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.

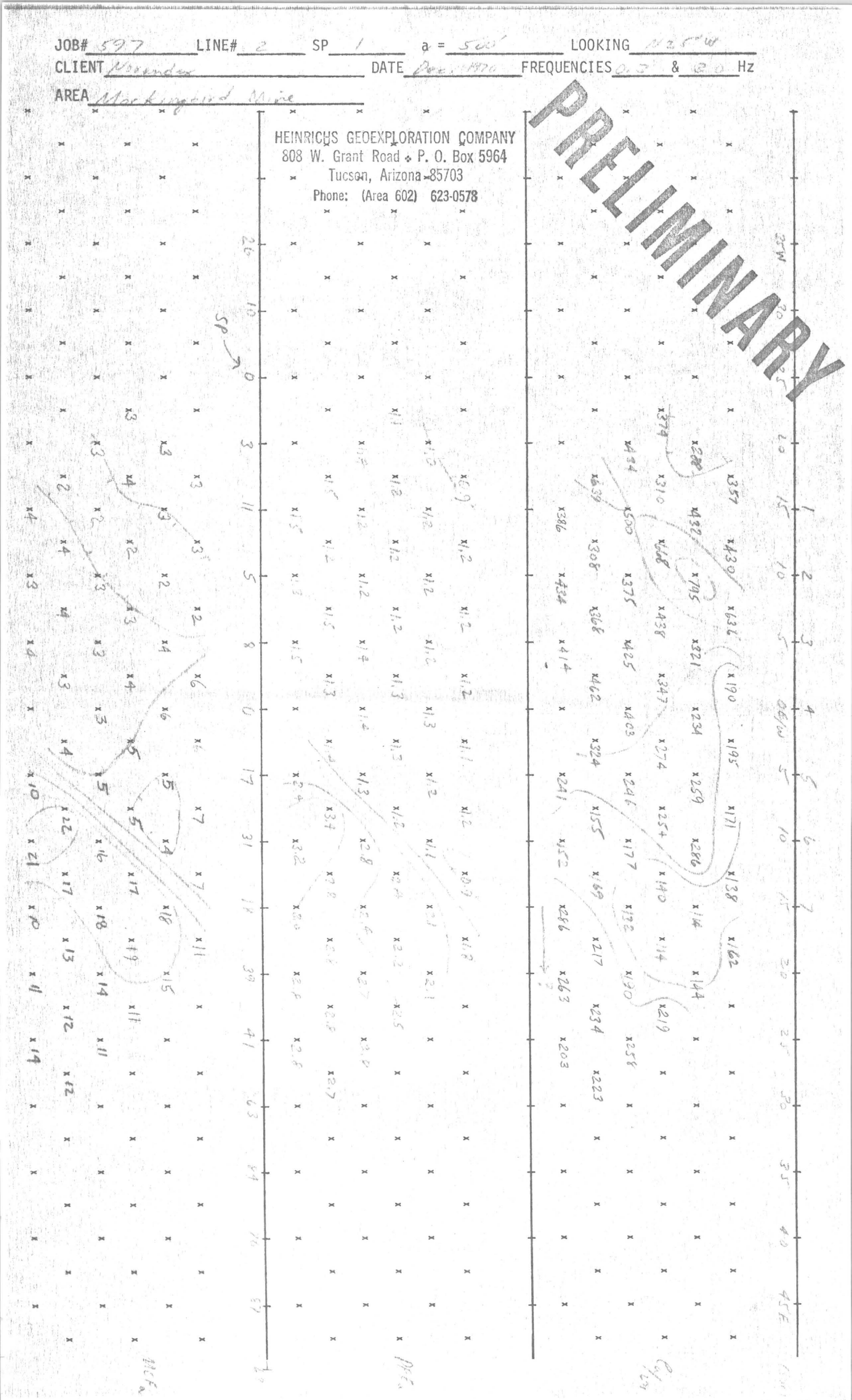
JOB# 597 LINE# 2 SP 1 a = 500' LOOKING N25°W

CLIENT Noranda DATE Dec. 1980 FREQUENCIES 0.5 & 2.0 Hz

AREA Mockingbird Mine

HEINRICHS GEOEXPLORATION COMPANY
808 W. Grant Road • P. O. Box 5964
Tucson, Arizona 85703
Phone: (Area 602) 623-0578

