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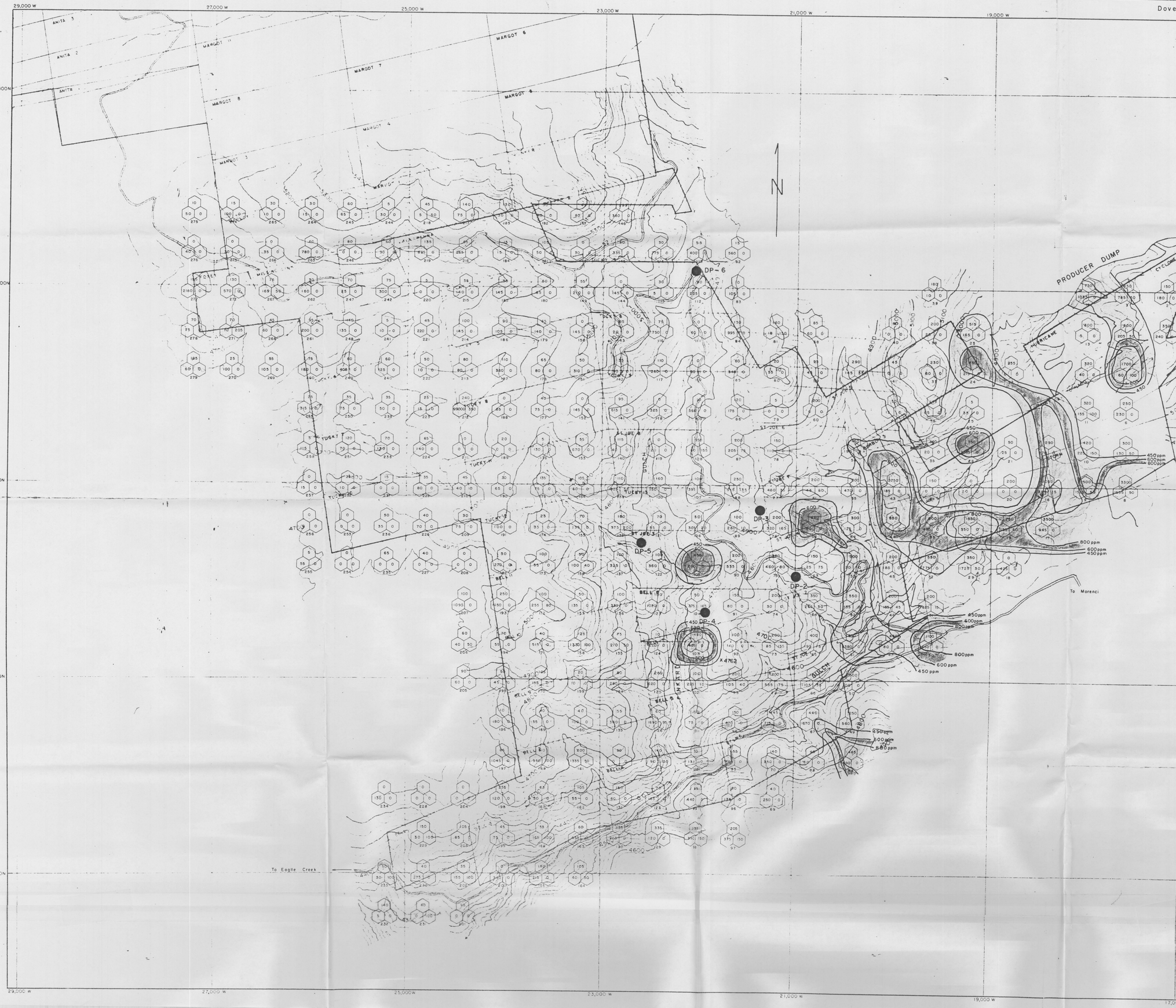


COPPER GEOCHEM EXPLANATION

ppm = Parts Per Million
1 ppm = 0.0001 %
Cu = Copper
Zn = Zinc
Mo = Molybdenum

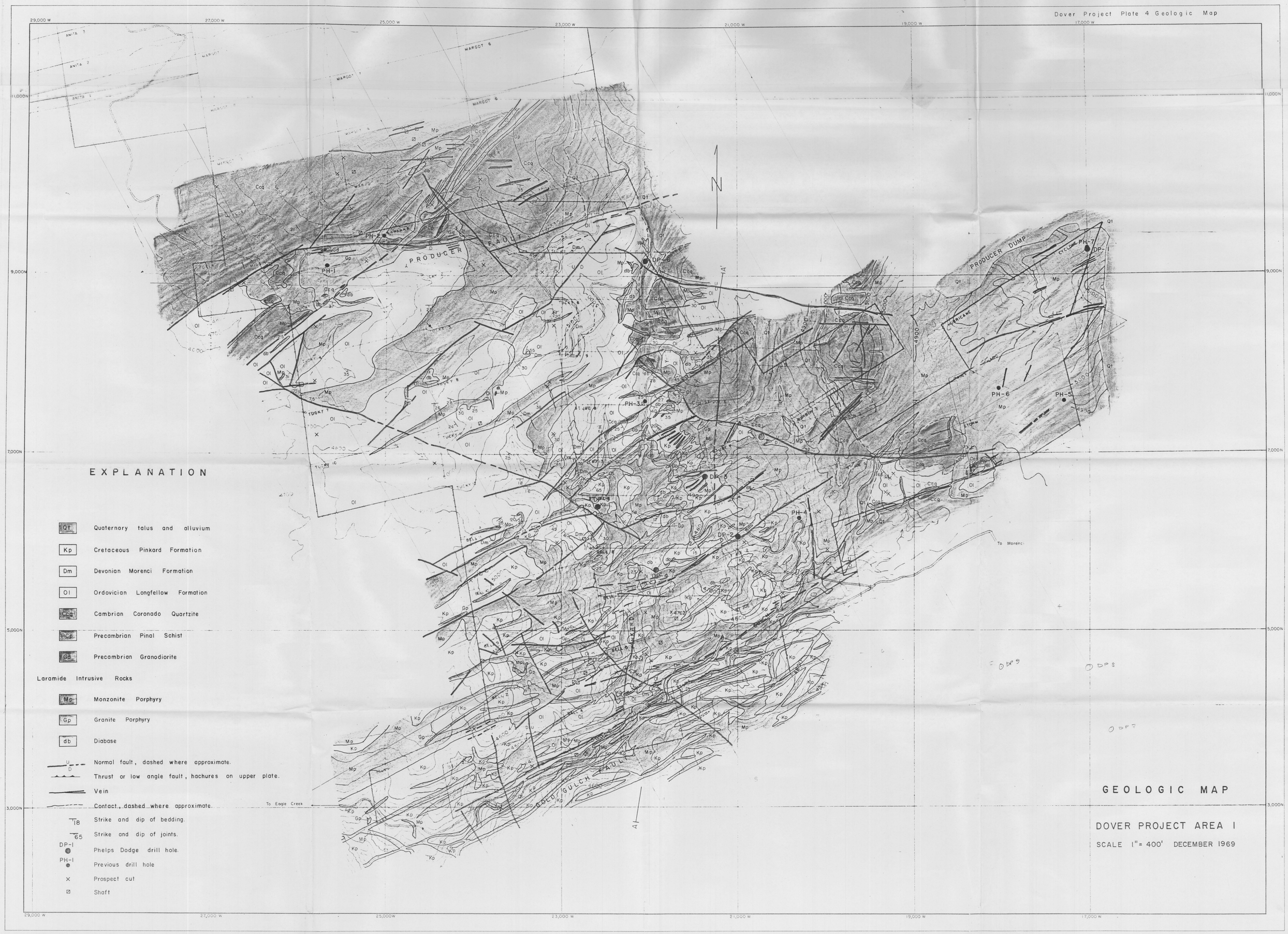
Cu – ppm
100
Zn – ppm 100 5 Mo – ppm
204
Sample Number

	Cu – ppm	Zn – ppm	Mo–ppm
Background	0–299	0–299	0
Threshold	300–449	300–449	0
Anomalous	450 +	450 +	1+

Drill Hole
DP-1

DOVER PROJECT AREA I

SCALE 1" = 400' DECEMBER 1969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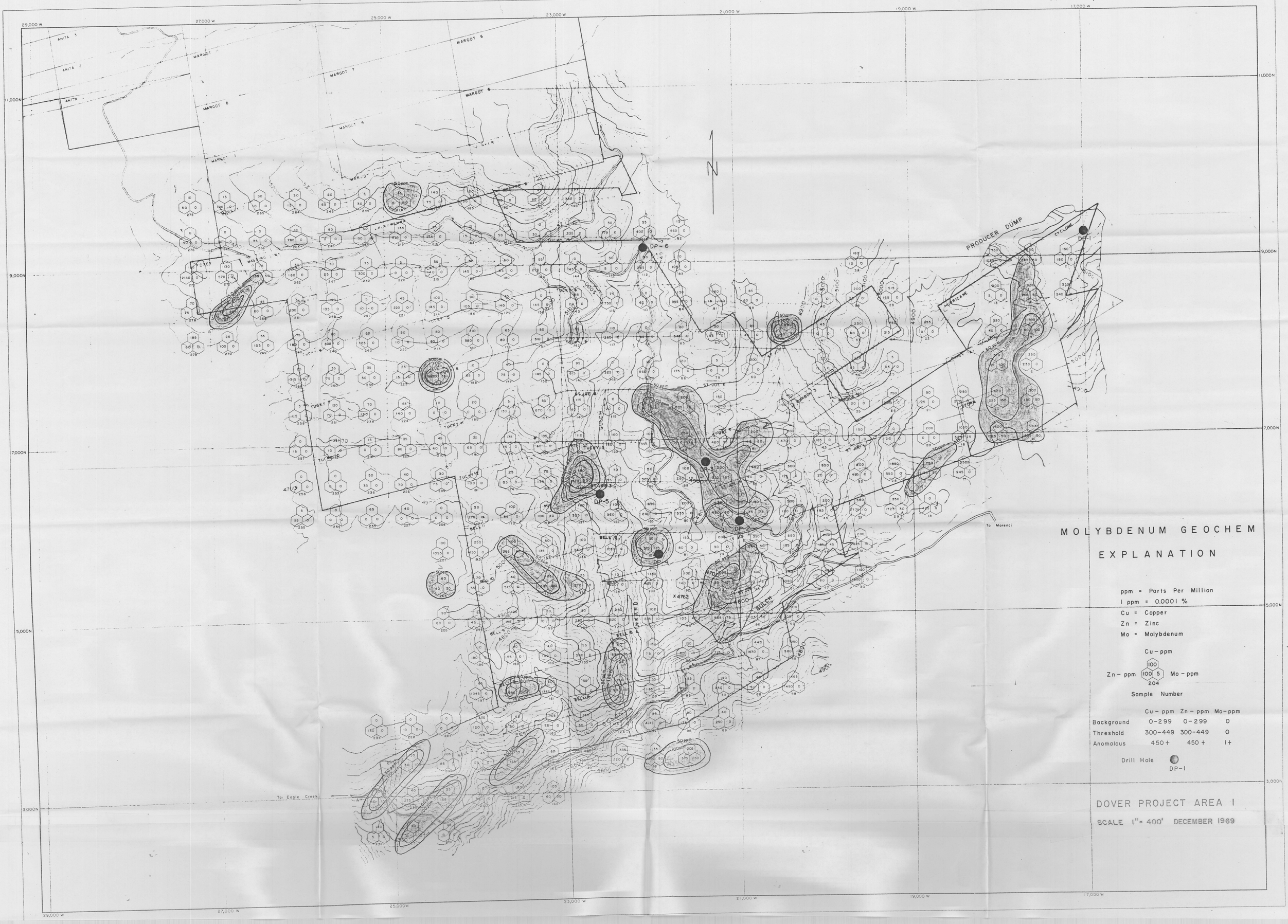
25,000 W
23,000 W
21,000 W
19,000 W
17,000 W
11,000N
9,000N
7,000N
5,000N
3,000N
N
PRODUCER FAULT
PRODUCER DUMP
HURRICANE
GOLD GULCH FAULT
To Morenci
To Eagle Creek
PH-1
PH-3
PH-4
PH-5
PH-6
PH-7
DP-1
DP-2
DP-3
DP-4
DP-5
DP-6
DP-7
DP-8
DP-9
A
A'
EXPLANATION
Qt Quaternary talus and alluvium
Kp Cretaceous Pinkard Formation
Dm Devonian Morenci Formation
Ol Ordovician Longfellow Formation
Ccq Cambrian Coronado Quartzite
PCp Precambrian Pinal Schist
Gd Precambrian Granodiorite
Laramide Intrusive Rocks
Mp Monzonite Porphyry
Gp Granite Porphyry
db Diabase
Normal fault, dashed where approximate.
Thrust or low angle fault, hachures on upper plate.
Vein
Contact, dashed where approximate.
18 Strike and dip of bedding.
65 Strike and dip of joints.
DP-1 Phelps Dodge drill hole.
PH-1 Previous drill hole
Prospect cut
Shaft
GEOLOGIC MAP
DOVER PROJECT AREA I
SCALE 1" = 400' DECEMBER 1969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27,000 W
25,000 W
23,000 W
21,000 W
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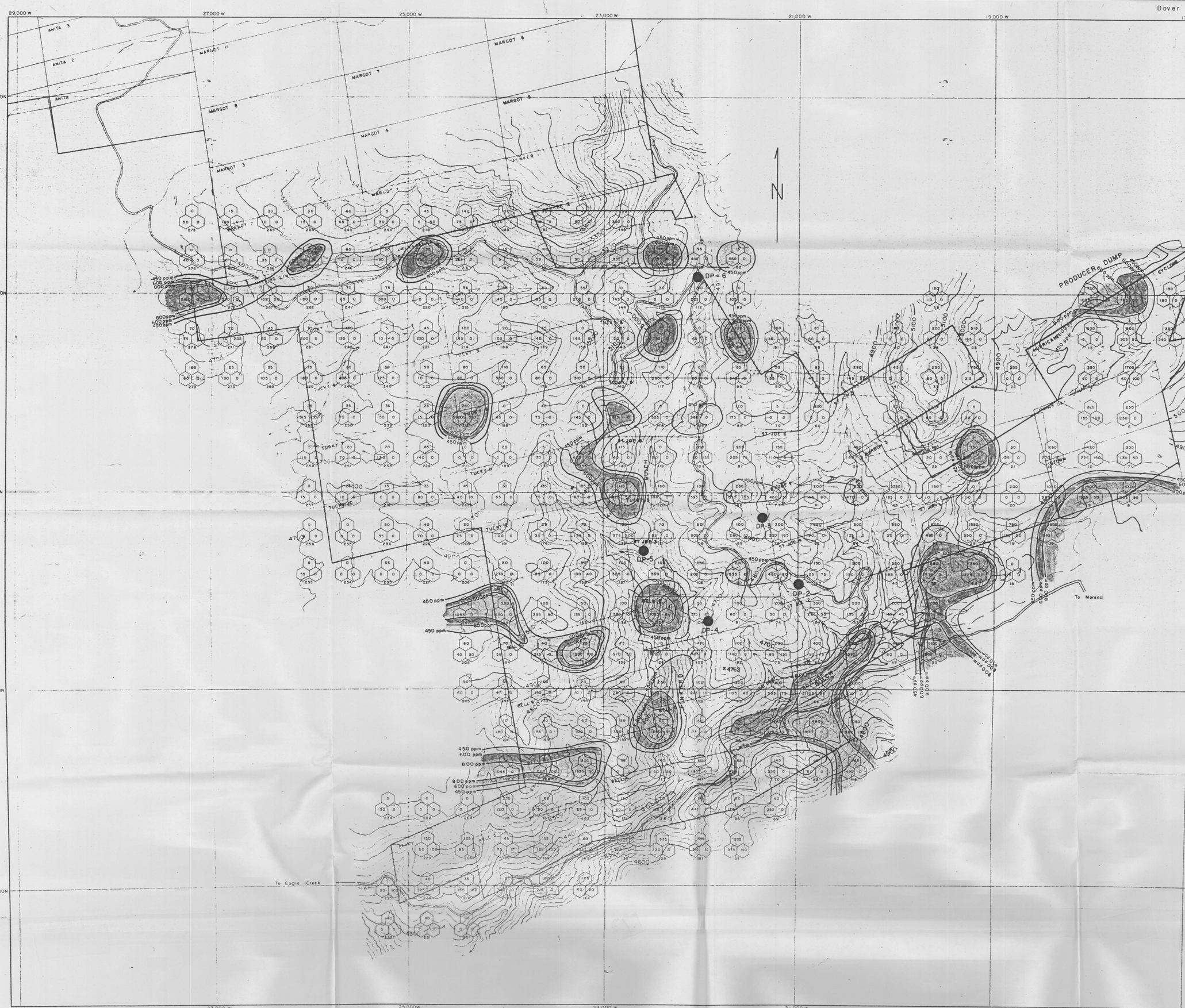
17,000 W
11,000N
9,000N
7,000N
5,000N
3,000N
N
PRODUCER DUMP
DP-1
DP-2
DP-3
DP-4
DP-5
DP-6
To Morenci
To Eagle Creek
MOLYBDENUM GEOCHEM
EXPLANATION
ppm = Parts Per Million
1 ppm = 0.0001 %
Cu = Copper
Zn = Zinc
Mo = Molybdenum
Cu - ppm
Zn - ppm
Mo - ppm
Sample Number
Cu - ppm Zn - ppm Mo-ppm
Background 0-299 0-299 0
Threshold 300-449 300-449 0
Anomalous 450+ 450+ 1+
Drill Hole
DP-1
DOVER PROJECT AREA 1
SCALE 1" = 400' DECEMBER 1969



ZINC GEOCHEM EXPLANATION

ppm = Parts Per Million
1 ppm = 0.0001 %
Cu = Copper
Zn = Zinc
Mo = Molybdenum

Cu – ppm
Zn – ppm (100) Mo – ppm (100 | 5)
204
Sample Number

	Cu – ppm	Zn – ppm	Mo-ppm
Background	0-299	0-299	0
Threshold	300-449	300-449	0
Anomalous	450 +	450 +	1+

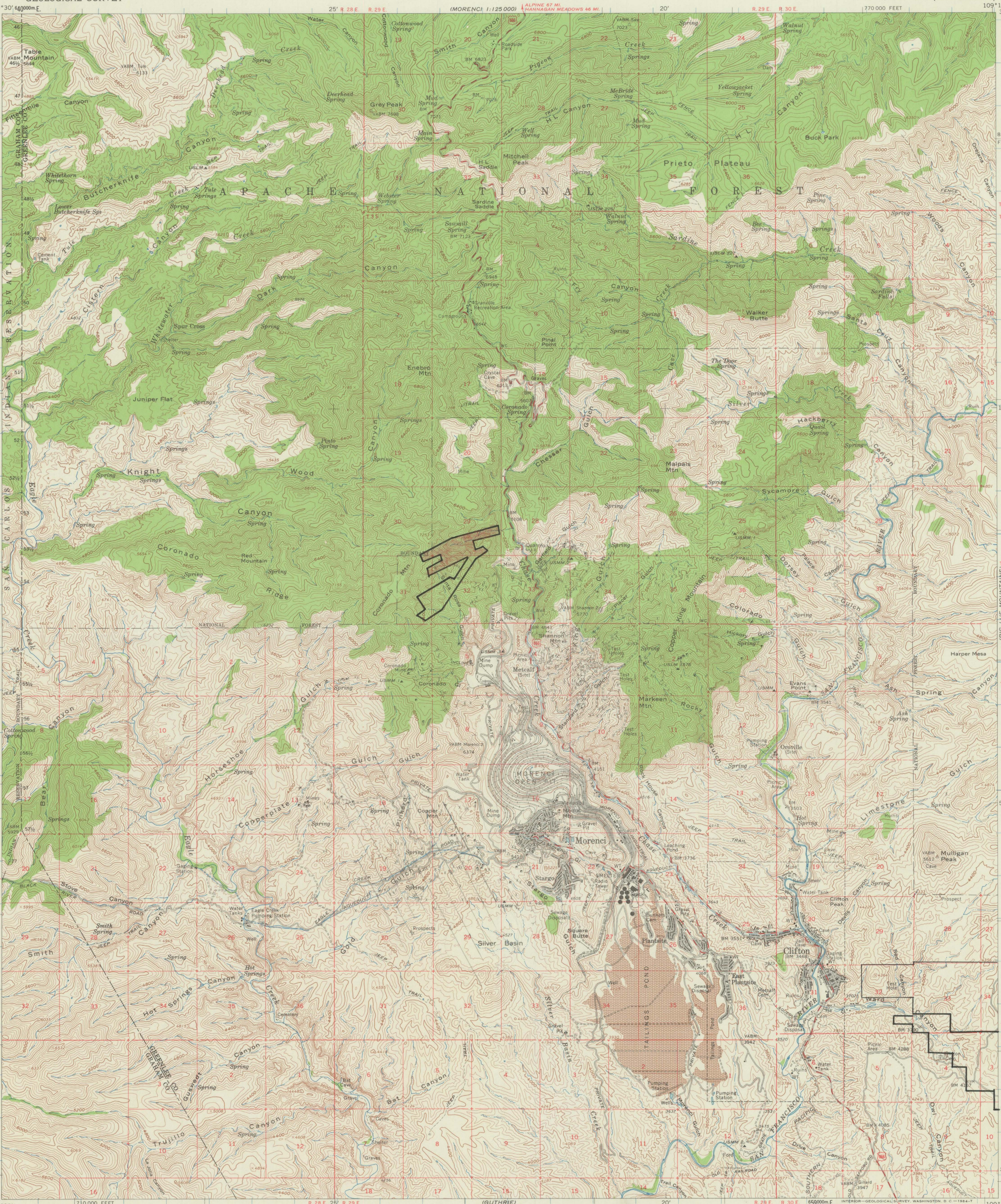
Drill Hole DP-1

DOVER PROJECT AREA 1

SCALE 1" = 400' DECEMBER 1969

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CLIFTON QUADRANGLE
ARIZONA
15 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey

Control by USGS, USC&GS, and U. S Soil Conservation Service

Topography by photogrammetric methods from aerial photographs taken 1959. Field checked 1962

Polyconic projection. 1927 North American datum
10,000-foot grid based on Arizona coordinate system, east zone
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue

Where omitted, land lines have not been established

13°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1962

SCALE 1:62500

1 ½ 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
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Medium-duty — Light-duty

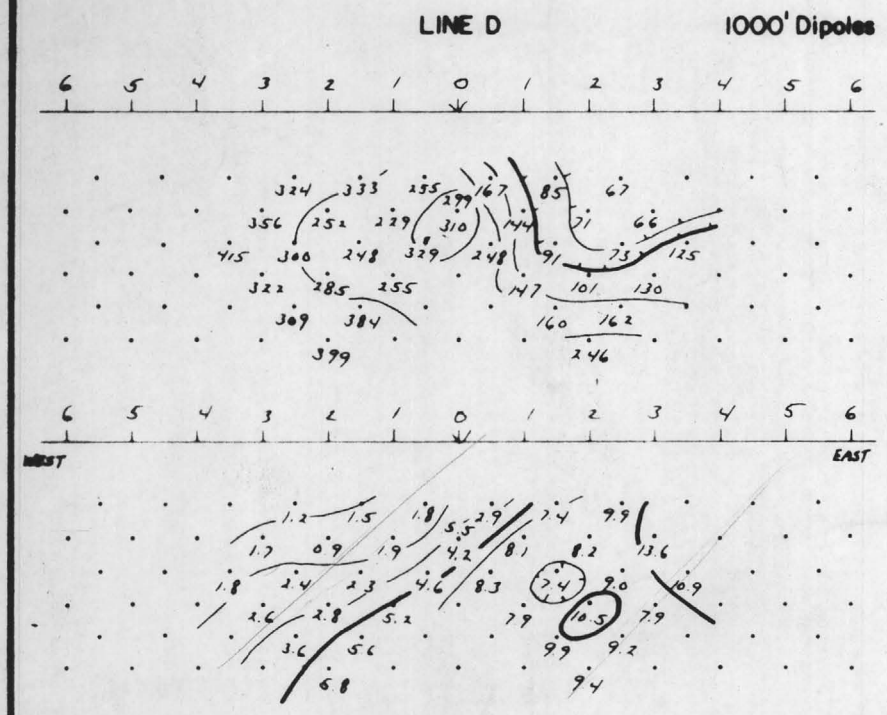
Unimproved dirt

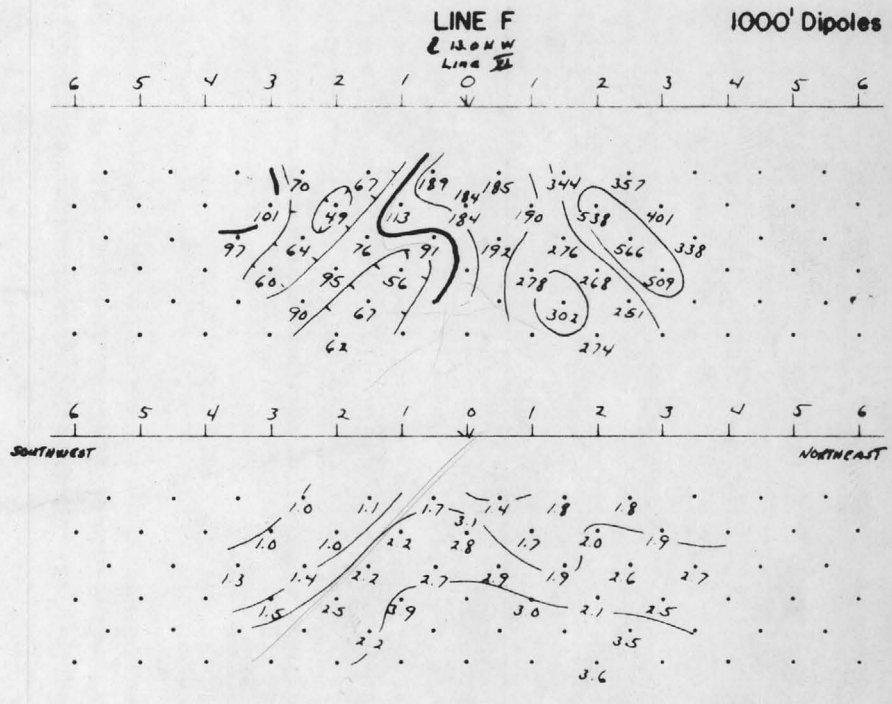
U. S. Route

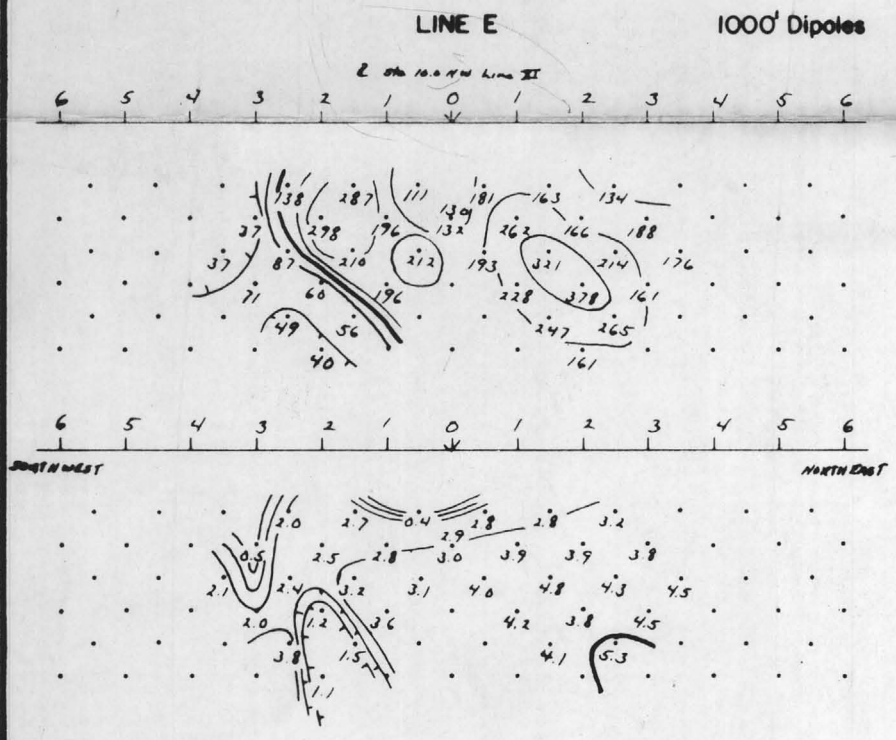
ARIZONA
QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER 25, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

