

Table 4. Roadways, Summary of 2002 Analytical Results for Metals in Soil

Gartner Lee	Location:		Tailings Line Road											
	Sample ID:	Sample Date:	Sample Depth (m):											
	Parameter	Units	Federal CCME Guidelines ^a		SQROs General									
			CEQG ^b	RL	Mine Area									
	Antimony (Sb)	µg/g	20		TP02-120-1	TP02-120-2	TP02-122-1	TP02-123-1	TP02-124-1	TP02-125-1	TP02-125-2	TP02-127-1	TP02-128-1	TP02-129-1
	Arsenic (As)	µg/g	12		0.0-0.1	0.1-0.6	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.1-0.6	0.0-0.1	0.0-0.1	0.0-0.1
	Barium (Ba)	µg/g	500		SE of town, along road to tailings pond	permafrost at 1.1 m depth	near top of ledge, surface, dust from tailings pond	tailings spill area	ledge in drainage path from ledge	east of ledge, no tailings dust	between road and creek	down gradient of dump pond	down gradient of dump pond	tailings spill area
	Beryllium (Be)	µg/g	4		-	-	-	<1	-	-	-	-	-	-
	Boron (B)	µg/g	-		-	-	-	<0.5	-	-	-	-	-	-
	Cadmium (Cd)	µg/g			4.2	3.6	3.8	4.2	3.2	<0.5	<0.5	0.6	0.7	0.7
	Chromium (Cr)	µg/g	64		-	-	-	17	-	-	-	-	-	-
	Chromium (VI)	µg/g	0.4		-	-	-	<1	-	-	-	-	-	-
	Cobalt (Co)	µg/g	50		-	-	-	10	-	-	-	-	-	-
	Copper (Cu)	µg/g			-	-	-	47	-	-	-	-	-	-
	Lead (Pb)	µg/g			144	102	125	219	56	29	19	18	39	147
	Mercury (Hg)	µg/g	6.6		-	-	-	0.2	-	-	-	-	-	-
	Molybdenum (Mo)	µg/g	10		-	-	-	<1	-	-	-	-	-	-
	Nickel (Ni)	µg/g	50		-	-	-	12	-	-	-	-	-	-
	Selenium (Se)	µg/g	1		-	-	-	<1	-	-	-	-	-	-
	Silver (Ag)	µg/g			-	-	-	2	-	-	-	-	-	-
	Thallium (Tl)	µg/g	1		-	-	-	<1	-	-	-	-	-	-
	Vanadium (V)	µg/g	130		-	-	-	13	-	-	-	-	-	-
	Zinc (Zn)	µg/g			1720	1410	1690	1870	2350	139	96	162	182	263
					23400									49

BOLD Concentration greater than or equal to the CCME generic soil guideline for Residential/Parkland (RL) land use.
Concentration greater than or equal to the Nonisvick Mines site-specific SQRO's for the General Mine Area

Notes:

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^b Canadian Environmental Quality Guidelines (CEQG). The site-specific factors used for determining the soil quality guideline include: soil ingestion, soil contact and nutrient cycling.

Table 4. Roadways, Summary of 2002 Analytical Results for Metals in Soil

 Gartner Lee		Location:		Tailings Line Road		Between Town and Mill				Road to Area 14				Road to dock						
Parameter	Units	Sample ID:		Federal CCME Guidelines ^a	SQROs General	Sample Date:	Sample Depth (m):	tailings spill area	0.3 m to bedrock	TP02-130-1	TP02-130-2	TP02-131A-1	TP02-132-1	TP02-136-1	TP02-138-1	TP02-145	TP02-146	TP02-147	SS02-029-1	SS02-032-1
		Sample Date:																		
		Sample Depth (m):																		
Parameter	Units	CEQG ^b RL	Mine Area																	
Antimony (Sb)	µg/g	20		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (As)	µg/g	12		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium (Ba)	µg/g	500		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium (Be)	µg/g	4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron (B)	µg/g	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium (Cd)	µg/g	-	50	2.5	1.3	1.3	1.8	23.8	4.6	61.0	0.6	<0.5	13.9	17.2						
Chromium (Cr)	µg/g	64		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (VI)	µg/g	0.4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt (Co)	µg/g	50		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper (Cu)	µg/g		5900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead (Pb)	µg/g		1050	137	68	122	107	265	98	1120	50	16	674	610						
Mercury (Hg)	µg/g	6.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (Mo)	µg/g	10		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (Ni)	µg/g	50		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium (Se)	µg/g	1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (Ag)	µg/g		18000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium (Tl)	µg/g	1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium (V)	µg/g	130		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (Zn)	µg/g		23400	651	516	501	655	19800	2120	25000	197	156	5740	7210						

BOLD

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Concentration greater than or equal to the Nanisivik Mines site-specific SQRO's for the General Mine Area

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Location:			Road to dock														
Parameter	Units	Federal CCME Guidelines* SQROs General CEQG ^b RL	Sample ID: Sample Date: Sample Depth (m):														
			SS02-032-2 2002-07-25 0.05-0.2	SS02-033-1 2002-07-26 0.0-0.05	SS02-045-1 2002-07-26 0.0-0.03	SS02-046-1 2002-07-26 0.0-0.03	SS02-046-2 2002-07-26 0.05-0.15	SS02-047-1 2002-07-26 0.0-0.5	SS02-047-2 2002-07-26 0.05-0.15	SS02-048-1 2002-07-26 0.00.05	SS02-049-1 2002-07-26 0.0-0.03	RD02-01-1 2002-07-26 0.0-0.1	RD02-02-1 2002-07-26 0.0-0.1				
			75 m west of SS02-029	25 m west of SS02-032	transact on crest of hill between dock & mill	25 m west of SS02-045 on northeast side of road	delectable concentrate odour	east road ditch	increased clay content	50 m west of SS02-047 on west side of road	25 m west of SS02-048	road between dock and mill	road between dock and mill				
Antimony (Sb)	µg/g	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Arsenic (As)	µg/g	12	-	-	-	4.3	-	-	-	5.2	-	-	-	-	-	-	
Barium (Ba)	µg/g	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Beryllium (Be)	µg/g	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Boron (B)	µg/g	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cadmium (Cd)	µg/g	50	3.3	14.0	17.1	21.5	<0.5	15.9	0.5	33.2	26.4	52.4	44.5	-	-	-	
Chromium (Cr)	µg/g	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chromium (VI)	µg/g	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cobalt (Co)	µg/g	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Copper (Cu)	µg/g	5900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lead (Pb)	µg/g	1050	161	492	708	702	16.0	690	23	839	711	783	1270	-	-	-	
Mercury (Hg)	µg/g	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Molybdenum (Mo)	µg/g	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nickel (Ni)	µg/g	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Selenium (Se)	µg/g	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Silver (Ag)	µg/g	18000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Thallium (Tl)	µg/g	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Vanadium (V)	µg/g	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Zinc (Zn)	µg/g	23400	1040	6880	6710	13600	114	9140	155	14300	13500	22700	18300	-	-	-	

