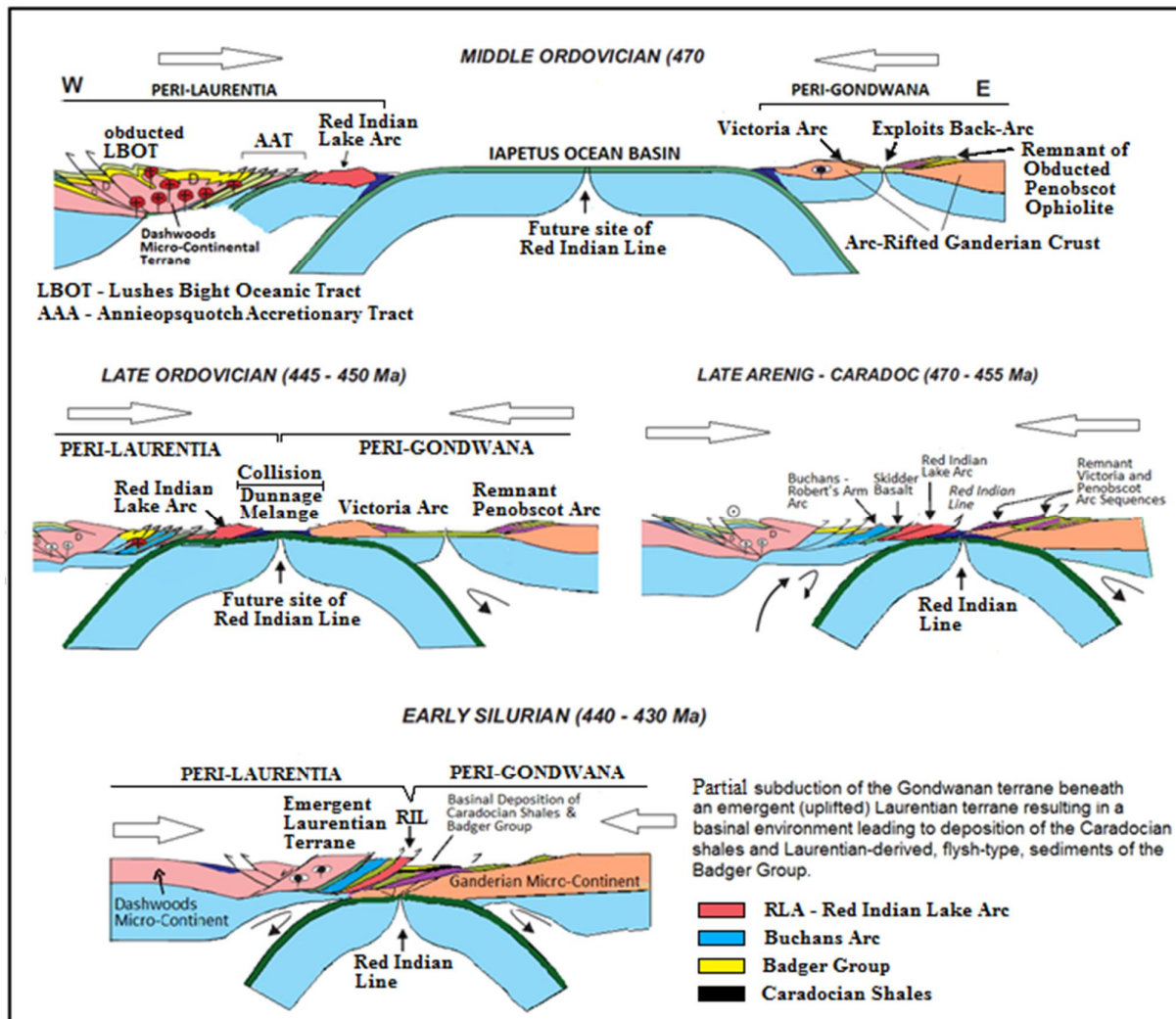


Figure 7.2 - Middle Ordovician–Early Silurian tectonic evolution of the peri-Laurentian and peri-Gondwanan terranes associated with closure of the Iapetus Ocean Basin (Modified after van Staal & Barr, 2012).



The VLSG has a maximum width of 28 km and a strike extension of 170 km extending from the Grand Falls-Windsor area, in the northeast, to the King George IV Lake and Burgeo highway area, in southwestern Newfoundland (Figs. 7.1 & 7.3).

From east to west, and corresponding with oldest to youngest stratigraphy, the volcanosedimentary units of the VLSG include: the Tally Pond (ca. 513 Ma), Long Lake (ca. 505 Ma), Tulks Hill (ca. 498 Ma), Pats Pond (ca. 487 Ma), Sutherlands Pond (ca. 462 Ma), Noel Paul's Brook (ca. 455–465 Ma) and Wigwam Brook (ca. 455 Ma) Groups (McNicoll et al., 2008; Zagorevski et al., 2007)(Fig. 7.3). Its uppermost (Caradocian) shale/chert sequence is assigned to the Noel Paul's Brook Group (Rogers & van Staal, 2003–2005). Along its north-northwestern fringe (present property area), the VLSG is overlain by a flyschoid sequence of greywacke/turbidites, argillites and conglomerates of the Ordovician-Silurian Badger Group.

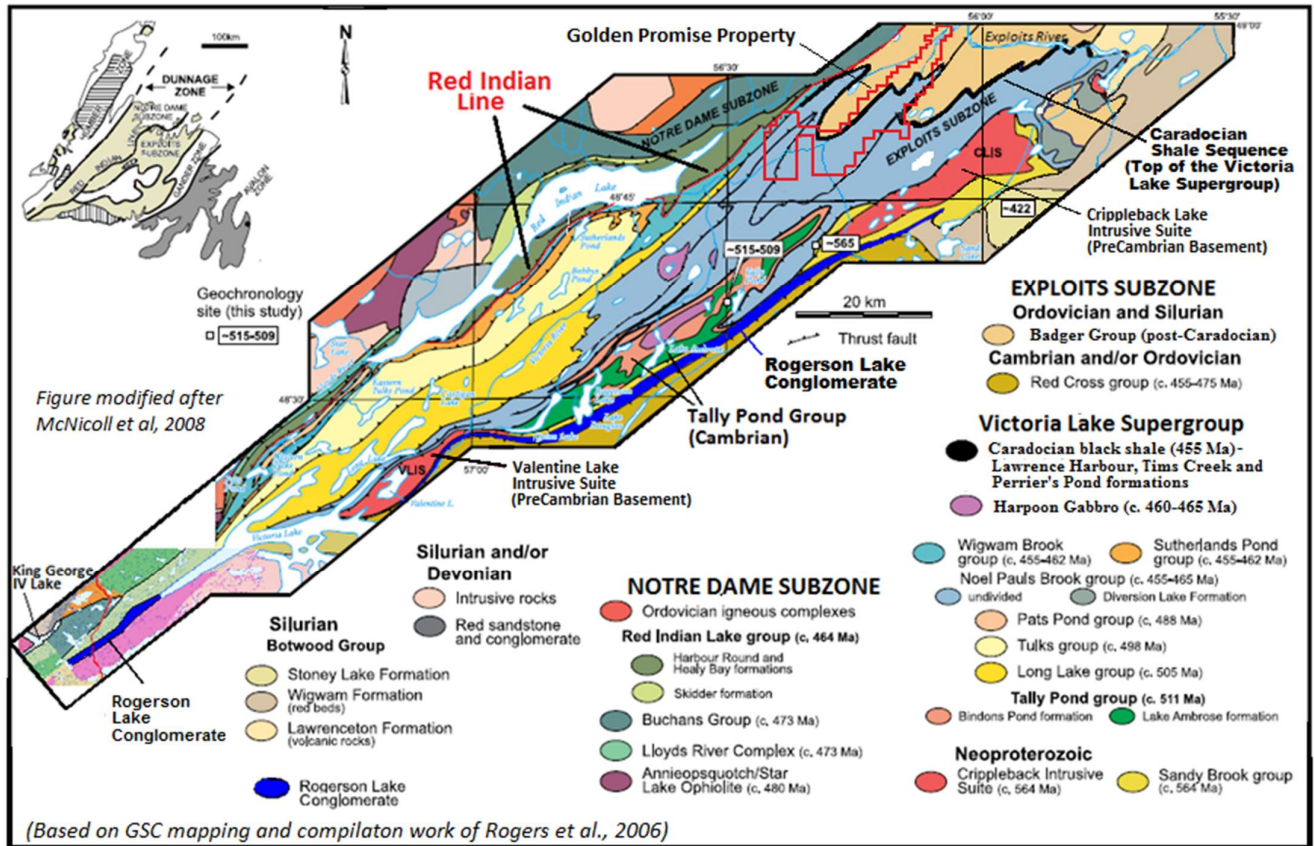
An important distinction is noted between the lithological character and tectonic origin of the sediments of the VLSG and those of the Badger Group. Prior to collision of the peri-Gondwanan and peri-Laurentian arc terranes, distal sedimentation concomitant with Victoria arc volcanism (of the VLSG) was influenced by extensional basins associated with arc rifting, wherein deposition of argillites, cherts and volcanogenic epiclastic/siliciclastic sediments occurred. Intermittent disruption and slumping of these sediments, due to seismic/rifting activity, resulted in the formation of turbidites – as recognized within the property area and elsewhere within the VLSG. During collision of the peri-Gondwanan (Victoria/Penobscot) arc terrane with the peri-Laurentian terrane – along the Red Indian Line (RIL) – the former assumed a lower-plate setting, undergoing partial subduction (and therefore subsidence) in contrast to simultaneous uplift of its Laurentian counterpart to the west (Zagorevski, et al., 2008)(see Fig. 7.2). This resulted in a basinal setting to the east of the RIL, thus, favoring widespread deposition of the (458-448 Ma) Caradocian black shales atop the Victoria arc sequence (Zagorevski, et al., 2008; van der Velden et al., 2004). Subsequent eastward transport of erosional detritus across the RIL, from the emergent Laurentian terrane, resulted in deposition of flyschoid-type sediments of the Badger Group, atop the Caradocian (Fig. 7.2).

Structurally, the VLSG is characterized by a moderately to strongly developed regional foliation fabric that dips steeply NW to SE in association with tight to isoclinal, folds which trend and (generally) plunge NE (Evans et al., 1990; Zagorevski, 2007). First, second and (locally) third-order folds occur parasitic to a regional-scale antiformal structure called the Victoria Anticlinorium (Kean, 1985) (Fig. 7.4). Metamorphic grade is generally lower-greenschist facies, increasing to mid-greenschist to lower-amphibolite facies along the southern margin of the VLSG.

#### Mineralization in the VLSG

The VLSG is host to numerous volcanogenic massive sulphide (VMS) and epigenetic-gold occurrences. Approximately 130 (chalcopyrite-sphalerite-galena-type) VMS occurrences are documented to date – including 30 significant deposits and prospects (Fig. 7.4 ). The most significant of these occur within the Early Cambrian Tally Pond Group which hosts the past-producing Duck Pond base metal deposit. Combined resources of the Duck Pond deposit and the nearby Boundary Zone deposit consisted of 5.48 Mt of 5.8 % Zn, 3.3% Cu, 0.9 % Pb, 59 g/t Ag & 0.8 g/t Au (Squires & Moore, 2001).

Figure 7.3 - Geology of the Victoria Lake Supergroup and adjacent stratigraphy, Central Dunnage Zone region, Newfoundland (After Rogers et al., 2006).



Equally prospective for the VLSG is the historical to recent discoveries of significant gold mineralization within the supergroup – particularly in the Valentine Lake to Wilding Lake areas, along the south-southeastern fringe area of the VLSG (Fig. 7.4). Exploration conducted from 1985 to present, in the Valentine Lake area, has led to the discovery of numerous prospects/deposits over a structural trend of 16 km. These occurrences consist mainly of *en echelon*, tension-gash and/or shear-related, gold-bearing, quartz and quartz-tourmaline vein systems which cut the Valentine Lake (granitoid) Intrusive Suite. A recent Press Release (Oct 30, 2018), By Marathon Gold Corp., on ongoing drill programs in the Valentine Lake area, have recently concluded a *measured* and *indicated* resource of 45,146,000 tonnes at 1.854 g/t (2,691,400 oz of contained gold) and an inferred resource totalling 26,857,000 tonnes of 1.774 g/t Au (1,531,600 oz of gold).

More recent (2015-2017) gold discoveries in the Wilding Lake area, located 19-26 km east-northeast of the Valentine Lake occurrences (along the same regional structural trend), consist of similar orogenic-style, structurally-controlled, quartz veins, bearing coarse to very coarse-grained gold.



The gold-bearing quartz vein systems comprising the **Golden Promise Property** prospects, located along the north-northwestern fringe of the VLSG, represent a relatively new discovery for the supergroup as well. Although of similar orogenic origin, these quartz vein systems are hosted within anticlinal folds affecting sedimentary units – being controlled by, or expressed as, axial planar breaks, en echelon type structures, spurs and fold-hinge related saddle reefs, quartz stockworks and ore chutes, as well as offset-faults and shears (Fig. 7.5) – similar to that characterizing the 80 million ounce (Au) Victoria District, of the Lachlan Fold Belt of southeastern Australia (Goldfarb et al., 2001 & 1998) and the 1.2 million oz. (Au) Meguma Group, of Nova Scotia (Bates, 1987). In both these ‘type localities’ turbiditic argillite/siliciclastic sediments comprise the host rocks affected. The Meguma Group, which contains “60 past producing gold districts” is also “considered one of the classic areas of turbidite-hosted gold mineralization” (Kontak et al., 1990; Ryan and Smith, 1998).

The similarity, in geological setting and character, between gold-bearing quartz vein systems of the Lachlan Fold Belt and the Victoria Lake Supergroup, is notable in several respects, particularly regarding: their (common) mode of development; host rock association (argillites/greywacke/turbidite sequences); and their similar (Ordovician) age and orogenic/tectonic development along the (paleo) Gondwanan continental margin.

Figure 7.4 - Structural elements and base metal/gold prospects of the Victoria Lake Supergroup  
(Modified after Pollock et al., 2002).

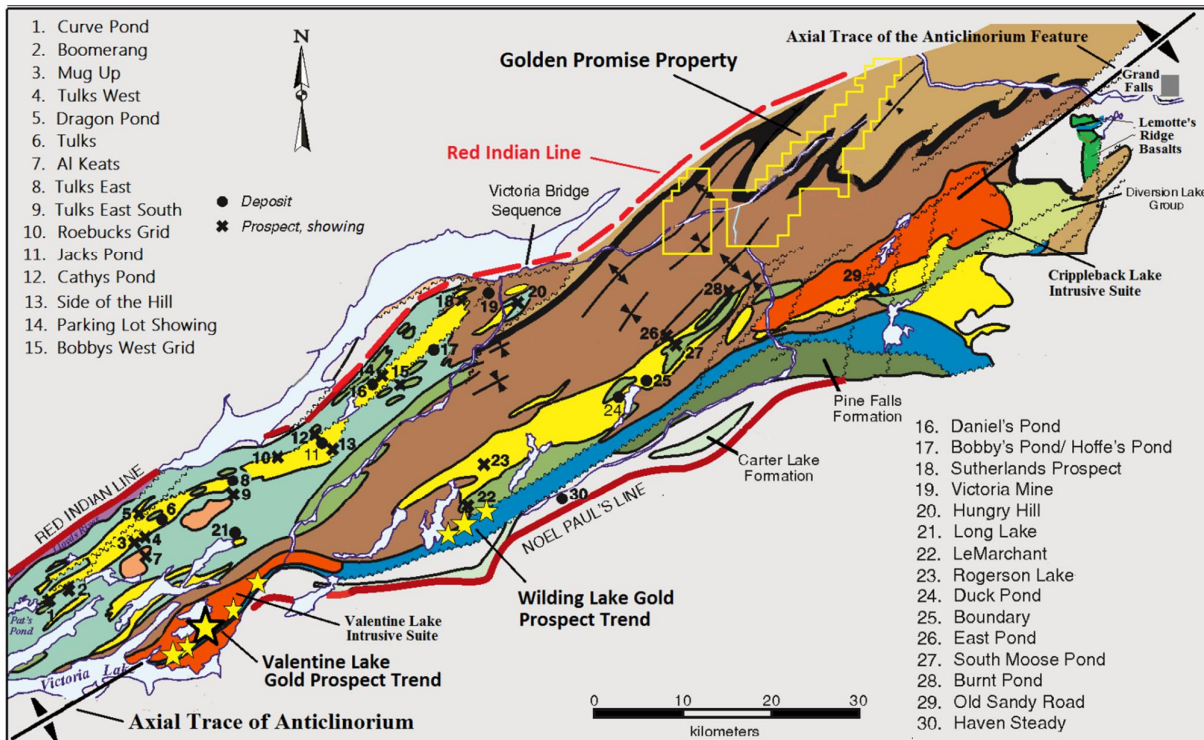
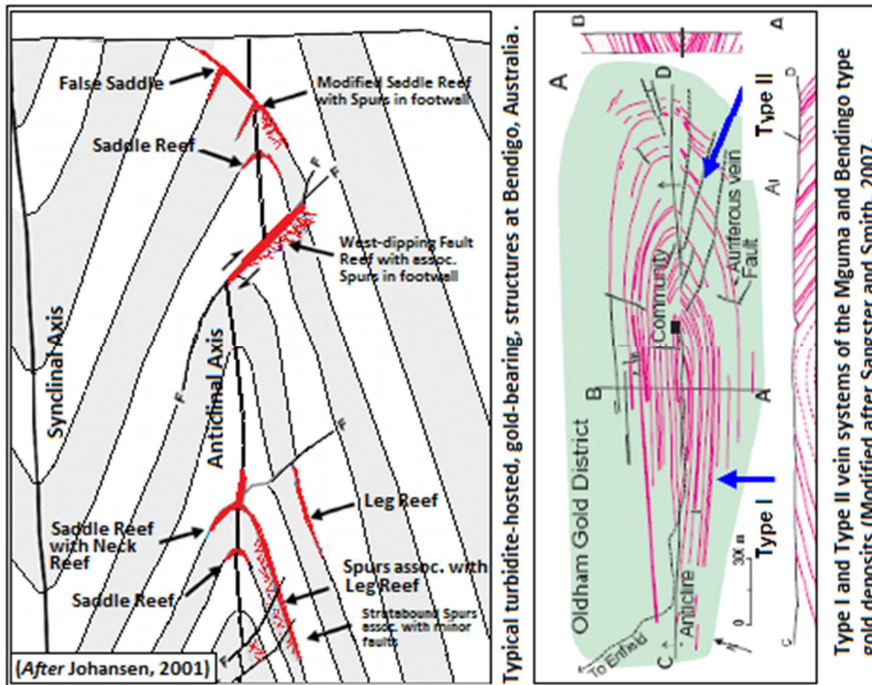


Figure 7.5 - Structural setting of the Bendigo and Meguma type gold deposits.

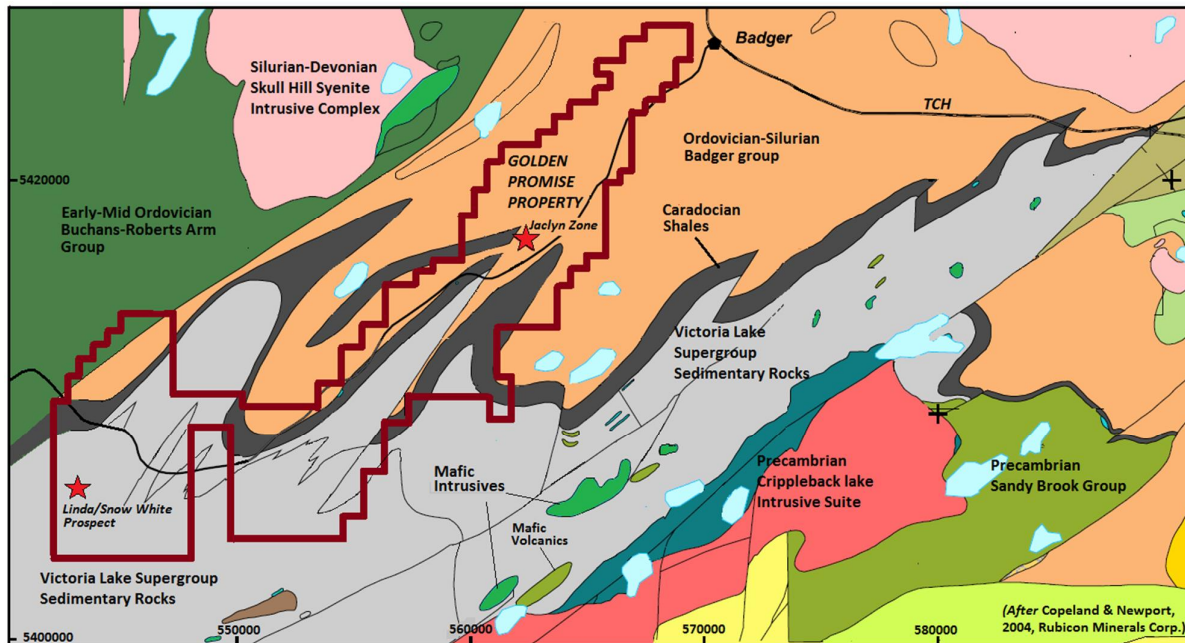


## 7.2 Property Geology

Given the general lack of bedrock exposure throughout the property area, the pertinent geology is best summarized in the context of the more salient (regional) features that transcend the area – as represented by the 1:50,000-scale mapping study, of NTS area 12A/16, by Kean and Jayasinghe (1982) and, herein, schematically represented by former stakeholder to the property area, Rubicon Minerals Corp. (2002), as Fig. 7.6). A later, more refined, geological interpretation of the *Golden Promise Property* area, by Rubicon and Placer Dome, in 2003, is represented in Fig. 7.7. These map presentations are based to a large extent, respectively, on interpretations derived from a 1966 regional airborne Electromagnetic (EM) survey, commissioned by Selco Exploration Co. Ltd/McIntyre Porcupine Mines Ltd, over the Red Indian Lake-Grand Falls area (Lazenby, 1966) and a 2003 EM/Magnetic survey, flown by Fugro Airborne Surveys Corp. (for Rubicon & Placer Dome), over the former '*Golden Promise Property*' area (see Figs. 7.7 & 7.8). In both cases, the pronounced electromagnetic (EM) conductive signature of the graphitic Caradocian shale sequence – an approx. 450 m wide, distinctive, marker horizon – was found to be particularly useful in determining the folded outline of the upper Victoria Lake Supergroup stratigraphy.

[Note, previous reports on the Golden Promise property refer to the Caradocian unit as *overlying* the Victoria Lake Supergroup (VLSG), thus, signifying its *exclusion* from the supergroup. However, based on mapping and compilation studies and nomenclatural revisions by Geological Survey of Canada workers, Rogers and van Staal (2003-2005), this sequence is now recognized as *part of* (and is therefore assigned to) the VLSG, thereby, comprising its uppermost (and youngest) stratigraphic member within the property area].

Figure 7.6 - Geology of the Golden Promise Property area, based on mapping by Kean et al. (1982).



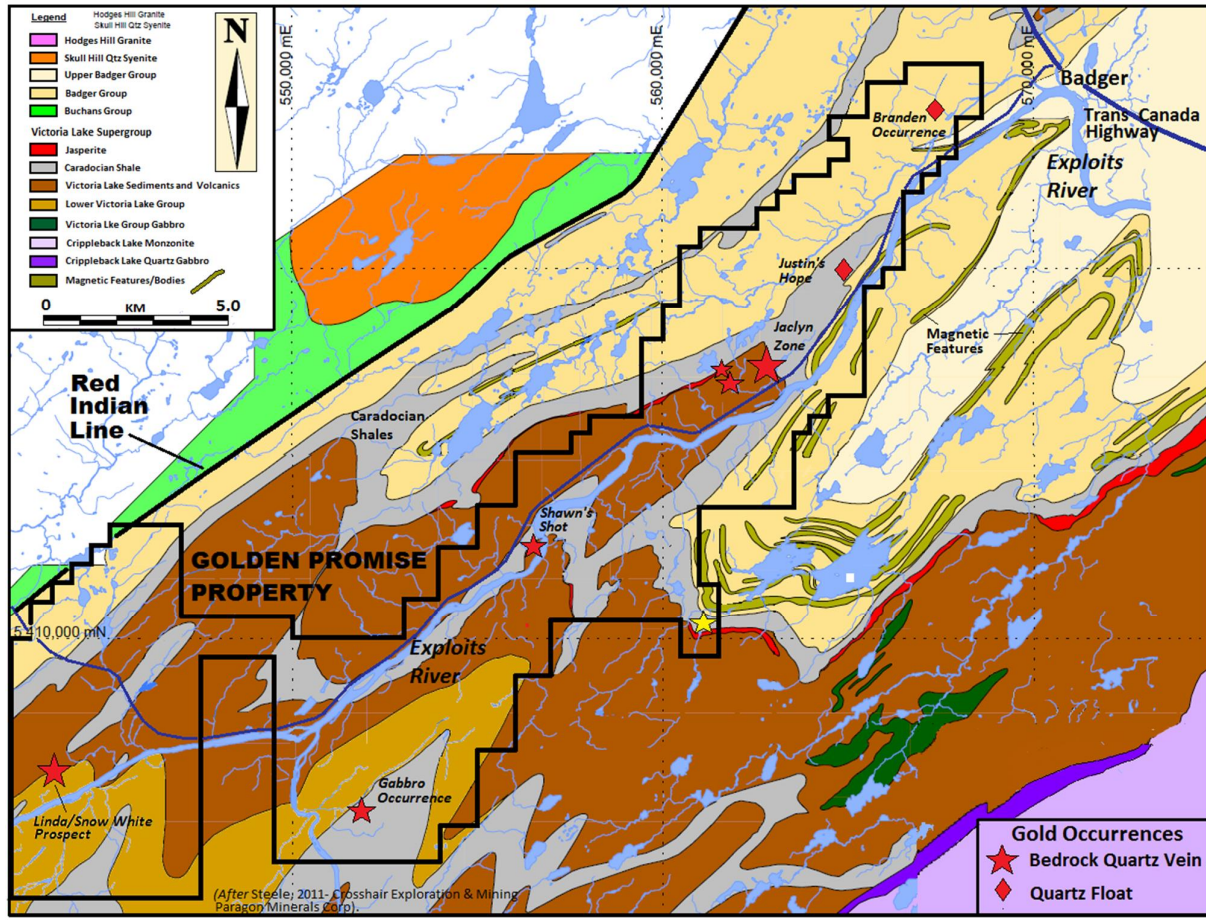
### 7.2.1 VLSG Sedimentary Rocks of the Property Area

Based on the work of Kean et al. (1982), the VLSG is seen as underlying only the southern half of the Golden Promise property (Fig. 7.6). However, results of the 2003 (Rubicon/Placer) airborne EM survey indicate the 'low-resistivity' Caradocian unit to have considerably further northeastward extension through the property than previously inferred. The linear form of this extension would appear to represent the crest or apex of the folded Caradocian shale unit as it plunges gently to the northeast, where it appears to have limited exposure through the overlying Badger Group sediments (see Fig. 7.7).

Rocks of the VLSG, in the property area, are divisible into two main units belonging to the Ordovician Noel Paul's Group (after the nomenclature of Rogers & van Staal, 2003-2005); these include the Caradocian shales of the *Lawrence Harbour Formation* and the dominantly volcanogenic clastic sediments of the *Stanley Waters Formation* (Sandeman et al., 2007). The latter (also informally referred as the *Exploits Rapids Formation*, by previous workers to the property) consists mainly of turbiditic sandstones, siltstones, greywackes and conglomerates overlain by argillites and minor cherts which "typically display a cyclic bedding sequence", i.e., with basal conglomerates and pebbly sandstones grading upward into sandstones overlain by thinly laminated siltstone or argillite and cherts (Kean et al., 1982; Evans & Kean, 2002). The units also commonly display wavy bedding, crossbedding, scouring, and load cast features (Steele, 2011 - Crosshair Exploration & Paragon Minerals). The turbiditic nature of much of the VLSG sediments is due to slumping within active volcanic arc extensional basins



Figure 7.7 - Distribution of the Victoria Lake Supergroup and Badger Group sediments, Golden Promise Property area, based on interpretations derived from the 2003 Fugro Airborne EM/Mag Survey.



At the Jaclyn zone, Steele (2011) reported the presence of turbidites consisting of “massive, metre-thick beds of felsic, volcanoclastic, arkosic and lithic greywacke” with zones of quartzofeldspathic lapilli-ash tuff” (suggesting proximity to a volcanic source); the latter is noted to phase out up-stratigraphy due to waning volcanism. Further mention is made of “volcanogenic-driven hydrothermal alteration ... marked by sericite-chlorite-silica-carbonate alteration and spotted alteration textures”.

The Mid Ordovician to Early Silurian Badger Group, inferred to occupy a significant portion of the northeastern property area (though bedrock confirmation is poor), is “comprised of a flyschoid sequence of argillite, greywacke, and conglomerate” (Wallis, 2010). These sediments are chemically and lithologically distinct from that of the VLSG; the latter consists mainly of mafic to intermediate volcanic and related epiclastic rocks, whereas the Badger Group “contains debris from mixed silicic crustal and mafic to ultramafic sources” (Sandeman, Rafuse & Copeland, 2010). As mentioned in Section 7.1.1, clastic sediments of the Badger Group were derived from the uplifted peri-Laurentian terrane to the west of the Red Indian Line. The group is further described as comprising “coarse-grained, thick-bedded, polymictic conglomerates” and “medium-grained, lithic wackes” – the latter having “locally abundant, grey-black, mudstone beds, rip-up clasts and mudstone lithic fragments” (Sandeman et al., 2010).

Figure 7.8 - Electromagnetic features/trends defined by the 1966 Airborne EM Survey by Selco Exploration Co. Ltd/ McIntyre Porcupine Mines Ltd (After Lazenby, 1966).

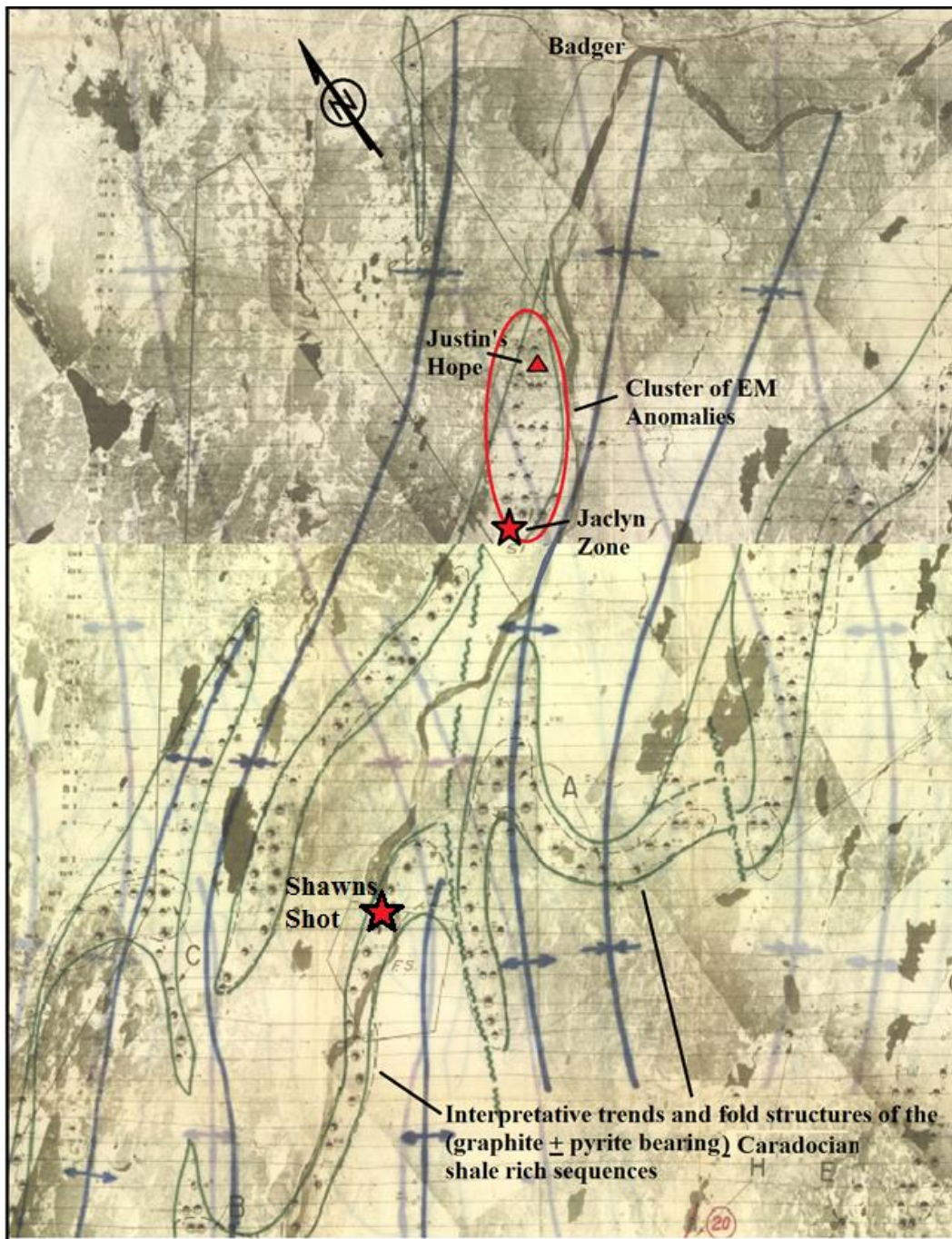
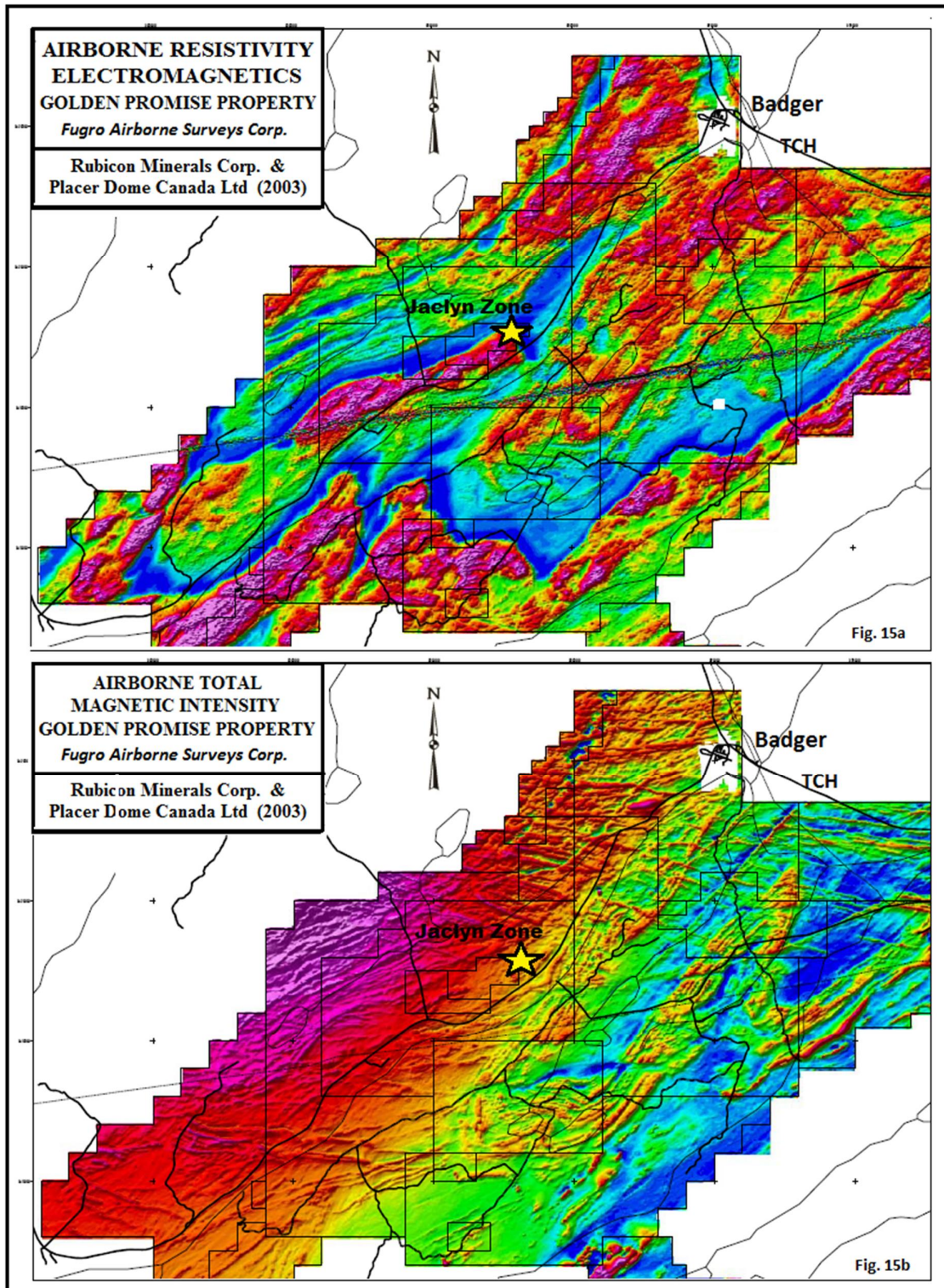




Figure 7.9 - Airborne EM(Resistivity) and Magnetic Features of the general Golden Promise Property area (Fugro Airborne Surveys Corp. (2003).



