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THE QUINN PROSPECT
GRAHAM COUNTY, ARIZONA

SOUTHWESTERN DEVELOPMENT CO.

SOUTHWESTERN DEVELOPMENT COMPANY
201 South Lake Avenue
Pasadena, California 91101
(213) 681-0268

April 14, 1971

Mr. Ken Jones
Essex International, Inc.
1704 West Grant Road
Tucson, Arizona 85705

SYM
APR 16 1971
RECEIVED

Dear Mr. Jones;

Southwestern Development Company, owners of the Quinn Prospect, Graham County, Arizona, would like to present for your consideration what we believe is an outstanding Porphyry Copper Prospect.

Therefore, you will find enclosed herewith a report which covers the salient features of this prospect. Following are some of the high-lights:

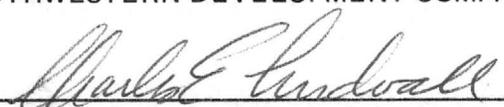
- 1). Copper mineralization within the Quinn Prospect claim block.
- 2). Small mineralized altered intrusive exposed at the edge of Tertiary-Quaternary Alluvium.
- 3). Intensity of mineralization in this intrusive body builds to the westward edge of its exposed portion, wherein lies the bulk of the Quinn Prospect claim block.
- 4). Volcanics, believed to be Cretaceous, which are adjacent to the intrusive, are altered and mineralized.
- 5). The Quinn Prospect falls within the general east-northeast trend embracing copper prospects and ore bodies from Silver Bell to Morenci.

Southwestern Development Company desires to share in a Porphyry Copper discovery. In taking a positive approach toward exploration of the Quinn Prospect, we are offering the property with emphasis on eventual sale price and/or royalties from an amount of exploration dollars being spent directly in the ground.

We will be happy to discuss in greater detail at your convenience, the exploration potential and all other aspects of the Quinn Prospect.

Sincerely yours,

SOUTHWESTERN DEVELOPMENT COMPANY

by: 

Charles E. Lindvall, Geologist

CEL/gh

May 5, 1971

Mr. Charles E. Lindvall
Southwestern Development Co.
201 South Lake Avenue
Pasadena, California 91101

Dear Eric:

Sorry I missed you last week, but I was in the field. While in the field I did get a chance to visit the Quinn Mine.

You have an interesting and well-presented prospect, but I fear it is a bit too much of a wildcat for Essex at this time. It is the sort of showing that many organizations are considering at present, but for the time being Essex is concentrating on situations and properties that might provide copper production at an early date.

We would like to continue to review properties such as this, as our exploration effort probably will continue to expand. I will be seeing some exploration people here in Tucson who are conducting reconnaissance work in the Aravaipa Valley and will mention your claim group to them.

Thanks for thinking of me.

