

GEOCHEMICAL REPORT **GEOLOGICAL BRANCH**
ASSESSMENT REPORT

on the

BONNIE BRAE CLAIMS

in the

KAMLOOPS MINING DIVISION

12,055

N.T.S. 82L/11W

50°39'N latitude & 119°18'W longitude

owned by:

PETER PETO,
#207-669 Martin St.,
Penticton, B.C. V2A 5L5

written by:

PETER PETO, Ph. D.

30 October 1983

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INTRODUCTION

The Bonnie Brae claims cover the lower drainages of Hobson and Leonard Creeks situated on the north slope of Mt Ida which is immediately south of Salmon Arm. The property consists of 6 units (2Ex3S), held under record number 4340(2), and is accessed via a well maintained logging road along Rumble Creek (Fig. 1). Exploration adits driven on quartz veins bearing argentiferous galena on the north face of Mt Ida, were first reported by Brewer (1913) and subsequently by Ferrier (1920) who reported values in gold and platinum. Some work at the foot of Hobson Creek was reported in the Minister of Mines Annual report (1930) after which the property remained idle until Annmar Mining financed a program of trenching (Mitchell, 1967). This report is based on property examinations on 31 May, 31 July, 10 and 23 August 1983 during which 21 soil and 20 rock samples were collected for multi-element geochemical determination.

PROPERTY GEOLOGY

The claims are underlain by cambro-ordovician schists belonging to the Silver Creek formation which in turn are unconformably overlain by upper Triassic (?) argillites and limestones of the Sicamous formation. These formations were intruded by early Cretaceous (?) two mica granites and subsequently capped by Eocene Volcanics of the Kamloops formation. The old workings expose a reticulate system of quartz veins trending N and E in highly sheared and fractured mica schists adjacent to a granite intrusive. Mineralization occurs along sheeted fracture zones and milky quartz veins and pods 0.3 to 30 metres wide, were reported to

carry pyrite, arsenopyrite, galena, chalcopyrite, sphalerite, marcasite, argentite, cosalite (?), fluorite and cassiterite (?) by Mitchell (1967). The association of tin, tourmaline, sericite, pyrite and quartz, indicative of greisen, were also reported.

ROCK AND SOIL GEOCHEMISTRY

Geochemical samples were analyzed by Acme Analytical Laboratories using multi-element ICP analysis of a 0.5 gm sample digested with 3 ml of aqua regia at 90°C for 1 hour and diluted to 10 mls with water. Au and Pt were done by fire assay and atomic absorption whereas Hg was done by flameless atomic absorption. The results are listed in Appendices. Rock samples collected near the Bonnie Brae adit near Hobson Creek are shown in Figure 2 whereas the following samples were collected from the "Millar" adit, shown in Figure 1.

	Cu	Pb	Zn	Ag	Au	Pt	Sn
1855	-	18	75	0.5	-	-	2
1856	-	790	111	9.4	-	-	17
1857	-	19	280	0.7	-	-	2
54370	16	31	68	4.3	1	2	4
54371	45	4273	569	24.9	5	2	57
76835	1676	61259	8505	44.2	20	2	4517
76836	29	1080	325	21.7	3	4	79

A reconnaissance soil line was run just beside the Hobson Creek Access road, perpendicular to the strike of the mineralized zone, between the "Miller" and "Bonnie Brae" adits to test for continuity between the showings (fig. 3).

CONCLUSIONS

Rock samples collected indicate that a N50°E trending mineralized zone is at least five hundred feet in length but carries relatively low values of Cu, Pb, Zn, Ag, Sn and Au. Mineralization is associated with relatively high concentrations of B, Sb, As, Bi confirming the suspected greisen mineralogy. Very low Au and Pt values do not corroborate Ferrier's (1920) findings. The soil line shows a weak concentration of Zn and Ag at the projected intersection of the mineralized zone but the connection remains tenuous. Nevertheless more detailed work appears to be warranted.

REFERENCES CITED

Brewer, W.M. (1913) B.C.D.M. Annual Report, p198-199.
B.C. Minister of Mines Annual Report (19130) p183-185.
Ferrier, W.F. (1920) Munition Resources Commission, P183-184.
Mitchell, J.A. (1967) Prospectus report (unpublished), Annmar Mining, 9p.