PRELIMINARY



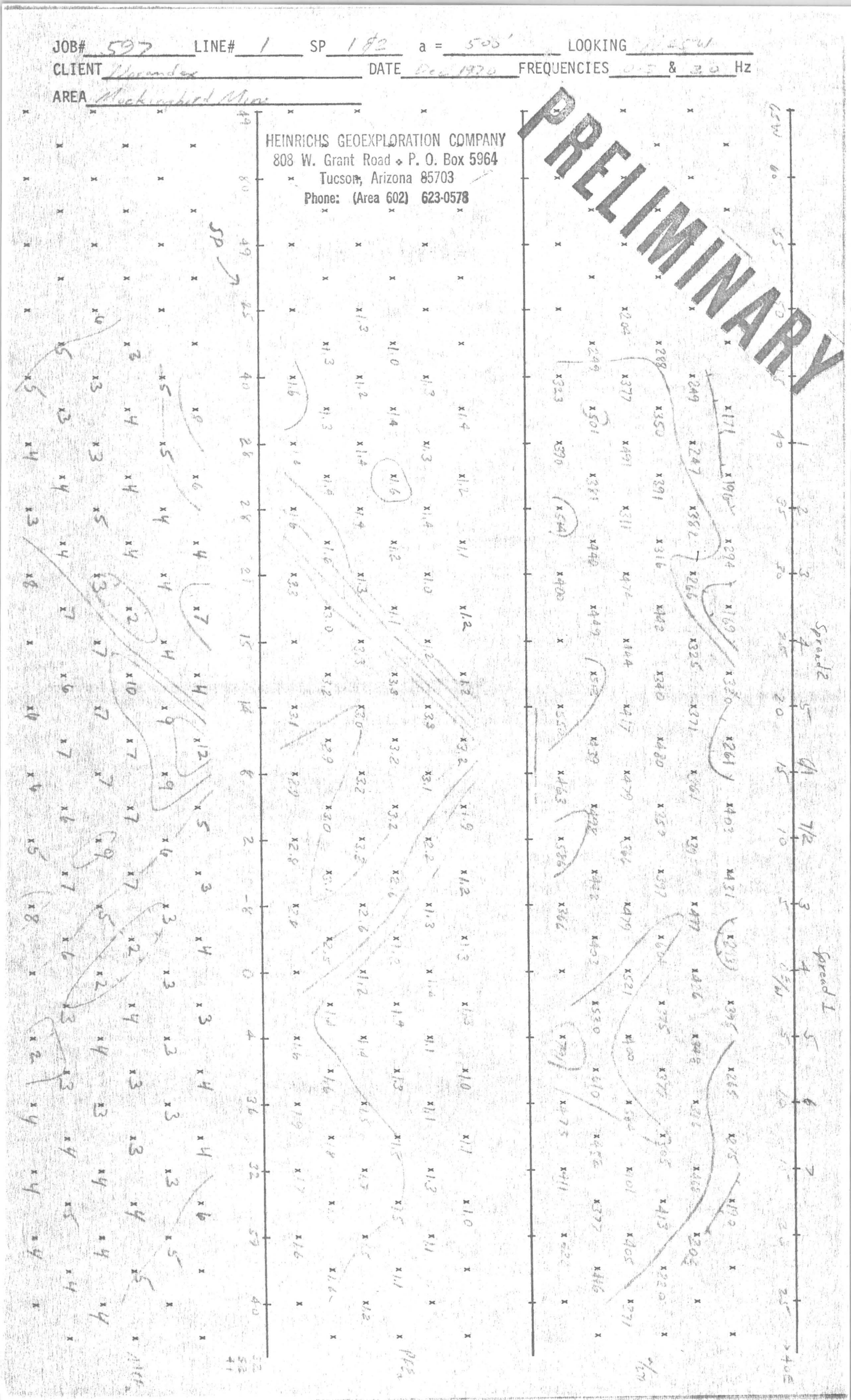
JOB# 597 LINE# 1 SP 182 a = 500' LOOKING

