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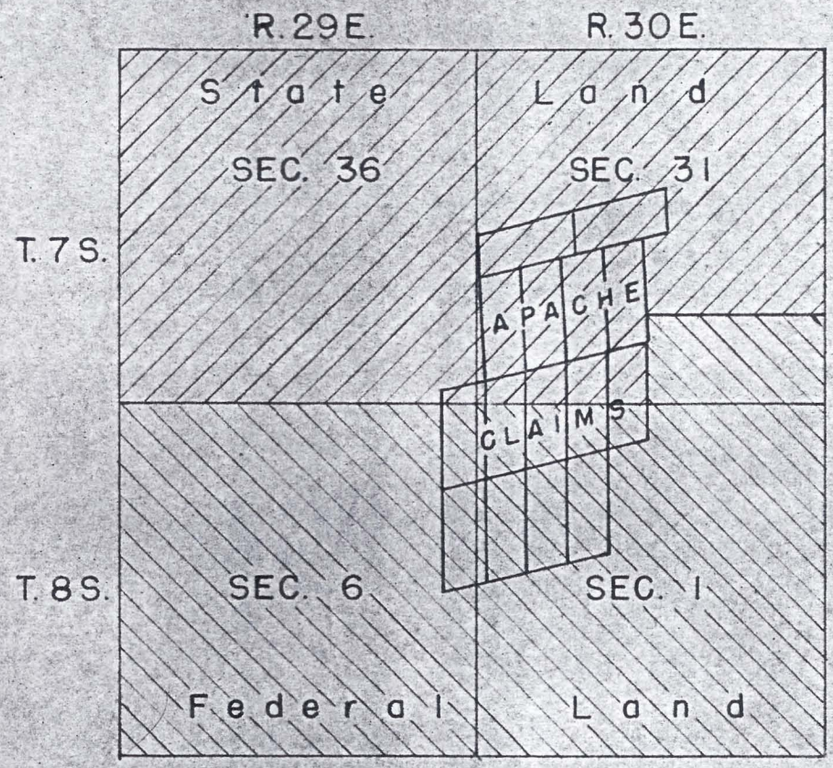


Sketch showing vested mineral rights
of Apache Tin area.

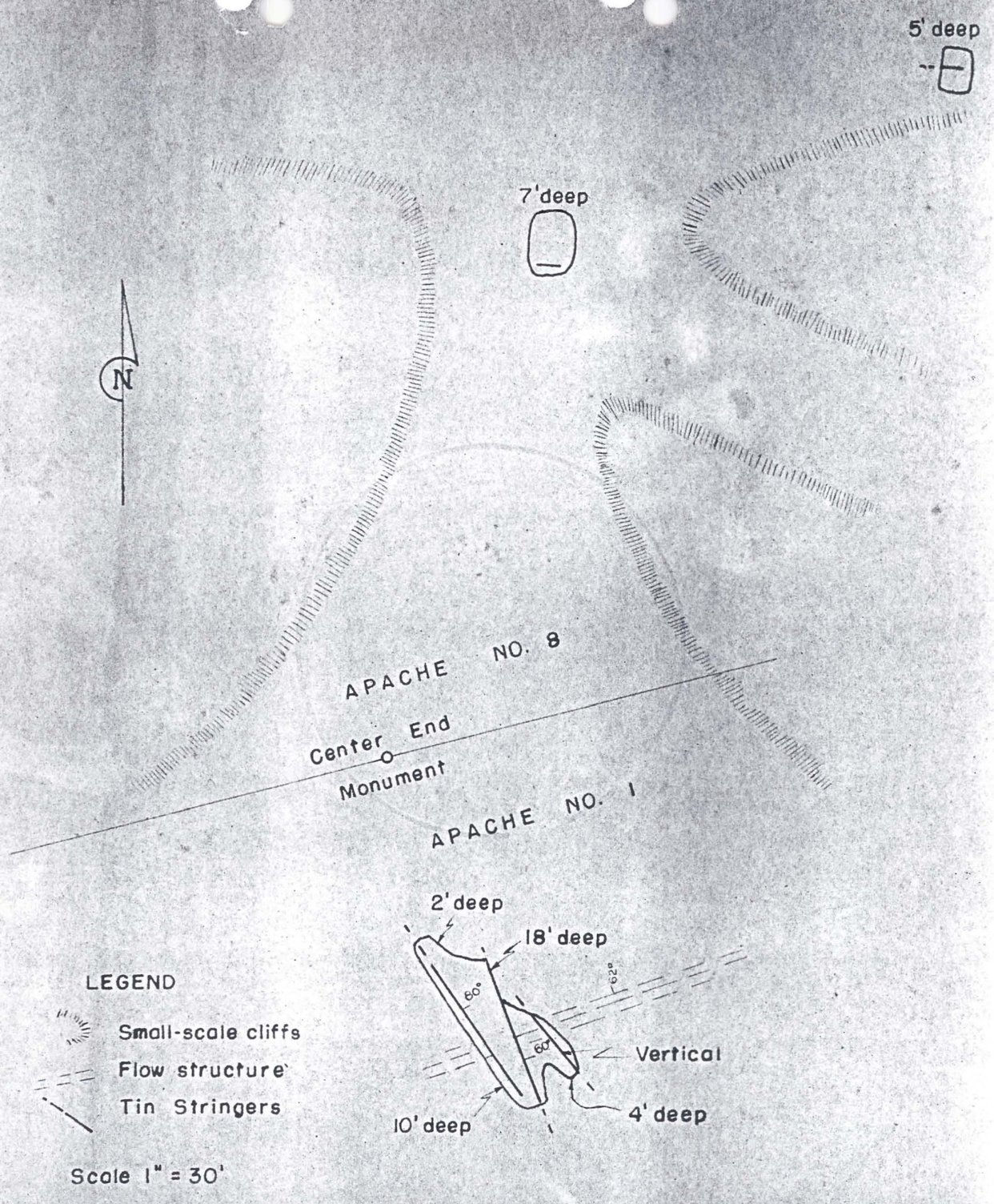
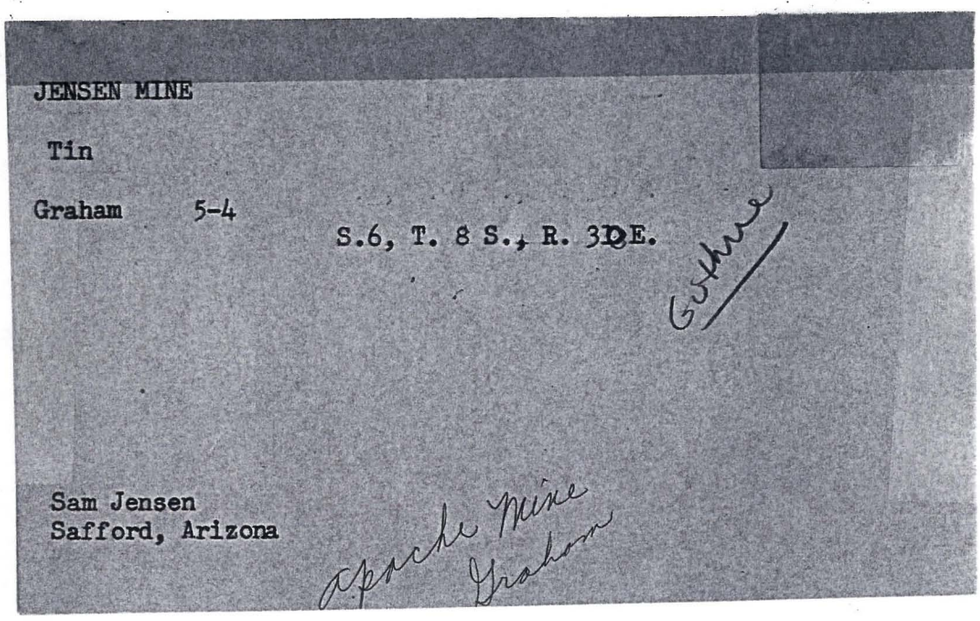


