60000947

Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Rosebud Drill Hole File – Hole No. RS-D987-99
AUTHOR	D. Mackerrow; K. Allen
DATE OF DOC(S)	1999-2000
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Rosebud Mining Co. LLC Hecla Mining Co.; Dark Zone
COMMODITY If not obvious	gold; silver
NOTES	Drill log; geology; assay; [redacted]; total depth 64' receipt; handwritten notes; downhole camera images photographs; down hole survey 17p. 1 down hole camera images

Keep docs at about 250 pages if no oversized maps attached
(for every 1 oversized page (>11x17) with text reduce
the amount of pages by ~25)

SS: DD 5/12/08
Initials Date
DB: mah
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

RS-D387-99

Dark zone

60000947 4010

60050947

Hecla MINING COMPANY

- quartz, chalcedony, silicification
- faults, fractures
- FeOx
- sulfide
- calcite, carbonate
- argillization, white clays
- propylitization
- potassic alteration
- chlorite, chloritic clays

Barite w stibnite

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	RS-D307-99	LOCATION	Dark Zone Section -50
PAGE 1 OF 2		NORTHING	
DATE	12/19/99	EASTING	
LOGGED BY	D.G. Mocherson	ELEVATION	
SCALE	1" = 10	AZIMUTH	N30W
TOTAL DEPTH	64	INCLINATION	+90

REMARKS

ITH	OX/RE	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
ALS	R	0-4.4 ALS. PHYLLITIC SHALE BLACK FINE GRAINED SHALE			9-13.3 Increasing fractures. Locally approaching crackle breccia.	4.4-9 Quartz veins with shiny pyrite and pyrite after marcasite.
TCS		4.4-22 TCS. SANDSTONE AND EPICLASTIC SEDIMENTS 4.4-9.5 medium grained sandstone coarse pyrite veins 18.6-21.8 Epiclastic sandstone and claystone. 21.8-23.5 Mixed zone of Dozer and Epiclastic. Epiclastics are sheared and silicified. Faulted Block	10		13.3-16.6 20° tca SILICA HEALEN Rubble Breccia 12 80° tca with slips at 40° tca	13.3-16.6 Heavy deposits of Pyrargyrite in quartz veins. Chalcopyrite with the pyrargyrite 18.4-21.5 Heavy quartz veining with marcasite and white clay
		22-22.7 DOZER FAULT BLOCK 22.7-23.6 TCS EPICLASTIC SEDS 23.6-35.4 DOZER Fine grained rhyolite. Auto breccia texture from 25' to 27'	20 30		24-30 Highly fracture Dozer with Barite and stibnite on all fractures	21.5-22.6 open vugs with Barite pyrargyrite and stibnite 26.8-29 Heavy barite content with stibnite and pyrargyrite 29-32.4
SRF		35.4-52.5 SRF Highly silicified Dozer to 45' where silica saturation absorbs all clast. Barite in vug and stibnite with the barite. Pyrargyrite with white clay in the fault	40 50		52.5 Sheared hanging wall contact is argillized from 52.5-53.5	50.9-52.5 Mix lithology zone transitioning to epiclastic

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ac
0	4.4					
4.4	9					
9	13.3					
13.3	16.6					
16.6	18.4					
18.4	21.5					
21.5	22.6					
22.6	23.6					
23.6	26.8					
26.8	29					
29	32.4					
32.4	35.4					
35.4	39					
39	44					
44	49					
49	52.5					

HOLE NUMBER RS-D387-99 PAGE 2 OF 2

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
SRF	R	44.8 – 52.5 S.R.F.	50			
LAT EPIclastic	R	52.5 – 56.7 EPICLASTIC BASAL CONGLOMERATE Pea size gravel conglomerate of Dacite fragments trace of ALS.			contacts did not survive drilling between SRF	
P.L.	R	56.7 – 64 PLANNAR LAMINAR Fine grained tuff Greenish gray in color	60		59.8 – 62 core is broken and healed by silica	59-64 Quartz vein Stock work with Pyrite and marcasite Chloritic alteration Trace $CaCO_3$ Rxn but no veins seen
		TO 64				

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
49	52.5				
52.5	54				
54	56.7				
56.7	59				
59	64				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # RS-D387-99 DATE 12/19/99 LOGGED BY: D.G. Mackerrow PAGE 1 OF 2

