GEOLOGY AND GEOCHEMISTRY

OF THE

VILLALTA CLAIM GROUP

NANAIMO MINING DIVISION

N.T.S. 92 F/1W

LATITUDE 49°05'North LONGITUDE 124°27½'West

CLAIM OWNER: CANAMIN RESOURCES LTD.

CLAIM OPERATOR: ASARCO EXPLORATION COMPANY
OF CANADA LIMITED

NOVEMBER 15, 1982 D. M. FLETCHER

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SUMMARY

The Villalta Property gold mineralization is hosted in a "hematite" formation positioned beneath an unconformity separating basal Permian Sicker volcanoclastics and limestone from overlying Cretaceous conglomerates of the Nanaimo Group. Additional gold mineralization is associated with pyrite and pyrrhotite pods positioned randomly in the limestone.

A geochemical soil survey covering 16 line kilometers was completed over the mineralized area and astride the limestone-conglomerate contact zone which bounds the auriferous "hematite" formation. The purpose and scope of the soil survey was to test for concealed extensions or additional pathfinder geochemical elements normally associated with gold mineralization.

The possibility that the "hematite" ore positioned near the unconformity is stratabound and extends laterally can only be tested by additional drilling along the limestone-conglomerate contact.

LOCATION AND ACCESS

The Villalta claim group lies in the south east corner of the Nanaimo Lakes map area. The property is positioned in the Nanaimo Mining Division (N.T.S. 92 F 1W) about 5.0 kilometers northwest of Fourth Lake and is easily accessible by road from Nanaimo.

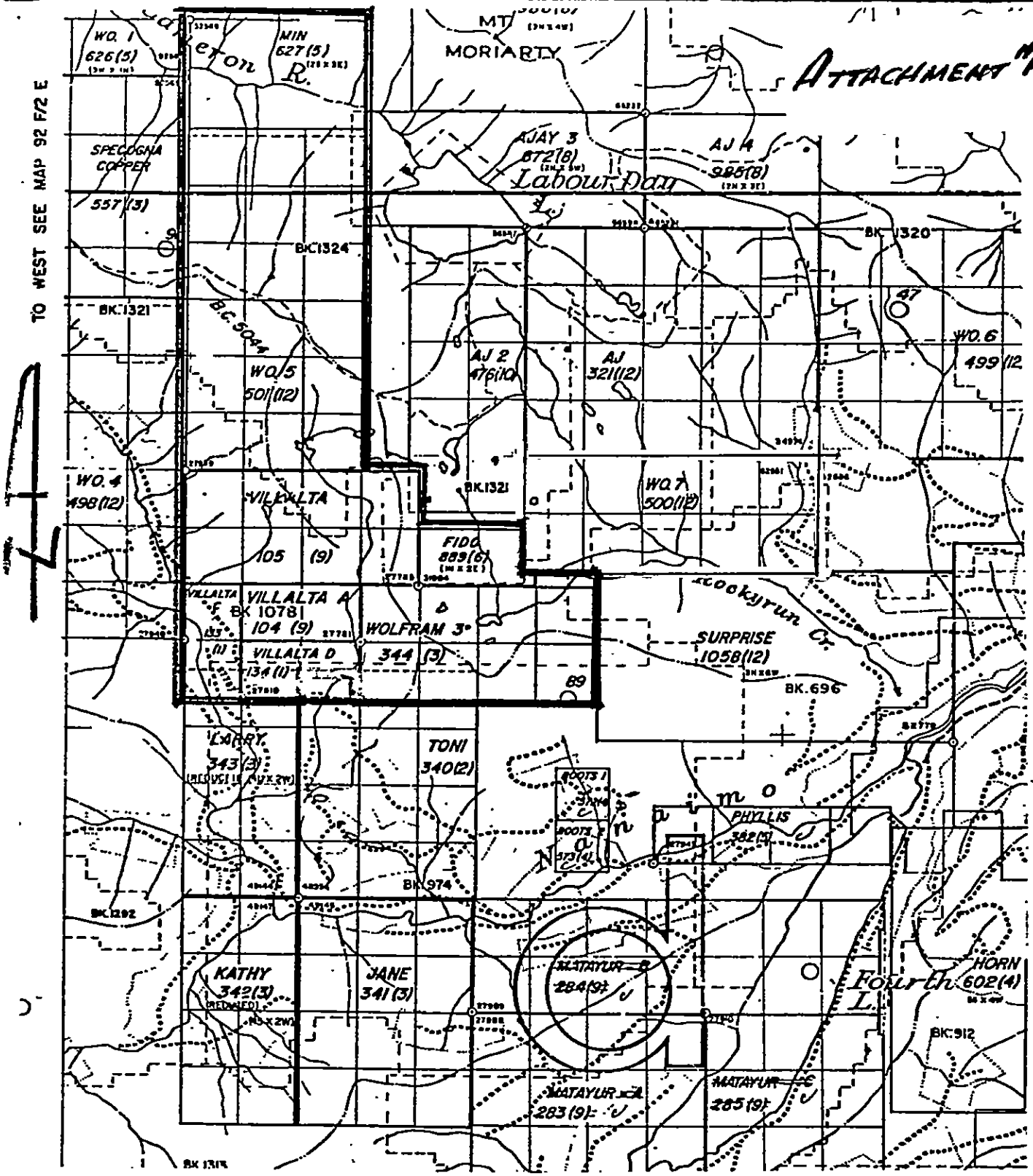
CLAIMS AND OWNERSHIP

The Villalta claims were staked by Mr. E. Specogna in 1976 and are currently held by Canamin Resources Ltd. The claims were optioned to Asarco Exploration Company of Canada Limited by an agreement with Canamin Resources Ltd. dated May 31, 1982. Asarco is the current operator of the property. A listing of the claims is as follows:

Claim Name	Record No.	Month	No. of Units
FIDO	889	6	2
WOLFRAM #3	344	3	8
VILLALTA	105	9	8
VILLALTA A	104	9	2
VILLALTA C	133	1	2
VILLALTA D	134	1	2
WO.5	501	12	18
MIN	627	5	6

See ATTACHMENT "A"

ATTACHMENT "A"



CLAIMS

CANAMIN RESOURCES LTD.

ASARCO	Vancouver		
VILLALTA PROPERTY			
Drawn by	Date	N.T.S.	SCALE
DMF	NOV 82	92F/W	1:50000

VanCal

GENERAL SETTING

The Villalta Property lies astride Sicker Group volcanic and sedimentary rocks of Permian age, unconformably overlain by Cretaceous sedimentary rocks of the Nanaimo Group. Significant gold mineralization hosted within an iron formation is positioned beneath the unconformity. The claims lie along a south facing slope which was logged and is now covered with a light veneer of debris and small, patchily scattered brush.

HISTORY

Previous work carried out prior to the Canamin agreement with Asarco consists of geological mapping, trenching and diamond drilling of 21 drill holes which confirm the presence of significant gold mineralization hosted in a "hematite" horizon positioned below the unconformity. In addition associated gold values occur with pyrite and pyrrhotite pods, veins and stringers positioned randomly in the underlying limestone.

Asarco's prospecting and geochemical sampling of the property was executed primarily to test for extensions and additions to the auriferous "hematite" zone and to determine the lateral extent of gold bearing sulfide bodies utilizing pathfinder geochemical elements normally associated with gold mineralization.

GEOLOGY AND MINERALIZATION

The property is underlain by Sicker Group volcanics, clastic sediments and limestone. Poorly sorted conglomerate and hematitic mudstones of the Cretaceous Nanaimo Group are positioned above an unconformity developed atop the Sicker limestone.

The auriferous "hematite" formation occurs below this unconformity and maybe separated from it by a sequence of volcanoclastics and/or andesite. The "hematite" formation appears to occupy a depression, elongated north-northeast, it appears fault bounded or possibly controlled by karst development in the limestone. See ATTACHMENT "C".

The massive sulfide bodies carrying appreciable gold values are rarely exposed but best seen in drill core. Those sulfide bodies are randomly distributed throughout the limestone in the drill area. These sulfide zones are comprised of pyrite, pyrrhotite, chalcopyrite, arsenopyrite, with rare galena and magnetite. The sulfide pods are most likely porosity-permeability controlled occurring randomly in vugs, fracture zones and within fault zones. Spatial density of these mineralized zones are not compact and they do not reflect an anastomosing vein, veinlet, or stringer sulfide system.

GEOCHEMICAL FIELD PROCEDURE

A control contour map of the area was prepared at a scale of 1:5000 with contour intervals at 10 meters. See ATTACHMENT "B".

A soil survey grid was established by topo-chain and compass. Approximately 650 soil samples were gathered with 25 meter sample spacing along lines no more than 50 meters apart. A total of 16 line kilometers of sampling was completed at the Villalta Property. Each soil sample was taken at a soil depth of 15-20 centimeters, bagged, packaged and dispatched to Acme Analytical Laboratories in Vancouver for analyses.

ANALYTICAL PROCEDURES

All soil samples were dried at 75°C and sieved to minus 80 mesh. ICP geochemical analysis was determined by taking a .500 gram sample digested with 3 milliliters of 3:1:3 nitric acid to hydrochloric acid to water at 90°C for 1 hour. The sample was diluted to 10 milliliters with water. Results are reported in ppm except for: Fe, Ca, P, Ba, Ti, Al, Na and K which are in percent. The leach is partial for Ca, P, Mg, Al, Ti, La, Na, K, Cl, and Cr. IS = Internal Standard. ICP results reported are for the following elements, Mn, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, Al, Na and K. Au++ analysis was determined taking 10 - 30 gram samples subjected to fire assay preconcentration techniques to produce silver beads which are dissolved and Au is determined in solution by atomic absorption. Ag++ analysis is by atomic absorption. Hg++ analysis is determined by cold vapour AA using F. & J. Scientific Hg assembly. Au aliquot of the extract is added to a stannous chloride/

hydrochloric acid solution. The reduced Hg is swept out of solution and passed into the Hg cell where it is measured by A.A.

STATISTICAL EVALUATION OF RESULTS

Gold - Please refer to ATTACHMENT "D" depicting gold values plotted in parts per billion over the grid. The highest gold response in soils was 5200 ppb. located at grid 4800N, 4925E positioned 50 meters south of, and down slope of, the principal surface exposure of "hematite" ore. The attached probability plot for gold suggests the following anomalous parameters,

> 630 ppb	= anomalous
450 - 629 ppb	= probably anomalous
325 - 449 ppb	= possibly anomalous
< 325 ppb	= background

Silver - Refer to ATTACHMENT "E" indicating soil response for silver. The highest silver soil response was 4.8 ppm positioned over the "hematite" zone at 4850N, 4825E. Probability plot for silver indicates the following anomalous parameters,

> 3.0 ppm	= anomalous
1.3 - 2.9 ppm	= probably anomalous
0.8 - 1.3 ppm	= possibly anomalous
< 0.8 ppm	= background

Mercury - Soil response for mercury is plotted on ATTACHMENT "F". The suggested parameters using a probability plot are,

> 200 ppb	= anomalous
80 - 199 ppb	= possibly anomalous
< 80 ppb	= background

Arsenic - Soil response for arsenic depicts a linear, enechelon northeast trend suggesting a definite structural control, see ATTACHMENT "G" demonstrating this feature. A probability plot suggests,

▷ 140 ppm	= anomalous
100 - 339 ppm	= probably anomalous
50 - 99 ppm	= possibly anomalous
◁ 49 ppm	= background

Probability plots for iron and manganese (ATTACHMENTS "H" & "I") indicate the general distribution of each of these elements. Inspection of soil response for each element does not readily depict rock type trend, structural trends or mineral trend in oxide form or in sulfide form.

CONCLUSION

The possibility that the "hematite" ore positioned along the limestone - conglomerate unconformable contact is stratabound and may extend laterally can only be tested by additional drilling. Location of percussion drilling sites to test the paleosurface positioned beneath the unconformity and hosting the gold bearing "hematite" formation could be controlled utilizing geochemical response from percussion drill samples.

APPENDIX 1

STATEMENT OF EXPENDITURES

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28 APRIL - 27 AUGUST 1982

1.	SALARIES	
	P. Conroy $66/day x 61 days	$ 4026
	M. Specogna $37.50/day x 46 days	1725
2.	ACCOMMODATION, SUPPLIES, EQUIPMENT	4780
3.	PHOTOGRAMMETRY - McELHANNEY SURVEYING	2200
4.	GEOCHEMICAL SAMPLING	
	650 Soil Samples @ $14/sample	9100
5.	VEHICLE EXPENSE	
	6 weeks @ $125/wk.	750
	TOTAL EXPENDITURE	$22581

STATEMENTS OF EXPLORATION AND DEVELOPMENT

1.	SUBMITTED 28 MAY 1982	$ 1600
2.	SUBMITTED 28 MAY 1982	600
3.	SUBMITTED 10 SEPT. 1982	19600
	TOTAL 1, 2, & 3	$21800

APPENDIX 2

STATEMENT OF QUALIFICATIONS

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I, David McLean Fletcher of Vancouver, British Columbia, Canada, certify that,

1. I am a graduate in Geological Engineering (B.Ap.Sc. 1956) of the University of British Columbia.

2. I have practised my profession as an exploration geologist continuously for the past 26 years.

3. I am a registered Professional Engineer in the Province of British Columbia and Ontario, Canada.

4. I supervised the geological and geochemical work accomplished at the Villalta Claims from April 1982 through August 1982.

D. M. Fletcher
November 15, 1982

APPENDIX 3

LIST OF ANALYTICAL RESULTS

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

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 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.
AG1 ANALYSIS BY AA. AU1 ANALYSIS BY AA FROM 10 GRAM SAMPLE. HG1 ANALYSIS BY FLAMELESS AA FROM .500 GRAM SAMPLE. SAMPLE TYPE - SOIL/SILT

DATE RECEIVED JULY 9 1982 DATE REPORTS MAILED July 19/82 ASSAYER D. Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

ASARCO FILE#82-0553

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	Au1 ppb	Hg1 ppb	Ag1 ppm
V4500N 4800E	1	44	14	52	.5	14	7	335	4.69	5	2	ND	2	13	1	2	2	139	.18	.06	4	39	.54	40	.29	8	2.53	.02	.02	2	6	100	.6
V4500N 4825E	1	45	11	54	.4	10	6	358	4.50	5	2	ND	2	14	1	2	2	143	.19	.08	4	37	.31	32	.31	6	1.88	.02	.02	2	11	110	.4
V4500N 4850E	1	121	15	69	.1	24	12	467	6.04	12	2	ND	2	12	1	2	3	182	.22	.12	4	68	.82	37	.40	10	4.93	.01	.03	2	7	90	.3
V4500N 4875E	1	106	13	64	.1	27	13	427	5.89	7	2	ND	2	14	1	2	2	187	.29	.06	5	70	.86	49	.42	9	3.54	.02	.04	2	12	80	.2
V4500N 4900E	1	169	15	182	.1	46	24	1362	6.40	28	2	ND	2	29	2	2	3	169	.91	.06	7	86	1.62	232	.37	12	4.36	.03	.07	2	16	70	.4
V4500N 4925E	1	146	13	602	.1	36	21	914	5.50	445	2	ND	2	32	3	2	2	140	.58	.07	6	63	1.77	91	.26	9	4.02	.01	.06	2	18	80	.3
V4500N 4950E	1	114	17	809	.5	39	21	2649	5.34	176	2	ND	2	22	6	2	4	135	.59	.07	9	72	1.78	136	.26	9	4.03	.02	.07	2	12	130	.6
V4500N 4975E	1	148	11	107	.1	39	21	1140	5.51	40	2	ND	2	26	1	2	3	161	.72	.07	6	77	2.34	69	.34	10	3.90	.02	.07	2	8	50	.3
V4500N 5000E	1	47	9	86	.2	20	10	306	5.09	24	3	ND	2	20	1	2	3	144	.18	.06	4	50	.93	47	.25	8	2.98	.01	.03	2	5	100	.4
V4500N 5025E	1	10	6	32	.2	7	5	211	3.40	3	2	ND	2	40	1	2	2	84	.24	.03	4	15	.66	14	.21	6	1.32	.03	.02	2	17	15	.1
V4500N 5050E	1	12	5	46	.2	12	7	300	3.42	2	2	ND	2	4	1	2	2	140	.06	.02	3	45	.95	71	.01	5	3.22	.01	.07	2	6	50	.4
V4500N 5075E	1	20	8	40	.1	11	6	292	6.57	3	2	ND	2	6	1	2	2	143	.09	.03	6	41	.78	38	.08	12	2.01	.01	.09	2	7	30	.3
V4500N 5100E	1	15	9	36	.2	8	4	152	4.36	6	2	ND	2	12	1	2	2	136	.13	.03	4	32	.45	27	.22	7	1.94	.01	.03	2	5	75	.3
V4500N 5125E	1	33	7	48	.2	16	10	185	4.32	6	2	ND	2	9	1	2	3	107	.07	.02	5	24	1.17	48	.04	8	2.82	.02	.09	2	15	40	.4
V4500N 5150E	1	5	4	26	.1	8	5	138	4.87	3	2	ND	2	12	1	2	2	91	.10	.02	5	29	.67	43	.06	8	1.78	.02	.07	2	42	40	.3
V4500N 5175E	1	17	11	89	.3	14	11	603	4.81	8	2	ND	2	7	1	2	2	144	.12	.04	3	45	2.23	49	.20	9	4.13	.02	.10	2	5	40	.4
V4500N 5200E	1	55	20	78	.2	13	9	782	5.12	11	2	ND	2	14	1	2	3	133	.25	.09	4	30	1.06	46	.21	11	3.69	.02	.09	2	4	150	.5
V4500N 5225E	1	42	16	61	.2	11	6	330	4.95	7	2	ND	2	11	1	2	2	137	.15	.07	4	31	.71	37	.21	8	3.57	.01	.05	2	22	70	.5
V4500N 5250E	1	16	11	45	.4	5	2	379	3.34	4	2	ND	2	5	1	2	2	118	.09	.03	4	16	.73	31	.21	5	2.15	.02	.06	2	3	80	.6
V4500N 5275E	1	24	8	34	.4	4	2	252	3.34	5	2	ND	2	8	1	2	2	90	.09	.04	5	16	.23	22	.11	5	2.09	.01	.03	2	22	70	.5
V4500N 5300E	1	145	16	97	.7	32	16	562	6.53	16	2	ND	2	13	1	2	3	147	.20	.06	7	51	1.10	72	.20	13	5.43	.02	.08	2	9	240	.8
V4550N 4650E	1	28	8	51	.2	13	6	317	3.27	8	2	ND	2	12	1	2	2	73	.15	.03	5	29	.46	68	.04	6	2.53	.02	.04	2	6	60	.2
V4550N 4675E	1	28	9	53	.1	14	6	178	3.55	9	2	ND	2	12	1	2	2	79	.12	.03	5	32	.45	61	.05	7	3.00	.02	.04	2	5	30	.2
V4550N 4700E	1	24	8	48	.2	11	5	155	3.04	3	2	ND	2	10	1	2	2	75	.12	.02	5	29	.34	56	.06	6	2.29	.02	.03	2	6	65	.2
V4550N 4725E	1	20	6	34	.1	8	5	201	2.92	5	2	ND	2	14	1	2	2	82	.18	.03	5	24	.41	46	.08	5	1.69	.02	.03	2	13	40	.2
V4550N 4750E	1	109	11	84	.1	33	15	720	5.22	8	2	ND	2	11	1	2	3	133	.18	.06	4	63	1.16	84	.22	9	5.16	.02	.04	2	8	120	.2
V4550N 4775E	1	85	12	75	.2	25	12	866	5.37	12	2	ND	2	9	1	2	3	130	.13	.12	4	62	.81	52	.18	10	4.13	.01	.04	2	20	140	.5
V4550N 4800E	1	8	8	22	.1	6	4	886	2.84	4	2	ND	2	42	1	2	2	93	.23	.04	4	25	.34	21	.22	5	1.17	.02	.01	2	2	70	.3
V4550N 4825E	1	152	15	72	.2	36	14	488	6.99	15	2	ND	2	8	1	2	3	197	.12	.07	5	96	1.19	48	.42	11	5.49	.02	.03	2	4	140	.2
V4550N 4850E	1	146	16	65	.1	32	13	519	6.01	11	2	ND	2	12	1	2	3	183	.22	.07	3	78	1.13	38	.43	11	4.75	.01	.03	2	7	120	.3
V4550N 4875E	1	9	11	15	.1	4	2	230	2.77	4	2	ND	2	11	1	2	2	149	.17	.03	4	25	.12	20	.46	5	.74	.02	.02	2	8	40	.1
V4550N 4900E	1	51	12	53	.1	14	6	174	4.72	8	2	ND	2	11	1	2	2	159	.19	.03	4	45	.45	39	.30	8	2.36	.02	.03	2	9	80	.3
V4550N 4925E	1	23	11	179	.4	9	4	100	3.79	44	2	ND	2	16	1	2	2	126	.20	.02	5	35	.30	44	.27	8	1.54	.02	.02	2	6	50	.4
V4550N 4950E	1	134	15	98	.2	33	16	656	5.55	23	2	ND	2	14	1	2	2	163	.36	.07	5	70	1.17	65	.37	9	4.06	.02	.04	2	7	120	.3
V4550N 4975E	1	16	10	53	.4	11	7	337	5.97	31	2	ND	2	5	1	2	2	146	.06	.05	5	42	1.05	41	.11	10	2.53	.01	.07	2	3	50	.5
V4550N 5000E	1	31	13	68	.2	12	8	311	4.07	55	2	ND	2	11	1	2	2	111	.14	.05	5	36	.78	53	.15	7	2.59	.01	.04	2	12	55	.3
V4550N 5025E	1	4	5	21	.1	4	3	173	3.00	8	2	ND	2	12	1	2	2	77	.15	.02	4	10	.37	30	.16	5	1.09	.02	.04	2	2	35	.2
STD A-1	1	30	40	172	.4	33	11	921	2.77	7	2	ND	2	34	1	2	2	53	.59	.09	8	70	.74	269	.08	8	1.94	.02	.20	2	2	50	.3