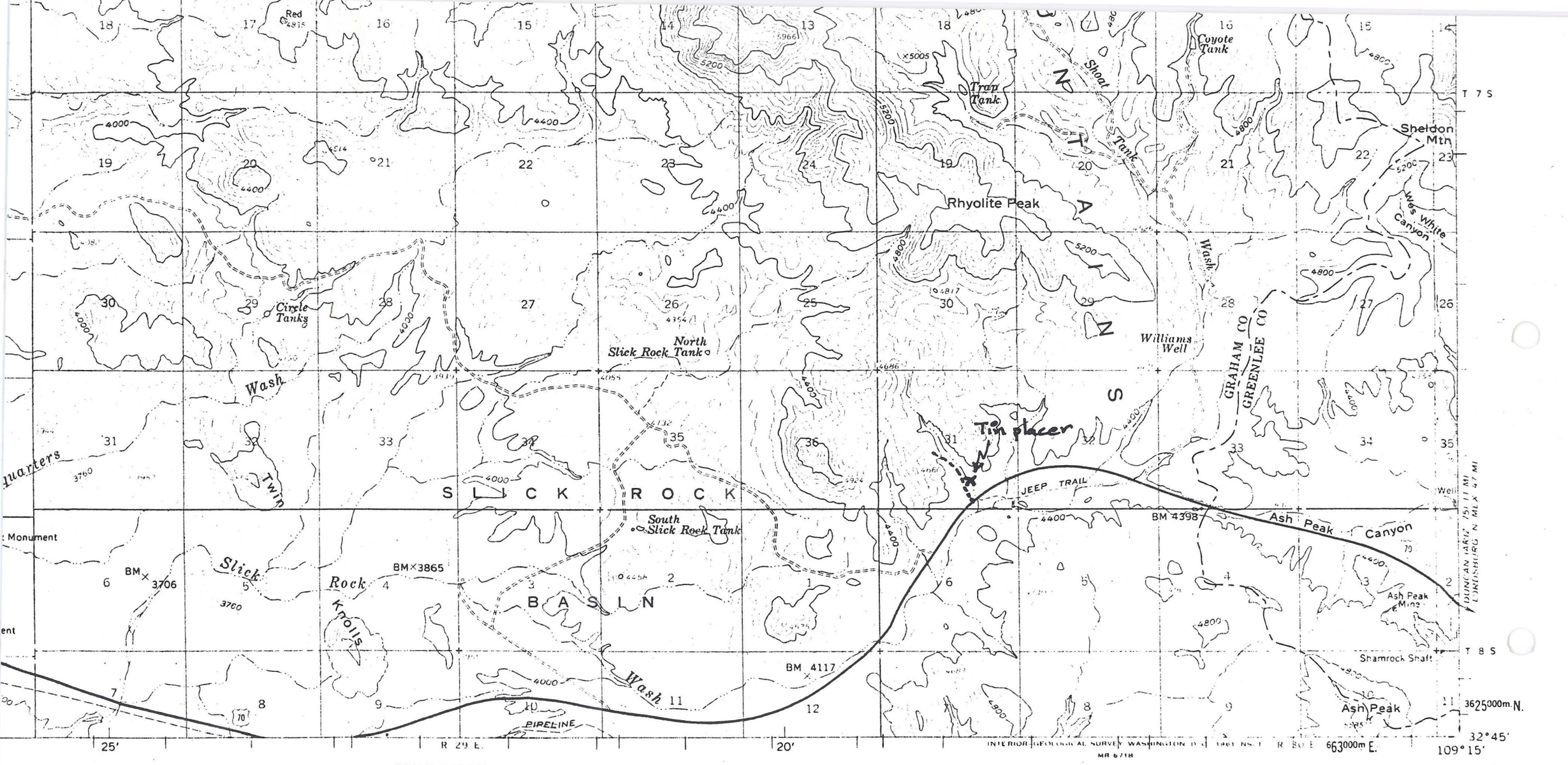
Figure 2.- Map of pits showing Tin Stringers.

