

PALADIN
RESOURCES N.L.
A.C.N. 061 681 098



EDEN CREEK PTY LTD

RELINQUISHMENT REPORT
on
Exploration Licence 8216

PINE CREEK
NORTHERN TERRITORY

COVERING THE PERIOD
15 September 1993 to 14 September 1995

COMPILED BY: K S TAYLOR

November 1995



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(i) SUMMARY

EL 8216 was granted to Eden Creek Pty Ltd, a subsidiary of Paladin Resources NL on 15 September 1993 with an area of 8 blocks. The tenement was halved, as of 15 September 1995, to 4 blocks. This report details all work carried out on the surrendered area.

Work carried out on the area surrendered during the first year included aeromagnetic data interpretation, geological mapping with 21 rock chip samples, stream sediment sampling and geochemical analyses.

Work carried out during the second year of tenure included follow-up stream sediment sampling (12 samples) of two low order stream anomalies and 1 BLEG anomaly. Results were disappointing.

(ii) TABLE OF CONTENTS

	PAGE
<i>SUMMARY</i>	<i>(i)</i>
<i>TABLE OF CONTENTS</i>	<i>(ii)</i>
1. INTRODUCTION	1
2. LOCATION	1
3. GEOLOGY	1
4. INVESTIGATIONS	2
4.1 Airborne Magnetism	2
4.2 Geological Mapping	2
4.3 Stream Sediment Sampling	3
4.3.1 First Year	3
4.3.2 Second Year	3
4.4 Geochemistry	3

LIST OF FIGURES

Figure 1	14D01	Pine Creek Projects, Location and Tenure
Figure 2	1:25,000	Total Field Magnetic Contours EL 8216
Figure 3		EL 8216 Rock Chip Sample Locations
Figure 4	14C08	Stream Sediment Survey - 200 Mesh Samples
Figure 5	14C09	Stream Sediment Survey - BLEG samples

LIST OF MAPS

Map 1	14A14	EL 8216 Geology
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LIST OF APPENDICES

Appendix 1	Geochemical Analyses - Rock Chip Samples
Appendix 2	Geochemical Analyses - Stream Sediment Samples

1. INTRODUCTION

Exploration Licence 8216, covering an area of eight blocks (26km²) was granted on 15 September 1993 to Eden Creek Pty Ltd, which was subsequently acquired by Paladin Resources NL (Paladin) as a wholly owned subsidiary prior to the listing of Paladin on the Western Australian Stock Exchange. It was reduced in area to 4 blocks (13km²) at the second anniversary on 15 September 1995.

The tenement is one of several worked by Paladin as the Central Pine Creek Project.

This report covers exploration work carried out by Paladin during the two years of tenure on the area surrendered.

2. LOCATION

EL 8216 lies approximately midway between Batchelor and Pine Creek on the PINE CREEK 1:250,000 map sheet SD 52-8 and FENTON 1:50,000 map sheet 14/5-I (Figure 1).

3. GEOLOGY

The Central Pine Creek Project lies within the Central Murrumbidgee Structural Domain with the majority of tenement areas situated adjacent to the Howley Anticline. In this region the prospective South Alligator Group rocks have been uplifted by intruding granitoid plutons such as the Burnside Granite and subsequently exposed on the flanks and marginal to the cores of regional domes. Gold mineralisation occurs preferentially within carbonaceous and sulphidic units of the South Alligator Group in quartz reefs or stockworks in a variety of structural settings though usually in association with anticlinal axes. Most gold deposits lie between 500 metres and 1000 metres from the granite contact.

131°30'



Mt Ringwood Stn

Margaret River

Goodall

EL8355 Pipeline

to Adelaide R (9Km)

EL8333 Howley Ck

EL8706 Mt Ringwood

EL9162

△ Mt Paqualin

Ban Ban Springs

Woolwonga West

EL8213

Woolwonga

Glencoe

Line

△ Mt Osborne

13°30'

Shoobridge North
EL8336

EL8216 Mt Shoobridge

EL9124 Caprock

Railway

Brocks Ck

Highway

Stuart

Cosmo Howley

H/way

Hayes Ck



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PINE CREEK PROJECT

LOCATION MAP

0 5 10 15Km

1:300000

This map falls within Pine Creek D52-8

DATE Sep 94

FIGURE 1

PLAN NO 14D01

Stratigraphically the South Alligator Group consists of the basal Koolpin Formation made up of BIF, carbonaceous phyllite and siltstone overlain by tuff, siltstone and phyllite of the Gerowie Tuff, and is topped by phyllite, chert and BIF of the Mt Bonnie Formation. Burrell Creek Formation flysch sediments of the Finnis River Group conformably overlie the South Alligator Group. The sediments were intruded by the Zamu Dolerite before the onset of metamorphism and deformation. The rocks are metamorphosed to lower greenschist facies by the Pine Creek orogeny. The tight isoclinal folds trend north and north-west and are refolded by east-west trending open folds.

