



41P11NE2020 2.20622 TYRRELL

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**DIAMOND DRILL LOG**

DRILL HOLE. HC98-1	COMPANY. Orogrande Resources		
PROJECT. Hydro Creek	DRILLED BY. L.Salo and Company		
CLAIM NO. 1146441	TOWNSHIP. Tyrrell		
UTM ZONE. 17	NORTHING. 5275250	EASTING. 496750	
GRID COORDINATES.	NORTHING. 9834	EASTING. 10500	
DEPTH. 176M	AZIMUTH. N. R.	DIP. -90	EL. 9995
DATE STARTED. Sep. 29, 1998	COMPLETED. Oct. 1, 1998		
LOGGED BY. Walter Hanych	CORE SIZE. BQ		
TARGET. Test the immediate area of the intercepts in DDH 2 which assayed 4.24g/t/11.6m, 2.71g/t/17.7m and 3.17g/t/13.5m between the 9820 and 9900 elevations.			

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
0.0	2.50	Casing	
2.50	12.21	Basalt flow	Medium green-gray, with 20% randomly oriented quartz-carbonate veinlets. 2.88-2.94, flow breccia. 5.20, fault gouge at 35° core axis.
12.21	25.87	Basalt tuff	Dark green-black, very massive. Upper contact is sharp at 25°-30° Core axis. 10% randomly oriented quartz carbonate veinlets.
25.87	27.65	Basalt flow	Medium gray-green, bleached. Upper contact defined by fault gouge at 25° core axis.
27.65	32.92	Basalt tuff	Massive, dark green-black. Sharp upper contact at 30° core axis, with quartz fracture filling.
32.92	53.65	Basalt flow	Medium gray-green, very fine grained. Gradational upper contact. 32.92-42.64, 10% qtz-carb veining. 42.64-53.65, quartz carbonate veining increases to 50%, possible

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
53.65	102.00	Diabase	<p>dike effect. Very chaotic arrangement to veining.</p> <p>51.0, fault with slickensides at 3° core axis.</p> <p>Massive, dark gray-purple, weakly magnetic. 3% quartz carbonate and epidote veinlets, generally perpendicular core axis. 1 cm chill margin, lobate but generally 20° core axis.</p> <p>60.64-79.25, pervasive hematization</p> <p>70.17, 2 cm epidote quartz carbonate vein.</p> <p>78.50, fault with gouge at 80° core axis, associated brecciated quartz vein.</p> <p>85.27, 1 cm epidote vein.</p> <p>85.78-86.01, 30% 2-5 mm epidote veins.</p> <p>87.60, 3 cm epidote vein.</p> <p>90.70-92.39, 30% randomly oriented quartz carbonate veinlets.</p> <p>99.15-99.32, fault gouge at 40° core axis.</p> <p>102.00, fault contact at 40° core axis.</p>
102.00	104.80	Felsic tuff	<p>Tyrrell Structural Zone, defined by hanging wall diabase. Unit is light yellow-tan, pervasively sericitized and moderately silicified. Net texture 1-2 mm chlorite veinlets throughout and 3-5 mm randomly oriented gray-white quartz veins.</p> <p>Massive, fine grained.</p> <p>102.00-102.27, 3% fine-coarse grained light yellow anhedral pyrite.</p> <p>102.27-103.00, 5% fine-coarse grained, anhedral-euhedral pyrite.</p> <p>103.00-103.52, brecciated, 30% chlorite mottled with 5% lead-gray pyrite exhibiting flowage type texture, looks hydrothermal.</p> <p>103.18-103.43, fault gouge and ground core with intense silicification. Upper contact is perpendicular to core axis, lower</p>

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
104.80	108.37	Sheared felsic tuff	<p>contact embayed at 25° core axis.  <b>103.52-104.80</b>, weakly silicified with 1% fine-medium grained anhedral-euhedral light yellow pyrite.</p> <p>30% of section is marked by a pronounced planar shear fabric at 45° core axis. Sericitization occurs as contorted laminations 1-2 mm in width, as wisps and irregular patches.</p> <p><b>104.80-105.10</b>, quartz carbonate veining displaying brittle-ductile deformation. Intense silicification with fine grained light yellow pyrite as well as dull gray laminated flow type pyrite. Overall 5% pyrite.</p> <p>Upper contact is defined by a 5 mm quartz carbonate vein at 45° core axis. Lower contact is defined by an embayed silicified section. 20% is chloritized as fine veins and laminations.</p> <p><b>107.48-107.53</b>, milky white quartz vein cut by chlorite veinlets. 3% euhedral pyrite.</p>
108.37	109.13	Brecciated felsic tuff	<p>Light-medium gray, intense silicification, weak sericitization.</p> <p>Closed framework breccia with fine matrix filling pyrite and 3% light yellow disseminated pyrite.</p>
109.13	115.68	Intermediate tuff	<p>Medium gray-green, with 20-30% mottled-contorted chloritization.</p> <p>Weak silicification, 1% fine grained anhedral-euhedral pyrite.</p> <p><b>109.13-109.64</b>, milky white quartz vein, subparallel to core axis. No significant mineralization.</p> <p><b>111.00-111.26</b>, intense silicification with an embayed upper contact perpendicular to core axis and lower contact defined by several 2-3 mm quartz veins at 30° core axis.</p> <p><b>113.57-114.62</b>, mottled with plastic deformation textures and 10% quartz veining.</p>

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
115.68	116.38	Brecciated mafic flow	Angular pale yellow-green fragments, micro quartz veined in chloritic matrix. Trace pyrite. Upper contact is diffuse and lower Contact is sharp at 40° core axis.
116.38	119.50	Intermediate tuff	Medium gray-green, medium grain, massive with trace pyrite.
119.50	120.38	Sheared basalt flow	Mottled and contorted fabric, 30% quartz carbonate veining. Upper and lower contact 40° core axis.
120.38	122.41	Intermediate tuff	Medium gray, coarse grained, massive, unaltered, trace pyrite. Lower contact is fault controlled at 20° core axis.
122.41	131.22	Quartz feldspar porphyry	Remnant 1-2 mm anhedral quartz and feldspar phenocrysts. Pervasive sericitization resulting in pale hue and mottled texture. 122.41-125.75, moderate silicification and sericitization with fine chlorite veinlets. 1% 1-2 mm disseminated anhedral-euhedral pyrite. 123.97-124.12, quartz vein with associated chlorite, unmineralized at 40° core axis. 125.75-127.66, very intense silicification and albitization resulting in beige hue to 70° of core 1-3% fine grain anhedral-euhedral pyrite. 127.66-131.22, moderate silicification and sericitization with 1% fine grained anhedral-euhedral pyrite.
131.22	132.38	Cherty tuff	Dark gray, very fine grained, upper and lower contact extremely embayed perpendicular to core axis. Trace pyrite.
132.38	139.30	Quartz feldspar porphyry	Remnant 1-2 mm quartz feldspar phenocrysts, rhyolite composition. 132.38-133.86, intensely silicified and sericitized, typical pale yellow tan color over 60% of section. Trace-1% pyrite. 133.86-135.50, moderate

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
139.30	144.15	Dacite porphyry	<p>sericitization, very intense</p> <p>silicification-albitization, weakly developed chlorite veinlets, trace-1% pyrite.</p> <p>135.50-138.12, moderate</p> <p>sericitization, intense silicification with etched and embayed fragment edges that are typically 1x2 cm in size.</p> <p>138.00, milky white 5 cm quartz vein at 20° core axis.</p> <p>138.12-138.58, very intense</p> <p>intense silicification-albitization, trace pyrite.</p> <p>138.58-139.30, moderate</p> <p>silicification and sericitization.</p> <p>Quartz feldspar phenocrysts and chlorite increasing to 30%. Medium gray, moderate silicification and sericitization. Typical wispy, mottled and contorted with chaotic orientation suggestive of flow.</p> <p>Chaotically distributed quartz veins in chloritic ground mass. Foliation at 45°-50° core axis. 3% pyrite.</p> <p>141.15 and 141.81 10 cm bands of intense silicification.</p>
144.15	146.24	Rhyolite flow	<p>Intense silicification and sericitization over 60% of section.</p> <p>Fine grained, typical yellow-tan, With 1% pyrite. 5% is randomly Oriented milky white quartz veining.</p> <p>14.00, fault at 45° core axis.</p>
146.24	152.00	Dacite porphyry	<p>Similar to unit described from 139.30-144.15. 30% sericite alteration as wisps and discontinuous chaotically arranged patches.</p> <p>146.24-147.24, 3% pyrite.</p> <p>148.94-152.00, very intense silicification and albitization resulting in smoky-gray-tan hue.</p> <p>20% quartz veining -chloritization, 1% pyrite.</p>
152.00	152.44	Carbonate breccia	50% beige carbonate fragments in silicified chloritic matrix. 3% very fine grained pyrite.

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
152.44	153.38	Dacite flow	Unit is composed of 40% quartz, 40% feldspar and 20 chlorite. Intense silicification throughout, 3% pyrite. 152.44-153.37, intense sericite. 153.37-154.84, sericitization as irregular patches and bands. 154.84-155.38, unaltered but contains 5% pyrite associated with chlorite.
155.38	161.57	Rhyolite porphyry	Massive, gray-brown, weakly silicified and sericitized with 5-7% fine grained anhedral-euhedral pyrite. 158.86-159.34, 20% of section is massive fine-medium grained pyrite as a broken irregular 2 cm flow band subparallel to core axis. Minor euhedral pyrite. 159.95-160.28, chloritic section with 7% flow type pyrite as irregular patches and laminae.
161.57	163.00	Rhyolite flow	Felsic unit with 30% contorted, banded and chaotically oriented sericite and chlorite. 1% pyrite.
163.00	165.69	Deformed rhyolite with argillite	70% is dark fine grained, chlorite-sericite and minor graphite mixed felsic material in a chaotic contorted, brecciated pattern of brittle-ductile deformation. Fine grained laminated and very fine grained disseminated pyrite is associated with the chlorite-argillite laminations. Possible interflow sediment. Fabric is oriented parallel to core axis. 165.54-165.17, quartz feldspar porphyry.
165.69	166.30	Quartz feldspar porphyry	Grey-white, felsic composition with 80% quartz feldspar phenocrysts. Upper contact at 30°, lower contact at 45°. 20% chlorite veinlets but no significant mineralization.
166.30	167.67	Quartz feldspar porphyry-	Mixture of argillite and quartz feldspar porphyry as jigsaw puzzle fragments with 20% argillite

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
167.67	169.89	argillite Argillite	fragments. 3% disseminated pyrite. This unit is similar to the above with the argillite fragments forming 80% of the fragments. 1% disseminated pyrite.
169.89	176.00	Diabase	Typical massive fine -medium grained, with an irregular embayed chill contact.
176.00		E.O.H.	End of hole.

OroGrande Resources Inc.

**HYDRO CREEK PROPERTY**

1998 Drilling Program

DDH No.	From m	To m	Hole Width m	Sample No	1 gr Au/t = 0.029 oz/ton		FA/AA 30gr Au oz/ton	TotAu*m
					Metallics Assaying	Total Au oz/ton		
98-1	102.00	103.46	1.46	278751	0.025	0.025		
98-1	103.46	104.80	1.34	278752	0.005	0.005		
	<b>104.80</b>	105.80	1.00	278753	<b>0.038</b>	<b>0.038</b>		
98-1	<b>105.80</b>	106.80	1.00	278754	0.021	0.022		
98-1	<b>106.80</b>	107.53	0.73	278755	0.015	0.015		
98-1	<b>107.53</b>	108.37	0.84	278756	0.028	0.028		
98-1	<b>108.37</b>	109.13	0.76	278757	0.017	0.017		
98-1	<b>109.13</b>	110.51	1.38	278758	0.011	0.011		
98-1	<b>110.51</b>	111.26	0.75	278759	0.007	0.007		
98-1	<b>111.26</b>	112.26	1.00	278760	0.002	0.002		
98-1	<b>112.26</b>	113.57	1.31	278761	0.010	0.011		
98-1	<b>113.57</b>	114.62	1.05	278762	0.009	0.008		
98-1	<b>114.62</b>	115.68	1.06	278763	<0.002	<0.002		
98-1	<b>115.68</b>	116.38	0.70	278764	<0.002	<0.002		
98-1	<b>116.38</b>	117.38	1.00	278765	<0.002	<0.002		
98-1	117.38	118.38	1.00	278766	0.011	0.011		
98-1	118.38	119.50	1.12	278767	<0.002	<0.002		
98-1	119.50	120.38	0.88	278768	0.015	0.015		
98-1	120.38	121.38	1.00	278769	0.004	0.004		
98-1	121.38	122.41	1.03	278770	<b>0.038</b>	<b>0.038</b>		
98-1	<b>122.41</b>	123.41	1.00	278771	0.003	0.003		
98-1	<b>123.41</b>	124.41	1.00	278772	0.011	0.011		
98-1	<b>124.41</b>	125.75	1.34	278773	0.015	0.015		
98-1	<b>125.75</b>	126.75	1.00	278774	0.025	0.025		
98-1	<b>126.75</b>	127.66	0.91	278775	0.011	0.011		
98-1	<b>127.66</b>	128.66	1.00	278776	0.008	0.008		
98-1	<b>128.66</b>	129.66	1.00	278777	0.003	0.003		
98-1	<b>129.66</b>	130.34	0.68	278778	0.007	0.007		
98-1	<b>130.34</b>	131.22	0.88	278779	0.003	0.003		
98-1	<b>131.22</b>	132.38	1.16	278780	0.008	0.008		
98-1	<b>132.38</b>	133.86	1.48	278781	0.030	0.030		
98-1	<b>133.86</b>	134.86	1.00	278782	0.007	0.007		
98-1	<b>134.86</b>	135.50	0.64	278783	0.004	0.004		
98-1	<b>135.50</b>	136.50	1.00	278784	0.005	0.006		
98-1	<b>136.50</b>	138.00	1.50	278785	0.008	0.008		
98-1	<b>138.00</b>	138.58	0.58	278786	0.012	0.012		
98-1	<b>138.58</b>	139.30	0.72	278787	0.015	0.015		
98-1	<b>139.30</b>	140.30	1.00	278788	<b>0.026</b>	<b>0.026</b>		
98-1	<b>140.30</b>	141.30	1.00	278789	<b>0.027</b>	<b>0.027</b>		
98-1	<b>141.30</b>	142.30	1.00	278790	0.010	0.010		
98-1	<b>142.30</b>	143.20	0.90	278791	0.017	0.017		
98-1	<b>143.20</b>	144.15	0.95	278792	0.007	0.007		
98-1	<b>144.15</b>	145.15	1.00	278793	0.009	0.009		
98-1	<b>145.15</b>	146.24	1.09	278794	0.007	0.008		
98-1	<b>146.24</b>	147.24	1.00	278795	0.019	0.019		
98-1	<b>147.24</b>	148.24	1.00	278796	0.003	0.003		
98-1	<b>148.24</b>	148.94	0.70	278797	0.004	0.004		
98-1	<b>148.94</b>	149.85	0.91	278798	0.011	0.011		
98-1	<b>149.85</b>	150.85	1.00	278799	0.015	0.015		
98-1	<b>150.85</b>	152.00	1.15	278800	0.004	0.004		
98-1	<b>152.00</b>	152.44	0.44	278701	0.019	0.020		

