Deloitte & Touche

Anvil Range Mining Complex: Assessment of Select Oxide Fines and Ore Stockpiles

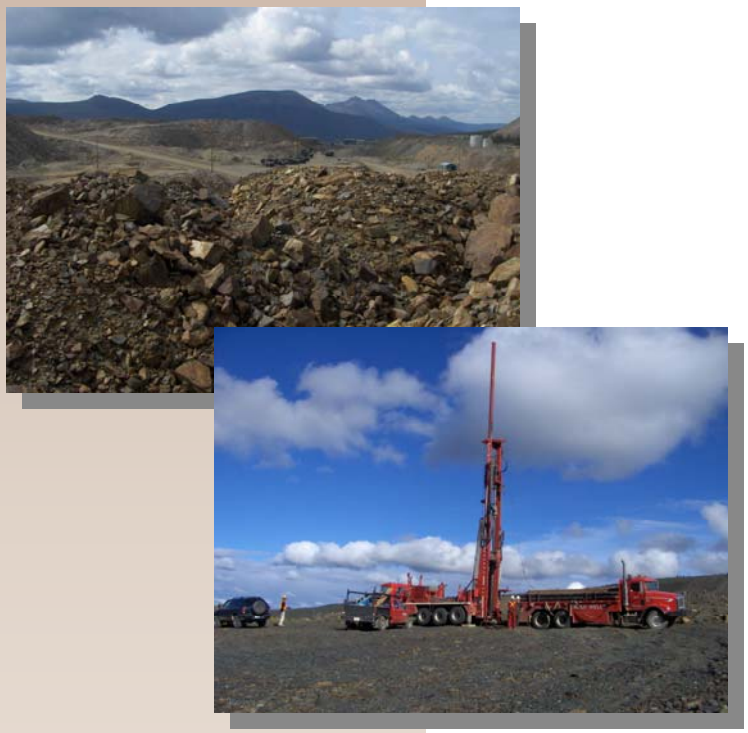
2005/06 Task 30

Prepared for:

DELOITTE & TOUCHE INC.

on behalf of the

FARO MINE CLOSURE PLANNING OFFICE



Prepared by:

SRK Consulting
Engineers and Scientists

Project Reference Number:
SRK 1CD003.077

July 2006

Anvil Range Mining Complex

Assessment of Select Oxide Fines and Ore Stockpiles

2005/06 Task 30

Deloitte and Touche Inc.

on behalf of

Faro Mine Closure Planning Office

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Executive Summary

Assessment of interim management options for the oxide fines and ore stockpiles undertaken by SRK Consulting (SRK) in 2004 indicated that more accurate delineation of Low Grade Stockpile A, Low Grade Stockpile C and the Oxide Fines Stockpile would significantly reduce overall cost variances. Consequently, a field and laboratory testing program was undertaken in 2005 to better define these three stockpiles. The primary objectives of the 2005 program were to: i) complete verification surface mapping of the three stockpiles; ii) determine the depth of the three stockpiles through drilling; and, iii) provide supplemental geochemical data.

The field program comprised surface mapping of the three stockpiles and drilling of three holes on the Low Grade Stockpile A, four on Low Grade Stockpile C, and one on the Oxide Fines Stockpile. The drill cuttings were logged and field paste parameters were determined. Both the mine rock and the underlying soils/rock were sampled for elemental analysis. Three test pits at the southwest limit of Low Grade Stockpile A were also excavated and sampled. In addition, the distribution of oxide fines around the mill site and laydown areas was mapped, shallow test pits were excavated and field parameters were determined.

The drill results enabled the volume estimates for Low Grade Stockpiles A and C to be better defined. However, some uncertainty remains with respect to the Oxide Fines Stockpile, since the single drill hole did not intersect the original topography below the dump. The hole was terminated short because field logging indicated a contact had been encountered which was thought to be underlying waste rock.

Revised cost calculations for the three closure alternatives identified in 2005 indicated that the cost difference between the 'cover in place' ($7.4 to $8.3 million) and the 'consolidate and cover' ($8.1 to $9.1 million) options is about $1 to 2 million, with the cover in place option being more cost favourable. However, the 'consolidate and cover' option would reduce the footprint of the covered areas from between 19.3 ha and 21.8 ha, to between 11.5 ha and 14.1 ha. That is equal to a 36% to 40% reduction in surface area and would result in a proportional reduction in infiltration and, consequently, metal and acidity loadings. Lime amendment during the consolidation process would add an additional cost of about $1.2 million. The immediate reduction in acidity loadings that would result, as well as the added benefit from limiting solute release during relocation, should justify the additional expense. Complete relocation to the Faro Pit, inclusive of lime amendment, is estimated to be between $14.8 and $19.6 million.

The preliminary assessment of the plant site fill indicated that significant proportions of the fill have properties similar to those of the oxide fines and are acidic. Some of the areas may be present as thin layers of reactive material that have been pushed over the crest of the fills at the plant site area.

It is recommended that, should the opportunity arise (i.e. if a drill is on site and becomes available), additional drilling should be undertaken in the Oxide Fines Stockpile area to establish the material types down to the original topography as well as to define the areal extent of the oxide fines and medium grade ore stored therein. It is also recommended that, once the overall closure strategy is better defined, complete costs associated with each option (including treatment and maintenance) be re-evaluated so that the ore and oxide fines management can be optimised relative to the overall strategy.

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1 Introduction

The oxide fines and ore stockpiles adjacent to the Faro open pit at the Anvil Range Mining Complex are believed to be a significant source of metal contamination to the surrounding environment. As a consequence, an assessment of interim management options for the oxide fines and ore stockpiles was undertaken by SRK Consulting (SRK) in 2004 (Task 19a, Oxide Fines Relocation Study). The study set out three alternatives, each having a wide variance in cost due to uncertainty with respect to the total volume of material to be handled (SRK, 2005). The study concluded that more accurate delineation of Low Grade Stockpile A and Low Grade Stockpile C would significantly reduce the overall variance between the lower and upper volume estimates. In addition, the variance observed for the Oxide Fines Stockpile indicated that further delineation of this stockpile would be beneficial.

As a consequence of these large variances, a field and laboratory testing program was undertaken in August 2005 to more clearly define the contact elevation between underlying waste rock or soil, and Low Grade Stockpile A, Low Grade Stockpile C, and the Oxide Fines Stockpile, respectively. The work was completed as part of Task 30, Management of Oxide Fines, for Deloitte and Touche Inc., on behalf of the Faro Mine Closure Planning Office. The primary objectives of the 2005 program were to:

- complete verification surface mapping of these stockpiles to appropriately target the drilling program;
- determine the depth of the stockpiles through drilling; and,
- provide supplemental geochemical data.

This report presents the results from the field and laboratory investigations, provides revised volume estimates for the respective stockpiles and compares revised cost estimates for select closure strategies.

2 Scope of Work

The investigations were undertaken in two stages comprising:

i) a field program (mapping, drilling, test pitting, sampling and field testing) and

ii) laboratory testing.

The scope of work for each stage of investigation is described below.

2.1 Field Program

2.1.1 Drilling, Test Pitting and Sampling

Surface mapping of the three stockpiles was undertaken to verify the planimetric extent of Low Grade Stockpile "A", Low Grade Stockpile "C", and the Oxide Fines Stockpile (Figure 2.1), and to identify appropriate sites for undertaking drilling. The number of drill hole sites were selected based on the estimated footprint areas and the total volume of material contained within each stockpile. A total of three holes were sited on Low Grade Ore Stockpile A, four on Low Grade Ore Stockpile C, and one on the medium grade ore portion of the Oxide Fines Stockpile. As shown in Figure 2.1 and discussed in SRK (2005), the Oxide Fines Stockpile is comprised of discrete areas of both brown and green oxide fines, as well as medium grade ore.

Drilling was undertaken using a 6-inch (15 cm) tricone air rotary drill rig. Drilling was typically terminated once natural soils were encountered, or when there was a clear transition in rock properties from ore to waste rock that extended beyond 2 m.

The drill cuttings were logged at the drill by Ms. Laura Findlater of Robertson GeoConsultants Inc. Representative composite samples were obtained and bagged, typically at 1 m intervals, or as appropriate, to reflect contacts between distinctly different material types. Both the mine rock and the underlying soils/rock were sampled for field testing and elemental analysis.

Piezometers were not installed in any of the drill holes because groundwater was not encountered.

In addition, three test pits were excavated at the southwest limit of Low Grade Stockpile A (where the low grade ore thickness was anticipated to be less than 3 m) to provide additional information on the elevation of the contact between the low grade ore and waste rock. A hydraulic excavator was used to excavate test pits to a depth of 2 to 3 m. The exposed material was logged for visual characteristics and then sampled for field and laboratory testing. The test pits were backfilled following logging and sampling.

2.1.2 Plant Site Surface Mapping

Supplemental mapping of the plant site fill was undertaken. The southern face of the entire length of fill between the emergency tailings area and the guardhouse parking lot was surveyed for material type. Shallow tests were completed in this area and sampled for field testing.

2.1.3 Field Testing

The paste parameters (paste pH and electrical conductivity) of the drill cuttings and test pit samples were determined in the field. Sub-samples of the drill cuttings and test pit samples were screened to less than 2 mm and paste parameters were determined using about 50 g of the screened drill cuttings at a distilled water to solids contact ratio of approximately 1:1 (w/w).

2.2 Laboratory Testing

Composite samples of the drill cuttings were selected based on the drill logs and submitted for elemental analyses. The analytical suite included total sulphur (S(T)) and trace elements (metals) by ICP-OES.

583000 E
583500 E
584000 E
584500 E
6914500 N
6914000 N
FARO PIT
Low Grade Stockpile "A"
Low Grade Ore
Oxide Fines #3
Oxide Fines #2
Crusher Stockpile
Medium Grade Ore Stockpile
Brown
Medium Grade Ore
Green
Oxide Fines Stockpile
Low Grade Stockpile "C"
1240.49
1224.01
1188.63
1188.62
1167.47
1163.43
1166.97
1181.59
1211.02
1187.64
1186.47
1232.81
1231.09
1152.85
1164.99
1230
1220
1210
1200
1190
1180
1170
1160
1150
50 0 100 200 300 feet
50 0 50 100 150 Metres
N

SRK CONSULTING
Faro Mine, Yukon

Map Scale:15,000
Contour Interval: 2m
Date of Photography: 03/07/25
Scale of Photography: 1:20000
Survey control derived from existing 1:20000 photography
Survey control based on: UTM Projection, NAD27
Compiled by The ORTHOSHOP, Calgary, September 2003
WO 8856

File Ref: 2003 FARO SITE PLAN-Oxide Fines.dwg

SRK Consulting
Engineers and Scientists

Deloitte & Touche

Assessment of Select Oxide Fines and Ore Stockpiles

Plan of Ore and Oxide Fines Stockpile Locations, based on 2005 mapping

PROJECT NO.	DATE	APPROVED	FIGURE
1CD003.077	July 2006	JTC	2.1

3 Results

3.1 Select Stockpile Assessment

3.1.1 Drill Logs

The locations of the drill holes and test pits are shown in Figure 3.1. Complete drill hole and test pit logs are provided in Appendix A. The drill cuttings and test pits were logged for rock type and appearance. Most significantly, the logs provide a preliminary indication of the depth from surface of the contact between the ore/ oxide fines and the underlying soil or waste rock. The observations from drill hole and test pit logs are summarised in Table 3.1.

Table 3.1: Summary of Drill Log Observations

Drill Hole or Test Pit ID	Northing	Easting	Collar Elevation (m asl)	Inferred Base of Ore Stockpile		Observed Soil/Bedrock	
				Contact Depth (m)	Elev. (m asl)	Contact Depth (m)	Elev. (m asl)
Low Grade Stockpile A							
LGSPA- 06	6914506	584145	1190	10.0	1180	13.5	1176.5
LGSPA- 07	6914593	584193	1192	12.0	1180	16.5	1175.5
LGSPA- 08	6914506	584114	1189	9.5	1179.5	18.0	1171.0
TP-LGA-1	6914482	584107	1182	2.2	1179.8	-*	-*
TP-LGA-2	6914467	584081	1181	1.4	1179.6	-*	-*
TP-LGA-3	6914453	584056	1180	1.0	1179	-*	-*
Low Grade Stockpile C							
LGSPC-06	6914356	584333	1194	14.3	1179.7	14.3	1179.7
LGSPC-07	6914294	584372	1190	11.2	1178.8	12	1178.0
LGSPC-08	6914339	584435	1201	19	1182.0	22	1179.0
LGSPC-09	6914268	584572	1198	11.8	1186.2	11.8	1186.2
LGSPC-10	6914533	584563	1197	8.6	1188.4	8.6	1188.4
Oxide Fines Stockpile							
MGSP04	6914322	583495	1177	10.3	1166.7	-*	-*

*Drill hole / test pit terminated before soil contact was intercepted.

As shown in Table 3.1, the contact elevation inferred from the drill logs for Low Grade Stockpile A is horizontal at about 1180 m asl. Below this elevation, there is a layer of waste rock above the original ground surface which was encountered at variable elevations, i.e. 1171 m asl to about 1177 m asl. The test pits excavated within the plateau in the vicinity of Low Grade Stockpile A indicated that a thin layer of low grade ore remains in this area. The thickness of the low grade ore layer ranges from about 2.2 m at the toe of the upper layer of the stockpile, to about 1 m at the outer crest of the plateau. These depths appear to correspond well with the base of the ore stockpile derived from the drill cutting logs.

In the case of Low Grade Stockpile C, the contact slopes from an elevation of about 1188 m asl in the east to about 1180 m asl in the west. The inferred contact for the base of Low Grade Stockpile C appears to coincide with the original ground elevation. The inferred contact based on the drill log for the Oxide Fines Stockpile is approximately at the road elevation.

3.1.2 Field Test Results

The complete field paste test results, together with depth profile plots for each drill hole, are provided in Appendix B. The results, in general, indicate that the low and medium grade ore has acidified, and that the 'acid front' in many cases extends beyond the inferred contact between the low grade ore and the underlying waste rock. The results for Low Grade Stockpile A indicate that the paste pH generally increases with depth, and that the paste conductivity typically is at about 5 mS/cm, but may be as high as 10 mS/cm. The results for Low Grade Stockpile C are similar with the exception of drill holes LGSPC-07 and C-08 which have zones of elevated conductivity in some cases exceeding 20 mS/cm. The paste parameters for the Oxide Fines Stockpile indicate the conductivity within the entire depth of the drill hole ranges from 5 to 10 mS/cm. The paste pH was at or below 4, with the exception a layer extending from about 8 to 10 m in depth below ground surface that had a paste pH of slightly below 6.

The correlation between the inferred contact and paste parameters is generally poor. This is not unexpected since the acidity will have, over many seasons, been transported through the low and medium grade ore into the underlying soils and/or waste rock.

3.1.3 Elemental Analyses

The complete elemental analyses are provided in Appendix C, and are summarized in Table 3.2 below. The contacts were re-assessed based on the zinc and sulphur grades and the revised contact elevations are as shown in Table 3.2. In general, the inferred contact corresponds well with the data from the drill hole logs, with the exception of that for the Oxide Fines Stockpile.

The drill hole in the medium grade ore portion of the Oxide Fines Stockpile was terminated at a depth of about 13.5 m, about 3 m below the logged contact. However, as shown in the table, the zinc and sulphur grades were found to be elevated to the bottom of the drill hole. This suggests that, while there was a transition in material type at the logged contact, the transition was from 'fresh' medium grade ore to oxidized medium grade ore (based on the material descriptions provided in the drill cutting log). The results further suggest that the actual contact is well below the previously inferred contact, and that the medium grade ore may extend to the original topography, which is some 16.5 below the bottom of the drill hole. The implication to the volume estimates is discussed in Section 3.1.4.

583000 E
583500 E
584000 E
584500 E
6914500 N
6914000 N
FARO PIT
PLANT SITE
1240.49
1224.01
1188.63
1188.62
1167.47
1163.43
1166.97
1149.26
1181.59
1211.02
1186.47
1187.64
1149.65
1232.81
1231.09
1165.0
1110.93
1230
1220
1210
1200
1190
1150
1160
1170
1180
LGSPA-07
LGSPA-08
LGSPA-06
TP-LGA-1
TP-LGA-2
TP-LGA-3
LGSPC-06
LGSPC-08
LGSPC-07
LGSPC-09
LGSPC-10
MGSP04

Faro Mine, Yukon

Map Scale:1:2000
Contour Interval: 2m
Date of Photography: 03/07/25
Scale of Photography: 1:20000
Survey control derived from existing 1:20000 photography
Survey control based on: UTM Projection, NAD27
Compiled by The ORTHOSHOP, Calgary, September 2003
WO 8856

50 0 100 200 300 feet
50 0 50 100 150 Metres

LEGEND

LGSPA- 06 Drill Hole Location
TP-LGA-1 Test Pit Location

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Acad-Faro\2006 Acad drawings\FARO SITE PLAN-Oxide Fines_Task30.dwg

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Anvil Range Mining Complex

Assessment of Select Oxide Fines and Ore Stockpiles

Drill Hole and Test Pit Locations

DATE:	APPROVED:	FIGURE:
July 2006	JTC	3.1

Low Grade Stockpile "A"

Low Grade Stockpile "C"

Oxide Fines Stockpile
– contains 2 types of oxide fines, as well as medium grade ore

FARO PIT

PLANT SITE

LGSPA-07
LGSPA-08
LGSPA-06
TP-LGA-1
TP-LGA-2
TP-LGA-3
LGSPC-06
LGSPC-08
LGSPC-07
LGSPC-09
LGSPC-10
MGSP04

583000 E
583500 E
584000 E
584500 E
6914500 N
6914000 N

1240.49
1224.01
1188.63
1188.62
1167.47
1181.59
1163.43
1166.97
1149.26
1149.65
1211.02
1186.47
1187.64
1232.81
1231.09
1165.0
1110.93

Faro Mine, Yukon

Map Scale:1:2000
Contour Interval: 2m
Date of Photography: 03/07/25
Scale of Photography: 1:20000
Survey control derived from existing 1:20000 photography
Survey control based on: UTM Projection, NAD27
Compiled by The ORTHOSHOP, Calgary, September 2003
WO 8856

50 0 100 200 300 feet
50 0 50 100 150 Metres

LEGEND

- LGSPA- 06 — Drill Hole Location
- TP-LGA-1 — Test Pit Location
- Low Grade Ore Deposits

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Vancouver

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Acad-Faro\2006 Acad drawings\FARO SITE PLAN-Oxide Fines_Task30.dwg

Deloitte & Touche

Anvil Range Mining Complex

Assessment of Select Oxide Fines and Ore Stockpiles

Revised Areas Based on 2005 Investigations

DATE:	APPROVED:	FIGURE:
July 2006	JTC	3.2

The zinc results for test pit TP-LGPA-3 indicate that the rock in this location consists predominantly of waste rock, albeit at an elevated sulphur grade. Therefore, the low grade ore – waste rock contact is located ('daylights') somewhere between test pits TP-2 and TP3. Overall, the results for Low Grade Stockpile A confirm a contact at an elevation of about 1179 to 1180 m asl.

The zinc results for Low Grade Stockpile C indicate that the contact rises marginally from an elevation of about 1180 m asl at the western perimeter of the dump to about 1188 m asl at the eastern perimeter. The zinc and sulphur grades in the low grade ore varied somewhat across the dump (horizontally), as well as vertically within the dump. The results further indicate that the low grade ore is underlain by waste rock.

Table 3.2: Summary of Stockpile Base Elevation from Zinc and Sulphur Analyses

Drill Hole Or Test Pit ID	Collar Elevation (m asl)	Inferred Base of Ore Stockpile		Zinc (ppm)		Total Sulphur (%)	
		Contact (m)	Elev. (m asl)	Above	Below	Above	Below
Low Grade Stockpile A							
LGSPA- 06	1190	10.0	1180	31,500	4,050	28.7	1.2
LGSPA- 07	1192	12.0	1180	28,500	3,400	23.8	1.6
LGSPA- 08	1189	10.0	1179	20,500	2,660	17.0	1.3
TP-LGA-1	1182	2.2	1179.8	13,300	-	12.1	-
TP-LGA-2	1181	1.4	1179.6	20,200	14,400	22.7	8.4
TP-LGA-3	1180	1.0	1179.0	1,670*	2,450*	7.1*	1.5*
Low Grade Stockpile C							
LGSPC-06	1194	14	1179.7	43,500	8,080	15.3	3.4
LGSPC-07	1190	12	1178.8	29,400	3,330	8.1	0.74
LGSPC-08	1201	19	1182.0	29,500	2,410	15.0	1.1
LGSPC-09	1198	12	1186.2	12,550	2,800	16.8	1.5
LGSPC-10	1197	7.5	1188.4	24,550	2,440	24.3	1.1
Oxide Fines Stockpile							
MGSP04	1177	>13.5	<1163	30,800*	39,200*	13.7*	21.8*

* Averages above and below the contact are inferred from the logs of the drill cuttings and test pits.

3.1.4 Revised Volume Estimates

A summary of the revised volume estimates for Low Grade Stockpile A, Low Grade Stockpile C, and the Oxide Fines Stockpile is provided in Table 3.3. These estimates were derived from the updated inferred contact elevations presented in Table 3.2, and the revised planimetric areas presented in Figure 3.2.

The estimated volume of 256,000 m^3 for Low Grade Stockpile A is well above the previous lower limit (71,000 m^3), but is below the previously estimated upper limit (555,000 m^3). The consistency in the drill cutting results provides good confidence in the revised volume estimate. The estimated planimetric surface area of the stockpile has increased from about 3.6 ha to about 4.3 ha.

Table 3.3: Summary of Revised Stockpile Volume Estimates

Location	Contact Elev. (m asl)	Footprint Area m^2	Volume m^3
Low Grade Stockpile A	~1180	42,500	256,000
Low Grade Stockpile C	1179 to 1188	91,100	654,000
Oxide Fines Stockpile	~1163	24,200	293,000
	~1147 (orig. top.)	24,200	693,000
	~1147 (orig. top.)	49,800	1,373,000

The revised volume estimate of 654,000 m^3 for Low Grade Stockpile C is close to the previously estimated upper limit of 723,000 m^3. The estimated planimetric area of the stockpile has however increased significantly from 5.1 ha to about 9.1 ha. It should be noted that the layer of low grade ore thins toward the eastern end of the stockpile, where the base of the low grade ore contacts the original topography, so that it will likely be possible to consolidate some of this material to reduce the footprint in this area, and thus reduce the size of the cover that may be required.

As noted before, the medium grade ore in the Oxide Fines Stockpile is underlain by oxide fines or highly oxidized medium grade ore, at least down to an elevation of 1163 m asl. At this elevation, the estimated volume of medium grade ore and oxide fines in the Oxide Fines Stockpile increases from the previous estimate of about 100,000 m^3 to about 300,000 m^3. Since the base of this material was not defined, the actual volume exceeds this estimate. It is possible that the depth may extend to original topography, in which case the volume of material contained will be about 693,000 m^3.

It should be noted that, since the base contact of the deposit is poorly defined by the previous visual mapping, it is also possible that the lateral extent of the dump may have been underestimated. If the oxide fines extend to depth at the angle of repose, the footprint of the dump increases to about 4.9 ha at the contact with the original topography. The corresponding volume would increase to about 1.4 million m^3.

These changes have significant implications with respect to the long-term closure options for the low grade ore and oxide fines, as discussed in Section 4.

3.2 Plant Site Area

The plant site fill was surveyed to assess the potential remediation requirements in this area. Shallow test pits were excavated along the southern face of the mill pad, from the emergency tailings area to the guardhouse parking lot, to develop a better understanding of the composition and the chemical characteristics of the fill material.

As noted before, paste parameters were determined and geological descriptions prepared for the materials encountered. The paste parameters are provided in Table 3.4, and the geological descriptions are provided in Appendix D. The locations of the acidic zones are illustrated in Figure 3.3.

As shown in Table 3.4, a large proportion of the materials were found to be acidic, with elevated conductivity values. A significant proportion of the samples was also found to have an elevated sulphide mineral content (see Appendix D), which suggests that for at least some proportion of the samples, the low pH values and elevated conductivities have been generated locally rather than originated elsewhere and transported to the sample locations.

As shown in Figure 3.3, there are significant sections of the fill that are acidic.

