UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Chemical Analyses (Raw Laboratory Data) and Locality Index Maps of the Confederate Gulch Area, Broadwater and Meagher Counties, Montana

By

U.S. Geological Survey

Open-file report No. 75-212

1975

Chemical analyses (raw laboratory data) and locality index maps of the Confederate Gulch area, Broadwater and Meagher Counties, Montana

Analytical data

Samples collected in the Confederate Gulch area, Montana, were analyzed by the Field Services Section of the U.S. Geological Survey using semi-quantitative spectrographic methods. In addition, most samples were analyzed for gold and copper and some for lead by atomic absorbtion methods and for mercury using the mercury detector. Samples W-1, G-2, and BCR-1 were used as internal spectrographic standards. Field numbers correspond to field localities plotted by number on the sample locality maps, but the majority of points on these maps were not sampled. The analysts are identified on one page of each group of samples.

TABLE OF CONTENTS

Samples arranged by sample submission groups

Spectrographic Analyses*

*some samples analyzed more than once

Atomic Absorption (Au, Cu, Pb) and Mercury analyses

FILM NO. C-169-A

SEMI-QUANTITATIVE SPECTROGRAPHIC ANALYSIS - FIELD SERVICES SECTION

REPORT NO. H 111-2056

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 5/23/69

Sheet #1

Fe % Fe	Mg %	Ca %	Ti %	Mn	Ag	As	Au	B	Ba Nc	DMW	Tag No.	11	Field No.	
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	19- 80	//////////	
7	Z	7	.5	1500	N	N	N	L	150		//////	11	N-1	1
1.5	3	7	.15	300	N	N	N	L	300		ATW-548	11	silicous pen DG-7	2
2	7	3	.2	300	N	N	N	30	300		549	11	pen 54	3
7	3	5	.7	1500	N	N	N	L	150		560	11	pen 61 ?	4
3	7	15	.2	1500	N	N	N	30	150		561	11	pen 65	5
3	7	7	.3	1500	N	N	N	L	100		562	11	pen 70	6
1.5	10	15	.15	2000	N	N	N	L	150		563	11	? tremolitic hornfels ! 106	7
3	7	7	.15	300	N	N	N	15	100		564	11	micaceous siliceous pen 117	8
3	7	10	.3	300	N	N	N	L	150		565	11	siliceous pen 1738	9
1.5	7	15	.15	300	N	N	N	L	500		566	11	micaceous siliceous pen 180	10
1.5	G 10	15	.2	300	N	N	N	L	300		567	11	pen - mylonite 208	11
.2	.07	3	.03	300	N	N	N	N	100		568	11	Quartzite peg 253	12
3	.3	.15	.2	500	N	N	N	30	300		569	11	peg ss 3668	13
.7	.2	.07	.3	70	N	N	N	30	150		570	11	quartzite - peg 367	14
3	7	15	.3	150	N	N	N	70	150		571	11	pen - mylonite 373	15
2	.7	.15	.3	70	N	N	N	30	700		572	11	silistone - peg 402	16
												11		17
												11		18
												11		19
												11		20
												11		21
												11		22
												11		23
												11		24

REMARKS: Fe, Mg, Ca, and Ti reported in%, all other elements reported in ppm. Results are reported in the

FILM NO. C-169-A

REPORT NO. HM-2056

ANALYST Carl L. Fort

Sheet 42

Be	Bi	Cd	Co	Cr	Cu	La	Mo	Nb	Ni No.	DMW	Tag No.	12	Field No.
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79 80	
L	N	N	70	300	150	L	L	15	70		11111	12	W-1
1.5	N	N	10	70	L	30	N	10	15		ATL-548	12	DG-7
1.5	N	N	15	70	20	30	L	15	70		549	12	54
L	N	N	[70]	20	[70]	L	[7]	20	20		560	12	61
1.5	N	N	15	70	50	30	N	15	2[illegible]		561	12	65
1.5	N	N	20	50	L	30	L	10	15		562	12	70
2	N	N	10	50	L	20	N	10	15		563	12	106
1.5	N	N	10	30	15	30	N	10	[illegible]		564	12	117
1.5	N	N	15	30	15	30	N	L	15		565	12	173B
1.5	N	N	15	50	L	30	N	L	15		566	12	180
1.5	N	N	15	50	15	30	N	L	15		567	12	208
N	N	N	L	N	L	L	N	L	5		568	12	253
1.5	N	N	L	15	10	30	N	10	15		569	12	366B
1.5	N	N	L	20	15	30	N	10	7		570	12	367
1.5	N	N	L	20	10	20	N	10	15		571	12	373
1.5	N	N	L	30	15	30	N	15	10		572	12	402
												12	
												12	
												12	
												12	
												12	
												12	
												12	
												12	

REMARKS:

LM NO. G-169-A

PORT NO. HM-2056

G = Greater than 10%, or greater than value shown.
H = Interference
- = Not looked for.

N = Not detected at limit of detection, or at value
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due of dilution technique.

Sheet # 3

Pb	Pd	Pt	Sb	Sc	Sn	Sr	Te	U	V	DMW	Tag No.	13	Field No
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	1111111
L			N	30	N	150			300		111111	13	W-1
L			N	7	N	500			70		AJW-548	13	DG-7
L			N	7	N	L			70		549	13	54
L			N	50	N	150			L500L		560	13	61
L			N	15	N	100			70		561	13	65
20			N	10	N	300			70		562	13	70
L			N	7	N	150			70		563	13	106
1			N	7	N	L			50		564	13	117
10			N	7	N	L			50		565	13	173-B
L			N	7	N	300			70		566	13	180
L			N	7	N	300			70		567	13	208
L			N	L	N	100			N		568	13	253
L			N	7	N	L			30		569	13	366B
L			N	5	N	L			30		570	13	367
10			N	7	N	150			50		571	13	373
15			N	7	N	100			50		572	13	402
												13	
												13	
												13	
												13	
												13	
												13	
												13	
												13	
												13	

REMARKS:

ILM NO. C-169-A

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EPORT NO. HM-2056

Sheet 14

W	Y	Zn	Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
V	15	N	100								/////	14	W-1	1
V	10	N	70								AJN-548	14	DG-7	2
V	15	N	70								549	14	54	3
V	30	L	150								560	14	61	4
V	20	N	70								561	14	65	5
V	15	N	70								562	14	70	6
V	10	300	50								563	14	106	7
V	15	N	70								564	14	117	8
V	15	N	70								565	14	173B	9
V	10	L	50								566	14	180	10
V	15	N	70								567	14	208	11
V	L	N	70								568	14	253	12
N	20	N	150								569	14	366B	13
V	15	N	300								570	14	367	14
N	15	N	70								571	14	373	15
N	30	N	500								572	14	402	16
												14		17
												14		18
												14		19
												14		20
												14		21
												14		22
												14		23
												14		24

REMARKS:

FILM NO. 4-2C

SEMI-QUANTITATIVE SPECTROGRAPHIC ANALYSIS - FIELD SERVICES SECTION

REPORT NO. HM-2057

6 - Step D.C. Arc

Requested by J. Gualtieri

Date 4-27-69

Sheet #1

Fe %	Mg %	Ca %	Ti %	Mn	Ag	As	Au	B	Ba	DMW	Tag No.	11	Field No.	
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
3	.3	1	.3	300	N	N	N	L	1500		//////	11	G-1	1
7	3	7	.3	2000				10	1500		AJW-596	11	Diorite DG-236	2
5	.7	7	.3	1500				L	1500		97	11	Syenit 242	3
7	2	3	.3	1500				20	1000		98	11	Felsite 275	4
7	7	7	.3	1000				L	1000		99	11	Diorite (283)	5
5	3	5	.5	300				L	1500		600	11	Felsite 318	6
1	.7	5	.1	500				L	1000		01	11	Fluorite Syenite 319	7
1	.1	.5	.1	500				L	1500		02	11	Syenite 320	8
3	1	1.5	.1	5000				L	1500		03	11	Syenite DG-321	9
2	.2	1	.15	500				L	2000		04	11	Syenite porph 344	10
5	.5	2	.3	1000				L	2000		05	11	Syenite porph 347	11
3	.15	1	.2	500				L	3000		06	11	Syenite porph 386	12
3	.7	3	.3	1000				L	1500		07	11	Quartz Monzonite 388	13
2	.5	2	.2	300				L	1000		08	11	Quartz Monzonite 389	14
2	.2	1.5	.2	700				L	1500		09	11	Syenite 392	15
3	.3	3	.2	500				L	1000		10	11	Quartz Monzonite 395	16
3	.3	2	.1	700				L	1500		11	11	Quartz Monzonite 396	17
3	.3	2	.1	500				L	1000		12	11	Quartz Monzonite 397	18
2	.3	1.5	.1	700				L	1500		13	11	Quartz Monzonite 126	19
												11		20
												11		21
												11		22
												11		23
												11		24

REMARKS: Fe, Mg, Ca, and Ti reported in%, all other elements reported in ppm. Results are reported in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc.

ILM NO. 4-CC

EPORT NO. HM-2057

ANALYST E.F. Cooley

Sheet #2

Be	Bi	Cd	Co	Cr	Cu	La	Mo	Nb	Ni	DMW	Tag No.	12	Field No.	
2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79 80	//////////	
1	N	N	L	20	10	200	15	10	L		/////	12	G-1	1
			20	30	10	70	L	10	10		AJW-596	12	DG-236	2
			5	10	L	100		10	L		97	12	242	3
			10	20	5	50		10	15		98	12	275	4
			70	2000	100	L		L	500		99	12	283	5
			20	300	10	100		L	70		600	12	318	6
2			L	L	L	50		20	L		01	12	319	7
1			L	L	L	L		10	L		02	12	320	8
1			L	L	10	50		20	L		03	12	DG-321	9
			L	L	L	50		L	L		04	12	344	10
			L	L	L	70		L	L		05	12	347	11
			L	L	L	50		L	L		06	12	386	12
			L	L	5	50		L	L		07	12	388	13
			L	L	L	L		L	L		08	12	389	14
			L	L	L	50		L	L		09	12	392	15
			L	L	L	50		L	L		10	12	395	16
			L	L	L	50		10	L		11	12	396	17
			L	L	L	50		10	L		12	12	397	18
			L	L	L	L		L	L		13	12	126	19
												12		20
												12		21
												12		22
												12		23
												12		24

REMARKS:

G = Greater than 10%, or greater than value shown.
H = Interference
- = Not looked for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

NO. 4-2C

RT NO. HM-2057

Sheet #3

Pb	Pd	Pt	Sb	Sc	Sn	Sr	Te	U	V	DMW	Tag No.	13	Field No.	
2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
100			N	5	N	200			30		//////	13	G-1	1
20				20		1500			200		AJW-596	13	DG-236	2
20				7		2000			200		97	13	242	3
20				7		200			150		98	13	275	4
10				20		500			200		99	13	283	5
70				10		1000			150		600	13	318	6
200				L		200			50		01	13	319	7
100				L		200			50		02	13	320	8
200				L		300			200		03	13	DG-321	9
50				L		1500			50		04	13	344	10
50				L		2000			200		05	13	347	11
70				L		2000			150		06	13	386	12
20				L		1500			150		07	13	388	13
10				L		1600			300		08	13	389	14
50				L		1500			100		09	13	392	15
20				L		1000			50		10	13	395	16
20				L		700			30		11	13	396	17
20				L		700			20		12	13	397	18
20			V	L	V	700			20		13	13	126	19
												13		20
												13		21
												13		22
												13		23
			•									13		24

REMARKS:

FILM NO. 4-2 C

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REPORT NO. HM-2057

Sheet #4

W	Y	Zn	Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
N	10	L	500								/////	14	G-1	1
	30		150								AJW-596	14	DG-236	2
	30		200								97	14	242	3
	20		200								98	14	275	4
	20		50								99	14	283	5
	15		200								[illegible]	14	318	6
	10		500								01	14	319	7
	L		100								02	14	320	8
	L		300								03	14	DG-321	9
	L		100								04	14	344	10
	10		70								05	14	347	11
	15		150								06	14	386	12
	10		150								07	14	388	13
	L		150								08	14	389	14
	10		200								09	14	392	15
	L		150								10	14	395	16
	L		150								11	14	396	17
	L		100								12	14	397-1	18
V	L	V	100								13	14	126	19
												14		20
												14		21
												14		22
												14		23
												14		24

REMARKS:

FILM NO. 4-1C

SEMI-QUANTITATIVE SPECTROGRAPHIC ANALYSIS - FIELD SERVICES SECTION

REPORT NO. HM-2057

6 - Step D.C. Arc

Requested by J. Gualtieri

Date 5-27-79

Sheet #1

Fe %	Mg %	Ca %	Ti %	Mn	Ag	As	Au	B	Ba	D M W	Tag No.	11	Field No.	
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79 80	In Dup //////////	
2	.3	1	.2	200	N	N	N	L	1500		//////	11	G-1	1
3	.7	5	.2	700	N			L	1500		AJW-573	11	Quartz Diorite DC-2B	2
3	.5	2	.2	1000	N			L	2000		74	11	Syenite DG-1	3
3	.2	2	.2	1000	N			L	2000		75	11	Diorite? 14	4
3	.1	.1	.07	200	N			L	G 5000		76	11	Syenite 16	5
3	.7	3	.2	1000	N			L	2000		77	11	Quartz Monzonite 42	6
3	.5	2	.2	1500	N			L	2000		78	11	Syenite 102	7
2	.1	.5	.1	700	N			L	1500		79	11	Syenite 104	8
2	.07	.5	.1	700	N			10	500		80	11	Syenite 107	9
15	5	7	G 1	1500	N			30	200		81	11	Diabase 116	10
1	.07	.2	.1	500	N			L	1500		82	11	Syenite 118A	11
5	1	7	.5	1000	N			L	1500		83	11	Syenite Porph 121	12
3	.7	5	.15	700	N			L	1500		84	11	Syenite Porph 123	13
7	1	7	1	2000	N			L	5000		85	11	Syenite Porph 132	14
2	.1	.1	.1	700	N			L	1500		86	11	Syenite Porph 157	15
15	3	7	G 1	2000	N			20	150		87	11	Diabase 173A	16
5	.07	1	.7	2000	N			L	3000		88	11	Syenite 175	17
1.5	.1	.2	1	100		1.2?		L	1500		89	11	Syenite 186?	18
1.5	.1	1	.1	1000	N			L	3000		90	11	Syenite 190	19
7	1	7	.3	1000	N			L	1000		91	11	Diorite 193	20
3	.3	.3	.3	1000	N			L	1000		92	11	Quartz Diorite 199	21
3	.15	.15	.3	700	N			L	2000		93	11	Syenite 220	22
1.5	.1	.2	.1	500	N			L	500		94	11	Syenite 222 Diorite	23
1.5	.2	2		100	N	N	N	L	1500 1500		95	11	Qtz 231A	24

FILM NO. 4-1C

REPORT NO. HM-2057

ANALYST E. F. Cooley

Sheet #2

Be	Bi	Cd	Co	Cr	Cu	La	Mo	Nb	Ni	DMW	Tag No.	12	Field No.	
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79 80	//////////	
1	N	N	L	20	15	200	10	20	L		/////	12	G-1	1
L			L	10	L	L	L	10	L 73		AJW-572	12	DC-2B	2
			L	L	5	100	L	10	L 74		74	12	DG-1	3
			L	L	L	50	L	10	L 75		75	12	14	4
			L	L	L	L	L	L	L 76		76	12	16	5
			L	L	L	50	L	10	L 77		77	12	42	6
			L	L	L	100	L	10	L 78		78	12	102	7
			L	L	L	50	L	10	L 79		79	12	104	8
			L	L	5	50	L	10	L 80		80	12	107	9
			L50	L70	L50	L	L5	L	L100		81	12	116	10
			L	L	5	50	L	10	L		82	12	118A	11
			L	L	L	100	L	10	L		83	12	121	12
			L	L	L	L	L	10	L		84	12	123	13
			10	L	L	150	L	10	L		85	12	132	14
			L	L	L	100	L	10	L		86	12	157	15
			L100	50	L100	L	L5	10	50		87	12	173A	16
			L	20	L	150	L	10	L		88	12	175	17
			L	L	L	150	L	10	L		89	12	186	18
			L	L	L	L	L	10	L		90	12	190	19
			L	20	L	L	L	10	5		91	12	193	20
			L	L	L	50	L	10	L		92	12	199	21
			L	L	L	300	L	20	L		93	12	220	22
			L	L	L	L	L	10	L		94	12	222	23
1			L	10	L	L	L	10	L		95	12	231A	24

REMARKS:

...greater than value shown.
H = Interference
- = Not looked for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

I NO. 4-1C

ORT NO. HM-2057

Sheet #3

Pb	Pd	Pt	Sb	Sc	Sn	Sr	Te	U	V	DMW	Tag No.	13	Field No.	
2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
100			N	5	N	200			20		//////	13	G-1	1
20				5		500			50		AJW-573	13	DC-2B	2
50				5		1000			70		74	13	DG-1	3
20				L		1000			150		75	13	14	4
30				L		2000			150		76	13	16	5
30				5		1000			100		77	13	42	6
50				5		1000			100		78	13	102	7
30				L		500			50		79	13	104	8
100				L		200			50		80	13	107	9
15				70		200			[700]		81	13	116	10
30				L		200			30		82	13	118A	11
30				5		1500			150		83	13	121	12
20				L		500			30		84	13	123	13
50				10		5000			[500]		85	13	132	14
20				L		1000			150		86	13	157	15
20				50		200			500		87	13	173A	16
50				5		2000			150		88	13	175	17
[200]				L		1000			70		89	13	186	18
50				L		1500			100		90	13	190	19
30				5		1500			100		91	13	193	20
30				L		300			70		92	13	199	21
[200]				L		1500			70		93	13	220	22
10				L		100			50		94	13	222	23
30				L		1000			70		95	13	231A	24

EMARKS:

FILM NO. 4-1C

(22)

REPORT NO. HM-2057

Sheet #4

W	Y	Zn	Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
	10	L	500								/////	14	G-1	1
	10		200								AJW-573	14	DC-2B	2
	20		200								74	14	DG-1	3
	20		200								75	14	14	4
	L		50								76	14	16	5
	10		200								77	14	42	6
	20		500								78	14	102	7
	L		500								79	14	104	8
	L		150								80	14	107	9
	50		100								81	14	116	10
	L		150								82	14	118A	11
	10		200								83	14	121	12
	L		300								84	14	123	13
	20		200								85	14	132	14
	L		200								86	14	157	15
	50		100								87	14	173A	16
	50		1000								88	14	175	17
	L		200								89	14	186	18
	L		200								90	14	190	19
	10		200								91	14	193	20
	10		200								92	14	199	21
	L		200								93	14	220	22
	L		300								94	14	222	23
	L	V	200								95	14	231A	24

REMARKS:

LM NO. 6-168-A SEMI-QUANTITATIVE SPECTROGRAPHIC ANALYSIS - FIELD SERVICES SECTION

PORT NO. HM-2059 6 - Step D.C. Arc Requested by J. GUALTIERI Date 5/21/69

Sheet #1

Fe % Fe	Mg %	Ca %	Ti %	Mn	Ag	As	Au	B	Ba	DMW	Tag No.	11	Field No.	
2-7 8	9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
7	3	7	.7	1500	N	N	N	L	150		//////	11	W-1	1
.3	.2	20	.003	700	N	N	N	L	100		AJW-614	11	Quartz calcite vein DG-11	2
.7	.05	G 20	.015	700	3	N	N	N	300		615	11	Quartz vein 1188	3
2	.15	7	.03	3000	30	N	N	L	700		616	11	Altered quartz diorite 1142	4
.1	.2	10	.003	70	N	N	N	N	100		617	11	Quartz vein 1174	5
3	3	15	.15	3000	.5	N	N	L	700		618	11	Quartz andesite pc 1230	6
.3	.07	.5	.03	50	N	N	N	N	700		619	11	Quartz vein 1231B	7
.7	.02	L	.003	70	3	N	N	N	3000		620	11	Quartz vein 1232A	8
3	.15	.05	.03	G 5000	15	N	.10	L	3000		621	11	Quartz vein 1232B	9
.3	3	20	.003	700	N	N	N	L	L		622	11	Quartz vein 1328	10
1.5	3	7	.15	300	1.5	N	N	L	700		623	11	Quartz vein 1334	11
1.5	7	20	.003	700	N	N	N	70	100		624	11	Pink quartz vein 1357B	12
.7	1.5	1.5	.002	70	N	N	N	L	L		625	11	Quartz vein 1421	13
												11		14
												11		15
												11		16
												11		17
												11		18
												11		19
												11		20
												11		21
												11		22
												11		23
												11		24

REMARKS: Fe, Mg, Ca, and Ti reported in%, all other elements reported in ppm. Results are reported in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1 etc.

FILM NO. 6-168-A

REPORT NO. HM-2059

ANALYST CARL L. FORN

S

Sheet #2

Be	Bi	Cd	Co	Cr	Cu	La	Mo	Nb	Ni	DMW	Tag No.	12	Field No
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79 80	11111111
L	N	N	70	200	150	L	L	10	70		11111	12	W-1
N	N	N	N	N	L	L	N	L	L		AJW-614	12	DG-11
1.5	50	N	N	N	5	30	L	50	L		615	12	118B
N	L	N	L	10	3000	30	7	15	15		616	12	142
N	L	N	N	N	L	L	N	L	L		617	12	174
1	N	N	10	70	10	20	L	10	20		618	12	230
N	L	N	N	10	L	L	150	L	L		619	12	231B
N	L	N	N	10	70	N	130	L	L		620	12	232A
1.5	20	N	20	10	700	L	150	10	30		621	12	232B
N	N	N	N	10	L	20	N	L	L		622	12	328
L	N	N	N	30	100	20	L	10	20		623	12	334
N	N	N	N	20	L	20	N	L	L		624	12	357B
N	L	N	N	10	L	L	N	L	L		625	12	421
												12	
												12	
												12	
												12	
												12	
												12	
												12	
												12	
												12	
												12	
												12	
												12	

REMARKS:

G = Greater than 10%, or greater than value shown.
H = Interference
- = Not looked for.

N = Not detected at limit of detection, or at value
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due of dilution technique.

LM NO. C-168-A

PORT NO. HM-2059

Sheet #3

Pb	Pd	Pt	Sb	Sc	Sn	Sr	Te	U	V	DMW	Tag No.	13	Field No
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	///////
L			N	30	N	100			200		//////	13	W-1
L			N	5	N	3000			L		AJW-64	13	DG-11
200			N	L	N	300			L		615	13	118B
20			N	7	N	N			70		616	13	142
N			N	L	N	L			N		617	13	174
300			N	10	N	150			70		618	13	230
L			N	L	N	200			10		619	13	231B
30			N	L	N	N			L		620	13	232A
300			N	L	N	N			30		621	13	232B
30			N	5	N	L			L		622	13	328
200			N	7	N	100			30		623	13	334
15			N	L	N	L			10		624	13	357B
L			N	L	N	L			L		625	13	421
												13	
												13	
												13	
												13	
												13	
												13	
												13	
												13	
												13	
												13	
												13	
												13	

REMARKS:

ILM NO. C-168-A

(12)

EPORT NO. HM-2059

Sheet 44

W	Y	Zn	Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	15	N	70								/////	14	W-1	1
1	10	N	L								AJW-614	14	DG-11	2
1	70	N	30								615	14	118B	3
1	10	N	15								616	14	142	4
1	15	N	L								617	14	174	5
1	10	N	70								618	14	230	6
1	L	N	100								619	14	231B	7
1	L	N	N								620	14	232A	8
50	10	N	70								621	14	232B	9
1	15	N	N								622	14	328	10
1	10	1000	70								623	14	334	11
1	15	N	20								624	14	357B	12
1	10	N	15								625	14	421	13
												14		14
												14		15
												14		16
												14		17
												14		18
												14		19
												14		20
												14		21
												14		22
												14		23
												14		24

REMARKS:

FILM NO. 1-175 H

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

REPORT NO. HM-2686

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 19 Feb 70

Sheet #1

	Fe %		Mg %		Ca %		Ti %		Mn		Ag		As		Au		B		Ba		DMW	Tag No.		11	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1		1.5		.5		.7		.2		200	N	(.5)	N	(200)	N	(10)	N	(10)		1500		////////		11	G-2	1
2		2		1.5		20		.02		700	L							100		50		AMS 837		11	DG-248 A	2
3		.2		.5		20		.01		1500	N							10	N	(20)		838		11	248 B	3
4		1.5		.3		.2		.2		10	N							100		500		839		11	one sample 517-666	4
5		3		3		1.5		.2		300	N							70		200		840		11	521	5
6		2		3		1.5		.1		150	N							30		150		841		11	604	6
7		1.5		5		5		.07		300	N							15		150		842		11	649	7
8		2		5		5		.1		300	N							30		200		843		11	650	8
9		7		2		.7		.5		300	L							30		300		844		11	663 A	9
10		5		3		1.5		.3		150	N							15		200		845		11	663 B	10
11		3		3		2		.1		300	N							70		100		846		11	674	11
12		3		2		3		.2		500	L						N			300		847		11	704	12
13		3		2		2		.15		150	N						N			1000		848		11	706 A	13
14		.3		10		10		.01		100	N						N			20		849		11	837	14
15		3		1.5		.2		.3		700	N							70		300		850		11	1087	15
16		1		.1		.2		.15		10	N						N			100		851		11	482 D	16
17		.15		.02	L	(.05)		.2	L	(10)	N						N			150		852		11	482 G	17
18		5		.3	N			.15		15	N							100		200		853		11	482 I-1	18
19		1		.3	N			.2	N		N							100		300		854		11	482 I-2	19
20		1		1		3		.15		1000		3						10		200		855		11	785	20
21		2		.3		.3		.2		150	N							10		1000		856		11	816	21
22																								11		22
23																								11		23
24																								11		24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc.