DDH No.	From m	To m	Hole Width m	Sample No	Total Au oz/ton	Au (-) oz/ton	Au oz/ton	TotAu*m
98-1	<b>152.44</b>	153.37	0.93	278702	0.004	0.004		
98-1	<b>153.37</b>	154.84	1.47	278703	0.025	0.025		
98-1	<b>154.84</b>	155.38	0.54	278704	<b>0.065</b>	0.065		0.0351
98-1	<b>155.38</b>	156.38	1.00	278705	<b>0.042</b>	0.042		0.042
98-1	<b>156.38</b>	157.38	1.00	278706	<b>0.051</b>	0.051		0.051
98-1	<b>157.38</b>	158.86	1.48	278707	<b>0.083</b>	0.083		0.12284
	<b>154.84</b>	<b>158.86</b>	<b>4.02</b>		<b>0.062</b>			<b>0.25094</b>
98-1	<b>158.86</b>	159.34	0.48	278708	0.015	0.015		
98-1	<b>159.34</b>	159.95	0.61	278709	0.015	0.015		
98-1	<b>159.95</b>	160.28	0.33	278710	0.022	0.022		
98-1	<b>160.28</b>	161.57	1.29	278711	0.017	0.017		
98-1	<b>161.57</b>	162.30	0.73	278712	0.011	0.011		
98-1	<b>162.30</b>	163.00	0.70	278713	0.003	0.004		
98-1	<b>163.00</b>	163.60	0.60	278714	0.017	0.018		
98-1	<b>163.60</b>	164.54	0.94	278715	<b>0.030</b>	0.030		
98-1	<b>164.54</b>	165.17	0.63	278716	0.002	0.002		
98-1	<b>165.17</b>	165.69	0.52	278717	0.012	0.012		
98-1	<b>165.69</b>	166.27	0.58	278718	0.006	0.006		
98-1	166.27	<b>167.60</b>	1.33	278719	<0.002	<0.002		
98-1	<b>167.60</b>	168.67	1.07	278720	0.004	0.004		
98-1	<b>168.67</b>	169.59	0.92	278721	0.004	0.004		
98-1	<b>169.59</b>	170.89	1.30	278722	<0.002	<0.002		
98-1	170.89	End of Sampling						

NOTES:

1. *italics on "B"*: Tyrrell structural Zone identified on core.
2. *italics on "C"*: +5% sulphides mainly as pyrite (two types) and black chlorite veining
3. Oct 16/98 update: all assaying and geological summaries available



## DIAMOND DRILL LOG

<b>DRILL HOLE.</b> HC98-2	<b>COMPANY.</b> Orogrande Resources		
<b>PROJECT.</b> Hydro Creek	<b>DRILLED BY.</b> L. Salo and company		
<b>CLAIM NO.</b> 1146441	<b>TOWNSHIP.</b> Tyrrell		
<b>UTM ZONE 17</b>	<b>NORTHING.</b> 5275160	<b>EASTING.</b> 496800	
<b>GRID COORDINATES</b>	<b>NORTHING.</b> 9848	<b>EASTING.</b> 10750	
<b>DEPTH.</b> 184M	<b>AZIMUTH.</b> N.A.	<b>DIP.</b> -90	<b>EL.</b> 10007
<b>DATE STARTED.</b> Oct. 2, 1998	<b>COMPLETED.</b> Oct 3, 1998		
<b>LOGGED BY.</b> Walter Hanych	<b>CORE SIZE.</b> BQ		
<b>TARGET.</b> Test the down dip extension of the mineralization Intercepted by DDH 16, which returned an assay of 0.70 g/t/10.9m, between the 9830-9900 elevations.			

<b>FOOTAGE</b>		<b>LITHOLOGY</b>	<b>DESCRIPTION</b>
<b>FROM</b>	<b>TO</b>		
0.0	1.00	Overburden	Casing
1.00	86.00	Diabase	Dark gray-black, fine-medium grained, weakly-moderately magnetic. Typical ophitic texture. Weak pervasive hematization. Trace pyrite. 10% of core contains 1 mm-2 cm epidote-quartz-carbonate veining, usually perpendicular to core axis. 18.50-19.80, fault with minor gouge upper contact 30° core axis, lower contact 60° core axis.
			42.00-42.25, pervasive epidotization 50.92-51.17, fault breccia, 1 mm-2 cm fragments, minor associated quartz veining, no significant mineralization. At 30° core axis.
			52.00-53.98, bleached and fine grained. Quartz feldspar vein parallel to core axis.
			82.34-86.00, 205 randomly oriented quartz carbonate veins
86.71	90.84	Basalt flow	86.00-86.71, 60% of core is broken,

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
			gouge developed and highly fractured as a result of the diabase intrusion.
			Beyond 86.71 basalt exhibits intense Silicification resulting in a patchwork Mottled texture of silica and chlorite.
			86.71-87.77, random quartz veinlets and light gray-tan silicification with 3% very fine grained pyrite.
			87.77-90.38, 50% broken, fractured and gouge core and weak silicification with 1% pyrite.
			90.38-90.84, weak sericitization and silicification, strong planar shear fabric at 45° core axis.
90.84	93.38	Felsic flow	Intense silicification and sericitization with net textured quartz veinlets resulting in shattered, brecciated texture. Sericite is typically patchy, and wispy .3% medium grained pyrite associated with quartz veins and matrix. Upper contact is sharp but embayed and perpendicular core axis.
93.38	93.70	Basalt	Weak sericitization and silicification.
93.70	94.38	Felsic flow	Similar to unit described at 98.84-93.38, but moderately silicified and sericitized and weakly chloritic.
94.38	95.04	Fault breccia	Brecciated section with 1 mm-1 cm fragments, 40% of which are composed of chlorite and sericite. Layered-sheared matrix with 5% pyrite. Upper contact is sharp 45° core axis, lower contact is also sharp at 20° core axis. Looks as though it may be part of a hydrothermal system.
95.04	96.26	Basalt flow	94.74-95.04, very intense silicification with 3% very fine grained pyrite.
			Mottled dark green and chloritic with weak sericitization and silicification.
			1% fine grained pyrite.
			95.38-96.26, moderately sericitized and silicified, 1% medium-coarse grained pyrite.
96.26	96.78	Breccia	Siliceous and chloritic fragments forming an open framework with a pyritic chlorite matrix. Chaotic distribution of fragments. 3% pyrite.

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
96.78	107.03	Basalt flow	<p>Lower contact sharp at 35° core axis.</p> <p>96.78-97.32, light gray-green, very intense silicification with 3% pyrite veinlets.</p> <p>97.32-100.42, moderately sericitized and intensely silicified. Broken and shattered sericitic and quartz veined felsic fragments. 80% of this section is broken core. 3% medium-coarse grained pyrite.</p> <p>100.42-103.65, Shattered with net texture quartz veining. Chloritic with weak sericitization and silicification. 1% disseminated pyrite.</p> <p>103.65-104.00, intensely sheared and 25% brecciated quartz feldspar veining. Shear fabric at 45° core axis.</p> <p>104.00-105.07, relatively unaltered section with weak sericitization.</p> <p>105.07-107.03, sheared with 50% brecciated quartz feldspar veining, weak sericitization. Breccia fragments are 2 mm-2 cm. 3% disseminated pyrite. Foliation at 30° core axis.</p>
107.03	114.41	Felsic flow	<p>107.03-108.11, massive quartz sericite with a 10 cm brecciated upper contact. Moderately silicified with 10% random quartz veining. 1% very fine grained anhedral pyrite.</p> <p>108.11-108.78, sheared with a contorted twisted fabric and fine flow laminations with associated sericite and 3-5% very fine grained anhedral pyrite.</p> <p>108.78-109.10, breccia of quartz vein and felsic fragments, with 7% very fine grained matrix pyrite.</p> <p>109.10-111.23, light gray-beige, moderately sericitized and silicified. 10% random quartz veining and 3% very fine grained pyrite.</p> <p>111.23-114.41, 40% brecciated quartz feldspar vein material and felsic fragments, 5 mm-3 cm size, resulting in a jigsaw puzzle texture. Intense silicification and moderate</p>

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
114.41	115.31	Felsic porphyry	sericitization. Trace-1% pyrite. 113.30, fault at 45° core axis. Light gray, massive with 2-3 mm quartz phenocrysts in a quartz sericite matrix. Trace pyrite.
115.31	116.13	Fault breccia	80% quartz vein fragments in a chloritic anastomosing flow textured matrix. Upper contact is sharp at 25° core axis, lower contact fracture controlled at 40° core axis. 1% pyrite associated with chlorite.
116.13	122.56	Dacite porphyry	116.13-117.35, light gray-green, medium grained with obscure quartz phenocrysts. 10% chlorite as fine fracture filling. 30% randomly oriented and contorted quartz feldspar veins. 1% very fine grained light gray pyrite as clusters and irregular masses. 117.35-122.56, massive and unaltered with 30% anhedral quartz phenocrysts. 5-10%, 2-3 mm randomly oriented quartz veins. Trace pyrite.
122.56	125.50	Rhyolite porphyry	Light gray-beige, 60% quartz phenocrysts in a fine grained quartz sericite matrix. Gradational upper contact. 123.02-123.41, intense silicification and associated quartz veining. No significant mineralization. 123.41-124.62, 60% beige quartz veining, parallel to core axis with brecciated jigsaw puzzle fragments. Trace pyrite. 124.62-125.85, 3% coarse grained euhedral and anhedral pyrite.
125.50	126.32	Quartz vein breccia	Brecciated quartz vein with chlorite infilling. 3-5% pyrite associated with chlorite. 126.25, 2 cm of fault gouge at 45° core axis.
126.32	132.23	Rhyolite	Light gray-beige, intense silicification and weak sericitization. 126.52-126.88, very intense silicification. 5% fine-medium grained anhedral-euhedral pyrite.

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
			126.88-127.25, 7% very fine grained pyrite.
			127.25-127.90, 60% quartz feldspar veining with trace pyrite associated with vein material and 3% pyrite with ground mass.
			127.90-132.23, 80% of section is intense silicification and quartz veining. Moderate sericitization. 1% disseminated pyrite.
			131.65-131.88, fault gouge, upper contact at 30° core axis, lower contact at 45° core axis.
132.23	139.79	Andesite flow	Medium gray-green, medium grained, massive and generally unaltered. 132.16-134.15, very intense silicification and albitization with associated quartz veining. Quartz veins are typically milky-white, 60°-perpendicular to core axis with 3% fine grained anhedral-euhedral pyrite. Veining appears to be later than the silicification. Overall 1% pyrite. Upper contact is gradational, lower contact sharp at 40° core axis.
139.79	140.07	Rhyolite flow	Massive, gray-beige, medium grained. Lower contact is sharp, perpendicular To core axis. Minor quartz veinlets, 1% euhedral pyrite.
140.07	140.53	Andesitic tuff	Light green-Grey, massive with trace pyrite.
140.53	141.81	Andesite flow	Grey-green, medium grained, massive, 3% disseminated pyrite. Lower contact is sharp, perpendicular to core axis and defined by a 2 cm flow breccia band.
414.81	143.05	Rhyolite porphyry flow	Purple-gray-smoky, 1-2 mm feldspar phenocrysts in fine grained matrix. 40% randomly oriented quartz veinlets and 3% anhedral-euhedral pyrite. Lower contact is a fault at 40° core Axis.
143.05	143.59	Andesitic tuff	Pale gray-green, massive, 3% anhedral pyrite. Lower contact sharp at 30° core axis.
143.59	143.66	Rhyolite flow	Beige, massive and siliceous with 5%