Table 3.4: Summary of Plant Site Fill Paste Parameters

Station ID	Easting	Northing	EC	pH
	NAD27	NAD27	(mS/cm)	(s.u.)
PP01	583277	6914025	15.04	2.17
PP02	583250	6914009	2.94	5.39
PP03	583205	6913993	5.92	3.27
PP04	583167	6914001	9.52	2.72
PP05	583143	6913965	6.32	1.97
PP06	583123	6913935	6.46	1.98
PP07	583105	6913923	1.98	5.72
PP08	583081	6913916	2.56	3.69
PP09	583060	6913925	4.39	5.68
PP09 surf	583060	6913925	10.04	2.5
PP10	583045	6913929	3.47	6.42
PP10 push	583045	6913929	6.26	3.89
PP11	583030	6913936	10.49	4.84
PP12	582997	6913943	8.94	10.35
PP13	582974	6913926	6.75	4.26
PP14	582938	6913925	4.07	5.44
PP15	582926	6913940	7.36	5.06
PP16	582869	6913970	2.92	6.36
PP16 surf	582869	6913970	5.43	3.94
PP17	582840	6913952	5.35	4.1
PP18	582812	6913967	2.91	6.36
PP19	582796	6913991	4.71	4.29
PP20	582795	6913998	3.51	4.94
PP20 ox	582795	6913998	5.28	5.86
PP21	582784	6914030	4.91	3.87
PP22	582744	6914025	4.26	3.95
PP23	582712	6914024	11.03	3.63
PP24	582712	6914117	0.7	6.38
PP25	582687	6914118	0.5	7.57
PP26	582609	6914153	2.13	7.03
PP27	582821	6914030	8.16	4.1

582500 E

583000 E

6914000 N

PP26
2.13
7.03

PP24
0.70
6.38

PP25
0.50
7.57

PP23
11.03
3.63

PP22
4.26
3.95

PP21
4.91
3.87

PP27
8.16
4.10

PP20
3.51
4.94

PP20 ox
5.28
5.86

PP19
4.71
4.29

PP18
2.91
6.36

PP17
5.35
4.10

PP16
2.92
6.36

PP16 surf
5.43
3.94

7.36
5.06

PP15

PP14
4.07
5.44

PP13
6.75
4.26

PP12
8.94
10.35

PP11
10.49
4.84

PP10
3.47
6.42

PP10 push
6.26
3.89

PP09
4.39
5.68

PP09 surf
10.04
2.50

PP08
2.56
3.69

PP07
1.98
5.72

PP06
6.46
1.98

PP05
6.32
1.97

PP04
9.52
2.72

PP03
5.92
3.27

PP02
2.94
5.39

PP01
15.04
2.17

N

LEGEND

PP02
2.94
5.39

EC (mS/cm)
- < 2
- 2–5
- >5

Grab Sample Location

pH (s.u.)
- < 3
- 3–5
- >5

Faro Mine, Yukon

Map Scale:1:2000
Contour Interval: 2m
Date of Photography: 03/07/25
Scale of Photography: 1:20000
Survey control derived from existing 1:20000 photography
Survey control based on: UTM Projection, NAD27
Compiled by The ORTHOSHOP, Calgary, September 2003
WO 8856

25 0 50 100 150 feet
12.5 0 25 50 75 Metres

SRK Consulting
Engineers and Scientists
Vancouver

SRK JOB NO.: 1CD003.077

Acad-Faro\2006 Acad drawings\FARO SITE PLAN-Oxide Fines_Task30.dwg

Deloitte & Touche

Anvil Range Mining Complex

Assessment of Select Oxide Fines and Ore Stockpiles

Plant Site Fill Survey Results

DATE:	APPROVED:	FIGURE:
July 2006	JTC	3.3

4 Summary and Conclusions

4.1 Oxide Fines and Low Grade Ore

4.1.1 Summary

Table 4.1 summarises the revised volume and surface area estimates based on the 2005 field investigations. As shown in the table, some uncertainty remains with respect to the Oxide Fines Stockpile. However, the volume estimates for Low Grade Stockpiles A and C are now fairly well defined. Note that the upper volume estimates, as presented in the previous assessment (SRK, 2005), are shown for the remainder of the stockpiles presented in the table. The reason for this is that, relative to the overall volume, the variance in upper and lower estimates for these stockpiles is small.

Table 4.1: Summary of Updated Oxide Fines and Ore Stockpile Area and Volume Estimates

Description	Planimetric Area (m^2)	Estimated Volume (m^3)
Oxide Fines Stockpiles - contains both green and brown oxide fines, as well as medium grade ore	24,200 to 49,800	693,000 to 1,373,000
Crusher stockpile	12,000	95,000
Medium Grade Stockpile	6,000	138,000
Oxide fines #2	5,000	67,000
Oxide fines #3	5,000	39,000
Low grade ore	7,000	44,000
Low Grade Stockpile A	42,500	256,000
Low Grade Stockpile C	91,000	654,000
Totals	**192,700 to 218,300**	**1,986,000 to 2,666,000**

* Note: For stockpile locations, please refer to Figure 2.1. For areas, please refer to SRK (2005)

As discussed in the preliminary oxide fines management plan (SRK, 2005), three potential strategies were considered namely, cover in place, consolidate to Low Grade Stockpile C or complete relocation to the Faro Pit. That report presented preliminary costs based on the high and low volume estimates, and for two possible fleet configurations. The cost estimates have been revised for the current volume estimates, but for simplicity, only the cost estimates for the high capacity fleet are summarised in the following sections.

4.1.2 Cost Implications

Cover in Place

The cover design, adopted for both the 'cover in place' option and the 'consolidate and cover' option (see next section), comprises a 0.5 m compacted till layer, overlain by a 1.5 m nominally compacted till layer. This cover is expected to reduce infiltration to less than 5 % of the mean annual precipitation. This cover design has not been optimized but has been adopted in this report for the purpose of cost comparisons (and to be consistent with the 2005 assessment).

Based on the cover design and placement requirements, all slopes would be re-graded to 3:1 (H:V) in preparation for cover placement. The maximum down-slope run is assumed to be 50 m. Conservatively it was assumed that runoff length would be restricted to a maximum of 15 m to minimise soil loss.

The estimated costs for covering the ore and oxide fines stockpiles in place are summarised in Table 4.2. As shown in the table, the estimated costs range from about $7.4 to $8.3 million.

Table 4.2: Summary of Estimated Costs for Cover in Place

Location	Low Area	High Area
Oxide Fines Stockpile	$924,000	$1,902,000
Crusher stockpile	$458,000	
Medium Grade Stockpile	$229,000	
Oxide fines #2	$191,000	
Oxide fines #3	$191,000	
Low grade ore	$267,000	
Low Grade Stockpile A	$1,623,000	
Low Grade Stockpile C	$3,476,000	
Totals	**$7,359,000**	**$8,337,000**

Note: Estimates derived for a Cat 777 truck fleet

Consolidate and Cover

A cover construction - water management strategy similar to that proposed for the 'cover in place' option would be adopted for the 'consolidate and cover' option. It should be noted that no attempt was made to determine the most efficient combination of relocation and covering in place but was intended to provide a basis for comparison to covering in place.

The costs estimated for relocating Low Grade Stockpile A is about $1.25 million (not including any lime amendment), compared to a 'cover in place' cost of $1.62 million. It is, therefore, more cost effective to consolidate this pile at the Low Grade Stockpile C location.

The cost to relocate the Oxide Fines Stockpile is estimated to be about $6.1 million for the low volume estimate, and about $8.3 million for the high volume estimate. These estimates assume that

the stockpile extends to the original topography. Should the dump extend to somewhere between the end of the drillhole and the original topography it may be possible that the actual costs will be lower, but no lower than about $1.9 million, which is equal to the volume to the bottom of the drillhole for the smaller footprint area. The corresponding estimated costs to cover this material in place range from $0.9 million to $1.9 million. There is, therefore, a clear cost advantage to cover this material in place.

The estimated costs for covering in place and consolidating the remainder of the Oxide Fines Stockpiles at the Low Grade Stockpile C location are summarised in Table 4.3. Again, only the estimate for the high capacity truck fleet is presented. As shown, the estimated costs are expected to range from about $8 million to $9 million. It should be noted that the volume estimates for determining relocation costs do not include any allowance to also relocate any acidic or metal-rich underlying soils or waste rock. Relocation costs may therefore be higher than indicated.

Table 4.3: Summary of Estimated Costs for Consolidate and Cover Option

Description	Location	Low Estimate	High Estimate
Load, haul, place and compact ore and oxide fines at Low Grade Stockpile C location	Low Grade Stockpile A	$1,249,000	
	Crusher stockpile	$ 603,000	
	Medium Grade Stockpile	$ 875,000	
	Oxide fines #2	$ 425,000	
	Oxide fines #3	$ 247,000	
	Low grade ore	$ 279,000	
Cover in place	Oxide Fines Stockpile	$924,000	$1,902,000
Cover consolidated materials	Low Grade Stockpile C	$3,476,000	
Totals		**$8,078,000**	**$9,056,000**

Note: Estimates shown for high capacity truck fleet (CAT 777).

Complete Relocation to Faro Pit

Estimates for the complete relocation of all the oxide fines and ore stockpiles to the Faro Pit are shown in Table 4.4. As shown, the costs for complete relocation of all the oxide fines and ore are expected to range from about $12.6 million to $16.9 million. As before, the volume estimates for determining relocation costs do not include any allowance for any acidic or metal-rich underlying soils or waste rock. Relocation costs may therefore be higher than indicated. These estimates also do not include the costs associated with lime amendment, should it be required. The need for lime amendment will depend on the long-term management strategy adopted for the pit lake.

Table 4.4: Summary of Estimated Costs for Complete Relocation of the Oxide Fines and Ore to the Faro Pit (Excluding Lime Amendment)

Task	Activity	Low Estimate	High Estimate
Load, haul, place and compact ore and oxide fines in Faro Pit	Oxide Fines Stockpile	$ 4,396,000	$ 8,710,000
	Crusher stockpile	$ 603,000	
	Medium Grade Stockpile	$ 875,000	
	Oxide fines #2	$ 425,000	
	Oxide fines #3	$ 247,000	
	Low grade ore	$ 279,000	
	Low Grade Stockpile A	$ 1,624,000	
	Low Grade Stockpile C	$ 4,149,000	
Total		**$12,598,000**	**$16,912,000**

Note: Estimates shown for high capacity truck fleet (CAT 777).

Alkali Amendment

Consideration may be given to amending the oxide fines and ore during relocation. Lime amendment would achieve the maximum reduction in solute concentrations in percolate from the consolidated heap. Limestone would not achieve similar reductions in solute concentrations, butI, it would sustain a reduction in solute concentrations over a longer period as it is less soluble than lime and, consequently, would not 'wash out'. Nonetheless, considering the reduction in net infiltration anticipated for the cover system, it can be shown that the term of benefit from lime amendment could be considerable. Table 4.5 summarises the estimated costs associated with lime amending. The costs associated with spreading the lime, however, are not included in the estimates. Should the oxide fines and ore be amended with lime during consolidation, the estimated lime amendment costs would be approximately $1.2 million (excludes Oxide Fines Stockpile and Low Grade Stockpile C). In the event of complete relocation to the Faro Pit, the overall lime costs are estimated to be between $2.2 million and $2.7 million.

Table 4.5: Summary of Estimated Costs Associated with Lime Amendment

Location	Lime Demand (kg/tonne)	Lime Cost ($/tonne)	Low Volume Estimate	High Volume Estimate
Oxide Fines Stockpile	2.28	0.73	$505,890	$1,002,290
Crusher stockpile	0.55	0.18	$17,100	
Medium Grade Stockpile	2.28	0.73	$100,740	
Oxide fines #2	12.55	4.02	$269,340	
Oxide fines #3	9.11	2.92	$113,880	
Low grade ore	6.65	2.13	$93,720	
Low Grade Stockpile A	7.34	2.35	$601,600	
Low Grade Stockpile C	2.28	0.73	$477,420	
TOTAL			**$2,179,690**	**$2,676,090**

4.1.3 Conclusions

The 2005 investigations have significantly reduced the uncertainty associated with the volumes of material in Low Grade Stockpiles A and C. Some uncertainty remains in the estimate for the Oxide Fines Stockpile, however.

The cost difference between the 'cover in place' ($7.4 to $8.3 million) and the 'consolidate and cover' ($8.1 to $9.1 million) options is about $1 to 2 million, with the cover in place option being more cost favourable. However, the 'consolidate and cover' option would reduce the foot print of the covered areas from between 19.3 ha and 21.8 ha, to between 11.5 ha and 14.1 ha. That is equal to a 36% to 40% reduction in surface area and would result in a proportional reduction in infiltration and consequently metal and acidity loadings. A corresponding reduction in cover maintenance requirements could also result. The reduction in acidity loadings and maintenance would likely offset the additional construction costs in the long term.

Lime amendment during the consolidation process would add an additional cost of about $1.2 million. The immediate reduction in acidity loadings that would result, as well as the added benefit from limiting solute release during relocation, should justify the additional expense.

Complete relocation to the Faro Pit, inclusive of lime amendment, is estimated to be between $14.8 and $19.6 million.

4.2 Plant Site Area

The preliminary assessment of the plant site fill determined that significant proportions of the fill have properties similar to those of the oxide fines and are acidic, as shown in Figure 3.3. However, it appears that at least some of these areas may represent thin layers of reactive material that have been pushed over the crest of the fills at the plant site area. Other areas show evidence (e.g. mill balls) that ore or ore-like material has been used as sub-grade for roads and parking areas.

5 Recommendations

5.1 Oxide Fines and Ore

As noted, there still remains some uncertainty regarding the volume and areal extent of the Oxide Fines Stockpile. Even so, the cost calculations suggest that, based on the current understanding of the area, cover in place will be more favourable than relocation. While not considered critical, it is nonetheless recommended that, should the opportunity arise (i.e. if a drill is on site and becomes available), additional drilling should be undertaken in this area to establish the material types down to the original topography as well as to define the areal extent of the Oxide Fines Stockpile.

The cost calculations presented herein are not optimized. They also do not consider long-term cost implications that relate to water treatment requirements and cover maintenance. The reason for this is that other closure activities that will occur on site, such as construction of water treatment facilities, have not yet been finalized. By dovetailing water treatment requirements for the covered areas, with other water treatment facilities, for example, overall treatment costs will be lower than in the case where a water treatment plant is constructed for the dedicated purpose of only treating the seepage from the covered areas. It is therefore recommended that once the overall closure strategy is better defined, complete costs associated with each option (including treatment and maintenance) be re-evaluated so that the oxide fines management can be optimised relative to the overall strategy.

5.2 Plant Site Area

It is recommended that these areas be better delineated by excavating additional test pits on the plateaus of the fill areas to determine both the horizontal and vertical (depth below surface) extent of these materials.

This report, **"2005/06 Task 30 – Assessment of Select Oxide Fines and Ore Stockpiles"**, has been prepared by SRK Consulting (Canada) Inc.

John Chapman, P.Eng.

Reviewed by

Cam Scott, P.Eng.

6 References

SRK Consulting, 2005. Revised Oxide Fines Management Plan, Anvil Range Mine Site. SRK Project Number 1CD003.44, February 2005.

Appendix A

Drill Hole and Test Pit Logs

SRK Consulting
Engineers and Scientists

BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile A
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-06 **TO** 2005-08-06
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914506.00 N 584145.40 E **DATUM:**

BOREHOLE: LGSPA06
PAGE: 1 **OF** 2
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
			LGO: Low-Grade Oxides	LGO: Slightly damp, grey medium sand with trace fine gravel. Gravel is subrounded to angular, slaty, with little weathering. Trace gravel clasts are 90% pyrite. Fines are 20% pyrite.		
	1			LGO: Slightly damp, grey-brown gravelly sand. Gravel is highly angular to subangular, slightly iron stained, dark grey slate.	1.0	
5						
	2		Hammer bouncing (boulders). Dusty drilling, lose circulation.	LGO: As above, chippy texture.	2.0	
10	3		Poor recovery.	LGO: Slightly damp, grey brown coarse gravel with some silt.	3.0	
	4		More boulders, very dusty.	LGO: Chip like texture.	4.0	
15						
	5			LGO: Dry, dark grey gravel. Highly angular to angular, slate with slight iron staining and chips <10% sulphides.	5.0	

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SRK Consulting
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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile A
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-06 **TO** 2005-08-06
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914506.00 N 584145.40 E **DATUM:**

BOREHOLE: LGSPA06
PAGE: 2 **OF** 2
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
				LGO: Sand with trace gravel (slate). Disseminated sulphides.		
			Hammer bouncing 6.5m. Very dark grey dust.			
	7			LGO: Dry, grey crushed boulder.	7.0	
25			Easier drilling.			
	8		Hard drilling, poor recovery.	LGO: As above.	8.0	
	9			LGO: Dry, grey chip texture. Majority of chips are slate with finely disseminated sulphides.	9.0	
30			Out of boulders.			
	10		Waste Rock Good recovery. Driller: 'seems more like solid rock'	Waste Rock: Slightly damp chips. Looks like fractured metamorphic rock (phyllite). Little/no sulphides, some iron staining, otherwise fresh.	10.0	
35						
	11			Waste Rock: As above.	11.0	
	12			Waste Rock: As above.	12.0	
40						
	13			Waste Rock: Fine to coarse gravel consisting of variable lithology: phyllite (half) highly weathered igneous rock (beige matrix, hornblende phenocrysts) and minor quartz.	13.0	
			Weathered Bedrock	Weathered Bedrock: Slightly damp, grey phyllite chips covered in clayey silt. Some iron staining, but otherwise fresh.		
45	14			Weathered Bedrock: As above, more fines.	14.0	
				Weathered Bedrock: As above, some quartz fragments.		
	15		END OF BOREHOLE		15.0	
50						

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile A
FILE No: FARO (1CD003.077)
BORING DATE: 2005-05-05 **TO** 2005-05-05
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914593.00 N 584193.80 E **DATUM:**

BOREHOLE: LGSPA07
PAGE: 1 **OF** 3
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
			LGO: Low-Grade Oxides No dust, easy drilling 0-4m.	LGO: Slightly damp, olive grey, sandy gravel. Gravel is highly angular to subangular, rich in pyrite. Trace 1cm clumps of orange-brown clay, isolated galena fragments.		
	1				1.0	
				LGO: As above. Moist gravel is mostly grey, massive rock with ~40% sulphides. Trace phyllite.		
5						
	2		Light brown-grey dust.	LGO: Dry brown-grey mix of iron stained phyllite, highly mineralized LGO and quartz/silicified rock.	2.0	
10	3			LGO: As above. Damp, less quartz.	3.0	
	4		Hammer bouncing. More light grey dust.	LGO: As above.	4.0	
15						
	5			LGO: Dry, grey sandy gravel. Predominantly ore. Sulphide content (pyrite) 25-30%.	5.0	

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile A
FILE No: FARO (1CD003.077)
BORING DATE: 2005-05-05 **TO** 2005-05-05
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914593.00 N 584193.80 E **DATUM:**

BOREHOLE: LGSPA07
PAGE: 2 **OF** 3
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
			Easy drilling.	LGO: as above. Grey brown gravelly sand.		
	7				7.0	
25				LGO: More phyllite than above (like 2-3m). Gravelly sand.		
	8				8.0	
			8.3m - Ground-up boulder.	LGO: Brown grey, sand with trace of gravel. Subrounded particles with rough (pitted) surfaces.		
	9		Hammer bouncing (bouldery)		9.0	
30				LGO: (Ground boulder). Grey silty sand with some gravel. Sulphides (pyrite) visible in fines and chips.		
	10		Driller: boulders with minimal material in between.		10.0	
35				LGO: Grey-brown gravelly sand. Mix of LGO and phyllite (like 2-3m).		
	11		Driller: Lots of clays.		11.0	
				LGO: Coarse sand to coarse gravel (<4cm). Mostly LGO (some iron staining) and minor phyllite.		
	12				12.0	
40			Waste Rock Not hard drilling.	LGO: As above.		
				Waste Rock: Highly weathered intrusive rock (beige/white matrix with horneblend phenocrysts) and silicified material (vein).		
	13				13.0	
				Waste Rock: beight brown mix of intrusive material (beige matrix with hornblende phenocrysts), quartzy material, phyllite and darker slate material (low pyrite content).		
45						

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile A
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BORING DATE: 2005-05-05 **TO** 2005-05-05
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914593.00 N 584193.80 E **DATUM:**

BOREHOLE: LGSPA07
PAGE: 3 **OF** 3
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
50	15			Waste Rock: As above.	15.0	
				Waste Rock: As Above.		
				Waste Rock: Grey, gravelly sand. Less intrusive material (~15%), mostly phyllite.		
	16			Waste Rock: Mostly highly weathered beige-white intrusive material (with hornblend phenocrysts). Some quartz and phyllite.	16.0	
55			Weathered Bedrock Driller: Hard rock but not intact (fractured).	Weathered Bedrock: Grey slate material. Slight iron staining. Chippy texture. Fractured.		
	17			Weathered Bedrock: As above, less iron staining. (slightly weathered)	17.0	
				Weatered Bedrock: As above, starts to get damp.		
				Weatered Bedrock: As above, damp.		
	18			Weatered Bedrock: Damp, grey-brown clayey sand and gravel. Slate material.	18.0	
60			END OF BOREHOLE			
	19				19.0	
65						
	20				20.0	
	21				21.0	
70						

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SRK Consulting
Engineers and Scientists

BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile A
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-08 **TO** 2005-08-09
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914506.00 N 584114.60 E **DATUM:**

BOREHOLE: LGSPA08
PAGE: 1 **OF** 4
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
			LGO: Low-Grade Oxides	LGO: Dry, grey, sandy silt w/ trace gravel. Mostly slatey material w/ disseminated sulphides, some quartz casts, slightly weathered surfaces		
	1			LGO: Slightly damp, brown grey gravel w/ trace sand. Gravel is angular to highly angular slatey material showings trace to moderate sulphide content.	1.0	
5						
	2			LGO: As above. Sand and gravel.	2.0	
10	3			LGO: Slightly damp, brown-grey sandy gravel. Gravel is subangular to angular, Half of clasts show >50% sulphide mineralization.	3.0	
	4			LGO: Damp, brown-beige gravelly sand. Gravel is subangular to angular mix of ore (slate) and phyllite. Micaceous fines. (Transition into different type of ore).	4.0	
15						
	5			LGO: Slightly damp, brown gravelly sand. Subangular to angular gravel, mostly (>50%) ore, some phyllite and highly weathered (igneous?) rock.	5.0	

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile A
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DIP: 90.00 **AZIMUTH:**
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BOREHOLE: LGSPA08
PAGE: 2 **OF** 4
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
				LGO: Dry, light brown-grey sandy gravel. Predominantly phyllite (80%).		
	7			LGO: Dry, grey, sand and gravel (boulder?).	7.0	
25						
	8			LGO: As above.	8.0	
				LGO: Damp, grey-brown gravelly sand. gravel is subrounded to rounded.		
	9			LGO: As above.	9.0	
30			Waste Rock	Waste Rock: Damp orange-brown sand with trace gravel. Gravel is subrounded to sub-angular. Phyllitic with some highly weathered intrusive material (beige matrix, hornblend phenocrysts).		
	10			Waste Rock: Slightly damp, beige sand and gravel. Gravel is predominantly phyllite with some intrusives (see above). Micaceous fines.	10.0	
35						
	11			Waste Rock: As above.	11.0	
	12			Waste Rock: As above.	12.0	
40						
	13			Waste Rock: As above. Predominantly fines.	13.0	
				Waste Rock: Light beige, clayey sand. Mostly highly weathered intrusive rock.		
45						

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile A
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-08 **TO** 2005-08-09
DIP: 90.00 **AZIMUTH:**
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BOREHOLE: LGSPA08
PAGE: 3 **OF** 4
DRILL TYPE: Air Rotary
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GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
				Waste Rock: As above.		
				Waste Rock: Beige sandy gravel. Gravel is subangular to angular phyllite.		
	15			Waste Rock: As above.	15.0	
50				Waste Rock: As above.		
	16		Lose circulation.	Waste Rock: Highly variable lithology, mix of phyllite, intrusive rock, quartz and trace ore with sulphide mineralization.	16.0	
55						
	17		Easy drilling.	Waste Rock: Light beige sand. Mostly highly weathered intrusive material.	17.0	
	18		Soil/Colluvium	Soil/Coluvium: Damp, dark brown, clayey sand and gravel. gravel is subrounded to angular mix of intrusives and metamorphics. Roots visible.	18.0	
60						
	19			Soil/Coluvium: As above.	19.0	
				Soil/Coluvium: As above, medium brown, rockier with less organics. Subrounded to subangular.		
				Soil/Coluvium: As above.		
65			Harder drilling 19.8m onwards (more boulders).			
	20			Soil/Coluvium: As above.	20.0	
			Driller: Junky at 20.3m (boulder).			
	21			Soil/Coluvium: As above.	21.0	
70						

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile A
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-08 **TO** 2005-08-09
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914506.00 N 584114.60 E **DATUM:**

BOREHOLE: LGSPA08
PAGE: 4 **OF** 4
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
75	23			Soil/Coluvium: As above.	23.0	
				Soil/Coluvium: As above.		
80	24			Soil/Coluvium: As above.	24.0	
	25		END OF BOREHOLE		25.0	
85	26				26.0	
	27				27.0	
90	28				28.0	
95	29				29.0	

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-06 **TO** 2005-08-06
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914356.00 N 584333.00 E **DATUM:**

BOREHOLE: LGSPC06
PAGE: 1 **OF** 3
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
			LGO: Low-Grade Oxides. Tough boulder at top. Poor recovery.	LGO: Crushed boulder (fresh silver grey chips).		
			LGO: Low-Grade Oxides. Easier drilling, Good recovery.	LGO: Slightly damp, brown fine to coarse sand w/ some gravel.		
	1			LGO, slightly damp, brown-grey sandy gravel. Gravel is dark grey slatey material with variable amounts of sulphide (up to 30% in some clasts).	1.0	
5						
	2			LGO: As above, dry. Some clasts show golden sulphide (pyrite), while others show silvery-grey mineralization.	2.0	
10	3			LGO: Slightly damp, grey-brown sandy gravel. gravel is highly angular to angular slate with some iron staining.	3.0	
	4			LGO: As above, gravelly sand.	4.0	
15						
	5			LGO: As above, sandy gravel.	5.0	
	6			LGO: As above. Brown.	6.0	
20						

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-06 **TO** 2005-08-06
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914356.00 N 584333.00 E **DATUM:**

BOREHOLE: LGSPC06
PAGE: 2 **OF** 3
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
	7			LGO: As above. Orange-brown.	7.0	
25	8		Losing circulation, poor recovery.	LGO: As above. Grey-brown.	8.0	
	9			LGO: Slightly damp, brownish grey, silty sand with some gravel. Highly angular to angular slate clasts with half of clasts highly mineralized (>50% pyrite).	9.0	
30			Hard Drilling			
	10		Poor recovery (void space).	LGO: Dry, grey silt, 15% sulphides.	10.0	
35						
	11		Big boulder - slow drilling.	LGO: Dry, grey-brown silty sand with some gravel. Some iron-staining.	11.0	
	12			LGO: Slightly damp, grey gravelly fine sand to silt, dissem. pyrite in highly angular to angular gravel - gravel is mix of slate, some quartz.	12.0	
40			Easier drilling.			
	13			LGO: Damp, dark grey, sand and gravel w. some silt. Sulphides visible in fines and disseminated in highly angular to angular dark grey slate clasts, a little Fe-stained (13.8m more damp).	13.0	
45						
	14				14.0	
			Weathered Bedrock	Weathered Bedrock: Light beige, silty sand with some gravel. Gravel is mostly phyllite, highly angular to subangular. Micaceous fines with trace (<1.0%) sulphides visible in fines.		