Concentration greater than or equal to the CCME generic soil guideline for Residential/Parkland (RL) land use.

Concentration greater than or equal to the Nanisivik Mines site-specific SQRO's for the General Mine Area

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b Canadian Environmental Quality Guidelines (CEQG). The site-specific factors used for determining the soil quality guideline include: soil ingestion, soil contact and nutrient cycling.

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Gartner Lee		Location:		Road to dock												Treatment and Retention Ponds		
		Sample ID:	RD02-04-1	RD02-04-2	RD02-05-1	RD02-05-2	RD02-06-1	RD02-06-2	RD02-06-3	RD02-06-4	SS02-002-1	SS02-002-2	SS02-003-1					
		Sample Date:	2002-07-26	2002-07-26	2002-07-26	2002-07-26	2002-07-26	2002-07-26	2002-07-26	2002-07-26	2002-07-21	2002-07-21	2002-07-21					
		Sample Depth (m):	0.0-0.1	0.1-0.5	0.0-0.1	0.1-0.5	0.0-0.1	0.1-0.2	0.2-0.3	0.3-0.4	0-0.1	0.15-0.25	0.0-1					
Parameter	Units	Federal CCME Guidelines ^a	SQROs General								at drainage junction from ponds	end of discharge pipeline	at toe of retention pond oxidized					
		CEQG ^b RL	Mine Area															
Antimony (Sb)	µg/g	20		-	-	-	-	-	-	-	-	-	3					
Arsenic (As)	µg/g	12		3.9	3.9	4.2	5.0	3.7	4.9	3.9	4.1	-	7.9					
Barium (Ba)	µg/g	500		-	-	-	-	-	-	-	-	-	26					
Beryllium (Be)	µg/g	4		-	-	-	-	-	-	-	-	-	<1					
Boron (B)	µg/g	-		-	-	-	-	-	-	-	-	-	<0.5					
Cadmium (Cd)	µg/g	50		20.5	7.9	26.0	21.1	8.6	44.4	16.5	4.8	3.3	46.1					
Chromium (Cr)	µg/g	64		-	-	-	-	-	-	-	-	-	14					
Chromium (VI)	µg/g	0.4		-	-	-	-	-	-	-	-	-	<1					
Cobalt (Co)	µg/g	50		-	-	-	-	-	-	-	-	-	8					
Copper (Cu)	µg/g	5900		-	-	-	-	-	-	-	-	-	10					
Lead (Pb)	µg/g	1050		432	988	967	989	227	915	308	40	98	6770					
Mercury (Hg)	µg/g	6.6		-	-	-	-	-	-	-	-	-	0.5					
Molybdenum (Mo)	µg/g	10		-	-	-	-	-	-	-	-	-	1					
Nickel (Ni)	µg/g	50		-	-	-	-	-	-	-	-	-	10					
Selenium (Se)	µg/g	1		-	-	-	-	-	-	-	-	-	<1					
Silver (Ag)	µg/g	18000		-	-	-	-	-	-	-	-	-	11					
Thallium (Tl)	µg/g	1		-	-	-	-	-	-	-	-	-	<1					
Vanadium (V)	µg/g	130		-	-	-	-	-	-	-	-	-	26					
Zinc (Zn)	µg/g	23400		6430	16300	10100	11600	5250	15800	4850	1520	987	16800					

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Table 4. Roadways, Summary of 2002 Analytical Results for Metals in Soil

Gartner Lee		Location: Sample ID: Sample Date: Sample Depth (m):		Treatment and Retention Ponds						Saddle									
				Federal CCME Guidelines ^a SQROs General CEQG ^b RL		Units		Sample Depth (m):											
								SS02-003-2											
								SS02-003-2											
Parameter		Units		at toe of retention pond		SS02-003		SS02-003		SS02-022		SS02-023		SS02-022		SS02-023			
				SS02-003		SS02-003		SS02-003		SS02-022		SS02-023		SS02-022		SS02-023			
Antimony (Sb)		μg/g		20		-		-		-		-		-		-		-	
Arsenic (As)		μg/g		12		-		-		-		-		-		-		-	
Barium (Ba)		μg/g		500		-		-		-		-		-		-		-	
Beryllium (Be)		μg/g		4		-		-		-		-		-		-		-	
Boron (B)		μg/g		-		-		-		-		-		-		-		-	
Cadmium (Cd)		μg/g		50		4.2		4.4		6.5		5.2		6.8		12.3		5.3	
Chromium (Cr)		μg/g		64		-		-		-		-		-		-		-	
Chromium (VI)		μg/g		0.4		-		-		-		-		-		-		-	
Cobalt (Co)		μg/g		50		-		-		-		-		-		-		-	
Copper (Cu)		μg/g		5900		-		-		-		-		-		-		-	
Lead (Pb)		μg/g		1050		227		241		435		230		905		822		933	
Mercury (Hg)		μg/g		6.6		-		-		-		-		-		-		-	
Molybdenum (Mo)		μg/g		10		-		-		-		-		-		-		-	
Nickel (Ni)		μg/g		50		-		-		-		-		-		-		-	
Selenium (Se)		μg/g		1		-		-		-		-		-		-		-	
Silver (Ag)		μg/g		18000		-		-		-		-		-		-		-	
Thallium (Tl)		μg/g		1		-		-		-		-		-		-		-	
Vanadium (V)		μg/g		130		-		-		-		-		-		-		-	
Zinc (Zn)		μg/g		25400		1150		1330		2000		1210		3640		6430		2310	

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Concentration greater than or equal to the Nanisivik Mines site-specific SORO's for the General Mine Area
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include: soil ingestion, soil contact and nutrient cycling.

