

CONTACT INFORMATION
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Tucson, Arizona 85701
520-770-3500
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

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James Doyle Sell Mining Collection

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JDS

AMERICAN SMELTING AND REFINING COMPANY
TUCSON ARIZONA

June 2, 1975

JUN 7 1975

W.L.K.

FILE MEMORANDUM

COMMONWEALTH MINE
COCHISE COUNTY, ARIZONA

On May 29, 1975, I made a brief visit to Essex International's office and looked over new data on the old Commonwealth silver-gold mine located 50 miles north of Douglas.

Paul Eimon, Lyall Lichty, William Brown and others have formed a company called Platoro Mines Inc. and have carried out sampling of the surface and those readily accessible underground workings (3rd, 5th and 6th levels). Access to the 7th and 8th (bottom) levels would require new ladders and some retimbering.

Production began in 1895 and was continued intermittently to 1927. Around one million tons was produced which at today's prices would amount to approximately \$100 million, or \$100 per ton. Considerable supergene enrichment was no doubt involved.

This hi-grade ore was extracted from three or more irregular veins striking westerly and dipping \pm 60 degrees southerly. They occur in mid-Tertiary andesite underlain by arkosic beds of the Cretaceous Bisbee formation. The vein "zone" is around 100' to 250' in width and 1500' in length at the surface, but maps of old workings indicate a total length of over 2000'. Their sampling has demonstrated that very low grade Au-Ag occurs well dispersed in the wall rock with a few X-cut samples averaging around .02 Au, 3.0 Ag. They estimate a possible 5 to 10 million tons of this grade to a depth of 425' with a waste-ore ratio of 3 to 1. This "ore" is assumed to occur in 3 or more zones \pm 20' wide.

The deposit is completely oxidized and the gold responds well to cyanidation ---- plus 90% recovery. However, the silver shows poor recovery with one ounce in the tails regardless of grind or leaching period time.

It is concluded that although only a very small part of the total workings (20 miles) have been sampled, the ore estimate is overly optimistic in size and considerable open pit mining dilution must be taken into account. Exploration possibilities obviously exist within the known zone, along strike and at depth, but on the basis of the information at hand, they do not appear attractive. No further investigation of the property is recommended at this time, however, the deposit lies at the northwest end of a very large area of probable shallow alluvial cover which deserves at least reconnaissance mapping and sampling. A separate memo will be forthcoming on this.

Eimon's report and sample maps will be placed in the SWED files.

J. H. Courtright
J.H. Courtright

JHC:vmh

cc: JJC Collins, WL Kurtz

October 24, 1988

SWED Staff

AGS Fall Field Trip, 1988
Tombstone-Bisbee-Commonwealth

The Guidebook for the 1988 Fall Field Trip of the Arizona Geological Society (149 pages, spiral bound) of October 22-23 has been placed in the Asarco Library.

The trip covers the Tombstone-Bisbee-Commonwealth areas of Cochise County.

Santa Fe Minerals has now tied up much of the patented and unpatented claims in the main Tombstone area and has three rigs busy. They are testing, by 3000 foot drill holes, for replacement deposits in the Abrigo and Martin limestones; Peter Megaw, project geologist.

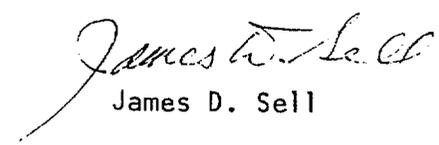
At Bisbee, the PD group has five geologists working on the drilling, interpretation, and engineering studies coupled with the economic analysis. Reserves have been announced in the range of 170 million tons at 0.45% copper in this Cochise deposit (north of the Dividend Fault). They have announced that all the copper will be recovered in a Solvent Extraction plant.

In the Gleeson area, Santa Fe has several core rigs busy. One "wag" said he wouldn't touch that area with a ten-foot pole and was glad his name would not be attached to the project. Apparently Jim Loghry is one of four consultants to the Santa Fe Gleeson project (he was not on the trip).

The Commonwealth Mine at Pearce is now being prepared for drilling (and fund-raising) by Westland Minerals Corporation. The cyanide tailings ($\pm\frac{1}{2}$ million tons at 2 oz./ton silver and 0.01 oz./ton gold, very high silica) are presently being shipped to the PD Hidalgo smelter.

H. Drewes, R. Newell, S. Eade, and J. Guilbert all combined to expound on the geology, mineralization, and on their thoughts to the group during the excellent days for an outing.

JDS:mek



James D. Sell

cc: W.L. Kurtz

August 16, 1990

W.L. Kurtz

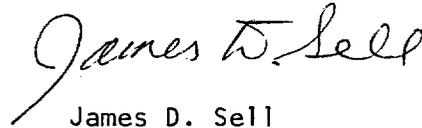
Miller's Evaluation
DRX Data
Commonwealth Mine
Cochise County, AZ

I submit M.A. Miller's evaluation of the DRX data on the Commonwealth Mine.

As noted, the ore block drawn by DRX includes substantial thickness of less than 0.02 opt gold and the ounces of recoverable gold would be less than the indicated value unless all of it would leach as indicated.

Contact with DRX is being maintained as they are completing a massive sampling program on the surface and within the available mine workings.

JDS:mek
Att.


James D. Sell

cc: R.L. Brown
M.A. Miller

August 9, 1990

J.D. Sell

Commonwealth Mine
Cochise County, AZ

Per your request, I have reviewed the assay results from DRX on the Commonwealth Mine's Phase 1 & 2 drilling programs. On the attached sections I have revised some of the assay intervals. The revisions are shown as: >.03 opt Au, red; <.03>.02, orange; <.02, orange dots.

It appears from the six sections that there is a continuity in thickness of the mineralized zone(s), but there is an erratic distribution of gold grade within the zone(s). It also appears that in some instances the intervals are "held up" by a very high grade (relative to the surrounding assay) value, thus causing the interval to be heavily weighted by this one assay. No assay values were cut in this revision.

The mineralized zone is open to the southeast along a display of the north vein for $\pm 1500'$. However, it appears (DRX has noted this in the report pp. 25, para. 3) that the Au/Ag ratio changes from W \rightarrow E with Ag dominating \rightarrow E. The last drill hole \rightarrow W is very weakly mineralized. However, H-W-145L 110'E of RCH W-8 has 35' at .032 Au, .92 Ag. I believe that this zone is open to the west even though RCH-W-8 was unmineralized. Mineral zoning suggests that gold will increase \rightarrow west with respect to silver. The drilling west of H-W-145L will be under pediment, and depth to bedrock is unknown. Additional land acquisition would be advisable if the zone continues to the west/NW.

DRX's geologic reserve of 1 mt @ .04 opt Au, .97 opt Ag is probably realistic; however, the stripping ratio of ore/waste will probably be higher than they have indicated. At a 70% + recovery of gold and a 40% recovery of silver the current geologic reserve is approximately 30,000 oz. gold, 400,000 oz. silver.

From an exploration perspective the additional tonnage possibilities as indicated by DRX within the Commonwealth area are reasonable. However, DRX seems to have discounted the western extension of the mineralized zone under pediment cover. This area appears to have the most immediate potential for establishing enough tonnage for a minable reserve coupled with the current reserve blocks. DRX's other exploration targets outside of the Commonwealth area should also be followed up, such as the Blue Jeep and San Ignacio areas where near ore

Commonwealth Mine

August 9, 1990

grade mineralization has been intersected in reconnaissance drilling.

The upside potential for 3-5 mt @ .04± Au, 1-2 opt Ag exists. Outside areas suggest additional tonnage potential of the same caliber. If the terms of the agreement are reasonable, I would recommend a drilling program west of the reserve area to increase the present geologic reserves into minable reserves and look to other targets for additional tonnage possibilities.

MAM:mek
Att.



Mark A. Miller

cc: W.L. Kurtz

①

509.01

3.5
1.575

1005

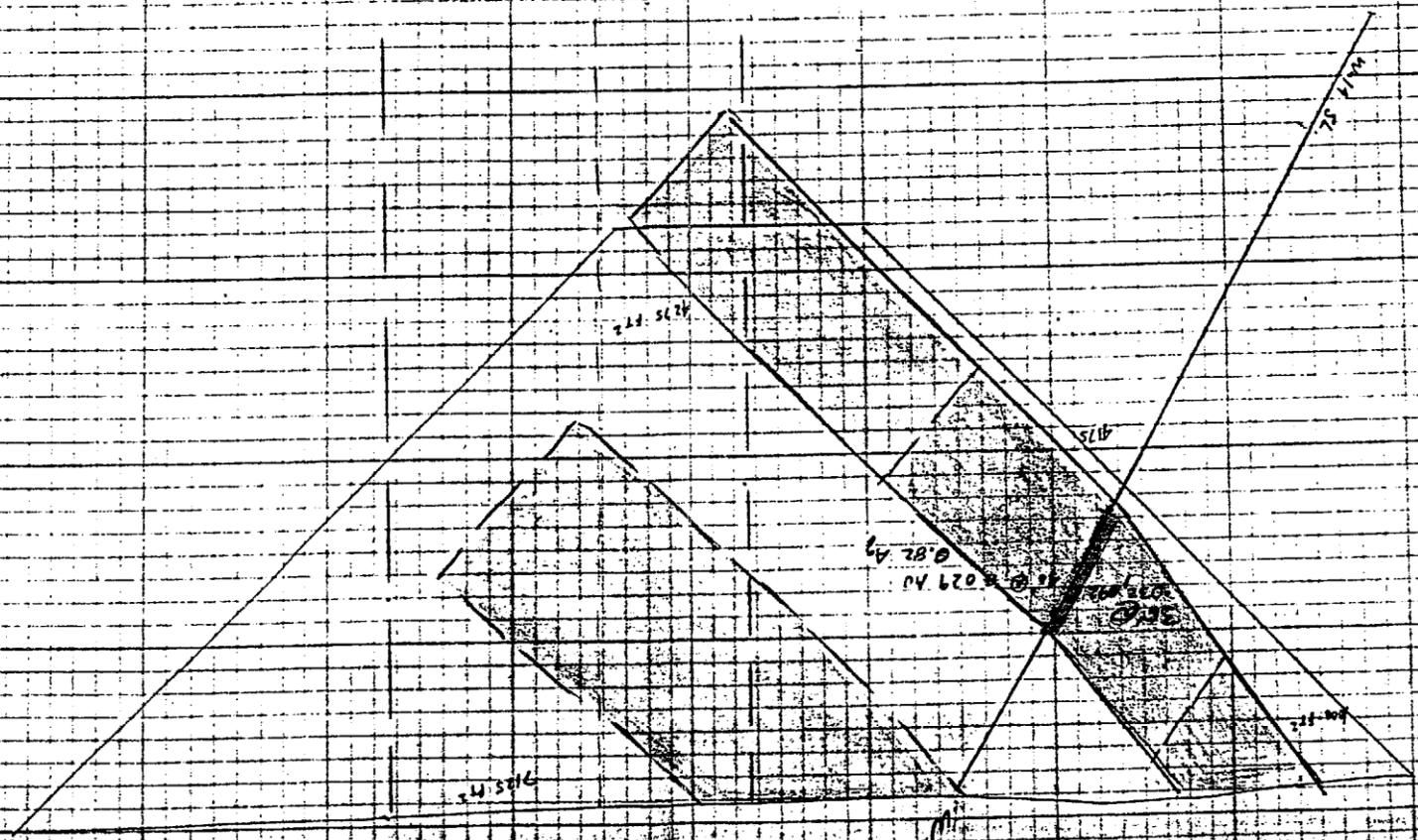
1100

INDICATED = $\frac{4175 \text{ FT}^2 \times 100}{12} = -34,792 \text{ T} @ 0.029 \text{ A} @ 0.82 \text{ A}_1$

INFERRED = $\frac{(1011 + 4235 + 2152) \times 100}{12} = 123,333 \text{ T} @ 0.029 \text{ A} @ 0.82 \text{ A}_1$

250 250 250

LENGTH of block
2, 5, 8, 11, 15



0.10 -

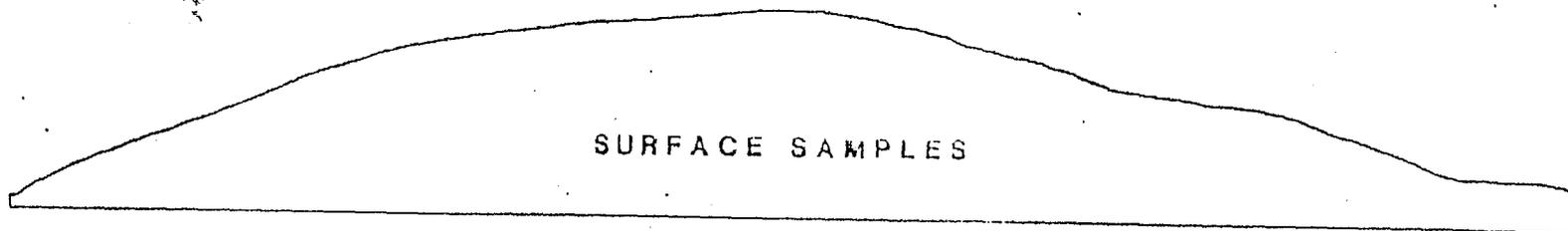
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0.06 -

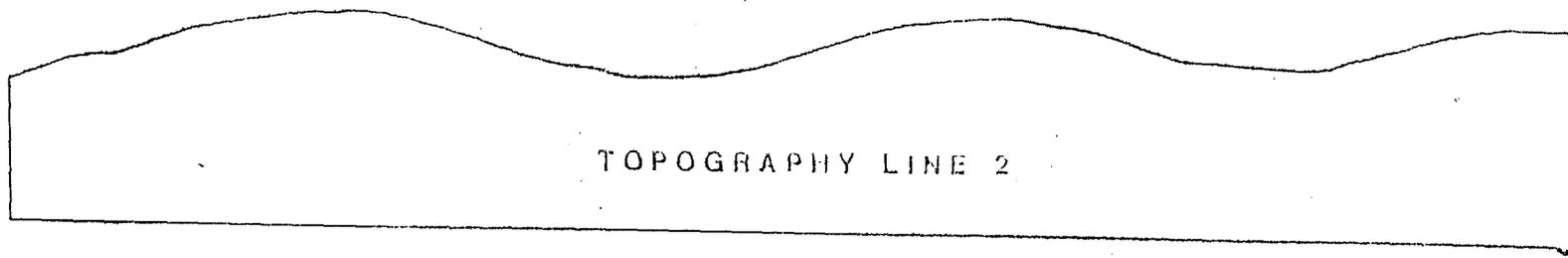
0.04 -

0.02 -

0.00 -



SURFACE SAMPLES

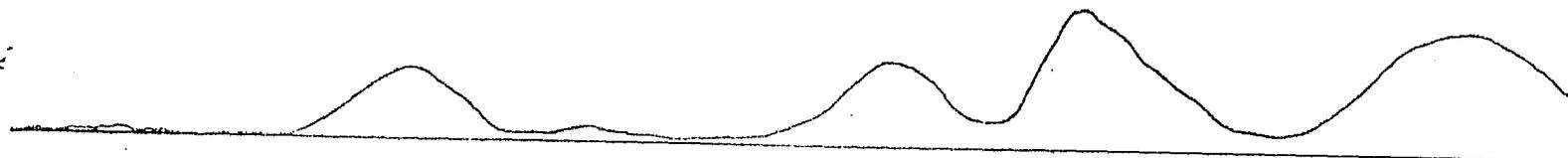


TOPOGRAPHY LINE 2

0.02 -

0.01 -

0.00 -



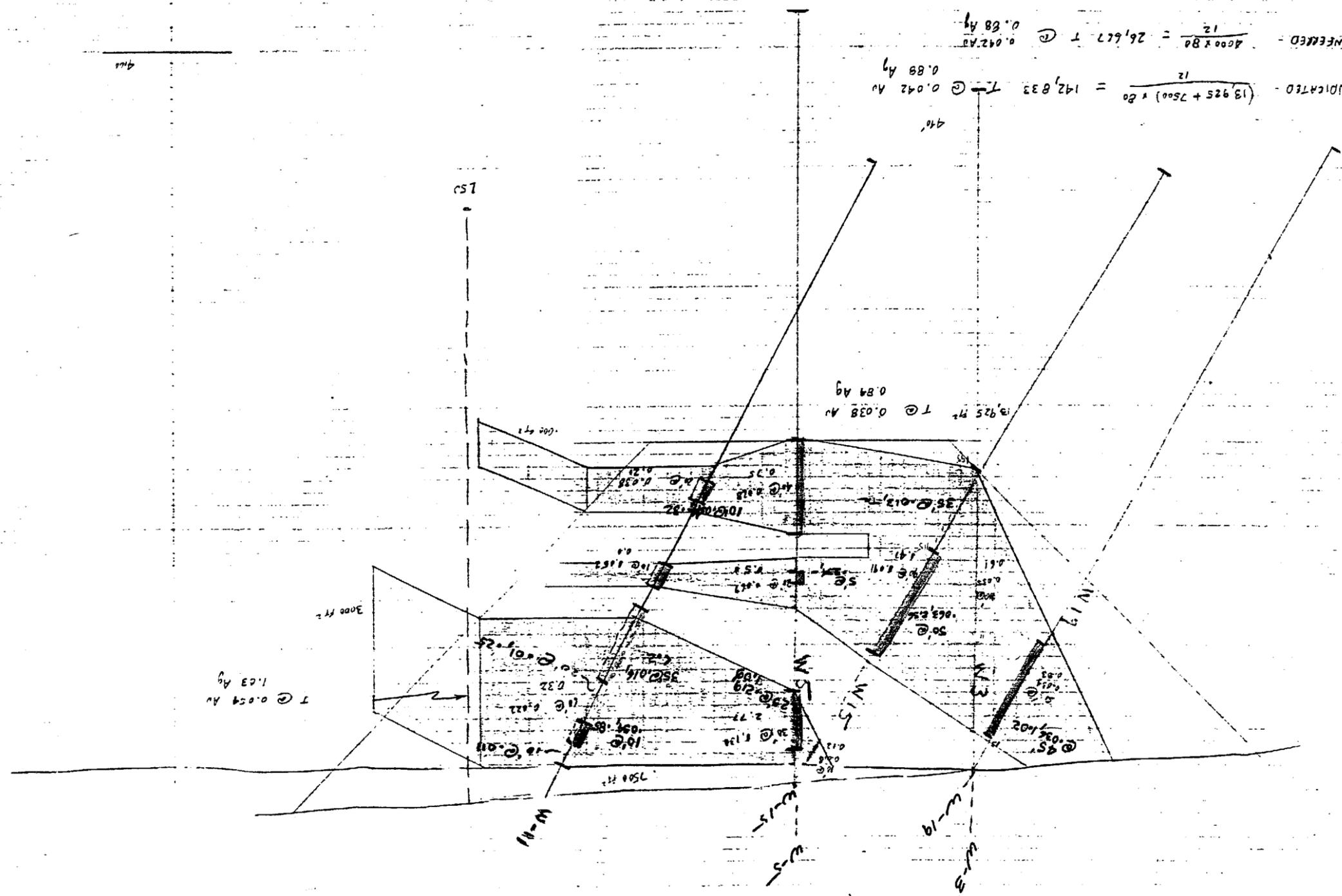
SUBSURFACE SAMPLES

LINE 2

2

10730

25475



Length of Rock 50' W & E 80'

Scale 1" = 20'

AMERICAN SMELTING AND REFINING COMPANY
TUCSON ARIZONA

June 2, 1975

FILE MEMORANDUM

COMMONWEALTH MINE
COCHISE COUNTY, ARIZONA

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Eimon's report and sample maps will be placed in the SWED files.

J. H. Courtright
J.H. Courtright

JHC:vmh

cc: JJCollins, WLKurtz

PEARCE

Western Area

15 holes

1 mill to 3 millions

100' centers

(8-9,000 ft. ^{total} 300-800 ft)

Bisbee

15 holes

100' centers

to 2 millions

to defend \pm 5 million tons
short list consents to receive ^{debt} money
to make

JDS

ASARCO

Exploration Department
Southwestern United States Division
James D. Sell
Manager

June 22, 1990

Mr. Robert E. MacDougall
First Fairfield Investment Company
1675 Larimer Street, Suite 720
Denver, Colorado 80202

Commonwealth Mine Area
Confidentiality Agreement
Cochise County, Arizona

Dear Robert:

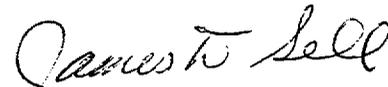
Attached you will find a signed confidentiality agreement on the Commonwealth Mine which has been cleared with New York.

In item 1, I have added a line which I believe will be agreeable by you and DRX, Inc.

Also in item 6 you and I previously agreed that the terms of this Confidentiality Agreement would be in force for only one year.

I am looking forward to the full data package to review for Asarco's continued interest in the Commonwealth Mine area.

Sincerely,



James D. Sell

JDS:mek
Att.

cc: W.L. Kurtz

CONFIDENTIALITY AGREEMENT

This Confidentiality Agreement is entered into as of this 22 day of June, 1990, by and between DRX, Inc. ("DRX") of 410 17th Street, Denver, Colorado 80202, and ASARCO Inc. ("Party") of P.O. Box 5747, Tucson, AZ 85703.

OKed verbally by J. Woods w/ following additions/connections noted in RLB.

In consideration of disclosure to Party of certain information which is in the possession of DRX in connection with its Commonwealth Mine Property located in Cochise County, Arizona, Party represents and agrees as follows:

1. Party represents and agrees that the information provided to it pursuant to this Confidentiality Agreement will be used solely to evaluate the transaction contemplated, *being the potential interest by ASARCO in the above property. JPB*
2. Party represents and agrees that it has been informed by DRX of the confidential nature of all information it is being provided pursuant to this Confidentiality Agreement, and that it will hold all such information confidential.
3. This agreement does not apply to details of the information provided to Party pursuant to this Confidentiality Agreement, which:
 - (a) are part of the public domain at the time they are acquired by Party;
 - (b) are not acquired by Party, either directly or indirectly, from DRX;
 - (c) are made known to Party without an obligation of confidentiality by a third party who has the lawful right to disclose the same;
 - (d) after they are made known to Party, become part to the public domain through no fault of Party.
4. Party agrees that it will be liable to DRX for any breach of this Confidentiality Agreement and will indemnify and save DRX harmless from and against all claims, demands and liabilities arising therefrom.
5. DRX does not hereby make, and shall not be deemed to have made, any express or implied representations or warranty to Party as to the accuracy or completeness of any of the information provided to Party pursuant to this Confidentiality Agreement.
6. The terms of this Confidentiality Agreement are in full force for ~~two~~ ^{one} years from date of signing.

DRX, Inc.

ASARCO INC.

