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Volume 4 ; Book 1 0056

TOMBSTONE

Mining District

Cochise County

ARIZONA

Misc. TMD Maps and Cross-sections
(Not Dated)

INDEX TAB
MAPS

MAP INDEX

Plate #		Intermediate	Final

MAPS AT A BASE SCALE OF 1:62,500 (1 inch = 1 mile)

Done 1. Western United Status showing the location of the project area in Arizona.

Done 2. Highway map showing location of project area near Tombstone, Arizona, in relation to Tucson and Phoenix, Arizona.

3 Tombstone area - Generalized geologic and structural map on screened topographic base.

4 Tombstone area - Generalized alteration and mineralization map on the geology and structural base Figure 3.

Done 5 Tombstone area - Property map showing ownership of major holdings of mineral rights. Red overprint shows state, Federal and private land and lands with mineral rights held by the Tombstone Development Company, as of October 1, 1981.

6 Dump sample location map showing area of influence boundaries and Ajax Fault, Prompter Fault and Horquilla Fault, from Newell, R. A., 1973. Distribution pattern for high silver ratios in dump samples. (In red).

7 Dump sample location map showing area of influence boundaries and Ajax Fault, Prompter Fault and Horquilla Fault, from Newell, R. A., 1973. Distribution pattern for high zinc ratios in dump samples. (In red).

8. Dump sample location map showing area of influence boundaries and Ajax Fault, Prompter Fault and Horquilla Fault, from Newell, R. A., 1973. Distribution pattern for high lead ratios in dump samples. (In red).

Plate #		Inter-mediate	Final
9.	Dump sample location map showing area of influence boundaries and Ajax Fault, Prompter Fault and Horquilla Fault, from Newell, R.A., 1973. Distribution pattern for high copper ratios in dump samples. (In red).		
10	Dump sample location map showing area of influence boundaries and Ajax Fault, Prompter Fault and Horquilla Fault, from Newell, R. A., 1973. Distribution pattern for high molybdenum ratios in dump samples. (In red).		
11	Dump sample location map showing area of influence boundaries and Ajax Fault, Prompter Fault and Horquilla Fault, from Newell, R. A., 1973. Distribution pattern for high molybdenum and zinc ratios in dump samples. (In red).		
12	Distribution pattern of silver in mesquite trees. (In red).		
13	Distribution pattern of zinc in mesquite trees. (In red).		
14	Distribution pattern of copper in mesquite trees. (In red).		
15	Distribution pattern of Molybdenum in mesquite trees. (In red).		
16	Aeromagnetic map of the Tombstone area.		
17	Gravity map of the Tombstone area.		
18	Combined map of dump sample ratios and generalized mesquite tree geochem for copper.		
19	Combined map of dump sample ratios and generalized mesquite tree geochem for zinc.		
20	Combined map of dump sample ratios and generalized mesquite tree geochem for silver.		

Plate #		Inter-mediate	Final
21	Combined map of dump sample ratios and generalized mesquite tree geochem for molybdenum.		
22	Combined generalized maps for molybdenum and silver (Figures 20 & 21).		
23	Combined generalized maps for silver, molybdenum, simplified aero magnetic data on 200 gamma contour intervals, gravity highs and outcrops of intrusive rocks and extrusive andesites.		
24	Geologic cross section A-A' with magnetic, gravity and geochemical profiles		
25	Geologic cross section B-B' with magnetic, gravity and geochemical profiles		
26	Geologic cross section C-C' with magnetic, gravity and geochemical profiles		
27	Geologic cross section D-D' with magnetic, gravity and geochemical profiles		
28	Geologic cross section E-E' with magnetic, gravity and geochemical profiles		
29	Geologic cross section F-F' with magnetic, gravity and geochemical profiles		

MAPS AT A SCALE OF 1:24,000 (1 inch = 2,000 feet)

30	Property map on a topographic and geoligic base showing all patented and unpatented mining claims determined from research into county records and previously existing records. No recent surveys have been used to create this map	1. 2. 3. 4 Property Map & enlargements	
31	Geologic and structural map of the Tombstone 15 min. quadrangle		
32	Alteration and mineralization map, on a geologic base, of the Tombstone 15 min. quadrangle		

Plate #		Intermediate	Final
MAPS AT A SCALE OF 1-6,000 (1 inch = 500 feet)			
33	Property map of the Tombstone Basin on a geologic and topographic base, showing the Tombstone Development Company Patented claims and known drill hole locations		
34	Geologic map of the Tombstone Basin area		
35	Alteration map of the Tombstone Basin area on a geologic and topographic base		
36	Geologic cross section A-A'		
37	Geologic cross section B-B'		
38	Geologic cross section C-C'		
39	Geologic cross section D-D'		

MAPS OF THE TOMBSTONE MINING DISTRICT
Cochise County, Arizona

Title:	Drawn by:	Date:	Scale:
Map of Downthrown Block(4)	J. P. McDaniel	6/22/54	1"=100'
Sections and Assays of Diamond Drill Holes 7,8,9,10 & 11, Oregon Mine	Department of the Interior Bureau of Mines #322	10/27/41	1"=20'
Sections and Assays of Diamond Drill Holes 1,2,3,4,5 & 5, Oregon Mine	Department of the Interior Bureau of Mines #322	9/30/41	1"=20'
Assay Map of Contact Mine	Department of the Interior Bureau of Mines #322	8/29/41	1"=40'
Assay Map of Blacktail Manganese Rattlesnake Group	Department of the Interior Bureau of Mines #322	9/41	1"=100'
Assay Map of Oregon Prompter Mine	Department of the Interior Bureau of Mines #322	8/41	1"=50'
Surface Drill Hole D-6-A Pulse Profiles	Newmont Exploration	10/54	
Surface Drill Hole D-2-A Pulse Profiles	Newmont Exploration,	11/54	
Claim Map - Mar & Mort Groups	R. J. Searls	5/53	1"=300'
Tranquility 500-Silver Thread 400 Level Geology Plan	J.P. McDaniel	7/15/54	1"=50'
Tranquility 500-Silver Thread 400 Level Plan	J. P. Mc Daniel	2/13/62	
Westside 600 - Pump 700	J. P. Mc Daniel	10/53	1"=100'
Westside 600 Level Plan	J. P. McDaniel	54	1"=50'
Map of 18 Unpatented Claims(2)	Tom Pitcher	10/ 1/73	1"=400'
Topographic Map Heapleach Test Area	J. R. Breeder, U.S.G.S.	12/ 5/74	1"=100'
Section of Surface 4 3/4" rotary hole D-1-A, collar location -1075.7S + 1266.2E	D.H.	9/30/54	1"=100'

Title:	Drawn by:	Date:	Scale:
Section N63 W through DD (2) Stations WS602 & T506 of DD Holes 7,8 & 9 & Rotary drill hole D-6 looking N27 E	D.H.	3/55	1"=100'
Dump No. 41 - Empire Silver Thread Shaft	JRB	73	1"=50'
Surface Location Map & Geochem(2) of Contention,Tranquility Area	Duval Corporation	6/ 1/67	1"=100'
Dump #39, Toughnut			1"=50'
East Fault Problem			
Schieffelin Project, three (2) array resistivity	Newmont Exploration	1/30/53	1"=600'
Wide West Project-Two (2) electrode array pulse survey-spacing=400'	Newmont Exploration	3/25/53	1"=100'
Wide West Project-two electrode array resistivity survey - spacing=200'	Newmont Exploration	3/25/53	1"=100'
Wide West Project-Two electrode array pulse survey-Spacing=200'	Newmont Exploration	3/25/53	1"=100'
Wide West Project Plan Map showing grid & geoloy	Newmont Exploration	3/25/53	1/2=100'
Assay map of D.D. Hole #8 collar location D.D. station WS-602 at 37N & 98W-bearing S 61 30'E	D.H.	3/55	1"=100'
Drill Hole #7-pulse profiles	Newmont Exploration	12/54	
Westside area-deep diamond drill hole-verticle section	J. P. McDaniel	5/25/54	1"=100'
Section of surface 4 3/4" rotary hold D-6	TDC		1"=100'
Toughnut Shaft			
Development Progress Map	TDC	2/22/54	1"=100'

Title:	Drawn by:	Date:	Scale:
Work Progress plan of west side 600	TDC	54	1"=20'
Work progress plan of west side 600	TDC	12/53	1"=20'
Dump No. 38-Grand Central			
Lucky Cuss Dump			1"=50'
Westside 600 - Pump 700	TDC	10/53	1"=100'
Project of Carlitos on the Grand Central claim			1"=10'

FEB 20 1981

By

RECEIVED FEB 18 1981

2/14/81

Jim

This is an inventory of the maps you gave me for T.D.C.

Your cooperation in supplying us with these is greatly appreciated.

Bill Hight & Frank Gallup will be here Wednesday and I will go over the maps with them.

Thanks again

Tom

FILE Tombstone Chron. file
x file Geo file/maps file

SMALL ORIGINALS

DESCRIPTION	SCALE	DATE	BY
Tranquility (500') Silver Thread (400')	1" = 25'	1954	McDaniel
Mar and Mort Claims	1" = 300'	1952	R.J.Searls
" " " "	"	"	"
Section between Westside and Pump Shafts	1" = 100'	Oct. 1953	---
Westside, 600' level	1" = 20'	1954	J.P.M.
Westside, 600' level	1" = 20'	Dec. 1953	J.P.M.
Drill holes Nos. 6, 7, 8 and 9	1" = 100'	Mar. 1955	D.H.
Claims in central part of Tombstone District	1" = 500'	----	Ransome
Silver Thrdad, Vertical section	1" = 100'	7/6/54	McDaniel
Drill holes (-1075.7S + 1266.2E)	1" = 100'	9/30/54	D.H.
Drill hole, No. 6	1" = 100'	10/12.54	D.H.
Silver Thread, Deep drill hole	1" = 100'	7/6/54	McDaniel
Rotary hole No. d-2 (1363 S 1095.5 E)	1" = 100'	10/27/54	D.H.
D.D.H. No. 6	1" = 100'	5/25/54	J?P.M.
R. D. H. Nos. D-2, D-10A, D-1A & D-6	1" = 100'	10/28/54	D.H.
Silver Thread, Deep Drill Hole	1" = 100'	7/6/54	McDahiel
Westside shaft, 600 ft. level	1" = 20'	Nov 1953	D.H.
Assay map, D.D. Hole No. 7	1" = 100'	12/31/54	D.H.
Portion of claim map	1" = 500'	-	-
Silver Thread, Deep Drill Hole	1" = 100'	7/6/54	McDaniel
Deep Diamond Drill Hole - D.D.H.No. 6	1" = 100'	5/25/54	J.P.M.
Rotary Hole, D-2	1" = 100'	10/27/54	D.H.
Assay map of D.D.H. No. 8	1" = 100'	Mar 1955	D.H.
D.H. No. 9	1" = 100'	2/22/55	D.H.
Westside pump site at 600' level	1" = 20'	-	-
Geologic map, State of Maine	1" = 40'	July 1968	W.L.
" " " " "	"	"	"
" " Uncle Sam Mine	"	"	"
" " State of Maine	"	"	"
" " " " "	"	"	"
Plate V1	-	-	Ransome
Water level profile	Variable	1954	McDaniel
State of Maine, Geologic outcrop map	-	Sept. 1973	J.A.B.

BLACK LINE COPIES

DESCRIPTION	SCALE	DATE	BY
Claim Map	1" = 300'	5/11/53	J.A.H.
Aerial Survey, Sec. 8, 9, 10, 15, 16, 17, 20, 21 & 22 - Contours 20'	1" = 400"	--	Cooper
Tracing of part of the above areal survey			
Tombstone Extension, Surface Geological and Topo	1" = 200'	--	McDaniel
Claim Map, Tombstone area	1" = 300'	5/11/53	J.A.H.
Surface drill holes	1" = 50'	8/3/54	McDaniel
" " "	"	"	"
Tranquility, 500' - Silver Thread 400'	1" = 50'	1954	"
" " " " "	"	7/15/54	"
Claim map, State of Maine area	1" = 300	5/12/53	Motz
Drill hole, Silver Thread	1" = 100'	7/6/54	McDaniel
Claim map, Mar and Mort.	1" = 300'	5/12/53	J.A.H.
Foundation for hoist (2 copies)	1½" = 1'	May 1953	M.H.W.
Water Surface, East - West	--	3/16/54	McDaniel
T.D.C., 18 unpatented claims	1" = 400"	10/1/73	Pitcher
Map of Downthrown Rock	1" = 100'	-	McDaniel
Composite level map, State of Maine	1" = 40'	July 1968	Austral oil
Geological map, State of Maine	1" = 40'	"	" "
" " " " "	"	"	" "
" " " " "	"	"	" "
" " " " "	"	"	" "
T.D.C., Patented claims	1" = 500'	2/21/74	Pitcher
Ransome Plates. V, IX, X, XLV, XV, XVI, XVLI, XVLII, XLXA, XLXB, XXI, XXII, XXIVA, XXIVB.			
Tombstone Quad.			

LARGE ORIGINALS

DESCRIPTION	SCALE	DATE	BY
Claim map, Churn drill holes	1" = 300'	5/11/53	J. A. H.
Contour map, Escapule west, cont. 5'	--	--	--
" " Standard to Westside, cont. 5'	--	--	--
" " Standaed west	--	--	--
" " Charleston area	--	--	--
Unidentified Geological Map			
" " "			
" " "			
Contour map, Standard to Westside, Cont. 5'			
Claim map of Bunker Hill lease, 300' level	1" = 150'	--	--
Tombstone area vicinity of State of Maine	1" = 400'	July 1958	Austral oil
Claim map showing Churn drill holes	1" = 300'	5/11/53	J.A.H.
Claim map, sec. 9, 10, 15, 16, 21 and 22	1" = 300'	5/13/53	Motz
Claim map,, Sec. 13,14,15,22,23 and 24	1" = 300'	5/11/53	Motz

COLORED MAPS NON REPRODUCABLE

DESCRIPTION	SCALE	DATE	BY
Plat of Sec. 1, 12, 13, and ½ of 6, 7, 18	1" = 300'	12/19/45	H.U.S.
Tranquility - 500 ft. level	1" = 50'	3/17/54	McDaniel
Tranquility - 500 ft. level	1" = 50'	3/17/54	McDaniel
Weastside area - Vertical section	1" = 100'	5/25/54	J.P.M.

SAVE

Reference section Tombstone

we need to try and see if we have all this material. Ron 8/28/88

INDEX OF ARIZONA DEPARTMENT OF MINERAL RESOURCES

Apature Cards of Maps & Data on Tombstone, Arizona

Arizona Library & Archives = ALA
Arizona Bureau of Mines = ABM

Cochise County		Comments
ABM	Blacktail fissure area (mine) Tombstone Manganese Project T.20S., R.22E., Sect. 14	Tombstone District
ABM	Boss Mine Baseline G&SRB&M	Tombstone District workings
ABM	Bunkerhill, Rattlesnake T.20S., R.22E., Sect. 14	Shafts - Tombstone District
ABM	Contention Mine T.20S., R.22.E., Sect 11SE	Tombstone District 1) 350 level 2) Section cut - Tombstone Dist. 3) Cross Cuts Contention-Tombstone
ABM	Dry Hill Mine T.20S., R.22E., Sect. 15	Tombstone District
ABM	Emerald Mine T.20S., R.22E., Sect. 23 NW	1) Tombstone Dist. 2) Telephone Shaft 1 of 2 3) Emerald Shaft; Silver Plume shaft 2 of 2
ABM	Empire Mine T.20S., R.22E., Sect. 11	1) Tombstone Dist. - all levels 2) 200 level 3) 200 level 4) 300 level 5) 400 level 6) 4th level 7) Tombstone District 8) Tombstone District 9) Tombstone District 10) Tombstone District
ABM	Gallagher Vanadium & Rare Min. Corp. T.21S., R.22E., Sect. 6	1) Tombstone District 2) Map of claims
ABM	Girard Mine T.20S., R.22E., Sect. 11	Tombstone District
ABM	Grand Central Old Grand Central, Grand Central Little Joe T.20S., R.22E., Sect. 11 SE	1) Shafts 2) Tranquility shaft
ABM	Herschel Mine T.20S., R.22E., Sect. 11 SE	1) 1st, 2nd, 3rd 4 maps, Tombstone 2) 2 Maps
ABM	Ingersol Mine T.20S., R.22E., Sect 11 SE	1) Tombstone District workings 2) Ingersol workings 3) Workings & geology - 2 maps 4) Inclined shaft
ABM	Lucky Cuss T.20S., R.22E., Sect 14 NW	1) 1st level 2) Multiple levels 3) Multiple levels 4) 1st & 5th levels 5) 1st & 5th levels 6) 3rd level 7) 3 maps - 4th level 8) 5th level - 2 maps 9) 5th level 10) Cross sections - 3 maps 11) 6th level w/geology (2 maps) 12) 2 maps, 2nd level

mike 628 5399

Index of Arizona Dept. of Mineral Resources 1

Apathre Cards of Maps & Data on Tombstone, Arizona

Tucson Blueprints

microfilm

Ariz. Libr. & Archives = ALA

ARIZ Bureau of mines = ABM

Cochise Co.

ABM	BlackTail Fissure Area (MINE) Tombstone Manganese Project T 20S R 22E Sec. 14	Comments: Tombstone District
ABM	Boss Mine Baseline G & SRB & M	comments Tombstone Dist. Workings
ABM	Bunkerhill, Rattlesnake T 20S R 22E Sec 14	COMMENTS SHAFTS · TOMBSTONE DIST.
ABM	CONTENTION MINE T 20S R22E Sec. 11 SE	comments: TOMBSTONE DIST. 1) 350 level 2) SECTION CUT TOMBSTONE DIST. 3) CROSS CUTS CONTENTION-TOMBSTONE
ABM	Dry Hill Mine T20S R 22 E Sec. 15	COMMENTS: TOMBSTONE DIST
ABM	EMERALD MINE T20S R22E Sec 23 NW	1) TOMBSTONE DIST 2) TELEPHONE SHAFT 1 of 2 3) Emerald SHAFT; SILVER-PLUME SHAFT 2 of 2

		COMMENTS
ABM	Empire Mine T20S R22E Sec. 11	1) TOMBSTONE DIST. ALL LEVELS 2) 200 Level 3) 200 level 4) 300 level 5) 400 level 6) 4th level 7) (TOMBSTONE DIST. very hazy print) 8) TOMB. DIST 9) " " 10) " "
ABM	GALLAGHER VANADIUM & Rare Min. Corp. T21S R22E Sec. 6	1) comments: TOMBSTONE DIST. 2) MAP OF CLAIMS
ABM	Girard Mine T20S R22E Sec. 11	TOMBSTONE DIST.
ABM	GRAND CENTRAL OLD GRAND CENTRAL, GRAND CENTRAL, LITTLE JOE T20S R22E Sec 11 SE	1) SHAFTS 2) TRANQUILITY SHAFT
ABM	HERSCHEL MINE T20S R22E Sec. 11 SE	1) 1st, 2nd, 3rd 4 maps, TOMBSTONE 2) 2 maps
ABM	INGERSOL MINE T 20S R22E Sec. 11 SE	1) TOMBSTONE DIST WORKINGS 2) Ingersol workings 3) WORKINGS & geology 2 maps 4) Inclined SHAFT

ABM ✓ Lucky Cuss

T20S R22E Sec. 14 NW

1) 1st level
2) multiple levels
3) mult. levels
4) 1st & 5th levels
5) 1st & 5th levels
6) 3rd level
7) 3 maps · 4th level
8) 5th level · 2 maps
9) 5th level
10) cross sections · 3 maps
11) 6th level w/ geology (2 maps)
12) 2 maps, 2nd level

—— End of typed map list ——

ABM ✓ NORTHWEST MINE TOMBSTONE DIST.

T20S R22E Sec. 11 SE

ABM ✓ OLD GUARD

T20S R22E Sec. 11 SE

1) TOMBSTONE DIST.
2) 3maps, workings & 2nd level
3) 3rd level
4) 4th, 5th levels, 2 maps
5) TOMBSTONE DIST, levels

ABM ✓ Oregon Prompter TOMBSTONE DIST.

T 20 S R22E Sec. 14 SE

1) WORKINGS
2) "
3) Drill hole locations
4) CROSS sections
5) TOMB. DIST.
6) 2 maps
7) TOMB. area

ABM ✓ Oregon Prompter Area

TOMBSTONE manganese Project

ABM ✓ Pump SHAFT
T20S R22E Sec. 11 SE

1) 262' level
2nd level, 800' level
geology, 3 maps
3) Pump Shaft 500';
Sulphuret 3rd level
4) 3rd level geology
?

5) TOMBSTONE DIST
600' level, (1 of 3)
6) 2 of 3
TOMBSTONE DIST
600 level
7) 3 of 3 600 level
TOMB. DIST.

8) 1 of 2
TOMBSTONE DIST
9) 2 of 2
800' & 1000' levels
TOMBSTONE DIST.

