66001498

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. 96-365
AUTHOR	M. Brady; Rogowski; S. King; C. Muerhoff V. Reid; B. Steelman
DATE OF DOC(S)	1996-1998
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.; Target II; Eklund Drilling
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 950' handwritten notes; directional survey 25p.

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 5/22/08
Initials Date

DB: mch
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

Drill log Rosebud 96-365

60001448 4010

0-100 ft
10 ft samples
rest - 5 ft

Hecla MINING COMPANY

ROSEBUD PROJECT
DRILL LOG

HOLE NUMBER 96-365
PAGE 1 OF 10
DATE
LOGGED BY M.W. Brady
TOTAL DEPTH

LOCATION
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA Target II
DRILLING CO. Eklund.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

6600 1440

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
0			Qal		
10					
20					
30					
40					
50			mixture of cuttings cave.		
60			probably Dozer bedrock.		
70					
80			Lt gray + Lt green v.fine equigranular tuff - Dozer, w/ Tr Diss limonite after pyrite.		
90			all ox ?		
100					

ALTERATION																			
SILICIFICATION					ARGILLIC				PROPYLITIC %		POTASSIC %		OXIDATION			VIENING	
5%	15%	+25%	MATRIX %	CLASTS %	5%	15%	+25%	TYPE	CHLORITE	CALCITE	K-SPAR	ALUNITE	5%	15%	+25%	%	TYPE

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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%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	SILICIFICATION QUARTZ %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOCURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
	D		Ltgry + Ltgreen/+ Orange brn vfine equigranular tuff w/tr diss feox after py			–					–				✓						100	–		–			–														
110	D														✓																										
	D		all ox.												✓																										
			more feox 110-120																																						
120	D		Ltgry + Lt green vfine equigranular tuff – Dozer. UNOX. Tr diss py			–					–				✓				–			–		–			21%														
	D														✓																										
130	D														✓																										
	D														✓																										
140	D														✓																										
	D														✓																										
150	D		qtz veinlets 145-150 1-3mm wide no sulf			–					–				✓						1	5	qtz	–			<1%														
	D		Lt green vfine equigranular tuff Tr diss py			–					–				✓							–	–	–			<1%														
160	D														✓																										
	D														✓																										
170	D														✓																										
	D														✓																										
180	D														✓																										
	D														✓																										
190	D														✓																										
	D														✓																										
200			Lt olive green andesite no sulf			–					–				✓							–	–	–			–														

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DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	SILICIFICATION CLASTS %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOCURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
			Lt olive green andesite - no sulf			–					–				✓				–																						
	D		Lt grey + Lt green v fine equigranular tuff w/ tr diss py. Dozer			–					–				✓				–					–		–	<1%														
210			ob. calcite veining 210-225																					–																	
	D																					50	cal																		
																						40	"																		
220	D																																								
																						30	"																		
	D																																								
230																																									
	D																																								
240																																									
	D		calcite veining 240-245																			30	cal																		
250																																									
	D																																								
260																																									
	D																																								
270																																									
	D																																								
280																																									
	D																																								
290																																									
	D																																								
300																																									

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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%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	SILICIFICATION CLASTS %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SLF %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOCURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
			Lt green v fine equigranular tuff w/tr diss py. ~ Dozer qtz veining 300-320ft			–					–				✓				–			5	qtz	–			1%														
310															✓																										
															✓																										
320															✓																										
															✓																										
330															✓																										
															✓																										
340															✓																										
															✓																										
			all same												✓																										
350															✓																										
															✓																										
360															✓																										
			360-365 qtz veining			–					–				✓				–			5	qtz																		
370															✓																										
			some sample contamination												✓																										
380															✓																										
															✓																										
390															✓																										
															✓																										
400															✓																										

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DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	SILICIFICATION QUARTS %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOCURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
	D		Lt green v fine equigranular tuff w/Tr diss py Dozer			–					–				✓				–			–		–			1%														
410	D														✓																										
	D														✓																										
420	D														✓																										
	D														✓																										
430	D														✓																										
	D														✓																										
440	D														✓																										
	D														✓																										
	D		Gray + Lt green v fine equigranular tuff w/ Tr diss py – Dozer			–					–				✓				–			–		–			2%														
450	D														✓																										
	D														✓																										
460	D														✓																										
	D		Lt green v fine equigranular tuff			–					–				✓				–			–		–																		
470	D														✓																										
	D														✓																										
480	D														✓																										
	D														✓																										
490	D	S	aa. w/qtz veinlets			–					–				✓				–				5	qtz																	
	D		poss wk clay 495-500								WK				✓																										
500																																									