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
0	9	49	66	38										
9	14	100	100	72										
14	19	100	102	64										
19	24	100	92	84										
24	29	54	100	0										
29	34	74	96	46										
34	39	80	100	56										
39	44	96	102	74										
44	49	56	100	48										
49	54	64	100	36										
54	59	54	100	20										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # RS-D387-99 DATE: 12/19/99 LOGGED BY: D.G. MacKerrow PAGE 2 OF 2

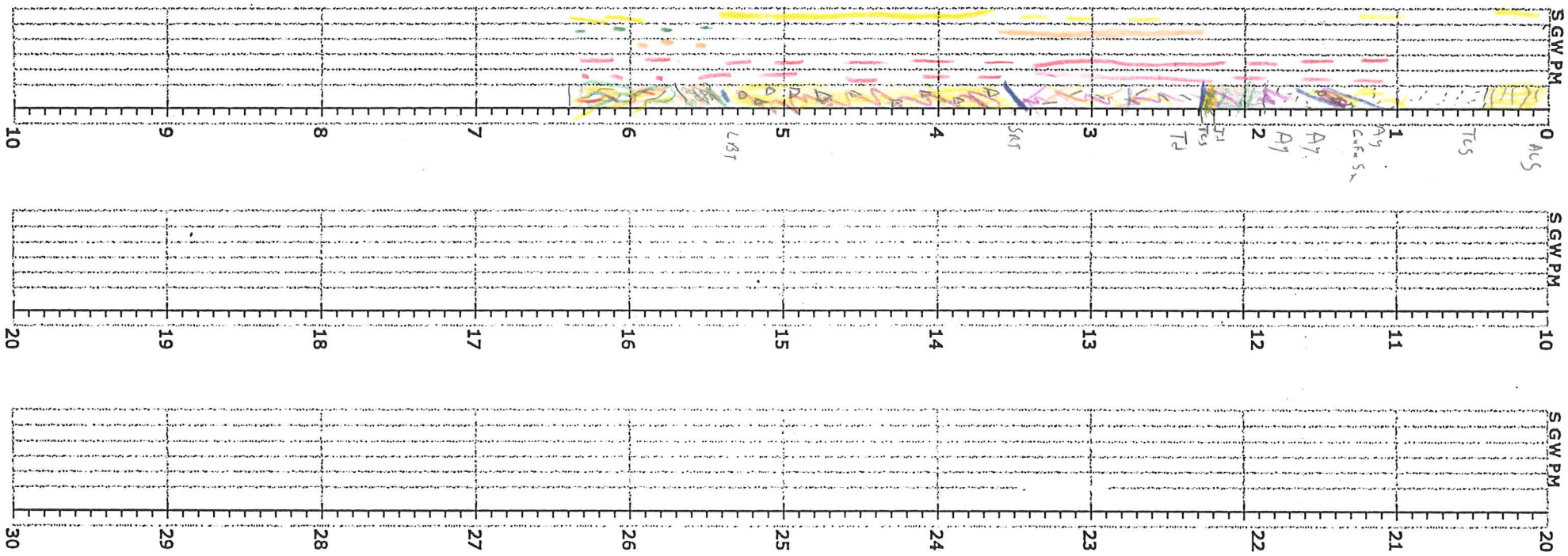
DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
59	64	76	90	.70										

ROSEBUD MINING COMPANY, LLC.

START HOLE 12/16/99	FINISH HOLE 12/16/99	HOLE # RS-D387-99	
HOLE TYPE Core	LOGGED BY D.G. Mackerron		
BEARING 304.68	ANGLE 86	T.D 64	
PAGE 1 OF 1	SURVEYED TO 64		

COLLAR COORDINATES	
NORTH	
EAST	
ELEV	
DRILLER	Gaddy

DRILLING CO. Action



ALTERATION INTENSITY

1 WEAK — 2 MODERATE — 3 STRONG

VERITHIN COLOR

737	SILICIFICATION
751	GREEN CLAY
747½	WHITE CLAY
755	PYRITE
757	MARCASITE

GRAPHIC LOG

VERITHIN COLOR

741	BRECCIA
	FAULT 741
	CONTACT
737	QUARTZ VEIN
741½	CALCITE VEIN
747½	CLAY VEIN
755	PYRITE VEIN

ALTERATION

	Silicification
	Argillic
	chloritic
	Sulfide
	Barite

INSPECTORATE

ROCKY MOUNTAIN GEOCHEMICAL

A MEMBER OF THE INSPECTORATE GROUP OF COMPANIES

840 GREG STREET • SPARKS, NEVADA 89431 • PHONE (775) 359-6311 • FAX (775) 359-2944

Certificate of Analysis

DATE: Monday, January 10, 2000

JOB NO: 99-51-76

CLIENT: Hecla (Rosebud Mine)
P.O. Box 2610
Winnecmucca, NV 89446 US

INVOICE NO: 33100357

RS-D387-99

CLIENT ORDER NO:

REPORT ON: 21 Core

SUBMITTED BY: Kurt Allen

DATE RECIEVED: Monday, December 20, 1999

ANALYSES: Rosebud Mine Development Protocol

ANALYTICAL METHODS: FA/AA, FA/GRAV

REMARKS:

CC: RMG File

E-MAILED TO:

in database

CLIENT: Hecla (Rosebud Mine)

99-51-76	Sample Designation	Gold FA/AA ppb	Gold FA/AA oz/ton	Gold FA/GRAV oz/ton	Silver FA/AA ppm	Silver FA/AA oz/ton	Silver FA/GRAV oz/ton
1	RS-D387-99 0'-4.4'	186	0.005		11.0	0.32	
2	RS-D387-99 4.4'-9'	2251	0.066	0.082	6.2	0.18	0.23
3	RS-D387-99 9'-13.3'	2311	0.067	0.135	6.5	0.19	0.29
4	RS-D387-99 13.3'-16.6	4940	0.144	0.141	99.3	2.90	15.08
5	RS-D387-99 16.6'-18.4	1375	0.040	0.039	8.2	0.24	0.24
6	RS-D387-99 18.4'-21.5	2744	0.080	0.072	106.2	3.10	15.19
7	RS-D387-99 21.5'-22.6	1434	0.042	0.046	102.7	3.00	14.07
8	RS-D387-99 22.6'-23.6	1553	0.045	0.044	26.7	0.78	0.91
9	RS-D387-99 23.6'-26.8	772	0.023	0.015	30.8	0.90	0.90
10	RS-D387-99 26.8'-29'	1440	0.042	0.049	61.6	1.80	1.99
11	RS-D387-99 29'-32.4'	777	0.023	0.028	87.3	2.55	2.41
12	RS-D387-99 32.4'-35.4	3800	0.111	0.122	34.6	1.01	1.00
13	RS-D387-99 35.4'-39'	846	0.025	0.032	69.2	2.02	2.11
14	RS-D387-99 39'-44'	3052	0.089	0.053	94.2	2.75	7.56
15	RS-D387-99 44'-49'	10910	0.319	0.272	24.7	0.72	0.49
16	RS-D387-99 49'-52.5'	12090	0.353	0.424	74.7	2.18	2.80
17	RS-D387-99 52.5'-54'	53	0.002		1.4	0.04	
18	RS-D387-99 54'-56.7'	27	0.001		0.7	0.02	
19	RS-D387-99 56.7'-59'	602	0.018		2.1	0.06	
20	RS-D387-99 59'-64'	1595	0.047	0.043	5.8	0.17	0.15
21	STD 75330	2224	0.065	0.060	32.9	0.96	0.83

Monday, January 10, 2000

By

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Kurt Allen
Hecla (Rosebud Mine)
P.O. Box 2610
Winnecmucca, NV 89446 US

Invoice No: 33100357
Invoice Date: 1/12/00
JobNo: 99-51-76
Account No: 00007292

Client PO:

INVOICE

Terms: Net 30 days

Item Description	Qty	Unit Price	Amount
Core 16-20 Lbs	20	$4.50	$90.00
Au, Ag FA/AA	21	$6.50	$136.50
Au, Ag FA	17	$7.00	$119.00

PLEASE REMIT TO:

Inspectorate America Corp.
P.O. Box 201901
Houston, TX 77216-1901

Sub Total:	$345.50
Discount: (0.00%)	$0.00
Discounted Total:	$345.50
Add'l Discount: (0.00%)	$0.00
Final Total:	$345.50