ABM St ANTHONY MINING & DEV'T CO.
TRANQUILITY & SILVER THREAD → 1) (map in very light pencil)
T20S, R22E Sec. 11 TOMBSTONE DIST.
SILVER THREAD → 2) 3 maps (in poor condition)

comments:

ABM ✓ Silverthread & SKIP SHAFT 1) TOMBSTONE DIST.
T20S R22E Sec. 11 SE

MINE

Silverthread & Empire → 2) workings, 2 maps
SKIP SHAFT → 3) 100 level
Silver thread & skip shaft → 4) 200 level
Silverthread → 5) 300 ft. level
Silverthread & contentment → 6) 300 levels & shafts
Silverthread → 7) 400 + 500 level
Silverthread & Empire → 8) workings

ABM ✓ SULFURET & PUMP SHAFTS
T20S R22E Sec. 11 SE 1) 300, 400 levels
2) 300, 400 levels

SULPHURET Incline 3) TOMBSTONE DIST.

ABM
Cochise Co.

TOMBSTONE DIST.
T20S R22E

TRANQUILITY; SILVERTHREAD; EMPIRE

comments

(of 23) 1) TOPO with Geology
2) multiple SHAFTS & workings (1 of 2)
3) 2 of 2
4) 2 maps TRANQ & EMPIRE 500' level
TRANQU & SILVERTHREAD 1st level
5) —
6) 2 maps Bisbee Grp.
Tombstone Dist.

7 of 23 EMPIRE, Girard, WESTSIDE, TOUGHNUT, Silverthread, north pt., TRANQUILITY, Pump, Head center, Boss, Grand Central, northwest, Emerald, COMET, LUCKY CUSS T20S R22E Sec. 11, 23
comment: 1 of 2 SHOWS DIFF. levels of underground mines

8 of 23 Sulphuret, Boss, Grand Central, Northwest, Empire, Girard, westside, Toughnut, silverthread, north pt, pump, comet, tranquility, head center
comment: 2 of 2 Shows diff. levels of underground mines

9) Tombstone area (comment)

10) Mining CLAIMS in TOMBSTONE AREA
T20S R22E Sec. 11, 12, 13, 14, 23, 24

11) Tombstone DIST. comment (TOMBSTONE AREA

12) Sulfuret, survey, Gerald, contention, Tribute, Herald, Mayflower, Silver belt, Empire, Contentment, Tranquility, Inventor, Defense

13) Lucky Cuss, OLD Guard, Herschel - 1 of 2; shafts

14) " " " 2 of 2 "

15) Toughnut, Empire
T20S R22E Sec. 11
comments: 2 maps
3rd level; Toughnut
2nd level, Empire

ABM TOMBSTONE DIST.

16 of 23 mines: Dry Hill, Empire, Tranquility, Toughnut, Sulphuret

comments: DRYhill workings

all others = SHAFT COLLARS

17 of 23 ALL LEVELS

comments: SKIP, Tranquility, & silverthread SHAFTS.

18) comments: TOPO. 1907

19) (1 of 2) SHAFTS

20) (2 of 2) SHAFT

21) 2 maps: ore BODIES & CLAIM MAP

} comments

22) Pump SHAFT comments: 7th level (2 of 2)

23) " " " : 7th level (1 of 2)

ABM TOMBSTONE EXTENSION MINE

T20S R22E Sec. 13 NE

comments

TOMB. DIST.

1) 100' & workings (2 maps)

2) 4 maps 200, 250, 350, 485' levels

3) 2 maps 100, 250, 200, 350, 485, 500' levels

4) 100' & 250' Levels

most Important

ABM TOUGHNUT T20S R22E Sec. 11

(1 of 20) 1st level

2) 1st level

3) ASSAY. NW STOPES 1st & 2nd levels

4) 1st level, 2nd level, ASSAY

5) ASSAYS. Below 1st level

6) ASSAYS. ABOVE 2nd level

7) 2nd level / 2 maps TOMBSTONE DIST.

8) ASSAY. 2nd level

9) level 2. Tombstone Dist.

10) 2nd level. Tombstone Dist.

11) 200' level w/geology

12) ASSAYS Intermediate level

13) ASSAY. 2nd level

14) ASSAYS. 2 maps (Toughnut / Goodenough) - MINE

15) ASSAY. STOPE UNDER WHEELERS HOUSE

16) ASSAY - Stope under wheelers' house

17) TOUGHNUT SHAFT - Tombstone Dist.

18) Toughnut & Girard level 2; Tombstone Dist.

19) Toughnut & Northwest

20) Toughnut & SKIP SHAFT - 2 maps

129

ABM TRANQUILITY

T20S, R22E Sec. 11 SE

1 of 7) underground workings 2 maps (1of2)

2) " " " (2of2)

3) Different levels Tombstone Dist.

4) Tranquility & DRYHILL - Tranqu. - 300' level } sec. 11, SE
Dryhill - workings } sec. 15, SW

5) TRANQUILITY, GIRARD, TOUGHNUT, EMPIRE, SILVERTHREAD
(1of2) 3rd levels SHAFTS & WORKINGS

6) (2of2) mine levels SHOWN SHAFTS; TOMBSTONE DIST

7) TRANQUILITY & EMPIRE Comments: 500 level, Tombstone Dist.

ABM TRANQUILITY & SILVERTHREAD T20S, R22E Sec. 11 SE

1 of 6) 1st level Tombstone Dist.

2) TOMBSTONE DIST. 300 & 400 levels - Shaft locations

3) TRANQUILITY, SILVERTHREAD, Empire (2of2) Tombstone Dist.

4) " " " "

5) Tranquility & silverthread Tombstone Dist.

6) " " ABOVE mines (skip shaft between) Tombst. Area

ABM TRIBUTE MINE T20S R22E Sec. 11 SE

Comments: mine levels shown - Tombstone Dist.

ABM ✓ Vizenza mine

T20S R14E Sec. 26

1) no comment

2) 1st level & 3rd level Tombstone Dist.

ABM West SIDE

T 20S R22E Sec. 11 SE

(1 of 11) 1st, 2nd, 5th, 7th levels (5 maps)

2) 3 maps - 3rd, 4th, 6th levels

(3 of 11) → WESTSIDE MINE

Tombstone Dist. (1 of 2)

4) → " " (2 of 2)

5) Comment: Tombstone Dist. geology

6) 100, 200, 700 levels (TOMBSTONE Dist.)

7) 4th level " "

8) 500 level " "

9) 500 level " "

10) All levels shown in relationship to other shafts (Tombstone Dist.)

11) 2 maps. 6th level & workings

ABM YELLOW JACKET

T20S R22E Sec. 11 SE

comments:

level 1

Tombstone Dist.

156 Total

Misc. Maps/Sections.

DRAWING NUMBER				
D. N.	R.	P.	F.	LOC.
1012	0	105	AF	S11A2

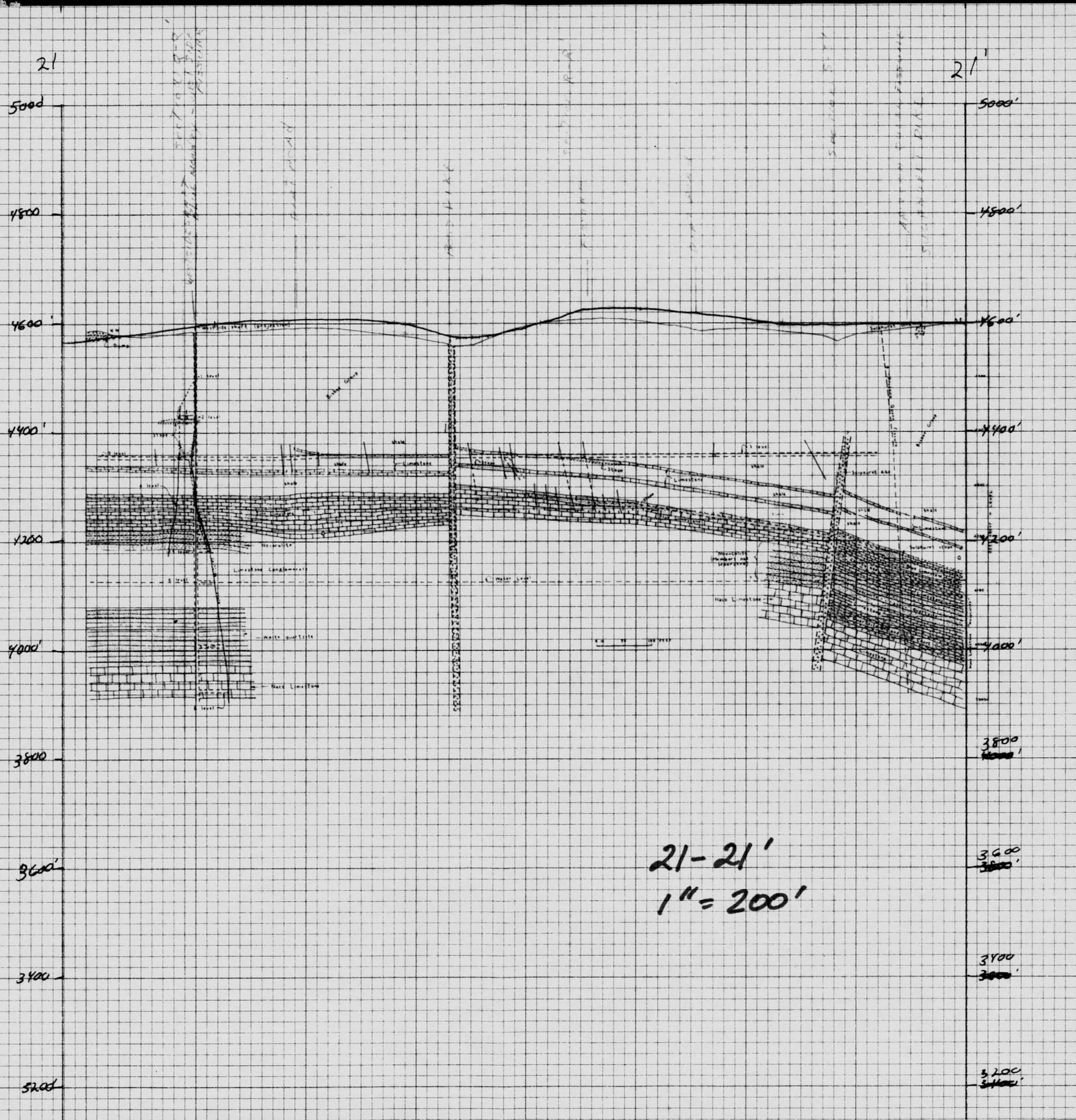
F-0049-0-105-FC.-N

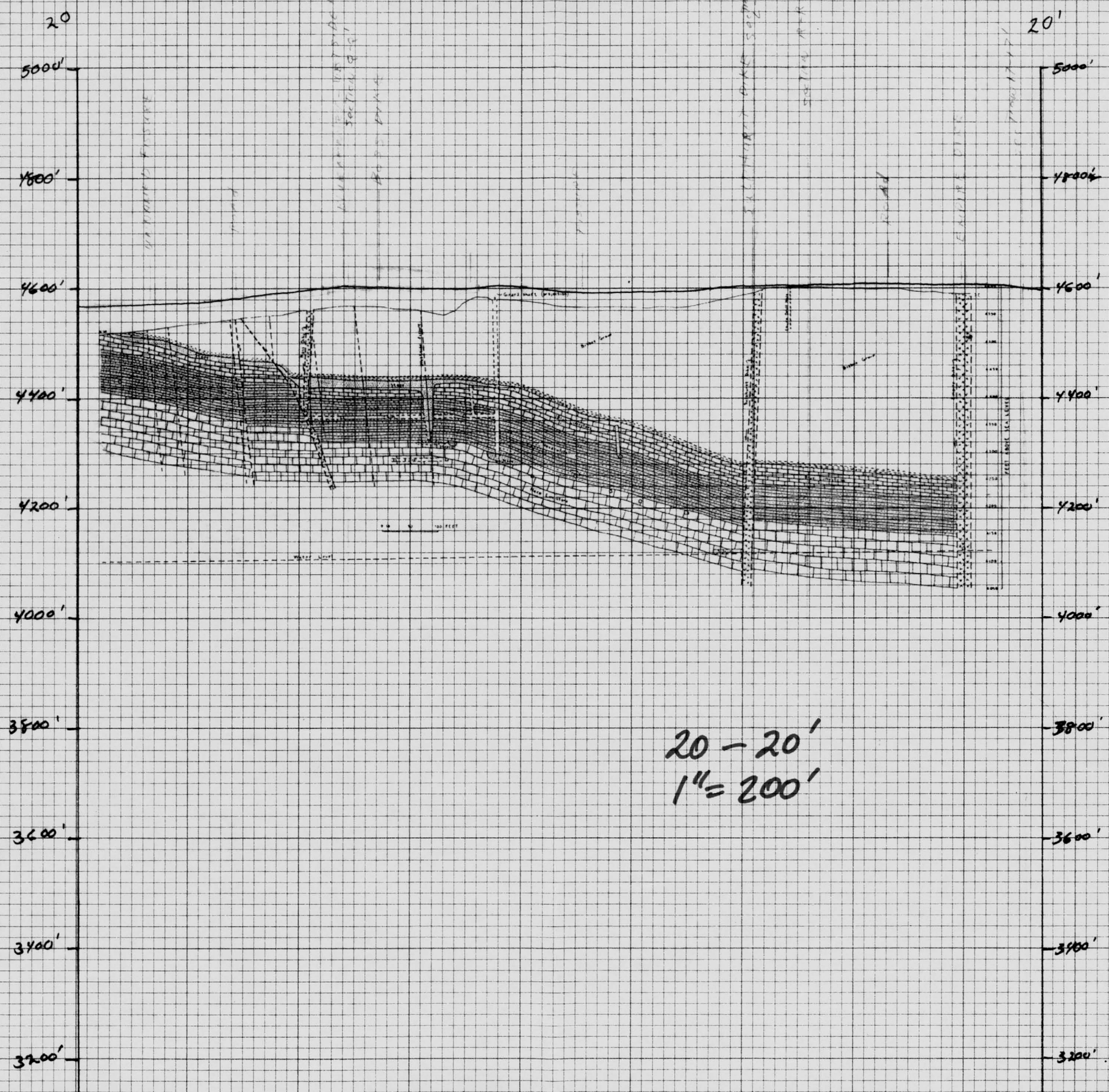
Plate VII.—Map of principal claims and workings in central part of Tombstone district (place transparent paper over Plate IV). Mine levels are indicated by numerals and stoped areas by dots.

DRAWING NUMBER				
D. N.	R.	P.	F.	LOC.
1012	0	105	AF	S11A2

F-0049-0-105-F.C. N

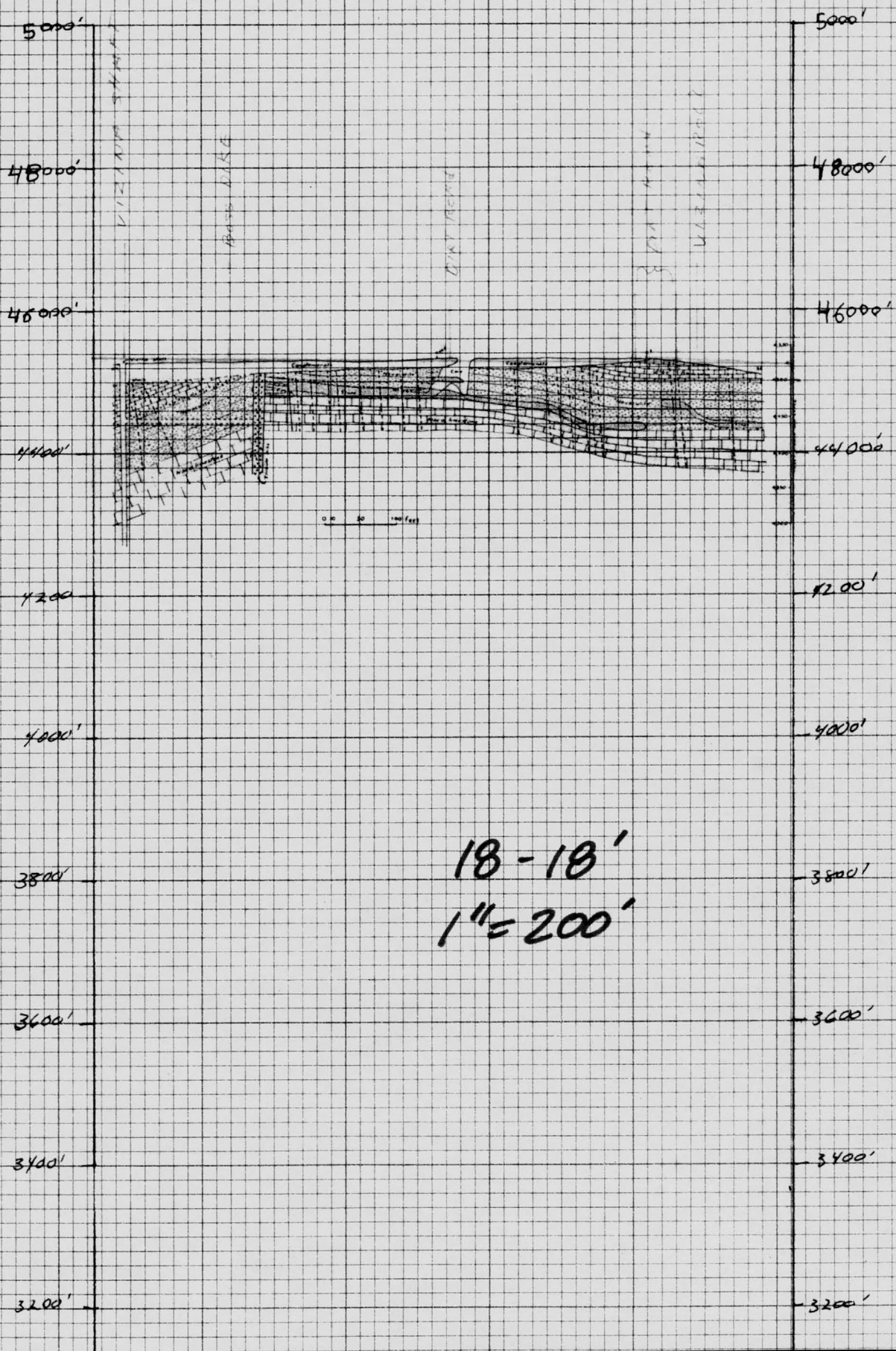
Plate VII.—Map of principal claims and workings in central part of Tombstone district (place transparent paper over Plate IV). Mine levels are indicated by numerals and stoped areas by dots.