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	Au* ppb	Hg* ppb	Ag* ppm
V4550N 5050E	1	45	6	35	.5	10	7	874	3.56	13	2	ND	2	11	1	3	3	109	.47	.07	5	23	.80	46	.12	2	1.62	.02	.07	2	2	110	.6
V4550N 5075E	2	79	15	97	1.1	13	10	516	5.12	24	2	ND	2	8	1	4	3	95	.10	.09	11	28	.75	94	.03	2	3.44	.01	.10	2	6	55	1.1
V4550N 5100E	1	7	6	23	.4	4	2	176	1.65	6	2	ND	2	7	1	2	2	71	.08	.02	5	14	.29	45	.10	2	1.53	.02	.05	2	2	60	.3
V4550N 5125E	1	167	45	212	.3	54	27	606	5.49	171	2	ND	2	16	1	3	4	131	.44	.06	7	75	1.36	111	.26	3	4.68	.02	.08	2	22	110	.3
V4550N 5150E	1	119	8	105	.3	34	20	504	6.20	20	2	ND	2	17	1	6	4	113	.14	.03	6	48	.70	129	.01	2	3.86	.01	.09	2	5	75	.2
V4550N 5175E	1	17	8	62	.2	7	8	518	4.13	20	2	ND	2	8	1	4	4	97	.10	.05	7	16	.84	60	.02	3	2.56	.02	.08	2	6	60	.2
V4550N 5200E	1	28	10	56	.2	8	5	367	4.51	13	2	ND	2	8	1	2	4	142	.08	.04	5	21	.82	70	.12	3	2.98	.02	.06	2	6	65	.2
V4550N 5225E	1	36	11	43	.2	17	9	549	5.16	3	2	ND	2	19	1	2	2	185	.26	.11	5	47	.63	48	.37	2	2.12	.02	.09	2	5	20	.1
V4550N 5250E	1	23	10	24	.3	10	5	140	4.56	7	2	ND	2	20	1	2	2	208	.26	.04	6	43	.28	36	.29	3	1.63	.02	.03	2	12	70	.3
V4550N 5275E	1	139	11	58	.6	19	10	432	5.45	8	2	ND	2	26	1	2	3	162	.22	.06	6	45	.61	46	.26	3	3.36	.02	.06	2	4	75	.6
V4550N 5300E	1	19	8	16	.1	8	3	140	2.83	2	2	ND	2	12	1	2	2	147	.14	.02	6	21	.23	28	.24	2	1.29	.01	.04	2	3	40	.1
STD A-1	1	30	45	178	.3	35	12	986	2.71	8	2	ND	2	35	1	2	3	56	.65	.10	9	75	.77	272	.09	5	1.99	.02	.20	2	2	55	.3
V4600N 4600E	1	36	13	89	.2	13	11	1094	3.54	14	2	ND	2	11	1	2	4	70	.16	.06	9	33	.49	161	.01	2	2.67	.01	.09	2	15	80	.3
V4600N 4625E	1	32	4	66	.3	18	9	217	3.68	17	2	ND	2	13	1	2	4	84	.12	.05	7	38	.47	81	.02	2	3.40	.02	.05	2	2	30	.2
V4600N 4650E	1	20	6	69	.2	14	9	357	2.76	10	2	ND	2	16	1	2	3	62	.30	.03	7	27	.47	148	.02	2	2.39	.02	.05	2	3	70	.1
V4600N 4675E	1	6	2	14	.2	3	2	104	1.08	2	2	ND	2	11	1	2	2	44	.15	.02	6	10	.18	38	.04	2	1.11	.02	.04	2	2	30	.2
V4600N 4700E	1	17	6	31	.4	8	3	196	2.16	15	2	ND	2	12	1	2	2	57	.18	.04	6	21	.26	49	.02	2	1.59	.02	.04	2	9	100	.3
V4600N 4725E	1	25	8	48	.6	12	6	370	3.48	6	2	ND	2	14	1	2	3	95	.15	.05	7	34	.44	52	.10	2	2.99	.02	.04	2	23	110	.6
V4600N 4750E	1	57	12	85	.2	19	14	2000	3.67	3	2	ND	2	19	1	2	4	113	.38	.11	8	45	.58	107	.16	5	3.86	.03	.13	2	12	60	.3
V4600N 4775E	1	43	12	55	.3	16	9	922	3.52	11	2	ND	2	11	1	2	3	105	.23	.09	5	42	.53	57	.17	3	2.62	.01	.04	2	7	160	.2
V4600N 4800E	1	59	12	53	.4	24	11	516	5.11	7	2	ND	2	13	1	2	3	181	.25	.04	6	65	.75	61	.34	2	3.48	.01	.04	2	4	80	.2
V4600N 4825E	1	62	16	87	.3	25	11	300	5.77	9	2	ND	2	11	1	2	3	184	.21	.05	6	69	.74	62	.37	4	3.57	.01	.04	2	2	90	.3
V4600N 4850E	1	176	15	171	.7	54	21	483	6.63	39	2	ND	2	12	1	2	4	195	.29	.04	6	96	1.62	112	.42	4	5.41	.02	.06	2	9	130	.7
V4600N 4875E	1	183	13	149	.2	50	25	1702	6.09	21	2	ND	2	28	1	2	4	180	.97	.06	8	95	1.78	175	.42	5	4.61	.03	.08	2	10	50	.3
V4600N 4900E	1	157	15	165	.2	46	23	948	5.59	21	2	ND	2	25	1	2	4	170	.85	.05	7	87	1.69	125	.42	3	4.33	.03	.06	2	7	80	.3
V4600N 4925E	1	173	20	193	.4	45	21	1014	5.58	45	2	ND	2	17	1	2	4	161	.72	.05	10	81	1.60	109	.41	3	4.92	.02	.05	2	8	55	.5
V4600N 4950E	1	85	12	98	.4	29	15	618	4.51	14	2	ND	2	15	1	2	4	142	.32	.04	6	67	.80	60	.41	4	3.87	.02	.04	2	7	90	.4
V4600N 4975E	1	64	14	91	.2	19	12	1358	4.43	15	2	ND	2	21	1	2	3	153	.33	.04	6	54	.59	84	.41	3	2.94	.02	.04	2	5	130	.3
V4600N 5000E	1	23	14	104	.2	28	17	6202	4.12	27	2	ND	3	42	2	2	7	127	.75	.08	4	77	.85	169	.37	5	2.61	.04	.06	2	3	85	.3
V4600N 5275E	1	166	9	63	.1	34	22	1089	6.56	5	2	ND	2	20	1	2	4	143	.22	.04	9	61	.91	240	.01	4	4.04	.01	.15	2	4	50	.5
V4650N 5230E	1	225	13	87	.3	38	21	2151	5.33	12	2	ND	2	43	1	2	4	161	.59	.11	5	67	1.13	120	.27	3	4.13	.02	.06	2	3	140	.4
V4650N 4600E	1	37	4	67	.3	18	7	200	3.17	14	2	ND	2	12	1	2	3	76	.13	.04	6	39	.48	81	.03	2	3.42	.01	.05	2	2	70	.4
V4650N 4625E	1	42	8	59	.2	22	9	290	3.55	12	2	ND	2	13	1	2	3	80	.15	.03	6	43	.64	80	.02	3	3.40	.02	.06	2	2	30	.3
V4650N 4650E	1	21	5	35	.1	9	5	137	2.40	3	2	ND	2	17	1	2	2	69	.21	.02	6	22	.35	60	.03	2	1.99	.02	.03	2	2	50	.2
V4650N 4675E	1	30	5	44	.4	13	8	379	3.31	5	2	ND	2	17	1	2	3	88	.20	.03	6	29	.44	76	.05	2	2.50	.01	.05	2	3	60	.5
V4650N 4700E	1	118	8	48	.9	10	7	236	3.52	15	4	ND	2	7	1	2	5	81	.08	.28	6	47	.43	38	.06	7	9.81	.01	.04	2	40	470	1.0
V4650N 4725E	1	41	10	63	.6	13	8	560	3.58	7	2	ND	2	14	1	2	3	100	.18	.11	5	34	.66	50	.12	2	3.14	.02	.06	2	4	150	.7
V4650N 4750E	1	10	6	21	.2	4	3	1237	1.97	2	3	ND	2	17	1	2	2	59	.20	.05	4	8	.25	55	.07	2	1.68	.02	.04	2	3	50	.3

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	Au* ppb	Hg* ppb	Ag* ppm
V4650N 4775E	1	8	5	16	.2	3	2	619	1.94	4	2	ND	2	18	1	2	2	56	.17	.03	4	9	.18	62	.06	2	1.33	.02	.04	2	2	65	.2
V4650N 4800E	1	54	11	40	.3	15	7	462	4.15	8	2	ND	2	9	1	2	3	112	.14	.09	5	40	.52	42	.15	2	3.23	.01	.04	2	11	130	.4
V4650N 4825E	1	129	15	200	1.0	40	22	1218	5.58	44	2	ND	2	26	1	2	4	127	.82	.06	9	67	1.43	196	.24	3	3.63	.03	.08	2	46	120	.9
V4650N 4850E	1	60	14	99	.3	19	11	501	4.45	25	2	ND	2	10	1	2	3	109	.20	.06	6	42	.64	66	.10	2	3.30	.02	.05	2	10	100	.3
V4650N 4875E	1	217	13	82	.2	54	24	939	6.44	8	2	ND	2	34	1	2	4	198	.76	.05	8	105	1.97	173	.44	2	5.09	.02	.07	2	9	70	.2
V4650N 4900E	1	39	15	106	.5	14	8	374	3.96	24	2	ND	2	10	1	2	2	104	.19	.06	5	37	.57	61	.14	2	2.77	.02	.04	2	10	60	.5
V4650N 4925E	1	105	16	124	.8	28	16	483	5.46	19	2	ND	2	10	1	2	4	161	.18	.06	5	66	.99	55	.34	2	5.07	.02	.04	2	6	140	.6
V4650N 4950E	1	20	9	57	.5	12	8	1025	3.69	12	2	ND	2	10	1	2	3	111	.25	.06	5	38	.62	80	.14	2	1.87	.02	.07	2	5	30	.5
V4650N 4975E	1	71	21	54	.3	12	9	1039	3.07	9	2	ND	2	10	1	4	2	94	.19	.04	7	33	.42	49	.21	2	1.55	.02	.05	2	3	60	.4
V4650N 5000E	1	28	17	68	.4	11	8	343	4.02	8	2	ND	2	12	1	2	2	112	.16	.04	7	34	.40	60	.29	2	2.25	.02	.05	2	15	55	.3
V4700N 4600E	1	82	7	75	.3	38	20	381	4.91	61	2	ND	2	11	1	2	4	98	.14	.04	6	58	.91	127	.04	2	4.70	.02	.06	2	4	60	.2
V4700N 4625E	1	17	4	32	.3	9	5	159	2.73	15	2	ND	2	13	1	2	2	72	.14	.03	5	23	.35	53	.04	2	1.76	.02	.04	2	2	60	.2
V4700N 4650E	1	15	7	28	.3	8	5	227	1.96	9	2	ND	2	11	1	2	2	54	.15	.03	5	18	.25	51	.04	2	1.68	.02	.04	2	2	30	.1
V4700N 4675E	1	17	4	45	.2	14	6	215	2.78	15	2	ND	2	10	1	2	3	61	.11	.03	6	30	.38	69	.01	2	2.24	.02	.05	2	2	60	.2
V4700N 4700E	1	25	5	45	.3	15	7	285	3.18	15	2	ND	2	11	1	2	3	65	.11	.04	6	35	.43	60	.02	2	2.66	.02	.07	2	2	40	.2
V4700N 4725E	1	44	6	48	.2	16	6	222	3.74	16	2	ND	2	13	1	2	3	84	.13	.05	6	42	.48	65	.03	2	3.04	.03	.06	2	2	90	.3
V4700N 4750E	1	13	7	45	.2	7	6	515	2.72	6	2	ND	2	13	1	2	3	69	.13	.03	9	18	.34	66	.01	2	2.50	.02	.06	2	16	20	.1
V4700N 4775E	1	11	5	29	.3	5	4	223	2.66	4	2	ND	2	10	1	2	2	69	.10	.02	10	17	.30	39	.03	2	1.73	.03	.04	2	5	75	.2
V4700N 4800E	1	102	13	96	.3	25	26	1553	4.91	15	2	ND	2	12	1	2	6	108	.25	.12	8	51	.72	77	.09	2	4.74	.01	.04	2	15	190	.3
V4700N 4825E	1	59	9	94	.3	19	8	232	5.72	11	2	ND	2	10	1	2	4	136	.12	.09	6	61	.52	58	.09	2	4.74	.02	.05	2	3	50	.3
V4700N 4850E	1	90	13	209	.5	24	14	740	4.85	43	2	ND	2	16	1	2	4	112	.41	.06	8	47	.78	112	.10	2	3.41	.02	.06	2	26	80	.4
V4700N 4875E	1	34	12	81	.3	15	7	235	4.53	36	2	ND	2	10	1	2	4	119	.15	.05	6	39	.45	58	.15	2	2.59	.01	.04	2	13	65	.3
V4700N 4900E	1	21	9	59	.3	8	4	184	3.84	14	2	ND	2	9	1	2	2	105	.12	.03	6	27	.31	40	.09	2	2.10	.02	.04	2	10	30	.2
V4700N 4925E	1	25	12	59	.4	13	9	1564	3.73	8	2	ND	2	12	1	2	3	110	.23	.05	5	38	.51	73	.19	2	2.07	.02	.05	2	5	80	.4
V4700N 4950E	1	41	11	81	.3	16	.8	377	4.31	15	2	ND	2	12	1	2	2	118	.17	.06	6	45	.49	72	.18	2	3.08	.02	.04	2	6	50	.4
V4700N 4975E	1	42	16	108	.3	17	10	797	4.12	22	2	ND	2	15	1	2	3	105	.21	.05	7	41	.54	80	.16	3	3.25	.04	.08	2	8	60	.5
V4700N 5000E	1	39	23	156	.6	21	11	746	4.44	15	2	ND	2	13	1	2	4	120	.17	.06	12	46	.39	102	.16	2	2.58	.01	.04	2	12	70	.7
V4750N 4600E	1	20	6	39	.2	12	6	245	2.64	10	2	ND	2	12	1	2	3	62	.14	.03	6	27	.34	77	.02	2	2.37	.02	.04	2	12	30	.2
V4750N 4625E	1	45	8	66	.2	19	15	731	4.33	5	2	ND	2	16	1	2	3	123	.24	.04	5	35	1.50	84	.07	2	3.36	.02	.07	2	3	65	.3
V4750N 4650E	1	25	5	29	.3	9	5	202	2.67	10	2	ND	2	17	1	2	2	77	.18	.03	5	20	.36	63	.05	2	1.84	.02	.04	2	6	30	.3
V4750N 4675E	1	35	7	51	.3	12	8	249	3.57	25	2	ND	2	17	1	2	2	85	.16	.05	6	28	.56	81	.04	2	2.77	.02	.07	2	12	100	.2
V4750N 4700E	1	36	3	34	.8	9	7	177	4.08	14	2	ND	2	8	1	2	2	96	.09	.04	5	19	.47	59	.01	2	2.72	.01	.06	2	2	40	.8
V4750N 4725E	1	78	8	70	.5	20	12	626	4.49	24	2	ND	2	10	1	2	4	97	.15	.12	6	44	.68	59	.03	2	3.71	.01	.07	2	5	140	.4
V4750N 4750E	1	94	8	82	.5	23	11	431	5.33	19	2	ND	2	10	1	2	5	112	.09	.13	6	59	.74	62	.06	2	5.38	.01	.06	2	8	220	.5
V4750N 4775E	1	58	7	55	.3	20	10	418	3.55	14	2	ND	2	12	1	2	3	84	.17	.08	6	39	.47	78	.05	2	3.08	.02	.05	2	20	110	.4
V4750N 4800E	1	34	7	74	.4	15	8	372	2.82	10	2	ND	2	22	1	2	2	67	.44	.05	4	28	.48	126	.04	2	1.80	.01	.06	2	2	120	.4
STD A-1	1	30	42	175	.3	35	12	971	2.79	9	2	ND	2	35	1	2	3	55	.44	.10	9	76	.75	270	.09	4	1.96	.02	.20	2	2	50	.3

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	Au* ppb	Hg* ppb	Ag* ppm
V4750N 4825E	1	134	18	239	.4	39	18	412	5.94	41	2	ND	2	12	1	2	4	142	.16	.06	7	72	1.07	108	.15	4	5.47	.01	.05	2	7	120	.3
V4750N 4850E	1	52	20	161	.9	12	7	366	5.20	100	2	ND	2	8	1	2	4	112	.10	.08	7	30	.70	68	.06	3	4.10	.01	.06	2	22	120	1.0
V4750N 4875E	1	55	19	233	.3	18	8	337	5.18	91	2	ND	2	16	1	2	4	124	.12	.04	7	42	.63	82	.07	3	3.12	.02	.04	2	120	60	.4
V4750N 4900E	1	7	11	27	.3	7	3	224	1.51	21	2	ND	2	4	1	2	2	42	.06	.03	7	19	.05	33	.04	3	.39	.01	.05	2	16	10	.3
V4750N 4925E	1	37	13	78	1.2	22	9	536	3.54	32	2	ND	2	7	1	2	3	81	.16	.04	6	41	.51	47	.11	3	1.98	.01	.05	2	7	80	1.0
V4750N 4950E	1	18	9	125	.5	9	2	85	2.00	29	2	ND	2	7	1	2	3	61	.10	.03	6	21	.12	17	.06	2	1.14	.01	.03	2	120	30	.4
V4750N 4975E	1	32	10	138	.7	18	9	452	3.85	11	3	ND	2	15	1	2	3	112	.22	.04	7	50	.49	44	.22	2	2.56	.02	.03	2	6	85	.7
V4750N 5000E	1	30	39	227	.6	26	16	3444	3.89	17	2	ND	2	11	2	5	5	93	.40	.16	14	50	.60	85	.12	3	2.18	.01	.06	2	20	55	.6
V4750N 5025E	1	26	12	40	.1	8	9	6800	3.62	4	2	ND	4	63	1	7	7	120	.48	.06	6	37	.20	73	.23	3	1.73	.02	.03	2	3	120	.3
V4750N 5050E	1	139	14	75	.3	31	13	658	6.81	6	2	ND	2	13	1	2	3	206	.22	.15	5	93	1.02	39	.43	2	4.90	.01	.04	2	4	200	.4
V4750N 5075E	1	75	15	69	.2	41	20	1198	7.77	8	2	ND	2	18	1	2	3	247	.70	.10	5	92	1.52	51	.55	4	3.02	.05	.05	2	2	110	.2
V4750N 5100E	1	62	14	103	.3	30	94	9369	5.76	11	2	ND	4	38	1	2	11	148	.34	.09	8	54	.39	105	.18	4	3.92	.01	.07	2	2	120	.4
V4750N 5125E	1	39	9	34	.5	15	7	316	4.93	6	2	ND	2	44	1	2	2	147	.48	.03	5	54	.44	31	.36	4	2.40	.02	.04	2	4	80	.6
V4750N 5150E	1	59	13	42	.2	15	7	220	4.53	5	2	ND	2	21	1	2	3	188	.19	.05	7	64	.42	41	.27	4	3.23	.02	.04	2	3	170	.2
V4750N 5175E	1	20	9	29	.3	16	9	325	7.20	2	2	ND	2	42	1	2	2	211	.28	.04	6	70	.36	62	.22	4	2.48	.01	.04	2	5	55	.3
V4750N 5200E	1	8	14	20	.3	6	2	430	1.44	3	2	ND	2	28	1	2	2	74	.45	.05	3	24	.16	32	.20	4	.52	.02	.03	2	4	140	.2
V4750N 5225E	1	34	12	49	.1	18	13	3337	4.52	4	2	ND	2	69	1	2	5	159	.58	.10	5	58	.44	78	.19	7	1.80	.01	.06	2	2	120	.2
V4750N 5250E	1	51	11	132	.3	13	16	3879	3.17	3	3	ND	2	152	1	2	5	85	2.14	.08	9	37	.26	325	.11	4	2.10	.01	.05	2	2	120	.2
V4750N 5275E	1	70	19	241	.4	30	24	1808	4.66	8	2	ND	2	64	1	2	4	133	.95	.09	9	50	.56	160	.20	5	4.36	.02	.08	2	2	110	.4
V4750N 5300E	1	13	5	20	.1	6	4	373	2.79	2	2	ND	2	25	1	2	2	86	.18	.03	4	27	.19	35	.05	2	1.65	.01	.04	2	2	40	.1
V4800N 4575E	1	25	10	52	.2	14	7	327	3.27	11	2	ND	2	20	1	2	3	94	.26	.04	6	38	.63	76	.09	5	2.42	.02	.05	2	14	70	.3
V4800N 4600E	1	48	10	88	.3	24	15	393	4.67	17	2	ND	2	35	1	2	4	120	.59	.05	8	47	.97	223	.08	4	3.87	.02	.06	2	20	70	.4
V4800N 4625E	1	70	12	104	.5	34	15	765	5.45	36	2	ND	2	32	1	2	4	112	.73	.08	10	57	.67	402	.04	4	5.66	.02	.08	2	4	75	.6
V4800N 4650E	1	18	10	46	.1	9	9	1573	2.38	5	2	ND	2	83	1	2	2	78	.81	.05	4	24	.85	146	.19	3	1.54	.02	.03	2	2	120	.2
V4800N 4675E	1	34	5	70	.4	16	12	331	3.47	11	2	ND	2	17	1	2	2	94	.39	.03	9	34	.65	272	.02	3	3.33	.01	.06	2	4	40	.4
V4800N 4700E	1	41	5	184	.4	23	14	378	4.26	22	2	ND	2	17	1	2	3	90	.38	.03	8	41	.66	186	.04	3	3.33	.02	.04	2	4	70	.4
V4800N 4725E	1	99	7	167	.7	33	15	352	5.11	45	2	ND	2	9	1	2	4	103	.14	.08	7	55	.80	98	.04	3	4.60	.01	.06	2	2	130	.6
V4800N 4750E	1	115	12	144	.4	39	20	376	6.14	26	2	ND	2	11	1	2	4	121	.13	.09	8	61	.81	144	.03	4	4.97	.02	.09	2	4	90	.5
V4800N 4775E	1	67	7	227	.3	21	12	520	5.13	26	2	ND	2	10	1	2	3	101	.19	.04	9	44	.62	124	.03	4	2.89	.01	.06	2	18	30	.2
V4800N 4800E	1	29	8	107	.6	13	7	205	4.57	11	2	ND	2	11	1	2	3	103	.12	.05	9	38	.41	79	.04	3	2.74	.01	.05	2	5	80	.5
V4800N 4825E	1	27	9	78	.8	9	8	786	3.47	6	2	ND	2	11	1	2	3	88	.11	.05	9	24	.60	118	.02	3	2.77	.02	.08	2	4	55	.6
V4800N 4850E	1	15	13	81	.5	12	4	285	2.18	25	4	ND	2	7	1	2	3	53	.09	.03	10	18	.21	21	.04	2	1.05	.01	.03	2	23	35	.4
V4800N 4875E	1	49	22	404	.7	26	12	1742	3.56	34	2	ND	2	16	2	2	4	73	.87	.08	15	39	.81	71	.11	4	2.87	.01	.04	2	13	40	.6
V4800N 4925E	1	189	18	222	1.2	7	4	403	9.71	100	2	4	2	7	1	2	83	65	.08	.10	8	29	.15	19	.09	3	1.28	.01	.02	2	5200	65	1.0
V4800N 4950E	1	18	15	64	.5	12	4	206	3.03	13	2	ND	2	18	1	2	3	80	.18	.05	7	43	.27	35	.10	2	1.86	.02	.03	2	38	35	.6
V4800N 4975E	1	3	3	13	.4	2	1	526	.30	2	2	ND	2	105	1	2	5	5	20.48	.05	7	3	.16	17	.01	15	.13	.01	.01	2	2	30	.4
STD A-1	1	30	46	174	.4	35	12	971	2.78	10	2	ND	2	35	1	2	3	55	.64	.10	9	74	.76	274	.09	5	1.99	.02	.19	2	2	55	.3

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	Au* ppb	Hg* ppb	Ag* ppm
V4800N 5000E	1	67	21	115	.6	26	12	2246	4.88	12	2	ND	2	17	1	3	2	137	.48	.17	11	63	.64	69	.23	4	3.85	.02	.05	2	7	140	.5
V4800N 5025E	1	71	18	104	.6	26	12	685	7.52	17	2	ND	2	13	1	3	2	210	.22	.17	5	89	.71	49	.39	2	4.02	.02	.04	2	5	140	.7
V4800N 5050E	1	78	16	87	.4	21	9	325	7.43	14	2	ND	2	15	1	4	2	219	.22	.14	5	85	.48	59	.38	2	4.06	.02	.04	2	3	170	.5
V4800N 5075E	1	41	14	40	.1	24	11	955	4.98	11	2	ND	2	63	1	2	3	172	1.45	.07	2	70	.85	29	.35	3	1.82	.02	.02	2	25	45	.2
V4800N 5100E	1	85	14	60	.2	25	11	653	5.84	8	2	ND	2	15	1	5	2	187	.27	.08	4	71	.74	48	.36	2	3.82	.02	.05	2	3	160	.3
V4800N 5125E	1	188	14	95	.1	49	20	480	7.40	9	2	ND	2	13	1	4	2	206	.20	.07	5	110	1.24	71	.33	4	6.99	.02	.05	2	3	120	.2
V4800N 5150E	1	100	12	91	.1	43	18	520	6.09	10	2	ND	2	21	1	4	2	167	.20	.06	6	75	.97	98	.17	3	4.73	.02	.08	2	2	110	.2
V4800N 5175E	1	117	13	91	.1	45	32	1067	4.99	4	2	ND	2	41	1	5	2	181	.41	.05	4	79	1.20	100	.29	4	4.41	.02	.08	2	2	90	.1
V4800N 5200E	1	34	9	43	.1	18	16	1941	4.68	2	2	ND	2	88	1	2	3	143	.68	.02	7	46	.43	91	.25	4	2.21	.03	.04	2	8	25	.2
V4800N 5225E	1	24	10	102	.1	60	32	1534	6.82	9	2	ND	3	139	1	2	2	171	1.30	.03	3	109	1.76	90	.43	6	3.56	.02	.09	2	2	15	.1
V4800N 5250E	1	70	12	68	.1	32	17	732	4.99	14	2	ND	2	35	1	2	2	132	.50	.08	5	54	1.00	100	.18	4	4.16	.02	.07	2	2	100	.2
V4800N 5275E	1	21	4	30	.1	9	5	230	3.73	7	2	ND	2	19	1	3	2	102	.24	.03	4	32	.31	41	.05	2	2.15	.02	.06	2	2	50	.1
V4800N 5300E	1	28	6	41	.1	13	8	221	4.53	11	2	ND	2	25	1	2	2	119	.17	.02	4	41	.49	64	.05	3	2.97	.03	.06	2	2	50	.1
V4850N 4575E	1	19	13	76	.1	9	10	1723	2.83	5	2	ND	2	39	1	2	3	87	.52	.07	4	20	.60	125	.09	3	2.00	.02	.06	2	170	150	.2
V4850N 4600E	1	57	13	311	.1	13	29	1602	5.73	11	2	ND	2	32	1	2	2	180	.44	.10	5	26	1.30	179	.12	3	4.00	.02	.07	2	60	60	.3
V4850N 4625E	1	35	8	85	.1	25	12	305	4.01	11	2	ND	2	13	1	2	2	89	.20	.05	5	44	.71	105	.04	2	3.19	.02	.06	2	3	40	.1
V4850N 4650E	1	62	9	98	.1	34	14	440	4.46	22	2	ND	2	17	1	2	2	96	.37	.06	5	54	.94	120	.03	2	4.02	.02	.08	2	2	100	.2
V4850N 4675E	1	8	7	13	.1	3	2	181	1.57	3	2	ND	2	17	1	2	2	61	.26	.02	4	8	.13	64	.07	2	1.01	.02	.04	2	3	60	.1
V4850N 4700E	1	79	10	93	.1	25	16	753	4.32	29	2	ND	2	26	1	5	2	84	.40	.07	7	39	1.03	150	.08	2	2.90	.02	.10	2	11	55	.1
V4850N 4725E	1	18	7	21	.1	4	4	2037	2.07	3	2	ND	2	8	1	2	3	46	.14	.04	8	7	.11	118	.01	2	1.11	.01	.11	2	2	80	.1
V4850N 4750E	1	8	3	21	.1	4	3	112	1.78	4	2	ND	2	7	1	2	2	50	.06	.02	6	7	.12	49	.02	2	1.11	.01	.04	2	11	20	.1
V4850N 4775E	1	66	13	198	.2	32	20	3323	5.06	23	2	ND	2	26	1	5	4	84	.44	.09	9	42	.65	409	.01	2	3.85	.02	.13	2	7	80	.4
V4850N 4800E	1	28	13	56	.3	13	10	1282	4.12	33	2	ND	2	10	1	2	2	91	.17	.05	5	25	.73	86	.07	3	1.68	.03	.08	2	40	20	.1
V4850N 4825E	1	45	15	139	.8	10	13	1708	4.26	15	2	ND	2	9	1	2	2	76	.10	.09	7	18	.65	134	.01	2	3.54	.01	.10	2	30	120	.8
V4850N 4850E	1	15	59	356	.1	15	9	2068	10.62	47	2	ND	2	6	2	2	3	72	.10	.10	8	22	.15	45	.02	2	1.41	.01	.03	2	16	45	.2
V4850N 4875E	3	105	148	163	1.7	5	4	1715	.01	1400	2	ND	2	5	1	2	34	49	.17	.23	12	13	.11	42	.08	5	.64	.01	.01	2	16	100	1.4
V4850N 4900E	1	243	67	426	2.3	10	7	261	7.53	23	2	ND	2	11	1	2	27	166	.17	.06	12	52	.23	29	.07	2	1.56	.01	.02	2	770	20	2.4
V4850N 4925E	1	290	47	168	1.4	9	4	2348	7.94	17	2	ND	2	12	1	2	16	142	.13	.09	7	46	.22	44	.08	2	2.03	.02	.03	2	435	120	4.8
V4850N 4950E	1	57	90	1422	3.0	53	21	8478	8.60	46	2	ND	3	8	8	5	9	160	.34	.18	34	64	1.44	105	.01	2	4.35	.01	.04	2	20	60	3.4
V4850N 4975E	1	28	14	83	.3	18	8	473	4.59	9	2	ND	2	16	1	2	2	123	.15	.07	7	50	.43	59	.06	3	2.63	.01	.04	2	6	270	.4
V4850N 5000E	1	113	12	92	.2	33	12	399	7.30	13	2	ND	2	11	1	2	2	161	.14	.14	5	85	.82	78	.19	3	5.13	.01	.05	2	3	200	.3
V5050N 4800E	1	55	9	42	.1	17	7	199	5.33	45	2	ND	2	10	1	2	2	115	.10	.05	6	53	.44	71	.03	3	3.60	.01	.05	2	2	100	.1
V5050N 4825E	1	24	6	34	.1	11	5	257	4.77	25	2	ND	2	10	1	2	2	110	.09	.06	6	40	.35	53	.03	2	2.42	.01	.05	2	2	50	.1
V5050N 4850E	1	33	12	51	.2	13	6	214	5.22	14	2	ND	2	7	1	2	2	103	.08	.08	5	50	.34	58	.02	2	3.00	.01	.05	2	2	110	.3
V5050N 4875E	1	5	7	8	.1	3	1	122	1.64	4	2	ND	2	6	1	2	2	81	.06	.02	5	15	.05	16	.10	2	.73	.01	.02	2	2	20	.1
V5050N 4900E	1	92	17	132	.3	50	21	471	4.77	20	2	ND	2	9	1	2	2	97	.10	.03	9	65	.91	144	.03	3	5.15	.02	.09	2	8	140	.3
STD A-1	1	30	43	173	.2	35	12	958	2.77	10	2	ND	2	35	1	2	2	55	.62	.10	8	73	.75	274	.08	5	1.94	.02	.20	2	2	55	.3