### 7.2.2 Silurian-Devonian Dyke/Sill Intrusives

A pronounced feature of the property geology, evident from the (2003) airborne magnetic data, is the widespread occurrence of ESE-trending (110-130°) mafic dykes (or dyke swarms) which cross-cut the stratigraphy (Fig. 7.9 ), presumably having their origin as part of the large Silurian-Devonian intrusive bodies located several km to the west. A report by Copeland and Newport (2004) states that these dykes “may be correlative to mafic plutonic rocks that intrude the upper levels of the Victoria Lake Supergroup”. An age range of Early Silurian-Late Devonian (443-355 Ma) is inferred for the dykes which, therefore, post-dates deposition of the Caradocian sequence. Where mafic dykes have been encountered in drill holes at the Jaclyn and other gold-bearing quartz vein system(s) on the property, the majority are noted to be syn-to late-deformation/faulting, with some occupying the same structures as the quartz veins themselves (Copeland et al., 2004, 2006).

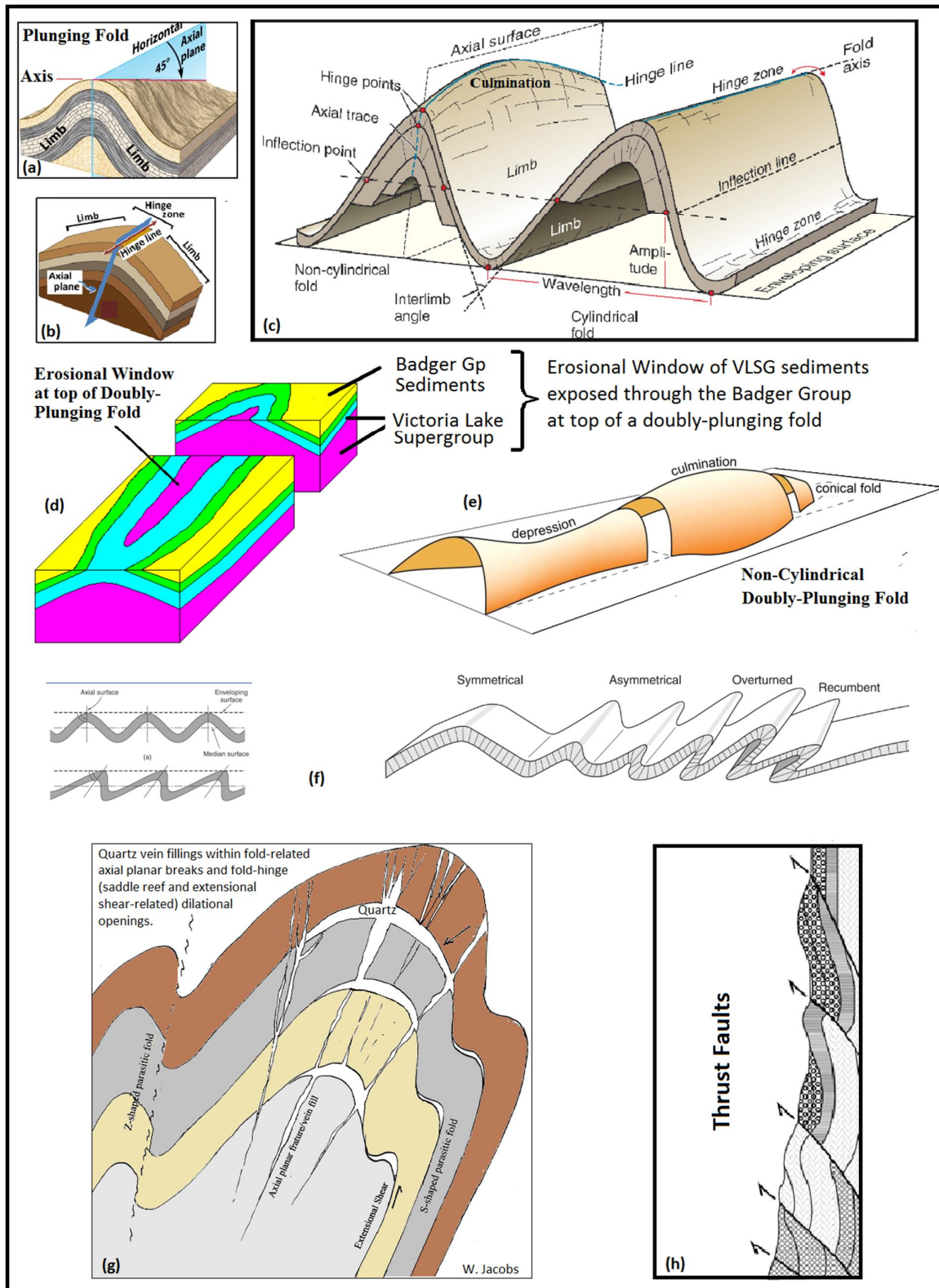
Copeland et al. (2004) also reported the occurrence of NE-trending, magnetic, dykes which trend parallel to the largely NE-oriented stratigraphy of the VLSG. However, a significant number of discontinuous linear magnetic bodies, showing conformity with the folded strata (as evident from the 2003 airborne magnetic survey), likely represent mafic sills as well. A geological interpretation report, on the *Golden Promise Property*, by Tettelaar (2010), makes mention of diorite sills and laccoliths intrusive into conglomerate beds in the area. Gabbroic intrusive bodies may also occur as host to auriferous quartz veins, such as seen at the *Gabbro Occurrence* and, in part, at the *Linda/Snow White Prospect* (southwestern claims area).

### 7.2.3 Structure

The general NE-trending stratigraphy of the VLSG, and associated shallow-dipping to vertical bedding dips (within the property area), are influenced by southeast-verging, open to sub-isoclinal, F1 folds that plunge moderately northeast (Tettelaar, 2010) – an interpretation based largely on the structural mapping of the property area by McNeill (2005). These fold structures are consistent with regional fold trends identified by historical mapping within the greater VLSG (see Fig. 7.4).

McNeill (2005) states that “the most prominent deformational feature within the Golden Promise area are folds” which form “outcrop scale to regional scale structures”. These are “generally open to tight, normal to inclined ... with well-developed cleavages”, their style and size being dependant on the stratigraphic unit, bedding thicknesses and the structural environment involved. Furthermore, “many outcrops are characterized by folds that are doubly plunging, resulting in elliptical interference patterns of bedding on outcrop surfaces”; this pattern is “commonly repeated at the regional scale”. McNeill (2005) also notes that, although many folds are doubly-plunging, the dominant plunge is northeast, with southwesterly plunges evident locally. “The main northeasterly plunge of folds, as measured in the field, is 030°/19° but the actual plunge of any large-scale structure will be less (at 13-15°)” (McNeill, 2005). Examples of variable fold morphologies, and related structures, in the property area, are shown in Fig. 7.10.

Figure 7.10 - Variable fold geometries and structures encountered on the Golden Promise Property.



Structural mapping by McNeill (2005) also revealed four generations of cleavage in the area – S0cl (parallel to bedding), S1 (generally axial planar to F1 folds) and S2 (axial planar to F2 folds). Numerous outcrops exhibiting variable cleavage orientations within the same fold – a phenomena typical of slate belts. The second-generation (F2) folds are described as having “steeply dipping, NW-striking, axial planes that re-fold earlier structures”; the plunges of these vary “depending on the earlier F1 fold geometry” (McNeill, 2005).

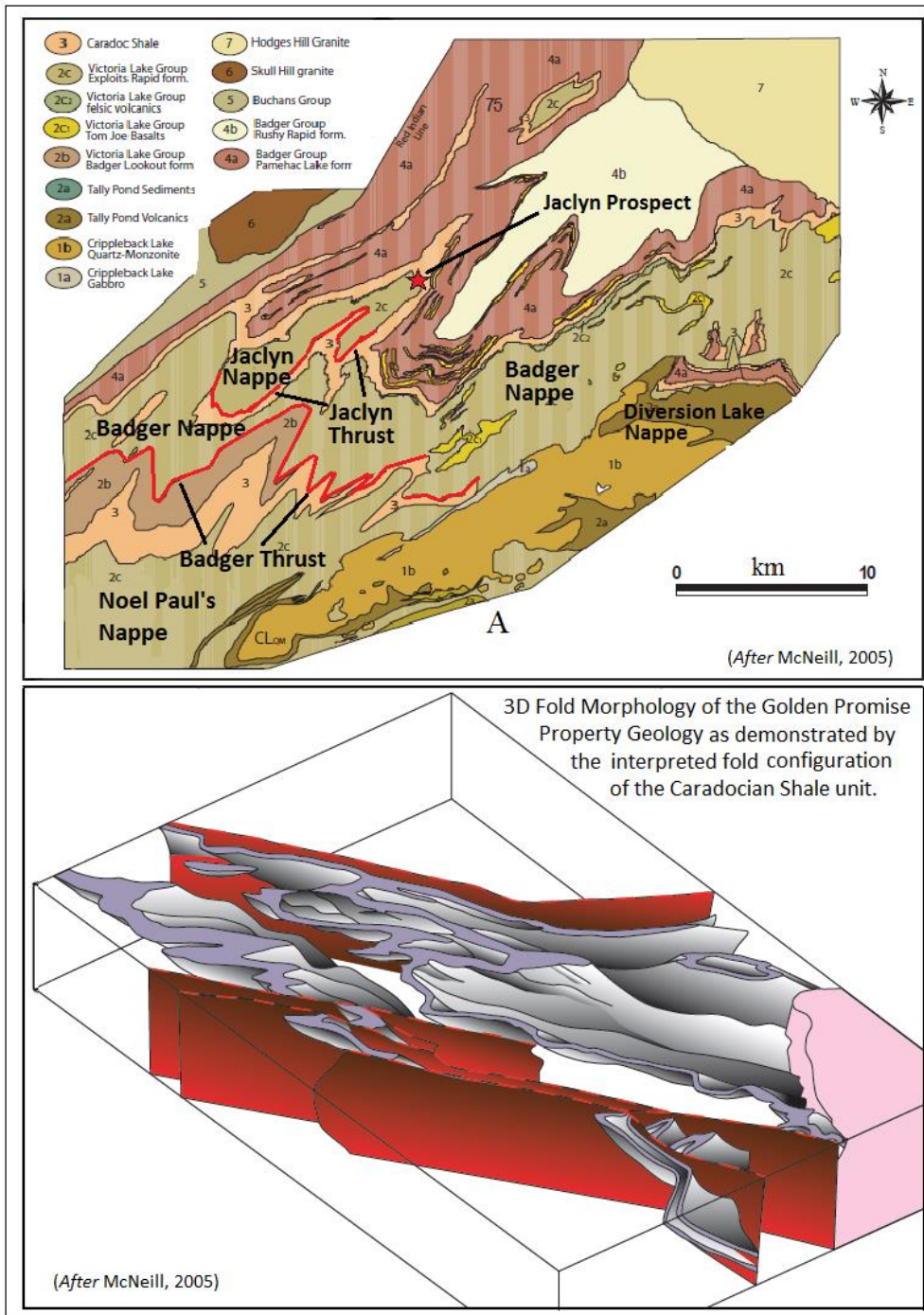
The entire VLSG stratigraphy within the property area, as well as up to several km extending farther east, has been recognized, by McNeill (2005), as comprising four main thrust nappes – the *Badger*, *Jaclyn*, *Noel Paul’s* and *Diversion Lake nappes* (Fig. 7.11). The structural contacts of these are defined as “generally coincident” and stratigraphically-parallel with the Caradocian shales. According to McNeill (2005), related thrust-faulting has resulted in some stacking or repetition of stratigraphy – and related fold structures (favorable for quartz vein development) – which is seen to maximize the quartz vein gold potential of the property. He states “the repetition of favourable tectonostratigraphic environments, by several thrust nappes, increases the number of prospective, *Jaclyn Vein*-type, gold deposits” since “each of these nappes host several antiformal fold closures that are similar to the Jaclyn area”.

Other structural features of the property, as reported by Tettelaar (2010), include regional syn- to late-folding, brittle-ductile, shear zones, trending ENE, NNE and ESE. These were reported by Copeland et al. (2004a) as having undergone “episodic reactivation”, thereby “acting as conduits for mineralized fluids responsible for the formation of the (gold-bearing) quartz vein systems”. Some ENE-trending breaks represent sinistral strike-slip faults along which both the quartz vein systems and the ENE-trending mafic dykes have been emplaced – the dykes, itself, indicating a long-lived, syn- to post-folding, relationship with the structures (Tettelaar, 2010). In some cases, the ENE-trending structures are “bounded or bent/offset by the NNE-trending structures” (Tettelaar, 2010). This assessment has been determined, collectively, from drill-log information, interpretation of airborne geophysical data and structural mapping investigations by McNeill (2005). Certainly, given the scarcity of bedrock exposure in the area, the 2003 airborne EM-resistivity/magnetic survey has been particularly useful in helping define both local and regional-scale fold structures, as well as offset faults, which trend parallel to, or transect, the axial trace of the folds (Wallis, 2010). The conductive nature of the Caradocian shale unit, observed in conjunction with the high ‘resistive’ character of the underlying siliciclastics, helps present a reliable interpretation of stratigraphy and structure.

Kean et al (1982) noted at least two periods of deformation for the general area – a southeastward-directed (D1) thrusting event related to the Late Ordovician (Taconic) to Early Silurian (Salinic) orogenies (445-430 Ma) and a (D2) folding-and-faulting event related to the Late Silurian-Early Devonian Acadian orogeny (421-400 Ma). Following closure of the Iapetus Ocean, at the end of the Taconic orogeny, Salinic orogenic compression, along the now-designated Red Indian Line (RIL) structural zone, was accompanied by downloading of the peri-Gondwanan (ExSZ) terrane resulting in the latter’s partial subduction beneath the peri-Laurentian (NDSZ) terrane (as discussed in Section 5.1.1). This setting is consistent with the recognized structural disposition of the regionally-extensive arc sequences of the Buchans-Roberts Arm and Red Indian Lake Groups, located along the west side of the RIL – which sequences are now defined as Laurentian overlap rocks comprising east to southeast-directed thrust slices (Fig. 7.2 ). This thrusting is evident within the property stratigraphy (of the VLSG), by virtue of the thrust nappes recognized by McNeill (2005) (Fig. 7.11).



Figure 7.11 - Diagrams showing the main structural elements of the Golden Promise Property area  
(After McNeill, 2005).



## 8 DEPOSIT TYPES

The mineral deposit type, characteristic of the property area, is that of orogenic, structurally-controlled, mesothermal, quartz vein gold mineralization. The development of auriferous quartz vein systems within structurally-prepared (folded and faulted) sedimentary units – namely, argillites, sandstones and greywacke/turbiditic sequences, of the Victoria Lake Supergroup – equates with other orogenic, turbidite/slate belt-hosted gold deposits worldwide. These include deposits of the the Lachlan Fold Belt of southeastern Australia, which has produced in excess of 80 million oz. of gold (Goldfarb et al., 2001 & 1998), and the Meguma Group, of Nova Scotia, which has produced around 1.2 million oz. of gold (Bates, 1987). The Meguma Group, which contains “60 past producing gold districts” is also “considered one of the classic areas of turbidite-hosted gold mineralization” (Kontak et al., 1990; Ryan and Smith, 1998).

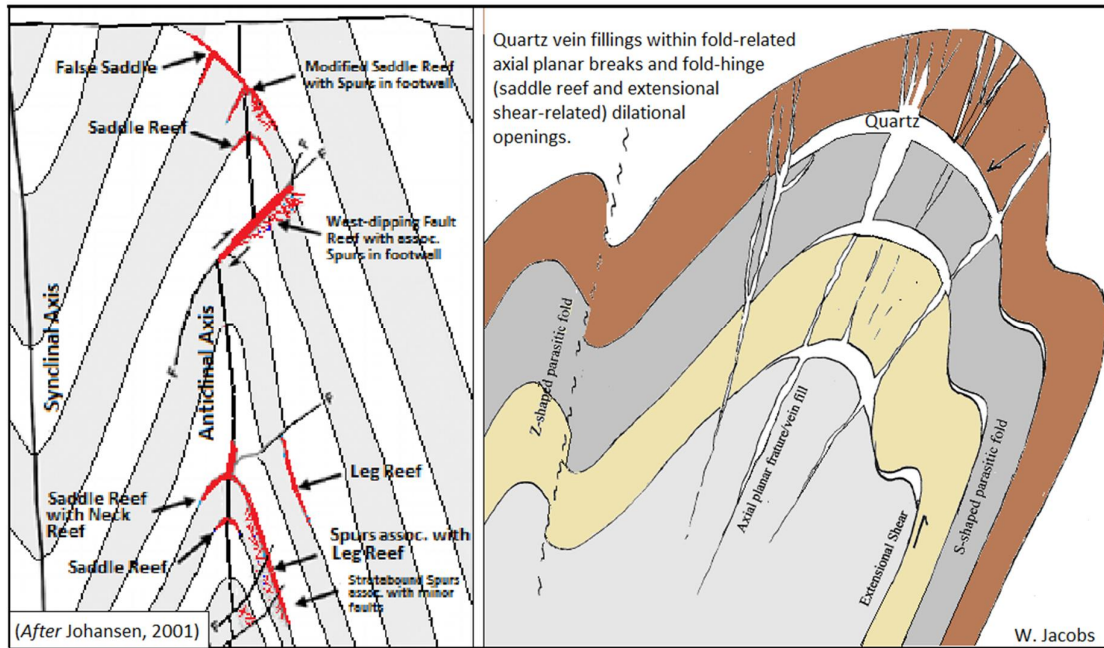
The similarity, in geological setting and character, between gold-bearing quartz vein systems of the Lachlan Fold Belt and the Golden Promise Property area (of the Victoria Lake Supergroup), is notable in several respects, particularly regarding: their (common) mode of development; host rock association (argillites/ greywacke/turbidite sequences); and their similar (Ordovician) age and orogenic/tectonic development along the (paleo) Gondwanan continental margin.

With respect to mode of development, the quartz vein systems are controlled by fold-related dilational/tensional openings, including axial planar breaks, fold-hinge related saddle reefs, stockworks and ore chutes, spurs and en echelon type features. The veins also show infilling along shears and offset and/or thrust faults (Johansen, 2001).[For emphasis and convenient reference, elements of Figs. 11 and 16, showing the above (Bendigo and Meguma-type) structural controls on auriferous quartz vein development, are combined, here, in Fig. 8.1, below]. Alteration, consisting of white mica, quartz, carbonate and occasional albite, generally characterize wallrock alteration envelopes which may extends up to 10 m from the auriferous veins. Other important elements of these quartz vein systems, as noted in relation to the Bendigo Zone goldfields (Lachlan Fold Belt), include:

- 1) the veins occur in “fields”, hosted by short strike-extent faults (<1 km), in areas of 1 km by 8 to 12 km and parallel the structural grain;
- 2) Veins are hosted by large antiformal culminations; and
- 3) The largest tonnage deposits generally occur within permeable turbidites, immediately beneath, or within, carbonaceous shale caprock (*After* Johansen, 2001).

According to Dominy et al. (2000), the above “types of coarse gold-bearing veins are characterized by high grades that are localized and erratic. Effective sampling of these veins is difficult and grade distribution can only reliably be obtained from underground development, including close-spaced sampling, bulk sampling, and trial mining. Diamond drilling is still an effective measure of geological continuity, but it is unlikely that anything above an “Inferred Resource” category can be estimated from surface drilling alone”.

Figure 8.1 - Typical turbidite-hosted, gold-bearing, quartz vein structures, at Bendigo, Australia.



Evaluation of quartz vein gold mineralization tends to be challenging since it does not lend itself to the degree of predictability as would be expected in the case of more pervasive-style mineralization where the commodity of interest is more representatively distributed, as per a given volume of rock or zone. The reason for this is two-fold: quartz veins, by their very nature, tend to be unpredictable in their occurrence as they represent injection of silica-rich hydrothermal fluids into zones of weakness (or openings) which, itself, may appear random; and, the nuggety-style or 'spotty' occurrence of gold mineralization, *within* quartz veins, lends uncertainty, as to grade and continuity, when channel or drill core sampling. Another important aspect of gold-bearing quartz veins which may impact on their economic viability for mining, is their size or – in the case of small veins – their density or concentration; veins may form sparse or isolated occurrences to densely concentrated 'swarms'.

While there is a predictable pattern of rock behaviour or deformation (due to mechanical stresses vs rock properties) – particularly in the form of fold-related axial planar breaks and fold-hinge dilational openings – it is uncertain as to what degree (or intensity) such features will develop.

The assessment report by Mullen (2007) states: "One of the inherent problems in evaluating this type of "nuggety" coarse gold deposit is the estimation of its overall grade". In relation to the *Jaclyn Main Zone*, Mullen (2007) further states that "increased (drill hole) density should improve the gold tenor and ... confirm the geological continuity of the zone". He also notes that, as in the case of the *Jaclyn Zone* area, "detailed exploration and development work at geologically similar deposits in Australia and Wales, U.K., has indicated that gold grades, based on wide-spaced drilling, consistently understate close-spaced drilling results" (Mullen, 2007; Dominy et al, 2000). Dominy et al., (2000) concludes that "bulk samples are likely to be the closest estimators of true grade" while John and Thalenhorst (1991) suggest a minimum bulk sample size of 500-1000 tonnes per 100,000 tonnes of "resource" (0.5-1%).

A redeeming quality of the quartz vein hosted gold mineralization is that it requires no metallurgical chemical process, but simply crushing, after which gold is then separated by gravity methods; the nugget style of the gold mineralization, as well as its structural and density (weight) contrast with quartz, lends itself to easy separation.

Descriptions (including excerpts from earlier reports) of the various quartz vein hosted gold occurrences/prospects on the *Golden Promise Property* are as follows:

### **8.1 JACLYN MAIN ZONE (JMZ)**

To date, the *Jaclyn Main Zone (JMZ)* vein system has been traced, by drilling, over a strike trend of 975 m and to a (vertical) depth of 400 m (Sparkes, 2010). The gold-bearing system consists of single to multiple, en echelon, quartz veins, which dip steeply SE (at 70°- 85°) for most of its trend, though, along its eastern extension, it dips steeply NW. This change is coincident with a variation, in strike, as well – from 070° (in the west) to 090°, along its eastern segment (Pilgrim & Giroux, 2008; Moore, 2003).

Moore (2003) described the *JMZ* as follows: “The vein system attains an estimated *true thickness* of close to 4 m, with individual veins up to 2.7 m thick. The quartz veins of the zone are milky white to grey in colour, comb-textured to locally vuggy, often stylolitic to banded, and inclusion rich – indicative of open-space filling in an extensional tectonic setting. Visible gold distribution within a vein is generally restricted to 10-20 cm thick zones, often close to vein margins. Gold occurs: i) as specks (0.1mm) to coarser (3 mm) flakes along short fractures oriented perpendicular to the vein margin (comb quartz crystal boundaries); ii) along stylolitic seams with fine-grained arsenopyrite; iii) as scattered specks along rusty fractures parallel to the vein boundary; and, less commonly, as iv) isolated grains in massive quartz”.

“Accessory minerals include calcite, chlorite, sericite, iron-carbonate, arsenopyrite, pyrite, galena, sphalerite, and chalcopyrite. Wall rock inclusions locally contain abundant arsenopyrite with lesser pyrite”. The predominant host rock to the veins consist of “fine-grained, weakly to well bedded, mudstone/greywacke intercalated with more granular arkosic greywacke” often hosting mudstone clasts up to 2 cm in size (Moore, 2003).

“Alteration associated with the veining extends up to 15 m either side of the zone but varies somewhat according to rock type. The most pronounced alteration is developed in fine-grained mudstone as light-green, 1-10 mm spots, and fracture alteration, consisting of silica-sericite-carbonate, locally coalescing into massive alteration sections. A steeply dipping mafic dyke (0.5-1.2 m wide) with chilled contacts, “cuts all rock types including the mineralized quartz vein” (Moore, 2003).

Further description of the *JMZ*, is presented by Mullen (2008) who notes: “at its eastern margin (Section 5600E), the veining remains quite strong and open in that direction”. To the west, the vein narrows and is affected by a late brittle fault running subparallel to the zone”. During the 2007 drilling, the near- surface, high-grade, central portion of the zone was “confirmed to consist of two *en echelon* vein segments which overlap by approx. 100 m (Sections 5150E- 5250E) and which are separated by 10-20 m” (Mullen, 2008) (see Fig. 6.1 ). This drilling also revealed that previous (2002) drill holes, GP02-18 and GP02-19, had been stopped short of the more northerly *en echelon Main Zone* branch.

Drilling in both 2006 and 2007, along the central portion of the *JMZ*, confirmed the existence a separate, parallel (albeit, narrow) high grade, VG-bearing (non-stylolitic) quartz vein/silica-flooded zone, located 5 m south of the main zone, being situated within the structural hangingwall of the *JMZ*. The zone, herein, named the *JM Satellite Zone*, was encountered in, at least, three holes, returning Au assay grades of:

327.97 g/t Au/0.40m [GP06-52];  
9.47 g/t Au/1.40m (incl. 27.67 g/t/0.45m)[GP06-61];  
10.37 g/t Au/1.75m (incl. 30.9 g/t /0.30m & 17.73 g/t /0.50m)[GP06-61]; and  
10.41 g/t Au/4.70m (incl. 64.49 g/t/0.50m, 26.59 g/t 0.35m & 5.51 g/t /0.7m)[GP07-92].

In drill hole GP06-52, a 20 cm (true width) intercept of the *JM Satellite zone*, revealed 115 specks of visible gold (VG). Two narrow (0.5-1 cm) VG-bearing quartz veinlets assayed 10.37 g/T Au/1.75m.

Numerous other high-grade gold intersections, at the *JMZ*, encompass a range from very narrow to significantly wide assay sections including 44.59 g/t Au/0.30m (GP03-31), 36.1 g/t /0.3 (GP03-25), 68.95 g/t/0.40m, 23.14 g/t over 0.90m (GP02-14), 43.83 g/t/1.45m (GP07-91), 6.87 g/t /1.70m (GP07-98), 16.57 g/t/2.55m (GP02-01), 6.51 g/t over 3.10m (GP06-56) and 4.18 g/t /5.20m (GP03-24). Interestingly, visible gold has been observed in over 80% of the drill holes at the *JMZ*.

An historical resource estimate prepared by Pilgrim & Giroux (2008), based on drilling completed during 2002 to 2007, yielded 921,000 tonnes averaging 3.02 g/t Au (89,500 ounces of contained gold)(Steele, 2011).

A longitudinal (grade x assay width) representation of the *JMZ*, based on all drilling to date (2010), is shown in Fig. 28. As can be seen from this section, the higher-grade portions of the quartz vein system is relatively shallow for the most part, with an apparent (ore shoot) plunge to the east.

## **8.2 JACLYN NORTH ZONE (JNZ)**

The *Jaclyn North Zone (JNZ)*, located approx. 250 m north of the *JMZ*, consists of three multiple quartz-veined zones (*Upper, Middle & Lower Subzones*) which have been delineated, by drilling (13 holes), over a roughly 400 m, ENE/WSW, strike, and down-dip for 165.5 m (Sparkes, 2010). All three zones reveal visible gold in drill core.

The Upper Sub-zone contains up to four individual veins, ranging from 0.25 to 0.70 m in thickness, with a best drill intersection of 2.63 g/t Au/1.30m (incl. 11.28 g/t Au/0.30m [GP07-76]). A composite assay of multiple veins, in the Middle Sub-zone, produced an assay of 5.24 g/t Au/1.70m (GP06-51). The Lower Sub-zone returned an assay of 15.23 g/t Au/0.30m (GP06-47).

The 2006 and 2007 drilling revealed strong to intense silica-sericite alteration, associated with both the *Middle* and *Lower Subzones*, which appear to be increasing with depth (Steele, 2011). Two of three holes drilled in in 2010 (final drilling) extended the zone significantly to the east with intersections of 2.08 g/t Au /0.38m (GP10-100) and 6.19 g/t Au/0.35 m (GP10-103). The third hole (GP10-99), which tested the *JNZ* below the earlier drilling, encountered 4.68 g/t Au /0.3m at a drill depth of 165.5 m. The visible gold bearing zones, encountered in holes GP10-99 and GP10-103, appear to correlate with the *Upper Subzone* (Sparkes, 2010). The intersection in GP10-100 appears to correlate with the *Middle Subzone*.

“Unlike the *JMZ vein system*, which crosscuts the sedimentary host rocks at a high angle (70°- 85° SE) to bedding, the *JNZ veins* run subparallel to bedding, dipping north at 35°-45°” (Pilgrim et al., 2008)(Fig. 22).

### **8.3 JACLYN SOUTH ZONE (JSZ)**

The *JSZ*, which has been tested by only 4 drill holes, to date, is located 300 m south of the *JMZ*. It consists of two, sub-parallel, locally stylolitic, quartz vein systems – an upper vein (the *Alpha Vein*), intersected over a max. core length of 3.4 m (or est. 3.0m ‘true width’) and two, smaller (0.03 & 0.3 m wide) well-laminated, veins (*Beta Veins*), hosting up to 1-2% pyrite and arsenopyrite. The two vein systems trend 080-085° and dip 60-65°S with a drill depth separation of 20-45 m (Pilgrim et al., 2008). Initial drill holes (GP03-31 & 33) encountered both quartz vein zones at a distance of 100 m apart, along a ENE/WSW trend. Later holes GP06-59 and GP06-60 intersected only the upper (*Alpha*) vein system, proving up a total (open-ended) strike length of 200 m for the latter (Steele, 2011). The veins are hosted within strongly sericitized and silicified mudstone and lithic greywacke, with alteration increasing in proximity to the veins (Copeland et al., 2004).

The *Beta Vein* system returned the highest Au grades, with assays of 44.59 g/t/ 0.3 m (or 8.92 g/t Au diluted over 1.5 m)(GP03-31) and 2.59 g/t/0.3 m (GP03-33). The *Alpha Vein* returned only elevated Au values of 0.12 g/t Au/0.5m (GP03-31) and 0.19 g/t/0.3m (Mullen, 2006).

### **8.4 SHAWN’S SHOT PROSPECT**

The Shawn’s Shot Prospect is located roughly 7.5 km southwest of the *Jaclyn Zone* and consists of a 0.3-0.4 m wide quartz vein, having an exposed trend of 2.0 m (at 110°/67-78°S), exposed on the west side of the Exploits River. Visible gold is present in the vein which has returned grab sample Au assays of 14 g/t, 30 g/t, 34 g/t and 100.5 g/t Au, with elevated Ag (up to 4.5 ppm) and As (up to 1230 ppm).

Two holes (GP04-45 & 46), drilled at the site, intersected several 10-30 cm wide, stylolitic, quartz veins and mafic dykes cutting dominantly mudstone and (lesser) greywacke – the latter host rocks showing variable, spotted to patchy and fracture-controlled sericite/chlorite alteration, with trace to 1% pyrite and arsenopyrite. Most quartz veins returned low Au values. However, both drill holes encountered a 0.3 m (core length) intersection of auriferous quartz veining within a (collective) depth range of 82.0 - 82.8 m (presumably the same vein) which returned assays of 0.6 g/t Au/0.30m (GP04-45) and 0.43 g/t Au/0.3 m (GP04-46).

### **8.5 OTTER BROOK SHOWING**

The Otter Brook Occurrence, located along the transition zone between Caradocian shales and siliciclastic sediments (approx. 5.0 km southeast of the *Shawn’s Shot* quartz vein), consists of a 5-30 cm wide, auriferous, quartz breccia vein, having an approx. 10 m ‘exposed’ trend along 0/65°SE. Up to 2% chalcopryrite, 5% pyrite, with trace arsenopyrite, occur along the vein. Grab sample results include up to 1.183 g/t Au, 2.2 g/t Au and 3.2 g/t Au.



## Jaclyn West Area

### **8.6 CHRISTOPHER VEIN**

Trenching and drilling at the *Christopher Zone* revealed a 2 m wide, composite, gold-bearing, quartz vein system developed within altered siltstone, mudstone and greywacke cross-cut by locally abundant, cm-scale, quartz-calcite veins/veinlets. The alteration consists of variable (weak to intense) sericitization, chloritization, Fe-carbonatization and silicification.

The vein system has an 'exposed' strike-length of 35 m, along 080°/75°S. The core section of the vein is characterized by generally massive (bull quartz), while the margins display laminated/stylolitic textures with up to 2% pyrite and trace to 2% arsenopyrite associated (Copeland et al, 2005). Grab sample results from the vein include assays of 3.8 g/t Au and 1.96 g/t Au, with up to 4240 ppm arsenic (As). The latter Au value was obtained from the southern margin of the vein system where visible gold was noted.

The first of two holes (GP04-39 & 40), drilled at the *Christopher Zone*, intersected a 0.7 m wide quartz vein breccia (fault) zone, at a drill depth of 73.2 m, representing a possible continuation of the vein exposed on surface. Here, brecciated greywacke, with angular quartz vein fragments cut by later-generation quartz-calcite-chlorite veins and veinlets, returned an assay of 0.03 g/t Au/0.7 m.

The second hole (GP04-40), which targeted the vein at a distance of 50 m east of the trench exposure, intersected a 1.1 m wide (core length) massive quartz vein, at a depth of 40.2-41.3 m and an adjacent (contiguous) 1.5 m wide zone of 3-4 cm wide, pyrite-arsenopyrite bearing, stylolitic, quartz veins, within weakly altered mudstone and greywacke. The best assay result was 0.025 g/t Au /1.1 m (main quartz vein). A 40 cm interval of core was reported lost immediately above the intercept, possibly corresponding with the fault/shear zone observed adjacent to the vein at surface.

### **8.7 NORTHWEST ZONE (NWZ)**

The *Northwest Zone* is located on the northern limb of the Jaclyn Anticline, approx. 450 m west of (along strike from) the *JNZ* (Fig. 26). The initial drill hole test (GP04-41) which targeted the (inferred) contact zone between the Caradocian shale unit and underlying siliciclastics, intersected four, 10-15 cm wide, laminated, quartz veins (at 26.1-30.35 m depth), returning elevated Au values throughout – the highest, being 0.10 g/t Au/1.35 m and 0.16 g/t Au/0.3 m. A second quartz vein zone, intersected at a shale/greywacke contact (at 87.3-88.0m), is described as a composite structure consisting of: a 20 cm wide, laminated, vuggy, quartz vein; a 10 cm wide breccia zone containing fragments of mafic dyke; a 0.4 m wide, ankerite-altered, mafic dyke; and a 60 cm wide, pyrite-arsenopyrite-chalcopryrite bearing, massive to laminated and stylolitic, quartz vein. A sample assay of 0.711 g/t Au/0.7 m (incl. 3.42 g/t Au/0.4 m) was obtained for the zone. Patchy sericite and chlorite alteration is associated and persists, from there, throughout remainder of hole (to 175.9 m).