21
21'
5000
4800
4600
4400'
4200
4000'
3800
3600'
3400
3200
Limestone
Shale
Limestone Conglomerate
Water quartzite
Hard Limestone
Water Level
21-21'
1" = 200'


20
20'
5000'
4800'
4600'
4400'
4200'
4000'
3800'
3600'
3400'
3200'
20 – 20'
1" = 200'

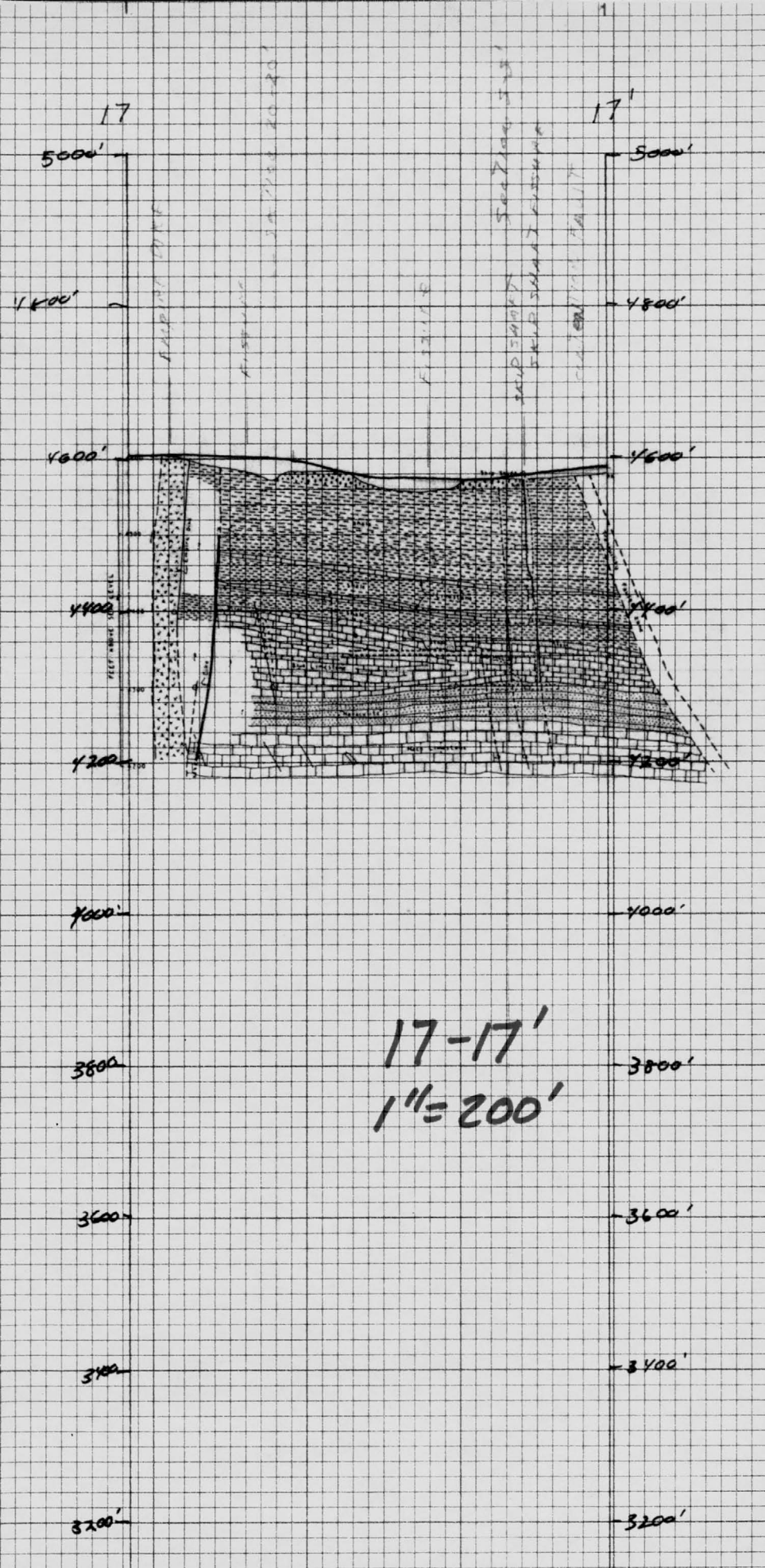
18

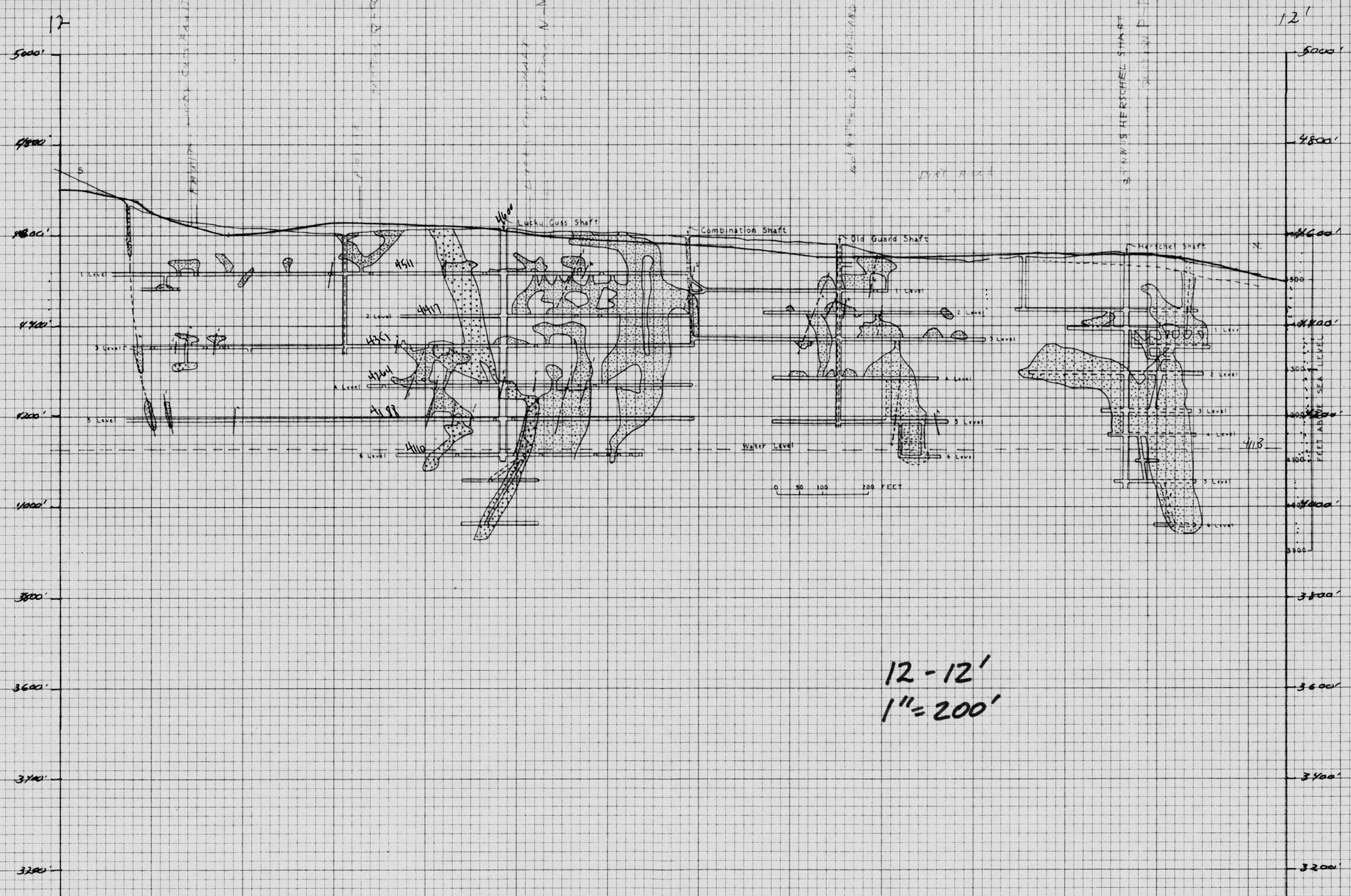
18'

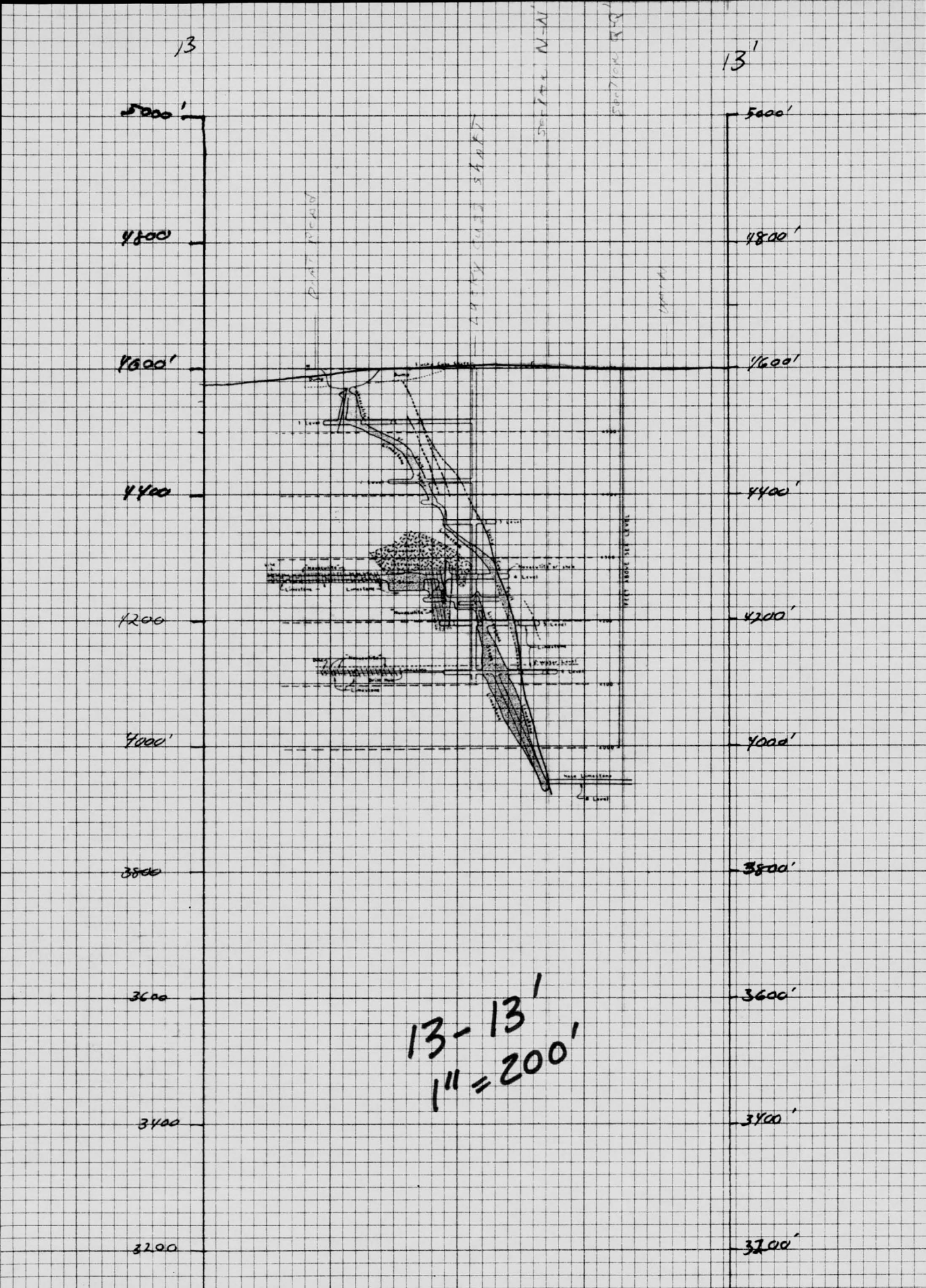


18 - 18'

1" = 200'


17
17'
5000'
4800'
4600'
4400'
4200'
4000'
3800'
3600'
3400'
3200'
17-17'
1"=200'


12
12'
5000'
4800'
4600'
4400'
4200'
4000'
3800'
3600'
3400'
3200'
Lucky Guss Shaft
Combination Shaft
Old Guard Shaft
Herschel Shaft
1 Level
2 Level
3 Level
4 Level
5 Level
6 Level
Water Level
4611
4417
4361
4118
0 50 100 200 FEET
FEET ABOVE SEA LEVEL
12 - 12'
1" = 200'

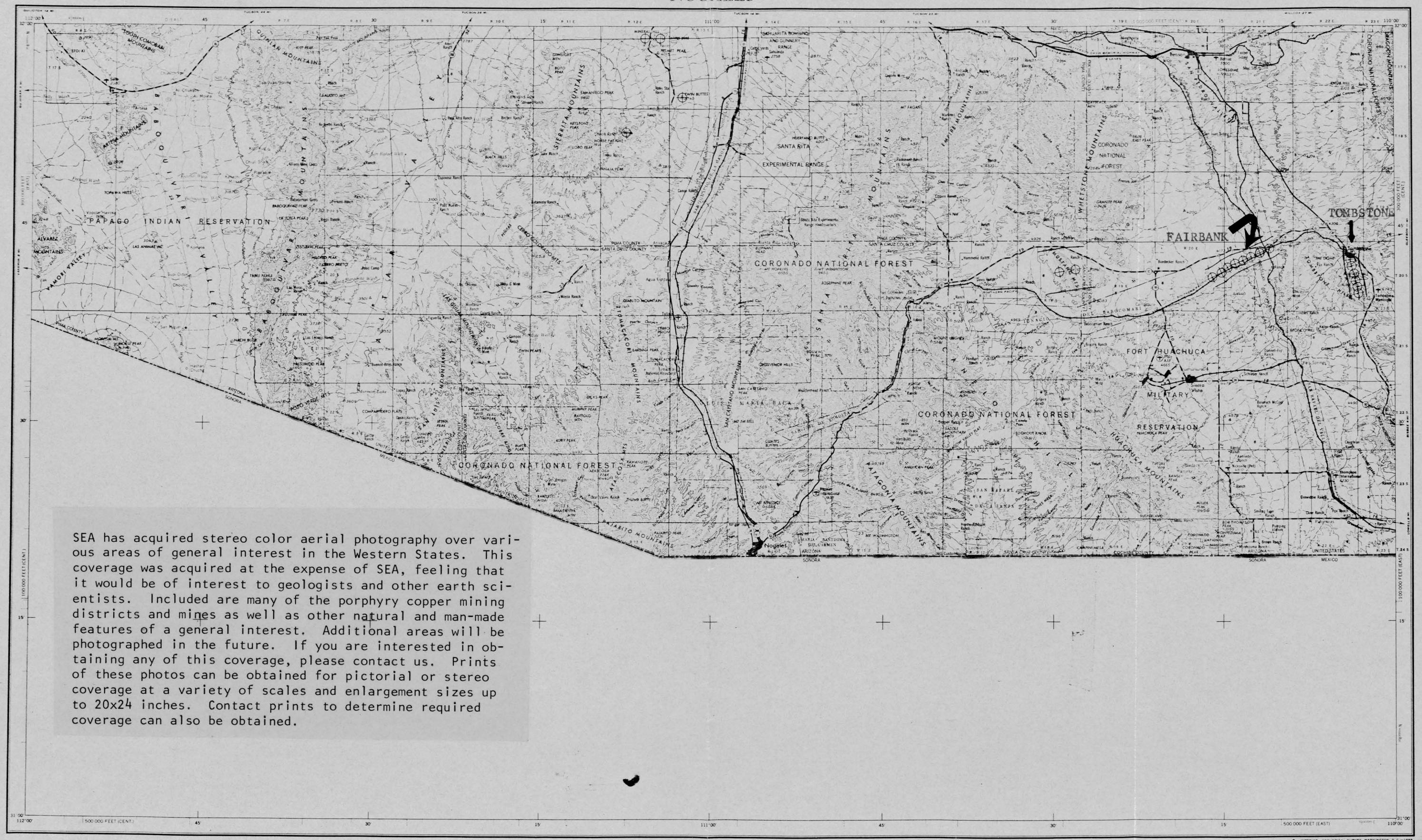

13
13'
5000'
4800'
4600'
4400'
4200'
4000'
3800'
3600'
3400'
3200'
13 - 13'
1" = 200'

Toughnut Mine Maps/Assys

Tm D Cross-Sections

Misc. Undated Maps

NOGALES



SEA has acquired stereo color aerial photography over various areas of general interest in the Western States. This coverage was acquired at the expense of SEA, feeling that it would be of interest to geologists and other earth scientists. Included are many of the porphyry copper mining districts and mines as well as other natural and man-made features of a general interest. Additional areas will be photographed in the future. If you are interested in obtaining any of this coverage, please contact us. Prints of these photos can be obtained for pictorial or stereo coverage at a variety of scales and enlargement sizes up to 20x24 inches. Contact prints to determine required coverage can also be obtained.

Prepared by the Army Map Service (KCSX), Corps of Engineers, U.S. Army, Washington, D.C. Compiled in 1957 by photogrammetric methods and from USGS and AMS quadrangles 1:25,000, 1:50,000 and 1:62,500, 1922-51. Planimetric detail revised by photo-planimetric methods. Horizontal and vertical control by USGS, USC&GS, and USCE. Photography field annotated 1956. Limited revision by U.S. Geological Survey 1962.

100,000-foot grid ticks based on Arizona coordinate system, east and central zones

10,000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue

Approximate road alinement

LEGEND

ROAD DATA 1956 - PARTIALLY REVISED 1962

Figures in red denote approximate distances in miles between stars

POPULATED PLACES: Over 500,000 — LOS ANGELES; 100,000 to 500,000 — OMAHA; 25,000 to 100,000 — GALVESTON; 5,000 to 25,000 — Laramie; 1,000 to 5,000 — Grand Coulee; Less than 1,000 — Sun Valley

RAILROADS: Standard gauge; Narrow gauge; Single track, Double or Multiple

BOUNDARIES: International; State; County; Park or reservation

Landplane airport; Landing area; Seaplane airport; Seaplane anchorage; Woods brushwood

ROADS: Hard surface, heavy duty; More than two lanes wide; Two lanes wide, Federal route marker; Hard surface, medium duty; More than two lanes wide; Two lanes wide, State; Interstate route markers; Improved light duty; Unimproved dirt; Trail

Landmarks: School; Church; Other

Horizontal control point; Windmill

Spot elevation in feet — 221

Marsh or swamp

Intermittent or dry stream

Power line

Scale 1:250,000

20 Statute Miles; 30 Kilometers; 15 Nautical Miles

CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS
TRANSVERSE MERCATOR PROJECTION

1955 MAGNETIC DECLINATION FOR CENTER OF THE SHEET IS 13°30' EASTERLY. MEAN ANNUAL CHANGE IS 0°03' WESTERLY.

FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225 OR WASHINGTON, D. C. 20242

LOCATION DIAGRAM FOR NH 12-2

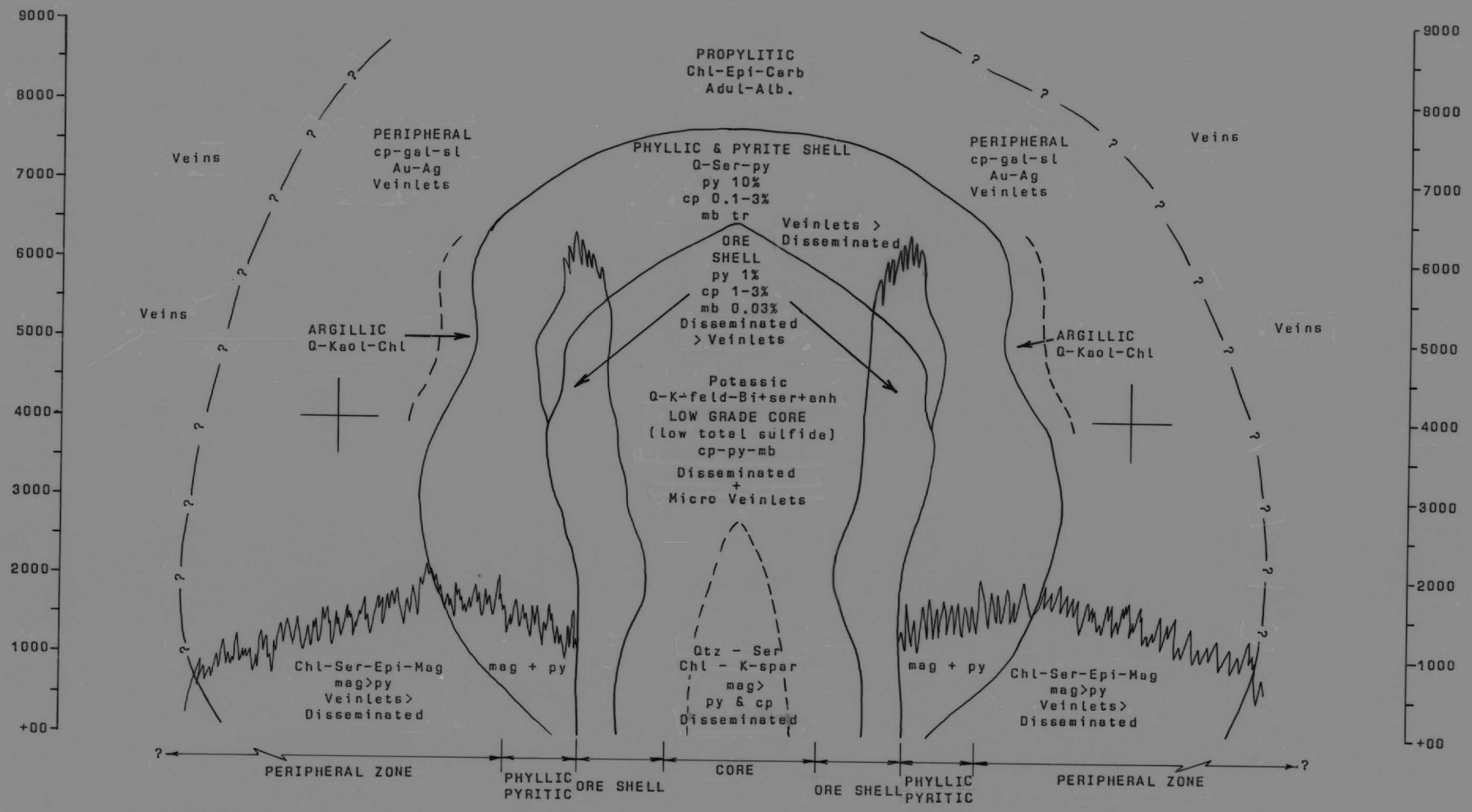
RELIABILITY DIAGRAM

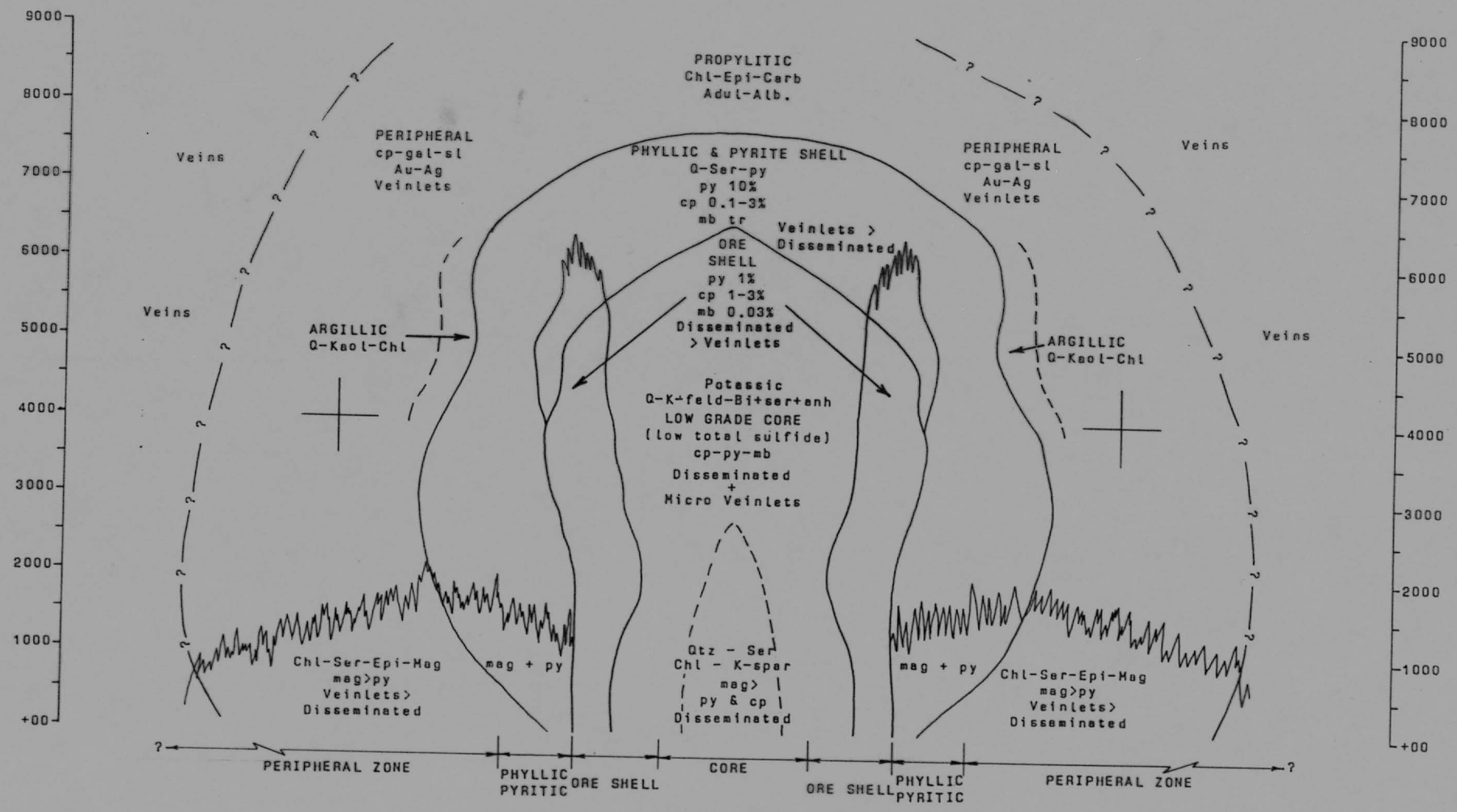
A. Large scale topographic maps, controlled ground survey, 1940-44
B. Large scale topographic maps, photogrammetric, 1945-51
C. Stereo compiled from 1955 aerial photography
D. Planimetry revised from 1955 aerial photography