Table 4. Roadways, Summary of 2002 Analytical Results for Metals in Soil

Parameter		Units	Location:		Saddle			
			Federal CCME Guidelines ^a CEQG ^b RL	SQROs General Mine Area	Sample ID: Sample Date:	Sample Depth (m):	TP02-141-1 2002-07-25	TP02-142-1 2002-07-25
Antimony (Sb)	µg/g	20			east side of saddle	east side of depression	west side of saddle	west side of saddle
Arsenic (As)	µg/g	12			-	-	-	-
Barium (Ba)	µg/g	500			-	-	-	-
Beryllium (Be)	µg/g	4			-	-	-	-
Boron (B)	µg/g	-			-	-	-	-
Cadmium (Cd)	µg/g		50		0.8	8.3	0.6	<0.5
Chromium (Cr)	µg/g	64			-	-	-	-
Chromium (VI)	µg/g	0.4			-	-	-	-
Cobalt (Co)	µg/g	50			-	-	-	-
Copper (Cu)	µg/g		5900		-	-	-	-
Lead (Pb)	µg/g		1050		57	536	73	29
Mercury (Hg)	µg/g	6.6			-	-	-	-
Molybdenum (Mo)	µg/g	10			-	-	-	-
Nickel (Ni)	µg/g	50			-	-	-	-
Selenium (Se)	µg/g	1			-	-	-	-
Silver (Ag)	µg/g		18000		-	-	-	-
Thallium (Tl)	µg/g	1			-	-	-	-
Vanadium (V)	µg/g	130			-	-	-	-
Zinc (Zn)	µg/g		23400		484	4710	185	120

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Table 5. Miscellaneous Areas, Summary of 2002 Analytical Results in Soil

Gartner Lee	Location:		Sample ID:												Land Farm			
	Parameter	Units	Sample Date:		Sample Depth (m):												LFC02-1	LFC02-2
			Field Screen ^a (ppm)	Sample Date:	Sample Depth (m):													
					Field Screen ^a (ppm)	Sample Date:	Sample Depth (m):											
Federal CCME Guidelines ^a			PHC CWS ^c	SQROs General Mine Area	TP02-94-1	TP02-95-1	TP02-95-2	TP02-96-1	TP02-96-2	TP02-97-2	TP02-98-2	TP02-99-2	TP02-100-2	TP02-101-1	TP02-101-2	2002-07-22	2002-07-22	
Non-Halogenated Volatiles					0.0-0.1	0.0-0.1	0.8	0.0-0.1	0.8	0.8	0.85	0.85	0.75	0.0-0.1	0.9	0.3	0.6	
Benzene	µg/g	0.5	-	-	47.2	7.5	3.5	2.9	4.9	7.8	2.5	2.6	2.6	5.1	5.7	177	783	
Fraction 1(C6-10) surface ^{e,f}	µg/g	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Toluene	µg/g	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ethylbenzene	µg/g	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Meta- & para-Xylene	µg/g	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ortho-Xylene	µg/g	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Xylene ^g	µg/g	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Extractable Hydrocarbons					-	-	-	-	-	-	-	-	-	-	-	-	-	
Fraction 2 (C10-16) surface ^{e,f}	µg/g	450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fraction 2 (C10-16) subsoil ^{e,f}	µg/g	1500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fraction 3 (C16-34) surface ^{e,f}	µg/g	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fraction 3 (C16-34) subsoil ^{e,f}	µg/g	2500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fraction 4(C34-50) surface ^{e,f}	µg/g	2800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Polycyclic Aromatic Hydrocarbons					-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(a)anthracene	µg/g	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(a)pyrene	µg/g	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(b)fluoranthene	µg/g	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(k)fluoranthene	µg/g	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dibenz(a,h)anthracene	µg/g	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Indeno(1,2,3-c,d)pyrene	µg/g	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Naphthalene	µg/g	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phenanthrene	µg/g	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pyrene	µg/g	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ethylene Glycol	µg/g	960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Metals					-	-	-	-	-	-	-	-	-	-	-	-	-	
Cadmium (Cd)	µg/g	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lead (Pb)	µg/g	1050	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	
Zinc (Zn)	µg/g	23400	-	131	-	-	-	-	-	-	-	-	-	-	-	-	-	

BOLD Concentration greater than or equal to the CCME generic soil guideline for Residential/Parkland (RL) land use.
Concentration greater than or equal to the Natisvik Mines site-specific SQRO's for the General Mine Area

Notes:

- = Analysis not conducted, or no guideline
< = Less than the detection limit indicated.

^a Field screening measurements are based on the 'dry headspace' method using a combustible gas meter calibrated to a hexane standard.
^b Canadian Council of Ministers of the Environment (CCME) standards and guidelines provides criteria based on land use activities and applies the most stringent criteria based on site-specific receptors and exposure pathway.

^c Petroleum Hydrocarbon Canada-Wide Standards (PHC CWS). The site-specific exposure pathways used to determine the standards include: ecological soil contact, and soil ingestion.

^d Canadian Environmental Quality Guidelines (CEQG). The site-specific factors used for determining the soil quality guideline include: soil ingestion, soil contact and nutrient cycling.

^e Guideline is dependant upon depth of sample (surface, subsoil > 1.5 m depth).

^f Guideline is dependent on median grain size of soil analyzed (Fine ≤ 75 µm, Coarse > 75 µm). Median grain size of soil sampled is coarse.