## Southwestern Golden Promise Property Area

### **8.8 LINDA/SNOW WHITE PROSPECT**

The *Linda-Snow White* prospect is described as a composite zone of quartz veining and quartz breccia, up to 5 m wide, cutting mudstone, siltstone, greywacke and gabbro. The vein system has an 'exposed' strike trend of 170 m, with a drill-defined strike dimension of 230 m, tested to a vertical depth of 110 m. The vein system remains open in all directions. The veins contain variable, though generally, minor pyrite, arsenopyrite and trace galena, with locally abundant gold occurring as specks or nuggets along dark stylolitic bands on, or close to, vein margins (Froude, 2005 & Pilgrim et al., 2008). Wall rock alteration consists of minor iron-carbonate, sericite and local chlorite.

Although grab samples from the vein system yielded numerous anomalous gold assay results – including many in the range of 1.28 g/t to 105.28 g/t Au (as well as an exceptional 'high' of 232.25 g/t Au) – channel sampling and drilling (16 holes) did not prove up any consistently high-grade Au results (see Sections 6.2.1.5 & 6.2.1.6). Most drill core samples returned assays in the range of 131-798 ppb Au over (core length) intervals of 0.14-1.78 m. Notable intersections included 19.5 g/t Au /1.15 m (incl. 63.2 g/t Au/0.35 m) and 1.5 g/t Au/0.50 m. The best channel sample assay result was 29.7 g/t Au/ 0.5 m (Morgan et al., 2006). Associated As results generally range from several hundred ppm to >2200 ppm (ICP detection limit).

### **8.9 GABBRO OCCURRENCE**

The *Gabbro Occurrence*, located 8.5 km ESE of the *Linda-Snow White Prospect*, consists of a 25 x 55 m area (minimum exposure) of iron-carbonate altered gabbro, cut by numerous ( $\leq 4$  cm wide) quartz veins and veinlets, hosting up to 10% pyrite (Copeland, 2006). Grab sample Au results include several assays between 1.35 g/t and 10.04 g/t Au, as well as many other results in the range of 119 - 955 ppb Au (Sparkes, 2006; Copeland, 2006).

### **8.10 AURIFEROUS QUARTZ BOULDER OCCURRENCES**

The widespread occurrence of abundant auriferous quartz float represents probable evidence of several yet-undiscovered quartz vein occurrences or deposits on the property. Such occurrences include the *Branden*, *Justin's Hope* and *Jaclyn West* quartz boulder trains. As mentioned in Section 6.1.2.7, the *Justin's Hope* (335.9 g/t Au) boulder occurrence lies atop 15.8 m of glacial till cover which, most likely, precludes any direct linkage of the quartz float to the immediate subsurface bedrock. The same is, likely, true of the extensive auriferous quartz boulder trains over the *Jaclyn Zone* where significant till thicknesses are present as well. In such cases, the sources of the anomalous float are inferred to lie farther 'up-ice' to the southwest. Where anomalous geochemical Au results have been obtained over deep tills, these may be similarly derived from 'up-ice', given that soils can developed from the glacially-transported (gold-bearing) parent material.

A summary of anomalous quartz float, and possible related soil occurrences, include the following:

**Branden Boulder Train:** Historical Au assay results of 80.7 g/t, 72.1 g/t, 62.6 g/t, 22.6 g/t, 20.5 g/t and 15.53 g/t Au (2017 exploration sampling results include 57.2 g/t, 233 ppb & 200 g/t Au).

**Justin's Hope Boulder Train:** Au assays: 335.9 g/t (9.8 oz/t), 10.2 g/t, 116 ppb, 99 ppb, 40 ppb, 20 ppb, 17 ppb, 16 ppb and 14 ppb (2017 results include 9 ppb & 100 ppb Au).

**Jaclyn Zone Boulder Train:** Au assays: 353.4 g/t, 45.5 g/t, 24.5 g/t, 16.3 g/t Au, 4 g/t (the 2017 sampling returned assays of 70.9 g/t, 6.11 g/t, 1.63 g/t, 420 ppb & 150 ppb Au; these results relate to surface quartz float samples and not to the abundant, highly anomalous, quartz float found, at depth, within the 2017 trench sites ). Soil sample results over the *Jaclyn Zone* area (Lines 47+00E to 56+00E) which may also have glacial origins, 'up-ice', include several multi-station gold anomalies of >15 ppb Au with a 'high' of 8995 ppb Au, and assays of up to 102 ppb and 273 ppb Au over the *Jaclyn East* area.

#### Jaclyn West Area

**Rip Pond Boulder Occurrence:** Six of nine float samples consisting of shale-hosted quartz veins, taken from the eastern side of the pond, returned >150 ppb Au, the highest being 1.4 g/t Au. Some of the veins host up to 20% chalcopyrite, pyrite and arsenopyrite, yielding assays of up to 2.74% Cu, 1565 ppm Co, 4450 ppm As, 11 ppm Sb, 6.2 ppm Ag and 37 ppm Bi.

**Northwest Zone Area:** Several laminated-textured quartz boulders, bearing up to 3% arsenopyrite (atop 4.6 m of till), returned elevated to anomalous Au values – the highest being 34 ppb, 98 ppb and two values at 25 ppb Au. A single-station (110 ppb Au) soil anomaly was identified nearby.

**GP04-42 Drill Site:** A number of auriferous, arsenopyrite-bearing, quartz boulders, located 85 m north of the drill collar, returned assays of 200-750 ppb Au (a 12.5 m till thickness was determined at the drill site, itself).

**GP04-43 Drill Site:** A three-station soil gold anomaly, of 26-36 ppb (located 630 m WSW of the *Northwest Zone*) was the target of a drill hole test which revealed a till depth of 12.1 m.

**GP04-44 Drill Site:** Several quartz breccia float, assaying up to 1 g/t Au, were found overlying 4.3 m of till cover at this site.

Approximately 800 m WNW (along strike) from the GP04-44 site, are a number of angular quartz boulders, up to 0.8 m in size, which returned Au values of up to 162 ppb. The boulders host mudstone wall rock material, but no (visible) sulphides.

[Note: 17.5% of the 257 float samples collected over the *Jaclyn-Jaclyn West* area assayed >150 ppb Au, with 5.8% assaying at >0.5 g/t Au. Corresponding arsenic assays included values as high as 7630 ppm and >10,000 ppm (Copeland, et al., 2005)].

## 9 EXPLORATION

Mineral exploration activities, by Great Atlantic Resources Corp., were carried out on the Golden Promise Property, during May to December 2017 and May to August 2018. All work, with the exception of a trenching program conducted on Mineral Licence 21281M, consisted of preliminary, reconnaissance-type prospecting and rock/soil sampling, sufficient to meet minimal assessment requirements for impending work-due-date deadlines on Mineral Licences 24015M, 24017M, 24018M, 24021M, 25156M, 25161M, 26162M, 21474M, 22313M, 25067M, 25916M, 24305M, 24311M and 21970M; this work was deemed adequate, for the interim, until such time a more focused exploration plan/strategy and budget could be implemented. A further objective of this initial work, by Great Atlantic, was to provide verification (by a “Qualified Person”) regarding the nature of the historically-reported gold mineralization and host geology. Consultant geologist, David Martin (P. Geo), and assistant/pro prospector, Bruce Stewart (both of New Brunswick), were retained, by Great Atlantic, to carry out the necessary mineral licence assessments during 2017. Consultant geologist, Paul Delaney (P. Geo.) and assistant, Art Clarke (both of Newfoundland and Labrador), were retained to carry out the necessary mineral licence requirements during 2018. David Martin (P. Geo.) also carried out a portion of the 2018 work.

During the course of this work, visits were made, by D. Martin (P. Geo), to the sites of the high-grade, gold-bearing, quartz float occurrences, including the *Jaclyn Zone*, *Justin’s Hope* and *Branden* (glacial) boulder trains, as well as to the (historically trenched & drilled) *Christopher*, *Shawn’s Shot* and *Linda/Snow White* quartz vein systems; no observations could be made at the *Jaclyn North*, *Jaclyn South* and *Jaclyn Main* sites, as the original trenches emplaced over these have been refilled (under site reclamation). Present trenching, however, performed during June-July 10, 2017, on Lic. 21281M, did provide (albeit limited) exposure for one of the *Jaclyn North* veins (as discussed below).

For most of the property areas examined, outcrop was found to be sparse to non-existence over wide areas, thus, necessitating a focus on soil testing and/or sampling of quartz float – which methods (combined) have proven effective in the discovery of the more significant prospects, to date. Soil sampling involved localized areas of coverage with samples collected at mainly 25 and 50 m spacings. All soil and rock samples were GPS-recorded.

### 9.1 2017 Exploration

The 2017 exploration program resulted in the collection of 160 soils and 149 rock samples. Rock sampling included 52 samples collected during the trenching program, on Lic. 21281M, and five ‘check’ samples from the *Christopher*, *Shawn’s Shot* and *Linda-Snow White* quartz vein occurrences, on Mineral Licences 21281M, 21474M and 21970M, respectively. A list of samples collected on all mineral licences concerned is given in Table 9.1 .

Although most 2017 samples returned negligible assay results, anomalous gold (Au) and/or arsenic (As) values were obtained, for a significant percentage of these, reaffirming the strong association between the quartz vein hosted gold and arsenopyrite mineralization on the property. It is evident that arsenic represents an important pathfinder element for the discovery of gold mineralization in this particular type of environment.

Table 9.1 - Rock & Soil Samples – 2017 Exploration Program – Great Atlantic Resources Corp.

Mineral Lic.	Rock Samples (No. of Samples)	Soil Samples (No. of Samples)
24015M	GP-R-017-1 to 6, 10-16, 18-24, 30-35, 37 & 38 (38)	GP-S-017- 1 to 18, 25-43 & 44-50 (44)
24017M	GP-R-017-36 & 40-53 (15)	GP-S-017-80 to 113 & 115-160 (80)
24018M	GP-R-017 – 25 & 29 (2)	GP-S-017 – 51 to 73 (23)
24021M	GP-R-017 - 26 to 28 (3)	GP-S-017 - 74-79 (6)
25067M	GP-R-017 – 7 to 9 & 17 (4)	GP-S-017 - 19 to 24 (6)
21474M	GP-R-917-203 (1)	
21281M	GP-R-017-200 to 202 & 204 to 255 (55) GP-T1-CH1 to CH-7 and GP-T3-CH1 (8)	
24305M	SGP-R-017 - 1 to 15 & 17 -21 (19)	
21970M	SGP-R-017-8 & 16 (2) SW-R-017-1 & SW-R-017-2 (2)	

The absence of appreciable results for some mineral licences, however, bears no reflection on the overall exploration potential of these areas, given that the present sampling, for the most part, was of a very cursory nature, involving only small select areas – essentially, a ‘first pass’ evaluation, to meet minimum assessment requirements for the 2017 assessment period.

*[With respect to the following discussion, rock and soil sample number prefixes (GP-R-017- & GP-S-017-) are, herein, shortened to GPR- and GPS-, respectively, for the sake of brevity and quick referencing].*

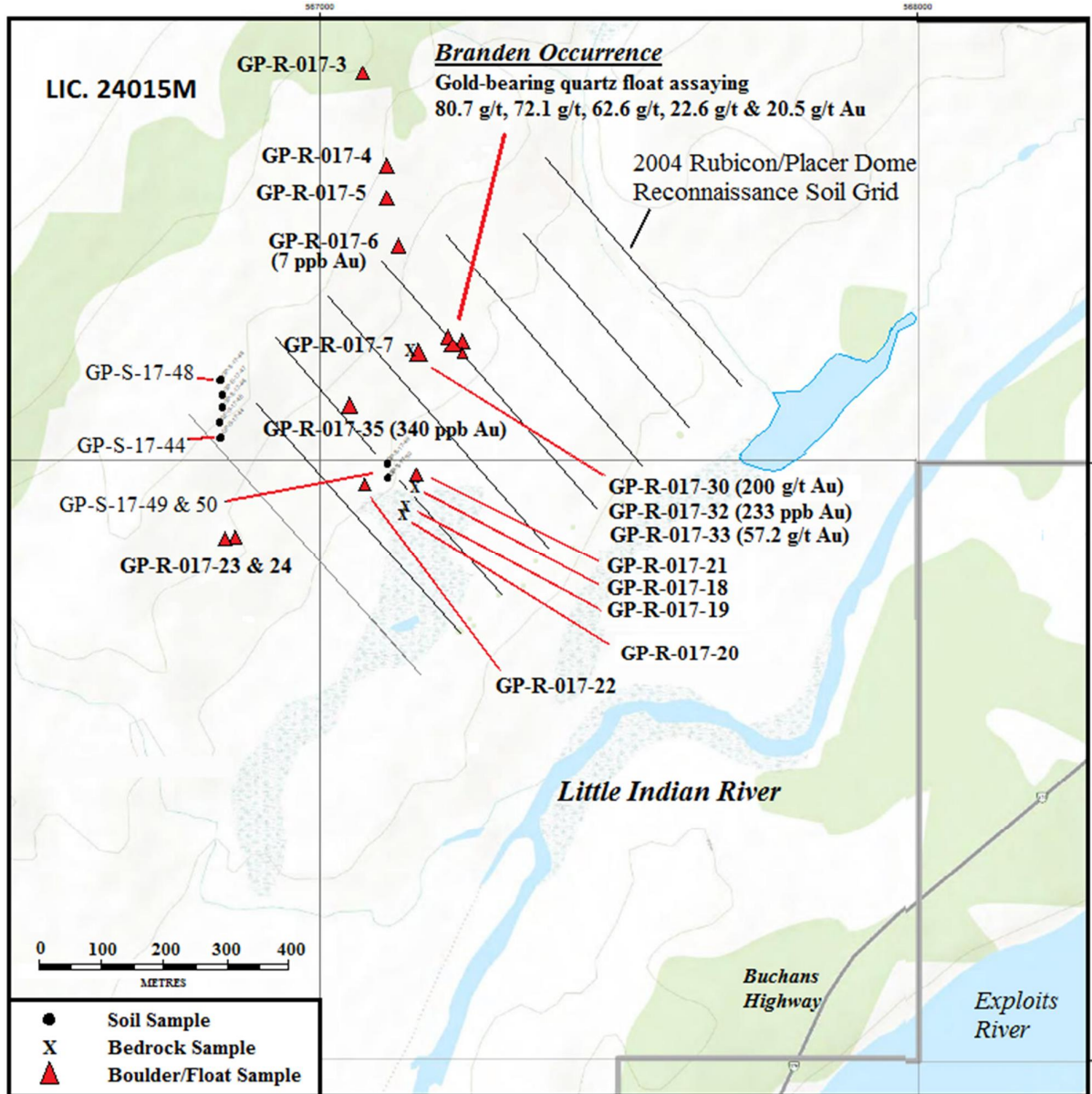
Sample highlights and important observations, pertaining to the 2017 field season, are as follows:

#### **Mineral Licence 24015M**

Three general areas of Lic. 24015M were investigated under the 2017 assessment, including: the area of the *Branden* quartz float/gold occurrences (northern claims area); the area inclusive of, and just north of, the *Justin’s Hope* quartz float/gold occurrences (east-central claims area); and site of a chalcopryite-bearing sulphide vein (southeasternmost claims).

Four of the 15 rock samples collected in the area of the *Branden Occurrence* (Fig. 9.1) are described, by geologist, D. Martin (P. Geo), as consisting of grey meta-sandstone, greywacke and siltstone, cut by NE- to ENE-striking, cm-scale, rusty, pyrite-bearing, quartz veinlets. Assays for these returned only ‘detection-limit’ values for Au (<5 ppb) and As (<5 ppm). Most of the remaining 11 rock samples consisted of angular float of the same. Two float samples of sericitized sandstone (GPR-30 & 32), cut by 30-50% rusty pyrite-bearing quartz veins, returned 200 g/t Au and 233 ppb Au, respectively (visible gold was observed in GPR-30). Two other samples (GPR-33 & 35), of angular quartz float, returned 57.2 g/t Au and 340 ppb Au, respectively (the latter sample was collected as a composite sample of multiple quartz boulders measuring up to 0.5 m across).

Figure 9.1 - 2017 Sample Location Map for the northern portion of Mineral Lic. 24015M.



The highest As assays included 454 ppm (GPR-30) and 559 ppm (GPR-33). A couple of the above samples revealed anomalous concentrations of Pb, Ag and Bi, as listed below.

GPR-30 (200 g/t Au (VG), 454 ppm As, 66 ppm Pb, 4.4 ppm Ag & 8 ppm Bi)

GPR-32 (233 ppb Au)

GPR-33 (57.2 g/t Au, 559 ppm As, 130 ppm Pb, 1.6 ppm Ag & 4 ppm Bi)

GPR-35 (340 ppb)



All seven reconnaissance soils samples (GPS-44 to 50), taken in the general vicinity of the *Branden Occurrence* (Fig. 9.1), returned only detection-limit Au values, while most did reveal significantly elevated As values (at 8.9-18.4 ppm).

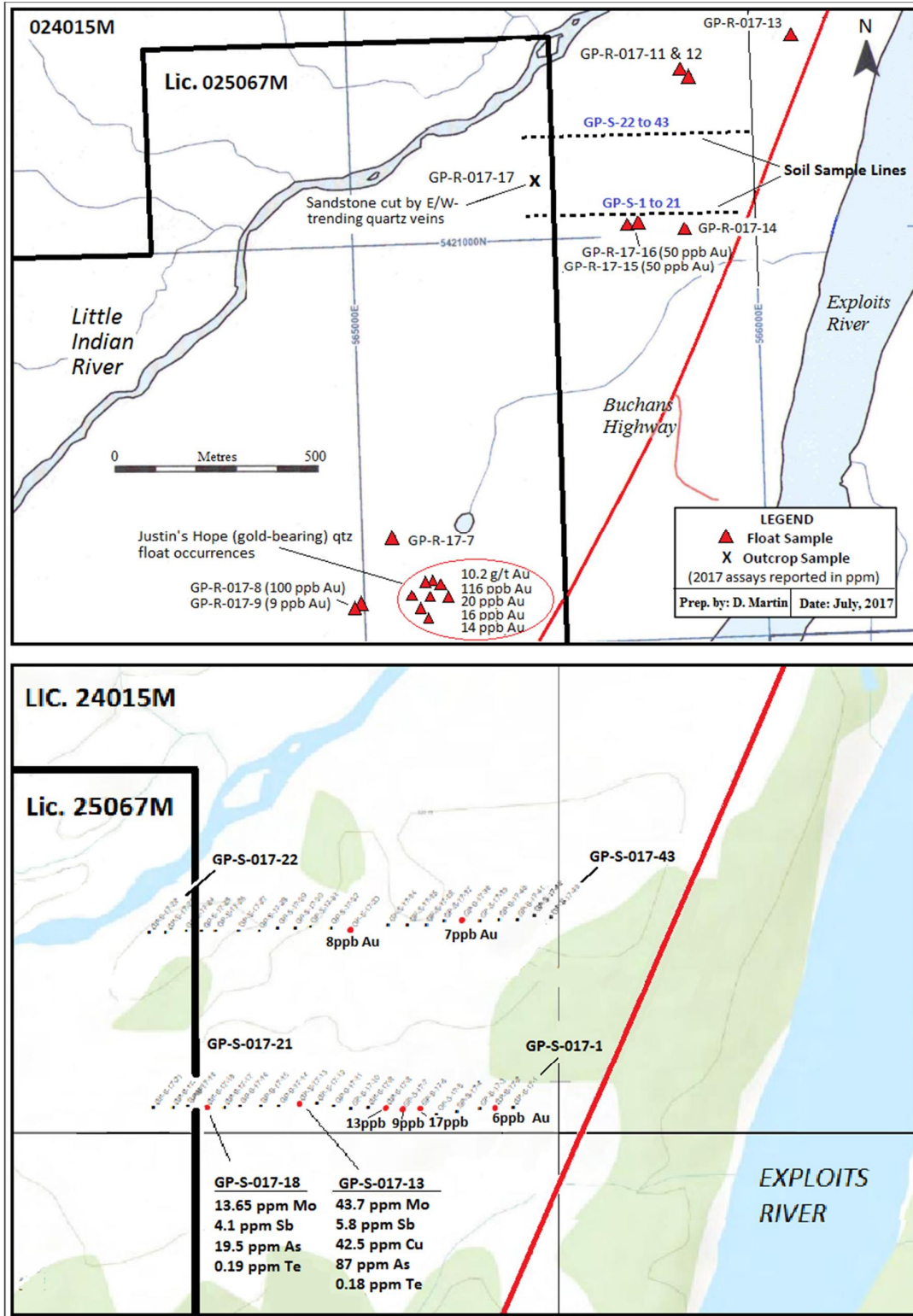
The discovery of quartz-veined (sedimentary) bedrock, approx. 200 m SSW of the *Branden* boulders, suggest the possibility that this float may be locally derived – a suggestion worthy of follow-up investigation. An important feature of the bedrock occurrences in the area is that they reveal typical Victoria Lake Supergroup (VLSG) siliciclastics, such as comprising the host rocks to the main quartz vein gold prospects to the south (Copeland et al., 2005). Based on the structural mapping results of McNeill (2005), Copeland et al (2005) suggested the same (VLSG) sediments may be exposed as an erosional ‘window’ through the overlying Badger Group – such an exposure being facilitated by a ‘doming’ effect created by a doubly-plunging F1 anticlinal feature that underlies the area (as shown in Fig. 7.10d).

In the east-central portion of Lic. 24015M (Fig. 9.2), approx. 1.0 km northeast of the *Justin’s Hope Occurrence*, two of six float samples of greywacke/sandstone, hosting minor disseminated pyrite and 1-3 cm wide, rusty, quartz veins, each assayed at 50 ppb Au (GPR-15 & 16), with corresponding As values of <5 ppm & 239 ppm.

Two E-W trending, 250m-spaced, reconnaissance, soil lines, emplaced across the general area of the float samples resulted in a total of 43 soil samples (GPS-1 to 43) (Fig. 9.2) – most of which yielded elevated to anomalous arsenic values (at 12.0-26.6 ppm). Several elevated responses for Au were also obtained, including two widely-spaced values (of 7 & 8 ppb), on the northern line, and 5 values of elevated to anomalous Au (up to 17 ppb), on the southern line. Three of the latter values (9, 13 & 17 ppb Au) form a multi-station anomaly (GPS-6 to 8). Also interesting for this area is the presence of elevated Cu (42.5 ppm), in association with several elevated to anomalous (granophile-related) elements, including Mo (43.7 ppm), Sb (5.8 ppm) and As (87 ppm), as well as 0.18 ppm Te (GPS-13). A second sample, taken approx. 125 m distant, gave 13.65 ppm Mo, 19.5 ppm As, 4.1 ppm Sb and 0.19 ppm Te (GPS-18) (Fig. 9.2). [The concentration of Te (Tellurium) is significant given that its average crustal abundance is 0.001-0.005 ppm].

Final sampling on Lic. 24015M involved the collection of two 2 bedrock samples (GPR-37 & 38) from the far southeastern corner of the licence (approx. 700 m SE of the Exploits River). The exposure is described, in a sample data sheet, provided by D. Martin (2017), as “brownish-grey, siliceous, metasediment with 5-10%, rusty, sulphide-bearing, quartz veins, 1-8 cm wide. The veins are noted to be vertical and trending 090-095°. [Regional government mapping indicates the stratigraphy of immediate area to be NE to NNE-striking and dipping 75-80°E (Evans et al., 1994)]. A single anomalous value of 5940 ppm Cu was obtained from the exposure – the related sample (GPR-38) consisting exclusively of sulphide-rich quartz vein material. No appreciable Au or As values were associated.

Figure 9.2 - 2017 Sample Location Map for the east-central portion of Mineral Lic. 24015M.



### Mineral Licence 25067M

Assessment work performed on Lic. 25067M was undertaken in conjunction with that carried out on the adjacent (east-central) claims area of 24015M. Prospecting and sampling conducted just inside the eastern boundary of Lic. 25067M, including around the site of the Justin's Hope quartz float-hosted gold occurrences, resulted in the collection of 4 rock samples (GPR-7-9 & 16) and 6 soils (GP-S-19 to 24) – the latter comprising the western extensions of the two soil lines on Lic. 24015M (Fig. 9.2).

Two of three rock (float) samples, taken in the immediate area of the Justin's Hope gold occurrences, returned Au assays of 9 ppb (GPR-9) and 100 ppb (GPR-8). These were described, by D. Martin, as consisting of angular, rusty, float of dark grey metasediment, with abundant pyrite and trace chalcopyrite (GPR-9) and a composite sample composed of multiple rusty, vuggy, quartz vein float, with minor arsenopyrite (GPR-8). A value of >2200 ppm As is associated with the latter, while GPR-9 revealed a number of other interesting results, including 59 ppm Co, 197 ppm Cr, 302 ppm Cu, 3.49 % S, 316 ppm W and 395 ppm Zn).

### Mineral Licence 24017M

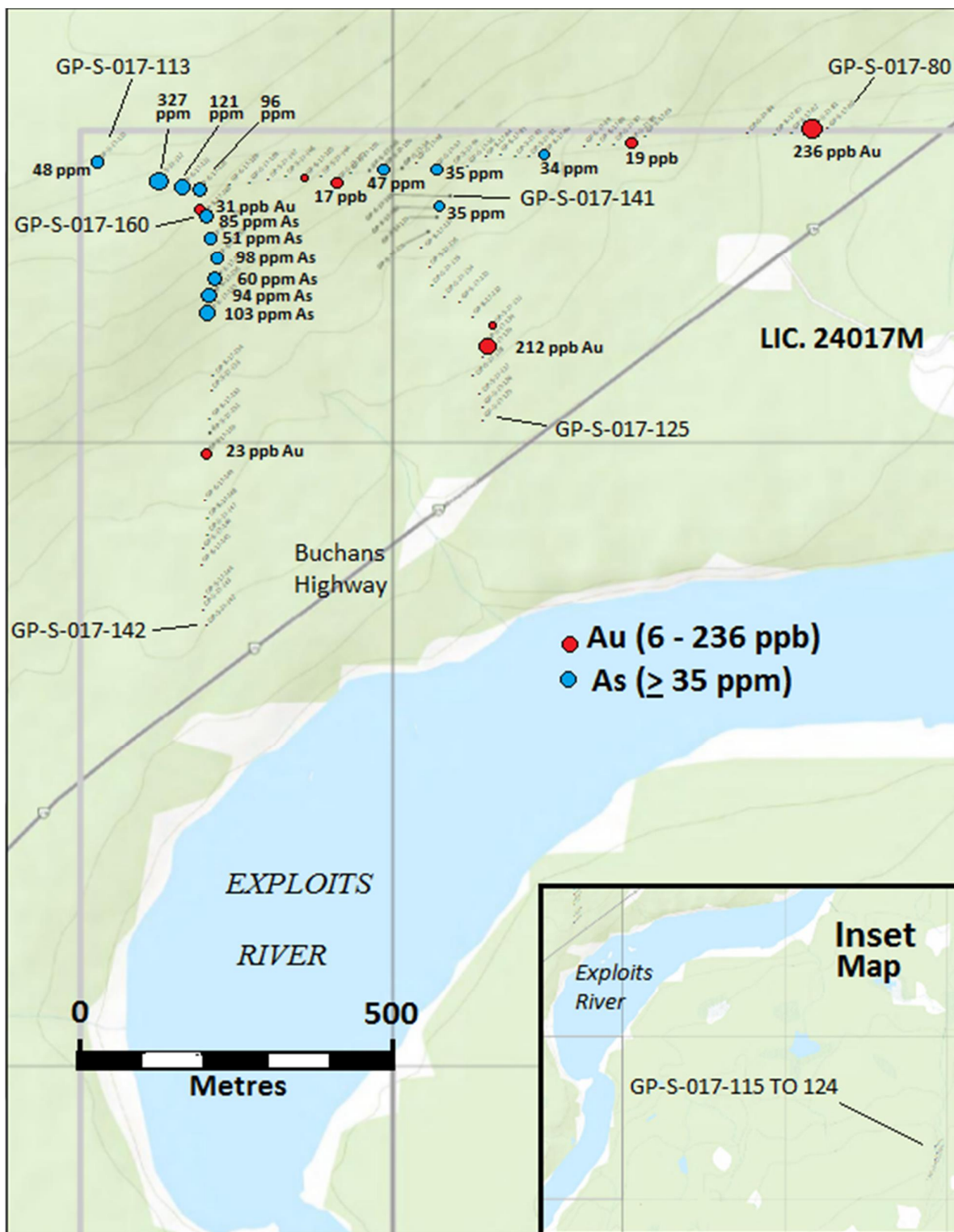
A total of 19 rock and 80 soils were collected from two general areas of Lic. 24017M – the northwestern corner area of the licence (NW of the Exploits River and Buchans Highway), and the south-central part of the licence (1.75-2.0 km SE of the river) (Fig. 9.3).

Only one of ten float samples, taken from the northwestern corner area of the licence returned an elevated assay result, this being 8 ppb Au. Most of the float material consisted of sandstone cut by 10-20% (< 3cm wide) pyrite-bearing quartz veins which included minor stockwork (pers. comm, D. Martin, 2017).

Soil samples collected for this area proved more interesting. Sampling was conducted on three reconnaissance lines, two of which extended north and roughly NW from the Buchans Highway and, the other trending east-west. Five of the 70 sample sites returned elevated to anomalous Au values of 9-31 ppb, while two others yielded highly anomalous values of **212 ppb** (GPS-130) and **236 ppb Au** (GPS-81) (Fig. 9.3).

Elevated to anomalous soil arsenic (As) values, however, were more pervasive, with 42 samples (60%) yielding 10.7-50.7 ppm As, 6 samples (8.5%) at 59.8-103.5 ppm As (GPS-155-160 & 110) and 2 samples at 121 & 327 ppm As (GPS-111 & 112). Interestingly, the most elevated to highly anomalous As responses form a contiguous trend, comprising a large multi-station anomaly in the northwestern corner area of the licence.

Figure 9.3 – 2017 Sample Location Map for Mineral Licence 24017M.



### **Mineral Licence 21474M**

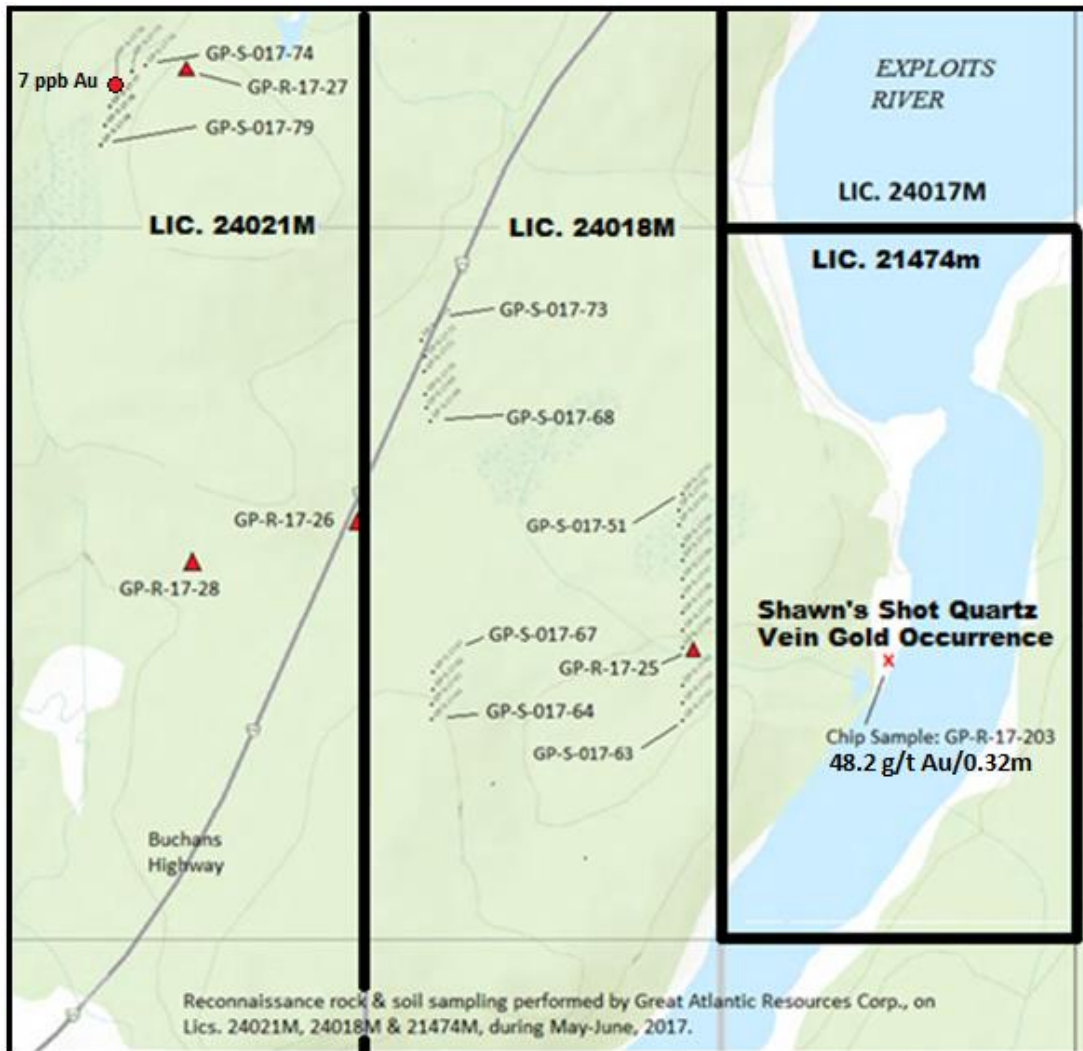
The 2017 investigation of Lic. 21474M (Fig. 9.4 ) was restricted to the more accessible western portion of the licence (i.e., west of the Exploits River) – particularly, around the site of the *Shawn's Shot* (bedrock) quartz-vein gold occurrence, located on the west side of the river. The vein is 0.35-0.4 m wide, with an 'exposed' strike/trend of 2.0 m (at 110°/67-78°S) at which point it disappears into the river.

Subcrop vein material, hosting abundant visible gold, sampled by W. Mercer, in 2003, returned an assay of 35 g/t Au, while subsequent samples, by Rubicon Minerals (also in 2003), produced assays of 14 g/t and 30 g/t Au. During hand trenching of the vein, by Rubicon, in 2004, four grab samples produced assays of >150 ppb Au – the highest being 100.5 g/t Au (with 4.5 ppm Ag & 1230 ppm As). A single chip sample (GPR-203) was taken across the vein, in 2017, which gave an assay of 48.2 g/t Au over 0.32 m. Prospecting revealed no 'visible' west-northwest continuation of the quartz vein beyond the river.

### **Mineral Licences 24018M and 24021M**

Two float samples and 23 soil samples were collected on Lic. 24018M, none of which produced any appreciable assay results. Similarly, on Lic. 24021M, three float samples and six soils were collected, returning negligible results – with the exception of a single elevated Au response, of 7 ppb (GPS-76) (Fig. 9.4).

Figure 9.4 - 2017 Sample Location Map for Mineral Licences 24018M, 24021M and 21474M.