CLIFTON, ARIZ.
N3300—W10915/15
1962





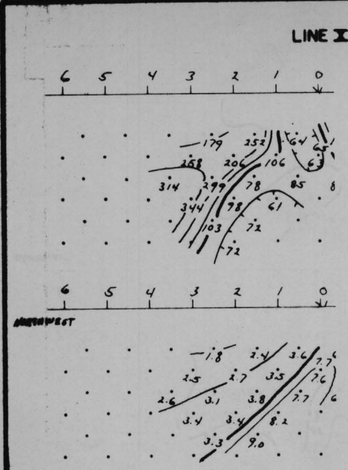


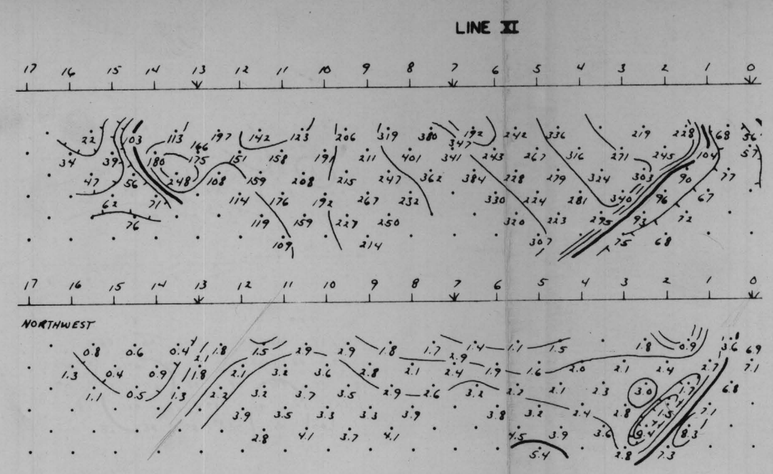
f = 0.1 & 2.0 cps

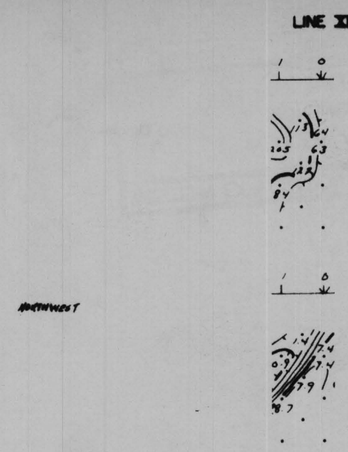
WESTERN EXPLORATION OFFICE PHELPS DODGE CORPORATION

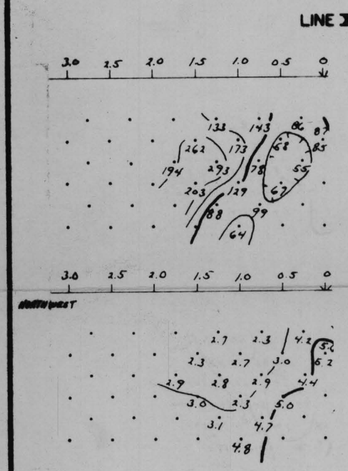
INDUCED POLARIZATION PROFILES
MORENCI (DOVER PROPERTY)
GREENLEE COUNTY, ARIZONA

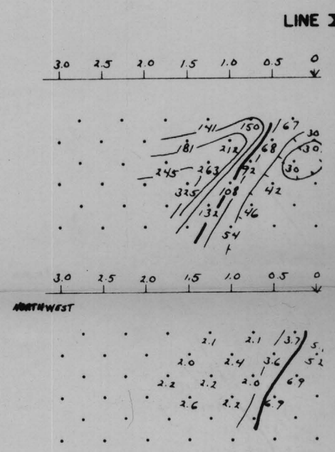
SCALE	H: As Shown	CONTOUR INTERVAL: Log		REVISIONS
	V:	DATE:	BY: HRE	
SHEET 3 OF 3		DRAWING NO:		FILE:

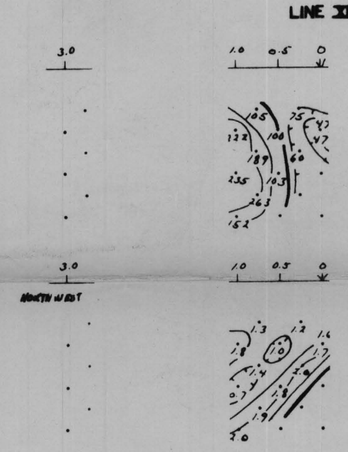


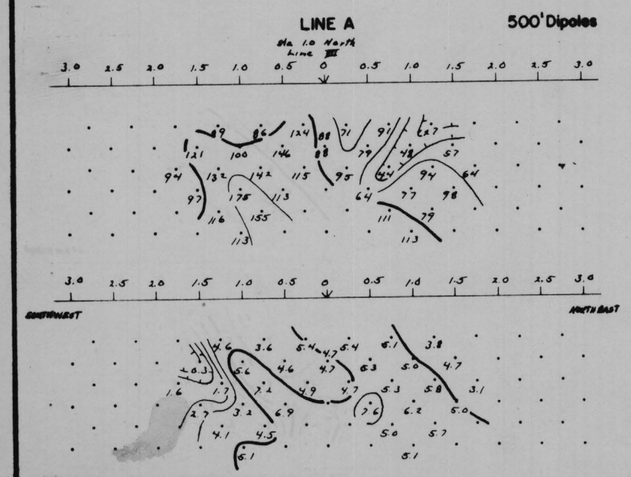


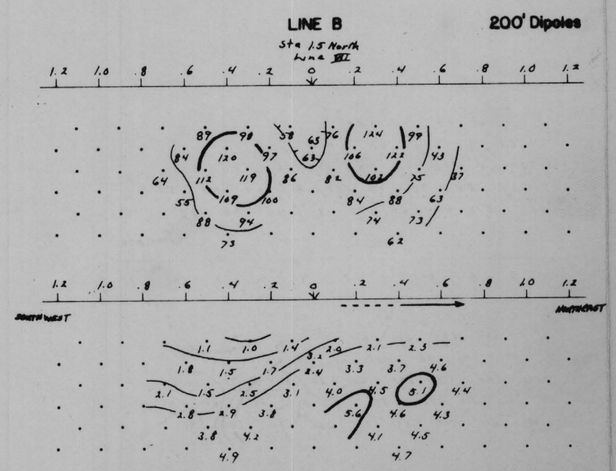


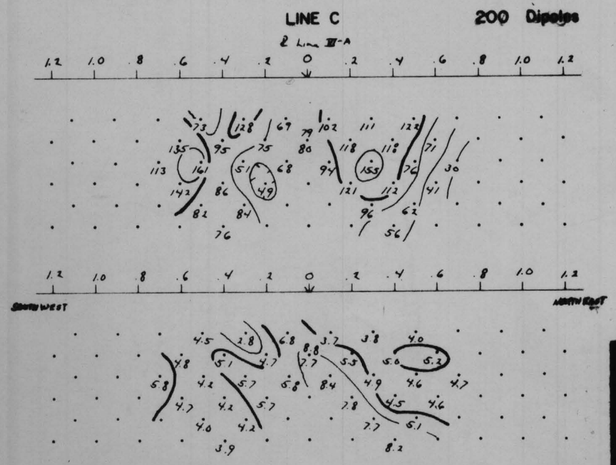












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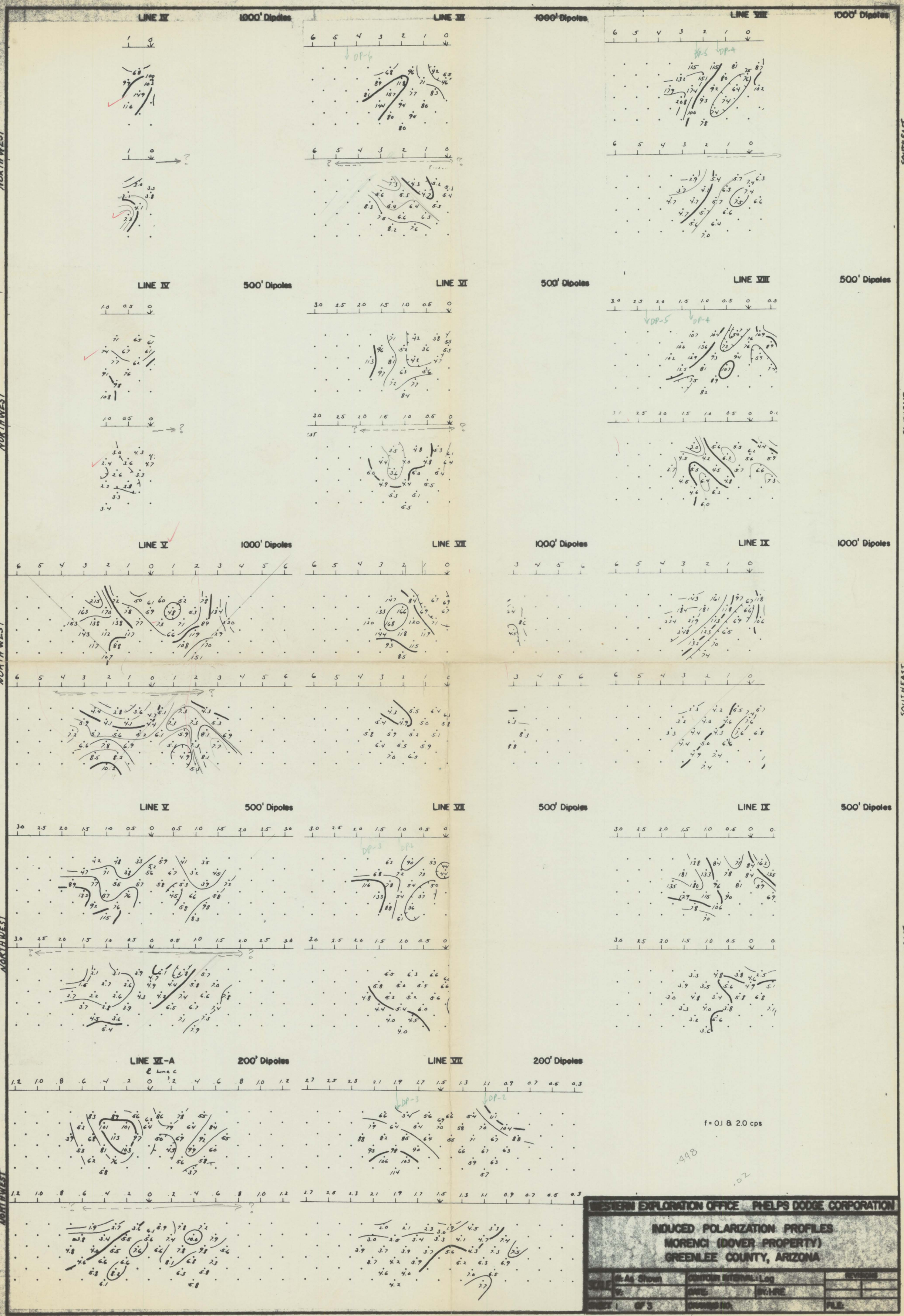
WESTERN EXPLORATION CORP.

INDUCED POLARIZATION PROFILES
MORENCI (DOVER PROPERTY)
GREENLEE COUNTY, ARIZONA


LINE IV 1000' Dipoles
LINE VI 1000' Dipoles
LINE VIII 1000' Dipoles
LINE IV 500' Dipoles
LINE VI 500' Dipoles
LINE VIII 500' Dipoles
LINE V 1000' Dipoles
LINE VII 1000' Dipoles
LINE IX 1000' Dipoles
LINE V 500' Dipoles
LINE VII 500' Dipoles
LINE IX 500' Dipoles
LINE VI-A 200' Dipoles
LINE VII 200' Dipoles
NORTHWEST
SOUTHEAST
f = 0.1 & 2.0 cps
WESTERN EXPLORATION OFFICE PHELPS DODGE CORPORATION
INDUCED POLARIZATION PROFILES
MORENCI (DOVER PROPERTY)
GREENLEE COUNTY, ARIZONA
SCALE As Shown
CONTOUR INTERVAL: Log
DATE
BY: HRE
SHEET 1 OF 3
DRAWING NO.
REVISIONS
FILE

SYNOPSIS OF THE DOVER PROPERTY EXPLORATION

February 26, 1969 thru July 1, 1970

Phelps Dodge Corporation
Morenci Branch
Geology Department
July 27, 1970

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SYNOPSIS OF THE DOVER PROPERTY EXPLORATION

February 26, 1969 thru July 1, 1970

Approximately 2,600 acres of Dover Property located west of Morenci, Arizona was divided into three areas of interest, (Figure 1). Area 1 is the Dover Property located between the Producer Fault and Gold Gulch; Area 2 is the patented mining claims south of Gold Gulch; Area 3 is the Keating Mine and immediate vicinity. The following is a tabulation of completed exploratory work as of July 1, 1970:

Item	Area 1	Area 2	Area 3
Geochemistry	Completed	-	-
Geophysics	Completed	Completed	-
Geology	Completed	Drill Sites	Keating Mine
Diamond Drilling	5,798 feet	2,973 feet	-

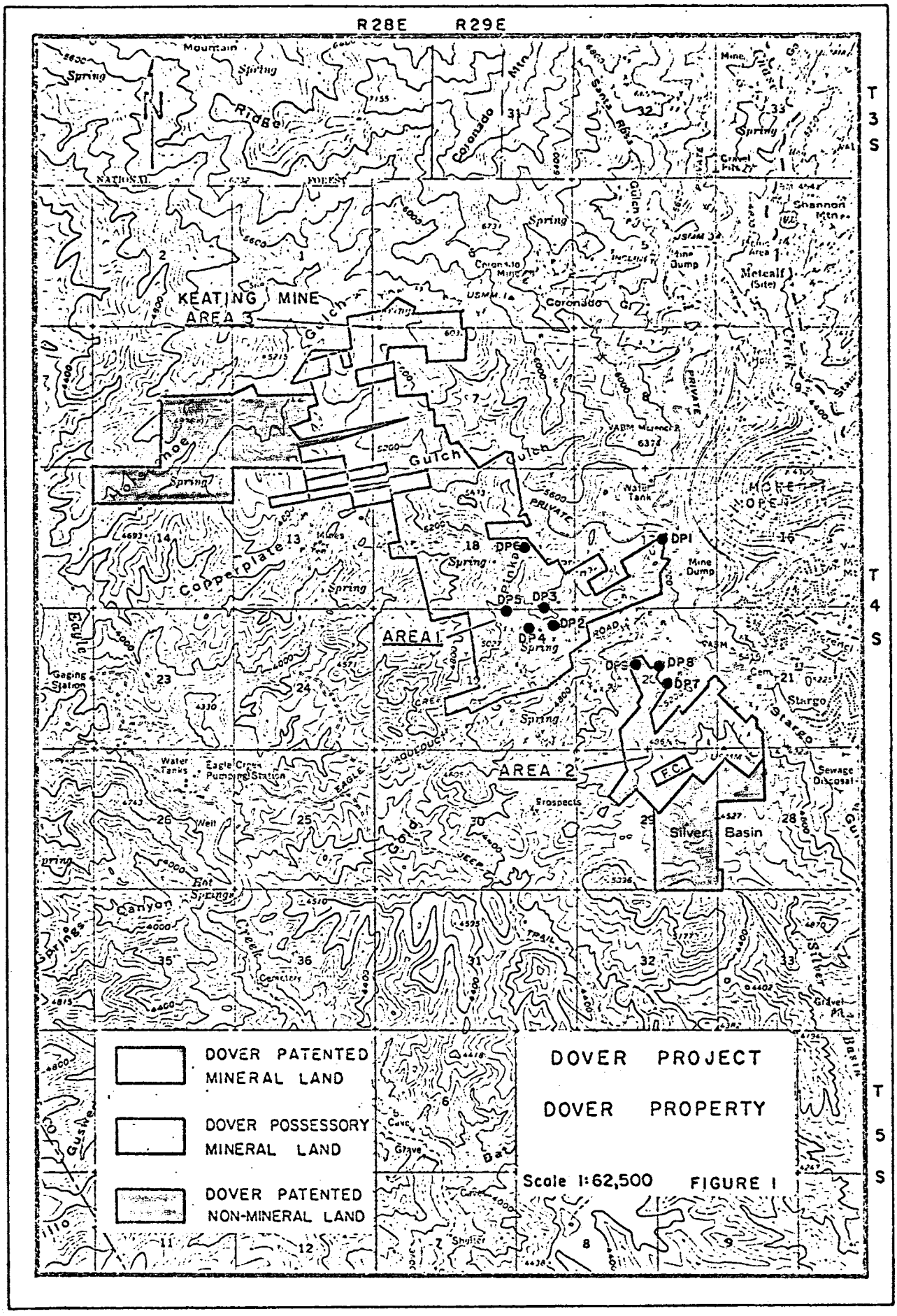
The Corporation has expended $101,727 on exploratory work thru July 1, 1970, as follows:

Diamond Drilling (8,771 feet)	$ 54,426
Drill Site Construction	3,213
Assessment Work	1,200
Engineering (Geology-Geochemistry-Geophysics)	36,813
Sampling	6,075
Tax Payment	685
Lease-Option Payment	50,000
Total	$152,412

Assessment Work

Assessment work was completed on the following twelve Dover Copper Mining Company possessory claims, (Figure 1):

Anita No. 1	Anita No. 8
Anita No. 2	Anita No. 18
Anita No. 3	Anita No. 22
Anita No. 4	Anita No. 32
Anita No. 5	Margot No. 11
Anita No. 6	Victory Fraction


R28E
R29E
T 3 S
T 4 S
T 5 S
KEATING MINE
AREA 3
AREA 1
AREA 2
DP1
DP2
DP3
DP4
DP5
DP6
DP7
DP8
DP9
F.C.
Silver Basin
Stargo
Copperplate
Coronado
Metcalf (Site)
DOVER PATENTED MINERAL LAND
DOVER POSSESSORY MINERAL LAND
DOVER PATENTED NON-MINERAL LAND
DOVER PROJECT
DOVER PROPERTY
Scale 1:62,500
FIGURE 1

Geochemical Survey

A trace element geochemical survey for copper, zinc and molybdenum in Area 1 was completed in September, 1969. The survey consisted of 255 rock chip samples that were taken on a 400 foot grid.

All samples were analyzed on a Perkin-Elmer 403 Atomic Absorption unit for trace amounts of copper, zinc and molybdenum. Plates 1 thru 3 show the results of this survey.

Geophysical Surveys

Induced Polarization (IP) and vertical magnetic intensity surveys of Area 1 and Area 2 were completed by the Western Exploration Division, Plate 5. Approximately 24 line miles of IP coverage utilizing 500 foot and 1,000 foot dipoles were completed. The magnetic survey was conducted on a 100-foot station line with a 200 foot line spacing. Drill holes located near geophysical anomalies encountered sufficient disseminated sulfides or magnetite-pyrite replacement type mineralization to explain the anomalies.

Geology

The lithology is characterized by dikes and sills of Laramide porphyries which intruded the Pre-Cenozoic rocks in a northeast-southwest zone of weakness. Normal faulting and subsequent erosion are responsible for the present day topography. Plate 4 is the geologic map of Area 1, Figure 2 is the geologic map of Area 2 drill sites and Figure 3 is the geologic map of the Keating Mine in Area 3. Detailed drill logs accompany this report.

Discussion

Hole DP-1, located on the Cyclone claim, was drilled to a depth of 2,035 feet and fulfilled the terms set forth in paragraph 5, Article II of the Option to Lease agreement. The geochemical, geophysical and geological work completed on the Dover Property led to the selection and drilling of holes DP-2 thru DP-9.

Drill holes DP-2 thru DP-5 were drilled in the vicinity of geochemical and geophysical anomalies. Trace amounts of molybdenite were seen in the core which explains the geochemical anomaly and sufficient magnetite-pyrite replacement type mineralization or disseminated pyritic mineralization was encountered to explain the geophysical anomalies.

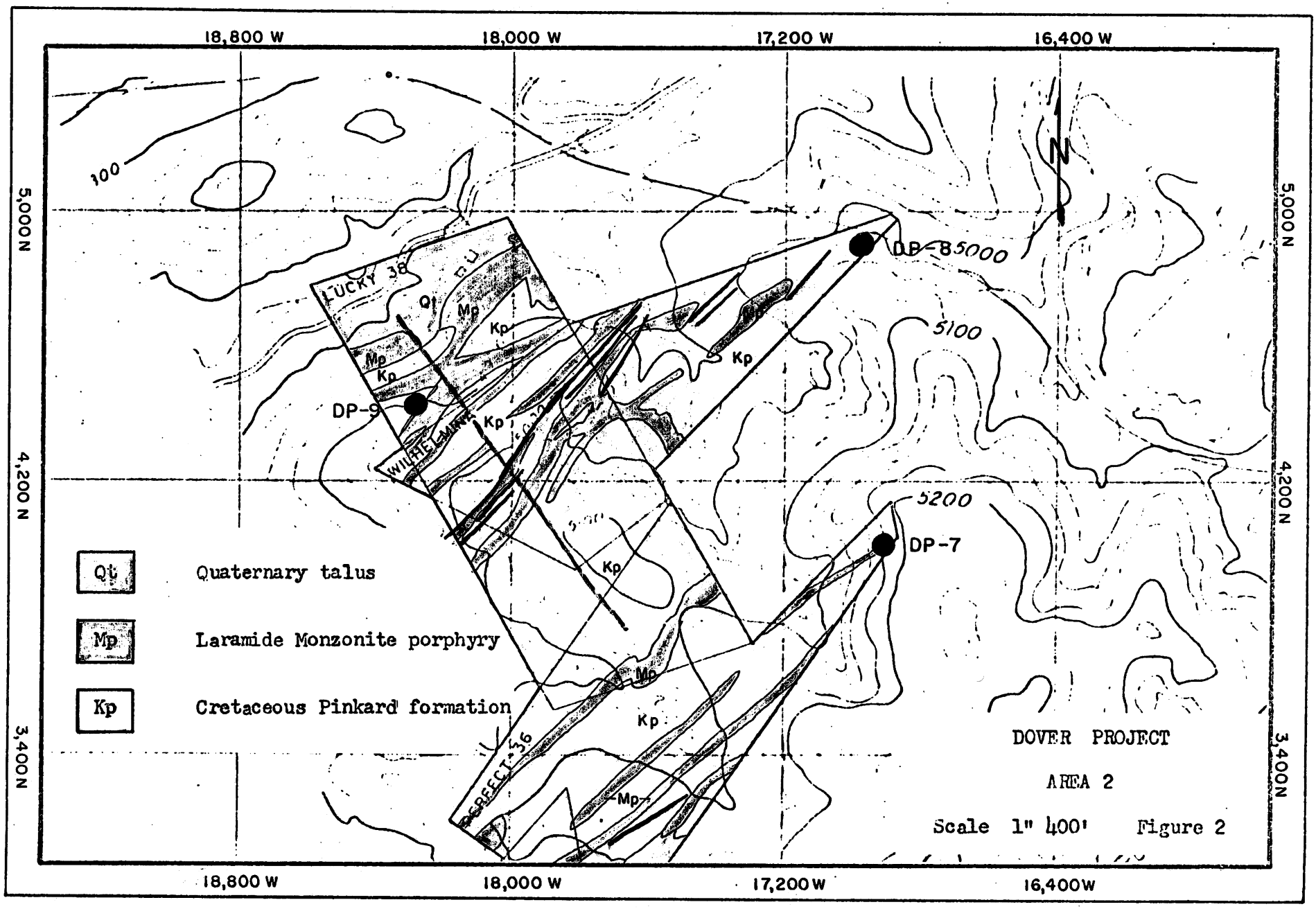
Drill holes DP-2 thru DP-5 were located and drilled on the basis of correlation between geological, geochemical and geophysical data. Because the drilling of these four holes, with discouraging results, depleted all of the coincident anomalies, drill holes DP-6 thru DP-9

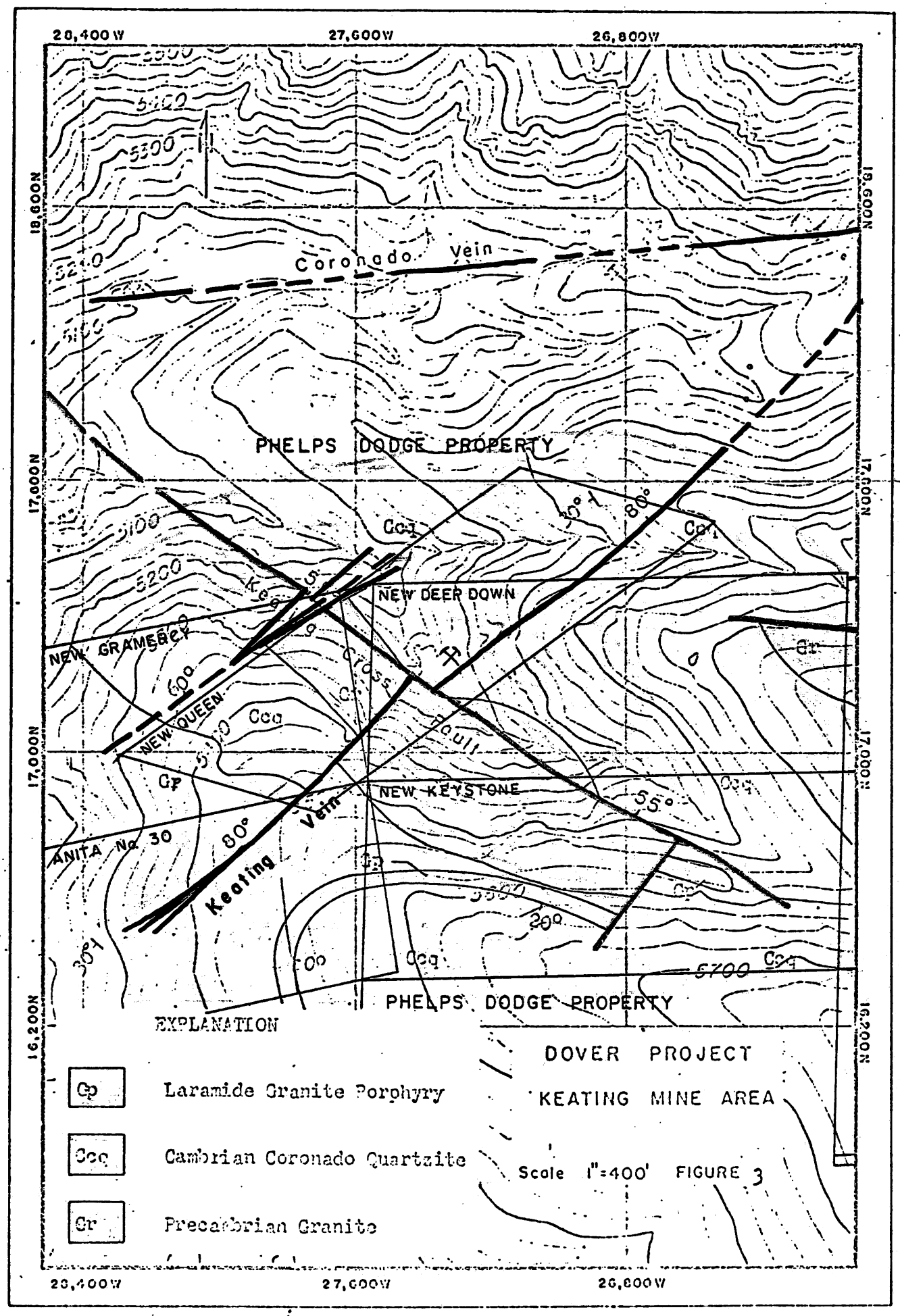
were located and drilled on the basis of only geophysical anomalies. Sufficient magnetite-pyrite replacement type mineralization or disseminated pyritic mineralization was encountered to explain the anomalies.