By: _____
Rudi P. Fronk, President

By: James W. Seel
Manager, SWED

ASARCO

JDS

Exploration Department
Southwestern United States Division
James D. Sell
Manager

June 18, 1990

Mr. J.L. Woods
Assoc. General Counsel
ASARCO Incorporated
180 Maiden Lane
New York, NY 10038

Commonwealth Mine Area
Confidentiality Agreement
Cochise County, Arizona

Dear Mr. Woods:

I attach a Confidentiality Agreement covering the Commonwealth Mine area, Cochise County, Arizona, for your approval to sign.

The Confidentiality Agreement is for access to all the property files and has been modified to have only a one-year term, which was okayed by them. No perimeter clause is in the agreement as the total area is staked around for some miles.

You may call or fax your approval of this form for me to sign and review the drill, exploration, data.

Sincerely,


James D. Sell

JDS:mek
Att.

cc: R.L. Brown
W.L. Kurtz

CONFIDENTIALITY AGREEMENT

This Confidentiality Agreement is entered into as of this day of _____, 1990, by and between DRX, Inc. ("DRX") of 410 17th Street, Denver, Colorado 80202, and ASARCO Inc. ("Party") of P.O. Box 5747, Tucson, AZ 85703.

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1. Party represents and agrees that the information provided to it pursuant to this Confidentiality Agreement will be used solely to evaluate the transaction contemplated.
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DRX, Inc. *DRX*

ASARCO INC.

By: _____
Rudi P. Fronk, President

By: _____

JDS

ASARCO

Exploration Department
Southwestern United States Division
James D. Sell
Manager

June 15, 1990

Mr. J.L. Woods
Assoc. General Counsel
ASARCO Incorporated
180 Maiden Lane
New York, NY 10038

Commonwealth Mine Area
Confidentiality Agreement
Cochise County, Arizona

Dear Mr. Woods:

I attach a Confidentiality Agreement covering the Commonwealth Mine area, Cochise County, Arizona, for your approval.

DRX, Inc. of Denver, Colorado, now is attempting to find a joint venture partner for 50% of the property. They have drilled T. Pattons (1984) recommended holes and have apparently established a reserve of 50,000 ounces of gold equivalent. Verbally they state this is 0.042 opt gold or 0.055 opt gold-silver equivalent. The historic production from the Commonwealth is 12.9 million ounces of silver and 122,000 ounces of gold from over a million tons of material.

The "CA" is for access to all the property files and is for a two-year term, which may be shortened. No perimeter clause is in as the total area is probably staked solid for some miles around.

Sincerely,


J.D. Sell

JDS:mek
att.

cc: R.L. Brown
W.L. Kurtz

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DRX, Inc.

ASARCO INC.

By: _____
Rudi P. Fronk, President

By: _____

Send drilling proposal.

400 ~~→~~ 500K

15 K lease

50 K lease

225 K buy out of 12% ownership.

→ buying \approx 50,000.00 cu x $\frac{5}{30}$ for DRX

$$2.5 Ag \times 5 =$$

$$0.015 \times 400 =$$

$$\frac{18.5}{400} = 0.046$$

Mrs. Peterson

7015 Chautilly Lane

Sevierville (Robert Corbett)

7015 Chautilly Lane

Roller 75214

PH 214 823 2538

To JDS
 Date 9/29 Time 9:25 AM PM

WHILE YOU WERE OUT

M Mark Arnold
 of PRX-
 Phone () 303-534-6080
Area Code Number Extension

TELEPHONED	<input checked="" type="checkbox"/>	PLEASE CALL	<input checked="" type="checkbox"/>
CALLED TO SEE YOU	<input type="checkbox"/>	WILL CALL AGAIN	<input type="checkbox"/>
WANTS TO SEE YOU	<input type="checkbox"/>	URGENT	<input type="checkbox"/>

RETURNED YOUR CALL

Message Best Western Benson
602 / 586-3646
Call @
Go down Wednesday 26
M
 Operator



REORDER #23-000

meet at 8:30 at Pierce
 is leave Tucson at 7:00 AM



JDS

ASARCO Inc.

OCT 1 1990

SW Exploration

TELECOMMUNICATION TRANSMITTAL

FIRST FAIRFIELD INVESTMENT COMPANY
1675 Larimer St., Suite 310
Denver, Colorado 80202
Telephone: (303) 571-0885
Telecopier: (303) 534-3638

DATE 1 October 1990

TO ASARCO Inc.

ATTN: James Sell

TELECOPIER NUMBER: 602-792-3934

FROM Bob MacDougall

Total Number of Pages 4 (including this cover sheet)

Sent By: Shirlee

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL BACK AS SOON AS POSSIBLE.

COMMENTS:

Jim: The report is in the mail to you today.

Note: I have attached a copy of the Executive Summary of the Addendum Commonwealth Report.

Bob

Randy Martinis
Mark Arnold



FIRST FAIRFIELD INVESTMENT COMPANY

ASARCO Inc. 0

OCT 1 1990

SW Exploration

1 October 1990

Mr. James Sell
ASARCO Inc.
P.O. Box 5747
Tucson, AZ 85703

1675 Larimer Street
Suite 310
Denver, CO 80202
303-571-0885
Telecopier 303-534-3638

Dear Jim:

DRX has just completed a new phase of sampling over their Commonwealth Project area. A total of 335 rock chip samples were taken, each varying between 10 and 15 pounds. The results of this work are quite significant.

First, there is strong geochemical support for doubling the Gold Zone (Commonwealth Mine area) reserves from 50,000 ounces to 100,000.

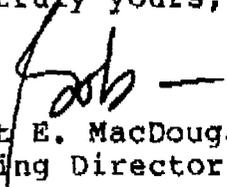
To the east in the Prism area, the triangular block between the Main Vein and the North Vein is shattered and flooded with quartz, forming a strongly mineralized quartz stockwork. Previous drilling plus the new sampling indicates a ten million ton target of ore grade material that is more silver-prone than that found in the Gold Zone to the west, but of similar equivalent grade.

Channel sampling in the Six Mile Hill area, southwest of the Gold Zone, also revealed an interesting gold/silver mineralized zone.

All the mineralization encountered to date from surface sampling, drilling, and in the underground workings, is epithermal, supergene-enriched, open-pitabile material. While initial bottle roll and column leach tests yielded favorable recoveries in the Gold Zone, more metallurgical work is needed on the Prism Zone mineralized rock.

DRX's addendum report covering the most recent work is attached. Please contact us or Mark Arnold at DRX if you have any questions.

Very truly yours,


Robert E. MacDougall
Managing Director

REM/sy

Enclosure: Addendum Report to Previously Submitted Pre-Feasibility Study

OCT 1 1990

1.0 EXECUTIVE SUMMARY

This report serves as an addendum and update to the previously submitted Commonwealth Pre-Feasibility Study report. It incorporates recent results and observations that resulted from an August, 1990 field program which consisted of surface and underground observations and sampling.

The recent work confirmed the potential to extend the "gold zone" mineralization to the east and double the minable reserves in this zone to approximately two million tons of 0.055 opt gold equivalent.

In addition to extending the existing reserves, the potential of additional reserves within the vicinity of the productive area of the old Commonwealth mine was greatly increased by the recent work. This work demonstrated the presence of open pitable grade material over significant width in areas previously believed to be barren (Figure 1). The potential in this area has been significantly increased to approximately ten million tons of 0.05 opt gold equivalent (approximately 500,000 ounces).

It is recommended that approximately 4,000 feet of additional drilling be added to the program recommended in the Pre-Feasibility report to test areas identified last summer as high ore potential within target areas One and Two. In addition, an extensive program of surface and underground channel sampling must be carried out to

increase our knowledge of the target and to provide the basic data for ore reserve calculations. This program will also allow the sighting of drill holes for a future program to define these reserves.

In addition to the high priority exploration potential at Commonwealth, The Six Mile Hill, Blue Jeep, and San Ignacio areas offer exciting exploration possibilities within a three mile radius of Commonwealth.

Oct report thru p. 10 , plus nurse location ^{figures}
all essays Commonwealth.

Preferability. Table of Contents / Table Fig last
Executive Summary

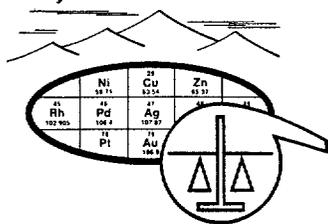
Land Status Fig 2 color (copy p 7-10)

Table 2 , p. 17

Table 3 p. 18

p. 24-25 → 26 → ~~36~~ 41

Fig 10 → 14 (p. 42-44)



SKYLINE LABS, INC.

1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

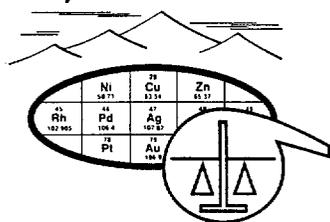
REPORT OF ANALYSIS

JOB NO. VLY 039
 December 3, 1990
 PROJECT NO.: WES-312
 6603 TO 6699
 PAGE 1 OF 4

WESTLAND MINERALS EXPLORATION CO.
 Attn: Mr. Mark A. Arnold
 410 17th St., Suite 2450
 Denver, CO 80202

Analysis of 94 Rock Chip Samples

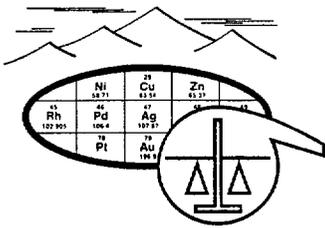
ITEM	SAMPLE NUMBER	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
1	6603	.008	1.05
2	6604	.034	1.63
3	6605	.004	.91
4	6606	.006	.83
5	6607	.080	1.32
6	6608	.004	.57
7	6609	.006	1.07
8	6610	.008	1.56
9	6611	.030	1.60
10	6612	.012	1.83
11	6613	.110	7.04
12	6614	.130	3.52
13	6615	.036	4.27
14	6616	.004	1.58
15	6617	.002	1.77
16	6618	.014	1.35
17	6619	.020	1.33
18	6620	.006	.66
19	6621	.006	.89
20	6622	.008	.89
21	6623	.008	1.09
22	6624	.004	1.07
23	6625	.010	1.93
24	6626	.002	1.05
25	6627 *	.000	.00



SKYLINE LABS, INC.
 1775 W. Sahuarro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 039
 December 3, 1990
 PAGE 2 OF 4

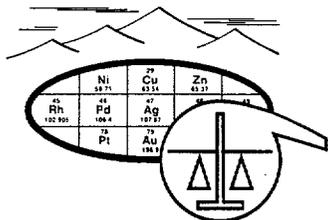
ITEM	SAMPLE NUMBER	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
26	6628 *	.000	.00
27	6629 *	.000	.00
28	6630	.006	.77
29	6631	.008	1.13
30	6632	.004	.52
31	6633	<.002	.37
32	6634	.002	.39
33	6635	.004	.27
34	6636	.004	.40
35	6637	.006	.36
36	6638	.002	.61
37	6639	.002	.32
38	6640	.044	1.03
39	6641	.006	.97
40	6642	.014	1.38
41	6643	.004	1.24
42	6644	.004	1.67
43	6645	.014	1.31
44	6646	.010	1.40
45	6647	.010	2.00
46	6648	.006	1.18
47	6649	.014	1.34
48	6650	.024	2.69
49	6651	.012	1.33
50	6652	.008	1.35



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JOB NO. VLY 039
 December 3, 1990
 PAGE 3 OF 4

ITEM	SAMPLE NUMBER	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
51	6653	.004	.79
52	6654	.004	.54
53	6655	.006	.75
54	6656	.004	.56
55	6657	.006	.59
56	6658	.020	.80
57	6659	.080	2.91
58	6660	.010	3.04
59	6661	.016	1.16
60	6662	.008	1.22
61	6663	.006	1.02
62	6664	.004	.32
63	6665	.002	.35
64	6666	.006	.41
65	6667	.010	.63
66	6668	.016	.93
67	6669	.022	1.68
68	6670	.012	2.28
69	6671	.014	2.23
70	6672	.006	1.08
71	6673	.004	.64
72	6674	.006	1.08
73	6675	.004	.66
74	6676	.006	.48
75	6677	.020	.73



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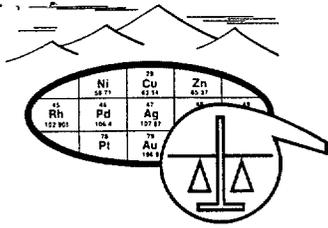
JOB NO. VLY 039
 December 3, 1990
 PAGE 4 OF 4

ITEM	SAMPLE NUMBER	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
76	6678	.020	1.13
77	6679	.030	3.80
78	6680	.030	7.29
79	6681	.010	2.14
80	6682	.004	1.15
81	6683	.018	1.02
82	6684	.022	1.01
83	6685	.004	.31
84	6686	.008	.75
85	6687	.006	.56
86	6688	.010	1.18
87	6689	.014	.92
88	6690	.002	.21
89	6691	.002	.49
90	6692	.008	.06
91	6693	.002	.06
92	6694	.004	.21
93	6695	.004	.31
94	6696	.008	.94
95	6697	.012	.33
96	6698	.002	.37
97	6699	.012	1.20

*NOTE: Items 25, 26 and 27 were not received.

cc: Mr. Ross Grunwald
 P.O. Box 3446
 Sonora, CA 95370

William L. Lehmbek
 Manager
 James A. Martin
 Arizona Registered Assayer No. 11122



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 Tucson, Arizona 85703
 (602) 622-4836

INVOICE
NET 30 DAYS

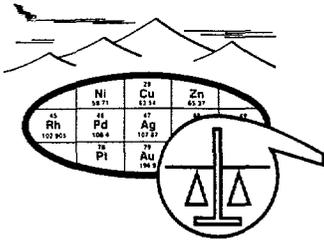
Job No. VLY 039
December 3, 1990
PROJECT NO.: WES-312
6603 TO 6699

WESTLAND MINERALS EXPLORATION CO.
Attn: Mr. Mark A. Arnold
410 17th St., Suite 2450
Denver, CO 80202

Analysis of 94 Rock Chip Samples

94 Au&Ag(oz/t) @ \$10.00.....	\$940.00
94 samples crushed, split and pulverized @ \$4.80	\$451.20
51 samples dried @ \$0.95	\$48.45
Pick up charges	\$95.00
Totals	\$1534.65

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1775 W. Sahuarro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

REPORT OF ANALYSIS

JOB NO. VLY 038
November 30, 1990
PROJECT NO.: WES-312
6627-6629 AND
6863-6869
PAGE 1 OF 1

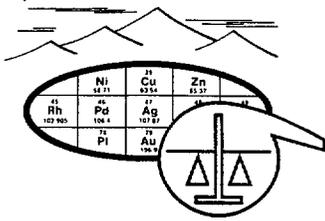
WESTLAND MINERALS EXPLORATION CO.
Attn: Mr. Mark A. Arnold
410 17th St., Suite 2450
Denver, CO 80202

Analysis of 10 Rock Chip Samples

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
1	6627	.016	1.03
2	6628	.060	1.69
3	6629	.044	1.47
4	6863	.012	2.33
5	6864	.085	2.89
6	6865	.030	1.78
7	6866	.735	.27
8	6867	.026	.21
9	6868	.008	.06
10	6869	1.030	.08

cc: Mr. Ross Grunwald
P. O. Box 3446
Sonora, CA 95370

REGISTERED ASSAYER
 CERTIFICATE NO.
 9425
 WILLIAM L.
 LEHMBECK
 Manager
 11/20/90



SKYLINE LABS, INC.
 1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

**INVOICE
 NET 30 DAYS**

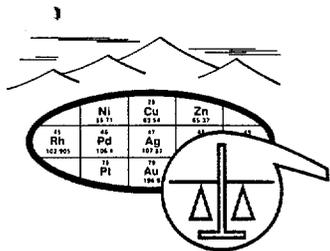
Job No. VLY 038
 November 30, 1990
 PROJECT NO.: WES-312
 6627-6629 AND
 6863-6869

WESTLAND MINERALS EXPLORATION CO.
 Attn: Mr. Mark A. Arnold
 410 17th St., Suite 2450
 Denver, CO 80202

Analysis of 10 Rock Chip Samples

10 Au&Ag(oz/t) @ \$10.00.....	\$100.00
10 samples crushed, split and pulverized @ \$3.50	\$35.00
3 samples dried @ \$1.00	\$3.00
Totals	\$138.00

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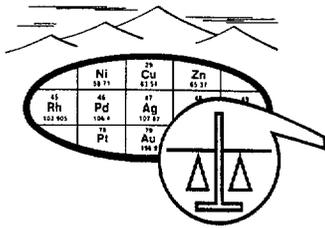
REPORT OF ANALYSIS

JOB NO. VLY 040
 November 30, 1990
 PROJECT NO.: WES-312
 6900 TO 6970
 PAGE 1 OF 3

WESTLAND MINERALS EXPLORATION CO.
 Attn: Mr. Mark A. Arnold
 410 17th St., Suite 2450
 Denver, CO 80202

Analysis of 71 Rock Chip Samples

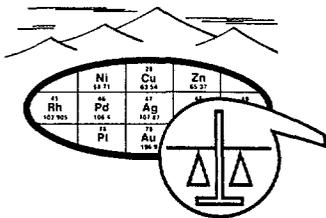
ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
1	6900	.018	1.92
2	6901	.012	1.36
3	6902	.006	.93
4	6903	.016	2.22
5	6904	.020	2.87
6	6905	.014	3.83
7	6906	.046	4.56
8	6907	.030	1.98
9	6908	.008	.86
10	6909	.018	.55
11	6910	.042	.45
12	6911	.002	.27
13	6912	.028	.32
14	6913	.008	.11
15	6914	.008	1.75
16	6915	.012	1.72
17	6916	.024	1.40
18	6917	.018	2.06
19	6918	.012	1.31
20	6919	.042	1.74
21	6920	.046	1.62
22	6921	.006	.90
23	6922	.004	.85
24	6923	.010	1.46
25	6924	.028	1.62



SKYLINE LABS, INC.
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 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 040
 November 30, 1990
 PAGE 2 OF 3

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
26	6925	.010	1.48
27	6926	.008	2.06
28	6927	.018	1.93
29	6928	.012	1.89
30	6929	.008	1.75
31	6930	.018	1.38
32	6931	.008	.63
33	6932	.004	.29
34	6933	.004	.35
35	6934	.004	.46
36	6935	.002	.75
37	6936	.006	.83
38	6937	.006	1.20
39	6938	.032	2.92
40	6939	.016	1.65
41	6940	.018	1.65
42	6941	.014	1.64
43	6942	.036	1.76
44	6943	.008	1.26
45	6944	.006	1.39
46	6945	.008	1.63
47	6946	.014	1.63
48	6947	.018	1.70
49	6948	.020	1.41
50	6949	.014	1.75



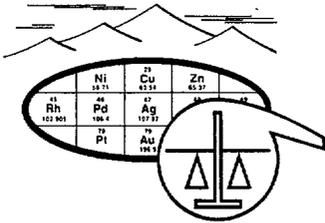
SKYLINE LABS, INC.
 1775 W. Sahuarro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 040
 November 30, 1990
 PAGE 3 OF 3

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
51	6950	.018	1.74
52	6951	.020	2.20
53	6952	.010	1.17
54	6953	.008	.95
55	6954	.012	1.32
56	6955	.006	1.44
57	6956	.018	4.90
58	6957	.065	1.80
59	6958	.070	1.67
60	6959	.014	2.90
61	6960	.014	2.94
62	6961	.028	2.82
63	6962	.014	2.69
64	6963	.040	3.16
65	6964	.016	3.01
66	6965	.016	2.39
67	6966	.018	1.57
68	6967	.046	2.44
69	6968	.024	2.74
70	6969	.030	1.43
71	6970	.080	2.22

cc: Mr. Ross Grunwald
 P. O. Box 3446
 Sonora, CA 95370

William L. Lehmbek
 Manager
 James A. Martin
 Arizona Registered Assayer No. 11122



SKYLINE LABS, INC.
 1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

INVOICE
NET 30 DAYS

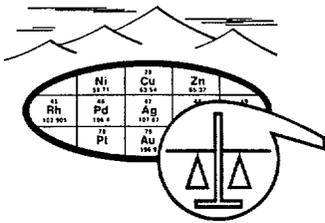
Job No. VLY 040
 November 30, 1990
 PROJECT NO.: WES-312
 6900 TO 6970

WESTLAND MINERALS EXPLORATION CO.
 Attn: Mr. Mark A. Arnold
 410 17th St., Suite 2450
 Denver, CO 80202

Analysis of 71 Rock Chip Samples

71 Au&Ag(oz/t) @ \$10.00.....	\$710.00
71 samples crushed, split and pulverized @ \$4.80	\$340.80
35 samples dried @ \$0.95	\$33.25
Totals	\$1084.05

COPY



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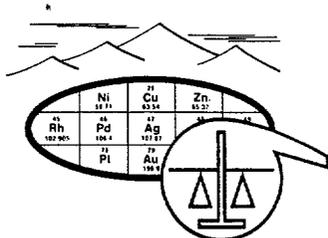
REPORT OF ANALYSIS

JOB NO. VLY 041
 December 3, 1990
 PROJECT NO.: WES-312
 6971 TO 7041
 PAGE 1 OF 3

WESTLAND MINERALS EXPLORATION CO.
 Attn: Mr. Mark A. Arnold
 410 17th St., Suite 2450
 Denver, CO 80202

Analysis of 71 Rock Chip Samples

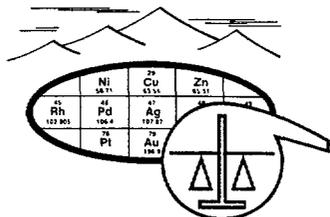
ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
1	6971	.018	1.86
2	6972	.036	2.48
3	6973	.012	1.05
4	6974	.010	1.17
5	6975	.028	3.54 —
6	6976	.008	1.64
7	6977	.004	1.89
8	6978	.006	1.81
9	6979	.020	3.23 —
10	6980	.022	3.13 —
11	6981	.042	2.49
12	6982	.018	.52
13	6983	.024	1.17
14	6984	.018	1.41
15	6985	.050	1.24
16	6986	.036	.66
17	6987	.270	.38
18	6988	.260	.40
19	6989	.310	.37
20	6990	.265	.48
21	6991	.195	1.05
22	6992	.140	<.01
23	6993	.110	1.41
24	6994	.038	.65
25	6995	.018	.57



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JOB NO. VLY 041
 December 3, 1990
 PAGE 2 OF 3

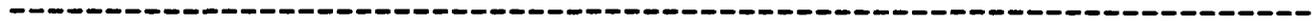
ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
26	6996	.020	.72
27	6997	.012	.62
28	6998	.012	.53
29	6999	.016	1.42
30	7000	.020	1.09
31	7001	.030	.94
32	7002	.022	.68
33	7003	.016	1.07
34	7004	.016	.94
35	7005	.018	1.43
36	7006	.022	2.37
37	7007	.004	.58
38	7008	.006	.12
39	7009	.004	.23
40	7010	.008	.11
41	7011	.014	.18
42	7012	.008	.20
43	7013	.004	.22
44	7014	.006	.10
45	7015	.004	.11
46	7016	.004	.07
47	7017	.012	1.18
48	7018	.010	.54
49	7019	.006	.11
50	7020	.004	.28



SKYLINE LABS, INC.