Sincerely yours,

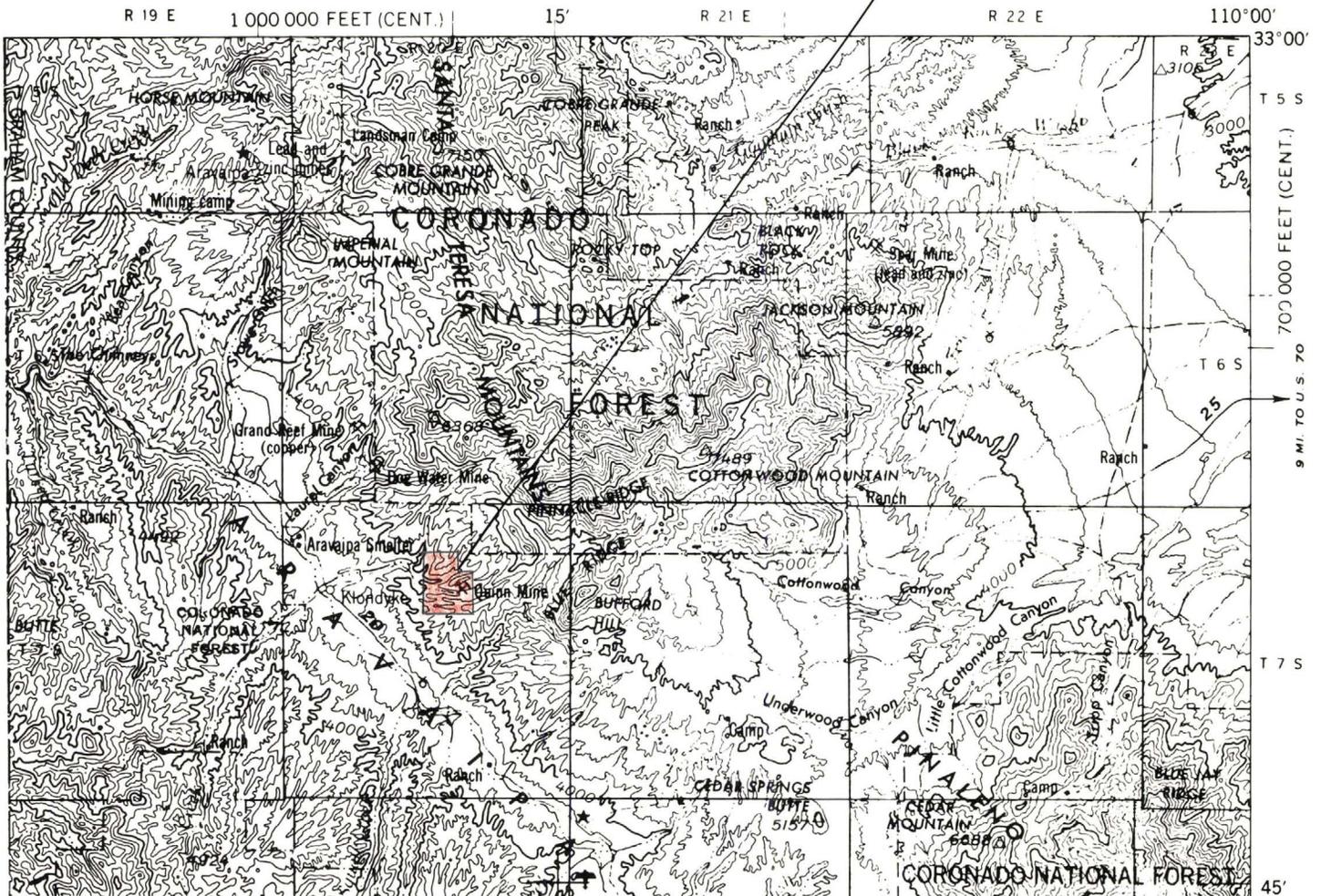
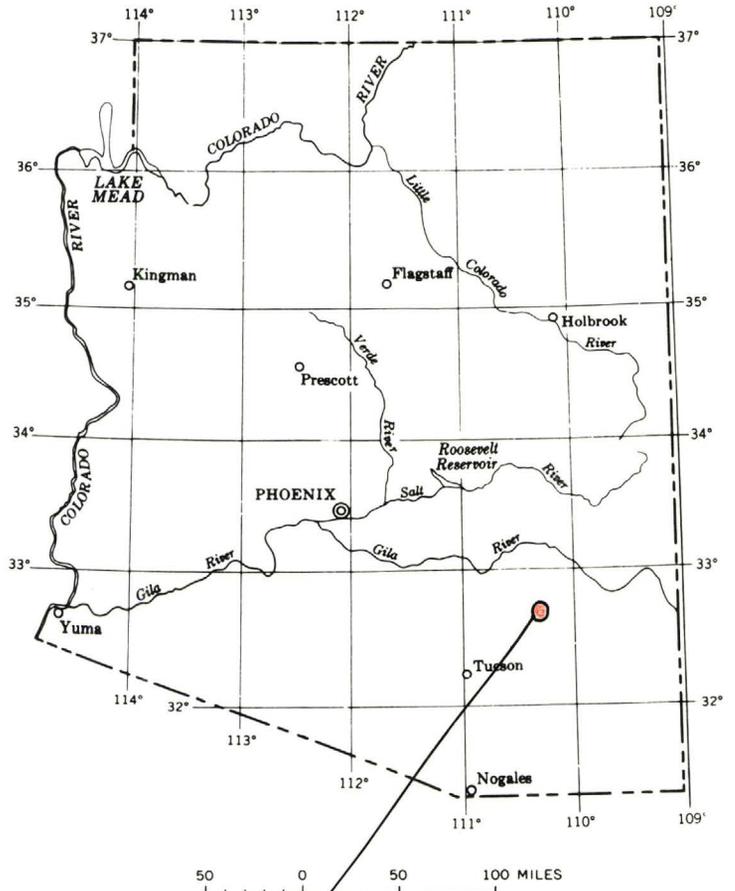
J. K. Jones