17

FILM NO. 1-175 A

REPORT NO. Hm-2686

ANALYST D. J. GRIMES + RT Hopkins

Sheet #2

Be		Bi		Cd		Co		Cr		Cu		La		Mo		Nb		Ni		DMW	Tag no.	12	Field No.	
1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77 78	79-80	////////////	
	2	N	(10)	N	(20)		5		5		10		100	N	(5)		10		5		//////	12	G-2	1
	1					L	(5)		7		70		20			N	(10)		30		Amo 837	12	DG-2K8 A	2
N	(1)					N		N	(5)	N	(5)		30			N		N	(5)		838	12	248 B	3
	2					N			20		15		100			L			20		839	12	one sample 517-666	4
	1						10		20		20	L	(20)			N			30		840	12	521	5
L							5		20		15	L				N			20		841	12	604	6
	1					N			20		50		20			N			15		842	12	649	7
	1						5		30		20		30			N			20		843	12	650	8
	1.5						30		200		150	N				N			100		844	12	663A	9
	1						20		30		15		30	↓			10		30		845	12	663B	10
L							15		30		20		20	N		L			30		846	12	674	11
	7					N			30		20		50		7	L			20		847	12	704	12
	3						20		50		20		30	N		L			30		848	12	706 A	13
N						N		N			7	N		N		N		L			849	12	837	14
	1.5						30		50		30		50	N			10		30		850	12	1097	15
N						N			7		15		50		5		10	L			851	12	482 D	16
N						N		N			15	N		N		L		L			852	12	482 G	17
	1						20		70		200		20	N		L			30		853	12	482I-1	18
	1					N			70		20		30	N			10		15		854	12	482I-2	19
N							10		70		2000		30	N		N			30		855	12	755	20
	1	↓		↓		L			5		30		70	N		L			5		856	12	816	21
																						12		22
																						12		23
																						12		24

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1

FILM NO. 1-1754

REPORT NO. HM-2686

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

Pb		Pd		Pt		Sb		Sc		Sn		Sr		Te		U		V		D M W	Tag No.		13	Field No.	
1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
	30					N	(100)		5	N	(10)		500						30		//////		13	G-2	1
	100								7				150						15		amg 837		13	DG-248A	2
N	(10)							N	(5)				1000					N	(10)		838		13	248B	3
	15								7				300						70		839		13	one sample 517-666	4
	20								10			L	(100)						70		840		13	521	5
	15								5			L							30		841		13	604	6
	100								5				200						30		842		13	649	7
	100								5				150						30		843		13	650	8
N									50			N							300		844		13	663 A	9
	15								15			L							50		845		13	663 B	10
	30								5			N							50		846		13	674	11
	10								10				300						70		847		13	704	12
	15								7				100						100		848		13	706 A	13
N								N				N						N			849		13	837	14
	15								15			N							70		850		13	1097	15
N								N				N							30		851		13	482 D	16
L								N				N						L			852		13	482 G	17
	30								7			N							100		853		13	482 I-1	18
	30								10				300						70		854		13	482 I-2	19
N									5			N							70		855		13	785	20
	15								7				300						30		856		13	816	21
																							13		22
																							13		23
																							13		24

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FILM NO. 1-M5H

REPORT NO. Itm-2686

(20)

Sheet #4

W		Y		Zn		Zr		Si%		Al%		Na%		K%		P%		Ce		DMW	Tag No.		14	Field No.	
1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
N	(50)		10	N	(200)		200														///////		14	G-2	1
			30				20														AMR 837		14	DG-248 A	2
	-		15			N	(10)														838		14	248 B	3
			15				100														839		14	ONE SAMPLE 517-666	4
			15				70														840		14	521	5
		L	(10)				30														841		14	604	6
			10				30														842		14	649	7
			10				50														843		14	650	8
			15				50														844		14	663 A	9
			20				100														845		14	663 B	10
			10				30														846		14	674	11
			20				70														847		14	706	12
			15				70														848		14	706 A	13
		N				N															849		14	832	14
			20				100														850		14	1097	15
			15				100														851		14	482 D	16
		N					70														852		14	482 G	17
		L					70														853		14	482 I-1	18
			10				100														854		14	482 I-2	19
			20				100														855		14	785	20
			20	V			150														856		14	816	21
																							14		22
																							14		23
																							14		24

20.

ILM NO. 1-1114

REPORT NO. HM-2687

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 20 Feb

Sheet #1

Fe %	Mg %	Ca %	Ti %	Mn	Ag	As	Au	B	Ba	DMW	Tag No.	11	Field No.	
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
2	.5	.7	.2	200	N (.5)	N (200)	N (10)	N (10)	1500		////////	11	G-2	1
7	1.5	3	.7	700				10	200		AMS 886	11	DG-679	2
3	.5	2.	.2	700				15	1000		881	11	714	3
10	2	3	.7	1000				L	150		882	11	740	4
7	1.5	5	.5	700				15	30		883	11	825	5
7	.5	2	.2	500				N	1500		884	11	834	6
3	7	5	.15	2000				N	200		885	11	996C	7
2	3	3	.1	1000				N	70		886	11	998-3	8
2	5	10	.1	1000				N	100		887	11	1052	9
2	.7	1.5	.15	300				N	500		888	11	1067A	10
3	.7	1	.2	700				15	500		889	11	1217	11
2	.2	.5	.3	300				15	700		890	11	1272	12
10	1	.7	.5	700				L	300		891	11	1274	13
10	1.5	3	.7	700				L	200		892	11	1257	14
7	2	5	1	700				N	700		893	11	1310A	15
7	2	3	1	700				N	1000		894	11	1310B	16
5	1	2	.3	1000				N	1000		895	11	1313	17
2	.5	2	.2	300	V	V	V	30	300		896	11	53-C	18
												11		19
												11		20
												11		21
												11		22
												11		23
												11		24

21

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc.

FILM NO. 1-177 H

REPORT NO. HM-2687

ANALYST D. J. GRIMES + RT Hopkins

Sheet #2

Be		Bi		Cd		Co	Cr	Cu	La		Mo		Nb		Ni		DMW	Tag no.		12	Field No.	
1	2-7	8	9-14	15	16-21	22 23-28	29 30-35	36 37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
	1.5	N	(10)	N	(20)	7	10	10		100	N	(5)		10		5		//////		12	G-2	1
1	(1)					30	50	150	N	(20)			N	(10)		50		[illegible]		12	DG-679	2
	1					5	L (5)	15		20			N			7		[illegible]		12	714	3
N						50	100	[illegible]	N				N			70		882		12	740	4
L						30	70	100	N				N			50		883		12	805	5
	1					10	10	15		30				10		15		884		12	834	6
	2					20	70	10		20			L			50		885		12	996C	7
	2					15	30	10		20				10		30		886		12	997B-3	8
	2					7	30	7	L				L			20		887		12	1052	9
	1					15	20	15		20	V		L			20		888		12	1087A	10
L						30	15	15		30	N		N			10		889		12	1217	11
	3					10	10	15		100		10		70	L	(5)		890		12	1272	12
N						30	30	70	N		N		N			30		891		12	1274	13
I						50	50	200	N				N			50		892		12	1287	14
N						30	500	50	L					10		100		893		12	1310A	15
N						30	100	30		30				20		70		894		12	1310B	16
I						20	10	30		70			L			15		895		12	1313	17
	J	V		V		5	N	30	N		V		N			7		896		12	537C	18
																				12		19
																				12		20
																				12		21
																				12		22
																				12		23
																				12		24

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1

FILM NO. 1-17 H

REPORT NO. Hm-2687

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	Pd	Pt	Sb	Sc	Sn	Sr	Te	U	V	DMW	Tag No.	13	Field No.	
1	2-7 8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
	30		N (100)	5	N (10)	500			30		//////	13	G-2	1
	30			30		100			200		Amg 880	13	DG-679	2
	10			7		500			70		881	13	714	3
L	(10)			50		150			200		882	13	740	4
L				30		200			100		883	13	805	5
	15			5		1000			50		884	13	834	6
	10			10		200			100		885	13	996C	7
	10			7		300			70		886	13	996-3	8
	10			5		1000			70		887	13	1052'	9
L				5	"	700			50		888	13	1058A	10
	15			7	N	300			70		889	13	1217	11
	10			5	L	500			30		890	13	1272	12
L				30	N	100			300		891	13	1274	13
L				30	"	300			200		892	13	1287	14
L				30		1000			150		893	13	1310 A	15
L				30		1000			150		894	13	1310 B	16
	10			10		1500			100		895	13	1313	17
L				5	"	300			30		896	13	537 C	18
												13		19
												13		20
												13		21
												13		22
												13		23
												13		24

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REPORT NO. HM-2687

(17)

Sheet #4

W	Y	Zn	Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.		Field No.	
L 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77	78 79-80	//////////	
N (50)	10	N (700)	200								///////	14	G-2	1
	30		100								[illegible]	14	DG-679	2
	15		150								881	14	714	3
	20		150								882	14	740	4
	30	V	150								[illegible]	14	805	5
	15	M	100								884	14	834	6
	15	200	30								885	14	996C	7
	15	L	150								996	14	996B-3	8
	10	L	50								887	14	1052	9
	10	N	70								888	14	1087A	10
	20		100								889	14	1217	11
	20		[illegible]								[illegible]	14	1272	12
	50		100								891	14	1274	13
	50		100								[illegible]	14	1287	14
	20		150								893	14	1310A	15
	20		200								894	14	1310B	16
	20		150								895	14	1313	17
	L (10)	V	70								896	14	537C	18
												14		19
												14		20
												14		21
												14		22
												14		23
												14		24

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SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION

ANALYSIS

REPORT NO. HM-2687 — 6 - Step D.C. Arc — Requested by J. GUALTIERI — Date 20 Feb. 70

Sheet #1

Fe %	Mg %	Ca %	Ti %	Mn	Ag	As	Au	B	Ba	DMW	Tag No.	11	Field No.	
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
2	.5	.5	.2	200	N (.5)	N (200)	N (10)	N (10)	1500		////////	11	G-2	1
10	1.5	1.5	.7	700	N			10	500		AMQ 857	11	DG-1290	2
2	7	5	.1	1000	N			N	300		858	11	106A	3
1.5	1.5	2	.1	700	N			N	1500		859	11	106B	4
3	.5	.5	.2	500	N			10	700		860	11	1322	5
1.5	.07	.1	.07	70	1.5			N	1500		861	11	186	6
7	1.5	2	.5	700	N			N	300		862	11	331	7
1.5	.5	.5	.15	200	N			N	1000		863	11	357A	8
.7	.3	1.5	.03	300	L			N	700		864	11	319	9
3	.7	1	.3	700	N			L	2000		865	11	477A	10
7	1.5	2	1	700	N			20	300		866	11	482A	11
7	.1	.05	.7	50	N			30	100		867	11	482B	12
5	1	1	1	300	N			10	200		868	11	482C	13
7	1.5	1.5	.7	700	N			10	200		869	11	482J	14
1	.07	.05	.07	100	N			10	50		870	11	483A	15
7	1.5	2	.5	700	N			N	150		871	11	487B	16
1.5	.05	.05	.05	100	N			10	100		872	11	514	17
1.5	1	1	.15	200	N			N	1000		873	11	615	18
1.5	.07	L (.05)	.07	700	N			10	150		874	11	658	19
7	.3	.1	.7	500	.5			L	1000		875	11	668A	20
7	.15	.05	.7	500	N			L	200		876	11	668B	21
3	5	5	.2	300	N			100	200		877	11	669	22
1.5	.1	.1	.1	300	N			N	700		878	11	672A	23
.3	.05	.1	.03	10	N	↓	↓	N	300		879	11	672B	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc.

FILM NO. 1-176 H

REPORT NO. HM-2687.

ANALYST D. J. GRIMES + RT Hopkins

Sheet #2

	Be		Bi		Cd		Co		Cr		Cu		La		Mo		Nb		Ni		DMW	Tag no.	12	Field No.	
1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77 78	79-80	//////////	
	1.5	N	(10)	N	(20)		7		7		10		100	N	(5)		10		5		//////	12	G-2	1
N	(1)						5		20		150		20			N	(10)		50		[illegible]	12	DG-1290	2
	2						7		30	L	(5)	N	(20)				10		30		858	12	106A	3
	1.5						7		20		30		50				10		15		859	12	106B	4
	3						7	L	(5)		7		100				50	L	(5)		860	12	1372	5
	1.5						5	N			15		70				10		5		861	12	186	6
N							50		10		30	N				N			30		862	12	331	7
	1						5		30		5		50			L			30		863	12	357A	8
	3					N	(5)	N			10		20				10		5		864	12	319	9
	2						10	L			10		70				10		7		865	12	477A	10
N							50		20		150	N				N			50		866	12	482A	11
L							7		20		500	N				N			30		867	12	482B	12
N							30		20		100	N				N			50		868	12	482C	13
L							30		20		100	N				N			50		869	12	482J	14
	1					N		N			5		30				20	L			870	12	483A	15
N							50		30		100	N				N			70		871	12	487B	16
	1					N		L			5		30				20		5		872	12	514	17
	1.5						15		20		10		50			N			30		873	12	615	18
	1					N		N			15		70				50	L			874	12	658	19
	1						50		20		70	N				N			30		875	12	668A	20
L							30		10		30	N				N			20		876	12	668B	21
	1						7		30		20		30			L			30		877	12	669	22
L							10				20		20				10		7		878	12	672A	23
	1	V		V		N		N			15	N		V			10		5		879	12	672B	24

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/

FILM NO. 1-726-4

REPORT NO. PLM-2697

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

Pb	Pd	Pt	Sb	Sc	Sn	Sr	Te	U	V	DMW	Tag No.	13	Field No.	
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
30			N (100)	5	N (10)	500			30		//////	13	G-2	1
10				30	N	200			[illegible]		AMO 857	13	DG-1290	2
N (10)				7	N	300			70		858	13	106A	3
20				7	N	1000			50		859	13	106B	4
L				5	10	500			20		860	13	1322	5
100				N	N	1000			50		861	13	186	6
N				30		L (100)			300		862	13	331	7
20				5		500			30		863	13	357A	8
20				N		200			20		864	13	319	9
20				7		1000			100		865	13	477A	10
L				30		200			300		866	13	482A	11
L				30		N			300		867	13	482B	12
10				30		150			200		868	13	482C	13
L				30		150			150		869	13	482J	14
20				N		N			10		870	13	483A	15
L				30		200			200		871	13	487G	16
15				N		N			10		872	13	514	17
15				7		500			50		873	13	615	18
70				L		N			L		874	13	658	19
15				30		N			300		875	13	668A	20
L				30		L			300		876	13	668B	21
L				15		100			50		877	13	669	22
L				N		100			30		878	13	670A	23
L			V	N	V	L			10		879	13	672B	24

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FILM NO. T-176 H

REPORT NO. 4m-2687

(23)

Sheet #4

1	W 2-7	8	Y 9-14	15	Zn 16-21	22	Zr 23-28	Si% 29	30-35	Al% 36	37-42	Na% 43	44-49	K% 50	51-56	P% 57	58-63	Ce 64	65-70	DUP 71	Tag No. 72-77	78	14 79-80	Field No.	
N	(50)		10	N	(200)		700														///////		14	G-2	1
			50	N			150														857		14	DG 1290	2
		L	(10)	N			150														858		14	106A	3
			15	N			150														859		14	106B	4
			20	N			**200**														860		14	1322	5
			10	N			70														861		14	186	6
			30	N			100														862		14	331	7
			20	N			100														863		14	357A	8
		L		N			150														864		14	319	9
			15	N			100														865		14	477A	10
			70	N			150														866		14	482 A	11
			30	N			100														867		14	482 B	12
			30	N			100														868		14	482 C	13
			30	N			100														869		14	482 J	14
		N		N			200														870		14	483A	15
			30	N			100														871		14	487B	16
		N		N			200														872		14	514	17
			10	N			100														873		14	615	18
		N		N			500														874		14	658	19
			50	N			100														875		14	668A	20
			20	N			100														876		14	668B	21
N			**20**	L			70														877		14	699	22
L	(50)		**10**	N			70														878*		14	672A	23
N		N		N			30														879		14	672B	

L 10-30 ppm W

REPORT NO. [illegible] 6 - Step D.C. Arc Requested by J. [illegible] Date 7 Apr. 70

Sheet #1

(.05) Fe %		(.02) Mg %		(.05) Ca %		(.002) Ti %		(10) Mn		(.5) Ag		(200) As		(10) Au		(10) B		(20) Ba		D M W	Tag No.		11	Field No.	
1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
	2		.5		.5		.2		200	N		N		N		N			1500		///////		11	G-2	1
	1.5		.3		1.5		.1		300	N		N		N		N			1000		AMT 023		11	DC-132	2
																							11		3
																							11		4
																							11		5
																							11		6
																							11		7
																							11		8
																							11		9
																							11		10
																							11		11
																							11		12
																							11		13
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																							11		15
																							11		16
																							11		17
																							11		18
																							11		19
																							11		20
																							11		21
																							11		22
																							11		23
																							11		24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

FILM NO. [illegible]

REPORT NO. [illegible]

ANALYST D.J. GRIMES + RT Hobbins

Sheet #2

(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(10) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	///////////	
	1.5	N		N			5	L			10		100	N		L			5		//////		12	G-2	1
	1.5	N		N		L		N			15	N		N		L			10		AMT 023		12	DS-132	2
																							12		3
																							12		4
																							12		5
																							12		6
																							12		7
																							12		8
																							12		9
																							12		10
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																							12		19
																							12		20
																							12		21
																							12		22
																							12		23
																							12		24

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FILM NO. 1-141

REPORT NO. HM-2697

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.
N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	D.L. W	Tag No.	13	Field No.	
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
20			N	5	N	500			30		//////	13	G-2	1
15			N	N	N	700			30		AMT 023	13	DG-132	2
												13		3
												13		4
												13		5
												13		6
												13		7
												13		8
												13		9
												13		10
												13		11
												13		12
												13		13
												13		14
												13		15
												13		16
												13		17
												13		18
												13		19
												13		20
												13		21
												13		22
												13		23
												13		24

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FILM NO. 1-14E

REPORT NO. HM-2697

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

(50) W	(10) Y	(200) Zn	(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.		Field No.
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77	78	79-80
N	10	N	200								///////		14 G-2
N	L	N	70								AMT 023		14 DG-132
													14
													14
													14
													14
													14
													14
													14
													14
													14
													14
													14
													16
													14
													14
													14
													14
													14
													14
													14
													14
													14

FILE NO. 1-13-I

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS

REPORT NO. HM-2716

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 6 APR. 70

Sheet #1

	(.05) Fe %		(.02) Mg %		(.05) Ca %		(.002) Ti %		(10) Mn		(.5) Ag		(200) As		(10) Au		(10) B		(20) Ba		DMW	Tag No.		Field No.	
1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80		
	2		.5		.5		.2		200	N		N		N		N			1500		////////		11	G-2	1
	.07	L		L		N			20		.7					N			50		AMT 064		11	DG-118 C	2
	.3		1	G	(20)		.015		1000	L						N		L			065		11	454	3
	2		7		7		.005		700	N							10	L			066		11	460	4
	1		1.5		15		.01		700		15					L		L			067		11	476	5
	.7		.05		.1		.01		30	N							30		70		068		11	482 E	6
	.5	L		L			.3	N		N						N			100		069		11	482 F	7
	.3		.05		.05		.2	L		N						N			150		070		11	482 H	8
	.5		1.5		5		.005		100	N							20		30		071		11	483 B	9
	.3		1		7		.02		150	N							70	L			072		11	488	10
	.3		.5		15		.01		500	N							70	L			073		11	500	11
	.1		.1		5		.007		150	N							15		20		074		11	501	12
	1.5	L		N			.03		30	N						N			100		075		11	517	13
	1.5		.02	N			.2		70	N						L			70		076		11	517B	14
	10		.2	L			.03		70		1.5						70		100		077		11	517C	15
	.3		.5		20		.01		700	N						N			20		078		11	520 B	16
	.1		.1		10		.007		200	N							50		20		079		11	537 D	17
	.2		.2		15		.007		300	N						N			30		080		11	598	18
	.5		5		10		.007		500	N						N			300		081		11	611 A	19
	.05		.2		1		.007		20	N						N			30		082		11	611 B	20
	.5		.1		3		.015		300	N						N			30		083		11	656 B	21
	1.5		.3		.3		.015		500		.5					N			30		084		11	663 C	22
	3	L		N			.3		300	L						N			30		085		11	665-666	23
	2		.7		5		.1		700	N		V		V		N			300		086		11	672 C	24

one sample

32

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

1

FILM NO. 1-13 J

REPORT NO. HM-2716

ANALYST DJ Grimes + RT Hopkins

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(10) Nb		(5) Ni		DMW	Tag no.	12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77 78	79-80	////////////	
		1.5	N		N			5	L			10		100	N			10		5		//////	12	G-2	1
	L		L				L		N			7	N			15	N			70		AMT 064	12	DG-118 C	2
	N		N				N		N		L			50	N		N		L			065	12	454	3
	N		N				N		N		L			100	N		N			5		066	12	460	4
	L			10			N		N			15		70	N		N			7		067	12	476	5
	N		N				N		N		N		N		N		N			5		068	12	482 E	6
	N		N				N		N			15	N		N		N		L			069	12	482 F	7
	N		N				N		N			10	N		N			15	L			070	12	482 H	8
	N		N				N		N		L		N		N		N		L			071	12	483 B	9
	N		N				N		N			10	L		N		N			5		072	12	488	10
	N		N				N		N		N		N		N		N		L			073	12	500	11
	N		N				N		N		N		N		N		N		L			074	12	501	12
	N		N				N		N			30	N			7	N			5		075	12	517	13
	N		N				N		L			20		30	N			10		10		076	12	517B	14
	L		N					20		15		50	N		N		L			50		077	12	517C	15
	N		N				N		N			5		20	N		N		N			078	12	520 B	16
	N		N				N		N			10	N		N		N		N			079	12	537D	17
	N		N				N		N			10		20	N		N		L			080	12	598	18
	N		N				N		N		L			70	N		N		L			081	12	611 A	19
	N		N				N		N			5	N		N		N		L			082	12	611B	20
	N		N				N		N			15	N		N		N			15		083	12	656 B	21
	N		N				N		N			15	N		N		N			15		084	12	663 C	22
		1	N				L		L			30		20		10		10		15		085	12	665-666	23
		2	N		N		N		N			30		30	N		L			5		086	12	672 C	24

33

FILM NO. 1-13 I

REPORT NO. Am-2776

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMS W	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	20			N	5	N	500			30		//////	13	G-2	1
2	30				N		N			L		AMT 064	13	DG-118C	2
3	L				L		1000			L		065	13	454	3
4	30				5		100			10		066	13	460	4
5	G (20,000)				5		500			L		067	13	476	5 *
6	L				N		N			L		068	13	482E	6
7	N				N		N			30		069	13	482F	7
8	N				L		N			15		070	13	482H	8
9	N				N		100			10		071	13	483B	9
10	N				N		L			15		072	13	488	10
11	10				L		1000			10		073	13	500	11
12	N				N		300			L		074	13	501	12
13	N				N		N			70		075	13	517	13
14	N				N		N			20		076	13	517B	14
15	30				N		N			20		077	13	517C	15
16	N				5		700			10		078	13	520B	16
17	N				N		1500			L		079	13	537D	17
18	L				N		700			L		080	13	598	18
19	L				L		150			10		081	13	611A	19
20	N				N		N			L		082	13	611B	20
21	N				N		N			L		083	13	656B	21
22	N				L		N			10		084	13	6603C	22
23	15				L		N			30		085	13	one sample 665-6666	23
24	L			V	L	V	200			50		086	13	677C	24

L 3-5% Pb

FILM NO. 1-131

REPORT NO. Hm-2716 (23)

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

	(50) W		(10) Y		(200) Zn		(10) Zr		Si%		Al%		Na%		K%		P%		Ce		DMW	Tag No.	14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	
	N			10	N			200														///////		14	G-2	1
2			N				L															AMT 064		14	DG-118 C	2
3				20			N															065		14	454	3
4				30			N															066		14	460	4
5				30				15														067		14	476	5
6			N				N															068		14	482E	6
7			N					70														069		14	482F	7
8			N					150														070		14	482H	8
9			N				L															071		14	483B	9
10				10			L															072		14	488	10
11				10			N															073		14	500	11
12				10			N															074		14	501	12
13				30	V			10														075		14	517	13
14				10	N			70														076		14	517B	14
15				15	L		L															077		14	517C	15
16				20	N		N															078		14	520B	16
17			N				N															079		14	537D	17
18			L				N															080		14	578	18
19				30			N															081		14	611A	19
20			N				L															082		14	611B	20
21			L				N															083		14	656B	21
22			N				N															084		14	663C	22
23			L					150														085		14	665-666	23
24				30	V			70														086		14	677C	24

35

FILM NO. 1-14 I

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS

REPORT NO. HM-2716

6 - Step D.C. Arc

Requested by T.L. GUALTIERI

Date 7-Apr-70

Sheet #1

	(.05) Fe %		(.02) Mg %		(.05) Ca %		(.002) Ti %		(10) Mn		(.5) Ag		(200) As		(10) Au		(10) B		(20) Ba		DMW	Tag No.		11	Field No.	
1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
	2		.5		.5		.7		200	N		N		N		N			1500		////////		11	G-2	1
	.07	L			.05	L			200	N		N				N			70		4mT 087		11	DG 673 Ne	2
	.7		2		5		.03		300	N		N					30		70		088		11	698	3
	.3		.7		1.5	L			70		1.5	N				N		G*	(5000)		087		11	706 B	4*
	1.5		3		5		.03		700	N		N					15		1500		090		11	793	5
	.7		.15		.07		.01		200	N		N					15		300		091		11	797	6
	.7		.07		5		.01		200		1	L				L			1000		092		11	813	7
	20		.1		5		.07		50	N			1000				15		2000		093		11	827	8
	.2	L			.05		.003	L		N		N				N			100		094		11	884	9
	1		.3		.5		.02		70		.5	N					15		100		095		11	1170	10
	3		.7		1		.015		500		1.5		200				10		1000		096		11	1218	11
	.3	L		N			.002		300	N		N					50		150		097		11	1273	12
	.05	L			.05	L		L			5	N				N			1500		098		11	1290	13
	1.5		.7		20		.07		1000	N		N					150		150		099		11	1330	14
	1.5		2		5		.3		1500		7	N					10		300		100		11	U-2	15
	20		.1		10		.005		1000	N		N					10		50		101		11	DG-831	16
	15		.05		.1		.05		200		3		3000				15		150		102		11	832	17
	20		.1		10		.03		20		7	N			✓		10		150		103		11	834	18
																							11		19
																							11		20
																							11		21
																							11		22
																							11		23
																							11		24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

36

x = 1% Ba

FILM NO. 1-14 I

REPORT NO. HM-2716

ANALYST DS Grimes + RT Hopkins

Sheet #2

	(1) Be	(10) Bi	(20) Cd	(5) Co	(10) Cr	(5) Cu	(20) La	(5) Mo	(10) Nb	(5) Ni	DMW	Tag no.	12	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	1.5	N	N	5	L	10	100	N	L	5		//////	12	G-2	1
2	N			N	N	15	N		N	7		AMT 087	12	DG-673 NE	2
3	N			N	N	N	N		N	7		088	12	698	3
4	N			N	N	30	N		N	5		089	12	706 B	4
5	N			7	L	15,000	N		N	10		090	12	793	5
6	N			7	N	500	N		N	10		091	12	797	6
7	1			N	N	10	N		N	10		092	12	815	7
8	7			N	20	70	N	V	N	10		093	12	827	8
9	L			N	N	N	N	N	N	7		094	12	884	9
10	N			N	N	5000	L	5	N	7		095	12	1170	10
11	N			N	N	G# (20,000)	N	L	N	15		096	12	1218	11 #
12	3			N	N	L	N	N	N	7		097	12	1273	12
13	N			N	N	N	N	N	N	7		098	12	1290	13
14	N			5	10	10	70	N	N	7		099	12	1330	14
15	N			15	30	5000	30	N	L	30		100	12	U-2	15
16	N			N	10	30	N	7	N	L		101	12	DG-831	16
17	5			20	15	10,000	N	30	N	15		102	12	832	17
18	N	V	V	150	10	G (20,000)	50	N	N	15		103	12	834	18
19													12		19
20													12		20
21													12		21
22													12		22
23													12		23
24													12		24