ITEMIZED COST STATEMENT

Peter Peto: 3 days @ \$300/day.....	\$900.00
Travel (truck rental gasoline).....	100.00
Food (3 mandays @ \$20/day).....	60.00
Analytical costs (41 multielement @\$14.75/sample).....	605.00
Report preparation.....	100.00
Freight.....	<u>15.00</u>
TOTAL COST	\$1840.00

AUTHOR'S QUALIFICATION

I, Peter Peto, of #207-669 Martin Street, Penticton, B.C.
DO HEREBY CERTIFY:

That I am a consulting geologist with a business address as shown above.

That I am a graduate of the University of Alberta where I obtained my B.Sc. and M.Sc. degrees in Geology in 1968 and 1970 respectively. I am also a graduate of the University of Manchester where I obtained my doctorate in Geology in 1975.

That I am a Fellow of the Geological Association of Canada.

That I have practiced my profession actively since 1975.

Dated this 30 day of Oct 1983, at Penticton, B.C.

Respectfully submitted:

Peter Peto

Peter Peto, Ph.D., F.G.A.C.



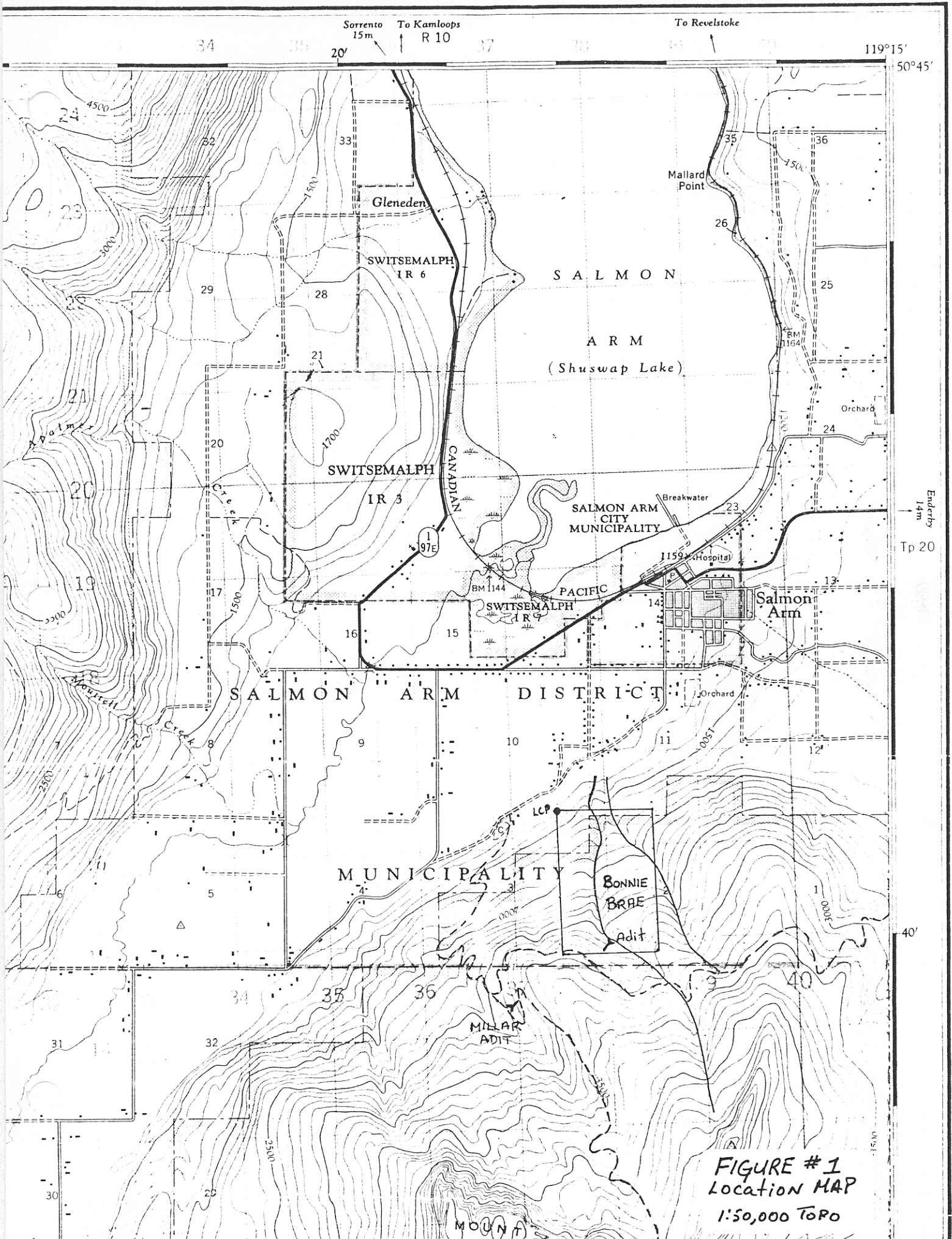


FIGURE #1
 Location MAP
 1:50,000 TOPO

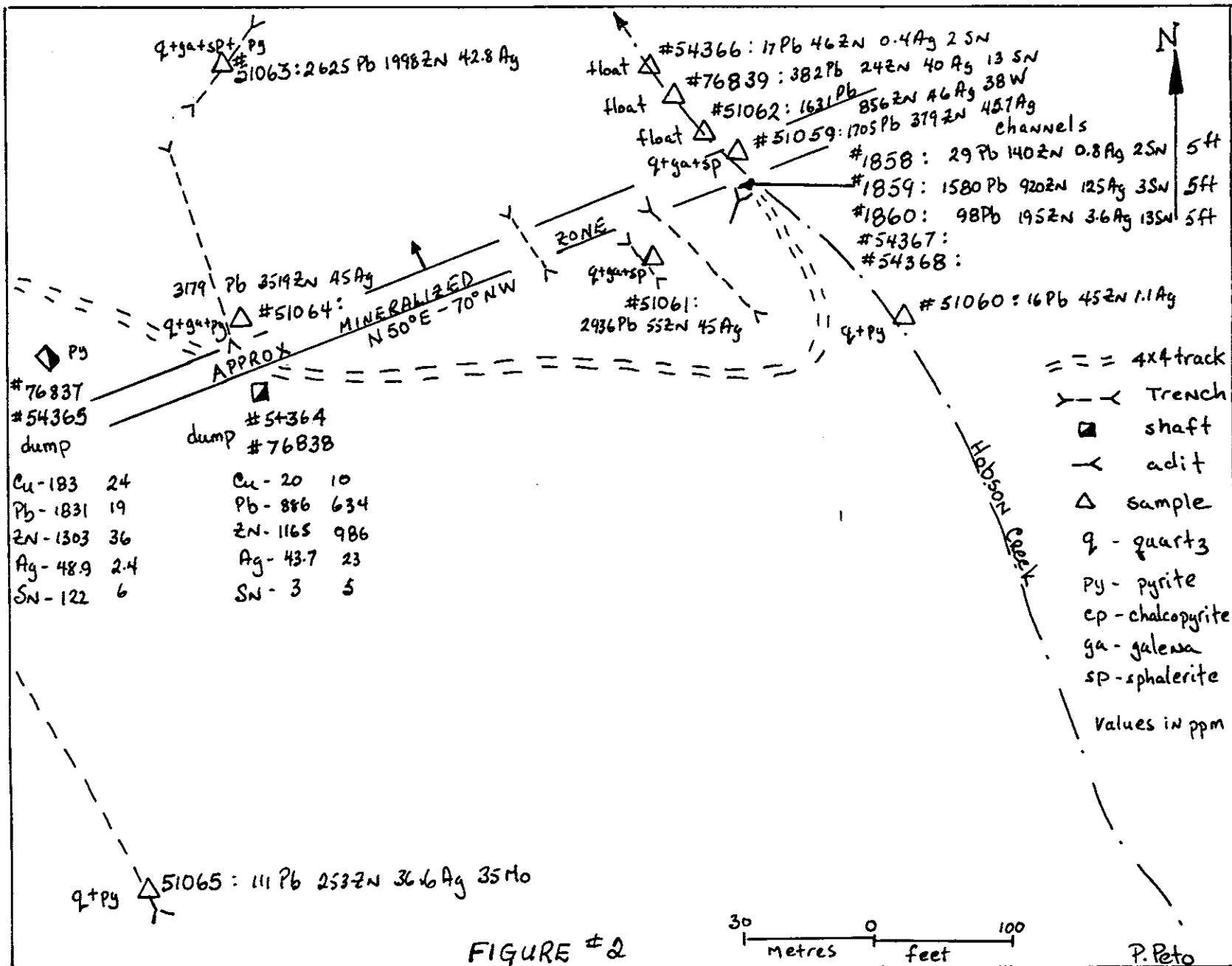


FIGURE #2

P. Peto

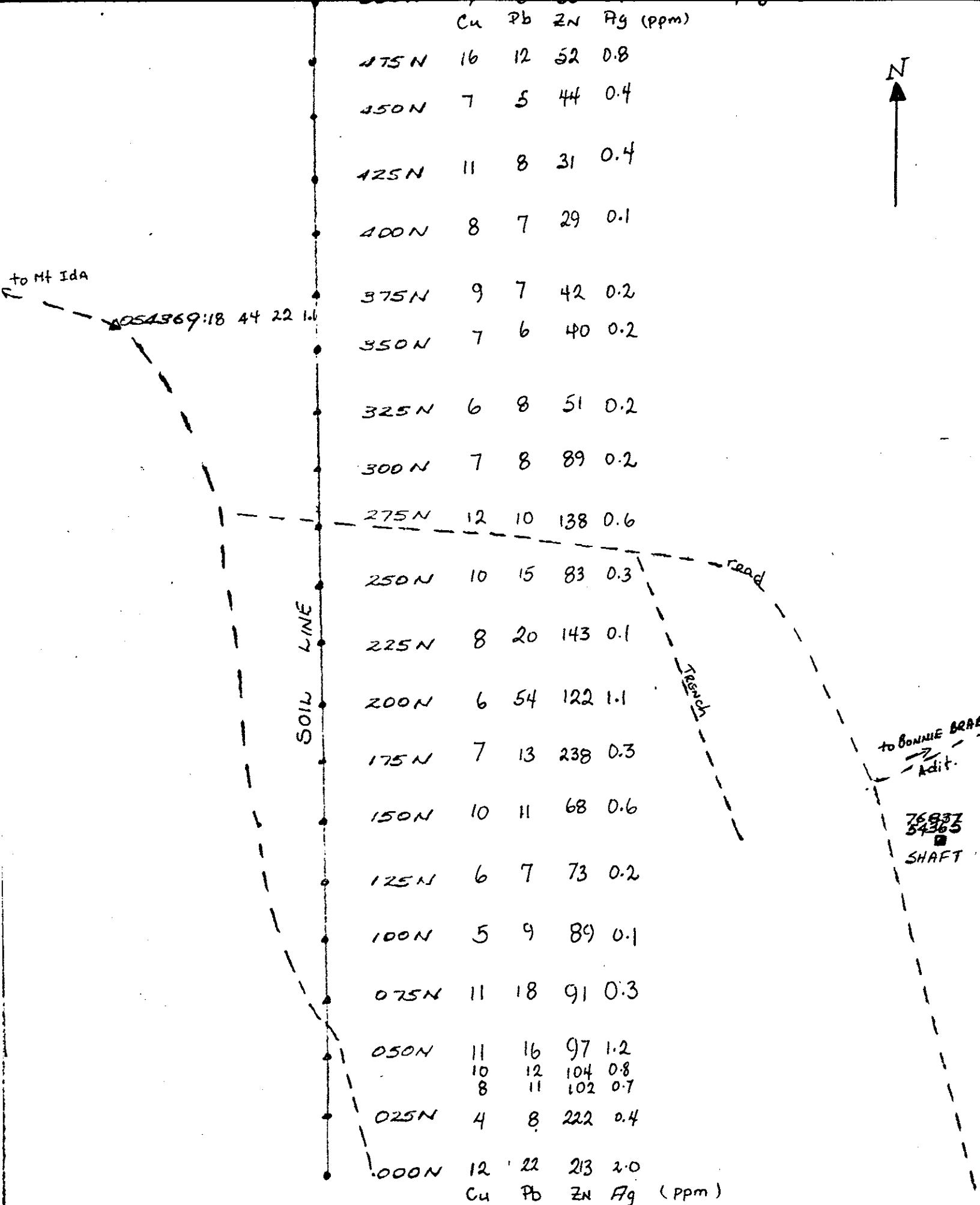
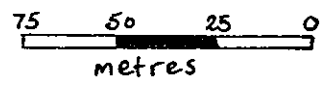


