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Arizona Department of Mines and Mineral Resources Mining Collection

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J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 27, 1982

Robert Dierking

1630 E. 4th Avenue
Apache Junction, AZ 85220

SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

Hole #4, 25' - 35'

454 gms ore
3 gms NaCn
3 gms Oxidizer

1500 ml. H_2O, leach & stir for 4 hrs. Filter & wash. Add resin to NaCn solution. Stir for 10 minutes. Filter & assay.

Assay results: 0.160 oz/ton Au
1.20 oz/ton Ag

Hole #1, 85' - 95'

454 gms ore
3 gms NaCn
3 gms Oxidizer

Leach & stir for 4 hrs. Filter & wash. Add resin to NaCn solution & stir for 10 minutes. Burn resin and assay.

Assay results: 0.11 oz/ton Au
0.508 oz/ton Ag

Jerry C. Henderson, Research Chemist

JCH:hh

REGISTERED ASSAYER
JACK [illegible] ONE
5479
ARIZONA, U.S.A.

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 16, 1982

S.S. International Trade, Inc.
1630 E. 4th Avenue
Apache Junction, AZ 85220

SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

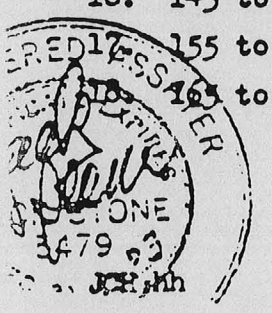
Process used for analysis: Scorefire assay.

5 grams of ore
70 grams of litharge
15 grams of flour
5 grams of soda ash
5 grams of borax (as cover)
1 gram of silver (in-quart)

Furnace at 1950°F, 3½" scorefire, ending up with a 30 - 40 gram lead button.

Assay results as follows:

Sample No. & Depth			Au Oz./ton
1.	0 to 5'	Hole #4	0.22
2.	5 to 15'	"	0.16
3.	15 to 25'	"	0.14
4.	25 to 35'	"	0.20
5.	35 to 45'	"	0.11
6.	45 to 55'	"	0.20
7.	55 to 65'	"	0.04
8.	65 to 75'	"	0.03
9.	75 to 85'	"	0.08
10.	85 to 95'	"	0.02
11.	95 to 105'	"	0.16
12.	105 to 115'	"	0.05
13.	115 to 125'	"	0.12
14.	125 to 135'	"	0.09
15.	135 to 145'	"	0.16
16.	145 to 155'	"	0.03
17.	155 to 165'	"	0.09
18.	165 to 175'	"	0.14



Jerry P. Henderson, Research Chemist

Gold, Silver and Platinum Ores

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August 17, 1982

S.S. International Trade, Inc.
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Process used for analysis: Scorefire assay.

5 grams of ore
70 grams of litharge
15 grams of flour
5 grams of soda ash
5 grams of borax (as cover)
1 gram of silver (in-quart)

Furnace at 1950°F, 3½" scorefire, ending up with a 30 - 40 gram lead button.

Assay results as follows:

Sample No. & Depth			Au Oz./ton
1.	0 to 5'	Hole #1	0.03
2.	5 to 15'	"	Trace
3.	15 to 25'	"	0.01
4.	25 to 35'	"	Trace
5.	35 to 45'	"	0.04
6.	45 to 55'	"	0.12
7.	55 to 65'	"	0.10
8.	65 to 75'	"	Trace
9.	75 to 85'	"	0.02
10.	85 to 95'	"	0.04
11.	95 to 105'	"	0.08
12.	105 to 115'	"	0.70
13.	115 to 125'	"	0.14
14.	125 to 135'	"	0.15
15.	135 to 145'	"	0.02
16.	145 to 155'	"	0.62
17.	155 to 165'	"	0.04
18.	165 to 175	"	0.08

Jerry C. Henderson, Research Chemist

JCH:hh

REGISTERED ASSAYER
UNITED STATES
ARIZONA, U.S.A.

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 27, 1982

Robert Dierking

1630 E. 4th Avenue
Apache Junction, AZ 85220

SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

Hole #3, 335' - 345'

454 gms ore
3 gms NaCn
3 gms Oxidizer
½ gm Caustic

} 1500 ml. H_2O, leach & stir 4 hrs. Filter & wash. Add resin to NaCn solution, stir for 10 minutes. Filter & wash.

Burn & pour bar for electrolytic. (1450 ml. H_2O / 75 ml. HNO_3)

Assay results:			
	Anode & Cathode mud	- 9.70 mg. Au;	668.3 mg Ag
	Ag Chloride	- 0.60 mg. Au;	748.04 mg Ag
	Electrolite	- 3.75 mg. Au;	68.4 mg Ag
	Total	0.90 oz/ton Au √	32.8 oz/ton Ag

Hole #5, 35' - 45'

454 gms ore
3 gms NaCn
3 gms Oxidizer
½ gm Caustic

} Add 1500 ml. H_2O, leach & stir for 4 hrs. Filter & wash. Add resin to NaCn solution & stir for 10 minu Filter & wash. Burn & assay.

Assay results: 0.07 oz/ton Au
0.94 oz/ton Ag

Jerry C. Henderson, Research Chemist

JCH:hh

REGISTERED ASSAYER

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 13, 1982

S.S. International Trade, Inc.
1630 E. 4th Avenue
Apache Junction, AZ 85220

SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

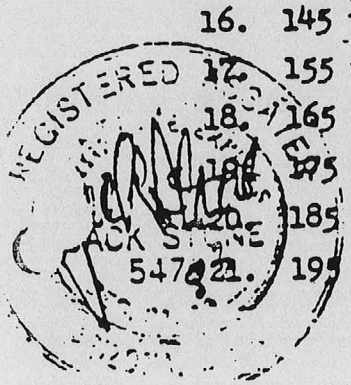
Process used for analysis: Scorefire assay.

5 grams of ore
70 grams of litharge
15 grams of flour
5 grams of soda ash
5 grams of borax (as cover)
1 gram of silver (in-quart)

Furnace at 1950°F, 3½" scorefire, ending up with a 30 - 40 gram lead button.

Assay results as follows:

Sample No. & Depth			Au Oz./ton
1.	0 to 5'	Hole #3	0.04
2.	5 to 15'	"	4.80
3.	15 to 25'	"	0.02
4.	25 to 35'	"	0.09
5.	35 to 45'	"	0.02
6.	45 to 55'	"	2.04
7.	55 to 65'	"	0.12
8.	65 to 75'	"	0.08
9.	75 to 85'	"	1.22
10.	85 to 95'	"	0.06
11.	95 to 105'	"	0.03
12.	105 to 115'	"	Trace
13.	115 to 125'	"	0.02 NO SAMPLE
14.	125 to 135'	"	0.01
15.	135 to 145'	"	Trace
16.	145 to 155'	"	0.02
17.	155 to 165'	"	0.09
18.	165 to 175'	"	0.02
19.	175 to 185'	"	0.18
20.	185 to 195'	"	0.14
21.	195 to 205'	"	0.06



J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 16, 1982

. International Trade, Inc.
0 E. 4th Avenue
che Junction, AZ 85220

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ocess used for analysis: Scorefire assay.

5 grams of ore
70 grams of litharge
15 grams of flour
5 grams of soda ash
5 grams of borax (as cover)
1 gram of silver (in-quart)

Furnace at 1950°F, 3½" scorefire, ending up with a 30 - 40 gram lead button.

ssay results as follows:

Sample No. & Depth			Au Oz./ton
1.	0 to 5'	Hole #5	0.06
2.	5 to 15'	"	0.12
3.	15 to 25'	"	0.10
4.	25 to 35'	"	0.08
5.	35 to 45'	"	0.14
6.	45 to 55'	"	0.06
7.	55 to 65'	"	0.08
8.	65 to 75'	"	0.11
9.	75 to 85'	"	0.12
10.	85 to 95'	"	0.12
11.	95 to 105'	"	0.08
12.	105 to 115'	"	0.06
13.	115 to 125'	"	0.14
14.	125 to 135'	"	0.16
15.	135 to 145'	"	0.14
16.	145 to 155'	"	0.10
17.	155 to 165'	"	0.10
18.	165 to 175'	"	0.06

RED

Jerry C. Henderson, Research Chemist

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 27, 1982

Robert Dierking

1630 E. 4th Avenue
Apache Junction, AZ 85220

SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

Hole #7, 155' - 165'

454 gms ore
3 gms NaCn
3 gms Oxidizer
½ gm Caustic

1500 ml. H_2O, leach & stir for 4 hrs. Filter & wash. Add resin to NaCn solution, stir for 10 minutes. Filter & wash. Burn resin & assay.

Assay results: 0.69 oz/ton Au
0.85 oz/ton Ag

Hole #6, 25' - 35'

454 gms ore
3 gms NaCn
3 gms Oxidizer
½ gm Caustic (pH Control)

Add 1500 ml. H_2O. Leach & stir for 4 hrs. Filter & wash. Add resin to NaCn solution. Stir for 10 minutes. Filter & wash. Burn resin & assay.

Assay results: 0.08 oz/ton Au
1.30 oz/ton Ag

Jerry C. Henderson

Jerry C. Henderson, Research Chemist

JCH:hh

REGISTERED ASSAYER
JACK STONE
33
ARIZONA, U.S.A.

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 19, 1982

S.S. International Trade, Inc.
1630 E. 4th Avenue
Apache Junction, AZ 85220

SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

Process used for analysis: Scorefire assay.

5 grams of ore
70 grams of litharge
15 grams of flour
5 grams of soda ash
5 grams of borax (as cover)
1 gram of silver (in-quart)

Furnace at 1950°F, 3½" scorefire, ending up with a 30-40 gram lead button.

Assay results as follows:

Sample No. & Depth			Au Oz./ton
1.	0 - 5'	Hole #7	0.02
2.	5 - 15'	"	Trace
3.	15 - 25'	"	0.03
4.	25 - 35'	"	0.02
5.	35 - 45'	"	0.04
6.	45 - 55'	"	0.04
7.	55 - 65'	"	0.02
8.	65 - 75'	"	Trace
9.	75 - 85'	"	Trace
10.	85 - 95'	"	Trace
11.	95 - 105'	"	Trace
12.	105 - 115'	"	0.02
13.	115 - 125'	"	Trace
14.	125 - 135'	"	Trace
15.	135 - 145'	"	Trace
16.	145 - 155'	"	Trace
17.	155 - 165'	"	Trace
18.	165 - 175'	"	Trace

Cupel 1000 mg. Ag. Button weight after cupel 975.40 mg.

Jerry C. Henderson, Research Chemist

JCH:hh

REGISTERED ASSAYER
JACK STONE
5479
83

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Gold, Silver and Platinum Ores

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Phone: (602) 892-4561

August 16, 1982

S.S. International Trade, Inc.
1630 E. 4th Avenue
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SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

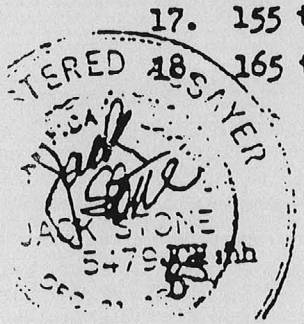
Process used for analysis: Scorefire assay.

5 grams of ore
70 grams of litharge
15 grams of flour
5 grams of soda ash
5 grams of borax (as cover)
1 gram of silver (in-quart)

Furnace at 1950°F, 3½" scorefire, ending up with a 30 - 40 gram lead button.

Assay results as follows:

Sample No. & Depth		Au Oz./ton
1. 0 to 5'	Hole #6	0.07
2. 5 to 15'	"	0.12
3. 15 to 25'	"	0.16
4. 25 to 35'	"	0.12
5. 35 to 45'	"	0.10
6. 45 to 55'	"	0.06
7. 55 to 65'	"	0.12
8. 65 to 75'	"	0.05
9. 75 to 85'	"	0.11
10. 85 to 95'	"	0.14
11. 95 to 105'	"	0.06
12. 105 to 115'	"	0.02
13. 115 to 125'	"	0.05
14. 125 to 135'	"	0.12
15. 135 to 145'	"	0.11
16. 145 to 155'	"	0.12
17. 155 to 165'	"	0.08
18. 165 to 175'	"	0.11



Jerry C. Henderson, Research Chemist

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 27, 1982

Robert Dierking

1630 E. 4th Avenue
Apache Junction, AZ 85220

SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

Hole #9, 15' - 25'

454 gms. ore
3 gms. NaCn
3 gms. Oxidizer

1500 ml. H_2O, leach & stir for 4 hrs. Filter & wash. Add resin to NaCn solution. Stir for 10 minutes. Filter & wash. Burn & assay.

Assay results: 0.14 oz/ton Au
0.56 oz/ton Ag

Hole #8, 115' - 125'

454 gms. ore
3 gms. NaCn
3 gms. Oxidizer

1500 ml. H_2O, leach & stir for 4 hrs. Filter & wash. Resin mixed with NaCn solution. Stir for 10 minutes. Filter & wash. Burn, assay & cupel.

Assay results: 0.33 oz/ton Au ✓
0.95 oz/ton Ag

Jerry C. Henderson, Research Chemist

JCH:hh

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 18, 1982

S.S. International Trade, Inc.
1630 E. 4th Avenue
Apache Junction, AZ 85220

SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

Process used for analysis: Scorefire assay.

5 grams of ore
70 grams of litharge
15 grams of flour
5 grams of soda ash
5 grams of borax (as cover)
1 gram of silver (in-quart)

Furnace at 1950°F, 3½" scorefire, ending up with a 30 - 40 gram lead button.

Assay results as follows:

Sample No. & Depth			Au Oz./ton
1.	0 - 5'	Hole #9	0.28
2.	5 - 15'	"	0.04
3.	15 - 25'	"	0.02
4.	25 - 35'	"	0.06
5.	35 - 45'	"	0.36
6.	45 - 55'	"	0.02
7.	55 - 65'	"	Trace
8.	65 - 75'	"	0.18
9.	75 - 85'	"	0.11
10.	85 - 95'	"	4.80
11.	95 - 105'	"	0.02
12.	105 - 115'	"	Trace
13.	115 - 125'	"	0.06
14.	125 - 135'	"	0.06
15.	135 - 145'	"	0.04
16.	145 - 155'	"	Trace
17.	155 - 165'	"	Trace
18.	165 - 175'	"	Trace

Jerry C. Henderson, Research Chemist

JCH:hh

REGISTERED ASSAYER
JAMES STONE
5473

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 19, 1982

S.S. International Trade, Inc.
1630 E. 4th Avenue
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SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

Process used for analysis: Scorefire assay.

5 grams of ore
70 grams of litharge
15 grams of flour
5 grams of soda ash
5 grams of borax (as cover)
1 gram of silver (in-quart)

Furnace at 1950°F, 3½" scorefire, ending up with a 30-40 gram lead button.

Assay results as follows:

Sample No. & Depth			Au Oz./ton
1.	0 - 5'	Hole #8	0.03
2.	5 - 15'	"	0.04
3.	15 - 25'	"	0.07
4.	25 - 35'	"	0.07
5.	35 - 45'	"	0.06
6.	45 - 55'	"	0.02
7.	55 - 65'	"	0.08
8.	65 - 75'	"	0.04
9.	75 - 85'	"	0.06

Cupel of 1000 mg. Ag - Button weight 973.20 mg.

Flux: 30 grams ore
40 grams soda ash
30 grams borax
5 grams silica
110 grams litharge
10 grams flour
1000 mg. silver

0-5; 5-15; 15-25; 25-35; lead buttons weight 90 grams. Scorefire & cupel.

35-45; 45-55; 55-65; 65-75; 75-85; cupelled.

10.	85 - 95'	Hole #8	0.24
11.	95 - 105'	"	0.04
12.	105 - 115'	"	0.08
13.	115 - 125'	"	0.92
14.	125 - 135'	"	0.16
15.	135 - 145'	"	0.14
16.	145 - 155'	"	0.28
17.	155 - 165'	"	0.32
18.	165 - 175'	"	0.08

REGISTERED ASSAYER CERTIFICATE JACK STONE 5479 DEC. 31, 1983 ARIZONA, U.S.A.

Crucible assay 30 grams ore - 1000 mg. Ag.

Jerry C. Henderson, Research Chemist

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 24, 1982

Robert Dierking
1630 E. 4th Avenue
Apache Junction, AZ 85220

SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

Hole #10; 45' - 55'

454 gms ore
3 gms KCN
4 gms Oxydizer
2 gms wetting agent
1500 ml H_2O

} Stir & heat 4 hrs. 120°F. Filter & wash. Resin added to KCN solution. Stir for 10 min. Filter & wash.

Burn resin & assay: 0.103 oz/ton Au
0.60 oz/ton Ag

Jerry E. Henderson, Research Chemist

JCH:hh

REGISTERED ASSAYER
JACK STONE
5479
DEC. 31, 1983
ARIZONA, U.S.A.

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 19, 1982

S.S. International Trade, Inc.
1630 E. 4th Avenue
Apache Junction, AZ 85220

SUBJECT: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

Process used for analysis: Scorefire assay.

5 grams of ore
70 grams of litharge
15 grams of flour
5 grams of soda ash
5 grams of borax (as cover)
1 gram of silver (in-quart)

Furnace at 1950°F, 3½" scorefire, ending up with a 30-40 gram lead button.

Assay results as follows:

Sample No. & Depth		Au Oz./ton
1.	0 - 5' Hole #10	10.49 ✓
2.	5 - 15' "	0.02
3.	15 - 25' "	0.02
4.	25 - 35' "	0.04
5.	35 - 45' "	0.02
6.	45 - 55' "	0.03
7.	55 - 65' "	0.02
8.	65 - 75' "	0.06
9.	75 - 85' "	0.08
10.	85 - 95' "	0.09
11.	95 - 105' "	0.02
12.	105 - 115' "	Trace
13.	115 - 125' "	0.04
14.	125 - 135' "	0.02
15.	135 - 145' "	0.08
16.	145 - 155' "	Trace
17.	155 - 165' "	0.06
18.	165 - 175' "	0.06

Jerry C. Henderson, Research Chemist

JCH:hh

REGISTERED ASSAYER
STATE OF ARIZONA
Jack Stone
JACK STONE
DATE 83

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 24, 1982

Robert Dierking

4th Avenue
Junction, AZ 85220

r: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

2; 165' - 175'

} gms KCN
} gms Oxidizer
} gms wetting agent
} gms ore
0 ml H_2O

Stir and heat 4 hrs. 120°F. Filter & wash. KCN solution, stir. Add resin & mix for 10 min. Filter & Wash. 3242 mg. Ag.

resin. Use two scorefire dishes. Split resin ash in two. Add
ms litharge, mix with resin. Melt at 1950°F. Add both lead buttons
ber and pour into bar. Clean bar and run in electrolytic.

} 150 ml H_2O
} 75 ml HNO_3 Plate at 9 to 10 amps.

e & Cathode filter, wash & assay.

e & cathode button wt. - 242 mg. - 0.32 Au
trolyte button wt. - 784 mg. - 0.08 Au
er button wt. -2262 mg. - 0.06 Au
0.46 Au

Ag. 2.6

Jerry C. Henderson, Research Chemist

:hh

REGISTERED ASSAYER
ARIZONA, U.S.A.

J and J Research and Development Inc.

Gold, Silver and Platinum Ores

2027 South McQueen Road • Mesa, Arizona 85202

Phone: (602) 892-4561

August 17, 1982

nternational Trade, Inc.
:. 4th Avenue
, Junction, AZ 85220

:T: GOLDEN HILLSIDE MINE SAMPLES SUBMITTED BY FRANK H. BUCHELLA, JR.

ss used for analysis: Scorefire assay.

5 grams of ore
70 grams of litharge
15 grams of flour
5 grams of soda ash
5 grams of borax (as cover)
1 gram of silver (in-quart)

Furnace at 1950°F, 3½" scorefire, ending up with a 30 - 40 gram lead button.