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	Au* ppb	Hg* ppb	Ag* ppm
V5050N 4925E	1	57	5	103	.4	23	12	322	5.56	66	2	ND	2	14	1	3	2	123	.13	.04	7	58	.58	79	.02	2	3.95	.02	.06	2	5	70	.3
V5050N 4950E	1	184	6	77	.4	56	40	1848	8.19	8	2	ND	2	14	1	3	2	127	.07	.06	11	99	1.14	253	.01	2	4.03	.01	.15	2	9	100	.4
V5050N 4975E	1	38	11	55	.2	26	9	255	5.08	21	2	ND	2	14	1	2	2	149	.18	.03	6	61	.85	83	.09	3	3.71	.02	.05	2	2	85	.2
V5050N 5000E	1	19	6	26	.3	9	4	134	3.24	7	2	ND	2	12	1	2	2	113	.13	.05	5	31	.32	34	.17	2	1.74	.02	.04	2	3	40	.1
V5050N 5025E	1	7	8	13	.2	5	2	136	2.22	5	2	ND	2	9	1	2	2	111	.11	.03	5	22	.18	21	.25	2	1.15	.02	.03	2	2	45	.1
V5050N 5050E	1	31	13	44	.3	15	7	260	4.01	11	2	ND	2	22	1	2	2	167	.18	.04	5	49	.43	81	.50	2	1.96	.03	.03	2	6	20	.2
V5050N 5075E	1	24	9	31	.2	11	5	136	2.78	4	2	ND	2	17	1	2	2	104	.16	.01	4	34	.36	73	.18	2	2.00	.02	.02	2	2	70	.1
V5050N 5100E	1	32	13	27	.3	17	7	237	4.56	5	2	ND	2	15	1	2	2	177	.13	.02	5	60	.56	31	.36	2	2.20	.01	.02	2	6	20	.1
V5050N 5125E	1	53	7	31	.4	13	6	176	5.93	8	2	ND	2	11	1	2	2	173	.12	.06	6	60	.30	39	.11	3	2.42	.02	.03	2	4	230	.2
V5050N 5150E	1	12	6	13	.3	7	3	149	4.16	3	2	ND	2	9	1	2	2	178	.11	.04	5	33	.13	14	.15	2	1.10	.01	.02	2	3	45	.1
V5050N 5175E	1	69	7	74	.4	22	12	418	5.51	9	2	ND	2	13	1	2	2	143	.13	.08	5	62	.60	66	.06	2	4.07	.02	.05	2	2	130	.2
V5050N 5200E	1	81	8	62	.3	21	10	296	5.22	10	2	ND	2	11	1	2	2	121	.12	.07	5	56	.71	47	.11	3	4.16	.02	.05	2	7	80	.1
V5050N 5225E	1	50	7	58	1.1	18	10	315	5.46	9	2	6	2	13	1	2	2	155	.12	.07	6	62	.57	46	.08	3	2.98	.01	.05	2	10	190	1.0
V5050N 5250E	1	140	10	89	.2	30	15	397	5.64	18	2	ND	2	11	1	2	2	160	.14	.08	5	79	.84	59	.11	3	4.92	.01	.05	2	4	110	.3
V5050N 5275E	1	138	12	78	.2	43	18	546	5.60	17	2	ND	2	23	1	2	2	171	.18	.04	7	80	1.36	114	.29	4	5.31	.02	.06	2	95	90	.4
V5050N 5300E	1	112	11	71	.2	32	17	782	4.65	12	2	ND	2	27	1	2	2	126	.57	.08	5	62	1.26	99	.26	4	4.73	.04	.08	2	4	65	.2
V5100N 4825E	1	8	8	11	.1	5	3	264	2.37	4	2	ND	2	13	1	2	2	112	.31	.02	5	23	.16	33	.25	2	.91	.02	.03	2	2	20	.1
V5100N 4850E	1	25	8	21	.3	8	4	103	4.30	53	2	ND	2	10	1	2	2	106	.10	.06	6	33	.24	32	.03	2	2.20	.02	.04	2	2	100	.2
V5100N 4875E	1	36	10	49	.5	13	9	208	3.50	18	3	ND	2	10	1	2	2	73	.09	.09	7	32	.34	82	.01	2	3.34	.02	.07	2	2	80	.3
V5100N 4900E	1	10	6	25	.2	6	3	105	2.32	7	2	ND	2	8	1	2	2	73	.09	.02	6	17	.15	64	.02	2	1.79	.02	.04	2	2	60	.1
V5100N 4925E	1	3	1	9	.1	1	1	49	1.03	2	2	ND	2	4	1	2	2	27	.04	.01	5	3	.05	34	.01	2	1.37	.01	.07	2	2	15	.1
V5100N 4950E	1	44	11	179	.6	112	64	2036	4.26	248	2	ND	2	31	1	2	3	62	.41	.07	12	45	.47	171	.01	2	5.90	.02	.08	2	2	180	.4
V5100N 4975E	1	11	4	37	.1	9	6	251	2.56	10	2	ND	2	49	1	2	2	60	.28	.02	4	20	.44	119	.04	2	2.42	.03	.05	2	2	30	.2
V5100N 5000E	1	4	2	21	.1	4	3	112	1.42	4	2	ND	2	22	1	2	2	30	.10	.01	3	9	.23	51	.01	2	2.08	.02	.04	2	2	50	.1
V5100N 5025E	1	2	3	10	.1	2	1	51	.84	2	2	ND	2	10	1	2	2	22	.06	.01	3	5	.11	26	.02	2	1.24	.03	.03	2	2	20	.1
V5100N 5050E	1	21	7	30	.1	9	4	103	3.13	2	2	ND	2	11	1	2	2	83	.09	.03	4	28	.36	44	.02	2	2.64	.01	.02	2	2	90	.1
V5100N 5075E	1	5	5	28	.2	4	2	117	1.80	4	2	ND	2	20	1	2	2	44	.13	.03	4	11	.22	52	.02	2	1.87	.01	.02	2	2	30	.2
V5100N 5100E	1	19	9	28	.4	8	3	112	3.80	10	2	ND	2	9	1	2	2	126	.12	.06	3	35	.31	24	.20	2	1.79	.01	.02	2	2	100	.3
V5100N 5125E	1	102	6	48	.4	23	13	168	8.98	5	2	ND	2	7	1	3	2	130	.05	.10	4	92	.40	52	.01	2	3.14	.01	.03	2	3	75	.3
V5100N 5150E	1	11	7	20	.2	6	3	117	2.54	5	2	ND	2	9	1	2	2	106	.13	.03	4	21	.28	23	.19	2	1.50	.01	.02	2	2	65	.1
V5100N 5175E	1	6	7	26	.2	6	4	781	1.51	3	2	ND	2	33	1	2	2	32	.32	.04	3	11	.31	87	.06	2	1.64	.01	.03	2	2	80	.2
V5100N 5225E	1	149	7	81	.8	28	14	198	8.69	11	2	ND	2	6	1	2	2	139	.05	.12	5	89	.36	44	.01	2	3.81	.01	.04	2	3	270	.7
V5100N 5250E	1	6	7	8	.2	4	1	56	1.84	6	2	ND	2	6	1	2	2	104	.08	.02	3	14	.11	13	.24	2	.80	.01	.01	2	4	25	.2
V5100N 5275E	1	94	10	60	.2	29	13	396	4.89	14	2	ND	2	18	1	2	2	120	.15	.05	6	57	.66	82	.04	2	3.72	.01	.05	2	3	75	.2
V5100N 5300E	1	5	2	16	.1	2	2	160	1.18	2	2	ND	2	9	1	2	2	36	.12	.03	2	8	.17	31	.06	2	1.40	.01	.03	2	2	50	.1
STD A-1	1	30	45	173	.4	34	12	959	2.75	10	2	ND	2	36	1	2	2	55	.62	.10	8	71	.76	279	.09	5	1.97	.02	.20	2	2	50	.3

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	Au* ppb	Hg* ppb	Ag* ppm
V5150N 4775E	1	122	6	78	.3	26	11	148	7.71	36	2	ND	2	14	1	2	2	167	.11	.08	7	87	.32	78	.04	2	5.33	.03	.09	2	2	130	.2
V5150N 4800E	1	99	10	66	.2	32	12	296	6.59	61	2	ND	2	9	1	2	2	131	.07	.06	7	77	.78	72	.02	2	5.11	.02	.08	2	2	150	.1
V5150N 4825E	1	77	7	66	.4	25	11	230	5.81	35	2	ND	2	11	1	2	2	131	.08	.05	7	66	.50	66	.02	2	4.24	.02	.06	2	3	180	.4
V5150N 4850E	1	113	5	55	.1	23	12	242	5.82	30	3	ND	2	6	1	2	2	106	.04	.04	12	46	.17	54	.01	3	2.37	.01	.09	2	2	30	.1
V5150N 4875E	1	20	3	29	.3	9	5	129	3.07	38	2	ND	2	7	1	2	2	75	.07	.04	6	24	.21	38	.01	2	2.03	.01	.05	2	2	70	.1
V5150N 4900E	1	40	5	60	.2	20	11	339	4.17	20	2	ND	2	10	1	2	2	81	.09	.05	6	42	.68	77	.01	2	3.85	.02	.06	2	2	40	.1
V5150N 4925E	1	26	2	40	.1	11	10	365	3.06	4	2	ND	2	5	1	2	2	42	.04	.04	5	19	.67	97	.01	2	3.53	.01	.12	2	2	40	.1
V5150N 4950E	1	49	6	63	.1	24	13	473	4.58	12	2	ND	2	17	1	2	2	77	.16	.08	8	46	.74	103	.01	2	3.95	.02	.08	2	2	80	.1
V5150N 4975E	1	38	12	126	.3	46	64	2460	5.02	196	2	ND	2	29	1	2	4	77	.43	.06	9	45	.47	161	.01	2	3.69	.02	.08	2	2	100	.2
V5150N 5000E	1	25	13	66	.2	14	6	157	5.65	5	2	ND	2	40	1	2	2	121	.16	.04	8	46	.39	93	.10	2	3.67	.02	.06	2	2	85	.2
V5150N 5025E	1	64	9	77	.4	27	11	256	5.29	8	2	ND	2	12	1	2	2	144	.12	.04	6	70	.82	74	.15	2	4.80	.02	.05	2	2	90	.2
V5150N 5050E	1	42	6	49	.1	23	11	321	3.93	16	2	ND	2	25	1	2	2	88	.14	.02	5	44	.90	95	.11	3	4.07	.03	.06	2	2	25	.1
V5150N 5075E	1	27	6	49	.2	11	5	348	3.43	8	2	ND	2	18	1	2	2	85	.17	.05	4	30	.39	68	.07	2	3.01	.02	.06	2	2	75	.1
V5150N 5100E	1	18	8	51	.1	12	24	927	2.09	3	2	ND	2	25	1	2	2	39	.21	.10	7	22	.31	114	.04	2	7.78	.02	.05	2	2	170	.2
V5150N 5125E	1	8	4	57	.1	9	10	535	2.46	2	2	ND	2	40	1	2	2	52	.36	.03	4	15	.51	175	.04	2	2.86	.03	.06	2	2	60	.1
V5150N 5150E	1	23	7	49	.1	16	8	242	3.71	2	2	ND	2	15	1	2	2	77	.14	.04	5	37	.63	86	.04	2	3.80	.02	.05	2	2	60	.1
V5150N 5175E	1	3	3	26	.1	3	2	127	.97	2	2	ND	2	15	1	2	2	25	.16	.01	3	7	.19	69	.04	2	1.21	.03	.03	2	2	45	.1
V5150N 5200E	1	8	6	27	.1	5	3	149	1.73	4	2	ND	2	16	1	2	2	52	.19	.02	4	16	.26	33	.10	2	1.65	.02	.03	2	2	30	.1
V5150N 5225E	1	18	7	45	.1	11	6	254	3.30	7	2	ND	2	13	1	2	2	68	.12	.07	3	27	.58	64	.02	2	3.29	.02	.06	2	2	80	.1
V5150N 5250E	1	44	8	49	.2	16	6	245	5.13	15	2	ND	2	11	1	2	2	132	.16	.06	4	49	.50	51	.11	3	3.26	.02	.04	2	2	85	.1
V5150N 5275E	1	30	9	73	.1	15	16	1023	3.61	13	2	ND	2	53	1	2	2	57	.74	.06	5	31	.98	144	.08	3	3.08	.05	.12	2	2	80	.1
V5150N 5300E	1	8	5	53	.1	5	4	333	1.97	2	2	ND	2	20	1	2	2	37	.33	.03	3	12	.50	140	.04	2	2.51	.02	.05	2	2	40	.1
V5200N 4775E	1	28	6	35	.4	12	5	192	3.61	9	2	ND	2	12	1	2	2	93	.12	.05	5	35	.30	55	.03	2	2.72	.02	.04	2	2	65	.1
V5200N 4800E	1	27	7	31	.4	9	4	118	4.55	23	2	ND	2	8	1	2	2	116	.08	.04	8	33	.19	38	.02	2	2.03	.02	.04	2	2	110	.2
V5200N 4825E	1	4	2	11	.1	2	1	49	1.64	2	2	ND	2	5	1	2	2	34	.04	.02	5	5	.10	24	.01	2	1.46	.02	.03	2	2	20	.1
V5200N 4850E	1	6	3	22	.1	3	2	190	1.79	11	2	ND	2	12	1	2	2	35	.10	.03	4	9	.21	52	.01	2	2.12	.02	.04	2	2	110	.1
V5200N 4875E	1	8	3	29	.1	5	4	192	2.63	19	2	ND	2	12	1	2	2	52	.11	.04	5	15	.25	54	.01	2	2.51	.02	.05	2	2	55	.1
V5200N 4900E	1	15	5	27	.2	8	4	282	3.55	35	2	ND	2	9	1	2	2	82	.10	.07	5	29	.24	37	.02	2	2.11	.02	.05	2	2	90	.1
V5200N 4925E	1	16	6	36	.3	8	5	209	3.39	11	2	ND	2	10	1	2	2	76	.08	.06	5	26	.26	46	.01	2	2.85	.02	.05	2	2	40	.1
V5200N 4950E	1	42	11	79	.3	26	38	870	4.73	102	2	ND	2	28	1	2	3	80	.48	.05	7	42	.38	121	.01	2	3.35	.02	.06	2	2	160	.3
V5200N 4975E	1	47	13	120	.6	46	92	3224	4.24	258	2	ND	2	26	1	2	3	56	.38	.07	17	42	.36	154	.01	2	4.66	.02	.08	2	2	140	.5
V5200N 5000E	1	39	7	78	.2	27	37	1892	4.44	184	2	ND	2	24	1	2	3	80	.39	.06	7	40	.53	122	.02	2	3.46	.02	.06	2	2	75	.2
STD A-1	1	36	45	177	.3	35	12	980	2.78	10	2	ND	2	36	1	2	2	56	.64	.10	8	74	.76	278	.09	5	1.97	.02	.20	2	2	50	.3

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

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 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 ppb.
AU** ANALYSIS FROM 10 GRAM FA+AA. AG* ANALYSIS BY AA. HG* ANALYSIS BY FLAMELESS AA FROM .500 GRAM SAMPLE. SAMPLE TYPE - SOIL/SILT

DATE RECEIVED JULY 16 1982 DATE REPORTS MAILED July 23/82 ASSAYER D. Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

ASARCO PROJECT # VILLALTA FILE # 82-0608

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	Au** ppb	Hg* ppb	Ag* ppm
4500N 4600E	1	55	13	98	.4	22	21	1133	4.57	2	2	ND	2	32	1	2	2	126	.01	.06	7	43	.51	137	.13	2	2.91	.02	.04	2	22	460	.3
4500N 4625E	1	74	17	95	.1	37	35	1435	5.30	10	2	ND	2	27	1	2	2	139	.01	.07	11	51	.82	161	.14	2	3.97	.02	.05	2	12	340	.1
4500N 4650E	1	70	49	83	.1	22	17	531	5.39	3	2	ND	2	13	1	3	2	153	.01	.06	8	49	.67	126	.18	2	3.50	.01	.04	2	16	130	.2
4500N 4675E	1	153	17	76	.1	57	22	430	5.88	12	2	ND	2	11	1	6	4	161	.01	.03	10	86	1.29	142	.25	3	6.42	.02	.04	2	21	85	.1
4500N 4700E	1	44	15	76	.1	29	14	431	5.17	4	2	ND	2	13	1	2	3	139	.01	.04	8	43	1.02	82	.21	3	3.88	.02	.04	2	9	110	.2
4500N 4725E	1	80	15	87	.1	30	14	677	5.91	2	2	ND	2	11	1	3	4	161	.01	.06	8	78	.93	71	.25	2	4.41	.02	.04	2	4	130	.2
4500N 4750E	1	13	12	29	.2	8	4	230	3.24	2	2	ND	2	12	1	2	2	109	.01	.05	6	30	.28	28	.21	2	1.58	.02	.02	2	2	110	.2
4500N 4775E	1	74	13	78	.1	25	12	652	5.13	2	2	ND	2	11	1	3	2	150	.01	.06	7	63	.74	56	.30	2	3.65	.02	.03	2	3	130	.1
4550N 4600E	1	51	18	118	.4	21	10	262	4.21	20	2	ND	2	11	1	2	3	90	.01	.06	8	41	.51	103	.04	3	3.43	.02	.03	2	6	80	.4
4550N 4625E	1	87	14	157	.7	35	15	1095	4.46	15	2	ND	2	36	1	2	3	85	.01	.06	13	59	.83	507	.04	3	5.15	.02	.05	2	5	110	.6
5000N 4600E	1	71	13	128	.1	27	12	341	4.72	23	2	ND	2	9	1	2	4	91	.01	.05	7	53	.73	88	.04	2	4.76	.01	.05	2	6	90	.3
5000N 4625E	1	44	9	58	.2	9	6	163	2.89	6	2	ND	2	15	1	2	3	80	.01	.02	7	22	.35	124	.03	2	2.01	.01	.03	2	90	100	.2
5000N 4650E	1	88	13	88	.1	32	19	989	4.90	23	2	ND	2	31	1	2	3	98	.01	.08	9	52	1.00	252	.04	3	4.25	.01	.08	2	8	70	.2
5000N 4675E	1	22	6	32	.1	9	5	129	3.10	7	2	ND	2	15	1	2	2	88	.01	.03	7	24	.31	69	.03	2	1.99	.01	.03	2	2	70	.1
5000N 4700E	1	61	9	68	.3	23	14	309	4.70	14	2	ND	2	53	1	2	2	124	.01	.03	8	53	.59	97	.13	3	3.61	.02	.05	2	20	100	.2
5000N 4725E	1	83	8	76	.3	26	14	896	5.55	36	2	ND	2	19	1	2	3	119	.01	.09	9	53	.62	109	.03	2	3.84	.01	.08	2	4	80	.4
5000N 4750E	1	50	12	45	.1	19	12	1003	4.22	7	2	ND	2	78	1	2	2	142	.01	.04	6	45	.57	123	.31	3	2.03	.04	.05	2	16	60	.1
5000N 4775E	1	109	10	70	.5	30	24	1493	5.69	22	2	ND	2	39	1	2	2	163	.01	.08	8	59	.64	198	.14	4	4.22	.01	.08	2	8	75	.4
5000N 4800E	1	38	6	63	.3	13	8	354	4.44	6	2	ND	2	14	1	2	3	106	.01	.05	8	33	.47	85	.04	2	2.80	.01	.06	2	3	80	.2
5050N 4600E	1	80	12	60	.5	20	16	905	5.07	17	2	ND	2	41	1	2	2	148	.01	.05	8	49	.42	145	.11	4	3.28	.02	.04	2	10	80	.3
5050N 4625E	3	214	22	108	.3	25	33	1144	6.59	24	2	2	2	22	1	2	6	158	.01	.11	11	43	1.70	112	.17	4	4.25	.02	.09	2	41	110	.4
5050N 4650E	1	22	11	50	.2	20	11	730	3.68	6	2	ND	2	35	1	2	2	98	.01	.04	7	54	.70	155	.04	3	2.91	.02	.06	2	2	80	.1
5050N 4675E	1	29	7	32	.2	15	7	236	3.52	8	2	ND	2	12	1	2	2	104	.01	.03	6	39	.45	69	.05	3	2.38	.02	.04	2	3	70	.1
5050N 4700E	1	33	9	54	.6	16	7	582	4.29	19	2	ND	2	14	1	2	2	107	.01	.09	7	44	.46	68	.08	3	2.81	.02	.03	2	2	110	.4
5050N 4725E	1	90	9	70	.2	22	15	783	5.29	32	2	ND	2	27	1	2	2	141	.01	.09	9	56	.47	139	.08	4	3.83	.02	.05	2	2	90	.3
5050N 4750E	1	83	11	77	.3	28	20	1016	5.42	23	2	ND	2	44	1	2	2	144	.01	.06	8	63	.59	178	.10	3	4.15	.01	.07	2	8	75	.2
5050N 4775E	1	57	10	68	.3	23	13	649	4.49	8	2	ND	2	25	1	3	2	112	.01	.07	8	52	.57	95	.14	4	3.99	.02	.05	2	2	85	.3
5100N 4600E	1	101	13	69	.4	31	21	743	6.14	8	2	ND	2	42	1	2	2	170	.01	.06	8	63	.67	174	.16	3	4.02	.01	.06	2	6	65	.4
5100N 4625E	1	45	11	198	.2	30	15	523	5.00	21	2	ND	2	23	1	2	3	132	.01	.05	9	53	.82	137	.08	3	4.01	.02	.05	2	16	90	.2
5100N 4650E	1	58	12	53	.3	27	11	366	4.05	9	2	ND	2	14	1	2	3	93	.01	.05	7	55	.89	64	.13	4	5.09	.02	.04	2	3	140	.2
5100N 4675E	1	92	14	63	.1	27	17	911	5.41	5	2	ND	2	23	1	2	2	142	.01	.06	8	67	.65	100	.19	3	4.45	.02	.04	2	4	80	.2
5100N 4700E	1	71	12	80	.2	27	13	457	4.83	14	2	ND	2	24	1	2	3	122	.01	.09	7	56	.59	104	.15	3	4.02	.01	.05	2	4	120	.1
5100N 4725E	1	49	11	56	.3	20	10	409	4.27	14	2	ND	2	18	1	2	2	103	.01	.05	7	47	.51	71	.07	3	3.31	.02	.05	2	2	60	.1
5100N 4750E	1	69	10	45	.5	18	11	715	4.89	11	2	ND	2	50	1	2	2	147	.01	.06	8	51	.41	81	.19	2	2.92	.02	.03	2	6	100	.3
5100N 4775E	1	79	11	78	.2	30	27	840	5.28	3	2	ND	2	34	1	2	2	143	.01	.08	10	58	.59	193	.08	3	4.52	.01	.05	2	5	90	.1
STD A-1	1	32	45	192	.4	36	13	1044	2.96	9	2	ND	2	35	2	2	2	59	.01	.11	11	79	.80	281	.09	5	2.12	.02	.20	2	5	50	.3