"In spherulitic rhyolite and in placers derived from it some 25 miles east of Safford on highway 70."

"Maricopa County in the outpost pegmatite, associated with bismuth and copper minerals, as tabular crystals with well defined faces, honey-yellow to very dark brown, some zoned, up to 1.5 inches in diameter."

CASSITERITE - MINERALS OF ARIZONA - UNIV. OF ARIZ. Bull Vol xxx No.2 p.32





SCALE 1:62500

1 0 1 2 3 4 MILES

3000 0 3000 6000 9000 12000 15000 18000 21000 FEET

1 5 0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 80 FEET
DOTTED LINES REPRESENT 40-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Heavy-duty — Light-duty

Medium-duty — Unimproved dirt

U.S. Route

ARIZONA

QUADRANGLE LOCATION

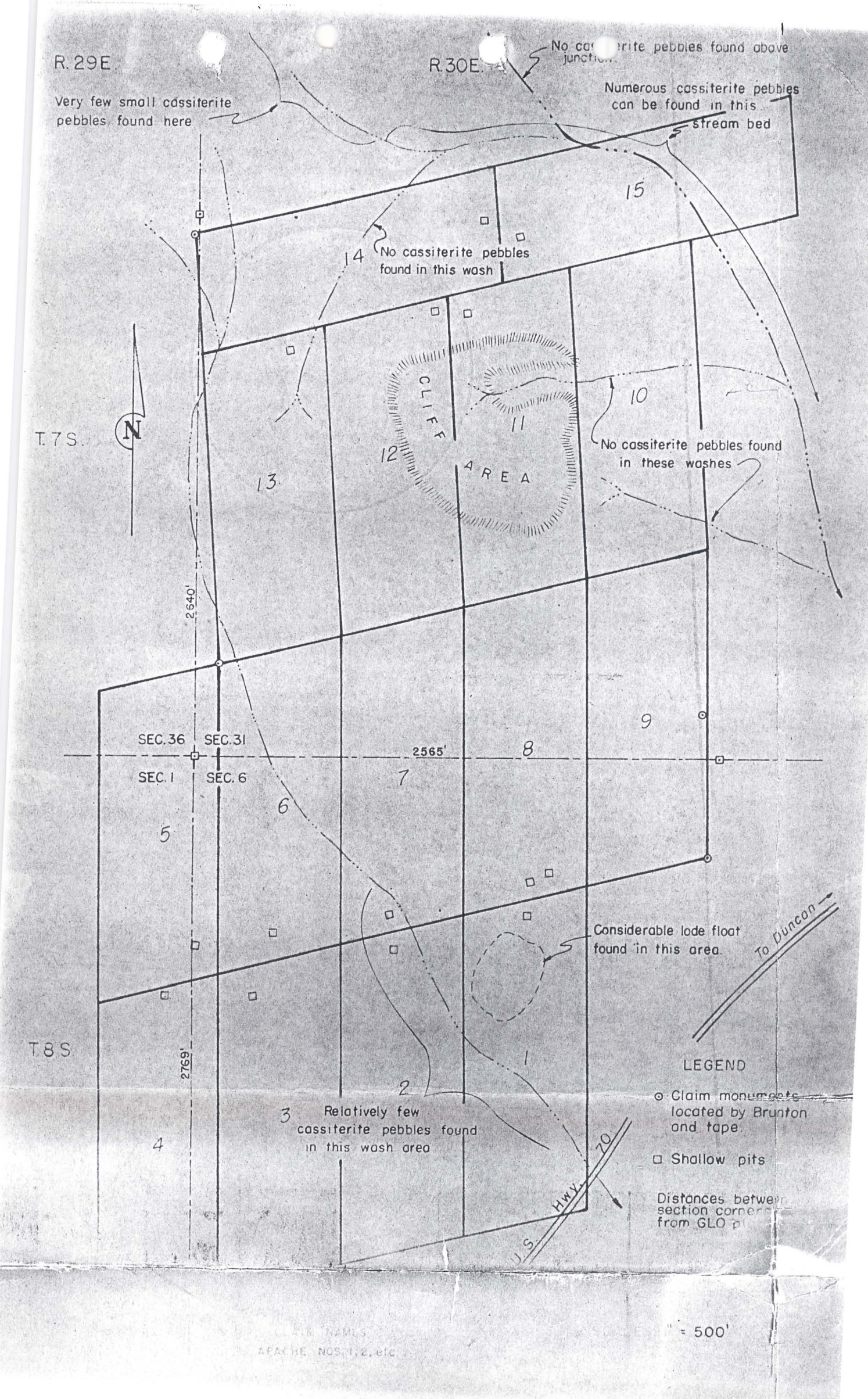
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1961—NS-T R 30 E

MR 6718

GUTHRIE, ARIZ.

N3245—W10915/15



Claim map, Apache Tin, Graham County, Arizona

UNITED STATES
DEPARTMENT OF THE INTERIOR
Oscar L. Chapman, Secretary

Bureau of Mines
James Boyd, Director

SUPPLEMENTAL EXAMINATION REPORT

APACHE TIN DEPOSIT

GRAHAM COUNTY, ARIZONA

By

Lincoln A. Stewart

1450

SUPPLEMENTAL EXAMINATION REPORT

UNITED STATES DEPARTMENT OF THE INTERIOR - BUREAU OF MINES

APACHE TIN DEPOSIT
GRAHAM COUNTY, ARIZONA

By Lincoln A. Stewart 1/

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2	Map of pits showing tin stringers	6

1/ Mining Engineer, Tucson Field Office, Mining Division, Region IV Bureau of Mines

SUMMARY

The Apache tin claims are located in southeastern Graham County, 25 miles east of Safford. The area is covered with Tertiary rhyolite flows in which a few tin-bearing veinlets have been found on the south side of a large hill. A few tons of ore have been hand sorted from near-surface lenses in these stringers. The mineralization consists of heavy, black oxides, hematite and cassiterite, finely intermixed and intergrown. Nodules within the mineralization show concentric ring structure common to "wood tin".