.y results as follows:

ple No. & Depth		Au Oz./ton
0 to 5'	Hole #2	0.02
5 to 15'	"	0.02
15 to 25'	"	0.03
25 to 35'	"	0.06
35 to 45'	"	0.08
45 to 55'	"	0.02
55 to 65'	"	0.04
65 to 75'	"	0.12
75 to 85'	"	0.06
85 to 95'	"	0.09
95 to 105'	"	0.02
105 to 115'	"	0.03
115 to 125'	"	Trace
125 to 135'	"	0.08
135 to 145'	"	0.08
145 to 155'	"	0.10
155 to 165'	"	0.14
165 to 175'	"	0.08

NOTE: Two (2) 1000 gm. silver inquarts were cupelled - 975.00 mg.

Jerry C. Henderson, Research Chemist

JCH:hh

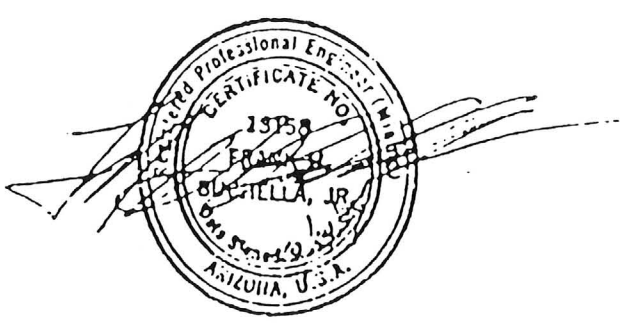
REPORT ON THE
GOLDEN HILLSIDE PROPERTY
APACHE JUNCTION, ARIZONA

FOR

Robert J. Lierking

OCTOBER 22, 1987

FRANK H. BUCHELLA, JR P.E.
MINING CONSULTANT
7949 N. SENDERO UNO
TUCSON, ARIZONA 85704



STATE OF ARIZONA
Department of State

CERTIFICATE OF TRADE NAME follows:

PRECIOUS METALS RECOVERY SYSTEM

I, Jane Dee Hull, Secretary of State, do hereby certify that in accordance with the Trade Name Application filed in this Office, the Trade Name herein certified has been duly registered pursuant to Section 44-1460.01, Arizona Revised Statutes, in behalf of:

MANHATTAN RESOURCES, INC.
1256 WEST CHANDLER BLVD
SUITE #29
CHANDLER, AZ 85224

Registration Date: November 27, 1995

Expiration Date: November 27, 2000

Date First Used: November 27, 1995

Trade Name No.: 151268

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Great Seal of the State of Arizona. Done at Phoenix, the capitol, this 28th day of November, 1995.

Jane Dee Hull

JANE DEE HULL
Secretary of State

GEOLOGICAL REPORT

HISTORY

In the early 1800's the Peralta family of Mexico first came into the region and found rich free-milling ore on the surface. They took back vast amounts of gold to their homeland.

Lack of roads and the hostility of the Apache Indians discouraged prospecting in the goldfield superstition mountain area until the 1879's. Prospecting and mining was then undertaken and the population is reported to have reached 1500 during the main mining boom of 1892-1904.

In the early 1900's the Mammoth Mine was born and became the largest and richest gold mine in Arizona. At that time the ore averaged $40 per ton and the encouraging sign was that the tonnage seemed inexhaustible.

The Black Queen property directly below Golden Hillside, has also proven to contain rich deposits and is being mined today.

The Golden Hillside therefore is surrounded by very rich properties as confirmed by reports and mining done in the area.

The Hillside claims were registered in 1907 and mining was done throughout the depression years. $200 per ton ore was being taken out at the time. That would average to around 7 ounces per ton today.

In more recent times Mr. Joseph Stephan and Mr. Robert Dierking worked the property and managed to create a 170 foot shaft that averaged 4 ounces of gold as they went down.

LOCATION AND ACCESS

The Golden Hillside property is situated in the county of Maricopa, 8 miles north of Apache Juntion, Arizona. It consists of 19 claims totalling 380 acres and an additional ~~72.6 acres~~ of patented land which is owned by the principals hereto. The property is located off the main highway. Apache Trail and electrical power and water are readily available.

GEOLOGY

The area is covered by a variety of rocks involving granites, sandstone, conglomerates, calcite, and quartz veins.

The area is characterized by broad alluvial deposits, hydrothermal volcanic eruptions, and scattered mountain ranges which are composed of Precambrian Schist and granite uncomfortably overlain by younger Precambrian and Paleozoic sedimentary rocks and by Tertiary volcanic rocks. Dikes, irregular bodies, and stocks of granitoid rocks and rhyolite of Cretaceous and Tertiary ages have intruded Paleozoic and older rocks. Large areas are covered by sedimentary rocks of Cenozoic age.

ORE DEPOSITS

The deposits are highly oxidized at the surface and oxidation seems to extend to a depth of more than 800 feet.

Massive sulphide zones may be found at depth as in another similar mining area known as Mammoth in Pinal county.

Other geologists who have done tests in the area state that the known ore deposits that were producing mines are believed to have occurred in veins or lodes within fault fissures or brecciate zones. The veins are usually only a few feet wide but the brecciated ore zones may be up to 60 more feet in width.

Dr. Gert Schroeder
Consultant Geologist
Duesseldorf, Germany

Phoenix, Sept. 12.78.

REPORT ON GOLDEN HILLSIDE MINE, APACHE JUNCTION, ARIZONA

I. SUMMARY

This report is based on a preliminary and incomplete study of the gold ore deposit "Golden Hillside", near Apache Junction, Arizona. The study was made during Oct. and Nov. 1975 and consisted of drenching, drilling and sampling. It was made for a german financier , who, without any understanding for the complexity of a thoroughgoing geological evaluation, lost his interest, after the first drilling results did not show the expected values of 3 oz Au/ton, which were taken at the bottom of the shaft and in one part of the intermediate drift.

For any person familiar with gold deposits it goes without saying, that values of 3 oz Au/ton in very rare cases appear as the average grade of a mine.

At the time of the completion of this report only the sampling result of drill hole #2 was available, a copy of it is attached. The sampled material was a mixture of the whole cuttings of the hole, the resulting grade of 0,13 oz Au/ton and 0,12 oz Pt/ton is therefore the average for the 165 feet length of the hole.

A recent drill hole below the calcite vein ran o.46 oz Au/ton and o.11 oz Pt/ton.

According to these preliminary and spotty results it can be said, that the deposit apparently consists of two ore shoots, one around the shaft and the other along the calcite vein.

Apart from the ore shoots the surface ground in many parts represents a kind of placer deposit with a grade of I to 3 g Au/ton, enough to justify a placer operation which could pay for a further exploration.

Since the occurrence of native copper in some samples indicates a possible concentration of mineral in depth, an exploration programme should include at least two holes of I200 feet depth at the shaft and at the calcite vein. The fact, that the mineralisation of gold in the calcite vein has been discovered only three years ago, is an indication for the possibility to find still one or two more ore concentrations on or around the property.

2. LOCATION

The Golden Hillside Mine is situated 7 miles N of Apache Junction on a hill W of the massif of the Superstition Mountains.

3. TOPOGRAPHY, VEGETATION, CLIMATE.

The topography of the mine consists of rolling hills, with differences in altitude of approx. 300 feet. Vegetation consists of cactus, palo verde- and mesquite trees. The climate is one of the best in the U.S., dry and warm with high temperatures up to Io6° F. from May to end of August and a short rainy season in September.

4.GEOLOGY.

The base of the geological formations of the "Goldfield-Mineralisation", of which the Golden Hillside is a northern prolongation, is a precambrian granodiorite complex, which formed a mountain range in the precambrian. This mountain range eroded and the detritus formed a conglomerate, which now covers the granodiorite. There are

no layers of the mesozoicum and only in the tertiary some volcanic series appear. A postvolcanic tectonic movement intersected the complex in long N-S - and shorter E-W striking faults. Along these faults and in numerous length- and cross-clefts hydrothermal solutions ascended, which produced a mineralisation of gold, silver and platinum with quartz and calcite as gangue minerals. Occasionally also mercury, native copper, lead, zinc, hematite, magnetite, ilmenite and manganese occurs. The bedrock, especially on the hanging wall of quartz veins, is impregnated with very fine-grained gold.

The distribution of gold concentrations is sporadic, there are apparently 2 ore shoots of I50 feet horizontal length each and a width of about 6 feet, one at the calcite vein and one at the shaft. The shaft has a depth of I40 feet.
The N-S striking faults dip to the W, near surface with 50-70°, according to the drillholes the dip increases with depth.

At the outcrop of the calcite vein, the formation is accompanied on the hanging wall by a diabas dyke, in direction to the foot wall a shear zone follows, then the 4 feet wide calcite vein is followed by a brecciated granodiorite which graduates into the undisturbed granodiorite.

The brecciated zone widens to the S, in direction to the Black Queen Mine and narrows again at the S- end of the formation, in the Goldfield Mine. Similar conditions can be observed at the eastern side of the road #88, in the area of the Hilltop Mine.

Apparently at the end of tertiary the granodiorite-stock was pressed upwards in a dome-like structure, consequently it broke and the resulting cleft-systems were filled by hydrothermal mineral solutions.

5. RECOMMENDATIONS.

At the Golden Hillside Mine by all foregoing explorations only the surface has been scratched, whereby two ore shoots have been found. The aim of a further, systematic exploration should be to search for a possible higher ore concentration in depth by drilling at least two holes of I200- I500 feet depth at the two existing ore shoots.

A geochemical sampling programme should take ground samples of I-2 feet depth in a grid of I00 x I00 feet in order to find the location of possible further ore shoots and to get an impression of the average grade of the mineralised cover of decomposed granodiorite. Thereby enough placer material should be found to justify a placer operation.

The shaft should be made accessible to resample the bottom and the two drifts.

G. Schroeder.

Dr. phil. nat. Gert Schroeder.

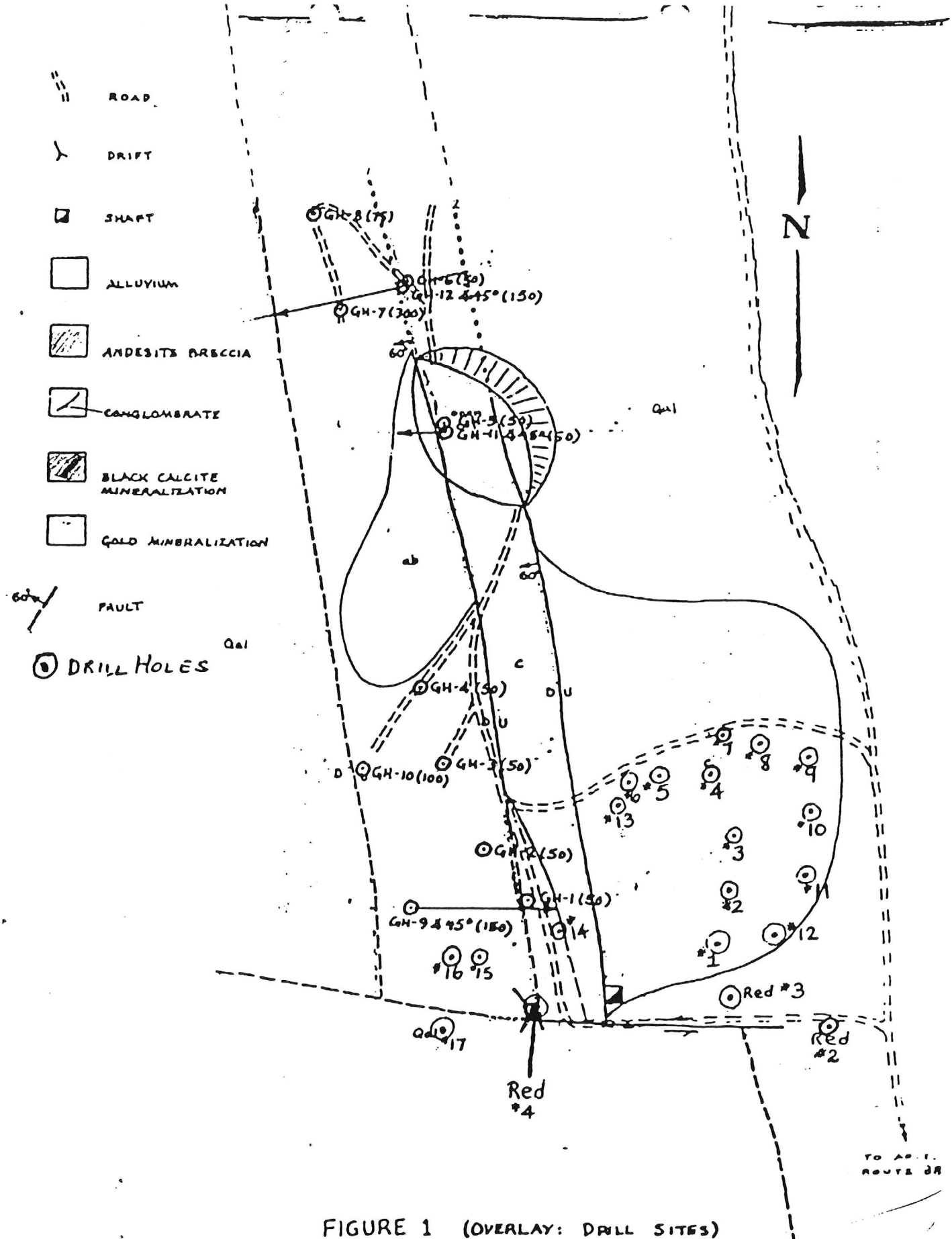
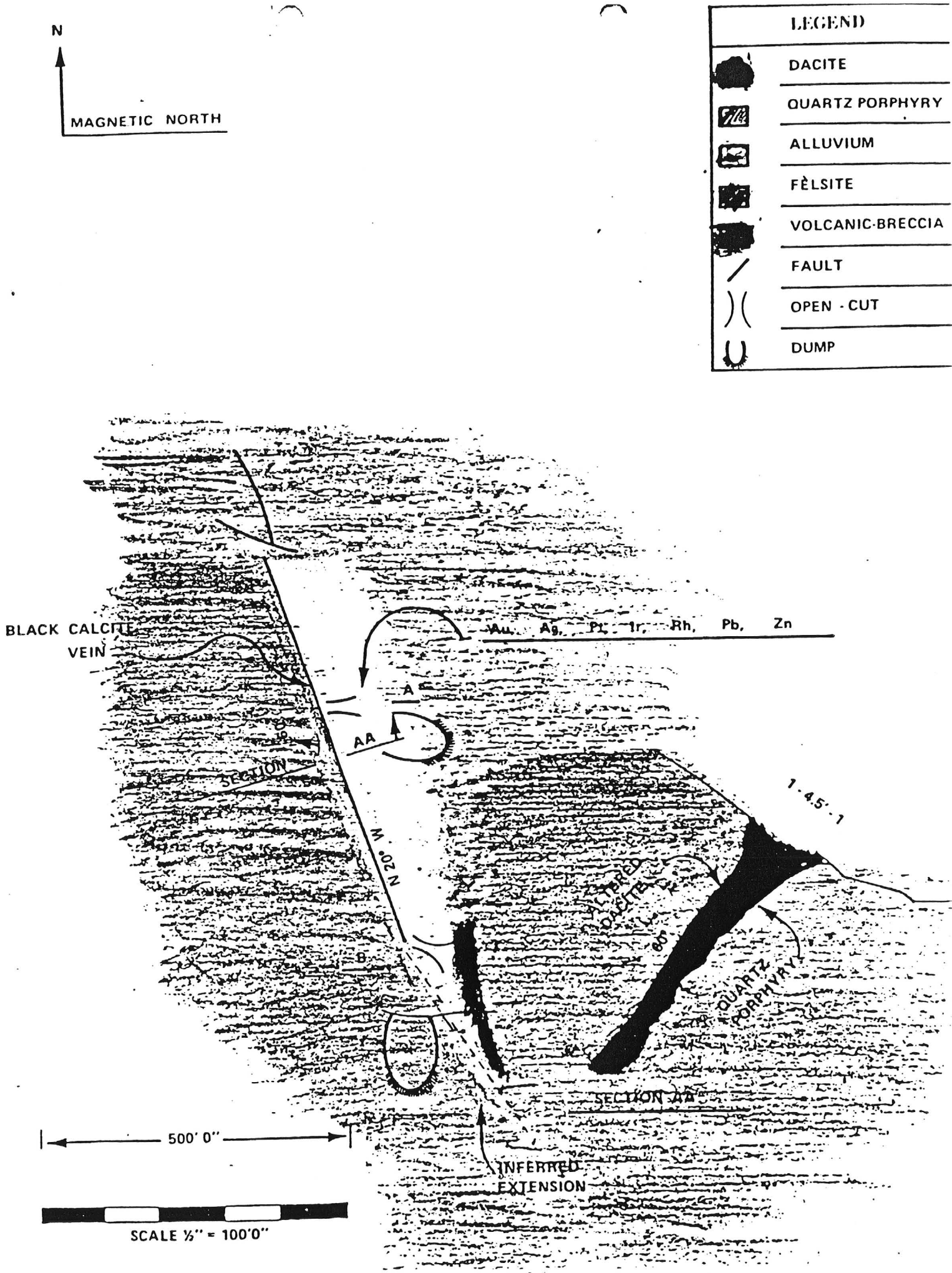


FIGURE 1 (OVERLAY: DRILL SITES)

GEOLOGIC SKETCH MAP WITH MINERALIZATION SCALE: 1" = 100'

North Part, Golden Hillside #1 Claim, Maricopa Co., Ariz.


N
MAGNETIC NORTH
LEGEND
DACITE
QUARTZ PORPHYRY
ALLUVIUM
FELSITE
VOLCANIC-BRECCIA
FAULT
OPEN - CUT
DUMP
BLACK CALCITE VEIN
Au, Ag, Pt, Ir, Rh, Pb, Zn
A
AA
SECTION
N 20° W
B
B
ALTERED DACITE
80°
1.4.5.-1
QUARTZ PORPHYRY
SECTION AA
500' 0"
INFERRED EXTENSION
SCALE ½" = 100'0"

GEOLOGY

Regional

The Golden Hillside property is located within the Basin and Range province near the point where the generally north trending mountain ranges change to a northwest trend. The ranges are separated by aggraded desert plains.

The oldest rocks in the area are precambrian granite intrusions consisting of granite and quartz monzonite. The intrusions form the basement rocks in the region.

The basement is overlain by a conglomerate with rounded to semi-rounded pebbles. The conglomerate is believed to be of early Tertiary age.

Throughout the Basin and Range province a period of intense deformation, sometimes called the Basin and Range distrubance began about 30 million years ago and continued until some 15 million years ago. This was a time of intense volcanic and tectonic activity and formed the major geological features of the area.

The Basin ranges represent fault blocks of complex internal structure which were elevated in reference to adjacent relatively depressed basins, plains or valleys. Many seem to be bounded by faults on one or more sides, which may occur within continuous zones or partly en echelon. The displacements of the faults range from relatively small amounts to several thousands of feet, and are regarded as dominantly of the normal type, but may also include reverse, thrust and lateral movements in several localities.

The Superior volcanic field covers the area, and five volcanic centers are known within the area. The Superstition cauldron is the major center, with others being the Black Mesa, Florence Junction, Haunted Canyon and Willow Springs. Some 4,000 cubic kilometers of volcanic ash and lava were extruded, covering an area of 8,000 square kilometers. The trend in rock types progresses from an early intermediate composition dome and lava stage through a silicic composition ash flow stage to a late mafic composition lava stage.

The history of the volcanic center can be summarized as follows: 1. Formation of early intermediate to mafic domes and composite volcanoes; 2. Caldera collapse with formation of welded tuffs; 3. Resurgence of central dome and intrusion of ring dikes.

The ring fracture system caused by caldera collapse is important, as this system is believed to have been the plumbing system for the migration of hydrothermal solutions. The hydrothermal solutions contained dissolved metals which eventually formed ore deposits.