CLIENT Thunder DATE Dec 1980 FREQUENCIES & Hz

AREA Mockingbird Mine

HEINRICHS GEOEXPLORATION COMPANY
808 W. Grant Road • P. O. Box 5964
Tucson, Arizona 85703
Phone: (Area 602) 623-0578

PRELIMINARY



HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 17
LINE 1 HALF E SP. 1 DATE 12.22.2

PAGE 1

SEND	CAL	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	3-4	0-5E	→	5-10E	→	→	10-15E	→	→	→
RANGE	1.0	10	10	10	10	10	10	10	1.0	1.0
DC 1	-0.2	1.1	1.0	1.1	1.2	1.0	0.8	0.9	1.2	1.0
DC 2										
DC 3 Cur	1.0	2	3	→	→	→	→	→	→	→
DC 4 #	1.0	1	2	3	4	5	6	7	8	9
DC 5 n		1	2	1	2	3	1	2	3	4
DC 6										
DC 7 K		1.5	6	1.5	6	15	1.5	6	15	30
DC 8 ρ		293	477	395	426	596	265	348	375	521
DC AVG.										
AC 1	97.8	387.	230.	762.	205.	115.	512.	168.	72.3	50.4
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.	3.0	+3.7		+31.5			-3.6			
AC NOISE	0.3									
POT RES.		2K		2K			1K			

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 77
LINE 1 HALF E SP. 1 DATE 12-22-2

SEND	5-6	4-5	3-4	2-3	1-2	6-7	5-6	4-5	3-4	2-3
RECEIVE	15-20E	→	→	→	→	20-25E	→	→	→	→
RANGE	10	10	1.0	1.0	1.0	10	10	1.0	1.0	1.0
DC 1	0.9	0.9	1.1	1.2	1.2	0.8	1.1	1.3	1.3	1.4
DC 2										
DC 3 n	3	→	→	→	→	→	→	→	→	→
DC 4 #	10	11	12	13	14	15	16	17	18	19
DC 5 n	1	2	3	4	5	1	2	3	4	5
DC 6										
DC 7 K	1.5	6	15	30	52.5	1.5	6	15	30	52.5
DC 8 ρ	275	316	377	400	530	190	468	505	584	610
DC AVG.										
AC 1	532.	153.	72.7	38.5	29.2	367.	225.	97.2	56.2	33.5
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.	+26.5					-18.9				
AC NOISE										
POT RES.	3K					6K				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 97
LINE 1 HALF E SP. 1 DATE 12-22-7

SEND	1-2	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4
RECEIVE	20-25E	25-30E	→	→	→	→	30-35E	→	→	→
RANGE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
DC 1	1.4	0.9	1.3	1.5	1.6	1.7	0.9	1.3	1.5	1.5
DC 2										
DC 3 Cm	3	→	→	→	→	→	→	→	→	→
DC 4 ft	20	21	22	23	24	25	26	27	28	29
DC 5 n	6	2	3	4	5	6	3	4	5	6
DC 6										
DC 7 K	84	6	15	30	52.5	84	15	30	52.5	84
DC 8 ρ	791	202	413	401	452	473	220	405	377	411
DC AVG.										
AC 1	27.2	97.6	79.6	38.6	24.8	16.2	42.5	39.0	20.6	14.1
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.		-8.1					+20.3			
AC NOISE										
POT RES.		5K					4K			

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 97

LINE 1 HALF E SP. 1 DATE 2-27-72

SEND	6-7	5-6	4-5							
RECEIVE	35-40	E →								
RANGE	1.0	1.0	1.0							
DC 1	1.0	1.4	1.4							
DC 2										
DC 3 Cm	3	→								
DC 4 H	30	31	32							
DC 5 M	4	5	6							
DC 6										
DC 7 K	30	52.5	84							
DC 8 P	271	446	422							
DC AVG.										
AC 1	26.2	24.5	14.5							
AC 2	0.0	0.0	0.0							
AC AVG.										
S.P.	-11.1									
AC NOISE										
POT RES.	3K									

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT -97
LINE 1 HALF W SP. 1 DATE 12-22-7-