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JOB NO. VLY 041
 December 3, 1990
 PAGE 3 OF 3



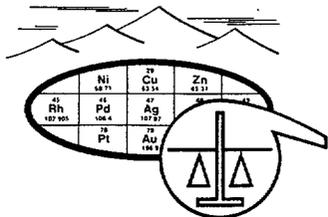
ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)



51	7021	.006	.42
52	7022	.008	.56
53	7023	.016	1.35
54	7024	.004	.26
55	7025	<.002	.04
56	7026	.002	.20
57	7027	<.002	.15
58	7028	.006	.62
59	7029	.002	.51
60	7030	.004	.87
61	7031	.004	1.51
62	7032	.004	1.54
63	7033	.006	1.72
64	7034	.008	1.62
65	7035	.006	1.89
66	7036	.014	2.38
67	7037	.004	.33
68	7038	<.002	.37
69	7039	<.002	.29
70	7040	<.002	.04
71	7041	<.002	.16

cc: Mr. Ross Grunwald
 P. O. Box 3446
 Sonora, CA 95370

[Handwritten signature]
 William L. Lehbeck
 Manager
 James A. Martin
 12/3/90



SKYLINE LABS, INC.

1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

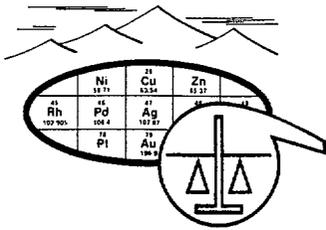
REPORT OF ANALYSIS

JOB NO. VLY 042
 December 20, 1990
 7042-7099
 PAGE 1 OF 3

WESTLAND MINERALS EXPLORATION CO.
 Attn: Mr. Mark A. Arnold
 410 17th St., Suite 2450
 Denver, CO 80202

Analysis of 58 Rock Chip Samples

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
1	7042	<.002	.11
2	7043	<.002	.19
3	7044	.008	1.96
4	7045	<.002	.13
5	7046	.002	.10
6	7047	.002	.14
7	7048	<.002	.02
8	7049	<.002	.89
9	7050	<.002	.59
10	7051	<.002	<.01
11	7052	<.002	.17
12	7053	.010	1.27
13	7054	.014	2.30
14	7055	.004	.59
15	7056	.004	.90
16	7057	.008	.89
17	7058	.004	.87
18	7059	.008	2.37
19	7060	.002	.59
20	7061	.014	2.29
21	7062	.010	2.23
22	7063	.020	2.03
23	7064	.004	1.20
24	7065	.006	1.70
25	7066	.004	.69

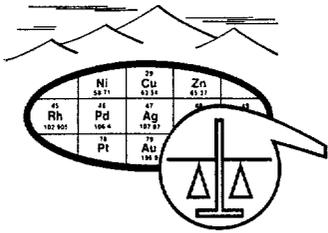


SKYLINE LABS, INC.
 1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 042
 December 20, 1990
 PAGE 2 OF 3

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
26	7067	.010	1.46
27	7068	.014	3.00 —
28	7069	.016	2.47
29	7070	.014	2.73
30	7071	.012	2.91
31	7072	.014	3.33 —
32	7073	.014	1.43
33	7074	.115	7.63 —
34	7075	.024	4.17 —
35	7076	.030	3.82 —
36	7077	.050	6.86 —
37	7078	.010	1.79
38	7079	.006	1.50
39	7080	.008	2.24
40	7081	.004	.89
41	7082	.002	.89
42	7083	.002	.86
43	7084	.006	1.92
44	7085	.004	1.01
45	7086	.002	1.02
46	7087	<.002	.33
47	7088	<.002	.32
48	7089	<.002	.21
49	7090	.020	2.38
50	7091	.008	.09

See sample sheet plate III



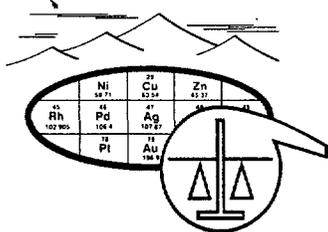
SKYLINE LABS, INC.
 1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 042
 December 20, 1990
 PAGE 3 OF 3

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
51	7092	.010	2.30
52	7093	.022	3.13 —
53	7094	.010	2.30
54	7095	.014	2.48
55	7096	.055	6.00 —
56	7097	.012	1.95
57	7098	.004	1.81
58	7099	.004	2.56

cc: Mr. Ross R. Grunwald
 P. O. Box 3446
 Sonora, CA 95370

[Handwritten Signature]
 William L. Lehmbeck
 Manager
 12/20/90



SKYLINE LABS, INC.

1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

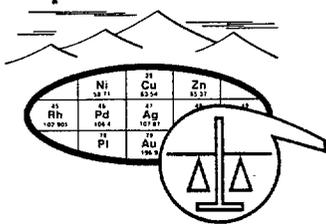
REPORT OF ANALYSIS

JOB NO. VLY 043
December 20, 1990
PAGE 1 OF 4

WESTLAND MINERALS EXPLORATION CO.
Attn: Mr. Mark A. Arnold
410 17th St., Suite 2450
Denver, CO 80202

Analysis of 100 Rock Chip Samples

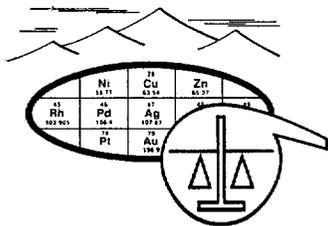
		FIRE ASSAY	
ITEM	SAMPLE NO.	Au (oz/t)	Ag (oz/t)
1	8000	.012	4.05 —
2	8001	.004	1.71
3	8002	.004	.61
4	8003	.028	3.06 —
5	8004	.002	<.01
6	8005	<.002	.60
7	8006	.002	.66
8	8007	.002	.85
9	8008	<.002	1.08
10	8009	<.002	.97
11	8010	.002	.22
12	8011	.002	.18
13	8012	.002	.07
14	8013	<.002	.18
15	8014	.002	.40
16	8015	<.002	.51
17	8016	.016	3.35 —
18	8017	.014	3.47 —
19	8018	.014	2.83
20	8019	.012	2.48
21	8020	.024	3.21 —
22	8021	.020	3.07 —
23	8022	.018	3.68 —
24	8023	.024	6.31 —
25	8024	.010	3.49 —



SKYLINE LABS, INC.
 1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 043
 December 20, 1990
 PAGE 2 OF 4

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
26	8025	.012	1.63
27	8026	.012	2.26
28	8027	.010	1.52
29	8028	.004	1.16
30	8029	.006	2.30
31	8030	.002	3.96 —
32	8031	.004	2.83
33	8032	.040	9.31 —
34	8033	.014	3.99 —
35	8034	.006	1.84
36	8035	.018	3.28 —
37	8036	.040	4.88 —
38	8037	.006	2.56
39	8038	.008	2.26
40	8039	.008	3.25 —
41	8040	.020	3.90 —
42	8041	.018	5.21 —
43	8042	.065	7.89 —
44	8043	.008	2.80
45	8044	.004	1.40
46	8045	.004	3.16 —
47	8046	.008	4.83 —
48	8047	.002	1.30
49	8048	.016	2.29
50	8049	.012	1.88

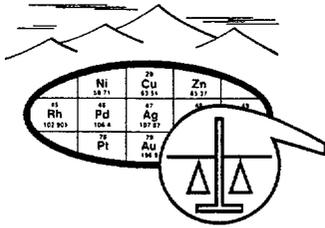


SKYLINE LABS, INC.

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 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 043
 December 20, 1990
 PAGE 3 OF 4

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
51	8050	.012	2.40
52	8051	.026	3.61 —
53	8052	.012	2.94
54	8053	.004	1.66
55	8054	.006	3.02 —
56	8055	.014	4.29 —
57	8056	.010	4.01 —
58	8057	.060	7.97 —
59	8058	.028	5.48 —
60	8059	.012	2.14
61	8060	.020	3.14 —
62	8061	.010	3.24 —
63	8062	.020	2.45
64	8063	.016	2.02
65	8064	.012	1.49
66	8065	.070	5.54 —
67	8066	.006	1.52
68	8067	.010	2.19
69	8068	.016	3.06 —
70	8069	.018	4.06 —
71	8070	.032	5.34 —
72	8071	.075	12.70 —
73	8072	.016	6.00 —
74	8073	.008	4.80 —
75	8074	.020	2.35



SKYLINE LABS, INC.

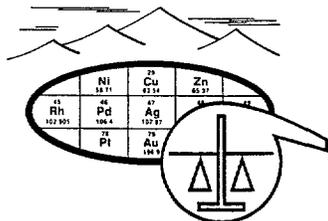
1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 043
 December 20, 1990
 PAGE 4 OF 4

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
76	8075	.026	2.02
77	8076	.016	2.49
78	8077	.008	2.82
79	8078	.012	4.64
80	8079	.016	4.67
81	8080	.024	4.67
82	8081	.012	3.84
83	8082	.018	5.10
84	8083	.024	4.88
85	8084	.022	5.39
86	8085	.014	4.98
87	8086	.120	8.02
88	8087	.014	3.38
89	8088	.012	3.79
90	8089	.026	5.41
91	8090	.010	3.53
92	8091	.010	3.15
93	8092	.014	2.80
94	8093	.010	2.23
95	8094	.008	2.49
96	8095	.020	2.29
97	8096	.012	3.07
98	8097	.004	1.39
99	8098	.018	2.89
100	8099	.012	2.15

cc: Mr. Ross R. Grunwald
 P. O. Box 3446
 Sonora, CA 95370

William L. Lehmbek
 Manager
 James A. Martin
 Arizona Registered Assayer No. 11122



SKYLINE LABS, INC.

1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

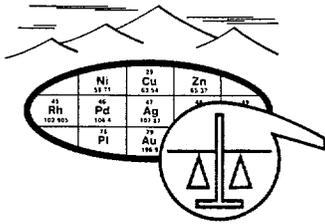
REPORT OF ANALYSIS

JOB NO. VLY 044
 December 21, 1990
 9000-9099
 PAGE 1 OF 4

WESTLAND MINERALS EXPLORATION CO.
 Attn: Mr. Mark A. Arnold
 410 17th St., Suite 2450
 Denver, CO 80202

Analysis of 100 Rock Chip Samples

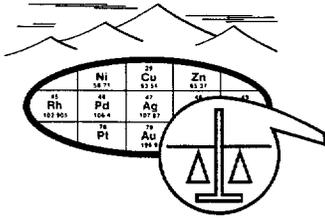
ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
1	9000	.012	2.82
2	9001	.022	3.26
3	9002	.020	3.60 —
4	9003	.010	3.12 —
5	9004	.030	4.06 —
6	9005	.030	3.54 —
7	9006	.016	2.39
8	9007	.012	2.56
9	9008	.010	2.04
10	9009	<.002	<.01
11	9010	.002	.01
12	9011	.002	1.88
13	9012	.022	2.77
14	9013	.055	4.54 —
15	9014	.010	3.21 —
16	9015	.012	2.04
17	9016	.040	3.36 —
18	9017	.018	3.34 —
19	9018	.024	2.53
20	9019	.012	3.33 —
21	9020	.012	2.33
22	9021	.020	3.07 —
23	9022	.008	1.74
24	9023	.004	.04
25	9024	<.002	.03



SKYLINE LABS, INC.
 1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 044
 December 21, 1990
 PAGE 2 OF 4

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
26	9025	<.002	.07
27	9026	<.002	.10
28	9027	<.002	.13
29	9028	.008	.01
30	9029	.008	.11
31	9030	.006	.37
32	9031	.006	.53
33	9032	.130	1.70
34	9033	.030	1.53
35	9034	.120	1.40
36	9035	.055	1.07
37	9036	.160	3.21
38	9037	.380	5.06
39	9038	.040	1.54
40	9039	.048	1.64
41	9040	.055	1.92
42	9041	.008	1.30
43	9042	.042	1.33
44	9043	.010	.82
45	9044	.006	.79
46	9045	.014	.84
47	9046	.012	1.25
48	9047	<.002	.41
49	9048	.004	.38
50	9049	<.002	.80

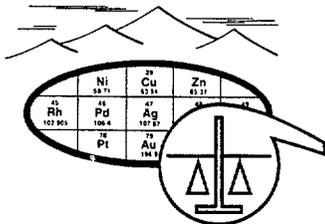


SKYLINE LABS, INC.

1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 044
 December 21, 1990
 PAGE 3 OF 4

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
51	9050	.002	.95
52	9051	<.002	1.10
53	9052	.004	1.02
54	9053	.004	.33
55	9054	.002	.23
56	9055	.008	.20
57	9056	.006	.27
58	9057	.004	1.47
59	9058	.016	2.12
60	9059	.028	3.15 —
61	9060	.030	3.17 —
62	9061	.022	4.22 —
63	9062	.014	5.28 —
64	9063	.008	.66
65	9064	.022	1.59
66	9065	.010	.52
67	9066	.010	.42
68	9067	.012	1.26
69	9068	.010	1.37
70	9069	.012	.78
71	9070	<.002	.08
72	9071	<.002	.14
73	9072	.002	.08
74	9073	.002	.06
75	9074	.013	.08



SKYLINE LABS, INC.

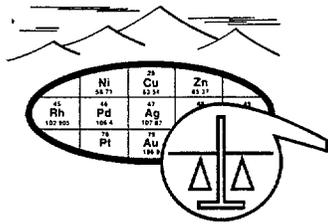
1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 044
 December 21, 1990
 PAGE 4 OF 4

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
76	9075	.070	.25
77	9076	<.002	.09
78	9077	<.002	.11
79	9078	.002	.41
80	9079	.002	.22
81	9080	.004	.44
82	9081	.016	1.21
83	9082	.010	1.55
84	9083	.016	3.74 —
85	9084	.012	3.33 —
86	9085	.002	.69
87	9086	.002	.64
88	9087	.004	.64
89	9088	.004	.49
90	9089	.002	.29
91	9090	.002	.07
92	9091	.006	1.27
93	9092	.014	3.09 —
94	9093	.002	.67
95	9094	<.002	.20
96	9095	.004	.29
97	9096	.004	.14
98	9097	<.002	.46
99	9098	<.002	.23
100	9099	<.002	.21

cc: Mr. Ross R. Grunwald
 P. O. Box 3446
 Sonora, CA 95370

William L. Lehbeck
 Manager

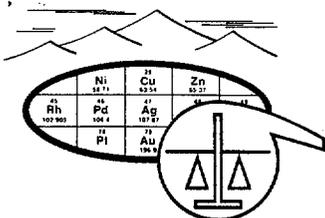


SKYLINE LABS, INC.
 1775 W. Sahuaro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. VLY 045
 December 26, 1990
 PAGE 2 OF 2

ITEM	SAMPLE NO.	FIRE ASSAY	
		Au (oz/t)	Ag (oz/t)
26	10025	.002	.55
27	10026	.006	.11
28	10027	.004	4.27 —
29	10028	.040	4.23 —
30	10029	.028	4.40 — ✓
31	10030	.012	4.98 —
32	10031	.002	1.35
33	10032	.002	2.60

cc: Mr. Ross R. Grunwald
 P. O. Box 3446
 Sonora, CA 95370



SKYLINE LABS, INC.

1775 W. Sahuaro Dr. • P.O. Box 50106
Tucson, Arizona 85703
(602) 622-4836

**INVOICE
NET 30 DAYS**

**Job No. VLY 045
December 26, 1990
10000-10032**

**WESTLAND MINERALS EXPLORATION CO.
Attn: Mr. Mark A. Arnold
410 17th St., Suite 2450
Denver, CO 80202**

Analysis of 33 Rock Chip Samples

33 Au&Ag(oz/t) @ \$10.00.....	\$330.00
33 samples crushed, split and pulverized @ \$4.80	\$158.40
Totals	\$488.40

COPY

From: F. T. GRAYBEAL

To: RLBrown

Commonwealth, Ariz

This is well-known deposit. Unless there is new concept, mineral zoning, or some reason to drill outside area of past work I would ~~decline~~ decline.

12/13/90

RECEIVED

DEC 17 1990

EXPLORATION DEPARTMENT

From: R. L. Brown

To: W L Kurtz

I had trouble recog-
nizing the merits
of this mine when
Jell described it to us.

R. L. B.

RECEIVED
DEC 17 1990
EXPLORATION DEPARTMENT

ASARCO

RECEIVED
DEC 12 1990
EXPLORATION DEPT

Southwestern Exploration Division

December 10, 1990

F. T. G.
DEC 13 1990

W.L. Kurtz

Silver (Gold) - Flux
Commonwealth Mine
Pearce District
Cochise County, Arizona

DRX, Inc. controls abundant property in the Pearce area of Cochise County, Arizona.

They have done, and continue to do, mapping and sampling, surface and in reopened underground workings and believe they have outlined some ten million tons which might average 2.5 ounces silver per ton with a slight gold credit (0.015 opt).

The entire rhyolite-andesite volcanic sequence is quartz flooded and quartz veined and might be excellent smelter flux material. Much of the previous mill tailings have already been shipped as flux material.

The earlier production was restricted to the main quartz veins, up to fifty feet wide, and it is reported that the million tons of ore mined averaged 12.9 opt silver and 0.12 opt gold. What remains are the pillars which often have similar high-grade values, and the less mineralized but silica-rich wall rocks.

Previous drilling has been completed and this scattered drilling supports the widespread distribution of values.

Figure 1 from the DRX report shows the ten million ton potential, and review of the data supports this tonnage/grade figure in the westerly striking, southerly dipping zone, 300 feet wide by 1700 feet long by 300 feet deep, and open both along strike and downdip.

On the west end, a 24 hole reverse-circulation drill program outlined a gold-bearing zone 200 feet wide by 475 feet long by several hundred feet in depth. They estimate this zone has a measured 600,000 tons of 0.042 opt gold and 0.98 opt silver, with an indicated additional 300,000 tons at 0.038 opt gold and 0.95 opt silver.

I believe a 10-20 hole drill program would confirm the tonnage/grade.

Included in their land package are several outlying areas which have some to moderate potential of silver-gold values.

RECEIVED

DEC 17 1990

EXPLORATION DEPARTMENT

Silver (Gold) - Flux

DRX, Inc. requests a proposal which might be patterned after the Yarnell program -- some upfront monies, assuming payments of underlying leases, and a work commitment toward a feasibility study. (They initially wanted a 50-80 hole commitment.)

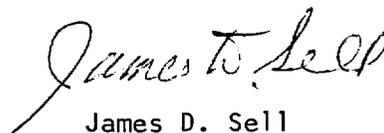
At various time, DRX, Inc. has suggested they would want substantial upfront, but they now have renegotiated some leases, etc. and have at least one \$225,000 buyout for a 12% underlying ownership. They had also thought that the proposal should include the purchasing of their 50,000 ounce gold, indicated material, at \$30 per ounce (\$1,500,000).

As no one has taken this project on for the past year, it is probable that there is much room for negotiation on the total or partial land package of DRX, Inc.

Early bottle-roll tests on the gold zone results suggest recoveries of 70-95% of the gold (head assay 0.032 to 0.179 opt gold) and 2-70% of the silver (head assay 0.50 to 2.6 opt silver). It is not known if the low recoveries are because of silica encapsulation versus the excellent silver recovery which might be because of silver chlorides and other easily soluble oxidized silver minerals. They do, of course, recommend abundant metallurgical studies.

I request corporate input as to the interest in a potentially questionable heap leach project and/or flux project of an area with plus 10 million tons of 2.5 opt silver and 0.015 opt gold. (Assuming 50% recovery of silver at \$5.00/oz. = \$6.25/ton plus 70% of 0.015 gold at \$400/oz. = \$4.20/ton, or around \$10.00/ton of mineralized rock.) (No silica values are available, but I would estimate between 80-90 percent silica.)

JDS:mek
Atts.


James D. Sell

cc: R.L. Brown
F.T. Graybeal

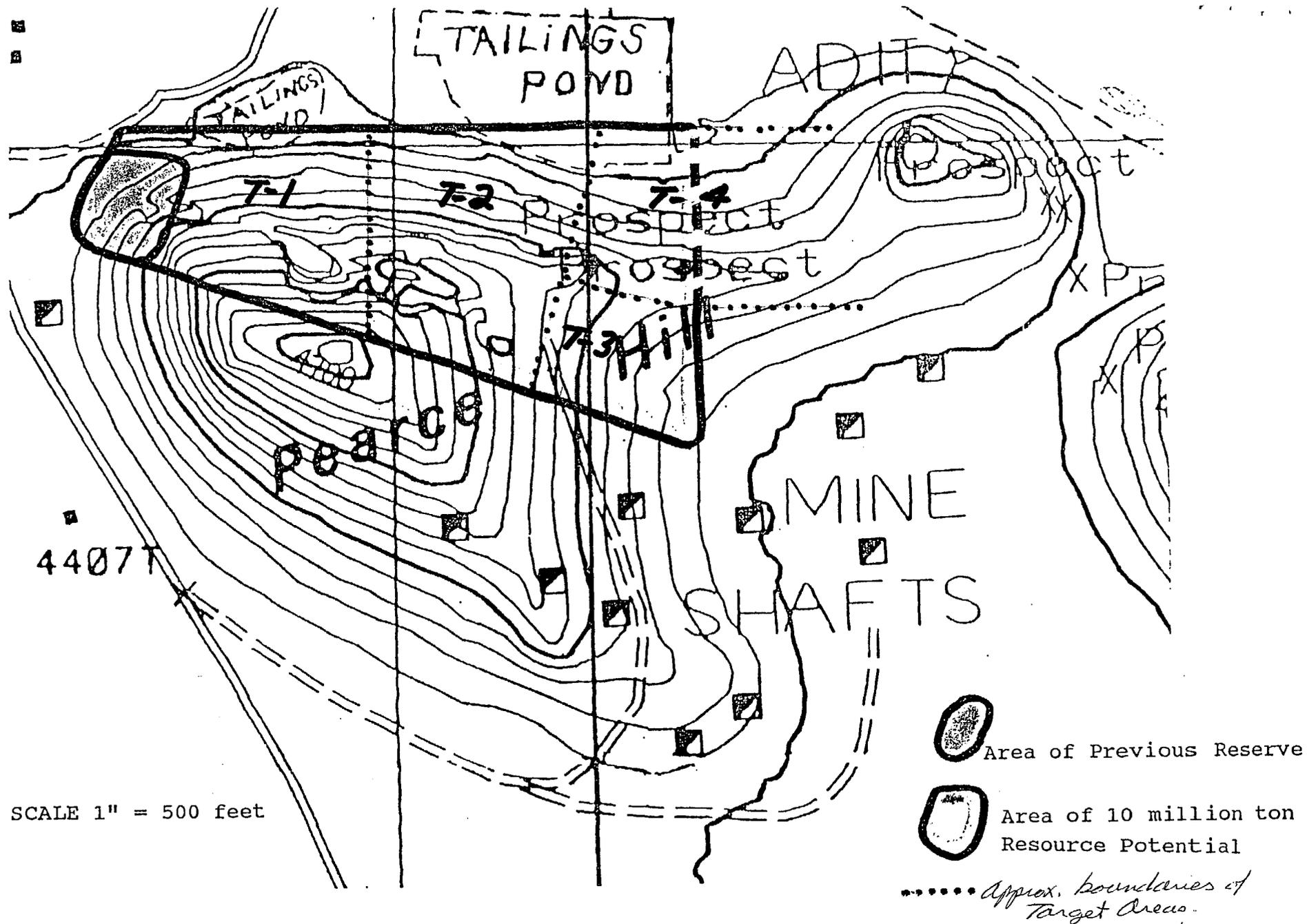


Figure 1. Map of Pearce Hill Showing Area of Previous Reserve and Larger Area of Geologic Resource.

