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PRINTED: 05/31/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: PEACH MINE

ALTERNATE NAMES:

PIMA COUNTY MILS NUMBER: 185

LOCATION: TOWNSHIP 18 S RANGE 15 E SECTION 15 QUARTER SE
LATITUDE: N 31DEG 51MIN 44SEC LONGITUDE: W 110DEG 47MIN 38SEC
TOPO MAP NAME: SAHUARITA - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

COPPER OXIDE
COPPER SULFIDE
ZINC
SILVER
LEAD
GOLD LODE

BIBLIOGRAPHY:

S.B. KEITH, AZBM BULL. 189, P. 128, 1974
ADM MR PEACH MINE FILE
ADM MR SOUTHERN CROSS FILE
ADM MR GUNSIGHT PROJECT FILE
ADM MR MAPS IN ELIGN MINE FILE
USGS BULL. 582, P. 125
ADM MR "U" FILE CU 69

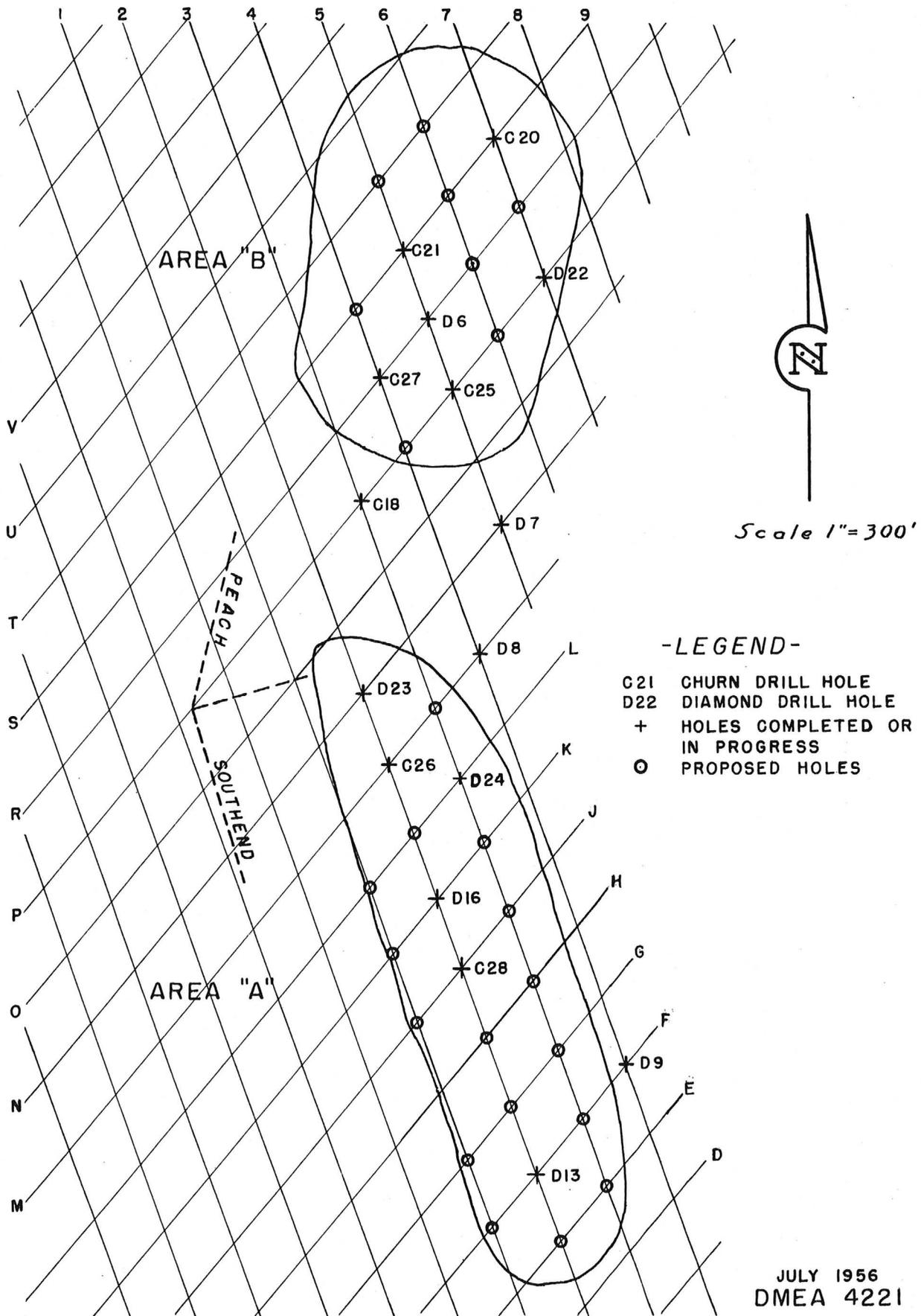


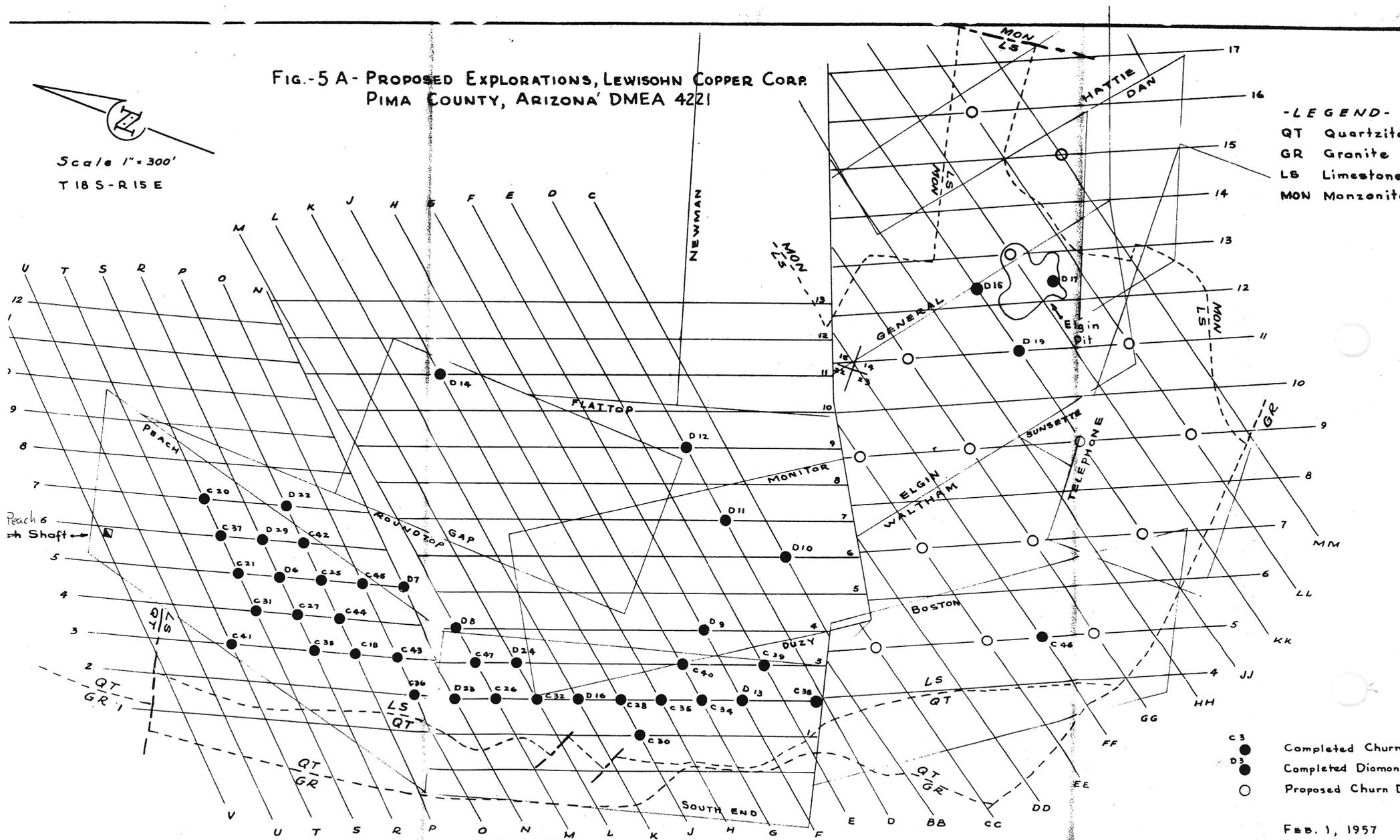
FIG. - 5 - PROPOSED EXPLORATIONS - LEWISOHN COPPER CORP.
 PIMA COUNTY, ARIZONA

