010

DIAMOND DRILLING

Area: O'Sullivan Lake

Report No: 27

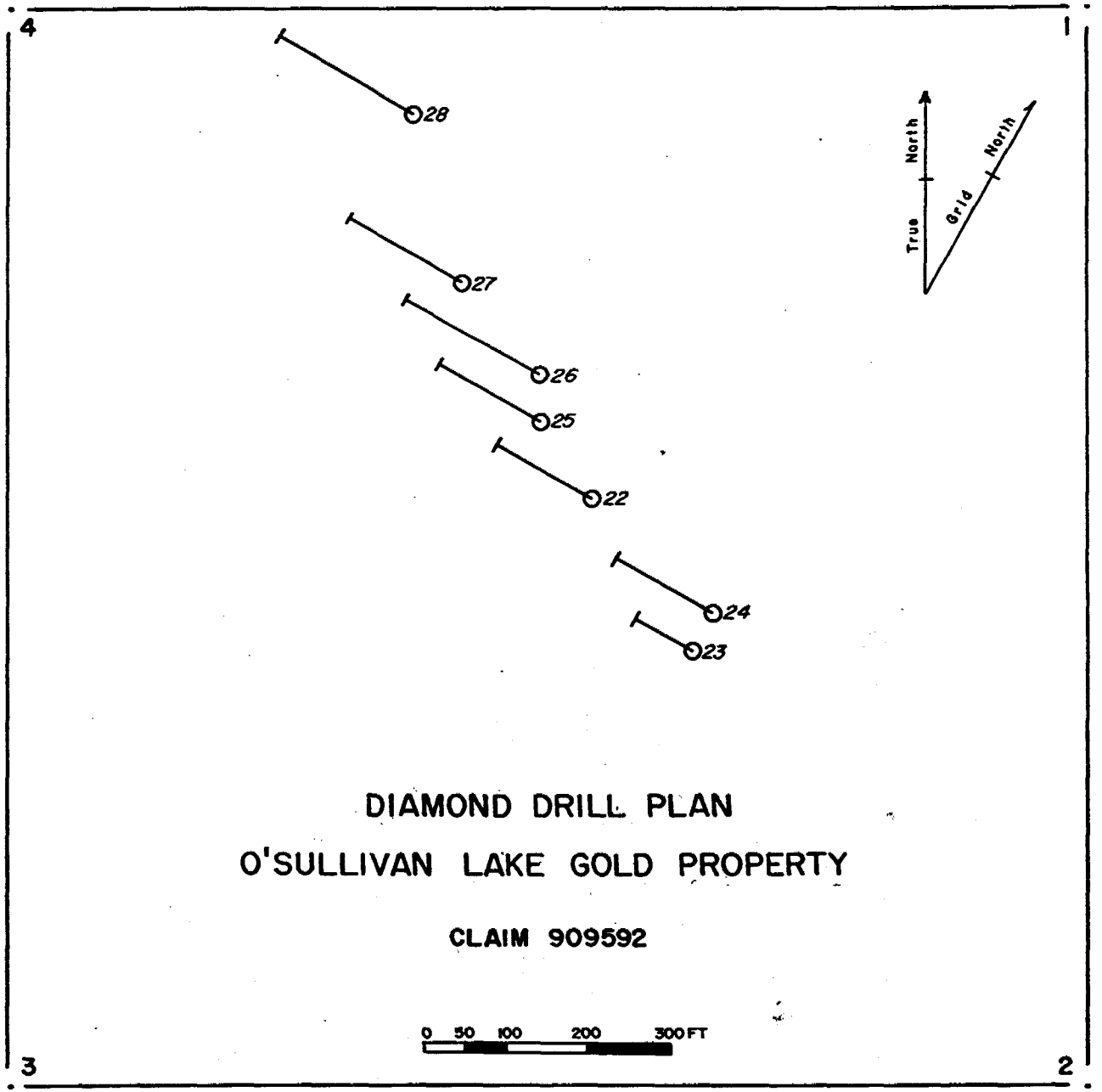
WORK PERFORMED FOR: Joseph B. Pendergast

RECORDED HOLDER: SAME AS ABOVE [x]

: OTHER [ ]

CLAIM NO.	HOLE NO.	FOOTAGE	DATE	NOTE
TB 909592	22	257'	Oct/86	(1)
	23	154'	Oct/86	(1)
	24	262'	Oct/86	(1)
	25	277'	Oct/86	(1)
	26	367'	Oct/86	(1)
	27	318'	Oct/86	(1)
	28	365'	Oct/86	(1)

NOTES: (1) #125-87(filed in July/87)



DIAMOND DRILL PLAN

O'SULLIVAN LAKE GOLD PROPERTY

CLAIM 909592

MARCH 3, 1987

W Sutt

O'SULLIVAN LAKE GOLD PROPERTY

Diamond Drill Hole #22

Bearing: 300°
Inclination: -60°

Depth: 257'

Grid Location:

Latitude 2600 N
Departure 0470 W

Drilling Dates:
1986.10.07 - 1986.10.09

FOOTAGE	DESCRIPTION
000.0 - 004.0	Casing.
004.0 - 039.2	Rhyolite, dark green to grey, very fine to fine grained, hard. 10% grades to Andesite, green to grey, very fine grained (5.7' to 6.0', 6.4' to 7.0', 7.3' to 7.5', 7.7' to 7.8', 14.2' to 14.7', 15.9' to 16.3'). 3% thin quartz-carbonate veining (80° quartz) at 4.2', 5.2', 14.6', 14.9', 16.0', 20.9' and 21.6' at random orientations. Quartz bleb in multiple fracture zone at 12.1' (5.0 cm long), and 21.6' (3.0 cm long broken up). From 4.0' to 9.5' have 5% to 10% pyrrhotite finely disseminated and concentrated along small fractures. 2.0 cm of high pyrrhotite concentration at 7.0'; 2.0 cm oval bleb of high pyrrhotite concentration at 9.1'. Pyrrhotite becomes intermittant and dominantly fracture associated after 9.5'. Minor associated pyrite in quartz vein at 4.2', 16.0', 16.6', 21.6', in quartz bleb at 21.6' and along fracture at 13.6'. Quartz veins at 27.5' (2 mm, 50° to core axis, 8% pyrite and pyrrhotite as fine grained inclusions), 30.2' (2 mm, 70° to core axis, 30% carbonate), 31.9' (1 mm, 40° to core axis, 20% carbonate), 32.2' (2 mm, 50° to core axis, 10% carbonate, 4% pyrite and pyrrhotite fine grained inclusions) and 38.6' (2 mm, 70° to core axis). Pyrrhotite intermittant, finely disseminated and fracture associated decreases from 25.0' to trace at 39.2'. 1.0 cm band of high concentration with minor pyrite at 36.9' dips at 60° to the core axis.
039.2 - 039.8	Andesite, dark green, fine grained, with a series of 10 parallel quartz veins 0.5 mm to 3 mm at 45° to core axis, granular quartz, trace pyrrhotite and pyrite.
039.8 - 046.8	Rhyolite, dark green to grey, fine grained. 1 cm band at 41.5' has fine to medium grained pyrrhotite with minor pyrite and dips at 80° to core axis. At 42.5', two quartz-carbonate seams (60% quartz), dip at 55° to core axis, and are 7 mm and 2 mm thick. 2 mm carbonate seams occur at 44.4' (30° to core axis), 44.8' (50° to core axis), 44.9' (50° to core axis), 45.5' (40° to core axis), 45.7' (30° to core axis), 45.9' (40° to core axis), 46.3' (40° to core axis), 46.4' (45° to core axis), 46.5' (45° to core axis) and 46.6' (45° to core axis). The last four carbonate seams terminate along a 10° to core axis carbonate-filled fracture which runs from 45.9' to 46.7'. Minor pyrrhotite and trace pyrite along carbonate seams and fractures. Rare sulphides disseminated throughout.

FOOTAGE	DESCRIPTION
046.8 - 048.6	Andesite, grey to green, fine grained. Fine carbonate seams emanate from 1 mm seam sub-parallel to core axis. Trace pyrite and pyrrhotite in carbonate seams.
048.6 - 049.1	Brecciated quartz stringer with associated andesite and minor carbonate and feldspar phenochrysts at 30° to core axis. Trace pyrite and pyrrhotite.
049.1 - 052.5	Andesite, grey, slightly green, fine grained. Trace thin carbonate seams at various angles. Rare finely disseminated sulphides, dominantly pyrrhotite.
052.5 - 053.3	Brecciated rhyolite and quartz. Rhyolite, medium to dark grey, slightly green, fine grained. Quartz, off-white and white, occasionally along fine fractures. Finely disseminated pyrrhotite with trace pyite; some orange rust.
053.3 - 071.3	Andesite, banded dark grey to grey and medium grey, fine grained, trace finely disseminated pyrrhotite and rare pyrite. Quartz seam at 53.8', 1.0 to 2.0 cm at 80° to core axis. Quartz seam (30% carbonate) at 54.7', 2 mm at 35° to core axis. Quartz seam (30% carbonate) at 54.3', 5 mm at 45° to core axis. Quartz seam (30% carbonate) at 54.8', 5 mm at 45° to core axis. Two quartz seams intersect at 69.6'; 5 mm at 20° to core axis, and 3 mm at 35° to core axis. 10% sulphides in and around seams (50% pyrrhotite, 50% pyrite, trace chalcopyrite).
071.3 - 077.7	Andesite, dark grey, slightly green, fine grained. 15% sulphides (80% pyrrhotite, 20% pyrite, trace chalcopyrite) associated with quartz seams at 72.5' (3 mm at 35° to core axis), 75.3' (3 mm at 40° to core axis) and 75.8' (8 mm, elliptical). Quartz seam from 76.0' to 77.6', sub-parallel to core axis, 2.0 cm, white with minor orange rust stain and 5% associated sulphides (80% pyrrhotite, 20% pyrite).
077.7 - 079.5	Quartz diorite, medium grey to spotted khaki, fine to medium grained, upper contact at 60° to core axis, lower contact indefinite. Quartz seam at 77.8' (1.0 cm, 50° to core axis) stops at upper contact, slight orange rust stain, no visible sulphides. Quartz seam at 78.8' (1.5 cm, 50° to core axis), rare pyrrhotite. Quartz seam at 79.2' (8 mm, 50° to core axis) has platey pyrrhotite on intersecting fracture face. Quartz seam at 79.5' (3 mm, 55° to core axis) is truncated at lower boundary, and has platey pyrrhotite on intersecting fracture face.
079.5 - 096.7	Andesite, medium grey, fine grained with minor thin carbonate filled fractures. Quartz seam at 95.1' (7 mm, 90° to core axis) has 10% disseminated sulphides (90% pyrrhotite, 10% pyrite).

FOOTAGE	DESCRIPTION
096.7 - 102.0	Andesite, medium to dark grey, fine grained. Pressure swirls and contortions in top 4.0'. Vague carbonate-quartz banding in this section has up to 5% sulphides (80% pyrrhotite, 20% pyrite). Rest of interval has approximately 0.25% disseminated sulphides.
102.0 - 106.3	Metamorphosed argillaceous sediment, dark grey to light grey, very fine grained with few fractures and upper contact at 25° to core axis. Quartz seam at 102.3' (8 mm, 35° to core axis) has associated 2% very finely disseminated pyrite. Quartz-argillite band (70% quartz) from 103.3' to 103.5' is 40° to core axis and has 5% associated cubic pyrite and trace pyrrhotite. Quartz seam at 104.3' (1.0 cm, 40° to core axis) has no visible sulphides. Altered quartz seam with carbonate and andesite inclusions at 105.0' (1.0 cm to 2.0 cm, 90° to core axis) has approximately 15% sulphides (50% pyrite, 50% pyrrhotite, rare chalcopyrite). Platey pyrrhotite on fracture planes. Lower contact irregular at approximately 80° to core axis.
106.3 - 112.0	Quartz diorite, spotted off-white in medium grey groundmass, coarse grained. Dominantly unaltered with minor fractures at approximately 55° to core axis and rare disseminated pyrrhotite and pyrite at 109.5'. Platey pyrrhotite and minor pyrite in fine fractures. Quartz seam (5 mm) from 109.9' to 112.0' sub-parallel to core axis has approximately 20% pyrrhotite, ½% pyrite and rare chalcopyrite.
112.0 - 120.7	Andesite, dark grey, slightly green, fine grained, uneven upper contact. Quartz seam at 115.1' (5 mm, 55° to core axis) has trace galena and trace pyrite. Quartz bleb at 115.9' (3.0 cm x 2.0 cm) houses no visible sulphides. Quartz seam from 117.3' to 120.7' (1.0 cm to 3.0 cm) runs sub-parallel to core axis, has 20% sulphides (70% pyrite, 25% pyrrhotite, 5% chalcopyrite) and trace chloritic alteration.
120.7 - 124.6	Andesite, medium grey, dark grey in part, light grey patch at 201.8', fine grained, grades to rhyolite in part. Quartz vein at 112.0' (5.0 cm, 20° to core axis), slightly chloritic, 15% sulphides (70% pyrrhotite, 30% chalcopyrite), very fine speck of visible gold.
124.6 - 124.8	Quartz diorite dyke, off-white, coarse grained spots in medium grey fine grained groundmass, very hard. Upper and lower contacts at 80° to core axis. Quartz seam from 124.6' to 124.8' (2 mm, 20° to core axis) houses one small pyrite pebble.
124.8 - 139.0	Andesite, dark green to grey, fine grained, fairly coherent with occasional carbonate fracture infill, one carbonate seam and one quartz seam. Patchy sections of approximately 1% disseminated pyrrhotite associated with carbonate alteration. Solid massive pyrrhotite band at 130.0' (4.0 cm, 60° to core axis).

FOOTAGE	DESCRIPTION
139.0 - 158.0	Andesite, with four short intersections of quartz albite porphyry dykelets. Andesite, dark green to dark grey, scattered dark brown bombs between 143.0' and 148.0'. Moderately fractured with carbonate slightly siliceous infill at random angles. Trace disseminated pyrite. Quartz albite porphyry dykelets (140.7' to 141.1', 148.5' to 149.2', 149.4' to 149.7', 150.1' to 150.3'), off-white, coarse grained feldspar and quartz phenocrysts in dark grey fine grained groundmass. Angle of intersection between 30° and 70° to core axis. Rare finely disseminated sulphides.
158.0 - 163.6	Rhyolite, dark green to grey, fine grained with 20% irregular yellow to buff rhyolite flow top alteration. Minor finely disseminated and occasionally patchy sulphides (70% pyrite, 30% pyrrhotite).
163.6 - 178.0	Rhyolite, dark green to grey, fine grained, 10% grades to andesite. Multiple fractures with carbonate (quartz in part) infill, most at 50° to core axis. Quartz seam at 163.6' (2 mm, 50° to core axis). Quartz bleb at 167.2' (3 mm) houses 15% sulphides (80% pyrrhotite, 15% chalchopyrite, 5% pyrite). 0.5% pyrrhotite and pyrite disseminated throughout and rarely concentrated in fractures.
178.0 - 182.2	Rhyolite, dark green to grey, fine grained. Four thin quartz seams at various angles to the core axis. Quartz seam at 181.7' has associated chlorite. Rare disseminated sulphides. Lower contact at 60° to core axis.
182.2 - 184.7	Diabase dyke, dark grey with black specks, medium grained. Three fractures with carbonate infill at random angles to core axis.
184.7 - 187.5	Rhyolite, medium to dark grey, becoming dark green to grey at 185.9'. Four quartz veins 5 mm thick at 60° to core axis. Trace disseminated sulphides. Lower contact at 50° to core axis.
187.5 - 257.0	Diabase, dark grey with black specks, medium grained, very homogeneous, very few fractures, no visible sulphides.
257.0	End of hole. Good sludge recovery throughout. Bottom hole dip test = 64°.

CORE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K1	4.0	7.7	3.7	32	
K2	7.7	9.5	1.8	6	
K3	9.5	12.1	2.6	7	
K4	12.1	15.2	3.1	26	
K5	15.2	17.0	1.8	27	
K6	17.0	21.1	4.1	6	
K7	21.1	23.0	1.9	37	
K8	23.0	27.0	4.0	11	
K9	27.0	30.4	3.4	3	
K10	30.4	34.0	3.6	15	
K11	34.0	36.5	2.5	15	
K12	36.5	39.2	2.7	48	
K13	39.2	39.8	0.6	7	
K14	39.8	42.0	2.2	4	
K15	48.6	49.1	0.5	15	
K16	52.3	53.3	1.0	15	
K18	69.6	71.3	1.7	206	140
K19	72.5	75.5	3.0	41	
K20	75.5	77.7	2.2	703	
K21	77.7	79.6	1.9	396	
K22	94.8	95.4	0.6	30	
K23	96.7	97.6	0.9	49	
K24	97.6	101.0	3.4	6	
K25	103.1	105.2	2.1	51	102
K26	109.6	112.0	2.4	44	32
K27	114.7	117.3	2.6	12	
K28	117.3	120.7	3.4	51	200
K29	122.0	123.4	1.4	0.249 oz	3400
K30	129.8	130.4	0.6	178	
K31	133.9	135.0	1.1	64	
K32	158.0	161.5	3.5	44	
K33	161.5	163.6	2.1	12	
K34	163.6	167.0	3.4	25	
K35	167.0	171.0	4.0	12	360
K36	171.0	175.0	4.0	11	
K37	175.0	178.0	3.0	10	
K38	181.6	182.2	0.6	14	
K39	184.7	187.5	2.8	6	

SLUDGE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K1	4	20	16	10	
K2	20	37	17	8	
K3	37	57	20	2	
K4	57	77	20	1420	2000
K5	77	97	20	118	
K6	97	117	20	134	183
K7	117	137	20	1700	610
K8	137	157	20	186	
K9	157	177	20	82	196
K10	177	197	20	94	
K11	197	217	20	60	
K12	217	237	20	24	
K13	237	257	20	12	

Core diameter 3.0 cm.