BAD

ROCKY MOUNTAIN GEO 7753592944 01/12 '00 14:59 NO.091 02/03

Reported

99-51-76	Sample Designation	Gold FA/AA ppb	Gold FA/AA oz/ton	Gold FA/GRAV oz/ton	Silver FA/AA ppm	Silver FA/AA oz/ton	Silver FA/GRAV oz/ton
1	RS-D387-99 0'-4.4'	186	0.005		11.0	0.32	
2	RS-D387-99 4.4'-9'	2251	0.066	0.082	6.2	0.18	0.23
3	RS-D387-99 9'-13.3'	2311	0.067	0.135	6.5	0.19	0.29
4	RS-D387-99 13.3'-16.6	4940	0.144	0.141	99.3	2.90	15.08
5	RS-D387-99 16.6'-18.4	1375	0.040	0.039	8.2	0.24	0.24
6	RS-D387-99 18.4'-21.5	2744	0.080	0.072	106.2	3.10	15.19
7	RS-D387-99 21.5'-22.6	1434	0.042	0.046	102.7	3.00	14.07
8	RS-D387-99 22.6'-23.6	1553	0.045	0.044	26.7	0.78	0.91
9	RS-D387-99 23.6'-26.8	772	0.023	0.015	30.8	0.90	0.90
10	RS-D387-99 26.8'-29'	1440	0.042	0.049	61.6	1.80	1.99
11	RS-D387-99 29'-32.4'	777	0.023	0.028	87.3	2.55	2.41
12	RS-D387-99 32.4'-35.4	3800	0.111	0.122	34.6	1.01	1.00
13	RS-D387-99 35.4'-39'	846	0.025	0.032	69.2	2.02	2.11
14	RS-D387-99 39'-44'	3052	0.089	0.053	94.2	2.75	7.56
15	RS-D387-99 44'-49'	10910	0.319	0.272	24.7	0.72	0.49
16	RS-D387-99 49'-52.5'	12090	0.353	0.424	74.7	2.18	2.80
17	RS-D387-99 52.5'-54'	53	0.002		1.4	0.04	
18	RS-D387-99 54'-56.7'	27	0.001		0.7	0.02	
19	RS-D387-99 56.7'-59'	602	0.018		2.1	0.06	
20	RS-D387-99 59'-64'	1595	0.047	0.043	5.8	0.17	0.15
21	STD 75330	2224	0.065	0.060	32.9	0.96	0.83

Monday, January 10, 2000

By

99-51-76

					Au	Au	Au		Ag	Ag
					FA/AA	FA/AA	FA/Grav		FA/AA	FA/Grav
	Type	Hole #	From	To	ppb	opt	opt		opt	opt
1	RS-	387	0	4.4	186	0.005			0.32	
2	RS-	387	4.4	9	2251	0.066	0.082		0.18	0.23
3	RS-	387	9	13.3	2311	0.067	0.135		0.19	0.29
4	RS-	387	13.3	16.6	4940	0.144	0.141		2.90	15.08
5	RS-	387	16.6	18.4	1375	0.040	0.039		0.24	0.24
6	RS-	387	18.4	21.5	2744	0.080	0.072		3.10	15.19
7	RS-	387	21.5	22.6	1434	0.042	0.046		3.00	14.07
8	RS-	387	22.6	23.6	1553	0.045	0.044		0.78	0.91
9	RS-	387	23.6	26.8	772	0.023	0.015		0.90	0.90
10	RS-	387	26.8	29	1440	0.042	0.049		1.80	1.99
11	RS-	387	29	32.4	777	0.023	0.028		2.55	2.41
12	RS-	387	32.4	35.4	3800	0.111	0.122		1.01	1.00
13	RS-	387	35.4	39	846	0.025	0.032		2.02	2.11
14	RS-	387	39	44	3052	0.089	0.053		2.75	7.56
15	RS-	387	44	49	10910	0.319	0.272		0.72	0.49
16	RS-	387	49	52.5	12090	0.353	0.424		2.18	2.80
17	RS-	387	52.5	54	53	0.002			0.04	
18	RS-	387	54	56.7	27	0.001			0.02	
19	RS-	387	56.7	59	602	0.018			0.06	
20	RS-	387	59	64	1595	0.047	0.043		0.17	0.15
21			STD-	75330	2224	0.065	0.060		0.96	0.83

