

#### WATERSHED PROPERTY

Gogama, northeastern Ontario, Canada



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#### This report has been prepared by

Caracle Creek International Consulting Inc. (Caracle Creek) on behalf of Sanatana Resources Inc.

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# TABLE OF CONTENTS

1.0	SUMMARY	14
2.0	INTRODUCTION	17
2.1	INTRODUCTION	17
2.2	TERMINOLOGY	18
2.3	UNITS	18
2.4	CARACLE CREEK QUALIFICATIONS	19
3.0	RELIANCE ON OTHER EXPERTS	21
4.0	PROPERTY DESCRIPTION AND LOCATION	22
4.1	LOCATION	22
4.2	DESCRIPTION AND OWNERSHIP	23
	4.2.1 The Option and Joint Venture Agreement	24
	4.2.2 50% Interest	26
	4.2.3 Clam Lake Property	27
	4.2.4 Additional 1% Interest and Joint Venture	27
	4.2.5 Area of Interest	28
	4.2.6 Surface Rights	28
4.3	OBLIGATIONS	29
4.4	PERMITS	29
4.5	EASEMENT APPLICATION	29
5.0	ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE,	AND
PHYS	SIOGRAPHY	30
5.1	ACCESS	30
5.2	CLIMATE AND VEGETATION	31
5.3	PHYSIOGRAPHY	31
5.4	INFRASTRUCTURE AND LOCAL RESOURCES	31
6.0	HISTORY	32
6.1	SUMMARY	32
6.2	YOUNG-SHANNON GOLD MINES LIMITED, 1933	39
6.3	YOUNG-SHANNON GOLD MINES LIMITED, 1934	39
6.4	HURST AND ARNOTT, 1950	39
6.5	THREE DUCKS LAKE SYNDICATE, 1958	40



6.6	JONSMITH MINES LTD., 1961	40
6.7	RENMARK EXPLORATIONS, 1970	40
6.8	WM. R. MILLER, 1971	40
6.9	WM. SIMS INDUSTRIES LTD., 1979	40
6.10	COMINCO LTD., 1979	41
6.11	HARGOR RESOURCES INC., 1980	42
6.12	NEALS ANDERSEN, JACK MCVITTIE, HARVEY BLANCHARD, BAXTER MINERALS LTD	
AND	CANADIAN CREST GOLD MINES LTD., 1979-1980	42
6.13	HANSON MINERAL EXPLORATION, 1980	42
6.14	MURGOLD RESOURCES INC., 1981	43
6.15	NATIONAL IRRON RESOURCES LTD., 1981	43
6.16	KIDD CREEK MINES LTD., 1982	43
6.17	BLUE FALCON MINES LTD., 1985	44
6.18	KIDD RESOURCES INC., 1985	44
6.19	NU-START RESOURCES CORPORATION, 1985	45
6.20	CONSOLIDATED SILVER BUTTE MINES LTD., 1986-1988	45
6.21	ISAAC BURNS, 1987	47
6.22	YOUNG-SHANNON GOLD PARTNERSHIP (1986), 1987	47
6.23	CHESBAR RESOURCES INC, 1988	47
6.24	EDWIN L. SPEELMAN, JAMES A. BRYAN, FREDERICK W. CHUBB, MURRAY LITTLE, 199	
6.25	ANGELO TOMASINI, 1993	48
6.26	HENRY DOUGLAS, 1995	49
6.27	ROBERT DUESS AND BRUCE DURHAM, 1995	49
6.28	ERANA MINES LIMITED, 1998	49
6.29	AUGEN GOLD CORP.	49
	6.29.1 South Swayze Property, 2007	49
	6.29.2 Chester Gold Area, 2009	50
	6.29.3 Schist Lake Area, 2009	51
6.30	AUGEN GOLD, SGH SURVEYS, 2010	52
7.0	GEOLOGICAL SETTING AND MINERALIZATION	54
7.1	REGIONAL GEOLOGY	54
7.2	LOCAL GEOLOGY – SWAYZE GREENSTONE BELT	57
	7.2.1 General Geology	57
	7.2.2 Deformation and metamorphism	58
	7.2.3 Alteration	59



	7.2.4	Mineralization in the Swayze Greenstone Belt	59
7.3	PROPER	TY GEOLOGY	60
	7.3.1	Structure	64
7.4	MINERA	ALIZATION	64
8.0	DEPOSIT	TYPES	68
9.0	EXPLORA	TION	69
9.1	GEOPH	YSICS OVERVIEW	69
9.2	GEOTEO	CH ZTEM SURVEY, APRIL 4 TO 19, 2011	69
	9.2.1	Survey Location	70
	9.2.2	Sample Method and Quality - Flight Specifications	72
	9.2.3	Sample Method and Quality - Flight Path	72
	9.2.4	Sample Method and Quality - Topographic Relief and Cultural Features	72
	9.2.5	Parameters - Aircraft and Equipment	73
	9.2.6	Results and Interpretation	74
	9.2.7	Geotech's Recommendations	
9.3	GEOLO	GICAL MAPPING AND PROSPECTING, JUNE 2011 TO JUNE 2012	78
	9.3.1	Reconnaissance Sampling	78
	9.3.2	Outcrop Mapping and Channel Sampling	
9.4	EARTHI	PROBE IP SURFACE SURVEY, JUNE – JULY 2011	96
	9.4.1	Procedures and Parameters	
	9.4.2	Sample Method and Quality	96
	9.4.3	Survey Design	
	9.4.4	Results and Data Interpretation	
	9.4.5	Conclusions	
9.5	GOCAD	3D SPATIAL DATABASE AND MODEL, 2011	104
9.6	AIRBOR	NE MAGNETICS AND EM STRUCTURAL INTERPRETATION, NOV. 2011	104
	9.6.1	Structural Analysis Method	104
	9.6.2	Observations - Magnetics	104
	9.6.2.	1 Observations – ZTEM	108
	9.6.3	Interpretation and Targeting	110
	9.6.4	Recommendations of Structural Interpretation	113
9.7	EARTHI	PROBE BOREHOLE IP SURVEY, DEC. 2011 TO JUNE 2012	114
	9.7.1	Procedures and Parameters	114
	9.7.2	Vertical Profiling (VP)	115
	9.7.3	IP Survey Location	116



	9.7.4 Cross-hole Tomography	118
	9.7.5 Results and Interpretation	119
	9.7.6 Borehole VP Results	
	9.7.7 Tomography hole to hole imaging	121
	9.7.8 Resistivity	
	9.7.9 Chargeability	123
	9.7.10 Correlation of Borehole Data to 2011 Surface IP survey	123
	9.7.11 Conclusions	124
9.8	GROUND MAGNETIC SURVEY, CLAM AND CHAIN LAKES, MARCH 2012	125
	9.8.1 System Specifications and Survey Design	125
	9.8.2 Ground Magnetics Results and Interpretation	127
9.9	DRILLING OVERVIEW	134
9.10	PHASE 1 DRILLING, OCT 2011 – FEB 2012	134
9.11	PHASE 2 DRILLING, MAR. 2012 TO SEPT. 2012	135
9.12	REGIONAL SOIL SAMPLING SURVEY, MAY – OCT. 2012	135
9.13	OUTCROP STRIPPING, MAPPING AND CHANNEL SAMPLING, FALL 2012	140
9.14	PHASE 3 DRILLING, DEC. 2012 – MARCH 2013	144
9.15	GROUND MAGNETICS, NORTH SHEAR ZONE, MAY 2013	145
	9.15.1 Ground magnetics processing	145
	9.15.2 Results and Interpretation	145
9.16	DRILLING, FALL 2013, BY TRELAWNEY	149
9.17	MAPPING, ROCK SAMPLING, FALL 2013, BY TRELAWNEY	149
10.0	DRILLING	150
10.1	PHASE 1 DRILLING OCT. 2011 – FEB. 2012	150
	10.1.1 Drill Overview	150
	10.1.2 Drill Methodology	152
	10.1.3 Drill Results	153
10.2	PHASE 2 DRILLING MAR. 2012 – SEPT. 2012	155
	10.2.1 Drill Overview	155
	10.2.2 Drill Methodology	158
	10.2.3 Drill Results	159
10.3	PHASE 3 DRILLING DEC. 2012 – MAR. 2013	160
	10.3.1 Drill Overview	160
	10.3.2 Drill Methodology	162
	10.3.3 Drill Results	163

# Caracle Creek

10.4	DRILLING FALL 2013, TRELAWNEY	165
11.0	SAMPLE PREPARATION, ANALYSES AND SECURITY	168
11.1	SAMPLE SECURITY	
11.2	SAMPLE PREPARATION	
	11.2.1 Channel sampling, June 2011 – June 2012	
	11.2.2 Drill Phase 1, 2 and 3 Samples	
	11.2.3 Drill Phase 1 and 3 check assays, March 2015	174
	11.2.4 Regional soil sampling survey, May – Oct. 2012	
12.0	DATA VERIFICATION	176
12.1	CARACLE CREEK SITE VISIT	176
	12.1.1 Trenches	
	12.1.2 Drill holes	
	12.1.3 Site Visit Samples	
12.2	QUALITY CONTROL GEOPHYSICS SURVEYS	
	12.2.1 Geotech ZTEM survey, April 4 to 19, 2011	
	12.2.2 EarthProbe IP surface survey, June – July 2011	
	12.2.3 Airborne Magnetics and EM structural interpretation, Nov. 2011	
	12.2.4 EarthProbe Borehole IP survey, Dec. 2011 to June 2012	
	12.2.5 Ground magnetic survey, March 2012	
	12.2.1 Ground magnetics, North Shear Zone, May 2013	
12.3	QUALITY CONTROL CHANNEL SAMPLES	193
12.4	QUALITY CONTROL DRILL PROGRAMS	193
	12.4.1 QA/QC of drill hole database – Phase 1 and 3	
	12.4.2 Phase 1 Drilling Oct. 2011 – Feb. 2012	
	12.4.3 Phase 2 Drilling Mar. 2012 – Sept. 2012	
	12.4.4 Phase 3 Drilling Dec. 2012 – Mar. 2013	
	12.4.5 Phase 1 and 3 check assays	
	12.4.6 Summary of QA/QC for Phase 1 and 3	
	12.4.7 Summary of QA/QC for Phase 2 drill program	221
13.0	MINERAL PROCESSING AND METALLURGICAL TESTING	222
14.0	MINERAL RESOURCE ESTIMATES	222
14.1	SOURCE OF DATA AND METHODOLOGY	222
14.2	WATERSHED BASIC STATISTICS	
14.3	GRADE CAPPING	



14.4	BLOCK MODEL	227
14.5	BLOCK INTERPOLATION	227
14.6	CLASSIFICATION	228
14.7	RESULTS	229
14.8	ISSUES THAT COULD AFFECT THE MINERAL RESOURCE	230
15.0	ADJACENT PROPERTIES	230
15.1	INTRODUCTION	230
15.2	IAMGOLD CORP. AND TRELAWNEY MINING AND EXPLORATION INC	231
15.3	GOLDON RESOURCES	233
16.0	OTHER RELEVANT DATA AND INFORMATION	233
17.0	INTERPRETATION AND CONCLUSIONS	233
18.0	RECOMMENDATIONS	237
18.1	GEOREFERENCE CLAIM POSTS	238
18.2	GEOLOGICAL MAPPING, TRENCHING AND CHANNEL SAMPLING	238
18.3	GEOPHYSICS	238
18.4	DRILLING AND RESOURCE ESTIMATE	239
18.5	QA/QC PROTOCOL	240
18.6	PROPOSED BUDGET	240
19.0	REFERENCES	243
20.0	STATEMENT OF AUTHORSHIP	247

# **FIGURES**

Figure 4-1 Location of Sanatana's Watershed Property.	23
Figure 4-2 Tenure map for Sanatana	26
Figure 5-1 Sign at the beginning of the Sultan Road at the Watershed indicating road use is at the user's own risk	c. 30
Figure 6-1 Mineral occurrences on the Watershed Property (from MNDM Mineral Deposit Inventory database)	35
Figure 6-2 Historic drill holes on Watershed Property (from MNDM Drill hole database)	36
Figure 6-3 Map showing the SGH anomalies east of Clam Lake	53
Figure 6-4 Map showing the SGH anomalies in the Schist Lake area	54
Figure 7-1: Location of the Abitibi subprovince. (from Jackson and Fyon, 1991)	55



Figure 7-2: Regional geology map showing the location of the Watershed Gold Property in the Swayze greenstone
belt (from OGS Miscellaneous Release Data 126, Revision 1)
Figure 7-3: Property geology map (from Ayer and Trowell, 2002, P3511)
Figure 7-4: Mafic volcanic rocks south of Bagsverd Creek bridge on Chester Road
Figure 7-5: Felsic volcanic rocks at kilometer 14 on Chester Road
Figure 7-6: Magmatic breccia from drill hole SR-11-01, ~488 m. Fragments of mafic intrusive occur in a matrix of
lighter colored, more felsic intrusive
Figure 7-7: Pink (hematite-dusted) tonalite or quartz diorite and hematite-rich stringers63
Figure 7-8:Visible gold (in centre of yellow circle) from drill hole SR-12-03, 285 m. The scale is in centimetres65
Figure 7-9: Quartz-pyrite vein from drill hole SR-13-01, 285 m
Figure 7-10: Quartz-carbonate-sulfide vein from drill hole SR-13-01, 294 m
Figure 7-11: Quartz-sulfide-malachite vein from the Mini Candy Cane Outcrop. Malachite indicates that chalcopyrite
was present before weathering
Figure 7-12: Quartz-pyrrhotite vein in drill hole SR-12-11, 29 m
Figure 7-13: Core from drill hole SR-12-24. The interval from 295 to 296 (second row in the core box on the photo)
carried 8.83 g/t Au. No significant veins or disseminated sulfides were visible
Figure 9-1 The survey block, with ZTEM and Magnetic Base Station Locations
Figure 9-2 ZTEM survey system
Figure 9-3 L1080 ZTEM 2D Inversion
Figure 9-4 L1180 ZTEM 2D Inversion
Figure 9-5 L1260 ZTEM 2D Inversion
Figure 9-6 L1640 ZTEM 2D Inversion
Figure 9-7 Total magnetic field results over the grid area77
Figure 9-8: Locations and results of the grab samples collected at the Watershed Property in 2011. All samples and
their locations are listed in Table 9-2. Samples listed as S- are listed as SANT- in Table 9-2
Figure 9-9: Overview map showing the locations of the trenches. Detailed maps of the trenches are in Appendix 4.
Figure 9-10 Exploration location of the EarthProbe DCIP survey on the Watershed Property, Chester and Yeo
townships
Figure 9-11 Example of the apparent resistivity pseudosection for surface line for L15
Figure 9-12 Example of an apparent resistivity plan map for $n = 5$ for the Clam Lake area100
Figure 9-13 Apparent resistivity (above) and apparent chargeability (below) pseudosections for surface Line 5100
Figure 9-14 Location of the center points of anomalous features identified from the EarthProbe DCIP survey102
Figure 9-15 First Vertical Derivative with Mineralized Zones
Figure 9-16 Observed form lines from First Vertical Derivative
Figure 9-17 Total Magnetic Intensity with Mineralized Zones



Figure 9-18 Interpreted Intrusions	107
Figure 9-19 2D line inversions of ZTEM apparent resistivity data	108
Figure 9-20 Example of the dipping conductive feature shown throughout the 2D inversions	109
Figure 9-21 ZTEM resistivity with major structure (black) and interpreted intrusions (red). Mineralized zon	nes in
yellow	110
Figure 9-22 Interpreted structural corridor	111
Figure 9-23 Structural interpretation and targeting on Watershed Property	113
Figure 9-24 Electrode configuration for the VP surveys	116
Figure 9-25 Location of the drill holes surveyed during the EarthProbe borehole DCIP survey	117
Figure 9-26 Tomography electrode configuration between two boreholes	119
Figure 9-27 Example of VP apparent resistivity and chargeability striplog for drill hole SR-11-01	121
Figure 9-28 Example of 2D inversion results for drill hole SR-12-06 to SR-12-09	122
Figure 9-29 Survey line location of the 2012 Sanatana ground magnetics survey.	127
Figure 9-30 SAN_12_001_TMI – Total Magnetic Intensity	129
Figure 9-31 Interpretation of major dykes on SAN_12_001_TMI	130
Figure 9-32 SAN_12_002_TMI – Total Magnetic Intensity	131
Figure 9-33 Interpretation of Major Dykes on SAN_12_02_TMI	132
Figure 9-34 SAN_12_003_TMI – Total Magnetic Intensity	133
Figure 9-35 Interpretation of major dykes on SAN_12-003-TMI	134
Figure 9-36: Soil survey results for gold.	137
Figure 9-37: Soil survey results for copper	138
Figure 9-38: Soil survey results for arsenic.	139
Figure 9-39: Soil survey results for bismuth	140
Figure 9-40: Location of the North Shear on the Watershed Property.	141
Figure 9-41: Schematic map of the North Shear showing the various outcrops and the best gold assay grades	142
Figure 9-42: Photo of the central part of the "North Shear".	144
Figure 9-43 North Shear ground magnetics data map	146
Figure 9-44 Regional geological interpretation for Watershed Property. Purple star for the Silver Butte Prospect	147
Figure 9-45 Close up of Fugro magnetics second vertical derivative with trends	148
Figure 9-46 North Shear Zone ground magnetics with trend lines	149
Figure 10-1 Sanatana's first drill set up on the Watershed Property, drill hole SR-11-01 on Line 16	151
Figure 10-2 Drill collar map of historic drill holes and Sanatana Phase 1 Oct. 2011 – Feb. 2012 drill program	152
Figure 10-3 Drill collar map of historic drill holes and Sanatana's Phase 2 Mar. – Sept. 2012 drill program	158
Figure 10-4 Drill collar map of historic drill holes and Sanatana's Phase 3 Dec. 2012 – Mar. 2013 drill program	162
Figure 10-5 Trelawney's drilling in 2013 in Clam Lake area	167
Figure 11-1: The core boxes are stored in encased racks that are locked.	169



Figure 11-2 Photo of Sanatana's granitic blank	171
Figure 12-1: Sanatana's core logging facility at the Watershed	177
Figure 12-2: Sanatana's secure core storage facility at the Watershed.	177
Figure 12-3: Quartz vein and channel sample location at the Chester trench area.	178
Figure 12-4: Mafic fragment in light tonalite at Dave's Outcrop	179
Figure 12-5: Mafic dyke in light tonalite at Dave's Outcrop.	180
Figure 12-6: Subparallel hematite veins in diorite at Tom's Outcrop.	180
Figure 12-7: Photo of the Parking Lot Trench. Sanatana stripped this area in 2012.	181
Figure 12-8: Quartz-sulfide veins at the Mini Candy Cane Trench	182
Figure 12-9: Malachite stains on quartz-sulfide veins from the Mini Candy Cane Trench area.	182
Figure 12-10: Photo of the Adanac Trench.	183
Figure 12-11: Flooded area at Trench #5	184
Figure 12-12: Central Shear in the North Shear area (cf. Figure 9-41). A strongly sheared zone is bounded by	/ more
competent rocks	185
Figure 12-13: Photo of the original channel sample 29044 collected by Sanatana in the 100 West area of the	North
Shear in 2012. A check sample of this channel sample was collected during the site visit (sample P957459)	185
Figure 12-14: Photo of the original channel sample 28498 collected by Sanatana in the 25 West area of the	North
Shear in 2012. A check sample of this channel sample was collected during the site visit (sample P957460)	186
Figure 12-15: Visible gold (in centre of photo with red hematite) was observed in SR-12-03 at 285.1 m. The dia	ameter
of the yellow circle is 1 cm	187
Figure 12-16: Photo of claim post 4 of claim 3018412. The coordinates recorded in the field were confirmed w	ith the
coordinates provided by the MNDM	188
Figure 12-17: Collar location of drill hole SR-11-05.	188
Figure 12-18 Control charts for Phase 1 external blank for Au and Cu	197
Figure 12-19 Control chart for Phase 1 standard Oreas 152a for Au	199
Figure 12-20 Control chart for Phase 1 standard Oreas 6 Pc for Au	200
Figure 12-21 Control charts for Phase 3 drilling external blank for Au and Cu.	206
Figure 12-22 Control chart for Phase 3 standard Oreas 52c for Au	207
Figure 12-23 Control chart for Phase 3 standard Oreas 52c for Cu	208
Figure 12-24 Control chart for Phase 3 standard Oreas 201 for Au.	209
Figure 12-25 Control chart for Phase 3 standard Oreas 15d for Au. Samples P365150 and P954190 are beyo	nd the
scale of the plot and are thus not plotted in the control chart.	210
Figure 12-26 Control chart for Phase 3 standard Oreas 10c for Au	211
Figure 12-26 Control chart for Phase 3 standard Oreas 10c for Au Figure 12-27 Control chart for Phase 3 standard Oreas 62c for Au	
-	212



Figure 14-1 Interpreted Wire Frame Solids with Drill Hole Distribution for Watershed	223
Figure 14-2 Plan View of Interpreted Wire Frame Solids with Drill Hole Distribution	224
Figure 14-3 Histogram showing frequency of all samples within the mineralized domains at Watershed	225
Figure 14-4 Au Composites Probability plot	226
Figure 15-1 Adjacent properties	231
Figure 15-2 IAMGOLD's tenure (from Lavigne and Roscoe, 2012)	232
Figure 20-1 Map of Trench 1	259
Figure 20-2 Map of Trench 2	260
Figure 20-3 Map of Trench 3	261
Figure 20-4 Map of Trench 4	262
Figure 20-5 Map of Trench 5	263
Figure 20-6 Map of Two Lamprophyres ("Two Lamps") Trench.	264
Figure 20-7 Map of the Adanac Trench	265
Figure 20-8 Map of the Line 2 Trench.	266
Figure 20-9 Map of the Mini Candy Cane Trench.	267
Figure 20-10: Map of the Parking Lot Trench	268
Figure 20-11 Map of the Line 3 Trench.	269
Figure 20-12 Map of the southern part of the Line 3 Trench	270
Figure 20-13 Map of the northern part of the Line 3 Trench	271
Figure 20-14 Overview Map of the Line 9 Trench	272
Figure 20-15 Map of Line 9A Trench.	273
Figure 20-16 Map of Line 9B Trench	274
Figure 20-17 Map of Line 11 Trench.	275
Figure 20-18 Map of Chester Showing	276
Figure 20-19 Map of the Notch Trench.	277
Figure 20-20 Map of the 25 East Trench at the North Shear	278
Figure 20-21 Map of the 25 West Trench at the North Shear	279
Figure 20-22 Map of the 50 East Trench at the North Shear	280
Figure 20-23 Map of the 75 West Trench at the North Shear	281
Figure 20-24 Map of the 100 East Trench at the North Shear.	282
Figure 20-25 Map of the 100 West Trench at the North Shear	283
Figure 20-26 Phase 1 prep duplicate plots: primary vs secondary and pair mean vs absolute pair difference for	or Au.
	285
Figure 20-27 Phase 1 pulp duplicate plots: primary vs secondary and pair mean vs absolute pair difference for	or Au.
	286



Figure 20-28 Phase 3 prep duplicate plots: primary vs secondary and pair mean vs absolute pair difference for	Au.
	.287
Figure 20-29 Phase 3 pulp duplicate plots: primary vs secondary and pair mean vs absolute pair difference for	Au.
	.288

# TABLES

Table 4-1 Watershed Property*	24
Table 4-2 Clam Lake Property*	27
Table 6-1 History of exploration activity for Sanatana's Watershed Property	32
Table 6-2 Summary of historic drill hole collar locations on Watershed Property	36
Table 6-3 List of drill holes completed by Chesbar in 1988	47
Table 6-4 Drill collar information for Augen Gold Corporation's 2009 drill program, Chester Gold area.	50
Table 6-5 Drill highlights from Augen Gold Corporation's 2009 drill program, Chester Gold area	51
Table 6-6: Drill collar information for Augen Gold Corporation's 2009 drill program, Schist Lake area	51
Table 6-7: Drill highlights from Augen Gold Corporation's 2009 drill program, Schist Lake area.	52
Table 9-1 ZTEM survey specifications	72
Table 9-2: Assay highlights of the grab samples collected at the Watershed Property in 2011	78
Table 9-3: Location summary table of grab sample areas.	82
Table 9-4 Highlights of trench grab samples (samples with Au values >1 g/t).	82
Table 9-5 Highlights of trench channel samples (samples with Au values >1 g/t)	82
Table 9-6: Summary table of channel sample areas.	95
Table 9-7 Summary of anomalous features identified from the EarthProbe survey.	103
Table 9-8 Dyke swarms observed in the magnetic data	105
Table 9-9 VP survey summary	117
Table 9-10 Multi-bore tomography survey summary	119
Table 9-11 Specifications of the Overhauser Magnetics system	125
Table 9-12 Specifications of the Ground Magnetics Survey	126
Table 9-13: Results of the statistical analysis of the soil sample data.	136
Table 9-14 Assay highlights of the channel samples at the North Shear	143
Table 10-1 Drill hole collar locations for Sanatana's Phase 1- 2011 to 2012 drill program, Zone 17, NAD83	151
Table 10-2 Drill highlights for Sanatana's Phase 1- 2011 to 2012 drill program.	154
Table 10-3 Drill hole collar locations for Sanatana's Phase 2- 2012 drill program, Zone 17, NAD83	156
Table 10-4 Total number of meters drilled per claim for Phase 2 drill program.	157
Table 10-5 Drill highlights for Sanatana's Phase 2- 2012 drill program.	160



Table 10-6 Drill hole collar locations for Sanatana's Phase 3- 2012- 2013 drill program, Zone 17, NAD83	161
Table 10-7 Drill highlights for Sanatana's Phase 3- 2012- 2013 drill program	164
Table 10-8 Trelawney drilling in 2013 on Clam Lake Property claims, NAD 83, Zone 17*	166
Table 10-9 Assay highlights from Trelawney's 2013 drill program on Clam Lake Property claims	168
Table 11-1 Standards used in Phase 1 – Oct. 2011 – Feb. 2012 drill program	172
Table 11-2 Standards used in Phase 2 – Mar. 2012 – Sept. 2012 drill program	173
Table 11-3 Standards used in Phase 3 – Dec. 2012 – Mar. 2013 drill program	174
Table 11-4 List of QC standards inserted with check assays for Phase 1 and 3	175
Table 12-1: List of samples collected during the site visit.	189
Table 12-2: Check sample results.	190
Table 12-3 QA/QC data verification criteria for EarthProbe surface IP	191
Table 12-4 In field QA/QC data verification criteria for EarthProbe borehole IP survey	192
Table 12-5 Whole rock compositions for the three blanks.	195
Table 12-6 Summary of QC review for Phase 1 drill program	220
Table 12-7 Summary of QC review for Phase 3 drill program	221
Table 12-8 Summary of failure rates for the blank and standards in Phase 2 drilling	221
Table 14-1 Summary of raw assay data statistics for all samples at Watershed within the mineralized domain	224
Table 14-2 Number of assays within each domain at Watershed	225
Table 14-3 Block model descriptions for Watershed	227
Table 14-4 Inferred Search ellipse parameters for Watershed	227
Table 14-5 Mineral Resource Statement (Effective Sept. 15, 2015)	229
Table 17-1 Mineral Resource Statement (Effective Sept. 15, 2015)	236
Table 18-1 Proposed channel locations.	239
Table 18-2 Proposed drill hole locations.	239
Table 18-3 Recommended exploration budget	241

# APPENDICES

- Appendix 1 Certificates of Author Appendix 2 – Legal Agreements for Tenure
- Appendix 3 Assessment files used in this Report
- Appendix 4 Trench Maps

# 1.0 SUMMARY

Caracle Creek International Consulting Inc. ("Caracle Creek") of Toronto, Ontario, Canada was contracted by Sanatana Resources Inc. ("Sanatana") of Vancouver, British Columbia, Canada, to review the Watershed Property (the "Property"), complete a resource estimate and prepare an Independent Technical Report (the "Report"), compliant with National Instrument 43-101 ("NI43-101"), companion policy NI43-101CP and Form 43-101F1. In addition, Sanatana has requested Caracle Creek provide an update to exploration completed on the Property since the last Technical Report by Ronacher et al. for Sanatana Diamonds Inc. with a submission date of March 14, 2011. The purpose of this Report is to compile, interpret and disclose the significant amount of exploration that has been completed on the Property since the last Technical Report and to disclose a resource estimate on the Property.

The Watershed Gold Property is located  $\sim$ 165 km north Sudbury, Ontario and  $\sim$ 130 km south of Timmins, Ontario and consists of 46 claims (covering 7,840 ha) of which Sanatana has the right to earn an undivided 51% interest along with a 20% interest in three claims (covering 224 ha) for which Sanatana has the right to earn up to an 10.2% interest. Surface rights are owned by the Crown.

Exploration in the area of the Watershed property started in 1950 and continued intermittently until the present time. A large number of companies completed various surveys including prospecting, mapping, ground and airborne geophysical surveys and diamond drilling. A number of geophysical anomalies were delineated and significant intersections were drilled.

The Watershed Property is located in the southern part of the Swayze greenstone belt of the Abitibi subprovince. The southern Swayze greenstone belt forms an ESE-trending syncline: The outer limb of the syncline is composed of tholeiitic flows of greenschist facies; the inner part of the syncline is composed of tholeiitic and calc-alkaline metavolcanic rocks; and the core is composed of clastic metasediments that are the youngest rocks in the structure. The Chester Intrusive Complex ("CIC") separates the northern and southern limbs of the syncline. The CIC consists of felsic to intermediate (tonalite to quartz diorite) and mafic (diorite, gabbro) intrusive rocks. The southern part of the Property lies within the CIC, the northern part of the Property is underlain by felsic to intermediate and mafic volcanic rocks.

The mineralization at the Watershed Property consists of vein- and fracture-hosted visible gold and sulfides, dominantly pyrite and minor chalcopyrite and pyrrhotite. The veins are up to several 10s of centimeter wide and consist of quartz, sulfides and locally carbonate. The stringers consist of chlorite, hematite and sulfides



and are very thin (one to several millimetres). Disseminated pyrite also occurs but gold is typically hosted by the thin veinlets. Locally, neither veins nor disseminated sulfides are visible in drill core that carries significant gold. The resource model indicates that the mineralized domains strike due east-west and dip  $50^{\circ}$  -  $70^{\circ}$  to the north. The mineralized domains range in thickness from 5 m to 15 m.

Sanatana has completed several geophysical, geochemical and geological surveys on the Property since 2011. In April 2011, a ZTEM survey covering an area of 78 km<sup>2</sup> (641 line km) was completed and delineated several conductive structures on the Property. A structural interpretation of the ZTEM survey (and a historic airborne magnetic survey) was completed and five main areas highlighted as potential target areas. In July 2011, an EarthProbe IP/resistivity survey was conducted. The survey determined that the Watershed project area is characterized by surficial features of low to moderate resistivity (1,500 – 8,000 Ohm.m) and low chargeability (<20 mV/V). In the Clam Lake area, the survey identified three features in the top 100 m. In the Chester area, the survey extended to 180–220 m below surface and several features were identified. In total, 23 anomalous features of significance were identified across the survey area.

A regional soil sampling survey was completed to complement the geophysical surveys and to determine regional, anomalous gold values in the soil. A total of 1,453 samples were collected. Gold values range from below the detection limit of 0.001 ppm to 0.092 ppm with a mean of 0.027. Several areas of anomalous gold were delineated by the survey.

Grab sampling, outcrop stripping and mapping and channel sampling were completed in 2011 and 2012. The mapping provided valuable insight into the local geology. A total of 1,122 channel samples were collected of which 48 returned gold grades > 1 g/t with the highest value being 38.89 g/t Au.

Three phases of drilling were completed (October 2011–February 2012, March 2012–September 2012, and December 2012–March 2013). A total of 17,131 m diamond drilling in 43 drill holes has been completed and 18,122 drill core samples, 711 blanks, 662 duplicates and 607 standards were analyzed. The drill holes intersected mostly diorite, felsic and mafic metavolcanic rocks, mafic intrusives, gabbro, several porphyry units, quartz diorite and monzodiorite, diabase and several smaller dikes and sills. The most common alteration minerals include chlorite, quartz, calcite, sericite, carbonates, albite and epidote.



An EarthProbe downhole IP/resistivity survey was completed in selected drill holes. The survey successfully delineated and correlated resistivity and chargeability features to lithologic features in the boreholes.

Based on the current exploration including geophysical and geochemical survey and the results obtained during the three phases of drilling, Caracle Creek concludes that the Watershed Property has significant potential for hosting gold mineralization and that additional exploration to constrain the quantity, quality and extent of the mineralization is warranted.

Mineral resource estimates for the Watershed property presented below are effective as of the 15<sup>th</sup> of September, 2015 (see table below). Blocks were classified as Inferred based on confidence in the geological model and the amount of samples within each domain. The wire framed solids were projected no more than 50 m past the last drill hole at depth and along strike.

Mineral Resource Statement (Effective Sept. 15, 2015):

Au Cut-Off g/t	Category	Tonnage (tonnes)	Grade Au g/t	Contained Au (ounces)
0.3	Inferred	4,300,000	1.22	168,700

All tonnage figures were rounded to the nearest 10,000. All grade figures were rounded to two decimal places.

- Au ounces were rounded to nearest 100.

- Mineral resources are not mineral reserves and do not have demonstrated economic viability.

- High grade assays were capped at 17 g/t.

- Specific gravity values were interpolated into the block model using the sample data provided by Sanatana.

- 0.3 g/t cut-off was determined from benchmarking of similar projects within the area.

The mineral resources at Watershed are contained within the mineralized domains, which dip  $50 - 70^{\circ}$ , and have a thickness of 5 - 15 m. Where possible, grades less than 0.3 g/t Au were excluded from the mineralized wire frame. The mineralized resource has been modeled to a max depth of 300 m below the surface. There is the potential to increase the resource along strike with more drilling. However, current claim boundary status may limit this. Surface outcropping shows that the Au mineralization continues to the surface, therefore channel sampling at the surface is recommended in order to interpret the mineralization all the way to the surface outcrops. This interpreted continuity suggests that the Au mineralized zones at Watershed are favorable with respect to selectivity and other factors when considering mining options. As a result, the stated Inferred Resource is considered to exhibit reasonable prospects for economic extraction.



The objective of this Report was to compile, interpret and disclose the significant amount of exploration that has been completed on the Property since the last Technical Report and to disclose a resource estimate on the Property. These objectives were met.

Based on the current exploration including geophysical surveys, geochemical surveys, three phases of drilling and resource modeling, Caracle Creek concludes that the Watershed Property has significant potential for hosting gold mineralization and that additional exploration to constrain the quantity, quality and extent of the mineralization is warranted.

The goal of the recommendations is to upgrade the inferred resources on claim 3011820 to indicated classification. The recommended geological mapping and trenching, geophysics, channel sampling and 2000 m of drilling is to support the upgrade in resource classification. The recommended georeferencing of claim posts is preparation for Ontario's conversion from map staking to online staking. The recommended exploration budget for the Watershed Property is approximately \$507,000.

# 2.0 INTRODUCTION

# 2.1 Introduction

Caracle Creek International Consulting Inc. ("Caracle Creek") of Toronto, Ontario, Canada was contracted by Sanatana Resources Inc. ("Sanatana") of Vancouver, British Columbia, Canada, to review the Watershed Property (the "Property"), complete a resource estimate and prepare an Independent Technical Report (the "Report"), compliant with National Instrument 43-101 ("NI43-101"), companion policy NI43-101CP and Form 43-101F1. In addition, Sanatana has requested Caracle Creek provide an update to exploration completed on the Property since the last Technical Report by Ronacher et al. for Sanatana Diamonds Inc. with a submission date of March 14, 2011. The purpose of this Report is to compile, interpret and disclose the significant amount of exploration that has been completed on the Property since the last Technical Report and to disclose a resource estimate on the Property.

The sources of information and data contained in this Report are Sanatana and the public domain as listed in the Reference section 19.0.

A site visit was completed by Caracle Creek Senior Geologist Elisabeth Ronacher, PhD, P.Geo., Principal Geologist with Ronacher McKenzie Geoscience and formerly Senior Geologist with Caracle Creek, on July



22 and 23, 2014. Dr. Ronacher visited the stripped areas on the Property, verified the locations of selected drill hole collars, reviewed drill core and collected check samples from drill core and outcrop. The check samples compare generally well with the original assay results.

# 2.2 Terminology

#### **AFMAG:** Audio-frequency magnetics

**Fire assay:** Fire assay is the method of choice for gold analysis. The procedure involves mixing an aliquot of the sample (e.g., 30 g or 50 g) with a flux agent (e.g., sodium borate, PbO) and a "collector" such as silver. The mixture is heated to ~1150 °C. The lead and silver settle to the bottom of the melt and the silver scavenges gold as it sinks. The lead and silver button is cupelled at 950 °C. The silver bead (which also contains gold) is dissolved and analyzed by atomic absorption or other techniques (http://actlabs.com/page.aspx?menu=72&app=240&cat1=619&tp=2&lk=no).

**ICP-MS:** Inductively Coupled Plasma - Mass Spectrometer: An instrument capable of determining the concentrations of 70+ elements simultaneously by measuring the mass of ions generated by an argon gas plasma heated to 10,000°K and passing through a magnetic quadrupole to the detector. Capable of ultralow detection limits (ppb to ppt) with very wide linear ranges (up to 7 orders of magnitude) (Acme Analytical Laboratories Ltd: www.acmelab.com).

MNDM: Ontario Ministry of Northern Development and Mines

**OGS**: Ontario Geological Survey

QA/QC: Quality Assurance/ Quality Control

ZTEM: Z-axis Tipper Electromagnetics; Geotech Ltd.'s proprietary airborne electromagnetic system

# 2.3 Units

The Metric System is the primary system of measure and length used in this Report and is generally expressed in kilometres (km), metres (m) and centimetres (cm); volume is expressed as cubic metres (m<sup>3</sup>), mass expressed as metric tonnes (t), area as hectares (ha), and gold and silver concentrations as grams per tonne (g/t). Conversions from the Metric System to the Imperial System are provided below and quoted where practical. Many of the geologic publications and more recent documents now use the Metric System



but older documents almost exclusively refer to the Imperial System. Metals and minerals acronyms in this Report conform to mineral industry accepted usage and the reader is directed to www.maden.hacettepe.edu.tr/dmmrt/index.html for a glossary.

Conversion factors utilized in this Report include:

- 1 troy ounce/ton = 34.285714 grams/tonne
- 1 gram/tonne = 0.029167 troy ounces/ton
- 1 troy ounce = 31.103477 grams
- 1 gram = 0.032151 troy ounces

The term gram/tonne or g/t is expressed as "gram per tonne" where 1 gram/tonne = 1 ppm (part per million) = 1000 ppb (part per billion). The mineral industry accepted terms Au g/t and g/t Au are substituted for "grams gold per metric tonne" or "g Au/t". Other abbreviations include ppb = parts per billion; ppm = parts per million; oz/t = troy ounce per short ton; Moz = million ounces; Mt = million tonne; t = tonne (1000 kilograms); SG = specific gravity; lb/t = pound/ton; and, st = short ton (2000 pounds).

Where quoted, Universal Transverse Mercator (UTM) coordinates are provided in the datum of Canada, NAD83, and Zone 17 North.

# 2.4 Caracle Creek Qualifications

Caracle Creek International Consulting Inc. is an international consulting company with the head office of Canadian operations based in Sudbury, Ontario, Canada. Caracle Creek provides a wide range of geological and geophysical services to the mineral industry. With offices in Canada (Sudbury and Toronto, Ontario and Vancouver, British Columbia) and South Africa (Johannesburg), Caracle Creek is well positioned to service its international client base.

Caracle Creek's mandate is to provide professional geological and geophysical services to the mineral exploration and development industry at competitive rates and without compromise. Caracle Creek's professionals have international experience in a variety of disciplines with services that include:

- Exploration Project Generation, Design and Management
- Data Compilation and Exploration Target Generation



- Property Evaluation and Due Diligence Studies
- Independent Technical Reports (NI43-101)/Competent Person Reports
- Mineral Resource/Reserve Modelling, Estimation, Audit; Conditional Simulation
- 3D Geological Modelling, Visualization and Database Management

In addition, Caracle Creek has access to the most current software for data management, interpretation and viewing, manipulation and target generation.

The Qualified Person and co-author of this Report is Julie Selway, Ph.D., P.Geo. Dr. Selway is a Principal Senior Geologist for Caracle Creek and a geologist in good standing of the Association of Professional Geoscientists of Ontario (APGO #0738). Dr. Selway has worked as a geologist since 1993 with academia and industry on a variety of exploration properties such as rare-element pegmatites, gold, Ni-Cu-PGE and potash. Dr. Selway has written numerous Independent Technical Reports (NI 43-101) on a variety of deposit types. Dr. Selway is jointly responsible for the entire Report except for the geophysics sections (9.2, 9.4, 9.6, 9.7, 9.8, 9.15) and the Mineral Resources Estimates, section 14.0. Dr. Selway did not visit the Property.

Another Qualified Person and co-author for this Report is Jason Baker, B.Eng., P.Eng. Mr. Baker is an Associate Senior Resource Estimator for Caracle Creek Canada and an engineer in good standing with Professional Engineers of Nova Scotia (APENS#9627). Mr. Baker has over 10 years of experience in geological modelling and resource calculations in both exploration (Gold, Lead-Zinc, VMS, epithermal Silver and Lithium) and operations (Coal, Gypsum, Lead-Zinc). Mr. Baker estimated and is responsible for the independent NI 43-101 compliant resources for this report (Section 14.0). Mr. Baker has not visited the Property.

Another Qualified Person and co-author for this Report is Elisabeth Ronacher, PhD, P.Geo. Dr. Ronacher is the Principle Geologist with Ronacher McKenzie Geoscience and a geologist in good standing with the Association of Professional Geoscientists of Ontario (APGO #1476). Dr. Ronacher has 15 years of experience in academia and industry and has worked on a variety of deposit types (porphyry, epithermal, VMS, orogenic, orthomagmatic) and commodities (Au, Cu, Ni, PGE). Dr. Ronacher is jointly responsible for the entire Report except for the geophysics sections (9.2, 9.4, 9.6, 9.7, 9.8, 9.15) and the Mineral Resources Estimates, section 14.0. Elisabeth Ronacher completed a site visit on the Watershed Property on July 22 and 23, 2014.

Another Qualified Person and co-author of this Report is Robert Gordon, BSc., P.Eng., MBA. Mr. Gordon is a Consultant Senior Geophysicist for Caracle Creek and an engineer in good standing of the Association of Professional Engineers of Ontario (PEO # 90447269). Mr. Gordon has been a geological engineer since 1985 and has worked with industry on a variety of exploration properties such as Voisey's Bay Nickel discovery, Ekati diamond discovery, gold and potash. Mr. Gordon has contributed to several Independent Technical Reports (NI 43-101) on a variety of deposit types. Mr. Gordon is responsible for the geophysics sections (9.2, 9.4, 9.6, 9.7, 9.8, 9.15) of this Report. Mr. Gordon did not visit the Property.

Certificates of Qualifications are provided in Appendix 1.

# **3.0 RELIANCE ON OTHER EXPERTS**

Caracle Creek has completed this Report in accordance with the methodology and format outlined in National Instrument 43-101, companion policy NI43-101CP and Form 43-101F1. This Report was prepared by competent and professional individuals from Caracle Creek on behalf of the Company and is directed solely for the development and presentation of data with recommendations to allow the Company and current or potential partners to reach informed decisions.

The information, conclusions and recommendations contained herein are based on a review of digital and hard copy data and information supplied to Caracle Creek by the Company, as well as various published geological reports, and discussions with representatives from the Company who are familiar with the Property and the area in general. Caracle Creek has assumed that the reports and other data listed in the "References" section of this Report are substantially accurate and complete.

Caracle Creek has relied on information provided by the Sanatana and Sanatana's legal counsel regarding land tenure and underlying agreements not in the public domain, and all of these sources appear to be of sound quality. Caracle Creek also used land tenure information provided on the website of the MNDM (www.mndm.gov.on.ca) to confirm the tenure information. The non-public source of information regarding land tenure is an Option and Joint Venture Agreement between Sanatana and Trelawney Augen Acquisition Company (TAAC), a redacted copy of which was provided to the author by Sanatana. While title documents and option/purchase agreements were reviewed for this study as provided by Sanatana, it does not constitute, nor is it intended to represent, a legal, or any other opinion as to title.



The dates, titles and authors of all reports that were used as a source of information for this Technical Report are listed in the "References" section of this Report. The dates and authors of these reports also appear in the text of this Report where relevant, indicating the extent of the reliance on these reports.

# 4.0 **PROPERTY DESCRIPTION AND LOCATION**

#### 4.1 Location

The Watershed Property is located ~165 km north Sudbury, Ontario and ~130 km south of Timmins, Ontario at approximately 425000 E and 5266322 N, UTM Zone17 N, NAD83 (Figure 4-1). The town of Gogama is approximately 26 km northeast of the Property. The Property is covered by NTS map sheets 41P12, 41P05 and 41009SE. The Property is within the Chester, Yeo, Neville and Benneweis townships.



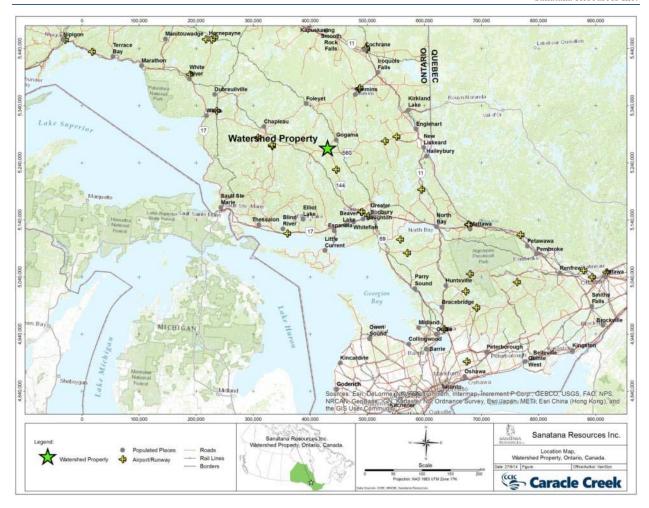


Figure 4-1 Location of Sanatana's Watershed Property.

#### 4.2 Description and Ownership

The Watershed Property consists of 46 contiguous unpatented mining claims totalling 7,840 ha in the Chester, Yeo, Neville and Benneweis townships of the Porcupine Mining Division (Table 4-1 and Figure 4-2). In addition to the 46 contiguous unpatented mining claims the Watershed Property includes a 20% interest in three additional mining claims situated in Yeo and Chester townships. These additional unpatented mining claims form part of the Watershed Property but are referred to for convenience as the "Clam Lake Property".



# 4.2.1 The Option and Joint Venture Agreement

Sanatana entered into an option and joint venture agreement with Augen Gold Corp. ("Augen") (as it then was) effective February 14, 2011 (the "Option and Joint Venture Agreement"). In November of 2011 Augen was acquired by Trelawney Mining and Exploration Inc. ("Trelawney") and, through a corporate reorganization, Augen was renamed "Trelawney Augen Acquisition Corp." ("TAAC"). In June of 2012 Trelawney was acquired by IAMGOLD Corporation.

Under the terms of the Option and Joint Venture Agreement, Sanatana has the option to acquire, free and clear of all encumbrances, up to a 51% undivided interest in the 46 unpatented mining claims comprising the Watershed Property. As described below, Sanatana also has the right to acquire up to a 51% interest in the Clam Lake Property (which forms part of the Watershed Property).

Table 4-1 Watershed Property\*

Township	Claim	Recording	Claim Due	Claim	Area	Work	Total	Total
/Area	Number	Date	Date	Units	(ha)	Required	Applied	Reserve
Benneweis	4209355	2006-Feb-23	2016-Sep-11	12	192	\$4,800	\$33,600	\$3,284
Benneweis	4216686	2006-Dec-04	2016-Dec-04	1	16	\$400	\$3,200	\$54
Chester	3004844	2004-Oct-04	2016-Dec-08	5	80	\$2,000	\$14,000	\$1,212
Chester	3010239	2004-Oct-08	2016-Jul-05	5	80	\$2,000	\$16,000	\$0
Chester	3011820	2004-Jun-03	2017-Aug-08	1	16	\$400	\$3,200	\$1,537,985
Chester	3011854	2004-Jun-09	2016-Aug-14	1	16	\$400	\$2,800	\$606
Chester	3014374	2004-Apr-02	2017-Jun-07	8	128	\$3,200	\$25,600	\$1,969
Chester	3017665	2004-Jul-09	2016-Apr-06	3	48	\$1,200	\$9,600	\$138,970
Chester	3017666	2004-Jul-09	2016-Sep-13	3	48	\$1,200	\$8,400	\$19,937
Chester	3017667	2004-Jul-09	2016-Sep-13	3	48	\$1,200	\$8,400	\$13,773
Chester	3017668	2004-Jul-09	2016-Sep-13	6	96	\$2,400	\$16,800	\$2,328
Chester	3018410	2004-Oct-08	2016-May-26	12	192	\$4,800	\$38,400	\$13,706
Chester	3018411	2004-Oct-08	2016-Dec-12	12	192	\$4,800	\$33,600	\$34,027
Chester	3018412	2004-Aug-31	2016-Apr-18	1	16	\$400	\$3,200	\$266,829
Chester	3018437	2004-Oct-08	2016-Dec-12	16	256	\$6,400	\$44,800	\$60,644
Chester	3019033	2004-Oct-08	2016-Jul-05	2	32	\$800	\$6,400	\$5,216
Chester	4203263	2004-Oct-04	2016-May-22	1	16	\$400	\$3,200	\$0
Chester	4203267	2004-Nov-29	2016-Dec-25	12	192	\$4,800	\$38,400	\$48
Chester	4203839	2005-Apr-08	2017-Apr-09	6	96	\$2,400	\$16,800	\$1,515
Chester	4203852	2005-Apr-08	2017-Apr-09	15	240	\$6,000	\$42,000	\$14,391
Chester	4206270	2005-Apr-08	2016-Sep-21	12	192	\$4,800	\$38,400	\$3,986
Chester	4206271	2005-Apr-08	2016-Sep-21	16	256	\$6,400	\$51,200	\$0
Chester	4206272	2005-Apr-08	2016-Sep-21	16	256	\$6,400	\$51,200	\$2,235
Chester	4206273	2005-Apr-08	2016-Sep-21	16	256	\$6,400	\$51,200	\$0
Chester	4206276	2005-Apr-08	2016-Sep-21	12	192	\$4,800	\$38,400	\$17,771
Chester	4206277	2005-Apr-08	2016-Sep-21	16	256	\$6,400	\$51,200	\$11,324
Chester	4206278	2005-Apr-08	2016-Sep-21	16	256	\$6,400	\$51,200	\$0
Chester	4206279	2005-Apr-08	2016-Sep-21	16	256	\$6,400	\$51,200	\$0
Chester	4227171	2007-Oct-22	2017-May-10	5	80	\$2,000	\$12,000	\$1,060
Chester	4240907	2008-Jul-22	2017-Feb-07	13	208	\$5,200	\$26,000	\$4,999

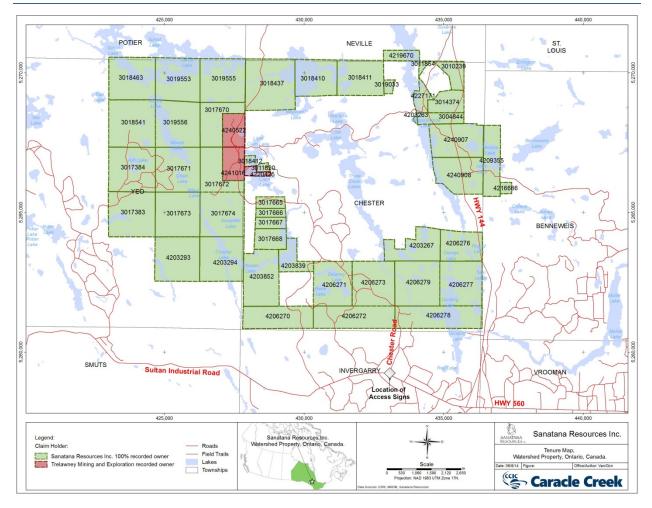


Township /Area	Claim Number	Recording Date	Claim Due Date	Claim Units	Area (ha)	Work Required	Total Applied	Total Reserve
Chester	4240908	2008-Jul-22	2017-Feb-07	12	192	\$4,800	\$24,000	\$4,242
Neville	4219670	2008-Jan-15	2016-Jan-15	3	48	\$1,200	\$7,200	\$921
Yeo	3017383	2004-Jul-30	2016-Mar-17	16	256	\$6,400	\$51,200	\$0
Yeo	3017384	2004-Jul-30	2016-Mar-17	16	256	\$6,400	\$51,200	\$0
Yeo	3017670	2004-Jul-30	2016-Mar-17	10	160	\$4,000	\$32,000	\$73,654
Yeo	3017671	2004-Jul-30	2016-Mar-17	16	256	\$6,400	\$51,200	\$3,295
Yeo	3017672	2004-Jul-30	2016-Mar-17	10	160	\$4,000	\$32,000	\$597,699
Yeo	3017673	2004-Jul-30	2016-Mar-17	16	256	\$6,400	\$51,200	\$2,841
Yeo	3017674	2004-Jul-30	2016-Oct-04	16	256	\$6,400	\$44,800	\$417,654
Yeo	3018463	2004-Jul-30	2016-Mar-17	16	256	\$6,400	\$51,200	\$0
Yeo	3018541	2004-Jul-30	2016-Mar-17	16	256	\$6,400	\$51,200	\$0
Yeo	3019553	2004-Jul-30	2016-Mar-17	16	256	\$6,400	\$51,200	\$14,387
Yeo	3019555	2004-Jul-30	2016-Mar-17	16	256	\$6,400	\$51,200	\$17,259
Yeo	3019556	2004-Jul-30	2016-Mar-17	16	256	\$6,400	\$51,200	\$0
Yeo	4203293	2004-Oct-04	2016-May-22	16	256	\$6,400	\$51,200	\$0
Yeo	4203294	2004-Oct-04	2016-Dec-08	16	256	\$6,400	\$44,800	\$9,241
			Total	490	7840			

#### Note:

\*Sanatana is the legal owner of 100% of the above-referenced unpatented mining claims and TAAC is the beneficial owner of 50% of such mining claims. Under the terms of the Option and Joint Venture Agreement, if Sanatana exercises its option to acquire a 51% interest in such mining claims TAAC's beneficial interest will be reduced to 49%.





#### Figure 4-2 Tenure map for Sanatana

Sanatana is the 100% recorded owner of the claims noted in green. These claims are held for the benefit of Sanatana and TAAC under the terms of the Option and Joint Venture Agreement. Trelawney Mining and Exploration Inc. is the recorded owner of the claims noted in red. A 20% interest in the claims is held for the benefit of Sanatana and TAAC under the terms of the Option and Joint Venture Agreement.

#### 4.2.250% Interest

In 2012 Sanatana exercised its first option and acquired a 50% undivided interest in the Watershed Property. In order to exercise the 50% interest, Sanatana paid to TAAC \$150,000 in cash, issued an aggregate of 5,000,000 common shares, and incurred over \$5,000,000 in work costs.



# 4.2.3 Clam Lake Property

In 2013, Sanatana expanded the Watershed Property by acquiring, for the sole benefit of Sanatana and TAAC, a 20% interest in three additional unpatented mining claims situated in Yeo and Chester townships (Table 4-2 and Figure 4-2). These additional mining claims are known as the Clam Lake Property (and form part of the Watershed Property). The remaining 80% interest in such mining claims is held by Trelawney.

The 20% interest is identified as a "carried interest" under the applicable acquisition agreement and is defined to mean that until completion of a positive prefeasibility study, all costs and expenses of the exploration programs, preparation and filing of assessment reports and other obligations relating to the Clam Lake Property are the sole and exclusive obligation and liability of Trelawney and Sanatana will not have any obligation of liability in respect thereof. Further details of the Clam Lake Property are set forth in Sanatana's press release dated August 12, 2013 (available at http://www.sanatanaresources.com).

#### Table 4-2 Clam Lake Property\*

Township /Area	Claim Number	Recording Date	Claim Due Date	Claim Units	Area (ha)	Work Required	Total Applied	Total Reserve
Chester	4220425	2008-Feb-13	2021-Feb-13	2	32	\$800	\$8,800	\$509
Yeo	4240522	2008-May-07	2017-May-07	6	96	\$615	\$18,585	\$15,765
Yeo	4241016	2008-May-26	2017-May-26	6	96	\$1,566	\$17,634	\$11,896
			Total	14	224	\$2,981		

#### Note:

\* Trelawney is the legal owner of 100% of the above-referenced unpatented mining claims and a 20% interest is held for Sanatana and TAAC pursuant to the terms of the Option and Joint Venture Agreement. Sanatana has earned a 50% interest in the Watershed Property; accordingly, it currently holds a 10% interest in the Clam Lake Property. If Sanatana exercises its option to earn a 51% interest in the Watershed Property then Sanatana's interest in the Clam Lake Property will increase to 10.2% interest.

# 4.2.4 Additional 1% Interest and Joint Venture

Pursuant to the terms of the Option and Joint Venture Agreement, Sanatana has the right to earn a further 1% interest in the Watershed Property, for a total undivided interest of 51% (the "51% Interest"), free and clear of all encumbrances. In order to earn the 51% Interest, Sanatana must prepare and deliver to TAAC (at Sanatana's sole cost) a pre-feasibility study on or before March 23, 2016. If Sanatana exercises its right



to acquire the 51% interest, Sanatana and TAAC would on the date of such exercise form a joint venture (the "Joint Venture") to further explore the Watershed Property on the terms described below. If Sanatana exercises the remaining 1% interest in the Option and Joint Venture Agreement its interest in the Clam Lake Property will increase from a 10% interest to a 10.2% interest (being a 51% interest in Sanatana's and TAAC's 20% interest to the Clam Lake Property).

Alternatively, if Sanatana surrenders its right to acquire the 51% Interest, Sanatana and TAAC would form the Joint Venture on the date Sanatana surrendered its right to acquire the 51% Interest and in any event no later than March 23, 2016.

Under the terms of the Option and Joint Venture Agreement, Sanatana has the right to be the manager of the Joint Venture (the "Manager") when it is formed and will manage the work program(s) as directed by a management committee set up based on the parties' respective interests in the Joint Venture (the "Management Committee"). Ultimately, if Sanatana acquires the 51% Interest (and assuming that it does not dilute its interest in the Joint Venture), Sanatana will control the Management Committee.

# 4.2.5Area of Interest

The Watershed Property is protected by an area of interest extending at least one kilometre from any portion of the Watershed Property (the "AOI") as it existed as of the date of the Option and Joint Venture Agreement. If a party to the Option and Joint Venture Agreement (or its affiliate) acquires any interest in mining claims or any other form of mineral tenure located wholly or partly in the AOI (the "AOI Tenure"), then such acquiring party must immediately notify the other party and provide the other party with (i) details of the acquisition/staking costs associated therewith and (ii) all details in its possession with respect to the nature of the AOI Tenure and the known mineralization thereon.

Further terms of the Option and Joint Venture Agreement are summarized in Sanatana's news release of April 29, 2013 (available at http://www.sanatanaresources.com).

# 4.2.6 Surface Rights

The surface rights for the Watershed Property are held by the Crown. Sanatana has legal access to the Watershed Property. There are no environmental liabilities on the Watershed Property. Watershed Property is in early exploration stage.



# 4.3 **Obligations**

In Ontario, to retain a mining claim, companies must submit an assessment file to MNDM's Geoscience Assessment Office showing that they have spent \$400/per claim unit on exploration. One claim unit is equal to 16 hectares. A mining claim is issued for a term of 2 years.

### 4.4 **Permits**

At the time of completion of this Report, Sanatana has applied to MNDM for an exploration permit to do drilling on the Watershed Property. Permits for certain activities such as drilling, mechanized stripping and cutting of lines >1.5 m width can be applied for with the MNDM at least 55 days prior to the start of exploration (http://www.mndm.gov.on.ca/en/mines-and-minerals/applications/exploration-permits).

# 4.5 Easement Application

In late April 2013, Trelawney Mining and Exploration ("Trelawney") made an application to the Ontario Mining and Lands Commissioner (the "MLC") for easements over significant areas of the Watershed Property. Trelawney formally withdrew its application in November 2014 and in early January 2015 a cost submission heard in front of the MLC was (http://www.sanatanaresources.com/s/news.asp?ReportID=700241). On April 27, 2015, Sanatana announced that the MLC has ordered Trelawney, a wholly owned subsidiary of IAMGOLD Corporation, to pay Sanatana over \$400,000 for its costs of defending Trelawney's failed easement application. On May 25, 2015. Sanatana announced that it received \$402,189.86 from IAMGOLD, on behalf of Trelawney, which was payment in full for costs awarded by the MLC in respect of Trelawney's failed easement application (http://www.sanatanaresources.com/s/news.asp?ReportID=709400).

Caracle Creek is not aware of any other significant factors or risks that may affect access, title, or the right or ability to perform work on the Property, as the easement application has been withdrawn (see section 4.5).



# 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

# 5.1 Access

The Watershed Property can be accessed on Highway 144 from Sudbury and Timmins, Ontario (Figure 4-1) and from the Sultan Industrial Road which begins at the intersection of Highway 144 and Highway 560 (the so called "Watershed Car and Truck Stop" or "Watershed"). Several dirt roads heading west from Highway 144 and north from Sultan Road, e.g., the Chester Road, provide legal access the Property. There are no restrictions from the Ministry of Natural Resources or the Ministry of Transportation on these roads (pers. commun. MNR, August 5, 2014). Some of the dirt roads are ploughed during the winter and can therefore be used year-round. The roads are maintained by the forestry industry in the area. Forestry companies posted signs at the intersection of Highway 144 and the Sultan Road advising that logging is taking place (Figure 5-1), however, access to the Sultan Road is unrestricted.



Figure 5-1 Sign at the beginning of the Sultan Road at the Watershed indicating road use is at the user's own risk.



### 5.2 Climate and Vegetation

Timmins is the closest weather station to the Watershed Property. The coldest average temperatures are - 17.5°C in December and the warmest average temperature is 17.4°C in July. The average precipitation is approximately 85 cm and falls evenly throughout the year (<u>http://www.climate.weatheroffice.gc.ca</u>).

The Watershed Property is covered by extensive tree cover composed of spruce, balsam, poplar, jack pine, tamarack and birch, which is typical of Ontario's Boreal forest.

Drilling can be conducted year round except for spring thaw in mid-March and April. Drilling on marsh lands and swamps is restricted to the winter months when the ground is frozen. Geological mapping and outcrop sampling can be conducted May to November when there is no snow on the ground.

# 5.3 Physiography

The area is characterized by moderate relief with an average elevation of ~400 m above sea level. The area contains a significant amount of marshy land, lakes and rivers. The Sultan Road is the approximate location of the Laurentian Divide, south of which all streams and rivers flow into the Great Lakes and north of the Sultan Road the streams and rivers flow into the Arctic Ocean.

# 5.4 Infrastructure and Local Resources

The Watershed Property is located halfway between the Timmins and Sudbury mining camps, along Highway 144, therefore skilled and unskilled labour is readily available.

Gogama is located ~26 km north of the Property and is the closest population centre to the Watershed Property. The approximate population of the community of Gogama is 450 people (<u>http://www.gogama.ca</u>). Gogama provides basic services including accommodation, restaurants, grocery stores, a nursing station, a bank and a post office.

Water is readily available from rivers and lakes. The biggest lakes include Schist Lake, Bagsverd and Mesomikenda. Most of the exploration activities are conducted near Clam, Chain and Chester Lakes.

A major power line runs parallel to Highway 144. The Canadian National Railway runs just west of the Property (Figure 4-2). Both Sudbury and Timmins have small airports.

The surface rights are owned by the Crown.



Sanatana's Watershed project is in the exploration stage and does not yet have 43-101 compliant prefeasibility study; therefore, discussion of potential tailings storage areas, potential waste disposal areas, heap pad leach pad areas and potential processing tailings storage area for mining operations is not relevant.

# 6.0 **HISTORY**

#### 6.1 Summary

Table 6-1 is a summary of exploration activity on Sanatana's Watershed Property in chronological order. Figure 6-1 shows known mineral occurrences and Figure 6-2 shows historic drill holes on the Watershed Property. Table 6-2 lists the collar locations for the historic drill holes. The collar location of selected holes in the Clam Lake and Chain Lake area were checked with the original assessment file maps and georeferenced. The georeferenced collar locations are best estimates and are not exact locations. These historic holes should be located in the field to obtain better collar locations. According to MNDM's drill hole database, historically 61 diamond drill holes for a total of 4,497 m has been drilled on the Watershed Property between 1958 and 1998.

