60001444

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. 96-361
AUTHOR	M. Brady; S. King; C. Muerhoff; V. Reid; B. Steelman
DATE OF DOC(S)	1996
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.; Eklund Drilling
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 600'; handwritten notes; directional survey 16p.

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)

	Initials	Date
SS:	DD	5/22/08
DB:	mah	
SCANNED:		

Revised: 1/22/08

Drill log Rosebud 96-361

60 00 1444 4010

Hecla MINING COMPANY

ROSEBUD PROJECT
DRILL LOG

HOLE NUMBER 96-361
PAGE 1 OF
DATE
LOGGED BY M.W. Brady
TOTAL DEPTH

LOCATION
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 6000 1414
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	BOX TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION																MINERALIZATION							METALLURGY				ANALYTICAL DATA				
						SILICIFICATION					ARGILLIC				PROPYLITIC %	POTASSIC %	OXIDATION			VEINING		SULFIDES			PY	CPY	MAR	K-SILI	SILICIC	BARITE								
						5%	15%	+25%	MASS	QUARTZ	5%	15%	+25%	TYPE	CHLORITE	CALCITE	H-SPAR	KUNITE	5%	15%	+25%	%	TYPE	5%	15%	+25%	%	%	%	%	%	%	OXIDE	SULF	SPECIES	MINERAL	FROM	TO	W	AU	AG
0			Qal																																		
10																																					
20			Purple, clay rich tuff Badger?																																			
30																																					
40																																					
50																																					
60																																					
70																																					
80																																					
90																																					
100			cuttings mixture Lt green wte equigranular tuff & wk fe ox coats 60% ox / 40% Unox																																			

Hecla MINING COMPANY

ROSEBUD PROJECT
DRILL LOG

HOLE NUMBER 96-361
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUMINE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SULF %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MIXTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
	v		wte equigranular tuff w/ wk diss py — rhy intr unox			–					–				✓				–			–					1-2														
110	v																																								
	v														✓																										
120	v																																								
	v														✓																										
130	v																																								
	v														✓																										
	v		a.a w/ min clay			–						X							–																						
140	v		a.a w/ no clay + wk-min qtz + py veinlets			–						–			✓				–			1-2	qtz + py				1-3														
150	v																																								
	v														✓																										
160	v																																								
	v														✓																										
170	v																																								
	v														✓																										
180	v																																								
	v														✓																										
190	v																																								
	v														✓																										
200	v		a.a w/ min qtz + py veinlets			–						–							–			2-4					2-4														

Hecla MINING COMPANY

ROSEBUD PROJECT
DRILL LOG

HOLE NUMBER 96-361
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DATE
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TOTAL DEPTH

LOCATION
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AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX %	CLASTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SULF %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDENITE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
			wte-Lt green equigranular tuff w/min qtz+py veinlets			–					–				✓				–			2-4	qtz + py				2-4														
			a.a w/ no qtz py veinlets			–					–				✓				–			–	–																		
210															✓																										
															✓																										
220															✓																										
			a.a w/wk qtz+py veinlets			–					–				✓				–			1-2	qtz + py				1-2														
230															✓																										
															✓																										
240															✓																										
			a.a w/min qtz+py veinlets			–					–				✓				–			2-4	qtz + py				2-4														
250			wte-Lt green-tan equigranular tuff w/min qtz+py veinlets			–					–				✓				–																						
			a.a w/wk qtz+py veinlets												✓							1-2	qtz + py				1-2														
260															✓																										
			a.a w/min qtz+py veinlets			–					–				✓				–			2-4	qtz + py				2-4														
270															✓																										
															✓																										
280															✓																										
															✓																										
290															✓																										
			a.a w/wk qtz+py veinlets			–					–				✓				–			1-2	qtz + py				1-2														
300																																									