A representative sample of the better pieces from this ore pile assayed 4.86 percent tin and 8.80 percent iron. Metallurgical tests indicate that no separation can be made of the tin and iron by an economically feasible process, owing to the intimate association of these oxides. However, tabling tests on a portion of this sample at minus 20 mesh gave a concentrate that assayed 23.1 percent tin and 34.1 percent iron with a recovery of 76 percent of the tin.

Considerable lode float can be found down the slope from the area of tin-bearing veins, but no additional mineralized zones could be found.

Cassiterite pebbles were found in various dry washes in and around the property. An abundance of these in a wash on the northeast side of the claims suggested that the source was from veins on an adjacent hillside. Search was made, but no lode float was found. Any mineralization of bedrock was obscured by overburden.

Except for the local mineralization in 3 adjacent pits, no mineralization in place was found elsewhere on the property.

INTRODUCTION

At the request of the owners, an examination was made of the Apache tin claims by an engineer[2] of the Bureau of Mines on March 10, 1949.

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[2] Lincoln A. Stewart, Mining Engineer, Tucson Field Office, Mining Division, Region IV, U. S. Bureau of Mines

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In the summary report at that time it was suggested that a more thorough examination be made at some future time to determine, if possible, more about the mode of occurrence of the mineralization and to delineate areas in which groups of the tin veinlets might occur.

The writer spent 3 days, February 28 through March 2, 1950, examining the property in more detail.

This area is of particular interest in that it contains the only known occurrence of tin in Arizona.

LOCATION

The Apache claims are readily accessible from either Safford or Duncan via paved U. S. Highway 70. Road directions are as follows: From the junction of State Highway 666 and U. S. Highway 70 on the east side of Safford, travel east on 70. At 24.5 miles pass mile post 364 on right side of road, and at 25.1 is a road cut that exposes a 100-foot dike of obsidian. The property lies immediately north of this cut. One can drive to the main prospect pit by turning left at 0.2 mile east

mile east of mile post 364 onto a dim trail that connects with an abandoned oiled road; following the old road east to a point above the "obsidian" cut where the road is fenced off, then turn left up the hill several hundred feet to the prospect pit. From the Federal checking station in Duncan, this "obsidian" road cut is 14.8 miles west on U. S. 70.

The claims are in sec. 31, T. 7 S., and sec. 6, T. 8 S., both of R. 30 E., with a little overlap into the adjacent sections to the west. See figure 1. Secs. 36 and 31 T. 7 S., are State owned and secs. 1 and 6, T. 8 S., are on Federal land.

The altitude varies from about 4,300 to 4,700 feet. Vegetation is sparse, typical of the semi-arid Arizona highlands. The area is in Graham County, about 2 miles west of the Greenlee County line.

There is no Geological Survey quadrangle sheet of this area.

PROPERTY AND OWNERSHIP

The Apache group of 15 unpatented claims is owned by Sam Jensen, 124 East 20th Street, Safford, Arizona, and John D. Lee, Gila, New Mex.. The property was located in December 1948. Both men have regular employment and do only desultory work on the claims. Location pits have been dug on 13 of the claims. The two other claims of the group (Nos. 9 and 10) have been monumented, but will not be recorded until location work has been done,

The only previous mineral claims noted in the area were a couple of defaulted placer locations along the wash on the northeast side of the property.

DEVELOPMENT

Very little development work has been done. On claims Nos. 1 and 8, where the tin veinlets were found, 3 pits have been dug relatively close to each other. Location pits have been dug on 13 of the 15 claims. Each of these pits was examined but only those on claims 1 and 8 showed mineralization.

The claims are well monumented. Considering the fact that measurements were made with a 100-foot sash cord and that no instrument was used for bearings, the lay-out of the group is suprisingly accurate in general outline.

For mapping purposes, the writer located claim monuments near each of the section corners by Brunton and tape distances.

GEOLOGY

The rocks in this area are diversified varieties and textures of rhyolite, with spherulitic types predominating. This is part of the immense expanse covered with Tertiary flows embracing considerable areas in east-central Arizona and west-central New Mexico. Appearances indicate that this tin deposit is similar in character, but on a much smaller scale, to those of the Black Range, Catron and Sierra Counties, New Mex., which are about 80 miles northeast. (See Bureau of Mines Report of Investigations No. 4068, Catron and Sierra Counties Tin Deposits, New Mex., and Geological Survey Bulletin 922-M, Tin Deposits of the Black Range, Catron and Sierra Counties, New Mex.) In these New Mexico deposits it was found that the mineralized stringers were too small to mine separately, and too scattered to be mined by bulk methods.

Random bearings of flow layering over the property indicate that the structures are predominately northeast to east, with relatively steep dips.

The highest hills on the property are capped by a hard, dense, red, fine-grained rhyolite that forms large cliffs. The underlying coarser grained spherulitic rhyolite weathers more readily and forms gentler slopes. Patches of obsidian occur at numerous places; one rather persistent dike of obsidian crosscuts the flow structure.

The original and largest prospect pit has been sunk on the north end of claim No. 1 where outcropping mineralization was found in 2 small veins some 2 feet apart. The examination a year ago showed the pit to be about 25 feet long, averaging 10 feet deep; one end was said to be 18 feet deep but muck from the last round was never cleaned out. The 2 veins (stringers would be a better term) diverge downward and northward. The hanging wall of the cut follows the stringer that strikes N. 20° W. dipping 60° N., and the other side of the cut is determined by the second stringer striking N. 35° W., dipping 80° N. Where exposed in the sides and bottom of the cut, neither stringer is more than 3 or 4 inches wide, containing extremely weak mineralization. Later additional work eastward disclosed another small vertical stringer of weak mineralization. See figure 2.