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-06 **TO** 2005-08-06
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914356.00 N 584333.00 E **DATUM:**

BOREHOLE: LGSPC06
PAGE: 3 **OF** 3
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
50	15			Weathered Bedrock: As above, less damp (phyllite).	15.0	
				Weathered Bedrock: As above more grey (phyllite).		
	16			Weathered Bedrock: As above. Damp, beige-brown, sandy gravel with trace clay (phyllite).	16.0	
55				Weathered Bedrock: As above.		
	17			Weathered Bedrock: As above.	17.0	
			END OF BOREHOLE			
	18				18.0	
60						
	19				19.0	
65						
	20				20.0	
	21				21.0	
70						
	22				22.0	

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-06 **TO** 2005-08-06
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914294.00 N 584372.00 E **DATUM:**

BOREHOLE: LGSPC07
PAGE: 1 **OF** 2
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
			LGO: Low-Grade Oxides. Easy drilling.	LGO: Slightly damp, grey-brown sandy gravel. gravel is highly angular to angular, slaty and massive rock diseminated sulphides. Trace phyllite. Iron staining on most surfaces.		
	1			LGO: As above.	1.0	
5						
	2			LGO: As above. Less fines @ 2.8m.	2.0	
10	3		LGO: Low-Grade Oxides. Hard drilling (boulder).	LGO: Dry grey, silty sand with trace gravel. (lithology as above). Half of particles have extensive iron staining.	3.0	
	4		LGO: Low-Grade Oxides. Easier drilling (pebbley).	LGO: Slightly damp, grey brown fine to coarse sand with trace of gravel. Angular to subangular gravel clasts with iron staining on most surfaces.	4.0	
15						
	5		LGO: Low-Grade Oxides. Lost circulation (void space), no recovery.	LGO: Small sample recovered. Medium to coarse fraction of above.	5.0	
20	6				6.0	
	7		LGO: Low-Grade Oxides. Easy drilling.	LGO: Grey, fine gravelly, coarse sand. Slate with little mineralization, slight iron staining on some surfaces (highly angular to angular)	7.0	
25						

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-06 **TO** 2005-08-06
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914294.00 N 584372.00 E **DATUM:**

BOREHOLE: LGSPC07
PAGE: 2 **OF** 2
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
				LGO: as above. more grey brown and more iron staining than above. Rinsed cuttings leave silver metallic sheen on water.		
30	9			LGO: Orange-brown-grey silty sand with some highly angular to angular slate gravel. Heavy iron staining on all surfaces.	9.0	
	10		Different drilling, but not solid rock, very dusty.	LGO: grey sandy gravel. very little iron staining. Trace clasts (2%) are heavily mineralized.	10.0	
35	11			LGO: as above, some intrusive looking material (calc-silicate?)	11.0	
			Waste Rock	WR: Light beige, sandy silt. Micaceous fines (probably ground up phyllite boulder).		
	12			WR: Damp, dark grey-brown silty sand with trace gravel. Gravel is subangular to angular with some subrounded. Mostly slatey material (not mineralized). Trace fibrous organics.	12.0	
40			Till/Soil	Till/Soil: Damp, dark brown, clayey sand and gravel. Gravel is angular to subrounded, iron stained phyllite and other lithologies. Forms ball.		
			Colluvium	Colluvium: Damp, brown silty sand and gravel. Gravel is subrounded to subangular. Trace organics.		
	13			Colluvium: As above.	13.0	
			Weathered Bedrock	Weathered Bedrock: Yellow-orange, sandy silt with trace gravel. Gravel is highly angular to subangular iron stained phyllite and quartz. Micaceous fines.		
			Hammer rattles (boulder)	Weathered Bedrock: as above.		
45				Weathered Bedrock: As above with some slaty material.		
	14		No recovery 14-14.25m	Weathered Bedrock: Light grey-beige silt to fine sand with trace gravel. Gravel comprised of phyllite, grey massive rock and some igneous material.	14.0	
				No sample		
				Weathered Bedrock: Grey-beige silty sand with some gravel (mostly slate).		
			Driller thinks solid or fractured rock.	Weathered Bedrock: Sandy silt with trace gravel. Gravel is mostly phyllite and trace highly weathered igneous material.		
50	15			Weathered Bedrock: Beige-grey silty sand and gravel. Gravel is angular to subrounded, iron stained, greenish-beige igneous rock.	15.0	
				Weathered Bedrock: Beige-grey gravelly sand, angular to subangular gravel (slate) with slight iron staining.		
				Weathered Bedrock: Gray-beige silty sand with some gravel. Highly angular to angular grey slate material and green-grey massive rock. Some iron staining.		
	16		END OF BOREHOLE		16.0	
55	17				17.0	

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-07 **TO** 2005-08-07
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914339.00 N 584435.20 E **DATUM:**

BOREHOLE: LGSPC08
PAGE: 1 **OF** 3
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

Site recently graded, probably top 1m removed.

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
			LGO: Low-Grade Oxides Hammer bouncing at begining (bouldery).	LGO: Slightly damp, grey medium sand. Rock chips highly angular with some iron staining. Chips desplay silver-coloured mineralization.		
	1		Easier drilling.	LGO: Dry, grey sandy gravel. gravel is highly angular to angular, highly mineralized (silver-coloured), predominately slate with some iron staining.	1.0	
5						
	2		Hammer bouncing.	LGO: As above.	2.0	
10	3		Hammer bouncing, no recovery.	LGO: No recovery.	3.0	
	4			LGO: Dry, silver-grey, silty sand (rock chips). Highly angular, looks like massive rock. Silver-coloured mineralization.	4.0	
15						
	5		LGO: Low-Grade Oxides, poor recovery.	LGO: Dry, minimal fines recovered (void space).	5.0	

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-07 **TO** 2005-08-07
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914339.00 N 584435.20 E **DATUM:**

BOREHOLE: LGSPC08
PAGE: 2 **OF** 3
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

Site recently graded, probably top 1m removed.

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
				LGO: Dry, grey-brown fines (10% sulphides).		
	7		LGO: Low-Grade Oxides, very dusty drilling, slightly better recovery.	LGO: Dry, grey, slatey rock chips. Silvery sheen in addition to disseminated sulphides. Minor Fe-staining.	7.0	
25						
	8			LGO: Dry, grey gravelly sand. Gravel is 50/50 mix of slate and highly mineralized massive rock.	8.0	
			LGO: Low-Grade Oxides. Brown dust, smaller boulders (<50cm)	LGO: Predominatly highly mineralized grey massive rock with some iron staining.		
	9				9.0	
30				LGO: grey-brown fine to coarse gravel (as in 8.5-9.0m)		
	10			LGO: as above.	10.0	
35						
	11			LGO: Dry, grey-brown silty sandy gravel. Gravel is slaty with silver sheen, less golden mineralization. Some iron staining.	11.0	
	12		LGO: Low-Grade Oxides, dark grey-brown dust.	LGO: Dry, fine-coarse gravel. Mix of golden-grey massive rock (mineralized) and grey slaty rock (silver sheen).	12.0	
40						
	13			LGO: Dry, grey slate chips. Less mineralized, silver sheen and trace of golden sulphite (pyrite).	13.0	
45						
	14			LGO: As above with more pyrite and some iron staining.	14.0	
	15		LGO: Low-Grade Oxides, browner dust.	LGO: As above but more fines (coarse sand). Dry, grey-brown. More iron staining.	15.0	
50						

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-07 **TO** 2005-08-07
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914339.00 N 584435.20 E **DATUM:**

BOREHOLE: LGSPC08
PAGE: 3 **OF** 3
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

Site recently graded, probably top 1m removed.

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
	16			LGO: Orange-grey mix of highly angular to angular slate and massive rock chips. Extensive iron staining (half of chips). Massive rock chips highly mineralized.	16.0	
55	17			LGO: Grey slate gravel. Not much mineralization but Fe-staining on most surfaces.	17.0	
	18		LGO: Low-Grade Oxides, browner dust.	LGO: As above with more silty fines. Fines are brown, dry.	18.0	
60	19		WR: Waste Rock. Softer drilling.	WR: Dry, light grey-beige, silty gravel (phyllite). Gravel is highly angular to angular, micaceous fines.	19.0	
65	20			WR: As above; trace highly angular quartz fragments (>2cm), some slate w/ subtle silver mineralization.	20.0	
	21			WR: Dry, grey sand gravel. Trace pyrite in fines.	21.0	
70	22		Till/Soil.	Till/Soil: Slightly damp, brown, silt to fine sand. Some twigs. Not densely compacted.	22.0	
				Till/Soil: As above, with some subrounded to highly angular gravel (40%). Piece of black bark (coal?); twigs.		
75				Till/Soil: As above. Slightly damp, gravelly silt. gravel is subrounded to subangular slate clasts with trace mineralization. Trace organic fibres.		
	23		Weathered Bedrock.	Till/Soil: As above, more a clayey-silty gravel.	23.0	
				Till/Soil: as above.		
				Weathered Bedrock: Grey-brown, slightly damp gravel. Brown fines, large (2-4cm) grey clasts of unmineralized slaty material.		
	24		END OF BOREHOLE		24.0	
80						

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-07 **TO** 2005-08-07
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914268.00 N 584572.60 E **DATUM:**

BOREHOLE: LGSPC09
PAGE: 1 **OF** 2
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
			LGO: Low-grade Oxides. Easy drilling w/ some boulders.	LGO: Slightly damp, dark grey silt to fine sand w/ some coarse sand. Coarse fraction is slatey material with fine disseminated sulphides.		
	1			LGO: As above. Silty gravel. Gravel is 40-50% sulphides.	1.0	
5			Hammer bouncing (boulder).			
	2			LGO: As above. Dry coarse sand with some gravel. Some iron-stained surfaces.	2.0	
10	3			LGO: Dry, dark grey silt (crushed boulder). Sulphides visible in fines.	3.0	
			Hammer bouncing (boulder).			
	4			LGO: Slightly damp, grey-brown silt with some gravel. Sulphides visible in coarse and fine fraction.	4.0	
15						
	5		LGO: Low-grade Oxides, poor recovery.	LGO: Dry, dark grey silt (crushed boulder). 20% sulphide.	5.0	
	6			LGO: As above.	6.0	
20						

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-07 **TO** 2005-08-07
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914268.00 N 584572.60 E **DATUM:**

BOREHOLE: LGSPC09
PAGE: 2 **OF** 2
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
	7			LGO: Damp, grey silty gravel with disseminated sulphides (like 2-3m).	7.0	
25			Hammer bouncing.			
	8		Extremely dusty.	LGO: As above.	8.0	
	9			LGO: As above. Slightly damp, more clay rich.	9.0	
30						
	10			LGO: Damp with first signs of natural ground or natural fill (some large bark (5cm) and over smaller organic fibres).	10.0	
35						
	11			LGO: As above.	11.0	
			No recovery	No recovery (Hammer pushes through interval)		
			Till/Soil	Till/Soil: Damp, dark brown to black silty clay w/ some coarse sand/fine gravel. Some bark. Low plasticity (forms a ball, unalbe to thread.)		
40	12			Till/Soil: Damp, clayey silt w/ some gravel, not as firm as above.	12.0	
			Weathered Bedrock	Weathered Bedrock: Slightly damp, brown, silty gravel. Gravel chips are highly angular, greenish-grey, slatey, with little/no sulphides, ~10% quartz. Fines are brown.		
			Fresh Bedrock, much harder drilling.	Weathered Bedrock: Light brown, slightly damp, silty gravel. Slightly weathered, iron staining on most surfaces.		
	13			Fresh Bedrock: Dry, light beige gravel (rock-chips). No weathering.	13.0	
				Fresh Bedrock: Dry, grey rock chips.		
45				Fresh Bedrock: Damp, brown, angular to subrounded coarse gravel w/ trace silt/clay. Fines are brown, gravel is grey w/ v. slightly weathered surfaces.		
			END OF BOREHOLE			
	14				14.0	

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-08 **TO** 2005-08-08
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914533.00 N 584570.80 E **DATUM:**

BOREHOLE: LGSPC10
PAGE: 1 **OF** 2
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
			LGO: Low-Grade Oxides. Poor recovery. Bouldery.	LGO: Dry, dark grey silty fine sand. Sulphides visible as separate particles (10-15%).		
	1				1.0	
				LGO: Slightly damp browny-grey as above.		
5						
	2				2.0	
				LGO: As above.		
10	3		LGO: Low-Grade Oxides. Good recovery, 0 to 5m redrilled as boulders at top caused hole to deviate from 90 deg.	LGO: Slightly damp, dark grey, sandy silt w/ trace of gravel. Coarse fraction is mostly slate w/ some phyllite, highly angular to angular. Slate has dissemin. sulphides, 50% of coarse fraction has some Fe-staining. Some sulphides in fines.	3.0	
	4			LGO: Dry, dark grey, gravelly sand w/ some silt. Gravel is highly angular, some Fe-staining, more sulphides than 3-4m.	4.0	
15						
	5		LGO: Low-Grade Oxides. Very dusty, poor recovery	LGO: Brownish grey, slightly damp, silty fine sand (like 0-3m).	5.0	

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Low Grade Stockpile C
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-08 **TO** 2005-08-08
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914533.00 N 584570.80 E **DATUM:**

BOREHOLE: LGSPC10
PAGE: 2 **OF** 2
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
			LGO: Low-Grade Oxides. Very easy drilling.	LGO: Slightly damp, brown-grey, gravelly silt and very fine sand. Gravel/sand is grey slate, half of the particles show disseminated sulphides, some Fe-staining, highly angular to angular. Sample from lower portion of interval.		
25	7				7.0	
				LGO: Damp, grey sandy gravel with trace of clay. Coarse fraction looks mostly slaty (less sulphides). Some hydrothermally altered rock - quartz.		
	8			LGO: As above. 8.3m hit natural ground.	8.0	
			Till/Soil: very easy drilling.	Till/Soil: Damp, dark brown, organic rich, sand and clay, little fibrous/peaty material with some twigs. Forms ball, but no threads (low plasticity).		
			Bedrock. Hard Drilling.	Till/Soil: As above, Sand and gravel with some clay. Gravel is highly angular to subangular.		
30	9			Weathered Bedrock: Light grey brown, coarse sand-gravel, chippy, minor chips w/ sulphide mineralization.	9.0	
				Fresh Bedrock: Light grey, coarse sand to gravel sized chips, looks like silicified shale (milkt grey) with trace sulphide. (<1%).		
	10		END OF BOREHOLE		10.0	
35	11				11.0	
40	12				12.0	
	13				13.0	
45						

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BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Medium Grade Stockpile
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-05 **TO** 2005-08-05
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914233.00 N 583495.90 E **DATUM:**

BOREHOLE: MGSP04
PAGE: 1 **OF** 2
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
			LGO: Low-Grade Oxides. Easy drilling, light grey dust.	LGO: Slightly damp grey fine to coarse gravel with some sand and trace clay. Gravel is subangular to angular slate/massive rock, some clasts highly mineralized (40% sulphides). Highly weathered.		
	1				1.0	
5				LGO: as above. Gravel is subrounded to subangular.		
	2			LGO: as above.	2.0	
10	3			LGO: As above, dark grey.	3.0	
	4			LGO: As above, finer. Slightly damp, dark grey, clayey, fine to coarse sand with some fine gravel.	4.0	
15						
	5		Browner Dust	LGO: As above, less damp. Fine gravelly fine sand.	5.0	
	6			LGO: As above. Fine gravel with some silt.	6.0	
20						

SRK Consulting
Engineers and Scientists

BOREHOLE LOG

PROJECT: Faro Oxide Fines Management
LOCATION: Medium Grade Stockpile
FILE No: FARO (1CD003.077)
BORING DATE: 2005-08-05 **TO** 2005-08-05
DIP: 90.00 **AZIMUTH:**
COORDINATES: 6914233.00 N 583495.90 E **DATUM:**

BOREHOLE: MGSP04
PAGE: 2 **OF** 2
DRILL TYPE: Air Rotary
DRILL: 6" Tricone
CASING: 6 5/8"

GENERAL REMARKS

DEPTH - ft	DEPTH - m	STRATIGRAPHY: SYMBOL	STRATIGRAPHY: DESCRIPTION	SAMPLES: SAMPLE DESCRIPTION	SAMPLES: DEPTH - m	LABORATORY and IN SITU TESTS
25	7		LGO: Low-Grade Oxides. Slightly harder drilling (not consistent). Grey and brown dust.	LGO: As above. Slightly damp, dark grey, fine gravel with some silt. Gravel displays sulphide mineralization.	7.0	
	8		LGO: Low-Grade Oxides. Dark grey dust.	LGO: Dark grey, chip texture (fresh surfaces).	8.0	
30	9		LGO: Low-Grade Oxides. Harder drilling.	LGO: Damp, dark grey gravel (10-40mm). Gravel is subangular to angular (chip like) slate w/ pyrite flecks.	9.0	
	10				10.0	
35			Waste Rock: very soft drilling.	Waste Rock: Damp brown clayey sand and gravel. Some larger phyllite disks (2cm dia., angular) and some pebbles (0.5-1.2cm dia.). Highly weathered.		
	11			Waste Rock: As above.	11.0	
40	12			Waste Rock: Damp orange brown, clayey sand and gravel. Gravel is subrounded to subangular, part phyllite, part massive rock (from LGO). Extensive iron staining, some particles stained bright red.	12.0	
	13			Waste Rock: as above.	13.0	
45			END OF BOREHOLE			
	14				14.0	

X:\06_REFERENCE_MATERIAL\3geotec\logtemplates\log\PMStrat_Samp_PLOTTED: 2005-11-18 11:27hrs

Low Grade Ore Stockpile A - Test Pit Logs

Location	Bore ID	Easting	Northing	From	To	Paste pH	EC	Material description
		NAD27	NAD27	m	m	S.U.	mS/cm	
LGSPA	TP-LGA-1	584114	6914480	0.00	1.00	2.16	8.00	Yellowish gray surface crust with abundant dark orangish brown cobbles embedded in surface. Below surface, material is cobble gravel with boulders (LG ore). Matrix is orange silty sand, slightly moist, with abundant sulphides. Pockets of 100% sulphide sand are visible. Accumulations of secondary salts noted below large rocks. Dark orangey brown staining is common.
LGSPA	TP-LGA-1			1.00	2.00	2.24	8.09	As above
LGSPA	TP-LGA-1			2.00	2.20	2.30	9.06	As above
LGSPA	TP-LGA-1			2.20	3.00	not tested	not tested	Waste rock pad under stockpile. Rock is grey phyllite/schist, siliceous- very hard to dig with excavator. Contains orange fines.
LGSPA	TP-LGA-2	584101	6914467	0.00	1.00	1.90	8.30	Low grade ore as for TP-LGA-1
LGSPA	TP-LGA-2			1.00	1.40	1.12	11.26	Low grade ore as for TP-LGA-1
LGSPA	TP-LGA-2			1.40	2.90	1.82	10.79	Gray ore (looks medium to high grade). Highly weathered, decomposed to fines and gravel; moist to wet. Water flowing in to TP at 2.6 m.
LGSPA	TP-LGA-2			2.90	3.00	2.08	3.06	Gray phyllite with orange staining. Very hard to dig with excavator.
LGSPA	TP-LGA-3	584081	6914452	0.00	1.00	2.02	7.30	Low grade ore as for TP-LGA-1
LGSPA	TP-LGA-3			1.00	2.40	3.57	4.31	Orange stained grey phyllite/schist with orange to dark orange sandy matrix with minor silt.
LGSPA	TP-LGA-3			2.40	2.90	5.65	4.05	Grey phyllite, little to no staining. Easy to dig with excavator.

Appendix B

Paste Parameters

Table B-1 Paste Parameters Measured in Oxide Fines and Low Grade Ore Drill Cuttings

Location	Bore ID	From	To	Paste pH	EC
		m	m	S.U.	mS/cm
LGSP	A06	0.00	1.00	2.87	3.45
LGSP	A06	1.00	2.00	3.66	4.34
LGSP	A06	2.00	3.00	4.76	4.22
LGSP	A06	3.00	4.00	4.31	5.03
LGSP	A06	4.00	5.00	3.53	6.98
LGSP	A06	5.00	6.00	4.82	4.94
LGSP	A06	6.00	7.00	4.86	6.27
LGSP	A06	7.00	8.00	4.90	4.07
LGSP	A06	8.00	9.00	4.98	4.07
LGSP	A06	9.00	10.00	5.41	2.77
LGSP	A06	10.00	11.00	5.88	6.58
LGSP	A06	11.00	12.00	6.04	4.22
LGSP	A06	12.00	13.00	7.35	3.08
LGSP	A06	13.00	13.50	6.37	3.78
LGSP	A06	13.50	14.00	6.20	2.49
LGSP	A06	14.00	14.50	6.46	3.50
LGSP	A06	14.50	15.00	6.51	4.19
LGSP	A07	0.00	1.00	2.80	4.43
LGSP	A07	5.00	6.00	4.02	4.51
LGSP	A07	10.00	11.00	3.38	8.78
LGSP	A07	11.00	12.00	3.55	9.81
LGSP	A07	12.00	13.00	4.92	5.38
LGSP	A07	13.00	14.00	5.69	7.12
LGSP	A07	14.00	14.50	5.51	8.18
LGSP	A07	17.90	18.10	6.24	2.20
LGSP	A08	0.00	4.00	5.26	4.04
LGSP	A08	4.00	7.00	5.45	5.61
LGSP	A08	7.00	9.50	3.33	4.15
LGSP	A08	9.50	10.00	3.40	6.70
LGSP	A08	10.00	12.00	5.65	4.98
LGSP	A08	12.00	13.00	5.82	6.07
LGSP	A08	13.00	13.50	5.93	6.12
LGSP	A08	13.50	15.50	6.33	4.74
LGSP	A08	15.50	18.00	7.00	3.83
LGSP	A08	18.00	19.00	5.89	7.61
LGSP	A08	19.00	20.00	6.02	6.06
LGSP	A08	20.00	21.00	7.16	4.66
LGSP	A08	21.00	23.00	7.58	4.18
LGSP	A08	23.00	25.00	7.70	0.69

Table B-1 Paste Parameters Measured in Oxide Fines and Low Grade Ore Drill Cuttings (cont.)