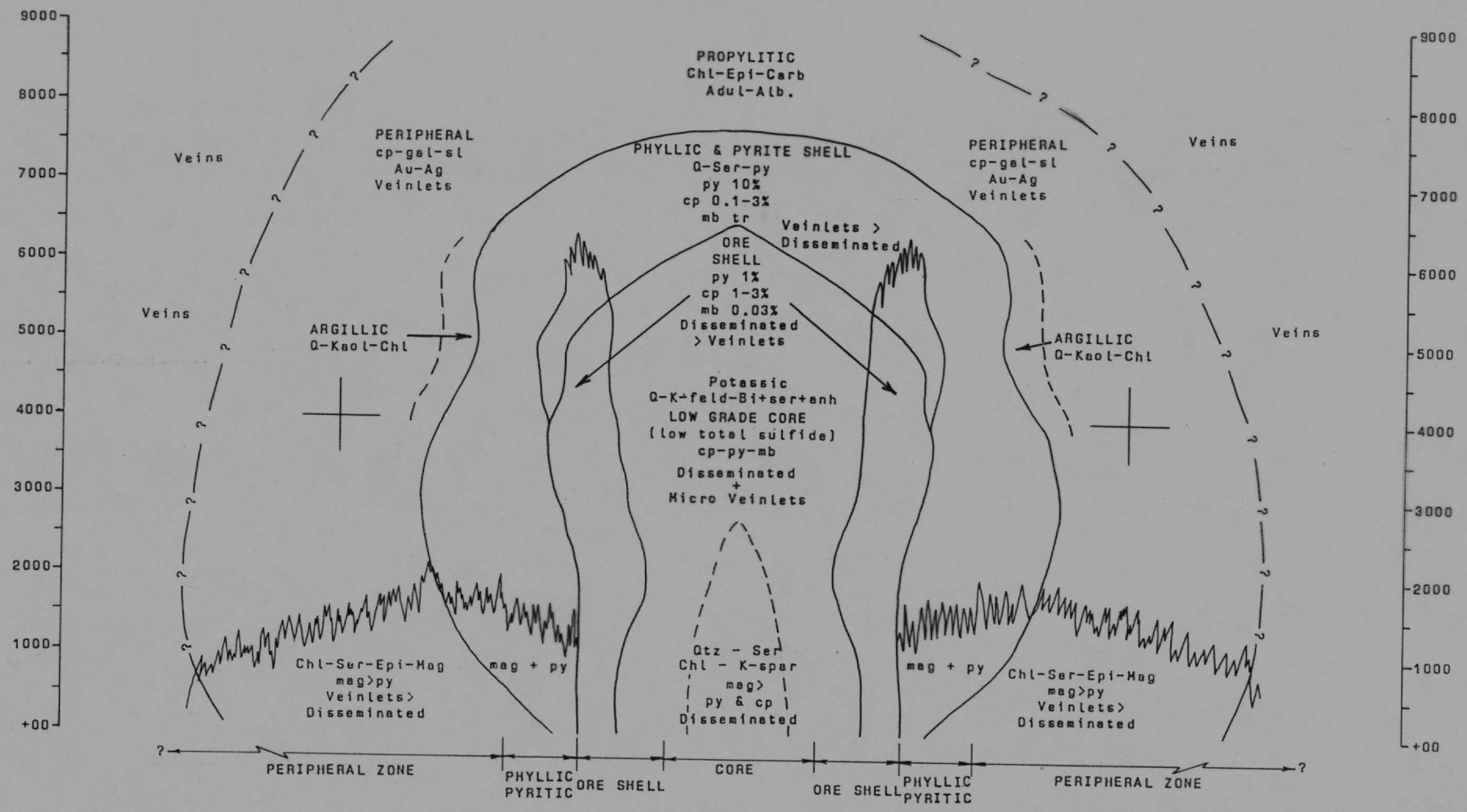
INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1968

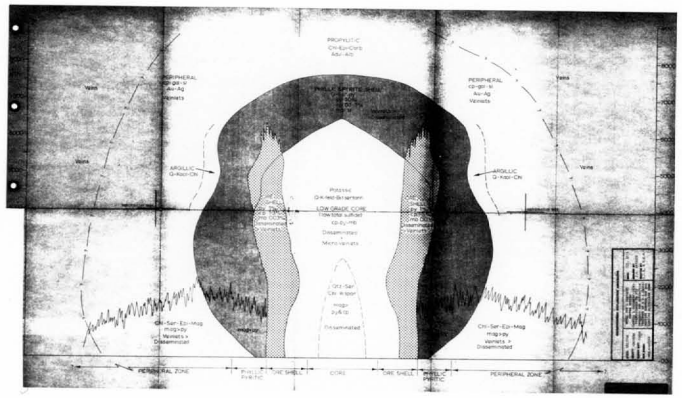
SEA

6783 Camino Principal
Tucson, AZ 85715
(602) 885 2319

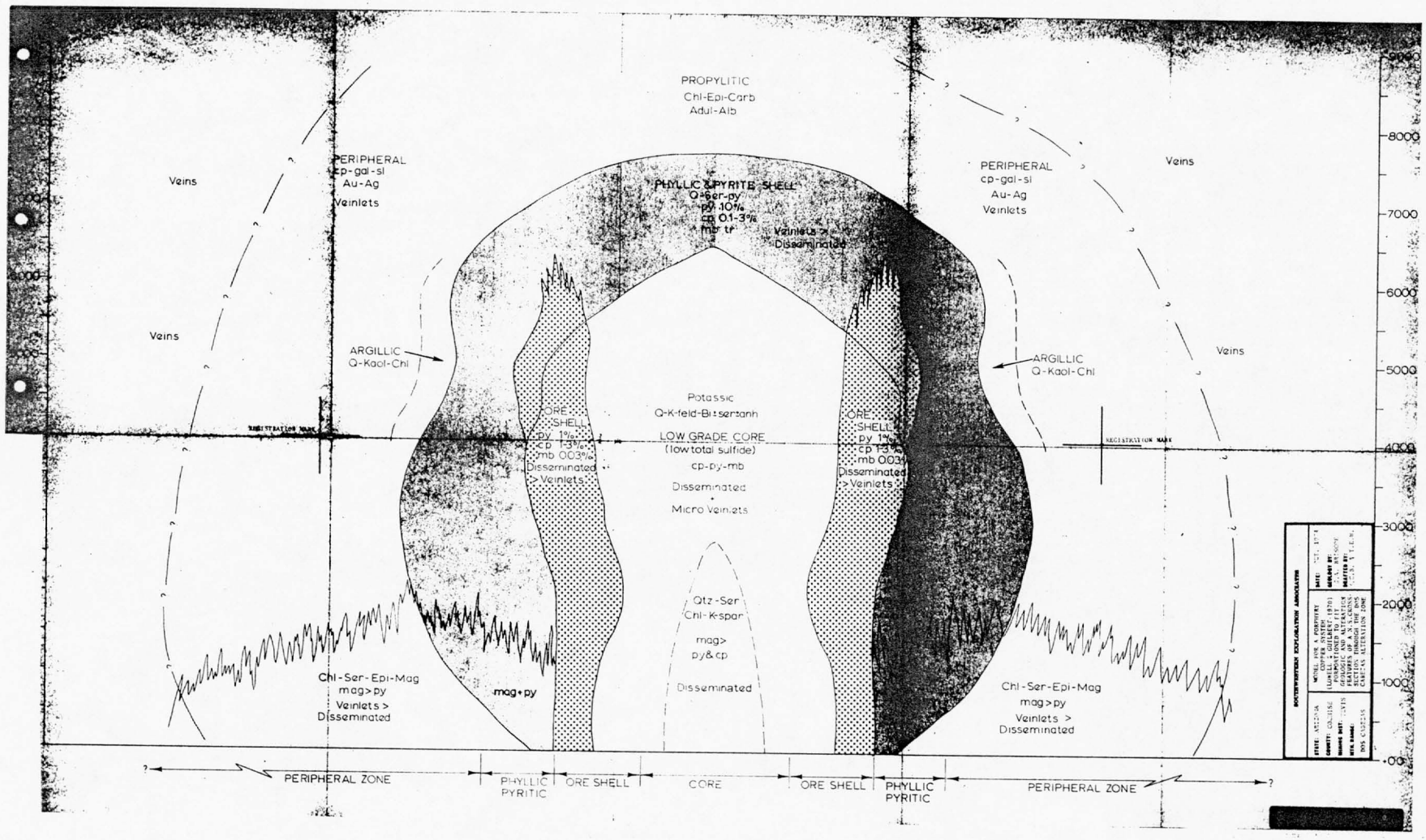

9000
8000
7000
6000
5000
4000
3000
2000
1000
+00
PROPYLITIC
Chl-Epi-Carb
Adul-Alb.
Veins
PERIPHERAL
cp-gal-sl
Au-Ag
Veinlets
PHYLLIC & PYRITE SHELL
Q-Ser-py
py 10%
cp 0.1-3%
mb tr
Veinlets >
Disseminated
ORE
SHELL
py 1%
cp 1-3%
mb 0.03%
Disseminated
> Veinlets
ARGILLIC
Q-Kaol-Chl
Potassic
Q-K-feld-Bi+ser+anh
LOW GRADE CORE
(low total sulfide)
cp-py-mb
Disseminated
+
Micro Veinlets
Chl-Ser-Epi-Mag
mag>py
Veinlets>
Disseminated
mag + py
Qtz - Ser
Chl - K-spar
mag>
py & cp
Disseminated
PERIPHERAL ZONE
PHYLLIC
PYRITIC
ORE SHELL
CORE
ORE SHELL
PHYLLIC
PYRITIC
PERIPHERAL ZONE


9000
8000
7000
6000
5000
4000
3000
2000
1000
+00
PROPYLITIC
Chl-Epi-Carb
Adul-Alb.
Veins
PERIPHERAL
cp-gal-sl
Au-Ag
Veinlets
PHYLLIC & PYRITE SHELL
Q-Ser-py
py 10%
cp 0.1-3%
mb tr
Veinlets >
Disseminated
ORE
SHELL
py 1%
cp 1-3%
mb 0.03%
Disseminated
> Veinlets
ARGILLIC
Q-Kaol-Chl
Potassic
Q-K-feld-Bi+ser+anh
LOW GRADE CORE
(low total sulfide)
cp-py-mb
Disseminated
+
Micro Veinlets
Chl-Ser-Epi-Mag
mag>py
Veinlets>
Disseminated
mag + py
Qtz - Ser
Chl - K-spar
mag>
py & cp
Disseminated
?
PERIPHERAL ZONE
PHYLLIC
PYRITIC
ORE SHELL
CORE


9000
8000
7000
6000
5000
4000
3000
2000
1000
+00
PROPYLITIC
Chl-Epi-Carb
Adul-Alb.
Veins
PERIPHERAL
cp-gal-sl
Au-Ag
Veinlets
PHYLLIC & PYRITE SHELL
Q-Ser-py
py 10%
cp 0.1-3%
mb tr
Veinlets >
Disseminated
ORE
SHELL
py 1%
cp 1-3%
mb 0.03%
Disseminated
> Veinlets
ARGILLIC
Q-Kaol-Chl
Potassic
Q-K-feld-Bi+ser+anh
LOW GRADE CORE
(low total sulfide)
cp-py-mb
Disseminated
+
Micro Veinlets
Qtz - Ser
Chl - K-spar
mag>
py & cp
Disseminated
Chl-Ser-Epi-Mag
mag>py
Veinlets>
Disseminated
mag + py
?
PERIPHERAL ZONE
PHYLLIC
PYRITIC
ORE SHELL
CORE
ORE SHELL
PHYLLIC
PYRITIC
PERIPHERAL ZONE

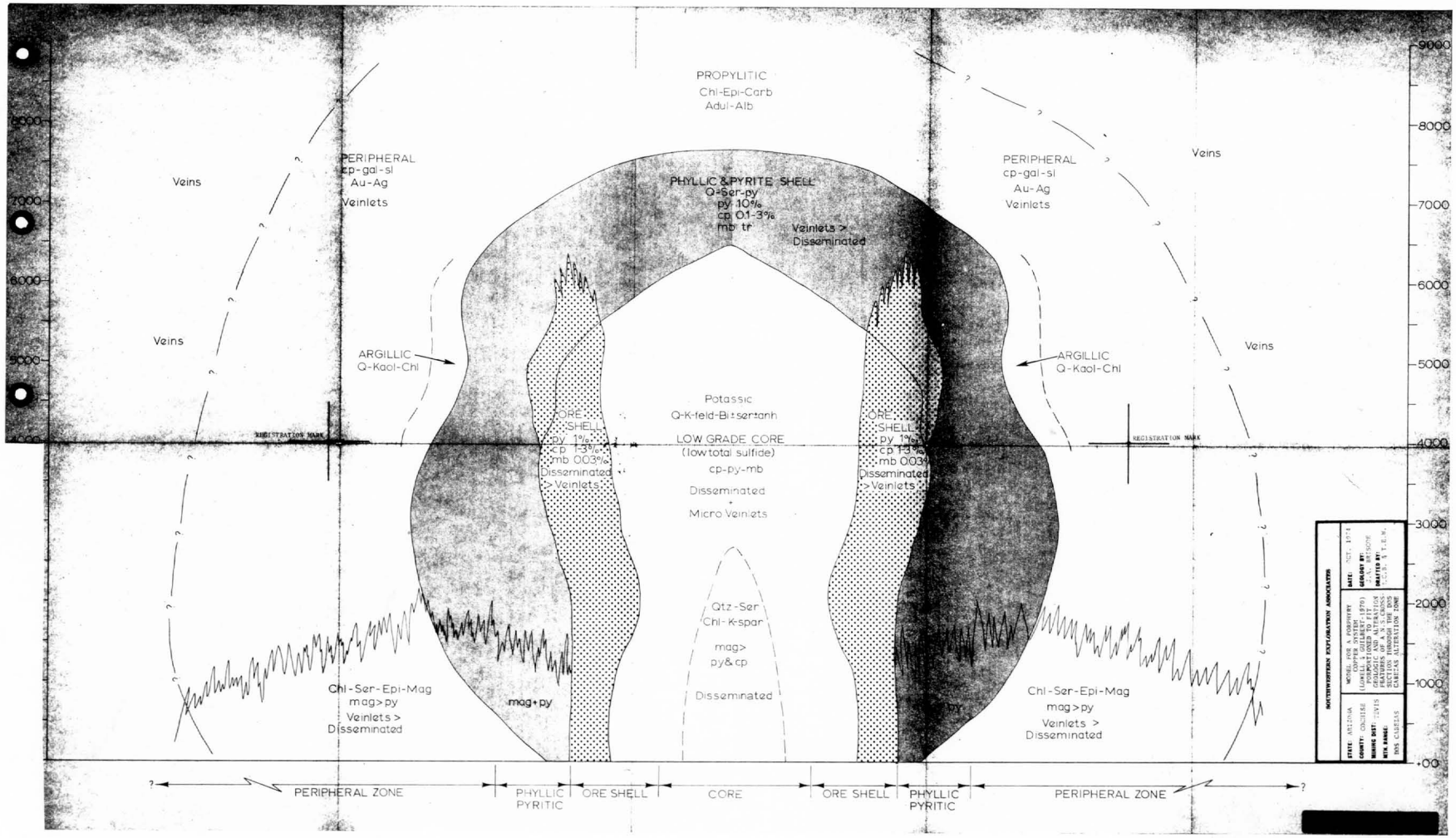

PROPYLITIC
Ch-Ep-Clrs
Adv-Arg
PERIPHERAL
Qz-gtr-sr
Au-Ag
Veinlets
PERIPHERAL
Qz-gtr-sr
Au-Ag
Veinlets
ARGILLIC
Q-Kaol-Ch
ARGILLIC
Q-Kaol-Ch
Potassic
Q-K-Ved-Biotite
LOW GRADE CORE
Flow/brec.suffused
Qz-Py-Hb
Disseminated
Micro-veinlets
Qtz-Sar
Qtz-K-spar
Hmgr
Py&Qtz
Disseminated
Ch-Sar-Ep-Mag
Hmgr-Py
Veinlets &
Disseminated
Ch-Sar-Ep-Mag
Hmgr-Py
Veinlets &
Disseminated
PERIPHERAL ZONE
PROPYLITIC
ORE SHELL
CORE
ORE SHELL
ARGILLIC
PROPYLITIC
PERIPHERAL ZONE

