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Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Rosebud – 1995 South Zone In-fill Drilling Program; Drill Hole Data vs. Block Model
AUTHOR	
DATE OF DOC(S)	1995
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7½'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; South Zone
COMMODITY If not obvious	gold; silver
NOTES	Assays; Hand written notes 4 p.

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: DP 8/1/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

1995 SOUTH ZONE IN-FILL DRILLING PROGRAM
DRILL HOLE DATA VS. BLOCK MODEL

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FINAL

HECLA MINING COMPANY - ROSEBUD PROJECT
1995 SOUTH ZONE UNDERGROUND IN-FILL DRILLING PROGRAM

DRILL HOLES VS. BLOCK MODEL (0.14 Au cut-off applied) Dec. 28, 1995

Hole ID	Drill Holes					Block Model				
	From	To	Thickness	Au (opt)	GxT	From	To	Thickness	Au (opt)	GxT
D-95-95	60.0	75.0	15.0	0.171	2.6	63.0	125.0	62.0	0.635	39.4
D-96-95	36.0	71.0	35.0	0.354	12.4	50.0	112.5	62.5	0.389	24.3
D-97-95	90.0	94.6	4.6	0.191	0.9	51.0	96.0	45.0	0.504	22.7
D-98-95	33.7	78.0	44.3	0.497	22.0	35.5	97.5	62.0	0.386	23.9
D-99-95	75.8	81.0	5.2	0.355	1.8	63.0	126.0	63.0	0.745	46.9
	102.8	130.0	27.2	0.269	7.3					
D-100-95	57.3	60.7	3.4	0.174	0.6	54.0	66.5	12.5	0.212	2.7
	70.0	80.0	10.0	0.407	4.1					
	110.0	125.0	15.0	1.088	16.3	104.0	154.5	50.5	1.617	81.7
D-101-95	64.0	102.0	38.0	0.599	22.8	55.0	120.0	65.0	0.736	47.8
D-102-95	74.0	145.0	71.0	2.515	178.6	89.0	134.0	45.0	2.687	120.9
	193.0	203.6	10.6	0.144 .310	1.5	185.0	208.0	23.0	0.319	7.3
D-103-95	63.0	111.0	48.0	0.473	22.7	58.0	~~128.0~~	70.0	1.022	71.5 ← 135
D-104-95	15.0	45.0	30.0	0.267	8.0					0.0
	61.0	80.8	19.8	0.526	10.4	60.5	65.0	4.5	0.481	2.2
	144.4	149.2	4.8	0.159	0.8	151.0	180.0	29.0	0.200	5.8
	175.0	185.8	10.8	0.628	6.8					0.0
D-105-95	20.0	38.0	18.0	0.466	8.4	3.0	15.0	12.0	0.451	5.4
	77.0	104.0	27.0	0.422	11.4	50.0	62.0	12.0	0.537	6.4
	129.0	201.0	72.0	0.377	27.1	77.0	189.0	112.0	0.449	50.3
D-106-95	78.4	89.5	11.1	0.150	1.7	0.0	138.5	138.5	0.612	84.8
	113.2	206.0	92.8	1.363	126.5					
	221.0	224.0	3.0	0.145	0.4	200.0	262.0	62.0	0.761	47.2
D-107-95	61.0	164.8	103.8	0.657	68.2	75.5	186.0	110.5	0.896	99.0 SR .909
D-108-95	41.0	44.4	3.4	0.222	0.8			0.0		0.0 111.5
	80.0	84.8	4.8	1.752	8.4	82.0	113.0	31.0	0.202	6.3
	115.6	118.1	2.5	0.590	1.5			0.0		0.0
D-109-95	0.0	30.0	30.0	0.356	10.7	0.0	9.0	9.0	0.628	5.7
	71.0	87.0	16.0	0.847	13.6	84.0	124.0	40.0	0.464	18.6
	142.0	146.0	4.0	0.243	1.0			0.0		0.0
D-110-95	71.0	135.0	64.0	0.446	28.5	65.5	115.0	49.5	0.554	27.4
	164.0	216.0	52.0	0.865	45.0	164.0	176.5	12.5	0.155	1.9
						189.0	251.0	62.0	1.322	82.0
D-111-95	87.2	120.0	32.8	1.711	56.1	80.0	131.0	51.0	0.984	50.2
D-112-95	80.0	104.0	24.0	0.720	17.3			0.0		0.0
	120.0	170.0	50.0	1.334	66.7	130.5	150.5	20.0	0.799	16.0
D-113-95	5.0	181.0	176.0	0.931	163.9	4.5	27.0	22.5	0.268	6.0
	195.0	202.0	7.0	0.214	1.5	181.0	200.0	19.0	0.567	10.8 → missed 67-160
D-114-95	10.0	47.4	37.4	0.225	8.4	25.0	37.5	12.5	0.653	8.2
	90.4	115.0	24.6	1.047	25.8	86.5	147.5	61.0	0.980	59.8
	140.0	145.0	5.0	0.354	1.8					92.7 - .537
	172.5	210.6	38.1	0.975	37.1	172.0	184.5	12.5	0.575	7.2
						258.0	293.0	35.0	0.409	14.3
D-115-95	0.0	25.0	25.0	0.408	10.2	16.0	19.0	3.0	0.289	0.9
	71.0	76.0	5.0	0.234	1.2					
	106.0	115.7	9.7	0.720	7.0	123.5	141.0	17.5	0.334	5.8
D-116-95	4.5	33.0	28.5	0.220	6.3	37.5	113.0	75.5	0.906	68.4
	90.0	120.0	30.0	0.588	17.6					
D-117-95	10.0	33.4	23.4	0.209	4.9	59.5	121.5	62.0	0.775	48.1
	157.0	188.6	31.6	5.396	170.5	196.5	233.5	37.0	0.429	15.9