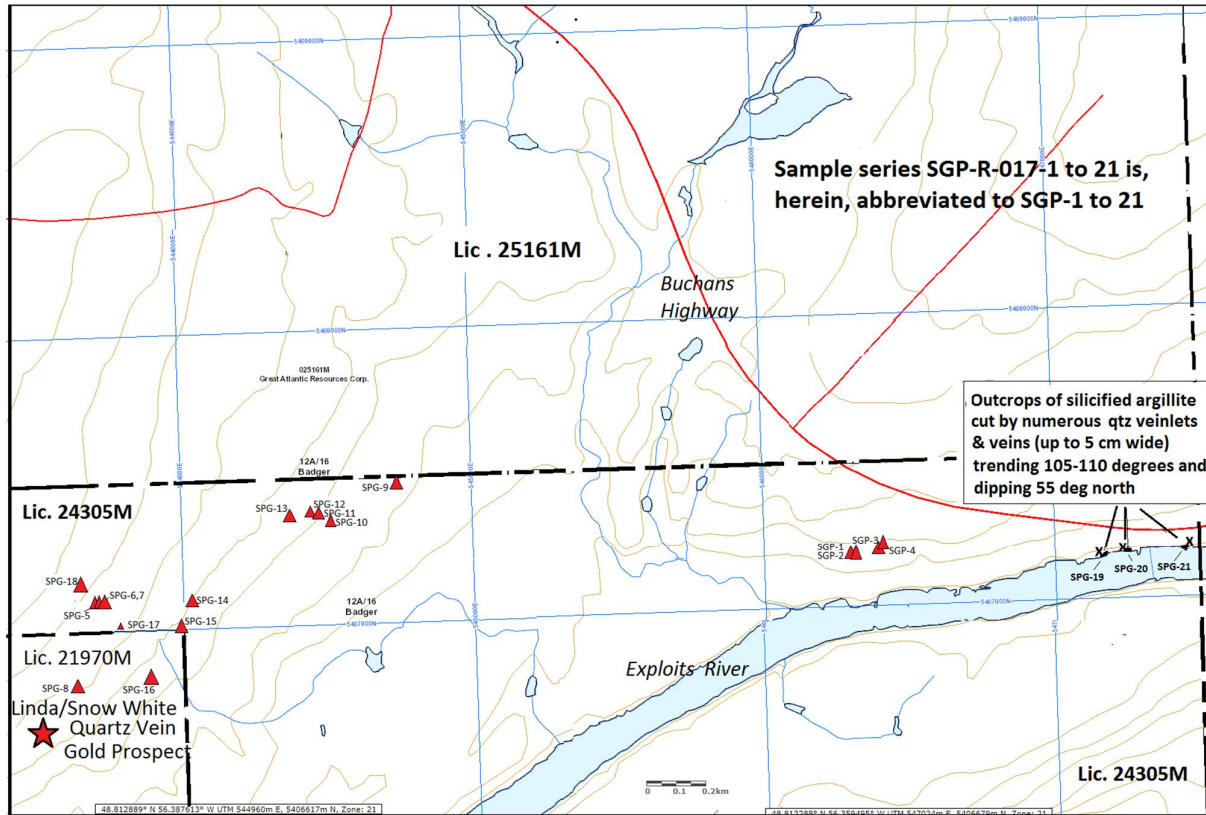
### Mineral Licences 21970M and 24305M

Preliminary reconnaissance work on Licences 24305M and 21970M (southwestern property area), resulted in a total of 23 rock samples of mainly float (Fig. 9.5). With the exception of two bedrock 'check' samples taken from the Linda-Snow White quartz vein system (on Lic. 21970M), no significant assays were returned. The two grab samples collected at the prospect returned (+150 mesh size sample fraction) assays of 1227 ppb and 15 ppb Au, however, with only 27 ppb and 7 ppb Au, respectively, for the weighted average assay result.

Prospecting along the north side of the Exploits River, 4 km east of the prospect, revealed numerous quartz veins/veinlets (up to 3 cm wide) cutting argillite, along an orientation of 105-110°/55N to subvertical. No appreciable results were obtained for float or bedrock samples in this area.



Figure 9.5 - 2017 Sample Location Map for Mineral Licences 21970M and 24305M.



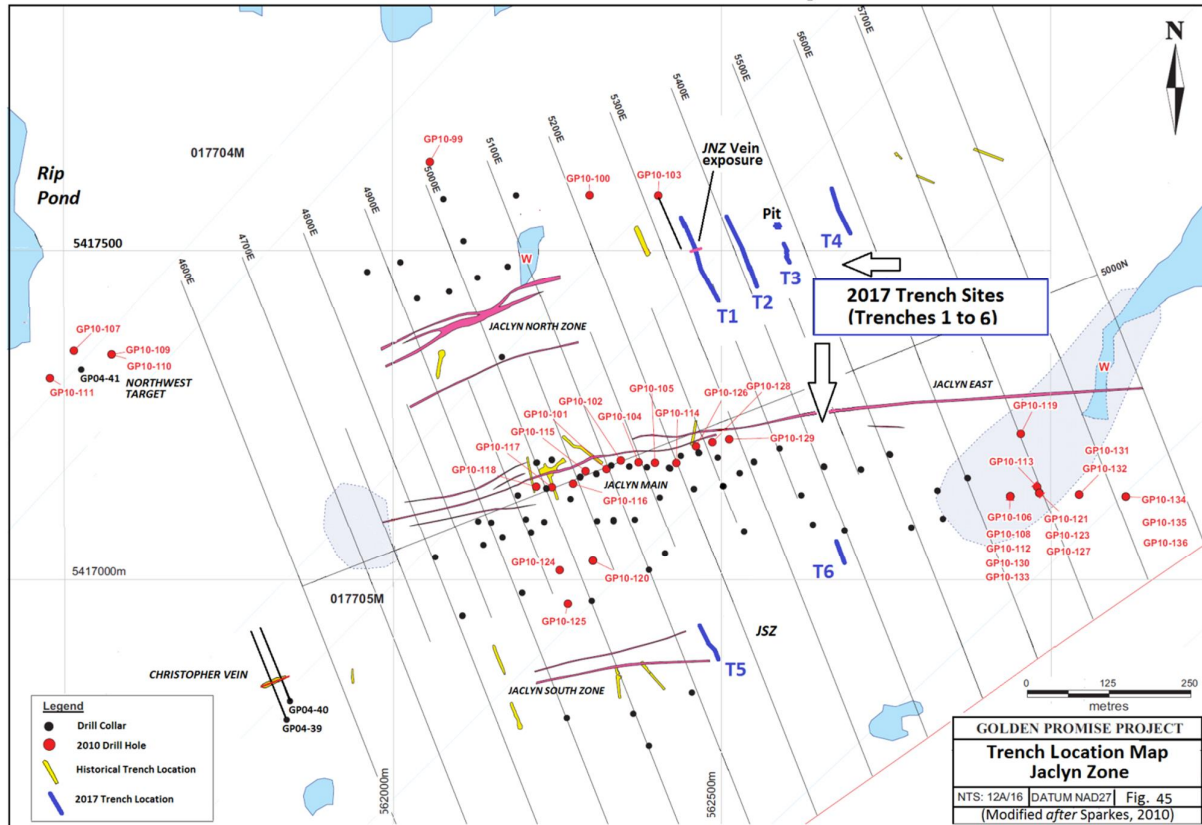
### Mineral Licence 21281M

Initial visits to Mineral Licence 21281M, by Great Atlantic, during 2017, involved check sampling at the *Christopher Vein* trench site (located 400 m west of the *Jaclyn South Zone*) (Fig. 9.6) as well investigation of quartz float distributed along the *Jaclyn Zone* boulder trains; with respect to the *Jaclyn Zone* area, no observation of the quartz vein systems could be made as all historical trenches have underwent reclamation (re-filled). At the *Christopher* trench, grab samples were taken from the north and south (stylolitic) vein margins, resulting in *weighted average* assay results of 540 ppb and 60 ppb Au (for samples GP-R-017-200 & 201, respectively). In the case of the first sample, a 2100 ppb Au was obtained for the +150 mesh-size sample fraction. For the second, a 60 ppb Au was also obtained for the -150 mesh fraction (Table 9.2).

Within the *Jaclyn* boulder train area, a total of seven quartz float samples were collected, four of which produced significant Au results – having *weighted average* assays of 0.42-70.9 g/t Au (samples GP-R-17-205 to 208). These were obtained from an area located 125-150 m north to northwest of the (later established) T4 trench site (Table 9.2).

A total of 52 grab, chip and channel samples were collected during the trenching operation on the *Jaclyn North* and *Jaclyn South Zones* with most yielding anomalous Au results, as discussed below and listed in Table 9.2.

Figure 9.6 - Map showing Location of 2017 trenches in relation to historical trenches and drill holes, *Jaclyn Zone* area.



The trenching project was carried out during June 28 - July 11, 2017, using an excavator, operated by local contractor J & T Welding & Construction, of Badger, NL. The program was designed to investigate further northeast to east-northeast extensions of the *Jaclyn North* and *Jaclyn South* quartz vein systems. Supervision and sampling were conducted by David Martin (P. Geo.), with assistance provided by prospector, Bruce Stewart. Trench mapping and additional sampling was carried out by the co-author, W. Jacobs.

A total of 6 trenches were excavated and sampled in the area of the *Jaclyn* prospects (Fig. 9.6 ); all were excavated to depths of generally 2.5 to 3.0 m, with widths of 1.5 to 2.0 m. A total of 54 samples were collected from the trenches, most of which consisted of quartz float exposed at depths of 1.5-3.0 m. Seven of the samples consisted of channels taken across the *Jaclyn North* quartz vein exposure in Trench 1.

Table 9.2 - Rock Sample Au Results – 2017 Trenching Program, Mineral Licence 21281

Trench No./Area	Sample No. (Abbrev.)	Sample Type	Analyses for Au (ppb) Screen Metallics/ Fire Assay			Regular Fire Assay Au
			+150 Mesh	-150 Mesh	Wt. Ave	
125m NW of T4	GPR-205	Float-Qtz, mnr py	2490	190	420	
125m NW of T4	GPR-206	Float-Qtz, tr py	30600	4950	6110	
135m N of T4	GPR-207	Float-Qtz, arg seams	10350	900	1630	
150m N of T4	GPR-208	Flt-Qtz, tr py, asp, VG	639000	46700	70900	
T1	GPR-209	Float -Sed <u>w</u> 6cm qv	2563000	13892	30239	
T1	GPR-210	Float-Sed <u>w</u> qtz vlts				797
T1	GPR-211	Bdrk-Sed <u>w</u> qtz vlts				7
T1	GPR-212	Float-Qtz-composite	101	118	118	
T1	GPR-213	Subcrop-Qtz	87	316	315	
T1	GPR-214	Chip Sample - QV	723	283	285/1.4m	
T1	GPR-215	Chip Sample/FW Sed				<5
T1	GPR-216	Float - qtz	184452	1256	1676	
T1	GPR-217	Float- Sed <u>w</u> 50% qvs	89	20	20	
T1	GPR-218	Float-Sed <u>w</u> qtz vlts				<5
T1	GPR-219	Bdrk-Sed <u>w</u> qtz vlts				13
T1	GPR-220	Bdrk-Sed <u>w</u> qtz vlts				<5
T1	GPR-245	Subcrop-Qtz	27163000	129990	208514	
T1	GPR-247	Bdrk-sed <u>w</u> qtz vlts				30
T1	GPR-248	Bdrk-sed <u>w</u> qtz vlts				284
T1	GP-T1-CH1	Chan - wallrock	833 (0.83 g/t)	9	10/0.2m	
T1	GP-T1-CH2	Chan Sampl- QV	19	41	41/0.52m	
T1	GP-T1-CH3	Chan Sampl- QV	6330 (6.3 g/t)	31	67/0.42m	
T1	GP-T1-CH4	Chan Sampl- QV	7091 (7.1 g/t)	90	118/0.68m	
T1	GP-T1-CH-5	Chan Smpl- QV	39	35	35/0.4m	
T1	GP-T1-CH-6	Chan Sampl- QV	1115 (1.1 g/t)	129	141/0.6m	
T1	GP-T1-CH-7	Chan Sampl- QV	35478 (35.5 g/t)	223	691/0.2m	
T2	GPR-221	Float-Qtz-composite	328771	736	988	
T2	GPR-222	Float-Qtz w tr aspy	7219	59	96	
T2	GPR-223	Flt-Sed w <5cm qvs				91
T2	GPR-224	Float-Qtz w tr aspy	1649	1037	1041	
T2	GPR-225	Float-Qtz w tr aspy	1662548	3092	4505	
T2	GPR-226	Float-Qtz w tr aspy	105409	1515	1897	
T2	GPR-227	Float-Qtz-composite	51	81	81	
T2	GPR-228	Float-Qtz w tr aspy	21	85	85	
Arg – argillite, Bdrk-bedrock, Chan-channel, Flt – Float, Qtz-quartz, QV-quartz vein, Sed-sediments, Smpl-sample, Vlts-veinlets, Wt. Ave - Weighted Average, <u>w</u> - with (Note: Sample labels GP-R-017-series , herein, abbreviated to GPR-).						

Table 9.2 - Rock Sample Au Results – 2017 Trenching Program, Mineral Licence 21281 (continued)						
Trench No.	Sample No. (Abbrev.)	Sample Type	Analyses for Au (ppb) Screen Metallics/ Fire Assay			Regular Fire Assay Au (ppb)
			+150 Mesh	-150 Mesh	Wt. Ave	
T2	GPR-229	Float-Qtz <u>w</u> tr aspy	3262	59	67	
T2	GPR-232	Float-Qtz	35	23	23	
T2	GPR-233	Float-Qtz	33	71	71	
T2	GPR-234	Float-Sed w/ 3cm qv				1653
T3	GP-T3-CH1	Chan-seds w/ qtz vlts				6
T3	GPR-235	Flt-Qtz w/mnr py	63	58	58	
T4	GPR-236	Float-Qtz <u>w</u> mntr aspy	163	279	279	
T4	GPR-237	Float-Qtz <u>w</u> mntr aspy & tr VG	13607000	47673	78049	
T4	GPR-238	Float-Qtz <u>w</u> mntr aspy	2388000	16595	31955	
T4	GPR-239	Float-Qtz <u>w</u> mntr py, <u>VG</u>	74384000	109767	163989	
T4	GPR-240	Float-Qtz <u>w</u> sed clasts	2036	26	34	
T4	GPR-241	Float-Qtz <u>w</u> mntr aspy	123263	412	634	
T4	GPR-242	Float-Qtz	595	61	61	
T4	GPR-243	Float-Qtz <u>w</u> mntr py, aspy	46174	560	748	
T4	GPR-244	Float-Qtz <u>w</u> VG	21831000	139463	332673	
T4	GPR-246	Float-Qtz-Composite	4280	66	73	
T5 area	GPR-202	Flt-Qtz: 85m E of T5			10	
T5	GPR-250	Float-Qtz	3311	255		263
T5	GPR-251	Float-Sed w/ qtz vlts				20
T5	GPR-252	Float-Qtz	8582	42		53
T5	GPR-253	Float-Sed w/ 1-5cm qvs				14
T5 area	GPR-249	Float-Qtz: 20m W of T5	294	11		11
T5 area	GPR-252	Float-Qtz: 88m E of T5	8582	42		53
T6 area	GPR-204	Flt-Qtz: 100m NW of T6	150	110	110	
T6	GPR-254	Float-Sed w/ $\leq 1$ cm qvs				<5
T6	GPR-255	Float-Sed w/ 8 cm qv				9
Arg – argillite, Bdrk-bedrock, Chan-channel, Flt – Float, Qtz-quartz, QV-quartz vein, Sed-sediments, Smpl-sample, Vlts-veinlets, Wt. Ave - Weighted Average, <u>w</u> - with (Note: Sample labels GP-R-017-series , herein, abbreviated to GPR-).						

## **Trenching – Jaclyn North Zone**

Trenching along the ‘projected’ ENE extension of the *Jaclyn North Zone (JNZ)* resulted in the excavation of 4 trenches spaced over a strike distance of 220 m, with individual lengths of 138 m (T1), 116 m (T2), 30 m (T3) and 71 m (T4)(Fig. 9.6). For the most part, trenching was not successful in reaching bedrock, due to excessive glacial till cover, thus, greatly limiting the degree of bedrock mapping and sampling that could be done. Variably-oriented laminations, observed in sparse occurrences of mainly argillite and greywacke, suggest the presence of local, small-scale, folds, throughout.

### *Trench 1 – Mapping and Sampling Results*

Placement of Trench 1 (T1) was determined by the surface projection of the gold-bearing quartz vein zone encountered in (historical) drill hole GP10-103, collared 200 m ENE of the drill-delineated section of the *JNZ* (Fig. 9.6). The trench was located approx. 20 m east of the drill section plane of GP-10-103.

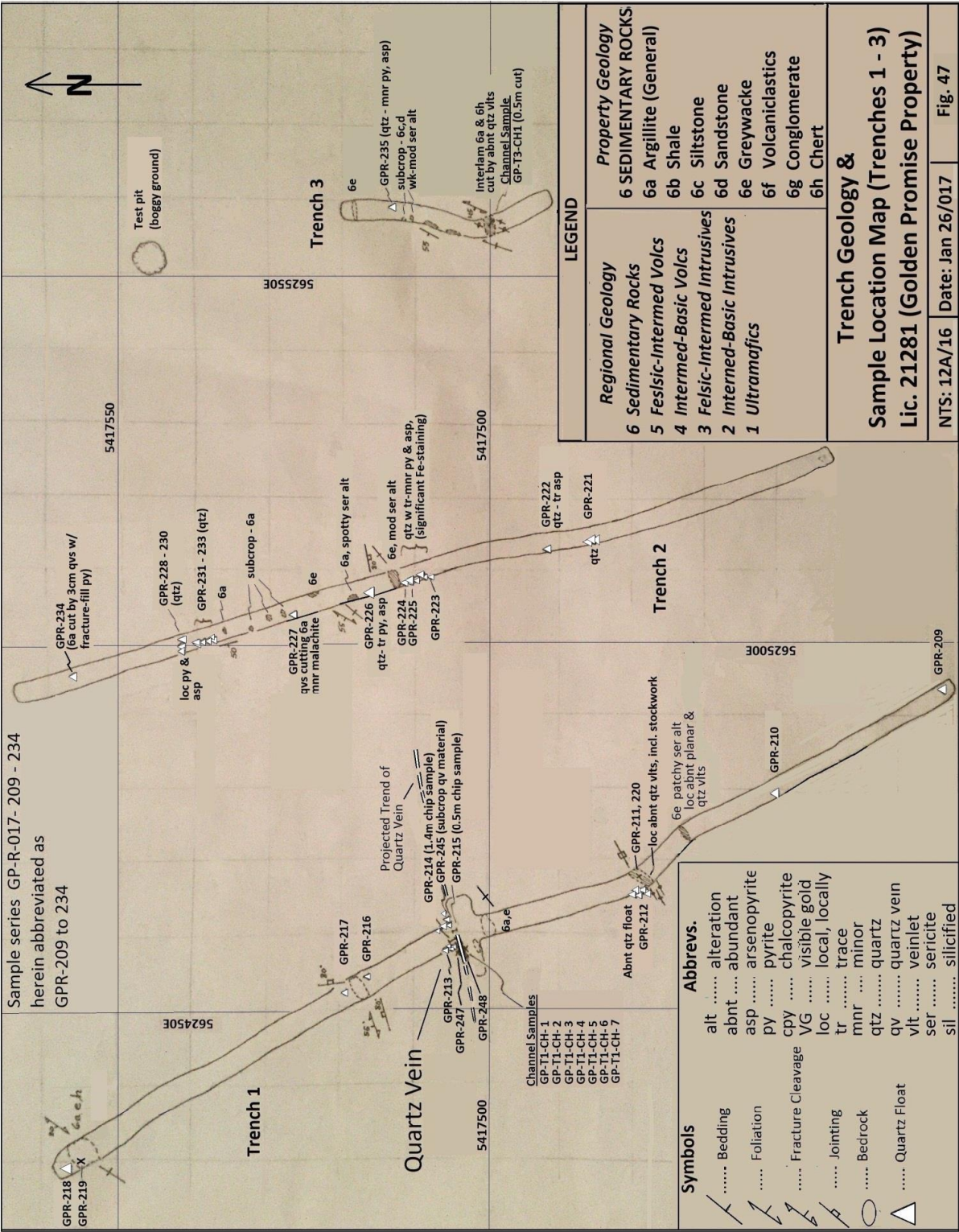
Despite the lack of bedrock encountered, excavation of the T1 site was successful in exposing a 1.0-1.5 m wide quartz vein at a depth of 2.0-3.0 m (Fig. 9.7) – its location, roughly corresponding with the inferred surface projection of a 0.7 m wide quartz vein intersected in GP-10-103 (believed to correlate with the Upper Sub-Zone vein system, of the *JNZ*). Limited widening of the trench undertaken at the site of the quartz vein, resulted in a total strike length exposure of 4.5 m. The vein trends 075° to 090° with a dip of 50-60°N – its variable attitude being due to deformation. No *intact* extension of the vein was observed trending east of the trench (at least at the 3m depth reached) due to the vein’s highly fractured/friable condition and, thus, remobilization as frost-heaved rubble. Slickenside features along fracture surfaces reveal post-veining deformation with evidence of low-angle thrusting from the northwest (this is consistent with the regional structural interpretations outlined in Sect. 7.2.3).

The T1 quartz vein is moderately to strongly fractured and Fe-stained, with an upper (0.2-0.4 m wide) marginal zone characterized by bluish-grey stylolitic seams and bands, hosting sporadic/minor occurrences of pyrite, arsenopyrite, rare galena and visible gold. Similar banding is seen along a small section of its poorly exposed footwall margin. These zones show evidence of multiple, discrete to diffusive, silica injections. In contrast, the central part of the vein consists of massive (bull) quartz. Both the hangingwall and footwall host rock consist of argillite having 20-30 cm wide zones of strong to intense, cm-scale, quartz veining (including stockwork), immediately adjacent to the main vein. Moderate to strong sericitization and silicification are associated.

*[For the sake of brevity in the following discussion of sample results, an abbreviated form of the sample labels, are used, as per the following examples: GP-R-017-210 = GPR-210; Channel sample GP-T1-CH1 = CH1].*



Figure 9.7 - Trench Geology and Sample Location Map - Trenches 1–3, Jaclyn North Zone.





A total of 7 channel samples were taken across sections of the quartz vein zone (including the immediate hangingwall). Samples were confined to three cross-sections of the vein, spaced roughly 1.0 m apart, each consisting of 2 or 3 contiguous samples. In addition, a 1.5 m chip sample was taken across the entire vein width, 1.4 m west of the channel samples.

Four of the six channels, from the vein, itself, yielded highly anomalous Au results for the +150 mesh-size sample fractions – including 6.33 g/t /0.42m (CH3), 7.09 g/t/0.69m (CH4), 1.1 g/t/0.6m (CH6) and 35.5 g/t /0.2m (CH7) (Table 9.2 ). A sample cut across the quartz veinlet stockwork zone comprising the hangingwall argillite returned 833 ppb Au /0.2m (CH1). The weighted average (wt. ave.) analyses for the above samples (combining the +150 & -150 mesh size fractions), produced lower, though, elevated to anomalous, Au results – 10 ppb (CH1), 67 ppb (CH3), 118 ppb (CH4), 141 ppb (CH6) and 691 ppb (CH7).

The 1.5 m chip sample (GPR-214), taken across the vein, returned 723 ppb Au (+150-mesh fraction) or 285 ppb (wt. ave. analysis). Grab samples of the sericite-altered hangingwall and footwall zones yielded 30 ppb Au (GPR-247) and 284 ppb Au (GPR-248), respectively. However, a 0.5 m chip sample (GPR-215) of the footwall argillite, cut by four ( $\leq 2$  cm wide) quartz veins, returned <5ppb Au.

Two composite grab samples (GPR-213 & 245) of quartz subcrop/rubble, marking the eastward continuation of the vein gave weighted average Au assay values of 315 ppb and 208.51 g/t Au, respectively.

Three of the 7 float samples collected from other parts of the trench, consisted of angular quartz vein debris (up to 0.3 m wide) – two of which returned (+150 mesh fraction) assay results of 328.8 g/t Au (GPR-221) and 184.4 g/t Au (GPR-216), or, respectively, 0.998 g/t and 1.676 g/t Au (wt. ave. results). These exhibited banding effects and bluish-grey stylolitic seams/fractures, defining the original vein margins, as well as pronounced reddish-brown to greenish-yellow staining due to the oxidation of minor pyrite and arsenopyrite.

The remaining 5 float samples and 3 bedrock samples, from the T1 trench, consisted of mainly light to pale green, sericite altered, argillite and greywacke, cut by abundant quartz veinlets. One float sample (GPR-209), cut by a 6 cm quartz vein, returned an assay of 30.24 g/t Au (wt. ave). A second float sample (GPR-210) and a bedrock sample (GPR-248) gave regular fire assay Au results of 797 ppb and 284 ppb, respectively.

Sample site GPR-212, located 25 m south of the main vein, is interesting in that it consists of a dense concentration of quartz rubble, up to 35 cm in size (composite sample assaying 118 ppb Au), exposed over a 1.5 m section of trench, within 1.0 m of surface – similar to that found adjacent to, and atop, the main vein. The 25 m separation between this occurrence and the trenched vein exposure to the north, is consistent with interval between the Upper and Middle-

Subzone vein systems encountered in drill hole GP10-103. An exposure of sericite-altered argillite, cross-cut by abundant quartz veinlets, nearby, may be a further indication of the proximity of such Subzone vein systems encountered in drill hole GP10-103. An exposure of sericite-altered argillite, cross-cut by abundant quartz veinlets, nearby, may be a further indication of the proximity of such a (second) vein system, at depth. Unfortunately, trenching, here, was hampered by rapid water inflow and did not extend below 1.5 m.

[Note, with respect to GP10-103, a 0.7 m wide quartz vein intersection was encountered, at 64.85-65.55 m, which yielded an interval of 6.19 g/t Au/0.35 m. A roughly 7.0 m wide zone of significant quartz-carbonate veining, with minor pyrite, arsenopyrite and trace sphalerite and galena, was also intersected at 89.55-96.46m, which returned two sample intervals of 0.066 g/t Au/0.35 m (89.55-89.9m) and 0.066 g/t/0.9 m (at 94.1-95.0 m)].

#### *Trenches 2 to 4 - Mapping and Sampling Results*

As in the case of T1, only sparse bedrock (and questionable bedrock) occurrences of interbedded/interlaminated argillite, greywacke and minor chert, with local sericite/silica alteration and minor quartz veinlet swarms, were mapped in T2 to T4 (Figs. 9.7 & 9.8 ). As well, significant clusters of (possibly frost-heaved) quartz vein rubble, exposed at depths of 2.0-3.0 m (in T2 & T4), were noted, which may suggest proximity to underlying bedrock/quartz vein sources.

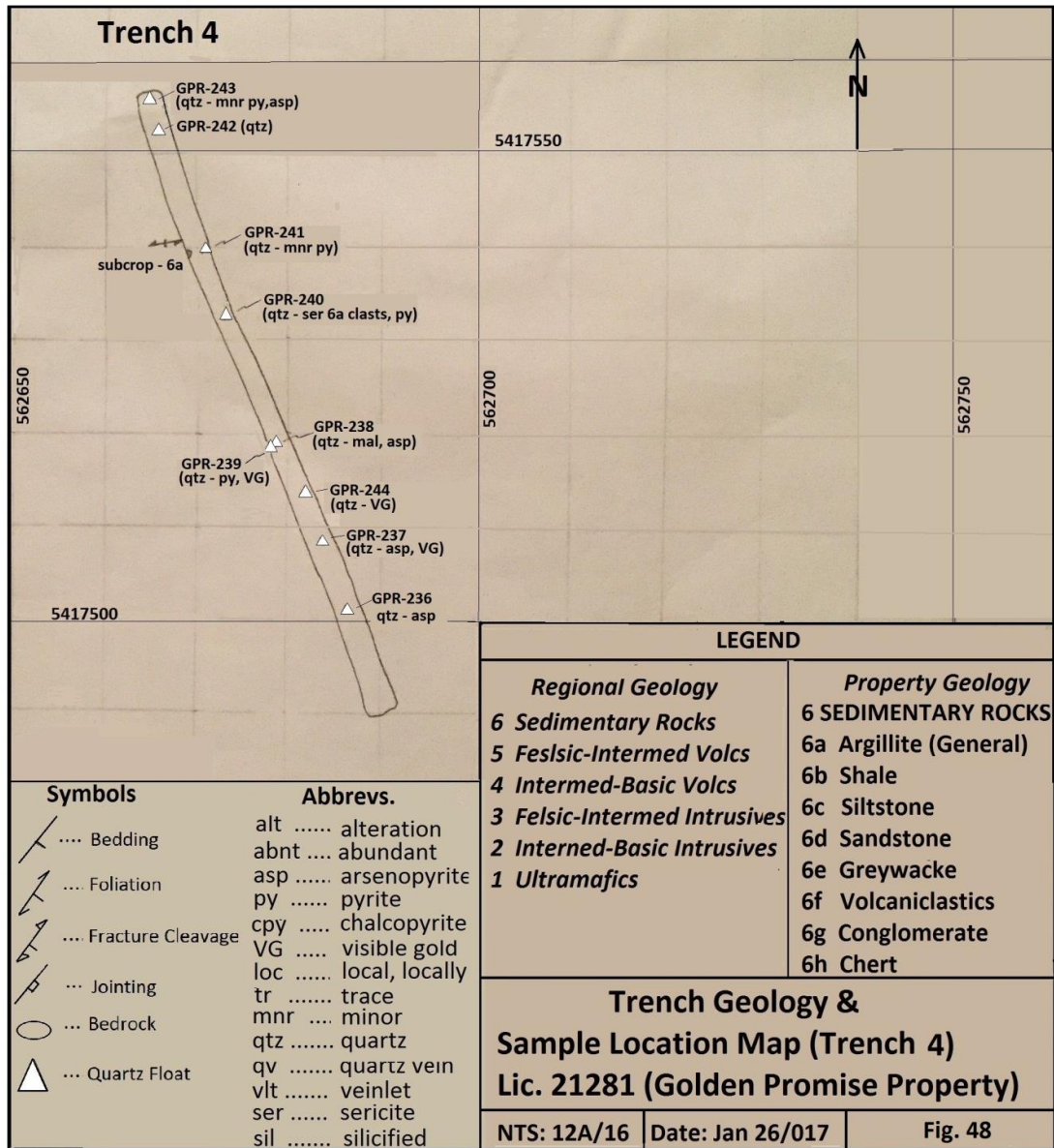
With the exception of one bedrock sample (from T3), all samples from T2 to T4 were taken of angular quartz float (0.2-0.7 m in size) having banded and stylolitic textures with generally trace to minor pyrite and arsenopyrite.

Most of the 14 quartz float samples (GPR-221 to 234) collected from T2 returned elevated to anomalous Au values, including three at 1.04 g/t (GPR-225), 4.505 g/t (GPR-225) and 1.897 g/t Au (GPR-226). In fact, samples GPR-224 and 225 were taken from a cluster of angular quartz float, located at the mid-section of T2, which occurs in rough alignment with the projected ENE extension of the Jaclyn North (Upper Subzone) vein encountered in T1 (Fig. 9.7 ). Sample GPR-229, taken from a significant cluster of quartz float in the northern section of T2, returned a +150 mesh assay analysis of 3.28 g/t Au (or wt. ave. assay of 67 ppb Au).

Trenching at the T3 site was hampered by wet (partially boggy) ground conditions to the north and deepening bedrock to the south, resulting in limited excavation work (Fig. 9.7 ). Interestingly, in the southern section of the trench, a zone of laminated argillite and chert (or silicified seams) cut by a dense swarm of parallel-trending quartz veinlets, was exposed over a 0.5 m width before 'dropping off' steeply into (deeper) till cover. A (0.5 m) channel sample of the zone, however, produced only 6 ppb Au (GP-T3-CH1). The remaining sample, consisting of quartz float hosting minor pyrite and trace arsenopyrite (from the northern section of the trench), returned 58 ppb Au (GPR-235).

Another 14 samples of quartz float (GPR-236 to 244), similar to that described in T1 to T3, were taken at the T4 site. The vein material was fairly evenly distributed along the 71 m trench – the more anomalous assay Au results (wt. ave.) being 279 ppb (GPR-236), 78.05 g/t (GPR-237), 31.96 g/t (GPR-238), 164 g/t (GPR-239), 634 ppb (GPR-241), 748 ppb (GPR-243) and 332.67 g/t (GPR-244). Two other samples returned values of 34 ppb Au (GPR-240) and 61 ppb (GPR-242).

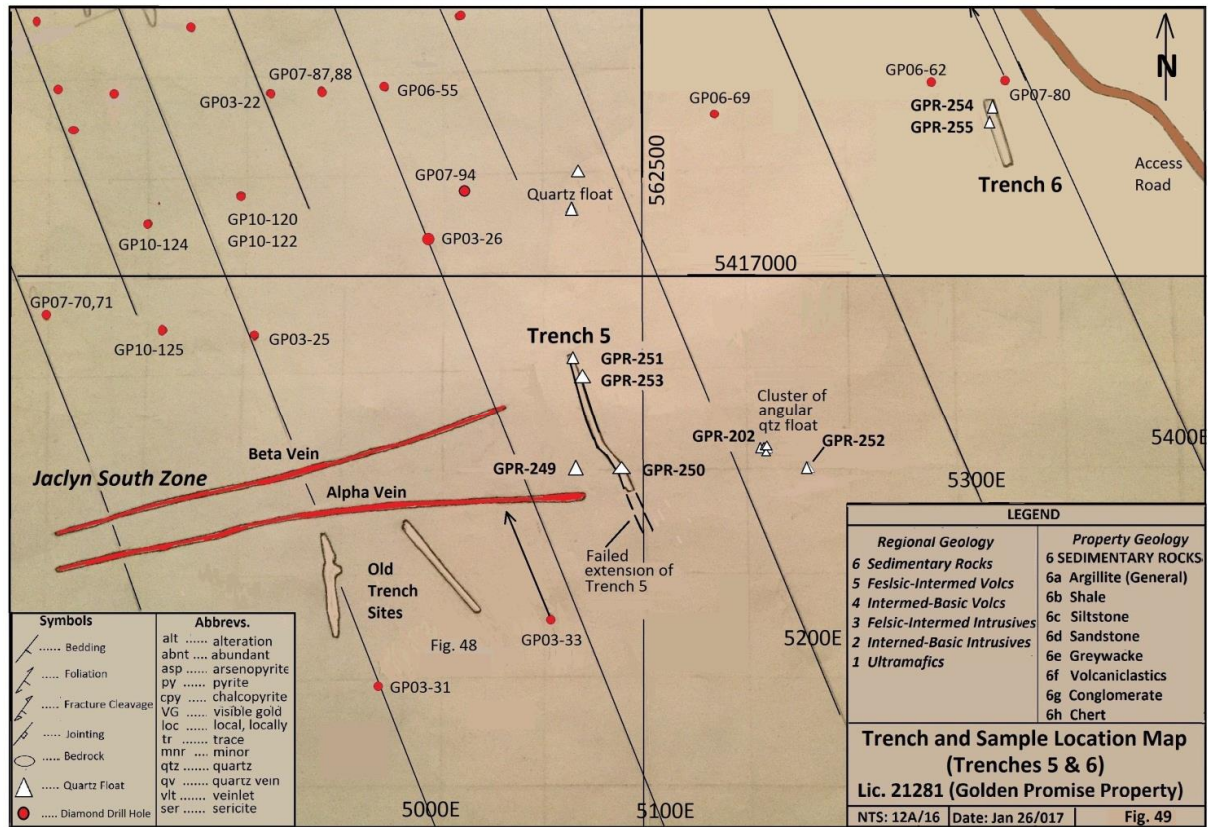
Figure 9.8 - Trench Geology and Sample Location Map - Trench 4, Jaclyn North Zone.



### Trenching - Jaclyn South Zone

Trenching in the *Jaclyn South Zone (JSZ)* area involved two excavation sites – T5, located approx. 55m east of the easternmost JSZ drill-intercept (GP03-33), and T6, located 245 m farther east-northeast (Figs. 9.6 & 9.9 ). The trenches were emplaced at 3.0 m depths with linear dimensions of 72 and 33 m, respectively. No bedrock was encountered in either of these. Unfortunately, excavation of both the T5 and T6 trench sites were limited in scope due to a combination of deep till (>3.0m) and excess/rapid water intake, resulting in ‘caving’. In the case of T5, this precluded sufficient extension of the trench southwards to ‘adequately’ cross-cut the projected trend of the main JSZ Alpha Vein (Fig. 9.9 ).