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
143.66	143.89	Andesite flow	disseminated pyrite. Grey-green, massive, medium grained, brecciated upper contact at 30° core axis, lower contact sharp but embayed and perpendicular to core axis, 1% pyrite.
143.89	144.30	Felsic tuff	Beige to light gray, massive with 3% fine grained pyrite. Lower contact is sharp at 60° core axis.
144.30	144.58	Intermediate tuff-lapilli tuff	Medium gray, massive with mafic and felsic lapilli with a greater proportion of the former. 1% disseminated pyrite.
144.58	145.49	Felsic tuff	Beige to light gray, massive, siliceous, 3-5% pyrite concentrated in the upper portion of unit to 145.29. Lower contact is sharp at 50° core axis.
145.49	146.31	Rhyolite porphyry	Smokey-gray with 30% 1-3 mm feldspar phenocrysts and 40% randomly oriented quartz veinlets. 3% anhedral-euhedral pyrite. Lower contact is fault controlled with gouge at 30°-40° core axis.
146.31	148.45	Intermediate tuff	Light gray, massive with trace-1% pyrite. Gradational lower contact.
148.45	149.03	Felsic tuff lapilli tuff	Light gray, massive with 30-40% felsic fragments in a sericitic ground mass. 5% disseminated pyrite. Lower contact is fault controlled at 40° core axis.
149.03	149.23	Rhyolite porphyry	Same as unit from 145.49-146.31.
149.23	149.51	Felsic tuff	Medium gray, fine grained, siliceous, 20-30% very fine grained pyrite.
149.51	151.84	Felsic lapilli stone pyroclastic breccia	Color varies from light green to light 30% angular and round pebble-cobble size fragments, ranging in composition from lithic to quartz sericite. Minor pyrite fragments. Lapilli ground mass of angular quartz With interstitial sericite. 5% disseminated pyrite. 149.77-149.90, brecciated quartz jasper vein, recemented with quartz. 150.65, purple-mauve quartz vein with 3% pyrite, perpendicular to core axis.
151.84	157.08	Granite	Light pink to orange, 60% Kspar, 20%

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
		porphyry dike	plagioclase, 20% quartz, trace pyrite. 30% of section has intense sericitization, faulting and gouge development. Most intense gouge at 152.90-153.38 at 30° core axis.
157.08	158.28	Felsic lapilli tuff-breccia-stone	Light gray-green, 30% angular quartz and lithic breccia fragments in a lapilli matrix of quartz fragments with interstitial sericite. Trace-1% pyrite.
158.28	159.00	Felsic lapilli stone	Cream-white-green, Tuffaceous ground mass of quartz feldspar sericite and angular lapilli of felsic material, fuchsite and jasper. 3% disseminated pyrite. 154.46-158.64, fault breccia, quartz vein ,chloritic and tuffaceous fragments. 3-5% pyrite. Upper contact 5° core axis, lower contact 35° core axis.
159.00	168.35	Felsic lapilli tuff	Light green with 30% angular and round pebble size pyroclastics of quartz and quartz-sericite in a clast supported ground mass of 1-3 mm angular quartz pyroclastics.
168.35	170.50	Komatiite flow	Altered komatiite flow. Pale yellow-green, silicified. Remnant spinifex as 2-3 mm crystals. 168.35-168.66, 7% disseminated pyrite within green carbonate material. Upper contact, sharp at 30° core axis.
170.58	171.28	Felsic pyroclastic flow	Rhyolite flow with interbeded felsic tuffaceous material. Light-medium gray, Fragment supported angular to round quartz pyroclasts in sericitic ground mass. 1% pyrite.
171.28	172.44	Felsic lapilli stone	Light green-gray, angular to round quartz, felsic and lithic fragments in a quartz fragmental ground mass with interstitial sericite. 1% disseminated pyrite.
172.44	173.20	Felsic pyroclastic flow	Interbeded rhyolite flow and felsic tuffaceous material. 10% random quartz feldspar veining. 1% pyrite.
173.20	173.71	Felsic tuff chloritized	Light pale green with 30% chloritized felsic tuff and 10% fuchsite. Sericitic matrix with 1 mm quartz pyroclasts.

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
173.71	173.94	Rhyolite flow	3% anhedral pyrite. Sharp upper and lower contacts at 40° and 30° respectively.
173.94	174.53	Felsic lapilli tuff	Light gray, fine grained, siliceous, 1% disseminated pyrite.
174.53	177.00	Felsic lapilli stone	Light green-gray, 1-3 mm angular quartz pyroclasts within a sericitic matrix. 1% pyrite.
177.00	180.27	Felsic tuff	Light green-grey, 2-3 mm quartz and lithic fragments within a sericitic matrix. 1% anhedral-euhedral pyrite. Light green-gray, tuffaceous. Upper contact defined by a 5 mm sericite band at 45° core axis. Gradational lower contact.
180.27	182.53	Felsic tuff-breccia-stone	Felsic, quartz and lithic fragments, angular to round 3 mm-3 cm in size. Felsic fragments are composed of quartz and sericite and are weakly pyritic. Minor jasper fragments. 3% disseminated pyrite.
182.53	184.00	Felsic tuff	Pale gray-green, sericitic ground mass with minor lapilli pyroclasts.
184.00		E.O.H.	

OroGrande Resources Inc.

**HYDRO CREEK PROPERTY**

1998 Drilling Program

DDH No.	From m	To m	Hole Width m	Sample No	Metallics Assaying		FA/AA 30gr Au oz/ton	TotAu*m
					Total Au oz/ton	Au (-) oz/ton		
98-2	86.71	87.77	1.06	278723	0.026	0.026		
98-2	87.77	89.00	1.23	278724	0.016	0.016		
98-2	89.00	90.38	1.38	278725	0.024	0.024		
98-2	90.38	90.84	0.46	278726	0.005	0.005		
98-2	90.84	91.84	1.00	278727	0.012	0.012		
98-2	91.84	92.84	1.00	278728	0.008	0.008		
98-2	92.84	93.70	0.86	278729	0.013	0.013		
98-2	93.70	94.38	0.68	278730	0.004	0.004		
98-2	94.38	95.04	0.66	278731	0.018	0.018		
98-2	95.04	95.83	0.79	278732	0.006	0.006		
98-2	95.83	96.78	0.95	278733	0.008	0.008		
98-2	96.78	97.32	<b>0.54</b>	278734	<b>0.076</b>	<b>0.076</b>		
98-2	97.32	98.32	1.00	278735	0.017	0.018		
98-2	98.32	99.32	1.00	278736	0.017	0.017		
98-2	99.32	100.42	1.10	278737	0.024	0.024		
98-2	100.42	101.42	1.00	278738	<0.002	<0.002		
98-2	101.42	102.42	1.00	278739	0.002	0.002		
98-2	102.42	103.65	1.23	278740	0.012	0.012		
98-2	103.65	104.00	0.35	278741	0.018	0.018		
98-2	104.00	105.07	1.07	278742	0.003	0.003		
98-2	<b>105.07</b>	106.00	0.93	278743	0.005	0.005		
98-2	<b>106.00</b>	107.03	1.03	278744	0.006	0.006		
98-2	<b>107.03</b>	108.11	1.08	278745	0.004	0.004		
98-2	<b>108.11</b>	<b>108.78</b>	0.67	278746	0.009	0.009		
98-2	<b>108.78</b>	<b>109.27</b>	0.49	278747	0.027	0.025		
98-2	<b>109.27</b>	<b>110.27</b>	1.00	278748	<0.002	<0.002		
98-2	<b>110.27</b>	<b>111.25</b>	0.98	278749	<0.002	<0.002		
98-2	<b>111.25</b>	<b>112.23</b>	0.98	278750	0.006	0.006		
98-2	<b>112.23</b>	<b>113.23</b>	1.00	278901	<0.002	<0.002		
98-2	<b>113.23</b>	<b>114.41</b>	1.18	278902	0.006	0.006		
98-2	<b>114.41</b>	<b>115.31</b>	0.90	278903	<0.002	<0.002		
98-2	<b>115.31</b>	<b>116.13</b>	0.82	278904	<0.002	<0.002		
98-2	<b>116.13</b>	<b>117.25</b>	1.12	278905	<0.002	<0.002		
98-2	<b>117.25</b>	<b>118.25</b>	1.00	278906	<0.002	<0.002		
98-2	<b>118.25</b>	<b>119.25</b>	1.00	278907	<0.002	<0.002		
98-2	<b>119.25</b>	<b>120.25</b>	1.00	278908	<0.002	<0.002		
98-2	<b>120.25</b>	<b>121.25</b>	1.00	278909	<0.002	<0.002		
98-2	<b>121.25</b>	<b>122.56</b>	1.31	278910	<0.002	<0.002		
98-2	<b>122.56</b>	<b>123.41</b>	0.85	278911	0.026	0.026		
98-2	<b>123.41</b>	<b>124.62</b>	1.21	278912	0.008	0.008		
98-2	<b>124.62</b>	<b>125.85</b>	1.23	278913	0.002	0.002		
98-2	<b>125.85</b>	<b>126.32</b>	0.47	278914	0.007	0.007		
98-2	<b>126.32</b>	<b>127.25</b>	0.93	278915	0.014	0.014		
98-2	<b>127.25</b>	<b>128.25</b>	1.00	278916	0.010	0.010		
98-2	<b>128.25</b>	<b>129.25</b>	1.00	278917	0.006	0.006		
98-2	<b>129.25</b>	<b>130.05</b>	0.80	278918	0.009	0.009		
98-2	<b>130.05</b>	<b>131.23</b>	1.18	278919	0.013	0.013		
98-2	<b>131.23</b>	<b>132.23</b>	1.00	278920	0.006	0.006		
98-2	132.23	133.23	1.00	278921	0.014	0.014		
98-2	133.23	134.15	0.92	278922	0.011	0.011		
98-2	134.15	135.15	1.00	278923	0.003	0.003		
98-2	135.15	136.15	1.00	278924	0.006	0.006		
98-2	136.15	137.15	1.00	278925	0.008	0.008		

DDH No.	From m	To m	Hole Width m	Sample No	Total Au oz/ton	Au (-) oz/ton	Au oz/ton	TotAu*m
98-2	137.15	138.15	1.00	278926	0.002	0.002		
98-2	138.15	139.79	1.64	278927	0.003	0.003		
98-2	139.79	140.53	0.74	278928	0.007	0.007		
98-2	140.53	141.81	1.28	278929	0.012	0.012		
98-2	141.81	143.05	1.24	278930	0.011	0.011		
98-2	143.05	144.58	1.53	278931	0.012	0.012		
98-2	144.58	145.49	0.91	278932	0.011	0.011		
98-2	145.49	146.31	0.82	278933	0.012	0.012		
98-2	146.31	147.31	1.00	278934	0.008	0.008		
98-2	147.31	148.45	1.14	278935	0.010	0.010		
98-2	148.45	149.03	0.58	278936	0.013	0.013		
98-2	149.03	149.51	0.48	278937	0.013	0.013		
98-2	149.51	150.51	1.00	278938	0.007	0.007		
98-2	150.51	151.84	1.33	278939	0.005	0.005		
98-2	151.84	153.44	1.60	278940	0.003	0.003		
98-2	153.44	154.44	1.00	278941	0.006	0.006		
98-2	154.44	155.44	1.00	278942	0.007	0.007		
98-2	155.44	156.44	1.00	278943	0.003	0.003		
98-2	156.44	157.08	0.64	278944	<0.002	<0.002		
98-2	157.08	157.28	0.20	278945	0.006	0.006		
98-2	<b>157.28</b>	159.00	1.72	278946	0.006	0.006		
98-2	159.00	160.00	1.00	278947	0.003	0.003		
98-2	160.00	161.00	1.00	278948	<0.002	<0.002		
98-2	161.00	162.00	1.00	278949	0.003	0.003		
98-2	162.00	163.00	1.00	278950	0.005	0.005		
98-2	163.00	164.00	1.00	278951	0.010	0.009		
98-2	164.00	165.00	1.00	278952	0.005	0.005		
98-2	165.00	166.00	1.00	278953	0.007	0.007		
98-2	166.00	167.00	1.00	278954	0.003	0.003		
98-2	167.00	168.35	1.35	278955	0.009	0.009		
98-2	168.35	169.14	0.79	278956	<b>0.030</b>	<b>0.030</b>		
98-2	169.14	170.50	1.36	278957	<b>0.042</b>	<b>0.042</b>		
98-2	170.50	171.28	0.78	278958	0.013	0.013		
98-2	171.28	172.44	1.16	278959	0.003	0.003		
98-2	172.44	173.20	0.76	278960	0.006	0.006		
98-2	173.20	173.71	0.51	278961	0.007	0.007		
98-2	173.71	174.53	0.82	278962	0.008	0.008		
98-2	174.53	175.53	1.00	278963	0.006	0.006		
98-2	175.53	177.00	1.47	278964	0.006	0.006		
98-2	177.00	178.00	1.00	278965	0.005	0.005		
98-2	178.00	179.00	1.00	278966	0.006	0.006		
98-2	179.00	180.27	1.27	278967	0.008	0.008		
98-2	180.27	181.00	0.73	278968	0.019	0.019		
98-2	181.00	182.00	1.00	278969	0.015	0.015		
98-2	182.00	183.00	1.00	278970	0.003	0.003		
98-2	183.00	183.66	0.66	278971	<b>0.026</b>	<b>0.026</b>		
98-2	183.66	End of Sampling						

NOTES:

1. *italics on "B"*: Tyrrell structural Zone identified on core.
2. *italics on "C"*: +5% sulphides mainly as pyrite (two types) and black chlorite veining
3. Oct 16/98 update: all assaying and geological summaries available



41P11NE2020 2.20622 TYRRELL

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030

## DIAMOND DRILL LOG

DRILL HOLE. HC98-3	COMPANY. Orogrande Resources		
PROJECT. Hydro Creek	DRILLED BY. L. Salo and company		
CLAIM NO. 1146441	TOWNSHIP Tyrrell		
UTM ZONE 17	NORTHING. 5275240	EASTING. 496750	
GRID COORDINATES	NORTHING. 9940	EASTING. 10700	
DEPTH. 191M	AZIMUTH. 205°	DIP -60	EL. 9995
DATE STARTED. OCT. 4, 1998	COMPLETED. OCT. 6, 1998		
LOGGED BY. Walter Hanych	CORE. SIZE BQ		
TARGET. Test the Tyrrell Structure along its down dip projection for high angle mineralized structures.			