GEOLOGY AND ORE RESERVES

GEOLOGY

The base of the geological formations is a precambrian granodiorite complex, which formed a mountain range in the precambrian. This mountain range eroded and the detritus formed a conglomerate, which now covers the grandiorite. A postvolcanic tectonic movement intersected the complex in long N-S and shorter E-W striking faults. Along these faults and in numerous length and cross-clefts, hydrothermal solutions ascended, which provided a mineralization of gold, silver and platinum with quartz and calcite as gangue minerals. The mineralization zone extends for 2,000 feet along the N-S strike with widths ranging from 6 feet to 500 feet. Mineralization has been proven to 425 feet and projected to 600 feet. The distribution of the gold is quite uniform with some high grade stringers as demonstrated by the drilling. The mineralization is cut off on the west by a very steep dipping fault. Areas to the north and east are undefined.

ORE RESERVES

Ten percussion-rotary drill holes 6 inches in diameter totaling 2,000 feet were drilled on an approximate 100-foot grid. One hole was drilled to 425 feet and one was drilled to 175 feet. Eight holes bottomed in ore and nine holes carried economic gold values. The areas to the north and in depth are open for expanding ore reserves.

The drill holes were sampled and assayed every ten feet for gold and silver. The total cuttings were removed from the hole and split into two samples; one for assaying and one for metallurgical testing. Check samples were run on two samples from each hole.

Sections and elevation maps were developed for the drilled out area. A pit was designed using the constraints of the fault on the west, the depth of the holes and maximum 100 foot area of influence. The ore reserves from this pit are as follows:

1 THE WALTZING DUTCHMAN MINE (GOLDEN HILLSIDE)

The Waltzing Dutchman mine is a small gold prospect situated on the eastern slope of the Goldfield Mountains, in Maricopa County, Arizona. It is approximately one mile north of the old mining camp of Goldfield, and the Goldfield mine. It is one of a group of prospects shown on the 1956. 7.5 minute Goldfield quadrangle map published by the United States Geological Survey and designated thereon as the "Golden Hillside Mines."

It is within the Tonto National Forest and on ground which is unsurveyed, but which, when it is surveyed, will be approximately in the center of section 36, Township 2 North, Range 8 East, Gila and Salt River Base and Meridian.

The property consists of one lode claim of about 20 acres. It is about ½ mile west of the Apache Trail Highway (Arizona 88) and easily accessible over a partially graded mine road. It is at an altitude of 2200 feet above sea level.

Gold was discovered and worked in the Goldfield Area in the early 90's by O. Hall and D. Sullivan. The Young Mines Company acquired the Goldfield Mine in 1910 and spent some 15 years exploring for ore. They opened the so-called Morman Stope. Considerable gold was taken from this property, but production records are incomplete. The company was reorganized as the Apache Trail Gold Mining Company, who made some production up until 1929-30. They sunk a shaft to the 1000' level with considerable underground workings. This mine has filled with water to the 200' level and has not worked for many years. It is approximately one mile south of the Waltzing Dutchman.

Geology

The Goldfield District is on a pediment which is floored by a coarse-textured granite, indurated conglomerate, and granite breccia. The gold

discoveries of the district appear to be related to two north-northeasterly trending faults which are nearly vertical and about 300' apart. The granite has been intruded in places by narrow dikes of andesite porphyry and cut by cross fractures. Principal gold values are found with the limonitic (iron-stained) residuals, which probably derived from leached out pyrite, and are found along the fault walls, especially where they have been intersected by cross fractures. If the residual limonite was formed by the leaching of pyrite then the mineralization may be of deep-seated origin and exploration at depth may prove a secondary zone of enrichment at lower levels.

The workings on the Waltzing Dutchman consist principally of a shaft 81 feet deep, which is being sunk along a very strong, sharply defined and smooth footwall. The strike of the vein at the bottom of the shaft is N 18° E and the dip 86° to the east. On the 40 foot level this wall appears to be striking N 18° W, with the dip nearly vertical. This may be a split from the main vein or fault. The formation in the shaft and on the 40-foot level (about 15 feet north of the shaft) is an altered granite, much broken and showing movement.

Mr. Robert Dierking, who is working the property, stated that he had obtained good gold values in the two-to-three inch iron-stained material on the east side of the footwall.

In order to get some idea of what values might be expected over a working width, I cut a sample across a three-foot width of the vein, and at right angles to it, in a short cross-cut about 15 feet north of the shaft. It assayed 0.76 ounces gold or $26.60 per ton. I regard this as encouraging. It indicates that gold is present and has been deposited along the fault wall, probably by rising solutions. As in all gold deposits, such solutions have followed fault fissures or weaknesses in the rock and have deposited mineral wherever the flow has been slowed or interrupted by a dike, cross-fissure, or some other impediment in the channel of flow. It is impossible to guess or predict where such an obstruction might have occurred, or where

ore shoots or lenses might be found, except that they will undoubtedly be found on or near the fault wall. With the strong and persistent mineralization as indicated along the faults, over a length of more than a mile, from Goldfield to the Waltzing Dutchman, I believe it very probable that other lenses of high-grade gold ore may be found along this fault wall.

It is suggested that these lenses might be found by means of geophysical prospecting, and proven by diamond-drilling before spending a great deal of money in the more-or-less blind sinking of shafts.

DONALD F. REED
Registered Mining Engineer
Route 2 Box 65
Chandler, Ariz.

Note: Assay dated 31 JAN 1967 made by Arizona Assay Office
815 North First Street
Phoenix, Arizona

shows .76 Gold per ton
$26.60 per ton

PRECIOUS METALS RECOVERY PROCESSES

Evaluation of Properties by Drilling and Assaying.

Experts in the Refining of Precious Metals by Ion Exchange Technology.

Mr. Robert Dierking
S.S. International Trade, Inc.
1630 E. 4th Ave
Apache Junction, AZ 85220

October 15, 1982

Dear Mr. Dierking,

The following are the analytical results of the ten samples of drillings that you submitted to our laboratory.

Sample Identification	Au oz/ton	Ag oz/ton
SK-#1 105-115	0.31	0.72
SK-#2 65-75	0.11	0.47
SK-#3 55-65	0.09	0.61
SK-#4 25-35	0.16	0.08
SK-#5 35-45	0.12	nil
SK-#6 15-25	0.17	0.09
Sk-#7 85-95	0.03	1.10
SK-#8 85-95	0.15	0.88
SK-#9 85-95	1.93	1.32
SK-#10 35-45	0.07	nil

Sincerely yours,

David M. Novak

David M. Novak
President

This analytical report pertains only to the chemical analysis of the above samples, which may or may not be representative of the precious metals values of the entire ore body, and therefore the results should be interpreted in this manner.

1894 Commercenter West, Suite 201
San Bernardino, CA 92408 (714) 889-8313

SPECTRO-ANALYSIS_____ SPECTRO-CHEMICAL _____ WET ANALYSIS _____ SPECIFIC GRAVITY _____

FIRE ASSAY ✓ ATOMIC ABSORPTION _____ PROCESS EXTRACTION RESEARCH _____ PROCESS AMALGAM _____

Sample submitted by: G. Schroeder DATE 11-26-75

GOLDEN HILLSIDE MINING CORP. 6518 Apache Trail, Mesa Arizona, Lilly Ann Ap

Sample description: #2 OTL8796

Probe aus dem gesamten Bohrgut von Bohrung 2

Assay bead was burnt on spectrograph and results are as follows:

Silver	0.24 oz. p/t
Iridium	0.02 oz. p/t
Platinum	0.12 oz. p/t
Gold	0.13 oz. p/t

Spectrograph reports must be given in a range rather than an exact figure. However, the particular model spectrograph which OTL uses, is superior in that it detects metals that could be overlooked by other methods of determination. It is especially suited to the trace and near trace elements.

The above figures are not necessarily indicative of the values obtainable by conventional extraction methods. All quantities shown in 'ounces per ton'.

Most samples containing the platinum group metals are of a 'complex' nature. In the make-up of these 'complexes' are many 'unstables' that tend to outweigh the 'stable' portion and act to suppress, or even prevent, the extraction of the 'stables'. OTL has been successful in overcoming this problem. We have established what we believe to be all the required basic production processes for the extraction of the precious metals from domestic ores.

OTL is equipped to perform the research needed to establish the feasibility and adaptability of ores to the OTL RECOVERY METHODS.

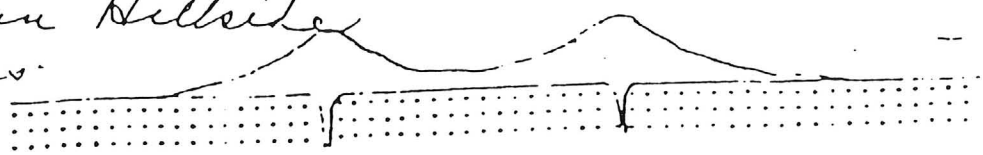
TEST FEE $20.00 PD.

V L Seaman

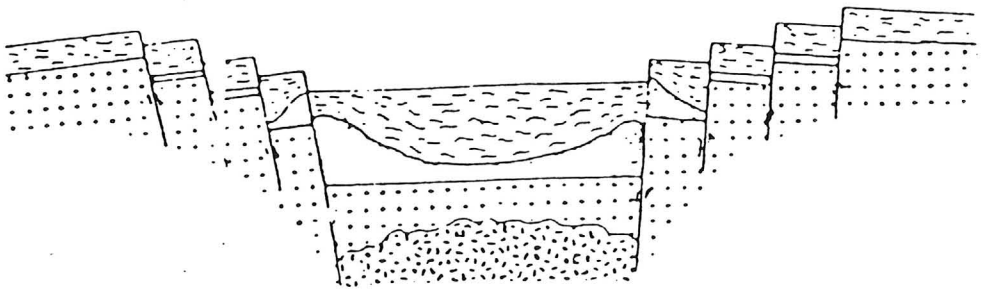
ORE-TECH LABORATORIES, Incorporated

PO BOX 174 SCOTTSDALE ARIZONA 85252 (602) 945-2110

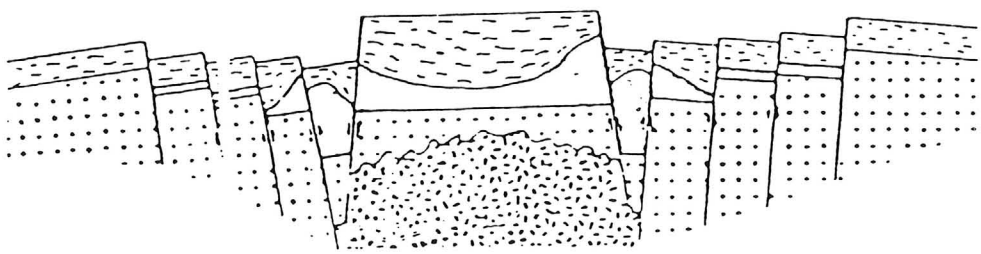
MINERAL ORES · PROCESS RESEARCH AND DEVELOPMENT · PRODUCTION EXTRACTION PROCESSES



A. Composite cone



B. Collapse caldera



C. Resurgent dome

Figure 6.—Stages in caldera development.

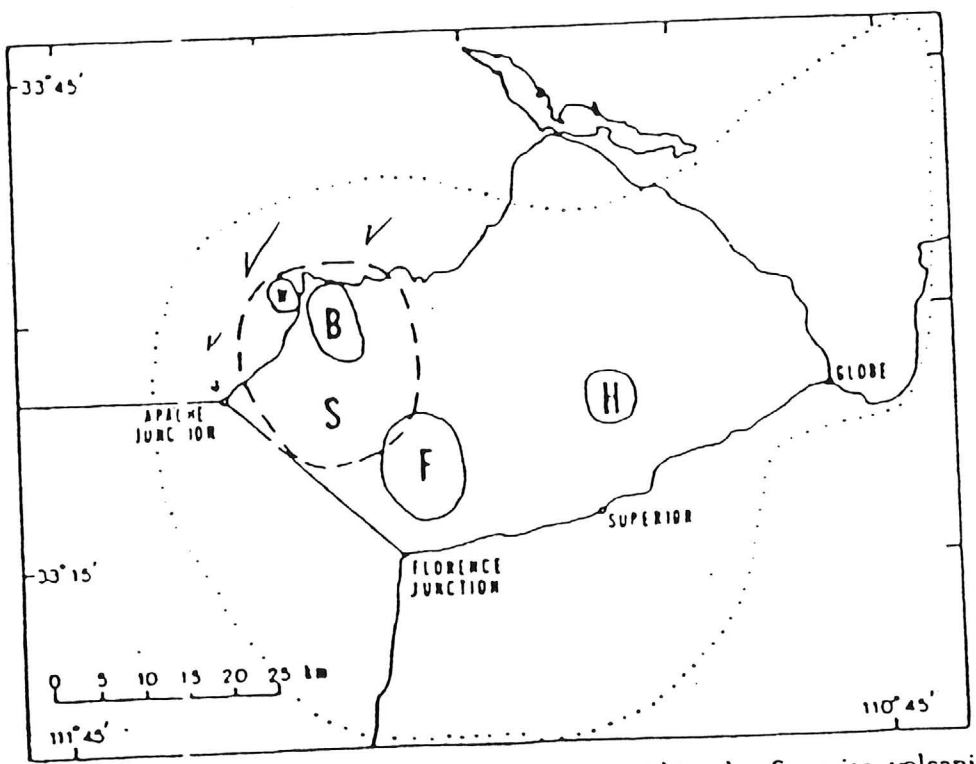


Figure 7.—Map showing distribution of caldrons within the Superior volcanic field. The limit of the field is shown by the dotted line. The caldrons are: Black Mes. (B), Florence Junction (F), Haunted Canyon (H), Superstition

ERA	PERIOD	EPOCH	FEATURES	AGE
	QUATERNARY	RECENT		0.01 m.y.
		PLEISTOCENE	Man	2
	TERTIARY	PLIOCENE		13
		MIOCENE		25
		OLIGOCENE		36
		EOCENE		58
		PALEOCENE	Mammals	63
MESOZOIC	CRETACEOUS			135
	JURASSIC			180
	TRIASSIC		Dinosaurs	230
PALEOZOIC	PERMIAN		First Reptiles	280
	PENNSYLVANIAN			310
	MISSISSIPPIAN			345
	DEVONIAN		First Amphibians	405
	SILURIAN		First Fishes	425
	ORDOVICIAN			500
	CAMBRIAN		First Fossils	600
PRECAMBRIAN			Oldest Rocks	3300
			Meteorites	4500

Figure 3 – Geologic time scale.

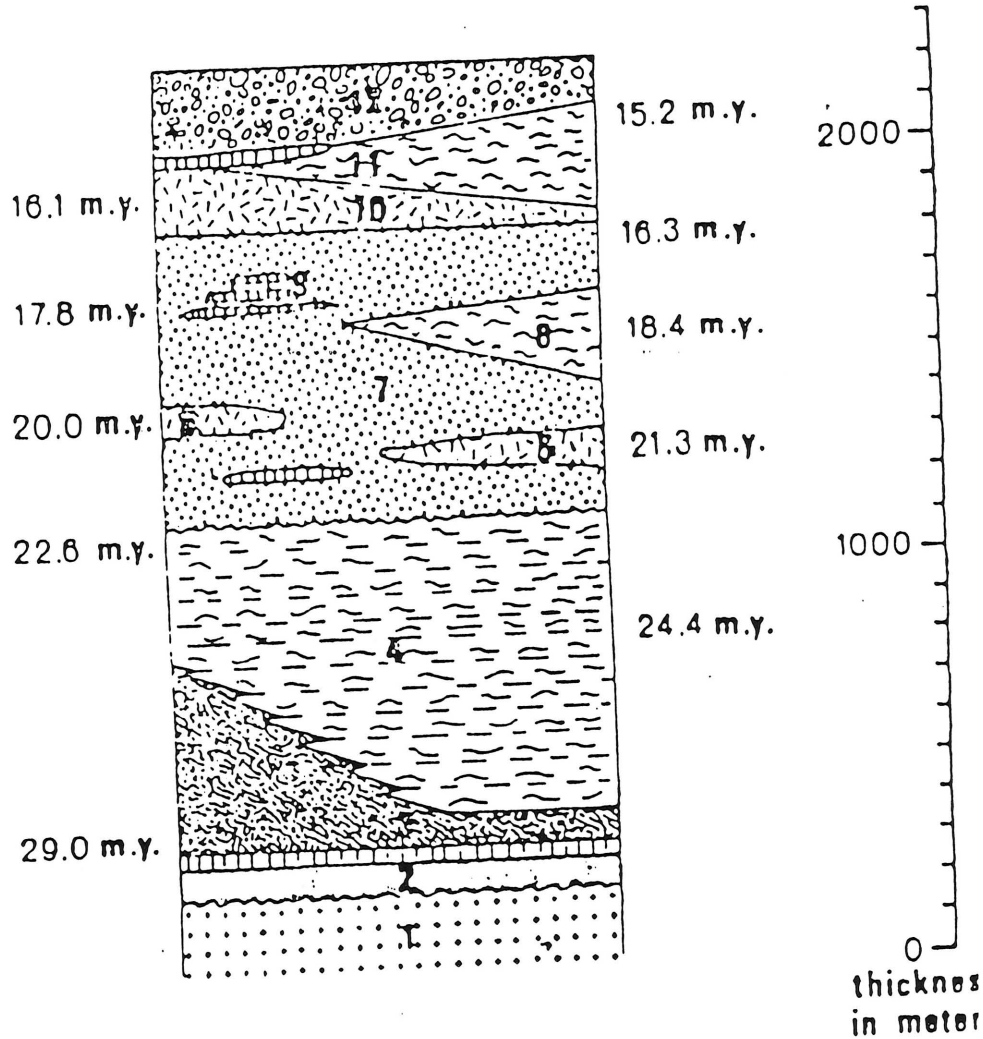
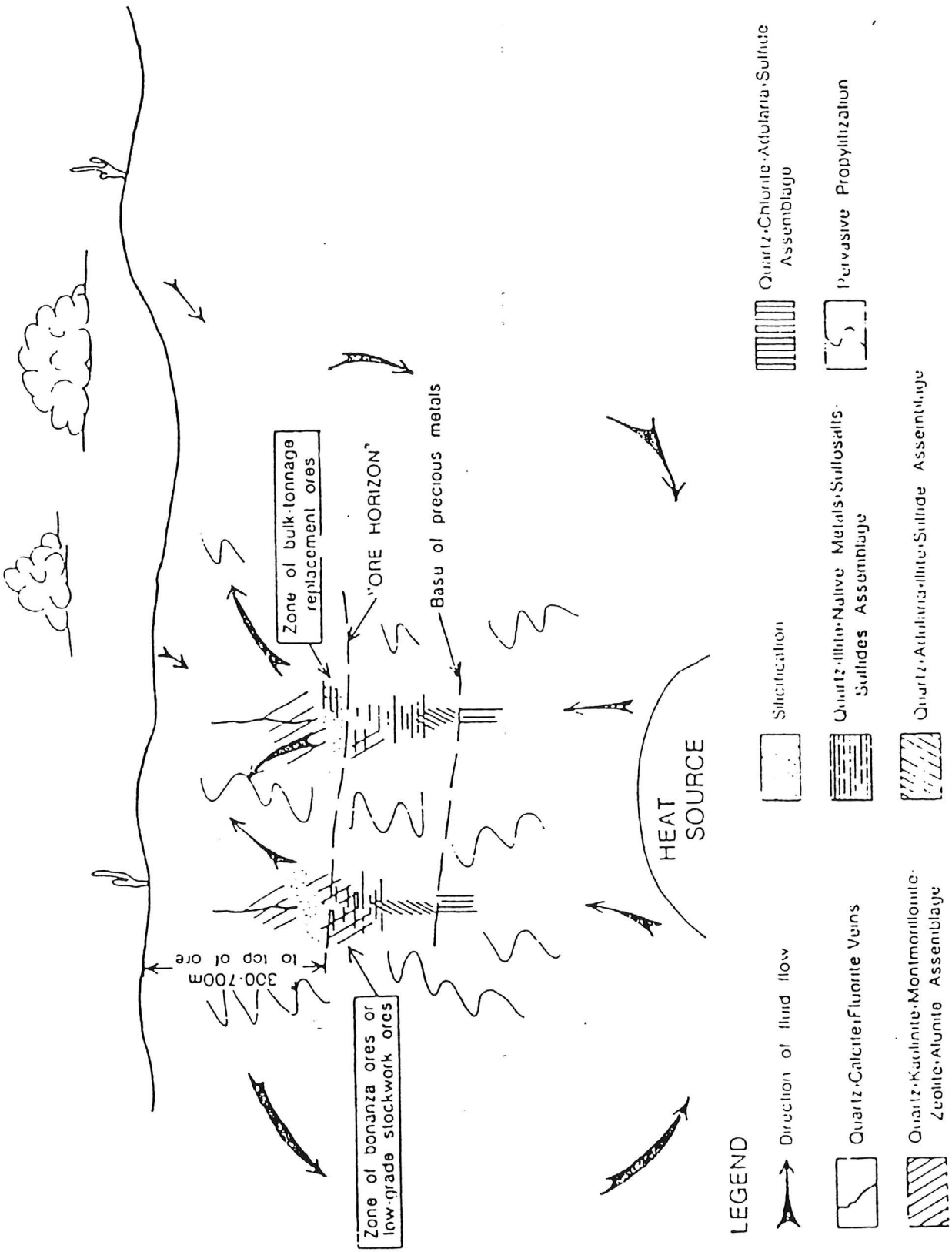
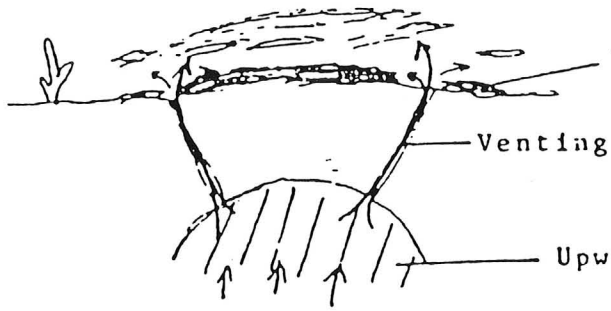


