

CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

The following file is part of the Walter E. Heinrichs, Jr. Mining Collection

#### **ACCESS STATEMENT**

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

#### CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

#### QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

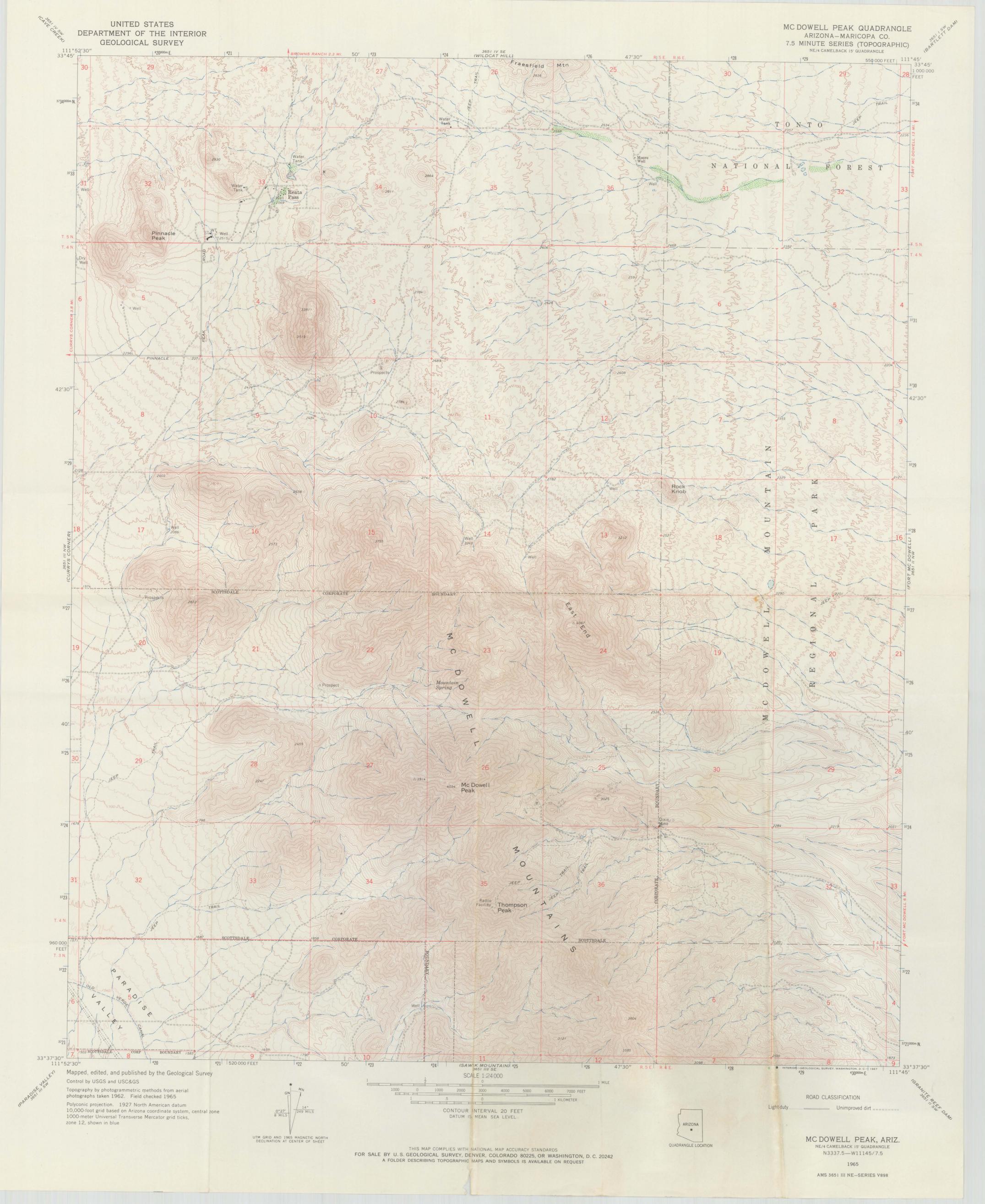
#### Drill hole No. 1 - DIXIE MINE - 306-68

Drill run	Core recovered	Total depth
2'	1.6	2.0')
3	1.8	5.0
1'	1.0	6.0 2-19-69
1'	0.8	7.0
2'	2.0	9.0
2'	45'	11.0
6'	6.0	17.0
5	5.0	22.0 2-20-69
5	5.0	27.0
3	3.0	30.0
10'	10:0	40.0'
3'	6.5'	47.0 2-21-69
3'	2.5'	50.0
10'	10.0	60.0'
10	10.0'	70.0 3 2-22-69
10'	10.0	80.0'5

	Orilled	Total Drilled	Recovered
Wednesday	3' feet	110 feet	3.0 feet
Heb 26	10	120	10
	10	140	4.5
Thursday	9	149	9
Feb 27	8	157	8
	1	158	1
	2.5	160.5	2.5
Friday	8.5	169	8.5
Feb 28	5.0	174	5.0
	6.0	180	6.0
Saturday	6	186	6.0
March/	9	195	9
	4.5	199.5	4.5
	5.5	205	5.5
	4	209	4
	4	213	4
Sunday	5	218	5
Sunday March 2	2.5	220.5	2.5
	9	229.5	9.0
	10	239.5	10.0
	7.5	247.0	7.5
	3	250.0	3.0

		,,		
Monday	Drilled	Total Prilled	Core Reco	vered
March 3	3 -	250 -	3	
	7-	257 -	7	
	10 -	267 -	7	
	8 -	275 -	8	
	5-	275 -	5	
	33			
Tuesday				Total Core
March 4	8	288	8	
	5	243 3' CORE LOS	, 5	
	7_	300 297-300	- 4	297
	20			
Wednesday				
March 3	8	308	8	305
.,0,0,0	3,5	311.5	2.5	307.5
	8.5	320	8.5	314
Thursday	4.5	324.5	4.5	3 20.5
March 6	5.5	330	5.5	326
	3	233	2.5	328.5
	7	340	6	334.5
Friday	9	349	9	343.5
Marchy	9	358	9	352.5
Saturday	2.5	360,5	2.5	355
March 8	8	368.5	8	363
	1.5	370	1.5	361.5
Sunday	5	375	5	369.5
Marchg	5	380	5	374.5
, , ,	10	340	10	384.5
	10	400	10	394.5
	NUMBER OF STREET			

	Drilled Total Drilled core Recov. Total core
Monday Marchio	Drilled Total Drilled core Recov. Total core



Date... 611 Shop No. 1309 HE

V A L U E S Latest Quotation

File No.

oz. Silver....

oz. Gold.....

lb. Copper.....

20 FEB 1969

Phoenix, Arizona 85001 P. O. BOX 1148

# rizona Assay Office

815 NORTH FIRST STREET

Phone: 253-4001

HEINRICH GEONCO P.O.BOX 5671 FUCSON 85703

Samples submitted for assay contain as follows:

THIS CERTIFIES

l lb. Zinc..... lb. Lead.....

Lbs.	20 Lbs.	Lbs.	Lbs.
2000 Lbs.	. 20	2240 Lbs.	22.4 Lbs.
2			
	L		Unit
Ton	Ton	Ton	Lon
Short Ton	Short Ton Unit	Long Ton	Long Ton Unit
Ś	Ś	ĭ	ĭ

TRACE  TRACE  TRACE  TRACE		SILVER	1111111	GOLD		TOTAL VALUE	PERCENTAGE	TAGE		
0.05-10 TRACE 00:055  O:	MARKS		PER TON		PER TON	of Gold & Silver	COPPER		REMAR	S
SERED ASS		.10		TRACE			0.035		i A cargari	
SERED AS	A Section of the sect									
ERED AS										
ERED AS										
ERED ASS										1.
ERED ASS									2.00	
								A STORY	RED ASS.	
								SAP	CAIR CTO	
								2	500	

Charges \$ .. 6 . 50

Assayer.....

JACK STONE REG.

Date... Shop No. 1309 HE

30 FEB 1969

Phoenix, Arizona 85001 P C ROX 1148

# Arizona Assay Office 815 NORTH FIRST STREET

oz. Gold

oz. Silver....

V A L U E S Latest Quotation

File No.

Phone: 253-4001

Samples submitted for assay contain as follows:

THIS CERTIFIES

lb. Zinc.....

lb. Lead..... lb. Copper.....

	2000 Lbs.	Unit 20 Lbs.		Unit 22.4 Lbs.	
O L	Short Ton	Short Ton Unit	Long Ton	Long Ton Unit	

TRACE PRADE OCC. TRACE OCC. TO GOID & SINNE CORPERATION OF		SILV	/ER		105		VALUE	TOTAL VALUE		PERCENTAGE	7	
OC-101 TRACE OC-201 OC-	MARKS	Ozs.	Tenths	PER TON	Ozs.		PER TON	of Gold & Silver	COPPER			REMARKS
A Tring	# 611 00-10		10		TRA	5			0.035			
A Tring												
ES TOTAL STATE OF THE STATE OF												4 -
A Tring	2		5									
S. Tark				. 0								
CS QUINGS												
THE REPORT OF THE PARTY OF THE				No. Co						L'OBTER	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
										To locate	TOIR	JER
			0 944							A CONTRACTOR OF THE PROPERTY O	5000	

JACK STONE REG. NO. 5479

Date 21 FEB 1969

Shop No. **612** File No. **1310 HE** 

V A L U E S Latest Quotation

rizona Assay Office

815 NORTH FIRST STREET

Phone: 253-4001 HEINRICH GEOSCO TUCSON Az.

> 1 lb. Lead..... 1 lb. Zinc..... THIS CERTIFIES

lb. Copper..... oz. Silver.... 1 oz. Gold.....

Phoenix, Arizona 85001 P. O. BOX 1148

Short Ton ...... 2000 Lbs.

#612 11*=20.55										
119-20.5		MARKS	SILVER PER TON	VALUE	PER TON		TOTAL VALUE		VIAGE	REMARKS
11%-20%5% 410 TRACE 0.030			Ozs.   Tenths	PER TON			of Gold & Silver	COPPER		
A RED TO	#613	11*-30.5*	10		THACE			0.030		14
A STATE OF THE PROPERTY OF THE										
RED TO SECOND TO										
A RED AS										
A CONTRACTOR OF THE PARTY OF TH						¥				
RED AS										
RED AS										
									GRED	100
										THE STATE OF THE S
									Se de la constant de	RES
										9
							The state of the s		7	2

Charges \$.....

ANDY CHUKA, PRINT

JACK STONE REG. NO. 547

Assayer

Date 31 FEB 1969

File No. .1310 HE Shop No. 612

V A L U E S Latest Quotation

oz, Silver....

oz. Gold.....

lb. Copper.....

1 lb. Zinc.....

lb. Lead.....

Phoenix, Arizona 85001 P. O. BOX 1148

Arizona Assay Office 815 NORTH FIRST STREET

Phone: 253-4001

HEINRICH GEO.CO TUCSON Az.

.4 Lbs.	RKS			÷ e	= ==			
Long Ton Unit 22.4 Lbs.	REMARKS					200	RES	× ×
Long Ton L					CRED	FICATE	Pod	CONTRACT OF
	PERCENTAGE					263	7	1
	GT COD DATE	0.030						
	TOTAL VALUE PER TON of Gold & Silver							
	VALUE PER TON							
	GOLD PER TON Ozs.   100ths	TRACE						
AZ.	VALUE PER TON			s				
1202	SILVER PER TON Ozs.   Tenths	10						
Samples submitted for assay contain as follows:	MARKS	111-30-51						
Samples st contain as		#613						

Charges \$.....

Assayer

JACK STONE REG. No. 5479

Shop No. .614

V A L U E S Latest Quotation

oz. Gold.....

oz. Silver....

lb. Copper.....

lb. Lead.....

Samples submitted for assay contain as follows: THIS CERTIFIES 1 lb. Zinc.....

Date 22 FEB 1969

Arizona Assay Office

815 NORTH FIRST STREET

Phone: 253-4001

HEINRICH GEO: CO W.O.# 306 TUCSON

Phoenix, Arizona 85001 P. O. BOX 1148

Short Ton Unit ..... 20 Lbs. Short Ton ...... 2000 Lbs. Long Ton ..... 2240 Lbs. Long Ton Unit ...... 22.4 Lbs.

OF LOW TRACE  OF LOW TRACE  OF LOW TRACE  OF COS  OF LOW TRACE  OF COS  OF COS			SIL	-		-	OLD	1111111	-	JE	PERCENTAGE		
20.5°=30° 30°=40° 40°=50° 40°=50° 10 TRAGE 0.03		MARKS	Ozs.		PER TON	-4-	100ths	PER TON	-	er COPF	ER		REMARKS
30°-40° 10 TRACE 0.03 40°-50° 10 TRACE 0.04	# 613	20.51-301	-W	10		TR	CE			0.03			
615 40°=50° .10 TRACE 0.04	# 614	301-401		10		TR	CE			0.0	23		
A ASS	# 615	40*~50*		10		TR	CE			0.0	4		
A AS													
A SS A S													
A AS													
TER CATE AND THE C											THE STATE OF THE S	AS	
											37	CATE	VER
											1	A Ch.	£5

Charges \$.....

Assayer.....

Date

Shop No. ....

Latest Quotation

lb. Copper.....

oz. Silver.....

oz. Gold.....

1 lb. Zinc.....

lb. Lead....

Date....... 23. FEB 1969

## Arizona Assay Office

815 NORTH FIRST STREET

Phone: 253-4001

HEINRICH GEO. CO TUCSON

Phoenix, Arizona 85001 P. O. BOX 1148 

Long Ton		REMARKS		CONTRACTOR DESCRIPTION OF THE PERSON OF THE
Long Tor Long Tor	PERCENTAGE		•	
	-	PER TON	of Gold & Silver  COPPE	
		VALUE	PER TON	
	GOLD	PER TON	Ozs. 100ths	
# 306		VALUE	PER TON	
AZ. W.O.	SILVER	PER TON	Ozs.   Tenths	
THIS CERTIFIES Samples submitted for assay contain as follows:		MARKS		1 4 4

15		SILVEK TONI		MALLIE	DED TOP	MALLIE	TOTAL VALUE		PERCEIN I AGE	LAGE	
	MARKS	Ozs.   Tenths		PER TON	Ozs.   100ths	PER TON	of Gold & Silver   COPPER	COPPER	1		REMARKS
# 613	30.51-30	•	010		TRACE			0.03			
# 614	301-401	•	9		TRACE			0.03	- 3		
# 615	401-501		9	20.5	TRACE		2	90.0			
					e3 1				1		
									¥.		
			(Barrell)	4.59					1/1	FRED	
				20.00			25 A		0.37	FICATE & TY	
									1	RES	
										Same of the same o	

JACK STONE REG. NO. 5479

Shop No. 616-617 File No. 1314HE

V A L U E S Latest Quotation

Date. 24 FEB1969

#### rizona Assay Office

815 NORTH FIRST STREET

Phone: 253-4001

HEINRICH GEO. CO TUCSON

THIS CERTIFIES

lb. Copper..... lb. Lead..... lb. Zinc.....

oz. Silver.... oz. Gold.....

Phoenix, Arizona 85001 P. O. BOX 1148 .. 2000 Lbs. ..... 20 Lbs. 2240 Lbs. 22 4 I hs Short Ton Unit ..... Short Ton ..... Long Ton ..... Long Ton Unit

Long Ton Unit 22.4 Lbs.		REMARKS	
Long Ton	PERCENTAGE	GOPPER	
90	TOTAL VALUE	PER TON Oze 1100ths PER TON of Gold & Silver   GOPPER	
W.O.# 306	7441115	PER TON	-
	GOLD	Oze 1100ths	
Az	7/4/1/15	PER TON	F
	SILVER	10	
Samples submitted for assay contain as follows:		MARKS	616

	MARKS	PES		VALUE	PER TON	JON JON	VALUE	TOTAL VALUE	PERCENTAGE	TAGE	REMARKS
		Ozs.	Ozs. Tenths	PER TON	Ozs.	100ths	PER TON	of Gold & Silver	COPPER		
#616	504-601		•10		TR	TRACE			0.035		
1104	60*=70*		٠ <u>.</u>		TR	TRACE			0.015		
		7									
										STERED ASS	
										STATIFICA E	JER
									1		
									9	1	

Charges \$.....

ANDY CHUKA, PRINT

JACK STONE REG. NO. 5479

Date...... 34. FEB1969 Shop No. 616-617....
File No. 1514HE....
VALUES
Latest Quotation

Phoenix, Arizona 85001 P. O. BOX 1148

# Arizona Assay Office

815 NORTH FIRST STREET

oz. Silver.....

oz. Gold.....

lb. Lead.....

1 lb. Zinc.....

lb. Copper.....

Samples submitted for assay contain as follows:

THIS CERTIFIES

Phone: 253-4001 HEINRICH GEO. GO TUGSON W.O.A.

Lbs.	Lbs.	Lbs.	Lbs.
2000 Lbs.	Short Ton Unit 20 Lbs.	2240 Lbs.	
Ton.	Ton (	Ton.	Ton L
Short Ton	Short	Long Ton	Long Ton Unit

		SILVER	7441116	GOLD	MALLIE	TOTAL VALUE		PERCENTAGE		
	MARKS	Ozs. Tenths	PER TON	Ozs. 100ths	PER TON	of Gold & Silver	CODDED			REMARKS
#616	508_80°	ç					0.038			
4617	601-701	8		TRACE			0.015			
								,		
		16		2						
									CLASSIC CONTROL OF THE PARTY OF	
									O THE	455AL
									Jan X	PIRES
									N. C.	Set 1
		The second second								Chal I
										100

Charges \$.....

Assayer.....

JACK STONE REG. NO. 5479

Shop No. 6/8 Date 2/27/68

Arizona Assay Office

Phoenix, Arizona 85001 P. O. BOX 1148

815 NORTH FIRST STREET

Hone: 253-4001

THIS CERTIFIES Samples submitted for assay contain as follows:

1 lb. Zinc.....

oz. Silver.....

l oz. Gold.....

Latest Quotation

VALUES

File No.

	I SIL	VER		-	GOLD		TOTAL VALUE		PERCENTAGE		
MARKS	PER Ozs.	Dzs.   Tenths	VALUE PER TON	Ozs.	TON 100ths	VALUE PER TON	of Gold & Silver	Copper		REMARKS	s
(018 - 70' - 80'		0/,			٢			0.035			
		, 10			MIL			0.03			
620-89,5-99'		, 10			7			0,035			
621- 99: -108"		01,			1			0.035			
			HO I	ORONIO CROE	0 14		A.		ERED 40		
			D.	HOM, ARESTO	7.4		1	33	SUFICATE E	ST. C.	
				14	2	6961		4	noon	NS/1	
			BDX 5671	1			85703			8	3
						CES 0676			161 16 05		

Charges \$.....

ANDY CHUKA, PRINT

JACK STONE REG. NO. 5479

Shop No. 6/8 File No.

Date 2/27/6/

Arizona Assay Office

815 NORTH FIRST STREET

l oz. Gold..... l oz. Silver.....

Latest Quotation

VALUES

1 lb. Copper.....

1 lb. Lead.....

1 lb. Zinc.....

Phone: 253-4001 Jeinnich Deserploration Co

Lbs. Lbs. Short Ton Unit ..... 20 Lbs.

Short Ton ...... 2000 Lbs. P. O. BOX 1148

Phoenix, Arizona 85001

Long Ton 2240 Lb	for assay Long Ton Unit 22.4 Lb
THIS CERTIFIES	Samples submitted for as contain as follows:

618 - 70 - 80' , 10   7   618 - 70' - 895' , 100   7   7   620 . 895   995'   100   7   7   620 . 895   995   7   7   7   7   620 . 895   995   7   7   7   7   7   7   7   7   7	PER TON	of Gold & Silver (00,000)	
	1 1 41	0,03	
	1 1	0,03	
	1- 1-	0,035	
	1-	720	
		((, ())	
			AFINED AS
			CONTROPTE OF STA
			Lac Contract
			APPARA

JACK STONE REG. NO. 5479

Shop No. 622

Date 3/28/69

# Arizona Assay Office

815 NORTH FIRST STREET

Flennich Les. Co Phone: 253-4001

lb. Copper.....

l oz. Silver.....

l oz. Gold.....

1 lb. Lead..... 1 lb. Zinc..... THIS CERTIFIES

Latest Quotation

VALUES

File No. .....

Phoenix, Arizona 85001 P. O. BOX 1148 Short Ton ...... 2000 Lbs. Short Ton Unit ..... 20 Lbs. Long Ton ..... 2240 Lbs. Long Ton Unit ...... 22.4 Lbs. 

Samples submitted for assay contain as follows:					-	Long Ton Unit .	Long Ton Unit 22.4 Lbs.
	I SILVER		GOLD		TOTAL VALUE	PERCENTAGE	
MARKS	PER TON	VALUE	PER TON	VALUE	PER TON		REMARKS
	Ozs. (Tenths	PER TON	Ozs.   100ths	PEK ION	of Gold & Silver		
					addea		
4623 108-1175	0/0		1001		0.035		
1					)		
# 6,43-1173 1263	0/'		TRACE		40.0		
41 18							
# 624-1262 141-	0/1		TRACE		0.065		
The state of the s							

BOX 5671 TUCSON, ARIZONA 85703

MA

GEOEK CEOEK

Phone: (AREA 602) 623-0578

Assayer.....

JACK STONE REG. NO. 5479

ANDY CHUKA, PRINT

Charges \$.....

Shop No. 622 Date 2/28/69

128/69

Arizona Assay Office

815 NORTH FIRST STREET

Hone: 253-4001

lb. Lead.....

lb. Zinc.....THIS CERTIFIES

V A L U E S Latest Quotation Samples submitted for assay contain as follows:

Phoenix, Arizona 85001 P. O. BOX 1148 

	SILVER		GOLD	VALUE	TOTAL VALUE	PERCENTAGE	
MARKS	Ozs. Tenths	PER TON	Ozs. 100ths	PER TON	of Gold & Silver		REMARKS
#622.108-1175	0/1		1900		0,035		
# 623.117, \$ 1265	0/'		TRACE		0.04		
# 624, 1265 1412	01'		TRACK		0.065		
						ENEU ASS.	
						E GONERAL E	ER
							-

Charges \$.....

ANDY CHUKA, PRINT

JACK STONE REG. NO. 5479

Shop No. 625 Date 3/1/69

## Arizona Assay Office

815 NORTH FIRST STREET

l oz. Gold......

V A L U E S Latest Quotation oz. Silver...... Ib. Copper.....

1 lb. Lead......

1 lb. Zinc.....

Samples submitted for assay contain as follows:

Henne: 253-4001 ges Co.

Phoenix, Arizona 85001 P. O. BOX 1148 

	SILVER		GOLD	11	TOTAL VALUE	PERCENTAGE	
MARKS	Ozs.   Tenths	VALUE PER TON	Ozs. 100ths	VALUE PER TON	of Gold & Silver	poed	REMARKS
3051-141-7505	.80		TRACE			2,35	
# 626-1505 160	.50		TRACE			0.07	
# 627 160-170	50		711			0,075	
					*1		
						ERED Age	
				ş		CONTENT OF THE PARTY OF THE PAR	
						Jan J	
						- States	
						61 10 00	

Charges \$.....

ANDY CHUKA, PRINT

אטער

JACK STONE REG. NO. 5479

Date 3 March 1969

" Shop No. **628**...

Phoenix, Arizona 85001 P. O. BOX 1148

Arizona Assay Office

815 NORTH FIRST STREET Phone: 253-4001 HEINRICH GEO: CO TUCSON AZ: 85703

lb. Copper.....

lb. Lead..... lb. Zinc.....

V A L U E S Latest Quotation

oz. Gold.....

oz. Silver.....

Samples submitted for assay W. O. #306 contain as follows:

THIS CERTIFIES

Lbs.	. 20 Lbs.	Lbs.	Lbs.
2000 Lbs.	20	2240 Lbs.	22.4 Lbs.
Short Ton	Short Ton Unit		Long Ton Unit
Ton	Ton	Ton	Ton
Short	Short	Long Ton	Long

628 170*=180* 639 180*=190* 630 190*=200* 631 200*=200* 632 209*=218.5* 635 218.5*=228* 634 634 638 638 638 638 639 639 631 638 633 634 634 634 638 638 638 638 638 638 638 638 638 638	TOTAL VALUE
8 170*=180* 3 180*=190* 0 190*=200* 1 200=209* 3 209*=218.5* 3 218.5*=238* 328*=238* 340 1	of Gold & Silver   GOPPER
9 180° = 190° • 40 0 190° = 200° • 40 1 200° = 209° • 40 3 209° = 218° 5° = 28° = 28° = 28° • 28	0000
1 200= 209* .40 2 209*=218.5* .40 3 218.5*=228* .40	0.01
200° 209° .40 209° ~218.5° ~28° .40	0.01
3 209*=218.5* .40 3 218.5*=228* .40	0.01
3 218,5°=228° 228°=238° .40	0.01
328**238*	0.005
	90000
635 238*=246.5* *40 NIL	0.005

Charges \$.....

Assayer

JACK STONE REG. NO. 5479

Date 3 March 1969

Shop No. 638 .....

File No.

Arizona Assay Office

Phoenix, Arizona 85001 P. O. BOX 1148

815 NORTH FIRST STREET

Phone: 253-4001

oz. Silver.....

oz. Gold..... V A L U E S Latest Quotation

lb. Lead lb. Copper.....

l lb. Zinc.....

THIS CERTIFIES

Short Ton Unit ...... 20 Lbs. Short Ton ...... 2000 Lbs. .... 2240 Lbs. Long Ton .....

HEINRICH GEO. CO

		SILVER	VALUE	GOLD	VALUE	TOTAL VALUE		PERCENTAGE	
	MARKS	Ozs. Tenths	PER TON	Ozs. 100ths	PER TON	of Gold & Silver	COPPER		KEMAKKS
628	1701-1801	40		TRACE	279		10.0		
629	1801-190	40		- A-1			10.0		
630		4					5 6		
	190 - 200	0		TIN			10.0		
109	808 -008	40		TRACE			0.03		
632	910 000	40		NIL			10		
633	- 60	.40		NIL			000		L D A D
634	0	.40		NIL			0.005	166	CATE ELERA
635		.40		NIL			0.005	373	Se S
	2020 000								The same

Charges \$.....

ANDY CHUKA, PRINT

JACK STONE REG.

Date. 5 March 1969

Shop No. 636-39

File No.

V A L U E S Latest Quotation

Phoenix, Arizona 85001 P. O. BOX 1148

> rizona Assay Office 815 NORTH FIRST STREET

Phone: 253-4001

HEINRICH GED: CO TUCSON AZ: 85703

Samples submitted for assay contain as follows:

THIS CERTIFIES 1 lb. Zinc.....

lb, Lead....

oz. Silver..... lb. Copper.....

oz. Gold.....

Short Ton Unit ...... 20 Lbs. Short Ton ..... 2000 Lbs. Long Ton ..... 2240 Lbs. Long Ton Unit ...... 22.4 Lbs.

	SILVER DED TON	VALUE	GOLD	VALUE	TOTAL VALUE	PERCENTAGE	
MARKS	Ozs.  Tenths	PER TON	Ozs.   100ths	PER TON	of Gold & Silver COPPER	PER	KEMAKKS
# 656 246.5*+254.5*	.40		NIL		0.00	25	
# 637 254.5*~264*	.40		NÎL		5	(A)	
# 638¢ 264*~273,5*	.40		NIL		0 0 0 0	25	
# 639	.40		NIL		0.005	25	
							SED AS
					1.	5.3	THE STATE OF THE S
						7	R. L. S. L.

Charges \$.....

ANDY CHUKA, PRINT

JACK STONE REG. No. 547

Date... 5... March... 1969

Shop No. 636-39 File No. V A L U E S Latest Quotation

Phoenix, Arizona 85001 P. O. BOX 1148

#### Arizona Assay Office

815 NORTH FIRST STREET

oz. Silver..... lb. Copper.....

1 lb. Zinc.....

1 lb. Lead.....

l oz. Gold.....

_	
0	
0	
$\stackrel{\sim}{=}$	
4	
253-400	
T)	
7	
45	
Phone	
_	
0	
_	
0	
-	
	100
	-
	0
	~
	min.
	C) (1)
	$\circ$
	87
	12-75-
	[+1] ·
	pic as
	OM
	<c;< td=""></c;<>
	Part.
	Sept.
	0
	h-1 1-
	~
	H, C
	22 02
	but F3
	6.7
	E D
	TT F-4
15450	Stand Pr. 4

Lbs.	Lbs.	Lbs.	Lbs.
2000 Lbs.	Short Ton Unit 20 Lbs.	Long Ton 2240 Lbs.	Long Ton Unit 22.4 Lbs.
Ton	Ton	Ton	Ton
Short Ton	Short	Long	Long

# 636 # 637 # 637 # 638 # 638 # 638 # 639 # 639	PER TON	of Gold & Silver 110 D Burp		Coccan
638 638 638		0.00		
346.5°-354.5° .40 638° .40 638° .40 839 373.5°-382.5° .40		0.00		
638' 40 638' 40 638' 40 364'-273.5' 40 639 373.5'-382.5' 40		0.00		
638 -364 -40 864 -273.5 -40 639 273.5 -282.5 -40		0.01		
638 873.5°-282.5°		0.005		
639 273.5°-282.5°				
373.5 -382.5				
		0000		
			FRE	A Poly
			S SEACATE	15 S
				RES
				Fred

Charges \$.....

ANDY CHUKA, PRINT

JACK STONE REG. NO. 5479

Hareh 1969  Arizona Assay Office  815 NORTH FIRST STREET Phone: 253-4001	Short Ton	COID   PERCENTAGE
Date. 6 March 1969 <b>Arizon</b> 81	HEINRICH GEOSCO TUCSON ARIZONA W: 0:# 306	I CIIVED I
Shop N.G. 41 File No. v A L U E s Latest Quotation 1 oz. Gold. 1 oz. Silver. 1 lb. Copper.	1 lb. LeadTinc	

	SILVER	-	COLD		TOTAL VALUE		PERCENTAGE	
MARKS	Ozs.  Tenths	VALUE PER TON	Ozs.   100ths	PER TON	of Gold & Silver   COPPER	COPPER		REMARKS
#640	30		NIL			0.005		
#641	Co		N L			0.005		
				*				
							RED	186
							CONTROPTE CATE	TER TOUR
								8
								100
							2 - C - C - C - C - C - C - C - C - C -	10

Charges \$.....

Assayer.....JACK STONE REG. NO. 5479

Date. 6 March 1969 Shop N640-41

V A L U E S Latest Quotation

l oz. Gold..... oz. Silver.....

1 lb. Copper..... 1 lb. Lead..... 1 lb. Zinc.....

Phoenix, Arizona 85001

Arizona Assay Office

Phone: 253-4001

815 NORTH FIRST STREET

P. O. BOX 1148	Short Ton

THIS CERTIFIES Samples submitted for assay contain as follows:	TUCSON W.O.# 306		ARIZONA					Long Ton 2240 Lbs. Long Ton Unit 22.4 Lbs.
× × × × ×	SILVER PER TON	VALUE	PER TON	VALUE	TOTAL VALUE	PERCENTAGE	AGE	REMARKS
	Ozs.   Tenths	PER TON	Ozs. 100ths	PER TON	of Gold & Silver	CONTRACTOR		
#640						900		
#641	2		1					
292 - 302	80		NEL			9000		
						4		
				, b			CKED AS	
							TIFICA E DOS	
						4	RES POR	R

Charges \$....

ANDY CHUKA, PRINT

JACK STONE REG. NO. 5479

Date. 7. March 1969 Shop No. ...642-43

Phoenix, Arizona 85001

Irizona Assay Office

V A L U E S Latest Quotation

oz. Gold..... oz. Silver.....

File No.

P. O. BOX 1148

Short Ton ...... 2000 Lbs.

Long Ton .....

Long Ton Unit ...... 22.4 Lbs.

815 NORTH FIRST STREET Phone: 253-4001

HEINRICH GEO. CO

Samples submitted for assay contain as follows:

THIS CERTIFIES

lb. Lead..... lb. Zinc.....

lb. Copper.....

3 5	Ozs.   Tenths	VALUE PER TON	PER TON Ozs.   100ths	VALUE PER TON	PER TON of Gold & Silver	COPPER		REMARKS
SCS - STT	\$30		NIL			0.005		
# 643 311* - 320.5*	.30		NIL	,		0.005		
						93		
						CATE	1 × × ×	
						JA JA	S (20)	

Charges \$.....

Assayer....

Date....7...Maroh...1969 Shop No. ...642-43

Phoenix, Arizona 85001 P. O. BOX 1148

## Arizona Assay Office

815 NORTH FIRST STREET Phone: 253-4001

> oz. Silver..... lb. Copper..... 1 lb. Lead.....

oz. Gold.....