ASARCO PROJECT # VILLALTA FILE # 82-0608

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	Au** ppb	Hg* ppb	Ag* ppm
5150N 4600E	1	46	10	68	.3	21	12	409	4.74	15	2	ND	2	27	1	2	2	140	.25	.05	4	49	.58	99	.19	4	3.59	.02	.04	2	5	100	.2
5150N 4625E	1	28	8	45	.2	12	6	367	3.73	7	2	ND	2	21	1	2	2	116	.22	.04	3	35	.34	63	.16	4	2.36	.02	.04	2	2	50	.1
5150N 4650E	1	53	8	62	.2	26	15	458	5.04	11	2	ND	2	29	1	2	2	135	.34	.05	4	56	.71	96	.17	6	3.80	.03	.06	2	3	70	.1
5150N 4675E	1	59	7	60	.1	21	13	459	4.80	4	2	ND	2	28	1	2	2	141	.30	.04	4	49	.50	99	.20	5	3.02	.02	.04	2	4	60	.2
5150N 4700E	1	77	10	68	.4	31	14	489	4.33	18	2	ND	2	16	1	2	2	99	.21	.05	4	50	.90	103	.10	6	4.12	.02	.06	2	3	100	.2
5150N 4725E	1	64	8	45	.4	19	11	399	4.24	12	2	ND	2	31	1	2	2	132	.31	.04	4	47	.50	71	.23	4	2.97	.02	.04	2	4	65	.3
5150N 4750E	1	61	5	64	.2	26	14	452	4.80	21	3	ND	2	18	1	2	3	117	.17	.05	6	51	.54	134	.05	4	4.22	.02	.04	2	3	80	.2
5200N 4600E	1	27	13	32	.2	11	10	2572	3.09	5	2	ND	2	28	1	2	2	110	.36	.08	3	31	.31	60	.15	3	1.78	.01	.05	2	2	120	.1
5200N 4625E	1	68	8	57	.3	21	11	327	4.65	4	4	ND	2	24	1	2	3	123	.22	.05	4	49	.49	73	.15	4	3.98	.02	.05	2	3	65	.2
5200N 4650E	1	65	10	54	.3	24	11	405	4.70	10	2	ND	2	25	1	2	3	130	.27	.05	3	53	.63	74	.19	5	3.80	.02	.05	2	3	70	.1
5200N 4675E	1	106	10	56	.3	30	14	372	4.92	6	4	ND	2	27	1	2	3	131	.23	.06	4	58	.83	69	.21	5	4.22	.01	.04	2	3	80	.2
5200N 4700E	1	60	8	48	.2	22	13	461	5.31	9	3	ND	2	34	1	2	2	160	.33	.05	4	52	.57	84	.22	6	3.26	.02	.04	2	5	85	.1
5200N 4725E	1	40	9	58	.2	23	11	443	4.65	7	3	ND	2	21	1	2	3	125	.26	.05	4	45	.55	115	.11	4	3.42	.02	.06	2	1	80	.1
5200N 4750E	1	35	7	61	.1	22	20	800	6.18	7	4	ND	2	62	1	2	2	113	.60	.03	6	44	.62	151	.08	4	3.37	.02	.05	2	2	65	.2
5200N 5025E	1	70	5	46	.3	28	13	260	5.52	15	2	ND	2	11	1	2	2	120	.13	.06	7	58	.61	54	.03	4	4.00	.02	.04	2	2	90	.2
5200N 5050E	2	53	7	71	.6	19	12	365	3.97	23	2	ND	2	39	1	2	3	96	.23	.05	6	41	.60	98	.10	4	4.12	.02	.06	2	2	65	.5
5200N 5075E	1	7	6	30	.2	5	3	119	1.77	3	2	ND	2	10	1	2	2	49	.10	.01	4	15	.29	60	.04	3	2.02	.02	.03	2	1	20	.1
5200N 5100E	1	7	4	27	.2	5	3	134	1.81	5	2	ND	2	13	1	2	2	48	.13	.01	4	13	.27	49	.05	2	1.74	.03	.03	2	3	20	.1
5200N 5125E	1	9	5	22	.2	5	3	99	2.00	4	2	ND	2	11	1	2	2	58	.12	.02	3	16	.24	33	.06	2	1.50	.03	.04	2	2	50	.1
5200N 5150E	1	18	5	38	.1	8	4	144	3.22	4	2	ND	2	17	1	2	2	75	.17	.07	4	26	.36	51	.04	3	2.56	.03	.04	2	1	60	.1
5200N 5175E	1	5	7	53	.1	5	4	258	2.25	2	2	ND	2	13	1	2	2	36	.17	.02	4	14	.50	119	.03	2	3.04	.03	.05	2	1	40	.1
5200N 5200E	1	4	7	24	.1	4	3	142	2.18	5	2	ND	2	14	1	3	2	43	.13	.03	4	12	.35	71	.03	2	2.90	.02	.05	2	1	50	.1
5200N 5225E	1	20	6	35	.1	10	5	177	3.75	5	2	ND	2	12	1	2	2	88	.10	.04	4	35	.41	54	.02	3	2.58	.02	.03	2	3	40	.1
5200N 5250E	1	32	9	45	.2	17	7	228	3.24	7	2	ND	2	14	1	2	2	81	.17	.03	4	33	.44	73	.05	3	3.01	.02	.05	2	1	55	.1
STD A-1	1	30	40	174	.4	34	12	962	2.73	12	2	ND	2	34	1	2	2	55	.63	.10	8	71	.73	261	.08	6	1.91	.02	.19	2	1	50	.3
5250N 4600E	1	26	7	39	.2	12	6	220	3.28	7	2	ND	2	20	1	2	2	90	.26	.03	4	31	.37	57	.11	4	2.47	.02	.04	2	2	50	.1
5250N 4625E	1	29	7	26	.4	10	4	196	3.77	4	4	ND	2	34	1	2	2	139	.29	.03	4	38	.29	47	.22	3	2.02	.02	.03	2	45	40	.2
5250N 4650E	1	63	8	42	.2	23	13	642	5.73	6	2	ND	2	33	1	2	2	193	.38	.04	3	63	.68	103	.26	5	3.16	.02	.04	2	8	90	.3
5250N 4750E	1	5	9	12	.1	8	4	158	2.09	2	2	ND	2	13	1	2	2	135	.33	.01	4	30	.27	30	.37	3	.82	.03	.02	2	3	15	.1
5250N 4775E	1	62	10	70	.3	35	12	287	4.39	14	2	ND	2	20	1	2	3	99	.21	.02	5	57	.93	125	.03	4	4.68	.02	.06	2	2	50	.3
5250N 4800E	1	29	4	48	.2	14	6	146	3.17	11	2	ND	2	12	1	2	2	76	.14	.03	5	31	.38	62	.02	3	2.27	.02	.04	2	3	30	.1
5250N 4825E	1	7	1	16	.2	4	2	169	1.33	3	2	ND	2	7	1	2	2	35	.05	.02	4	12	.14	46	.01	2	1.56	.03	.03	2	1	40	.1
5250N 4850E	1	11	7	37	.2	20	6	332	3.63	9	2	ND	2	7	1	2	2	106	.08	.07	10	54	.27	55	.01	3	2.59	.02	.07	2	1	100	.1
5250N 4875E	1	46	6	56	.3	18	9	606	5.72	71	2	ND	2	10	1	2	2	116	.11	.11	7	54	.42	57	.01	4	3.64	.02	.06	2	1	120	.1
5250N 4900E	1	106	9	90	.6	37	16	322	7.17	169	2	ND	2	8	1	2	3	136	.09	.08	5	81	.74	73	.02	3	4.62	.01	.06	2	2	100	.5
5250N 4925E	1	123	7	105	.4	66	35	839	8.84	54	4	ND	2	10	1	2	2	131	.07	.13	8	99	.82	62	.01	2	5.73	.02	.04	2	4	100	.3
5250N 4950E	1	35	10	125	.5	35	42	1193	3.26	154	2	ND	2	12	1	2	2	45	.17	.07	10	26	.26	132	.01	3	4.02	.01	.07	2	2	130	.7
5250N 4975E	1	59	11	100	.4	38	29	1207	4.27	147	2	ND	2	20	1	2	2	71	.33	.07	7	42	.72	140	.02	3	4.15	.02	.08	2	1	75	.4
5250N 5000E	1	99	11	73	.5	26	15	505	4.52	62	2	ND	2	31	1	2	2	83	.31	.04	6	46	1.07	189	.07	4	4.04	.02	.07	2	3	50	.4

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	Au†† ppb	Hg† ppb	Aq† ppm
5250N 5025E	1	32	8	51	.1	15	8	321	4.27	75	2	ND	2	25	1	2	3	93	.18	.06	5	33	.52	102	.03	3	3.50	.01	.07	2	3	90	.1
5250N 5050E	1	31	8	51	.2	15	8	322	4.16	73	2	ND	2	24	1	3	3	90	.18	.06	5	33	.49	103	.03	3	3.54	.02	.07	2	2	70	.1
5250N 5075E	1	23	8	35	.1	14	6	291	3.40	17	2	ND	2	28	1	2	2	84	.18	.03	4	31	.49	74	.06	3	2.59	.02	.05	2	2	50	.1
5250N 5100E	1	22	12	39	.1	10	5	184	4.03	12	2	ND	2	12	1	2	2	101	.12	.04	4	37	.42	49	.07	4	2.87	.03	.04	2	1	100	.1
5250N 5125E	1	10	9	32	.1	8	5	176	2.84	5	2	ND	2	10	1	2	2	56	.14	.03	3	17	.45	100	.04	2	2.75	.02	.04	2	1	30	.1
5250N 5150E	1	11	10	32	.1	7	4	135	2.60	6	2	ND	2	9	1	2	2	58	.12	.02	3	18	.34	63	.02	2	2.49	.02	.03	2	6	50	.1
5250N 5175E	1	24	8	39	.1	11	5	223	3.30	14	2	ND	2	10	1	2	2	82	.13	.04	4	32	.42	60	.04	3	2.75	.03	.04	2	2	45	.1
5250N 5200E	1	51	10	66	.1	17	7	194	5.16	13	3	ND	2	11	1	2	2	110	.08	.06	3	57	.52	63	.02	2	4.29	.02	.04	2	2	200	.2
5250N 5225E	1	20	4	12	.2	6	3	79	4.17	13	3	ND	2	12	1	2	2	135	.10	.05	2	31	.11	33	.03	3	1.40	.02	.03	2	3	20	.1
5250N 5250E	1	10	7	19	.2	8	8	89	2.69	5	2	ND	2	13	1	2	2	79	.15	.03	4	19	.13	34	.02	2	1.22	.02	.03	2	2	20	.1
5250N 5275E	1	51	11	68	.2	26	10	225	5.11	10	3	ND	2	20	1	2	2	114	.15	.07	4	44	.71	91	.13	2	3.98	.02	.05	2	1	60	.1
5300N 4675E	1	23	10	35	.1	12	5	229	4.94	8	3	ND	2	14	1	2	2	144	.20	.04	4	42	.45	69	.12	3	2.94	.02	.04	2	2	60	.1
5300N 4700E	1	33	10	41	.1	13	5	169	4.43	12	8	ND	2	10	1	2	3	97	.11	.04	3	45	.52	46	.05	3	4.15	.01	.03	2	2	60	.1
5300N 4725E	1	18	6	34	.2	12	4	143	3.20	8	2	ND	2	13	1	2	2	76	.16	.03	3	30	.43	39	.05	3	2.32	.02	.03	2	3	40	.1
5300N 4750E	1	16	6	39	.2	11	4	162	2.65	6	2	ND	2	14	1	2	2	69	.18	.03	4	26	.41	50	.03	2	2.66	.02	.04	2	2	50	.1
5300N 4775E	1	7	4	26	.2	6	3	221	1.59	4	2	ND	2	15	1	2	2	42	.18	.02	4	15	.26	46	.05	2	1.78	.03	.04	2	2	40	.1
5300N 4800E	1	6	4	24	.2	4	2	106	1.73	4	2	ND	2	13	1	2	2	42	.17	.02	2	10	.23	41	.04	2	1.84	.03	.02	2	2	20	.1
5300N 4825E	1	17	6	49	.1	13	5	229	3.45	5	3	ND	2	19	1	2	3	73	.15	.04	3	33	.44	53	.08	2	3.56	.03	.03	2	2	65	.1
5300N 4850E	1	7	5	39	.1	6	4	246	1.96	3	2	ND	2	14	1	2	2	50	.15	.02	4	17	.24	49	.02	2	2.06	.02	.03	2	2	40	.1
5300N 4875E	1	4	3	9	.1	2	1	85	.87	4	2	ND	2	9	1	2	2	27	.10	.01	2	6	.10	27	.05	2	.98	.03	.02	2	3	35	.1
5300N 4900E	1	8	5	33	.1	6	4	377	2.29	8	2	ND	2	11	1	2	2	53	.11	.03	3	18	.26	62	.02	2	2.08	.02	.02	2	1	50	.1
5300N 4925E	1	17	6	41	.3	10	5	194	3.28	13	2	ND	2	12	1	3	2	72	.12	.03	3	27	.37	69	.02	2	2.77	.02	.04	2	2	40	.2
5300N 4950E	1	14	3	70	.1	9	6	312	3.15	25	2	ND	2	12	1	2	3	44	.14	.06	4	18	.45	91	.01	2	4.06	.01	.12	2	1	45	.1
5300N 4975E	1	66	12	75	.3	19	8	275	4.78	248	2	ND	2	10	1	3	2	107	.12	.08	5	42	.38	101	.01	2	3.58	.02	.06	2	3	70	.3
5300N 5000E	1	22	7	55	.1	9	4	129	3.07	83	2	ND	2	10	1	2	2	76	.12	.03	5	25	.26	66	.02	2	2.76	.02	.03	2	2	50	.2
5300N 5025E	1	14	7	31	.1	8	4	120	2.97	56	2	ND	2	11	1	2	2	74	.13	.02	5	23	.25	49	.02	2	1.88	.02	.03	2	2	30	.1
5300N 5050E	1	25	15	76	.1	22	174	4477	10.19	451	2	ND	3	17	1	2	2	110	.30	.09	6	38	.35	123	.02	2	3.44	.02	.07	2	3	120	.1
5300N 5075E	1	18	9	26	.1	8	4	155	3.99	16	4	ND	2	8	1	2	2	109	.09	.04	5	32	.21	44	.05	2	2.15	.02	.04	2	1	20	.1
5300N 5100E	1	9	8	13	.1	4	3	134	2.46	9	4	ND	2	7	1	2	2	80	.09	.02	4	18	.10	26	.07	2	1.49	.02	.02	2	1	40	.1
5300N 5125E	1	18	7	17	.1	9	4	128	4.49	9	4	ND	2	9	1	2	2	126	.09	.05	4	35	.26	50	.10	2	2.19	.02	.04	2	1	35	.1
5300N 5150E	1	2	3	11	.1	3	2	87	1.41	2	2	ND	2	8	1	2	2	36	.06	.01	3	8	.20	23	.03	2	1.43	.03	.02	2	1	10	.1
5300N 5175E	1	5	4	22	.1	5	3	138	2.49	6	2	ND	2	11	1	2	2	66	.09	.03	3	14	.34	44	.02	2	2.56	.03	.05	2	1	40	.1
5300N 5200E	1	9	7	25	.1	5	3	157	2.43	3	3	ND	2	10	1	3	2	55	.10	.03	4	18	.29	57	.03	2	2.51	.02	.03	2	1	20	.1
5300N 5225E	1	32	6	25	.1	9	4	123	4.32	9	4	ND	2	12	1	2	2	124	.08	.09	2	57	.25	44	.03	2	2.12	.02	.04	2	1	90	.2
5300N 5250E	1	23	8	24	.1	10	6	96	4.74	18	3	ND	2	13	1	2	2	145	.10	.07	2	35	.15	42	.01	3	1.70	.02	.05	2	1	25	.1
5300N 5275E	1	33	9	103	.2	34	74	1210	5.46	12	2	ND	2	13	1	2	2	107	.09	.07	5	62	.66	83	.02	2	3.41	.02	.06	2	1	80	.2
5300N 5300E	1	15	9	31	.4	10	4	106	3.51	7	2	ND	2	12	1	2	2	113	.14	.05	3	32	.25	42	.13	2	1.60	.02	.05	2	3	50	.1
STD A-1	1	31	39	180	.4	35	13	996	2.83	8	2	ND	2	36	1	2	2	58	.45	.10	8	72	.75	273	.09	5	1.97	.02	.20	2	1	50	.2

AUG 10 1982

D.M.F.

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

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 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 ppb.
AU* ANALYSIS FROM 10 GRAM FA+AA. AG* ANALYSIS BY AA. HG* ANALYSIS BY FLAMELESS AA FROM .500 GRAM SAMPLE. SAMPLE TYPE - SOIL - -80MESH & PULVERIZE, ROCK

DATE RECEIVED AUG 6 1982 DATE REPORTS MAILED Aug 18/82 ASSAYER D.C. Dayer DEAN TOYE, CERTIFIED B.C. ASSAYER

ASARCO PROJECT VILLALTA FILE # 82-0776 PAGE # 1

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	Au* ppb	Hg* ppb	Ag* ppm
V4600N 3025E	1	16	8	31	.6	6	3	580	2.31	8	2	ND	2	6	1	2	2	71	.12	.03	3	19	.23	53	.10	2	1.39	.01	.03	2	4	280	.5
V4600N 3050E	1	120	14	87	.7	22	11	636	5.47	40	2	ND	2	14	1	2	2	136	.17	.07	2	54	.68	79	.15	3	4.54	.01	.03	2	2	190	.4
V4600N 3075E	1	16	9	37	.5	7	7	1483	2.07	8	2	ND	2	12	1	2	2	58	.19	.03	4	23	.25	55	.10	2	1.23	.02	.03	2	11	80	.3
V4600N 5100E	1	27	11	60	.5	9	9	1040	3.35	7	2	ND	2	7	1	2	2	92	.16	.05	4	23	.52	83	.20	2	2.19	.01	.03	2	4	80	.5
V4600N 5125E	1	86	19	75	.4	17	11	291	5.67	49	2	ND	2	7	1	2	2	106	.09	.05	3	38	.60	57	.05	3	4.06	.01	.04	2	6	70	.5
V4600N 5150E	1	11	8	21	.3	5	4	615	2.63	2	2	ND	2	16	1	2	2	91	.20	.02	3	20	.15	39	.19	2	.98	.01	.03	2	2	70	.2
V4600N 5175E	1	31	10	35	.4	11	6	471	3.89	5	2	ND	2	12	1	2	2	136	.17	.03	2	36	.31	60	.19	2	1.89	.01	.03	2	3	100	.3
V4600N 5200E	1	15	5	26	.3	9	5	120	3.91	4	2	ND	2	17	1	2	2	96	.16	.02	3	22	.17	47	.02	2	1.70	.01	.02	2	4	30	.1
V4650N 3025E	1	46	13	96	.8	14	11	639	3.79	8	2	ND	2	17	1	2	2	104	.19	.04	3	40	.33	88	.21	2	2.36	.01	.02	2	2	80	.7
V4650N 3050E	1	109	11	94	.3	25	12	414	5.29	12	2	ND	2	18	1	2	2	131	.18	.06	2	50	.71	59	.36	2	3.86	.01	.02	2	4	90	.5
V4650N 3075E	1	130	11	87	.6	34	16	562	5.69	16	2	ND	2	14	1	2	2	140	.18	.06	2	64	.79	95	.28	2	4.18	.01	.03	2	2	85	.7
V4650N 5100E	1	77	11	72	.3	28	14	334	5.10	5	2	ND	2	15	1	3	2	132	.17	.04	3	51	.60	115	.17	3	3.26	.01	.02	2	4	80	.3
V4650N 5125E	1	84	385	167	2.2	15	6	374	3.17	13	2	ND	2	11	1	2	2	57	.11	.05	12	14	.16	158	.01	3	2.33	.01	.04	2	9	450	2.1
V4650N 5150E	1	88	13	72	.2	38	29	578	6.24	2	2	ND	2	22	1	2	2	177	.37	.04	3	57	.46	256	.10	3	4.32	.01	.04	2	2	70	.2
V4700N 3025E	1	95	56	273	1.6	32	13	584	5.98	21	2	ND	2	8	1	2	2	131	.10	.07	9	66	.67	84	.11	4	3.48	.01	.04	2	105	150	1.8
V4700N 3050E	1	73	10	81	.4	22	11	696	5.62	8	2	ND	2	14	1	3	2	143	.17	.10	2	54	.46	86	.12	2	3.47	.01	.04	2	4	100	.5
V4700N 3075E	1	34	10	39	.3	13	5	251	4.47	3	2	ND	2	9	1	2	2	137	.15	.06	2	45	.36	36	.29	2	2.03	.01	.02	2	1	45	.3
V4700N 5100E	1	78	13	59	.2	26	10	361	6.67	7	2	ND	2	9	1	2	2	199	.17	.05	2	74	.74	53	.37	2	4.12	.01	.02	2	1	100	.5
V4700N 5125E	1	51	8	35	.5	19	10	233	5.56	4	2	ND	2	11	1	2	2	155	.20	.02	5	50	.35	96	.01	2	2.61	.01	.02	2	2	40	.5
V4700N 5150E	1	40	7	35	.4	24	10	284	3.46	2	2	ND	2	19	1	2	2	103	.41	.03	2	27	.60	136	.07	3	3.41	.01	.03	2	2	60	.6
V4700N 5175E	1	19	8	25	.3	9	4	254	3.03	3	2	ND	2	36	1	2	2	112	.41	.01	2	30	.24	22	.15	3	1.30	.01	.03	2	2	50	.3
V4700N 5200E	1	56	8	31	.3	14	7	319	4.47	2	2	ND	2	28	1	2	2	127	.33	.02	2	39	.31	70	.14	3	2.51	.01	.03	2	3	80	.3
V4700N 5225E	1	29	7	38	.3	11	8	216	4.12	2	2	ND	2	25	1	4	2	120	.23	.01	4	35	.19	86	.14	3	1.68	.01	.03	2	3	30	.3
V4700N 5250E	1	38	7	41	.3	24	15	353	6.93	4	2	ND	2	26	1	5	2	171	.19	.02	2	59	.54	92	.09	4	2.43	.01	.05	2	6	35	.2
V4700N 5275E	1	38	7	68	.2	22	16	659	5.32	2	2	ND	2	53	1	2	2	127	.66	.02	2	41	.43	264	.07	3	2.37	.01	.10	2	3	50	.3
STD A-1/AU	1	30	38	179	.4	34	12	958	2.82	12	2	ND	2	35	1	2	2	54	.64	.10	8	69	.75	267	.08	6	2.03	.02	.21	2	524	50	.4
V4850N 3000E	1	97	14	77	.5	29	11	364	7.59	20	2	ND	2	8	1	2	2	166	.10	.14	2	78	.75	71	.20	3	4.74	.01	.03	2	1	180	.9
V4850N 3025E	1	36	11	35	.2	13	7	474	7.14	10	2	ND	2	6	1	2	2	219	.09	.07	2	63	.38	38	.27	3	2.65	.01	.02	2	2	90	.3
V4850N 3050E	1	113	10	71	.3	39	17	659	6.68	29	2	ND	2	12	1	2	2	172	.26	.05	3	79	1.03	75	.30	3	4.39	.01	.03	2	2	80	.5
V4850N 3075E	1	53	13	56	.3	18	8	256	6.97	5	2	ND	2	8	1	3	2	219	.10	.04	2	73	.46	45	.33	4	3.05	.01	.02	2	2	60	.4
V4950N 3100E	1	40	9	39	.4	13	6	272	7.58	5	2	ND	2	9	1	3	2	238	.10	.07	2	73	.33	30	.35	3	2.61	.01	.01	2	2	65	.4
V4950N 3125E	1	66	12	49	.4	21	11	252	6.89	5	2	ND	2	8	1	2	2	237	.14	.05	3	65	.62	33	.48	4	3.83	.01	.02	2	2	180	.7
V4850N 3150E	1	58	10	34	.2	18	8	308	5.96	4	2	ND	2	10	1	2	2	187	.17	.03	2	44	.38	41	.23	4	3.03	.01	.02	2	2	60	.5
V4850N 3175E	1	107	11	60	.2	30	13	400	5.81	6	2	ND	2	11	1	2	2	168	.14	.06	2	65	.81	46	.38	4	3.50	.01	.02	2	2	170	.6
V4850N 3200E	1	43	7	43	.3	15	7	298	5.18	2	2	ND	2	13	1	2	2	134	.17	.06	2	54	.34	35	.19	4	2.96	.01	.03	2	1	80	.4
V4850N 3225E	1	46	11	62	.4	21	11	348	5.42	3	2	ND	2	21	1	2	2	137	.28	.04	2	54	.42	60	.16	5	2.87	.01	.03	2	2	45	.5
V4850N 3250E	1	42	8	38	.4	12	8	548	3.95	2	2	ND	2	22	1	3	2	114	.20	.03	2	35	.30	57	.11	3	1.68	.01	.03	2	2	50	.4
V4850N 3275E	1	14	5	19	.3	5	2	186	2.37	2	2	ND	2	13	1	2	2	78	.12	.03	2	18	.14	21	.05	3	1.51	.01	.02	2	1	55	.2