Hecla MINING COMPANY

ROSEBUD PROJECT
DRILL LOG

HOLE NUMBER 96-361
PAGE 4 OF
DATE
LOGGED BY
TOTAL DEPTH

LOCATION
NORTHING
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ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	BOX TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC %	CHLORITE	CALCITE	EPIDOTE	POTASSIC %	ALUNITE	OXIDATION 5%	15%	+25%	%	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SILI %	SILICIC %	BARITE %	METALLURGY: CODE	SULF	OXIDE	MOLY	ANALYTICAL DATA: FROM	TO	W	Au	Ag
310			Lt green equigranular tuff w/ wk diss py			–					–				✓				–		–			–																			
						–					–				✓				✓																								
			Lt green + tan equigranular tuff a.a												✓									–																		
320															✓																											
															✓																											
330															✓																											
															✓																											
			a.a w/ wk min qtz py veinlets			–					–				✓						–			1-3	qtz py				1-3												
340															✓																											
															✓																											
350																																								
360																																								
370																																								
380																																								
390																																								
400																																								

Hecla MINING COMPANY

ROSEBUD PROJECT
DRILL LOG

HOLE NUMBER 96-361
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DATE
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AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VEINING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SULF %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
	V		Lt green-tan equigranular tuff w/ wk diss py + wk min qtz + py veinlets			–					–				✓				–			1-2	qtz + py				1-2														
410	V														✓																										
	V														✓																										
420	V														✓																										
			same w/ contamination blew out casing + fault.			–					–				✓				–																						
430															✓																										
			Lt green tuff w/ fine lithics + wk clay w/ Tr diss py (430-450)			–					X				✓				–			–	–																		
440															✓																										
															✓																										
450															✓																										
															✓																										
460															✓																										
															✓																										
470															✓																										
															✓																										
			a.a w/ Lithics getting larger			–									✓				–																						
480															✓																										
															✓																										
490															✓																										
															✓																										
500															✓																										

Hecla MINING COMPANY

ROSEBUD PROJECT
DRILL LOG

HOLE NUMBER 96-361
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AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	BOX TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION															MINERALIZATION							METALLURGY				ANALYTICAL DATA				
						SILICIFICATION					ARGILLIC				PROPYLITIC %	POTASSIC %	OXIDATION				SULFIDES			PY %	CPY %	MAR %	K-SILI %	SILICIC %	BARITE %	OXIDE	SULF	CARBON	MOIST	FROM	TO	W	Au	Ag
						5%	15%	+25%	MASS	QUARTZ	5%	15%	+25%	TYPE	CHLORITE	CALCITE	H-SPAR	HEMATITE	5%	15%	+25%	%	TYPE	5%	15%	+25%													
500			Lt green tuff w/ ab fine lithics			–					–				✓				–			→															
															✓																						
															✓																						
510															✓																						
			a.a w/ wk cal veinlets			–					–				✓				–			1-2 cal															
															✓																						
520															✓																						
			a a – no cal veinlets			–					–				✓				–			–															
															✓																						
530															✓																						
															✓																						
540															✓																						
															✓																						
															✓																						
550															✓																						
															✓																						
															✓																						
560															✓																						
			Lt green Lt gray tuff w/ ab fine lithics												✓							–	–														
															✓																						
570															✓																						
			collar blew out again much contamination but same												✓							–	–														
															✓																						
580															✓																						
															✓																						
															✓																						
590															✓																						
															✓																						
															✓																						
600															✓																						

TD 600

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP038220

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF

:

:

:

CLIENT REFERENCE No: 96-361 RECEIVED : 8 MAY 1996

No. SAMPLES : 109 REPORTED : 29 MAY 1996

MAIN SAMPLE TYPE : DRILL CUTTINGS

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

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

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP038220

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 96-361

REPORTED : 29 MAY 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-361 000-010	<0.001		0.02
96-361 010-020	<0.001		<0.02
96-361 020-030	<0.001		<0.02
96-361 030-040	<0.001		<0.02
96-361 040-050	<0.001		<0.02
96-361 050-060	<0.001		<0.02
96-361 060-070	<0.001		<0.02
96-361 070-080	<0.001		<0.02
96-361 080-090	<0.001		<0.02
96-361 090-100	<0.001		0.02
96-361 100-105	0.002		0.04
96-361 105-110	0.003		0.05
96-361 110-115	0.001		0.05
96-361 115-120	0.002		0.05
96-361 120-125	0.015		0.05
96-361 125-130	0.005	0.009	0.08
96-361 130-135	0.002		0.04
96-361 135-140	0.003		0.04
96-361 140-145	0.002		0.04
96-361 145-150	0.002		0.05
96-361 150-155	0.001	0.002	0.04
96-361 155-160	0.003		0.04
96-361 160-165	0.003		0.05
96-361 165-170	0.002		0.05
96-361 170-175	0.002		0.05

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP038220

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 96-361

REPORTED : 29 MAY 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-361 175-180	<0.001		0.05
96-361 180-185	<0.001		<0.02
96-361 185-190	<0.001		0.02
96-361 190-195	<0.001		0.04
96-361 195-200	0.004		0.52
96-361 200-205	0.006		0.83
96-361 205-210	<0.001		0.07
96-361 210-215	0.003		0.07
96-361 220-225	0.002		0.07
96-361 225-230	0.001		0.07
96-361 230-235	0.001		0.25
96-361 235-240	<0.001		0.02
96-361 240-245	<0.001		<0.02
96-361 245-250	<0.001		<0.02
96-361 250-255	0.001		0.06
96-361 255-260	0.001		0.06
96-361 260-265	0.004		0.39
96-361 265-270	0.005	0.004	0.26
96-361 275-280	0.003		0.08
96-361 280-285	0.007		0.10
96-361 285-290	0.002		0.11
96-361 290-295	0.003		0.16
96-361 295-300	<0.001		0.04
96-361 300-305	<0.001		0.03
96-361 305-310	0.001		0.06

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP038220

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 96-361

REPORTED : 29 MAY 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-361 310-315	0.002		0.17
96-361 315-320	0.003		0.32
96-361 320-325	0.002		0.12
96-361 325-330	0.002		0.12
96-361 330-335	0.002		0.08
96-361 335-340	0.017		0.08
96-361 340-345	0.004		0.16
96-361 345-350	0.002		0.21
96-361 350-355	0.002		0.16
96-361 355-360	0.003		0.07
96-361 360-365	0.002		0.07
96-361 365-370	0.012	0.013	0.12
96-361 370-375	0.002		0.15
96-361 375-380	0.002		0.07
96-361 380-385	0.002		0.13
96-361 385-390	0.003		0.10
96-361 390-395	0.004		0.14
96-361 395-400	0.003		0.08
96-361 400-405	0.003		0.22
96-361 405-410	0.002		0.10
96-361 410-415	0.002		0.07
96-361 415-420	0.004		0.09
96-361 420-425	0.005		0.12
96-361 425-430	0.003		0.07
96-361 430-435	0.001		0.04

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP038220

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 96-361

REPORTED : 29 MAY 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-361 435-440	0.001		0.04
96-361 440-445	0.001		0.04
96-361 445-450	0.001		0.02
96-361 450-455	0.003		0.05
96-361 455-460	<0.001		0.03
96-361 460-465	0.002		0.05
96-361 465-470	0.006		0.04
96-361 470-475	<0.001		0.04
96-361 475-480	<0.001		0.04
96-361 480-485	<0.001	<0.001	0.03
96-361 485-490	<0.001		0.03
96-361 490-495	<0.001		0.04
96-361 495-500	<0.001		0.04
96-361 500-505	<0.001		0.03
96-361 505-510	0.002		0.04
96-361 510-515	<0.001		0.05
96-361 515-520	<0.001		0.03
96-361 520-525	<0.001		0.03
96-361 525-530	<0.001		0.03
96-361 530-535	<0.001		0.04
96-361 535-540	<0.001		0.03
96-361 540-545	<0.001		0.04
96-361 545-550	<0.001		0.04
96-361 550-555	<0.001		0.04
96-361 555-560	<0.001		0.05