Figure 9.9 - Trench and Sample Location Map - Trenches 5 & 6, Jaclyn South Zone.



### Trench 5 - Sampling Results

Three float samples were collected from T5, including quartz, which assayed at 263 ppb Au (GPR-250), and argillite cut by  $\leq 1.5$  cm wide quartz veins, assaying 20 ppb (GPR-251) and 14 ppb Au (GPR-253).

Three surface samples of float were also collected, at distances of 20 m west (GPR-249) and 65-88 m east of the southern section of T5 (GPR-202 & 252). Significant results included a (+150-mesh fraction) assay of 294 g/t Au, from an angular, rusty, 0.5 x 0.6 m size quartz boulder (GPR-249), and a (+150 mesh fraction) assay of 8.58 g/t Au, from an angular, 0.4 x 0.4 m size, massive, quartz boulder (GPR-252).

### Trench 6 - Sampling Results

No appreciable assay results were obtained for the two samples (GPR-254 & 255) collected from the north end of T6 – these being from a 0.3 x 0.4m boulder of greywacke cut by pyrite-bearing quartz veinlets, and a 15 x 20cm boulder of partly silicified argillite, cut by an 8cm quartz vein. Sample GPR-204, located approx. 100 m northwest of the trench – taken from an angular, 0.4 x 0.5 m size, boulder of rusty, vuggy, quartz, containing altered wallrock fragments and minor pyrite – returned 150 ppb Au (wt. ave. assay).

## 9.2 2018 Exploration

Mineral exploration activities, by Great Atlantic Resources Corp., were carried out on the Golden Promise Property during late May to August, 2018. The work consisted of reconnaissance-type prospecting and rock/soil sampling, sufficient to meet minimal assessment requirements for impending work-due-date deadlines on Mineral Licences 022313M, 024015M, 024017M, 024018M, 0245021M, 024305M, 024311M, 025156M, 025161M, 025162M and 025916M. The work was conducted by geologist, Paul Delaney (P. Geo) and assistant, Art Clarke. Geologist, David Martin (P. Geo.) also conducted prospecting and collected a portion of the rock samples. As with similar work conducted in 2017, the 2018 program was deemed adequate, for the interim, until such a time a more focused exploration plan / strategy and budget can be implemented.

As with the 2017 rock sampling program, focus in 2018 was given to sampling quartz vein material, either composed entirely of quartz or host rock material containing quartz veining. The B-horizon was sampled where possible during the 2018 soil sampling program. Although the 2018 work was still reconnaissance in nature, the areas of work were chosen based on favourable geology, favourable historic geophysics information and / or other historic work; and the 2017 exploration results. For example, one area of 2018 focus was the northeast region of mineral licence 25156M. This licence required significant assessment expenditure in 2018. Soil samples were collected along four traverses and rock samples were collected in the northeast region of the licence to explore the area further west-southwest of the Shawn's Shot gold bearing vein which occurs on licence 21474M.

Great Atlantic has received partial analytical results for 2018 soil and rock samples as of the Effective Date of this report. Analytical results were received for soil and rock samples collected in mineral licences 24021M, 24305M, 25156M, 25161M and 25162M during May to mid-June. Analytical results received are for 110 soil samples and 72 rock samples as of the Effective Date of this report. Outcrop in the areas prospected within these mineral licences was sparse to non-existent.

Of the 72 rock samples for which analytical results have been received as of the Effective Date of this report, all but one was reported as float. These mainly consisted of sedimentary / metasedimentary rocks and / or quartz vein material. Approximately half of the float samples returned anomalous values for gold in the 5-23 ppb range. Two float samples from one region returned higher gold values. Sample 309045 from a large quartz boulder in the south-central region of mineral licence 025161M returned 74 ppb gold while sample 309053 from a small float of siliceous siltstone with quartz veining / flooding in the northeast region of mineral licence 024305M returned 192 ppb gold. Outcrop sample (309029) was collected further north in the central region of mineral licence 025161M. This sample of rusty, pyrite-bearing, cherty rock returned 197 ppb gold and 122 ppm arsenic. The sample locations and corresponding gold analyses are presented in Figures 9.11 to 9.14.

Soil samples returning anomalous gold values as of the Effective Date of this report were primarily from two adjacent northwest-southeast traverses in the south-central to central region of mineral licence 025161M. Sample spacing along these traverses was approximately 50 meters. Eight of nine samples from the northern half of Line 1 (samples L1-11 to L1-19) returned anomalous gold values in the 5-77 ppb range. Some of these samples returned anomalous values for arsenic (including 173 and 190 ppm) and copper (including 105 and 286 ppm). Sample L1-19 also returned



40 ppm molybdenum and 12 ppm antimony. All 11 samples from adjacent Line 3 returned anomalous gold values in the 5-15 ppb range. Scattered soil samples in other regions returned anomalous gold values in the 5-10 ppb range, being single sample to 2-sample anomalies. Of note, sample 554700 5412450 from the northeast corner of mineral licence 025156M returned 60 ppb gold, representing an isolated but significant anomaly. The sample locations and corresponding gold analyses are presented in Figures 9.10 to 9.15.

Figure 9.10 - 2018 Soil Sample Location Map for Mineral Licence 25156M

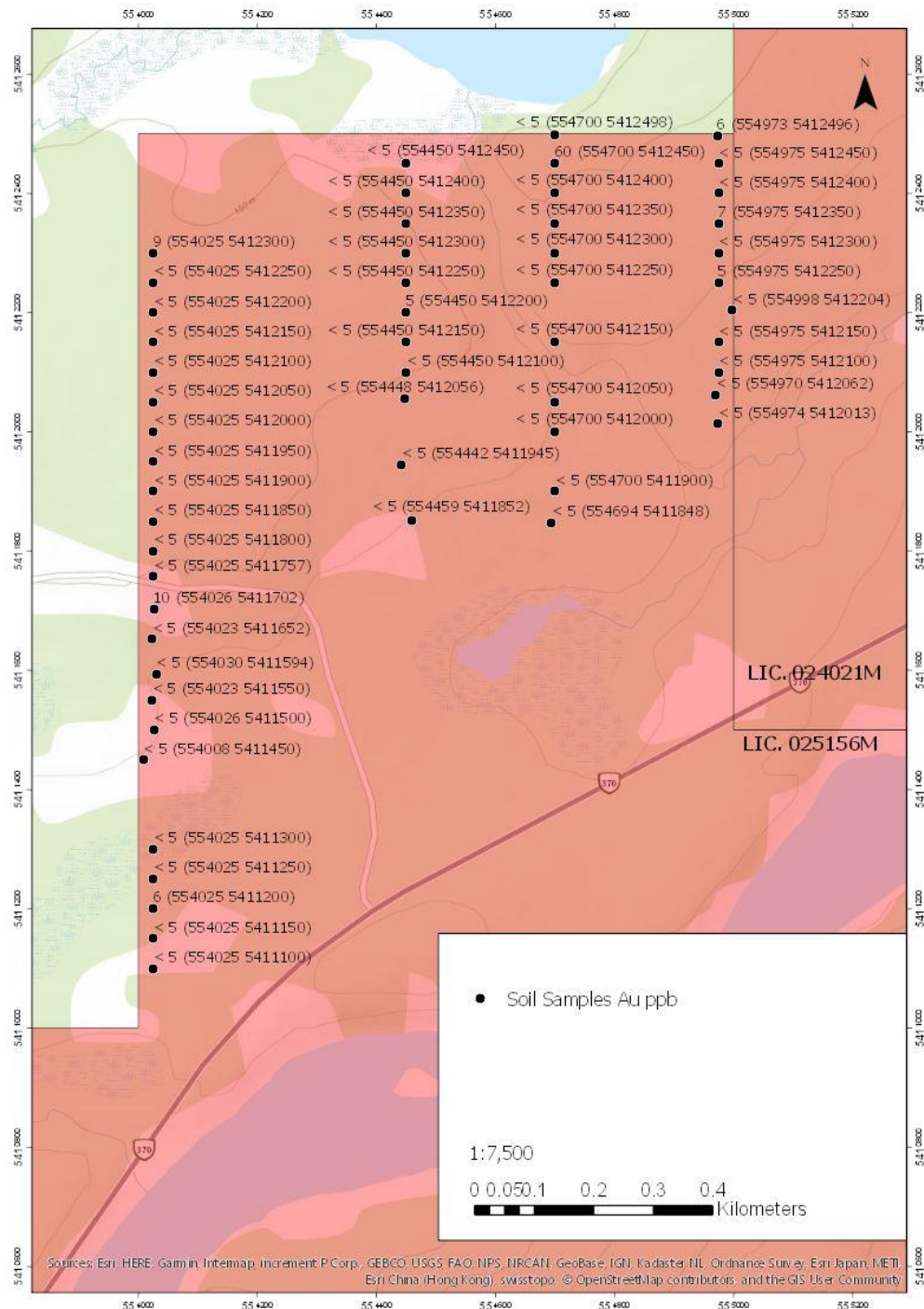




Figure 9.11 - 2018 Rock Sample Location Map for Mineral Licences 24021M and 25156M

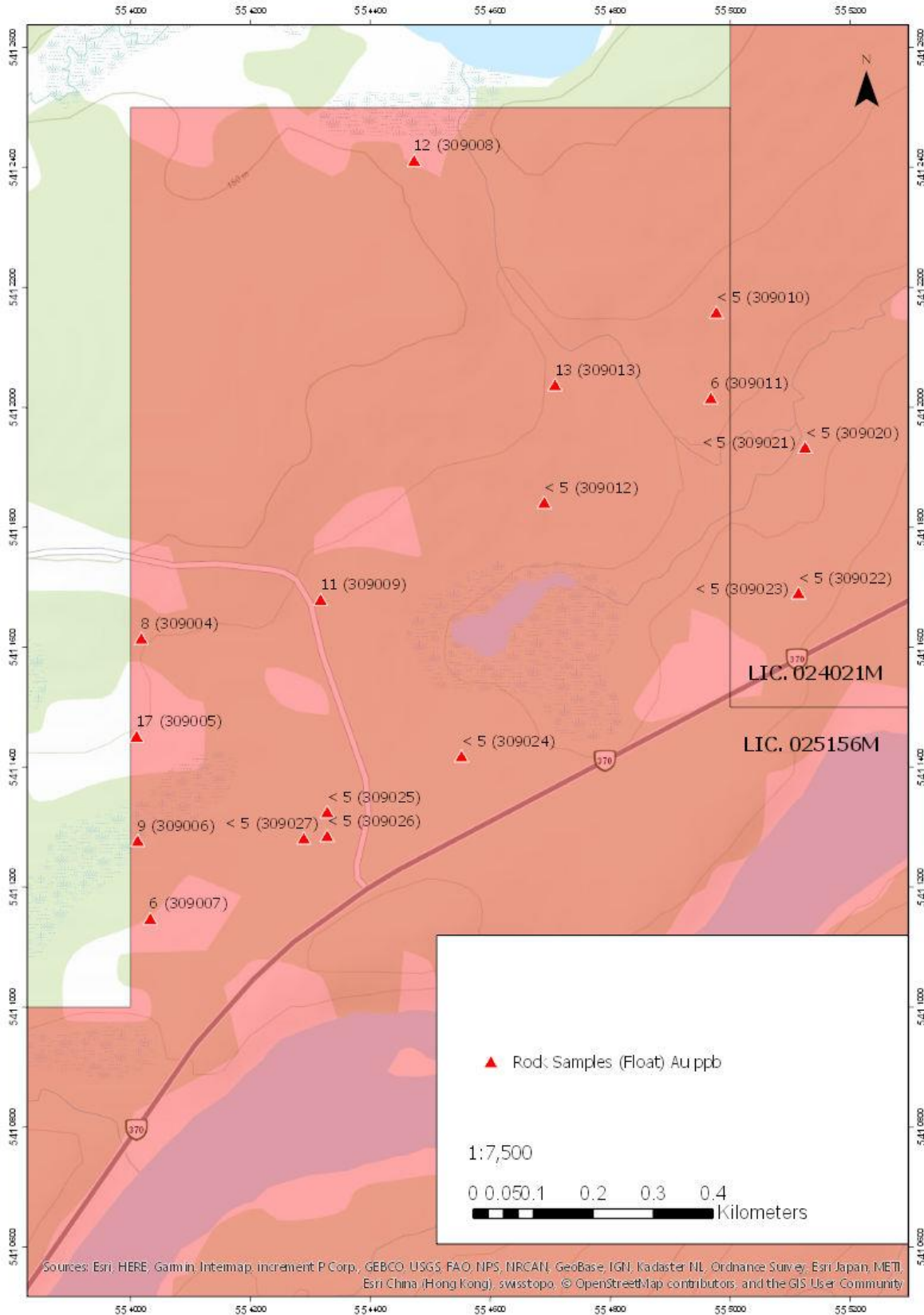


Figure 9.12 - 2018 Rock Sample Location Map for Mineral Licences 25156M and 25161M

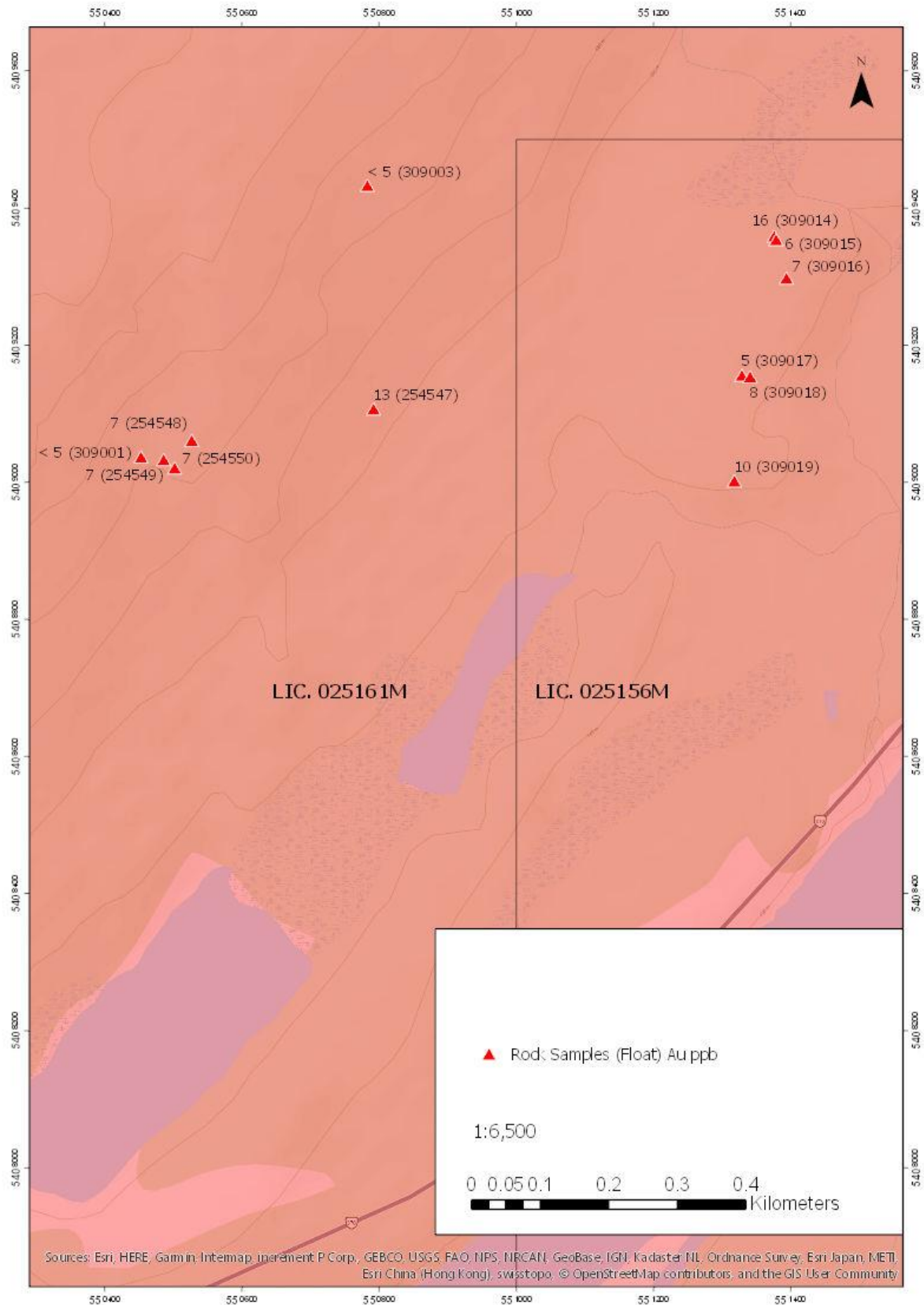


Figure 9.13 - 2018 Rock Sample Location Map for Mineral Licences 22161M and 25162M

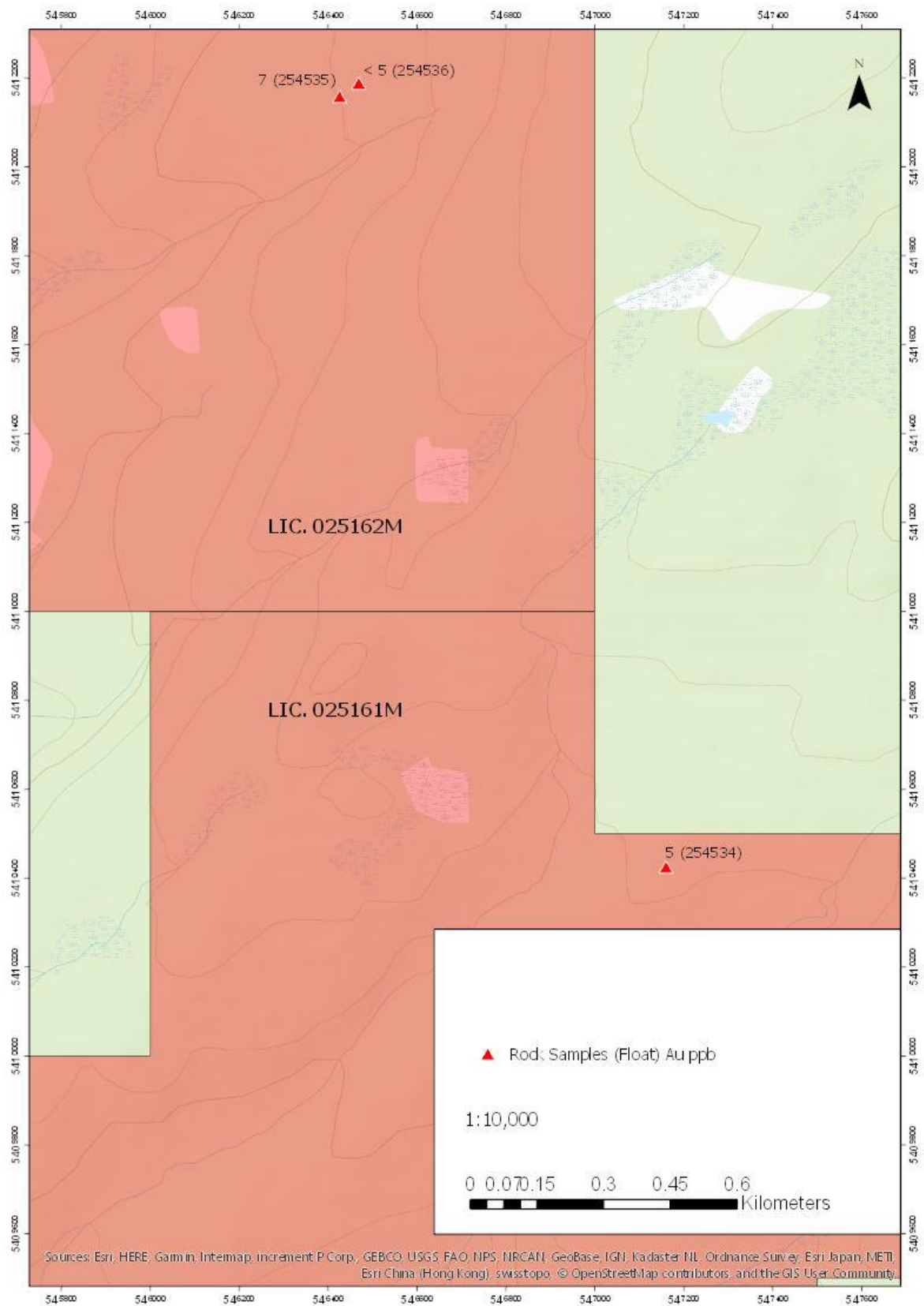


Figure 9.14 - 2018 Rock Sample Location Map for Mineral Licences 24305M and 25161M

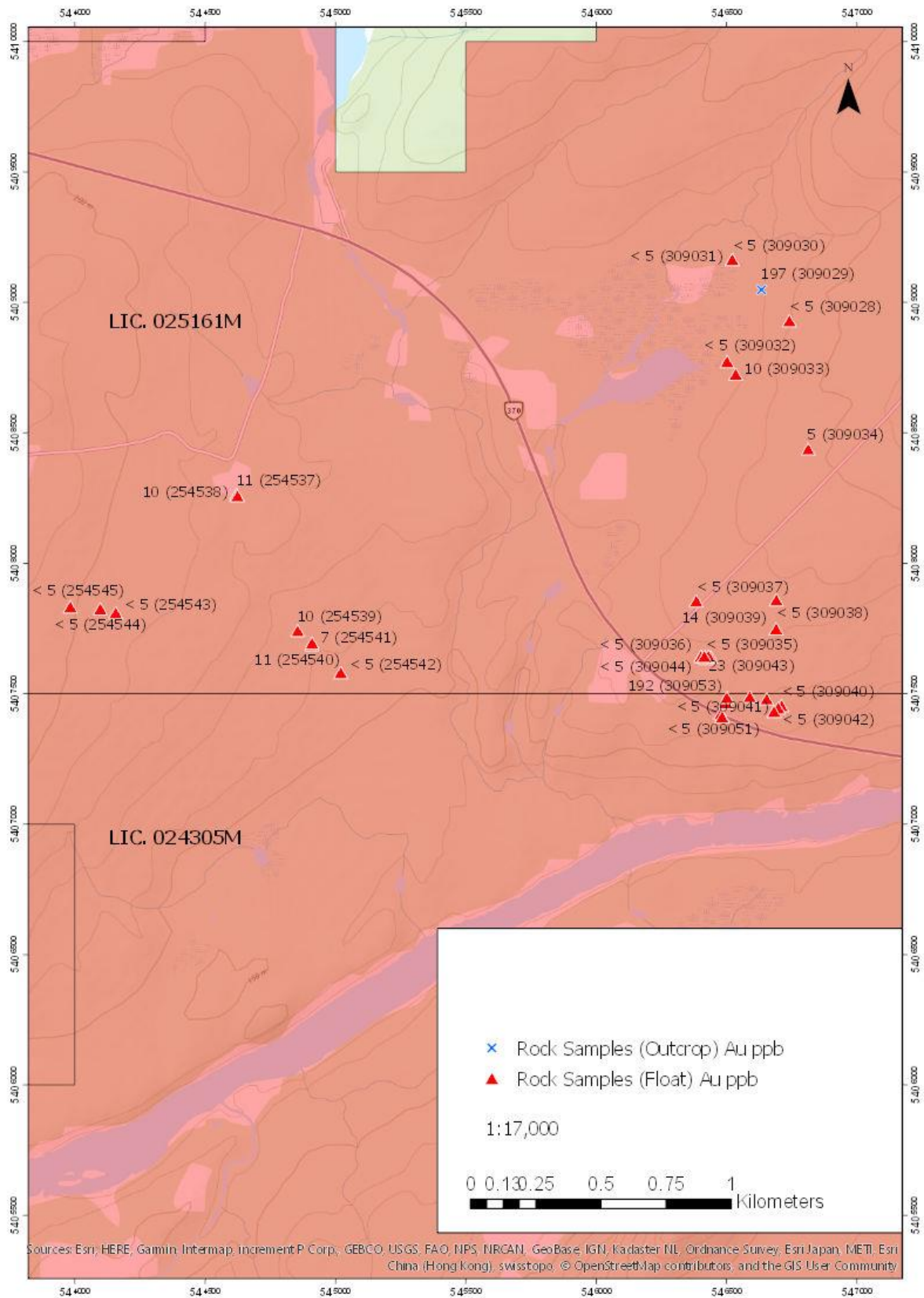
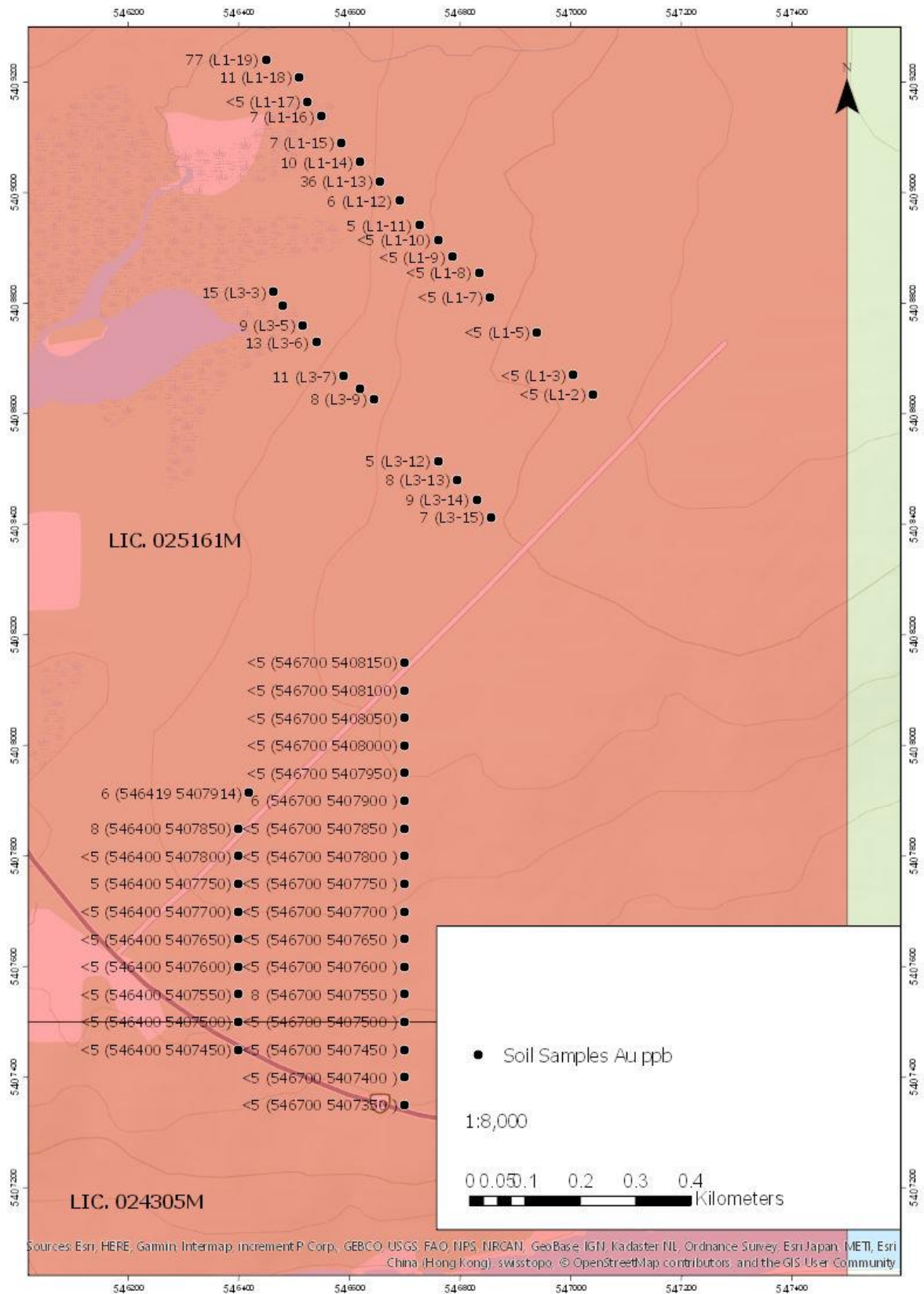




Figure 9.15 - 2018 Soil Sample Location Map for Mineral Licences 24305M and 25161M



## **10 DRILLING**

Great Atlantic Resources Corp. has not done any drilling on the Property. Drill programs conducted by previous operators are described in Section 6 (History).



## 11 SAMPLE PREPARATION, ANALYSES AND SECURITY

### 11.1 2017 Sampling Methodology and Approach

All rock and soil samples collected on the Golden Promise Property, by geologist David Martin (P. Geo) and assistant/pro prospector, Bruce Stewart, during the 2017 exploration program, were numerically-labelled according to a systematic sampling scheme which denoted abbreviated property name (GP), sample type [rock (R) or soil (S)], year (017) and sample number (eg. soil sample series GP-S-017-1 to 160). Sample tags, bearing the sample number, were left in the field to mark the sample sites. Also, sample descriptions and GPS location measurements were recorded in field notes, and later used to compile a sample data spreadsheet.

Given the quartz-vein-hosted nature of the 'known' gold mineralization on the property, focus was given to the sampling of quartz veins (bedrock), quartz float and any host rock material (bedrock or float) bearing multiple small quartz veins/veinlets. Most samples, however, consisted of float, this being more widespread and abundant, relative to the (sparse) bedrock exposures. [Note, most of quartz vein gold discoveries on the property, to date, have resulted from the tracing of quartz float debris (up-ice) to potential source areas where further investigation has been carried out by trenching].

The 2017 rock samples were collected with a 4 lb sledge hammer (and chisel where needed), ensuring that the amount of sample medium collected was reasonably large (1.5-2.0 kgs), to account for the typically 'spotty' nature (nugget effect) of gold-in-quartz which may be more easily missed in smaller samples.

Individual soil samples consisted of approx. 250 grams of B-horizon material, obtained with the use of a hand-held (steel) soil auger. Given the reconnaissance nature of the 2017 soil sampling program, sample collection consisted of, mainly, limited-area (single- or sparse line), coverage, over select areas, with sample stations at 25-50 m spacings.

Prior to rock sample analyses (as per analytical methods described in Section 10), certain quartz samples were selected for *metallics* screen preparation whereby the entire sample is pulverized and separated into two size fractions by a standard mesh-size screen/sieve (150 mesh); the separate fractions are specified, for example, as +150 mesh (coarse) and -150 mesh (fine). Following this procedure, each fraction is separately weighed and analyzed by Fire Assay Au, with results then used to calculate a combined (weighted-average) assay result.

Quartz samples selected for the *metallics* screening method were those having: a) significantly elevated gold values, as determined from a previous standard fire assay analysis; b) visible gold or sulphides; and c) stylolitic features and/or banded vein margins. The advantage of using the above technique is that it ensures a larger and, thus, more representative, sample medium to be tested, with, therefore, less risk of coarse gold grains being excluded from the final analysis. The technique also ensures better reproducibility for assay results.

Among the samples analyzed using the preparatory screen separation process, were those taken at the *Christopher*, *Shawn's Shot*, *Linda-Snow White* and *Jaclyn North* (quartz vein) prospects. In the latter case, most of the quartz float samples exposed by trenching along the projected trend of the *Jaclyn North* vein system, were analyzed using this method.

## 11.2 2017 Sampling Program

All samples were bagged, sealed and labelled during the course of the field work. Rock samples were placed in high-strength polyethylene bags for storage and shipment. Soil samples were placed in (industry-standard) moisture-releasing, durable, kraft paper bags. Following short-term sample storage, at a secure building, in Grand Falls-Windsor, NL, samples were shipped, by D. Martin and B. Stewart, to two separate laboratory facilities, as named below.

The first of the sample shipments, consisting of 160 soils and 64 rocks – collected during reconnaissance investigations on Mineral Licences 24015M, 24017M, 24018M, 24021M & 25067M and during 'check' sampling, at known auriferous quartz veins and/or boulder sites, on Licences 21474M and 21281M – were sent, via air cargo, to ALS Minerals (ALS Canada Ltd), in Sudbury, Ontario, for processing and analyses.

During processing, the soils were sieved to -180 microns (80 mesh) and analyzed using Fire-Assay Au/AAS and 48-element- Four-Acid ICP-AES /ICP-MS. Most rocks were analyzed using 33-Element/Four-Acid ICP-AES and Fire-Assay Au/AAS (Table 11.1 ), with some 'check' samples (of quartz float/vein material) selected for the 150 mesh screen metallics separation/Fire Assay Au. Samples analyzed under the latter method included a single chip sample (GPR-203) taken from the *Shawn's Shot* quartz vein (Lic. 21474M), two grab samples (GPR-200 & 201) from the *Christopher* vein (Lic. 21281M) and 6 samples of quartz float (GPR-202 & 204-208) collected from the *Jaclyn North* and *Jaclyn South* boulder train areas (Lic. 21281M).

Table 11.1 - General Information on Analytical Methods

<p><b>(After Laboratory Testing Inc. website. 2017)</b></p> <p><b>ICP = Inductively Coupled Plasma; AES = Atomic Emission Spectrometry; AAS = Atomic Absorption Spectrometry; MS = Mass Spectrometry</b></p> <p><b>ICP Analysis is performed to identify and measure a range of chemical elements necessary for the analysis of metal samples.</b></p> <p><b>ICP-AES or ICP Atomic Emission Spectroscopy is a technique that can determine concentrations of trace to major elements and can detect most elements in the periodic table. Reliable results can be obtained for about 70 elements with detection limits in the parts per billion range.</b></p> <p><b>ICP-MS or ICP Mass Spectrometry is highly sensitive and capable of multi-element trace analysis and ultra trace analysis, often at the parts-per-trillion level].</b></p>
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All grab, chip and channel samples (totalling 52) collected during the trenching operation on the *Jaclyn North and Jaclyn South Zones*, as well as 23 rock samples from the southwestern claims (Lics. 24305M & 21970M) were, personally, transported and delivered to Eastern Analytical Ltd, Springdale, NL, by David Martin (P. Geo), where analyses were conducted for gold only.

Over 70% of the trench samples from the *Jaclyn North* and *South* zones were processed and analyzed using the metallic screen separation/Fire Assay method, these being quartz float and bedrock quartz vein material. Host rock (sedimentary) material, having some quartz veining, were generally analyzed using regular Fire Assay Au technique. Analytical standards (controls) were inserted within the sample batch at every 10<sup>th</sup> sample position.

For the 23 rocks collected from licence area of 24305M and 21970M (southwestern property area), all were, analyzed for Au only, however, with only the two grab samples – from the Linda-Snow White vein, itself – involving the metallic screen separation/Fire Assay technique. One standard control sample (OREAS 202) was inserted with the sample batch. As well, random duplicate (pulp) analyses were done, by Eastern Analytical Ltd, for two of the samples.

### **11.3 2018 Sampling Program**

Rock samples from the 2018 exploration program on the Golden Promise property were numerically labelled using sample booklets. For each rock sample, the sample number was written on the sample bags and one tag from the sample booklet with the sample number was placed in the bag before sealing. For each soil sample from the 2018 Golden Promise program, the sample number was written on the sample bag. The majority of soil samples were assigned sample numbers corresponding to the sample coordinates (NAD 27 east and north coordinates marked on the sample bag representing the sample number). For certain soil sampling traverses, the soil samples were labelled by line number and station such as L1-10 and L1-11. Sample descriptions and GPS locations (using hand-held GPS devices) were recorded in field notes, and later used to compile sample data spreadsheets. A piece of flagging tape with the written sample number was left at each sample site.

All samples were bagged, labelled and sealed during the course of the field work. Rock samples were placed in high-strength polyethylene bags for storage and shipment. Soil samples were placed in (industry-standard) moisture-releasing, durable, kraft paper bags. Following short-term sample storage, at a secure building, in Grand Falls-Windsor, NL, samples were transported by P. Delaney (P.Geo.) to Eastern Analytical laboratory facilities.

During processing, the soil samples were sieved to -80 mesh. The rock samples were crushed to 80% -10 mesh, followed by creation of split samples, and pulverizing of the split samples to 95% - 150 mesh. The rock and soil samples were analyzed for gold using Fire-Assay / Atomic Absorption (AA) and for 34-elements using Four-Acid Inductively Coupled Plasma – Optical Emission Spectroscopy (ICP-OES).

