6000 1679

Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Report on Geologic Consulting Visit to the Rosebud Mine, Nevada; January 2000
AUTHOR	J. Proffett; K. Allen
DATE OF DOC(S)	2000
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Rosebud Mining Co.; NW Corridor; Dreamland; North Equinox; South Wild Rose; Wild Rose; Proffett Exploration, Inc
COMMODITY If not obvious	gold; silver
NOTES	Property report: geology; correspondence; receipt 10p. 12

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 6/4/08
Initials Date

DB: [illegible] 7/08
Initials Date

SCANNED: NV Rec
Initials Date

Revised: 1/22/08

JOHN PROFFETT

6000 1679 4010

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PROFFETT EXPLORATION INC.

P. O. BOX 772066
EAGLE RIVER, ALASKA 99577 USA
(907) 696 5480; FAX: (907) 696 5481
E-mail: proffettak@aol.com

January 14, 2000

Kurt Allen, Chief Geologist
Rosebud Mining Company
P. O. Box 2610
Winnemucca, NV 89446

Dear Kurt,

Enclosed is a brief report on my visit to Rosebud, and an invoice for fees and expenses. There are two copies of the report; one is not stapled so that you can make extra copies.

I enjoyed meeting you and the other geologists at Rosebud, and the visit was interesting and informative for me. I hope our paths will cross again sometime. Best of luck with your exploration program.

Best Regards,

John M. Proffett

REPORT ON GEOLOGIC CONSULTING VISIT TO THE ROSEBUD MINE, NEVADA

by John M. Proffett, P. O. Box 772066, Eagle River, AK 99577
January, 2000

Two days were spent at Hecla's Rosebud project to review the geology and exploration efforts in and around the Rosebud Mine and in the surrounding district. Particular attention was directed toward the geologic structure and it's effect on exploration. In this short time it was only possible to gain impressions, which are discussed briefly below.

Structure

Structure in the Rosebud district is dominated by a moderately southeast dipping section of Tertiary volcanic and sedimentary rocks that are displaced by several northwest dipping normal faults.

Displacement Direction: In addition to the apparent normal displacement of stratigraphic units across these faults, there are several other lines of evidence that suggest dominantly hangingwall-to-the-northwest displacement. 1) NW trending slickensides are dominant on fault surfaces. 2) Bends in fault plane surfaces trend dominantly NW. This is shown particularly well for the South Ridge Fault in the Mine, where the fault appears very planar along N55W cross sections, but has several bends when viewed on N35E cross sections. These bends are like large scale mullions or slickensides, and in districts where independent evidence for displacement is available (such as Yerington, NV), the axes of the bends are parallel to the displacement direction. 3) Veinlets that fill what appear to be tension fractures in the ore zones near the South Ridge Fault strike NE and dip steeply, consistent with displacement of hangingwall to the northwest for the fault.

No evidence for or against a significant component of strike slip displacement along any of the faults was observed during the visit.

Ultimately, the only criteria which are truly reliable indicators of displacement direction are geologic features that have been displaced across the fault. In a volcanic terrane such as this, trends of lines of pinchouts of units, intersections of dikes with stratigraphic units, or intersections of intrusive or dome contacts with stratigraphic units are examples of possible features that might be useful for this purpose. Geologic surface mapping of rock units, together with drill hole and underground data is necessary to make use of such features.

Style of Faulting: Although variable in detail, the overall amount and direction of tilting seems to be fairly consistently moderate to the SE or ESE across the district, from the Rosebud Mine area on the southeast to the Wild Rose area and Crofoot-Lewis Mine on the NW. Several NW dipping normal faults are distributed across this

area, the larger of which dip 25° - 40° NW. Such a geometry is more consistent with an origin for the faults as originally more steeply dipping normal faults that have been flattened somewhat during deformation by the SE tilting, rather than a "detachment" style geometry. The nearly planar geometry of faults as interpreted on N55W sections also supports such an origin, rather than a strongly "listric" style.

An origin for the faults as originally more steeply dipping, and then flattened by SE tilting, is a style that is quite common throughout the Basin and Range province, although in a number of areas such faults have been misinterpreted as detachment style faults, or faults with a strongly listric geometry. Such a style of faulting is consistent with Hecla's revised interpretation for sections through the mine and to the northwest (Northwest Corridor), that deep intercepts of the Mesozoic basement lie beneath a tilted unconformity displaced by up to three subparallel faults, rather than a single South Ridge Fault that flattens strongly with depth.

Exploration

The clear role of structural control of ore at the mine, primarily along the South Ridge Fault, and secondarily at it's intersection with steep fractures and at a bend in the fault plane, indicates that Hecla's current emphasis on structurally defined targets is justified. Examples of such targets that were reviewed during the visit are discussed below.

NW Corridor: Defined by the intersection of the South Ridge Fault with several other structures, as well as by the trend of the East and North ore zones, this target zone trends NW from the mine at depth. As a trend that contains known orebodies it should certainly receive additional emphasis, and the current interpretation of three moderately NW dipping normal faults (YK, Cave and South Ridge) along this trend, rather than only the South Ridge Fault, provides additional targets.