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RIG TYPE
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FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	SILICIFICATION QZ STS %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VEINING %	VEINING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	AS-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOCURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
	D		Lt green v fine equigranular tuff w/ tr diss py. Dozer			–					–				✓				–					–			<1%														
	D														✓				–					–																	
50			Lt green + gray v fine equigranular tuff - tr disc py			–					–				✓				–					–																	
	D		Lt green v fine a.a			–					–				✓				–					–																	
520	D		Lt green + gray v fine aa.			–					–				✓				–					–																	
	D														✓																									
530	D		Lt green v fine a.a. w/ wk clay			–					X				✓				–					–																	
	D		Lt green + gray v fine aa.			–					–				✓				–					–																	
540	D														✓																									
	D		Lt green v fine aa. w/ qtz veinlets			–					–				✓				–			5	qtz	–																	
550	D														✓																									
	D		Lt green v fine a.a			–					–				✓				–			–	–	–																	
560	MnO_2 D		Lt green v fine tuff w/ black coats MnO_2(?) or black qtz.(?)			–					–				✓				–			5	MnO_2 ?	–																	
	D														✓																									
570	D		Lt green + Green v fine tuff a.a			–					–				✓				–			–	–	–																	
	MnO_2 D		w/ silver black coats MnO_2(?) or black qtz.(?)			–					–				✓				–			5	MnO_2 ?	–																	
580	D MnO_2														✓																									
	MnO_2 D														✓																									
590	D MnO_2														✓																									
	MnO_2 D														✓																									
600																																									

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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%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	SILICIFICATION QUARTS %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	AG-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
	D MnO_2		Lt green v fine equigranular tuff w/ black coals & chunks MnO_2 (?) or black qtz (?) tr diss py / Dozer			–					–				✓				–			5	MnO_2 ?	–			<1%													
	MnO_2 D														✓																										
610																																									
	D MnO_2														✓																										
	MnO_2 D														✓																										
620																																									
	D MnO_2														✓																										
	MnO_2 D														✓																										
630																																									
	D MnO_2														✓																										
	MnO_2 D														✓																										
640																																									
	D MnO_2														✓																										
	MnO_2 D														✓	✓																									
650																																									
	D MnO_2														✓																										
	MnO_2 D														✓	✓																									
660																																									
	D MnO_2		a.a. w/ increasing black frags + films			–					–				✓							10																			
	MnO_2 D														✓	✓																									
670																																									
	D MnO_2														✓																										
	MnO_2 D														✓	✓																									
680																																									
	D MnO_2														✓							20																			
	MnO_2 D		a.b black frags			–					–				✓	✓																									
690																																									
	D MnO_2														✓																										
	MnO_2 D		a.a w/ less black frags			–					–				✓	✓						5																			
700																																									

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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%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	SILICIFICATION QUARTS %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
710	D Mn O2		Lt green v. fine equigranular tuff w/Tr Diss py + med black frags + tueinlets.			–					–				✓				–			5	Mn O2	–			<1%													
720	D Mn O2														✓																										
730	V ?		Lt green fine equigranular tuff w/Tr diss py. coarsegrained than above. → intrusive? no black frags			–					–				✓				–																						
740	V		w/some qtz veinlets												✓							5	qtz																		
750	V														✓																										
760	V		a.a w/qtz veinlets + Tr black frags			–					–				✓				–			3																			
770	V														✓																										
780	V														✓																										
790	V		a.a w/qtz veinlets + Tr black frags			–					–				✓				–			2																			
800	V														✓																										

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FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	SILICIFICATION CLASTS %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	AS-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
			Lt green fine equigranular tuff but coarser as before tr diss py no qtz veinlets or black frags			–					–				✓				–					–			<1%														
810															✓																										
			a.a. w/tr black frags			–					–				✓				–					–																		
820															✓																										
															✓																										
830															✓																										
			a.a. w/wk qtz veinlets w/black frags			–					–				✓				–			3	qtz	–																	
840															✓																										
			Darker green fine grained tuff w/ tr diss py no black frags			–					–				✓				–					–																		
850															✓																										
															✓																										
			Dark gray green fine grained tuff a.a.			–					–				✓				–																						
860															✓																										
			Lt green tuff a.a w/wk calcite veinlets			–					–				✓				–			3	cal																		
870															✓																										
			Lt green tuff a.a. but v fine grained as originally			–					–				✓				–																						
880															✓																										
			Lt green tuff a.a but somewhat coarser			–					–				✓				–																						
890															✓																										
900															✓																										