.473 w/orig. data

7.169

Hole ID	Drill Holes					Block Model				
	From	To	Thickness	Au (opt)	GxT	From	To	Thickness	Au (opt)	GxT
D-118-95	no intercepts >= 0.14 Au opt					92.0	172.0	80.0	0.850	68.0
D-119-95	no intercepts >= 0.14 Au opt					no blocks >= 0.14 Au opt				
D-120-95	no intercepts >= 0.14 Au opt					63.0	100.0	37.0	0.734	27.2
						115.5	127.0	11.5	1.057	12.2
D-121-95	46.0	160.0	114.0	0.474	54.0	58.5	180.5	122.0	0.390	47.6
D-122-95	6.0	34.5	28.5	0.445	12.7					
	106.5	118.3	11.8	0.725	8.6	109.5	148.0	38.5	0.237	9.1
	138.7	146.7	8.0	0.152	1.2					
D-123-95	10.0	35.0	25.0	0.331	8.3					
	108.0	116.0	8.0	0.242	1.9	105.0	120.0	15.0	1.084	16.3
D-124-95	76.0	93.0	17.0	0.703	12.0	23.5	108.0	84.5	0.210	17.7
	183.8	227.0	43.2	1.345	58.1	203.5	228.5	25.0	0.519	13.0
D-125-95	no intercepts >= 0.14 Au opt					no blocks >= 0.14 Au opt				
D-126-95	41.1	46.0	4.9	0.294	1.4	22.5	35.5	13.0	0.275	3.6
	93.4	103.0	9.6	0.501	4.8	61.5	113.0	51.5	0.166	8.5
	158.0	197.5	39.5	0.569	22.5	164.5	217.0	52.5	0.382	20.1
D-127-95	38.0	58.0	20.0	0.368	7.4					
	129.6	148.6	19.0	0.765	14.5	126.5	142.0	15.5	0.855	13.3
D-128-95	73.0	90.0	17.0	0.848	14.4	45.0	97.0	52.0	0.292	15.2
	200.0	245.0	45.0	0.245	11.0	176.0	225.5	49.5	0.751	37.2
D-129-95	102.0	141.0	39.0	0.673	26.2	121.5	133.5	12.0	0.160	1.9
	251.0	259.5	8.5	0.377	3.2	231.5	268.5	37.0	0.630	23.3
D-130-95	73.0	98.0	25.0	0.230	5.8	56.0	88.5	32.5	0.235	7.6
	173.8	185.0	11.2	0.503	5.6	188.0	212.0	24.0	0.716	17.2
D-131-95	65.0	105.0	40.0	0.230	9.2	64.0	88.5	24.5	0.235	5.8
	165.0	196.0	31.0	0.280	8.7	188.0	212.0	24.0	0.716	17.2
	233.5	246.0	12.5	0.305	3.8					
TOTALS			2022.9		1564.2			2475.0		1625.3
WEIGHTED AVERAGE GRADE				0.773					0.657	

PERCENT DIFFERENCE (drill holes / block model)

Ore Footage Drilled:	82%	of block model
Grade * Thickness:	96%	of block model
Weighted Avg Grade:	118%	of block model