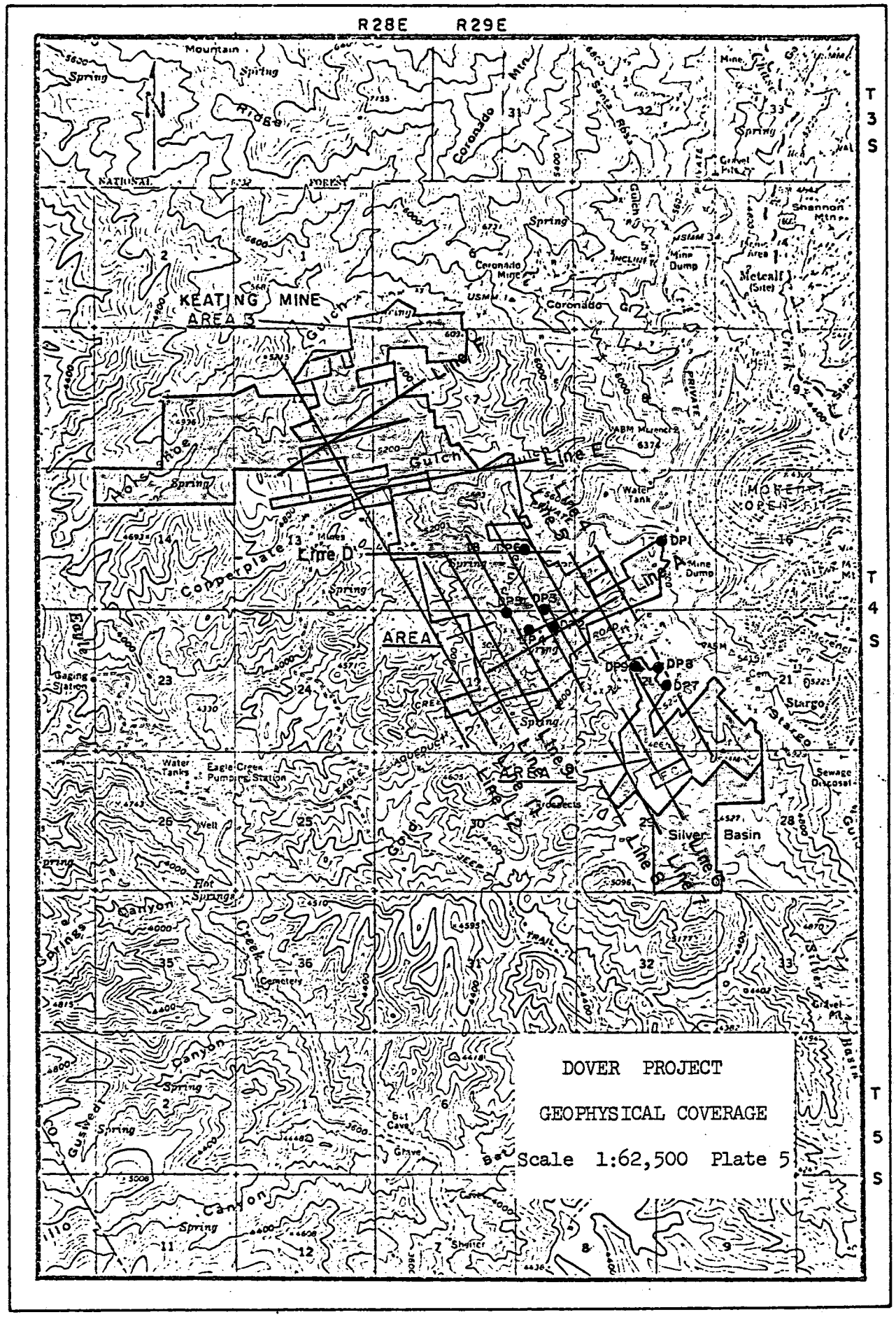
None of the drill holes encountered ore grade mineralization and drilling operations were terminated on April 14, 1970 because all geochemical, geophysical and structural targets were drilled in Areas 1 and 2.

The Keating Mine, Area 3, is located approximately 1/4 mile south of Horseshoe Gulch on the New Queen lode claim. The majority of mining was done between 1926 and 1945 from the Keating Vein which strikes N 45° E and dips 80° northwest, Figure 3. No complete records of production are available but it appears that approximately 11,000 tons of ore with an average grade of 5.34 percent copper have been removed. Access to this area would require the construction of 2,500 feet of road at an estimated cost of $35,000. The capping indicates that the economic mineralization is confined to the narrow Keating Vein. This area would not be of interest to the Phelps Dodge Corporation because of the unfavorable capping and limited reserves.

Phelps Dodge Corporation
Morenci Branch
Geology Department
July 27, 1970


18,800 W
18,000 W
17,200 W
16,400 W
5,000 N
4,200 N
3,400 N
N
100
5000
5100
5200
DP-8
DP-9
DP-7
LUCKY 38
WILLIE MINE
PERFECT 36
Qt
Mp
Kp
Qt Quaternary talus
Mp Laramide Monzonite porphyry
Kp Cretaceous Pinkard formation
DOVER PROJECT
AREA 2
Scale 1" 400'
Figure 2


28,400W
27,600W
26,800W
18,600N
17,000N
16,200N
Coronado Vein
PHELPS DODGE PROPERTY
NEW DEER DOWN
NEW GRAMBERG
NEW QUEEN
NEW KEYSTONE
ANITA No. 30
Keating Vein
Cross Fault
Ccq
Cp
Cr
80°
55°
20°
5300
5200
5100
5700
PHELPS DODGE PROPERTY
EXPLANATION
Cp Laramide Granite Porphyry
Ccq Cambrian Coronado Quartzite
Cr Precambrian Granite
DOVER PROJECT
KEATING MINE AREA
Scale 1"=400'
FIGURE 3



DOVER PROJECT

GEOPHYSICAL COVERAGE

Scale 1:62,500 Plate 5

Geology and Mineralization of Drill Holes DP-1 thru DP-9

Drill Hole	DP-1
Location	Cyclone Claim (Phelps Dodge Coordinates 9,283 N, 16,979 W)
Collar Elevation	5,185 feet
Date Started	July 22, 1969
Date Completed	September 25, 1969
Total Depth	2,035 feet

The core was characterized by argillized and locally silicified monzonite porphyry similar to the monzonite at the Morenci Mine. A younger, finer grained, monzonite porphyry was encountered at 495 feet and persisted to a depth of 2,035 feet. The mineralization was characterized by 1/16 to 1/2 inch infrequent veinlets of pyrite, chalcopyrite, galena and hematite, pyrite on fractures, disseminated pyrite and chalcopyrite with local thin enrichment of chalcocite and covellite and traces of molybdenite as film on fractures and in the selvages of quartz veins. The highest 10-foot assay was 0.23 percent copper and the highest 50-foot assay was on the 4500 level which averaged 0.12 percent copper. Complete assays follow:

Level	% Cu	Level	% Cu	Level	% Cu
5100	0.02	4400	0.10	3700	0.02
5050	0.05	4350	0.05	3650	0.04
5000	0.09	4300	0.04	3600	0.07
4950	0.06	4250	0.04	3550	0.07
4900	0.05	4200	0.03	3500	0.05
4850	0.05	4150	0.03	3450	0.01
4800	0.06	4100	0.01	3400	0.06
4750	0.03	4050	0.04	3350	0.05
4700	0.03	4000	0.04	3300	0.11
4650	0.04	3950	0.04	3250	0.03
4600	0.09	3900	0.02	3200	0.03
4550	0.08	3850	0.02	3150	0.02
4500	0.12	3800	0.03		
4450	0.03	3750	0.07		

Location: Cyclone Claim
Coordinates 9,283 N , 16,979 W

DRILL LOG

Hole DP- 1
Collar Elevation 5,185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu				
	0	9				Rock Bit	Fill/Mp	Rock bit thru argillized, friable monzonite porphyry. Iron and manganese oxides. Iron oxide after pyrite.
	9	14				Nx Core 100% c.r.	Mp	ditto
5150	14	40				Rock Bit 2 hours of reaming	Mp	ditto
	40	45	.01	Cu	0.02	Nx Core 100% c.r.	Mp	ditto
	45	55	.03			"	"	Weak-spotty silicification, biotite partially replaced by chlorite.
	55	65	.02			"	"	Fractures at 60°, some slickensided with clay development confined to fractures.
	65	75	.03			"	"	Weak quartz-sericite, quartz content increased locally.
5100	75	85	.02			"	"	ditto

Location: Cyclone Claim
Coordinates 9,283 N, 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5,185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.05	Nx Core Normal drilling 100% c.r.	Mp	Propylitic monzonite porphyry cut by 1/8" quartz veinlets. Moderate iron oxide after pyrite staining, manganese oxide.
	85	95	.03					
						"		Fractures at 50°-70°
	95	105	.03					
						"		ditto
	105	115	.04					
						"		ditto
	115	125	.04					
						"		ditto
5050	125	135	.10					
				Cu	0.09	"	Mp/Fault/ Mp	Fault breccia 143-144 feet.
	135	145	.14					
						"		ditto
	145	155	.10					
						"		Ditto, trace of malachite.
	155	165	.10					
						"	Mp/Vein/ Mp	Quartz-pyrite vein 170-171 feet.
	165	175	.05					
						"		ditto
5000	175	185	.08					

Location: Cyclone Claim
Coordinates 9,283 N , 16,979 W

DRILL LOG

Hole DP- 1
Collar Elevation 5,185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	185	195	.04	Cu	0.06	Nx Core Normal Drilling	Mp	Propylitized monzonite porphyry, argillized feldspars
	195	205	.05			Ditto	Mp/Vein/ Mp	Quartz vein 198-199 feet
	205	215	.07			Ditto	"	ditto
	215	225	.05			Ditto	"	Fractures at 60°
4950	225	235	.07			Ditto	Mp/Vein/ Mp	Quartz-galena-sphalerite vein dip 6°, 1/4 inch thick at 232 feet. Pyrite, galena, sphalerite, iron and manganese oxides.
	235	245	.07	Cu	.05	Ditto	Mp	Nontronite 239-240 feet. Thin pyrite-galena-sphalerite-calcite veinlets, trace of chalcopyrite.
	245	255	.06			Ditto	"	Fractures 60°-70°, slickensided, iron and manganese oxide, disseminated pyrite.
	255	265	.05			Ditto	Mp/Fault	Well fractured and shattered monzonite porphyry to 260 feet then brecciated, moderate clay and iron oxide.
	265	275	.05			Ditto	Fault/Mp	Brecciated monzonite porphyry to 273 feet then well fractured and shattered.
4900	275	285	.04			Ditto	Mp/Fault	Brecciated monzonite porphyry 277 to 277.5 feet, iron and manganese oxide, trace of disseminated pyrite and galena.

Location: Cyclone Claim
Coordinates 9,283 N , 16,979 N

DRILL LOG

Hole DP-1
Collar Elevation 5,185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	285	295	.05	Cu	0.05	Nx Core Normal drilling, 100% c.r.	Mp	Propylitized monzonite porphyry, fractures 40°, quartz-pyrite vein 289-291 feet, iron and manganese oxide.
	295	305	.05			Ditto	"	ditto
	305	315	.05			Ditto	Mp/Fault/Mp	Well fractured 70°-80°, brecciated 308-310 feet, silicification at 30°.
	315	325	.04			Ditto	Mp	Fractures at 50°-70°.
4850	325	335	.04			Ditto	"	Ditto, increase in silicification.
	335	345	.04	Cu	0.06	Ditto	Mp/Fault/Mp	Fault breccia 339-339.8 feet, fractures at 60°.
	345	355	.09			Ditto	Mp	ditto, trace of chrysocolla.
	355	365	.02			Ditto		ditto
	365	375	.03			Ditto		ditto
4800	375	385	.11			Ditto		ditto, increase in fracturing at 15°-45°-70°, trace of chrysocolla.

Location: Cyclone Claim
Coordinates 9283 N, 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5,185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	385	395	.03	Cu	0.03	Nx Core Normal Drilling 100% c.r.	Mp	Propylitized monzonite porphyry, fractures at 15°-45°-70°, iron and manganese oxide, trace disseminated pyrite.
	395	405	.04			ditto		ditto
	405	415	.02			ditto		ditto
	415	425	.03			ditto		ditto
750	425	435	.02			ditto		ditto
	435	445	.02	Cu	0.03	ditto		ditto
	445	455	.01			ditto		ditto, weak quartz veinlets at 70°, moderate argillization.
	455	465	.03			ditto		ditto
	465	475	.07			ditto		ditto
700	475	485	.04			ditto		ditto

Location: Cyclone Claim
Coordinates 9283 N, 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	485	495	.05	Cu	0.04	Nx core Normal Drilling 100% c.r.	Mp	Propylitized, well fractured monzonite porphyry with iron oxide and disseminated pyrite, trace of covellite at 488 feet.
	495	505	.05			ditto	Mp	ditto
	505	515	.04			ditto	Mp/Fault	Fault gouge 511 feet.
	515	525	.04			ditto	Fault/Mp	Fault zone to 518 feet.
4650	525	535	.03			ditto	Mp	ditto
	535	545	.08	Cu	0.09	ditto		ditto
	545	555	.20			ditto		ditto, pyrite disseminated and in veinlets, increase in chalcopyrite.
	555	565	.07			ditto		ditto
	565	575	.08			ditto		ditto
4600	575	585	.04			ditto		ditto

Location: Cyclone Claim
Coordinates 9283 N, 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	585	595	.05	Cu	0.08	Nx Core Normal Drilling 100% c.r.	Mp	Propylitized, well fractured monzonite porphyry with disseminated pyrite and iron oxide after pyrite.
	595	605	.07					ditto
	605	615	.10					ditto
	615	625	.06					ditto
4550	625	635	.12					ditto, trace of chalcocite.
	635	645	.10	Cu	0.12			ditto, trace of chalcocite, covellite, galena
	645	655	.12				Mp/Fault	Fault-vein-quartz-pyrite traces of chalcocite 654 to 655 feet.
	655	665	.18				Mp	Moderate argillization, pyrite, trace of chalcopyrite, covellite, chalcocite.
	665	675	.16				"	ditto
4500	675	685	.05				"	ditto, trace of molybdenite.

Location: Cyclone Claim
Coordinates 9283 N, 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	685	695	.03	Cu	0.03	Nx Core normal drilling 100% c.r.	Mp	Propylitized monzonite porphyry, argillization confined to fractures.
	695	705	.02			ditto		ditto
	705	715	.02			ditto		ditto
	715	725	.03			ditto		ditto
4450	725	735	.05			ditto		ditto
	735	745	.09	Cu	0.10	ditto		ditto, trace of chalcopyrite.
	745	755	.07			ditto		ditto
	755	765	.23			ditto	Mp/Fault	Fault zone begins at 763 feet, fractures at 45°-60°. Disseminated pyrite and chalcopyrite in the monzonite porphyry, iron oxide in fault.
	765	775	.07			ditto	Fault/Mp	Fault zone to 766 feet. Propylitized monzonite porphyry with disseminated pyrite, iron oxide in fault and on fractures.
4400	775	785	.06			ditto	Mp	Ditto, fresh rock, broken rock 781 to 781.4 feet. Trace molybdenite.

Location: Cyclone Claim
Coordinates 9283 N, 16,979 W

DRILL LOG

Hole DP- 1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	785	795	.10	Cu	0.05	Nx Core Normal drilling 100% c.r.	Mp	Propylitized monzonite porphyry, fractures at 10°-20°, trace disseminated pyrite and chalcopyrite.
	795	805	.02			ditto		ditto, no chalcopyrite.
	805	815	.02			ditto		ditto
	815	825	.06			ditto		ditto
350	825	835	.03			Broken Core 834.0-834.2 98% c.r.		ditto
	835	845	.06	Cu	0.04	Broken Core 843.0-843.6 94% c.r.	Mp/Fault/ Mp	Fault zone, dip 40° at 842 to 843 feet, 1/2 inch and 2 inch veins of quartz-pyrite-chalcopyrite-trace molybdenite at 835.2 feet.
	845	855	.02			Broken Core 849	Mp	ditto
	855	865	.01			Nx Core Normal Drilling 100% c.r.		ditto
	865	875	.02			ditto		ditto
4300	875	885	.10			95% c.r. Broken Core in FaultZone	Mp/Fault/ Mp	Fault Zone 878.6 to 881 feet, pyrite-galena-chalcopyrite veinlet 882 to 882.1 feet.

Location: Cyclone Claim
Coordinates 9283 N , 16,979 W

DRILL LOG

Hole DP- 1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	885	895	.03	Cu	0.04	Regrinding of Core @ 889-889.4	Mp	Propylitized, fractures at 10°-40°-50°, argillization confined to fractures, monzonite porphyry, disseminated pyrite local traces of chalcopyrite.
	895	905	.02			Nx Core Normal Drilling 100% c.r.		ditto
	905	915	.07			ditto	Mp/Vein/ Mp	Quartz vein 909 to 914, dip 50°.
	915	925	.06			ditto broken core 915-917		ditto
4250	925	935	.01			Lost 4" @ 928 in fault zone	Mp/Fault/ Mp	Fault zone 928 to 928.9 feet.
	935	945	.03	Cu	0.03	Nx Core normal drilling 100% c.r.		ditto
	945	955	.02			ditto	Mp/Vein/ Mp	Quartz-pyrite-iron oxide vein 947-952, also quartz-sericite alteration.
	955	965	.01			ditto	Mp	ditto
	965	975	.03			Broken Core (97.5% c.r.)		ditto
4200	975	985	.05			ditto broken and crushed core 980-981.9	Mp/Vein/ Mp	Sphalerite vein 982-982.8 feet.

Location: Cyclone Claim
Coordinates 9283 N , 16,979 W

DRILL LOG

Hole DP- 1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	985	995	.05	Cu	0.03	Crushed & broken (95% c.r.) normal drilling	Mp	Propylitized monzonite porphyry, relatively fresh, argillization confined to fractures, disseminated weak pyrite.
	995	1005	.05			Locally shattered 96.7% c.r.		ditto, fractures at 45°-80°
	1005	1015	.04			Nx Core Normal drilling 100% c.r.		ditto
	1015	1025	.01			Broken core 1022		ditto
4150	1025	1035	.02			Broken and crushed core 1026-1026.5		ditto
	1035	1045	.02	Cu	0.01	Nx Core Normal drilling 100% c.r.		ditto
	1045	1055	.02			Broken core 1050-1050.4 & 1051-1054		ditto
	1055	1065	.01			Broken core 1056-1059		ditto
	1065	1075	.01			Nx Core Normal drilling 100% c.r.		ditto
4100	1075	1085	.01			Broken and crushed 1076-1078.6 & 1082-1085		ditto, quartz-pyrite vein 1083 to 1083.8 feet.

Location: Cyclone Claim
Coordinates 9283 N , 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.04	Core broken and crushed at 1093.6	Mp	Propylitized monzonite porphyry, argillization confined to fractures at 60°, weak disseminated pyrite.
	1085	1095	.04					
						Crushed and broken to 1098 1103-1104		ditto
	1095	1105	.03					
						Nx Core normal drilling 100% c.r.		ditto, fractures at 15°-45°-60°, trace of chalcopyrite.
	1105	1115	.06					
						ditto	Mp/Vein/Mp	Quartz-pyrite vein 1129.5 to 1129.8 feet.
	1115	1125	.03					
						ditto broken core	Mp	ditto
4050	1125	1135	.05					
				Cu	0.04	ditto broken core to 1141		ditto
	1135	1145	.03					
						Nx core normal drilling 100% c.r.		ditto
	1145	1155	.03					
						Regrinding of core 1155 & 1155.4 99% c.r.	Mp/Vein/Mp	Quartz-pyrite veinlet, dip 75°.
	1155	1165	.04					
						Broken core 1172-1173 100% c.r.		ditto, minor veinlets of quartz-pyrite.
	1165	1175	.05					
						Broken core		ditto
4000	1175	1185	.03					

Location: Cyclone Claim
Coordinates 9283 N , 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	1185	1195	.03	Cu	0.04	Broken core	Mp	Propylitized monzonite porphyry, argillization confined to fractures at 20° to 70°. Quartz-pyrite veinlet 1/4 inch thick dipping 70°. Weak disseminated pyrite and on fractures.
	1195	1205	.06			Nx Core Normal drilling 100% c.r.		ditto, decrease in argillic alteration.
	1205	1215	.03			ditto		ditto, fractures at 15°-40°-70°.
	1215	1225	.03			Broken core		ditto
3950	1225	1235	.03			Broken core 1225-1226		ditto, several pyrite veinlets at 1227 & 1229 feet.
	1235	1245	.03	Cu	0.02	Broken core 1242-1243.8		ditto, quartz veinlet 1239-1240.
	1245	1255	.03			Nx Core Normal drilling 100% c.r.		ditto, 45° fractures show slickensides.
	1255	1265	.03			ditto		ditto, pyrite veinlets at 1256, 1258.4 & 1260 feet all 1/8 inch thick.
	1265	1275	.01			locally shattered core		ditto
3900	1275	1285	.01			Nx core 1279 feet Bx core 1279 on		ditto

Location: Cyclone Claim
Coordinates 9283 N, 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	1285	1295	.01	Cu	0.02	Bx 100% c.r. locally shattered core	Mp	Propylitized, fractures at 45°-80°, monzonite porphyry, weak disseminated pyrite.
	1295	1305	.01			ditto		ditto
	1305	1315	.01			ditto		ditto, broken core 1309-1310, 1/8 inch quartz-pyrite veinlets at 1313.6 & 1315 feet, dip 80°-85°.
	1315	1325	.04			1317 broken 1323-1324		ditto
3850	1325	1335	.03			Bx Core normal drilling 100% c.r.		ditto
	1335	1345	.03	Cu	0.03	ditto		ditto
	1345	1355	.06			Broken core		ditto, fractures at 15°-45°-70°
	1355	1365	.05			Bx core normal drilling 100% c.r.		ditto
	1365	1375	.01			ditto		ditto
3800	1375	1385	.03			ditto		ditto

Location: Cyclone Claim
Coordinates 9283 N, 16,979 W

DRILL LOG

Hole DP- 1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	1385	1395	.06	Cu	0.07	Bx 100% c.r. broken core 1393	Mp	Propylitized, fractures at 15-40-60-80 argillization confined to fractures, monzonite porphyry, weak disseminated and veinlets of pyrite.
	1395	1405	.03			Broken and redrilling to 1405		ditto
	1405	1415	.06			Bx core normal drilling 100% c.r.		ditto
	1415	1425	.08			Regrinding of core at 1418		ditto, quartz-pyrite-chalcopyrite veinlet 1418 to 1418.5 feet.
3750	1425	1435	.10			Bx core normal drilling 100% c.r.		ditto
	1435	1445	.02	Cu	0.02	ditto		ditto, fractures 5°-15°-25°-40°
	1445	1455	.02			ditto		ditto
	1455	1465	.02			ditto		ditto
	1465	1475	.03			broken core 1472.5-1474		ditto
3700	1475	1485	.03			Broken core 1479 & 1484		ditto

Location: Cyclone Claim
Coordinates 9283 N, 16,979 W

DRILL LOG

Hole DP- 1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	1485	1495	.09	Cu	0.04	Broken core 1486-1491	Mp	Propylitized to relatively fresh monzonite porphyry, fractures at 10° to 60°. Disseminated and thin veinlets of pyrite, locally traces of chalcopyrite.
	1495	1505	.03			Broken core 1504		ditto
	1505	1515	.04			Broken core to 1507		ditto
	1515	1525	.02			Bx core normal drilling 100% c.r.		ditto
3650	1525	1535	.01			ditto		ditto
	1535	1545	.05	Cu	0.07	Broken and fractured at 15 - 70° 1542		ditto
	1545	1555	.04			Fractured to 1549		ditto
	1555	1565	.02			Fractured 1555 - 1564		ditto
	1565	1575	.15			Bx Core normal drilling 100% c.r.		ditto, increase in chalcopyrite.
3600	1575	1585	.08			ditto		ditto

Location: Cyclone Claim
Coordinates 9283 N , 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	1585	1595	.03	Cu	0.07	Bx Core normal drilling 100% c.r.	Mp	Fresh monzonite porphyry, propylitic and argillic confined to fractures, trace of pyrite with local disseminated chalcopyrite. Fractures at 5°-60°-80°
	1595	1605	.03			ditto		ditto
	1605	1615	.04			ditto	Mp/Fault/ Mp	1/4 inch clay zone, dip 80° at 1616
	1615	1625	.06			ditto	Mp	ditto
3550	1625	1635	.19			ditto		ditto
	1635	1645	.05	Cu	0.05	ditto		ditto
	1645	1655	.08			ditto		ditto
	1655	1665	.04			ditto		ditto
	1665	1675	.04			ditto		ditto
3500	1675	1685	.04			ditto		ditto

Location: Cyclone Claim
Coordinates 9283 N, 16,979 W

DRILL LOG

Hole DP- 1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	1685	1695	.01	Cu	0.01	Bx core normal drilling 100% c.r.	Mp	Fresh monzonite porphyry, propylitic and argillic confined to fractures, weak disseminated pyrite, local chalcopyrite.
	1695	1705	.01			ditto		ditto
	1705	1715	.01			ditto		ditto
	1715	1725	.03			ditto		ditto
3450	1725	1735	.01			ditto		ditto
	1735	1745	.09	Cu	0.06	ditto	Mp/Fault/ Mp	Fault zone 1735.4 to 1737.5 feet.
	1745	1755	.07			Broken core at 80°		ditto
	1755	1765	.04			Bx core normal drilling 100% c.r.		ditto
	1765	1775	.05			ditto		ditto
3400	1775	1785	.07			ditto		ditto

Location: Cyclone Claim
Coordinates 9283 N , 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	1785	1795	.09	Cu	0.05	Bx core normal drilling 100% c.r.	Mp	Fresh monzonite porphyry, propylitic and argillic confined to fractures, weak disseminated pyrite, local chalcopyrite.
	1795	1805	.08			ditto		ditto
	1805	1815	.05			ditto		ditto, fractures at 15°-45°
	1815	1825	.03			ditto		ditto
3350	1825	1835	.02			ditto		ditto
	1835	1845	.04	Cu	0.11	ditto		ditto, quartz,pyrite-chalcopyrite veinlet - 1/8 inch thick 1843.6 feet, dip 70°.
	1845	1855	.22			ditto		ditto, numerous thin quartz-pyrite-chalcopyrite veinlets.
	1855	1865	.02			ditto		ditto
	1865	1875	.05			ditto		ditto
3300	1875	1885	.09			ditto		ditto

Location: Cyclone Claim
Coordinates 9283 N, 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	1885	1895	.02	Cu	0.03	Bx core normal drilling 100% c.r.	Mp	Fresh monzonite porphyry, propylitic and argillic confined to fractures, weak disseminated pyrite, local chalcopyrite.
	1895	1905	.02			ditto		ditto
	1905	1915	.03			ditto		ditto
	1915	1925	.04			ditto		ditto
3250	1925	1935	.06			ditto	Mp/Fault/ Mp	ditto, clay and slickensides at 1934 feet, dip 80°
	1935	1945	.05	Cu	0.03	ditto	Mp	ditto, increase in quartz content
	1945	1955	.02			ditto		ditto, fractures at 60°-80°, weak-thin-quartz-sericite veinlets.
	1955	1965	.03			ditto		ditto
	1965	1975	.04			ditto		ditto
3200	1975	1985	.03			ditto		ditto

Location: Cyclone Claim
Coordinates 9283 N, 16,979 W

DRILL LOG

Hole DP-1
Collar Elevation 5185

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.02	Bx core normal drilling 100% c.r.	Mp	Relatively fresh monzonite porphyry - increase in quartz content, argillic alteration confined to fractures, weak disseminated pyrite and local chalcopyrite.
	1985	1995	.02					
	1995	2005	.02			ditto		ditto
	2005	2015	.02			ditto		ditto
	2015	2025	.03			ditto		ditto
3150	2025	2035	.02			ditto		ditto, 1/2 inch pyrite specular hematite veinlet, dip 40° at 2032 feet.
				Cu		End of hole.		