FIGURE #3



ICP GEOCHEMICAL ANALYSIS

A .500 GRAM SAMPLE IS DIGESTED WITH 3 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 90 DEG.C. FOR 1 HOUR. THE SAMPLE IS DILUTED TO 10 ML9 WITH WATER.
 THIS LEACH IS PARTIAL FOR: Ca, P, Mg, Al, Ti, La, Na, K, W, Ba, Si, Sr, Cr AND B. Au DETECTION 3 ppm.
 AU: ANALYSIS FROM 10 GRAM FA+AA. AGI ANALYSIS BY AA. H6: ANALYSIS BY FLAMELESS AA FROM .500 GRAM SAMPLE. SAMPLE TYPE - ROCK CHIPS

DATE RECEIVED AUG 4 1983 DATE REPORTS MAILED Aug 11/83 ASSAYER D. Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

ASARCO EXPLORATION PROJECT # FROM PETER PETO FILE # 83-1485

PAGE # 1

SAMPLE #	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Autl	Hg1	Ag1
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb	ppb	ppm
51053 <i>Local</i>	27	198	29	19	2.5	48	21	433	57.17	3609	2	ND	4	17	1	2	2	109	.22	.07	10	7	.17	7	.01	2	1.18	.01	.02	13	18	50	2.5
51054 <i>Local</i>	2	157	5	26	.5	6	1	147	1.00	1244	2	ND	2	2716	1	2	15	18	29.16	.03	2	4	.13	18	.01	5	.32	.01	.01	2	14	20	.7
51055	12	26793	19	272	12.9	24	17	747	27.80	186	6	ND	8	15	4	2	2	65	4.69	.12	3	10	.30	7	.03	2	1.64	.01	.01	2	320	.30	12.9
51056 <i>Local</i>	9	62	13	182	.5	52	16	383	12.83	35	10	2	2	1526	2	2	2	281	11.56	.06	2	7	.50	47	.01	2	.28	.01	.04	2	380	20	.5
51057 <i>H1, 2</i>	16	312	11	20	.6	66	20	393	19.88	33	6	ND	2	73	1	2	2	288	4.50	.06	2	11	1.15	12	.01	2	.32	.02	.04	2	50	70	.6
51059 <i>Boswell</i>	3	22	1705	379	45.7	5	2	163	1.54	33	2	ND	2	74	9	7	611	5	2.48	.01	2	5	.03	170	.01	230	.36	.03	.28	2	26	10	44.0
51060 <i>Boswell</i>	1	62	16	45	1.1	11	4	535	1.81	23	2	ND	8	225	1	2	2	18	1.49	.03	19	20	.09	35	.01	8	.43	.04	.12	2	2	10	.8
51061	5	9	2936	35	45.4	3	1	82	.92	9	2	ND	3	28	2	12	1240	2	.33	.01	2	5	.01	33	.01	13	.13	.01	.10	2	22	5	10.0
51062	19	27	1631	856	46.6	3	1	59	.54	2	2	ND	2	8	38	29	3373	2	.02	.01	2	6	.01	8	.01	9	.04	.01	.03	38	12	5	43.0
51063	5	14	2625	1998	42.8	5	3	78	1.73	51	3	ND	3	63	47	12	723	3	.65	.01	2	3	.02	123	.01	4	.49	.03	.42	2	33	10	42.0
51064	2	79	3179	3519	44.9	3	1	80	1.41	32	3	ND	3	50	70	15	60	2	2.30	.01	2	3	.02	248	.01	440	.22	.04	.17	2	4	20	39.5
51065	35	32	111	253	36.6	2	1	71	1.51	37	2	ND	2	38	7	2	366	3	.11	.01	2	2	.03	104	.01	9	.34	.01	.17	2	2	10	46.5
51058 SOIL	49	41	16	426	.6	55	8	270	19.43	51	2	ND	3	116	1	2	2	39	8.27	.09	8	7	.14	416	.01	2	.52	.01	.07	2	5	110	.6
STD A-1/FA-AU	1	30	40	183	.3	35	15	1106	2.75	9	2	ND	3	38	1	2	2	58	.61	.10	8	76	.77	284	.07	11	2.06	.01	.20	2	51	50	.3

+30 ppm Ag require regular Assay.