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
0.0	15.00	Overburden	Casing
15.00	15.25	Rhyolite flow	Beige-gray, very fine grained intensely quartz veined with 1-2 mm randomly oriented veinlets. 1% disseminated fine grained pyrite.
15.25	16.66	Brecciated rhyolite flow	Similar to above unit except as noted, 15.25-15.50, closed framework breccia 15.50-16.27, open framework breccia with sericitic-chloritic matrix, 30% angular felsic fragments. 3% disseminated pyrite associated with chloritic portions of matrix. 16.27-16.66, closed framework breccia with 1% disseminated pyrite. Lower contact is fault controlled at 50° core axis.
16.66	20.12	Andesite flow	Light green-gray, intense brittle- ductile deformation of a mafic- intermediate volcanic. Bleached, strongly sheared at 60° core axis. 50% of section is volcanic component, 50% brecciated quartz vein material.

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
20.12	20.74	Interbedded basalt-argillite	Weak silicification, moderate sericitization. 3% coarse grained pyrite. Medium green with alternating black contorted bands of interflow argillite. 40% fragmented quartz vein material. Foliation at 40° core axis. Volcanic portion is bleached with moderate sericitization. 3% fine grained pyrite associated with argillite. Sharp upper and lower contacts.
20.74	22.10	Basalt flow	Bleached and brecciated volcanic and carbonate fragments with trace fuchsite. Brittle ductile deformation, 20% brecciated quartz vein material, moderate silicification. Fine laminated pyrite associated with chlorite. Overall 1% disseminated pyrite.
22.10	22.43	Argillite	Brecciated quartz vein material in black, chloritic, argillite matrix. 10% massive fine grained pyrite and 1% coarse grained pyrite. Section exhibits brittle ductile deformation.
22.43	23.00	Basalt flow	Similar to section from 20.74-22.10.
23.00	23.61	Fault breccia	Brecciated quartz vein material, fragment supported, intense silicification, moderate sericitization. Sharp upper and lower contacts at 65° core axis. 1-3% very fine grained pyrite.
23.61	25.14	Basalt flow	Medium green, fine grained, weak sericitization and silicification. 20% brecciated quartz vein material and randomly oriented chaotic veining. Sharp lower contact. 1% disseminated coarse grained pyrite.
25.14	26.71	Interbedded felsic volcanic-argillite	Intermixed package of felsic volcanic material, brecciated quartz veining and chloritic argillite. 30% of section is argillite that contains up to 10% pyrite. Down hole from this point rocks become relatively unaltered with no brittle ductile deformation.
26.71	31.41	Rhyolite flow	Light gray, fine grained, massive, moderate sericitization. 3-5%

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
31.41	33.17	Felsic tuff-breccia	disseminated pyrite. Lower contact is fault controlled with 2 cm of gouge at 50° core axis. 27.00-28.50, 50% broken core.
33.17	35.00	Felsic tuff	Mixture of brecciated purple-gray quartz vein and felsic tuff material. Breccia fragments range in size from Pebble-cobble and are composed of quartz sericite. 20% are pyritic containing 10% pyrite. Lower contact is sharp at 20° core axis.
35.00	36.15	Rhyolite flow	Grey with pale yellow sections as a result of sericitization forming dendritic patches. 3% fuchsite and chlorite clots, no significant mineralization. Lower contact is fault controlled at 20° core axis.
36.15	37.47	Felsic tuff	Light gray with pale yellow sections. Porphyritic with gray purple silicified sections exhibiting intense silicification. Moderate sericitization. 5% disseminated and clotty pyrite. Lower contact is fault controlled with Minor gouge at 30° core axis.
37.47	38.64	Rhyolite flow	Light gray, massive, weakly sericitized. 1-3% disseminated pyrite.
38.64	42.89	Felsic lapilli stone	Rhyolite flow breccia fragment supported, chloritic matrix.
42.89	44.81	Felsic lapilli	Light gray-green, massive. 1-2 mm felsic pyroclasts in a sericitic matrix supporting angular quartz, jasper and lithic fragments ranging in size from 3-mm-1.5-cm. 1% medium-coarse grained pyrite. Upper contact is fault controlled at 25° core axis, lower contact gradational.
44.81	51.15	Felsic lapilli stone-breccia	Light gray, massive, medium-coarse grained felsic pyroclasts. No significant mineralization. Gradational lower contact.
51.15	53.49	Felsic lapilli	Similar to section from 38.64-42.89 with the exception of 1% pyrite fragments 1 cm X 2 cm. 46.00-46.50, broken core.
			Light gray, massive, weak sericitization and silicification. 20%

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
53.49	54.56	Felsic tuff	chaotic quartz veining. 1% fine-coarse grained pyrite.
54.56	56.00	Felsic lapilli	Light gray, fine grained, weak sericitization and silicification. 1% disseminated pyrite.
56.00	56.14	Porphyritic felsic flow	Light gray-purple with feldspar phenocrysts. 1% disseminated pyrite.
56.14	57.29	Felsic tuff	Light gray, massive, fine grained. Upper and lower contact defined by a 10-cm sericitic band. Overall 1% pyrite.
57.29	62.06	Felsic lapilli tuff	20% angular-round siliceous, grit-pebble size pyroclasts in a sericitic matrix. Moderate sericitization, weak silicification. 1% disseminated pyrite.
62.06	67.27	Felsic tuff-lapilli tuff	Massive with 1-3 mm siliceous pyroclasts in a weakly chloritized sericitic matrix. 1% disseminated pyrite.
67.27	76.79	Felsic lapilli	Same unit as 44.81-51.15 except that it is moderately sericitized. 3% chlorite and 1% disseminated pyrite.
76.79	81.33	Felsic lapilli tuff	Light gray and massive. Moderate sericitization, 3% disseminated pyrite.
81.33	84.00	Felsic lapilli tuff-breccia	Deformation increases from this point. Gray-pale yellow, intense Sericitization, moderate chloritization. Felsic lapilli and breccia pyroclasts in an open framework sericitic matrix. Strong shearing at 45° core axis.
84.00	87.54	Felsic tuff	1-3% fine grained anhedral pyrite. 84.00-86.91, gray-pale yellow, coarse grained, intense sericitization. 3% fine grained and clustered pyrite. Upward fining gradational contact at 45° core axis.
87.54	89.28	Quarts	86.91-87.54, chloritized with 3% disseminated anhedral pyrite. Light pale yellow, 1-2 mm subhedral quartz and feldspar phenocrysts. Intense sericitization and silicification with 1% disseminated pyrite. Sharp upper and lower contacts with embayed contacts perpendicular to

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
89.28	90.69	Rhyolite flow	core axis. Yellow-gray, fine grained, siliceous intensely sericitized and silicified, moderate chloritization. 1% anhedral-euhedral fine grained pyrite.
90.69	91.86	Felsic tuff	Beige, massive with 10% random gray veining. Moderate sericitization and intense silicification. 1-3% anhedral-euhedral pyrite. Upper and lower contacts are fault controlled at 30° core axis.
91.86	92.64	Porphyritic rhyolite flow	Beige, massive with anhedral feldspar phenocrysts. 10% randomly oriented 2-cm gray quartz veins. 3% fine-coarse grained anhedral pyrite. Intense silicification. Lower contact is fault controlled at 35° core axis.
92.64	96.52	Intermediate tuff	Andesitic composition, medium green-gray, strong shearing at 45° core axis. Moderate sericitization, weak Silicification. 10% brecciated quartz vein material. 1-3% fine-medium grained anhedral pyrite.
96.52	101.08	Felsic tuff breccia	Strongly sheared and brecciated angular-round fragments in a chloritic matrix. 40% fragments, 40% chlorite, 20% sericite. Weak silicification and sericitization. 96.89-97.41, 5% matrix associated pyrite.
101.08	102.13	Felsic lapilli tuff-stone	Beige-gray, felsic and lithic fragments in gritty quartz pyroclasts within a sericitic matrix. Weak chloritization, intense silicification. 1% anhedral pyrite.
102.13	102.90	Fault breccia	Bleached, mafic, pebble-cobble size fragments in a highly chloritic matrix exhibiting flow-like texture. Could be part of a hydrothermal system. Upper and lower contacts are sharp at 30° and 10° core axis respectively. No significant mineralization.
102.90	105.39	Porphyritic felsic breccia	Beige-tan, felsic porphyritic breccia in a chlorite-feldspar matrix. 20% 1-2 mm gray quartz veining. 3% fine-coarse grained anhedral-euhedral

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
105.39	106.21	Quartz feldspar porphyry	disseminated and clustered pyrite. Light gray, massive, 10% 1-2 mm gray quartz veins and anhedral quartz and feldspar phenocrysts. 3% fine grained pyrite. Upper contact is fault controlled at 15° core axis. Lower contact defined by quartz vein at 80° core axis.
106.21	107.00	Felsic lapilli tuff-stone	Felsic, lithic and rare jasper fragments with 3% coarse grained anhedral pyrite. Gradational lower contact.
107.00	107.30	Intermediate tuff	Andesitic composition, light gray, massive. 3% very fine grained anhedral pyrite.
107.30	108.40	Felsic lapilli tuff	From this point on degree of alteration and deformation much less. Light yellow-gray, moderate sericitization. Granular angular quartz pyroclasts in a sericitic ground mass. 1% medium-coarse grained anhedral pyrite. Gradational lower contact.
108.40	109.91	Felsic tuff-lapilli tuff	Light gray, generally massive, 10% 5 mm-1 cm quartz feldspar veins. 3% fine-coarse grained anhedral-euhedral pyrite. Lower contact is fault controlled at 15° core axis.
109.91	113.0	Quartz feldspar porphyry	Pale yellow-gray, intense silicification, moderate sericitization. 1-3% anhedral pyrite.
113.00	113.43	Felsic lapilli tuff	Interlocking mosaic of 1-2 mm quartz pyroclasts in sericitic ground mass. Permeatively sericitized. 3% subhedral-euhedral pyrite.
113.43	114.46	Felsic lapilli tuff-breccia	Pale yellow, intense silicification with 10% 1-2 mm randomly oriented quartz veins. 1-3% fine-medium grained anhedral disseminated and clustered pyrite. Upper and lower contacts are sharp at 55° and 10° core axis respectively.
114.46	114.98	Felsic tuff-lapilli tuff	Same as 113.00-113.43, but with 3% fine-medium grained anhedral pyrite. Unit has greater tuffaceous component than previously mentioned unit. Gradational lower contact.
114.98	117.62	Felsic lapilli	Pale yellow, intense sericitization and

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
		tuff	silicification. 1-2 mm quartz pyroclasts in sericitic ground mass. 1% disseminated anhedral pyrite. 10% 1-2 mm gray quartz veinlets. Lower contact is sharp at 50° core axis.
117.62	118.76	Felsic tuff	Medium gray, massive, moderate sericitization, intense silicification. 3% very fine grained anhedral pyrite. Gradational lower contact.
118.76	122.58	Felsic lapilli tuff-stone	Pale yellow, felsic, quartz and minor lithic fragments, 2-5 mm in size. 1% anhedral disseminated and clustered pyrite
122.58	123.10	Felsic tuff	Beige-light gray, massive, fine-medium grained. Intense silicification. 3% fine-medium grained anhedral pyrite. Lower contact sharp at 35° core axis.
123.10	125.47	Quartz feldspar porphyry	Beige-light gray with 40% quartz feldspar phenocrysts in a fine grained siliceous matrix. 1-3% fine grained anhedral pyrite. Lower contact is sharp at 50° core axis.
125.47	125.92	Felsic tuff	123.50, 10 cm milky white quartz vein. Same as unit from 117.62-118.76. Lower contact is sharp and defined by a brecciated quartz vein at 45° core axis.
125.92	128.04	Quartz feldspar porphyry	Sheared with ghostly feldspar phenocrysts in a highly siliceous matrix. Moderate sericitization as wisps and patches. 5% anhedral euhedral pyrite.
128.04	130.23	Intermediate tuff	Andesitic composition, medium gray, sheared with 1% disseminated pyrite. Upper and lower contacts at 30° core axis. Pervasively carbonated.
130.23	134.50	Basalt flow	Dark green-medium gray, intense carbonate, mottled texture. Highly chloritic with bleached sections. Minor interflow pyrite as laminations. 10% quartz carbonate veining.
134.50	137.29	Intermediate tuff	Medium gray, tuffaceous. 50% faulted, fractured and broken core. Lower contact is fault controlled and sheared at 45° core axis.