Block Model is exaggerating thickness by approximately 5.5% as compared to domain boundaries:

PERCENT DIFFERENCE (drill holes / block model)

Ore Footage Drilled:	86%	of block model
Grade * Thickness:	102%	of block model

HECLA MINING COMPANY - ROSEBUD PROJECT
1995 SOUTH ZONE UNDERGROUND IN-FILL DRILLING PROGRAM

DRILL HOLES VS. BLOCK MODEL (0.14 Au cut-off applied) January 23, 1996

	Drill Holes					Block Model				
Hole ID	From	To	Thickness	Au (opt)	GxT	From	To	Thickness	Au (opt)	GxT
D-95-95	60.0	75.0	15.0	0.171	2.6	63.0	125.0	62.0	0.635	39.4
D-96-95	36.0	71.0	35.0	0.354	12.4	50.0	112.5	62.5	0.389	24.3
D-97-95	90.0	94.6	4.6	0.191	0.9	51.0	96.0	45.0	0.504	22.7
D-98-95	33.7	78.0	44.3	0.497	22.0	35.5	97.5	62.0	0.386	23.9
D-99-95	75.8	81.0	5.2	0.355	1.8	63.0	126.0	63.0	0.745	46.9
	102.8	130.0	27.2	0.269	7.3					
D-100-95	57.3	60.7	3.4	0.174	0.6	54.0	66.5	12.5	0.212	2.7
	70.0	80.0	10.0	0.407	4.1					
	110.0	125.0	15.0	1.088	16.3	104.0	154.5	50.5	1.617	81.7
D-101-95	64.0	102.0	38.0	0.599	22.8	55.0	120.0	65.0	0.736	47.8
D-102-95	74.0	145.0	71.0	2.515	178.6	89.0	134.0	45.0	2.687	120.9
	193.0	203.6	10.6	0.144	1.5	185.0	208.0	23.0	0.319	7.3
D-103-95	63.0	111.0	48.0	0.473	22.7	58.0	128.0	70.0	1.022	71.5
D-104-95	15.0	45.0	30.0	0.267	8.0					0.0
	61.0	80.8	19.8	0.526	10.4	60.5	65.0	4.5	0.481	2.2
	144.4	149.2	4.8	0.159	0.8	151.0	180.0	29.0	0.200	5.8
	175.0	185.8	10.8	0.628	6.8					0.0
D-105-95	20.0	38.0	18.0	0.466	8.4	3.0	15.0	12.0	0.451	5.4
	77.0	104.0	27.0	0.422	11.4	50.0	62.0	12.0	0.537	6.4
	129.0	201.0	72.0	0.377	27.1	77.0	189.0	112.0	0.449	50.3
D-106-95	78.4	89.5	11.1	0.150	1.7	0.0	138.5	138.5	0.612	84.8
	113.2	206.0	92.8	1.363	126.5					
	221.0	224.0	3.0	0.145	0.4	200.0	262.0	62.0	0.761	47.2
D-107-95	61.0	164.8	103.8	0.657	68.2	75.5	186.0	110.5	0.896	99.0
D-108-95	41.0	44.4	3.4	0.222	0.8			0.0		0.0
	80.0	84.8	4.8	1.752	8.4	82.0	113.0	31.0	0.202	6.3
	115.6	118.1	2.5	0.590	1.5			0.0		0.0
D-109-95	0.0	30.0	30.0	0.356	10.7	0.0	9.0	9.0	0.628	5.7
	71.0	87.0	16.0	0.847	13.6	84.0	124.0	40.0	0.464	18.6
	142.0	146.0	4.0	0.243	1.0			0.0		0.0
D-110-95	71.0	135.0	64.0	0.446	28.5	65.5	115.0	49.5	0.554	27.4
	164.0	216.0	52.0	0.865	45.0	164.0	176.5	12.5	0.155	1.9
						189.0	251.0	62.0	1.322	82.0
D-111-95	87.2	120.0	32.8	1.711	56.1	80.0	131.0	51.0	0.984	50.2
D-112-95	80.0	104.0	24.0	0.720	17.3			0.0		0.0
	120.0	170.0	50.0	1.334	66.7	130.5	150.5	20.0	0.799	16.0
D-113-95	5.0	181.0	176.0	0.931	163.9	4.5	27.0	22.5	0.268	6.0
						67.0	160.0	93.0	0.537	49.9
	195.0	202.0	7.0	0.214	1.5	181.0	200.0	19.0	0.567	10.8
D-114-95	10.0	47.4	37.4	0.225	8.4	25.0	37.5	12.5	0.653	8.2
	90.4	115.0	24.6	1.047	25.8	86.5	147.5	61.0	0.980	59.8
	140.0	145.0	5.0	0.354	1.8					
	172.5	210.6	38.1	0.975	37.1	172.0	184.5	12.5	0.575	7.2
						258.0	293.0	35.0	0.409	14.3
D-115-95	0.0	25.0	25.0	0.408	10.2	16.0	19.0	3.0	0.289	0.9
	71.0	76.0	5.0	0.234	1.2					
	106.0	115.7	9.7	0.720	7.0	123.5	141.0	17.5	0.334	5.8
D-116-95	4.5	33.0	28.5	0.220	6.3	37.5	113.0	75.5	0.906	68.4
	90.0	120.0	30.0	0.588	17.6					
D-117-95	10.0	33.4	23.4	0.209	4.9	59.5	121.5	62.0	0.775	48.1
	157.0	188.6	31.6	5.396	170.5	196.5	233.5	37.0	0.429	15.9