FIG.-5 A- PROPOSED EXPLORATIONS, LEWISOHN COPPER CORP.
PIMA COUNTY, ARIZONA' DMEA 4221



Scale 1"=300'
T 18 S-R 15 E

-LEGEND-
QT Quartzite
GR Granite
LS Limestone
MON Monzonite



● C3 Completed Churn
● D3 Completed Diamond
○ Proposed Churn

FEB. 1, 1957

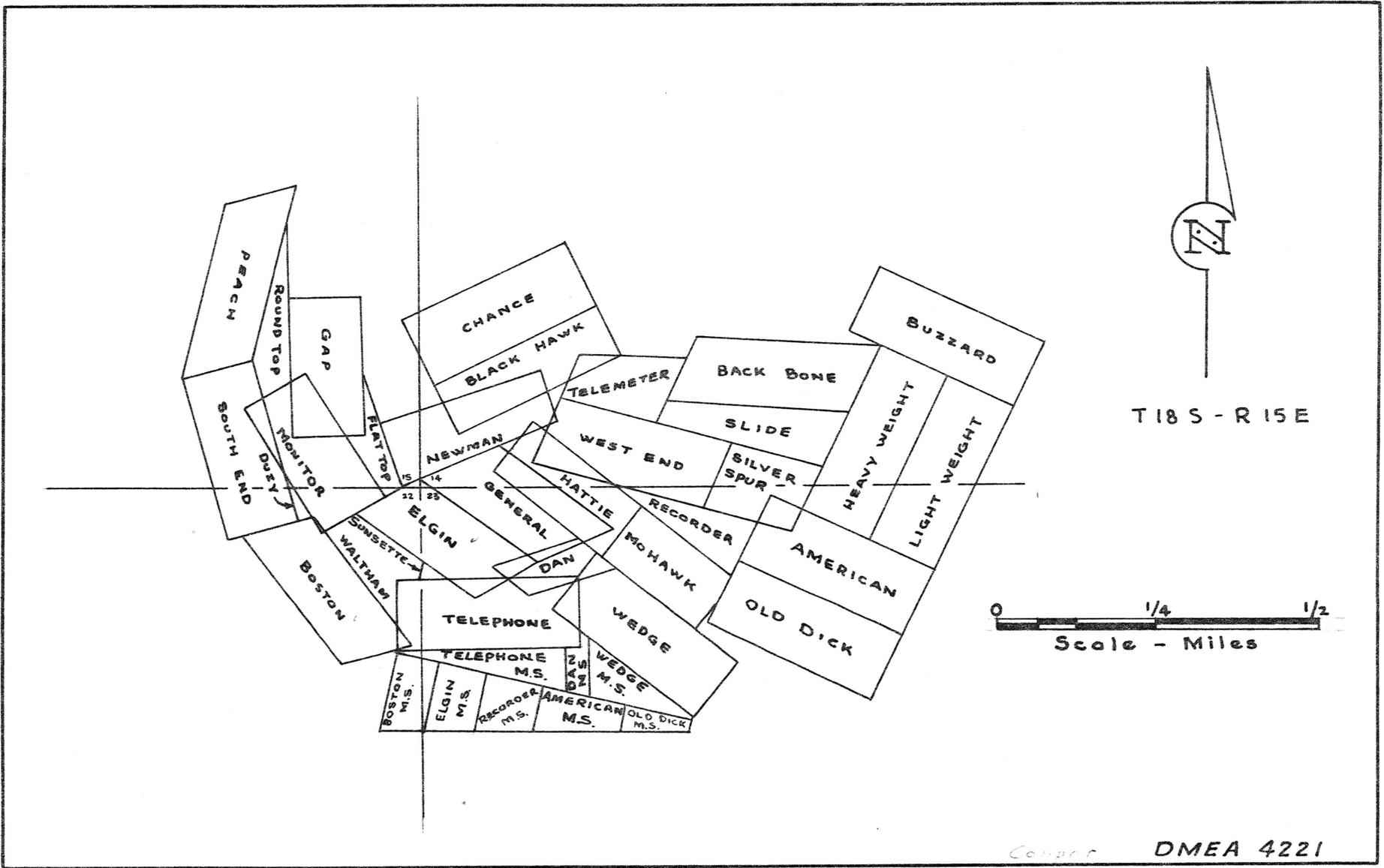