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
137.29	137.63	Dacite flow	134.00-136.00, 3-5% pyrite. Light gray, siliceous, 1% disseminated pyrite. Sharp lower contact at 45° core axis.
137.63	138.92	Intermediate tuff	Light medium gray, moderate silicification, weak sericitization. 1% coarse grained anhedral pyrite.
138.92	144.00	Basalt flow	Dark green-medium gray, intense shearing at 45° core axis. 10% quartz feldspar veining and silicified sections with 5% anhedral pyrite. Overall 1% pyrite. Lower contact is sharp at 60° core axis.
144.00	146.96	Dacite flow	Beige, intense silicification, weak sericitization. 3% fine-medium grained anhedral-euhedral pyrite. Lower contact is sheared over 20 cm at 40° core axis.
146.96	163.22	Basalt flow	146.96-149.57, medium gray-green, strongly foliated at 45° core axis. Intense silicification 1% anhedral pyrite. 149.57-161.65, very fine grained, highly chloritic, 5% randomly oriented quartz carbonate veining, 30% of section is bleached, trace pyrite. 161.65-163.22, intense silicification, dike effect. Lower contact at 20° core axis.
163.22	166.00	Diabase	Black, fine grained, typical diabase with ophitic texture. Lower contact at 35° core axis.
166.00	172.58	Basalt flow	Sheared with parallel core axis fabric. Hematite associated with quartz carbonate veining. Lower contact at 158 core axis.
172.58	191.00	Diabase	Upper contact starts at 45° core axis and then within 0.5 meters becomes parallel to core axis then in 20-cm swings out at an acute angle. Epidote veins at 178.92 (8 cm), 179.30 (8 cm), 190.24 (15 cm).
191.00		E.O.H.	





DDH <u>No.</u>	From <u>m</u>	To <u>m</u>	Hole Width <u>m</u>	Sample <u>No</u>	Total Au <u>oz/ton</u>	Au (-) <u>oz/ton</u>	Au <u>oz/ton</u>	TotAu*m
98-3	151.07	153.00	1.93	657639			0.0009	
98-3	153.00	155.00	2.00	657640			0.0085	
98-3	155.00	157.00	2.00	657641			0.0015	
98-3	157.00	159.00	2.00	657642			0.0035	
98-3	159.00	161.00	2.00	657643			0.0023	
98-3	161.00	161.65	0.65	657644			0.0032	
98-3	161.65	163.22	1.57	657645			0.0137	
98-3	163.22	End of Sampling						

NOTES:

1. *italics on "B"*: *Tyrrell structural Zone identified on core.*
2. *italics on "C"*: *+5% sulphides mainly as pyrite (two types) and black chlorite veining*
3. Oct 16/98 update: all assaying and geological summaries available

**DIAMOND DRILL LOG**

<b>DRILL HOLE.</b> HC98-4	<b>COMPANY.</b> Orogrande Resources		
<b>PROJECT.</b> Hydro Creek	<b>DRILLED BY.</b> L. Salo and company		
<b>CLAIM NO.</b> 1146157	<b>TOWNSHIP.</b> Tyrrell		
<b>UTM ZONE 17</b>	<b>NORTHING.</b> 5275730	<b>EASTING.</b> 496750	
<b>GRID COORDINATES</b>	<b>NORTHING.</b> 10355	<b>EASTING.</b> 10507	
<b>DEPTH.</b> 20M	<b>AZIMUTH.</b> N.A.	<b>DIP.</b> -90	<b>EL.</b> 10000
<b>DATE STARTED.</b> Oct. 7, 1998	<b>COMPLETED.</b> Oct. 7, 1998		
<b>LOGGED BY.</b> Walter Hanych	<b>CORE SIZE.</b> BQ		
<b>TARGET.</b> Test the area immediately south of the Lacarte pit for subhorizontal quartz carbonate veins which exposed in pit reportedly contained spectacular visible gold.			

<b>FOOTAGE</b>		<b>DESCRIPTION</b>	
<b>FROM</b>	<b>TO</b>	<b>LITHOLOGY</b>	
0.0	1.50	Overburden	Casing
1.50	20.00	Dacite feldspar porphyry	Medium gray, massive, highly siliceous with 20-30% anhedral-subhedral 2-4 mm feldspar phenocrysts. 10% narrow, 2-3 mm quartz carbonate veins with 60°-90° core angles. 2.40, irregular 2-10 mm quartz carbonate vein at 50° core axis. Associated sericitization halo 8 cm wide with trace fuchsite. 2.64-3.00, pervasive sericitization with 5% medium-coarse grained anhedral-euhedral pyrite and trace fuchsite. 2.89, 1 cm quartz feldspar vein, 3% pyrite. 3.39, 5-cm quartz vein with 1-2 mm pyrite stringers parallel to core axis. 4.70-4.89, quartz feldspar vein, milky white, with brecciated wall rock inclusions. 25° core axis.

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
			<b>4.89-7.84</b> , pyrite content increasing to 5% as patches and clusters up to 1x3 cm in size. Looks like primary pyrite.
			<b>6.59-6.84</b> , interflow breccia with a 3-cm quartz vein at 6.81, pale gray-white, 20% massive pyrite cross cuts vein material, 1-3% very fine grained dull gray pyrite and coarse yellow pyrite. Vein at 40° core axis.
			<b>7.00</b> , quartz carbonate vein with oxidized pyrite and leached carbonate resulting in cavities, 10 cm sericite halo with associated 20% massive and medium grained euhedral pyrite. Vein at 30° core axis and appears to be fracture controlled.
			<b>7.00-10.71</b> , pronounced beige discoloration to core, could be albitionization.
			<b>8.96-12.34</b> , 3% of section is massive irregular patches of bronze pyrite averaging 3 cm <sup>2</sup> . Narrow cross cutting quartz carbonate vein.
			<b>12.34-12.86</b> , bleached.
			<b>12.34-20.00</b> , frequency of quartz carbonate veining increasing to 20%.
			<b>14.73-20.00</b> , 3% patchy pyrite with 10% of section sericitized with 5% medium-coarse grained euhedral pyrite.
			<b>17.85-18.00</b> , intense sericitization with 5% euhedral pyrite. At 17.97 5 mm quartz carbonate vein at 45° core axis. Appears to be fracture controlled.
			<b>18.83-19.17</b> , pervasively sericitized with 5% coarse grained euhedral pyrite.
			<b>18.93</b> , 1-cm quartz feldspar vein.
			<b>19.65-19.81</b> , 30% massive irregular patchy pyrite.
<b>20.00</b>		<b>E.O.H.</b>	





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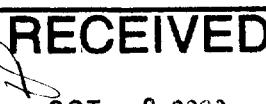
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050

## DIAMOND DRILL LOG

<b>DRILL HOLE.</b>	<b>HC98-5</b>	<b>COMPANY.</b>	<b>Orogrande Resources</b>
<b>PROJECT.</b>	<b>Hydro Creek</b>	<b>DRILLED BY .L. Salo and Company</b>	
<b>CLAIM NO.</b>	<b>1146157</b>	<b>TOWNSHIP.</b> Tyrrell	
<b>UTM ZONE 17</b>	<b>NORTHING. 5275750</b>	<b>EASTING. 496770</b>	
<b>GRID COORDINATES</b>	<b>NORTHING. 10378</b>	<b>EASTING. 10530</b>	
<b>DEPTH. 50M</b>	<b>AZIMUTH. 240°</b>	<b>DIP. -45</b>	<b>EL. 9997</b>
<b>DATE STARTED. Oct. 7, 1998</b>		<b>COMPLETED. Oct. 8, 1998</b>	
<b>LOGGED BY. Walter Hanych</b>		<b>CORE SIZE. BQ</b>	
<b>TARGET. Hole collared to undercut the high grade gold zone exposed in the Lacarte pit.</b>			

<b>FOOTAGE</b>		<b>LITHOLOGY</b>	<b>DESCRIPTION</b>
<b>FROM</b>	<b>TO</b>		
0.0	3.00	Overburden	Casing
3.00	8.38	Ultramafic flow	Black, medium grained, massive, essentially a chlorite, talc, carbonate rock with minor magnetite. 10% randomly oriented 1-3 mm quartz carbonate veins. 7.60-8.38, 20% coarse grained subhedral pyrite forming 2 cm x 3 cm nodules, 1-5 mm bands, irregular clots and aggregates, as well as euhedral crystals. Lower contact is sharp but irregular at 50° core axis.
8.38	8.87	Basalt flow breccia	Dark green, fine grained. Upper contact area defined by 10 cm of breccia fragments, incorporating mafic, felsic and pyritic fragments. Sharp lower contact at 70° core axis.
8.87	10.89	Brecciated siliceous exhalite	Gray-white, 80% subround-round felsic fragments, closed frame work, chloritic matrix with 10% pyrite. 9.09-9.37, 405 massive pyrite as two separate irregular masses, hematized.

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FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
10.89	11.71	Basalt flow	<p>10.00-10.12, 50% massive pyrite.          Dark green, fine grained, massive.</p> <p>10.89-11.16, 80% brecciated 1-2 cm massive pyrite fragments. 3% is brecciated siliceous fragments similar to those of the above unit.</p> <p>11.26-12.41, 30% coarse grained anhedral pyrite associated with a dacitic section.</p> <p>Upper and lower contacts are sharp at 25° and 35° respectively.</p>
11.71	12.44	Brecciated siliceous exhalite	<p>Same as unit at 8.87-10.89.</p> <p>Upper contact appears to be appears to be gradational with the basalt encroaching into the matrix of breccia.</p> <p>12.15-12.44, 50% massive pyrite as shattered coalescing globules.</p> <p>Lower contact is similar to upper contact.</p>
12.44	18.84	Basalt-andesite flow	<p>Medium green-dark gray, massive.</p> <p>12.44-15.55, 10% pyrite as irregular stringers and masses from 1 cm<sup>2</sup> to 2x3 cm.</p> <p>15.55-16.69, 40% massive pyrite with a section from 16.00-16.69 containing irregular and patchy pyrite associated with massive 5 mm-1 cm magnetite.</p> <p>16.69-17.29, 10% magnetite.</p> <p>17.29-17.86, 30% magnetite as distinct round dense concentrations.</p> <p>17.86-18.57, 50% pyrite as 5 mm-2 cm masses and swirled flow laminae measuring 3 cm in width and 10 cm long.</p> <p>Lower contact at 40° core axis.</p>
18.84	50.00	Dacite feldspar porphyry	<p>Massive, medium gray except as noted. 10% 1-3 mm quartz carbonate veinlets at 45° core axis.</p> <p>19.75-20.93, moderate-intense sericitization, 3-5% medium grained euhedral pyrite.</p> <p>21.52-21.90, moderate sericitization, trace-1% pyrite.</p> <p>23.70-24.28, moderate sericitization, trace pyrite.</p>

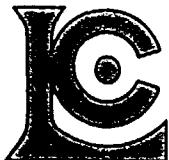
FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
			25.12-26.31, 3% coarse grained anhedral pyrite.
			27.62-28.52, very intense sericitization displaying an embayed sharp upper alteration front at 40° core axis, lower contact is gradational. Trace-1% pyrite.
			29.00-29.79, intense sericitization, with a gradational upper contact and sharp lower alteration front perpendicular to core axis. Trace pyrite.
			29.79-31.48, bleached.
			29.95, 2 cm quartz feldspar vein at 45° core axis.
			32.46-32.66, 1 cm quartz feldspar vein at 45° core axis, associated sericite and 10% coarse grained anhedral-euhedral pyrite.
			33.57-33.93, weak sericitization.
			35.58-35.74, 5% coarse grained anhedral-euhedral pyrite.
			36.86-37.00, 1 cm quartz feldspar vein with associated sericite and 3% coarse grained anhedral-euhedral pyrite.
			42.00-47.34, very intense sericitization and silicification.
			42.00-43.10, 1% fine grained anhedral-euhedral pyrite.
			43.10-44.13, fault zone characterized by very intense sericite, broken core, gouge and slip planes at 50° core axis.
			43.66, 3 cm quartz feldspar vein associated with most intense gouge and hematite between 43.54-44.00. with intense sericite to 50.00.
			43.87-44.00, 3% coarse grained anhedral-euhedral pyrite.
			43.90 onward feldspar phenocrysts increase from 10% to 20%.
			44.00-44.87, 20% matrix filling pyrite in a flow type breccia.
			45.84-45.95, ribbon style shear related white-gray quartz vein chlorite partings containing 5% stringer pyrite.