Year	Company	Type of Work	Results	Assessment File Number
1950	W. Hurst and M. Arnott	line cutting, surveying, geological mapping	geological map, best assay 0.13 oz/ton	41009SE0063
1958	Three Ducks Lake Syndicate	diamond drilling	no significant results	41P12SW0091
1961	Jonsmith Mines Ltd.	diamond drilling	no significant results	41P12SW0100
1970	Renmark Explorations	EM survey	identified 4 conductors	41P12SW0116
1971	Wm. R. Miller	diamond drilling	no significant results	41P12SW0098
1979	Cominco Ltd.	line cutting, geological mapping, sampling, magnetics	magnetics identified anomalies, best assay 0.22 g/t Au	41P12SW0136
1979	Wm. Sims Industries Ltd.	airborne magnetics, prospecting, sampling	2 showings sampled, best assay 0.59 oz/ton	41P12SW0019
1980	Neals Andersen, Jack McVittie, Harvey Blanchard, Baxter Minerals Ltd. and Canadian Crest Gold Mines Ltd.	geophysics, stripping, mapping, sampling	best assay 0.24 % Au	41P12SW0083
1980	Cominco Ltd.	magnetics, EM	long conductive feature	41009SE0058

Table 6-1 History of exploration activity for Sanatana's Watershed Property



Year	Company	Type of Work	Results	Assessment File Number
1980	Cominco Ltd.	diamond drilling	best sample 0.26 g/t Au over 1.5 m	41009SE0059
1980	Cominco Ltd.	geological mapping	geological map	41009SE0061
1980	Hanson Mineral Exploration Ltd.	claim option, summary of exploration	0.262 oz/t Au over 18.1 ft	41P12SW0084
1980	Hargor Resources INC.	airborne EM	major E-W conductor and a fault	41009NW9161
1980	Wm. Sims Industries Ltd.	magnetics, EM	numerous conductive zones	41P12SW0018
1981	Murgold Resources Inc.	geological mapping	no significant results	41P12SW0004
1981	Murgold Resources Inc. National Irron Resources	VLF-EM survey	2 anomalies no significant results within	41P12SW0071
1981	Ltd.	geological mapping	property	41P12SW0017
1981/82	Hanson Mineral Exploration Ltd.	diamond drilling	no significant results	41P12SW0079
1983	Kidd Creek Mines Ltd.	magnetics, EM	a highly conductive, nonmagnetic zone was identified	41009SE0057
1983	Murgold Resources Inc.	general report	bulk sample assayed 0.34 oz/t Au	41P12SW0002
1983	Murgold Resources Inc.	trenching, sampling, mapping, drilling	no significant results within property	
1983/84	Kidd Creek Mines Ltd.	diamond drilling	best intersection 5.2 g/t Ag, 0.22% Cu, 0.764% Zn over 1.5 m	41P12SW0134
1985	Blue Falcon Mines Ltd.	airborne magnetic and VLF-EM	identified several conductors	41P12SE0507
1985	Kidd Resources Ltd./Blue Falcon Mines Ltd.	magnetics, EM	located 9 conductors	41P12SW0066
1985	Kidd Resources Ltd.	VLF EM survey, magnetics	5 conductors and a high magnetic band was identified	41P12SW0132
1985	Nu-Start Resources Corp.	diamond drilling	best intersection 0.027 oz/t Au over 4.1 ft	41P12SW0063
1986	Blue Falcon Mines Ltd.	airborne magnetic and VLF-EM	identified several conductors	41912SW8506
1986	Blue Falcon Mines Ltd.	magnetics, VLF-EM, geological survey	4 conductors and a magnetic high area	41P12SW0130
1987	Blue Falcon Mines Ltd. & Kidd Resources Ltd.	geological mapping, sampling, magnetics	identified minor sulphide bearing shear zones	41P12SW0300
1987	Consolidated Silver Butte Mines Ltd.	geological mapping, geochemistry, VLF-EM	located 6 conductors, best assay 0.33 oz/t Au	41P12SW0038
1987	Consolidated Silver Butte Mines Ltd.	soil sampling, VLF-EM	located 10 Au targets	41P12SW0039
1987	Consolidated Silver Butte Mines Ltd.	geological mapping, geochemistry, VLF-EM	located 4 conductors, best assay 0.754 g/t Au	41P12SW0055



Year	Company	Type of Work	Results	Assessment File Number
1986	Consolidated Silver Butte Mines Ltd.	geological mapping, geochemistry	no significant results	41P12SW0060
1987	Isaac Burns	diamond drilling	no significant results	41P12SW0053
1988	Consolidated Silver Butte Mines Ltd.	VLF-EM, soil sampling	located 6 conductors	41P12SW0122
1987	Consolidated Silver Butte Mines Ltd.	stripping	no significant results	41P12SW0131
1988	Consolidated Silver Butte Mines Ltd.	general report	no significant results	41P12NE8451
1989	Blue Falcon Mines Ltd.	stripping	no significant results	41P12SW0123
1989	Blue Falcon Mines Ltd.	stripping	no significant results	41P12SW0127
1989	Consolidated Silver Butte Mines Ltd.	geochemistry	best assay 0.468 oz/t Au	41P12SW0027
1986-1988	Consolidated Silver Butte Mines Ltd.	geochem sampling and assaying	best assay 0.543 oz/ton Au	41P12SW0028
1989	Consolidated Silver Butte Mines Ltd.	geological mapping, sampling	best assay 0.754 oz/t Au	41P12SW8456
1990	Blue Falcon Mines Ltd.	airborne magnetic and VLF-EM	located several conductors	41P12SE0520
1992	Edwin L. Speelman	VLF-EM survey	identified 3 conductors	41P12SW0026
1992	Edwin L. Speelman	geochemistry, sampling	no significant results	41P12SW8455
1993	Angelo Tomasini	diamond drilling	best intersection 0.131 oz/t Au over 5 m	41P12SW0008
1994	Edwin L. Speelman	stripping, trenching, diamond drilling	best intersection 2.94 g/t Au over 1.9 m	41P12SW0013
1995	Henry Douglas	IP survey	located 1 chargeable, conductor	41P12SW0014
1995	R. Bruce Durham & Robert Duess (Individuals)	stripping, sampling, IP survey	best assay 1.392 g/t Au, one anomaly	41P12SW0016
1998	Erana Mines Ltd.	trenching, stripping, sampling	best assay 2.23 oz/t Au	41P12SW0033
2009	Augen Gold Corp	sampling, diamond drilling	best assay 270 g/t Au	
2009	Augen Gold Corp	sampling, diamond drilling	best assay 7.16 g/t Au	



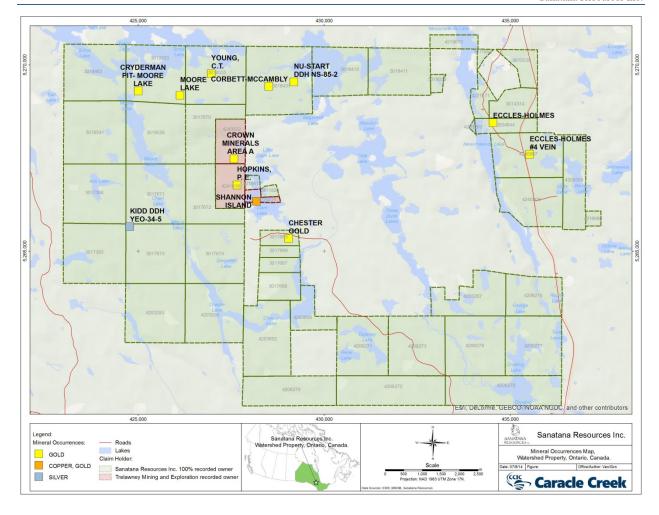


Figure 6-1 Mineral occurrences on the Watershed Property (from MNDM Mineral Deposit Inventory database)



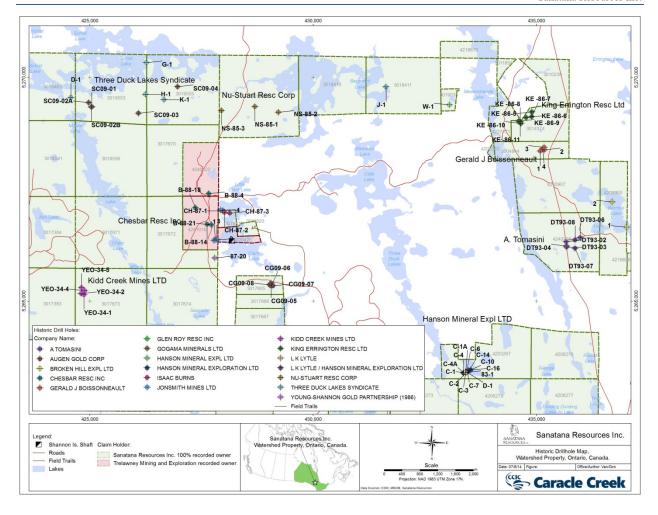


Figure 6-2 Historic drill holes on Watershed Property (from MNDM Drill hole database)

Table 6-2 Summary of historic drill hole collar locations on Watershed Property.							
Hole ID	Company_Name	Easting	Northing	Township	Year	Assessment File No	
		-	-	-			
D-1	THREE DUCK LAKES SYNDICATE	424574	5269556	YEO	1958	41009SE9050	
G-1	THREE DUCK LAKES SYNDICATE	426264	5270333	POTIER	1958	41009SE9018	
H-1	THREE DUCK LAKES SYNDICATE	426243	5269628	YEO	1958	41P12SW0137	
J-1	THREE DUCK	431630	5269793	CHESTER	1958	41P12SW0091	
K-1	THREE DUCK	426657	5269506	YEO	1958	41P12SW0137	
1	LAKES SYNDICATE JONSMITH MINES LTD	427806	5266376	YEO	1961	41P12SW0138	

1



Hole ID	Company_Name	Easting	Northing	Township	Year	Assessment File No
		-	-	-		
2	JONSMITH MINES LTD	427779	5266357	YEO	1961	41P12SW0138
3	JONSMITH MINES LTD	427844	5266385	YEO	1961	41P12SW0138
4	JONSMITH MINES LTD	427928	5267036	CHESTER	1961	41P12SW0100
1	BROKEN HILL EXPL LTD	437017	5266654	BENNEWEIS	1971	41P12SW0020
2	BROKEN HILL EXPL LTD	436690	5267216	BENNEWEIS	1971	41P12SW0020
C-1	L K LYTLE	433410	5263401	CHESTER	1979	41P12SW0087
C-2	L K LYTLE	433410	5263402	CHESTER	1980	41P12SW0087
C-10	HANSON MINERAL EXPLORATION LTD	433474	5263435	CHESTER	1981	41P12SW0078
C-14	HANSON MINERAL EXPLORATION LTD	433487	5263439	CHESTER	1981	41P12SW0078
C-16	HANSON MINERAL EXPLORATION LTD	433526	5263457	CHESTER	1981	41P12SW0078
C-3	HANSON MINERAL EXPLORATION LTD	433412	5263402	CHESTER	1981	41P12SW0078
C-6	HANSON MINERAL EXPLORATION LTD	433433	5263416	CHESTER	1981	41P12SW0078
C-7	HANSON MINERAL EXPLORATION LTD	433449	5263419	CHESTER	1981	41P12SW0078
D-1	HANSON MINERAL EXPLORATION LTD	433433	5263414	CHESTER	1981	41P12SW0078
C-4	HANSON MINERAL EXPLORATION LTD	433366	5263392	CHESTER	1982	41P12SW0078
C-4A	HANSON MINERAL EXPLORATION LTD	433368	5263394	CHESTER	1982	41P12SW0078
W-1	HANSON MINERAL EXPL LTD	433052	5269390	CHESTER	1982	41P12SW0079
83-1	L K LYTLE	433411	5263400	CHESTER	1983	41P12SW0076
C-1A	L K LYTLE / HANSON MINERAL EXPLORATION LTD	433411	5263403	CHESTER	1983	41P12SW0078
YEO-34-1	KIDD CREEK MINES LTD	424867	5265142	YEO	1983	41P12SW0135
YEO-34-2	KIDD CREEK MINES LTD	424802	5265170	YEO	1983	41P12SW0134
YEO-34-4	KIDD CREEK MINES LTD	424883	5265233	YEO	1984	41P12SW0134
YEO-34-5	KIDD CREEK MINES LTD	424813	5265299	YEO	1984	41P12SW0134





Hole ID	Company_Name	Easting	Northing	Township	Year	Assessment File No
	<b>1</b> • <b>1</b> • <b>1</b>					
NG 05 1		100605	50(0050	CLIECTER	1005	410120100002
NS-85-1	NU-STUART RESC CORP	428695	5269352	CHESTER	1985	41P12SW0063
NS-85-2	NU-STUART RESC CORP	429219	5269225	CHESTER	1985	41P12SW0063
NS-85-3	NU-STUART RESC CORP	427944	5269263	CHESTER	1985	41P12SW0063
KE -86-10	KING ERRINGTON RESC LTD	434650	5268976	CHESTER	1986	41P12SW0037
KE -86-11	KING ERRINGTON RESC LTD	434634	5269010	CHESTER	1986	41P12SW0037
KE -86-5	KING ERRINGTON RESC LTD	434896	5269232	CHESTER	1986	41P12SW0037
KE -86-6	KING ERRINGTON RESC LTD	434766	5269106	CHESTER	1986	41P12SW0037
KE -86-7	KING ERRINGTON RESC LTD	434895	5269126	CHESTER	1986	41P12SW0037
KE -86-8	KING ERRINGTON RESC LTD	434635	5269011	CHESTER	1986	41P12SW0037
KE -86-9	KING ERRINGTON RESC LTD	434599	5269023	CHESTER	1986	41P12SW0037
87-20	YOUNG-SHANNON GOLD PARTNERSHIP (1986)	427797	5265964	CHESTER	1987	41P12SW0052
CH-87-1	ISAAC BURNS	427979	5267019	CHESTER	1987	41P12SW0053
CH-87-2	ISAAC BURNS	428014	5266986	CHESTER	1987	41P12SW0053
CH-87-3	ISAAC BURNS	428130	5266967	CHESTER	1987	41P12SW0053
B-88-14	CHESBAR RESC INC	427625	5266718	YEO	1988	41P12SW0124
B-88-18	CHESBAR RESC INC	427359	5267087	YEO	1988	41P12SW0124
B-88-21	CHESBAR RESC INC	427721	5266707	YEO	1988	41P12SW0124
B-88-4	CHESBAR RESC INC	427663	5267402	YEO	1988	41P12SW0124
DT93-02	A TOMASINI	435665	5266329	CHESTER	1993	41P12SW0008
DT93-03	A TOMASINI	435671	5266208	CHESTER	1993	41P12SW0008
DT93-04	A TOMASINI	435671	5266233	CHESTER	1993	41P12SW0008
DT93-06	A TOMASINI	435976	5266419	CHESTER	1993	41P12SW0008
DT93-07	A TOMASINI	435861	5266180	CHESTER	1993	41P12SW0008
DT93-08	A TOMASINI	435864	5266367	CHESTER	1993	41P12SW0008
1	GERALD J BOISSONNEAULT	435084	5268356	CHESTER	1997	41P12SW2002
2	GERALD J BOISSONNEAULT	435177	5268383	CHESTER	1997	41P12SW2002
3	GERALD J BOISSONNEAULT	435170	5268440	CHESTER	1997	41P12SW2002



Hole ID	Company_Name	Easting	Northing	Township	Year	Assessment File No
4	GERALD J BOISSONNEAULT	435144	5268409	CHESTER	1998	41P12SW2002
CG09-05	Augen Gold Corp	429060	5265401	CHESTER	2009	
CG09-06	Augen Gold Corp	429059	5265339	CHESTER	2009	
CG09-07	Augen Gold Corp	429099	5265341	CHESTER	2009	
CG09-08	Augen Gold Corp	429026	5265363	CHESTER	2009	
SC09-01	Augen Gold Corp	425039	5269349	YEO	2009	
SC09-02A	Augen Gold Corp	424971	5269442	YEO	2009	
SC09-02B	Augen Gold Corp	425035	5269340	YEO	2009	
SC09-03	Augen Gold Corp	426086	5269202	YEO	2009	
SC09-04	Augen Gold Corp	426965	5269797	YEO	2009	

# 6.2 Young-Shannon Gold Mines Limited, 1933

Milton Jessop found the Shannon Island occurrence while working for the Chester Shannon Group - Young Shannon Gold Mines Limited and a 7m (25 foot) test pit was sunk (Figure 6-1) (MNDM: MDI41P12SW00055). Reported gold values ranged between 24 and 47 g/t gold together with 40 g/t Ag and 3.5% Cu in a quartz vein.

### 6.3 Young-Shannon Gold Mines Limited, 1934

Young Shannon Gold Mines Limited started shaft sinking on the old pit on Shannon Island which achieved a depth of 38m (125') together with 30m of lateral development by the years end (Figure 6-1 and Figure 6-2) (MNDM: MDI41P12SW00055). The shaft was sunk on a gold- bearing quartz vein which contained sulphides. Fragments of the vein, mineralized with pyrite and chalcopyrite, can be seen on the mine dump. Old records indicate that the underground samples returned weighted average gold values of 17 g/t and 3.3% Cu over 0.6m in a number of zones down the shaft. In addition, 910m (3,000') of diamond drilling was carried out. Results and location of the drilling is unknown.

This shaft is 85 ft (25.9 m) within the claim boundary of Clam Lake Property claim 420425.

### 6.4 Hurst and Arnott, 1950

Between May and August 1950, W. Hurst and M. Arnott performed line cutting, surveying and geological mapping (MNDM Assessment File 41009SE0063; on Sanatana's claim 3018463) southwest of Schist Lake



in the Yeo township. The mapping was carried out by W. Gerrie. There are four showings on the map area hosted in mineralized shear zones and mineralized veins in iron formation. The mineralization consists of disseminated pyrite, pyrrhotite and arsenopyrite. The best sample yielded 0.13 oz/ton (4.46 g/t) Au and appeared to be spatially associated with arsenopyrite.

# 6.5 Three Ducks Lake Syndicate, 1958

In August 1958, Three Ducks Lake Syndicate drilled on hole (J-1) totaling 177 feet (53.95 m) south of the east arm of Bagsverd Lake in Chester township (Sanatana's claim 3018411; MNDM Assessment File 41P12SW0091) (Figure 6-2). The exact location is not known, but is estimated in the MNDM's drill hole database. No gold was reported.

### 6.6 Jonsmith Mines Ltd., 1961

In April 1961, Jonsmith Mines Ltd. drilled 4 drill holes (#1, 2, 3 and 4) totaling 406 feet (123.75 m) in Chester township (MNDM Assessment Files 41P12SW0100 and 41P12SW0138) (Figure 6-2). Holes #1, 2, 3 are on Clam Lake Property claim 4241016 and hole #4 is on Sanatana's claim 3018412. The holes intersected some pyrite and chalcopyrite, but no gold was reported.

#### 6.7 Renmark Explorations, 1970

In 1970 Renmark Exploration conducted an electromagnetic survey southwest of Mesomikenda Lake in Chester Township (MNDM Assessment File 41P12SW0116). The survey identified 4 significant conductors that are located along the contact between granite and sediments.

#### 6.8 Wm. R. Miller, 1971

In September, 1971, Wm. R. Miller drilled 1 hole totaling 150 feet northeast of Southcamp Bay in Chester township (Sanatana's 4227171 claim) (MNDM Assessment File 41P12SW0098). The hole intersected granodiorite with minor amounts of quartz veins and pyrite, but no assays were reported.

#### 6.9 Wm. Sims Industries Ltd., 1979

In July, 1979 Wm. Sims Industries Ltd. carried out an airborne magnetometer survey, prospecting and sampling in the northeast corner of Chester and northwest corner of Benneweis townships (MNDM Assessment File 41P12SW0019). The work was performed by Edward J. Blanchard. The spacing of the



airborne magnetometer survey lines was 660 feet (201 m) and the altitude of the aircraft was 250 feet 76 m). The targets indicated by the airborne survey were sampled. Gold was found in mostly east-west striking veins and shear zones. The best showing is located between Southcamp Bay and Hwy 144 in Chester Township (No.1 showing). The best assay from the No.1 showing returned 0.48 oz/ton (16.45 g/t) Au. The best sample returned 0.59 oz/ton (20.23 g/t) of Au over 3.5 feet (1.07) across a vein from a shaft (No.4 showing).

In July and August 1980, Wm. Sims Industries Ltd. carried out magnetic and electromagnetic surveys and prospecting in the northeast corner of Chester and northwest corner of Benneweis townships (MNDM Assessment File 41P12SW0018). The work was performed by Shield Geophysics Ltd. There are 2 showings on the Property: No.1 (Eccles-Holmes) showing and the No.4 showing. Assays of grab samples from the No.1 occurrence returned between 0.01 and 0.08 oz/ton (2.74 g/t) Au. The geophysical surveys (400 feet spacing) suggested the presence of numerous conductive zones that were believed to represent shear zones. According to the report, the strongest conductive zones may represent sulphides.

#### 6.10 Cominco Ltd., 1979

In August and September 1979, Cominco Ltd. completed line cutting, geological mapping, a magnetometer survey and sampling in the Schist Lake area (MNDM Assessment File 41P12SW0136). The magnetometer survey identified strong anomalies which coincided with diabase dikes and some anomalies trending eastwest, which is the general direction of the stratigraphy and structure in the area. Grab samples were collected; the best sample returned 0.22 g/t Au.

In September and October 1979, Cominco Ltd. completed geological mapping southwest of Schist Lake (MNDM Assessment File 41009SE0061). Two previously trenched showings containing sulphide were identified. Both showings occur in iron formation. No assays were reported.

In October 1979, Cominco Ltd. completed a horizontal loop EM and magnetics survey southwest of Schist Lake (MNDM Assessment File 41009SE0058). The work was performed by Geoex Ltd. The survey delineated a long conductive feature, which was identified as iron formation by geological mapping. According to the report, a sinistral fault and a vertical displace the iron formation by approximately 500 feet (152.4 m).

In April and May 1980, Cominco Ltd. drilled 3 holes totaling 249.33 m southwest of Schist Lake (Sanatana's claim 3018463; MNDM Assessment File 41009SE0059). The drill holes intersected mafic and



felsic volcanic rocks and iron formation. The best sample returned 0.26 g/t Au over 1.5 m. Another sample returned 1508 ppm Zn over 1.5 m. Both samples were iron formation.

#### 6.11 Hargor Resources Inc., 1980

In August, 1980 Hargor Resources Inc. carried out an electromagnetic survey in Yeo, Huffman, Grove and Osman townships (MNDM Assessment File 41009NW9161). The survey was performed by Geophysical Surveys Inc. The lines were oriented north-south and located 200 m apart. A major east-west trending conductor and a fault in Yeo Township were delineated by the survey.

# 6.12 Neals Andersen, Jack McVittie, Harvey Blanchard, Baxter Minerals Ltd. and Canadian Crest Gold Mines Ltd., 1979-1980

Between August 1979 and October 1980, an airborne magnetometer survey, gamma-ray spectrometer survey, bulldozing, stripping and sampling of sulphide zones were carried out on a group of claims owned by Neals Andersen, Jack McVittie, Harvey Blanchard, Baxter Minerals Ltd. and Canadian Crest Gold Mines Ltd. in the northwest corner of Chester and northeast corner of Yeo townships (MNDM Assessment File 41P12SW0083). The work was performed by Erana Mines Ltd. The line spacing was 660 feet (201 m). A vein was sampled and the analyses averaged 3-9 % Cu; the presence of gold was reported but not quantified.

### 6.13 Hanson Mineral Exploration, 1980

In November 1980, Hanson Mineral Exploration reported a summary of the geology of their property in Chester Township (MNDM Assessment File 41P12SW0084). A vein was sampled and yielded an average of 0.262 oz/t (8.98 g/t) over 18.1 feet (5.52 m). One sample yielded 3.3 oz/t (113.14 g/t) Ag over 3.9 feet (1.19 m).

Between September 1981 and May 1982, Hanson Mineral Exploration drilled eleven drill holes totalling 625.3 feet (109.6 m) in Chester Township (MNDM Assessment Files 41P12SW0078 and 41P12SW0079). The holes were drilled along the strike of a quartz vein. One of the drill holes intersected a shear zone, but no gold was found in the samples. Only minor pyrite and trace pyrrhotite were observed.



### 6.14 Murgold Resources Inc., 1981

Between May and September 1981, Murgold Resources Inc. completed geological mapping in Chester, Benneweis and St. Louis townships (MNDM Assessment File 41P12SW0004). The work was performed by Norminex Ltd. Several gold bearing veins were identified. A grab sample from a vein (#16) yielded Au 2.9 oz/t (99.43 g/t), but that is located outside of the Watershed Gold Property.

Between May and August 1981, Murgold Resources Inc. carried out a VLF-EM survey (MNDM Assessment File 41P12SW0071). The work was performed by Norminex Ltd. The survey identified two anomalous zones that were interpreted to represent fractures parallel to that of gold-bearing quartz veins in the area.

In 1983 Murgold Resources Inc. completed a general report on their property in Chester, Benneweis and St. Louis townships (MNDM Assessment File 41P12SW0002). The work was performed by Hill, Goettler, De Laporte Ltd. The weighted average of a 656 ton bulk sample taken during an earlier exploration program yielded 0.34 oz/t (11.66 g/t) Au.

Following the report, in the summer and fall of 1983, Murgold Resources carried out an exploration program consisting of diamond drilling, trenching, sampling, soil sampling, geological mapping and VLF-EM and magnetometer surveys. Several gold-bearing veins and shear zone were identified, the exact location of them is not known and most of them fall outside of the Watershed Property. Approximately 32 drill holes were drilled, but the exact locations of the holes are not known.

### 6.15 National Irron Resources Ltd., 1981

In August and September 1981, National Irron Resources Ltd. completed geological mapping on their property in Benneweis Township (MNDM Assessment File 41P12SW0017). One area of interest was located southwest of Annex Lake, which is located outside of the Watershed Property boundaries.

### 6.16 Kidd Creek Mines Ltd., 1982

In May and June 1982, Kidd Creek Mines Ltd. carried out a proton precession magnetometer, a horizontal loop electromagnetic and a VLF electromagnetic survey in Yeo Township (MNDM Assessment File 41009SE0057). A single, highly conductive, nonmagnetic zone was detected; the exact location is not known.



Between August 1983 and June 1984, Kidd Creek Mines Ltd. drilled 34 holes totalling 3479 feet (885.75 m) in Yeo Township (Sanatana claim 3017673; MNDM Assessment File 41P12SW0134 and 41P12SW0135) (Figure 6-2). The drill holes (YEO-34-1, YEO-34-2, YEO-34-4, YEO-34-5) intersected sulphide and gold mineralization. Samples were assayed for Cu, Zn Au and Ag, but the units were not reported.

### 6.17 Blue Falcon Mines Ltd., 1985

In June and July 1985, Blue Falcon Mines Ltd. conducted an airborne magnetic and a VLF electromagnetic survey (MNDM Assessment Files 41P12SE0507 and 41P12SW8506). The work was performed by Terraquest Ltd. The survey covered 15 townships including the Yeo, Chester, Benneweis and Neville townships. The data were useful in identifying a number of conductors that may indicate the presence of sulphides.

In August and September 1986, Blue Falcon Mines Ltd. carried out a magnetic, a VLF electromagnetic survey and a geological survey southwest of Moore Lake in Yeo Township (MNDM Assessment File 41P12SW0130). The VLF electromagnetic survey located 4 significant conductors occurring in granites. The magnetic survey identified a magnetic high area within the granites, possibly indicating the presence of sulphides.

In October 1989, Blue Falcon Mines Ltd. completed stripping in Yeo Township (MNDM Assessment Files 41P12SW0123 and 41P12SW0127). No significant results were reported.

In December 1990, Blue Falcon Mines Ltd. contracted Terraquest to complete a high sensitivity magnetic and VLF-EM survey on their properties across Mallard, Yeo, Chester, Benneweis and Champagne townships (MNDM Assessment File 41P12SE0520). The magnetic data acquired was found to be consistent with known geology. The EM data identified numerous conductors, some of which can be correlated to know structures.

### 6.18 Kidd Resources Inc., 1985

In March 1985, Kidd Resources Inc. and Blue Falcon Mines Ltd. carried out a magnetometer VLF electromagnetic survey in the southeastern part of Chester Township (MNDMF Assessment File 41P12SW0066). The work was performed by Bobex Exploration Ltd. The survey located nine moderate to strong electromagnetic conductors trending WNW-ESE.



In March 1985, Kidd Resources Inc. completed line cutting and magnetometer and VLF electromagnetic surveys west of Moore Lake in Yeo Township (MNDM Assessment File 41P12SW0132). The work was performed by Bobex Exploration Ltd. The VLF electromagnetic survey identified 5 weak to strong conductors and the magnetic survey identified a high magnetic band with a strike similar to that of the regional trend.

In May 1987, Kidd Resources Inc. and Blue Falcon Mines Ltd. completed line cutting and geological mapping in east central Yeo and west central Chester townships (MNDM Assessment File 41P12SW0300). Shear zones with sulphides were identified.

### 6.19 Nu-Start Resources Corporation, 1985

In July, 1985 Nu-Start Resources Corporation completed a drilling program consisting of 3 drill holes totaling 1318 feet (401.73 m) west of Bagsverd Lake in Chester township (Sanatana claim 3018437, MNDM Assessment File 41P12SW0063) (Figure 6-2). The holes (NS-85-1 to 3) intersected veins with minor sulphide mineralization. The best intersection assayed 0.027 oz/t (0.93 g/t) Au over 4.1 feet (1.25 m).

### 6.20 Consolidated Silver Butte Mines Ltd., 1986-1988

Between July 1986 and August 1988, Consolidated Silver Butte Mines Ltd. carried out geochemical assaying on rock grab samples west of Mesomikenda Lake in Chester township (partly covered by Sanatana's claim 3019033) and Yeo township (MNDM Assessment File 41P12SW0028). The exact location of the samples is not known. The highest amount of gold assayed was 0.543 oz/ton (18.62 g/t) Au from the northern part of Chester township, but this sample may not be located within the Watershed Property.

In October and November 1986, Consolidated Silver Butte Mines Ltd. completed a geological and geochemical survey northwest of Dividing Lake (Sanatana's claim 4203267) in Chester Township (MNDM Assessment File 41P12SW0060). The work failed to locate any areas of interest for gold mineralization.

In July and August 1987, Consolidated Silver Butte Mines Ltd. carried out a VLF electromagnetic survey and a geochemical survey east of and along Southcamp Bay (Sanatana's 4240907, 4203263 and 3004844 claims) in Chester township (MNDM Assessment File 41P12SW0039). The geophysical survey identified



24 weak to strong conductors. The geochemical survey consisted of soil sampling. The maximum values in soil samples were 0.169 g/t Au and 4.8 g/t Ag. The program was successful in locating 10 targets.

In August and September 1987, Consolidated Silver Butte Mines Ltd. carried out geological, geochemical and VLF electromagnetic surveys northwest of Dividing Lake (Sanatana's claim 4203267) in Chester Township (MNDM Assessment File 41P12SW0055). The geochemical survey consisted of soil and rock chip sampling. The richest soil sample returned 0.044 g/t Au. The best rock chip sample yielded 0.754 g/t Au. The VLF electromagnetic survey identified three strong conductors and one weak conductor.

In October and November 1987, Consolidated Silver Butte Mines Ltd. completed line cutting and geological, geochemical and geophysical surveys west of Mesomikenda Lake in Chester township (partly covered by Sanatana's claim 3019033; MNDM Assessment File 41P12SW0038). The geochemical survey consisted of soil sampling and 6 rock chip samples. The highest gold value was 0.03 g/t Au in the soil samples. The assays of rock chip samples yielded a maximum value of 0.33 oz/t (11.31 g/t) Au, but this sample falls outside of the Watershed Gold Property. The geophysical survey consisted of a VLF electromagnetic survey, which was successful in locating 6 moderate to strong conductors.

In November 1987, Consolidated Silver Butte Mines Ltd. carried out a VLF electromagnetic survey and soil sampling between Moore Lake and Schist Lake in Yeo Township (Sanatana's claims 3018463 and 3019553; MNDM Assessment File 41P12SW0122). The VLF electromagnetic survey was successful in locating 6 conductors, although the shear zones hosting Au did not give a strong response due to the disseminated nature of sulphides in them. The best soil sample yielded 0.04 g/t Au.

In December 1987, Consolidated Silver Butte Mines Ltd. completed bulldozer stripping on their properties in Chester and Yeo townships (MNDM Assessment File 41P12SW0131).

In April 1988, Consolidated Silver Butte Mines Ltd. filed an assessment report that summarized the exploration programs on all of their properties in the southern Swayze greenstone belt including the properties in Chester and Yeo townships (MNDM Assessment File 41P12NE8451). The report also proposed an exploration program for 1988 and 1989, which included stripping, blasting, diamond drilling and geological mapping in the Chester and Yeo Township.

In June 1989, Consolidated Silver Butte Mines Ltd. completed geological mapping and sampling east of and along Southcamp Bay (Sanatana's claims 4240907, 4203263 and 3004844) in Chester township



(MNDM Assessment File 41P12SW8456). The mapping identified several veins and shear zones of interest. A grab sample yielded 0.754 oz/t (25.85 g/t) Au.

In August, 1989 Consolidated Silver Butte Mines Ltd. reported assay data on grab samples (MNDM Assessment File 41P12SW0027). The sample with the highest amount of gold yielded 0.468 oz/t (16.05 g/t) Au. This sample was collected east of Southcamp Bay in Chester Township (Sanatana's claim 4240907).

#### 6.21 Isaac Burns, 1987

In February 1987, Isaac Burns completed a drilling program consisting of 3 holes (CH-87-1, CH-87-2 and CH-87-3) totaling 870 feet (265.18 m) (Figure 6-2). The holes were drilled on the western shore of Clam Lake (MNDM Assessment File 41P12SW0053; Sanatana claim 3018412). The holes intersected primarily granodiorite with minor mafic units, some weak pyrite was noted but no assays were reported.

### 6.22 Young-Shannon Gold Partnership (1986), 1987

Young Shannon Gold Partnership carried out a 7 hole diamond drill program (total 2230 ft, 679.70 m) to test the mineralization in a sheared and brecciated structure plus other targets around the "F zone" and the old shaft on Shannon Island (MNDM: MDI41P12SW00055). Two intersections of the vein returned values of 19 g/t Au and 2.8 g/t Ag over 0.3m and 9.5 g/t Au and 6 g/t Ag over 0.6m. Six of these holes appear to be at least 15 ft (4.6 m) south of the claim boundary and thus not on Sanatana's Watershed Property. Drill hole 87-20 appears to be the only hole on Sanatana's Watershed Property (claim 3017672) (Figure 6-2).

### 6.23 Chesbar Resources Inc, 1988

Chesbar Resources Inc. ("Chesbar") completed a drilling program consisting of four diamond drill holes totaling 393.8 m from January 20 to March 11, 1988 (Ministry of Northern Development and Mines Assessment Report 41P12SW0124, 1989) (Figure 6-2; Table 6-3). The locations for these four holes are georeferenced from assessment file sketch maps. The collars are best estimates and are not exactly correct due to georeferencing errors. The collars need to be located in the field to determine their exact locations.

Historic Claim #	Current Claim #	Azimuth (°)	Dip (°)	Final Depth (ft)	Final Depth (m)
P 917047	4240522	180	-45	306	93.3
P 917050	4241016	0	-60	355	108.2
P 917051	4240522	216	-45	325	99.1
	P 917047 P 917050	P 917047         4240522           P 917050         4241016	P 917047         4240522         180           P 917050         4241016         0	P 917047         4240522         180         -45           P 917050         4241016         0         -60	P 917047         4240522         180         -45         306           P 917050         4241016         0         -60         355

Table 6-3 List of drill holes completed by Chesbar in 1988.

#### CARACLE CREEK INTERNATIONAL CONSULTING INC.

Page | 47

	Caracle Creek			Independer	Watershed P	al Report and Resource Estimate Watershed Property, Gogama Sanatana Resources Inc.	
B-88-21	P 917049	4241016	0	-45	306	93.3	
			·		1292	393.8	

All four drill holes intersected dominantly granodiorite, which was locally sheared or brecciated, and minor gabbro or diorite. Quartz stringers with disseminated pyrite and quartz veins with pyrite (up to 20%) and pyrrhotite are abundant. In hole B-88-14, quartz with massive pyrite was observed.

A total of 166 samples were collected but assay results of the samples are not available.

These holes are located on Clam Lake Property claim 4241016.

# 6.24 Edwin L. Speelman, James A. Bryan, Frederick W. Chubb, Murray Little, 1992

In 1992, Edwin L. Speelman, James A. Bryan, Frederick W. Chubb, and Murray Little conducted a VLF – EM 16 survey in the Chester Lake area of their Bryan et al. property within Chester Township (MNDM Assessment File 41P12SW0026). The survey identified 18 conductors, 15 of which are classified as poor with the remaining 3 conductors being intermediate to moderate conductors. Some conductors were interpreted to be potential shear zones.

In 1992, Edwin L. Speelman, James A. Bryan, Frederick W. Chubb, and Murray Little conducted a boulder and humus sampling program in the Chester Lake area of their Bryan et al. property within Chester Township (MNDM Assessment File 41P12SW8455). Seven humus samples were taken, all of which assayed less than 3 ppb Au. The highest gold value reported from the boulder samples as 50 ppb Au.

### 6.25 Angelo Tomasini, 1993

In 1993, Angelo Tomasini contracted R.J. Roussain (Consultant) to complete diamond drilling in an area close to highway 144, on the east side of Mesomikenda Lake (Sanatana claim 4240908; MNDM Assessment File 41P12SW0008) (Figure 6-2). Six holes (DT93-02, 03, 04, 06, 07, 08) were drilled totaling 1115 feet (339.85 m) to test mineralized quartz veins as well as a parallel VLF conductor. The best intersection found was 0.131 oz/t (4.49 g/t) Au over 5 m in hole DT93-04. However, anomalous gold was found throughout holes intersecting mineralized quartz veins.



#### 6.26 Henry Douglas, 1995

In 1995, Henry Douglas contracted Rayan Exploration Ltd. to conduct an IP survey on his Benneweis township property located in west and southwest Benneweis township (MNDM Assessment File 41P12SW0014). The survey was intended to identify a proposed fault within the area. Of the three lines surveyed, all indicate a chargeable, conductive body to the east, which was interpreted to indicate the possible fault zone.

#### 6.27 Robert Duess and Bruce Durham, 1995

In 1995, Robert Duess and Bruce Durham acquired staked claims around the Bagsverd lake area and completed a regional prospecting/sampling/line cutting program as well as an IP survey (MNDF Assessment File 41P12SW0016). Twenty six grab samples were collected during the course of the program with one sample assaying at 1.392 g/t Au. Val d'Or Geophysics was contracted to complete an IP survey. Results of the survey indicated the presence of several high chargeability/low resistivity anomalies.

#### 6.28 Erana Mines Limited, 1998

In 1998, Erana Mines Limited completed a stripping and sampling program on their property close to highway 144, on the east side of Mesomikenda Lake (MNDNF Assessment File 41P12SW0033). Four trenches were dug and a strongly fractured zone within a granodiorite body with quartz and chalcopyrite was identified. One chip sample from this zone assayed at 2.23 oz/t (76.46 g/t) Au with other samples as high as 0.132 oz/t (4.53 g/t) Au and 0.125 oz/t (4.29 g/t)Au.

### 6.29 Augen Gold Corp.

### 6.29.1 South Swayze Property, 2007

In October and November 2007, Fugro Airborne Surveys Corp. completed an airborne magnetic and EM survey for Augen Gold Corp. ("Augen") on Augen's South Swayze property which included the current Sanatana Watershed Property (Fugro, 2008). The information was used to produce maps that display magnetic, conductive and radiometric properties of the survey.

The EM anomalies fall into four general categories. The first type consists of discrete, well-defined anomalies, which are usually attributed to conductive sulphides or graphite, but could also represent near vertical faults or shears. The second type consists of moderately broad responses that are flat-dipping and



may represent conductive rock units, zones of deep weathering or alteration zones. The third type of anomaly includes anomalies associated with magnetite. The fourth type of anomaly represents cultural anomalies. The EM survey identified more than 500 weak to strong bedrock conductors over the survey area.

The magnetic contour maps display variations in magnetic intensity, irregular patterns and offsets or changes in strike directions, suggesting that the survey area has undergone intense deformation and/or alteration. The magnetic survey also identified numerous, narrow, dyke-like features and faults striking NNW and at least four NE-trending features in the east central portion of the Augen property.

The survey identified at least five conductors within or near Schist Lake, one of them is a strong easttrending, NE dipping conductor, located near the southern edge of a magnetic unit. Two other anomalies within Schist Lake suggest a thin bedrock source associated with an ESE-trending magnetic anomaly. The survey also identified a SSE-trending low resistivity zone along Southcamp Bay. No further details of the survey were available to Caracle Creek.

# 6.29.2 Chester Gold Area, 2009

During a regional prospecting program in 2009, Augen confirmed several historic gold occurrences in the southern part of their South Swayze property called Chester Gold Area (McRoberts, 2010a). Grab samples from the Chester Gold occurrence in the Chester Gold Area returned 270.0, 133.0, 69.3, 57.9 and 35.0 g/t Au (Figure 6-1).

In the same year, Augen completed diamond drilling on the Chester Gold Area. Four drill holes were completed in October of 2009 totalling 299.5 meters (Figure 6-2; Table 6-4; McRoberts, 2010a). Drilling was carried out to test the potential beneath the historic Chester Gold Occurrence, where grab samples yielded up to 270 g/t Au. The best intersection of the drilling was in hole CG09-06 which was 0.413 g/t Au over 0.3 meters (

Table 6-5). Drilling failed to identify significant gold mineralization underlying the historic gold occurrence in the Chester Gold Area.

Table 6-4 Drill collar information for Augen Gold Corporation's 2009 drill program, Chester Gold area.

Hole #	Claim Number	Easting	Northing	Azimuth (°)	Dip (°)	Depth (m)	<b>Completion Date</b>
CG09-05	3017665	429060	5265401	204	-45	86.0	Oct-19-2009
CG09-06	3017665	429059	5265339	332	-45	61.0	Oct-19-2009
CG09-07	3017665	429099	5265341	292	-45	100.5	Oct-21-2009
CG09-08	3017665	429026	5265363	98	-45	52.0	Oct-21-2009

Oct. 29, 2015



#### TOTAL

299.5

Hole	e #	From (m)	To (m)	Length (m)	Sample Number	Au (g/t)
CG09	-05	64.40	65.00	0.60	H821374	0.044
CG09	-06	36.00	36.30	0.30	H821415	0.413
CG09	-07	59.23	59.50	0.27	E429143	0.058
CG09	-08	41.48	41.60	0.12	E429122	0.10

Table 6-5 Drill highlights from Augen Gold Corporation's 2009 drill program, Chester Gold area

#### 6.29.3 Schist Lake Area, 2009

Augen Gold Corp completed a regional prospecting program in the Schist Lake Area of their South Swayze Property in 2009 (McRoberts, 2010b). Highlights from the sampling of occurrences within the Schist Lake West Area included: 1.89 g/t Au, 1.97 g\t Au (Cryderman Pit Occurrence), 2.81 g/t Au, 1.17 g\t Au (Moore Lake\Bobway Occurrence) and 7.16 g/t Au, 6.38 g\t Au, 6.28 g\t Au (trenches and shaft near Schist Lake).

In 2009, Augen Gold Corporation completed diamond drilling on the Schist Lake Area. Five drill holes were completed in October of 2009 totalling 627.5 meters (Figure 6-2; Table 6-6; McRoberts, 2010b). Drilling was intended to test four historic gold occurrences (Cryderman pit occurrence, Moore Lake/Bobway occurrence, historic trenches and mine shaft near Schist Lake) within the Schist Lake West Area. The best intersection of the drill program was in hole SC09-01 at 0.769 g/t Au over 1.12 meters (Table 5-5; true widths of mineralization in these drill holes, at this stage, is not precisely known). Drilling failed to identify significant gold mineralization underlying the historic gold occurrences in the Schist Lake Area.

Table 6-6: Drill collar information for Augen Gold Corporation's 2009 drill program, Schist Lake area.

Hole #	Claim Number	Easting	Northing	Azimuth (°)	Dip (°)	Depth (m)	<b>Completion Date</b>
SC09-01	3019553	424971	5269442	179	-45	169.0	Oct-12-2009
SC09-02A	3019553	425035	5269340	179	-45	33.0	Oct-08-2009
SC09-02B	3019553	425039	5269349	197	-45	123.0	Oct-10-2009
SC09-03	3019553	426086	5269202	179	-45	142.5	Oct-14-2009
SC09-04	3019555	426965	5269797	169	-45	160.0	Oct-16-2009
TOTAL				-	-	627.5	-



Hole #	From (m)	To (m)	Width (m)	Sample Number	Au (g/t)
SC09-01	48.55	49.67	1.12	H821223	0.769
SC09-02B	26.00	27.00	1.00	H821004	0.078
SC09-02B	34.51	35.19	0.68	H821015	0.155
SC09-03	81.00	81.43	0.57	H821067	0.240
SC09-04	45.39	46.44	1.05	H821199	0.243
SC09-04	74.00	75.00	1.00	H821076	0.147
SC09-04	75.00	75.75	0.75	H821077	0.445

*Table 6-7: Drill highlights from Augen Gold Corporation's 2009 drill program, Schist Lake area.* 

The true widths of the mineralization in historic drill holes are not known.

#### 6.30 Augen Gold, SGH surveys, 2010

Augen Gold completed a soil gas hydrocarbon ("SGH") surveys east of Clam Lake (approximately between 428450 m E/5266300 m N and 428600 m E/5266800 m N) in late 2010. The initial survey consisted of 63 soil samples collected along three parallel north-south trending lines with a line spacing of 100 m and a samples spacing of 25 m. The total area surveyed is 700 m  $\times$  200 m. The soil samples were analyzed by Activation Laboratories ("Actlabs") of Ancaster, Ontario. Actlabs delineated three anomalies (Figure 6-3) that indicate the presence of vein-like gold mineralization (Sutherland, 2010).



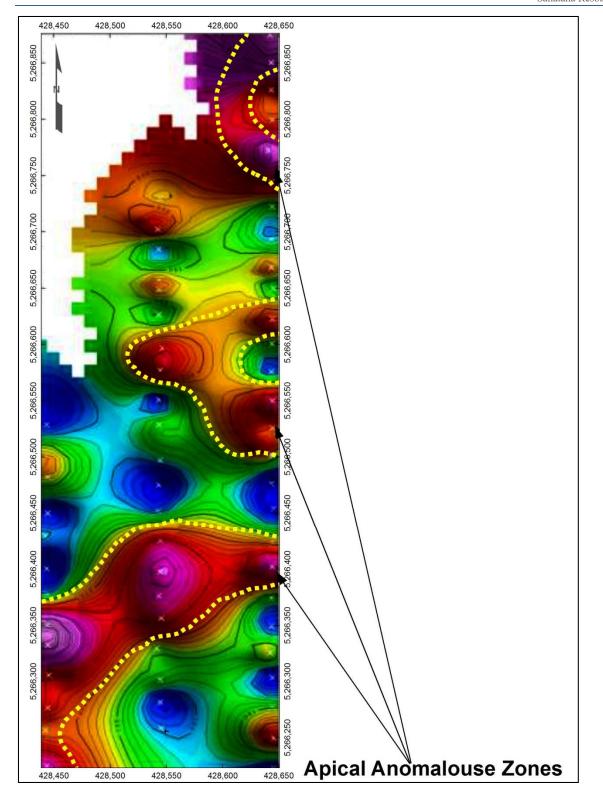


Figure 6-3 Map showing the SGH anomalies east of Clam Lake.



Augen also completed an SGH survey at Schist Lake (between approximately 425000 m E/5260000 m N and 433000 m E/5270000 m N) where 1709 soil samples were collected and sent to Actlabs for analysis (Sutherland, 2011). The samples were collected along 44 parallel north-south trending lines with a line spacing of 200 m and a sample spacing of 25 m. The area surveyed is 9 km  $\times$  2 km in size. Several narrow, east-west trending Au anomalies were delineated (Figure 6-4). Actlabs recommended collecting infill samples.

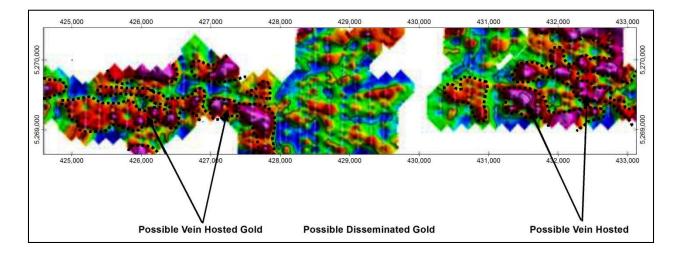


Figure 6-4 Map showing the SGH anomalies in the Schist Lake area.

# 7.0 GEOLOGICAL SETTING AND MINERALIZATION

# 7.1 **Regional Geology**

The Watershed Property lies within the Swayze Greenstone Belt, which is part of the Western Abitibi Subprovince of the Superior Province. The age of the Abitibi Subprovince is between 2.75 and 2.67 Ga (Jackson and Fyon, 1991; Figure 7-1).



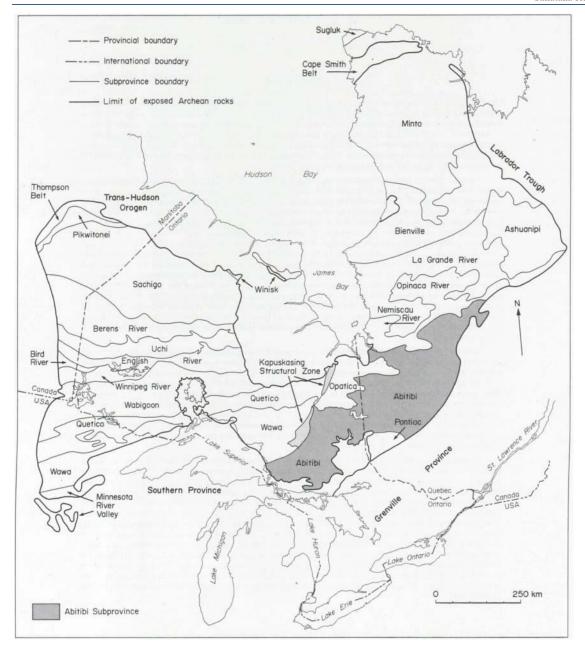


Figure 7-1: Location of the Abitibi subprovince. (from Jackson and Fyon, 1991).

The Western Abitibi Subprovince is bounded by the Kapuskasing Structural Zone to the west, the sedimentary rocks of the Opatica Subprovince to the north, the sedimentary rocks of the Pontiac Subprovince and the Mesoproterozoic Grenville Province to the southeast and the Paleoproterozoic Huronian Supergroup to the south (Jackson and Fyon, 1991; Ayer et al., 2005).



The rocks in the Western Abitibi Subprovince can be subdivided into (Jackson and Fyon, 1991):

- 1. komatiite-tholeiite assemblages with interflow iron formation
- 2. komatiite-tholeiite assemblages with felsic metavolcanic rocks
- 3. komatiite-tholeiite assemblages with no significant iron formation or felsic metavolcanic rocks
- 4. tholeiite assemblages characterized by alternating iron- and magnesium-rich units
- 5. tholeiite assemblages characterized by thick iron- or magnesium-rich units, or both
- 6. ultramafic to felsic metavolcanic rocks with iron formation
- 7. intermediate to felsic metavolcanic rocks
- 8. intermediate effusive metavolcanic rocks
- 9. turbiditic metasedimentary dominated rocks
- 10. alluvial-fluvial metasedimentary and alkalic metavolcanic dominated rocks

Pre-cleavage folds, thrust faults and structures related to batholith emplacement are the oldest structure in the Western Abitibi Subprovince (Jackson and Fyon, 1991). This is followed by the development of regional shear zones and folds during and following the emplacement of batholiths and striking west to northwest and northeast. Thrust faults and steep reverse faults accompanied the shearing and folding.

The types of mineralization in the Western Abitibi Subprovince include: volcanic-associated massive sulphide (VMS) deposits, lode gold deposits, komatiite-associated Ni-Cu-PGE deposits and iron formations.

The Western Abitibi Subprovince contains the following domains: the Abitibi greenstone belt; the Swayze greenstone belt); the Batchawana greenstone belt; the Benny, Hutton and Parkin greenstone belts and the Temagami greenstone belt (Jackson and Fyon, 1991).

The Abitibi greenstone belt is one of largest and economically most productive greenstone belts in the world (Ayer and Trowell, 2002). The Abitibi greenstone belt is subdivided into a northern belt and a southern belt (Jackson and Fyon, 1991; Dimroth et al., 1983b). The northern belt is characterized by abundant tonalite-



trondhjemite-granodiorite intrusions, large anorthosite complexes, lack of ultramafic flows and greenschist or higher grade of metamorphism. The southern belt consists of abundant ultramafic flows, fewer tonalitetrondhjemite-granodiorite intrusions and greenschist or lower grade of metamorphism.

# 7.2 Local Geology – Swayze Greenstone Belt

### 7.2.1 General Geology

The Watershed Property is located within the southern Swayze greenstone belt (Figure 7-2, which is located in the southern Abitibi greenstone belt and is interpreted to represent a deeper erosional level of the Abitibi greenstone belt (Heather et al., 1995; Ayer and Trowell, 2002). The southern Swayze greenstone belt is an ESE-trending syncline that extends from Esther to Brunswick townships (Siragusa, 1993). The outer limb of the syncline is composed of tholeiitic flows of greenschist facies. The inner part of the syncline is composed of clastic metasediments that are the youngest rocks in the structure. The metasediments in the west part of the belt are intruded by the Jerome porphyry. Iron formation and subvolcanic gabbroic rocks are also present in the southern Swayze greenstone belt.

In Chester township felsic to intermediate intrusive rocks of the Chester Intrusive Complex separate the northern and southern limbs of the syncline (Heather and Shore, 1999). The northern part of this pluton is the host of several gold occurrences. In the southeastern part of Yeo township a more mafic component of the Chester Intrusive Complex merges with the southern limb of the syncline. The contact between the mafic and felsic to intermediate intrusive rocks forms an S-shaped migmatitic fringe in Chester township (Siragusa, 1993). The contact zone between the northern limb of the syncline and the granitic pluton in Chester township is also migmatitic.



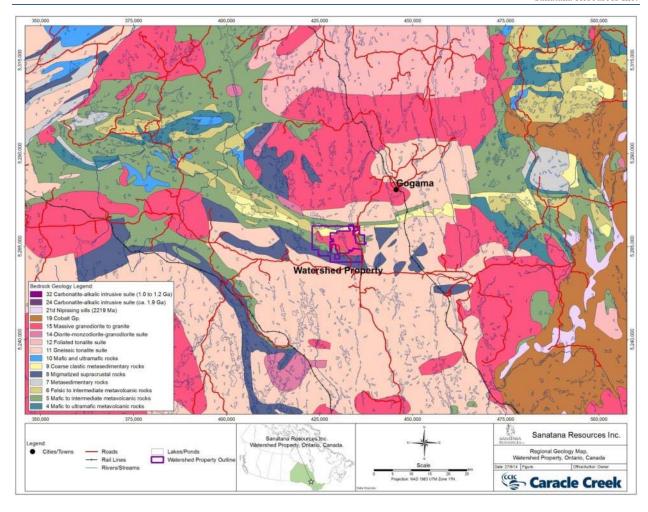


Figure 7-2: Regional geology map showing the location of the Watershed Gold Property in the Swayze greenstone belt (from OGS Miscellaneous Release Data 126, Revision 1).

#### 7.2.2 Deformation and metamorphism

The Swayze greenstone belt has undergone polyphase folding, development of multiple foliation generations, high-strain zones and late brittle faulting (Heather and Shore, 1999).

Eight major subparallel, sinistral NNW-trending and several NE-trending faults offset the syncline (Siragusa, 1993). Younger diabase dikes also strike NNW and NE to a lesser extent.

Most of the rocks in the Swayze greenstone belt have undergone greenschist facies metamorphism (Heather and Shore, 1999). Amphibolite facies metamorphism is limited to the contact aureoles of felsic intrusions.



# 7.2.3 Alteration

The rocks in the Swayze greenstone belt were subjected to two types of synvolcanic alteration, syntectonic and late tectonic alterations (Heather and Shore, 1999).

The first type of synvolcanic alteration is characterized by intense chloritization (±sericitization) and is associated with felsic to intermediate volcanic activity around 2730 Ma (Heather and Shore, 1999). Base metal mineralization is associated with this alteration.

The second type of synvolcanic alteration is characterized by chlorite-magnetite-epidote±sericite±quartz and is locally developed within the Chester Intrusive Complex (Heather and Shore, 1999).

Syntectonic alteration is developed in high-strain zones and includes chloritization, sericitization, silicification, Fe- and Ca-carbonatization, sulphidation and tourmalinization (Heather and Shore, 1999).

Late tectonic alteration is associated with brittle faults and fractures and is characterized by the presence of alteration minerals chlorite, epidote, hematite and quartz (Heather and Shore, 1999).

# 7.2.4 *Mineralization in the Swayze Greenstone Belt*

Base metals and gold are the main commodities in the Swayze greenstone belt (Heather and Shore, 1999).

Most of the base metal occurrences are associated with iron formation (Heather and Shore, 1999). There mineralization formation: are two types of base metal in iron chlorite-quartzchalcopyrite±sphalerite±galena breccia zones and minor amounts of stratiform/stratabound pyritepyrrhotite±sphalerite. Base metals are also associated with gold occurrences in the Chester Intrusive Complex. Minor chalcopyrite-pyrite mineralization occurs in some of the granitoid complexes, such as the Kenogamissi granitoid complex (e.g., Rush Lake Copper; Heather and Shore, 1999: Ontario Geological Survey Open File Report 3384C). Most of the gold mineralization is associated with quartz veins (Heather and Shore, 1999).

The presence of mineralization in the Swayze greenstone belt in general does not necessarily indicated the presence of mineralization on the Watershed Property. This Report distinguishes clearly between the mineralization in the region and the mineralization on the Watershed Property.



# 7.3 Property Geology

The southern part of the Property is underlain by the Chester Intrusive Complex that consists of felsic to intermediate (tonalite to quartz diorite) and mafic (diorite, gabbro) intrusive rocks. The northern part of the Property is underlain by felsic to intermediate and mafic volcanic rocks (Figure 7-3).

The tonalite and quartz diorite are equigranular, medium- to fine-grained, leucocratic rocks and consist dominantly of plagioclase, quartz and biotite. The darker colored diorite and gabbro consist dominantly of plagioclase, hornblende, biotite and minor quartz. In outcrop, fragments of the more mafic phases are observed in the felsic phases (Figure 12-4); the fragments can be up to several metres long and the contacts can be sharp, diffuse or apparently "corroded" with embayments in the fragments. However, the relationship between the felsic and mafic phases is complex and field relationships (outcrop and drill core) indicate magma mingling and mixing (cf. also Heather, 1996). The Chester Intrusive Complex was dated by Heather and van Breemen (1994) and returned a U-Pb age of 2740±2 Ma. The mafic and felsic phases contain blue quartz eyes (Heather, 1996).

The intrusive rocks were emplaced in felsic and mafic volcanic rocks of the Chester Group. The mafic volcanic rocks are fine-grained, dark gray and belong to the Arbutus Formation (Heather, 1996; Figure 7-4). The felsic volcanic rocks are fine-grained, light gray and belong to the Yeo Formation (Heather, 1996; Figure 7-5). Heather (1996) suggests that the volcanic rocks are coeval with the Chester intrusive rocks.

Breccias were observed in outcrop and in drill core (Figure 7-6). Strongly sheared, several tens of centremeter thick dikes appear to cut the intrusive rocks locally (Figure 12-5).

Hematite alteration is pervasive in the Chester intrusive rocks and is particularly obvious in the felsic variety. Hematite colors the feldspars pink and also occurs as distinct veinlets and stringers.



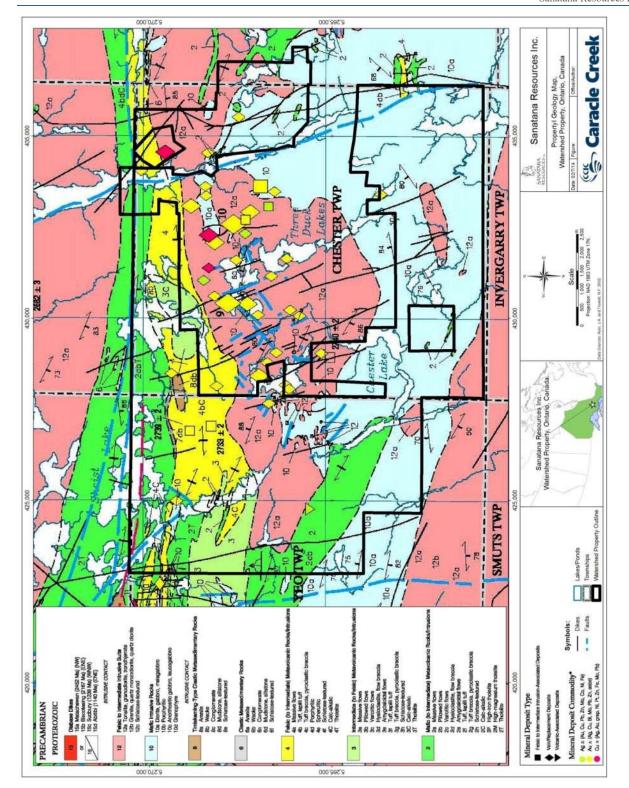


Figure 7-3: Property geology map (from Ayer and Trowell, 2002, P3511).

Oct. 29, 2015





Figure 7-4: Mafic volcanic rocks south of Bagsverd Creek bridge on Chester Road.



Figure 7-5: Felsic volcanic rocks at kilometer 14 on Chester Road.





Figure 7-6: Magmatic breccia from drill hole SR-11-01, ~488 m. Fragments of mafic intrusive occur in a matrix of lighter colored, more felsic intrusive.



Figure 7-7: Pink (hematite-dusted) tonalite or quartz diorite and hematite-rich stringers.

Oct. 29, 2015



# 7.3.1 Structure

A major, east-west striking high-strain zone, the Ridout Shear Zone crosses the northern part of the Property. Heather et al. (1996) interpreted this zone as either the western extension of the Kirkland Lake-Matachewan-Shiningtree structure or a new subparallel structure and suggest oblique, dextral movement as well as flattening along the zone.

# 7.4 Mineralization

The mineralization at the Watershed Property consists of vein- and fracture-hosted visible gold (Figure 7-8) and sulfides (Figure 7-9, Figure 7-10), dominantly pyrite and minor chalcopyrite (Figure 7-11) and pyrrhotite (Figure 7-12). The veins are up to several 10s of centimeter wide and consist of quartz, sulfides and locally carbonate. The stringers consist of chlorite, hematite and sulfides and are very thin (one to several millimetres). Disseminated pyrite also occurs. Locally, neither veins nor disseminated sulfides are visible in drill core that carries significant gold, e.g., in SR-12-24 between 295 and 296 m (Figure 7-13). This interval carried 8.83 g/t Au. In these cases, very thin stringers likely host the gold.

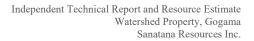
Diabase dykes cross cut mineralization. There are four major trends for the dykes:

- McKenzie and Wetherup's structural interpretation identified NE 045°
- Sanatana's magnetic survey shows NNE 020° direction that may represent a swarm
- ESE 110°
- SSE 160°

The diabase dykes are typically vertical and a couple of metres wide.

From a very simple study of the quartz veins with gold mineralization using orientations from the televiewer data, Sanatana found that most were trending roughly east-west. There is a range of variation between structural trends observed within mineralized intervals and the veins are striking from  $080^{\circ}$  to  $110^{\circ}$  and dipping  $+60^{\circ}$  to the north.

Similar to the televiewer data, the resource model indicates that the mineralized domains strike due eastwest and dip  $50^{\circ}$  -  $70^{\circ}$  to the north. The mineralized domains range in thickness from 5 m to 15 m.





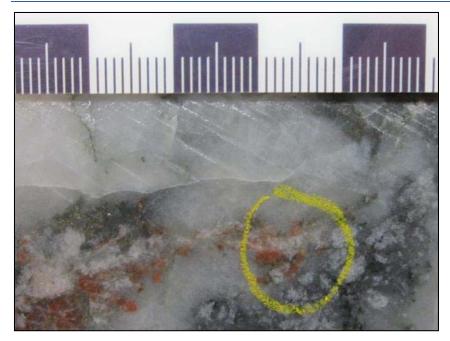


Figure 7-8: Visible gold (in centre of yellow circle) from drill hole SR-12-03, 285 m. The scale is in centimetres.



Figure 7-9: Quartz-pyrite vein from drill hole SR-13-01, 285 m.





Figure 7-10: Quartz-carbonate-sulfide vein from drill hole SR-13-01, 294 m.



Figure 7-11: Quartz-sulfide-malachite vein from the Mini Candy Cane Outcrop. Malachite indicates that chalcopyrite was present before weathering.

Oct. 29, 2015





Figure 7-12: Quartz-pyrrhotite vein in drill hole SR-12-11, 29 m.



*Figure 7-13: Core from drill hole SR-12-24. The interval from 295 to 296 (second row in the core box on the photo) carried 8.83 g/t Au. No significant veins or disseminated sulfides were visible.* 

# 8.0 **DEPOSIT TYPES**

The Swayze greenstone belt is prospective for orogenic gold deposit ("shear zone hosted", "mesothermal", "greenstone-hosted quartz-carbonate vein" deposit). These deposits occur in deformed greenstone belts, particularly those that are characterized by tholeiitic basalts and ultramafic komatiites intruded by intermediate to felsic porphyritic intrusions (Dubé and Gosselin, 2007). They are located along major compressional to transtensional crustal-scale fault zones marking convergent margins between major units but ore is typically hosted by second- and third order shears and faults and at jogs and changes in strike (Goldfarb et al., 2005). In Canada, these vein deposits are often associated with conglomerates (e.g. the Timiskaming conglomerate). They are a major source of gold in the greenstone belts of the Superior and Slave provinces of the Canadian Shield.

Orogenic gold deposits are characterized by a network of auriferous, laminated quartz-carbonate veins and locally hydrothermal breccias. The dominant sulfides are pyrite and arsenopyrite but W-, Bi- and Tebearing phases are also common. Sulfides also occur disseminated in the wall rock. Typical alteration includes iron-carbonate, silicification, muscovite, chlorite, K-feldspar, biotite, tourmaline and albite.

Orogenic deposits formed from metamorphic fluids (Dubé and Gosselin, 2007) that were rich in  $CO_2$ , low in salinity and generated during prograde metamorphism where the fluids were channelled along major crustal deformation zones. Drastic pressure changes (and resulting unmixing and desulfidation) and wall rock interaction caused the precipitation of the sulfides (and gold).

World-class ore bodies are between 2 and 10 km long, approximately 1 km wide and extend to depths of 2 to 3 km (Goldfarb et al., 2005). Canadian examples include the Timmins, Kirkland Lake, Val d'Or and Rouyn-Noranda districts of the Abitibi greenstone belt and the Pickle Lake and Rice Lake greenstone belts of the Uchi subprovince.

In addition to the long recognized orogenic deposits in the area, the Côté Gold deposit was interpreted to be the Archean equivalent of Phanerozoic porphyry deposits (Kontak et al., 2013; <u>www.iamgold.com</u>). According to IAMGold, the Côté gold deposit consists of low to moderate grade Au  $\pm$  Cu mineralization associated with brecciated intermediate to felsic, and locally mafic intrusive rocks. The nature of the alteration and mineralization appears to suggest a porphyry-style deposit. A gold-mineralizing hydrothermal system appears to have overprinted magmatically brecciated rock and developed propylitic and potassic alteration (<u>www.iamgold.com</u>).

Oct. 29, 2015



In general, porphyry deposits are large tonnage–low-grade deposits amenable to bulk mining. Disseminated and vein-hosted porphyry mineralization occurs around granitic to granodioritic and tonalitic stocks; Hollister (1975) coined the term "diorite model" for porphyry mineralization associated with more mafic intrusions. Hydrothermal alteration occurs concentrically around the stocks with potassic alteration (orthoclase, biotite) forming the core, followed by phyllic (quartz, sericite, pyrite), lateral argillic (clay minerals) and outer propylitic alteration (chlorite, pyrite, calcite, epidote) (Lowell and Guilbert, 1970).

# 9.0 **EXPLORATION**

### 9.1 Geophysics overview

The Watershed Property has had a significant investment of geophysical exploration over the years. Early geophysical surveys were conducted on the Property by several different exploration companies which included RenMark Exploration, Cominco, Sims industries, Axter and Canadian Crest Gold Mines, Hargold Resources, Murgold Resources, Kidd Creek Mines, Kidd Resources, Blue Falcon Mines, Consolidated Silver Butte Mines and Augen Resources (Table 6-1).

These surveys were documented to have been completed in 1970, 1979 and 1980 and continuously through until 2009. Surveys included a broad spectrum of geophysical surveys such as ground EM and magnetics, airborne magnetics and ground IP surveys. The results of these surveys were reviewed in section 6.0.

More recently, Sanatana has carried out new and advanced geophysical surveys as part of their exploration programs on the Property. In particular two rounds of ground magnetic surveys, advanced airborne EM (ZTEM) surveys and follow-up structural interpretation and advanced ground IP and borehole tomography IP surveys have been carried out.

# 9.2 Geotech ZTEM survey, April 4 to 19, 2011

A Z-axis Tipper electromagnetic (Z-TEM) airborne survey was completed by Geotech Ltd. on the Watershed Property from April 4 to 19, 2011 (Geotech Ltd., 2011, MNDM assessment AFRO ID: 2.51243). The survey included airborne total field magnetic sensor.

The geophysical surveys consisted of the helicopter borne audio-frequency magnetic (AFMAG) Z-TEM system and aero magnetics using a caesium magnetometer. A total of 641 line kilometres of geophysical data were acquired during the survey.