Location	Bore ID	From	To	Paste pH	EC
		m	m	S.U.	mS/cm
LGSPA	TP-LGA-1	1.00	2.00	2.24	8.09
LGSPA	TP-LGA-1	2.00	2.20	2.30	9.06
LGSPA	TP-LGA-1	2.20	3.00	not tested	not tested
LGSPA	TP-LGA-2	0.00	1.00	1.90	8.30
LGSPA	TP-LGA-2	1.00	1.40	1.12	11.26
LGSPA	TP-LGA-2	1.40	2.90	1.82	10.79
LGSPA	TP-LGA-2	2.90	3.00	2.08	3.06
LGSPA	TP-LGA-3	0.00	1.00	2.02	7.30
LGSPA	TP-LGA-3	1.00	2.40	3.57	4.31
LGSPA	TP-LGA-3	2.40	2.90	5.65	4.05
LGSP	C06	0.00	1.00	3.14	2.21
LGSP	C06	3.00	4.00	3.15	2.04
LGSP	C06	7.00	8.00	3.17	2.48
LGSP	C06	11.00	12.00	5.02	0.97
LGSP	C06	12.00	13.00	5.70	3.02
LGSP	C06	13.00	14.00	5.87	4.14
LGSP	C06	14.00	15.00	5.86	4.61
LGSP	C06	15.00	15.50	5.71	5.13
LGSP	C06	15.50	16.00	5.62	2.37
LGSP	C06	16.00	17.00	5.70	3.28
LGSP	C06	17.00	17.50	5.89	2.87
LGSP	C07	0.00	3.00	3.64	3.63
LGSP	C07	3.00	4.00	4.00	2.37
LGSP	C07	4.00	7.00	2.66	10.15
LGSP	C07	7.00	9.00	3.07	15.96
LGSP	C07	9.00	10.00	3.08	5.28
LGSP	C07	10.00	11.25	4.24	9.94
LGSP	C07	11.25	11.50	5.00	7.50
LGSP	C07	11.50	12.00	3.59	5.66
LGSP	C07	12.00	13.00	4.54	5.55
LGSP	C07	13.00	14.00	6.43	4.34
LGSP	C07	14.25	15.50	6.71	3.12
LGSP	C07	15.50	16.00	7.34	2.48
LGSP	C08	0.00	3.00	2.49	18.43
LGSP	C08	3.00	6.00	3.69	7.85
LGSP	C08	6.00	8.50	3.25	>19.99
LGSP	C08	8.50	11.00	2.72	13.56
LGSP	C08	11.00	13.00	2.85	13.00
LGSP	C08	13.00	14.00	3.21	11.89
LGSP	C08	14.00	15.00	2.97	9.95
LGSP	C08	15.00	17.00	2.68	17.66
LGSP	C08	17.00	19.00	2.38	>19.99
LGSP	C08	19.00	22.00	5.39	6.54
LGSP	C08	22.00	22.20	5.61	12.66
LGSP	C08	22.20	23.00	7.04	5.74
LGSP	C08	23.00	24.00	8.50	6.87

Table B-1 Paste Parameters Measured in Oxide Fines and Low Grade Ore Drill Cuttings (cont.)

Location	Bore ID	From m	To m	Paste pH S.U.	EC mS/cm
LGSP	C09	0.00	1.00	4.19	2.09
LGSP	C09	5.00	7.00	5.80	2.61
LGSP	C09	9.00	10.00	6.16	3.10
LGSP	C09	10.00	11.00	5.83	2.83
LGSP	C09	11.00	12.00	5.26	3.72
LGSP	C09	12.00	13.00	6.31	2.96
LGSP	C09	13.50	13.70	7.12	2.19
LGSP	C10	0.00	1.00	2.78	3.05
LGSP	C10	1.00	2.00	2.64	6.76
LGSP	C10	3.00	4.00	3.11	3.75
LGSP	C10	4.00	5.00	3.39	4.07
LGSP	C10	5.00	6.00	4.15	6.96
LGSP	C10	6.00	7.50	5.58	2.57
LGSP	C10	7.50	8.30	6.56	2.78
LGSP	C10	8.30	8.70	7.47	1.22
LGSP	C10	8.70	8.80	6.86	1.38
LGSP	C10	8.80	10.00	6.60	1.17
MGSP	04	0.00	1.50	4.05	4.37
MGSP	04	1.50	2.00	3.55	7.74
MGSP	04	2.00	3.00	3.03	5.89
MGSP	04	3.00	4.00	4.26	na
MGSP	04	4.00	5.00	3.89	8.42
MGSP	04	5.00	6.00	3.69	7.38
MGSP	04	6.00	7.00	4.23	7.36
MGSP	04	7.00	8.00	4.30	9.30
MGSP	04	8.00	9.00	5.57	8.32
MGSP	04	9.00	10.00	5.72	6.16
MGSP	04	10.00	11.00	4.09	6.95
MGSP	04	11.00	11.50	3.75	6.95
MGSP	04	11.50	12.00	3.84	8.51
MGSP	04	12.00	13.00	4.14	na
MGSP	04	13.00	13.50	4.07	7.70

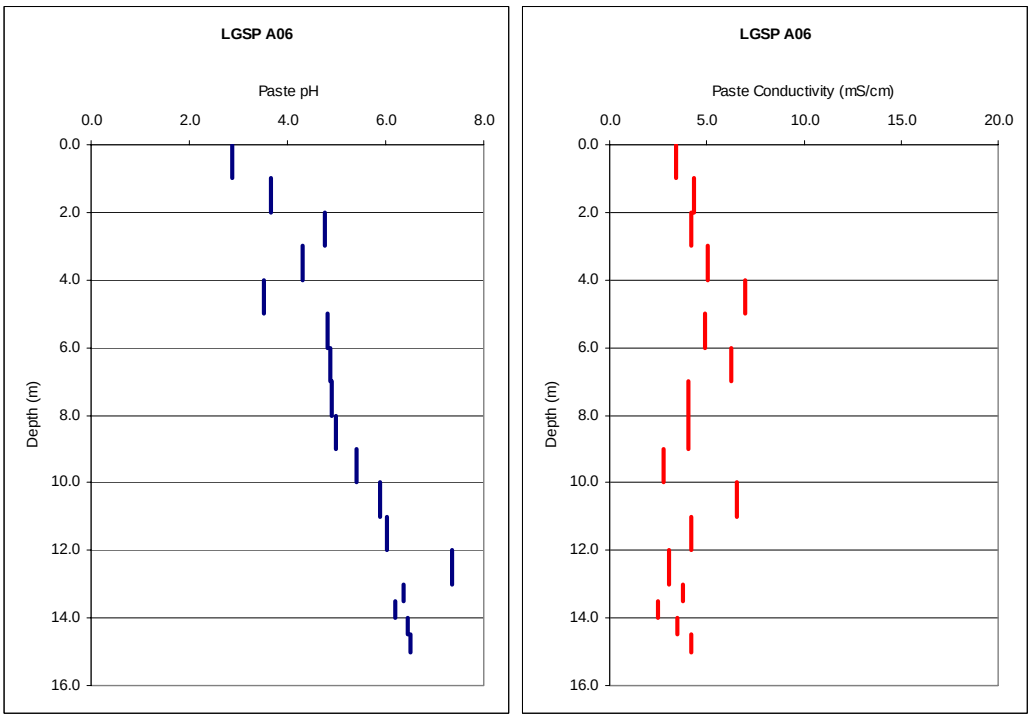

Figure B-1 Low Grade Ore Stockpile A – Drill Hole LGSP A06

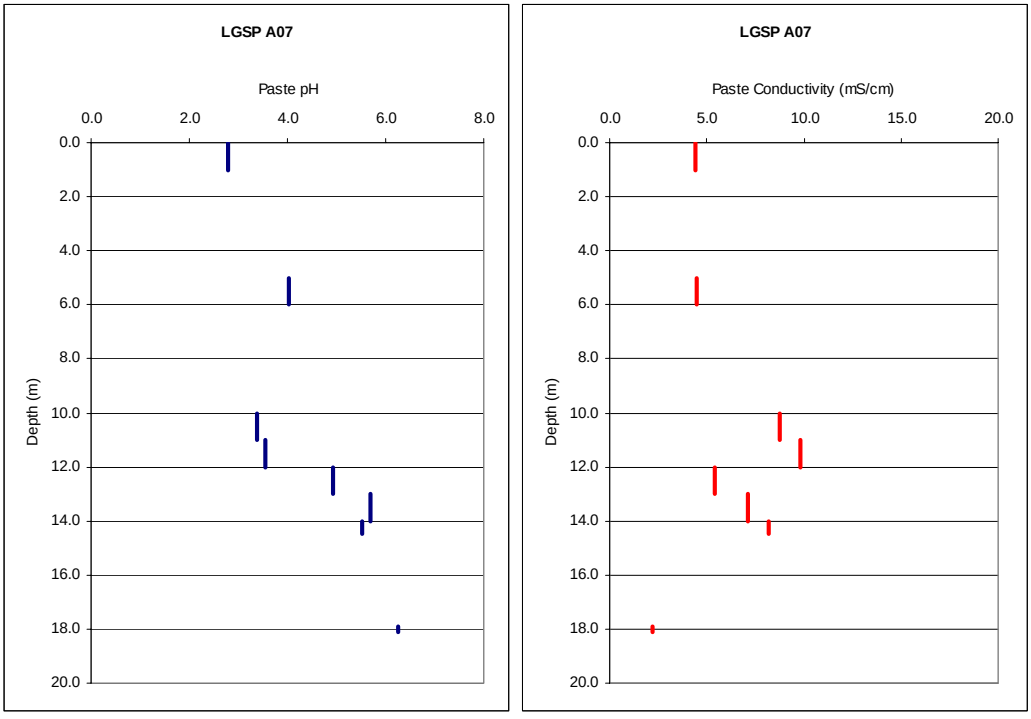

Figure B-2 Low Grade Ore Stockpile A – Drill Hole LGSP A07

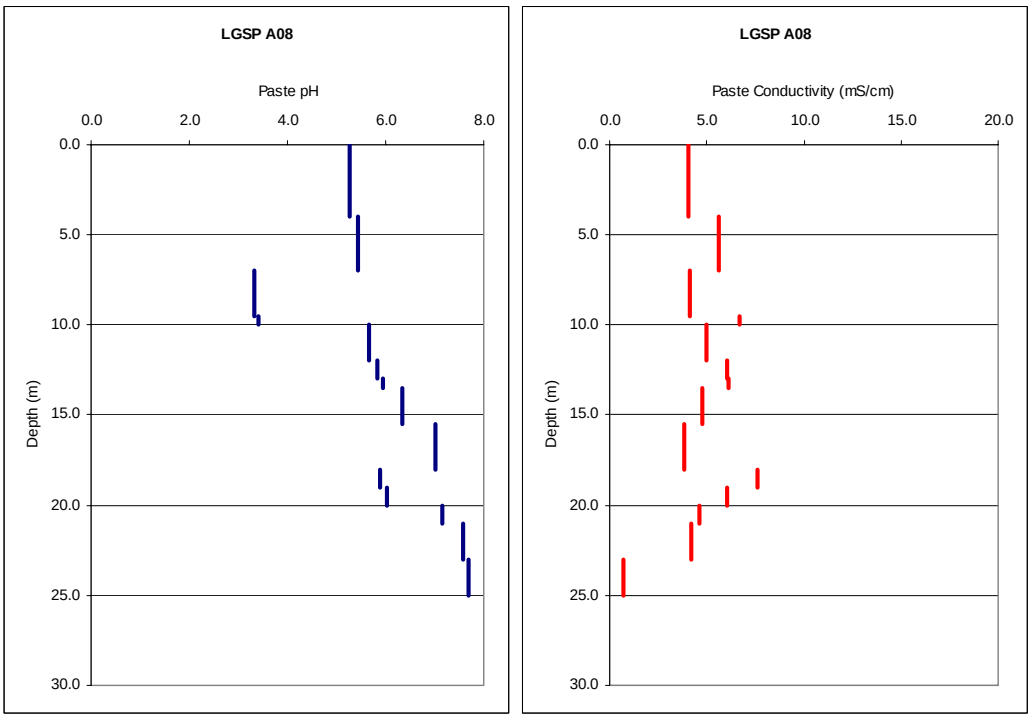

Figure B-3 Low Grade Ore Stockpile A – Drill Hole LGSP A08

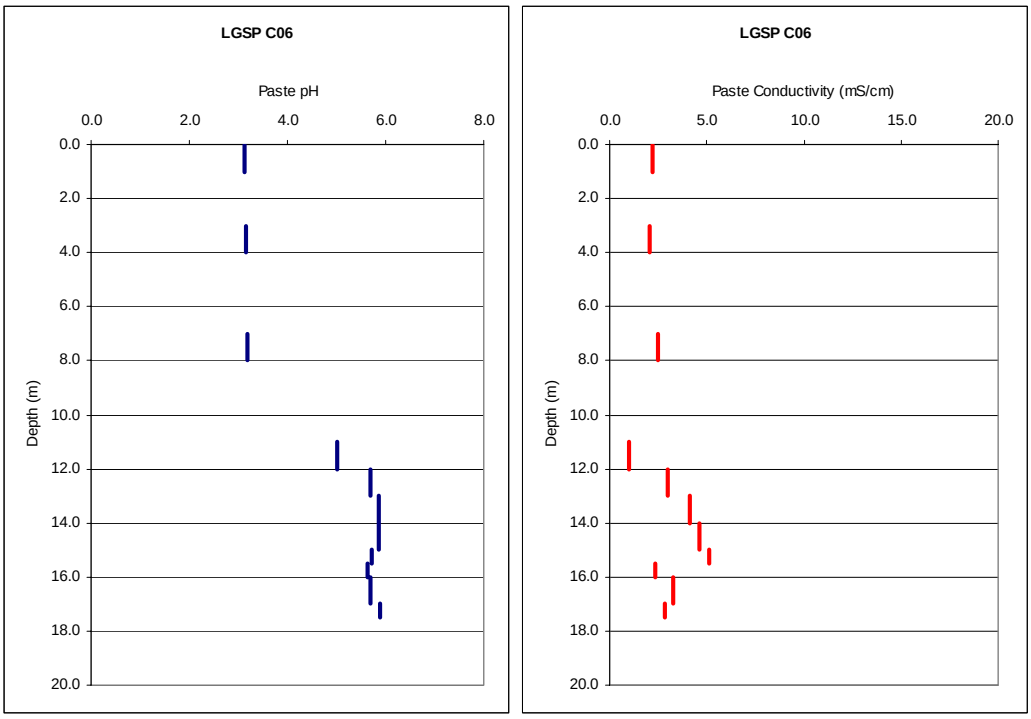

Figure B-4 Low Grade Ore Stockpile C – Drill Hole LGSP C06

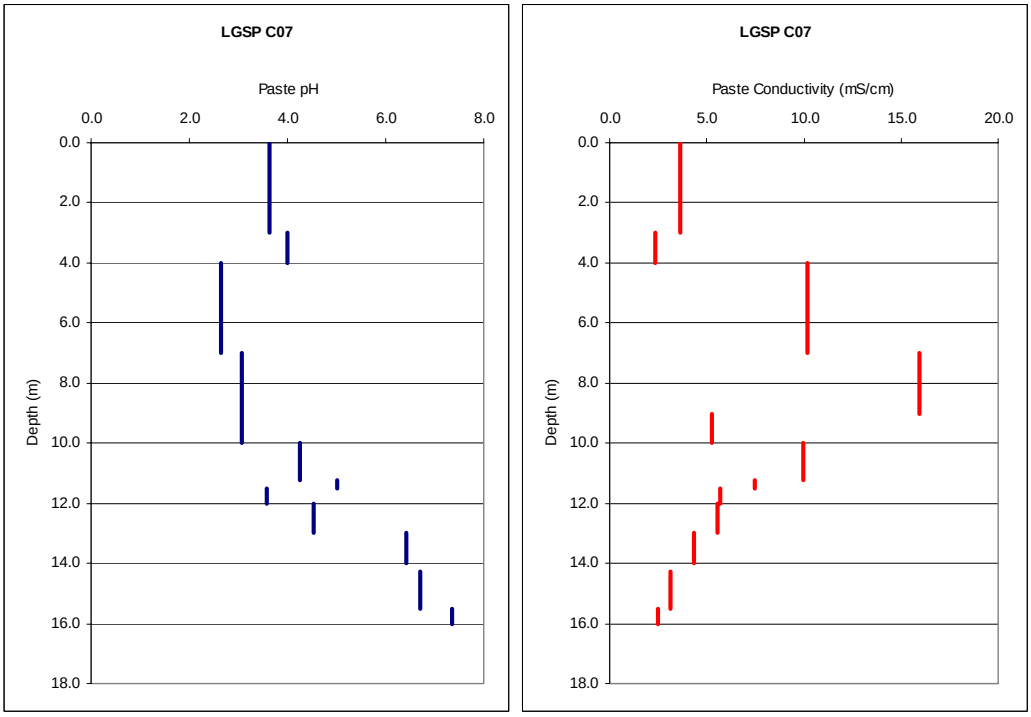

Figure B-5 Low Grade Ore Stockpile C – Drill Hole LGSP C07

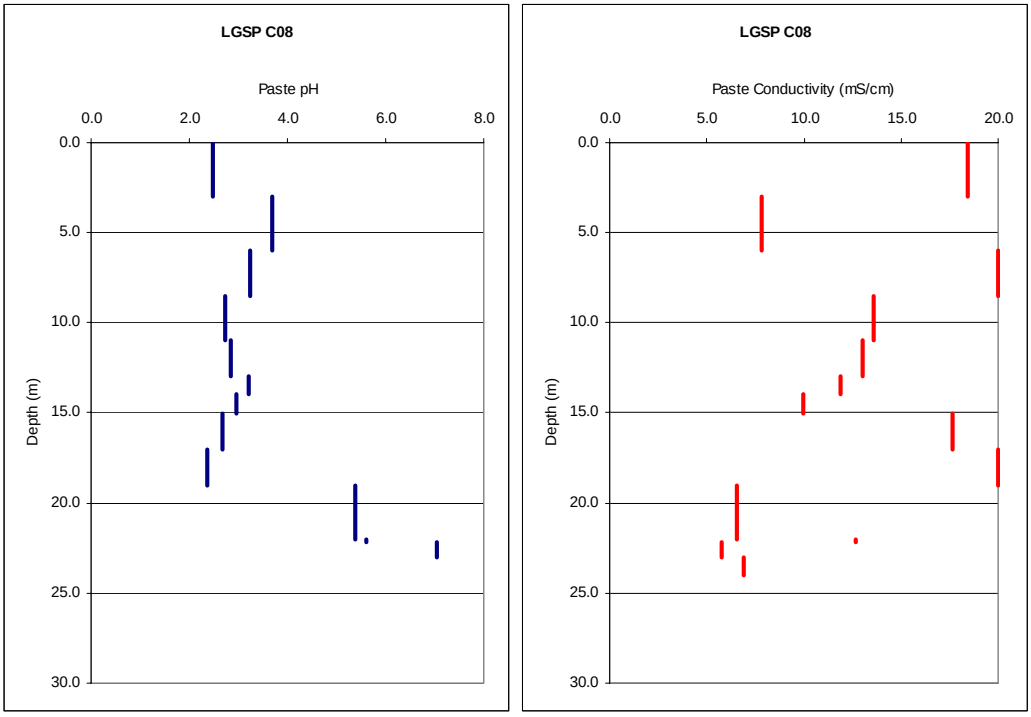

Figure B-6 Low Grade Ore Stockpile C – Drill Hole LGSP C08

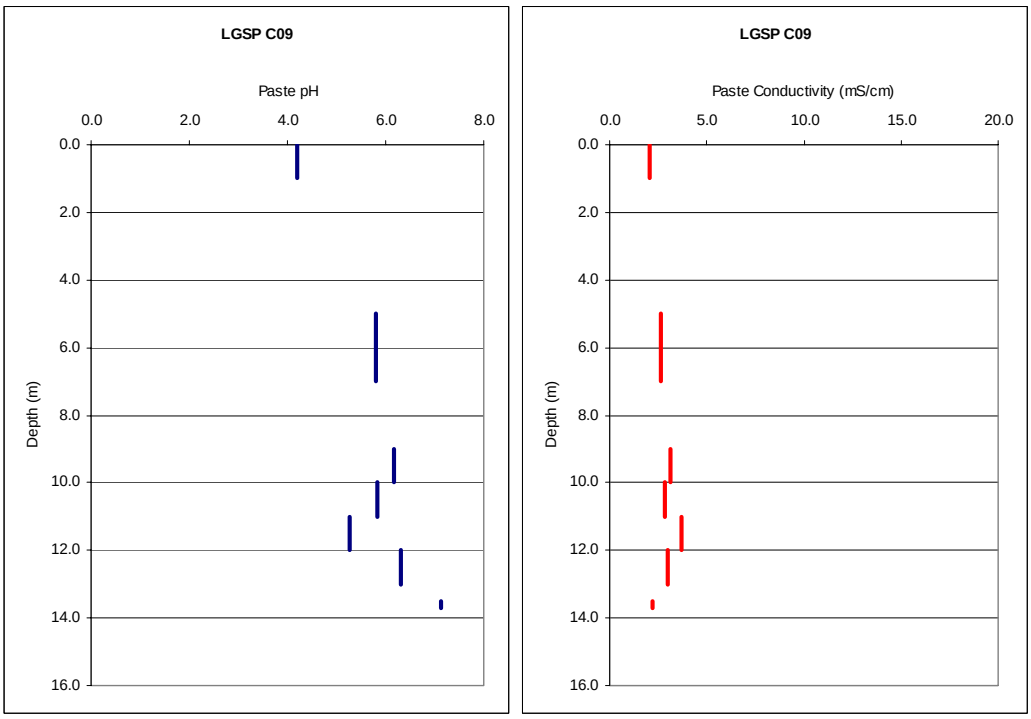

Figure B-7 Low Grade Ore Stockpile C – Drill Hole LGSP C09

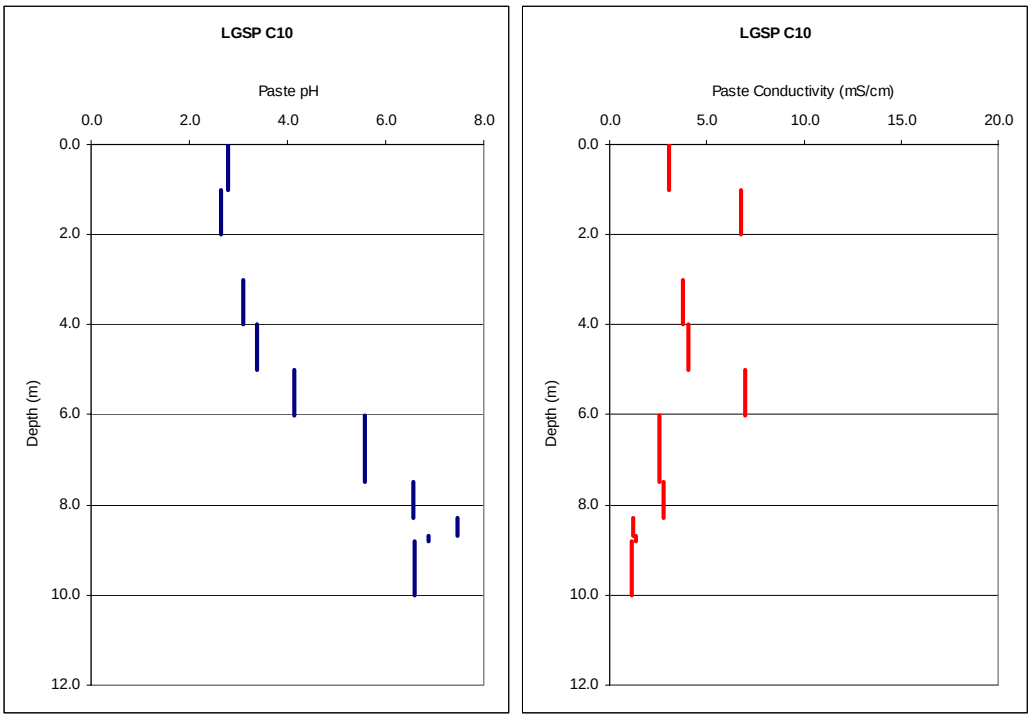

Figure B-8 Low Grade Ore Stockpile C – Drill Hole LGSP C10

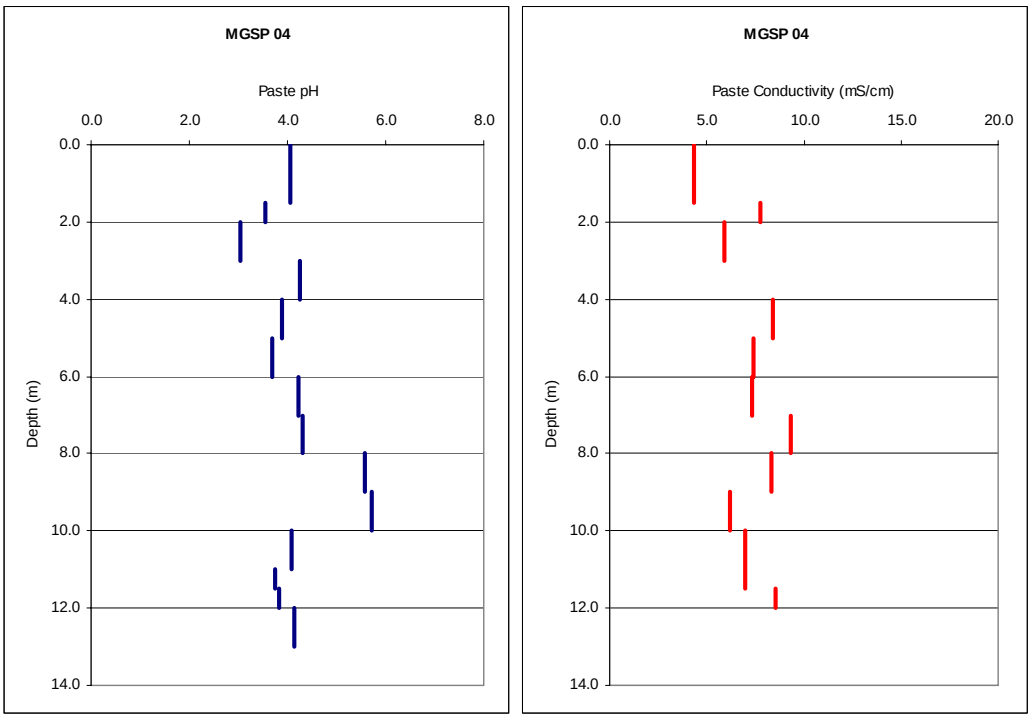

Figure B-9 Medium Grade Ore Stockpile – Drill Hole MGSP C04

Table B-2 Paste Parameters Measured in Low Grade Ore Stockpile 'A' Test Pit Samples