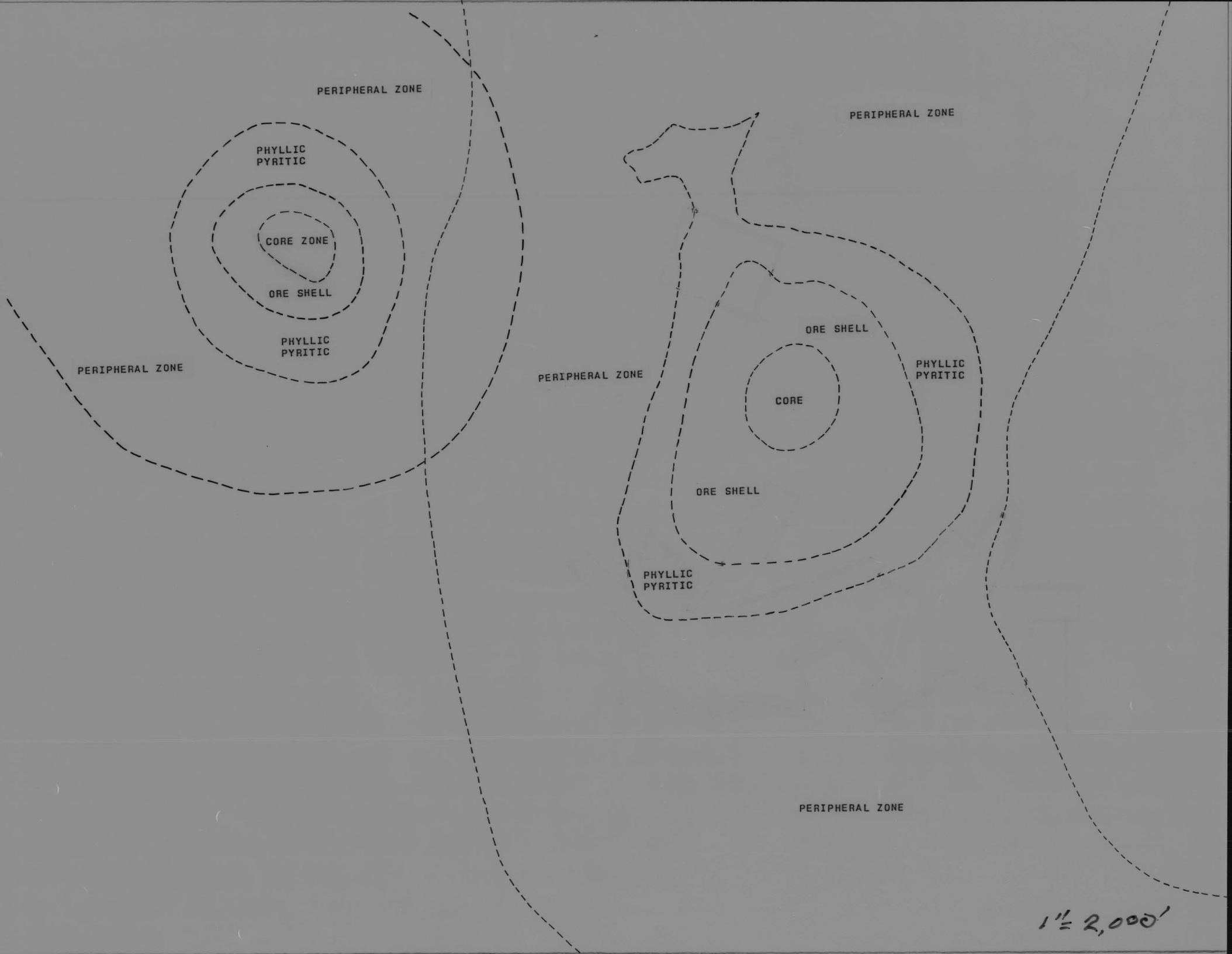
1" = ~~2000'~~ 1 mile

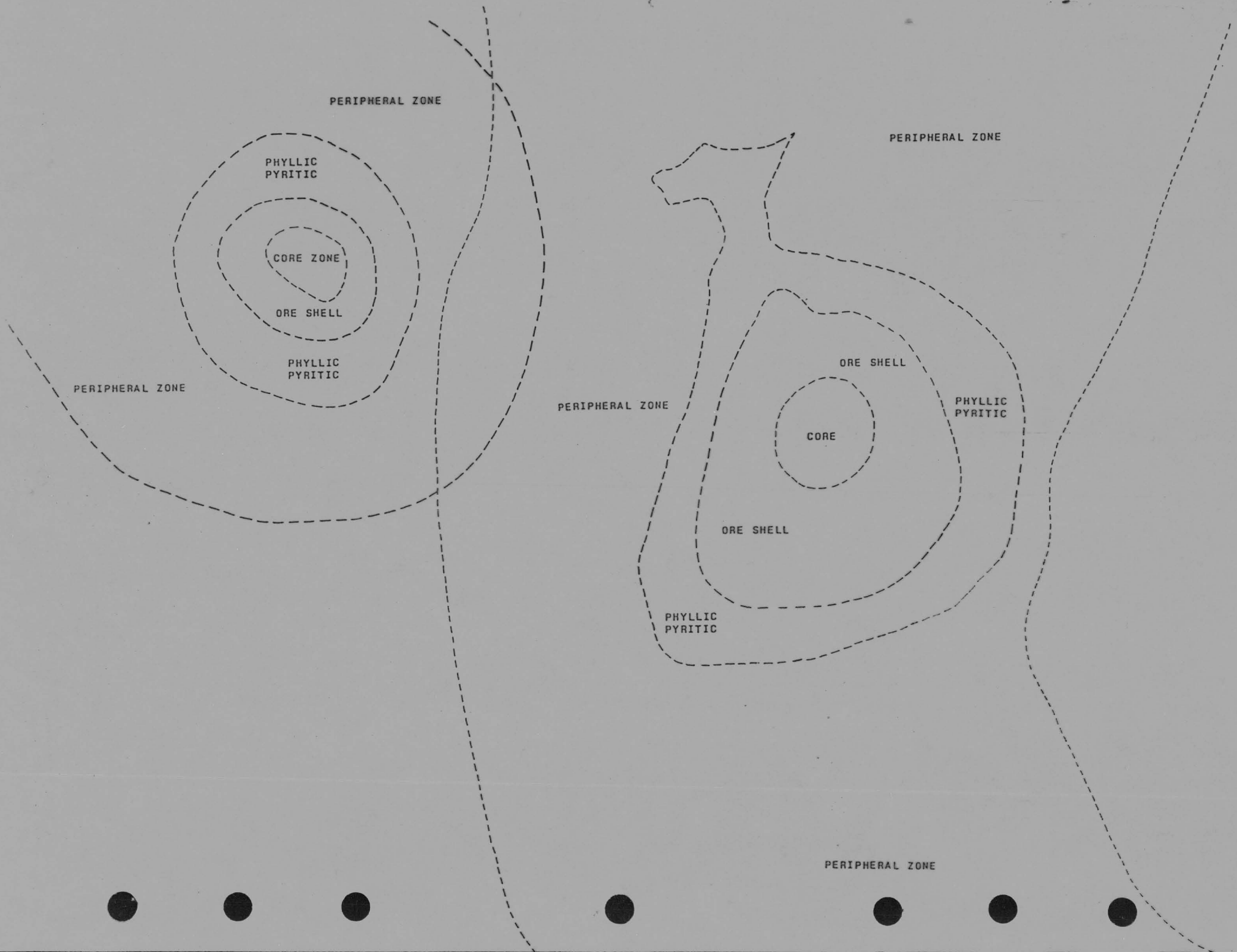


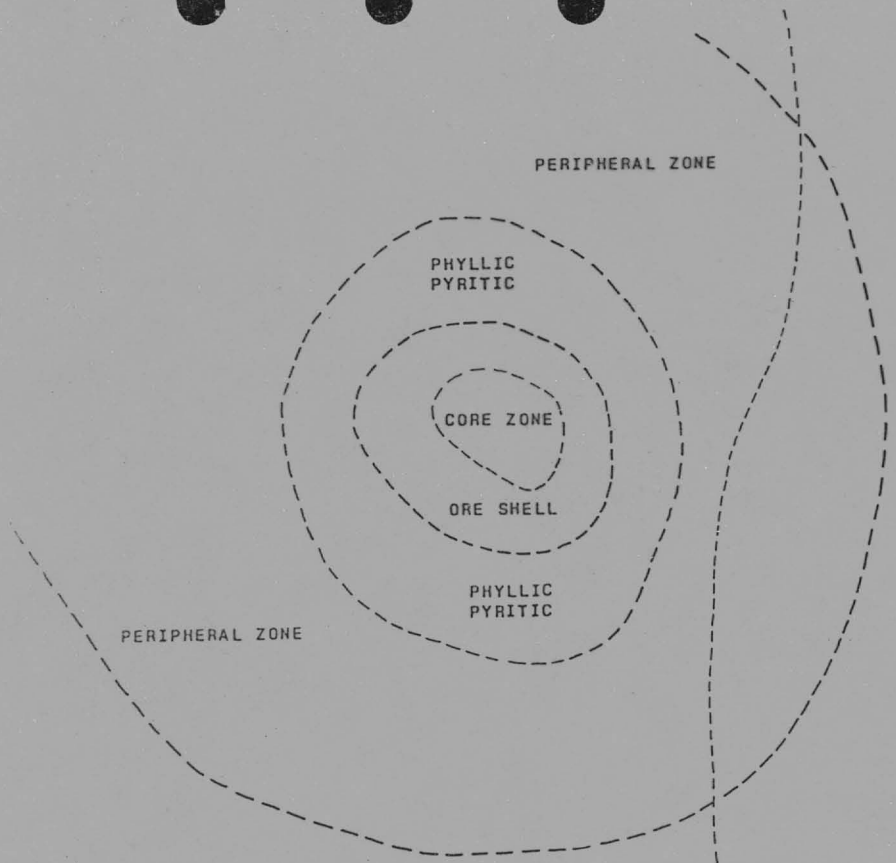
4900
3
1900

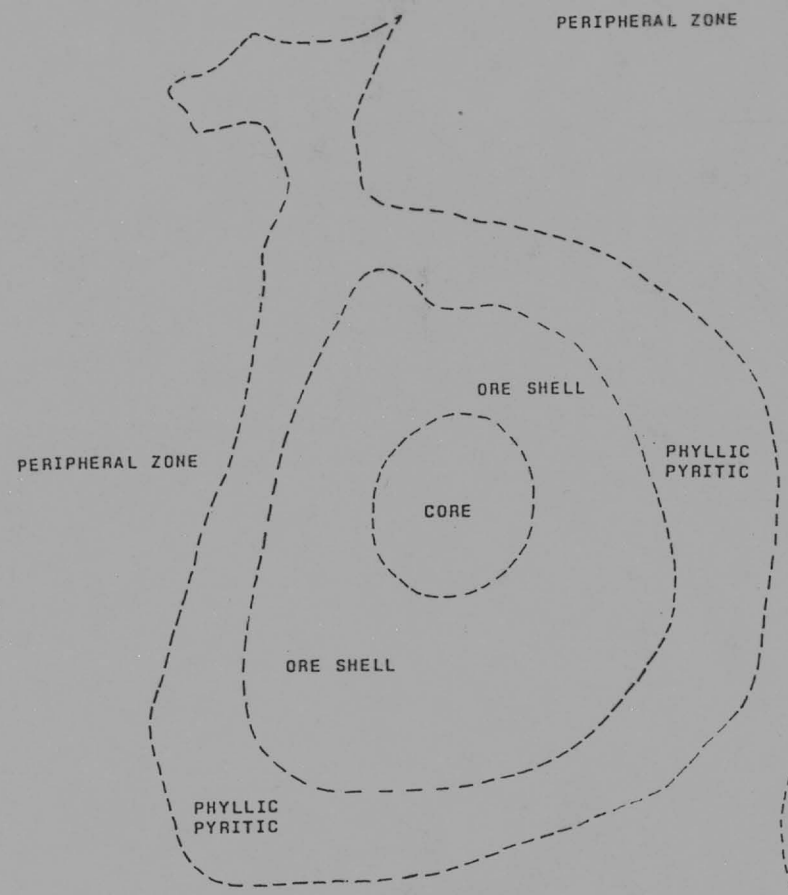
1"=2000'


PROPYLITIC
Chl-Epi-Carb
Adul-Alb
PERIPHERAL
cp-gal-sl
Au-Ag
Veinlets
Veins
PHYLLIC & PYRITE SHELL
Q-Ser-py
py 10%
cp 0.1-3%
mb tr
Veinlets > Disseminated
ARGILLIC
Q-Kaol-Chl
Potassic
Q-K-feld-Bi ± sertanh
LOW GRADE CORE
(low total sulfide)
cp-py-mb
Disseminated
+
Micro Veinlets
ORE SHELL
py 1%
cp 1-3%
mb 003%
Disseminated
> Veinlets
Qtz-Ser
Chl-K-spar
mag>
py & cp
Disseminated
Chl-Ser-Epi-Mag
mag>py
Veinlets >
Disseminated
mag+py
REGISTRATION MARK
9000
8000
7000
6000
5000
4000
3000
2000
1000
+00
PERIPHERAL ZONE
PHYLLIC PYRITIC
ORE SHELL
CORE
ORE SHELL
PHYLLIC PYRITIC
PERIPHERAL ZONE
NORTHWESTERN EXPLORATION ASSOCIATES
STATE: ARIZONA
COUNTY: COCHISE
MINING DIST: CLVIS
MIN. RANGE: DOS CABEZAS
MODEL FOR A PORPHYRY COPPER SYSTEM
LOOKING EAST (1791)
PROPORTIONED TO PIT
GEOLOGIC AND ALTERATION
PROFILE ALONG A VERTICAL
SECTION THROUGH THE DOS
CABEZAS ALTERATION ZONE
DATE: OCT. 1974
SURVEY BY: ANTISCHE
DRAFTED BY: T.E.M.


PERIPHERAL ZONE
PHYLLIC
PYRITIC
CORE ZONE
ORE SHELL
PHYLLIC
PYRITIC
PERIPHERAL ZONE
PERIPHERAL ZONE
PERIPHERAL ZONE
ORE SHELL
PHYLLIC
PYRITIC
CORE
ORE SHELL
PHYLLIC
PYRITIC
PERIPHERAL ZONE
1" = 2,000'

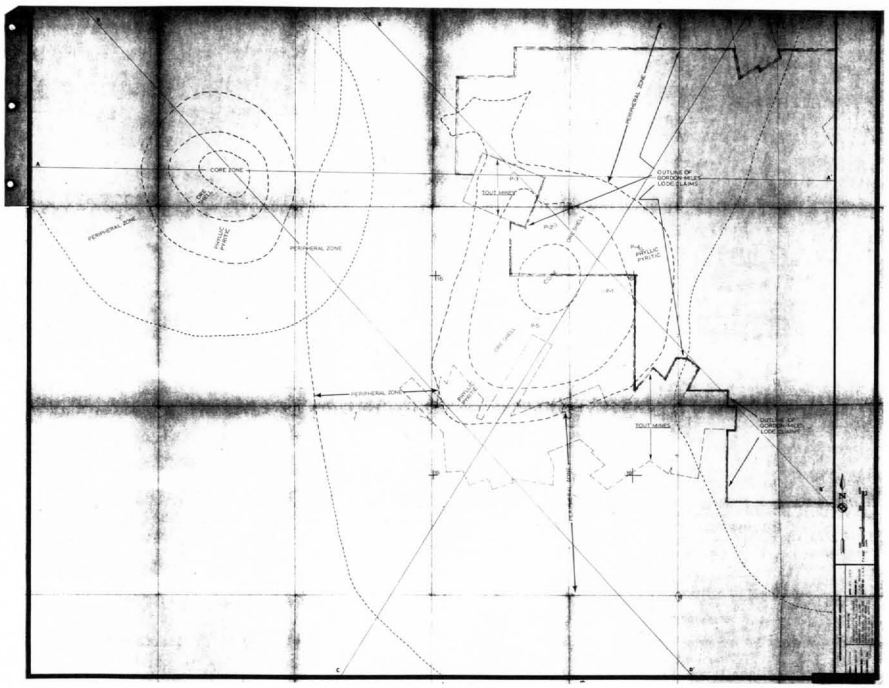

PERIPHERAL ZONE
PHYLLIC
PYRITIC
CORE ZONE
ORE SHELL
PHYLLIC
PYRITIC
PERIPHERAL ZONE
PERIPHERAL ZONE
PERIPHERAL ZONE
ORE SHELL
PHYLLIC
PYRITIC
CORE
ORE SHELL
PHYLLIC
PYRITIC
PERIPHERAL ZONE