5.
3.5

0.333 Au

1.32 Ag

DARKZONE DRILLHOLES
12-20-99
DARKZONE.CR5 12/21/99 06:06:54

Point	Northing	Easting	Elevation	Description
1	2,204,482.2684	481,967.9582	4,345.06	N21BS
146	2,204,446.8501	482,396.7055	4,354.82	384
147	2,204,441.6573	482,399.6361	4,357.37	385
148	2,204,439.4456	482,400.6166	4,357.43	386
149	2,204,436.5937	482,401.4911	4,358.59	387
150	2,204,429.0662	482,407.0972	4,350.49	388
151	2,204,429.4145	482,406.5015	4,353.59	389
152	2,204,430.5218	482,435.1747	4,358.73	381
153	2,204,429.3186	482,435.5506	4,363.49	382
154	2,204,425.1618	482,437.6035	4,364.08	383
155	2,204,412.8824	482,472.0992	4,358.36	370
156	2,204,412.7553	482,471.8012	4,361.96	371
157	2,204,412.2666	482,472.2979	4,364.63	372
158	2,204,407.7960	482,474.9600	4,367.92	373
159	2,204,404.8226	482,476.6447	4,368.40	374
160	2,204,392.1322	482,483.4680	4,361.01	375
161	2,204,392.4909	482,483.4562	4,363.90	376
162	2,204,392.6683	482,482.9364	4,369.46	377
163	2,204,397.3947	482,510.3608	4,360.68	378
164	2,204,397.4057	482,510.0441	4,366.13	379
165	2,204,396.9083	482,510.0179	4,371.04	380

DARK ZONE DEVELOPMENT DRILLING
DOWN-HOLE SURVEYS

DRILL HOLE #	DIP	AZIMUTH	CORRECTED AZIMUTH
RS-D370-99	5.5	313	328.66
RS-D371-99	22	313	328.66
RS-D372-99	36	313	328.66
RS-D373-99		Not	Surveyed
RS-D374-99		Not	Surveyed
RS-D375-99	14.5	142	157.66
RS-D376-99	31	135	150.66
RS-D377-99	51	177.5	161.84
RS-D378-99	-4	317	332.66
RS-D379-99	22	314	329.66
RS-D380-99	39		331
RS-D381-99	26	314.5	330.16
RS-D382-99	39.5	311.5	327.16
RS-D383-99	58	305	320.66
RS-D384-99	31	314.5	330.16
RS-D385-99	50.5	309	324.66
RS-D386-99	69	305	320.66
RS-D387-99	86	304.68	320.34
RS-D388-99	10.5	137.5	153.16
RS-D389-99	30.5	140	155.66

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Work Order # _____
Date Received _____
Purchase Order # _____
Project # _____
Date Shipped 12/20/99
Shipped Via _____
# of Cartons _____
# of Samples 20

Geochemical Laboratory Instruction Sheet

Copy of Results:	Results And Invoice To:
Kurt Allen	Kurt Allen
Rosebud Mining L.L.C.	Rosebud Mining L.L.C.
P.O. Box 2610	P.O. Box 2610
Winnemucca NV 89446	Winnemucca NV 89446
(775) 623-6912 Fax (775) 623 6967	AUTHORITY:

No. of Samples	Sample Type	List of Sample Numbers	Elements Requested
20	core	RS-D387-99	Au Ag: USE Rosebud
			Mine development
		See attached sheet for	Protocol
		sample intervals	
1	Pulp	Rosebud Production standard	
		at end of run	

COARSE REJECT (Free storage for 30 days)
- [x] Return/collect after analysis
- [ ] Return/collect after 30 days
- [ ] Discard after 30 days

IF NOT MARKED, REJECT DISCARDED AFTER 30 DAYS

PULP (Free storage for 6 months)
- [x] Return/collect after analysis
- [ ] Return/collect at 6 months
- [ ] Discard at 6 months

IF NOT MARKED, PULP IS DISCARDED AFTER 6 MONTHS

COARSE REJECTS/PULPS WILL BE DISCARDED UNLESS OTHERWISE REQUESTED

Au - GOLD METHOD
- [x] Fire Assay/A.A.
- [ ] Fire Assay/Gravimetric
- [ ] NaCN/A.A.