Location	Bore ID	Easting	Northing	From	To	Paste pH	EC	Material description
		NAD27	NAD27	m	m	S.U.	mS/cm	
LGSPA	TP-LGA-1	584114	6914480	0.00	1.00	2.16	8.00	Yellowish gray surface crust with abundant dark orangish brown cobbles embedded in surface. Below surface, material is cobble gravel with boulders (LG ore). Matrix is orange silty sand, slightly moist, with abundant sulphides. Pockets of 100% sulphide sand are visible. Accumulations of secondary salts noted below large rocks. Dark orangey brown staining is common.
LGSPA	TP-LGA-1			1.00	2.00	2.24	8.09	As above
LGSPA	TP-LGA-1			2.00	2.20	2.30	9.06	As above
LGSPA	TP-LGA-1			2.20	3.00	not tested	not tested	Waste rock pad under stockpile. Rock is grey phyllite/schist, siliceous-very hard to dig with excavator. Contains orange fines.
LGSPA	TP-LGA-2	584101	6914467	0.00	1.00	1.90	8.30	Low grade ore as for TP-LGA-1
LGSPA	TP-LGA-2			1.00	1.40	1.12	11.26	Low grade ore as for TP-LGA-1
LGSPA	TP-LGA-2			1.40	2.90	1.82	10.79	Gray ore (looks medium to high grade). Highly weathered, decomposed to fines and gravel; moist to wet. Water flowing in to TP at 2.6 m.
LGSPA	TP-LGA-2			2.90	3.00	2.08	3.06	Gray phyllite with orange staining. Very hard to dig with excavator.
LGSPA	TP-LGA-3	584081	6914452	0.00	1.00	2.02	7.30	Low grade ore as for TP-LGA-1
LGSPA	TP-LGA-3			1.00	2.40	3.57	4.31	Orange stained grey phyllite/schist with orange to dark orange sandy matrix with minor silt.
LGSPA	TP-LGA-3			2.40	2.90	5.65	4.05	Grey phyllite, little to no staining. Easy to dig with excavator.

Appendix C

Elemental Analyses

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings

SAMPLE DESCRIPTION	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm
LGSP-A06 0-1m	24	1.38	668	290	0.5	<2	0.07	10.8	86	10	868	33.3	0.21	0.06	172
LGSP-A06 0-1m	24	1.38	668	290	0.5	<2	0.07	10.8	86	10	868	33.3	0.21	0.06	172
LGSP-A06 2-3m	39.1	2.93	241	80	0.9	<2	0.91	49.1	91	226	1835	18.35	0.42	2.31	1685
LGSP-A06 2-3m	39.1	2.93	241	80	0.9	<2	0.91	49.1	91	226	1835	18.35	0.42	2.31	1685
LGSP-A06 6-7m	51.5	0.76	821	210	0.6	<2	0.21	59.3	126	40	2530	31.4	0.15	0.27	1390
LGSP-A06 6-7m	51.5	0.76	821	210	0.6	<2	0.21	59.3	126	40	2530	31.4	0.15	0.27	1390
LGSP-A06 9-10m	21.4	3.35	1530	1710	1.2	<2	0.16	54.4	82	37	1475	19.35	1.22	0.31	857
LGSP-A06 9-10m	21.4	3.35	1530	1710	1.2	<2	0.16	54.4	82	37	1475	19.35	1.22	0.31	857
LGSP-A06 10-11m	2.4	8.49	32	1260	2.6	<2	0.9	7.6	20	72	113	5.02	2.49	1.18	925
LGSP-A06 10-11m	2.4	8.49	32	1260	2.6	<2	0.9	7.6	20	72	113	5.02	2.49	1.18	925
LGSP-A06 11-12m	1.5	7.65	65	1100	2.4	<2	1.32	3.2	20	72	100	5.23	2.08	1.22	1185
LGSP-A06 11-12m	1.5	7.65	65	1100	2.4	<2	1.32	3.2	20	72	100	5.23	2.08	1.22	1185
LGSP-A06 13-13.5m	1.1	7.84	11	1620	5.7	<2	0.49	2.2	14	58	40	4.06	2.96	0.8	536
LGSP-A06 13-13.5m	1.1	7.84	11	1620	5.7	<2	0.49	2.2	14	58	40	4.06	2.96	0.8	536
LGSP-A06 13.5-14m	0.5	8.69	7	1270	3.5	<2	0.58	1.3	15	71	39	4.67	2.94	1.22	482
LGSP-A06 13.5-14m	0.5	8.69	7	1270	3.5	<2	0.58	1.3	15	71	39	4.67	2.94	1.22	482
LGSP-A06 14.5-15m	0.5	8.46	20	1030	2.9	<2	1.07	0.8	20	92	45	4.69	2.44	1.38	795
LGSP-A06 14.5-15m	0.5	8.46	20	1030	2.9	<2	1.07	0.8	20	92	45	4.69	2.44	1.38	795

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings (cont.)

SAMPLE DESCRIPTION	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	V ppm	W ppm	Zn ppm	S %	Zn %	Zn (ppm)
LGSP-A06 0-1m	5	0.01	10	380	>10000	>10.0	35	12	0.04	36	<10	8450	38.7		8450
LGSP-A06 0-1m	5	0.01	10	380	>10000	>10.0	35	12	0.04	36	<10	8450	38.7	0	8450
LGSP-A06 2-3m	8	0.05	197	700	>10000	>10.0	63	32	0.14	100	10	>10000	19.25	2.59	25900
LGSP-A06 2-3m	8	0.05	197	700	>10000	>10.0	63	32	0.14	100	10	>10000	19.25	2.59	25900
LGSP-A06 6-7m	5	0.01	45	280	>10000	>10.0	83	20	0.03	29	20	>10000	32.8	4.5	45000
LGSP-A06 6-7m	5	0.01	45	280	>10000	>10.0	83	20	0.03	29	20	>10000	32.8	4.5	45000
LGSP-A06 9-10m	3	0.08	25	260	>10000	>10.0	42	25	0.08	45	<10	>10000	24	4.69	46900
LGSP-A06 9-10m	3	0.08	25	260	>10000	>10.0	42	25	0.08	45	<10	>10000	24	4.69	46900
LGSP-A06 10-11m	<1	0.75	40	490	2010	1.78	6	103	0.38	78	<10	9180	1.88		9180
LGSP-A06 10-11m	<1	0.75	40	490	2010	1.78	6	103	0.38	78	<10	9180	1.88	0	9180
LGSP-A06 11-12m	2	0.47	47	580	1040	1.69	<5	96	0.35	94	<10	4830	1.82		4830
LGSP-A06 11-12m	2	0.47	47	580	1040	1.69	<5	96	0.35	94	<10	4830	1.82	0	4830
LGSP-A06 13-13.5m	1	0.61	31	380	892	0.88	<5	47	0.28	65	<10	2250	0.91		2250
LGSP-A06 13-13.5m	1	0.61	31	380	892	0.88	<5	47	0.28	65	<10	2250	0.91	0	2250
LGSP-A06 13.5-14m	<1	0.59	42	440	490	0.74	<5	78	0.36	86	<10	2370	0.83		2370
LGSP-A06 13.5-14m	<1	0.59	42	440	490	0.74	<5	78	0.36	86	<10	2370	0.83	0	2370
LGSP-A06 14.5-15m	1	0.49	57	540	177	0.59	<5	75	0.41	101	<10	1610	0.67		1610
LGSP-A06 14.5-15m	1	0.49	57	540	177	0.59	<5	75	0.41	101	<10	1610	0.67	0	1610

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings (cont.)

SAMPLE	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn
DESCRIPTION	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm
LGSP-A07 0-1m	>100	1.5	1450	1200	0.8	2	0.17	15.4	46	49	1550	18.45	0.34	0.09	397
LGSP-A07 0-1m	>100	1.5	1450	1200	0.8	2	0.17	15.4	46	49	1550	18.45	0.34	0.09	397
LGSP-A07 3-4m	36.7	1.88	619	1260	1.3	<2	0.32	50.3	137	128	2210	28	0.54	0.36	1160
LGSP-A07 3-4m	36.7	1.88	619	1260	1.3	<2	0.32	50.3	137	128	2210	28	0.54	0.36	1160
LGSP-A07 7-8m	69.8	2.35	342	90	1.2	<2	0.62	67	137	180	1750	21.4	0.56	1.4	1960
LGSP-A07 7-8m	69.8	2.35	342	90	1.2	<2	0.62	67	137	180	1750	21.4	0.56	1.4	1960
LGSP-A07 10-11m	29.9	2.96	433	1780	1.3	<2	0.18	38.4	146	102	1695	20.5	0.94	0.5	1615
LGSP-A07 10-11m	29.9	2.96	433	1780	1.3	<2	0.18	38.4	146	102	1695	20.5	0.94	0.5	1615
LGSP-A07 12-13m	4.1	6.02	28	590	7.3	<2	0.38	8	23	40	167	3.18	2.8	0.5	635
LGSP-A07 12-13m	4.1	6.02	28	590	7.3	<2	0.38	8	23	40	167	3.18	2.8	0.5	635
LGSP-A07 13-14m	4	7.48	43	440	5.2	<2	0.5	8.9	27	48	196	4.67	2.6	0.77	861
LGSP-A07 13-14m	4	7.48	43	440	5.2	<2	0.5	8.9	27	48	196	4.67	2.6	0.77	861
LGSP-A07 15.5-16.5m	0.9	6.84	94	1120	3.9	<2	1.7	1.2	14	44	57	3.38	2.14	0.85	809
LGSP-A07 15.5-16.5m	0.9	6.84	94	1120	3.9	<2	1.7	1.2	14	44	57	3.38	2.14	0.85	809
LGSP-A07 16.5-17.9m	0.7	8.2	13	1270	3.2	<2	1.18	0.8	17	73	57	4.16	2.55	1.2	532
LGSP-A07 16.5-17.9m	0.7	8.2	13	1270	3.2	<2	1.18	0.8	17	73	57	4.16	2.55	1.2	532
LGSP-A07 17.9-18.1m	1.1	7.61	22	980	2.5	<2	1.24	2.4	40	67	72	3.83	2.33	1.04	1200
LGSP-A07 17.9-18.1m	1.1	7.61	22	980	2.5	<2	1.24	2.4	40	67	72	3.83	2.33	1.04	1200

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings (cont.)

SAMPLE	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn	S	Zn	Zn
DESCRIPTION	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	%	(ppm)
LGSP-A07 0-1m	8	0.02	41	640	>10000	>10.0	173	32	0.05	98	<10	>10000	19.5	1.28	12800
LGSP-A07 0-1m	8	0.02	41	640	>10000	>10.0	173	32	0.05	98	<10	>10000	19.5	1.28	12800
LGSP-A07 3-4m	5	0.06	100	430	>10000	>10.0	81	25	0.07	35	10	>10000	29.4	2.66	26600
LGSP-A07 3-4m	5	0.06	100	430	>10000	>10.0	81	25	0.07	35	10	>10000	29.4	2.66	26600
LGSP-A07 7-8m	6	0.05	225	330	>10000	>10.0	100	34	0.08	49	20	>10000	22.2	4.87	48700
LGSP-A07 7-8m	6	0.05	225	330	>10000	>10.0	100	34	0.08	49	20	>10000	22.2	4.87	48700
LGSP-A07 10-11m	7	0.06	68	390	>10000	>10.0	57	38	0.1	54	10	>10000	23.9	2.61	26100
LGSP-A07 10-11m	7	0.06	68	390	>10000	>10.0	57	38	0.1	54	10	>10000	23.9	2.61	26100
LGSP-A07 12-13m	2	0.77	37	140	2120	2.43	10	29	0.08	18	<10	5670	2.85		5670
LGSP-A07 12-13m	2	0.77	37	140	2120	2.43	10	29	0.08	18	<10	5670	2.85		5670
LGSP-A07 13-14m	2	0.58	49	300	1725	2.51	9	47	0.19	52	<10	5850	2.93		5850
LGSP-A07 13-14m	2	0.58	49	300	1725	2.51	9	47	0.19	52	<10	5850	2.93		5850
LGSP-A07 15.5-16.5m	3	0.46	48	430	466	0.83	<5	67	0.23	60	<10	2190	0.96		2190
LGSP-A07 15.5-16.5m	3	0.46	48	430	466	0.83	<5	67	0.23	60	<10	2190	0.96		2190
LGSP-A07 16.5-17.9m	2	0.54	44	660	329	0.69	5	90	0.35	92	<10	834	0.79		834
LGSP-A07 16.5-17.9m	2	0.54	44	660	329	0.69	5	90	0.35	92	<10	834	0.79		834
LGSP-A07 17.9-18.1m	1	0.98	46	610	765	0.61	8	170	0.34	78	<10	2490	0.66		2490
LGSP-A07 17.9-18.1m	1	0.98	46	610	765	0.61	8	170	0.34	78	<10	2490	0.66		2490

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings (cont.)

SAMPLE	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn
DESCRIPTION	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm
LGSP-A08 0-4m	40.5	2.5	475	2160	1.1	<2	0.17	56	67	32	1920	14.65	0.8	0.22	774
LGSP-A08 0-4m	40.5	2.5	475	2160	1.1	<2	0.17	56	67	32	1920	14.65	0.8	0.22	774
LGSP-A08 4-7m	24.5	7.21	494	2500	2.5	<2	0.87	25.3	38	126	864	9.84	1.88	0.88	1360
LGSP-A08 4-7m	24.5	7.21	494	2500	2.5	<2	0.87	25.3	38	126	864	9.84	1.88	0.88	1360
LGSP-A08 7-9.5m	23.2	2.42	539	450	1	2	0.21	13.2	143	42	1325	31.2	0.66	0.29	695
LGSP-A08 7-9.5m	23.2	2.42	539	450	1	2	0.21	13.2	143	42	1325	31.2	0.66	0.29	695
LGSP-A08 9.5-10m	12.4	6.28	193	1250	3.6	<2	0.38	11.4	66	45	717	13.55	2.09	0.5	789
LGSP-A08 9.5-10m	12.4	6.28	193	1250	3.6	<2	0.38	11.4	66	45	717	13.55	2.09	0.5	789
LGSP-A08 10-12m	17.4	8.46	175	470	3.8	2	0.31	6.4	37	70	361	7.03	2.83	0.89	708
LGSP-A08 10-12m	17.4	8.46	175	470	3.8	2	0.31	6.4	37	70	361	7.03	2.83	0.89	708
LGSP-A08 13.5-15.5m	5.1	8.01	102	310	4.5	<2	0.7	6	29	63	238	6.02	2.83	0.97	770
LGSP-A08 13.5-15.5m	5.1	8.01	102	310	4.5	<2	0.7	6	29	63	238	6.02	2.83	0.97	770
LGSP-A08 15.5-18m	0.9	7.74	19	920	4.4	<2	1.04	1.4	27	73	114	4.75	2.51	1.31	713
LGSP-A08 15.5-18m	0.9	7.74	19	920	4.4	<2	1.04	1.4	27	73	114	4.75	2.51	1.31	713
LGSP-A08 18-19m	<0.5	7.19	<5	740	2.9	<2	2.36	2	17	73	38	3.68	2.13	1.4	967
LGSP-A08 18-19m	<0.5	7.19	<5	740	2.9	<2	2.36	2	17	73	38	3.68	2.13	1.4	967
LGSP-A08 19-20m	<0.5	6.98	7	800	2.6	<2	2.2	2.4	18	70	46	3.52	2.11	1.32	921
LGSP-A08 19-20m	<0.5	6.98	7	800	2.6	<2	2.2	2.4	18	70	46	3.52	2.11	1.32	921
LGSP-A08 20-21m	<0.5	7.17	13	770	2.2	<2	4.02	<0.5	22	129	43	4.2	1.76	2.21	1125
LGSP-A08 20-21m	<0.5	7.17	13	770	2.2	<2	4.02	<0.5	22	129	43	4.2	1.76	2.21	1125
LGSP-A08 23-25m	<0.5	7.12	20	850	2.5	2	1.47	0.7	11	51	30	3.47	2.24	1.01	419
LGSP-A08 23-25m	<0.5	7.12	20	850	2.5	2	1.47	0.7	11	51	30	3.47	2.24	1.01	419

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings (cont.)

SAMPLE DESCRIPTION	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	V ppm	W ppm	Zn ppm	S %	Zn %	Zn (ppm)
LGSP-A08 0-4m	7	0.05	26	370	>10000	>10.0	68	35	0.08	91	10	>10000	15.9	4.65	46500
LGSP-A08 0-4m	7	0.05	26	370	>10000	>10.0	68	35	0.08	91	10	>10000	15.9	4.65	46500
LGSP-A08 4-7m	3	0.3	66	550	>10000	6.67	46	103	0.26	98	<10	>10000	7.26	1.73	17300
LGSP-A08 4-7m	3	0.3	66	550	>10000	6.67	46	103	0.26	98	<10	>10000	7.26	1.73	17300
LGSP-A08 7-9.5m	7	0.1	35	290	>10000	>10.0	38	21	0.08	37	<10	>10000	33.1	1.05	10500
LGSP-A08 7-9.5m	7	0.1	35	290	>10000	>10.0	38	21	0.08	37	<10	>10000	33.1	1.05	10500
LGSP-A08 9.5-10m	3	0.38	30	300	7790	>10.0	21	44	0.18	50	<10	7640	11.65		7640
LGSP-A08 9.5-10m	3	0.38	30	300	7790	>10.0	21	44	0.18	50	<10	7640	11.65		7640
LGSP-A08 10-12m	2	0.35	38	470	5350	2.95	15	39	0.34	83	<10	3320	3.17		3320
LGSP-A08 10-12m	2	0.35	38	470	5350	2.95	15	39	0.34	83	<10	3320	3.17		3320
LGSP-A08 13.5-15.5m	1	0.57	46	390	1925	2.69	<5	66	0.24	65	<10	3960	2.86		3960
LGSP-A08 13.5-15.5m	1	0.57	46	390	1925	2.69	<5	66	0.24	65	<10	3960	2.86		3960
LGSP-A08 15.5-18m	2	0.87	52	570	394	1.62	<5	90	0.28	94	<10	974	1.63		974
LGSP-A08 15.5-18m	2	0.87	52	570	394	1.62	<5	90	0.28	94	<10	974	1.63		974
LGSP-A08 18-19m	1	1.18	52	620	130	0.54	<5	230	0.37	88	<10	3890	0.53		3890
LGSP-A08 18-19m	1	1.18	52	620	130	0.54	<5	230	0.37	88	<10	3890	0.53		3890
LGSP-A08 19-20m	1	1.16	49	640	193	0.56	<5	228	0.36	86	<10	4030	0.57		4030
LGSP-A08 19-20m	1	1.16	49	640	193	0.56	<5	228	0.36	86	<10	4030	0.57		4030
LGSP-A08 20-21m	1	1.2	91	690	51	0.36	<5	299	0.45	113	<10	1890	0.36		1890
LGSP-A08 20-21m	1	1.2	91	690	51	0.36	<5	299	0.45	113	<10	1890	0.36		1890
LGSP-A08 23-25m	1	1.2	25	610	112	0.04	<5	214	0.31	78	<10	582	0.05		582
LGSP-A08 23-25m	1	1.2	25	610	112	0.04	<5	214	0.31	78	<10	582	0.05		582

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings (cont.)