SEND	CAL	S.P.	S.P.	3-4	4-5	5-6	6-7	2-3	3-4	4-5
RECEIVE	4-5	0-5W	5-10W	10-15W	→	→	→	15-20W	→	→
RANGE	1.0			10	10	10	1.0	10	10	1.0
DC 1	-0.2			1.0	1.1	0.9	1.0	1.7	2.0	2.4
DC 2										
DC 3 Com	1.0			3	→	→	→	→	→	→
DC 4 #	1.0			1	2	3	4	5	6	7
DC 5 n				1	2	3	4	1	2	3
DC 6										
DC 7 K_a				1.5	6	15	30	1.5	6	15
DC 8 ρ				431	585	613	521	403	391	397
DC AVG.					232?					
AC 1	97.8			83/.	282.	118.	50.4	776.	184.	75.5
AC 2	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.	3.0	-8.3	+9.6	+5.5				+5.6		
AC NOISE	0.3									
POT RES.		2K	4K	3K				4K		

	3-4
	15-20
3Hz	184.
1Hz	1.0
0.3Hz	2.0
0.1 Hz	3.1
Dev	0.0

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 597
LINE 1 HALF W SP. 1 DATE 12-22-?

SEND	5-6	6-7	1-2	2-3	3-4	4-5	5-6	6-7	1-2	2-3
RECEIVE	15-20W	→	20-25W	→	→	→	→	→	25-30W	→
RANGE	1.0	1.0	10	10	1.0	1.0	1.0	1.0	10	1.0
DC 1	2.4	2.3	2.9	2.9	3.0	3.0	2.9	2.6	2.9	3.0
DC 2										
DC 3 Km	3	→	→	→	→	→	→	→	→	→
DC 4 #	8	9	10	11	12	13	14	15	16	17
DC 5 n	4	5	1	2	3	4	5	6	2	3
DC 6										
DC 7 K_u	30	52.5	1.5	6	15	30	52.5	84	6	15
DC 8 ρ	479	403	258	361	350	366	442	366	367	480
DC AVG.										
AC 1	45.6	21.8	491.	171.	66.2	34.7	23.9	12.4	174.	90.7
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.			+1.1						+5.9	
AC NOISE										
POT RES.			2k						3k	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 597
LINE 1 HALF W SP. 1 DATE 12-22

SEND	3-4	4-5	5-6	1-2	2-3	3-4	4-5	1-2	2-3	3-4
RECEIVE	25-30 SW	→	→	30-35 SW	→	→	→	35-40 SW	→	→
RANGE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
DC 1	3.0	2.8	2.6	2.9	2.8	2.7	2.7	3.1	3.0	2.9
DC 2										
DC 3 Em	3	→	→	→	→	→	→	→	→	→
DC 4 #	18	19	20	21	22	23	24	25	26	27
DC 5 n	4	5	6	3	4	5	6	4	5	6
DC 6										
DC 7 Ky	30	52.5	84	15	30	52.5	84	30	52.5	84
DC 8 ρ	479	498	586	331	417	439	463	443	512	550
DC AVG.										
AC 1	45.3	27.0	19.9	62.6	39.6	23.8	15.7	41.9	27.7	18.6
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.				+7.1				+0.0		
AC NOISE										
POT RES.				4K				3K		

1 2 3 4

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT # 97

LINE 1 HALF E SP. 1 DATE 12-22-7

SEND	3-4	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	CAL	0-5E	→	5-10E	—	→	10-15E	—	—	→
RANGE	100x10	200x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10
VOLTAGE	200	630	830	860	940	830	760	850	920	830
CURRENT	1.0	2.6	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
SEND	5-6	4-5	3-4	2-3	1-2	6-7	5-6	4-5	3-4	2-3
RECEIVE	15-20E	—	—	—	→	20-25E	—	—	—	→
RANGE	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10
VOLTAGE	660	760	840	920	820	480	650	750	840	910
CURRENT	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

FREQUENCIES 3 0.3

SENDER NO. 6644-S

OPERATOR Tom Freeman

RECEIVER NO.

OPERATOR B J Freeman

COMMENTS: Frequency on the Sender is off. Signal can not come up on the Rx. Small round capacitor on freq. termine l in the Tx. has broken loose on one side. Situation corrected and all is normal. Loss of one hour.