Hole Logged By:

Bill J. Sutherland

Bill J. Sutherland

O'SULLIVAN LAKE GOLD PROPERTY

Diamond Drill Hole #23

Bearing: 300°
Inclination: -60°

Depth: 154'

Grid Location:

Latitude 2500 N
Departure 0270 W

Drilling Dates:
1986.10.09 - 1986.10.10

FOOTAGE	DESCRIPTION
000.0 - 014.0	Casing.
014.0 - 154.0	Diabase, medium to dark grey, medium grained, minor thin fractures to 32.0', rare fractures thereafter, rare carbonate infill. Dominantly massive and unaltered.
154.0	End of hole, good sludge recovery throughout. Bottom hole dip test was not taken.

CORE SAMPLES

No core samples were taken, as the hole consisted entirely of diabase.

SLUDGE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K14	14	27	13	6	
K15	27	47	20	12	
K16	47	67	20	10	
K17	67	87	20	6	
K18	87	107	20	8	
K19	107	127	20	4	
K20	127	147	20	38	
K21	147	154	7	4	

Core diameter 3.0 cm.

Hole Logged By:

Bill J. Sutherland

O'SULLIVAN LAKE GOLD PROPERTY

Diamond Drill Hole #24

Grid Location:

Bearing: 300°
Inclination: -60°

Latitude 2550 N
Departure 0270 W

Depth: 262'

Drilling Dates:
1986.10.10 - 1986.10.11

FOOTAGE	DESCRIPTION
000.0 - 034.0	Casing.
034.0 - 047.0	Rhyolite, dark green to grey, fine grained, 10% andesite. Network of flow top rhyolite fractures from 36.1' to 36.7'; no visible sulphides. Scalloped fracture at 40.6' (3 mm, 30° to core axis) has trace very fine grained sulphides. Thin fracture infill at 40.8' (25° to core axis) has trace fine grained pyrite and chalcopyrite. Bizarre rhyolite-quartz flow top fracture infill from 41.0' to 47.0'. Sulphides associated with some of these. Fracture infill at 45.4' contains 5% sulphides (60% pyrrhotite, 40% chalcopyrite).
047.0 - 058.0	Rhyolite, generally light green, 35% dark green, fine grained. Well fractured and brecciated (flow top) in part. Quartz seam at 49.0' (1.0 cm, 40° to core axis), no visible sulphides.
058.0 - 064.8	Andesite, dark green, dark grey, fine grained; 20% rhyolite, dark green, fine grained. Approximately 20% carbonate seams and fracture infill with dominant orientation of 40° to core axis. Quartz seam at 59.0' (8 mm, 40° to core axis), offset 2.0 cm, no visible sulphides. Light brown rhyolite inundation from 59.9' to 60.2', 63.4' to 63.6' and 64.3' to 64.5', with trace fine grained disseminated pyrite.
064.8 - 065.3	Diabase dyke, dark grey, fine to medium grained. Top contact at 55° to core axis, bottom contact at 70° to core axis.
065.3 - 065.9	Andesite, dark green to dark grey, fine grained. Quartz seam at 65.6' (7 mm, 50° to core axis) contains 1% chalcopyrite and pyrite.
065.9 - 066.6	Diabase dyke, very dark grey, fine grained, no alteration. Upper contact at 70° to core axis, lower contact at 60° to core axis.
066.6 - 069.4	Andesite, dark grey, fine grained. A few thin fractures with carbonate infill. Rare disseminated fine grained pyrite and pyrrhotite.
069.4 - 074.1	Diabase dyke, very dark grey, fine grained, unaltered. Upper contact at 50° to core axis and lower contact at 50° to core axis.

FOOTAGE	DESCRIPTION
074.1 - 079.8	Andesite, dark grey, slightly green, fine grained. Numerous thin fractures with carbonate infill at approximately 50° to core axis over top 1.0'. Approximately 0.25% very finely disseminated pyrite, pyrrhotite and chalcopyrite from 74.1' to 75.0'. Sulphides generally become scarce below 75.0'. Some carbonate-quartz fracture infill to 79.0', with approximately 20% chalcopyrite in carbonate-quartz seam at 78.7'. Two 7 mm quartz seams at 79.5' and 79.8' dip at 50° to core axis and contain trace very fine grained disseminated pyrrhotite.
079.8 - 085.0	Rhyolite, dark green to grey, fine grained. 20% rhyolite flow top alteration and fracture infill. Contorted fractures and swirls between 82.0' and 84.0'. Trace disseminated pyrite, chalcopyrite and pyrrhotite throughout. Quartz seam at 81.6' (5 mm, 40° to core axis) and 83.7' (1.0 cm, 40° to core axis).
085.0 - 092.0	Rhyolite, dark grey to green, fine grained, grades to andesite with depth. Frequent carbonate-quartz (70% carbonate) seams of random orientation and housing trace very finely disseminated sulphides. Orange rust spots along thin quartz seam at 89.3' (80° to core axis). Lower contact at 40° to quartz axis.
092.0 - 099.4	Gnessic anorthite-augite porphyry dyke, black and off-white, sub-schistose with few alterations. No visible sulphides. Fragmented quartz seam at 95.6' (1.0 cm, 30° to core axis).
099.4 - 109.2	Rhyolite, light brown to buff, very fine grained to cryptocrystalline. Moderately fractured at approximately 50° to core axis. Upper contact is at 80° to core axis; lower contact is indistinct. Up to 5% finely disseminated sulphides throughout (70% pyrite, 20% chalcopyrite, 5% galena, 5% pyrrhotite). Five mm quartz seams at 102.0' (30° to core axis), 105.9' (45° to core axis) and 106.2' (40° to core axis). Quartz bleb at 106.9' (2.0 cm). Anorthite-augite porphyry intrusion partially cuts core for 3.0 cm at 101.1'. Dirty carbonate seam at 106.5' (5 mm, 30° to core axis) contains trace disseminated pyrite. Massive pyrite with 10% chalcopyrite in fractured 5 mm seam (30° to core axis) at 105.2' is truncated by a perpindicular fracture one-third of the way down/across the core. Massive pyrite seam at 105.4' (8 mm, 40° to core axis) has trace dirty carbonate in two spots along the length of the seam.
109.2 - 112.5	Transition zone from rhyolite as above to diabase as below. 40% rhyolite at top decreases quickly to 10%, and diminishes to 0% at 112.5'. Rhyolite is in large phenocrysts. Those above 112.0' are light brown to buff, while those below 112.0' are dark grey. Sulphides (70% pyrrhotite, 20% pyrite, 10% chalcopyrite) occur prominantly (25%) at top and decrease with depth to approximately 1% at the base.

FOOTAGE	DESCRIPTION
112.5 - 115.0	Diabase dyke, dark grey, fine to medium grained with minor ribbons of carbonate fracture infill.
115.0 - 118.0	Rhyolite-diabase flow breccia. Rhyolite, light brown to pale green, trace green chloritic alteration, few thin carbonate-quartz seams cut rhyolite but not diabase. General weaving of rhyolite and diabase sub-parallel to core axis. Diabase, dark grey, fine to medium grained. 2% to 5% sulphides (30% pyrite, 40% pyrrhotite, 30% chalcopyrite) in fractures, platey on fracture slip plane, and disseminated near contact in diabase.
118.0 - 118.8	Quartz diorite with diabase intrusive. Quartz diorite, off-white, course grained quartz eyes in dark green to grey groundmass. Trace very finely disseminated sulphides throughout and concentrated (5%) in thin quartz-carbonate fracture infill at 118.7' (40° to core axis). Fracture in diabase (2 mm, 20° to core axis) runs for 0.4' along core, is 80% filled with pyrrhotite and pyrite, and 10% filled with carbonate-quartz.
118.9 - 122.0	Quartz diorite, off-white quartz eyes in medium to dark grey groundmass. Quartz seam at 119.7' (4 mm, 40° to core axis) contains 2% sulphides (pyrrhotite and chalcopyrite). Fracture intersecting this quartz seam at 50° to core axis has platey pyrite on the slip face. Rhyolite seam (1.0 cm) runs sub-parallel to core axis from 120.4' to 121.8' and contains trace disseminated sulphides. Diabase phenocryst (1.5 cm) at 119.1'. Lower contact at 60° to core axis.
122.0 - 126.4	Rhyolite, light brown to yellow to pale green, very fine grained to cryptocrystalline. Few fractures and few thin quartz seams. Rare disseminated sulphides. Some platey pyrite on fracture slip face at 123.2', 123.9', 124.3', 125.4' and 126.4'. Lower contact at 90° to core axis.
126.4 - 128.1	Quartz albite porphyry, pale green and off-white coarse grained spots in fine grained dark grey groundmass. Scattered thin fractures with occasional quartz-carbonate infill. Rare disseminated sulphides. Irregular lower contact.
128.1 - 134.0	Rhyolite, medium to dark grey, very fine grained to cryptocrystalline, becoming light brown to yellow to pale green at 129.0', and fine grained from 132.5'. Irregular 8.0 cm diabase intrusion runs sub-parallel to core axis at 128.5' and contains 5% sulphides (60% pyrrhotite, 40% chalcopyrite, trace galena). Multiple irregular fracturing in top foot. Remainder has moderate fracturing with a couple of thin quartz-carbonate seams and platey pyrite on slip faces at 128.9' and 132.4'.

FOOTAGE	DESCRIPTION
134.0 - 140.8	Rhyolite, light brown to yellow to pale green, slightly grey in part, very fine grained to cryptocrystalline. Minor fracturing with occasional platey pyrite on slip face. Trace very finely disseminated sulphides throughout.
140.8 - 150.0	Rhyolite, light grey to light brown, slightly yellow, fine grained. Trace disseminated sulphides throughout. Moderately fractured at approximately 45% to core axis with a slight sericitic hue. Andesite intrusive from 144.5' to 144.8' is light grey, fine grained, 50° to the core axis, contains trace disseminated sulphides and a quartz-carbonate seam at 20° to the core axis.
150.0 - 153.4	Andesite, light grey to light green, slightly brown, sericitic hue and fine grained with minor thin quartz veining in top foot. Rare pyrrhotite and chalcopyrite in quartz veins which trend generally at 45° to core axis. Bottom contact at 60° to core axis.
153.4 - 170.2	Rhyolite, light green to light brown to grey, cryptocrystalline. 20% grades to rhyolite, light green to light brown to grey, fine grained. Moderate random fracturing. Quartz-carbonate seam (60% quartz) at 167.6' (8 mm, 40° to core axis) contains rare disseminated pyrite. Platey pyrite on fracture slip face at 167.0', 168.2', 169.2' and 170.0'. Speckled pyrite on fracture slip face at 169.6' and 169.9'.
170.2 - 185.4	Rhyolite, similar to that from 153.4' to 170.2', light green to light brown to grey, cryptocrystalline. Minor spotted orange phenocrysts between 170.4' and 170.6'. Thin quartz seams (50° to core axis) at 181.7', 181.8' and 182.0'. Platey pyrite on most slip faces of multiple fractures; 170.2', 170.3', 170.5', 171.0', 171.1', 172.4', 173.0', 173.2', 174.0', 174.3', 174.5', 175.3', 176.5', 177.2', 177.6', 179.0', 179.3', 180.4', 183.5' and 184.0'. Trace finely disseminated pyrite throughout. Uneven lower contact.
185.4 - 195.7	Quartz diorite, light grey to buff with dark specks, medium grained. Few fractures with occasional carbonate infill. Rare chalcopyrite in some fractures. Quartz-carbonate infill (80% quartz) in thin seams (55° to core axis) at 193.6' and 193.8' with 2% associated pyrite.
195.7 - 224.0	Rhyolite, pale brown to grey, cryptocrystalline, well fractured, rare thin quartz seams. Platey pyrite on fracture slip face at 196.8', 197.7', 198.3', 198.5', 198.7', 200.5', 201.4', 201.8', 202.2', 202.7', etcetera. Two thirds of fractures have platey pyrite and there is a fracture about every 0.4'. Quartz seam at 215.5' (1.0 cm, 40° to core axis) contains some grey fine grained felsitic alteration and no visible sulphides. Quartz seam at 217.3' (6 mm, 40° to core axis) has 8% platey pyrite on slip face and some slight fine grained felsitic alteration around edges. Quartz seams at 222.2', 223.4' and 223.5' (1.0 cm to 2.0 cm, 55° to core axis) have no visible sulpides.

FOOTAGE	DESCRIPTION
224.0 - 232.0	Quartz diorite, medium grey, medium grained. Quartz-carbonate seam (70% carbonate) at upper contact (8 mm, 50° to core axis) pinches out over the width of the core and has very fine pyrite along the seam contact. Quartz-carbonate seam (70% carbonate) at 224.4' (1.0 cm, 60° to core axis) has no visible sulphides. Moderate fracturing throughout, dominantly at 60° to core axis. Trace very finely disseminated sulphides throughout. Lower contact at 80° to core axis.
232.0 - 235.1	Rhyolite, light brown to pale green, cryptocrystalline, very fine grained in part. Moderate random fine fractures. Minor platey pyrite on some fracture slip faces. Lower contact at 60° to core axis.
235.1 - 239.2	Quartz diorite, blue-grey, medium grained, somewhat gnessic from 236.0' to 238.5'. Quartz seam at 236.7' (8 mm, 40° to core axis) has trace pyrite and chalcopyrite along its edge. Quartz seam at 237.7' (5 mm, 30° to core axis) contains rare chalcopyrite.
239.2 - 239.8	Dyke (?) of metamorphosed sediment, medium to dark grey, fine grained. Upper contact at 30° to core axis, lower contact at 50° to core axis.
239.8 - 253.1	Quartz diorite, grey, medium grained with minor thin fractures. Ten quartz seams from 243.6' to 244.8' (5 mm to 1.0 cm, 60° to 70° to core axis) compose 25% of the section and contain 0.25% sulphides (60% pyrite, 20% pyrrhotite, 20% chalcopyrite). Eight quartz seams from 249.3' to 252.5' (5 mm to 2.0 cm, 70° to core axis) with high concentration of quartz (65%) from 250.5' to 251.5', contain 0.5% sulphides (60% pyrite, 35% pyrrhotite, 5% chalcopyrite). Lower contact at 25° to core axis. Two 3.0 cm quartz blebs at base of interval have 0.25% sulphides (60% pyrite, 30% pyrrhotite, 10% chalcopyrite) in adjacent slightly gnessic, sericitic, altered strata.
253.1 - 258.2	Volcanic sediment, medium to dark grey, fine grained, finely interbedded at 40° to core axis. Brecciated quartz seams at 255.8' and 255.9' (5 mm, 40° to core axis). Invasion rock surrounding quartz is darker than host and contains approximately 20% very finely disseminated pyrrhotite. Independent of quartz there is 5% very finely disseminated patchy pyrite and pyrrhotite from 255.0' to 255.5'.
258.2 - 262.0	Quartz diorite, dark green to dark grey, medium grained. Upper contact at 80° to core axis. Minor fracturing with trace platey pyrite on a couple of slip faces. Two thin quartz seams (30° to core axis) at base of interval have no visible sulphides.
262.0	End of hole. Patchy sludge recovery. Bottom hole dip test = 68°.

CORE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K40	39.4	40.7	1.3	7	
K41	41.3	45.4	4.1	27	
K42	62.9	64.8	1.9	19	
K43	65.3	65.9	0.6	6	120
K44	66.6	69.4	2.8	10	
K45	74.1	76.0	1.9	8	
K46	78.6	79.8	1.2	19	
K47	79.8	82.5	2.7	14	
K48	82.5	85.0	2.5	21	
K49	88.8	89.6	0.8	10	
K50	99.4	103.0	3.6	110	80
K51	103.0	106.0	3.0	0.030 oz	240
K52	106.0	109.2	3.2	41	
K53	109.2	112.5	3.3	12	900
K54	115.0	118.0	3.0	17	1040
K55	118.0	118.8	0.8	74	
K56	118.8	122.0	3.2	6	160
K57	128.1	129.1	1.0	52	420
K58	144.2	146.0	1.8	3	
K59	150.0	151.1	1.1	140	
K60	166.7	170.2	3.5	34	
K61	181.0	184.2	3.2	19	
K62	192.0	194.5	2.5	22	
K63	214.7	218.2	3.5	6	
K64	221.5	224.0	2.5	8	
K65	224.0	227.0	3.0	11	
K66	236.0	238.5	2.5	111	
K67	243.6	244.8	1.2	251	
K68	249.1	250.5	1.4	11	
K69	250.5	251.5	1.0	17	
K70	251.5	253.1	1.6	11	
K71	254.8	256.4	1.6	36	
K72	260.0	262.0	2.0	49	

SLUDGE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K22	35	47	12	16	
K23	47	67	20	68	910
K24	67	87	20	26	
K25	87	107	20	96	124
K26	107	127	20	22	300
K27	127	147	20	36	270
K28	147	167	20	18	

SLUDGE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K29	167	187	20	24	
K30	187	207	20	14	
K31	207	227	20	26	
K32	227	247	20	50	

Poor returns were recovered for sludge samples K22, K23, K26, K27, K30, K31 and K32.