V A L U E S Latest Quotation

Samples submitted for assay contain as follows:

THIS CERTIFIES 1 lb. Zinc.

HEINRICH GEO. CO

Short Ton 2000 Lbs.	Short Ton Unit 20 Lbs.	Long Ton 2240 Lbs.	Long Ton Unit 22.4 Lbs.	

	SILVER	-	-	GOLD	4111111	TOTAL VALUE		PERCENTAGE	.GE		and the second second
MARKS	Ozs. Tenths		PER TON	Ozs. 100ths	PER TON	of Gold & Silver	COPPER	o:		REM	REMARKS
100	•	-30		NTL			0.005				
311 - 320.5	•	-30	**	NT			0.005				
										15 (546)	
									- A		
įa.								100	CATE		
								The state of the s	Q A	2	
										sf (0,1)	
								1	1000	- 111	

Charges \$.....

ANDY CHUKA, PRINT

JACK STONE REG. NO. 5479

Date....

644-45

Shop No. ...

V A L U E S Latest Quotation

8 Mageh 1969

rizona Assay Office

Phoenix, Arizona 85001 P. O. BOX 1148

815 NORTH FIRST STREET

Phone: 253-4001

HEINRICH GEOSCO TUCSON ARIZONA

l lb. Lead.....

l lb. Zinc.....

lb. Copper.....

oz. Silver.... l oz. Gold.....

THIS CERTIFIES Samples submitted for assay contain as follows:

Lbs.	Lbs.	Lbs.	Lbs.
2000 Lbs.	20 Lbs.	2240 Lbs.	22.4 Lbs
	Jnit		Long Ton Unit
Short Ton	Short Ton Unit	Long Ton	Ton U
Short	Short	Long	Long

320.5-329* O.30 TRACE PER TON of Gold & Silver GOPPER  320.5-329* O.30 TRACE O.0015  NIL O.025		SILVER		GOLD		TOTAL VALUE	PERCENTAGE	
0.30 TRACE 0.015 0.30 NIL 0.025	MARKS	Ozs. Tenths	VALUE PER TON	Ozs. 100ths	PER TON	of Gold & Silver	COPPER	REMARKS
329*=339* 0.025 NIL  0.025		0.30		TRACE			0,015	
329*=339* 0.30 NIL 0.025								
CONTRIBUTED AS		0.30		NIL			0.025	
ALERED AS								
S ANTER AS								
CEE							No.	RED ASO
							5/5	FICATE
							30	

Charges \$.....

JACK STONE REG. NO. 5479

Shop No. 644-45

V A L U E S Latest Quotation

Date 8 Nagoh 1969

## Arizona Assay Office

815 NORTH FIRST STREET

Phone: 253-4001

HEINRICH GEO.CO TUCSON ARIZONA

Samples submitted for assay contain as follows:

THIS CERTIFIES

l lb. Zinc.....

oz. Silver

oz. Gold.....

lb. Copper..... lb. Lead.....

Phoenix, Arizona 85001 P. O. BOX 1148 Short Ton ...... 2000 Lbs. Short Ton Unit ..... 20 Lbs. Long Ton ...... 2240 Lbs. Long Ton Unit ..... 22.4 Lbs.

contain as follows:	MO # 308	1000				Long lon	Long 1 on Unit 22.4 Lbs.
	SILVER		GOLD		TOTAL VALUE	PERCENTAGE	
MARKS	Ozs.   Tenths	VALUE PER TON		VALUE PER TON	of Gold & Silver	COPPER	REMARKS
344 320.5-329*	0.30		TRACE			0.016	
4645 339 -339	0.30		NE			0.025	

JACK STONE REG. NO. 5479 Assayer.....

ANDY CHUKA, PRINT

Charges \$.....

V A L U E S Latest Quotation

oz. Gold..... oz. Silver .....

File No.

Shop No.**646** 

Date 10 March 1969

frizona Assay Office

Phoenix, Arizona 85001 P. O. BOX 1148

> 815 NORTH FIRST STREET Phone: 253-4001

HEINRICH GEO.CO TUCSON ARIZONA

Samples submitted for assay contain as follows:

THIS CERTIFIES

lb. Zinc.....

lb. Copper.....

lb. Lead.....

Lbs.	Lbs.	Lbs.	Lbs.
2000 Lbs.	20 Lbs.	2240 Lbs.	22.4 Lbs.
	Short Ton Unit		Long Ton Unit
Ton	Ton	Ton	Ton
Short Ton	Short	Long Ton	Long

24 24 25	SILVER PER TON	VALUE	GOLD PER TON	VALUE	TOTAL VALUE	PERCENTAGE	REMARKS
	Ozs.   Tenths	PER TON	Ozs. 100ths	PER TON	of Gold & Silver	COPPER	
#646 339*~348.5*	.30		TRACE			0.005	
						STERED ASP	
						THE COUNTY BY	
						S COLUMN S S S S S S S S S S S S S S S S S S S	
							12 14

Charges \$.....

ANDY CHUKA, PRINT

JACK STONE REG. NO. 5479

Date 10 Waroh 1969

Arizona Assay Office
815 NORTH FIRST STREET

Phoenix, Arizona 85001 P. O. BOX 1148

> Phone: 253-4001 HEINRICH GEO. GO TUCSON ARIZONA

> > Samples submitted for assay contain as follows:

THIS CERTIFIES

lb. Lead.....

lb. Copper..... oz. Silver....

1 lb. Zinc.....

oz. Gold. V A L U E S Latest Quotation

File No.

Shop No.646....

			1
Lbs.	Lbs.	Lbs.	Lbs.
2000 Lbs.	Short Ton Unit 20 Lbs.	2240 Lbs.	22.4 Lbs.
	Unit		Unit
Ton	Ton	Ton	Ton
Short Ton	Short	Long Ton	Long Ton Unit

3391-348,51  TRACE  Oct. Tenfis Per ToN of Gold & Silver (COPP)  TRACE  O.OCS	\$ \times	PER	SILVER PER TON	VALUE	GOLD PER TON	VALUE	TOTAL VALUE		PERCENTAGE	REMARKS
3391-348,51 0.005		Ozs.		PER TON	Ozs.   100ths		of Gold & Silver	CODDING		
	#646 3391-348.51		30		TRACE		44.4	0.005		
		10.								
			100							
	- A									
1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 /										
OF THE STATE OF TH								SIE	14/10	
		See 1							OR RE	
							13			

Charges \$.....

ANDY CHUKA, PRINT

JACK STONE REG. NO. 5479

Shop No. 647-652 File No. 13.09. HE

V A L U E S Latest Quotation

oz. Gold.....

oz. Silver.....

Date. 12 MARCH 1969

Phoenix, Arizona 85001 P. O. BOX 1148

## frizona Assay Office

815 NORTH FIRST STREET

Phone: 253-4001

Short Ton ..... 2000 Lbs. Short Ton Unit ..... 20 Lbs. Long Ton Unit ..... 22.4 Lbs.

HEINRICH GEO. CO TUCSON ARIZONA

Samples submitted for assay contain as follows:

THIS CERTIFIES

lb. Copper.....

lb. Lead.....

lb. Zinc....

	000 11000					1	
M A B K S	PER TON	VALUE	PER TON	VALUE	TOTAL VALUE	PERCENTAGE	REMARKS
	Ozs.   Tenths	PER TON	Ozs.   100ths	PER TON	of Gold & Silver	COPPER	
#647	64		6				
648 357.5**367.5*	04		800			0.015	
649 367.5 \$ 377.5	30		NIL			0.005	
650 377.5*=387.5*	30		NIL			0.01	
651 387.5*~397*	.30		NIL			0.01	
652 397* -	.30		TRACE			0.01	ENED
							S STORY E STORY
							OREX

Assayer.....

JACK STONE REG. NO. 5479

ANDY CHUKA, PRINT

Charges \$.....

1,2409, ESE Latest Quotation

File No. 647-653

Shop No.

Arizona Assay Office Date 12 MARCH 1969

Phoenix Arizona 85001

815 NORTH FIRST STREET Phone: 253-4001

HEINRICH GEO. CO TUCSON ARIZONA

Samples submitted for assay contain as follows:

THIS CERTIFIES

lb. Lead.....

oz. Silver..... lb. Copper.....

oz. Gold....

lb. Zinc....

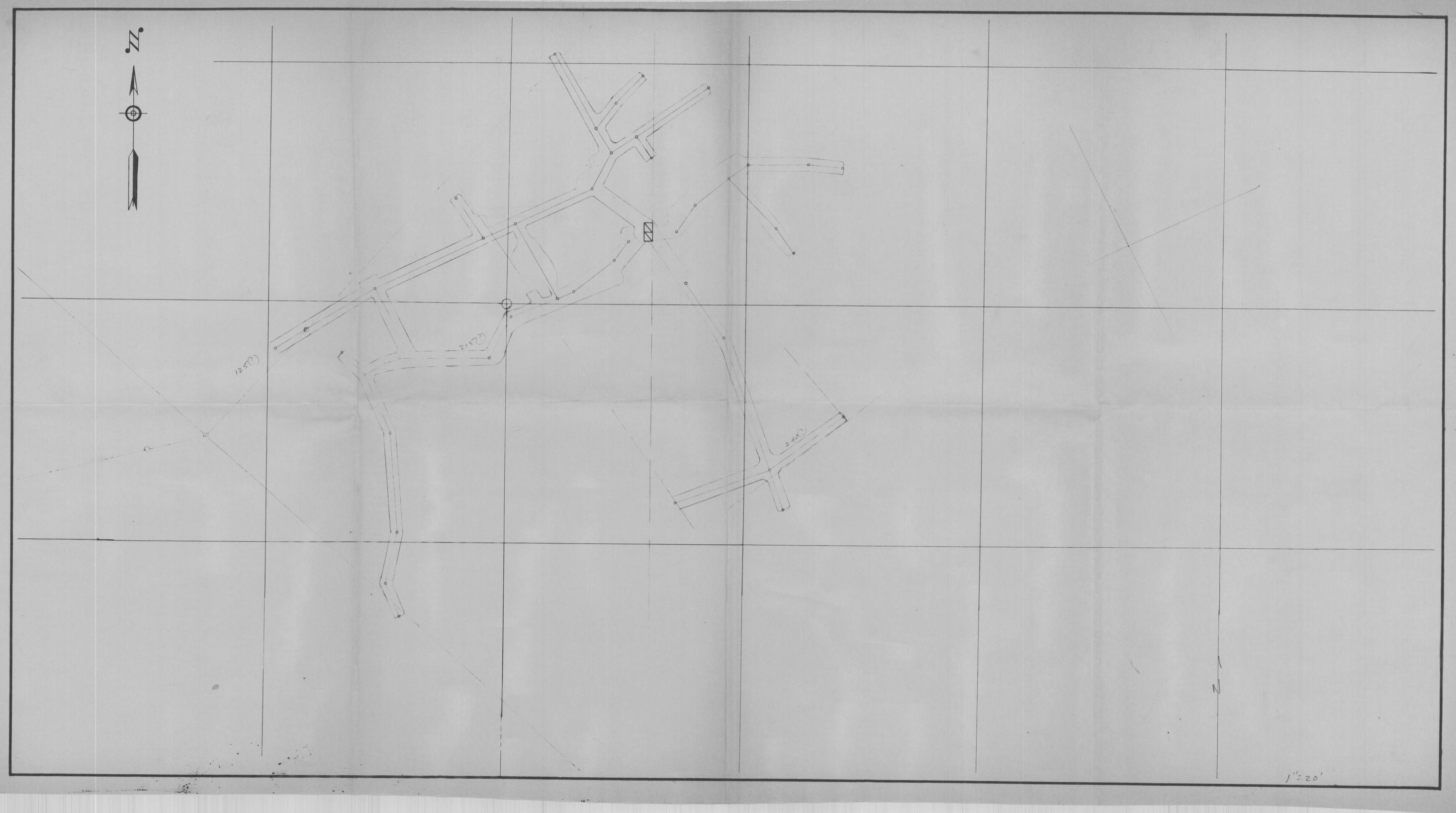
Short Ton
Short Ton Short Ton Unit Long Ton

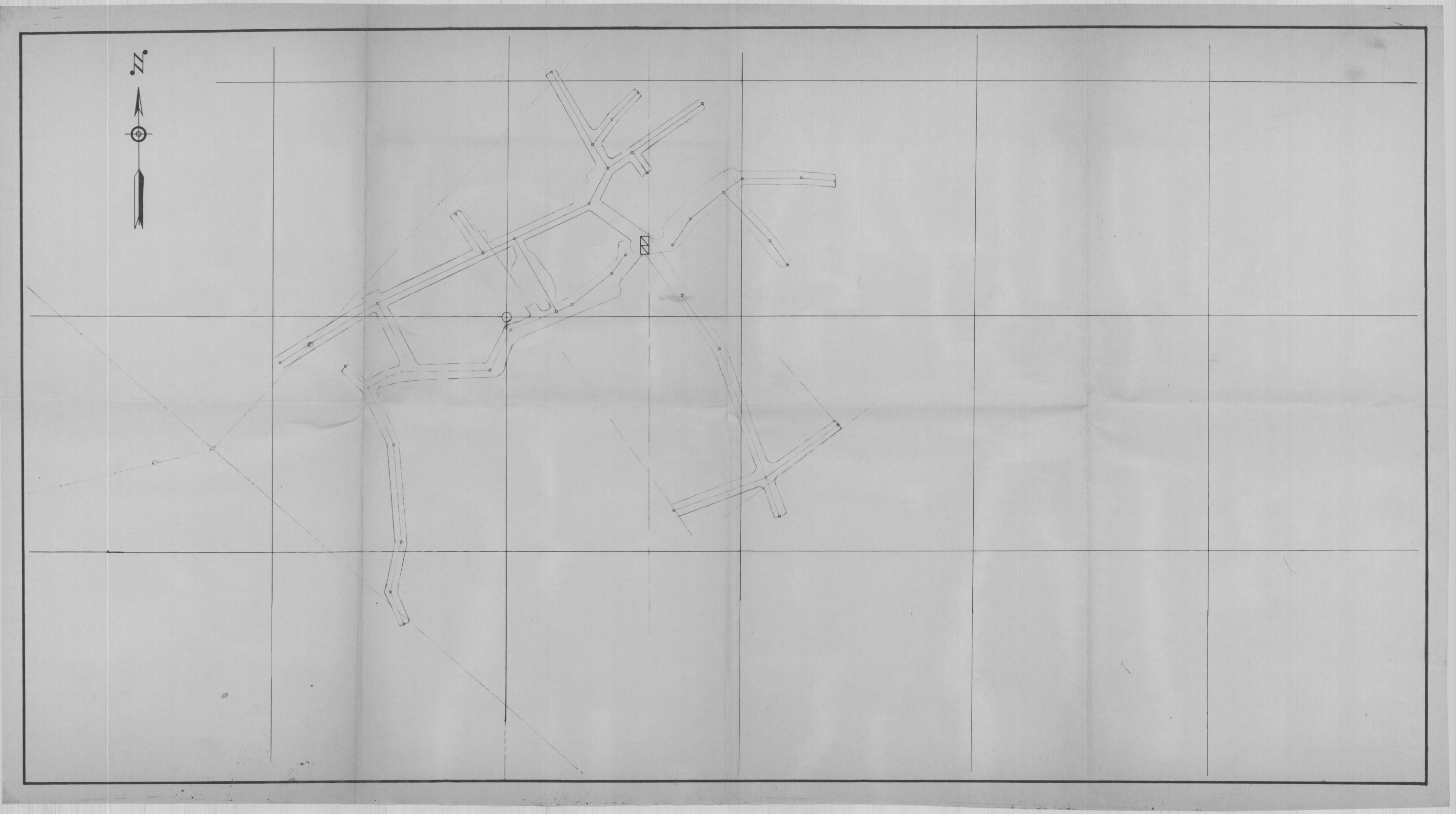
	O. TSILSERO		GOLD		TOTAL VALUE	PERCENTAGE	
MARKS	Ozs.  Tenths	VALUE PER TON	Ozs.   100ths	PER TON	of Gold & Silver	Contract and a	REMARKS
#847						TOTAL TOTAL	
348.51-357.51	40		200			20.0	
+648 357 51=327 51	40		800			410	
1649 3e7 E 377 E	30		WTT			800	
650 377 51-387 51	202		NTI.				
651 387 51-397	20		NTT.			0.01	
652	) k		TOACT				AFRED AS
							CONTENT OF STATE
							THE 109 01

Charges \$.....

JACK STONE REG. NO. 5479

Assayer.....







#### HEINRICHS GEOEXPLORATION COMPANY POST OFFICE BOX 5671 TUCSON, ARIZONA, 85703 GABLE: GEOEX, TUCSON

geophysical engineers  STARTED 19 Feb 1969 LOCATION 180' F OF DIXIE Shaft		DIRECTION N 35°W	HOLE NO		
10 101-11 1010	geophysical engineers	10 - 1 1010	MOI LINI I	DIXIE Shaft	E
1" 12"	1"- 12"	COMPLETED 10 Mar 1969	COLLAR COORD: N	E	
DATE 17 Mar 1969 NOTES BY Cooley SHEET 2 OF 5	17 10 10.	DE I I II	1	5	

	_//	Mar 1969 NOTES BY Cooley SHEET 2		OF						-
ITH- LOGY	MIN- ERAL,	ROCK TYPE - GEOLOGY	SURV.	% CORE	SECT.	. Ag	CORE	ASS	AYS	
			_				70			
No.			_	86%	5/1/	0.1	T	0.035		
		9 tz - sericite schist -	-		0					
		- weather tel			5/	0,		20.0		
		- 20		100%	11,1	ο,	<sup>1</sup>	Ó		
		- 1	-	2	50	,		n An		-
		- - 30			808	O,	4	0.0	. 5	
		<u>-</u>	-	100	0 %	1		Λη		
		gray-green (chloritic)	-	ِيل <i></i> "	000	0	4	0,0		10
		40 9tz-sericite, limovite stained, altered -	-	910		-				
		- Pyingtz. weathering effects - Pyingtz, alteration decreasing		83010	200	6	4	0.00		
		pyrite in 9tz more than	-					4		
		Limonite stains in fractures	_		5000	0,	4	m 0.0		
		60	_	2				5	+	
			-	S)O	0,0	0,	4	0,0		
		- <u>70</u>		10	6		-			
3					20-80	\	4	0.035		
		<u>3</u> 0	-		10	0,				
		• · · · · · · · · · · · · · · · · · · ·	-							
			-	-						2



### HEINRICHS GEOEXPLORATION COMPANY POST OFFICE BOX 5671 TUCSON, ARIZONA, 85703 CABLE: GEOEX, TUCSON

	DIRECTION	HOLE NO	
eophysical engineers	INCLINATION	PROPERTY	
copity sicul engineers	STARTED	LQCATION	
	COMPLETED	COLLAR COORD; NE	
SCALE:	DEPTH 80 - 160	COLLAR ELEVATION	
DATE	NOTES BY	SHEETOF	

LITH- OLOGY	MIN- ERAL	BO ROCK TYPE - GEOLOGY	SHBA	% CORE	SECT	100	CORE	ASS	AYS		$\exists$
0.00		Core fresher, limouite in planes & fraction res decreasing		NEOV D	3501	\ 0	114	MOOO			
		- - - - - - - - - -	-		89. 25. 88	0	K	0.035			
		- broken, soft (8") clayey			80,-66	o'	7	5 moio			The state of the s
			-	J.d	108/1/2	0	<0000	0.035			
				00	112/26.8	0,	S S	o.0 X			Calcalate and Affa and an appropriate and Affa and an appropriate and appropri
		40			36.5-14	0, 10	Z.	0.065			in a comment of the contract o
		slight brecciation		X 8/0	181-185.5	08.0	Tr	0.35		-	i
		Biotite & redstain			50.5- 160	0.50	Tr	0.0			September of the Control of the Cont
			-	æ	37						The amount of the second of th



# HEINRICHS GEOEXPLORATION COMPANY POST OFFICE BOX 5671 TUCSON, ARIZONA, 85703 CABLE: GEOEX, TUCSON

LITH- MIN- I		W CODE CODE ASSAU	
DATE	NOTES BY	SHEET3OF5	
SCALE:	DEPTH_160-240	COLLAR ELEVATION	
	COMPLETED	Continue Country	
	STARTED	LQCATION	
geophysical engineers	INCLINATION	PROPERTYPROPERTY	
# #	DIRECTION	HOLE NO	

0	ATE_		NOTES BY SHEET SHEET		OF	5					
L	ITH-	MIN- ERAL	160 ROCK TYPE - GEOLOGY	SHEV	% CORE	SECT	0.	CORE	ASS	AYS	$\overline{}$
		Z.NAZ	160-168  block, fine grained, botite, some epidote  Py ± 1%	-	, REGY D	02/-09/	15.0	lin !	50.00		
	Y.			-		120-180	O, A	1.	000		
			- 6" chtoritic: zone	 - - -		180-190	Ø. Ø	nil	10.0	c	The second of th
				-	6/0	190-200	o A	n.l	0.01		e de la constante de la consta
			- 3"clear 9tz.	-	00/	200,209	o, A	1,2	0.0		0 to 10 to 1
			- - -			309-2165	0,0	1,14	0.0/		e and a district of the control of t
			220 - 222 to 230 - fine grained chlorite-biotite schist, epidote, py ± 176			2/8,5-726	A,0	1111	0.005		CONTRACTOR OF THE CONTRACTOR O
			230 9/z-sericite schist			228-23B	Q.	nil	0,000		Control of the state of the sta
			<u>-</u> 240								
		- 1222		 	1	1 l	, <b>1</b>	l congre	] 	l .	1 1



## HEINRICHS GEOEXPLORATION COMPANY POST OFFICE BOX 5671 TUCSON, ARIZONA, 85703 CABLE: GEOEX, TUCSON

#	DIRECTION	HOLE NO	
eophysical engineers	INCLINATION	PROPERTY	
copilysical engineers	STARTED	LOCATION	
	COMPLETED	COLLAR COORD: N	ΕΕ
SCALE:	DEPTH 240-320	COLLAR ELEVATION	
DATE	NOTES BY	SHEETOF	F5

LITH- OLOGY	MIN- ERAL.	Z40 ROCK TYPE - GEOLOGY	SURV	% CORE	SECT	Ag	CORE	ASSI	AYS	
		- 246.5 to 250 , very broken, tolay	-		738 246.S	, A , o	1.14	0.00		_
		<u>z</u> 50			2465 - 2545	0,0	1.1	0.005		
		_ 257-14" py vein			548	, A . o	11.1	0,1		
			-	70	2233			9		Marie property and a 1972
		273 to 278,5 "Zones of sericite	- - -		285. S.					
		<u>2</u> 80	-	0	235-282.S		w.			
		<u>2</u> 90	- - -		362.5.38			2		Medical section of the section of th
		- - - 300	- - -	X Sto	305-39					
		- 307 to 310 - breccia é, gougy	- - -		\$ 118		- v			
		310 - 311 to 322 - chlorite sericite schist, fine grained red brown Fred Mr. Oxider in Error planes		50	305	ie.				- I the Real Property of the Control
		Fee Mn Oxides in Froc. planes,	  		3/1/2					
	22100000000		- - -							

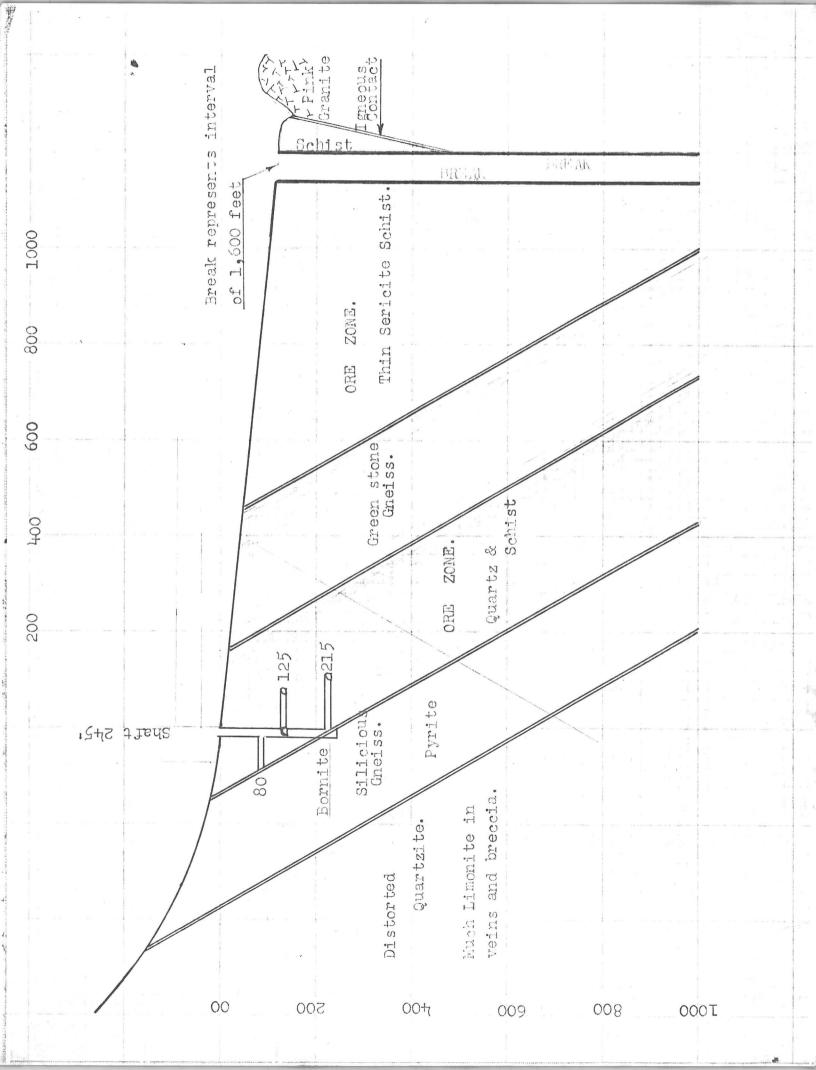


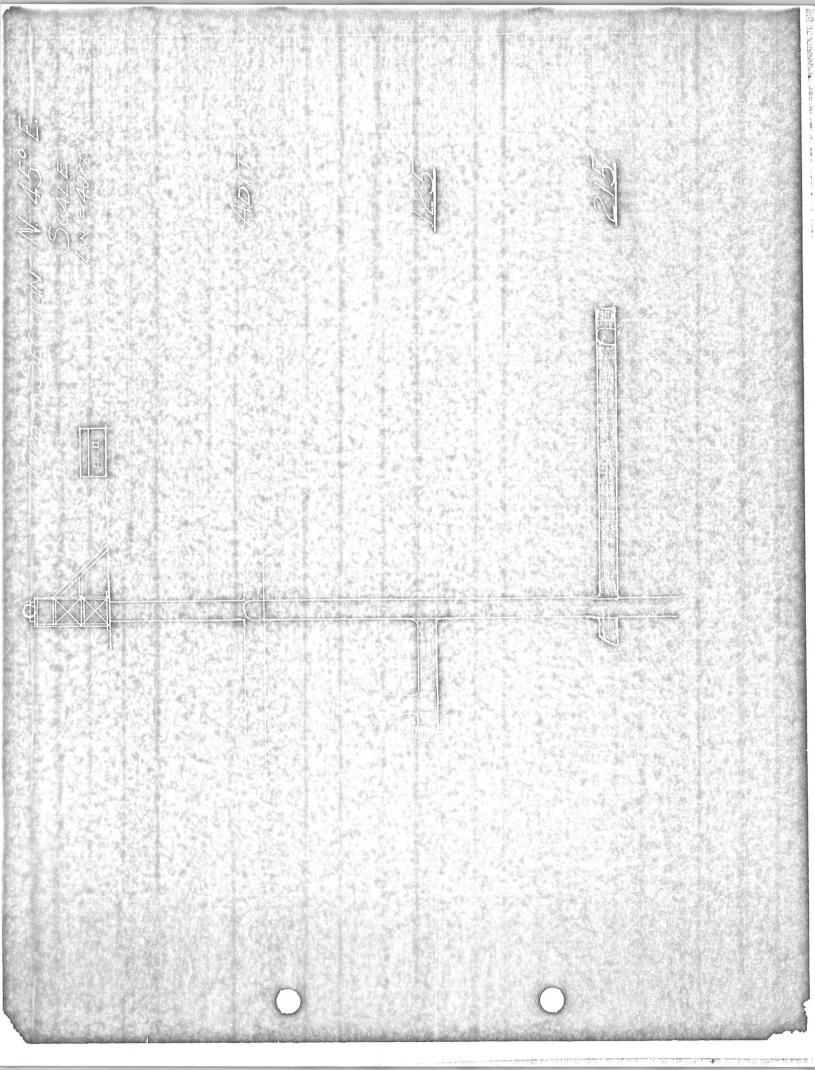
SCALE: \_

### HEINRICHS GEOEXPLORATION COMPANY POST OFFICE 80X 5671 TUCSON ARIZONA 85703 PHONE: 602/623-0578 CABLE: GEOEX, TUCSON

DIRECTION\_\_\_\_ \_\_HOLE NO.\_\_ INCLINATION \_\_\_\_\_ PROPERTY\_\_\_ STARTED \_\_\_\_ \_\_ LOCATION \_\_\_ COMPLETED\_\_\_ \_\_ COLLAR COORD: N\_\_\_ \_\_\_COLLAR ELEVATION \_\_ DEPTH 320-404 (bottom)

LITH-	MIN-	NOTES BY SHEET	<u></u> _	% CORF		-	CORE	ASS	AYS	 
OLOGY	ERAL	320 ROCK TYPE - GEOLOGY	SURV.	% CORE RECV'D	SECT.	Ag	Ay	Cy		
		-327.5 - 2" clear 9+2			320,55	Mò	7	0,0/5		-
				80	329,339	800	111	0.025		
		340 - 345.5 - 3" clearqtz, 5% Ry - 348.5 - 1/2" fracture, 9tz Filled			5.9×5.955	, v	\	0,000		
		350		J.F	3485.35	Ø,o	0.005	0,015		-
		360 360-361 clear 9+2 = 364,5 to 366, chloritic schot			25.55 35.55	ó	0.000	0.015		
				8/0	36 25 32 32 35	e) B)	1111	0,005		-
Y		- 380 - - -		0/	25.55.55	0	1.1	10:0		1 1 1 1
		= 389-broken, very talcy = 395- Red brown, fine grained, hematite-limonite = 5tain, soft-			< 45-5-5650	8,0	nili	0.0		
		398.5 to 400 - maroon, looks like 9+zite  schist py +170  soft, light colored			X	0,3	Ľ,	10.0	\	-
		L 4041 - bottom of hole				ž			18	-





		1		
	Tag No.	Depth	Tay No	Depth
	611	0-//	639	× 273.5 - Z82.
	612	11-20,5	640	2825 - 297
, i	613	20.5-30	641	292 - 302
	614	30-40	642	302 - 311
	615	40-50	643 V	311 - 320.5
×	616	50 - 60	644	320.5 - 329
	617	60-70	645	329 - 339
	618	70-80	646	339 - 348.5
×	619	80-89.5	647	348,5-357,5
	620	89.5-99	648	357.5 - 367.5
	621	99-108	649	367.5 - 377.5
	622	108-117.5	650	377.5 - 387.5
*	623 V	117.5- 126.5	851	387.5 - 397
X	624 ~	126.5-141	;	397 - 310?
*	625 ~	141-150.5		
*	626 V	150.5-160		
	627	160 - 170		
	628	170-180		
	629	180-190		
*	630	190-200		
	631	200-209		
	632	209-218.5		
	633	218,5-228		
*	634 V	228-238		
	635 2	38 - 246 . 5		
	636 2	16,5-254.5		
*	637 1 25	4.5 - 264		
	638 26	4-273.5		