4. INVESTIGATIONS

4.1 Airborne Magnetism

High resolution multi-client aeromagnetic data, covering the tenement and surrounding areas, was purchased from World Geoscience. The survey was flown by Aerodata Holdings Ltd during the period December 1987 - May 1988. The data was used to provide an in-house interpretation of the physical structure in geology of the area (*Figure 2*).

4.2 Geological Mapping

The tenement was mapped on aerial photo overlays at a scale of 1:25,000. The geology consists of rocks of the Burrell Creek Formation with Shoobridge granite overlapping to the north. The Burrell Creek Formation contains typical white mica bearing greywacke and siltstone. The Shoobridge granite has a halo of biotite rich hornfels. The north-south Carruthers Fault traverses the tenement in the west and the mapping shows several anticlines with axes plunging north or northwest. A total of 21 rock chip samples were collected and sent for assay.

745000 mE

747500 mE

131°15'

131°17'30"

13°30'

8505000 mN

8502500 mN

13°32'30"

8500000 mN

8497500 mN

13°35'



Figure No. 2

Rock chips assays returned anomalous values in the surroundings of a east northeast trending fault on the southeastern edge of Mount Shooobridge granite. This fault contains abundant graphite and is linked to a copper deposit, where cobalt is also abundant. (*Map 1, Figure 3, Appendix 1*)

4.3 Stream Sediment Sampling

4.3.1 First Year

A total of 110 stream sediment samples were taken at 55 selected sample points on streams draining the tenement area. Two samples, a BLEG and - 200 mesh, were taken at each site.

The sampling returned three low anomalous values, 22.8 ppb Au in BLEG sample 398, 7 and 8 ppb Au in -200 mesh samples in respectively 403 and 375. (*Figure 4 & 5, Appendix 2*)

4.3.2 Second Year

The anomalous samples were followed up with a further 12 samples taken from the -200 mesh fraction, sieved on site and sent to Assaycorp for Au analysis. The results were disappointing. (*Figure 4*)

4.4 Geochemistry

The rock chip samples were sent to Australian Laboratory Services Pty Ltd at Alice Springs for gold analysis using method PM 205 (aqua regia AAS).

The stream sediment samples were sent to Assaycorp Pty Ltd at Pine Creek using the fire assay method with a detection limit of .001ppm Au. (*Appendix 1 & 2*)