#### 11.4 Historical Sampling Program

The following account of the historical drilling and sampling practices performed during 2002 to 2010 on the northeastern Golden Promise Property area (encompassing the Jaclyn Zone, Jaclyn West, Justin's Hope and Shawn's Shot prospects, were (collectively) summarized in assessment report by Sparkes (2010) and Mullen (2002-2008) and a 2008 NI 43-101 report, by Pilgrim and Giroux (2008), as follows:

All diamond drilling on the property was conducted by Petro Drilling Company Ltd, of Springdale, NL. Upon completion of drill holes, casings were left in the ground and marked with 4" x 4" wooden posts, with aluminium dymo tape (affixed) on which drill-hole data – depth, inclination, azimuth, etc – were recorded. The drill collar locations were initially assigned field grid coordinates with all holes later surveyed with a Trimble GPS unit (with  $\pm 0.5$  m accuracy). During drilling, hole deviation was monitored with a Reflex survey instrument at 60 m intervals down-hole.

The drill core was logged in a secure, well lighted, core logging facility, in Badger (located near the property), where the selected sample intervals were sawn in half using a diamond-blade rock saw. A one-half section of core was then bagged for shipment for assay analysis, while the remaining half was returned to the core box. The diamond saw blade was routinely cleaned, after each sample cutting, to prevent cross contamination of mineralization. The finished core was stored in metal racks at the logging facility, with all core boxes labelled with aluminium dymo tape. Before shipment to the lab, samples were securely sealed in polyethylene plastic bags, then sealed in larger, woven, rice bags.

For sampling conducted during 2002 to 2007, samples were delivered, directly, by company personnel, or by freight truck, to Eastern Analytical Ltd, in Springdale. After completion of gold analyses, all remaining pulps were shipped, via air cargo out of Gander, to ALS Chemex Labs in Vancouver, BC, for 27-Element multi-acid digestion ICP analysis plus additional check assays for gold on a selected subset. Coarse rejects were stored at Eastern Analytical (Pilgrim et al., 2008).

(Sample preparation and assay procedures, employed by Eastern Analytical, are outlined in Table 11.2).

During the 2010 drilling, core samples were delivered, by Crosshair personnel, directly to Accurassay Laboratories' prep lab, in Gambo, NL. Following preparation, the samples were shipped to Accurassay's analytical laboratory, in Thunder Bay, ON, for Fire Assay Au and ICP analysis. Samples containing visible gold (or suspected to), or assaying  $>1$  g/t Au, under regular Fire Assay, were automatically submitted for metallic screen method. Thirty element ICP analyses were conducted using Accurassay's ICP-MA (multi-acid) technique" (Sparkes, 2010).

For rock, grab, float and core samples taken during the prospecting and drilling programs conducted between 2002 and 2004, analytical standards were inserted, by Eastern Analytical Ltd, into the sample batch at every 20<sup>th</sup>, consecutive sample position. During the 2006/2007 and 2010 drill campaigns, a blank was inserted into the sample stream, by the core technician, once every 20 samples, while two to three standard control samples (with known gold contents) were inserted into almost every sample batch at the laboratory (Mullen, 2008; Pilgrim & Giroux, 2008; & Sparkes, 2010). Gold analyses were performed using a combination of screen metallics sieving and 30 gram (1 A.T.) Fire Assay technique.

“Gold check assays on Eastern Analytical’s screened pulps, by ALS Chemex (for the 2002-2007 sampling), compared favourably with the -150 mesh metallic assays by Eastern, considering the nugget-style nature of the gold mineralization. In the range of 0.1-1.0 g/t Au, Eastern was, on average, higher by 26% about 82% of the time and lower by 38% for the remainder. Between 1.0 to 3.0 g/t Au, Eastern’s assays were on average 25% higher than ALS Chemex’s 28% of the time, and lower by an average 30% for the remaining 72%. However, in the more critical >3.0 g/t Au subset, Eastern’s assays averaged 10% higher 62% of the time, and lower by an average 18% for the remaining 38% of the time” (Mullen, 2006 & 2007).

The standards were supplied to Eastern Analytical by CDN Resource Laboratories Ltd. of Delta, BC. Their documented gold values were  $0.82 \pm 0.09$  g/T (CDN-GS-10, Eastern No. STD-J),  $0.99 \pm 0.08$  g/T (CDN-GS-1C, Eastern No. STD-L), and  $3.47 \pm 0.26$  g/T (CDN-GS-3B, Eastern No. STD-M) No major analytical issues were encountered as the standards assayed within the acceptable two standard deviation limits quoted by CDN Resource Labs, and all blanks assayed <5 ppb Au (Mullen, 2008).

Table 11.2 - Sample Preparation and Assay Procedures at Eastern Analytical Ltd

Eastern Analytical Ltd	
<b>SAMPLE PREPARATION OF ROCK</b>	
Samples are organized and labeled when they enter the lab and then placed in drying ovens until they are completely dry. After drying is complete samples are taken and crushed in a Rhino Jaw Crusher to approximately 75% -10 mesh material.	
The complete sample is rifle-split until approximately 250 – 300 grams of material is separated. The remainder of the sample is bagged and stored as coarse reject. The 250 – 300 gram split is then pulverized using a ring mill to approximately 98% -150 mesh material.	
The ring pulverizers and jaw crushers are cleaned with silica sand when changing clients. Rings and bowls are inspected by a sample prep technician after each sample and silica sand is used to clean equipment as needed.	
<b>SAMPLE PREPARATION OF SOILS</b>	
Soils are dried at 90°F. They are then pounded with a rubber mallet in the soil bag and then screened through an 80 mesh screen. The -80 fraction is rolled and kept as the sample. The +80 mesh fraction is discarded.	
<b>FIRE ASSAY PROCEDURE</b>	
A 30 gram sample is weighed and placed into an earthen crucible containing PBO fluxes and then mixed. Silver nitrate is added and the samples are fused in a fire assay oven to obtain a liquid which is poured into a mold and left to cool. A lead button is then separated from the slag and cupelled in to a fire assay oven which obtains a silver bead containing the Gold.	
The silver is removed with 1 ml nitric acid and then 3 ml hydrochloric acid is added to bring the Ag and Au into solution. After cooling, deionized water is added to bring the sample up to a	

present volume. Then sample is then analyzed by Atomic Absorption.

*Atomic Absorption (AA):*

Samples are analyzed one at a time by AA (in batches of 24) with a value obtained by taking the average of three readings per sample. Unit is checked with a calibration solution after every 12 samples. Sample results are recorded manually and transferred to the manual data entry person where assay data is remerged with RMX sample number and tabulated into reports for certificates. Reports and standards are checked by the Chief Assayer before the certificates are release to the client.

*Au Metallics:*

All quartz vein samples are analyzed using a metallic sieving process. The entire sample is crushed, and then approximately one kilogram is split off into four portions. This split is pulverized and then sieved through a +150 mesh screen. All of the +150 fraction is placed in an envelope and then fired, the sample weight is then recorded (usually a low weight <10 g). The entire -150 fraction is placed in a plastic bag and the weight is recorded. The final Au value is calculated by one half A.T. from the -150 fraction and the fire assay.

PROCEDURE FOR AR-ICP30

Each sample rack contains one blank, two CanMet standards and 37 unknowns, of which two will be duplicates.

A 0.500 gram sample is digested with 2ml HNO<sub>3</sub> in a 95oC water bath for ½ hour, after which 1 ml HCL is added. The sample is returned to the water bath for an additional ½ hour. After cooling, the sample is diluted to 10 ml with deionized water, stirred, and let stand for 1 hour to allow precipitate to settle. The sample is then ready for ICP analysis.

GEOCHEM PROCEDURE FOR CU/PB/ZN/AG

A 0.500g sample is digested in a test tube with 2ml of nitric acid and 1ml of hydrochloric acid for 1 hour. Samples are then diluted to 10ml with deionized water and analyzed on the AA.

2010 Bulk Sampling Program, Jaclyn Main Zone

Sample analytical procedures and quality control measures reported for the Crosshair (bulk sample preparation) trench sampling program, are presented in an excerpt from Steele (2011) as follows:

“Each sample was placed in a plastic sample bag with a labelled sample tag and sealed. All samples were then placed into large rice bags, securely sealed and delivered by Crosshair personnel directly to the Accurassay Laboratories Ltd sample preparation facility, in Gambo, NL. Prepared pulps were then sent to the main laboratory facility in Thunder Bay, ON, for gold analyses and 30-element ICP-OES analyses by multi acid digestion. Of the 53 channel samples submitted, 18 channel samples contained visible gold and were analyzed by the pulp metallics method with AA finish, which uses a 1,000g sub-sample size and sieved using a 150 mesh screen. The entire +150



metallics portion is assayed along with two duplicate sub-samples of the -150 pulp portion. Results are reported as a weighted average of gold in the entire sample. The remaining 35 channel samples and all drill cuttings samples were analyzed via standard 50g fire assay with AA finish. All fire assayed samples that gave results greater than 1g/t were re-assayed by the pulp metallics method. Two different standards with known gold content and blanks (<5ppb Au) were also submitted with the channel and drill cutting samples to monitor quality control” (Steele, 2011).

### **11.5 Quality Assurance / Quality Control Programs for Drill Core**

During the period 2004 through 2008, the property was explored by Rubicon and subsequently by Paragon. Both companies sent drillcore to Eastern Analytical Laboratory in Springdale Newfoundland for determination of gold by screened metallic assaying. Rubicon provided Eastern Analytical with three standards that were obtained from CDN Labs in Delta, BC and Eastern Analytical inserted those standards into the sample stream at intervals established by Rubicon and Paragon, generally one standard per 20 samples for an insertion rate of 5%. During the 2005/2006 drill program Rubicon also submitted blanks with drillcore samples. The total number of submitted blanks is not known; records have been found for 40. There is no record of Eastern Analytical performing duplicate analyses to measure analytical precision.

Upon completion of their assaying, Eastern Analytical forwarded the pulps to ALS (then ALS Chemex) in North Vancouver BC for 20-element ICP analyses. During the period 2004-2005, Rubicon sent drillcore to ALS as well as to Eastern Analytical. As with Eastern Analytical, Rubicon instructed ALS to insert standards and blanks into the sample stream at proscribed intervals of one in 20, although it appears that unlike Eastern Analytical, ALS supplied their own standards. As well, ALS performed duplicate analyses although the frequency is not known.

Because the sample pulps that were forwarded to ALS by Eastern Analytical had already been assayed for gold, ALS performed very few gold assays and therefore there are relatively few QA/QC measures for gold with respect to the pulps.

During their 2010 – 2011 drill program, Crosshair sent drillcore samples to Accurassay Labs in Thunder Bay Ontario for gold assaying. The assay certificates indicate that Accurassay performed duplicate analyses, generally at a rate of one duplicate per 10 assays, but towards the end of the program the ratio dropped to one in 20. There are no records of assaying of standards or blanks by Accurassay.

In 2011, Crosshair sent one batch of pulps (70) to ALS for determination of gold; those samples were subjected to the normal ALS QA/QC protocol of standards, blanks and duplicates.

All QA/QC analyses for which documentation is available are tabulated in the following Table 11.3. QA/QC data is also available for the ALS treatment of non-gold pulps but because the only element of interest at Jaclyn Main Zone is gold, those data are less relevant to the current discussion, although they do demonstrate that ALS consistently achieved their targets for accuracy, precision and absence of cross-contamination.

If Eastern Analytical maintained an insertion rate of 5%, the documentation of their assaying of standards is incomplete but it is not known whether that rate was actually maintained.

Table 11.3 - Summary of Jaclyn Main Zone QA/QC Programs and Samples

ALS Chemex Drillcore QA/QC for Rubicon, Paragon and Crosshair					
Samples	Type	Year	Standard Au	Blanks	Duplicate Pairs Au
1,041	Core	2004 – 2005 + 2011	74	75	65
Percent			7.1	7.2	6.2
ALS Chemex Sample Pulp QA/QC for Rubicon and Paragon					
Samples	Type	Year	Standard Au	Blanks	Duplicate Pairs Au
2,765	Pulp	2004 - 2007	32	129	32
Percent			1.2	4.7	1.2
Eastern Analytical Drillcore QA/QC for Rubicon and Paragon					
Samples	Type	Year	Standard Au	Blanks	Duplicate Pairs Au
2,093	Core	2004 - 2007	35	40	0
Percent			1.7	1.9	0.0
Accurassay Drillcore QA/QC for Crosshair					
Samples	Type	Year	Standard Au	Blanks	Duplicate Pairs Au
1,359	Core	2010	0	0	105
Percent			0.0	0.0	7.7

Figures 11.1 and 11.2 are control plots of two of the standards assayed by Eastern Analytical. Records exist for only one assay of the third standard, so it is not presented.

Figure 11.1 - Eastern Analytical Standard L Control Plot

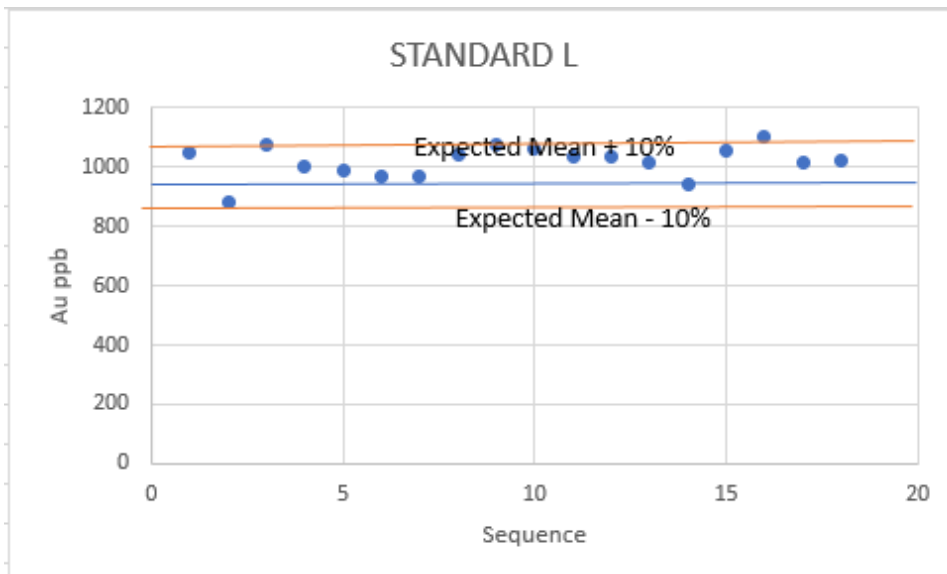
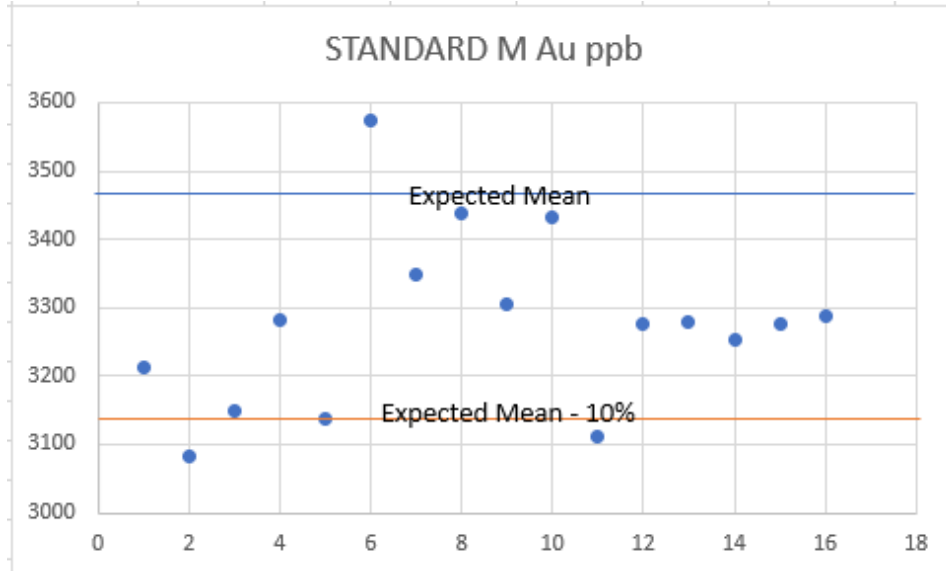


Figure 11.2 - Eastern Analytical Standard M Control Plot



Standard L assays fall mostly within a  $\pm 10\%$  band although more values lie above the expected mean than below. This suggests that for samples with contained gold values of about one ppm, the Eastern Analytical assays may slightly overstate the actual value. Standard M assays also fall mostly within the  $\pm 10\%$  band but most fall below the expected mean which suggests that for samples with contained gold values of 3 ppm or greater, the Eastern Analytical assays may understate the actual value.

No plots of ALS standard analyses are included here because ALS used numerous (21) standards and the population for each is too small to comprise a meaningful plot. However, all ALS standard assays fall within target limits.

All Eastern Analytical and ALS assays of blanks were at or below detection limit which indicates that there was no evidence of cross-contamination.

All duplicate pair assays show close agreement as demonstrated by the following three plots.

Figure 11.3 - ALS Rubicon – Paragon Duplicate Pairs XY Plot

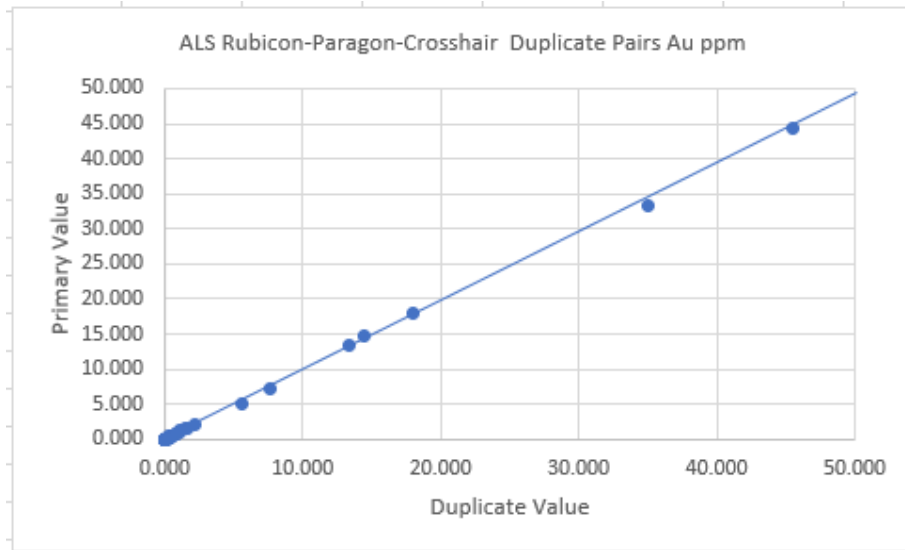


Figure 11.4 - ALS Crosshair Duplicate Pairs XY Plot

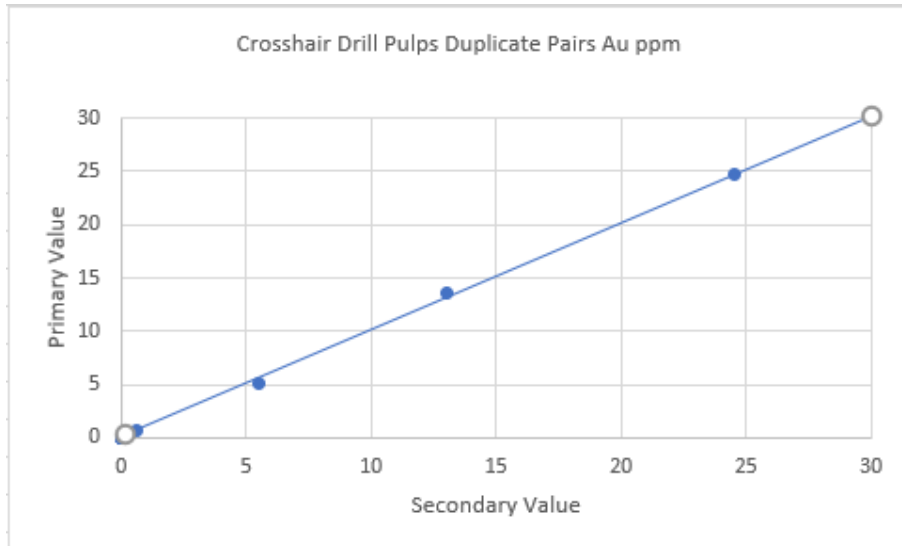
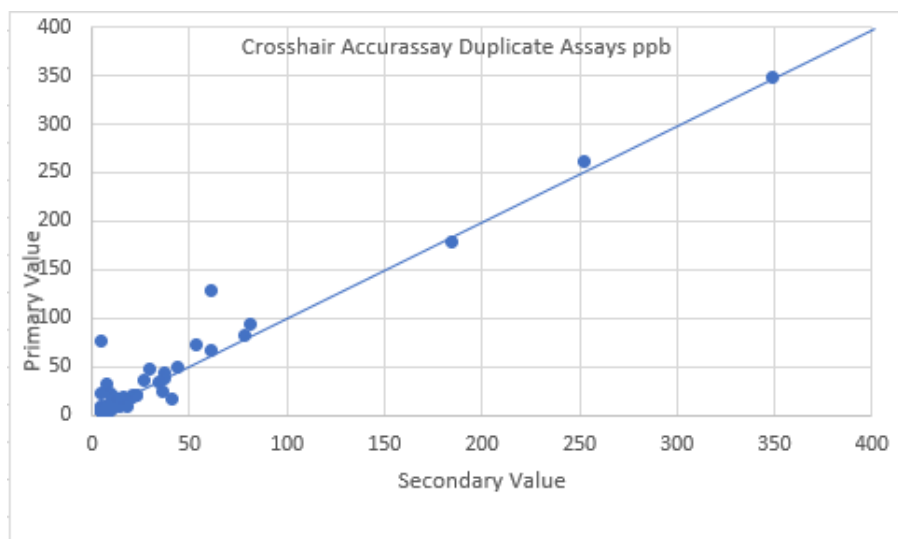


Figure 11.5 - Accurassay Crosshair Duplicate Pairs XY Plot



The author (Mosher) is of the opinion that sample preparation, security and analytical procedures are within industry norms and are acceptable.

## 12 DATA VERIFICATION

Data used for the mineral resource estimate described in Section 14 was verified in three ways:

- 1) The Property has been the subject of three site inspections by two of the authors of this report: Mr Pilgrim inspected the Property on two occasions, in 2005 and in 2008, during and immediately after the completion of drill programs and had the opportunity to observe and determine the location of the majority of holes that were drilled within the Jaclyn Main Zone. Mr Mosher inspected the site in August 2018. The Mosher site inspection was carried out to confirm the presence and location of drillholes in preparation for the resource estimation described in Section 14, as well as to review bedrock geology. As it is mandatory that all excavations be reclaimed, few of the drillcollars remain and none of the trenches nor the bulk sample site remain and in fact it is difficult to determine their locations;
- 2) Drill core was examined, and samples were collected from drill core and submitted to ALS in North Vancouver to verify original assay values. Quarter-core samples were collected from half core by diamond saw. Visible gold was observed in several of the intervals examined but these intervals were not sampled as they had already been reduced to quarter core;
- 3) The assay database was compared with as many original assay laboratory certificates as were available. Certificates were available for approximately 60% of the 4,861 assays in the database. It should be noted that two sets of assays exist for samples collected during the period 2006 – 2007. Samples were initially assayed by ALS Chemex in North Vancouver by fire assay with an atomic absorption finish; for samples containing more than 10 g/t gold, the samples were re-assayed with a gravimetric finish. Subsequently in 2007, it was decided that because of the common presence of elemental gold, metallic screening would be appropriate. Therefore, all the samples were re-assayed by Eastern Analytical in Newfoundland. Many of these results are higher than the ALS results due to the presence of coarse gold and it is the Eastern Analytical results that have been used in the database. No discrepancies were found between the Eastern Analytical assay certificates and corresponding assay values in the database.

Table 12.1 is a comparison of original and check assay values for six (6) core samples that were collected during the site visit.

Table 12.1 - Jaclyn Main Zone Verification Assay Results

Drill Hole	From (m)	To (m)	Length (m)	Original Au g/t	Check Au g/t	Sample #
GP02-09	47.6	48.3	0.7	1.4	1.455	CNF10434
GP02-09	48.3	48.7	0.4	1.0	0.005	CNF10435
GP06-51	153.5	153.8	0.3	14.1	25.1	CNF13676
GP06-51	153.8	154.2	0.4	9.4	4.27	CNF13677
GP07-74	181.0	181.5	0.5	5.2	1.79	CNF19937
GP07-74	181.5	182.0	0.5	2.4	0.083	CNF19938



As can be seen from Table 12.1, the check assays range from being very similar to both significantly higher and lower than the original assays. These differences are ascribed to three probable causes: 1) the original samples were collected from sawn half-core; the check samples were collected by sawing the remaining half-core to obtain a quarter-core sample so that the original and check samples are testing different sample material; 2) although the samples are proximate, the particulate nature of the gold makes it highly improbable that both samples would contain identical quantities of gold. The variability of gold content is both positive and negative which is taken to reflect the erratic nature of gold distribution and; 3) the check samples were not analyzed using metallic screening because they were all too small – between 0.32 and 0.56 kilograms – and ALS requires a minimum sample size of one kilogram for the screening process. Therefore, the check samples may have contained particulate gold that was not accounted for in the assaying process and this omission may account for the two check samples that are of very low grade. The check assays do, however, demonstrate both the presence of gold in the samples and also serve to emphasize the need for metallic screening of all samples that may be collected from the Property in future for any further assessment of the gold mineralization present.

The author (Mosher) is of the opinion that the data are adequate for the purpose of the mineral resource estimate described in Section 14 of this technical report.

## 13 MINERAL PROCESSING AND METALLURGICAL TESTING

### 13.1 2010 Bulk Sample Program Jaclyn Main Zone

A description of the 2010 bulk sampling program, performed on the *Jaclyn Main* (gold-bearing) quartz vein system, is herein, presented as mainly excerpts and abbreviated statements from Steele (2011). [Comments by the author are enclosed in parentheses and brackets].

“In June 2010, Crosshair Exploration & Mining Corp. entered into a contract with Stantec Consulting Ltd (an internationally-based company), in which Stantec would provide planning, design and project management services to the bulk sampling program”. A geotechnical drilling program was completed by Stantec in Sept, 2010, which showed overburden depths ranging from 1.5 to 3.5 metres, though more typically between 2.0 and 2.5m (Steele, 2011).

Using existing drill hole data on the *Jaclyn Main Zone*, a determination on the surface projection of the vein was made, by Hawco King Renouf Ltd, of St. John’s, NL, to guide excavation work (overburden removal). Organics and overburden (till) material were stockpiled at separate locations adjacent to the trench site. Mechanized trenching, prep-drilling and blasting were conducted by Barker Construction Ltd, of Baie Verte, NL, during November 1-26, 2010, with operational and logistical aspects of the program supervised by Stantec. Geological mapping, sampling and ore zone designations – for blasting and extraction purposes – were performed by independent geological consultant, Tanya Tettelaar (M.Sc., P.Geo.), assisted by Crosshair staff personnel, Owen Chaulk and Steve Janes (Steele, 2011).

“The completed trench was approx. 170 metres in length and ranged from 5 metres to 10 metres in width” (Steele, 2011). [An outline of the bulk sample trench-site, with channel sample locations, is shown in Fig. 50. The location and extent of the trench site, in relation to the Jaclyn Main longitudinal ore zone section, is shown in Fig. 6.11.

Blast holes, 10 and 15 ft deep, were prepared using an Airtrack drill. Based on calculations, by Crosshair staff, the estimated quantity of rock removal was approx. 2,600 tonnes. “Due to poor ground conditions (strongly fractured subcrop), only 50% of the vein and host rock was exposed”. Also, groundwater and silt drainage into the pre-blast holes resulted in some of these being partially or completely lost, an issue which negatively affected the depth and intensity of blasting for portions of the trench.

A total of 53 channel samples and 23 drill chip samples (from blast prep holes) were taken from the trench site. Channel sampling resulted in 47 samples from bedrock and 6 from (loose) subcrop/quartz vein material. Eighteen of the channel samples were noted to contain visible gold, with bedrock and subcrop channels assaying up to 161.65 g/t Au/0.7 m and 35.37 g/t Au/0.45 m, respectively. Corresponding average assay grades for these channels were 9.87 g/t Au/0.5 m and 9.60 g/t Au/0.5 m. Drill chip samples returned assay values up to 56.18 g/t Au, with an average of

9.38 g/t Au (Steele, 2011). All sample locations are shown in Fig. 13.1. All related data, with respect to sample UTM and field grid coordinates, sample descriptions and assay results, are presented in Tables 13.1 and 13.2.

The blasted ore zone material was mechanically busted into acceptable sizes for milling (< 0.4 m) and loaded onto 30-tonne capacity semi-trucks for transport to the Nugget Pond mill facility, currently operated by Rambler Metals and Mining Plc., on the Baie Verte Peninsula. This entailed a (one-way) road distance travel of approx. 200 km. Seventy-one truck-loads of material were transported for an estimated total of 2,241 wet tonnes. Following the ore concentrate processing, “two gold bars were poured and shipped to Johnson Matthey Ltd, in Toronto, for refining. Bar 1 weighed 4.773 kg and contained 118.84 oz. of gold and 20.54 oz of silver. Bar 2 weighed 0.638 kg and contained 15.265 oz, of gold and 2.51 oz. of silver” (Steele, 2011). In addition, 482.5 kilograms of concentrate were recovered from the Ball mill and SAG mill (during clean out) and also shipped to Johnson Matthey for treatment and refining. Eight samples collected from the Ball mill produced an average assay grade of 6.5 g/t Au, while eleven samples from the SAG mill material produced an average grade of 5.13 g/t Au. “After refining, the bars and the mill concentrate produced a total of 313.59 ounces of gold and 23.05 ounces of silver. Based on the mill records and the total gold recovered, the average recovered gold grade was 4.47 g/t. The average tails grade was 1.12 g/t gold, indicating a back-calculated head grade of 5.59 g/t gold with an 80% recovery” (Steele, 2011).

“Crosshair compared the head grade with the estimated sample grade using the block model prepared, in April 2008, by Gary Giroux (P. Eng), which stated an inferred resource of 921,000 t at 3.02 g/t Au”. [This grade was based on drill hole results from 2002 to 2007 and, thus, did not included the 2010 in-fill drilling implemented in preparation for the bulk sampling program]. “Assuming a 2 m deep trench and 25% dilution, Giroux determined that the bulk sample would have a tonnage of 2,125 t at an average grade of 4.42 g/t” (Steele, 2011).

The 80% recovery – while, in fact, a positive result – “is lower than that predicted by the bench scale test work. It is believed that the lower-than-expected recovery is due to the presence of carbonaceous material in the waste rock. In the future, this issue can be mitigated by modifying the circuit to a carbon-in-leach process as opposed to a carbon-in-pulp process. This would result in a minor modification to the flow sheet which will be further refined in future metallurgical test programs” (Steele, 2011) (See Section 11 for sample analytical procedures and quality control measures, pertaining to the program).

## Golden Promise Property - National Instrument 43-101 Report



Table 13.1 - Bulk Sample Trench Site Channel Sample Data and Gold Results, Jaclyn Main Zone

Channel Location#	Sample Number	Easting	Northing	Sample Source	Interval Length (m)	Rock Type	VG	Au g/t
1	S10301	562375.0	5417204.6	Bedrock	0.5	Stockwork zone		0.061
1	S10302	562374.8	5417204.1	Bedrock	0.5	Stockwork zone	1 speck	0.087
1	S10303	562374.7	5417203.6	Bedrock	0.5	Quartz vein		2.439
1	S10304	562374.6	5417203.2	Bedrock	0.4	Quartz vein	1 speck	5.252
1	S10305	562374.4	5417202.8	Bedrock	0.6	Greywacke		0.426
2	S10306	562365.3	5417205.9	Bedrock	0.5	Lithic greywacke		0.006
2	S10307	562365.4	5417204.9	Bedrock	0.5	Quartz veinlet/gw		1.491
2	S10308	562365.4	5417204.3	Bedrock	0.5	Greywacke		0.007
2	S10310	562365.3	5417203.3	Bedrock	0.5	Quartz vein	4 specks	9.262
3	S10311	562358.9	5417204.3	Bedrock	0.5	Greywacke		0.068
3	S10312	562359.0	5417203.7	Bedrock	0.6	Quartz vein		2.824
3	S10313	562359.1	5417203.2	Bedrock	0.5	Quartz vein		2.803
3	S10314	562359.2	5417202.7	Bedrock	0.5	Quartz vein		5.332
3	S10315	562359.3	5417202.2	Bedrock	0.5	Arkosic greywacke		0.124
4	S10316	562333.3	5417198.4	Bedrock	0.5	Mudstone/greywacke		1.681
4	S10317	562333.1	5417197.7	Bedrock	0.5	Quartz vein	3 specks	11.196
4	S10318	562333.1	5417197.0	Bedrock	0.5	Mudstone		0.01
5	S10319	562326.9	5417198.5	Bedrock	0.6	Mudstone		0.088
5	S10320	562326.9	5417197.9	Bedrock	0.5	Quartz vein	2 specks	43.165
5	S10322	562327.1	5417197.4	Bedrock	0.6	Mudstone		0.055
6	S10323	562306.1	5417196.1	Bedrock	0.6	Greywacke		0.058
6	S10324	562306.0	5417195.5	Bedrock	0.6	Quartz vein	1 speck	12.863
6	S10325	562306.0	5417195.0	Bedrock	0.6	Quartz vein	3 specks	19.223
6	S10326	562306.2	5417194.3	Bedrock	0.7	Stockwork zone	4 specks	0.044
7	S10327	562286.6	5417193.2	Bedrock	0.5	Greywacke		0.162
7	S10328	562286.4	5417192.7	Bedrock	0.5	Quartz vein		3.653
7	S10329	562286.6	5417191.6	Bedrock	0.5	Quartz vein		3.713
7	S10330	562286.7	5417191.1	Bedrock	0.6	Stockwork zone		2.007
7	S10331	562287.2	5417190.3	Bedrock	0.5	Mudstone/greywacke		1.878
8	S10332	562275.6	5417191.8	Bedrock	0.6	Stockwork zone		3.26
8	S10333	562275.7	5417191.2	Bedrock	0.6	Quartz vein		3.624
8	S10334	562276.0	5417190.5	Bedrock	0.6	Quartz vein	4 specks	5.601
8	S10335	562276.1	5417190.0	Bedrock	0.5	Mudstone		0.006
8	S10336	562276.6	5417187.9	Bedrock	0.5	Quartz vein	1 speck	37.11
9	S10337	562260.2	5417187.3	Bedrock	0.35	Quartz vein	4 specks	21.009
9	S10338	562260.2	5417186.9	Bedrock	0.35	Quartz vein	1 speck	3.403
9	S10339	562260.2	5417186.3	Bedrock	0.5	Lithic greywacke		0.005
10	S10340	562249.6	5417185.9	Bedrock	0.7	Quartz vein	10 specks	161.646
10	S10341	562249.9	5417185.3	Bedrock	0.6	Quartz vein	1 speck	7.478
10	S10343	562250.0	5417184.8	Bedrock	0.5	Mudstone		0.005
-	S10344			Float	0.6	Quartz vein		2.315
-	S10345			Float	0.5	Quartz vein		0.151
-	S10346			Float	0.45	Quartz vein	2 specks	35.374
-	S10347			Float	0.65	Quartz vein	2 specks	14.61
-	S10348			Float	0.35	Quartz vein		1.029
-	S10349			Float	0.65	Quartz vein		4.157
11	S10350	562225.0	5417174.0	Bedrock	0.5	Quartz vein		3.624
11	S10351	562225.2	5417173.5	Bedrock	0.5	Mafic dyke		0.011
11	S10352	562225.9	5417173.0	Bedrock	0.4	Mafic dyke		0.17
11	S10353	562225.9	5417172.4	Bedrock	0.7	Quartz vein	2 specks	30.672
11	S10354	562226.1	5417171.7	Bedrock	0.6	Mudstone/greywacke		25.605
12	S10355	562223.4	5417173.7	Bedrock	0.5	Quartz vein	4 specks	30.851

Table 13.2 - 2010 Bulk Sample Site Drill Chip Sample Gold Results

<b>Drill Chip Sampling Gold Results</b>				
<b>Sample Number</b>	<b>Easting</b>	<b>Northing</b>	<b>Drillhole Depth (ft)</b>	<b>Au g/t</b>
S10357	562375.4	5417202.9	10	21.699
S10358	562366.7	5417203.3	10	17.796
S10359	562359.2	5417203	10	0.337
S10360	562359.6	5417203.2	10	2.827
S10361	562350.1	5417202.4	10	9.900
S10362	562332.7	5417198	10	0.730
S10363	562332.7	5417197.4	10	10.545
S10364	562332.1	5417197.8	10	10.837
S10365	562332.2	5417197.3	10	0.093
S10366	562286.8	5417192.8	15	0.614
S10368	562250.4	5417185.3	10	19.357
S10369	562226.6	5417172.1	10	56.183
S10371	562221.8	5417171.9	10	0.765
S10372	562238.7	5417176.9	10	7.892
S10373	562231.2	5417173.3	10	8.819
S10374	562303.2	5417192.1	10	0.115
S10376	562302.7	5417194.7	10	8.368
S10377	562302	5417192.9	10	2.794
S10378	562299.7	5417194.6	10	6.629
S10379	562312.8	5417194.8	10	22.299
S10380	562320.8	5417195.7	10	1.267
S10381	562236.9	5417175.8	10	3.392
S10383	562223.4	5417171.4	10	3.070



## 14 MINERAL RESOURCE ESTIMATES

### 14.1 Introduction

Great Atlantic provided data files in Excel format containing collar, downhole survey, assay and lithology data for 136 drillholes with a total of 4,861 assays for gold and 38 other elements. This dataset contains information for 36 holes that were drilled in 2010 and were therefore not included in the previous resource estimate that was carried out in 2008. Of the 38 other elements, only arsenic was considered to be present in potentially significant quantities, so the mineral resource estimate was carried out for gold and arsenic. In addition to the drill database, Great Atlantic provided copies of laboratory assay certificates and assay laboratory quality control certificates in pdf format. No data from trenches or other sample media were received.