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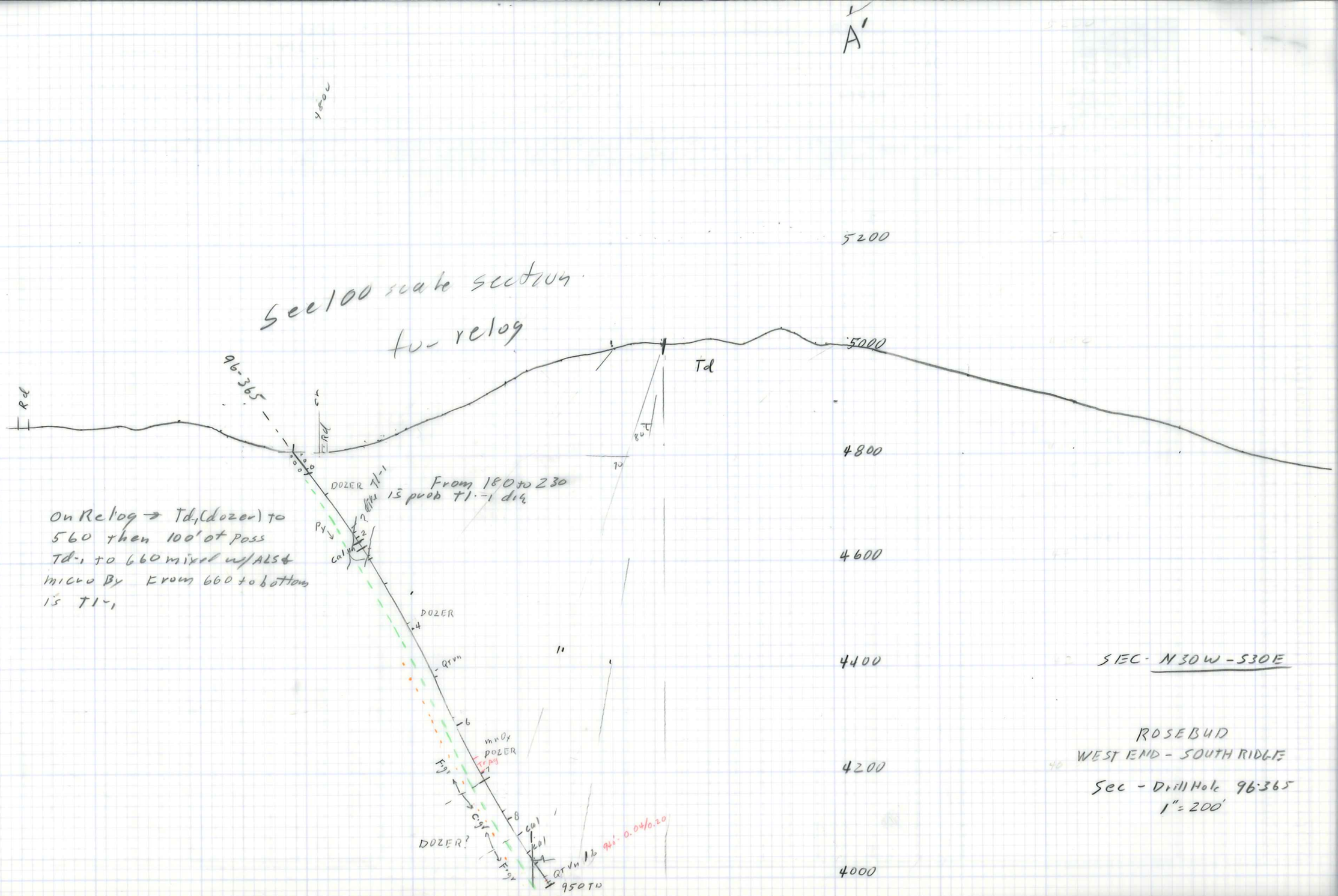
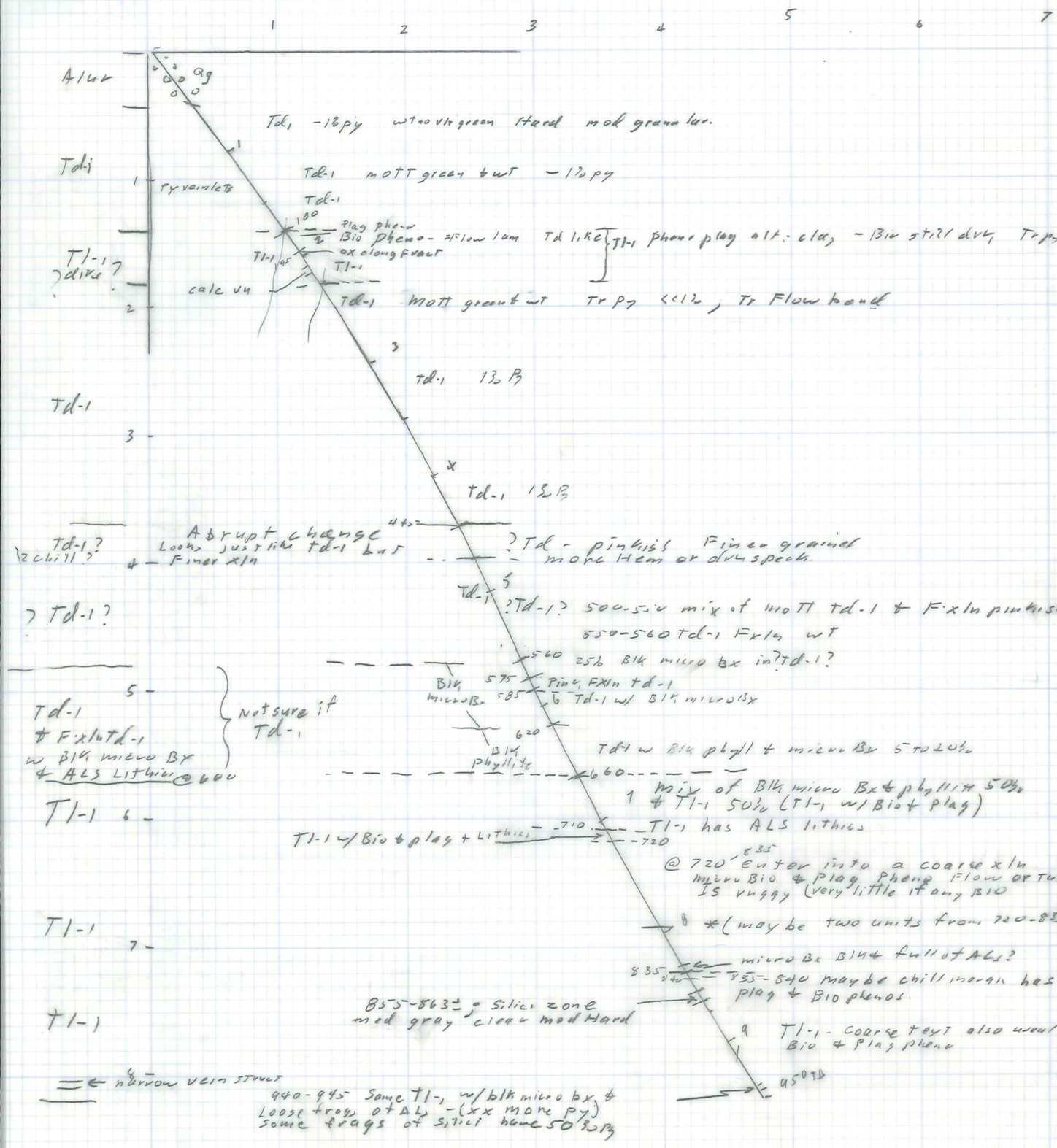
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX	SILICIFICATION QUARTS	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOCURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
			Lt green fine equigranular tuff w/ Tr. diss. py - Dozer			—					—				✓				—			—		—			<1%														
910															✓																										
															✓																										
920															✓																										
															✓																										
930															✓																										
															✓																										
			Lt green fine equigranular tuff w/ min qtz veinlets + black tags			—					—				✓				—			1%	qtz	—			1-2 %														
940															✓																										
			Lt green fine tuff a.a			—					—				✓				—			—					<1%														
950			TD950																																						