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 997

LINE 1 HALF E SP. 1 DATE 12-22-70

SEND	1-2	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4
RECEIVE	20-25E	25-30E	→	→	→	→	30-35E	→	→	→
RANGE	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10
VOLTAGE	820	480	650	750	840	910	480	640	750	830
CURRENT	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

SEND	6-7	5-6	4-5							
RECEIVE	35-40E	→	→							
RANGE	300x10	300x10	300x10							
VOLTAGE	470	640	740							
CURRENT	3.0	3.0	3.0							

FREQUENCIES 3.0 0.3

SENDER NO. 6644-5

OPERATOR Tom Freeman

RECEIVER NO.

OPERATOR BJ Freeman

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT _____

LINE 1 HALF W* SP. 1 DATE 12-22-76

SEND	CAL	3-4	4-5	5-6	6-7	2-3	3-4*	4-5	5-6	6-7
RECEIVE	4-5	10-15W	→	→	→	15-20W	→	→	→	→
RANGE	10x100	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10
VOLTAGE	240	820	730	630	470	900	820	730	630	470
CURRENT	1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
SEND	1-2*	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5
RECEIVE	20-25W	→	→	→	→	→	25-30W	→	→	→
RANGE	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10
VOLTAGE	800	890	820	730	630	470	800	890	820	730
CURRENT	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

FREQUENCIES 3 0.3

SENDER NO. 6644-5

OPERATOR Tom Freeman

RECEIVER NO.

OPERATOR BJ Freeman

COMMENTS:

* 1.0 + 0.1 Hz also

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 97

LINE 1 HALF W SP. 1 DATE 12-22-76

SEND	5-6	1-2	2-3	3-4	4-5	1-2	2-3	3-4		
RECEIVE	25-30W	30-35	W →		→	35-40	W →			
RANGE	300x10	300x10	300x10	300x10	300x10	300x10	300x10	300x10		
VOLTAGE	630	800	890	820	730	800	880	820		
CURRENT	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES 3.0 0.3

SENDER NO. CC44-5

OPERATOR T Freeman

RECEIVER NO.

OPERATOR BJF

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT #597

LINE 1 HALF W SP. 2 DATE 12-23-?

SEND	CAL	4-5	3-4	2-3	1-2	3-4	2-3	1-2	2-3	1-2
RECEIVE	4-5	6-7	→	→	→	5-6	→	→	4-5	→
RANGE	100x10	300x10	300x10	300x10	200x10	300x10	300x10	200x10	300x10	200x10
VOLTAGE	220	670	640	980	760	640	980	760	980	760
CURRENT	1.0	3.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	2.0
SEND	1-2	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5
RECEIVE	3-4	40-45	→	→	→	→	45-50	→	→	→
RANGE	200x10	300x10	300x10	300x10	300x10	300x10	200x10	300x10	300x10	300x10
VOLTAGE	760	970	640	670	810	870	750	960	640	670
CURRENT	2.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0

FREQUENCIES 3 0.3

SENDER NO. 66445

OPERATOR T. FREEMAN

RECEIVER NO. 22702 R

OPERATOR B. FREEMAN

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT #597

LINE 1 HALF W SP. 2 DATE 12-23-76

SEND	5-6	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4
RECEIVE	45-50	→	50-55	→	→	→	→	55-60	→	→
RANGE	300x10	300x10	200x10	300x10	300x10	300x10	300x10	200x10	300x10	300x10
VOLTAGE	900	860	750	960	630	660	800	740	950	630
CURRENT	3.0	3.0	2.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0
SEND	4-5	1-2	2-3	3-4						
RECEIVE	→	60-65	→	→						
RANGE	300x10	200x10	300x10	300x10						
VOLTAGE	660	740	950	630						
CURRENT	3.0	2.0	3.0	3.0						

FREQUENCIES 3 0.3

SENDER NO. 6645

OPERATOR T. FREEMAN

RECEIVER NO. 22702 R

OPERATOR B. FREEMAN

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT #577
LINE 1 HALF W SP. 2 DATE 8-23-76

SEND	CAL	4-5	3-4	2-3	1-2	3-4	2-3	1-2	2-3	1-2
RECEIVE	4-5	6-7	→	→	→	5-6	→	→	4-5	→
RANGE	1.0	10	10	1.0	1.0	10	10	1.0	10	1.0
DC 1	-0.1	3.3	3.4	3.5	3.3	1.1	1.1	1.0	1.1	0.9
DC 2										
DC 3 Cm	1.0	3	3	3	2	3	3	2	3	2
DC 4 #	1.0	1	2	3	4	5	6	7	8	9
DC 5 n		1	2	3	4	1	2	3	1	2
DC 6										
DC 7 Kp		1.5	6	15	30	1.5	6	15	1.5	6
DC 8 ℓ		264	375	348	444	320	325	442	169	266
DC AVG.										
AC 1	97.9	498.	177.	65.7	28.0	619.	157.	57.1	327.	85.8
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.	3.0									
AC NOISE	0.3									
POT RES.										

