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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: LILLY, SAGUARO & EMPIRE MINES

ALTERNATE NAMES:
PALO VERDE I & II

PIMA COUNTY MILS NUMBER: 151

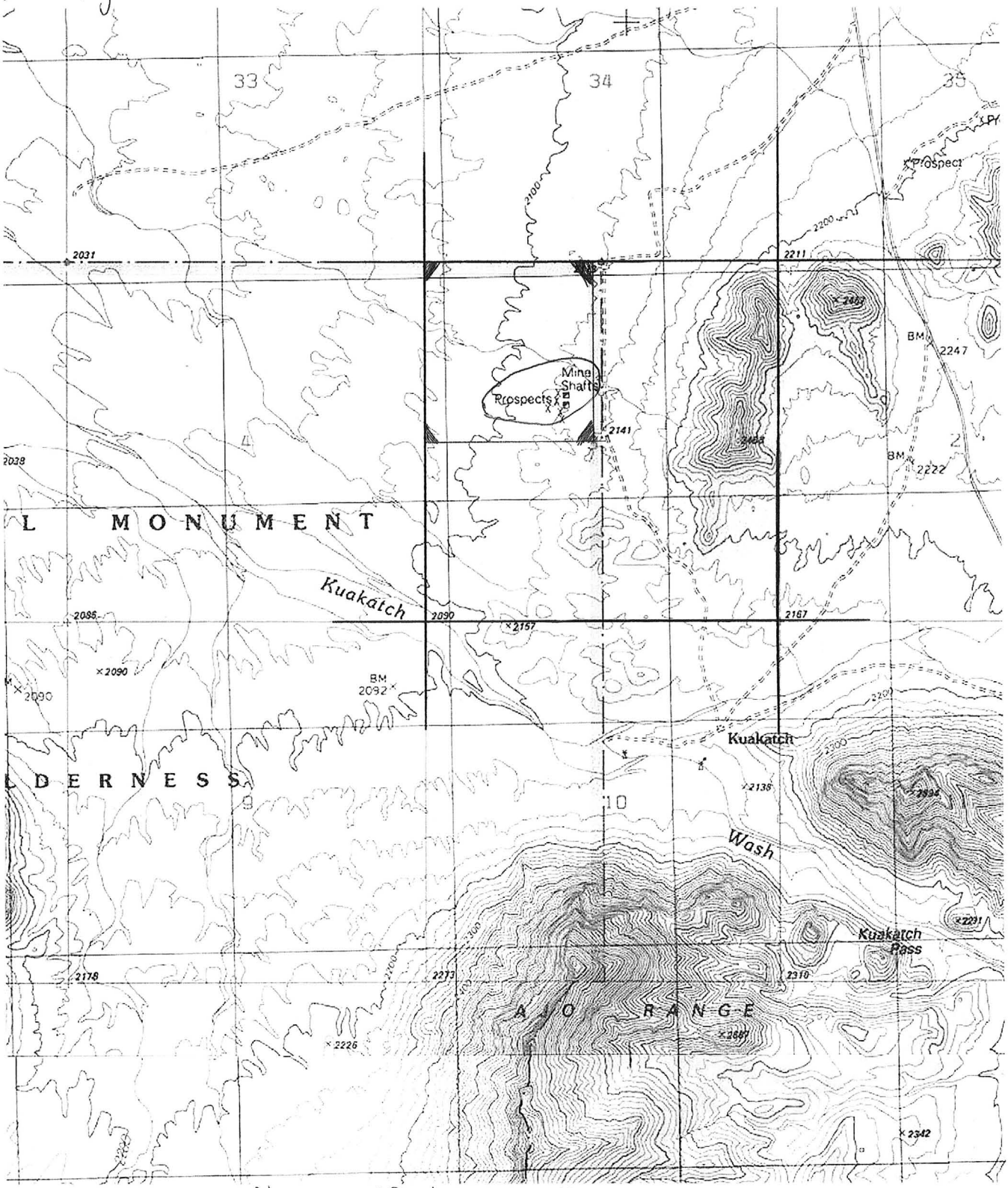
LOCATION: TOWNSHIP 15 S RANGE 4 W SECTION 3 QUARTER NW
LATITUDE: N 32DEG 09MIN 03SEC LONGITUDE: W 112DEG 40MIN 09SEC
TOPO MAP NAME: MT AJO - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
GOLD LODE
SILVER

