

## Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY	Pershing
If different from written on document	
TITLE	Rosebud Dr. II Hole File - Drill Hole RS-500
If not obvious	
AUTHOR	V. Reid, D. Schoenl
DATE OF DOC(S)	2000
MULTI_DIST Y / N?	N
Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Gator; Hecla Mining Co.
COMMODITY	gold; silver
If not obvious	
NOTES	directional survey; total depth 1025' 1 floppy disk  NOTE: Do not have program to open data on floppy disk  NOTE: Scan envelope  Ap. 6 1 floppy disk

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)

Revised: 1/22/08

SS: DD 6/5/08  
Initials Date  
DB: Mch 7/08  
Initials Date  
SCANNED: NV Blue  
Initials Date

60001696 4010

Attn: Pete

RS-500

2,219, 519-N  
480, 000-IE  
5725-EI

in database

CRM 6/13

60001696

WELLBORE NAVIGATION, INC.  
WINNEMUCCA, NEVADA

GYROSCOPIC DIRECTIONAL SURVEY  
BY MINIMUM CURVATURE

FOR

\* \* \* \* \*  
\* HECLA MINING COMPANY \*  
\* \* \* \* \*

JOB NUMBER: 29-0588-311

WELL NAME: RS-500

LOCATION: GATOR

SURVEY DATE: 06/09/2000

SURVEY ENGINEER: VERN REID

GYRO REFERENCE BEARING: TRUE NORTH

TIE-ON COORDINATES AT: O.M.D.

TAKEN FROM: COLLAR

VERTICAL SECTION CALCULATED IN A  
PROPOSAL DIRECTION OF: 000.00

WATER CONTACT= 191'

DEPTH MEASURED IN FEET

COMMENTS: EKLUND  
DON SCHOORL

\* \* \* \* \* THIS DIRECTIONAL SURVEY REPORT IS \* \* \* \* \*

\* \* \* \* \* CORRECT TO THE BEST OF MY KNOWLEDGE \* \* \* \* \*

\* \* \* \* \* AND IS SUPPORTED BY ACTUAL FIELD DATA! \* \* \* \* \*

\* \* \* \* \*

\* \* \* \* \* COMPANY REPRESENTATIVE \* \* \* \* \*

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WELLCORE NAVIGATION, INC.  
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311

WELL NAME: RG-500

INRUN SURVEY  
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R PROP.	INCL HORZ	BEARING AZIMUTH	COORDINATES LATITUDE	DEPARTURE	D-LEG /100	D-LEG /CL	STATION DISPLACEMENT	TEMP. DIRECTION DEG F
0.0	0.00	0.00	0.000	-89.45	275.22	0.00 N	0.00 E	0.00		0.00 AT 000.00	
50.0	49.99	-0.58	-0.532	-88.46	205.83	0.58 S	0.53 W	2.88	1.44	0.79 AT 222.37	081.27
100.0	99.97	-1.86	-1.525	-87.77	226.07	1.86 S	1.53 W	1.90	0.95	2.41 AT 219.31	080.48
150.0	149.91	-3.45	-3.336	-86.71	230.67	3.45 S	3.34 W	2.16	1.08	4.80 AT 224.06	079.71
200.0	199.83	-5.18	-5.602	-86.75	234.67	5.18 S	5.60 W	0.46	0.23	7.63 AT 227.26	069.41
250.0	249.74	-6.94	-7.912	-86.58	230.73	6.94 S	7.91 W	0.57	0.29	10.52 AT 228.75	069.62
300.0	299.67	-8.53	-10.074	-87.25	237.12	8.53 S	10.07 W	1.50	0.75	13.20 AT 229.73	070.27
350.0	349.62	-9.88	-11.818	-87.68	226.71	9.88 S	11.82 W	1.26	0.63	15.40 AT 230.11	070.67
400.0	399.59	-10.81	-13.102	-88.63	246.23	10.81 S	13.10 W	2.25	1.13	16.99 AT 230.46	070.93
450.0	449.58	-11.55	-13.981	-88.64	214.07	11.55 S	13.98 W	1.51	0.76	18.13 AT 230.45	071.11
500.0	499.57	-12.33	-14.642	-88.99	228.15	12.33 S	14.64 W	0.91	0.45	19.14 AT 229.89	071.03
550.0	549.56	-12.99	-15.333	-88.82	224.79	12.99 S	15.33 W	0.36	0.18	20.10 AT 229.72	071.14
600.0	599.55	-13.41	-15.935	-89.44	258.74	13.41 S	15.94 W	1.56	0.78	20.82 AT 229.93	071.09
650.0	649.55	-13.08	-16.399	-89.00	329.12	13.08 S	16.40 W	1.94	0.97	20.98 AT 231.43	071.21
700.0	699.53	-11.92	-16.934	-88.07	338.29	11.92 S	16.93 W	1.91	0.96	20.71 AT 234.86	071.32
750.0	749.50	-10.38	-17.712	-87.96	328.38	10.38 S	17.71 W	0.72	0.36	20.53 AT 239.62	071.47
800.0	799.48	-9.28	-18.975	-88.01	293.52	9.28 S	18.98 W	2.42	1.21	21.12 AT 243.95	071.47
850.0	849.44	-9.00	-20.728	-87.80	265.59	9.00 S	20.73 W	2.06	1.03	22.60 AT 246.52	071.65
900.0	899.41	-9.62	-22.447	-87.86	234.74	9.62 S	22.45 W	2.31	1.16	24.42 AT 246.81	071.68
950.0	949.37	-10.59	-24.188	-87.55	246.25	10.59 S	24.19 W	1.11	0.55	26.40 AT 246.36	071.91
1000.0	999.31	-11.78	-26.382	-86.71	237.96	11.78 S	26.38 W	1.87	0.93	28.89 AT 245.94	072.92
1025.0	1024.26	-12.57	-27.583	-86.70	235.43	12.57 S	27.58 W	0.58	0.15	30.31 AT 245.51	074.07

THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF  
1025.0 FEET EQUALS 30.31 FEET AT 245.51

-1200

-1000

-800

-600

-400

-200

0

1025 1025 1025  
600 600 600

0

0

0

200

400

600

800

WELLBORE NAVIGATION, INC.  
HORIZONTAL PROJECTION  
FOR  
HECLA MINING COMPANY  
WELL NAME: RS-500  
JOB NUMBER: 29-0588-311  
DATE: 06/09/2000  
SCALE: 100 FT./INCH



HORZ. DISP.  
30.31 AT 245.51

-800

-600

-400

-200

0

WELLBORE NAVIGATION, INC.  
VERTICAL PROJECTION

FOR

HECLA MINING COMPANY

WELL NAME: RS-500  
JOB NUMBER: 29-0588-311  
DATE: 06/09/2000  
SCALE: 100 FT./INCH

650

8400 100

8150

8200

8250

8300 300

8350

8400

8450

8500 500

8550

8600

8650

8700 700

8750

8800

8850

8900 900

8950

9000

9025

1100

1300