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT #577
LINE 1 HALF W SP. 2 DATE 12-23-2

SEND	1-2	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5
RECEIVE	3-4	40-45	—	—	—	→	45-50	"	—	→
RANGE	10	10	10	10	10	10	10	10	10	10
DC 1	1.0	1.1	1.3	1.1	1.2	2.9	1.3	1.2	1.5	1.3
DC 2										
DC 3 Rec	2	3	3	3	3	3	2	3	3	3
DC 4 #	10	11	12	13	14	15	16	17	18	19
DC 5 M	1	1	2	3	4	5	1	2	3	4
DC 6										
DC 7 K	1.5	1.5	6	15	30	52.5	1.5	6	15	30
DC 8 e	294	196	382	316	474	449	171	247	391	311
DC AVG.										
AC 1	379.	379.	184.	61.0	45.7	24.3	220.	119.	75.2	30.0
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.		+11.8					-15.2			
AC NOISE										
POT RES.		3 k					4k			

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT # 597
LINE 1 HALF W SP. 2 DATE 12-23-7

SEND	5-6	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4
RECEIVE	45-50	⟶	50-55	⟶	⟶	⟶	⟶	55-60	⟶	⟶
RANGE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
DC 1	1.5	3.2	1.2	1.3	1.3	1.3	1.5	0.9	1.1	1.2
DC 2										
DC 3 Rec	3	3	2	3	3	3	3	2	3	3
DC 4 #	20	21	22	23	24	25	26	27	28	29
DC 5 n	5	6	2	3	4	5	6	3	4	5
DC 6										
DC 7 K_n	52.5	84	6	15	30	52.5	84	15	30	52.5
DC 8 ρ	440	400	249	350	491	381	514	288	377	501
DC AVG.										
AC 1	24.2	13.5	80.4	67.4	47.3	21.0	17.7	37.2	36.3	27.6
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0
AC AVG.										
S.P.			+24.0					+30.9		
AC NOISE										
POT RES.			4K					2K		

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT #597
LINE 1 HALF W SP. 2 DATE 12-23-7

SEND	4-5	1-2	2-3	3-4						
RECEIVE	55-60	60-65	W →							
RANGE	1.0	1.0	1.0	1.0						
DC 1	1.3	1.2	1.2	1.5						
DC 2										
DC 3 Cm	3	2	3	3						
DC 4 ft	30	31	32	33						
DC 5 n	6	4	5	6						
DC 6										
DC 7 K_n	84	30	52.5	84						
DC 8 ρ	390	204	249	323						
DC AVG.										
AC 1	13.4	13.1	13.7	11.1						
AC 2	0.0	0.0	0.0	0.0						
AC AVG.										
S.P.			-30.9							
AC NOISE										
POT RES.			3K							

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 597

LINE 2 HALF W SP. 1 DATE 12-23-7

SEND	CAL	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	4-5	0.5W	→	5-10W	→	→	10-15W	→	→	→
RANGE	100x10	300x10	200x10	300x10	300x10	200x10	300x10	300x10	300x10	200x10
VOLTAGE	300	720	820	720	720	810	930	710	720	800
CURRENT	1.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0	3.0	2.0
SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	15-20	W	→	→	→	20-25	W	→	→	→
RANGE	200x10	300x10	300x10	300x10	200x10	200x10	200x10	300x10	300x10	300x10
VOLTAGE	1000	930	710	720	800	990	1000	930	710	720
CURRENT	2.0	3.0	3.0	3.0	2.0	2.0	2.0	3.0	3.0	3.0