Core diameter 3.0 cm.

Hole Logged By:

Bill J. Sutherland

Bill J. Sutherland

O'SULLIVAN LAKE GOLD PROPERTY

Diamond Drill Hole #25

Bearing: 300°
Inclination: -60°

Depth: 277'

Grid Location:

Latitude 2650 N
Departure 0570 W

Drilling Dates:
1986.10.12 - 1986.10.13

FOOTAGE	DESCRIPTION
000.0 - 015.0	Casing.
015.0 - 016.0	Quartz diorite, medium grey, medium to coarse grained. Few fine fractures, no visible sulphides. Lower contact at 90° to core axis.
016.0 - 021.3	Andesite, dark green, becoming medium grey, brown bombs between 17.4' and 18.8', fine grained. Frequent carbonate seams at various angles to core axis. Meandering quartz bleb of 2.0 cm in thickness runs from 17.7' to 18.0'. Trace very fine sulphides associated with chloritic alteration. Lower contact at 60° to core axis.
021.3 - 022.5	Gnessic anorthite-augite porphyry dyke, black and off-white, sub-schistose with few alterations. Quartz seam at 21.8' (3.0 cm, 80° to core axis) holds 2% chalcopyrite. Lower contact at 60° to core axis.
022.5 - 026.0	Andesite, medium to dark green, grey in part, brown bomb at 25.5', fine grained, 15% grades to rhyolite. Scattered thin randomly oriented carbonate seams. Trace sulphides.
026.0 - 053.6	Rhyolite, dark green to grey, fine grained. 4 cm band of light green to yellow rhyolite intrudes at 27.0' and trends at 50° to core axis. Rhyolite flow top swirls and contortions with minor brecciation occur intermittently from 28.6' to 32.6'. This section contains minor patches (0.25% in total) of associated sulphides (80% pyrrhotite, 20% chalcopyrite). Carbonate seam at 35.6' (1.0 cm, 80° to core axis) has 10% associated pyrrhotite. Secondary rhyolite fracture infill at 50.7' (4 mm, 70° to core axis) contains 3% disseminated pyrrhotite and 0.5% chalcopyrite. Secondary green-grey band of rhyolite at 51.2' (2.0 cm, 80° to core axis) contains 10% disseminated pyrrhotite. Flow top breccia zone between 51.8' and 52.0' contains 5% pyrrhotite. Flow top breccia zone between 52.5' and 52.7' contains fracture infill of 30% pyrrhotite and 2% chalcopyrite. Contact zone from 53.5' to 53.8' has associated secondary rhyolite and 10% fine grained chalcopyrite. Lower contact of 40° to core axis is uneven in part.
053.6 - 054.3	Quartz diorite, off-white spots in dark grey to brown groundmass. Several fine fractures at 45° to core axis. Lower contact at 70° to core axis.

FOOTAGE	DESCRIPTION
054.3 - 072.3	Rhyolite, dark green to grey, fine grained. Small random fractures. 3 mm to 5 mm quartz seams (40° to core axis) at 58.8', 61.9', 62.6' and 68.9'. Carbonate-quartz seam at 69.5' (1.0 cm, 30° to core axis). 2.0 cm bands of 10% very finely disseminated pyrrhotite and trace chalcopyrite (70° to core axis) occur at 54.9', 56.1', 56.7', 58.1', 62.3', 63.5', 64.8', 68.5' and 71.0'. Lower contact is indefinite.
072.3 - 092.0	Andesite, medium grey, fine grained, slightly medium grained. Numerous 5 mm to 1.0 cm carbonate stringers to 76.0'. Less frequent and thinner carbonate stringers occur thereafter. Brecciated section with 10% quartz and 10% carbonate runs from 76.1' to 76.6' and contains rare visible sulphides. Anorthite-augite porphyry dykelet from 81.8' to 82.1' (upper and lower contact at 90° to core axis) is roughly similar to those of Hole #22 and Hole #24. Quartz seams at 81.3' and 81.8' (1.0 cm, 50° to core axis) have no visible sulphides. Quartz seams at 84.3' and 87.3' (1.0 cm, 30° to core axis) contain trace fine grained pyrrhotite and pyrite. Thin quartz seams at 90.4', 90.9' and 91.3' all trend at 30° to core axis.
092.0 - 103.5	Andesite, medium grey, becoming slightly green with depth, fine grained, slightly medium grained. Medium grained, wavey, slightly altered section from 93.0' to 95.6'. Slightly brecciated, granular quartz seam with trace associated chlorite at 94.4' (1.0 cm, 40° to core axis) degenerates to carbonate within the diameter of the core and contains trace disseminated pyrite. Mineralised band at 98.0' (1.0 cm, 15° to core axis) contains 80% pyrrhotite. Section of secondary rhyolite and carbonate alteration with minor quartz from 99.2' to 99.9' has 1% pyrrhotite and trace disseminated pyrite. Quartz seam at 102.2' (6.0 cm, 40° to core axis) has trace associated chlorite and no visible sulphides. Quartz, slightly carbonate seam at 103.0' (3 mm, 35° to core axis) sports medium to coarse grained feldspar phenocrysts, but no visible sulphides.
103.5 - 130.0	Rhyolite, dark grey, slightly green, fine grained, slightly medium grained has two thin quartz seams containing trace sulphides and scattered fine carbonate seams throughout, which on minor occasions contain up to 2% pyrrhotite, trace pyrite, trace chalcopyrite and rare galena. Contorted and brecciated flow top zones from 122.0' to 122.9' and 126.6' to 127.8' contain 2% pyrite and trace chalcopyrite.
130.0 - 145.0	Andesite, medium grey, green in part, fine grained. Numerous thin fractures with carbonate fracture infill at 30° to the core axis from 130.0' to 132.0'. Section of contorted structure and alteration runs from 132.0' to 133.6' and contains 1% to 2% (10% in part) patchy sulphides (90% pyrrhotite, 10% chalcopyrite). 8 mm quartz veins (50° to core axis) at 135.9', 138.5', 138.6' and 142.0' contain trace disseminated sulphides. Multiple carbonate seams (5 mm to 1.0 cm, 40° to core axis) from 142.5' to 145.0' have rare sulphides.

FOOTAGE	DESCRIPTION
145.0 - 166.6	Rhyolite, dark grey to green, fine grained, occasionally medium grained. Upper contact along thin quartz seam is at 40° to core axis. Section from 146.2' to 147.3' contains 1% disseminated sulphides (90% pyrrhotite, 10% chalcopyrite). Band of 20% sulphides (dominantly pyrrhotite) extends from 147.4' to 147.5'. Quartz seam from 147.7' to 147.9' at 70° to core axis has 30% sulphides (60% chalcopyrite, 30% pyrrhotite, 10% pyrite). Chert band at 150.4' (1.0 cm, 70° to core axis) has 3% fine to coarse grained pyrrhotite. Patchy finely disseminated pyrrhotite (0.25% in total) runs from 151.3' to 153.6'. Carbonate seam at 157.6' (1.0 cm, 75° to core axis) contains trace pyrrhotite. Medium grained brecciated section with minor quartz and carbonate inundation runs from 161.4' to 162.1' and contains trace pyrrhotite and chalcopyrite. Multiple irregular carbonate seams (10% of rock) occur from 164.4' to 166.6' and contain 2% associated pyrrhotite and chalcopyrite.
166.6 - 181.9	Quartz albite porphyry, coarse grained off-white phenocrysts in medium to dark grey groundmass. Multiple very fine fractures and few thin quartz veins. Rare fine scattered sulphides exist in this interval.
181.9 - 189.6	Andesite, medium grey, dark green to grey, sericitic buff hue from 184.0' to 187.0', fine to medium grained. Minor scattered carbonate seams. Four quartz veins 5 mm to 1.0 cm in thickness at various angles to the core axis from 182.6' to 183.9' all contain approximately 1% disseminated pyrite.
189.6 - 233.7	Rhyolite, dark green to grey, fine grained, occasionally medium grained. Multiple quartz-carbonate seams and fracture infill at various angles to the core axis contain occasional trace associated sulphides. Slightly mineralised bands (1.5 cm to 2.0 cm, 40° to 90° to core axis), carbonaceous, black and white specked, medium grained, containing approximately 0.5% pyrrhotite with rare chalcopyrite and pyrite occur at 196.2', 200.0', 203.7', 203.9', 204.7' and 205.8'. Light green secondary rhyolite bleb of three square cm occurs at 208.7'. A cluster of cubic coarse grained pyrite crystals occurs at 213.5'. 50% flow top alteration from 222.0' to 225.6' occurs mainly along fractures. Quartz seam coincident with core axis runs from 225.0' to 227.8', and comprises 10% to 90% of core (averaging 35%). Contained in this seam are some chlorite, rhyolite, orange feldspar phenocrysts and 5% sulphides (95% chalcopyrite, 5% pyrite).

FOOTAGE	DESCRIPTION
233.7 - 259.8	Rhyolite, somewhat mafic, dark grey, fine to medium grained. Few fractures with the exception of a prominent fracture along core axis, very little alteration, rare carbonate fracture infill. Disseminated 1% to 2% medium grained pyrite from 233.7' to 240.0', then trace from 240.0' to 259.8'. Brecciated rose quartz and green-yellow rhyolite scattered seam at 256.0' trends 45° to core axis and contains trace disseminated pyrite.
259.8 - 260.3	Andesite, dark green to grey, fine grained. Carbonate seam at 260.1' (2.0 cm, 60° to core axis) contains trace pyrite. Lower contact at 60° to core axis.
260.3 - 277.0	Diabase, dark grey, fine to medium grained, becoming medium grained from 265.0'. Rare fracturing and occasional carbonate fracture infill. Trace disseminated pyrite.
277.0	End of hole. Generally good sludge recovery throughout. Bottom hole dip test = 68°.

CORE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K73	17.4	18.3	0.9	14	
K74	21.6	22.2	0.	0.110 oz	
K75	28.6	32.6	4.0	14	
K76	35.4	36.0	0.6	4	
K77	50.6	53.8	3.2	12	
K78	61.8	65.0	3.2	38	
K79	75.7	76.7	1.0	12	1800
K80	80.4	82.0	1.6	6	300
K81	83.7	84.9	1.2	196	
K82	87.0	87.8	0.8	27	
K83	97.7	98.7	1.0	6	
K84	99.2	100.2	1.0	196	
K85	101.9	102.3	0.4	27	
K86	121.8	123.1	1.3	6	
K87	126.5	127.9	1.4	11	
K88	132.0	133.6	1.6	34	
K89	137.5	138.4	0.9	8	
K90	146.1	147.3	1.2	11	
K91	147.3	148.0	0.7	0.041 oz	2.10%
K92	150.3	153.6	3.3	17	
K93	161.4	162.1	0.7	12	
K94	164.3	166.6	2.3	121	
K95	182.5	184.0	1.5	67	
K96	203.0	206.0	3.0	36	

CORE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K97	213.2	213.6	0.4	474	
K98	225.0	227.8	2.8	0.062 oz	1200
K99	233.7	237.0	3.3	0.075 oz	
K100	259.6	260.3	0.7	55	
K101	275.3	277.0	1.7	8	

SLUDGE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K33	17	37	20	1620	
K34	37	57	20	46	430
K35	57	77	20	14	
K36	77	97	20	428	
K37	97	117	20	4	
K38	117	137	20	4	320
K39	137	157	20	30	1400
K40	157	177	20	50	
K41	177	197	20	106	
K42	197	217	20	118	
K43	217	237	20	1040	490
K44	237	257	20	264	

Core diameter 3.0 cm.

Hole Logged By:

Bill J. Sutherland

O'SULLIVAN LAKE GOLD PROPERTY

Diamond Drill Hole #26

Bearing: 300°
Inclination: -60°

Depth: 367'

Grid Location:

Latitude 2700 N
Departure 0600 W

Drilling Dates:
1986.10.13 - 1986.10.16

FOOTAGE	DESCRIPTION
000.0 - 026.0	Casing.
026.0 - 034.6	Andesite, medium grey to green, fine grained. Rare finely disseminated pyrite and pyrrhotite increasing from 32.0'. Quartz seam at 33.7' (7 mm, 35° to core axis), white, 1.0 cm displacement along fracture. Quartz seam at 33.8' (5 mm to 2.0 cm thick, 45° to core axis) contains 5% disseminated pyrrhotite and trace pyrite. Quartz seam at 34.5' (1.0 cm to 2.0 cm, 45° to core axis) contains trace pyrrhotite and pyrite.
034.6 - 035.7	Quartz vein, grey to white, 50° to core axis. Andesite band at 35.3' (2.0 cm to 3.0 cm, 55° to core axis). Vein contains 7% blebs and finely disseminated pyrrhotite and pyrite, with some chalcopyrite.
035.7 - 044.8	Andesite, medium grey to green, fine grained, brown bombs from 40.6'. Platey pyrrhotite on fracture slip faces and finely disseminated throughout with rare very fine disseminated pyrite. Thin carbonate seams at various angles are scattered throughout.
044.8 - 076.1	Rhyolite, dark green to dark grey, fine grained. Rare patchy pyrrhotite with a little pyrite throughout, with pyrrhotite on fracture slip faces. Quartz seam at 47.6' (2 mm, 50° to core axis) is truncated by a 2.5 cm andesite band, medium grey to green, trending at 45° to core axis. Andesite bomb, medium grey to green, fine grained from 55.3' to 55.7', within which is a fractured 2 mm grey quartz seam trending at 40° to core axis. 20% sulphides (pyrrhotite and minor pyrite) disseminated and in blebs. Another andesite band, green to grey, fine grained at 56.5' (2.5 cm, 80° to core axis) contains 15% pyrrhotite and pyrite. Grey quartz seam at 59.5' (2 mm, 50° to core axis); grey quartz seam at 60.0' (2 mm, 60° to core axis); grey to white quartz bleb at 62.9' (1.0 cm to 2.0 cm) contains slight olivine inclusion. No visible sulphides in any of this quartz. Quartz-carbonate seam (70% quartz) at 63.2' (2 mm, 40° to core axis) has no visible sulphides. White quartz-carbonate seam (80% quartz) at 67.1' (2 mm, 35° to core axis) contains no visible sulphides. Quartz-carbonate seams with random orientation continue to occur about every foot to the base of the interval. Quartz seam at 73.8' (2 mm, 30° to core axis) incurs 2 mm fracture displacement and contains rare pyrite. Two white and grey quartz seams at 74.0' (4 mm, 55° to core axis) contain a little pyrite mineralisation. Wavy and chunky stress fractures and alteration occur at 75.0'.

FOOTAGE	DESCRIPTION
076.1 - 082.7	Rhyolite, dark green to dark grey, medium grey in part, fine grained, 10% grades to Andesite. Minor scattered thin carbonate seams. Rare pyrrhotite and pyrite (70% pyrrhotite) blebs.
082.7 - 083.4	Quartz diorite, white coarse grained quartz in brown grey and medium grey groundmass. Upper contact at 55° to core axis. Quartz seam at 83.2' (1 mm, 55° to core axis) contains rare finely disseminated pyrrhotite. Lower contact at 50° to core axis.
083.4 - 098.6	Rhyolite, dark green to grey, fine grained, 15% grades to andesite. Scattered irregular thin carbonate seams. Light grey quartz seam at 85.5' (5 mm, 45° to core axis) has 2 mm dark grey quartz seam branching from it at 55° to core axis. Rare very finely disseminated pyrite. Altered brecciated section from 89.3' to 89.9' is composed of rhyolite chunks and cream quartz blebs in fine to medium grained rhyolite. Granular quartz-carbonate seam (80% quartz) at 75.7' (5 mm to 1.0 cm, 80° to core axis) contains no visible sulphides.
098.6 - 100.6	Rhyolite breccia, dark green to grey, fine grained chunks with thin quartz-carbonate halo in groundmass of medium grey to green rhyolite. 20% pyrite and pyrrhotite disseminated in phenocrysts and 10% in blebs in groundmass. Alteration and sulphides decrease from 99.6'.
100.6 - 101.1	Rhyolite, dark green, slightly dark grey, fine grained. Multiple thin random carbonate stringers.
101.1 - 107.0	Andesite, medium grey, slightly green, with medium to dark brown patches at top and base of interval, fine grained. Multiple carbonaceous seams from 2 mm to 10 mm, majority at 50° to core axis. Brecciated section from 101.0' to 101.2' contains 10% disseminated patches of pyrite and pyrrhotite. Altered and semi brecciated section from 103.9' to 104.8' contains 10% scattered quartz-carbonate seams. Trace visible sulphides in this interval.
107.0 - 127.5	Rhyolite, dark green to dark grey, fine grained. Top foot grades from andesite and has 25% medium to dark brown banding. Multiple random carbonate stringers grade to quartz seam at 108.9' (5 mm, 50° to core axis), 114.4' (5 mm, 55° to core axis) and 119.2' (5 mm, 50° to core axis). Altered, moderately brecciated section from 113.7' to 114.4' has pronounced warping and contorted veining. 8% sulphides (pyrrhotite and minor chalcopyrite) associated with veining and alteration. Quartz seam at 121.5' (8 mm, 50° to core axis); quartz seam at 122.6' (8 mm, 50° to core axis); quartz-carbonate seam (50% quartz) at 124.1' (1.5 cm, 45° to core axis). Irregular felsite intrusion, black specked light grey, 1.0 cm to 5.0 cm at 127.3'. Rare disseminated sulphides.