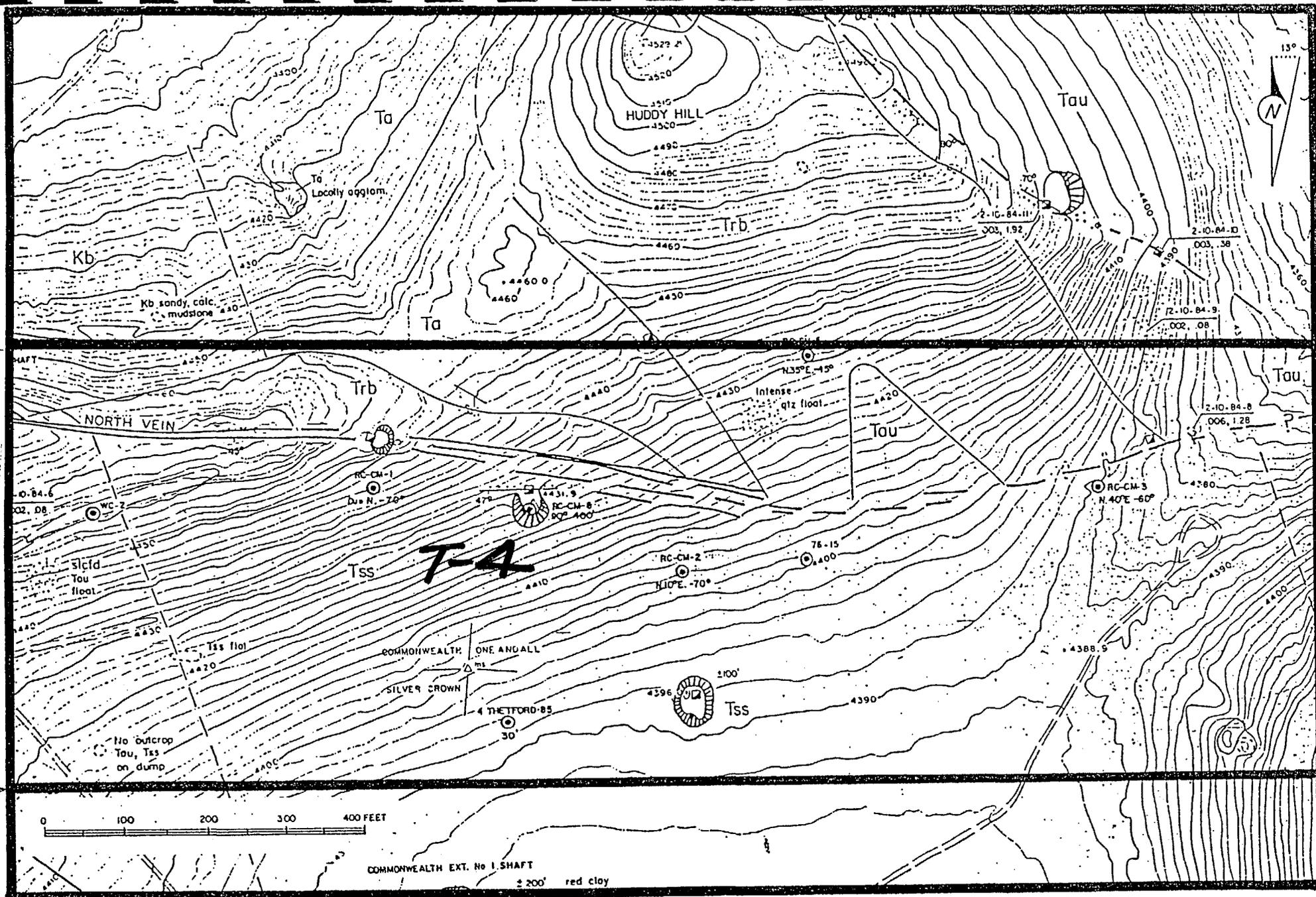


Figure 13. Location Map for Commonwealth Target Area 4.

Silver (Gold) - Flux

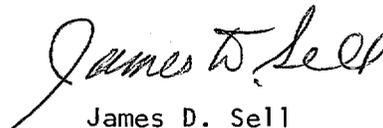
DRX, Inc. requests a proposal which might be patterned after the Yarnell program -- some upfront monies, assuming payments of underlying leases, and a work commitment toward a feasibility study. (They initially wanted a 50-80 hole commitment.)

At various time, DRX, Inc. has suggested they would want substantial upfront, but they now have renegotiated some leases, etc. and have at least one \$225,000 buyout for a 12% underlying ownership. They had also thought that the proposal should include the purchasing of their 50,000 ounce gold, indicated material, at \$30 per ounce (\$1,500,000).

As no one has taken this project on for the past year, it is probable that there is much room for negotiation on the total or partial land package of DRX, Inc.

Early bottle-roll tests on the gold zone results suggest recoveries of 70-95% of the gold (head assay 0.032 to 0.179 opt gold) and 2-70% of the silver (head assay 0.50 to 2.6 opt silver). It is not known if the low recoveries are because of silica encapsulation versus the excellent silver recovery which might be because of silver chlorides and other easily soluble oxidized silver minerals. They do, of course, recommend abundant metallurgical studies.

I request corporate input as to the interest in a potentially questionable heap leach project and/or flux project of an area with plus 10 million tons of 2.5 opt silver and 0.015 opt gold. (Assuming 50% recovery of silver at \$5.00/oz. = \$6.25/ton plus 70% of 0.015 gold at \$400/oz. = \$4.20/ton, or around \$10.00/ton of mineralized rock.) (No silica values are available, but I would estimate between 80-90 percent silica.)



James D. Sell

JDS:mek
Atts.

cc: R.L. Brown
F.T. Graybeal

- 3 -

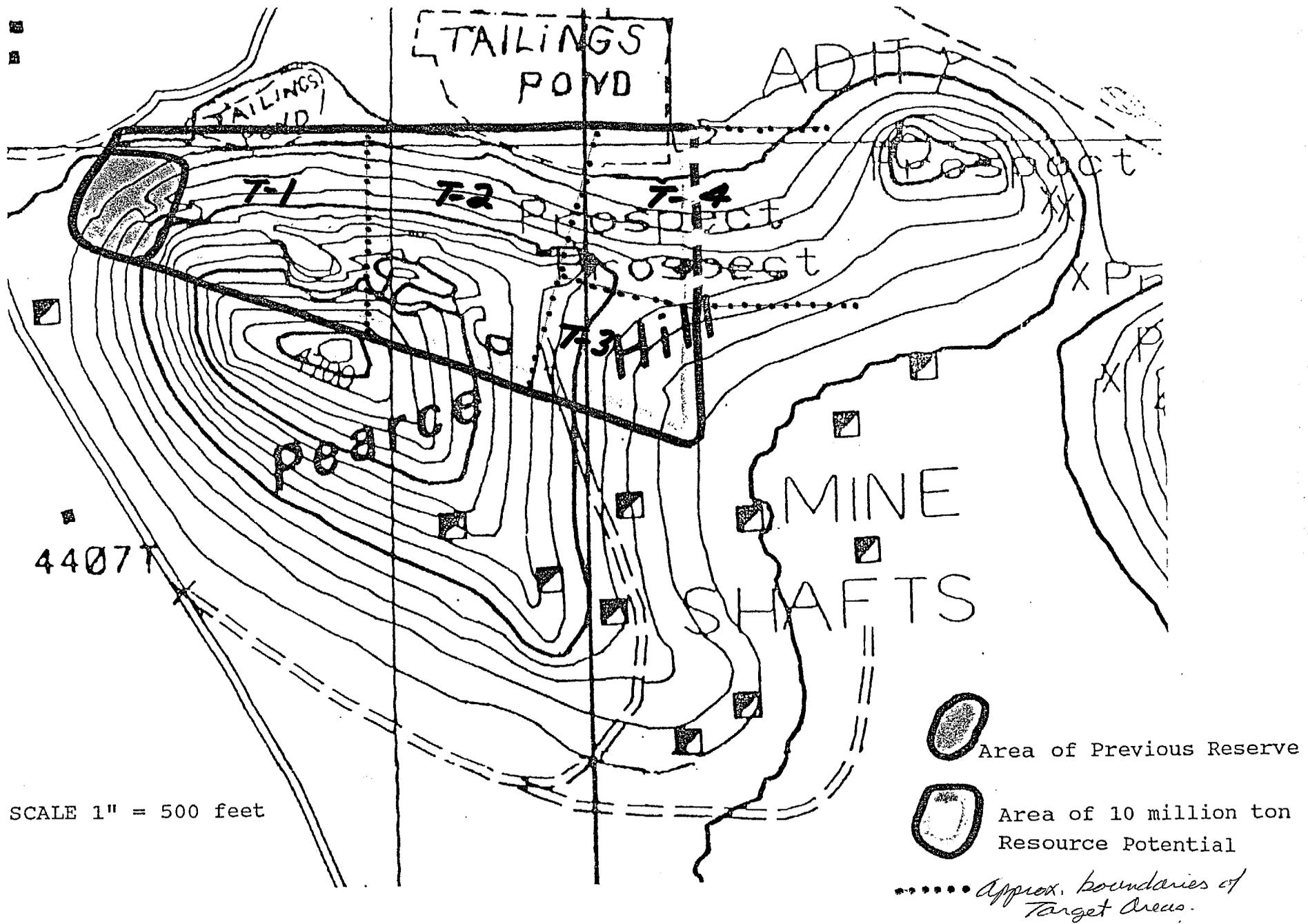


Figure 1. Map of Pearce Hill Showing Area of Previous Reserve and Larger Area of Geologic Resource.

From: F. T. GRAYBEAL

JDS

To: DL Brown

Commonwealth, Australia

This is well-known deposit. Unless there is new concept, mineral zoning, or some reason to drill outside area of past work I would ~~like~~ decline.

12/13/90

RECEIVED

DEC 17 1990

EXPLORATION DEPARTMENT

From: R. L. Brown

To: WL Kurtz

I had trouble recognizing the merits of this mine when I described it to us.

R. L. B.

Call Smelter:
How many tons/year flux
can be used.
What influence Ag₂O,
What min. SiO₂,
magnetite etc.

see letter of 12/29/70

RECEIVED

DEC 17 1990

EXPLORATION DEPARTMENT

To Sell
Date 12/17 Time 2:39 AM PM
WHILE YOU WERE OUT
M Ross Grunwald
of Westland
Phone 209 532-8021
Area Code Number Extension

TELEPHONED	<input type="checkbox"/>	PLEASE CALL	<input checked="checked" type="checkbox"/>
CALLED TO SEE YOU	<input type="checkbox"/>	WILL CALL AGAIN	<input type="checkbox"/>
WANTS TO SEE YOU	<input type="checkbox"/>	URGENT	<input type="checkbox"/>

RETURNED YOUR CALL

Message _____
is sending you
a fax in about 40
minutes

Operator



REORDER #23-000

JDS

ASARCO

Exploration Department
Southwestern United States Division
James D. Sell
Manager

December 20, 1990

Mr. W.L. Lehbeck
Lab Manager (& Treasurer)
Skyline Labs, Inc.
P.O. Box 50106
Tucson, AZ 85703

Westland Mineral Expl. Co.
Commonwealth Mine Samples
Cochise County, Arizona

Dear Bill:

In regard to the three sets of samples you are pulling from the VLY job at the Commonwealth Mine, as described to you by FAX of December 17, 1990, from Ross R. Grunwald, I request that after you have prepared the three new composite samples you then run the samples for the following:

Copper, Lead, Zinc, Arsenic, Antimony, Gold, Silver, Tin, Bismuth, Cadmium, Nickel, Total Iron, Sulfur, Silica (SiO₂), Alumina (Al₂O₃), and Lime (CaO).

Sincerely,


James D. Sell

JDS:mek

cc: W.L. Kurtz

Dec 3 6603 - 6624

Nov 30 6627 - 6629

Dec 3 6630 - 6699

Nov 30 6863 - 6869

Nov 30 6900 - 6970

Dec 3 6971 - 7041

Dec 26 7042 - 7099

Dec 20 8000 - 8099

Dec 21 9000 - 9099

Dec 26 10,000 - 10032

dv

12-20-90

FROM: J. D. SELL

TO: W L Huntly

Commonwealth Data
Cochise Co, AZ

Here is the packet for
your review -





Westland
Minerals Exploration Co.

410 Seventeenth Street
Suite 2450
Denver, CO 80202
303/534-6226
FAX 303/534-7618

January 12, 1991

Mr. Jim Sell
Asarco
Southwestern Exploration Division
P.O. Box 5747
1150 North 7th Avenue
Tucson, AZ 85703

RE: Commonwealth Mine

ASARCO Incorporated

JAN 15 1991

SW Exploration

Dear Jim:

Enclosed please find the location and assay maps and associated assay sheets for the recent surface and underground sampling at Commonwealth. We will be continuing the underground sampling and mapping along with surface dozer trenching until January 23rd. I can be reached at the Best Western in Benson, (602) 586-3646 or you can get a message to me through the Denver office if you have any questions.

Sincerely,

Mark A. Arnold
Exploration Manager

MA/ma
Encl.

To JDS

Date 1/18/91 Time 10:59 AM PM

WHILE YOU WERE OUT

M. Rudy Frank

of DRX

Phone (303) 534-6080
Area Code Number Extension

TELEPHONED	<input checked="checked" type="checkbox"/>	PLEASE CALL	<input checked="checked" type="checkbox"/>
CALLED TO SEE YOU	<input type="checkbox"/>	WILL CALL AGAIN	<input type="checkbox"/>
WANTS TO SEE YOU	<input type="checkbox"/>	URGENT	<input type="checkbox"/>

RETURNED YOUR CALL

Message They'll be in Tues
next week. will call
them morning.

Mary
Operator



REORDER #23-000



Westland
Minerals Exploration Co.

410 SEVENTEENTH STREET
SUITE 2450
DENVER, CO 80202

Jan. 14, 1991

Mr. Jim Sell
Asarco
Southwestern Exploration Division
P. O. Box 5747
Tucson, Arizona 85703

623-1327

MetCon 1-24-91

all samples have been received (3 sets)

3 Composites.

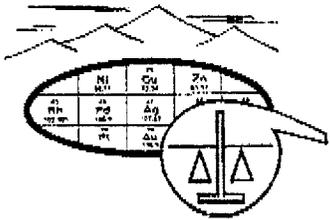
Will prepare 3 composites

Will prepare new lead assay for Au-Ag.

Will conduct CN-leach, 72 hr, with
assay each 24 hrs.

± 2½ weeks for completion.

4-5 months ^{ostium} ~~free time~~ for drilling, completion / monthly
report — then to JV assignment.



SKYLINE LABS, INC.

1775 W. Sahuaro Dr. • P.O. Box 50106
Tucson, Arizona 85703
(602) 622-4836

*Commonwealth
Cochise Co., AZ*

FAX 792-3934

DATE: 1-9-91

TO: Jim Sell Asarco

FROM: Janice Allen

ASARCO Incorporated

JAN 9 1991

SW Exploration

OUR FAX NUMBER: (602) 622-6065

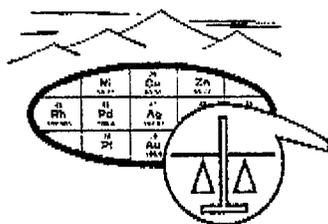
RE: _____

TOTAL NUMBER OF PAGES 3, INCLUDING COVER SHEET

Please call _____ (at (602) 622-4836) if there are any problems with this transmission

COMMENTS:

*Prelim on 3 composite samples
Sn 5 CD pending*

**SKYLINE LABS, INC.**

1775 W. Sahuaro Dr. • P.O. Box 50106

Tucson, Arizona 85703

(602) 622-4836

REPORT OF ANALYSIS

JOB NO. TAJ 707
January 9, 1991
COMPOSITE 1,2,3
PAGE 1 OF 2

ASARCO INCORPORATED
Attn: Mr. James D. Sell
Southwestern Exploration
P.O. Box 5747
Tucson, AZ 85703

ASARCO Incorporated

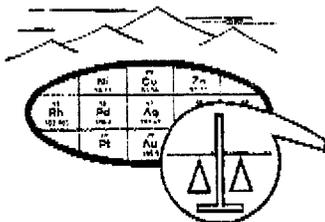
JAN 9 1991

SW Exploration

Preliminary Analysis of 3 Composite Samples

ITEM	SAMPLE NUMBER	Cu (ppm)	Pb (ppm)	Zn (ppm)	As (ppm)
1	COMP 6959-6979	24.	105.	215.	95.
2	COMP 6982-6993	22.	34.	145.	55.
3	COMP 8016-8033	205.	700.	680.	60.

ITEM	SAMPLE NUMBER	Sb (ppm)	FIRE ASSAY		Bi (ppm)
			Au (oz/t)	Ag (oz/t)	
1	COMP 6959-6979	4.2	.024	2.30	.5
2	COMP 6982-6993	15.0	.155	.75	.2
3	COMP 8016-8033	8.0	.014	3.45	.3



SKYLINE LABS, INC.

1775 W. Sahuaro Dr. • P.O. Box 50106
Tucson, Arizona 85703
(602) 622-4836

JOB NO. TAJ 707
January 9, 1991
PAGE 2 OF 2

ITEM	SAMPLE NUMBER	Ni (ppm)	Fe (%)
1	COMP 6959-6979	10.	1.7
2	COMP 6982-6993	8.	1.5
3	COMP 8016-8033	8.	1.6

ASARCO Incorporated

JAN 9 1991

SW Exploration

ITEM	SAMPLE NUMBER	SiO2 (%)	Al2O3 (%)	CaO (%)
1	COMP 6959-6979	75.7	11.2	.4
2	COMP 6982-6993	76.7	7.9	3.2
3	COMP 8016-8033	76.1	5.6	8.1

opt Au
< 0.01 Au blank
0.01-0.02 Au brown 10-19
0.02-0.03 Au blue 20-29
0.03-0.04 Au purple 30-39
0.04+ Au red. 40+

Ag
~~< 0.5 opt. Ag~~ < 1 opt Ag < 100
~~0.5-0.9 Ag~~ 1-2¹⁹⁹ Ag 100-199
~~1-1.5 Ag~~ 2-3²⁹⁹ Ag 200-299
~~1.5-2.0 A~~ 3-4³⁹⁹ Ag 300-399
~~+2~~ +4 opt Ag 400+

2/12/91

Commonwealth.

Very Preliminary

No results from leach residues yet.

∴ 3 composites:

	Au	Ag	
1) head =	0.028	2.16	± 35-40% for both
2) =	0.022	0.63	good Au ± 90 40% Ag
3) =	0.020	3.22	± 35-40% for both.

Recent concentration 1st CN ; 1.24th fine

Nov 1979

Electro & pro samples ready

JDS

Commonwealth Mines
Cochise Co., AZ

METCON Research Inc.

1844 W. Grant Road, Suite 106
Tucson, Arizona 85745

Tel: (602) 623-1327
Telex 284623 KDE UR

ASARCO Incorp

FEB 19 1991

SW Expired

FAXMITTAL

DATE: 19 February, 1991 TIME: 4:50 P.M.

TO: ASARCO

Attn: Jim Bell

FAX NUMBER: 792-3934

FROM: Eugene Jacinto

OF PAGES INCLUDING THIS SHEET: 4

IF ALL PAGES ARE NOT RECEIVED, PLEASE CALL: (602)623-1327

COMMENTS: Final report to follow.

Commonwealth Mine Samples

HARD COPY TO FOLLOW: YES NO

OUR NEW FAX NUMBER IS: (602)620-0268

JDS

ASARCO

Exploration Department
Southwestern United States Division
James D. Sell
Manager

February 20, 1991

Mr. W.L. Lehbeck
Lab Manager
Skyline Labs, Inc.
P.O. Box 50106
Tucson, AZ 85703

Westland Mineral Expl. Co.
Commonwealth Mine Samples
Cochise County, Arizona

Dear Bill:

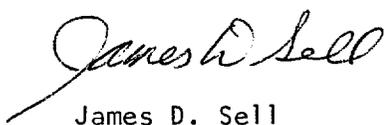
As FAXed to you on February 19, 1991, Westland Minerals has authorized you to prepare new pulps for Composite #4, #5, and #6.

On this set only the gold-silver head grade values need to be determined.

Send the three new Composites to METCON and they in turn will run the three new Composites in their bottle-roll NaCN leach test for a period of five days, taking samples every 24 hours, as needed. As before, you will again provide the analysis as needed by METCON.

Thank you for this service.

Sincerely,



James D. Sell

JDS:mek

cc: W.L. Kurtz
Eugenio lasillo - METCON

JDS

ASARCO

Exploration Department
Southwestern United States Division
James D. Sell
Manager

February 20, 1991

Mr. Ross Grunwald
Westland Minerals Exploration Co.
410 Seventeenth Street, Suite 2450
Denver, Colorado 80202

Commonwealth Mine Samples
Cochise County, Arizona

Dear Ross:

Your FAX on Composites #4, #5, and #6, arrived and I attach a copy of the letter sent to Skyline and METCON on working the Composites.