In a ZTEM survey, a single vertical-dipole air-core receiver coil is flown over the survey area in a grid pattern, similar to regional airborne EM surveys. Two orthogonal, air-core horizontal axis coils are placed close to the survey site to measure the horizontal EM reference fields. Data from the three coils are used to obtain the Tzx and Tzy Tipper (Vozoff, 1972) components at six frequencies in the 30 to 720 Hz band. The ZTEM is useful in mapping geology using resistivity contrasts and magnetometer data provides additional information on geology using magnetic susceptibility contrasts.

### 9.2.1 Survey Location

The Survey Block is located approximately 26 kilometres to the southwest of Gogama, Ontario and it covers the entire Watershed Property (Figure 9-1).





Figure 9-1 The survey block, with ZTEM and Magnetic Base Station Locations

The block was flown in a south to north (N  $0^{\circ}$  E azimuth) direction, with a flight line spacing of 200 metres, as depicted in Figure 9-1. Tie lines were flown perpendicular to the traverse lines at a spacing of 2000 metres (N  $90^{\circ}$  E azimuth). For more detailed information on the flight spacing and direction see Table 9-1.



Survey Block	Traverse Line spacing (m)	Area (km2)	Planned Line-km	Actual Line-km	Flight direction	Line numbers
Watershed	traverse: 200	78	944.7	594.7	N 0° E/N 180° E	L1000 - L1840
	tie: 2000		100.8	46.3	N 90° E/N 270° E	T2000 - T2050
		total	1045.5	641		

#### Table 9-1 ZTEM survey specifications

# 9.2.2 Sample Method and Quality - Flight Specifications

During the survey the helicopter was maintained at a mean height of 151 metres above the ground with a nominal survey speed of 80 km/hour for the survey block. This allowed for a nominal EM sensor terrain clearance of 77 metres and a magnetic sensor clearance of 94 metres.

The on board operator was responsible for monitoring the system integrity. He also maintained a detailed flight log during the survey, tracking the times of the flight as well as any unusual geophysical or topographic feature.

On return of the aircrew to the base camp the survey data was transferred from a compact flash card (PCMCIA) to the data processing computer. The data were then uploaded via ftp to the Geotech office in Aurora, Ontario, for daily quality assurance and quality control by trained personnel.

## 9.2.3 Sample Method and Quality - Flight Path

The flight path, recorded by the acquisition program as WGS 84 latitude/longitude, was converted into the WGS 84, UTM Zone 17 North coordinate system in Oasis Montaj. The flight path was drawn using linear interpolation between x, y positions from the navigation system. Positions are updated every second and expressed as UTM eastings (x) and UTM northings (y).

## 9.2.4 Sample Method and Quality - Topographic Relief and Cultural Features

Topographically, the block exhibits a shallow relief with an elevation ranging from 369 to 455 metres above mean sea level over an area of 196.6 square kilometres (Figure 9-1). The survey area has various rivers and streams running throughout it which connect various lakes and wetlands. There are visible signs of culture throughout the survey, such as trails, roads and Highway 144 runs along the east end of the block. There are also a number buildings and a power line located in the northeast corner. The survey block covers a



number of Ontario Mining Claims. The survey block is covered by NTS (National Topographic Survey) of Canada sheets 041009, 041P12 and 041P05.

9.2.5 Parameters - Aircraft and Equipment

### Survey Aircraft

The survey was flown using a Eurocopter Aerospatiale (Astar) 350 B3 helicopters, registration number C-GEOZ (Figure 9-2). The helicopter was operated by Geotech Aviation. Installation of the geophysical and ancillary equipment was carried out by a Geotech Ltd crew.

#### Airborne Receiver

The airborne ZTEM receiver coil measures the vertical component (Z) of the EM field. The receiver coil is a Geotech Z-Axis Tipper (ZTEM) loop sensor which is isolated from most vibrations by a patented suspension system and is encased in a fibreglass shell. It is towed from the helicopter using a 90 metre long cable as shown in Figure 9-2. The cable is also used to transmit the measured EM signals back to the data acquisition system.

The coil has a 7.4 metre diameter with an orientation to the Vertical Dipole. The digitizing rate of the receiver is 2000 Hz. Attitudinal positioning of the receiver coil is enabled using 3 GPS antennas mounted on the coil. The output sampling rate is 0.4 seconds.

#### Airborne magnetometer

The magnetic sensor utilized for the survey was a Geometrics split-beam optically pumped caesium vapour magnetic field sensor, mounted in a separate bird, and towed on a cable at a mean distance of 57 metres below the helicopter (Figure 9-2). The sensitivity of the magnetic sensor is 0.02 nanoTesla (nT) at a sampling interval of 0.1 seconds. The magnetometer will perform continuously in areas of high magnetic gradient with the ambient range of the sensor approximately 20k-100k nT. The Aerodynamic magnetometer noise is specified to be less than 0.5 nT. The magnetometer sends the measured magnetic field strength as nanoTesla to the data acquisition system via the RS-232 port.





Figure 9-2 ZTEM survey system

## 9.2.6 Results and Interpretation

The total area coverage is 78 km<sup>2</sup>. Total survey line coverage is 641 line kilometres. The principal sensors included a Z-Axis Tipper electromagnetic (ZTEM) system and a caesium magnetometer. Results have been presented as stacked profiles and contour colour images at a scale of 1:20,000 in the original Geotech ZTEM report.

The Z-TEM survey delineated several conductive structures on the Property.

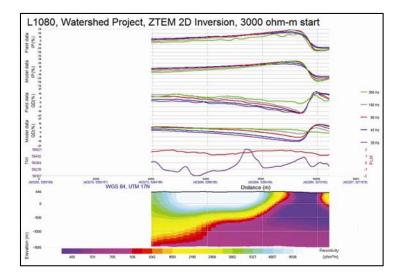
There is no summary interpretation included in the original Geotech report however 2D inversions have been provided in Appendix F of the original report. An example of a typical result for the survey is found in Figure 9-3. These results indicate the typically large, broad and deep features expected from a ZTEM survey. The survey is dominated by a large dipping conductor which is located at the surface in the



northwest potion of the grid and dips south. As one travels east the feature continues to dip south but is non continuous towards the surface.

Figure 9-3, Figure 9-4 and Figure 9-5 for Lines 1080, 1180 and 1260 show that further to the east the lines are broken due to access across neighbouring mining claims, so the continuity of this feature is unknown. The author of the original report mentioned that this deep feature may be an artifact of the inversion, however, he also indicated it may be real, in which case the feature could represent a major structural conduit.

On line 1640 an anomalous deep conductive feature appears isolated at roughly 500- 700m in depth (Figure 9-6).



The total magnetic field results over the grid area are shown in Figure 9-7.

Figure 9-3 L1080 ZTEM 2D Inversion



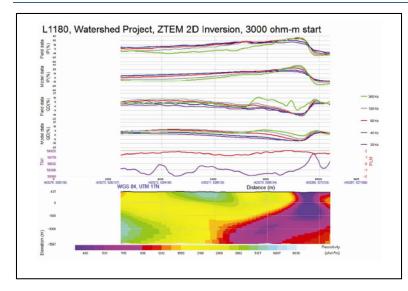


Figure 9-4 L1180 ZTEM 2D Inversion

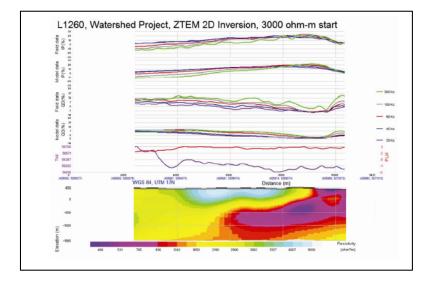


Figure 9-5 L1260 ZTEM 2D Inversion



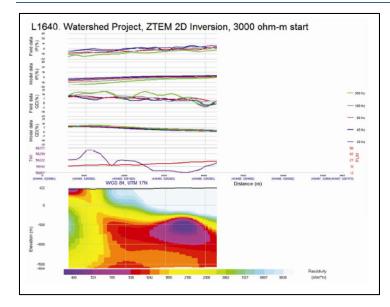


Figure 9-6 L1640 ZTEM 2D Inversion

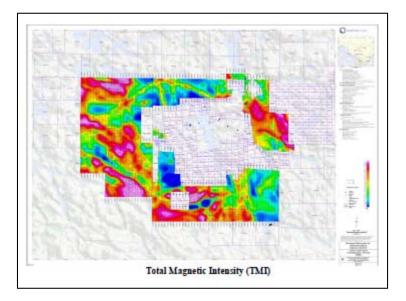


Figure 9-7 Total magnetic field results over the grid area.



## 9.2.7 Geotech's Recommendations

Geotech provided some cursory recommendations as follows. Based on the geophysical results obtained, a number of interesting conductive structures were identified across the Property. The magnetic results also contain worthwhile information in support of exploration targets of interest.

The Z-TEM data has been inverted in 2D but no formal interpretation was provided by Geotech. We therefore recommend a more detailed interpretation of the available geophysical data, including 2D (constrained inversions), in conjunction with the geology, prior to ground follow up and drill testing. A formal interpretation of the inverted dataset is warranted with attention to detail and economic depth of interest. In order facilitate a thorough, investigation of the data in conjunction with the known geological information we recommend a full 3D "common earth model" with use of the Gocad integrated 3D earth modelling package.

3D inversion of the ZTEM data may provide improved understanding of the resistivity substructure however is not recommended at this time, due to the uncertainty in the 2D results.

The magnetic data should be inverted and included in the model for further investigation.

# 9.3 Geological Mapping and Prospecting, June 2011 to June 2012

## 9.3.1 Reconnaissance Sampling

The sampling from this initial phase of the field work was referred to as the SANT series. The survey started in June 20, 2011 and was completed on June 30, 2012. The sample locations and results are listed in Appendix 3 of MNDM Assessment Report 2.54296 (Racicot and Ronacher, 2013). Table 9-2 lists assay highlights. The sample sites and gold values are shown on Figure 9-8. Most of the descriptions of the grab sampling are from Assessment Report 2.54296 (Racicot and Ronacher 2013)

A total of 89 Sant series samples were taken in total. The areas where samples with values greater than 1 g/t gold will be briefly discussed from west to east.

7	<u>[able</u>	9-2	2: A	ssay	hi	ghligh	ts of	the	grab	samples	colle	ctec	l at	the	Wa	tershe	d Property	in 2011.
	~		T		-													

Sample ID	Easting	Northing	Au (g/t)	Claim #
Sant 114	428634	5266702	96.11	3011820
Sant 109	428593	5266719	35.24	3011820
Sant 105	428593	5266719	32.6	3011820



Sample ID	Easting	Northing	Au (g/t)	Claim #
Sant 108	428600	5266718	29.95	3011820
Sant 107	428593	5266733	24.67	3011820
Sant 106	428593	5266719	22.92	3011820
Sant 74	426985	5269753	15.71	3019555
Sant 75	426985	5269753	13.78	3019555
Sant 18B	427850	5266130	10.39	3017672
Sant 73	426985	5269753	10.39	3019555
Sant 76	426985	5269753	7.18	3019555
Sant 68	426956	5269752	6.07	3019555
Sant 65	426956	5269752	4.23	3019555
Sant 56	426972	5269753	4.17	3019555
Sant 70	426956	5269752	4.17	3019555
Sant 72	426985	5269753	3.73	3019555
Sant 55	426972	5269753	3.17	3019555
Sant 62	426972	5269753	2.67	3019555
Sant 41	434526	5268446	2.46	3004844
Sant 54	426972	5269753	2.43	3019555
Sant 44	434526	5268446	2.33	3004844
Sant 52	426972	5269753	2.33	3019555
Sant 103	428500	5266768	2.18	3011820
Sant 40	434526	5268446	2.08	3004844
Sant 45	434526	5268446	1.93	3004844
Sant 77	426985	5269753	1.9	3019555
Sant 49	434526	5268446	1.74	3004844
Sant 78	426985	5269753	1.68	3019555
Sant 61	426972	5269753	1.59	3019555
Sant 42	434526	5268446	1.34	3004844
Sant 53	426972	5269753	1.21	3019555
Sant 60	426972	5269753	1.21	3019555
Sant 104	428500	5266768	1.21	3011820
Sant 94	434530	5268455	1.18	3004844
Sant 59	426972	5269753	1.12	3019555



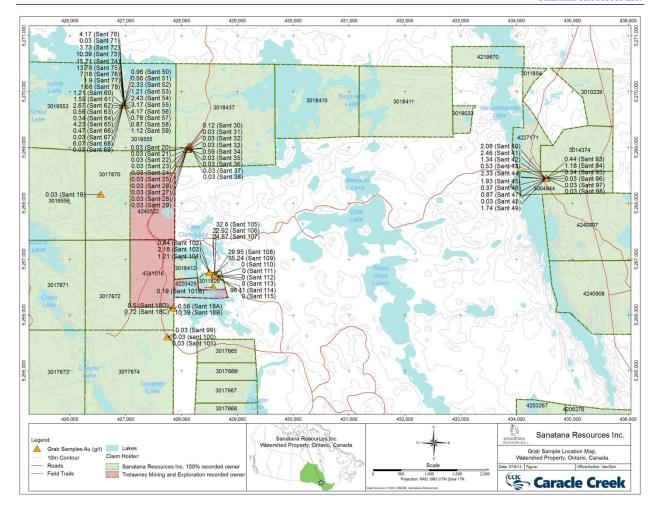


Figure 9-8: Locations and results of the grab samples collected at the Watershed Property in 2011. All samples and their locations are listed in Table 9-2. Samples listed as S- are listed as SANT- in Table 9-2.

### South of Schist Lake

Twenty nine samples were taken from an old showing where Augen Gold had obtained anomalous grab samples in 2009. Eighteen of these samples contained values greater than 1 g/t gold and three of the samples had values greater than 10 g/t gold). Sample Sant 74, the highest sample, had a value of 15.707 g/t gold taken from a 5–8 cm quartz vein containing 1–2% pyrite within a schistose, sheared, mafic volcanic rock.

The presence of volcanic rocks and nearby arsenopyrite was reminiscent of arsenopyrite bearing gold showings in volcanic rock several townships to the west in Osway and Huffman townships.



### Chester Road West of Bagsveld Lake

Nineteen samples were taken from a site where Augen Gold had obtained an anomalous gold value of 3.67 g/t in a quartz vein with chloritic seams in 2008. The highest value from these 19 samples was 0.591 g/t in some chlorite bearing quartz rubble beside Chester Road. There were numerous small, discontinuous quartz veins in this area.

## West of Clam Lake

Seven samples were taken west of Clam Lake and only sample Sant 18B was anomalous. It contained 10.39 g/t Au in some pit rubble near the eastern boundary of the Property. The sample consisted of a 1–2 cm wide pyrite band (8–10% pyrite) on the edge of a rusty quartz vein.

### Claim 3011820- East of Clam Lake

Eighteen samples were taken from this claim. Three grab samples were taken from the north boundary of this claim prior to the stripping. Samples Sant 103 and 104 had values greater than 1 g/t gold (2.18 and 1.21 g/t gold respectively) in a quartz diorite with minor chalcopyrite along fracture planes.

Fifteen grab samples were taken to the southeast near trenches 1 and 2 prior to the washing and channel sampling. Three samples had values greater than 1 g/t Au. Sample Sant 105 and Sant 109, both taken from the west side of trench 2, had chalcopyrite associated with a quartz vein in a diorite/gabbro. Sample Sant 114 was the highest grab sample of this series from the trenches with a value of 3.09 g/t Au. It was a composite sample of a light coloured, 'gritty looking' rock (quartz diorite) taken from a flat area near the north end of trench 1 taken prior to the trench being washed. A series of channel cuts were later done in the vicinity of this grab sample- but the results were not duplicated.

## Pole Line Showing

Sixteen samples were taken from an old showing referred to as the Eccles-Holmes # 4 vein- situated under the pole line and just east of the Mesomikenda Lake Road. This showing was first discovered in 1933 and over the years channel or grab samples ran from 1.7 g/t gold to 48 g/t gold.

Seven of the grab samples had values greater than 1 g/t gold. The rock was originally described as a 'quartz grit' with numerous quartz grains but was later recognized as a quartz diorite, often with numerous blue quartz grains. The highest assay was sample Sant 41 with 2.46 g/t gold. This sample had 6–8% pyrite.



Area	Easting	Northing	Claim
SE of Schist Lake	426972	5269753	3019556
Chester Road W of Bagsveld Lake	428129	5269000	3018437
East of Clam Lake	429100	5266908	3007643
West of Clam Lake	427850	5266130	3017672
Claim 3011820	428500	5266768	3011820
Pole Line Series	434530	5268455	3004844

Table 9-3: Location summary table of grab sample areas.

# 9.3.2 Outcrop Mapping and Channel Sampling

Following the reconnaissance sampling, geophysical anomalies east of Clam Lake were stripped and mapped and channel samples were collected (Figure 9-9; Table 9-6). The initial outcrop stripping (referred to below as trenching although no bedrock was moved) was done over an easterly trending resistivity anomaly. The western edge of this anomaly appears to be offset by about 150 meters to the south. Detailed maps of the trenches are shown in Appendix 4. The trench descriptions are from Assessment Report 2.54296 (Ronacher and Racicot, 2013). Trench grab samples highlights are listed in Table 9-4 and trench channel sample highlights are show in Table 9-5.

Sample ID	Easting	Northing	Claim	Trench #/Area	Au (g/t)
5279132	426789	5266428	3017672	Line 2: S end of Adanac	25.26
6042	428701	5266693	3011820	Trench 5	3.06
16044	428702	5266697	3011820	Trench 5	2.27
16030	428478	5266454	3011820	Trench 4	2.01
5279071	426810	5266197	3017672	Line 2 Parking Lot	1.99
16104	428644	5265444	3017665	E of Line 9	1.93
16052	428698	5266707	3011820	Trench 5	1.33
5279035A	426944	5266918	3017672	Line 3 South	1.11

Table 9-4 Highlights of trench grab samples (samples with Au values >1 g/t).

Table 9-5 Highlights of trench channel samples (samples with Au values >1 g/t).

Sample ID	Easting	Northing	Claim	Trench #	Length (cm)	Au (g/t)	
849816	428610	5266704	3017820	Trench 2	101	6.181	
849949	428646	5266631	3017820	Trench 1	113	4.422	
849660	428706	5266706	3017820	Trench 5	65	3.033	

Oct. 29, 2015

#### **CARACLE CREEK INTERNATIONAL CONSULTING INC.**

Page | 82



Sample ID	Easting	Northing	Claim	Trench #	Length (cm)	Au (g/t)
849637	428696	5266694	3017820	Trench 5	65	2.891
849947	428646	5266632	3017820	Trench 1	99	2.863
62550	429045	5265381	3017665	Chester	77	2.466
849808	428602	5266708	3017820	Trench 2	66 cm	2.267
849862	428594	5266656	3017820	Trench 2	100	1.984
62546	429055	5265344	3017665	Chester	69	1.956
62599	428659	5265446	3017665	L 9: E side	66	1.871
849671	428697	5266706	3017820	Trench 5	80	1.644
849911	428635	5266654	3017820	Trench 1	95	1.36
62574	426751	5266222	3017672	Trench 5	29	1.304
849553	428593	5266767	3017820	Trench 2	106 cm	1.162
849896	428638	5266664	3017820	Trench 1	102	1.048
849617	428698	5266675	3017820	Trench 5	105	1.02





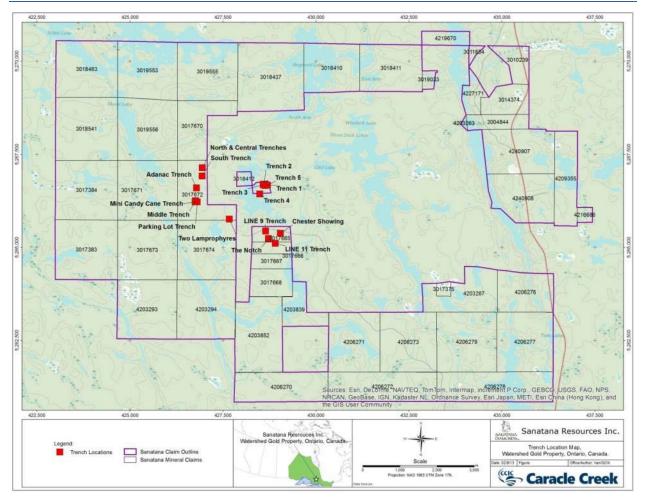


Figure 9-9: Overview map showing the locations of the trenches. Detailed maps of the trenches are in Appendix 4.

Grab samples were initially taken from the exposed trenches before they were washed and channel sampled as a way of obtaining an advance look at potential anomalous areas. Grab sample locations were based on a combination of obtaining a systematic distribution of samples, sampling sulphides and/or quartz veins. A list of trench grab samples is provided in Appendix 5 of Assessment Report 2.54296 (Racicot and Ronacher, 2013).

The trenches were subsequently mapped and channel sampled. Channel samples were taken as continuously as possible down the length of the trench. The channel samples were usually about a meter long unless the topography or geology dictated otherwise. A list of trench channel samples is provided in Appendix 6 of Assessment Report 2.54296 (Racicot and Ronacher, 2013).



The grab samples and subsequent channel samples were sent to SPJ labs in Sudbury and initially analyzed only for gold. Some channel samples were sent to ALS Laboratories in Sudbury for multi-element analysis.

The geological descriptions of the trenches relied on the field terms. For example, some of the intermediate rocks were pinkish locally due to hematization and were referred to as 'granodiorite' in the field; however, these rocks are typically quartz diorite.

## Claim 3011820

Prior to the trenching, several grab samples were taken from the north boundary of this claim. Sample Sant-103 had a value of 2.18 g/t gold indicating the rocks on this claim had a potential for containing anomalous gold values. A detailed list of all trench grab and channel samples is provided in Appendix 5 and 6 of Assessment Report 2.54296 (Racicot and Ronacher, 2013).

Five trenches were established on this claim and are shown on Figure 9-9. Trenches 1, 2A, 2B, 3 and 5 covered the north resistivity anomaly on line 15 and 16 while trench 4 was located close to the southern offset of the resistivity anomaly on Line 13.

In addition, channel samples from claim 3011820 were analyzed for major element oxides and trace elements to assist with geological interpretations. Samples from claim 3011820 were studied in detail with the goal to understand the nature of the mineralization and of finding additional mineralized zones.

## Trench One:

This trench is located on the south half of the east trending apparent resistivity anomaly about 50 m east of grid Line 15. This was the longest trench on the claim with a length of 103 m, including an eight meter, water-filled hole near the center where no outcrop was obtained. North of the water-filled hole, the general geology of the trench consisted of about 15 meters of grey quartz diorite followed by about 25 m of gabbro.

South of the water-filled hole there were about five meters of gabbro followed by about 10 meters of felsic tonalite and about 40 meters of diorite with minor pink diorite and gabbro.

A total of 21 grab samples and 129 channel samples were taken from this trench. Of the 129 channel samples, 14 contained values greater than 0.1 g/t gold. The majority of these anomalous samples came from the center of the trench from a pink granodiorite. Of the 14 anomalous samples, six were above 0.3 g/t and an additional four samples had values >1.0 g/t.



Sample 849949 located near the south end of the trench was the highest channel sample with a value of 4.42 g/t gold. This was a composite sample taken across the contact of a  $0.5 \times 2$  m dark 'xenolith' and medium-grained, dark grey and pink diorite.

The highest-grade grab sample had a value of 2.09 g/t gold (sample Sant-114). This sample was a composite sample located in a fine grained, gritty, felsic granodiorite situated between the grey granodiorite and the gabbro in the north section of the trench. Numerous channel samples were taken in the area where the composite grab sample came from but the high gold grade could not be duplicated, likely due to the nugget effect.

### Trench Two:

This trench was established in two sections, a north and south trench about 25 meters east of Line 15. The northern trench (2A) was initiated from the northern claim boundary of the claim and covered the north contact of the apparent resistivity anomaly. The southern part of this trench was done in two sections (2B and 2C), largely due to the location of the access road.

The dominant rock type in this trench is gabbro or greenish altered gabbro with some more felsic diorite or granodiorite locally. There were also a few flat lying quartz veins and a lamprophyre dyke.

Five grab samples were taken from this trench: two of these samples assayed over 1 g/t gold (Sant-109 and Sant-105). Sample Sant-105, from an irregular, rusty quartz vein in a knobby textured gabbro, assayed 1.048 g/t Au. A nearby rusty quartz vein with 20% chalcopyrite assayed 1.133 g/t gold (Sant-109).

Seventy channel samples were taken from trench two with eight samples assaying greater than 0.1 g/t gold. Of these eight anomalous samples, four assayed >1 g/t gold. The anomalous samples are equally spaced throughout the length of the trench.

Sample 849816 located at the south end of the trench was the highest channel sample with a value of 6.181 g/t gold in a rusty, flat lying, 1 cm wide quartz vein within a medium grained gritty looking granodiorite. Two small channel cuts were made in the quartz vein and the host rock in an effort to determine the source of the gold- although the subsequent assays were low and inconclusive.

Sample 849808, located about 10 meters northwest of sample 849816 was the second highest channel sample from this trench and assayed 2.267 g/t gold. This sample is a steeply dipping quartz vein in a dark gabbroic rock.



Trench Three:

Trench three covered the southern contact of the resistivity anomaly just west of Line 15. The trench was only 35 meters long, including a 10 meter section that was quickly flooded by a spring at the north end. The majority of the trench was a hard, mafic, feldspar porphyry.

Eleven grab samples were taken from this trench, including at least eight that were located at the north end of the trench before it was flooded; none of the grab samples contained anomalous gold values. Twenty seven channel samples were taken from the trench but none of these were anomalous.

Trench Four:

An attempt was made to strip the western edge of the easterly trending apparent resistivity anomaly on Line 13. This portion of the anomaly is bounded to the south, east and west by Clam Lake. An east–west trending cliff also cuts across part of the anomaly, which made stripping this anomaly somewhat difficult.

The exposed portion of this trench is 30 meters long. An additional 17 meter long narrow trench was dug on the northern edge of the outcrop trench but solid bedrock was not reached. North of this narrow trench an additional 10 meters was dug up but subsequently filled in shortly after it was exposed because of flooding.

Most of the trench geology was quartz diorite that ranged in colour from pink to grey.

Eight preliminary grab samples were taken from this trench, including two samples from the northern, filled in section. Three samples had values greater than 0.1 g/t- with the highest sample (16030) assaying at 2.012 g/t. This sample had 1% chalcopyrite in rusty fractures in a siliceous looking diorite.

Thirty four channel samples were taken from this trench. Five samples had values >0.1 g/t Au, with sample 849705 having the highest value of 0.708 g/t Au in a 1 cm pyrite vein in a grey granodiorite with blue quartz.

Trench Five:

Trench 5, the most easterly of the trenches on this claim, covered the northern edge of the resistivity anomaly on Line 16. The initial west part of the trench was flooded so the trenching had to progress to the north and east.

Oct. 29, 2015



This trench was 45 m long and was the most diverse of the trenches on this claim. The north section of this trench was generally a medium- to coarse-grained gabbro and/or dark diorite. The central portion of this trench contained an easterly trending, 2–3 m wide, biotitic, lamprophyre with a 1–1.5 m quartz vein within the lamprophyre near the southern contact: the quartz vein pinches out to the west. The south section of the trench consisted mainly of a pink, felsic altered granodirite.

Twenty seven preliminary grab samples were taken from this trench. Ten of these samples had values >0.1 g/t gold. Three of these 10 samples had values >1 g/t gold, with sample 16042 having the highest value of 3.061 g/t Au; this sample was described in the field as being in "a fine grained, light gray granodiorite that contained < 2% mafics, 2–4% chalcopyrite in 2–3 mm fractures and 1–2% pyrite associated with a one cm wide mafic band".

The southern group of anomalous gold samples, including sample 16042, was clustered south of the east trending lamprophyre and quartz vein. A second grouping of anomalous gold values had five samples that were spatially related to a sulphide bearing diorite or gabbro near the north third of the trench. Sulphides, dominantly chalcopyrite, were usually related to these anomalous gold values.

Sixty seven channel samples were taken from trench five. Twelve of these samples assayed over 0.1 g/t Au and of these, four samples assayed >1 g/t gold. The highest channel sample was sample 849660 which assayed 3.033 g/t Au over 0.65 m in sheared fine-grained, medium grey diorite with chlorite and a five cm wide quartz vein. The second highest channel sample, sample 849637, occurred about 10 meters west of 849660 and assayed 2.891 g/t Au in a fine- to medium-grained light green diorite.

## Chester Road Stripping

Additional stripping was completed on seven different areas along Chester Road. The areas are located south and west of Clam Lake. They will be discussed from west to east. Apparent resistivity anomalies were stripped on Line 2, Line 3, Line 9, Line 10 and Line 11.

Two additional areas of geological interest along Chester road were also stripped by excavator. One was an area referred to as "The Two Lamprophyres". This was an area where there were two mafic units that intersected. The second area was the Chester showing, an area beside the Chester road that had very high historical gold values (up to 143 g/t; Ontario Mineral Deposit Inventory Number: MDI41P12SW00020). This showing was so close to the stripping on Line 9 and had high historical gold values, therefore it was stripped to obtain a better understanding of the geology.



#### Line 2:

This line was covered by a broad apparent resistivity anomaly. This resistivity anomaly was stripped in four different locations. They are described from north to south.

### Adanac Trench:

The Adanac was the longest of the trenches with a length of  $\sim 230$  m. The dominant rock type was gabbro and/or basalt. Some of these mafic rocks were pinkish locally due to hematization and were referred to as 'granodiorite' in the field although they are quartz diorite rather than granodiorite.

The southernmost part of the trench contained breccia and feldspar porphyry. There was also an old shallow,  $\sim 25$  m long trench west of the new trench near the top of the hill. The new trench did not uncover anything of significant interest.

A total of 40 grab samples were taken from this trench. Only two samples had values > 0.1 g/t gold. Sample 5279132 was the highest sample from this trench with a value of 25.26 g/t Au. The sample came from a small quartz vein with about 5% pyrite hosted by granodiorite. Sample 5279133 located immediately south of 5279132 had an anomalous value of 0.453 g/t Au in a medium-grained, pink and grey granodiorite.

### Middle Trench:

This area was a small area located about 50 meters south of the Adanac trench and on the east side of the access road. This trench was  $\sim$ 30 meters long and although no samples were taken. Most of the exposed rock on the trench was granodiorite with a narrow mafic dyke in the south and a medium grained porphyry in the north. All contacts and geological trends in this outcrop strike  $\sim$ 140°. This is consistent with many other contacts on the Property.

### Mini Candy Cane Trench:

This area was stripped because the edge of a mafic lamprophyric dyke had been uncovered by the excavator and 23 grab samples had been taken from the immediate area.

After stripping additional eight grab samples were taken. Two of the initial grab samples had values > 0.1 g/t Au. Sample 16211 assayed 0.59 g/t Au in a medium-grained, light grey granodiorite with 2% free quartz and 3–4% pyrite crystals: sample 16213 assayed 0.458 g/t Au in a fine- to medium-grained pink granodiorite with 5% pyrite and spatially associated with a mafic fracture zone.

The northern part of this trench was mainly a pink granodiorite or a hematized gabbro/basalt. The southern portion of the trench was mapped as a possible felsic flow or pink, hematized granodiorite with a possible xenolith at the south end.

This trench had two noteworthy features: (1) the first was a lamprophyre-type unit trending at  $140^{\circ}$  at the north end of the trench. (2) The second feature was a series of easterly trending, rusty, narrow (5–10 cm) sheared bands. They frequently had sulphides associated with them and appear to be in close proximity to some of the anomalous channel samples, including the highest-grade sample from this trench, sample 62574.

After the trench was mapped, 29 channel samples were taken. Five of these samples contained values >0.1 g/t gold. The highest assay from this trench was sample 62574 with a value of 1.304 g/t Au. It was taken from a 30 cm channel with 1–2% coarse-grained pyrite at the southeast end of a one meter wide quartz pod.

## Parking Lot Trench:

This trench was located about 40 meters east of the Mini Candy Cane trench and was stripped to cross the north contact of the resistivity anomaly.

This trench is about 100 meters long. Most of the southern section of the trench is gabbro (or coarse grained basalt), much of which is magnetic and/or hematized. The remaining section of the trench has feldspar porphyry and felsic granodiorite. Five grab and six channel samples were taken from this trench.

Grab sample 5279071 assayed 1.991 g/t Au and consisted of a small sample with two fragments of a pyrite vein in dark green, fine-grained, chlorite with quartz, 5% pyrite and a trace of chalcopyrite; the host rock was a gabbro.

Three of the six channel samples were anomalous and contained values >0.1 g/t Au. Sample 62579 and sample 62580 were from a medium-grained diorite with abundant blue quartz. These two samples were located about 5–6 meters north of the high-grade grab sample 5279071. Sample 62583 had an assay of 0.368 g/t gold in very hematized, medium-grained, pink granodiorite: this could be indicative of a possible relationship between the hematite and gold. There were no visible sulphides or quartz at this sample site.



Line 3:

This trench was the most northerly of all the trenches. It was established over a broad apparent resistivity anomaly and was stripped in four different sections due to hilly or wet areas. The total length of all the trenching over the anomaly was approximately 200 m.

The dominant rock type was granodiorite, ranging from pink, grey to green in colour. The two highest- grab samples of the north central trench occurred in an area of greenish granodiorite. There was also evidence of at least one lamprophyre dyke in the north central trench.

A total of 54 grab samples were taken from the line 3 trenches. Two of these samples had >0.1 g/t Au. Sample 16193 on the north central trench was in a medium-grained, rusty greenish granodiorite and had a value of 0.340 g/t Au.

Sample 5279035A, taken from the south trench, had a value of 1.105 g/t Au in a medium-grained, medium grey, gritty, quartz-rich granodiorite with a 0.5 cm wide pyrite-rich fracture. The geology on this trench was very uniform and other sulphides were rare.

Twenty five channel samples were taken from a part of the central trench. Cold weather and other factors prevented more comprehensive channel sampling on this trench. Two samples had values > 0.1 g/t Au. Sample 849754 had 0.286 g/t Au in a greenish pink and grey granodiorite. Sample 849788 had a value of 0.34 g/t Au in a medium- to fine-grained, pink granodiorite between a quartz carbonate zone and a 2 m wide shear zone striking  $120^{\circ}$ .

### Line 9:

A small resistivity anomaly on line 9 was on strike with a larger resistivity anomaly to the southeast on Lines 10 and 11 that was located immediately south of the Chester showing. There was also a smaller resistivity anomaly closely associated with the Chester showing on Line 11. The possibility that one or both of these anomalies could be related to the Chester showing warranted stripping the resistivity anomaly on line 9.

This small resistivity anomaly was trenched in two areas but bedrock was not reached. Subsequently, trenching was moved about 40 m to the east and a small exploratory area was trenched. Three preliminary grab samples were taken before the area was washed. Sample 16104 assayed 1.927 g/t Au in a felsic intrusive with a trace of malachite on one of the fractures. The three samples were all next to a lamprophyre.



This small exploratory area was expanded and two trenches were dug, an east and a west trench. The west trench, the smallest of the two trenches, consisted mainly of a pink and grey granodiorite and a lamprophyre striking at  $140^{\circ}$ . Ten grab samples and seven channel samples were taken from this trench. The only sample that assayed > 0.1 g/t was channel sample 62587 with a value of 0.68 g/t gold. The sample consisted of 70% grey, mafic, strongly sheared rock (lamprophyre?) and 30% quartz.

The east trench was located just to the east of the original high grab sample. Most of this trench consisted of pink granodiorite as well as the original lamprophyre. A narrow breccia zone in proximity of the original anomalous grab sample (16104) extended intermittently at a bearing of about 080° from sample 16104. This breccia zone was less than a meter wide and appeared to stop after about 5–7 m in the west end of a discoloured zone.

Seventy eight (78) grab samples were taken from this east trench. Seven of these grab samples assayed >0.1 g/t Au. Sample 16149 assayed 0.283 g/t Au and sample 16151 assayed 0.996 g/t Au; both samples were from medium-grained, pink granodiorite with no notable visible sulphides. These two samples were within 2–3 m of the breccia zone but do not appear related.

The five other anomalous samples all assayed between 0.2 and 0.3 g/t Au. All five samples were in a medium grained, pink granodiorite with rusty fractures, but without notable visible sulphides.

A total of 21 channel samples were also taken from the east trench. Two of the samples had values >0.1 g/t Au. Sample 62593 had a value of 0.113 g/t Au and was an 80 cm long sample of medium-grained, dirty pink granodiorite from the breccia zone. Sample 62599 had a value of 1.871 g/t Au; it was a 66 cm long sample taken from the eastern end of the breccia zone in the discoloured zone. This sample consisted of 75% medium-grained, pink granodiorite and 25% fine-grained mafic granodiorite.

Line 10:

An attempt was made to reach the center of the apparent resistivity anomaly on Line 10 from a north–south gravel road, located west of the anomaly but the area was covered by extensive swamp. Several small areas on or near the western edge of the anomaly were trenched and washed. No obvious sulphides or quartz veining were noted and these areas were not mapped or sampled.

Line 11:

The gravel road mentioned above was extended from west of Line 10 east to Line 11. A trench was established on the west side of Line 11 but the overburden was too deep at the south end of the resistivity anomaly. The trench was extended south in an attempt to trench the small resistivity anomaly about 100 m to the south. Just before the anomaly was reached the overburden became too deep and water began to seep in. The last 15–20 m of the trench were filled in but the remainder of the trench was mapped.

This remainder of the trench was ~65 meters long. Most of the trench was a pink or grey granodiorite. An east trending gabbro unit located in the center of the trench appears to have cut off a narrow, north trending, magnetic diabase dyke. A small lamprophyre dyke occurs immediately south of the diabase dyke.

Fifteen grab samples were taken from this trench, including 10 samples that were taken from the area that was flooded and filled in. Two of these samples had values > 0.1 g/t Au. Sample 16091 was in a very rusty carbonate on top of a medium-grained mafic unit striking 060°; it assayed 0.311 g/t Au. Sample 16099 assayed 0.141 g/t Au in a slightly rusty, pink, felsic unit with small silvery, pyrite cubes.

Chester Showing:

Several strategic patches were successfully stripped and washed adequately enough to obtain 34 channel samples.

Most of the outcrop is granodiorite. On the east side of the mapped area there is a 1–2 m wide, moderately foliated lamprophyre dyke striking140°. A 25 m wide swamp about 18-20 meters west of this outcrop also strikes at approximately 140°.

Between the lamprophyre and the swamp there is an old 10 m deep shaft and an old 15 m long trench that strikes  $\sim 080^{\circ}$ . There are also various short, discontinuous, partly flat quartz veins in close proximity to the old trench.

The only quartz vein that extended from the west end of the trench was a narrow, 3–4 cm wide quartz vein striking 080°. Five grab samples were taken from the west end of the trench, including sample 62514 which cut across the narrow quartz vein; it did not produce any anomalous gold values.

Four additional channel samples were taken from the west end of the trench, on strike with where a goldbearing quartz vein would have exited the trench. Only one sample, 62513, was > 0.1 g/t Au with a value



of 0.34 g/t in a grey grandodiorite. This sample was close to, but south of the narrow, 3–4 cm wide quartz vein mentioned above.

The stripping allowed for almost continuous channel sampling on the east side of the trench. Six samples were taken from north to south and laid out so that if a quartz vein extended east from the trench, it would be detected. Even though there was no quartz vein extending from the trench, all six samples had values >0.1 g/t Au. All six samples were a medium-grained, medium pink granodiorite. The most southern sample, 62546, had the highest value of the channel samples (1.958 g/t Au). This sample contained minor pyrite.

The stripping also uncovered several small, flat lying or irregular quartz veins several meters north of the trench as well as some small quartz veins in close proximity to the lamprophyre dyke. Seven of these channel samples had values > 0.1 g/t gold. Two of the 3 samples north of the old trench were associated with flat lying quartz veins that were parallel to the lamprophyre, but about 7–8 m west of the lamprophyre.

Four other anomalous samples were in close proximity to the lamprophyre: two of them were associated with narrow quartz veins parallel to the lamprophyre. The other two anomalous samples had quartz as part of the sample.

The highest-grade channel sample taken in the fall of 2011 from this showing was sample 62550, located several meters north of the exposed lamprophyre. This sample assayed 2.466 g/t Au in a rusty quartz vein in medium-grained, pinkish granodiorite that was exposed by hand stripping. This sample did not appear to be related to the lamprophyre and as a result of the limited stripping around this sample, only two samples were taken from this area.

Two Lamprophyres Trench:

This outcrop is located in claim 3017674 on the west side of Chester Road (Figure 9-9). This area was stripped because of a high amount of hematite staining along one roadside outcrop. The trenching was approximately 35 m long and eventually exposed two lithologically different lamprophyres in a pink granodiorite. One lamprophyre was a dark to medium grey, slightly banded, foliated unit with minor biotite striking 150°. The other lamprophyre was a younger, darker, biotite-rich unit that cut across the first lamprophyre at ~020°.

Seventeen grab samples were taken from this trench. Six samples assayed > 0.1 g/t Au and were in or close to the older, foliated lamprophyre. Sample 16079 was the highest assay with 0.595 g/t Au in a fine- to



medium-grained, light pink, felsic, slightly green quartz diorite with possible small quartz veins and rusty fractures. Three of the other anomalous samples appear to be associated with what was referred to in the field as a dirty gray "quartzite" with 0.5–1% pyrite and rusty fractures. The two other anomalous samples were from the older lamprophyre that had minor pyrite.

#### The Notch:

Fourteen channels samples were taken from an outcrop on Line 10 in 2012 referred to as 'The Notch'. Most of the rock type in this trench was a granodiorite, but there was an area with abundant narrow quartz veins as well as a larger flat lying quartz vein with chlorite fractures. None of the channel samples from this trench were anomalous.

#### Table 9-6: Summary table of channel sample areas.

able 9-0: Summary table of chann	Easting	Northing	Claim #	Length (m)
CLAIM 3011820				
Trench 1	428635	5266665	3011820	104.5
Trench 2	428602	5266703	3011820	69.1
Trench 3	428584	5266687	3011820	37.8
Trench 4	428490	5266440	3011820	29.5
Trench 5	428700	5266675	3011820	48.4
<u>LINE 2</u>				
Adanac Trench	426790	5266600	3017672	260.8
Middle Trench	426765	5266255	3017672	31.3
Mini Candy Cane Trench	426755	5266225	3017672	44.7
Parking Lot Trench	426810	5266225	3017672	109.0
LINE 3				
North & Central Trenches	426950	5267145	3017672	154.2
South Trench	426944	5266918	3017672	62.8
LINE 9 Trench	428648	5265442	3017665	42.7
LINE 11 Trench	428907	5265110	3017666	78.4
CHESTER ROAD OUTCROPS				
Chester Showing	429045	5265380	3017665	24.5
Two Lamprophyres	427673	5265760	3017672	72.2
THE NOTCH	428725	5265240	3017665	13.1
TOTAL			-	1183.0



## 9.4 EarthProbe IP Surface Survey, June – July 2011

Sanatana contracted Caracle Creek, to complete an EarthProbe survey consisting of high resolution direct current (DC) resistivity and induced polarization (IP) on the Watershed Property (Palich and Qian, 2012a, MNDM assessment file AFRO ID: 2.53494). The survey consisted of two components; surface high resolution resistivity and IP, and borehole resistivity and IP. The objectives of the survey were to map the resistivity and chargeability signature of the Property to locate potential extensions of the Côté gold mineralization trend and identify potential drilling targets. The EarthProbe surface DCIP survey was undertaken on the Property from June 10 – July 20, 2011.

## 9.4.1 Procedures and Parameters

The geophysical survey was undertaken using the EarthProbe high resolution direct current resistivity and induced polarization (DCIP) logging and tomography system. The EarthProbe system can be configured for the collection of standard surface IP data, vertical resistivity profiles (VRP), and/or multi-bore/surface-to-bore tomographic images. For this survey, data were collected using the surface DCIP configuration.

The EarthProbe technology measures the IP effect in the time-domain. Time-domain measurements involve sampling the waveform at intervals after the current is switched off to derive the apparent chargeability, which is a measure of the strength of the induced polarization effect. At the same time as chargeability measurements are collected, apparent resistivity data can be derived from the constant current on-time of the waveform after the initial IP charging effects are over, providing further information about the presence or absence of conductive minerals within the host rocks.

## 9.4.2 Sample Method and Quality

IP data were collected in three areas (west zone, central zone, and east zone) along surface lines spaced 150 m apart, which is considered an appropriate spacing to collect the desired information about the subsurface.

IP and resistivity measurements were taken in the time-domain mode using a 2,048 millisecond (ms) square wave change cycle (512 ms positive charge, 512 ms off, 512 ms negative charge, 512 ms off). The delay time used after the charge shut off was 128 ms.

The electrode configuration used for this survey was the Wenner-alfa configuration. Stainless steel stakes were used for current electrodes (A-B) as well as for the potential electrodes (m-N). In this array, A-M-N-B is equally spaced, and for each reading, the "a-spacing" between all electrodes is incremented by one.



The Quality Control methods employed during the EarthProbe survey are discussed in Section 12.2.4. Data collection was continuously monitored at the survey site. Data collected that did not pass conditions set in Table 11-1 was re-surveyed on site immediately. All EarthProbe final data collected on the Watershed Property passed the conditions set in Table 11-1.

Despite the results, during the interpretation process it was noted that the magnitude of the current waveform measured in the eastern grid was less than typically observed for an EarthProbe survey under non-frozen conditions. This may have decreased the measured response sensitivity range. Further analysis is required.

## 9.4.3 Survey Design

The IP survey covers portions of claims 3017670, 3017672, 3017674, 3017666, 3017667, 3017668, and 3011820. Details of these claims are summarized in Table 4-1. The survey location is shown in Figure 9-10.





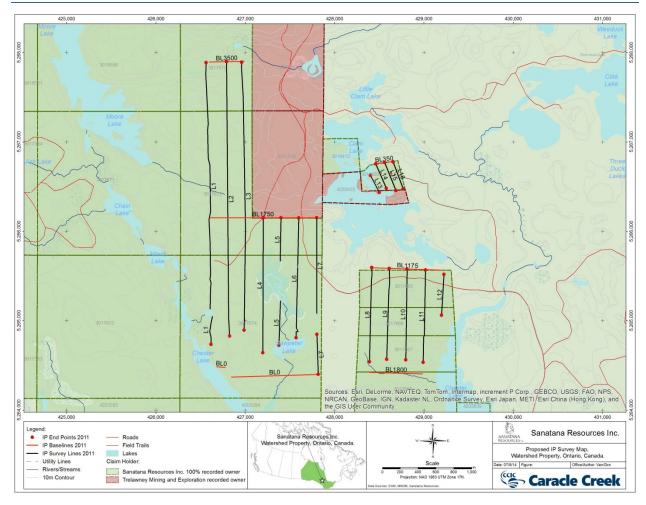


Figure 9-10 Exploration location of the EarthProbe DCIP survey on the Watershed Property, Chester and Yeo townships.

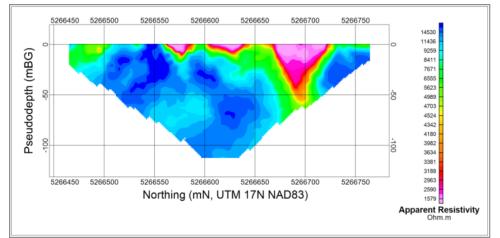
IP data were collected along 16 surface lines (totalling 21.7 line-kilometres) spaced 100 m to 200 m apart (Figure 9-10), over areas immediately along strike from the adjacent IAMGOLD Côté Gold Deposit. Approximately 3.3 line-kilometres of planned survey were not completed due to the inundation of the survey area with water at the time of the survey. The size of the area covered by the IP survey is approximately 338 hectares. The electrode separation was 4.4 m - 10 m. The electrode configuration used for this survey was the Wenner-alfa configuration. Stainless steel stakes were used for current electrodes (A-B) as well as for the potential electrodes (M-N). In this array, A-M-N-B is equally spaced, and for each reading, the "a-spacing" between all electrodes is incremented by one.



# 9.4.4 Results and Data Interpretation

Apparent resistivity and chargeability pseudosections for all surface lines are presented in Appendix 3 of the original report (Figure 9-11). Plan maps for Clam Lake (n=2, 5, 10, 15 and 20), and Chester Area and Chain Lakes (n = 2, 5, 10, 15, 20, 30, and 40) are provided in Appendix 4 of the original Caracle Creek Report dated July, 2012 (Figure 9-12).

In general the Watershed project area is characterized by surficial features of low to moderate resistivity (1,500 - 8,000 Ohm.m) and low chargeability (less than 20 mV/V). Beneath these surficial features, resistivity increases with increasing depth with basement exhibiting resistivity greater than 15,000 Ohm.m. Background chargeability in the survey area is interpreted to be less than 20 mV/V.



Example of resistivity and chargeability results for Line 5 are in Figure 9-13

Figure 9-11 Example of the apparent resistivity pseudosection for surface line for L15.



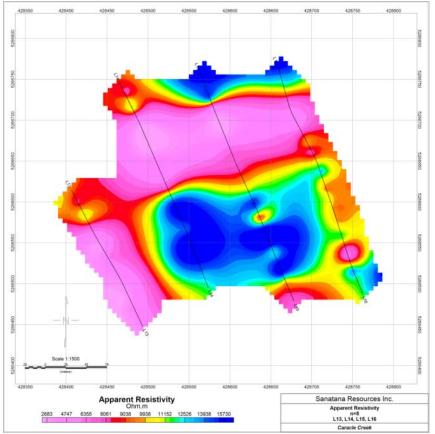


Figure 9-12 Example of an apparent resistivity plan map for n = 5 for the Clam Lake area.

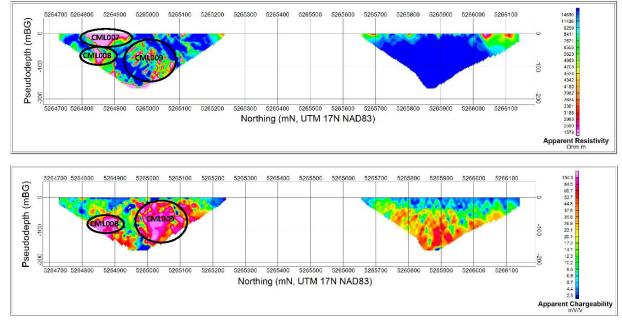


Figure 9-13 Apparent resistivity (above) and apparent chargeability (below) pseudosections for surface Line 5.

Oct. 29, 2015



### Clam Lake Area

Due to the small size of the claim, investigation of the Clam Lake area was predominantly limited to the top 100 m of the subsurface. Three features of interest were identified in the Clam Lake Area (Figure 9-14).

### **Chester Area**

Investigation of the Chester area extended to depths between approximately 180 - 220 m below surface, excepting L12, which extended to approximately 125 m. Several features of interest were identified in the Chester Area: CHS001 to CHS008 (Figure 9-14).

### **Chain of Lakes Area**

Investigation of the Chain of Lakes area extended to depths between approximately 220 - 400 m below surface, excepting L5 which was broken by an impassable swamp and therefore was run as two short arrays, investigating depths up to 180 m. Several features of interest were identified in the Chain of Lakes area: CML001 to CML-12 (Figure 9-14).



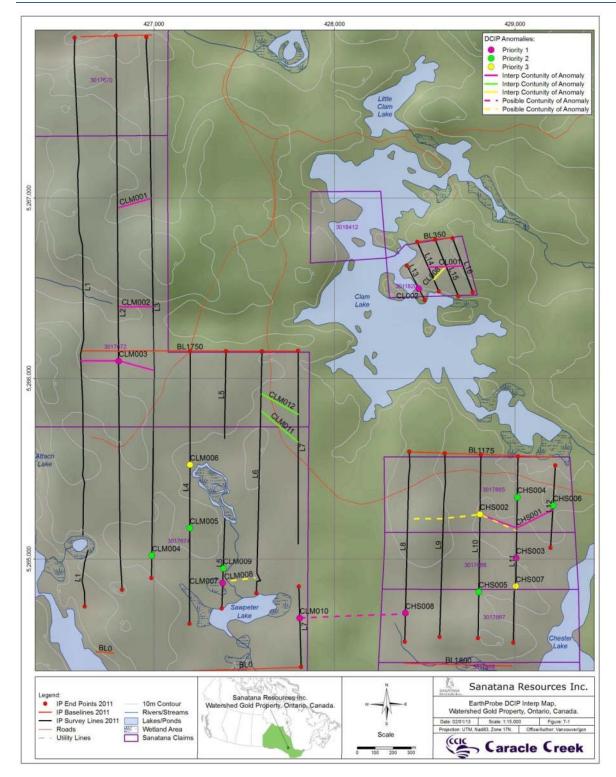


Figure 9-14 Location of the center points of anomalous features identified from the EarthProbe DCIP survey



## 9.4.5 Conclusions

The EarthProbe DCIP surface data collected have successfully imaged the subsurface with a theoretical depth of investigation of 100 m in the Clam Lake area, 180 - 220 m in the Chester area, and 220 - 400 m in the Chain of Lakes area.

Results of the survey have been presented and analysed as pseudosections and contour maps to identify potentially anomalous resistivity and chargeability features. Surface resistivity within the Watershed is characterized by a moderate to low resistivity (1,500 - 8,000 Ohm.m) and low chargeability (less than 20 mV/V). Beneath these surficial features, resistivity increases with increasing depth with basement exhibiting resistivity greater than 15,000 Ohm.m. Twenty-three anomalous features of significance have been identified across the survey area; several other smaller features are also present in the data and may warrant future investigation if these more prominent features return mineralization of interest. The location of the centre point of each anomalous feature is presented on Figure 9-14. Table 9-7 summarizes the anomalies and provides recommendations for their follow-up.

Anomaly ID	D Survey Lines Identified Recommendation		Priority
		Clam Lake Area	
CL001	L14, L15, L16	Ground truth and drill	1
CL002	L13	Ground truth and drill	1
CL003	L14, L15	Drill test	3
		Chester Area	
CHS001	L10, L11, L12?	Ground truth and drill	1
CHS002	L10, L8?, L9?, L11?	Drill test	3
CHS003	L11	Ground truth and drill	1
CHS004	L11	Ground truth	2
CHS005	L10	Ground truth	2
CHS006	L12	Ground truth	2
CHS007	L11	Ground truth	3
CHS008	L8, L7?	Ground truth and drill	1
	0	Chain Lakes Area	
CML001	L3, L2	Ground truth and drill	1
CML002	L2, L3	Ground truth and drill	1
CML003	L1, L2, L3	Ground truth and drill	1
CML004	L3,	Ground truth	2
CML005	L4	Ground truth	2
CML006	L4	Drill test	3
CML007	L5	Ground truth and drill	1
CML008	L5, L6?	Drill test	3
CML009	L5	Drill test	2
CML010	L7	Ground truth and drill	1
CML011	L6, L7	Ground truth	2
CML012	L6, L7	Ground truth	2

 Table 9-7 Summary of anomalous features identified from the EarthProbe survey.



## 9.5 GoCad 3D spatial database and model, 2011

A 3D compilation of exploration data and data from the public domain was completed in 2011. The 2011 drill holes and assay results are included as are historic drill holes, Earthprobe ground IP and ZTEM data, publicly available geology maps and faults. The model is used for interpreting and targeting, however, the model has not been updated with exploration information since late 2011.

## 9.6 Airborne Magnetics and EM structural interpretation, Nov. 2011

A structural interpretation of available airborne geophysical data in the region was conducted in late 2011 and completed in June, 2012 (McKenzie and Wetherup 2012, MNDM assessment AFRO ID: 2.51243). The datasets used in this study were the Fugro DIGHEM data flown for Augen Gold Corp in 2007 (Fugro Airborne Surveys Corp, 2008) (section 6.29.1) and the Geotech ZTEM survey flown for Sanatana Resources in 2011 (Geotech Ltd., 2011) (section 9.2).

## 9.6.1 Structural Analysis Method

The structural analysis method employed in this report consists of three stages: Observation, Compilation and Interpretation. Airborne magnetic data was filtered to produce various products highlighting different structures; key observations were recorded and interpreted in a large-scale context. All postulated structures and domain settings were evaluated for their relationship to mineralization. Known mineralized zones located on the adjacent Trelawney – Chester claims were digitized from public information found on the Trelawney Mining website (www.trelawneymining.com/chester).

The airborne magnetic dataset clipped from the Gogama DIGHEM survey flown in 2007 was primarily used for the observations (Fugro Airborne Surveys Corp, 2008). The first vertical derivative of the magnetic data was used to create observed form lines. The ZTEM resistivity model, provided by Geotech Ltd., was also reviewed in context with the magnetic data (Geotech Ltd., 2011).

### 9.6.2 Observations - Magnetics

Raw observations were recorded from the total magnetic field and first vertical derivative ("1VD") (Figure 9-15 and Figure 9-17). This exercise primarily gives a sense of the major trends of the data and begins the process of highlighting subtle but significant structures.



Figure 9-16 illustrates the observations from the 1VD and demonstrates that the magnetics are dominated by a 160° trending dyke swarm (light grey) postulated to be the Matachewan and Hearst swarms. This is crosscut by a younger 110° (orange) Sudbury swarm. The oldest trend at 45° (red) is found in the north-western portion of the survey and is interpreted to be the Preissac swarm (MNDM, 2000).

Order (Oldest – Youngest)	Age	Orientation	Colour
Preissac swarm	1.6 – 2.5 Ga	45°	Red
Matachewan and Hearst	1.6 – 2.5 Ga	160°	Grey
Sudbury swarm	0.9 – 1.6 Ga	110°	Orange

Table 9-8 Dyke swarms observed in the magnetic data

Figure 9-18 demonstrates observations from the total magnetic intensity ("TMI"). Several packages of alternating contrasts between quiet and active magnetics are noted. A large intrusion is interpreted in the southern portion of the survey. This is not currently reflected in the regional bedrock geology mapping.

The apparent resistivity datasets from the Gogama DIGHEM survey were examined at 56 kHz, 7200 Hz and 900 Hz. The moderate and low frequency apparent resistivity only shows a linear conductive anomaly in the east coincident with a major power line. No other structural information was noted.



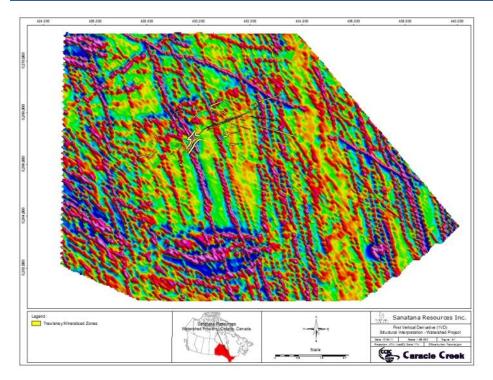


Figure 9-15 First Vertical Derivative with Mineralized Zones

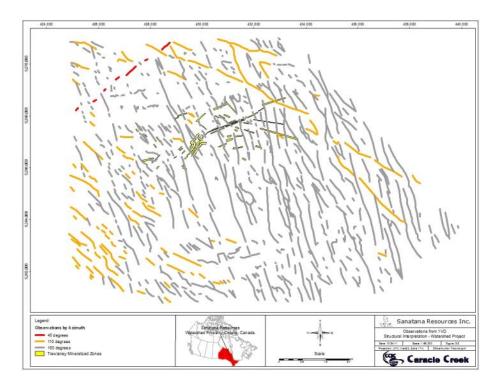


Figure 9-16 Observed form lines from First Vertical Derivative



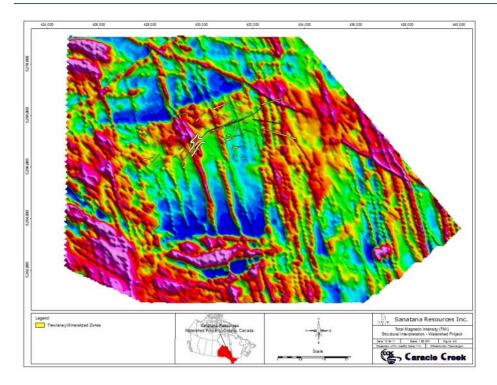


Figure 9-17 Total Magnetic Intensity with Mineralized Zones

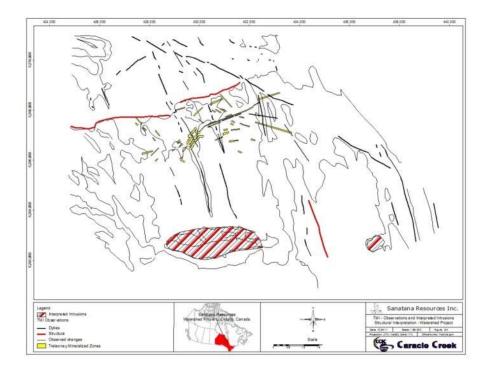


Figure 9-18 Interpreted Intrusions



## 9.6.2.1 Observations – ZTEM

The ZTEM system is an airborne audio-frequency magnetics ("AFMAG") system and is used primarily as a resistivity mapping tool (Geotech, 2011). Changes in the vertical magnetic field are measured along an extremely low frequency ("ELF") range of 30-360Hz. Lateral resistivity contrasts cause the electromagnetic field to tip vertically. ZTEM is sensitive to subtle resistive contrasts.

Lines from the Sanatana ZTEM dataset were inverted by Geotech. These inversions were examined in a 3D viewer (Figure 9-19). Several lines show a dipping conductor (Figure 9-20) with dips approximately 30°S. This feature may possibly be an artifact of the 2D inversion as the northern portion of the lines encounter a significant conductive contrast. The inversion would need to create this feature to compensate for the building conductivity response along line. However, this response is seen through all survey line inversions, lending evidence that it may be real and may represent a dipping geological contact. The central tie line shows support that this dipping conductor is real.

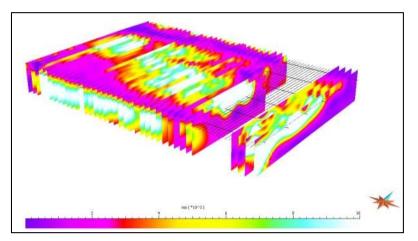


Figure 9-19 2D line inversions of ZTEM apparent resistivity data



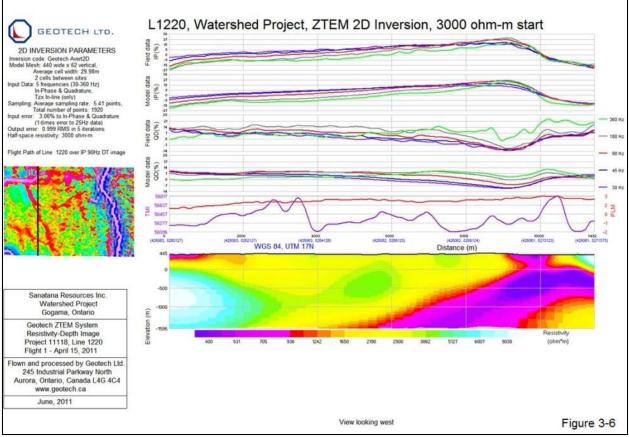


Figure 9-20 Example of the dipping conductive feature shown throughout the 2D inversions.

The ZTEM resistivity model shows correlation with the interpreted fault (Figure 9-21), demonstrating a break in resistive features in the north and a contact between resistive and conductive features to the south. The large intrusion in the south also has resistive coincidence.



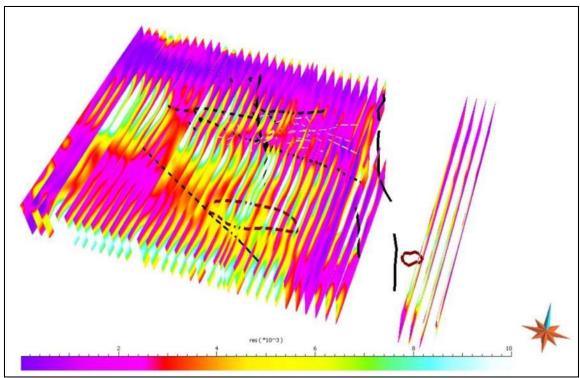


Figure 9-21 ZTEM resistivity with major structure (black) and interpreted intrusions (red). Mineralized zones in yellow.

The majority of mineralized zones adjacent to the Watershed Property appear to largely be coincident with the more conductive bedrock units (purple on this colour scale) although some are mapped across the northern resistive unit.

### 9.6.3 Interpretation and Targeting

Extrapolating to the larger context, several potential fold hinges are noted throughout the survey area. A series of structural corridors are noted east and west of the Chester Deposit tracking  $120^{\circ} - 135^{\circ}$  and are displayed in Figure 9-22 (hatch marked).





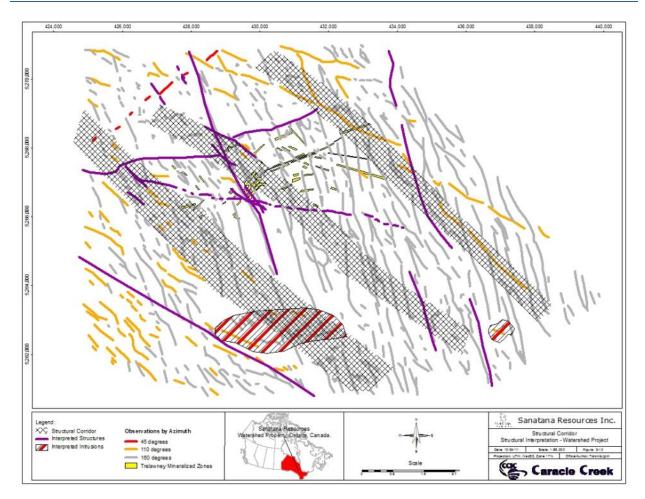


Figure 9-22 Interpreted structural corridor

Gold mineralization generally requires a brittle-ductile deformational environment for emplacement, hence its tendency to occur within more competent rock units adjacent to shear zones. Gold is an incompatible element and driven off in metamorphic fluids. This fluid does not flow in this ductile environment and requires the breaks and fractures caused brittle environment to transport and emplace the gold. Fault zones are areas of low pressure and are critical to these formational conditions. Both folding and faulting are noted in this dataset, and these areas are highlighted as targets. Five main areas are highlighted as potential target areas from this data review, and are highlighted in Figure 9-23. All targets are assigned the prefix 'WAT' for Watershed Property.



WAT\_001 – This target represents the intersection of two significant structures with respect to the adjacent mineralized deposits. Both structures offset the Matachewan and Hearst dykes (1600) in the magnetics. In addition, this structure lies within a high interest fold corridor. This area is predominantly conductive in the ZTEM data. It is recommended to complete further work in this area.

**WAT\_002** – This target is centred on the potential intrusive feature. It is a prominent secondary feature that requires ground truthing and age dating. This target is has resistive coincidence in the ZTEM data.

WAT\_003 – This area has been surveyed with EarthProbe. It exists in a favorable structural corridor and is the extension of the current known mineralized zones. This area is has predominantly resistive coincidence in the ZTEM data.

WAT\_004 – This area is the intersection of the three main trending swarms with the major NNW trending fault. The area has conductive coincidence in the ZTEM data.

WAT\_005 – Low angle conductive/resistive contact identified in ZTEM data. This target zone coincides with the intersection of major structure identified in the magnetics. Recommended for follow-up.