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	Au†† ppb	Hg† ppb	Ag† ppm
V4850N 4600E floor	1	21	5	33	.3	9	4	129	3.51	15	2	ND	2	13	1	2	2	96	.11	.04	4	30	.33	29	.08	3	2.50	.01	.03	2	5	50	.2
V4900N 4600E	1	194	11	70	.3	26	14	803	4.12	32	2	ND	2	22	1	2	3	85	.49	.04	7	46	.86	184	.04	5	3.55	.01	.06	2	3	60	.2
V4900N 4625E	1	89	11	93	.3	29	14	595	4.50	23	2	ND	2	16	1	2	4	91	.32	.05	6	50	.84	168	.04	5	3.86	.01	.06	2	2	60	.4
V4900N 4650E	1	111	11	84	.3	31	16	902	4.46	35	2	ND	2	22	1	2	4	85	.49	.04	7	51	1.00	269	.05	6	3.72	.01	.07	2	8	55	.2
V4900N 4675E	1	90	12	78	.2	34	16	716	4.67	45	2	ND	2	23	1	2	3	88	.54	.04	7	55	1.09	263	.05	6	3.78	.01	.07	2	3	40	.2
V4900N 4700E	1	103	12	116	.4	33	20	917	5.25	45	2	ND	2	27	1	2	4	103	.49	.07	8	46	.59	322	.02	5	4.75	.01	.07	2	2	70	.5
V4900N 4725E	1	33	6	40	.3	12	7	265	3.53	36	2	ND	2	11	1	2	3	85	.12	.03	7	28	.36	65	.03	4	2.44	.01	.03	2	2	40	.1
V4900N 4750E	1	40	9	79	.4	24	14	312	4.37	33	2	ND	2	12	1	2	3	94	.18	.03	7	44	.61	149	.04	5	3.07	.01	.04	2	2	40	.3
V4900N 4775E	4	126	8	84	.2	20	11	286	8.51	18	2	ND	2	6	1	2	4	118	.04	.06	14	56	.11	80	.01	6	2.86	.01	.07	2	130	20	.3
V4900N 4800E	1	53	9	125	.9	20	17	601	4.75	9	2	ND	2	44	1	2	4	119	.19	.03	7	43	.27	144	.05	5	3.55	.01	.07	2	5	60	.9
V4900N 4825E	1	104	12	113	.3	17	18	1125	7.06	10	2	ND	2	30	1	2	7	160	.18	.05	8	49	.17	70	.06	6	2.21	.01	.03	2	190	75	.4
V4900N 4850E	1	23	8	64	.6	12	7	239	3.89	3	2	ND	2	20	1	2	2	89	.13	.03	5	28	.17	54	.04	4	2.04	.01	.04	2	14	30	.6
V4900N 4875E	1	66	12	85	1.1	25	15	1414	5.31	20	2	ND	2	74	1	2	4	138	.26	.07	4	60	.63	118	.16	4	4.45	.01	.06	2	10	70	1.0
V4900N 4900E	2	630	58	980	5.4	45	31	1571	16.54	33	3	ND	2	13	5	2	61	650	.27	.18	14	49	.46	66	.07	2	1.97	.01	.03	4	1400	5	4.3
V4700N 4925E	1	69	10	81	.8	21	10	407	5.23	5	2	ND	2	66	1	2	4	150	.21	.06	4	60	.56	55	.17	5	4.09	.01	.03	2	6	5	.9
V4900N 4950E	1	61	12	74	.1	20	10	660	5.54	7	2	ND	2	12	1	2	4	140	.11	.11	5	60	.56	51	.13	6	4.42	.01	.05	2	8	55	.2
V4900N 4975E	1	105	11	72	.3	25	13	391	6.74	14	2	ND	2	15	1	2	4	151	.13	.14	5	73	.69	54	.22	4	5.75	.01	.04	2	2	150	.3
V4900N 5000E	1	147	16	84	.2	41	17	395	5.62	11	2	ND	2	12	1	2	4	144	.11	.05	4	80	1.11	76	.19	6	6.72	.01	.05	2	3	90	.2
V4900N 5025E	1	108	11	102	.3	35	14	331	6.82	24	2	ND	2	12	1	2	5	162	.12	.06	4	80	.88	70	.20	5	5.95	.01	.04	2	2	70	.1
V4900N 5050E	1	18	9	39	.1	21	12	331	5.47	2	2	ND	2	142	1	2	2	174	.44	.03	3	58	.62	47	.25	4	2.96	.01	.05	2	9	20	.1
V4900N 5075E	1	112	10	79	.3	41	26	974	6.04	22	3	ND	2	48	1	2	3	149	.30	.03	5	76	.98	136	.29	4	3.47	.01	.08	2	3	40	.3
V4900N 5100E	1	57	9	50	.4	23	12	271	7.41	8	2	ND	2	33	1	2	4	201	.19	.03	3	77	.50	65	.18	4	3.79	.01	.04	2	4	60	.2
V4900N 5125E	1	73	12	68	.3	38	21	347	8.62	20	2	ND	3	16	1	2	4	210	.07	.05	5	85	.67	127	.08	5	4.48	.01	.09	2	3	60	.1
V4900N 5150E	1	111	12	78	.4	34	14	389	5.29	9	2	ND	2	12	1	2	4	133	.19	.07	4	66	.96	71	.20	4	4.91	.01	.04	2	2	100	.2
V4900N 5175E	1	76	15	62	.2	25	10	312	7.55	6	2	ND	2	15	1	2	2	232	.20	.05	3	83	.79	41	.51	4	3.89	.01	.02	2	2	80	.3
V4900N 5200E	1	35	8	35	.3	12	6	244	4.71	2	2	ND	2	29	1	2	3	163	.24	.03	4	45	.33	51	.25	3	2.27	.01	.02	2	2	60	.4
V4900N 5225E	1	51	9	42	.5	15	7	188	5.73	2	4	ND	2	26	1	2	3	193	.24	.04	3	50	.39	45	.33	2	2.62	.01	.03	2	3	80	.5
V4900N 5250E	1	101	10	66	.4	25	13	382	6.56	10	4	ND	2	41	1	2	3	193	.20	.05	2	67	.41	59	.26	2	4.07	.01	.05	2	5	220	.4
V4900N 5275E	1	56	8	55	.3	23	13	494	6.57	5	2	ND	2	57	1	2	3	189	.18	.05	3	62	.49	64	.17	2	3.79	.01	.04	2	3	70	.3
V4900N 5300E	1	58	11	73	.2	29	20	669	4.72	24	2	ND	2	38	1	2	3	81	.42	.04	6	48	.79	114	.03	4	3.63	.01	.05	2	2	80	.2
V4950N 4750E	1	11	9	42	.3	4	5	3133	2.10	6	2	ND	2	13	1	2	2	44	.22	.06	8	7	.17	186	.01	3	1.37	.01	.10	2	1	80	.2
V4950N 4775E	1	22	5	28	.5	9	5	209	3.37	20	2	ND	2	13	1	2	2	86	.10	.03	8	22	.15	60	.02	3	1.82	.01	.04	2	2	50	.5
V4950N 4800E	1	104	11	68	.4	23	14	484	6.62	24	2	ND	2	10	1	2	3	105	.12	.07	9	46	.25	149	.01	2	2.75	.01	.12	2	5	55	.4
V4950N 4825E	1	145	9	64	.4	28	18	341	6.85	18	2	ND	2	23	1	2	4	149	.11	.04	7	58	.36	137	.01	3	4.32	.01	.09	2	4	30	.2
V4950N 4850E	1	51	14	72	.3	13	6	2459	4.25	11	2	ND	2	55	1	2	3	120	.32	.11	4	45	.33	112	.15	3	3.22	.01	.05	2	2	110	.2
V4950N 4875E	1	40	8	36	.2	16	8	1334	4.62	6	2	ND	2	83	1	2	2	151	.23	.04	5	47	.47	66	.17	3	3.34	.01	.07	2	3	40	.2
STD A-1/AU	1	30	43	173	.4	34	11	929	2.73	9	2	ND	2	35	1	2	2	53	.61	.09	7	67	.73	265	.08	4	1.93	.02	.20	2	490	55	.3

ASARCO PROJECT VILLALTA FILE # 82-0776

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	Au** ppb	Hg* ppb	Ag* ppm
V4950N 4900E	1	33	11	68	.4	15	10	1107	4.29	6	2	ND	2	16	1	2	3	133	.24	.11	4	41	.43	98	.08	3	2.57	.01	.06	2	3	75	.3
V4950N 4925E	1	13	7	20	.4	6	3	135	3.88	2	2	ND	2	10	1	2	3	129	.11	.03	5	29	.16	24	.07	2	1.75	.01	.02	2	4	55	.1
V4950N 4950E	1	44	11	45	.3	24	10	500	5.50	7	2	ND	2	81	1	2	3	177	.34	.07	2	59	.77	124	.29	4	4.02	.02	.05	2	4	60	.2
V4950N 4975E	1	107	13	71	.2	33	14	336	6.08	14	2	ND	2	11	1	2	4	154	.12	.05	5	76	1.02	54	.17	3	5.04	.01	.05	2	2	150	.2
V4950N 5000E	1	54	9	66	.4	18	8	234	5.72	13	2	ND	2	22	1	2	4	145	.14	.05	5	55	.50	59	.13	3	3.95	.01	.05	2	2	90	.3
V4950N 5025E	1	113	10	87	.1	39	20	594	6.03	11	2	ND	2	15	1	2	4	134	.14	.06	5	73	.90	107	.11	2	4.74	.01	.08	2	4	75	.1
V4950N 5050E	1	58	10	97	.1	29	13	403	5.22	5	2	ND	2	16	1	2	3	125	.21	.07	6	59	.77	89	.06	2	3.40	.01	.06	2	1	50	.2
V4950N 5075E	1	118	13	97	.2	37	17	424	6.18	15	2	ND	2	19	1	2	4	159	.13	.07	3	74	.78	94	.28	4	5.65	.01	.06	2	2	80	.3
V4950N 5100E	1	75	11	80	.4	25	13	350	6.24	4	2	ND	2	23	1	2	3	178	.19	.06	3	68	.63	95	.31	6	4.02	.01	.06	2	2	85	.4
V4950N 5125E	1	26	14	50	.2	20	11	423	6.64	5	2	ND	2	56	1	2	2	159	.25	.05	3	65	.54	67	.24	2	3.11	.01	.06	2	4	70	.3
V4950N 5150E	1	29	6	37	.3	17	8	356	5.04	2	2	ND	2	69	1	2	3	152	.38	.02	3	56	.44	62	.27	2	2.36	.02	.03	2	6	30	.2
V4950N 5175E	1	97	9	58	.3	29	13	306	6.11	5	2	ND	2	25	1	2	3	172	.20	.04	3	68	.82	59	.29	2	3.85	.01	.04	2	11	70	.3
V4950N 5200E	1	70	12	67	.2	24	10	384	5.58	15	2	ND	2	14	1	2	2	160	.17	.06	3	66	.72	56	.27	2	3.99	.01	.04	2	3	75	.3
V4950N 5225E	1	47	12	58	.5	21	9	342	6.73	2	2	ND	2	18	1	2	3	209	.18	.06	3	73	.55	46	.35	2	3.73	.01	.04	2	4	70	.2
V4950N 5250E	1	58	10	73	.4	17	10	542	5.75	2	2	ND	2	46	1	2	3	177	.22	.05	3	60	.38	52	.16	2	3.70	.01	.03	2	8	50	.2
V4950N 5275E	1	83	9	69	.2	23	13	435	7.33	2	2	ND	2	36	1	2	3	198	.14	.05	3	73	.45	80	.14	2	4.50	.01	.06	2	7	50	.3
V4950N 5300E	1	28	9	28	.3	9	4	256	4.30	3	4	ND	2	40	1	2	3	148	.23	.04	4	42	.19	44	.17	2	1.99	.01	.04	2	8	30	.1
STD A-1/AU	1	30	45	174	.4	33	12	933	2.77	8	2	ND	2	35	1	2	2	54	.41	.09	7	68	.73	265	.08	4	1.93	.02	.21	2	510	50	.3
V5000N 4825E	1	35	7	39	.3	11	5	274	4.02	9	2	ND	2	19	1	2	3	112	.17	.04	5	35	.30	68	.05	2	2.23	.01	.04	2	3	50	.2
V5000N 4850E	1	10	5	20	.5	5	2	143	2.33	2	2	ND	2	9	1	2	2	67	.10	.02	6	16	.17	30	.03	2	1.69	.01	.02	2	1	100	.3
V5000N 4875E	1	12	14	34	.5	7	3	177	3.19	2	2	ND	2	9	1	2	3	85	.11	.06	6	25	.22	39	.04	2	1.94	.01	.04	2	1	70	.4
V5000N 4900E	1	85	16	104	.2	24	11	624	6.46	10	2	ND	2	8	1	2	4	135	.09	.13	5	55	.53	62	.02	2	5.07	.01	.07	2	2	220	.2
V5000N 4925E	1	62	13	92	.2	24	13	336	5.26	8	2	ND	2	9	1	2	4	117	.08	.06	5	57	.71	82	.04	2	4.76	.01	.06	2	2	150	.3
V5000N 4950E	1	43	17	106	.3	48	36	1434	4.25	116	2	ND	2	12	1	2	3	64	.16	.04	13	41	.40	146	.01	2	4.69	.01	.07	2	1	100	.5
V5000N 4975E	1	30	9	36	.3	13	5	147	3.63	8	2	ND	2	10	1	2	2	124	.12	.03	4	37	.37	38	.13	2	2.10	.01	.03	2	3	40	.2
V5000N 5000E	1	119	11	85	.2	36	15	348	6.62	17	2	ND	2	15	1	2	3	172	.10	.04	4	78	.95	119	.12	2	5.01	.01	.06	2	5	80	.2
V5000N 5025E	1	72	11	88	.3	29	13	276	6.74	13	2	ND	2	10	1	2	3	163	.10	.06	5	70	.75	80	.10	2	4.98	.01	.05	2	1	130	.3
V5000N 5050E	1	35	9	42	.2	12	6	313	6.31	5	4	ND	2	26	1	2	3	188	.12	.06	3	62	.32	46	.23	2	3.08	.01	.03	2	4	85	.3
V5000N 5075E	1	48	10	59	.2	16	7	220	5.28	7	2	ND	2	21	1	2	3	155	.10	.05	4	56	.33	46	.12	2	3.82	.01	.04	2	3	75	.2
V5000N 5100E	1	36	9	35	.7	12	6	210	6.30	3	2	ND	2	20	1	2	2	181	.10	.04	3	59	.26	68	.18	2	3.19	.01	.06	2	52	140	.6
V5000N 5125E	1	41	9	32	.3	12	7	194	6.23	4	2	ND	2	8	1	2	3	169	.05	.04	9	55	.28	39	.02	2	2.98	.01	.03	2	3	70	.2
V5000N 5150E	1	80	8	48	.5	16	9	242	6.50	6	3	ND	2	14	1	2	3	188	.10	.05	5	63	.37	79	.05	2	3.18	.01	.06	2	3	100	.3
V5000N 5175E	1	48	15	103	.6	21	45	4589	3.81	9	2	ND	2	26	1	2	3	108	.37	.07	7	40	.48	181	.11	2	2.69	.01	.05	2	2	170	.4
V5000N 5200E	1	20	6	20	.4	8	4	194	4.38	5	2	ND	2	23	1	2	2	172	.15	.04	3	40	.24	25	.20	2	1.81	.01	.02	2	4	80	.2
V5000N 5225E	1	21	8	22	.4	7	4	426	4.42	2	2	ND	2	14	1	2	2	185	.14	.04	4	41	.17	27	.23	2	1.58	.01	.02	2	4	40	.2
V5000N 5250E	1	44	11	34	.4	12	5	228	5.92	5	2	ND	2	18	1	2	3	200	.17	.06	3	59	.32	40	.33	2	2.54	.01	.04	2	3	30	.2
V5000N 5275E	1	62	9	60	.2	25	14	819	5.63	5	2	ND	2	14	1	2	3	187	.30	.04	3	66	.80	57	.39	2	2.72	.01	.03	2	2	50	.3
V5000N 5300E	1	21	7	48	.2	10	6	195	4.05	9	2	ND	2	16	1	2	2	85	.17	.03	3	30	.39	53	.02	2	2.46	.01	.04	2	2	30	.1
FP-1	1	89	6	74	.1	25	13	737	4.30	9	2	ND	2	35	1	2	2	113	1.04	.05	3	45	1.46	48	.32	2	2.82	.06	.05	2	5	20	.2

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	Au†† ppb	Hg† ppb	Ag† ppm
ZONE	4	23327	231	611	34.3	13	30	1056	5.42	187	2	ND	2	3	7	26	7	23	.17	.05	2	7	.52	61	.01	2	.80	.01	.01	19	4000	420	50.0
4865N 4875E	18	658	15	1	25.5	2	3	478	48.60	264	2	ND	2	2	1	71	2	34	.19	.03	21	1	.15	3	.01	2	.34	.01	.01	5	3	120	4.3
4865N 4875E (DX)	1	79	3	1	.6	1	1	55	4.35	24	2	ND	2	1	1	2	2	2	.02	.01	2	1	.02	2	.01	2	.05	.01	.01	2	-	-	-

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

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 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 ppb.
Au‡‡ ANALYSIS FROM 10 GRAM FA+AA. Ag‡ ANALYSIS BY AA. Hg‡ ANALYSIS BY FLAMELESS AA FROM .500 GRAM SAMPLE. SAMPLE TYPE - SOIL & CORE

DATE RECEIVED AUG 13 1982 DATE REPORTS MAILED Aug 21/82 ASSAYER Dean Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

ASARCO FILE # 82-0839

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	Au‡‡ ppb	Hg‡ ppb	Ag‡ ppm
V45N 5325E	1	80	8	73	.5	24	12	405	5.79	13	6	ND	2	16	1	3	2	152	.21	.06	6	62	.59	51	.09	2	4.70	.01	.05	2	3	220	.4
V45N 5350E	1	123	9	87	.9	33	16	415	6.56	14	2	ND	2	17	1	2	2	149	.19	.09	7	73	.70	81	.12	2	5.80	.01	.08	2	4	260	.6
V45N 5375E	1	110	11	92	.3	29	18	776	5.35	8	4	ND	2	27	1	2	2	135	.63	.07	7	57	1.35	86	.24	2	4.44	.03	.15	2	20	130	.2
V45N 5400E	1	76	12	73	.5	25	14	1332	5.02	10	4	ND	2	26	1	2	2	157	.40	.06	6	58	.70	121	.25	2	3.76	.02	.05	2	4	150	.2
V45N 5425E	1	113	8	92	.8	25	13	367	4.91	9	2	ND	2	17	1	5	3	197	.24	.11	7	75	.73	50	.25	2	5.37	.02	.04	2	14	140	.4
V45N 5450E	1	213	14	121	.5	47	28	1966	6.92	11	3	ND	2	31	1	2	2	161	.03	.06	8	81	1.60	148	.24	2	4.57	.04	.13	2	13	45	.3
V45N 5475E	1	52	10	81	.5	10	6	333	5.08	5	5	ND	2	11	1	3	2	142	.14	.04	7	33	1.11	49	.17	2	4.67	.02	.04	2	5	230	.3
V45N 5500E	1	84	9	49	.2	16	8	332	6.75	2	3	ND	2	13	1	2	3	160	.18	.11	11	51	.51	51	.06	2	4.46	.01	.07	2	11	120	.1
V45N 5525E	2	87	7	56	.3	20	10	376	6.12	2	2	ND	2	18	1	2	2	171	.22	.06	8	63	.60	54	.14	2	4.88	.01	.05	2	5	120	.1
V45N 5550E	4	110	6	59	.7	15	8	300	6.94	7	2	ND	2	17	1	4	3	183	.16	.08	7	49	.61	56	.17	2	6.13	.01	.05	2	8	130	.3
V45N 5575E	1	17	7	15	.4	5	2	141	1.72	3	3	ND	2	173	1	2	2	87	.89	.01	7	28	.15	14	.14	2	1.76	.02	.01	2	4	20	.1
V45N 5600E	1	119	6	108	.3	19	11	465	6.73	6	2	ND	2	14	1	2	2	145	.16	.13	7	40	.73	81	.12	2	4.90	.01	.14	2	3	50	.2
V45N 5625E	1	102	30	428	.7	52	50	3940	5.15	35	3	ND	2	27	4	2	3	99	.49	.13	21	72	.54	250	.04	4	7.17	.02	.09	2	3	130	.7
V45N 5650E	2	108	7	241	.4	43	47	3274	4.46	20	5	ND	2	25	2	2	3	83	.36	.14	20	67	.46	214	.02	5	6.66	.01	.09	2	3	220	.6
V45N 5675E	3	108	17	219	.4	43	22	1067	5.30	36	2	ND	2	23	1	2	2	99	.56	.11	15	47	.76	111	.06	5	3.11	.02	.12	2	12	200	.4
V45N 5700E	1	105	13	79	.3	24	17	883	5.16	13	6	ND	2	23	1	2	2	119	.45	.14	13	52	.80	95	.08	5	4.19	.02	.10	2	4	100	.2
V45N 5725E	1	78	14	75	.6	9	9	455	6.66	50	4	ND	4	24	1	3	2	132	.21	.22	12	47	.65	52	.10	3	4.87	.01	.05	2	2	170	.2
V45N 5750E	1	13	4	28	.2	6	4	288	2.75	3	2	ND	2	20	1	2	2	69	.27	.05	6	20	.41	38	.03	2	2.43	.02	.05	2	1	10	.1
V45N 5775E	2	56	8	36	.3	8	6	357	3.20	9	2	ND	2	19	1	2	2	92	.39	.10	6	31	.37	34	.10	3	2.78	.02	.05	2	2	95	.1
V45N 5800E	2	68	7	48	.4	9	7	447	3.88	7	2	ND	2	22	1	2	2	94	.29	.12	8	30	.43	50	.14	4	3.93	.02	.03	2	1	110	.2
V45+75N 5325E	1	29	7	25	.5	10	5	200	3.29	3	2	ND	2	30	1	2	2	108	.26	.03	6	35	.30	34	.12	2	2.16	.01	.02	2	4	60	.2
V46N 5350E	1	57	12	61	.6	20	9	265	4.56	6	2	ND	2	26	1	2	2	128	.22	.05	7	49	.61	65	.13	3	4.32	.01	.06	2	11	50	.2
V46N 5375E	1	37	4	34	.6	14	8	438	5.90	2	2	ND	2	31	1	2	2	107	.39	.04	5	65	.29	71	.13	2	3.49	.01	.04	2	15	55	.3
V46N 5400E	1	19	9	34	.4	12	8	714	4.72	2	2	ND	2	91	1	2	2	181	.57	.04	6	50	.39	63	.33	2	2.59	.01	.03	2	3	50	.3
V46N 5425E	1	28	6	48	.4	20	11	1423	4.35	7	2	ND	2	60	1	2	2	148	.63	.05	5	59	.49	86	.41	2	2.69	.03	.04	2	4	60	.2
V46N 5450E	1	91	11	76	.7	43	23	455	8.14	7	2	ND	3	32	1	2	2	229	.24	.04	7	84	.69	154	.13	2	6.07	.01	.10	2	5	80	.3
V46N 5475E	1	51	6	64	.5	32	17	333	8.84	2	4	ND	3	34	1	2	2	233	.17	.04	6	86	.47	129	.11	2	6.08	.01	.09	2	5	60	.1
V46N 5500E	1	137	23	132	.5	43	22	635	7.48	4	4	ND	2	22	1	2	3	180	.16	.04	9	78	1.15	111	.03	2	6.71	.01	.09	2	4	65	.2
V46N 5525E	1	40	3	44	.8	21	11	292	6.41	2	5	ND	2	15	1	2	2	186	.12	.03	19	72	.46	76	.02	2	4.20	.01	.05	2	3	65	.5
V46N 5550E	1	87	4	55	.6	28	14	397	6.86	7	3	ND	2	25	1	2	2	190	.24	.06	8	78	.62	75	.08	2	4.12	.01	.04	2	2	50	.2
V46N 5575E	1	162	8	101	.5	42	21	752	6.72	7	4	ND	2	18	1	2	2	175	.29	.07	11	83	.84	93	.08	3	5.14	.01	.08	2	8	80	.2
V46N 5600E	1	244	8	103	.3	46	25	895	6.56	12	3	ND	2	23	1	2	2	176	.37	.06	12	83	1.09	123	.18	2	5.13	.02	.09	2	10	110	.2
V46N 5625E	2	329	11	139	.5	46	21	917	5.85	13	2	ND	2	15	1	2	2	127	.31	.07	25	56	.59	109	.04	3	3.65	.01	.09	2	47	210	.3
V46N 5650E	1	56	8	50	.5	17	7	284	5.41	8	4	ND	2	17	1	2	2	170	.26	.05	11	50	.39	52	.08	2	3.20	.01	.04	2	2	60	.2
V46N 5675E	1	55	8	68	.6	19	8	257	5.01	6	3	ND	2	14	1	2	2	129	.18	.09	6	59	.51	51	.09	4	4.47	.01	.03	2	1	100	.3
V46N 5700E	1	155	16	179	.6	45	25	1138	5.77	13	3	ND	2	18	1	2	2	152	.30	.09	10	73	1.11	82	.18	5	6.10	.01	.06	2	10	160	.8
V46N 5725E	2	88	49	220	1.1	38	15	627	4.54	9	4	ND	2	15	1	2	2	129	.26	.09	8	57	1.09	39	.22	3	5.08	.01	.03	2	5	340	1.1
STD A-1	1	32	35	183	.4	36	13	1016	2.78	9	2	ND	2	32	1	2	2	57	.71	.10	9	80	.82	264	.09	8	2.40	.02	.20	2	1	55	.3

