60001537

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. D-89-94
AUTHOR	C. Muerhoff, S. Fairclotl
DATE OF DOC(S)	1994
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Hecla Mining Co., South Zone
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 239' handwritten notes 7p.

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 5/29/08
Initials Date

DB: MAG
Initials Date

SCANNED: NV Blue
Initials Date

Revised: 1/22/08

D-89-94

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Hecla
MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-89-94	LOCATION	South zone	REMARKS	
PAGE 1 OF 4		NORTHING	2204001.2	Drilled from 1000N station	
DATE	Nov, 1994	EASTING	481822.5	NQ core ; Hagby On-vein 1000	
LOGGED BY	C. Muerhoff	ELEVATION	4655.7		
SCALE	1" = 10'	AZIMUTH	84.0°		
TOTAL DEPTH	239'	INCLINATION	+32.0°	(transcribed from "quick log")	

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		0'-32.7' Thinly laminated, fg, grey zshy tuff w/ bedding @ ± 45° to core axis at beginning of hole & ± 60° to core axis at end of interval. Grain size increases downhole. 32.7'-44.0' Gradational contact into "spotted tuff" w/ pseudo-bedding @ ± 75° to core axis. Moderately silicified w/ chloritized pumice fiamme w/ illitic reaction rims. Silicification increases downhole (pervasive over last few feet). 44.0'-49.0' only ~ 10% recovery (fault?)	10 20 30 40 50			0'-32.7' Chlorite along bedding planes is minor at first, but by 20' entire core is strongly chloritized. Entire interval cut by random, discontinuous stockwork of chlorite ± pyrite (generally within 10' ± of 30° to core axis). 32.7'-44.0' Cut by chalcedony + pyrite + illite ± v. coarse-grain marcasite stringers @ ± 20° to core axis. Interval is vugy with large marcasite blades on drusy quartz.

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
0	5	5	0.002	0.02		
5	10	5	<0.001	0.02		
10	15	5	0.003	0.04		
15	20	5	0.063	0.35	0.069	(grav)
20	26	6	0.003	0.04		
26	32.7	6.7	<0.001	<0.02		
32.7	38	5.3	0.001	0.05		
38	44	6	0.029	0.14	0.041	
44	49	5	0.087	0.20	0.099	(grav)

HOLE NUMBER D-89-94 PAGE 2 OF 4

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		49.0'-59.0' Thinly interbedded light green med-grain zsh tuff & grey vfg flow-laminated zsh tuff. Bedding @ 55°-60° to core axis. 59.0'-164.2' Same as above but now without silicification. 63'-65' short interval of chloritized/argillized "spotted tuff" ↓ back into finely-laminated vfg zsh flow/airfall tuff. Minor zones of brecciation sporadically throughout interval. ↓ past 98', unit becomes moderately silicified.	50 60 70 80 90 100 110 120		61'-63' Two-foot zone of intense brecciation/cemented by grey chalcedony + pyrite. ← 80' bedding @ 60° to core axis ← 100' bedding @ 70° to core axis ← 120' bedding @ 30° to core axis.	50'-59' Interval is pervasively silicified w/ nearly total SiO_2 replacement on intermittent bedding. Black chalcedony + pyrite along bedding planes & @ ±30° to core axis that cut chlorite + pyrite + illite hairline stockwork. 59'-164.2' • chloritic alteration increasing in intensity w/ depth. • Cut by pyrite ± black chalcedony stringers @ ± parallel to core axis & "spiderweb" hairline stockwork of chlorite. • past 80' downhole, begin to pick up illite + marcasite ± pyrite ± "dude's butter" clay along fractures @ 50°-to-parallel to core axis.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
49	54.5	5.5	0.014	0.07		
54.5	59	4.5	0.026	0.11		
59	64	5	0.009	0.06		
64	69	5	0.006	0.04		
69	74	5	0.004	0.05		
74	79	5	0.003	0.08		
79	84	5	0.001	0.05		
84	89	5	0.004	0.04		
89	94	5	0.006	0.004		
94	99	5	0.001	0.03		
99	104	5	0.003	0.05		
104	109	5	<0.001	<0.02		
109	114	5	<0.001	0.02		
114	119	5	0.002	0.06		

HOLE NUMBER D-89-94 PAGE 3 OF 4

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		finely-laminated vfg ash flow/ airfall tuff continues.	120			
			130		@130', 1" white & grey chalcedony veinlet w/ pyrite & marcasite inclusions, parallel to core axis.	
			140			
			150			
			160			
		164.2' Irregular, but sharp, contact with Bud @ 25° to core axis.				164.2'-168' first few feet of Bud is pervasively silicified, but wanes rapidly with depth.
		164.2'-239' Bud Volcanics. Heterolithic lithic-lapilli tuff/tuff breccia w/ bedding/banding @ ± 55°-60° to core axis.	170			
			180			Rest of interval is sporadically vugy with euhedral pyrite on drusy quartz.
			190			