37

= 5-7% Cu ** ~ 3% Cu

FILM NO. 1-14 I

REPORT NO. HM-2716

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	D.L. W	Tag No.	13	Field No.	
	2-7	9-14	16-21	23-28	30-35	37-42	44-49	51-56	58-63	66-70	71	72-77	79-80	//////////	
1	20			N	5	N	500			30		//////	13	G-2	1
2	N				N		N			L		AMT 087	13	DG-673NE	2
3	L				L		L			10		088	13	648	3
4	70				N		100			L		089	13	706 B	4
5	10				5		N			20		090	13	793	5
6	N				5		N			L		091	13	797	6
7	N			N	N		L			L		092	13	813	7
8	15			700	L		100			30		093	13	827	8
9	N			N	N		N			L		094	13	884	9
10	7000				N		L			10		095	13	1870	10
11	100				N		N			10		096	13	1218	11
12	M				N		N			L		097	13	1273	12
13	20000				N		N			L		098	13	1290	13
14	70				L		700			15		099	13	1330	14
15	N			V	10		L			100		100	13	U-2	15
16	N			N	N		L			20		101	13	DG-831	16
17	20			L	N		150			100		102	13	832	17
18	10			N	N	V	N			20		103	13	834	18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24													13		24

38

JN NO. 1-191

REPORT NO. HA-2716

· Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

(16)

	(50) W		(10) Y		(200) Zn		(10) Zr		Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77	78 79-80	//////////	
1	N			10	N			200								///////	14	G-2	1
2			N		N		N									AMT 087	14	DG-673NE	2
3			L		N			10								088	14	678	3
4			N		N		N									089	14	706B	4
5				20	N			20								090	14	793	5
6	N		G*	(200)	N			10								091	14	797	6*
7	L		N		N		L									092	14	813	7
8		500		20	N			50								093	14	827	8
9	N		N		N		N									094	14	884	9
10			N		N			20								095	14	1870	10
11				20	N		N									096	14	1218	11
12			N		N			30								097	14	1273	12
13			N		N		N									098	14	1290	13
14				15		300		15								099	14	1330	14
15	N			30	N			200								100	14	U-2	15
16		200	N		N		N									101	14	DG-831	16
17		50		15	L			30								102	14	832	17
18		200		10	N		N									103	14	834	18
19																	14		19
20																	14		20
21																	14		21
22																	14		22
23																	14		23
24																	14		24

* 700 - 1000 ppm Y

FILM NO. 2-176-F

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS
6 - Step D.C. Arc

REPORT NO. #111-3963

Requested by J. GUALTIERI Date 9/20/7[illegible]

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	7	1.5	3	1	1000	N	N	N	L	500		////////	11	BCR-1	1
2	2	.7	1.5	.3	1500	L			L	3000		BEV 241	11	DG-36A	2
3	3	.7	2	.2	1500	N			L	1500		242	11	70A	3
4	1.5	.3	.2	.3	30				L	1500		243	11	142	4
5	10	1.5	2	1	1000				L	150		244	11	174	5
6	1.5	.07	.5	.2	700				N	2000		245	11	175	6
7	7	2	1.5	.5	1500				L	500		246	11	326	7
8	3	1	1.5	.3	1500				10	1500		247	11	270	8
9	3	.3	1.5	.3	1500				10	200		248	11	427A	9
10	3	1	1.5	.3	1000				L	1000		249	11	428	10
11	2	.7	1	.3	200				L	1500		250	11	444	11
12	1.5	.2	.07	.1	700				L	5000		251	11	480	12
13	3	.3	.15	.2	300				10	300		252	11	507A	13
14	1.5	.02	.2	.07	200				15	100		253	11	508	14
15	1.5	.3	1.5	.1	700				L	2000		254	11	509	15
16	2	.3	1.5	.2	1000	√	√	√	10	1000		255	11	564	16
17	2	1	1.5	.2	300	N	N	N	N	2000		256	11	588	17
18													11		18
19													11		19
20													11		20
21													11		21
22													11		22
23													11		23
24	1	[illegible]	1	1			N	N	10	300		REF-5A	11	17	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

40

FILM NO. G-176-F

REPORT NO. HM-3963

ANALYST C. FORN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.	12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	
1	L		N		N			30	L			15	L		N		N			7		1111111		12	BCR-1	1
2		2						5	N			30		30			L		L			BFV241		12	DG-36A	2
3		1						5	N			50		30			N		L			242		12	70A	3
4		1.5					L		N			7		20			L		L			243		12	142	4
5	L							50		30		150	N				N			70		244		12	174	5
6		1					L		N			5		30			L		L			245		12	175	6
7	L							20		70		150		20			N			50		246		12	326	7
8		1						7	L			7		20			N			15		247		12	270	8
9		1.5						5	L			5	L				N			5		248		12	427A	9
10		1						7	L			10		20			N			7		249		12	428	10
11		1.5						5		50		7		20			N			20		250		12	444	11
12		1					N		L			7		30			L		L			251		12	480	12
13		1.5						5	L			7	L				L		L			252		12	507A	13
14		1.5					N		L			7		30				30	N			253		12	508	14
15		1					N		L			7	L				N		L			254		12	509	15
16		1.5	V		V		N		L			5		50	V			20	L			255		12	564	16
17		1.5	N		N			7		30		7		20	N		L			20		256		12	588	17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24		1	N		N		L		L			15		100	N			50	L			REF-5A		12	17	24

14

FILM NO. C-17E-F G= Greater than 10%, or Greater than value shown.
REPORT NO. H III-3963 H = Interference
= Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb		Pd		Pt		(100) Sb		(5) Sc		(10) Sn		(100) Sr		Te		U		(10) V		D M W	Tag No.		13	Field No.
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////
1		10					N			30	N			200						300		///////		13	BCR-1
2		20								5				300						150		BFV 241		13	DG-36A
3		10								5				300						100		242		13	70A
4		15							L					300						50		243		13	142
5	L									30				150						500		244		13	174
6		10							L					1000						50		245		13	175
7	L									15				300						150		246		13	B26
8		15								7				500						70		247		13	270
9		10								5				150						70		248		13	427A
10		10								7				500						70		249		13	428
11		30							L					300						30		250		13	444
12		100							N					700						50		251		13	480
13	L									5				200						70		252		13	507A
14		15							N				L							15		253		13	508
15		20							N					1000						20		254		13	509
16		15							L					300						50		255		13	564
17		20					N			5	N			700						30		256		13	588
18																								13	
19																								13	
20																								13	
21																								13	
22																								13	
23																								13	
24		[illegible]					N			[illegible]	N			[illegible]						[illegible]		TF-5A		13	11

FILM NO. C-1764

REPORT NO. HM-3963

Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W		(10) Y		(200) Zn		(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1	2-7	8	9-14	15	16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	N			30	L		150								////////	14	BCR-1	1
2				20	N		150								BFV241	14	DG-364	2
3				10	N		70								242	14	70A	3
4				10	N		150								243	14	142	4
5				30	L		100								244	14	174	5
6				15	N		150								245	14	175	6
7				10	L		100								246	14	1826	7
8				10	L		100								247	14	270	8
9				15	L		100								248	14	427A	9
10				15	N		100								249	14	435	10
11			L		N		100								250	14	444	11
12			N		N		70								251	14	450	12
13				10	N		100								252	14	517A	13
14			L		L		700								253	14	518	14
15			L		N		100								254	14	519	15
16				15	N		150								255	14	524	16
17	N		L		N		150								256	14	598	17
18																14		18
19																14		19
20																14		20
21																14		21
22																14		22
23																14		23
24	tr			30	L		200								BF 1A	14	17	24

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FILM NO. C-177-F

REPORT NO. HM-3963

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 9/20/73

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	7	1.5	2	1	1000	N	N	N	L	500		///////	11	BCR-1	1
2	3	.5	1.5	.3	200				10	1000		BEN 254	11	PG-156	2
3	1.5	.07	L	.07	1000				15	100		258	11	658	3
4	1.5	.7	.2	.3	150				L	1000		259	11	438	4
5	1.5	.1	1	.2	700				L	1500		260	11	694	5
6	2	1.5	.5	.3	1500				10	700		261	11	705	6
7	3	.7	1.5	.3	1500				10	500		262	11	713	7
8	5	.7	1	.3	1000				15	150		263	11	729A	8
9	15	2	3	1	1500				20	200		264	11	758	9
10	7	1	1	.5	1500				10	500		265	11	760	10
11	7	2	.15	.3	500				10	150		266	11	795	11
12	10	2	5	1	1000				10	L		267	11	805	12
13	7	1.5	3	.3	2000				L	1000		268	11	824	13
14	7	1.5	2	.3	1000				L	1500		269	11	859	14
15	3	.3	1	.5	300				10	1000		270	11	1320	15
16	2	.2	.07	.2	100	V	V	V	L	1500		271	11	1087B	16
17	15	2	5	1	1500	N	N	N	10	150		272	11	1129	17
18													11		18
19													11		19
20													11		20
21													11		21
22													11		22
23													11		23
24	1	.3	L	.1	70	2	N	N	10	700		REF-5A	11	183	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

FILM NO. 6-177-F

REPORT NO. HM-3963

ANALYST C. FORN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.	12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	
1	L		N		N			30	L			30	L		N		N			10		///////		12	BCR4	1
2		1.5						5		10		20		30			L			15		BFX4		12	DG-156	2
3		7					L		L			5		50				30		10		258		12	658	3
4		1					L			50		15		30			N			15		259		12	438	4
5		1.5					L		L			20		30			N		L			260		12	694	5
6		1.5						10	L			20		30			N			7		261		12	705	6
7	L							5	L			10		20			L		L			262		12	713	7
8		1.5						10	L			10		30			L		L			263		12	729A	8
9	L							100		50		500	N				N			70		264		12	758	9
10		1						10		10		10		20			L			5		265		12	760	10
11		1						15		50		50	N				N			30		266		12	792	11
12	L							20		70		100	N				L			50		267		12	805	12
13		1						20		10		20		20	V		N			10		268		12	824	13
14		1.5						15	L			70		30	N		N			7		269		12	859	14
15		3					L		L			15		70		20		70		5		270		12	1320	15
16		1.5	V		V		L		L			20		70	N		L		L			271		12	1087B	16
17		1	N		N			30		20		70	N		N		L			20		272		12	1129	17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24		30	N		L		L		L			5	L		N		N			10		REF-5A		12	183	24

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FILM NO. 6-177-F

REPORT NO. HW-3963

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.
N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////
1	10			N	30	N	200			300		////////	13	BCR4
2	20				5		500			50		254	13	DG-150
3	100				N		N			10		258	13	658
4	20				L		L			30		259	13	438
5	15				N		700			30		260	13	694
6	10				10		100			100		261	13	705
7	20				5		300			100		262	13	713
8	15				7		300			100		263	13	729A
9	L				70		200			500		264	13	758
10	10				7		500			100		265	13	760
11	L				15		N			100		266	13	792
12	L				50		150			300		267	13	805
13	10				15	Y	700			150		268	13	824
14	15				15	N	700			200		269	13	859
15	20				N	L	300			20		270	13	1320
16	70			Y	N	N	700			100		271	13	1087B
17	10			N	30	N	200			300		272	13	1129
18													13	
19													13	
20													13	
21													13	
22													13	
23													13	
24				N	N	N	150			30		REF-5A	13	183

FILM NO. C-177-F

REPORT NO. AM-3963

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W		(10) Y		(200) Zn		(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1	2-7	8	9-14	15	16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	N			30	L		150								////////	14	BCR-1	1
2			L		N		150								BFX	14	DG-150	2
3			N		L		700								258	14	658	3
4			L		N		150								259	14	438	4
5				10	N		100								260	14	694	5
6				15	L		150								261	14	705	6
7				20	L		150								262	14	713	7
8				20	L		150								263	14	729A	8
9				70		200	150								264	14	758	9
10				20	L		150								265	14	760	10
11				15	N		200								266	14	792	11
12				50		300	200								267	14	805	12
13				20	L		100								268	14	824	13
14				30	L		150								269	14	859	14
15				30	N		500								270	14	1320	15
16			L		N		200								271	14	1087B	16
17	N			50		200	150								272	14	1129	17
18																14		18
19																14		19
20																14		20
21																14		21
22																14		22
23																14		23
24				15		300	30								RLF-5A	14	153	24

LH

FILM NO. 6-178-F

REPORT NO. HM-3963

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

6 - Step D.C. Arc

Requested by _____ Date _____

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	7	1.5	3	5 1	1500	N	N	N	L	700		////////	11	BCR-1	1
2	3	.3	.7	.5	1000				10	700		BFV 273	11	DG-1315	2
3	7	2	3	.7	2000				20	1500		274	11	1160	3
4	5	.5	3	.3	2000				20	1500		275	11	1169A	4
5	2	.3	1.5	.5	500				L	1500		276	11	1183	5
6	3	1.5	1.5	.5	2000				10	1500		277	11	1199	6
7	5	.7	3	.5	2000				20	1500		278	11	1218	7
8	3	1.5	1	.3	1500				10	1000		279	11	1258A	8
9	5	.5	2	5 1	500				L	3000		280	11	1262	9
10	10	3	3	1	2000				15	300		281	11	1280	10
11	15	2	1	1	1500				10	500		282	11	1286A	11
12	7	3	3	5 1	1500				L	2000		283	11	1310	12
13	5	1	3	.5	2000	"	"	"	15	> 5000		284	11	1312	13
14	10	2	5	.7	1000	N	N	N	70	500		285	11	658A	14
15													11		15
16													11		16
17													11		17
18													11		18
19													11		19
20													11		20
21													11		21
22													11		22
23													11		23
24	1	.1	.15	.15	20	1.5	N	N	10	100		RT-6A	11	3	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. 6-178-F

REPORT NO. HM-3963

ANALYST C. FORN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	L		N		N			30	L			15	L		M		N			10		////////		12	BCR-1	1
2		3						5		10		15		50				70	L			BFV 273		12	DG-1315	2
3		1.5						15	L			70		30			L			5		274		12	1160	3
4		1.5						5	L			7		30			N		L			275		12	1169A	4
5		1					L			15		15		30			L		L			276		12	1183	5
6		1						7	L			10		50			L		L			277		12	1199	6
7	L							5	L			10		30			L		L			278		12	1218	7
8		1.5						5	L			7		30	N		L		L			279		12	1258A	8
9		1						10		50		20		100		7		70		10		280		12	1262	9
10	L							30		50		200	L		N		L			70		281		12	1280	10
11		1						20	L			100		20	N		L			15		282		12	1286A	11
12		1.5						20		70		70		50		5		50		70		283		12	1310	12
13		1	V		V			5	L			10		20	N		L		L			284		12	1312	13
14	L		N		N			150		150		150	M		N		1.			100		285		12	658A	14
15																								12		15
16																								12		16
17																								12		17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24		3	H		H		L			15		5		50	N		N			15		REF-1A		12	3	24

64

FILM NO. C-178-F

REPORT NO. Hm-3963

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 / 2-7	8 / 9-14	15 / 16-21	22 / 23-28	29 / 30-35	36 / 37-42	43 / 44-49	50 / 51-56	57 / 58-63	64 / 65-70	71	72-77 / 78	79-80	//////////	
1	10			N	30	N	200			300		BTF-1	13	BCR-1	1
2	15				5		300			20		273	13	DG-1315	2
3	20				20		1000			200		274	13	1160	3
4	10				7		300			100		275	13	1169A	4
5	10				15		1500			100		276	13	1183	5
6	L				10		700			100		277	13	1199	6
7	L				10		500			100		278	13	1218	7
8	L				7		150			50		279	13	1258A	8
9	15				15		1000			100		280	13	1262	9
10	L				30		150			300		281	13	1280	10
11	L				50		100			500		282	13	1286A	11
12	10				30		700			200		283	13	1310	12
13	10			V	5	V	300			50		284	13	1312	13
14	L			N	30	N	100			200		285	13	658A	14
15													13		15
16													13		16
17													13		17
18													13		18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24	30			N	L	N	200			50		REF-51	13	3	24

50

FILM NO. C-178-F

REPORT NO. HW-3963

NOTE: Some combinations of elements affect the limits of detection. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W		(10) Y		(200) Zn		(10) Zr		Si%		Al%		Na%		K%		P%		Ce		DMW	Tag No.		14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	N			30	L			150														////////		14	BCR-1	1
2				15	N			500														BFV 273		14	DG-1315	2
3				30	L			150														274		14	1160	3
4				20	L			150														275		14	1169A	4
5				15	N			150														276		14	1183	5
6				20	L			150														277		14	1199	6
7				30	L			150														278		14	1218	7
8				20	N			100														279		14	1258A	8
9				30	L			500														280		14	1262	9
10				30	L			100														281		14	1280	10
11				30		200		150														282		14	1286A	11
12				30	L			300														283		14	1310	12
13				20	L			150														284		14	1312	13
14	N			15	L			50														285		14	658A	14
15																								14		15
16																								14		16
17																								14		17
18																								14		18
19																								14		19
20																								14		20
21																								14		21
22																								14		22
23																								14		23
24	N			20		200		70														BF-54		14	3	24

FILM NO. C-179-F

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

REPORT NO. HM-3964

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 9/30/

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	7	1.5	2	G 1	1500	N	N	N	L	50		////////	11	BCR-1	1
2	3	.3	.7	.05	700	30			N	150		BFX 286	11	DG-140C	2
3	.5	.02	L	L	15	1.5			N	300		287	11	232A	3
4	.3	.07	.05	.03	300	1			N	300		288	11	232B-3	4
5	3	.02	L	.1	G 5000	15			N	G 5000		289	11	232 D	5
6	1	1.5	2	.1	700	N			10	200		290	11	248A	6
7	1	.5	20	.015	1000	30			N	70		291	11	1423	7
8	3	.7	15	.3	1500	1			L	20		292	11	1439	8
9	1.5	.1	.15	.1	30	1.5			10	700		293	11	1446A	9
10	1.5	.02	.1	.1	1500	2			N	1000		294	11	1446 B	10
11		L	.05	L	20	N			N	20		295	11	1459 B	11
12	1	.7	7	.015	700	N			10	30		296	11	1543 B	12
13	.1	.2	10	.002	500	N			N	L		297	11	1555A	13
14	1	.7	5	.002	500	N			L	20		298	11	1556	14
15	1	.5	20	L	5000	N			N	150		299	11	1558	15
16	2	L	.5	.05	200	30			N	G 5000		300	11	1563	16
17	.3	.7	20	.01	1500	N	N	N	L	500		301	11	1573A	17
													11		18
													11		19
													11		20
													11		21
													11		22
													11		23
	G		.5	.5	700	10	300	N				RLF-5A	11	71	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. C-179-F

REPORT NO. HW-3964

ANALYST C. Fern

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	L		N		N			20	L			15	L		N		N			7		////////		12	BCR-1	1
2	N						N		L			15000	N			5	N		L			BFY 286		12	DG-142C	2
3	N						N		L			100	N		N		N		L			287		12	232A	3
4		1					N		L			20	N		N		N		L			288		12	232B-3	4
5	L						N		L			2000	L			7	N			15		289		12	232 D	5
6	L						N		L			20	N		N		N			5		290		12	248A	6
7	N						N		L			3100		30			N		N			291		12	1423	7
8	N							10	L			20	N				1			10		292		12	1439	8
9		1					N		L			10		70				20	N			293		12	H40A	9
10	L							5	L			20	N				N			5		294		12	H40B	10
11	L						N		L			10	N				L		L			295		12	1459B	11
12	N						N		L			7	N				N		L			296		12	543B	12
13	N						N		L			5	N				N		L			297		12	1555A	13
14	L						N		L			7	N				N		L			298		12	1556	14
15	N						N		L		1			30			N		N			299		12	1558	15
16	N							5	L			10000	N		N		N		L			300		12	1563	16
17	N		N		N		N		L			70		70	N		N		L			301		12	1573A	17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24																								12		24
25										200		200		70		7	L					REF-5A		12	71	25

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FILM NO. C-179-F

REPORT NO. HW-3964

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////
1	15			N	30	N	200			300		//////	13	BCR-1
2				N	N		N			L		286	13	DG-142C
3	10			N	N		N			L		287	13	232A
4	30			N	N		N			L		288	13	232B-3
5	20			N	5		N			20		289	13	232D
6	10			N	L		L			10		290	13	248A
7	30			200	L		1500			L		291	13	1423
8	L			N	10		150			200		292	13	1439
9	20				N		N			50		293	13	1440A
10	70				L		N			15		294	13	1440B
11	N				N		N			L		295	13	1459B
12	100				L		200			L		296	13	1543B
13	C				N		300			L		297	13	1555A
14	L				N		100			L		298	13	1556
15	30				5		150			L		299	13	1558
16	3000			N	N	N	150			15		300	13	1563
17	200			N	N	N	150			L		301	13	1573A
18													13	
19													13	
20													13	
21													13	
22													13	
23													13	
24				N	15	N	300			10		RLF-5A	13	71

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FILM NO. C-179-F

REPORT NO. HW-3964

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

	(50) W		(10) Y		(200) Zn		(10) Zr		Si%		Al%		Na%		K%		P%		Ce		DMW	Tag No.		14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	N			20	L			150														////////		14	BCR-1	1
2			N		N			15														BFY 286		14	DG-H2C	2
3			N		N		N															287		14	232A	3
4			L		N			20														288		14	232B-3	4
5				10	N			15														289		14	232D	5
6			L		N			15														290		14	248A	6
7				20	L		L															291		14	H23	7
8				10	N			10														292		14	1439	8
9				15	N			200														293		14	H46A	9
10			N		N		N															294		14	H46B	10
11			N		N		N															295		14	1459B	11
12				10	N		N															296		14	1543B	12
13			L		N		N															297		14	1555A	13
14				10	N		N															298		14	1556	14
15				20	N		L															299		14	1558	15
16			N		N			10														300		14	1563	16
17	N			30	N		L															301		14	1573A	17
18																								14		18
19																								14		19
20																								14		20
21																								14		21
22																								14		22
23																								14		23
24																								14		24
25					150			10																14	71	25

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FILM NO. 2-180-F SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

REPORT NO. HM-3964 6 - Step D.C. Arc Requested by J. GUALTIERI Date 9/30/72 Sheet #1

(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	///////////	
7	1.5	3	G 1	1500	N	N	N	L	500		//////	11	BCR-1	1
5	1	2	.07	700	15			L	3000		BT-V 302	11	DG-248C	2
1.5	.7	20	L	3000	N			N	50		303	11	1622A	3
1	1.5	3	.01	1000	N			N	70		304	11	2139A	4
.2	.02	.15	.03	200	N			N	200		305	11	1991	5
.2	.3	10	.015	300	N			10	70		306	11	2100	6
.2	.02	.15	L	20	N			N	500		307	11	2107A	7
1.5	.03	.07	.015	30	20			N	200		308	11	2116B	8
1.5	.02	L	.01	10	10			N	50		309	11	2111	9
2	5	7	L	1500	N			L	L		310	11	2133C	10
1.5	.7	3	.02	1500	1.5			L	100		311	11	241A	11
15	1	1	.015	300	.5			10	L		312	11	2163	12
.5	.7	.15	.03	300	N			L	200		313	11	2158	13
.2	L	L	.01	50	N			N	100		314	11	2157	14
1	.7	.15	.1	300	N			N	700		315	11	241A	15
2	.2	.05	.2	1500	L	"	"	10	700		316	11	2164	16
.2	L	L	.007	100	N	N	N	N	100		317	11	2165	17
												11		18
												11		19
												11		20
												11		21
												11		22
												11		23
1	.5	.7	.15	1000	70	N	N	300	500		REF 5A	11	42	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

FILM NO. G-160-F

REPORT NO. HW-3964

ANALYST C. FORN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.	12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	
1	L		N		N			30	L			15	L		N		N			10		///////		12	BCR-1
2		1					L			10		700	L			15				7		BFV 302		12	OG-248C
3	N						N		L			5	L		N				L			303		12	1622A
4							N		L			10	N		N					5		304		12	2129A
5							N		L			7	N		N					5		305		12	1996
6							N		L			7		20	N					5		306		12	2000
7							N		L			7	L		N					5		307		12	2007A
8							N		L			15	N			15				5		308		12	2010B
9							L		L			10	N		N					5		309		12	2011
10	N						N		L			5	N		N					5		310		12	2033C
11		1					L		L			200	N							5		311		12	241A
12		1					L		L			300		156		7				5		312		12	2163
13		1					N		L			7	N		N				L			313		12	2158
14	N						N		L			5	N		N				L			314		12	2157
15	L						N		L			7		50		5			L			315		12	2161A
16		1					N		L			5	N		N		N		L			316		12	2164
17	N		N		N		N		L			10	N		N		N		L			317		12	2165
18																								12	
19																								12	
20																								12	
21																								12	
22																								12	
23																								12	
24		1	L			20		5	L			10000		30	N		N		L			REF 5A		12	42

FILM NO. G-180-F

REPORT NO. HW-3964

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
1	10			N	30	N	200			300		HHW	13	BCR-1	1
2	10000				5		700			50		302	13	DG-248C	2
3	100				5		3000			10		303	13	1622A	3
4	15				N		100			10		304	13	2129A	4
5	70				N		N			L		305	13	1996	5
6	10				5		300			L		306	13	2000	6
7	L				N		N			L		307	13	2007A	7
8	L				N		N			15		308	13	2010B	8
9	N				N		N			L		309	13	2011	9
10	15				L		200			L		310	13	2033C	10
11	1000				N		100			20		311	13	241A	11
12	30				L		N			20		312	13	2163	12
13	30				N		N			L		313	13	2158	13
14	N				N		N			L		314	13	2159	14
15	50				N		L			20		315	13	2161A	15
16	50			V	N	N	N			20		316	13	2164	16
17				N	N	N	N			L		317	13	2165	17
18													13		18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24													13		24
25				N	N	500	L			15		PTF 5A	13	42	25