Table 1 — Stratigraphic column for units within the Superstition cauldron. Nur
bers to the right and left of the column are radiometric dates for the un
(from Stuckless and Sheridan, 1971). 1. Precambrian basement, 2. Arko
conglomerate, 3. Older dacite domes, 4. Siphon Draw Member, Superstiti
Tuff, 5. Quartz latite lava, Goldfield Mountains, 6. Quartz latite dom
Apache Cap, 7. Geronimo Head Formation, 8. Dogie Spring Member, Sup
stition Tuff, 9. Basalt lava, Black Mesa, 10. Rhyolite and Quartz latite lav
domes, and dikes, 11. Canyon Lake Member, Superstition Tuff, 12. Young
late gravels

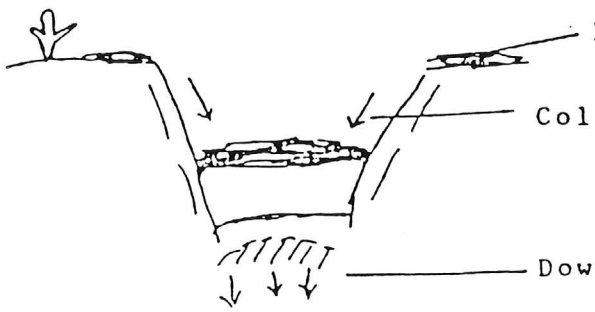
Figure 2. Generalized cross-section of hypothetical Ag-Au-base metal system showing types of alteration to be expected. Applies to vein and bulk-tonnage systems. (from Berger, USGS OF 82-795, 1982, p. 122, fig. 1b.)



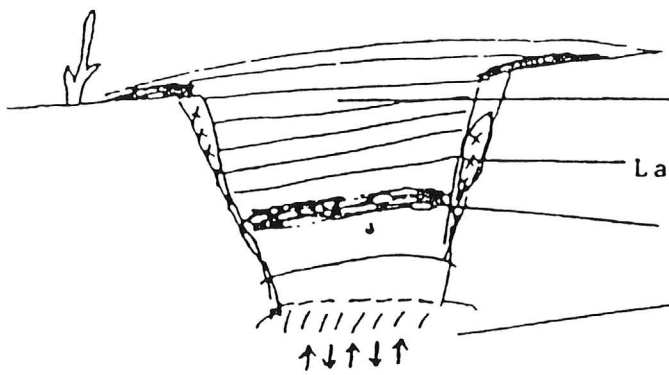
As magma pressure increases, volcanic material vents to the surface through ring fractures



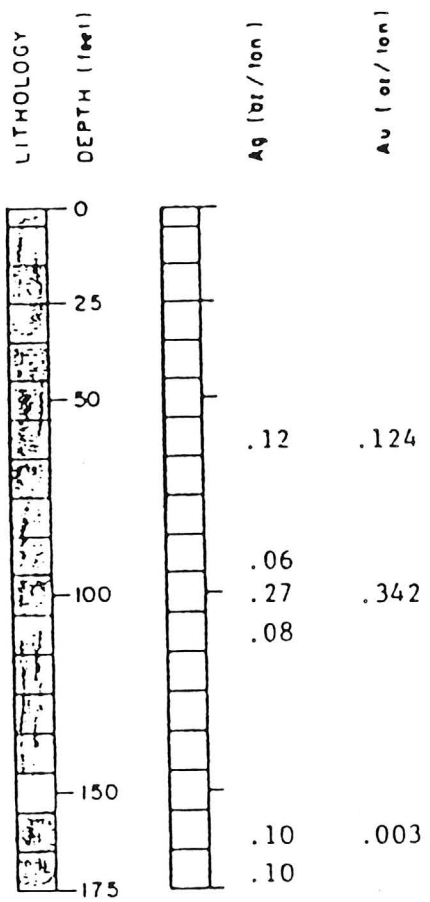
Subsequent to venting the magma level lowers and typically the host block above the magma chamber collapses into the emptying magma chamber.



Any further venting will fill the depression formed during collapse, and commonly intrusions into the ring fracture zone mark termination of simple caldera formation.



Ring fracture zones therefore can be envisioned as major conduit through which volcanic material vents to the surface in the formation of calderas. Ring fractures, the "plumbing" of caldera systems, also serve as channelways for the migration of hydrothermal solutions.



PURPLE CONGLOMERATE

BROWN CONGLOMERATE

GREY CONGLOMERATE

ASSAY ORDER:

Width (ft.) – Ag (oz/ton), Au (oz/ton)

GOLDEN HILLSIDE JOINT VENTURE

ASSAY SECTION

Drill Hole 82-1

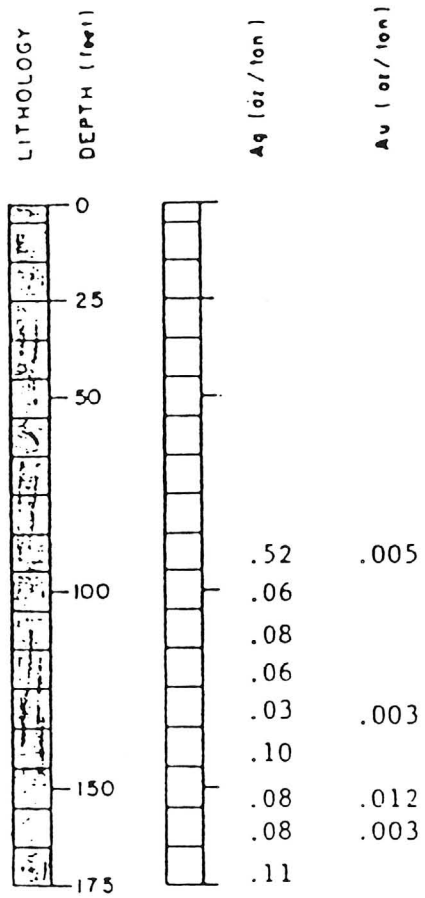
GOLDEN HILLSIDE AREA

MARICOPA COUNTY, ARIZONA

SCALE 1" = 50'

0 50 100 FEET

DRAWN BY G CROCKER	LOC T2N, R3E
DATE JUNE 1983	FIGURE Nº 9



PURPLE CONGLOMERATE

BROWN CONGLOMERATE

GREY CONGLOMERATE

ASSAY ORDER:

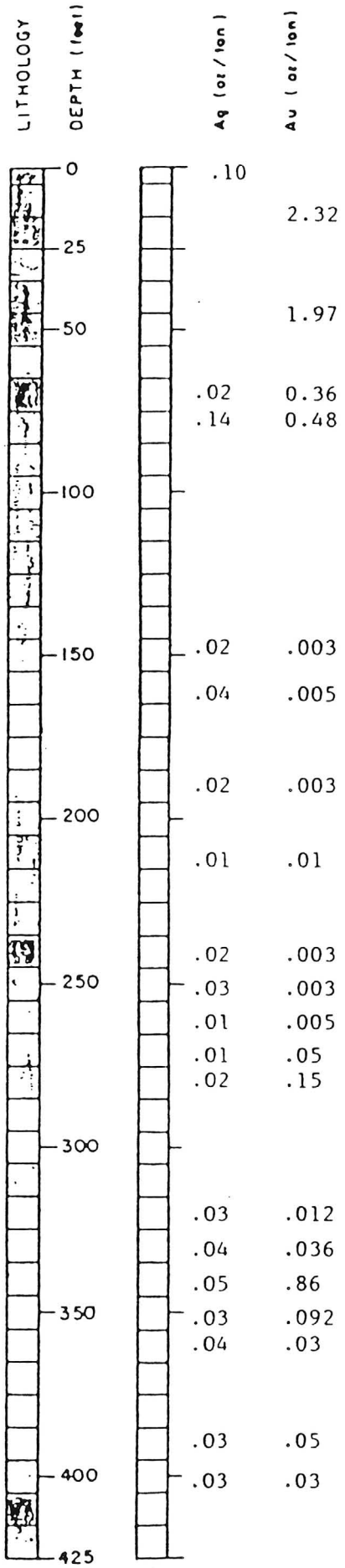
Width (ft.) - Ag (oz/ton), Au (oz/ton)

GOLDEN HILLSIDE JOINT VENTURE

ASSAY SECTION
DRILL HOLE 82-2
GOLDEN HILLSIDE AREA
MARICOPA COUNTY, ARIZONA
SCALE 1" = 50'

0 50 100 FEET

DRAWN BY G. CROOKER	LOC. T2N, R8E
DATE: JUNE 1983	FIGURE Nº 10



PURPLE CONGLOMERATE

BROWN CONGLOMERATE

GREY CONGLOMERATE

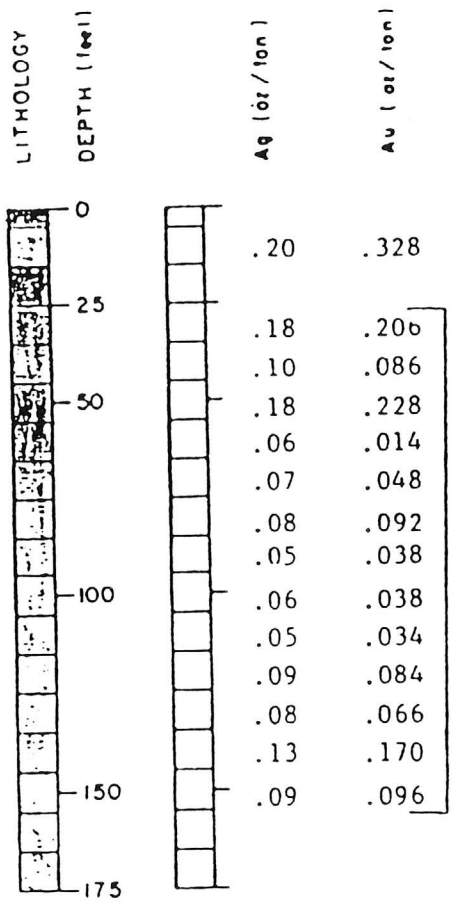
ASSAY ORDER:
Width (ft) - Ag (oz/ton), Au (oz/ton)

GOLDEN HILLSIDE JOINT VENTURE

ASSAY SECTION
DRILL HOLE 82-3
GOLDEN HILLSIDE AREA
MARICOPA COUNTY, ARIZONA
SCALE 1" = 50'

0 50 100 FEET

DRAWN BY G CROCKER	LOC. T2N, R8E
DATE JUNE 1983	FIGURE Nº. 11



130 - 0.09, 0.092

PURPLE CONGLOMERATE

BROWN CONGLOMERATE

GREY CONGLOMERATE

ASSAY ORDER

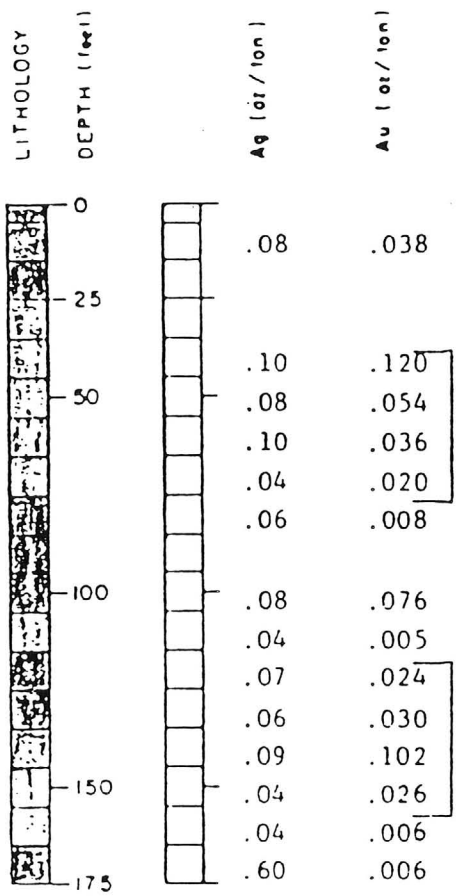
Width (ft.) - Ag (oz/ton), Au (oz/ton)

GOLDEN HILLSIDE JOINT VENTURE

ASSAY SECTION
DRILL HOLE 82-4
GOLDEN HILLSIDE AREA
MARICOPA COUNTY, ARIZONA
SCALE 1" = 50'

0 50 100 FEET

DRAWN BY G CROOKER	LOC T2N. R8E
DATE: JUNE 1983	FIGURE Nº 12



40 - 0.09, 0.058

40 - 0.06, 0.048

PURPLE CONGLOMERATE

BROWN CONGLOMERATE

GREY CONGLOMERATE

ASSAY ORDER

Width (ft.) - Ag (oz/ton), Au (oz/ton)

GOLDEN HILLSIDE JOINT VENTURE

ASSAY SECTION

DRILL HOLE 82-5

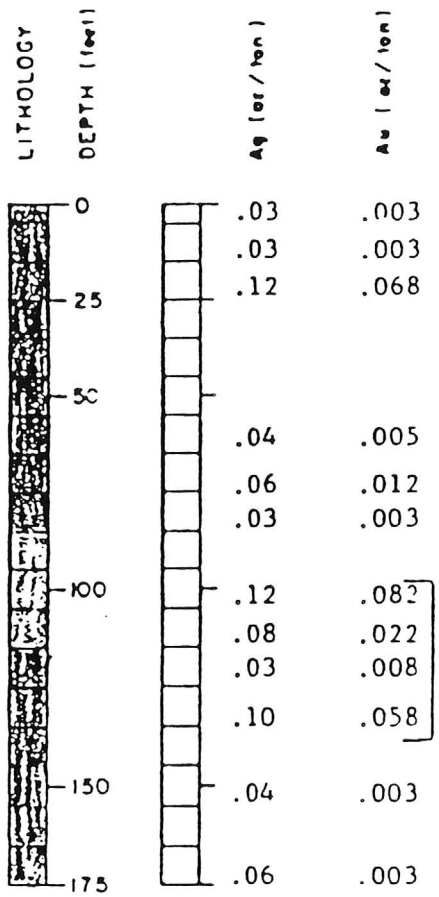
GOLDEN HILLSIDE AREA

MARICOPA COUNTY, ARIZONA

SCALE 1" = 50'

0 50 100 FEET

DRAWN BY G CROOKER	LOC. T2N, R8E
DATE: JUNE 1983	FIGURE Nº 13



40 - .08,.0 43

PURPLE CONGLOMERATE

BROWN CONGLOMERATE

GREY CONGLOMERATE

ASSAY ORDER

Width (ft.) - Ag (oz/ton), Au (oz/ton)

GOLDEN HILLSIDE JOINT VENTURE

ASSAY SECTION
DRILL HOLE 82-6
GOLDEN HILLSIDE AREA
MARICOPA COUNTY, ARIZONA
SCALE 1" = 50'

0 100 FEET

DRAWN BY G CROCKER	LOC. T2N. R8E
DATE JUNE 1983	FIGURE Nº 14

PRECIOUS METALS RECOVERY PROCESSES

Evaluation of Properties by Drilling and Assaying.

Experts in the Refining of Precious Metals by Ion Exchange Technology.

April 26, 1982

Mr. Allen Russell
8453 La Mesa
La Mesa, Ca. 92041

Enclosed please find the analysis of an ore sample that was submitted to our laboratory by Mr. Robert Dierking. The results derived from 57 pounds of ore and then calculated ounces of gold to the ton.

Sample Identification	Element Recovered	Oz./Ton
57 Pounds	Gold	0.32

Sincerely yours,

David M. Novak

c.c. Mr. Sam Sharma
Mr. Robert Dierking

1894 Commercenter West, Suite 201
San Bernardino, CA 92408 (714) 889-8313

PRECIOUS METALS RECOVERY PROCESSES

Evaluation of Properties by Drilling and Assaying.

Experts in the Refining of Precious Metals by Ion Exchange Technology.

Mr. Bob Dierkey
1630 East 4th Ave.
Apache Junction, Az. 85220

March 2, 1982

Dear Mr. Dierkey,

The following is the analyical results that you submitted to our laboratory for the gold content in your ore sample.

The method used for the determination was ion-exchange technology.

Sample Identification	Element	oz./ton
Rocks	Gold	0.84

Sincerely yours,

David M. Novak

1894 Commercenter West, Suite 201
San Bernardino, CA 92408 (714) 889-8313

COPPER STATE ANALYTICAL LAB., INC.

DNYANENDRA A. SHAH
ARIZONA REG. NO. 8888

REGISTERED ASSAYER
P. O. BOX 7517
TUCSON, ARIZONA 85725

710 E. EVANS BLVD
PHONE 602-884-5811
884-5812

John Fiorio
1630 E. 4th Ave.
Apache Junction, Az 85220

JOB # 000545
RECEIVED 11/5/81
REPORTED 11/16/81
INVOICE # C 0710

SAMPLE NUMBER	Au opt	Ag opt
1	Tr	0.15
2	0.040	0.24
3	0.018	0.32
5	0.130	0.50
6	0.018	Tr
11	0.148	0.92
15	0.024	0.30
18	0.064	0.56
19	0.448	0.72
20	0.288	0.65
21	0.095	0.35
22	4.305	1.55
24	5.650	2.85
25	0.075	Tr

REGISTERED ASSAYER CERTIFICATE NO. 8888 Dnyanendra Amritlal Shah DATE SIGNED 11-16-81 Arizona U. S.

1 ppm = 0.0001% 1 troy oz./ton = 34.286 ppm 1 ppm = 0.0292 troy oz./ton

* Gold and Silver reported in troy oz. per 2,000 lb. ton.