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	Au** ppb	Hg* ppb	Ag* ppm
V46N 5750E	1	121	22	178	1.0	40	21	1171	5.25	11	5	ND	2	18	1	4	3	144	.36	.16	6	62	1.02	52	.20	5	5.04	.02	.04	2	5	250	.4
V46N 5775E	3	49	13	202	.3	165	43	692	2.86	57	6	ND	2	3	1	3	4	61	.07	.19	11	43	1.23	18	.05	4	4.46	.01	.03	2	10	50	.5
V46N 5800E	1	71	9	109	.8	28	11	627	4.45	10	2	ND	2	14	1	2	2	140	.23	.07	7	50	.49	39	.13	4	3.78	.01	.01	2	3	160	.9
V46N 5825E	2	103	13	135	.7	39	12	480	3.85	14	4	ND	2	9	1	2	3	88	.20	.14	4	38	.32	72	.05	4	2.67	.01	.04	2	2	120	.8
V46N 5850E	1	53	2	60	.2	9	6	172	4.52	2	2	ND	4	8	1	2	3	68	.09	.11	16	25	.21	69	.01	4	4.48	.01	.13	2	2	60	.4
V46N 5875E	1	66	5	73	.2	21	12	372	4.65	2	4	ND	2	24	1	2	3	111	.33	.10	6	56	.89	47	.24	4	4.90	.02	.04	2	3	85	.3
V46N 5900E	1	23	5	40	.2	8	5	241	2.88	2	3	ND	2	27	1	2	2	74	.27	.04	6	28	.40	46	.09	3	2.67	.02	.03	2	2	65	.2
DDH																																	
80-1 22'-25' 54127 Core	1	10	10	40	.4	8	3	176	1.42	29	2	ND	2	7	1	2	2	46	.12	.03	12	16	.08	26	.07	3	.88	.01	.04	2	34	35	.5
80-5) 98'-100' 54128	1	141	13	2043	.4	9	8	573	4.07	3	3	ND	2	16	8	2	3	44	.60	.14	25	13	1.09	126	.01	10	2.73	.04	.30	6	9	200	.5
80-6) 118'-120' 54129	1	203	58	1340	.8	11	7	1285	4.19	3	3	ND	2	37	4	2	4	50	1.58	.17	29	11	1.70	62	.01	4	2.90	.02	.19	3	45	720	.9
80-6) 178'-180' 54130	2	147	27	89	1.2	73	33	448	12.85	36	3	ND	2	115	1	2	2	290	.50	.06	19	138	.42	328	.06	3	2.36	.14	.24	2	10	20	.5
	7	180	29	110	4.5	9	4	1639	21.53	85	14	3	2	49	1	4	199	124	4.28	.18	9	13	.37	20	.01	2	.59	.01	.01	18	4700	25	2.6
80-6) 188'-190' 54131	5	559	23	577	15.8	29	11	4237	23.40	149	11	ND	2	42	5	8	220	269	4.18	.18	22	11	.85	57	.01	2	.56	.01	.01	10	2500	5	13.6
81-1) 98'-100' 54132	2	105	16	99	1.4	89	39	489	14.19	34	7	ND	2	131	1	2	2	405	.65	.06	19	151	.56	424	.06	2	2.90	.12	.22	2	9	5	.2
81-1) 113'-115' 54133	1	161	10	238	.3	48	23	1104	7.05	3	5	ND	2	55	1	2	2	151	1.48	.08	10	58	1.48	175	.11	7	3.88	.05	.19	2	17	5	.6
81-2) 128'-130' 54134	5	512	13	826	2.1	130	12	1390	10.25	520	6	ND	2	93	6	2	15	631	7.11	.21	33	40	.64	14	.01	2	.96	.01	.01	5	2600	25	1.5
81-3) 168'-170' 54135	2	137	14	124	1.4	66	41	571	14.09	24	7	ND	2	103	1	2	2	355	.86	.14	21	122	.49	231	.06	2	2.72	.10	.25	2	8	5	.4
81-3) 178'-180' 54136	1	77	21	348	.4	44	21	1503	6.37	19	15	ND	2	52	1	2	2	283	2.81	.41	30	126	1.80	182	.12	7	2.70	.05	.22	2	95	5	.4
81-7) 117'-125' 54137	1	47	3	110	.1	125	44	1659	9.06	6	9	ND	2	52	1	2	2	151	1.95	.09	10	198	2.01	65	.36	2	4.00	.05	.08	2	6	10	.3
81-7) 218'-228' 54138	1	49	6	92	.3	30	17	1127	4.77	13	3	ND	2	38	1	2	2	93	1.16	.05	6	32	2.19	452	.13	10	3.85	.07	.38	2	4	10	.5
81-12) 95'-105' 54139	1	125	18	134	.4	125	41	551	8.26	32	2	ND	2	94	1	2	2	225	.74	.09	17	88	.82	220	.04	10	3.01	.07	.25	2	14	10	.4
STD A-1	1	32	36	190	.4	37	13	1057	2.87	9	3	ND	2	33	1	2	2	58	.76	.11	10	84	.83	268	.09	8	2.38	.02	.20	2	1	55	.4
V46N 5925E	1	107	5	64	.3	30	14	399	5.03	2	4	ND	2	23	1	2	3	126	.23	.07	6	78	1.00	53	.14	3	4.89	.02	.03	2	3	90	.7
V46N 5950E	1	70	5	59	.3	20	13	1168	4.70	8	6	ND	2	31	1	2	2	133	.53	.09	8	52	.69	73	.16	4	3.12	.02	.05	2	2	60	.5

ASARCO EXPLORATION PROJECT # VILLALTA-GRID NO FILE # 82-1276

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	Au** ppb	Hg* ppb	Ag* ppm
VILLALTA																																	
4900N+4450E	1	23	10	50	.2	14	7	284	3.23	11	2	ND	2	9	.1	2	.2	75	.15	.04	3	32	.46	71	.03	3	2.43	.02	.03	2	5	55	.1
4900N+4475E	1	29	15	71	.2	20	8	225	4.35	8	2	ND	2	7	1	2	2	93	.12	.05	2	43	.68	83	.04	3	3.16	.01	.03	2	2	80	.1
VILL-3 (STD)	1	78	13	71	.2	15	11	746	3.31	6	2	ND	2	17	1	2	2	63	.37	.10	8	23	.89	98	.07	4	2.29	.02	.09	2	2	35	.3

ASARCO EXPLORATION PROJECT # VILLALTA-GRID NO FILE # 82-1276

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	Au** ppb	Hg* ppb	Ag* ppm
LLALTA																																	
4400N+4600E	1	40	12	66	.8	18	9	429	3.95	69	2	ND	2	7	1	2	3	93	.10	.06	3	43	.65	48	.13	2	3.42	.01	.03	2	10	80	1.0
4400N+4625E	1	16	8	31	.4	8	5	452	2.86	8	3	ND	2	6	1	2	2	84	.12	.04	3	25	.30	44	.07	2	1.50	.01	.02	2	6	65	.2
4400N+4650E	1	11	8	18	.3	4	2	337	1.36	4	2	ND	2	8	1	2	2	39	.13	.03	2	10	.13	46	.04	2	.75	.01	.03	2	2	80	.2
4400N+4675E	1	34	7	34	.3	11	6	396	3.95	5	2	ND	2	12	1	2	2	145	.17	.05	3	44	.30	41	.25	2	1.71	.01	.01	2	5	50	.3
4400N+4700E	1	56	7	85	.2	22	9	398	4.72	8	3	ND	2	6	2	2	2	141	.12	.06	2	55	.73	46	.34	2	3.25	.01	.02	2	3	60	.2
4400N+4725E	1	65	11	81	.1	27	13	446	6.56	2	4	ND	2	5	2	2	2	184	.12	.09	2	79	.82	50	.38	2	3.91	.01	.02	2	3	120	.3
4400N+4750E	1	21	7	29	.3	7	5	391	3.82	2	3	ND	2	9	1	2	2	148	.18	.07	2	35	.19	40	.35	2	1.25	.01	.01	2	4	110	.4
4400N+4775E	1	47	9	37	.2	15	6	326	5.74	6	3	2	2	7	2	2	2	205	.15	.07	2	61	.44	53	.35	2	2.35	.01	.01	2	6	150	.4
4400N+4800E	1	51	12	56	.1	17	7	342	6.88	2	4	2	2	7	2	2	2	206	.13	.07	3	70	.47	55	.37	2	3.66	.01	.02	2	4	140	.2
4400N+4825E	1	23	10	40	.1	10	5	176	5.35	3	2	ND	2	11	1	2	2	197	.18	.05	3	39	.29	65	.28	2	1.61	.01	.01	2	4	60	.1
4400N+4850E	1	40	11	75	.3	25	18	4521	4.00	8	3	ND	2	28	2	2	2	129	.74	.05	8	45	1.03	88	.23	2	2.47	.01	.02	2	5	90	.5
4400N+4875E	1	18	8	22	.3	8	4	158	4.22	4	3	ND	2	10	1	2	2	208	.15	.04	2	39	.24	36	.31	2	1.05	.01	.01	2	8	30	.1
4400N+4900E	1	10	7	19	.4	4	3	117	2.85	4	2	ND	2	8	1	2	2	130	.12	.03	2	21	.16	34	.22	2	.76	.01	.01	2	4	50	.1
4400N+4925E	1	116	10	244	.1	42	22	955	5.45	186	3	2	2	16	3	2	2	141	.54	.06	4	73	1.98	75	.27	2	3.44	.02	.05	2	16	140	.3

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	Au** ppb	Hg* ppb	Ag* ppm
4400N+4950E	1	69	10	75	.3	20	9	274	4.93	24	3	ND	2	14	1	3	2	153	.16	.08	2	43	.80	50	.21	2	3.39	.02	.03	2	6	80	.5
4400N+4975E	1	147	16	267	.1	41	22	1054	5.52	209	7	ND	2	20	2	2	2	150	.59	.07	3	75	2.03	92	.30	2	3.83	.02	.06	2	32	100	.5
4400N+5000E	6	99	16	111	.4	19	12	545	4.65	64	4	ND	2	19	1	2	2	132	.46	.08	2	43	1.04	65	.22	2	2.29	.02	.04	2	24	130	.7
4450N+4600E	1	72	9	97	.1	33	14	408	4.57	16	2	ND	2	9	1	2	2	100	.12	.06	2	56	1.03	82	.13	2	4.42	.02	.04	2	3	60	.4
4450N+4625E	1	119	12	67	.3	22	13	516	4.51	9	5	ND	2	13	1	2	2	137	.26	.04	2	55	.62	100	.19	2	2.71	.02	.04	2	3	85	.3
4450N+4650E	1	108	13	73	.1	30	13	424	5.15	8	2	ND	2	9	1	2	2	154	.17	.06	2	69	.89	75	.30	2	3.72	.01	.03	2	4	70	.5
4450N+4675E	1	77	15	79	.3	22	18	1216	6.59	7	4	ND	2	16	1	2	2	193	.16	.06	2	55	.57	92	.25	2	3.36	.01	.01	2	4	80	.5
4450N+4700E	1	35	16	44	.1	15	13	1284	5.89	8	3	ND	2	12	1	6	2	194	.15	.08	2	39	.47	58	.18	2	1.81	.02	.03	2	5	160	.3
4450N+4725E	1	50	9	46	.4	18	13	1168	4.84	6	4	ND	2	36	1	5	2	159	.24	.07	2	36	.79	65	.23	2	1.67	.02	.01	2	3	90	.6
4450N+4750E	1	38	11	57	.5	11	7	824	4.32	7	5	ND	2	10	1	5	2	138	.15	.06	2	43	.50	74	.28	2	2.23	.02	.02	2	10	120	.6
4450N+4775E	1	115	13	88	.1	33	14	776	5.84	15	6	ND	2	8	1	5	2	176	.16	.12	2	79	1.00	87	.43	2	5.05	.01	.02	2	5	160	.6
4450N+4800E	1	28	6	38	.4	8	5	715	3.54	4	4	ND	2	10	1	3	2	153	.20	.06	2	40	.22	52	.33	2	1.25	.02	.01	2	13	80	.5
4450N+4825E	1	20	7	27	.2	8	7	639	2.64	3	3	ND	2	13	1	2	2	104	.26	.03	2	32	.27	41	.35	2	.95	.02	.02	2	6	40	.2
4450N+4850E	1	80	10	64	.3	24	10	385	5.78	6	4	ND	2	9	1	4	2	181	.17	.06	2	73	.80	44	.41	2	3.65	.01	.01	2	6	130	.2
4450N+4875E	1	88	13	85	.1	27	14	909	6.06	11	3	ND	2	13	1	2	2	183	.17	.09	2	72	.87	60	.36	2	4.24	.02	.02	2	8	80	.4
4450N+4900E	1	83	13	108	.3	28	12	374	6.33	17	4	ND	2	9	1	4	2	191	.12	.07	2	72	.95	52	.39	2	4.04	.02	.02	2	4	160	.5
4450N+4925E	1	35	13	65	.3	12	6	371	6.18	20	3	ND	2	7	1	3	2	180	.10	.08	2	59	.42	29	.27	2	2.53	.01	.01	2	20	140	.5
4450N+4950E	1	141	15	202	.3	36	20	1430	5.07	63	3	ND	2	29	2	2	2	133	.92	.07	6	69	1.45	168	.27	2	3.51	.02	.04	2	21	120	.5
4450N+4975E	1	92	12	145	.6	24	12	787	6.17	116	4	ND	2	16	1	2	2	193	.30	.13	2	70	1.21	53	.38	2	4.30	.02	.02	2	10	150	1.0
4450N+5000E	1	116	10	86	.1	39	30	1181	5.01	18	8	ND	2	44	1	2	2	190	.34	.07	2	88	3.61	38	.36	2	4.98	.02	.06	2	5	70	.3
STD A-1	1	31	43	184	.3	34	12	946	2.74	12	2	ND	2	35	1	2	2	56	.61	.10	7	75	.78	292	.08	5	1.96	.02	.20	2	1	50	.3
4800N+2475E 4475E	2	50	15	75	.4	11	9	1491	3.08	11	2	ND	2	39	1	2	2	93	1.38	.06	6	25	.42	162	.06	2	2.49	.01	.02	2	10	160	.4
4800N+2500E 4500E	1	27	8	44	.2	11	7	377	3.29	7	2	ND	2	16	1	2	2	99	.31	.04	2	27	.65	91	.09	2	2.19	.02	.02	2	4	60	.3
4800N+2525E 4525E	1	80	16	96	.9	15	19	1023	5.69	15	4	ND	2	16	1	2	2	137	.19	.14	3	33	.96	101	.08	2	3.40	.01	.02	2	5	80	1.0
4800N+2550E 4550E	1	41	12	60	.3	16	17	1371	3.78	9	2	ND	2	29	1	2	2	105	.41	.10	2	32	1.13	86	.12	2	2.20	.01	.04	2	8	110	.5
4800N+4450E ✓	1	36	8	48	.3	16	7	276	3.53	42	2	ND	2	8	1	2	2	72	.14	.04	4	37	.31	55	.01	2	2.27	.01	.03	2	1	40	.4
4850N+2500E 4500E	1	28	11	60	.2	10	13	925	3.59	6	2	ND	2	21	1	2	2	102	.24	.04	3	25	.87	176	.04	2	2.27	.02	.04	2	15	45	.3
4850N+2525E 4525E	15	9	66	.2	7	8	477	3.16	9	2	ND	2	11	1	2	2	67	.15	.04	5	15	.49	112	.01	2	2.38	.01	.05	2	35	40	.2
4850N+2550E 4550E	45	12	87	.3	29	16	259	4.53	19	3	ND	2	10	1	2	2	109	.18	.04	5	45	.67	135	.03	2	4.39	.02	.04	2	10	80	.3
4850N+2575 4575E	46	9	91	.2	26	12	410	4.29	17	2	ND	2	10	1	2	2	89	.15	.06	4	47	.88	117	.04	2	3.42	.02	.04	2	7	55	.3
4850N+4450E	1	36	11	66	.2	20	10	387	3.73	8	3	ND	2	11	1	2	2	70	.20	.04	3	40	.83	168	.02	2	3.06	.02	.04	2	3	100	.2
4850N+4475E	1	52	16	98	.4	23	17	1333	4.05	21	2	ND	2	27	1	2	2	76	.76	.07	10	41	.69	288	.03	2	3.69	.02	.05	2	23	110	.5
4900N+2500E 4500E	1	23	8	58	.3	14	9	372	2.83	5	2	ND	2	10	1	2	2	61	.20	.04	3	30	.62	102	.03	2	2.18	.01	.02	2	5	60	.4
4900N+2525E 4525E	26	8	81	.2	13	6	188	3.04	7	2	ND	2	11	1	2	2	73	.18	.04	3	28	.47	103	.03	2	2.26	.01	.02	2	2	60	.4
4900N+2550E 4550E	22	8	59	.2	13	7	259	2.88	2	2	ND	2	12	1	2	2	72	.18	.03	3	28	.58	110	.04	2	2.06	.02	.03	2	2	65	.3
4900N+2575E 4525E	16	9	47	.3	12	6	192	2.57	6	2	ND	2	16	1	2	2	64	.46	.02	3	30	.62	157	.04	2	1.74	.02	.02	2	2	70	.2

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

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 MLS WITH WATER.
THIS LEACH IS PARTIAL FOR: Ca,P,Mg,Al,Ti,La,Na,K,W,Ba,Sl,Sr,Cr AND B. Au DETECTION 3 ppb.
AU* ANALYSIS FROM 10 GRAM FA+AA. AS* ANALYSIS BY AA. HG* ANALYSIS BY FLAMELESS AA FROM .500 GRAM SAMPLE. SAMPLE TYPE - SOIL & ROCK

DATE RECEIVED AUG 11 1982 DATE REPORTS MAILED Aug 25/82 ASSAYER D. Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

ASARCO PROJECT # VILLALTA FILE # 82-0816 PAGE # 1

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	Au* ppb	Hg* ppb	Ag* ppm
V4700N 5300E	1	28	6	30	.5	12	8	443	3.51	3	2	ND	2	23	1	2	2	107	.37	.03	5	33	.30	99	.01	2	2.10	.01	.03	2	4	40	.1
V4700N 5325E	1	52	8	46	.7	19	12	637	6.63	6	2	ND	2	10	1	3	2	196	.15	.05	7	61	.21	62	.07	2	2.25	.01	.04	2	4	40	.2
V4700N 5350E	1	36	4	32	.8	12	7	887	6.33	2	2	ND	2	7	1	2	2	169	.07	.04	11	57	.14	67	.01	2	2.21	.01	.03	2	2	50	.6
V4700N 5375E	1	26	11	36	.3	9	7	2726	4.05	5	2	ND	2	20	1	2	2	160	.24	.05	5	46	.20	99	.26	2	1.37	.02	.04	2	3	60	.1
V4700N 5400E	1	40	6	42	.5	21	10	198	3.87	4	2	ND	2	9	1	2	2	171	.08	.03	16	62	.40	90	.01	2	3.27	.01	.06	2	6	35	.1
V4700N 5425E	1	143	14	69	.6	44	18	342	5.83	16	2	ND	2	14	1	2	2	204	.24	.03	5	78	.83	86	.26	2	4.60	.02	.04	2	3	100	.1
V4700N 5450E	1	93	13	71	.7	43	25	1095	5.94	12	2	ND	2	25	2	2	2	157	.42	.04	10	78	.66	143	.05	2	3.87	.01	.09	2	5	160	.3
V4700N 5475E	1	74	11	73	.7	37	28	1428	5.71	6	2	ND	2	22	1	2	2	157	.36	.04	8	71	.65	120	.04	2	3.45	.01	.09	2	4	100	.2
V4700N 5500E	1	65	12	56	.4	31	35	1670	5.45	5	2	ND	2	27	1	2	2	152	.29	.04	8	69	.53	146	.06	2	3.07	.01	.08	2	3	85	.2
V4700N 5525E	1	179	9	65	.4	40	21	533	6.44	9	2	ND	2	17	2	2	2	169	.16	.05	7	76	.43	119	.08	2	4.23	.01	.10	2	4	130	.1
V4700N 5550E	1	72	8	54	.5	20	12	328	6.74	8	2	ND	2	13	1	2	2	173	.13	.04	7	65	.33	56	.05	2	3.24	.01	.03	2	4	130	.2
V4700N 5575E	1	80	11	89	.6	37	25	644	6.78	5	2	ND	2	12	1	2	2	180	.15	.04	10	80	.54	172	.01	2	3.97	.01	.11	2	4	200	.2
V4700N 5600E	1	110	11	82	.5	43	21	394	7.22	11	2	ND	2	17	2	2	2	207	.11	.05	6	86	.73	92	.14	2	4.57	.01	.08	2	7	250	.1
V4700N 5625E	1	62	12	82	.6	36	44	4848	6.57	8	2	ND	3	23	1	2	2	176	.34	.07	9	85	.58	166	.11	2	4.25	.01	.07	2	3	320	.4
V4700N 5650E	1	148	11	121	1.3	57	106	5375	5.67	8	2	ND	2	36	2	2	2	160	.48	.07	16	89	.54	259	.06	2	4.81	.02	.11	2	3	250	1.6
V4700N 5675E	1	59	8	41	.6	24	12	308	7.72	10	2	ND	2	12	1	2	2	192	.10	.05	9	67	.28	54	.02	2	2.90	.01	.04	2	3	2600	.3
V4700N 5700E	1	141	12	72	.6	32	16	715	5.54	6	2	ND	2	24	1	2	2	159	.20	.06	5	68	.67	60	.09	3	3.68	.01	.04	2	7	110	.4
V4700N 5725E	1	20	7	48	.3	11	6	401	2.40	2	2	ND	2	62	1	2	2	134	.47	.03	7	62	.24	120	.12	2	3.01	.01	.06	2	3	80	.1
V4700N 5750E	1	61	7	57	.8	27	15	537	6.23	10	2	ND	2	13	1	2	2	212	.10	.05	5	76	.57	54	.02	3	4.12	.01	.04	2	3	80	.6
V4700N 5775E	1	23	6	25	.7	12	5	251	5.30	4	2	ND	2	15	1	2	2	205	.14	.04	10	56	.22	31	.15	2	1.84	.01	.01	2	2	25	.3
V4700N 5800E	1	113	14	128	.8	35	19	505	7.24	12	2	ND	2	10	1	2	2	167	.09	.08	6	92	.58	69	.04	2	5.28	.01	.04	2	2	260	.7
V4700N 5825E	1	35	11	40	.8	16	7	154	6.00	13	2	ND	2	9	1	2	3	211	.10	.05	5	66	.20	34	.07	3	1.96	.01	.02	2	6	70	.6
V4700N 5850E	1	65	19	86	1.0	23	10	267	8.17	20	2	ND	2	11	1	2	2	206	.12	.11	5	89	.33	47	.07	2	3.23	.01	.03	2	5	140	.8
V4700N 5875E	4	101	273	1099	2.7	58	24	2883	8.54	154	2	ND	2	13	8	2	3	77	.08	.25	16	30	.25	87	.02	2	1.50	.01	.06	3	40	280	2.8
V4700N 5900E	1	54	28	378	3.1	59	27	8445	7.33	70	2	ND	3	12	7	2	2	158	.56	.28	13	70	.42	65	.24	2	4.84	.01	.01	2	28	350	3.2
V4700N 5925E	1	19	9	44	.5	8	5	658	3.43	4	2	ND	2	13	1	2	2	136	.15	.04	4	29	.27	37	.14	3	1.99	.02	.01	2	2	25	.3
V5350N 4600E	1	31	8	40	.4	14	7	314	4.74	7	2	ND	2	35	1	2	2	167	.35	.04	6	48	.29	121	.32	2	1.94	.02	.01	2	4	70	.1
V5350N 4625E	2	23	5	39	.4	12	5	189	4.23	10	2	ND	2	23	1	2	2	142	.24	.03	6	44	.25	117	.21	2	1.89	.02	.01	2	200	50	.1
V5350N 4650E	4	24	10	34	.4	13	6	190	4.17	4	2	ND	2	13	1	2	2	113	.21	.02	5	37	.42	58	.10	3	2.89	.02	.03	2	2	60	.1
V5350N 4775E	1	6	5	17	.2	4	2	110	1.78	4	2	ND	2	14	1	2	2	45	.13	.01	4	15	.19	46	.04	2	1.44	.02	.01	2	1	35	.1
V5350N 4800E	1	23	8	41	.3	11	5	184	3.46	8	2	ND	2	11	1	2	2	78	.13	.03	5	35	.40	51	.08	2	3.38	.02	.02	2	1	80	.1
V5350N 4825E	1	18	8	28	.3	9	4	127	2.98	5	2	ND	2	10	1	2	2	80	.14	.02	5	32	.31	35	.05	2	2.34	.01	.01	2	1	60	.1
V5350N 4850E	1	10	6	31	.2	7	3	134	2.55	3	2	ND	2	14	1	2	2	63	.14	.03	4	25	.30	41	.06	2	2.29	.02	.01	2	2	45	.1
V5350N 4875E	1	6	5	23	.2	5	2	158	2.12	2	2	ND	2	10	1	2	2	57	.11	.02	4	20	.18	41	.05	2	1.82	.02	.01	2	1	40	.1
V5350N 4900E	1	5	4	23	.2	4	2	121	1.85	3	2	ND	2	10	1	2	2	49	.13	.01	4	16	.18	36	.04	2	1.75	.02	.01	2	1	20	.1
V5350N 4925E	1	11	5	30	.2	8	3	198	2.12	10	2	ND	2	8	1	2	2	50	.09	.02	4	24	.28	64	.03	2	1.86	.02	.01	2	1	30	.1
V5350N 4950E	1	14	5	39	.2	9	4	254	2.78	9	2	ND	2	13	1	2	2	69	.13	.03	6	31	.30	67	.04	2	2.11	.02	.02	2	2	30	.2
STD A-1	1	31	37	174	.4	35	13	1006	2.72	11	2	ND	2	32	2	2	2	56	.60	.09	9	75	.70	270	.09	8	1.89	.02	.20	2	1	55	.3