### 14.2 Exploratory Data Analysis

The Jaclyn Main Zone was tested by 107 holes; the remaining 29 holes tested other vein occurrences. The 107 holes that tested the Jaclyn Main Zone contained 3,336 assays. Descriptive statistics for these assays are given in Table 14.1.

Table 14.1 - Jaclyn Main Zone Assay Descriptive Statistics

All Assays JMV	Au ppm	As ppm
Mean	0.78	312
Standard Deviation	7.70	891
Range	327.97	9,999
Minimum	0.00	1
Maximum	327.98	10,000
Count	3,336	3,336

As the holes were sampled continuously, most of these assays do not contain gold: only 520 of the 3,336 assay values are greater than detection limit (0.05 g/t for ALS and 5 ppb for Eastern Analytical). Within the Jaclyn Main Zone, gold mineralization of potential economic interest is associated with quartz veins and only 262 assays are described in the dataset as being associated with quartz veins. Descriptive statistics for those assays are given in Table 14.2.

Table 14.2 - Jaclyn Main Zone Assays in Quartz Veins Descriptive Statistics

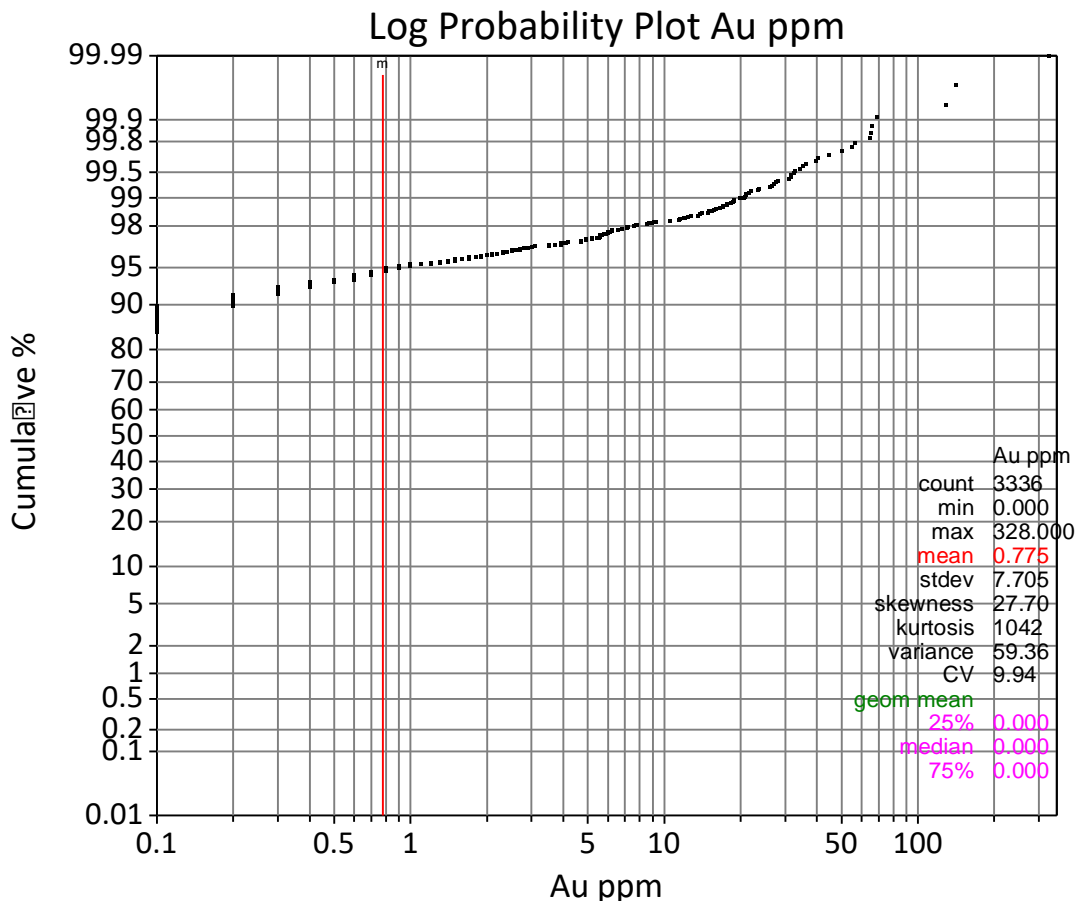
All Assays in Quartz Veins	Au_ppm	As_ppm
Mean	5.52	1,177
Standard Deviation	23.24	1,591
Range	328.00	10,000
Minimum	0.00	0
Maximum	328.00	10,000
Count	262	262

### 14.3 Capping

Capping is the process of artificially reducing high values within a sample population that are regarded as statistically anomalous with respect to the population as a whole (outliers), to avoid the distorting influence these values would have on the statistical characteristics of the population if left at their full value. The risk in including atypically high values in a resource estimate is that their contribution to the estimated grade will be disproportionate to their contribution to the tonnage, and therefore the grade of the resource as a whole will be overstated.

Cumulative frequency curves are commonly used to determine whether capping is appropriate. If a single sample population is present, the cumulative frequency curve is a straight line; prominent steps in the curve indicate the potential presence of separate or mixed populations. Figure 14.1 shows the cumulative frequency curve for gold for the Jaclyn Main Zone. The plot exhibits a prominent break at 65 g/t so all assays that exceed that value were capped at 65 g/t.

Figure 14.1 - Jaclyn Main Zone Gold Assay Cumulative Frequency Curve



Five of the 3,336 assays were capped at 65 g/t. These five assays represent 0.15% of the sample population but by being capped, their capped values reduce the aggregate sum of the sample population by approximately 16% which suggests that those five samples exert an influence on grade that is disproportionate to their number. See Table 14.3.

Table 14.3 - Jaclyn Main Zone Capped Assay Descriptive Statistics

JMV Capped Assay Descriptive Statistics	Au ppm	Au Capped ppm
Mean	0.78	0.66
Standard Deviation	7.70	4.46
Range	327.97	65.00
Minimum	0.00	0.00
Maximum	327.98	65.00
Sum	2606.46	2198.14
Count	3336	3336
Number of Assays Capped	0.00	5
Percent Reduction in Aggregate Value	0.00	16

#### 14.4 Composites

Compositing of samples is done to overcome the influence of sample length on the contribution of sample grade (sample support). A composite length is chosen that is equal to or greater than the majority of sample lengths. As approximately 99% of the samples are shorter than or equal to one meter, one meter was chosen as the composite length.

#### 14.5 Bulk Density

During 2006 and 2007, 102 specific gravity (SG) measurements were made on samples of core from six drillholes. Forty-two of those samples were of quartz vein material and had an average SG of 2.66 g/cm<sup>3</sup>. That value was rounded to 2.7 for the mineral resource estimate described in this section of the report.

#### 14.6 Geological Interpretation

The Jaclyn Main Zone has previously been modelled (Pilgrim and Giroux, 2008) as two slightly-overlapping en-echelon veins that strike approximately east-west and dip steeply to the south. Although there are several quartz vein intercepts that may represent the overlap of two en-echelon veins, the evidence for the presence of two separate veins is not unequivocal; there are multiple vein intercepts in many of the drillholes which may suggest the presence of an indeterminate number of parallel veins rather than just two. Evidence from surface trenching suggests the presence of a persistent main vein so the other vein intercepts may represent less well-developed subordinate veins.

Given the ambiguity that multiple vein intercepts represent, the simplifying step was taken to model the Jaclyn Main Zone as a single vein that strikes approximately east-west and dips approximately 75° to the south. The vein as modelled represents the aggregation of quartz vein intercepts that are located approximately mid-way between the hangingwall and footwall boundaries of all quartz vein intercepts within the Jaclyn Main Zone. The modelled vein contains 99 of the 262 quartz vein intercepts in drillholes in the Jaclyn Main Zone.

#### 14.7 Spatial Analysis

An attempt was made to create variograms for the Jaclyn Main Zone quartz vein intercepts but there were insufficient data points to establish more than several points on the variogram and therefore a range could not be established.

Consequently, instead of doing the interpolation by kriging, which is dependent upon variograms, inverse distance squared ( $ID^2$ ) was used and a search ellipse was established on the basis of the orientation of the Jaclyn Main Zone vein, and on the spatial density of drillholes. The search ellipse is longest (100 meters) in the strike direction of the vein (east-west), is narrowest (2 meters) across strike (north-south), and is 50 meters in the Z direction. The dimensions were chosen to capture at least two drillholes in the strike direction and to limit the lateral smearing of grades in the across-strike direction. The search ellipse is parallel to the vein and plunges 15 degrees to the east. The plunge of the search ellipse is based on the apparent plunge of high-grade gold values. Figure 14.2 shows the distribution of contoured gold grades in a long vertical section view of the Jaclyn Main Zone vein. The eastward plunge of the higher grades is obvious and may relate to regional fold plunges. Figure 14.2 also shows the approximate lower limit of the conceptual pit that was used to constrain the mineral resource estimate described in this section of the report.

Figure 14.2 - Jaclyn Main Zone Vertical Long Section Contoured Gold Grades

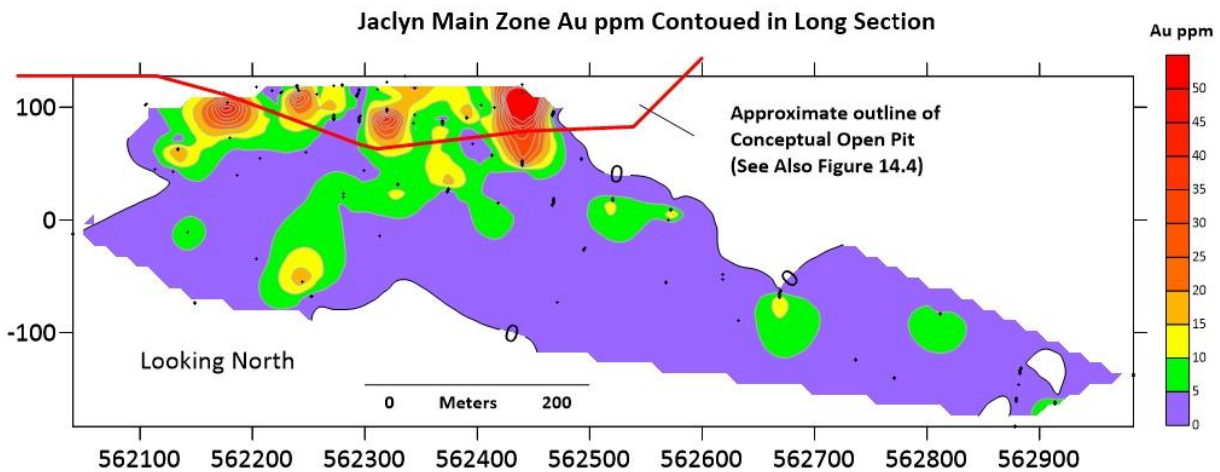
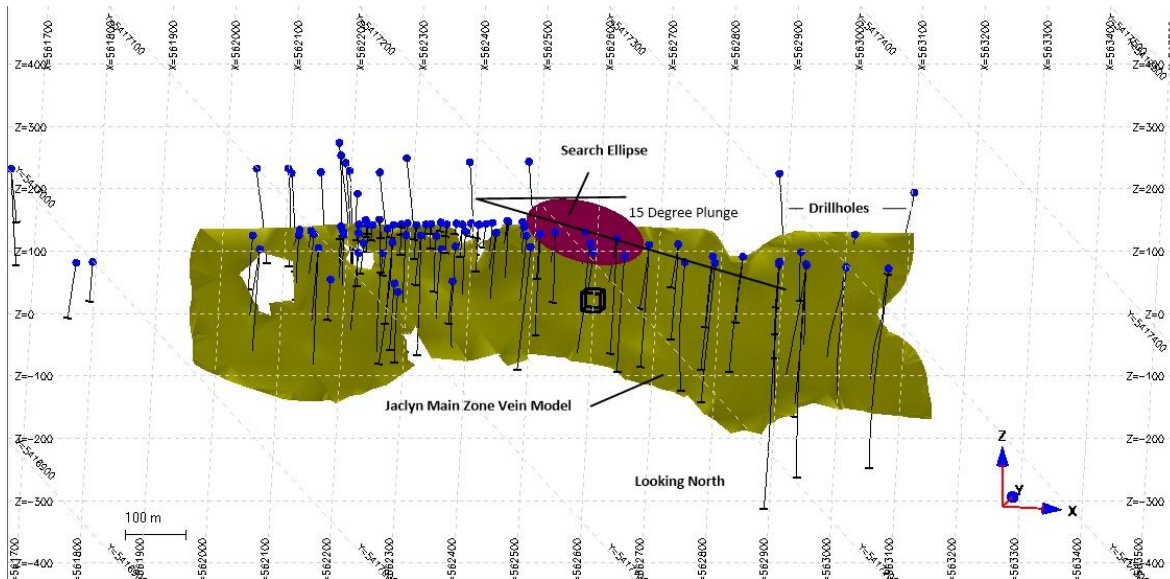


Table 14.4 sets out the parameters for the search ellipse. Figure 14.3 shows the search ellipse relative to the Jaclyn Main Zone vein model.

Table 14.4 - Jaclyn Main Zone Search Ellipse Parameters

Zone	Azimuth (°)	Dip (°)	Spin (°)	E_W Axis (m)	N_S Axis (m)	Vertical Axis (m)
JMZ	80	-15	-20	100	2	50

Figure 14.3 - Jaclyn Main Zone Search Ellipse



#### 14.8 Block Model

Block model parameters are given in Table 14.5. The block model has not been rotated; model axes are oriented north-south and east-west.

Table 14.5 - Jaclyn Main Zone Block Model Parameters

Origin (UTM)		Block Size (m)		Extent	
X	562000	X	15	Rows	84
Y	5417000	y	1	Columns	74
Z	-200	Z	10	Levels	38

#### 14.9 Interpolation Plan

Grades were interpolated into the block model using Inverse Distance Squared ( $ID^2$ ) weighting. Grades were interpolated in a single pass. In order for a grade to be interpolated into a block it was necessary that a minimum of two and a maximum of 10 composites were located within the volume of the search ellipse. A maximum of one composite per hole was allowed thereby ensuring that, at a minimum, each block was informed by at least two drillholes to demonstrate the continuity of mineralization. The volume percentage within the geological wireframe was estimated for each block and the tabulated resource is stated only for those portions of the block model within the geological wireframe.

#### 14.10 Mineral Resource Classification

All resources have been classified as Inferred because of the relatively wide spacing of drillholes through significant portions of the zone. Closer-spaced drilling will serve to increase confidence in the geological interpretation of the zone as well as to confirm historical drill results.

#### 14.11 Reasonable Prospects of Eventual Economic Extraction

The Jaclyn Main Zone is, in part, exposed at surface and it is appropriate to assume that if mined, at least part of the deposit would be extracted by open pit methods. For that reason, the mineral resource has been constrained by a conceptual pit. Table 14.6 lists the parameters used for the conceptual pit. No allowance was made for mining dilution or mining loss. The costs used are generic and were chosen based on publicly-available costs for small open pit mines and for flotation processing of gold. The cutoff grade for the resources within the open pit was taken as 0.6 g/t based on the combined mining and processing cost per tonne of US\$27.50 divided by the price of one gram of gold (US\$41.79) and rounded to the nearest 0.2-gram value. The underground cutoff value was taken as 1.5 g/t based on its frequent use in publicly-available documentation as an appropriate cutoff grade for small underground mining operations.

Table 14.6 - Conceptual Pit Parameters

Parameter	Unit	Value
Gold	Ounce	US\$1,300
Gold	Gram	US\$41.79
Mining	Cost/tonne	US\$02.50
Processing	Cost/tonne	US\$25.00
Pit Slope	Degrees	45

#### 14.12 Mineral Resource Tabulation

The Jaclyn Main Zone Mineral Resource is tabulated in two parts: Table 14.7 is a tabulation of pit-constrained resources based on the parameters outlined in Section 14.11. The basecase resource is stated at a cutoff grade of 0.6 g/t gold and is highlighted. At a cutoff grade of 0.6 g/t, the pit-constrained mineral resource is estimated to be approximately 157,300 tonnes with an average capped grade of 11.4 g/t gold, equivalent to approximately 57,800 contained ounces of gold. Gold grades have been rounded to the nearest 0.1 gram; arsenic grades have been rounded to the nearest gram; tonnes and ounces have been rounded to the nearest 100.



Table 14.7 - Jaclyn Main Zone Pit-Constrained Inferred Mineral Resource Estimate

Cutoff Au g/t	Au Cap g/t	Au Uncap g/t	As_ppm	Tonnes	Au Ounces Capped	Au Ounces Uncapped
10.0	21.9	28.5	1,881	63,300	44,600	57,900
5.0	16.4	20.5	1,773	101,100	53,300	66,700
4.0	15.2	18.9	1,748	112,300	54,900	68,300
3.0	14.1	17.5	1,718	124,000	56,300	69,600
2.0	13.7	17.0	1,711	128,400	56,700	70,000
1.5	13.2	16.3	1,724	134,100	57,000	70,300
1.0	11.8	14.6	1,758	151,500	57,700	71,000
0.8	11.5	14.2	1,772	155,700	57,800	71,100
0.6	11.4	14.1	1,783	157,300	57,800	71,200
0.4	11.4	14.0	1,782	157,800	57,800	71,200
0.2	11.4	14.0	1,784	158,200	57,800	71,200

- Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
- There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- Mineral resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding.
- Mineral resource tonnage and grades are reported as undiluted.
- Contained Au ounces are in-situ and do not include recovery losses.

Table 14.8 is the tabulation of the underground resource and is stated at a basecase cutoff grade of 1.5 g/t gold, which is highlighted. The underground portion of the mineral resource is estimated to comprise 200,200 tonnes with an average capped gold grade of 7.5 g/t for an approximate total of 48,600 contained ounces of gold. Gold grades have been rounded to the nearest 0.1 gram; arsenic grades have been rounded to the nearest gram; tonnes and ounces have been rounded to the nearest 100.

Table 14.8 - Jaclyn Main Zone Underground Inferred Mineral Resource Estimate

Cutoff Au g/t	Au Cap g/t	Au Uncap g/t	As_ppm	Tonnes	Au Ounces Capped	Au Ounces Uncapped
10.0	15.7	15.7	4,109	51,100	25,700	25,800
5.0	11.1	11.2	2,918	111,300	39,800	39,900
4.0	10.1	10.2	2,668	130,800	42,600	42,700
3.0	9.1	9.1	2,431	155,400	45,300	45,500
2.0	8.0	8.1	2,273	184,500	47,700	47,800
1.5	7.5	7.6	2,211	200,200	48,600	48,700
1.0	7.0	7.0	2,162	218,500	49,300	49,500
0.8	6.7	6.7	2,131	230,400	49,700	49,800
0.6	6.5	6.5	2,104	239,300	49,900	50,000
0.4	6.0	6.0	2,080	262,100	50,200	50,400
0.2	5.2	5.2	2,068	305,100	50,600	50,800

- Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
- There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- Mineral resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding.
- Mineral resource tonnage and grades are reported as undiluted.
- Contained Au ounces are in-situ and do not include recovery losses.

In Tables 14.7 and 14.8, the quantity of mineral resource and the corresponding average gold grade is also stated for a range of cutoff grades other than the basecase. It is notable that the total resource is relatively insensitive to cutoff grade because of the high grade of the Jaclyn Main Zone vein. It is also notable that the near-surface (pit-constrained) portion of the vein has a significantly higher average grade than the deeper (underground) portion. This outcome is consistent with the contoured gold grades shown in Figure 14.2.

Table 14.9 combines the pit-constrained and underground resources. The cutoff grade of 1.1 g/t for the total resource is the weighted average of the pit-constrained and underground cutoff grades.

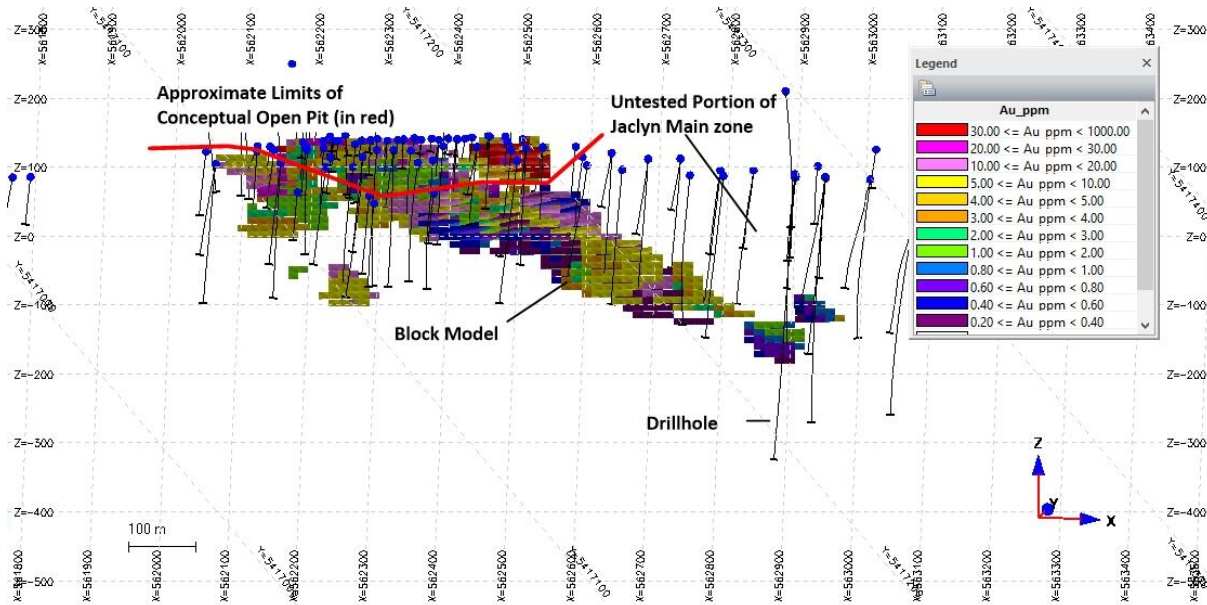
Table 14.9 - Jaclyn Main Zone Total Inferred Mineral Resource Estimate

Resource	Cutoff Au g/t	Au Cap g/t	Au Uncap g/t	As_ppm	Tonnes	Au Ounces Capped	Au Ounces Uncapped
Total	1.1	9.3	10.4	2,023	357,500	106,400	119,900
Pit-Constrained	0.6	11.4	14.1	1,783	157,300	57,800	71,200
Underground	1.5	7.5	7.6	2,211	200,200	48,600	48,700

NOTE: The cutoff grade for the total mineral resource is the weighted average of the pit-constrained and underground cutoff grades.

Figure 14.4 shows a vertical long-section view of the block model together with the approximate vertical limits of the conceptual pit and with an indication of the untested portion of the zone.

Figure 14.4 - Jaclyn Main Zone Block Model Long Section View



### 14.13 Block Model Validation

The Jaclyn Main Zone Mineral Resource Estimate was validated several ways: 1) visually by comparing block model grades with proximal composite grades within the block model, 2) by comparing average grades of raw assays, composites, and the block model, and 3) by swath plots. In all cases the comparisons are considered to be reasonable.

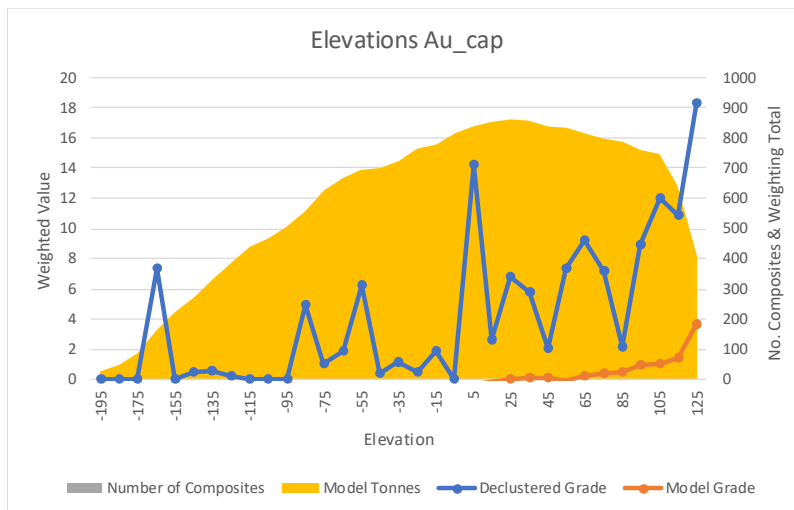
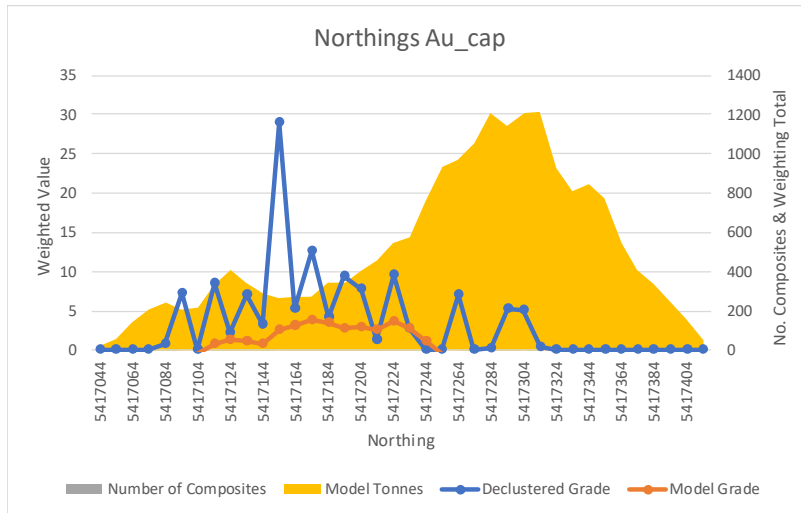
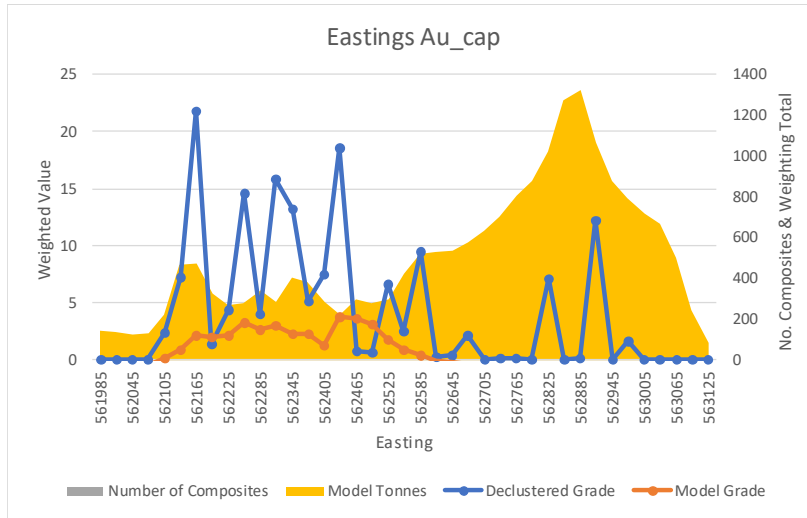
Table 14.10 shows the comparison of descriptive statistics among non-zero values for raw assays, composites and the block model. The composite average grade is slightly lower than the raw assay average grade as is to be expected because of the combining of higher with lower grades. Similarly, the block model average grade is slightly lower for capped gold as can be expected as a result of distance-weighting of composite values during the interpolation process. It is noted, however that the average uncapped grade is slightly higher than the corresponding composite grade which suggests that a minor amount of “smearing” of higher grades may have taken place during the interpolation process. Regardless, the agreement among data types indicates that the estimation process has not meaningfully distorted the original assay values.

Table 14.10 - Jaclyn Main Zone Assay, Composite and Block Model Descriptive Statistics

Statistic	Assays Non-Zero			Composites Non-Zero			Block Model Non-Zero		
	Au g/t Cap	Au g/t Uncap	As ppm	Au g/t Cap	Au g/t Uncap	As ppm	Au g/t Cap	Au g/t Uncap	As ppm
Mean	6.9	8.5	1,921	6.8	7.3	1,780	6.6	7.4	1,897
Standard Deviation	13.2	26.4	2,096	11.8	15.1	1,636	7.9	10.1	1,337
Range	64.9	327.9	9,998	65.0	125.5	9,982	56.7	65.7	8,493
Minimum	0.1	0.1	3	0.0	0.0	18	0.0	0.0	38
Maximum	65.0	328.0	10,000	65.0	125.5	10,000	56.7	65.7	8,532
Count	220	220	220	135	135	135	2,521	2,521	2,521

Figure 14.5 is a swath plot of capped gold grades relative to the corresponding composite grades. The grades of the block model are noticeably smoothed relative to the composites.

Figure 14.5 - Jaclyn Main Zone Capped Gold Swath Plot



#### **14.14 Comparison With Previous Estimates**

The only previous mineral resource estimate for the Jaclyn Main Zone was carried out in 2008 by Gary Giroux as part of a technical report prepared by Larry Pilgrim and Gary Giroux for Crosshair Exploration and Mining Corporation, dated April 30, 2008.

The 2008 Mineral Resource Estimate interpreted the Jaclyn Main Zone as being comprised of two separate overlapping veins. These veins were modelled to a minimum thickness of 1.5 meters and gold grades within the veins were capped at 32 and 35.3 g/t. The resource estimate was carried out using 1.5-meter composites. At a cutoff of 1.0 g/t gold, the total resource for both veins was estimated to be 921,000 tonnes with an average capped grade of 3.02 g/t for an approximate total of 89,500 contained ounces.

By comparison, at a cutoff of 1.0 g/t the current estimate contains 370,000 tonnes with an average grade of 9 g/t gold for an approximate total of 107,000 contained ounces of gold. The current estimate was carried out using intersected vein thicknesses, corrected for dip, rather than a minimum 1.5-meter thickness, 1.0-meter composites rather than 1.5-meter composites, and assay values capped at 65 g/t rather than 32 or 35.3 g/t.

The difference in tonnage is attributed to the use in the current estimate of intersected vein thicknesses rather than modelled minimum thicknesses of 1.5 meters as was done in the 2008 estimate. Many of the vein intercepts are shorter than one meter: the average intersected thickness for non-zero assays within the currently modelled Jaclyn Main Zone vein is 0.47 meters. The higher grade in the current estimate is in part attributable to the use of undiluted, narrower vein widths as well as to the higher capping level. The current mineral resource estimate contains data from 22 holes that were drilled in the Jaclyn Main Zone in 2010 that therefore were not part of the 2008 estimate. Those holes were all drilled within the limits of pre-2010 drilling and therefore did not expand the dimensions of the zone. Further, the average grade of the 2010 assays is slightly lower than the average of the pre-2010 assays although the impact of this lower grade on the outcome of the current estimate is considered to be negligible.

## **15 MINERAL RESERVE ESTIMATES**

Not applicable.



## **16 MINING METHODS**

Not applicable.

## **17 RECOVERY METHODS**

Not applicable.

## **18 PROJECT INFRASTRUCTURE**

Not applicable.

## **19 MARKET STUDIES AND CONTRACTS**

Not applicable.

## **20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT**

Not applicable.

## **21 CAPITAL AND OPERATING COSTS**

Not applicable.



## **22 ECONOMIC ANALYSIS**

Not applicable.

## **23 ADJACENT PROPERTIES**

The Moosehead Gold Project of Sokoman Iron Corp. is located approximately 41 kilometers east-northeast of the Golden Promise Property. The Moosehead Gold Project is also located within the Exploits Subzone. Gold mineralization is reported in quartz veins at the Moosehead Gold Project (source: Sokoman Iron Corp. website). Diamond drill hole intersections reported by Sokoman on the Moosehead Gold Project during 2018 include 44.96 g/t gold / 11.90 meter core length in drill hole MH-18-01 and 33.56 g/t gold / 24.90-meter core length in drill hole MH-18-17 (Sokoman New Releases of July 24 and November 16, 2018). Regarding the Moosehead Gold Project, the qualified persons have been unable to verify the information and the information is not necessarily indicative of the mineralization on the property that is the subject of this technical report.

There are no other adjacent properties the description of which would enhance the understanding of the Properties that are the subject of this Technical Report.

## **24 OTHER RELEVANT DATA AND INFORMATION**

The authors are not aware of any other data or information that is relevant to the subject, content and purpose of this report that would make this Technical Report more understandable or not misleading.

## 25 INTERPRETATION AND CONCLUSIONS

### 25.1 General

Although significant drilling has been conducted on the *Golden Promise Property*, to date – particularly in relation to the *Jaclyn Zone* – the property remains largely unexplored. A general lack of bedrock exposure over large areas (due to extensive glacial till cover) precludes any *direct* evaluation of the property's geology and gold potential for the most part.

Given the general scarcity of outcrop, much of the historical exploration work on the property has been restricted to soil geochemistry and sampling of (glacially-transported) quartz float. Nevertheless, gold-bearing quartz veins have been found to be widely-distributed over the area, with present discoveries – including the *Jaclyn Zone*, *Christopher*, *Shawn's Shot* and *Linda-Snow White* prospects – collectively encompassing a roughly 22 km NE/SW trend. This distribution of quartz veins is consistent with the widespread occurrence of gold-bearing quartz float contained within, or lying atop, the glacial till. All such quartz vein prospects exhibit the same characteristics – namely massive vein cores, with laminated and stylolitic margins hosting minor pyrite, arsenopyrite and (often visible) gold.