A
A'
5200
5000
4800
4600
4400
4200
4000
See 100 scale section
to relog
96-365
Rd
Td
DOZER
Tl-1
From 180 to 230
is prob Tl-1 dig
On Relog → Td, (dozer) to
560 then 100' of Poss
Td-1 to 660 mixed w/ALS &
micro Py From 660 to bottom
is Tl-1
Py
calvn
DOZER
Qtvn
mrOx
DOZER
Fe Ox
Cu Ox
DOZER?
Cal
Qtvn
950 TD
SEC - N30W - S30E
ROSEBUD
WEST END - SOUTH RIDGE
Sec - Drill Hole 96-365
1" = 200'



* almost all of hole is strongly Clay Alt

** Tr Py except in Vn & Bx areas

96-365'

1" = 100'

In plane of hole

by Rogowski 26 Oct 98

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP037791

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: 96-365 RECEIVED : 2 APR 1996

No. SAMPLES : 179 REPORTED : 5 APR 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.

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ANALYSIS REPORT SP037791

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 96-365

REPORTED : 5 APR 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-365 000-010	<0.001		0.02
96-365 010-020	<0.001		0.02
96-365 020-030	<0.001		0.02
96-365 030-040	<0.001		0.02
96-365 040-050	<0.001		<0.02
96-365 050-060	<0.001		<0.02
96-365 060-070	<0.001	<0.001	<0.02
96-365 070-080	<0.001		<0.02
96-365 080-090	<0.001		<0.02
96-365 090-100	<0.001		<0.02
96-365 100-105	<0.001		<0.02
96-365 105-110	<0.001	<0.001	<0.02
96-365 110-115	<0.001		0.03
96-365 115-120	<0.001		0.03
96-365 120-125	<0.001		0.02
96-365 125-130	<0.001		0.02
96-365 130-135	<0.001		0.02
96-365 135-140	<0.001		0.02
96-365 140-145	<0.001		0.02
96-365 145-150	<0.001		0.02
96-365 150-155	<0.001		0.02
96-365 155-160	<0.001		0.03
96-365 160-165	<0.001		0.02
96-365 165-170	<0.001		0.02
96-365 170-180	<0.001		0.03

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ANALYSIS REPORT SP037791

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SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-365 180-185	<0.001		0.02
96-365 185-190	<0.001		0.03
96-365 190-195	<0.001		0.03
96-365 195-200	<0.001		0.03
96-365 200-205	<0.001	<0.001	0.03
96-365 205-210	<0.001		0.03
96-365 210-215	<0.001		<0.02
96-365 215-220	<0.001		0.02
96-365 220-225	<0.001		0.03
96-365 225-230	<0.001		0.03
96-365 230-235	<0.001		0.03
96-365 235-240	<0.001		0.03
96-365 240-245	<0.001		0.03
96-365 245-250	<0.001	<0.001	0.03
96-365 250-255	<0.001		0.03
96-365 255-260	<0.001		0.02
96-365 260-265	<0.001		<0.02
96-365 265-270	<0.001		<0.02
96-365 270-275	<0.001		<0.02
96-365 275-280	<0.001		<0.02
96-365 280-285	<0.001		0.02
96-365 285-290	<0.001	<0.001	0.02
96-365 290-295	<0.001		0.02
96-365 295-300	<0.001		0.02
96-365 300-305	<0.001		0.02

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ANALYSIS REPORT SP037791

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REFERENCE : 96-365

REPORTED : 5 APR 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-365 305-310	<0.001		0.02
96-365 310-315	<0.001		0.02
96-365 315-320	<0.001		0.03
96-365 320-325	<0.001		0.03
96-365 325-330	<0.001		0.02
96-365 330-335	<0.001		0.03
96-365 335-340	<0.001		0.02
96-365 340-345	<0.001		0.02
96-365 345-350	<0.001		0.02
96-365 350-355	<0.001		0.02
96-365 355-360	<0.001		0.02
96-365 360-365	<0.001		0.02
96-365 365-370	<0.001		<0.02
96-365 370-375	<0.001		<0.02
96-365 375-380	<0.001		<0.02
96-365 380-385	<0.001	<0.001	<0.02
96-365 385-390	<0.001	<0.001	<0.02
96-365 390-395	<0.001		<0.02
96-365 395-400	<0.001		<0.02
96-365 400-405	<0.001		0.02
96-365 405-410	<0.001		0.02
96-365 410-415	<0.001		0.02
96-365 415-420	<0.001		0.02
96-365 420-425	<0.001		0.02
96-365 425-430	<0.001		0.02

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REFERENCE : 96-365

REPORTED : 5 APR 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-365 430-435	<0.001		0.02
96-365 435-440	<0.001		0.02
96-365 440-445	<0.001		0.02
96-365 445-450	<0.001		0.02
96-365 450-455	<0.001		0.02
96-365 455-460	<0.001		0.02
96-365 460-465	<0.001	<0.001	0.02
96-365 465-470	<0.001		0.02
96-365 470-475	<0.001		0.02
96-365 475-480	<0.001		0.02
96-365 480-485	<0.001		0.02
96-365 485-490	<0.001		0.02
96-365 490-495	<0.001		0.02
96-365 495-500	<0.001		0.02
96-365 500-505	<0.001		0.02
96-365 505-510	<0.001		0.02
96-365 510-515	<0.001	<0.001	0.02
96-365 515-520	<0.001		0.02
96-365 520-525	<0.001		0.02
96-365 525-530	<0.001		0.02
96-365 530-535	<0.001		0.02
96-365 535-540	<0.001		0.02
96-365 540-545	<0.001		0.02
96-365 545-550	<0.001		<0.02
96-365 550-555	<0.001		0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP037791

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CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 96-365

REPORTED : 5 APR 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-365 555-560	<0.001		0.02
96-365 560-565	<0.001		0.02
96-365 565-570	<0.001		<0.02
96-365 570-575	<0.001		<0.02
96-365 575-580	<0.001		<0.02
96-365 580-585	<0.001	<0.001	<0.02
96-365 585-590	<0.001		<0.02
96-365 590-595	<0.001		0.02
96-365 595-600	<0.001		0.02
96-365 600-605	<0.001		0.02
96-365 605-610	<0.001		0.02
96-365 610-615	<0.001		0.02
96-365 615-620	<0.001		0.02
96-365 620-625	<0.001		0.02
96-365 625-630	<0.001		0.02
96-365 630-635	<0.001		0.02
96-365 635-640	<0.001		0.02
96-365 640-645	<0.001		0.02
96-365 645-650	<0.001		0.02
96-365 650-655	<0.001		0.02
96-365 655-660	<0.001		0.02
96-365 660-665	<0.001		0.05
96-365 665-670	<0.001		0.05
96-365 670-675	<0.001		0.05
96-365 675-680	<0.001		0.06