RESULTS REPORTED IN:
- [ ] ppb
- [ ] PPM
- [x] oz/T
- [ ] grams/T

TRACE ELEMENT METHOD
- [ ] Wet Chem./A.A.
- [ ] Wet Chem./ICP

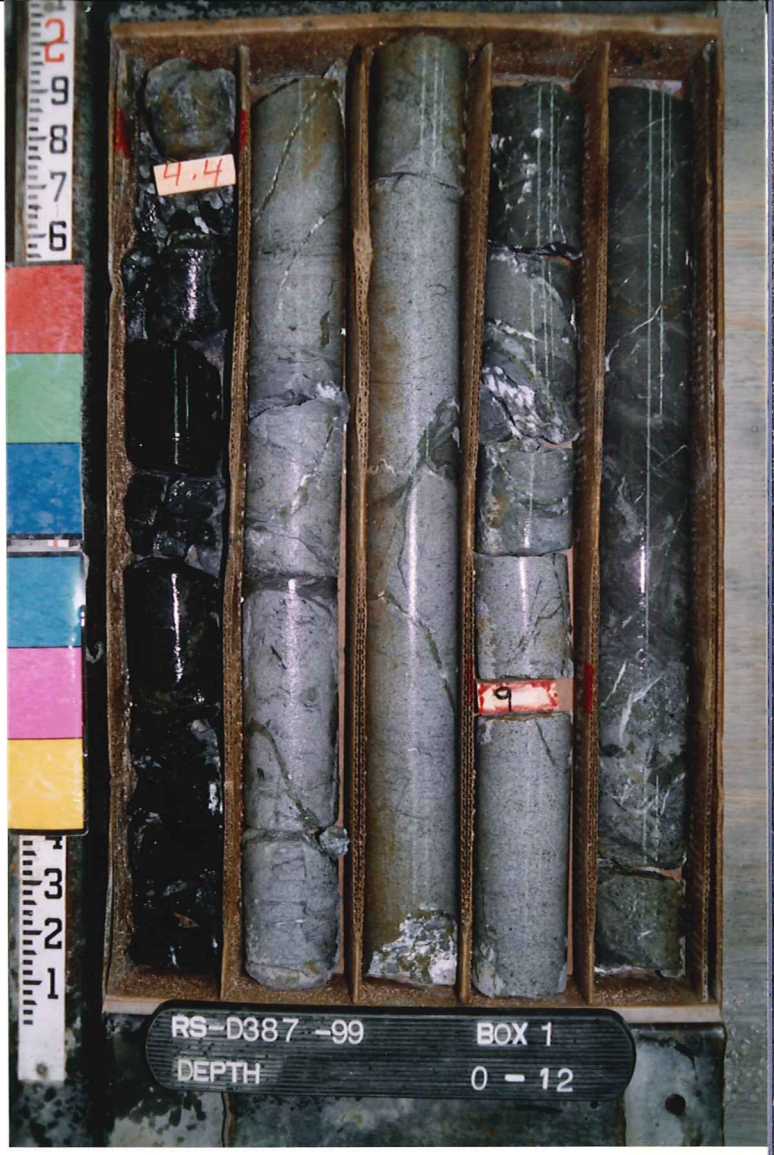
RESULTS REPORTED IN:
- [ ] ppm
- [ ] Percent %
- [x] oz/T
- [ ] grams/T