Most gold occurrences discovered on the property, to date, have been the result of attempts to trace the origin of quartz float, up-ice, to (suspected) source areas, where trenching and drill testing – particularly, in the case of the *Jaclyn Zone* prospects – have proven quite successful in encountering significant quartz vein hosted gold mineralization, despite deep till cover. Such discoveries, however, may be fortuitous given that, where significant till depths are encountered, it is unlikely that such float were derived from the immediate subsurface bedrock, but rather farther 'up-ice'. Interestingly, this incidence of quartz vein gold discovery may simply be due to the widespread, prolific, occurrence of the auriferous quartz veins, itself. Also, anomalous geochemical results obtained over till-covered areas may also relate to development of soils over the originally transported, gold-bearing, parent material. This aspect of the property's glacial history, combined with its favorable geology and incidence of gold discoveries to date, bodes well for the property's greater unseen gold potential.

Geological mapping by McNeill (2005), performed in conjunction with interpretation of high-resolution airborne EM/Magnetic survey results (2003), has confirmed a folded and faulted, largely turbiditic (argillite/sandstone/greywacke), sequence throughout the property. Observations from outcrop and drill core indicate the auriferous quartz veins to be controlled by dilational and displacement structures similar to that characterizing the prolific gold producing districts of the Bendigo-Ballarat zone, of Australia, and the Meguma Group, of Nova Scotia (Fig. 8.1). Within any regional-scale fold regime, there is typically a hierarchy of fold patterns repeated from the mega-scale to the micro-scale, whereby, useful information regarding the broader structural controls on quartz vein development, can be gleaned from outcrop and drill core. At one outcrop site, located 250 m northeast of the *Shawn's Shot* prospect, Copeland et al (2004) reported tight folds (within graphitic shale and sandstone) showing "small scale examples of breached anticlines" i.e., with quartz veins occupying breaks developed along anticlinal hinges. Also, a section of core from drill-hole GP04-43 (located 1.0 km west of the *Jaclyn Zone*) exhibits small-scale fold structures showing saddle reef type quartz vein fillings as well as bedding-parallel and axial planar quartz veins and veinlets, with local stockwork. Such features are reflective of the broader structural controls exerted on formation of auriferous quartz veins on the *Golden Promise Property*.

The gold potential of the property area is further highlighted by its close spatial relationship with the Red Indian Line (RIL) – a regional-scale, orogenic, structure (and suture zone), marking the northwestern edge of the Victoria Lake Supergroup (VLSG). This structural environment is similar to that of the gold-rich Baie Verte-Brompton Line (BBL) – an Appalachian-scale structure defining the western boundary of the Dunnage Zone in western to northeastern Newfoundland (Fig. 7.1); numerous gold occurrences (including quartz vein hosted types) are associated with the latter structure, including the presently-producing Pine Cove gold deposit on the Baie Verte Peninsula.

The (*Golden Promise*) property's structural setting is also similar to that of the southeastern fringe zone of the VLSG, where numerous orogenic quartz vein hosted gold occurrences have been discovered, over a 40 km structural trend, encompassing the Valentine Lake gold camp and the fairly recent (2015-2017) Wilding Lake discovery area. [Ongoing drill programs in the Valentine Lake area, by Marathon Gold Corp., have recently concluded a *measured and indicated* resource of 45,146,000 tonnes at 1.854 g/t (2,691,400 oz of contained gold) and an *inferred* resource totalling 26,857,000 tonnes of 1.774 g/t Au (1,531,600 oz of gold)(Marathon Gold Corp. Press Release, May 30, 2018)].

In terms of exploration strategy, an important aspect of the quartz vein-hosted gold mineralization on the *Golden Promise Property* – one that is particularly useful in further exploration and discovery of the same – is the strong genetic link between arsenopyrite and gold mineralization; historical sampling of both rocks and soils on the property reveal a generally strong correlation between elevated to highly anomalous arsenic (As) and gold (Au), thereby, rendering arsenic an excellent geochemical pathfinder for (yet-undiscovered) gold occurrences in the area. In fact, historical – as well as the recent (2017) – soil geochemical sampling on the property, has shown elevated to anomalous arsenic (As) to be rather pervasive over the area, in contrast with the more 'spotty' or localized Au-in-soil occurrences. This is not surprising given the susceptibility of arsenopyrite to oxidation and geochemical breakdown (typical of sulphides) compared to the relatively inert (or un-oxidative state) and stability of gold. Geochemical arsenic is, therefore, more readily dispersed in the environment, whereas, gold particles – particularly that associated with quartz veins – are largely dispersed by mechanical/erosional means. Thus, the presence of arsenopyrite or geochemically anomalous arsenic, represents potential for gold mineralization, on the property, that may not otherwise be evident.

Present gold discoveries on the *Golden Promise Property*, including the *Jaclyn Main*, *Jaclyn North*, *Jaclyn South*, *Christopher* and *Linda/Snow White* (quartz vein) prospects, remain as 'open-ended' targets for future drilling investigations, as these zones have not, yet, been fully delineated by drilling. Also, the abundant occurrences of angular, auriferous, quartz float and gold-in-soil anomalies (which remain unsourced) likely, represent additional undiscovered gold occurrences/deposits on the property. All such areas or occurrences deserve further investigation (see Section 26).

## 25.2 Conclusions and Interpretations relating to the 2017 Trenching Program

The 2017 trenching investigations on Licence 21281M, particularly on the *Jaclyn North Zone (JNZ)*, proved interesting, although, deep glacial till cover precluded access to bedrock, for the most part. The program was successful, however, in exposing one of the *JNZ* quartz veins, at one trench site (T1), while, elsewhere, along the projected ENE quartz vein trend (tested over a distance of 220 m), numerous, angular, auriferous quartz boulders were exposed, several of which contain visible gold. Weighted average Au analyses for these (i.e., combining the +150 & -150 mesh sample fractions) include grades of:

- 1) 30.2 g/t & 208.5 g/t Au, for Trench 1 (T1);
- 2) 1.04 g/t, 1.897 g/t & 4.5 g/t Au, for T2; and
- 3) 31.96 g/t, 78.0 g/t, 163.99 g/t & 332.67 g/t Au, for T4.

Channel sample results from the *JNZ* vein, encountered in T1, include assay grades of up to 35.5 g/t Au/0.2 m and 7.09 g/t Au/0.69 m (+150 mesh sample fraction analyses)(see Section 8).

The angularity and local clustering of the above-mentioned auriferous quartz boulders suggest likely proximity to a subsurface bedrock source. In fact, such a cluster of (apparently frost-heaved) quartz vein rubble/float was found directly overlying the *JNZ* vein, exposed in T1, which is believed to correlate with the *JNZ Upper Subzone* quartz vein system. As well, within the same trench, approx. 25 m farther south, another significant cluster of quartz float debris, indicates the possible presence (at depth) of the *JNZ Middle Subzone* vein system – particularly, given that the distance between the two subzones in nearby drill hole GP10-103, is also 25 m. Also, the large size of some of the float (up to 0.7 m wide) encountered in T2 and T4, suggest the presence of large quartz vein sources.

As in the case of the *JNZ*, the trenching investigation of the *Jaclyn South Zone (JSZ)* was significantly hampered by deep glacial till cover and rapid water intake, resulting in ‘caving’. Consequently, trenches T5 and T6 could not be sufficiently extended to adequately cross-cut the projected trend of the quartz vein system (see Section 9).

Limited historical drilling (4 holes) on the *JSZ*, to date, has produced Au assay intersections of 44.59 g/t /0.3 m (or 8.92 g/t /1.5 m diluted) and 2.59 g/t /0.3 m, for the *Beta Vein* system. The larger *Alpha Vein*, which has an estimated ‘true width’ of up to 3.0 m, has, thus far, yielded only low Au values (up to 0.12 g/t Au/0.5m and 0.19 g/t Au/0.3 m). Given the variability of vein widths and Au grades, typical of such quartz vein systems, further drilling beyond the present *limited* area of investigation, may yet prove up a more robust auriferous vein system.

## 25.3 Jaclyn Main Zone Mineral Resource Estimate

The Jaclyn Main Zone is estimated to contain a pit-constrained Inferred resource of approximately 157,300 tonnes with an average capped gold grade of 11.4 g/t and an underground resource of 200,200 tonnes with an average capped grade of 7.5 g/t.



Table 25.1 is a summary of the estimated mineral resource for the Jaclyn Main Zone. The table shows the total resource together with the pit-constrained and underground portions. The cutoff grade for the total resource is the weighted average of the pit-constrained and underground cutoff grades.

Table 25.1 - Jaclyn Main Zone Inferred Mineral Resource

Resource	Cutoff Au g/t	Au Cap g/t	Au Uncap g/t	As_ppm	Tonnes	Au Ounces Capped	Au Ounces Uncapped
Total	1.1	9.3	10.4	2,023	357,500	106,400	119,900
Pit-Constrained	0.6	11.4	14.1	1,783	157,300	57,800	71,200
Underground	1.5	7.5	7.6	2,211	200,200	48,600	48,700

## 26 RECOMMENDATIONS

While further reconnaissance mapping, prospecting and sampling coverage is needed over the general *Golden Promise Property*, a number of specific areas *are* recommended for follow-up investigations based on the results of both the 2017 and earlier (historical) exploration programs. The budget for the work proposed is presented in Table 26.1.

### 26.1 Mineral Licence 24015M

Two areas deserving of further investigation, within Lic. 24015M (based on the results of the 2017 prospecting & sampling), include:

- 1) the general area of the four float samples which assayed 200 g/t Au (GPR-30), 233 ppb Au (GPR-32), 57.2 g/t Au (GPR-33) and 340 ppb Au (GPR-35), located near the *Branden Occurrence* (Fig. 41). Aside from the associated anomalous arsenic (up to 559 ppm), two of the samples produced anomalous concentrations of other elements as well, including Pb (130 ppm), Ag (4.4 ppm) and Bi (8 ppm), which may prove as useful pathfinders, in soils, in leading to a bedrock source.

Also, glacial striations (030-040°) observed in the two historical trenches excavated 40 m WSW and 120 m SW of the *Branden Occurrence*, suggest these trenches to be *off-trend* with respect to the 'up-ice' source direction for the high-grade, auriferous, boulders (see Fig. 6.8). It is, therefore, recommended that trenching be conducted farther east to align with the indicated 'up-ice' direction.

- 2) the area of two reconnaissance soil lines, located within the east-central portion of Lic. 24015M (3.5 km SW of the *Branden*), where numerous, elevated to anomalous, Au and As responses were obtained (up to 17 ppb & 87 ppm, respectively) (Fig. 9.2). Elevated As values were obtained for over 50% of the 43 soil samples taken here, thus, indicating potential for widely-dispersed gold mineralization in the area. These responses are coincident, in part, with other anomalous elements of interest, as revealed by two samples – GPS-13 and GPS-18 – located approx. 130 m apart on the southern recce line. These results include:

GP-S-17-13: 42.5 ppm Cu, 43.7 ppm Mo, 5.8 ppm Sb and 0.18 ppm Te, and

GP-S-17-18: 13.65 ppm Mo, 4.1 ppm Sb and 0.19 ppm Te.

The concentration of Te (Tellurium) is significant given that its average crustal abundance is only 0.001-0.005 ppm.

Also, two float samples (GPR-15 & 16), taken adjacent to the southern recce line, both returned assay values of 50 ppb Au (the samples consisted of greywacke/sandstone, hosting minor disseminated pyrite and 1-3 cm wide, rusty, quartz veins).

Initial geochemical sampling over the *Branden* area, in 2004, involved 100m-spaced recce lines, thus, leaving considerable untested 'gaps' – nevertheless, producing five widely-spaced, elevated to anomalous, Au values, of 7 ppb, 8ppb, 18 ppb, 55 ppb and 177 ppb. Also, the two, above-mentioned, soil lines, sampled by Great Atlantic (2017), 3.5 km farther southwest, were spaced 250 m apart. More detailed soil sampling is, therefore, recommended for both these areas, utilizing 25m-spaced lines and 25m stations. In the case of the *Branden* area, grid coverage should encompass the sites of the gold-bearing quartz float, as well. [The presence of bedrock exposure, for both areas, suggests the possibility that the mineralized float may have a proximal/shallow bedrock source where soils may be more effective in reflecting subsurface mineralization].

## **26.2 Mineral Licence 24017M**

A particularly interesting area worthy of follow-up, on Lic. 24017M, is the northwestern corner portion of the licence (Fig. 43) where 50 out of 70 reconnaissance soil samples (2017) returned elevated to anomalous As (10.7 to 327 ppm) as well as lesser, and more widely scattered, Au values (with five assays at 9-31 ppb and two at 212 ppb and 236 ppb Au). The most significantly concentrated, and highest, of the As results (which range from 48 to 327 ppm) comprise a large multi-station anomaly involving the northwesternmost sample sites (Fig. 43). No bedrock was noted in the area, except for a possible subcrop occurrence of sandstone cut by 10% rusty quartz veinlets which assayed 8 ppb Au.

The high concentration of anomalous As-in-soils for the above area, most likely, suggests a local bedrock source. Given the strong association of arsenopyrite with gold mineralization on the property, such an extensive and pronounced arsenic (As) anomaly may indicate the presence of significant gold mineralization in the area. This is supported, to some extent, by the more widely scattered Au results which attain very high concentrations, including 212 ppb and 236 ppb Au. A detailed and systematic soil grid survey is recommended for the area to better define the existing Au and As anomalies, with the possible identification of others, where trenching investigations may then be carried out.

## **26.3 Mineral Licence 21281M**

Areas deserving of further drilling investigations within this licence include the *Jaclyn* and *Jaclyn West* areas:

### **26.3.1 Jaclyn Zone**

Given that *none* of the three main quartz vein systems in this area – *Jaclyn North (JN)*, *Jaclyn South (JS)* and *Jaclyn Main (JM) Zones* – have, yet, been fully delineated by drilling, additional drill testing is warranted along both the ENE and WSW (projected) extensions of these zones. The projected ENE extension of the vein systems should constitute a priority target given that the present limits of drilling, in this area, occur in proximity to an interesting airborne geophysical feature (located still further ENE) marked by a pronounced transition from a zone of very high resistivity (encompassing the present quartz vein gold discoveries in the area) to a zone of very low resistivity response. This feature lies within the core of the *Jaclyn Anticline* (Fig. 26.1 ) – the high and low resistivities having been inferred as corresponding, respectively, with the siliciclastic component of the VLSG stratigraphy and the (conductive) Caradocian Shale unit. Thus, potential for significant fold-hinge dilational opening – favoring a large-scale saddle reef type quartz vein emplacement – is implicated here.

As well, the sharp linear delineation of the resistivity feature may indicate the presence of a displacement feature which also has implications for potential significant quartz vein siting. Further discussion of this target area is presented below.

Given that excavation efforts, during the 2017 trenching program, were hampered by excess glacial till depths, further investigation of the projected ENE extensions of the *JNZ* and *JSZ* quartz vein systems would be better served and more expeditiously (and cost-effectively) implemented, by direct drilling alone; this allows for the acquisition of useful geological information as well. In addition to the successful (trenching) encounter of one of the *JNZ* veins (at T1; see Figs. 9.6 & 9.7 ), further discovery by drilling, along the trend, is highly probable given the occurrences of significant clusters of angular, high-grade, auriferous, quartz vein float, up to 0.7 m wide, present at depth along Trenches 1, 2 and 4.

#### **26.3.1.1 Jaclyn Main Zone:**

The near-surface portion of eastern end of the zone has been tested by a few drillholes and can reasonably be regarded as a valid exploration target. Six (6) holes with an aggregate length of 900 meters are recommended to test this portion of the zone at depths of approximately 100 and 150 meters below surface to establish whether the vein is present at these depths and if present, whether it is mineralized.

If successful, this drill program will enlarge the Jaclyn Main Zone but regardless will establish the reasonable limits of the zone.

#### **26.3.1.2 Jaclyn North**

Four (4) holes with an aggregate length of 700 meters should be drilled here to test for extensions of the known veins.

#### **26.3.2 Jaclyn West Area**

Additional drilling is warranted to evaluate further strike and dip extensions of the *Christopher Vein*, as well as other zones of quartz veining and alteration identified by single-hole drill tests represented by drill holes GP04-42, 43 & 44 (see Fig. 26.1). These holes (located to the WSW and WNW of the Christopher Vein) reveal favorable alteration and structural features indicative of a prospective quartz-vein-zone gold environment.

##### Drill Site GP04-42 (located 0.6 km WSW of the *Christopher Vein*)

Further drilling is required at this site to more broadly assess the significance or scope of the alteration and quartz veining encountered during the initial drilling test. Variable spotty to patchy and locally pervasive sericite  $\pm$  chlorite  $\pm$  ankerite  $\pm$  silica alteration, with minor to locally abundant sulphides (mainly pyrite), persist throughout the entire 199.6 m drill hole. Three of several narrow quartz veins (including breccia zones) encountered, returned intersections of 0.16 g/t Au/0.4m, 0.65 g/t Au/0.4 m and 0.24 g/t Au/0.5m (core length sample widths).

Further prospecting is also recommended in the GP04-42 area to determine the source of a number of auriferous, arsenopyrite-bearing, quartz boulders (assaying 200-750 ppb Au) located 85 m north of the drill collar. Give the drill-indicated overburden/till depth, here (12.5 m), prospecting efforts should focus on the 'up-ice' source direction, to the southwest.

#### Drill Site GP04-43 (located 630 m WSW of, and along strike from, the Northwest Zone)

Of interest at the GP04-43 drill site is a 7.4 m (core length) intersection of black graphitic shale with minor, thin, greywacke beds, cut by 40% stylolitic, laminated and stockwork quartz veins. Of further interest is the presence of cm-scale, fold-related, axial planar and saddle reef-type quartz vein fillings or structures, within the zone. These small-scale dilational features or openings typically indicate the presence of larger-scale equivalents – as part of higher-order (encompassing) folds – within the immediate to general area. Such features represent potential for significant concentrations of auriferous quartz zones (as veins, lenses or shoots) that may persist along the hinge of a large fold – where competency contrasts between different rock layers (sediments in this case) can result in significant dilational ‘openings’ (Fig. 8.1 ). In the prolific gold mining Bendigo district of Australia, 80% of the gold production is from “quartz bodies in anticlinal crests” (Website: Bendigo, Victoria, Australia - After Porter GeoConsultancy Pty Ltd, 2007).

The above quartz-veined shale unit also exhibits local weak pervasive ankerite alteration as do adjacent units (although such alteration is not manifested or generally well-developed within black carbonaceous shales). However, in a deeper mudstone unit, which persists to the end of hole (EOH: 171.5 m), there is a reported increase of sericite alteration and fracture-fill pyrite throughout the last 4.5 m of hole. Although drilling was terminated at this depth, the core-logging geologist, D. Copeland, suggested that “perhaps the hole was approaching a vein zone” and should not have been discontinued (Copeland et al., 2005).

A three-station soil gold anomaly (of 26-36 ppb) is also present at the GP04-43 site. Given the drill-indicated 12.1 m till depth (true thickness), the anomaly may, either, be related to a shallow bedrock source elsewhere (nearby) or is the result of gold-bearing glacial till material derived from ‘up-ice’, to the southwest. In any case, further investigation of the anomaly by prospecting and follow-up soil sampling should be undertaken.

#### Drill Site GP04-44

This site (located roughly 1.0 km WSW of the *Christopher Vein*) may be considered for further drill-testing on account of its rather pervasive, weak to intense, alteration (sericite  $\pm$  chlorite  $\pm$  ankerite  $\pm$  silica), associated quartz-calcite veinlets, local breccia structures and trace to minor pyrite, chalcopyrite and sphalerite, affecting mudstones and greywackes, throughout the entire 153 m hole. Furthermore, this zone lies along strike from the *Christopher Vein*.

Also worthy of follow-up is the reported occurrence of a ‘subcropping’ of quartz breccia, assaying up to 1 g/t Au, at the drill site. A drill-indicated till cover thickness of 4.3 m was determined at the site of this occurrence, thus, ruling out an immediate subsurface bedrock source. Therefore, follow-up prospecting is recommended to test the proximal to distal ‘up-ice’ trend for such a source.

#### Jaclyn Main-Jaclyn West Area

The *Jaclyn Main - Jaclyn West* area lies within a large anticlinal fold structure (*Jaclyn Anticline*) – as interpreted from the mapping of O’Neill (2005) and results of the 2003 high-resolution airborne EM/Mag survey (Fig. 26.1 ). The anticlinal feature is one of several, large-scale, nappe-type, structures dominating the north-northwesterly to northeasterly extension of the Victoria Lake Supergroup (see Figs. 7.4 & 7.11 ). The sharply contrasting EM/resistivity responses, associated

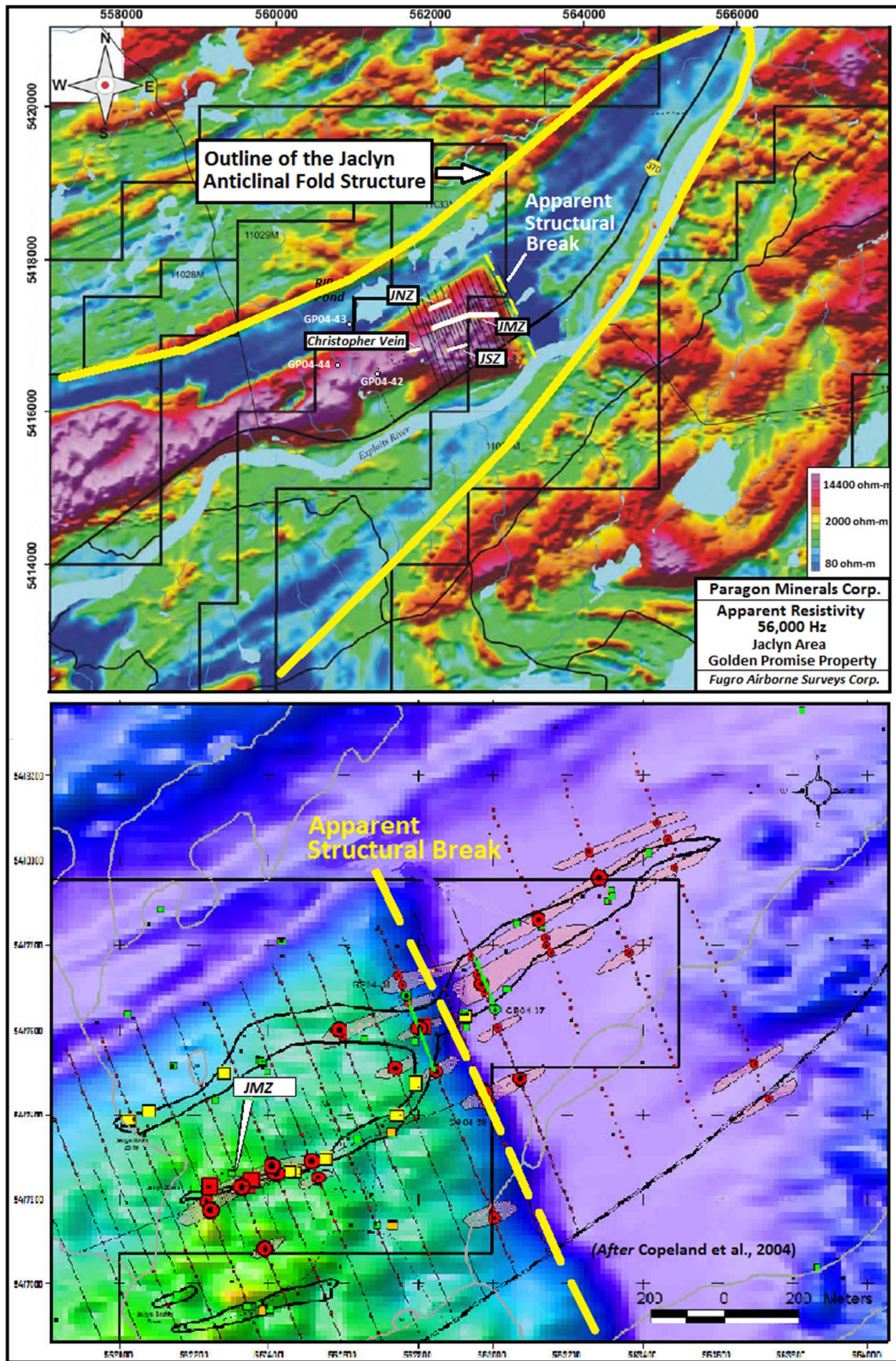
with the *Jaclyn Anticline*, are interpreted as reflecting the resistive siliciclastic core of the fold structure and the outer, largely conductive, 450 m thick, (graphitic) Caradocian Shale unit.

The abundant linear, ENE/WSW-trending, quartz vein systems discovered in the *Jaclyn Main-Jaclyn West* area, appear to represent axial planar breaks associated with the core of the *Jaclyn Anticline*. Thus far, these veins have been encountered *only* within the high-resistivity (core zone) area of the fold (Fig. 26.1 ), as drilling has not, yet, extended to the large low-resistivity area to the NE – albeit, with the exception of drill hole GP04-37 (the latter drill site, located north of the *JMZ* trend, *does* confirm the Caradocian Shale unit interpreted to underlie this area). Therefore, it is unknown, at this point, whether or not the axial planar quartz veins are as profusely developed within the latter unit as it is within the siliciclastic-dominated stratigraphy to the SW. However, probably more important, here, is the marked competency contrast between shales and siliciclastics which bodes excellent potential for fold-hinge dilational openings responsible for saddle reef-type quartz vein filling. The large-scale size of the resistivity feature may indicate potential for a large-scale form of this type of quartz body. These type of dilational structures comprise the main form of quartz-hosted gold deposits in the Bendigo-Ballarat district of Australia.

Also noted with respect to the resistivity feature, is its sharp linear trend which may reflect some structural modification of the siliciclastics/shale (hinge) contact, due to displacement, although this is not evident elsewhere across the large fold (Fig. 26.1). Such a structural offset or displacement, if present, may have implications for additional or complementary siting of auriferous quartz.

To assess the possibility of a saddle-reef type structure associated with the resistivity feature and (major) lithological contact, future drilling should be properly designed to effectively cross-cut any such zone. Given that the major folds throughout the *Golden Promise Property* area, have been determined, by O'Neill (2005), to plunge gently NE (at 13-19°), related quartz masses or bodies would be expected to follow such a plunge. Thus, some element of future drilling in this area should involve a series of SW-directed drill holes (at -45°), along linear resistivity feature, to test this possibility.

Figure 26.1 - Airborne Resistivity images of the Jaclyn Zone area, showing the outline of the Jaclyn Anticlinal Fold Structure and Resistivity features.





## 26.4 General Recommendations

In terms of more regional follow-up on the Golden Promise property, some exploration focus should be given to areas or sites of dyke intrusions (as inferred from the 2003 airborne survey magnetic map) as these tend to follow many of the same structures as occupied by the quartz vein systems. A review of the drill log data for the Golden Promise prospects (present study) reveals an apparent strong spatial relationship between the sites of large quartz veins and the presence of mafic dykes (the latter generally occurring adjacent to the veins and exhibiting chill margins denoting its post-vein occurrence). While there is obviously *no* genetic relationship between the two, it is apparent that localized intrusions of dykes were facilitated, to a large extent, by the same structurally-prepared zones of weakness that had (preferentially) accommodated the hydrothermal fluids responsible for the quartz veins. Therefore, noting the occurrence of these magnetic dykes (via magnetic and resistivity surveys) – in relation to favourable fold structures – can be a worthwhile tool for defining future gold exploration targets on the property.

Follow-up investigations should be undertaken around all significant historical Au and/or As soil anomalies given that the discovery of the *Linda-Snow White Prospect* resulted from an investigation of a single-station Au anomaly (120 ppb).

A final consideration for future work on the property is the importance of assessing the potential of permeable host rocks (particularly coarse sediments) as an additional source of gold mineralization. It is important to note that – in relation to the Bendigo gold district of Australia – “the largest tonnage deposits generally occur within permeable turbidites, immediately beneath, or within, carbonaceous shale caprock” (Johansen, 2001); such rocks may be infiltrated by gold-bearing silicic fluids without necessarily forming quartz veins. Therefore, future sampling on the property (particularly via drilling) should be cognizant of this possibility, and may warrant some sampling of existing drill core, i.e., apart from the already sampled quartz veins.

Exploration results on the *Golden Promise Property*, to date, highlight significant potential for one or more economic gold deposits. Future work should focus on extending and better defining the mineralized quartz vein systems, as well as identifying additional zones of mineralization along, and across strike from, the known vein systems.

Table 26.1 - Budget for Proposed Work

AREA	ACTIVITY	QUANTITY/ITEM OR PERSONNEL	UNIT COSTS (CAD\$)	COST (CAD\$)
<b>LIC. 21281M</b>	Drill Supervision, Core Logging Report & DDH Section Prep.	Geologist - 60 days	\$ 500 /day	\$30,000.00
	Assistant: Core handling	Assistant - 45 days	\$250/day	\$11,250.00
	Drilling Contract	10 holes (1600 meters) (Jaclyn Main & North Vein)	\$75/meter	\$120,000
	Mob/Demob: Springdale-Property	Round Trip	\$3000.00	\$ 3000.00
	Core Logging Facility Rental	1.5 months	\$1000/month	\$1500.00
	Core Shipment (Drill site-core facility-Springdale laboratory)	--	\$600.00	\$600.00
	NQ Core Trays	400 Core Trays	\$8/tray	\$3200.00
	ATV Rental (Core haulage)	45 days Rental	\$50/day	\$ 2250.00
	Downhole Survey Tests	25 Survey tests	\$180/test	\$4500.00
	Flex-it Survey Instrument Rental	6 weeks rental	\$500/week	\$3000.00
	Vehicle Rental (Lodging site to drill site)	6 weeks rental	\$75/day	\$4875.00
	Fuel	45 days	\$50/day	\$2250.00
	Supplies	\$200.00	\$200.00	\$200.00
	Accommodations	2 personnel@45 days (90 man-days)	\$75/day	\$6750.00
	Meals	2 personnel@45 days (\$90 man-days)	\$40/day	\$3600.00
	Assays	220 Core Samples	\$48/sample	<u>\$10,560.00</u>
				<b>Sub-Total</b>
				<b>\$207,535</b>
<b>LIC. 24015M</b>	Recce Grid Construction & Soil Sampling (21 x 350 m lines + 20 500m lines w/ 25m spaced lines & GPS recorded stations)	Geologist (Sampling & Report/Map Prep) ó 40days	\$ 500/day	\$20,000.00
		Assistant ó 35 days	\$250/day	\$8750.00
	Vehicle Rental	35 days	\$75/day	\$2625.00

	Fuel	35 days	\$50/day	\$750.00
	Accommodations	2 personnel@35days (70 man-days)	\$75/day	\$5250.00
	Meals	2 personnel@35days (70 man-days)	\$40/day	\$2800.00
	Supplies	--	\$50.00	\$50.00
	Assays (Soil Samples)	735 Samples	\$48/sample	<u>\$35,280</u>
				<b>Sub-Total \$75,505</b>
<b>LIC. 24017M</b>	Recce Grid Construction & Soil Sampling (27 x 500m lines w/ 50m-spaced lines and GPS-recorded stations)	Geologist (Sampling & Report/Map Prep) ó 19days	\$ 500/day	\$9500.00
		Assistant ó 15 days	\$250/day	\$3750.00
	Vehicle Rental	15 days		
	Fuel	15 days	\$75/day	\$1125.00
	Accommodations		\$50/day	\$750.00
	Meals	2 personnel@15 days (30 man-days)	\$75/day	\$2250.00
		2 personnel@15 days (30 man-days)	\$50.00	\$1500.00
	Supplies	--	\$50.00	\$50.00
	Assays (Soil Samples)	300 Samples	\$48/sample	<u>\$14,400.00</u>
				<b>Sub-Total \$33,325</b>
<b>Grand Total</b>				<b>\$316,365</b>

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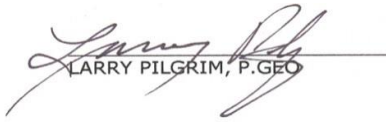
## **28 CERTIFICATES OF QUALIFIED PERSONS**

### **28.1 Larry Pilgrim P.Geo.**

I, Larry R. Pilgrim, a self-employed geological consultant residing at 10 Witchazel Lane, King's Point, Newfoundland and Labrador, A0J 1H0, hereby certify that:

1. I personally reviewed all sections of this technical report entitled " Technical Report on the Golden Promise Property, Central Newfoundland and Labrador".
2. I am a graduate of the Memorial University of Newfoundland, St. John's, NL with a B.Sc. degree in Geology (1980).
3. I have been employed in the mineral exploration and mining industry for 38 years, and have explored for gold, base metals, uranium, and oil in Canada for both senior and junior mining companies and am a "qualified person" for the purposes of National Instrument 43-101.
4. I am a member in good standing with the Association of Professional Engineers and Geoscientists of Newfoundland and Labrador since 1993(Registration No. 03154).
5. My most recent visit to the Golden Promise Property was on February 1, 2008.
6. I am responsible for part of Section 1, Section 2, Sections 4 through 11, Section 13, parts of Sections 26 and 26, and Section 27.
7. I am considered independent of Great Atlantic Resources Corp applying the test outlined in section 1.4 of National Instrument 43-101. I am not an employee, insider or director nor do I hold securities, directly or indirectly, of Great Atlantic Resources Corp or of a party related to the issuer; nor do I, or expect to, hold securities, directly or indirectly, in another issuer that has a direct or indirect interest in the property that is the subject of this technical report or an adjacent property. I do not have, nor do I expect to have, directly or indirectly, an ownership, royalty, or other interest in the property that is the subject of this technical report or an adjacent property. I have not received the majority of my income, directly or indirectly in the three years preceding the date of the technical report from the issuer or a related party of the issuer. I, therefore, am considered independent of Great Atlantic Resources Corp in respect of this report.
8. I am considered an insider of Maritime Resources Corp where I am employed in a full time capacity as Project Manager Newfoundland division.
9. I have prepared a 43-101 technical report on the Golden Promise Property in 2006 at the request of Rubicon Minerals Corporation and again co-authored as qualifying person on a 43-101 technical report for Crosshair Exploration and Mining Corporation in 2008.
10. I have read National Instrument 43-101 and Form 43-101F, and the technical report has been prepared in compliance with this Instrument and Form 43-101F.
11. As of the date of this 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 report not misleading.

Dated this 4th day of December, 2018

  
LARRY PILGRIM, P.GEO

Larry Pilgrim, P. Geo



## 28.2 Gregory Z Mosher, P. Geo.

I, Gregory Z. Mosher, P. Geo., of North Vancouver, British Columbia, do hereby certify:

1. I am a geologist with a business address at #603 – 131 East Third Street North Vancouver, Canada, V7L 0E3.
2. This certificate applies to the technical report entitled “Technical Report on the Golden Promise Property, Central Newfoundland”, dated December 4, 2018 (the “Technical Report”).
3. I am a graduate of Dalhousie University (B.Sc. Hons., 1970) and McGill University (M.Sc. Applied, 1973). I am a member in good stand of the Association of Professional Engineers and Geoscientists of British Columbia, License #19267. My relevant experience with respect to gold deposits includes over 30 years of exploration for and evaluation of such deposits. Additionally, I have conducted mineral resource estimates since 2003. I am a “Qualified Person” for the purposes of National Instrument 43-101 (the “Instrument”).
4. My personal inspection of the Property was on August 30, 2018, for a total of one day.
5. I am responsible for part of Section 1, Sections 3, 12 and 14, and parts of Sections 25 and 26 of the Technical Report.
6. I am independent of Great Atlantic Resources Corp. as defined by Section 1.5 of the Instrument.
7. I have no prior involvement with the Property that is the subject of the Technical Report.
8. I have read the Instrument and the Technical Report has been prepared in compliance with the Instrument.
9. As of the date of this 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.

Signed and dated 4th day of December 2018 at Vancouver, British Columbia.

The image shows a handwritten signature in black ink that reads "gzmosher". To the right of the signature is a red octagonal stamp. The text inside the stamp, arranged in a circular fashion, reads: "PROFESSIONAL", "PROVINCE OF", "G. MOSHER", "BRITISH COLUMBIA", and "GEOSCIENTIST".

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Gregory Z. Mosher, P. Geo.