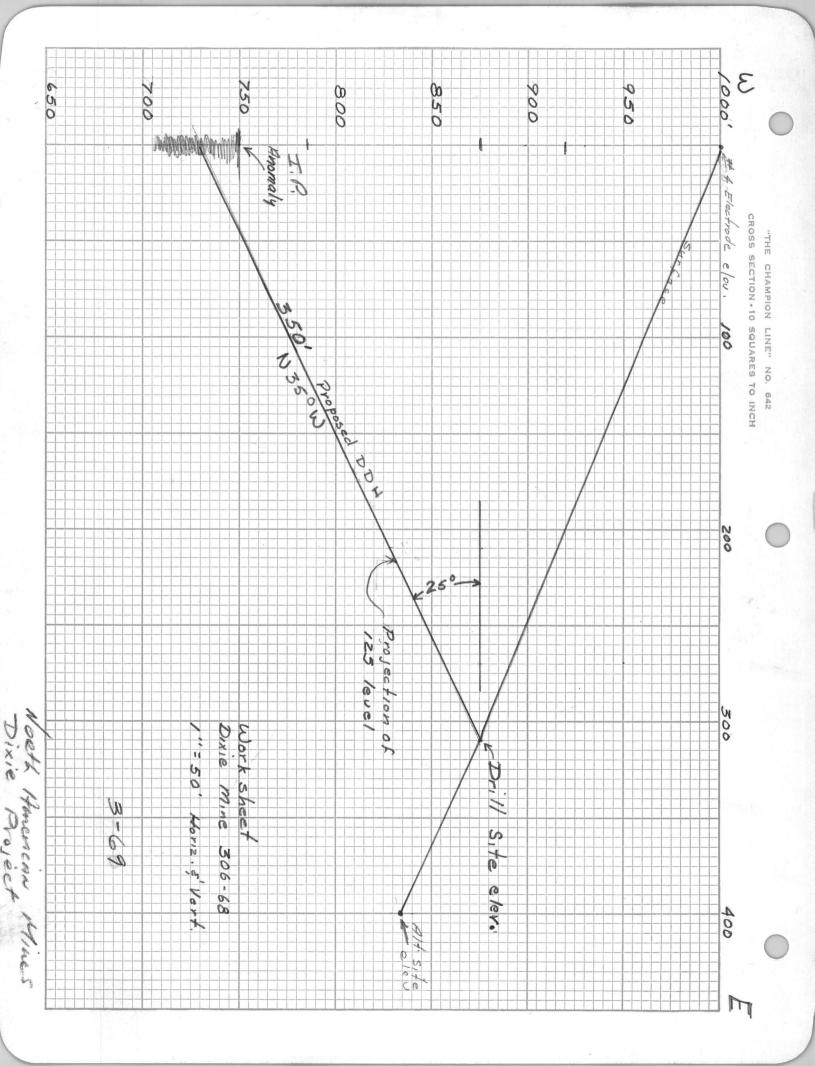
Assay log
DD H #7 Dixie Mine
306-68

Depth	pate	Recovery	Jin Con	Silver 02./ton	Gold	Copper %	Assay Tog No:
011 2010	19 Feb 1969	86%	0	0,10	Trace	0.035	611
2020	20 Feb 1969	100%	100	0.10	Trace	0.030	612
27 30	1767		30	0110	Trace	0.030	613
40	21		40	0110	Trace	0.03	614
	Feb 1969	82%	450	0.10	Trace	0,040	615
50			50-60	0.10	Trace 20.005	0.035%	X 616
60	22 Feb	97	10	0.10	Trace	0.015	617
	1969	100%	30	0.10	Tracc	0.035	618
80			88	0110	Nil <0.005	0.03	x 619
90	25 Feb		4.	0.10	Trace	0.035	620
100	67	A STATE OF THE PARTY OF THE PAR	208	0.10	Trace	0.035	621
//0.	26	T.	10011	0,10	0-007	6.035	622,
120	1 eb 69	100%	17.726	0.10	Trace	0,04	623
130							

Depth	date	Recovery	You.	Silver 03/ton	Gold	Capper	Assart Too
130				20,0005%	60.005	2.8%	
138		100 %	St.	0.10	Trace	0.065	X624
140			20				
	27 Feb	45%	50.5	0.80	Trace	0.35	vein projection
150	1919		, ki				625
		100%	4.16	6.50	Trace	0.07	x 626
160			150				
	28		100,00	0.50	Nil	0.075	627
170	Teb	1	1/8				
	1969		000	0.40	Trace	0.01	628
180			10				
			00	0,40	Nil.	0.01	629
190		1	80,00	90			
	mor	0	8	0:40	NI1	0.01	x 630
200	1909	10	100				
			5000	0,40	Trace	0.01	631
210			5				
			200	0.40	Nil	0.01	632
220			3				
	2 Mor		2000	0.40	N,1	0.005	633
230	1969			0,0005 %	20,005	0,25	
			23.8	0.40	Nil	0,005	X 634
240			V10-1				
			300 July	0.40	wil	0.005	638
250		~	150 M	0,40	Ni/	0.005	636
	3	10	S 80				
260	mor_		2325	0,40	nil	0.10	1637
			8				

							1 Assay
D "	date	0	2 Xion	Silver	Gold		
Depth	OC.	Recovery	8	03/ton		Copper	708
					oz/ton	70	-
			254.74	0,40	Nil 20,005%	13%	* 637
	3	70%	39.	0140	1011	0.61	+ (
270	mar		273	0,40	NI	0.005	638
212	1919	100%	K'	0740	No.	0,005	
		10070	7				1
			313	20,0005%	20.005%	0:35%	X 639
280	4		23	0.40	Nil	0.005	639
		100%					
	mor		14,10				
290	1969		4,100	0.20	Nil	0.005	640
						CONCERNITION OF THE PARTY OF TH	
		45%	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
300			à	0.20	NIL	0.005	641
			M				1.17
310	5 mar	75%	30°	0.20	Nil	0.005	642
	1969		6/	20,0005%	20:005	0,20%	
			30				7643
320			37 33 11 37 37 37 37 37 37 37 37 37 37 37 37 37	0.20	N:1	0.005	
			9				
		100%	30 30				644
330	6		30	0.30	Tr	0.015	
	mar	THE RESIDENCE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER,					
	1969		3				645
710		100%	853. ESS	0.30	NI	0.025	
340			232 Sep. (25)	American Control of Security Control of Cont			
			3	0.30	Tr	0.005	646
	7		35				
350		100%	3,35				
	1969		5,3	0.40	0,005	0.015	647
7			200 C				
360	8		0	<0.0005%	20,005	0 110%	W
	mor	100%	15,0	0.40	0.008	0015	x 648
	1969	0, 00,	8/23/25/25/25/25/25/25/25/25/25/25/25/25/25/				
370			25.55 P				
			157	0.30	Nil	0 006	649
			200	0.30	7077	0.005	
380		100%	30				
	9 nor		6,	- 24	1.1	/	650
	1969		6;	0.30	Ni/	0.01	630
390					BERTHER TOWNS THE		Andready has been seen to be a

		1					1
Depth	Do te	Recovery	section	Silver Oz/Eon	Gold	Copper %	Assay Tog
			3875.381	0.30	Nil	0.0	851
400			397-404	0.30 <0.0005%	Trace	0.01 0.55%	X 852
				Bo Hom Hole	404'		
	1						



#### Rocky Mountain Geochemical Corporation

2050 EAST 14TH STREET TUCSON, ARIZONA 85719

Phone 622-5702 Area Code: 602

#### CERTIFICATE OF ANALYSES

Date

April 5, 1969

Page 1 of 1

Client

Heinrich's Geoexploration

808 West Grant Road

P.O. Box 5671 Tucson, Arizona

Report on:

4 Samples

Submitted by:

Heinrich's Geoexploration

Date Received:

March 28, 1969

Analysis:

Copper, Gold & Silver

Remarks:

Analyses determined by atomic absorption.

RMGC Job No. 69-5-28T

Heinrich's Job No. 306-68

cc:

RMGC--Salt Lake

file

Enclosed

Sample No.	ppm Copper	ppm Gold	ppm Silver
624	635	-0.1	5
625	+1000 = 0.35%	1.0	16
626	680	-0.1	7
637	660	-0.1	3

V Anta Brudshaw

Anita Bradshaw

All values are reported in parts per million unless specified otherwise. A minus sign (-) is to be read "less than" and a plus sign (+) "greater than." Values in parenthesis are estimates. This analytical report is the confidential property of the above mentioned client and for the protection of this client and ourselves we reserve the right to forbid publication or reproduction of this report or any part thereof without written permission.



#### > HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD - TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

	IDENTIFICATION		Gold X ozs. X	Silver ozs.	Lead XX	Copper Zinc XXXX	%XXX			
	ELEMENT:		Sample #616	2-60'	Sample #619 8	ELEMENT: 0-89.5		Sample #616		\$amp #619
	Silver	<	0.0005%	<	0.0005%	Nickel *	<	0.01	<	0.01
	Aluminum		8.5		7.0	Phosphorus *	<	0.1	<	0.1
	Arsenic *	<	0.01	<	0.01	Lead	<	0.01	<	0.01
	Boron		0.05		0.04	Rubidium *	<	0.1	<	0.1
	Barium		0.4		0.45	Antimony	<	0.01	<	0.0
	Beryllium *	<	0.0001	<	0.0001	Silicon		33.00		29.00
	Bismuth *	<	0.001	× / <	0.001	Tin *	K	0.001	<	0.00
	Calcium		1.5		0.45	Strontium *	<	0.001	<	0.00
	Cadmium *	<	0.01	<	0.01	Tantalum *	<	0.1	<	0.1
	Cerium *	<	0.01	<	0.01	Tellurium *	<	0.01	<	0.0
	Cobalt *	<	0.001	<	0.001	Thorium *	<	0.1	<	0.1
	Chromium		0.003		0.002	Titanium		4.0		3.3.
	Cesium *	<	0.5	<	0.5	Thallium *	<	0.01	<	0.0
	Copper		0.35		0.15	Uranium *	<	0.1	<	0.1
	Iron		6.8		4.5	Vanadium		0.008		0.0
	Gallium *	<	0.01	<	0.01	Tungsten *	<	0.1	<	0.1
	German Lum *	<	0.001	<	0.001	Zinc *	<	0.01	<	0.0
	Indium *	<	0.001	<	0.001	Zirconium		0.23		0.19
	Potassium *	<	1.0	<	1.0	Gold *	<	0.005	<	0.00
	Lithium *	<	0.01	<	0.01	Rare Earths		NII		Nil
	Magnes 1 um		2.5		1.8					
	Manganese		0.12		0.10					
	Molybdenum *	<	0.001	<	0.001					
	Sodium *	<	0.01	<	0.01	* Not detected				
	Niobium *	<	0.03	<	0.03					
C: DD: TY: DD:	Mr. D. Cooley HEINRICHS GEOEXPL P. O. Box 5671 Tucson, Arizona		ON	R S	REMARKS. 2.0. 1149 esearch pectrogr		rt. By	Preparatio	n \$	
ITY:				P	age 1			Analysi		



#### > HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD - TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

IDENTIFICATION		X ozs.X	Silver ozs.	XXLead XXX	Copper %	XXX%XXX	XXX <b>%</b> XXX			
ELEMENT:		Sample #623	17,5 60		126.5 -	NT:		Sample #623		Samp1 #624
Silver	<	0.0005	6 <	0.0005%	Nicke	1 *	<	0.01	<	0.01
Aluminum		7.5		8.5	Phosp	horus *	<	0.1	<	0.1
Arsenic *	<	0.01	<	0.01	Lead		<	0.01	<	0.01
Boron		0.015		0.015	Rubid	1um *	<	0.1	<	0.1
Barium		0.10		0.10	Antin	ony	<	0.01	<	0.01
Barryllium *	<	0.0001	<	0.0001	Silic	on		30.00		35.00
Bismuth *	<	0.001	<	0.001	Tin *		<	0.001	<	0.001
Calcium		0.85		0.43	Stron	tium *		0.001	<	0.001
Cadmium *	<	0.01	<	0.01	Tanta	1um *	<	0.1	<	0.1
Cerium *	<	0.01	· . <	0.01	Tellu	rium *		0.01	<	0.01
Cobalt *	<	0.001	<	0.001	Thori	um *	1 46 <	0.1	<	0.1
Chromium	<	0.001	<	01001	Titan	ium		3.5		4.2
Cesium *	<	0.5	<	0.5	Thall	ium *	<	0.01	<	0.01
Copper		0.18		2.8	Urani	um *	<	0.1	<	0.1
Iron		6.1		6.5	Vanad	ium		0.015		0.00
Gallium *	<	0.01	<	0.01	Tungs	ten *	<	0.1	<	0.1
Germanium *	<	0.001	<	0.001	Zinc	*	<	0.01	<	0.01
Indium *	<	0.001	7	0.001	Zirco	nium		0.20		0.08
Potassium *	<	1.0	× ×	1.0	Gold	*	<	0.005	<	0.00
Lithium *	<	0.01	<	0.01	Rare	Earths		NIL		NII
Magnes I um		2.3		2.4						
Manganese		0.20		0.18						
Sodium *	<	0.01	<	0.01						
Niobium *	<	0.03	<	0.03	* Not	detect	ed			
Molybdenum *	<	0.001	<	0.001						
Mr. D. Cooley HEINRICHS GEOEXPLORA P. O. Box 5671 Tucson, Arizona 8570				EMARKS:		Analysis	Cert. By	Preparation Analysis	CONTRACTOR OF THE PARTY OF THE	



#### > HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD - TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

	IDENTIFICATION		Gold X	Silver ozs.	X Lead	Copper %	XXZincXXXX	Mo.XX			
	ELEMENTS:		\$ample #625	141-1505	Sample #626	150,5-160 ELEME	INTS:		Sample #625		Samp #626
	Silver		0.003%		0.001%	Nicke	1 *	<	0.01	<	0.01
	Aluminum		4.8		7.5	Phosp	horus *	<	0.1	<	0.1
	Arsenic *		0.01	<	0.01	Lead			0.04		0.02
	Boron		0.01		0.12	Rubid	ium *	<	0.1	<	0.1
	Barium		0.15		0.30	Antin	ony		0.85		0.30
	Beryllium *		0.0001	<	0,0001	Silic	on		28.00		27.00
	Bismuth *	<	0.001	<	0.001	Tin *		<	0.001	<	0.00
	Calcium		0.50		0.8	Stron	tlum *	<	0.001	<	0.00
	Cadmium *		0.01	<	0.01	Tanta	lum *	<	0.1	<	0.1
	Certum *		0.01	<	0.01	Tellu	rium *		0.01	<	0.01
	Cobalt *	<	0.001		0.001	Thori	um *	<	0.1	* <	0.1
	Chromium		0.002		0.004	Titan	ium		1.8		2.0
	Cesium *	<	0.5		0.5	Thall	Tum *	<	0.01	<	0.01
	Copper		3.0		0.75	Urani	um 🜣		0.1:	<	0.1
	Iron		2.2		4.4	Vanad	ium		0.003		0.00
	Gallium *	<	0.01	<	0.01	Tungs	ten *	<	0.1	<	0.1
	Germanium *	<	0.001	<	0.001	Zinc	*	<	0.01	<	0.01
	Indium *	<	0.001	<b>*</b>	0.001	Zirco	nium		0.06		0.22
	Potassium *	<	1.0	<	1.0	Gold	*	V	0.005	<	0.00
	Lithium *	<	0.01	<	0.01	Rare	Earths		NII		NII
	Magnes i um		0.35		2.7						
	Manganese		0.08		0.80						
	Sodium *	<	0.01	<	0.01						
	Niobium *	<	0.03		0.03						
	Molybdenum *	<	0.001	<	0.001						
C:				R	EMARKS:		Analysis Co	ert. By			
DD: ITY: DD: ITY:				1	Page 3				Preparation Analysis		



#### > HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD - TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

	IDENTIFICATION		Gold ozs.	Silver ozs.	Lead %	Copper %	Zinc XXX%XXXX	Mo.			
	ELEMENTS:		5ample #630	190-200	#634	228-238 ELEME	NTS:		#630		5amp #634
	Silver	V	0.00053	<	0.0005%	Nicke	1 %	<	0.01	<	0.01
	Aluminum		3.1		9.4		horus	<	0.1*		0.12
	Arsenic *	1 <	0.01	<	0.01	Lead		<	0.01		0.05
	Boron		0.085		0.03	Rubic	lium *	<	0.1	<	0.1
	Barjum		0.2		0.35	Antin	ony	<	0.01	<	0.01
	Beryllium *		0.0001	4	0.0001	SILIC	on		24300		23.00
	Bismuth *	<	0.001	<	0.001	Tin :		<	0.001	<	0.00
	Calcium		0.3		2.75	Stron	tium *	<	0.001	<	0.00
	Cadmium *	<	0.01	<	0.01	Tanta	lum *		0.1	<	0.1
	Cerlum *	<	0.01	<	0.01	Telli	rium *	<	0.01	<	0.01
	Cobalt	1	0.001	. <	0.001*	Thori	um *	<	0.1	<	0.1
	Chromium		0.001	<	0.001	Titar	lum		1.1		4.6
	Cesjum *		0.5	<	0.5	Thall	tum *	<	0.01	<	0.01
	Copper		0.15		0.25	Urani	um *	<	0.1	<	0.1
	Iron		1.1		9.0	Vanac	lium		0.003		0.02
	Gellium *	<	0.01	<	0.01	Tungs	ten *	<	0.1	<	0.1
	Germanium *	<	0.001	<	0.001	Zinc		<	0.01	<	0.01
	Indjum *	X	0.001	/ · · · · <	0.001	Zirec	on Tum		0.10		0.18
	Potassium *	<	1.0	<	1.0	Gold	*	<	0.005	<	0.00
	Lithium *	<	0.01	<	0.01	Rare	Earths		NII		Nil
	Magnesium	1	0.45		3.3						
	Manganese		0.08		0,2						
	Sodium *	<	0.01	<	0.01	* Not	detected				
	Niobium *	<	0.03	<	0.03						
	Molybdenum *	<	0.001	<	0.001						
C:				R	EMARKS:		Analysis C	ert. By			
DD: ITY: DD: ITY:				Pi	age 4				Preparation Analysi		



#### > HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD - TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

	IDENTIFICATION	STOREST TREES OF THE STOREST OF THE	ilver Lead	Copper Zinc %	Mo. XX	
	ELEMENTS:	\$ample 254 #637 26		273.5 _ 263.5 EMENTS:	Sample #637	Samp 1 #639
	Stiver	< 0.0005%	< 0.0005%	Nickel *	< 0.01	< 0.01
	Aluminum	5.8	7.0	Phosphorus *	< 0.1	< 0.1
	Arsenic *	< 0.01	< 0.01	Lead	0.06	0.02
	Boron	0.075	0.06	Rubidium *	< 0.1	< 0.1
	Barium	0.30	0.23	Antimony	< 0.01	< 0.01
	Beryllium *	< 0.0001	< 0.0001	STITICON	24.00	23.00
	Bismuth *	< 0.001	< 0,001	7in *	< 0.001	< 0.001
	Calcium Indian	0.3	0,28	Strontium	0.001	< 0.001
	Cadmium *	< 0.01	< 0.01	Tantelum *	< 0.1	< 0.1
	Cerium #	< 0.01	0,01	Tellurium *	< 0.01	< 0.01
	Cobalt *	0.001	< 0.001	Thorium *	< 0.1.	< 0.1
	Chromium	0.001	0.002	Titanium	2.0	3.5
	Cesium #	< 0.5	< 0.5	Thallium *	< 0.01	< 0.01
	Copper	1.3	0.35	Uranium *	< 0.1	< 0.1
	Iron	2.8	1.2	Variadium	0.008	0.005
	Gallium *	< 0.01	< 0.01	Tungsten *	< 0.1	< 0.1
	Germanium *	4 0.001	< 0.001	Zina 🖈	< 0.01	< 0.01
	Indium *	< 0.001	4 0.001	Zirconium	0.20	0.63
	Potassium *	< 11.0 . Ta	< 1.0	Gold *	< 0.005	< 0.005
	Lithium *	< 0.01	< 0.01	Rare Earths	NIT	NII
	Magnestum	0.85	160			
	Manganese	0110	0.07			
	Sodium *	< 0.01	< 0.01	* Not detected		
	Niobium *	< 0.03	< 0.03			
	Molybdenum *	< 0.001	< 0.001			
C:			REMARKS:	Analysis Ce	rt. By	
DD: ITY: DD: ITY:			Page 5		Preparation	<u>\$</u>



#### HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD - TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

IDENTIFICATION	ON Gold ozs.	Silver Lead ozs. %	Copper Zinc %	XX.Mo.XX	
ELEMENTS:	Sample:	311-32015 Sample		Sample #6/12	Samp I
	#643	#31.8	ELEMENTS:	#643	#645
Silver	< 0.0005	% < 0.000s	% Nickel *	0.01	< 0.01
Aluminum	12.0-0	3.3	Phosphorus 8	< 0.1	< 0.1
Arsenic *	< 0.01	< 0.01	Lead	< 0.01	< 0.01
Boron	< 0.901	0.055	Rubidium *	0.1	< 0.1
Barium	0.15	< 0.1	Antimony	< 0.01	< 0.01
Beryllium *	< 0.0001	< 0.0001	Silicon	27.00	24.00
Bismuth *	< 0,001	10,000	Tin *	0.001	< 0.001
Calcium	2,20	8.2	Strontium *	< 0.001	< 0.001
Cadmium *	< 0.01	< 0.01	Tanzalum *	< 0.1	< 0.1
Carium *	< 0.01	< 0.01	Tellurium *	0.01	< 0.01
Cobalt *	< 0.007	€ 0.001	Thorlum *	0.1	< 0.1
Chromium	0.002	0.001	Titanium	0 4.5	1.3
Cosium *	< 0.5	< 0.5	Thall fum *	< 0.01	< 0.01
Copper	0.20	0.10	Uran Lum *	0.1	< 0.1
Iron	10.4	5.5	Venadium	0.025	0.01
Gallium *	< 0.01	K o. o.	Tungsten *	40.1	< 0.1
Germanium *	< 0.001	<10.001	Zinc	< 0.01	< 0.01
Indium *	< 0.001	< 0.00	Zirconium	0.16	0.11
Potassium *	1.0 H	TA < 1.0	Gold *	< 0.005	< 0.005
Lithium *	< 0.01	< 0.01	Rare Earths	NII	NII
Magneslum	3.4	1.3			
Manganese	0.48	0.09			
Sodium *	< 0.01	< 0.01			
Niobium *	< 0.03	< 0.03	* Not detect	ed	
Molybdenum 3	< 0.001	< 0.001			
		REMARKS:	Analysis	Cert. By	
D; Y; D; Y;		Page 6		Preparatio Analysi	



#### HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD - TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

Branch Representatives at Buyer's Plants:
Phelps Dodge Corp., Douglas, Árizona; ASARCO, El Paso, Amarillo, Texas and Hayden, Arizona

	Gold Silv	经根据 机铁铁铁 化油油 化压缩 化二氯甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	Mo.
	Sample 397-		Sample
ELEMENTS:	#852 3/0	ZA ELEMENTS:	#852
Silver	< 0.0005%	Nickel *	< 0.01
Aluminum	7.2	Phosphorus *	< 0.1
Arsenic *	< 0.01	Lead	0.01
Boron	0.05	Rubidium *	< 0.1
Berlum	0.18	Antimony	< 0.01
Berylliam *	< 0.0001	Silicon -	29.00
Bismuth *	< 0.001	Tin *	< 0.001
Calcium	0.07	Strontium *	< 0.001
Gadmium *	< 0.01	Tantalum *	< 0.1
Cerlum #	< 0.01	Tellusium *	0.01
Cobalt *	< 0.001	Thorium *	< 0.1
Chromium	0.001	Titanium	3.2
Ceslum *	< 0.5	That I fun *	< 0.01
Copper	0.55	Byanium *	< 0.1
Iron	10.5	Venadium	0.005
Gallium *	< 0.01	Tungsten *	< 0.1
Germanium *	< 0.001	Zinc *	< 0.01
Indium *	< 0.001	Zirconium	0.30
Potassium #	< 1.0	Gold*	< 0.005
Lithium	<0.01	Rare Earths	NIT THE WAR
Magnesium	2.0		
Manganese	0.11		
Sodlum *	< 0.01	* Not detect	ed
	< 0.03		
Niobium *	(1) 对这些地位在10 (1) (2) (2) (2) (2) (2) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4		Construence of the property of

Date Spl. Received / 18/69

Compl.3/27/69

TUC 342534

182,00

ACC. HEINRICHS GEOEXPLORATION COMPANY

Diamond Drilling Project
Dixie Mine
Maricopa County
Arizona

for

N. A. M.

April 1969

# DIAMOND DRILLING PROJECT DIXIE MINE MARICOPA COUNTY, ARIZONA

For

NORTH AMERICAN MINES INC.

**APRIL 1969** 

By

P. O. Box 5671 Tucson, Arizona 85703

Phone: 623-0578 Area Code: 602

的人们的**是对你的关系的**对于一个人。在这个是有关的人们的

#### TABLE OF CONTENTS

	PAGE
GENERAL LOCATION	
INTRODUCTION	1
CONCLUSIONS AND RECOMMENDATIONS	2
OPERATIONS AND PROCEDURES	3
APPENDIX	
ASSAYS	
ARIZONA ASSAY OFFICE	
HAWLEY & HAWLEY	
ROCKY MOUNTAIN GEOCHEMICAL CORPORATION	
ASSAY COMPARISON LIST	
DOCUET	

#### INTRODUCTION

At the request of Mr. Q. A. Shaw, President of North American Mines, a drill hole on the Dixie property was spotted to test the mineralization in the vicinity of the mine and specifically to confirm the cause of the extremely weak I. P. anomaly located between 2.5 and 4.0 on I. P. line 1. (Refer to GEOEX report, I. P. and Geochemical Survey, Geology, Reconnaisance, and Claim Examination of the Dixie Mining Area, Dixie Mining District, Maricopa County, Arizona, January 1969.) GEOEX was also responsible for selecting the drilling company and for supervision of drilling, core handling and assaying.

#### CONCLUSIONS AND RECOMMENDATIONS

All of the core, except in the first forty (40) feet, contains some pyrite, mostly less than one percent but very locally in greater percentages which is sufficient to account for the I. P. anomalism. The rock is a quartz-sericite schist with minor chlorite-biotite zones and a few clear quartz vein-lets. Limonite staining is essentially confined to the near surface portion except right at the bottom of the hole. At about one hundred fifty (150) feet the hole apparently crossed the extension of the vein that the Dixie Mine workings exploited. Core recovery was poor there in spite of the fact that it was anticipated and values increased somewhat in this area.

The assay and spectographic analysis results do not indicate the presence of a large porphyry type of ore body able to sustain an open pit operation. However, more drilling might develope a small underground operation such as has been the history of the Dixie Mine.

#### OPERATIONS AND PROCEDURES

The drill site was selected on the following basis: Topography and accessibility to reduce the costs of road and drill pad preparation, keeping the hole depth five hundred (500) feet or less, maximum information across beds of schist and sampling the mineralized zone and the I. P. anomaly. If the site had been placed further east, a fault may have been encountered and to cross the fault at a depth where it would not interfere with the drilling would have necessitated a drill hole greatly in excess of five hundred (500) feet. The hole was drilled at a 25° angle from the horizontal on a bearing of N 35° W for a total of four hundred four (404) feet. The bottom of the hole is two hundred seventy-five (275) feet below the surface. The core appears to have crossed the planes of schistoscity normal to the dip and within 1-2° of being normal to the strike. There is no obvious deviation along the hole, therefore it should be relatively accurately plotted.

The core was boxed, split and delivered to the assay office by GEOEX personnel daily. GEOEX personnel involved were R. Palmer and M. Critchley under the supervision of D. B. Cooley. The drilling company was Boyles Brothers Drilling Company from the Sunnyslope, Arizona office and the assaying was done by Arizona Assay in Phoenix. At selected depth intervals, the assay pulps were quartered and half was sent to Hawley & Hawley of Tucson for spectographic analysis. The spectographic analysis were expected to be check assays but because of the limitations of the technique and discrepancies of possibly significant magnitude between the reported copper values, it was decided to send the rest of the pulps of selected samples to Rocky Mountain Geochemical Corporation for check assays. These results (see appendix) correlate quite well with the original assays from Arizona Assay Office and emphasize the very semi-quantitative nature of spectographic work in general.

Respectfully submitted,

HEINRICHS GEOEXPLORATION COMPANY

Donald B Cooley

Donald B. Cooley

Geologist

APPROVED: COMPANY
HEINRICHS RECEXPLORATION COMPANY
Walter E. Heinrichs Gir.
President ONA, U.S.

Date 20 FEB 1969 Shop No. **611** 

File No. 1309. HE

V A L U E S Latest Quotation

oz. Silver.... oz. Gold....

lb. Lead.....

lb. Zinc...

THIS CERTIFIES lb. Copper.....

# Arizona Assay Off

815 NORTH FIRST STREET

Phone: 253-4001
Project GEO:CO
Project S671

85703 TUCSON AZ.

W:0:# 306

Phoenix, Arizona 85001 P. O. BOX 1148 ... 2000 Lbs. Short Ton Unit ...... 20 Lbs. Long Ton ..... 2240 Lbs. 22.4 Lbs. Short Ton ..... Long Ton Unit ..

	SILVER		GOLD		TOTAL VALUE	PERCENTAGE	
MARKS	Ozs. Tenths	VALUE PER TON	ls.	VALUE PER TON	of Gold & Silver	COPPER	REMARKS
# 611 0*-11*	010		THACE			0.035	
-	010		THACE			0.030	
#613 20.5'-30'	10		TRACE			0.030	
#614 30*-40*	10		TRACE			0.030	
#615 40*-50*	10		TRACE			0.040	
#616 50-60	.10		TRACE			0.35	
#617 6070	01.		TRACE			0.15	
# 618 70:-80	10		TRACE			0,035	
# 619 80*-89.5*	.10		NIL			0.03	
# 630 89.51-991	01,		TRACE			0,035	
# 631 99*-108*	.10		THACE			0.035	
# 633	5. 10		.007			0.035	AFRED AC
I			THACK			0.04	SP FICATE ATL
# 634	01.		THACE		av.	0.065	THE THE STATE OF T
# 688	.80		THACE			0.35	Same?

PAGE # 1 Charges \$....INVOICE # 1309 H.E..

Assayer.....

JACK STONE REG.

ANDY CHUKA, PRINT

Date.... Shop No. 1509 HE

30 FEB 1969

V A L U E S Latest Quotation

oz. Gold....

oz. Silver.....

lb. Lead..... lb. Copper.....

lb. Zinc....

THIS CERTIFIES Samples submitted for assay contain as follows:

W: 0:#306

Arizona Assay Office

815 NORTH FIRST STREET

Phone: 253-4001

HEINRICH GEO. CO TUCSON Az. 85703

Phoenix, Arizona 85001 P. O. BOX 1148

... 2240 Lbs. ..... 2000 Lbs. Short Ton Unit ..... 20 Lbs. Long Ton Unit ..... 22.4 Lbs. Long Ton Short Ton .....

2 A A M	SILVER PFR TON	VALLE	GOLD	VALLE	TOTAL VALUE			200
	Ozs. Tenths	PER TON	Ozs. 100ths	PER TON	of Gold & Silver	COPPER	¥	KEMAKKS
# 626	.50		TRACE			(0.0) 40.0		
# 637	.50		NIL			0.075		
# 628	.40		TRACE			0.01		
# 629	40		NIL			0.01		
# 630	.40		N			0.01		
# 631	.40		TRACE			0.01		
# 632	.40		N II			0.01		
#633	.40		NIL			0.005		
#634	.40		TRACE			0.005		
# 635	.40		NIL			0.005		
# 636			NIL			0.005		
#637	1/15		NIL			0.01	STENEU 40	1
#638	4.		NIL			0.005	AS AND ATE	NE
#639	4.		NIL			0.005	Y	R
#640	.30		NIL			0.005	0	
#641-2921-3021	.30		NIL			0.005	31, 19	
							The state of the s	10

Charges \$P.AGE..#...3...
INVOICE #

Assayer.....

JACK STONE REG. NO. 5479

PAGE #3 Shop No. 611 File No. 1309. HE

V A L U E S Latest Quotation

lb. Copper..... oz. Silver..... oz. Gold....

lb. Lead.....

Samples submitted for assay contain as follows: THIS CERTIFIES lb. Zinc....

W. 0.# 306

Date 30 FEB 1969

# Arizona Assay Office

815 NORTH FIRST STREET

Phone: 253-4001 HEINRICH GEO: CO TUCSON AZ.85703

Phoenix, Arizona 85001 P. O. BOX 1148

Short Ton ...... 2000 Lbs. Short Ton Unit ...... 20 Lbs. Long Ton ...... 2240 Lbs. Long Ton Unit ...... 22.4 Lbs.

MARKS	SILVER PER TON	VALUE	PER TON	VALUE	TOTAL VALUE		PERCENTAGE	BEMARKS
	Ozs. Tenths	PER TON	Ozs. 100ths	PER TON	of Gold & Silver	COPPER		CANAL CALLED
	.30		NIL			0.005		
# 643 311 - 320.5	.30		NIL			0.005		
# 644 330.5*-339*	30		TRACE			0.015		
645	30		NII			0.025		D01
# 646 339*-348.5*	.30		TRACE			0.005		
# 647 348.5 -357.5	.40		000			0.015		
# 648 m 357.51-367.51	.40		8000			0.015		
# 649 367.5 -377.5	.30		NIL			0.005		
			NIL			0.01		
# 651 387.5397	1266		NIL			0.01		
# 653	•30		TRACE			10.0		
							CEREN	1.
							SPICATE	188 M
							1 (See )	ER
								P
PAGE # 3 - INVOIC	INVOICE # 1309 HE	3H 60					000	1

TN VOICE # Charges \$ 273.00 FAGE # 0

Assayer.....