FOOTAGE FROM	TO	LITHOLOGY	DESCRIPTION
			<b>Visible gold, as fine flour gold clustering to form several 1-mm concentrations across full width of core. Ribbon vein at 70° core axis.</b>
			<b>46.68-46.90, 30% fine grained pyrite as irregular masses.</b>
			<b>47.42-48.12, randomly oriented pale green, cherty quartz vein containing brecciated wall rock and 10-15% interstitial pyrite as irregular patches.</b>
			<b>47.57, 5 cm quartz feldspar vein at 45° core axis.</b>
			<b>47.77, 2 cm quartz feldspar vein at 20° core axis.</b>
			<b>48.12-50.00, intense sericite and 15% globular, patchy pyrite.</b>
<b>50.00</b>		<b>E.O.H.</b>	









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## CERTIFICATE OF ANALYSIS A9833038

SAMPLE	PREP CODE	Au tot oz/T	Au - oz/T	Au + mg	Wt - grams	Wt + grams					
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N278915	3290	226	0.014	0.014	0.019	1580	22.62				
N278916	3290	226	0.010	0.010	0.009	1338	31.08				
N278917	3290	226	0.006	0.006	0.003	1481	21.95				
N278918	3290	226	0.009	0.009	0.011	1305	27.22				

CERTIFICATION:





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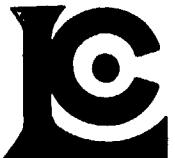
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CERTIFICATION: *[Signature]*







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609047	205	226	0.315	0.0092	-----							
609048	205	226	0.130	0.0038	-----							
609049	205	226	0.015	<0.0005	-----							
609050	205	226	0.050	0.0015	-----							

CERTIFICATION *Leanne Alexander*



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N278765	3290 226	< 0.002	< 0.002	0.002	1330	29.28					
N278766	3290 226	0.011	0.011	0.002	1440	27.72					
N278767	3290 226	< 0.002	< 0.002	< 0.002	1643	9.06					
N278768	3290 226	0.015	0.015	0.016	1262	27.27					
N278769	3290 226	0.004	0.004	0.003	1393	29.78					
N278770	3290 226	0.038	0.038	0.050	1327	33.61					
N278771	3290 226	0.003	0.003	0.007	1611	31.56					
N278772	3290 226	0.011	0.011	0.006	1279	35.23					
N278773	3290 226	0.015	0.015	0.006	1771	19.66					
N278774	3290 226	0.025	0.025	0.013	1241	17.60					
N278775	3290 226	0.011	0.011	0.005	1675	22.09					
N278776	3290 226	0.008	0.008	0.007	1229	26.96					
N278777	3290 226	0.003	0.003	< 0.002	1205	17.81					
N278778	3290 226	0.007	0.007	< 0.002	890	19.92					
N278779	3290 226	0.003	0.003	< 0.002	1309	17.48					
N278780	3290 226	0.008	0.008	0.004	1719	27.32					
N278781	3290 226	0.030	0.030	0.022	1850	29.10					
N278782	3290 226	0.007	0.007	0.005	1300	13.98					
N278783	3290 226	0.004	0.004	0.007	958	24.58					
N278784	3290 226	0.005	0.006	< 0.002	1394	30.90					
N278785	3290 226	0.008	0.008	< 0.002	2081	11.75					
N278786	3290 226	0.012	0.012	0.004	948	15.76					
N278787	3290 226	0.015	0.015	0.015	1138	20.45					
N278788	3290 226	0.026	0.026	0.005	1345	12.09					
N278789	3290 226	0.027	0.027	0.009	1329	15.73					
N278790	3290 226	0.010	0.010	0.003	1631	16.82					
N278791	3290 226	0.017	0.017	0.007	1495	18.91					
N278792	3290 226	0.007	0.007	< 0.002	1649	13.36					
N278793	3290 226	0.009	0.009	0.011	1466	15.58					
N278794	3290 226	0.007	0.008	< 0.002	1547	17.29					
N278795	3290 226	0.019	0.019	0.012	1444	14.83					
N278796	3290 226	0.003	0.003	0.004	1473	15.13					
N278797	3290 226	0.004	0.004	< 0.002	1109	9.95					
N278798	3290 226	0.011	0.011	0.006	1367	14.62					
N278799	3290 226	0.015	0.015	< 0.002	1483	13.40					
N278800	3290 226	0.004	0.004	< 0.002	1704	10.00					

CERTIFICATE OF ANALYSIS  
*Adriana Pavaoza*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 5175 Timberlea Blvd., Mississauga  
 Ontario, Canada L4W 2S3  
 PHONE: 905-624-2806 FAX: 905-624-6163

To: OROGRANDE RESOURCES INC.

926 - 1122 4TH ST. S.W.  
 CALGARY, AB  
 T2R 1M1

Project: HYDRO CREEK  
 Comments: ATTN: GUY SALAZAR CC: WALTER HANYCH

Page Number : 1  
 Total Pages : 3  
 Certificate Date: 21-OCT-1995  
 Invoice No. : 19833585  
 P.O. Number :  
 Account : NJW

CERTIFICATE OF ANALYSIS A9833585

SAMPLE	PREP CODE	Au g/t FA+AA	Au oz/T calc.									
278999	205 226	0.105	0.0031									
279000	205 226	0.165	0.0048									
599951	205 226	0.140	0.0041									
599952	205 226	0.050	0.0015									
599953	205 226	0.220	0.0064									
599954	205 226	0.085	0.0025									
599955	205 226	0.115	0.0034									
599956	205 226	0.060	0.0018									
599957	205 226	0.075	0.0022									
599958	205 226	0.110	0.0032									
599959	205 226	0.095	0.0028									
599960	205 226	0.060	0.0018									
599961	205 226	0.160	0.0047									
599962	205 226	0.085	0.0025									
599963	205 226	0.035	0.0010									
599964	205 226	0.025	0.0007									
599965	205 226	0.090	0.0026									
599966	205 226	0.105	0.0031									
599967	205 226	0.090	0.0026									
599968	205 226	0.160	0.0047									
599969	205 226	0.110	0.0032									
599970	205 226	0.060	0.0018									
599971	205 226	0.055	0.0016									
599972	205 226	0.090	0.0026									
599973	205 226	0.250	0.0073									
599974	205 226	0.095	0.0028									
599975	205 226	0.115	0.0034									
599976	205 226	0.220	0.0064									
599977	205 226	0.220	0.0064									
599978	205 226	0.100	0.0029									
599979	205 226	0.085	0.0025									
599980	205 226	0.290	0.0085									
599981	205 226	0.235	0.0069									
599982	205 226	0.090	0.0026									
599983	205 226	0.030	0.0009									
599984	205 226	0.360	0.0105									
599985	205 226	0.150	0.0044									
599986	205 226	0.075	0.0022									
599987	205 226	0.040	0.0012									
599988	205 226	0.010	<0.0005									

CERTIFICATION: *[Signature]*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 5175 Timberlea Blvd., Mississauga  
 Ontario, Canada L4W 2S3  
 PHONE: 905-624-2806 FAX: 905-624-6163

To: OROGRANDE RESOURCES INC.

926 - 1122 4TH ST. S.W.  
 CALGARY, AB  
 T2R 1M1

Page Number :2  
 Total Pages :3  
 Certificate Date: 21-OCT-199  
 Invoice No. :19833585  
 P.O. Number :  
 Account :NJW

Project : HYDRO CREEK  
 Comments: ATTN: GUY SALAZAR CC: WALTER HANYCH

## CERTIFICATE OF ANALYSIS A9833585

SAMPLE	PREP CODE	Au g/t FA+AA	Au oz/T calc.									
599989	205 226	0.490	0.0143									
599990	205 226	0.080	0.0023									
599991	205 226	0.055	0.0016									
599992	205 226	0.015	<0.0005									
599993	205 226	0.035	0.0010									
599994	205 226	0.125	0.0036									
599995	205 226	0.200	0.0058									
599996	205 226	0.745	0.0217									
599997	205 226	0.160	0.0047									
599998	205 226	0.145	0.0042									
599999	205 226	0.180	0.0053									
600000	205 226	0.410	0.0120									
609001	205 226	0.045	0.0013									
609002	205 226	< 0.005	<0.0005									
609003	205 226	< 0.005	<0.0005									
609019	205 226	< 0.005	<0.0005									
609034	205 226	< 0.005	<0.0005									
609035	205 226	0.290	0.0085									
609036	205 226	0.040	0.0012									
609037	205 226	0.050	0.0015									
609038	205 226	< 0.005	<0.0005									
609039	205 226	< 0.005	<0.0005									
609040	205 226	< 0.005	<0.0005									
609041	205 226	0.030	0.0009									
609042	205 226	0.025	0.0007									
609043	205 226	< 0.005	<0.0005									
657601	205 226	0.235	0.0069									
657602	205 226	0.230	0.0067									
657603	205 226	0.165	0.0048									
657604	205 226	0.120	0.0035									
657605	205 226	0.300	0.0088									
657606	205 226	0.400	0.0117									
657607	205 226	0.070	0.0020									
657608	205 226	0.165	0.0048									
657609	205 226	0.185	0.0054									
657610	205 226	0.155	0.0045									
657611	205 226	0.200	0.0058									
657612	205 226	0.080	0.0023									
657613	205 226	0.040	0.0012									
657614	205 226	1.720	0.0502									

CERTIFICATION:



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 5175 Timberlea Blvd., Mississauga  
 Ontario, Canada L4W 2S3  
 PHONE: 905-624-2806 FAX: 905-624-6163

To: OROGRANDE RESOURCES INC.

926 - 1122 4TH ST. S.W.  
 CALGARY, AB  
 T2R 1M1

Project : HYDRO CREEK

Comments: ATTN: GUY SALAZAR CC: WALTER HANYCH

Page Number :3  
 Total Pages :3  
 Certificate Date: 21-OCT-1998  
 Invoice No.: 19833585  
 P.O. Number:  
 Account : NJW

## CERTIFICATE OF ANALYSIS A9833585

SAMPLE	PREP CODE	Au g/t FA+AA	Au oz/T calc.									
657615	205 226	0.165	0.0048									
657616	205 226	0.525	0.0153									
657617	205 226	0.840	0.0245									
657618	205 226	0.145	0.0042									
657619	205 226	0.230	0.0067									
657620	205 226	0.310	0.0090									
657621	205 226	0.035	0.0010									
657622	205 226	0.060	0.0018									
657623	205 226	0.015	<0.0005									
657624	205 226	0.410	0.0120									
657625	205 226	0.515	0.0150									
657626	205 226	0.090	0.0026									
657627	205 226	0.695	0.0203									
657628	205 226	0.745	0.0217									
657629	205 226	0.070	0.0020									
657630	205 226	0.100	0.0029									
657631	205 226	0.085	0.0025									
657632	205 226	0.010	<0.0005									
657633	205 226	0.360	0.0105									
657634	205 226	0.705	0.0206									
657635	205 226	0.705	0.0206									
657636	205 226	0.135	0.0039									
657637	205 226	0.050	0.0015									
657638	205 226	0.085	0.0025									
657639	205 226	0.030	0.0009									
657640	205 226	0.290	0.0085									
657641	205 226	0.050	0.0015									
657642	205 226	0.120	0.0035									
657643	205 226	0.080	0.0023									
657644	205 226	0.110	0.0032									
657645	205 226	0.470	0.0137									

CERTIFICATION:

*Lorraine Alexander*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
5175 Timberlea Blvd., Mississauga  
Ontario, Canada L4W 2S3  
PHONE: 905-624-2806 FAX: 905-624-6163

To: OROGRANDE RESOURCES INC.

926 - 1122 4TH ST. S.W.  
CALGARY, AB  
T2R 1M1

Page Number :1  
Total Pages :1  
Certificate Date: 29-OCT-19  
Invoice No.: 19834600  
P.O. Number :  
Account : NJW

Project: HYDRO CREEK  
Comments: ATTN: GUY SALAZAR CC: WALTER HANYCH

## CERTIFICATE OF ANALYSIS A9834600

SAMPLE	PREP CODE	Au tot g/t	Au - g/t	Au + mg	Wt - grams	Wt + grams	Au oz/T calc.				
N278979	3288	226	0.65	0.65	395	24.49	0.0190				
N278981	3288	226	1.19	1.20	1214	28.13	0.0350				

CERTIFICATION

*Adriana Alexandra*



**Declaration of Assessment Work  
Performed on Mining Land**

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990

Transaction Number (office use)
W0080.00375 Assessment Files Research Imaging



41P1LINE2020 2.20622 TYRRELL

900

- Instructions:** - For work performed on Crown Lands before recording a claim, use form 0240.  
- Please type or print in ink.

2 . 2 0 6 2 2

**1. Recorded holder(s) (Attach a list if necessary)**

Name	Client Number
ARCHIE LACARTE	155166
Address	Telephone Number
GENERAL DELIVERY	705.624.2496
GOW GANDA, ON P0J · IJO	Fax Number
Name	Client Number
Address	Telephone Number
	Fax Number

**2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.**

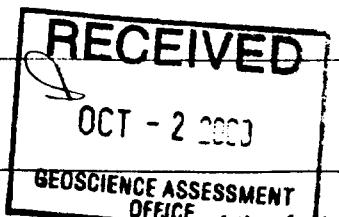
- Geotechnical: prospecting, surveys, assays and work under section 18 (regs)  Physical: drilling, stripping, trenching and associated assays  Rehabilitation

Work Type	Office Use
DIAMOND DRILLING	Commodity
Dates Work Performed From 01 Day 10 Month Year 98 To 26 Day 10 Month Year 98	Total \$ Value of Work Claimed 38,538
Global Positioning System Data (if available) 5 275 250N 496 750E	NTS Reference Mining Division Laird Lake
Township/Area TYRRELL M or G-Plan Number G 3725	Resident Geologist District Kirkland Lake

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required;  
- provide proper notice to surface rights holders before starting work;  
- complete and attach a Statement of Costs, form 0212;  
- provide a map showing contiguous mining lands that are linked for assigning work;  
- include two copies of your technical report.