FILM NO. C-180-F

REPORT NO. HM-3964

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	W (50)		Y (10)		Zn (200)		Zr (10)		Si%		Al%		Na%		K%		P%		Ce		DMW	Tag No.		14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	N			30	L			150														///////		14	BCR-1	1
2	G	10000		30	N			15														302		14	DG-2485	2
3	N			20	N		N															303		14	1622A	3
4			L		N		N															304		14	2129A	4
5			N		N			30														305		14	1996	5
6				20	N			10														306		14	2000	6
7			N		N		N															307		14	2007B	7
8			L		N		N															308		14	2010B	8
9			N		N		N															309		14	2011	9
10				15	N		N															310		14	2133C	10
11			L		N		N															311		14	241A	11
12				30	N		N															312		14	2163	12
13			N		N			15														313		14	2158	13
14			N		N		N															314		14	2159	14
15			L		N			70														315		14	2161A	15
16			L		N			100														316		14	2164	16
17	N		L		N		N															317		14	2165	17
18																								14		18
19																								14		19
20																								14		20
21																								14		21
22																								14		22
23																								14		23
24				20		7		50														[illegible]		14	[illegible]	24

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FILM NO. 6-181 F

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS

REPORT NO. HM-3964

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 9/30/72

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
1	2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
	7	1.5	3	G 1	1500	N	N	N	L	500		//////	11	BCR-1	1
	.1	L	L	L	30	5		N	N	100		BFV 318	11	DG-2168	2
	1.5	.05	.05	.1	30	30		50	L	700		319	11	2167	3
	.1	L	L	N	L	N		N	N	150		320	11	2168	4
	15	.02	L	.03	L	50		15	10	1500		321	11	2169	5
	2	.07	L	.15	15	1.5		N	10	300		322	11	2170	6
	.2	L	L	N	15	N		N	N	300		323	11	2173	7
	.2	.02	L	N	30	N		N	N	20		324	11	2181	8
	3	.15	.1	L	70	1.5		N	L	70		325	11	2182	9
	1	.1	.3	.002	100	N		N	N	50		326	11	2183	10
	1	.1	.1	.03	70	2		N	N	200		327	11	2184	11
	2	3	3	.2	1500	N		N	L	300		328	11	2185	12
	15	.1	.1	.05	30	30		50	10	150		329	11	2190	13
	1	.02	L	.005	20	3		N	N	50		330	11	2190A	14
	7	.05	.2	.015	20	3		N	10	5000		331	11	2 [illegible]	15
	2	.2	.07	.2	G 5000	10		N	10	G 5000		332	11	2332B	16
	.3	.3	7	.015	700	N	N	N	L	50		333	11	1551	17
													11		18
													11		19
													11		20
													11		21
													11		22
													11		23
	[illegible]	[illegible]	[illegible]	.1	[illegible]	1	N	N	30	[illegible]		REF SA	11	166	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

FILM NO. 6-181-F

REPORT NO. HM-3964

ANALYST C. FORN

Sheet #2

(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
L		N		N			30	L			15	L		N		N			10		////////		12	BCR-1	1
N		N				N		L			15	N			50				5		BFV 318		12	DG-2166R	2
L		N				N		L			20		50	N				L			319		12	2167	3
N		N				N		L			5	N		N				L			320		12	2168	4
N		L					15	L			30	N			150				7		321		12	2169	5
	1	N					5	L			7		20		5			L			322		12	2170	6
L						N		L			7	N		N				L			323		12	2173	7
N						N		L			5	N		N				L			324		12	2181	8
N							10	L			7	N			15				5		325		12	2182	9
L						N			10		50	N			30			L			326		12	2183	10
	1.5					N			20		20	N		N				L			327		12	2184	11
	1.5						5	L			15		20		10				20		328		12	2185	12
L							10	L			20	N			30			L			329		12	2190	13
L						N		L			15	N			15			L			330		12	2190A	14
L						L		L			10	N			50			L			331		12	2009	15
	1.5						20	L			500		20		70				30		332		12	232B	16
N		N		N		N			10		7	N		N		N		L			333		12	1551	17
																							12		18
																							12		19
																							12		20
																							12		21
																							12		22
																							12		23
		N		N		N			15		200	L			30	N		L			REF SA		12	166	24

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FILM NO. 6-181-F

REPORT NO. HW-3964

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb		Pd		Pt		(100) Sb		(5) Sc		(10) Sn		(100) Sr		Te		U		(10) V		DMW	Tag No.		13	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1		10					N			30	N			200						300		////////		13	BCR-1	1
2	N								N				N						L			BFV 318		13	DG-2166B	2
3		10							N				N							20		319		13	2167	3
4	L								N				N						L			320		13	2168	4
5		15							N				N						L			321		13	2169	5
6		100							N				N							20		322		13	2170	6
7	N								N				N						L			323		13	2173	7
8	N								N				N						L			324		13	2181	8
9	N								N				N						L			325		13	2182	9
10	N								N				N						L			326		13	2183	10
11		70							N				L							10		327		13	2184	11
12		20								9				150						70		328		13	2185	12
13		10							N				L							70		329		13	2190	13
14	N								N				N						L			330		13	2190A	14
15	N								N					100					L			331		13	2009	15
16		70					V		N		V		L							50		332		13	232B	16
17	N						N			5	N			300					L			333		13	1551	17
18																								13		18
19																								13		19
20																								13		20
21																								13		21
22																								13		22
23																								13		23
24							N			5	N			150						70		PTF 5A		13	166	24

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FILM NO. C-181-F

REPORT NO. HL-3964

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W		(10) Y		(200) Zn		(10) Zr		Si%		Al%		Na%		K%		P%		Ce		DMW	Tag No.		14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	////////////	
1	N			30	L			150														///////		14	BCR-1	1
2	N		N		N		N															BFV 318		14	DG-216B	2
3	L			10	N			70														319		14	2167	3
4	N		N		N		N															320		14	2168	4
5	N		N		N			10														321		14	2169	5
6		50		10	N			150														322		14	2170	6
7	N		N		N		N															323		14	2173	7
8	N		N		N		N															324		14	2181	8
9	N		N		N		N															325		14	2182	9
10	N		N		N		N															326		14	2183	10
11	N		N		N			20														327		14	2184	11
12	N		L		L			30														328		14	2185	12
13	L			10	N			15														329		14	2190	13
14	N		L		N		N															330		14	2190A	14
15	N		N		N			15														331		14	2009	15
16	L			10	N			100														332		14	232B	16
17	N			30	N		N															333		14	1551	17
18																								14		18
19																								14		19
20																								14		20
21																								14		21
22																								14		22
23																								14		23
24				10	N			70														BFV		14	166	24

63

FILM NO. C-182-F

REPORT NO. HM-3964

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS
6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 9/30/72

Sheet #1

	(.05) Fe %		(.02) Mg %		(.05) Ca %		(.002) Ti %		(10) Mn		(.5) Ag		(200) As		(10) Au		(10) B		(20) Ba		DMW	Tag No.		11	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1		7		1.5		2		1		1500	N		N		N		L			300		////////		11	BCR-1	1
2		.2		.03		.05		.5		30	N		N		N			10		20		BFV 334		11	DG-1583	2
3		.05	L		L			.05		20	N		N		N			10	L			335		11	1742	3
4																								11		4
5																								11		5
6																								11		6
7																								11		7
8																								11		8
9																								11		9
10																								11		10
11																								11		11
12																								11		12
13																								11		13
14																								11		14
15																								11		15
16																								11		16
17																								11		17
18																								11		18
19																								11		19
20																								11		20
21																								11		21
22																								11		22
23																								11		23
24		.5		.5		.15		.3		[illegible]		3		100	L	[illegible]		200		150		REF-5A		11	80	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. G-182-F

REPORT NO. H 111-3964

ANALYST C. FERN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	////////////	
1	—		N		N			20	L			15	L		N		N			7		////////		12	BCR-1	1
2	L		N		N		N		N		L		N		N		L		L			BFV 334		12	DG-1583	2
3	N		N		N		N		N			7	N		N		N		L			335		12	1742	3
4																								12		4
5																								12		5
6																								12		6
7																								12		7
8																								12		8
9																								12		9
10																								12		10
11																								12		11
12																								12		12
13																								12		13
14																								12		14
15																								12		15
16																								12		16
17																								12		17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24	—		+		N		—	10	—	70		30		30	N		N			50		REF-5A		12	80	24

FILM NO. C-182-F

REPORT NO. HW-3964

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	10			N	20	N	200			300		////// BFW	13	BCR-1	1
2	N			N	L	N	N			15		334	13	OG-1593	2
3	N			N	N	N	N			10		335	13	1742	3
4													13		4
5													13		5
6													13		6
7													13		7
8													13		8
9													13		9
10													13		10
11													13		11
12													13		12
13													13		13
14													13		14
15													13		15
16													13		16
17													13		17
18													13		18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24				N	15	N	150			100		PDF-5A	13	80	24

FILM NO. C-182-F

REPORT NO. HW-3964

Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

(50) W	(10) Y	(200) Zn	(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DW	Tag No.	14	Field No.
1 \ 2-7	8 | 9-14	15 | 16-21	23 | 23-28	29 | 30-35	36 | 37-42	43 | 44-49	50 | 51-56	57 | 58-63	64 | 65-70	71	72-77 | 78	79-80	
N	30	L	50								////////	14	BCR-1
N	L	N	300								BFX 334	14	DG-1583
N	L	N	70								335	14	1742

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FILM NO. 6-187-F

REPORT NO. Hm-3965

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS
6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 10/11/72

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	2-7	9-14	16-21	23-28	30-35	37-42	44-49	51-56	58-63	65-70		72-77	79-80		
	10	1.5	3	G 1	1500	N	N	N	L	500		////////	11	BCR-1	1
	7	5	5	.3	1000				150	200		RFV 336	11	DG-38	2
	5	3	5	.3	700				100	300		337	11	74	3
	3	3	10	.15	1500				L	200		338	11	78	4
	3	3	3	.15	700				150	150		339	11	81	5
	2	.3	.2	.05	20				70	100		340	11	81A	6
	2	.3	.07	.2	10				150	300		341	11	81B	7
	3	5	3	.1	700				70	150		342	11	109	8
	5	10	5	.15	1500				70	200		343	11	141A	9
	3	.5	.15	.2	G 5000				10	500		344	11	141B	10
	3	5	5	.15	300				100	150		345	11	144	11
	3	7	5	.15	700	N			10	300		346	11	232	12
	15	.3	.1	.01	G 5000	70			L	G 5000		347	11	232B-1	13
	7	1	.15	.2	G 5000	L			50	G 5000		348	11	232B-2	14
	15	2	10	.03	1500	N			10	500		349	11	248	15
	5	7	3	.3	500	N			100	300		350	11	248B	16
	5	7	7	.3	700	N	N	N	70	300		351	11	2189	17
													11		18
													11		19
													11		20
													11		21
													11		22
													11		23
	7	.7	.7	.5	70	L	300	N	2[illegible]	700		REF-10	11	39	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. 6-707

REPORT NO. HM-3965 ANALYST C. FORN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.	12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	
1	L				N			30	L			15		20	N		N			10		////////		12	BCR-1
2		1						5		30		20		20	N					15		BFV 336		12	DG-38
3		1.5						7		50		20		30	N					50		337		12	74
4		1.5						7		20		10		30	N					15		338		12	78
5		1.5						5		30		15		30	N					10		339		12	81
6	L						L		L			15	L		N					5		340		12	81A
7	L						L			10		15	L		N				L			341		12	81B
8		1						5		20		10		20	N					15		342		12	109
9		1					L			50		10		20	N					20		343		12	141A
10		3						10		50		30		30		15				20		344		12	141B
11		1.5					L			30		7		20	N					10		345		12	144
12		1.5					L			30		30		20	N					15		346		12	232
13		15						300		15		3000		70		700				200		347		12	232B-1
14		5						10		30		100		30		30				50		348		12	232C-1
15		1					L			10		20		20	N					5		349		12	248
16		1.5						10		50		20		30	N		"			20		350		12	248B
17		1						7		30		10		30	N		N			15		351		12	2189
18																								12	
19																								12	
20																								12	
21																								12	
22																								12	
23																								12	
24		2								5				7		5	L			10		Ref-13		12	39

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FILM NO. 6-187-F

REPORT NO. IFA-3965

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.
N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////
1	10			N	30	N	200			500		////////	13	BCR-1
2	30				10		300			70		336	13	DS-38
3	10				15		200			70		337	13	74
4	15				7		300			50		338	13	78
5	30				7		300			30		339	13	81
6	L				N		L			20		340	13	81A
7	30				L		150			30		341	13	81B
8	10				5		N			30		342	13	109
9	10				10		L			50		343	13	141A
10	L				10		N			70		344	13	141B
11	70				5		N			50		345	13	144
12	L				7		N			30		346	13	232
13	300				L		3000			30		347	13	232B-1
14	20				10		150			70		348	13	232B-2
15	30				L		500			10		349	13	248
16	30				10		150			70		350	13	248B
17	10			N	10	N	200			30		351	13	2187
18													13	
19													13	
20													13	
21													13	
22													13	
23													13	
24	7			20	2	11	0			50		[illegible]	13	[illegible]

70

FILM NO. 6-181-1

REPORT NO. HW-3965

Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W	(10) Y	(200) Zn	(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1 / 2-7	8 / 9-14	15 / 16-21	22 / 23-28	29 / 30-35	36 / 37-42	43 / 44-49	50 / 51-56	57 / 58-63	64 / 65-70	71	72-77 / 78	79-80	//////////	
1	N	30	L	150								////////	14	BCR-1	1
2		10	L	100								BFV 336	14	DG-38	2
3		15	L	70								337	14	74	3
4		10	L	50								338	14	78	4
5		15	N	100								339	14	81	5
6		L	N	20								340	14	81A	6
7		L	N	100								341	14	81B	7
8		10	L	20								342	14	109	8
9		20	L	30								343	14	141A	9
10		10	L	70								344	14	141B	10
11		L	N	50								345	14	144	11
12	N	15	N	70								346	14	232	12
13	100	150	L	30								347	14	232B1	13
14	L	20	L	70								348	14	232B2	14
15	N	10	N	10								349	14	248	15
16	N	10	N	70								350	14	249B	16
17	N	10	N	100								351	14	2189	17
18													14		18
19													14		19
20													14		20
21													14		21
22													14		22
23													14		23
24	150	"	"	"								"	14	"	24

14

FILM NO. 6-788-F

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

REPORT NO. HM-3965

6 - Step D.C. Arc

Requested by J. Gualtieri

Date 10/10/72

Sheet #1

(.05) Fe %	(.02) Mg %	(.05) Ca %		(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au		(10) B	(20) Ba	D M W	Tag No.	11	Field No.	
1 2-7	8 9-14	15 16-21	22	23-28	29 30-35	36 37-42	43 44-49	50 51-56	57	58-63	64 65-70	71	72-77 78	79-80	///////////	
7	1.5	3	G	1	1500	N	N	N	L		500		///////	11	BCR-1	1
2	1	10		.15	2000					50	150		BFV 352	11	DG-4AA	2
3	3	5		.1	1000					70	150		353	11	677	3
3	3	5		.15	700					100	200		354	11	1301	4
3	5	1.5		.2	300					150	200		355	11	1340	5
.1	.07	.1		.1	100				N		30		356	11	1341	6
1.5	.05	.2		.5	70					10	50		357	11	1341A	7
1.5	.3	7		.3	5000					15	500		358	11	1342A	8
1.5	.05	.1		.02	200					10	50		359	11	1347	9
1	7	10		.015	300				L		20		360	11	1358	10
1.5	5	7		.1	700					50	700		361	11	1359	11
1.5	.2	1		.1	300					30	150		362	11	1361	12
5	2	1.5		.3	700					50	500		363	11	1371	13
2	2	.07		.15	30					150	200		364	11	1374	14
3	1.5	.5		.2	500					100	500		365	11	1389	15
1	2	15		.05	70					30	70		366	11	1405	16
1.5	3	15		.05	500	N	N	N		30	70		367	11	1406	17
														11		18
														11		19
														11		20
														11		21
														11		22
														11		23
[illegible]	[illegible]				[illegible]					[illegible]			[illegible]	11	161	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. 6-188-2

REPORT NO. HM-3965 ANALYST C. FORN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.	12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	
1	L		N		N			30	L			15	L		N		N			10		////////		12	BCR-1	1
2	L						L			20		5		20						10		EFK 352		12	DS-4BA	2
3		1					L			20		7	L							15		353		12	677	3
4		1.5					L			20		7	L							10		354		12	134	4
5		1.5						10		50		30		50						50		355		12	1340	5
6	N						N		L			5	L						L			356		12	1341	6
7	L						N		L			7		100					L			357		12	1344A	7
8	L						L			30		7		50						10		358		12	1345A	8
9	L							7	L			7		30						20		359		12	1347	9
10	L						N		L			7	N						L			360		12	1358	10
11		1.5					N			20		7	L							5		311		12	1359	11
12		1.5					L			15		10		20			L			10		312		12	1361	12
13		1						7		30		30		30			N			30		363		12	1371	13
14		2					N			10		5		100			L			5		364		12	1374	14
15		1.5					L			20		15		20			N			15		365		12	1389	15
16	L						N		L			7	L				N		L			366		12	1405	16
17	L		N		N		N		L			5		20	N		N		L			367		12	1406	17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24										10								30		5		Post-UP		12	167	24

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FILM NO. 6-188-F   G= Greater than 10%, or Greater than value shown.
REPORT NO. HM-3965   H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	Pb (10)		Pd		Pt		Sb (100)		Sc (5)		Sn (10)		Sr (100)		Te		U		V (10)		DMW	Tag No.		13	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1		10					N			30	N			200						300		///////		13	BCR-1	1
2		15								5				2000						20		352		13	DG-419A	2
3		10								5				150						30		353		13	677	3
4		15								7				150						50		354		13	1301	4
5		100								10			N							100		355		13	1340	5
6	N									7			N							10		356		13	1341	6
7	N									5			N							50		357		13	1341A	7
8		15								15				150						20		358		13	1346A	8
9	N								N				N							30		359		13	1347	9
10	L								N				N							10		360		13	1358	10
11		10								5			N							30		361		13	1357	11
12	L								N				N							100		362		13	1361	12
13		20								7			N							50		363		13	1371	13
14		10								5			N							10		364		13	1374	14
15		10								10				100						50		365		13	1389	15
16		10							L					500						15		366		13	1405	16
17		20					N		L		N			300						15		367		13	1406	17
18																								13		18
19																								13		19
20																								13		20
21																								13		21
22																								13		22
23																								13		23
24		[illegible]					[illegible]			[illegible]	N			[illegible]						[illegible]		[illegible]		13	767	24

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FILM NO. C-138-F

REPORT NO. HM-3765

NOTE: Some combinations of elements ... Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

	(50) W		(10) Y		(200) Zn		(10) Zr		Si%		Al%		Na%		K%		P%		Ce		DMW	Tag No.		14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	N			30	L			150														///////		14	BCR-1	1
2				20	N			100														BFV 352		14	DG-419A	2
3				15	L			20														353		14	677	3
4				10	N			20														354		14	130	4
5				10	L			70														355		14	1340	5
6			L		N			150														356		14	1341	6
7				30	N			300														357		14	1341A	7
8				70	N			200														358		14	1346A	8
9			L		N			15														359		14	1347	9
10			N		N		N															360		14	1358	10
11				10	N			20														361		14	1359	11
12			L		N			30														362		14	1361	12
13				30	L			300														363		14	1371	13
14				50	N			200														364		14	1374	14
15				30	N			200														365		14	1389	15
16				10	N			15														366		14	1405	16
17	N			10	N			15														367		14	1406	17
18																								14		18
19																								14		19
20																								14		20
21																								14		21
22																								14		22
23																								14		23
24				25				700																14		24

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FILM NO. 2-189-1

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS

REPORT NO. HM-3965

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 10/10/82

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	2-7	9-14	16-21	23-28	30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	////////////	
	10	1.5	3	1	150	N	N	N	L	500		///////	11	BCR-1	1
	2	1.5	.1	.15	30				100	200		BFV 365	11	DG-1427	2
	.2	.05	.1	.3	20				10	20		369	11	1435	3
	5	3	1.5	.3	500				100	200		370	11	1448	4
	1	1	G 20	.05	500				20	50		371	11	1459A	5
	5	2	1.5	.3	1000				70	300		372	11	1435	6
	5	3	3	.3	700				50	100		373	11	1487	7
	.5	1.5	20	.02	300				L	100		374	11	1490A	8
	3	3	10	.15	1000				100	150		375	11	1495	9
0	3	5	7	.15	500				70	150		376	11	1501	10
1	5	5	5	.3	700				150	150		377	11	1515	11
2	5	.5	1.5	.3	1500				20	150		378	11	1534	12
3	1.5	.5	20	.015	3000				L	100		379	11	1535A	13
4	2	.5	5	.3	2000				15	500		380	11	1535B	14
5	15	1	1.5	1	500				150	200		381	11	1535	15
6	10	1.5	5	.2	1000				50	200		382	11	1558A	16
7	5	5	3	.3	500	N	N	N	50	200		383	11	1559A	17
8													11		18
9													11		19
0													11		20
1													11		21
2													11		22
3													11		23
4			5									RMF-1B	11	79	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

FILM NO. C-784-1

REPORT NO. HW-3965

ANALYST C. Ford

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.	12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	
1	L		N		N			30	L			15	L		N		N			10		///////		12	BCR-1	1
2		5					N		L			10		150			N		L			BFV 368		12	DG-1177	2
3	N							5	L			15	N				N			5		369		12	1435	3
4		2						10		70		20		50			L			30		370		12	1448	4
5	N						N		L			10		100			N			5		371		12	1459A	5
6		2						10		50		20		30			N			30		372		12	1485	6
7		1						10		20		10		20			N			20		373		12	1487	7
8	N						N		L			5	N				N		L			374		12	1491A	8
9		2						7		20		10		20			N			15		375		12	1475	9
10		2						7		30		20		20			N			20		376		12	1501	10
11		1.5						15		30		30		20			N			30		377		12	1515	11
12		1.5						5	L			10		150				30	L			378		12	1534	12
13							N		L			5	N				N		L			379		12	1535A	13
14		1						5		50		10		20			N			15		380		12	1535B	14
15		1						50		20		150	L				N			15		381		12	1558	15
16		1.5	V					10		50		5		20			N			20		382		12	1558A	16
17		1.5	N					10		50		20		30			N			50		383		12	1557A	17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24																								12		24

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FILM NO. C-187-F

REPORT NO. HW-3965

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.
N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////
1	10			N	30	N	200			300		////////	13	DCR-1
2	30				5		N			10		368	13	DG-1427
3	ϕ				L		N			10		369	13	1435
4	10				10		N			100		370	13	1448
5	30				7		200			10		371	13	1457A
6	30				10		L			50		372	13	1425
7	L				15		N			30		373	13	1459
8	L				N		500			10		374	13	1472A
9	20				7		N			30		375	13	1475
10	10				5		200			30		376	13	1501
11	15				15		N			50		377	13	1515
12	15				L		500			70		378	13	1534
13	100				W		300			10		379	13	1538A
14	L				7		N			30		380	13	1538B
15	20				50		N			700		381	13	1553
16	L				15		100			100		382	13	1558A
17	20			N	10	N	N			100		383	13	1557A
18													13	
19													13	
20													13	
21													13	
22													13	
23													13	
24	-			N	15	N				15		Ref-1	13	79

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FILM NO. 6-187-1

REPORT NO. HM-3965

Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

	(50) W		(10) Y		(200) Zn		(10) Zr		Si%		Al%		Na%		K%		P%		Ce		RMW	Tag No.		14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80		
1	N			30	L			150														////////		14	BCR-1	1
2				200	N			150														BFV 368		14	DG-1427	2
3				10	N			500														369		14	1435	3
4				15	L			100														370		14	1448	4
5				50	N			20														371		14	1457A	5
6				30	L			150														372		14	1475	6
7				15	L			70														373		14	1489	7
8			N		N		N															374		14	1492A	8
9				10	N			50														375		14	1495	9
10				10	N			50														376		14	1501	10
11				15	L			70														377		14	1515	11
12				30	N			200														378		14	1534	12
13			L		L		N															379		14	1535A	13
14				30	N			150														386		14	1535B	14
15				50		200		150														381		14	1558	15
16				10	L			70														382		14	1558A	16
17	N			20	L			100														383		14	1559A	17
18																								14		18
19																								14		19
20																								14		20
21																								14		21
22																								14		22
23																								14		23
24																								14		24

FILM NO. 6-190-B

REPORT NO. H 14-3965

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

6 - Step D.C. Arc

Requested by J. Gualtieri

Date 10/9/70

Sheet #1

	(.05) Fe %		(.02) Mg %		(.05) Ca %		(.002) Ti %		(10) Mn	(.5) Ag		(200) As		(10) Au		(10) B		(20) Ba		DMW	Tag No.		11	Field No.	
1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
	7		1.5		2		1		1500	N		N		N		L			500		///////		11	BCR-1	1
	1.5		.7		15		.05		3000								30		50		BFV 334		11	DS-1567	2
	2		3		3		.15		300								70		200		335		11	1571	3
	2		5		5		1		700								50		100		336		11	1577	4
	1		.7		20		.05		70								10		30		337		11	1579	5
	1.5		.3		10		.02		100								15		20		338		11	1579A	6
	.5		.7		20		.03		150								10		30		389		11	1581	7
	3		3		1.5		.3		500								15		300		390		11	1617	
	15		3		.3		1		150								15		150		391		11	1622B	
	1		.7		20		.015		300							L		L			392		11	1639	
	3		3		2		.2		300								10		150		393		11	1656	
	1.5		.7		15		.05		1500								10		20		394		11	1659	12
	1.5		.7		20		.05		700							L			30		395		11	1668	13
	2		.5		15		.01		1000								10		50		396		11	1706	14
	.5		.7		20		.05		100	N							15		20		397		11	1726	15
	5		1		15		.05	G	5000	L							100		300		398		11	1745	16
	1		1.5	G	20		.01		300	N		N		N		L			1000		399		11	1748	17
																							11		18
																							11		19
																							11		20
																							11		21
																							11		22
																							11		23
	[illegible]		.07		[illegible]		.1		[illegible]		[illegible]		[illegible]		10		[illegible]		[illegible]		R-F-113		11	GO	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. 6-190-F

REPORT NO. HW 3965

ANALYST C. FOX

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.	12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78 79-80	//////////	
1	L		N		N			30	L			15	L		N		N			10		////////	12	BCR-1	1
2	L						L			15		5		70					L			BFV 384	12	DG-1567	2
3		1.5						5		20		10		20						30		385	12	1571	3
4		1.5					L			15		5	L							15		386	12	1577	4
5	L						N			20		5	N						L			387	12	1579	5
6	L						N		L			5	N							7		388	12	1579A	6
7	L						N			15	L		N							7		389	12	1581	7
8		2						7		50		7		30						30		390	12	1617	8
9		1						50		15		50	N							30		391	12	1622B	9
10	N						N			10	L		N						L			392	12	1639	10
11		2						5		20		20		20						20		393	12	1656	11
12	L							5	L			15	L							5		394	12	1659	12
13	L						N		L		L		N						L			395	12	1668	13
14		1					N		L			5	N						L			396	12	1706	14
15	N						N		L		L		N							5		397	12	1726	15
16		1.5						10		15		150		30						15		398	12	1745	16
17	L		N		N		N		L		L		N		N		N		L			399	12	1748	17
18																							12		18
19																							12		19
20																							12		20
21																							12		21
22																							12		22
23																							12		23
24		1.5	N		L		L		L				1			20	N		L			REF-15	12	60	24