ASARCO PROJECT # VILLALTA FILE # 82-0816

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	Au†† ppb	Hg† ppb	Ag† ppm
V5350N 4975E	1	27	9	27	.5	14	6	140	3.04	174	2	ND	2	6	1	2	2	141	.07	.03	8	43	.22	32	.03	2	2.13	.01	.01	2	3	50	.2
V5350N 5000E	1	16	14	34	.3	8	4	115	2.43	78	2	ND	2	6	1	2	2	54	.09	.04	4	24	.25	27	.02	2	1.86	.01	.01	2	1	50	.2
V5350N 5025E	1	8	13	24	.3	5	2	99	2.69	31	2	ND	2	7	1	2	2	64	.08	.04	5	21	.18	27	.03	2	1.78	.02	.01	2	1	30	.3
V5350N 5050E	1	34	10	35	.5	11	5	136	5.80	103	2	ND	2	6	1	2	2	147	.07	.05	7	51	.15	42	.04	2	2.43	.01	.02	2	1	140	.3
V5350N 5075E	1	21	10	14	.5	7	3	118	7.12	55	2	ND	2	5	1	2	2	181	.08	.08	7	41	.11	24	.07	2	1.68	.01	.02	2	2	60	.3
V5350N 5150E	1	63	12	28	.3	14	6	200	5.10	16	2	ND	2	6	1	2	2	136	.07	.06	5	54	.38	36	.16	2	3.46	.01	.03	2	1	130	.2
V5350N 5175E	1	11	7	21	.3	8	3	385	2.23	7	2	ND	2	6	1	2	2	69	.11	.04	3	30	.21	37	.04	2	2.00	.02	.02	2	1	70	.1
V5350N 5200E	1	19	4	13	.2	3	2	70	1.82	7	2	ND	2	5	1	2	2	42	.05	.02	3	12	.23	46	.02	2	1.72	.01	.01	2	1	40	.2
V5350N 5225E	1	60	8	89	.4	31	18	457	5.95	11	2	ND	2	16	1	2	2	108	.22	.08	8	76	.68	81	.01	2	3.25	.02	.04	2	1	65	.4
V5350N 5250E	1	48	10	66	.5	22	9	236	5.76	16	2	ND	2	8	1	2	2	112	.08	.07	5	69	.54	60	.01	2	3.50	.01	.03	2	2	120	.4
V5350N 5275E	1	34	11	79	.3	25	10	260	6.89	13	2	ND	2	6	1	2	2	122	.04	.08	5	84	.90	42	.01	2	3.64	.01	.04	2	1	100	.2
V5350N 5300E	1	10	4	24	.3	5	2	220	1.29	3	2	ND	2	5	1	2	2	52	.06	.01	3	18	.11	30	.10	2	1.13	.01	.01	2	1	30	.1
V5400N 4600E	1	26	8	35	.4	10	4	175	3.70	4	2	ND	2	21	1	2	2	139	.25	.03	6	46	.17	93	.22	2	1.48	.02	.01	2	7	70	.1
V5400N 4625E	1	138	9	94	.5	43	23	502	5.76	31	2	ND	2	12	1	2	2	110	.12	.02	8	76	.81	99	.02	2	4.50	.01	.04	2	4	70	.2
V5400N 4650E	1	140	12	85	.4	38	31	1273	7.10	17	2	ND	2	13	1	2	2	115	.18	.07	10	80	.68	103	.02	2	4.18	.01	.06	2	6	65	.2
V5400N 4700E	1	14	7	51	.3	7	5	385	1.99	4	2	ND	2	23	1	2	2	47	.23	.02	5	21	.29	86	.05	2	2.22	.02	.01	2	1	50	.2
V5400N 4725E	1	49	16	46	.2	16	8	213	4.88	12	2	ND	2	15	1	2	2	94	.14	.05	5	47	.56	53	.15	2	5.23	.02	.03	2	1	80	.2
V5400N 4750E	1	30	11	47	.2	15	11	280	3.48	9	2	ND	2	15	1	2	2	76	.16	.04	5	34	.49	61	.09	3	3.44	.01	.03	2	2	60	.1
V5400N 4775E	1	38	12	48	.3	19	8	226	4.29	11	2	ND	2	17	1	2	2	90	.14	.03	5	46	.60	73	.11	2	4.80	.01	.02	2	2	40	.1
V5400N 4800E	1	34	12	59	.3	15	7	223	5.24	10	2	ND	2	15	1	2	2	100	.11	.05	5	46	.56	60	.14	2	4.34	.02	.03	2	1	110	.2
V5400N 4850E	1	11	6	16	.3	5	2	120	2.43	6	2	ND	2	8	1	2	2	74	.11	.03	4	23	.16	24	.06	2	1.29	.01	.01	2	1	40	.1
V5400N 4875E	1	68	13	61	.4	33	11	300	4.38	18	2	ND	2	10	1	3	2	86	.13	.03	5	59	.90	80	.07	3	4.58	.01	.04	2	2	120	.2
V5400N 4900E	1	6	3	9	.1	2	1	56	.77	2	2	ND	2	7	1	2	2	30	.08	.01	3	11	.07	18	.03	2	.74	.02	.01	2	1	30	.1
V5400N 4925E	1	46	9	46	.2	19	8	216	5.34	8	2	ND	2	8	1	2	2	101	.10	.06	5	57	.52	47	.04	2	3.42	.01	.03	2	2	100	.2
V5400N 4950E	1	21	7	22	.4	9	3	105	3.57	14	2	ND	2	9	1	2	2	93	.08	.04	5	32	.21	39	.04	2	1.84	.01	.02	2	1	85	.1
V5400N 4975E	1	17	16	58	.5	12	30	656	2.99	36	2	ND	2	10	1	2	2	64	.15	.04	9	27	.29	83	.01	2	2.35	.01	.04	2	1	65	.4
V5400N 5000E	1	38	7	25	.5	15	6	98	4.42	407	2	ND	2	5	1	2	2	132	.06	.03	9	35	.14	26	.04	3	1.49	.01	.02	2	2	45	.2
V5400N 5025E	1	80	12	17	.5	10	5	158	6.03	43	2	ND	2	7	1	2	2	119	.13	.05	4	52	.39	41	.15	2	1.97	.01	.04	2	1	60	.3
V5400N 5100E	1	9	5	9	.2	3	13	836	2.13	111	2	ND	2	3	1	2	2	83	.02	.01	9	17	.03	34	.04	2	.88	.01	.01	2	2	10	.1
V5400N 5125E	1	83	11	70	.5	32	22	327	6.70	22	2	ND	2	10	1	2	2	147	.19	.06	6	62	.37	83	.18	2	4.23	.01	.01	2	3	55	.4
V5400N 5150E	1	33	8	11	.5	6	2	84	4.35	7	2	ND	2	4	1	2	2	179	.04	.03	5	43	.16	38	.24	2	1.67	.01	.01	2	1	40	.2
V5400N 5175E	1	67	12	49	.5	17	6	197	5.37	21	2	ND	2	6	1	2	2	141	.09	.05	5	59	.51	50	.10	2	3.71	.01	.03	2	18	130	.1
V5400N 5200E	1	22	13	48	.3	14	6	141	4.23	10	2	ND	2	10	1	2	2	108	.11	.05	5	47	.36	51	.06	2	2.40	.01	.03	2	1	70	.2
V5400N 5225E	1	85	12	96	.2	45	12	314	6.00	17	2	ND	2	6	1	2	2	113	.04	.05	6	86	1.20	72	.02	2	4.99	.01	.05	2	1	65	.2
V5400N 5250E	1	15	10	35	.5	10	5	158	4.32	9	2	ND	2	7	1	2	2	116	.06	.04	5	43	.24	48	.09	2	2.05	.01	.02	2	76	80	.4
V5400N 5275E	1	31	14	72	.5	25	9	251	7.75	19	2	ND	2	7	1	2	2	131	.05	.08	6	85	.73	44	.05	2	3.43	.01	.05	2	2	110	.3
V5400N 5300E	1	43	14	60	.4	22	8	221	7.39	17	2	ND	2	7	1	2	2	129	.03	.07	5	82	.82	62	.07	2	3.48	.01	.04	2	1	60	.2
STD A-1/AU/H8	1	31	37	175	.4	36	13	1013	2.73	11	2	ND	2	32	2	2	2	36	.60	.09	9	75	.71	279	.09	8	1.92	.02	.20	2	1	55	.3

ASARCO PROJECT # VILLALTA FILE # 82-0816

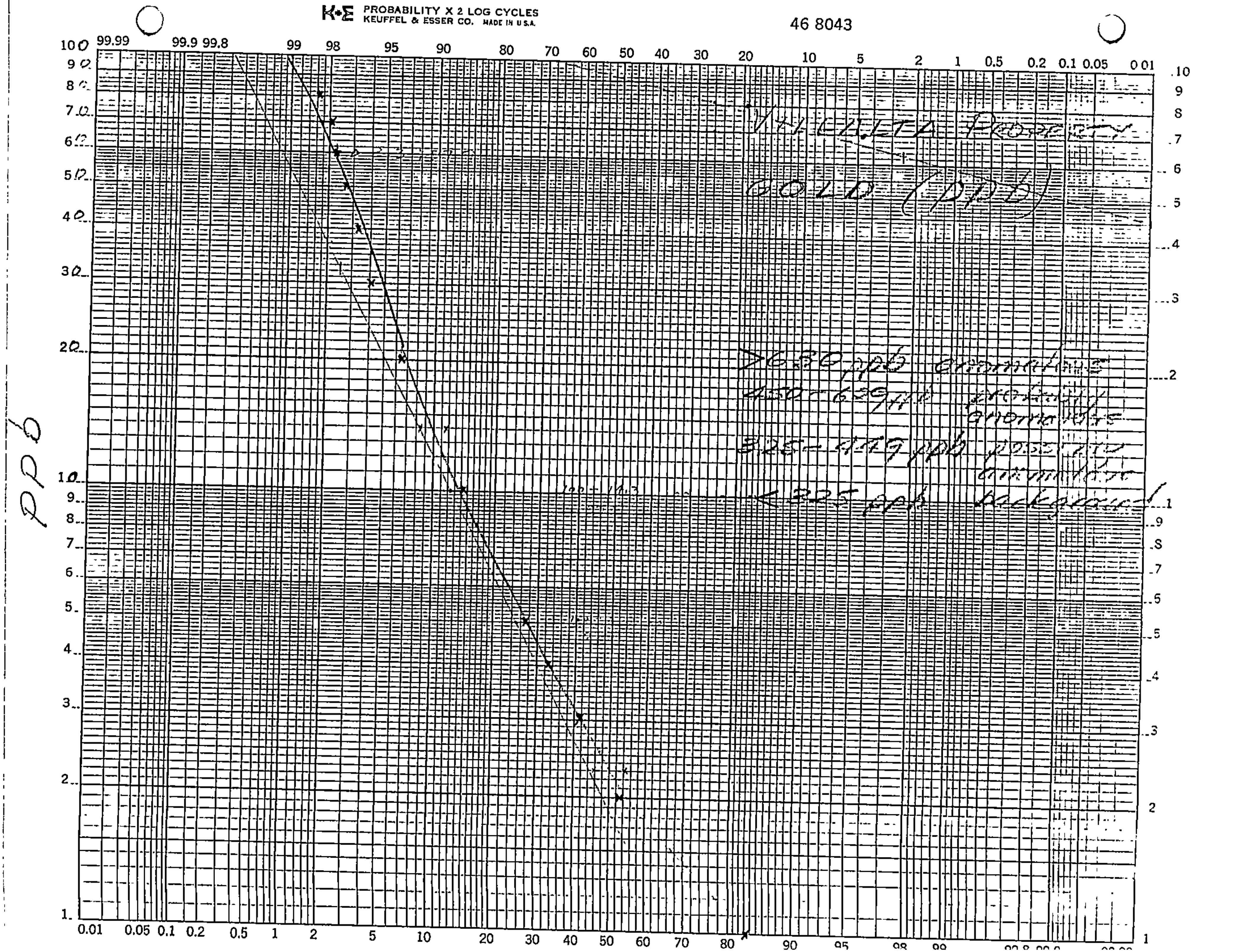
SAMPLE #	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au†† ppb	Hg† ppb	Ag† ppm
V5450N 4600E	1	37	3	16	.4	3	2	68	5.00	2	2	ND	2	13	1	2	2	108	.07	.03	6	38	.06	49	.01	4	2.01	.01	.04	2	2	40	.3
V5450N 4650E	1	18	9	41	.4	6	5	384	2.28	6	2	ND	2	18	1	2	2	60	.22	.03	6	25	.21	50	.10	3	2.38	.02	.02	2	2	30	.5
V5450N 4675E	1	16	5	56	.2	9	10	474	3.05	5	2	ND	2	83	1	2	3	59	.40	.08	7	21	.35	82	.12	4	4.82	.03	.05	2	1	100	.3
V5450N 4725E	1	13	7	26	.2	6	3	130	2.37	3	2	ND	2	16	1	2	2	66	.25	.02	5	25	.31	38	.09	3	2.42	.01	.01	2	1	90	.2
V5450N 4750E	1	4	3	9	.1	3	1	95	.80	2	2	ND	2	13	1	2	2	39	.18	.01	4	14	.09	20	.10	2	.92	.01	.01	2	1	25	.3
V5450N 4775E	1	8	4	13	.2	4	1	147	1.84	2	2	ND	2	10	1	2	2	71	.13	.01	5	24	.18	37	.13	2	1.28	.01	.02	2	1	40	.1
V5450N 4825E	1	19	8	38	.2	9	4	183	3.58	2	2	ND	2	10	1	2	2	86	.12	.04	5	32	.34	42	.08	4	2.76	.02	.02	2	1	85	.5
V5450N 4850E	1	25	10	39	.3	9	4	178	5.18	6	2	ND	2	11	1	2	3	111	.11	.08	6	44	.39	53	.08	4	3.14	.01	.03	2	1	140	.2
V5450N 4875E	1	32	10	37	.2	8	4	161	4.50	3	2	ND	2	9	1	2	3	89	.09	.08	6	38	.27	46	.06	3	3.72	.01	.03	2	1	140	.1
V5450N 4900E	1	10	12	20	.3	5	2	117	2.91	4	2	ND	2	9	1	2	2	87	.10	.04	5	25	.18	30	.07	3	1.73	.01	.01	2	2	70	.2
V5450N 4925E	1	65	8	53	.1	14	5	169	6.01	14	2	ND	2	7	1	2	4	94	.07	.14	6	72	.36	42	.05	4	6.88	.02	.04	2	2	150	.2
V5450N 4950E	1	80	10	65	.2	29	13	313	4.73	10	2	ND	2	11	1	2	3	98	.12	.05	7	59	.77	67	.05	4	4.42	.02	.04	2	4	140	.2
V5450N 4975E	1	21	6	23	.2	8	3	165	3.77	5	2	ND	2	10	1	2	2	101	.12	.04	5	37	.24	32	.06	3	2.09	.01	.03	2	1	65	.3
V5450N 5000E	1	32	9	50	.7	15	7	197	4.29	15	2	ND	2	10	1	2	3	101	.12	.04	6	46	.38	64	.06	3	2.78	.01	.03	2	1	50	.7
V5450N 5050E	1	39	10	82	.4	39	48	1565	4.56	215	2	ND	2	30	1	2	3	89	.49	.04	15	51	.42	120	.01	2	2.82	.02	.06	2	3	70	.6
V5450N 5075E	1	65	12	92	.5	46	43	671	5.83	185	2	ND	2	10	1	2	3	100	.11	.05	9	67	.70	84	.02	3	3.68	.01	.07	2	2	80	.5
V5450N 5100E	1	21	2	21	.6	9	6	353	3.96	71	2	ND	2	6	1	2	2	104	.06	.03	5	38	.11	34	.01	3	1.59	.01	.03	2	2	20	.5
V5450N 5125E	1	71	7	41	.4	20	10	227	6.11	72	2	ND	2	8	1	2	2	144	.11	.05	7	64	.48	54	.21	2	3.14	.01	.03	2	1	50	.3
V5450N 5150E	1	46	11	45	.2	15	6	307	3.65	10	2	ND	2	11	1	2	4	81	.16	.05	5	40	.52	62	.06	3	3.60	.02	.05	2	1	80	.3
V5450N 5175E	1	71	13	94	.2	32	9	299	5.82	10	2	ND	2	8	1	2	4	109	.09	.05	7	78	.81	69	.08	4	5.82	.01	.04	2	1	50	.4
V5450N 5200E	1	48	10	94	.3	23	9	418	5.95	28	2	ND	2	11	1	2	4	121	.10	.07	7	61	.55	71	.07	4	3.60	.01	.04	2	2	60	.2
V5450N 5225E	1	23	9	39	.3	11	4	209	4.26	3	2	ND	2	8	1	2	3	106	.16	.05	6	46	.40	57	.06	3	2.67	.01	.05	2	2	45	.2
V5450N 5250E	1	54	13	114	.3	38	12	339	5.70	12	2	ND	2	11	1	2	4	110	.06	.07	8	81	.97	100	.02	2	4.69	.02	.08	2	1	70	.2
V5450N 5275E	1	19	13	49	.5	16	7	252	6.16	12	2	ND	2	10	1	2	3	148	.05	.06	6	68	.42	65	.02	2	3.16	.02	.04	2	1	65	.3
V5450N 5300E	1	54	12	100	.2	42	12	270	6.48	19	3	ND	2	11	1	2	3	146	.10	.05	8	82	1.04	99	.04	2	4.54	.02	.06	2	1	40	.1
V5500N 4625E	1	10	5	35	.4	4	3	259	1.42	2	2	ND	2	19	1	2	2	48	.15	.02	7	17	.14	50	.07	2	1.68	.02	.01	2	1	20	.3
V5500N 4650E	1	30	10	55	.2	7	5	282	3.51	2	2	ND	2	1	1	2	3	69	.30	.07	7	24	.42	144	.11	3	4.42	.03	.04	2	1	65	.2
V5500N 4675E	1	9	7	50	.3	5	4	218	2.30	2	2	ND	2	27	1	2	2	55	.29	.04	5	19	.25	63	.08	3	2.58	.02	.02	2	2	25	.3
V5500N 4700E	1	24	17	73	.2	12	8	211	3.24	2	2	ND	2	20	1	2	2	70	.26	.05	5	29	.37	86	.10	4	3.99	.02	.04	2	1	130	.3
V5500N 4725E	1	13	6	18	.1	4	2	114	1.96	3	2	ND	2	13	1	2	2	77	.28	.01	6	24	.20	24	.16	2	1.76	.01	.01	2	1	50	.1
V5500N 4750E	1	33	8	42	.3	9	4	133	3.41	5	2	ND	2	13	1	2	3	84	.18	.05	6	36	.28	53	.08	4	3.61	.02	.03	2	1	220	.1
V5500N 4775E	1	12	8	22	.2	5	2	129	3.66	2	2	ND	2	11	1	2	3	101	.14	.03	6	34	.21	37	.07	2	2.03	.01	.01	2	1	40	.1
V5500N 4800E	1	25	11	37	.2	12	5	218	7.24	5	2	ND	2	12	1	2	3	152	.15	.07	6	60	.47	43	.10	2	3.19	.02	.04	2	1	60	.1
V5500N 4825E	1	15	6	38	.2	5	3	181	3.21	2	2	ND	2	12	1	2	3	75	.09	.03	5	20	.30	82	.08	2	2.60	.02	.01	2	1	50	.1
V5500N 4850E	1	28	14	46	.1	13	6	404	7.16	8	2	ND	2	11	2	2	2	105	.13	.12	7	48	.60	37	.17	3	4.14	.01	.03	2	1	140	.2
V5500N 4875E	1	34	15	49	.2	15	7	329	4.49	5	2	ND	2	13	1	2	3	92	.16	.11	7	46	.59	63	.11	4	3.63	.02	.05	2	1	90	.4
STD A-1	1	32	36	175	.4	35	12	1005	2.76	9	2	ND	2	33	2	2	2	57	.59	.09	9	74	.71	280	.09	9	1.96	.02	.20	2	1	55	.3
V5450N 4800E	1	28	13	48	.6	14	6	417	7.57	2	3	ND	2	13	1	13	3	105	.17	.15	4	51	.65	40	.16	2	4.20	.01	.05	2	1	180	.2

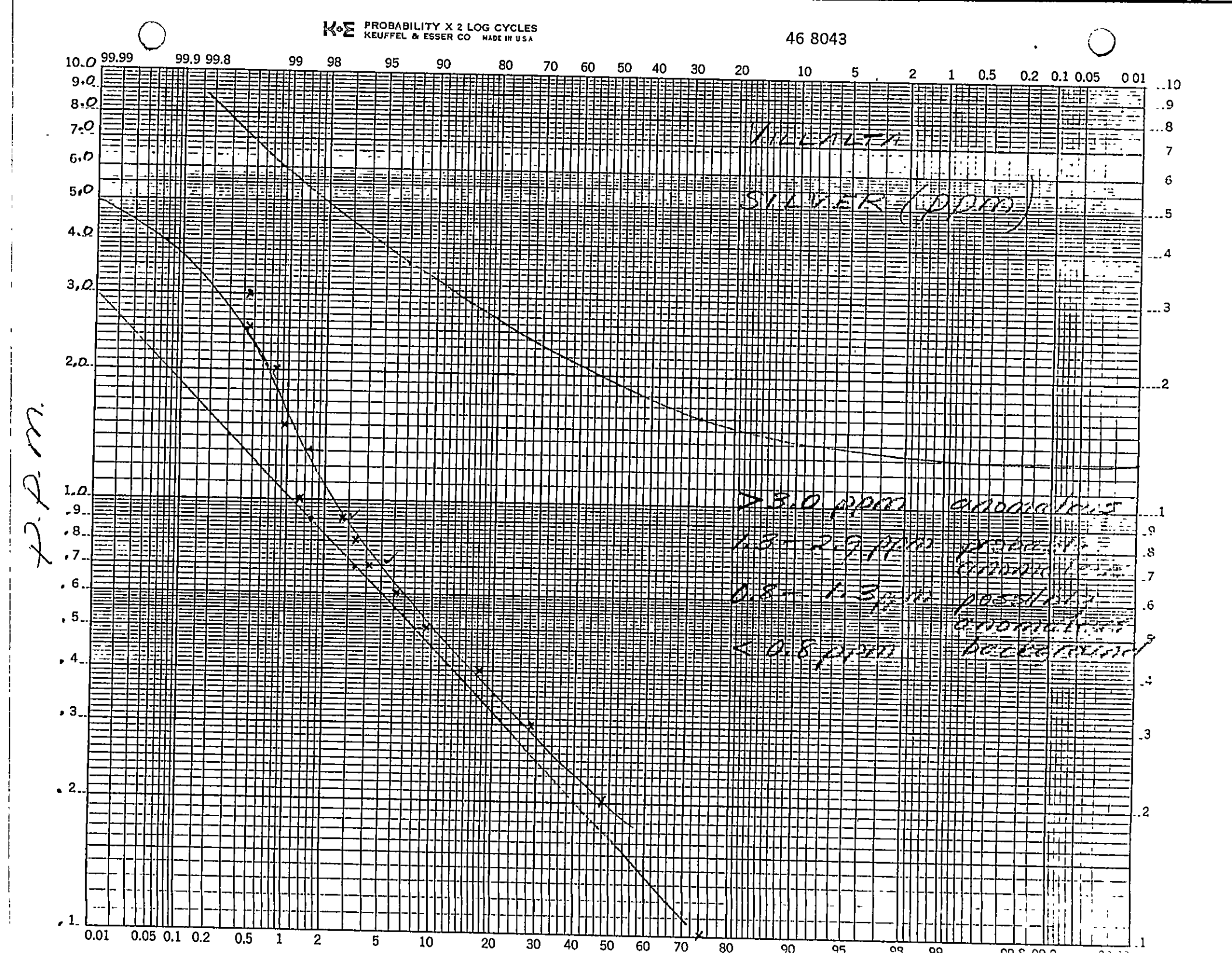
ASARCO PROJECT # VILLALTA FILE # 82-0816

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	Au†† ppb	Hg† ppb	Ag† ppm
V5500N 4900E	1	55	15	45	.2	19	8	385	4.86	35	2	ND	2	14	1	2	3	80	.13	.09	6	48	.67	62	.10	4	3.35	.01	.05	2	1	100	.3
V5500N 4925E	1	32	13	38	.2	12	6	208	7.58	19	2	ND	2	11	2	2	2	138	.09	.10	6	57	.49	49	.09	2	3.45	.01	.07	2	2	70	.2
V5500N 4950E	1	68	49	93	.1	23	8	313	6.59	13	2	ND	2	11	2	2	3	132	.14	.06	7	83	.73	57	.14	3	5.64	.02	.05	2	1	60	.3
V5500N 4975E	1	34	11	73	.3	19	7	277	7.28	16	2	ND	2	10	1	2	4	145	.06	.10	7	80	.56	72	.02	2	3.92	.02	.06	2	2	70	.4
V5500N 5000E	1	32	12	32	.1	11	5	240	5.50	10	2	ND	2	12	1	2	3	126	.14	.07	6	49	.37	55	.08	3	2.65	.01	.05	2	2	80	.2
V5500N 5025E	1	26	7	23	.4	10	4	137	4.64	14	2	ND	2	9	1	2	3	160	.09	.03	6	40	.12	62	.10	3	1.91	.02	.03	2	1	30	.2
V5500N 5050E	1	64	8	37	.5	40	18	232	7.67	496	2	ND	2	4	1	2	3	157	.03	.07	17	44	.07	52	.01	4	1.42	.01	.09	2	1	20	.2
V5500N 5075E	1	110	9	70	1.2	44	15	270	8.11	873	2	ND	2	9	1	2	3	119	.13	.06	10	65	.44	75	.01	2	3.13	.01	.09	2	1	50	.6
V5500N 5100E	1	150	9	53	.9	32	14	238	7.70	367	2	ND	2	6	1	2	4	135	.07	.09	10	79	.44	55	.02	2	4.98	.01	.06	2	1	150	.7
V5500N 5125E	1	81	12	53	.3	26	10	246	7.59	382	2	ND	2	7	1	4	4	129	.10	.08	8	71	.48	53	.02	2	5.62	.01	.08	2	1	80	.3
V5500N 5150E	1	94	13	86	.3	30	11	279	6.27	349	2	ND	2	10	1	2	3	159	.11	.06	9	69	.66	59	.08	4	4.72	.02	.04	2	1	90	.3
V5500N 5175E	1	5	3	13	.1	3	1	85	1.02	7	2	ND	2	7	1	2	2	34	.07	.01	4	14	.12	44	.03	2	1.41	.02	.01	2	1	15	.2
V5500N 5200E	1	21	9	41	.4	15	4	242	3.69	13	2	ND	2	7	1	2	2	111	.04	.05	7	48	.37	66	.01	2	2.91	.01	.06	2	1	40	.2
V5500N 5225E	1	31	10	44	.4	14	4	297	6.13	10	2	ND	2	7	1	2	3	141	.04	.07	7	73	.43	73	.01	2	3.97	.01	.07	2	2	40	.1
V5500N 5250E	1	49	12	72	.3	22	9	411	5.66	12	2	ND	2	13	1	2	3	156	.15	.07	7	63	.54	66	.10	2	3.94	.01	.04	2	2	60	.2
V5500N 5275E	1	41	11	31	.2	12	5	169	8.37	20	2	ND	2	18	2	2	3	156	.09	.11	6	62	.35	53	.06	2	3.20	.01	.04	2	1	60	.1
V5500N 5300E	1	45	22	93	.2	28	10	691	5.48	18	2	ND	2	18	1	2	3	93	.18	.14	6	49	.70	129	.07	4	5.24	.07	.08	2	1	90	.3