**3. Person or companies who prepared the technical report (Attach a list if necessary)**

Name	Telephone Number
WALTER HANUCH	705.445.6440
Address	Fax Number
P.O. Box 688 COLLINGWOOD, ON L9Y 4E8	705.445.6440
Name	Telephone Number
	Fax Number
Name	Telephone Number
	Fax Number
Name	Telephone Number
	Fax Number



**4. Certification by Recorded Holder or Agent**

I, WALTER HANUCH, do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent	Date
	Sept 30 2000

Agent's Address	Telephone Number	Fax Number
P.O. BOX 688 COLLINGWOOD, ON L9Y 4E8	705.445.6440	705.445.6440

--	--

--	--

**5. Work to be recorded and distributed.** Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

WCD 6070375

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date.
eg TB 7827	16 ha	\$26, 825	N/A	\$24,000	\$2,825
eg 1234567	12	0	\$24,000	0	0
eg 1234568	2	\$ 8, 892	\$ 4,000	0	\$4,892
1 1146441	16	\$ 34,138	Ø	Ø	\$ 34,138
2 1146157	16	84,00	Ø	Ø	\$ 4,400 CON 400
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
Column Totals		\$ 38,538			\$ 38,538

I, \_\_\_\_\_, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing

Date

Sept 30, 2000

**6. Instructions for cutting back credits that are not approved.**

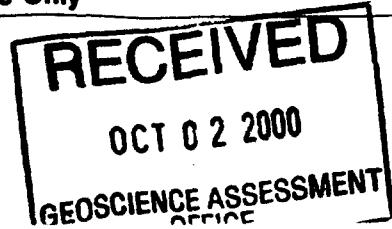
Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

**For Office Use Only**

Received Stamp



Deemed Approved Date	Date Notification Sent
Date Approved	Total Value of Credit Approved

Approved for Recording by Mining Recorder (Signature)



Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

2002

Work Type	Units of Work	Cost Per Unit of work	Total Cost
DIAMOND DRILLING	613 METERS	\$29.36 /METER	\$ 18,146.75
GEO SUPERVISION /CORE LOGGING	613 METERS	\$11.52 / METER	\$ 7,062.00
Associated Costs (e.g. supplies, mobilization and demobilization).			
SAMPLE SHIPPING / FIELD SUPPLIES		\$ 0.60 /METER	\$ 369.18
CORE SHACK RENTAL		\$ 28.62 / DAY	\$ 458.00
ASSAY COSTS - 194 SAMPLES (METALLIC Au)		\$35.41 /SAMPLE	\$ 6,869.54
150 SAMPLES F/A I A.T.		\$19.47 /SAMPLE	\$ 2,920.50
Transportation Costs			
VEHICLE RENTAL 4x4		\$ 64.20 /DAY	\$ 1,027.20
FUEL		\$ 31.37 /DAY	\$ 501.99
Food and Lodging Costs			
MEALS & ACCOMMODATIONS		\$ 73.92 /DAY	\$ 1,182.73
Total Value of Assessment Work			\$ 38,537.89

## Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK                           × 0.50 =    Total \$ value of worked claimed.

## Note:

- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

## Certification verifying costs:

- I, WALTER HANYCH, (please print full name), do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as RECEIVED OCT - 2 2000 (recorded holder, agent, or state company position with signing authority) I am authorized to make this certification.

Signature	Date
	Sept. 30. 2010

Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

December 8, 2000

ARCHIE ALBANY LACARTE  
GENERAL DELIVERY  
GOWGANDA, Ontario  
P0J-1J0



# Ontario

Geoscience Assessment Office  
933 Ramsey Lake Road  
6th Floor  
Sudbury, Ontario  
P3E 6B5

Telephone: (888) 415-9845  
Fax: (877) 670-1555

Visit our website at:  
[www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm](http://www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm)

Dear Sir or Madam:

**Submission Number:** 2.20622

**Status**

**Subject: Transaction Number(s):** W0080.00375 Approval After Notice

---

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact LUCILLE JEROME by e-mail at [lucille.jerome@ndm.gov.on.ca](mailto:lucille.jerome@ndm.gov.on.ca) or by telephone at (705) 670-5858.

Yours sincerely,

A handwritten signature in black ink that reads "Lucille Jerome".

ORIGINAL SIGNED BY  
Lucille Jerome  
Acting Supervisor, Geoscience Assessment Office  
Mining Lands Section

# Work Report Assessment Results

Submission Number: 2.20622

Date Correspondence Sent: December 08, 2000

Assessor: LUCILLE JEROME

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W0080.00375	1146441	TYRRELL	Approval After Notice	December 08, 2000

**Section:**  
16 Drilling PDRILL

The revisions outlined in the Notice dated October 27, 2000 have been corrected. Accordingly, assessment work credit has been approved as outlined on the Declaration of Assessment Work Form accompanying this submission.

**Correspondence to:**

Resident Geologist  
Kirkland Lake, ON

Assessment Files Library  
Sudbury, ON

**Recorded Holder(s) and/or Agent(s):**

Walter Hanych  
COLLINGWOOD, ONTARIO, CAN

ARCHIE ALBANY LACARTE  
GOWGANDA, Ontario

ROBERT MACCALLUM  
ENGLEHART, Ontario

DARLENE JUNE STUBBS  
HUNTSVILLE, Ontario

## INDEX TO LAND DISPOSITION

PLAN

G-3725  
TOWNSHIP

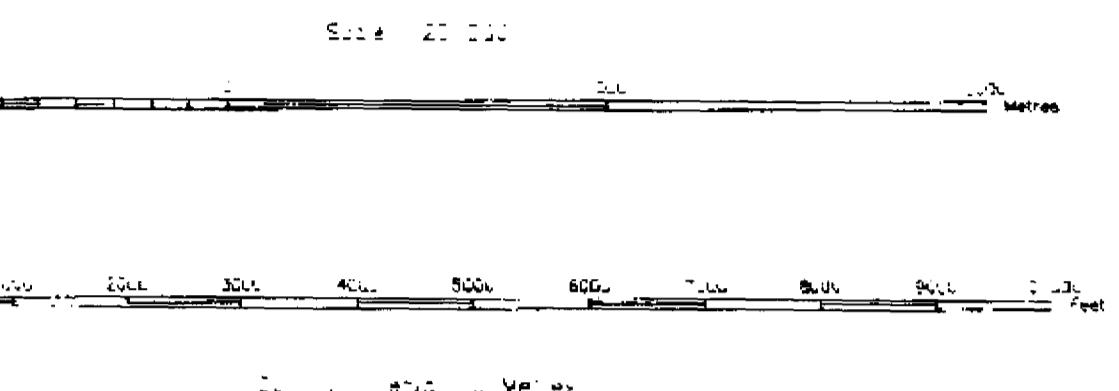
**TYRRELL**

M.N.R. ADMINISTRATIVE DISTRICT  
**KIRKLAND LAKE**

MINING DIVISION

**LARDER LAKE**

LAND TITLES/REGISTRY DIVISION  
**TIMISKAMING**



### AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY  
S.R.O. - SURFACE RIGHTS ONLY  
M.+S. - MINING AND SURFACE RIGHTS

Description Order No. Date Disposition File

(R) W-L-58/96 NER SEPT 17/96 SRO ARCHAEOLOGICAL SITE

(B) SEC 35 W-L-40/98 OCT 13/98 M&S 195150

(R) SEC 35 W-L-17/98 ONT MAY 13/99 M&S  
(200 METRES FROM WATER'S EDGE)

### SYMBOLS

Boundary	.....
Township, Meridian, Baseline	.....
Road allowance; surveyed	.....
shallow	.....
Lot/Concession; surveyed	.....
unsurveyed	.....
Parcel; surveyed	.....
unsurveyed	.....
Right-of-way; road	.....
railway	.....
utility	.....
Reservation	.....
Cliff, Pit, Pile	.....
Contour	— 20 —
Interpolated	.....
Approximate	.....
Depression	.....
Control point (horizontal)	△
Flooded land	.....
Mine head frame	.....
Pipeline (above ground)	.....
Railway: single track	.....
double track	.....
abandoned	.....
Road; highway, county, township	.....
access	.....
trail, bush	.....
Shoreline (original)	.....
Transmission line	.....
Wooded area	.....

### DISPOSITION OF CROWN LANDS

Patent

Surface & Mining Rights	●
Surface Rights Only	○
Mining Rights Only	□

Lease

Surface & Mining Rights	■
Surface Rights Only	□
Mining Rights Only	○

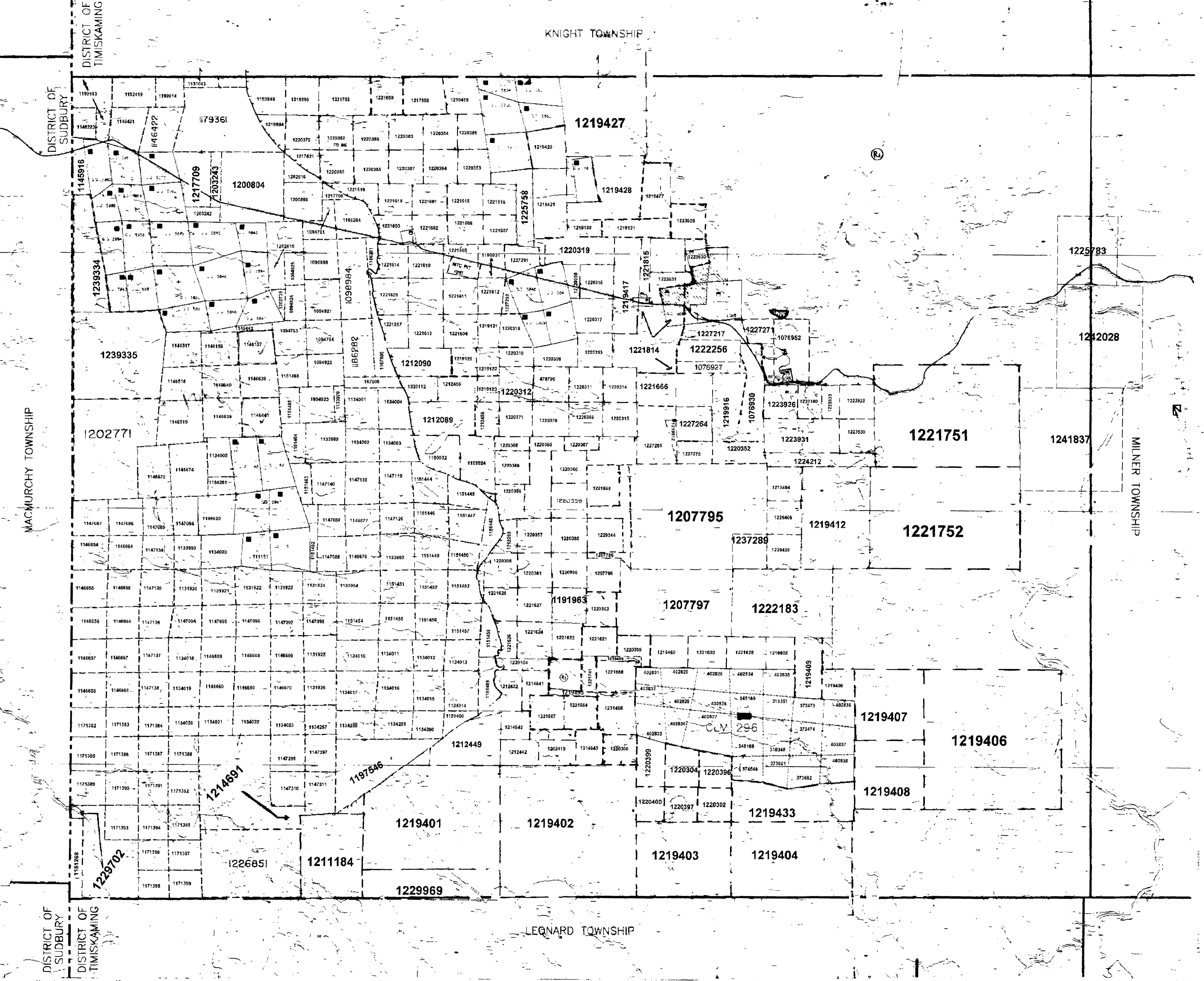
Licence of Occupation

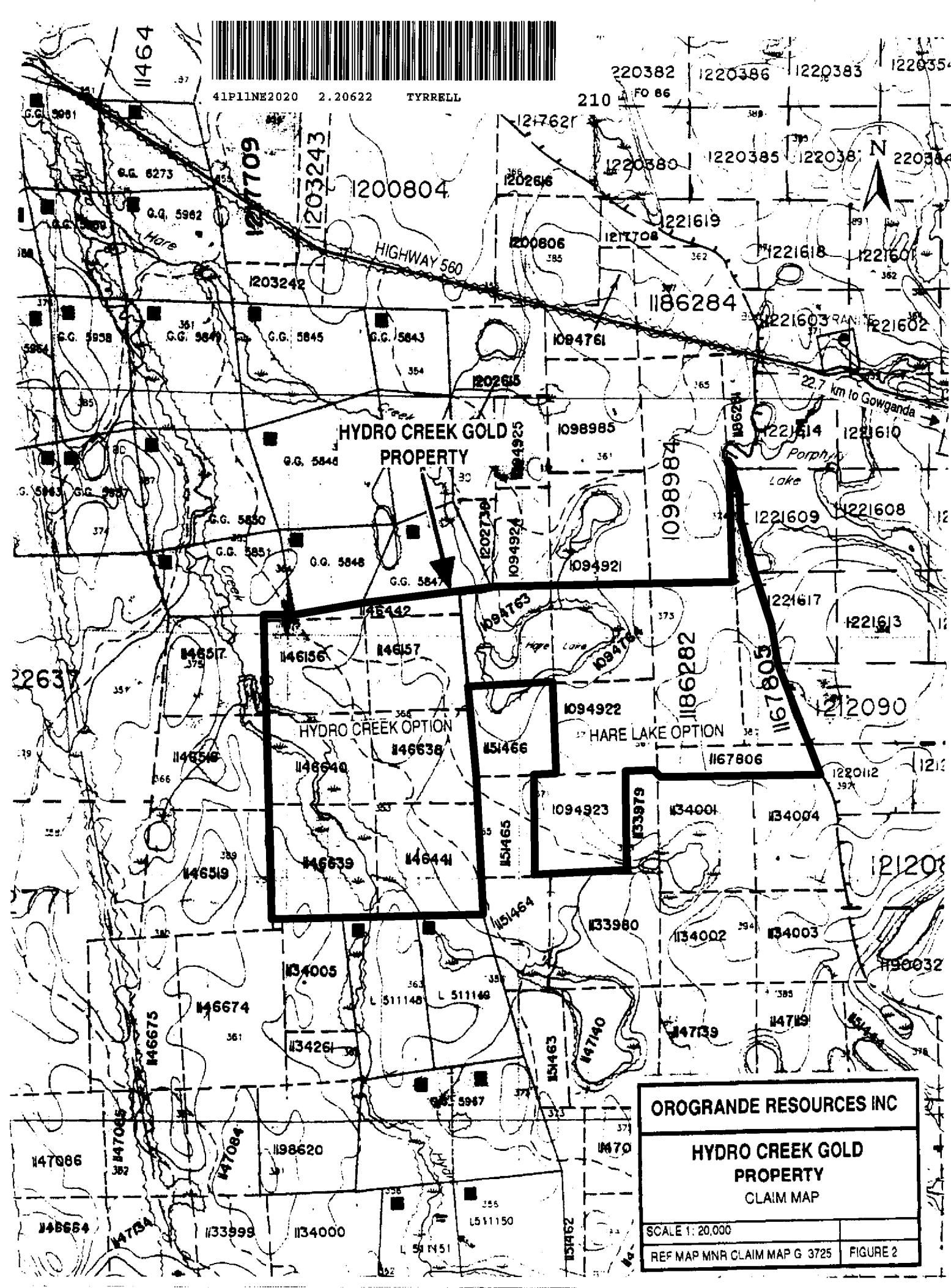
Order-in-Council	▲
Cancelled	○

Reservation

Sand & Gravel	○
Land Use Permit	□

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINISTER OF NATURAL RESOURCES AND THE MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.