JKJ:td

NAME OF PROPERTY: QUINN MINE		NUMBER:
REFERENCES: USGS Bulletin 763 USGS Prof. Paper 461		
PRODUCTION & RESERVES	SAMPLES:	
METALLURGY:	ENGINEERING:	
FACILITIES:	EXPLORATION POSSIBILITIES: No good evidence for a porphyry copper nearby. A wildcat type of prospect in a generally interesting area.	

ADDITIONAL INFORMATION OR SKETCH MAP:

LOCATION MAP



THE QUINN PROSPECT
Graham County, Arizona

LOCATION

The Quinn Prospect is located on the western flank of the Santa Teresa Mountains in Graham County, Arizona approximately three miles east of Klondyke, Arizona. The prospect lies in unsurveyed sections 10, 11, 14, 15, T7S R20E. The claim group is presently reached from either Safford or Willcox and by a ranch road leading off the Aravaipa Valley road about $\frac{3}{4}$ of a mile SE of Klondyke.

MINING HISTORY

The geographic area is considered part of the Aravaipa mining district, which dates from the 1870's. Two copper-silver-lead mines, the Quinn and the Laclede, lie within the Prospect claim block. The Quinn Mine, which lies in unsurveyed section 11 within the claim block, had intermittent lead and copper production up to 1925, according to C.P. Ross (see USGS Bulletin 763). Last recorded production since then, according to F.S. Simons, is an unknown tonnage in 1947 (See USGS Professional Paper 461).

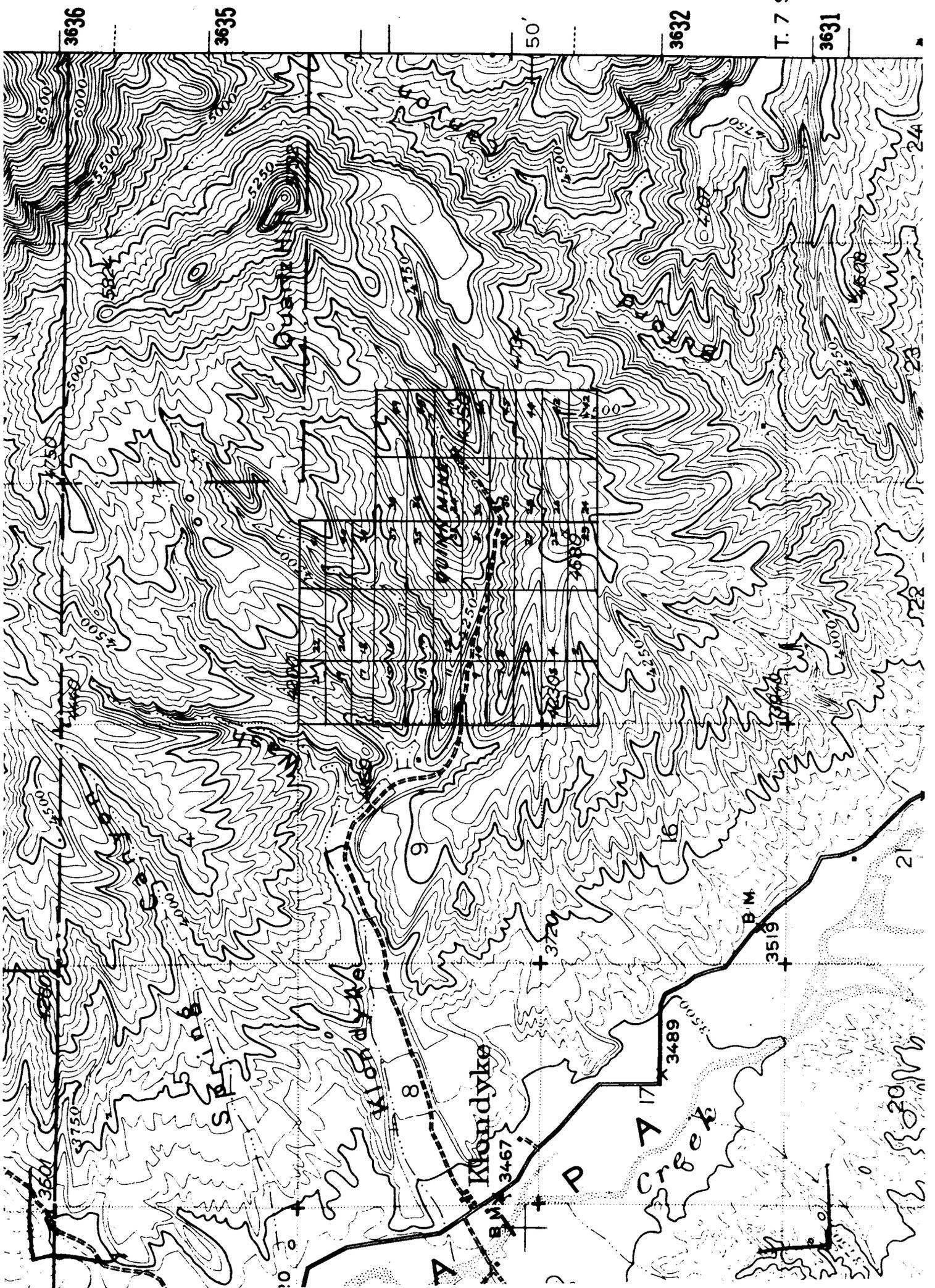
In the north center of unsurveyed section 10 the Laclede Mine is reported to have shipped three carloads of (silver-copper) ore, very rich in silver.