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP038220

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 96-361

REPORTED : 29 MAY 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-361 560-565	<0.001		0.04
96-361 565-570	0.002		0.03
96-361 570-575	<0.001		0.06
96-361 575-580	<0.001		0.02
96-361 580-585	<0.001		0.02
96-361 585-590	0.001		0.04
96-361 590-595	<0.001		0.05
96-361 595-600	<0.001		0.07
96-361 UNKNOWN #1	0.003	0.003	0.13

WELNAV
ELKO, NEVADA

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

****
* HECLA MINNING COMPANY *
****

JOB NUMBER: 29-0588-311

WELL NAME: 96-361

LOCATION: ROSEBUD PROJECT

SURVEY DATE: 04/30/96

SURVEY ENGINEER: VERN REID

GYRO REFERENCE BEARING: 053.00

TIE-ON COORDINATES AT: 0 M.D.
TAKEN FROM: COLLAR

****
****** DEPTH MEASURED IN FEET *******
****

COMMENTS: ****** EKLUND ******
** BRIAN STEELMAN **

PROJECTED F/550' T/600'.

****
****
*** THIS DIRECTIONAL SURVEY REPORT IS ****
** CORRECT TO THE BEST OF MY KNOWLEDGE ***
* AND IS SUPPORTED BY ACTUAL FIELD DATA! *
**
**
** **********
** COMPANY REPRESENTATIVE **
****
****

WELNAV
ELKO, NEVADA

JOB NUMBER: 29-0588-311

WELL NAME: 96-361

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R CLOS.	INCL	BEARING AZIMUTH	COORDINATES LATITUDE	COORDINATES DEPARTURE	D-LEG /100	D-LEG /CL	STATION DISP.	DISPLACEMENT DIRECTION
0.0	0.00	0.00	0.000	-45.27	062.83	0.00 N	0.00 E	0.00		0.00	AT 000.00
50.0	35.83	34.76	-2.838	-46.26	064.65	15.44 N	31.28 E	3.22	1.61	34.88	AT 063.73
100.0	72.40	68.81	-4.546	-47.76	066.43	29.56 N	62.30 E	3.86	1.93	68.96	AT 064.62
150.0	109.75	102.03	-5.563	-48.92	066.87	42.73 N	92.81 E	2.39	1.20	102.18	AT 065.28
200.0	148.03	134.18	-6.386	-50.99	067.00	55.33 N	122.41 E	4.14	2.07	134.34	AT 065.68
250.0	187.30	165.13	-6.945	-52.53	067.74	67.24 N	150.97 E	3.21	1.61	165.27	AT 065.99
300.0	227.35	195.05	-6.767	-53.93	069.78	78.09 N	178.86 E	3.72	1.86	195.17	AT 066.41
350.0	268.05	224.09	-6.043	-55.03	069.88	88.11 N	206.13 E	2.20	1.10	224.17	AT 066.86
400.0	309.32	252.30	-5.382	-56.26	069.60	97.88 N	232.60 E	2.48	1.24	252.36	AT 067.18
450.0	351.04	279.84	-4.622	-56.85	070.37	107.32 N	258.49 E	1.45	0.73	279.88	AT 067.45
500.0	393.01	307.01	-3.453	-57.27	071.37	116.23 N	284.18 E	1.38	0.69	307.03	AT 067.76
550.0	435.21	333.77	-1.833	-57.86	072.36	124.57 N	309.66 E	1.59	0.80	333.78	AT 068.09
600.0	477.55	360.30	0.010	-57.89	072.38	132.63 N	335.00 E	0.06	0.03	360.30	AT 068.40