005

BRC

BAHAMIAN REFINING CORPORATION
CUSTOM REFINERS. COMPLETE ANALYSIS & FLOWSHEET DESIGN

9222 N. 14TH AVE., PHOENIX, ARIZ. 85021
TELEPHONE (602) 279-9702

November 17, 1981

S & S International Trade Corp.
John Fiorio
1630 E. 4th Avenue
Apache Junction, AZ

Dear Mr. Fiorio:

By actual recovery, using both hydrochemical and ferometallurgical methods, all in ozs. per ton, your values on 65 foot rock sample are .59 gold and .44 silver.

Sincerely,

Fred Finell, Jr.

FF:kt

As a mutual protection to clients, the public and this corporation, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from this corporation.

PRECIOUS METALS RECOVERY PROCESSES

Evaluation of Properties by Drilling and Assaying.

Experts in the Refining of Precious Metals by Ion Exchange Technology.

Mr. S.K. Sharma
1325 18th st. N/W
Washington, D.C. 00108

September 10, 1981

Dear Mr. Sharma,

Enclosed please find the anaytical results of the ore samples that were sent to us via express mail and received on Saturday September 5, 1981.

The results of the ore samples were determined by ion-exchange separation.

As we discussed by telephone today, we will be looking forward to receiving concentrate from this ore. At this time we certainly feel the property should be futher explored. Sam, when sending the concentrate also please include some of the middlings and tailings so that we could also anaylize them.
We will be looking forward to hearing from you and hopefully we will be able to set up a recovery process for you.

Sample Identification	Element Recovered	OZ/TON
Large Bag	Gold	2.10
Small Bag	Gold	0.32

Note: Silver present as the metal was nil.

Sincerely Yours,

David M. Novak
Present

1894 Commercenter West, Suite 201
San Bernardino, CA 92408 (714) 889-8313

PRECIOUS METALS RECOVERY PROCESSES

Evaluation of Properties by Drilling and Assaying.

Experts in the Refining of Precious Metals by Ion Exchange Technology.

Mr. Sam Sharma
1325 18th St.
Northwest
Washington D.C. 20036

October 16, 1981

Dear Mr. Sharma,

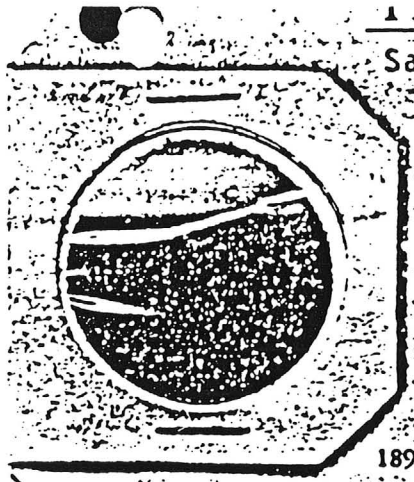
Enclosed please the analytical results of the ore concentrates that we received at our labortory last week. The method used to determined the results was ion-exchange separation.

Sample Identification	Element	Oz./ton
Cons #1	Gold	5.30
Cons #2	Gold	0.44

Sincerely Yours,

David M. Novak
President

1894 Commercenter West, Suite 201
San Bernardino, CA 92412 (714) 824-0593



Sam Sharma

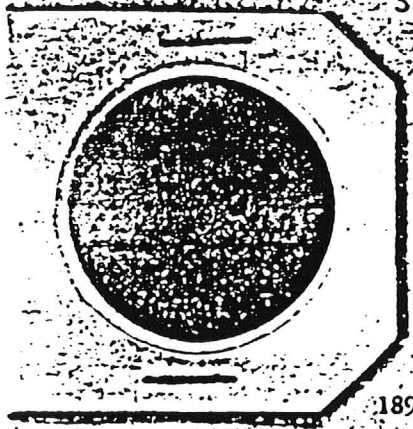
Date: October 16, 1981

Sample Identification: Cons #2

Element Recovered: Gold

Ounces per Ton: 0.44

1894 Commercenter West, Suite 201, San Bernardino, California 92412



PRECIOUS METALS RECOVERY PROCESSES

Sam Sharma

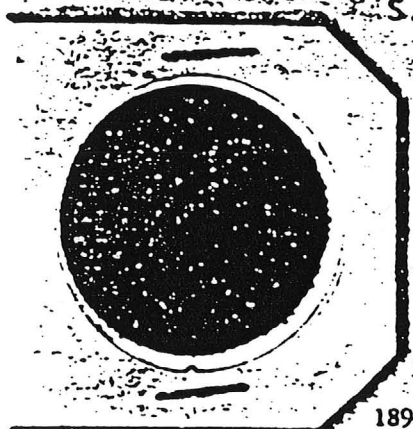
Date: October 16, 1981

Sample Identification: Cons #1

Element Recovered: Gold

Ounces per Ton: 5.30

1894 Commercenter West, Suite 201, San Bernardino, California 92412



PRECIOUS METALS RECOVERY PROCESSES

S.K. Sharma

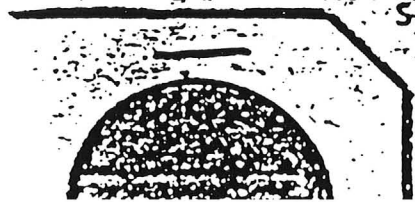
Date: September 10, 1981

Sample Identification: Large Bag

Element Recovered: Gold

Ounces per Ton: 2.10

1894 Commercenter West, Suite 201, San Bernardino, California 92412



PRECIOUS METALS RECOVERY PROCESSES

S.K. Sharma

Date: September 10, 1981

Sample Identification: Small Bag

ARIZONA TESTING LABORATORIES

[illegible] 817 WEST MADISON ST. [illegible] PHONE [illegible]

For

Date September 6, 1974

Sample of Ore

Received: 9-4-74

Submitted by: same

ASSAY CERTIFICATE

Gold figured at $ 200.00 per ounce

Silver figured at $ 5.00 per ounce

LAB. NO.	IDENTIFICATION	GOLD		SILVER		PERCENTAGES	
		OZ. PER TON	VALUE	OZ. PER TON	VALUE		
7671	No Mark	2.75	$550.00 $200. oz				

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

THE UNIVERSITY OF ARIZONA
TUCSON, ARIZONA 85721

ARIZONA BUREAU OF MINES

TEL. (602) 884-1943

February 10, 1976

Mr. Frank C. Peterson
P. O. Box 21462
Phoenix, Arizona 85036

Dear Mr. Peterson:

This will report on results of a standard cyanide agitation leaching test of your mine run ore.

As previously reported, the ore is a very dark-colored, weathered or altered calcite, commonly called "black" calcite. Assays of a representative portion of the samples received showed 0.14 ounces of gold per ton, 23.7 ounces of silver and 2.05 percent of manganese with no other significant mineral values.

The lime additions required to maintain a suitable basic leach solution amounted to 1.2 pounds per ton of ore. Cyanide strength was maintained by adding a total of 0.9 pounds per ton in three staged additions.

After ten days leaching of minus 65-mesh ore, the results were as follows:

	Percent Extraction at end of:			
	24 hours	48 hours	120 hours	240 hours
Gold	60	75	80	80
Silver	30	33	36	38

It is believed no appreciable increase in extraction of either metal could be gained by extending the leaching time so the test was halted at this point.

REPORT OF A TELEPHONE CONVERSATION between James Aspell and Michael Migel on April 15, 1980

Re: Report from Escapules at Tombstone regarding 200 lbs. of samples from Golden Hillside

Aspell reported that the Escapules have completed their testing and divided the two samples into two lots: one crushed to one inch, and the other crushed to one-half inch. The Escapules reported a better than 74% recovery, but there was a strange phenomenon in that the gold in this assay ran very high, and the silver ran very low. This is contrary to any samples we have ever taken from the black calcite vein. Herewith the Escapules' results on leaching:

ONE INCH

	Gold	Silver
24	.130	.09
48	.156	.16
72	.159	.164

The average values on 48 (no material increase on 72) = $80.40 ton

ONE-HALF INCH

24	.139	.23
48	.194	.36
72	.197	.362

The average values on 48 (no material increase on 72) = $102.40 ton

It is therefore evident that the black calcite material will have to be crushed to one-half inch or finer.

J.M.M.

MIDVALE OFFICE

ROCKY MOUNTAIN GEOCHEMICAL CORP.

P. O. BOX 337 • 3323 W. 7900 SOUTH • MIDVALE, UTAH 84047 • PHONE: (801) 255-3588

Certificate of Analysis

Date: June 3, 1976

RMGC Numbers:

Local Job No.: 76-11-43 S

Client: REX MONTIS SILVER COMPANY
216 Paxton Ave.
Salt Lake City, UT 84121
attn: Merlyn Bingham

Foreign Job No.:

Invoice No.: M 7855

Client Order No.:

Report On: 1 sample

Submitted by: Merlyn Bingham

Date Received: May 26, 1976

Analysis: Lead and Zinc assay, also Gold and Silver assay

Analytical Methods: Lead and Zinc determined by atomic absorption; Gold and Silver determined by fire assay.

Remarks:

cc: enc.
file (2)

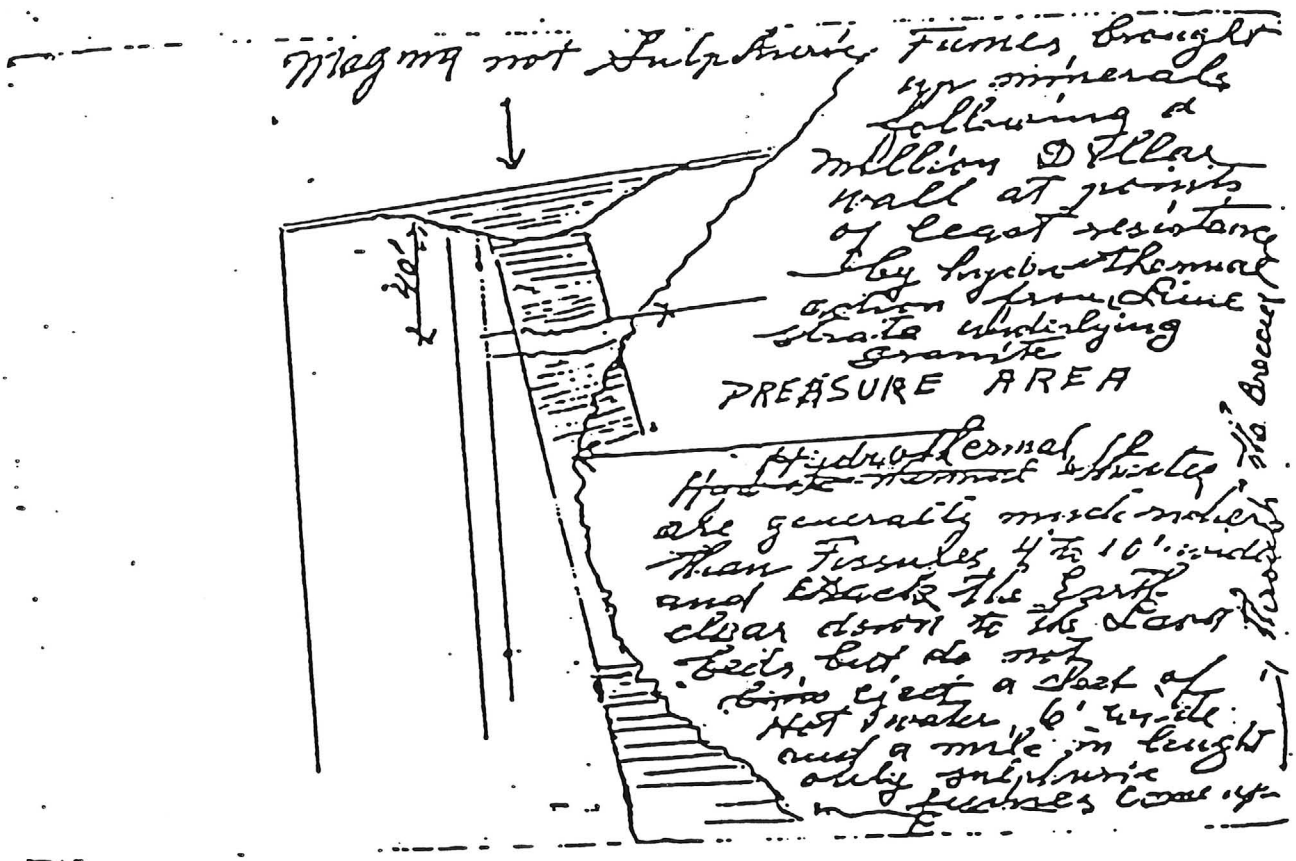
LRR/llp

Sam.No.	Lead (%)	Zinc (%)	oz/ton Gold -fire assay-	oz/ton Silver -fire assay-
1	1.18	1.04	.077	29.25

By Lawrence R. Reid
Lawrence R. Reid

All values are reported in parts per million unless specified otherwise. A minus sign (—) is to be read "less than" and a plus sign (+) "greater than." Values in parenthesis are estimates. This analytical report is the confidential property of the above mentioned client and for the protection of this client and ourselves we reserve the right to forbid publication or reproduction of this report or any part thereof without written permission.

ND = None Detected 1 ppm = 0.0001% 1 Troy oz/ton = 34.284 ppm


Magma not Sulphuric Fumes, brought up minerals following a Million Dollar wall at points of least resistance by hydrothermal action from lime strata underlying granite
PREASURE AREA
Hydrothermal shoots are generally much richer than fissures, 4' to 10' wide and crack the earth clear down to the lava beds, but do not eject a sheet of hot water, 6' wide and a mile in length. Only sulphuric fumes come up through the breccia.
Joseph Stephan (former partner of Robert J. Dierking).

IRON KING ASSAY OFFICE

ASSAY CERTIFICATE

BOX 247 – PHONE 632-7410
HUMBOLDT, ARIZONA 86329

ASSAY MADE FOR

May 27, 1979

Ref no.	DESCRIPTION	GOLD oz/ton Au	SILVER oz/ton Ag		% Fe
95-24-1	Top road, 1st run	.116	0.06		
95-24-2	Top Hole, "	.100	Tr		
95-24-3	East Pile "	.122	0.06		
95-24-4	West pile "	.144	Tr		
95-24-5	Top Road, Special run	.166	0.61		
95-24-6	Top Hole " "	.160	Tr		
95-24-7	East Pile " "	.614	Tr		
95-24-8	West Pile " "	.572	Tr		

CHARGES $58.00

ASSAYER

ANALYTICAL REPORT

SPECTRO-ANALYSIS_____ SPECTRO-CHEMICAL _____ WET ANALYSIS _____ SPECIFIC GRAVITY _____

FIRE ASSAY_____ ATOMIC ABSORPTION _____ PROCESS EXTRACTION RESEARCH X PROCESS AMALGAM _____

Sample submitted by: Hays Colvin DATE 8-3-76

Sample description: Golden Hillside Mine, Black Calcite OTL11535

PROOF-OF-EXTRACTION

EVALUATE FOR PRECIOUS METAL CONTENT VIA PRODUCTION EXTRACTION:

	Rhodium	0.07 oz. p/t
	Ruthenium	nil
	Palladium	nil
*	Silver	11.28 oz. p/t
	Iridium	0.11 oz. p/t
	Platinum	0.12 oz. p/t
	Osmium	nil
	Gold	0.23 oz. p/t

* An analysis was perfobmed on the waste (tails) to determine precious metals left after leach extraction. Only silver was found. This silver would account for ar additional 3.37 oz. p/t.

Spectrograph reports must be given in a range rather than an exact figure. However, the particular model spectrograph which OTL uses, is superior in that it detects metals that could be overlooked by other methods of determination. It is especially suited to the trace and near trace elements.

The above figures are not necessarily indicative of the values obtainable by conventional extraction methods. All quantities shown in 'ounces per ton'.

Most samples containing the platinum group metals are of a 'complex' nature. In the make-up of these 'complexes' are many 'unstables' that tend to outweigh the 'stable' portion and act to suppress, or even prevent, the extraction of the 'stables'. OTL has been successful in overcoming this problem. We have established what we believe to be all the required basic production processes for the extraction of the precious metals from domestic ores.

OTL is equipped to perform the research needed to establish the feasibility and adaptability of ores to the OTL RECOVERY METHODS.

TEST FEE $135.00 PD.

ORE-TECH LABORATORIES, incorporated

P.O. BOX 174, SCOTTSDALE, ARIZONA 85252 ( ) 945-2110

MINERAL ORES - PROCESS RESEARCH AND DEVELOPMENT - PRODUCTION EXTRACTION PROCESSES

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Golden Hillside Mine
Mr. Ed. Wilkerson

Date November 2, 1979

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
1933	Claim #1	1.25	0.30				

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Mr. Frank Peterson
352 North 35th Street
Phoenix, Arizona 85008

Date October 25, 1979

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
1852	Golden Hillside Mine Claim #1, Dyke Shaft	0.25	0.15				

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer
CERTIFICATE
6253
CLAUDE E. McLEAN, JR.
Date Signed 10/25/79

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Mr. Frank C. Peterson
Post Office Box 21462
Phoenix, Arizona 85036

Date July 18, 1980

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
6888	Golden Hillside #1 Burnt Shaft	0.06	0.10				

3 cc: Mr. Robert J. Dierking
1630 East 4th Avenue
Apache Junction, AZ. 85220

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer
Certificate No. 6258
Claude Eugene McLean Jr.
Signed 7/18/80
Arizona, U.S.A.

Arizona Testing Laboratories

815 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

Rec'd 34607 10-27

For Mr. Frank Peterson
Post Office Box 21462
Phoenix, Arizona 85036

Date September 30, 1977

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
5245	Black Calcite North & South end of vein Golden Hillside Mine Claim No. 1 9-18-77	0.02	6.5				

cc: Robert J. Dierking
Route 7, Box 2070
Apache Junction, AZ. 85220

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean

Claude E. McLean, Jr.

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Mr. Frank Peterson
Box 21462
Phoenix, Arizona 85036

Date April 17, 1979

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
9745	Golden Hillside Claim #4 - #2 shaft taken from the N.E. wall at 22'	0.07	0.45				

cc: Mr. Robert Dierking
1630 E. 4th Avenue
Apache Junction, Az. 85220

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer
CERTIFICATE NO.
6258
CLAUDE EUGENE
McLEAN, JR.
Date Signed 4/17/79
ARIZONA, U.S.A.

ARIZONA TESTING LABORATORIES

A DIVISION OF CLAUDE E. McLEAN & SON LABORATORIES, INC.
815 WEST MADISON STREET PHOENIX, ARIZONA 85007 PHONE 254-6181

For Hillside Mining
218 North 85th Place
Mesa, Arizona 85207

Date March 26, 1975

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
9054	Quartz Concentrate	16.6	4.70				
	Tails	0.08	0.20				
	Carbonate Concentrate	0.16	8.35				
	Tails from Carbonate	0.06	4.95				

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E McLean

Claude E. McLean, Jr.

ARIZONA TESTING LABORATORIES

A DIVISION OF CLAUDE E. McLEAN & SON LABORATORIES, INC.
815 WEST MADISON STREET PHOENIX, ARIZONA 85007 PHONE 254-6181

For Mr. Frank C. Peterson
Post Office Box 21462
Phoenix, Arizona 85036

Date January 3, 1975

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
8454	Mark (Black Calcite Vein)	- DID NOT ASK FOR GOLD CONTENT -	15.7				

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E McLean

Claude E. McLean, Jr.

Shop No. 2600
File No. 1978-SP

Date 25 JULY 1967

VALUES
Latest Quotation

1 oz. Gold.....
1 oz. Silver.....
1 lb. Copper.....
1 lb. Lead.....
1 lb. Zinc.....

THIS CERTIFIES
Samples submitted for assay contain as follows

Arizona Assay Office

815 NORTH FIRST STREET
Phone: 253-4001

Phoenix, Arizon
P. O. BOX

MR. JOE STEPHAN
P. O. BOX 423
MESA ARIZONA

Short Ton .....
Short Ton Unit .
Long Ton .....
Long Ton Unit .