Hole ID	Drill Holes					Block Model				
	From	To	Thickness	Au (opt)	GxT	From	To	Thickness	Au (opt)	GxT
D-118-95	no intercepts >= 0.14 Au opt					92.0	172.0	80.0	0.850	68.0
D-119-95	no intercepts >= 0.14 Au opt					no blocks >= 0.14 Au opt				
D-120-95	no intercepts >= 0.14 Au opt					63.0	100.0	37.0	0.734	27.2
						115.5	127.0	11.5	1.057	12.2
D-121-95	46.0	160.0	114.0	0.474	54.0	58.5	180.5	122.0	0.390	47.6
D-122-95	6.0	34.5	28.5	0.445	12.7					
	106.5	118.3	11.8	0.725	8.6	109.5	148.0	38.5	0.237	9.1
	138.7	146.7	8.0	0.152	1.2					
D-123-95	10.0	35.0	25.0	0.331	8.3					
	108.0	116.0	8.0	0.242	1.9	105.0	120.0	15.0	1.084	16.3
D-124-95	76.0	93.0	17.0	0.703	12.0	23.5	108.0	84.5	0.210	17.7
	183.8	227.0	43.2	1.345	58.1	203.5	228.5	25.0	0.519	13.0
D-125-95	no intercepts >= 0.14 Au opt					no blocks >= 0.14 Au opt				
D-126-95	41.1	46.0	4.9	0.294	1.4	22.5	35.5	13.0	0.275	3.6
	93.4	103.0	9.6	0.501	4.8	61.5	113.0	51.5	0.166	8.5
	158.0	197.5	39.5	0.569	22.5	164.5	217.0	52.5	0.382	20.1
D-127-95	38.0	58.0	20.0	0.368	7.4					
	129.6	148.6	19.0	0.765	14.5	126.5	142.0	15.5	0.855	13.3
D-128-95	73.0	90.0	17.0	0.848	14.4	45.0	97.0	52.0	0.292	15.2
	200.0	245.0	45.0	0.245	11.0	176.0	225.5	49.5	0.751	37.2
D-129-95	102.0	141.0	39.0	0.673	26.2	121.5	133.5	12.0	0.160	1.9
	251.0	259.5	8.5	0.377	3.2	231.5	268.5	37.0	0.630	23.3
D-130-95	73.0	98.0	25.0	0.230	5.8	56.0	88.5	32.5	0.235	7.6
	173.8	185.0	11.2	0.503	5.6	188.0	212.0	24.0	0.716	17.2
D-131-95	65.0	105.0	40.0	0.230	9.2	64.0	88.5	24.5	0.224	5.5
	165.0	196.0	31.0	0.280	8.7	188.0	212.0	24.0	0.716	17.2
	233.5	246.0	12.5	0.305	3.8					
TOTALS			2022.9		1564.2			2568.0		1674.9
WEIGHTED AVERAGE GRADE				0.773					0.652	

PERCENT DIFFERENCE (drill holes / block model)

Ore Footage Drilled:	79%	of block model
Grade * Thickness:	93%	of block model
Weighted Avg Grade:	119%	of block model

Block Model is exaggerating thickness by approximately 5.5% as compared to domain boundaries:

PERCENT DIFFERENCE (drill holes / block model)

Ore Footage Drilled:	83%	of block model
Grade * Thickness:	99%	of block model