Drill Hole	DP-2
Location	St. Joe No. 4 Claim (Phelps Dodge Coordinates 6,067 N, 20,991 W)
Collar Elevation	4,730 feet
Date Started	September 26, 1969
Date Completed	October 20, 1969
Total Depth	1,055 feet

The core was characterized by hornfelsic shales of the Pinkard Formation which have been intruded by monzonite porphyry. Argillized and locally quartz-sericitized monzonite porphyry was penetrated at 472 feet. Metamorphosed Ordovician limestones and Cambrian quartzites intruded by propylitized monzonite porphyry were penetrated at 813 feet. The hole was terminated in propylitized Precambrian granodiorite at a depth of 1,055 feet. The mineralization was characterized by infrequent veinlets of pyrite with traces of chalcopyrite, pyrite on fractures, disseminated pyrite with traces of chalcopyrite, pyrite-magnetite-galena-sphalerite replacement type mineralization in the limestones and traces of molybdenite and hematite. The highest 10-foot assay was 0.46 percent copper and the highest 50-foot assay was on the 4250 level that averaged 0.28 percent copper. Complete assays follow:

Level	% Cu	Level	% Cu	Level	% Cu
4700	0.02	4350	0.02	4000	0.01
4650	0.03	4300	0.03	3950	0.02
4600	0.03	4250	0.28	3900	0.02
4550	0.03	4200	0.14	3850	0.02
4500	0.04	4150	0.02	3800	0.02
4450	0.02	4100	0.02	3750	0.09
4400	0.02	4050	0.03	3700	0.03
				3650	0.02

Location: St. Joe No. 4 Claim
Coordinates 6,067 N, 20,991 W

DRILL LOG

Hole DP-2
Collar Elevation 4730

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.02			
	0	10	.01			Nx core 50% c.r.	Kp/Mp	Metamorphosed-epidote-chlorite- Pinkard shale contact with monzonite porphyry is obscure. Monzonite porphyry-propylitized with weak quartz-sericite veinlets, iron and manganese oxide, iron ox after py.
	10	20	.03			Ditto	Mp	ditto - appears to be a sill, pervasive quartz-sericite.
4700	20	30	.03			Rock Bit		ditto - shale inclusions - thick black clay seams, trace of pyrite.
	30	40	.04	Cu	0.03	Ditto		ditto
	40	50	.04			ditto		ditto
	50	60	.03			Nx core normal drilling 90% c.r.		ditto
	60	70	.03			ditto		ditto - inclusions of quartzite - locally brecciated, crushed pyrite.
4650	70	80	.03			ditto		ditto, trace molybdenite

Location: St. Joe No. 4 Claim
Coordinates 6067 N , 20,991 W

DRILL LOG

Hole DP-2
Collar Elevation 4730

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	80	90	.02	Cu	0.03	Nx Core Normal drilling 90% c.r.	Mp	Propylitized with local pervasive chlorite and sericite alteration, iron oxide after pyrite and weak disseminated pyrite. Locally very broken, argillic stronger on fractures.
	90	100	.03			100% c.r.		ditto
	100	110	.01			95% c.r.		ditto
	110	120	.02			ditto		ditto
4600	120	130	.05			ditto		ditto
	130	140	.03	Cu	0.03	ditto		ditto
	140	150	.01			85% c.r.		ditto, quartz-sericite veinlets at 15°
	150	160	.02			100% c.r.		ditto
	160	170	.02			85% c.r.		ditto
4550	170	180	.05			80% c.r.		ditto, zeolites in veinlets.

Location: St. Joe No. 4 Claim
Coordinates 6067 N, 20,991 W

DRILL LOG

Hole DP-2
Collar Elevation 4730

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	180	190	.08	Cu	0.04	Nx Core Normal drilling 85% c.r.	Mp	Propylitized with local pervasive chlorite and sericite alteration, locally very broken with argillic alteration stronger in these areas, disseminated weak pyrite.
	190	200	.06			90% c.r.		ditto
	200	210	.02			100% c.r.		ditto
	210	220	.01			ditto		ditto
4500	220	230	.04			ditto		ditto
	230	240	.02	Cu	0.02	ditto		ditto
	240	250	.01			ditto		ditto, biotite increases
	250	260	.04			ditto		ditto
	260	270	.01			95% c.r.		ditto
4450	270	280	.01			95% c.r.		ditto

Location: St. Joe No. 4 Claim
Coordinates 6067 N, 20,991 W

DRILL LOG

Hole DP-2
Collar Elevation 4730

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	280	290	.01	Cu	0.02	Nx core normal drilling 100% c.r.	Mp	Propylitized with local pervasive chorite and sericite alteration, locally very broken, with argillic alteration, local 1-inch py. vns. and traces of galena, sphalerite and chalcopyrite.
	290	300	.02			ditto		ditto
	300	310	.01			ditto		ditto
	310	320	.05			ditto		ditto, trace molybdenite.
4400	320	330	.01			90% c.r.		ditto
	330	340	.03	Cu	0.02	95% c.r.		ditto
	340	350	.01			90% c.r.		ditto
	350	360	.01			95% c.r.		ditto
	360	370	.01			90% c.r.		ditto
4350	370	380	.02			ditto		ditto, zeolites

Location: St. Joe No. 4 Claim
Coordinates 6067 N, 20,991 W

DRILL LOG

Hole DP-2
Collar Elevation 4730

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	380	390	.02	Cu	0.03	Nx core normal drilling 95% c.r.	Mp	Increase in propylitic alteration, argillic alteration locally intense, zeolite veinlets, traces of pyrite locally strong with chalcopyrite, galena, sphalerite.
	390	400	.04			95% c.r.		ditto
	400	410	.01			100% c.r.		ditto
	410	420	.03			ditto		ditto
4300	420	430	.03			ditto		ditto
	430	440	.12	Cu	0.28	ditto		ditto, increase in chalcopyrite
	440	450	.46			ditto		ditto, chalcopyrite, pyrite, magnetite veinlets
	450	460	.40			ditto		ditto, chalcopyrite, pyrite, magnetite veinlets
	460	470	.29			ditto		ditto, chalcopyrite, pyrite, magnetite veinlets
4250	470	480	.13			ditto	Mp/ Ol Skarn	Monzonite porphyry - Ordovician Longfellow limestone contact at 472 feet, massive replacement of limestone by calc-silicates and magnetite-pyrite.

Location: St. Joe No. 4 Claim
Coordinates 6067 N, 20,991 W

DRILL LOG

Hole DP-2
Collar Elevation 4730

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	480	490	.08	Cu	0.14	Nx Core Normal drilling 100% c.r.	Ol skarn	Ordovician Longfellow limestone - replaced by calc-silicates, magnetite-pyrite and locally chalcopyrite.
	490	500	.09			90% c.r.		ditto
	500	510	.13			100% c.r.		ditto
	510	520	.39			80% c.r.		Ordovician Longfellow limestone - quartzite contact at 517 feet, trace of molybdenite, increase in magnetite-chalcopyrite.
4200	520	530	.02			90% c.r.		
	530	540	.02	Cu	0.02	ditto		
	540	550	.01			100% c.r.	Ol Quartzite/ Mp	Quartzite-monzonite porphyry contact at 548 feet. Propylitized monzonite porphyry, disseminated pyrite.
	550	560	.02			80% c.r.	Mp	ditto
	560	570	.01			85% c.r.	Ccq	Cambrian Coronado quartzite contact with monzonite porphyry at 560 feet, quartzite locally limey.
4150	570	580	.02			95% c.r.		ditto

Location: St. Joe No. 4 Claim
Coordinates 6067 N, 20,991 W

DRILL LOG

Hole DP-2
Collar Elevation 4730

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	580	590	.01	Cu	0.02	Nx Core Normal drilling 95% c.r.	Ccq	Cambrian Coronado quartzite - general silicification, locally coarse bedded, disseminated pyrite, trace of chalcopyrite.
	590	600	.03			90% c.r.		ditto
	600	610	.02			90% c.r.		ditto
	610	620	.01			85% c.r.		ditto
4100	620	630	.01			100% c.r.		ditto
	630	640	.01	Cu	0.03	ditto		ditto
	640	650	.06			ditto		ditto
	650	660	.04			ditto		ditto
	660	670	.03			90% c.r.	Ccq/Mp	Quartzite-monzonite porphyry contact at 661.8 feet. Monzonite porphyry - propylitized - well fractured, locally disseminated chalcopyrite.
4050	670	680	.02			95% c.r.	Mp	ditto

Location: St. Joe No. 4 Claim
Coordinates 6067 N, 20,991 W

DRILL LOG

Hole DP-2
Collar Elevation 4730

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01			
	680	690	.02			Nx Core Normal drilling 100% c.r.	Mp	Propylitized monzonite porphyry - local silicification and inclusions of limestone, quartzite, shale as noted. Disseminated pyrite, local chalcopyrite.
	690	700	.01			95% c.r.		ditto, some fractures slickensided
	700	710	-			100% c.r.		ditto
	710	720	.02			ditto		ditto, 2 inch quartz-pyrite vein at 717.5 feet dip 65°.
4000	720	730	.01			ditto		ditto
				Cu	0.02			
	730	740	.01			ditto		ditto
	740	750	.01			ditto		ditto
	750	760	.01			ditto		ditto
	760	770	.04			ditto		ditto
3950	770	780	.02			ditto		ditto

Location: St. Joe No. 4 Claim
Coordinates 6067 N, 20,991 W

DRILL LOG

Hole DP-2
Collar Elevation 4730

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	780	790	.04	Cu	0.02	Nx Core Normal drilling 95% c.r.	Mp	Propylitized monzonite porphyry - local silicification and inclusions of limestone, quartzite, shale as noted. Disseminated pyrite, local chalcopyrite.
	790	800	.02			ditto	Mp/Fault/ Mp	Fault zone 792 to 797 feet.
	800	810	.01			ditto	Mp	ditto
	810	820	.03			ditto		ditto
3900	820	830	-			100% c.r.		ditto, 60° fracture slickensided
	830	840	.01	Cu	0.02	ditto		ditto
	840	850	.01			ditto		ditto
	850	860	.01			ditto		ditto
	860	870	.01			ditto	Mp/Fault/ Mp	Fault zone 864.4 - 865.5 feet.
3850	870	880	.08			ditto	Mp	ditto

Location: St. Joe No. 4 Claim
Coordinates 6067 N, 20,991 W

DRILL LOG

Hole DP-2
Collar Elevation 4730

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	880	890	.03	Cu	0.02	Nx Core normal drilling 100% c.r.	Mp	Propylitized monzonite porphyry - local silicification and inclusions as noted. Disseminated pyrite, local chalcopyrite.
	890	900	.01			ditto		ditto, inclusion of Precambrian granodiorite 897-898.8 feet.
	900	910	.01			ditto		ditto
	910	920	.02			ditto		ditto
3800	920	930	.01			ditto	Mp/Grd	Precambrian granodiorite - propylitized, well fractured locally, from 922 feet. Disseminated pyrite.
	930	940	.21	Cu	0.09	ditto		ditto, trace chalcopyrite, galena, in quartz vein, dip 30°, at 936.5 feet, shearing at 57° to 60°, 934 to 935 feet.
	940	950	.07			ditto	Grd/Fault	Fault zone 945.1 feet.
	950	960	.10			90% c.r.	Fault/Grd	Fault zone to 951 feet, crushed and brecciated granodiorite, propylitized granodiorite from 951 feet, fractures at 30°-45°-70°
	960	970	.03			100% c.r.		ditto, quartz-pyrite veinlet, dip 30° at 967 feet.
3750	970	980	.02			ditto	Grd/Mp	Granodiorite-monzonite porphyry contact at 979 feet.

Location: St. Joe No. 4 Claim
Coordinates 6067 N, 20,991 W

DRILL LOG

Hole DP-2
Collar Elevation 4730

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	980	990	.02	Cu	0.03	Nx Core normal drilling 100% c.r.	Mp	Propylitized monzonite porphyry-disseminated pyrite.
	990	1000	.02			ditto		ditto
	1000	1010	.03			90% c.r.		ditto
	1010	1020	.09			90% c.r.	Mp/Grd	Monzonite porphyry-granodiorite contact at approximately 1013 feet. Disseminated pyrite.
3700	1020	1030	.01			100% c.r.	Grd	ditto
	1030	1040	.01	Cu	0.02	95% c.r.		ditto
	1040	1050	.01			ditto		ditto
	1050	1055	.03			100% c.r.	Grd	Propylitized granodiorite, trace of pyrite.
3650								

Drill Hole	DP-3
Location	Tucky No. 13 Claim (Phelps Dodge Coordinates 6,734 N, 21,363 W)
Collar Elevation	4,892 feet
Date Started	October 21, 1969
Date Completed	November 11, 1969
Total Depth	860 feet

The core was characterized by hornfelsic shales of the Pinkard Formation which have been intruded by propylitized monzonite porphyry. The Pinkard Formation was penetrated at 132 feet where the shales and limestones of the Devonian Morenci formation were encountered. The metamorphosed Ordovician limestones and Cambrian quartzites, intruded by propylitized and locally quartz-sericitized monzonite porphyry were encountered at 269 feet and were penetrated at 778 feet. The hole was terminated in propylitized Precambrian granodiorite at a depth of 860 feet. The mineralization was characterized by iron oxides after pyrite to 507 feet, magnetite-pyrite replacement type mineralization in the limey shales and Ordovician limestones, pyrite on fractures, disseminated pyrite and traces of chalcopyrite in the monzonite porphyry and disseminated pyrite in the Precambrian granodiorite. The highest 10-foot assay was 0.19 percent copper and the highest 50-foot assay was on the 4400 level that averaged 0.12 percent copper. Complete assays follow:

Level	% Cu	Level	% Cu	Level	% Cu
4850	0.03	4550	0.01	4250	0.05
4800	0.02	4500	0.01	4200	0.04
4750	0.03	4450	0.05	4150	0.01
4700	0.02	4400	0.12	4100	0.02
4650	0.01	4350	0.06	4050	0.02
4600	0.05	4300	0.02	4000	0.04

Location: Tucky 13 Claim
Coordinates 6,734 N, 21,363 W

DRILL LOG

Hole DP-3
Collar Elevation 4,892

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	0	10		Cu	0.03	4½" Rock Bit Normal drilling	Fill/Kp	Rock bit thru fill and Cretaceous shale
	10	12	0.02			Nx core Normal Drilling 97% c.r.	Kp	Hornfelsic Cretaceous Pinkard formation, trace of monzonite porphyry, iron oxide after pyrite
	12	22	0.02			Nx core Normal Drilling 90% c.r.		ditto
	22	32	0.02			ditto		ditto
4850	32	42	0.06			Nx core Normal Drilling 100% c.r.		ditto
	42	52	0.04	Cu	0.02	Nx core Normal Drilling 90% c.r.		ditto
	52	62	0.01			ditto		ditto
	62	72	0.01			Nx core Normal drilling 95% c.r.	Mp	Monzonite porphyry from 62 feet, iron oxide after pyrite
	72	82	0.01			Nx core Normal drilling 90% c.r.	Mp/Kp	Monzonite porphyry - Cretaceous Pinkard shales contact at 78 feet, iron oxides after pyrite, trace of magnetite
4800	82	92	0.02			ditto	Kp	ditto, abundant epidote

Location: Tucky 13 Claim
Coordinates 6,734 N , 21,363 W

DRILL LOG

Hole DP-3
Collar Elevation 4,892

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	92	102	0.05	Cu	0.03	Nx core 6 hrs reaming 90% c.r.	Kp	Cretaceous Pinkard shales - propylitized with local quartz veinlets
	102	112	0.02			ditto	Mp	Shale to 102 feet then propylitized monzonite porphyry, iron oxide after pyrite and disseminated pyrite
	112	122	0.02			Nx core Normal drilling 80% c.r.		ditto
	122	132	0.03			Nx core Normal drilling 100% c.r.	Mp	ditto
4750	132	142	0.01			Nx core Normal drilling 90% c.r.	Dm	Monzonite porphyry to 132 feet then Devonian Morenci shale, dip 20°, propylitized black shale, disseminated pyrite-magnetite and iron oxide after pyrite
	142	152	0.01	Cu	0.02	Nx core Normal drilling 100% c.r.		ditto
	152	162	0.01			ditto		ditto
	162	172	0.03			Nx core Normal drilling 90% c.r.		ditto
	172	182	0.03			ditto		ditto
4700	182	192	0.02			Nx core Normal drilling 100% c.r.		ditto

Location: Tucky 13 Claim
Coordinates 6,734 N, 21,363 W

DRILL LOG

Hole DP-3
Collar Elevation 4,892

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	192	202	0.02	Cu	0.01	Nx core Normal drilling 100% c.r.	Dm	Devonian Morenci shale-hornfelsic and replaced by magnetite-pyrite shale-limestone contact at approximately 196 feet
	202	212	0.02			ditto		ditto, mixed shale-limestone
	212	222	0.01			ditto		ditto
	222	232	0.01			ditto		ditto-limestone
4650	232	242	0.01			Nx core Normal drilling 90% c.r.		ditto-limestone
	242	252	0.04	Cu	0.05	ditto		ditto-limestone
	252	262	0.17			Nx core Normal drilling 100% c.r.		ditto-limestone
	262	272	0.01			ditto	Dm/Mp	Monzonite porphyry-70% propylitized with chlorite-sericite, disseminated pyrite and traces of iron oxide after pyrite on fractures
	272	282	0.02			ditto	Mp	ditto
4600	282	292	0.03			ditto		ditto

Location: Tucky 13 Claim
Coordinates 6,734 N , 21,363 W

DRILL LOG

Hole DP-3
Collar Elevation 4,892

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	292	302	0.01	Cu	0.01	Nx core Normal drilling 100% c.r.	Mp	Propylitized monzonite porphyry-disseminated pyrite and traces of iron oxide after pyrite on fractures, local quartz-sericite veinlets
	302	312	0.01			Nx core Normal drilling 90% c.r.		ditto
	312	322	0.01			Nx core Normal drilling 100% c.r.		ditto
	322	332	0.01			ditto		ditto, veinlets of epidote
4550	332	342	0.01			ditto		ditto
	342	352	0.01	Cu	0.01	ditto		ditto
	352	362	0.01			ditto		ditto
	362	372	0.01			Nx core Normal drilling 90% c.r.		ditto, trace of sphalerite
	372	382	0.01			Nx core Normal drilling 100% c.r.		ditto, weaker pyrite
4500	382	392	0.02			ditto		ditto, pyrite confined to center of quartz-sericite veinlets

Location: Tucky 13 Claim
Coordinates 6,734 N , 21,363 W

DRILL LOG

Hole DP- 3
Collar Elevation 4,892

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	392	402	0.02	Cu	0.05	Nx core Normal drilling 100% c.r.	Mp	Propylitized monzonite porphyry-epidote veinlets, pyrite disseminated and center of weak quartz-sericite veinlets, local sphalerite and chalcopyrite
	402	412	0.01			ditto		ditto
	412	422	0.03			ditto		ditto
	422	432	0.14			Nx core Normal drilling 95% c.r.	Mp/Fault/ Mp	Fault zone 426.2-427 feet inclusion of
4450	432	442	0.04			Nx core Normal drilling 100% c.r.		ditto
	442	452	0.07	Cu	0.12	ditto		ditto
	452	462	0.19			ditto		ditto
	462	472	0.06			ditto		ditto
	472	482	0.11			ditto	Mp/ Ol skarn	Monzonite porphyry-Ordovician Longfellow limestone contact at 477.7 feet, limestone is 90% epidote
4400	482	492	0.17			ditto		ditto

Location: Tucky 13 Claim
Coordinates 6,734 N , 21,363 W

DRILL LOG

Hole DP- 3
Collar Elevation 4,892

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	492	502	0.04	Cu	0.06	Nx core Normal drilling 100% c.r.	Ol skarn/ Mp	Ordovician Longfellow limestone-monzonite porphyry contact at 494 feet, magnetite-pyrite in limestone, monzonite porphyry 80% propylitized with disseminated and veinlets of pyrite
	502	512	0.02			ditto	Mp	ditto
	512	522	0.10			ditto		ditto
	522	532	0.11			ditto		ditto
4350	532	542	0.04			ditto		ditto
	542	552	0.04	Cu	0.02	ditto	Mp/ Ol skarn	Monzonite porphyry-Ordovician Longfellow limestone contact at 550 feet
	552	562	0.01			Nx core Normal drilling 90% c.r.	Ol skarn	ditto
	562	572	0.02			Nx core Normal drilling 100% c.r.		ditto
	572	582	0.02			ditto	Ol skarn/ Mp/Ccq	Monzonite porphyry sill at contact between Ordovician and Cambrian
4300	582	592	0.02			Nx core Normal drilling 90% c.r.	Ccq	Cambrian Coronado quartzite-apparent dip 20°, locally coarser grained, disseminated pyrite with local traces of chalcopyrite

Location: Tucky 13 Claim
Coordinates 6,734 N , 21,363 W

DRILL LOG

Hole DP-3
Collar Elevation 4,892

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.05			
	592	602	0.11			Nx core Normal drilling 85% c.r.	Ccq	Cambrian Coronado quartzite, dip 20°, locally coarser grained, disseminated pyrite, traces of chalcopyrite
	602	612	0.02			Nx core Normal drilling 100% c.r.		ditto
	612	622	0.02			ditto	Ccq & Mp	Cambrian Coronado quartzite and monzonite porphyry contact at 45° to 50°
	622	632	0.04			ditto	Mp	ditto, local quartz-sericite veins, argillic confined to fractures
4250	632	642	0.04			ditto		ditto
				Cu	0.04			
	642	652	0.06			ditto		ditto
	652	662	0.02			Nx core Normal drilling 90% c.r.		ditto, quartzite inclusions, trace of pyrite, broken core
	662	672	0.01			Nx core Normal drilling 100% c.r.		ditto
	672	682	0.02			ditto		ditto
4200	682	692	0.07			ditto		ditto, inclusion of quartzite

Location: Tucky 13 Claim
Coordinates 6,734 N, 21,363 W

DRILL LOG

Hole DP- 3
Collar Elevation 4,892

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01			
	692	702	0.02			Nx core Normal drilling 90% c.r.	Mp	Propylitized monzonite porphyry, local silicification, minor argillic alteration, weak disseminated pyrite
	702	712	0.01			Nx core Normal drilling 100% c.r.	Mp/Ccq	Monzonite porphyry-Cambrian Coronado quartzite well fractured, contact at 707 feet, weak disseminated pyrite
	712	722	0.01			ditto	Ccq	ditto
	722	732	0.01			ditto		ditto
4150	732	742	0.01			ditto	Ccq/Mp	Cambrian Coronado quartzite-monzonite porphyry contact at 735 feet, dip 60°, weak disseminated pyrite
				Cu	0.02			
	742	752	0.02			ditto	Mp	ditto
	752	762	0.03			Nx core Normal drilling 90% c.r.		ditto
	762	772	0.01			ditto		ditto
	772	782	0.04			ditto	Mp/Ccq/Mp	ditto, inclusion of Cambrian Coronado quartzite 775-778 feet, well fractured local brecciation
4100	782	792	0.02			ditto	Mp	ditto

Location: Tucky 13 Claim
Coordinates 6,734 N , 21,363 W

DRILL LOG

Hole DP-3
Collar Elevation 4,892

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	792	802	0.01	Cu	0.02	Nx core Normal drilling 90% c.r.	Mp	Propylitized monzonite porphyry, locally well fractured and brecciated with quartzite inclusions, disseminated pyrite with traces of chalcopyrite
	802	812	0.02			ditto		ditto
	812	822	0.02			ditto		ditto
	822	832	0.02			ditto	Mp/Grd	Monzonite porphyry-Precambrian granodiorite contact at 831 feet. Granodiorite is propylitized with disseminated pyrite and traces of chalcopyrite
4050	832	842	0.03			Nx core Normal drilling 83% c.r.	Grd	ditto
	842	852	0.04	Cu	0.04	Nx core Normal drilling 100% c.r.		ditto
	852	860	0.04			ditto		ditto
4000								