The Grand Reef Mine 4.5 miles to the northwest produced possibly in excess of \$1,000,000 worth of lead, silver and copper ore during its history, which dates to the 1890's.

Numerous small prospect pits on copper stained quartz seams are found in the Precambrian Pinal Schist north and northeast of the property.

LAND STATUS

The Quinn Prospect consists of forty nine (49) contiguous unpatented mining claims. The claims were staked during January 13 through January 18, 1971. The claims were laid out by Transit-Stadia survey. Prior to staking, a search of BLM records showed the land was public domain open to mineral entry. No patents have been issued. Claim notices posted in 1968 were found but lack of evidence of active work and search of county records show these to be abandoned.



3636

3635

50'

3632

T. 7 S

3631

Kiondyko

B.M. 3467

Creek

B.M.

3519

3489

8

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16

A

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GEOLOGY

Regionally the Quinn Prospect lies on the eastern side of the Aravaipa Valley on the southwestern flank of the Santa Teresa Mountains. These mountains are largely composed of the Santa Teresa granite of probable tertiary age.

The interrelated rock system in the general area of the Quinn Prospect is composed of four principal rocks, which chronologically are:

1. Precambrian Pinal Schist.
2. Buford Canyon Formation (probable Cretaceous age).
3. Santa Teresa Granite (probable Tertiary age).
4. Quaternary - Tertiary gravels and alluvium.

Within the immediate area of the Quinn Prospect, outcropping rocks are Precambrian Pinal Schist, volcanics and conglomerates of Buford Canyon Formation, biotite quartz latite dikes and Tertiary-Quaternary gravels and alluvium.

The Precambrian Pinal Schist within the claim block consists primarily of schistose feldspathic graywacke, quartz-muscovite-chlorite schist and quartzite. The quartzite is highly resistant and underlies a northeast trending strip including the prominent topographic feature, Quartz Hill. The graywacke and schist erodes to subdued topography and weathers to a dull brown or greenish brown.

Locally the Pinal is strongly chloritized near latite dikes. North and northeast of the Quinn Prospect are found numerous small prospect pits on copper stained quartz seams in the Precambrian Schist.