****
*
* THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF *
*
* 600.0 FEET EQUALS 360.30 FEET AT 068.40 *
*
****

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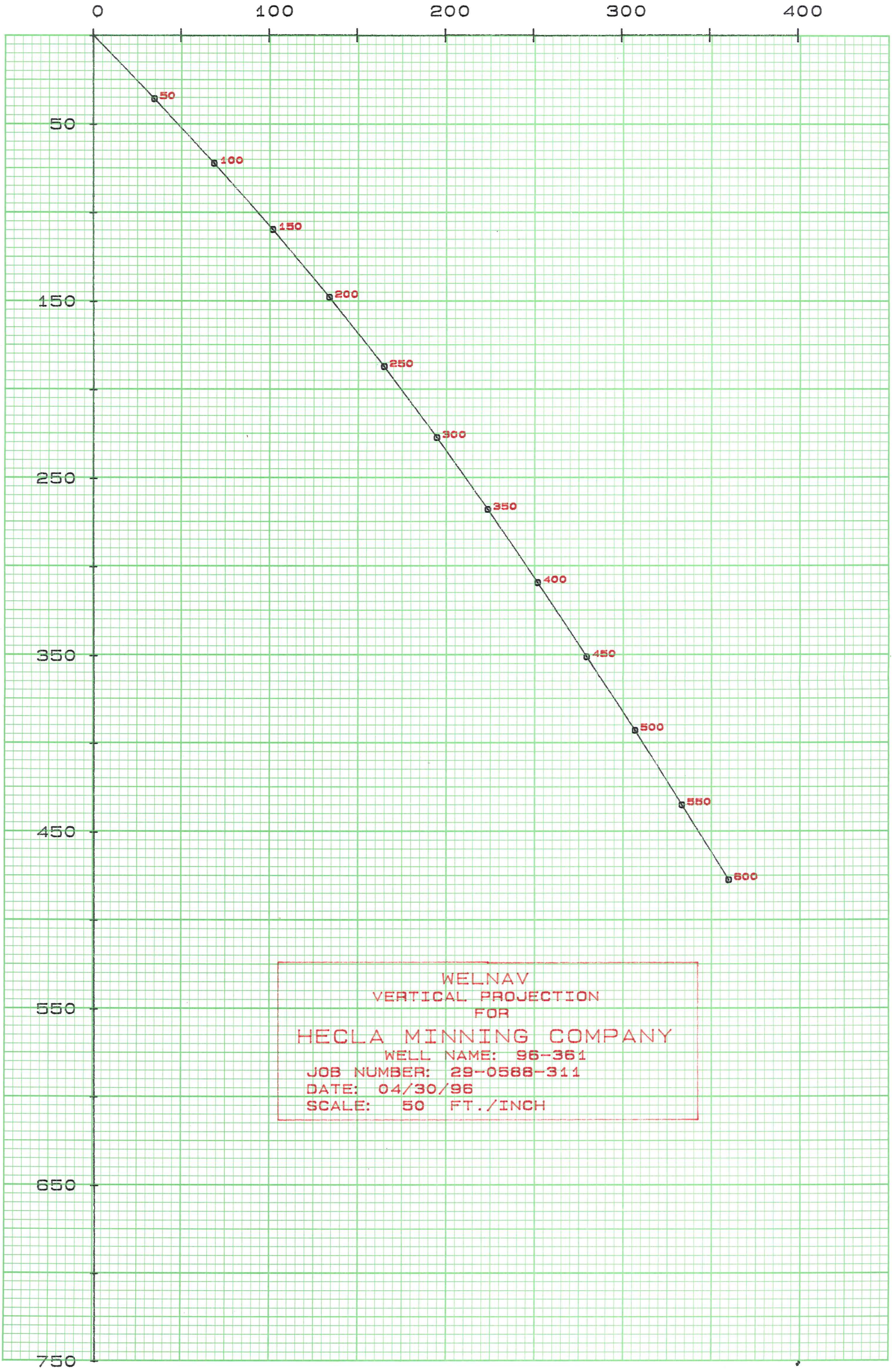

WELNAV
VERTICAL PROJECTION
FOR
HECLA MINNING COMPANY
WELL NAME: 96-361
JOB NUMBER: 29-0588-311
DATE: 04/30/96
SCALE: 50 FT./INCH