Drill Hole	DP-4
Location	Bell No. 8 Claim (Phelps Dodge Coordinates 5,708 N, 21,912 W)
Collar Elevation	4,693 feet
Date Started	November 12, 1969
Date Completed	December 10, 1969
Total Depth	897 feet

The hole was collared in a diabase sill which was penetrated at 61 feet where monzonite porphyry was encountered. Metamorphosed Ordovician limestones, intruded by propylitized and locally silicified monzonite porphyry, were encountered at 191 feet and penetrated at 443 feet where the Cambrian quartzite was encountered. The hole was terminated at 897 feet in monzonite porphyry after coring through propylitized Precambrian granodiorite. The mineralization was characterized by iron oxides after pyrite to 720 feet, magnetite-pyrite-sphalerite-galena replacement type mineralization in the Ordovician limestones, disseminated pyrite and traces of chalcopyrite, molybdenite and hematite. The highest 10-foot assay was 0.36 percent copper and the highest 50-foot assay was on the 4400 level that assayed 0.10 percent copper. Complete assays follow:

Level	% Cu	Level	% Cu	Level	% Cu
4650	0.01	4350	0.06	4050	0.01
4600	0.01	4300	0.01	4000	0.01
4550	0.01	4250	0.04	3950	0.01
4500	0.01	4200	0.01	3900	0.02
4450	0.01	4150	0.01	3850	0.02
4400	0.10	4100	0.01	3800	0.01

Location: Bell No. 8 Claim
Coordinates 5,708 N , 21,912 W

DRILL LOG

Hole DP-4
Collar Elevation 4,693

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	0	6		Cu	0.01	Rock Bit 2 hours cementing	Fill	Rock bit through road fill
	6	13	0.01			Nx core 40% c.r.	db	Propylitized diabase, abundant epidote on fractures and replacing mafic phenocrysts. Iron and manganese oxides.
	13	23	0.02			Nx core 90% c.r.	ditto	ditto
	23	33	0.01			Nx core Normal drilling 100% c.r.	ditto	ditto
4650	33	43	0.01			ditto	ditto	ditto, broken core 38 to 41 feet
	43	53	0.01	Cu	0.01	ditto 2 hrs. reaming	ditto	ditto
	53	63	0.01			ditto	db/mp	Diabase-monzonite porphyry contact at 60.8 feet. Propylitic alteration - increase in epidote.
	63	73	0.01			ditto	Mp	ditto, 70° fractures slickensided, epidote veinlets. Iron oxide after pyrite
	73	83	0.01			ditto	ditto	ditto
4600	83	93	0.01			ditto	ditto	ditto, fractures at 50°-60°, iron and manganese oxides, trace pyrite

Location: Bell No. 8 Claim
Coordinates 5,708 N , 21,912 W

DRILL LOG

Hole DP-4
Collar Elevation 4,693

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	93	103	0.01	Cu	0.01	Nx core Normal drilling 100% c.r.	Mp	Weak propylitic alteration, fractures at 50° to 60°. Iron and manganese oxides, weak disseminated pyrite.
	103	113	0.01			ditto	ditto	ditto
	113	123	0.01			Nx core 90% c.r.	ditto	ditto
	123	133	0.01			Nx core Normal drilling 100% c.r.	Mp/Fault	Monzonite porphyry - fault zone at 125 feet, dipping 65°. Weak disseminated pyrite in monzonite porphyry and iron oxides in fault. Talc vein at 125 feet.
4550	133	143	0.01			ditto	Fault	Strong brecciation with moderate iron oxides after pyrite.
	143	153	0.01	Cu	0.01	ditto	Fault/Mp	Fault zone - propylitized monzonite porphyry contact at 144 feet. Iron oxide and disseminated pyrite. Epidote in footwall of fault.
	153	163	0.01			ditto	Mp	ditto
	163	173	0.01			ditto	ditto	ditto
	173	183	0.01			ditto	ditto	Contains inclusions of skarn and silicified limestone. Iron oxide and disseminated pyrite.
4500	183	193	0.01			ditto	Mp/skarn	Propylitized monzonite porphyry-skarn contact at 191 feet. Intense epidote veins, iron oxide and traces of pyrite.

Location: Bell No. 8 Claim
Coordinates 5,708 N , 21,912 W

DRILL LOG

Hole DP-4
Collar Elevation 4,693

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	193	203	0.01	Cu	0.01	Nx core Normal drilling 100% c.r.	Skarn/Mp/Skarn	Monzonite porphyry 196 to 200 feet. Strong iron oxide and pyrite. Quartz veins.
	203	213	0.01			ditto	Skarn/Mp	Skarn-monzonite porphyry contact at 204 feet, dipping 50°. Strong pyrite and iron oxide.
	213	223	0.01			ditto	Mp	Propylitized monzonite porphyry, strong 50°-60° fractures, iron oxide after pyrite.
	223	233	0.01			ditto	Mp/Fault/Mp	Fault breccia dip 60°, 224 to 230 feet. Iron oxide and disseminated pyrite.
4450	233	243	0.01			ditto	Mp	Propylitized monzonite porphyry, weak iron oxide and disseminated pyrite.
	243	253	0.01	Cu	0.10	ditto	Mp/Skarn	Monzonite porphyry - skarn contact at 251 feet.
	253	263	0.02			ditto	Skarn	80% epidote-diopside, pyrite and iron oxides
	263	273	0.05			ditto	Skarn/Mp/Skarn	Propylitized monzonite porphyry 268 to 270 feet. Intense alteration and pyrite, iron oxide
	273	283	0.36			ditto	Skarn	ditto
4400	283	293	0.05			ditto	ditto	ditto

Location: Bell No. 8 Claim
Coordinates 5,708 N , 21,912 W

DRILL LOG

Hole DP- 4
Collar Elevation 4,693

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	293	303	0.01	Cu	0.06	Nx core Normal drilling 100% c.r.	Ol skarn	Ordovician Longfellow skarn
	303	313	0.08			ditto	Ol skarn/ mp	Limey shale-monzonite porphyry at 305 feet. Shale metamorphosed to hornfels (spotted) - 60 to 80% chlorite.
	313	323	0.17			ditto	Mp/Ol skarn	Monzonite porphyry-skarn contact at 318 feet. Iron oxide and pyrite - magnetite, trace of chalcopyrite.
	323	333	0.03			Nx core 95% c.r.	Ol skarn/ mp/Ol skarn	Monzonite porphyry 324 to 327 feet, fractures at 60°, disseminated pyrite in monzonite porphyry.
4350	333	343	0.01			Nx core Normal drilling 100% c.r.	Ol skarn	Bedding dip 25°, epidote is replaced by pyrite, quartz-pyrite veinlets.
	343	353	0.01	Cu	0.01	ditto	Ol skarn/ mp/Ol	Monzonite porphyry 346 to 348 feet, limestone locally 60% chlorite, epidote, pyrite
	353	363	0.01			ditto	Ol	Limestones and sandstones, metamorphosed as above. Iron oxide-pyrite-quartz veinlet at 358 feet dip 70°, six inches thick.
	363	373	0.01			ditto	ditto	ditto
	373	383	0.01			ditto	ditto	ditto
4300	383	393	0.01			ditto	ditto	ditto, 30° fractures slickensided.

Location: Bell No. 8 Claim
Coordinates 5,708 N , 21,912 W

DRILL LOG

Hole DP- 4
Collar Elevation 4,693

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	393	403	0.01	Cu	0.04	Nx core Normal drilling 100% c.r.	Ol	Metamorphosed, relic bedding, marble-quartzite. Pyrite-magnetite. Dip 15° to 20°
	403	413	0.05			ditto	ditto	ditto, 1 inch quartz-pyrite-chalcopyrite vein at 407 feet, dip 50°.
	413	423	0.13			ditto	ditto	ditto, magnetite, trace of chalcopyrite.
	423	433	0.01			ditto	ditto	ditto, $\frac{1}{4}$ inch quartz-pyrite vein dipping 60° at 427.2 feet.
4250	433	443	0.02			ditto	Ol	Ordovician Longfellow limestone-Cambrian Coronado quartzite contact at 343 feet. Strong calc-silicate development in limestone.
	443	453	0.01	Cu	0.01	ditto	Ccq	Well fractured Cambrian Coronado quartzite, 15° to 60°. Iron oxide after pyrite and disseminated pyrite.
	453	463	0.01			Nx core 90% c.r. 24 hrs. cementing	Ccq/Fault Mp/Ccq	Clay gouge and monzonite porphyry 457-462.5 feet. Quartzite well fractured. Decrease in iron oxide and pyrite.
	463	473	0.01			ditto	Ccq	ditto - fractures at 15°-70°
	473	483	0.01			ditto	ditto	ditto, fractures at 30°-45°-70°
4200	483	493	0.01			Nx core Normal drilling 100% c.r.	Ccq/mp	Quartzite-monzonite porphyry contact dip 20° at 488 feet, monzonite porphyry fractures at 60° coated with epidote and chlorite

Location: Bell No. 8 Claim
Coordinates 5,708 N , 21,912 W

DRILL LOG

Hole DP- 4
Collar Elevation 4,693

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01			
	493	503	0.01			Nx core Normal drilling 100% c.r.	Mp	Monzonite porphyry, propylitized, fractures at 60°, disseminated and clots of pyrite.
	503	513	0.01			ditto	Ccq	Cambrian quartzite from 503 feet, dip 17°, weak quartz-sericite veinlets, disseminated and clots of pyrite.
	513	523	0.01			Nx core 90% c.r.	Ccq/ Mp/Ccq	Monzonite porphyry 518-522 feet, quartzite is well broken, 60°-70° fractures slickensided, dip 20°.
	523	533	0.01			Nx core Normal drilling 100% c.r.	Ccq	Locally broken, fractures at 15°-60°. Iron oxide on fractures.
4150	533	543	0.01			ditto	ditto	ditto, bedding dip 25°
				Cu	0.01			
	543	553	0.01			ditto	ditto	ditto, coarser grained.
	553	563	0.01			ditto	ditto	ditto
	563	573	0.01			ditto	ditto	ditto
	573	583	0.01			ditto	ditto	ditto
4100	583	593	0.01			ditto	ditto	ditto

Location: Bell No. 8 Claim
Coordinates 5,708 N, 21,912 W

DRILL LOG

Hole DP- 4
Collar Elevation 4,693

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01			
	593	603	0.01			Nx core Normal drilling 100% c.r.	Ccq	Cambrian Coronado quartzite-iron oxide trace of pyrite, coarser grained
	603	613	0.01			ditto		ditto, coarser grained
	613	623	0.01			ditto		ditto, coarser grained
	623	633	0.01			ditto		ditto, fine grained
4050	633	643	0.01			ditto		ditto
				Cu	0.01			
	643	653	0.01			ditto		ditto
	653	663	0.01			ditto		ditto
	663	673	0.01			ditto		ditto
	673	683	Tr.			ditto		ditto
4000	683	693	0.01			ditto		ditto

Location: Bell No. 8 Claim
Coordinates 5,708 N , 21,912 W

DRILL LOG

Hole DP-4
Collar Elevation 4,693

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01	Nx core Normal drilling 100% c.r.	Ccq	Fine grained with pebbly lenses - iron oxide
	693	703	0.01					
						Nx core to 707 feet Bx core 707 feet 100% c.r.	ditto	ditto
	703	713	0.01					
						Bx core Normal drilling 100% c.r.	ditto	ditto
	713	723	0.01					
						Bx core 90% c.r.	ditto	ditto
	723	733	0.01					
						Bx core 100% c.r.	Ccq/ Mp/Ccq	Cambrian Coronado quartzite-monzonite porphyry contact at 738 feet, monzonite is propylitized with trace of sericite. Iron oxide and trace of pyrite. Quartzite at 742 feet with 1 inch thick pyrite vein, traces of iron oxide.
3950	733	743	0.01					
				Cu	0.02	ditto	Ccq/Mp	Monzonite porphyry below 744 feet, trace of argillic alteration on fractures.
	743	753	0.01					
						ditto	Mp/Fault/ Grd-mp	Fault breccia zone 759 to 761 feet dip 25°-30°. Propylitized Precambrian granodiorite and monzonite porphyry below 761 feet.
	753	763	0.06					
						ditto	Grd-mp	ditto, increase in pyrite.
	763	773	0.02					
						ditto	Grd-mp/ mp	Monzonite porphyry-granodiorite mixture gives way to monzonite porphyry which is 90% saussuritized. Trace pyrite-iron oxide
	773	783	0.01					
						ditto	Mp	ditto
3900	783	793	0.01					

Location: Bell No. 8 Claim
Coordinates 5,708 N, 21,912 W

DRILL LOG

Hole DP-4
Collar Elevation 4,693

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	793	803	0.01	Cu	0.02	Bx core 90% c.r.	Mp	Saussuritized - 70% - monzonite porphyry, trace disseminated pyrite
	803	813	0.02			Bx core 60% c.r.	ditto	ditto
	813	823	0.02			Bx core 50% c.r.	Mp/Grd	Monzonite porphyry-granodiorite contact at 819 feet. Granodiorite is well fractured with disseminated pyrite.
	823	833	0.04			Bx core 90% c.r.	Grd	ditto, moderate quartz-sericite alteration
3850	833	843	0.04			ditto	ditto	ditto
	843	853	0.03	Cu	0.01	ditto	ditto	ditto, some fractures slickensided, disseminated and veins of pyrite
	853	863	0.01			Bx core 95% c.r.	ditto	ditto
	863	873	0.02			Bx core 70% c.r.	ditto	ditto, well fractured
	873	883	0.01			Bx core Normal drilling 100% c.r.	Grd/mp	Granodiorite-monzonite porphyry contact at 878 feet. Propylitized monzonite porphyry plug. Weak disseminated pyrite.
3800	883	897	0.01			ditto	Mp	ditto

Drill Hole	DP-5
Location	St. Joe No. 3 Claim (Phelps Dodge Coordinates 6,404 N, 22,587 W)
Collar Elevation	4,676 feet
Date Started	December 11, 1969
Date Completed	December 30, 1969
Total Depth	393 feet

The core was characterized by a propylitized monzonite porphyry sill that was penetrated at 29 feet where the metamorphosed Devonian shale, intruded by propylitized monzonite porphyry, was encountered. Metamorphosed Ordovician limestones, intruded by monzonite porphyry, were penetrated at 348 feet. The hole was terminated at 382 feet in Cambrian quartzites. The mineralization was characterized by iron oxides after pyrite to 382 feet, magnetite-pyrite-sphalerite-galena replacement type mineralization in the Ordovician limestones, disseminated pyrite and traces of chalcopyrite, molybdenite and hematite. The highest 10-foot assay was 0.27 percent copper and the highest 50-foot assay was on the 4500 level that assayed 0.15 percent copper. Complete assays follow:

Level	% Cu	Level	% Cu	Level	% Cu
4650	0.01	4500	0.15	4350	0.02
4600	0.01	4450	0.10	4300	0.01
4550	0.03	4400	0.03	4250	0.01

Location: St. Joe No. 3 Claim
Coordinates 6,404 N, 22,587 W

DRILL LOG

Hole DP-5
Collar Elevation 4,676

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01			
	0	10				Rock Bit 0-10 1 hour cementing	Fill	Rock bit through road fill
	10	16	.01			Nx Core 90% c.r. 2 hr.cementing	Mp	Well fractured, propylitized, clay on fractures. Chlorite and epidote replacing original hornblendes. Iron and manganese oxides with pyrite on fractures.
4650	16	26	.01			100% c.r. normal drilling	Mp	ditto
	26	36	.01	Cu	0.01	Nx Core 6 hr.cementing 100% c.r.	Mp/Kp	Monzonite porphyry - Pinkard shale contact at 29 feet, dipping 60°. Contact is brecciated and bleached to 33 feet.
	36	46	.01			Nx Core 4 hr.cementing 100% c.r.	Kp	Faulting on a micro scale at 42 feet. Iron oxides after pyrite.
	46	56	.01			80% c.r. Nx Core Normal Drilling	Kp	General brecciation from 48 feet. Shale dipping 60°.
	56	66	.01			Nx Core 100% c.r. Normal Drilling	Kp/Mp	Shale - monzonite porphyry contact at 58 feet, dipping 60°. Propylitic alteration prevails. Iron oxides and trace of disseminated pyrite.
4600	66	76	.01			Ditto	Mp	Ditto with epidote on fractures at 60°.

Location: St. Joe No. 3 Claim
Coordinates 6,404 N, 22,587 W

DRILL LOG

Hole DP-5
Collar Elevation 4,676

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	76	86	.01	Cu	0.03	Nx core 100% c.r. Normal Drilling	Mp	Propylitized monzonite porphyry. Iron oxides and trace disseminated pyrite.
	86	96	.01			"		ditto
	96	106	.01			"		ditto
	106	116	.01			"	Mp/Fault/Mp	Fault zone of brecciated monzonite porphyry 106.5 to 109 feet. Quartz-pyrite vein at 106.5 feet, iron oxides.
4550	116	126	.10			"	Fault/Mp/Ol	General brecciation and fault zone 115 to 124 feet composed of monzonite porphyry. Ordovician Longfellow limestone 124 feet. Abundant epidote. Iron oxide in fault zone and magnetite-pyrite replacement type mineralization in the limestone, tr of chalcopyrite.
	126	136	.03	Cu	0.15	"	Ol	Massive replacement by epidote, garnet, magnetite and pyrite. Quartz vein at 136 feet, 1/4 inch wide, dipping 75°.
	136	146	.15				Ol	ditto, trace of chalcopyrite.
	146	156	.27			"	Ol	ditto
	156	166	.20			"	Ol	ditto
4500	166	176	.10			"	Ol	ditto

Location: St. Joe No. 3 Claim
Coordinates 6,404 N, 22,587 W

DRILL LOG

Hole DP-5
Collar Elevation 4,676

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	176	186	.24	Cu	0.10	Nx core 100% c.r. Normal Drilling	Ol	Limestone replaced by epidote, garnet, magnetite and pyrite, trace chalcopyrite. Some fracture slickensided.
	186	196	.04			"	"	ditto, 80° to 90° quartz veining.
	196	206	.17			"	Ol/Fault/ Ol	Fault zone at 204 feet dipping 45°.
	206	216	.04			"	Ol	ditto
4450	216	226	.02			"	Ol/Fault	Replaced limestone to 223.5 feet. Brecciation and fault zone dipping 60°, composed of limestone and monzonite porphyry fragments. Iron oxide and fine disseminated pyrite in fault zone.
	226	236	.01	Cu	0.03	"	Fault	ditto
	236	246	.02			"	Fault	ditto
	246	256	.04			"	Fault	ditto
	256	266	.02			"	Fault	ditto
4400	266	276	.04			"	Fault	ditto with considerable clay development, quartzite fragments.

Location: St. Joe No. 3 Claim
Coordinates 6,404 N, 22,587 W

DRILL LOG

Hole DP- 5
Collar Elevation 4,676

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.02	Nx Core 100% c.r. Normal drilling	Fault	
	276	286	.02					
	286	296	.01			"	Fault/Mp	Fault to 290.5 feet, monzonite porphyry dipping 30°, well fractured and locally brecciated. Iron oxide and weak disseminated pyrite.
	296	306	.03			"	Mp	
	306	316	.01			"	"	
4350	316	326	.01			"	"	
				Cu	0.01	"	"	
	326	336	.01					
	336	346	.01			"	"	
	346	356	.01			90% c.r. Nx core Normal drilling	Mp/Ccq	Monzonite porphyry - Cambrian Coronado quartzite contact at 348 feet. Quartzite well fractured. Weak disseminated pyrite in monzonite porphyry and iron oxide in quartzite.
	356	366	.01			Nx Core 100% c.r. 24 hrs cementing	Ccq	Brecciated quartzite, trace of epidote, moderate iron oxide.
4300	366	376	.01			Nx Core 40% c.r. Normal drilling	Ccq	ditto

Location: St. Joe No. 3 Claim
Coordinates 6,404 N , 22,587 W

DRILL LOG

Hole DP-5
Collar Elevation 4,676

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01	Nx Core 40% c.r. 14 hrs. cementing	Ccq	Strong brecciation and fracturing, quartzite is coarser grained.
	376	386	.01					
	386	393				80% c.r. Nx Core Normal drilling	Ccq/Mp	ditto, iron oxide
4250								
				Cu				

Drill Hole	DP-6
Location	Tucky No. 3 Claim (Phelps Dodge Coordinates 9,170 N, 22,039 W)
Collar Elevation	4,886 feet
Date Started	December 31, 1969
Date Completed	January 14, 1970
Total Depth	558 feet

The core was characterized by Cambrian quartzite, intruded by propylitized monzonite porphyry, which was penetrated at 342 feet where a xenolith of the Precambrian Pinal Schist was encountered. The hole was terminated at a depth of 558 feet in propylitized Precambrian granodiorite. The mineralization was characterized by iron oxides after pyrite to 309 feet, disseminated pyrite and traces of chalcopyrite and hematite. The highest 10-foot assay was 0.02 percent copper and the highest 50-foot assay was 0.01 percent copper. Complete assays follow:

Level	% Cu	Level	% Cu	Level	% Cu
4850	0.01	4700	0.01	4550	0.01
4800	0.01	4650	0.01	4500	Trace
4750	0.01	4600	0.01	4450	0.01

Location: Tucky No. 3 Claim
Coordinates 9,170 N , 22,039 W

DRILL LOG

Hole DP- 6
Collar Elevation 4,886

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01			
	0	30				Rock Bit 0-12 normal drilling Nx core	Fill	Rock bit through recent gravels and road fill.
4830	30	36	.01			Nx Core normal drilling 95% c.r.	Ordovician Cambrian	Fresh limey sandstones and quartzites, fractures at 45° and 60°. Iron oxides after pyrite. Ordovician-Cambrian boundary.
	36	46	.01	Cu	0.01	100% c.r. 1 hour cementing	"	1" crushed and brecciated zone at 40 feet, dip at 30°. Iron oxides trace pyrite.
	46	56	.01			Lost 3 ft. of core, 1-hour drilling Nx core	"	Well broken limey quartzite, bedding has 30° apparent dip. Iron oxides and disseminated pyrite.
	56	66	.01			Nx core 100% c.r. normal drilling	Cambrian Coronado Quartzite	locally limey, coarse grained 57-60 feet. Iron oxides and disseminated pyrite.
	66	76	.01			ditto	"	Minor fractures at 70°, apparent bedding at 30°. Vuggy at 74 feet, iron oxides and disseminated pyrite.
4800	76	86	.01			99% c.r. Nx core normal drilling	Ccq/Mp	Quartzite-monzonite porphyry contact at 83 feet dipping 70°. Iron and manganese oxides with disseminated pyrite.

Location: Tucky No. 3 Claim
Coordinates 9,170 N , 22,039 W

DRILL LOG

Hole DP-6
Collar Elevation 4,886

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	86	96	.02	Cu	0.01	Nx Core 100% c.r. normal drilling	Mp/Fault/ Mp	Fault zone 88 to 90 feet. Iron oxides after pyrite, manganese oxides.
	96	106	.01			"	Mp/Ccq/ Fault	Monzonite porphyry - quartzite contact at 96 feet dipping 30°. Several slickensided fractures at 30° to 70°. Disseminated pyrite in monzonite porphyry. General brecciation with fault at 105.6 feet.
	106	116	.01			"	Ccq/Mp/ Ccq	Well fractured, monzonite porphyry - 110.9 to 113 feet contact with quartzite at 60°.
	116	126	.01			"	Mp	Argillized monzonite porphyry. Iron oxide, disseminated and veined pyrite, quartz-pyrite vein 122-122.2 and pyrite vein 124-124.5.
4750	126	136	.01			"	Mp	ditto
	136	146	.01	Cu	0.01	"	Mp/Fault/ Mp	brecciation 134 to 135 feet.
	146	156	.01			"	Mp/Ccq	Monzonite porphyry - quartzite contact at 146.9 feet, dipping 30°. Iron oxide and disseminated pyrite. Brecciated 152.5 to 153 feet.
	156	166	.01			"	Ccq	Fracturing at 30°-60°-70°-90°. Iron oxides, trace of pyrite.
	166	176	.01			"	"	Resilicification locally.
4700	176	186	.01			"	"	Moderate fracturing at 15°, 30°, 60°, 90°.

Location: Tucky No. 3 Claim
Coordinates 9,170 N , 22,039 W

DRILL LOG

Hole DP-6
Collar Elevation 4,886

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01	Nx core 100% c.r. normal drilling	Ccq/Mp	Quartzite-monzonite porphyry contact at 191 feet, dipping 30°. Iron oxides and disseminated pyrite.
	186	196	.01					
	196	206	.01			"	Mp/Fault/ Mp	Brecciated zone 202 to 203 feet dipping 60°.
	206	216	.01			"	Mp	Ditto
	216	226	.01			"	Mp/Ccq	Monzonite porphyry - quartzite contact at 218.6 feet, dipping 30°. Fractures at 15°, 30°, 60°.
4650	226	236	.01			"	Ccq/Mp	Quartzite-monzonite porphyry contact at 234 feet, dipping 60°.
	236	246	.01	Cu	0.01	"	Mp	Broken core to 238.5 feet.
	246	256	.01			"	Mp	ditto
	256	266	.01			"	Vein/Mp/ Ccq	Fault vein 256-257 feet, monzonite porphyry-quartzite contact at 265 feet. Quartzite is coarser grained.
	266	276	.01			"	Ccq	Broken core, propylitized quartzite, iron oxides.
4600	276	286	.01			"	Ccq	ditto, fractures at 30°, 45°, 60°, 90°.

Location: Tucky No. 3 Claim
Coordinates 9,170 N, 22,039 W

DRILL LOG

Hole DP-6
Collar Elevation 4,886

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01	Nx Core 100% c.r. normal drilling	Ccq	Propylitized quartzite, coarser grained. Iron oxides.
	286	296	.01					
	296	306	.01			"	Ccq/Mp/ Ccq/Mp/ Ccq	Quartzite to 298.5 feet, 300.2 to 302 feet, and 303 feet on. Iron oxide and disseminated pyrite in monzonite porphyry.
	306	316	.01			"	Ccq/Mp	Quartzite-monzonite porphyry contact at 308.6 feet, high angle. Disseminated pyrite in monzonite porphyry.
	316	326	.01			"	Mp	Propylitized monzonite porphyry.
4550	326	336	Tr			"	Mp	ditto
	336	346	Tr	Cu	Tr	"	Mp/Grd	Monzonite porphyry - Precambrian granodiorite contact at 341.6 feet. Granodiorite intrusive relationship with Pinal quartzite fragments.
	346	356	Tr			"	Grd	Propylitized and locally blocked granodiorite. Disseminated pyrite.
	356	366	Tr			"	"	ditto, aplitic dike phase, 359.7 - 361.5 feet.
	366	376	Tr			"	"	Fractures at 15°, 30°, 45°, some slickensides.
4500	376	386	Tr			"	"	ditto, quartz-pyrite veins dipping 70° at 376 and 380.9 to 381.3 feet.