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REPORTED : 5 APR 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-365 680-685	<0.001		0.04
96-365 685-690	<0.001		0.04
96-365 690-695	<0.001		0.03
96-365 695-700	<0.001		0.04
96-365 700-705	<0.001		0.02
96-365 705-710	<0.001		0.02
96-365 710-715	<0.001		0.02
96-365 715-720	<0.001		0.02
96-365 720-725	<0.001		0.02
96-365 725-730	<0.001		0.02
96-365 730-735	<0.001		0.02
96-365 735-740	<0.001		0.02
96-365 740-745	<0.001		0.02
96-365 745-750	<0.001		0.02
96-365 750-755	<0.001		0.02
96-365 755-760	<0.001		0.02
96-365 760-765	0.004		0.02
96-365 765-770	0.003		0.02
96-365 770-775	0.001		<0.02
96-365 775-780	<0.001		0.02
96-365 780-785	<0.001	<0.001	0.02
96-365 785-790	<0.001		0.02
96-365 790-795	<0.001		<0.02
96-365 795-800	<0.001		<0.02
96-365 800-805	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

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REFERENCE : 96-365

REPORTED : 5 APR 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-365 805-810	<0.001		<0.02
96-365 810-815	<0.001		<0.02
96-365 815-820	<0.001		<0.02
96-365 820-825	<0.001		<0.02
96-365 825-830	<0.001		0.02
96-365 830-835	<0.001		0.02
96-365 835-840	<0.001		0.02
96-365 840-845	<0.001		0.02
96-365 845-850	<0.001		0.02
96-365 850-855	<0.001		0.02
96-365 855-860	<0.001		<0.02
96-365 860-865	<0.001		<0.02
96-365 865-870	<0.001		0.02
96-365 870-875	<0.001		0.02
96-365 875-880	<0.001		0.02
96-365 880-885	<0.001		0.02
96-365 885-890	<0.001		<0.02
96-365 890-895	<0.001		<0.02
96-365 895-900	<0.001		0.02
96-365 900-905	<0.001		0.02
96-365 905-910	<0.001		0.02
96-365 910-915	<0.001		0.02
96-365 915-920	<0.001		0.02
96-365 920-925	<0.001		0.02
96-365 925-930	<0.001		0.02

AMERICAN ASSAY LABORATORIES

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PROJECT : ROSEBUD
REFERENCE : 96-365

REPORTED : 5 APR 1996

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
96-365 930-935	<0.001		0.02
96-365 935-940	0.004		0.08
96-365 940-945	0.040	0.050	0.20
96-365 945-950	0.002		0.04