Also attached is a copy of the results from METCON, and as you see, the high silver samples (Composite #1 and #3) both show a continued extraction from 24 hours thru 72 hours, thus it was agreed to continue the leach from three days to a total of five days. This will give a much better tag onto the question of increased retention time for, hopefully, increased silver recovery in the ranges needed. Gold also reacted similarly in the low grade gold values, but as you've noted before, the high grade gold jumps right out.

I note that the original samples took two months to get this report out and I guess I can't see much of an improvement for this next batch.

Thanks for letting us get involved.

Sincerely


James D. Sell

JDS:mek
Atts.

cc: W.L. Kurtz

ASARCO

Exploration Department

Southwestern United States Division

James D. Sell
Manager

February 20, 1991

Mr. W.L. Lehbeck
Lab Manager
Skyline Labs, Inc.
P.O. Box 50106
Tucson, AZ 85703

Westland Mineral Expl. Co.
Commonwealth Mine Samples
Cochise County, Arizona

Dear Bill:

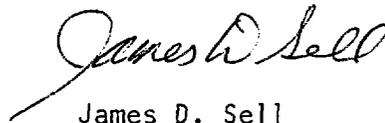
As FAXed to you on February 19, 1991, Westland Minerals has authorized you to prepare new pulps for Composite #4, #5, and #6.

On this set only the gold-silver head grade values need to be determined.

Send the three new Composites to METCON and they in turn will run the three new Composites in their bottle-roll NaCN leach test for a period of five days, taking samples every 24 hours, as needed. As before, you will again provide the analysis as needed by METCON.

Thank you for this service.

Sincerely,



James D. Sell

JDS:mek

cc: W.L. Kurtz
Eugenio Iasillo - METCON

METCON Research Inc.

1844 W. Grant Road, Suite 106
Tucson, Arizona 85745

Tel: (602) 623-1327
Telex 284623 KDE UR

ASARCO Incorp

FEB 19 1991

FAXMITTAL

SW Exploration

DATE: 19 February, 1991 TIME: 4:50 P.M.

TO: ASARCO

Attn: Jim Sell

FAX NUMBER: 792-3934

FROM: Eugene Pasillo

OF PAGES INCLUDING THIS SHEET: 4

IF ALL PAGES ARE NOT RECEIVED, PLEASE CALL: (602)623-1327

COMMENTS: Final report to follow.

Commonwealth Mine Samples

HARD COPY TO FOLLOW: YES _____ NO _____

OUR NEW FAX NUMBER IS: (602)620-0268

3.0 PROCEDURES

The procedures utilized for sample preparation and metallurgical testing are described as follows:

- 3.1 Three suites of samples labeled VLY040 , VLY041, and VLY043 received from Skyline Labs Inc. were weighed and logged in. An equal weight composite sample was prepared from each suite of samples. The composite samples were crushed to minus 10 mesh, blended, and representative samples were split out for testing and gold and silver assay.
- 3.2 A 500 gram portion of each sample was combined with 1000 milliliters of distilled water, and lime was added for pH control.
- 3.3 The slurry was agitated on a bottle roll apparatus until the pH stabilized between 10.5 and 11.5, then 1.0 gram of sodium cyanide was added. Addition of lime continued throughout the leach period at 24 hour intervals to maintain a pH above 11.0.
- 3.4 Cyanide leaching was conducted for 72 hours. At the end of leaching, solids and liquids were separated by filtration.
- 3.5 Leached residue and daily pregnant solution samples were assayed for gold and silver and metallurgical calculations were performed.

4.0 RESULTS AND DISCUSSION

The results obtained from cyanide leach testing of composite sample numbers 1, 2, and 3 are outlined in Table 4.1 in this section of the report. A brief discussion on the metallurgical results is outlined herein.

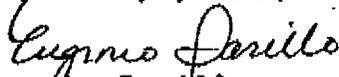


The reagent consumption data indicate that the cyanide and lime consumptions were moderate for this ore.

Solution samples taken at 24 hour intervals throughout the leach cycle showed that a 24 hour leach cycle should provide approximately the same levels of extraction achieved after 48 and 72 hours for both gold and silver for composite samples 1 and 2. A gradual daily increase in precious metals extraction was observed for composite sample number 3.

We appreciate the opportunity to work with you on this important project. Should you have any questions regarding the information contained in this report please do not hesitate to contact us.

Very truly yours,


Eugenio Iasillo
Process Engineer



Westland

Minerals Exploration Co.

410 Seventeenth Street
Suite 2450
Denver, CO 80202
Tel: (303) 534-6080
Fax: (303) 534-7618

To: Bill Lehmbeck, Skyline Labs, Tucson
From: Ross R. Grunwald
Date: February 19, 1991
Subject: Compositing of samples for Asarco Metallurgical Testwork.

This memo will authorize you to release splits of rejects from our samples to Mr. Jim Sell of Asarco and composite them according to his instructions for metallurgical testwork. He will be contacting you on this.

Specifically, the composites will consist of the following:

Composite #4	Job #VLY 040 VLY 046	Samples 6903-6913 7100-7125
Composite #5	Job #VLY 048	Samples 7321-7342
Composite #6	Job #VLY 048 VLY 049	Samples 7379-7399 Samples 7400-7415

I am enclosing copies of the sample sheet of you need additional clarification. If there are any questions, please call me at (209) 532-8021.

Thank you very much

R. R. Grunwald

JDS

METCON Research Inc.

1844 W. Grant Road, Suite 106
Tucson, Arizona 85745

Tel: (602) 623-1327
Telex 284623 KDE UR

FAXMITTAL

DATE: 19 March 1991 TIME: 11:15 A.M.

TO: ASARCO

Ref: Cyanide leach test Results
Attn: Mr. James Sell

FAX NUMBER: 792-3934

FROM: Eugeno Fasello

OF PAGES INCLUDING THIS SHEET: 4

IF ALL PAGES ARE NOT RECEIVED, PLEASE CALL: (602)623-1327

COMMENTS: Dear Mr. Sell:

The results from a 5 day
leach test conducted on composite
samples 4, 5 and 6 are
enclosed.

HARD COPY TO FOLLOW: YES NO

OUR NEW FAX NUMBER IS: (602)620-0268

ASARCO
MAR 19 1991
SW EXPIRATION

April 8, 1991

FILE NOTE

Cyanide Leach Tests
Commonwealth Mine Samples
Cochise County, Arizona

The METCON Research Inc. report EI-007-91, dated 28 March 1991, has been received. Evaluated were six composite samples from the Commonwealth Mine underground sampling. Composite 1, 2, and 3 were from the 3rd level and used a 72-hour leach interval. Composite 4 was also from the 3rd level and used a 120-hour leach interval. Composites 5 and 6 were from the 5th level and used a 120-hour leach interval.

As noted, the gold is readily leached, but the silver is less than 50%, which is the general rule of the Nevada heap leach systems.

JDS:mek
Att.


James D. Sell

cc: R.L. Brown
F.T. Graybeal
W.L. Kurtz
D.E. Crowell
Rudi Fronk (DRX, Inc.)

3.0 PROCEDURES

The procedures utilized for sample preparation and metallurgical testing are described as follows:

- 3.1 A total of six suites of samples were received from Skyline Labs Inc. The samples were weighed and logged in. An equal weight composite sample was prepared from each suite of samples. The composite samples were crushed to minus 10 mesh, blended, and representative samples were split out for testing and gold and silver assay.
- 3.2 A 500 gram portion of each composite sample was combined with 1000 milliliters of distilled water and lime was added for pH control.
- 3.3 The slurry was agitated on a bottle roll apparatus until the pH stabilized between 10.5 and 11.5, then 1.0 gram of sodium cyanide was added. Addition of lime continued throughout the leach period at 24 hour intervals to maintain the pH above 11.0.
- 3.4 Cyanide leaching was conducted for 72 hours for composite samples 1, 2, and 3. A longer leach time of 120 hours was applied to composites 4, 5, and 6. At the end of leaching, solids and liquids were separated by filtration.
- 3.5 Leached residue and daily pregnant solution samples were assayed for gold and silver and metallurgical calculations were performed.

4.0 RESULTS AND DISCUSSION

The results obtained from cyanide leach testing of composite sample numbers 1 through 6 are outlined in Table 4.1 in this section of the report. A brief discussion concerning the metallurgical results is outlined herein.

The silver extraction achieved in these samples was poor. The best silver extraction (approximately 50 percent) was achieved on composite sample number 5 which showed a silver content of approximately 2.7 ounces per ton. The lowest silver extraction (12.5 percent) was obtained in composite sample number 1 with a silver content of 2.1 ounces per ton.

The reagent consumption data indicate that the cyanide and lime consumptions were moderate for this ore.

Solution samples taken at 24 hour intervals throughout the leach cycle showed that a 24 hour leach cycle should provide approximately the same levels of extraction achieved over longer retention time for leaching. A gradual daily increase in silver extraction was observed in most of the samples throughout the leach cycle.

We appreciate the opportunity to work with you on this important project. Should you have any questions regarding the information contained in this report please do not hesitate to contact us.

Very truly yours,


Eugenio Iasillo
Process Engineer

METCON RESEARCH INC.
 1844 West Grant Road., Suite 106
 Tucson, Arizona 85745
 Phone: (602) 623-1327

BOTTLE ROLL NaCN LEACH TEST

=====

CLIENT	<u>ASARCO -- COMMONWEALTH</u>	DATE	<u>03/26/91</u>
TEST No.	<u>5</u>	PROJECT No	<u>M-251</u>
FEED	<u>COMPOSITE #5</u>	CONDUCTED BY	<u>E.I./F.G.</u>
OBJECTIVE	<u>5 day Cyanide Leach</u>		

ALIQUOT 0.02

SAMPLE DESCRIP.	METALL. PRODUCT	ASSAYS (Oz/ton)		CONTENT (mg)		% EXTRACTION CUMULATIVE	
		Au	Ag	Au	Ag	Au	Ag
Res./Sol.	gram/ml						
0 hrs.	1000						
24 hrs.	1000	0.018	0.590	0.601	20.223	68.59	46.13
48 hrs.	1000	0.018	0.602	0.613	21.028	69.96	47.97
72 hrs.	1000	0.018	0.613	0.625	21.840	71.33	49.82
96 hrs.	1000	0.018	0.602	0.637	21.860	72.71	49.87
120 hrs.	1470	0.012	0.400	0.637	21.811	72.71	49.76
Leach Res	498	0.014	1.290	0.239	22.025	27.29	50.24
Calc.Head	500	0.051	2.557			100.00	100.00
HeadAssay		0.044	2.700				

SAMPLE DESCRIP.	METALL. PRODUCT	NaCN		CaO		SOLUTION pH
		1b/ton	1b/ton	1b/ton	1b/ton	
Preg+Wash	mls	sol.conc.	consump.	sol.conc.	consump.	
0 hrs.	1000	2.00		1.02		11.4
24 hrs.	1000					11.0
48 hrs.	1000					10.7
72 hrs.	1000					10.5
96 hrs.	1000					10.5
120 hrs.	1470	0.98	1.12	0.04	1.92	10.6

METCON RESEARCH INC.
1844 West Grant Road., Suite 106
Tucson, Arizona 85745
Phone: (602) 623-1327

BOTTLE ROLL NaCN LEACH TEST

CLIENT	ASARCO -- COMMONWEALTH	DATE	03/26/91
TEST No.	6	PROJECT No.	M-251
FEED	COMPOSITE #6	CONDUCTED BY	E. I./F.G.
OBJECTIVE	5 day Cyanide Leach		

ALIUQUOT 0.02

SAMPLE DESCRIP.	METALL. PRODUCT	ASSAYS (Oz/ton)		CONTENT (mg)		% EXTRACTION CUMULATIVE	
		Au	Ag	Au	Ag	Au	Ag
Res./Sol.	gram/ml						
0 hrs.	1000						
24 hrs.	1000	0.018	0.213	0.601	7.308	83.30	23.15
48 hrs.	1000	0.018	0.239	0.613	8.355	84.96	26.47
72 hrs.	1000	0.018	0.242	0.625	8.620	86.63	27.31
96 hrs.	1000	0.018	0.239	0.637	8.686	88.29	27.52
120 hrs.	1425	0.012	0.158	0.619	8.344	85.79	26.44
Leach Res	498	0.006	1.360	0.102	23.221	14.21	73.56
Calc.Head	500	0.042	1.841			100.00	100.00
HeadAssay		0.044	1.950				

SAMPLE DESCRIP.	METALL. PRODUCT	NaCN	NaCN	CaO	CaO	SOLUTION pH
		lb/ton	lb/ton	lb/ton	lb/ton	
Preg+Wash	mls	sol.conc.	consump.	sol.conc.	consump.	
0 hrs.	1000	2.00		1.98		11.0
24 hrs.	1000					10.6
48 hrs.	1000					10.6
72 hrs.	1000					10.8
96 hrs.	1000					10.6
120 hrs.	1425	0.92	1.38	0.04	3.85	10.7

3/28/91

To JDS

Date 1/29/91 Time 2:30 AM PM

WHILE YOU WERE OUT

M Rudie Frank

of Rudy Greenwood

Phone (303) 534-6080

TELEPHONED	<input checked="" type="checkbox"/>	PLEASE CALL	<input type="checkbox"/>
CALLED TO SEE YOU	<input type="checkbox"/>	WILL CALL AGAIN	<input type="checkbox"/>
WANTS TO SEE YOU	<input type="checkbox"/>	URGENT	<input type="checkbox"/>

RETURNED YOUR CALL

Message

Re Commonwealth

Property

Mary
Operator

Will be available
in Denver for
discussion
week of 25-29



REORDER

brought in Leeds 544 94

To Sell

Date 4/2 Time 1227 AM PM

WHILE YOU WERE OUT

M Rudie Frank

of _____

Phone () 303 534 6080

TELEPHONED	<input checked="" type="checkbox"/>	PLEASE CALL	<input checked="" type="checkbox"/>
CALLED TO SEE YOU	<input type="checkbox"/>	WILL CALL AGAIN	<input type="checkbox"/>
WANTS TO SEE YOU	<input type="checkbox"/>	URGENT	<input type="checkbox"/>

RETURNED YOUR CALL

Message _____

Operator K



REORDER #23-000

JDS

METCON Research Inc.

1844 W. Grant Road, Suite 106
Tucson, Arizona 85745

Telephone: (602) 623-1327
Facsimile: (602) 620-0268

28 March 1991
EI-007-91

ASARCO Incorporated

APR 5 1991

SW

ASARCO Inc.
Exploration Department
P.O. Box 5747
Tucson, AZ 85703-0747

Attention: Mr. James D. Sell
Manager

Subject: Cyanide Leach Testing on the
Commonwealth Mine Samples

Dear Mr. Sell:

Pursuant to instructions received during our recent phone conversation, this letter report details results from metallurgical cyanide leach test work conducted on 6 composite samples prepared from the Commonwealth Mine.

1.0 INTRODUCTION

During the month of February 1991, several suites of samples from the Commonwealth Mine were delivered to Metcon Research Inc. by Skyline Labs Inc. personnel. A single 72 or 120 hour cyanide bottle roll leach test was conducted on six composite samples after crushing to minus 10 mesh. The procedures utilized and the results obtained in this investigation are outlined herein.

2.0 SUMMARY

A single 72 or 120 hour cyanide bottle roll leaching technique provided gold extraction levels ranging from approximately 58 to 95 percent on samples crushed to minus 10 mesh. The higher grade (0.122 ounce gold per ton) sample provided the highest gold extraction. The silver extractions observed ranged from 12 to 49 percent.

The cyanide and lime consumptions are considered moderate. The sodium cyanide consumption averaged 1.2 lbs per ton and lime consumption averaged approximately 2.6 lbs per ton. These reagent consumptions are consistent with previous test work conducted by Metcon Research on samples from the same project.

3.0 PROCEDURES

The procedures utilized for sample preparation and metallurgical testing are described as follows:

- 3.1 A total of six suites of samples were received from Skyline Labs Inc. The samples were weighed and logged in. An equal weight composite sample was prepared from each suite of samples. The composite samples were crushed to minus 10 mesh, blended, and representative samples were split out for testing and gold and silver assay.
- 3.2 A 500 gram portion of each composite sample was combined with 1000 milliliters of distilled water and lime was added for pH control.
- 3.3 The slurry was agitated on a bottle roll apparatus until the pH stabilized between 10.5 and 11.5, then 1.0 gram of sodium cyanide was added. Addition of lime continued throughout the leach period at 24 hour intervals to maintain the pH above 11.0.
- 3.4 Cyanide leaching was conducted for 72 hours for composite samples 1, 2, and 3. A longer leach time of 120 hours was applied to composites 4, 5, and 6. At the end of leaching, solids and liquids were separated by filtration.
- 3.5 Leached residue and daily pregnant solution samples were assayed for gold and silver and metallurgical calculations were performed.

4.0 RESULTS AND DISCUSSION

The results obtained from cyanide leach testing of composite sample numbers 1 through 6 are outlined in Table 4.1 in this section of the report. A brief discussion concerning the metallurgical results is outlined herein.

Table 1
COMMONWEALTH MINE
BOTTLE ROLL LEACH TESTS
SUMMARY OF RESULTS

<u>Products</u> <u>72 hr. leach</u>	<u>weight/</u> <u>volume</u>	<u>Assays (OPT)</u>		<u>Content</u>		<u>% Extraction</u>		<u>Consumption of</u> <u>Reagents (lb/ton)</u>	
		<u>Au</u>	<u>Ag</u>	<u>Au</u>	<u>Ag</u>	<u>Au</u>	<u>Ag</u>	<u>NaCN</u>	<u>CaO</u>
<u>Composite No. 1</u>									
Preg + Wash	1370	0.004	0.09	0.186	4.55	57.67	12.45	1.21	2.00
Residue	497	0.008	1.88	0.136	32.03				
Calc Head		0.019	2.13						
Assay Head		0.028	2.16						
<u>Composite No. 2</u>									
Preg + Wash	1300	0.041	0.09	1.93	4.32	95.02	37.94	1.35	4.00
Residue	491	0.006	0.42	0.10	7.07				
Calc Head		0.118	0.66						
Assay Head		0.122	0.63						
<u>Composite No. 3</u>									
Preg + Wash	1440	0.003	0.46	0.134	23.28	79.69	38.53	0.83	0.88
Residue	497	0.002	2.18	0.034	37.15				
Calc Head		0.010	3.52						
Assay Head		0.020	3.22						
<u>120 hr. leach</u>									
<u>Composite No. 4</u>									
Preg + Wash	1360	0.012	0.07	0.593	3.72	94.55	21.41	1.36	2.89
Residue	498	0.002	0.80	0.034	13.66				
Calc Head		0.037	1.01						
Assay Head		0.040	0.91						
<u>Composite No. 5</u>									
Preg + Wash	1470	0.012	0.40	0.637	21.81	72.71	49.76	1.12	1.92
Residue	498	0.014	1.29	0.239	22.03				
Calc Head		0.051	2.56						
Assay Head		0.044	2.70						
<u>Composite No. 6</u>									
Preg + Wash	1425	0.012	0.16	0.619	8.34	85.79	26.44	1.38	3.85
Residue	498	0.006	1.36	0.102	23.22				
Calc Head		0.042	1.84						
Assay Head		0.044	1.95						

The composite samples prepared for testing had head assays ranging from 0.020 to 0.122 ounces of gold per ton of ore. The silver contained in these samples ranged from 0.63 to 3.22 ounces per ton.

The metallurgical data developed in this study indicate that the composite samples tested contain cyanide-soluble precious metals. The gold extractions obtained ranged from 58 to 95 percent. The highest level of gold extraction was obtained in the sample with the highest (0.118 ounces per ton) gold content. The gold content in the composite sample numbers 1 and 3 was relatively low at 0.019 and 0.010 ounces per ton, respectively.

The silver extraction achieved in these samples was poor. The best silver extraction (approximately 50 percent) was achieved on composite sample number 5 which showed a silver content of approximately 2.7 ounces per ton. The lowest silver extraction (12.5 percent) was obtained in composite sample number 1 with a silver content of 2.1 ounces per ton.

The reagent consumption data indicate that the cyanide and lime consumptions were moderate for this ore.

Solution samples taken at 24 hour intervals throughout the leach cycle showed that a 24 hour leach cycle should provide approximately the same levels of extraction achieved over longer retention time for leaching. A gradual daily increase in silver extraction was observed in most of the samples throughout the leach cycle.

We appreciate the opportunity to work with you on this important project. Should you have any questions regarding the information contained in this report please do not hesitate to contact us.