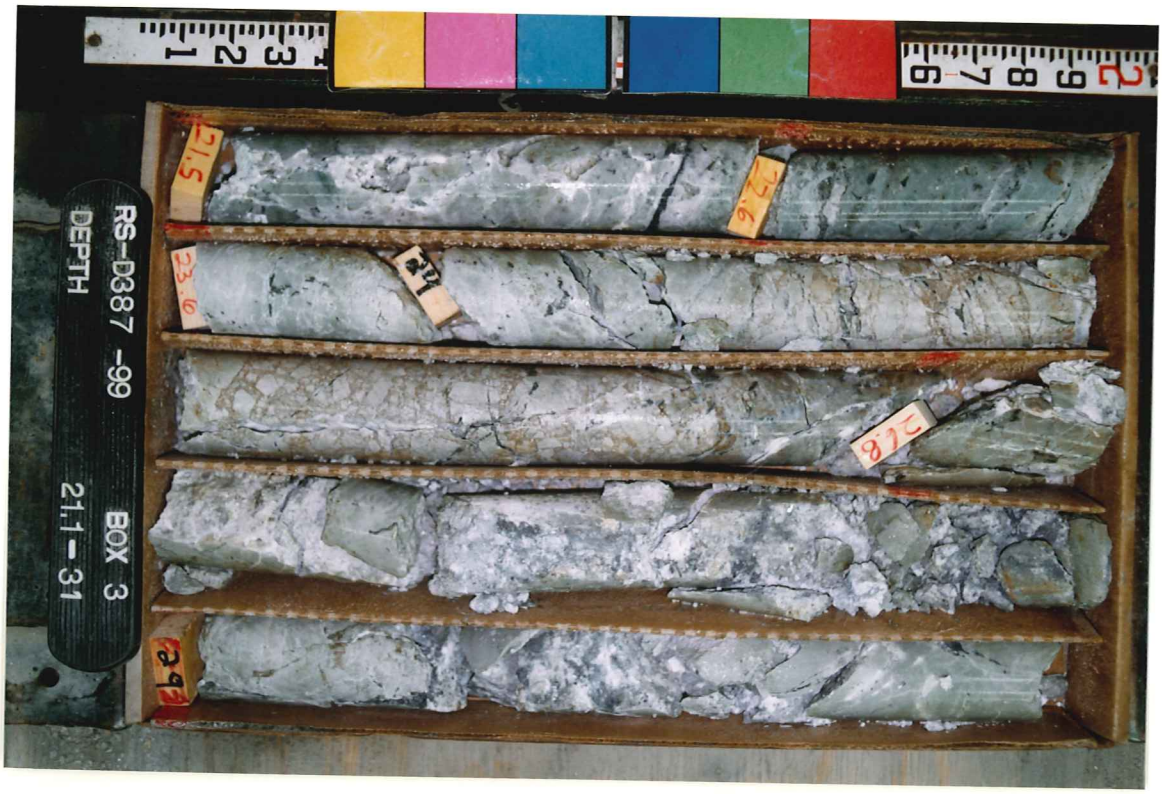
ADDITIONAL INSTRUCTIONS: _____

RS-D387-99

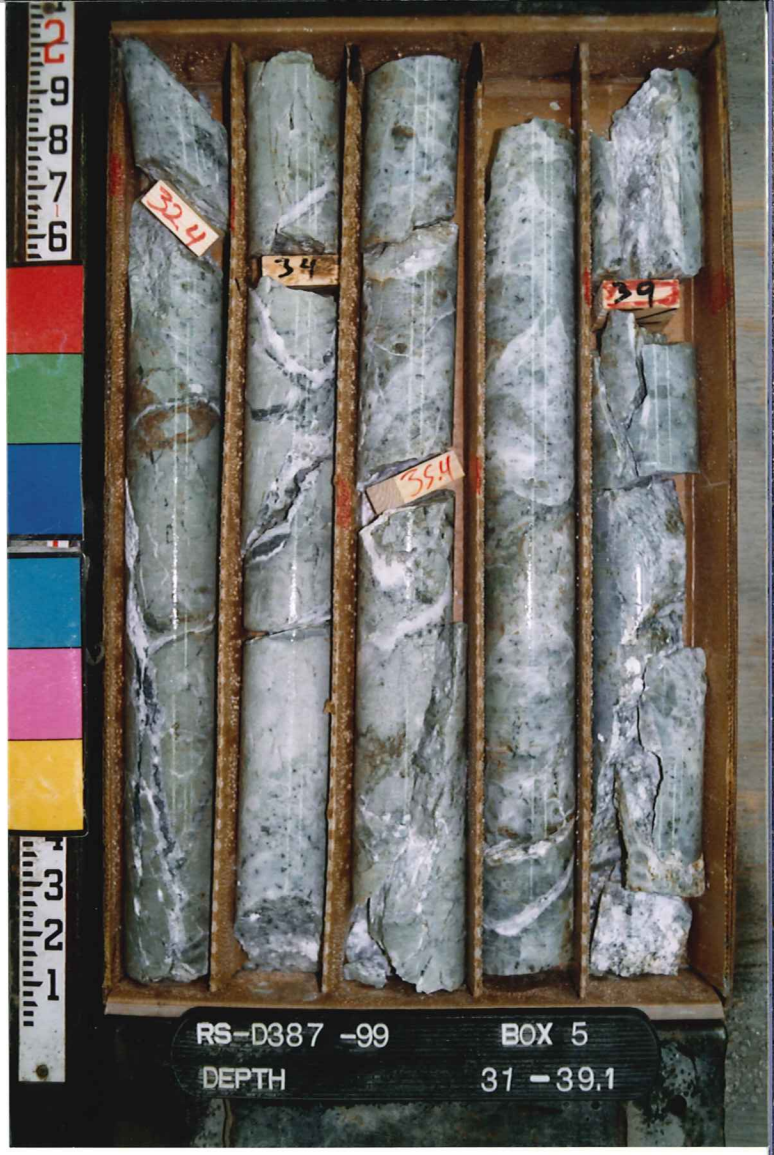
Depth From	To	Interval	Au	Ag	Sample Number
0	4.4	4.4	x	x	1
4.4	9	4.6	x	x	2
9	13.3	4.3	x	x	3
13.3	16.6	3.3	x	x	4
16.6	18.4	1.8	x	x	5
18.4	21.5	3.1	x	x	6
21.5	22.6	1.1	x	x	7
22.6	23.6	1	x	x	8
23.6	26.8	3.2	x	x	9
26.8	29	2.2	x	x	10
29	32.4	3.4	x	x	11
32.4	35.4	3	x	x	12
35.4	39	3.6	x	x	13
39	44	5	x	x	14
44	49	5	x	x	15
49	52.5	3.5	x	x	16
52.5	54	1.5	x	x	17
54	56.7	2.7	x	x	18
56.7	59	2.3	x	x	19
59	64	5	x	x	20