FREQUENCIES 3 0.3

SENDER NO. 66445

OPERATOR T. FREEMAN

RECEIVER NO. 22702R

OPERATOR B. FREEMAN

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 597

LINE 2 HALF W SP. / DATE 12-23-7

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	20-25W	25-30	W	→	→	→	30-35	W	→	→
RANGE	200x10	200x10	200x10	300x10	300x10	300x10	200x10	200x10	300x10	300x10
VOLTAGE	800	990	1000	920	710	720	990	1000	920	710
CURRENT	2.0	2.0	2.0	3.0	3.0	3.0	2.0	2.0	3.0	3.0

SEND	1-2	2-3	3-4	1-2	2-3	1-2				
RECEIVE	35-40	W	→	40-45	W	→ 45-50				
RANGE	~~200x10~~	X	X	X	X	X				
VOLTAGE	~~990~~	X	X	X	X	X				
CURRENT	2.0	X	X	X	X	X				

FREQUENCIES 3 0.3

SENDER NO. 66445

OPERATOR T. FREEMAN

RECEIVER NO. 22702R

OPERATOR B. FREEMAN

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 1597

LINE 2 HALF E SP. 1 DATE 12-23-2

SEND	CAL	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2
RECEIVE	3-4	10-15E	—	—	—	15-20E	—	—	—	—
RANGE	10X100	10×300	3.0	10×200	10×200	10×300	10×300	10×300	10×200	10×300
VOLTAGE	290	700	920	990	970	700	700	920	990	970
CURRENT	1.0	3.0	3.0	2.0	2.0	3.0	3.0	3.0	2.0	2.0
SEND	6-7	5-6	4-5	3-4	2-3	1-2	6-7	5-6	4-5	3-4
RECEIVE	20-25E	—	—	—	—	—	25-30E	—	—	—
RANGE	10×200	10×300	10×300	10×300	10×200	10×200	10×300	10×300	10×300	10×300
VOLTAGE	720	700	700	910	990	970	770	700	700	910
CURRENT	2.0	3.0	3.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0

FREQUENCIES 3 0.3

SENDER NO. 66445

OPERATOR T. FREEMAN

RECEIVER NO. 22702R

OPERATOR B. FREEMAN

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT F597

LINE 2 HALF E SP. 1 DATE 8-23-79

SEND	2-3	6-7	5-6	4-5	3-4	6-7	5-6	4-5	6-7	5-6
RECEIVE	25-30E	30-35	E ⟶	⟶	⟶	35-40	E ⟶	⟶	40-45	E ⟶
RANGE	10x200	10x300	10x300	10x300	10x300	10x200	10x300	10x300	10x200	10x300
VOLTAGE	990	770	700	700	910	770	700	700	770	700
CURRENT	2.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0
SEND	1-2									
RECEIVE	25-30									
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES 3 0.3

SENDER NO. 66445

OPERATOR T. FREEMAN

RECEIVER NO. 22702R

OPERATOR B. FREEMAN

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT # 597
LINE 2 HALF W SP. 1 DATE 12-23-76

SEND	CAL	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	4-5	0-5W	→	5-10W	—	→	10-15W	—	—	→
RANGE	1.0	10	1.0	10	10	1.0	100.	10	1.0	1.0
DC 1	-0.1	1.0	1.1	1.1	1.2	1.2	1.1	1.1	1.2	1.3
DC 2										
DC 3 Cm	1.0	3	2	3	3	2	3	3	3	2
DC 4 #	1.0	1	2	3	4	5	6	7	8	9
DC 5 n		1	2	1	2	3	1	2	3	4
DC 6										
DC 7 K_ρ		1.5	6	1.5	6	15	1.5	6	15	30
DC 8 ρ		195	259	190	234	272	636	321	347	405
DC AVG.										
AC 1	97.9	377.	83.5	368.	113.	35.0	1230.	155.	67.0	26.0
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.	3.0	+8.4		-2.7			+6.4			
AC NOISE	0.3									
POT RES.		2K		4K			4K			

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT # 597
LINE 2 HALF W SP. 1 DATE 12-23-76