BIBLIOGRAPHY:
S.B. KEITH, AZBM BULL. 189, P. 122, 1974
ADMMR LILLY, SAGUARO & EMPIRE MINES FILE

Mt Ajo -15 min



N32 09' 03" W113 40' 09"

Lilly, Saguaro & Empire Mines

ArcGIS -

PALO VERDE I & II

PIMA
GUNSIGHT DIST.
T15S, R4W, Sec 3

MILS LILLY, SAGUARO, AND EMPIRE MINES

Accompanied Walt Koller to the Palo Verde Au claims of Bessie Burnham, Ajo widow. They are unpatented in T15S, R4W in the Organ Pipe Cactus National Monument. Here are several 4"-10" veins of Au-quartz in a gray granite. They all trend NE and dip SE from 40°-50°. The strikes of at least 2 of these veins are such thatthey perhaps intersect beyond the present workings which consist of inclined shafts of various depths up to 50 feet. The most extensive excavation is an open cut 8-10 feet deep, 150 feet long and 20 feet wide from which several car loads of screened ore were shipped to the smelter for flux. There are perhaps 300 tons of -¼" screenings remaining. This open cut work was done in 1961; the claims were staked in April, 1956. The claims are readily accessible and are about 3 miles south of the old Gunsight Pb-Ag mine; there is very little relief. GW WR 4/18/73

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Palo Verde Claims Date May 9, 1961

District Gunsight Hills, Pima Co. Engineer Lewis A. Smith

Subject: Mine Visit by Lewis A. Smith and W.G. Burnham of Ajo.

Since the last report was written two bulldozer cuts were made 60 to 80 feet east of the two shafts. These disclosed a quartz vein which is approximately 4 feet wide and was traceable in intermittent outcrops for several hundred feet. It strikes variably in a general N 10° W direction, but has been offset in at least 3 places a few feet east or west. The offsetting faults were not strong. The vein terminates, to the south, against a strong fault. The vein quartz was dragged westward, an undetermined distance. The area to the west is heavily covered by detrital material. The main bulldozer cuts exposed the vein for a length of about 100 feet and the maximum depth of the cut was about 10 feet. The cut at one place was 20 feet wide, but the average would be somewhat less. The vein is white quartz and the hanging wall has about 1 foot of heavy limonite stain and blebs. This portion appears to be the main gold-bearing area. A much narrower red hematite stained footwall band of gouge may also have some gold. The dip is steep to the west. The small mill, which was on the Tom Jones claims, was moved out to this property two months ago and was run, producing a pile of 1/8-1/4 inch screenings, which were reported to have some gold in them. These were to be wet concentrated, but the well went dry. A drilled well reached water, but it rapidly silted-up. Whether these people plan further work, is seriously questioned by Burnham.

The second vein lies 75-90 feet west of the bulldozer cuts. It strikes N-S and dips 55 degrees east. Two open 35 foot shafts (inclined to the east) disclosed about 24 to 30 inches of red stained quartz which assayed around $30.00 in gold. The vein changes dip at the bottom of the shafts, where it encounters a fault or another quartz vein. The apparent dip there steepened to 60 degrees. The distance between the veins to the south appears to increase. It would then seem logical that further prospecting would best be done toward the north or the projected vein intersection. The two quartz veins are crossed by an E-W shear which is also mineralized. This shear's age with respect to the veins was not clear, but did not appear to offset them. The country rock in the immediate vicinity is a biotite-monzonite, cut in places by andesite porphyry or felsite dikes (this could be aplite). The area locally contains some granite. The felsite and andesite dikes appear to be roughly parallel and generally strike EW. The previously mentioned shear apparently is close to one of the felsite (aplite?) dikes. The monzonite is little altered near the veins. Chloritization is present along the vein walls. A wide felsite dike a thousand feet south of the shafts forms a prominent ridge which has about 50 to 60 feet of relief above the surrounding areas. Neither of the Palo Verde veins crossed this where they should have along the vein strikes. It was therefore presumed that the previously mentioned intervening fault had offset the veins far to the west. Some scattered patches of intrusive andesite porphyry were seen west of the veins. The main Little Ajo mountains immediately south are composed of Tertiary volcanics, which dip about 35-40 degrees to the east, but are extensively faulted. In each block the flows dip differently with respect to the adjacent blocks.