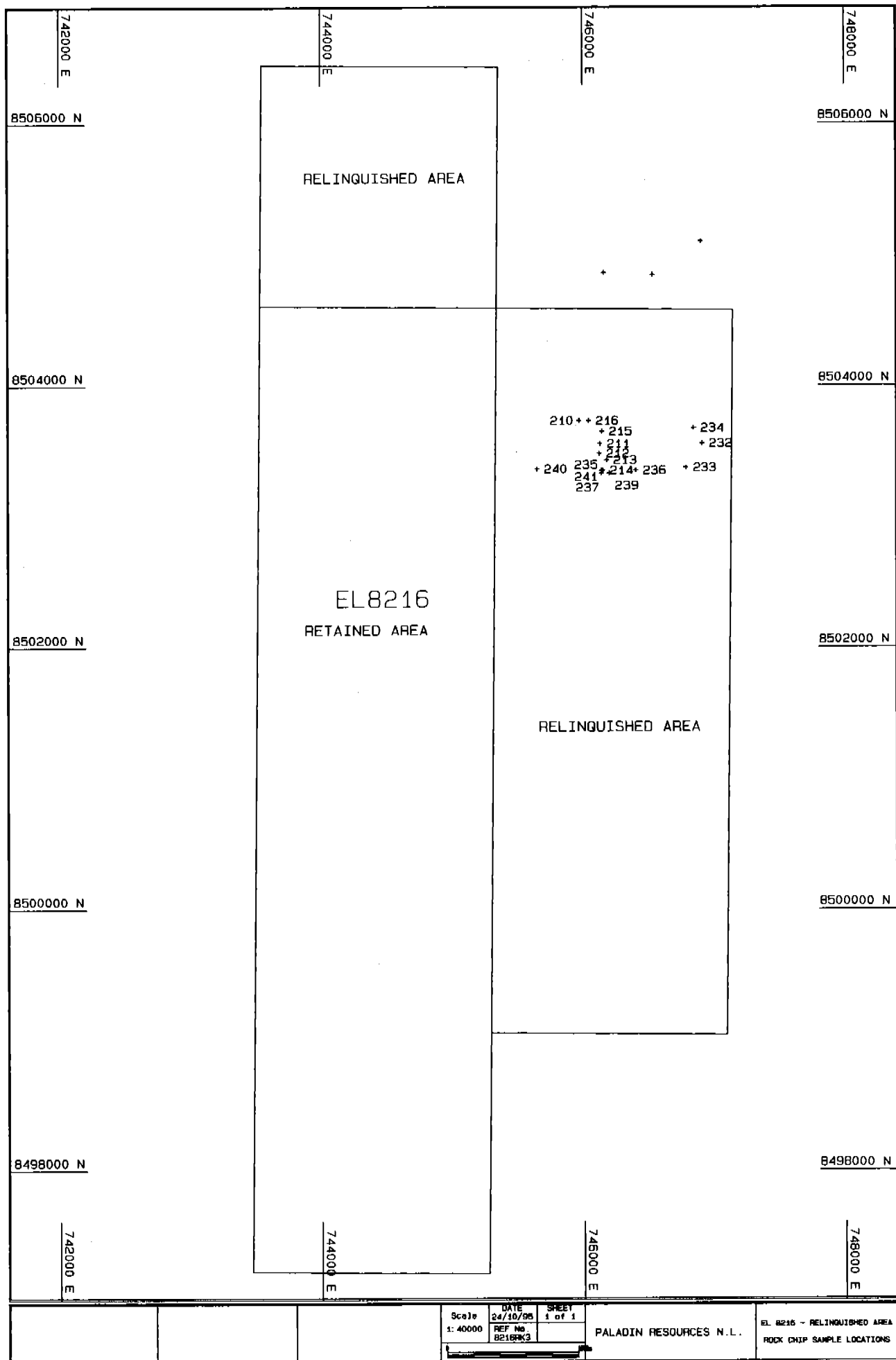


Figure No. 3

131°15'

131°17'

•278

•265

EL8336

437
2

358

Creek

culvert

13°31'

N

EL8216

266

267 SHOOBRIDGE

- 385 ● Sample point (Sept94)
- 2 -200mesh Au result in PPB
- 457 ○ Follow up sampling (Nov94)

13°34'

0 500 1000m
1:25000



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PINE CREEK PROJECT
EL 8216
STREAM SEDIMENT SURVEY
Au PPB
-200 MESH SAMPLES

DATE	Nov 94	FIGURE	4
PLAN NO	14C08		

365 2 300m South

131°15'

131°17'