A pile of ore estimated at 15 tons was sorted from the mining operation. Most of it came from the first 4 feet of depth at the south end of the pit. The gangue in the ore, as well as the adjacent rocks is

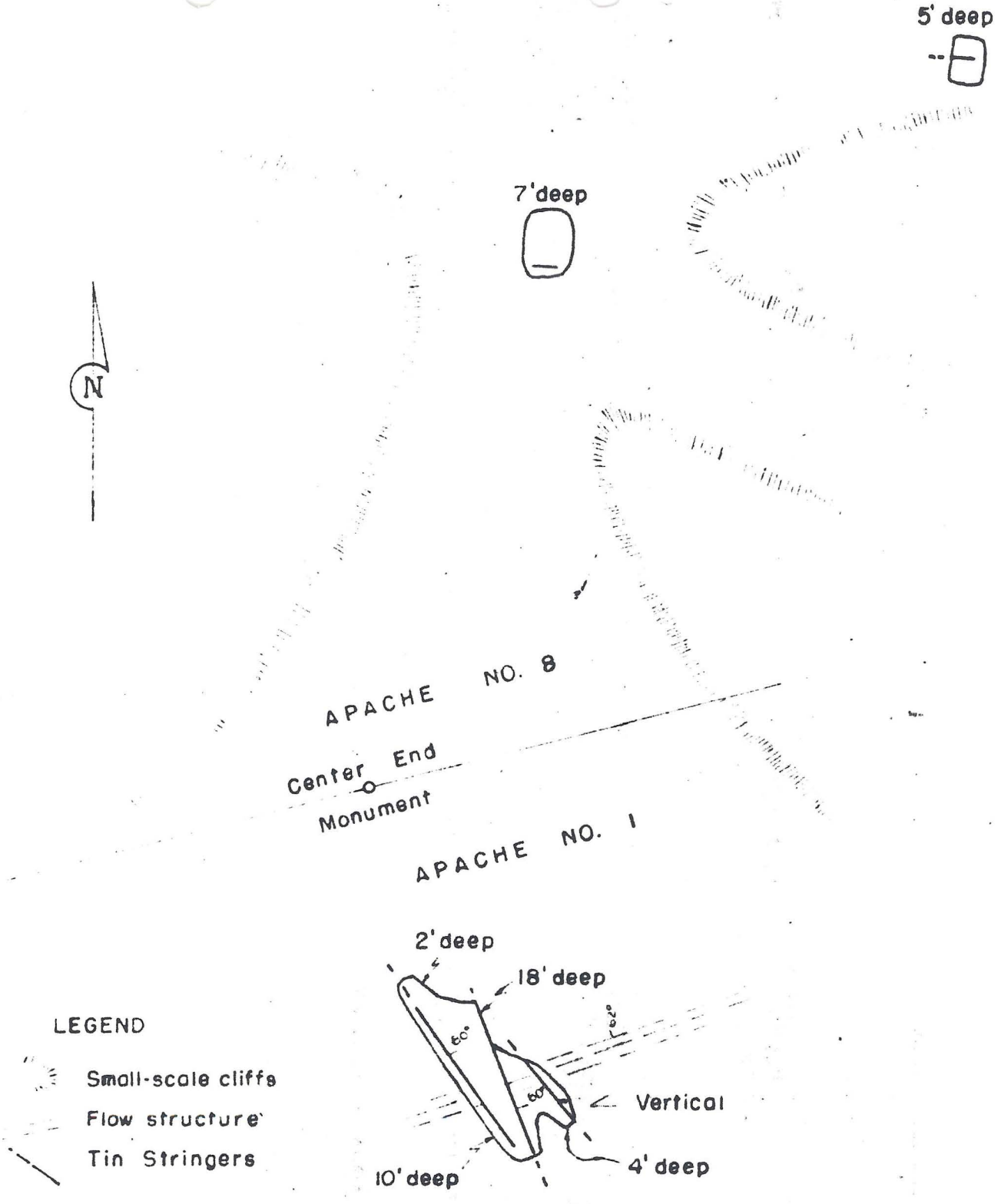

Figure 2.- Map of pits showing Tin Stringers.

spherulitic rhyolite of a light red-brown color. There are no definite walls to the veins, but the mineralized rock is harder than the adjacent barren areas.

The mineralization consists of heavy, black oxides, hematite and cassiterite, with a little magnetite. On weathered surfaces a botryoidal or reniform structure is evident, and on a sawed surface, the nodules show concentric ring structure common to "wood tin". Microscopic work on polished sections indicates that the cassiterite and hematite are finely and intimately intermixed and intergrown.

A 1½-pound character specimen, rhyolite gangue containing a ½-inch stringer of black oxides, assayed 2.95 percent tin and 24.0 percent iron.

Up the hill, 150 feet northward, is a 7-foot pit in fine-grained, white, scoriaceous rhyolite. On the dump, a small pile of mineralized material was segregated, that came from a pocket entirely mined out; there was no indication of the stringer in the cut. Mr. Jensen stated that the stringer was almost east-west and extended only to a depth of 2 feet.

A third cut, to the northeast (fig. 2), showed a very narrow stringer with slight mineralization. A large chunk of rock nearby showed mineralization on one end. It must have fallen from the cliffs immediately to the south. Considerable time was spent in examining the cliff faces in the area indicated by figure 2, but no mineralization was found.

Down-slope to the south of these pits can be found float material from these or similar veins. The overburden is not more than a couple of feet thick and Mr. Jensen has scratched out small pits and trenches over this area but no mineralisation has been found in place.

The greater part of one day was spent in searching the various washes within or near the property for cassiterite or "stream tin". The distribution of the tin nodules should give a clue to the location of the areas from which the mineral was eroding. The sand in the washes was relatively shallow and usually not more than 10 or 15 feet in width. Search was made by scratching into riffles, pot holes, or other natural traps.

More than 300 of these pebbles of wood tin were found, varying in size from a match head to one half inch in diameter. None was found with adhering gangue rock.

The wash on the northeast side of the property (figure 1) was the source of the greater part of the tin nodules. Most of them were black, indicating admixed iron, but some were honey colored, presumably nearly iron free. The light-colored ones were more predominant in the wash area to the north of claims 14 and 15, and may indicate an original vein environment different from that of the black ones but this assumption could not be proved.