MARKS	SILVER PER TON Ozs.	Tenths	VALUE PER TON	GOLD PER TON Ozs.	Tenths	VALUE PER TON	TOTAL VALUE PER TON of Gold & Silver	PERCENTAGE
SEALED BOTTLE		.9	$1.35	4.	.32	$151.20		
							SEALS BROKEN IN THIS OFFICE	

Charges $ 4.00 PAID

Assayer.....

JACK STONE Reg. No.

J and J Research and Development Inc.

Gold, Silver and Platinum Ores
2027 South McQueen Road • Mesa, Arizona 85202
Phone: (602) 892-4561

October 26, 1982

TO: Mr. Sam Sharma
S & S International Trade, Inc.
1325 - 18th Street N.W.
Washington, D.C. 20036

R E C E I P T

Received from S & S International Trade, Inc. the sum of EIGHT THOUSAND TWO HUNDRED FIFTY and NO/100 DOLLARS ($8,250.00) for testing and assaying ore samples from the Golden Hillside Mine. Samples submitted by Frank Buchella during the period August 1, 1982 thru August 27, 1982.

Date Received	Amount
August 10, 1982	$1,000.00
August 11, 1982	1,000.00
August 13, 1982	1,000.00
August 16, 1982	2,000.00
August 17, 1982	2,000.00
September 8, 1982	1,250.00
TOTAL	$8,250.00

Jerry C. Henderson, Research Chemist

JCH:hh

cc: Mr. Bob Dierking

GOLDRUNNER MINERAL TESTING LABS
3049 SCENIC DRIVE
APACHE JUNCTION ARIZONA 85220
TEL. (602) 982-3260

DATE: 3-21-74

NAME: HILLSIDE MINES TEST NO. 0316

SAMPLE CONSISTS MAINLY OF: BLACK VEIN MATERIAL WITH DIRT. LOWER HOLE APPROX. 150' S/E OF DISCOVERY.

SAMPLE WAS CRUSHED: (YES) AS IS ( )

TO BE FIRE ASSAYED: AS IS (YES) AFTER PULVERIZING

TO BE PANNED DOWN TO CONCENTRATES (- NO -) AFTER PULVERIZING

TO BE PRE-TREATED (NO) FOR MORE ACCURATE ASSAY

	GOLD	SILVER	OTHER
RESULTS:	(4.92) OZ. PER TON	(1.24) OZ. PER TON	

SPECIAL NOTE: FREE GOLD WAS SEEN IN (1) UNCRUSHED SAMPLE.

VISUAL INSPECTION (ANALYSIS) OF ORE ONLY: ( )

CRUSHED PANNED AND INSPECTED TO THE BEST OF OUR ABILITY, SHOWS THE FOLLOWING:
THE FOLLOWING METALS CAN BE SEEN IN YOUR CONCENTRATES.
SILVER METAL, BLACK & SILVER METAL, BROWN METAL,
BLACK SAND & MAGNETIC SAND, SILVER GRAY & COPPER METAL BALLS

NOTE: CUSTOMERS ORE MAY BE RICHER OR LEANER, IT ALL DEPENDS ON WHERE THE DIP WAS TAKEN OUT OF THE QUARTERING, AND WHERE THE CUSTOMER OBTAINED THE SAMPLE FROM.

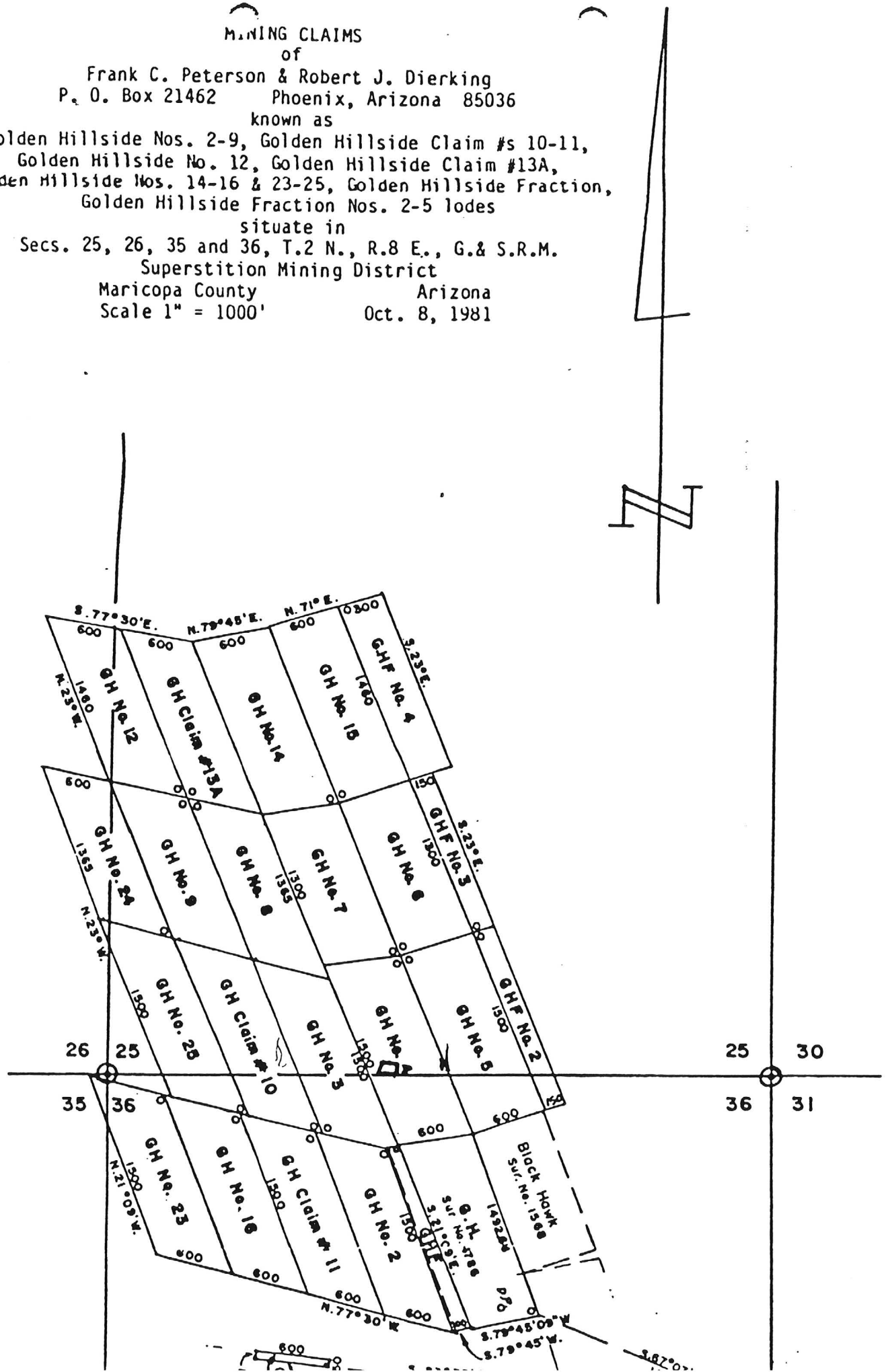
FINAL RESULTS ARE MERELY A REFERENCE THAT THE ORE (IS) OR (IS NOT) CARRYING NOBLE METALS.

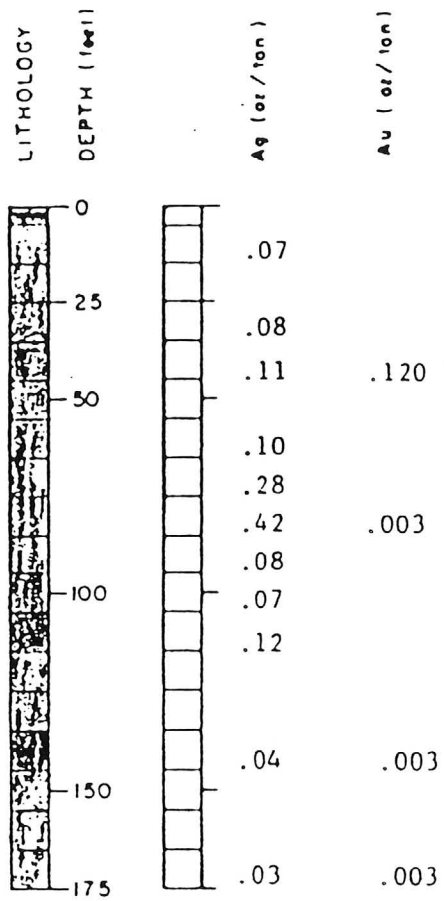
WE ALSO DO BLAST FURNACE MELTING OF METALS, AND CARBON ARC ROD MELTING.

WE ALSO DO ELECTROPLATING OF GOLD, SILVER, COPPER AND BRONZE.

AMT. PAID 7.50 SIGNED: R R Taylor

MINING CLAIMS
of
Frank C. Peterson & Robert J. Dierking
P. O. Box 21462 Phoenix, Arizona 85036
known as
Golden Hillside Nos. 2-9, Golden Hillside Claim #s 10-11,
Golden Hillside No. 12, Golden Hillside Claim #13A,
Golden Hillside Nos. 14-16 & 23-25, Golden Hillside Fraction,
Golden Hillside Fraction Nos. 2-5 lodes
situate in
Secs. 25, 26, 35 and 36, T.2 N., R.8 E., G.& S.R.M.
Superstition Mining District
Maricopa County Arizona
Scale 1" = 1000' Oct. 8, 1981





PURPLE CONGLOMERATE

BROWN CONGLOMERATE

GREY CONGLOMERATE

ASSAY ORDER:

Width (ft.) - Ag (oz/ton), Au (oz/ton)

GOLDEN HILLSIDE JOINT VENTURE

ASSAY SECTION

DRILL HOLE 82-7

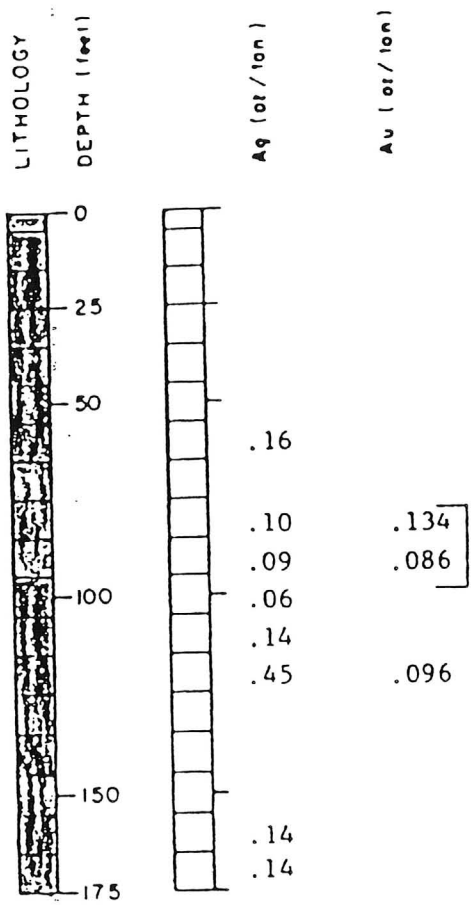
GOLDEN HILLSIDE AREA

MARICOPA COUNTY, ARIZONA

SCALE 1" = 50'

0 50 100 FEET

DRAWN BY G CROCKER	LOC. T2N. R8E
DATE. JUNE 1983	FIGURE Nº 15



20 - 0.09, 0.11

PURPLE CONGLOMERATE

BROWN CONGLOMERATE

GREY CONGLOMERATE

ASSAY ORDER

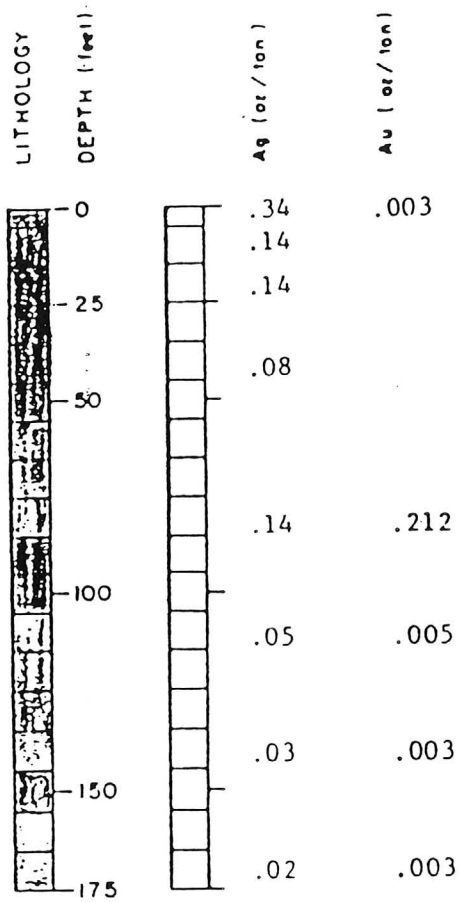
Width (ft.) - Ag (oz/ton), Au (oz/ton)

GOLDEN HILLSIDE JOINT VENTURE

ASSAY SECTION
DRILL HOLE 82-8
GOLDEN HILLSIDE AREA
MARICOPA COUNTY, ARIZONA
SCALE 1" = 50'

0 50 100 FEET

DRAWN BY G CROCKER	LOC. T2N, R8E
DATE: JUNE 1983	FIGURE Nº. 16



PURPLE CONGLOMERATE

BROWN CONGLOMERATE

GREY CONGLOMERATE

ASSAY ORDER:

Width (ft.) - Ag (oz/ton), Au (oz/ton)

GOLDEN HILLSIDE JOINT VENTURE

ASSAY SECTION

DRILL HOLE 82-9

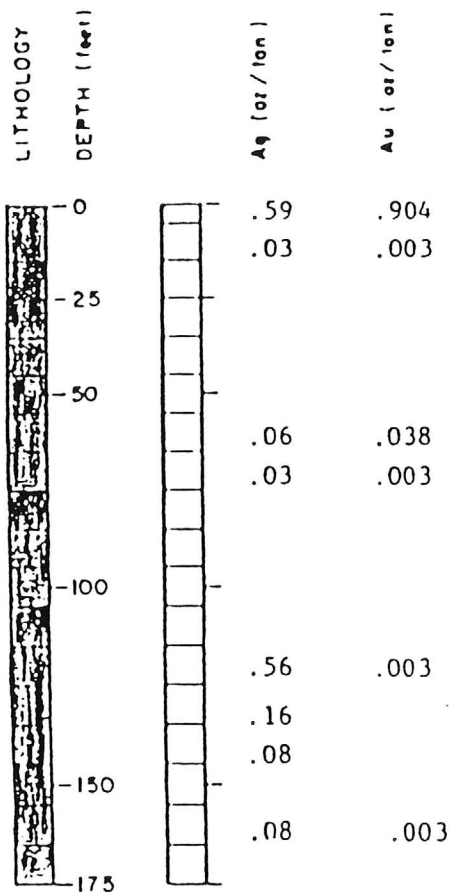
GOLDEN HILLSIDE AREA

MARICOPA COUNTY, ARIZONA

SCALE 1" = 50'

0 50 100 FEET

DRAWN BY G CROCKER	LOC T2N, R8E
DATE JUNE 1983	FIGURE Nº 17



PURPLE CONGLOMERATE

BROWN CONGLOMERATE

GREY CONGLOMERATE

ASSAY ORDER

Width (ft.) - Ag (oz/ton), Au (oz/ton)

GOLDEN HILLSIDE JOINT VENTURE

ASSAY SECTION

DRILL HOLE 82-10
GOLDEN HILLSIDE AREA
MARICOPA COUNTY, ARIZONA
SCALE 1" = 50'

0 50 100 FEET

DRAWN BY G CROOKER	LOC. T2N, R8E
DATE · JUNE 1983	FIGURE Nº. 18

Golden Hillside Drill Hole Cutting's 12th of August, 1983
Samples were taken every 10' from Hole #1, #2, and #3
All samples were mixed together to acquire an average.

TABLE 1 GOLDEN HILLSIDE DRILL HOLE CUTTINGS
24 hr. AGITATED CYANIDE LEACH TEST
RESULTS SHOWN IN THE FOLLOWING CHART

Note: Each column represents a separate split at as-received size.

SAMPLE:	A Split 1 3270A/3273A		A Split 2 3334		A Split 3 3351		A Split 4 3334C		A Split 5 3334E		B Split 1 3270B		B Split 2 3273B	
LEACH TIME Hrs	Pulverized Oz/ton		Pulverized Oz/ton		As Receuved Oz/ton						Pulverized Oz/ton		As Received Oz/ton	
	AU	AG	AU	AG	AU	AG	AU	AG	AU	AG	AU	AG	AU	AG
1	.097	.11	.089	2.11	-	-					.087	.09	-	—
2	.189	.26	.092	-	.094	.09					.093	.09	.033	.046
4	.354	.61	.098	-	.12	-					.16	.14	.097	-
8	.460	.97	.10	-	-	-					.27	.23	-	-
24	.896	.98	.23	2.73	.17	.11					.42	.47	.098	.09
Tail Assay Fire	.004	.08	.001	.29	.004	.01					.003	.01	.002	.01
Calculated Head Assay	.982	.87	.19	3.21	.89	.67					.87	.18	.87	.91
Head Assay Fire	.992	.76	.20	.97	-	-	2.06	2.11	.97	.96	.76	.21		
Percent Gold Recovered	99.1		98.8		95.7						95.2		75.0	

page 5

Reed Engineering

P.O. Box 1520
Carlsbad, CA 92018

Client Ray Payton

Golden Hillside

Date: OCT 20 1993

ASSAY CERTIFICATE

Sample Number	Gold OZ/TON	Gold PPM	Silver OZ/TON	Silver PPM
Roadside Tailings	.14	4.8	.62	21.3
Roadside Cons.	83.51	2,863.2	17.10	586.3
Test Hole #3, Tailings	.09	3.1	.45	15.4
Test Hole #3	201.84	6,920.2	30.16	1,034.0

HEAD ORE= 2.01 OZ. PT for test hole # 3

" " .83 OZ. PT for Roadside Material

Notes
Test: Fire Assay, quantitative.
OZ. : Troy ounce.
TON : 2,000 Lbs.
PPM : Parts per Million.
PPM : Same as Milligrams per Kilo.
Lower Detection Limit: .02 ppm.
Assay is no representation or warranty
of sample origin or property value.
Assay fees paid: $ 114.00

P. Reed

Assayer.

When recorded, mail to:

Name: JACK DAVIS

Address: P.O. BOX 1719

City/State/Zip Code: CHANDLER, AZ. 85244

OFFICIAL RECORDS OF
MARICOPA COUNTY RECORDER
HELEN PURCELL
95-0709110 11/17/95 01:55
LILIAN 1 OF 1

Space above this line for Recorder's use

QUITCLAIM DEED

KNOW ALL MEN BY THESE PRESENTS:

That ~~I~~(we), Robert J. Dierking and Frank C. Peterson the undersigned, for the consideration of Ten Dollars ($10.00), and other valuable considerations, do hereby release, remise, and forever quitclaim unto Manhattan Resources, Inc., a Nevada Corporation.

all right, title and interest in that certain Property situated in Maricopa County, State of Arizona, and described as follows:

Golden Hillside Mining Claims, located in the Superstition Mining District Sections; 25. 26. 35 and 36 Township 2 N, Range 8 E, G & S. R. M., Maricopa County, Arizona.

AMC Numbers: 31512, 31513, 31514, 31515 & 31516.

RECEIVED
B.L.M. AZ STATE OFFICE
DEC 11 9 25 AM '95

IN WITNESS WHEREOF, I(we) have hereunto set my(our) hand(s) and seal this 15th day of NOVEMBER 19 95.