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FILM NO. C-1980-F

REPORT NO. HA-3965

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.
N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80		
1	10			N	30	N	200			300		////////	13	BCR-1	1
2	L				5		300			10		BFV 384	13	DG-1567	2
3	10				7		L			30		385	13	1571	3
4	15				5		L			30		386	13	1577	4
5	L				5		200			15		387	13	1579	5
6	L				N		200			10		388	13	1579A	6
7	L				L		500			15		389	13	1581	7
8	30				15		N			100		390	13	1617	8
9	L				30		N			500		391	13	1622B	9
10	15				N		300			10		392	13	1639	10
11	15				10		L			70		393	13	1656	11
12	L				L		500			10		394	13	1659	12
13	L				N		300			L		395	13	1668	13
14	L				N		200			L		396	13	1706	14
15	L				L		500			15		397	13	1726	15
16	L				15		200			15		398	13	1745	16
17	L			N	N	N	200			L		399	13	1748	17
18													13		18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24	1000			150	L	N	N			15		REF-13	13	60	24

. FILM NO. C-190-F

REPORT NO. HM-3965

Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W		(10) Y		(200) Zn		(10) Zr		Si%		Al%		Na%		K%		P%		Ce		DMW	Tag No.		14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	N			30	L			150														///////		14	BCR-1	1
2				50	N			15														BFV 384		14	DG-1567	2
3				15	N			70														385		14	1571	3
4				10	L			30														386		14	1577	4
5				15	N			15														387		14	1579	5
6				15	N			10														388		14	1579A	6
7				10	L			15														389		14	1581	7
8				15	L			70														390		14	1617	8
9				15	N			150														391		14	1622B	9
10			N		L			10														392		14	1639	10
11				15	N			70														393		14	1656	11
12				15	N			20														394		14	1659	12
13			N		L		N															395		14	1668	13
14				10	N		L															396		14	1706	14
15			L		N		L															397		14	1726	15
16				70	N			15														398		14	1745	16
17	N		L		N		L															399		14	1748	17
18																								14		18
19																								14		19
20																								14		20
21																								14		21
22																								14		22
23																								14		23
24	N			15		3000		70														[illegible]		14	60	24

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FILM NO. 6-181-F

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

REPORT NO. Hm-3965

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 10/6/81

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	2-7	9-14	16-21	23-28	30-35	37-42	44-49	51-56	58-63	65-70	71	72-77	79-80		
1	7	1.5	3	1	1500	N	N	N	L	500		1111111	11	BCR-1	1
2	1.5	5	10	.1	300				15	70		BFV 400	11	DG-1759	2
3	3	2	.5	.2	200				30	300		401	11	1782	3
4	5	1.5	.15	.2	200				15	200		402	11	1783	4
5	5	3	1.5	.3	200				50	150		403	11	1793	5
6	.15	.05	.07	.15	15				N	20		404	11	1878	6
7	1.5	1	20	.07	1500				10	50		405	11	1903	7
8	1.5	1.5	10	.1	2000				15	1000		406	11	1909	8
9	1	.3	.3	.2	70				10	1500		407	11	1918	9
10	5	1.5	.3	.3	500				30	500		408	11	1922	10
11	1	.05	.05	.2	100				L	20		409	11	1935	11
12	3	5	3	.2	500	V	V		L	200		410	11	1997	12
13	.15	.7	20	.007	70	N	N		N	L		411	11	2002	13
14	7	.05	1	.01	300	L	1000		10	20		412	11	2002A	14
15	5	5	.15	.2	70	N	N		70	200		413	11	2004	15
16	1	1	G 20	.03	700	N	N	V	L	L		414	11	2021	16
17	.3	.7	G 20	.015	500	N	N	N	L	L		415	11	2028	17
18													11		18
19													11		19
20													11		20
21													11		21
22													11		22
23													11		23
24	.3	5	1	.7	100	10	1	N	70	G 5000		REF-1B	11	56	24

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REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

FILM NO. 6-191-F

REPORT NO. ifm-3965 ANALYST C. FORN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	L		N		N			30	L			15	L		N		N			10		//////		12	BCR-1	1
2	L						N			20		5		20					L			BFV 400		12	DG-1759	2
3		1						10		30		15		30						30		401		12	1782	3
4		1						15		20		30		20						30		402		12	1783	4
5		2					L			20		50		30						30		403		12	1723	5
6	L							5		10		10	L						L			404		12	1878	6
7	L						N			10		7	N							5		405		12	1903	7
8	L						N			15		5	N							7		406		12	1909	8
9		1						5		15		20		30	N					5		407		12	1918	9
10		1.5						15		20		20		30		50				30		408		12	1922	10
11		1					L		L			7		70	N					5		409		12	1935	11
12		L						10		50		100		30	N					50		410		12	1997	12
13	L						N		L			5	N		N		N		L			411		12	2002	13
14		20					L			10		30	N			15	L			10		412		12	2002A	14
15		1.5						5		30		50	N		N		N			20		413		12	2004	15
16	L						N		L			5	N		N		N		L			414		12	2021	16
17	N		N		N		N		L		L		N		N		N		L			415		12	2028	17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24		3	N			150		5		300		200		150		15	L			300		REF-18		12	56	24

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FILM NO. G-191-F

REPORT NO. HW-39565

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet 1

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.
	1 / 2-7	8 / 9-14	15 / 16-21	22 / 23-28	29 / 30-35	36 / 37-42	43 / 44-49	50 / 51-56	57 / 58-63	64 / 65-70	71	72-77 / 78	79-80	
1	10			N	30	N	200			300		///////	13	BCR-1
2	L				L		N			15		BRV 400	13	DG-1759
3	30				7		N			20		401	13	1782
4	15				5		N			20		402	13	1783
5	10				10		L			30		403	13	1793
6	N				N		N			L		404	13	1878
7	10				L		300			10		405	13	1903
8	10				5		200			15		406	13	1909
9	15				5		L			15		407	13	1918
0	30				7		L			30		408	13	1922
11	L				N		100			15		409	13	1935
12	L				15		N			50		410	13	1997
13	L			N	N		300			L		411	13	2002
14	L			500	5		N			50		412	13	2002A
15	10			N	15		N			50		413	13	2004
16	100			N	N		700			10		414	13	2021
17	L			N	N	N	300			10		415	13	2028
18													13	
19													13	
20													13	
21													13	
22													13	
23													13	
24	70			N	30	L	2400			10000		REF-10	13	

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FILM NO. C-191-F

REPORT NO. HM-3965

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W		(10) Y		(200) Zn		(10) Zr		Si%		Al%		Na%		K%		P%		Ce		DMW	Tag No.		14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	N			30	L			150														////////		14	BCR-1	1
2				10	N			50														REV		14	DG-1759	2
3				20	L			150														401		14	1782	3
4				20	L			150														402		14	1783	4
5				10	N			100														403		14	1793	5
6			L		N			200														404		14	1808	6
7				20	L			50														405		14	1903	7
8				15	N			70														406		14	1907	8
9				20	N			200														407		14	1918	9
10				30	N			200														408		14	1922	10
11			L		N			300														409		14	1935	11
12	/			20	L			70														410		14	1997	12
13	N		L		N		N															411		14	2002	13
14		300		15	L			10														412		14	2002A	14
15	N			10	L			100														413		14	2004	15
16	/			15	N			15														414		14	2021	16
17	N		L		N		L															415		14	2028	17
18																								14		18
19																								14		19
20																								14		20
21																								14		21
22																								14		22
23																								14		23
24	N			150		1500		500																14		24

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FILM NO. C-192-F

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS

REPORT NO. Hm-3965

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 10/10/72

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
	7	1.5	3	1	1500	N	N	N	L	50		///////	11	BCK-1	1
	3	3	5	.15	700				L	20		BFV 146	11	DG-2033B	2
	.07	.1	.3	.2	20				N	70		417	11	2061	3
	1	1.5	G 20	.015	1000				L	70		418	11	2015	4
	3	1	1.5	.3	300				100	500		419	11	2115	5
	3	3	5	.3	1500				50	150		420	11	2116	6
	3	5	1.5	.2	500				70	150		421	11	2117	7
	3	5	5	.2	1000				70	150		422	11	2120	8
	.5	.7	20	.015	500				L	L		423	11	2121	9
10	2	3	5	.2	1000				100	200		424	11	2123	10
11	3	5	7	.15	1500				100	500		425	11	2125	11
12	2	.5	3	.3	5000				15	2000		426	11	1687	12
13	3	5	1.5	.3	500				100	200		427	11	2130	13
14	2	7	7	.1	1500				50	100		428	11	2146	14
15	3	5	2	.2	500				150	100		429	11	2149	15
16	3	5	3	.3	700	V	V	V	150	150		430	11	2150	16
17	3	7	7	.3	700	N	N	N	150	300		431	11	2152	17
18													11		18
19													11		19
20													11		20
21													11		21
22													11		22
23													11		23
24	1.5	.15	.2	.03	70	2	N	N	10	100		REF-1B	11	3	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

FILM NO. 6-192-F

REPORT NO. HM-3765

ANALYST C. FORD

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	L		N		N			30	L			15	L		N		N			10		////////		12	BCR-1	1
2		1						7		30		5		20			N			20		BFV 416		12	DG-20338	2
3	N						L		L			20		20			L		L			417		12	2061	3
4	L						N			10	L		L				N		L			418		12	2015	4
5		3						7		50		30		50			L			15		419		12	2115	5
6		1.5						5		20		15		20			N			20		420		12	2116	6
7		1.5						7		30		10		30			N			30		421		12	2117	7
8		1.5					L			20		7		30			N			20		422		12	2120	8
9	N						N		L		L		N				N		L			423		12	2121	9
10		1.5						5		30		10		20			N			20		424		12	2123	10
11		1.5						10		50		30		50			N			30		425		12	2129	11
12		1.5						7		30		7		20			N			15		426		12	1687	12
13		1						7		50		10		70			N			30		427		12	2130	13
14		1.5						7		20		10	L				N			15		428		12	2146	14
15		1.5						10		20		20		30			N			30		429		12	2149	15
16		1.5						7		30		7		70			N			50		430		12	2150	16
17		2						5		70		30		70	N		N			30		431		12	2152	17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24		30	N									5			N		I			15		BIR-1		12	3	24

FILM NO. 6-192-F

REPORT NO. HM-3965

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb		Pd		Pt		(100) Sb		(5) Sc		(10) Sn		(100) Sr		Te		U		(10) V		D M W	Tag No.		13	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1		10					N			30	N			200						300		///////		13	BCR-1	1
2		30								7				100						50		BF-V 416		13	DG-20338	2
3		10							N				N							10		417		13	2061	3
4		30							N					200						10		418		13	2015	4
5		50								10				100						50		419		13	2115	5
6		10								7				150						50		420		13	2116	6
7		20								7			N							50		421		13	2117	7
8	L									10			L							30		422		13	2120	8
9	L								N					300						10		423		13	2121	9
10		30								10				100						50		424		13	2123	10
11		70								10				200						50		425		13	2129	11
12		10								15			L							30		426		13	1687	12
13	L									10			N							70		427		13	2130	13
14		20								7			N							30		428		13	2146	14
15		30								10			N							50		429		13	2149	15
16		20								10			L							50		430		13	2150	16
17		30					N			15	N		N							70		431		13	2152	17
18																								13		18
19																								13		19
20																								13		20
21																								13		21
22																								13		22
23																								13		23
24		[illegible]					N			[illegible]	N			[illegible]						30		[illegible]		13	3	24

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FILM NO. C-1932-F

REPORT NO. 14-3965

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

(50) W	(10) Y	(200) Zn	(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DW	Tag No.	14	Field No.
2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	
	30	L	150								///////	14	BCR-1
	20	L	20								BFW 416	14	BG-20331
	L	N	100								417	14	2161
	10	N	15								418	14	2015
	50	N	300								419	14	2115
	10	L	70								420	14	2116
	10	L	70								421	14	2117
	15	L	50								422	14	2120
	L	N	10								423	14	2121
	10	L	50								424	14	2123
	15	N	70								425	14	2129
	70	L	200								426	14	1692
	10	N	100								427	14	2130
	10	200	50								428	14	2146
	10	L	70								429	14	2149
	15	L	70								430	14	2150
N	15	N	100								431	14	2152

FILM NO. G-1-G

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS
6 - Step D.C. Arc

REPORT NO. HM-3965

Requested by J. GUALTIERI

Date 10/10/72
Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	7	1.5	3	G 1	1500	N	N	N	L	500		////////	11	3CR-1	1
2	3	3	1.5	.2	300				100	200		BFV 432	11	DG-2153	2
3	2	5	3	.2	500				70	150		433	11	2154	3
4	2	5	5	.2	1500				L	150		434	11	2155	4
5	2	5	5	.2	1000				L	300		435	11	2156	5
6	5	3	7	.15	G 5000				L	100		436	11	2160	6
7	3	5	5	.3	700				50	500		437	11	2160A	7
8	3	5	2	.3	300				150	200		438	11	2162	8
9	3	5	3	.3	300				100	300		439	11	2162A	9
10	7	3	.05	.2	300				10	300		440	11	2130	10
11	5	7	3	.2	700				L	500		441	11	2174	11
12	7	3	.07	.3	200				200	500		442	11	2175	12
13	7	3	.05	.2	70				200	500		443	11	2175A	13
14	3	3	1	.3	300				100	200		444	11	2176	14
15	5	5	7	.2	300				L	100		445	11	2177	15
16	7	7	3	.3	500				L	300		446	11	2178	16
17	2	5	10	.2	1000				70	200		447	11	2178A	17
18	7	5	.1	.5	100	N	N	N	200	2000		448	11	2179	18
19													11		19
20													11		20
21													11		21
22													11		22
23													11		23
24													11		24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

FILM NO. 6-1-6

REPORT NO. HM-3965

ANALYST P. FORN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	L		N		N			30	L			15		20	N		N			10		////////		12	BCR-1	1
2		1.5						5		30		20		50	N					30		BFV 432		12	DG-2153	2
3		1.5						15		20		15		30	N					20		433		12	2154	3
4		1.5						5		30		5		20	N					20		434		12	2155	4
5		1.5						5		30		10		50	N					20		435		12	2156	5
6		5						5		30		10		20		700				15		436		12	2160	6
7		1.5						20		70		20		30		5				70		437		12	2160A	7
8		1.5					L			50		10		30	N					20		438		12	2162	8
9		1.5						10		70		7		30	N					30		439		12	2162A	9
10		1.5						15		70		100	N			7				30		440		12	2180	10
11		1.5						7		30		100		20		15				50		441		12	2174	11
12		2						15		50		70		20	N					50		442		12	3175	12
13		2						5		70		100	L		L					50		443		12	2175A	13
14		1						15		50		10		70	N					50		444		12	2176	14
15		1.5						15		50		30		30	N					30		445		12	2177	15
16		1.5						7		50		30		30	N					15		446		12	2178	16
17		1.5	V		V			5		20		20		20	N		V			10		447		12	2178A	17
18		1.5	N		N			10		70		50		20		5	N			15		448		12	2179	18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24																								12		24

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FILM NO. G-1-G

REPORT NO. HW-3965

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	10			N	30	N	300			300		////////	13	BCR-1	1
2	30				15		N			70		BFV 432	13	DG-2153	2
3	70				7		N			50		433	13	2154	3
4	L				10		L			70		434	13	2155	4
5	L				10		100			50		435	13	2156	5
6	10				7		200			100		436	13	2160	6
7	L				15		100			70		437	13	2160A	7
8					15		N			70		438	13	2162	8
9					15		N			70		439	13	2162A	9
10	L				15		N			100		440	13	2180	10
11	L				7		N			50		441	13	2174	11
12	150				15		N			100		442	13	2175	12
13	70				15		N			100		443	13	2175-A	13
14	70				10		N			100		444	13	2176	14
15	10				10		N			70		445	13	2177	15
16	L				15		N			70		446	13	2178	16
17	70			V	10	V	150			30		447	13	2178A	17
18	15			N	20	N	N			150		448	13	2179	18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24													13		24

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FILM NO. 6-1-G

REPORT NO. HW-3965-

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W		(10) Y		(200) Zn		(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1	2-7	8 9-14	15	16-21	22	23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	////////////	
	N		30	L			150								///////	14	BCR-1	1
			10	L			70								DFV #32	14	DG-2153	2
			10	L			50								433	14	2154	3
			15	L			50								434	14	2155	4
			20	L			70								435	14	2151	5
			20		200		30								436	14	2111	6
			15	N											437	14	2110A	7
			15	N			70								438	14	2162	8
			15	L			70								439	14	2162A	9
0			10	L			70								440	14	2130	10
1			15		200		100								441	14	2174	11
2			10		500		100								442	14	2175	12
3			15		200		70								443	14	2175A	13
4			15	L			100								444	14	2176	14
5			20	L			70								445	14	2177	15
6			15	L			70								446	14	2178	16
7			15	N			70								447	14	2178A	17
8	N		10	L			100								448	14	2179	18
9																14		19
0																14		20
1																14		21
2																14		22
3																14		23
4																14		24

M NO. G-71-F

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS

ORT NO. HM-3966

6 - Step D.C. Arc

Requested by J. Gualtieri

Date 6/54
Sheet #1

(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.
2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////
7	1.5	3	1	1500	N	N	N	N	500		///////	11	BCR-1
3	.2	.2	.15	1000	N	N	N	N	G 5000		BFF 449	11	DG-16
2	.15	.7	.15	1000	N	N	N	N	5000		450	11	118-D
3	.7	2	.2	1000	N	N	N	N	2000		451	11	121
2	.15	1.5	.1	1500	N	N	N	N	5000		452	11	190
2	.15	.3	.05	500	N	N	N	N	700		453	11	222
3	.7	2	.2	1000	N	N	N	N	1500		454	11	309
3	.5	1	.1	3000	N	N	N	N	1000		455	11	321
1.5	.2	.1	.1	500	N	N	N	N	700		456	11	876
3	.15	.7	.1	1500	N	N	N	N	5000		457	11	881
1.5	.1	.5	.05	500	N	N	N	N	300		458	11	884
3	.5	2	.2	1000	N	N	N	N	3000		459	11	996
1	.15	.1	.03	500	N	N	N	N	150		460	11	1036
1.5	.5	.7	.15	1000	N	N	N	N	1500		461	11	1047
2	.7	1.5	.2	1500	N	N	N	N	G 5000		462	11	1047
1	.02	1	.07	700	N	N	N	N	2000		463	11	1078

NOTES: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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LM NO. 6-71-F

PORT NO. HM-3966

ANALYST C. Fey, L. Barnick, J. Reynolds

Sheet #2

(1) Be	(10) Bi	(20) Cd	(5) Co	(10) Cr	(5) Cu	(20) La	(5) Mo	(10) Nb	(5) Ni	DMW	Tag no.	12	Field No.
2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	
	N	N	30	L	15	20	N	N	10		///////	12	BCR-1
1.5	N		5		20	20		N	N		449	12	DG-1c
1.5	N		N		15	90		L	L		450	12	118-D
1.5	N		5		50	L		L	L		451	12	121
1.5	N		L		50	50		L	N		452	12	190
15	N		N		30	N		L	L		453	12	222
1	L		5		50	20		L	L		454	12	309
2	N		L		50	20		10	L		455	12	321
2	N		L		50	30		L	L		456	12	876A
1	N		L		30	L		10	L		457	12	881
2	N		L		50	50		L	L		458	12	884
1.5	N		5		30	70		L	L		459	12	996-A
3	N		L	20	20	N		L	L		460	12	1036
1.5	N		L	L	30	150		L	N		461	12	1047-B
1.5	N		5	L	50	20		L	L		462	12	1047-D
1.5	N		N	20	15	50		N	N		463	12	1078
												12	
												12	
												12	
												12	
												12	
												12	
												12	
												12	
/								L				12	DUP 2

M NO. 6' 71-F

ORT NO. USGS-3966

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.
N = Not detected at limit of detection, or
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	D M W	Tag No.	13	Field No.
2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77	78 79-80	
10			N	30	N	200			300		////////	13	BCR-1
20				L		3000			100		BEV 449	13	DG-16
100				L		2000			70		450	13	118-D
15				5		700			70		451	13	121
50				N		1500			100		452	13	190
20				N		200			30		453	13	222
10				5		1000			50		454	13	309
70				N		300			100		455	13	321
20				N		200			30		456	13	876-A
50				N		1500			50		457	13	881
30				N		300			15		458	13	884
30				N		1500			70		459	13	996-A
10				N		N			20		460	13	1036
20				N		1000			50		461	13	1047-E
20				L		1500			50		462	13	1047-I
15				N		3000			70		463	13	1078
												13	
												13	
												13	
												13	
												13	
												13	
												13	
												13	

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LM NO. 6-11-F

PORT NO. HM-3966

Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

(50) W	(10) Y	(200) Zn	(10) Zr	Si%	Al%	Na%	K%	P%	Ce	Tag No.	14	Field No.
2-7	8 9-14	15 16-21	23 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71 72-77	78 79-80	//////////
	30	L	150							////////	14	BCR-1
	10	N	70							BFV 449	14	DG-K6
	10	L	70							450	14	118-D
	10	L	70							451	14	121
L		N	150							452	14	190
L		L	50							453	14	222
	15	L	70							454	14	309
	10	200	70							455	14	321
	15	L	70							456	14	876-A
	10	L	70							457	14	881
L		N	70							458	14	884
	20	N	150							459	14	996-h
L		N	100							460	14	1036
	10	N	150							461	14	1047-E
	20	N	100							462	14	1047-I
	10	N	50							463	14	1078
											14	
											14	
											14	
											14	
											14	
											14	
											14	
											14	

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FILM NO. C-183-F SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

REPORT NO. It 14-3967 6 - Step D.C. Arc Requested by J. GUALTIERI Date 9/30/73 Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
	7	1.5	3	G 1	1500	N	N	N	L	5000		////////	11	BCR-1	
	1.5	.2	.5	.2	20	L			L	1500		BFV 464	11	DG-231	2
	5	1	2	.5	1500	N			L	1000		465	11	2191	3
	.5	.07	.07	.05	70				N	1000		466	11	232C	4
	2	.7	1.5	.2	1500				L	1500		467	11	236A	5
	3	1	1.5	.3	2000				10	1000		468	11	244	6
	7	1	2	G 1	1500				L	1000		469	11	1354A	7
	7	2	5	G 1	1500				10	1500		470	11	1354B	8
	10	3	3	1	3000				15	150		471	11	1438	9
	1.5	.5	.2	.1	70				10	5000		472	11	1441	10
	3	.7	1	.5	1000				15	1000		473	11	1450	11
	10	1.5	3	1	2000				15	200		474	11	1457A	12
	10	1.5	2	1	2000				10	20		475	11	1457B	13
	5	1	3	.3	2000				L	1000		476	11	2188	14
	7	.2	3	.3	2000				L	1500		477	11	1497	15
	3	.7	.3	.2	1500				L	1500		478	11	1505	16
	2	.7	1.5	.2	1500	N	N	N	L	3000		479	11	1509	17
													11		18
													11		19
													11		20
													11		21
													11		22
													11		23
		7	1.5	.2	2000	N	N	N	10	20		REF-5A	11	14	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

FILM NO. C-183-F

REPORT NO. HM-3967

ANALYST C. FORN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	L		N		N			20	L			15	L		N		N			7		////////		12	BCR-1	1
2		1					N		L			20	L		L		N		L			BFV 464		12	DG-231	2
3		1						7	L			20		20	N		N		L			465		12	2191	3
4		1					L		L			15	N		N		N		L			466		12	232C	4
5		1						10	L			30		20	N		N		L			467		12	236A	5
6		1						7		15		10		20	N		N			5		468		12	244	6
7		1.5						20		20		30		50	L			30		15		469		12	1354A	7
8		1.5						30		30		50		50	N			30		30		470		12	1354B	8
9	N							50		50		200	N		N		N			70		471		12	1438	9
10		2					N		L			10		50	N			20	L			472		12	1441	10
11		3						7	L			10		70	L			50	L			473		12	1450	11
12		1						30		20		150	L		N		L			20		474		12	1457A	12
13	N							50		20		150	N		N		N			70		475		12	1457B	13
14		1.5						10		15		5		30	N		N			5		476		12	2188	14
15		1						15		20		30		30	N		N			10		477		12	1497	15
16		2						7	L			10		50	N			20	L			478		12	1505	16
17		1	N		N			5	L			7		50	N			20	L			479		12	1509	17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24			N		N			150		2000		30	N		N		N			700		REF-5A		12	14	24

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FILM NO. 6-183-F

REPORT NO. HW-3967

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	10			N	30	N	200			300		////////	13	BCR-1	1
2	15				L		500			30		BF 464	13	DE-231	2
3	15				7		1500			100		465	13	2191	3
4	30				N		100			10		466	13	232C	4
5	20				5		1000			50		467	13	236A	5
6	15				7		1000			70		468	13	244	6
7	10				15		700			100		469	13	1354A	7
8	10				20		1500			150		470	13	1354B	8
9	L				30		150			500		471	13	1438	9
10	70				N		1000			50		472	13	1441	10
11	10				5		700			30		473	13	1450	11
12	10				30		100			300		474	13	1457A	12
13	L				30		500			500		475	13	1457B	13
14	10				10		1000			100		476	13	2188	14
15	30				15		1000			150		477	13	1497	15
16	30			V	5	V	200			50		478	13	1565	16
17	30			N	5	N	1500			50		479	13	1569	17
18													13		18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24				N	10	N	N			50		PLF-5A	13	14	24

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FILM NO. 6-183-F

REPORT NO. HM-3967

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W		(10) Y		(200) Zn		(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1	2-7	8	9-14	15	16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	////////////	
1	N			30	L		150								///////	14	BCR-1	1
2			L		N		100								BFV 464	14	DG-231	2
3				20	N		150								465	14	2191	3
4			L		N		20								466	14	232C	4
5				15	N		100								467	14	236A	5
6				20	N		150								468	14	244	6
7				30	L		200								469	14	1354A	7
8				30	L		200								470	14	1354B	8
9				20		200	70								471	14	1438	9
10			L		N		150								472	14	1441	10
11				20	N		300								473	14	1450	11
12				50		200	150								474	14	1457A	12
13				20		200	50								475	14	1457B	13
14				20	L		150								476	14	2188	14
15				15	L		100								477	14	1497	15
16				15	N		150								478	14	1505	16
17	N			10	N		150								479	14	1509	17
																14		
																14		
																14		
																14		
																14		
																14		
			L		L		10								[illegible]	14	14	