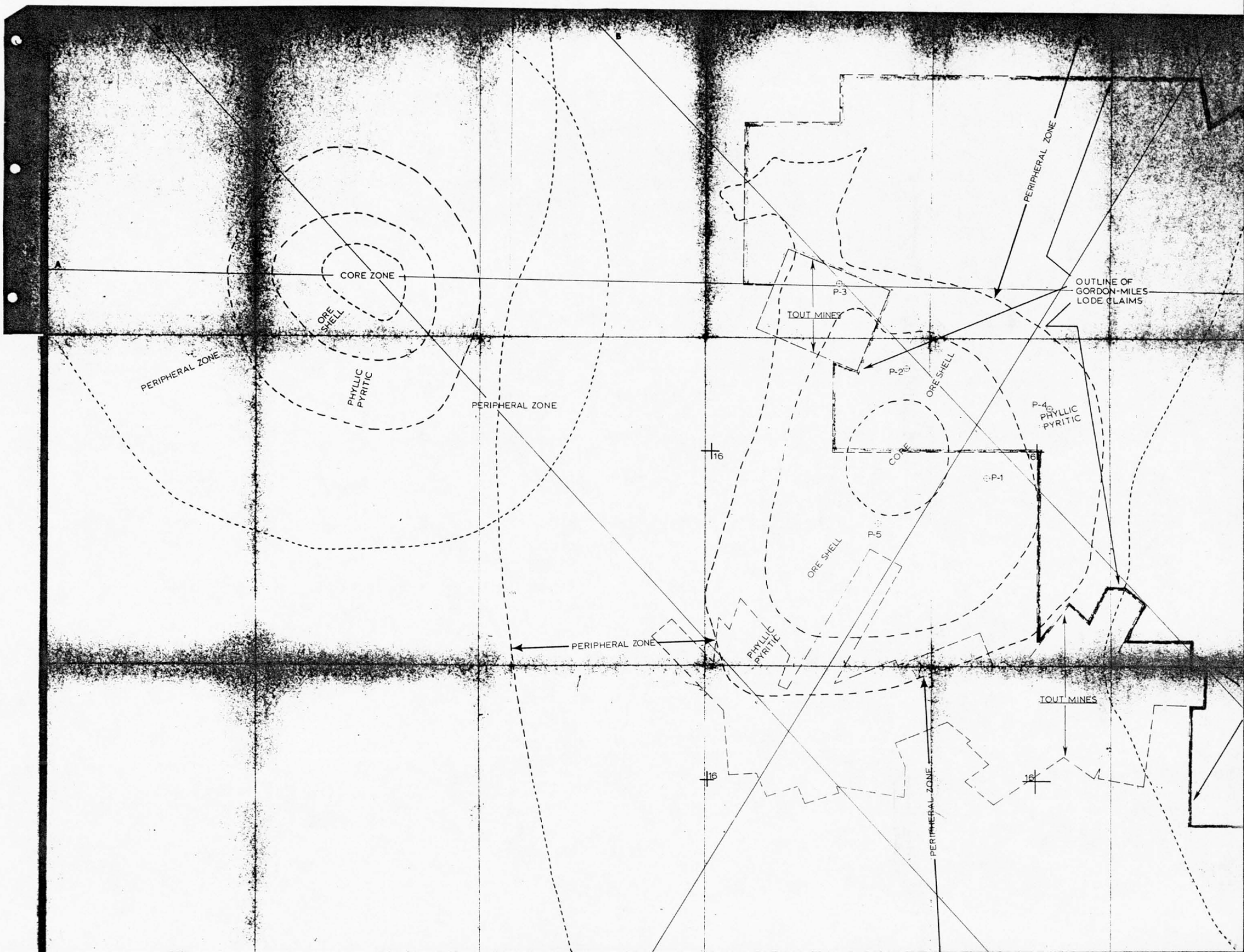


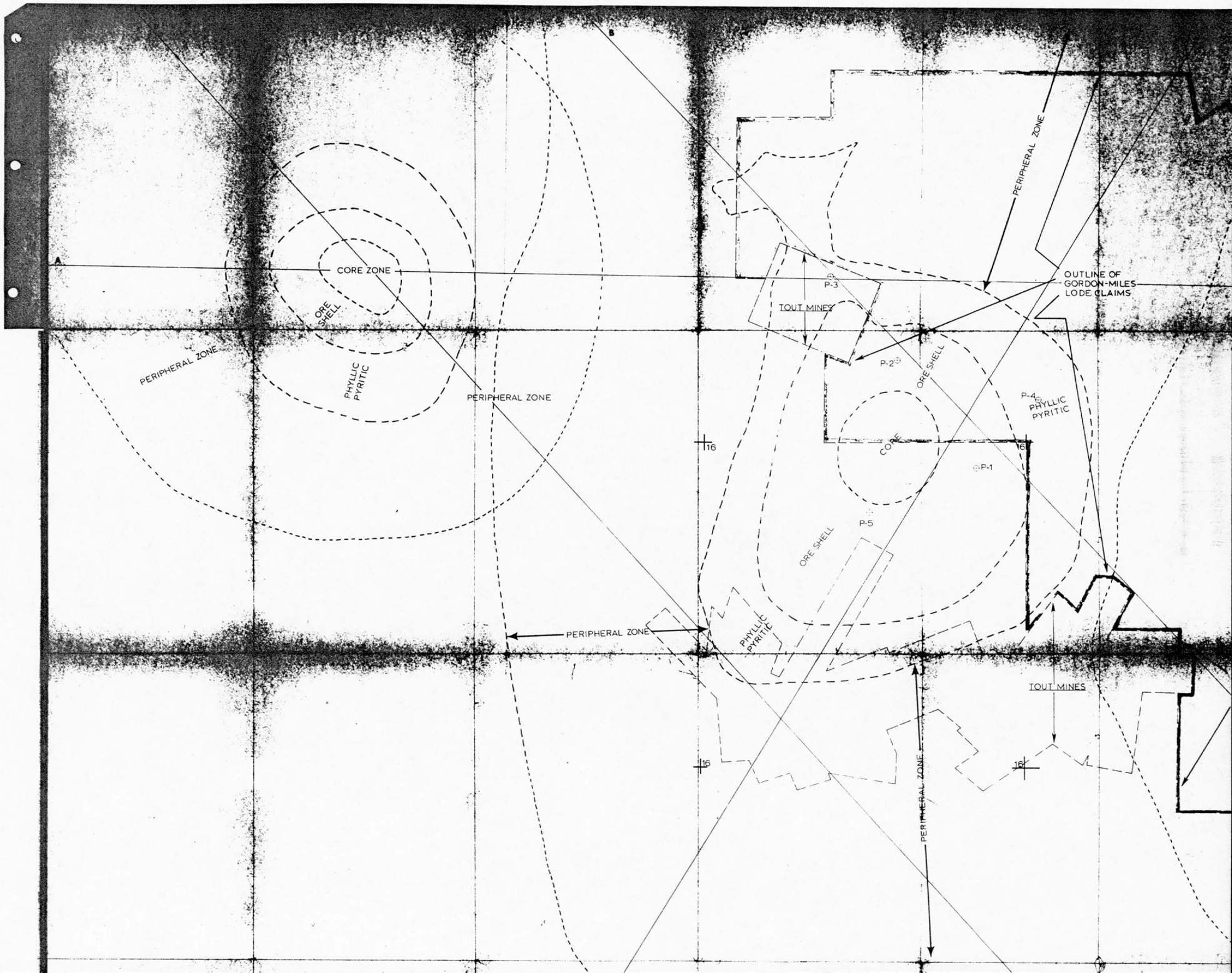
PERIPHERAL ZONE

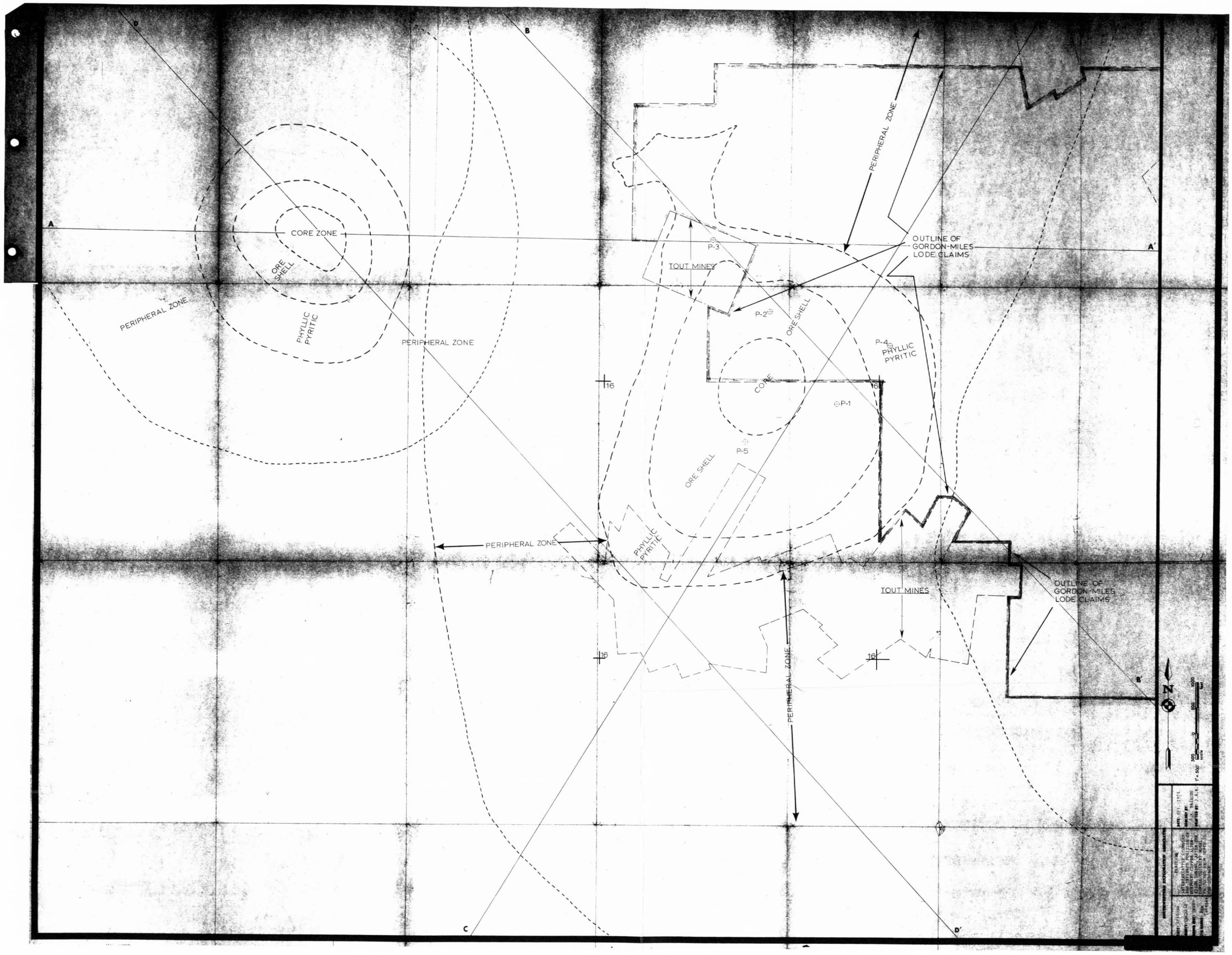
PERIPHERAL ZONE


CORE ZONE
PERIPHERAL ZONE
PERIPHERAL ZONE
PERIPHERAL ZONE
OUTLINE OF GORDON-HILLY LODE CLAIMS
OUTLINE OF GORDON-HILLY LODE CLAIMS
SOUTH MINES
SOUTH MINES
PYRITIC
PYRITIC
PYRITIC

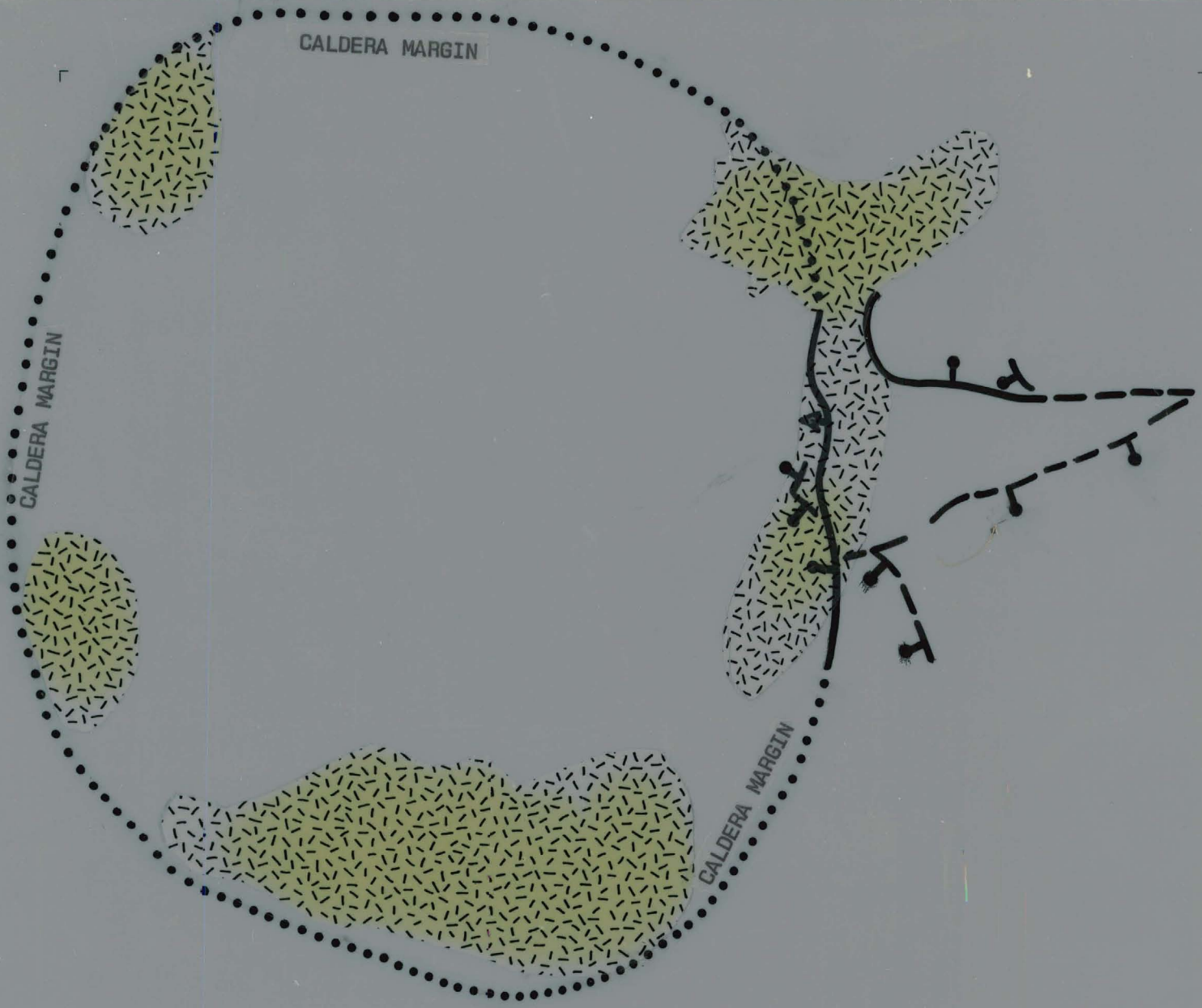
B
A
A'
C
D'
PERIPHERAL ZONE
OUTLINE OF
GORDON-MILES
LODE CLAIMS
TOUT MINES
P-3
P-2
P-1
P-4
P-5
ORE SHELL
CORE
PHYLLIC
PYRITIC
ERAL ZONE
16
N


A
B
CORE ZONE
ORE SHELL
PHYLLIC PYRITIC
PERIPHERAL ZONE
PERIPHERAL ZONE
PERIPHERAL ZONE
PERIPHERAL ZONE
OUTLINE OF GORDON-MILES LODE CLAIMS
TOUT MINES
P-3
P-2
P-4
P-1
P-5
ORE SHELL
CORE
ORE SHELL
PHYLLIC PYRITIC
PHYLLIC PYRITIC
TOUT MINES
16
16
16
16


A
B
CORE ZONE
ORE SHELL
PHYLLIC PYRITIC
PERIPHERAL ZONE
PERIPHERAL ZONE
PERIPHERAL ZONE
PERIPHERAL ZONE
OUTLINE OF GORDON-MILES LODE CLAIMS
TOUT MINES
TOUT MINES
P-1
P-2
P-3
P-4
P-5
ORE SHELL
ORE SHELL
PHYLLIC PYRITIC
PHYLLIC PYRITIC
CORE
16
16
16
16


A
A'
B
B'
C
C'
D
D'
CORE ZONE
ORE SHELL
PHYLLIC PYRITIC
PERIPHERAL ZONE
PERIPHERAL ZONE
PERIPHERAL ZONE
PERIPHERAL ZONE
PERIPHERAL ZONE
TOUT MINES
TOUT MINES
P-1
P-2
P-3
P-4
P-5
ORE SHELL
ORE SHELL
CORE
PHYLLIC PYRITIC
PHYLLIC PYRITIC
OUTLINE OF GORDON-MILES LODE CLAIMS
OUTLINE OF GORDON-MILES LODE CLAIMS
16
16
16
16
N
500 0 500 1000
1" = 500'

1" = 200'


CALDERA MARGIN
CALDERA MARGIN
CALDERA MARGIN

Explanation

Geology

QTgu — OLDER OR UNDIFFERENTIATED SURFICAL DEPOSITS (HOLOCENE TO OLIGOCENE):—Gravel, sand, and silt (Pleistocene and Pliocene—Mainly alluvium of basins; includes some colluvium and landslide deposits. Generally light-pinkish gray, weakly indurated, and with poorly rounded clasts; locally well indurated. Thickness several meters to hundreds of meters.

QTb — Basalt (Pleistocene to Pliocene)—Lava flows, pyroclastic rocks, and some intercalated gravel. Thickness several meters to a few hundred meters in most places. Radiometrically dated at 0.25, 1.0, and 3.2 m.y. old

Tva — Extensive andesite and dacite (Miocene and Upper Oligocene)—Lava flows, pyroclastic rocks, some intercalated epiclastic rocks, and dikes. Mostly gray, fine-grained, porphyritic rocks; includes some very coarse feldspar porphyry andesite (Turkey track porphyry, an informal term of Cooper, 1961). Thickness mostly several meters to several tens of meters. Dated at 24, 25, 27, 33, and 39 m.y.

Tv — Extrusive rhyolite and rhyodacite (Miocene and Upper Oligocene—Lava flows, welded tuff, pyroclastic rocks, and some intercalated epiclastic rocks. Light-gray to grayish-pink, vitric to fine-grained, porphyritic. Commonly a few tens to a few thousand of meters thick. Dated at 23, 24, 25, 26, 26, 26, and 27 m.y. An additional date of 47 m.y., if substantiated, may indicate the presence of Eocene rocks in the lower member of the S O Volcanics of Cochise Co.

Tlc — Lower conglomerate, gravel, and sand (Oligocene and Eocene?)—Alluvium; commonly grayish-red deposits of small, well rounded, nonvolcanic clasts. Mostly several meters to a few tens of meters thick.

Tlv — UPPER CORDILLERAN (LARAMIDE) IGNEOUS ROCKS (LOWER PALEOCENE)—Lower volcanic rocks—Rhyolite to andesite lava flows, pyroclastic rocks, and some intercalated epiclastic rocks. Dated at 57 m.y. Possibly younger age to east.

TKg — MAIN CORDILLERAN (LARAMIDE) IGNEOUS ROCKS—Porphyritic and aplitic intrusive rocks (Paleocene and Upper Cretaceous)—Mostly latitic porphyry to dacitic porphyry in small stocks and plugs and aplitic bodies not associated with other granitoid stocks. Dated at 61, 63, 63, 64, and 65 m.y.

Kib — Fluidized intrusive breccia—exact age unknown, but penetrates, and thus younger than Uncle Sam porphyry.

Kr — Rhyodacite tuff and welded tuff.—Includes parts of Salero Formation, Sugarloaf Quartz Latite, and Bronco Volcanics, and all of Red Bay Rhyolite, Cat Mountain Rhyolite of Brown (1939) and Uncle Sam Prophyry. Includes local intrusive bodies and locally contains fragments of exotic rocks. Thickness commonly several tens of meters to several hundreds of meters. Dated at 66(?), 70, 72, 73, and 73 m.y. The Uncle Sam, in the Tombstone area, is dated 72 m.y.

Ka — Andesitic to dacitic volcanic breccia.—Includes parts of Salero Formation, Sugarloaf Quartz Latite, and Bronco Volcanics, and all of Demetrie Volcanics and Silverbell Formation of Courtright (1958). Commonly contains large blocks of exotic rocks and locally includes some sedimentary rocks and intrusive rocks. Several tens of meters to several hundreds of meters thick in most places.

Kls — Lower quartz monzonite and granodiorite—Includes some quartz diorite; appears in small stocks. Locally associated with mineralization. Dated at 70, 71, 72, 73, 74, 74, 74, and 76 m.y. The Schieffelin granodorite at Tombstone is 72 m.y.

Kb — BISBEE FORMATION OR GROUP, UNDIFFERENTIATED (LOWER CRETACEOUS)—Upper part of Bisbee Formation or Group, undifferentiated, and related rocks.—Includes upper part of Bisbee Formation, Mural Limestone, Morita, Cintura, Willow Canyon, Apache Canyon, Shellenberger Canyon and Turney Ranch Formations (not listed in stratigraphic sequence) of the Bisbee Group, Amole Arkose of Bryant and Kinnison (1954), and Angelic Arkose. Consists of brownish- to reddish-arkose, gray siltstone, sandstone, conglomerate, and some fossiliferous gray limestone. Commonly several hundred meters thick

Jg — GRANITE AND QUARTZ MONZONITE (JURASSIC)—Stocks of pinkish-gray coarse-grained rock. Locally associated with mineralization. Dated at 140, 148, 149, 149, 150, 153, 160, 161, 167, 178, 185 m.y.

PIPs — Sedimentary rocks (Lower Permian and Upper Pennsylvanian)—consists of Epitaph Dolomite (Lower Permian), Colina Limestone (Lower Permian), and Earp Formation (Lower Permian and Upper Pennsylvanian), undifferentiated. Epitaph Dolomite is a dark- to light-gray slightly cherty dolomite, limestone, marl, siltstone, and gypsum, 120-280 meters thick. Colina Limestone is a medium gray, thick-bedded, sparsely cherty, and sparsely fossiliferous limestone 120-280 meters thick. Earp Formation is a pale-red siltstone, mudstone, shale, and limestone, 120-240 meters thick.

IPh — Horquilla Limestone (Upper and Middle Pennsylvanian)—Light-pinkish-gray, thick- to thin-bedded, cherty, fossiliferous limestone and intercalated pale-brown to pale-reddish-gray siltstone that increases in abundance upward. Typically 300-490 meters thick.

MDs — SEDIMENTARY ROCKS (MISSISSIPPIAN AND DEVONIAN)—Consists mainly of Escabrosa Limestone (Mississippian)—locally (Armstrong and Silberman, 1974) called Escabrosa Group—and Martin Formation (Upper Devonian), undifferentiated. In part of the Chiricahua Mountains also includes Paradise Formation (Upper Mississippian) and Portal Formation of Sabins, 1957a (Upper Devonian). In the Little Dragoon Mountains and some adjacent hills also includes Black Prince Limestone, whose fauna and correlation show strongest affinities with Mississippian rocks but which may include some Pennsylvanian rocks. Escabrosa Limestone is a medium-gray, massive to thick-bedded, commonly crinoidal, cherty, fossiliferous limestone 90-310 meters thick. Martin Formation is thick to thin-bedded, gray to brown dolomite, gray sparsely fossiliferous, and some siltstone and sandstone, 90-120 meters thick. Paradise Formation is a brown, fossiliferous, shaly limestone. Portal Formation is a black shale and limestone 6-105 meters thick. Black Prince Limestone is pinkish-gray limestone with a basal shale and chert conglomerate, as much as 52 meters thick.

Ꞓs — SEDIMENTARY ROCKS (LOWER ORDOVICIAN TO MIDDLE CAMBRIAN)—El Paso Limestone (Lower Ordovician and Upper Cambrian), Abrigo Formation (Upper and Middle Cambrian), and Bolsa Quartz (Middle Cambrian), undifferentiated.—El Paso Limestone is a gray, thin-bedded cherty limestone and dolomite 90 meters to about 220 meters thick. Abrigo Formation is a brown, thin-bedded fossiliferous limestone, sandstone, quartzite, and shale, 210-240 meters thick. Bolsa Quartzite is a brown to white or purplish-gray, thick-bedded, coarse-grained quartzite and sandstone with a basal conglomerate, 90-180 meters thick. To the east, equivalents of part of the Abrigo Formation and Bolsa Quartzite are known as the Coronado Sandstone.

Ꞓs — Sedimentary rocks (Upper and Middle Cambrian)—Abrigo Formation (Upper and Middle Cambrian), and Bolsa Quartzite (Middle Cambrian), undifferentiated.

Yg — GRANITOID ROCKS (PRECAMBRIAN Y):—Mainly granodiorite and quartz monsonite, unfoliated to foliated, in part metamorphosed. Generally in stocks, which ahve been little studied.

Xs — PINAL SCHIST (PRECAMBRIAN X)—Chlorite schist, phyllite, and some metavolcanic rocks, metavolcanic rocks, metaquartzite, metaquartzite conglomerate, and gneiss. One metavolcanic rock dated at 1715 m.y.

CONTACT—Dotted where concealed.

MARKER HORIZON—Dotted where concealed.

DIKES—Showing dip.

FAULTS—Showing dip. Dotted where concealed or intruded; ball and bar on downthrown side.

70 — 45 — Normal

45 — Reverse

Strike-slip—Arrow couple shows relative displacement. Single arrow shows movement of active block.

Major thrust fault—Sawteeth on upper plate.

Thrust fault—Sawteeth on upper plate.

Anticline.

Syncline.

30 — Inclined strike and dip of beds.

EXOTIC-BLOCK BRECCIA—Rock contains chip or block inclusions of rock different from those of host or other blocks nearby. Typically of volcanic-tectonic or sedimentary-tectonic origin; excludes Tertiary megabreccia deposits.

(QTgu) 157 — Site of well or generalized site of several wells, showing unit penetrated, if known, and depth of well, in feet. 100 feet equals 30.5 meters.

72x — COLLECTION SITE—Radiogenically dated rock showing age in millions of years. Query before symbol where precise location uncertain.

Roads and Highways

Dry wash

Southern Pacific Railroad

Government Reservation Boundary

Aqueduct

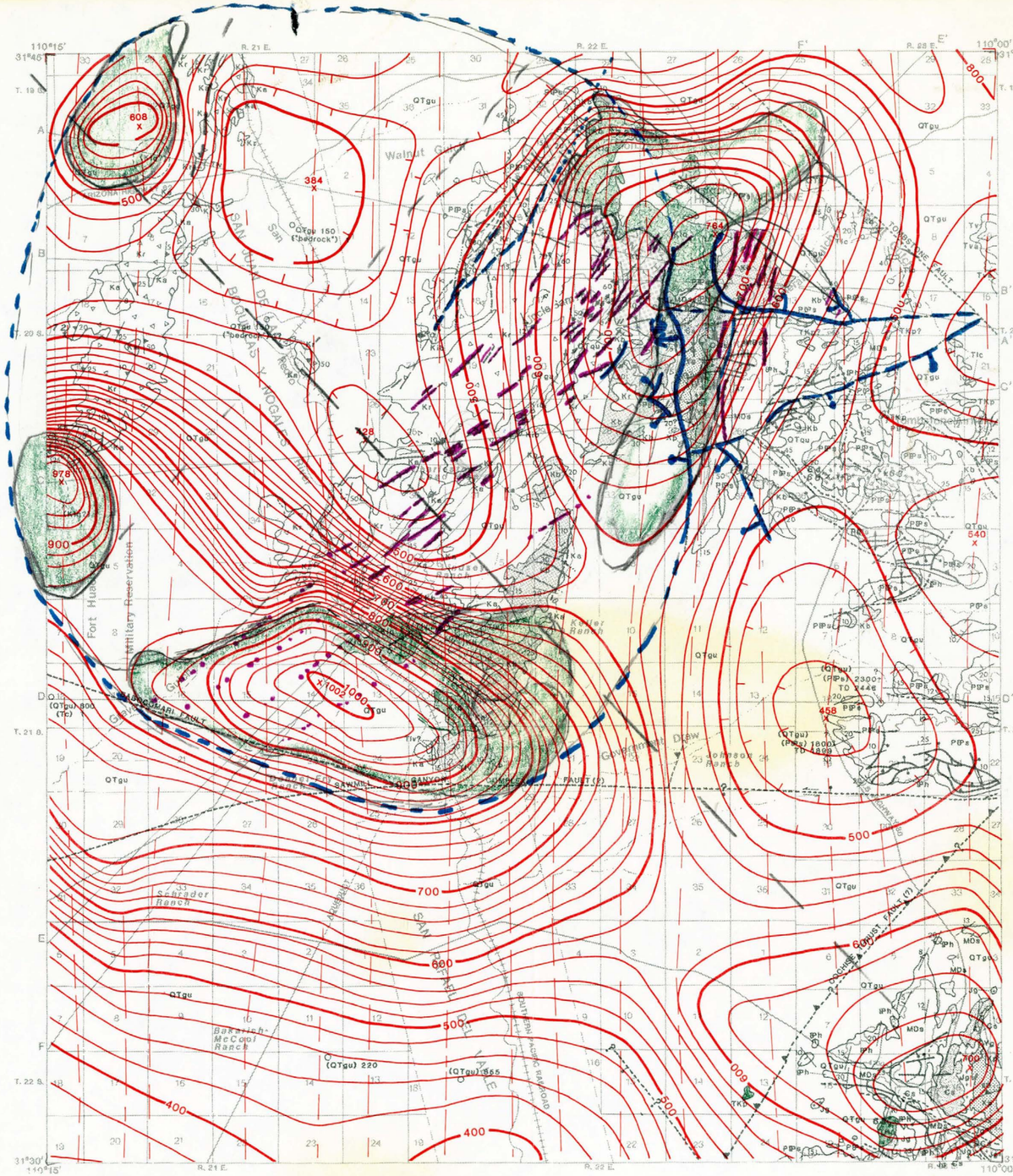
A——A' Cross section line

Flight line

Index contour line

Contour line

Contour interval: 25 gammas



Tombstone Development Company, Inc.
Tombstone, Arizona

1 0 1 2 3 Miles

N

Geology adopted from Drewes, Harold, 1980, and Newell, R.A., 1973.