FOOTAGE	DESCRIPTION
127.5 - 148.0	Quartz albite porphyry, cream coarse grained phenocrysts in medium grey groundmass. 10% grades to fine to medium grained. Quartz-carbonate seam (50% quartz) at 128.0' (5 mm, 50° to core axis). Quartz seam at 128.5' (8 mm, 45° to core axis). Rose quartz seam at 129.3' (1.0 cm, 30° to core axis). Rose and grey quartz seam at 130.0' (5 mm to 1.0 cm, 30° to core axis) grades to 30% carbonate along its length. Carbonate seam at 138.7' (2 mm, 60° to core axis). Quartz seam near base at 148.0' (4 mm, 55° to core axis) contains trace galena mineralisation.
148.0 - 160.0	Rhyolite, dark grey to green, fine grained. Upper contact at 30° to core axis. Small quartz seams (50° to core axis) at 148.5', 149.5', 150.4', 150.6', 151.4', 154.4', 154.5', 155.6'and 156.2'. Quartz vein at 156.2' contains 15% pyrite and 3% pyrrhotite. Quartz vein at 155.0' contains 20% rhyolite phenocrysts and 3% disseminated pyrite. Quartz seam at 151.6' is 1.0 cm thick and trends at 50° to core axis.
160.0 - 164.7	Andesite, dark green to grey, fine grained. Random thin carbonate seams throughout. Sulphides (pyrite and pyrrhotite) are associated with these carbonate seams at 162.2' and 162.4'. Quartz seam at 160.0' (8 mm, 45° to core axis) contains 8% pyrite and trace pyrrhotite. Four quartz seams between 106.5' and 160.9' (8 mm to 2.0 cm, 45° to core axis) contain 3% pyrite and trace pyrrhotite. Quartz seam at 162.1' (3 mm, 40° to core axis) contains 3% pyrite and trace pyrrhotite. Quartz seam at 163.5' (3 mm, 45° to core axis) contains trace pyrite.
164.7 - 166.1	Andesite intrusive, medium green, medium grained, sub-parallel to core axis with associated brecciated quartz-carbonate veining 1.0 cm to 2.0 cm wide. Trace finely disseminated pyrite.
166.1 - 167.0	Rhyolite, dark green, fine grained, 15% grades to medium green fine grained andesite. Random fractures and carbonate seams with some carbonate fracture infill. Strong sulphide show (80% pyrrhotite, 10% chalcopyrite, 10% pyrite) sub-parallel to core axis and associated with carbonate fractures from 166.5' to 167.0'.
167.0 - 173.7	Rhyolite, dark green, fine grained. Many random fractures, carbonate fracture infill, thin carbonate seams and rare thin quartz seams. Trace sulphide associated with some carbonate fractures and rarely disseminated throughout.
173.7 - 173.9	Quartz albite porphyry intrusive, cream coarse grained phenocrysts in medium grey groundmass. No visible sulphides.
173.9 - 178.0	Rhyolite, very dark green, fine grained. 8% andesite (intrusive ?) at 174.3' and 175.2' with associated quartz and sericitisation. Numerous random fractures and carbonate infill. Rare to nil visible sulphides.

FOOTAGE	DESCRIPTION
178.0 - 193.6	Rhyolite, dark grey, dark green, medium green in part, fine grained. Lots of random fine fractures, some carbonate infill and a few thin quartz seams. Minor sulphide mineralisation (80% pyrite, 20% pyrrhotite) in fractures and quartz-carbonate seams and some disseminated between 184.0' and 188.0'.
193.6 - 197.0	Andesite, medium green to grey, 40% medium brown, fine grained. Well fractured with lots of quartz-carbonate (20% quartz) infill. Rare visible sulphides. Upper contact at 80° to core axis.
197.0 - 211.0	Andesite, medium grey, light grey in part, slightly green, fine grained. Severly contorted with multiangled carbonate seams, rare quartz seams and fracture infill. Becoming softer with depth. Approaches ropey texture in part. Rare visible disseminated pyrite.
211.0 - 216.0	Ropey textured volcanics, soft, talc-like in part, green to grey, mangled. Platey pyrite on slip faces and sometimes along carbonate veining. Vugs in carbonate seam at 212.0'.
216.0 - 222.5	Andesite, dark green to grey, fine grained, some ropey texture. Abundant irregular carbonate seams. Altered and contorted structure throughout. 1% spotty disseminated sulphides (70% pyrrhotite, 30% pyrite).
222.5 - 230.5	Andesite, dark green, fine grained, medium grey carbonate fracture infill, brown to grey bombs in top three feet. Multiple random fractures. 0.5% pyrite cubes disseminated throughout. Top contact at 25° to core axis.
230.5 - 234.5	Rhyolite, dark green to grey, fine grained. Few small carbonate filled fractures. 0.5% pyrrhotite disseminated throughout and in fracture at 233.0'.
234.5 - 248.8	Rhyolite, dark green to grey, fine grained, grades to andesite in bottom foot. Random faint hairline fractures throughout and random oriented carbonate seams increasing towards the base. Sulphides are occasionally associated with carbonate seams. Quartz veins at 235.3' and 235.4' (4 mm, 45° to core axis). Longitudinal 2.0 cm quartz bleb starts at 236.2', runs to 236.5', and contains 2% scattered pyrrhotite, trace pyrite and chalcopyrite. Quartz seam at 240.7' (4 mm, 35° to core axis) branches to two seams and is then truncated by a carbonate seam. Three yellow to white quartz seams converge at 243.9', each approximately 8 mm wide and 40° to core axis.

FOOTAGE	DESCRIPTION
248.8 - 271.0	Quartz diorite, medium to light grey, brown in part, very hard. Relatively unaltered with few fractures. Rare platey pyrite along some fracture slip faces. Quartz seam at 256.7' (5 mm to 1.0 cm, 20° to core axis) contains 10% sulphides (80% pyrrhotite, 10% pyrite, 10% chalcopyrite). Quartz seam at 257.4' (5 mm, 25° to core axis) is truncated at 257.3' and contains 5% sulphides (80% pyrrhotite, 10% pyrite, 10% chalcopyrite). Quartz seam at 260.2' (6 mm, 20° to core axis) contains 10% fine to medium grained sulphides (60% pyrrhotite, 40% pyrite).
271.0 - 271.4	Contact zone at 45° to core axis. Quartz-carbonate seam (70% quartz) with chunks of rhyolite and quartz diorite. Trace chalcopyrite and pyrrhotite along bottom contact with rhyolite.
271.4 - 292.0	Rhyolite, dark green to grey, fine grained, approximately 15% grades to andesite. Quartz-carbonate seam (80% quartz) at 272.6' (1.0 cm, 30° to core axis) is truncated by a thin quartz-carbonate seam trending sub-parallel to core axis and contains 1% disseminated pyrite and pyrrhotite. Multiple random quartz-carbonate seams throughout; those with greater than 80% quartz have associated sulphides, as do seams at 272.6', 276.7', 278.0' and 283.0'. Sulphides average 1% and are comprised of pyrite, pyrrhotite and trace chalcopyrite.
292.0 - 311.0	Rhyolite, dark green to grey, fine grained, approximately 20% grades to andesite, dark green to grey, fine grained. Quartz seam at 292.3' (1.5 cm, 40° to core axis) is edged by yellow to light green rhyolite, and contains trace chalcopyrite and pyrrhotite. Brecciated section with pale green to yellow rhyolite phenocrysts up to 2.0 cm in rhyolite groundmass from 294.6' to 294.8' contains no visible sulphides. Quartz-carbonate seam (10% quartz), at 294.5' (1.0 cm, 20° to core axis) contains slight chloritisation, 1.0 cm phenocrysts of flow associated rhyolite and trace chalcopyrite. 0.25% fine grained disseminated sulphides (70% pyrite, 20% pyrrhotite, 10% chalcopyrite) occur from 296.0' to 300.0'. Yellow to green flow rhyolite seam at 299.6' (4 mm, 35° to core axis) contains 3% sulphides. Quartz seam at 300.0' (8 mm, 50° to core axis) contains associated chlorite and 5% sulphides. Light green to yellow rhyolite margins fractures sub-parallel to core axis from 302.4' to 303.2' and contains trace chalcopyrite and pyrrhotite. 0.25% fine grained sulphides (40% pyrrhotite, 30% pyrite, 30% chalcopyrite) are disseminated from 302.4' to 311.0', and are concentrated along edges of quartz seam (7 mm, 40° to core axis) at 308.2'.

FOOTAGE	DESCRIPTION
311.0 - 328.2	Rhyolite, dark grey to dark green, fine grained. Minor fine fractures with prominent quartz-carbonate seams containing very rare sulphides at 315.6' (8 mm, 40° to core axis), 315.9' (1.5 cm, 40° to core axis) and 321.5' (1.0 cm, 30° to core axis). Medium grey granular rhyolite seam at 322.0' (1.0 cm, 30° to core axis) contains 30% pyrite, and another at 328.2' (1.0 cm, 80° to core axis) contains 1% pyrite.
328.2 - 344.7	Rhyolite, dark green to dark grey, fine grained. Few fractures with rhyolite flow infill. Flow alteration and brecciation from 329.3' to 330.5'. 2.0 cm quartz bleb at 329.7 contains 0.5% medium to coarse grained pyrite with trace pyrrhotite along some thin fractures. Brecciated flow rhyolite seam at 332.0' (3.0 cm, 80° to core axis) contains 5% coarse grained pyrite. A brecciated 2.0 cm x 3.0 cm bomb of rhyolite at 333.3' contains 1% coarse grained pyrite. Irregular brecciated 2.0 cm flow rhyolite seams at 337.0', 338.6' and 342.0' contain no visible sulphides. Quartz seam at 344.7' (1.0 cm, 40° to core axis) contains very rare fine grained galena.
344.7 - 345.5	Andesite, argillaceous, dark green, fine grained, moderately fractured with some thin carbonate infill. Brecciated muddy light green 2 mm contact with upper rhyolite includes 4 mm brecciated quartz seam trending at 40° to core axis.
345.5 - 353.5	Rhyolite, somewhat mafic, medium to dark grey, slightly green, fine grained. Little alteration with a few fractures sub-parallel to core axis. Rare finely disseminated pyrite. This interval is similar to the Hole #25 section from 233.7' to 259.8'.
353.5 - 367.0	Diabase, medium grey, speckled off-white, medium grained. Few fractures and rare carbonate infill. Dominantly homogeneous with rare disseminated pyrite.
367.0	End of hole. Sludge recovery good to 197', and poor thereafter. Bottom hole dip test = 66°.

CORE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K102	32.0	34.6	2.6	22	
K103	34.6	35.7	1.1	211	2400
K104	55.1	56.8	1.7	14	
K105	62.5	63.2	0.7	3	
K106	73.6	76.1	2.5	11	
K107	89.0	90.0	1.0	3	

CORE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K108	98.6	100.6	2.0	29	
K109	101.0	101.8	0.8	14	
K110	103.8	104.7	0.9	59	
K111	113.4	114.4	1.0	45	
K112	129.0	130.3	1.3	1	
K113	147.3	148.1	0.8	4	
K114	148.0	150.6	2.6	7	
K115	150.6	153.6	3.0	8	
K116	153.8	156.2	2.4	59	
K117	156.2	157.1	0.9	8	
K118	160.0	160.9	0.9	32	
K119	164.7	166.1	1.4	11	
K120	166.1	167.0	0.9	14	
K121	167.0	169.7	2.7	19	
K123	173.9	178.0	4.1	25	
K124	184.0	188.0	4.0	19	
K125	193.6	197.0	3.4	21	
K126	211.0	214.0	3.0	4	
K127	214.0	217.0	3.0	4	
K128	217.0	220.0	3.0	18	
K129	220.0	222.5	2.5	17	
K130	225.5	228.0	2.5	43	
K131	225.5	228.0	2.5	12	
K132	228.0	230.5	2.5	70	
K133	230.5	234.5	4.0	18	
K134	234.5	237.0	2.5	22	
K135	237.0	240.0	3.0	6	
K136	240.0	244.0	4.0	22	
K137	244.0	247.0	3.0	19	
K138	247.0	248.8	1.8	126	
K139	256.6	257.9	1.3	3	
K140	270.9	271.9	1.0	22	
K141	272.4	273.3	0.9	11	
K142	276.5	277.2	0.7	10	
K143	278.6	279.5	0.9	22	
K144	296.0	300.0	4.0	32	
K145	302.4	306.4	4.0	7	
K146	306.4	310.4	4.0	6	
K147	321.5	322.8	1.3	4	
K148	329.3	330.7	1.4	6	
K149	332.0	333.4	1.4	2	
K150	344.3	344.8	0.5	22	

SLUDGE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K45	26	37	11	74	370
K46	37	57	20	56	
K47	57	77	20	2	
K48	77	97	20	2	
K49	97	117	20	28	470
K50	117	137	20	6	
K51	137	157	20	24	
K52	157	177	20	10	630
K53	177	197	20	10	
K54	197	217	20	8	
K55	217	237	20	14	
K56	237	257	20	10	310
K57	257	277	20	8	240
K58	277	297	20	22	
K59	297	317	20	10	270
K60	317	337	20	2	
K61	337	357	20	20	

Core diameter 3.0 cm.

Hole Logged By:

Bill J. Sutherland

Bill J. Sutherland

O'SULLIVAN LAKE GOLD PROPERTY

Diamond Drill Hole #27

Grid Location:

Bearing: 300°
Inclination: -60°

Latitude 2750 N
Departure 0740 W

Depth: 318'

Drilling Dates:
1986.10.17 - 1986.10.18

FOOTAGE	DESCRIPTION
000.0 - 046.7	Casing.
046.7 - 053.4	Quartz diorite, off-white medium to coarse grained quartz eyes in dark green to grey groundmass. Lower contact at 65° to core axis.
053.4 - 066.0	Rhyolite, dark grey to green, fine grained. Moderately fractured with mainly rhyolite flow infill and occasional carbonate infill. Fractures at random orientations, but dominantly at 50° to core axis. Up to 2% (averaging 0.25%) fracture associated sulphides (50% pyrrhotite, 50% chalcopyrite) occur in patches from 59.9' to 64.8'. A 10.0 cm band of carbonate-host rock alteration occurs at 64.8', trends at 45° to core axis, has trace associated quartz at 65.0' and contains trace sulphides.
066.0 - 085.0	Rhyolite, dark grey to blue, slightly green, fine to medium grained. Trace disseminated sulphides (50% chalcopyrite, 50% pyrrhotite) throughout and concentrated in scattered fine fractures (totalling 0.25% between 69.4' and 70.1'). Platey pyrite occurs on fracture slip face (50° to core axis) at 70.1'. Very thin fracture at 73.1' (30° to core axis) has fine brecciated quartz infill, associated green chlorite and anomalous sulphide infill (60% pyrrhotite, 40% chalcopyrite).
085.0 - 119.0	Rhyolite, dark grey to blue, minor dark grey to green, fine grained, medium grained in part. Minor fractures, most at 40% to core axis, with occasional thin quartz and thin carbonate infill. Quartz seam at 90.0' (2.0 cm, 30° to core axis) contains no sulphides. Dominantly unaltered with rare disseminated sulphides.
119.0 - 121.8	Andesite, grey to green, minor brown patches, fine grained, minor medium grained. Lots of fracturing, mainly at 55° to core axis. Fracture infill is comprised of 75% carbonate and 25% quartz and/or feldspar. Fractures contain rare pyrite. Upper contact at 70° to core axis; lower contact at 70° to core axis.
121.8 - 143.6	Rhyolite, dark grey, slightly green, fine grained. Numerous thin fractures with carbonate infill at various angles to the core axis. Quartz seam at 133.1' (8 mm, 55° to core axis) contains rare sulphides. Quartz seam at 134.1' (8 mm, 55° to core axis) is truncated by a grey to white carbonate seam after ¼ core diameter.

FOOTAGE	DESCRIPTION
	This carbonate seam is 2.0 cm thick, runs at 50° to core axis and contains trace pyrite. Quartz seam at 134.8' (5 mm, 55° to core axis) is slightly carbonaceous and contains no visible sulphides. Quartz seam at 135.1' (1.5 cm, 55° to core axis) is margined by carbonate and contains rare pyrite. A brecciated conglomeration of quartz, ultramafic and rhyolite runs for 4.0 cm from 139.8', trends at 70° to core axis and contributes to trace pyrite and minor rust in adjacent fracture at 139.7'. A piece of dark grey to green andesite runs from 141.9' to 142.1'. Quartz seam at 142.4' (4 mm, 70° to core axis) contains no sulphides.
143.6 - 147.5	Rhyolite, dark green to grey, fine grained with 30% flow top brecciation and alteration. Flow top rhyolite is yellow to green. In brecciated sections, sulphides range from trace to 8% (70% pyrrhotite, 30% chalcopyrite), averaging 1% in altered sections and 0.25% overall. Host rhyolite contains imperceptible sulphides.
147.5 - 150.3	Andesite, brown to grey, green in part, fine grained. Myriad of quartz-carbonate fracture infill (40% quartz) comprising 35% of rock trend generally at 55° to core axis. Light brown rhyolite band at 138.7' (8 mm, 60° to core axis). Quartz seam at 138.8' (1.0 cm, 60° to core axis). There is no visible sulphides in any of this section. Upper contact is at 50° to core axis; lower contact is at 60° to core axis.
150.3 - 162.0	Rhyolite, dark grey to green, fine grained, occasionally medium grained. Minor thin fractures. Brecciated bleb of rhyolite flow at 151.1', 151.5' and 159.1'. Quartz seam at 157.7' (2.0 cm, 60° to core axis). Quartz seam at 161.0' (7 mm, 30° to core axis). Quartz-carbonate seam (60% quartz) at 157.8' (2.5 cm, 60° to core axis). Rare disseminated sulphides (70% pyrite, 30% chalcopyrite) throughout with trace concentrations in fractures, brecciated blebs of rhyolite flow, quartz seams and quartz-carbonate seam.
162.0 - 165.6	Rhyolite, dark grey, slightly green, fine grained, medium grained in part. Minor thin fractures. A crescent shaped 5.0 cm thick section of carbonaceous andesite enters the core at 162.1' at an ever shallowing angle, and exits the core at 163.1' on the same side. 10% sulphides (50% chalcopyrite, 50% pyrrhotite) are contained in this segment in blebs up to 3 mm and finely disseminated. Mineralisation is spotty rather than regular. Quartz seam at 164.5' (2 mm, 50° to core axis) contains rare sulphides. Quartz seam at 164.8' (2 mm, 60° to core axis) contains very rare sulphides. Quartz seam at 164.9' (6 mm, 60° to core axis) contains rare sulphides. Quartz seam at 165.5' (4 mm, 60° to core axis) contains rare sulphides.