^g Total Xylene calculated as the sum of meta, para and ortho Xylenes

Table 5. Miscellaneous Areas, Summary of 2002 Analytical Results in Soil

Gartner Lee		Location:	
		Sample ID:	TP02-01-3
		Sample Date:	1900-03-20
		Sample Depth (m):	10
		<i>Petal Screen * (pppm)</i>	439
Parameter	Units	Federal CCME Guidelines ^a	former AST
		PHC CWS ^c , CEQC ^d RL	SOROs General Mine Area
Non-Halogenated Volatiles			
Benzene	µg/g	0.5	-
Fraction 1(C6-10) surface ^{e,f}	µg/g	130	-
Toluene	µg/g	1.4	-
Ethylbenzene	µg/g	1.2	-
Meta- & para-Xylene	µg/g	-	-
ortho-Xylene	µg/g	-	-
Total Xylene ^g	µg/g	1	-
Extractable Hydrocarbons			
Fraction 2 (C10-16) surface ^{e,f}	µg/g	450	5150
Fraction 2 (C10-16) subsoil ^{e,f}	µg/g	1500	-
Fraction 3 (C16-34) surface ^{e,f}	µg/g	400	70
Fraction 3 (C16-34) subsoil ^{e,f}	µg/g	2500	-
Fraction 4(C34-50) surface ^{e,f}	µg/g	2800	-
Polycyclic Aromatic Hydrocarbons			
Benz(a)anthracene	µg/g	1	-
Benz(a)pyrene	µg/g	0.7	-
Benz(b)fluoranthene	µg/g	1	-
Benz(k)fluoranthene	µg/g	1	-
Dibenz(a,h)anthracene	µg/g	1	-
Indeno(1,2,3-c,d)pyrene	µg/g	1	-
Naphthalene	µg/g	0.6	-
Phenanthrene	µg/g	5	-
Pyrene	µg/g	10	-
Ethylene Glycol	µg/g	960	-
Metals			
Cadmium (Cd)	µg/g	50	-
Lead (Pb)	µg/g	1050	-
Zinc (Zn)	µg/g	23400	-

Notes:

- = Analysis not conducted, or no guideline

< = Less than the detection limit indicated.

a Field screening measurements are based on the 'dry headspace' method using a combustible gas meter calibrated to a hexane standard.

b Canadian Council of Ministers of the Environment (CCME) standards and guidelines provides criteria based on land use activities and

applies the most stringent criteria based on site-specific receptors and exposure pathway

c Petroleum Hydrocarbon Canada-Wide Standards (PHC CWS). The site-specific exposure pathways used to determine the standards

include: ecological soil contact, and soil ingestion.

d Canadian Environmental Quality Guidelines (CEQG). The site-specific factors used for determining the soil quality guidelines

Include: soil ingestion, soil contact and nutrient cycling

e Guideline is dependant upon depth of sample (surface, subsoil > 1.5 m depth)

f Guideline is dependent on median grain size of soil analyzed (Fine $\leq 75 \mu\text{m}$, Coarse $> 75 \mu\text{m}$). Median grain size of soil

sampled is coarse.

8 Total Xylene calculated as the sum of meta, para and ortho Xylenes

Table 5. Miscellaneous Areas, Summary of 2002 Analytical Results in Soil

Gartner Lee	Location:		K-Baseline			Stolport air strip						
	Parameter	Units	Federal CCME Guidelines ^a		TP02-05-2 2002-07-19 0.4-0.8 243 former AST	TP02-05-3 2002-07-19 1.6 229 former AST	TP02-06-3 2002-07-19 1.8 198 area of surface staining	TP02-103-1 2002-07-22 0.0-0.15 3.1 adjacent to strip	TP02-104-1 2002-07-22 0.0-0.15 43.2 area of surface staining at former AST	TP02-104-2 2002-07-22 0.7-0.9 181 former AST	TP02-104-3 2002-07-22 1.3 13.8 former AST	TP02-105-2 2002-07-22 1.1 40.7 down gradient of TP02-104
			PHC CWS ^c	SQROs General								
			CEQG ^d RL	Mine Area								
Non-Halogenated Volatiles												
Benzene	µg/g	0.5	-	-	-	-	-	-	-	-	-	-
Fraction 1 (C6-10) surface ^{e,f}	µg/g	130	-	-	-	-	-	-	-	-	-	-
Toluene	µg/g	1.4	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/g	1.2	-	-	-	-	-	-	-	-	-	-
Meta- & para-Xylene	µg/g	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/g	-	-	-	-	-	-	-	-	-	-	-
Total Xylene ^g	µg/g	1	-	-	-	-	-	-	-	-	-	-
Extractable Hydrocarbons												
Fraction 2 (C10-16) surface ^{e,f}	µg/g	450	7080	-	-	8560	5830	-	7750	2240	<25	<25
Fraction 2 (C10-16) subsoil ^{e,f}	µg/g	1500	-	-	-	-	-	-	-	-	-	-
Fraction 3 (C16-34) surface ^{e,f}	µg/g	400	100	-	-	-	-	-	4990	770	<25	<25
Fraction 3 (C16-34) subsoil ^{e,f}	µg/g	2500	-	-	110	90	-	-	-	-	-	-
Fraction 4 (C34-50) surface ^{e,f}	µg/g	2800	<5	-	-	-	-	-	-	-	<10	-
Polycyclic Aromatic Hydrocarbons												
Benzo(a)anthracene	µg/g	1	<0.1	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	µg/g	0.7	<0.2	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	µg/g	1	<0.1	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/g	1	<0.1	-	-	-	-	-	-	-	-	-
Dibenz(o,a,h)anthracene	µg/g	1	<0.1	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/g	1	<0.1	-	-	-	-	-	-	-	-	-
Naphthalene	µg/g	0.6	1.1	-	-	-	-	-	-	-	-	-
Phenanthrene	µg/g	5	<0.1	-	-	-	-	-	-	-	-	-
Pyrene	µg/g	10	<0.1	-	-	-	-	-	-	-	-	-
Ethylene Glycol	µg/g	960	-	-	-	-	-	-	<10	-	-	-
Metals												
Cadmium (Cd)	µg/g	50	-	-	-	-	-	-	-	-	-	-
Lead (Pb)	µg/g	1050	-	-	-	-	-	-	9350	-	-	-
Zinc (Zn)	µg/g	23400	-	-	-	-	-	-	926	-	-	-