Dreamland: The targets here are the intersection between several steep east - west veins and the moderately NW dipping YK, Cave and South Ridge faults. The past production from the east - west veins provide a strong "geochemical anomaly" that makes this an attractive target area. Drill holes should be targeted with consideration for the location of each of the specific NW dipping faults, and each of the east - west veins, as well as consideration of projection of ore shoots on the veins and location of favorable stratigraphic units.

North Equinox: A large zone of silicification and strong alteration trends approximately east - west across this area. Tabular breccia zones and slickensided surfaces observed within this zone suggest that it dips steeply south. On the east it is truncated by a 25° - 30° west dipping fault (ZZ fault?) and to the west it appears to be truncated by another gently to moderately west-dipping fault. Both west dipping faults have silicification and alteration along them, and both intersection zones between the east - west structure and the west dipping faults appear to be characterized by wider

alteration zones. Exploration targets may occur down plunge along either or both intersection zones, and should be evaluated by selective close space surface samples, and by mapping in order to locate and project rock units that may contain favorable lithologies.

South Wild Rose: The Lizard Fault immediately south of Wild Rose Canyon shows very little alteration, but alteration and silicification appear where this fault crosses the ridge just to the south. This location corresponds with the projected intersection between the Lizard Fault and what appears to be a NNW - dipping fault that was observed a few hundred feet to the southwest. This latter fault exposure consists of up to a few feet of silicified breccia with slickenside surfaces and a few tens of feet of argillic alteration. It has apparently only been sparsely sampled, and a parallel structure, a few hundred feet to the west - northwest appears to have been sampled little if at all. Additional selective sampling should be done on these structures, and especially in the intersection area with the Lizard Fault, and the down - plunge projection of the intersection area should be evaluated with regard to the presence of possibly favorable rock units.

Wild Rose: Several targets are in the process of being evaluated in this area. The current drill hole (as of January 7 & 8, 2000) is targeted toward the intersection of several steep NE - striking fractures with some gently to moderately W to NW dipping faults.

The deepest of the targeted gently to moderately dipping faults is the Lizard Fault. The Lizard Fault exposures east of the present drill area strike N55E and dip 36NW, whereas the Lizard Fault exposures just south of Wild Rose Canyon strike N12W and dip 28SW. It was not possible during the visit to determine if these exposures are really the same fault strand. If they are, there must be a considerable change of orientation (55°) between the two locations, which might represent a locus of mineralization similar to that along the South Ridge Fault in the mine that coincides with the East and North ore zones. If they are not the same fault strand, then there could be an intersection between them that might also represent a target.

The relatively large zone of strong alteration in the current target area at Wild Rose also enhances it's potential. However targets with weaker or more restricted alteration should not be ignored, since alteration around some of the ore in the mine, particularly in the South Zone, can be quite narrow.

WNW Structures: Some steeply to moderately dipping WNW trending structures were observed, such as just east of the current drill location at Wild Rose. Such structures could represent "transfer" faults, that accommodate different amounts of displacement on different parts of gently to moderately dipping faults. Their intersection with gently to moderately dipping faults could represent structural targets.

Geologic Mapping: An important part of the geologic mapping of use in defining

structural targets is of course the accurate measurement and recording of fault and fracture exposures. In addition to this, especially where poor exposures make correlation of structures between outcrops difficult, and where differences in orientation of structures are common, it is important to identify and map rock units on either side of the faults. This not only aids in estimating the magnitude of displacement on faults, but in identifying various fault-bound blocks and thereby helping to correlate fault exposures. To this end, a well documented stratigraphic section together with documentation of lateral variations is a valuable aid to structural mapping.

Geochemical Sampling: The Rosebud district has been well covered by a geochemical sampling grid, which has been augmented by additional rock chip samples of selected mineralized outcrops. However more detailed selective sampling in certain altered and mineralized zones, such as structural intersections like those mentioned above (North Equinox, South Wild Rose, etc.) could be very helpful in defining targets. These should be rock chip samples of the various types of alteration and mineralized structures present where outcrops occur, but could be close spaced soil samples where there is no outcrop. The restriction of much of the precious metal values to thin fractures and veinlets in the ore zones of the Rosebud Mine illustrates the importance of detailed sampling of even very thin individual structures.

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January 14, 2000

Kurt Allen, Chief Geologist
Rosebud Mining Company
P. O. Box 2610
Winnemucca, NV 89446

INVOICE

Geological Consulting Fees for John M. Proffett at the Rosebud, NV project are as follows:

Time Period 2000	Days of work	Location	Activities, projects	Fees (US$ 400/day)
Jan 6	0.5		Travel at 1/2 time	$100.00
Jan 7, 8	2	Rosebud	Review structure and exploration	$800.00
Jan 9	0.5		Travel at 1/2 time	$100.00
Jan 14	1	Eagle River, AK	Report preparation	$400.00
Total days	4	days	January 6 - 14, 2000	$1400.00
EXPENSES:				$US
Jan 6 - 9, 2000		Accounting and receipts attached		$958.25
Jan 6 - 14, 2000			TOTAL FEES + EXPENSES ($US)	$2358.25

Please send a check for the amount, $2358.25, made out to **Proffett Exploration Inc.**, to **P. O. Box 772066, Eagle River, Alaska, 99577**. Should you need the Employer Identification Number (EIN) of Proffett Exploration Inc. for tax purposes, it is 92 - 0078371.

Thank you very much,

John M. Proffett

86-2524-858
KAA