APPENDIX 4

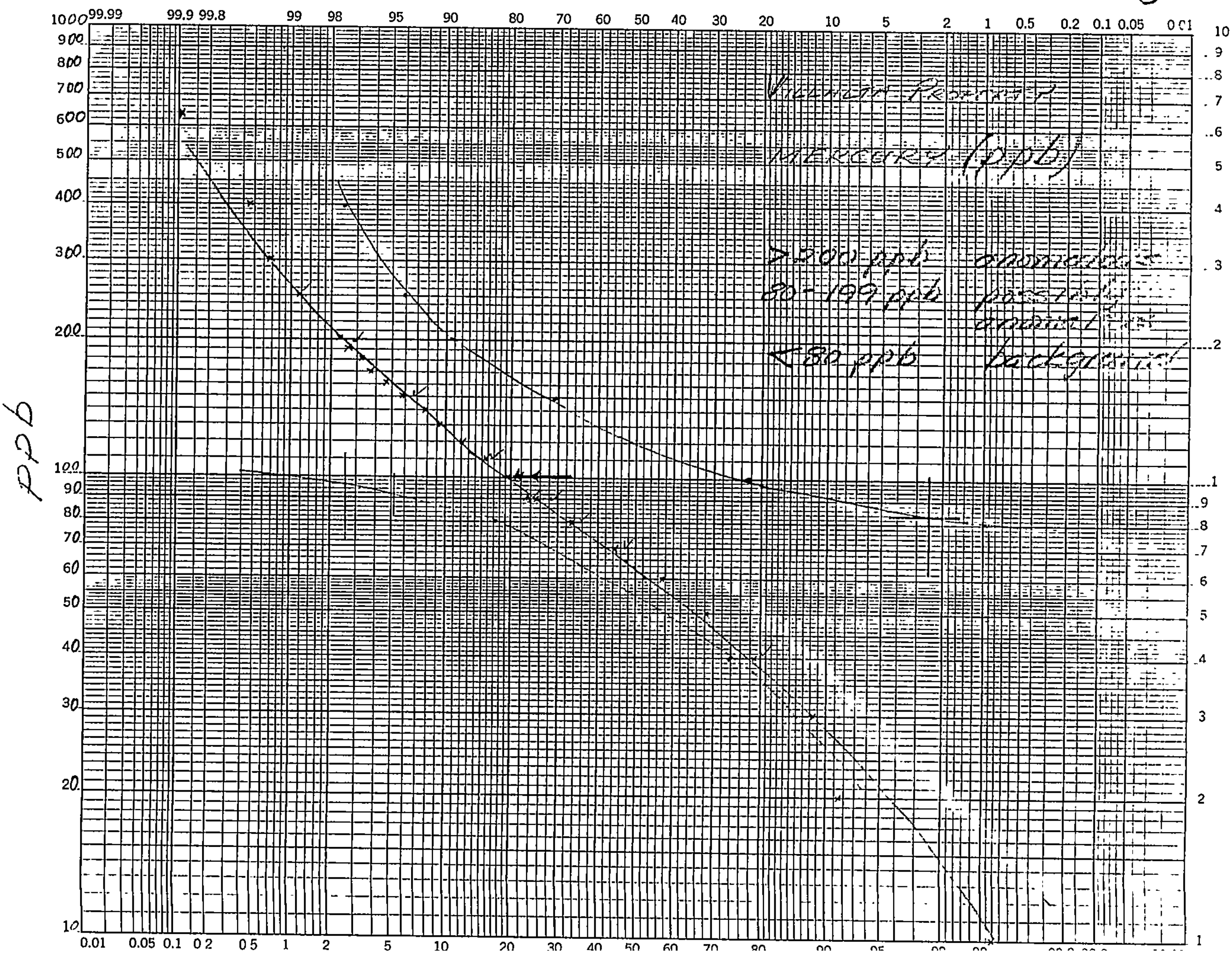
PROBABILITY PLOTS 1

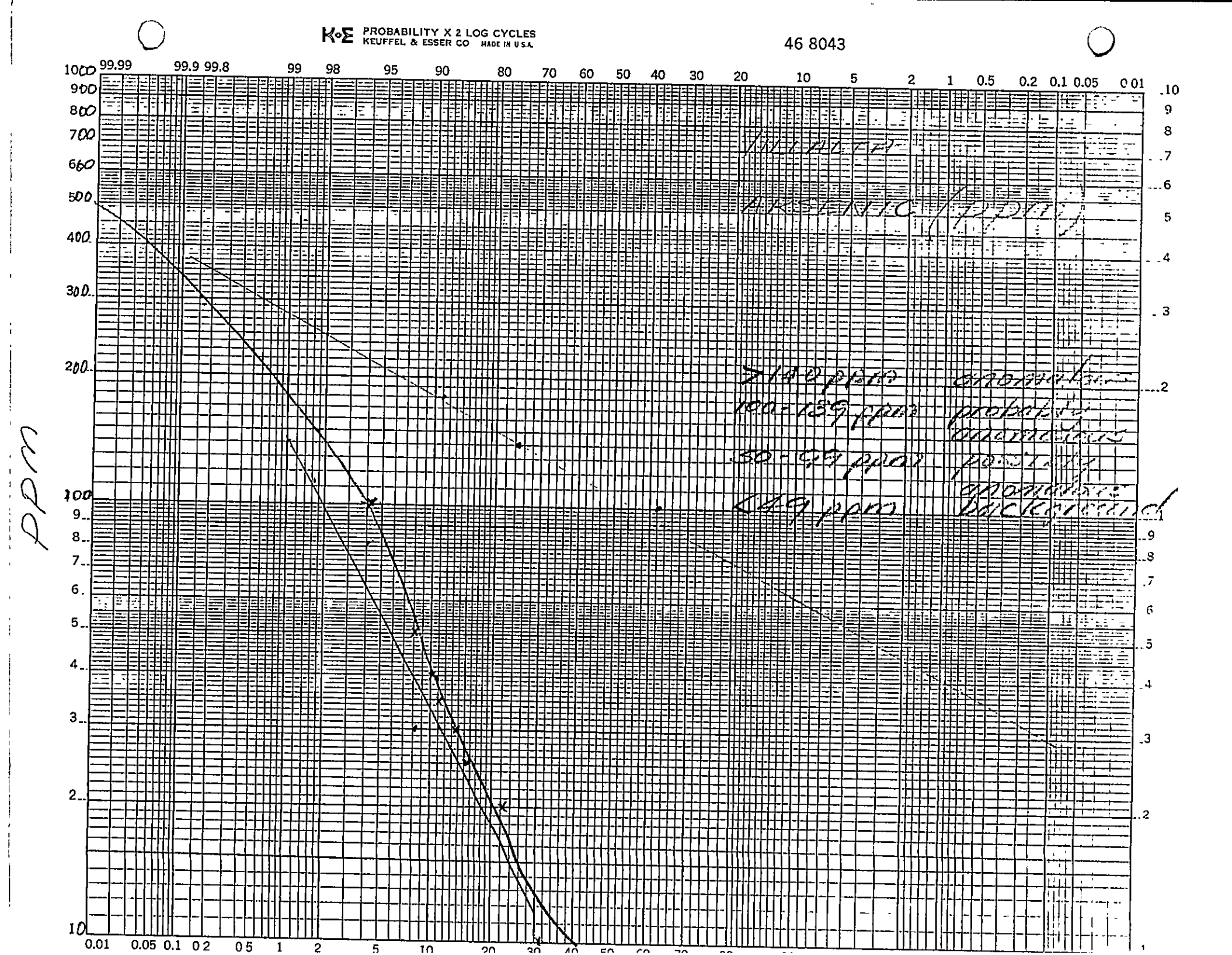

K+E PROBABILITY X 2 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.
46 8043
PROPERTY
GOLD (PPB)
>650 ppb anomalous
450-649 ppb probably anomalous
325-449 ppb possibly anomalous
<325 ppb background
ppb


K•E PROBABILITY X 2 LOG CYCLES
KEUFFEL & ESSER CO MADE IN U.S.A.
46 8043
99.99 99.9 99.8 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01
0.01 0.05 0.1 0.2 0.5 1 2 5 10 20 30 40 50 60 70 80 90 95 98 99
10.0 9.0 8.0 7.0 6.0 5.0 4.0 3.0 2.0 1.0 .9 .8 .7 .6 .5 .4 .3 .2 .1
10 9 8 7 6 5 4 3 2 1 .9 .8 .7 .6 .5 .4 .3 .2 .1
ILLINOIS
SILVER (ppm)
>3.0 ppm
1.3 - 2.9 ppm
0.8 - 1.3 ppm
< 0.8 ppm
p.p.m.

K+E PROBABILITY X 2 LOG CYCLES
KEUFFEL & ESSER CO MADE IN U.S.A.

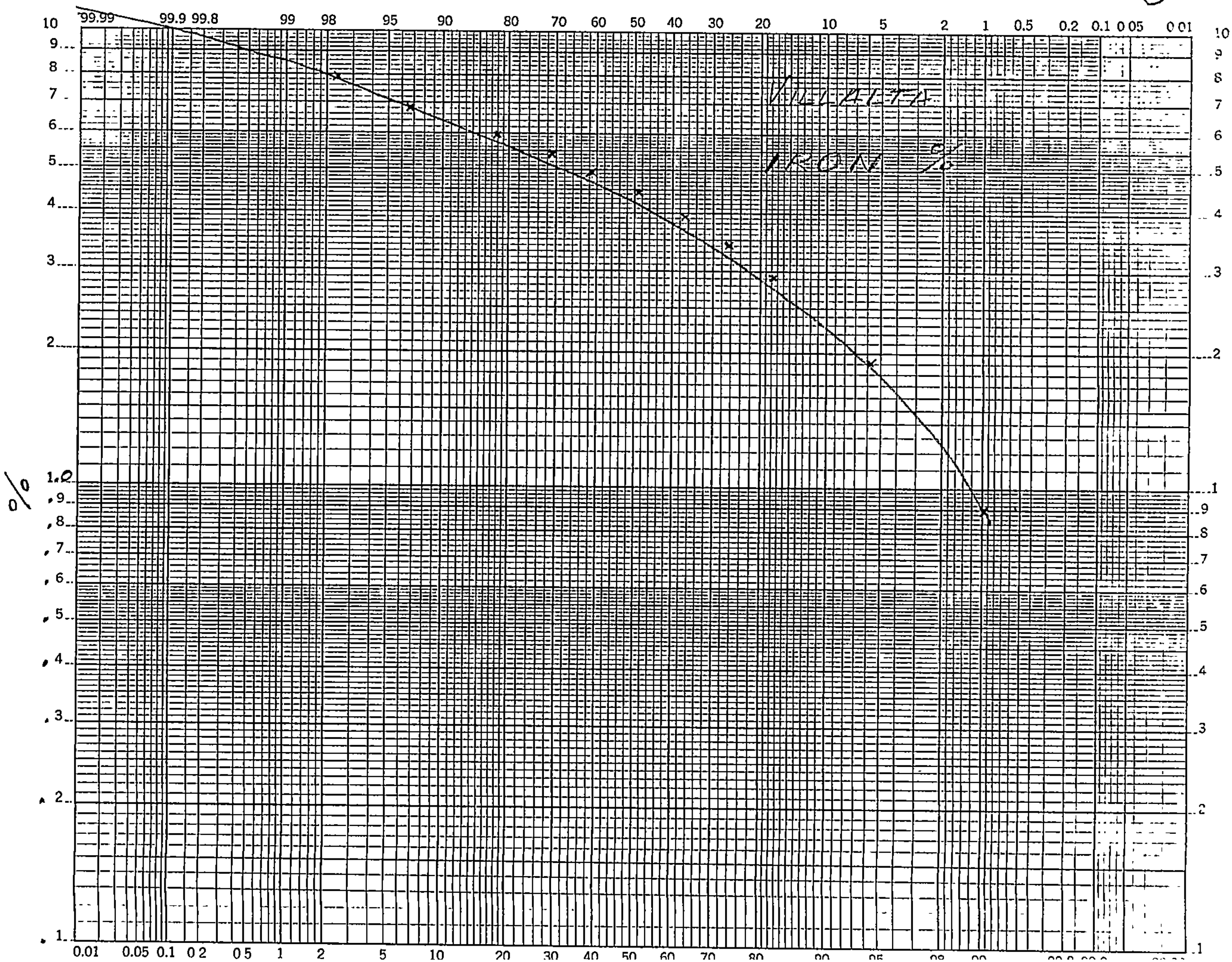
46 8043




K•E PROBABILITY X 2 LOG CYCLES
KEUFFEL & ESSER CO MADE IN U.S.A.
46 8043
99.99 99.9 99.8 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01
1000 900 800 700 660 500 400 300 200 100 9 8 7 6 5 4 3 2 1 10
.10 9 8 .7 .6 5 .4 .3 .2 .1 .9 .8 .7 6 .5 .4 .3 .2 1
0.01 0.05 0.1 0.2 0.5 1 2 5 10 20 30 40 50 60 70 80
>140 ppm
100-139 ppm
50-99 ppm
<49 ppm

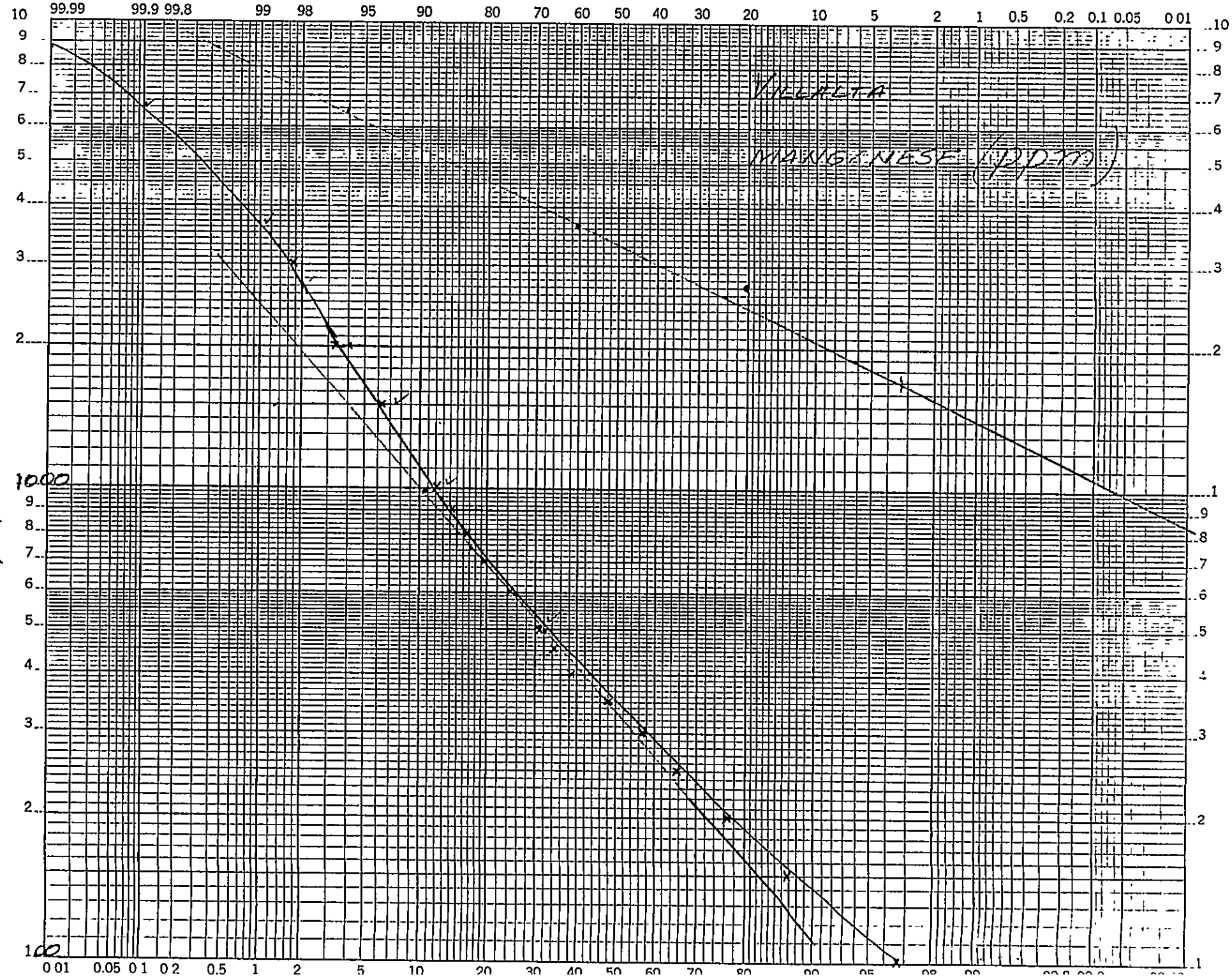
K&E PROBABILITY X 2 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

46 8043



K·E PROBABILITY X 2 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

46 8043



GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,789

N

1017.3

1001.7

737.0

598.11

713.7

1411.2

5100 E.

5200 E.

5300 E.

4600E

4700E

4800E

4900E

ATTACHMENT "F"

ASARCO			Vancouver
VILLALTA GOLD AND COPPER PROSPECT NANAIMO LAKES B.C. MERCURY (PPB)			
Drawn by	Date	N.T.S.	Scale
G.J.C.	NOV/82		1:2500

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. M. FLETCHER
11344

N

1017.3

1001.7

737.0

598.1

713.7

5500N
5450N
5400N
5350N
5300N
5250N
5200N
5150N
5100N
5050N
5000N
4950N
4900N
4850N
4800N
4750N
4700N
4650N
4600N
4550N
4500N
4450N
4400N

5200 E.
5300 E.

ATTACHMENT "E"

ASARCO	Vancouver

VILLALTA GOLD AND COPPER PROSPECT
NANAIMO LAKES B.C.
SILVER (PPM)

Drawn by	Date	N.T.S.	Scale	
G.J.C.	NOV/82		1:2500	

NOTE: PPM RESULTS EXPRESSED TO ONE DECIMAL POINT

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. M. FLETCHER

CONTACT

NANAIMO ARGILLITE

K-SPAR HORNBLENDE PORPHYRY

NANAIMO CONGLOMERATE

LIMESTONE

TUFF & ANDESITE

ROAD

CREEK

FeO

4600E 4625E 4650E 4675E 4700E 4725E 4750E 4775E 4800E 4825E 4850E 4875E 4900E 4925E 4950E 4975E 5000E 5025E 5050E 5075E 5100E 5125E 5150E 5175E 5200E 5225E 5250E 5275E 5300E

5500N 5450N 5400N 5350N 5300N 5250N 5200N 5150N 5100N 5050N 5000N 4950N 4900N 4850N 4800N 4750N 4700N 4650N 4600N 4550N 4500N

SYMBOLS

- SULFIDE VEIN, PYRITE, PYRRHOTITE
- BEDDING STRIKE, DIP
- HEMATITE, IRON OXIDE

GEOLOGICAL BRANCH ASSESSMENT REPORT

10,789

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — D. M. FLETCHER

D. M. Fletcher
1344

VILLALTA GRID

GEOLOGY

SCALE 1:2500

ATTACHMENT "C"

50 25 0 50 100
METERS

GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,789

ATTACHMENT "G"

ASARCO	Vancouver
VILLALTA GOLD AND COPPER PROSPECT NANAIMO LAKES B.C. ARSENIC (PPM)	

Drawn by	Date	N.T.S.	Scale	
G.J.C.	NOV 82		1:2500	

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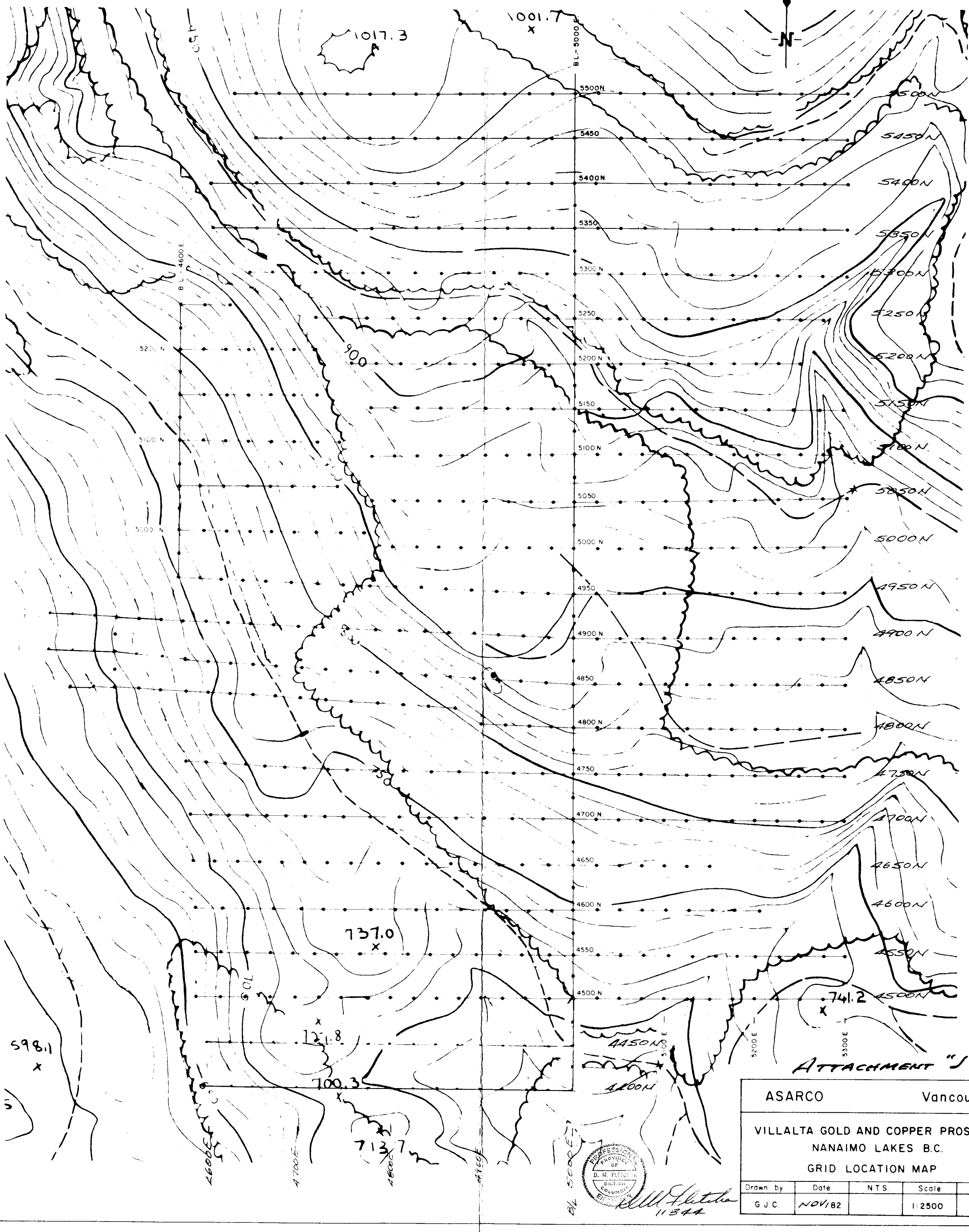
13144

GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,789



Attachment "J"

ASARCO		Vancouver	
VILLALTA GOLD AND COPPER PROSPECT NANAIMO LAKES B.C. GRID LOCATION MAP			
Drawn by	Date	N.T.S.	Scale
G.J.C.	NOV/82		1:2500

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA D. M. FLETCHER

11344

GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,789

N

1017.3

1001.7

737.0

598.1

713.7

5300N
5250N
5200N
5150N
5100N
5050N
5000N
4950N
4900N
4850N
4800N
4750N
4700N
4650N
4600N
4550N
4500N
4450N
4400N

5200 N
5100 N
5000 N

4600E
4700E
4800E
4900E
5000E
5100E

ATTACHMENT "D"

ASARCO	Vancouver			
VILLALTA GOLD AND COPPER PROSPECT NANAIMO LAKES B.C. GOLD (PPB)				
Drawn by	Date	N.T.S.	Scale	
G.J.C.	NOV/82		1:2500	

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GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,789

N

1017.3

1001.7

737.0

5980

4450 N

5100 E.

5200 E.

5300 E.

ATTACHMENT "I"

ASARCO	Vancouver			
VILLALTA GOLD AND COPPER PROSPECT NANAIMO LAKES B.C. *MANGANESE (PPM)*				
Drawn by	Date	N.T.S.	Scale	
G.J.C.	NOV. 182		1:2500	

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GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,789

N

1017.3

1001.7

5500N 5450N 5400N 5350N 5300N 5250N 5200N 5150N 5100N 5050N 5000N 4950N 4900N 4850N 4800N 4750N 4700N 4650N 4600N 4550N 4500N 4450N 4400N

B.L. 4600 E

5200 N 5100 N 5000 N

5298.1

7371.0

7137

4961.2

5200 E. 5300 E.

ATTACHMENT "H"

ASARCO	Vancouver
VILLALTA GOLD AND COPPER PROSPECT NANAIMO LAKES B.C. *IRON (%)*	

Drawn by	Date	N.T.S.	Scale	
G.J.C.	NOV 82		1:2500	

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA D. M. FLETCHER

11344

GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,789

D. M. FLETCHER 11344

ATTACHMENT "B"

Scale and elevation datum based on limited ground control resulting in good relative but uncertain absolute map accuracy.
Compiled from aerial photography at an approximate scale of 1:60000. Flown in 1976

ASARCO EXPLORATION CO. OF CANADA LTD.

VILLALTA CLAIM GROUP

PRELIMINARY RECONNAISSANCE TYPE MAPPING

McElhanney Surveying & Engineering Ltd.
1136 Alberni Street, Vancouver, B.C., Canada

Scale	1:5000
Contour Interval	10 metres
Date	MAY 1982
Job No.	06962-0
Sheet No.	1 of 1