JACK STONE REG



#### > HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD - TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

	IDENTIFICATION		XXXXXXXXX	XXXXX	XXXXXXXXXX	ξχχχίχχχχχχίχξχχ ξχ	XXX <b>%</b> XXX				
	ELEMENT:		Sample #616		Sample #619	ELEMENT:		Sample #616		Samp1 #619	
	Silver		0.0005%	<	0.0005%	Nickel *	<	0.01	<	0.01	
	Aluminum		8.5		7.0	Phosphorus *	<	0.1	<	0.1	
	Arsenic *		0.01	<	0.01	Lead	<	0.01	<	0.01	
	Boron		0.05		0.04	Rubidium *	<	0.1	<	0.1	
	Barium		0.4		0.45	Antimony	<	0.01	<	0.01	
	Beryllium *		0.0001	<	0.0001	Silicon		33.00		29.00	
	Bismuth *	<	0.001	<	0.001	Tin *	<	0.001	<	0.001	
	Calcium	## " T	1.5		0.45	Strontium *	<	0.001	<	0.001	
	Cadmium *	<	0.01	<	0.01	Tantalum *	<	0.1	<	0.1	
	Cerium *	<	0.01	<	0.01	Tellurium *	<	0.01	<	0.01	
	Cobalt *	<	0.001	<	0.001	Thorium *	<	0.01	<	0.1	
	Chromium		0.003		0.002	Titanium		4.0		3.3	
	Cesium *	<	0.5	<	0.5	Thallium *	<	0.01	<	0.01	
	Copper		0.35		0.15	Uranium *	<	0.1	<	0.1	
	Iron		6.8		4.5	Vanadium		0.008		0.01	
	Gallium *	<	0.01	<	0.01	Tungsten *	<	0.1	<	0.1	
	Germanium *	<	0.001	<	0.001	Zinc *	<	0.01	<	0.01	
	Indium *	<	0.001	<	0.001	Zirconium		0.23		0.19	
	Potassium *	<	1.0	<	1.0	Gold *	<	0.005	<	0.00	
	Lithium *	<	0.01	<	0.01	Rare Earths		Nil		Nil	
	Magnesium		2.5		1.8						
	Manganese		0.12		0.10						
	Molybdenum *	<	0.001	<	0.001		1				
	Sodium *	<	0.01	<	0.01	* Not detect	ed			7 4 4	
	Niobium *	<	0.03	<	0.03						
DD: TY: DD: TY:	Mr. D. Cooley HEINRICHS GEOEXPLORATION P. O. Box 5671 Ty: Tucson, Arizona 85703				REMARKS: P.O. 1149 Research Spectrograph Preparation \$						
11:				Page 1  Analysis \$  ate Spl. eccived 3/18/69 Date Compl. 3/27/69 TUC 342534  \$							



#### HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD

TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

Branch Representatives at Buyer's Plants:
Phelps Dodge Corp., Douglas, Arizona; ASARCO, El Paso, Amarillo, Texas and Hayden, Arizona

IDENTIFICATION		xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	XXXXX	XXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	*XXX			
ELEMENT:		Sample #623		Sample #624	ELEMENT:	* \$4\)	Sample #623		Sample #624
Silver	<	0.0005%	<	0.0005%	Nickel *	<	0.01	<	0.01
Aluminum		7.5		8.5	Phosphorus *	<	0.1	<	0.1
Arsenic *	<	0.01	<	0.01	Lead	<	0.01	<	0.01
Boron		0.015		0.015	Rubidium *	<	0.1	<	0.1
Barium		0.10		0.10	Antimony	<	0.01	<	0.01
Berryllium *	<	0.0001	<	0.0001	Silicon		0.00	4	5.00
Bismuth *	<	0.001	<	0.001	Tin *	<	0.001	<	0.001
Calcium		0.85		0.43	Strontium *	<	0.001	<	0.001
Cadmium *	<	0.01	<	0.01	Tantalum *	<	0.1	<	0.1
Cerium *	<	0.01	<	0.01	Tellurium *	<	0.01	<	0.01
Cobalt *	<	0.001	<	0.001	Thorium *	<	0.01	<	0.01
Chromium	<	0.001	<	0.001	Titanium		3.5		4.2
Cesium *	<	0.5	<	0.5	Thallium *	<	0.01	<	0.01
Copper		0.18		2.8	Uranium *	<	0.1	<	0.1
Iron		6.1		6.5	Vanadium		0.015		0.005
Gallium *	<	0.01	<	0.01	Tungsten *	<	0.1	<	0.1
Germanium ☆	<	0.001	<	0.001	Zinc *	<	0.01	<	0.01
Indium *	<	0.001	<	0.001	Zirconium		0.20		0.08
Potassium *	<	1.0	<	1.0	Gold *	<	0.005	<	0.005
Lithium *	<	0.01	<	0.01	Rare Earths		Nil		Nil
Magnesium		2.3		2.4					
Manganese		0.20		0.18					
Sodium *	<	0.01	<	0.01					
Niobium *	<	0.03	<	0.03	* Not detected				
Molybdenum *	<	0.001	<	0.001					
Mr. D. Cooley				EMARKS:	Analysis Ce				

ADD: HEINRICHS GEOEXPLORATION CITY. P. O. Box 5671

ADD: Tucson, Arizona 85703

ucson, Arizona 85703

Page 2
Preparation \$

Date Spl. 3/18/69 Date Received 3/18/69 Compl.3/27/69

TUC 342534

\$

Analysis \$



#### > HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD -

TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

Samp1 #626
0.01
0.1
0.02
0.1
0.30
27.00
0.001
0.001
0.1
0.01
0.11
2.0
0.01
0.1
0.005
0.1
0.01
0.22
0.005
Nil



#### HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD - TELEPHONE 622-4836 - POST OFFICE BOX 5934 TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

	IDENTIFICATION	a-211,58	Gold Si	XXXXX	XXXXXXXXXX	XXXXXXXXXX	Zinc XXXXXXXXXX	XXX			
	ELEMENTS:		#630		#634	ELEMENT	S:		Sample #630		Samp1 #634
	Silver	<	0.0005%	<	0.0005%	Nickel	*	<	0.01	<	0.01
	Aluminum		3.1		9.4	Phospho	rus	<	0.1*		0.12
	Arsenic *	<	0.01	<	0.01	Lead		<	0.01		0.055
	Boron		0.085		0.03	Rubidiu	ım *	<	0.1	<	0.1
	Barium		0.2		0.35	Antimon	ıy	<	0.01	<	0.01
	Beryllium *	<	0.0001	<	0.0001	Silicon	1		24.00		23.00
	Bismuth *	<	0.001	<	0.001	Tin *		<	0.001	<	0.001
	Calcium		0.3		2.75	Stronti	um *	<	0.001	<	0.001
	Cadmium *	<	0.01	<	0.01	Tantalu	ım *	<	0.1	<	0.1
	Cerium *	<	0.01	<	0.01	Telluri	um *	<	0.01	<	0.01
	Cobalt	<	0.001	<	0.001*	Thorium	1 *	<	0.1	<	0.1
	Chromium		0.001	<	0.001	Titaniu	ım.		1.1		4.6
	Cesium *	<	0.5	<	0.5	Thalliu	ım *	<	0.01	<	0.01
	Copper		0.15		0.25	Uranium	1 *	<	0.1	<	0.1
	Iron		1.1		9.0	Vanadiu	ım		0.003		0.02
	Gallium *	<	0.01	<	0.01	Tungste	en *	<	0.1	<	0.1
	Germanium *	<	0.001	<	0.001	Zinc		<	0.01	<	0.01
	Indium *	<	0.001	<	0.001	Zirconi	um		0.10		0.18
	Potassium *	<	1.0	<	1.0	Gold *		<	0.005	<	0.00
	Lithium *	<	0.01	<	0.01	Rare Ea	rths		Nil		Nil
	Magnesium		0.45		3.3						
	Manganese		0.08		0.2						
	Sodium *	<	0.01	<	0.01	* Not d	letected				
	Niobium *	<	0.03	<	0.03						
	Molybdenum *	<	0.001	<	0.001			4.7			
C: DD:					MARKS:	. Ву	3 <b>y</b>				
ITY: DD: ITY:			Pa	age 4			Preparation \$				
	EINRICHS GEOEXPLORA		Da	te Sp	3/18/69	Date	Analysis \$ 3/27/69 TUC 342534 \$				



#### > HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD -

TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

	IDENTIFICATION		XXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	KXXXXXXXXX	<b>XXXXX</b> XX	XX <b>XX</b> XXXX	XXXX			
	ELEMENTS:		Sample #637		Sample #639	ELEME			Sample #637		Samp 1 6 #639
	Silver	<	0.0005%	<	0.0005%	Nicke	1 *	<	0.01	<	0.01
	Aluminum		5.8		7.0	Phosp	horus *	<	0.1	<	0.1
	Arsenic *	<	0.01	<	0.01	Lead			0.06		0.02
	Boron		0.075		0.06	Rubic	lium *	<	0.1	<	0.1
	Barium		0.30		0.23	Antim	ony	<	0.01	<	0.01
	Beryllium *	<	0.0001	<	0.0001	Silic	on		24.00		23.00
	Bismuth *	<	0.001	<	0.001	Tin *		<	0.001	<	0.001
	Calcium		0.3		0.28	Stron	tium	<	0.001	<	0.001
	Cadmium *	<	0.01	<	0.01	Tanta	lum *	<	0.1	<	0.1
	Cerium *	<	0.01	<	0.01	Tellu	rium *	<	0.01	<	0.01
	Cobalt *	<	0.001	* <	0.001	Thori	um *	<	0.1	<	0.1
	Chromium		0.001		0.002	Titan	ium		2.0		3.5
	Cesium *	<	0.5	<	0.5	Thall	ium *	<	0.01	<	0.01
	Copper		1.3		0.35	Urani	um *	<	0.1	<	0.1
	Iron		2.8		1.2	Vanad	ium		0.008		0.00
	Gallium *	<	0.01	<	0.01	Tungs	ten *	<	0.1	<	0.1
	Germanium *	<	0.001	<	0.001	Zinc	*	<	0.01	<	0.01
	Indium *	<	0.001	<	0.001	Zirco	nium		0.20		0.63
	Potassium *	<	1.0	<	1.0	Gold	*	<	0.005	<	0.00
	Lithium *	<	0.01	<	0.01	Rare	Earths		Ni 1		Nil
	Magnesium		0.85		1.0						
	Manganese		0.10		0.07						
	Sodium *	<	0.01	<	0.01	* Not	detected				
	Niobium *	<	0.03	<	0.03						
	Molybdenum *	<	0.001	<	0.001						
:: DD: TY:					REMARKS: Analysis Cert. By Page 5					5	
TY:									Analysis	. \$	



#### > HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD .

TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

	IDENTIFICATION		x & XXXXXXX	XXXXXXXX	xxxxxxxx	XXXXXXXX	XXXXXXX	XXXXXX			
	ELEMENTS;		Sample #643		Sample #64 <b>x</b> 8	ELEME	NTS:		Sample #643		Samp1 #645
	Silver	<	0.0005%	<	0.0005%	Nicke	1 *	<	0.01	<	0.01
	Aluminum		10.0		3.3	Phosp	horus &	<	0.1	<	0.1
	Arsenic *	<	0.01	<	0.01	Lead		<	0.01	<	0.01
	Boron	<	0.001		0.055	Rubic	lium *	<	0.1	<	0.1
	Barium		0.15	<	0.1	Antin	nony	<	0.01	<	0.01
	Beryllium *	<	0.0001	<	0.0001	Silic	on		27.00		24.00
	Bismuth *	<	0.001	<	0.001	Tin *		<	0.001	<	0.001
	Calcium		2.20		6.2	Stron	tium *	<	0.001	<	0.001
	Cadmium *	<	0.01	<	0.01	Tanta	ılum *	<	0.1	<	0.1
	Cerium *	<	0.01	<	0.01	Tellu	ırium *		0.01	<	0.01
	Cobalt *	<	0.001	<	0.001	Thori	um *		0.11	<	
	Chromium		0.002		0.001	Titar	ium		4.5		1.3
	Cesium *	<	0.5	<	0.5	Thall	ium *	<	0.01	<	
	Copper		0.20		0.10	Urani	um *	<	0.1	<	0.1
	Iron		10.4		5.5	Vanac	lium		0.025		0.01
	Gallium *	<	0.01	<	0.01	Tungs	ten *	<	0.1	<	0.1
	Germanium *	<	0.001	<	0.001	Zinc	*	<	0.01	<	0.01
	Indium *	<	0.001	<	0.001	Zirco	nium		0.16		0.11
	Potassium *	<	1.0	<	1.0	Gold	*	<	0.005	<	0.005
	Lithium *	<	0.01	<	0.01	Rare	Earths		Nil		Nil
	Magnesium		3.4		1.3						
	Manganese		0.18		0.09						
	Sodium *	<	0.01	<	0.01						
	Niobium *	<	0.03	<	0.03	* Not	detected	d			
	Molybdenum *	<	0.001	<	0.001						
C:				RE	MARKS:		Analysis C	ert. By			
ITY: DD: ITY:				F	Page 6				Preparation		
CC:				Date Sp	real control	Date		1	Analysis	\$	



## > HAWLEY & HAWLEY

ASSAYERS AND CHEMISTS, INC.

1700 WEST GRANT ROAD

TELEPHONE 622-4836 - POST OFFICE BOX 5934

TUCSON, ARIZONA 85703

#### THE SOUTHWEST'S LEADING ASSAYERS AND REPRESENTATIVES

Branch Representatives at Buyer's Plants:
Phelps Dodge Corp., Douglas, Arizona; ASARCO, El Paso, Amarillo, Texas and Hayden, Arizona

IDENTIFICATION	XXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXX	XXX <b>%</b> XXX		
EL EMPLIES	Sample			FLEW	NEC		Sample "950	
ELEMENTS:	#852			ELEME	NIS:		#852	
Silver	< 0.0005	%		Nickel	*	<	0.01	
Aluminum	7.2			Phosph	orus *	<	0.1	
Arsenic *	< 0.01			Lead			0.01	
Boron	0.05	C CYA		Rubidi	um *	<	0.1	
Barium	0.18			Antimo	ny	<	0.01	
Beryllium *	< 0.0001			Silico	n		29.00	
Bismuth *	< 0.001			Tin *		<	0.001	
Calcium	0.07			Stront	ium *	<	0.001	
Cadmium *	< 0.01	1		Tantal	um *	<	0.1	
Cerium *	< 0.01	13		Tellus	ium *	<	0.01	
Cobalt *	< 0.001			Thoriu	m *	<	0.01	
Chromium	0.001			Titani	um		3.2	
Cesium *	< 0.5			Thalli	um *	<	0.01	
Copper	0.55			Uraniu	m *	<	0.1	
Iron	10.5			Vanadi	um		0.005	
Gallium *	< 0.01	1 × 1		Tungst	en *	<	0.1	
Germanium *	< 0.001			Zinc %		<	0.01	a i
Indium *	< 0.001			Zircor	ium		0.30	
Potassium *	< 1.0			Gold*		<	0.005	
Lithium *	< 0.01			Rare B	arths		Nil	
Magnesium	2.0							
Manganese	0.11							
Sodium *	< 0.01			* Not	detect	ed		
Niobium *	< 0.03						REGISTE	RED A
Molybdenum *	< 0.001						SERTI G	784
Mr. D. Cooley HEINRICHS GEOEXPLORATION P. O. Box 5671 Tucson, Arizona 8570		P. Re 30	EMARKS: 0. #11 esearch 0% disco	Spectro	graphs (	Cert. By	Preparation Preparation	HARD B. S. A.

Date Spl. Received3/18/69

ACC: HEINRICHS GEOEXPLORATION COMPANY

Date Compl.3/27/69

TUC 342534

182.00

## Rocky Mountain Geochemical Corporation

2050 EAST 14TH STREET TUCSON, ARIZONA 85719

Phone 622-5702 Area Code: 602

## CERTIFICATE OF ANALYSES

Date

April 5, 1969

Page 1 of 1

Client

Heinrich's Geoexploration

808 West Grant Road

P.O. Box 5671 Tucson, Arizona

Report on:

4 Samples

Submitted by:

Heinrich's Geoexploration

Date Received:

March 28, 1969

Analysis:

Copper, Gold & Silver

Remarks:

Analyses determined by atomic absorption.

RMGC Job No. 69-5-28T

Heinrich's Job No. 306-68

cc:

Enclosed

RMGC--Salt Lake

file

Sample No.	ppm <u>Copper</u>	ppm Gold	ppm Silver
624	635	-0.1	5
625	+1000 = 0.35%	1.0	16
626	680	-0.1	7
637	660	-0.1	3

By Inita Bradshaw

Anita Bradshaw

All values are reported in parts per million unless specified otherwise. A minus sign (-) is to be read "less than" and a plus sign (+) "greater than." Values in parenthesis are estimates. This analytical report is the confidential property of the above mentioned client and for the protection of this client and ourselves we reserve the right to forbid publication or reproduction of this report or any part thereof without written permission.

ND = Non Detected

1 ppm = 0.0001%

1 Troy oz./ton = 34.28 ppm

% Mo. x  $1.6683 = \% MoS_2$ 



# HEINRICHS GEOEXPLORATION COMPANY POST OFFICE BOX 5671 TUCSON, ARIZONA, 85703 PHONE: 602/623-0578 CABLE: GEOEX, TUCSON

geophysical engineers		INCLINATION	N 35° W 25° 19 February 1969	_property_Dixie M	ine Sec 30		
	- -		10 March 1969	LOCATION 180			
SCALE:	1" = 10'	DEPTH	0-80	COLLAR ELEVATION			
DATE	17 March	NOTES BY	D.B. Cooley	_SHEET		5	
LITH- MIN- I				T	10/ CODE	CODE AC	CAVO

10 Qtz sericite schist weathered  20gray-green (chloritic)qtz sericite, limonite stained, altered 40 soft, weatheredpy. in qtz py. in qtz., weathering effects decreasing 50 pyrite in qtz.more than in sericite, less than 1% Limonite stains in fractures  60	LITH- MIN- DLOGY ERAL	17 March NOTES BY D.B. Cooley SHEET 1  ROCK TYPE - GEOLOGY	SURV.	% CORE	SECT	20	CORE	ASSAYS	
20gray-green (chloritic)qtz sericite, limonite stained, altered 40 soft, weatheredpy, in qtzpy, in qtz., weathering effects decreasingpy in qtz., weathering effects decreasingpy in qtz. for the property of the prope						13	11v		
30 gray-green (chloritic) qtz sericite, limonite stained, altered 40 soft, weathered py. in qtz py. in qtz., weathering effects decreasing  50  pyrite in qtz.more than in sericite, less than 1% Limonite stains in fractures				Bo.	,1	0;	4	0.035	
=gray-green (chloritic) =qtz sericite, limonite stained, altered 40 soft, weathered py. in qtz py. in qtz., weathering effects decreasing  50 pyrite in qtz.more than in sericite, less than 1% Limonite stains in fractures		20		6/0	11/20/2	0.	Λ́γ	0.03	
qtz sericite, limonite stained, altered 40 soft, weathered py. in qtz py. in qtz., weathering effects decreasing  50  pyrite in qtz.more than in sericite, less than 1% Limonite stains in fractures  60  70				100			74	03	
qtz sericite, inmonite stained, altered 40 soft, weathered py. in qtz py. in qtz., weathering effects decreasing  50  pyrite in qtz.more than in sericite, less than 1% Limonite stains in fractures  60  70  70							,	0.	
pyrite in qtz.more than in sericite, less than 1% Limonite stains in fractures  50  pyrite in qtz.more than in sericite, less than 1% Limonite stains in fractures				-	36.40	0,	4	0.62	
pyrite in qtz.more than in sericite, less than 1% Limonite stains in fractures  60  70  70		py.in qtz., weathering effects decreasing -			1000	0,	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0.0%	2.
- 70 -   10   1   1   10   1   1   1   1   1		pyrite in qtz.more than in sericite, less than 1% Limonite stains in fractures			, \dot{\dot{\dot{\dot{\dot{\dot{\dot{\dot	0.	4	0000	
				10 de 10	10,70	0/	4	0.015	8.0
80					10°	0,	<\\.	35	
		-80 - -			-			*	3



# HEINRICHS GEOEXPLORATION COMPANY POST OFFICE BOX 5671 TUCSON, ARIZONA, 85703 CABLE: GEOEX, TUCSON

#		DIRECTION N 35° W	HOLE NO.							_
geophys	ical engineers	INCLINATION25°	PROPERTY_D	ixie Mir	ne, Se	c 30	, T	4 N,	R 6	E
		started 19 February 1969	LOCATION							-
00415.	111 - 101	COMPLETED 10 March 1969								-
DATE_	17 Manah		COLLAR ELEV	ATION			_			-
		1969NOTES BY D.B. Cooley	SHEET		0F		5			-
LITH-	MIN- ERAL 80	ROCK TYPE - GEOLOGY		SHEV	% CORE	SECT	C	ORE AS	SAYS	
02001	200	NOON TITE ULULUUT		SURV.	KECY D	SEUI.	HO	ulcu	+++	+
1	37.	Core fresher, limonite in planes	3	-						-
	-	and fractures decreasing		4		06				-
	- H			-		\$ 8,5		1 2		-
1	E.			4		A	0.1	11 00 st		-
	90					-		+	+	
				7		اه				
						8/2		14 35		
						8/2	0,	14 000	,	
1	100			7		- Q.			+	-
					Ų.					_
	broke	n, soft (8") clayey				1		,		-
				7		9,30	0,1	11 0.035	)	-
				7		99	١	0,		-
	110			-		{•	$\top$		$\Box$	-
	11.0			_		1				-
				-		1/1		1 3		-
	-			-		18/1	0, 1	400.00		-
	- 1			-	1	100				-
	100			4	1000	ì				-
	120			$\dashv$	100	80.5		١,		-
1.5				-	1 1	1/8	1/1	10 0		-
	H. San			-		M'	0,	1, 0,		-
						//	_		$\perp$	-
	1 -			4		7				-
	130			-				,		_
				-		14/				-
	-			4		1,		1		-
	-			4		6	01/2 X	11 6/2		_
	-					1000	0.	0.0		
	140					1/2				_
					-			_		
	4" - :	2-5% py in qtz			ا د	h				
		slight brecciation			1/2/0	50		,		
1 1					H,	1/20/20/20/20/20/20/20/20/20/20/20/20/20/	80 4	x 0,35		
	150					1	0,	, 0,		
		nd - 5 to 10% py., tetrahedrite	(trace)			1		-	$\Box$	
		F3.3 22.0 0.0 0.0 0.0		]		0/				1
100	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					1/2	10	4		
	Bioti	te and Redstain		7		5	20/0/	1001		
	160				ļ	505/10	0	0.	2	
					Ī			,		
	A Section 1			7					3	
				7	-					
	_				- 1	1	1	1 .	1 1	1 1



# HEINRICHS GEOEXPLORATION COMPANY POST OFFICE BOX 5671 TUCSON, ARIZONA, 85703 PHONE: 602/623-0578 CABLE: GEOEX, TUCSON

geophysical engineers  SCALE:1" = 10"	INCLINATION 25°  STARTED 19 February 1969  COMPLETED 10 March 1969  DEPTH 160'-240'	HOLE NO. I PROPERTY DIXIE MI LOCATION 180 'E COLLAR COORD: N COLLAR ELEVATION	ine, Sec E of Dixi	30, T 4 e Shaft	I N, R 6	5_E
DATE17 March 19	69NOTES BY D.B. Cooley	SHEET 3	OF	5		
LITH- MIN- OLOGY ERAL 160	ROCK TYPE - GEOLOGY	SURV.	% CORE RECV'D SEC	COR	E ASSAYS	
- 160-168		_				
	k, fine grained, biotite, some 1%	epidote _	10/2	10 0/2 /11/	0.016	Adaptation to the first state of the state o
				8 ,		Andrew Williams
180			190	10, 0, Ve	0'0,	
  6" chlor	itic zone	_		Óg		
190			130	o. Mil	0,01	1
				8		
200			6/0 100 m	of hij	0,01	
3" clear	qtz-		10/0			
210			Jag. 3	0,1/4	0.0	
_		-	201/2	35 o'A N'I	0.01	-
				1	V	- Date of the control
222 to 2	30 - fine grained chlorite-biot schist, epidote, py ± 1%	ite _	718.5	0.1 N.1	0.00	
_230		_	J18,	, o	0.	
qt	z sericite schist		23	o' hil	0.00	
			220	lo. lú.	0.	
		_				- 100 610 610 610 610



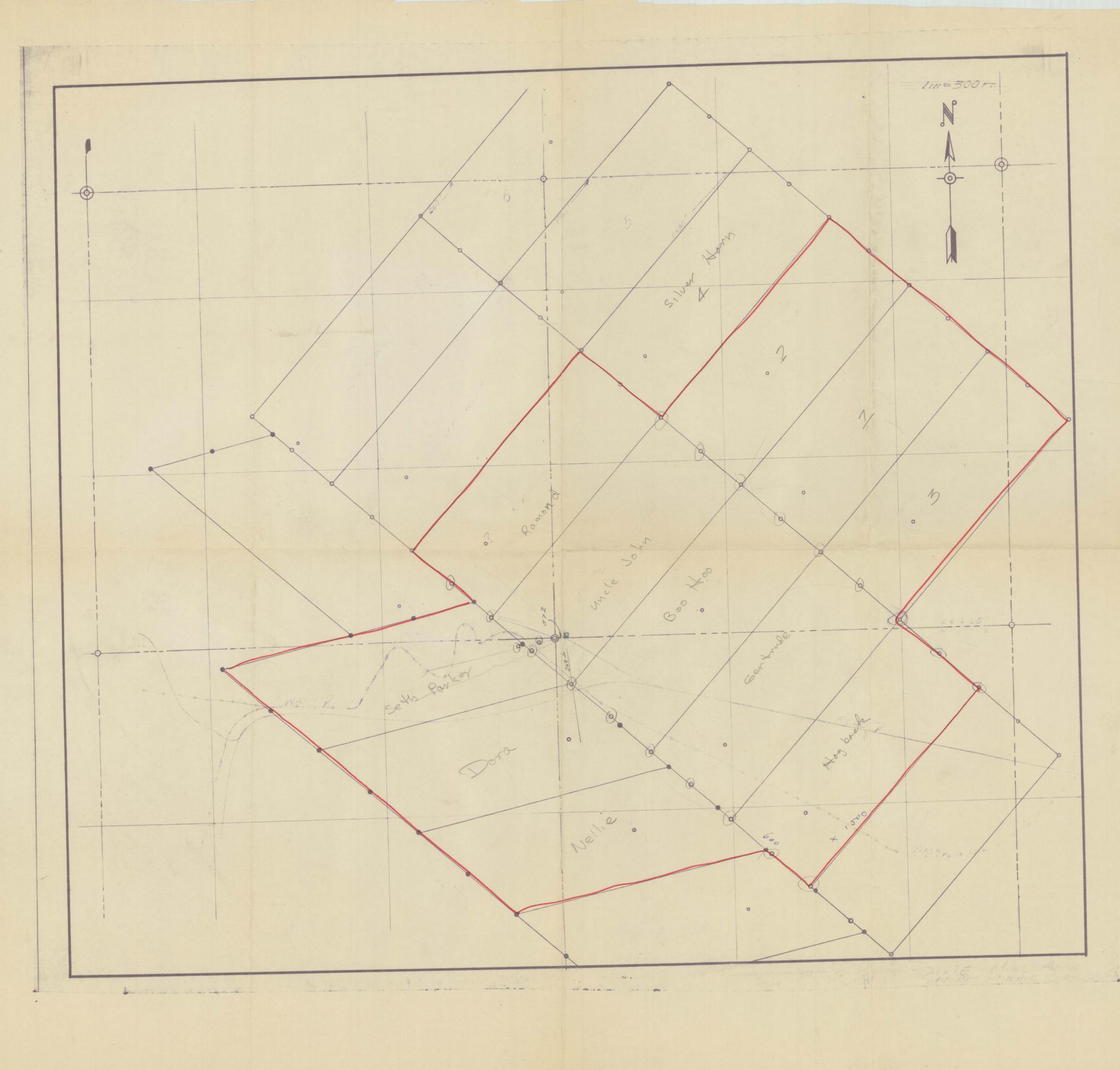
## HEINRICHS GEOEXPLORATION COMPANY POST OFFICE BOX 5671 TUCSON ARIZONA 85703 CABLE: GEOEX, TUCSON

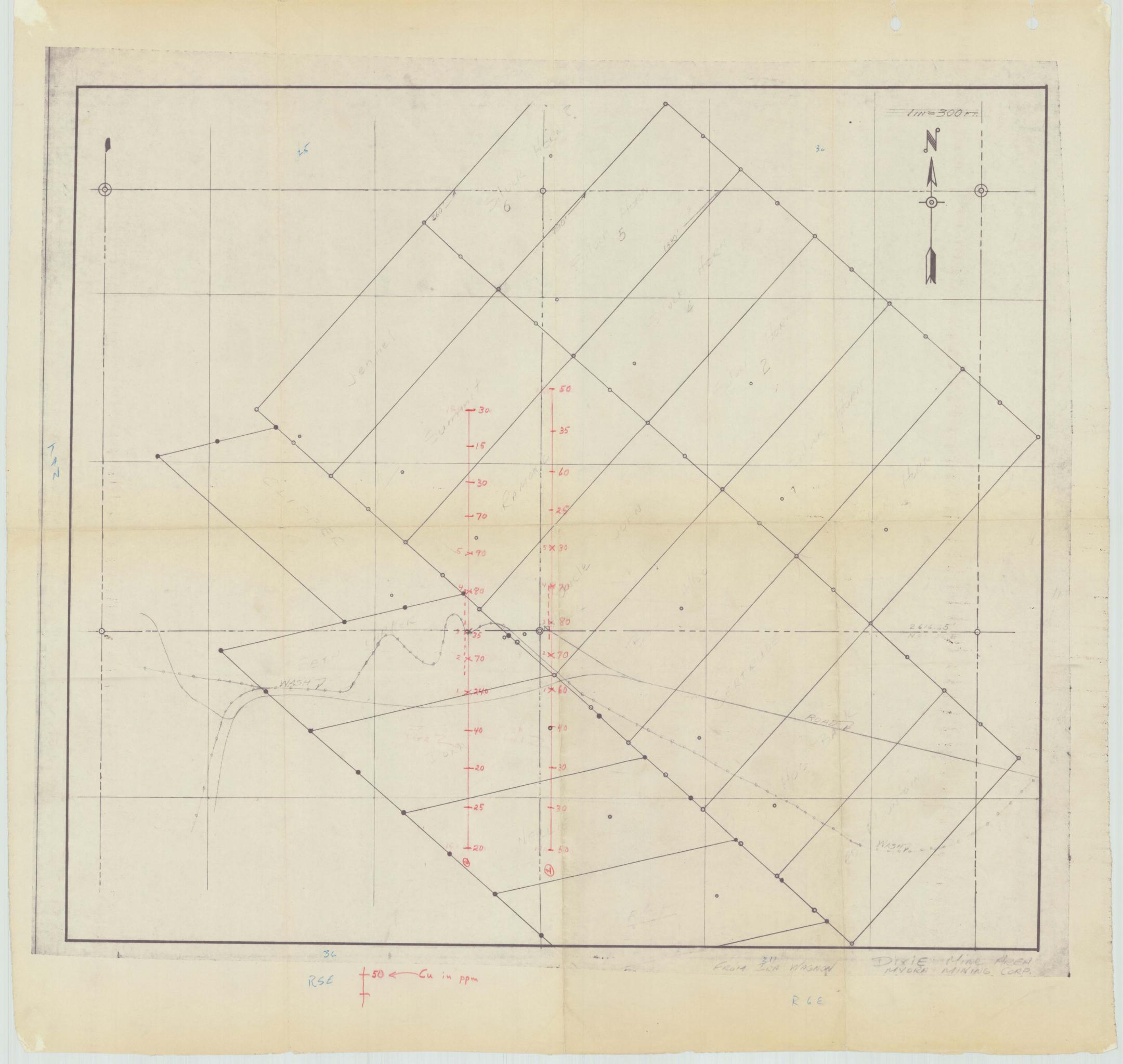
	geophys	ical engineers	INCLINATION		HOLE NOPROPERTY	l Dixie M	line, S	ec 30,	T 4 N,	R_6_E	
				19 February 196 10 March 1969	59 LOCATION COLLAR COO		E Of D	ixie S	haft		
1	SCALE:	1" = 10'		240-320'	COLLAR ELE			t		-	
	DATE _			D.B. Cooley	SHEET	4	0F_	5			
1	LITH- OLOGY	MIN- ERAL, 240				T	% CORE	T	CORE ASS	SAYS	
	OLOGY	ERAL. 240	ROCK TY	PE - GEOLOGY		SURV	. RECV'D	SECT. A	CORE ASS		
						_		16			_
		-						3 3 7 0.	1 mil 0.05		_
		246	.5 to 250, v	ery broken, talo	cy .	-		3 0,	1 1/1 000		-
1								di		1	_
		250				_		25 1			_
I								37 3	1 11 0,005		4
1						_		2465/25 2	14 0,		-
1		=257 -	1/4" py vei	n		_		3			-
		_	., , , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•		4		1 14			4
1		260						32 3 0'H	1.		_
1		-				-	1	18 0 ix	1/1/ 0.1		-
		-					1/2/0	32		.	4
		-				-					4
1			1			-		1 2			-
1		270				_		13, 0	Nil 0.005		-
		- 070 07	0 5		*			24,79.5	1 1		-
		273-27		zones of sericit	-0	4		)			+
1		- 56	veral i -2	Zones of Sericit	Je .	-		25. O. J.	1, 12		-
1	4	_				-		1 3	1 11/1 100		-
		280					1	(P) 0.	1 1/1/ 0.05		-
1						4	0/00/	3,	J V		-
1						-	100,		7 7		4
		-				_		0,3	116		4
1						-		30	y Ny 0.00		+
		290				-		\$	1 0		$\dashv$
		-				-		1,2			-
		-				4	H.				-
	1116	E				-	0/2	3 .	1 6		-
							45/0	300	b 11/1 0.003		$\dashv$
		300					+	30,30	is 0		$\dashv$
		63 <b>-</b> 3- 2 1 1				-		7			+
						+					-
1		307-310	breccia &	gougy		-		3/1/2	11/ 16		-
		F .		J		-		303,311	7 1/1/ 0.02		+
1		310 311-32	2			-	100	130	1		-
		Ch	lorite-seric	ite schist, fine	grained	+	1/50/0	1	a X		+
		re	d brown	Fe & mn oxides i	in Frac. planes	-	,	10,	do //1/		+
						+		120	2 11/ 4/2		+
		1000				+		ולמ	1, 0		-
		320				-		")	1		+
						-					+
1						-					-
1	1	_						1 1	1 1		_