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FILM NO. C-184-F

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS

REPORT NO. HM-3967

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 9/30/7

Sheet #1

	(.05) Fe %		(.02) Mg %		(.05) Ca %		(.002) Ti %		(10) Mn		(.5) Ag		(200) As		(10) Au		(10) B		(20) Ba		DMW	Tag No.		11	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1		7		1.5		3	G	1		1500	N		N		N		L			500		////////		11	BCR-1	1
2		5		.7		2		.3		1000							L			1500		BFV 480		11	DG-1510	2
3		5		.7		2		.5		1500								10		2000		481		11	1543	3
4		5		1.5		2		.5		1500							L			1000		482		11	1555	4
5		3		.5		1		.2		1500							N			2000		483		11	2186	5
6		7		1		2		1		1500								15		300		484		11	1559	6
7		5		1		2		.5		1500							L			1500		485		11	1576	7
8		3		.5		1		.3		1500							L			500		486		11	1584	8
9		3		.2		1		.3		1500							L			500		487		11	1657	9
10		3		1		1.5		.3		1500								10		1500		488		11	1659	10
11		7		1.5		3	G	1		1000							L			700		489		11	1758	11
12		7		2		3	G	1		1500							L			700		490		11	1759	12
13		7		1.5		1.5	G	1		1000							L			500		491		11	1962	13
14		7		1.5		3	G	1		1500							L			500		492		11	1963	14
15		10		2		3	G	1		2000	N							15		150		493		11	1978	15
		3		.3		.15		.2		1500		1						10		1000		494		11	1996	16
		10		2		3	G	1		2000	N		N		N			15		150		495		11	1999	17
																								11		
																								11		
																								11		
																								11		
																								11		
																								11		
19																								11		
		1.5		.1	L			.2		20		2	N		N			10		100		REF-18		11	123	

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

101

FILM NO. G-184-F

REPORT NO. HM-3967

ANALYST C. FERN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	L		N		N			30	L			15	L		N		N			10		////////		12	BCR-1	1
2		1.5						10	L			20		70			L			7		BFV 480		12	DG-1510	2
3		1.5						10	L			20		150				20		5		481		12	1543	3
4	L							15		15		30		50			L			10		482		12	1555	4
5		1						5	L			10		20			N			5		483		12	2186	5
6		1						20	L			150		20			N			20		484		12	1559	6
7		1.5						10		15		30		100				20		10		485		12	1576	7
8		1						5		10		10		30			N			5		486		12	1584	8
9		1.5						7	L			20		100				20		5		487		12	1657	9
10		1.5						5	L			30		50			L			7		488		12	1689	10
11	L							30	L			50		30				20		10		489		12	1758	11
12	L							30	L			30		30				20		10		490		12	1759	12
13	L							30	L			30		20				20		10		491		12	1962	13
14	L							20	L			15		20				20		7		492		12	1963	14
15	L							50		20		200	N				N			70		493		12	1978	15
16		1	N				L			10		7		50			L		L			494		12	1996	16
17	L		N		N			30		30		300	L		N		N			50		495		12	1999	17
																								12		
																								12		
																								12		
																								12		
																								12		
																								12		
																								12		
		2 G	N		N			5		10		5		50	N		N			15		REF-13		12	123	

501

FILM NO. C-184-F

REPORT NO. HM-3967

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	
1	10			N	30	N	200			300		////////	13	BCR-1
2	10				10		500			100		BFV 480	13	DG-1510
3	15				7		500			100		481	13	1543
4	15				20		1000			200		482	13	1555
5	15				L		700			50		483	13	2186
6	10				30		150			200		484	13	1559
7	20				10		700			150		485	13	1576
8	10				5		150			70		486	13	1534
9	30				5		700			100		487	13	1657
10	L				7		300			100		488	13	1684
11	L				15		700			200		489	13	1958
12	L				20		700			200		490	13	1959
13	L				15		500			200		491	13	1962
14	-				20		700			200		492	13	1963
15	L				30		150			700		493	13	1978
16	30				5		200			50		494	13	1996
17	10			N	30	N	150			700		495	13	1999
													13	
													13	
													13	
													13	
													13	
													13	
													13	
	[illegible]			N	L	N	200			50		REF-1B	13	123

90

FILM NO. C-184-F

REPORT NO. HM-3967

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W		(10) Y		(200) Zn		(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1	2-7	9-14	15	16-21	22	23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	N		20	L			150								///////	14	BCR-1	1
2			15	L			150								BFV 480	14	DG-1510	2
3			20	N			150								481	14	1543	3
4			15	L			100								482	14	1555	4
5			10	N			100								483	14	2186	5
6			50	L			150								484	14	1559	6
7			20	N			150								485	14	1576	7
8			15	N			100								486	14	1584	8
9			20	N			150								487	14	1657	9
10			20	N			100								488	14	1689	10
11			20	L			150								489	14	1958	11
12			20	L			150								490	14	1959	12
13			20	L			150								491	14	1962	13
14			20	L			150								492	14	1963	14
15			20		200		100								493	14	1978	15
16			10	L			100								494	14	1996	16
17	N		20		200		100								495	14	1999	17
18																14		18
19																14		19
20																14		20
21																14		21
22																14		22
23																14		23
24			15		300		50								[illegible]	14	1999	24

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FILM NO. C-185-F

REPORT NO. HM-3967

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 9/30/72

Sheet #1

	(.05) Fe %		(.02) Mg %		(.05) Ca %		(.002) Ti %		(10) Mn		(.5) Ag		(200) As		(10) Au		(10) B		(20) Ba		DMW	Tag No.		11	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1		7		1.5		3	6	1		1500	N		N		N		L			500		////////		11	BCR-1	1
2		3		.3		1.5		.3		700	N						L			2000		BFV 496		11	DG-2007	2
3		3		.5		1.5		.3		1500	N						L			1000		497		11	2009	3
4		3		.7		3		.2		1500	N						L			1000		498		11	2010	4
5		2		.5		.1		.3		70	N						L			3000		499		11	213A	5
6		3		.5		.15		.3		50	N						L			2000		500		11	213B	6
7		10		1.5		2		.7		1500	N							10		50		501		11	2038	7
8		.5		.07		.1		.03		200	N							15		200		502		11	2158A	8
9		2		.07		.07		.1		1500		.7					N			2000		503		11	215A	9
10		2		.2		1.5		.2		1000	N						N			1000		504		11	215B	10
11		1.5		.2		.2		.15		700	N						N			1000		505		11	216	11
12		1		.2		.07		.15		1500	N							10		1000		506		11	216A	12
13		1.5		.3		.2		.3		2000	N						N			1000		507		11	216A	13
14		3		.5		2		.3		2000	N						N			1500		508		11	216	14
15		2		.3		1		.15		1500	N						N			700		509		11	216A	15
16		2		.3		.1		.2		2000	N		V		V			15		1000		510		11	217A	16
17		1.5		.3		.15		.3		500		1	N		N			20		1500		511		11	217	17
18																								11		18
19																								11		19
20																								11		20
21																								11		21
22																								11		22
23																								11		23
24		9		.1	4			.5		50		5	L		N			10		1000				11	63	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. G-185-F

REPORT NO. HM-3967

ANALYST C. FORN

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	L		N		N			30	L			15	L		N		N			10		////////		12	BCR-1	1
2		1.5					L					70		30	N		N		L			BFV 496		12	DG-2007	2
3		1.5					L					15		50	N		N		L			497		12	2008	3
4		1.5						5				5		30	N		N		L			498		12	2010	4
5		3					N					30		30	N		N		L			499		12	2130A	5
6		3					N					20		30	N		L		L			500		12	2130B	6
7	L							50				7	L		N		N			20		501		12	2038	7
8		1					L					10	N		N		N		N			502		12	2158A	8
9		1					L					15	L			10	N		L			503		12	2159A	9
10		1.5					N					30		20	N		N		L			504		12	2159B	10
11		1.5					L					20		30	N		N		L			505		12	2161	11
12		1.5					L					5		20		7	N		L			506		12	2164	12
13		1					N					10		30	N		N		L			507		12	2165A	13
14		1.5					L					20		30	N		N		L			508		12	2166	14
15		1.5					L					5		20	N		L		L			509		12	2166A	15
16		1.5	V		V		L		V			150		30	N		L		L			510		12	2171A	16
17		1.5	N		N		N		L			5		30	N		L		N			511		12	2172	17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24		3	1		N			5		90		10		30	N		N			30				12	63	24

101

FILM NO. C-185-F

REPORT NO. HW-3967

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80		
1	10			N	30	N	200			300		////////	13	BCR-1	1
2	20				5		1000			100		BFV 496	13	DG-2007	2
3	20				5		1500			100		497	13	2008	3
4	15				7		1000			70		498	13	2010	4
5	150				5		300			150		499	13	2130A	5
6	30				5		300			150		500	13	2130B	6
7	20				30		L			500		501	13	2038	7
8	15				N		L			10		502	13	2158A	8
9	L				N		100			20		503	13	2159A	9
10	20				5		700			50		504	13	2159B	10
11	15				N		200			30	-	505	13	2161	11
12	30				N		L			20		506	13	2164	12
13	15				5		500			30		507	13	2165A	13
14	20				5		1500			100		508	13	2166	14
15	15				5		700			30		509	13	2166A	15
16	15				5		L			50		510	13	2171A	16
17	10			N	5	N	L			50		511	13	2172	17
													13		
													13		
													13		
													13		
													13		
													13		
													13		
24				N	5	N	300			50			13	63	24

FILM NO. C-185-F

REPORT NO. HW-3967

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

	(50) W		(10) Y		(200) Zn		(10) Zr		Si%		Al%		Na%		K%		P%		Ce		DMW	Tag No.		14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	////////////	
1	N			30	L			150														///////		14	BCR-1	1
2				20	N			100														RFV 496		14	DG-2007	2
3				20	N			150														497		14	2008	3
4				20	L			100														498		14	2010	4
5				10	L			100														499		14	2130A	5
6				15	L			100														500		14	2130B	6
7				30	L			150														501		14	2038	7
8			N		N			20														502		14	2158A	8
9				10	N			100														503		14	2159A	9
10				10	N			150														504		14	2159B	10
11			L		N			100														505		14	2161	11
12				10	N			100														506		14	2164	12
13				20	N			150														507		14	2165A	13
14				15	N			150														508		14	2166	14
15				10	N			100														509		14	2166A	15
16				15	N			150														510		14	2171A	16
17	N			10	N			150														511		14	2172	17
18																								14		18
19																								14		19
20																								14		20
																								14		
																								14		
																								14		
23				20		500		70																14	[illegible]	23

FILM NO. C-186-F

REPORT NO. HW-3967

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 9/30/72

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	7	1.5	3	1	1500	N	N	N	L	500		////////	11	BCR-1	1
2	1.5	.2	.3	.15	700	N			L	700		BFV 512	11	DG-217A	2
3	1.5	.3	.5	.15	100	N			L	2000		513	11	2157	3
4	1	.02	.15	.03	100	N			N	100		514	11	2159C	4
5	.15	.02	.15	.02	70	N			N	100		515	11	2166	5
6	5	.7	1.5	1	1000	N			L	2000		516	11	1353A	6
7	10	2	3	1	2000	N			L	150		517	11	1563	7
8	15	2	3	1	2000	N			L	200		518	11	2033A	8
9	1.5	.3	.15	.1	1500	N			L	200		519	11	2121A	9
10	1.5	.2	.1	.07	200	N	V	V	10	150		520	11	2128	10
11	2	.3	.15	.15	2000	N	N	N	10	1000		521	11	2171	11
12													11		12
13													11		13
14													11		14
15													11		15
16													11		16
17													11		17
													11		
													11		
													11		
													11		
													11		
													11		
													11		
	7	.3	1	1	5000	N	N	N	10	300		REF LB	11	17	

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. 6-186-F

REPORT NO. HM-3967

ANALYST C. FOSTER

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	L		N		N			30	L			15	L		N		N			10		////////		12	BCR-1	1
2		1.5					L		L			10	N				N		L			BFV 512		12	DG-217A	2
3		1					L		L			20	N				N		L			513		12	2157	3
4		2					L		L			7	L				N		L			514		12	2159C	4
5		2					L		L			10	N				N		N			515		12	2166	5
6		3						7		20		20		70				70	N			516		12	1353A	6
7	L							50		30		300	N				N			70		517		12	1563	7
8	L							30	L			70	L				N			20		518		12	2033A	8
9	-						N		L			5		70			N		N			519		12	212A	9
10		1					L		L			7		20			N		L			520		12	2128	10
11		1			N		N		L			70	L		N		N		N			521		12	2171	11
12																								12		12
13																								12		13
14																								12		14
15																								12		15
16																								12		16
17																								12		17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24		1.5	1.		N			5	L			5		300	N			30	L			REF LB		12	17	24

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FILM NO. C-186-F

REPORT NO. 44-3967

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	10			N	30	N	300			300		////////	13	BCR-1	1
2	10				N		300			30		EFV 512	13	DG-217uA	2
3	15				5		700			30		513	13	2157	3
4	15				N		L			L		514	13	2159C	4
5	15				N		N			L		515	13	2166	5
6	20				5		1000			50		516	13	1353A	6
7	15				30		200			500		517	13	1563	7
8	10				50		150			500		518	13	2033A	8
9	15				N		L			20		519	13	2121A	9
10	30			V	N	V	200			15		520	13	2128	10
11	15			N	N	N	L			30		521	13	2171	11
12													13		12
13													13		13
14													13		14
15													13		15
16													13		16
17													13		17
18													13		18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24													13		24
25													13		25
26													13		26
27													13		27
28													13		28
29													13		29
30	20			N	20	N	150			100		PIF 18	13	17	30

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FILM NO. C-186-F

REPORT NO. HW-3567

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

	(50) W		(10) Y		(200) Zn		(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1	2-7	8	9-14	15	16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	N			30	L		150								////////	14	BCR-1	1
2				10	N		100								REV 512	14	DG-2174A	2
3			L		N		100								513	14	2157	3
4			L		N		70								514	14	2159C	4
5			N		N		10								515	14	2166	5
6				50	L		500								516	14	1353A	6
7				50		200	100								517	14	1563	7
8				50		200	100								518	14	2033A	8
9			N		N		200								519	14	2121A	9
10			L		N		150								520	14	2128	10
11	N			10	N		100								521	14	2171	11
12																14		12
13																14		13
14																14		14
15																14		15
16																14		16
17																14		17
18																14		18
19																14		19
20																14		20
21																14		21
22																14		22
23																14		23
24	N			30	L		300								REF 1B	14	17	24

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FILE NO. 6-19-G

REPORT NO. HM 3968

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS
6 - Step D.C. Arc

Requested by J. L. Gualtieri Date 11/9/72

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	15	2	3	1	1000	(N)	(N)	(N)	(N)	700		//////	11	BCR-1	1
2	5	7	5	.2	300				(L)	300		BFV52	11	Dg-2	2
3	7	↓	7	.2	↓				150	300		523	11	Dg-25	3
4	3		5	.15					50	200		524	11	Dg-48	4
5	5		2	.2	200				70	300		525	11	Dg-54	5
6	7	10	10	.2	700				(L)	700		526	11	Dg-62	6
7	7	10	5	.15	300				15	200		527	11	Dg-63	7
8	.7	.5	.1	.15	20				70	300		528	11	Dg-80	8
9	10	5	.7	.3	200				300	500		529	11	Dg-92	9
10	2	10	7	.1	1500				(N)	150		530	11	Dg-106	10
11	3	7	5	.2	500				10	(		531	11	Dg-173B	11
12	5	3	3	.15	150				70	↓		532	11	Dg-261	12
13	.7	.7	20	.01	1000				15	(L)		533	11	Dg-268	13
14	5	3	20	.02	700				100	(L)		534	11	Dg-268-A	14
15	10	2	7	1	1000				20	70		535	11	Dg-336-A	15
16	5	.3	.1	.15	500				70	150		536	11	Dg-336-B	16
17	1.5	1.5	20	.2	1500	↓	↓	↓	20	150		537	11	Dg-367	17
18													11		18
19													11		19
20													11		20
21													11		21
22													11		22
23													11		23
24	.7	.2	3	.15	100	20	500	50	70	70		////	11	Sp/B-111	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. 6-19-G

REPORT NO. HM 3968

ANALYST K.J. CURRY - C. SMITH

Sheet #2

	(1) Be	(10) Bi	(20) Cd	(5) Co	(10) Cr	(5) Cu	(20) La	(5) Mo	(20) Nb	(5) Ni	DMW	Tag no.	12	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	1	N	N	30	10	15	20	(L)	(L)	7		////////	12	BCR-1	1
2	1	"	"	10	50	10	30	15		10		BFV522	12	Dg-2	2
3	1	"	"	20	70	20	30	(N)		15		523	12	Dg-25	3
4	1.5	"	"	(L)	20	(L)	20			15		524	12	Dg-48	4
5	1	"	"	10	50	15	30			30		525	12	Dg-54	5
6	1	"	"	7	70	(L)	"			"		526	12	Dg-62	6
7	1	"	"	5	70	5	"			"		527	12	Dg-63	7
8	(L)	"	"	(N)	20	10	"			(L)		528	12	Dg-82	8
9	1.5	"	"	5	70	7	"			10		529	12	Dg-92	9
10	5	"	"	(N)	30	(L)	(L)			7		530	12	Dg-66	10
11	1	"	"	10	70	7	30			15		531	12	Dg-173B	11
12	1	"	"	15	70	10	30			30		532	12	Dg-201	12
13	(N)	"	"	(N)	(L)	10	20			5		533	12	Dg-248	13
14	(L)	"	"	(L)	(L)	70	20	(L)		15		534	12	Dg-248 B	14
15	(L)	"	"	30	30	500	(L)	(N)		50		535	12	Dg-336-A	15
16	1	"	"	7	10	15	50	(N)		15		536	12	Dg-336-B	16
17	(N)	"	"	(N)	10	30	30	(N)	"	(L)		537	12	Dg-367	17
18													12		18
19													12		19
20													12		20
21													12		21
22													12		22
23													12		23
24	(N)	(N)	(N)	(N)	20	70	(L)	(N)	(L)	(L)		///	12	Gp B-III	24

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FILM NO. 6-19-6

REPORT NO. HM3968

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination; or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	15			(N)	30	(N)	300			300		////////	13	BCR-1	1
2	(N)				10		300			70		BFV522	13	Dg-2	2
3	15				15		200			70		523	13	Dg-25	3
4	(N)				7		100			50		524	13	Dg-48	4
5	(L)				10		100			100		525	13	Dg-54	5
6	10						200			70		526	13	Dg-62	6
7	(N)						(L)			70		527	13	Dg-63	7
8	(N)				(L)		(N)			30		528	13	Dg-80	8
9	30				15		100			100		529	13	Dg-92	9
10	10				5		200			30		530	13	Dg-106	10
11	(N)				10		(L)			30		531	13	Dg-173B	11
12	10				10		(L)			50		532	13	Dg-201	12
13	20				(N)		1000			10		533	13	Dg-248	13
14	300				7		150			15		534	13	Dg-248 A1	14
15	15				30		150			300		535	13	Dg-336-A	15
16	(L)				5		(L)			50		536	13	Dg-336B	16
17	(L)				7		300			30		537	13	Dg-367	17
18													13		18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24	150			100	(N)	(N)	150			70		////	13	Gp 1B-111	24

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FILM NO. 6-19-G

REPORT NO. HM-3968

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

	(50) W	(10) Y	(200) Zn	(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	N	20	N	150								////////	14	BCR-1	1
2		15		70								5[illegible]22	14	Dg-2	2
3		15										523	14	Dg-25	3
4		20										524	14	Dg 48	4
5		10		50								525	14	Dg-54	5
6		15		70								526	14	Dg-62	6
7		10		50								527	14	Dg-63	7
8		20		200								528	14	Dg-82	8
9		15		70								529	14	Dg-92	9
10		(L)	700									530	14	Dg 106	10
11		15	(N)									531	14	Dg-173	11
12		10										532	14	Dg-201	12
13		15		(N)								533	14	Dg 348	13
14		30		(L)								534	14	Dg-348A	14
15		30		70								535	14	Dg 336A	15
16		15		100								536	14	Dg 336B	16
17		30		150								537	14	Dg 367	17
18													14		18
19													14		19
20													14		20
21													14		21
22													14		22
23													14		23
24	(N)	(L)	(N)	30								///	14	Sp 12-III	24

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FILM NO. 6-20-6

REPORT NO. HM 3968

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS
6 - Step D.C. Arc

Requested by J. L. Gualtieri Date 11/10/72

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	10	1.5	2	.7	700	N	N	N	N	700		//////	11	BCR-1	1
2	5	7	7	.3	500				50	150		BFV536	11	Dg-373	2
3	3	1.5	.05	.7	50				300	300		539	11	Dg-420	3
4	1	1	G (20)	.03	500				150	L		540	11	Dg-424	4
5	5	7	10	.15	500				100	70		541	11	Dg-455	5
6	3	7	5	.15	300				L	100		542	11	Dg-472	6
7	5	5	5	.15	500				15	150		543	11	Dg-487-A	7
8	5	7	5	.2	500				70	100		544	11	Dg-502	8
9	1	.7	.07	.5	70				150	300		545	11	Dg-517-666	9
10	1.5	3	.05	.2	30				150	150		546	11	Dg-529	10
11	.2	1.5	20	(L)	1500				(N)	(L)		547	11	Dg-535	11
12	2	7	7	2	300				100	100		548	11	Dg-565	12
13	7	10	7	.3	1000				100	150		549	11	Dg-576	13
14	3	7	5	.15	300				30	200		550	11	Dg-590-A	14
15	3	10	3	.15	200				30	150		551	11	Dg-590-B	15
16	1	1.5	20	.05	500				15	(L)		552	11	Dg-608	16
17	3	1.5	.2	.5	100	↓	↓		200	300		553	11	Dg-620	17
18	10	.3	.5	.15	700	100	300	↓	1000	300		111	11	Sp 1B-132	18
19													11		19
20													11		20
21													11		21
22													11		22
23													11		23
24													11		24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. 6-26-G

REPORT NO. HM 3968

ANALYST K. J. CURRY - C. SMITH

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(20) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	///////////	
1		1		(N)		(N)		7		15		15		100		(L)		(L)		15		//////		12	BCR-1	1
2		(L)						7		20		7		20		(N)				15		BEV538		12	Dg-373	2
3		3						7		50		10		30		5				30		539		12	Dg-420	3
4		N						(N)		(L)		(L)		(L)		N		(N)		(L)		540		12	Dg-424	4
5		2						7		50		30		30						20		541		12	Dg-455	5
6		1.5						7		50		30		30						20		542		12	Dg-472	6
7		1.5						7		70		70		30						30		543		12	Dg-487-A	7
8		1						5		30		10		20				N		15		544		12	Dg-502	8
9		2						(N)		30		7		100		(N)		(L)		15		545		12	Dg-517-666	9
10		5								(L)		(L)		100				(L)		(L)		546		12	Dg-529	10
11		(N)								(L)		(L)		70				(N)		(N)		547		12	Dg-535	11
12		1								20		15		20				(L)		15		548		12	Dg-565	12
13		(L)						10		30		15		30						30		549		12	Dg-576	13
14		1						7				50		30								550		12	Dg-590-A	14
15		(L)						7				15		20								551		12	Dg-590-B	15
16		(N)						(N)		15		10		(L)				(N)		7		552		12	Dg-608	16
17		1.5						7		20		20		30				(L)		15		553		12	Dg-620	17
18		1.5						10		(L)		15000		30		7		(L)		7		1111		12	Sp 18-132	18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24																								12		24

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FILM NO. 6-20-G

REPORT NO. HM 3968

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	L			N	30	N	300			300		////////	13	BCR-1	1
2	15				7		300			50		BFV538	13	Dg 373	2
3	20				15		100			300		539	13	Dg-426	3
4	15				(N)		1500			10		540	13	Dg-434	4
5	50				10		150			30		541	13	Dg-455	5
6	N				7		200			70		542	13	Dg-472	6
7	30				10		L			50		543	13	Dg 457-A	7
8	L				7		100			50		544	13	Dg-502	8
9	15				7		300			70		545	13	Dg-517-666	9
10	15				5		(N)			15		546	13	Dg-524	10
11	(L)				(N)		500			(L)		547	13	Dg-535	11
12	30				5		150			50		548	13	Dg-565	12
13	15				10		300			70		549	13	Dg-576	13
14	15				7		200					550	13	Dg-590A	14
15	(L)				7		150					551	13	Dg-590B	15
16	(L)				(L)		700			20		552	13	Dg-608	16
17	15				7		(L)			50		553	13	Dg-620	17
18	30				(L)	500	100			20		1111	13	GSJB-132	18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24													13		24

FILM NO. 6-20-G

REPORT NO. HM 3468

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W	(10) Y	(200) Zn	(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	N	20	N	200								///////	14	BCD-1	1
2		15		100								538	14	Dg 373	2
3		30		150								539	14	Dg 420	3
4		15		20								540	14	Dg 424	4
5		20		50								541	14	Dg 455	5
6		10		50								542	14	Dg 472	6
7		10		70								543	14	Dg 457A	7
8		15		50								544	14	Dg 502	8
9		10		100								545	14	Dg 577-666 one Sheet	9
10		30		200								546	14	Dg 529	10
11		30		(N)								547	14	Dg 535	11
12		15		50								548	14	Dg 565	12
13		20		70								549	14	Dg 576	13
14		10		50								550	14	Dg 590A	14
15		↓		70								551	14	Dg 590 B	15
16		↓		30								552	14	Dg 608	16
17		30	↓	150								553	14	Dg 620	17
18		50	1500	70								111	14	Gp IC-132	18
19													14		19
20													14		20
21													14		21
22													14		22
23													14		23
24													14		24