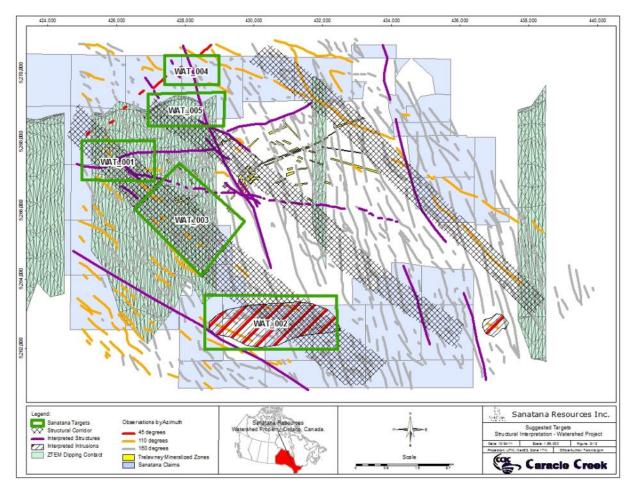


Figure 9-23 Structural interpretation and targeting on Watershed Property

### 9.6.4 Recommendations of Structural Interpretation

It is recommended to ground truth all prominent structures in the field. Given that fold sets are omnipresent, if outcrops are located then good folding measurements along with indications of alteration and fracturing can be determined. The intersection of shear zones with fold axes, flexures or competent rocks are extremely important in identifying gold traps. In addition, it is important to determine the relative age of mineralization with the various structures and rocks encountered.

The southern possible intrusion is a prominent feature and requires ground truthing for confirmation and age dating to determine if it is post-mineralization. The resistive coincidence in the ZTEM data is upgrading that this is a separate rock type.



The possible low-angle resistive/conductive contact should be ground truthed and possibly drill tested for confirmation. If this area represents a thrust fault it may be upgrading in terms of hosting mineralization.

## 9.7 EarthProbe Borehole IP survey, Dec. 2011 to June 2012

Caracle Creek was contracted by Sanatana to conduct a borehole EarthProbe survey on the Clam Lake and the Chain of Lakes area of the Watershed Gold Property (Palich and Qian, 2012b, MNDM assessment AFRO ID: 2.56104). EarthProbe is a high resolution DC resistivity and induced polarization (IP) logging and tomography survey system. The EarthProbe borehole DCIP surveys were undertaken on the Property from Clam Lake (December 4 - 20, 2011, February 18 – March 3, 2012) and Chain Lake (June 4 - 18, 2012).

The objectives of the survey were to:

- To determine the resistivity and chargeability signature of lithologies in the investigation area;
- To evaluate correlations between resistivity and chargeability and mineralization encountered in the boreholes;
- To determine the extent and orientation of mineralization in the boreholes and identify off-hole mineralization potential; and
- To correlate borehole results to the surface DCIP signature that was identified during the 2011 surface IP survey.

### 9.7.1 Procedures and Parameters

The geophysical survey was undertaken using the EarthProbe high resolution direct current resistivity and induced polarization (DCIP) logging and tomography system. The EarthProbe system can be configured for the collection of standard surface IP data, vertical resistivity profiles (VRP), and/or multi-bore/surface-to-bore tomographic images. For this survey, data were collected using the borehole DCIP configuration.

The EarthProbe technology measures the IP effect in the time-domain. Time-domain measurements involve sampling the waveform at intervals after the current is switched off, to derive the apparent chargeability, which is a measure of the strength of the induced polarization effect. At the same time as chargeability measurements are collected, apparent resistivity data can be derived from the constant current on-time of the waveform after the initial IP charging effects are over, providing further information about the presence or absence of conductive minerals within the host rocks.



# 9.7.2 Vertical Profiling (VP)

Vertical resistivity and chargeability profiling (VP) is achieved by placing a standard current and potential electrode array down a single borehole. The borehole setup is the same as for a surface Schlumberger survey (Figure 9-24). The measured voltage is converted into apparent resistivity through a geometric factor that takes into account the earth-air interface. The apparent resistivity pseudosection is then created by assigning the apparent resistivity using the standard Schlumberger-array convention of AB/4 to approximate distance away from the borehole.

IP and resistivity measurements were taken in the time-domain mode using an 8,192 millisecond (ms) current injection square waveform (2,048 ms positive charge, 2,048 ms off, 2,048 ms negative charge, 2,048 ms off).

The survey was conducted using a downhole Schlumberger array as shown in Figure 9-24. The electrode separation ('A'-spacing) was 16 m and there are 24 electrodes on each cable; each borehole was read 3 times, with a shift of 4 m to generate an effective electrode spacing of 4 m. Based on the maximum electrode separations, a theoretical formation penetration of about 25 m was achieved. Table 9-9 summarizes the borehole survey details for the VP. Figure 9-25 depicts the locations of the boreholes surveyed.

For this survey, data were collected using a high resolution borehole vertical profiles (VP), and multi-bore tomographic images DCIP configuration with conventional electrode nomenclature is used whereby "A" denotes the positive current electrode, "B" the negative current electrode, "M" the positive potential electrode and "N" the negative potential electrode.



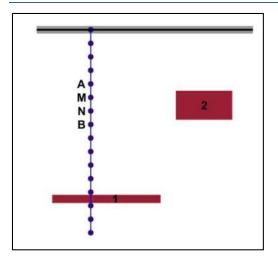


Figure 9-24 Electrode configuration for the VP surveys

# 9.7.3 IP Survey Location

The borehole IP surveys cover portions of claims 3017670, 3017672, 3017674, and 3011820. The survey location is shown in Figure 9-25 and a summary of the drill holes is given in Table 9-9.



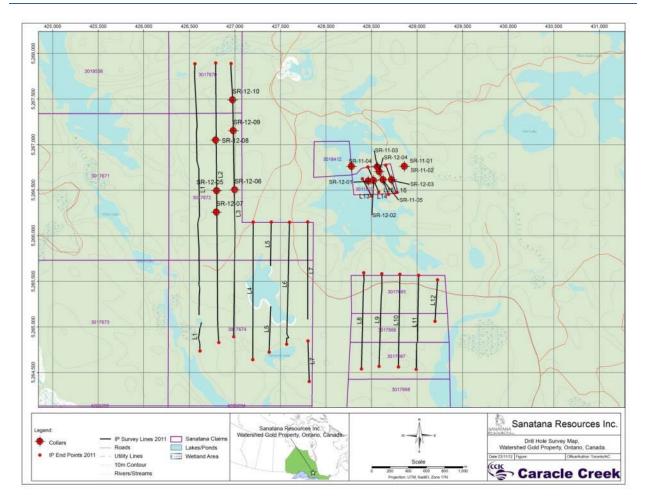


Figure 9-25 Location of the drill holes surveyed during the EarthProbe borehole DCIP survey

Borehole ID	Easting	Northing	Altitude	Azimuth	Dip	Hole Depth (mbg)	Logged Interval (mbg)	Dipole Length (m)
Clam Lake								
SR-11-01	428661	5266763	406	160	-60	575	35-399	4
SR-11-02	428661	5266763	406	160	-70	674	39-415	4
SR-11-03	428564	5266756	404	160	-60	491	35-415	4
SR-11-04	428279	5266762	397	160	-60	560	35-383	4
SR-11-05	428626	5266615	399	160	-60	401	23-403	4
SR-12-01	428465	5266602	404	180	-60	392	10-350	4
SR-12-02	428522	5266608	405	160	-60	401	23-401	4
SR-12-03	428720	5266615	401	160	-60	401	17-365	8
SR-12-04	428585	5266705	400	160	-60	302	8.6-276.6	4
Chain of Lak	tes							

Table 9-9 VP survey summary



Borehole ID	Easting	Northing	Altitude	Azimuth	Dip	Hole Depth (mbg)	Logged Interval (mbg)	Dipole Length (m)
SR-12-05	426800	5266496	412	180	-60	512	34.23-414.23	4
SR-12-06	426998	5266506	421	180	-60	510	2.96-138.96	4
SR-12-07	426796	5266261	403	170	-60	508	34.06-414.06	4
SR-12-08	426788	5267051	416	175	-60	498	34.04-414.04	4
SR-12-09	426983	5267154	407	175	-60	506	34.4-414.4	4
SR-12-10	426974	5267492	402	175	-60	500	34.2-414.2	4

## 9.7.4 Cross-hole Tomography

Borehole tomography, in which both current electrodes and potential electrodes are placed across two regions, can provide detailed information about resistivity and chargeability distribution between the boreholes (Daniels 1977; Daniels and Dyck 1984; Shima 1992). Daniels and Dyck (1984) demonstrated a variety of applications of borehole resistivity measurements to mineral exploration including assessment of the continuity of intersected mineralization between boreholes and detection of off-hole mineralized sources.

Tomographic measurements for current and potential electrodes straddled across two boreholes can assist in identifying conductor extensions between two boreholes. To measure the apparent resistivity and chargeability between two boreholes, electrical current is injected between two electrodes across two boreholes and the potential difference at the two electrodes is measured immediately below the current injection electrodes, as shown in Figure 9-26. This measurement configuration is very sensitive to detect and delineate sub-horizontal thin conductive or resistive beds. Table 9-10 summarizes the multi-bore tomography configurations undertaken during this survey. Borehole locations are depicted in Figure 9-25.

IP and resistivity tomographic measurements were taken in the time-domain mode using an 8,192 millisecond (ms) current injection square waveform (2,048 ms positive charge, 2,048 ms off, 2,048 ms negative charge, 2,048 ms off).



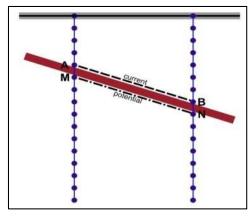


Figure 9-26 Tomography electrode configuration between two boreholes

Primary Borehole	<b>Borehole Pairings</b>	Survey Interval – Primary Borehole (mbg)	Survey Interval – Secondary Borehole (mbg)
Clam Lake			
	SR-11-02	39-383	39-415
SR-11-01	SR-11-03	35-415	35-415
SR-11-02	SR-12-03	35-415	29-377
SR-11-03	SR-11-04	35-415	35-415
	SR-12-02	33-377	27-403
SR-11-05	SR-12-03	33-377	29-377
	SR-12-04	23-403	8-276.6
SR-12-01	SR-12-02	10-350	27-403
Chain of Lakes			
	SR-12-06	38.23-414.23	2.96-138.96
SR-12-05	SR-12-07	38.92-382.92	38.06-414.06
CD 12.06	SR-12-07	2.96-138.96	38.06-414.06
SR-12-06	SR-12-09	2.96-130.96	38.4-414.4
CD 12.09	SR-12-09	38.04-414.04	38.4-382.4
SR-12-08	SR-12-10	38.4-382.4	38.2-414.2
SR-12-09	SR-12-10	38.4-382.4	38.2-414.2

#### Table 9-10 Multi-bore tomography survey summary

### 9.7.5 Results and Interpretation

Results for the borehole survey are broken into 2 sections. The first is VP which are derived from the vertical single hole profile surveys (Figure 9-27) and the second are results from between pairs of holes (tomography imaging) (Figure 9-28). Specific features of interest for each borehole are detailed in the original geophysical report titled "Earthprobe borehole IP Interpretation report" (Palich and Qian, 2012b).



9.7.6 Borehole VP Results

#### Clam Lake

Results of the vertical profiling indicated that holes could be broken up into two groups when making correlations. The first group of holes: SR-11-01, SR-11-02, SR-11-03 and SR-11-04, is all located along a similar northing, around 5266750N, and have moderate chargeability and high resistivity. Holes SR-11-05, SR-12-01, SR-12-02 and SR-12-03 are the second group of holes, and are located further south by approximately 150 m. These holes have low to moderate chargeability and low to moderate resistivity. Hole SR-12-04 is located in between the two group of holes but trends most similarly to the group of holes further south. The main difference seen is the low resistivity of the second group is a response to the mafic volcanics which are only seen in this group of holes. Off hole moderate to high chargeabilities are particularly noticed in the second group of holes and are a response to the complex lithology. There are more in hole moderate chargeability features in the first group of holes which seem to coincide with mafic lithologies, as well as increases in Au, Cu, S and Zn.

### Chain of Lakes

The Chain of Lakes area consists of six bore holes. These boreholes were drilled on L2 and L3 of the 2011 IP surface survey. These holes target two surface IP targets. The first target area is to the south, sitting around 5266420 m and was investigated by drillholes SR-12-05, SR-12-06 and SR-12-07. SR-12-05 was lithologically distinct from the other two holes. SR-12-06 and SR-12-07 contained a lot of granodiorite and feldspar porphyry. SR-12-05 was strongly influenced by metavolcanics and lapilli.

The second target area is located further to the north, around 526735m and was investigated by SR-12-08, SR-12-09 and SR-12-10. These holes were largely dominated by quartz diorite and all three holes showed moderate chargeability.

In general, features from the borehole survey do not seem to have a strong correlation to assay results. This is likely due to the general lack of strong assay results from these 6 holes.



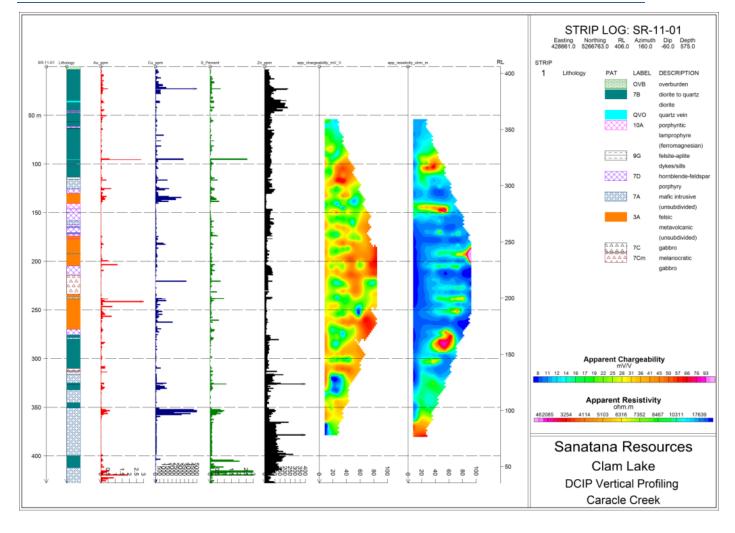


Figure 9-27 Example of VP apparent resistivity and chargeability striplog for drill hole SR-11-01.

# 9.7.7 Tomography hole to hole imaging

2D inversions of the cross-hole tomography data are presented in Appendix 4 of the original report with an example shown in Figure 9-28.



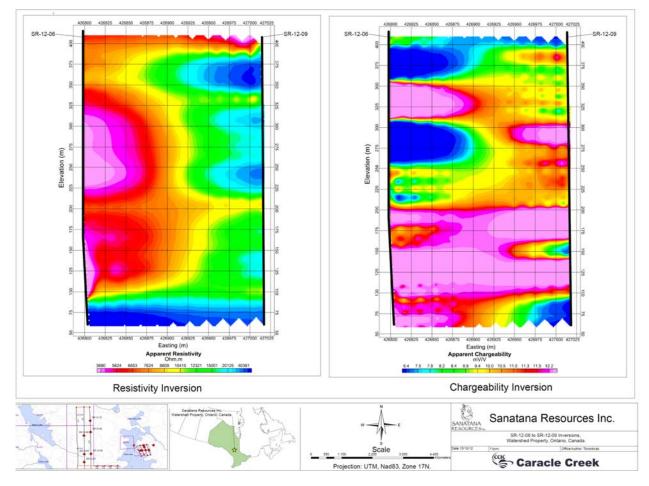


Figure 9-28 Example of 2D inversion results for drill hole SR-12-06 to SR-12-09

### 9.7.8*Resistivity*

Resistivity in Clam Lake appears to be controlled almost solely by lithology. The highly resistive features for the Clam Lake holes are controlled mainly by the gabbro. In the south part of the Clam Lake holes, holes SR-11-05, SR-12-01, SR-12-02, and SR-12-03, there are two lithological controls for the resistivity lows. Midway down the holes mafic volcanics seem to be controlling the lows and deeper in the holes, the resistivity lows are coming through in the mafic intrusives. The resistivity lows in the mafic intrusives also seem to be associated with sulphur highs. Hole SR-11-01 demonstrates this trend clearly. From 350-360 m in the mafic intrusive the sulphur values average 0.56 percent. In the Clam Lake holes diorite seems to correlate to moderately resistive features. Similarly, in the Chain of Lakes holes granodiorite, for the holes in the South, is what controls the moderately resistive features and quartz diorite controls those features for the holes in to North.

Oct. 29, 2015



The Chain of Lakes also shows a highly resistive lithology, intermediate lapilli, that is seen almost solely in hole SR-12-05. Resistivity lows differ among the two sets of holes in the Chain of Lakes. In the holes to the South, SR-12-05, SR-12-06, and SR-12-07, the resistivity lows fall mainly in mafic metavolcanics and in the feldspar porphyry. In the holes to the North, SR-12-08, SR-12-09, SR-12-10, mafic intrusives and mafic dikes are associated with resistivity lows

## 9.7.9 Chargeability

Chargeability highs in both the Clam Lake and Chain of Lakes holes appear to correlate with sulphide zones and lithology. Areas of mineralization that occur within mafic volcanics in the Clam Lake area show a high chargeability response. Areas of high mineralization found in felsic metavolcanics show no chargeability correlation. It seems that chargeability highs are related to mineralization, but only if the mineralization occurs in a certain lithology.

## 9.7.10 Correlation of Borehole Data to 2011 Surface IP survey

Resistivity on the Watershed Property ranged from 1,500-8,000 Ohm.m as determined by the EarthProbe surface IP survey. From the borehole survey similar results were found. In the Clam Lake area, resistivity values ranged from 2,000 to 15,000 Ohm.m and in the Chain of Lakes area values ranged from 1,500 to 10,000 Ohm.m.

Chargeability on the Watershed Property ranged from 0 - 200 mV/V as determined by the EarthProbe survey IP survey. A consistent range of values was observed in both the Clam Lake and Chain of Lakes areas using the borehole IP system.

### <u>Clam Lake</u>

Resistivity lows were observed at shallow depths (less than 50 m) in holes SR-12-01 and SR-12-04 which was coincident with shallow surface anomalies mapped in this location from the 2011 surface IP survey. Borehole SR-12-01, which was drilled into an extensive low resistivity target identified through the surface IP survey, exhibited low resistivity throughout the surveyed interval (40 - 320 m).

The surface IP survey mapped a broad chargeability high below a depth of approximately 50 m across L13, L14 and L15 and to a lesser extent in L16. Large, depth pervasive chargeability highs were identified in SR-12-01 (from at least 40 m), SR-11-04 (from 80 m) and SR-12-02 (below 150 m), and SR-11-05 (below 100 m), coincident with the chargeability feature mapped through the surface survey. Similar chargeability



highs were mapped in the borehole survey below a depth of 100 m in SR-11-01, SR-11-02, and SR-12-03 (drilled along L16); these features were intersected below the depth of investigation of the surface survey.

#### Chain of Lakes

A resistivity low was observed between 55-100 m in SR-12-05, coincident with the resistivity low identified in L2 (CML002) that was predicted to extend to depths of approximately 100 m that was targeted by the borehole. The resistivity low intersected between 150-200 m in SR-12-08 may be coincident with the low resistivity feature (CML001) mapped to depth in this area.

The surface IP survey mapped an intermittent but broad chargeability high across L2 and L3 in the survey area. This feature was reflected in SR-12-05, SR-12-08, SR-12-09, and SR-12-10, and to a lesser extent in SR-12-08, at depths below 100 m.

### 9.7.11 Conclusions

The high resolution EarthProbe borehole DCIP survey at the Clam Lake and Chain of Lakes properties has successfully delineated and correlated resistivity and chargeability features to lithologic features in the boreholes. The following conclusions are derived from this study:

- Resistivity responses were predominantly associated with lithological variations within the boreholes, with the following notable trends:
  - Resistivity lows (< 4,000 Ohm.m) are typically associated with mafic volcanics
  - Moderate resistivity (4,000 6,000 Ohm.m) occurs in association with the diorite, quartz diorite and granodiorite in most boreholes
  - Resistivity highs (> 10, 000 Ohm.m) usually occur in association with felsic metavolcanics and gabbro.
- Localized chargeability highs in both Clam Lake and Chain of Lakes areas are associated with increased Au, Cu, S, or Zn responses found in mafic volcanics and quartz diorite. When increased mineralization responses are found in the felsic metavolcanics there is no increase in chargeability.
- Mineralized intersections appear to be relatively localized to the boreholes and in most cases were insufficiently thick to be clearly mapped by the vertical profiling.

- The low resistivity features identified in the Clam Lake and Chain of Lakes area were coincident with shallow resistivity targets identified during the 2011 surface survey.
- Results of the vertical profiling indicated a general trend of moderate to high chargeability in the Clam Lake and Chain of Lakes areas, coincident with a broad chargeability highs delineated through the 2011 surface survey.

As the source of resistivity and chargeability features identified during the borehole survey have not been entirely explained by lithology and/or mineralization, possibly due to the complexity of the lithologic profile, investigation into possible higher order mineralogical relationships that could contribute to the source of the resistivity and chargeability responses is recommended to improve the value of the borehole DCIP data as an exploration tool.

## 9.8 Ground magnetic survey, Clam and Chain Lakes, March 2012

Caracle Creek was contracted by Sanatana to process ground magnetics data on three survey grids within the Watershed Gold Property and to provide an interpretation of the processed results (Palich and McKenzie, 2013, MNDM assessment AFRO ID: 2.54284). The objective of these surveys was to identify diabase dykes to assist with drill collar positioning, to avoid intersecting them where possible.

### 9.8.1 System Specifications and Survey Design

This ground magnetics survey was undertaken with the GSM-19W "Walking" Overhauser Magnetometer with DGPS and a GSM-19 base station (Table 9-11). A GSM-19 base station was located at an average location of 428,751mE, 5,265,525mN or 0.5 - 2.3 kilometers away. The survey consists of three different grids within the Watershed Property. The ground magnetics survey was undertaken on the Property from March 1-12, 2012.

Sixty-one line surveys were planned over three separate grids with 25 m line spacing and a North orientation. The specifics of the three survey grids are detailed in Table 9-12.

Survey Item	Specifications
Survey Type	Magnetometer
Magnetometer System	Overhauser GSM-19W

Table 9-11 Specifications of the Overhauser Magnetics system



Survey Item	Specifications
Survey Configuration	Walking Magnetometer – 48.5 km lines
Line Spacing	25 m
Diurnal Monitoring	Overhauser GSM-19 Base station recorder
Record Interval	60+ 4 sec
Sensitivity	$0.022 nT/\sqrt{Hz}$
Resolution	0.01nT
Absolute Accuracy	+/- 0.1 nT
Range	20,000 to 120,000 nT
Gradient Tolerance	< 10,000 nT/m

Table 9-12 S	Specifications	of the	Ground Magnetics Survey
10000 / 12 0			

Grid	Location	Claims	Number of L Lines	Line Kilometres	Line Spacing	Area (km <sup>2</sup> )
SAN_12_001 (Northwest)	Yeo Township, Claim Lake	3017672	13	9.4	25 m	0.229
SAN_12_002 (Southeast)	Chester Township, Chester Area	3017665, 3017666, 3017667, 3017668	32	31.7	25 m	0.793
SAN_12_003 (Northeast)	Chester Township, Clam Lake	3011820	16	7.4	25m	0.124

Figure 9-29 denotes the line paths and all three survey areas. The black lines are all data lines collected with GPS data but did not have matching diurnal data. The orange lines denote areas where partial sections of the walk-mag files did not have corresponding diurnal data. The blue lines are the final processed and diurnally corrected survey lines.



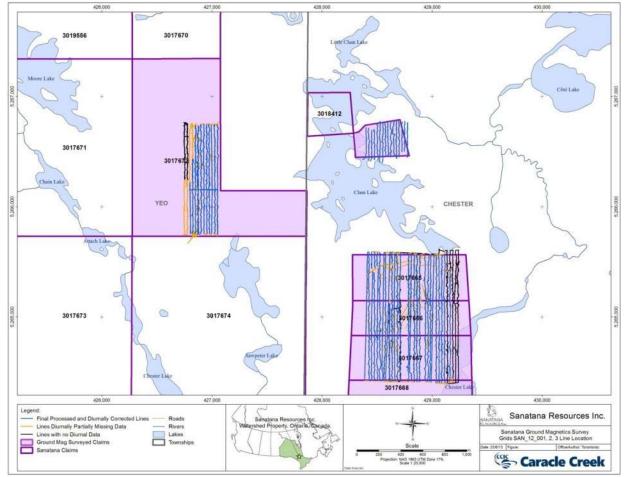


Figure 9-29 Survey line location of the 2012 Sanatana ground magnetics survey.

## 9.8.2 Ground Magnetics Results and Interpretation

Overall, the ground magnetic surveys were found to contain noisy data, likely due to tree cover and difficult walking conditions. The data was successfully processed and probable diabase dykes have been identified.

All three grids were successful in identifying diabase dyke magnetic signatures, with SAN\_12\_002\_TMI (southeast) (Figure 9-29) providing a better sense of the east-west extent due to its larger size. Similar to SAN\_12\_001\_TMI, SAN\_12\_003\_TMI shows a more limited ability to identify a trend in the diabase dyke magnetic signatures due to the extent of the surveyed area (Figure 9-30, Figure 9-32 and Figure 9-34)

Grid SAN\_12\_001 could benefit from being extended on both the eastern and western sides to better understand the extent of the magnetic diabase dykes. It is also recommended to resurvey the central missing



line of SAN\_12\_002 to tie both portions of the grid together, especially if drill holes are planned to be sited in the vicinity.

Interpretation of the major diabase dykes can be found in Figure 9-31, Figure 9-33 and Figure 9-35 in yellow. Other, minor magnetic observations are noted in black. The interpretation of the Sudbury Swarm (110°) and Matachewan and Hearst swarm (160°) are also noted in orange and grey respectively (MNDM, 2000; McKenzie and Wetherup, 2011).



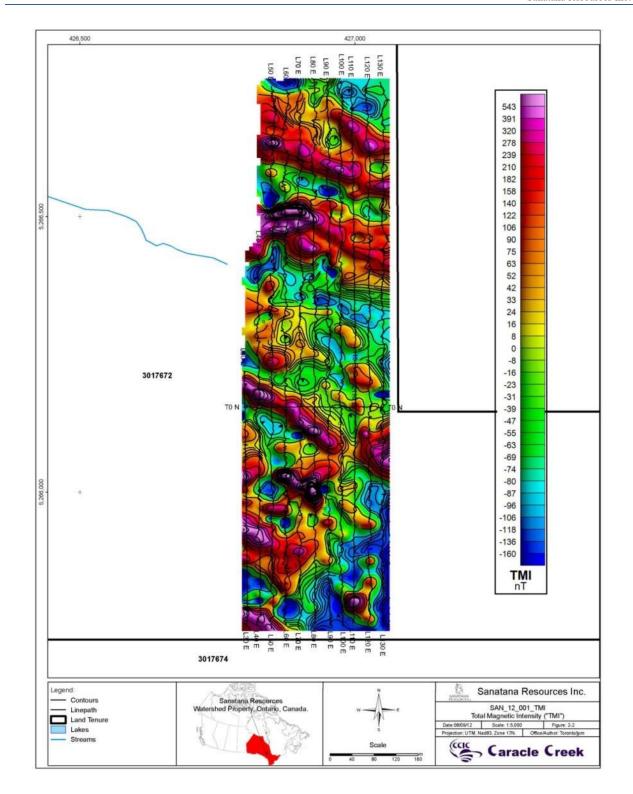


Figure 9-30 SAN\_12\_001\_TMI – Total Magnetic Intensity



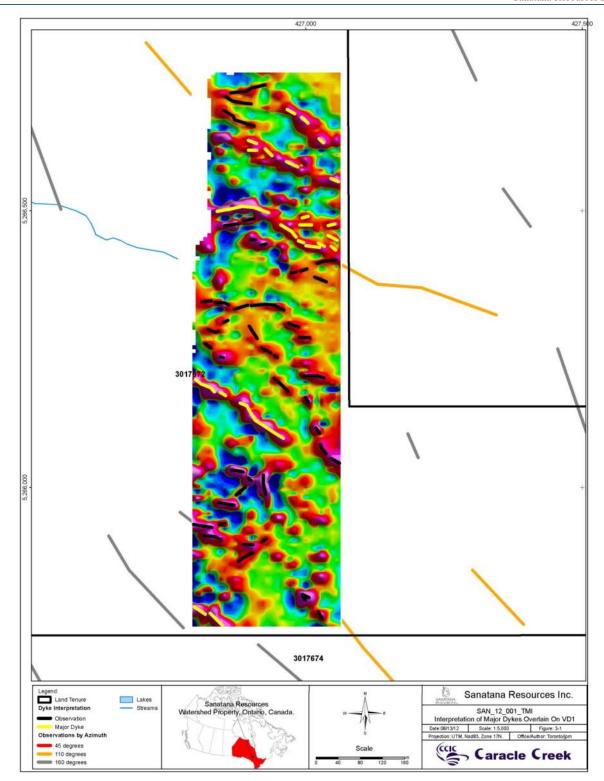


Figure 9-31 Interpretation of major dykes on SAN\_12\_001\_TMI



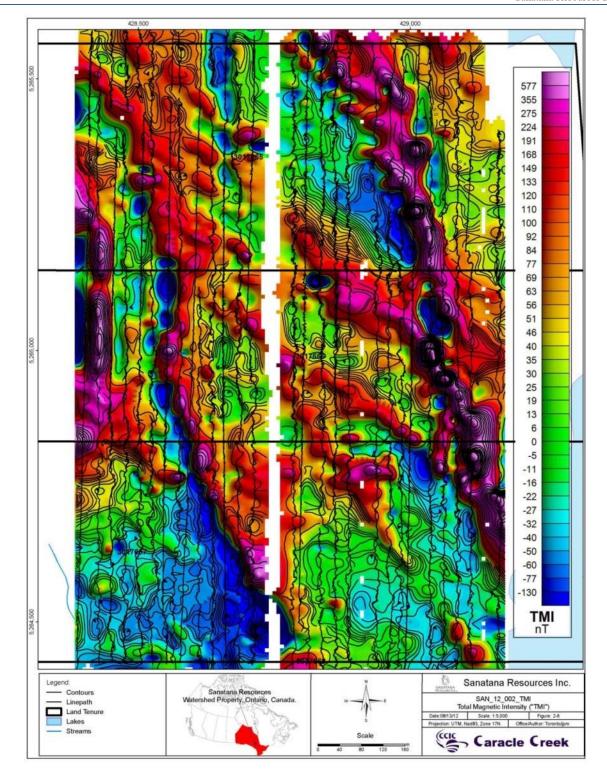


Figure 9-32 SAN\_12\_002\_TMI – Total Magnetic Intensity



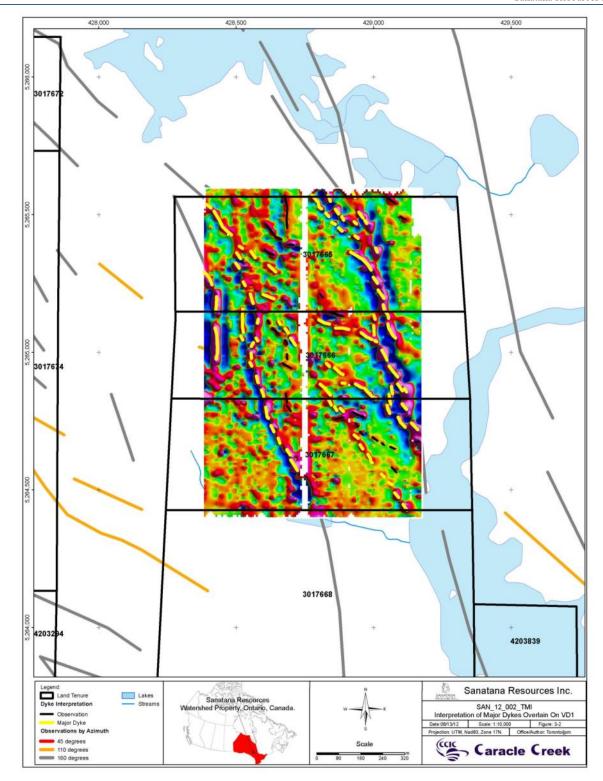


Figure 9-33 Interpretation of Major Dykes on SAN\_12\_02\_TMI

Oct. 29, 2015



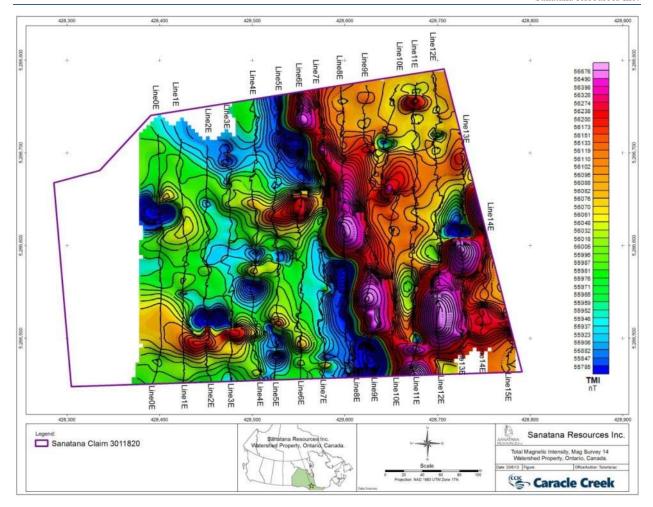


Figure 9-34 SAN\_12\_003\_TMI – Total Magnetic Intensity



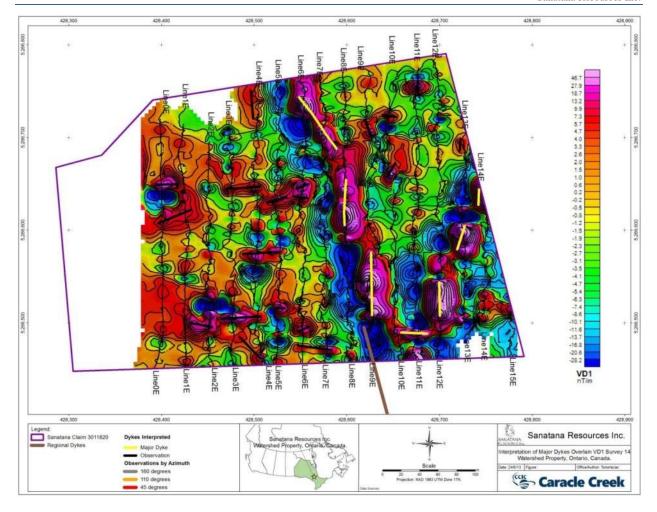


Figure 9-35 Interpretation of major dykes on SAN\_12-003-TMI

### 9.9 Drilling overview

A total of 17,131 m diamond drilling has been completed by Sanatana over three programs: 25 drill holes targeting east Clam Lake area, 11 drill holes around Chain of Lakes, six drill holes at west Clam Lake and one drill hole at Chester targeting IP anomalies and coincident gold in channel sampling.

### 9.10 Phase 1 Drilling, Oct 2011 – Feb 2012

A diamond drill program consisting of 9 holes and 4,197 m were completed on the Watershed Property between October 2011 and Feb. 2012. The 9 holes were drilled on claim 3011820, east of Clam Lake,



Chester township. The results of this drill program including sampling are discussed in detail in section 10.1.

## 9.11 Phase 2 Drilling, Mar. 2012 to Sept. 2012

A diamond drill program consisting of 18 holes and totaling 7,929 m were completed on the Watershed Property between April 2012 and the fall of 2012. The 18 holes were drilled:

- on Clam Lake claims 3011820 and 3018412, Chester township
- claim 3017670 northeast of Chain Lake, Yeo township
- claim 3017674 Chain Lake area, Yeo township
- claim 3017665 south of Clam Lake, Chester township

The results of this drill program including sampling are discussed in detail in section 10.2.

## 9.12 Regional soil sampling survey, May – Oct. 2012

A soil sampling program encompassing the entire Property was completed on early summer of 2012 and in October 2012 (MNDM assessment report by Ronacher and Gill, 2014). A total of 1,454 samples were collected. During the first phase of sampling (early summer 2012) 1,042 samples were collected from a grid with line and sample spacing of 400 m. The purpose of the survey was to collect B horizon soil from till to test for gold anomalies. Approximately one kilogram of B horizon soil was collected with an auger in the field. A further 412 samples were collected from the same areas at a regular grid spacing of 100 m as infill samples in Oct. 2012.

Sanatana analyzed the results statistically (Table 9-13). Gold values range from below the detection limit of 0.001 ppm to 0.092 ppm with a mean of 0.027. Several areas of anomalous gold were delineated by the survey and infill sampling was completed in these areas in October 2012. A total of 412 additional samples were collected. The results are shown graphically on Figure 9-36. Pathfinder elements (Cu, As and Bi) are shown on Figure 9-37 and Figure 9-39. Sanatana calculated correlations between gold and pathfinder elements and determined weak correlations between Au and As (6%), Bi (9%), Cu (10%), Te (9%), Sb (7%), W (11%), Zn (8%) and Sn (7%).



Table 9-13: Results of the statistical analysis of the soil sample data.

	Au	Ag	As	Bi	Cd	Cu	Zn
Mean	0.0027	0.0415	2.9734	0.0996	0.0576	10.7706	16.2592
Standard Error	0.0001	0.0013	0.2924	0.0011	0.0019	0.4120	0.4136
Median	0.0020	0.0300	1.6000	0.0900	0.0400	7.3000	13.0000
Mode	0.0010	0.0300	1.4000	0.0800	0.0400	6.3000	12.0000
<b>Standard Deviation</b>	0.0048	0.0429	9.4213	0.0358	0.0616	13.2732	13.3246
Sample Variance	0.0000	0.0018	88.7610	0.0013	0.0038	176.1783	177.5442
Kurtosis	138.0425	63.1939	217.9311	9.3956	61.6706	75.6015	71.8865
Skewness	9.4203	5.7346	13.6429	2.3083	6.6948	6.8205	6.2627
Range	0.0915	0.6950	174.9000	0.3300	0.8600	201.1000	227.0000
Minimum	0.0005	0.0050	0.1000	0.0200	0.0100	0.9000	1.0000
Maximum	0.0920	0.7000	175.0000	0.3500	0.8700	202.0000	228.0000
No of assays	1032	1038	1038	1038	1038	1038	1038
				-			
	Hg	Мо	Pb	S	Sb	Se	Sn
Mean	<b>Hg</b> 0.0400	<b>Mo</b> 0.4595	<b>Рb</b> 5.6593	<b>S</b> 272.3025	<b>Sb</b> 0.0653	<b>Se</b> 0.3919	<b>Sn</b> 0.4579
Mean Standard Error	-						
	0.0400	0.4595	5.6593	272.3025	0.0653	0.3919	0.4579
Standard Error	0.0400 0.0009	0.4595 0.0118	5.6593 0.1015	272.3025 14.3411	0.0653 0.0019	0.3919 0.0093	0.4579 0.0042
Standard Error Median	0.0400 0.0009 0.0300	0.4595 0.0118 0.3700	5.6593 0.1015 5.3000	272.3025 14.3411 200.0000	0.0653 0.0019 0.0600	0.3919 0.0093 0.4000	0.4579 0.0042 0.4000
Standard Error Median Mode	0.0400 0.0009 0.0300 0.0300	0.4595 0.0118 0.3700 0.3000	5.6593 0.1015 5.3000 5.5000	272.3025 14.3411 200.0000 200.0000	0.0653 0.0019 0.0600 0.0250	0.3919 0.0093 0.4000 0.3000	0.4579 0.0042 0.4000 0.4000
Standard Error Median Mode Standard Deviation	0.0400 0.0009 0.0300 0.0300 0.0285	0.4595 0.0118 0.3700 0.3000 0.3805	5.6593 0.1015 5.3000 5.5000 3.2707	272.3025 14.3411 200.0000 200.0000 462.0415	0.0653 0.0019 0.0600 0.0250 0.0611	0.3919 0.0093 0.4000 0.3000 0.3006	$\begin{array}{c} 0.4579 \\ 0.0042 \\ 0.4000 \\ 0.4000 \\ 0.1355 \end{array}$
Standard Error Median Mode Standard Deviation Sample Variance	0.0400 0.0009 0.0300 0.0300 0.0285 0.0008	0.4595 0.0118 0.3700 0.3000 0.3805 0.1448	5.6593 0.1015 5.3000 5.5000 3.2707 10.6972	272.3025 14.3411 200.0000 200.0000 462.0415 213482.3501	0.0653 0.0019 0.0600 0.0250 0.0611 0.0037	0.3919 0.0093 0.4000 0.3000 0.3006 0.0903	0.4579 0.0042 0.4000 0.4000 0.1355 0.0184
Standard Error Median Mode Standard Deviation Sample Variance Kurtosis	0.0400 0.0009 0.0300 0.0300 0.0285 0.0008 13.1103	0.4595 0.0118 0.3700 0.3000 0.3805 0.1448 35.1784	5.6593 0.1015 5.3000 5.5000 3.2707 10.6972 456.0324	272.3025 14.3411 200.0000 200.0000 462.0415 213482.3501 65.2774	0.0653 0.0019 0.0600 0.0250 0.0611 0.0037 74.3498	0.3919 0.0093 0.4000 0.3000 0.3006 0.0903 51.3906	0.4579 0.0042 0.4000 0.4000 0.1355 0.0184 9.5101
Standard Error Median Mode Standard Deviation Sample Variance Kurtosis Skewness	$\begin{array}{c} 0.0400\\ 0.0009\\ 0.0300\\ 0.0300\\ 0.0285\\ 0.0008\\ 13.1103\\ 2.7595\end{array}$	0.4595 0.0118 0.3700 0.3000 0.3805 0.1448 35.1784 4.9655	$5.6593 \\ 0.1015 \\ 5.3000 \\ 5.5000 \\ 3.2707 \\ 10.6972 \\ 456.0324 \\ 17.9851 \\$	272.3025 14.3411 200.0000 200.0000 462.0415 213482.3501 65.2774 7.2292	0.0653 0.0019 0.0600 0.0250 0.0611 0.0037 74.3498 7.0583	$\begin{array}{c} 0.3919\\ 0.0093\\ 0.4000\\ 0.3000\\ 0.3006\\ 0.0903\\ 51.3906\\ 5.1484 \end{array}$	0.4579 0.0042 0.4000 0.4000 0.1355 0.0184 9.5101 1.7855
Standard Error Median Mode Standard Deviation Sample Variance Kurtosis Skewness Range	$\begin{array}{c} 0.0400\\ 0.0009\\ 0.0300\\ 0.0300\\ 0.0285\\ 0.0008\\ 13.1103\\ 2.7595\\ 0.2750\\ \end{array}$	$\begin{array}{c} 0.4595\\ 0.0118\\ 0.3700\\ 0.3000\\ 0.3805\\ 0.1448\\ 35.1784\\ 4.9655\\ 4.2850\end{array}$	5.6593 0.1015 5.3000 5.5000 3.2707 10.6972 456.0324 17.9851 90.2000	272.3025 14.3411 200.0000 200.0000 462.0415 213482.3501 65.2774 7.2292 6450.0000	$\begin{array}{c} 0.0653\\ 0.0019\\ 0.0600\\ 0.0250\\ 0.0611\\ 0.0037\\ 74.3498\\ 7.0583\\ 0.8450\\ \end{array}$	$\begin{array}{c} 0.3919\\ 0.0093\\ 0.4000\\ 0.3000\\ 0.3006\\ 0.0903\\ 51.3906\\ 5.1484\\ 4.2000 \end{array}$	$\begin{array}{c} 0.4579\\ 0.0042\\ 0.4000\\ 0.4000\\ 0.1355\\ 0.0184\\ 9.5101\\ 1.7855\\ 1.5000\\ \end{array}$
Standard Error Median Mode Standard Deviation Sample Variance Kurtosis Skewness Range Minimum	$\begin{array}{c} 0.0400\\ 0.0009\\ 0.0300\\ 0.0300\\ 0.0285\\ 0.0008\\ 13.1103\\ 2.7595\\ 0.2750\\ 0.0050\\ \end{array}$	$\begin{array}{c} 0.4595\\ 0.0118\\ 0.3700\\ 0.3000\\ 0.3805\\ 0.1448\\ 35.1784\\ 4.9655\\ 4.2850\\ 0.0250\\ \end{array}$	5.6593 0.1015 5.3000 5.5000 3.2707 10.6972 456.0324 17.9851 90.2000 1.1000	$\begin{array}{c} 272.3025\\ 14.3411\\ 200.0000\\ 200.0000\\ 462.0415\\ 213482.3501\\ 65.2774\\ 7.2292\\ 6450.0000\\ 50.0000\\ \end{array}$	$\begin{array}{c} 0.0653\\ 0.0019\\ 0.0600\\ 0.0250\\ 0.0611\\ 0.0037\\ 74.3498\\ 7.0583\\ 0.8450\\ 0.0250\\ \end{array}$	$\begin{array}{c} 0.3919\\ 0.0093\\ 0.4000\\ 0.3000\\ 0.3006\\ 0.0903\\ 51.3906\\ 5.1484\\ 4.2000\\ 0.1000\\ \end{array}$	$\begin{array}{c} 0.4579\\ 0.0042\\ 0.4000\\ 0.4000\\ 0.1355\\ 0.0184\\ 9.5101\\ 1.7855\\ 1.5000\\ 0.1000\\ \end{array}$



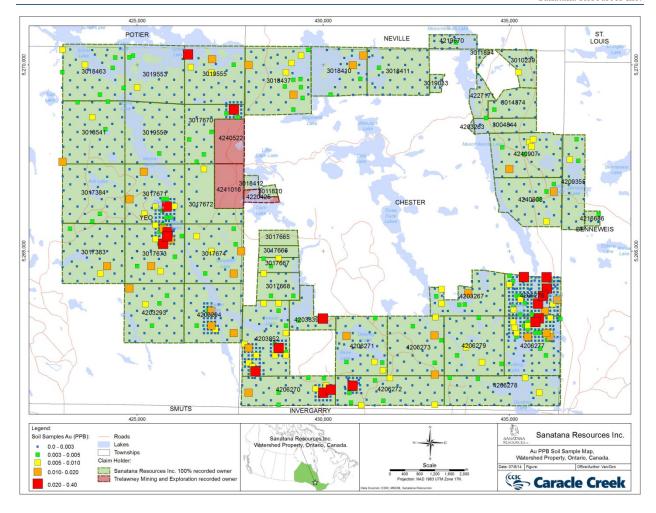


Figure 9-36: Soil survey results for gold.



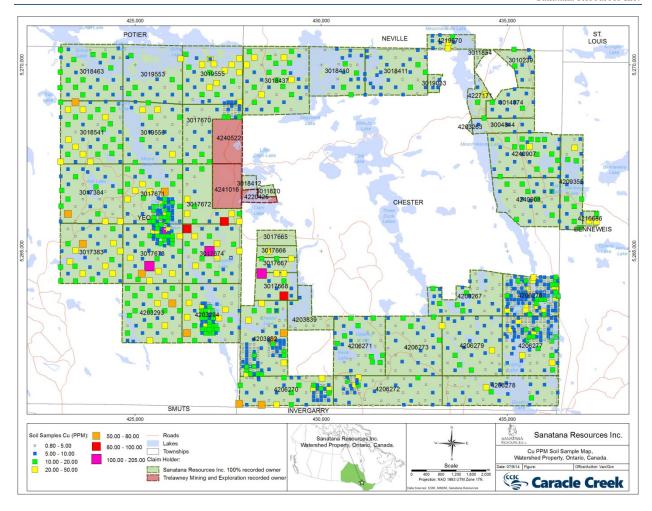


Figure 9-37: Soil survey results for copper.



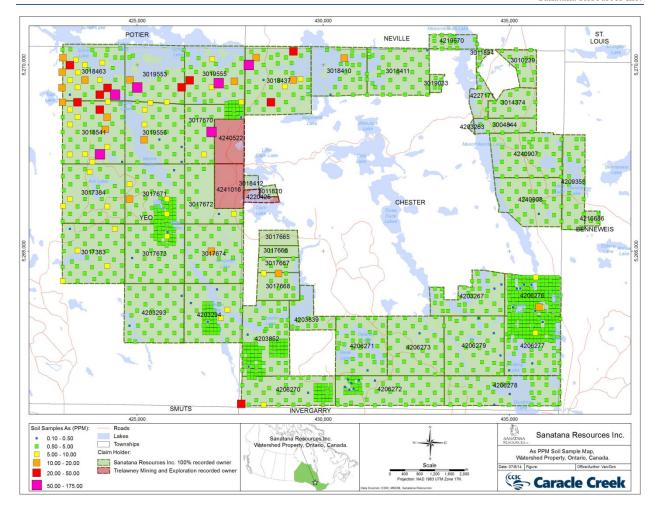


Figure 9-38: Soil survey results for arsenic.





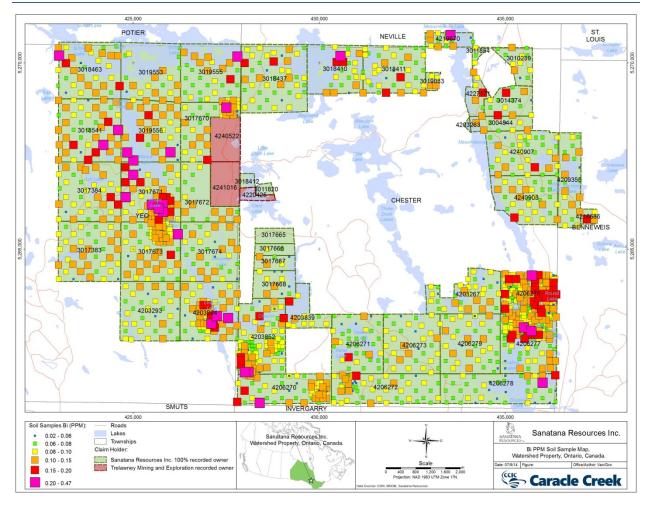


Figure 9-39: Soil survey results for bismuth.

#### 9.13 Outcrop stripping, mapping and channel sampling, fall 2012

In the fall of 2012, further outcrop stripping, mapping and sampling took place east of Highway 144 and Mesomikenda Lake (Figure 9-40). The area was called the "North Shear" because of the intense shearing at this outcrop. Access to the stripped area is on Highway 144 and on a trail off Hwy 144 at 435508 m E and 5268798 m N; the North Shear can be reached on foot and is located at ~435781 m E, 5268128 m N and 408 m elevation. Several areas were stripped along a ~300 m long, northwest-striking zone. The North Shear is divided into the 100 West, 75 West, Central Trench, 25 East, 50 East and 100 East zones (Figure 9-41).



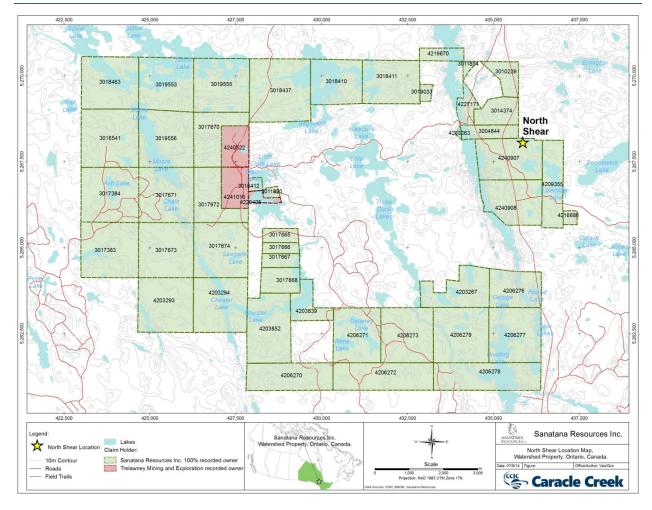


Figure 9-40: Location of the North Shear on the Watershed Property.





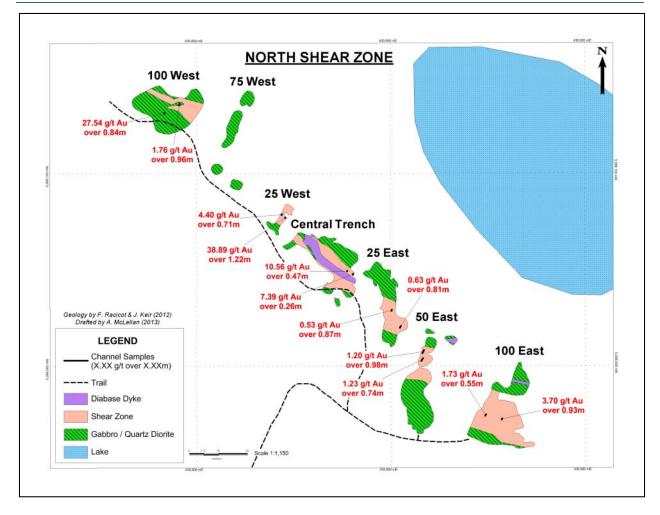


Figure 9-41: Schematic map of the North Shear showing the various outcrops and the best gold assay grades.

The stripped area was mapped and 636 channel and 20 grab samples were collected. Maps of the trenches are in Appendix 4. Two grab samples returned gold values above 1 g/t Au (2.33 g/t and 1.93 g/t Au). The channel samples contained up to 38.89 g/t Au. Table 9-14 lists assay highlights of the channel samples.



Sample #	Easting	Northing	Area	Trench	Width (cm)	Au (g/t)
28498	435840	5268070	North Shear	25W	122	38.89
29044	435780	5268120	North Shear	100W	84	27.54
28384	435873	5268035	North Shear	Central	26	7.39
28015	435560	5267600	N of Shaft	75E	70	5.999
28497	435840	5268070	North Shear	25W	71	4.4
29089	435955	5267957	North Shear	100E	93	3.7
28110	435470	5267546	W of Shaft	0E	72.5	3.1
28359	435873	5268035	North Shear	Central	89	2.8
28496	435840	5268070	North Shear	25W	71	2.73
28380	435873	5268035	North Shear	Central	40	2.4
28374	435873	5268035	North Shear	Central	106	2.
28338	435873	5268035	North Shear	Central	90	2.
28045	435520	5267566	S of Shaft	50E	56	1.9
20890	435470	5267546	W of Shaft	0E	45	1.9
28353	435873	5268035	North Shear	Central	92	1.8
29025	435780	5268120	North Shear	100W	96	1.7
28373	435873	5268035	North Shear	Central	79	1.7
29100	435955	5267957	North Shear	100E	55	1.7
28375	435873	5268035	North Shear	Central	100	1.
28362	435873	5268035	North Shear	Central	77	1.
28500	435840	5268070	North Shear	25W	55	1.
28369B	435873	5268035	North Shear	Central	42	1.3
28358	435873	5268035	North Shear	Central	70	1.2
28466	435915	5267965	North Shear	50E	74	1.2
28460	435915	5267965	North Shear	50E	98	1.
28376	435873	5268035	North Shear	Central	95	1.1
28357	435873	5268035	North Shear	Central	99	1.1
28040	435520	5267566	S of Shaft	50E	67	1.0
28371	435873	5268035	North Shear	Central	77	1.0
28346	435873	5268035	North Shear	Central	70	1.0

Table 9-14 Assay highlights of the channel samples at the North Shear.





Figure 9-42: Photo of the central part of the "North Shear".

## 9.14 Phase 3 Drilling, Dec. 2012 – March 2013

A diamond drill program consisting of 16 holes totalling 4,805.8 m were completed between December 2012 and March 2013. The holes were drilled on claim 3011820 on Clam Lake, Chester township. The results of this drill program including sampling are discussed in detail in section 10.3.



#### 9.15 Ground magnetics, North Shear Zone, May 2013

In May 2013, Sanatana Resources collected 17.3 km of ground magnetic data over their Silver Butte North Shear prospect on the Watershed Property. The North Shear prospect is located on highway 144, east of Mesomikenda Lake, claim 4240907.

Rock Point Geophysics processed the ground magnetics data and produced maps suitable for assessment filing and further interpretation (Walker, 2013). In addition to the ground mag data, results from prospecting in the North Shear area and existing airborne geophysical data over the prospect were used to interpret potential trends of interest. These interpretations are included in the following discussion.

#### 9.15.1 Ground magnetics processing

The data processing steps included:

- 1. Filtering the base station data.
- 2. Splitting the rover data into lines.
- 3. Filtering the GPS data to remove dropouts and repeats.
- 4. Filtering the raw magnetic data.
- 5. Applying diurnal corrections.

The final magnetic data was gridded with a cell size of 12.5 m. In order to supress surficial high frequency responses the gridded data was filtered and upward continued by 12.5 m.

#### 9.15.2 Results and Interpretation

The final processed data is shown in Figure 9-43.



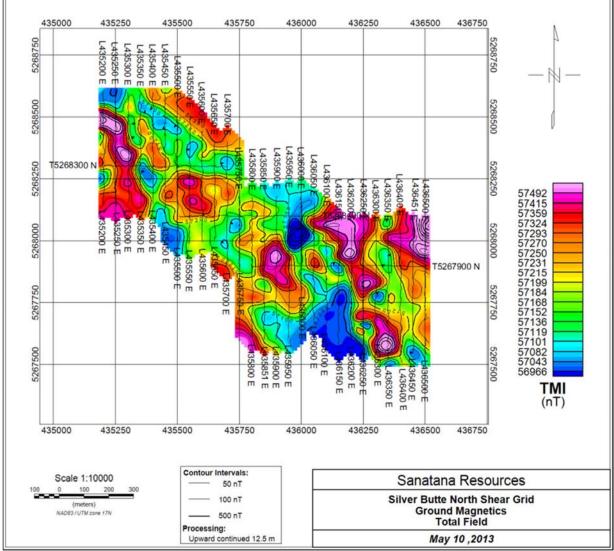


Figure 9-43 North Shear ground magnetics data map

The interpretation of the North Shear zone incorporated the following data sets:

- GeoTech ZTEM 2011 passive electromagnetic (EM) survey with magnetics
- FUGRO Dighem 2008 frequency domain EM and magnetics
- Mapping (regional and prospect scale)
- Ground Magnetics

Each data set was interpreted individually and the results were compared and compiled in order to produce an overall picture.

Oct. 29, 2015



A regional geological interpretation is shown in Figure 9-44. The features of interest are the Gold Trend and the Northern Shear zone (indicated by the purple star). Based on current mapping the strike length of the North Shear zone is approximately 250 m.

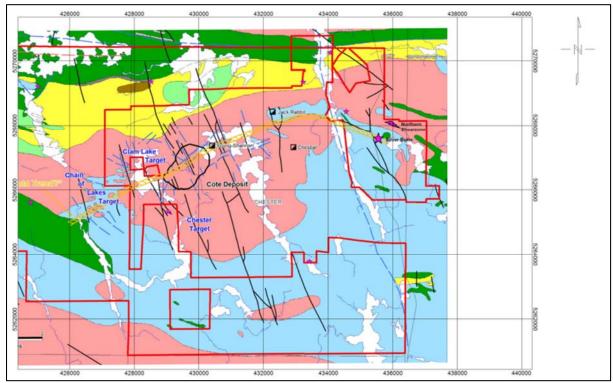


Figure 9-44 Regional geological interpretation for Watershed Property. Purple star for the Silver Butte Prospect.

A close-up of the second vertical derivative magnetics from the Fugro survey is shown in Figure 9-45. The mineralized trend from the North Shear Zone lines up with the edge an anomalous response. These trends are subtle. They are visible in the first vertical derivative however they are better defined in the second vertical derivative. Based on the magnetic data it is possible extend the trend by approximately 1 km to the north-west.



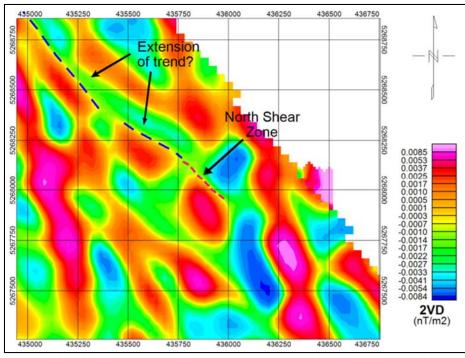


Figure 9-45 Close up of Fugro magnetics second vertical derivative with trends. The trend from the geology map (red dashed line) and the trend from the magnetic image (blue dashed line). The grid interval is 250 m.

The airborne (Fugro) and ground magnetics data have different line spacing (150 m vs. 50 m), line direction (045/225 vs. 0/180) and measurement height (30 m (but upward continued to 110 m) vs. 2 m (upward continued to 14.5 m). Therefore, it is not surprising that the magnetic images are not identical. However, there are a number of similarities. The fact that the ground magnetics data was collected closer to the ground enhances high frequency responses.

The ground magnetics data also suggests that the trend extends to the north-west. There is also a possible extension to the south-east indicated.



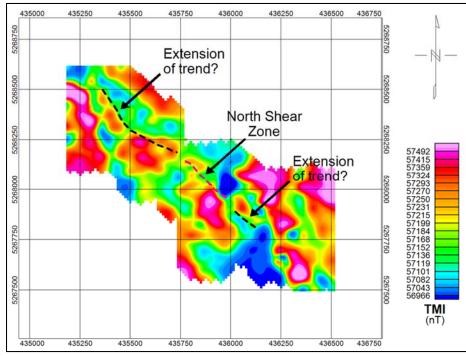


Figure 9-46 North Shear Zone ground magnetics with trend lines. The trend from the geology map (red dashed line) and the trend from the ground magnetic image (black dashed line). The grid interval is 250 m.

The geophysical trends indicate possible extensions to the north and south of the known North Shear trend and should be investigated further.

## 9.16 Drilling, fall 2013, by Trelawney

Trelawney Mining and Exploration Inc., a wholly owned subsidiary of IAMGOLD Corporation, reported to Sanatana that they drilled 3 holes totalling 892.5 m in the fall of 2013. The 3 holes were drilled on 4240522 and 4241016 claims, Clam Lake, Yeo township (section 10.4).

The results of this drill program including sampling are discussed in detail in section 10.4.

## 9.17 Mapping, rock sampling, fall 2013, by Trelawney

Sanatana announced in a News Release dated June 2, 2014 that Trelawney had completed Property-scale mapping and rock sampling in three areas on unpatented mining claims 4240522, 4241016 and 4220425 in late 2013. The exploration work focused on three priority target areas: the Baxter trend, the South IP Anomaly and the Hopkins Trend. The details about this work or results are not available to Caracle Creek.



## **10.0 DRILLING**

#### 10.1 Phase 1 Drilling Oct. 2011 – Feb. 2012

#### 10.1.1 Drill Overview

The purpose of the Phase 1 drill program was to test the subsurface IP anomalies and elevated gold assays. All drill holes are located in target WAT\_003 (Figure 9-23), one of five targets located by the structural study based on the available geophysical data (McKenzie and Wetherup, 2012, MNDM assessment 2.51243). The drill holes are also located in the vicinity of several gold occurrences on the claims and dispositions previously owned by Trelawney, now by IAMGOLD. The drill holes are also coincident with elevated gold values in surficial geochemical sampling of stripped bedrock outcrops.

A diamond drill program consisting of 9 holes and totaling 4,197 m was completed on the Watershed Property between Oct. 21, 2011 and February 2, 2012 (Table 10-1, Figure 10-1 and Figure 10-2). All drill holes were drilled on claim 3011820, located in Chester Township.

Drill hole SR-11-04 plots on the drill collar map (Figure 10-2) on the claim boundary, but actually the collar is a few meters south of the claim boundary within claim 3011820. The reason the drill hole collar plots on the claim boundary on the map is two-fold; one because of inaccuracies plotting the mining claim itself compared to what was staked in the field, and two because of inaccuracies of obtaining the collar location with a handheld GPS near the base of a small ravine in heavy forest. To expand a little further on the first point, Troy Gill, Sanatana's Exploration Manager, personally flagged the drill pad and sighted the peg for the collar knowing that the collar was hard up against the northern boundary of the claim, so Sanatana's team specifically looked for the corner and line posts and the blaze line of the boundary to make sure they were collaring within claim 3011820. There was a blaze mark on a tree just metres north of where they placed the drill collar post. Mr. Gill left orders with the drill contractor to leave that tree in place, but the tree may have been cut down during the creation of the drill pad.

The drill program was supervised by Troy Gill (Exploration Manager for Sanatana) (1925–925 West Georgia Street, Vancouver, BC, V6C 3L2). Mr. Gill planned all of the holes, sighted most of them and was on site 2 weeks in and 2 weeks out rotation. The drill core was logged by Eden Hynes and Ken Germundson. The drill core is stored at Sanatana's core shack located at the Watershed Car and Truck Stop, corner Hwy. 144 and 560, Gogama, Ontario, POM 1W0.



Hole			Elevation	Azimuth	Dip			
Number	Easting	Northing	(m)	(°)	(°)	Length (m)	Start Date	Finish Date
SR-11-01	428661	5266763	406	160	-60	575	21/10/2011	02/11/2011
SR-11-02	428665	5266760	406	160	-70	674	02/11/2011	20/11/2011
SR-11-03	428564	5266756	404	160	-60	491	20/11/2011	30/11/2011
SR-11-04	428479	5266762	397	160	-60	560	01/12/2012	10/12/2011
SR-11-05	428626	5266615	399	160	-60	401	12/12/2011	10/01/2012
SR-12-01	428465	5266602	404	160	-60	392	10/01/2012	16/01/2012
SR-12-02	428522	5266608	405	160	-60	401	16/01/2012	23/01/2012
SR-12-03	428720	5266615	401	160	-60	401	24/01/2012	28/01/2012
SR-12-04	428585	5266705	400	160	-60	302	28/01/2012	02/02/2012
					Total	4,197		



Figure 10-1 Sanatana's first drill set up on the Watershed Property, drill hole SR-11-01 on Line 16.



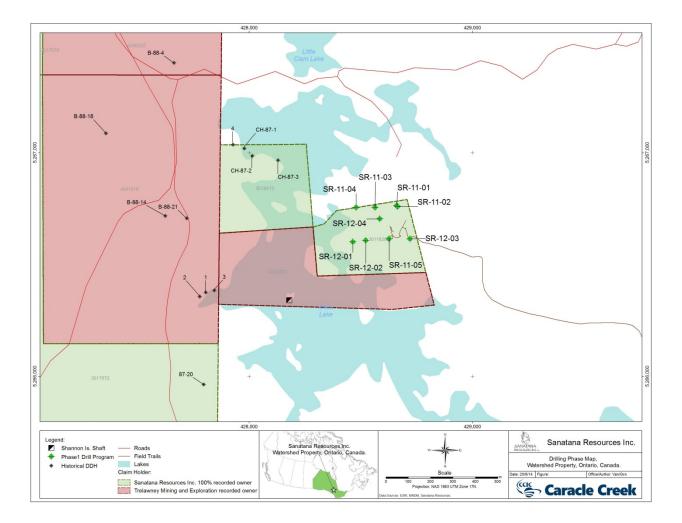


Figure 10-2 Drill collar map of historic drill holes and Sanatana Phase 1 Oct. 2011 – Feb. 2012 drill program.

## 10.1.2 Drill Methodology

The holes were drilled by Surface Contract Drilling of Lively, Ontario (35 William Ave., Lively, ON, P3Y 1E7) using an HTM 2500 drill which was made by Usinage Marcotte Inc., Val d'Or, Quebec. The core size of all drill holes is NQ2 (wireline core tube). Casing was anchored in bedrock and flagged. Most hole collar locations were determined using a handheld GPS but those that have downhole surveys of any type have a DGPS location attached to them.



A Reflex EZ-TRAC down hole survey was performed at 50 m on the way down and at 3 m intervals at the end of the hole with the shot coming back up from the bottom. The Reflex tests measured azimuth and dip of the hole.