GEO	
geophysical	engineers

## HEINRICHS GEOEXPLORATION COMPANY POST OFFICE BOX 5671 TUCSON, ARIZONA, 85703

GEO	EA.	PHONE: 602/623-0578	CABLE: GEOEX, TUC	SON					
$\oplus$		DIRECTION N 35° W	HOLE NO						
The same		INCLINATION 25°	PROPERTY Dixi	<u>ie Mir</u>	ne, Se	c 30,	_T_4_	N, R	6 E
ophysical	engineers	STARTED 19 February 1969	LOCATION	180' E	EofD	ixie	Shaft		
	111 - 101	COMPLETED 10 March 1969	COLLAR COORD;	N		E			
ALE:	1" = 10' 17 March 1969	DEPTH 320-404' (bottom	- OULLANT SELEVATI			5			
TE	17 March 1909	NOTES BY D. B. Cooley	SHEET	5	OF	- 2			
TH- MI	N-320			CHEV	% CORE	CEOT I	AQ LAN	ASSA	YS
OGY ER	IAL JZU	ROCK TYPE - GEOLOGY		SURV.	KECA.D	SECT.	Ag INV	Cu	-
				- 1		)			
				_	1	1 BA			
					0/0	11	1) Kr	12	
	327.5	5 - 2" clear qtz.			1000	300	12 pt	000	
	330				,				
	100			1	8500			1	
	-			1	8210	à			
	- 2			-		33		1	
			į.	-		13	0. 11/	3	
				_		23	0 10.	0.00	
	340		_	1 7		1			
					2	6			
						1/8.		,	
	345.5 -	3" clear qtz., 5% py.		1		J. J	10 K	0.00	
	- F			1		125	0. 1/1	0.	
	- 3/18	.5 - 1/2" fracture, qtz fille	ad .	-		3		-	
	350 340.	5 - 1/2 Tracture, que Title	.u			345-375°			-
	L			-	1 %	3	7 0. 0.	,	
				1	1	Y	0, 8	0.00	
	×					18	0,	0,	
		,				95°	_	$\vdash$	
	360					3			
	<sup>360</sup> 360-361	clear qtz.				16			1.0
	-			7		17	4 7	5	1.2
				7		\$5.30 VE 1.30	0, 0's	0,000	
	_ 364.5 -	366, chloritic schist	,	-		\$		0	
	-			-			-		
	370	2 2	-	-	<b>N</b>	100	-   -	- 1	
				-	60	Service Services		6	
	The state of			_	10	6	03 1/1	500.	
			,		1	1/2	10.	0.	-
						1		+	
	200					6		1 - 45	
	380		-		1	4/2-18/2			
	4			-		(,)	3 1/	6	
	-			+	÷	18/3	02 h	0.0	
	-			-		3,			
				-			1 2	$\top$	
	390389 -	broken, very talcy		_		2			
						3			
					3.	1	3 1/1	0.0	
	305	red brown, fine grained, hen	natite-limonite			887.5c.	1 , 1 b,	0	
A 10 10 10 10 10 10 10 10 10 10 10 10 10	+395 -	stain, soft	ACTOC TIMOTITUE			3	-	-	
	398 5	- 400 - maroon, looks like o	ıtzite	-		THOU CAR			
/ / · · · ·	400 - 390.3	schist. py. + 1%		-		142	100 Y	10,	
19				-		2	0 1/	, 0.	
	404 soft	, light colored		_		15	-	+	
		<ul> <li>bottom of hole</li> </ul>		1					

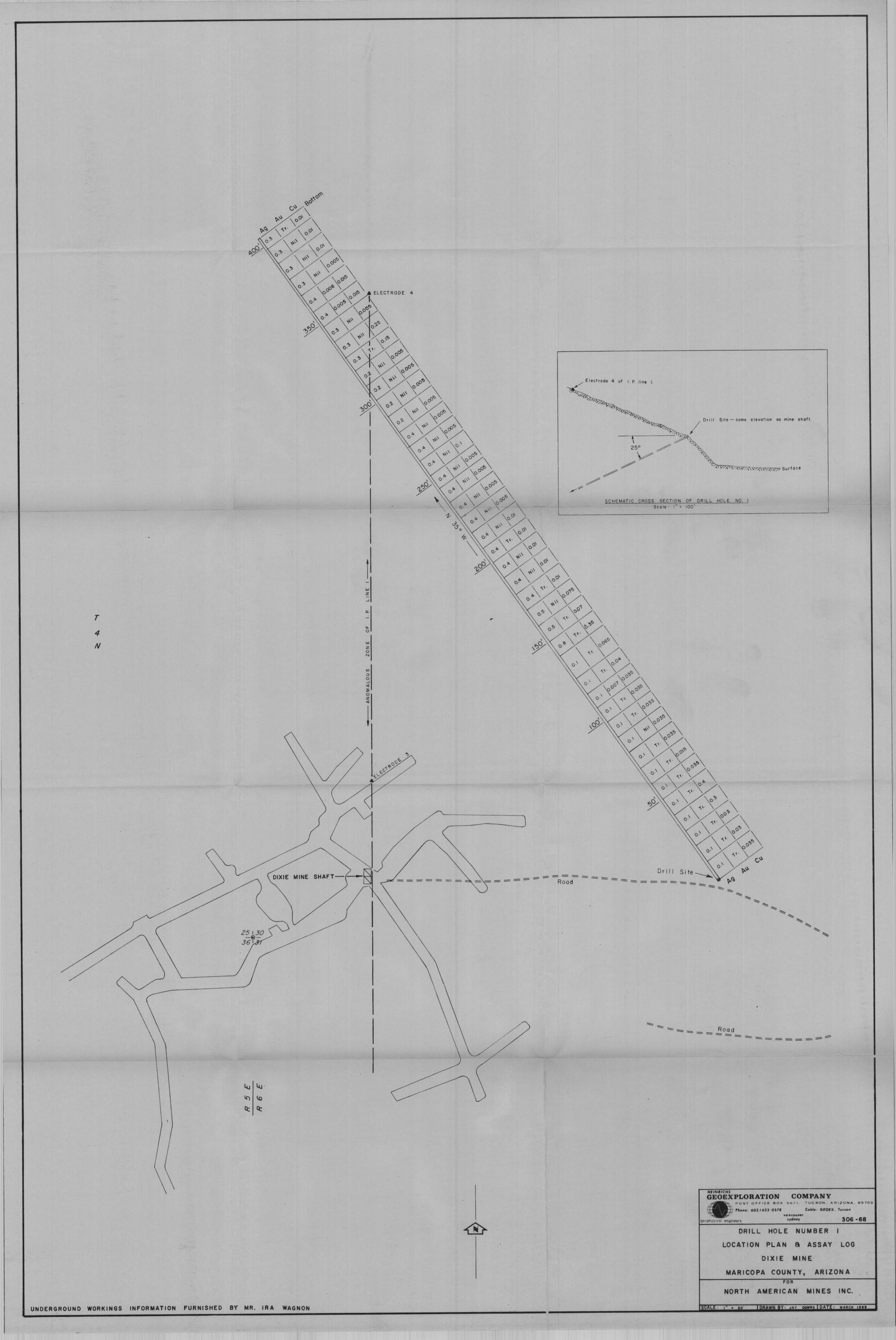




# ASSAY COMPARISON LIST

NUMBER	DEPTH	ARIZON	ARIZONA ASSAY OFFICE	FICE	HAULEY (Specto	(Spectographic)		ROCKY MOUNTAIN GEOCHEMICAL CORP	EMIC MO	PE
		oz/t	Au oz/t	24 C	34 Å	50 E	×5	p &		D A
616	50-60*	0.10	Trace	0.35	<40.0005	< 0.005	0.35			
619	80-89.5	0.10	3	0.03	< 0.0005	< 0.005	0.15			
623	117.5-126.5	0.107	0.007	0.035	< 0.0005	< 0.005	0.18			
624	126.5-141'	0.10	Trace	0.065	< 0.0005	< 0.005	2.69	<0.1		(J)
625	141-150.5	0.80	Trace	0.35	-00003	< 0.005	3.0	1.0		16
626	150.5-160	0.50	Trace	0.07	0.001	< 0.005	0.75	<0.1		7
630	190-200'	0.40	Nf1	0.01	< 0.0005	< 0.005	0.15			
634	228-238'	0.40	N17	0.005	< 0.0005	< 0.005	0.25			
637	254.5-264	0.40	2	0.01	< 0.0005	< 0.005		< 0.1		ω
639	273.5-282.5	0.40	111	0.005	₹ 0.0005	< 0.005	0.35			
643	311-320.5	0.20	111	0.005	0.0005	< 0.005	0.10			
648	357.5-367.5	0.4	0.008	0.015	0.005	< 0.005	0.2			
852	397-404	0.3	Trace	0.01	0.0005	< 0.005	0.55			

HEINRICHS GEGENELORATION COMPANY



INP. AND GEOCHEMICAL SURVEY, GEOLOGY RECONNAISSANCE, AND CLAIM EXAMINATION

OF THE

DIXIE MINE AREA
DIXIE MINING DISTRICT
MARICOPA COUNTY, ARIZONA

#368-69 for North American Mines, Inc. INDUCED POLARIZATION AND GEOCHEMICAL SURVEY, GEOLOGY RECONNAISSANCE, AND CLAIM EXAMINATION

of the

DIXIE MINE AREA

DIXIE MINING DISTRICT

MARICOPA COUNTY, ARIZONA

For

North American Mines, Inc.

January 1969

By

Heinrichs Geoexploration Company
P. O. Box 5671 Tucson, Arizona 85703
Phone: 623-0578 Area Code: 602

### TABLE OF CONTENTS

	PAGE
GENERAL LOCATION	
INTRODUCTION	1
CONCLUSIONS AND RECOMMENDATIONS	3
INTERPRETATION	w 8
BASIS OF THE INDUCED POLARIZATION METHOD	1a
IN MAP POCKET: (Total 4 pieces)	
Induced Polarization and Geochemical Sur Location and Interpretation Plan	vey
Composite Claim Map	
Sectional Data Sheets	
Line 1 Line 2	

GENERAL LOCATION of DIXIE MINE AREA for NORTH AMERICAN MINES INC. ARIZONA •FLAGSTAFF KINGMAN HOLBROOK PRESCOTT : PHOENIX. CLIFTON FLORENCE\* SAFFORD. YUMA TUCSON. • TOMBSTONE STATUTE MILES 100 25 200 HEINRICHS TUCSON, ARIZONA 85703 PH: 602/623-0578 CABLE: GEOEX, TUCSON GEOPHYSICAL ENGINEERS VANCOUVER SYDNEY

#### INTRODUCTION

At the request of Mr. Quincy A. Shaw of North American Mines, Inc., Heinrichs Geoexploration Company conducted an induced polarization and geochemical survey along with reconnaissance geology and claim examination, over parts of the Dixie Mine Area, Dixie Mining District, Maricopa County, Arizona, during the interim January 6 - 8, 1969.

Two induced polarization (I.P.) lines were surveyed, consisting of one four sending dipole electrode spread each. This gives a total surface coverage of 6,000 feet between extreme receiving electrodes, of which 3,500 feet represents subsurface plotted data at a separation between sending and receiving dipoles of three dipole lengths. Lines 1 and 2 are oriented north-south and spaced 500 feet apart with a 250 foot dipole spacing.

The selection of a 250 foot dipole spacing was to give detailed information from about 50 to 300 feet below surface.

The induced polarization measurements were made with the dual frequency technique, on a dipole-dipole electrode configuration. Frequencies used were 0.1 and 3.0 hertz. Equipment used for this work was a Geoex Mark 7 sender and a Mark 3 receiver.

Geochemical samples were taken at each induced polarization

station on both lines which gave a total of 26 samples.

These soil samples were tested for copper and silver content.

The data are presented on sectional data sheets, one for each line, showing resistivity, percent frequency effect (PFE), and metallic conduction factor (MCF), contoured in section with self potential (SP) and soil sample copper content in profile form. An induced polarization and geochemical survey location and interpretation plan is also included.

Heinrichs personnel involved in the field work were Donald B. Cooley, project chief, Ronald Palmer, crew chief, assisted by Michael Critchley and William Rasmussen; interpretation, compilation and report by William Rasmussen, Chris Ludwig, and the Geoex Tucson staff.

#### CONCLUSIONS AND RECOMMENDATIONS

The weak sulfide indications encountered could represent occurrences of some conceivable economic significance, however, the initial suggestion provided by this very small sample of subsurface information, does not seem to relate, directly at any rate, to immediate major sulfide concentration. Regionally nearby, or at considerably greater depth, there could be an indirect relationship with something more important, but much greater effort would be needed to test for such possibilities. If such were contemplated, broad reconnaissance photo and ground geology, geochemistry and perhaps magnetics would be the most constructive preliminary approach for this type of investigation.

Very weak induced polarization anomalism was seen on both Lines 1 and 2 and appears to correlate with the general vicinity of the known mineralization and its apparent strike projection to the west.

The I.P. anomalism appears to be coming from a restricted source, particularly on Line 2 where the majority of the response seems to originate from within about 250 feet of the surface. The source may extend somewhat deeper on Line, however.

The very weak strength of the I.P. response suggests that

the total integrated average sulfide content across the interpreted anomalous zones is less than 1% by volume. However, as is likely the case, the source could be in several very narrow-high sulfide pods from which the effect has been diluted with the county rock by the 250 foot dipole and station spacing needed to obtain the desired penetration.

Geochemically, there is a broad weak copper soil anomaly correlating with the I.P. anomaly on Line 1. On Line 2, however, the copper anomalism shows as two minor highs on either side of the I.P. anomalism. The one-station geochemical indication of strong copper near electrode 1, Line 2, may be affected by contamination from some shallow prospect pits nearby and additional sampling on a closer grid in that vicinity would be necessary to verify it.

The silver geochemistry was quite negative. One part per million silver (1 PPM) was seen at stations 0.0 N/S Line 1 and 2.5 N, Line 2; the rest all being less than 1 PPM.

The self potential measurements taken in conjunction with the I.P. show only minor background variations. This implies a lack of significant quantities of activity oxidizing interconnected sulfides within several hundred feet of the surface.

Geologically, the mine is in an area of schist which is quite siliceous in nature and which in general strikes N 65 E and dips 60° - 80° to the southeast. The dump shows much

pyrite, usually associated with quartz. Mineralization in this type of environment tends to be spotty and irregularly spaced in all dimensions along the zone of interest. The size of the bodies is often quite small and not necessarily interconnected.

An access tunnel, from the gully, that connects to the vertical shaft has some chalcanthite (copper sulfate), minor chalcopyrite, tetrahedrite and other similar copper minerals in it. Inclined shafts apparently lead to lower levels but are full of water to about 15 feet below the tunnel level. No other indication of mineralization was seen in the area other than a couple of minor iron stained zones.

In conclusion, it appears that the I.P. and copper geochemistry can crudely outline the zone of interest and we recommend that the zone be prospected further along strike on roughly the same line and station spacing. Since the anomalism on Line 2 to the west of Line 1 is somewhat weaker and smaller than that on Line 1, it is recommended that most work be concentrated to the east of Line 1.

The work to date has not outlined a well defined target and no drilling based solely on the geophysical-geochemical results is recommended now. Hopefully, the additional work along the strike of the zone of interest will disclose a stronger and better defined target than that already seen over the known workings.

Along with additional geophysics and geochemistry, some consideration should be given to dewatering the underground workings to sample and map the mineralization in more detail.

If drilling is done at the present stage, we recommend that it be concentrated near the workings since the strongest I.P. response was seen there and the area is of fairly easy access. At this time, the drilling could help determine the depth persistance and width of the mineralization below and laterally from the present level of development. Any available maps of the underground workings and mineralization would greatly aid in optimizing the location of this drilling.

The claim corners and location monuments all seem to be in place but only two claim notices could be found so the survey area could not be positively related to the entire claim group. Claim notices were found for Myora 12 and Dice Mine #5, dated 9 June 1958 by Adolph Romo. The maps furnished us do not identify these claims. So the only positive identification we have at present as to our location on the ground is the section corner just west of the main shaft at the Dixie Mine, the topography, and the surface evidence of mine workings. If any encouragement is developed by further work, the claims should be identified on the ground by marking all posts and reposting fresh location notices.

Composite plan maps, scale 1"=1000' and scale 1"=300'

have been constructed using information furnished Geoex as to claim locations. Without proper tie data these may be rather inaccurate, as the positive location of the claims on the ground has not been made. Filing of geophysical, geological, and geochemical reports for assessment work purposes may be somewhat difficult because of this. One day in the field with the claim locator and one of our men hopefully could resolve this problem.

#### INTERPRETATION

## Line 1

This line shows a very weak I.P. anomaly beginning near 1.25 S and extending north to about 2.5 N. The Dixie Mine shaft is located approximately at 0.5 S on this line, which is close to the southern edge of the anomaly. The polarizing material has a fairly high resistivity relative to its surroundings below a depth of approximately 100 feet making it a difficult target to detect.

Self potentials show only background variations along the line which implies no sizeable zone of interconnected oxidizing sulfides within several hundred feet of surface.

Soil samples taken at the I.P. stations were tested for copper and silver and showed a slight anomaly in copper over the center of the line. This correlates with the I.P. results fairly well.

## Line 2

This line shows a very weak I.P. anomaly from 3.75 S to 2.5 N. This may be due to a horizontally extended body that is near surface. The anomaly might also be due to several limited depth dipping bodies. The latter case would correlate better with the surface geology. Whatever the cause of the anomaly, it appears to be mostly within 250 feet of surface.

Only background variations are seen in the self potentials.

Soil samples showed two copper anomalies along the line. One is small and centered over the number five electrode while the other appears several times larger with its center over the number one electrode. Neither of these anomalies seem to correlate with the induced polarization anomaly, however, they are located on either side of the I.P. anomaly.

The analysis for silver was non-diagnostic.

Respectfully submitted,

HEINRICHS GEOEXPLORATION COMPANY

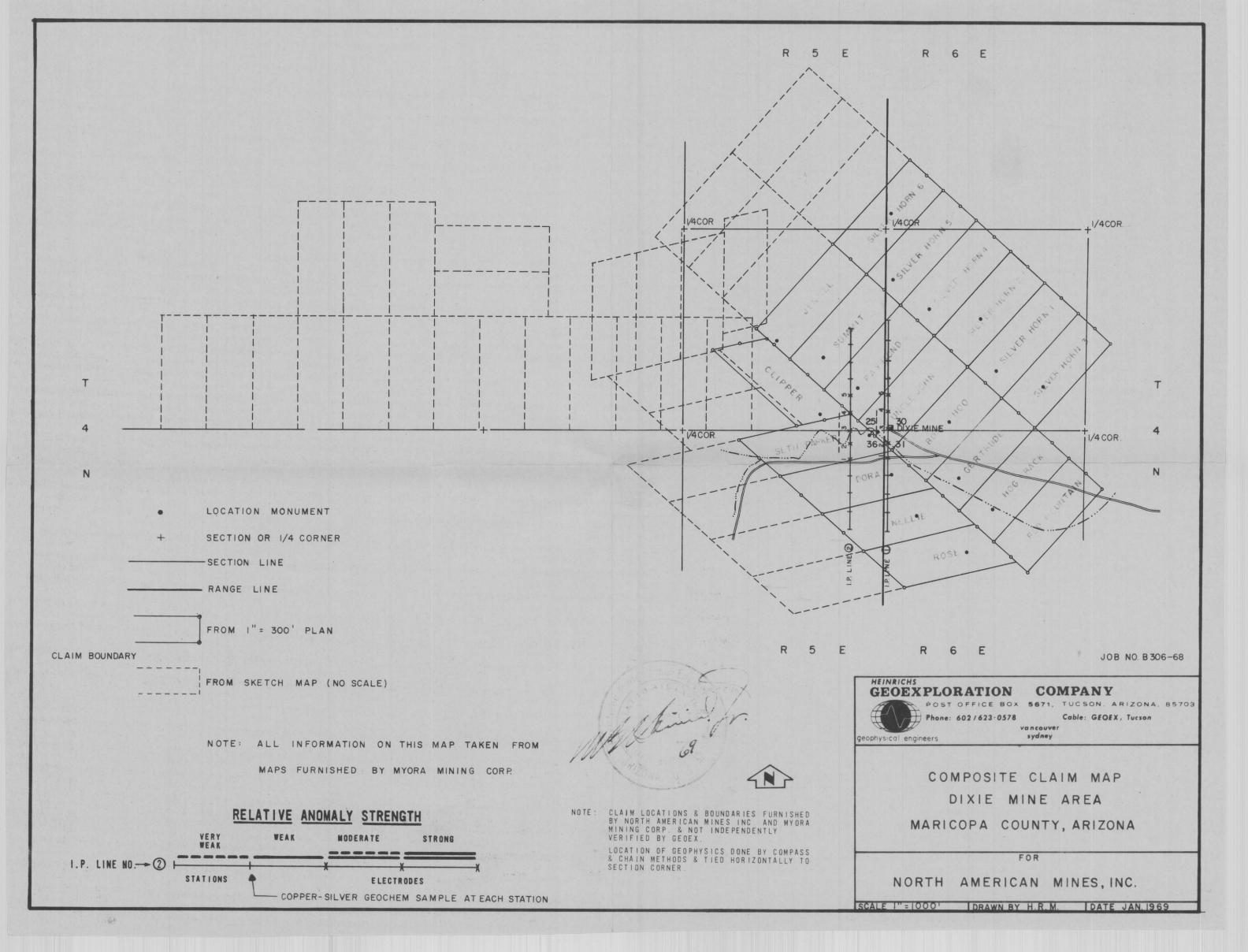
Chris S Ludwig Sr. Geophysicist

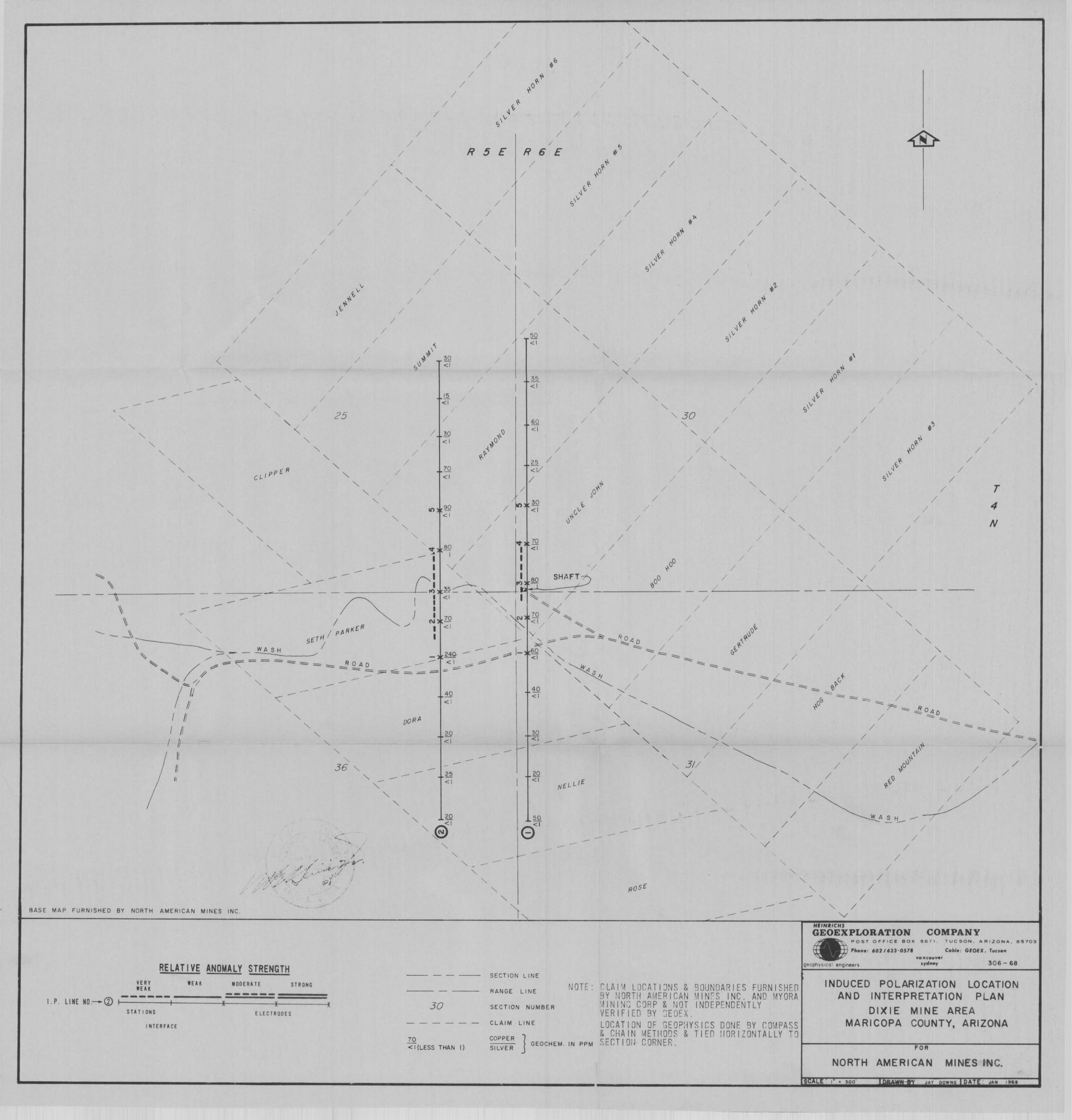
APPROVED &

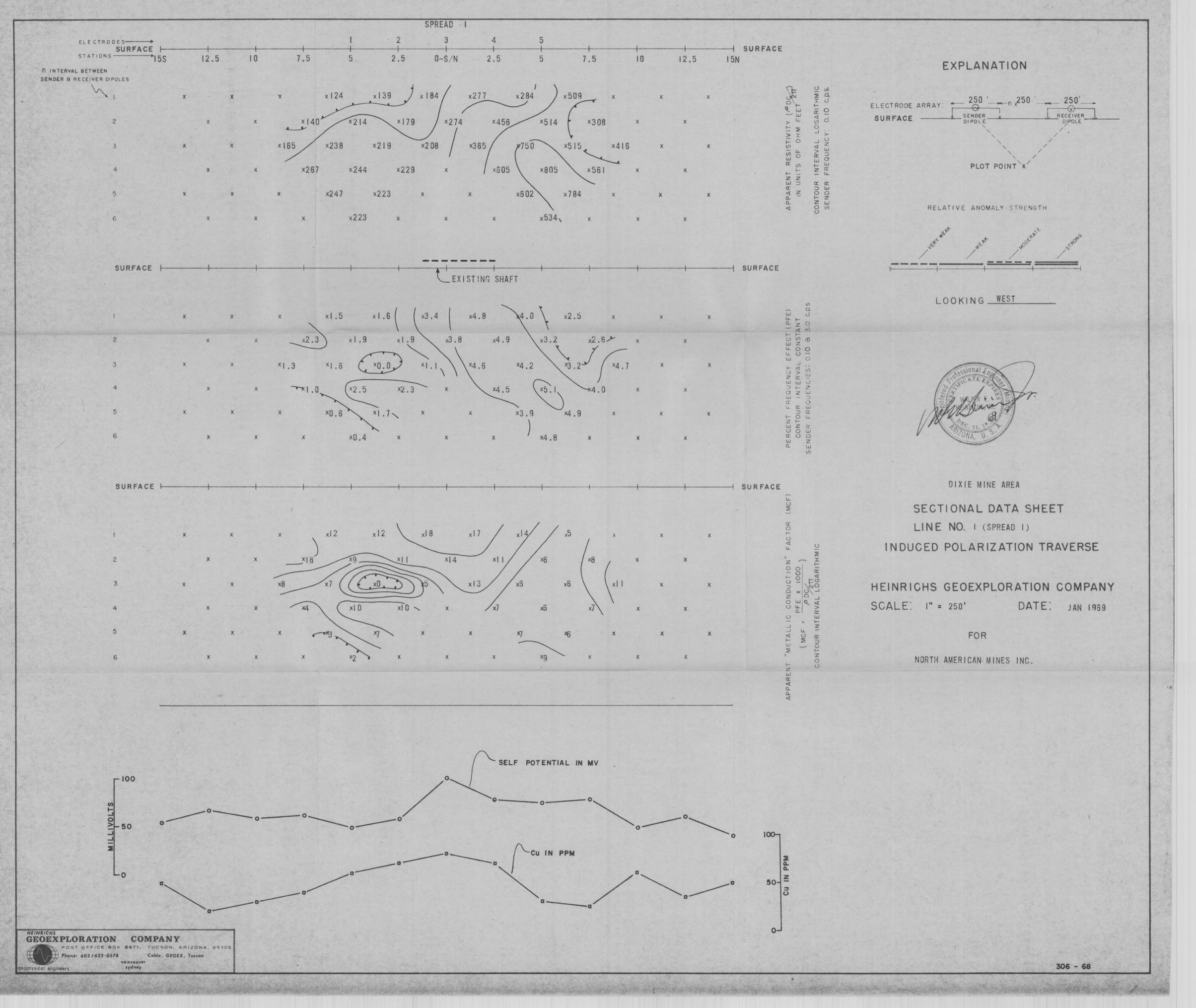
Jz/ Manager OHEN RICHS IR

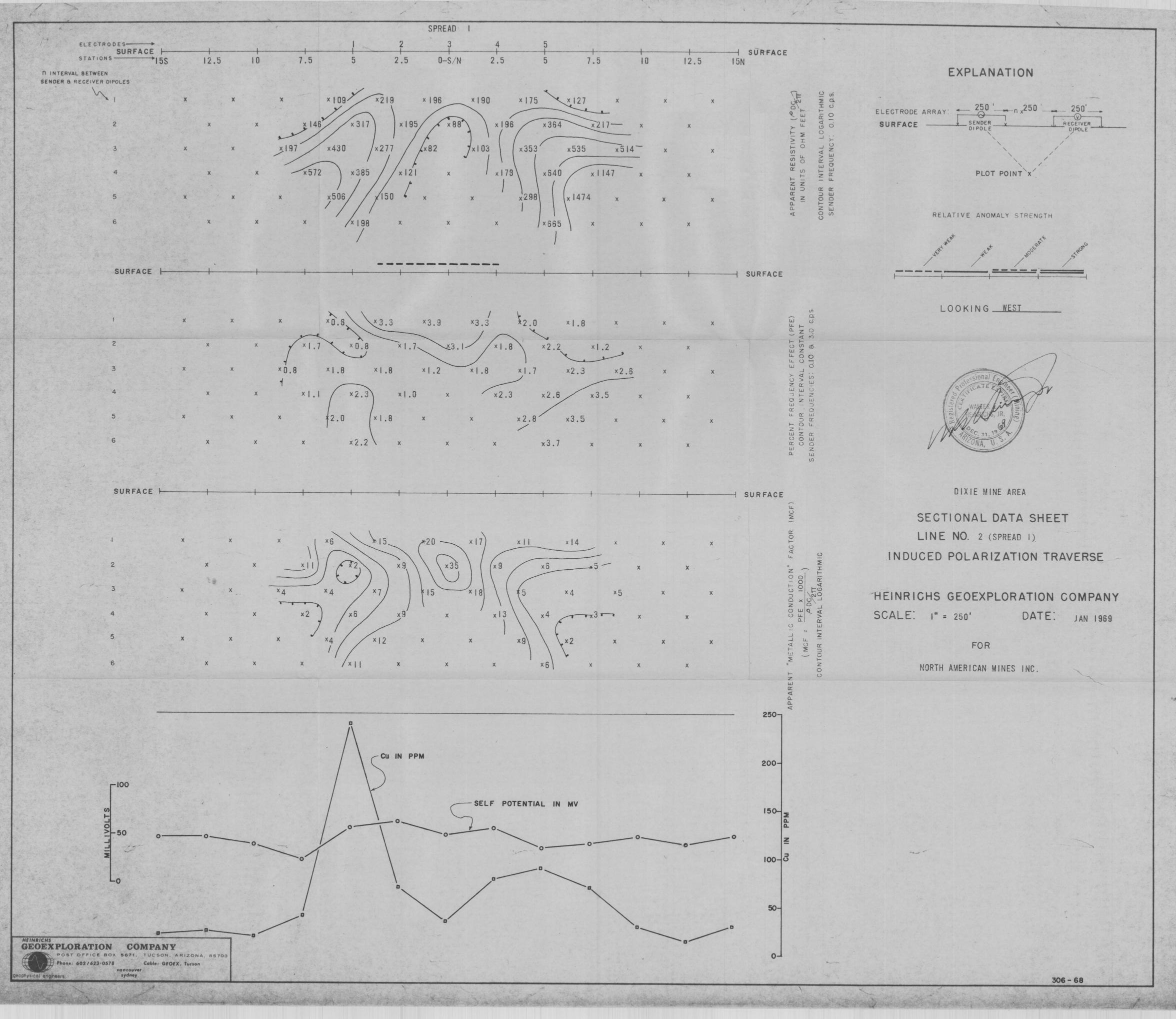
January 21, 196

Tucson, Arizona









SPREAD 1	A= 250	FREQ. 2.0	Jan 67
		7	
LINE	DATE 1/8/89	LABEL	
103 B306-68	LOOKING	CENTER 0.0	COUPLING YES

PAGE	DATE 1-8	5-7	1	10	10%	₹.00	20.8	8,00	NO.00	7.94	8.16	7.90		7,96	7.96				Control of the Contro
0	-	3-4		100	36.0	37.7	36.0	37,7						36.3	36.38				
0	306-68 S SP	2.3	300	300	501	106	105	106		8				105.	105				
0	HALF	1-2	750-1000	300	144.5	145.5	(44.5	145.5						5.441	5.771		2.91+	50.	
	T2	5-7	1	30	1.01	1111	10,7	1111	10.01	1111				8.01	8101				
		3-4	2	100	65.18	63.8	85.8	63.8	2500	63.8				63.9	63,9				
	1 T I ON CO.	2-3	500-750	1000	293	290	243	290	293	250				283.	283,		-33.3	400	
0	NOTES	5-4	1	100	29.7	29.4	29.8	29.6	29.00	29.5	29.8	5.65		28.5	28.5				
0	HEINRICHS GEOEXPLORATION I.P.RECEIVER NOTES	3-4	250-500	300	268	267	268	267	268	267				259.	259.		5:5-	90.	
0	I.P.R	5-5	0-250	300	259	257	259	257	259	257.				25/1	251.		+12.9	500	
		SEND	RECEIVE	RANGE	0 0 1	DC 2	00 3	DC 4	00 5	00 6	DC 7	D C 8	DC AVG.	AC 1	AC 2	AC AVG.	S.P.	AC NOISE	