FILM NO. 6-21-G

REPORT NO. It M 3968

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS
6 - Step D.C. Arc

Requested by J. L. Gualtieri

Date 11/10/72

Sheet #1

	(.05) Fe %		(.02) Mg %		(.05) Ca %		(.002) Ti %		(10) Mn		(.5) Ag		(200) As		(10) Au		(10) B		(20) Ba	DMW	Tag No.	11	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77 78	79-80	//////////	
1		15		2		5		1		1500		(N)		(N)		(N)		(N)		1000		////////	11	BCR-1	1
2		5		2		5		.3		500		(N)						70		300		BFV54	11	Dg-622	2
3		1.5		3		1.5		.07		1000								15		4		555	11	Dg-636	3
4		3		7		7		.07		700								10		70		556	11	Dg-649	4
5		7		10		5		.2		500		(N)						150		150		557	11	Dg-674	5
6		1.5		5		10		.07		300		↓						20		100		558	11	Dg-506	6
7		5		↓		3		.2		300		5						(L)		300		559	11	Dg-701	7
8		7		↓		3		.2		200		(N)						(L)		1000		560	11	Dg-706A	8
9		5		2		.15		.3		150								100		300		561	11	D-719	9
10		7		7		3		.3		1000		↓						70		200		562	11	Dj721	10
11		.5		2		7		.1		5000		15						(L)		3000		563	11	Dg-785	11
12		3		.7		1.5		.3		700		(N)						30		200		564	11	Dg-816	12
13		1.5		1		1.5		.15		500								30		300		565	11	Dg-831	13
14		5		3		10		.3		1500								20		700		566	11	Dg-836	14
15		1	G	(10)	G	(20)		.02		500								(N)		(L)		567	11	Dg-851	15
16		5		5		7		.15		1500								70		100		568	11	Dg-693	16
17		1.5		.15		.3		.5		100		↓		↓				30		(L)		569	11	Dg-865	17
18		15		.2		.5		.007		500		5		1500		↓		20		(L)		///	11	GpIB-115	18
19																							11		19
20																							11		20
21																							11		21
22																							11		22
23																							11		23
24																							11		24

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REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

FILM NO. 6-21-G

REPORT NO. HM3968

ANALYST K. J. CURRY – C. SMITH

Sheet #2

	(1) Be	(10) Bi	(20) Cd	(5) Co	(10) Cr	(5) Cu	(20) La	(5) Mo	(20) Nb	(5) Ni	DMW	Tag no.	12	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	1	N	N	50	15	30	30	7	(L)	15		////////	12	BCR-1	1
2	(L)			N	30	50	50	(N)		30		BFV54	12	Dg-622	2
3	L			N	L	5	30			10		555	12	Dg-636	3
4	1			5	15	20	20			15		556	12	Dg-649	4
5				20	70	30	30	(N)		50		557	12	Dg-674	5
6	(L)			(N)	15	10	20	(N)		15		558	12	Dg-506	6
7	5			(N)	70	70	30	5		15		559	12	Dg-704	7
8	2			20	150	70	30	7		30		560	12	Dg-766	8
9	1.5			20	70	50	70	(N)		30		561	12	D-719	9
10	2			15	70	7	50			20		562	12	Dg721	10
11	(N)			(N)	(N)	7000	50			5		563	12	Dg-785	11
12	1				10	70	70			(L)		564	12	Dg-816	12
13	(L)				20	15	20			(L)		565	12	Dg-821	13
14	(N)			15	70	5	80			20		566	12	Dg-836	14
15	(N)			(N)	(N)	10	(L)		(N)	(L)		567	12	Dg-851	15
16	(L)			15	70	20	20		(L)	70		568	12	Dg-693	16
17	(N)			(N)	15	150	70			15		569	12	Dg-865	17
18	5	30		20	(L)	700	30	15		30		///	12	Gp1B-115	18
19													12		19
20													12		20
21													12		21
22													12		22
23													12		23
24													12		24

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FILM NO. 6-21-G

REPORT NO. HM 3968

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	15			(N)	30	(N)	300			500		///////	13	Pan-1	1
2	(L)				7		300			50		BFV564	13	Dg-622	2
3	15				5		1000			15		555	13	Dg-636	3
4	300				5		150			50		556	13	Dg-649	4
5	100				10		100			70		557	13	Dg-674	5
6	(N)				5		300			20		558	13	Dg-506	6
7	15				10		150			100		559	13	Dg-704	7
8	15				15		100			200		560	13	Dg-706A	8
9	20				15		(L)			70		561	13	D-719	9
10	20				15		(L)			100		562	13	Dg721	10
11	15				5		200			30		563	13	Dg-785	11
12	30				10		300			50		564	13	Dg-816	12
13	10				5		100			30		565	13	Dg-821	13
14	(L)				10		300			100		566	13	Dg-830	14
15	(L)				(N)		150			30		567	13	Dg-851	15
16	30				7		(L)			70		568	13	Dg-692	16
17	(N)				(L)		300			30		569	13	Dg-865	17
18	1000				(L)		(L)			300		1111	13	Sp1B-115	18
19													13		19
20													13		20
21													13		21
22													13		22
3													13		3
24													13		24

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FILM NO. 6-21-G

REPORT NO. H M 3968

NOTE: Some combinations of elements affect the ... Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

	(50) W	(10) Y	(200) Zn	(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80		
1	N	30	N	200								///////	14	BCR-1	1
2		30		300								554	14	Dg 622	2
3		15		30								555	14	Dg 636	3
4		4		30								556	14	Dg 649	4
5		15	(L)	70								557	14	Dg 674	5
6		10	(N)	30								558	14	Dg 506	6
7		15	(L)	50								559	14	Dg 704	7
8		10	300	70								560	14	Dg 706A	8
9		30	(L)	200								561	14	Dg 719	9
10		50	(N)	150								562	14	Dg 721	10
11		30		100								563	14	Dg 785	11
12		30		150								564	14	Dg 816	12
13		20		150								565	14	Dg 821	13
14		30		300								566	14	Dg 830	14
15		(L)		(L)								567	14	Dg 851	15
16		10	1000	50								568	14	Dg 693	16
17		30	N	1000								569	14	Dg 865	17
18	50	20	100	70								1111	14	GP1B-115	18
19													14		19
20													14		20
21													14		21
22													14		22
23													14		23
24													14		24

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FILM NO. 6-22-G

REPORT NO. HM 3968

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS
6 - Step D.C. Arc

Requested by J. L. Gualtieri Date 11/13/72

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	2-7	9-14	16-21	23-28	30-35	37-42	44-49	51-56	58-63	65-70	71	72-77 78	79-80		
1	10	2	3	.7	1500	N	N	N	N	700			11	DCR-1	1
2	7	10	7	.2	500				(L)	300		BFK570	11	Dg-874	2
3	7	10	10	.3	700				(L)			571	11	Dg-875	3
4	5	7	.7	.15	200				150			572	11	Dg-942	4
5	7	3	.15	.3	1000				150	↓		573	11	Dg-1097	5
6	.5	.2	5	.03	1000				15	3000		574	11	Dg-1108	6
7	3	7	.15	.3	150				100	300		575	11	Dg-1116	7
8	1	10	10	.05	1000				10	(L)		576	11	Dg-1135	8
9	.2	.07	.15	.07	150				10			577	11	Dg-1135-A	9
10	.15	.7	10	(N)	1500				(N)	↓		578	11	Dg-1140	10
11	1	.15	.7	.3	1500				70	70		579	11	Dg-1141	11
12	1.5	.7	10	↓	3000				↓	300		580	11	Dg-1152	12
13	1	5	1.5	↓	500				↓	1500		581	11	Dg-1168	13
14	.15	.07	.2	.1	30				15	(L)		582	11	Dg-1181	14
15	7	3	3	.3	700				150	1500		583	11	Dg-1191	15
16	5	1.5	.3	↓	700				200	700		584	11	Dg-1197	16
17	5	1.5	1.5	↓	500	↓	↓		30	200		585	11	Dg-1214	17
18	10	.5	.7	↓	100	.7	500	↓	200	500		1111	11	GolB-159	18
19													11		19
20													11		20
21													11		21
22													11		22
23													11		23
24													11		24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. 6-dd-6

REPORT NO. HM 3968

ANALYST K.J. CURRY - C. SMITH

Sheet #2

	(1) Be	(10) Bi	(20) Cd	(5) Co	(10) Cr	(5) Cu	(20) La	(5) Mo	(20) Nb	(5) Ni	DMW	Tag no.	12	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//// //////	
1	L	(N)	(N)	30	15	15	20	(L)	-1	15		////////	12	BCR-1	1
2	1			10	70		30	(N)		20		BFR570	12	Dg-874	2
3	1.5			7						15		571	12	Dg-875	3
4	1.5			(L)		20				30		572	12	Dg-942	4
5	2			30	50	30				30		573	12	Dg-1097	5
6	(L)			(N)	(L)	70	20		(N)	(L)		574	12	Dg-1108	6
7	1			7	70	(L)	50		(N)	15		575	12	Dg-1116	7
8	(N)			(N)	20	30	20		(L)	(N)		576	12	Dg-1135	8
9					(L)	5	20		(N)	(L)		577	12	Dg-1135A	9
10					(L)	70	(N)		(L)	(N)		578	12	Dg-1140	10
11	1.5				30	50	150			(L)		579	12	Dg-1141	11
12	1				70	15	30			5		580	12	Dg-1152	12
13	2			20	70	15	50			30		581	12	Dg-1168	13
14	(N)			(N)	(N)	50	20			(L)		582	12	Dg-1171	14
15	1.5			15	70	(L)	70			30		583	12	Dg-1191	15
16	1.5					70				20		584	12	Dg-1197	16
17	1					15				30		585	12	Dg-1214	17
18	2			7	50	70		7		15		////	12	GpIB-154	18
19													12		19
20													12		20
21													12		21
22													12		22
23													12		23
24													12		24

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FILM NO. 6-22-G

REPORT NO. HM 3968

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	15			N	30	(N)	300			300		////////	13	PCR-1	1
2					10		300			100		BF1570	13	Dg-814	2
3					700		700			100		571	13	Dg-875	3
4	↓				↓		(L)			70		572	13	Dg-947	4
5	20				15		(L)			100		573	13	Dg-1097	5
6	(L)				(N)		300			10		574	13	Dg-1105	6
7	(L)				10		(N)			30		575	13	Dg-1116	7
8	(N)				(L)		(L)			15		576	13	Dg-1135	8
9					(N)		(L)			10		577	13	Dg-1135A	9
10	↓				(N)		200			(L)		578	13	Dg-1140	10
11	10				(L)		150			30		579	13	Dg-1141	11
12	15				15		100			70		580	13	Dg-1152	12
13	50				15		100			70		581	13	Dg-1168	13
14	(N)				(N)		(L)			10		582	13	Dg-1121	14
15	30				15		100			70		583	13	Dg-1191	15
16	15				15		100			70		584	13	Dg-1197	16
17	(N)			↓	7		(L)			50		585	13	Dg-1214	17
18	70			300	10	↓	300			70		1111	13	Gp IB-154	18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24													13		24

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FILM NO. 6-22-6

REPORT NO. HM 3968

NOTE: Some combinations of elements affect one another. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W	(10) Y	(200) Zn	(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
	(N)	20	N	70								///////	14	BCR-1	1
2		10	N	50								570	14	Dg 874	2
3		15	L	70								571	14	Dg 875	3
4		L	L	50								572	14	Dg 942	4
5		15	N	70								573	14	Dg 1097	5
6		10		30								574	14	Dg 1108	6
7		50		300								575	14	Dg 1116	7
8		10		30								576	14	Dg 1135	8
9		L		70								577	14	Dg 1135A	9
10		N		N								578	14	Dg 1140	10
11		30		500								579	14	Dg 1141	11
12		20		100								580	14	Dg 1152	12
13		30	L	150								581	14	Dg 1168	13
14		L	N	70								582	14	Dg 1181	14
15		30		150								583	14	Dg 1191	15
16		50		300								584	14	Dg 1197	16
17		30		300								585	14	Dg 1214	17
18	150	30		200								///	14	Sp 1B-154	18
19													14		19
20													14		20
21													14		21
22													14		22
23													14		23
24													14		24

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FILM NO. 6-23-G

REPORT NO. HM 3968

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS

6 - Step D.C. Arc

Requested by J. L Gualtieri Date 11/13/82

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	2-7	9-14	16-21	23-28	30-35	37-42	44-49	51-56	58-63	65-70	71	72-77	79-80	////// ///	
1	15	2	3	.7	1500	N	N	N	N	700		///////	11	BLR-1	1
2	3	.5	7	.07	1000	N			20	L		BFr586	11	Dg-1231	2
3	.15	.7	.05	.15	L	L			300	300		587	11	Dg 482-I-2	3
4	3	.5	3	.1	300	N			70	100		588	11	Dg - 604	4
5	2	.1	.07	.15	70	1.5			20	L		589	11	Dg-517-B	5
6	3	.5	.5	.07	300	N			50	L		590	11	Dg - 491	6
7	.2	.05	.05	.15	50	N			L	L		591	11	Dg-517-A	7
8	10	.05	L	.3	70	N			L	L		592	11	one sample Dg-665-666	8
9	10	.7	L	.2	L	N			100	100		593	11	Dg-482-I-1	9
10	1.5	.03	L	.1	20	L			L	50		594	11	Dg-482-D	10
11	.3	.02	L	.15	L	N			N	L		595	11	Dg-482-G	11
12	10	3	3	.3	1000	L			70	150		596	11	Dg-656-A	12
13	.7	.15	2	.07	300	N			30	50		597	11	Dg-1116	13
14	1.5	.5	.7	.07	150	N			50	70		598	11	Dg-1112	14
15	3	5	5	.15	300	N			15	100		599	11	Dg-1023	15
16	[illegible]	[illegible]	[illegible]	.15	[illegible]	N	I	N	L	[illegible]		////	11	GpIB-34	16
17													11		17
18													11		18
19													11		19
20													11		20
21													11		21
22													11		22
23													11		23
24													11		24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. 6-23-G

REPORT NO. HM 3968

ANALYST K.J. CURRY — C. SMITH

Sheet #2

	(1) Be	(10) Bi	(20) Cd	(5) Co	(10) Cr	(5) Cu	(20) La	(5) Mo	(20) Nb	(5) Ni	DMW	Tag no.	12	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	1	N	N	50	15	15	30	L	L	15		////////	12	BLR-1	1
2	L			15	20	15	50	N	L	15		BFr596	12	Dg-1221	2
3	1.5			N	70	100	30	N	L	5		587	12	Dg-482-T-2	3
4	L			L	30	15	20	N	L	15		588	12	Dg-604	4
5	N			N	(L)	100	50	N	L	10		589	12	Dg-517-B	5
6	L			L		10	L	N	N	15		590	12	Dg-491	6
7	N			N		15	L	N	L	N		591	12	Dg-517-A	7
8	1.5			7	15	150	20	15	L	20		592	12	Dg-665-666 one sample	8
9	1.5			15	70	300	30	7	L	15		593	12	Dg-482-T-1	9
10	N			N	(L)	10	20	L	L	L		594	12	Dg-482-D	10
11	N			N	(L)	30	L	N	N	N		595	12	Dg-482-G	11
12	N			30	200	150	L	L	L	70		596	12	Dg-656-A	12
13	N			N	(L)	7	L	N	N	5		597	12	Dg-1110	13
14	N			7	15	15	20	N	N	15		598	12	Dg-1112	14
15	N			15	50	30	20	N	N	10		599	12	Dg-1023	15
16	15			70	1500	50	L	N	L	300		1111	12	GpIB-34	16
17		N	N										12		17
18													12		18
19													12		19
20													12		20
21													12		21
22													12		22
23													12		23
24													12		24

133

FILM NO. 6-23-G

REPORT NO. HM 3968

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

14 It. εV1

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	D M W	Tag No.	13	Field No.	
1	2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	15			N	30	N	300			300		///////	13	BLR-1	1
2	20				L		L			20		F 586	13	Dg 1221	2
3	70				15		300			100		587	13	Dg 482 I-2	3
4	30				5		100			50		588	13	Dg-664	4
5	L				N		L			15		589	13	Dg-517 B	5
6	20				5		100			30		590	13	Dg-491	6
7	N				N		L			15		591	13	Dg-517-A	7
8	20				N		L			30		592	13	Dg-665666	8
9	20				7		L			100		593	13	Dg-482 I-1	9
10	N				N		L			20		594	13	Dg-482-D	10
11	L				N		L			15		595	13	Dg 482G	11
12	N				30		100			200		596	13	Dg 656-A	12
13	L				N		150			15		597	13	Dg-1110	13
14	N				L		L			20		598	13	Dg-1112	14
15	20			N	7	N	N			50		599	13	Dg-1023	15
16					15	N	200			100		1111	13	[illegible] 1B-34	16
17													13		17
18													13		18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24													13		24

134

FILM NO. 6-23-G

REPORT NO. HM 3968

NOTE: Some combinations of elements ... Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

	(50) W	(10) Y	(200) Zn	(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	N	30	N	70								///////	14		1
2		15		50								586	14	Dg-1221	2
3		12		70								587	14	Dg 482I-2	3
4		10		30								588	14	Dg 604	4
5		15		70								589	14	Dg-517 B	5
6		10		30								590	14	Dg-491	6
7		L		70								591	14	Dg 517-A	7
8		L		150								592	14	Dg 665 60	8
9		L		70								593	14	Dg 482-1	9
10		L		70								594	14	Dg 482D	10
11		L		70								595	14	Dg 482G	11
12		15		50								596	14	Dg 65A	12
13		L		70								597	14	Dg 1110	13
14		10		150								598	14	Dg 1112	14
15		L		50								599	14	Dg-1023	15
16	V	L	N	N								1111	14	4	16
17													14		17
18													14		18
19													14		19
20													14		20
21													14		21
22													14		22
23													14		23
24													14		24

FILM NO. 6-70-F

REPORT NO. HM-3971

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION ANALYSIS

6 - Step D.C. Arc

Requested by J. GUALTIERI

Date 6/22/70

Sheet #1

	(.05) Fe %	(.02) Mg %	(.05) Ca %	(.002) Ti %	(10) Mn	(.5) Ag	(200) As	(10) Au	(10) B	(20) Ba	DMW	Tag No.	11	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	7	2	3	1	1500	N	N	N	L	700		////////	11	BCR-1	1
2	2	.7	G 30	.15	2000	N	N		L	700		BFY 6.3.2	11	DG-1460	2
3	1.5	1	.7	.1	500	N	200		50	200		633	11	1435	3
4	3	1	10	.5	700	N	N		10	500		634	11	1455	4
5	3	1.5	G 20	.2	700	N	N		10	700		635	11	1356-A	5
6	3	1	G 30	.3	500	N	N		15	G 5000		636	11	1356-B	6
7	1	.5	.7	.15	100	N	N		L	200		637	11	1387	7
8	3	2	20	.3	1000	N	N		20	500		638	11	1434	8
9	2	1	7	.07	150	.5	200		100	100		639	11	1913	9
10	7	2	10	.7	1500	N	N		20	700		640	11	1911	10
11	3	.1	.5	.03	300	N	L		20	150		641	11	1158	11
12	20	.03	.1	.015	50	N	300		L	20		642	11	1157-7	12
13	1	1.5	20	.02	3000	N	N		15	200		643	11	1163	13
14	2	.7	1	G 1	70	N	L		10	1500		644	11	1218	14
15	2	2	G 20	.15	700	N	N	V	15	500		645	11	1388	15
16													11		16
17													11		17
18													11		18
19													11		19
20													11		20
21													11		21
22													11		22
23													11		23
24	20	.3	.5	.03	700	30	300	N	L	500			11	(20)134	24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

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FILM NO. 6-70-F

REPORT NO. HA-3971

ANALYST C. FORN - R. BABCOCK - J. REYNOLDS

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(10) Nb		(5) Ni		DMW	Tag no.	12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	
1	L		N		N			30	L			30	L		N		N			10		///////		12	BCR-1	1
2	L							5	L			10	N		N		N		L			BFV 632		12	DG-1460	2
3		70						5		20		70		50	N			200	N			633		12	1435	3
4		1						7		30		30		50	N		L			15		634		12	1455	4
5		1.5						5		50		10		50	N			30		7		635		12	1356-A	5
6		3						5		50		10		70	N			50		5		636		12	1356-B	6
7		1					L			20		7	N		N		N		L			637		12	1387	7
8		3						5		50		20		50	N			30		10		638		12	1434	8
9		20					L		L			30		100		5		200	N			639		12	1913	9
10		2						15		30		30		50	N			70		15		640		12	1911	10
11		10					N		L			50	N			100		70	L			641		12	1158	11
12		3					N		L			20	N		N			70	N			642		12	1159-7	12
13		7					N		L			10	N		N		N			5		643		12	1163	13
14		1					L			30		15		50		10		100		10		644		12	1268	14
15		1					L			70		15		20	N		N			7		645		12	1388	15
16																								12		16
17																								12		17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24		1	—	300	N			7	L			1500	N			15	N			70				12	(20)134	24

137

FILM NO. C-70-F

REPORT NO. HW-3871

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

	(10) Pb	Pd	Pt	(100) Sb	(5) Sc	(10) Sn	(100) Sr	Te	U	(10) V	DMW	Tag No.	13	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	15			N	30	N	300			300		//////	13	BCR-1	1
2	15				10	N	100			20		BFV 632	13	DG-1410	2
3	20				N	20	L			10		633	13	1435	3
4	10				15	L	200			50		634	13	1455	4
5	15				10	L	500			20		635	13	1356-A	5
6	15				7	10	300			30		636	13	1356-B	6
7	L				7	N	L			10		637	13	1387	7
8	15				10	L	200			50		638	13	1434	8
9	20				N	30	N			L		639	13	1913	9
10	10				15	L	500			70		640	13	1911	10
11	70				N	10	N			L		641	13	1158	11
12	20				N	N	200			L		642	13	1159-7	12
13	L				N	N	300			15		643	13	1163	13
14	15				7	L	700			50		644	13	1268	14
15	20				7	N	200			20		645	13	1388	15
16													13		16
17													13		17
18													13		18
19													13		19
20													13		20
21													13		21
22													13		22
23													13		23
24	510			150	5	30	200			100			13	20/134	24

13

FILM NO. 6-70-F

REPORT NO. HA-3971

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

	(50) W	(10) Y	(200) Zn	(10) Zr	Si%	Al%	Na%	K%	P%	Ce	DMW	Tag No.	14	Field No.	
	1 2-7	8 9-14	15 16-21	22 23-28	29 30-35	36 37-42	43 44-49	50 51-56	57 58-63	64 65-70	71	72-77 78	79-80	//////////	
1	N	30	L	100								////////	14	BCR-1	1
2		20	N	70								632	14	DG-460	2
3		150		300								633	14	1435	3
4		50		200								634	14	1455	4
5		50		150								635	14	1356-A	5
6		70		200								636	14	1356-B	6
7		10		70								637	14	1387	7
8		30		150								638	14	1434	8
9		70		300								639	14	1913	9
10		30		200								640	14	1911	10
11		50	N	100								641	14	1158	11
12		30	L	150								642	14	1159-7	12
13		30	N	10								643	14	1163	13
14		20	N	70								644	14	1268	14
15		20	N	100								645	14	1388	15
16													14		16
17													14		17
18													14		18
19													14		19
20													14		20
21													14		21
22													14		22
23													14		23
24	15%	30	700	20									14	20/15A	24

130

FILM NO. 6-51-F

SEMI-QUANTITATIVE SPECTROGRAPHIC - FIELD SERVICES SECTION
ANALYSIS

REPORT NO. HM-3977

6 - Step D.C. Arc

Requested by J. [illegible]

Date [illegible]

Sheet #1

	(.05) Fe %		(.02) Mg %		(.05) Ca %		(.002) Ti %		(10) Mn		(.5) Ag		(200) As		(10) Au		(10) B		(20) Ba		D M W	Tag No.		11	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1		7		2		7		1		1500	N		N		N		L			500		///////		11	BCR-1	1
2		.5		.7	6	20		.015		1000	N		N		N		L			20		800		11	Dg-1573-A	2
3																								11		3
4																								11		4
5																								11		5
6																								11		6
7																								11		7
8																								11		8
9																								11		9
10																								11		10
11																								11		11
12																								11		12
13																								11		13
14																								11		14
15																								11		15
16																								11		16
17																								11		17
18																								11		18
19																								11		19
20																								11		20
21																								11		21
22																								11		22
23																								11		23
24																								11		24

REMARKS: Fe, Mg, Ca, and Ti reported in %, all other elements reported in ppm. Results are in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Lower limits of determination are in parenthesis.

FILM NO. 6-51-F

REPORT NO. HM 3977

ANALYST [illegible]

Sheet #2

	(1) Be		(10) Bi		(20) Cd		(5) Co		(10) Cr		(5) Cu		(20) La		(5) Mo		(10) Nb		(5) Ni		DMW	Tag no.		12	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	L		N		N			30	L			15	L		N		N			7		////////		12	BCR-1	1
2	L		N		N		N			20		5		50	N		N			5		BFV 800		12	DG-1573-A	2
3																								12		3
4																								12		4
5																								12		5
6																								12		6
7																								12		7
8																								12		8
9																								12		9
10																								12		10
11																								12		11
12																								12		12
13																								12		13
14																								12		14
15																								12		15
16																								12		16
17																								12		17
18																								12		18
19																								12		19
20																								12		20
21																								12		21
22																								12		22
23																								12		23
24																								12		24

14

FILM NO. 6-51-F

REPORT NO. HM-3977

G= Greater than 10%, or Greater than value shown.
H = Interference
- = Not look for.

N = Not detected at limit of detection, or at value shown.
L = Detected, but below limit of determination, or below value shown.
* = Usual limits of determinations do not apply due to use of dilution technique.

Sheet #3

	(10) Pb		Pd		Pt		(100) Sb		(5) Sc		(10) Sn		(100) Sr		Te		U		(10) V		DMW	Tag No.		13	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1		10					N			30	N			300						300		////////		13	BCR-1	1
2		30					N		N		N			1000					L			E=V 800		13	Dag-1573-A	2
3																								13		3
4																								13		4
5																								13		5
6																								13		6
7																								13		7
8																								13		8
9																								13		9
10																								13		10
11																								13		11
12																								13		12
13																								13		13
14																								13		14
15																								13		15
16																								13		16
17																								13		17
18																								13		18
19																								13		19
20																								13		20
21																								13		21
22																								13		22
23																								13		23
24																								13		24

FILM NO. 6-51-F

REPORT NO. HM-3977

NOTE: Some combinations of elements affect the limits of determination. Approximate values are given. In unusually favorable materials, concentrations somewhat lower than the values given may be detected. In unfavorable materials the given limits of determination may not be attained for some of the elements.