WELNMAV
ELKO, NEVADA

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

****
* HECLA *
****

JOB NUMBER: 29-0588-311

WELL NAME: 96-365

LOCATION: ROSEBUD PROJECT

SURVEY DATE: 03/27/96

SURVEY ENGINEER: VERN REID

GYRO REFERENCE BEARING: 166.00

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

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

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

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

WELNMAV
ELKO, NEVADA

JOB NUMBER: 29-0588-311 WELL NAME: 96-365

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	-51.44	139.98	0.00 N	0.00 E	0.00		0.00	AT 000.00
50.0	38.96	31.00	-4.576	-50.91	142.93	24.51 S	19.52 E	3.85	1.92	31.34	AT 141.46
100.0	78.32	61.59	-8.382	-52.97	142.60	49.05 S	38.17 E	4.14	2.07	62.16	AT 142.11
150.0	118.62	90.94	-12.183	-54.44	142.36	72.53 S	56.20 E	2.95	1.48	91.75	AT 142.23
200.0	159.65	119.28	-15.780	-55.87	142.90	95.23 S	73.54 E	2.93	1.46	120.32	AT 142.32
250.0	201.53	146.42	-18.925	-57.88	143.62	117.12 S	89.89 E	4.09	2.05	147.64	AT 142.50
300.0	244.23	172.31	-21.455	-59.42	144.97	138.24 S	105.07 E	3.39	1.69	173.64	AT 142.76
350.0	287.54	197.20	-23.505	-60.64	145.34	158.74 S	119.34 E	2.47	1.23	198.60	AT 143.06
400.0	331.47	221.02	-25.065	-62.31	146.93	178.56 S	132.66 E	3.67	1.83	222.44	AT 143.39
450.0	376.02	243.71	-25.876	-63.68	148.74	197.77 S	144.75 E	3.20	1.60	245.08	AT 143.80