FIG. -2A- REVISED CLAIM MAP, LEWISOHN COPPER CORP.
 PIMA COUNTY, ARIZONA

Copyright DMEA 4221

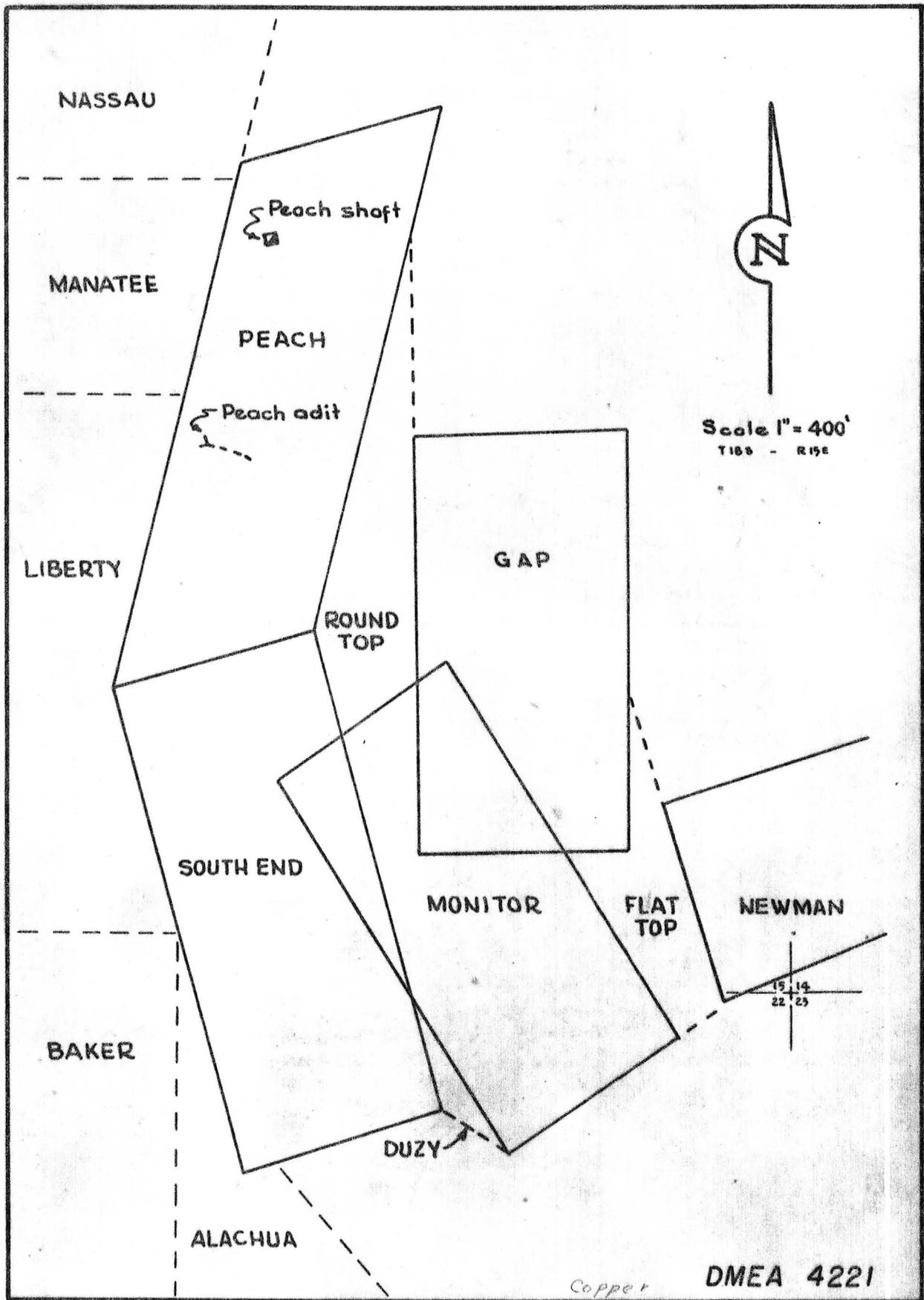


FIG. 2 CLAIM MAP , LEWISOHN COPPER CORP.
PIMA COUNTY, ARIZONA

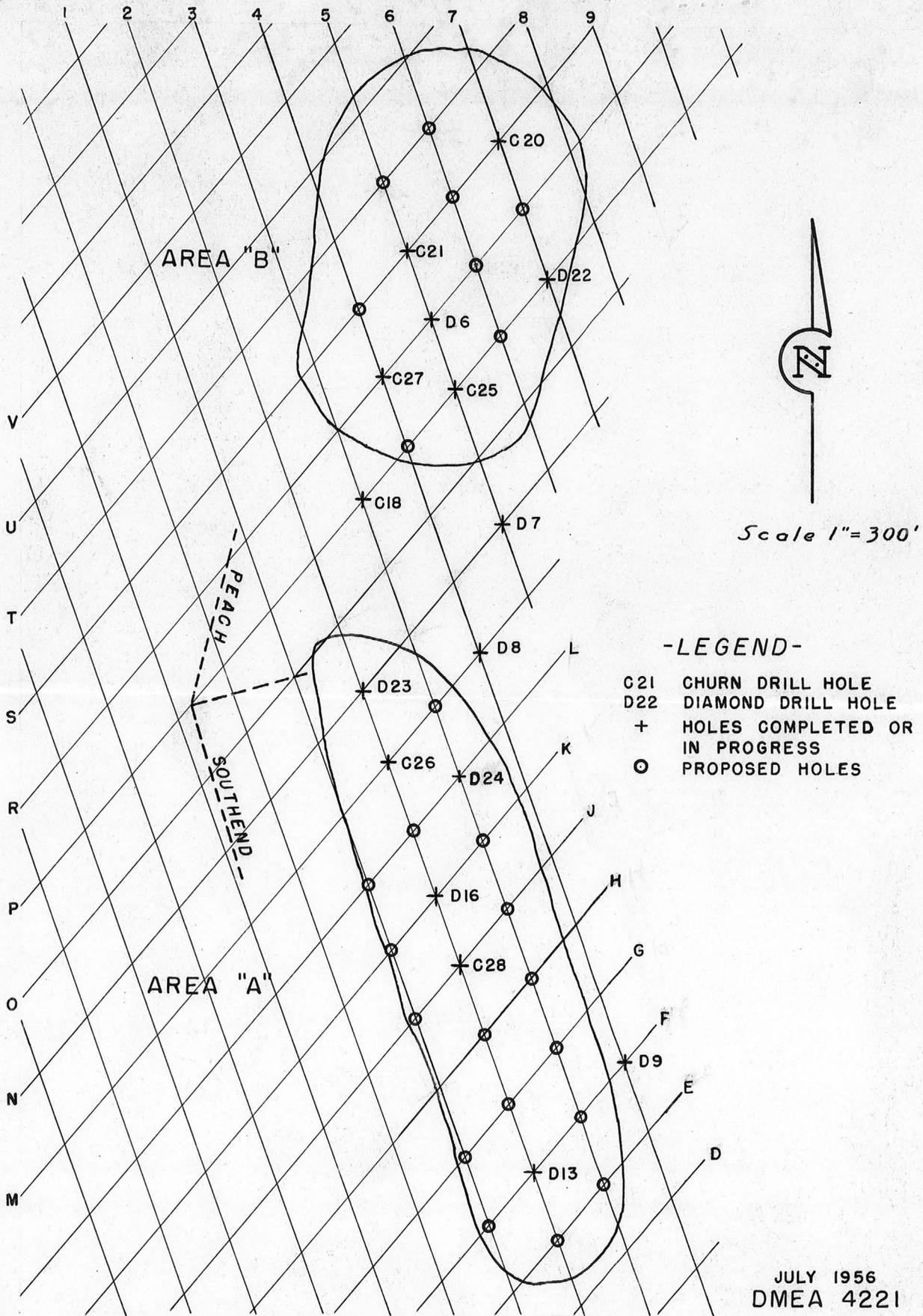
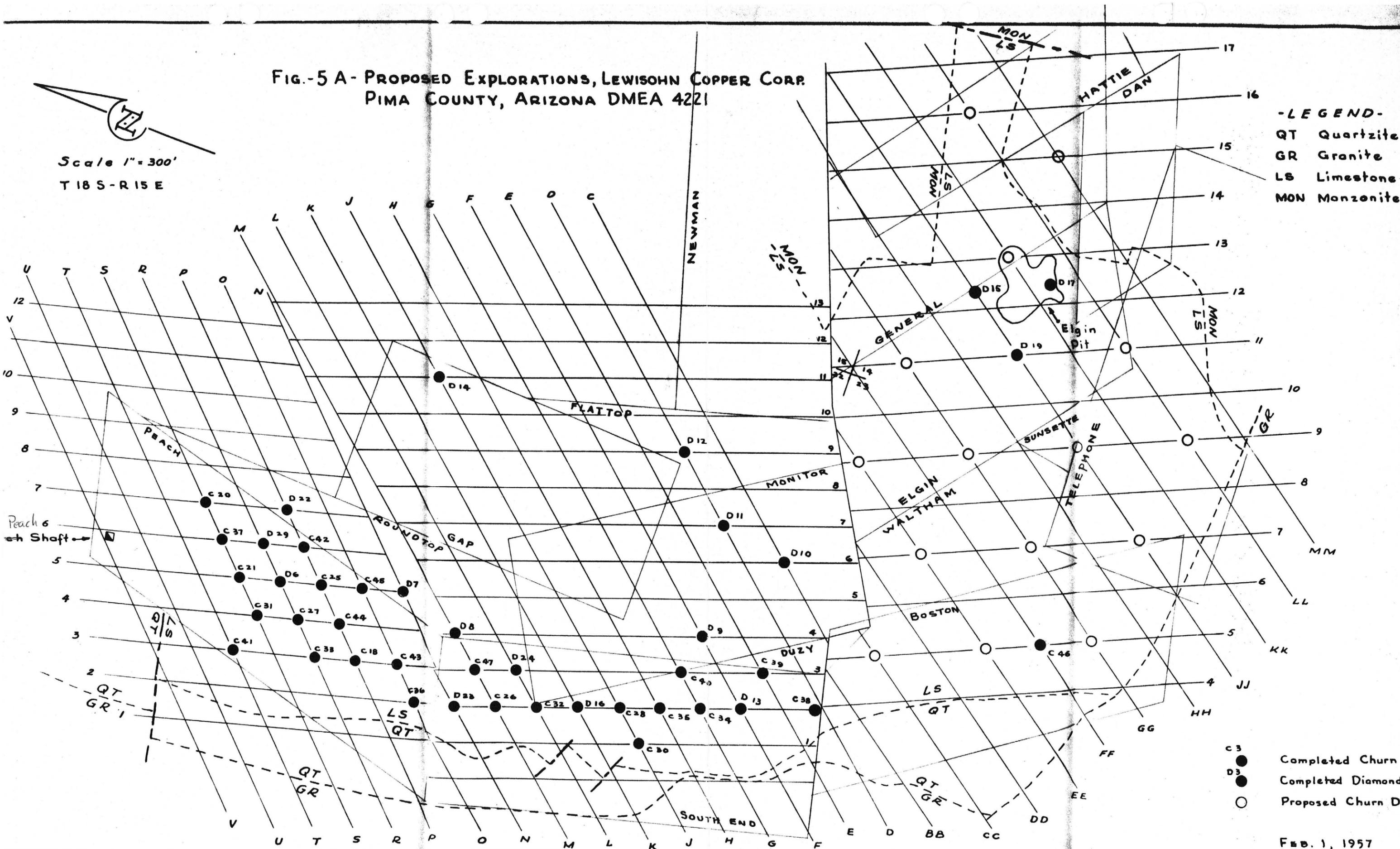