:	0	0	0	2	252=		0	0	0	PAGE
	HE IN	HEINRICHS GEOEXPLORATION	OEXPLOR	PROJECT	O. PRO	JECT _	N.A.M.	306-68		
	- d.	. P. RECEIVER NOTES	NOTES		L	3	HALF	S SP. /		-DATE -8
SEND	1-3	2-3	3-4	4-5	1-2	2-3	3-4	シーガ	cal	
RECEIVE	10001	1250		1	1250-1500	000		1	1-2	
RANGE	100	100	30	0/	100	00/	20	10/	300	
DC 1	49.8	57.9	25.9	5,70	26.3	37,5	18.4	4.38	46.7	
D C 2	48.0	56.3	25.2	5,64	5.5.3	35.5	2.02	205	66.7	
DC 3	2:50	58,0	26.0	8228	265	37.5	18.2	4.56	1	
DC 4	4800	56,2	25.2	\$5.2	25.8	38.5	20./	4.76	1	
D C 5	49.5	58,0	2509	5,80	7.92	37.48	18.3	4,66		
9 00	48.0	56.22	25.4	25.54	25.8	38.6	20,1	5.00		
DC 7	5.60	0.88	25.8	5.80	26.5	37.4	18.3	27%		
8 J O	47.9	5.95	152	195	25.7	38.5	20.5	5.10		
DC AVG.										
AC 1	0'85	52.3	25,1	5.60	26.0	37.7	18.9	4.62	0000/	
AC 2	0.84	25.35	1.22	5,60	26.0	37.7	18.9	4.62	)	
AC AVG.										
S.P.	7.97				0					
AC NOISE	200				50.					
POT RES.										

PAGE	SP. / DATE //8/L	13 76 E		Transfer Stationary	9 420 490	01/	3	2-3		390	0.1				
	NAM 306 HALF 5	4	A Charles and A		380			NOTE THE REAL PROPERTY OF THE PERSON NAMED AND POST OF THE PERSON NAMED AN		064 0	0.1				
0.		1.2	+		290	$\vdash$	3-4	ANTERTACIONE MINISTERNA MANTER DE L'ANTERNA MA		420	1,0				
	PROJECT_	45			084	1.0	2.3	RESIDENCE OF SERVICE OF STREET, CONTRACTOR O	-	3 80	1.0				
		3-4	January Statement of the Statement of th		420	1.0	7-7	reguerative Militar		290	01/	NTS:			
	ATION CO	2.3	physician		282	1.0	4-5	1		790	1.0	COMMENTS:			
	HEINRICHS GEOEXPLORATION CO.  1. P. SENDER NOTES	4-5	1		790	1.0	3.4	Appearant appearance of the party of the par		420	1.0				
0	P. SEN	3.4	and other property	10.7	1/20	1.0	2-3	AND THE PROPERTY OF THE PROPER		380	1.0	0.10	5-16	musseln	4-177
0	HEINE	4-6	1		430	10	1.2	AND THE PERSON NAMED IN COLUMN		290	110	SIES 3.0	NO. 1363	& B. Ras	3 NO. /A
		SEND	RECEIVE	RANGE	VOLTAGE	CURRENT	SEND	RECEIVE	RANGE	VOLTAGE 290	CURRENT //0	FREQUENCIES 3.0	SENDER NO. / 367/- \$	OPERATOR B. Rasmudsen	RECEIVER NO. 14 661-8

PAGE	DATE/-8	1-2	1	30	126	124	125	124	25	124	125			123	2.3		9.9.	90	S. Land
0	- DAT	FO - 22		100	1 600	1 005	1 8847	1 105	1	501	1 884	501	7	1991	19.1		+		
0	N SP.	7-8	000	300	128	127	123	127	128	127				126.	126.				
0	MAN - 306-68 HALF N SP.	5-カ	750-10	300	128	178	178	861						177.	176.		V	7	
	CT 2	6-1	1	30	139	149	139	8/11	139	148	140	Chi		14.3	142		24+	50'	414
		2-3	22	001	157	667	067	869	620	123	069	667		623	6.23		or or commence of		
	ATION CO.	3-4	r-00s	300	246	245	246	245	246	245				243.	243.		/		
0	NOTES	1-2	100	100	305	305	306	306	307	306				30.4	30.3		-21.2	10'	
0	HEINRICHS GEOEXPLORATION	2-3	250-500	300	272	261	261	212	262					255.	255.		>		
0	HEINR I.P.R	1-3	0-250	300	265	272	266	267	266					250	258.	1.4	+7.0	. 5	
1		SEND	RECEIVE	RANGE	1 00	DC 2	00 3	D C 4	00.5	9 00	DC 7	8 00	DC AVG.	AC 1	AC 2	AC AVG.	S.P.	AC NOISE	POT RES.

ш	a.										1					Г			Γ
PAGE	DATE													,	7				
0		cal	15-7	300	101	104	106	401	70/	101				106.	106			100	
0	306-68	1-3	1	30	163	163	697	621	671	67/	671	591		162	77/		0%+	100	
0	HALF	2.3		100	509	578	585	285	485	294	585	295		57.5	575		-	The state of the s	
	PROJECT _	3-4	1500-	_	018	266	018	766	018	166	608	197		78.3	186		Transcourage supplying a second		
		5-7	1250-	100	100	612	121	616	121	616	721			70.9	200		1	7	
	ATION CO.	C-1	^	30	122 124	M1711	451 821	511	123	511	123	511	88	11.7	11.7		-7.8	0/1	
0	NOTES	2.3		100	854	887	85h	884	65h	437	07/7	75P		1.14	l'hh		Company of the Compan	-	
0	HEINRICHS GEOEXPLORATION	3-4	252	001	the	256	She	556	346	554	Shl	456		0746	ohl		Vella,	Taken Marine	
0	I.P.R	5-4	1000/	001	152	270	446	772	742	222	742	266		75.7	75.7		5 Bear	- Comment	
*		SEND	RECEIVE	RANGE	1 00	DC 2	003	D C 4	0 5	9 00	7 00	8 00	DC AVG.	AC 1	AC 2	AC AVG.	S.P.	AC NOISE	POT RES

*	0									PAGE
	HEINE	SICHS GE	DEXPLOR/	HEINRICHS GEOEXPLORATION CO.		JECT_	PROJECT NAM 306	708		1
		P. SEN	SENDER NOTES	OTES	LIN	INEZ	HALF	N SP.	HALF W SP. / DATE //8//	TE 1/8/19
SEND	1-2	2-3	4-1	7.4	2-3	1-2	4-5	4.6	2.3	1-2
RECEIVE	9	(Inches and Association of the Inches and In	A Samuel	No. of Concessions of Concession of Concession of Concession of Co		1		Assessment Against Statement	DODGE SERVICE STREET,	1
RANGE										
VOLTAGE	280	360	280	400	360	280	0.87	00/	360	280
CURRENT	14	114	14	4/	119	119	10	61	, I	14
SEND	45	h&	23	12	56	34	23	12		Cal
RECEIVE		Secremental Selections of the second		1	SERVED PROCESSION OF THE PROPERTY OF THE PROPE	Acete de la constitue de la co	A SCHOOL OF THE ACCIVITY OF THE POST OF THE ACCIVITY OF THE AC	and design and the second		5-7
RANGE										
VOLTAGE	03/	00%	360	280	08%	00%	360	082		234
CURRENT	14	14	14	PA!	14	14	14	81		17
FREQUENCIES 30	CIES 30	0.1		COMMENTS:	TS:					
SENDER NO. 13671-	NO. 1367	5-1								
OPERATOR R. Palmer	R. R. Pa	Imer	September 1							
RECEIVER NO. 10661-R	R NO. /	1661-R								
OPERATOR B. Rasmussen	R B. R.	25 musse								

1.000											1.000		1.000		y		The same of the sa		The same of the sa	
1.000	1 . 000	10000	10000	T a O O O	T + 0 0 0	T 0 0 0 0	T = U U U	7 0 0 0 0	1000		. ×									1557
259	268	297	293	658 638	107	1445	105	360 377	801	DC	495	579 563	259 252	570	263	375	184	438 502		LEFT
257 259	268	294	290	658		1445	105	360	802		492	580	260	578	265	375	182	456		
257	267	296	290	638	111	1455	106	377	800		480	562	252 259	558 580	258	385	201	476		
259 257	268	298 295	293	638	111				794		480	562	254	554	258	386	201	500		
		298							816 790		495 479	580 563	258 254	580 561	265 257	374 385	183	510		
516	535	591	583	1296	218	2900	211	737	1601	DC		1142	511		522		386	940	1994	
516	535	592	583	1296	218	2900	211	737		SUMS		1143	512	1142	524 523	760	384	958		non-time was your man time, then the time your man have some some some
516 516	535 535	594 594	583 583	1296	218	2900	511	737	1602		972	1142	511	1138	522	759	384	942		
516	535	593	name and the and the Stiff are to	1296	218				1599		972 975	1142	513 512	1134	522 523	760 760	384	966		
		593 593							1610		974	1143	512		522	759	385	932		
				-																
1	1	2	1	2	3	1	5	3	4	N	2	3	4	5	3	4	5	6		*
258 0	267.5	29.64	291.5	64.80	10.90	145.0	105.5	36.85	8.018	DCA	48.66	57.11	25.59	5,685	26.13	31.99	19.51	4.109	9901	*
			ATTO MADE THE HARR STREET WATER								48.00									
251 0	250 0	28.50	283-0	63.90	10.80	14400	105.0	30.30	1.900	ACE	40000	50030	25.10	5.000	CD . UU	21010	10000	40000	70000	
251 0	250 0	28 50	283 0	63-90	10.80	144.5	105.0	36.30	7.960	ACA	48.00	56.30	25.10	5.600	26.00	37.70	18.90	4.620	100.0	
				AND NOT THE REAL PROPERTY.				OR AND THE REAL PRINTS	as not the case the risk 25	. 1077 was 1540 rate \$507 care a	146.4				THE REAL PROP SEED VALUE OF					
194.1	201.2	89.20	219.3	195.0	82.00	109.1	31/02	211.2	120.0	KHU	14004	427.0	305,0	14701	1.40.0	DIT.		1,000	1000	
3.1	3.6	4.3	3.3	1.7	1.2	.6	*8	1.8	1.0	PFE	1.7	1.8	2.3	1.8	.8	1.1	2.0	2.2	1.003	AC CAL
16	18	48	15	9	15	6	5	7	9	MCF	11	4	6	12	4	2	4	11		
									1.000		1.000	744	458	1.000	1.000	810	603	1.000	106	RIGHT
267	261	305	245	679	149	178 178	127	500 488	124		770	752 745		116	719	795 810		163	104	SIDE
266	261	306	245	690	148	178	127	501	124		772	755	438	115	719	. 796	585	164	104	
266	262	307	245	677	90 139		128	501	125		742	746 755		123		810		169	106	
		300	243	690	140			488	125		742	745		123		809 797		169		
				679	147			501			776	754	437	124		151	595	104		
														114						
											45								b	o
532	523	610	491	1370	288	356	255	989	250	DC	1522				1439	1605	1181	332	210	
533	522	611	491	1369	288	356	255	988	249	SUMS	1514	1497			100				210	
533 533	523 524	612	491	1368	287 368287	356	255 255	989	-10		1516 1514	1500		238	1440	1606	1178	333	210	
		613	491	1286	367 287 288		255	990 989	249		1519								210	
				1369	287			989			1518	4		238		1606		333		
				68	4									239						
														238						
														- Ann			440			
	1	2	1	2	3	1	5	3	4	Re now were note now over	2	3	4 0 MR 400 MR 400 MR 400 MR	5	4	4	5	6	*	
1	THE PERSON NAMED IN	30.59	245.5	61.20	14.37	178.0	127.5	49.46	12.46	DCA	75.87	74.96	44.82	11.91	71.99	80.29	58.97	16.64	105.0	*
266,4	261.5	30 40	243.0	67.90	14.30	177.0	126.0	49.10	12.30	ACI	75.70	74.00	44.10	11.70	70.90	78.30	57.50	16.20	106.0	
258 0	255 0	2000	19 2 19 m	67 00	14.20	176.0	126 • 0	49.10	12.30	ACS	75.70	74.00	) 44.10	11.70	70.80	78.40	5/.50	16.20	100.0	***
258.0 258.0	255.0 255.0	30.30			THE REAL PROPERTY AND PERSONS NAMED IN		106 0	49.10	12.30	ACA	75.70	14.00	) 44.10	11010	(() = 00	10000	21.20	10050	106.0	
258.0 258.0 258.0	255.0	30.30	243.0	67.90	14.25	1/6.5	15000		16.000	MUM									AL	
258.0 258.0 258.0 *	255.0 255.0	30.35	243.0	67.90	14.25	1/6.5	NAME AND DESCRIPTIONS			\$5 mm mm mm mm mm mm mm		Tale 400 AND 400 AND AND							Same and	\$=====================================
258.0 258.0 258.0 *	255.0 255.0	30.35	243.0	67.90	14.25	1/6.5	NAME AND DESCRIPTIONS			\$5 mm mm mm mm mm mm mm		Tale 400 AND 400 AND AND							Same and	

103 B306-68 LINE 1	LINE	1	SPREAD L
2 PODKING E	_ DATE_/	DATE 1/2/69 A= 2	A= 250
CENTER O, O	LABEL	,	FREQ. 2, o
COLIPI ING		Doe line	Doctor in DCA
		SNONE	Be 1

	0	0		30.0	3.0 60 HZ		0	0	0	PAGE
3	HEIN	HEINRICHS GEOEXPLORATION CO.	OEXPLOR	ATIONC		JECT	N.A.M - 306-68	-306-6	00	
	<b>d</b> .	. P. RECE I VER	NOTES		LINE	-	HALF	HALF S SP.	1	DATE 1-7-6
SEND	5-4	3-4	5-7	2 -3	3-4	5-7	1-3	2.3	3-4	5-7
RECEIVE	0-52-0	250-500	100	250-750	250		1-054	000/		^
RANGE	1000	300	300	300	100	100	300	/ 00	100	30
1 00	376	245	94.0	185	58.6	28.0	165,5	75.4	30,3	14.7
DC 2	375	2 イリ	93.0	186	2.09	26.7	165,5	71.0	2.82	15:9
0 0 3	376	245	04,0	1851	57.4	28.3	164.5	72.5	30.2	3.71
D C 4	375	244	92.0	186	60.3	27.6	165.5	7007	28.3	15.9
0 5			5.46		57.5	28.4	164.5	77.6	30.3	15:0
9 00			93.0		60.0	27.4	165.5	70.0	28.3	15:8
DC 7			94,0		St.P	7.82		72.60	30.3	146
0 C 8			0.76		2:09	27.7		20,06	28.3	15.9
DC AVG.					1					
AC 1	362 .	238,5	30.5	. 781	59.0	27.7	164.	70.8	29.5	1.51
AC 2	362.	238.5	30.06	184	59.0	27.7	164.	71.0	29.5	1.51
AC AVG.										
S.P.	-43.3	19.0		+12,6			- NO			
AC NOISE	101	,05		70'			40.			
POT RES.										
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							

								20.000		
		0					0	0	0	PAGE
	HEIN	RICHS GE	OEXPLOR	HEINRICHS GEOEXPLORATION CO.	PRO	JECT	PROJECT NAM 30%	308		
	-	I. P. SEN	SENDER NOTES	OTES	LINE	_ / _	HALF 5	S SP.	DATE.	TE //2/18
SEND	热	34	22	300	75	45	12	die.	75	45
RECEIVE	1	unissimonatous usag	1	Appendiction Application of the Property of th	ALITICAS INVESTIGAÇÃ A DESCRIPCIONEIXOS SUESTIANOS		минеропрости		Michigan effects Agricy while Ground Agric Sage	CONTRACTOR DESCRIPTION OF THE PERSON NAMED IN COLUMN NAMED IN
RANGE			5							
VOLTAGE	320	380	320	360	380	320	160	300	380	320
CURRENT	1.0	7, 0	1.0	1.0	1.0	1,0	1.0	1.0	1.0	1.0
SEND	1.2	200	42	4-5	1-2	2.3	3.4	45		Cal.
RECEIVE	padhiengarante	CONTRACTOR STATEMENT OF THE STATEMENT OF	SACTOR AND PROPERTY OF THE PARTY OF THE PART	Communication of the Communica	AMERICAN CONTRACTOR	CHARLESCONDI	AND PERSONAL PROPERTY AND	6		1-2
RANGE									102	
VOLTAGE	091	300	380	320	160	300	380	320		160
CURRENT	1.0	7.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0
FREQUENCIES 3.0	CIES 3, 6	0/0		COMMENTS:	TS:					
SENDER NO. /367/-	NO. 136	5-16								
OPERATOR	3 S F	OPERATOR B. RASMUSSYM						- Aug		
RECEIVER NO.		10661-R								
OPERATOR R		Palmer								

	0	0		800	a= 250		0	0	0	PAGE
	HEINI	HEINRICHS GEGEXPLORATION CO.	DEXPLOR NOTES	ATION	TION CO. PROJECT	1-1-1	N.A.M.	306-68	00	11111
	-	ILULI VLIV		1000 E	LIN	-	LALL	MALF W SF. WAIE	AU	E / _ /
SEND	1-3	2 -3	1-3	3-4	2-3	1-3	5-4	3-4	2-3	1-2
RECEIVE	0-250	_	250-500> 500-7	-003	150	1	750-	1000		1
RANGE	300	1000	300	000/	300	100	1000	300	300	100
1 00	242	357	86.5	374	0.05/	47.0	1002	165.5	35.5	39.6
D C 2	243	357	0,38	367	148.0	48,6	667	170.5	2,001	7.62
00 3	142	357	86.5	374	150.0	46.6	299	165.5	35.5	39.6
D C 4	243	357	0,38	367	148.0	2.65	667	170.5	5.00/	39,4
00 5	1241					16.5				
9 00	243					8.85				
DC 7	142		7.00			46.5				
8 00	243					8.87				
DC AVG.	16	4	1			100 100				
AC 1	256.	343.	85.0	360,	143.5	46.1	655,	164.5	95,0	38.2
AC 2	256.	343.	85.0	360.	143,5	1197	655.	164.5	95,0	38.2
AC AVG.	0 6									
S. P.	-23.7	-3.0		+3,3			-29,3			
AC NOISE	106	100		40.			.05			
POT RES.	200									

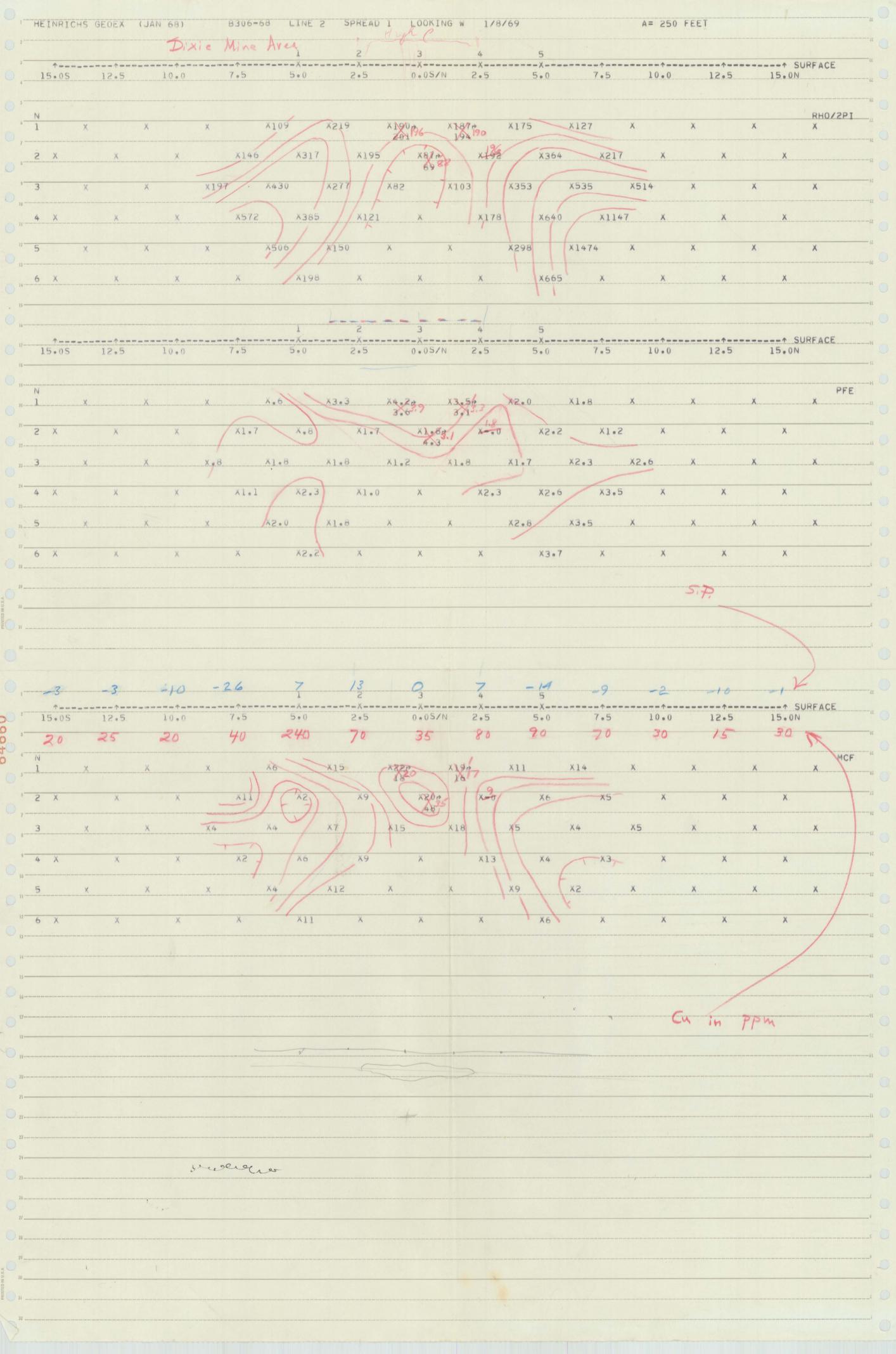
		0	0	(			0	0		PAGE
	HEIN	RICHS GE	HEINRICHS GEOEXPLORATION		CO. PRO	PROJECT _	N.A.M.	306-68	900	7
	7.	IEUE I VEN	NOIE		LINE	,	HALF ~ SF.	SE	- DAIE	E / = /
SEND	5-4	3-4	2-3	1-3	4-5	3-4	2-3	1-3	cal	
RECEIVE	1000-	1000- 1250-		1	1250-	1250 - 1500-		1	19-17	
RANGE	300	100	100	30	100	100	100	30	300	
D C 1	100	66.3	51,5	0.22	55.7	37.5	30,4	12.9	. 0.36	9
DC 2	101	2:39	53.8	23.0	53,4	00 17	28.2	12.0	0.86	
DC 3	00/	66.3	57.5	21.9	2.55	37.5	30.2	12.9	)	1000
D C 4	101	2.89	54,0	23.1	53.4	358	28.2	121	7	
D C 5			51.3	21.8			30.4	12.7		
9 00			54.0	23,2			28.3	12,1		
DC 7			57.0	27.8	The second second		30.3	12.6		
8 J Q	100		54,0	23.1			28.2	12.2		
DC AVG.	10.00									
AC 1	0.66	65.8	50.6	21.85	52.4	35.6	28.2	12,0	0.66	
AC 2	99.0	65.8	50,6	21.85	52,4	35.6	28.2	12.0	)	
AC AVG.										
S.P.	+1110	4.00			8.61-					
AC NOISE	90.				.05					
POT RES.						× 100 m				

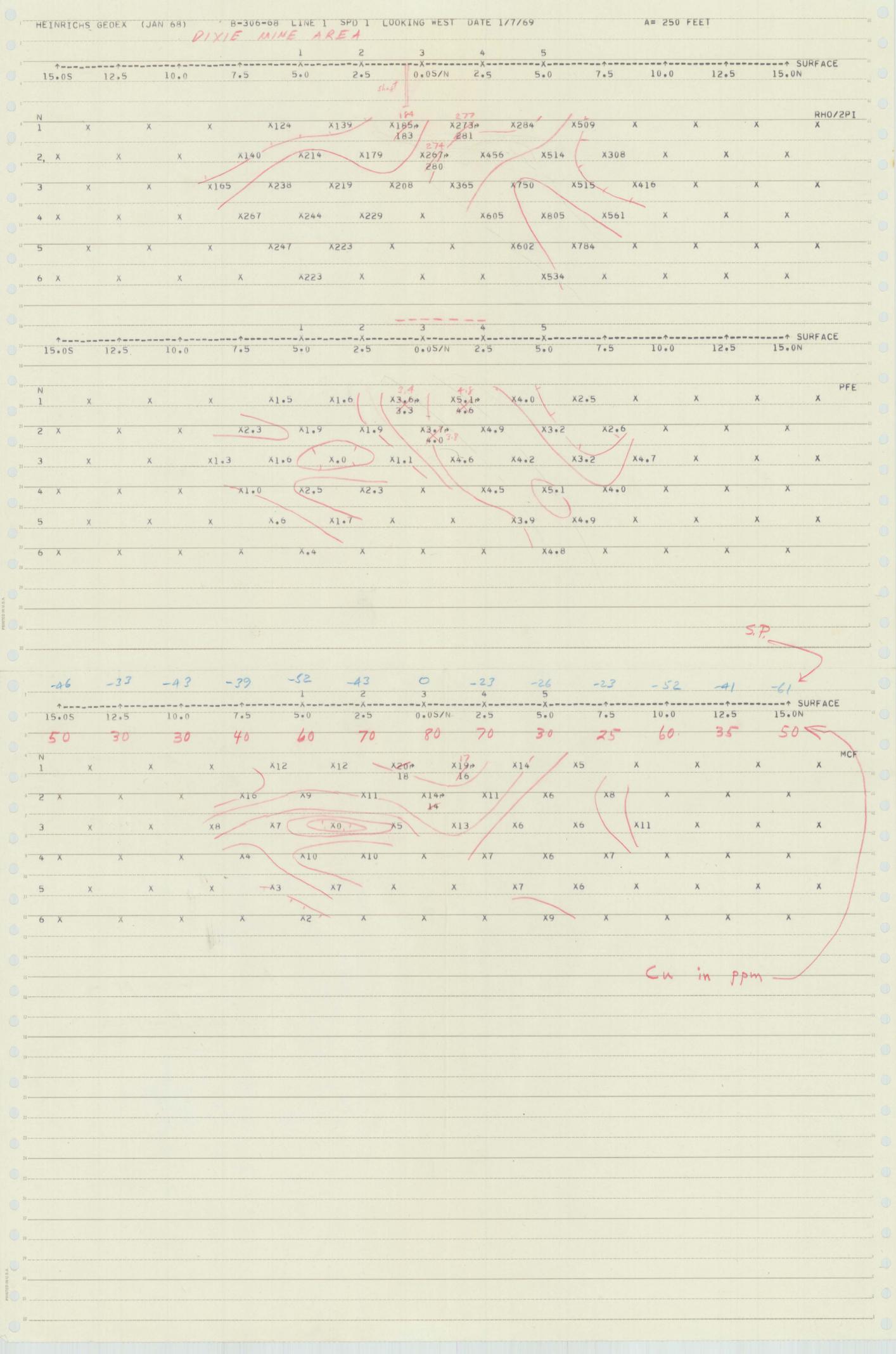
W	12/6															
PAGE	DATE!	1-2	-		160	1.0	Cal	5-15		320	1.0					
0	/ DA	2.3	Reparamental property of the second		300	0.7	10 m									
	30L N SP.	3.4	The company of the second		568	1.0	102			160	1.0					
	PROJECT_NAM 30L LINEHALF_N	45	PATER CONTRACTOR CONTRACTOR		320	1.0	2-3	Dersonentersterstell Gazzens o		300	1.0					
	DECT_	3.4	Name of the last		160	1.0	3.4	griftonessengetratifikantehigana		370	07					
		2.3	O ALLEGORIST SHAPPER S		300	1.0	5-12	orum ace expension		3/8	0.1	ITS:				
	TES CO.	3-4	Atternamentalistication		325	01	1-2	Communicación		09/	0.7	COMMENTS:			,	
	HEINRICHS GEOEXPLORATION CO. 1. P. SENDER NOTES	1.2	1		091	1.0	2-3	Medical variety of the second control of the second of the		300	1.0			5		
0	P. SEN	4	- China has been a particular and a second		300	1.0	3.4	A THE RESIDENCE OF THE PARTY OF		375	1.6	0.10	13671-5	B. RASMUSSEW	161-8	Imer
	HEINE	1-2	1		160	7,0	5-7			320	1.0	CIES 3.0	NO. 136		R NO. /0	R R. Pa
		SEND	RECEIVE	RANGE	VOLTAGE	CURRENT	SEND	RECEIVE	RANGE	VOLTAGE	CURRENT	FREQUENCIES 3.0	SENDER NO.	OPERATOR	RECEIVER NO. 10661- R	OPERATOR R. Palmen

EINRICH	S GEO	EX ()	AN 68)		B-30	6-68	LINE 1	SPD 1	LOOK	ING WE	ST DATE	1/7/	9			A= 25	50 FEET				
376 375	245 244	1.000 940 930 940 920 945 930 940 920	185	586	280 267 283 276 284 274 284	1655 1655 1645 1655 1645 1645 1655	724 710 725 707 726	303 282 302 283 303 283 303	1.000 147 159 148 159 150 158 146 159	I DC	1.000 466 466 473 472 468 467 470 466	320 316 320 318 319 319 319	1.000 159 169 159 166 156 167 159 167	845 855 845 885	220 221 219 220 220 221 219	174 180 179 184 175 176	940 945 945 950 940 940 940	1.000 538 536 517 522 520 554 542 530	1.000	LEFT SIDE	
751	489	1870 1870 1860 1865 1875 1870 1860	371	1188 1196 1197 1198 1195 1188 1190	550 559 560 558 558	3300 3300 3300 3300	1435 1432 1433	585 584 585 586 586 586 586	306 307 307 309 308 304 305	DC SUMS	932 939 945 940 935 937 936	636 638	328 328 325 322 323 326 326	1700 1730 1730 1690 1685	441 440 439	354 359 363 359 351		1074 1053 1039 1042 1074 1096	2004		
362.0 2 362.0 2 362.0 2 362.0 2 281.1 1	38.5 9 38.5 9 38.5 9 83.0 2	90.50 90.50 90.50 *	184.0 184.0 184.0 138.8	59.00 59.00 59.00 178.6	27.70 27.70 27.70 27.70 27.70	164.0 194.0 *	70.80 71.00 70.90 214.5	29.50 29.50 29.50 29.50	15.10 15.10 15.10 229.5	AC1 AC2 ACA RHO PFE	46.20 46.20	31.60 31.60 31.60 238.3	16.00 16.00	8.450 8.450 8.450 223.2	21.90 21.90 21.90 21.90	17.80 17.80 17.80 266.9	9.450 9.450 9.450	5.340 5.340 * 5.340 * 223.1	101.0	DC CAL	
242 243 241 243 241 243 241 243 241 243	NO 400 CM (70 M) 4	· · · · · · · · · · · · · · · · · · ·	NOTE THAN THE MANY THE MANY	DK 1005 GET 1000 HAD GET 1000	1.000	1.000	1.000 1655 1705	0 qu 60 <sup>60</sup> uo 16 sis.	. no no no no 🔆 (	I DC			500 cm app cm fill 600	1.000 220 230 219 231 218 232 218 231	1.000 552 534 552 534	358 375	1.000 304 282 302 282 304 283 303 282		980	RIGHT SIDE	
485 484 484 484 484 484 484	714 714	1745 1745 1745 1745	741 741 741	298 298 298	956 952 958 957 953 953 953		3360 3360 3360	1960 1960 1960	790 790 790		201 201 201	1345 1345 1345	1053 1053 1055 1053 1053 1050 1050	450 449 450 449 450 450 449		733 733 733 733	586 584 584 586 587 586 585	249 249 250 250 250 247 248	1960		
236.0 34 236.0 34 236.0 34	57.0 8 43.0 8 43.0 8	87.25 85.00 85.00 85.00	360.0 360.0 360.0	143.5 143.5 143.5	47.73 46.10 46.10 46.10 365.3	655.0 655.0 655.0 *	164.5 164.5 164.5	95.00 95.00 95.00	38.20 38.20 38.20	AC1 AC2 ACA	2 100.50 99.00 99.00 99.00	65.80 65.80	50.60 50.60 50.60	21.85 21.85 21.85	52.40 52.40 52.40	35.60 35.60 35.60	28.20 28.20 28.20	12.00 12.00 12.00 12.00	99.00 99.00 	DC CAL	
3.6	5.1	3.7	4.0	4,9	13	2.5	3.2	4.2	4.5	MCF	2.6	6	5.1	3.9	4.7	7	4.9	4.8	1.010 4	AC CAL	
			*									2									
												2 3									
	*																				
				7		were near man man man mile being bei	PART SHE HAS BEEN THE THE THE SHE HAS BEEN AND AND AND AND AND AND AND AND AND AN				a well which where these their state which was seen and well as the state of the st										er dem som feste som dem som visse som

,0

PRINTED IN U.S.A.