SAMPLE	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn
DESCRIPTION	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm
LGSP-C06 0-1m	25.3	2.49	140	90	0.9	<2	0.19	13.5	46	29	1260	9.75	0.94	0.16	222
LGSP-C06 0-1m	25.3	2.49	140	90	0.9	<2	0.19	13.5	46	29	1260	9.75	0.94	0.16	222
LGSP-C06 3-4m	31.2	2.98	547	110	1	3	0.19	23.9	41	37	1215	9.01	1.15	0.19	301
LGSP-C06 3-4m	31.2	2.98	547	110	1	3	0.19	23.9	41	37	1215	9.01	1.15	0.19	301
LGSP-C06 6-7m	35	2.11	224	180	1	17	0.15	51.2	63	30	2740	15.55	0.76	0.16	432
LGSP-C06 6-7m	35	2.11	224	180	1	17	0.15	51.2	63	30	2740	15.55	0.76	0.16	432
LGSP-C06 10-11m	35.6	1.15	171	200	<0.5	<2	0.08	125	53	17	1880	19.6	0.43	0.08	256
LGSP-C06 10-11m	35.6	1.15	171	200	<0.5	<2	0.08	125	53	17	1880	19.6	0.43	0.08	256
LGSP-C06 13-14m	36.9	1.51	375	90	0.9	<2	0.2	63.8	170	23	1430	26.2	0.41	0.23	1105
LGSP-C06 13-14m	36.9	1.51	375	90	0.9	<2	0.2	63.8	170	23	1430	26.2	0.41	0.23	1105
LGSP-C06 14-15m	2.7	8.75	42	760	3.3	3	0.37	9	32	81	207	7.25	2.87	1.04	788
LGSP-C06 14-15m	2.7	8.75	42	760	3.3	3	0.37	9	32	81	207	7.25	2.87	1.04	788
LGSP-C06 15-15.5m	7.2	8.84	67	130	3.3	<2	0.38	16	49	77	341	9.77	2.73	0.98	934
LGSP-C06 15-15.5m	7.2	8.84	67	130	3.3	<2	0.38	16	49	77	341	9.77	2.73	0.98	934
LGSP-C06 17-17.5m	3	9.34	74	2970	3.7	<2	0.33	4.3	25	83	106	5.93	2.9	0.94	656
LGSP-C06 17-17.5m	3	9.34	74	2970	3.7	<2	0.33	4.3	25	83	106	5.93	2.9	0.94	656
LGSP-C07 0-3m	29	3.82	149	500	1.5	2	0.15	33.7	63	36	1555	13.65	1.22	0.33	762
LGSP-C07 0-3m	29	3.82	149	500	1.5	2	0.15	33.7	63	36	1555	13.65	1.22	0.33	762
LGSP-C07 7-9m	23	2.09	552	70	0.8	2	0.18	33.4	23	31	632	5.56	0.68	0.12	204
LGSP-C07 7-9m	23	2.09	552	70	0.8	2	0.18	33.4	23	31	632	5.56	0.68	0.12	204
LGSP-C07 10-11.25m	29	2.45	207	470	1.3	<2	0.14	50.7	34	31	776	11.3	0.84	0.21	398
LGSP-C07 10-11.25m	29	2.45	207	470	1.3	<2	0.14	50.7	34	31	776	11.3	0.84	0.21	398
LGSP-C07 11.25-11.5m	9	8.2	69	140	3.3	<2	0.27	16.3	32	70	264	8.62	2.74	0.83	647
LGSP-C07 11.25-11.5m	9	8.2	69	140	3.3	<2	0.27	16.3	32	70	264	8.62	2.74	0.83	647
LGSP-C07 12-13m	1.4	7.61	19	980	3	<2	1.08	5.6	18	67	74	4.08	2.56	0.99	703
LGSP-C07 12-13m	1.4	7.61	19	980	3	<2	1.08	5.6	18	67	74	4.08	2.56	0.99	703
LGSP-C07 14.25-15.5m	1.1	7.99	8	1100	1.8	<2	2.79	2.4	14	48	60	4.62	2	1.31	862
LGSP-C07 14.25-15.5m	1.1	7.99	8	1100	1.8	<2	2.79	2.4	14	48	60	4.62	2	1.31	862
LGSP-C07 15.5-16m	1.6	9.08	9	1040	2.9	<2	3.86	3.5	20	88	176	5.17	2.56	1.61	917
LGSP-C07 15.5-16m	1.6	9.08	9	1040	2.9	<2	3.86	3.5	20	88	176	5.17	2.56	1.61	917

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings (cont.)

SAMPLE	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn	S	Zn	Zn
DESCRIPTION	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	%	(ppm)
LGSP-C06 0-1m	7	0.05	26	840	>10000	6.7	28	51	0.06	124	<10	>10000	6.89	1.16	11600
LGSP-C06 0-1m	7	0.05	26	840	>10000	6.7	28	51	0.06	124	<10	>10000	6.89	1.16	11600
LGSP-C06 3-4m	11	0.08	29	540	>10000	7.52	55	32	0.07	214	<10	>10000	7.63	1.91	19100
LGSP-C06 3-4m	11	0.08	29	540	>10000	7.52	55	32	0.07	214	<10	>10000	7.63	1.91	19100
LGSP-C06 6-7m	9	0.05	23	330	>10000	>10.0	41	24	0.06	112	30	>10000	14.95	3.79	37900
LGSP-C06 6-7m	9	0.05	23	330	>10000	>10.0	41	24	0.06	112	30	>10000	14.95	3.79	37900
LGSP-C06 10-11m	5	0.03	18	140	>10000	>10.0	60	15	0.04	61	50	>10000	18.85	9.62	96200
LGSP-C06 10-11m	5	0.03	18	140	>10000	>10.0	60	15	0.04	61	50	>10000	18.85	9.62	96200
LGSP-C06 13-14m	8	0.02	36	570	>10000	>10.0	61	21	0.05	85	40	>10000	28.3	5.25	52500
LGSP-C06 13-14m	8	0.02	36	570	>10000	>10.0	61	21	0.05	85	40	>10000	28.3	5.25	52500
LGSP-C06 14-15m	1	0.37	45	430	1810	2.77	<5	52	0.4	96	<10	6990	2.99		6990
LGSP-C06 14-15m	1	0.37	45	430	1810	2.77	<5	52	0.4	96	<10	6990	2.99		6990
LGSP-C06 15-15.5m	1	0.35	42	590	5410	5.8	11	51	0.4	98	<10	>10000	5.65	1.35	13500
LGSP-C06 15-15.5m	1	0.35	42	590	5410	5.8	11	51	0.4	98	<10	>10000	5.65	1.35	13500
LGSP-C06 17-17.5m	1	0.39	41	560	1075	1.7	<5	55	0.39	98	<10	3740	1.65		3740
LGSP-C06 17-17.5m	1	0.39	41	560	1075	1.7	<5	55	0.39	98	<10	3740	1.65		3740
LGSP-C07 0-3m	7	0.09	23	300	>10000	>10.0	46	25	0.13	86	40	>10000	11.05	2.91	29100
LGSP-C07 0-3m	7	0.09	23	300	>10000	>10.0	46	25	0.13	86	40	>10000	11.05	2.91	29100
LGSP-C07 7-9m	10	0.03	23	920	>10000	5.53	46	21	0.07	159	10	>10000	6.02	2.81	28100
LGSP-C07 7-9m	10	0.03	23	920	>10000	5.53	46	21	0.07	159	10	>10000	6.02	2.81	28100
LGSP-C07 10-11.25m	8	0.09	32	280	>10000	>10.0	52	24	0.07	97	20	>10000	11.05	4.58	45800
LGSP-C07 10-11.25m	8	0.09	32	280	>10000	>10.0	52	24	0.07	97	20	>10000	11.05	4.58	45800
LGSP-C07 11.25-11.5m	3	0.4	47	410	5350	4.74	14	44	0.34	98	<10	>10000	4.34	1.46	14600
LGSP-C07 11.25-11.5m	3	0.4	47	410	5350	4.74	14	44	0.34	98	<10	>10000	4.34	1.46	14600
LGSP-C07 12-13m	2	1.04	39	640	792	1.1	<5	166	0.33	90	<10	6620	1.04		6620
LGSP-C07 12-13m	2	1.04	39	640	792	1.1	<5	166	0.33	90	<10	6620	1.04		6620
LGSP-C07 14.25-15.5m	1	1.82	29	850	437	0.54	<5	260	0.44	98	<10	1665	0.48		1665
LGSP-C07 14.25-15.5m	1	1.82	29	850	437	0.54	<5	260	0.44	98	<10	1665	0.48		1665
LGSP-C07 15.5-16m	<1	1.33	46	670	1070	0.85	<5	320	0.44	91	<10	1705	0.71		1705
LGSP-C07 15.5-16m	<1	1.33	46	670	1070	0.85	<5	320	0.44	91	<10	1705	0.71		1705

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings (cont.)

SAMPLE	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn
DESCRIPTION	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm
LGSP-C08 0-3m	18.9	2.3	558	260	1	2	0.18	30.7	158	27	2010	20.2	0.64	0.21	650
LGSP-C08 0-3m	18.9	2.3	558	260	1	2	0.18	30.7	158	27	2010	20.2	0.64	0.21	650
LGSP-C08 11-13m	22.4	1.56	416	210	0.6	<2	0.08	39.5	98	21	1415	18.7	0.61	0.15	695
LGSP-C08 11-13m	22.4	1.56	416	210	0.6	<2	0.08	39.5	98	21	1415	18.7	0.61	0.15	695
LGSP-C08 13-14m	21.8	1.82	418	70	0.7	<2	0.06	40.9	40	21	1025	7.9	0.71	0.14	343
LGSP-C08 13-14m	21.8	1.82	418	70	0.7	<2	0.06	40.9	40	21	1025	7.9	0.71	0.14	343
LGSP-C08 14-15m	22.6	2.08	492	80	0.7	<2	0.06	39.2	48	26	778	10.95	0.84	0.14	315
LGSP-C08 14-15m	22.6	2.08	492	80	0.7	<2	0.06	39.2	48	26	778	10.95	0.84	0.14	315
LGSP-C08 19-22m	7	7.74	42	160	2.7	2	0.27	8.2	27	64	402	6.92	2.49	0.84	616
LGSP-C08 19-22m	7	7.74	42	160	2.7	2	0.27	8.2	27	64	402	6.92	2.49	0.84	616
LGSP-C08 22-22.2m	0.6	8.87	26	830	2.8	<2	0.76	1.4	36	78	50	4.77	2.75	1.11	713
LGSP-C08 22-22.2m	0.6	8.87	26	830	2.8	<2	0.76	1.4	36	78	50	4.77	2.75	1.11	713
LGSP-C08 22.2-23m	<0.5	8.07	11	790	2.4	<2	4.42	0.5	23	73	41	3.88	2.34	1.56	779
LGSP-C08 22.2-23m	<0.5	8.07	11	790	2.4	<2	4.42	0.5	23	73	41	3.88	2.34	1.56	779
LGSP-C08 23-24m	<0.5	8.19	7	530	2	<2	7.83	<0.5	12	62	26	3.68	2.45	1.88	618
LGSP-C08 23-24m	<0.5	8.19	7	530	2	<2	7.83	<0.5	12	62	26	3.68	2.45	1.88	618
LGSP-C09 0-1m	5.5	0.82	503	130	0.9	<2	0.21	13.1	253	10	2790	28.6	0.19	0.14	1300
LGSP-C09 0-1m	5.5	0.82	503	130	0.9	<2	0.21	13.1	253	10	2790	28.6	0.19	0.14	1300
LGSP-C09 3-4m	13.6	2.22	715	190	1.1	<2	0.11	21.7	187	24	1845	22.3	0.81	0.2	949
LGSP-C09 3-4m	13.6	2.22	715	190	1.1	<2	0.11	21.7	187	24	1845	22.3	0.81	0.2	949
LGSP-C09 5-7m	17	4.38	376	230	1.4	<2	2.01	26	47	50	1135	17.15	1.1	0.81	1230
LGSP-C09 5-7m	17	4.38	376	230	1.4	<2	2.01	26	47	50	1135	17.15	1.1	0.81	1230
LGSP-C09 9-10m	10.6	7.63	371	590	2.6	<2	0.57	9.6	56	109	534	10.35	2.18	1.13	1005
LGSP-C09 9-10m	10.6	7.63	371	590	2.6	<2	0.57	9.6	56	109	534	10.35	2.18	1.13	1005
LGSP-C09 10-11m	6.8	8.67	259	90	3	2	0.68	5.4	48	119	261	8.91	2.45	1.48	968
LGSP-C09 10-11m	6.8	8.67	259	90	3	2	0.68	5.4	48	119	261	8.91	2.45	1.48	968
LGSP-C09 11-12m	2.3	7.65	65	140	2.3	2	1.5	4.1	30	85	228	5.43	1.89	1.27	1080
LGSP-C09 11-12m	2.3	7.65	65	140	2.3	2	1.5	4.1	30	85	228	5.43	1.89	1.27	1080
LGSP-C09 13-13.8m	<0.5	8	14	760	2.3	<2	8.23	<0.5	15	50	26	4.33	2.12	1.9	917
LGSP-C09 13-13.8m	<0.5	8	14	760	2.3	<2	8.23	<0.5	15	50	26	4.33	2.12	1.9	917

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings (cont.)

SAMPLE	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn	S	Zn	Zn)
DESCRIPTION	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	%	(ppm
LGSP-C08 0-3m	4	0.08	19	220	>10000	>10.0	38	25	0.09	79	30	>10000	21.2	2.32	23200
LGSP-C08 0-3m	4	0.08	19	220	>10000	>10.0	38	25	0.09	79	30	>10000	21.2	2.32	23200
LGSP-C08 11-13m	7	0.04	25	180	>10000	>10.0	40	15	0.04	89	<10	>10000	20.3	3.1	31000
LGSP-C08 11-13m	7	0.04	25	180	>10000	>10.0	40	15	0.04	89	<10	>10000	20.3	3.1	31000
LGSP-C08 13-14m	8	0.04	27	90	>10000	8.08	36	15	0.04	136	10	>10000	7.56	3.07	30700
LGSP-C08 13-14m	8	0.04	27	90	>10000	8.08	36	15	0.04	136	10	>10000	7.56	3.07	30700
LGSP-C08 14-15m	9	0.04	26	190	>10000	>10.0	39	18	0.05	150	60	>10000	10.95	3.32	33200
LGSP-C08 14-15m	9	0.04	26	190	>10000	>10.0	39	18	0.05	150	60	>10000	10.95	3.32	33200
LGSP-C08 19-22m	3	0.55	35	410	1975	3.29	7	55	0.33	101	<10	5680	3.13		5680
LGSP-C08 19-22m	3	0.55	35	410	1975	3.29	7	55	0.33	101	<10	5680	3.13		5680
LGSP-C08 22-22.2m	1	0.89	56	520	218	0.94	<5	158	0.39	91	<10	2080	0.88		2080
LGSP-C08 22-22.2m	1	0.89	56	520	218	0.94	<5	158	0.39	91	<10	2080	0.88		2080
LGSP-C08 22.2-23m	1	0.95	48	600	96	0.41	<5	322	0.42	90	<10	1695	0.37		1695
LGSP-C08 22.2-23m	1	0.95	48	600	96	0.41	<5	322	0.42	90	<10	1695	0.37		1695
LGSP-C08 23-24m	<1	0.66	34	520	56	0.18	<5	472	0.39	75	<10	189	0.17		189
LGSP-C08 23-24m	<1	0.66	34	520	56	0.18	<5	472	0.39	75	<10	189	0.17		189
LGSP-C09 0-1m	2	0.02	17	130	5920	>10.0	22	22	0.03	12	<10	>10000	28.2	1.17	11700
LGSP-C09 0-1m	2	0.02	17	130	5920	>10.0	22	22	0.03	12	<10	>10000	28.2	1.17	11700
LGSP-C09 3-4m	2	0.04	14	160	>10000	>10.0	44	14	0.05	34	<10	>10000	23.9	1.83	18300
LGSP-C09 3-4m	2	0.04	14	160	>10000	>10.0	44	14	0.05	34	<10	>10000	23.9	1.83	18300
LGSP-C09 5-7m	4	0.63	35	310	>10000	>10.0	29	59	0.24	63	<10	>10000	18.8	2.18	21800
LGSP-C09 5-7m	4	0.63	35	310	>10000	>10.0	29	59	0.24	63	<10	>10000	18.8	2.18	21800
LGSP-C09 9-10m	2	0.33	72	480	4880	7.86	20	74	0.31	91	<10	6740	7.99		6740
LGSP-C09 9-10m	2	0.33	72	480	4880	7.86	20	74	0.31	91	<10	6740	7.99		6740
LGSP-C09 10-11m	1	0.63	72	580	4080	5.57	8	94	0.39	96	<10	4190	5.26		4190
LGSP-C09 10-11m	1	0.63	72	580	4080	5.57	8	94	0.39	96	<10	4190	5.26		4190
LGSP-C09 11-12m	1	0.91	57	660	1320	2.64	<5	200	0.37	95	<10	4940	2.77		4940
LGSP-C09 11-12m	1	0.91	57	660	1320	2.64	<5	200	0.37	95	<10	4940	2.77		4940
LGSP-C09 13-13.8m	1	1.26	37	640	171	0.2	<5	524	0.5	99	<10	658	0.19		658
LGSP-C09 13-13.8m	1	1.26	37	640	171	0.2	<5	524	0.5	99	<10	658	0.19		658

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings (cont.)

SAMPLE DESCRIPTION	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm
LGSP-C10 0-1m	14.8	1.63	725	70	0.6	6	0.07	14.1	116	17	759	22	0.62	0.09	100
LGSP-C10 0-1m	14.8	1.63	725	70	0.6	6	0.07	14.1	116	17	759	22	0.62	0.09	100
LGSP-C10 4-5m	14.4	1.87	425	120	0.7	5	0.14	47	202	20	2950	25.2	0.74	0.14	886
LGSP-C10 4-5m	14.4	1.87	425	120	0.7	5	0.14	47	202	20	2950	25.2	0.74	0.14	886
LGSP-C10 7.5-8.3m	0.8	8.39	15	1400	2.2	<2	4.4	2.6	37	160	114	5.81	2.29	2.88	1005
LGSP-C10 7.5-8.3m	0.8	8.39	15	1400	2.2	<2	4.4	2.6	37	160	114	5.81	2.29	2.88	1005
LGSP-C10 8.3-8.7m	0.7	7.95	8	880	2.1	<2	7.07	0.8	20	78	85	4.24	2.38	1.66	773
LGSP-C10 8.3-8.7m	0.7	7.95	8	880	2.1	<2	7.07	0.8	20	78	85	4.24	2.38	1.66	773
LGSP-C10 8.7-8.8m	0.6	8.47	18	740	2.2	2	6.74	3.7	34	101	217	5.4	2.39	2.12	747
LGSP-C10 8.7-8.8m	0.6	8.47	18	740	2.2	2	6.74	3.7	34	101	217	5.4	2.39	2.12	747
LGSP-C10 8.8-10m	<0.5	9.06	<5	630	2.2	2	8.72	1.5	27	78	60	4.39	2.86	2.15	642
LGSP-C10 8.8-10m	<0.5	9.06	<5	630	2.2	2	8.72	1.5	27	78	60	4.39	2.86	2.15	642
MGSP-04 0-1.5m	39.1	1.73	2050	40	0.6	3	0.48	65.8	137	25	3680	17	0.53	0.35	2480
MGSP-04 0-1.5m	39.1	1.73	2050	40	0.6	3	0.48	65.8	137	25	3680	17	0.53	0.35	2480
MGSP-04 2-3m	32.3	2.98	3100	40	0.9	<2	0.26	27.7	77	43	3120	11.65	1.1	0.3	720
MGSP-04 2-3m	32.3	2.98	3100	40	0.9	<2	0.26	27.7	77	43	3120	11.65	1.1	0.3	720
MGSP-04 4-5m	30.6	4.69	1690	60	1.3	2	0.81	31.2	34	78	1000	8.22	1.68	0.8	615
MGSP-04 4-5m	30.6	4.69	1690	60	1.3	2	0.81	31.2	34	78	1000	8.22	1.68	0.8	615
MGSP-04 6-7m	40.7	2.37	1915	30	0.7	<2	0.23	47.7	44	34	1050	10.6	0.88	0.23	749
MGSP-04 6-7m	40.7	2.37	1915	30	0.7	<2	0.23	47.7	44	34	1050	10.6	0.88	0.23	749
MGSP-04 8-9m	30	2.17	2190	30	0.7	<2	0.12	67.5	32	21	1170	9	0.8	0.16	430
MGSP-04 8-9m	30	2.17	2190	30	0.7	<2	0.12	67.5	32	21	1170	9	0.8	0.16	430
MGSP-04 9-10m	57.6	1.52	1915	20	0.6	4	0.41	102.5	78	20	1720	19.2	0.47	0.25	1650
MGSP-04 9-10m	57.6	1.52	1915	20	0.6	4	0.41	102.5	78	20	1720	19.2	0.47	0.25	1650
MGSP-04 11-11.5m	42.1	3.31	432	1480	1.3	7	0.35	59.7	87	45	1240	20.9	0.94	0.23	1450
MGSP-04 11-11.5m	42.1	3.31	432	1480	1.3	7	0.35	59.7	87	45	1240	20.9	0.94	0.23	1450
MGSP-04 12-13m	39.7	3.1	383	1040	1.2	11	0.47	53.2	102	42	1445	22.3	0.8	0.27	1210
MGSP-04 12-13m	39.7	3.1	383	1040	1.2	11	0.47	53.2	102	42	1445	22.3	0.8	0.27	1210
MGSP-04 13-13.5m	44.8	2.98	321	1260	1.1	4	0.27	54.9	74	34	1365	18.95	0.82	0.26	1095
MGSP-04 13-13.5m	44.8	2.98	321	1260	1.1	4	0.27	54.9	74	34	1365	18.95	0.82	0.26	1095

Table C-1 Elemental Analyses – Low Grade Ore and Oxide Fines Drill Cuttings (cont.)

SAMPLE	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn	S	Zn	Zn
DESCRIPTION	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	%	(ppm)
LGSP-C10 0-1m	7	0.08	22	80	9510	>10.0	51	16	0.04	71	60	>10000	23	1.28	12800
LGSP-C10 0-1m	7	0.08	22	80	9510	>10.0	51	16	0.04	71	60	>10000	23	1.28	12800
LGSP-C10 4-5m	4	0.03	30	220	>10000	>10.0	25	20	0.04	51	30	>10000	25.5	3.63	36300
LGSP-C10 4-5m	4	0.03	30	220	>10000	>10.0	25	20	0.04	51	30	>10000	25.5	3.63	36300
LGSP-C10 7.5-8.3m	1	2.16	120	1250	745	1.29	<5	342	0.54	136	<10	3210	1.22		3210
LGSP-C10 7.5-8.3m	1	2.16	120	1250	745	1.29	<5	342	0.54	136	<10	3210	1.22		3210
LGSP-C10 8.3-8.7m	1	1.25	49	670	648	0.66	6	430	0.37	79	10	1215	0.64		1215
LGSP-C10 8.3-8.7m	1	1.25	49	670	648	0.66	6	430	0.37	79	10	1215	0.64		1215
LGSP-C10 8.7-8.8m	2	1.11	72	800	930	1.88	<5	417	0.42	99	<10	3750	1.81		3750
LGSP-C10 8.7-8.8m	2	1.11	72	800	930	1.88	<5	417	0.42	99	<10	3750	1.81		3750
LGSP-C10 8.8-10m	1	0.76	49	520	343	0.65	<5	493	0.39	78	110	1590	0.62		1590
LGSP-C10 8.8-10m	1	0.76	49	520	343	0.65	<5	493	0.39	78	110	1590	0.62		1590
MGSP-04 0-1.5m	6	0.06	30	260	>10000	>10.0	115	37	0.06	61	10	>10000	17.7	2.83	28300
MGSP-04 0-1.5m	6	0.06	30	260	>10000	>10.0	115	37	0.06	61	10	>10000	17.7	2.83	28300
MGSP-04 2-3m	8	0.08	25	230	>10000	>10.0	135	45	0.08	118	<10	>10000	11.35	1.61	16100
MGSP-04 2-3m	8	0.08	25	230	>10000	>10.0	135	45	0.08	118	<10	>10000	11.35	1.61	16100
MGSP-04 4-5m	10	0.1	52	410	>10000	7.33	123	97	0.14	216	<10	>10000	7.68	1.88	18800
MGSP-04 4-5m	10	0.1	52	410	>10000	7.33	123	97	0.14	216	<10	>10000	7.68	1.88	18800
MGSP-04 6-7m	9	0.05	35	180	>10000	>10.0	149	30	0.05	164	20	>10000	12.05	3.11	31100
MGSP-04 6-7m	9	0.05	35	180	>10000	>10.0	149	30	0.05	164	20	>10000	12.05	3.11	31100
MGSP-04 8-9m	7	0.04	23	110	>10000	>10.0	112	30	0.05	104	20	>10000	12.1	3.12	31200
MGSP-04 8-9m	7	0.04	23	110	>10000	>10.0	112	30	0.05	104	20	>10000	12.1	3.12	31200
MGSP-04 9-10m	7	0.03	27	250	>10000	>10.0	264	26	0.05	88	10	>10000	21.2	5.96	59600
MGSP-04 9-10m	7	0.03	27	250	>10000	>10.0	264	26	0.05	88	10	>10000	21.2	5.96	59600
MGSP-04 11-11.5m	13	0.07	46	1270	>10000	>10.0	93	52	0.11	124	40	>10000	22.2	3.45	34500
MGSP-04 11-11.5m	13	0.07	46	1270	>10000	>10.0	93	52	0.11	124	40	>10000	22.2	3.45	34500
MGSP-04 12-13m	7	0.08	39	1520	>10000	>10.0	79	36	0.11	96	40	>10000	23.2	3.9	39000
MGSP-04 12-13m	7	0.08	39	1520	>10000	>10.0	79	36	0.11	96	40	>10000	23.2	3.9	39000
MGSP-04 13-13.5m	6	0.11	29	490	>10000	>10.0	72	41	0.1	70	20	>10000	20	4.42	44200
MGSP-04 13-13.5m	6	0.11	29	490	>10000	>10.0	72	41	0.1	70	20	>10000	20	4.42	44200

Table C-2 Elemental Analyses – Low Grade Ore Stockpile A Test Pit Samples

SAMPLE	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn
DESCRIPTION	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm
TP- LGA-1 0-1m	24.2	3.06	592	70	0.8	3	0.09	11.1	63	39	938	17.6	1.02	0.13	178
TP- LGA-1 0-1m	24.2	3.06	592	70	0.8	3	0.09	11.1	63	39	938	17.6	1.02	0.13	178
TP- LGA-1 1-2m	29.8	2.94	766	50	0.7	2	0.05	16.8	35	35	658	12.85	1.02	0.13	170
TP- LGA-1 1-2m	29.8	2.94	766	50	0.7	2	0.05	16.8	35	35	658	12.85	1.02	0.13	170
TP- LGA-1 2-2.2m	22.5	4.19	822	60	1.1	6	0.08	14.2	30	49	823	12.1	1.32	0.24	182
TP- LGA-1 2-2.2m	22.5	4.19	822	60	1.1	6	0.08	14.2	30	49	823	12.1	1.32	0.24	182
TP- LGA-2 0-1m	51.6	1.05	405	50	<0.5	7	0.08	24	141	17	2170	23.7	0.32	0.08	420
TP- LGA-2 0-1m	51.6	1.05	405	50	<0.5	7	0.08	24	141	17	2170	23.7	0.32	0.08	420
TP- LGA-2 1-2m	66.1	1.16	1120	30	<0.5	11	0.04	31.3	99	15	2770	16.75	0.36	0.06	675
TP- LGA-2 1-2m	66.1	1.16	1120	30	<0.5	11	0.04	31.3	99	15	2770	16.75	0.36	0.06	675
TP- LGA-2 2-2.9m	58.8	2.08	437	30	0.8	7	0.11	29.5	37	25	1615	6.55	0.67	0.16	404
TP- LGA-2 2-2.9m	58.8	2.08	437	30	0.8	7	0.11	29.5	37	25	1615	6.55	0.67	0.16	404
TP- LGA-3 0-1m	10.9	7.05	257	260	1.9	2	0.62	1.3	45	80	717	11.55	2.15	0.55	240
TP- LGA-3 0-1m	10.9	7.05	257	260	1.9	2	0.62	1.3	45	80	717	11.55	2.15	0.55	240
TP- LGA-3 1-2.4m	3	9.36	67	1880	3.5	2	0.44	2	23	83	230	6.74	3.01	0.93	533
TP- LGA-3 1-2.4m	3	9.36	67	1880	3.5	2	0.44	2	23	83	230	6.74	3.01	0.93	533
TP- LGA-3 2.4-2.9m	<0.5	9.84	14	1280	2.9	<2	0.91	5.4	28	96	66	5.45	3.03	1.5	700
TP- LGA-3 2.4-2.9m	<0.5	9.84	14	1280	2.9	<2	0.91	5.4	28	96	66	5.45	3.03	1.5	700

Table C-2 Elemental Analyses – Low Grade Ore Stockpile A Test Pit Samples (cont.)