FIG.- 5 - PROPOSED EXPLORATIONS - LEWISOHN COPPER CORP.
PIMA COUNTY, ARIZONA

FIG. 5 A- PROPOSED EXPLORATIONS, LEWISOHN COPPER CORP.
PIMA COUNTY, ARIZONA DMEA 4221

Scale 1" = 300'
T 18 S - R 15 E

-LEGEND-
QT Quartzite
GR Granite
LS Limestone
MON Monzonite



Arizona Copper Reserves and Resources
Compiled by the Arizona Dept. Mines and Mineral Resources

Printed: 1/28/2005
Last Updated: 1/1/1994

PEACH ELGIN

Alternate name(s):

Helvetia West

Company:

Asarco Inc.
2575 E. Camelback Road, Suite 500
Phoenix, AZ 85016-4240
602-977-6500
www.asarco.com

Location:

Township 18 S Range 15 E Sec. 15
Latitude/Longitude: 31.86 110.78
Twenty miles SE of Tucson in Santa Rita Mtns.

Mineralization type and reserve/resource:

Type	Tons (millions)	Grade (%)		
Mixed	23	0.76	TCu	(a)
Mixed	46	0.58	TCu	(b)
Mixed				

Reserve information and sources:

(a) 0.4% cutoff. (b) 0.3% cutoff. Mineralization is 60% sulfides.
Waste to ore ratio generally less than 3:1.
Geology of the Helvetia Copper Deposit - AZ, SME Preprint 92-61, 1992, Anzalone, S.A.
and Brown, R.L.

Comments:

Included in sale to Asarco of Helvetia in 1988.

PEACH MINE

PIMA COUNTY
Helvetia District
T18S R15E Sec 15

NJN WR 6/15/84: Discussed the status of Anamax's pending applications for the Helvetia Mine (Peach (file) Elgin (file) Pima County with Forest Service Zone Geologist Hilton Cass. He reported that they have been stalled on the desk of Bill Nelson of BLM for over a year.

PEACH MINE

(Peach, South End & Gap Claims)

PIMA COUNTY

HELVETIA DISTRICT

T18S, R15E, Sec 15

Banner Mining Company, Box 5605, Tucson, Arizona, has option to purchase this property.

See: AXEL L. JOHNSON reports dated Sept. 6, 1961 and July 20, 1962 in "GUNSIGHT PROJECT" file.

MILS PEACH MINE

See: SOUTHERN CROSS (file)

ELGIN MINE (file)

SOCIETY FOR MINING, METALLURGY, AND EXPLORATION, INC.

P.O. BOX 625002 • LITTLETON, COLORADO • 80162-5002

PREPRINT
NUMBER

92-61



GEOLOGY OF THE HELVETIA COPPER DEPOSIT — ARIZONA

S. A. Anzalone

ASARCO Incorporated
Tucson, Arizona

R. L. Brown

ASARCO Incorporated
New York, New York

For presentation at the SME Annual Meeting
Phoenix, Arizona — February 24-27, 1992

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1

Geology of the Helvetia Copper Deposit
Arizona

The Helvetia copper deposit is a large undeveloped Laramide porphyry copper system located in the Santa Rita Mountains, Pima County, Arizona. This porphyry copper system consists of four areas of copper mineralization: Rosemont, Peach-Elgin, Broadtop Butte, and Copper World. Asarco refers to the four areas collectively as the "Helvetia Deposit". Mineralization and alteration are primarily contact pyrometasmatic, and zoning of hydrothermal alteration and sulfide mineral assemblages are similar to those observed at the Twin Buttes and Mission copper mines located approximately 32 km west of Helvetia. Asarco acquired the Helvetia Deposit in 1988 and has continued the exploration and development effort since then.

A considerable amount of excellent geological work has been completed in the area but little information has been published on developments since the mid-1950's. The geology of the deposit as developed by numerous geologists over the past 75 years and the large, bulk tonnage low grade copper deposits outlined in recent years will be briefly reviewed in this paper.