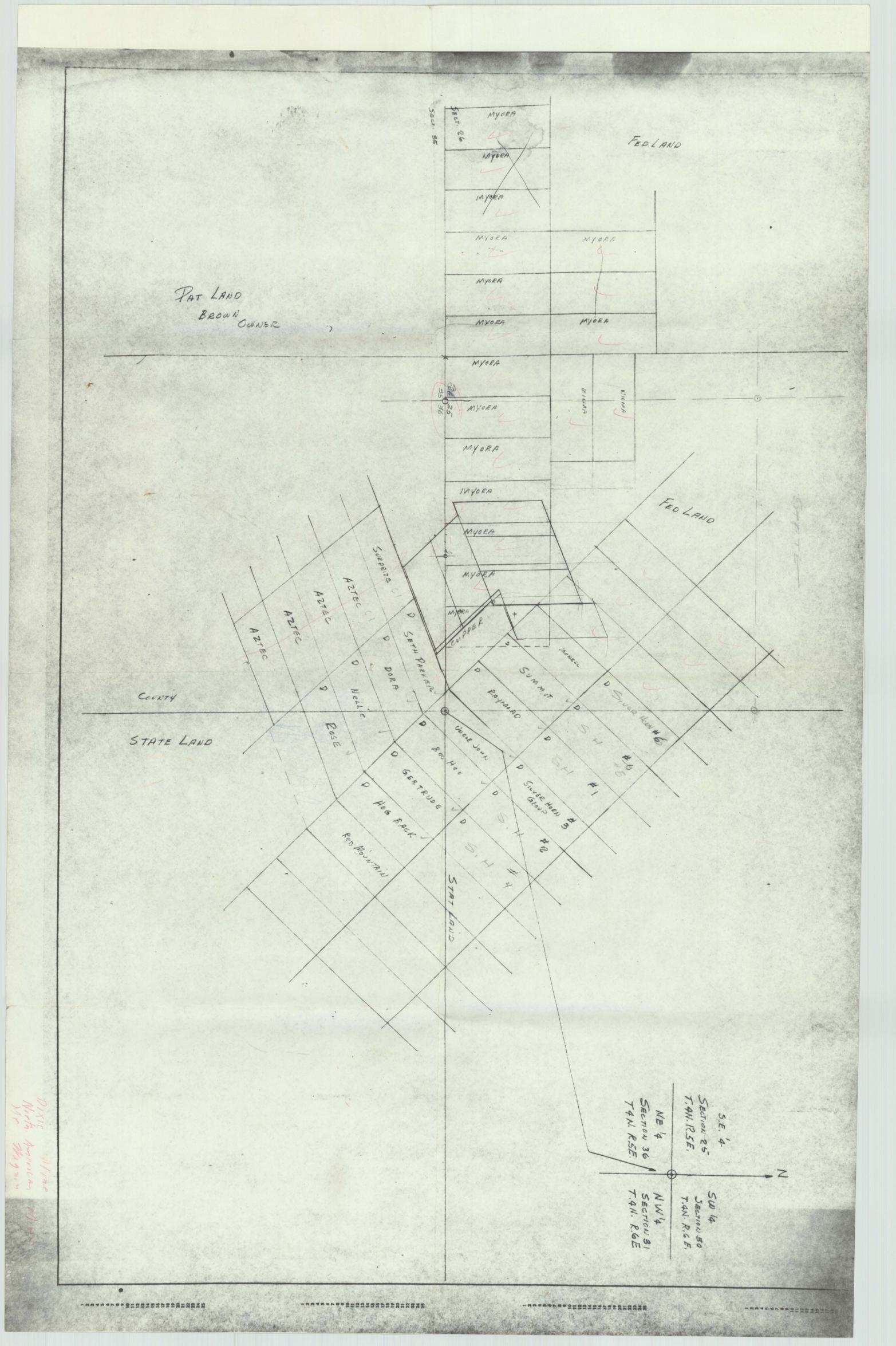




LILE

DIXIE MINE AREA

NORTH AMERICAN MINES





of Camplhack Qual North American Mass Dixic Mine

# THE TOPOGRAPHIC MAPS OF THE UNITED STATES

The United States Geological Survey is making a series of standard topographic maps to cover the United States. This work has been in progress since 1882, and the published maps cover more than 47 percent of the country, exclusive of outlying possessions.

The maps are published on sheets that measure about 16½ by 20 inches. Under the general plan adopted the country is divided into quadrangles bounded by parallels of latitude and meridians of longitude. These quadrangles are mapped on different scales, the scale selected for each map being that which is best adapted to general use in the development of the country, and consequently, though the standard maps are of nearly uniform size, the areas that they represent are of different sizes. On the lower margin of each map are printed graphic scales showing distances in feet, meters, miles, and kilometers. In addition, the scale of the map is shown by a fraction expressing a fixed ratio between linear measurements on the map and corresponding distances on the ground. For example, the scale ½500 means that 1 unit on the map (such as 1 inch, 1 foot, or 1 meter) represents 62,500 of the same units on the earth's surface.

Although some areas are surveyed and some maps are compiled and published on special scales for special purposes, the standard topographic surveys and the resulting maps have for many years been of three types, differentiated as follows:

1. Surveys of areas in which there are problems of great public importance—relating, for example, to mineral development, irrigation, or reclamation of swamp areas—are made with sufficient detail to be used in the publication of maps on a scale of  $\frac{1}{31,080}$  (1 inch = one-half mile) or  $\frac{1}{24,000}$  (1 inch = 2,000 feet), with a contour interval of 1 to 100 feet, according to the relief of the particular area mapped.

2. Surveys of areas in which there are problems of average public importance, such as most of the basin of the Mississippi and its tributaries, are made with sufficient detail to be used in the publication of maps on a scale of  $\frac{1}{62,500}$  (1 inch = nearly 1 mile), with a contour interval of 10 to 100 feet.

3. Surveys of areas in which the problems are of minor public importance, such as much of the mountain or desert region of Arizona or New Mexico, and the high mountain area of the northwest, are made with sufficient detail to be used in the publication of maps on a scale of  $\frac{1}{125,000}$  (1 inch = nearly 2 miles) or  $\frac{1}{250,000}$  (1 inch = nearly 4 miles), with a contour interval of 20 to 250 feet.

The aerial camera is now being used in mapping. From the information recorded on the photographs, planimetric maps, which show only drainage and culture, have been made for some areas in the United States. By the use of stereoscopic plotting apparatus, aerial photographs are utilized also in the making of the regular topographic maps, which show relief as well as drainage and culture.

A topographic survey of Alaska has been in progress since 1898, and nearly 44 percent of its area has now been mapped. About 15 percent of the Territory has been covered by maps on a scale of  $\frac{1}{500,000}$  (1 inch = nearly 8 miles). For most of the remainder of the area surveyed the maps published are on a scale of  $\frac{1}{250,000}$  (1 inch = nearly 4 miles). For some areas of particular economic importance, covering about 4,300 square miles, the maps published are on a scale of  $\frac{1}{62,500}$  (1 inch = nearly 1 mile) or larger. In addition to the area covered by topographic maps, about 11,300 square miles of southeastern Alaska has been covered by planimetric maps on scales of  $\frac{1}{125,000}$  and  $\frac{1}{250,000}$ .

The Hawaiian Islands have been surveyed, and the resulting maps are published on a scale of  $\frac{1}{62,500}$ .

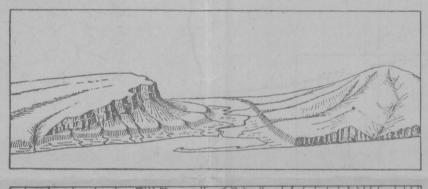
A survey of Puerto Rico is now in progress. The scale of the published maps is  $\frac{1}{80,000}$ .

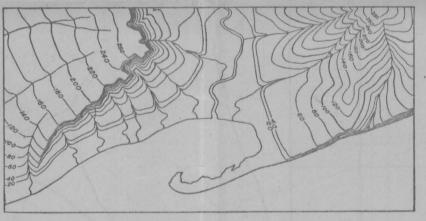
The features shown on topographic maps may be arranged in three groups—(1) water, including seas, lakes, rivers, canals, swamps, and other bodies of water; (2) relief, including mountains, hills, valleys, and other features of the land surface; (3) culture (works of man), such as towns, cities, roads, railroads, and boundaries. The symbols used to represent these features are shown and explained below. Variations appear on some earlier maps, and additional features are represented on some special maps.

All the water features are represented in blue, the smaller streams and canals by single blue lines and the larger streams by double lines. The larger streams, lakes, and the sea are accentuated by blue water lining or blue tint. Intermittent streams—those whose beds are dry for a large part of the year—are shown by lines of blue dots and dashes.

Relief is shown by contour lines in brown, which on a few maps are supplemented by shading showing the effect of light thrown from the northwest across the area represented, for the purpose of giving the appearance of relief and thus aiding in the interpretation of the contour lines. A contour line represents an imaginary line on the ground (a contour) every part of which is at the same altitude above sea level. Such a line could be drawn at any altitude, but in practice only the contours at certain regular intervals of altitude are shown. The datum or zero of altitude of the Geological Survey maps is mean sea level. The 20-foot contour would be the shore line if the sea should rise 20 feet above mean sea level. Contour lines show the shape of the hills, mountains, and valleys, as well as their altitude. Successive contour lines that are far apart on the map indicate a gentle slope, lines that are close together indicate a steep slope, and lines that run together indicate a cliff.

The manner in which contour lines express altitude, form, and grade is shown in the figure below.





The sketch represents a river valley that lies between two hills. In the foreground is the sea, with a bay that is partly enclosed by a hooked sand bar. On each side of the valley is a terrace into which small streams have cut narrow gullies. The hill on the right has a rounded summit and gently slop-

STANDARD SYMBOLS

ing spurs separated by ravines. The spurs are truncated at their lower ends by a sea cliff. The hill at the left terminates abruptly at the valley in a steep scarp, from which it slopes gradually away and forms an inclined tableland that is traversed by a few shallow gullies. On the map each of these features is represented, directly beneath its position in the sketch, by contour lines.

The contour interval, or the vertical distance in feet between one contour and the next, is stated at the bottom of each map. This interval differs according to the topography of the area mapped: in a flat country it may be as small as 1 foot; in a mountainous region it may be as great as 250 feet. In order that the contours may be read more easily certain contour lines, every fourth or fifth, are made heavier than the others and are accompanied by figures showing altitude. The heights of many points—such as road intersections, summits, surfaces of lakes, and benchmarks—are also given on the map in figures, which show altitudes to the nearest foot only. More precise figures for the altitudes of benchmarks are given in the Geological Survey's bulletins on spirit leveling. The geodetic coordinates of triangulation and transit-traverse stations are also published in bulletins.

Lettering and the works of man are shown in black. Boundaries, such as those of a State, county, city, land grant, township, or reservation, are shown by continuous or broken lines of different kinds and weights. Public roads suitable for motor travel the greater part of the year are shown by solid double lines; poor public roads and private roads by dashed double lines; trails by dashed single lines. Additional public road classification if available is shown by red overprint.

Each quadrangle is designated by the name of a city, town, or prominent natural feature within it, and on the margins of the map are printed the names of adjoining quadrangles of which maps have been published. More than 4,100 quadrangles in the United States have been surveyed, and maps of them similar to the one on the other side of this sheet have been published.

Geologic maps of some of the areas shown on the topographic maps have been published in the form of folios. Each folio includes maps showing the topography, geology, underground structure, and mineral deposits of the area mapped, and several pages of descriptive text. The text explains the maps and describes the topographic and geologic features of the country and its mineral products. Two hundred twenty-five folios have been published.

Index maps of each State and of Alaska and Hawaii showing the areas covered by topographic maps and geologic folios published by the United States Geological Survey may be obtained free. Copies of the standard topographic maps may be obtained for 10 cents each; some special maps are sold at different prices. A discount of 40 percent is allowed on an order amounting to \$5 or more at the retail price. The discount is allowed on an order for maps alone, either of one kind or in any assortment, or for maps together with geologic folios. The geologic folios are sold for 25 cents or more each, the price depending on the size of the folio. A circular describing the folios will be sent on request.

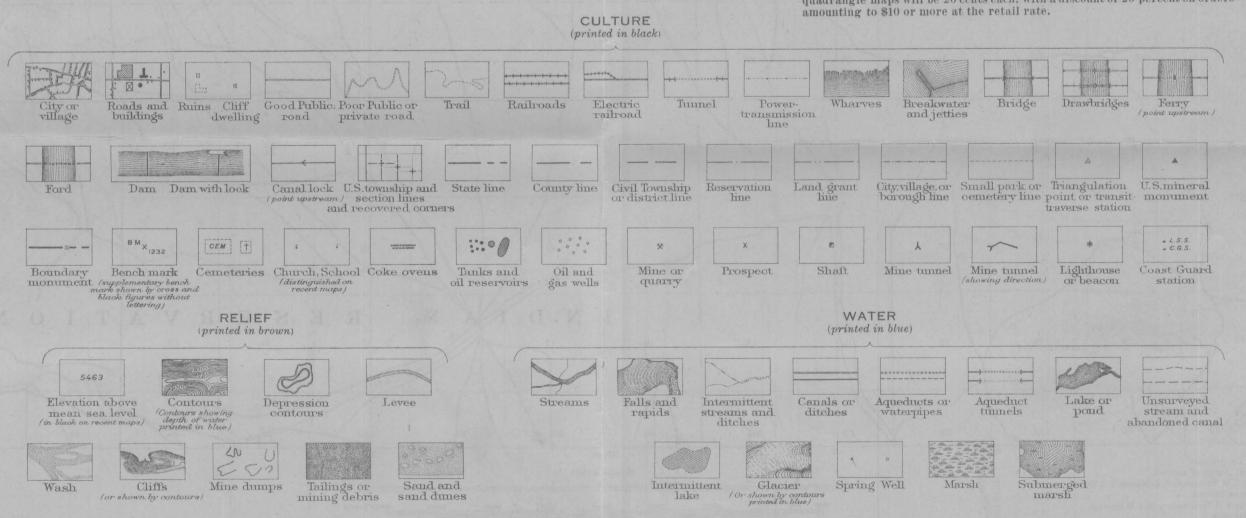
Applications for maps or folios should be accompanied by cash, draft, or money order (not postage stamps) and should be addressed to

THE DIRECTOR.

United States Geological Survey,
Washington, D. C.

November 1937.

NOTE:—Effective on and after October 1, 1946, the price of standard topographic quadrangle maps will be 20 cents each, with a discount of 20 percent on orders



INDUCED POLARIZATION AND GEOCHEMICAL SURVEY,
GEOLOGY RECONNAISSANCE, AND CLAIM EXAMINATION

of the

DIXIE MINE AREA
DIXIE MINING DISTRICT
MARICOPA COUNTY, ARIZONA

For

North American Mines, Inc.

January 1969

By

Heinrichs Geoexploration Company
P. O. Box 5671 Tucson, Arizona 85703
Phone: 623-0578 Area Code: 602

# TABLE OF CONTENTS

	PAGE
GENERAL LOCATION	
INTRODUCTION	1
CONCLUSIONS AND RECOMMENDATIONS	3
INTERPRETATION	1, 8
BASIS OF THE INDUCED POLARIZATION METHOD	la
IN MAP POCKET: (Total 4 pieces)	
Induced Polarization and Geochemical Surv Location and Interpretation Plan	еу
Composite Claim Map	
Sectional Data Sheets	
Line 1 Line 2	

### INTRODUCTION

At the request of Mr. Quincy A. Shaw of North American Mines, Inc., Heinrichs Geoexploration Company conducted an induced polarization and geochemical survey along with reconnaissance geology and claim examination, over parts of the Dixie Mine Area, Dixie Mining District, Maricopa County, Arizona, during the interim January 6 - 8, 1969.

Two induced polarization (I.P.) lines were surveyed, consisting of one four sending dipole selectrode spread each. This gives a total surface coverage of 6,000 feet between extreme receiving electrodes, of which 3,500 feet represents subsurface plotted data at a separation between sending and receiving dipoles of three dipole lengths. Lines 1 and 2 are oriented north-south and spaced 500 feet apart with a 250 foot dipole spacing.

The selection of a 250 foot dipole spacing was to give detailed information from about 50 to 300 feet below surface.

The induced polarization measurements were made with the dual frequency technique, on a dipole-dipole electrode configuration. Frequencies used were 0.1 and 3.0 hertz. Equipment used for this work was a Geoex Mark 7 sender and a Mark 3 receiver.

Geochemical samples were taken at each induced polarization

station on both lines which gave a total of 26 samples.

These soil samples were tested for copper and silver content.

The data are presented on sectional data sheets, one for each line, showing resistivity, percent frequency effect (PFE), and metallic conduction factor (MCF), contoured in section with self potential (SP) and soil sample copper content in profile form. An induced polarization and geochemical survey location and interpretation plan is also included.

Heinrichs personnel involved in the field work were Donald B. Cooley, project chief, Ronald Palmer, crew chief, assisted by Michael Critchley and William Rasmussen; interpretation, compilation and report by William Rasmussen, Chris Ludwig, and the Geoex Tucson staff.

# CONCLUSIONS AND RECOMMENDATIONS

The weak sulfide indications encountered could represent occurrences of some conceivable economic significance, however, the initial suggestion provided by this very small sample of subsurface information, does not seem to relate, directly at any rate, to immediate major sulfide concentration. Regionally nearby, or at considerably greater depth, there could be an indirect relationship with something more important, but much greater effort would be needed to test for such possibilities. If such were contemplated, broad reconnaissance photo and ground geology, geochemistry and perhaps magnetics would be the most constructive preliminary approach for this type of investigation.

Very weak induced polarization anomalism was seen on both Lines 1 and 2 and appears to correlate with the general vicinity of the known mineralization and its apparent strike projection to the west.

The I.P. anomalism appears to be coming from a restricted source, particularly on Line 2 where the majority of the response seems to originate from within about 250 feet of the surface. The source may extend somewhat deeper on Line1, however.

The very weak strength of the I.P. response suggests that

the total integrated average sulfide content across the interpreted anomalous zones is less than 1% by volume. However, as is likely the case, the source could be in several very narrow-high sulfide pods from which the effect has been diluted with the county rock by the 250 food dipole and station spacing needed to obtain the desired penetration.

Geochemically, there is a broad weak copper soil anomaly correlating with the I.P. anomaly on Line 1. On Line 2, however, the copper anomalism shows as two minor highs on either side of the I.P. anomalism. The one-station geochemical indication of strong copper near electrode 1, Line 2, may be affected by contamination form some shallow prospect pits nearby and additional sampling on a closer grid in that vicinity would be necessary to verify it.

The silver geochemistry was quite negative. One part per million silver (1 PPM) was seen at stations 0.0 N/S Line 1 and 2.5 N, Line 2; the rest all being less than 1 PPM.

The self potential measurements taken in conjunction with the I.P. show only minor background variations. This implies a lack of significant quantities of activity oxidizing interconnected sulfides within several hundred feet of the surface.

Geologically, the mine is in an area of schist which is quite siliceous in nature and which in general strikes N 65 E and dips 60° - 80° to the southeast. The dump shows much

pyrite, usually associated with quartz. Mineralization in this type of environment tends to be spotty and irregularly spaced in all dimensions along the zone of interest. The size of the bodies is often quite small and not necessarily interconnected.

An access tunnel, from the gully, that connects to the vertical shaft has some chalcanthite (copper sulfate), minor chalcopyrite, tetrahedrite and other similar copper minerals in it. Inclined shafts apparently lead to lower levels but are full of water to about 15 feet below the tunnel level. No other indication of mineralization was seen in the area other than a copule of minor iron stained zones.

In conclusion, it appears that the I.P. and copper geochemistry can crudely outline the zone of interest and we recommend that the zone be prospected further along strike on roughly
the same line and station spacing. Since the anomalism on
Line 2 to the west of Line 1 is somewhat weaker and smaller
than that on Line 1, it is recommended that most work be concentrated to the east of Line 1.

The work to date has not outlined a well defined target and no drilling based solely on the geophysical-geochemical results is recommended now. Hopefully, the additional work along the strike of the zone of interest will disclose a stronger and better defined target than that already seen over the known workings.

Along with additional geophysics and geochemistry, some consideration should be given to dewatering the underground workings to sample and map the mineralization in more detail.

If drilling is done at the present stage, we recommend that it be concentrated near the workings since the strongest I.P. response was seen there and the area is of fairly easy access. At this time, the drilling could help determine the depth persistance and width of the mineralization below and laterally from the present level of development. Any available maps of the underground workings and mineralization would greatly aid in optimizing the location of this drilling.

The claim corners and location monuments all seem to be in place but only two claim notices could be found so the survey area could not be positively related to the entire claim group. Claim notices were found for Myora 12 and Dice Minec 5, dated 9 June 1958 by Adolph Romo. The maps furnished us do not identify these claims. So the only positive identification we have at present as to our location on the ground is the section corner just west of the main shaft at the Dixie Mine, the topography, and the surface evidence of mine workings. If any encouragement is developed by further work, the claims should be identified on the ground by marking all posts and reposting fresh location notices.

Composite plan maps, scale 1"=1000' and scale 1"=300'

have been constructed using information furnished Geoex as to claim locations. Without proper tie data these may be rather inaccurate, as the positive location of the claims on the ground has not been made. Filing of geophysical, geological, and geochemical reports for assessment work purposes may be somewhat difficult because of this. One day in the field with the claim locator and one of our men hopefully could resolve this problem.

### INTERPRETATION

# Line 1

This line shows a very weak I.P. anomaly beginning near 1.25 S and extending north to about 2.5 N. The Dixie Mine shaft is located approximately at 0.5 S on this line, which is close to the southern edge of the anomaly. The polarizing material has a fairly high resistivity relative to its surroundings below a depth of approximately 100 feet making it a difficult target to detect.

Self potentials show only background variations along the line which implies no sizeable zone of interconnected oxidizing sulfides within several hundred feet of surface.

Soil samples taken at the I.P. stations were tested for copper and silver and showed a slight anomaly in copper over the center of the line. This correlates with the I.P. results fairly well.

# Line 2

This line shows a very weak I.P. anomaly from 3.75 S to 2.5 N. This may be due to a horizontally extended body that is near surface. The anomaly might also be due to several limited depth dipping bodies. The latter case would correlate better with the surface geology. Whatever the cause of the anomaly, it appears to be mostly within 250 feet of surface.

Only background variations are seen in the self potentials.

Soil samples showed two copper anomalies along the line.

One is small and centered over the number five electrode

while the other appears several times larger with its center

over the number one electrode. Neither of these anomalies

seem to correlate with the induced polarization anomaly, how
ever, they are located on either side of the INP. anomaly.

The analysis for silver was non-diagnostic.

Respectfully submitted,
HEINRICHS GEOEXPLORATION COMPANY

Chris S Ludwig Sr. Geophysicist

APPROVED:

Walter E. Heinrichs, Jr. President & General Manager

January 21, 1969 Tucson, Arizona DIAMOND DRILLING PROJECT
DIXIE MINE
MARICOPA COUNTY, ARIZONA

For

NORTH AMERICAN MINES INC.

**APRIL 1969** 

By

P. O. Box 5671 Tucson, Arizona 85703

Phone: 623-0578 Area Code: 602

# TABLE OF CONTENTS

	PAGE
GENERAL LOCATION	
INTRODUCTION	1
CONCLUSIONS AND RECOMMENDATIONS	2
OPERATIONS AND PROCEDURES	3
APPENDIX	
ASSAYS	
ARIZONA ASSAY OFFICE	
HAWLEY & HAWLEY	
ROCKY MOUNTAIN GEOCHEMICAL CORPORATION	
ASSAY COMPARISON LIST	

# POCKET

DRILL HOLE LOCATION AND PROFILE W/ASSAY LOG

## INTRODUCTION

At the request of Mr. Q. A. Shaw, President of North American Mines, a drill hole on the Dixie property was spotted to test the mineralization in the vicinity of the mine and specifically to confirm the cause of the extremely weak I. P. anomaly located between 2.5 and 4.0 on I. P. line l. (Refer to GEOEX report, I. P. and Geochemical Survey, Geology, Reconnatisance, and Claim Examination of the Dixie Mining Area, Dixie Mining District, Maricopa County, Arizona, January 1969.) GEOEX was also responsible for selecting the drilling company and for supervision of drilling, core handling and assaying.

### CONCLUSIONS AND RECOMMENDATIONS

All of the core, except in the first forty (40) feet, contains some pyrite, mostly less than one percent but very locally in greater percentages which is sufficient to account for the I. P. anomalism. The rock is a quartz-sericite schist with minor chlorite-biotite zones and a few clear quartz vein-lets. Limonite staining is essentially confined to the near surface portion except right at the bottom of the hole. At about one hundred fifty (150) feet the hole apparently crossed the extension of the vein that the Dixie Mine workings exploited. Core recovery was poor there in spite of the fact that it was anticipated and values increased somewhat in this area.

The assay and spectographic analysis results do not indicate the presence of a large porphyry type of ore body able to sustain an open pit operation. However, more drilling might develope a small underground operation such as has been the history of the Dixie Nine.

# OPERATIONS AND PROCEDURES

The drill site was selected on the following basis: Topography and accessibility to reduce the costs of road and drill pad preparation, keeping the hole depth five hundred (500) feet or less, maximum information across beds of schist and sampling the mineralized zone and the I. P. anomaly. If the site had been placed further east, a fault may have been encountered and to cross the fault at a depth where it would not interfere with the drilling would have necessitated a drill hole greatly in excess of five hundred (500) feet. The hole was drilled at a 25° angle from the horizontal on a bearing of N 35° W for a total of four hundred four (404) feet. The bottom of the hole is two hundred seventy-five (275) feet below the surface. The core appears to have crossed the planes of schistoscity normal to the dip and within 1-2° of being normal to the strike. There is no obvious deviation along the hole, therefore it should be relatively accurately plotted.

personnel daily. GEOEX personnel involved were R. Palmer and M. Critchley under the supervision of D. B. Cooley. The drilling company was Boyles Brothers Drilling Company from the Sunnyslope, Arizona office and the assaying was done by Arizona Assay in Phoenix. At selected depth intervals, the assay pulps were quartered and half was sent to Hawley & Hawley of Tucson for spectographic analysis. The spectographic analysis were expected to be check assays but because of the limitations of the technique and discrepancies of possibly significant magnitude between the reported copper values, it was decided to send the rest of the pulps of selected samples to Rocky Mountain Geochemical Corporation for check assays. These results (see appendix) correlate quite well with the original assays from Arizona Assay Office and emphasize the very semi-quantitative nature of spectographic work in general.

Respectfully submitted,
HEINRICHS GEOEXPLORATION COMPANY

Donald B. Cooley Geologist

APPROVED:

HEINRICHS GEO

Walter E

President

# ASSAY COMPARISON LIST

SAMPLE	ОЕРТИ									
		Ag oz/t	Au oz/t	3*	Ag %	2 %	3*	Ag	D B	3 1
919	20-09	01.0	Trace	0.35	<-0.0005	< 0.005	0.35			
619	80-89.5	0.10	58	0.03	< 0.0005	< 0.005	0.15			
623	117.5-126.5"	0.007	0.007	0.035	< 0.0005	< 0.005	0.18			
624	126.5-141'	0.10	Trace	0.065	< 0.0005	< 0.005	2.8	< 0.1	ro.	0.0635
625	141-150.5'	0.80	Trace	0.35	000003	< 0.005	3.0	1.0	91	0.35
929	150.5-160'	0.50	Trace	0.02	0.001	< 0.005	0.75	< 0.1	7	0.068
630	190-2001	0.40	Lin	10.0	< 0.0005	< 0.005	0.15			
634	228-238"	0.40	HII	0.005	< 0.0005	< 0.005	0.25			
637	254.5-264'	0.40	Lin	10.0	< 0.0005	< 0.005	1.3	< 0.1	m	990.0
639	273.5-282.5	0.40	EC. dos bos	0.005	₹ 0.0005	< 0.005	0.35			
643	311-320.5	0.20	200 600 600	0.005	0.0005	< 0.005	0.10			
648	357.5-367.5	9.0	0.008	0.015	0.005	<0.00	0.2			
852	397-404	0.3	draee	10.0	0.0005	<0.005	0.55			



# HEINRICHS GEOEXPLORATION COMPANY

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

4 April 1969

Mr. Q. A. Shaw, President North American Mines 60 State Street Boston, Massachusetts 02109

Dear Mr. Shaw:

Apparently there is a misunderstanding about the status of the Dixie Drilling. We sent the spectographic work out intending to also use it as a check on the assays which is a standard procedure on projects such as this. The spectographic results correspond well in the silver results, and within the limits of the technique with the gold assays. The copper results showed a significant discrepancy such that it was necessary to send some of the same samples out for a check assay to resolve this discrepancy. At this time we are still waiting for the results which should arrive at anytime, but the labs are quite busy at the present time.