Location: Tucky No. 3 Claim
Coordinates 9,170 N , 22,039 W

DRILL LOG

Hole DP-6
Collar Elevation 4,886

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01	100% c.r. Nx Core Normal drilling	Grd	Propylitized granodiorite. Disseminated pyrite and trace of chalcopyrite.
	386	396	.02					
						90% c.r. Nx Core Normal drilling	Grd/ Mp-Fault	Granodiorite - brecciated monzonite porphyry contact at 405 feet.
	396	406	.02					
						Nx Core 100% c.r. Normal Drilling	Mp-Fault	ditto, trace of disseminated pyrite.
	406	416	.01					
						"	Mp/Grd	Monzonite porphyry-granodiorite contact at 417.2 feet.
	416	426	.01					
						100% c.r. Nx core Normal drilling	Grd	Propylitized granodiorite.
4450	426	558						
				Cu				

Drill Hole	DP-7
Location	Perfect 36 Claim (Phelps Dodge Coordinates 4,019 N, 16,891 W)
Collar Elevation	5,173 feet
Date Started	January 14, 1970
Date Completed	February 9, 1970
Total Depth	1,010 feet

The core was characterized by well fractured and argillized shales of the Pinkard Formation to 80 feet where propylitized monzonite porphyry was encountered. The porphyry was penetrated at 160 feet where the Devonian Formation was encountered. The contact altered Ordovician limestones were encountered at 249 feet and persisted to 675 feet where the Cambrian Coronado Quartzite was encountered. The hole was terminated in locally argillized Coronado Quartzite at a depth of 1,010 feet. The mineralization was characterized by iron oxides after pyrite to 200 feet, magnetite-pyrite-galena-sphalerite replacement type mineralization in the limestones, disseminated pyrite with traces of chalcopyrite in the monzonite porphyry and iron oxides after covellite and chalcocite with traces of enriched pyrite in the Cambrian Coronado Quartzite. The highest 10-foot assay was 0.10 percent copper and the highest 50-foot assay was on the 4800 level which averaged 0.05 percent copper. Complete assays follow:

Level	% Cu	Level	% Cu	Level	% Cu
5050	0.01	4700	0.02	4400	0.02
5000	0.01	4650	0.01	4350	0.01
4950	0.01	4600	0.02	4300	0.02
4900	0.02	4550	0.01	4250	0.01
4850	0.01	4500	0.02	4200	0.02
4800	0.05	4450	0.03	4150	0.01
4750	0.02				

Location: Perfect 36 Claim
Coordinates 4,019 N , 16,891 W

DRILL LOG

Hole DP-7
Collar Elevation 5,173

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	80	83	0.01	Cu	0.01	Rock Bit to 80 ft. Nx core 100% c.r.	Fill/Kp/Mp	Rock bit thru incompetent Cretaceous Pinkard shales, dip 20°, spot core 61-62 feet, iron oxide after pyrite, monzonite porphyry from 80.9 feet.
	83	93	0.01			Nx core Normal drilling 100% c.r.	Mp	Propylitized, well fractured monzonite porphyry, iron and manganese oxides, iron oxide after pyrite, argillic alteration moderate pervasive and on fractures
	93	103	0.01			ditto		ditto
	103	113	0.01			ditto		ditto
5050	113	123	0.01			ditto		ditto
	123	133	0.01	Cu	0.01	ditto	Mp	ditto
	133	143	0.01			ditto	Kp/Mp	Cretaceous Pinkard shale-sandstone, locally well fractured and brecciated, iron oxide after pyrite and traces of disseminated pyrite-from 133 to 134.4 feet.
	143	153	0.01			ditto	Mp	ditto as above
	153	163	0.02			ditto	Mp/Dm	Monzonite porphyry - Devonian Morenci shale contact at 159.5 feet, hornfelsic shale and propylitized monzonite porphyry.
5000	163	173	0.01			ditto	Dm	ditto, dip 25°

Location: Perfect 36 Claim
Coordinates 4,019 N , 16,891 W

DRILL LOG

Hole DP-7
Collar Elevation 5,173

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	173	183	0.01	Cu	0.01	Nx core Normal drilling 100% c.r.	Dm	Devonian Morenci shale - hornfelsic, dip 25°, fine disseminated pyrite and magnetite, trace of iron oxide after pyrite
	183	193	0.01			ditto		ditto
	193	203	0.01			ditto		ditto
	203	213	0.01			Broken core 100% c.r.		Shale-limestone contact at 208 feet. Black limestone-basal Devonian below 208 feet.
4950	213	223	0.01			ditto		ditto
	223	233	0.02	Cu	0.02	Nx core Normal drilling 100% c.r.		ditto
	233	243	0.01			ditto		ditto
	243	253	0.01			ditto	Dm/Ol skarn	Devonian-Morenci basal limestone-Ordovician Longfellow limestone contact at 249 feet, abundant epidote, disseminated pyrite and magnetite.
	253	263	0.01			ditto	Ol skarn	ditto
4900	263	273	0.05			ditto		ditto

Location: Perfect 36 Claim
Coordinates 4,019 N , 16,891 W

DRILL LOG

Hole DP-7
Collar Elevation 5,173

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	273	283	0.03	Cu	0.01	Nx core normal drilling 100% c.r.	01 skarn	Ordovician Longfellow limestone-intense skarn, locally 20% magnetite, pyrite and traces of chalcopyrite, galena, sphalerite
	283	293	0.01			ditto		ditto
	293	303	0.01			ditto		ditto
	303	313	0.01			ditto		ditto
4850	313	323	0.01			ditto		ditto
	323	333	0.01	Cu	0.05	ditto		ditto, 20-30% garnet-epidote
	333	343	0.05			ditto		ditto
	343	353	0.08			ditto		ditto
	353	363	0.07			ditto		ditto, jadeite?
4800	363	373	0.04			ditto		ditto

Location: Perfect 36 Claim
Coordinates 4,019 N, 16,891 W

DRILL LOG

Hole DP- 7
Collar Elevation 5,173

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	373	383	0.01	Cu	0.02	Nx core Normal drilling 100% c.r.	Ol skarn	Ordovician Longfellow limestone-intense skarn, decrease in pyrite-magnetite content
	383	393	0.01			ditto		ditto, 50% epidote
	393	403	0.01			ditto		ditto
	403	413	0.05			ditto		ditto
4750	413	423	0.01			Nx core 2 hrs. cementing 100% c.r.		ditto
	423	433	0.01	Cu	0.02	3 hrs. cementing 100% c.r.		ditto
	433	443	0.01			Nx core Normal drilling 100% c.r.		ditto
	443	453	0.03			ditto		ditto
	453	463	0.02			ditto		ditto
4700	463	473	0.03			ditto	Ol skarn/ Fault/ Ol skarn	Fault zone 470-471.5 feet tr. pyrite

Location: Perfect 36 Claim
Coordinates 4,019 N, 16,891 W

DRILL LOG

Hole DP-7
Collar Elevation 5,173

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	473	483	0.01	Cu	0.01	Nx core Normal drilling 100% c.r.	Ol skarn	Ordovician Longfellow limestone-intense skarn, weaker pyrite-magnetite
	483	493	0.01			ditto		ditto
	493	503	0.01			ditto		ditto
	503	513	0.01			ditto		ditto
4650	513	523	0.01			ditto		ditto
	523	533	0.01	Cu	0.02	ditto		ditto
	533	543	0.01			ditto		ditto
	543	553	0.02			ditto	Ol skarn/ Fault	Fault 547 feet
	553	563	0.02			ditto	Fault/ Ol	Fault to 558.5 feet - Ordovician Longfellow limey shale and sandstone
4600	563	573	0.02			ditto well fractured	Ol	ditto

Location: Perfect 36 Claim
Coordinates 4,019 N , 16,891 W

DRILL LOG

Hole DP-7
Collar Elevation 5,173

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01	Nx core Normal drilling 100% c.r. well fx.	Ol/Fault	Ordovician Longfellow limey shale and sandstone - fault at 577 feet.
	573	583	0.02					
	583	593	0.01			ditto	Fault/Ol	Ordovician Longfellow limey sandstone from 587 feet, quartz-pyrite vein at 587 feet.
	593	603	0.01			ditto	Ol	Quartzite locally limey, iron oxide after pyrite and disseminated pyrite
	603	613	0.01			ditto		ditto
4550	613	623	0.01			Normal drilling 100% c.r.		ditto
	623	633	0.01	Cu	0.02	ditto		ditto
	633	643	0.01			ditto		ditto
	643	653	0.01			ditto	Fault	Fault gouge of Ordovician Longfellow quartzite at 643 feet, clay
	653	663	0.01			ditto	Fault	ditto
4500	663	673	0.05			ditto	Fault	ditto

Location: Perfect 36 Claim
Coordinates 4,019 N, 16,891 W

DRILL LOG

Hole DP-7
Collar Elevation 5,173

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	673	683	0.10	Cu	0.03	Nx core Normal drilling 100% c.r.	Fault/ Ccq	Fault gouge of Ordovician Longfellow quartzite-Cambrian Coronado quartzite contact at 674.5 feet, disseminated pyrite and iron oxide after pyrite
	683	693	0.01			ditto		ditto
	693	703	0.02			ditto		ditto
	703	713	0.01			ditto		ditto
4450	713	723	0.01			ditto	Ccq/Mp	Propylitized monzonite porphyry from 714 feet
	723	733	0.01	Cu	0.02	ditto	Mp/Ccq	Cambrian Coronado quartzite from 730 feet, as above, locally coarse grained
	733	743	0.03			ditto	Ccq	ditto
	743	753	0.01			ditto - 4 hours casing		ditto
	753	763	0.05			Bx core Normal drilling 100% c.r.		ditto
4400	763	773	0.01			90% c.r.		ditto

Location: Perfect 36 Claim
Coordinates 4,019 N, 16,891 W

DRILL LOG

Hole DP-7
Collar Elevation 5,173

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	773	783	0.01	Cu	0.01	Bx core Normal drilling 100% c.r.	Ccq	Cambrian Coronado quartzite - locally coarser grained, disseminated pyrite and iron oxide after pyrite
	783	793	0.01			ditto		ditto
	793	803	0.01			ditto		ditto
	803	813	0.01			Bx core Normal drilling 90% c.r.		ditto
4350	813	823	0.01			100% c.r.		ditto
	823	833	0.03	Cu	0.02	ditto		ditto
	833	843	0.01			ditto		ditto
	843	853	0.01			ditto		ditto
	853	863	0.04			ditto		ditto
4300	863	873	0.01			ditto		ditto

Location: Perfect 36 Claim
Coordinates 4,019 N , 16,891 W

DRILL LOG

Hole DP-7
Collar Elevation 5,173

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	873	883	0.01	Cu	0.01	Bx core Normal drilling 100% c.r.	Ccq	Cambrian Coronado quartzite-locally coarser grained, disseminated pyrite and iron oxide after pyrite
	883	893	0.01			ditto		ditto
	893	903	0.01			ditto		ditto
	903	913	0.02			ditto		ditto
4250	913	923	0.02			ditto		ditto
	923	933	0.02	Cu	0.02	ditto		ditto
	933	943	0.01			ditto		ditto
	943	953	0.01			ditto		ditto
	953	963	0.04			ditto		ditto
4200	963	973	0.04			90% c.r.		ditto

Location: Perfect 36 Claim
Coordinates 4,019 N , 16,891 W

DRILL LOG

Hole DP-7
Collar Elevation 5,173

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01			
	973	983	0.01			Bx core Normal drilling 95% c.r.	Ccq	Cambrian Coronado quartzite - locally coarser grained, disseminated pyrite and iron oxide after pyrite
	983	993	0.01			100% c.r.		ditto
	993	1003	0.01			ditto		ditto
	1003	1010	0.01			95% c.r.		ditto
4150								
				Cu				

Drill Hole	DP-8
Location	Wilhelmina Claim (Phelps Dodge Coordinates 4,887 N, 16,980 W)
Collar Elevation	5,033 feet
Date Started	February 10, 1970
Date Completed	March 4, 1970
Total Depth	840 feet

The core was characterized by well fractured and incompetent Pinkard shales cut by monzonite porphyry dikes to 143 feet. The Devonian Formation was penetrated at 249 feet where the contact altered Orodovician limestones were encountered and persisted to 519 feet where the Cambrian Coronado Quartzite was encountered. The Cambrian was penetrated at 721 feet and the hole was terminated in propylitized granodiorite at a depth of 840 feet. The mineralization was characterized by iron oxides after pyrite to 300 feet, magnetite-pyrite-sphalerite replacement type mineralization in the limestones and iron oxides after covellite and chalcocite with traces of enriched pyrite in the Cambrian Coronado Quartzite. The highest 10-foot assay was 0.11 percent copper and the highest 50-foot assay was on the 4800 level which averaged 0.04 percent copper. Complete assays follow:

Level	% Cu	Level	% Cu	Level	% Cu
4950	0.01	4650	0.02	4350	0.03
4900	0.01	4600	0.01	4300	0.01
4850	0.01	4550	0.01	4250	0.01
4800	0.04	4500	0.03	4200	0.03
4750	0.03	4450	0.01	4150	0.02
4700	0.02	4400	0.02		

Location: Wilhelmina Claim
Coordinates 4,887 N , 16,980 W

DRILL LOG

Hole DP-8
Collar Elevation 5,033

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01			
	0	60				Rock Bit	Fill/Kp	Rock bit through fill and incompetent Cretaceous Pinkard shales, well fractured, hornfelsic, iron and manganese oxides, iron oxide after pyrite
	60	73	0.01			Nx core 2 hours cementing 90% c.r.	Kp/Mp	Propylitized monzonite porphyry from 72 feet, sill contact
4950	73	83	0.01			68-79 85% c.r. 3 hours cementing Hard drilling	Mp	ditto
	83	93	0.01	Cu	0.01	95% c.r. 1 hour cementing	Mp/Kp	Propylitized monzonite porphyry - Cretaceous Pinkard shales and sandstones contact at 86.6 feet, argillic, well fractured locally, iron oxide after pyrite
	93	103	0.01			95% c.r.	Kp	ditto
	103	113	0.01			4 hours cementing 20% c.r.		ditto
	113	123	0.01			4 hours cementing 40% c.r.		ditto
4900	123	133	0.02			50% c.r. 4 hours cementing		ditto

Location: Wilhelmina Claim
Coordinates 4,887 N , 16,980 W

DRILL LOG

Hole DP-8
Collar Elevation 5,033

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	133	143	0.02	Cu	0.01	2 hours cementing 90% c.r.	Kp/Mp	Cretaceous Pinkard shales and sandstones, hornfelsic, contact with monzonite porphyry 136 to 143 feet, trace of pyrite
	143	153	0.01			100% c.r. 146	Dm	Devonian Morenci shales below 143 feet, broken and limey, iron oxide after pyrite and disseminated pyrite
	153	163	0.01			99% c.r.		ditto
	163	173	0.01			99% c.r. 171 2 hrs. cem.		ditto
4850	173	183	0.01			99% c.r. 2 hours cementing		ditto
	183	193	0.02	Cu	0.04	100% c.r. Nx core		ditto
	193	203	0.01			100% c.r. Normal drilling		ditto
	203	213	0.01			ditto		ditto
	213	223	0.07			ditto		Devonian Morenci shale-basal limestone contact at 215 feet, fine disseminated pyrite and magnetite, increase in epidote.
4800	223	233	0.08			ditto		Devonian Morenci basal limestone.

Location: Wilhelmina Claim
Coordinates 4,887 N, 16,980 W

DRILL LOG

Hole DP-8
Collar Elevation 5,033

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	233	243	0.05	Cu	0.03	Heavy core 100% c.r. 231	Dm	Devonian Morenci basal limestone - dip 22°, calc-silicate development, pyrite-magnetite finely disseminated, locally traces of chalcopyrite.
	243	253	0.06			100% c.r.		ditto
	253	263	0.01			259 100% c.r. 1 hr. cem.		ditto
	263	273	0.01			Nx core Normal drilling 100% c.r.		ditto
4750	273	283	0.01			ditto		ditto
	283	293	0.01	Cu	0.02	ditto	Dm/ Fault	Fault 290.5 feet
	293	303	0.01			ditto	Fault/ Ol	Fault to 294 feet, Ordovician Longfellow limestone, strong replacement by calc-silicates, considerable magnetite-pyrite, local chalcopyrite, sphalerite and galena
	303	313	0.06			ditto		ditto
	313	323	0.01			ditto		ditto
4700	323	333	0.01			ditto		ditto

Location: Wilhelmina Claim
Coordinates 4,887 N , 16,980 W

DRILL LOG

Hole DP-8
Collar Elevation 5,033

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.02	Nx core Normal drilling 100% c.r.	Ol	Ordovician Longfellow (limestone) skarn, magnetite-pyrite replacement, local chalcopyrite, sphalerite and galena
	333	343	0.02					
	343	353	0.03			ditto		ditto
	353	363	0.01			ditto		ditto
	363	373	0.02			ditto		ditto
4650	373	383	0.02			ditto		ditto
				Cu	0.01			
	383	393	0.02			ditto	Ol/Mp	Propylitized monzonite porphyry from 390.5 feet contains Ordovician skarn fragments
	393	403	0.02			ditto	Mp/Ol	Monzonite porphyry-Ordovician Longfellow (limestone) skarn contact at 402.2 feet, dip 60°, magnetite-pyrite replacement, local chalcopyrite, galena, sphalerite
	403	413	0.01			3 hours cementing 100% c.r.		ditto
	413	423	0.01			1 hour cementing 100% c.r.		ditto
4600	423	433	0.01			100% c.r.		ditto

Location: Wilhelmina Claim
Coordinates 4,887 N , 16,980 W

DRILL LOG

Hole DP-8
Collar Elevation 5,033

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	433	443	0.03	Cu	0.01	100% c.r.	01	Ordovician Longfellow (limestone) skarn, magnetite-pyrite replacement, local traces of chalcopyrite, sphalerite and galena
	443	453	0.01			ditto		ditto
	453	463	0.01			3 hours cementing 100% c.r.		ditto
	463	473	0.01			100% c.r.		ditto
4550	473	483	0.01			ditto		ditto
	483	493	0.02	Cu	0.03	ditto		ditto
	493	503	0.01			Nx core Normal drilling 100% c.r.		ditto
	503	513	0.02			ditto		ditto
	513	523	0.10			ditto		ditto
4500	523	533	0.01			ditto		ditto

Location: Wilhelmina Claim
Coordinates 4,887 N , 16,980 W

DRILL LOG

Hole DP- 8
Collar Elevation 5,033

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	533	543	0.01	Cu	0.01	Nx core Normal drilling 100% c.r.	Ol	Ordovician Longfellow limey sandstones near contact with Cambrian Coronado quartzite
	543	553	0.01			70% c.r.	Ol/Fault	Fault zone from 547 feet, dip 60° to 70° quartzite gouge
	553	563	0.01			4 hours cementing 90% c.r.	Fault	ditto
	563	573	0.01			6 hours cementing 100% c.r.	Fault	ditto
4450	573	583	0.01			4 hours cementing 90% c.r.	Fault	ditto
	583	593	0.01	Cu	0.02	90% c.r.	Fault/ Ccq	Fault zone to 591 feet - Cambrian Coronado quartzite 591 feet on, well fractured, locally coarser grained, iron oxide and disseminated pyrite, traces of chalcopyrite.
	593	603	0.01			3 hours cementing Nx core 100% c.r.	Ccq	ditto
	603	613	0.02			Nx core Normal drilling 100% c.r.		ditto
	613	623	0.02			ditto		ditto
4400	623	633	0.02			ditto		ditto

Location: Wilhelmina Claim
Coordinates 4,887 N , 16,980 W

DRILL LOG

Hole DP- 8
Collar Elevation 5,033

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.03	Nx core Normal drilling 100% c.r.	Ccq	Cambrian Coronado quartzite, well fractured, locally coarser grained, iron oxide, disseminated pyrite, traces of chalcopyrite
	633	643	0.01					
	643	653	0.02			ditto		ditto
	653	663	0.01			ditto		ditto
	663	673	0.01			ditto		ditto
4350	673	683	0.11			ditto		ditto
				Cu	0.01			
	683	693	0.01			ditto		ditto
	693	703	0.01			ditto		Basal Cambrian Coronado conglomerate from 699.3 feet
	703	713	0.01			ditto		ditto
	713	723	0.02			ditto	Ccq/Grd	Cambrian Coronado quartzite-Precambrian granodiorite contact at 720.9 feet. Granodiorite propylitized, pyrite and iron oxide
4300	723	733	0.01			ditto	Grd	ditto

Location: Wilhelmina Claim
Coordinates 4,887 N , 16,980 W

DRILL LOG

Hole DP-8
Collar Elevation 5,033

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.01	Nx core Normal drilling 100% c.r.	Grd	Propylitized Precambrian granodiorite, iron-oxide and pyrite
	733	743	0.01					
	743	753	0.03			ditto		ditto
	753	763	0.01			ditto		ditto
	763	773	0.01			ditto		ditto
4250	773	783	0.01			ditto		ditto
				Cu	0.03			
	783	793	0.01			ditto		ditto, well fractured and crushed 785-786
	793	803	0.02			ditto		ditto
	803	813	0.05			ditto		ditto
	813	823	0.04			ditto		ditto
4200	823	833	0.04			ditto		ditto

Location: Wilhelmina Claim
Coordinates 4,887 N , 16,980 W

DRILL LOG

Hole DP-8
Collar Elevation 5,033

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.02	Nx core Normal drilling 100% c.r.	Grd	Propylitized Precambrian granodiorite, iron-oxide and disseminated pyrite
	833	840	0.02					
4150								
				Cu				

Drill Hole	DP-9
Location	Lucky 38 Claim (Phelps Dodge Coordinates 4,387 N, 18,279 W)
Collar Elevation	4,919 feet
Date Started	March 5, 1970
Date Completed	April 14, 1970
Total Depth	1,123 feet

The core was characterized by well fractured and propylitized shales and sandstones of the Pinkard Formation cut by monzonite porphyry dikes to 323 feet where the Devonian Formation was encountered. The Devonian was penetrated at 484 feet and the contact altered Ordovician limestones, cut by monzonite porphyry, were penetrated at 775 feet. The Cambrian Coronado Quartzite was penetrated at 1,022 feet and the hole was terminated in propylitized granodiorite at a depth of 1,123 feet. The mineralization was characterized by iron oxides after pyrite to 150 feet, finely disseminated and veinlets of pyrite in the shales and limestones, magnetite-pyrite-galena-sphalerite replacement type mineralization in the Ordovician limestones and iron oxides after covellite and chalcocite with traces of enriched pyrite in the Cambrian Coronado Quartzite. The highest 10-foot assay was 0.23 percent copper and the highest 50-foot assay was on the 4400 level which averaged 0.09 percent copper. Complete assays follow:

Level	% Cu	Level	% Cu	Level	% Cu
4800	0.06	4400	0.09	4000	0.05
4750	0.07	4350	0.07	3950	0.09
4700	0.06	4300	0.06	3900	0.09
4650	0.03	4250	0.04	3850	0.02
4600	0.02	4200	0.08	3800	0.02
4550	0.05	4150	0.04	3750	0.04
4500	0.03	4100	0.02		
4450	0.06	4050	0.03		

Location: Lucky 38 Claim
Coordinates 4387 N, 18,279 W

DRILL LOG

Hole DP-9
Collar Elevation 4919

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
				Cu	0.06			
	0	90				Rock Bit Casing to 90 feet	Fill/Kp	Rock bit through fill and Cretaceous Pinkard shale and sandstone. Iron and manganese oxides.
	90	99	.07			Normal drilling Nx core 99% c.r.	Kp	ditto
	99	109	.05			Nx core Normal drilling 100% c.r.		ditto
4800	109	119	.05			90% c.r.		ditto
	119	129	.06	Cu	0.07	ditto		ditto
	129	139	.06			80% c.r.		ditto
	139	149	.14			1 hour cementing 80% c.r.		ditto
	149	159	.08			Normal drilling 80% c.r.		Locally disseminated pyrite and iron oxide.
4750	159	169	.02			ditto		Ditto, well fractured, zeolite, alunite, dip 22°.

Location: Lucky 38 Claim
Coordinates 4387 N , 18,279 W

DRILL LOG

Hole DP-9
Collar Elevation 4919

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	169	179		Cu	0.06	Nx core 3 hours cementing 70% c.r.	Kp	Cretaceous Pinkard shales and sandstones, hornfelsic, pyrite and iron oxide on fractures, local chalcopyrite.
	179	189	.07			1 hour cementing lost 12 ft. of core		ditto
	189	199	.13			2 hours cementing 80% c.r.		ditto
	199	209	.03			Normal drilling 80% c.r.	Kp/Fault-db/Kp	Fault zone - diabase 203 to 206 feet.
4700	209	219	.03			ditto	Kp	As above.
	219	229	.06	Cu	0.03	ditto		ditto
	229	239	.02			ditto		ditto
	239	249	.02			ditto		ditto
	249	259	.02			ditto		ditto
4650	259	269	.01			3 hours cementing 80% c.r.	Kp/Mp	Propylitized monzonite porphyry, well fractured and argillized, disseminated pyrite, galena.

Location: Lucky 38 Claim
Coordinates 4387 N, 18,279 W

DRILL LOG

Hole DP-9
Collar Elevation 4919

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	269	279	.02	Cu	0.02	Nx core 2 hours cementing 50% c.r.	Mp	Propylitized monzonite porphyry, iron oxide and disseminated pyrite.
	279	289	.02			Normal drilling 80% c.r.	Mp/Kp	Cretaceous Pinkard shale - sandstones from 286 feet, well fractured, disseminated pyrite, local galena and sphalerite.
	289	299	.02			70% c.r.	Kp	ditto
	299	309	.02			50% c.r.	Kp/Mp	Propylitized monzonite porphyry from 304 feet as above.
4600	309	319	.04			80% c.r.	Mp	ditto
	319	329	.11	Cu	0.05	80% c.r.	Mp/Kp	Monzonite porphyry - Cretaceous Pinkard shales and sandstones contact at 323 feet.
	329	339	.02			2 hours cementing 70% c.r.	Kp	ditto
	339	349	.03			Normal drilling 90% c.r.		ditto
	349	359	.03			80% c.r.		ditto
4550	359	369	.05			Bx Core 6 hours cementing 80% c.r.		ditto

Location: Lucky 38 Claim
Coordinates 4387 N , 18,279 W

DRILL LOG

Hole DP-9
Collar Elevation 4919

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	369	379	.02	Cu	.03	Bx core Normal drilling 80% c.r.	Kp	Cretaceous Pinkard shale and sandstone, hornfelsic, disseminated pyrite.
	379	389	.01			100% c.r.		ditto
	389	399	.04			ditto		ditto
	399	409	.05			ditto	Kp/Mp	Cretaceous Pinkard shale & sandstone - propylitized monzonite porphyry contact at 404.2 feet, weak disseminated pyrite.
4500	409	419	.02			ditto		ditto
	419	429	.02	Cu	0.06	ditto		ditto
	429	439	.13			ditto	Mp/Dm	Propylitized monzonite porphyry - Devonian Morenci shales contact at 436 feet, disseminated and veinlets of pyrite.
	439	449	.02			ditto	Dm	ditto
	449	459	.06			ditto		ditto
4450	459	469	.08			ditto	Dm/Mp	Devonian Morenci shale contact with propylitized monzonite porphyry at 463 feet, dip 60°.