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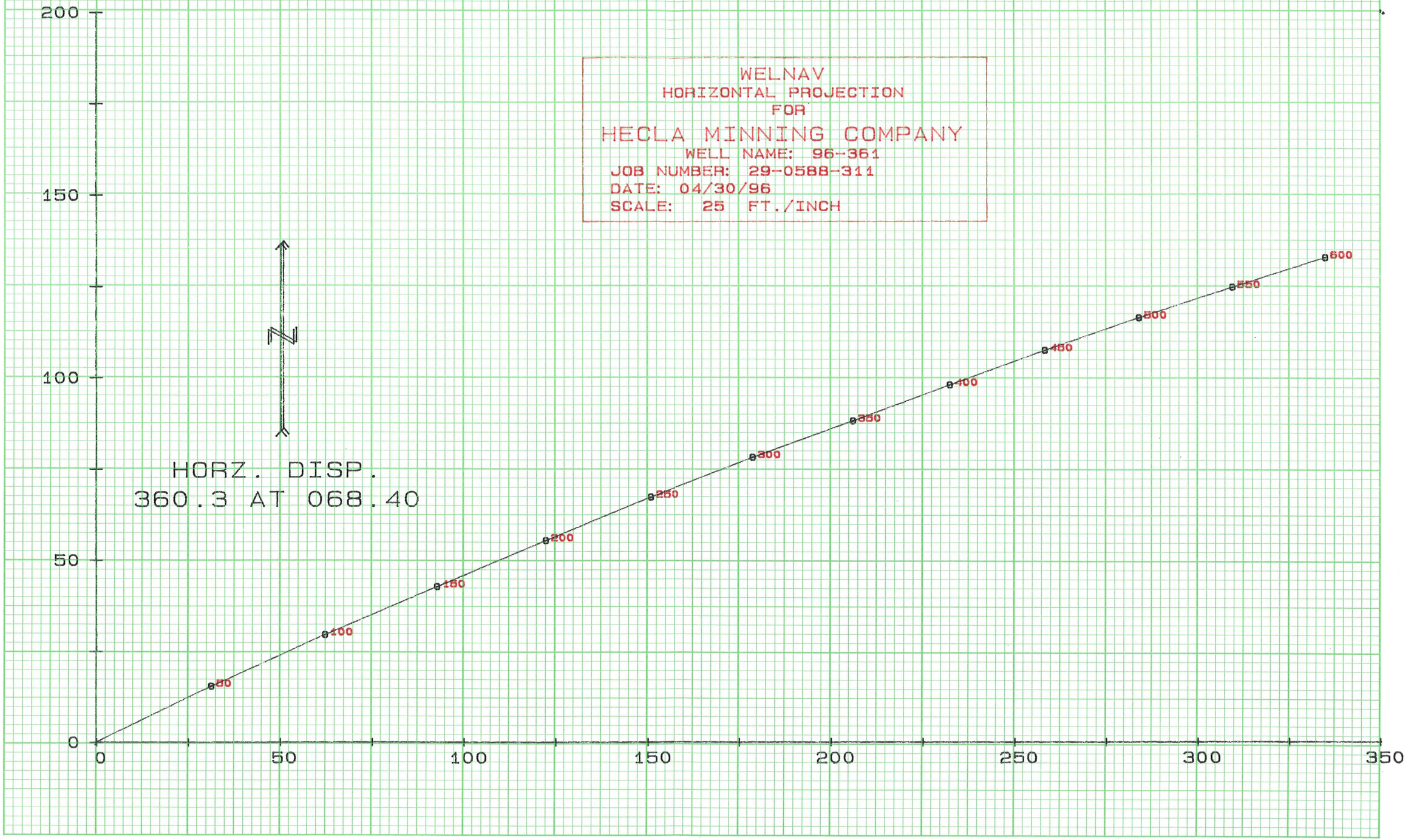
WELNAV
HORIZONTAL PROJECTION
FOR
HECLA MINNING COMPANY
WELL NAME: 96-361
JOB NUMBER: 29-0588-311
DATE: 04/30/96
SCALE: 25 FT./INCH

N

HORZ. DISP.
360.3 AT 068.40