The localization of the tin nuggets suggests that the veins from which the tin eroded are on the hillside that covers the north ends of the claims Nos. 10, 11, 12 and the adjacent halves of 14 and 15.

The hill is crowned with the high, steep cliffs previously mentioned. This formation appears to be barren of mineralization. Enough bedrock is exposed at places along the base of the cliffs to indicate that the underlying formation is the softer, spherulitic phase. On the slopes of the hill, from the bottom of the cliffs to the stream bed, only few areas of bedrock were seen; the remainder is covered with overburden. Any possible mineralized areas were thus hidden, and no lode float was found to indicate even general locations. The location pits were all in barren rock.

The stream bed below the known mineralized area of claim No. 1 yielded only a few nuggets of stream tin. This might be accounted for by the fact that the erosional travel distance is much less than on the north side of the hill.

METALLURGICAL TESTS

A 50-pound sample of the better pieces from the 15-ton ore pile assayed 4.86 percent tin and 8.80 percent iron. A sink-float test on a portion of this material ground to 10-mesh recovered 85 percent of the tin in a concentrate that assayed 20.22 percent tin and 31.08 percent iron.

A flotation test was made on a portion of this sample ground to 200 mesh. A concentrate was made that assayed 23.4 percent tin and 39.1 percent iron with a recovery of 72.2 percent of the tin.

A tabling test of this ore, ground to minus 20 mesh recovered 75.9 percent of the tin in a concentrate that assayed 23.1 percent tin and 34.1 percent iron. Re-tabling the middling product probably would have made a total recovery of 80 percent of the tin and raised the grade to 25 percent tin.

Mineral Deposit Models

DENNIS P. COX and DONALD A. SINGER, Editors

U.S. GEOLOGICAL SURVEY BULLETIN 1693

DESCRIPTIVE MODEL OF RHYOLITE-HOSTED Sn

By Bruce L. Reed, Wendell Duffield, Stephen D. Ludington, Charles H. Maxwell, and Donald H. Richter

APPROXIMATE SYNONYM Mexican-type.

DESCRIPTION Cassiterite and wood tin in discontinuous veinlets in rhyolite flow-dome complexes and derivative placers (see fig. 128).

GENERAL REFERENCES Lee-Moreno (1980), Huspeni and others (1984).

GEOLOGICAL ENVIRONMENT

Rock Types Alkali-feldspar rhyolite with SiO_2 >75 percent; includes topaz rhyolites of Burt and others (1982) and Christiansen and others (1983). Distinctive accessory minerals may include topaz, fluorite, bixbyite, pseudobrookite, and beryl. Petrochemical signature similar to Climax Mo.

Textures Crystal-poor (5 percent) to crystal-rich (50 percent) rhyolite with quartz and sanidine phenocrysts; rare fayalite, biotite, or hornblende may be present.

Age Range Tertiary; chiefly Oligocene and Miocene.

Depositional Environment Rhyolite flow-dome complexes and related pyroclastic and epiclastic rocks.

Tectonic Setting(s) Silicic volcanic fields, generally in areas of thick continental crust.

Associated Deposit Types None are known, but based on geochemical similarity of associated magmas, these may be a surface expression of Climax Mo.

DEPOSIT DESCRIPTION

Mineralogy Cassiterite (including wood tin) plus hematite (characteristically specularite) ± cristobalite, fluorite, tridymite, opal, chalcedony, beudantite, mimetite, adularia, durangite, and zeolite minerals.

Texture/Structure Most commonly as 0.1- to 10-cm-wide discontinuous veins and veinlets whose other dimensions seldom exceed 75 m. These veins and veinlets may be clustered in zones of somewhat greater dimension. Cassiterite also occurs as disseminations in the matrix of rhyolite flows or fault breccias. These two types of deposits are part of a continuum.

Alteration May be absent; tin may or may not occur in large areas of vapor-phase alteration (tridymite, sanidine, hematite, ± pseudobrookite); alteration directly associated with mineralization may include cristobalite, fluorite, smectite, kaolinite, and other clay minerals.

Ore Controls Deposits are generally in the fractured and brecciated outer parts of flow-dome complexes where permeability is high.

Weathering Weathering is generally minor, but a translucent red-orange clay mineral (smectite) is present in most deposits.

Geochemical Signature Dispersion of associated elements (Sn, Fe, Be, Li, F, As, Sb, Pb, Zn, Bi, REE) in rock is minimal. Best exploration guide is presence of high concentrations of tin (>1,000 ppm) in pan concentrate samples. Cassiterite in stream sediments is usually restricted to within 2-3 km of tin deposits.

Examples

Black Range, USNM	(Fries, 1940; Lufkin, 1972)
Mexico deposits	(Foshag and Fries, 1942; Smith and others, 1950; Ypma and Simons, 1969; Pan, 1974; Lee-Moreno, 1980)

Model 25h--Con.

Las Perlitas	MXCO	Mina del Aire	MXCO
Las Tablas	MXCO	Mina Dura	MXCO
La Triste	MXCO	Palo Colorado	MXCO
La Venadita	MXCO	Panchillo	MXCO
La Vibora	MXCO	Plan de Tecolotes	MXCO
La Victoria	MXCO	Potrero del Molino	MXCO
La Vieja-El Agua	MXCO	San Francisco	MXCO
Leoncitos	MXCO	San Humberto	MXCO
Loreto	MXCO	San Juanera	MXCO
Los Angeles	MXCO	San Rafael	MXCO
Los Arrieros	MXCO	San Ruperto	MXCO
Los Caballos	MXCO	Santa Efigenia	MXCO
Los Campamentos #1	MXCO	Santa Gertrudis	MXCO
Los Campamentos #2	MXCO	Santa Leonor	MXCO
Los Campamentos #3	MXCO	Santa Lucia	MXCO
Los Cuatillos	MXCO	Socorro-Guadalupe	MXCO
Los Garcia	MXCO	Sombreretillo	MXCO
Los Lobos	MXCO	Soto	MXCO
Los Pinacates	MXCO	Tecolotes	MXCO
Manga de Lopez	MXCO	Tolano	MXCO
Manzanillas	MXCO	Veta Blanca	MXCO
Metal Negro	MXCO		