FOOTAGE	DESCRIPTION
165.6 - 167.0	Andesite, dark green to grey, fine grained. Abundant quartz-carbonate seams (60% quartz) at 50° to core axis make up 30% of interval. Trace very fine pyrite and chalcopyrite occupy some of these seams. Quartz bleb (possibly a truncated seam) at 166.7' is 2 mm wide and contains no visible sulphides.
167.0 - 187.0	Rhyolite, dark grey to blue, fine grained. Numerous hairline fractures at various angles to core axis. Quartz seams (about one per foot) 1 mm to 8 mm thick trend at 50° to core axis and contain trace sulphides (dominantly pyrite). 0.25% medium to coarse grained sulphides (50% pyrite, 50% pyrrhotite) are disseminated through this interval and increase towards the base.
187.0 - 197.6	Rhyolite, dark green to grey, medium green in part, slightly grey to brown from 196.6' to 197.3'. Somewhat softer, andesitic and medium grey from 197.3' to 197.6'. Flow top alteration, brecciation and fracture infill comprises 50% of top foot which contains 1% disseminated pyrrhotite. The middle 2 mm of a medium grey band at 188.8' (50° to core axis) is black and contains 20% sulphides (70% pyrrhotite, 30% chalcopyrite). A similar medium to dark grey band at 193.8' (1.0 cm, 70° to core axis) contains 8% disseminated sulphides (60% pyrrhotite, 40% pyrite). Granular light green to white quartz seams (2.0 cm to 3.0 cm, 65° to core axis) occur at 190.4', 191.1' and 191.5'. Minor sulphides (dominantly pyrrhotite) occur at the margins of these seams. From 192.2' to 193.0' some flow top rhyolite is associated with wavy, irregular, elliptical and even marbley patterns. Patchy sulphide occurrences (80% chalcopyrite, 20% pyrrhotite) show up through here, mainly at the top of the marbled section at 192.7', where there is 20% sulphides over 1.0 cm. The rest averages 0.25% to 0.5%. From top to bottom in this section (187.0' to 197.6'), coarse grained cubic pyrite is disseminated in a trace amount (0.05%).
197.6 - 198.0	Quartz, white, trace green chlorite ribbons, contains 0.25% sulphides (40% pyrite, 30% chalcopyrite, 30% pyrrhotite). Upper contact at 50° to core axis; lower contact at 70° to core axis).
198.0 - 202.0	Lampophyr dyke, mottled brown, medium grey, dark grey, medium green and slightly orange to pink. Rare fractures, dominantly unaltered. Scalloped rose quartz seam at 198.1' (2 mm, 75° to core axis). White quartz seam at 198.8' (1.0 cm, 70° to core axis) is rimmed with clusters of cubic pyrite.
202.0 - 209.0	Rhyolite, grey to blue, slightly green, fine grained. Multiple fine fractures increasing towards the base contain some quartz-carbonate infill. Truncated quartz seam at 208.2' (3 mm, 50° to core axis). Trace coarse grained pyrite blebs disseminated throughout the interval.

FOOTAGE	DESCRIPTION
209.0 - 219.0	Rhyolite, dark grey to green, fine grained, medium grained in part. Multiple very fine fractures. Approximatly 10% flow top alteration along some fractures and concentrated in brecciated sections 209.1' to 209.2', 211.6' to 211.7', 212.0' to 212.3' and 213.2' to 213.9'. 5% fine to medium grained disseminated sulphides (60% chalcopyrite, 40% pyrite) occur in top of these from 209.1' to 209.2', with coarse grained disseminated pyrite showing from 209.2' to 209.8'. Fine grained grey brecciated band contributes along with flow top brecciation to 3% sulphides (70% chalcopyrite, 25% pyrite, 5% pyrrhotite) from 213.2' to 213.9'. Another 2.0 cm grey band from 213.9' to 214.1' at 60° to core axis contains 5% medium grained sulphides (80% chalcopyrite, 20% pyrite) disseminated along fine internal fractures. Quartz seam at 216.0' (7 mm, 60° to core axis) contains trace sulphides. Quartz seam at 217.1' (1.0 cm, 40° to core axis) contains trace sulphides. Medium to coarse grained pyrite is disseminated (0.1% to 1%) throughout this whole section.
219.0 - 249.0	Rhyolite, dark grey, dark grey to green in part, fine grained occasionally medium grained. Moderate fine fractures, most at 60° to core axis. Light green chert/rhyolite fracture infill and mild brecciation from 219.0' to 219.2', 219.7' to 221.4', 223.1' to 223.5', 224.5' to 224.7', 226.5' to 226.7' and 231.7' to 231.8' contain trace to 1% sulphides (60% chalcopyrite, 40% pyrite). Green and orange to pink chert/rhyolite seam at 225.0' (7 mm, 40° to core axis) contains trace sulphides along perimeter. Scalloped light green 2 mm secondary rhyolite seam at 231.5' trends at 70° to core axis. Granular quartz-carbonate-rhyolite seam at 248.5' (1.0 cm, 20° to core axis) contains prominent chloritisation , no visible sulphides and is truncated by diabase at 249.0'.
249.0 - 271.2	Diabase, dark grey, very fine grained to 252.0', dark grey fine grained to 259.0' and medium grey medium grained from 259.0' to 271.2'. Generally massive with few thin fractures.
271.2 - 271.5	Rhyolite, very dark green, fine grained, moderatly fractured with some thin quartz fracture infill and no visible sulphides. Upper and lower contacts at 90° to core axis.
271.5 - 277.8	Diabase, medium to dark grey, medium grained. Few random fractures. Base contact at 75° to core axis.
277.8 - 281.2	Granite, orange, black, off-white, coarse grained. Moderate fine fracturing. Felsic inclusions (approximately 4.0 cm x 2.0 cm) occur at 279.7', 280.0' and 280.6' and contain fractured narrow seams and blebs of quartz and rhyolite/chert. 2% sulphides (50% pyrite, 50% chalcopyrite) are associated with these alterations. Lower contact at 15° to core axis.

FOOTAGE	DESCRIPTION
281.2 - 284.2	Diabase, medium to dark grey, medium grained. Rare thin fractures. Dominantly unaltered. Rare disseminated pyrite.
284.2 - 284.3	Andesite, green to dark grey, fine grained. Minor very thin fractures. rare sulphides. Indistinct upper contact. Quartz seam at base (284.3') runs for 4 mm, trends at 70° to core axis and contains very rare sulphides.
284.3 - 318.0	Diabase, medium to dark grey, medium grained. Rare thin fractures. Light green quartz fracture infill at 294.2' extends for 2 mm, trends at 30° to core axis and is accompanied by a 1.0 cm bleb of orange feldspar. Thin quartz seams at 303.4' (80° to core axis), 304.2' (70° to core axis) and 309.8' (50° to core axis) contain rare finely disseminated pyrite. Slight green-grey hue over section with most fine fracturing (306.0' to 310.0').
318.0	End of hole. Good sludge recovery to 207', poor returns from 207' to 318'. Bottom hole dip test = 66°.

CORE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K151	59.9	62.5	2.6	6	180
K152	62.5	64.8	2.3	81	
K153	69.4	70.1	0.7	41	420
K154	72.8	73.4	0.6	11	2000
K155	119.0	121.8	2.8	4	
K156	133.1	135.3	2.2	3	
K157	139.5	140.3	0.8	3	
K158	143.8	147.0	3.2	17	
K159	150.8	151.6	0.8	6	
K160	157.6	158.2	0.6	27	
K161	162.1	163.1	1.0	8	540
K162	164.4	165.6	1.2	23	
K163	165.6	167.0	1.4	45	
K164	168.0	170.2	2.2	8	
K165	182.0	184.4	2.4	10	
K166	190.3	191.6	1.3	17	
K167	192.2	193.0	0.8	23	
K168	197.6	198.0	0.4	0.0508 oz	
K169	198.4	199.1	0.7	30	
K170	207.7	209.0	1.3	3	
K171	209.0	209.8	0.8	99	340
K172	213.2	214.0	0.8	55	
K173	219.0	221.0	2.0	7	

CORE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppb
K174	247.9	249.0	1.1	30	
K175	271.2	271.5	0.3	3	
K176	279.6	281.2	1.6	32	

SLUDGE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K62	47	67	20	20	1140
K63	67	87	20	2	171
K64	87	107	20	6	
K65	107	127	20	14	
K66	127	147	20	4	
K67	147	167	20	14	280
K68	167	187	20	8	
K69	187	207	20	792	
K70	207	227	20	48	330
K71	227	247	20	34	
K72	227	247	20	28	
K73	247	267	20	28	
K74	267	287	20	30	
K75	307	318	11	36	

Core diameter 3.0 cm.

Hole Logged By:

Bill J. Sutherland

Bill J. Sutherland

O'SULLIVAN LAKE GOLD PROPERTY

Diamond Drill Hole #28

Bearing: 300°
Inclination: -60°

Depth: 365'

Grid Location:

Latitude 2900 N
Departure 0890 W

Drilling Dates:
1986.10.20 - 1986.10.21

FOOTAGE	DESCRIPTION
000.0 - 088.5	Casing.
088.5 - 113.9	Quartz diorite, blue to grey, slight green to yellow hue in part, medium grained. Few fine fracture lines. Quartz seam at 89.9' (1.0 cm, 50° to core axis) contains no visible sulphides. Quartz seam at 107.2' (1.0 cm, 50° to core axis) contains slight green chloritisation and has 0.5% disseminated sulphides (40% chalcopyrite, 30% pyrrhotite, 30% pyrite) along margins.
113.9 - 114.2	Andesite, dark green to grey, fine grained. Strongly inundated with ribbons of carbonate alteration (approximately 35% of rock) running at 65° to core axis in conjunction with three 1.0 cm blebs of quartz. No visible sulphides are present. Upper contact at 75° to core axis; lower contact at 90° to core axis.
114.2 - 136.5	Quartz diorite, blue to grey, medium grained. Some very fine fracturing. Quartz seam at 118.2' (4 mm, 45° to core axis) contains trace sulphides (50% pyrite, 50% chalcopyrite) in seam and in host rock up to 4.0 cm from seam. Quartz seam at 131.4' (2 mm, 70° to core axis) contains no visible sulphides. Quartz seam at 139.2' (1.0 cm, 40° to core axis) contains very rare fine grained galena. From 135.6' minor orange rust spots occur which are occasionally associated with fractures. Undifferentiated very fine grained sulphides are associated with these rust spots.
136.5 - 137.2	Andesite, medium grey, slightly green, fine grained. Severly altered with abundant undulating flow lines running sub-parallel to core axis. Contorted quartz vein at 136.8' (2 mm to 5 mm, sub-parallel to core axis) contains rare fine grained sulphides. Upper contact at 80° to core axis; lower contact is at 50° to core axis.
137.2 - 169.7	Quartz diorite, blue to grey with occasional orange rust spots which decrease with depth (stopping at 145.0'), medium grained. Numerous very fine fractures. Minor platey pyrite on rare fracture slip faces. Two quartz seams 2.0 cm apart at 137.5' (4 mm, 80° to core axis) contain 1% sulphides (pyrite and chalcopoyrite) and are shrouded in yellow to green chert/rhyolite alteration. Quartz seam at 143.1' (2.0 cm, 80° to core axis) contains no visible sulphides. Quartz seam at 148.5' (1.0 cm, 30° to core axis) contains trace fine to medium grained disseminated pyrite on perimeter and in nearby host rock.

FOOTAGE	DESCRIPTION
	Quartz seam at 157.0' (7 mm, 25° to core axis) has up to 1.5% fine to medium grained cubic pyrite disseminated in surrounding host rock. Quartz seam at 163.0' (6 mm, 50° to core axis) contains rare visible sulphides. Quartz seam at 163.5' (7 mm, 40° to core axis) contains trace pyrite with rare pyrite in surrounding host rock.
169.7 - 171.4	Andesite, medium to dark grey, slightly green, fine grained. This interval is basically unaltered. Quartz seam at 170.3' (4 mm, 40° to core axis) contains no visible sulphides. Upper contact at 80° to core axis; lower contact at 50° to core axis.
171.4 - 174.3	Quartz diorite, blue to grey, slightly yellow, medium grained. From 171.4' to 172.0' a 1.5 cm quartz seam runs semi-parallel to the core axis. 20% of this seam has pieces of high carbonate concentration which contain 30% finely disseminated pyrrhotite. The quartz component contains rare disseminated pyrite. In this interval there is also hazy altered andesite phenocrysts and some minor chert/rhyolite alteration. Outside the quartz seam, sulphide concentration is approximately 0.5% (50% chalcopyrite, 50% pyrite). Below 172.0', the section has a few thin fractures with 2% anomalous associated medium grained cubic pyrite crystals at 174.0'. Quartz seam at 172.5' (1.0 cm, 50° to core axis) contains rare pyrite and chalcopyrite.
174.3 - 177.7	Andesite, dark green to grey, fine grained. Moderate thin fracturing with carbonate infill. Quartz seam at 176.2' (2.0 cm, 70° to core axis) contains rare visible sulphides. Patches of medium to coarse grained pyrite at 177.5' (comprising 1% of rock from 177.4' to 177.5') appear to be independent of fracturing. Some minor fine pyrite occurs in secondary fracturing and carbonate infill sub-horizontal to core axis. Fractures containing no visible sulphides trend at 40° to 90° to core axis from 177.3' to 177.7'. Upper contact at 50° to core axis; lower contact at 70° to core axis.
177.7 - 185.3	Sub-ropey volcanics, medium grey, medium grained with evident stress alteration. Minor scattered thin quartz-carbonate seams (60% quartz) and few thin fractures. Medium grey rhyolite phenocryst at 185.2'. Lower contact at 50° to core axis.
185.3 - 192.2	Rhyolite, medium to light grey, very light brown, cryptocrystalline with grainy texture from 187.0' to 187.3'. Multiple thin randomly oriented fractures occasionally contain rare fine pyrite and chalcopyrite. Quartz seam at 187.7' (8 mm, 45° to core axis) pinches out within core diameter and has no visible sulphides. Quartz seam at 188.1' (1.0 cm, 35° to core axis) has rare cubic pyrite in adjacent rhyolite but no visible sulphides in seam.

FOOTAGE	DESCRIPTION
192.2 - 230.4	Andesite, green to grey, fine to medium grained. Multiple random thin (up to 5mm) carbonate seams. Four grey to light brown rhyolite intrusions (widths varying from 3.0 cm to 10.0 cm) take up 50% of the rock from 193.0' to 194.4'. 2% sulphides (70% chalcopyrite, 15% pyrite, 15% pyrrhotite) occur in fractures near margins, dominantly in andesite and trace in rhyolite. Remaining section has erratic sulphide (90% pyrite, 10% chalcopyrite) occurrences, sometimes up to 2% over short intervals in carbonate seams and fine fractures (as between 200.1' and 200.3'). Pyrite in platey form occurs on rare fracture slip faces. Sulphides generally decrease with depth. Quartz seam at 220.4' (2.0 cm, 60° to core axis) contains minor chert/rhyolite alteration and rare visible sulphides. Sericitised section from 220.9' to 221.1' has approximately 1% disseminated pyrite in minor wavy brecciated rhyolite flow contours. Rhyolite alteration from 228.1' to 228.5' and 229.7' to 229.9' contains 1% disseminated pyrite in upper section and trace sulphide in lower section. Lower contact at 60° to core axis.
230.4 - 231.0	Granite, orange, off-white, dark grey, coarse grained with rare disseminated fine grained pyrite.
231.0 - 250.0	Andesite, medium to dark green, medium grained, grades to rhyolite in part. Multiple random fine fractures with minor carbonate infill and rarely with quartz-carbonate infill contain trace sulphides (mainly pyrite). Swirly, brecciated in part, yellow to green rhyolite alteration from 232.5' to 232.8', 233.4' to 233.6', 237.0' to 237.3', 237.6' to 237.7', 241.4' to 241.5', 247.3' to 247.4', 248.2' to 248.3' and 249.1' to 249.4'. Upper three intervals have 4% pyrite, which steadily decreases to 1% pyrite in lower intervals.
250.0 - 261.8	Andesite, medium green, fine to medium grained. Multiple thin fractures most at 40° to 60° to core axis have a component of carbonate infill. Sub-brecciated rhyolite alteration as before with 2% associated pyrite from 250.4' to 250.7' and 255.8' to 256.8'. Quartz seam at 251.3' (2.0 cm, 60° to core axis) has rare pyrite in rock which margins the seam. Rare sulphide (pyrite) is associated with fractures and carbonate infill in the rest of the andesite. Quartz-carbonate seam (60% quartz) at lower contact runs from 261.5' to 261.8' (9 mm, 50° to core axis) contains no visible sulphides.
261.8 - 262.4	Quartz diorite, light grey to off-white, medium grey, moderately fractured with rare disseminated sulphides. Top and bottom contact at 40° to core axis.