Geotechnical logging was completed to determine RQD, fractures and veins every 3 m run of core and magnetic susceptibility measurements were recorded every 1 m.

DGI Geoscience Inc. of Toronto, Ontario used Acoustic Televiewer (ATV) to complete structural analysis of joints, fractures, faults, bedding, foliation and veins for the entire hole for all of the holes for Phase 1 drill program. DGI also completed a physical properties survey every 0.1 m downhole for density, magnetic susceptibility, neutron porosity, natural gamma and resistivity.

All drill core samples (half NQ2 core) were sent to AGAT's Sudbury lab. A total of 5663 samples were analyzed by the lab including drill core, standards, blanks and core duplicates inserted during sampling.

## 10.1.3 Drill Results

The drill holes intersected mostly diorite, felsic and mafic metavolcanic rocks, mafic intrusives, gabbro, several porphyry units, granodiorite and monzodiorite, diabase and several smaller dikes and sills. The most common alteration minerals include chlorite, quartz, calcite, sericite, carbonates, albite and epidote.

The average overburden depth for this drill program (SR-11-01 to SR-12-04) was 2.33 m. The core recovery ranged from 99-100% for every hole except, SR-11-01 which had a weighted average core recovery of 95% as a large fault zone was intersected between 439.2m and 469.9m.

Cross sections, drill core logs and assay certificates for this phase of drilling are given in MNDM Assessment Report by Selway and Gill (2015a) (MNDM assessment AFRO ID: 2.56104).

Drill highlights are summarized in Table 10-2. The best gold intersections include:

62.216 g/t over 1.5 m including 192 g/t over 0.5 m in hole SR-12-03 in quartz carbonate system with visible gold (Figure 12-15). The gold is associated with quartz, calcite and chlorite and pyrite. Interval 285.6m to 285.75m contained more than 100 tiny specks of visible gold on the outside of irregular 7-10cm wide pinkish quartz-carbonate vein (mainly calcite). Just 5-6 cm below gold bearing quartz-carbonate vein is a 7-10cm pinkish 'zone' of broken core, hematized material followed by approx. 35cm of fractured, dirty white quartz.



- 32.866 g/t over 1.9 m including 45.86 g/t over 1.1 m in hole SR-11-04 in granodiorite
- 31.7 g/t over 0.3 m in hole SR-12-02 in a fine-grained mafic rock with strong chlorite alteration and 30% shear-style calcite veining. This interval also has 5% chalcopyrite and 3% pyrite.
- 29.7 g/t over 1 m in hole SR-11-04 in andesite/diorite with blue quartz
- 24.3 g/t over 1 m in hole SR-12-01 in mafic flow

Hole number	From (m)	To (m)	Interval (m)	Au (ppm)
SR-11-01	95.4	95.8	0.4	2.810
	241.0	242.0	1.0	17.900
SR-11-02	115.0	116.0	1.0	3.940
	123.0	124.0	1.0	3.060
	150.0	151.0	1.0	2.390
	178.0	179.0	1.0	7.090
	200.0	201.0	1.0	3.030
	424.0	425.0	1.0	18.700
	475.0	479.0	4	2.127
SR-11-04	37.5	38.6	1.1	2.310
	114.5	117.5	3	1.537
	156.0	160.0	4	14.193
incl	157.0	158.0	1.0	29.700
	171.0	173.0	2	1.190
	252.5	253.5	1.0	16.700
	453.0	454.9	1.9	32.866
incl	453.8	454.9	1.1	45.860
SR-11-05	166.0	167.0	1.0	4.740
	272.0	273.0	1.0	2.000
	340.0	343.4	4.5	1.492
	354.0	359.0	5	1.342
incl	355.0	356.0	1.0	3.940
SR-12-01	24.8	27.0	2.2	11.673
incl	24.8	25.8	1.0	24.300
	79.2	80.0	0.8	7.230
	143.0	144.0	1.0	4.750
	293.0	295.7	2.7	2.343
incl	294.7	295.7	1.0	5.370
	301.7	302.4	0.7	2.990
	311.2	312.7	1.5	3.576
SR-12-02	137.4	140.0	2.6	1.432
	198.8	199.1	0.3	31.700
	201.5	203.5	2	5.433
incl	203.1	203.5	0.4	13.600
	205.2	205.5	0.4	2.340
	274.0	275.0	1.0	2.110
SR-12-03	197.0	201.0	4	1.133

Table 10-2 Drill highlights for Sanatana's Phase 1-2011 to 2012 drill program.



Hole number	From (m)	To (m)	Interval (m)	Au (ppm)
incl	197.0	198.0	1.0	3.020
	242.5	244.0	1.5	1.423
	257.7	258.7	1.0	2.560
	285.3	286.8	1.5	62.216
incl	285.3	285.8	0.5	192.000
SR-12-04	77.0	78.0	1.0	16.000
	184.0	186.0	2	5.225
incl	184.0	185.0	1.0	8.070
	294.0	297.0	3	2.604
incl	295	296	1	5.010

The relationship between sample length and the true thickness of mineralization and the orientation of the mineralization is not yet known.

#### 10.2 Phase 2 Drilling Mar. 2012 – Sept. 2012

#### 10.2.1 Drill Overview

The purpose of the Phase 2 drill program in the Chain Lake area was to target a significant IP anomaly located approximately 1,500 metres west of mineral claim 3011820 (EarthProbe anomalies CML001, 002 and 003, section 9.4.4). This IP anomaly corresponded to a 25.26 g/t Au grab sample (sample number 5279132) collected late in 2011 from Line 2 south end of Adanac Trench during the Company's outcrop stripping program (section 9.3.2). Hole SR-12-22 tested an isolated IP anomaly oriented southeast - northwest in the Chester area within mineral claim 3017665. The purpose was also to test the existence of gold mineralization west of Clam Lake.

A diamond drill program consisting of 18 holes and totaling 7,970.62 m was completed on the Watershed Property between March 7 and Sept. 23, 2012 (Table 10-3; Figure 10-3). The 18 holes (SR-12-05 to 22) were drilled on:

- claim 3017672, east of Chain Lake, Yeo Township, 2566.6 m (SR-12-05 to 09)
- claim 3017670, northeast of Chain Lake, Yeo Township, 500.7 m (SR-12-10)
- claim 3018412, east of Clam Lake, Chester Township, 1829.2 m (SR-12-11 to 16)
- claim 3017674 south of Chain Lake, Yeo Township, 2572.5 m (SR-12-17 to 21)



claim 3017665, south of Clam Lake, the "Chester showing", Chester Township, 501.62 m (SR-12-22).

The total meters drilled on each claim are listed in Table 10-4. SR-12-11 is fully contained within claim 3018412. SR-12-10's collar is on 3017670, but it extends at depth onto claim 3017672. SR-12-10 has 292.11 m on claim 3017670, and 208.59 m on claim 3017672. SR-12-22's collar is on 3017665, but it extends at depth onto claim 3017666. SR-12-22 has 282.06 m on claim 3017665, and 219.56 m on claim 3017666.

The drill program was supervised by Troy Gill (Exploration Manager for Sanatana) (1925–925 West Georgia Street, Vancouver, BC, V6C 3L2). Mr. Gill planned all of the holes, sighted most of them and was on site 2 weeks in and 2 weeks out rotation. The drill core was logged by Eden Hynes, Becky Dayboll and Ken Germundsen. The drill core is stored at Sanatana's core shack located at the Watershed Car and Truck Stop, corner Hwy. 144 and 560, Gogama, Ontario, POM 1W0.

Hole			Elevation			Length			
Number	Easting	Northing	(m)	Azimuth	Dip	(m)	Start Date	<b>Finish Date</b>	Claim
SR-12-05	426800	5266500	315	180	-60	512.5	07/03/2012	16/03/2012	3017672
SR-12-06	427000	5266500	422	180	-60	32.0	17/03/2012	17/03/2012	3017672
SR-12-06b	427000	5266500	422	180	-60	510.0	18/04/2012	25/04/2012	3017672
SR-12-07	426800	5266250	404	170	-60	508.0	25/04/2012	03/05/2012	3017672
SR-12-08	426800	5267050	413	175	-60	498.4	03/05/2012	09/05/2012	3017672
SR-12-09	427000	5267150	412	175	-60	505.7	10/05/2012	17/05/2012	3017672
SR-12-10	427000	5267500	405	175	-60	500.7	06/06/2012	16/06/2012	3017670
SR-12-11	427910	5267013	394	175	-60	505.3	17/06/2012	23/06/2012	3018412
SR-12-12	427908	5266975	396	0	-50	110.0	25/06/2012	26/06/2012	3018412
SR-12-13	428085	5266919	395	170	-60	502.5	27/06/2012	05/07/2012	3018412
SR-12-14	427919	5266865	393	175	-60	409.0	06/07/2012	10/07/2012	3018412
SR-12-15	427935	5266766	396	180	-60	200.0	11/07/2012	13/07/2012	3018412
SR-12-16	427946	5266715	397	180	-60	102.4	14/07/2012	15/07/2012	3018412
SR-12-17	426988	5265049	407	180	-60	558.9	15/07/2012	24/07/2012	3017674
SR-12-18	426997	5265110	410	175	-60	457.9	25/07/2012	01/08/2012	3017674
SR-12-19	427194	5265336	415	175	-60	536.7	13/08/2012	22/08/2012	3017674
SR-12-20	437387	5265052	412	175	-60	518.2	22/08/2012	30/08/2012	3017674
SR-12-21	427800	5264700	408	175	-60	500.8	30/08/2012	09/09/2012	3017674
SR-12-22	428800	5265300	396	175	-60	501.62	11/09/2012	23/09/2012	3017665
					total	7970.62			

Table 10-3 Drill hole collar locations for Sanatana's Phase 2- 2012 drill program, Zone 17, NAD83



Hole			Elevation			Length			
Number	Easting	Northing	(m)	Azimuth	Dip	(m) ັ	Start Date	<b>Finish Date</b>	Claim

Table 10-4 Total number of meters drilled per claim for Phase 2 drill program.

Claim Number	Total Meterage Drilled Per Claim (m)
3017672	2775.2
3017670	292.1
3018412	1829.2
3017674	2572.5
3017665	501.62
total	7970.62





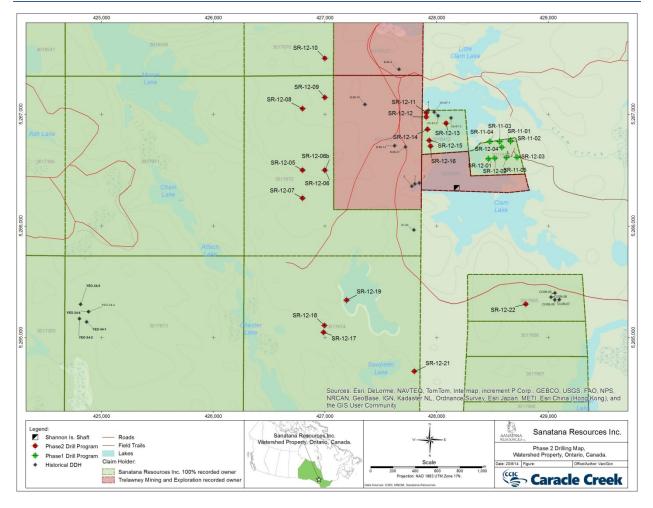


Figure 10-3 Drill collar map of historic drill holes and Sanatana's Phase 2 Mar. – Sept. 2012 drill program.

#### 10.2.2 Drill Methodology

The holes were drilled by Surface Contract Drilling of Lively, Ontario (35 William Ave., Lively, ON, P3Y 1E7) using an HTM 2500 drill which was made by Usinage Marcotte Inc., Val d'Or, Quebec. The core size of all drill holes is NQ2 (wireline core tube). Casing was anchored in bedrock and flagged. Most hole collar locations were determined using a handheld GPS but those that have downhole surveys of any type have a DGPS location attached to them.

A Reflex EZ-TRAC down hole survey was performed at 50 m on the way down and at 3 m intervals at the end of the hole with the shot coming back up from the bottom. There was no 3m survey data for holes SR-



12-14 and SR-12-20 due to problems with the Reflex tool data logger. These two holes do have downhole surveys every 50 m. The Reflex tests measured azimuth and dip of the hole.

Geotechnical logging was completed to determine RQD, fractures and veins every 3 m run of core and magnetic susceptibility measurements were recorded every 1 m.

DGI Geoscience Inc. of Toronto, Ontario used Acoustic Televiewer (ATV) to complete structural analysis of joints, fractures, faults, bedding, foliation and veins for the entire hole. The ATV tests were only completed on selected holes: SR-12-09, 11, 12, 13, 15, 16 and 22. Physical property surveys were not completed.

All drill core samples (half NQ2 core) were sent to AGAT's Sudbury lab. A total of 9835 samples were analyzed by the lab including drill core, standards, blanks and core duplicates were inserted during sampling.

#### 10.2.3 Drill Results

For drill holes SR-12-05 to 10 east of Chain Lake (claims 3017672 and 3017670), the overburden depths had an average of 2.83 m with SR-12-09 having the deepest overburden of 6.13 m of till. The weighted average core recovery was 100.03%. For drill holes SR-12-11 to 16 east of Clam Lake (claim 3018412), the overburden depths had an average of 2.58 m and the weighted average core recovery was 100.09%. For drill holes SR-12-17 to 21 south of Chain Lake (claim 3017674), the overburden depths had an average of 2.98 m and the weighted average core recovery was 99.97%. For drill hole SR-12-22 at the Chester showing (claim 3017665), the overburden depth was 6.17 m and the weighted average core recovery was 99.73%.

Cross sections, drill core logs and assay certificates for this phase of drilling are given in MNDM Assessment Report by Selway and Gill (2015b) (MNDM assessment AFRO ID: 2.56033).

Drill highlights are summarized in Table 10-5. The best gold intersections include:

- 32.40 g/t Au over 0.6 m in SR-12-11 in a strongly mineralized, stylolitic quartz vein. The stylolites are chloritic and mineralized with pyrrhotite, chalcopyrite and minor pyrite. There are a few specks of visible gold at 29.52 m and 29.35 m. Overall there is 5% pyrrhotite, 3% chalcopyrite and 1% pyrite. This vein zone is hosted by the quartz-diorite.
- 14.5 g/t Au over 0.8 m in SR-12-13 in quartz diorite with 1% disseminated pyrite



• 3.08 g/t Au over 1.0 m in SR-12-18 in granodiorite with chlorite and sericite, 5% pyrite as disseminated and in veinlets and 5% quartz veining.

Hole	From		Length	Au
Number	(m)	To (m)	(m)	(ppm)
SR-12-05	241.0	242.0	1.0	0.96
SR-12-09	21.5	22.5	1.0	1.08
SR-12-09	257.0	258.0	1.0	2.20
SR-12-09	331.0	334.0	3.0	0.39
SR-12-09	415.5	416.5	1.0	1.30
SR-12-09	433.0	434.0	1.0	2.83
SR-12-09	500.1	500.5	0.4	1.78
SR-12-11	11.0	12.0	1.0	3.39
SR-12-11	29.1	29.7	0.6	32.40
SR-12-12	108.7	109.4	0.7	4.50
SR-12-13	139.8	140.6	0.8	14.50
SR-12-14	149.0	153.0	4.0	0.60
SR-12-15	102.0	113.0	11.0	0.30
including	107.0	107.7	0.7	1.38
SR-12-18	307.0	311.8	4.8	1.00
including	308.0	309.0	1.0	3.08

Table 10-5 Drill highlights for Sanatana's Phase 2- 2012 drill program.

The relationship between sample length and the true thickness of mineralization and the orientation of the mineralization is not yet known.

#### 10.3 Phase 3 Drilling Dec. 2012 – Mar. 2013

#### 10.3.1 Drill Overview

The purpose of Phase 3 drill program was to begin an infill drilling program on Clam Lake claim 3011820 and to test the continuity of the gold bearing intervals previously drilled. The sixteen drill holes were completed on a grid layout among the previously completed nine drill holes to provide an overall spacing of approximately 50m between drill collars along lines 100m apart. Thus Clam Lake claim 3011820 has a total of 25 holes.

A diamond drill program consisting of 16 holes totalling 4,995.6 m were completed between December 7, 2012 and March 31, 2013. All of the holes were collared on claim 3011820 on Clam Lake, Chester township.



The drill program was supervised by Troy Gill (Exploration Manager for Sanatana) (1925–925 West Georgia Street, Vancouver, BC, V6C 3L2). Mr. Gill planned all of the holes, sighted most of them and was on site 2 weeks in and 2 weeks out rotation. The drill core was logged by Eden Hynes and Frank Racicot. The drill core is stored at Sanatana's core shack located at the Watershed Car and Truck Stop, corner Hwy. 144 and 560, Gogama, Ontario, POM 1W0.

Table 10-6 Drill hole collar locations for Sanatana's Phase 3- 2012- 2013 drill program, Zone 17, NAD83

Hole			Elevation	Azimuth	Dip	Length	Start	Finish
Number	Easting	Northing	(m)	(°)	(°)	(m)	Date	Date
SR-12-23	428480	5266710	395	170	-60	500.8	7/Dec/12	14/Dec/12
SR-12-24	428500	5266660	393	170	-60	500.9	15/Dec/12	10/Jan/13
SR-13-01	428545	5266560	399	170	-60	303.0	11/Jan/13	15/Jan/13
SR-13-02	428582	5266515	399	170	-60	207.0	16/Jan/13	17/Jan/13
SR-13-03	428475	5266550	392	170	-60	303.0	18/Jan/13	20/Jan/13
SR-13-04	428496	5266515	390	170	-60	201.0	21/Jan/13	24/Jan/13
SR-13-05	428480	5266465	381	170	-60	102.0	25/Jan/13	26/Jan/13
SR-13-06	428603	5266660	408	170	-60	462.9	29/Jan/13	8/Feb/13
SR-13-07	428646	5266573	408	170	-60	282.0	11/Feb/13	15/Feb/13
SR-13-08	428662	5266521	408	170	-70	249.0	16/Feb/13	3/Mar/13
SR-13-09	428681	5266474	404	170	-80	222.0	4/Mar/13	7/Mar/13
SR-13-10	428680	5266710	409	170	-60	507.0	7/Mar/13	20/Mar/13
SR-13-11	428768	5266473	397	170	-80	201.0	21/Mar/13	23/Mar/13
SR-13-12	428750	5266519	406	170	-70	231.0	23/Mar/13	26/Mar/13
SR-13-13	428735	5266567	408	170	-60	261.0	26/Mar/13	28/Mar/13
SR-13-14	428699	5266662	406	170	-60	462.0	28/Mar/13	31/Mar/13
					total	4995.6		



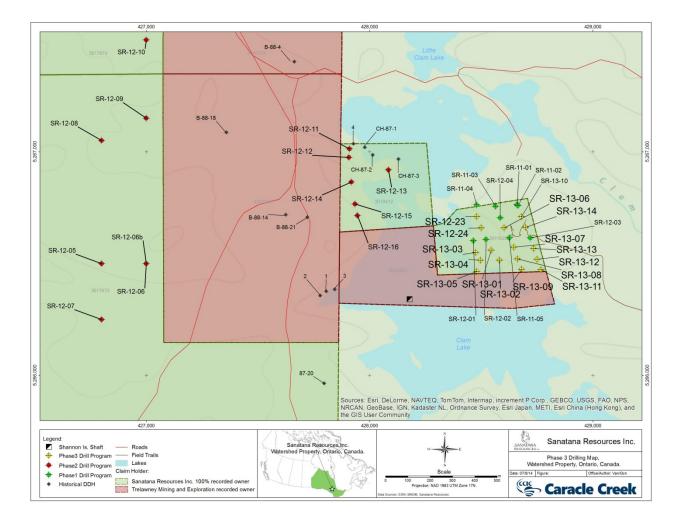


Figure 10-4 Drill collar map of historic drill holes and Sanatana's Phase 3 Dec. 2012 – Mar. 2013 drill program.

## 10.3.2 Drill Methodology

The holes were drilled by Surface Contract Drilling of Lively, Ontario (35 William Ave., Lively, ON, P3Y 1E7) using an HTM 2500 drill which was made by Usinage Marcotte Inc., Val d'Or, Quebec. The core size of all drill holes is NQ2 (wireline core tube). Casing was anchored in bedrock and flagged. Most hole collar locations were determined using a handheld GPS but those that have downhole surveys of any type have a DGPS location attached to them.

Drill hole SR-13-08 took about 3 weeks to complete because the hole intersected a major fault in diabase that fell between 182 m and 189 m where the core essentially had no competency and there was a large amount of lost or ground core. It was necessary to cement the hole to drill through the fault.



A Reflex EZ-TRAC down hole survey was performed at 50 m on the way down and at 3 m intervals at the end of the hole with the shot coming back up from the bottom. The Reflex tests measured azimuth and dip of the hole.

Geotechnical logging was completed to determine RQD, fractures and veins every 3 m run of core and magnetic susceptibility measurements were recorded every 1 m. Acoustic Televiewer (ATV) surveys were not completed on the holes for this phase of drilling.

All drill core samples (half NQ2 core) were sent to AGAT's Sudbury lab. A total of 5865 samples were analyzed by the lab including drill core, standards, blanks and core duplicates.

10.3.3 Drill Results

For this drill program (SR-12-23 to SR-13-14), the overburden depths had an average of 3.95 m and a weighted average core recovery of 99.65%.

Cross sections, drill core logs and assay certificates for this phase of drilling are given in MNDM Assessment Report by Selway and Gill (2015c) (MNDM assessment AFRO ID: 2.56059).

Drill highlights are summarized in Table 10-7. The best gold intersections include:

- 69.7 g/t Au over 0.8 m in SR-13-14 in sheared mafic dyke with banding defined by chlorite, calcite and possible red siderite (hematite is minor and scattered). Fabric becomes crenulated around a grey gold bearing quartz vein between 431.5m and 432m. Between 431.5m and 432m there is a grey ribbon quartz vein zone with 60% quartz, 7% splashy chalcopyrite, 3% pyrite and 5+ small specks of visible gold, red banding in this vein is possibly siderite.
- 44.07 g/t Au over 0.5 m in SR-13-12 in strongly sericitized quartz diorite which hosts 10 cm of sulphides besides a quartz vein. The sulphides are semimassive with 23 % pyrite and 2% chalcopyrite.
- 45.1 g/t Au over 0.5 m in SR-13-03 in gabbro to quartz gabbro with strong chlorite alteration. Between 260.2 m and 262.4 m there is a zone of very strong silicification and quartz eye concentration that has 5% very smokey grey quartz, 10% massive aggregates of pyrite and 5% chalcopyrite.
- 17.2 g/t Au and 0.50 % Cu over 0.5 m in SR-13-14 in sheared mafic dyke with banding defined by chlorite. Fabric becomes crenulated around a grey gold bearing quartz vein between 415.8 m and



416.3 m. From 415.8 m to 416.3 m there is an early grey quartz vein with chloritic patches, 3% pyrite, 3% chalcopyrite and more than 15 small speck of visible gold within the vein.

- 16.4 g/t Au over 1.0 m and 17.8 g/t Au over 0.9 m in SR-12-24 in breccia and microbreccia with 2% disseminated pyrite
- 15.6 g/t Au over 0.8 m in SR-13-01 in granodiorite with hematite staining and strong chlorite alteration
- 12.70 g/t Au over 0.5 m in SR-13-14 in gabbro to quartz gabbro. From 251m to 253.7m there is a vein zone with 25% grey quartz veining and the host rock is very chloritic and there are deep red hematite bands. Some of the veins have pyrite along the stylolites. There are 4 specks of visible gold in a small cluster in a small vein at 251.85m.
- 9.56 g/t Au over 5.1 m in SR-13-03 in gabbro to quartz gabbro. Between 260.2m and 262.4m there is a zone of very strong silicification and quartz eye concentration that has 5% very smokey grey quartz, 10%massive aggregates of pyrite and 5% chalcopyrite. Strong chlorite alteration also occurs throughout this interval.

Hole	From	То	Length	Au
Number	(m)	(m)	(m)	(ppm)
SR-12-23	56.00	63.00	7.00	1.19
including	56.80	57.70	0.90	5.73
SR-12-23	339.00	340.00	1.00	6.23
SR-12-24	283.24	291.00	7.76	1.57
including	283.24	283.77	0.53	3.93
including	283.77	284.27	0.50	11.60
SR-12-24	295.00	312.46	17.46	3.51
including	295.00	296.00	1.00	8.83
including	296.00	297.00	1.00	6.21
including	297.00	298.00	1.00	3.63
including	309.00	309.70	0.70	6.94
including	309.70	310.70	1.00	16.40
including	310.70	311.60	0.90	17.80
including	311.60	312.46	0.86	1.21
SR-12-24	384.80	385.30	0.50	3.12
SR-13-01	226.00	226.80	0.80	15.60
SR-13-01	231.00	235.00	4.00	1.39
including	232.00	233.00	1.00	3.75
SR-13-01	284.40	285.40	1.00	5.61
SR-13-01	285.40	286.10	0.70	3.96
SR-13-01	293.2	294.0	0.8	2.80
SR-13-01	294.0	294.9	0.9	7.01
SR-13-02	26.0	26.9	0.9	2.52
SR-13-02	115.8	120	4.20	1.44
including	118.0	119.0	1.0	3.57
SR-13-02	177.0	178.3	1.3	4.70

Table 10-7 Drill highlights for Sanatana's Phase 3- 2012- 2013 drill program



Hole Number	From (m)	To (m)	Length (m)	Au (ppm)
SR-13-03	74.0	75.0	1.0	( <b>ppiii)</b> 7.80
SR-13-03	134.00	135.10	1.10	2.45
SR-13-03	160.00	163.00	3.00	4.63
including	160.00	161.1	1.1	9.63
including	161.1	162.0	0.9	3.17
SR-13-03	257.9	263.0	5.10	9.56
including	257.9	203.0 259.0	1.1	9.30 8.96
including	257.9	260.2	1.1	9.31
including	239.0	260.2	0.8	4.02
including	260.2	261.0	0.8	4.02 45.10
0				
SR-13-04	16.0	17.0	1.0	2.65
SR-13-04	189.0	195.0	6.00	1.02
including	190.0	191.0	1.00	2.28
SR-13-05	40.0	41.0	1.0	2.77
SR-13-06	274.0	275.0	1.0	4.23
SR-13-06	375.0	376.0	1.0	7.72
SR-13-07	48.00	49.30	1.30	8.25
SR-13-09	151.1	164.0	12.90	1.51
including	159.00	160.20	1.20	8.54
including	160.20	161.00	0.80	2.94
SR-13-09	172.00	172.50	0.50	9.17
SR-13-09	203.00	203.60	0.60	3.67
SR-13-10	59.5	60.0	0.5	5.58
SR-13-10	157.00	161.00	4.00	2.08
including	158.0	159.0	1.0	7.06
SR-13-12	12.00	18.00	6.00	2.28
including	12.0	12.5	0.5	44.07
SR-13-13	255.0	256.1	1.1	5.62
SR-13-14	251.50	252.00	0.50	12.70
SR-13-14	319.4	320.2	0.8	2.99
SR-13-14	338.0	339.0	1.0	3.90
SR-13-14	372.4	373.3	0.9	3.57
SR-13-14	413.1	417.2	4.10	3.02
SR-13-14	415.8	416.3	0.5	17.20
SR-13-14	416.3	416.8	0.5	4.77
SR-13-14	425.5	425.9	0.4	2.54
SR-13-14	431.5	432.3	0.8	69.70

The relationship between sample length and the true thickness of mineralization and the orientation of the mineralization is not yet known.

## 10.4 Drilling fall 2013, Trelawney

Trelawney Mining and Exploration Inc., a wholly owned subsidiary of IAMGOLD Corporation, reported to Sanatana that they drilled 3 holes totalling 892.5 m in the fall of 2013. The 3 holes were drilled on

# Caracle Creek

4240522 and 4241016 claims, Clam Lake, Yeo township (Figure 10-5) (Sanatana Resources press release dated June 2, 2014, http://www.sanatanaresources.com).

Trelawney holds a direct 80% interest and the remaining 20% interest held for the benefit of Sanatana and TAAC under the terms to the Option and Joint Venture agreement between Sanatana and TAAC.

Hole Number	Easting (m)	Northing (m)	Azimuth	Dip	Length (m)
CLM13-01	427,629	5,267,594	200°	-50°	352.5
CLM13-02	427,505	5,266,878	178°	-45.7°	270
CLM13-03	427,860	5,266,190	325°	-50.2°	270

Table 10-8 Trelawney drilling in 2013 on Clam Lake Property claims, NAD 83, Zone 17\*

\*Note - Drill hole collar locations are derived from maps Trelawney provided to the Company and are approximate only.



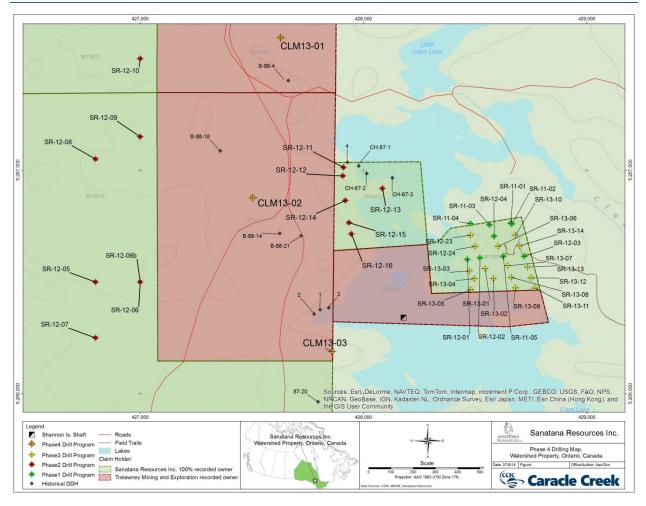


Figure 10-5 Trelawney's drilling in 2013 in Clam Lake area.

The highlight of the program was hole CLM13-02 which intersected a shear zone carrying disseminated to stringer sulphide mineralization from 139.5 to 148m (8.5m core interval), including a 3.0m interval of quartz veining and silicification containing some visible gold (Sanatana Resources press release dated June 2, 2014, http://www.sanatanaresources.com). This zone returned an intersection of 63.2 g/t Au / 5.0m (uncut), or 16.6 g/t Au over 5.0m (capped at 25g/t Au) (Table 10-9). The intersection occurs at a vertical depth of approximately 100m and the true width is estimated at 2.5 metres.



Hole Number	Target	From (m)	To (m)	Interval (m)	True width (m)	Au (g/t)	Au g/t (cut @ 25 g/t)	Comments
CLM13-01	Baxter trend below Pit A					NSR		Predominantly altered tonalite.
CLM13-02	E-F Zone , east edge of IP anomaly	143	148	5	2.5	63.2	16.6	Sulphide / deformation zone with po, py, cpy and visible gold on 3m.
CLM13-03	Hopkins Zone					NSR		Sheared altered tonalite 201.5-209.25m.
NSR = No Signific	cant Results.							

Table 10-9 Assay highlights from Trelawney's 2013 drill program on Clam Lake Property claims

## 11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

#### 11.1 Sample Security

The channel and grab samples were collected by Frank Racicot, Sanatana geologist, and he hand delivered them to the SPJ lab in Sudbury.

The drill core for all three Phases of drilling was transported from the drill rig to Sanatana's core logging facility at the Watershed by the drilling contractor. After the core was logged, it was cut using a core saw. One half of the core was bagged together with a pre-numbered sample tag and sealed (taped). The second half remained in the core box. The core boxes are stored in secure (locked) encased racks next to the core shack (Figure 11-1). The sample bags were collected in rice bags and picked up by AGAT Laboratories and transported to AGAT's preparation laboratory in Sudbury, Ontario.





Figure 11-1: The core boxes are stored in encased racks that are locked.

#### **11.2 Sample Preparation**

#### 11.2.1 Channel sampling, June 2011 – June 2012

Channel samples were collected subsequent to trenching. The purpose of the channel sampling was early stage regional prospecting. The location of the channel samples were carefully drawn on scaled map, but the UTM coordinates, elevation and azimuth of the start of each channel were not recorded in the field. The field geologist did tie in the stripping maps with UTM's taken at a few of the grid points and then an average applied to make it fit so that some of the channels had UTM's, but not each one. The location of the channels was georeferenced by Caracle Creek from the trench maps given in Appendix 4.

Oct. 29, 2015



Internal QC blanks and standards were not inserted into the sample stream. The samples delivered by Sanatana to SPJ Assay Labs ("SPJ") located in Lively, within Greater Sudbury. SPJ Assay Labs changed its name to SRX Assay Labs ("SRX") located on Kelly Lake Road, Sudbury with the same owner, Sav Dagostino on May 14, 2012 (http://www.srxassaylabs.com/wp-content/uploads/2012/06/Name-Change-May-14-2012.pdf). From June 14, 2010 to June 13, 2013, SRX had 9001:2008 ISO Certification and the SRX website states that they have 17025 ISO Certification for AA geochemical and ICP Multi-element analyses, although the Certificate of Registration is not posted.

The channel samples were analyzed by lead fire assay for gold only. The details of the fire assay methodology are not given on SRX website or in the assay certificates.

The QP recommends that for future channel sampling in the resource area of the Watershed Property, location of channel samples be adequately recorded with UTM coordinates, elevation and azimuth. The QP also recommends that samples from future channel sampling in the resource area be submitted to Sanatana's primary lab, AGAT. In the QP's opinion, the security of the channel samples is adequate for the purpose of regional sampling.

11.2.2 Drill Phase 1, 2 and 3 Samples

#### **Sample Preparation**

The core boxes were labelled with the box number and the drill hole number using a marker. A database was maintained to keep track of box number, hole number and meterage within the box. Core photos were taken of wet core before it was cut with meterage marked (white), sample numbers marked (red), cut line marked (yellow) and sample tags inserted. Close up pictures of visible gold in wet, uncut drill core were also taken.

The sample tags are barcoded with the sample numbers so that the lab can use a bar code scanner when it receives the sample rather than manually typing in the sample numbers. AGAT recorded the sample weight with the sample number when it received the samples. Both the bar coded sample numbers and the recording of the sample weights help to eliminate sample number mix ups at the receiving stage in the lab. AGAT recorded the sample login weight by balance.

All core samples were  $\frac{1}{2}$  core and  $\frac{1}{2}$  core stayed in the core box for future reference.

#### QC blanks and standards



Every 10<sup>th</sup> sample was a QC sample. The QC samples were inserted in order: blank, preparation duplicate and standard, so that every 30 samples have one blank, one standard and one preparation duplicate. The preparation duplicate is always the sample after the original. For the preparation duplicates, Sanatana sent empty sample bags with a sample tag inside. AGAT would do a 75% 2mm crush using a Rocklabs Crusher, take an additional 250 g split with an automatic Riffle Splitter and then pass it to the LM5 for pulverizing.

Blank is a barren granite/granodiorite with similar mineralogy to the gold host rocks, but barren for gold and base metals (Figure 11-2). The blank contains quartz (40 vol.%), feldspar (30 vol.%), chlorite/biotite (15 vol.%), epidote (5 vol.%) and minor hematite staining. The blank came from an outcrop on the west side of Highway 144 at UTM: 438394mE 5247641mN NAD83 Zone 17. Four samples of the blank inserted into the sample stream with the check assays had an average SG of 2.63.



Figure 11-2 Photo of Sanatana's granitic blank.

#### **Analytical Methods**



The drill core samples were submitted to AGAT Laboratories preparation lab in Sudbury and analyzed by AGAT Mississauga analytical lab. The samples were analyzed by a 4-acid digest with ICP/ICP-MS finish (201071) for 48 metals. The samples were analyzed for Au by fire assay (30g) with ICP-OES finish (202052) and pulp metallics - fire assay with an ICP finish (202120) for fire assay samples.

AGAT Laboratories is accredited for specific tests as listed in the laboratory's current scope of accreditation by the following organizations: the Standards Council of Canada (SCC), the Canadian Association for Laboratory Accreditation (CALA) and QMI-SAI Global (AGAT website: http://www.agatlabs.com/about/accreditation.cfm). AGAT Laboratories is certified to both: International Organization for Standardization's ISO/IEC 17025 - General Requirements for the Competence of Testing and Calibration Laboratories and the ISO 9000 series of Quality Management Standards.

#### <u>Phase 1: Oct. 2011 – Feb. 2012</u>

For SR-11-01, 02 and 04 and SR-12-01, 02, samples with > 10 g/t Au were analyzed by gravimetrics automatically. For SR-12-03, 12 mineralized samples were analyzed by pulp metallic and for SR-12-04, 3 mineralized samples were analyzed by pulp metallics.

The standards that were used for this phase of drilling were purchased from Analytical Solutions Ltd.: Oreas 152a, Oreas 6Pc and Oreas 62d. The standards have gold hosted in quartz veins and felsic rocks which is a matrix match for the mineralization on the Watershed Property. All of the standards are certified for Au using fire assay method which method matches with Sanatana's analytical protocol.

Standard Name	Element	Units	Certified Value	1 Std Dev	Matrix	Method
Oreas 152a	Au	ppb	116	5	porphyry copper-gold rocks (felsic)	fire assay
	Au	ppm	0.116	0.005		fire assay
	Cu	%	0.385	0.009		4-acid
	Mo	ppm	80	5		4-acid
	S	%	0.921	0.046		4-acid
Oreas 6Pc	Au	ppm	1.52	0.065	quartz-veined metagreywacke	fire assay
Oreas 62d	Au	ppm	10.5	0.33	epithermal vein gold and andesitic volcanics	fire assay
	Ag	ppm	8.37	0.68		aqua regia

Table 11-1 Standards used in Phase 1 – Oct. 2011 – Feb. 2012 drill program



#### Phase 2: Mar. 2012 - Sept. 2012

Samples for hole SR-12-12 are <sup>1</sup>/<sub>4</sub> core NQ2 rather than <sup>1</sup>/<sub>2</sub> core due to a lab mix up reconciling the assay results back to the sample numbers.

For SR-12-11, four mineralized samples were requested for pulp metallic analyses only. For SR-12-13, samples with > 10 g/t Au were analyzed by gravimetrics automatically.

The standards that were used for this phase of drilling were purchased from Analytical Solutions Ltd.: Oreas 152a, Oreas 15f, Oreas 52c, Oreas 6Pc, Oreas 15d, Oreas 62c and Oreas 62d. The standards have gold in quartz veins and gold in veins hosted by mafic rocks to match the mineralization on the Watershed Property. All of the standards are certified for Au using fire assay method which method matches with Sanatana's analytical protocol.

Standard			Certified	1 Std		
Name	Element	Units	Value	Dev	Matrix	Method
Oreas 152a	Au	ppb	116	5	porphyry copper-gold rocks (felsic)	fire assay
	Au	ppm	0.116	0.005		fire assay
	Cu	%	0.385	0.009		4-acid
	Mo	ppm	80	5		4-acid
	S	%	0.921	0.046		4-acid
Oreas 15f	Au	ppm	0.334	0.016	gold ore and alkali olivine basalt	fire assay
Oreas 52c	Au	ppb	346	17	porphyry copper-gold rocks (felsic)	fire assay
	Au	ppm	0.346	0.017		fire assay
	Cu	wt%	0.344	0.009		4-acid
	Mo	ppm	267	15		4-acid
	S	wt%	0.471	0.015		4-acid
Oreas 6Pc	Au	ppm	1.52	0.065	quartz-veined metagreywacke	fire assay
Oreas 15d	Au	ppm	1.559	0.042	gold ore and alkali olivine basalt epithermal vein gold and andesitic	fire assay
Oreas 62c	Au	ppm	8.79	0.21	volcanics	fire assay
	Ag	ppm	8.76	0.49	epithermal vein gold and andesitic	aqua regia
Oreas 62d	Au	ppm	10.5	0.33	volcanics	fire assay
	Ag	ppm	8.37	0.68		aqua regia

Table 11-2 Standards used in Phase 2 - Mar. 2012 - Sept. 2012 drill program

Phase 3: Dec. 2012 - Mar. 2013



For sample SR-12-24 and SR-13-01, samples with > 10 g/t Au were analyzed by gravimetrics automatically. For samples from SR-13-03 and 12, samples with > 10 g/t Au were analyzed by pulp metallic automatically. A total of 25 mineralized samples from SR-13-14 were requested for pulp metallics instead of fire assay analyses.

The standards that were used for this phase of drilling were purchased from Analytical Solutions Ltd.: Oreas 52c, Oreas 201, Oreas 15d, Oreas 10c and Oreas 62c. All of the standards have gold ore within a mafic host rock to matrix match the lithologies in the Watershed Property, except for Oreas 52c which is hosted by felsics rocks. All of the standards are certified for Au using fire assay method which method matches with Sanatana's analytical protocol.

Standard Name	Element	Units	Certified Value	1 Std Dev	Matrix	Method
Oreas 52c	Au	ppb	346	17	porphyry copper-gold rocks (felsic)	fire assay
	Au	ppm	0.346	0.017		fire assay
	Cu	wt%	0.344	0.009		4-acid
	Mo	ppm	267	15		4-acid
	S	wt%	0.471	0.015		4-acid
Oreas 201	Au	ppm	0.514	0.017	gold ore and tholeiitic basalt	fire assay
Oreas 15d	Au	ppm	1.559	0.042	gold ore and alkali olivine basalt	fire assay
Oreas 10c	Au	ppm	6.60	0.16	gold ore and alkali olivine basalt epithermal vein gold and andesitic	fire assay
Oreas 62c	Au	ppm	8.79	0.21	volcanics	fire assay
	Ag	ppm	8.76	0.49		aqua regia

*Table 11-3 Standards used in Phase 3 – Dec. 2012 – Mar. 2013 drill program.* 

In the QP's opinion the sample preparation, security and analytical procedures for the drill core samples are adequate for the purpose of resource estimation.

## 11.2.3 Drill Phase 1 and 3 check assays, March 2015

Representative pulps of check sample from Phase 1 and 3 drill programs were submitted to ALS Limited in Sudbury, Ontario and analyzed by their lab in North Vancouver, BC. The check samples were selected from the Sanatana core shack at the Watershed and delivered to ALS preparation lab in Sudbury on March 10, 2015 by Troy Gill (Exploration Manager for Sanatana). ALS is an ISO 9001:2008 and 17025 certified analytical laboratory. The check samples were selected from each drill hole and included a wide range of Au grades from low to high grade samples. A total of 431 drill core pulps from Phase 1 and 524 drill core pulps from Phase 3 were analyzed by fire assay (Au-ICP21 – 30 g sample, FA followed by ICP-AES finish).



A total of 12 drill core pulps from Phase 1 and 17 drill core pulps from Phase 3 with > 5 g/t Au were analyzed by gravimetrics (Au-GRA21 – 30 g sample, FA followed by GRAV finish). A total of 984 pulps of drill core from Phase 1 and 3 were assayed of the total 9601 samples in the resource drill hole database for 10% of the database. In addition to the Au fire assay and gravimetrics assay, all of the 984 pulps of drill core also had specific gravity measurements (OA-GRA08b) for use in the resource estimate.

A total of 109 QC samples were inserted every 10<sup>th</sup> sample so that every 30 samples contained one standard, one pulp duplicate and one blank. The standards inserted are the same as was used for Phase 3 drill program and are given in Table 11-4. The blank is the same barren granite/granodiorite that was used in previous drill programs as described in section 11.2.2.

Standard			Certified			
Name	Element	Units	Value	1 Std Dev	Matrix	Method
					porphyry copper-gold rocks	
Oreas 52c	Au	ppb	346	17	(felsic)	fire assay
	Au	ppm	0.346	0.017		fire assay
	Cu	wt%	0.344	0.009		4-acid
	Mo	ppm	267	15		4-acid
	S	wt%	0.471	0.015		4-acid
Oreas 201	Au	ppm	0.514	0.017	gold ore and tholeiitic basalt	fire assay
Oreas 15d	Au	ppm	1.559	0.042	gold ore and alkali olivine basalt	fire assay
Oreas 10c	Au	ppm	6.60	0.16	gold ore and alkali olivine basalt	fire assay

Table 11-4 List of QC standards inserted with check assays for Phase 1 and 3.

In the QP's opinion the sample preparation, security and analytical procedures for the check assays of the drill core samples are adequate for the purpose of resource estimation.

## 11.2.4 Regional soil sampling survey, May – Oct. 2012

The samples were taken as a traditional soil sample, but to account for the fact that they are till, not residual soil, the samples were screened at ALS. The samplers in the field removed the vegetation and spade out the humus layer, then they took a soil auger and turn out one auger full. If that was all B-horizon, it could go in the bag, or else they kept digging. Once they got one auger of clean sample, that went in the bag and then another auger full was collected, to give around 1 kg of sample to process. The samplers were instructed not to sample in swamps.

The samples were transported to ALS Limited in Sudbury, Ontario. At ALS, pebbles and coarse material was screened. An additional screen of 250 mesh (0.063 mm) was applied and approximately 250 g of fine



material (silt and mud) was collected. The samples were analyzed for trace level Au and 51 elements by aqua regia and ICP-MS. Duplicate sample splits were taken every 20 samples to check sample result variation. Internal lab standards results were requested to assess sample precision. ALS is an ISO 9001:2008 and 17025 certified analytical laboratory.

# **12.0 DATA VERIFICATION**

#### 12.1 Caracle Creek Site Visit

A site visit to the Watershed Property was completed by Caracle Creek geologist Elisabeth Ronacher, P.Geo., on July 22 and 23, 2014. Ms. Ronacher was accompanied by Frank Racicot, P.Geo., a consultant to Sanatana familiar with the Property and the drill core.

Sanatana maintains a field office and a core logging facility at the intersection of Highway 144, the Sultan road and Highway 560 (the Watershed Car and Truck Stop; see Section 5.1 Access) at UTM 436318 m E, 5257926 m N and an elevation of 418 m (Figure 12-1). Sanatana's secure core storage area is also located at the Watershed next to the core shack (Figure 12-2 and Figure 11-1).

During the site visit, several trenches were visited in the field. In addition, drill holes from each phase of drilling were reviewed.





Figure 12-1: Sanatana's core logging facility at the Watershed.



Figure 12-2: Sanatana's secure core storage facility at the Watershed.



## 12.1.1 Trenches

The stripped areas were visited in the field to obtain an overview of the geology of the Property and to confirm the grab and channel samples collected along the trenches.

The Chester showing where extensive stripping occurred was visited; the outcrop is located on the Chester Road at 429029 m E, 5235385 m N and 404 m. A historic pit is located at this stripped area. The dominant rock type at this outcrop is a light rock consisting dominantly of quartz and feldspar with only minor mafic phases. It was interpreted to be a tonalite. A several tens of centimetre wide quartz vein cuts the tonalite (Figure 12-3). Sanatana collected channel samples from this outcrop in 2012.



Figure 12-3: Quartz vein and channel sample location at the Chester trench area.

Dave's Outcrop is also located along the Chester Road at 427816 m E, 5265531 m N and 410 m elevation. The stripped area is characterized by large (up to 2 m), elongated fragments of mafic rocks in light tonalite



(Figure 12-4). A mafic dyke of <1 m width was also observed (Figure 12-5). Sanatana did not map or sample this outcrop.

At Tom's Outcrop along Chester Road (427682 m E, 5265742 m N), subparallel hematite veins in tonalite or diorite were observed (Figure 12-6).

The Two Lamprophyres Outcrop was also visited (427652 E, 5265768 N, 416 m). Quartz-chlorite pods of several tens of centimeter diametre were observed.



Figure 12-4: Mafic fragment in light tonalite at Dave's Outcrop.





Figure 12-5: Mafic dyke in light tonalite at Dave's Outcrop.

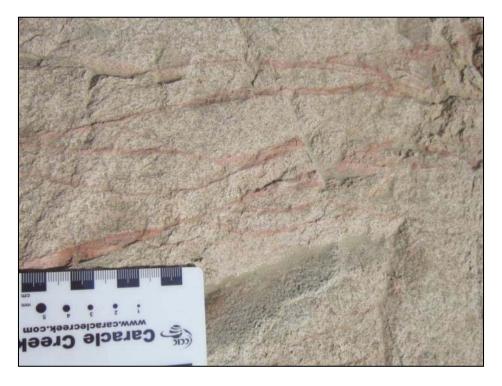


Figure 12-6: Subparallel hematite veins in diorite at Tom's Outcrop.

The Parking Lot Trench (Figure 12-7), located at 426810 m E and 5266218 m N, is characterized by blocks of mafic rocks in lighter, more felsic rocks (tonalite or granodiorite?). Feldspar porphyry was also observed.



Locations of channel samples were visited. The rocks are locally hematite altered. Minor quartz veins of  $\sim 10$  cm width occur. Sheared, mafic dikes cut the granodiorite.



Figure 12-7: Photo of the Parking Lot Trench. Sanatana stripped this area in 2012.

The Mini Candy Cane Outcrop is distinct because it is characterized by parallel, rusty, quartz-sulfide veins (Figure 12-8). The veins appear to dip steeply towards the west (approximate strike 150°). The sulfides are oxidized on surface (rusty); the dominant sulfide is pyrite but chalcopyrite also occurs and is locally weathered to malachite (Figure 12-9).





Figure 12-8: Quartz-sulfide veins at the Mini Candy Cane Trench.



Figure 12-9: Malachite stains on quartz-sulfide veins from the Mini Candy Cane Trench area.

Oct. 29, 2015



The Adanac Trench, located at 426793 m E and 5266413 m N, is a stripped area from the foot to the top of a small hill (the elevation at the foot is ~403 m) (Figure 12-10).

Trenches #1 and #5 on the Clam Lake claims where much of the drilling occurred were visited. Trench #5 is partly flooded (Figure 12-11). Channel samples were taken at this location in 2011. Trench #1 starts in pink granodiorite but darker diorite is dominant in the middle of the trench.

The North Shear is a stripped area east of Highway 144 at approximately 435781 m E, 5268128 m N and an elevation of ~408 m. Access to this area is via Highway 144 and on a gravel path leading east from Highway 144 at 435508 m E and 5268798 m N. The North Shear is an extremely sheared area where several high-grade channel samples were collected in 2012 (Figure 9-40, Figure 9-41, Figure 12-12). Check samples of two high-grade channel samples were collected during the site visit (Table 12-1, Figure 12-13, Figure 12-14).

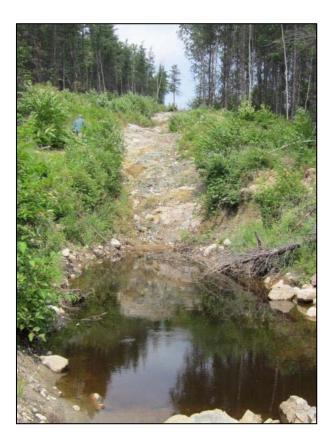


Figure 12-10: Photo of the Adanac Trench.







Figure 12-11: Flooded area at Trench #5.





*Figure 12-12: Central Shear in the North Shear area (cf. Figure 9-41). A strongly sheared zone is bounded by more competent rocks.* 



*Figure 12-13: Photo of the original channel sample 29044 collected by Sanatana in the 100 West area of the North Shear in 2012. A check sample of this channel sample was collected during the site visit (sample P957459).* 

Oct. 29, 2015





*Figure 12-14: Photo of the original channel sample 28498 collected by Sanatana in the 25 West area of the North Shear in 2012. A check sample of this channel sample was collected during the site visit (sample P957460).* 

# 12.1.2 Drill holes

Core of diamond drill holes completed during all three phases of drilling were reviewed at Sanatana's core logging facility at the Watershed. Several check samples were collected from the drill core. Drill holes SR-11-01 and SR-12-09 were reviewed in full and high-grade sections of holes SR-11-04, SR-12-03, SR-12-11, SR-12-24, SR-13-01 and SR-13-03 reviewed and samples. Visible gold was observed in drill hole SR-12-03 at 285.10 m (Figure 12-15).





*Figure 12-15: Visible gold (in centre of photo with red hematite) was observed in SR-12-03 at 285.1 m. The diameter of the yellow circle is 1 cm.* 

In addition, claim post 4 of claim 3018412 was located in the field (Figure 12-16). Several drill holes collars were also located (Figure 12-17).





*Figure 12-16: Photo of claim post 4 of claim 3018412. The coordinates recorded in the field were confirmed with the coordinates provided by the MNDM.* 



Figure 12-17: Collar location of drill hole SR-11-05.

Oct. 29, 2015



## 12.1.3 Site Visit Samples

Several samples from drill core and from the trenches were collected during the site visit. Table 12-1 lists the sample numbers and descriptions. Six samples were collected from drill core and two from the stripped areas. The samples were submitted to Activation Laboratories ("Actlabs") in Sudbury, Ontario, by Elisabeth Ronacher. A certified reference material (Oreas 62C) and a blank were included. The sample results are presented in Table 12-2. The standard and the blank were acceptable.

Sample P957460 was collected from the North Shear area and contained 85.70 g/t gold. The original sample contained 38.89 g/t Au. Both the original and the check sample contained significant amounts of gold. The check sample was taken from the same location where the original sample was taken but was not a duplicate of the original sample. Therefore, there is a discrepancy in the actual gold content. Check sample P957459 which was also collected from the North Shear area. It did not contain any gold whereas the original sample contained 27.50 g/t Au. This discrepancy is likely also due to a slight difference in location of the sample and to the nugget effect of gold.

The drill core samples reproduced the original gold values well. Only one sample, P957451, from drill hole SR-11-04 (453.8–454.8 m) did not reproduce the original value. The sample was from a faulted zone and the material collected during the site visit may not have been representative of the original sample.

In general, the check assay results were acceptable.

Sample	Sample	Hole ID	From	To (m)	Interval	Sample Description
<b>ID</b> P957451	Type Drill Core	SR-11-04	(m) 453.80	454.80	( <b>m</b> ) 1.00	strongly faulted zone (rock fragments only); dark green, very fine-grained rock; strong chlorite alteration; sulfides not visible
P957452	Drill Core	SR-12-24	295.00	296.00	1.00	very fine-grained, dark green mafic rock with intense chlorite alteration; no veins or visible sulfides
P957453	Drill Core	SR-13-01	226.00	226.80	0.80	pink-gray, medium-grained granodiorite; chlorite altered, 50% pink, hematite-dusted feldspar; fragments of lighter-colored intrusive in darker matrix; no veins; no visible sulfides
P957454	Standard	OREAS 62	С			
P957455	Drill Core	SR-13-01	294.00	294.75	0.75	medium- to fine-grained granodiorite or diorite, strongly chlorite altered, ~10% disseminated pyrite; quartz-pyrite veins with minor carbonate

Table 12-1: List of samples collected during the site visit.



Sample ID	Sample Type	Hole ID	From (m)	To (m)	Interval (m)	Sample Description
P957456	Drill Core	SR-13-03	74.00	75.00	1.00	granodiorite, pink feldspar (hematite dusted albite), quartz, chlorite; minor disseminated sulfides (pyrite); chlorite veinlets
P957457	Blank					granite/granodiorite: quartz (40%), feldspar (30%), chlorite/biotite (15%), epidote (5%), minor hematite staining
P957458	Drill Core	SR-12-09	433.00	434.00	1.00	dark grey diorite, chlorite altered, quartz-sulfide veins (pyrite, minor chalcopyrite)
Sample ID	Sample Type	-	Easting	Northing	Interval (m)	Sample Description
P957459	Grab sample		435785	5268128	0.84	rusty diorite, strongly weathered, chlorite veins, disseminated sulfides (?, barely visible because of weathering)
P957460	Grab sample		435847	5268078	1.20	sheared diorite, chlorite altered, rusty brown (oxidized sulfides); quartz vein fragments with sulfides (~1%?, only pyrite recognized)

```
Table 12-2: Check sample results.
```

Sample ID	Sample Type	Hole ID	From (m)	To (m)	Interval (m)	Original Sample ID	Original Au g/t	Check Au g/t
P957451	Drill Core	SR-11-04	453.80	454.80	1.00	M567573	15.00	0.131
P957452	Drill Core	SR-12-24	295.00	296.00	1.00	P363792	8.83	6.190
P957453	Drill Core	SR-13-01	226.00	226.80	0.80	P364298	15.60	8.790
P957454	Standard	OREAS 62	C				8.79 ±0.21	8.800
P957455	Drill Core	SR-13-01	294.00	294.75	0.75	P364376	7.01	1.160
P957456	Drill Core	SR-13-03	74.00	75.00	1.00	P364714	7.80	5.600
P957457	Blank						< 0.01	0.008
P957458	Drill Core	SR-12-09	433.00	434.00	1.00	M595462	2.83	4.020
Sample ID	Sample Type		Easting	Northing	Interval (m)			
P957459	Grab sample		435785	5268128	0.84	29044	27.50	0.008
P957460	Grab sample		435847	5268078	1.20	28498	38.89	85.700

# 12.2 Quality Control Geophysics Surveys

# 12.2.1 Geotech ZTEM survey, April 4 to 19, 2011

In-Field data processing and quality control are done on a flight by flight basis by a qualified data processor supplied by the survey company. Processing steps and check-up procedures are designed to assure the best



possible final quality of ZTEM survey data. A general overview of those steps is presented in the following paragraphs. The In-Field quality control can be separated into several phases:

- a. GPS Processing Phase: GPS Data are first examined and evaluated during the GrafMov processing.
- b. Raw data, ZTEM viewer phase: Data can be viewed, examined for consistency, individual channel spectra examined and overall noise estimated in the viewer provided by the ZTEM proprietary software, on the raw flight data and raw base station data separately, on the merged data, and finally on the data that have undergone ZTEM processing.
- c. Field Geosoft phase: Magnetic data, Radar altimeter data, GPS positioning data are re-examined and processed in this phase. Prior to splitting the lines EM data are examined flight by flight and the effectiveness of applying the attitude correction evaluated. After splitting the lines, a set of grids are generate for each parameter and their consistency evaluated. Data profiles are also re-evaluated on a line to line basis. A power line monitor channel is available in order to identify power line noise.

### 12.2.2 EarthProbe IP surface survey, June – July 2011

Several QA/QC criteria were applied during the survey to assess the quality of the data. Acceptable thresholds for the survey were established by the operator based on industry accepted practices and site specific conditions. The QA/QC criteria used for this survey are summarised in Table 12-3.

QA/QC Measure	Acceptable Threshold
Current and voltage waveform must be a castle shape and the correlation of the current and voltage time series must be above a defined threshold	0.9
Injected current must be within a defined range	Above 0.01 mA
Measured voltage must be within a defined range	5 – 10,000 mV
Standard deviation of stacked voltage data must be below a defined threshold	5%
System self-potential must be below a defined threshold	100 mV
	Current and voltage waveform must be a castle shape and the correlation of the current and voltage time series must be above a defined threshold Injected current must be within a defined range Measured voltage must be within a defined range Standard deviation of stacked voltage data must be below a defined threshold System self-potential must be below a

<b>T</b> 11 10 0	OLIOG I	• ••	• • •		C ID
Table 12-3	QA/QC data	verification	criteria for	EarthProbe	surface IP
	2 2 2				



## 12.2.3 Airborne Magnetics and EM structural interpretation, Nov. 2011

Data for this interpretation was supplied by Sanatana from previously collected airborne surveys. Both Survey Data sets were collected to industry standard, by reputable airborne companies. Geotech provided the ZTEM data and Dighem, a division of Fugro, provide the airborne resistivity data. Caracle Creek is aware of industry standard airborne industry standards.

# 12.2.4 EarthProbe Borehole IP survey, Dec. 2011 to June 2012

Several QA/QC criteria were applied during the survey to assess the quality of the data. Acceptable thresholds for the survey were established by the operator based on industry accepted practices and site specific conditions. The QA/QC criteria used for this survey are summarised in Table 12-4.

At the end of each survey day, the full waveform data are dumped from the field computer to a laptop. The data are then emailed to the office, and subsequently processed and loaded into TQIPDB (<u>http://www.scicomap.com/TQIPdb.htm</u>) for waveform quality assessment and removal of noisy data points. The data in TQIPDB format are then output into Geosoft format for plotting (<u>www.geosoft.com</u>). All the maps are subsequently created in Geosoft.

Survey Component	QA/QC Measure	Acceptable Threshold
Waveform	Current and voltage waveform must be a castle shape and the correlation of the current and voltage time series must be above a defined threshold	0.9
Injection current	Injected current must be within a defined	
	range	Above 1 mA
Measured voltage	Measured voltage must be within a defined	
_	range	5 - 10,000  mV
Stacked voltages	Standard deviation of stacked voltage data	
-	must be below a defined threshold	5%
Self-potential	System self-potential must be below a	
•	defined threshold	100 mV

Table 12-4 In field QA/QC data verification criteria for EarthProbe borehole IP survey



# 12.2.5 Ground magnetic survey, March 2012

This ground magnetics survey was undertaken with the GSM-19W "Walking" Overhauser Magnetometer with DGPS and a GSM-19 base station. A GSM-19 base station was located at an average location of 428,751mE, 5,265,525mN or 0.5 - 2.3 kilometers away.

The procedures followed were to industry standard. The data as presented appears of `normal` industry quality and representative of the magnetic signature of the region.

## 12.2.1 Ground magnetics, North Shear Zone, May 2013

The data as presented appears of `normal` industry quality and representative of the magnetic signature of the region.

# 12.3 Quality Control Channel Samples

The original purpose of the channel sampling programs on the Watershed Property was for regional prospecting. The channel sampling program was completed June 2011 to June 2012 at an early stage of the exploration on the Property. External blanks and standards were not inserted into the sample stream with the channel samples, but should be inserted in the future. SPJ did not insert an internal blank to monitor contamination during sample preparation. An internal standard (PJV-2) was inserted by SPJ every 20 samples with a certified value of 7.698 g/t, but this internal standard is too high grade to monitor the quality of the channel samples. Thus, the channel sample assays are treated as qualitative rather than quantitative in resource model. The lithological descriptions of the channel samples are of excellent quality and are used in the resource model.

### 12.4 Quality Control Drill Programs

### 12.4.1 QA/QC of drill hole database – Phase 1 and 3

The QA/QC of the drill hole database began with importing the collar, survey, structure and assays into an Access database. Phase 1 and 3 drill programs drilled 25 holes for a total length of 9,192.6 m on mineral claim 3011820. The 9 Phase 1 drill holes had an azimuth of 160° and a dip of 60-70°. The 16 Phase 3 drill holes had an azimuth of 170° and a dip of 60-80°.



As part of the QA/QC of the drill hole database, the data in the collar and survey database tables were compared with the corresponding data in the drill core logs. For Phase 1, the EOH's were rounded off to whole numbers at some point in the compilation, but the correct EOH is in the drill core logs and core photos. This applies to SR-11-02 which has the EOH was 674.0 m in the database and 674.2 m in the drill core log and core photo; and to SR-12-01 which has the EOH as 392.0 m in the database and 392.32 m in the drill core log and core photo. The corrections were made in the database. For Phase 3, hole SR-13-06 at 102 m has an azimuth of 160° which looks odd as the survey reading before it at 99 m is 167.1° and the reading after it at 105 m is 166.8°. There is likely an error in the azimuth at 102 m. These were the only issues identified in the collar and survey database tables for Phase 1 and 3. Overall of the quality of these tables is excellent.

The assay database consists of assays from 9601 unique samples of drill core from Phase 1 and 3 drill programs. Prior to importing into Access, all assays below detection limit were converted to half detection limit (i.e., < 0.001 g/t Au converted to 0.0005 g/t Au). The assay database was checked for duplicate sample numbers (i.e., same sample entered into the database twice or an error in sample number). Each sample in the database was found to be unique and two samples with incorrect sample numbers were fixed. Two core duplicates were moved from the sample assay table to the QA/QC assay table.

Sample login weights were reviewed to identify standards and drill core mix up. For the sample login weight, the standard packages are typically 0.1 kg (100 g) and for the drill core is approximately 2 kg. For Phase 1, SR-11-01, job number 11T547200, the sample login weights for the standard packages for 5 standards were 0.01 kg (10 g) to 0.03 kg (30 g). Obviously, this is an error in the sample weight by the lab, as the standard foil packages were prepackaged at 100 g each and 10 g of material would have been insufficient to complete the multi-element 4-acid analysis and fire assay.

For Phase 3, SR-13-13 sample P956439 (weight = 0.10 kg) was labelled drill core, but it is actually standard Oreas 201 and sample P956440 (weight = 2.38 kg) was labelled as a standard but it is actually drill core. SR-13-13 sample P956439 was labelled on the core in the core photos but its sample login weight at the lab indicates that it is a standard, so the sample mix up must have occurred in the core shack.

For Phase 3, sample numbers in hole SR-12-24 start with P363xxx in the core photos and drill core logs and for assay certificates 12U675541 and 13U680920. For assay certificate 13U678911, the sample numbers start with P363xxx for the core photos and drill core logs, but the sample numbers were switched to P636xxx in the chain of custody form and the assay certificates. Thus for these samples the sample



numbers in the drill core logs don't match that in the assay certificate. Caracle Creek recommends that Sanatana request that the lab reissue the assay certificate with the correct sample numbers.

## 12.4.2 Phase 1 Drilling Oct. 2011 – Feb. 2012

The <u>blank</u> for Phase 1 drill program was a barren granite gneiss. A total of 162 blank samples were analyzed. Au assays with well above 3 x (detection limit of 0.001 ppm Au) were classified as failures.

There are three compositions for the blanks for Phase 1 (Table 12-5). The first blank was a diabase dyke (high Fe and Cu) and 15 samples were used with SR-11-01 to 02. Upon review of the assays from the diabase dyke blank, Sanatana decided that it was not an appropriate blank and discontinued its use. The second blank was a granitic gneiss (high Ca and Mg) and 23 samples was used with SR-12-01 to 04. Upon review of the assays from the second blank, Sanatana decided that it was not an appropriate blank and discontinued its use. The third blank was the barren granitic gneiss which covers all of the Phase 1 drill holes and represents the majority of the blank compositions. Sanatana decided that this was the best blank to use and it is described in Section 11.2.2.The barren granitic gneiss contains high K, Na and Mn and variable Al.

							Mn	
Hole range	Al (%)	Ca (%)	Cu (%)	Fe (%)	K (%)	Mg (%)	(ppm)	Na (%)
SR-11-01 to			0.012 to	5.28 to		2.13 to	282 to	1.69 to
SR-11-02	5.05 to 7.69	4.74 to 6.41	0.022	11.20	0.44 to 1.15	4.51	661	2.11
SR-12-01 to	moderate	moderate	failed	high	moderate 0.005 to	moderate 7.16 to	moderate	moderate 0.02 to
SR-12-04	0.02 to 0.36	13.7 to 19.6	< 0.003	0.03 to 0.26	0.100	13.10	63 to 226	0.16
SR-11-01 to	low 1.14 to	high	low	low	low	high 0.07 to	low 813 to	low 2.15 to
SR-12-04	14.30	0.10 to 1.96	< 0.005	0.52 to 1.64	1.01 to 4.24	0.67	2340	4.63
	variable	low	low	moderate	high	low	high	high

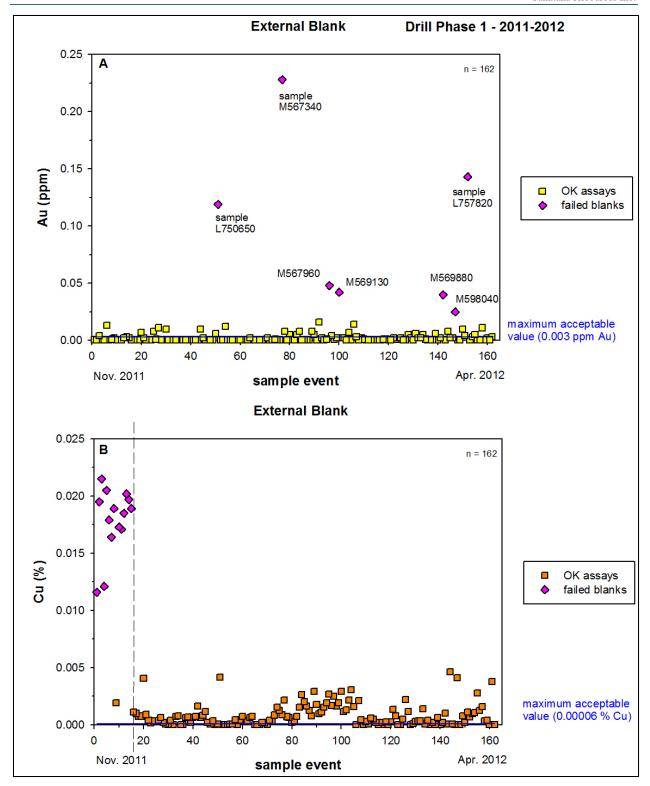
Table 12-5 Whole rock compositions for the three blanks.