SAMPLE	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn	S	Zn	Zn (ppm)
DESCRIPTION	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	%	
TP- LGA-1 0-1m	10	0.06	22	430	>10000	>10.0	36	43	0.08	146	<10	>10000	15.05	1.04	10400
TP- LGA-1 0-1m	10	0.06	22	430	>10000	>10.0	36	43	0.08	146	<10	>10000	15.05	1.04	10400
TP- LGA-1 1-2m	12	0.07	20	230	>10000	>10.0	47	39	0.07	164	<10	>10000	11.7	1.58	15800
TP- LGA-1 1-2m	12	0.07	20	230	>10000	>10.0	47	39	0.07	164	<10	>10000	11.7	1.58	15800
TP- LGA-1 2-2.2m	9	0.1	21	400	>10000	9.49	39	49	0.12	152	<10	>10000	9.45	1.36	13600
TP- LGA-1 2-2.2m	9	0.1	21	400	>10000	9.49	39	49	0.12	152	<10	>10000	9.45	1.36	13600
TP- LGA-2 0-1m	10	0.02	9	350	>10000	>10.0	84	24	0.04	83	30	>10000	25.7	2.06	20600
TP- LGA-2 0-1m	10	0.02	9	350	>10000	>10.0	84	24	0.04	83	30	>10000	25.7	2.06	20600
TP- LGA-2 1-2m	12	0.03	13	350	>10000	>10.0	204	32	0.06	95	<10	>10000	19.65	1.98	19800
TP- LGA-2 1-2m	12	0.03	13	350	>10000	>10.0	204	32	0.06	95	<10	>10000	19.65	1.98	19800
TP- LGA-2 2-2.9m	13	0.08	10	200	>10000	7.4	201	56	0.11	124	<10	>10000	8.43	1.44	14400
TP- LGA-2 2-2.9m	13	0.08	10	200	>10000	7.4	201	56	0.11	124	<10	>10000	8.43	1.44	14400
TP- LGA-3 0-1m	3	0.39	24	450	8900	7.16	27	80	0.29	110	10	1670	7.09		1670
TP- LGA-3 0-1m	3	0.39	24	450	8900	7.16	27	80	0.29	110	10	1670	7.09	0	1670
TP- LGA-3 1-2.4m	1	0.38	42	460	1610	1.67	14	53	0.39	99	<10	1255	1.76		1255
TP- LGA-3 1-2.4m	1	0.38	42	460	1610	1.67	14	53	0.39	99	<10	1255	1.76	0	1255
TP- LGA-3 2.4-2.9m	3	0.34	64	790	300	1.07	<5	74	0.41	144	<10	3650	1.17		3650
TP- LGA-3 2.4-2.9m	3	0.34	64	790	300	1.07	<5	74	0.41	144	<10	3650	1.17	0	3650