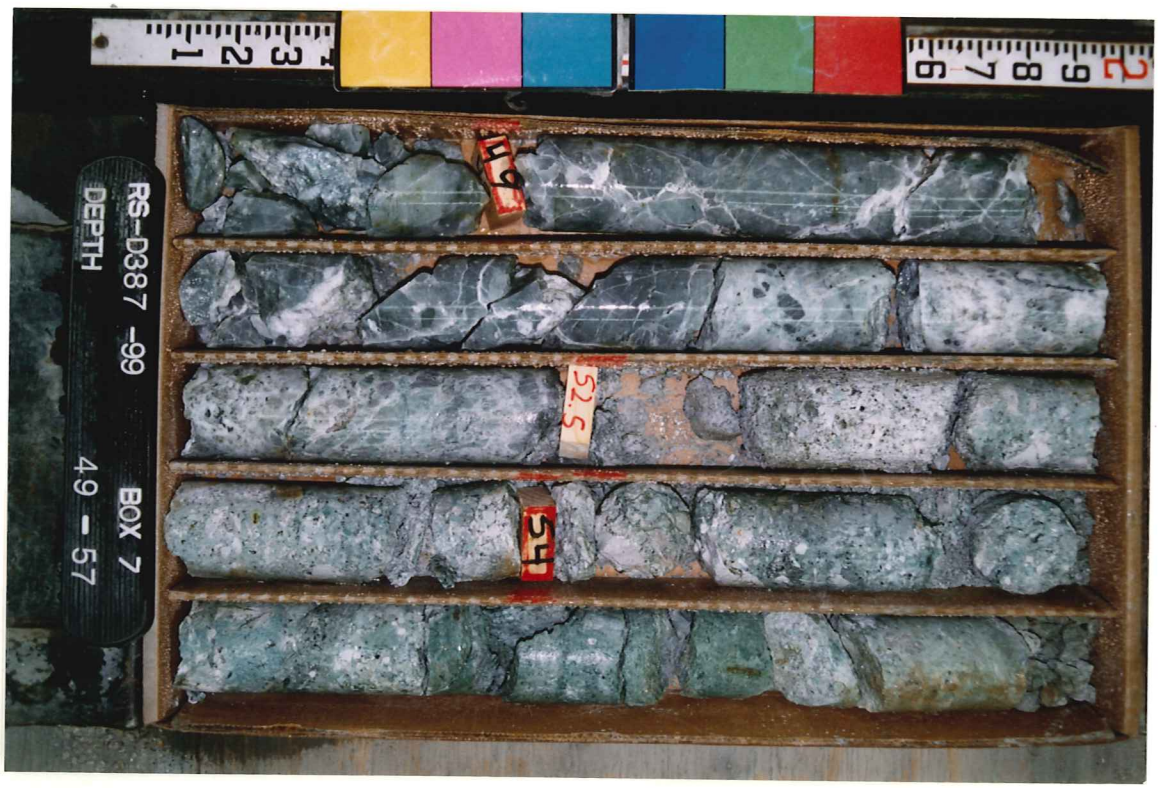
RS-D387 -99
BOX 2
DEPTH
12 - 21.1


RS-D387 -99
BOX 1
DEPTH
0 - 12


RS-D387 -99
BOX 3
DEPTH
21.1 - 31

49
RS-D387 -99
BOX 6
DEPTH
39.1 - 49


32.4
34
35.4
39
RS-D387 -99
BOX 5
DEPTH
31 - 39.1


49
52.5
54
RS-D387 -99
BOX 7
DEPTH
49 - 57

TD
64
59
56.7
RS-D387 -99
BOX 8
DEPTH
57 - 64

387?

WELL RS-A ~~386~~

DEPTH 64'

PICTURE NO.

INCLINATION 90°

OBS. DIR.

COR. DIR.

TOOL FACE

RUN BY G. GADDIE

DATE 12-16-99

CHECKED BY

sperry-sun
DRILLING SERVICES