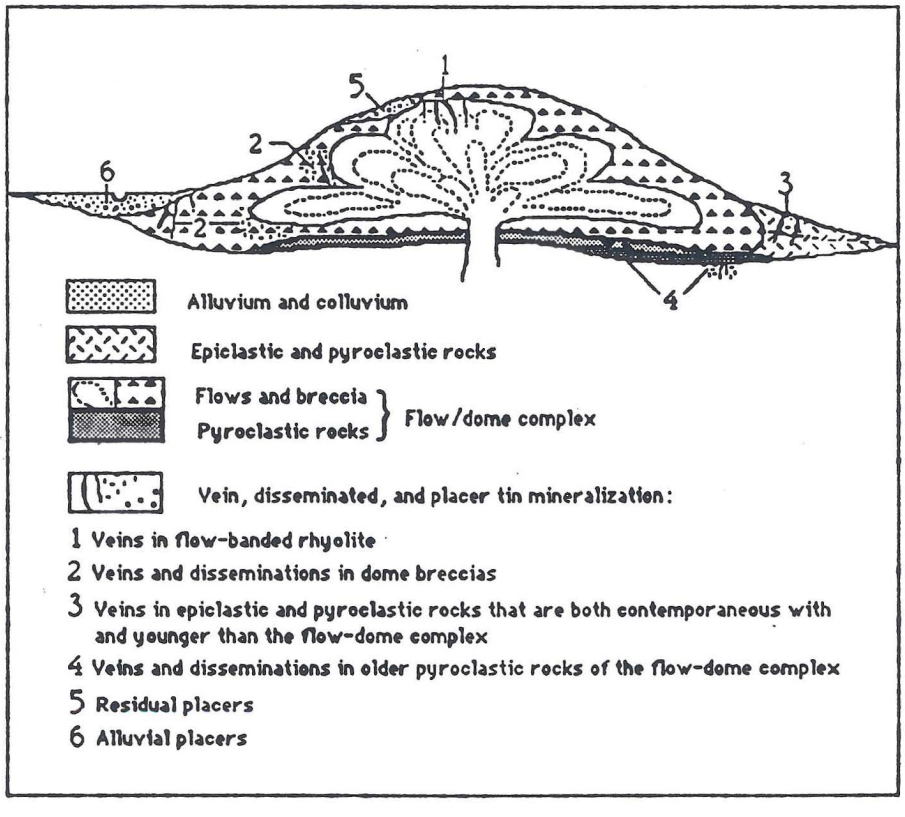

Figure 128. Cartoon cross section of rhyolite-hosted Sn deposit showing relationship of cassiterite concentrations to rhyolite dome.

Roland I. Erickson, P.E. CONSULTING MINING ENGINEER AND GEOLOGIST

Apache

May 10, 1967

Mr. George B. Warsaw, President
American Tin Corporation
4073 Beverly Blvd.
Los Angeles, California 90004

Subject: Sam Jensen Arizona Tin Claims

Dear Mr. Warsaw:

A report on the subject property is herewith presented, concluding that a thorough investigation on the tin occurrence should be made.

The Phase I study will require an expenditure of:

A. Surface: surveying, mapping, tractor excavation, laboratory and supervision: $12,000.00

B. Sub-surface: sample drilling including laboratory and supervision: $50,000.00

Total Phase I --- $62,000.00

A Phase II is a continuation of the drilling to outline an orebody, or if outlined in Phase I, a plan of operations.

I strongly recommend the Phase I investigation now.

Very truly yours,

Roland I. Erickson

Roland I. Erickson, P. E.

RIE:lld

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ILLUSTRATIONS

Sketch Location Map ..... In text

Pictures ..... " "

Assay Sheets ..... " "

Letter from Attorney, Mr. Wilford R. Richardson explaining status of claim ownership.

Prospecting Agreement ..... In text

U.S.G.S. Quadrangle Map, Guthrie, Arizona..... In Back Cover

RESUME

PRELIMINARY REPORT TO

AMERICAN TIN CORPORATION
ON
SAM JENSEN ARIZONA TIN CLAIMS

STAFFORD, ARIZONA

ASSIGNMENT

Make a two day examination on the claims, and if possible take 500 pounds of samples for a mill test. The field work was done by Roland I. Erickson, P.E. on April 14 and 15 and the report prepared in Los Angeles, California, on April 16, 24, and May 10, 1967, by Roland I. Erickson, P.E.

CONCLUSIONS

1. Highway 70 cuts diagonally through six of the claims, and, in road construction four rock-cuts had been made. They were sampled by Erickson:

Sample No. 2, 20 feet long carries 0.324% Sn. by Eisenhauer Laboratories and 0.48% Sn. by Grand Junction Laboratories.

1. In one Sam Jensen excavation, Pit "B", a high grade pocket was mined out: one grab sample submitted by Mr. Jensen carried 5.92% Sn. at Eisenhauer Laboratories, Now only a three inch vein exists in the pit face.

2. The area has a history of Tin Nodules to be found on slopes and in stream bottoms; during this short examination a "hunt" was not made.

3. Because of these tin occurrences it is concluded the area should be surveyed, the surface tractor cleaned and mapped, and, the mineralized zones sampled and drilled.

RECOMMENDATIONS

PHASE I

A. - 1. Lease from the state of Arizona the SW 1/4 of Sec. 31 and the SE 1/4 of Sec. 36.

2. Survey the Sam Jensen claims.

3. a) Tractor clean the surface for possible mineralized areas;
b) Map, sample and assay exposed possible tin bearing zones.