The Buford Canyon Formation within the Quinn Prospect area is a sequence of sedimentary and volcanic rocks that can be divided into two members, a lower conglomerate possibly 500-600 feet thick and an upper volcanic member at least 1500 feet thick. The conglomerates rest unconformably on the Pinal Schist and contain interbedded andesitic volcanic rocks. The volcanic member consists of gray, greenish gray, reddish or purple-fine grained or sparsely porphyritic vesicular or amygdaloidal andesite flows, basalt flows and flow breccias.

In the claim block the Buford Canyon Formation generally dips 40° or steeper; appears to have very significant thickness variation along strike; and is in depositional contact with the Pinal Schist.

The age of the Buford Canyon Formation is either late Mesozoic or early Tertiary. Local relationships and lithology suggest that it is probably of Cretaceous age. This observation is based on certain similarities of the Buford Canyon Formation to Cretaceous rocks nearby and dissimilarities to regional Tertiary or Tertiary-Cretaceous volcanic sequences. (To the northwest of the Quinn Prospect are the Horse Mountain Volcanics, thought to be Cretaceous-Tertiary.)

The Santa Teresa Granite, exposed nearby to the east of the Quinn Prospect is thought to be genetically related to the quartz latite dikes which are present and geologically significant to the mineralogy of the Quinn Mine and claims. (See USGS Professional Paper 461, 1967).

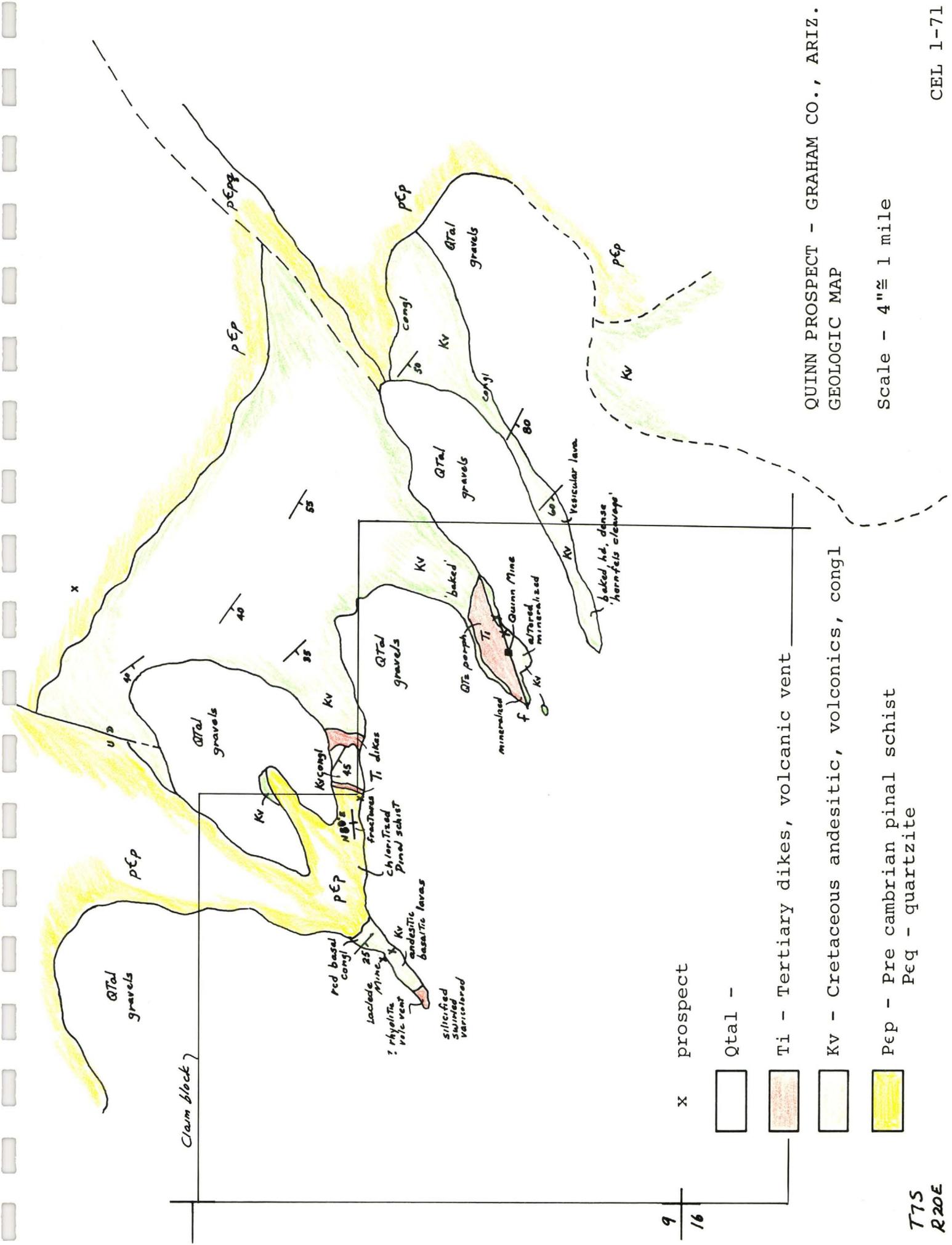
A small intrusive body at the Quinn Mine is elongated in an east-northeast direction. The eastern end of the intrusive is in contact with partially baked Cretaceous volcanics. The intrusive has chilled border margins against volcanic rocks, wherever they occur. The western end of the intrusive extends under the Quaternary-Tertiary gravels. It is this western exposed tip that shows increased mineralization and silicification. It has an abundance of rounded quartz "eyes" and in places appears to be quartz porphyry.