Sheet #4

	(50) W		(10) Y		(200) Zn		(10) Zr		Si%		Al%		Na%		K%		P%		Ce		D M W	Tag No.		14	Field No.	
	1	2-7	8	9-14	15	16-21	22	23-28	29	30-35	36	37-42	43	44-49	50	51-56	57	58-63	64	65-70	71	72-77	78	79-80	//////////	
1	N			30	L			150														///////		14	BCR-1	1
2	N			15	N		N															[illegible]		14	Dg-1573A	2
3																								14		3
4																								14		4
5																								14		5
6																								14		6
7																								14		7
8																								14		8
9																								14		9
10																								14		10
11																								14		11
12																								14		12
13																								14		13
14																								14		14
15																								14		15
16																								14		16
17																								14		17
18																								14		18
19																								14		19
20																								14		20
21																								14		21
22																								14		22
23																								14		23
24																								14		24

FIELD SERVICES SECTION

Submitter: J. L. GUALTIERI HM 3963 1/3

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST
Au AA	C. L. WHITTINGTON		
Hg Instr.			
Cu AA			

Completion Date 12-7-72

FIELD NO.	TAG NO.	DATE: /	/	/	/	/	/	/	/
		Au	Hg	Cu					
Dg-36-A	BFV241	N(.05)	.04	45					
70-A	242	.20	.08	35					
142	243	N(.05)	.02	L(5)					
174	244		.02	150					
175	245		.02	L(5)					
1326	246		L(.02)	130					
270	247		L(.02)	10					
427-A	248		.02	5					
428	249		L(.02)	10					
444	250		.02	10					
480	251		.02	20					
507-A	252		.02	10					
508	253		.02	L(5)					
509	254		L(.02)						
564	255		N(.02)						
588	256		L(.02)	L(5)					
150	257		.20	10					
658	258		.02	L(5)					
438	259	N(.05)	L(.02)	25					
	Reference Samples	.05	.08	40					144

REMARKS: G = Greater than value shown; I = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

#23 #2 #117

FIELD SERVICES SECTION

Submitter: _____ HM 3963 2/3

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date _____

FIELD NO.	TAG NO.	DATE:							
		Au	Hg	Cu					
Dg-694	BFV 260	N(.05)	L(.02)	N(5)					
705	261		.02	15					
713	262		.02	L(5)					
729-A	263		L(.02)	5					
758	264		.02	310					
760	265		L(.02)	L(5)					
792	266		.02	15					
805	267		.30	80					
824	268		.02	15					
859	269		L(.02)	55					
1320	270		L(.02)	L(5)					
1089-B	271		.02	5					
1129	272		.02	50					
1315	273		L(02)	5					
1160	274		.02	40					
1169-A	275		N(.02)	5					
1183	276		.02	10					
1199	277		.02	5					
1218	278	N(.05)	L(.02)	L(5)					
	Reference Samples	.05	.24	40					145

#102 #156 #053

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

Submitter: _____ HM 3763 3

ELEMENT AND METHOD ANALYST ELEMENT AND METHOD ANALYST

Completion Date _____

DATE:									
FIELD NO.	TAG NO.	Aw	Hg	Cw					
Dg-1258-A	BFV 279	N(.05)	.04	L(5)					
1262	280		.04	10					
1280	281		.04	190					
1286-A	282		.04	65					
1310	283		.02	35					
1312	284		L(.02)	L(5)					
658-A	285	N(.05)	.04	100					
	Reference Samples	.05 #41	4. #99	80 #026					

146

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * – Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: J. L. GUALTIERI HM 3964

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST
Au AA	C. L. WHITTINGTON		
Hg Instr.			
Cu, Pb AA			

Completion Date 12-7-72

FIELD NO.	TAG NO.	DATE: Au	Hg	Cu	Pb				
Dg-142-C	BFV 286	2.0	.55	19,000	L(5)				
232-A	287	.25	.04	70	30				
232-B-3	288	N(.05)	.14	15	35				
232-D	289	.30	.06	1900	20				
248-A	290	N(.05)	.02	10	10				
1423	291		1.5	3200	20				
1439	292		.02	10	N(5)				
1440-A	293	N(.05)	.08	10	65				
1440-B	294	.10	.06	5	210				
1459-B	295	N(.05)	L(.02)	L(5)	L(5)				
1543-B	296		L(.02)	5	290				
1555-A	297		N(.02)	L(5)	5				
1556	298		L(.02)	L(5)	10				
1558	299		L(.02)	5	35				
1563	300		.12	9600	9200				
1573-A	301	N(.05)	.02	40	180				
248-C	302	.40	.10	680	8800				
1622-A	303	N(.05)	L(.02)	10	10				
2129-A	304	N(.05)	.28	L(5)	25				
	Reference Samples	.70	.40	340	10				147

#154 #125 #045 #045

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in parts per million unless otherwise noted.

FIELD SERVICES SECTION

Submitter: _____ HM 3964 2/3

ELEMENT AND METHOD ANALYST ELEMENT AND METHOD ANALYST

Completion Date _____

FIELD NO.	TAG NO.	DATE:							
		Au	Hg	Cu	Pb				
Dg-1996-A	BFV 305	N(.05)	L(.02)	L(5)	40				
2000	306	N(.05)	L(.02)	5	5				
2007-A	307	.05	.02	20	15				
2010-B	308	7.5	.50	20	15				
2011	309	10.	.30	L(5)	5				
2033-C	310	L(.05)	L(.02)	L(5)	10				
241-A	311	.30	.02	240	1000				
2163	312	N(.05)	.02	240	30				
2158	313	N(.05)	L(.02)	5	10				
2159	314	N(.05)	N(.02)	L(5)	L(5)				
2161-A	315	.05	L(.02)	15	25				
2164	316	L(.05)	.02	5	30				
2165	317	N(.05)	L(.02)	10	L(5)				
2166-B	318	N(.05)	L(.02)	N(5)	L(5)				
2167	319	28.	L(.02)	20	10				
2168	320	.30	.02	L(5)	20				
2169	321	21.	.06	10	20				
2170	322	1.0	.02	L(5)	120				
2173	323	N(.05)	L(.02)	N(5)	L(5)				
	Reference Samples	.10 #199	.16 #171	55 #134	120 #134				148

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: _____ HM 3964 3/3

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date _____

		DATE:							
FIELD NO.	TAG NO.	Au	Hg	Cu	Pb				
Dg-2181	BFV324	N(.05)	N(.02)	L(5)	L(5)				
2182	325	2.0	.04	L(5)	5				
2183	326	N(.05)	.02	30	N(5)				
2184	327	N(.05)	.02	20	35				
2185	328	N(.05)	L(.02)	20	20				
2190	329	54.	.8	15	10				
2190-A	330	.80	.14	L(5)	5				
2009	331	3.0	.70	L(5)	L(5)				
232-B	332	6.5	.28	360	65				
1551	333	N(.05)	N(.02)	10	L(5)				
1583	334	N(.05)	N(.02)	L(5)	N(5)				
1742	335	N(.05)	L(.02)	L(5)	N(5)				
	Reference Samples	.30	.8	1000	4400				
		#64	#150	#082	#082				

149

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: J.L. QUALTIERI IIM 3965

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST
Au AA	C.L. WHITTINGTON		
Hg Detector			
Cu, Pb AA			

Completion Date 1-24-73

DATE:									
FIELD NO.	TAG NO.	Au	Hg	Cu	Pb				
Dg-38	BFV 336	N(.05)	L(04)	20	10				
74	337		.02	25	10				
78	338		.02	15	5				
81	339		.04	15	20				
81-A	340		.04	5	10				
81 B	341		.10	N(5)	35				
109	342		.02	15	5				
141-A	343		.02	10	5				
141-B	344		.60	30	5				
144	345		.02	10	50				
232	346	N(.05)	.02	25	L(5)				
232-B-1	347	1.5	2.0	2400	160				
232-B-2	348	.15	.8	65	10				
248	349	N(.05)	.02	10	15				
248-B	350		.04	15	20				
2189	351		.04	15	5				
419-A	352		.02	10	10				
677	353		.04	15	5				
1301	354	N(.05)	.14	10	10				
	Reference Samples	.10	.3	55	75				150
		#129	#133	#074	#044				

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: J L GUNTER HM 3465

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date 11/24/75

FIELD NO.	TAG NO.	DATE:							
		Au	Hg	Cu	Pb				
Dg-1340	BFV 355	N(.05)	L(.02)	35	60				
1341	356			N(5)	L(5)				
1341-A	357			5	5				
1346-A	358			10	L(5)				
1347	359		L(.02)	10	L(5)				
1358	360		.02	L(5)	N(5)				
1359	361		.02	10	L(5)				
1361	362		L(.02)	15	10				
1371	363		.04	15	15				
1374	364		L(.02)	L(5)	10				
1389	365		.02	10	L(5)				
1405	366		L(.02)	10	L(5)				
1406	367		.02	5	10				
1427	368		L(.02)	L(5)	30				
1435	369		N(.02)	N(5)	L(5)				
1448	370		L(.02)	20	L(5)				
1459-A	371		L(.02)	20	15				
1485	372		.04	30	20				
1489	373	N(.05)	L(.02)	15	L(5)				
	Reference Samples	.30 #76	3. #120	330 #061	10 #061				151

REMARKS: G = Greater than value shown; II = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: J. L. CHALLIFOUX HM 3965

3/6

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date 1/24/73

FIELD NO.	TAG NO.	DATE:							
		Au	Hg	Cu	Pb				
Dg-1492-A	BFV374	N(.05)	N(.02)	5	L(5)				
1495	375		.02	10	15				
1501	376		L(.02)	15	10				
1515	377		L(.02)	20	15				
1534	378		.02	L(5)	15				
1535-A	379		N(02)	10	70				
1535-B	380		L(.02)	L(5)	L(5)				
1558	381		.06	110	15				
1558-A	382		L(.02)	L(5)	L(5)				
1559-A	383		.02	20	20				
1567	384		.02	10	L(5)				
1571	385		.04	10	5				
1577	386		L(.02)	5	5				
1579	387		.60	5	5				
1579-A	388		.02	5	L(5)				
1581	389		.02	5	N(5)				
1617	390		L(.02)	20	30				
1622-B	391		.02	30	N(5)				
1639	392	N(05)	N(.02)	5	10				
	Reference Samples	.05 #106	3. #75	50 #037	45 #037				152

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: J. L. CHALFANT HM 3965

ELEMENT AND METHOD | ANALYST | ELEMENT AND METHOD | ANALYST

Completion Date 1-24-73

DATE:									
FIELD NO.	TAG NO.	Au	Hg	Cu	Pb				
Dg-1656	BFV313	N(.05)	.02	25	10				
1659	394		.02	25	L(5)				
1668	395		L(.02)	5	L(5)				
1706	396		N(.02)	10	N(5)				
1726	397		L(.02)	10	N(5)				
1745	398		L(.02)	180	L(5)				
1748	399		N(.02)	10	N(5)				
1751	400		L(.02)	10	N(5)				
1782	401		L(.02)	15	35				
1783	402		L(.02)	25	10				
1793	403		.02	30	L(5)				
1878	404		N(.02)	N(5)	N(5)				
1903	405		.02	10	10				
1909	406		L(.02)	5	L(5)				
1918	407		.02	L(5)	10				
1922	408		.04	10	25				
1135	409		L(.02)	L(5)	L(5)				
1997	410		L(.02)	60	5				
2002	411	N(.05)	.02	10	L(5)				
	Reference Samples	3.5 #128	.28 *28	50 *102	140 *102				153

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: J L CHALLIFOUX HM 3965 5/6

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date 1/24/73

	DATE:								
FIELD NO.	TAG NO.	Au	Hg	Cu	Pb				
Dg-2002-A	BFV 412	N(.05)	.08	20	10				
2004	413		L(.02)	30	10				
2021	414		L(.02)	10	45				
2028	415		.02	10	5				
2033-B	416		L(.02)	L(5)	25				
2061	417		.55	L(5)	15				
2075	418		.02	10	20				
2115	419		.06	25	30				
2116	420		L(.02)	20	10				
2117	421		L(.02)	15	20				
2120	422		N(.02)	15	L(5)				
2121	423		L(.02)	10	5				
2123	424		.02	20	20				
2129	425		.24	15	45				
1687	426		L(.02)	L(5)	L(5)				
2130	427		N(.02)	15	L(5)				
2146	428		N(.02)	15	50				
2149	429		.02	20	20				
2150	430	N(.05)	L(.02)	15	15				
	Reference Samples	.10 #143	.14 #157	120 #135	260 #135				154

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: J L CHALLIFOUX IIM 3965 6/6

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date 1/24/73

	DATE:								
FIELD NO.	TAG NO.	Au	Hg	Cu	Pb				
Dg-2152	BFV431	N(.05)	.02	25	15				
2153	432		.8	30	25				
2154	433		.02	20	60				
2155	434		.02	L(5)	L(5)				
2156	435		.02	5	L(5)				
2160	436		.10	15	10				
2160-A	437		.06	20	L(5)				
2162	438		L(.02)	15	N(5)				
2162-A	439		L(.02)	15	L(5)				
2180	440		.12	95	L(5)				
2174	441		.08	90	L(5)				
2175	442		.14	60	140				
2175-A	443		.08	80	65				
2176	444		.02	15	70				
2177	445		.02	30	10				
2178	446		.04	35	L(5)				
2178-A	447		.02	25	60				
2179	448	N(.05)	.22	45	15				
	Reference Samples	.55 #84	5. #121	310 #174	570 #179				

155

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: J. L. GUALTIERI HM 3967

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST
Au AA	C. L. WHITTINGTON		
Hg Detector			
Cu AA			

Completion Date 1-30-73

FIELD NO.	TAG NO.	DATE:							
		Au	Hg	Cu					
Dg-231	BFV 464	L(.05)	.60	20					
2191	465	N(.05)	L(.02)	10					
232-C	466		.12	15					
236-A	467		L(.02)	35					
244	468		.02	15					
1354-A	469		N(.02)	10					
1354-B	470		L(.02)	20					
1438	471		L(.02)	220					
1441	472		.06	5					
1450	473		N(.02)	10					
1459-A	474	N(.05)	L(.02)	160					
1457-B	475	L(.05)	L(.02)	150					
2188	476	N(.05)	N(.02)	10					
1497	477		N(.02)	40					
1505	478		L(.02)	10					
1509	479		L(.02)	10					
1510	480		N(.02)	20					
1543	481		L(.02)	20					
1555	482	N(.05)	.02	40					
	Reference Samples	.45 #156	3. #31	10. #187					156

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: _____ HM 3967 2/4

ELEMENT AND METHOD ANALYST ELEMENT AND METHOD ANALYST

Completion Date _____

FIELD NO.	TAG NO.	DATE: / / Au	/ / Hg	/ / Cu	/	/	/	/	/
Dg-2186	BFV483	N(.05)	N(.02)	10					
1559	484	〃	.02	160					
1576	485	〃	L(.02)	30					
1584	486	N(.05)	N(.02)	L(5)					
1657	487	L(.05)	.04	25					
1689	488	N(.05)	.02	25					
1958	489	〃	.02	20					
1959	490	〃	L(.02)	20					
1962	491	〃	.04	20					
1963	492	〃	.02	15					
1978	493	〃	L(.02)	170					
1996	494	〃	.02	10					
1999	495	N(.05)	.04	210					
2007	496	.30	L(.02)	55					
2008	497	L(.05)	L(.02)	L(5)					
2010	498	N(.05)	L(.02)	L(5)					
2130-A	499	N(.05)	.45	40					
2130-B	500	.05	1.1	15					
2038	501	N(.05)	L(.02)	45					
	Reference Samples	.85 #99	.50 #112	210 #032					157

REMARKS: G = Greater than value shown; II = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in parts per million unless otherwise noted.

FIELD SERVICES SECTION

Submitter: _____ HM 3967 3/4

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date _____

	DATE:									
FIELD NO.	TAG NO.	Aw	Hg	Cw						
Dg-2158-A	BFV502	N(.05)	.04	5						
2159-A	503	3.0	.06	5						
2159-B	504	L(.05)	.02	25						
2161	505	.40	L(.02)	20						
2164	506	.05	L(.02)	L(5)						
2165-A	507	L(.05)	.04	10						
2166	508	N(.05)	L(.02)	L(5)						
2166-A	509	}	L(.02)	L(5)						
2171-A	510	}	.04	120						
2172	511	N(.05)	.04	L(5)						
2174-A	512	.20	.08	15						
2157	513	N(.05)	.02	20						
2159-C	514	.10	L(.02)	10						
2166-C	515	N(.05)	L(.02)	L(5)						
1353-A	516	}	.02	L(5)						
1563	517	}	.04	190						
2033-A	518	N(.05)	.02	50						
2121-A	519	.05	.14	5						
2128	520	N(.05)	L(.02)	N(5)						
	Reference Samples	.10	.28	6200						158
		#125	#129	#156						

REMARKS: G = Greater than value shown; I = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: _____ HM 3967 4/4

ELEMENT AND METHOD ANALYST · ELEMENT AND METHOD ANALYST

Completion Date _____

FIELD NO.	TAG NO.	DATE:							
		Au	Hg	Cu					
Dg-2171	BFV 521	L(.05)	.08	100					
	Reference Samples	.75 #171	.35 #81	1400 #047					

159

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: J.L. GUALTIERI HM 3968

ELEMENT AND METHOD		ANALYST	ELEMENT AND METHOD		ANALYST
Au	AA	C.L. WHITTINGTON			
Hg	Detector				
Cu	AA				

Completion Date 2-1-73

FIELD NO.	TAG NO.	DATE:							
		Au	Hg	Cu					
Dg-2	BFV522	N(.05)	L(.02)	35					
25	523		L(.02)	30					
48	524		N(02)	5					
54	525		L(.02)	20					
62	526		N(.02)	L(5)					
63	527			10					
82	528			L(5)					
92	529			10					
106	530		N(.02)	N(5)					
173-B	531		L(.02)	25					
201	532		L(.02)	15					
248	533	N(.05)	N(.02)	10					
248-A-1	534	.05	.02	85					
336-A	535	L(.05)	.08	460					
336-B	536	N(.05)	.02	20					
367	537		N(.02)	20					
373	538		N(.02)	10					
420	539		N(.02)	15					
424	540	N(.05)	.02	5					
	Reference Samples	.05	.55	100					160
		*78	#192	#008					

REMARKS: G = Greater than value shown; I = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * = Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: _____ HM 3968 2/5

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date _____

	DATE:								
FIELD NO.	TAG NO.	Aw	Hg	Cw					
Dg-455	BFV541	N(.05)	L(.02)	20					
472	542		.02	20					
487-A	543		L(.02)	30					
502	544		L(.02)	10					
517-666	545		6.	20					
529	546		.04	10					
535	547		.02	10					
565	548		.02	15					
576	549		.02	15					
590-A	550		.08	45					
590-B	551		.02	20					
608	552		.02	10					
620	553		.04	30					
622	554		.02	20					
636	555		L(.02)	10					
649	556		.02	20					
674	557		.04	20					
506	558	N(.05)	L(.02)	10					
704	559	.50	.02	45					
	Reference Samples	.20	.22	10					161

#59 #35 #041

REMARKS: G = Greater than value shown; H = Interference; - = Not looked for; N( ) = Not detected at limit of detection, or at value shown; L( ) = Detected, but below limit of determination, or below value shown; * - Usual limits of determinations do not apply due to use of dilution technique or different sample weight; INS = Indicates insufficient sample. All values reported in

FIELD SERVICES SECTION

Submitter: _____ HM 3968 3/5

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date _____

FIELD NO.	TAG NO.	DATE: Aw	Hg	Cu					
Dg-706-A	BFV560	N(.05)	.02	10					
719	561		L(.02)	5					
721	562		L(.02)	5					
785	563		.06	4800					
816	564		L(.02)	15					
821	565		L(.02)	15					
830	566		.04	5					
851	567		.02	10					
693	568		.02	25					
865	569		L(.02)	L(5)					
874	570		N(.02)	10					
875	571		.02	20					
942	572		L(.02)	20					
1097	573		.04	35					
1108	574		.02	15					
1116	575		.02	10					
1135	576		L(.02)	L(5)					
1135-A	577		.04	L(5)					
1140	578	N(.05)	.02	90					
	Reference Samples	.10 #79	.8 #172	50 #150					162

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FIELD SERVICES SECTION

Submitter: _____ HM 3968 4/5

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date _____

	DATE:								
FIELD NO.	TAG NO.	Aw	Hg	Cw					
Dg-1141	BFV579	N(.05)	.02	5					
1152	580		L(02)	10					
1168	581		.02	5					
1181	582		.08	L(5)					
1191	583		.02	L(5)					
1197	584		.08	10					
1214	585		.02	L(5)					
1221	586		.04	10					
482-I-2	587		3.	90					
604	588		.02	15					
517-B	589		2.5	85					
491	590		.04	10					
517-A	591		.70	L(5)					
665-666	592		.12	45					
482-I-1	593		.35	450					
482-D	594		.75	10					
482-G	595	N(.05)	4.	15					
656-A	596	L(05)	.08	130					
1110	597	N(.05)	.06	L(5)					
	Reference Samples	.10 #189	3. #141	180 #176					163

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FIELD SERVICES SECTION

Submitter: _____ HM 3468

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date _____

FIELD NO.	TAG NO.	DATE:							
		Au	Hg	Cu					
Dg-1112	BFV 598	N(.05)	.04	10					
1023	599	N(.05)	.04	30					
	Reference Samples	3.5 #8	3. ±199	220 ±016					

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FIELD SERVICES SECTION

Submitter: J. Gualtieri HM 3969 1/1

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST
As - AA - J Mitchell & J.G. Frisken			
Hg - detector - J.G. Frisken			

Completion Date _____

FIELD NO.	TAG NO.	DATE: As	Hg						
Dg 793	BFV 600	N(0.05)	1.3						
797	601	↓	0.02						
813	602	↓	5.5						
831	603	↓	0.05						
832	604	0.25	1.0						
834	605	1.5	0.08						
1170	606	N(0.05)	0.10						
1218	607	↓	0.90						
1273	608	↓	0.08						
1330	609	↓	004						

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FIELD SERVICES SECTION

Submitter: [illegible] HM 3970 1/2

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST
Au - AA -	R.B. CARTEN		
Hg - detector	J.G. Frisken		
Cu - AA.	J. Mitchell		

Completion Date 11-11-72

FIELD NO.	TAG NO.	Au	Hg (New)	Cu					
Dg 193	5FV 610	L(.05)	0.04	200					
275	611	L(.05)	0.04	60					
331	612	L(.05)	0.04	80					
482-A	613	L(.05)	0.02	190					
482-B	614	L(.05)	0.02	250					
482 C	615	N(.05)	L(0.02)	240					
482 D	616	N(.05)	0.02	220					
483 A	617	L(.05)	0.02	40					
457-B	618	L(.05)	L(0.02)	300					
514	619	L(.05)	0.02	40					
537 C	620	L(.05)	0.04	70					
668 A	621	N(.05)	0.04	50					
668 B	622	N(.05)	0.24	40					
672 A	623	L(.05)	0.02	40					
672 B	624	L(.05)	0.02	40					
677	625	N(.05)	0.02	200					
740	626	N(.05)	L(0.02)	220					
1272	627	N(.05)	0.02	30					
1274	628	N(.05)	0.14	70					
1287	629	N(.05)	L(0.02)	240					166

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FIELD SERVICES SECTION

Submitter: _____ HM 3970

ELEMENT AND METHOD ANALYST ELEMENT AND METHOD ANALYST

Completion Date _____

FIELD NO.	TAG NO.	DATE:							
		A_g	H_g	C_g					
D_g 1290	HFV 630	N(.05)	0.02	200					
668	631	N(.05)	0.02	40					

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FIELD SERVICES SECTION

Submitter: J Gualtieri HM 3471 1/1

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST
Au - AA -	R.B CARTER		
Hg - detector -	J.G. Fosken		
Cu AA	J. Mitchell		

Completion Date 10-11-22

old

FIELD NO.	TAG NO.	DATE: Au	Hg	Cu					
Dg 1460	BFV 632	L(.05)	0.06	40					
1354	633	N(.05)	0.02	35					
1355	634		0.02	40					
1356A	635		0.02	40					
1356B	636		L(0.01)	30					
1357	637		0.05	50					
1434	638		0.02	45					
1713	639	↓	0.02	40					
1911	640	.05	0.02	35					
1158	641	.05	0.04	40					
1154-7	642	.05	0.02	40					
1163	643	.05	0.03	50					
1268	644	N(.05)	0.02	40					
1388	645	L(.05)	0.03	50					
									168

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FIELD SERVICES SECTION

Submitter: J. L. GUALTIERI HM 3972 1/2

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST
Au AA	C. L. WHITTINGTON		
Hg Detector			
Cu, Pb AA			

Completion Date 1-18-73

FIELD NO.	TAG NO.	DATE: /	/	/	/	/	/	/	/
		Au	Hg	Cu	Pb				
Dg-11-A	BFV646	N(.05)	.04	10	L(5)				
70-B	647	.10	.04	15	N(5)				
118-B	648	N(.05)	.06	15	1700				
118-C	649	N(.05)	.02	N(5)	L(5)				
141	650	N(.05)	.14	10	130				
142	651	1.0	.10	1400	60				
174	652	N(.05)	.04	5	L(5)				
230	653	N(.05)	.04	5	650				
231-B	654	N(.05)	.04	5	L(5)				
232-A	655	2.5	.10	40	90				
328	656	N(.05)	.02	5	15				
334	657	.40	1.0	100	4600				
359-B	658	N(.05)	.04	5	10				
421	659		L(.02)	5	10				
454	660		.06	L(5)	5				
460-A	661		.02	5	190				
476	662		.10	25	12,000				
479-B	663		L(.02)	10	35				
482-E	664	N(.05)	.04	L(5)	10				
	Reference Samples	.45 #132	3. #21	1600 #047	100 #047				169

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FIELD SERVICES SECTION

Submitter: _____ HM 3972 2/2

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST

Completion Date _____

	DATE:								
FIELD NO.	TAG NO.	Au	Hg	Cu	Pb				
Dg-482-H	BFV665	N(.05)	.35	10	10				
483-B-1	666		.06	L(5)	L(5)				
488	667		.02	15	20				
500	668		.02	10	20				
501	669		N(.02)	N(5)	L(5)				
504	670		.02	15	15				
517-B	671		1.5	30	10				
517-C	672		.14	20	20				
519	673		.02	10	5				
520-B	674		.02	L(5)	L(5)				
537-D	675		L(.02)	L(5)	N(5)				
598	676		.06	25	30				
611-A	677		L(.02)	L(5)	5				
611-B	678	N(.05)	.02	N(5)	L(5)				
636-B	679	.05	L(.02)	20	5				
672-C	680	N(.05)	.04	20	10				
673-N	681		L(.02)	N(5)	N(5)				
698	682		.02	L(5)	N(5)				
482-F	683	N(.05)	.8	5	5				
	Reference Samples	3.5	.30	1700	110				170
		#13	#5	#111	#111				

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FIELD SERVICES SECTION

Submitter: J L Gualtieri HM 3977 1/1

ELEMENT AND METHOD	ANALYST	ELEMENT AND METHOD	ANALYST
Au - AA -	J. Hill / J.G. Frisken		
Hg - Inst.	J.G. Frisken		

Completion Date 4-13-72

FIELD NO.	TAG NO.	Au	Hg					
DG 1573A	BFV 800	L(0.02)	0.04					

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