ROBERT J. DIERKING

Robert J Dierking
~~FRANK C. PETERSON~~
Print Name of Releasor

ROBERT J. DIERKING
Print Name of Releasor

FRANK C. PETERSON

Frank C Peterson
Signature of Releasor

Robert J Dierking
Signature of Releasor

Print Name of Witness (if required by State Laws)

Print Name of Witness (if required by State Laws)

Signature of Witness (if required by State Laws)

Signature of Witness (if required by State Laws)

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(UPC 722573-84066) (ISBN 1-57164-066-5)

sclaim (KC)

State of Arizona)
) ss. **ACKNOWLEDGMENT**
County of Yavapai)

On this 15th day of November, 19 95, before me, the undersigned Notary Public, personally appeared Frank C. Peterson and Robert J. Dierking,

known to me to be the individual(s) who executed the foregoing instrument and acknowledged the same to be his(her)(their) free act and deed.

My Commission Expires: My Commission Expires Feb. 13, 1999

Notary Public

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(UPC 722573-64066) (ISBN 1-57164-066-5)

ANALYTICAL REPORT

_____SPECTRO-CHEMICAL _____WET ANALYSIS _____SPECIFIC GRAVITY _____

IC ABSORPTION _____PROCESS EXTRACTION RESEARCH _____PROCESS AMALGAM _____

I by: G. Schroeder DATE 11-26-75

LSIDE MINING CORP. 6518 Apache Trail, Mesa Arizona, Lilly Ann Apts.

..on: #2 OTL8796

:s dem gesamten Bohrgut von Bohrung 2

s burnt on spectrograph and results are as follows:

Silver	0.24 oz. p/t
Iridium	0.02 oz. p/t
Platinum	0.12 oz. p/t
Gold	0.13 oz. p/t

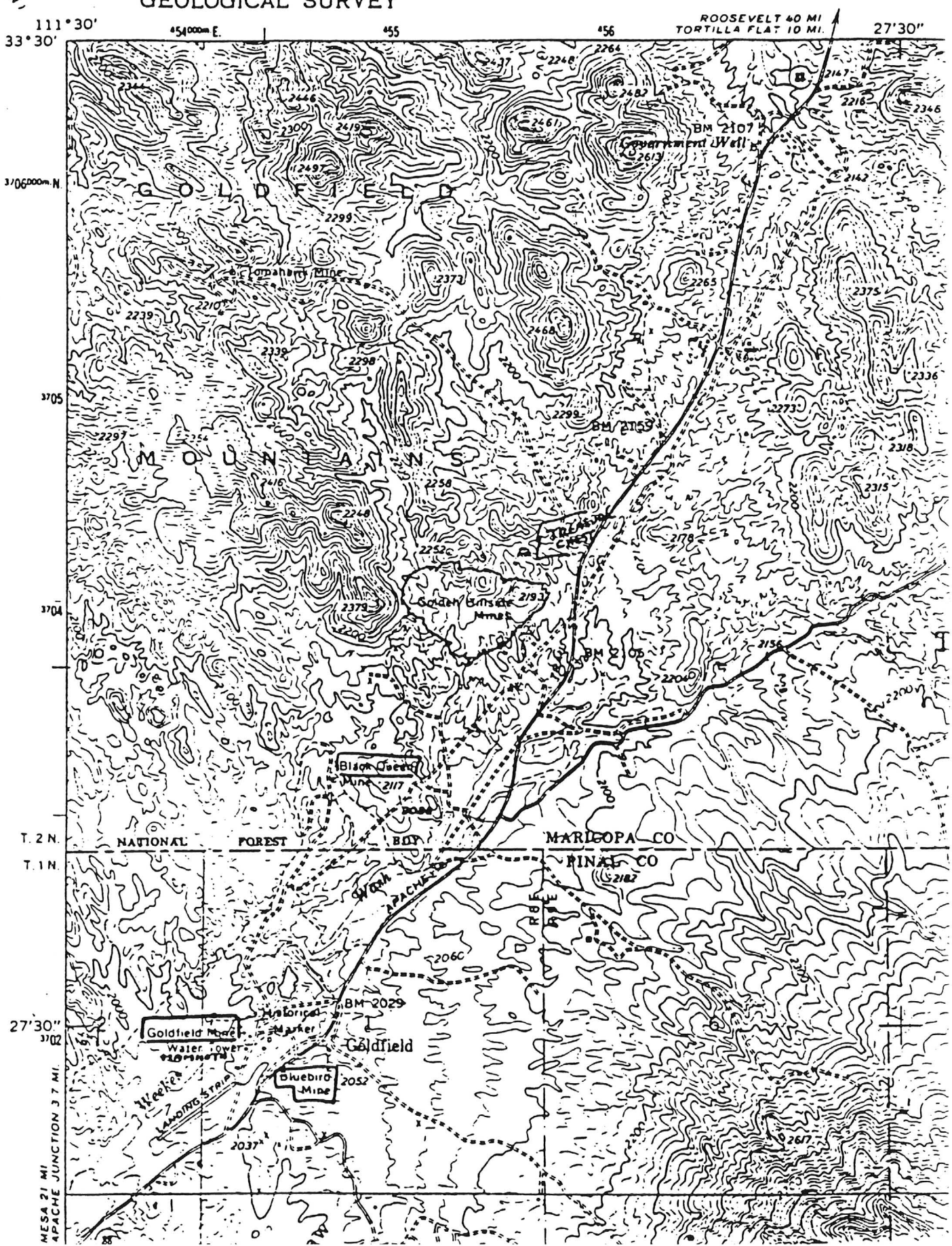
reports must be given in a range rather than an exact figure. However, the particular model which OTL uses, is superior in that it detects metals that could be overlooked by other methods on. It is especially suited to the trace and near trace elements.

ures are not necessarily indicative of the values obtainable by conventional extraction methods. shown in 'ounces per ton'.

containing the platinum group metals are of a 'complex' nature. In the make-up of these e many 'unstables' that tend to outweigh the 'stable' portion and act to suppress, or even extraction of the 'stables'. OTL has been successful in overcoming this problem. We have es- we believe to be all the required basic production processes for the extraction of the precious omestic ores.

3651 II SE
(STEWART MTN)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Kappes, Cassiday & Associates

1845 Glendale Avenue, Sparks, Nevada 89431
702-356-7107 - Telex 170049

12 August, 1983

GOLDEN HILLSIDE DRILLHOLE CUTTINGS
CYANIDE BOTTLE ROLL TESTS

FINAL REPORT - 12 AUGUST, 1983

SUMMARY AND CONCLUSIONS

Two samples of drillhole cuttings, labelled "A" and "B" respectively, were tested for gold and silver solubility in cyanide, using agitated leach tests on pulverized and as-received samples. The results showed that essentially all of the gold is soluble in a 24 hour leaching period. Head and tails were analyzed by fire assay techniques and test solutions were assayed by direct AA analysis. The results of the leach tests are presented in Table 1.

Problems were encountered in obtaining consistent head assays of the two samples. Results of fire assays from two different commercial laboratories are included as the next-to-last line in Table 1. A total of four assays on one sample, and two on the other, were run. In all cases, the same pulverized portions used for the fire assays were also used for cyanide leach tests and the leach test tailings were fire assayed (a total of 11 fire assays were run as part of the test program).

Relatively good agreement is observed between calculated and assay heads when both the assay sample and the leach test feed sample are split from the same pulverized pulp. However, when the assay portions are split from the as-received samples (drillhole cuttings 1/4 inch and finer) prior to pulverizing, the head assay values vary over wide limits.

This type of assay behavior is sometimes an indication of coarse gold present in the samples. However, the good correlation between calculated head and assay head for splits from the same pulverized pulp indicates uniform gold distribution, and thus relatively fine gold.

The rate of gold dissolution was measured in two bottle roll tests and was found to be moderately rapid and complete in 24 hours. The results are characteristic of fine gold in the barely-visible range (50-150 microns).

The overall findings indicate a very irregular distribution of relatively large pockets of finely divided gold. This type of distribution might result if the gold was present in the original (unoxidized) rock as fine dispersions within high-grade, large crystals of pyrite or other sulfide minerals. Distribution as large grains of gold telluride would also fit the observations.

Percent silver recoveries are not calculated because the silver fire assays are not accurate for this metal within the assay range. The data indicate that recovered precious metal will assay approximately 60 percent gold, 40 percent silver.

Final test solutions contained negligible amounts of copper (less than 1 ppm). Very little cyanide was consumed in the tests, and the final pH of 10.0 was unchanged from starting conditions. The results indicate that there should be no chemical problems with cyanidation.

The procedures which were used for the pulverized ore leach tests in the test program are as follows:

1. Dry the samples (the samples were received as five-pound bags of nearly dry material, mostly smaller than 1/4 inch).

2. Split out 200 grams of sample. Pulverize to below 100 mesh.

3. Split out a portion of the pulverized material and submit to a commercial laboratory for fire assay.

4. Split out 100 grams of pulverized material. Place in a 250 ml polybottle. Add 250 mls of solution containing 1.0 grams NaCN per liter. Adjust pH with lime, if necessary (this was not necessary).

5. At pre-determined time intervals, check solution for pH, NaCN, gold and silver levels.

6. At end of test (24 hours), measure pH, NaCN, and copper content of solution.

7. Filter, dry, pulverize tailings. Submit to a commercial laboratory for fire assay.

For the as-received ore leach tests, 300 gram portions were split out of the main sample and leached in a similar manner with 450 mls of solution in a one-liter bottle.

In spite of the assay variability, the results indicted that the contained gold was cyanide soluble from both the drill-hole cuttings and the pulverized material.

In order to employ a larger sample for testing, it might be useful to run a series of mini-column leach tests on portions of the drillhole cuttings. This type of test would not substitute for a "total gold" assay, but the results would be appropriate if heap or vat leaching were being considered for processing the ore, and the large sample size might eliminate the sampling problems.

The procedure would be as follows:

1) Place one or two kilograms of drill cuttings in a 2-inch diameter leach column.

2) Percolate cyanide solution through the column for one week. Assay solution for gold content every other day.

3) At the end of the week, adsorb all dissolved gold and silver onto activated carbon and fire assay the carbon.

4) Dry, pulverize and fire assay the test tailings in duplicate.

We could run the above tests in our laboratory at a cost of $260.00 per test, including report, assuming at least five such tests were run and reported together ($350.00 if only one test is run). Once reproducibility were established it might be possible to eliminate one of the tailings assays or to shorten the leach procedures, so that future tests could be less expensive.

If the samples were received in our lab as five-pound or smaller samples, ready for testing, there would be no preparation charge. Compositing of samples, or handling of bulk samples, would be charged on a time/materials basis.

Good luck with your project.

Submitted by,

Daniel W. Kappes
KAPPES, CASSIDAY & ASSOCIATES

DWK/rp

IMPLEMENTATION

PRESENTATION

The New "DYNALEACH" Process and It's Advantages Over "Heap" and "Vat" Leaching. For the Recovery of Gold and Silver from Ores.

PRECIOUS METALS RECOVERY PROCESSES

David M. Novak - President
John P. McCloskey-
Technical Director

Evaluation of Properties by Drilling and Assaying
Experts in the Refining of Precious Metals
by Ion Exchange Technology.

INTRODUCTION

The "DYNALEACH" process(Trade Name and Patents Pending)is a precious metals recovery system developed as a significant improvement over "VAT" and "HEAP" leaching, the methods now most commonly used for the extraction and recovery of Gold and Silver from ores containing these values. The main objective of "PRECIOUS METALS RECOVERY PROCESSES, INC.," developers of the process, was to provide a precious metals recovery system for the economical recovery of Gold and Silver from placer deposits,ore dumps and tailings piles containing only trace amounts of these elements. This objective has been accomplished.

With the currently used "VAT" leaching process, one of the biggest disadvantages in the high cost per ton of ore to be processed, is the cost of the many steel tanks, pulverizers, mechanical mixers, slurry pumps, pressure and vacuum filters, centrifuges and the like required to carry out the process. Also, the enormous labor costs involved in the actual operation and maintenance of all of this equipment makes the method more amenable to the recovery of values from high grade concentrates, rather than to low grade ores.

The "HEAP" leaching process at first introduction seems to offer an inexpensive trouble free system for the extraction of values from low grade ores. However, there are certain inherent basic problems associated with the system such as, solution channeling resulting in some of the ore never being contacted with the extracting solution; contamination of the effluent with fines and slimes which must be separated or in some cases are sent to a special "VAT" recovery system, including expensive filters, etc.

The "DYNALEACH" system for the recovery of precious metals values from low grade ores reduces or entirely eliminates most of the problems encountered with the "VAT" and "HEAP" leaching techniques. In addition, the complete "DYNALEACH" package includes a modern up to date, ion exchange precious metals refining process, which enables the in house preparation of Gold bars of 99.95+ purity, and Silver bars of 99.9+ purity, without the need for the services of outside refiners.

1894 Commercenter West, Suite 201
San Bernardino, CA 92408 (714) 889-8313

IMPLEMENTATION

"PRECIOUS METALS RECOVERY PROCESSES INC.,"(PMRP), inventors of the "DYNA-LEACH" PROCESS, offer the following services in regards to the bonded construction and implementation of the process, designed for the most economical recovery of precious metals values from ores. Typical applications include the recovery of Gold and Silver from ore dumps, tailings piles, placer deposits and even some concentrates that may be amenable.

Various sizes of " DYNALEACH" PROCESS SYSTEMS are offered, ranging from 40 tons per batch, to as much as 100,000 tons. "PMRP" will install the systems in any area, regardless of how remote, but in some cases at increased cost due to construction difficulties that may be encountered.

All systems, regardless of size are provided with a concrete block building with identical standardized laboratory test equipment, since basically the same analytical control tests are needed regardless of the size of the operation. For this reason the cost of the laboratory represents a greater proportion of the total cost of a smaller system than for a larger installation. The laboratory buildings will be air conditioned and heated, with office space and process chemicals storage area. Also, it will house the process ion exchange recovery columns, process pumps, chemicals addition tanks, precious metals refining equipment etc.

The highest quality laboratory furniture will be used in all facitlities, such as fume hoods, work benches, laboratory type sinks, chemicals storage cabinet, balance table, desk, etc.

In addition all of the laboratories will contain essentially the same type of equipment which includes an accurate Atomic Absorption Spectrophotometer with exhaust hood, background corrector for improved accuracy, and digital readout; a pH meter, high temperature muffle furnace, conductivity meter, drying oven, vacuum pump, tubing pump, electroanalyzer, micro-electronic balance with digital readout, electronic scale for accurate weighing of Gold and Silver bars, ion exchange columns for laboratory separations, refining equipment, and miscellaneous chemical glassware items too numerous to mention but definitely adequate to perform all of the necessary functions.

Finally in summation, "PMRP" will provide to purchasers of a "DYNALEACH" PROCESS SYSTEM, a complete turnkey operation, with operating manuals which explain in detail every step of the process, from the initial testing of the ore for values, to the final techniques required for the in house refining of the recovered values to high purity Gold and Silver bars. Continuing technical consultations services will be rendered as required to assure continued success of the project.

THE "DYNALEACH" PROCESS

THE "DYNALEACH" PROCESS

In the paragraphs that follow, direct comparisons are made between the subject "DYNALEACH" process, and the currently used "VAT" and "HEAP" leaching techniques, in order to clearly elucidate the basic advantages of the recommended process for the economical recovery of Gold and Silver from ores containing only trace amounts of these elements.

COMPARED TO VAT LEACHING

1 When employing the "VAT" leaching technique for precious metals recovery the ore must be pulverized to a sufficiently fine particle size in order that it can be maintained in suspension in the chemical extraction tanks used in the process. The ore is then kept in suspension with either mechanical mixers, high pressure air, and or recirculated continuously by means of suitable slurry pumps. After extracting the ore for whatever time period is deemed necessary, the ore must then be separated from the chemical extracting solution. This is accomplished by means of very expensive equipment such as pressure or vacuum filters, centrifuges or the time consuming inefficient decantation technique. The clarified pregnant solution is then ready to be passed through columns of activated carbon, or treated with reducing agents such as Zinc metal for recovery of the extracted values.

The above "VAT" leaching process description indicates very clearly that very expensive equipment is required per ton of ore to be processed by this method. In addition to the large investments needed for the purchases of the pulverizers, steel tanks, mechanical mixers, slurry pumps, filters, centrifuges and the like, the labor costs incurred in the operation and maintenance of these various types of equipment is enormous. Due to these extensive equipment and labor costs per ton of ore to be processed, the "VAT" leaching technique is more amenable to the extraction of precious metals values from concentrates, rather than the economical recovery of Gold and Silver from low grade ores.

In comparison, the recommended "DYNALEACH" process does not require the use of expensive pulverizing equipment, minus half inch ore size being adequate. No metal tanks, mechanical mixers, slurry pumps, high pressure air systems are needed since the ore need not be kept in suspension or continuously recirculated. Also, there is no need for expensive filters or centrifuges, since because of the unique design and mode of operation of the recommended subject process, any fines or slimes present are automatically separated during the operation of the system.

2 During times when inadvertant power or equipment failures may occur, the mechanical mixers or slurry pumps used to carry out the "VAT" leaching process will stop functioning. At these times the slurry will suddenly settle to form highly compacted masses in the bottoms of the tanks. This can cause costly time consuming shutdowns, since it is no easy matter to work in steel tanks which many times may contain highly toxic chemicals, such as, cyanides, chlorine and the like.

These problems do not occur when using the "DYNALEACH" process. No unclogging of slurry pumps, possibly damaged with thick slurries, or hand emptying of large steel tanks containing highly compacted ores often impregnated with cyanides, chlorine and other toxic chemicals is required. Obviously the complete elimination of labor problems of this magnitude makes operation of the extraction facility a pleasure rather than what could be accurately described as a living nightmare.

3. When adding the finely divided ore required for carrying out the "VAT" leaching process special equipment must be used such as conveyers, primary slurry preparation tanks and so forth, which are not meant for handling large tonnages of ore at a time.

In contrast, when employing the "DYNALEACH" technique, the ore may be added with heavy equipment, such as skip loaders, bulldozers which handle tons of ore at a time. This makes the method more suitable to the recovery of precious metals values from low grade ores, rather than from high grade concentrates.

COMPARED TO HEAP LEACHING

1. When employing the "HEAP" leaching technique for the recovery of precious metal values from ores, the ore pile is continuously sprayed from above with a chemical solution. The sprayed solution impinges on the ore surfaces washing away fines which contaminate the extractant solution with large quantities of finely divided material. Next, after the initial effects of cleaning away the fines from the surfaces of the ore material, the continuous impinging causes more degradation of ore particles resulting in the production of more fines to adulterate the clarity of the effluent solution. Before the Gold and Silver values contained in the extractant solution can be recovered, these fines and slimes must be either separated by means of expensive filter presses, centrifuges, the construction of large setting ponds, and or the actual separate treatment of the fines in 'Vats.'

The "DYNALEACH" process, however, because of its unique design and mode of operation, produces an effluent solution that is clear and free of suspended materials, and therefore does not require the use of the separations equipment needed for carrying out the "HEAP" leaching process.

2. When processing an ore on a "Leach Pad" in the usual manner, one is confronted with the problem of solution channeling. This is caused by the presence of air pockets in the ore pile which cannot be prevented. Because of this phenomenon some of the ore is never really contacted with the chemical solution and therefore remains incompletely extracted causing a lesser percentage of recovered values.

This undesirable phenomenon is practically non-existant when employing the subject "DYNALEACH" process. This of course means a more rapid and complete recovery of the Gold and Silver values.

3. It is well known that some unoxidized ores require a prior treatment with an oxidizing chemical such as chlorine, before satisfactory recovery of the precious metals values can be made. If a chemical solution containing large amounts of a volatile chemical such as chlorine, is sprayed onto a "Heap Leach Pad," an inordinate amount of the toxic gas will escape into the atmosphere and thereby contaminate the environment.

Because of the unique design and mode of operation of the "DYNALEACH" process, volatile toxic gases such as chiorine can be added to the chemical solution in the amounts necessary for the oxidation of unoxidized ores without unduly polluting the enviromnent.