BOLD Concentration greater than or equal to the CCME generic soil guideline for Residential/Parkland (RL) land use.
Concentration greater than or equal to the Nonivik Mines site-specific SQRO's for the General Mine Area

Notes:

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c Petroleum Hydrocarbon Canada-Wide Standards (PHC CWS). The site-specific exposure pathways used to determine the standards include: ecological soil contact, and soil ingestion.

d Canadian Environmental Quality Guidelines (CEQG). The site-specific factors used for determining the soil quality guideline include: soil ingestion, soil contact and nutrient cycling.

e Guideline is dependent upon depth of sample (surface, subsoil > 1.5 m depth).

f Guideline is dependent on median grain size of soil analyzed (Fine ≤ 75 µm, Coarse > 75 µm). Median grain size of soil sampled is coarse.

g Total Xylene calculated as the sum of meta, para and ortho Xylenes

Appendix K

Photographs



- PHOTOGRAPHS -

PHOTOGRAPH 1



Test Pit TP03-310 being excavated the dock cell containing the fuel line and beneath the concentrate conveyor.

PHOTOGRAPH 2



Test Pit TP03-312 being excavated adjacent entrance of concentrate shed.

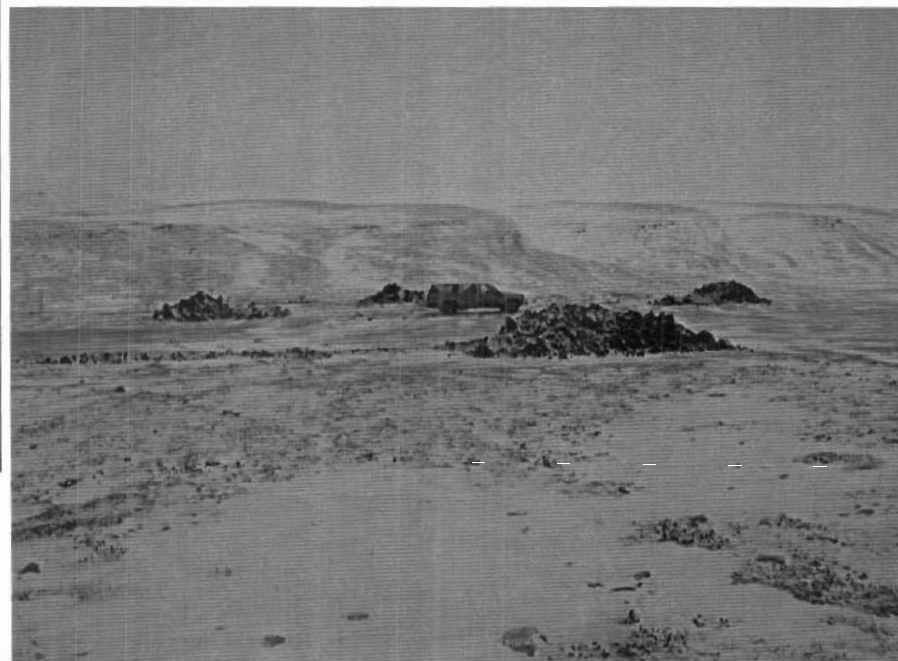
- PHOTOGRAPHS -

PHOTOGRAPH 3



East end of STOL airstrip where hydrocarbon contaminations were encountered in the 2002 Phase 2 ESA. Seepage sampling well installed in Test Pit TP03-373.

PHOTOGRAPH 4



Test Pits excavated adjacent apron of STOL airstrip to investigate elevated lead concentrations detected in 2002 Phase 2 ESA.

- PHOTOGRAPHS -

PHOTOGRAPH 5



Test Pit TP03-370 being excavated at Carpenter Shop to investigate downgradient extent of hydrocarbon contaminated soil.

PHOTOGRAPH 6



Test Pit TP03-392 was excavated at edge of roadway marked by blue flagging tape.

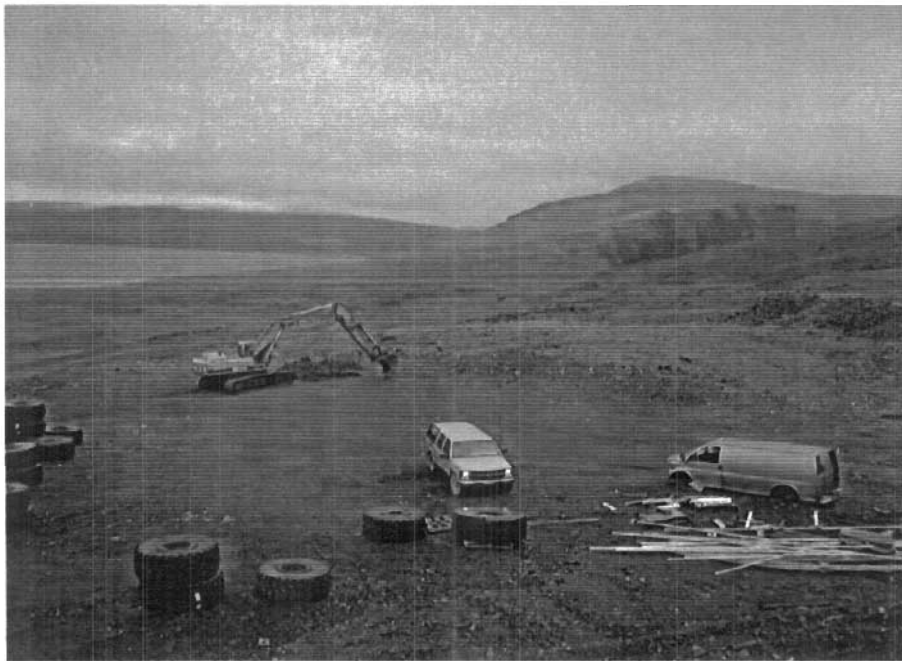
- PHOTOGRAPHS -

PHOTOGRAPH 7



Test Pits TP03-328 and TP03-329 were excavated in the warehouse yard to investigate hydrocarbon contamination encountered in the 2002 Phase 2 ESA.

PHOTOGRAPH 8



Test Pit TP03-331 was at the "boneyard" on the north side of the Industrial Complex in an area with concentrations of hydrocarbon and metals greater than the SQROs.