Samples sent to Vancouver by P. Peto. Aug 11th

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ASARCO EXPLORATION PROJECT # MOONLIGHT FILE # 83-1613

SAMPLE #	Mo	Cu	Pb	Zn	Ag	Ki	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Ti	B	Al	Na	K	N	Sn	Au	Hgt	Ag	Pt
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	I	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	I	I	ppm	ppm	I	ppm	I	ppm	I	I	I	ppm	PPM	ppb	ppb	ppb	ppb
54357	6	54	23	82	.5	37	11	251	2.30	29	8	ND	2	116	2	2	2	97	2.53	.14	7	46	1.10	428	.16	10	2.75	.33	.79	2	2	3	5	.4	2
54358	1	67	21	43	.7	35	10	242	1.80	65	8	ND	2	134	1	2	2	29	2.75	.07	6	16	.42	56	.13	10	2.45	.35	.16	2	2	8	10	.4	3
54359	1	89	9	25	.2	16	11	151	2.19	9	2	ND	2	94	1	2	2	35	1.60	.05	8	13	.17	42	.18	11	2.04	.26	.08	2	2	60	5	.3	2
54360	5	35	14	33	.3	16	8	248	2.12	14	2	ND	2	80	1	2	2	55	1.25	.09	7	15	.49	109	.20	10	1.44	.19	.20	2	2	8	5	.3	2
54361	2	106	6	22	.2	7	5	325	4.94	12	2	ND	2	40	1	2	2	77	.77	.09	4	8	.35	116	.20	8	1.17	.12	.10	2	2	18	20	.4	6
54362	18	4	9	20	.5	54	35	579	4.30	8	4	ND	2	90	1	2	2	46	5.59	.16	2	20	.08	15	.01	8	.21	.07	.02	2	2	36	3	.5	4
54363	94	8	8	22	1.4	11	7	113	14.08	337	4	2	6	679	1	2	2	174	.03	.11	12	12	.03	182	.03	2	.30	.44	.13	24	2	1950	10	.3	9
54364	1	20	886	1165	43.7	3	1	82	.77	21	2	ND	2	23	26	3	83	2	.24	.01	2	4	.04	24	.01	16	.06	.01	.03	2	3	8	50	30.4	2
54365	1	24	19	36	2.4	8	4	478	1.39	28	2	ND	4	139	1	2	4	6	.64	.03	12	8	.34	46	.01	8	.44	.02	.27	2	6	1	30	1.7	3
54366	1	18	17	46	.4	20	8	326	1.87	2	2	ND	4	72	1	2	2	24	.49	.04	16	24	.46	91	.06	4	1.03	.03	.27	2	2	1	10	.2	2
54367	10	17	398	560	15.4	11	5	2114	1.27	36	2	ND	2	79	23	2	16	5	.16	.01	2	4	.06	123	.01	10	.45	.01	.20	2	6	3	30	15.1	2
54368	2	17	73	122	5.8	3	1	233	.85	11	2	ND	2	142	3	2	9	4	.76	.01	2	3	.07	219	.01	5	1.16	.14	.80	2	11	1	5	5.1	3
54369	1	18	44	22	1.1	7	3	418	1.09	17	2	ND	2	120	1	2	2	7	.03	.01	5	11	.09	62	.01	3	.32	.05	.18	2	2	1	10	.7	2
54370	1	16	31	68	4.3	8	3	980	1.59	68	2	ND	2	103	1	2	8	11	.44	.02	10	7	.05	113	.01	12	.74	.10	.36	2	4	1	20	3.7	2
54371	1	45	4273	569	24.9	4	1	201	1.37	113	2	ND	4	46	11	47	2	4	.30	.01	2	6	.03	61	.01	9	.28	.02	.20	9	57	5	440	19.4	2
STD A-1	1	30	39	185	.3	36	13	1070	2.77	10	2	ND	2	37	1	2	2	55	.62	.10	8	75	.76	288	.09	7	2.00	.02	.21	2	3	1	55	-	-

pp
S1056
P.P.S.M.A.
OSIZE

ASARCO SAMPLES TAKEN AUGUST 10th / 83

PAGE-11-

BONNIE BRAE-MILLER
ADVT
MT 10A.
Pinned specimens

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS, VANCOUVER B.C. PH: 253-3158 TELEX: 04-53124

R.E.G.