A N70° mineralized fault zone borders the quartz latite intrusive on the south. In a small canyon east of the Laclede mine are found biotite-quartz latite dikes.

Near the Laclede Mine at the edge of the gravels is small outcrop of vari-colored silicic volcanic rocks. These light colored rocks are swirled and silicified and have been mapped as a Horse Mountain formation fault sliver. Aspects of these rocks suggest however, that it is a portion of a rhyolitic volcanic vent.

(In discussion of the subject intrusive rocks it should be noted that in the canyon south of the Quinn Mine the Buford Canyon volcanics are dense hard and have a hornfels-like cleavage strongly suggesting baking by a nearby intrusive.)

Quaternary-Tertiary gravels, terrace deposits, lakebeds and stream alluvium overlie the Pinal Schist, Buford Canyon Formation and quartz latite intrusives. Lithologically the gravels are very typical of all the valley alluviums in this part of Southeastern Arizona. Specific to the Prospect, the thickness of the Quaternary-Tertiary alluvium at the western edge of the claim block is presumably up to a maximum of 500 feet.



QUINN PROSPECT - GRAHAM CO., ARIZ.
GEOLOGIC MAP

Scale - 4" ≈ 1 mile

x prospect

- Qtal -
- Ti - Tertiary dikes, volcanic vent
- Kv - Cretaceous andesitic, volcanics, congl
- pEp - Pre cambrian pinal schist
Peg - quartzite