- PHOTOGRAPHS -

PHOTOGRAPH 9



Test Pit TP03-334 being excavated at northwest corner of the compressor building.

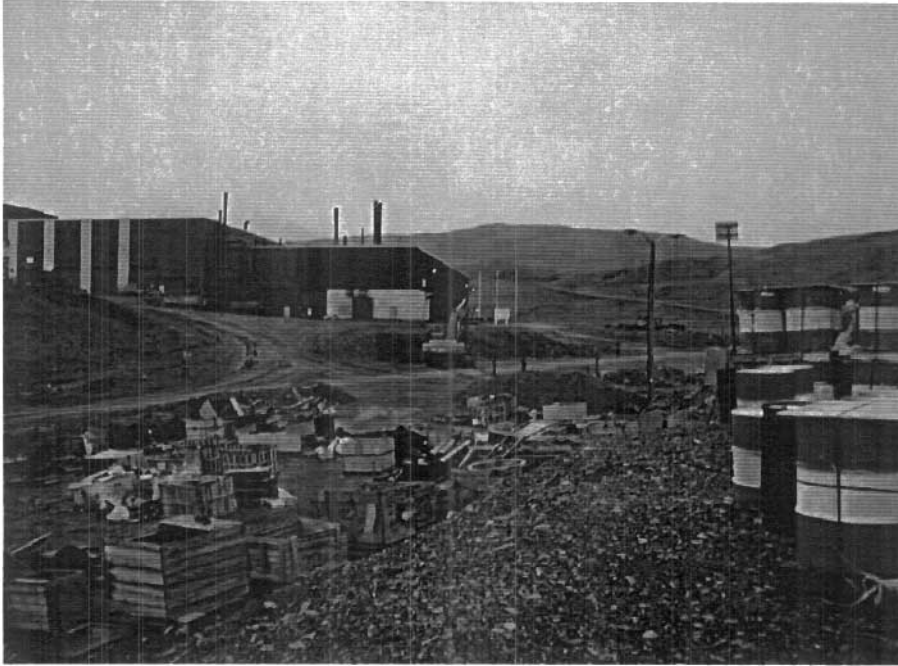
PHOTOGRAPH 10



Test Pit TP03-326 being excavated adjacent to the Industrial Complex in an area used for the temporary storage of pyrite rich waste rock.

- PHOTOGRAPHS -

PHOTOGRAPH 11



Test Pit TP03-330 being excavated downgradient of the oil water separator at the Industrial Complex.

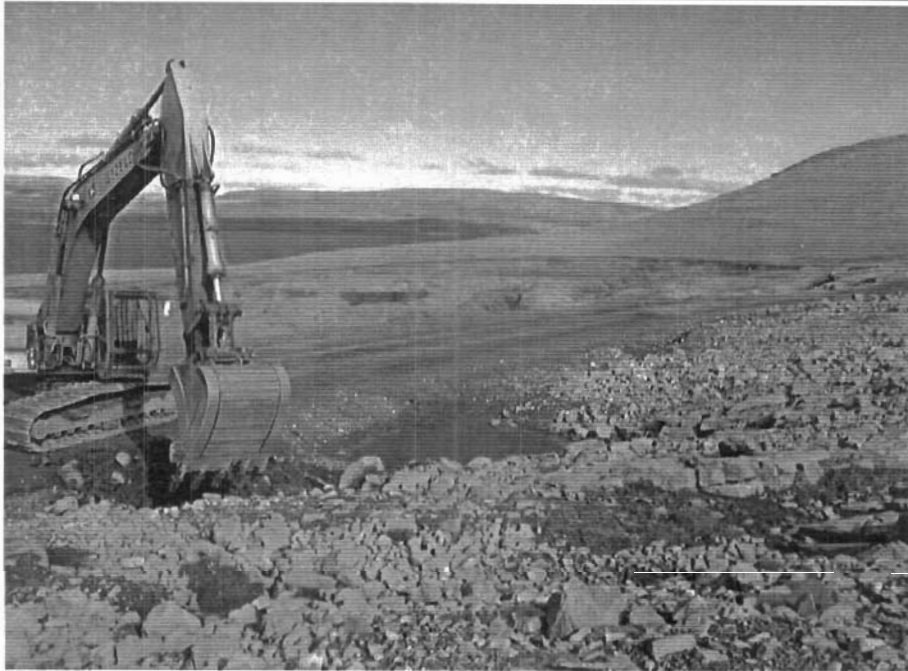
PHOTOGRAPH 12



Test Pits TP03-332 and TP03-333 were excavated between the waste oil storage tank at the Industrial Complex and Twin Lakes Creek.

- PHOTOGRAPHS -

PHOTOGRAPH 13



Test Pit TP03-323 was excavated adjacent the road from the Industrial Complex to the Dock in an area of shallow bedrock.

PHOTOGRAPH 14



Test Pit TP03-385 being excavated at the Land Fill. Looking North.

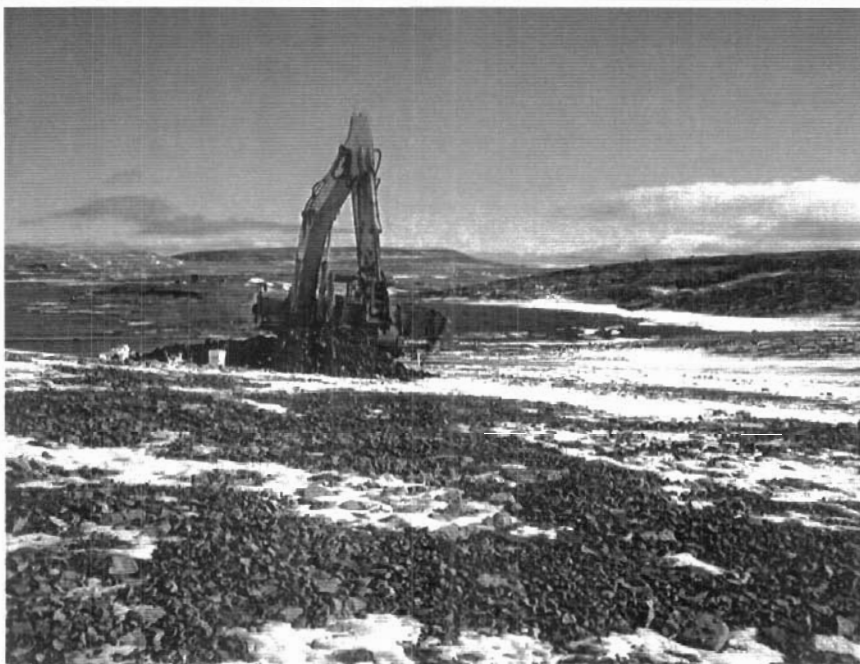
- PHOTOGRAPHS -

PHOTOGRAPH 15



Test Pit TP03-387 being excavated in soft ground at east edge of Land Fill.