Mr. Burnham wants to get someone to drill the vein intersection area.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Palo Verde I & II Date March 7, 1961

District Gunsight Hills, Pima Co. Engineer Lewis A. Smith

Subject: Interview with W. G. Burnham

Claims: 2 unpatented

Owners: W. G. Burnham and Charles Anderson, both of Ajo. (Burnham's address is P.O. Box 742, Ajo.)

Work: One shaft 60 feet deep and some lateral work near the bottom of the shaft. (The latter is now inaccessible.) Several shallow cuts and pits are also present.

Minerals: Gold

Geology: The deposit lies in a coarse, more or less graphic, granitic rock related to that in which the Gunsight mine lies. The rock at the Gunsight is similar to monzonite. The gangue is essentially quartz with some barite. (Gunsight gangue was mainly barite.) Two veins were located, both of which trend north-south. One, the east vein, is nearly vertical while the second dips flatly to the east. A number of fractures cross these veins, but none appear to have offset the veins appreciably. Mr. Burnham thinks they are pre-mineral. He wishes to sink to the intersection of the veins. This intersection may pitch downward flatly to the north or south. The gold tends to be concentrated near to these cross fractures. The specimens indicated the presence of some calcite. The monzonite (?) intrudes pre-Cambrian schists which are dark in color. To the south the older formations are capped by andesite, rhyolite and basalt, in this order, from bottom to top. This flow series comprises the Little Ajo mountains to the south and much of the Pozo Redondo mountains to the north. The west face of both ranges is formed by a group of roughly parallel major step faults. The downdrop of these faults accumulatively is estimated at about 1200 to 1500 feet. (Phelps Dodge drilling on the Knox property west of the fault indicates about 1500 feet in three steps.) The downthrow is to the west of these faults.) It is believed by some that this fault system forms the east border of a wide graben structure which extends over to the component fault system, (the Growler fault) which forms the east face of the Growler, Dripping Springs and Puerto Blanco ranges. The Growler fault's downthrow is to the east of the ranges. The two fault systems vary from 15 to 25 miles apart. The Palo Verde claims are east of the Graham faults (about 2-2½ miles). The vein fractures are believed to be earlier, at least in their inception than the graben faults which may have taken most of the Tertiary to reach their present status since the early Tertiary andesite, the mid-Tertiary rhyolites and late Tertiary basalts have all been offset by it. The Palo Verde veins have not up to now been traced to the volcanics so that their age has not been established with respect to them. However, the monzonite (?) intrusive is reported to cut the lower part of the andesite flows in one place which would date it as earlier than the upper andesites and the later flows, but most probably in the same epoch which produced the andesitic flows. However, the monzonite (?) intrusives are not wide spread in this area and contact relations are difficult to find. At Ajo, which

lies well within the probable graben structure, the monzonite is more wide spread and has been tentatively dated by Gilluly as earliest Tertiary or late Cretaceous (Laramide). Here it is later than part of the early Tertiary volcanics which it domes. At Ajo two separate monzonites are mapped but the relationship between these is not definitely known although they may be differentiates of the same magma as they are of about the same general age. Therefore, it would seem useful to get some sort of correlation petrographically between the monzonite (?) of the Gunsight Hills and the monzonites of the Ajo area. If reasonable similarity between the two monzonites in the two areas can be shown, then the area in the Gunsight Hills could be of more future interest than is now the case. The monzonites at Ajo are, at least, associated with mineralization since they provided the avenues for the entrance of the mineral bearing solutions which in turn mineralized the monzonite.