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→file: Goose Lake ABA Results.

October 7, 1997
Project No: 2-21-900

Mr. Neil Firt
Arauco NWT Ltd.
3014 Calgary Trial South,
Edmonton, Alberta T6J 3V4

Dear Mr. Firt:

Subject: Acid Base Accounting (ABA) Results for Goose Lake Project

Attached in Tables 1 are the results of acid base accounting on 14 samples from the Goose Lake Project. ABA was determined by the Sobek method. Total sulphur, CO_2 and ICP analyses were conducted by ACME Analytical Laboratories Ltd. of Vancouver, B.C. The ICP results are attached.

Our invoice for $1,736.00 is attached. Cost details are shown in Table 2.

Sincerely,

BCRI

Tim O'Hearn, P.Eng.
Mine Waste & Drainage
Environmental Services & Technology

cc. Jane Howe.

BC Research Inc.
3650 Wesbrook Mall
Vancouver, BC
Canada V6S 2L2
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Table 1

Arauco MWT Ltd. ABA Results (Sobek Procedure)

Sample ID	Paste pH	CO2 Inorg. (%)	Total Sulphur (Wt.%)	Sulphate Sulphur (Wt.%)	Sulphide Sulphur* (Wt.%)	Maximum Potential Acidity** (Kg CaCO3/Tonne)	Neutralization Potential (Kg CaCO3/Tonne)	Net Neutralization Potential (Kg CaCO3/Tonne)
AR9851	9.2	1.76	4.89	<0.01	4.89	152.8	35.9	-116.9
AR9852	8.5	2.41	8.04	<0.01	8.04	251.3	70.7	-180.6
AR9853	8.5	0.87	1.93	<0.01	1.93	60.3	8.9	-51.4
AR9854	8.9	2.80	1.17	<0.01	1.17	36.6	58.2	21.6
AR9855	8.3	0.56	1.06	<0.01	1.06	33.1	22.4	-10.8
AR9856	8.4	2.27	0.92	0.01	0.91	28.4	80.2	51.8
AR9857	8.7	6.76	0.22	<0.01	0.22	6.9	175.7	168.8
AR9858	8.8	1.67	0.34	<0.01	0.34	10.6	43.3	32.7
AR9859	9.1	3.68	1.61	<0.01	1.61	50.3	39.2	-11.1
AR9860	8.6	0.90	<0.02	<0.01	<0.02	<0.63	7.0	7.0
AR9861	8.2	7.18	4.29	<0.01	4.29	134.1	221.1	87.0
AR9862	8.3	0.48	0.25	<0.01	0.25	7.8	11.6	3.8
AR9863	9.3	0.22	<0.02	<0.01	<0.02	<0.63	9.9	9.9
AR9864	8.6	0.87	0.04	<0.01	0.04	1.3	6.0	4.7
Duplicates								
AR9857	8.8			<0.01				
AR9863	9.3			<0.01			9.7	
AR9860		0.95	<0.02					
Reference								
NBM-1				0.31			50.4	
CSA Stand.			5.13	2.53				

*Based on difference between total sulphur and sulphate-sulphur

**Based on sulphide-sulphur

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

B.C. Research Inc. PROJECT 2-21-900 File # 97-5426

3650 Wesbrook Mall, Vancouver BC V6S 2L2 Submitted by: Terri-Lynn Delaney

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppm
AR 9851	<1	62	26	24	2.3	26	18	395	14.49	5832	8	4	3	37	<.2	<3	<3	25	2.55	.037	16	30	.33	17	.03	11	1.71	.14	.20	3	<5	<1
AR 9852	4	64	11	<1	4.9	24	11	270	16.09	19881	10	19	<2	28	<.2	6	<3	8	1.79	.073	7	69	.70	6	.01	29	.53	.05	.08	<2	<5	<1
AR 9853	5	73	14	5	.5	9	7	146	9.43	3303	<8	<2	<2	36	<.2	5	<3	19	1.22	.066	6	67	.23	8	.01	16	1.45	.10	.15	<2	<5	<1
AR 9854	3	23	15	3	.3	8	3	233	7.26	196	<8	<2	<2	94	<.2	3	<3	12	2.35	.063	8	52	.13	8	.01	11	.75	.06	.09	<2	<5	<1
AR 9855	5	13	43	2	.7	7	4	71	7.24	273	<8	2	<2	21	<.2	8	<3	8	.58	.067	4	60	.08	9	.01	14	.30	.03	.04	<2	<5	<1
AR 9856	1	30	21	5	.3	7	3	101	8.67	63	<8	<2	<2	101	<.2	<3	<3	14	2.39	.215	12	33	.13	12	.01	22	.59	.05	.07	<2	<5	<1
AR 9857	4	6	17	2	<.3	5	3	273	7.97	138	<8	<2	<2	61	<.2	4	<3	9	3.70	.086	10	49	1.33	10	.01	38	.45	.04	.09	6	<5	<1
AR 9858	1	9	32	<1	<.3	5	3	75	10.19	192	<8	<2	<2	53	<.2	6	<3	11	1.59	.079	6	40	.09	9	.01	5	.38	.04	.07	<2	<5	<1
AR 9859	5	16	22	39	3.7	47	21	378	16.16	409	<8	<2	6	26	<.2	<3	<3	71	1.16	.027	19	141	1.30	19	.02	15	3.00	.09	.39	2	<5	<1
AR 9860	2	2	21	103	<.3	78	28	521	10.09	20	<8	<2	12	16	.2	4	<3	49	.17	.030	43	113	1.36	54	.04	7	4.22	<.01	.20	<2	<5	<1
RE AR 9860	4	<1	12	105	<.3	79	29	531	10.19	23	<8	<2	12	16	<.2	6	3	51	.17	.031	43	111	1.37	55	.04	6	4.27	<.01	.21	<2	<5	<1
AR 9861	4	93	22	40	2.0	50	17	874	11.87	239	<8	<2	3	56	<.2	<3	<3	46	4.49	.036	18	123	.98	38	.05	17	2.73	.01	.35	12	<5	<1
AR 9862	10	4	47	6	1.0	3	1	221	1.58	4736	<8	8	<2	13	<.2	11	<3	3	.45	.053	18	123	.16	5	<.01	4	.25	.01	.01	100	<5	<1
AR 9863	8	2	18	6	<.3	2	1	67	.63	5	<8	<2	<2	41	<.2	<3	<3	1	.34	.047	20	88	.20	107	<.01	5	.79	.03	.37	<2	<5	<1
AR 9864	5	<1	9	98	<.3	74	26	460	9.26	27	<8	<2	9	12	<.2	5	<3	46	.15	.030	36	97	1.26	44	.03	4	3.84	<.01	.17	2	<5	<1
STANDARD C3	28	67	40	156	5.7	38	13	749	3.49	52	19	<2	17	31	22.6	12	21	87	.60	.091	19	178	.61	152	.09	20	1.95	.04	.17	16	<5	1