PHOTOGRAPH 16



Test Pit TP03-363 being excavated at west side of the WTDA.

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PHOTOGRAPH 17



Test Pit TP03-366 was excavated at the north west corner of the WTDA.

PHOTOGRAPH 18



Look west at Test Pit TP03-354 on the roadway between the 09 Portal and Area14.

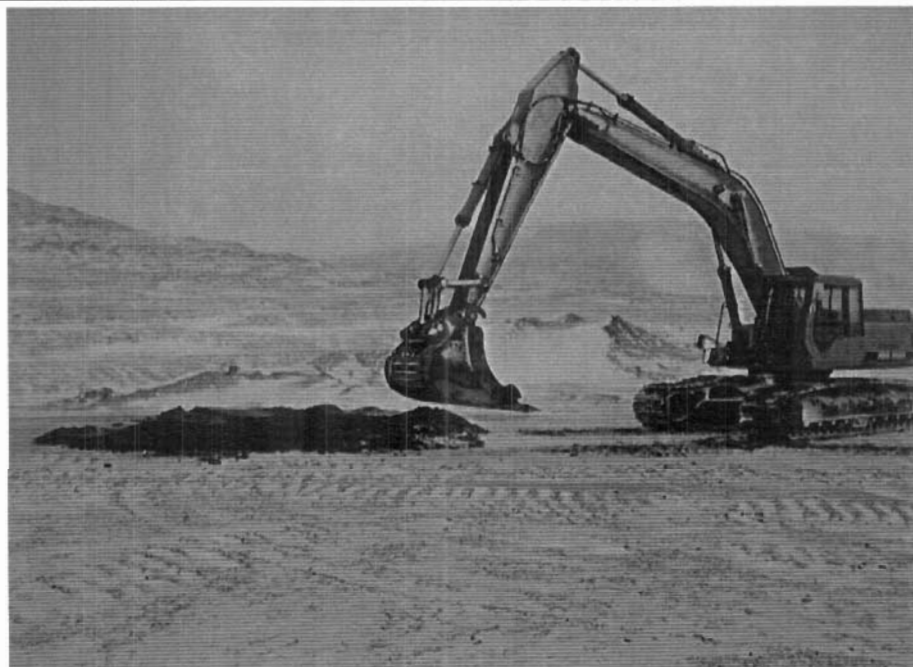
- PHOTOGRAPHS -

PHOTOGRAPH 19



Looking southwest at Test Pit TP03-356 excavated on the roadway between the 09 Portal and Area14.

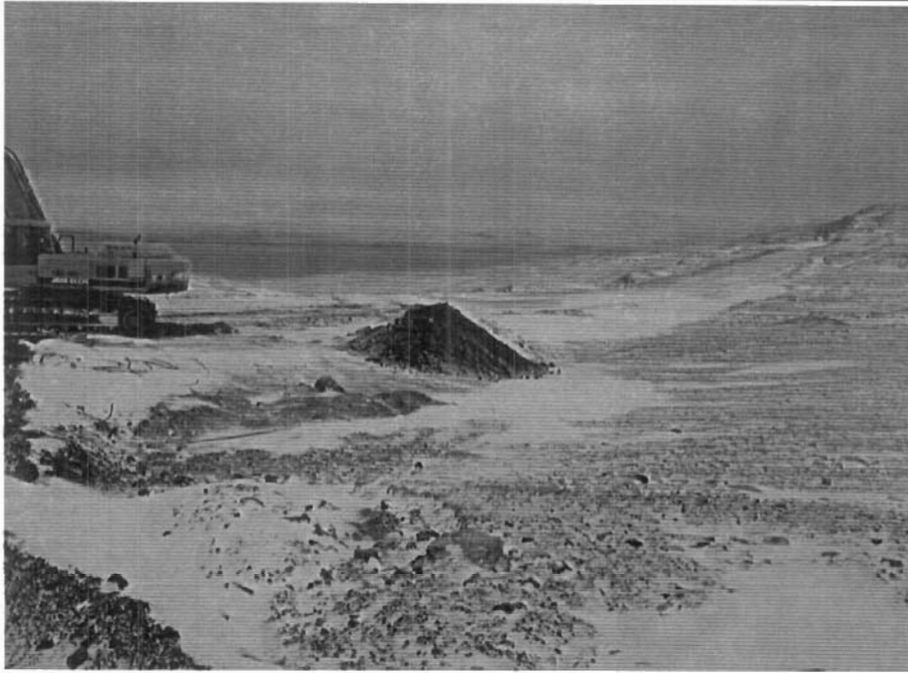
PHOTOGRAPH 20



Test Pit TP03-340 being excavated downgradient of the former fuel tank at K-Baseline.

- PHOTOGRAPHS -

PHOTOGRAPH 21



Test Pit TP03-342 was excavated adjacent the drainage pathway at K-Baseline.