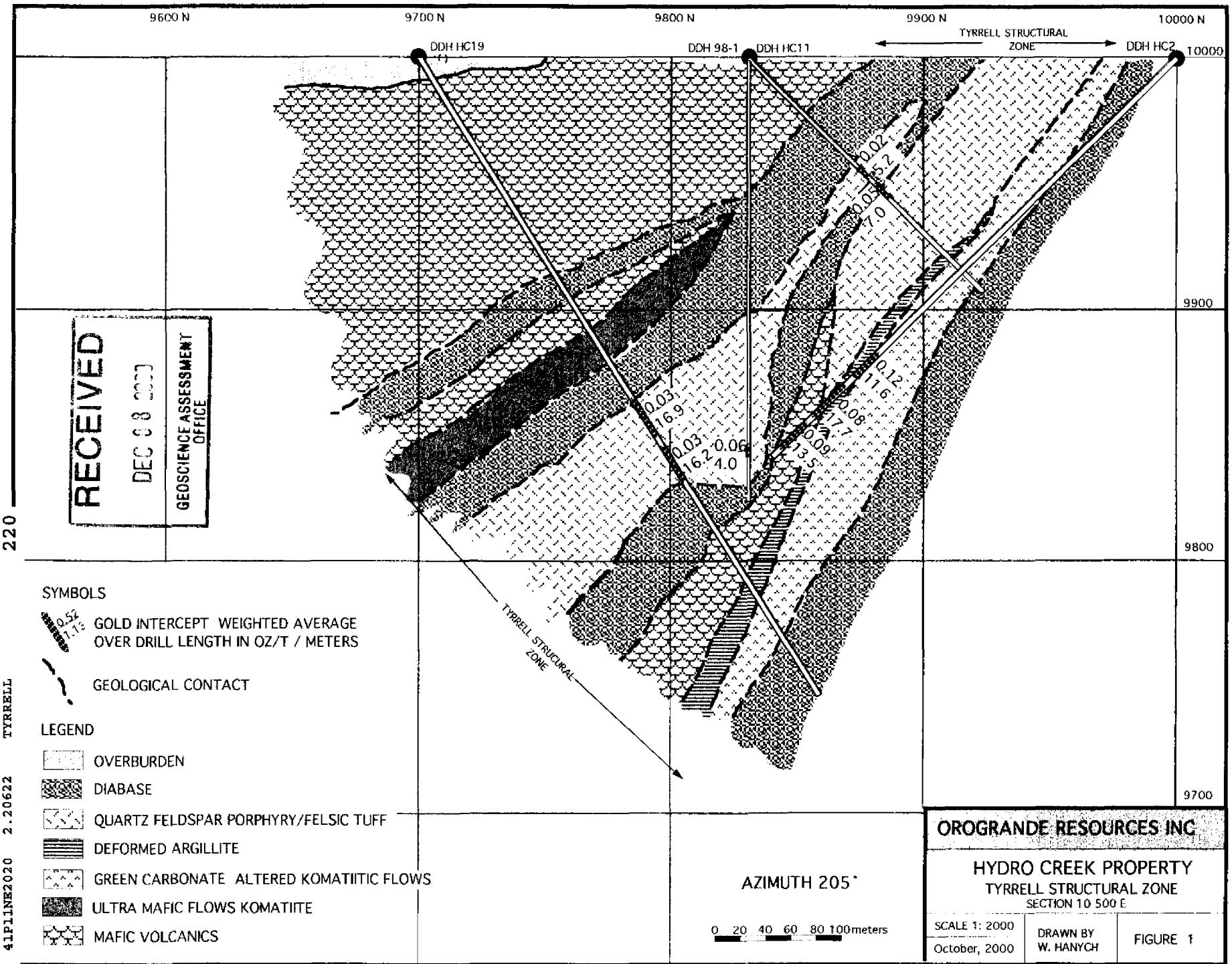


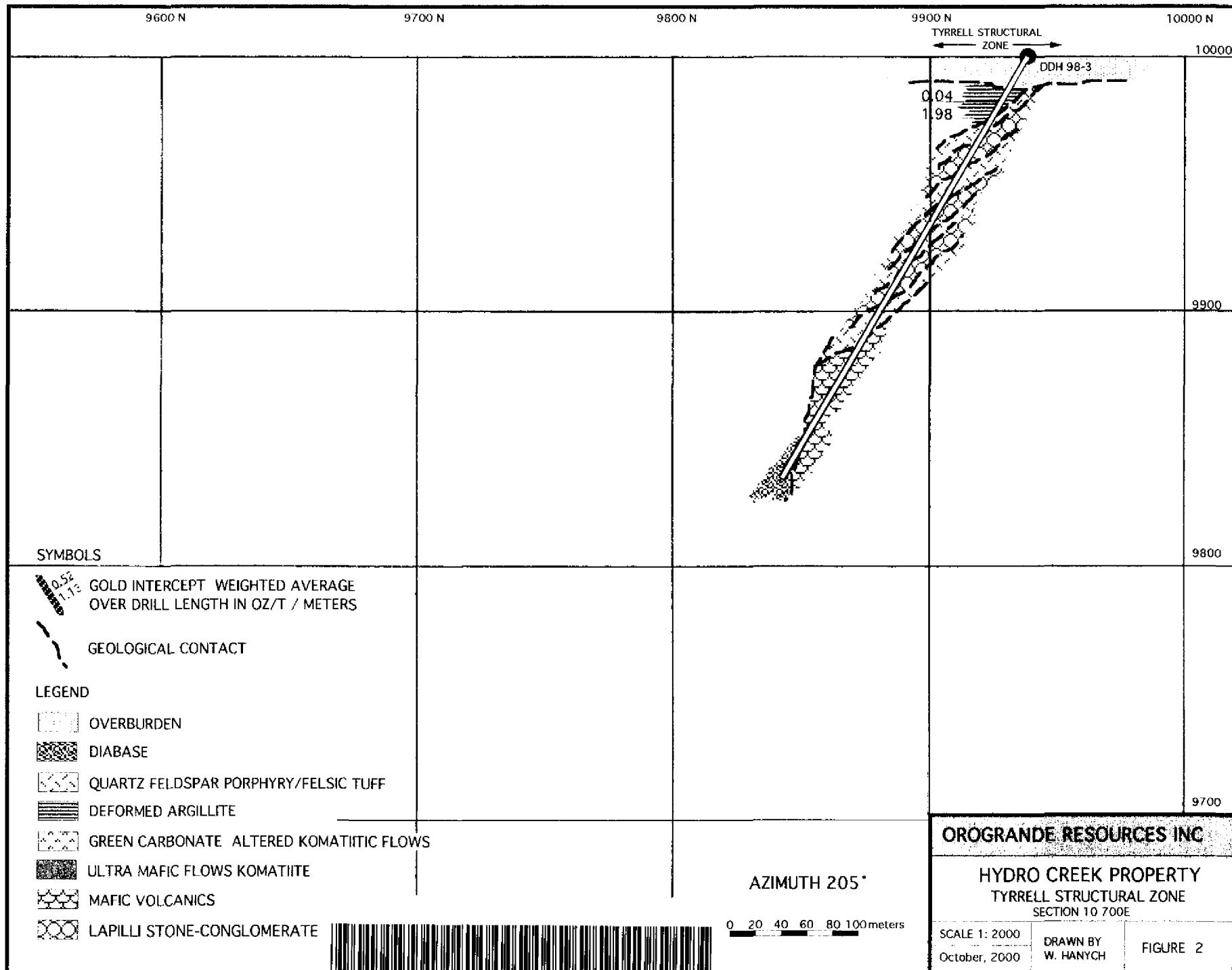
**OROGRANDE RESOURCES INC**

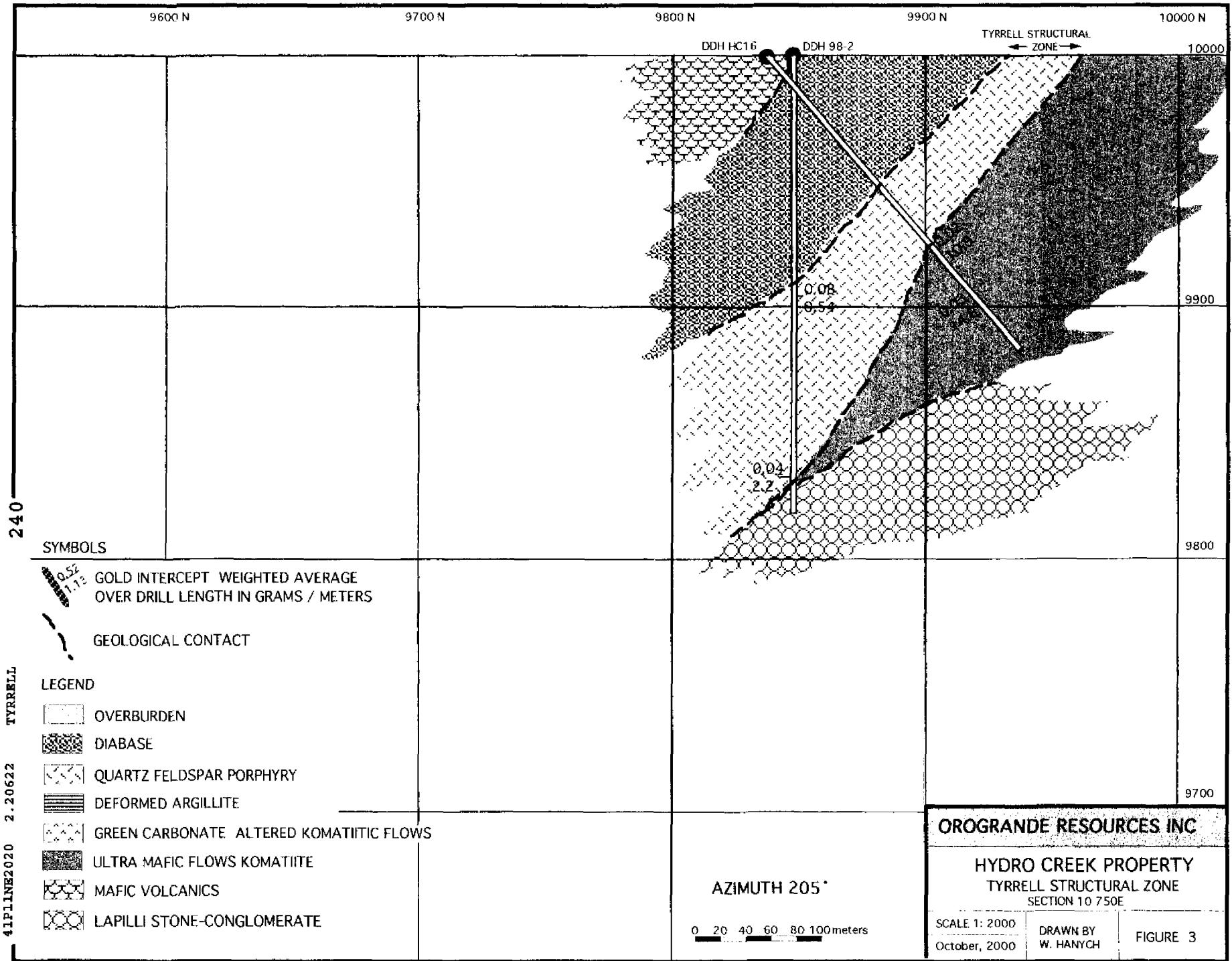
**HYDRO CREEK GOLD  
PROPERTY  
CLAIM MAP**

SCALE 1: 20,000

REF MAP MNR CLAIM MAP G 3725 FIGURE 2







1+00W

0+50W

10000

DDH98-4

Lacarte gold pit

DDH98-5

9900

0.52  
1.13

9800

250



41F11NE2020 2.20622

TYRRELL

## SYMBOLS

— QUARTZ-CARBONATE VEINS

 GOLD INTERCEPT WEIGHTED AVERAGE  
OVER DRILL LENGTH IN OZ/T / METERS

GEODEGICAL CONTACT

## LEGEND

OVERBURDEN

FELDSPAR PORPHYRY

CHEMICAL SEDIMENTS

ANDESITIC VOLCANICS

ULTRAMAFIC VOLCANICS

OROGRANDE RESOURCES INC.

azimuth 240°

HYDRO CREEK PROPERTY

LACARTE GOLD PIT

OLD GRID SECTION 10+45W

0 5 10 15 meters

SCALE 1: 500  
October, 2000DRAWN BY  
W. HANYCH

FIGURE 4



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TYRRELL

260