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
119	124	5	0.019	0.11	0.029	
124	129	5	<0.001	0.05		
129	134	5	0.007	0.11		
134	139	5	0.003	0.04		
139	144	5	<0.001	0.02		
144	149	5	<0.001	0.04		
149	154	5	0.001	0.04		
154	159	5	<0.001	0.02		
159	164.2	5.2	0.011	0.06		
164.2	168	3.8	0.016	0.08	0.019	
168	173	5	0.001	0.03		
173	178	5	0.001	0.03		
178	183	5	0.002	0.04		
183	188	5	<0.001	0.04		

HOLE NUMBER D-89-94 PAGE 4 OF 4

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		Bud heterolithic tuff / tuff breccia continues to end of hole.	190			
			200			
			210			
			220			
			230			
		T.D. 239'				

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
188	193	5	0.001	0.04		
193	198	5	0.001	0.08		
198	203	5	0.012	0.03	0.015	
203	208	5	0.025	0.02	0.008	
208	213	5	<0.001	0.03		
213	218	5	<0.001	0.02		
218	223	5	<0.001	0.04		
223	228	5	0.001	0.03		
228	233	5	0.002	0.07		
233	239	6	<0.001	0.04		

ANALYSIS REPORT

American Assay Laboratories

P.O. BOX 71060
RENO, NV,,U.S.A.,
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF

:

:

:

CLIENT REFERENCE No: D-89-94

LABORATORY JOB No. : SP031526

SAMPLE TYPE :

RECEIVED : 7 NOV 1994

REPORTED : 14 NOV 1994

No. SAMPLES : 47

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA60	15%	OPT	0.001
Au(RZ)	FA60	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

OK to pay
14014J-477
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AMERICAN ASSAY LABORATORIES
ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : D-89-94
JOB NUMBER : SP031526
REPORTED : 14 NOV 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-89-94 00-05	0.002			0.02
D-89-94 05-10	<0.001			0.02
D-89-94 10-15	0.003			0.04
D-89-94 15-20	0.063		0.069	0.35
D-89-94 20-26	0.003			0.04
D-89-94 26-32.7	<0.001			<0.02
D-89-94 32.7-38	0.001			0.05
D-89-94 38-44	0.029	0.041		0.14
D-89-94 44-49	0.087		0.099	0.20
D-89-94 49-54.5	0.014			0.07
D-89-94 54.5-59	0.026			0.11
D-89-94 59-64	0.009			0.06
D-89-94 64-69	0.006			0.04
D-89-94 69-74	0.004			0.05
D-89-94 74-79	0.003			0.08
D-89-94 79-84	0.001			0.05
D-89-94 84-89	0.004			0.04
D-89-94 89-94	0.006			0.04
D-89-94 94-99	0.001			0.03
D-89-94 99-104	0.003			0.05
D-89-94 104-109	<0.001			<0.02
D-89-94 109-114	<0.001			0.02
D-89-94 114-119	0.002			0.06
D-89-94 119-124	0.019	0.029		0.11
D-89-94 124-129	<0.001			0.05

AMERICAN ASSAY LABORATORIES
ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : D-89-94
JOB NUMBER : SP031526
REPORTED : 14 NOV 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-89-94 129-134	0.007			0.11
D-89-94 134-139	0.003			0.04
D-89-94 139-144	<0.001			0.02
D-89-94 144-149	<0.001			0.04
D-89-94 149-154	0.001			0.04
D-89-94 154-159	<0.001			0.02
D-89-94 159-164.2	0.011			0.06
D-89-94 164.2-168	0.016	0.019		0.08
D-89-94 168-173	0.001			0.03
D-89-94 173-178	0.001			0.03
D-89-94 178-183	0.002			0.04
D-89-94 183-188	<0.001			0.04
D-89-94 188-193	0.001			0.04
D-89-94 193-198	0.001			0.08
D-89-94 198-203	0.012	0.015		0.03
D-89-94 203-208	0.025	0.008		0.02
D-89-94 208-213	<0.001			0.03
D-89-94 213-218	<0.001			0.02
D-89-94 218-223	<0.001			0.04
D-89-94 223-228	0.001			0.03
D-89-94 228-233	0.002			0.07
D-89-94 233-239	<0.001			0.04