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.
- SAMPLE TYPE: PULP Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 17 1997 **DATE REPORT MAILED:** Sept 24/97 **SIGNED BY.** C. Leong .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

 Data___ FA ___

ACID ROCK DRAINAGE SAMPLES, GOOSE LAKE, 1997

Sample No.	Lithology	DDH	from (m)	to (m)	length (m)	Description
AR9851	LIF (>3%)	97GO-001	217.00	219.00	2.00	SBOIF - Chlorite and hornblende alteration within poorly banded, highly altered LIF. 10% pyrrhotite matted and in irregular blebs. 2% arsenopyrite as crystals up to 5mm. 1% pyrite matted and in blebs.
AR9852	LIF (>3%)	97GO-002	155.20	157.20	2.00	SBOIF / QTZVN - Altered LIF and sulphide bearing quartz vein. Iron Formation consists of chlorite, grunerite, chert, hornblende and magnetite. 6% arsenopyrite as crystals up to 1.5cm and crystal aggregates. 9% pyrrhotite as bands, blebs, and matted texture. 3% pyrite as blebs.
AR9853	LIF (0-2%)	97GO-010	111.54	113.70	2.16	OIF - Magnetite, chert , chlorite, grunerite in iron formation, with minor quartz vein (15%). 1% pyrrhotite, with trace arsenopyrite and pyrite.
AR9854	LIF (0-2%)	97GO-010	115.53	117.65	2.12	OIF / SBOIF - Same iron formation as in AR9853, with 20% quartz stringers. Contains 2 specks of visible gold in chlorite. 1% pyrrhotite, with trace arsenopyrite and pyrite.
AR9855	LIF (0-2%)	97GO-010	117.65	119.65	2.00	OIF - same as in AR9853, with minor quartz stringers. 1% pyrrhotite with trace arsenopyrite and pyrite.
AR9856	LIF (trace)	97GO-010	108.00	110.00	2.00	OIF - Magnetite, chert , chlorite, grunerite in iron formation, with trace pyrite.
AR9857	LIF (trace)	97GO-010	98.00	100.00	2.00	OIF - Magnetite, chert , chlorite, grunerite in iron formation, with no apparent sulphides.
AR9858	LIF (trace)	97GO-011	106.62	108.62	2.00	OIF - Well to moderately banded iron formation composed mainly of grunerite, magnetite and chert bands with minor chlorite. 10% quartz veins. Trace amount of pyrite and pyrrhotite.
AR9859	MMD (mineralized)	94GO-068	104.20	106.00	1.80	Black graphitic mudstone with light grey quartz vein (40%). 5% pyrite as irregular masses and crystal aggregates.

AR9860	MMD (non-mineralized)	97GO-010	85.00	87.00	2.00	Foliated, black, phyllitic mudstone, with occasional quartz stringers.
AR9861	FMZ (mineralized)	94GO-058	87.20	89.95	2.75	Silicate iron formation consisting of hornblende and chlorite, with minor black mudstone and chloritic greywacke. 30% quartz veins. 6% pyrite, Trace to 1% arsenopyrite, trace pyrrhotite.
AR9862	FD (mineralized)	97GO-002	177.52	178.92	1.40	Recrystalized, siliceous, Felsic volcanic. Mineralized with chlorite, sulphides and one speck of visible gold. Trace amounts of arsenopyrite, pyrite, and pyrrhotite.
AR9863	FD (non-mineralized)	97GO-010	89.00	90.00	1.00	Siliceous felsic volcanic with phenocrysts of quartz and plagioclase. Also some chlorite and biotite.
AR9864	duplicate of AR9860	97GO-010	85.00	87.00	2.00	Foliated, black, phyllitic mudstone, with occasional quartz stringers.

LIF - Lower Iron Formation
MMD - Middle Mudstone
FMZ - Footwall Main Zone
FD - Felsic Dyke
OIF - Oxide Iron Formation
SBOIF - Sulphide bearing Oxide Iron Formation
QTZVN - Quartz Vein