Very truly yours,

Eugenio Iasillo
Eugenio Iasillo
Process Engineer

METCON RESEARCH INC.
1844 West Grant Road., Suite 106
Tucson, Arizona 85745
Phone: (602) 623-1327

BOTTLE ROLL NaCN LEACH TEST

=====

CLIENT	ASARCO -- COMMONWEALTH	DATE	03/26/91
TEST No.	1	PROJECT No	M-251
FEED	COMPOSITE #1	CONDUCTED BY	E.I./F.G.
OBJECTIVE	72 hr Cyanide Leach		

ALIQUOT 0.02

SAMPLE DESCRIP.	METALL. PRODUCT	ASSAYS (Oz/ton)		CONTENT (mg)		DISTRIBUTION %	
		Au	Ag	Au	Ag	Au	Ag
Res./Sol.	gram/ml						
0 hrs.	1000						
	1000						
	1000						
24 hrs.	1000	0.005	0.117	0.180	4.004	55.96	10.94
48 hrs.	1000	0.006	0.126	0.194	4.385	60.19	11.98
72 hrs.	1370	0.004	0.093	0.186	4.555	57.67	12.45
Leach Res	497	0.008	1.880	0.136	32.035	42.33	87.55
Calc.Head	500	0.019	2.134			100.00	100.00
HeadAssay		0.028	2.160				

SAMPLE DESCRIP.	METALL. PRODUCT	NaCN	NaCN	CaO	CaO	SOLUTION pH
		1b/ton	1b/ton	1b/ton	1b/ton	
Preg+Wash	mls	sol.conc.	consump.	sol.conc.	consump.	
0 hrs.	1000	2.00		1.00		10.70
0	1000					
0	1000					
24 hrs.	1000					
48 hrs.	1000					10.50
72 hrs.	1370	1.02	1.21	0	2.00	10.00

METCON RESEARCH INC.
 1844 West Grant Road., Suite 106
 Tucson, Arizona 85745
 Phone: (602) 623-1327

BOTTLE ROLL NaCN LEACH TEST

CLIENT ASARCO -- COMMONWEALTH DATE 03/26/91
 TEST No. 2 PROJECT No. M-251
 FEED COMPOSITE #2 CONDUCTED BY E.I./F.G.
 OBJECTIVE 72 hr Cyanide Leach

ALIQUOT 0.02

SAMPLE DESCRIP.	METALL. PRODUCT	ASSAYS (Oz/ton)		CONTENT (mg)		DISTRIBUTION %	
		Au	Ag	Au	Ag	Au	Ag
Res./Sol.	gram/ml						
0 hrs.	1000 1000 1000						
24 hrs.	1000	0.073	0.128	2.503	4.388	123.38	38.52
48 hrs.	1000	0.073	0.131	2.553	4.579	125.85	40.19
72 hrs.	1300	0.041	0.093	1.928	4.323	95.02	37.94
Leach Res	491	0.006	0.420	0.101	7.070	4.98	62.06
Calc.Head	500	0.118	0.665			100.00	100.00
HeadAssay		0.122	0.630				

SAMPLE DESCRIP.	METALL. PRODUCT	NaCN	NaCN	CaO	CaO	SOLUTION pH
		lb/ton	lb/ton	lb/ton	lb/ton	
Preg+Wash	mls	sol.conc.	consump.	sol.conc.	consump.	
0 hrs.	1000	2.00		2.00		10.50
0	1000					
0	1000					
24 hrs.	1000					10.30
48 hrs.	1000					10.20
72 hrs.	1300	1.02	1.35	0	4.00	

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 Tucson, Arizona 85745
 Phone: (602) 623-1327

BOTTLE ROLL NaCN LEACH TEST

CLIENT	ASARCO -- COMMONWEALTH	DATE	03/26/91
	3		M-251
TEST No.	COMPOSITE #3	PROJECT No	E.I./F.G.
FEED	72 hr Cyanide Leach	CONDUCTED BY	
OBJECTIVE			

ALIQOT 0.02

SAMPLE DESCRIP.	METALL. PRODUCT	ASSAYS (Oz/ton)		CONTENT (mg)		DISTRIBUTION %	
		Au	Ag	Au	Ag	Au	Ag
Res./Sol.	gram/ml						
0 hrs.	1000 1000 1000						
24 hrs.	1000	0.003	0.552	0.090	18.921	53.69	31.31
48 hrs.	1000	0.003	0.604	0.112	21.102	66.69	34.92
72 hrs.	1440	0.003	0.456	0.134	23.282	79.69	38.53
Leach Res	497	0.002	2.180	0.034	37.146	20.31	61.47
Calc.Head	500	0.010	3.525			100.00	100.00
HeadAssay		0.020	3.220				

SAMPLE DESCRIP.	METALL. PRODUCT	NaCN	NaCN	CaO	CaO	SOLUTION pH
		lb/ton	lb/ton	lb/ton	lb/ton	
Preg+Wash	mls	sol.conc.	consump.	sol.conc.	consump.	
0 hrs.	1000	2.00		1.00		10.80
0	1000					
0	1000					
24 hrs.	1000					
48 hrs.	1000					10.50
72 hrs.	1440	1.1	0.83	0.04	1.88	10.20

METCON RESEARCH INC.
 1844 West Grant Road., Suite 106
 Tucson, Arizona 85745
 Phone: (602) 623-1327

BOTTLE ROLL NaCN LEACH TEST

CLIENT	ASARCO -- COMMONWEALTH	DATE	03/26/91
	4		M-251
TEST No.	COMPOSITE #4	PROJECT No	E.I./F.G.
FEED	5 day Cyanide Leach	CONDUCTED BY	
OBJECTIVE			

ALIQUOT 0.02

SAMPLE DESCRIP.	METALL. PRODUCT	ASSAYS (Oz/ton)		CONTENT (mg)		% EXTRACTION CUMULATIVE	
		Au	Ag	Au	Ag	Au	Ag
Res./Sol.	gram/ml						
0 hrs.	1000						
24 hrs.	1000	0.018	0.080	0.601	2.753	95.83	15.84
48 hrs.	1000	0.018	0.093	0.613	3.259	97.75	18.75
72 hrs.	1000	0.018	0.098	0.625	3.473	99.66	19.98
96 hrs.	1000	0.018	0.093	0.637	3.390	101.58	19.50
120 hrs.	1360	0.012	0.074	0.593	3.722	94.55	21.41
Leach Res	498	0.002	0.800	0.034	13.659	5.45	78.59
Calc.Head	500	0.037	1.014			100.00	100.00
HeadAssay		0.040	0.910				

SAMPLE DESCRIP.	METALL. PRODUCT	NaCN	NaCN	CaO	CaO	SOLUTION pH
		lb/ton	lb/ton	lb/ton	lb/ton	
Preg+Wash	mls	sol.conc.	consump.	sol.conc.	consump.	
0 hrs.	1000	2.00		1.50		10.8
24 hrs.	1000					11.1
48 hrs.	1000					11.0
72 hrs.	1000					10.6
96 hrs.	1000					10.6
120 hrs.	1360	0.97	1.36	0.04	2.89	10.8

METCON RESEARCH INC.
 1844 West Grant Road., Suite 106
 Tucson, Arizona 85745
 Phone: (602) 623-1327

BOTTLE ROLL NaCN LEACH TEST

CLIENT	ASARCO -- COMMONWEALTH		DATE	03/26/91
	5		DATE	M-251
TEST No.	COMPOSITE #5		PROJECT No.	E.I./F.G.
FEED	5 day Cyanide Leach		CONDUCTED BY	
OBJECTIVE				

ALIQUOT 0.02

SAMPLE DESCRIP.	METALL. PRODUCT	ASSAYS (Oz/ton)		CONTENT (mg)		% EXTRACTION CUMULATIVE	
		Au	Ag	Au	Ag	Au	Ag
Res./Sol.	gram/ml						
0 hrs.	1000						
24 hrs.	1000	0.018	0.590	0.601	20.223	68.59	46.13
48 hrs.	1000	0.018	0.602	0.613	21.028	69.96	47.97
72 hrs.	1000	0.018	0.613	0.625	21.840	71.33	49.82
96 hrs.	1000	0.018	0.602	0.637	21.860	72.71	49.87
120 hrs.	1470	0.012	0.400	0.637	21.811	72.71	49.76
Leach Res	498	0.014	1.290	0.239	22.025	27.29	50.24
Calc.Head	500	0.051	2.557			100.00	100.00
HeadAssay		0.044	2.700				

SAMPLE DESCRIP.	METALL. PRODUCT	NaCN		CaO		SOLUTION pH
		1b/ton	1b/ton	1b/ton	1b/ton	
Preg+Wash	mls	sol.conc.	consump.	sol.conc.	consump.	
0 hrs.	1000	2.00		1.02		11.4
24 hrs.	1000					11.0
48 hrs.	1000					10.7
72 hrs.	1000					10.5
96 hrs.	1000					10.5
120 hrs.	1470	0.98	1.12	0.04	1.92	10.6

METCON RESEARCH INC.
 1844 West Grant Road., Suite 106
 Tucson, Arizona 85745
 Phone: (602) 623-1327

BOTTLE ROLL NaCN LEACH TEST

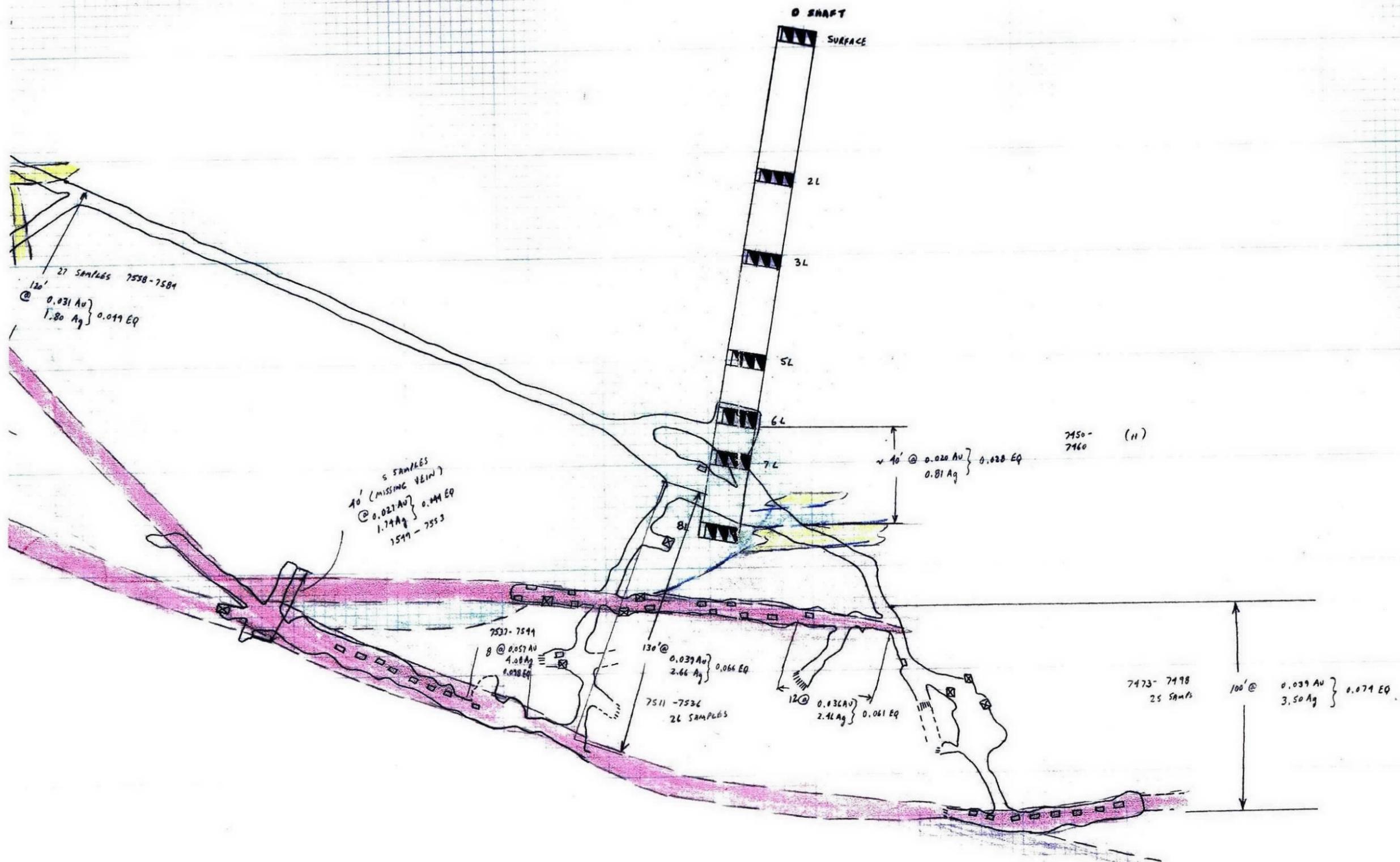
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CLIENT	ASARCO -- COMMONWEALTH	DATE	03/26/91
TEST No.	6	PROJECT No	M-251
FEED	COMPOSITE #6	CONDUCTED BY	E.I./F.G.
OBJECTIVE	5 day Cyanide Leach		

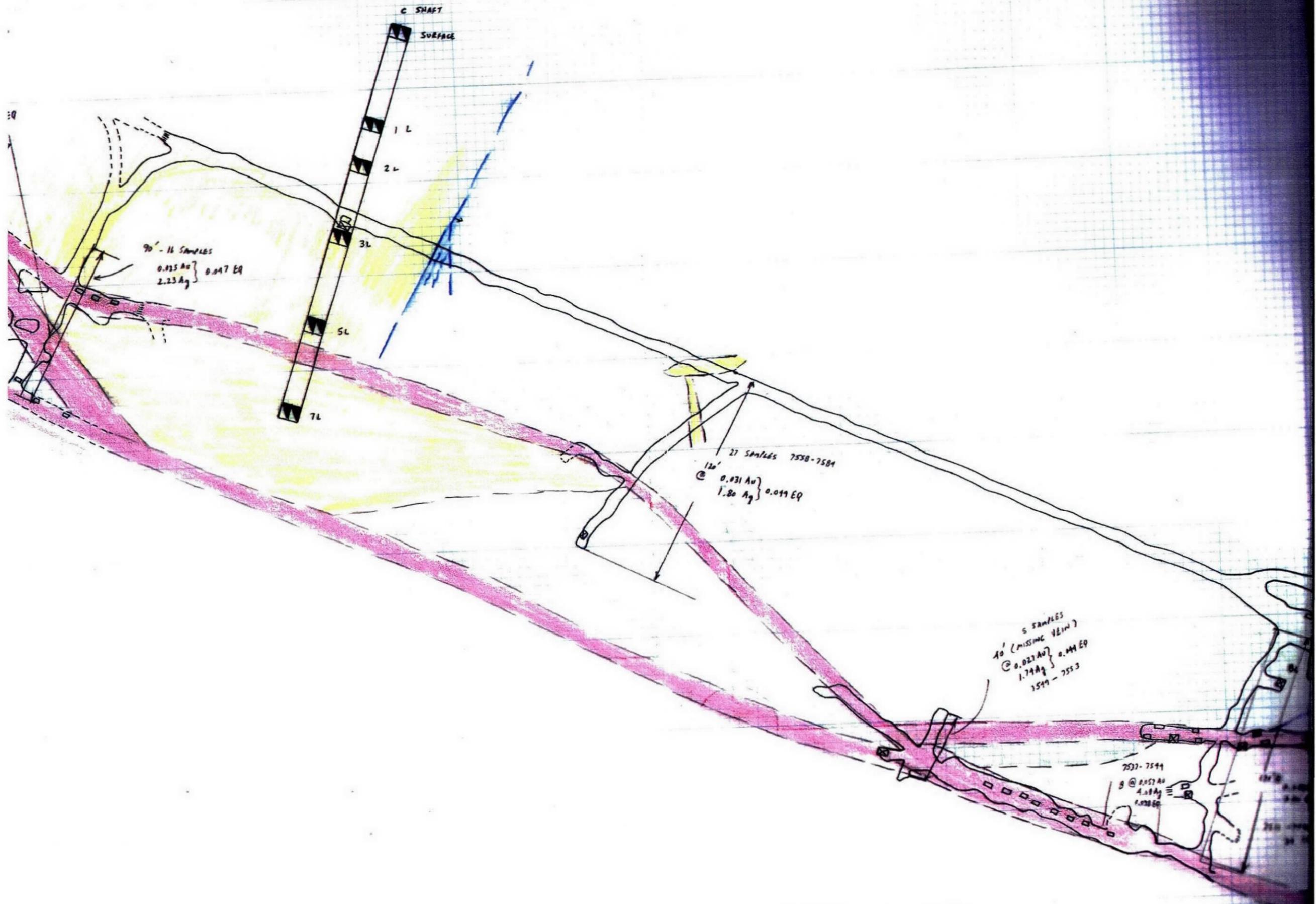
ALIQUOT 0.02

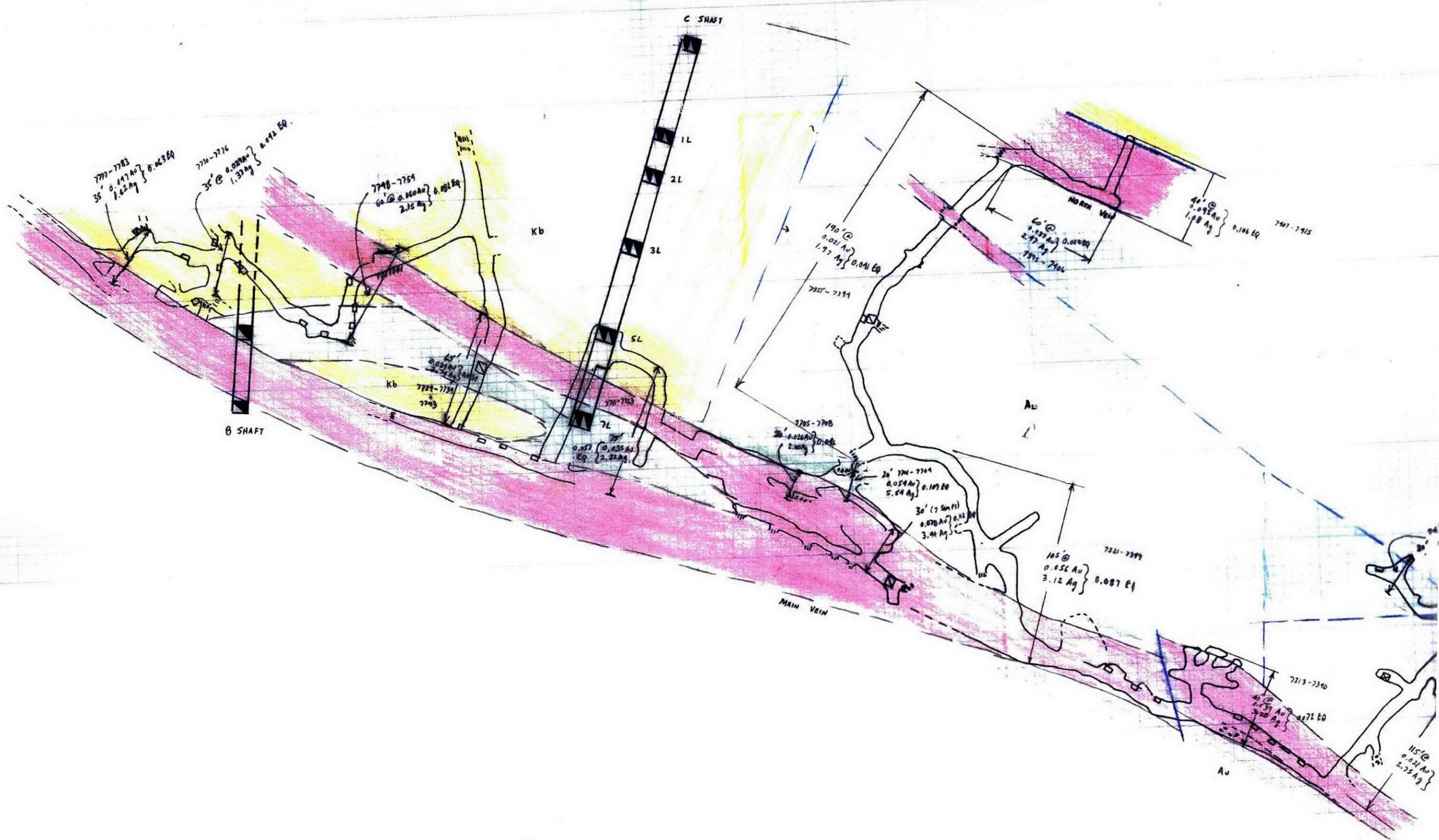
SAMPLE DESCRIP.	METALL. PRODUCT	ASSAYS (Oz/ton)		CONTENT (mg)		% EXTRACTION CUMULATIVE	
		Au	Ag	Au	Ag	Au	Ag
Res./Sol.	gram/ml						
0 hrs.	1000						
24 hrs.	1000	0.018	0.213	0.601	7.308	83.30	23.15
48 hrs.	1000	0.018	0.239	0.613	8.355	84.96	26.47
72 hrs.	1000	0.018	0.242	0.625	8.620	86.63	27.31
96 hrs.	1000	0.018	0.239	0.637	8.686	88.29	27.52
120 hrs.	1425	0.012	0.158	0.619	8.344	85.79	26.44
Leach Res	498	0.006	1.360	0.102	23.221	14.21	73.56
Calc.Head	500	0.042	1.841			100.00	100.00
HeadAssay		0.044	1.950				

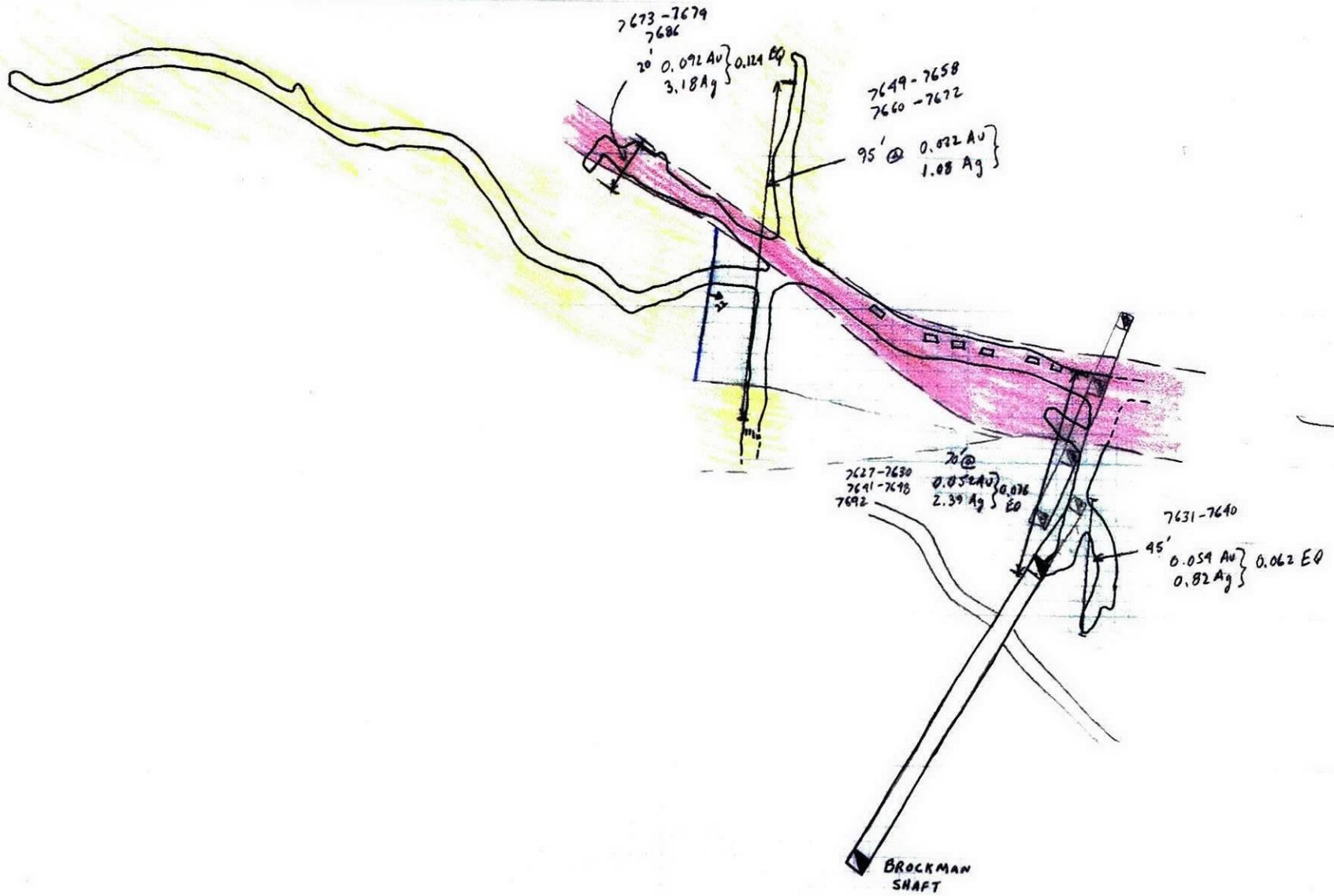
SAMPLE DESCRIP.	METALL. PRODUCT	NaCN	NaCN	CaO	CaO	SOLUTION pH
		1b/ton	1b/ton	1b/ton	1b/ton	
Preg+Wash	mls	sol.conc.	consump.	sol.conc.	consump.	
0 hrs.	1000	2.00		1.98		11.0
24 hrs.	1000					10.6
48 hrs.	1000					10.6
72 hrs.	1000					10.8
96 hrs.	1000					10.6
120 hrs.	1425	0.92	1.38	0.04	3.85	10.7