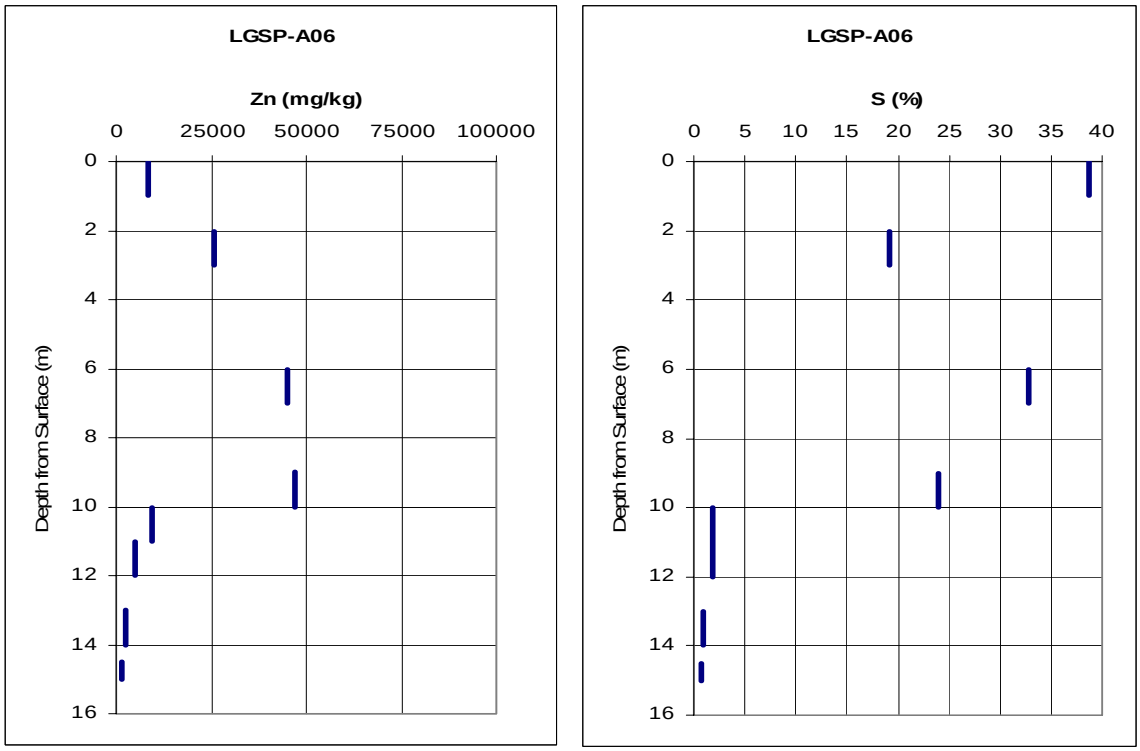

Figure C- 1 Zinc and Sulphur Profiles in LGSP-A06

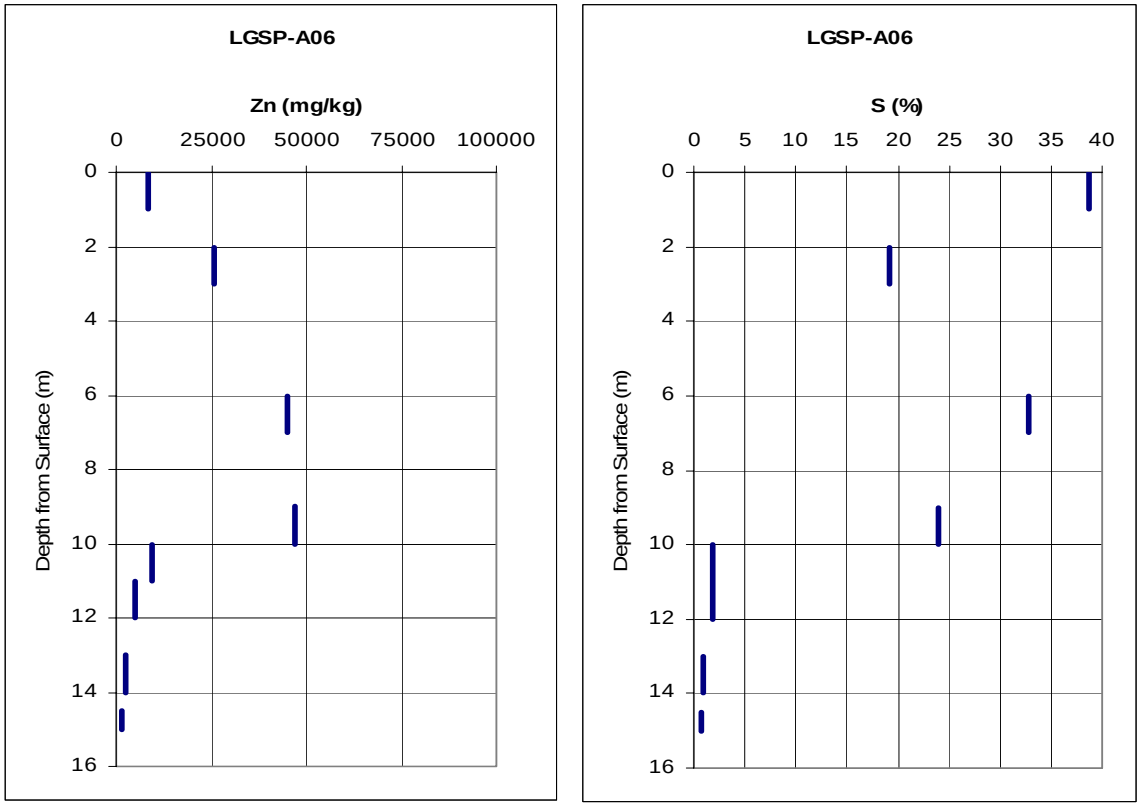

Figure C- 2 Zinc and Sulphur Profiles in LGSP-A07

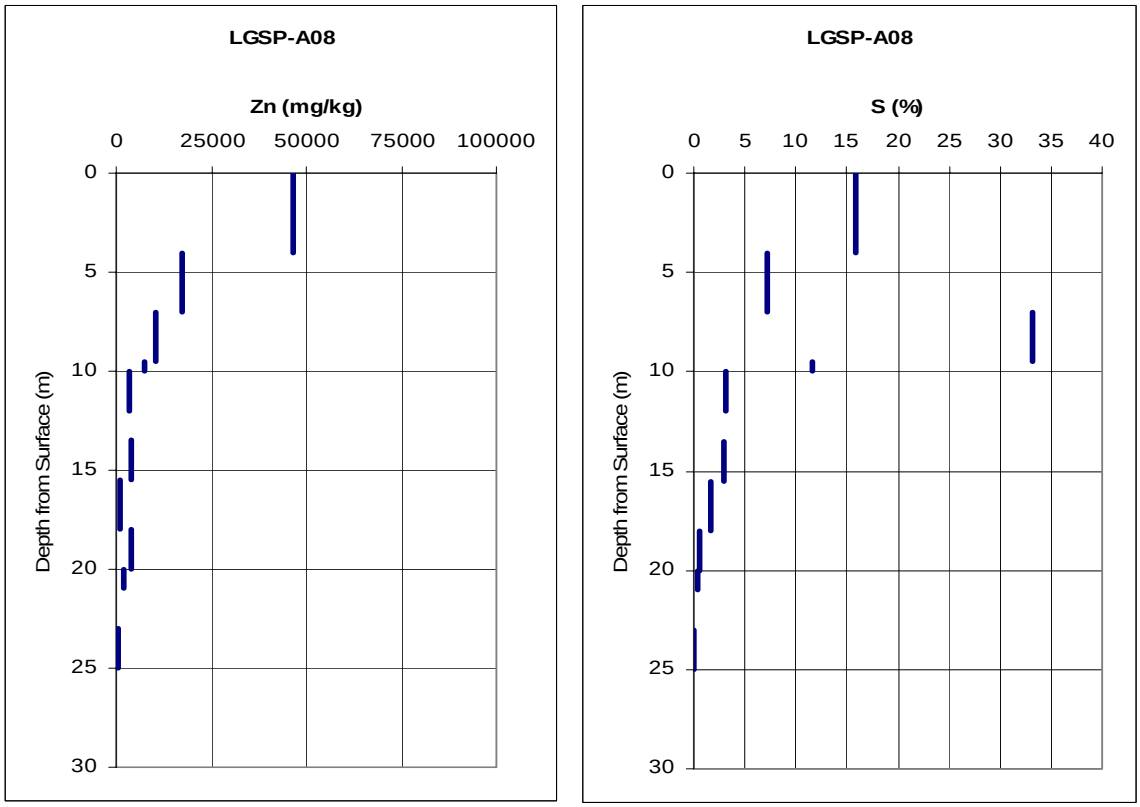

Figure C- 3 Zinc and Sulphur Profiles in LGSP-A08

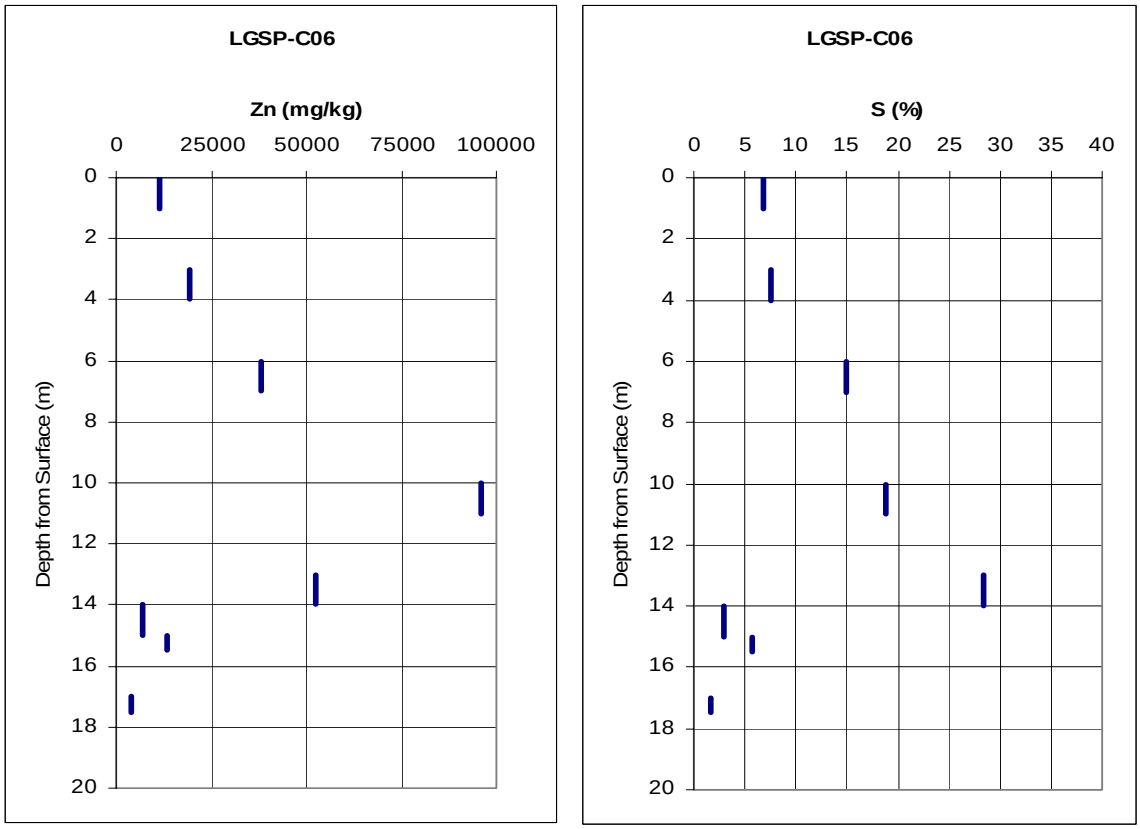

Figure C- 4 Zinc and Sulphur Profiles in LGSP-A09

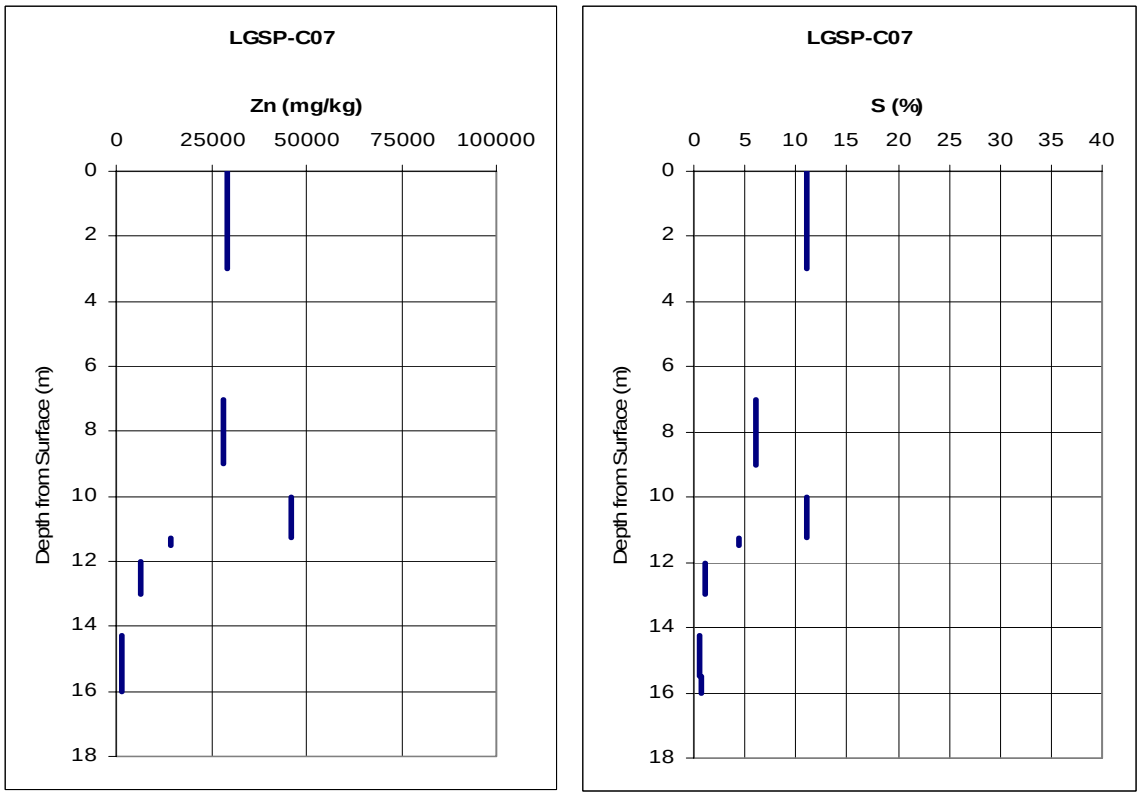

Figure C- 5 Zinc and Sulphur Profiles in LGSP-C07

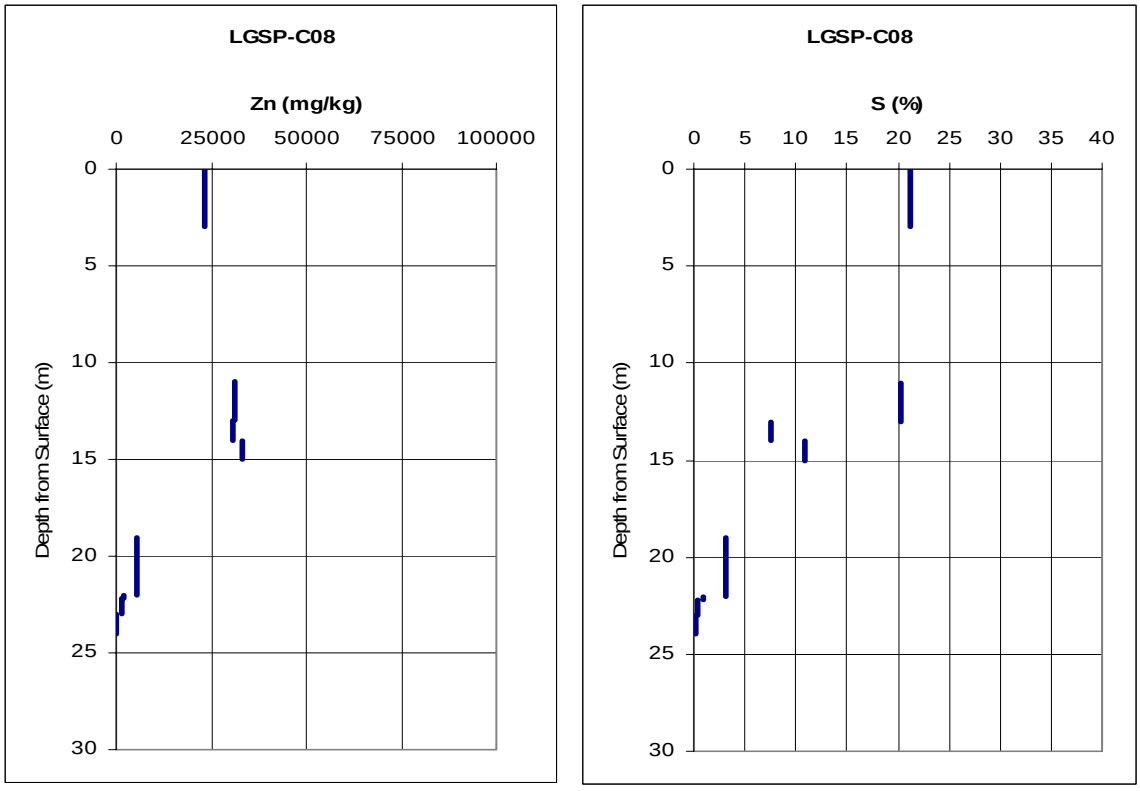

Figure C- 6 Zinc and Sulphur Profiles in LGSP-C08

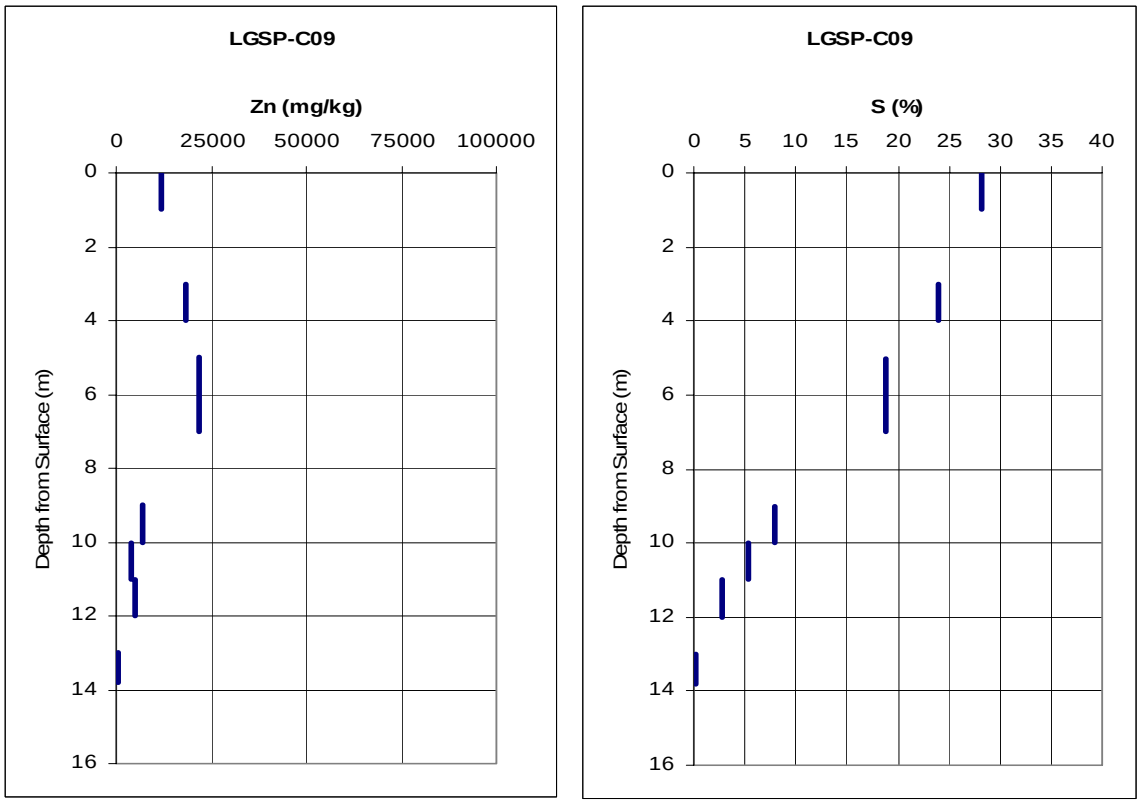

Figure C- 7 Zinc and Sulphur Profiles in LGSP-C09

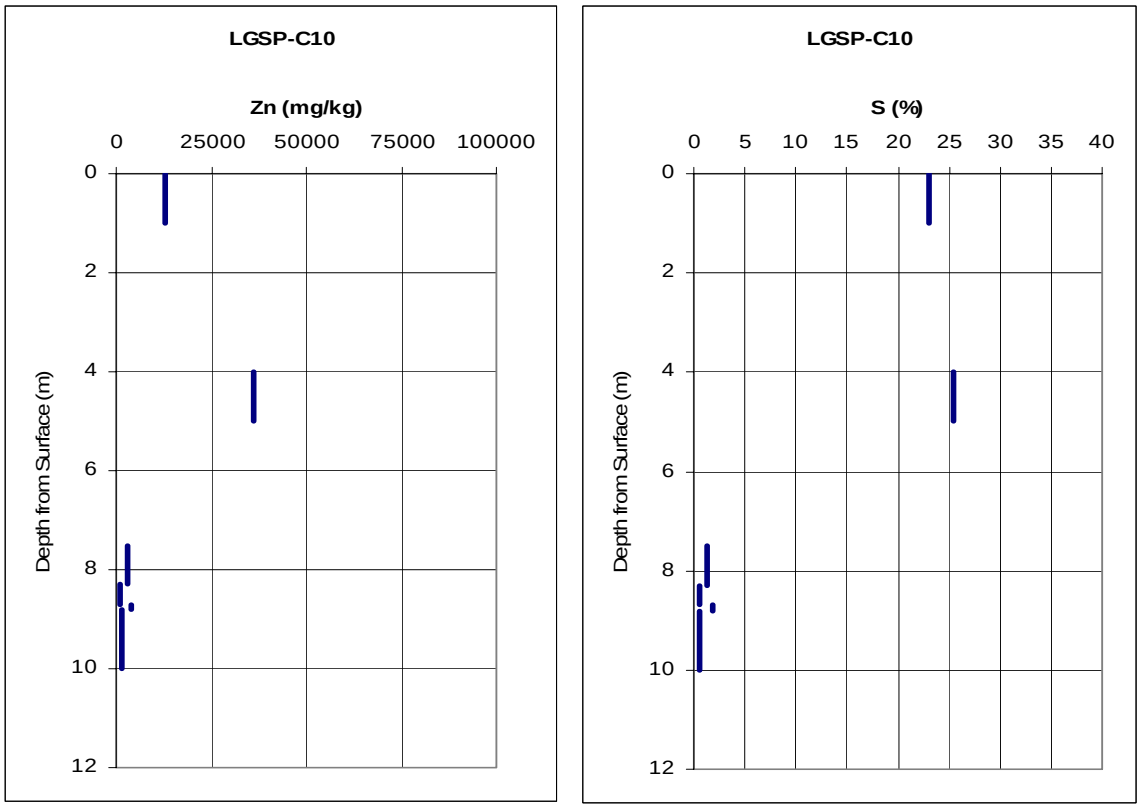

Figure C- 8 Zinc and Sulphur Profiles in LGSP-C10

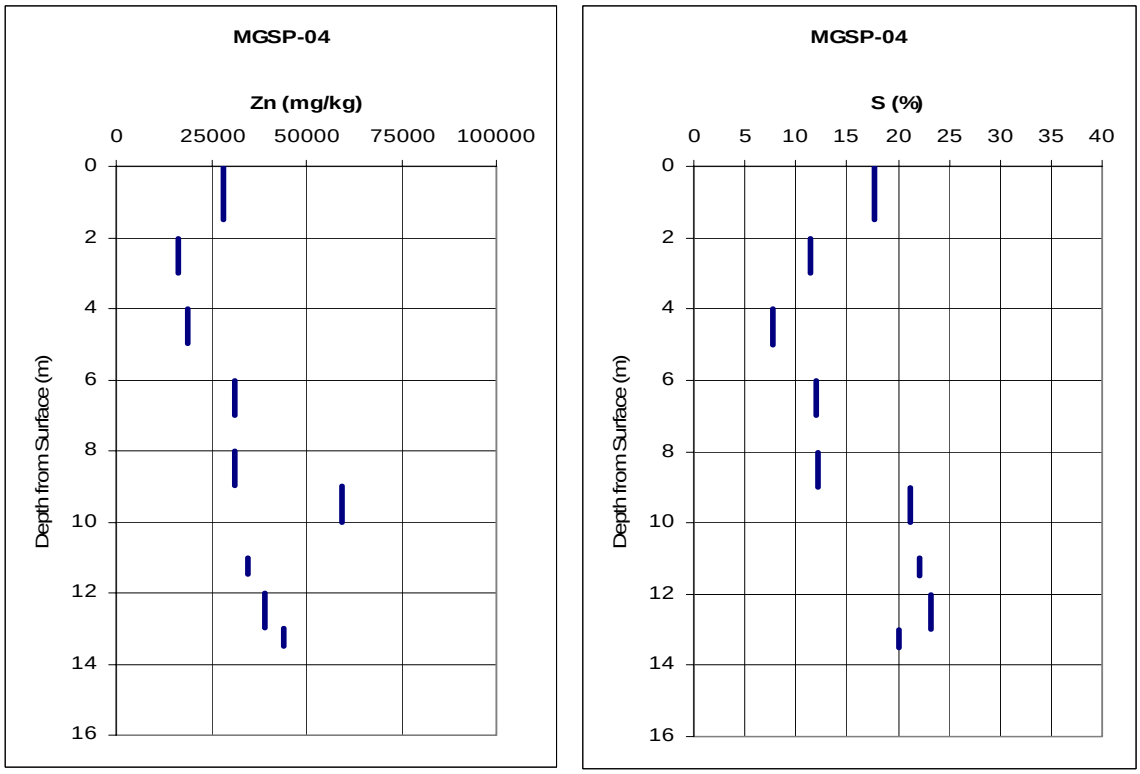

Figure C- 9 Zinc and Sulphur Profiles in MGSP-A04

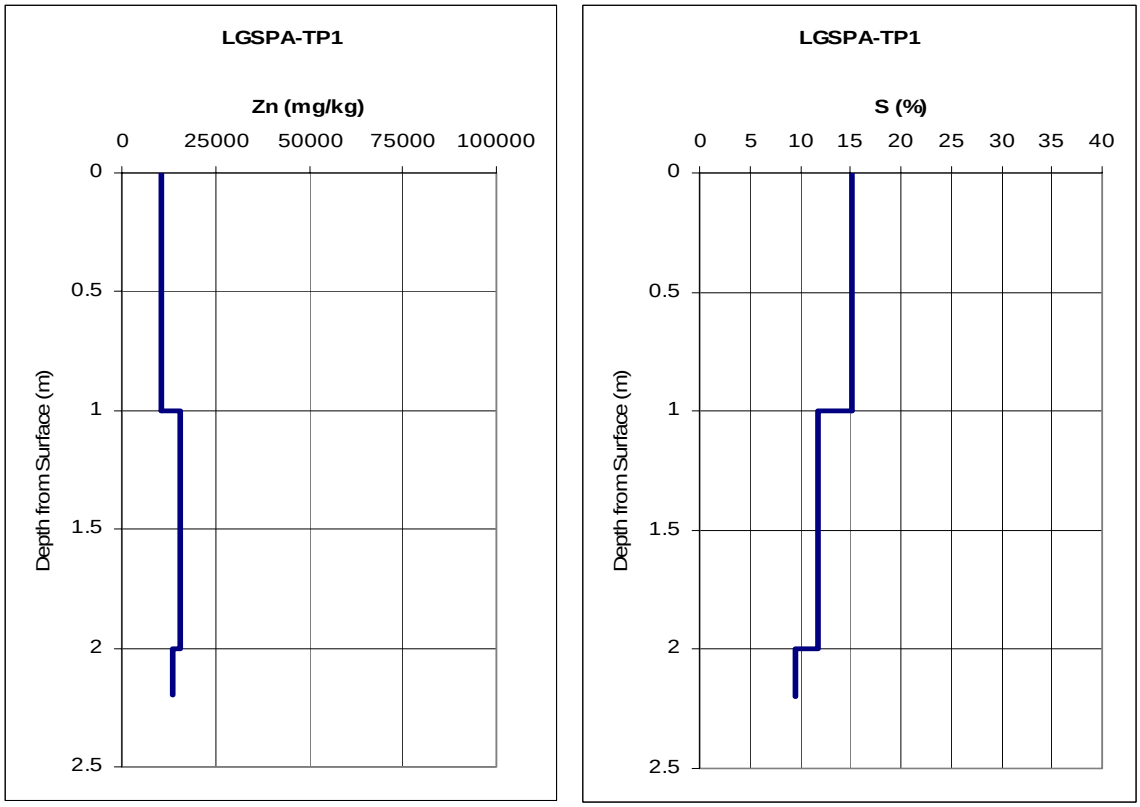

Figure C- 10 Zinc and Sulphur Profiles in Low Grade Ore Stockpile Test Pit TP1

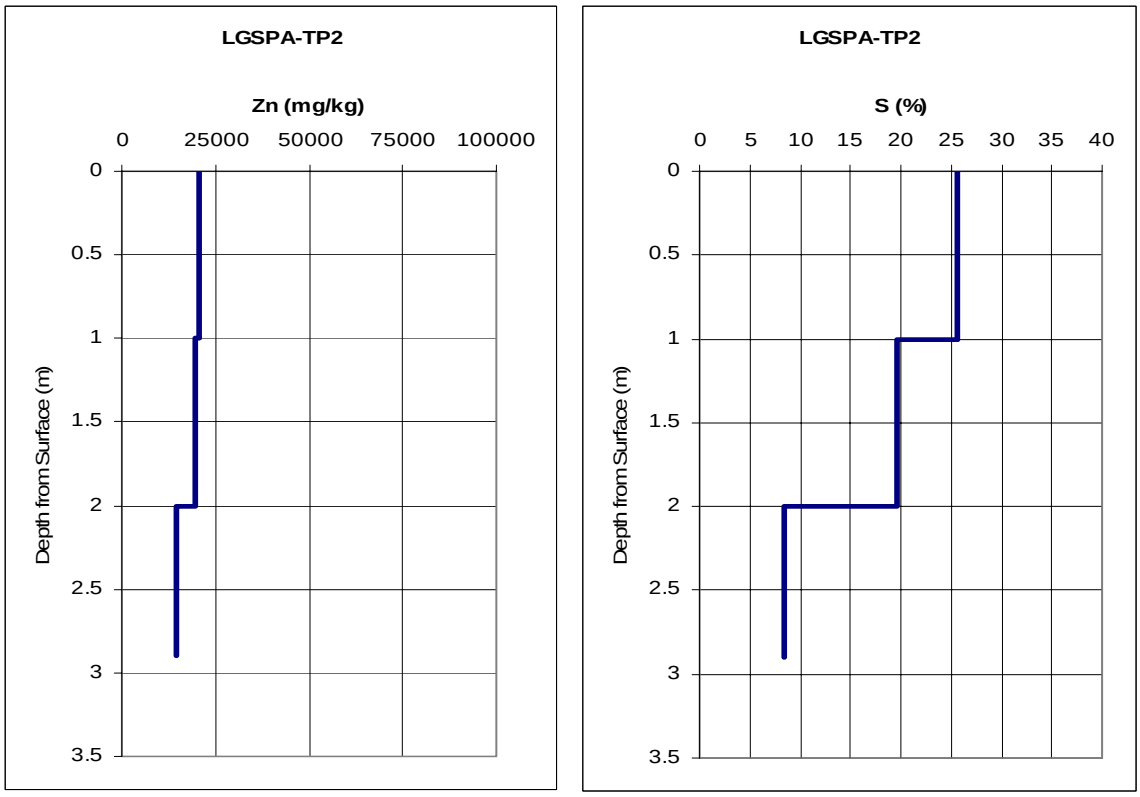

Figure C- 11 Zinc and Sulphur Profiles in Low Grade Ore Stockpile Test Pit TP2

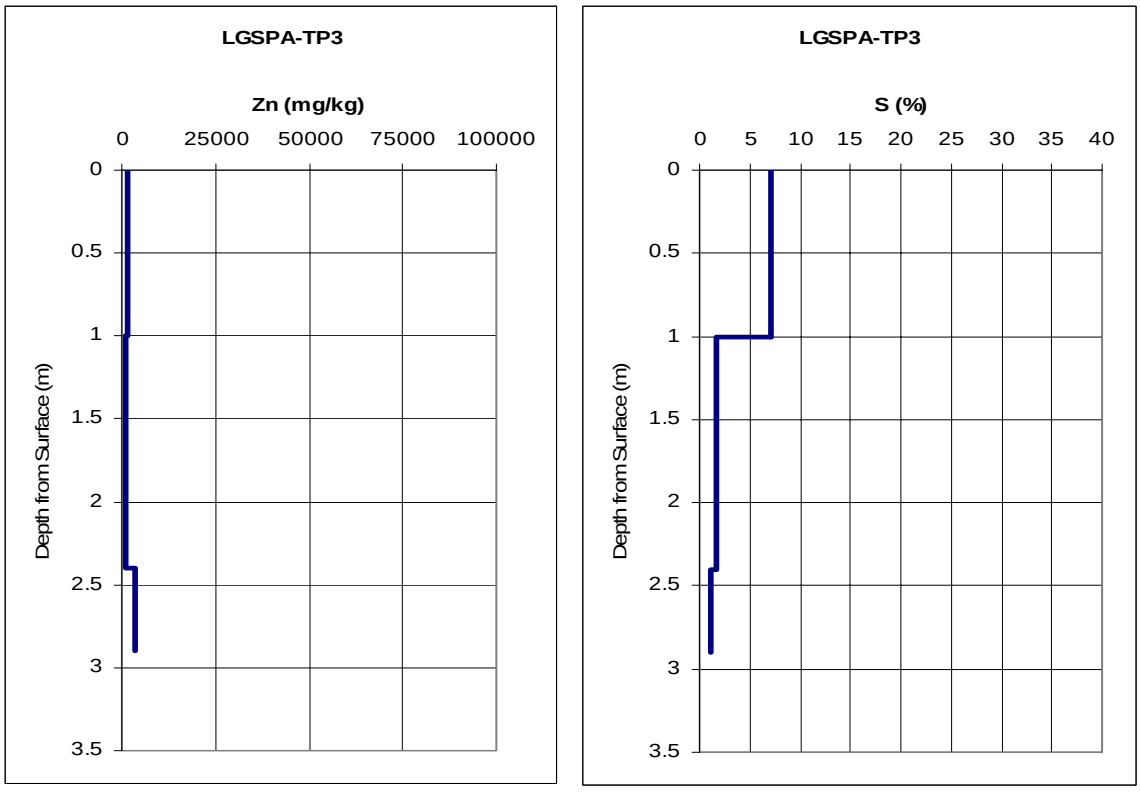

Figure C- 12 Zinc and Sulphur Profiles in Low Grade Ore Stockpile Test Pit TP3

Appendix D

Site Fill Geological Descriptions

Table D-1 Mill Site Fill Geological Descriptions and Paste Parameters

Station ID	EC	pH	Easting	Northing	Material Description and Notes
	(mS/cm)	(s.u.)	NAD27	NAD27	
PP01	15.04	2.17	583277	6914025	Orangish brown to yellowish brown fines, with angular to subrounded grey sulphidic phyllite gravel and dark rusty brown clasts. Sulphides abundant on surface, in clasts and as individual grains
PP02	2.94	5.39	583250	6914009	Pushed calc-silicate waste with greyish brown matrix. Occasional patches where matrix is weathered dark orange. Secondary salts observed in sheltered locations beneath large rocks, and patches of surface (10%) have pale yellowish stain (could be from runoff). Similar material, mixed with metal waste, half way back to previous point.
PP03	5.92	3.27	583205	6913993	Similar to PP02- calc silicatewaste, mixed with metal and trash, with orangey- to yellosih brown matrix
PP04	9.52	2.72	583167	6914001	Dark orangey brown and yellowish brown matrix of sand/silt, with 50% mix of calc-silicate, sulphide, and rounded granitoid gravel. Looks like a mix of till and mine waste.
PP05	6.32	1.97	583143	6913965	Yellowish olive brown to orangey brown matrix with 40-50% angular gravel and cobbles of grey phyllite, green schist, and sulphides. Sulphide clasts are weathered dark orangey brown.
PP06	6.46	1.98	583123	6913935	Yellowish tan matrix with abundant orangish tan staining. 40-50% angular gravel and rock chips of weathered greyish to greenish schist, highly weathered to pale yellow on external surfaces, and dark orangish brown to rusty brown on internal surfaces. Isolated well-rounded granitoid clasts observed.
PP07	1.98	5.72	583105	6913923	Gray matrix with local orange stained patches. Rock is 50% dark grey schist with orange staining on foliation. This location is the first instance of grey material along this stretch of toe (proceeding west).
PP08	2.56	3.69	583081	6913916	Material at base of several erosional gullies near crest of plant pad. Rock is angular mix of dark grey- and pale greenish grey-weathering schist. Fines are small chips of schist, ranging from dark grey to rusty brown, with patches of yellowish light brown.
PP09	4.39	5.68	583060	6913925	Below surface layer, material is angular dark grey biotite schist, with open framework (few fines or sand).
PP09 surf	10.04	2.5	583060	6913925	Surficial deposition of yellowish light brown matrix, with visible individual sulphide grains and orange to dark rusty brown staining locally. Clasts are angular dark grey schist with rusty orange staining on internal surfaces.
PP10	3.47	6.42	583045	6913929	Location at edge of runoff/ dozer push zone. Original material appears to be grey biotite schist with grey matrix.
PP10 push	6.26	3.89	583045	6913929	Location at edge of runoff/ dozer push zone. Push material is yellowish light brown, with orange staining, and contains abundant angular to subrounded gravel of grey schist, pale green schist, massive sulphides, and calc-silicate.
PP11	10.49	4.84	583030	6913936	Medium brown silty sand fines with visible sulhpide sand on surface. Efflorescent salts forming on surface, and accumulating beneath overhangs. Rocks are calc-silicate, grey schist, subrounded to rounded granitoids, and massive sulphides. Granitoid clasts stained yellow to orange. Location is below ramp for water treatment plant pipeline.
PP12	8.94	10.35	582997	6913943	Medium brown sand with white surface crust adjacent to runoff channel on pad face. Clasts are mainly granitoid gravel with approximately 10% subangular schist particles; few to no fines present. No staining observed. Abundant mill chemical residue in local area- possibly soda ash (??)
PP13	6.75	4.26	582974	6913926	Orangish brown sandy matrix with local orange staining and 30% calc-silicate, granitoid, schist, and coal gravel. Abundant trash mixed with material. Sulphide sand grains visible on washed surfaces. Clasts appear slightly bleached.
PP14	4.07	5.44	582938	6913925	Medium brown sand with local orange staining, with 20% angular calc-silicate and biotite schist gravel, with trace subrounded granitoid clasts. No secondary salts or visible sulphide grains observed. Minor coal and trash mixed with material.

Table D-1 Mill Site Fill Geological Descriptions and Paste Parameters (cont.)

Station ID	EC	pH	Easting	Northing	Material Description and Notes
	(mS/cm)	(s.u.)	NAD27	NAD27	
PP15	7.36	5.06	582926	6913940	Medium brown sand with local orange staining, with 30% angular calc-silicate and biotite schist gravel, with trace subrounded granitoid clasts. No secondary salts or visible sulphide grains observed. Minor coal and trash mixed with material.
PP16	2.92	6.36	582869	6913970	Grey silty sand with grey biotite schist and granitoid gravel. Contains coal, plastic, metal and wood trash.
PP16 surf	5.43	3.94	582869	6913970	Yellowish to orangish light brown surface material with yellowish-stained granitoids, clac-silicate, and schist. Local orange to dark rusty brown staining in matrix. Contains coal, plastic, metal and wood trash.
PP17	5.35	4.1	582840	6913952	Yellowish to orangish light brown silty sand with local orange to rusty brown staining. Clasts consist of calc-silicate, grey biotite schist, and unstained granitoid gravel. Material contains abundant trash. Surface weathers grey, with traces of secondary salts and accumulations beneath overhangs.
PP18	2.91	6.36	582812	6913967	Loose medium brown sandy till, with isolated laminations of greyish orange sand. Abundant wood, plastic, metal trash
PP19	4.71	4.29	582796	6913991	Yellowish tan matrix with local orange to dark rusty brown staining in matrix and near clasts. Clasts are angular dark grey, yellowish-stained schist and minor subrounded granitoids. No sulphides visible in matrix and no massive sulphides observed.
PP20	3.51	4.94	582795	6913998	Orange silty sand matrix with local dark rusty brown staining, and 30-40% angular gray schist gravel with trace granitoid clasts.
PP20 ox	5.28	5.86	582795	6913998	Dark chocolate brown fines dumped at the edge of laydown area, near scrap mill components. May be milling residue- very uniform colour and grain size.
PP21	4.91	3.87	582784	6914030	Yellowish to orangish tan silty sand matrix with local dark rusty brown staining, 20% angular dark grey schist, calc-silicate, massive quartz, and subrounded granitoid gravel, clasts on surface all stained pale yellow (bleached).
PP22	4.26	3.95	582744	6914025	Yellowish to orangish tan silty sand matrix with local dark rusty brown staining, 20% angular dark grey schist, calc-silicate, massive quartz, and subrounded granitoid gravel, clasts on surface all stained pale yellow (bleached). Mixed with natural woody debris.
PP23	11.03	3.63	582712	6914024	Yellowish to orangish tan silty sand matrix with local dark rusty brown staining, 20% angular dark grey schist, calc-silicate, massive quartz, and subrounded granitoid gravel, clasts on surface all stained pale yellow (bleached). Mixed with natural woody debris.
PP24	0.7	6.38	582712	6914117	Medium olive brown till, dense, with subrounded to subangular granitoid and schistose clasts. Minor balsam poplar growing on pad. This location marks the southeasterm limit of the guardhouse laydown pad toe.
PP25	0.5	7.57	582687	6914118	Medium brown sandy matrix with secondary white salt forming on 15-20% of surface. Material contains 30-40% angular schist, calc-silicate, and subrounded granitoid gravel, with trace dark rusty brown-stained clasts.
PP26	2.13	7.03	582609	6914153	Medium brown matrix with local orange staining, gravel is angular green and grey schist and subrounded granitoids with isolated massive sulphide cobbles. Contains discarded mill balls. Location is southeasten limit of employee parking lot pad by guardhouse.
PP27	8.16	4.1	582821	6914030	Mix of dark orangey brown sulphide sand and sulphide, schist, and granitoid clasts. Surface weathers greensih yellow, and this colouration extends over a 30m x 50m area.