The Au analyses of the blanks had 7 failures for a failure rate of 4.3% (Figure 12-18). Sample L750650 from SR-11-03 has 0.119 g/t Au and is likely Oreas 152a. Sample L757820 (SR-12-04) has 0.143 g/t Au and M567340 (SR-11-04) has 0.228 g/t Au both have high Au for a blank, but they do not match that of the certified values of the standards. Sample M567340 was analyzed after a drill core sample with 16.7 g/t Au and is thus likely sample contamination. Sample L757820 does not have any high grade Au samples near it, so it is not contamination from a previous drill core sample.



The average Cu value for the blank is 0.0023 % Cu which is well above 3 x (detection limit 0.00006 % Cu). For this QA/QC review, only Cu assays > 0.005 % Cu were classified as failures. The Cu assays of the blank had 14 failures for a failure rate of 8.6% (Figure 12-18). All of the Cu failures were from the diabase dyke blank from SR-11-01 and SR-11-02 analyzed in Nov. 2011. Since the granite gneiss blank typically contains Cu above the detection limit, this might not be an ideal blank to use for Cu.





*Figure 12-18 Control charts for Phase 1 external blank for Au and Cu. The failed Cu samples in B are from the diabase dyke blank.* 



<u>Standard Oreas 152a</u> is a low grade Au and Cu standard with a certified value of 0.116 g/t Au and a standard deviation of 0.005 g/t Au; and a certified value of 0.385 % Cu and a standard deviation of 0.009 % Cu. A total of 53 samples of this standard were analyzed with drill holes from SR-11-01 to SR-12-04. Sample L761590 with SR-11-02 was originally labelled as Oreas 62c, but its composition matches Oreas 152a, so it was likely originally mislabelled.

For Au for Oreas 152a, a total of 9 failures were identified for a failure rate of 17.0% (Figure 12-19). Three of the 9 failures are minor failures, so if you discount them, the failure rate would be 11.3%. Sample L761290 with SR-11-01 was a warning for Au, but a failure for Cu and Mo and is likely a standard mix up. Sample M569240 with SR-12-01 is likely a sample mix up, as it failed for Au, Cu and Mo and the Mg, Mn and P don't match the typical range for the standard. The assays of Oreas 152a are bias low as all of the assays are below the certified value except for 5 assays.

For Cu for Oreas 152a, a total of 7 failures were identified for a failure rate of 13.5%. For Cu, all of the failures had Cu assays below the certified value. Sample M569240 with SR-12-01 had a low sample login weight of 0.4 kg, failed for Au, Cu and Mo and major elements did not match the composition of the standard. Thus sample M569240 is likely a sample mix up. Sample M567480 with SR-11-04 failed for both Au and Cu.



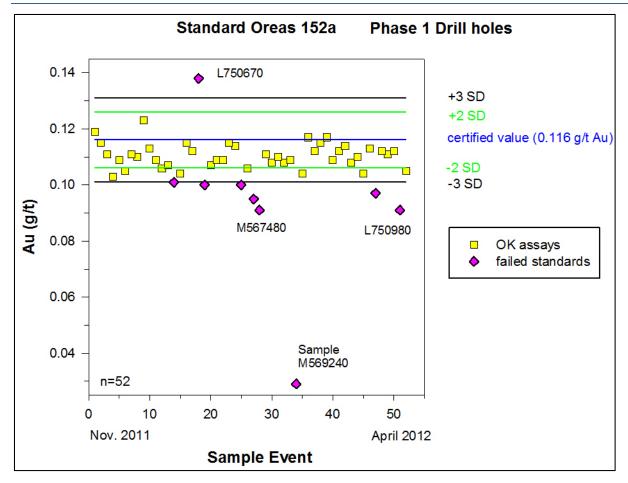


Figure 12-19 Control chart for Phase 1 standard Oreas 152a for Au

<u>Standard Oreas 6Pc</u> is a medium grade Au standard with a certified value of 1.52 g/t Au and a standard deviation of 0.065 g/t Au. A total of 59 samples of this standard were analyzed with drill holes SR-11-01 to SR-12-04 (Figure 12-20). There is only 1 failure for this standard (sample L757690) for a failure rate of 1.7%. Sample M569210 with SR-12-01 has an acceptable Au assay and the whole composition matches that of Oreas 6Pc, but it has a sample login weight of 2.45 kg which indicates an error in the sample login weight. The assays for Oreas 6Pc are bias low as the majority of the assays are below the certified value for the standard. Overall, the quality of the Au assays for Oreas 6Pc is excellent.



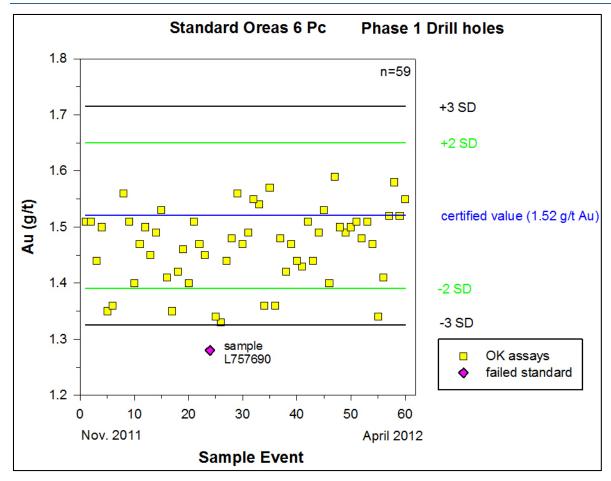


Figure 12-20 Control chart for Phase 1 standard Oreas 6 Pc for Au

<u>Standard Oreas 62d</u> is a high grade Au standard with a certified value of 10.5 g/t Au and a standard deviation of 0.33 g/t Au. A total of 55 samples of this standard were analyzed with drill holes SR-11-01 to SR-12-04. This standard was intended to monitor the accuracy of the high grade drill core samples, but unfortunately, its certified value is above the upper detection limit of 10 g/t Au for the fire assay analytical method. Subsequent to the fire assay analysis of this standard, the lab attempted to analyze it again using gravimetrics, but there was insufficient material to complete the gravimetric analyses. The standard was pre-packaged in 100 g foil bags. As the certified value of this standard is above the upper detection limit of fire assay method, the fire assay results for it can't be used to monitor accuracy. Sanatana realized this and changed the high grade standard to Oreas 62c with 8.79 g/t Au in the Phase 2 drill program.



Three samples of Oreas 62d definitely failed as they were well below the certified value. Sample M567800 (SR-11-05) has 5.84 g/t Au, sample M569750 (SR-12-03) has 7.32 g/t Au and sample L759950 (SR-11-01) has 8.67 g/t Au.

### Pulp Metallics

A total of 686 selected coarse duplicates from Phase 1 samples were reanalyzed by pulp metallic to check for gold nugget effect. Wherever possible, the total Au from the pulp metallic analyses was used in the assay database for samples with > 10 g/t Au instead of the gravimetric results.

#### Preparation Duplicates

Typically, Sanatana selected every 30<sup>th</sup> sample to be a preparation duplicate. An empty sample bag with a sample tag was submitted to AGAT and AGAT filled the sample bag with a split of the coarse crush material from the previous original sample. Thus the preparation duplicates do not have a sample login weight. Typically, the original core is a sample number ending in "9" and the matching preparation duplicate is the following sample number ending in "0".

Sanatana decided to use preparation duplicates instead of core duplicates because <sup>1</sup>/<sub>4</sub> core sample original and <sup>1</sup>/<sub>4</sub> core for a duplicate is not representative in comparison with <sup>1</sup>/<sub>2</sub> core sampling program. The <sup>1</sup>/<sub>4</sub> core would have half the weight of sample in the processing steam the lab. The drill core was marked with a continuous yellow cut line to ensure that the <sup>1</sup>/<sub>2</sub> core sample is representative and not bias to gold nuggets. The yellow cut line is visible in the drill core photos.

A total of 161 preparation duplicate pairs were analyzed (Figure 20-26). All of the preparation duplicates passed except for one high grade sample (M7567230) from SR-11-04 for a failure rate of 0.6%. For this sample the bulk composition is the same for the original and the preparation duplicate, so it is not a sample mix up. The sample was analyzed by gravimetrics as shown in assay certificate 12U567722 with original sample M567229 has 7.57 g/t Au and the core duplicate M567230 has 14.7 g/t Au. Sanatana noticed the difference between the two assays and requested that AGAT reassay the original sample by pulp metallics. The sample was re-analyzed as shown in assay certificate 12T603941 with M567229 has 9.23 g/t total metallic gold. The coarse fraction had 9.72 g/t and the fine fraction has 9.21 g/t Au. The assay database for the resource estimate will use the metallic total Au number of 9.23 g/t Au, as it is very similar to the assay for the fine and coarse fraction and in the same ball park as the original gravimetrics assay.



The quality of the preparation duplicates is excellent.

### Pulp Duplicates

As part of AGAT's internal QA/QC, AGAT analyzed approximately every 12<sup>th</sup> sample within each batch of samples as a pulp duplicate. A total of 273 pulp duplicate pairs were analyzed for Au by fire assay with 6 failures for a failure rate of 2.2% (Figure 20-27).

Lab sample 3122475 which corresponds to Sanatana sample number M569423 from SR-12-01 is a failed pulp duplicate pair as the original sample had 0.595 g/t Au and the duplicate sample had 1.190 g/t Au. The major elements for this pulp duplicate pair are similar, so it is not a sample mix up. The pulp duplicate failure is likely due to heterogeneous Au content in the sample material or analytical error.

Lab sample 3108462 which corresponds to Sanatana sample number M567936 from SR-11-05 is a failed pulp duplicate as the original sample had 0.455 g/t Au and the duplicate sample had 0.786 g/t Au. The major elements for this pulp duplicate are very similar, so it is not a sample mix up. The pulp duplicate failure is likely due to heterogeneous Au content in the sample material or analytical error.

The other four pulp duplicate failures are relatively minor. Overall of the quality of the pulp duplicates is excellent.

### 12.4.3 Phase 2 Drilling Mar. 2012 – Sept. 2012

The <u>blank</u> for Phase 2 drill program was a barren granite gneiss. A total of 369 blank samples were analyzed. Au assays with well above 3 x detection limit of 0.001 ppm Au were classified as failures. The Au assays of the blank had 12 failures for a failure rate of 3.3%. The failures for Au all had > 0.025 g/t Au in the assays. Sample P360030 (SR-12-18) had 0.102 g/t Au and M595810 (SR-12-10) had 0.210 g/t Au. As both analyses don't match the certified value for Oreas 152a of 0.116 g/t Au, they are likely not a sample mix up with this standard. Sample P360030 followed drill core sample P360029 with 3.08 g/t Au and is thus likely sample contamination. Sample M595810 is a possible sample mix up with the drill core sample before it. Sample M595809 has only 0.025 g/t Au.

The average Cu value for the blank is 0.0013 % Cu which is well above 3 x detection limit (0.00006 % Cu). For this QA/QC review, only Cu assays > 0.005 % Cu were classified as failures. The Cu assays of the blank had 4 failures for a failure rate of 1.1%. Since the granite gneiss blank typically contains Cu above the detection limit, this might not be an ideal blank to use for Cu.



Standard Oreas 152a is a low grade standard for Au and Cu with a certified value of 0.116 g/t Au and a standard deviation of 0.005 g/t Au; and a certified value of 0.385 % Cu and a standard deviation of 0.009 % Cu. A total of 26 samples of this standard were analyzed with drill holes from SR-12-05 to 08, and SR-12-19.

For Au, Oreas 152a had only 2 failures for a failure rate of 7.7%. Sample M599470 (SR-12-07) failed with 0.139 g/t Au. Sample P360230 (SR-12-19) had 1.41 g/t Au and is likely a sample mix up with Oreas 6 Pc. This standard was not used for any other drill hole after SR-12-08, so it was likely not available in the core shack for hole SR-12-19.

For Cu, Oreas 152a had 3 failures for a failure rate of 11.5%. Sample P360230 (SR-12-19) failed for both Au and Cu and it looks like it was incorrectly named and is actually Oreas 6Pc. Sample M599470 (SR-12-07) also failed for both Au and Cu and is likely a sample mix up as the major elements don't match that of Oreas 152a. Once these two sample mix ups are fixed in the drill hole database, the failure rate will be reasonable.

<u>Standard Oreas 15f</u> is a low grade Au standard with a certified value of 0.334 g/t Au and a standard deviation of 0.016 g/t Au. A total of 50 samples of this standard were analyzed with SR-12-10 to 19. There was only 1 failure for this standard for a failure rate of 0.4%. Sample P360500 (SR-12-19) has 1.46 g/t Au and looks like it is actually Oreas 15d, not Oreas 15f. Thus this failure is actually an incorrect standard name rather than an analytical issue. The quality of the assays for this standard is excellent. Sample N986980 (SR-12-13) passed, but a sample login weight was not recorded.

<u>Standard Oreas 52c</u> is a low grade Au and Cu standard with a certified value of 0.346 g/t Au and a standard deviation of 0.017 g/t Au; and a certified value of 0.344 % Cu and a standard deviation of 0.009 g/t Cu. A total of 21 samples for the standard were analyzed with drill holes SR-12-20 to SR-12-22. One sample (P362870) of Oreas 52c was analyzed with SR-12-12 which is odd, as it was probably not available in the core shack at that time. There are no failures for Au and 7 failures for Cu for a failure rate for Cu of 33.3%. The quality of the Au assays for this standard is excellent, but the high failure rate for the Cu needs to be investigated.

<u>Standard Oreas 6Pc</u> is a medium grade Au standard with a certified value of 1.52 g/t Au and a standard deviation of 0.065 g/t Au. A total of 18 samples of this standard were analyzed with drill holes SR-12-05 to 08. There are no failures for this standard and the quality of the analyses is excellent.



<u>Standard Oreas 15d</u> is a medium grade Au standard with a certified value of 1.559 g/t Au and a standard deviation of 0.042 g/t Au. A total of 62 samples of the standard were analyzed with drill holes SR-12-10 to 22. A total of 10 failures were identified for a failure rate of 16.1%. A total of 8 of the 10 failures had Au assays below the certified value. Sample M596040 (SR-12-10) had 0.319 g/t Au and is probably actually Oreas 52c. Sample M596610 (SR-12-11) passed for Au, but had no recorded sample weight. The high failure rate for this standard should be investigated by Sanatana and AGAT.

<u>Standard Oreas 62c</u> is a high grade Au standard with a certified value of 8.79 g/t Au and a standard deviation of 0.21 g/t Au. A total of 60 samples of the standard were analyzed with drill holes SR-12-10 to 22. This standard had 14 failures for a failure rate of 23.3 %. A total of 10 of the 14 failures had Au assays below the certified value. Sample N988030 (SR-12-17) had 1.16 g/t Au and could be Oreas 6Pc, although the Au value is not a perfect match for Oreas 6Pc. Sample N988000 (SR-12-17) had 9.62 g/t Au which is close to the upper detection limit for fire assay analytical method. The major elements composition does not match Oreas 62c, so it is possibly Oreas 62d with a certified value of 10.5 g/t Au.

<u>Standard Oreas 62d</u> is a high grade Au standard with a certified value of 10.5 g/t Au and a standard deviation of 0.33 g/t Au. This standard was intended to monitor the accuracy of the high grade drill core samples, but unfortunately, its certified value is above the upper detection limit of 10 g/t Au for the fire assay analytical method. Subsequent to the fire assay analysis of this standard, the lab attempted to analyze it again using gravimetrics, but there was insufficient material to complete the gravimetric analyses. The standard was pre-packaged in 100 g foil bags. As the certified value of this standard is above the upper detection limit of fire assay method, the fire assay results for it can't be used to monitor accuracy. Sanatana realized this and changed the high grade standard to Oreas 62c with 8.79 g/t Au later on in the Phase 2 drill program.

A total of 26 samples of Oreas 62d were analyzed by fire assay with drill holes SR-12-05 to 08. Three of the samples of this standard were definite failures. Sample M598210 (SR-12-05) has 0.115 g/t Au and looks like Oreas 152a. Sample M594310 (SR-12-08) has 1.54 g/t Au and looks like Oreas 6Pc. Sample M598150 (SR-12-05) has 9.83 g/t Au which looks acceptable, but the major elements don't match Oreas 62d. This sample may be correct for fire assay of Au, but was mix up in the lab for the 4-acid analysis.

# 12.4.4 Phase 3 Drilling Dec. 2012 – Mar. 2013

The <u>blank</u> for Phase 3 drill program was a barren granite gneiss. A total of 195 blank samples were analyzed (Figure 12-21). Au assays with well above 3 x (detection limit of 0.001 ppm Au) were classified as failures. The Au assays of the blank had 8 failures for a failure rate of 4.1% (Figure 12-21). The failures were:

- P954980 (SR-13-08) which had a sample login weight of 0.58 kg which is typical for the blanks, but the Au assay was 1.58 ppm Au which is typical for Oreas 15d. Oreas 15d typically weighs 0.10 kg. This is likely a sample mix up after it was weighed by the lab.
- P363810 (SR-12-24) which had a sample login weight of 0.54 kg which is typical for the blanks, but the Au assay was 0.343 ppm Au which is typical for Oreas 52c. Oreas 52c typically weighs 0.10 kg. This is likely a sample mix up after it was weighed by the lab.
- P954780 (SR-13-08) and P365339 (SR-13-06) had sample login weighs typical of that for drill core and elevated Au contents. Thus they are sample mix ups with drill core.
- P364560, P955190, P955280 and P957140 were failed blanks with Au values above 3 x the detection limit for Au.

Sample P365336 (SR-13-06) was labeled as a blank, but it had a sample login weight of 2.50 kg. This sample is a sample mix up with drill core, even though it contained Au below the detection limit.

Cu assays with well above 3 x detection limit of 0.00006 % Cu were classified as failures. The Cu assays of the blank had 5 failures for a failure rate of 3% (Figure 12-21). The failures were:

- P365339 (SR-13-06) had sample login weighs typical of that for drill core and elevated Cu contents. Thus it is a sample mix ups with drill core.
- P364050 (SR-13-01), P364560 (SR-13-02), P365130 (SR-13-04) and P955220 (SR-13-09) were failed blanks with Cu values above the 3 x detection limit for Cu.

The average Cu value for the blank is 0.001 % Cu which is well above 3 x detection limit (0.00006 % Cu). For this QA/QC review, only Cu assays > 0.005 % Cu were classified as failures. Since the granite gneiss blank typically contains Cu above the detection limit, this might not be an ideal blank to use for Cu.

The failure rate of 4% for Au and 3% for Cu is acceptable and the sample mix ups are easy to fix in the assay database. If Sanatana is planning on including Cu in a future resource, it is recommended that another blank be used to monitor Cu contamination.



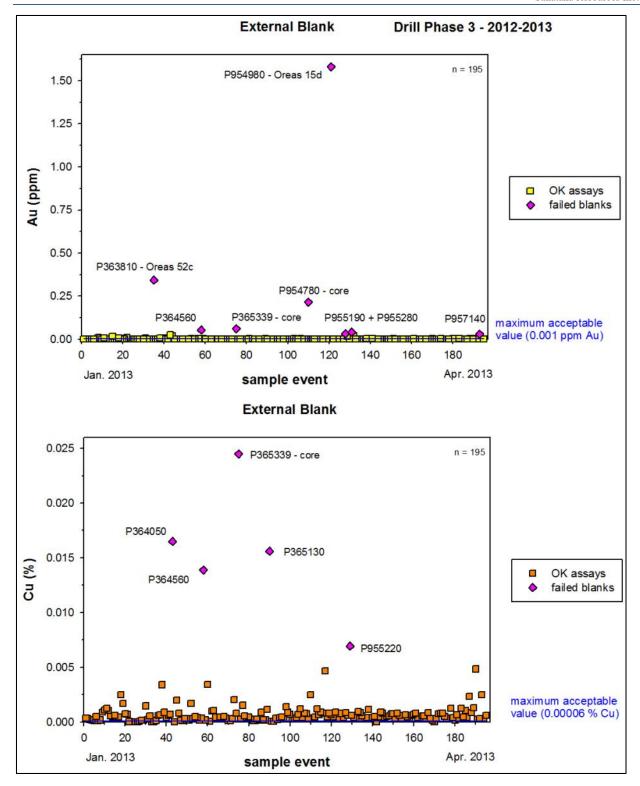


Figure 12-21 Control charts for Phase 3 drilling external blank for Au and Cu.



<u>Standard Oreas 52c</u> is a low grade Au and Cu standard with a certified value of 0.346 g/t Au and a standard deviation of 0.017 g/t Au; and a certified value of 0.344 % Cu and a standard deviation of 0.009 g/t Cu. A total of 42 samples for the standard were analyzed with drill holes SR-12-23 to SR-13-13. There are no failures for Au and 9 failures for Cu for a failure rate for Cu of 21.4% (Figure 12-22 and Figure 12-23). This is a high failure rate for Cu which should be investigated by Sanatana and AGAT. For 8 of the 9 failures, the Cu values were above the certified value.

The analyses for Au are accurate within  $\pm 2$  standard deviation, but are bias low as they tend to have values below the certified value. The majority of the analyses for Cu are also accurate within  $\pm 2$  standard deviation, but are bias high as they tend to have values above the certified values.

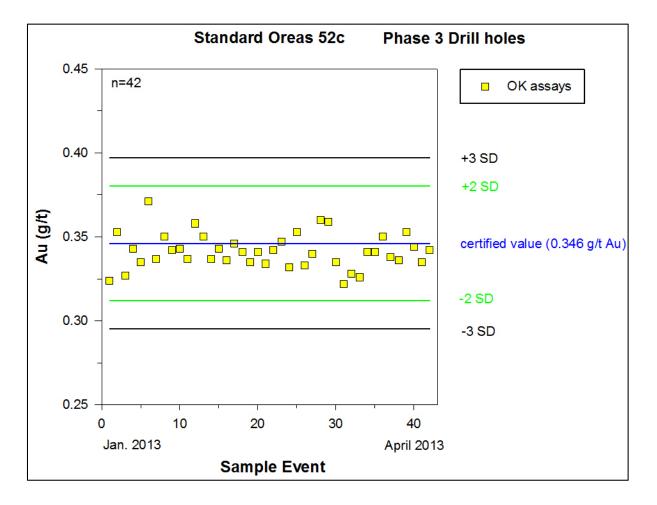


Figure 12-22 Control chart for Phase 3 standard Oreas 52c for Au



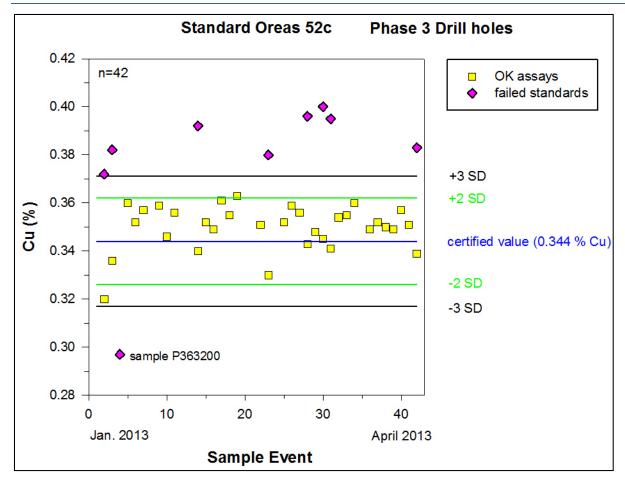


Figure 12-23 Control chart for Phase 3 standard Oreas 52c for Cu

<u>Standard Oreas 201</u> is a low grade Au standard with a certified value of 0.514 g/t Au and a standard deviation of 0.017 g/t Au. A total of 18 samples of the standard were analyzed in Phase 3 drill program with drill holes SR-13-08 to 14 and only one failure was identified for a failure rate of 5.6% (Figure 12-24). The failed sample was P956440 from SR-13-13. The failed assay was well below the certified value and has a login weight of 2.38 kg indicating that it was likely drill core and not Oreas 201. The majority of the analyses of standard were within  $\pm$  2 standard deviation and no bias was detected. Thus, other than one sample mix up, the analyses for Oreas 201 are excellent.



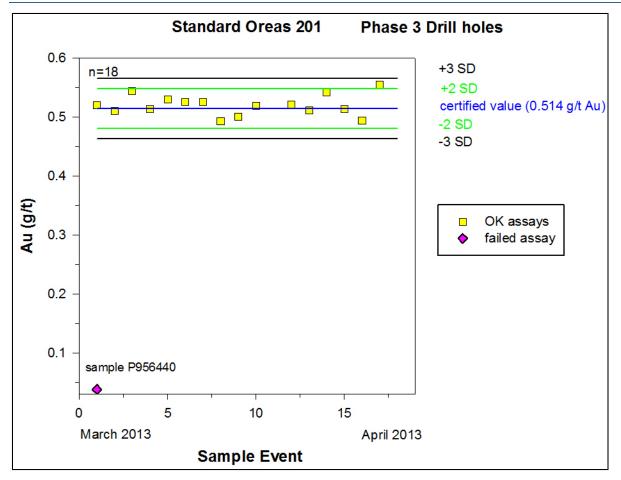


Figure 12-24 Control chart for Phase 3 standard Oreas 201 for Au.

<u>Standard Oreas 15d</u> is a medium grade Au standard with a certified value of 1.559 g/t Au and a standard deviation of 0.042 g/t Au. A total of 76 samples of the standard were analyzed in the Phase 3 drill program with drill holes SR-12-23 to SR-13-14 (Figure 12-25). A total of 5 failures were identified for a failure rate of 6.6%. Sample P365150, SR-13-04 with 0.34 g/t Au is probably actually Oreas 52 c, not Oreas 15d, as its values for both Au and Cu match that for Oreas 15d. This sample is just incorrectly named in the drill hole database. Sample P954190, SR-13-06 with 8.32 g/t Au is probably actually Oreas 62c, not Oreas 15d, as the major element composition for this sample does not match Oreas 15d. Although, it is not a perfect match for the Au and Ag values of Oreas 62c. Thus this sample is also incorrectly named in the drill hole database. Samples P362960, P363590 and P954280 are failed Au samples with values below the certified value. The majority of the analyses are within  $\pm 2$  standard deviation, but they are consistently bias low. Caracle Creek recommends that Sanatana investigate with AGAT, as to why these analyses are bias low.



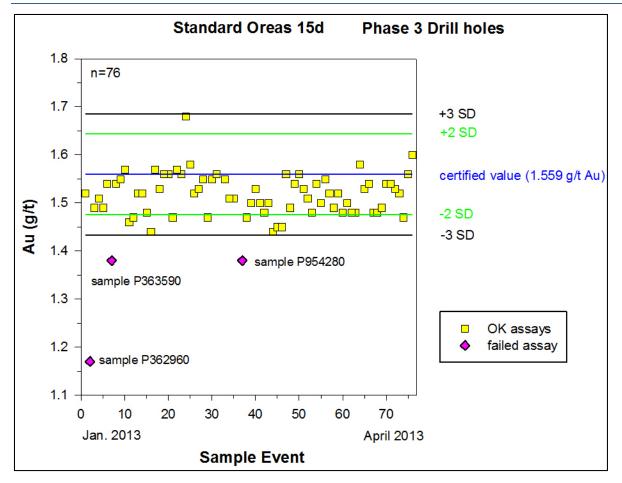


Figure 12-25 Control chart for Phase 3 standard Oreas 15d for Au. Samples P365150 and P954190 are beyond the scale of the plot and are thus not plotted in the control chart.

<u>Standard Oreas 10c</u> is a high grade Au standard with a certified value of 6.60 g/t Au and a standard deviation of 0.16 g/t Au. A total of 21 samples of the standard were analyzed in the Phase 3 drill program with drill holes SR-13-08 to 14 (Figure 12-26). No failures and no bias in the analyses were identified. The analyses are within  $\pm 2 x$  standard deviation. Thus the quality of the analyses for this standard is excellent.



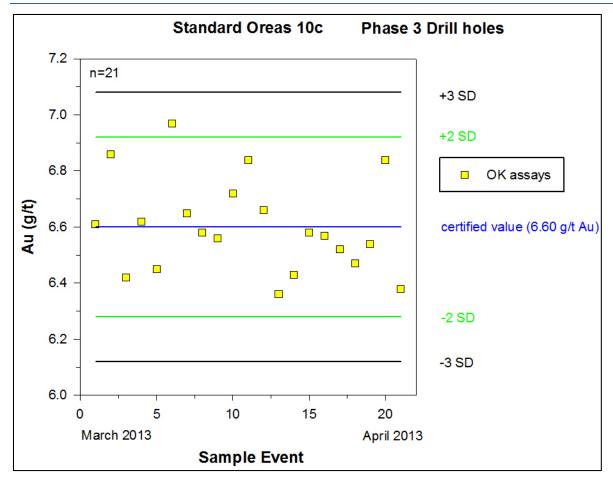


Figure 12-26 Control chart for Phase 3 standard Oreas 10c for Au

<u>Standard Oreas 62c</u> is a high grade Au standard with a certified value of 8.79 g/t Au and a standard deviation of 0.21 g/t Au. A total of 35 samples of the standard were analyzed in Phase 3 drill program with drill holes SR-12-23 to SR-13-14 (Figure 12-27). This standard had only 1 minor failure (sample P954700, SR-13-07) for a failure rate of 2.9 %. The analyses showed no bias and the majority of the analyses are within  $\pm 2$  standard deviation. Thus the quality of the analyses is excellent.



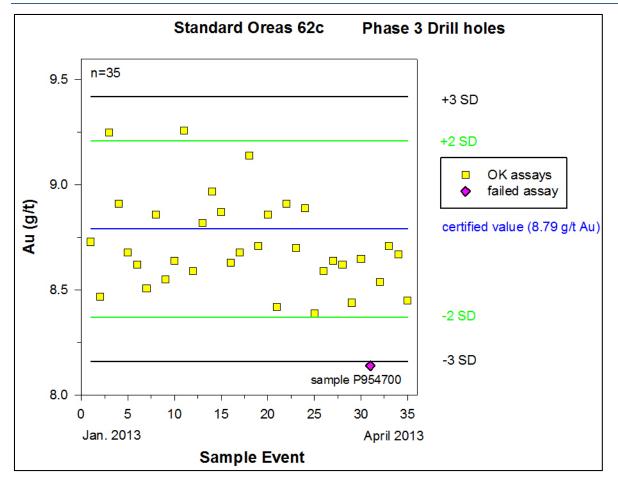


Figure 12-27 Control chart for Phase 3 standard Oreas 62c for Au

#### Preparation Duplicates

Typically, Sanatana selected every 30<sup>th</sup> sample to be a preparation duplicate. An empty sample bag with a sample tag was submitted to AGAT and AGAT filled the sample bag with a split of the coarse crush material from the previous original sample. Thus the preparation duplicates do not have a sample login weight. Typically, the original core is a sample number ending in "9" and the matching preparation duplicate is the following sample number ending in "0".

A total of 189 preparation duplicate pairs were analyzed of which 9 pairs failed for a failure rate of 4.8% (Figure 20-28). Original sample P957089 and preparation duplicate P957090 from SR-13-14 had a high absolute pair difference with 3.57 g/t Au in the original sample and 5.28 g/t Au in the duplicate sample. The majority of the major elements are similar in the two samples so it is not a sample mix up. This sample has strong sericite alteration with 3% chalcopyrite and 1% pyrite. The K % content is similar in the two



samples, indicating that the sericite content is similar in the two samples. The Cu content is not similar with 1.44% Cu in the original sample and 2.86 % Cu in the duplicate sample suggesting that the higher Au content in the duplicate sample corresponds to a higher chalcopyrite content. Likely, the preparation duplicate pair did not fail due to analytical techniques but rather due to heterogeneity in the sample material.

Original sample P364929 original and preparation duplicate sample P364930 from SR-13-03 is also a failed duplicate pair with 4.02 g/t Au in the original sample and 5.03 g/t Au in the preparation duplicate. The majority of the major elements are similar in the two samples, so it is not a sample mix up. This sample has very strong silification and quartz eye concentration with 5% very smokey grey quartz, 10% massive aggregates of pyrite and 5% chalcopyrite. The Cu and Fe content is higher in the duplicate sample than the original sample with 1.08 % Cu and 13.8 % Fe in the original sample and 1.47 % Cu and 16.2% Fe in the duplicate sample. This suggests that the pyrite and chalcopyrite content in the duplicate sample is much higher in the original sample and the duplicate failure is likely due to sample heterogeneity rather than analysis.

It appears that Au content is not similar in preparation duplicate pairs for samples with high chalcopyrite content. The higher Au content corresponds with the high Cu content in the preparation duplicates, but this is not always the case in the rest of the drill hole database.

Original sample P956429 and preparation duplicate sample P956430 from SR-13-13 is another failed duplicate with 0.82 g/t Au in the original sample and 2.05 g/t Au in the preparation duplicate. This sample has moderate sericitization, silification and hematite staining. There is a significant difference in the mica content between these two samples as the original sample has 1.98 % Al and 0.8% K and the duplicate has 4.12 % Al and 1.26 % K. The hematite staining is also likely different between the two samples as the original sample has 1.49 % Fe. This is not a sample mix up as there are no samples nearby with a better match for major elements. Likely, the coarse crush was not homogeneous before the split was taken. There is higher gold, mica and hematite in the duplicate sample than in the original sample. Thus the duplicate failure was likely not due to analysis.

Original sample P363729 and preparation duplicate sample P363730 from SR-12-24 is another failed duplicate with 2.24 g/t Au in the original and 1.17 g/t Au in the preparation duplicate. This sample has 7% disseminated pyrite along fractures. There is a difference between the pyrite content between the two samples as the original sample has 11.6 % Fe and 2.18 % S and the duplicate has 11.1% Fe and 1.94% S. There is higher gold and pyrite content in the original sample than the duplicate sample.



Overall, the quality of the preparation duplicates is acceptable, but the high grade Au samples likely need to be mixed better to make sure that the sample is homogeneous before the preparation split is taken. The heavy minerals like chalcopyrite and pyrite and the platy micas are settling out of the sample before the split. The preparation duplicate failures are likely due to sampling rather than analysis.

### Pulp Duplicates

As part of AGAT's internal QA/QC, AGAT analyzed approximately every  $12^{th}$  sample within each batch of samples as a pulp duplicate. A total of 356 pulp duplicate pairs were analyzed for Au by fire assay with only one failure for a failure rate of 0.3% (Figure 20-29). The regression line through the primary vs secondary plot has  $R^2 = 0.9943$ .

Lab sample 4063683 which corresponds to Sanatana sample number P363738 from SR-12-24 is a failed pulp duplicate as the original sample had 0.107 g/t Au and the duplicate sample had 0.999 g/t Au. The Al in the original sample is 13.1% Al and in the pulp duplicate is 11.9% Al, but the rest of the elements are similar between the original and duplicate assays. The pulp duplicate failure is likely due to analytical error.

Overall the quality of the pulp duplicates is excellent.

### 12.4.5 Phase 1 and 3 check assays

#### Standards and blanks inserted into ALS check assay sample stream

A total of 35 blanks were inserted into the check assay sample stream and all of the blanks were equal to or below the detection limit of 0.001 ppm Au for FA. Two blanks were analyzed by gravimetrics and both were below the detection limit of 0.05 ppm Au.

Nine samples of Oreas 52c with a certified value of 0.346 g/t Au were inserted into the sample stream, analyzed by FA and all of these QC samples passed within  $\pm 2 x$  standard deviation.

Two samples of standard Oreas 201 with a certified value of 0.514 g/t Au were inserted into the sample stream, analyzed by FA and both QC samples passed within  $\pm 2 x$  standard deviation.

Thirteen samples of standard Oreas 15d with a certified value of 1.559 g/t Au were inserted into the sample stream, analyzed by FA and all of these QC samples passed within  $\pm 2 x$  standard deviation except for one sample which passed within  $\pm 3 x$  standard deviation.



Eleven samples of standard Oreas 10c with a certified value of 6.60 g/t Au were inserted into the sample stream, analyzed by FA and all of these QC samples passed within  $\pm 2 x$  standard deviation.

Two samples of standard Oreas 62c with a certified value of 8.79 g/t Au were inserted into the sample stream, analyzed by gravimetrics and both QC samples passed within  $\pm 2 x$  standard deviation.

### Phase 1

A total of 431 pulps from samples were submitted to ALS Sudbury as check assays. The Au fire assays had an excellent correlation with the original assays from AGAT with only 6 failed samples and a 1.4% failure rate (Figure 12-28). The regression line through the check assays that passed is 0.9999 indicating an excellent correlation between the AGAT and ALS assays. All of the failures have > 3 g/t Au in either the original or check assay and thus may be due to gold nuggets rather than analytical error.

Original sample M565655 from SR-12-02, 137.4 - 138.0 m was analyzed by fire assay to have 2.63 g/t Au (job number 12U577450) and by screen metallic to have total gold of 10.2 g/t Au (job number 12T603947). The check sample P957857 from the same interval was analyzed by fire assay to have 3.34 g/t Au (job number SD15034764). The original and check assay by fire assay seem to be similar and the metallic assay seems to be out of place. The metallics assay may have been influenced by one coarse-grained gold nugget. The description in the drill core logs for the interval is siliceous medium-grained diorite with moderate chlorite and silica alteration, patchy weak hematite staining, 1% disseminated pyrite and 0.5 % chalcopyrite which suggests that it is reasonable for Au mineralization to be present, but no visible gold was mentioned.

Original sample M569363 from SR-12-01, 143.0-144.0 m was analyzed by fire assay to have 4.75 g/t Au (job number 12U575095). The check sample P957835 from the same interval was analyzed by fire assay to have 0.382 g/t Au. The description in the drill core log for the interval is diorite with a short section of daisy type grading to fine-grained basalt with no indication of mineralization in the interval.



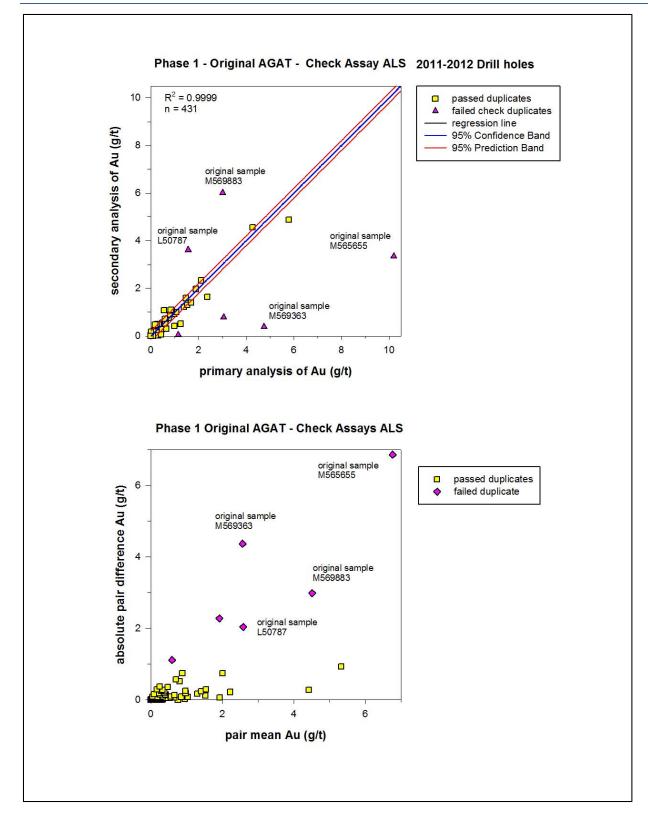


Figure 12-28 Comparison of original assays from and check assays from ALS for Phase 1 drill program

Oct. 29, 2015



Phase 3

A total of 524 pulps from samples were submitted to ALS Sudbury as check assays. The Au fire assays had an excellent correlation with the original assays from AGAT with only 6 failed samples and a 1.1% failure rate (Figure 12-29). The regression line through the check assays that passed is 1.0000 indicating an excellent correlation between the AGAT and ALS assays.

Original sample P364376 from SR-12-13-01, 294.0-294.9 m was analyzed by fire assay to have 7.01 g/t Au (job number 13U682919). Check sample P958155 from the same interval was analyzed by fire assay to have 1.82 g/t Au (job number SD15034981). The drill core log description for the interval is very strongly altered well mineralized quartz diorite with strong silicification, strong chlorite+sericite, 5% pyrite and 1% chalcopyrite. It is reasonable for this interval to contain gold mineralization. The lack correlation between the two samples is likely due gold nuggets rather than analytical error.

Original sample P364898 from SR-13-03, 231.8-233.0 m was analyzed by fire assay to have 2.17 g/t Au (job number 13U682886). Check sample P958211 from the same interval was analyzed by fire assay to have 0.001 g/t Au which is equal to the detection limit. Check sample before it, P95210 is supposed to be a blank, but it was analyzed as having 2.10 g/t Au. This is a sample-blank switch which was fixed in the drill hole database.





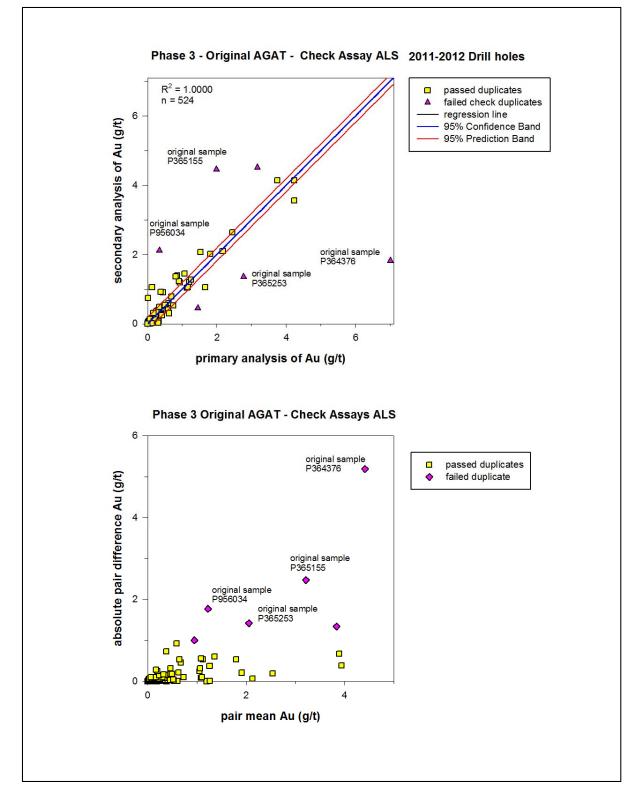


Figure 12-29 Comparison of original assays from AGAT and check assays from ALS for Phase 3 drill program.

Oct. 29, 2015



# 12.4.6 Summary of QA/QC for Phase 1 and 3

The following is a summary of the QA/QC review of the drill hole database for Phase 1 and 3 drill program on mineral claim 3011820 for Au. The purpose of the QA/QC review is to assess the quality of the Au assays to be used in a resource estimate as reported in this Report. Phase 1 and 3 drill programs drilled 25 holes for a total length of 9,192.6 m on mineral claim 3011820. The 9 Phase 1 drill holes had an azimuth of 160° and a dip of 60-70°. The 16 Phase 3 drill holes had an azimuth of 170° and a dip of 60-80°. The assay database consists of assays from 9601 unique samples of drill core from Phase 1 and 3 drill programs.

Sample login weights were reviewed to identify standards and drill core mix up. In Phase 1, 5 standards had an incorrect login weight which is a minor issue. In Phase 3, 3 standard and drill core mix ups identified and were fixed in the database. Also one assay certificate from Phase 3 has typos in the sample numbers which can be easily fixed. Given the large number of assays in the database, the low number of sample mix ups is excellent.

A summary of the QC review for <u>Phase 1</u> is given in Table 12-6. For Phase 1, the blanks had a low failure rate of 4.3% for Au. The low grade Au standard Oreas 152a with a certified value of 0.116 g/t Au had a moderate failure rate of 11.3% for Au and the assays are bias low. The medium grade standard Oreas 6Pc with a certified value of 1.52 g/t Au had failure rate of 1.7% for Au with only one failure. Oreas 6Pc assays were also bias low. The high grade standard Oreas 62d had a certified value of 10.5 g/t Au. As the certified value of this standard is above the upper detection limit of fire assay method, the fire assay results for it can't be used to monitor accuracy. Sanatana realized this and changed the high grade standard to Oreas 62c with 8.79 g/t Au in the Phase 2 drill program.

For Phase 1, the preparation duplicates only had one failure for a failure rate of 0.6% for Au. The failed preparation duplicate pair was originally analyzed by gravimetrics. Sanatana noticed the difference between the two assays and requested that AGAT reassay the original sample by pulp metallics. The total metallic gold, fine fraction and coarse fraction from the pulp metallics are very similar for this sample and this is the value that is in the drill hole database.

For Phase 1, the pulp duplicates had 6 failures for a failure rate of 2.2% for Au. The pulp duplicates failures are likely due to heterogeneous Au content in the sample material or analytical error.



QC sample name	Element	Units	Certified value	Failure rate (%)	Bias
blank	Au			4.3	
Oreas 152a	Au	g/t	0.116	11.3	low
Oreas 6Pc	Au	g/t	1.52	1.7	low
Oreas 62d	Au	g/t	10.5	N/A	N/A
preparation duplicates	Au	g/t		0.6	
pulp duplicates	Au	g/t		2.2	

Table 12-6 Summary of QC review for Phase 1 drill program

For <u>Phase 3</u>, the barren granitic gneiss blanks had a low failure rate of 4.1% for Au due to sample mix ups between the blanks and standards or drill core. These sample mix ups are easy to fix in the database. The low grade Au standard Oreas 52a with a certified value of 0.346 g/t Au had no failures for Au and the assays are within  $\pm 2$  standard deviation, but the assays are bias low. Another low grade Au standard Oreas 201 with a certified value of 0.516 g/t Au has only one failure for a failure rate of 5.6% for Au and no bias. The one failure was a sample mix up between the standard and drill core. The medium grade standard Oreas 15d with a certified value of 1.559 g/t Au had 5 failures for a failure rate of 6.6% for Au. Two of the five failures were incorrectly named standards and the remaining three failures were analytical error. Assays of Oreas 15d are bias low. The high grade standard Oreas 10c with a certified value of 6.60 g/t Au had no failures, all of the analyses were within  $\pm 2$  x standard deviation and no bias. The high grade standard Oreas 62c with a certified value of 8.79 g/t Au had only one minor failure for a failure rate of 2.9% for Au. Overall the quality of the blanks and standards are excellent.

For Phase 3, the preparation duplicates had 9 failures for a failure rate of 4.8%. Overall, the quality of the preparation duplicates is acceptable, but the high grade Au samples likely need to be mixed better to make sure that the sample is homogeneous before the preparation split is taken. The heavy minerals like chalcopyrite and pyrite and the platy micas are settling out of the sample before the split. The preparation duplicate failures are likely due to sampling rather than analysis.

For Phase 3, the pulp duplicates had only one failure for a failure rate of 0.3% which is excellent.

Overall, in the Qualified Person's opinion, the quality of the blanks, standards, preparation duplicates and pulp duplicates for Au for Phase 1 and 3 drill programs are excellent. The blanks consistently show no contamination. The gold standards indicated that the gold assays were typically within 2 x standard deviation. The preparation and pulp duplicates have low failure rates. The Phase 1 and 3 assay database is reliable for use in a resource estimate.



QC sample name	Element	Units	Certified value	Failure rate (%)	Bias
blank	Au	g/t		4.1	
Oreas 52c	Au	g/t	0.346	0	low
Oreas 201	Au	g/t	0.514	5.6	none
Oreas 15d	Au	g/t	1.559	6.6	low
Oreas 10c	Au	g/t	6.6	0	none
Oreas 62c	Au	g/t	8.79	2.9	none
preparation duplicates	Au	g/t		4.8	
pulp duplicates	Au	g/t		0.3	

#### Table 12-7 Summary of QC review for Phase 3 drill program

# 12.4.7 Summary of QA/QC for Phase 2 drill program

For <u>Phase 2</u>, the barren granitic gneiss had a low failure rate of 3.3%. The low grade standard Oreas 152a with a certified value of 0.116 g/t Au had only 2 failures for a failure rate of 7.7% for Au. Another low grade standard Oreas 15f with a certified value of 0.344% had no failures for Au. The medium grade standard Oreas 6Pc with a certified value of 1.52 g/t Au had no failures for Au. Another medium grade standard Oreas 15d with a certified value of 1.559 g/t Au had a failure rate of 16.1%. The high grade standard Oreas 62c with a certified value of 8.79 g/t Au had a failure rate of 23.3%. Another high grade standard Oreas 62d had a certified value of 10.5 g/t Au. As the certified value of this standard is above the upper detection limit of fire assay method, the fire assay results for it can't be used to monitor accuracy. Sanatana realized this and changed the high grade standard to Oreas 62c with 8.79 g/t Au later on in the Phase 2 drill program.

In the Qualified Person's opinion drill core assays from Phase 2 are adequate for the purpose of assessing the quality of the elevated Au grade assays from this drill program.

QC sample name	Element	Units	Certified value	Failure rate (%)	Bias
blank	Au	g/t		3.3	
Oreas 152a	Au	g/t	0.116	7.7	
Oreas 15f	Au	g/t	0.334	0.4	
Oreas 52c	Au	g/t	0.346	0	
Oreas 6Pc	Au	g/t	1.52	0	
Oreas 15d	Au	g/t	1.559	16.1	low
Oreas 62c	Au	g/t	8.79	23.3	low
Oreas 62d	Au	g/t	10.5	N/A	

 Table 12-8 Summary of failure rates for the blank and standards in Phase 2 drilling



# 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing or metallurgical test work has been commissioned by Sanatana on potential ores from the project area.

# **14.0 MINERAL RESOURCE ESTIMATES**

# 14.1 Source of data and methodology

Independent, NI 43-101 compliant resources at the Watershed property were estimated by Jason Baker P.Eng., an Associate Senior Resource Estimator with Caracle Creek, using 25 drill holes drilled by Sanatana 2011-2013 on claim 3011820. The drill hole database was provided by Sanatana in excel format that included collar, assay, lithology, specific gravity and structural data. Magnetic survey data was also provided by Sanatana to assist in the 3D modeling. QA/QC was completed by Caracle Creek on the assays prior to incorporation in the 3D model. All of these data were compiled into a database which links directly to the geological modelling and resource estimation software. 3D wireframes (solids) representing the mineralized areas were constructed and used to constrain the tonnage and grade estimation. GEMCOM's GEMS software V.6.5 was used to generate the 3D model and perform the grade estimation. Grades for Au were estimated using the anisotropic inverse distance method of interpolation. The topography data used in the model was constructed from the drill hole collars.

Mineral resources were calculated by the methods described above. Figure 14-1 shows the interpreted wire frame solids for the Watershed property as well as the drill hole distribution used to constrain and develop the 3D models.



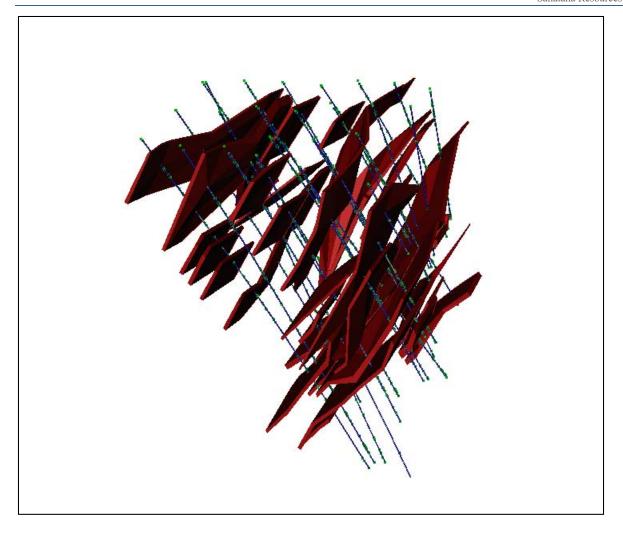


Figure 14-1 Interpreted Wire Frame Solids with Drill Hole Distribution for Watershed

# 14.2 Watershed Basic Statistics

The Watershed property has been defined by 25 drill holes totalling 9002.8 m and 9284 drill hole assays. The drill holes were drilled in a sectional pattern with surface drill hole spacing of 80 m to 120 m between sections and 40-60 m along section (Figure 14-2). Thirty one (31) mineralized domains were identified, some of which are continuous across multiple sections. The mineralized domains strike due east west and dip 50° - 70° to the north. The mineralized domains range in thickness from 5 m to 15 m. A basic statistical analysis was performed on the raw drill hole data within the mineralized domains for Watershed, see Table 14-1 and Figure 14-3 for the results.



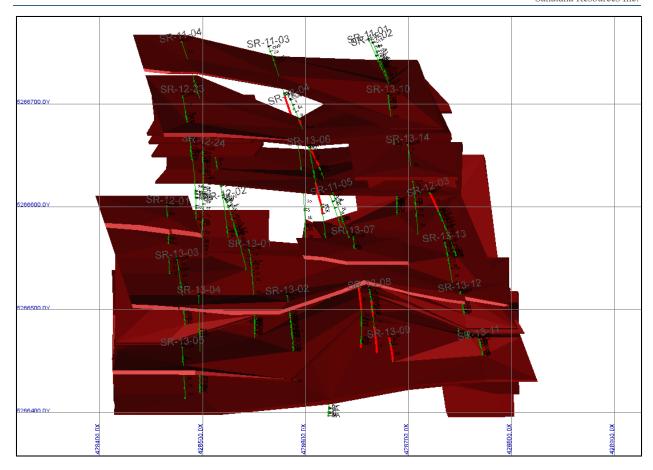


Figure 14-2 Plan View of Interpreted Wire Frame Solids with Drill Hole Distribution

Table 14-1 Summary of raw assay data statistics for all samples at Watershed within the mineralized domain.
-------------------------------------------------------------------------------------------------------------

Sample Data	Quantity
Number of Samples	830
Minimum Value (Au g/t)	0.00
Maximum Value (Au g/t)	192.0
Mean (Au g/t)	1.69
Variance (Au g/t)	71.35
Standard Deviation (Au g/t)	8.45
Coefficient of Variation	4.99





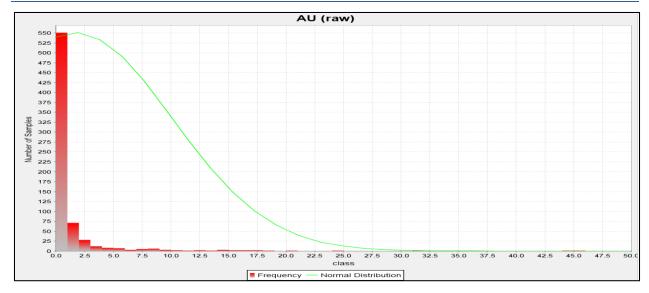


Figure 14-3 Histogram showing frequency of all samples within the mineralized domains at Watershed

### Variography

Variography was attempted on domain 21, which contains the largest amount of samples at 161 (Table 14-2). Spatial correlation could not be established due to the low number of samples. As a result, variography was not performed on the rest of the domains in the deposit.

	<i>v v</i>
Domain Name	# Of Samples
1	31
2	63
3	11
4	5
5	15
6	6
7	7
8	6
9	31
10	8
11	7
12	6
13	53
14	45
15	17
16	32

Table 14-2 Number of assays within each domain at Watershed



Domain Name	# Of Samples
17	7
18	69
19	25
20	43
21	161
22	13
23	6
24	16
25	6
26	25
27	39
28	13
29	25
30	7
31	28
Total	830

# 14.3 Grade Capping

Au grades at the Watershed were capped at 17 g/t based on interpretation of the composites probability plot (see Figure 14-4). The plot shows that 99% of all composites are below 17 g/t and therefore is a reasonable capping limit.

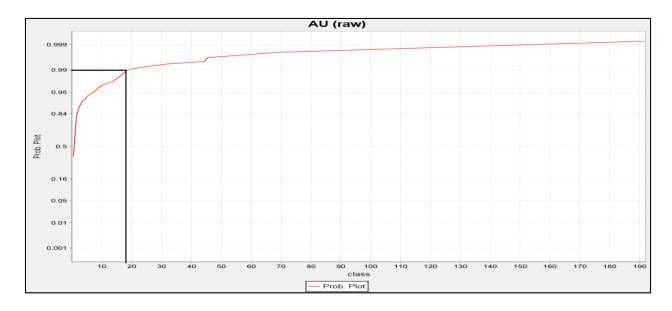


Figure 14-4 Au Composites Probability plot



### 14.4 Block Model

The block model parameters for Watershed are shown in Table 14-3. The block model origin coordinates are represented by the Maximum "X", Maximum "Y" and Minimum "Z". Positive rotation is clockwise about any axis.

Table 14-3 Block model descriptions for Watershed

	Y (m)	X (m)	Z (m)
Origin Coordinates (m)	5,266,350	428,350	450
Block Size	5	5	2.5
Rotation	0	0	0
Number Of Blocks	100	90	225
	·	• • •	

### 14.5 Block Interpolation

#### **Inferred Resources**

Au grades were estimated using the anisotropic inverse distance squared method. A minimum of 2 samples and a maximum of 25 samples were used in the estimation of individual blocks. Search ellipses in the shape of spheres were used in the estimation (Table 14-4) with a semi-major to major axis ratio of 1 and a major to minor axis ratio of 1.

Major Search Radius	Semi-major Search Radius	Minor Search Radius
150m	150m	150m

Table 14-4 Inferred Search ellipse parameters for Watershed

Specific gravity ("SG") was also estimated using the same anisotropic inverse distance squared method, using the same search ellipse parameters in Table 14-4. The data used for the interpolation of SG was in the form of 951 samples tested from the drill program.



### 14.6 Classification

Based on the study reported herein, delineated mineralization at the Watershed is classified in part as **mineral resource** according to the following NI 43-101 definitions:

"In this Instrument, the terms "mineral resource", "inferred mineral resource", "indicated mineral resource" and "measured mineral resource" have the meanings ascribed to those terms by the Canadian Institute of Mining, Metallurgy and Petroleum, as the CIM Standards on Mineral Resources and Reserves Definitions and Guidelines adopted by CIM Council on November 27, 2010, as those definitions may be amended from time to time by the Canadian Institute of Metallurgy, and Petroleum."

"A **Mineral Resource** is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge."

Mineral resources are not mineral reserves as economic viability of the Property has not yet been shown. The terms Measured, Indicated and Inferred are defined in NI 43-101 as follows:

"A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity."

"An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the



deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed."

"An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes."

The estimated tonnages for the mineralized domains at Watershed are classified as Inferred resources as described in the following section.

# 14.7 Results

Mineral resource estimates for the Watershed property presented below are effective as of the 15<sup>th</sup> of September, 2015 (Table 14-5). Blocks were classified as Inferred based on confidence in the geological model and the amount of samples within each domain. The wire framed solids were projected no more than 50 m past the last drill hole at depth and along strike.

Table 14-5 Mineral Resource Statement (Effective Sept. 15, 2015)

Au Cut-Off g/t	Category	Tonnage (tonnes)	Grade Au g/t	Contained Au (ounces)
0.3	Inferred	4,300,000	1.22	168,700

All tonnage figures were rounded to the nearest 10,000. All grade figures were rounded to two decimal places.

Au ounces were rounded to nearest 100.

Mineral resources are not mineral reserves and do not have demonstrated economic viability.

High grade assays were capped at 17 g/t.

- Specific gravity values were interpolated into the block model using the sample data provided by Sanatana.

- 0.3 g/t cut-off was determined from benchmarking of similar projects within the area.

The mineral resources at Watershed are contained within the mineralized domains, which dip  $50 - 70^{\circ}$ , and have a thickness of 5 - 15 m. Where possible, grades less than 0.3 g/t Au were excluded from the mineralized wire frame. The mineralized resource has been modeled to a max depth of 300 m below the surface. There is the potential to increase the resource along strike with more drilling. However, current claim boundary status may limit this. Surface outcropping shows that the Au mineralization continues to the surface,



therefore channel sampling at the surface is recommended in order to interpret the mineralization all the way to the surface outcrops. This interpreted continuity suggests that the Au mineralized zones at Watershed are favorable with respect to selectivity and other factors when considering mining options. As a result, the stated Inferred Resource is considered to exhibit reasonable prospects for economic extraction.

The block model tonnages and grades were verified using a sectional volume method and taking the weighted average of the drill hole assays within the sectional volume. The results were within 5% of the tonnage and grade calculated by the inverse distance block model interpolation. The interpolation was also done using nearest neighbour and the results were within 3% for both tonnage and grade to that of the inverse distance squared model.

# 14.8 Issues That Could Affect the Mineral Resource

There are no known factors related to permitting, legal, title, taxation, socio-economic, environmental, and marketing or political issues which could materially affect the mineral resource. Additional drilling is required, and recommended, to determine the full extents of the Au mineralization at Watershed. The estimation parameters set for the mineral resources were allowed to interpolate through non-sampled intervals. Zero grades were not assigned.

# **15.0** Adjacent Properties

### 15.1 Introduction

Sanatana's Watershed Property forms a C-shape around parts of IAMGOLD's Côté Gold project and the in turn the Watershed Property is also surrounded by other parts of IAMGOLD's Côté Gold project (Figure 15-1). The opening in the C-shape in the east is 1.3 km.



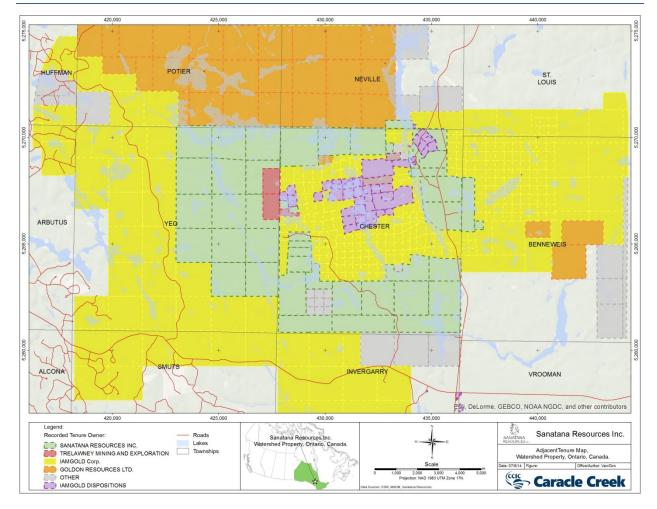


Figure 15-1 Adjacent properties

# 15.2 IAMGOLD Corp. and Trelawney Mining and Exploration Inc

On June 21, 2012, IAMGOLD acquired all of the outstanding common shares of Trelawney Mining and Exploration Inc. ("Trelawney"), a Canadian junior mining and exploration company that owns a 92.5% interest in the Côté Gold project located adjacent to the Swayze Greenstone Belt in northern Ontario, Canada (IAMGOLD Annual Report 2013).

On January 22, 2013, the Company announced an updated NI 43-101 compliant resource estimate for the Côté Gold deposit in Ontario comprising indicated resources of 269 million tonnes, averaging 0.88 grams of gold per tonne for 7.61 million ounces and inferred resources of 44 million tonnes, averaging 0.74 grams of gold per tonne for 1.04 million ounces (IAMGOLD Annual Report 2013). The updated resource estimate,



based on a cut-off grade of 0.30 grams of gold per tonne, represents a 114% increase in indicated resources in comparison to the previous estimate announced October 4, 2012.

IAMGOLD's 2014 Annual Report stated that: "Until a more favourable gold price environment returns, this project will remain on hold. With its well-established infrastructure and low power costs, they are confident that Côté will be an operational mine in the future." IAMGOLD approved a \$25.1 million feasibility study on the Côté Gold deposit, which is anticipated to be completed by 2017 (IAMGOLD Annual Report 2014).

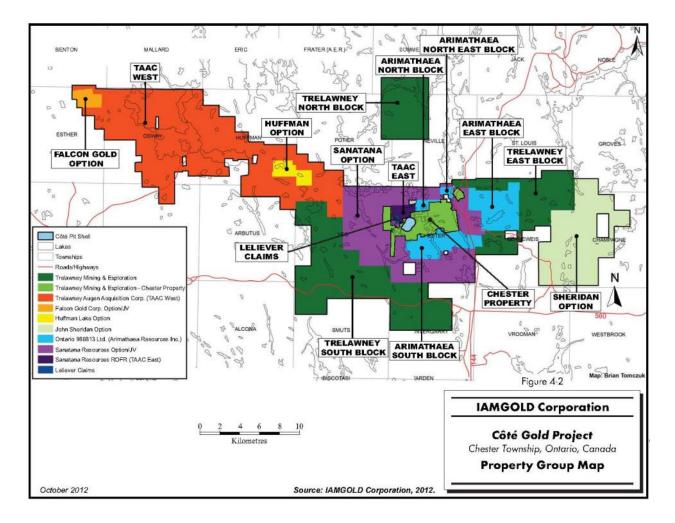


Figure 15-2 IAMGOLD's tenure (from Lavigne and Roscoe, 2012)



### **15.3 GoldON Resources**

GoldON Resources Inc. ("GoldON") owns three, non-contiguous claim groups adjacent to Sanatana's Watershed Property (Figure 15-1) (<u>www.goldonresources.com</u>). GoldON's largest shareholder is IAMGOLD.

On February 5, 2015, GoldON announced that they completed a drill program on Neville-Portier Portion of its Swayze Gold Project. The two-hole, 400 m drill program completed in late November 2014 was designed to test two shallow gold targets developed from the geological mapping, prospecting and geophysical surveying programs completed on their Property earlier in 2014. The assay results of the drill program were not publically disclosed.

The Qualified Persons of this Report have been unable to verify the information presented in the Adjacent Property Sections. This information is not necessarily indicative of the mineralization on the Watershed Property. This Report clearly distinguishes between the information from the adjacent properties and the information from the Watershed Property.

# **16.0** OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this technical Report more understandable.

# **17.0** INTERPRETATION AND CONCLUSIONS

Sanatana completed a number of geophysical and geological surveys on the Watershed property. The geophysical surveys include a ZTEM survey, two Earthprobe IP surveys and two ground magnetic surveys.