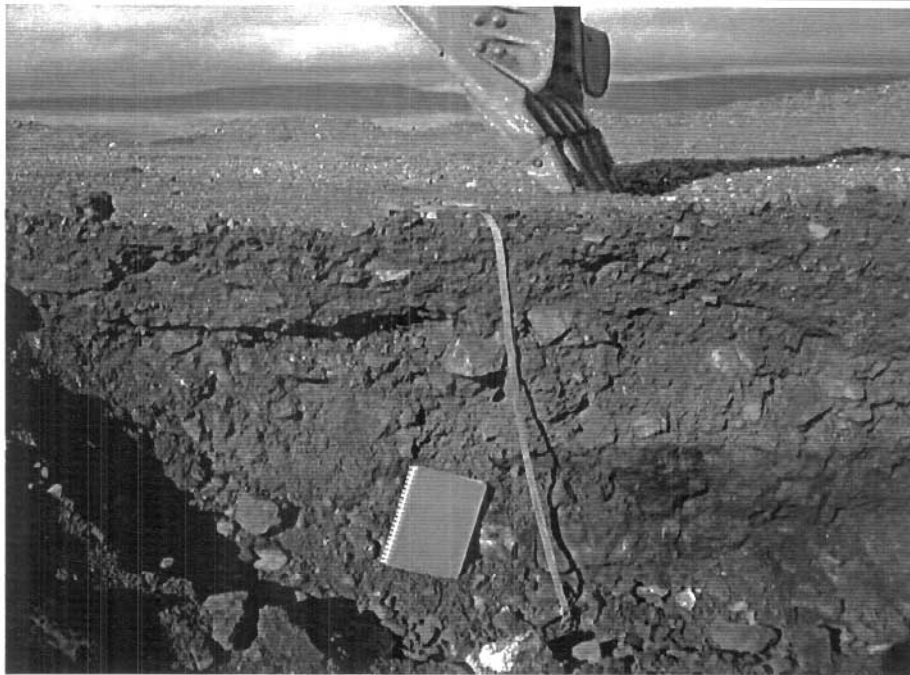
PHOTOGRAPH 22



Test Pit TP03-335 was excavated at the edge of the former Oceanview open pit.

- PHOTOGRAPHS -

PHOTOGRAPH 23



Test Pit TP03-336 was excavated adjacent to the former portal to the Oceanview underground workings. Pyrite rich bands of soil were exposed.

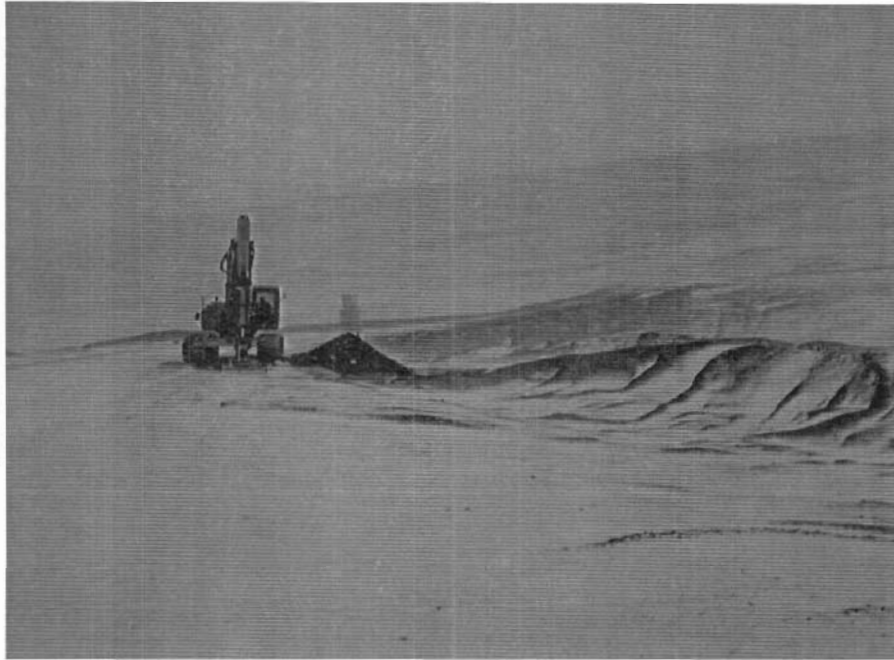
PHOTOGRAPH 24



Looking West at Test Pit TP03-336 in an area with patches of pyrite rich soils.

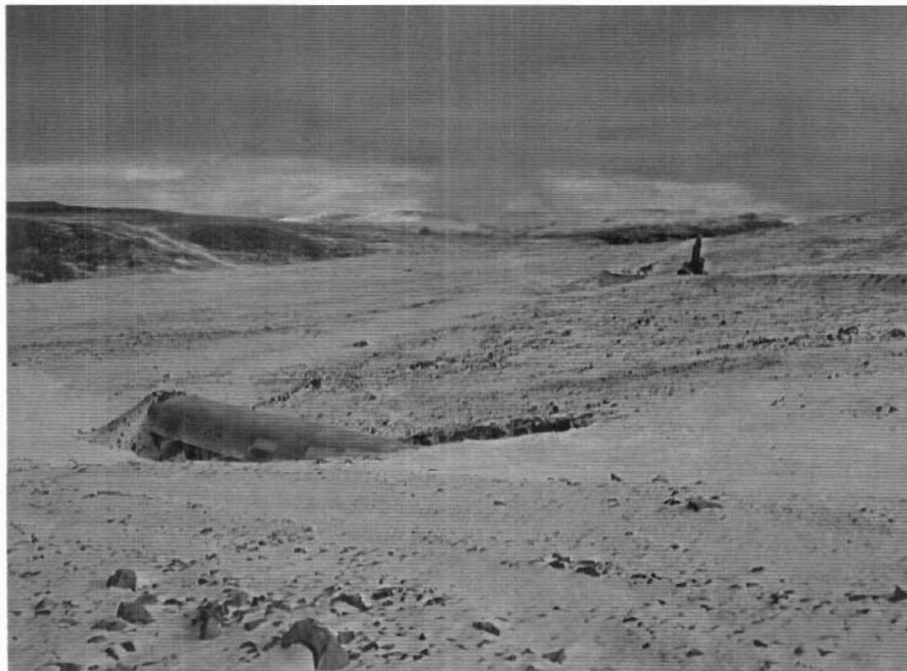
- PHOTOGRAPHS -

PHOTOGRAPH 25



Looking east. Test Pit TP03-345 was excavated in the road on the west side of Chris Creek.

PHOTOGRAPH 26



Looking east at the 17 N Portal and the excavator digging Test Pit TP03-349.