ICP GEOCHEMICAL ANALYSIS

AUG 26 1983

A .500 GRAM SAMPLE IS DIGESTED WITH 3 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 90 DEG.C. FOR 1 HOUR. THE SAMPLE IS DILUTED TO 10 MLS WITH WATER.
THIS LEACH IS PARTIAL FOR: Ca, P, Mg, Al, Ti, La, Na, K, W, Ba, Si, Sr, Cr AND B. Au DETECTION 3 ppm.
AU11 ANALYSIS FROM 10 GRAM FA+AA. HG1 ANALYSIS BY FLAMELESS AA FROM .500 GRAM SAMPLE. SAMPLE TYPE - ROCK CHIPS

DATE RECEIVED AUG 18 1983 DATE REPORTS MAILED Aug 25/83 ASSAYER D. Toyer DEAN TOYE, CERTIFIED B.C. ASSAYER

ASARCO EXPLORATION FILE # 83-1720

PAGE # 1

SAMPLE #	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	X	W	Sn	Au11	Hg1	Pt11	
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	PPM	ppb	ppb	ppb	
76835	2	1676	61259	8505	44.2	5	1	58	1.63	185	2	ND	7	257	188	281	7	2	.01	.01	7	5	.01	33	.01	4	.08	.01	.04	2	4517	20	5400	2	MILLER AD
76836	1	29	1080	325	21.7	3	1	38	.79	43	2	ND	2	14	6	11	2	2	.02	.01	2	5	.01	41	.01	3	.08	.01	.09	2	79	3	140	4	MILLER-PYL
76837	2	183	1831	1303	48.9	3	1	46	1.12	45	2	ND	2	48	24	19	38	2	1.99	.01	2	5	.01	168	.01	210	.20	.03	.19	2	122	7	100	3	BB SHAFT
76838	2	10	634	986	23.0	4	2	47	1.24	38	2	ND	2	7	19	6	30	2	.22	.01	2	5	.01	16	.01	7	.05	.01	.03	2	5	8	70	2	BB TR #
76839	7	6	382	24	40.1	4	1	67	1.53	42	2	ND	2	62	1	2	56	5	2.97	.01	2	1	.05	130	.01	81	.70	.02	.58	2	13	6	50	2	BB-VI.-C