Finally, in summary, when processing ores by either "VAT" or "HEAP" leaching techniques, it is common practive to use columns of activated carbon to absorb the precious metals from the extracting solution. However, this can present a major recovery problem. For example, tests at the "Bureau Of Mines" indicate that it can take up to 72 hours of continuous recirculation of boiling methyl alcohol through the carbon before a satisfactory amount of the Gold and Silver are removed from the column.

In contrast, the "DYNALEACH" PROCESS, instead of using carbon, employs a modern ion exchange resin material, which first of all has over 10 times the adsorption capacity as the carbon and therefore requires much smaller columns. Also, the Silver can be recovered selectively from the column first, by using our proprietary selective Silver desorbant solution, followed by the selective removal of the Gold, both in separate water solutions, at room temperature, and in a few hours time period.

In addition, the complete "DYNALEACH" package enables the plant operator to refine the recovered precious metals, in house, to high purity Gold and Silver bars, without the need and complete trust in an outside refiner.

MONETARY EXPENDITURES AND RETURNS PER BATCH

"DYNALEACH" PROCESS SYSTEM NO. 120T

The following calculations are based on the use of two each, "DYNALEACH" PROCESS SYSTEM NO. 60T Units, operated side by side, as a single extraction facility. This mode of operation is recommended, especially when the process is being applied to the recovery of Gold and Silver from low grade ores.

Gross Returns Per Batch

If Ore Averages	0.50 oz/ton Au @ $350.00 per oz	$ 21,000.00
	1.00 oz/ton Au @ $350.00 per oz	$42,000.00
	5.00 oz/ton Au @ $350.00 per oz	$210,000.00
	50.00 oz/ton Au @ $350.00 per oz	$2,100,000.00

Estimated Expenses Per Batch

In the following calculations of expenses, only those costs which result directly from carrying out the "DYNALEACH" PROCESS are included. Any prior costs incurred, such as for crushing or hauling, will vary with each ore processed and therefore must be considered separately. However, if the ore is from a nearby placer or tailings pile, where no crushing or long distance hauling is required, the following costs should be the only costs.

Loading and Unloading of Ore	$500.00
Chemicals	$1,200.00
Maintenance, Salaries, Miscellaneous, etc.	$3,380.00
Total Per Batch	$6,000.00

Estimated Net Returns

		Net Per Batch	Net Per Month*
If Ore Averages	0.50 oz/ton Au	$ 15,000.00	$ 45,000.00
	1.00 oz/ton Au	$ 36,000.00	$ 108,000.00
	5.00 oz/ton Au	$ 204,000.00	$ 612,000.00
	50.00 oz/ton Au	$ 2,094,000.00	$ 6,282,000.00

*It is estimated that at least 3 batches per month could be processed.

PRICE

The "DYNALEACH" SYSTEM NO. 120T is the smallest system offered and is recommended mainly for processing concentrates or high grade ore. The cost of one each NO. 120T SYSTEM is $325,000.00 plus a royalty of 10% of the gross metals as recovered.

Purchasers of the system will be provided with continuous technical consultation services as required, from guidance for the initial extraction of the precious metal values present in the ore, to the final in house refining and production of high purity Gold and Silver bars.

"DYNALEACH" PROCESS SYSTEM NO. 600T

The following calculations are based on the use of two each, "DYNALEACH" PROCESS SYSTEM NO. 300T Units, operated side by side, as a single extraction facility. This mode of operation is recommended, especially when the process is being applied to the recovery of precious metals values from low grade ores.

Capacity of two each NO. 300T Units — 600 Tons of Ore Per Batch

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Gross Returns Per Batch

If Ore Averages	0.10 oz/ton Au @ $350.00 per oz	$ 21,000.00
	0.50 oz/ton Au @ $350.00 per oz	$ 105,000.00
	1.00 oz/ton Au @ $350.00 per oz	$ 210,000.00
	5.00 oz/ton Au @ $350.00 per oz	$ 1,050,000.00

Estimated Expenses Per Batch

In the following calculations of expenses, only those costs which result directly from carrying out the "DYNALEACH" PROCESS are included. Any prior costs incurred, such as for crushing or hauling, will vary with each ore processed and therefore must be considered separately. However, if the ore is from a nearby placer or tailings pile, where no crushing or long distance hauling is required, the following costs should be the only costs.

Loading and Unloading of Ore		$ 1,200.00
Chemicals		$ 1,600.00
Maintenance, Salaries, Miscellaneous, etc.		$ 4,200.00
	Total Per Batch	$ 7,000.00

Estimated Net Returns		Net Per Batch	Net Per Month*
If Ore Averages	0.10 oz/ton Au	$ 14,000.00	$ 42,000.00
	0.50 oz/ton Au	$ 98,000.00	$ 294,000.00
	1.00 oz/ton Au	$ 203,000.00	$ 609,000.00
	5.00 oz/ton Au	$ 1,043,000.00	$ 3,129,000.00

* It is estimated that at least 3 batches per month could be processed.

PRICE

The total price of one each, "DYNALEACH" SYSTEM NO. 600T, installed and completely equipped as a turnkey operation is $380,000.00 plus a royalty of 10% of the gross metals as recovered.

Purchasers of the system will be provided with continuous technical consultation services as required, from guidance for the initial extraction of the precious metals values present in the ore, to the final in house refining and production of high purity Gold and Silver bars.

"DYNALEACH" PROCESS SYSTEM 2.5K

The following calculations are based on the use of two each, "DYNALEACH" PROCESS SYSTEM NO. 1250 Units, operated side by side, as a single extraction facility. This mode of operation is recommended, especially when the process is being applied to the recovery of precious metals values from low grade ores.

Capacity of Two Each NO. 1250T Units		2,500 Tons of Ore Per Batch
Gross Returns Per Batch		
If Ore Averages	0.03 oz/ton Au @ $350.00 per oz	$ 26,250.00
	0.10 oz/ton Au @ $350.00 per oz	$ 87,500.00
	0.20 oz/ton Au @ $350.00 per oz	$ 175,000.00
	0.50 oz/ton Au @ $350.00 per oz	$ 437,500.00

Estimated Expenses Per Batch

In the following calculations of expenses, only those costs which result directly from carrying out the "DYNALEACH" PROCESS are included. Any prior costs incurred, such as for crushing or hauling, will vary with each ore processed and therefore must be considered separately. However, if the ore is from a nearby placer or tailings pile, where no crushing or long distance hauling is required, the following costs should be the only costs.

Loading and Unloading of Ore	$ 2,500.00
Chemicals	$ 5,000.00
Maintenance, Salaries, Miscellaneous, etc.	$ 5,500.00
Total Per Batch	$ 13,000.00

Estimated Net Returns		Net Per Batch	Net Per Month*
If Ore Averages	0.03 oz/ton Au	$ 13,250.00	$ 39,750.00
	0.10 oz/ton Au	$ 74,500.00	$ 223,500.00
	0.20 oz/ton Au	$ 162,000.00	$ 486,000.00
	0.50 oz/ton Au	$ 424,500.00	$ 1,273,500.00

* It is estimated that at least 3 batches per month could be processed.

PRICE

The total price of one each, "DYNALEACH" PROCESS SYSTEM NO. 2.5K, installed and completely equipped as a trunkey operation is $ 430,000.00, plus a royalty of 10% of the gross metals as recovered.

Purchasers of the system will be provided with continuous technical consultation services as required, from guidance for the initial extraction of the precious metals values present in the ore, to the final in house refining and production of high purity Gold and Silver bars.

"DYNALEACH" PROCESS SYSTEM NO. 5K

The following calculations are based on the use of two each, "DYNALEACH" PROCESS SYSTEM NO. 2.5K Units, operated side by side, as a single extraction facility. This mode of operation is recommended, especially when the process is being applied to the recovery of the precious metals values from low grade ores.

Capacity of two each NO. 2.5K Units		5,000 Tons of Ore Per Batch
Gross Returns Per Batch		
If Ore Averages	0.03 oz/ton Au @ $350.00 per oz	$ 52,500.00
	0.10 oz/ton Au @ $350.00 per oz	$ 175,000.00
	0.20 oz/ton Au @ $350.00 per oz	$ 350,000.00
	0.50 oz/ton Au @ $350.00 per oz	$ 875,000.00

Estimated Expenses Per Batch

In the following calculations of expenses, only those costs which result directly from carrying out the "DYNALEACH" PROCESS are included. Any prior costs incurred, such as for crushing or hauling, will vary with each ore process and therefore must be considered separately. However, if the ore is from a nearby placer or tailings pile, where no crushing or long distance hauling is required, the following costs should be the only costs.

Loading and Unloading of Ore	$ 10,000.00
Chemicals	$ 5,000.00
Maintenance, Salaries, Miscellaneous, etc.	$ 8,000.00
Total Per Batch	$ 23,000.00

Estimated Net Returns		Net Per Batch	Net Per Month*
If Ore Averages	0.03 oz/ton Au	$ 29,500.00	$ 88,500.00
	0.10 oz/ton Au	$ 152,000.00	$ 456,000.00
	0.20 oz/ton Au	$ 327,000.00	$ 981,000.00
	0.50 oz/ton Au	$ 852,000.00	$ 2,556,000.00

*It is estimated that at least 3 batches per month could be processed.

PRICE

The total price of one each, "DYNALEACH" PROCESS SYSTEM NO. 5K, installed and completely equipped as a turnkey operation is $ 528,000.00 plus a royalty charge of 10% of the gross metals as recovered.

Purchasers of the system will be provided with continuous technical consultation services as required, from guidance for the initial extraction of the precious metals values present in the ore, to the final in house refining and production of high purity Gold and Silver bars.

"DYNALEACH" PROCESS SYSTEM NO. 10K

The following calculations are based on the use of two each, "DYNALEACH" PROCESS SYSTEM NO. 5K Units, operated side by side, as a single extraction facility. This mode of operation is recommended, especially when the process is being applied to the recovery of precious metals values form low grade ores.

Capacity of Two Each No. 5K Units — 10,000 Tons of Ore Per Batch

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Gross Returns Per Batch

If Ore Averages	0.03 oz/ton Au @ $350.00 per oz	$ 105,000.00
	0.10 oz/ton Au @ $350.00 per oz	$ 350,000.00
	0.20 oz/ton Au @ $350.00 per oz	$ 700,000.00
	0.50 oz/ton Au @ $350.00 per oz	$ 1,750,000.00

Estimated Expenses Per Batch

In the following calculations of expenses, only those costs which result directly from carrying out the "DYNALEACH" PROCESS are included. Any prior costs incurred, such as crushing or hauling, will vary with each ore processed and therefore must be considered separately. However, if the ore is from a nearby placer or tailings pile, where no crushing or long distance hauling is required, the following costs should be the only costs.

Loading and Unloading of Ore	$ 20,000.00
Chemicals	$ 10,000.00
Maintenance, Salaries, Miscellaneous, etc.	$ 10,000.00
Total Per Batch	$ 40,000.00

Estimated Net Returns		Net Per Batch	Net Per Month*
If Ore Averages	0.03 oz/ton Au	$ 65,000.00	$ 195,000.00
	0.10 oz/ton Au	$ 310,000.00	$ 930,000.00
	0.20 oz/ton Au	$ 660,000.00	$ 1,980,000.00
	0.50 oz/ton Au	$ 1,710,000.00	$ 5,130,000.00

*It is estimated that at least 3 batches per month could be processed.

PRICE

The total price of one each, "DYNALEACH" PROCESS SYSTEM NO. 10K, installed and completely equipped as a turnkey operation is $ 788,000.00, plus a royalty charge of 10% of the gross metals as recovered.

Purchasers of the system will be provided with continuous technical consultaion services as required, from guidance for the initial extraction of the precious metals values present in the ore, to the final in house refining and production of high purity Gold and Silver bars.

"DYNALEACH" PROCESS SYSTEM NO. 20K

The following calculations are based on the use of two each, "DYNALEACH" PROCESS SYSTEM NO. 10K Units, operated side by side, as a single extraction facility. This mode of operation is recommended, especially when the process is being applied to the recovery of precious metals values from low grade ores.

Capacity of Two Each No. 10K Units — 20,000 Tons of Ore Per Batch

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Gross Returns Per Batch

If Ore Averages	0.03 oz/ton Au @ $ 350.00 per oz	$ 210,000.00
	0.10 oz/ton Au @ $ 350.00 per oz	$ 700,000.00
	0.20 oz/ton Au @ $ 350.00 per oz	$ 1,400,000.00
	0.50 oz/ton Au @ $ 350.00 per oz	$ 3,500,000.00

Estimated Expenses per Batch

In the following calculations of expenses, only those costs which result directly from carrying out the "DYNALEACH" PROCESS are included. Any prior costs incurred, such as crushing or hauling, will vary with each ore processed and therefore must be considered separately. However, if the ore is from a nearby placer or tailings pile, where no crushing or long distance hauling is required, the following costs should be the only costs.

Loading and Unloading of Ore	$ 40,000.00
Chemicals	$ 20,000.00
Maintenance, Salaries, Miscellaneous, etc.	$ 15,000.00
Total Per Batch	$ 75,000.00

Estimated Net Returns		Net Per Batch	Net Per Month*
If Ore Averages	0.03 oz/ton Au	$ 135,000.00	$ 405,000.00
	0.10 oz/ton Au	$ 625,000.00	$ 1,875,000.00
	0.20 oz/ton Au	$ 1,325,000.00	$ 3,975,000.00
	0.50 oz/ton Au	$ 3,425,000.00	$ 10,275,000.00

* It is estimated that at least 3 batches per month could be processed.

PRICE

The total price of one each, "DYNALEACH" PROCESS SYSTEM NO. 20K, installed and completely equipped as a turnkey operation is $ 998,000.00 plus a royalty charge of 10% of the gross metals as recovered.

Purchasers of the system will be provided with continuous technical consultation services as required, from guidance for the initial extraction of the precious metals values present in the ore, to the final in house refining and production of high purity Gold and Silver bars.

"DYNALEACH" PROCESS SYSTEM NO. 100K

The following calculations are based on the use of two each, "DYNALEACH" PROCESS SYSTEM NO. 50K Units, operated side by side, as a single extraction facility. This mode of operation is recommended, especially when the process is being applied to the recovery of precious metals values from low grade ores.

Capacity of Two Each NO. 50K — 100,000 Tons of Ore Per Batch

Gross Returns Per Batch

If Ore Averages	0.02 oz/ton Au @ $350.00 per oz	$ 700,000.00
	0.04 oz/ton Au @ $350.00 per oz	$ 1,400,000.00
	0.10 oz/ton Au @ $350.00 per oz	$ 3,500,000.00
	0.20 oz/ton AU @ $350.00 per oz	$ 7,000,000.00

Estimated Expenses Per Batch

In the following calculations of expenses, only those costs which result directly from carrying out the "DYNALEACH" PROCESS are included. Any prior costs incurred, such as for crushing or hauling, will vary with each ore processed and therefore must be considered separately. However, if the ore is from a nearby placer or tailings pile, where no crushing or long distance hauling is required, the following costs should be the only costs.

Loading and Unloading of Ore	$ 200,000.00
Chemicals	$ 100,000.00
Maintenance, Salaries, Miscellaneous, etc.	$ 25,000.00
Total Per Batch	$ 325,000.00

Estimated Net Returns		Net Per Batch	Net Per Month*
If Ore Averages	0.02 oz/ton Au	$ 375,000.00	$ 1,125,000.00
	0.04 oz/ton Au	$ 1,075,000.00	$ 3,225,000.00
	0.10 oz/ton Au	$ 3,175,000.00	$ 9,525,000.00
	0.20 oz/ton Au	$ 6,675,000.00	$ 20,025,000.00

*It is estimated that at least 3 batches per month could be processed.

PRICE

The total price of one each, "DYNALEACH" PROCESS SYSTEM NO. 100K, installed and completely equipped as a turnkey operation is $ 2,735,000.00, plus a royalty of 10% of the gross metals as recovered.

Purchasers of the system will be provided with continuous technical consultation services as required, from guidance for the initial extraction of the precious metals values present in the ore, to the final in house refining and production of high purity Gold and Silver bars.

BACKGROUND INFORMATION

JOHN P. McCLOSKEY

TECHNICAL DIRECTOR - CHIEF CHEMIST

PRECIOUS METALS RECOVERY PROCESSES

Place of Birth: St. Louis, Missouri

Education: Chemistry, B.S. Washington U., St. Louis, Missouri 1939

Classification: Research Chemist

EXPERIENCE

Present — Technical Director: Precious Metals Recovery Processes.
Duties entail the accurate analysis of ores for metals such as, gold, silver, platinum group metals, copper, nickel, beryllium, rhenium, etc. In addition to straight chemical analysis of ores, commercial extraction processes were developed for the recovery of precious metal value from valuable low and high grade ore bodies. Some of the processes developed and now on hand include, ion exchange separation for the recovery of gold, silver, platinum group metals, copper and others. Also, the economical recovery of parts per million amounts of gold in natural water supplies, such as wells, rivers and the like.

1961 to 1975 — Member Technical Staff and Chief Analytical Chemist:
Autonetics, Microelectronics Division of Rockwell International, Anaheim, California.
Duties and responsibilities entailed microanalytical analysis of exotic materials related to space technology in support of research to space technology in support of research of NASA. Work assignments included chemical analysis of rare thin films, bubble domain electronic circuitry, corrosion of particles of electronic circuits as small as ten to the minus twelve (10-12) gram. Developed methods for locating ovide anomalies in silicon oxide integrated circuits. Developed ion exchange methods for the separation of exotic elements such as, gallium from indium, europium from dysproxium, etc. Developed chemical catalyst for automotive exhaust control and many other assignments too numerous to mention.

1958 to 1961 — Chief Chemist: U.S. Army Engineers, Athens, Greece.
Mediterranean Division Laboratory, Athens, Greece.
Supervision of chemists engaged in the chemical and physical testing of all materials used in the construction and maintenance of U.S. Government Military Bases in Greece, Italy, Morocco, Ethiopia, Israel, Iran, Pakistan and Turkey. Work assignments included the chemical analysis of paint pigments and vehicles, water from the Mediterranean Sea, the Dead Sea, wells from various countries. Road materials such as asphalts, cement, concrete, metals, rocks and minerals for the U.S. Geological Survey team, and in fact all materials used in maintenance of the Military Bases. Also, supervision of foreign chemical engineers working in cement plants located in various locations in Turkey, which were providing cement for air field runways and the like.

1948 to 1958 — Chief Chemist: Division Testing Laboratory, U.S. Navy Agana, Guam.
Division Laboratory for the Marianas Area for the U.S. Government. Duties entailed supervision of laboratory personnel engaged in the chemical and physical testing of all material used in new construction and maintenance in the Marianas Area. Work assignments included the chemical analysis of rocks and minerals for the U.S. Geological Survey team researching in the islands. Also, chemical analysis of construction materials such as, cement, concrete, paints, hericided for weed control, soil for agricultural purposes, water from rivers, wells, potable water supplies, various locations in the ocean, etc. Also, corrosion studies, metals from machine parts of ships, coconut oils for soap manufactured by the natives, etc.

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PUBLICATIONS OF MR. JOHN P. MC CLOSKEY

1. "Grow Alcohol As A Replacement For Gasoline"
   Energy Sources Journal, Volume 2, Number 1, page 53, 1975

2. "Electrograph Method For Locating Pinholes In This Silicon Dioxide Films"
   Journal Of The Electrochemical Society, Page 643, June 1967

3. "Specific Spectrophotometric Microdetermination of Beryllium"
   Microchemical Journal, Page 33, 1967

4. "Spectrophotometric Determination of Beryllium In Air Borne Dust Samples"
   Microchemical Journal, Page 41, 1967

5. "Volumetric Determination Of Hypophosphite In Electroless Nickel Plating Solutions"
   "Plating" Journal Of The American Electroplaters Society, Page 689, July 1964

6. Automatic Buret, Scientific Glassware items given the title of a "Mc Closkey Buret"
   by Scientific Glassware Company 1965