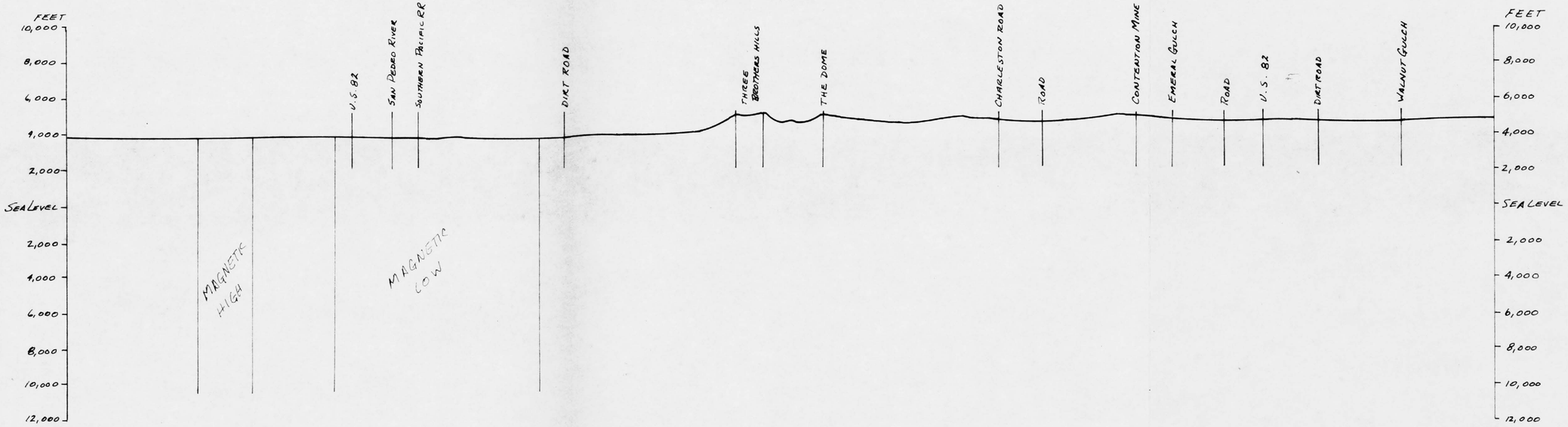
Figure 16. Aeromagnetic map of the Tombstone area.

From *Residual Aeromagnetic map of Southeastern Arizona*, Sauck, W.A., and Sumner, J.S., 1970. From Andreason, G.E., Mitchell, C.M., and Tyson, N.S., 1965

By James A. Briscoe
James A. Briscoe and Associates
Tucson, Arizona

881-2426

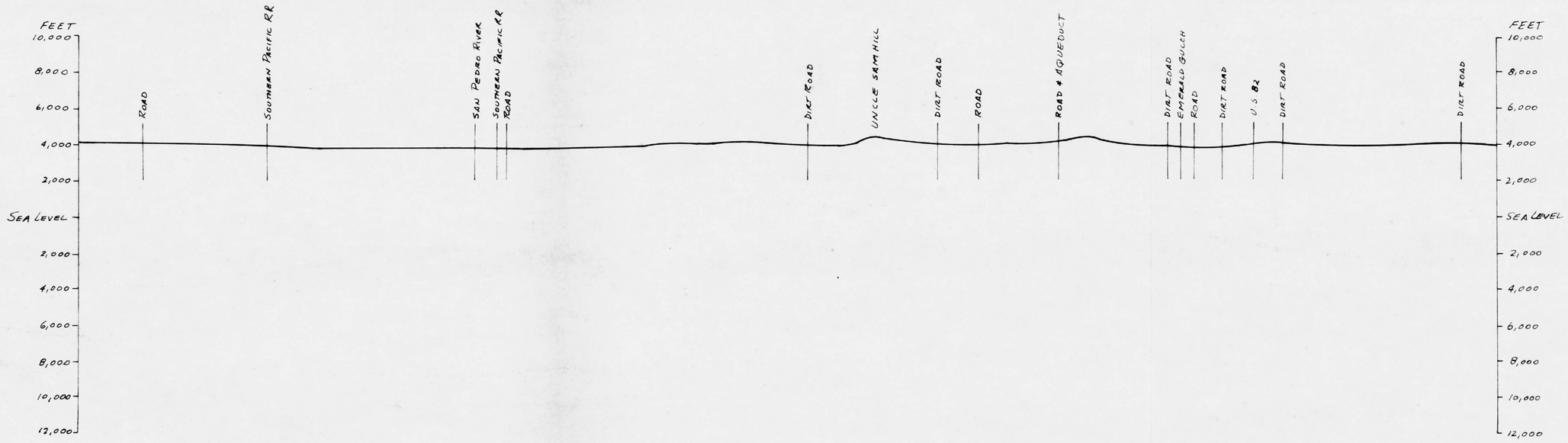
PLATE 24



PRELIMINARY CROSS SECTION A"-A'''

SCALE: 1" = 1 MILE
HORIZONTAL & VERTICLE

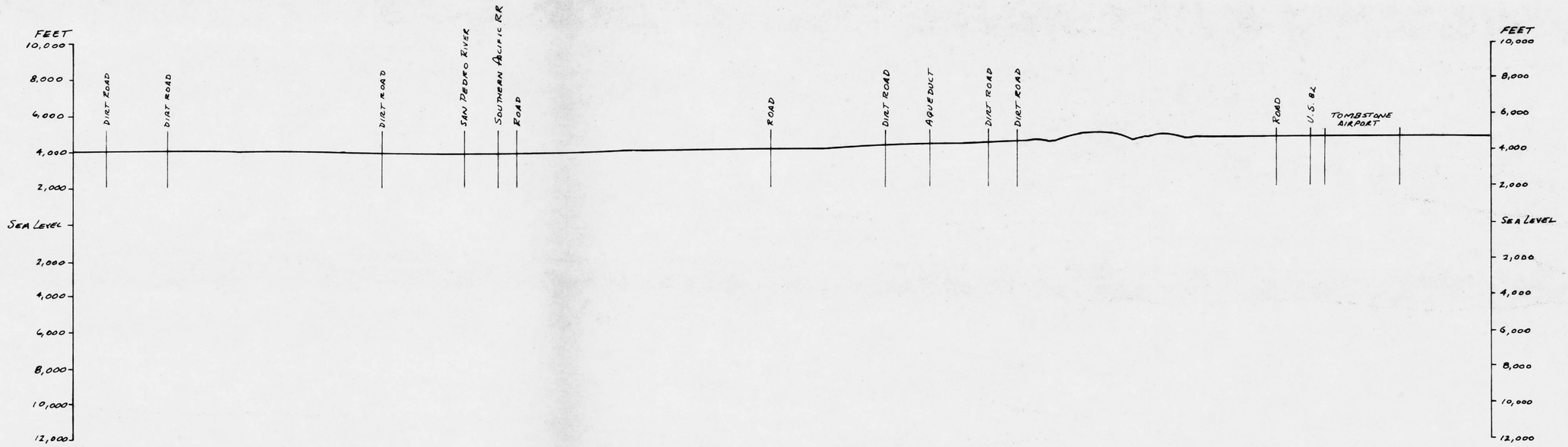
PLATE 25



PRELIMINARY CROSS SECTION B-B'

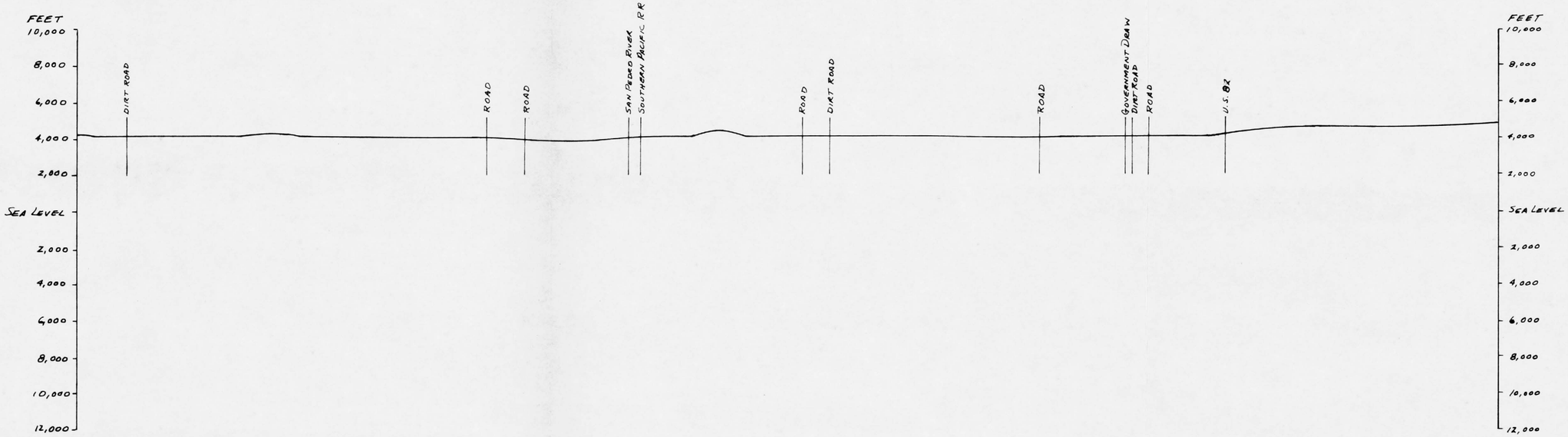
SCALE : 1" = 1 MILE
HORIZONTAL & VERTICLE

PLATE 28



PRELIMINARY CROSS SECTION C-C'

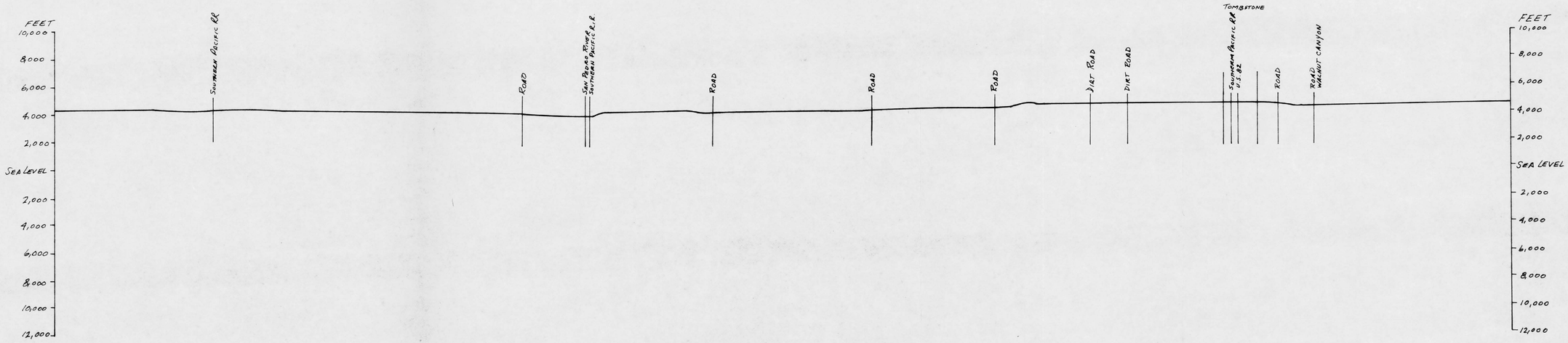
SCALE : 1" = 1 MILE
HORIZONTAL & VERTICLE



PRELIMINARY CROSS SECTION D-D'

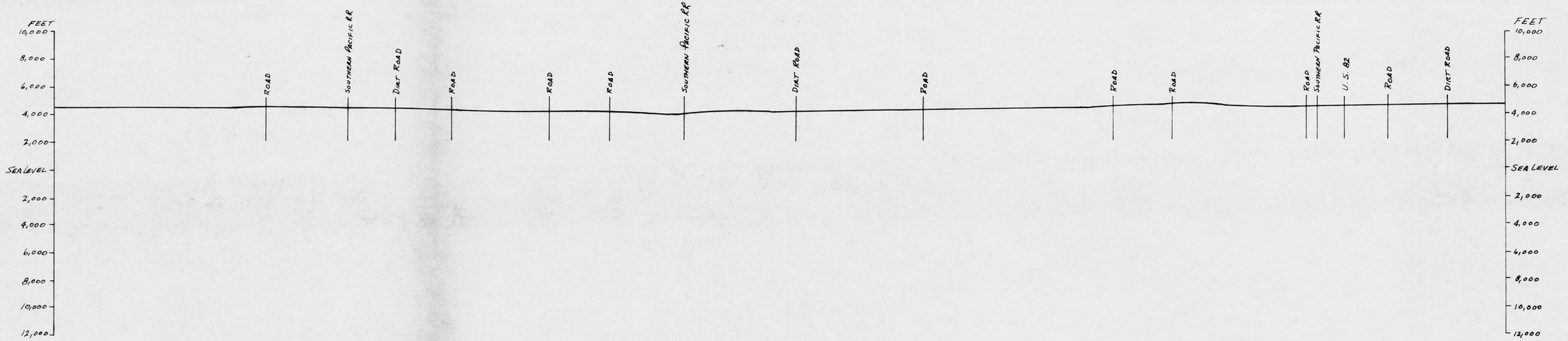
SCALE: 1" = 1 MILE
HORIZONTAL & VERTICLE

PCA PL 28



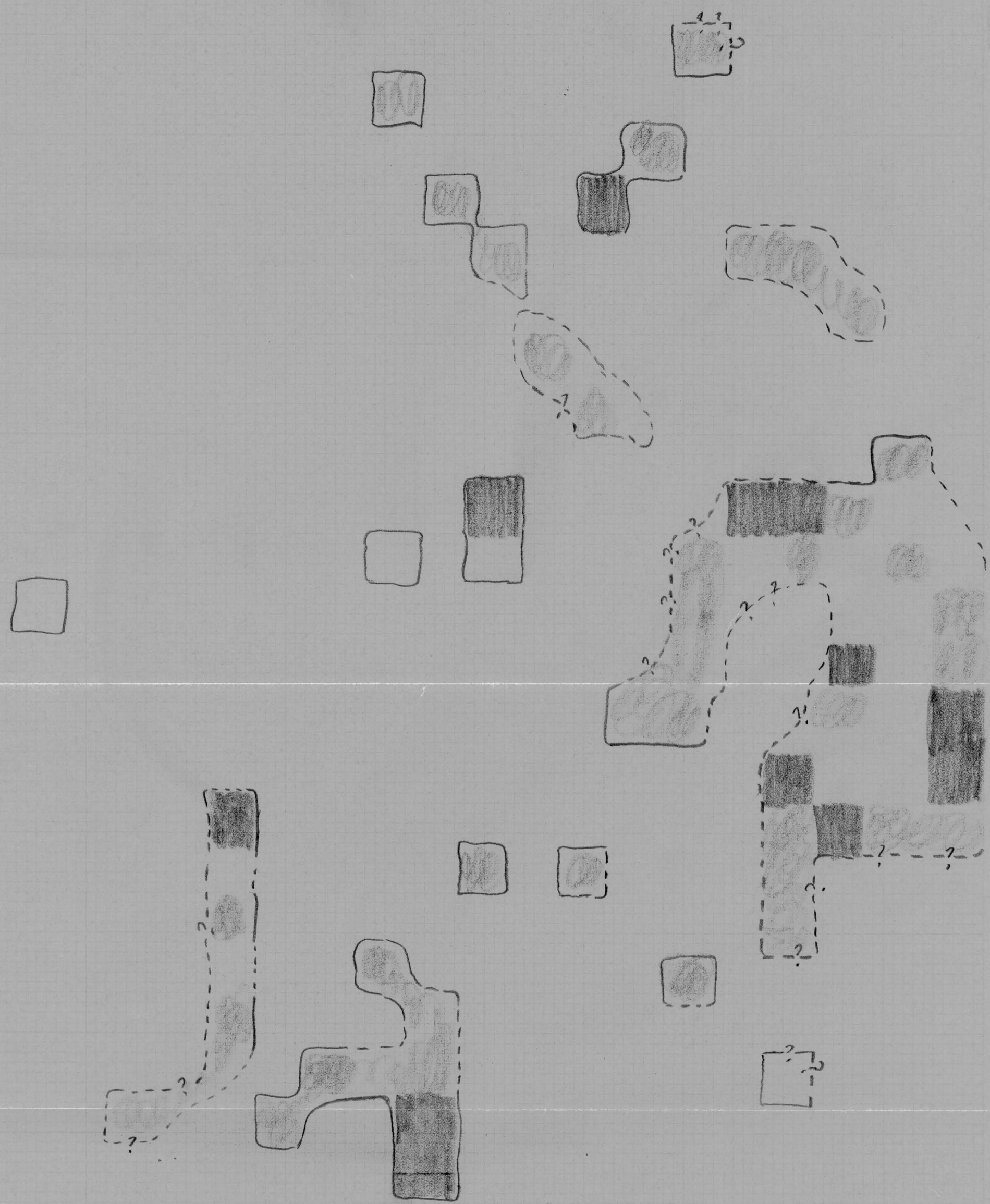
PRELIMINARY CROSS SECTION E-E'

SCALE: 1" = 1 MILE
HORIZONTAL & VERTICLE

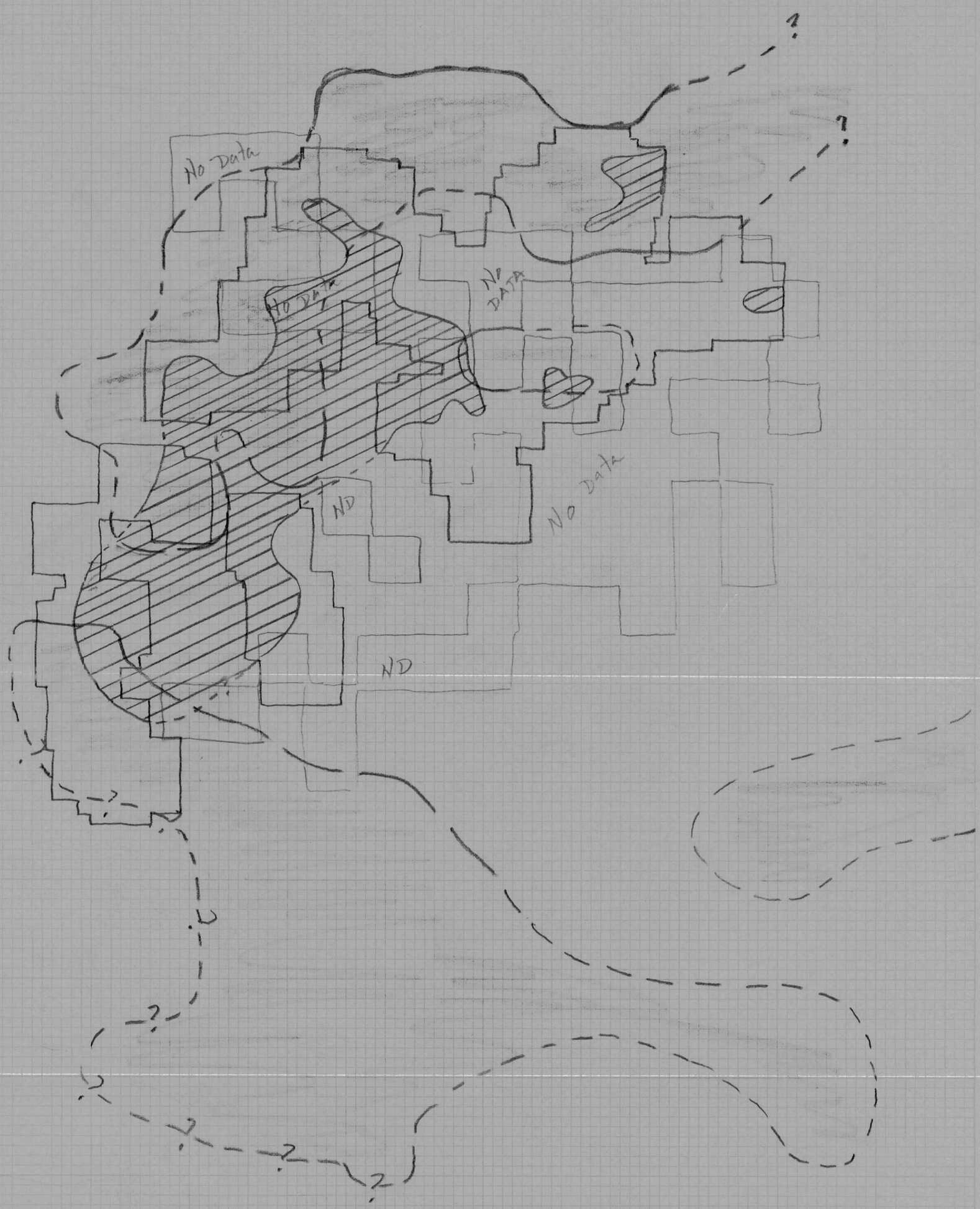


PRELIMINARY CROSS SECTION F-F'

SCALE: 1" = 1 MILE
HORIZONTAL & VERTICLE



Generalized outline of anomalous copper values in mesquite tree geochem.