Ag 730 ppm } require regular Assay
Pb 10,000 ppm }

SAMPLE #	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sn	Au11	Hgt	Ag1	Pt11
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	I	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	I	I	ppm	ppm	I	ppm	I	ppm	I	I	I	ppm	PPM	ppb	ppb	ppm	ppb
4 250N	1	10	15	83	.3	45	7	395	1.79	7	2	ND	4	25	1	2	2	22	.16	.15	20	13	.24	246	.10	4	3.14	.02	.12	2	2	2	40	.6	5
4 225N	1	8	20	143	.1	26	7	886	1.98	2	9	ND	4	27	1	2	2	24	.17	.04	19	14	.21	199	.06	4	1.56	.02	.17	2	2	1	30	.1	3
4 200N	1	6	54	122	1.1	23	4	361	.86	7	3	ND	2	17	1	2	2	11	.10	.02	7	6	.08	158	.06	6	1.78	.01	.04	2	2	4	30	1.1	2
4 175N	1	7	13	238	.3	20	4	1446	1.39	7	10	ND	2	33	2	2	2	20	.19	.06	7	11	.11	244	.09	5	2.42	.03	.09	2	2	1	40	.4	2
4 150N	1	10	11	68	.6	31	6	245	1.62	2	5	ND	3	27	1	2	2	21	.12	.03	14	16	.24	310	.08	3	2.43	.02	.14	2	2	3	40	.5	2
4 125N	1	6	7	73	.2	20	4	225	1.11	4	4	ND	2	25	1	2	2	17	.14	.06	10	12	.19	133	.05	2	1.23	.02	.09	2	2	2	20	.4	2
4 100N	1	5	9	89	.1	20	4	376	1.33	7	2	ND	2	27	1	2	2	21	.14	.16	8	9	.11	128	.08	3	2.45	.03	.06	2	2	2	30	.1	2
4 75N	1	11	18	91	.3	19	6	604	1.69	6	2	ND	3	81	2	2	2	25	.43	.06	18	22	.36	186	.06	2	1.34	.01	.17	2	2	9	20	.5	2
4 50BN	1	11	16	97	1.2	29	7	337	1.91	7	6	ND	3	36	1	2	2	28	.17	.05	11	22	.38	254	.10	3	2.88	.02	.19	2	2	2	30	1.3	2
4 50AN	1	10	12	104	.8	20	6	524	1.70	4	2	ND	3	44	1	2	2	26	.22	.05	12	21	.35	189	.08	3	2.17	.02	.17	2	2	1	20	.7	2
4 50N	1	8	11	102	.7	24	7	290	1.84	3	5	ND	3	33	1	2	2	28	.16	.03	11	27	.46	169	.08	15	2.18	.02	.18	2	2	6	30	.5	2
4 25N	1	4	8	222	.2	12	4	229	1.18	2	2	ND	2	23	1	2	2	22	.12	.04	7	12	.18	172	.05	4	1.16	.02	.06	2	2	3	20	.4	2
4 0N	1	12	22	213	1.9	29	7	604	1.80	5	2	ND	3	27	2	2	2	27	.13	.16	10	21	.33	362	.09	4	2.64	.02	.13	2	2	3	60	2.0	2
STD A-1	1	30	39	186	.3	36	13	1085	2.82	9	2	ND	2	38	1	2	2	59	.59	.09	8	74	.75	219	.08	6	2.08	.02	.20	2	2	-	50	.3	-
4 500N	1	9	6	50	.1	21	6	232	1.65	3	2	ND	2	30	1	2	2	24	.15	.06	11	22	.35	122	.06	3	1.56	.01	.13	2	2	5	10	.2	4
4 475N	1	16	12	52	.8	56	6	459	2.16	5	3	ND	3	63	1	2	2	24	.28	.10	14	20	.128	342	.10	4	3.38	.03	.13	2	2	1	50	.9	2
4 450N	1	7	5	44	.4	34	4	342	1.53	2	2	ND	2	31	1	2	2	18	.18	.16	10	15	.20	187	.08	3	2.44	.02	.11	2	2	1	40	.3	2
4 425N	1	11	8	31	.4	20	4	147	1.39	2	2	ND	2	25	1	2	2	21	.13	.02	20	18	.29	89	.06	3	1.20	.02	.13	2	2	2	10	.3	2
4 400N	1	8	7	29	.1	14	5	183	1.28	2	2	ND	2	32	1	2	2	20	.15	.03	13	18	.27	89	.05	3	.87	.01	.12	2	2	2	20	.1	2
4 375N	1	9	7	42	.2	25	5	352	1.42	2	2	ND	2	36	1	2	2	19	.19	.19	9	14	.20	125	.07	3	2.15	.02	.12	2	2	1	10	.3	2
4 350N	1	7	6	40	.2	24	4	214	1.33	2	2	ND	2	30	1	2	2	21	.17	.13	12	17	.21	131	.07	4	1.82	.02	.11	2	2	1	20	.1	2
4 325N	1	6	8	51	.2	23	3	438	1.38	4	6	ND	2	49	1	2	2	17	.20	.13	7	11	.12	190	.08	3	2.29	.02	.09	2	2	1	20	.1	2
4 300N	1	7	8	89	.2	20	4	477	1.59	2	2	ND	2	46	1	2	2	20	.19	.04	10	11	.13	191	.08	4	2.50	.02	.09	2	2	1	30	.4	2
4 275N	1	12	10	138	.6	33	7	182	1.93	3	4	ND	3	27	1	2	2	25	.10	.01	21	32	.60	123	.10	3	1.77	.02	.39	2	2	1	20	.4	3
STD A-1/FK-AU/PT	1	31	38	184	.3	36	12	1047	2.86	9	2	ND	2	38	1	2	2	59	.59	.09	8	76	.75	276	.08	7	2.06	.02	.19	2	2	54	50	.3	98

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Soil Samples taken August 23rd by Araco