The report is rough drafted and only waiting for these assay returns to be completed. When they come to us we will finish the report and make our re-At the same time we will send a commendations and send you the report. final billing and copies of all the results and a copy of all of the information to the attorneys unless we hear otherwise from you.

We also sent a letter to Mr. Wagnon yesterday asking him to meet you on April the 8th. By now you have probably received your copy of that letter.

Very truly yours, HEINRICHS GEOEXPLORATION COMPANY

Donald B. Cooley Donald B. Cooley

Geologist

DBC/PIP P.S. The chock assay results just came in and are in the range of the original assays as we suspected they would be. Unfortunately spectographic analysis is only semi-quantitative at best.

4 April 1969 Mr. W. A. Shaw, President North American Mines 60 State Street Boston, Massachusetts 02109 Dear Mr. Shaw: Apparently there is a misunderstanding about the status of the Dixie Drilling. We sent the spectographic work out intending to also use it as a check on the assays which is a standard procedure on projects such as this. The spectographic results correspond well in the silver results, and within the limits of the technique with the gold assays. The copper results showed a significant discrepancy such that it was necessary to send some of the same samples out for a check assay to resolve this discrepancy. At this time we are still waiting for the results which should arrive at anytime, but the labs are quite busy at the present time. The report is rough drafted and only waiting for these assay returns to be completed. When they come to us we will finish the report and make our recommendations and send you the report. At the same time we will send a final billing and copies of all the results and a copy of all of the information to the attorneys unless we hear otherwise from you. We also sent a letter to Mr. Wagnon yesterday asking him to meet you on April the 8th. By now you have probably received your copy of thet letter. Very truly yours, HEINRICHS GEOEXPLORATION COMPANY Donald B. Cooley Geologist DBCpplp

Mr. Q. A. Shaw, President North American Mines Boston, Massachusetts 02109

Mr. Shaw:

Apparent1

April 3, 1969

Mr. Ira Wagnon P.O. Box 382 Casa Grande, Arizona

Dear Ira;

Mr. Shaw called today and asked us to pass on the fol-

lowing information:

He will arrive in Tucson Tuesday, 8 April 1969, at 4:34 P.M., flight 221 American Airlines from Chicago. He would like you to meet him, if possible and if not, he will be at the Desert Inn in Tucson. As of now, he intends to leave from Phoenix on the following Friday.

We have not sent out a report on the Dixie as the Spectographic analysis and the assays are not in good agreement, so we have sent out a few for a check. They should be back this week, we see told.

Very truly yours, HEINRICHS GEOEXPLORATION COMPANY

Donald B. Cooley Geologist

DBC/vr

cc: Q. A. Shaw, President
North American Mines, Inc.
60 State Street
Boston, Massachusetts 02109

14 March 1969 Mr. Ira Wagnon P.O. Box 382 Casa Grande, Arizona Dear Ira, We have been asked by Mr. Shaw to carefully look at and log the core American Exploration left there. Also to split and assay the core if it seems worthwhile to do so. He asked us to get a letter, from you and also signed by your partners that we be authorized to look at the core and work on it. As soon as we receive this authorization we will come up and look at this core. The drilling at the Dixie stopped at 404' and showed nothing really. The core has just come and I haven't logged it as yet, but the assays are complete. Hope you are well and we will be seeing you soon. Very truly yours, HEINRICHS GEOEXPLORATION COMPANY Donald B. Cooley DBC/plp



#### HEINRICHS GEOEXPLORATION COMPANY

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

November 4, 1968

Mr. Quincy A. Shaw, Jr.
North American Mines, Inc.
68 State Street
Boston, Mass. 02109

Re: Proposed Mineral Evaluation Dixie Mine Project, McDowell Mountains, Maricopa County, Arizona

Dear Mr. Shaw,

This will confirm our phone conversation of Friday, November 1, 1968 and subsequent phone conversations this morning with Vic Verity, in which Vic advised us of complications in your agreement with the owner of the Dixie property. Therefore, for our mutual understanding and agreement, we propose the following:

Upon receiving an okay from you or Mr. Verity, Geoex will send a mining geologist to the Dixie Mine and vicinity. His assignment will be to locate and identify the major mineralized structure or strictives on the property in order to properly orient a proposed I. P. survey of three lines.

Charges will be at the rate of \$150.00 per man day for the geologist and \$250.00 per crew day for a standard I. P. crew including all the necessary equipment. Vehicle charges will be \$15.00 per day, plus \$0.15 per mile per vehicle. Directly related supplies, communications, living, travel, and other direct job incidentals charged at our cost. Final compilation, interpretation, and report is \$150.00 per Tucson staff day. Based on these rates, total estimated cost of the job as presently planned will be about \$2,000.00, if three I. P. lines are run on 500'dipole spacing as suggested by

wvember 4. 1968

Excessive weather delay and standby charges are one half the daily rate. Breakdown of our equipment in excess of one hour per day will be made up or not charged.

Others of our technical staff are involved for consultation and supervision or as needed and/or are supplied at our standard rates as requested and mutually agreed upon.

All property permits, brushing, and trespassing liability and related costs incurred on behalf of client assumed by client. Charges for extra equipment and personnel employed if mutually desired, are extra.

Geoex will save client harmless from all Workmen's Compensation, public liability and property damage liability incurred by Geoex employees.

Preliminary data or copies of rough field plotting sheets are available as work progresses.

Payments are due on presentation and billings may be submitted periodically with the final statement after completion of the final report.

We would like to undertake full management and direction of your continuing exploration program, and respectfully request that you advise us on how you would like to proceed.

Although we worked for you through Graton on many projects through the years we still have little idea of the desired and general scope of your operation.

I am enclosing some recent literature which you may not have that describes our company activities.

In the meantime we will hold off on sending anyone to the field till we hear further from you or Vic. If you would like us to expedite negotiations with the owners in your behalf either directly or through Vic, please let us know. This could be a worthwhile step in our helping to pick up the ball for you.

> Sincerely yours, HEINRICHS GEOEXPLORATION COMPANY

E. Grover Heinrichs Vice President

November 4, 1968 Mr. Quincy A. Shaw, Jr. North American Mines. Inc. 68 State Street Boston, Mass. 02109 Re: Proposed Mineral Evaluation Dixie Mine Project, McDowell Mountains, Maricopa County, Arizona Dear Mr. Shaw. This will confirm our phone conversation of Friday, November 1, 1968 and subsequent phone conversations this morning with Vic Verity, in which Vic advised us of complications in your agreement with the owner of the Dixie property. Therefore, for our mutual understanding and agreement, we propose the following: Upon receiving an okay from you or Mr. Verity, Geoex will send a mining geologist to the Dixie Mine and vicinity. His assignment will be to locate and identify the major mineralized structure or strictives on the property in order to properly orient a proposed I. P. survey of three Charges will be at the rate of \$150.00 per man day for the geologist and \$250.00 per crew day for a standard I. P. crew including all the necessary equipment. Vehicle charges will be \$15.00 per day, plus \$0.15 per mile per vehicle. Directly related supplies, communications, living, travel, and other direct job incidentals charged at our cost. Final compilation, interpretation, and report is \$150.00 per Tucson staff day. Based on these rates total estimated cost of the job as presently planned will be about \$2,000.00, if three I. P. lines are run on 500'dipole spacing as suggested by Graton Lynch.

Mr. Quincy A. Sl. Jr. vember: 4, 1968 Excessive weather delay and standby charges are one half the daily rate. Breakdown of our equipment in excess of one hour per day will be made up or not charged. Others of our technical staff are involved for consultation and supervision or as needed and/or are supplied at our standard rates as requested and mutually agreed upon. All property permits, brushing, and trespassing liability and related costs incurred on behalf of client assumed by client. Charges for extra equipment and personnel employed if mutually desired, are extra. Geoex will save client harmless from all Workmen's Compensation, public liability and property damage liability incurred by Geoex employees. Preliminary data or copies of rough field plotting sheets are available as work progresses. Payments are due on presentation and billings may be submitted periodically with the final statement after completion of the final report. We would like to undertake full management and direction of your continuing exploration program, and respectfully request that you advise us on how you would like to proceed. Although we worked for you through Graton on many projects through the years we still have little idea of the desired and general scope of your operation. I am enclosing some recent literature which you may not have that describes our company activities. In the meantime we will hold off on sending anyone to the field till we hear further from you or Vic. If you would like us to expedite negotiations with the owners in your behalf either directly or through Vic, please let us know. This could be a worthwhile step in our helping to pick up the ball Sincerely yours, HEINRICHS GEOEXPLORATION COMPANY E. Grover Heinrichs Vice President

Excessive weather delay and standby charges are one half the daily rate. Breakdown of our equipment in excess of one hour per day will be made up or not charged.

Others of our technical staff are involved for consultation and supervision or as needed and/or are supplied at our standard rates as requested and mutually agreed upon.

All property permits, brushing, and trespassing - liability and related costs incurred on behalf of client assumed by client

Control of an interest the same start of the same start in the sam



Mr. Quincy A. Shaw, President North American Mines, Inc. 60 State Street Boston, Mass. 02109

Dear Mr. Shaw,

Enclosed herewith please find an origional and two copies of our report "Induced Polarization and Geochemical Survey, Geology Reconnaissance, and Claim Examination of the Dixie Mine Area, Dixie Mining District, Maricopa County, Arizona".

Reproducibbe sepias will follow shortly.

As you can see from the enclosed maps, there are quite a few of the claims that we don't have names for or discovery monument locations. Also, there is considerable doubt as to the true location of some of the outlying claims relative to the other claims and the land net.

For assessment purposes, the work should be shown in relation to the discoveries and boundaries of the claims. Therefore, it will be necessary to at least obtain the location notices for all claims on which the work is to apply. Hopefully they will be detailed enough to correct the map and plot the discoveries. Perhaps the Myora Mining Company has more accurate maps in their possession.

It seems reasonable to us that the burden of supplying these claimsdetails should fall on the Myora Mining Company.

Also, it appears that some of the claims may be on State rather than Federal Land and that a Regional Park may be involved. These problems should be researched to determine the true present status of these claims particularly if further work is contemplated or if you are contractually obligated to file the assessment work.

Mr. Quincy A. S. January 21, 1969 North American Mines, Inc. -2-A copy of the two plan maps and this cover letter is being sent to Mr. Verity so that he will also be aware of the problem. Yours very truly, HEINRICHS GEOEXPLORATION COMPANY Chris S. Ludwig Sr. Geophysicist CSL/rc Enclosure 3 cc: Mr. Verity

October 29, 1968 Mr. Quincy A. Shaw, Jr. North American Mine, Inc. 68 State Street 02109 Boston, Mass. Dear Mr. Shaw: Yesterday afternoon we attempted to reach Mr. Lynch through his Mulcahy Lumber Company contact and found that he had suffered a fatal heart attack recently. This was an unexpected shock to all of us who have worked with Mr. Lynch. The reason we had attempted to contact him was his recent request that we do a few lines of induced polarization at a property in the McDowell Mountains. We felt that an inquiry to you is in order to determine if Mr. Lynch had optioned some ground and committed a geophysical survey as a part of his agreement. We have no details of the job he wanted done but we wanted to be sure that his efforts would not be wated through an inadvertant default in an agreement of which you were not aware. We have deactivated Mr. Lynch's request for a field crew and there are no charges accrued on the account. Meanwhile, we will await your instructions, regarding whether a and how we might assist you if desired, immediately or in the future.

# Rocky Mountain Geochemical Corporation

2050 EAST 14TH STREET TUCSON, ARIZONA 85719

Phone 622-5702 Area Code: 602

## CERTIFICATE OF ANALYSES

Date

February 12, 1969

Page1 of 2

Client

Heinrichs Geoexploration Company

808 West Grant Road

Tucson, Arizona

Report on:

26 samples

Submitted by:

Heinrichs Geoexploration Company

**Date Received:** 

February 11, 1969

Analysis:

Gold

Remarks:

Gold determined by Atomic Absorption.

Job No. 69-2-35T

cc:Enclosed

North American Mises
Dixie RMGC - Salt Lake

file

AB:nlb

All values are reported in parts per million unless specified otherwise. A minus sign (-) is to be read "less than" and a plus sign (+) "greater than." Values in parenthesis are estimates. This analytical report is the confidential property of the above mentioned client and for the protection of this client and ourselves we reserve the right to forbid publication or reproduction of this report or any part thereof without written permission.

Samp	ole	e No.	ppm Gold	Sam	016	No.	ppm Gold
Line	1-	-O.ONS	-0.1	Line	2-	-O.ONS	-0.1
11	11	2.5N	-0.1	11	11	2.5N	-0.1
11	11	2.5S	-0.1		11	2.5S	-0.1
n.	#1	5.0N	-0.1	n	11	5.0N	-0.1
n .	11	5.0S	-0.1	11	11	5.0S	-0.1
<b>(1)</b>	11	7.5N	-0.1	11	11	7.5N	-0.1
11	11	7058	-0.1	11	11	7.5S	-0.1
n .	11	10.0N	-0.1	11	11	10.0N	-0.1
11	11	10.08	-0.1	11	11	10.0S	-0.1
n	11	12.5N	-0.1	11	11	12.9N	-0.1
11	11	12.5S	-0.1	11	11	12.58	-0.1
11	11	15.0N	-0.1	11	11	15.ON	-0.1
Line	1-	-15.0S	-0.1	Line	2-	-15.0S	-0.1

ROCKY MOUNTAIN GEOCHEMICAL CORPORATION

Tucson, Arizona February 12, 1969

Anita Bradshaw

# Rocky Mountain Geochemical Corporation

2050 EAST 14TH STREET TUCSON, ARIZONA 85719

Phone 622-5702 Area Code: 602

## CERTIFICATE OF ANALYSES

Date

February 12, 1969

Page 1 of 2

Client

Heinrichs Geoexploration Company

808 West Grant Road

Tucson, Arizona

Report on:

26 samples

Submitted by:

Heinrichs Geoexploration Company

Date Received:

February 11, 1969

Analysis:

Gold

Remarks:

Gold determined by Atomic Absorption.

Job No. 69-2-35T

cc:Enclosed

RMGC - Salt Lake

file

AB:nlb

All values are reported in parts per million unless specified otherwise. A minus sign (-) is to be read "less than" and a plus sign (+) "greater than." Values in parenthesis are estimates. This analytical report is the confidential property of the above mentioned client and for the protection of this client and ourselves we reserve the right to forbid publication or reproduction of this report or any part thereof without written permission.

Sample No.		ppm Gold		Sample No.		e No.	ppm Gold	
Line	1-	-O.ONS	-0.1		Line	2-	-O.ONS	-0.1
	11	2.5N"	-0.1		"	11	2.5N	-0.1
11	11	2.5S	-0.1		11	11	2.5S	-0.1
ii.	11	5.0N	'-0.1		11	11	5.0N	-0.1
	11	5.0S	-0.1		11	11	5.08	-0.1
11	11	7.5N	-0.1		11	11	7.5N	-0.1
- <b>11</b>	Ħ	7.5S	-0.1		Ħ	11	7.5S	-0.1
11	11	10.0N	-0.1		11	11	10.0N	-0.1
11	11	10.05	-0.1		11	11	10.05	-0.1
	11	12.5N	-0.1		ii ii	11	12.9N	-0.1
11	11	12.5S	-0.1		ij	11	12.55	-0.1
11	11	15.0N	-0.1		11	11	15.0N	-0.1
Line	1-	-15.0S	-0.1		Line	2-	-15.0S	-0.1

ROCKY MOUNTAIN GEOCHEMICAL CORPORATION

Tucson, Arizona February 12, 1969

Anita Bradshaw



HEINRICHS GEOEXPLORATION COMPANY

LAB I.P. Q RESISTIVITY DATA & COMPUTATION SHEET Chieur North American Mines Prewer Dixie Mine Avea DATE FREA - AC 30 HZ DC 105 HZ SAMPLE NO. Green mica Dark schist GEOLOGIC Pyrite showing Pyrite Showing DESCRIPTION REMARKS 出 #2 21 CALIBRATION 五1 # 2 Aug #2 Aug Aus . I Vdc Vac DC cal A C. Pral Kn - 4/. L. W. Tim inches 292 301 350 359 193 344 338 278 270 193 Vdc 298 305 352 362 193 341 335 266 267 193 Vdc (Aug) 640 627 386 31.8 31.6 197,5 Vac 31.9 197.5 31.6 Vac (ava) 63.7 Pal2TT .995 1.005 PFE 2.4 1.8 - 2,3 MCF 8

VERITY & SMITH ATTORNEYS AT LAW SUITE 902 TRANSAMERICA BUILDING 177 NORTH CHURCH AVENUE TUCSON, ARIZONA 85701 VICTOR H. VERITY AREA CODE 602 LEO N. SMITH TELEPHONE 622-7446 January 7, 1969 JAMES E. MUELLER JOHN C. LACY NORBERT W. LUDWIG HEINKICHS GEOEK SEOPHYSICAL ENGINEERS Mr. Grover Heinrichs Heinrichs Geoexploration Company BOX 5671 TUCSON, ARIZ P. O. Box 5671 Phone: (AREA 602) 623-0578 Tucson, Arizona 85703 Dear Grover: Confirming our conversation on January 2nd, I enclose Exhibit A to the North American - Myora Lease and Option Agreement. The Exhibit lists 39 unpatented mining claims, but some of them are the names of claims that were located and abandoned and then relocated so I can't tell you exactly how many of the 39 claims are in force. I think you will have to try and figure that out from the maps that you have and the field work. The commitment of North American is to perform assessment work for the assessment year which began September 1, 1968 and will end September 1, 1969. This is a firm commitment on the part of North American and enough work should be done at the rate of \$100.00 per claim to take care of all of the claims which are in existence. Very truly yours, VHV:lf Enclosure cc: Mr. Quincy A. Shaw

#### EXHIBIT A

Exhibit A to Lease and Option Agreement between Myora Mining Corporation and North American Mines, Inc., concerning the following described unpatented lode mining claims situated in the Dixie Mining Distruct, Maricopa County, Arizona. The names of the claims and the book and page of recording in the Recorder's Office of Maricopa County are as follows:

	Docket		
Name of Claim	/Book		Page
Shake de usung pungan kenangan di mendadi di dalah dendadi kenangan pengan pengan pengan pengan pengan pengan			
Silver Horn #1	42	. ,	152
Silver Horn #2	42		153
Silver Horn #3	42		154
Silver Horn #4	42		155
Silver Horn #5	42		156
Silver Horn #6	42		157
Bertha Extension	42		511
Bertha Extension #2	42		512
Aztec #1	3848		15
Aztec #2	<b>3</b> 588		324
Aztec #3	<b>3</b> 588.		325
Aztec #4	3848		17
Aztec #5	3848		16
Surprize #1	3848		18
Supprise #2	3848		19
Surprize #3	3848		20
Surprize #4	3848		21
Surprize #5	3848		22
Surprize #6	3848	•	23
Surprize #7	3848		24
Red Mountain	4728		56
Myora #1	4728		40
Myora #2	4728		41
Myora #3	4728		42
Myora #4	4728		43
Myora #5	4728		44
Myora #6	4728		45
Myora #7	4728		46
Myora #8	4728		47
Myora #9	4728		48
Myora #10	4728		49
Myora #11	4728		50

32 #39000

Name of Claim	Book	Page
Myora #12	4728	51
Myora #13	. 4728	52
Myora #14	4728	53
Myora #16	4728	54
Wilma #1	3680	489
Wilma #2	3680	490
Wilma #3	3680	491

together with all veins, lodes and mineral deposits and mining claims now owned or hereafter acquired by Optionor within Sections 30 and 31, T. 5 N., R. 6 E., and Sections 25 and 36, T. 5 N., R. 5 E., G&SRM, Maricopa County, Arizona, and together with any relocations, amendments, or patents of the above-listed unpatented lode mining claims.

# Rocky Mountain Geochemical Corporation

2050 EAST 14TH STREET TUCSON, ARIZONA 85719

Phone 622-5702 Area Code: 602

#### CERTIFICATE OF ANALYSES

Date

January 15, 1969

Page 1 of 2

Client

Heinrichs Geo-Exploration Company

808 West Grant Road

P.O. Box 5671 Tucsonm, Arizona

ATTNETION: Don Cooley

HEINRICHS
GEORIX

STORYPICAL ENGINEERS
TEGRON, ARIZONA

JAN 1 7 1969

BOX 5671 TUCSON, ARIZONA 85703 Phone: (AREA 602) 623-0578



Report on:

26 samples

Submitted by:

Don Cooley

**Date Received:** 

January 10, 1969

Analysis:

Silver

Remarks:

Silver determined by Atomic Absorption.

Job No. 69-1-29T

cc: Enchosed

RMGC - Salt Lake

file

AB:nlb

All values are reported in parts per million unless specified otherwise. A minus sign (-) is to be read "less than" and a plus sign (+) "greater than." Values in parenthesis are estimates. This analytical report is the confidential property of the above mentioned client and for the protection of this client and ourselves we reserve the right to forbid publication or reproduction of this report or any part thereof without written permission.

Samp	le	No.	ppm Silver
Line	1	- O.ONS	1
11	11	2.5N	-1
11	11	2.58	-1
11	11	5.0N	-1
11	11	5.0S	-1
	ff	7.5N	-1
11	11	7.5S	-1
11	W.	10.0N	-1
11	tt	10.05	-1
	11	12.5N	-1
11	11	12.58	-1
11	11	15.0N	1
Line	1	-15.0S	-1
Line	2	- 0.0NS	-1
11	11	2.5N	1
	11	2.58	-1
11:	11	5.0N	-1
11	11	5.08	-1
11	11	7.5N	-1
tt .	11	7.58	-1
11	11	10.0N	-1
11	tt	10.05	-1
11	11	12.5N	-1
11	11	12.5S	-1
11	11	15.0N	-1
Line	2	-15.0S	-1

ROCKY MOUNTAIN GEOCHEMICAL CORPORATION
Tucson, Arizona January 15, 1969

By Anta Brudshaw

Anita Bradshaw

## Rocky Mountain Geochemical Corporation

2050 EAST 14TH STREET TUCSON, ARIZONA 85719

Phone 622-5702 Area Code: 602

#### CERTIFICATE OF ANALYSES

Date

January 15, 1969

Page 1 of 2

Client

Heinrichs Geo-Exploration Company

808 West Grant Road

P.O. Box 5671 Tucsonm, Arizona

ATTNETION: Don Cooley

Report on:

26 samples

Submitted by:

Don Cooley

Date Received:

January 10, 1969

Analysis:

Silver

Remarks:

Silver determined by Atomic Absorption.

Job No. 69-1-29T

cc: Enchosed

RMGC - Salt Lake

file

AB:nlb

All values are reported in parts per million unless specified otherwise. A minus sign (-) is to be read "less than" and a plus sign (+) "greater than." Values in parenthesis are estimates. This analytical report is the confidential property of the above mentioned client and for the protection of this client and ourselves we reserve the right to forbid publication or reproduction of this report or any part thereof without written permission.

Sampl	Le	No.	ppm <u>Silver</u>
Line	1	- 0.0NS	<b>1</b>
11	11	2.5N	-1
11	27	2.58	-1
11	**	5.0N	-1
11	11	5.0S	<b>-1</b>
11	11	7.5N	-1
11	11	7.58	-1
11	W	10.0N	-1
n	11	10.05	-1
11	11	12.5N	-1
Ħ	***	12.58	<b>-1</b>
n	11	15.0N	-1
Line	1	-15.0S	-1
Line	2	- 0.0NS	_1
. 11	11	2.5N	
11	11	2.58	_1
- 11	11	5.0N	_1
- 11	11	5.0S	-1
11	11	7.5N	_1
11	11	7.58	-1
11	11	10.0N	<b>-1</b>
11	11	10.05	<b>-1</b>
11	11	12.5N	-1
11	11		-1
11	11	15.0N	-1
Line	2	-15.0S	-1

ROCKY MOUNTAIN GEOCHEMICAL CORPORATION January 15, 1969 Tucson, Arizona

By Anita Bradshaw





#### MEMORANDUM OF

#### JAN

# LEASE AND OPTION AGREEMENT BOX 5671 TUCSON, ARIZONA 85703

Phone: (AREA 602) 623-0578

Under the terms of that certain LEASE AND OPTION AGREE-MENT dated Karmler 7 , 1968, by and between MYORA MINING CORPORATION, an Arizona corporation, designated as Myora, and NORTH AMERICAN MINES, INC., a Delaware corporation, qualified to do business in Arizona, designated therein as North American, Myora granted a lease with option to purchase to North American of certain mining claims situated in the Dixie Mining District, Maricopa County, Arizona, as more fully described in Exhibit A attached hereto, and Myora assigned to North American that certain Mining Lease and Option recorded in Docket 7291, pages 2 to 8, office of the Recorder of Maricopa County, Arizona, covering certain additional unpatented mining claims in the Dixie Mining District, described as follows:

Claim Name	Book	Docket	Page
Hog Back Gertrude Boo-Hoo Uncle John Raymond Summit Olipper Seth Parker Dora Rose Nellie	40 40 40 40 40 40 40	953 969 4495	128 134 129 516-517 130 127 133 16 131 132 425

North American was granted the exclusive right to enter into and upon all the mining claims collectively referred to as the Property for the purpose of conducting exploration and mining activities, with the right to mine, remove, and sell all minerals, metals, ores and materials of any nature.

The said Lease and Option Agreement between Myora and North American is for a term of twenty (20) years from the

above-mentioned date unless sooner terminated in accordance with the provisions thereof.

A copy of the said Lease and Option Agreement is on file at the office of Myora Mining Corporation, 5625 West Campbell Avenue, Phoenix, Arizona, and the office of Verity & Smith, 902 Transamerica Building, Tucson, Arizona.

Dated this of Accessible 1968.

MYORA MINING CORPORATION

ATTEST:

Secretary

NORTH AMERICAN MINES, INC.

By Robert E President

By Dunch President

ATTEST:

Maryly Steins Secretary

STATE OF ARIZONA )
COUNTY OF MARICOPA)
On this the 1th day of December, 1968, before me, the undersigned Notary Public, personally appeared Robert E. and Linux Summer, who acknowledged.
themselves to be the President and Secretary of Myora Mining Cor-
poration and that they as such officers executed the foregoing instru-
ment for the purposes therein contained.
IN WITNESS WHEREOF, I hereunto set my hand and official
seal.
Spiral Leanick
Notary Public
War Commission Erminas
My Commission Expires:
My Commission Expires Feb. 9, 1972
COMMONWEALTH  SYNAMIC OF MASSACHUSETTS )  ) ss.  COUNTY OF SUFFOLK )
On this 2nd day of January , 196% before
me, the undersigned Notary Public, appeared Quincy A. Shaw
and Marylou Steeves , known to me to
be the persons whose names are subscribed to the foregoing instruments,
and known to me to be the President and Secretary of North American
Mines, Inc., a Delaware corporation, and acknowledged to me that they
executed said instrument for the purpose and consideration therein con-
tained, and as the act of said corporation.
Given under my hand and seal of office this 2nd day of
January, 1969. Michael & Beel
My Commission Expires:  Notary Public  To Formidation Expires June 7, 1974

# Rocky Mountain Geochemical Corporation

2050 EAST 14TH STREET TUCSON, ARIZONA 85719

Phone 622-5702 Area Code: 602

#### CERTIFICATE OF ANALYSES

Date

January 13, 1969

Page 1 of 2

Client

Heinrichs Geo-Exploration

808 West Grant Road

P.O. Box 5671 Tucson, Arizona

ATTENTION: Don Cooley

Report on:

26 samples

Submitted by: Don Cooley

Date Received: January 10, 1969

Analysis:

Copper

Remarks:

Copper determined by Atomic Absorption.

Job No. 69-1-29T

cc: Enclosed

RMGC - Salt Lake

file

AB:nlb

All values are reported in parts per million unless specified otherwise. A minus sign (-) is to be read "less than" and a plus sign (+) "greater than." Values in parenthesis are estimates. This analytical report is the confidential property of the above mentioned client and for the protection of this client and ourselves we reserve the right to forbid publication or reproduction of this report or any part thereof without written permission.

Sampl	e No.	<u>C</u>	ppm; opper	Sampl	e No.		ppm Copper
Line	1-0.0	NS '	80	Line	2-0.0	NS	35
i ii	" 2.5	N	70	11.	" 2.5	N	80
11	. 2.5	S	70	11	" 2.5	S	70
11	" 5.0	N	30	11	" 5.0	N	90
	" 5.0	S	60	-11	" 5.0	S	240
11.	" 7.5	N	25	11.	" 7.5	N	70
. 11	" 7.5	S	40	11	" 7.5	S	40
. 11	"10.0	N	60	11	"10.0	N.	30
÷ + 11	"10,0	S	30	11 ,	"10.0	S	20
ti .	"12.5	N	35	n ·	"12.5	$\mathbf{N}$	15
. 11	"12.5	S	30		"12.5	S	25
11	"15.0	N	50		"15.0	N	30
Line	1-15.0	o s	50	Line	2-15.	0 S	20

ROCKY MOUNTAIN GEOCHEMICAL CORPORATION

Tucson, Arizona

January 14, 1969

Inita Bradshaw

# Rocky Mountain Geochemical Corporation

2050 EAST 14TH STREET TUCSON, ARIZONA 85719

Phone 622-5702 Area Code: 602

#### CERTIFICATE OF ANALYSES

Date

January 13, 1969

Page 1 of 2

Client

Heinrichs Geo-Exploration

808 West Grant Road

P.O. Box 5671 Tucson, Arizona

ATTENTION: Don Cooley

Report on:

26 samples

Submitted by: Don Cooley

Date Received: January 10, 1969

Analysis:

Copper

Remarks:

Copper determined by Atomic Absorption.

Job No. 69-1-29T

cc: Enclosed

RMGC - Salt Lake

file

AB:nlb

All values are reported in parts per million unless specified otherwise. A minus sign (-) is to be read "less than" and a plus sign (+) "greater than." Values in parenthesis are estimates. This analytical report is the confidential property of the above mentioned client and for the protection of this client and ourselves we reserve the right to forbid publication or reproduction of this report or any part thereof without written permission.

Sampl	Le No.	ppm Copper	Sample No.	ppm Copper
Line	1-0.0 NS	80	Line 2-0.0 NS	35
11	" 2.5 N	70	" " 2.5 N	80
11	* 2.5 S	70	" " 2.5 S	70
11	" 5.0 N	30	" " 5.0 N	90
n	" 5.0 S	60	" " 5.0 S	240
11	" 7.5 N	25	" "7.5 N	. 70
-11	" 7.5 S	40	" "7.5 S	40
11	"10.0 N	60	" "10.0 N	30
11	"10,60 S	30	" "10.0 S	20
11	"12.5 N	35	" "12.5 N	15
	"12.5 S	30	" "12.5 S	25
11	"15.0 N	50	" "15.0 N	30
Line	1-15.0 S	50	Line 2-15.0 S	20

ROCKY MOUNTAIN GEOCHEMICAL CORPORATION

Tucson, Arizona January 14, 1969

Anita Bradshaw

0306-68 0 Ag PPM

Line I

5-1 125U-1 5-1 5-1

15 N-1 15N-1

5-1

NORTH AMERICAN MINES, INC.
60 STATE STREET
BOSTON, MASS. 02109

TELEPHONE AREA CODE 617 523-8110

HEINRICHS
GEOEX

SCOPHYBICAL ENGINEERS
SUCGEON, ARIZONA

NOV & 1

4/

BOX 5671 TUCSON, ARIZONA 85703

Phone: (AREA 602) 623-0578

November 4, 1968

Mr. Paul A. Head Geophysicist Heinrichs Geoexploration Company 806 West Grant Road Tucson, Arizona 85703

Dear Mr. Head:

Air Mail

Thank you for your kind letter of October 29, 1968.

Before I could answer it, I received a call from Mr. Grover Heinrichs and I outlined to him our plans.

This is just to acknowledge your letter and good thoughts about Grat Lynch. His death is a very great loss to me after 38 years of close association.

Sincerely,

Q. a. Shaw

QAS:G

cc: Mr. Victor Verity
Verity & Smith
Suite 902 - Transamerica Building
177 North Church Avenue
Tucson, Arizona 85701