Location: Lucky 38 Claim
Coordinates 4387 N, 18,279 W

DRILL LOG

Hole DP-9
Collar Elevation 4919

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	469	479	.05	Cu	0.09	Bx Core Normal drilling 100% c.r.	Mp	Propylitized monzonite porphyry, weak quartz-sericite veinlets, disseminated pyrite.
	479	489	.12			ditto	Mp/Dm Skarn	Devonian Morenci basal limestone from 484 feet, strong magnetite pyrite, local chalcopyrite.
	489	499	.16			ditto	Dm Skarn	ditto
	499	509	.05			ditto		ditto
4400	509	519	.07			80% c.r.		ditto
	519	529	.11	Cu	0.07	95% c.r.	Dm Skarn/ Mp	Propylitized monzonite porphyry from 523 feet, contact at 60°, disseminated pyrite.
	529	539	.10			100% c.r.	Mp	ditto
	539	549	.06			ditto	Mp/ Ol Skarn	Ordovician Longfellow (limestone) skarn from 540 feet, 30% epidote, strong calc-silicate-pyrite-magnetite replacement.
	549	559	.03			ditto	Ol Skarn	ditto
4350	559	569	.03			ditto		ditto

Location: Lucky 38 Claim
Coordinates 4387 N , 18,279 W

DRILL LOG

Hole DP-9
Collar Elevation 4919

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	569	579	.02	Cu	0.06	Bx Core Normal drilling 90% c.r.	Ol Skarn	Ordovician Longfellow (limestone) skarn, intense calc-silicate-pyrite-magnetite replacement.
	579	589	.15			100% c.r.		ditto
	589	599	.03			ditto		ditto
	599	609	.05			3 hours cementing 100% c.r.	Ol Skarn/ Mp	Propylitized monzonite porphyry from 600 feet.
4300	609	619	.03			2 hours cementing 100% c.r.	Mp/ Ol Skarn	Ordovician Longfellow (limestone) skarn as above from 618 feet.
	619	629	.03	Cu	0.04	8 hours cementing 100% c.r.	Mp & Ol	Mixture of propylitized monzonite porphyry and Ordovician Longfellow limestone.
	629	639	.04			5 hours cementing 100% c.r.	Ol Skarn	Ordovician Longfellow (limestone) skarn as above.
	639	649	.08			Normal drilling 100% c.r.		ditto
	649	659	.04			ditto		ditto
4250	659	669	.01			90% c.r.		ditto

Location: Lucky 38 Claim
Coordinates 4387 N , 18,279 W

DRILL LOG

Hole DP-9
Collar Elevation 4919

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	669	679	.03	Cu	0.08	Bx Core Normal drilling 100% c.r.	01 Skarn	Ordovician Longfellow (limestone) skarn, strong calc-silicate-magnetite-pyrite replacement.
	679	689	.02			4 hours cementing 100% c.r.		ditto
	689	699	.08			4 hours cementing 100% c.r.		ditto, quartzite from 696 feet.
	699	709	.13			4 hours cementing 100% c.r.		quartzite to 705 feet.
4200	709	719	.16			8 hours cementing 100% c.r.		Interbedded Ordovician Longfellow basal limestone and quartzite.
	719	729	.04	Cu	0.04	4 hours cementing 100% c.r.		ditto
	729	739	.08			Normal drilling 90% c.r.		ditto
	739	749	.04			100% c.r.		ditto
	749	759	.01			ditto	01/Fault/01	Fault 756.5 to 758 feet.
4150	759	769	.02			ditto	01	ditto

Location: Lucky 38 Claim
Coordinates 4387 N , 18,279 W

DRILL LOG

Hole DP-9
Collar Elevation 4919

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	769	779	.03	Cu	0.02	Bx Core Normal drilling 100% c.r.	Ol/Ccq	Cambrian Coronado quartzite, well fractured, from 775 feet, iron oxide and disseminated pyrite.
	779	789	.02			ditto	Ccq	ditto
	789	799	.02			90% c.r.		ditto
	799	809	.02			100% c.r.	Ccq/Mp	Propylitized monzonite porphyry from 797.7 feet.
4100	809	819	.02			ditto	Mp/Ccq	Cambrian Coronado quartzite from 813 feet as above.
	819	829	.03	Cu	0.03	ditto		ditto
	829	839	.02			ditto		ditto
	839	849	.05			95% c.r.		ditto
	849	859	.01			80% c.r.		ditto
4050	859	869	.03			4 hours cementing 95% c.r.		ditto

Location: Lucky 38 Claim
Coordinates 4387 N, 18,279 W

DRILL LOG

Hole DP-9
Collar Elevation 4919

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	869	879	.02	Cu	0.05	Bx Core 13 hours cementing 100% c.r.	Ccq	Cambrian Coronado quartzite, well fractured, locally coarser grained, iron oxide and disseminated pyrite, traces of chalcopyrite.
	879	889	.11			Normal drilling 100% c.r.		ditto
	889	899	.05			ditto		ditto
	899	909	.03			95% core		ditto
4000	909	919	.03			100% c.r.		ditto
	919	929	.05	Cu	0.09	ditto		ditto
	929	939	.12			ditto		ditto
	939	949	.16			ditto		ditto
	949	959	.05			ditto		ditto
3950	959	969	.07			90% c.r.		ditto

Location: Lucky 38 Claim
Coordinates 4387 N, 18,279 W

DRILL LOG

Hole DP-9
Collar Elevation 4919

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	969	979	.19	Cu	0.09	Bx Core Normal drilling 100% c.r.	Ccq	Cambrian Coronado quartzite, well fractured, locally coarser grained, iron oxide and disseminated pyrite.
	979	989	.23			95% c.r.		ditto
	989	999	.01			80% c.r.		ditto
	999	1009	.02			90% c.r.		ditto
3900	1009	1019	.01			20 hours cementing 100% c.r.		ditto
	1019	1029	.02	Cu	0.02	4 hours cementing. 100% c.r.	Ccq/Grd	Precambrian granodiorite, propylitized, disseminated pyrite.
	1029	1039	.03			Normal drilling 100% c.r.	Grd/Mp	Propylitized monzonite porphyry from 1036.
	1039	1049	.02			95% c.r.	Mp	ditto
	1049	1059	.01			100% c.r.		ditto
3850	1059	1069	.01			ditto		ditto

Location: Lucky 38 Claim
Coordinates 4387 N, 18,279 W

DRILL LOG

Hole DP-9
Collar Elevation 4919

Elev.	Interval		%Cu	Composite Analysis		Drill Data	Rock Type	Description, Alteration and Mineralization
	1069	1079	.01	Cu	0.02	Bx Core Normal drilling 100% c.r.	Mp/Fault	Fault zone, dip 50°, from 1070 feet.
	1079	1089	.02			Ditto	Fault/Grd	Precambrian granodiorite, propylitized, disseminated pyrite, from 1088 feet.
	1089	1099	.02			Ditto	Grd	ditto
	1099	1109	.02			Ditto		ditto
3800	1109	1119	.02			Ditto		ditto
	1119	1123	.04	Cu	0.04	Ditto		ditto
3750								

HEINRICHS GEOEXPLORATION COMPANY

806 WEST GRANT ROAD, TUCSON, ARIZONA, 85703. P.O. BOX 5671. PHONE: (AREA CODE 602) 623-0578

December 9, 1970

Mr. Gary Tiscornia
President
Dover Mining Company
7810 N. Sendero Juana
Tucson, Arizona 85718

Re: Job # 586

Dear Mr. Tiscornia:

We have reviewed the induced polarization geophysical data on the Dover Project since our interim letter dated December 2, 1970, and discussed it with Mr. George Rogers and Mr. Richard Eisenbeis of Phelps Dodge. The results of this review and our discussions follow:

1. With the exception of the southern portion of Line V, no I.P. was run in Area #2, as indicated on the plan map included in the Phelps Dodge report.

Although this map indicates I.P. coverage of approximately one-half of Area 2, there was only one Line, (V) which penetrated this portion of the property.

2. Several I.P. anomalies possibly indicative of substantial sulfide concentration were not investigated by subsequent drilling. The most interesting is the strong I.P. response noted along Gold Gulch, on lines IV through XII. The data is limited as the anomalous zone is at or very near to the southern boundary of Area 1, and information beyond this point was not made available to us. Nevertheless, indications are that a zone of relatively strong mineralization, having fairly good depth extent, is present along this fault zone. There is considerable faulting and fracturing along the zone

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and numerous old workings indicating that some past production must have come from this area. On the eastern end beyond the mapped strike of the fault there are three drill holes. However, the I.P. data indicates a rather diffuse widespread mineralization here, as opposed to the rather concentrated strong mineralization indicated along the main strike of the Gold Gulch Fault. It seems that a drill hole into the Gold Gulch fault is warranted.

The second area of anomalism which also was apparently not tested, lies north of line "D" and is centered approximately 1500 feet south of the northwest corner of section 18. The I.P. effects here are not strong, however, there is a definite increase in I.P. response indicating a probable increase in mineralization as well. It is reported that the quartzites in the area do contain uneconomic mineralization which may be sufficient to explain the geophysical anomalism noted. This zone does seem to have a fairly large aerial extent and certainly drilling should be considered.

3. Some of the drilling was not located so as to properly evaluate the I.P. anomalism. In at least one instance (DP-6) the drilling does not appear to have been placed over the most favorable anomalism.

4. At least one geochemical anomaly was not investigated by drilling. The notable example of this is the coincident, copper, molybdenum, zinc anomaly located approximately 2200 feet S 20° W of DP 1. There is also correlating I.P. anomalism and it lies along a geologically favorable zone, i.e., the possible eastward extension of the Gold Gulch Fault Zone. Therefore, drilling may be warranted here and should at least be considered.

These observations, it should be understood, have been made purely from a technical geophysical and geochemical standpoint, and no other information has been utilized. It is possible that if we have the full benefit of all additional data available to Phelps Dodge, especially magnetics, geology etc. and more time to study it all more thoroughly perhaps our conclusions will more nearly agree with theirs. Certainly they must have a philosophy of mining economics which we cannot completely appreciate. Nevertheless, based upon the information made available to us to date, we feel that the aforementioned unexplained anomalism should be followed up.

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If additional drill locations are desired, we would be happy to carry out a more intensive interpretation of the data towards this end. The cost to do this additional work would probably run somewhere in the neighbourhood of $500.00 - $1000.00.

We trust this letter will serve to help in your considerations and dealings with Phelps Dodge.

After you have an opportunity to review our report, please let us have your reactions.

Respectfully submitted,
HEINRICHS GEOEXPLORATION COMPANY

By: [signature]

John P. Matthews, Jr.
Geophysicist

Registered Professional Engineer (Mining)
CERTIFICATE EXPIRES
WALTER E. HEINRICHS, JR.
DEC. 31, 19 70
ARIZONA, U. S. A.

Original & 1 cc mailed to Mr. Tiscornia
1 cc mailed to Mr. J.T. Ryan
1 cc to Mr. Donald B. Cooley, GEOEX

JPM/re:

HEINRICHS GEOEXPLORATION COMPANY

806 WEST GRANT ROAD, TUCSON, ARIZONA 85703, P.O. BOX 5964, PHONE: (602) 623-0578

December 2, 1970

Mr. Gary Tiscornia, President
Dover Mining Company
7810 N. Sendero Juana
Tucson, Arizona 85718

Re: GEOEX Job #586

Dear Mr. Tiscornia:

During the week of November 21, 1970, Mr. W. E. Heinrichs, Jr and Mr. J. P. Matthews, Jr., visited the Dover Property and inspected drill core from the area. This interim report reflects our opinions concerning this visit and a review of the Phelps Dodge report furnished to us by you.

Mr. John O'Neill, General Manager, Phelps Dodge Morenci Operations, assigned Mr. Jack M. Langton, Chief Geologist to help us in our review of the data, and in our property examination. Following a general tour of the Dover Property, in which all but two of the Phelps Dodge drill sites were visited, we returned to the P.D. office and reviewed the general and specific geology of the area as well as the general magnetic data. During this review Mr. Ron Boatman, the geologist in charge of the Dover Project, gave us his ideas concerning the economic potential of the property and P. D.'s interest in it. Finally a random check of the drill core was made with the help of Mr. Boatman.

As far as can be ascertained at this time, all of the drilling was done on geochemical, magnetic or induced polarization (I.P.) anomalism, or a combination of these. Apparently there was little or no drilling done on purely geological considerations, or if so, these were not mentioned. Perhaps this is because the geochemical and geophysical results are relatively factual, whereas geologic ideas may represent considerably more theory and interpretation. In other words, the former may be more nearly proven correct even though the practical meaning or significance may be obscure while the geologic aspects could be more subject to contemporary dispute or argument.

Probably the most puzzling factor is the very low copper values found in the drill holes, particularly in hole #1 which is within one mile of the center of the Morenci Pit. Reportedly, normal background in

the district is approximately 0.15% copper (personal communication with Jack Langton) while copper values in all of the holes probably average considerably less than 0.10%. There is no reason to suspect poor assaying, however, some check assaying should be done as a routine matter of course. P. D. reports there is considerable apparently vertical (?) or near vertical dike-like lineation and structure running through the property. Thus if more stronger mineralization is concentrated either within or outside of these dike-like features, it is conceivable that vertical drill holes would not penetrate enough of the whole section represented and thus somewhat higher or somewhat lower values might be encountered than is truly representative of the whole. However, since most of the economic mineralization in the district is disseminated, small high grade ore zones would probably not influence the average ore grade over a large area enough to make ore-grade material of the whole.

P. D.'s explanation of the very low copper values found on the Dover Property lies in the apparent existence of a major (?) fault trending more or less north-south. P. D. believes that this fault may form the western boundary of a graben in which the Morenci Pit is located. They infer a downward movement on the order of 800 ft. east of this fault leaving the western block uplifted relative to the Pit. They further reason that subsequent erosion has stripped the mineralized zone leaving the underlying, unmineralized rock. An examination of the aerial photo of the pit certainly seems to support this hypothesis. Without considerable additional geologic mapping we are inclined to agree that this fault may well have played an important role in the localization of economic mineralization within the district.

Based upon the low copper values encountered in drilling it does not appear that an appreciable amount of ore grade material exists above 1,000 ft. at least in tonnages and grade of present economic interest or potential interest in the future by P. D. or likely anyone else. Although, in most cases the unmineralized "basement" (P.D. interpretation) rock was reached in drilling, there is always a possibility that deeper mineralization could exist. Further economic possibilities may also exist in the form of small, high grade mineralization in the northern part of the area (Keating Mine). Mineralization of this type is probably of little interest to Phelps Dodge, but could be of some interest to smaller operators if sufficient ore could be developed. Such a possibility does not seem too favorable at this time.

Although we have not yet completed correlation and study of the exact location or magnitude of the I. P. effects (data received yesterday) it appears that there is sufficient sulfide mineralization in the drill core to account for the I. P. anomalism. There is, of course, the possibility that drilling was not located properly to best sample the most favorable I. P. effects. Having received the I. P. data from Phelps Dodge's office in Douglas we will now interpret it to determine if the drilling was properly located and if all favorable targets were drilled. We will let you know if this indicates any important changes in our general thinking.

Original was not
sealed nor were other
delivered copies

Without benefit of actually seeing your agreement with Phelps Dodge, we have no reason to believe that P. D. has tried to be tricky or hide anything which your agreement calls for. The chance that drilling to the depth penetrated so far has missed a major ore deposit on the Dover Property seems very remote. Despite P. D.'s lack of interest in the property from a mining standpoint there is little doubt that they can use this property for protection and/or extremely valuable and needed dump space.

Not to stress or emphasize economic potential, but to more comprehensively summarize more of the technical or theoretical possibilities for further exploration of the property, one or more additional drill holes perhaps should be considered but in lieu of more study, we have no particular program or sites to recommend. Because of the considerable apparently vertical dike-like lineation and structure running through the property, it would likely take more than one additional drill hole to completely eliminate every possibility. Our initial impressions do not indicate favorable potential for large homogeneous disseminated type mineralization especially at depths above 1,000 feet. The only other possibilities are represented by more selective higher grade type of operations or deep block caving as is being done at San Manuel, Ariz. Present economic and inferred deeper geologic conditions do not seem to favor recommending the relatively expensive work required to explore for such type deposits. One possible exception to this would be if one or more 3,000 ft. - 5,000 ft. drill holes indicated favorability, or if considerably more careful surface examination revealed much more highly favorable indications than information available to date has suggested. The northern part of the property, from which there has been some past production along the Producer Fault (?) structure, could perhaps be in this latter category.

This letter is intended to generate your questions which we welcome and will endeavor to answer right away.

Respectfully submitted,
Heinrichs GEOEXploration Company

J. P. Matthews, Jr., Geophysicist

Registered Professional Engineer (Mining) CERTIFICATE EXPIRES WALTER E. HEINRICHS, JR. DEC. 31, 1970 ARIZONA, U. S. A.

Walter E. Heinrichs, Jr., President

WEH/JPM/jh

Distribution:
Original & 1 cc, Hand delivered to Mr. Tiscornia (12/2/70)
1cc Mailed to Mr. Tiscornia
1cc " " Mr. J. T. Ryan
1cc to Mr. D. B. Cooley, Senior Geologist, GEOEX.

PLEASE NOTE, INITIAL, & KEEP MOVING

W.E.H.	☐	GHF	☒	P.H. Info only
E.G.H.	☐	DBC	☒	D.B.C. Handle
M.J.H.	☐		☐	
	☐		☐	
Handle C.S.L.	☒		☐	
info only J.P.M.	☒		☐	
M.L.	☐		☐	
	☐		☐	
J.B.	☐		☐	
	☐		☐	

DOVER COPPER MINING COMPANY
7810 SENDERO DE JUANA
ROUTE 6
TUCSON, ARIZONA ~~85704~~ 85718

October 22, 1970

HEINRICHS GEOEX
Cable: GEOEX
REC'D OCT 23 1970 REC'D
BOX 5964 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578

Heinrichs Geoexploration Company
P. O. Box 5671
Tucson, Arizona 85703

Gentlemen:

Complying with your letter of October 19, 1970, I am enclosing the following:

My letter of this date to the management of the Phelps Dodge, authorizing them to allow your Company to see the necessary data in our behalf, and

Your original letter of October 19, 1970, covering our contract with you which I have signed as per your request.

I have sent the carbon copy of your October 19th letter to Mr. J. T. Ryan in St. Joseph, Michigan, and have asked him to transmit the necessary funds to you as the Dover Copper Mining Company books are taken care of in his office.

Sincerely yours,

DOVER COPPER MINING COMPANY

By: Gary W. Tiscornia
Gary W. Tiscornia, President

GWT/as
cc: Mr. J. T. Ryan
St. Joseph Sav. & Loan Bldg.
St. Joseph, Mi. 49085

DOVER COPPER MINING COMPANY
7810 SENDERO DE JUANA
ROUTE 6
TUCSON, ARIZONA ~~85704~~ 85718

October 22, 1970

Phelps Dodge Corporation
Morenci, Arizona

Gentlemen:

This letter is to introduce you to Heinrichs Geoexploration Company whom we have retained as consultants.

I trust you will make all information pertinent to the Dover available to them.

Sincerely,

DOVER COPPER MINING COMPANY

By Gary W. Tiscornia
G.W.Tiscornia, President

GWT/as

HEINRICHS GEOEXPLORATION COMPANY

806 WEST GRANT ROAD, TUCSON, ARIZONA, 85703. P.O. BOX 5671. PHONE: (AREA CODE 602) 623-0578

October 19, 1970

Mr. Gary Tiscornia
President, Dover Mining Company
7810 N. Sendero Juana
Tucson, Arizona 85718

Dear Mr. Tiscornia:

Pursuant to your discussion with Mr. Heinrichs 14 October and the telephone discussion with Mr. Cooley 15 October, we are sending this letter contract for your approval and signature.

On or about the second week in November 1970, GEOEX will supply the necessary personnel to examine the geophysical, geochemical and geologic data and the core from the Dover property now held by Phelps Dodge in Morenci, Arizona.

We estimate that the time required for proper examinations of these data, and to prepare a report will involve an elapsed time of two to three weeks. Our report will consist of an appraisal of the data examined, copies of the data if available, and our opinion whether Phelps Dodge has made a proper evaluation of your property either as customary in the industry and/or as per the terms of your agreement with them, the latter provided we are furnished a copy of same.

The estimated billing will be approximately $1000.00 for this service. If gross discrepancies occur in interpretation of the data or detailed logging of the core is indicated, the cost may exceed this amount. If this is the case we will notify you as soon as this is apparent. In any event, our charge rate will be $150.00 per professional man/day worked plus direct related expenses.

Cont'd.....

Cont'd.....

When you return a signed copy of this contract please include a letter of introduction to the management at Phelps Dodge authorizing GEOEX to see this data in your behalf.

Company policy requires a 50% deposit for the estimated total amount of charges. A check for $500.00 returned with this contract is required. Additional billings will be presented periodically as work is accomplished and/or at the completion of the project. Please sign and return one copy of this letter contract.

Respectfully,
HEINRICHS GEOEXPLORATION COMPANY

Donald B Cooley

Donald B. Cooley
Senior Geologist

Approved: _____
Walter E. Heinrichs, Jr. President

Signed: _____ Date: 21 OCT 70

Enclosed: extra copy of letter

GEOEX Job # 586

DBC/re:

HEINRICHS GEOEXPLORATION COMPANY

806 WEST GRANT ROAD, TUCSON, ARIZONA, 85703. P.O. BOX 5671. PHONE: (AREA CODE 602) 623-0578

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The estimated billing will be approximately $1000.00 for this service. If gross discrepancies occur in interpretation of the data or detailed logging of the core is indicated, the cost may exceed this amount. If this is the case we will notify you as soon as this is apparent. In any event, our charge rate will be $150.00 per professional man/day worked plus direct related expenses.

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Respectfully,
HEINRICHS GEOEXPLORATION COMPANY

Donald B Cooley

Donald B. Cooley
Senior Geologist

Approved: _____
Walter E. Heinrichs, Jr. ~~President~~

Signed:_____ Date:_____

Enclosed: extra copy of letter

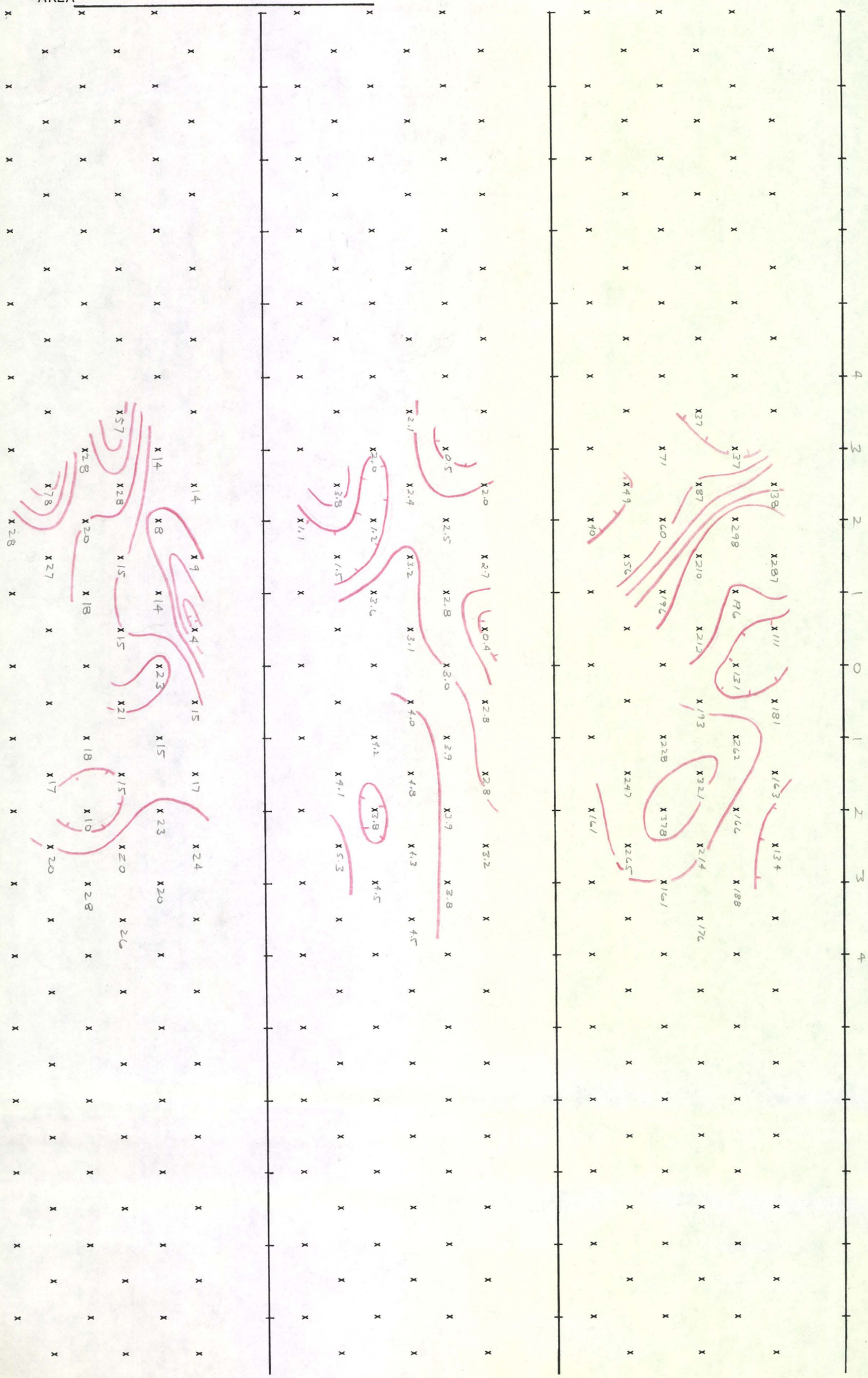
GEOEX Job # 586

DBC/re:

JOB#_____ LINE# E SP_____ a = _____ LOOKING_____

CLIENT_____ DATE_____ FREQUENCIES_____ & _____ Hz

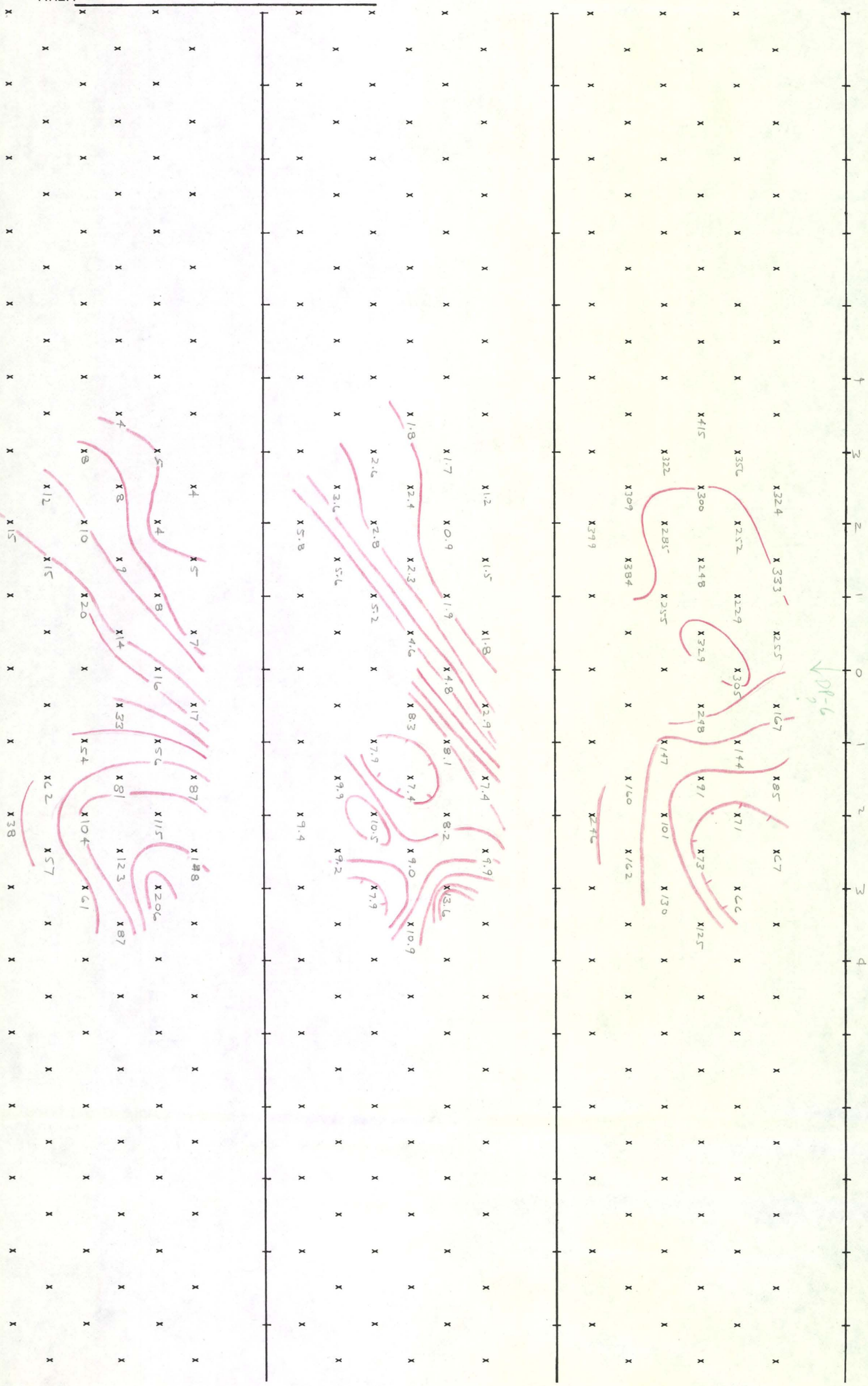
AREA_____



JOB# _____ LINE# D [redacted] SP _____ a = _____ [redacted] LOOKING _____

CLIENT _____ DATE _____ FREQUENCIES _____ & _____ Hz

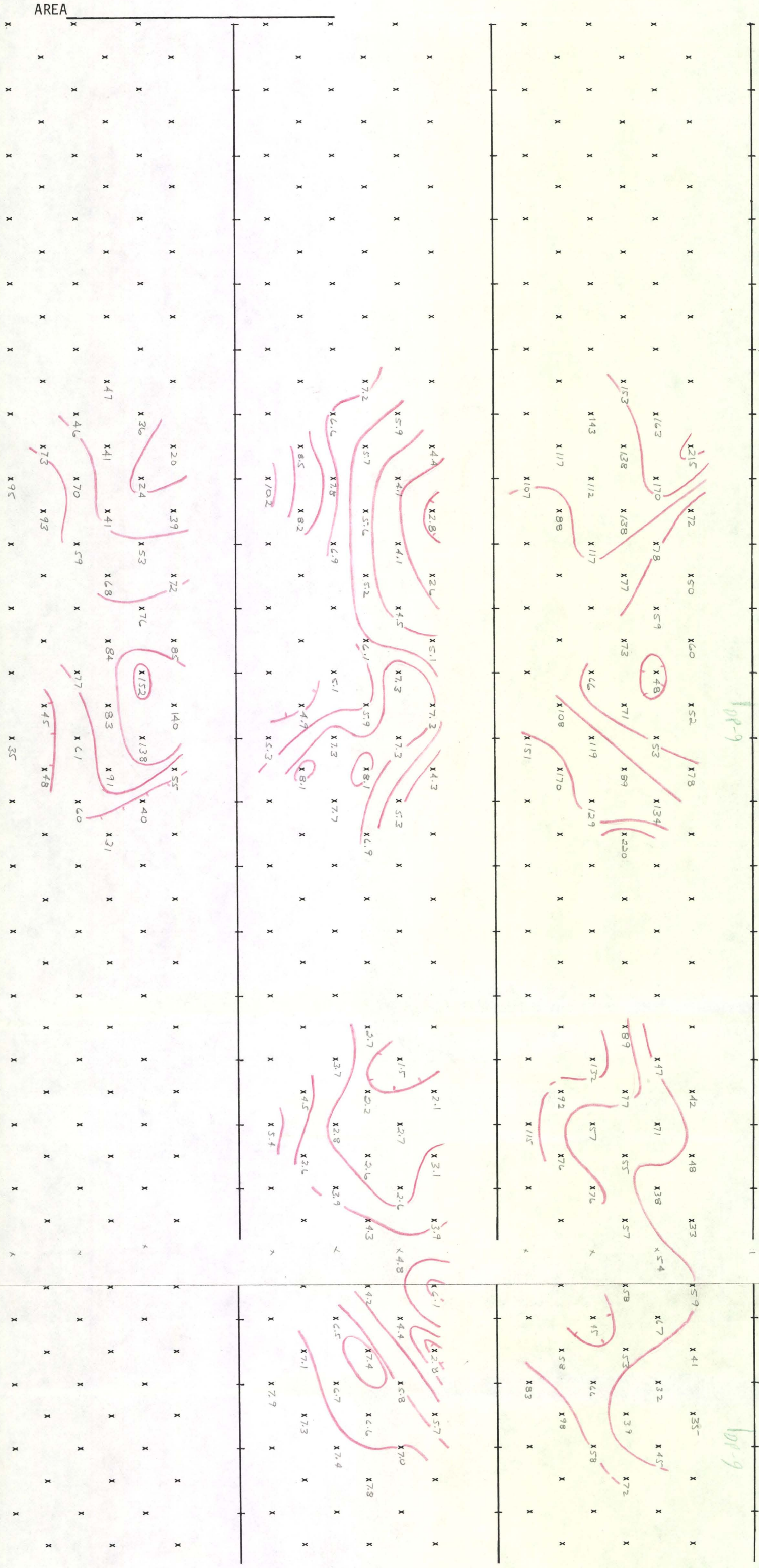
AREA _____



JOB#_____ LINE# [redacted] SP_____ a = [redacted] LOOKING_____

CLIENT_____ DATE_____ FREQUENCIES_____ & _____ Hz

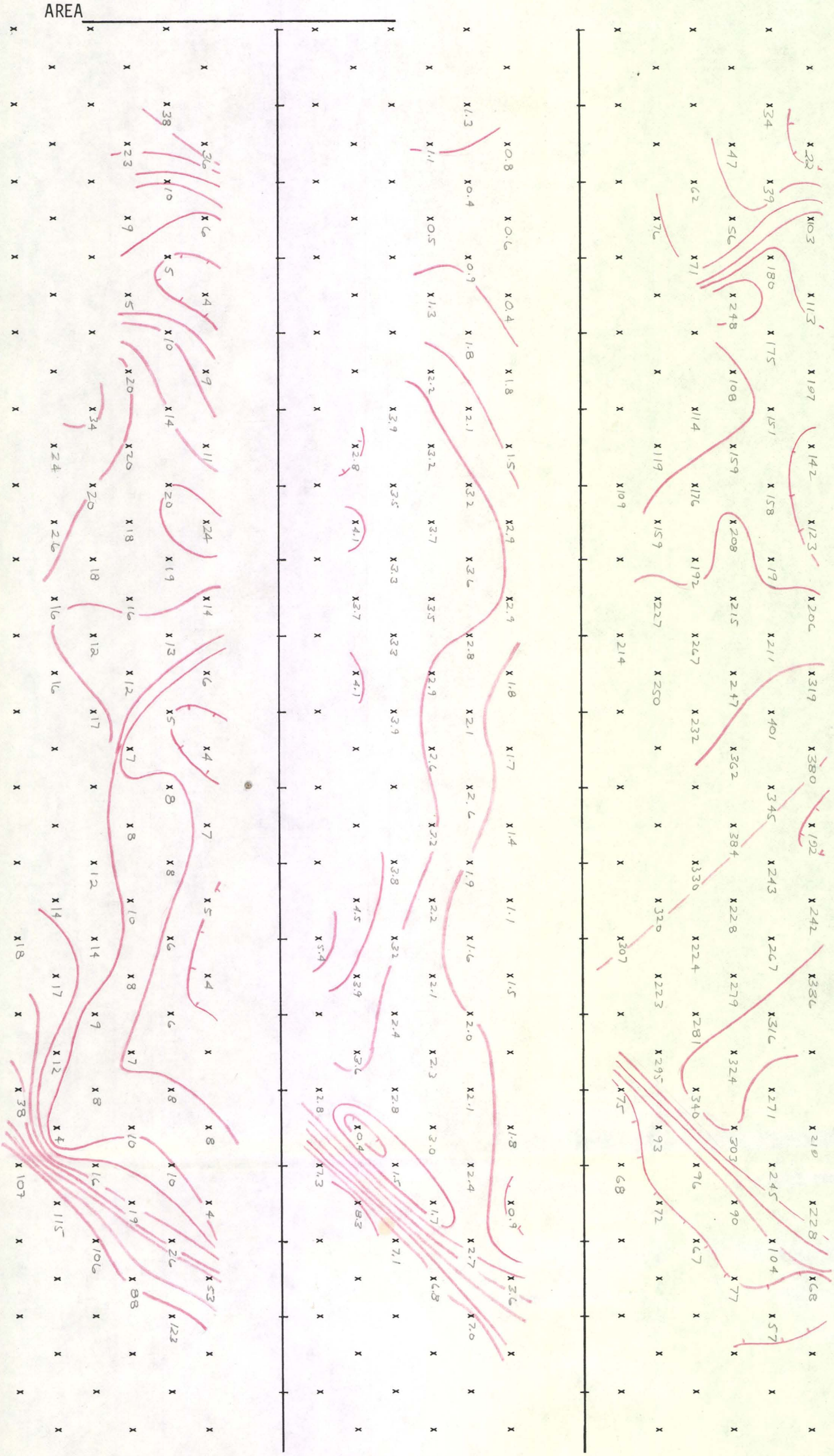
AREA_____



JOB#_____ LINE# [illegible] SP_____ a = _____ LOOKING_____

CLIENT_____ DATE_____ FREQUENCIES_____ & _____ Hz

AREA_____

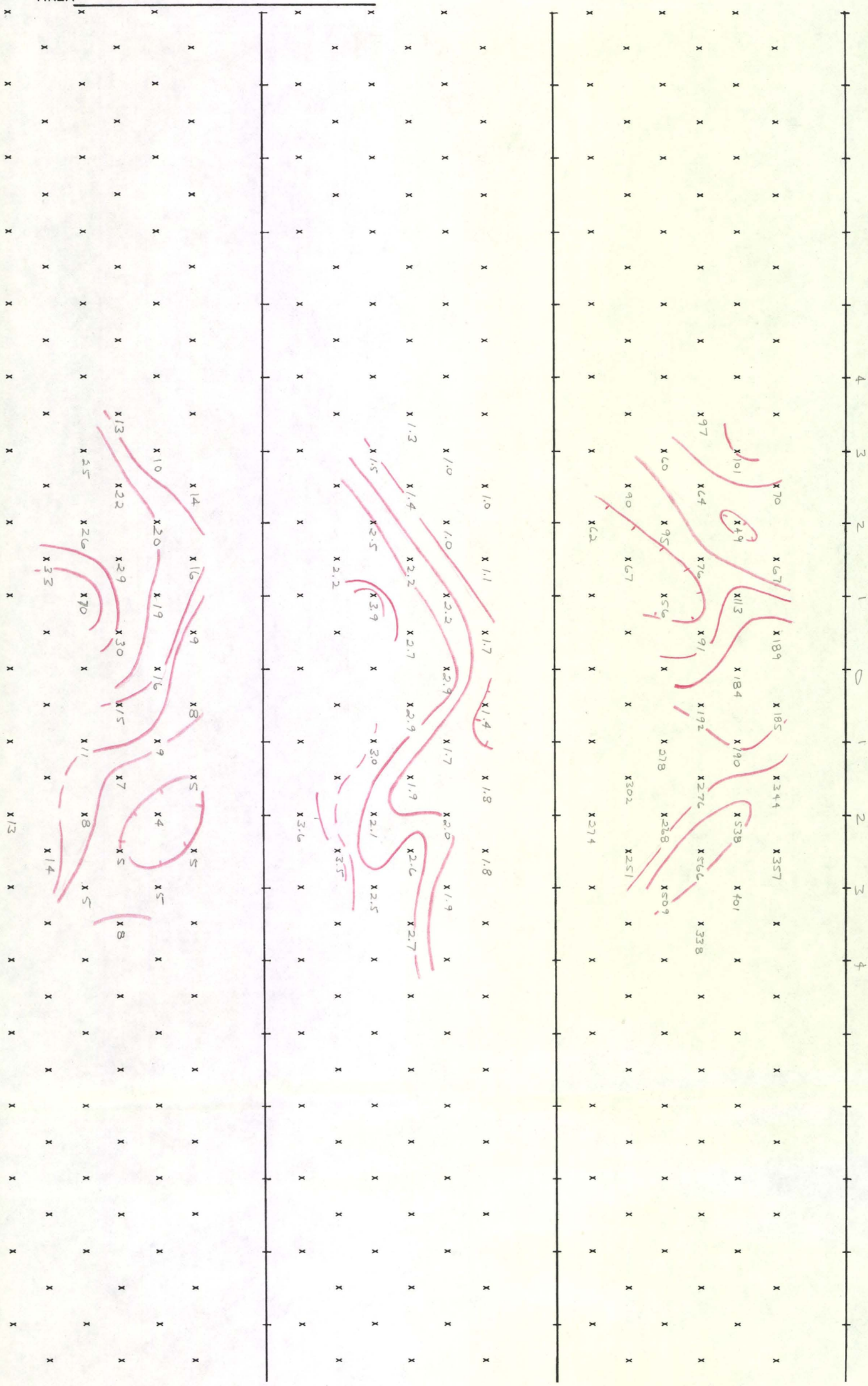


Probable data

JOB#_____ LINE# F_____ SP_____ a = _____ LOOKING_____

CLIENT_____ DATE_____ FREQUENCIES_____ & _____ Hz

AREA_____



JOB#_____ LINE# VIII SP_____ a = _____ LOOKING_____

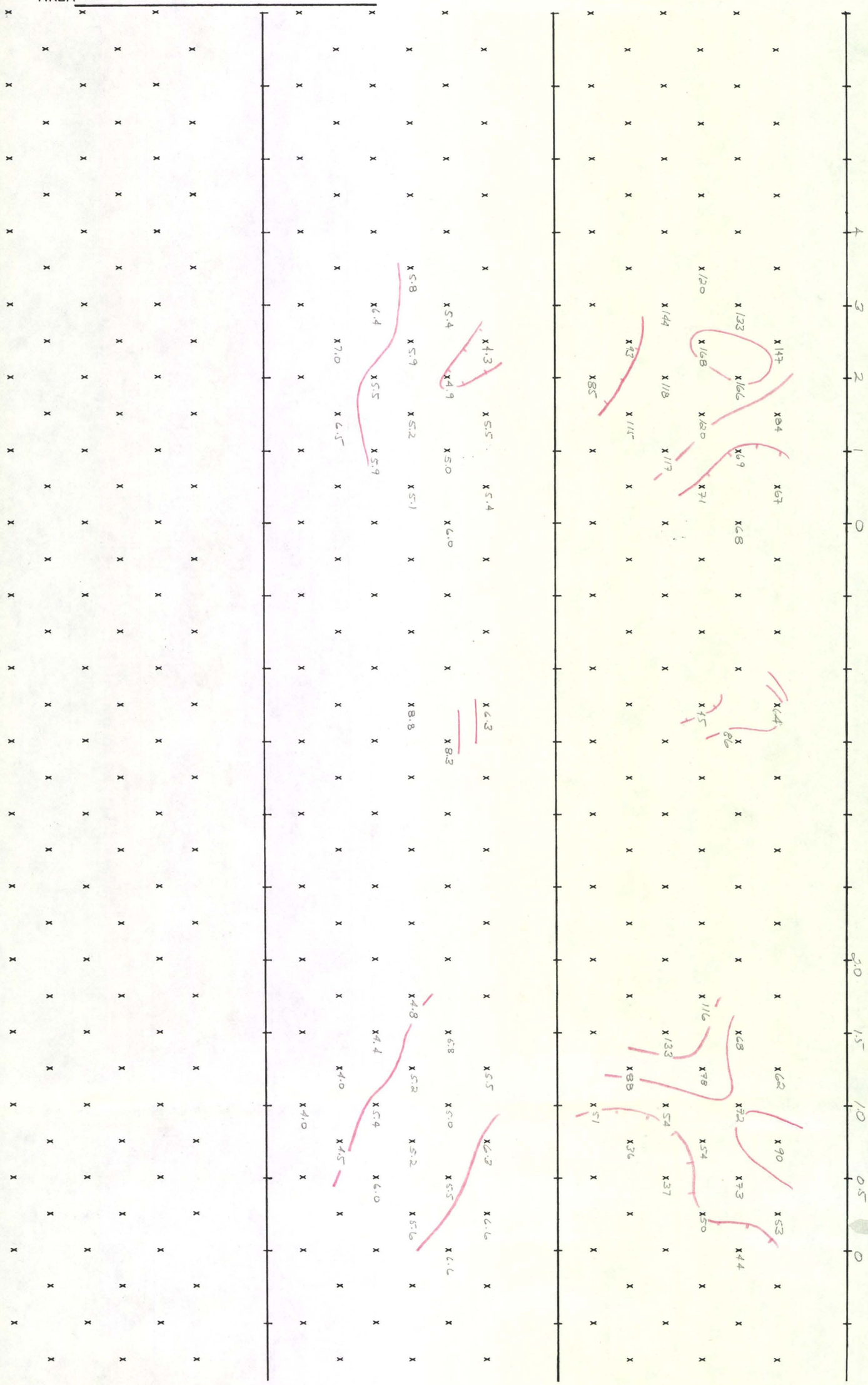
CLIENT_____ DATE_____ FREQUENCIES_____ & _____ Hz

AREA_____

JOB#_____ LINE# VII SP_____ a = _____ LOOKING_____

CLIENT_____ DATE_____ FREQUENCIES_____ & _____ Hz

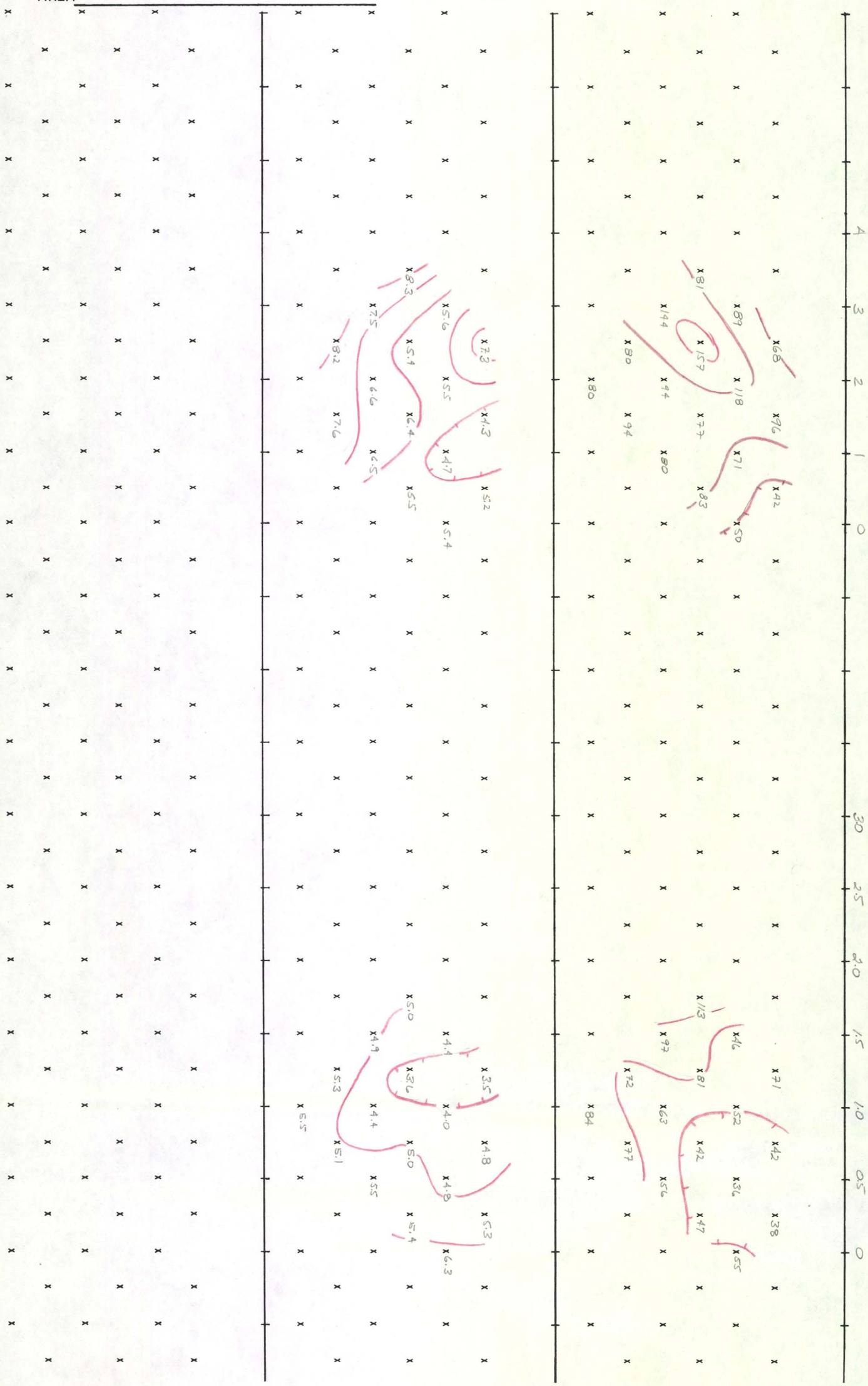
AREA_____



JOB#_____ LINE# VI SP_____ a = _____ LOOKING_____

CLIENT_____ DATE_____ FREQUENCIES_____ & _____ Hz

AREA_____



JOB#_____ LINE# IV SP_____ a = _____ LOOKING_____

CLIENT_____ DATE_____ FREQUENCIES_____ & _____ Hz

AREA_____

Geoex Job # 586
Dover Min Co. 11/12/70

John O'Neill

Jack M. Langton -
865-2273

Ron Boatman.

Gen. Rogers.

9/19/53 4-1
19535 Photo.

11-17-70

Job # 586 Dover Mining Co. Morenci — J.P.M. & W.E.H.

Magnetic & I.P. data from P.D. Douglas George Rogers

Get needed data from Dover M.C. Reports, maps, drillogs
U.S. Lime etc.
Order 1962 U.S.G.S. topo.

Selected District References

Consideration acquisition of large photo map - photo or mosiac

Consider preparing one or two rough typical cross sections

DP drill core: DP1 - 2035
DP2 - 1055
DP3 - 860
DP4 - 897
DP5 - 393
DP6 - 558
DP7 - 1010
DP8 - 840
DP9 - 1123
8811'

N. area
Center area
So "

Considerations

1. Need to check assays in extreme low background.
2. drill additional check holes or holes.

3. Exceptions to P.D. basement concept

4. In importance of keating vein? (not seen by WEA SPM) access through pits

5. Fault on west of pit

6.

Dover #586 12/1/70

PM

Gary Tiscornia

called Walt. re: letter interim

pick up Wed P.M. 2 Dec to

take back to Michigan

$135,000.00 more committed by P.D. for

further exploration of property if Dover

insists etc.

Walt suggests our final report to follow

their questions etc, except for a

supplemental letter ie G.P. data.

Dover Mining Co. Jh #586

11/30/70

John T. Ryan Called

re: Dover - P.D. Moreno Area

Engineers re highway 666 county road etc tarp. vs. permanent.

Wants to come out to Tucson on 8th or 10th-11th Dec. 9AM discussion

Tentatively JR. will call to confirm next day or two.

W.

Call from Mr Ryan
atty for Dover

11/17/70

Dover Mining Co.

$500.00

Mr Ryan. may come to Tucson?
Dec. 1-2-3

Call Garry Tesarowia.

297-1516 + assure him check is in the mail.

as of the morning mail (11/17/70) about 9:45 the letter was not in the mail box now was it delivered to the Price! JF

Done
JF.

W. A Calls: 54157 42432 43602

LONG DISTANCE PHONE CALL REPORT

Request of Mr. New

Date 11/13/70

Number Called 865-3772 (Exchange) | 865-4111 (Number)

Time Requested _____ A.M. P.M.

KIND OF SERVICE DESIRED

☒ Station to Station ☐ Person to Person

Individual John O'Niel Mgr.

Firm Phelps Dodge

Time Called 4:25 ~~A.M.~~ P.M.

Street Address

Time Connected 4:27 ~~A.M.~~ P.M.

City Morenci State Arizona.

Time Off 4:30 ~~A.M.~~ P.M.

Remarks: 8AM Tues. Mgrs office

& Motel reservations.

Minutes Elapsed Time

CHARGES: $

Phone Company Verification of Charge Given by

Switchboard Operator's Notations

☒ **Company Business**
☐ **Personal Call**

Charge to Dover Min Co. 386 A/C No.

Signed

Switchboard Operator

The **UTILITY** Line Form 39A

RYAN, McQUILLAN & VANDER PLOEG
ATTORNEYS AT LAW
ST. JOSEPH SAVINGS & LOAN BUILDING
SAINT JOSEPH, MICHIGAN
49085

JOHN T. RYAN
JAMES B. McQUILLAN
DAVID VANDER PLOEG

TELEPHONE
YUKON 3-2583
AREA CODE 616

November 16, 1970

AIR MAIL

Heinrichs Geoexploration Company
806 West Grant Road
Tucson, Arizona 85703

Re: Dover Copper Mining Company

Gentlemen:

Please find enclosed herewith Dover's check no. 289 in amount of $500.00 as a 50% deposit for the estimated total amount of charges.

Sincerely,

John T. Ryan dh

John T. Ryan

JTR:dh

Enc.

Rec'd 11/18/70
Job 586