FOOTAGE	DESCRIPTION
262.4 - 264.0	Andesite, medium to dark green, fine to medium grained. Abundant fractures at 40° to core axis contain carbonate infill comprising 50% of rock. 1% pyrite is disseminated through this interval. Quartz seam at 263.9' (6 mm, 70% to core axis) is brecciated along its length and at one point blebs out to 2.0 cm. No visible sulphides manifest themselves in this seam.
264.0 - 264.3	Gnessic quartz diorite, contact zone, moderately stressed with no visible sulphides. Gnessosity at 60° to core axis. Upper contact at 50° to core axis; lower contact at 40° to core axis.
264.3 - 275.2	Andesite, medium green, fine to medium grained. Prominent stress at 50% to core axis for most of interval with multiple fractures and concomitant carbonate infill aligning. Brecciated quartz seam at 265.2' (2.0 cm, 40° to core axis). Some rhyolite alteration is present for 10.0 cm above the seam. 3% disseminated pyrite is in host rock adjacent to seam. Brecciated quartz-carbonate seam (70% quartz) at 271.7' (3.0 cm, 60° to core axis) contains phenocrysts of andesite (15% of total) and 8% disseminated pyrite. Semi-brecciated quartz-carbonate seam (80% quartz) at 266.3' (3.5 cm, 40° to core axis) contains rare disseminated pyrite. Quartz seam at 274.0' (2.0 cm, 50° to core axis) contains no visible sulphides.
275.2 - 275.3	Quartz seam, white, 3.0 cm, 60° to core axis contains 20% chunky black ultramafic phenocryst inclusions and 5% orange feldspar with no visible sulphides.
275.3 - 275.7	Sub-gnessic granular quartz seam shows stress at 60° to core axis, moderate green chloritisation and possible rhyolite alteration with no visible sulphides. Indefinite upper and lower contact.
275.7 - 280.0	Andesite, medium green, fine to medium grained. Multiple random thin fractures , some with carbonate infill. Does not have the prominent stress orientation as above. Quartz seam at 279.0' (5 mm to 1.0 cm, runs sub-parallelto core axis for 10 cm) contains rare pyrite and trace chalcopyrite.
280.0 - 280.6	Altered quartz diorite, light blue to light brown to light grey, medium to coarse grained. Moderately fractured with trace disseminated pyrite. Upper and lower contacts indiscernible.
280.6 - 281.7	Andesite, medium to dark green, fine grained. Minor fractures with associated carbonate infill. Lower contact at 40° to core axis.
281.7 - 287.0	Altered quartz diorite, light blue to light brown to light grey, medium to coarse grained with multiple random fractures and rare sulphides. Carbonate seam at 286.4' runs for 2 mm and trends at 80° to core axis.

FOOTAGE	DESCRIPTION
287.0 - 340.0	Andesite, medium to dark green, fine to medium grained. Moderate random fractures with random thin carbonate seams and fracture infill comprise 15% of total rock. Fracture direction becomes pronounced and consistent from 300.0' (45° to core axis) and carbonate component increases to 25%. A rhyolite dyke runs from 330.7' to 331.5', trends at 50° to core axis and contains rare fine disseminated pyrite. The rest of this interval contains rare sulphides.
340.0 - 344.3	Rhyolite, medium to dark grey, fine grained, 20% marbled with very random quartz-carbonate seaming (80% quartz) which contains trace pyrite. 5% grades to green andesite which occurs intermittently along the 50° to core axis plane. Upper contact at 50° to core axis; lower contact at 30° to core axis.
344.3 - 365.0	Andesite, medium to dark green, fine to medium grained. Strong directional character which varies along its length between 30° to core axis and 70° to core axis. Stress fracturing is ubiquitous and is accentuated by carbonate infill which is approximately 30% of rock. 1.0 cm quartz eye occurs at 344.4'. Prominantly brecciated carbonaceous section from 355.8' to 356.6' contains trace pyrite. Strong directional stress character resumes at 356.6' and continues to total depth.
365.0	End of hole. Good sludge recovery to 267'. Poor to nil sludge recovery from 267' to 365'. Bottom hole dip test = 67°.

CORE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K177	107.2	107.9	0.7	10	
K178	117.5	119.0	1.5	6	
K179	135.5	136.5	1.0	47	
K180	136.5	137.2	0.7	17	
K181	137.2	139.6	2.4	17	
K182	148.0	149.2	1.2	26	
K183	156.3	158.3	2.0	18	
K184	171.4	172.3	0.9	54	
K185	172.8	173.7	0.9	48	
K186	177.0	177.7	0.7	26	
K187	187.4	188.4	1.0	32	
K188	193.0	194.8	1.8	18	240
K189	194.8	197.0	2.2	21	
K190	199.5	201.7	2.2	14	

CORE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K191	215.6	217.6	2.0	51	
K192	220.1	221.2	1.1	10	
K193	227.9	230.4	2.5	25	
K194	232.3	233.6	1.3	6	
K195	248.0	250.0	2.0	22	
K196	255.5	257.0	1.5	18	
K197	262.4	264.0	1.6	26	
K198	264.0	264.3	1.3	21	
K199	265.0	265.9	0.9	43	
K200	271.4	274.3	2.9	11	
K201	275.2	275.7	0.5	22	
K202	280.0	280.6	0.6	26	
K203	280.6	281.7	1.1	58	
K204	281.7	284.5	2.8	10	
K205	284.5	287.0	2.5	10	
K206	305.0	307.0	2.0	17	
K207	340.0	342.0	2.0	26	
K208	342.0	344.3	1.3	29	
K209	355.8	356.6	0.8	22	

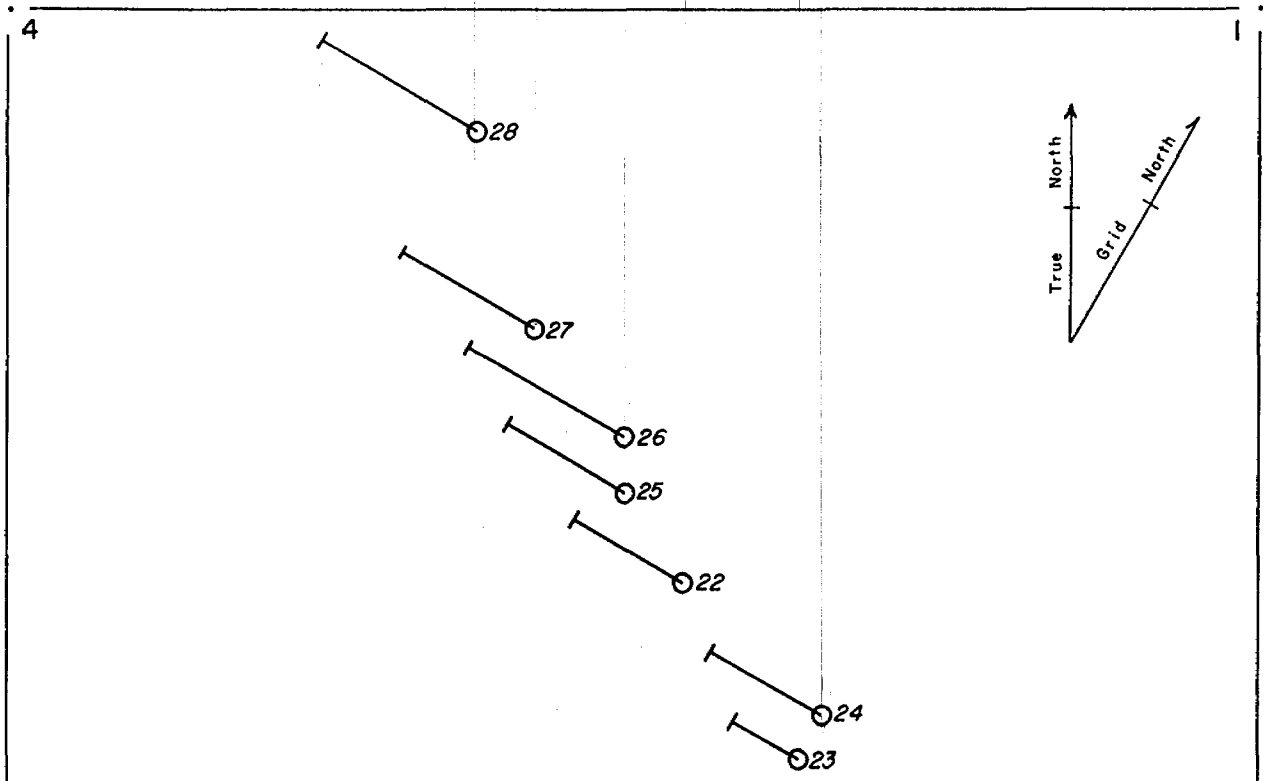
SLUDGE SAMPLES

Sample	From	To	Length	Au ppb	Cu ppm
K76	88	107	19	12	
K77	107	127	20	22	
K78	127	147	20	42	
K79	147	167	20	34	
K80	167	187	20	28	
K81	187	207	20	250	290
K82	207	227	20	16	
K83	227	247	20	28	
K84	247	267	20	32	
K85	267	360	93	160	

Core diameter 3.0 cm.

Hole Logged By:

Bill J. Sutherland



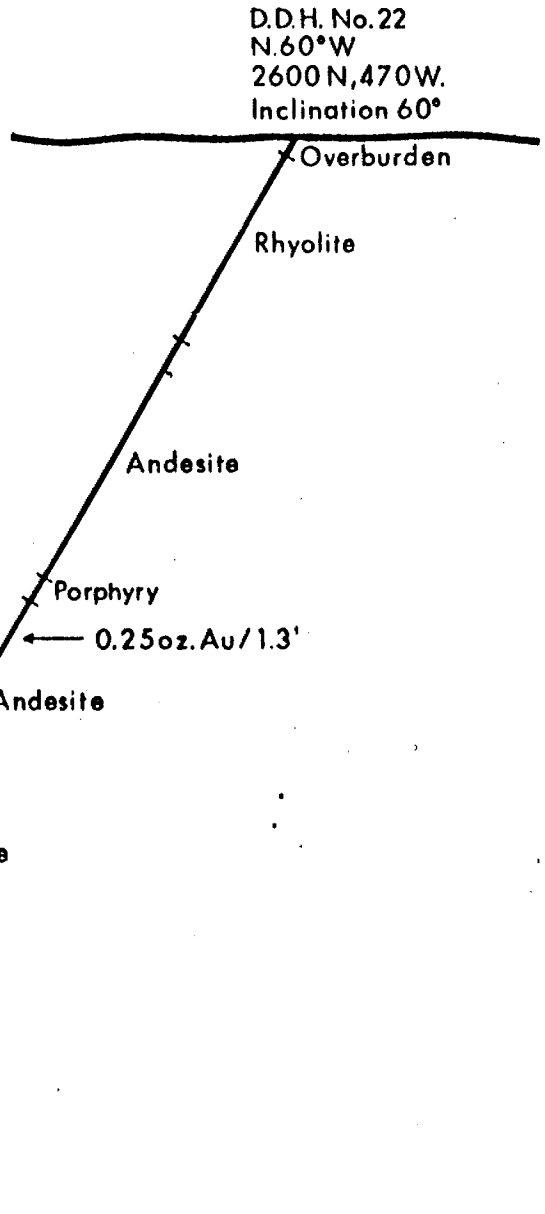
DIAMOND DRILL PLAN

O'SULLIVAN LAKE GOLD PROPERTY

CLAIM 909592

MARCH 3, 1987

W Sutt



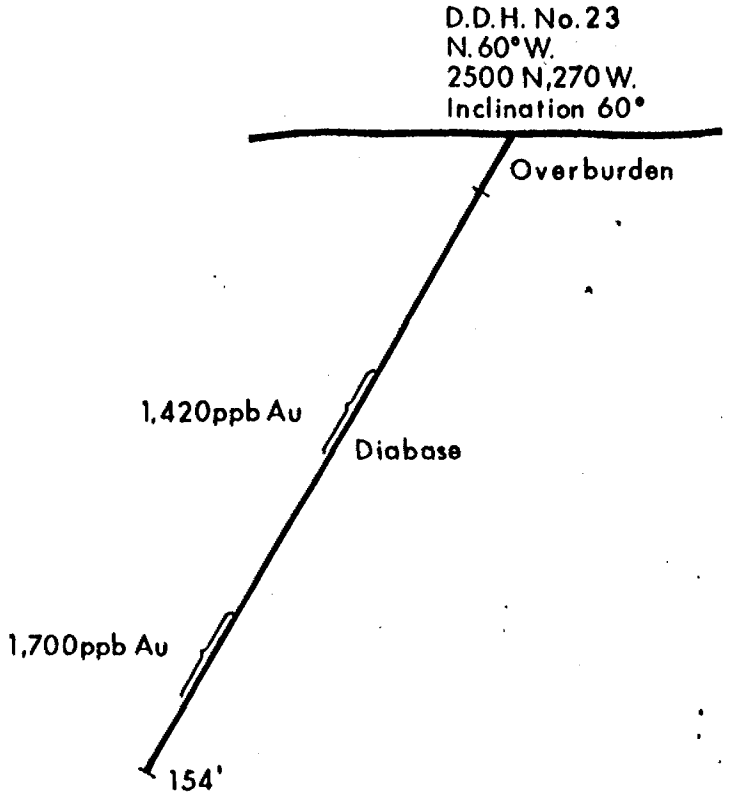
LICENSED PROFESSIONAL ENGINEER
J. R. ZIMMERMAN
ONTARIO

KOWKASH GOLD CORPORATION

D.D.H. HOLE No. 22

SCALE: 1" = 40'

Nov. 10, 1986.