Location

The Helvetia copper deposit is located approximately 50 km southeast of Tucson, Arizona, in the northern Santa Rita Mountains (Figure 1). It lies within the Basin and Range Physiographic Province at elevations ranging from 1402 m to 1890 m.

Exploration and Mining History

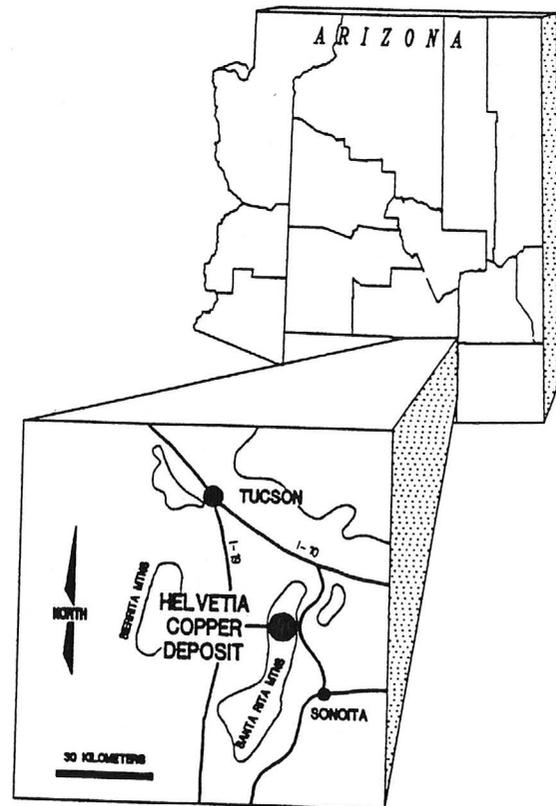
Copper mineralization may have been discovered in the Helvetia district prior to the Civil War, but no records are available for these early discoveries. The district has had a relatively small production of copper ore principally from underground mines. In the late 1880's copper ore from the district was treated at the Columbia Smelter, located on the west side of the Santa Rita Mountains, and the Rosemont Smelter, located on the east flank of the same range near the Rosemont Camp (Creasey, 1955). In 1903 the Helvetia Copper Company began operation and continued until 1911. Copper was produced almost continuously from 1915 to 1951. In the 1940's, some disseminated copper mineralization skarns were mined from small open pits located in the Elgin area. Total production from the Helvetia District through 1950 totalled 227 300 tons of ore containing 17 290 000 pounds of copper, 1 097 980 pounds of zinc, and 180 760 ounces of silver (Schrader, 1915; Creasey, 1955).

After 1950, activities consisted mainly of exploration and development drilling. The Lewisohn Copper Company conducted a drilling program in the Peach-Elgin area in 1955 and in 1956 outlined a possible open pit copper deposit in the Peach Hill area (Figure 3). Drilling in 1956 by American Exploration and Mining Co. in the Ingersoll breccia area, located southeast of Broadtop Butte, failed to outline

an economic deposit. In the late 1950's the Helvetia Deposit was acquired by the Banner Mining Company, and a modest exploration drilling program was conducted in the area. During this Banner program, drill hole G-33 penetrated the first significant porphyry copper mineralization in the Rosemont area. This hole contained a 300 m intercept of greater than 0.90% Cu mineralization. Anaconda Mining Company acquired the property in 1963 and carried out an extensive mapping and drilling program. The vast majority of the modern information on the Helvetia Deposit was developed by Anaconda and Anamax personnel. Their efforts resulted in the delineation of the Rosemont area porphyry copper deposit, a major North American copper resource. The property was incorporated into the Anamax Mining Co. when Amax joined Anaconda in a partnership in 1973. Anamax sold the property to a real estate company in 1986 which in turn sold it to Asarco in 1988.

Geology

The four Helvetia copper deposits occur within a series of moderate to steeply dipping Paleozoic and Mesozoic sedimentary rocks that have been intruded by Laramide igneous rocks. Mineralization and alteration are primarily contact pyrometasmatic (Creasey, 1955), and hydrothermal alteration and zoning of sulfide



LOCATION MAP - HELVETIA COPPER DEPOSIT
FIGURE 1

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Peach Mine

Date Dec. 28, 1956

District Helvetia District, Pima Co.

Engineer Axel L. Johnson

Subject: Field Engineers Report. Personal Visit & Information from B. H. Martin, Mgr.

Location Near Helvetia. About 1/4 mile west of Helvetia.

Number of Claims 6 pat. claims ----(Peach, Monitor, South End, Gap & 2 others)

Owners Lewisohn Copper Corp., 128 N. Church Street, Tucson, Ariz.

Operators Same as above.

Officers Richard E. Chilson, 8350 Tanque Verde Road, Tucson, Ariz. ---President.
Mail. address ---- Box 2729, Tucson, Ariz.