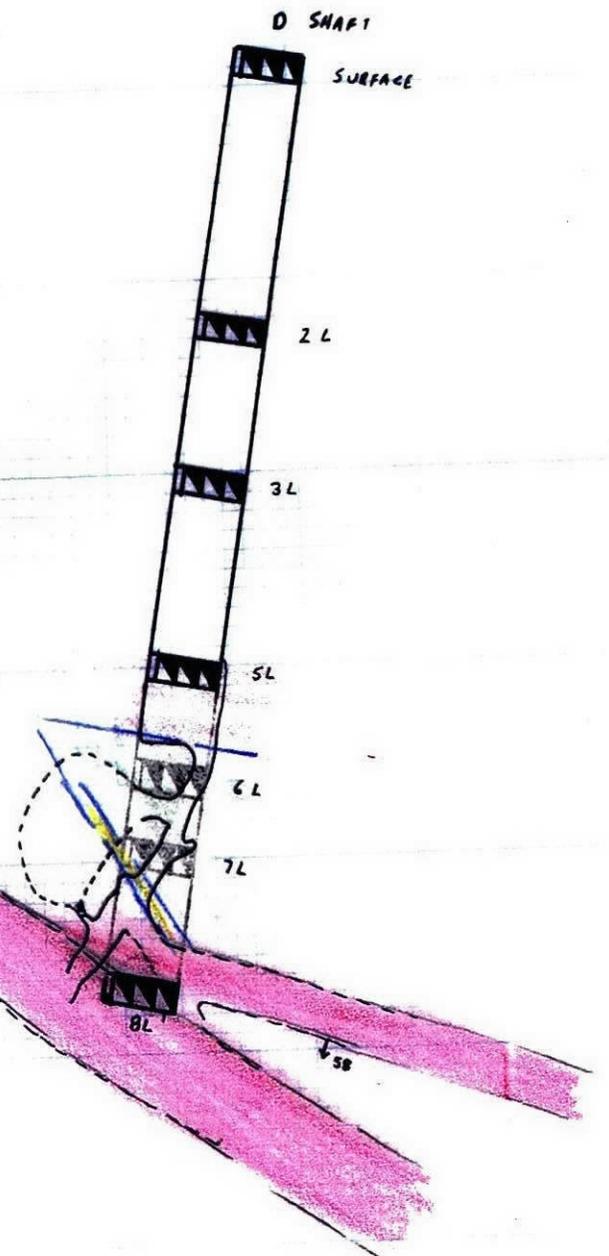
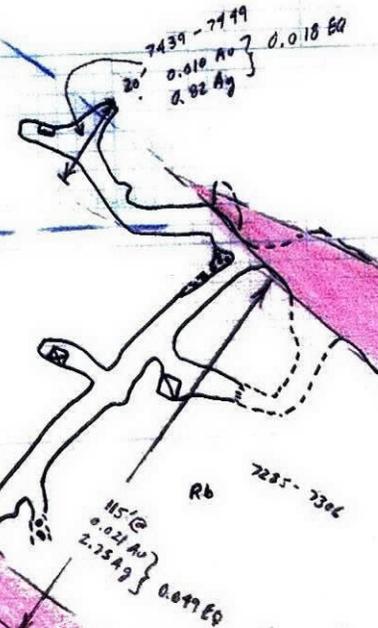
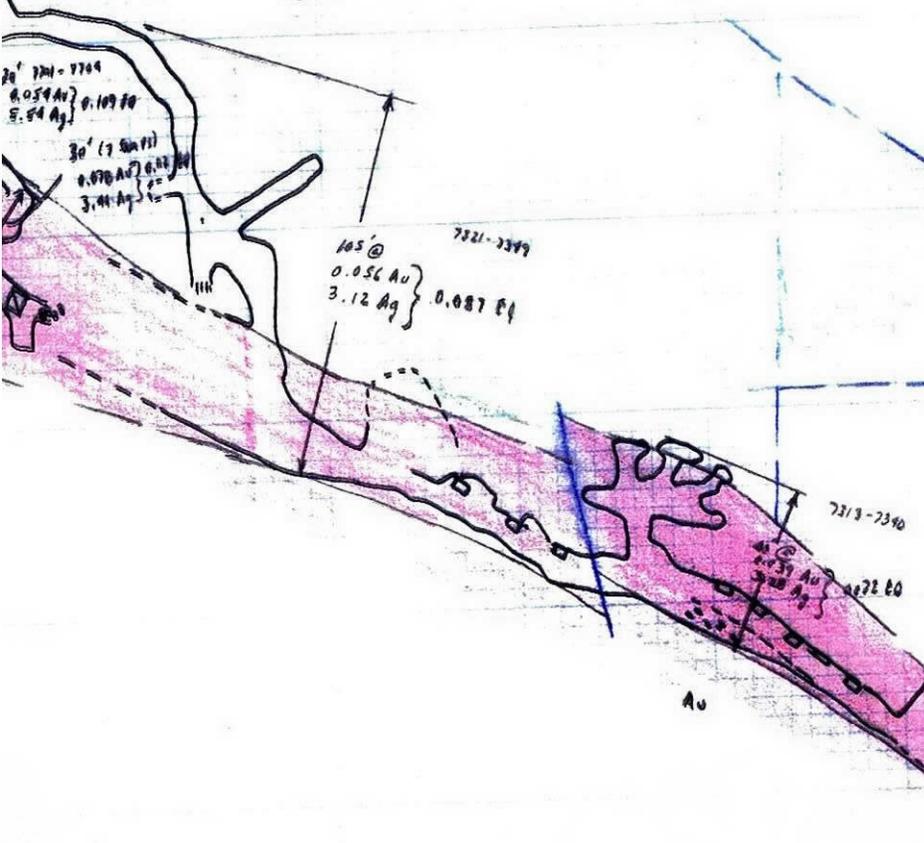
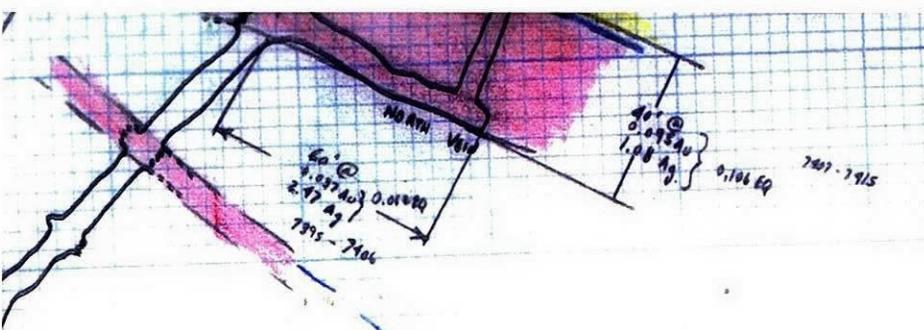
6th level
(East)



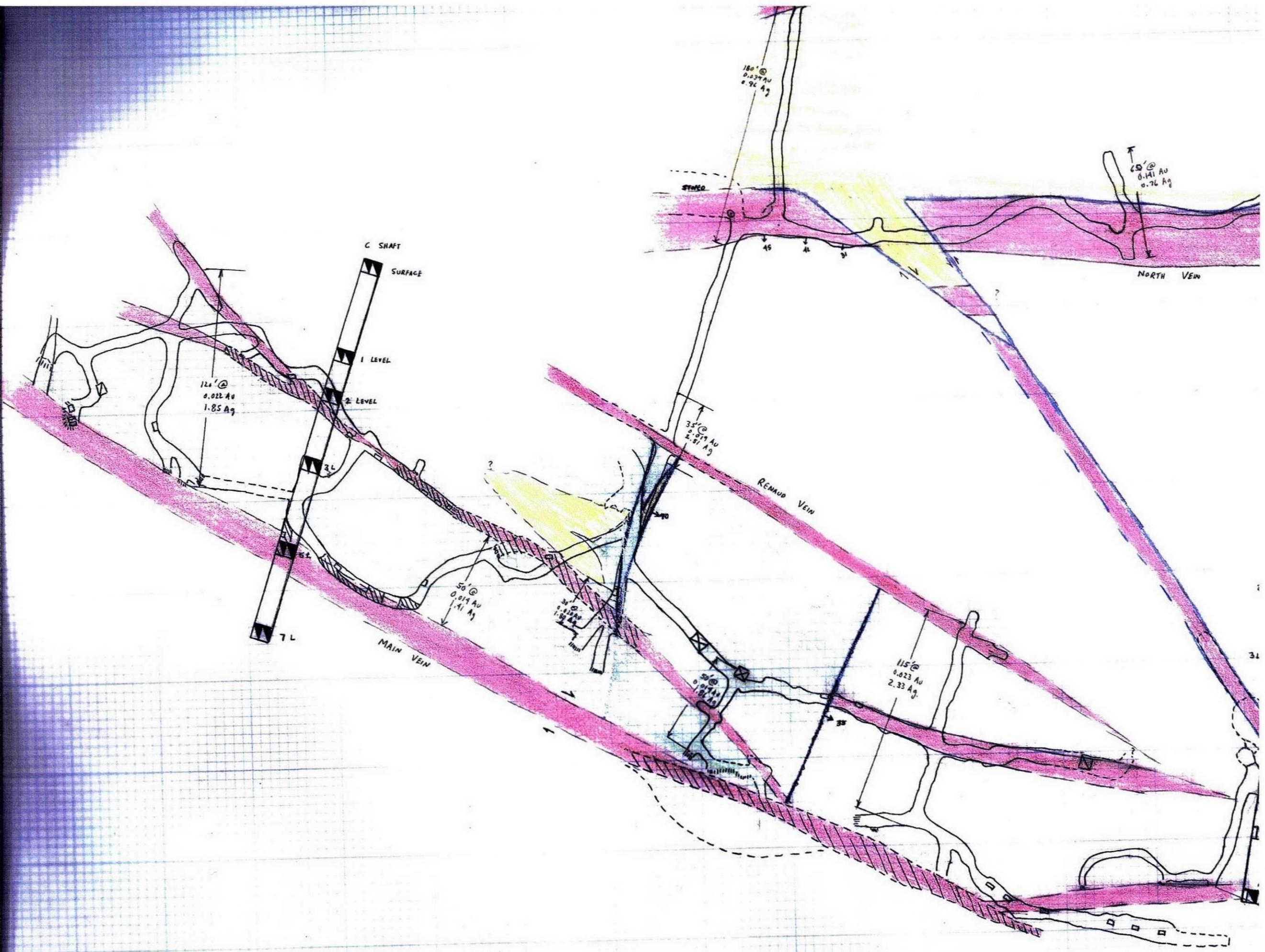




5th Level
(Far West)



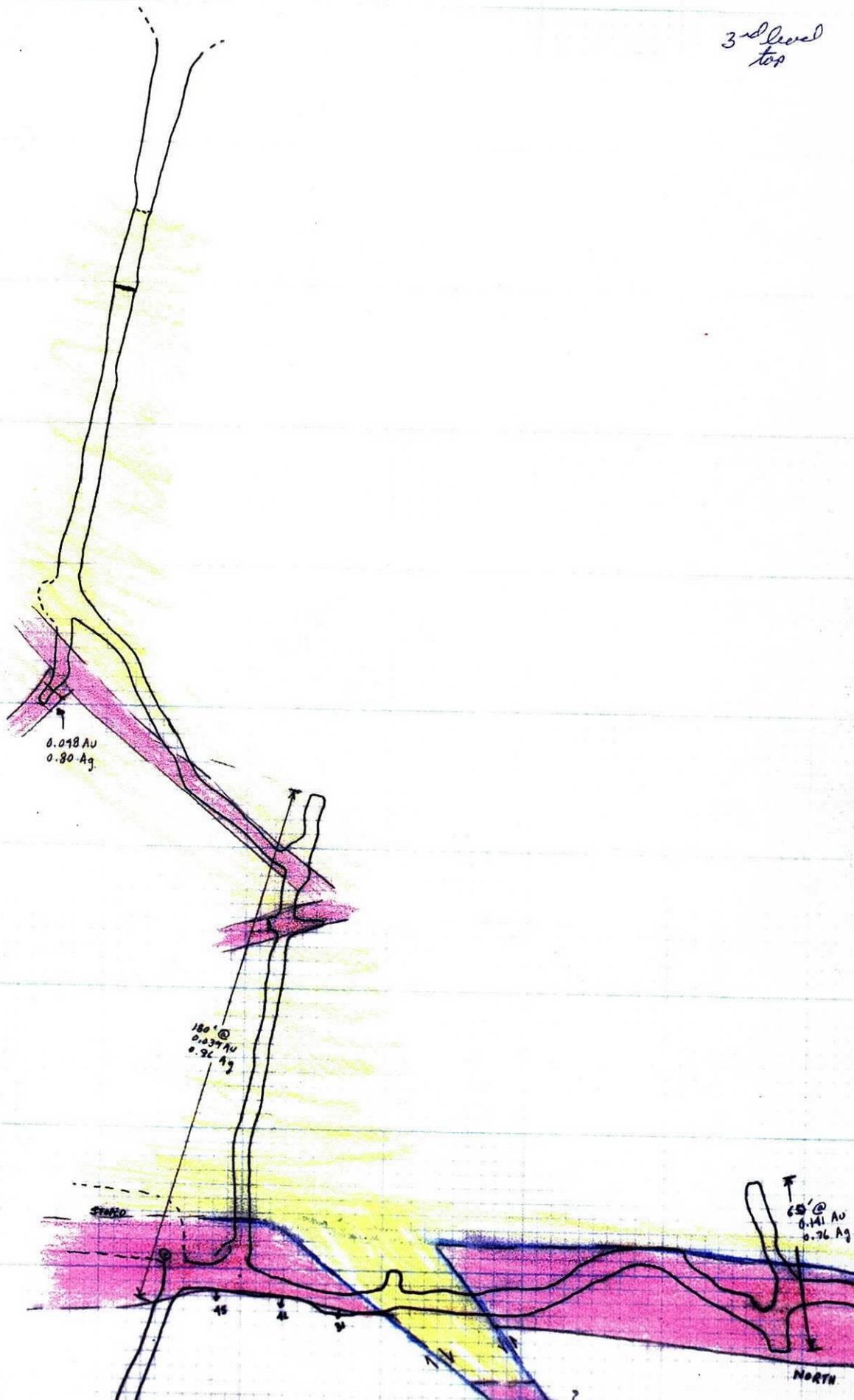
5th level (East)

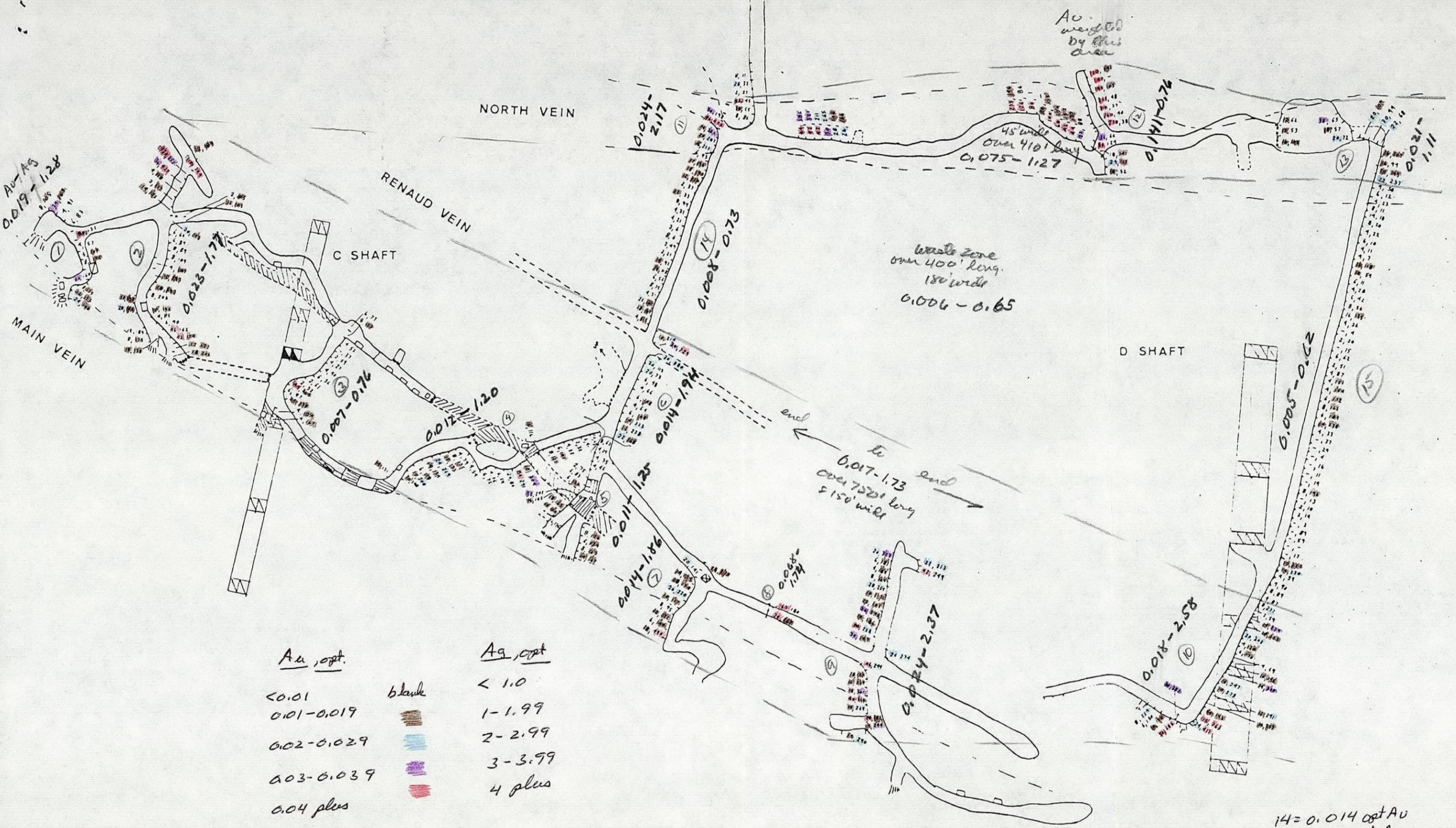


30' @ 0.02 Au
1.22 Ag

3rd Level

3rd level
top





<u>Au</u> , opt.		<u>Ag</u> , opt.
< 0.01	blank	< 1.0
0.01-0.019		1-1.99
0.02-0.029		2-2.99
0.03-0.039		3-3.99
0.04 plus		4 plus

14 = 0.014 opt Au
 143 = 1.43 opt Ag

S Vein

at

at

Total

Au

Ag

①

6603 - 6611

$- 0.180/9 = 0.020$

$16.54/9 = 1.17$

6914 - 6916

$- 0.044/3 = 0.015$

$4.87/3 = 1.62$

①

$0.224/12 = 0.019$

$15.41/12 = 1.28$

6612 - 6629 = $0.492/18 = 0.027$

$34.46/18 = 1.91$

6919 - 6930 = $0.210/12 = 0.018$

$18.68/12 = 1.56$

②

$0.702/30 = 0.023$

$53.14/30 = 1.77$

③

6630 - 6644 = $0.115/15 = 0.007$

$11.43/15 = 0.76$

④

6645 - 6647 = $0.284/23 = 0.012$

$27.69/23 = 1.20$

⑤

6931 - 6940 = $0.180/16 = 0.011$

$20.04/16 = 1.25$

⑥

6669 - 6681 = $0.184/13 = 0.014$

$25.22/13 = 1.94$

⑦

6947 - 6956 = $0.144/10 = 0.014$

$18.58/10 = 1.86$

⑧

6957 & 6958 = $0.135/2 = 0.068$

$3.47/2 = 1.74$

⑨

6959 - 6981 = $0.546/23 = 0.024$

$54.60/23 = 2.37$

⑩

7059 - 7081 = $0.409/23 = 0.018$

$59.33/23 = 2.58$

Total South Vein $2.9195/167 = 0.01748$ Au

$288.91/167 = 1.73$ Ag

x 350 Au
x 75% Ag
= 4.59

x 4 Ag
x 35% Au
= 2.42

N Vein Au

Samples[±] T / #

⑩ 6903-6910 = 0.194 / 8 = 0.024

⑫ 6982-6993 = 1.694 / 12 = 0.141

⑬ 6994-6996 = 0.076 / 3 = 0.025

7003-7006 = 0.072 / 4 = 0.018

0.148 / 7 = 0.021

Total N Vein 2.1038 / 27 = 0.075

Subset of 13 ⊥ to Vm

6997-6999 = 0.040 / 3 = 0.013 not good

Subset of 13 parallel in Vm

7000-7002 = 0.072 / 3 = 0.024 ok

Subset^W of 12, parallel in Vm.

6593-6601 = 19 =

Subset E of 11, parallel to Vm

6587-6592 = 16 =

W Crosscut between Vms.