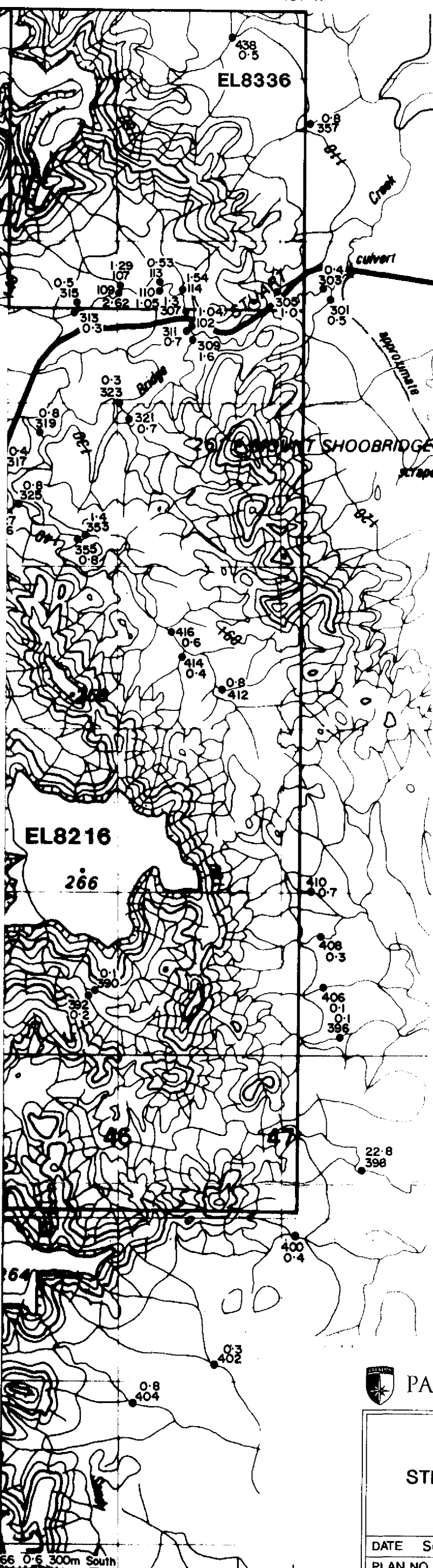
•278

•265

EL8336

N

13°31'



386 Sample point & number
 0.3 BLEG sample Au result in PPB

13°34'

0 500 1000m
 1:25000



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PINE CREEK PROJECT
 EL 8216
 STREAM SEDIMENT SURVEY
 Au PPB
 BLEG SAMPLES

DATE Sep 94
 PLAN NO 14C09

FIGURE 5

66 0.6 300m South

ABBREVIATION CODE FOR SAMPLE RESULT PRINTOUTS

GRP	ROCK GROUP
TY	ROCK TYPE
IM	INDICATOR MINERAL
A1	ALTERATION TYPE 1
S1	STRENGTH OF ALTERATION 1
A2	ALTERATION TYPE 2
S2	STRENGTH OF ALTERATION 2
A3	ALTERATION TYPE 3
S3	STRENGTH OF ALTERATION 3
MN	MINERALISATION
G	GRAIN SIZE
TX	TEXTURE
SCINT	SCINTILLOMETER
PET	PETROLOGY
CODE	INTERNAL MANAGEMENT FILE

TYPE		ROCK		MINERAL		ROCK TEXTURE	
FIRST COLUMN		SECOND & THIRD COLUMNS					
SAMPLE TYPE		DRILLHOLE CUTTINGS OF SURFICIAL DEPOSITS---40					
Point Sample	1	Hand Auger	41				
Channel Sample, Drillhole Section	2	Auger	42				
Composite Sample	3	Vacuum	43				
Bulk Sample	4	Rotary Air Blast	44				
Other	5	Percussion	45				
		Reverse Circulation	46				
		Air Core	47				
		Diamond Core	48				
		Other	49				
SECOND & THIRD COLUMNS		TRENCHES/PITS					
BEDROCK - NATURAL EXPOSURES		40					
Rock in situ (Outcrop)	01	Surficial Deposits	51				
Rock not in situ (scree, boulders)	02	Bedrock (in general)	52				
Specimen	03	Wall Rock of Ore	53				
Other	04	Ore	54				
		Other	55				
SOIL - NATURAL EXPOSURES		TIME/SHAFT/OPEN CUT					
Residual	11	Surficial Deposits	61				
Transported	12	Bedrock (in general)	62				
Organogenic	13	Wall Rock of Ore	63				
Other	14	Ore	64				
		Other	65				
STREAM SEDIMENTS		WATER					
Sediments - Active	21	Spring/Seeping	71				
Sediments from bank or bar	22	Swamp	72				
Other	23	Earth Dam	73				
		Lake	74				
		Rever	75				
		Bore/Well	76				
		Other	77				
DRILLHOLE CUTTINGS OF BEDROCK		GEOBOTANICAL SAMPLES					
Hand Auger	31		80				
Auger	32	TECHNOLOGICAL SAMPLES					
Vacuum	33		80				
Rotary Air Blast	34						
Percussion	35						
Reverse Circulation	36						
Air Core	37						
Diamond Core	38						
Other	39						