9 / 16

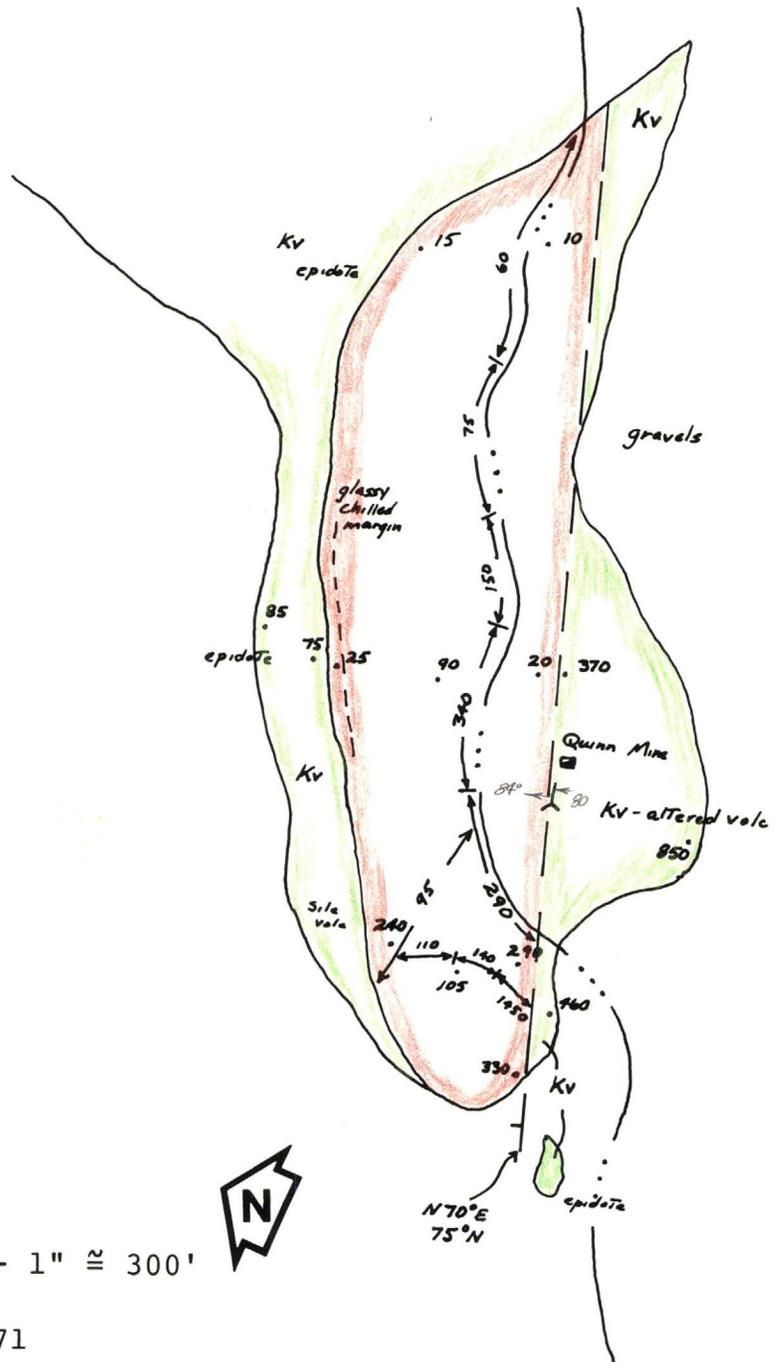
GEOCHEMICAL RESULTS

Significant geochemical values in copper were noted in the area of the Quinn Mine, both in the altered-looking quartz latite intrusive and in altered volcanic rock. Sampling within the quartz latite body and altered andesitic volcanics ranged from background to a high of 1450 ppm copper.

The western end of the intrusive body, which is cut off by the gravels, shows the highest copper values. The results of the rockchip sampling are shown on the accompanying map.

All geochemical determinations were done by Rocky Mountain Geochemical Labs in Prescott, Arizona.

QUARTZ LATITE PORPHYRY, QUINN MINE
 GEOCHEM ROCK CHIP SAMPLES
 COPPER IN PPM



Scale - 1" ≈ 300'

CEL 1-71

SUMMARY

1. There is clear evidence of copper mineralization in the general area and specifically within the Quinn Prospect claim block.
2. There is a small intrusive body in the claim block that is mineralized and altered.
3. Intensity of mineralization and alteration in this intrusive body builds to the westward edge of its exposed portion, wherein lies the bulk of the Quinn Prospect claim block.
4. Mineralized altered volcanics of probable Cretaceous age outcrop against the intrusives and extend under the alluvium, wherein lies the bulk of the Quinn Prospect claim block.
5. Within a certain part of the claim block exposed volcanics that occur at the edge of the gravels are baked, suggesting a nearby intrusive to the west.
6. In one canyon within the claim block there is a strongly chloritized Pinal Schist at the edge of the gravels, possibly an indication of an intrusive body to the west.
7. Within the claim block there are exposed rhyolitic rocks that outcrop at the edge of the gravels and are similar to rhyolitic vents that occur in the Galiuro Mountain Range nearby to the west.
8. The Quinn Prospect falls within the general east-northeast regional trend embracing many copper prospects and mines, including Silver Bell, San Manuel, Copper Creek and Morenci.
9. Structurally strong east-northeast trends that are found in other porphyry copper districts in Arizona are evident in the Quinn Prospect:
 - a) Mineralized fault zone at the Quinn mine is N70° E
 - b) Schistosity in the Pinal is strongly east-northeast
 - c) Elongation of the quartz latite body is in an east-northeast direction.