⑭ 6682-6699 = 0.142 / 18 = 0.008

+ 6900-6902 = 0.036 / 3 = 0.012

0.178 / 21 = 0.008

Ag

T / # =

17.32 / 8 = 2.17

9.10 / 12 = 0.76

1.94 / 3 = 0.65

5.81 / 4 = 1.45

7.75 / 7 = 1.11

34.17 / 27 = 1.27

2.57 / 3 = 0.86 in case

2.71 / 3 = 0.90 in case

cont find

cont find

= 11.08 / 18 = 0.62

= 4.21 / 3 = 1.40

15.29 / 21 = 0.73

(15)

E crosscut between Vns:

$$7007 - 7058 = 0.258 / 52 = 0.005$$

$$\frac{0.436}{73} = 0.006$$

$$31.985 / 52 = 0.62$$

$$\frac{47.275}{73} = 0.65$$

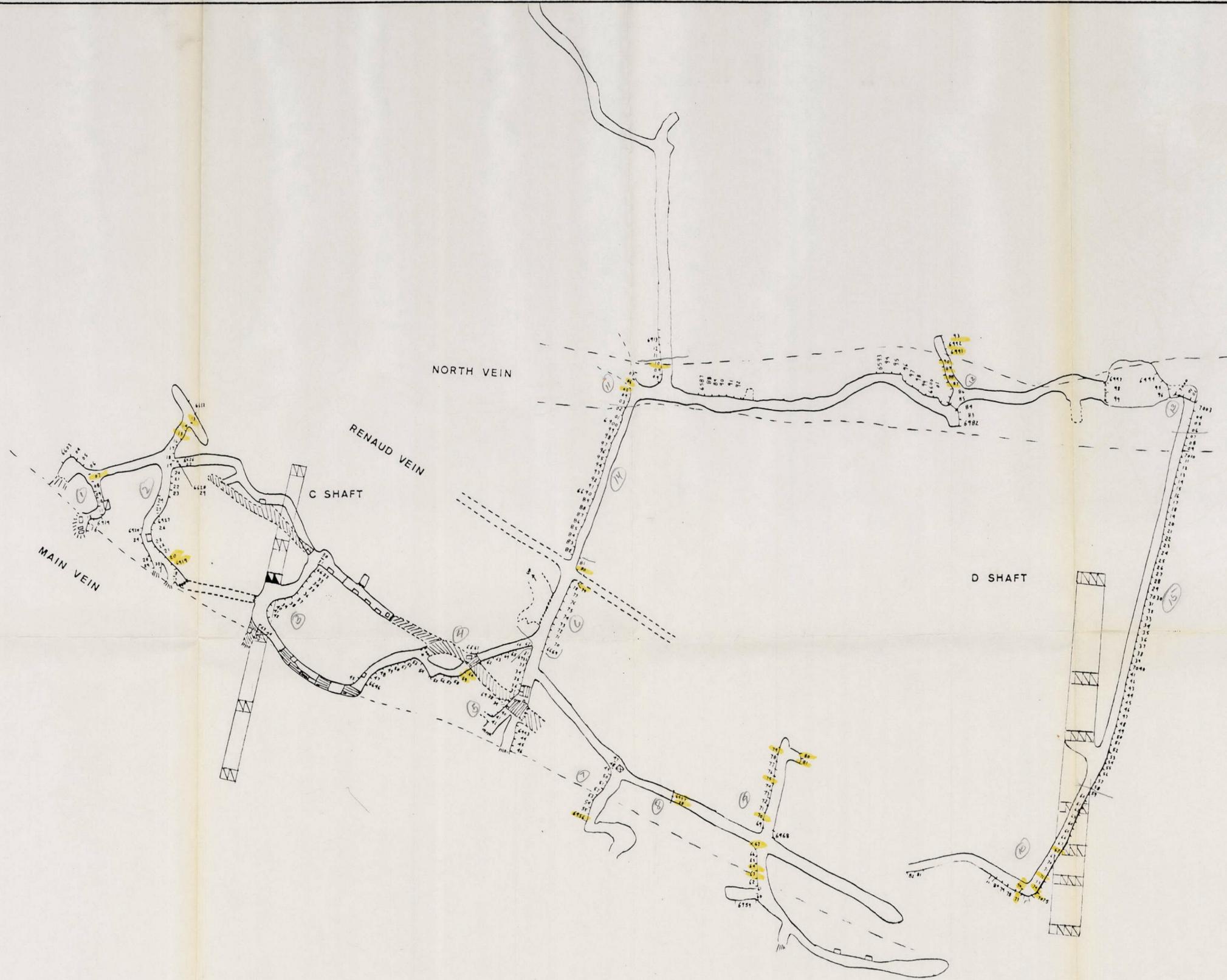


Plate III.
 COMMONWEALTH MINE
 COCHISE COUNTY, ARIZONA
 THIRD LEVEL PLAN MAP
 SHOWING CHANNEL SAMPLE LOCATIONS AND NUMBERS
 Westland Minerals Exploration Co.
 January, 1991
 Scale: 1"=50'

Sample here +0.04 Au or +3.00 Ag

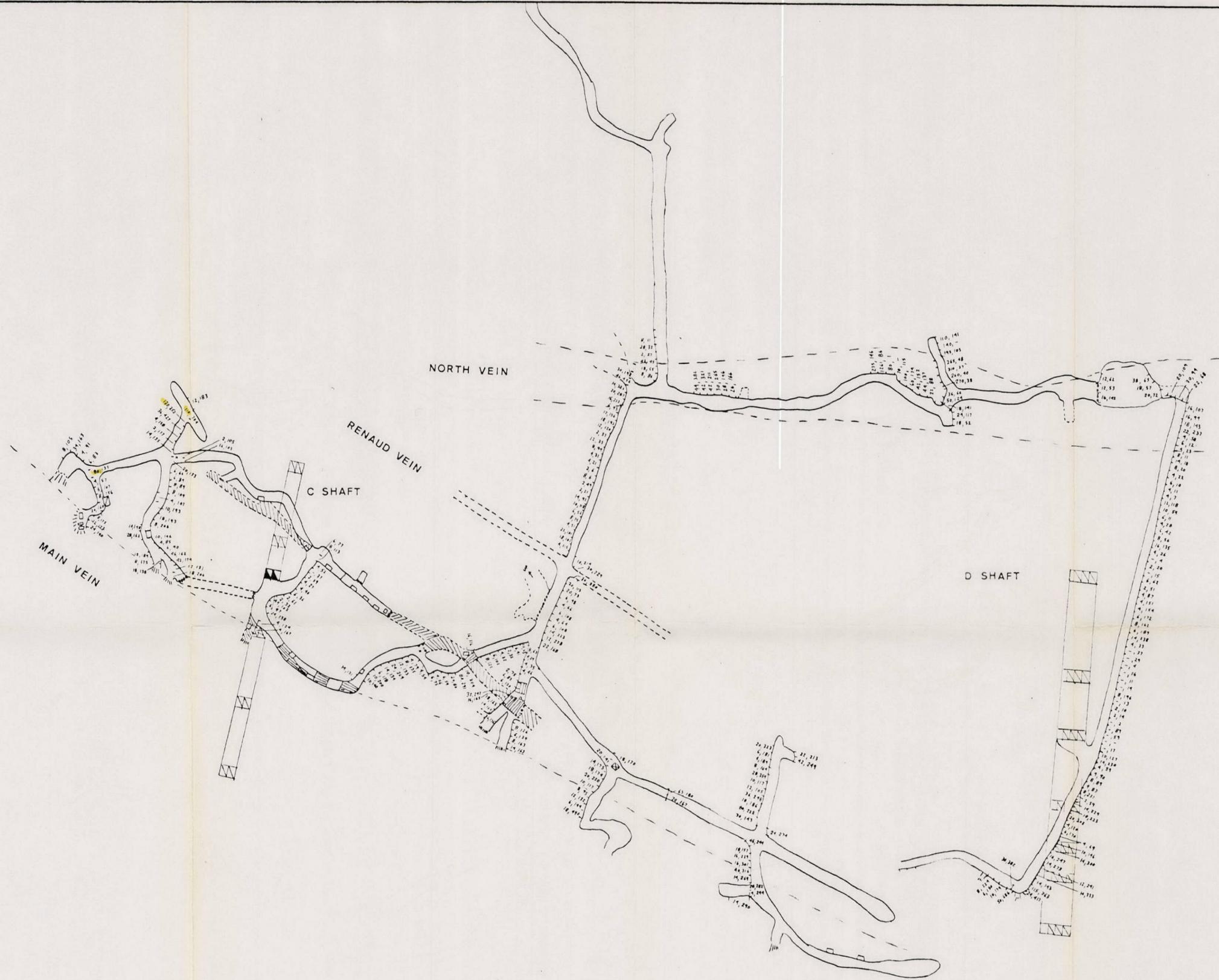


Plate IV.
 COMMONWEALTH MINE
 COCHISE COUNTY, ARIZONA
 THIRD LEVEL PLAN MAP
 Showing
 CHANNEL SAMPLE LOCATIONS & GOLD AND SILVER VALUES
 Westland Minerals Exploration Co.
 January, 1991
 Scale: 1"=50'

EXPLANATION:
 Ag, opt X 100
 Au, opt X 1000
 Channel
 14 = 0.014 opt Au
 143 = 1.43 opt Ag

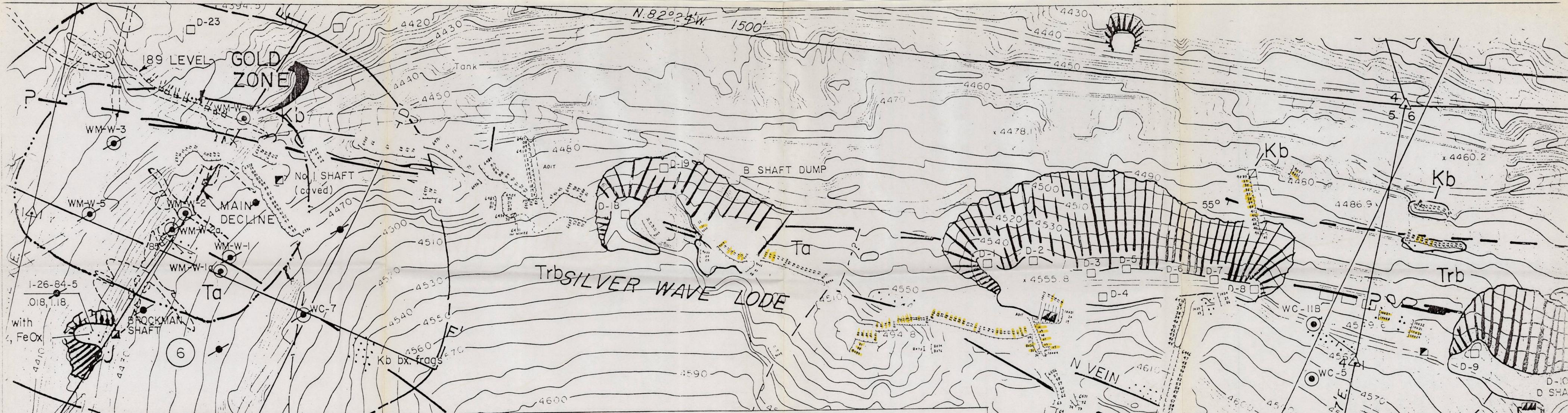


Plate I.
 COMMONWEALTH MINE
 COCHISE COUNTY, ARIZONA
 CHANNEL SAMPLE LOCATIONS AND NUMBERS
 Westland Minerals Exploration Co.
 September, 1990
 Scale: 1"=50'

9/90 9/90 Revised 1/91, P.P.

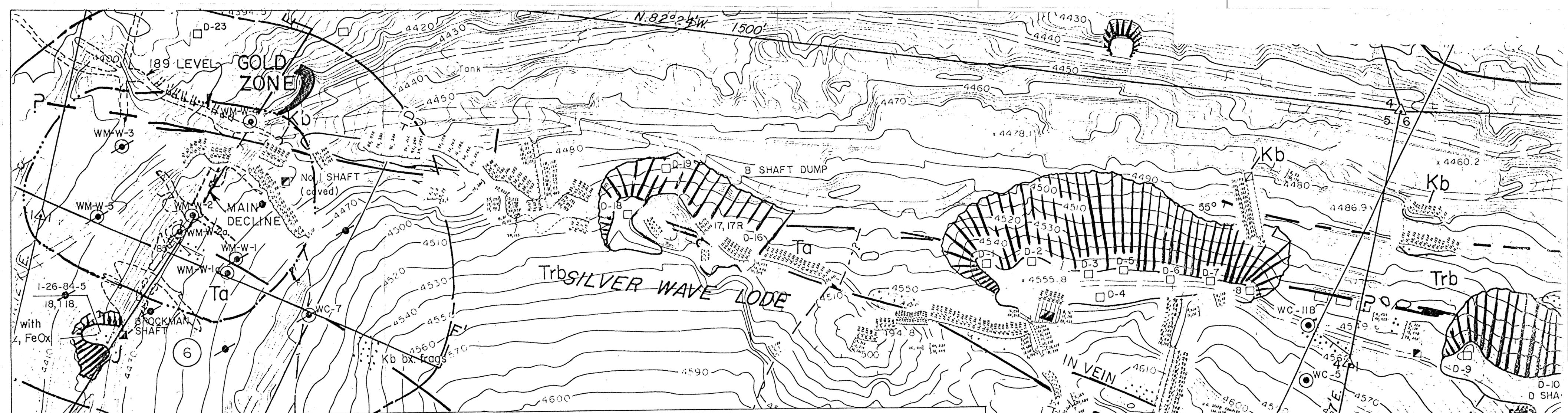


Plate II.
 COMMONWEALTH MINE
 COCHISE COUNTY, ARIZONA
 CHANNEL SAMPLE LOCATIONS & GOLD AND SILVER VALUES
 Westland Minerals Exploration Co.
 September, 1990
 Scale: 1"=50'

EXPLANATION:
 Ag, opt X100
 Channel $\left\{ \begin{array}{l} \text{Au, opt X1000} \\ \text{Ag, opt X100} \end{array} \right.$

wkk-jby

RECEIVED

JUN 13 1991

EXPLORATION DEPARTMENT

George Cross News Letter

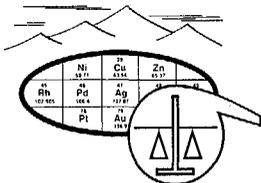
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NO.112(1991)
JUNE 11, 1991

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VANCOUVER, B.C.
V7Y 1G5
(604) 683-7265
FAX (604) 683-5306

NO.112(1991)
JUNE 11, 1991

**SKYLINE LABS, INC.**1775 W. Sahuarro Dr. • P.O. Box 50106
Tucson, Arizona 85703
(602) 622-4836**CORRECTED REPORT**
JOB NUMBER TAJ 707
June 17, 1991
COMPOSITE 1,2,3
PAGE 1 OF 1**ASARCO INCORPORATED**
Attn: Mr. James D. Sell
Southwestern Exploration
P.O. Box 5747
Tucson, AZ 85703**REPORT OF ANALYSIS****Analysis of 3 Composite Samples**

ITEM	SAMPLE NO.	Cu (ppm)	Pb (ppm)	Zn (ppm)	As (ppm)	Sb (ppm)	Au (oz/t)	Ag (oz/t)	Sn (ppm)
1	COMP 6959-6979	32.	100.	205.	90.	4.2	.028	2.16	< 2.
2	COMP 6982-6993	28.	32.	135.	50.	15.0	.122	.63	< 2.
3	COMP 8016-8033	210.	640.	660.	55.	7.0	.020	3.22	< 2.

ITEM	SAMPLE NO.	Bi (ppm)	Cd (ppm)	Ni (ppm)	Fe (%)	S (%)	SiO2 (%)	Al2O3 (%)	CaO (%)
1	COMP 6959-6979	.5	.5	14.0	2.0	< .05	70.0	11.8	.45
2	COMP 6982-6993	.2	.4	12.0	1.8	< .05	70.0	8.2	3.60
3	COMP 8016-8033	.3	.4	12.0	1.8	< .05	68.5	5.8	8.70

ASARCO Incorporated

JUN 20 1991

SW EXPLORATION

Charles E. Thompson
Arizona Registered Assayer No. 9427William L. Lehmbek
Arizona Registered Assayer No. 9425James A. Martin
Arizona Registered Assayer No. 11122

JDS

ASARCO

Exploration Department
Southwestern United States Division
James D. Sell
Manager

June 24, 1991

Mr. Rudi Frank, President
DRX, Inc.
410 Seventeenth Street, Suite 2450
Denver, Colorado 80202

Composite Analysis
Commonwealth Mine
Cochise Co., AZ

Dear Mr. Frank:

Attached is a copy of the assay analysis of the three composites which were prepared from your rejects.

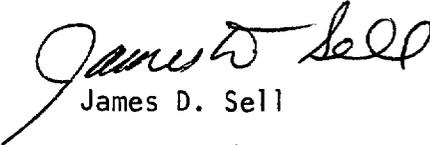
Composites 6959-6979
6982-6993
8016-8033

As noted, the silica-alumina content would give some problem in the smelter as would the nickel content in cathode production.

Otherwise, how is it all going with your work at Commonwealth.

I see Glamis has taken an option. Is this on the total package?

Sincerely,


James D. Sell

JDS:mek
Att.

cc: W.L. Kurtz

ASARCO

Exploration Department
Southwestern United States Division
James D. Sell
Manager

June 24, 1991

Mr. Rudi Frank, President
DRX, Inc.
410 Seventeenth Street, Suite 2450
Denver, Colorado 80202

Composite Analysis
Commonwealth Mine
Cochise Co., AZ

Dear Mr. Frank:

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Composites 6959-6979
6982-6993
8016-8033

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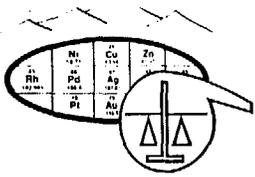
I see Bema has taken an option. Is this on the total package?

Sincerely,


James D. Sell

JDS:mek
Att.

cc: W.L. Kurtz



SKYLINE LABS, INC.
 1775 W. Sahuarro Dr. • P.O. Box 50106
 Tucson, Arizona 85703
 (602) 622-4836

CORRECTED REPORT
JOB NUMBER TAJ 707
 June 17, 1991
COMPOSITE 1,2,3
 PAGE 1 OF 1

ASARCO INCORPORATED
 Attn: Mr. James D. Sell
 Southwestern Exploration
 P.O. Box 5747
 Tucson, AZ 85703

REPORT OF ANALYSIS

Analysis of 3 Composite Samples

ITEM	SAMPLE NO.	Cu (ppm)	Pb (ppm)	Zn (ppm)	As (ppm)	Sb (ppm)	Au (oz/t)	Ag (oz/t)	Sn (ppm)
1	COMP 6959-6979	32.	100.	205.	90.	4.2	.028	2.16	< 2.
2	COMP 6982-6993	28.	32.	135.	50.	15.0	.122	.63	< 2.
3	COMP 8016-8033	210.	640.	660.	55.	7.0	.020	3.22	< 2.

ITEM	SAMPLE NO.	Bi (ppm)	Cd (ppm)	Ni (ppm)	Fe (%)	S (%)	SiO2 (%)	Al2O3 (%)	CaO (%)
1	COMP 6959-6979	.5	.5	14.0	2.0	< .05	70.0	11.8	.45
2	COMP 6982-6993	.2	.4	12.0	1.8	< .05	70.0	8.2	3.60
3	COMP 8016-8033	.3	.4	12.0	1.8	< .05	68.5	5.8	8.70

ASARCO

JUN 20 1991

SW Exploration

Charles E. Thompson
 Arizona Registered Assayer No. 9427

William L. Lehmbeck
 Arizona Registered Assayer No. 9425

James A. Martin
 Arizona Registered Assayer No. 11122

52

cc: JCB, PGV

JDS





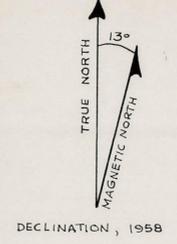


EXPLANATION

Rock UNITS	
QUATERNARY	<p>Qal</p> <p>ALLUVIUM</p>
EAST LOWER CRETACEOUS TO TERTIARY	<p>T and (up)</p> <p>UPPER ANDESITE</p>
	<p>Tbx</p> <p>FLOW BRECCIA</p>
	<p>T and (m)</p> <p>MIDDLE ANDESITE</p>
LOWER CRETACEOUS	<p>Kss</p> <p>BISBEE FORMATION</p>

SYMBOLS

- GEOLOGIC CONTACT
- STRIKE AND DIP OF BEDDING
- STRIKE AND DIP OF FAULT DASHED WHERE INFERRED
- STRIKE AND DIP OF FLOW STRUCTURE
- SHAFT
- ADIT
- DUMP
- TAILINGS
- EDGE OF CAVED AREA
- MINERALIZED FRACTURE ZONE



COMMONWEALTH MINE
 PEARCE ARIZ.
 PRELIMINARY
 GEOLOGIC MAP

SCALE: 1" = 100'

BY: STAFF DATE: NOV, 1975

AMERICAN SMELTING AND REFINING COMPANY
TUCSON ARIZONA

June 2, 1975

FILE MEMORANDUM

COMMONWEALTH MINE
COCHISE COUNTY, ARIZONA

On May 29, 1975, I made a brief visit to Essex International's office and looked over new data on the old Commonwealth silver-gold mine located 50 miles north of Douglas.

Paul Eimon, Lyall Lichty, William Brown and others have formed a company called Platoro Mines Inc. and have carried out sampling of the surface and those readily accessible underground workings (3rd, 5th and 6th levels). Access to the 7th and 8th (bottom) levels would require new ladders and some retimbering.

Production began in 1895 and was continued intermittently to 1927. Around one million tons was produced which at today's prices would amount to approximately \$100 million, or \$100 per ton. Considerable supergene enrichment was no doubt involved.

This hi-grade ore was extracted from three or more irregular veins striking westerly and dipping \pm 60 degrees southerly. They occur in mid-Tertiary andesite underlain by arkosic beds of the Cretaceous Bisbee formation. The vein "zone" is around 100' to 250' in width and 1500' in length at the surface, but maps of old workings indicate a total length of over 2000'. Their sampling has demonstrated that very low grade Au-Ag occurs well dispersed in the wall rock with a few X-cut samples averaging around .02 Au, 3.0 Ag. They estimate a possible 5 to 10 million tons of this grade to a depth of 425' with a waste-ore ratio of 3 to 1. This "ore" is assumed to occur in 3 or more zones \pm 20' wide.

The deposit is completely oxidized and the gold responds well to cyanidation ---- plus 90% recovery. However, the silver shows poor recovery with one ounce in the tails regardless of grind or leaching period time.

It is concluded that although only a very small part of the total workings (20 miles) have been sampled, the ore estimate is overly optimistic in size and considerable open pit mining dilution must be taken into account. Exploration possibilities obviously exist within the known zone, along strike and at depth, but on the basis of the information at hand, they do not appear attractive. No further investigation of the property is recommended at this time, however, the deposit lies at the northwest end of a very large area of probable shallow alluvial cover which deserves at least reconnaissance mapping and sampling. A separate memo will be forthcoming on this.

Eimon's report and sample maps will be placed in the SWED files.

J. H. Courtright
J.H. Courtright

JHC:vmh

cc: JJC Collins, WLKurtz

AMERICAN SMELTING AND REFINING COMPANY
TUCSON ARIZONA

Route: JHC _____
JDS _____
FTG _____
GJS _____
File _____

April 23, 1975

J. H. C.

JUN 4 1975

*Common wealth
mine*

FILE MEMORANDUM

Pearce
Cochise Co., Arizona

Paul Eimon states that over 450 samples collected from surface outcrops and underground indicate a zone 2,000 feet long and 150 feet wide at surface that averages ^{.02} 2 oz. Au, 3-4 oz. Silver (Jacobs assays). Zone narrows on third level and widens again on 6th level.

W. L. Kurtz
W. L. Kurtz

WLK:1b