APPENDIX 1

GEOCHEMICAL ANALYSES

Rock Chip Samples

RECORD	SAMP	N-AMG	E-AMG	GRP	TYP	IM1	IM2	IM3	A1	S1	AU(0.001)	AU2(0.001)
1	210	8503733	745969	SBG	GR	QZ					<0.001	<0.001
2	211	8503554	746129	SBG	GR	QZ					0.001	
3	212	8503480	746124	SBG	GR	QZ					<0.001	<0.001
4	213	8503430	746180	SBG	GR	QZ					0.001	<0.001
5	214	8503351	746153	SBG	GR	QZ					0.022	0.021
6	215	8503649	746144	SBG	GR	QZ					0.015	0.013
7	216	8503732	746043	SBG	GR	QZ					<0.001	<0.001
8	232	8503557	746909	FRG	BX	QV	GR		GR	M	0.108	0.101
9	233	8503372	746786	FRG		QV	GR		GR	W	0.070	0.077
10	234	8503675	746845	FRG		QV					0.017	0.019
11	235	8503350	746140	FRG	GW				MC	W	0.073	0.068
12	236	8503351	746405	FRG		GR	QV		GR	S	0.017	0.019
13	237	8503330	746140	FRG	BX	GR					0.052	0.058
14	239	8503330	746200	FRG		GR	QV		GR	S	0.009	0.008
15	240	8503362	745649	FRG	HF	BI					0.002	
16	241	8503330	746140	FRG		GR	QV		GR	S	0.009	0.011

APPENDIX 2

GEOCHEMICAL ANALYSES

Stream Sediment Samples

RECORD	SAMP	N-AMG	E-AMG TYP	AU(0.0001)	AU2(0.0001)
1	301	8504600	747400 BLEG	0.0005	
2	302	8504600	747400 -200#	0.0010	
3	303	8504650	747400 BLEG	0.0004	
4	304	8504650	747400 -200#	0.0050	0.0040
5	307	8504530	746410 BLEG	0.0013	
6	308	8504530	746410 -200#	0.0020	
7	309	8504280	746350 BLEG	0.0016	
8	310	8504280	746350 -200#	0.0010	
9	311	8504380	746310 BLEG	0.0007	
10	312	8504380	746310 -200#	0.0010	0.0020
11	313	8504570	745710 BLEG	0.0003	
12	314	8504570	745710 -200#	0.0010	
13	319	8503800	745500 BLEG	0.0008	
14	320	8503800	745500 -200#	0.0010	
15	321	8503880	745800 BLEG	0.0007	
16	322	8503880	745800 -200#	0.0010	
17	323	8503950	745700 BLEG	0.0003	
18	324	8503950	745700 -200#	0.0010	0.0010
19	325	8503300	745260 BLEG	0.0008	
20	326	8503300	745260 -200#	0.0010	
21	353	8503140	745780 BLEG	0.0014	
22	354	8503140	745780 -200#	<0.001	
23	355	8503200	745700 BLEG	0.0008	
24	356	8503200	745700 -200#	0.0010	
25	389	8500385	745925 -200#	0.0010	
26	390	8500385	745925 BLEG	0.0001	
27	391	8500200	745920 -200#	0.0010	
28	392	8500200	745920 BLEG	0.0002	
29	395	8500068	747726 -200#	0.0010	
30	396	8500068	747726 BLEG	<0.0001	
31	397	8499250	747426 -200#	0.0020	
32	398	8499250	747426 BLEG	0.0228	
33	399	8498863	747022 -200#	0.0020	0.0020
34	400	8498863	747022 BLEG	0.0004	
35	401	8498122	746576 -200#	0.0010	
36	402	8498122	746576 BLEG	0.0003	
37	403	8497858	746130 -200#	0.0070	0.0100
38	404	8497858	746130 BLEG	0.0008	
39	405	8500365	747163 -200#	0.0040	
40	406	8500365	747163 BLEG	<0.0001	
41	407	8500680	747140 -200#	0.0010	
42	408	8500680	747140 BLEG	0.0003	
43	409	8500989	747122 -200#	0.0020	
44	410	8500989	747122 BLEG	0.0007	
45	411	8502253	746731 -200#	0.0020	0.0020
46	412	8502253	746731 BLEG	0.0008	
47	413	8502420	746380 -200#	0.0010	
48	414	8502420	746380 BLEG	0.0004	
49	415	8502560	746340 -200#	0.0010	
50	416	8502560	746340 BLEG	0.0006	

RECORD	SAMP	N-AMG	E-AMG TYP	AU(0.0001)	AU2(0.0001)
51	439	8497860	746111 -200#	0.0010	
52	440	8497860	746100 -200#	0.0020	
53	441	8498190	745360 -200#	0.0020	
54	442	8498180	745350 -200#	<0.001	
55	446	8499550	746860 -200#	<0.001	
56	447	8499540	746850 -200#	<0.001	
57	448	8499550	746640 -200#	<0.001	
58	449	8499540	746640 -200#	0.0010	
59	450	8499400	746250 -200#	0.0010	
60	451	8499410	746240 -200#	<0.001	<0.001
61	452	8499380	745860 -200#	<0.001	
62	453	8499370	745860 -200#	<0.001	