General Outline of Anomalous H_2O Values in Mesquite Trees - Goacher

Generalized outline of anomalous zone values in Magnetic Tree - Gerhson

FILE Tombstone

Lisle EXPLORATION CO.

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4136 SOUTH TRENTON
TULSA, OKLAHOMA 74105
PHONE (918) 742-0535

WILLCOX-LORDSBURG AREA ARIZONA-NEW MEXICO AEROMAGNETIC SURVEY SPECIFICATIONS

Flight Date:	August-November 1980
Flown By:	EG&G geoMetrics
Line Mileage:	20,500±
Flight Direction:	North South Traverse, East West Tie Lines
Traverse Interval:	0.66 Mile
Tie Line Ratio:	10:1 (Three Miles)
Flight Altitude:	750′ MTC
Location Systems:	Singer SKK 1000 Doppler, Singer SKQ-601 Computer and Sperry C-12 Gyro Stabilized Compass
Magnetometer:	geoMetrics Model G-803 Proton Magnetometer with 0.5 gamma sensitivity (Sample rate at 50 meter intervals)
Camera:	Automax GS2FPR 35mm Tracking Camera
Altimeter:	Honeywell YG 7600 Recording Radar Altimeter, Rosemont Recording Barometric Altimeter
Original Recording:	HP 7130 Analog Recorder, geoMetrics Digital Data Acquisition System (Model 714) and geoMetrics Model G-806 High Performance Proton Magnetometer Base Station (0.5 gamma sensitivity)
Interpretation:	Available upon request
Data Price:	$5.00 per Line Mile — Minimum sale 1250± Line Miles = 30 Minute Quadrangle with the Scale of 1:96,000 (1″ = 8,000′)
Deliverable Items:	Print of the Flight Line Maps and a Print of the Residual Intensity Contour Maps with IGRF removed
	If requested, Mylar will be furnished at cost of reproduction.
	Prices subject to change

Robert A. Fowler
VICE PRESIDENT
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GEOPHYSICAL SERVICES DIVISION
395 JAVA DRIVE, P.O. BOX 497, SUNNYVALE, CA 94086 USA
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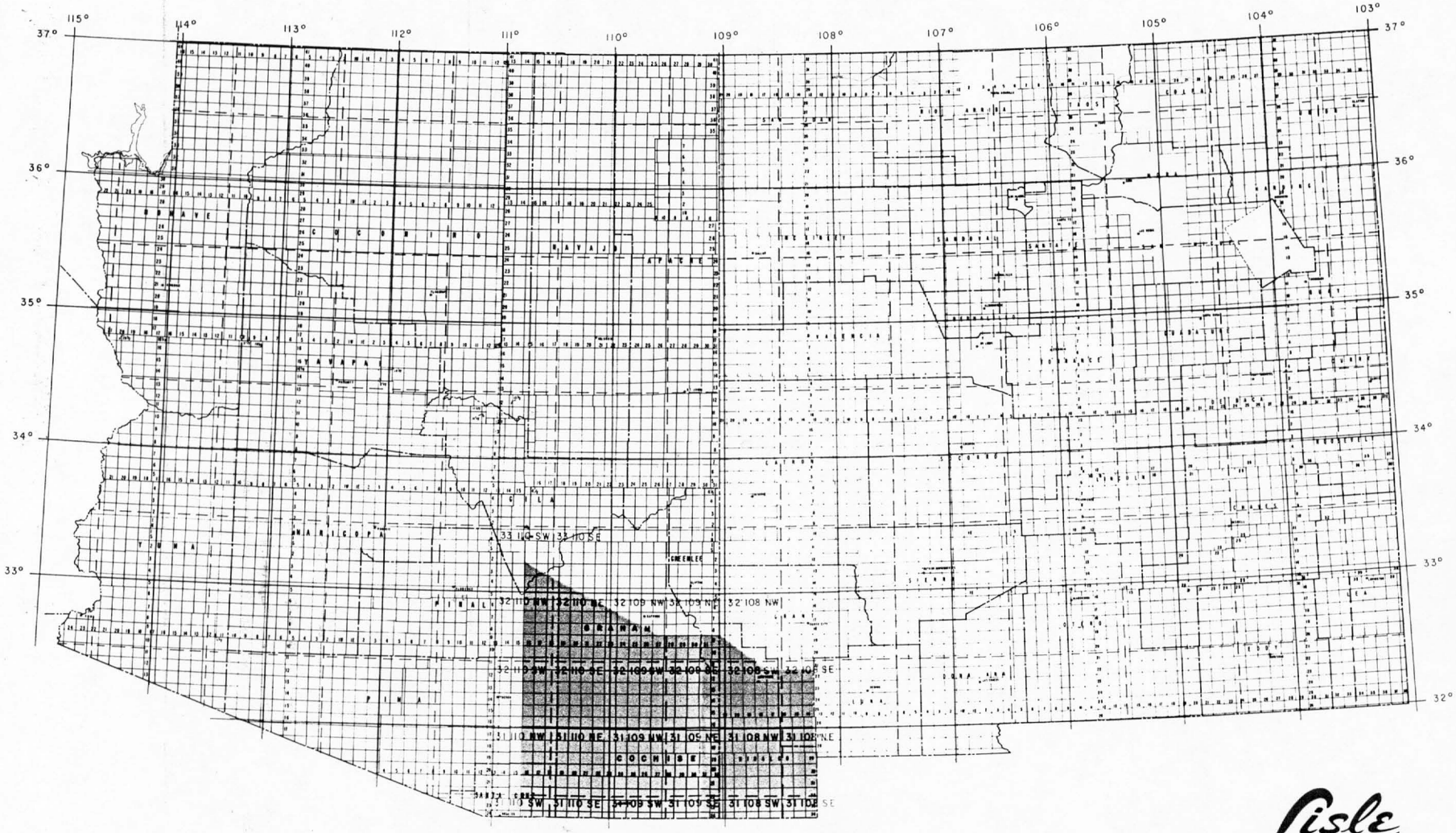

AEROMAGNETIC COVERAGE

Lisle EXPLORATION CO

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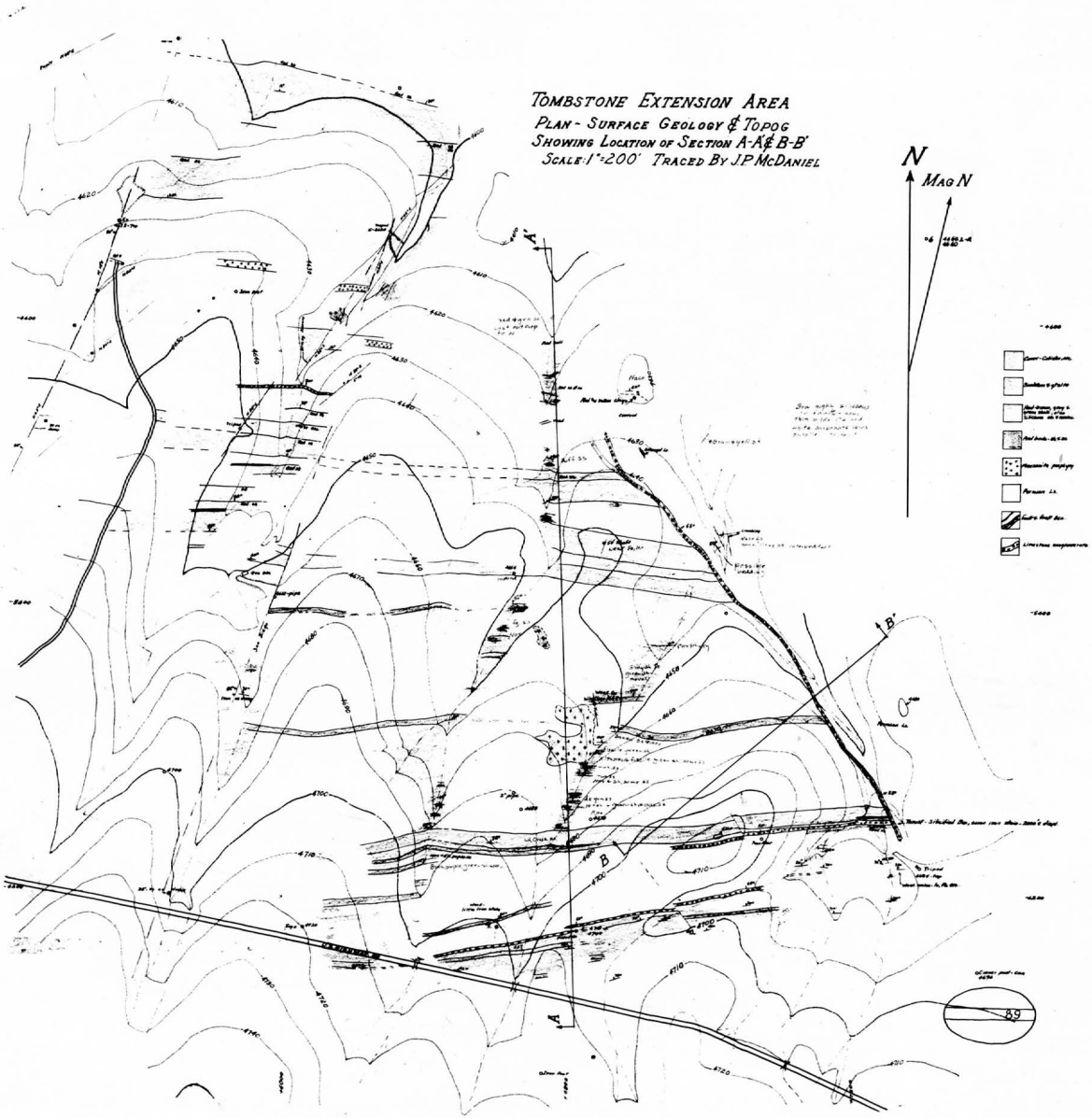
AEROMAGNETIC SURVEY

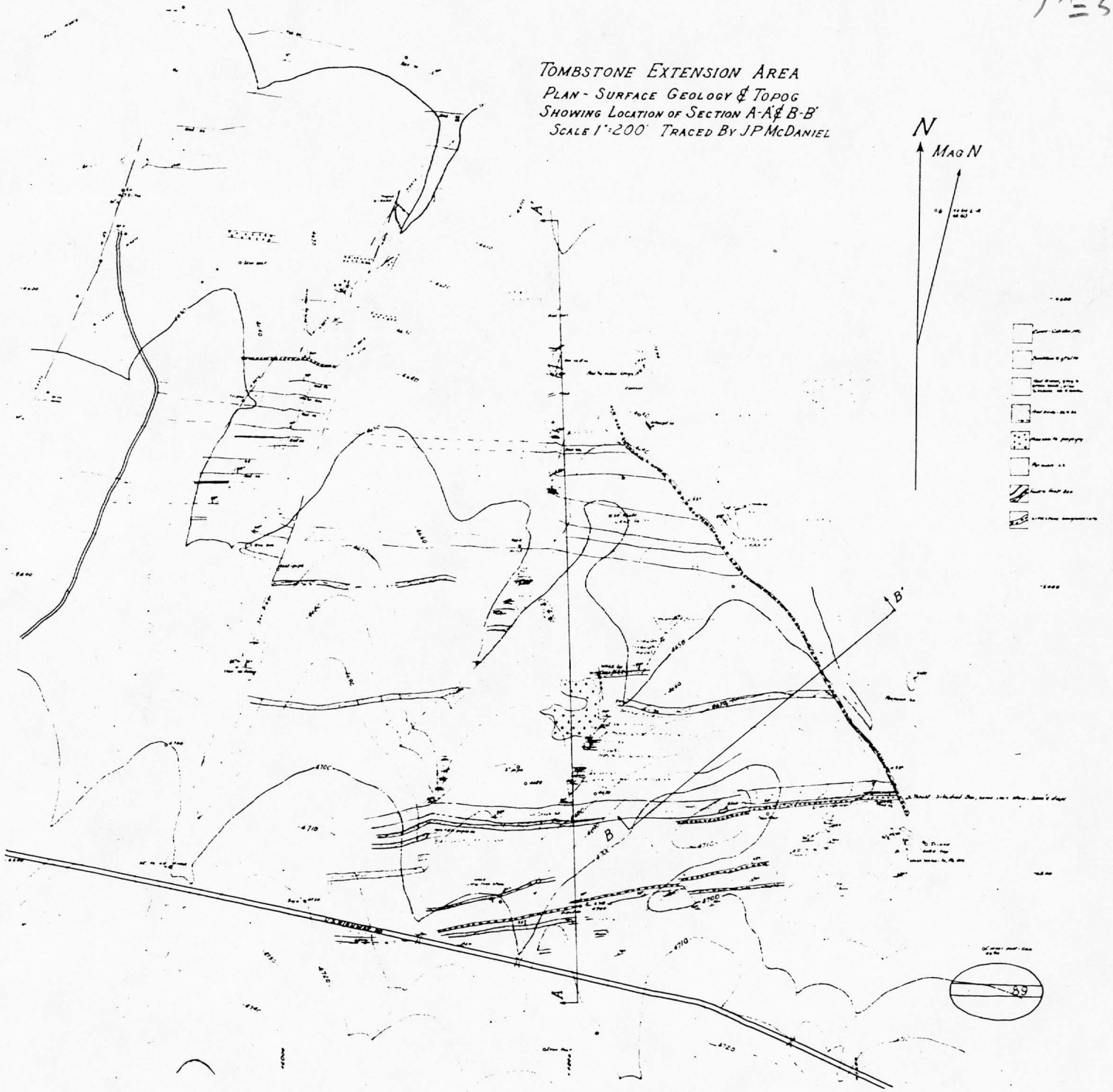
PORTIONS OF

ARIZONA AND NEW MEXICO

1" = 500'


TOMBSTONE EXTENSION AREA
PLAN - SURFACE GEOLOGY & TOPOG
SHOWING LOCATION OF SECTION A-A' & B-B'
SCALE: 1" = 200' TRACED BY J.P. McDANIEL
N
MAG N
A
A'
B
B'
89

1" = 500'


TOMBSTONE EXTENSION AREA
PLAN - SURFACE GEOLOGY & TOPOG
SHOWING LOCATION OF SECTION A-A' & B-B'
SCALE 1" = 200' TRACED BY J.P. McDANIEL
N
MAG N
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A'
B
B'
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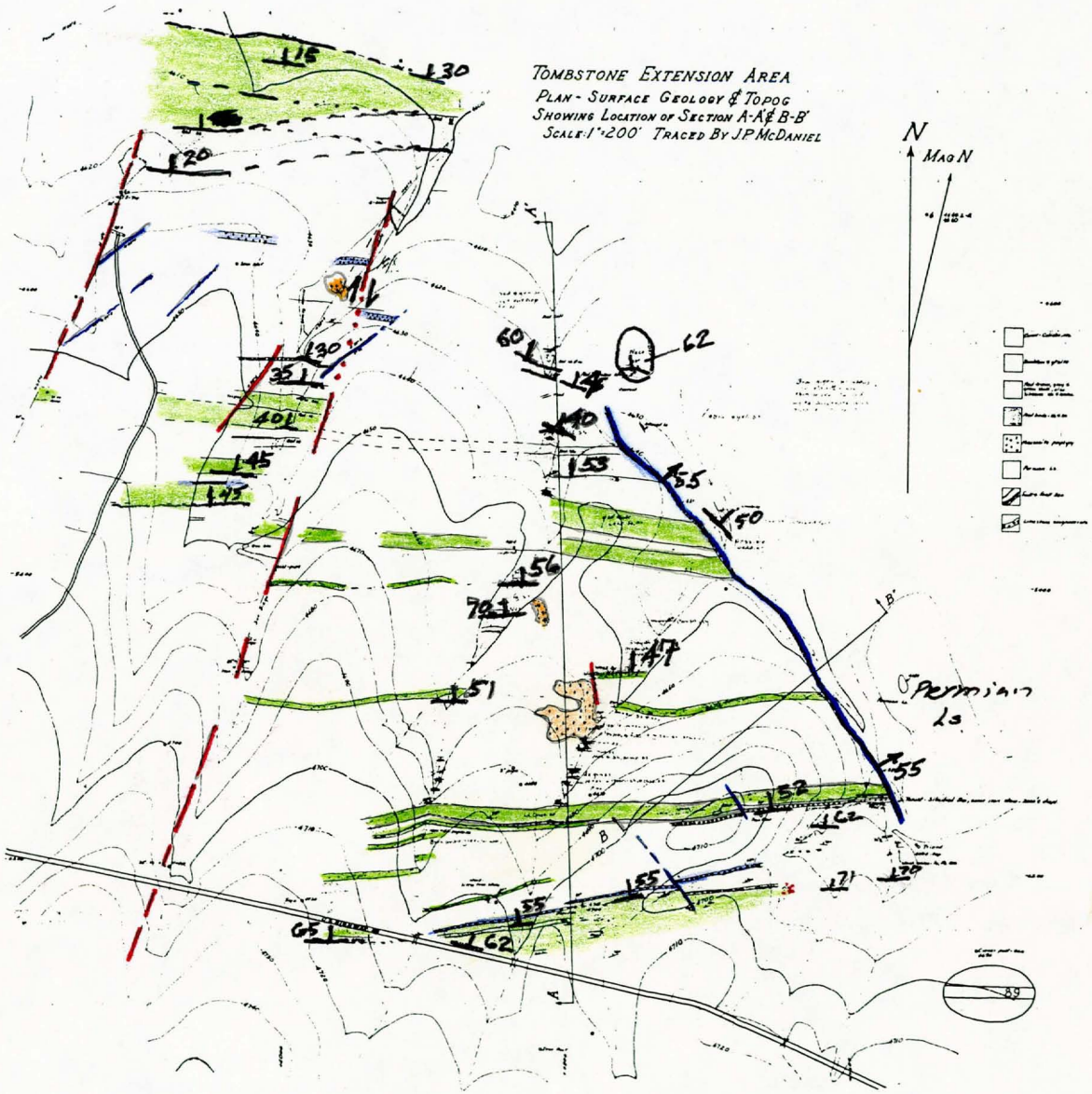
4710
4720
69

1" = 500'


TOMBSTONE EXTENSION AREA
PLAN - SURFACE GEOLOGY & TOPOG
SHOWING LOCATION OF SECTION A-A' & B-B'
SCALE 1" = 200' TRACED BY J.P. McDANIEL
N
MAG N
Permian
Ls
A
A'
B
B'

C-LINE # 62028

Cochise Co., AZ Tombstone M.D.
Aeromagneti Survey
Scale 1:250,000
(From GeoMetrics Survey)

Southwestern Exploration Associates

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1. Mining District index map with USGS quadrangle overlay
2. County bibliography list with explanations
3. Target listing
4. Listing of all deposits with current exploration status
5. Map indexes to various commodities and a generalized land status map
6. County report by State Bureau of Mines
7. Information on industrial mineral occurrences within the county
8. General articles filed alphabetically, preceded by bibliography list
9. Metal price list

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1. Index map of available theses
2. Theses arranged alphabetically by author

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1. Reduced A.M.S. sheets
2. Reduced 7½ and 15 minute quad sheets with list of mines located on each quad sheet

Volume 4: U.S.G.S. Geologic, Geophysical, Geochemical and Open File Maps

1. Index to maps in Volume 4
2. Geologic maps
3. Geophysical maps
4. Geochemical maps
5. Photo index maps

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1. Mining district summary sheet
2. Mint records, mineral resources material, Weed's Copper Handbook (colored sheets separate these sections)
3. Mining district articles listed alphabetically
4. Bibliography
5. Mine summary sheets with geologic data
6. Land status

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