↓ B. H. Martin, 5334 E. Willard, Tucson, Ariz. --- Manager.
(Ben)

Principal Minerals Copper

Production Rate No production. Exploration program with churn drilling.

Geology Irregular replacements in more or less altered limestone, adjacent to and near a quartzite footwall.

Ore Values Values differ within very wide limits, and no averages are available as yet.

Ore in Sight and Probable Will be determined by the present exploration program.

Milling & Marketing Facilities No mill on the property. No plans ~~make~~ for the construction of a mill has been announced by the company.

Present Mine Workings None, except surface cuts and churn drill holes, as far as is known by field engineer.

Present Operations Churn drilling is now being done by the Purcell Drilling Co. on contract. This is now done under a D. M. E. A. Loan (see provisions of same below). About 30 churn drill holes were put down to depths of approximate 300 ft. each this year prior to the granting of a D. M. E. A. loan, on which work was started Nov. 2, 1956. After that date, churn drilling has been done on the exploration loan program.

D. M. E. A. Loan Program First phase calls for a gross of \$ 88,000 to be spent in sinking 24 churn drill holes to an average depth of 300, or a maximum of 7,200 lin. ft. of drilling. If the results of this drilling program is favorable, this will be followed by an additional D. M. E. A. loan, ~~or~~ Second phase exploration loan, which may possibly be followed by a Third Phase loan. Work on the exploration loan (1st Phase) was started on Nov. 2, 1956.

STATUS OF DORMANT MINES

MINE NAME: Newman (Peach Pit)

LOCATION: Helvetia

OWNER AND/OR LEASEE: Owner: Lewisohn Estate, Lessee, R. E. Chilson

ADDRESS: P. O. Box 2729, Tucson

APPROXIMATE PRODUCTION (Year of 1946):

COPPER 40,000 Lbs. LEAD _____ Lbs.
ZINC _____ Lbs. (OTHER) _____

CHECK THE CHIEF CAUSE OF YOUR DISCONTINUED PRODUCTION:

- (A) Easily available ore worked out.
- (B) Increased costs, but have quantity similar to past grade of ore.
- (C) Too close a margin to develop more ore.
- (D) _____

If you have ore ready to mine please give your estimate of the amount of metal (name each metal) that you could produce in one year (after allowing 60 days to get started) if there were premiums above present market prices. Name amount with a low premium, and amount at a high premium; such as:

Copper at $22\frac{1}{2}\phi$ plus 5ϕ premium..... 1,000,000 Lbs.
Copper at $22\frac{1}{2}\phi$ plus 10ϕ premium..... 1,500,000 Lbs.

Could produce 2,000 lbs copper per day at $27\frac{1}{2}\phi$
or
4,000 lbs copper per day at $32\frac{1}{2}\phi$

or could develop larger scale at lower price with longer
If you do not have ore ready to mine please discuss the following: time period.

- (A) Do you think a reasonable development program would produce a justified tonnage of commercial ore at above mine?

Yes

- (B) With a premium price (guaranteed for one year) could you carry out such a development program yourself? What premium?

Yes. Although one year is a short ime for both
developing and mining an ore body.

- (C) If you could not do this yourself, would a quick drilling program by some government agency (at government expense) be sufficient?

Government drilling would be a very great help.

- (D) Or would you prefer a loan plan similar to the arrangements during World War II?

As a taxpayer I object to previous loan administration

How about a combination plan in two stages such as follows?

Stage 1: Government engineers review project and, if a little drilling appears to be justified and a preliminary key to the situation, such drilling program to be agreed upon by owner and government engineer, paid for by the government, but let by contract.

Stage 2: If results of drilling (or without drilling) justify underground development and/or production equipment, same to be obtainable via a mortgage loan on property.

Please discuss the above: I like this combination plan

because of its flexibility. Government projects tend to be slow however and limited in number. For these reasons I prefer the blanket premiums for the smaller producers which also allows individual operators to take risks which the government should not accept for mine possibilities. The extent of risk which an operator is willing to undertake and the resulting number of productive operations which will be opened depend directly on the factors of possible rate of repayment, i.e.: price, and possible over-all repayment that is, the time period. And I believe the time period is the more influential factor. Particularly does the time factor influence the investment justified in larger scale production planning. Undeveloped ore requires six months to get in production even if the exploratory work has been done.
SUGGESTIONS:

And since development costs at least as much per day as mining, a one year period would require three times the repayment rate that a two year period for the same return.

My conclusion is that a guaranteed price is and will always be the strongest incentive and the most effective method of obtaining production of metal (or anything else). My reasoning is that while government loans and assistance will help many operations where capital is lacking, yet the most competent operators will be able to raise capital whenever there is a measure of security afforded.

DATE

SIGNATURE

August 30, 1950

Richard E. Carlson