ESTIMATED COST

1. State lease 320 acres @ 0.50 =			$ 160.00
2. Survey claims =			1000.00
3. a) Tractor excavation 6 days @ $250.00 =	$1500.00		
b) Supervision, sampling, assaying and mapping	7300.00		
	8800.00	=	8800.00
			9960.00
		Say ----	10,000.00
		Allow for head office ----------	2,000.00
A. Total ----------			12,000.00

PHASE NO. 1

B. Drill the mineralized zones

Allow as available ---------- 50,000.00

(Drilling, sampling, supervision)

TOTAL PHASE 1 $ 62,000.00

PHASE II

a) Providing additional investigation is required to outline a mineable ore body or ore bodies, and if it is warranted, such a program must be set up and the cost estimated.

b) In the event sufficient reserves are developed in PHASE I for a mine and mill operation, PHASE II will be an economic study to determine the size of the operation, make a mining plan, design the mill and adjuncts. This will include estimates of operating costs and capital requirements.

REPORT ON

THE SAM JENSON TIN CLAIMS

ARIZONA

LOCATION

The Apache Tin Claims are in Graham County, 24.5 miles East of Safford, Arizona. U.S. Highway 70 passes thru several of the claims. (Four rock cuts made during road construction give good rock exposures.)

OWNERSHIP

In a letter to Mr. George B. Warsaw, dated April 11, 1967, Attorney Wilford R. Richardson states that, quote: "Mr. Jensen (and possibly others) located 18 mining claims in this area and the location papers were dated 29 July 1959 and recorded 30 July 1959." (However, Mr. Jensen did not attempt to do the assessment work except for Apache Nos. 1 through 8.") Unquote.

Before any extensive excavations are made the titles should be checked, and a State lease obtained for any work to be done on Sections 36 and 31.

MINERALIZATION

The rocks are lithic rhyolites and tuffs. The tin mineralization is in the tuffs, narrow veins, fractures and pockets. High grade nodules have been found on the slopes and in the washes. In this short examination a search was not made for them, however, an assay of these so-called "nuggets" made at the Longhorn Smelter, Texas, gave 55.54% Sn. (12/4/48)

It is here theorized that the tin was trapped in the fractures of the softer tuffs beneath a harder capping which in places of observed mineralization is eroded. In other places probably the tin bearing segment is eroded in whole or in part.

Coarse fractured zones also carry Tin: (One 20 feet long cut in one road rock-cut, see sketch, has 0.324 to 0.48% Sn)

Mr. Sam Jensen, Pit "B", started a pit at 8 inches wide, it increased to two feet wide and now the pit face has only a three inch wide vein. A non-selected sample submitted to Mr. Warsaw by Mr. Jensen carried 5.94% Sn., Eisenhauer Laboratories, Mareh 15, 1967.

Sampling by Erickson April 14-15, 1967

A. The Highway 70 crosses through several of the claims, during construction four rock-cuts were made.

Samples taken in the cuts:

ROCK CUT	SAMPLE NO.	LENGTH
No. 1	1	100 ft. not assayed
2	2	20 ft. 0.324% Sn., 0.480% Sn.
2	3	75 ft. 0.108% Sn.
2	4	10 ft. 0.123% Sn.
2	5	125 ft. 0.119% Sn.
3	6	130 ft. Not Assayed
4	7	70 ft. Not Assayed

Samples Nos. 1, 6 and 7 did not show enough "heavies" during panning to warrant assaying.

The above samples were removed by breaking off pieces of rock along the entire exposure of road cut and could be classified as channel cut samples. Sample #2, which assays .324 to .480% Sn, upon crushing and pulverizing, concentrates very well, indicating that the ore is amenable to concentration.

(B) Jensen Excavations

Trench "A" Grey country rock not assayed.

Shaft Red breccia, panning shows no "heavies". Not assayed.

Trench "B" Took ore sack size sample: High in "heavies", former sample by Jensen to Warsaw, 5.94% Sn., Eisenhauer Laboratories; former selected sample by Jensen to Smith-Emery (12/4/48) 12.84% Sn. Not sent for assay by Erickson. In the trench the face is now only a three inch vein; Jensen states he excavated from an eight inch outcrop which increased to 24 inches then "petered" down to three inches. The rock surrounding trench "B" appears to be mineralized with cassiterite and the samples from trench "B" concentrate very well by gravity concentration methods.

Trench "C" 1/2 inch wide hematite stringer. Specimen sample taken but not assayed.

SAMPLE PREPARATION

The rock pieces in the ore sack size samples were crushed down to about minus 1/4", and by coning and quartering the sample reduced to several pounds and sent to Eisenhauer Laboratories. (Nos. 2,3,4 and 5). A duplicate of each was retained and the duplicate of No. 2 was sent to Grand Junction Laboratories for check assay.

ADDITIONAL REQUIRED EXPLORATION

A sub-surface investigation is necessary and warranted. To better layout such a program, surface work is recommended and is termed PHASE I A.

COST PHASE I

A. SURFACE STUDY

1. Lease state land	$ 160.00		
2. Survey claims	1000.00		
			1,160.00
3.a) Tractor Excavations 6 days @ $250.00	1500.00		1,500.00
b) Supervision, Sampling, etc. mapping, including helper, pickup, etc. (20 days)	5,200.00		
Sampling			
Labor: 2 for 10 days $100.00		1,000.00	
Equipment - 10 days @ 30.00		300.00	
Sample transport and assays		800.00	
		7,300.00	7,300.00
			9,960.00
		Say	10,000.00
		Head office and contingencies	2,000.00
		PHASE I A	12,000. 00

B. DRILLING, mineralized zones

Allow	50,000.00
TOTAL PHASE I	$ 62,000.00

COST PHASE II

Phase II is a continuation of Phase I if further work is needed to outline an orebody or orebodies, or if further investigation is warranted.

Providing an orebody, or orebodies are outlined adequately for a mine-mill operation Phase II is an economic study to determine size of the operation, mine planning, mill design and adjuncts.

A cost estimate would now be hypothetical only for a Phase II.

STUDY MADE ON SAM JENSON LEASE

APRIL 14 and 15, 1967