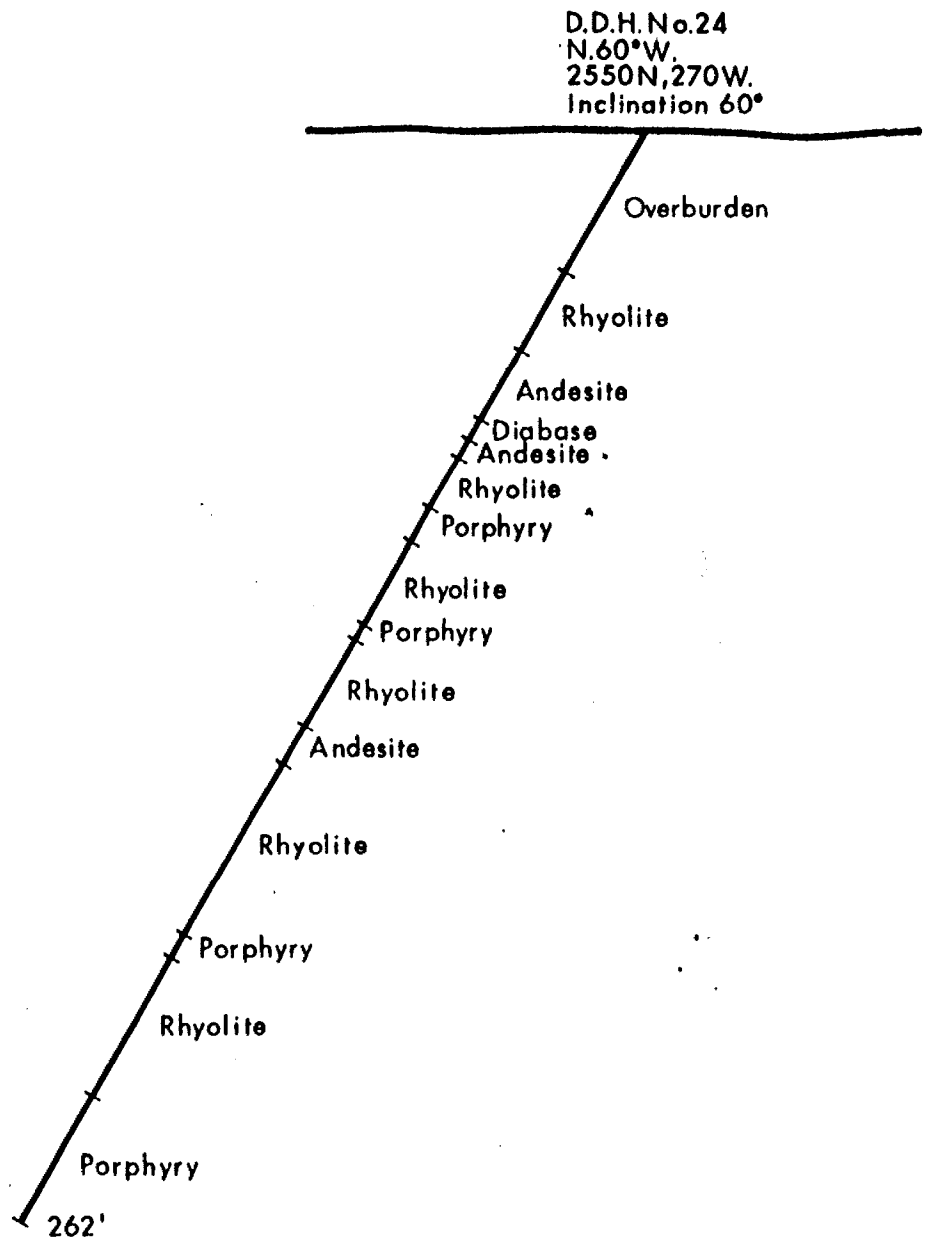


LICENSED PROFESSIONAL ENGINEER
T. R. ZIMMERMAN
ONTARIO

HOWKASH GOLD CORPORATION

D.D. HOLE No. 23

SCALE



LICENSED PROFESSIONAL ENGINEER

KOMKASH GOLD CORPORATION

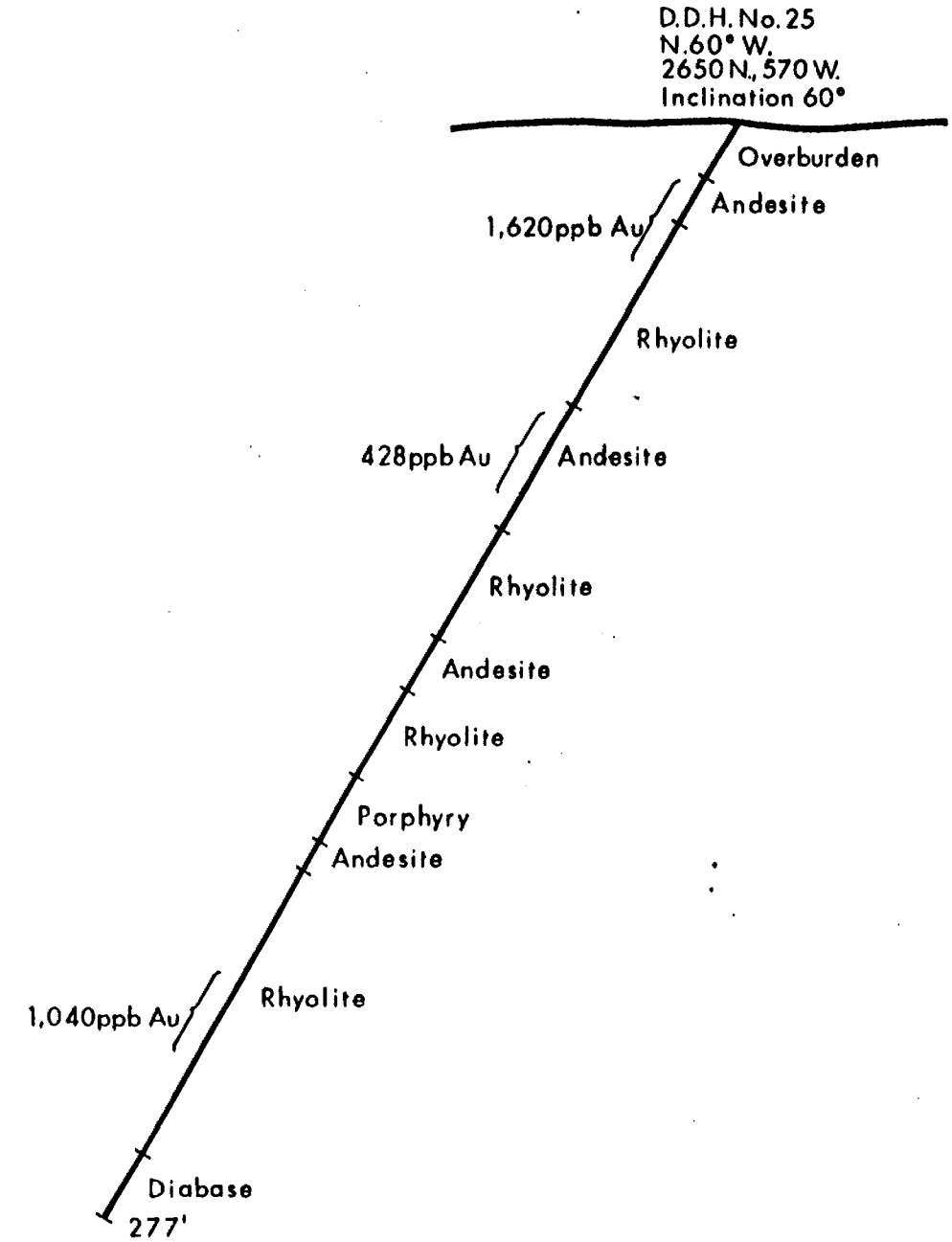
D. R. ZIMMERMAN

D.D.H. LOCATION No. 24

ONTARIO

SCALE 1" = 100'

Nov. 10, 1966.



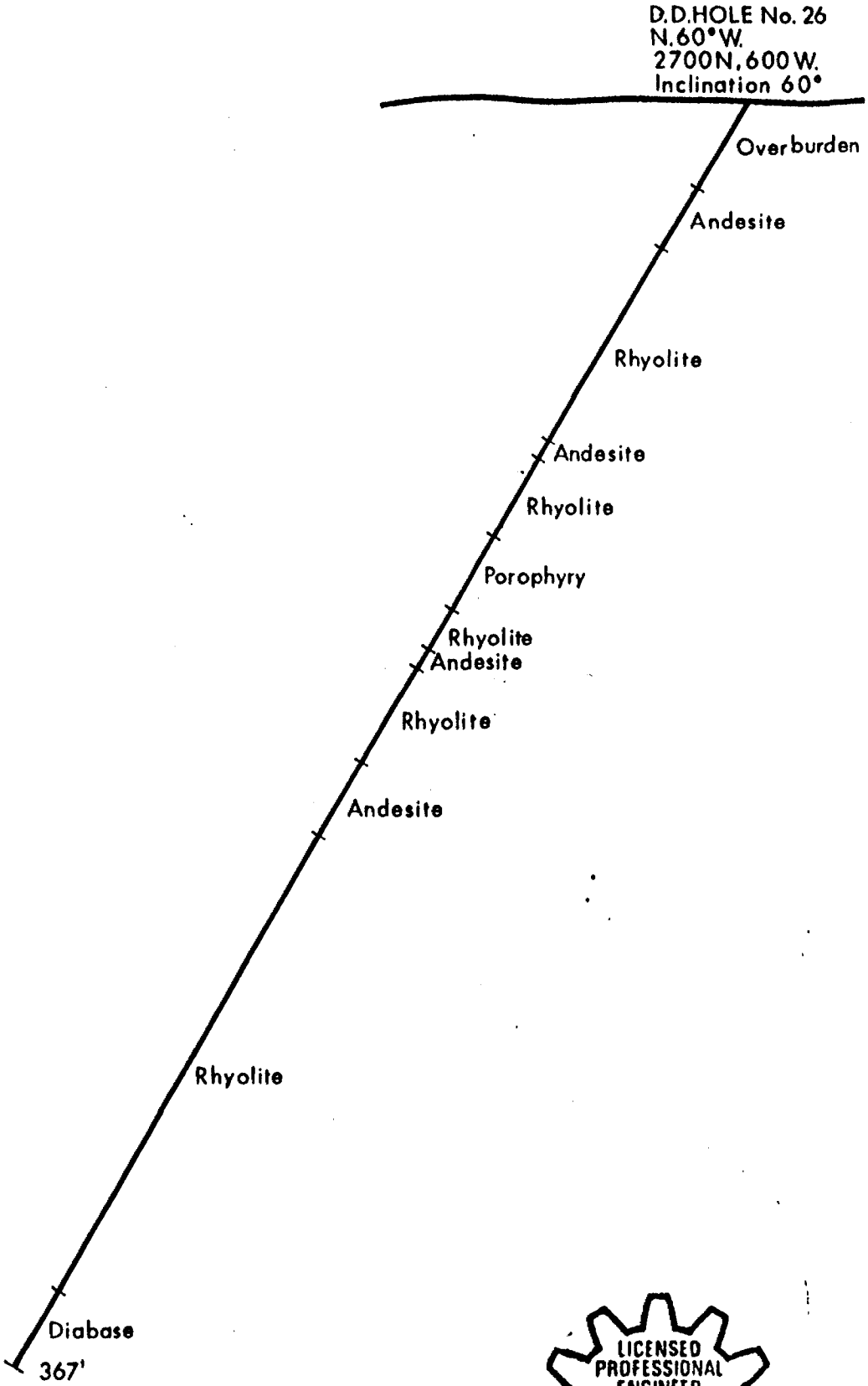
LICENSED PROFESSIONAL ENGINEER
J. R. ZIMMERMAN

KOWKASH GOLD CORPORATION

D.D.H. No. 25

SCALE 1" = 40'

Nov. 10, 1966.



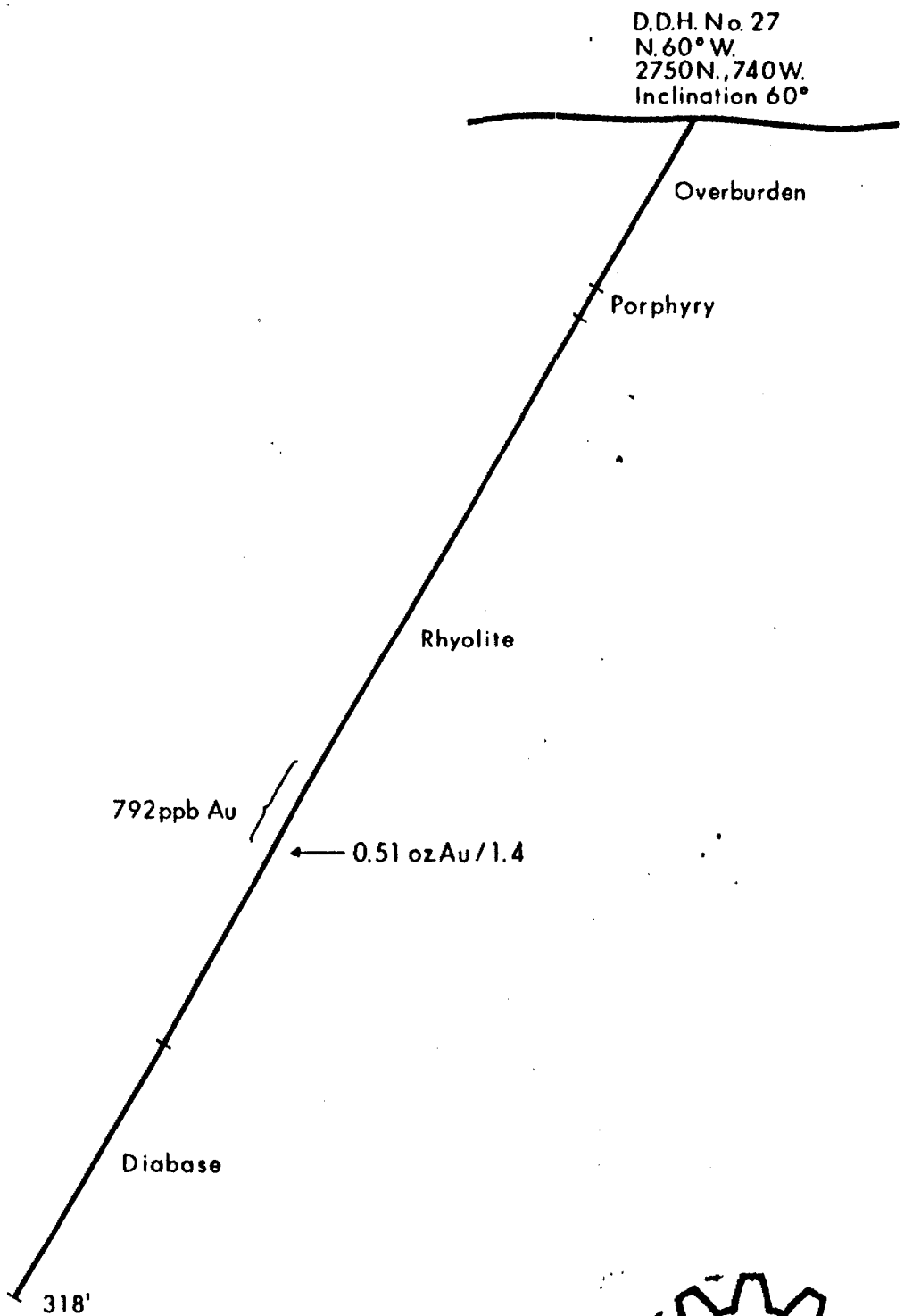
LICENSED PROFESSIONAL ENGINEER
J. R. ZIMMERMAN

KOWKASH GOLD CORPORATION

D.D.HOLE No. 26

SCALE: 1" = 50'

Nov. 14, 1986. Jno R. Zimmerman



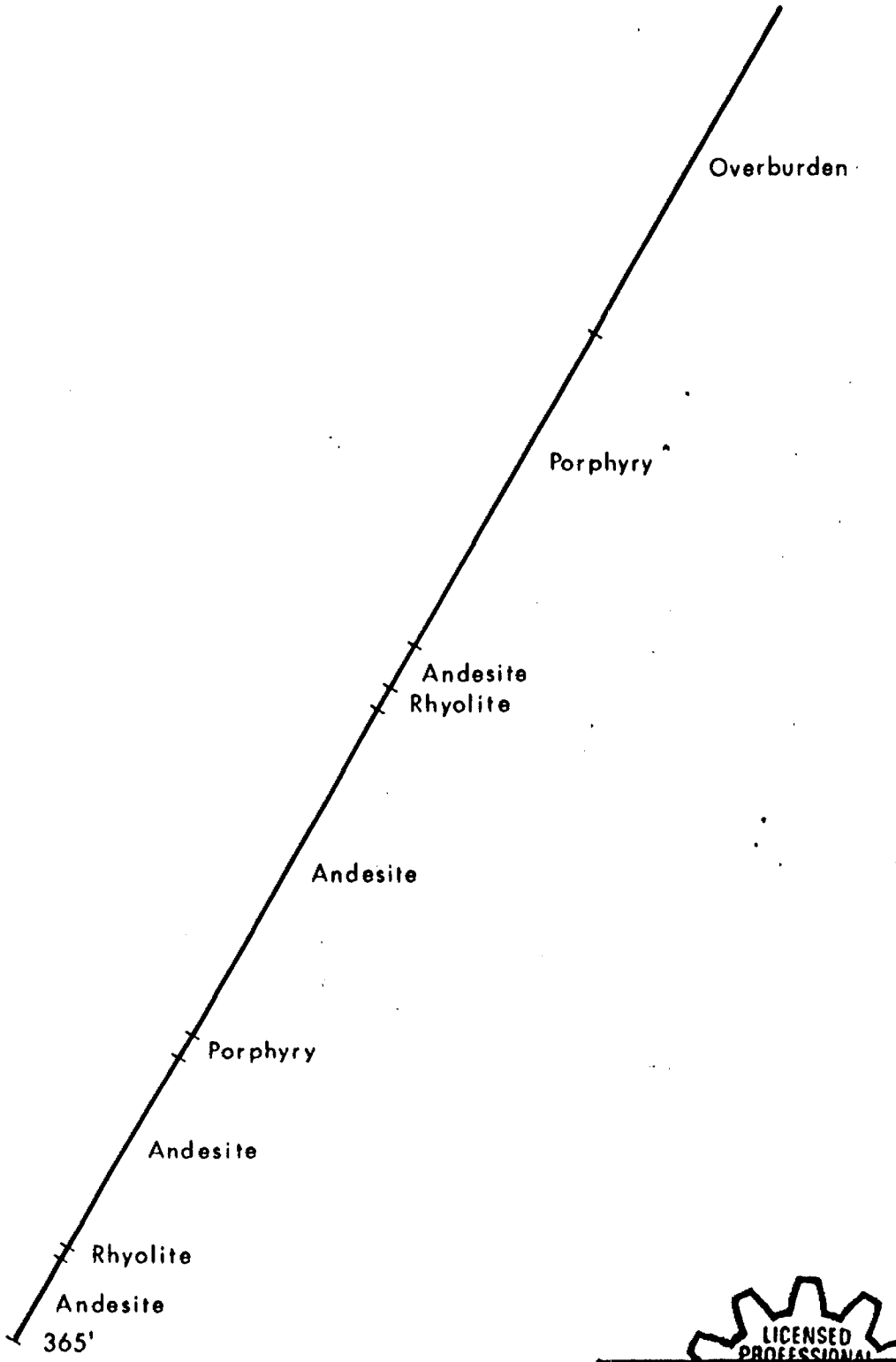
LICENSED PROFESSIONAL ENGINEER
J. R. ZIMMERMAN

KOWKASH GOLD CORPORATION

D.D.H. No. 27

SCALE: 1" = 40'