500.0	421.10	265.32	-26.129	-65.10	149.66	216.33 S	155.82 E	2.95	1.48	266.60	AT 144.24
550.0	466.61	286.02	-25.505	-65.94	153.57	234.54 S	165.67 E	3.65	1.82	287.15	AT 144.76
600.0	511.85	307.24	-23.871	-63.67	154.90	253.71 S	174.91 E	4.68	2.34	308.16	AT 145.42
650.0	556.53	329.56	-21.591	-62.99	156.46	274.16 S	184.15 E	1.96	0.98	330.27	AT 146.11
700.0	600.70	352.81	-18.596	-61.09	157.90	295.77 S	193.23 E	4.03	2.01	353.30	AT 146.84
750.0	644.35	376.93	-15.144	-60.57	158.11	318.37 S	202.36 E	1.06	0.53	377.24	AT 147.56
800.0	687.82	401.29	-10.974	-60.19	161.03	341.52 S	210.98 E	2.98	1.49	401.44	AT 148.29
850.0	730.88	426.18	-5.849	-58.70	161.94	365.62 S	219.05 E	3.12	1.56	426.22	AT 149.07
900.0	773.53	451.60	0.022	-58.38	163.77	390.56 S	226.74 E	2.02	1.01	451.60	AT 149.86

```
*************************************************************
*                         ********                          *
*      THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF          *
*                         ********                          *
*   900.0 FEET EQUALS    451.60    FEET AT   149.86         *
*                         ********                          *
*************************************************************
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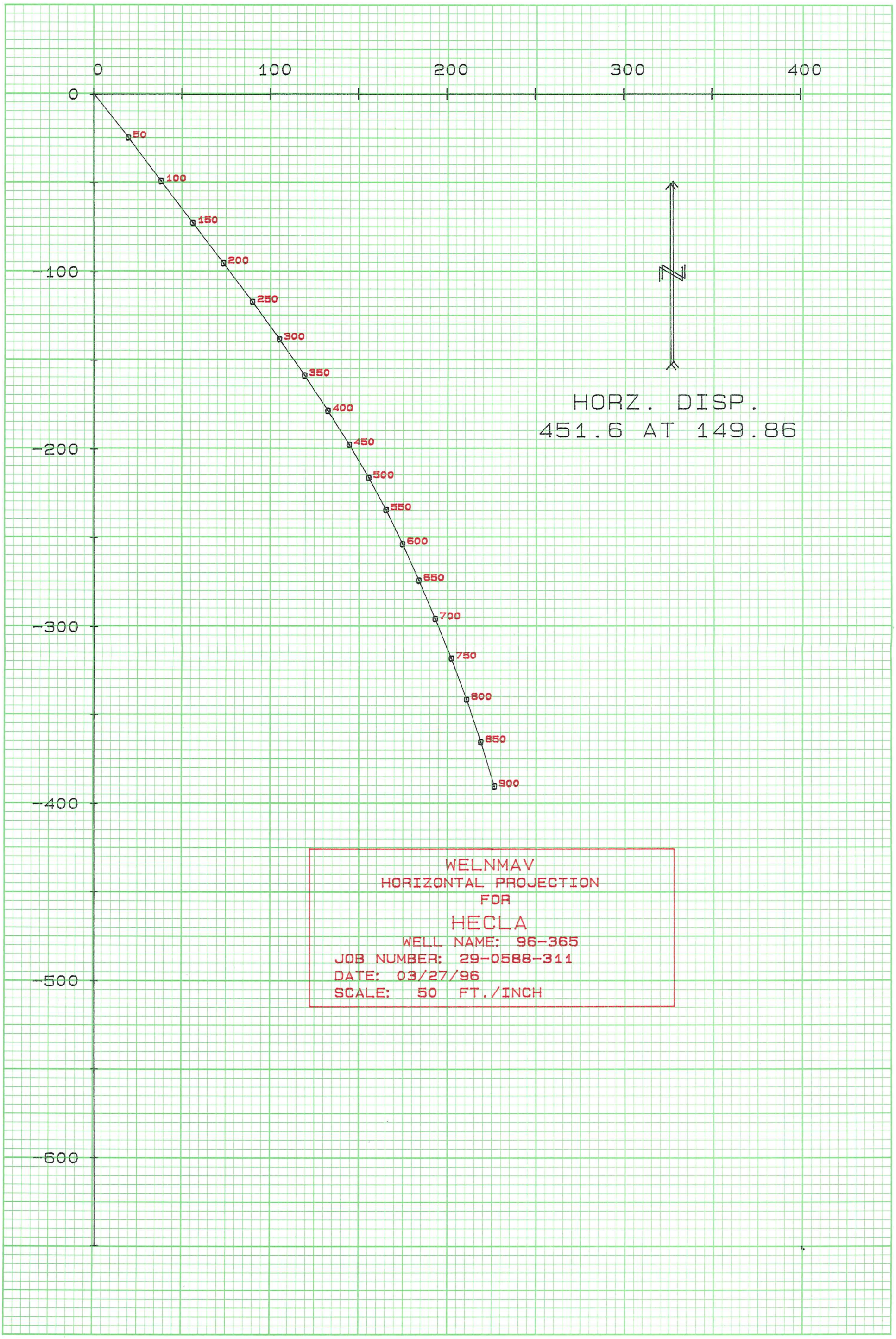
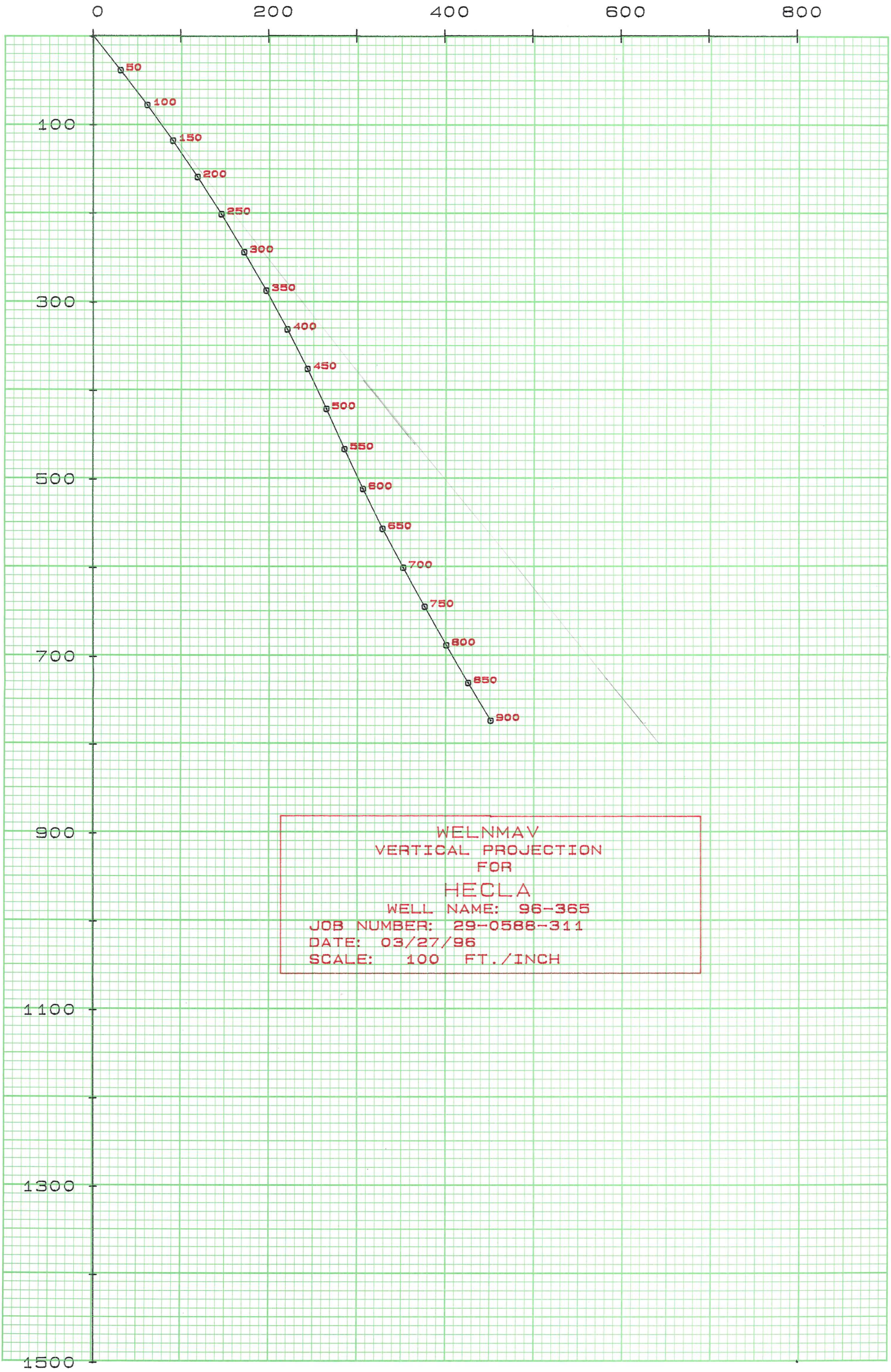
CK PRINTING CENTER (801) 467-2841



CK PRINTING CENTER (801) 467-2841