The ZTEM survey covered an area of 78 km<sup>2</sup> (641 line km) and delineated several conductive structures on the Property. Geotech Ltd. Completed 2D inversions and the results indicate the typically large, broad and deep features expected from a ZTEM survey. The survey is dominated by a large dipping conductor which is located at the surface in the northwest potion of the grid and dips south. Towards the east the feature continues to dip south but is non-continuous towards the surface. This deep feature may be an artifact of the inversion or a major structural conduit. A structural interpretation of the ZTEM survey (and a historic airborne magnetic survey) was completed and several potential fold hinges are noted throughout the survey area. A series of structural corridors were also noted east and west of the Chester Deposit. Gold



mineralization generally requires a brittle-ductile deformational environment for emplacement, hence its tendency to occur within more competent rock units adjacent to shear zones. Gold is an incompatible element and driven off in metamorphic fluids. This fluid does not flow in this ductile environment and requires the breaks and fractures caused brittle environment to transport and emplace the gold. Fault zones are areas of low pressure and are critical to these formational conditions. Both folding and faulting are noted in this dataset, and these areas are highlighted as targets. Five main areas were highlighted as potential target areas from this data review, and are highlighted in Figure 9-23.

There Earthprobe surface IP/resistivity survey indicated that the Watershed project area is characterized by surficial features of low to moderate resistivity (1,500 - 8,000 Ohm.m) and low chargeability (<20 mV/V). Beneath these surficial features, resistivity increases with increasing depth with basement exhibiting resistivity greater than 15,000 Ohm.m. Background chargeability in the survey area is interpreted to be <20 mV/V. In the Clam Lake area, the survey identified three features in the top 100 m. In the Chester area, the survey extended to 180–220 m below surface and several features were delineated. In the Chain of Lakes area, the survey extended to 220–400 m below surface and several features were identified. In total, 23 anomalous features of significance have been identified across the survey area; several other smaller features are also present in the data and may warrant future investigation if these more prominent features return mineralization of interest.

In addition to the surface Earthprobe survey, a downhole Earthprobe IP/resistivity survey was also completed and successfully delineated and correlated resistivity and chargeability features to lithologic features in the boreholes. The following conclusions are derived from this study:

- Resistivity responses were predominantly associated with lithological variations within the boreholes, with the following notable trends:
  - Resistivity lows (< 4,000 Ohm.m) are typically associated with mafic volcanics
  - Moderate resistivity (4,000 6,000 Ohm.m) occurs in association with the diorite, quartz diorite and granodiorite in most boreholes
  - Resistivity highs (> 10, 000 Ohm.m) usually occur in association with felsic metavolcanics and gabbro.
- Localized chargeability highs in both Clam Lake and Chain of Lakes areas are associated with increased Au, Cu, S, or Zn responses found in mafic volcanic rocks and quartz diorite. When increased mineralization responses are found in the felsic metavolcanic rocks there is no increase in chargeability.

- Mineralized intersections appear to be relatively localized to the boreholes and in most cases were insufficiently thick to be clearly mapped by the vertical profiling.
- The low resistivity features identified in the Clam Lake and Chain of Lakes area were coincident with shallow resistivity targets identified during the 2011 surface survey.
- Results of the vertical profiling indicated a general trend of moderate to high chargeability in the Clam Lake and Chain of Lakes areas, coincident with a broad chargeability highs delineated through the 2011 surface survey.

As the source of resistivity and chargeability features identified during the borehole survey have not been entirely explained by lithology and/or mineralization, possibly due to the complexity of the lithologic profile, investigation into possible higher order mineralogical relationships that could contribute to the source of the resistivity and chargeability responses is recommended to improve the value of the borehole DCIP data as an exploration tool.

A regional soil sampling survey was completed to complement the geophysical surveys and to determine regional, anomalous gold values in the soil. A total of 1,453 samples were collected. Gold values range from below the detection limit of 0.001 ppm to 0.092 ppm with a mean of 0.027. Several areas of anomalous gold were delineated by the survey. Sanatana calculated correlations between gold and pathfinder elements and determined weak correlations between Au and As (6%), Bi (9%), Cu (10%), Te (9%), Sb (7%), W (11%), Zn (8%) and Sn (7%).

Sanatana ground truthed several geophysical and geochemical anomalies and prospected know showings on the Property. Gold values from below the detection limit up to 96 g/t Au were obtained. These results prompted a program of outcrop stripping, mapping and channel sampling in the Clam Lake area, along the Chester Road and in the North Shear area. Of 1,122 channel samples, 48 returned gold grades > 1 g/t with the highest value being 38.89 g/t.

The channel sample results were encouraging and drilling took place in three separate phases. A total of 17,131 m diamond drilling in 43 drill holes has been completed: 25 drill holes targeting east Clam Lake area, 11 drill holes around Chain of Lakes, six drill holes at west Clam Lake and one drill hole at Chester targeting IP anomalies and coincident gold in channel sampling. A total of 18,122 drill core samples, 711 blanks, 662 duplicates and 607 standards were analyzed. The drill holes intersected mostly diorite, felsic and mafic metavolcanic rocks, mafic intrusives, gabbro, several porphyry units, granodiorite and



monzodiorite, diabase and several smaller dikes and sills. The most common alteration minerals include chlorite, quartz, calcite, sericite, carbonates, albite and epidote. Drilling highlights include:

- 62.216 g/t over 1.5 m including 192 g/t over 0.5 m in hole SR-12-03
- 69.7 g/t Au over 0.8 m in SR-13-14
- 44.07 g/t Au over 0.5 m in SR-13-12
- 45.1 g/t Au over 0.5 m in SR-13-03
- 32.866 g/t over 1.9 m including 45.86 g/t over 1.1 m in hole SR-11-04
- 32.40 g/t Au over 0.6 m in SR-12-11

Drill core was reviewed during the personal inspection of the Property. Visible gold was observed in the drill core (SR-12-03 at 285.10 m).

Some of the current and historic geological and geophysical information was compiled in a Gocad 3D model, however, the model does not contain the full data set.

Mineral resource estimates for the Watershed property presented below are effective as of the 15<sup>th</sup> of September, 2015 (Table 14-5). Blocks were classified as Inferred based on confidence in the geological model and the amount of samples within each domain. The wire framed solids were projected no more than 50 m past the last drill hole at depth and along strike.

Table 17-1 Mineral Resource Statement (Effective Sept. 15, 2015)

Au Cut-Off g/t	Category	Tonnage (tonnes)	Grade Au g/t	Contained Au (ounces)
0.3	Inferred	4,300,000	1.22	168,700

All tonnage figures were rounded to the nearest 10,000. All grade figures were rounded to two decimal places.

- Au ounces were rounded to nearest 100.

Mineral resources are not mineral reserves and do not have demonstrated economic viability.

High grade assays were capped at 17 g/t.

- Specific gravity values were interpolated into the block model using the sample data provided by Sanatana.

0.3 g/t cut-off was determined from benchmarking of similar projects within the area.

The mineral resources at Watershed are contained within the mineralized domains, which dip  $50 - 70^{\circ}$ , and have a thickness of 5 - 15 m. Where possible, grades less than 0.3 g/t Au were excluded from the mineralized wire frame. The mineralized resource has been modeled to a max depth of 300 m below the surface. There is the potential to increase the resource along strike with more drilling. However, current claim boundary status may limit this. Surface outcropping shows that the Au mineralization continues to the surface,



therefore channel sampling at the surface is recommended in order to interpret the mineralization all the way to the surface outcrops. This interpreted continuity suggests that the Au mineralized zones at Watershed are favorable with respect to selectivity and other factors when considering mining options. As a result, the stated Inferred Resource is considered to exhibit reasonable prospects for economic extraction.

The current drill hole databases for Watershed as compiled for review as part of this report, are considered reliable for the purposes of estimating Inferred mineral resources. The approach to the development of the Inferred resources follow accepted industry standards and are compliant with NI 43-101 reporting guidelines.

Caracle Creek feels that the drill hole databases for the Watershed property does not contain enough data within the mineralized domains to perform variography and thus establish spatial continuity. More drilling should be added to these databases in order to improve confidence for estimating Indicated resources (see recommendations below).

The objective of this Report was to compile, interpret and disclose the significant amount of exploration that has been completed on the Property since the last Technical Report and to disclose a resource estimate on the Property. These objectives were met.

Based on the current exploration including geophysical and geochemical survey and the results obtained during the three phases of drilling, Caracle Creek concludes that the Watershed Property has significant potential for hosting gold mineralization and that additional exploration to constrain the quantity, quality and extent of the mineralization is warranted.

Caracle Creek has not identified significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information presented here.

# **18.0 RECOMMENDATIONS**

The goal of the recommendations is to upgrade the inferred resources on claim 3011820 to indicated classification. The recommended geological mapping and trenching, geophysics, channel sampling and 2000 m of drilling is to support the upgrade in resource classification. The recommended georeferencing of claim posts is preparation for Ontario's conversion from map staking to online staking.



### **18.1** Georeference claim posts

Caracle Creek recommends that Sanatana georeference all claim posts on the Watershed Property in preparation for the conversion from ground staking to map staking in the province of Ontario. Georeferencing of claim posts qualifies for assessment credit in unorganized townships.

# 18.2 Geological Mapping, Trenching and Channel Sampling

Caracle Creek recommends that Sanatana conduct detailed mapping of the location and orientation of diabase dykes, faults and mineralization within claim 3011820 so that it can be incorporated into the 3D resource model.

Caracle Creek also recommends that for future channel samples in claim 3011820, Sanatana records UTM coordinates, elevation and azimuth so that they can be easily added to the resource model. Caracle Creek also recommends that Sanatana use their primary lab for gold assays from future channel samples in claim 3011820 so that they can be included in future resource estimates.

# 18.3 Geophysics

Sanatana has carried out several geophysical programs in the past several years including deep penetrating ZTEM as well as structural interpretations, and ground magnetics and high resolution Earthprobe IP. In addition, a wide variety of historical geophysical information was gathered in the previous 30–40 years. To date little use has been made of the historic information, yet it may be a cost effective use of time to investigate this information more thoroughly.

Based on the findings of the recent geophysical surveys, new targeting from this information is not recommended until the information has been put together in conjunction with all other geoscience information available. New targeting methods may be of value to further exploration on the Property. In particular, the usefulness of the downhole IP has been established and is recommended for any further drilling campaigns.

Other geophysics exploration activities include:

1. Physical rock property studies to assign rock property information to key lithologies such as resistivity, chargeability and susceptibility will be useful to further utilise the geophysical data sets to date.

Oct. 29, 2015



- 2. Historical investigation of available data/ results from years of exploration on the property should be carried out to assist with ongoing and future exploration initiatives on the block for gold and or other commodities.
- 3. Magnetic inversion (considering the rock property study)
- 4. Earthprobe surface IP inversion (considering the rock property study)

### **18.4 Drilling and Resource Estimate**

Caracle Creek recommends that Sanatana complete a Trimble DGPS survey of all of the drill collars in claim 3011820 to improve the resource model.

Caracle Creek recommends regular spaced definition drilling and channel sampling on claim 3011820 to upgrade Inferred resources to Indicated classification; *e.g.* 35 to 50m spaced centres. Drill spacing needs to target both along strike and down dip positions. Caracle Creek also recommends regular spaced channel sampling to upgrade exploration targets near surface to at least Inferred status. Mr. Baker has proposed channel and drill holes locations within the resource model with the potential to upgrade the resource from inferred to indicated status (Table 18-1 and Table 18-2).

Table 18-1	Proposed	channel	locations.
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Channel Id	Easting	Northing	Elevation (m)	Length (m)	Azimuth	Dip
CH-1	428661.00	5266763.00	400.00	350.00	160.00	0.00
CH-2	428616.00	5266759.00	400.00	300.00	160.00	0.00
CH-3	428568.00	5266756.00	400.00	325.00	160.00	0.00
CH-4	428522.00	5266756.00	400.00	325.00	160.00	0.00
CH-5	428469.00	5266759.00	400.00	325.00	160.00	0.00
CH-6	428439.00	5266728.00	400.00	300.00	169.00	0.00

Table 18-2 Proposed drill hole locations.

		· · · · · · · · ·	Elevation	Length		
Drill Hole Id	Easting	Northing	(m)	(m)	Azimuth	Dip
DH-1	428616.00	5266758.00	405.00	150.00	160.00	-60.00
DH-2	428635.00	5266710.00	405.00	150.00	160.00	-60.00
DH-3	428652.00	5266664.00	405.00	100.00	160.00	-60.00
DH-4	428678.00	5266587.00	405.00	100.00	160.00	-60.00
DH-5	428695.00	5266541.00	405.00	100.00	160.00	-60.00
DH-6	428522.00	5266756.00	405.00	150.00	160.00	-60.00
DH-7	428539.00	5266706.00	405.00	150.00	160.00	-60.00
DH-8	428588.00	5266575.00	405.00	125.00	160.00	-60.00
DH-9	428603.00	5266529.00	405.00	100.00	160.00	-60.00
DH-10	428495.00	5266687.00	405.00	150.00	160.00	-60.00
DH-11	428489.00	5266606.00	405.00	150.00	169.00	-60.00



			Elevation	Length	÷	
Drill Hole Id	Easting	Northing	(m)	(m)	Azimuth	Dip
DH-12	428455.00	5266643.00	405.00	150.00	169.00	-60.00
DH-13	428433.00	5266598.00	405.00	150.00	169.00	-60.00
DH-14	428554.00	5266667.00	405.00	100.00	160.00	-60.00
DH-15	428512.00	5266535.00	405.00	100.00	160.00	-60.00

# 18.5 QA/QC protocol

Sanatana's quality control protocol meets industry standards for a grassroots exploration program, but the following changes to the QA/QC protocol as the project advances:

- Continue to complete gravity measurements on 10% of drill core samples.
- Sample tags are included in the core photos, but the sample number is buried underneath the core on the sample tag. It is recommended that the sample number be visible on the sample tags in the core photos for further confirmation of sample numbers.
- Preparation duplicates are taken from the coarse crush at the lab to assess quality of sampling procedure. The lab should mix the coarse crush to make sure that it is homogeneous before taking the split.
- If Sanatana is planning on including Cu in a future resource, it is recommended that another blank be used to monitor Cu contamination, as the Cu average value in the blank is greater than 3 times the detection limit for the 4-acid analytical method.
- Start inserting a high grade Cu standard into the sample stream and resolve the issues with high failure rate for Cu in standard Oreas 152a.
- Screen metallic analyses to assess Au nugget effect for high grade Au samples.

# **18.6 Proposed Budget**

Table 18-3 contains the recommended exploration budget for the Watershed Property. The total exploration budget is approximately \$507,000 and includes georeferencing of claim posts, trenching and mapping, geophysics, channel sampling and 2000 m drill program and resource estimate.



#### Table 18-3 Recommended exploration budget

Item	Unit	# of Units	Cost/Unit	Total Cost	Subtotals
Georeference claim posts					
Geologist	day	14	\$500	\$7,000	
Junior Geologist	day	14	\$400	\$5,600	
rental of Trimble DGPS	week	2	\$1,400	\$2,800	
truck rental	week	2	\$800	\$1,600	
meals (2 geos)	day	28	\$50	\$1,400	
accommodation (2 geos)	day	28	\$120	\$3,360	
sub-TOTAL					\$21,760
Trenching and Mapping					
Geologist (mapping)	day	14	\$500	\$7,000	
1 Assistant (washing, sampling)	day	14	\$350	\$4,900	
Assaying	sample	300	\$50	\$15,000	
miscellaneous field supplies	estimate			\$5,000	
truck rental	week	2	\$800	\$1,600	
meals (2 geos)	day	28	\$50	\$1,400	
accommodation (2 geos)	day	28	\$120	\$3,360	
sub-TOTAL					\$38,260
<u>Geophysics</u>					
Physical properties bench testing	hour	50	\$130	\$6,500	
Magnetic inversion	estimate			\$10,000	
IP/resistivity (3 km/day)	day	10	\$3,000	\$30,000	
sub-TOTAL					\$46,500
Drilling (Clam Lake)					
Drilling	m	2000	\$100	\$200,000	
Geologist (logging)	day	30	\$500	\$15,000	
Geotech	day	30	\$350	\$10,500	
Core cutter	day	30	\$250	\$7,500	
Assaying	sample	2000	\$50	\$100,000	
meals (3 geos)	day	90	\$50	\$4,500	
accommodation (3 geos)	day	90	\$120	\$10,800	
Miscellaneous (vehicles, sample tags, core boxes, etc.)	estimate			\$10,000	
sub-TOTAL					\$358,300

#### **Resource Estimate (Clam Lake)**



Item	Unit	# of Units	Cost/Unit	Total Cost	Subtotals
SG analysis	sample	200	\$15	\$3,000	
QC for resource	hour	48	\$130	\$6,240	
Check samples	sample	200	\$30	\$6,000	
Resource estimate	hour	150	\$140	\$21,000	
NI43-101 report	hour	48	\$130	\$6,240	
sub-TOTAL					\$42,480
TOTAL					\$507,300
TOTAL			·	·	\$507,3



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Oct. 29, 2015



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Oct. 29, 2015



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# **20.0** STATEMENT OF AUTHORSHIP

This Report, titled "Independent Technical Report and Resource Estimate, Watershed Property, Gogama, northeastern Ontario, Canada", and dated Oct. 29, 2015 was prepared and signed by the following Qualified Persons:

"signed and sealed"

Julie Selway Principal Senior Geologist, Ph.D., P.Geo. Oct. 29, 2015 Sudbury, Ontario

"signed and sealed"

Jason Baker Associate Senior Resource Estimator, B. Eng., P.Eng. Oct. 29, 2015 Fall River, Nova Scotia

"signed and sealed"

Elisabeth Ronacher Principal Geologist, Ronacher McKenzie Geoscience, Ph.D., P.Geo. Oct. 29, 2015 Sudbury, Ontario

"signed and sealed"

Robert Gordon Senior Geophysicist, B.Sc. Eng., P. Eng. Oct. 29, 2015 Oakville, Ontario



# **Appendix 1 – Certificates of Qualified Persons**



Julie Selway

1545 Maley Drive, Suite 2019 Sudbury, Ontario, Canada, P3A 4R7 Telephone: 705-671-1801 Email: jselway@caraclecreek.com

#### **CERTIFICATE OF QUALIFIED PERSON**

I, Julie Selway, do hereby certify that:

- 1. I am employed as Principal Senior Geologist for the geological consulting firm of Caracle Creek International Consulting Inc. Canada.
- 2. I am jointly responsible for the entire Technical Report, except for the check assay sections (11.2.3 and 12.4.5), the geophysics sections (9.2, 9.4, 9.6, 9.7, 9.8, 9.15) and the Mineral Resources Estimates, section 14.0, titled "Independent Technical Report and Resource Estimate, Watershed Property, Gogama, northeastern Ontario, Canada" dated October 29, 2015 and prepared for Sanatana Resources Inc.
- 3. I hold the following academic qualifications: B.Sc. (Hons) Geology (1991) Saint Mary's University; M.Sc. Geology (1993) Lakehead University; Ph.D. Mineralogy (1999) University of Manitoba.
- 4. I am a member of the Association of Professional Geoscientists of Ontario (Member #0738). I am a member in good standing of the Mineralogical Association of Canada, Geological Association of Canada and Mineralogical Society of America.
- 5. I have worked on exploration projects world-wide including: Canada (Quebec, Ontario, Manitoba, Saskatchewan and British Columbia), United States, Mexico, Hungary, Czech Republic and have worked on rare-element pegmatites, gold, Ni-Cu-PGE, potash and porphyry copper deposits since 1993. I am a Qualified Person for the purpose of the National Instrument 43-101.
- 6. I have not visited the Property.
- 7. I am independent of the issuer of this Report applying all the tests in section 1.5 of National Instrument 43-101.
- 1. I have no prior involvement with the Property that forms the subject of this Technical Report other than that was a co-author of the previous NI 43-101 Report and several assessment file reports as listed in the Reference section 19.0.
- 8. I have read the NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
- 9. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.
- 10. 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.

Dated this 29th Day of October 30 JULIE B. SELWAY Julie Selway, Ph.D., P.Ge Principal Senior Geologist Oct. 29, 2015 **K INTERNATIONAL CONSULTING INC.** 

Page | 1

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#### Jason Baker 5 Short Lane Fall River, Nova Scotia, Canada, B2T 1H7 Telephone: 902-209-2037 Email: jbaker@caraclecreek.com

#### **CERTIFICATE OF QUALIFIED PERSON**

I, Jason Baker, do hereby certify that:

- 1. I am employed as Associate Senior Resource Estimator for the geological consulting firm of Caracle Creek International Consulting Inc. Canada.
- 2. I am responsible for "Mineral Resource Estimates" section 14.0 of the Technical Report, titled "Independent Technical Report and Resource Estimate, Watershed Property, Gogama, northeastern Ontario, Canada" dated October 29, 2015 and prepared for Sanatana Resources Inc.
- 3. I hold the following academic qualifications: B.Eng. (2000) Dalhousie University (TUNS), Halifax, Nova Scotia.
- 4. I am a member of the Association of Professional Engineers of Nova Scotia (APENS#9627).
- 5. I have worked over 10 years in geological modelling and resource calculations in Canada (Nova Scotia, Newfoundland, Ontario, Manitoba, and British Columbia), United States, Mexico, Finland and China in both exploration (Gold, Lead, Zinc, Copper, Silver, Nickel, Lithium) and operations (Coal, Gypsum, Lead and Zinc). I am a Qualified Person for the purpose of the National Instrument 43-101.
- 6. I have not visited the Property.
- 7. I am independent of the issuer of this report applying all the tests in section 1.5 of National Instrument 43-101.
- 8. I have no prior involvement with the Property that forms the subject of this Technical Report
- 9. I have read the NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
- 10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.
- 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 technical report not misleading.

Dated this 29th Day of October, 2015.

Jason Baker, B. Eng., P. Eng. Associate Senior Resource Estimator, Caracle Creek Canada



Oct. 29, 2015

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Page | 1

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### **Robert Gordon**

2284 Carol Road Oakville, Ontario, Canada, L6J 6B6 Email: rgordon@caraclecreek.com

#### **CERTIFICATE OF QUALIFIED PERSON**

I, Robert Gordon, do hereby certify that:

- 1. I am employed as Consultant Senior Geophysicist for Caracle Creek International Consulting Inc. Canada.
- I am responsible for the geophysics sections (9.2, 9.4, 9.6, 9.7, 9.8, 9.15) of the Technical Report, titled "Independent Technical Report, Watershed Property, Gogama, northeastern Ontario, Canada" dated October 29, 2015 and prepared for Sanatana Resources Inc.
- 3. I hold the following academic qualifications: B.Sc. Eng. in Geological Engineering specializing in Geophysics from the University of Queen's at Kingston (1985).
- 4. I am a member in good standing of the Association of Professional Engineers of Ontario (Member #90447269).
- 5. I have worked on more than 50 exploration projects world-wide including: Canada (Quebec, Ontario, Manitoba, Alberta, Saskatchewan, New Brunswick, Newfoundland, NWT, Nunavut and British Columbia), United States, Mexico, Finland, Sweden, South Africa, Ethiopia, Tanzania, Zimbawe, Chile, Ecuador and have worked on gold, Ni-Cu-PGE, potash, diamonds, and porphyry copper deposits since 1985. I am a Qualified Person for the purpose of the National Instrument 43-101.
- 6. I have not visited the Property.
- 7. I am independent of the issuer of this Report applying all the tests in section 1.5 of National Instrument 43-101.
- 8. I have no prior involvement with the Property that forms the subject of this Technical Report.
- 9. I have read the NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
- 10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.
- 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 technical Report not misleading.

Dated this 29<sup>th</sup> Day of October, 2015.

Robert L. Gordon, B.Sc., P. Eng, MBA Consultant Senior Geophysicist, Caracle Creek Canada



Oct. 29, 2015

**CARACLE CREEK INTERNATIONAL CONSULTING INC.** 

Page | 1

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Elisabeth Ronacher

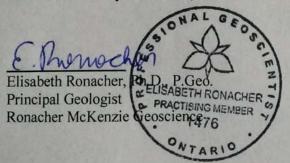
Ronacher McKenzie Geoscience Sudbury, Ontario, Canada Telephone: 705-419-1508 Email: elisabeth.ronacher@rmgeoscience.com

# **CERTIFICATE OF QUALIFIED PERSON**

I, Elisabeth Ronacher, do hereby certify that:

- 1. I am the Principal Geologist at Ronacher McKenzie Geoscience.
- I am jointly responsible for the entire Technical Report, except for the geophysics sections (9.2, 9.4, 9.6, 9.7, 9.8, 9.15) and the Mineral Resources Estimates, section 14.0, titled "Independent Technical Report and Resource Estimate, Watershed Property, Gogama, northeastern Ontario, Canada" dated October 29, 2015 and prepared for Sanatana Resources Inc.
- 3. I hold the following academic qualifications: M.Sc. Geology (1997), University of Vienna, Vienna, Austria; Ph.D. Geology (2002), University of Alberta, Edmonton, Canada.
- 4. I am a member of the Association of Professional Geoscientists of Ontario (Member #1476). I am a member in good standing of the Society of Economic Geologists (SEG) and the Society for Geology Applied to Mineral Deposits (SGA).
- 5. I have worked on exploration projects worldwide (including Canada, Mongolia, China, Austria) and have worked on Au, Cu, base metal, Cu-Ni PGE and U deposits since 2003. I am a Qualified Person for the purpose of the National Instrument 43-101.
- 6. I visited the Property on March 4, 2011 and again on July 22 and 23, 2014.
- 7. I am independent of the issuer of this Report applying all the tests in section 1.5 of National Instrument 43-101.
- I have no prior involvement with the Property that forms the subject of this Technical Report other than that I provided consulting services to Sanatana Resources and was a co-author of the previous NI 43-101 Report and several assessment file reports as listed in the Reference section 19.0.
- 9. I have read the NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
- 10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.
- 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 technical Report not misleading.

Dated this 29th Day of October, 2015.





# Appendix 2 – Legal Agreements

## EXECUTION VERSION

# OPTION AND JOINT VENTURE AGREEMENT

#### **THIS AGREEMENT** is dated effective February 14, 2011

## **BETWEEN:**

AUGEN GOLD CORP., a company incorporated pursuant to the laws of the Province of Ontario and having an office for mailing at Suite 500 - 360 Bay Street, Toronto, Ontario, M5H 2V6

(the "Optionor")

## AND:

SANATANA DIAMONDS INC., a company incorporated pursuant to the laws of the Province of British Columbia and having an office for mailing at Suite 1925 – 925 West Georgia Street, Vancouver, British Columbia, V6C 3L2

(the "**Optionee**")

#### WHEREAS:

(A) The Optionor is the registered and beneficial owner of certain mineral claims licenses, claims, concessions or reservations (for convenience herein collectively called the "**mineral claims**") located in the Province of Ontario, the specific description of such mineral claims is attached hereto as Schedule "A" and is illustrated in the map attached hereto as Schedule "B" (collectively, the "**Property**");

(B) The Optionor has agreed to grant an exclusive option to the Optionee to acquire up to a 51% undivided interest in and to the Property by paying certain consideration and by incurring certain Work Costs (as that term is defined below) as set forth herein;

(C) The Optionor is the registered and beneficial owner of certain mineral claims located in the Province of Ontario, the specific description of such mineral claims is attached hereto as Schedule "D" and is illustrated in the map attached hereto as Schedule "E" (collectively the "Additional Property");

(D) The Optionor has agreed to grant a right of first refusal to the Optionee to purchase all or to acquire an interest in the Additional Property as set forth herein; and

(E) Capitalized words have the meanings given to them in the text of this Agreement and in Schedules hereto, as applicable.

**NOW THEREFORE**, in consideration of the mutual covenants and agreements herein contained and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by each of the parties, the parties covenant and agree as follows:

# PART 1

# **DEFINITIONS AND INTERPRETATION**

# Definitions

1.1 For the purposes of this Agreement, except as otherwise expressly provided herein, the following words and phrases have the following meanings:

(a) "50% Interest" means a fifty percent (50%) undivided right, title and interest in and to the Property and in all rights of the Optionor with respect thereto;

(b) "**51% Interest**" means a fifty-one percent (51%) undivided right, title and interest in and to the Property (inclusive of the 50% Interest) and in all rights of the Optionor with respect thereto;

(c) "Additional Property" has the meaning ascribed thereto in Recital (C);

(d) "Affiliate" has the meaning given to that term in the *Business Corporations Act* (British Columbia);

(e) "Agreement" means this agreement and all of the schedules hereto, as may be amended from time to time;

(f) "AOI Tenure" has the meaning ascribed therein in §10.1;

(g) "Arbitration Panel" has the meaning ascribed thereto in §18.13;

(h) "Area of Interest" has the meaning ascribed thereto in  $\S10.1$ ;

(i) **"Bona Fide Offeror**" has the meaning ascribed thereto in §13.1;

(j) "Commencement of Commercial Production" means:

(i) if a mill is located on the Property, the last day of a period of forty (40) consecutive days in which, for not less than thirty (30) days, the mill processed ore from the Property at not less than sixty percent (60%) of its rated capacity; and

(ii) if no mill is located on the Property, the last day of the first period of thirty
 (30) consecutive days during which ore has been shipped from the Property on a reasonably regular basis for the purpose of earning revenues;

but no period of time during which ore is shipped from the Property for testing purposes, and no period of time during which milling operations are undertaken as initial tune-up, will be taken into account in determining the date of commencement of commercial production;

(k) "Earn-In Date" means the date which is the earlier of the date which the Optionee has (i) vested the 50% Interest but has elected by notice to the Optionor not to proceed to earn the 51% Interest or (ii) earned the 51% Interest in accordance with §4.1;

(1) "Effective Date" means the date which is the later of:

(i) the date the Exchange accepts this Agreement, and

(ii) the date of this Agreement;

(m) "Encumbrance" means any privilege, mortgage, hypothec, lien, charge, pledge, security interest or adverse claim;

(n) **"Environmental Liability**" means any claim, demand, loss, liability, damage, cost or expense (including legal fees) suffered or incurred in respect of environmental cleanup and remediation obligations and liabilities arising directly or indirectly from operations or activities conducted in or on the Property;

(o) **"Exchange**" means the TSX Venture Exchange Inc.;

(p) "Execution Date" means the date this Agreement is signed by the last of the parties to sign it;

(q) "Formal Agreement" has the meaning ascribed thereto in §17.1;

(r) **"Holder**" has the meaning ascribed thereto in §12.4;

(s) "Interest" has the meaning ascribed thereto in §13.1;

(t) "Joint Venture" means the joint venture to be formed between the Optionor and the Optionee in respect of the Property in the event of and upon exercise of the Option and which is more particularly described in §9.1;

(u) "Offer" has the meaning ascribed thereto in  $\S12.3(a)$ ;

(v) "Offered Interest" has the meaning ascribed thereto in §12.3(a);

(w) "**Option**" means the exclusive option granted by the Optionor to the Optionee to acquire either the 50% Interest or the 51% Interest, and thereupon form the Joint Venture, all on the terms and conditions set forth herein;

(x) "**Option Period**" means the period from the Effective Date to and including the earliest of the:

(i) the Earn-In Date, and

(ii) the termination hereof pursuant to Part 8;

(y) "Participation Right" has the meaning ascribed thereto in §15.1;

(z) "**Pre-Feasibility Study**" means a comprehensive study of the viability of a mineral project that has advanced to a stage where the mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, has been established and an effective method of mineral processing has been determined, and includes a financial analysis based on reasonable assumptions of technical, engineering, legal, operating, economic, social, and environmental factors and the evaluation of other relevant factors which are sufficient for a qualified person (as such term is defined by National Instrument 43-101 – *Standards of Disclosure for Mineral Projects*), acting reasonably, to determine if all or part of the mineral resource may be classified as a mineral reserve;

(aa) "**Production Royalty Interest**" means an interest in the returns generated from production on the Property determined in accordance with Schedule "C";

(bb) "**Property**" has the meaning ascribed thereto in Recital (A);

(cc) "Purchasing Party" has the meaning ascribed thereto in §12.3(b);

(dd) "**Right of First Refusal**" has the meaning ascribed thereto in §13.1;

(ee) "**ROFR Period**" has the meaning ascribed thereto in  $\S13.1$ ;

(ff) **"ROFR Term**" has the meaning ascribed thereto in §13.1;

(gg) "Seller" has the meaning ascribed thereto in §12.3(a);

(hh) "Shares" means the shares in the capital of the Optionee;

(ii) **"Third Party Property Information**" has the meaning ascribed thereto in §7.7; and

(jj) "Work Costs" means all expenditures and costs incurred by the Optionee relating directly or indirectly to the Property, including all expenditures and costs incurred:



[§1.1(jj) reducted due to confidentiality provision. §1.1(jj) summarizes all expenditures constituting Work Costs.]

# Interpretation

1.2 For the purposes of this Agreement except as otherwise expressly provided herein:

(a) the words "herein", "hereof", and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular Part, clause, subclause or other subdivision or Schedule;

(b) a reference to a Part means a Part of this Agreement and the symbol § followed by a number or some combination of numbers and letters refers to the section, paragraph or subparagraph of this Agreement so designated;

(c) the headings are for convenience only, do not form a part of this Agreement and are not intended to interpret, define or limit the scope, extent or intent of this Agreement or any of its provisions;

(d) the word "**including**", when following a general statement, term or matter, is not to be construed as limiting such general statement, term or matter to the specific items or

matters set forth or to similar items or matters (whether or not qualified by non-limiting language such as "without limitation" or "but not limited to" or words of similar import) but rather as permitting the general statement or term to refer to all other items or matters that could reasonably fall within its possible scope;

(e) a reference to currency means Canadian currency; and

(f) words importing the masculine gender include the feminine or neuter, words in the singular include the plural, words importing a corporate entity include individuals, and vice versa.

## PART 2

## **THE PROPERTY**

## **The Property**

2.1 The Property is comprised of the mineral claims more particularly described in Schedule "A" hereto and shown on the map attached as Schedule "B" hereto and will include any additional mineral claims that become part of the Property pursuant to §10.1, including any mineral claims staked within the Property and all mining leases and other mining interests derived from any such mineral claims. Any reference to any mineral claim comprising the Property includes any mineral lease or other interest into which such mineral claim may be converted.

# PART 3

# **REPRESENTATIONS AND WARRANTIES**

#### **Mutual Representations**

3.1

The Optionee and the Optionor each represent and warrant to the other that:

(a) it has been duly incorporated and is a valid and subsisting body corporate under the laws of its jurisdiction of incorporation and is duly qualified to carry on business in Ontario and to hold an interest in the Property;

(b) it has duly obtained all necessary governmental, corporate and other authorizations for its execution and performance of this Agreement, and the consummation of the transactions contemplated herein will not, with the giving of notice or the passage of time, or both, result in a breach of, constitute a default under, or result in the creation of any Encumbrance on its assets under, the terms or provisions of any law applicable to it, its constating documents, any resolution of its directors or shareholders or any indenture, Agreement or other instrument to which it is a party or by which it or its assets may be bound; (c) no proceedings are pending for, and it is unaware of any basis for the institution of any proceedings leading to, its dissolution or winding up or the placing of it in bankruptcy or its subjection to any other law governing the affairs of bankrupt or insolvent persons; and

(d) it has full right, power and authority to enter into and accept the terms of this Agreement and to carry out the transactions contemplated herein.

# **Optionor's Representations**

3.2

The Optionor represents and warrants to the Optionee that:

(a) it is the legal and beneficial owner of a one hundred percent (100%) interest in the mineral claims described in Schedules "A" and "B" hereto and has the exclusive right to enter into this Agreement and dispose of an interest in the Property in accordance with the terms hereof;

(b) the mineral claims comprising the Property are validly located, duly recorded and in good standing, free and clear of all Encumbrances and underlying interests whatsoever;

(c) sufficient assessment work has been done and reports filed to keep the mineral claims comprising the Property in good standing under the applicable law in Ontario;

(d) there are no actions, suits, investigations or proceedings before any court, arbitrator, administrative agency or other tribunal or governmental authority, whether current, pending or threatened, which directly or indirectly relate to or affect the mineral claims comprising the Property or the interests of the Optionor therein nor is the Optionor aware of any acts which would lead it to suspect that the same might be initiated or threatened;

(e) there are no outstanding Agreements or options to purchase or otherwise acquire the Property or any portion thereof or any interest therein, and no person has any royalty or other interest whatsoever in the production from or profits earned from any of the mineral claims comprising the Property;

(f) the Optionor is legally entitled to hold its interest in the Property and the licences, permits, easements, rights of way, certificates and other approvals now held or hereafter acquired by it and necessary for the exploitation of the Property, and will remain so entitled for so long as it holds any interest in the Property;

(g) upon exercise of the Option by the Optionee, the Optionor will have the legal right and authority to transfer title to an undivided fifty-one percent (51%) legal and beneficial interest in the Property to the Optionee;

(h) the activities directly or indirectly relating to the mineral claims comprising the Property by the Optionor and any other person on behalf of the Optionor have been in compliance with all other applicable laws and the Optionor has not received any notice

nor is the Optionor aware after reasonable inquiry of any breach or violation of any such laws having been alleged;

(i) there are no obligations or commitments for reclamation, closure or other environmental corrective, clean-up or remediation action directly or indirectly relating to the mineral claims comprising the Property;

(j) no environmental audit, assessment, study or test has been conducted in relation to the mineral claims comprising the Property by or on behalf of the Optionor nor is the Optionor aware after reasonable inquiry of any of the same having been conducted by or on behalf of any governmental authority or by any other person; and

(k) the Optionor's interest in the Property does not constitute all or substantially all of its undertaking.

# Survival of Representations and Warranties

3.3 The representations and warranties of the parties set out herein are conditions upon which the parties have relied in entering into this Agreement and will survive the termination of this Agreement and the acquisition of any interest in the Property by the Optionee hereunder, and each party will indemnify and save the other harmless from all loss, damage, costs and expenses which may be suffered or incurred by the other as a result of or in connection with any breach or inaccuracy of any such representation and warranty made by such party.

# PART 4

# **DUE DILIGENCE**

# **Due Diligence Inquiry**

4.1 The Optionee will be entitled to conduct a due diligence investigation of the title and environmental condition of the Property, the results of which investigation will be satisfactory to the Optionee, acting reasonably, and which investigation will be completed within 10 days from the Execution Date. In order to assist the Optionee in its due diligence investigation the Optionor's legal counsel should prepare and deliver to the Optionee (at the Optionor's cost) a legal opinion in such form acceptable to the Optionee confirming the Optionor's ownership of the Property. If at any time during such due diligence period the Optionee, based on its due diligence investigations, decides acting reasonably that the Optioner's title to the property or the environmental condition of the Property is unsatisfactory, the Optionee may terminate this Agreement upon written notice to the Optionor without any obligation or liability to the Optionor whatsoever. This §4.1 is for the sole and exclusive benefit of the Optionee and if not satisfied may be waived in whole or in part by the Optionee.

# **Delivery of Information**

4.2 Within five (5) days after the Execution Date, the Optionor will disclose and deliver to the Optionee all information and data in its possession or within its knowledge relating

to title to the Property and the environmental condition of the Property, including copies of all historical documentation and Encumbrances relating to title to the Property and all notifications from regulatory authorities and environmental studies, tests and assessments relating to the environmental condition of the Property.

# PART 5

# **GRANT OF OPTION**

# **Grant of Option**

5.1 The Optionor hereby grants to the Optionee the sole and exclusive right and option to earn the 50% Interest free and clear of all Encumbrances by:

(a) paying to the Optionor a total of \$150,000 within 10 days of the Effective Date;

(b) allotting and issuing to the Optionor, as fully paid and non-assessable, a total of 5,000,000 Shares, as follows:

(i) 2,000,000 Shares within 10 days of the Effective Date,

(ii) an additional 1,500,000 Shares on or before the twelve-month anniversary of the Effective Date, and

(iii) an additional 1,500,000 Shares on or before the twenty-four-month anniversary of the Effective date; and

(c) incurring Work Costs of not less than \$5,000,000 as follows:

(i) \$1,000,000 on or before the twelve-month anniversary of the Effective Date,

(ii) an additional \$1,500,000 on or before the twenty-four-month anniversary of the Effective Date, and

(iii) an additional \$2,500,000 on or before the thirty-six-month anniversary of the Effective date.

#### **Determination of Work Costs**

5.2

Work Costs will be deemed to have been incurred by the Optionee when

[§5.2 redacted due to confidentiality provision. §5.2 summarizes the procedure to determine Work Costs.]

**Excess Work Costs and Deficiencies** 



[§5.3 redacted due to confidentiality provision. §5.3 summarizes how excess work costs and deficiencies are dealt with.]

# Make-up Right



[§5.4 redacted due to confidentiality provision. §5.4 summarizes the make-up right for Work Costs.]

# **Exercise of Option**

5.5 The Optionee may in its sole direction at any time accelerate the payment of the consideration (cash and Shares) and the Work Costs described in §5.1.

5.6 If the Optionee incurs the Work Costs and pays the Optionor the consideration (cash and Shares) described in §5.1, it will, without further act or payment, have and be deemed for all purposes to have exercised the 50% Interest and to have earned the 50% Interest free and clear of all Encumbrances.

5.7 Upon the Optionee having earned the 50% Interest in accordance with the provisions of §5.1, the Optionee will have the right to earn the 51% Interest free and clear of all Encumbrances by preparing and delivering to the Optionor (at the Optionee's sole cost) a Pre-Feasibility Study on a prospect or prospects on the Property on or before the sixty-month anniversary of the Effective Date.

5.8 The Optionee may in its sole discretion at any time prepare and deliver the Pre-Feasibility Study described in §5.7 to exercise the 51% Interest and thereby earlier acquire the 51% Interest.

5.9 If the Optionee prepares and delivers the Pre-Feasibility Study described in §5.8, it will, without any further act or payment, have and be deemed for all purposes to have exercised the 51% Interest and to have earned the 51% Interest free and clear of all Encumbrances.

# PART 6

# **ENVIRONMENTAL INDEMNIFICATION**

# **Optionor Indemnity**

6.1		 	

[§6.1 redacted due to confidentiality provision. §6.1 summarizes the Optionor's indemnity with respect to environmental matters.]

# **Optionee Indemnity**

6.2			

[§6.2 redacted due to confidentiality provision. §6.2 summarizes the Optionee's indemnity with respect to environmental matters.]

# **Limitation on Indemnities**



# [§6.3 redacted due to confidentiality provision. §6.3 summarizes the indemnity pertaining to the Optionor and the Optionee if the Joint Venture is entered into.]

# Survival

6.4

The provisions of this Part 6 will survive any termination of this Agreement.

# PART 7

# **RIGHTS AND OBLIGATIONS DURING OPTION PERIOD**

# **Work Programs During Option Phase**

7.1 The Optionee will have the exclusive right to manage and operate all work programs carried out on the Property for so long as the Option remains outstanding, and all work programs will be in the sole discretion of the Optionee.

## Overhead

7.2 The Optionee will be entitled to include in Work Costs for so long as the Option remains outstanding an overhead charge for management supervision and administrative services of the Optionee equal to:

(a) percent (20%) of all expenditures and costs incurred by the Optionee under each contract with a third party involving an expenditure of Work Costs in excess of \$ 2000; and

(b) percent ( $\checkmark$ %) of all other Work Costs incurred by the Optionee in respect of the Property; excluding in each case the amount of the overhead charge fixed under this §7.2.

[§7.2 redacted due to confidentiality provision. §7.2 sets out the amount the Optionee is entitled to include in Work Costs for management supervision and administrative services.]

# **Additional Rights**

7.3 For so long as the Option is outstanding, the Optionee and its employees, representatives, agents and independent contractors will have the right:

(a) to access to all information in the possession or control of the Optionor relating to prior operations on the Property including all geological, geophysical and geochemical data and drill results;

(b) to enter upon the Property and carry out such exploration and development work thereon and thereunder as the Optionee considers advisable, including removing material from the Property for the purpose of testing; and (c) to bring upon and erect upon the Property such structures, machinery and equipment, facilities and supplies as the Optionee considers advisable.

# **Optionor's Access**

7.4 The Optionor will have access to the Property, concurrently with the Optionee, at all reasonable times, at the Optionor's own risk and expense, for the purpose of inspecting the work being done by the Optionee, provided such inspection does not unduly interfere with any work being carried out by or on behalf of the Optionee.

## **Optionee Obligations**

7.5

For so long as the Option is outstanding, the Optionee will:

(a) record all assessment work done by it on the Property;

(b) keep the Property free and clear of all Encumbrances arising from its operations under this Agreement (except Encumbrances for taxes not yet due, other inchoate Encumbrances and Encumbrances contested in good faith by the Optionee) and to contest or discharge any such Encumbrance that is filed;

(c) obtain and maintain, and cause any contractor engaged by it to obtain and maintain, such insurance as the Optionee reasonably considers appropriate in the circumstances, with both the owner and the Optionee being named as insured in such policies; and

(d) conduct all work in a careful and miner-like manner and in compliance with all applicable laws.

# **Reporting Obligations**

7.6 Subject to §7.7, for so long as the Option is outstanding, the Optionee will:



# [§7.6 redacted due to confidentiality provision. §7.6 requires the Optionce to comply with certain reporting obligations to the Optionor for the duration of the Option.]

# **Third Party Property Information**

7.7 The Optionor acknowledges and agrees that neither the Optionee nor any of its Affiliates are providing any representation or warranty in respect of the accuracy, completeness or validity of the information relating to the Property obtained by the Optionee from laboratories and other independent contractors and provided to the Optionor pursuant to §7.6 or 8.2(b) or otherwise hereunder ("Third Party Property Information") and that no such representation or warranty will be implied.

The Optionor hereby forever releases and discharges the Optionee and its Affiliates from any claim in respect of the accuracy, completeness or validity of any Third Party Property Information.

# **Limitation on Property Information**

7.8 Notwithstanding anything expressed or implied in this Agreement, the Optionor will not have access to any interpretive data, reports or results generated in respect of the Property for the internal use of the Optionee or its Affiliates nor will the Optionor have access to any of the Optionee's proprietary techniques.

# **Transfer of Claims**



[§7.9 redacted due to confidentiality provision. §7.9 requires the Optionor to complete transfers of the mineral claims comprising the Property to the Optionee after a triggering event.]

# Surrender

7.10 The Optionee may at any time and from time to time while the Option is outstanding, abandon, surrender, allow to lapse, reduce the area of or otherwise deal with any part or parts of the Property as it may determine, provided that the Optionee will give to the Optionor not less than ninety (90) days' notice of its intention to do so and will, if requested by the Optionor by notice to the Optionee within such ninety (90) day period, deliver forthwith to the Optionor duly executed transfers of the part or parts of the Property so intended to be dealt with. Any part or parts of the Property so dealt with will cease to be included in the Property and will cease to be subject to this Agreement for all purposes.

# - 15 -

# PART 8

# **TERMINATION OF OPTION AND AGREEMENT**

#### Termination

8.1 In addition to its right of termination under §4.1, the Optionee will have the right at any time prior to its exercise of the Option to give notice to the Optionor terminating the Option and this Agreement. If the Optionee gives such notice of termination or, subject to §5.3, §5.4 and §16.1, if the Optionee fails to incur the Work Costs and consideration referred to in §5.1 on or before the dates referred to therein, then the Option and this Agreement will terminate and the Optionee will, subject to the provisions of Part 3, Part 6 and Part 11, and subject to §8.2 have no further rights or interest in the Property and no further obligations or liabilities to the Optionor.

# **Events on Termination**

8.2 If this Agreement is terminated by the Optionee pursuant to §8.1, the Optionee will:

(a) forthwith deliver to the Optionor duly executed transfers of the mineral claims comprising the Property in favour of the Optionor, free and clear of all Encumbrances arising from the Optionee's operations hereunder (except for taxes not yet due, other inchoate Encumbrances and Encumbrances contested in good faith by the Optionee);

(b) deliver to the Optionor, within sixty (60) days of termination, a final report on all work carried out by the Optionee on the Property since the date of the last annual report delivered under §7.6(b), together with all drill cores and unprocessed assay samples and copies of all maps, drill logs, assay results and other factual technical data compiled by the Optionee with respect to the Property and not previously delivered to the Optionor;

(c) remove from the Property within twelve (12) months of termination, or sooner if required under applicable law, all structures, machinery, equipment, facilities and supplies erected, installed or brought upon the Property by or at the instance of the Optionee; and

(d) leave all mineral claims and any other mineral tenures comprising the Property in good standing under applicable law.

# - 16 -

# PART 9

# FORMATION AND OPERATION OF JOINT VENTURE

# **Formation of Joint Venture**

9.1 Effective as of the Earn-In Date, the Optionee and the Optionor will participate in a joint venture (the "Joint Venture") for the purpose of further exploration and development work on the Property and if warranted, the operation of one or more mines on the Property.

# **Participating Interests**

9.2 If the Optionee exercised the 51% Interest in accordance with §5.9 the participating interests of the parties at the time the Joint Venture is formed will be:

Optionee 51% Optionor 49%

9.3 If the Optionee has not exercised the 51% Interest in accordance with §5.9 the participating interests of the parties at the time the Joint Venture is formed will be:

Optionee 50% Optionor 50%

Each party will be responsible for payment of its proportionate share (based on its participating interest) of the operating and capital costs of the Joint Venture's operations, including reclamation and remediation obligations and any security required therefor.

# **Management** Committee

9.4 Upon formation of the Joint Venture, a Management Committee, formed by members from each party and holding voting rights in accordance with each party's participating interest, will be established which will make all decisions,

[§9.4 redacted due to confidentiality provision. §9.4 sets out the rights of the Management Committee.]

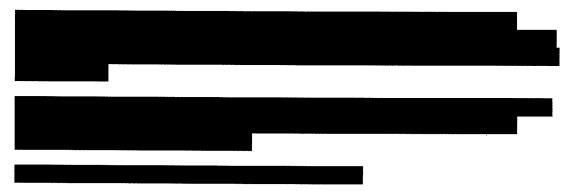
# Manager

9.5 The Manager will be subject to the direction and control of the Management Committee. The Optionee will have the right to be the Manager of the Joint Venture and to manage and operate the exploration, feasibility study, mine development and mining phases of the project during the term of the Joint Venture, provided that the Optionee's participating interest in the Joint Venture is at least percent (2%). If the Optionee holds less than a percent (2%) participating interest, the Management Committee may appoint a new Manager.

[§9.5 redacted due to confidentiality provision. §9.5 sets out what participating interest the Optionee is required to maintain to be the Manager.]

# **Overhead Costs**

9.6 The Manager will be entitled to charge the Joint Venture an amount for general overhead and administrative costs and management fees equal to:



excluding in each case the amount of the overhead charge fixed under this §9.6.



[§9.6 redacted due to confidentiality provision. §9.6 sets out the costs the Manager is entitled to charge the Joint Venture.]

# **Contracts with Manager**

9.7 The Manager and any Affiliate of the Manager may enter into contracts with the Joint Venture, provided that at the time of formation of any such contract the terms thereof, including the allocation of revenues, costs, obligations and liabilities are fair and reasonable, and that any charges made by the Manager or its Affiliates to the Joint Venture do not exceed the fair market value therefor.

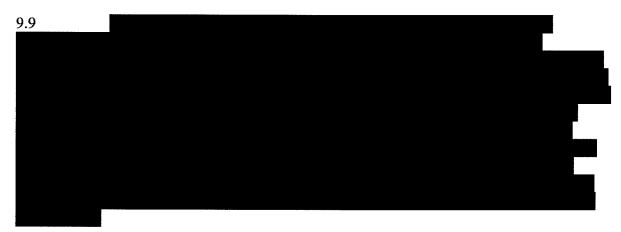
# **Accounting Procedures**





# [§9.8 redacted due to confidentiality provision. §9.8 sets out the accounting procedure for the Joint Venture.]

# **Programs and Budgets**



[§9.9 redacted due to confidentiality provision. §9.9 sets out the procedure for Programs and Budgets of the Joint Venture.]

# Dilution

9.10 The dilution formula will be as follows:



[§9.10 redacted du	e to confidentiality p	rovision. §9.10 set	ts out the dilution f	ormula.]
<b>Excess Work Costs</b>	5			
0 11				

9.11			

	ovision. §9.12 sets out the procedure for applying
excess Work Costs to the Joint Venture.	

# **Royalty Interest**

9.12 If any party is diluted to a percent (26%) or lower participating interest, that party will be deemed to have waived the opportunity to participate in future work programs, whether in exploration, development or production, and to have converted its participating interest to a percent (26%) Production Royalty Interest, to be determined and paid as set out in Schedule "C" hereto.

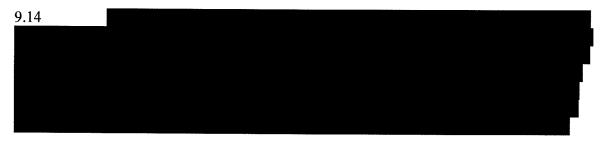
[§9.12 redacted due to confidentiality provision. §9.12 sets out the threshold participating interests which will trigger the conversation of the participating interest to a Production Royalty Interest.]

# **Feasibility Study**

# 9.13



# **Production Decision**



[§9.14 redacted due to confidentiality provision. §9.14 sets out dilution that may occur if a party does not provide raise required capital in connection with a production decision.]

# **Reclamation Fund**

9.15			

[§9.15 redacted due to confidentiality provision. §9.15 sets out a reclamation fund the Management Committee requires from time to time.]

# **Buy-out of Production Royalty**



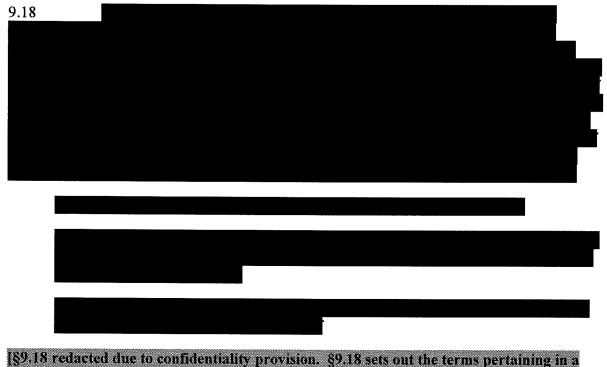
[§9.16 redacted due to confidentiality provision. §9.16 sets out the terms that a party can purchased the Production Royalty Interest.]

# Withdrawal

9.17 Notwithstanding anything herein contained, a party hereto may elect to withdraw from the Joint Venture by offering its interest in writing to the other party for \$1.00. If the other

party does not accept the offer in writing within ninety (90) days, the Manager will cease operations.

# **Default in Funding**



default in funding to the Joint Venture.]

**Taking in Kind** 



[§9.19 redacted due to confidentiality provision. §9.19 sets out the terms pertaining to a party to the Joint Venture taking its share of the products in kind.]

# PART 10

# **AREA OF INTEREST**

## Area of Interest

10.1 If either party or any of its Affiliates stakes or otherwise acquires any interest in mineral claims or any other form of mineral tenure (the "**AOI Tenure**") located wholly or partly

in an area (the "Area of Interest") within **sector** kilometres from any portion of the Property as it exists at the date of execution of this Agreement

the acquiring party will forthwith give notice to the other party of such staking or acquisition, the costs thereof and all details in its possession with respect to the nature of the AOI Tenure and the known mineralization thereon. Upon delivery of such notice:

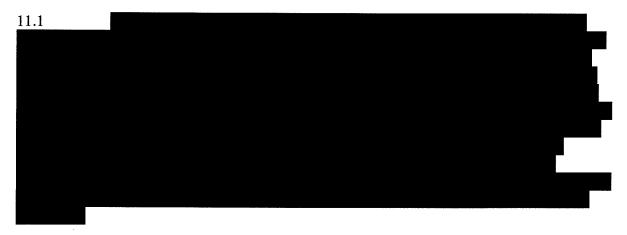


[§10.1 redacted due to confidentiality provision. §10.1 sets out the terms pertaining to the Area of Interest.]

# **PART 11**

# CONFIDENTIALITY

# Confidentiality



[§11.1 redacted due to confidentiality provision. §11.1 sets out the confidentiality provisions.]

# **News Releases and Other Documents**



[§11.2 redacted due to confidentiality provision. §11.2 sets out the review procedure for news releases and other disclosure documents with respect to the Property.]

# Survival of Confidentiality Obligations

11.3 The provisions of this Part 11 will survive any termination of the Option and this Agreement and the acquisition of any interest in the property by the Optionee hereunder.

# PART 12

# **RESTRICTIONS ON TRANSFERS AND ENCUMBRANCES**

# **Restrictions on Transfers and Encumbrances**

12.1 Except as set forth in §12.2 to §12.4 hereof, no party will sell, transfer, assign or convey or grant any Encumbrance over all or any part of its interest in the Property or this Agreement or any of its rights, benefits and privileges hereunder (including any Production Royalty Interest) (collectively for purposes of this Part 12 "an interest in the Property") without the prior written consent of the other party thereto, and any attempt to sell, transfer, assign or convey or to grant any such Encumbrance over all or any part of its interest in the Property without such consent will be of no effect.

# **Transfers to Affiliates**

12.2 Each party may sell, transfer, assign and convey an interest in the Property to an Affiliate of such party, provided such party delivers to the other party notice of such assignment and provided that before such Affiliate ceases to be an Affiliate of such party, the interest assigned to such Affiliate must be assigned back to such party.

# **Right of First Refusal**

12.3 No party will sell, assign, transfer or otherwise dispose of an interest in the Property except in accordance with §12.1 or §12.2 or upon the following conditions:



# [§12.3 redacted due to confidentiality provision. §12.3 sets out the right of first refusal for the Property.]

## Encumbrances

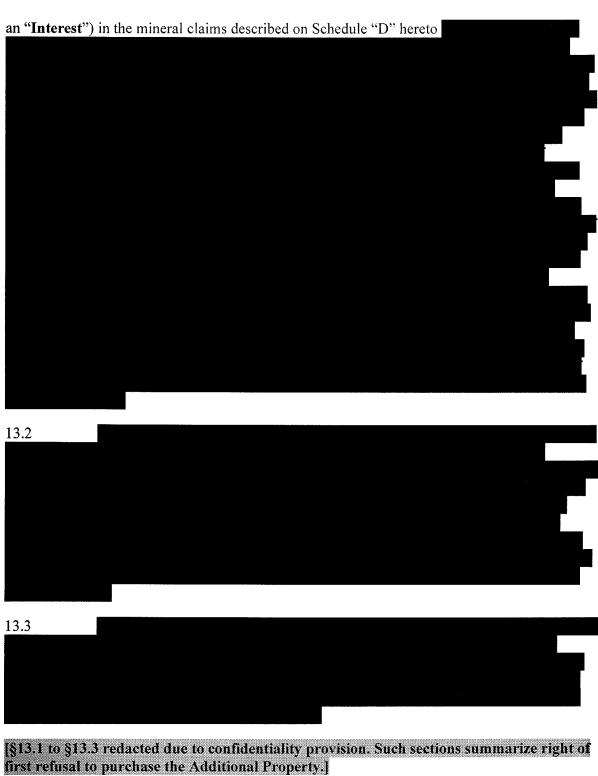
12.4 Following formation of the Joint Venture, a party may grant an Encumbrance over its interest in the Property, but only upon the condition that the mortgagee, pledgee or other encumbrancer (the "Holder") will have first entered into an Agreement with the other party binding upon the Holder and its assignees to the effect that the Holder and its assignees will not enter into possession of the interest subject to the Encumbrance or institute any proceedings to obtain possession thereof, but will limit their remedies against such interest to the sale thereof, and that §12.3 will apply to any such sale.

## **PART 13**

# PURCHASE OF ADDITIONAL PROPERTY

# **Right of First Refusal**

13.1 For a period of years from the Effective Date (the "**ROFR Term**"), if the Optionor receives a bona fide offer from any person (a "**Bona Fide Offeror**") to purchase or to acquire an interest in any property right, title or interest held by the Optionor in (collectively,



# PART 14

# **OPTION AND EXCHANGE ACCEPTANCE**

# Option

14.1 This Agreement is an option only and nothing herein contained will be construed as obligating the Optionee to do any acts or make any payments hereunder, and any act or acts or payment or payments as will be made hereunder will not be construed as obligating the Optionee to do any further act or make further payment or payments.

# **Exchange Acceptance**

14.2 The obligations of the Optionee under this Agreement are subject to the acceptance for filing of the Agreement by the Exchange. The Optionor agrees to use commercially reasonable efforts to assist the Optionee in obtaining Exchange acceptance of this Agreement, including signing and delivering or providing all such documents and information as may be reasonably required by the Exchange

14.3 If the Effective Date has not occurred within 90 days of the date of execution hereof, then either party may terminate this Agreement without liability by notice to the other party.

# PART 15

# PARTICIPATION RIGHT AND RESTRICTION ON INTEREST

# **Participation Right**

15.1 For the duration of the Option Period, the Optionee will grant the Optionor the right, but not the obligation, to purchase up to 10% of any securities issued in any brokered or non-brokered offering of the Optionee (the "**Participation Right**"), provided that if such offering is a prospectus exempt offering that the Optionor qualifies under an exemption proved by National Instrument 45-106 – *Prospectus and Registration Exemptions*.

# Interest

15.2 The Participation Right is not exercisable by the Optionor if, after giving effect to such exercise, the Optionor, together with any person or company action jointly or in concert with the Optionor would in the aggregate beneficially own, or exercise control or direction over that number of voting securities of the Optionee which is **securities** or greater of the total issued and outstanding voting securities of the Optionee, immediately after giving effect to such exercise.

# [Part 15 redacted due to confidentiality provision. Such sections set out threshold restriction on Participation Right.]

#### **PART 16**

## **FORCE MAJEURE**

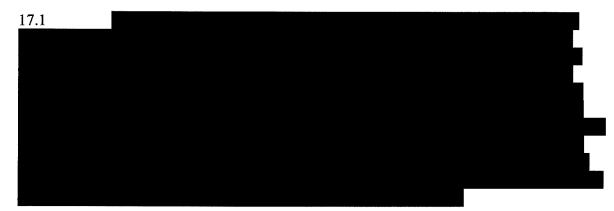
#### **Force Majeure**

16.1 No party will be liable to the other party hereto and no party will be deemed in default hereunder for any failure to perform or delay in performing any of its obligations under this Agreement or in incurring Work Costs caused by or arising out of any event (a "force majeure event") beyond the reasonable control of such party, excluding lack of funds but including lack of rights or permission by government authorities or indigenous peoples' groups to enter upon the Property to conduct exploration, development and mining operations thereon, war conditions, actual or potential, earthquake, fire, storm, flood, explosion, strike, labour trouble, accident, riot, unavoidable casualty, act of restraint, present or future, of any lawful authority, act of God, protest or demonstrations by environmental lobbyists or indigenous peoples' groups, act of the public enemy, delays in transportation, breakdown of machinery, inability to obtain necessary materials in the open market or unavailability of equipment. No right of a party will be affected for failure or delay of a party to perform any of its obligations under this Agreement or to incur Work Costs, if the failure or delay is caused by a force majeure event. All times provided for in this Agreement will be extended for the period equal to the period of delay. The affected party will take all reasonable steps to remedy the cause of the delay attributable to the events referred to above, provided that nothing contained in this section will require any party to settle any labour dispute, protest or demonstration, or to question or test the validity of any governmental order, regulation, law or claim of right by indigenous peoples' groups. The affected party will promptly give notice to the other party of the commencement and termination of each period of force majeure.

# **PART 17**

# **NEGOTIATION OF FORMAL AGREEMENT**

#### Notice to Negotiate



# [§17.1 redacted due to confidentiality provision, §17.1 summarizes the right to negotiate a further agreement.]

# **PART 18**

# ARBITRATION

18.1 Any dispute arising between the parties in respect of the interpretation of this Agreement or the performance of any obligation hereunder will be submitted to binding arbitration

# [§18.1 redacted due to confidentiality provision. §18.1 summarizes arbitration provisions.]

# **PART 19**

# GENERAL

## Relationship

19.1 Nothing in this Agreement will be deemed to constitute either party the partner, agent or legal representative of the other or to create any fiduciary relationship between them, for any purpose whatsoever.

## **Other Activities**

19.2 Nothing in this Agreement will restrict in any way the freedom of either party, except with respect to its interest in the Property, to conduct as it sees fit any business or activity whatsoever, whether in competition with the Joint Venture or otherwise, including the exploration for, or the development, mining, production or marketing of any mineral, without any accountability to the other party. No party which is the owner or operator of another mining property, mill or other facility will be obliged to mill, beneficiate or handle any material from the Property or otherwise deal with the Joint Venture.

## Notices

19.3 Any notice, commitment, election, consent or any communication required or permitted to be given hereunder by one party hereto to the other party, in any capacity (a "**Notice**") will be in writing and will be deemed to have been given if mailed by prepaid registered mail return receipt requested, faxed or delivered to the address of the other party set out below:

# If to the Optionor:

Augen Gold Corp. Suite 500 – 360 Bay Street Toronto, Ontario M5H 2V6

Attention: Chief Executive Officer Fax No.: (416) 361-0923

# If to the Optionee:

Sanatana Diamonds Inc. Suite 1925 – 925 West Georgia Street Vancouver, British Columbia V6C 3L3

Attention: Chief Executive Officer Fax No.: (604) 408-6682

or to such substitute address as such party may from time to time direct in writing, and any such Notice will be deemed to have been received, if mailed, on the date noted on the return receipt, if faxed, on the first business day after the date of transmission, and if delivered, upon the day of delivery or if such day is not a business day, then on the first business day thereafter.

# Waiver of Right of Partition

19.4 Each party waives the benefit of all provisions of law as now in effect or as enacted in future relating to actions of partition of real and personal property and agrees that for so long as this Agreement is in effect it will not resort to any action in law or in equity to partition the Property or any other real or personal property subject to this Agreement.

# Interpretation

19.5 For purposes of this Agreement, headings are for convenience of reference only and are not intended to interpret, define or limit the scope of this Agreement or any provision hereof. The singular of any term includes the plural and vice versa, and use of any term is generally applicable to either gender and where applicable, a body corporate, firm or other entity. The word "including" is not limiting whether or not non-limiting language (such as "without limitation" or "but not limited to" or words of similar import) is used with reference thereto. Unless otherwise indicated, all dollar references are to Canadian dollars.

## **Further Assurances**

19.6 The parties hereto will from time to time do such further acts and things and execute such further documents and instruments as may be reasonably required in order to carry out and implement this Agreement.

# Amendments

19.7 No modification, variation or amendment of this Agreement will be effective unless evidenced in writing, executed by both of the parties.

# Severance

19.8 If any provision of this Agreement will be invalid, illegal or unenforceable in any respect under any applicable law, such provision may be severed from this Agreement, and the validity, legality and enforceability of the remaining provisions hereof will not be affected or impaired by reason thereof.

# Time

19.9 Time will be of the essence of this Agreement.

# **Governing Law**

19.10 This Agreement will be governed by and interpreted and enforced in accordance with the laws in force in the Province of British Columbia (excluding any conflict of laws rule or principle which might refer such construction to the laws of another jurisdiction) and the applicable federal laws of Canada. Each party irrevocably submits to the non-exclusive jurisdiction of the courts of British Columbia with respect to any matter arising hereunder or relating hereto.

# **Entire Agreement**

19.11 This Agreement contains the entire understanding between the parties hereto dealing with the subject matter hereof and supersedes and replaces all negotiations, correspondence and prior agreements or understandings relating thereto.

# Enurement

19.12 This Agreement will enure to the benefit of and be binding upon the parties hereto and their respective successors and permitted assigns.

# Counterparts

19.13 This Agreement may be executed in as many counterparts as may be necessary or by facsimile and each such counterpart agreement or facsimile so executed are deemed to be an original and such counterparts and facsimile copies together will constitute one and the same instrument.