Nov. 10, 1966. James R. Zimmerman



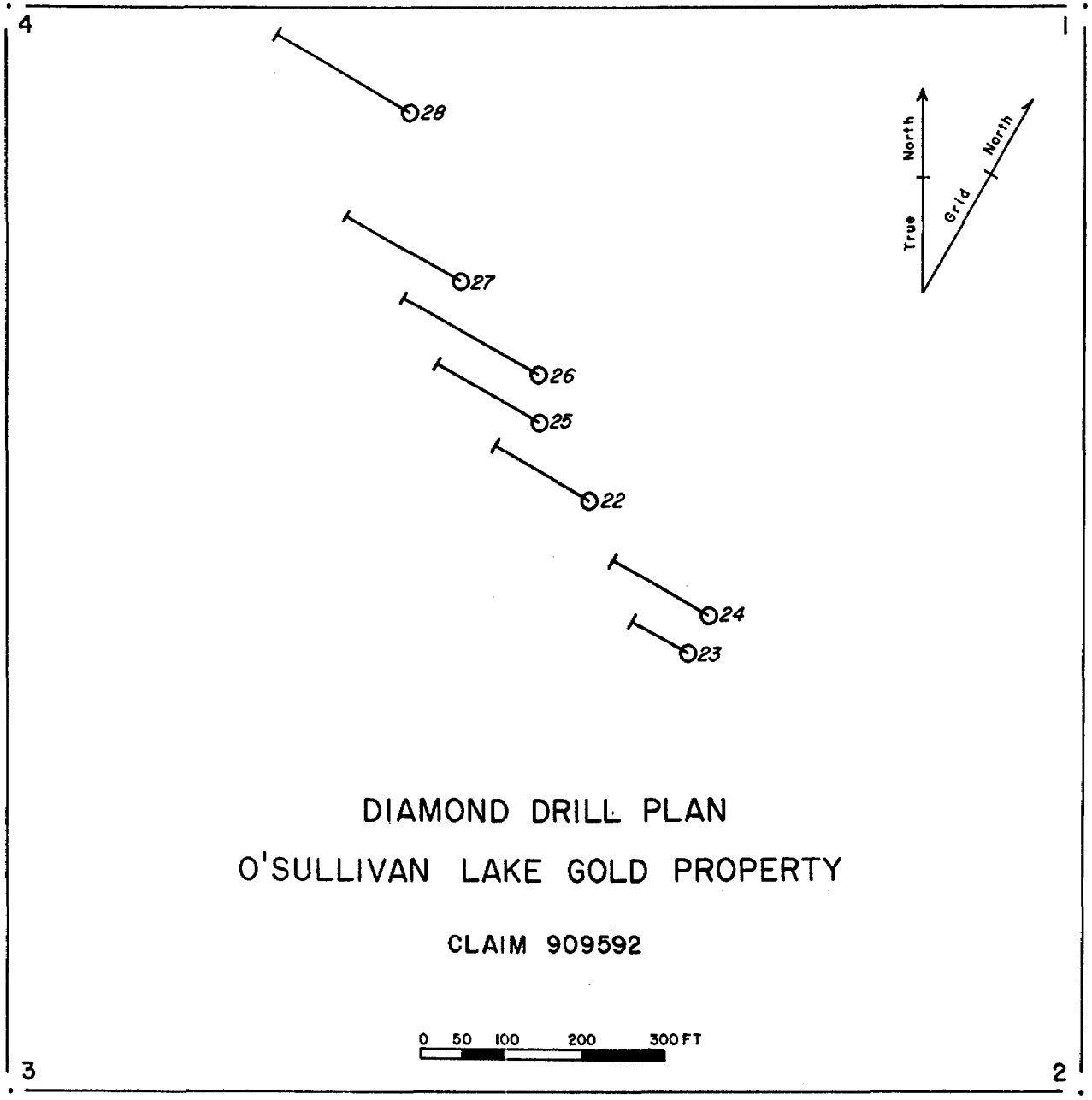
LICENSED PROFESSIONAL ENGINEER
U. K. ZIMMERMAN

KOWKASH GOLD CORPORATION

D.D.HOLE No. 28

ONTARIO

SCALE: 1" = 40'



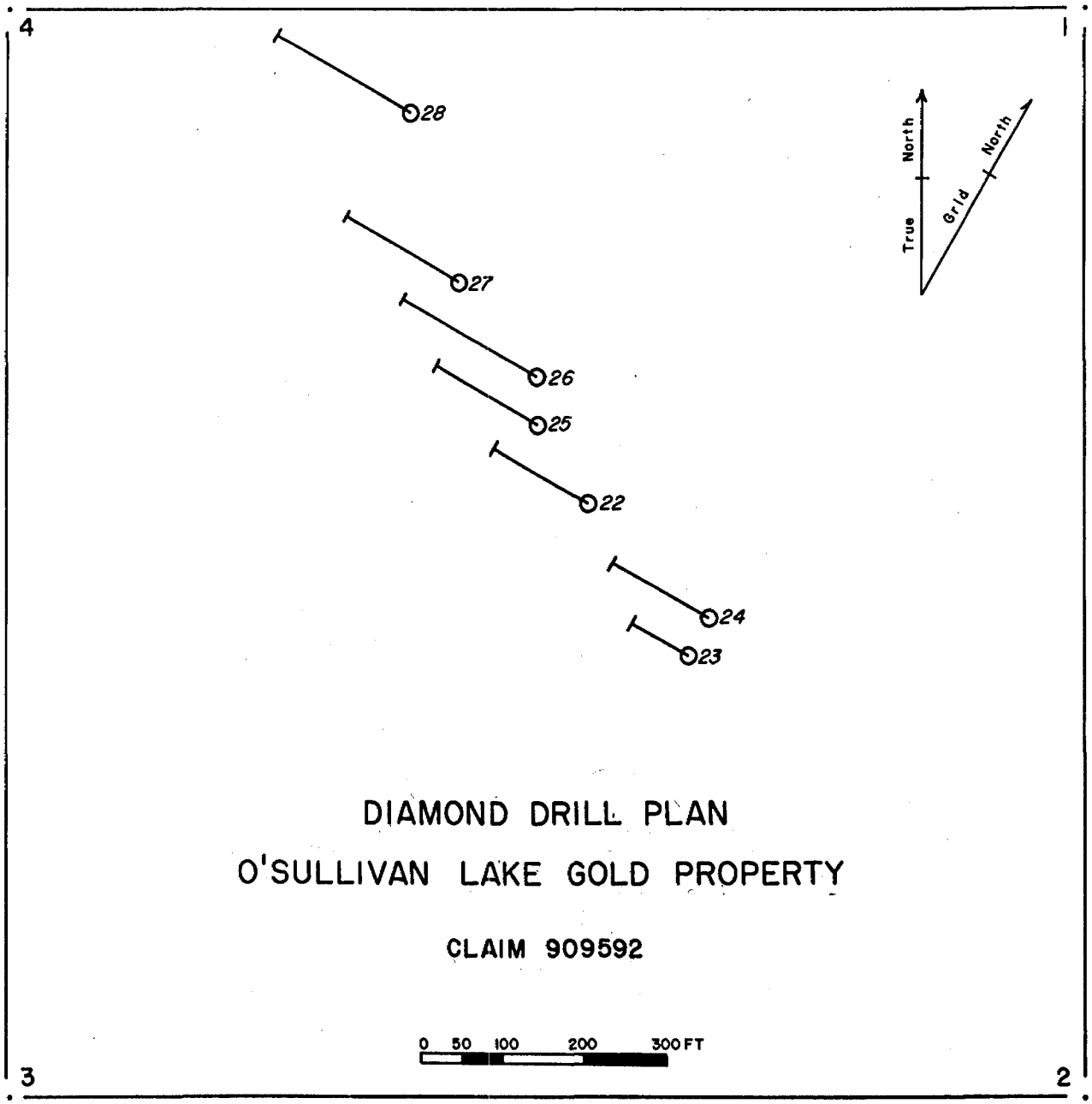
DIAMOND DRILL PLAN

O'SULLIVAN LAKE GOLD PROPERTY

CLAIM 909592

MARCH 3, 1987

W Sutt



DIAMOND DRILL PLAN

O'SULLIVAN LAKE GOLD PROPERTY

CLAIM 909592

MARCH 3, 1987

W Sutt

Ministry of Natural Resources
Ontario

Report of Work

#125

The Mi

42L06NE0014 27 O'SULLIVAN LAKE

900

Name and Postal Address of Recorded Holder

~~William Donald Sutherland~~ JOSEPH B. [illegible] ~~D-9730~~

1720 110th Ave. S.W., Calgary, Alta. T2W 0E3

~~Glenbow Road, Box 2, Cochrane, Alberta T0L 0W0~~

Summary of Work Performance and Distribution of Credits

Total Work Days Cr. claimed	Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.
for Performance of the following work. (Check one only)	TB	909567	60	TB	909575	20	TB	909583	60
☐ Manual Work		909568	20		909576	60		909584	60
☐ Shaft Sinking Drifting or other Lateral Work.		909569	60		909577	60		909585	60
☐ Compressed Air, other Power driven or mechanical equip.		909570	60		909578	60		909586	60
☐ Power Stripping		909571	60		909579	20		909587	60
☒ Diamond or other Core drilling		909572	20		909580	20		909588	60
☐ Land Survey		909573	60		909581	20		909589	60
		909574	60		909582	20		909590	60

All the work was performed on Mining Claim(s): TB 909592 Prior Assignment: 2000 days. Balance 2000

Required Information eg: type of equipment, Names, Addresses, etc. (See Table Below)

Midwest Drilling
180 Cree Crescent
Winnepeg, Manitoba
R3J 3W1 (204-885-7532)

Drilling Dates:
November 7, 1986 - November 21, 1986

THUNDER BAY MINING DIVISION
RECEIVED
MAR 30 1987
AM 7|8|9|10|11|12|1|2|3|4|5|6 PM

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES
RESEARCH OFFICE
APR 8 1987
RECEIVED

Date of Report	Recorded Holder or Agent (Signature)
March 23, 1987	W. Don Sutherland

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying

(403) 278-7893
Bill D. Sutherland, Geologist, Apt. #5 811-48th Ave. S.W.
Calgary, Alberta T2S 1E7

Date Certified	Certified by (Signature)
March 23, 1987	B Sutherland

Table of Information/Attachments Required by the Mining Recorder

Type of Work	Specific information per type	Other information (Common to 2 or more types)	Attachments
Manual Work	Nil	Names and addresses of men who performed manual work/operated equipment, together with dates and hours of employment.	Work Sketch: these are required to show the location and extent of work in relation to the nearest claim post.
Shaft Sinking, Drifting or other Lateral Work			
Compressed air, other power driven or mechanical equip.	Type of equipment		
Power Stripping	Type of equipment and amount expended. Note: Proof of actual cost must be submitted within 30 days of recording.	Names and addresses of owner or operator together with dates when drilling/stripping done.	
Diamond or other core drilling	Signed core log showing; footage, diameter of core, number and angles of holes.		Work Sketch (as above) in duplicate
Land Survey	Name and address of Ontario land surveyer.	Nil	Nil

Ministry of Natural Resources
Ontario

Report of Work

page #2

The Mining Act

Instructions – Supply required data on a separate form for each type of work to be recorded (see table below).
– For Geo-technical work use form no. 1362 "Report of Work (Geological, Geophysical, Geochemical and Expenditures)"

O'Sullivan Lake 6-82

Name and Postal Address of Recorded Holder

~~William Donald Sutherland~~ JOHN B. RANSFORD

Prospector's Licence No. ~~0~~ A49429

Glenbow Road, RR#2 Cochrane, Alberta T0L 0W0

Summary of Work Performance and Distribution of Credits

Total Work Days Cr. claimed for Performance of the following work. (Check one only)	Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.
	TB	909591	60	TB	909599	60			
☐ Manual Work		909592	60		909600	60			
☐ Shaft Sinking Drifting or other Lateral Work.		909593	60		909801	60			
☐ Compressed Air, other Power driven or mechanical equip.		909594	60		909802	60			
☐ Power Stripping		909595	60		909803	60			
☒ Diamond or other Core drilling		909596	60		909804	60			
☐ Land Survey		909597	60						
		909598	60						

All the work was performed on Mining Claim(s): TB 909592

Required Information eg: type of equipment, Names, Addresses, etc. (See Table Below)

Midwest Drilling
180 Cree Crescent
Winnepeg, Manitoba
R3J 3W1

Drilling Dates:
November 7, 1986 - November 21, 1986

THUNDER BAY
MINING DIVISION
RECEIVED
MAR 12 1987
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Date of Report	Recorded Holder or Agent (Signature)
March 6, 1987	Wm Sutherland

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

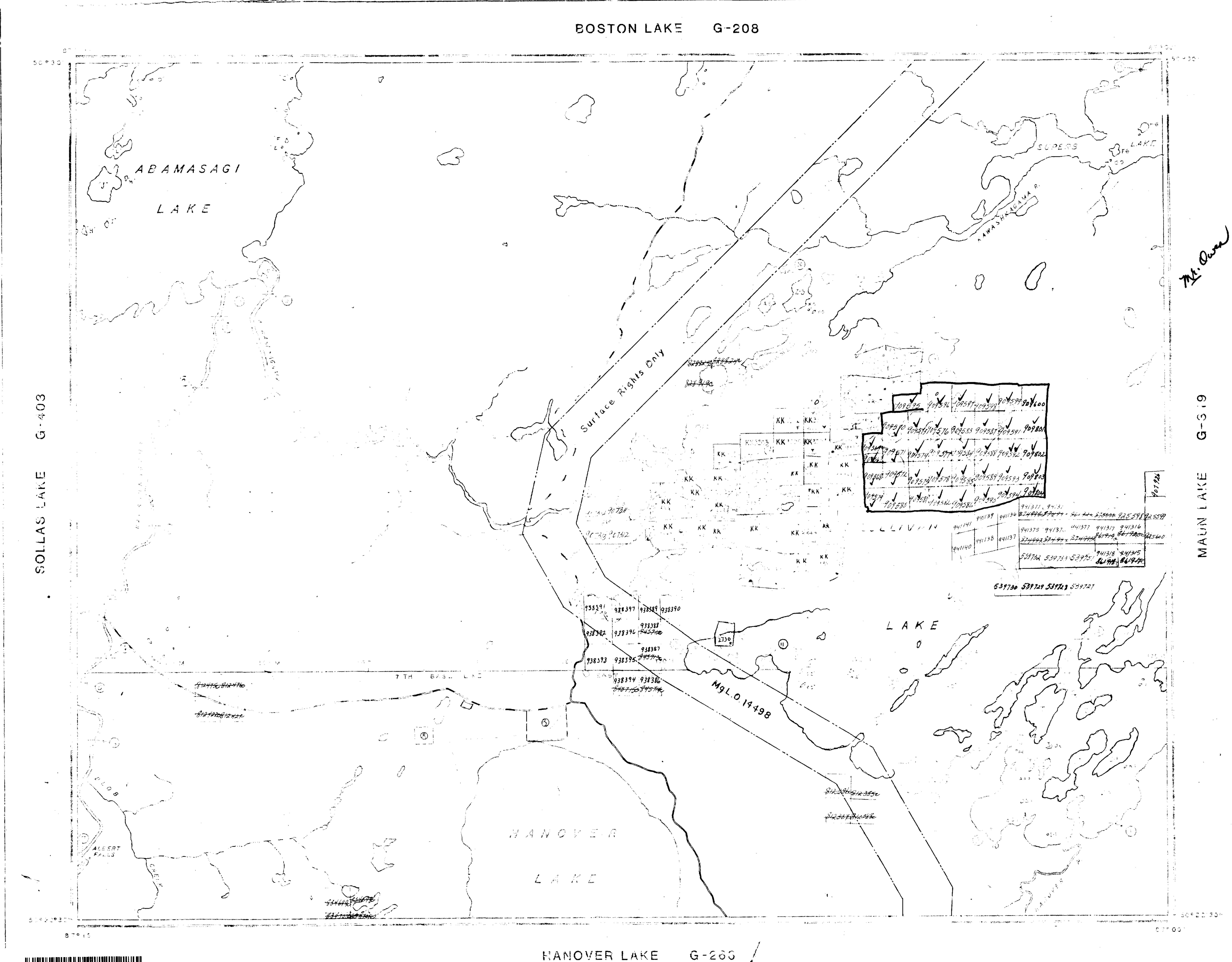
Name and Postal Address of Person Certifying

Bill J. Sutherland, Geologist, Apt #5 - 811 - 40th. Ave. S.W.
Calgary, Alberta T2S 1E7

Date Certified	Certified by (Signature)
March 6, 1987	B Sutherland

Table of Information/Attachments Required by the Mining Recorder

Type of Work	Specific information per type	Other Information (Common to 2 or more types)	Attachments
Manual Work	Nil	Names and addresses of men who performed manual work/operated equipment, together with dates and hours of employment.	Work Sketch: these are required to show the location and extent of work in relation to the nearest claim post.
Shaft Sinking, Drifting or other Lateral Work			
Compressed air, other power driven or mechanical equip.	Type of equipment		
Power Stripping	Type of equipment and amount expended. **Note:** Proof of actual cost must be submitted within 30 days of recording.	Names and addresses of owner or operator together with dates when drilling/stripping done.	
Diamond or other core drilling	Signed core log showing; footage, diameter of core, number and angles of holes.		Work Sketch (as above) in duplicate
Land Survey	Name and address of Ontario land surveyer.	Nil	Nil



REFERENCES

LEGEND

HIGHWAY AND ROUTE No.	
OTHER ROADS	
TRAILS	
SURVEYED LINES:	
TOWNSHIPS, BASE LINES, ETC.	
LOTS, MINING CLAIMS, PARCELS, ETC	
UNSURVEYED LINES:	
LOT LINES	
PARCEL BOUNDARY	
MINING CLAIMS ETC	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING OR FLOODING RIGHTS	
SUBDIVISION OR COMPOSITE PLAN	
RESERVATIONS	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINES	
TRAVERSE MONUMENT	

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
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	OC
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 200 1000 (1 KM) 2000 (2 KM)

AREA

O'SULLIVAN LAKE

M.N.R. ADMINISTRATIVE DISTRICT

GERALDTON

MINING DIVISION

THUNDER BAY

LAND TITLES / REGISTRY DIVISION

THUNDER BAY

Ministry of Natural Resources — Land Management Branch

Ontario

May 20, 1986

Date JULY 1961

G-362

200