# **Rule Against Perpetuities**

19.14 The parties do not intend that there will be any violation of the Rule Against Perpetuities, the Rule Against Unreasonable Restraints on the alienation of property, or any similar rule. Accordingly, if any right or option to acquire any interest in the Property exists under this Agreement, such right or option must be exercised, if at all, so as to vest such interest within time periods permitted by applicable rules. If, however, any such violation should inadvertently occur, the parties hereby agree that a court will reform that provision in such a way as to approximate most closely the intent of the parties within the limits permissible under such rules.

## Time

19.15 Time will be of the essence hereof.

# **Resale Restrictions**

19.16 All Shares issued by the Optionee to the Optionor pursuant to this Agreement will be subject to such resale restrictions as may be imposed by applicable securities law and the Exchange.

# **Change in Capitalization**

19.17 If the Optionee undertakes a change in capitalization affecting its Shares, such as subdivision, consolidation or reclassification of the Shares or other relevant changes in Shares, including any adjustment arising from a merger, acquisition or plan of arrangement, such proportionate adjustments, if any, appropriate to reflect such change will be made by the Optionor with respect to the number of Shares which may be issued by the Optionee to the Optionor hereunder.

**IN WITNESS WHEREOF** the parties have executed this Agreement as of the day and year first set forth above.

# AUGEN GOLD CORP.

Per: <u>(signed) "J. David Mason"</u> Authorized Signatory Name: J. David Mason Title: CEO

# SANATANA DIAMONDS INC.

Per: <u>(signed) "Peter Miles"</u> Authorized Signatory Name: Peter Miles Title: CEO

# **SCHEDULE "A"**

# THE PROPERTY

This is Schedule "A" to the Option and Joint Venture Agreement between Augen Gold Corp. and Sanatana Diamonds Inc. dated February 14, 2011 (the "Agreement"). All capitalized terms under in this Schedule "A" but not otherwise defined have the meanings ascribed thereto in the Agreement.

Township/ Area	Claim Number <sup>(1)</sup>	Recorded	Due Date	Status	Recorded Owner - Percentage	Work Required	Total Work:	Present Work Assignment	Claim Bank
CHESTER	3004844	2004-Oct- 04	2011-May-22	Active	100 % Augen	\$2,000	\$6,000	\$0	\$0
CHESTER	<u>3010239</u>	2004-Oct- 08	2011-May-26	Active	100 % Augen	\$2,000	\$6,000	\$0	\$0
CHESTER	<u>3011820</u>	2004-Jun- 03	2012-Jan-20	Active	100 % Augen	\$400	\$1,600	\$0	\$0
CHESTER	<u>3017665</u>	2004-Jul-09	2012-Feb-25	Active	100 % Augen	\$1,200	\$4,800	\$0	\$0
CHESTER	<u>3017666</u>	2004-Jul-09	2012-Feb-25	Active	100 % Augen	\$1,200	\$4,800	\$0	\$0
CHESTER	<u>3018412</u>	2004-Aug- 31	2011-Apr-18	Active	100 % Augen	\$400	\$1,200	\$0	\$0
CHESTER	<u>3011854</u>	2004-Jun- 09	2012-Jan-26	Active	100 % Augen	\$400	\$1,600	\$0	\$0
CHESTER	<u>3014374</u>	2004-Apr- 02	2011-Nov-19	Active	100 % Augen	\$3,200	\$12,800	\$0	\$0
CHESTER	<u>3017667</u>	2004-Jul-09	2012-Feb-25	Active	100 % Augen	\$1,200	\$4,800	\$0	\$0
CHESTER	<u>3017668</u>	2004-Jul-09	2012-Feb-25	Active	100 % Augen	\$2,400	\$9,600	\$0	\$0
CHESTER	<u>3018410</u>	2004-Oct- 08	2011-May-26	Active	100 % Augen	\$4,800	\$14,400	\$0	\$0
CHESTER	<u>3018411</u>	2004-Oct- 08	2011-May-26	Active	100 % Augen	\$4,800	\$14,400	\$0	\$0
CHESTER	<u>3018437</u>	2004-Oct- 08	2011-May-26	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
CHESTER	<u>3019033</u>	2004-Oct- 08	2011-May-26	Active	100 % Augen	\$800	\$2,400	\$0	\$0
CHESTER	<u>4203263</u>	2004-Oct- 04	2011-May-22	Active	100 % Augen	\$400	\$1,200	\$0	\$0
CHESTER	<u>4203267</u>	2004-Nov- 29	2011-Dec-25	Active	100 % Augen	\$4,800	\$14,400	\$0	\$0
CHESTER	<u>4203839</u>	2005-Apr- 08	2011-Sep-21	Active	100 % Augen	\$2,400	\$7,200	\$0	\$0
CHESTER	<u>4203852</u>	2005-Apr- 08	2011-Sep-21	Active	100 % Augen	\$6,000	\$18,000	\$0	\$0
CHESTER	<u>4206270</u>	2005-Apr- 08	2011-Sep-21	Active	100 % Augen	\$4,800	\$14,400	\$0	\$0
CHESTER	<u>4206271</u>	2005-Apr- 08	2011-Sep-21	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
CHESTER	<u>4206272</u>	2005-Apr- 08	2011-Sep-21	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
CHESTER	<u>4206273</u>	2005-Apr- 08	2011-Sep-21	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
CHESTER	<u>4206276</u>	2005-Apr- 08	2011-Sep-21	Active	100 % Augen	\$4,800	\$14,400	\$0	\$0
CHESTER	<u>4206277</u>	2005-Apr- 08	2011-Sep-21	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
CHESTER	<u>4206278</u>	2005-Apr- 08	2011-Sep-21	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
CHESTER	<u>4206279</u>	2005-Apr- 08	2011-Sep-21	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0

Township/ Area	Claim Number <sup>(1)</sup>	Recorded	Due Date	Status	Recorded Owner - Percentage	Work Required	Total Work:	Present Work Assignment	Claim Bank
CHESTER	<u>4227171</u>	2007-Oct- 22	2011-Oct-22	Active	100 % Augen	\$2,000	\$4,000	\$0	\$0
CHESTER	<u>4240907</u>	2008-Jul-22	2011-Jul-22	Active	100 % Augen	\$5,200	\$5,200	\$0	\$0
CHESTER	<u>4240908</u>	2008-Jul-22	2011-Jul-22	Active	100 % Augen	\$4,800	\$4,800	\$0	\$0
YEO	<u>3017670</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$4,000	\$12,000	\$0	\$0
YEO	<u>3017671</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
YEO	<u>3017672</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$4,000	\$12,000	\$0	\$0
YEO	<u>3017673</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
YEO	<u>3017674</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
YEO	<u>3019553</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
YEO	<u>3019555</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
YEO	<u>3019556</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
YEO	<u>4203293</u>	2004-Oct- 04	2011-May-22	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
YEO	<u>4203294</u>	2004-Oct- 04	2011-May-22	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
YEO	<u>3017383</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$6,400	\$19,200	\$0	<b>\$</b> 0
YEO	<u>3017384</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$6,400	\$19.200	\$0	\$0
YEO	<u>3018541</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
YEO	<u>3018463</u>	2004-Jul-30	2011-Mar-17	Active	100 % Augen	\$6,400	\$19,200	\$0	\$0
BENNEWEI S	<u>4209355</u>	2006-Feb- 23	2011-Feb-23	Active	100 % Augen	\$4,800	\$14,400	\$0	\$254
BENNEWEI S	<u>4216686</u>	2006-Dec- 04	2011-Dec-04	Active	100 % Augen	\$400	\$1,200	\$0	\$0
NEVILLE	<u>4219670</u>	2008-Jan- 15	2012-Jan-15	Active	100 % Augen	\$1,200	\$2,400	\$0	\$0

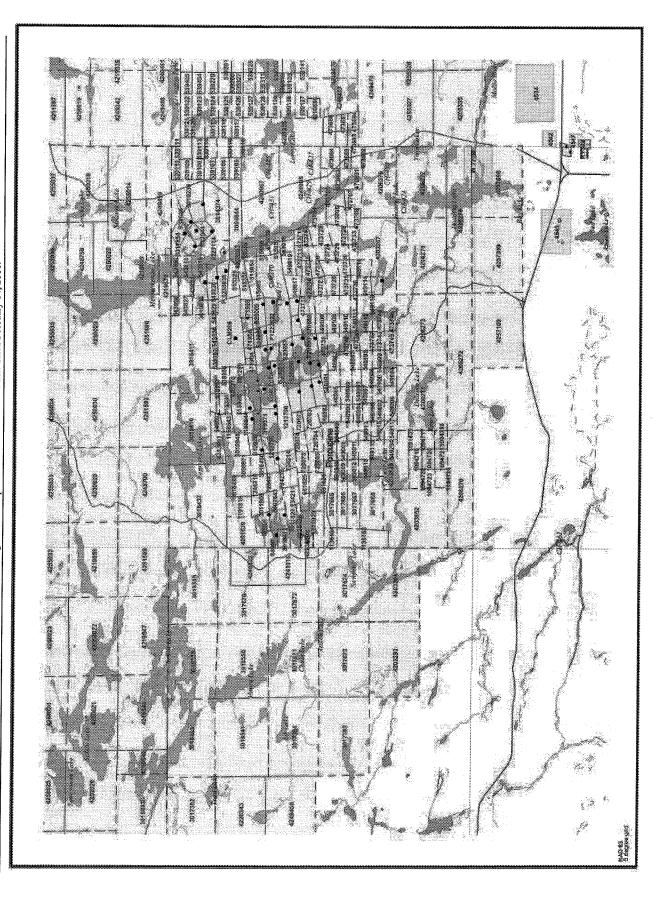
Note: (1)

[Note 1 above redacted due to confidentiality provision. The note states for the avoidance of doubt that any mineral claims Augen holds or controls over a certain latitude will be deemed to comprise part of the Claims.]

SCHEDULE "B"

# PROPERTY MAP

This is Schedule "B" to the Option and Joint Venture Agreement between Augen Gold Corp. and Sanatana Diamonds Inc. dated February 14, 2011.



### SCHEDULE "C"

## **PRODUCTION ROYALTY**

This is Schedule "C" to the Option and Joint Venture Agreement between Augen Gold Corp. and Sanatana Diamonds Inc. dated February 14, 2011.

1. For the purpose of this Schedule, "Agreement" means the agreement of which this Schedule "C" forms a part, "Payor" means the party or parties paying a percentage of Production Returns pursuant to the Agreement, "Payee" means the party receiving the percentage of Production Returns and other capitalized terms have the meanings given to them in this Schedule "C" or elsewhere in this Agreement.

2. For the purposes hereof, the term "**Production Returns**" will, subject to paragraphs 3 to 7 inclusive below, mean gross revenues received from the sale by the Payor of all ore mined from the Property and from the sale by the Payor of all concentrate, metal and products derived from ore mined from the Property, after deduction of the following:

(a) All smelting and refining costs, sampling, assaying and treatment charges and penalties including but not limited to metal losses, penalties for impurities and charges for refining, selling and handling by the smelter, refinery or other purchaser (including price participation charges by smelters and/or refiners);

(b) costs of handling, transporting, securing and insuring such material from the Property or from a concentrator, whether situated on or off the Property, to a smelter, refinery or other place of treatment, and in the case of gold or silver concentrates, security costs;

(c) *ad valorem* taxes and taxes based upon sales or production, but not income taxes; and

(d) marketing costs, including sales commissions, incurred in selling ore mined from the Property and in selling concentrate, metal and products derived from ore mined from the Property.

3. Where revenue otherwise to be included under this Schedule is received by the Payor in a transaction with a party with whom it is not dealing at arm's length, the revenue to be included will be based on the fair market value under the circumstances and at the time of the transaction.

4. Where a cost otherwise deductible under this Schedule is incurred by the Payor in a transaction with a party with whom it is not dealing at arm's length, the cost to be deducted will be the fair market cost under the circumstances and at the time of the transaction.

5. For the purposes of determining Production Returns, all receipts and major disbursements in a currency other than Canadian will be converted into Canadian currency on the day of receipt or disbursement, as the case may be, and all other disbursements in a currency

other than Canadian will be converted into Canadian currency at the average rate for the month of disbursement determined using the Bank of Canada noon rates.

6. The Payor may, but will not be under any duty to, engage in price protection (hedging) or speculative transactions such as futures contracts and commodity options in its sole discretion covering all or part of production from the Property and, except in the case where Products are actually delivered and a sale is actually consummated under such price protection or speculative transactions, none of the revenues, costs, profits or losses from such transactions will be taken into account in calculating Production Returns or any interest therein.

7. Upon the Commencement of Commercial Production, the Property may be operated as a single operation with other mining properties owned by third parties or in which the Payor has an interest, in which event, the parties agree that (notwithstanding separate ownership thereof) ores mined from the mining properties (including the Property) may be blended at the time of mining or at any time thereafter, provided, however, that the respective mining properties will bear and have allocated to them their proportionate part of costs described in paragraphs 2(a) to 2(d) above incurred relating to such single operation, and will have allocated to each of them the proportionate part of the revenues earned relating to such single operation. In making any such allocation, effect will be given to the tonnages of ore and other material mined and beneficiated and the characteristics of such material including the metal content of ore removed from, and to any special charges relating particularly to ore, concentrates or other products or the treatment thereof derived from, any of such mining properties. The Payor will ensure that reasonable practices and procedures are adopted and employed for weighing, determining moisture content, sampling and assaying and determining recovery factors.

8. Payments of a percentage of Production Returns will be made within 30 days after the end of each calendar quarter in which Production Returns, as determined on the basis of final adjusted invoices, are received by the Payor. All such payments will be made in Canadian dollars.

9. After the year in which the Commencement of Commercial Production occurs, the Payee will be provided annually on or before April 1 with a copy of the calculation of Production Returns for the preceding calendar year, determined in accordance with this Schedule "C" and certified correct by the Payor.

10. Nothing contained in the Agreement or any Schedule attached thereto will be construed as conferring upon the Payee any right to or beneficial interest in the Property. The right to receive a percentage of Production Returns from the Payor as and when due is and will be deemed to be a contractual right only. The right of the Payee to receive a percentage of Production Returns from the Payor as and when due will not be deemed to constitute the Payor the partner, agent or legal representative of the Payee or to create any fiduciary relationship between them for any purpose whatsoever.

11. The Payor will be entitled to (a) make all operational decisions with respect to the methods and extent of mining and processing of ore, concentrate, metal and products produced from the Property (including the decision to process by heap leaching rather than conventional

milling); (b) make all decisions relating to sales of such ore, concentrate, metal and products produced; and (c) make all decisions concerning temporary or long-term cessation of operations.

12. All Production Royalty payments will be considered final and in full satisfaction of all obligations of the Payor with respect thereto, unless the Payee gives the Payor written notice describing and setting forth a specific objection to the calculation thereof (an "Objection Notice") within twelve (12) months after receipt by the Payee of the calculation herein provided for. If the Payee delivers an Objection Notice, the Payee will, for a period of thirty (30) days after the Payor's receipt of written notice of such objection, have the right, upon reasonable notice and at a reasonable time, to have the Payor's accounts and records relating to the calculation of the Production Royalty audited by a chartered accountant acceptable to the Payee and to the Payor, each acting reasonably. If such audit determines that there has been a deficiency or an excess in the payment made to the Payee, such deficiency or excess will be resolved by adjusting the next quarterly Production Royalty payment due hereunder. The Payee will pay all costs of such audit unless a deficiency of more than ten percent (10%) of the amount due is determined to exist. The Payor will pay all costs of such audit if a deficiency of more than ten percent (10%) of the amount due is determined to exist. If the Pavee does not deliver an Objection Notice to the Payor within such twelve (12) month period, the calculation will be deemed to be correct for all purposes.

## **SCHEDULE "D"**

# THE ADDITIONAL PROPERTY

This is Schedule "D" to the Option and Joint Venture Agreement between Augen Gold Corp. and Sanatana Diamonds Inc. dated February 14, 2011. All capitalized terms under in this Schedule "D" but not otherwise defined have the meanings ascribed thereto in the Agreement.

Township/ Area	Claim Number <sup>(1)</sup>	Recorded	Due Date	Status	Recorded Owner - Percentage	Work Required	Total Work:	Present Work Assignment	Claim Bank

[Schedule "D" redacted due to confidentiality provision. This Schedule "D" details the mineral claims comprising the Additional Property.]

SCHEDULE "E"

# MAP

This is Schedule "E" to the Option and Joint Venture Agreement between Augen Gold Corp. and Sanatana Diamonds Inc. dated February 14, 2011.

[Schedule "E" reducted due to confidentiality provision. This Schedule "E" illustrates the mineral claims comprising the Additional Property.]



Appendix 3 – Assessment Files Used in this Report



Assessment File	Company	Company	Year	Work Done	Property/Area	Township
# 41912SW8506	Blue Falcon	(Contract) Terraquest	1986	Airborne Magnetic	Swayze Syncline	Yeo
	Mines Ltd.	Ltd.		and VLF-EM	Area	
41009NW9161	Hargor Resources INC.	Geophysical Surveys Inc.	1980	Airborne EM	Gogama area	Osway, Huffman, Yeo, Grove
41O09SE0057	Kid Creek Mines Ltd.		1983	Magnetics, EM	Swaze Belt Project	Yeo
41009SE0058	Cominco Ltd.	Geoex Ltd.	1980	Magnetics, EM	Schist Lake Area	Yeo
41009SE0059	Cominco Ltd.		1980	Diamond Drilling	Schist Lake Area	Yeo
41009SE0061	Cominco Ltd.		1980	Geological Mapping	Schist Lake Area	Yeo
41009SE0063	W. Gerrie (Individual)		1950	Geological Mapping	Schist Lake Area	Yeo, Potier
41O09SE0050	Three Ducks Lake Syndicate		1958	Diamond Drilling	Schist Lake Area	Yeo
41P12NE8451	Consolidated Silver Butte Mines Ltd.		1987	General Report	Swayze Project	Chester, Osway, Yeo
41P12SE0507	Blue Falcon Mines Ltd.	Terraquest Ltd.	1985	Airborne Magnetic and VLF-EM	Swayze Syncline Area	Yeo
41P12SE0520	Blue Falcon Mines Ltd.	Terraquest Ltd.	1990	Airborne Magnetic and VLF-EM	Gogama area	Mallard, Yeo, Chester, Benneweiss
41P12SW0002	Murgold Resources Inc.	Hill, Goettler, De Laporte Ltd.	1983	General Report	Gogama area	, Champagne Chester, Benneweiss , St. Louis
41P12SW0004	Murgold Resources Inc.	Normtnex Ltd.	1981	Geological Mapping	Gogama area	Chester, Benneweiss , St. Louis
41P12SW0008	R.J. Roussain		1993	General Report/Diamond Drilling	Douglas - Tomasini Property	Chester, Benneweiss
41P12SW0009	Murgold Resources Inc.	Raymond Davies	1990	Overburden Sampling	Bryan et al Claim group	Chester
41P12SW0013	Edwin L. Speelman (OPAP?)		1994	Trenching, sampling, Diamond Drilling	Bryan et al Claim group	Chester
41P12SW0014	Henry Douglas (Individual)	Rayan Exploration Ltd.	1995	IP survey	Benneweis Township Property	Chester, Benneweis
41P12SW0016	R. Bruce Durham & Robert Duess (Individuals)		1996	General Report, Prospecting, Mapping, Sampling	Bagsverd Lake Property	Chester, Yeo
41P12SW0017	National Irron Resources Ltd.		1981	Geological Mapping	Gogama Gold Prospect	Benneweis
41P12SW0018	Wm. Sims Industires Ltd.	Shield Geophysics Ltd.	1980	Magnetics, EM	William Sims Property	Chester
41P12SW0019	Wm. Sims Industires Ltd.	Edward J. Blanchard	1979	Airborne Magnetics,	William Sims Property	Benneweis



Assessment File #	Company	Company (Contract)	Year	Work Done	Property/Area	Township
		(Contract)		Prospecting, Sampling		
41P12SW0026	Edwin L. Speelman		1992	VLF EM-16 Survey	Bryan et al Claim group	Chester
41P12SW0027	Consolidated Silver Butte Mines Ltd.		1989	Geochem Sampling, Diamond Drilling?	?	Chester
41P12SW0028	Consolidated Silver Butte		1989	Geochem Sampling, Diamond Drilling?	?	Chester
41P12SW0033	Mines Ltd. Erana Mines Ltd.		1997	Trenching, Stripping, Sampling	?	Chester
41P12SW0038	Consolidated Silver Butte Mines Ltd.		1987	Geological Mapping, Geochemistry, Geophysics	NE Chester Township	Chester
41P12SW0039	Consolidated Silver Butte Mines Ltd.		1987	Geological Mapping, Geochemistry, Geophysics	East Central Chester Township	Chester
41P12SW0053	Isaac Burns	Constable Consulting Inc.	1987	Diamond Drilling	?	Chester
41P12SW0055	Consolidated Silver Butte Mines Ltd.	ine.	1987	Geological Mapping, Geochemistry,	?	Chester
41P12SW0060	Consolidated Silver Butte Mines Ltd.		1987	Geophysics Geological Mapping, Geochemistry	?	Chester
41P12SW0063	Nu-Stuart Resources Corp.	Constable Consulting Inc.	1985	Diamond Drilling	Bagsverd Lake Area	Chester
41P12SW0066	Blue Falcon Mines Ltd.	Prasanta K. Sarker	1985	Magnetics, EM	SE Chester Twonship	Chester
41P12SW0071	Murgold Resources Inc.	Norminex Ltd.	1981	VLF EM-16 Survey	Three Ducks Lake Area	Chester
41P12SW0079	Hanson Mineral Exploration Ltd.		1981/ 82	Diamond Drilling	?	Chester
41P12SW8456	Consolidated Silver Butte Mines Ltd.		1989	Geological Mapping, Geochemistry	Central Chester Township	Chester
41P12SW0083	Baxter Minerals Ltd. & Canadian Crest Gold Mines Ltd.		1980	Geophysics, Stripping, Mapping, Sampling	Neals Andersen Claim Group	Chester, Yeo
41P12SW0084	Hanson Mineral Exploration Ltd.		1980	Claim Options	?	Chester
41P12SW0091	Three Ducks Lake Syndicate		1958	Diamond Drilling	Bagsverd Lake Area	Chester
41P12SW0096	Coniston Exploration		1971	Diamond Drilling	Clam Lake Area	Chester
41P12SW0098	Wm. R. Miller		1971	Diamond Drilling	Beaver Lake Area	Chester
41P12SW0100	Jonsmith Mines Ltd.		1961	Diamond Drilling	Clam Lake Area	Chester

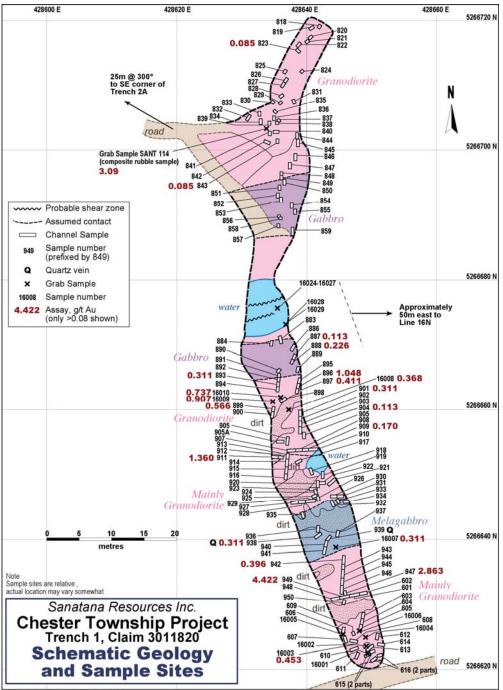


Assessment File #	Company	Company (Contract)	Year	Work Done	Property/Area	Township
41P12SW0116	Renmark Explorations		1970	EM survey	Three Ducks Lake Area	Chester
41P12SW0122	Consolidated Silver Butte Mines Ltd.		1988	Geophysics, Geochemistry	Northeastern Yeo Township	Northeaster n Yeo Township
41P12SW0123	Blue Falcon Mines Ltd.	Johnex Holdings Ltd.	1989	Stripping, Mapping	Moore Lake Area	Chester
41P12SW0127	Blue Falcon Mines Ltd.	Johnex Holdings Ltd.	1989	Stripping, Mapping	?	Chester
41P12SW0130	Blue Falcon Mines Ltd.		1986	General Report, Geophysics	?	Yeo
41P12SW0131	Consolidated Silver Butte Mines Ltd.		1988	Stripping, Mapping	?	Yeo
41P12SW0132	Kidd Resources Ltd.	Bobex Resources Ltd.	1985	VLF EM-16 Survey, Magnetics	Ash Lake Area	Yeo
41P12SW0134	Kidd Creek Mines Ltd.		1983/ 84	Diamond Drilling	?	Yeo
41P12SW0136	Cominco Ltd.		1979	GeoMapping, Sampling, Magnetics	Schist Lake Area	Yeo
41P12SW0300	Blue Falcon Mines Ltd. & Kidd Resources Ltd.		1987	GeoMapping, Sampling, Magnetics	East Central Yeo and West Central Chester Township. Sawpeter Lake Project	Chester, Yeo
41P12SW8455	Edwin L. Speelman		1992	Geochemistry, Sampling	Bryan et al property	Chester
41P12SW0034	Glen Roy		1987			
41P12SW0138	Jonsmith Mines Ltd.		1961			
41P12SW0052	Young-Shannon Gold Mines		1987			
41P12SW0124	Chesbar Resources Inc.		1988			
41P12SW0135	Kidd Creek Mines Ltd.		1983			



# Appendix 4 – Trench Maps





Geology by F. Racicot, September 2011

Figure 20-1 Map of Trench 1.



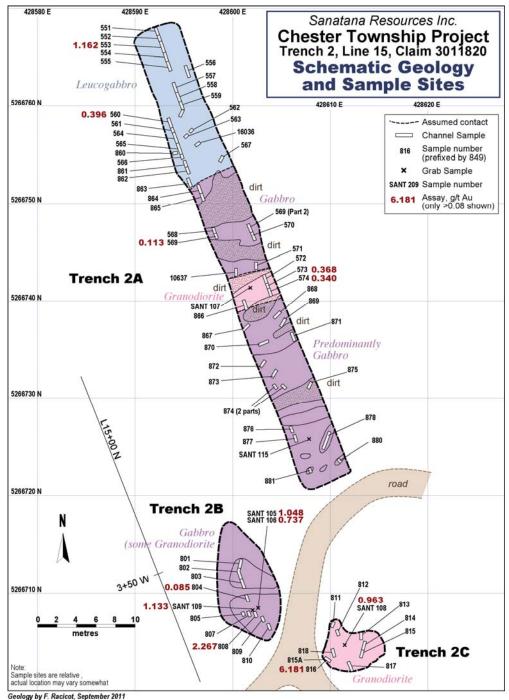
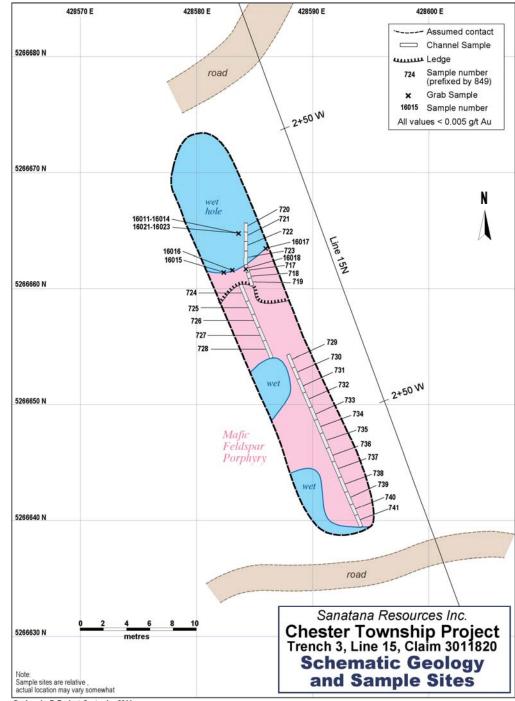


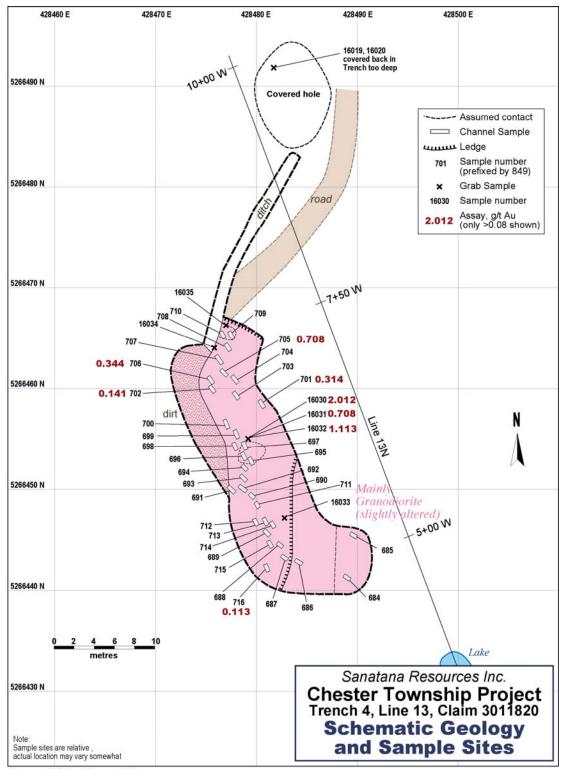
Figure 20-2 Map of Trench 2.





Geology by F. Racicot, September 2011 Figure 20-3 Map of Trench 3.





Geology by F. Racicot, September 2011 Figure 20-4 Map of Trench 4.



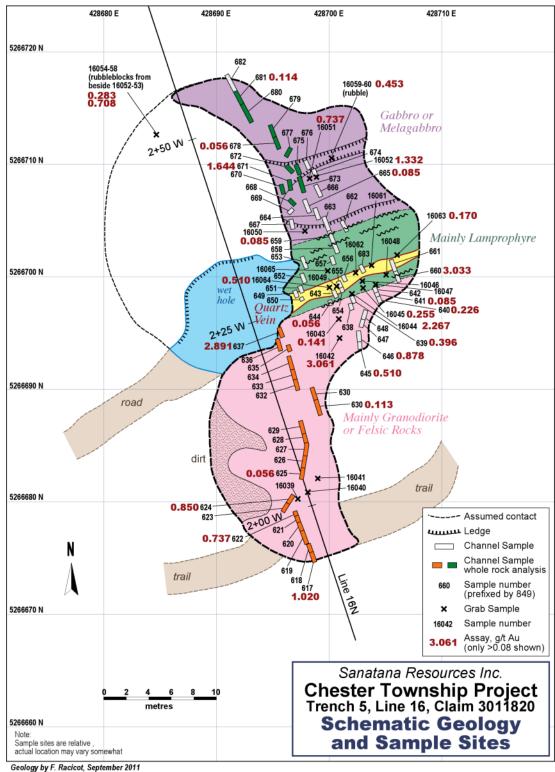


Figure 20-5 Map of Trench 5.



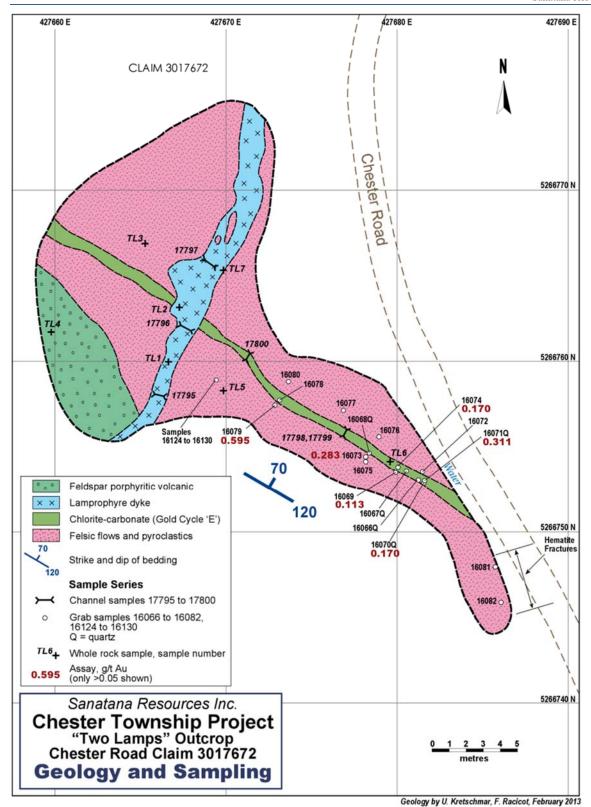


Figure 20-6 Map of Two Lamprophyres ("Two Lamps") Trench.



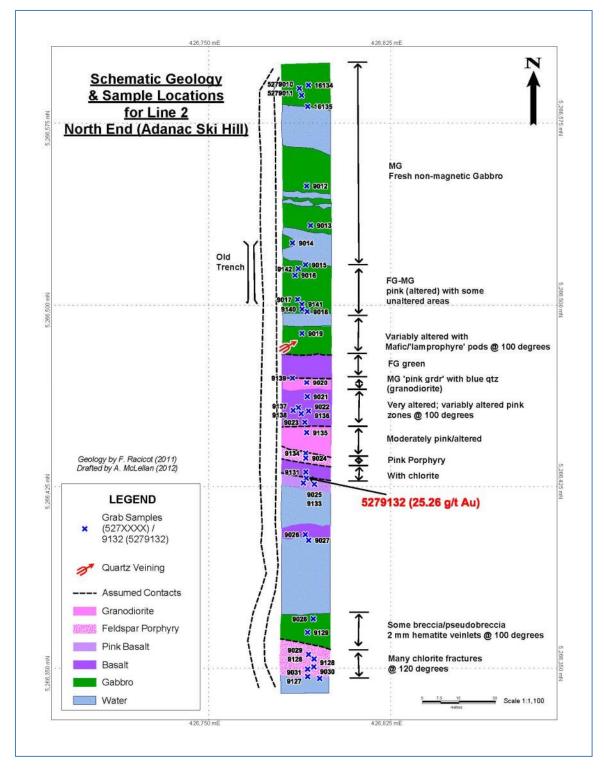


Figure 20-7 Map of the Adanac Trench.



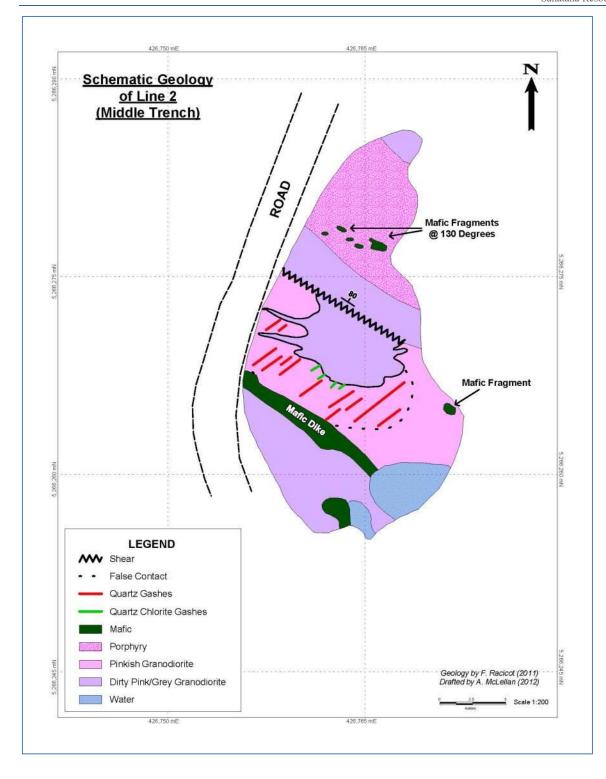


Figure 20-8 Map of the Line 2 Trench.



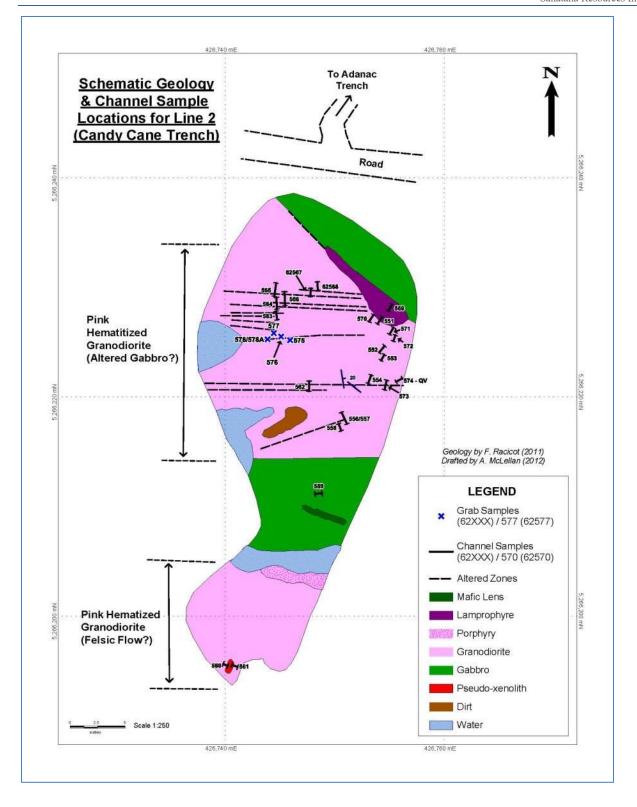


Figure 20-9 Map of the Mini Candy Cane Trench.





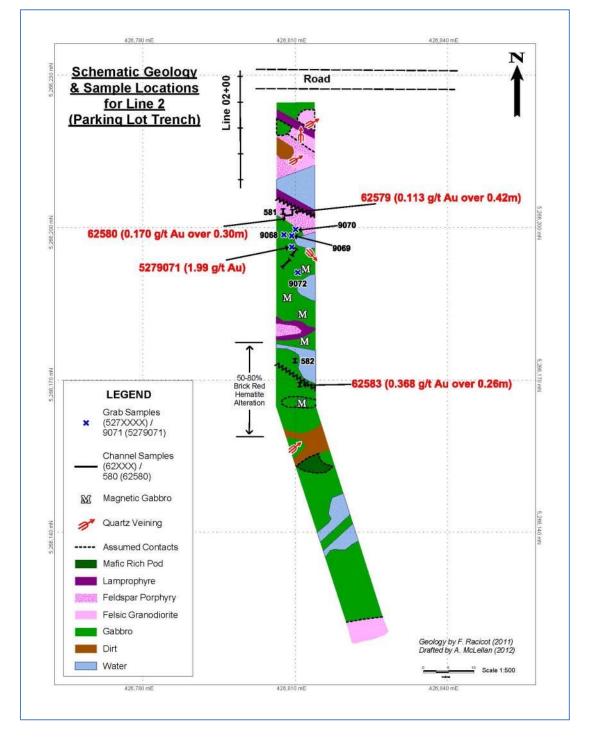


Figure 20-10: Map of the Parking Lot Trench.





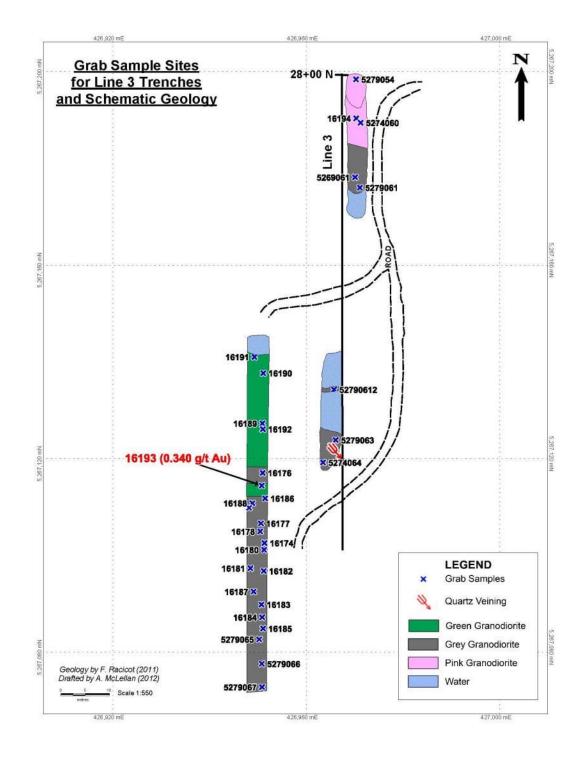


Figure 20-11 Map of the Line 3 Trench.



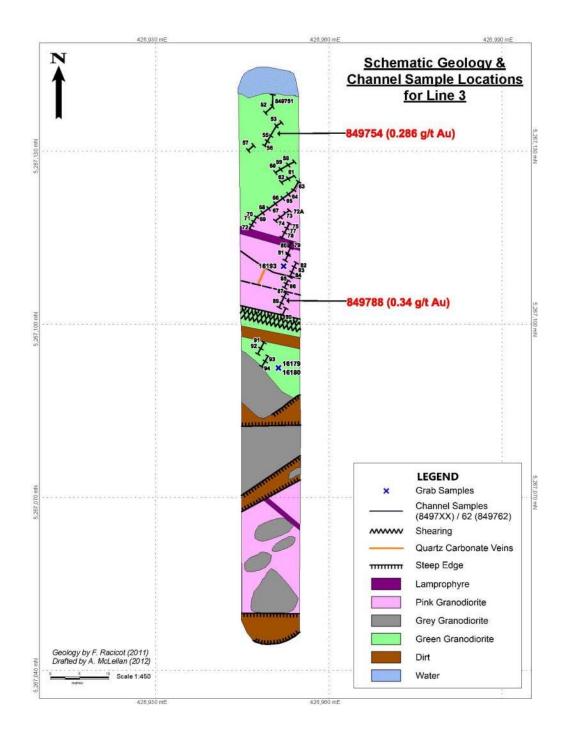


Figure 20-12 Map of the southern part of the Line 3 Trench.





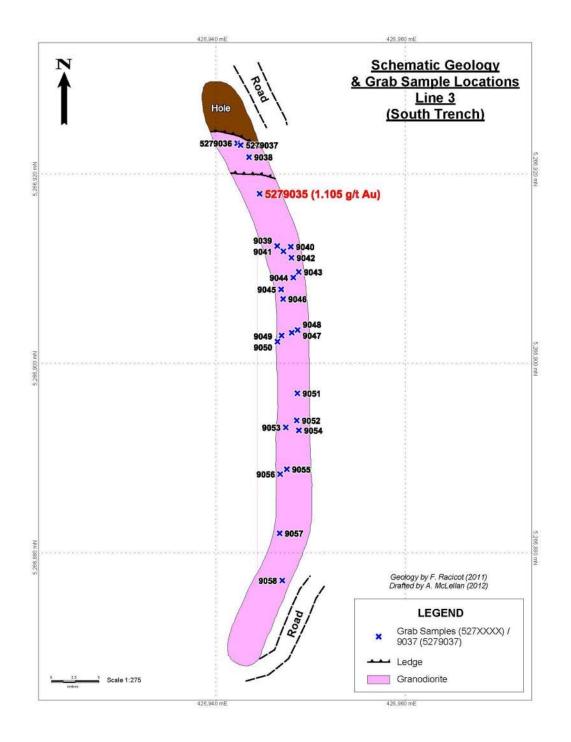


Figure 20-13 Map of the northern part of the Line 3 Trench.



Independent Technical Report and Resource Estimate Watershed Property, Gogama Sanatana Resources Inc.

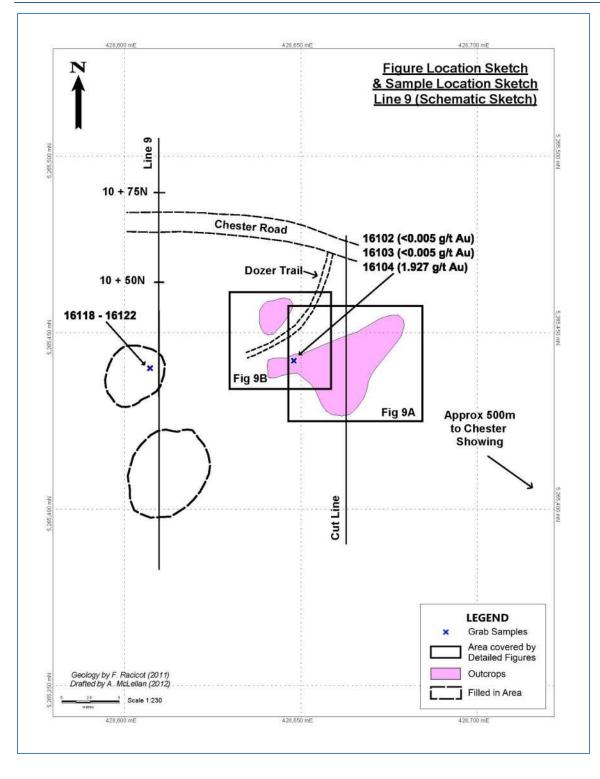


Figure 20-14 Overview Map of the Line 9 Trench.



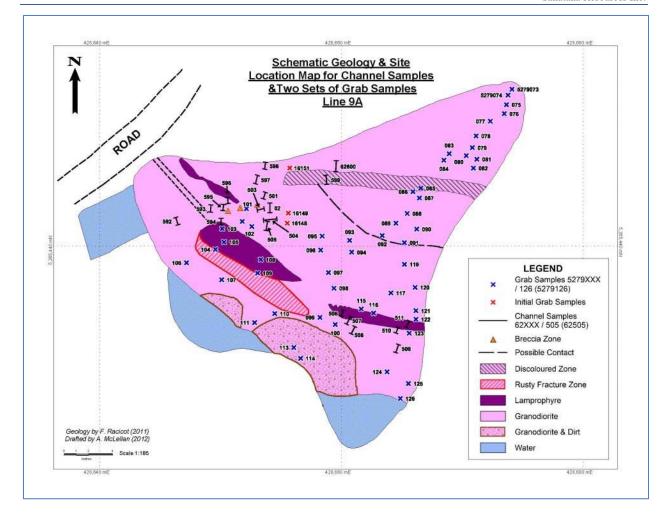


Figure 20-15 Map of Line 9A Trench.





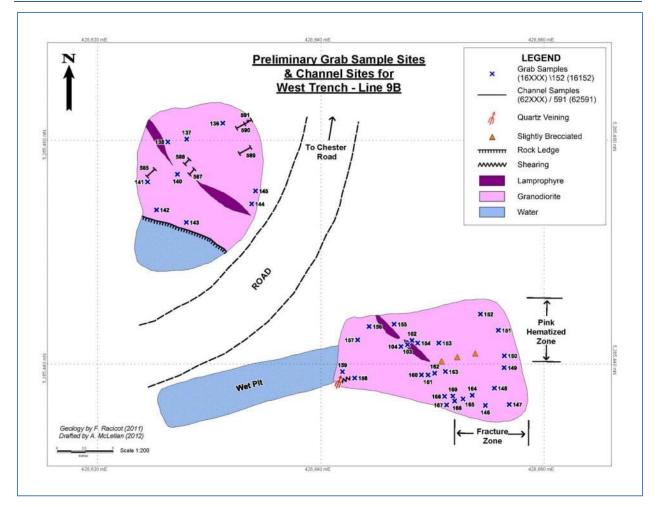


Figure 20-16 Map of Line 9B Trench.



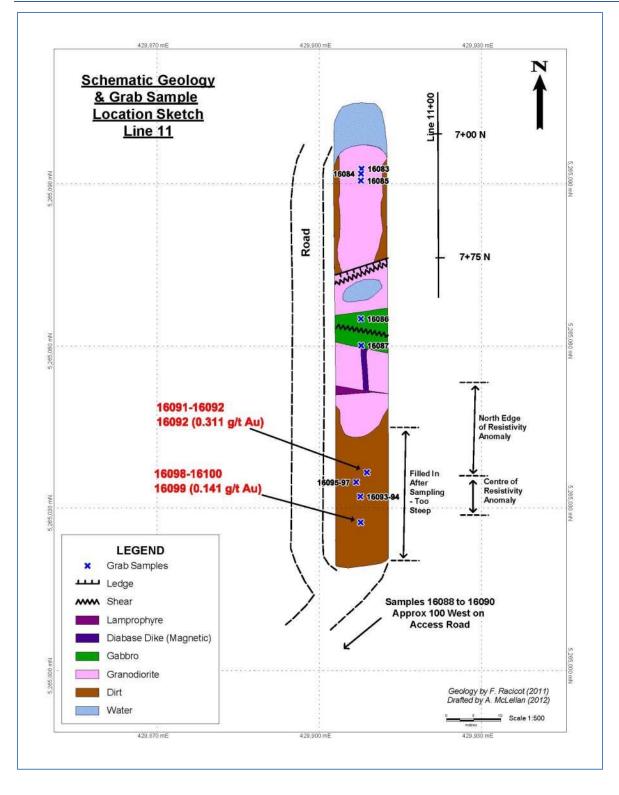


Figure 20-17 Map of Line 11 Trench.



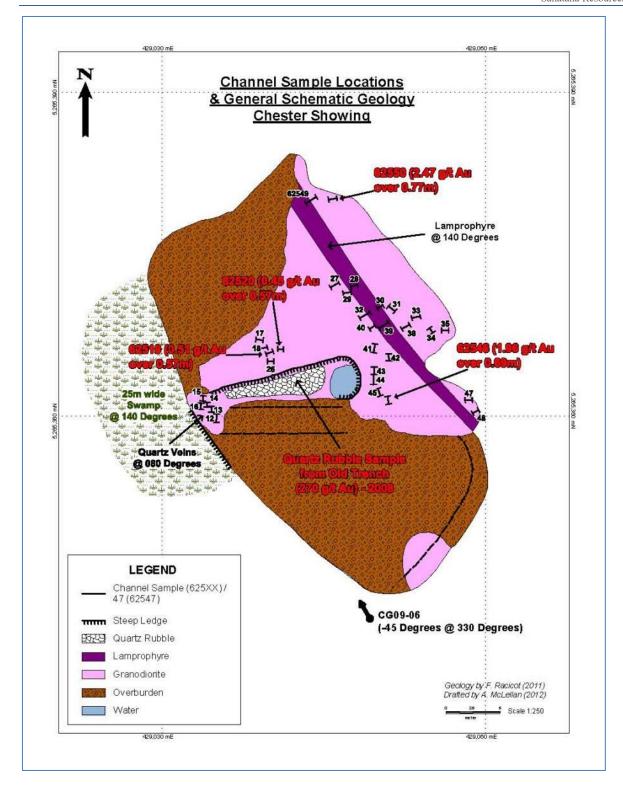


Figure 20-18 Map of Chester Showing.



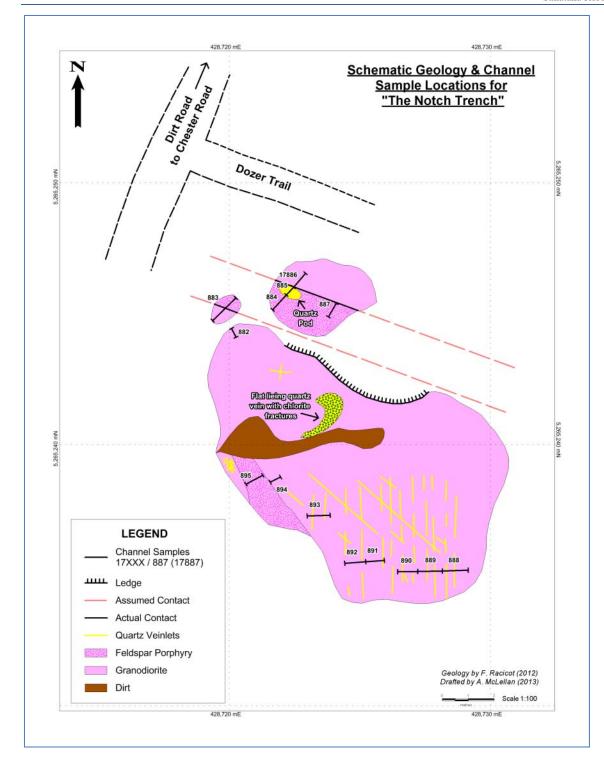


Figure 20-19 Map of the Notch Trench.



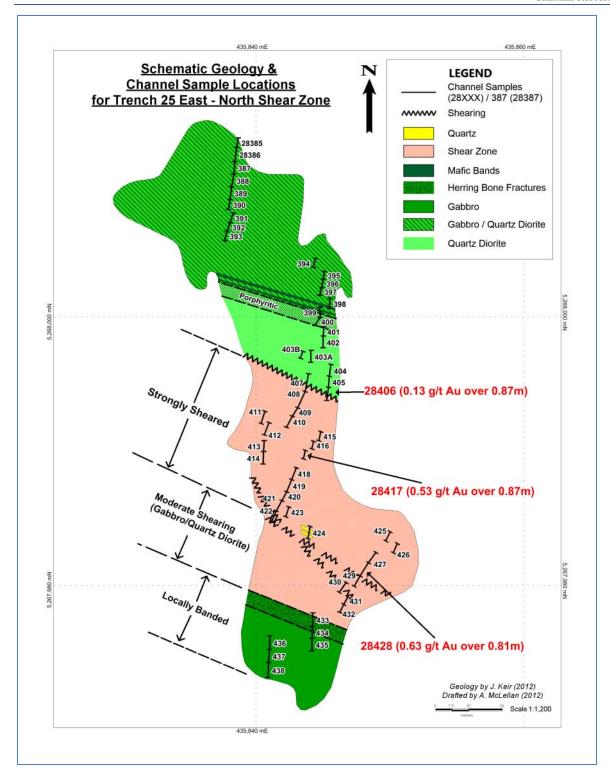


Figure 20-20 Map of the 25 East Trench at the North Shear.



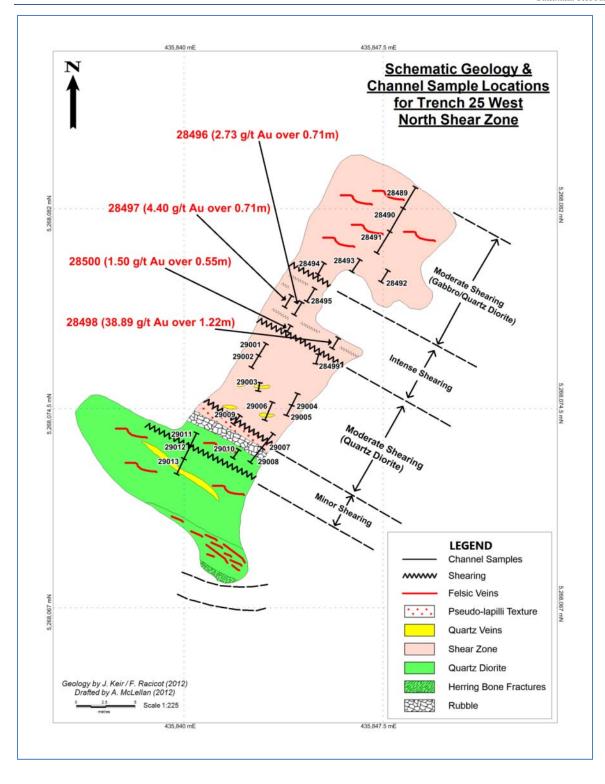


Figure 20-21 Map of the 25 West Trench at the North Shear.





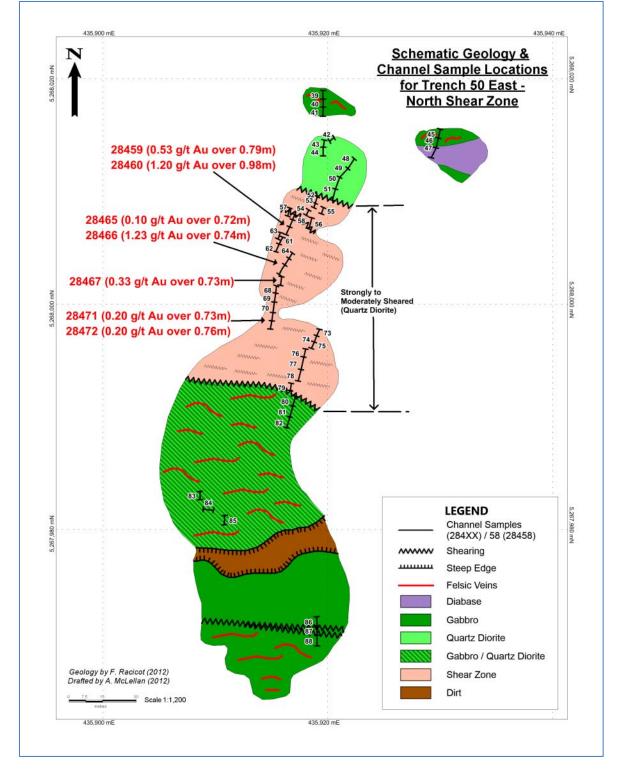


Figure 20-22 Map of the 50 East Trench at the North Shear.



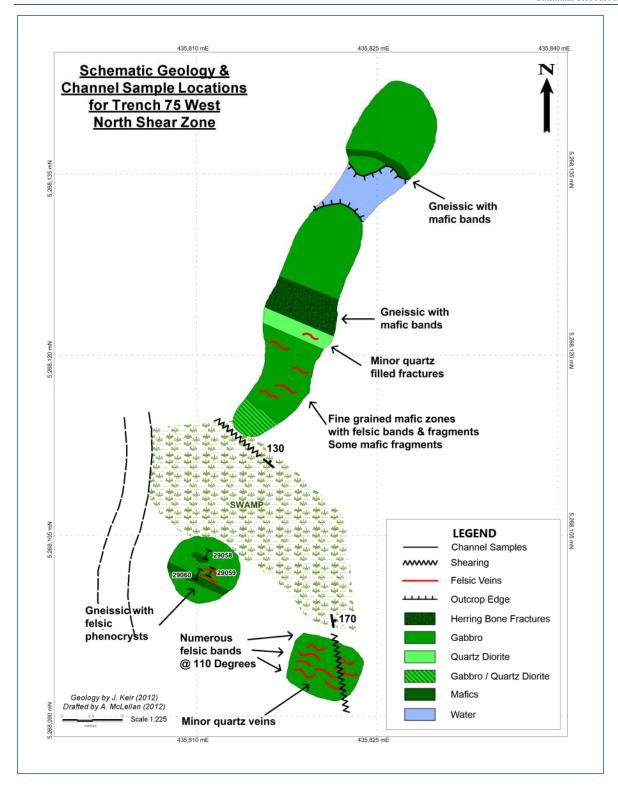


Figure 20-23 Map of the 75 West Trench at the North Shear.



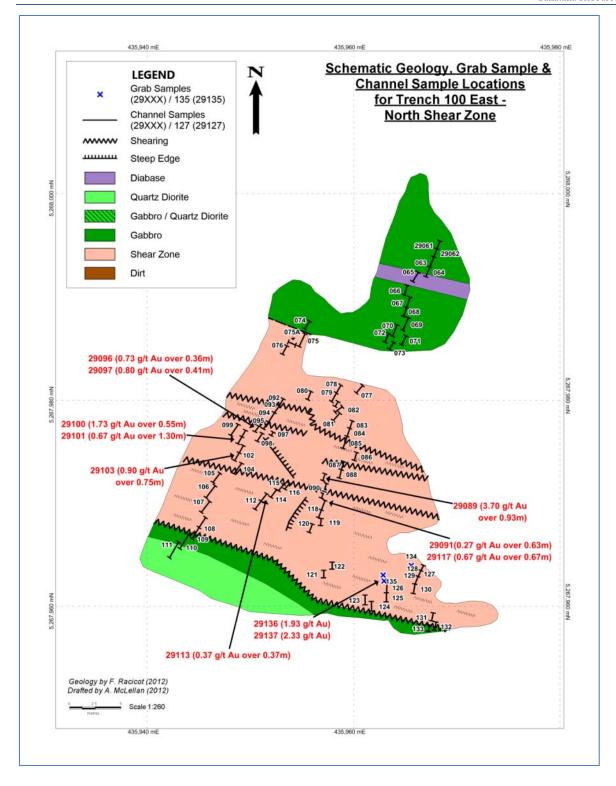


Figure 20-24 Map of the 100 East Trench at the North Shear.



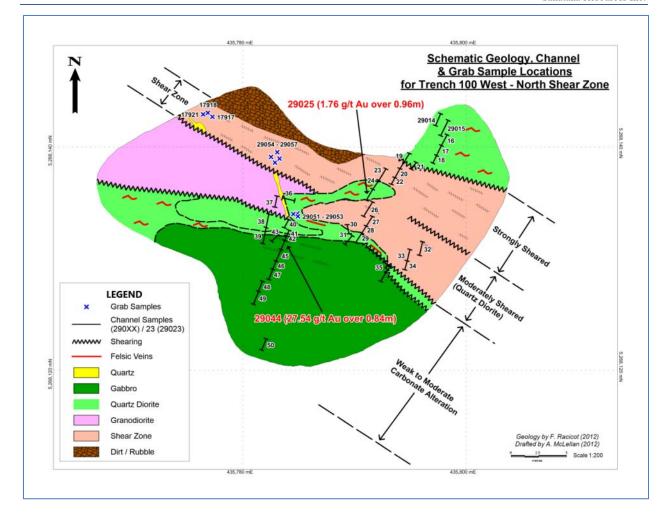
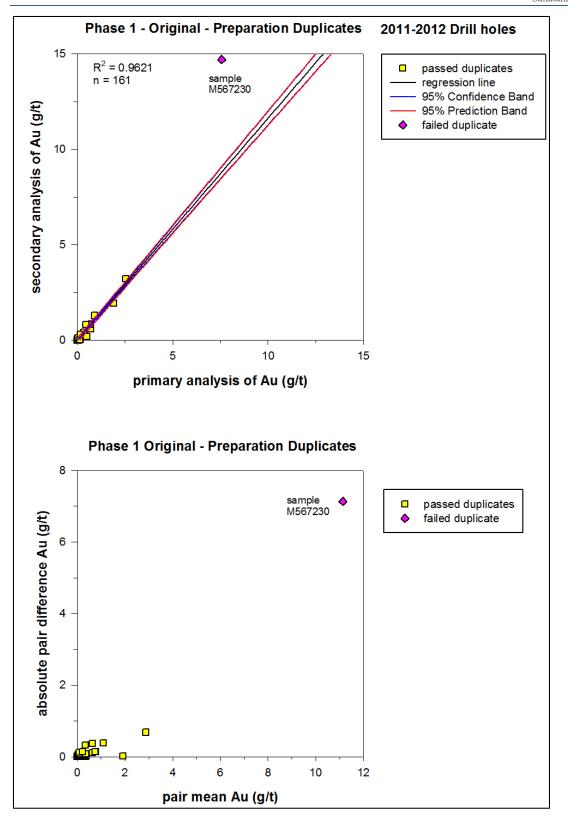


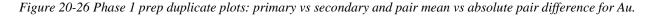
Figure 20-25 Map of the 100 West Trench at the North Shear.



# Appendix 5 – QC plots









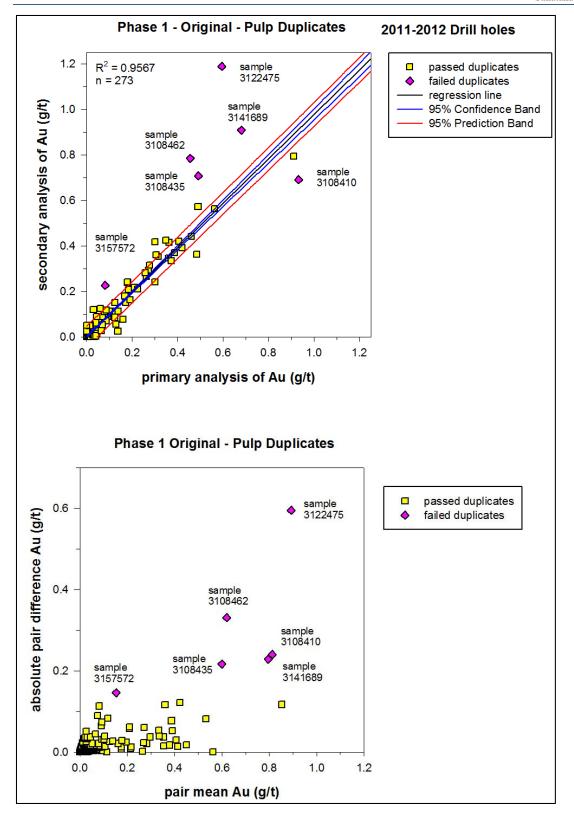


Figure 20-27 Phase 1 pulp duplicate plots: primary vs secondary and pair mean vs absolute pair difference for Au.

Page | 286



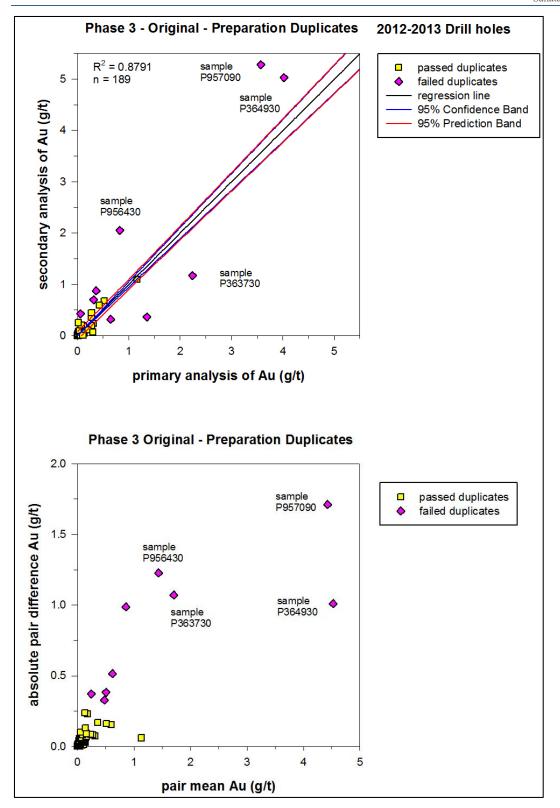


Figure 20-28 Phase 3 prep duplicate plots: primary vs secondary and pair mean vs absolute pair difference for Au.



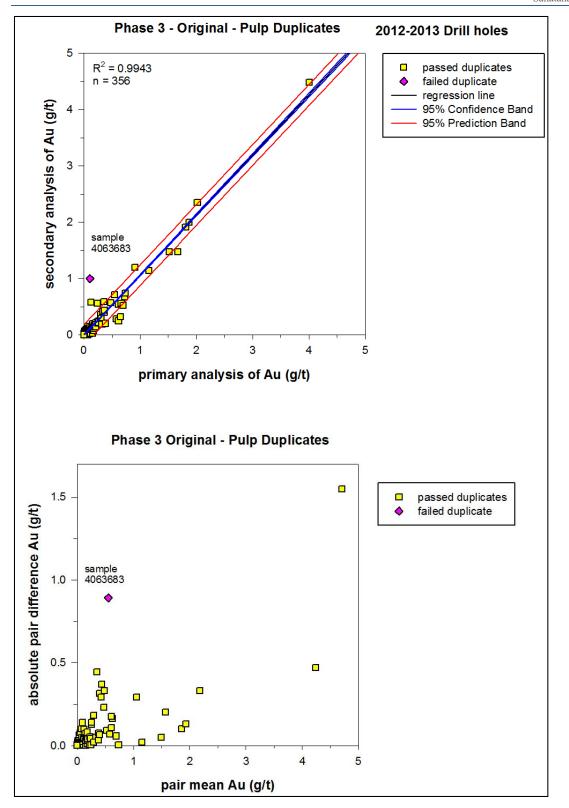


Figure 20-29 Phase 3 pulp duplicate plots: primary vs secondary and pair mean vs absolute pair difference for Au.