SEND.	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	15-20	W →				20-25	W →			
RANGE	10	10	1.0	1.0	1.0	10	10	10	1.0	1.0
DC 1	1.1	1.1	1.1	1.3	1.2	0.8	1.1	1.1	1.1	1.4
DC 2										
DC 3 Cm	2	3	3	3	2	2	2	3	3	3
DC 4 #	10	11	12	13	14	15	16	17	18	19
DC 5 n	1	2	3	4	5	1	2	3	4	5
DC 6										
DC 7 Kn	1.5	6	15	30	52.5	1.5	6	15	30	52.5
DC 8 ρ	430	795	438	425	462	357	432	668	375	368
DC AVG.										
AC 1	554.	384.	84.6	41.0	17.0	462.	139.	129.	36.2	20.3
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.	-8.3					-2.8				
AC NOISE										
POT RES.	4K					5K				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT #597
LINE 2 HALF W SP. 1 DATE 12-23-76

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	20-25W	25-30W	———	———	———	——→	30-35W	———	———	———
RANGE	0.1	1.0	1.0	1.0	1.0	0.1	1.0	1.0	1.0	1.0
DC 1	1.4	0.9	1.1	1.1	1.1	1.2	1.0	1.3	1.4	1.4
DC 2										
DC 3 Gm	2	2	2	3	3	3	2	2	3	3
DC 4 #	20	21	22	23	24	25	26	27	28	29
DC 5 M	6	2	3	4	5	6	3	4	5	6
DC 6										
DC 7 Km	84	6	15	30	52.5	84	15	30	52.5	84
DC 8 ρ	414	288	310	500	308	434	374	434	639	386
DC AVG.										
AC 1	9.51	93.0	40.0	48.4	17.0	9.96	48.2	27.9	35.2	13.3
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.		+10.3					+15.8			
AC NOISE										
POT RES.		4K					2K			

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT #597
LINE 2 HALF E SP. 1 DATE 12-27-2

SEND	CAL	S.P.	S.P.	4-5	3-4	2-3	1-2	5-6	4-5	3-4
RECEIVE	3-4	0-5E	5-10E	10-15E	←	←	→	15-20E	←	→
RANGE	1.0			10	10	1.0	1.0	10	1.0	1.0
DC 1	-0.1			1.1	1.1	1.1	1.3	0.8	1.0	1.1
DC 2										
DC 3 Em	1.0			3	3	2	2	3	3	3
DC 4 #	1.0			1	2	3	4	5	6	7
DC 5 n				1	2	3	4	1	2	3
DC 6										
DC 7 Ka				15	6	15	30	1.5	6	15
DC 8 ρ				171	259	276	401	138	286	254
DC AVG.										
AC 1	97.8			331.	125.	35.5	25.8	267.	92.6	49.0
AC 2	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.	3.0	+17.0	+13.9	-13.3				+21.4		
AC NOISE	0.3									
POT RES.		2K	2K	3K				3K		

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT #597
LINE 2 HALF E SP. 1 DATE 12-23-70

SEND	2-3	1-2	6-7	5-6	4-5	3-4	2-3	1-2	6-7	5-6
RECEIVE	15-20E	→	20-25E	→	→	→	→	→	25-30E	→
RANGE	1.0	1.0	10	1.0	1.0	1.0	0.1	0.1	1.0	1.0
DC 1	1.2	1.3	1.7	2.0	2.3	2.7	3.3	2.3	2.0	2.1
DC 2										
DC 3 Cm	2	2	2	3	3	3	2	2	3	3
DC 4 #	8	9	10	11	12	13	14	15	16	12
DC 5 n	4	5	1	2	3	4	5	6	2	3
DC 6										
DC 7 Kn	30	52.5	1.5	6	15	30	52.5	84	6	15
DC 8 ρ	246	324	162	114	140	177	155	241	96	114
DC AVG.										
AC 1	15.8	11.9	208.	54.8	26.8	16.8	5.58	5.47	45.9	21.7
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.			+2.1						+22.4	
AC NOISE										
POT RES.			4k						3k	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT #597
LINE 2 HALF E SP. 1 DATE 12-23-70

SEND	4-5	3-4	2-3	6-7	5-6	4-5	3-4	6-7	5-6	4-5
RECEIVE	25 30E	→	→	30-35E	→	→	→	35-40	E →	→
RANGE	1.0	0.1	0.1	1.0	1.0	1.0	0.1	1.0	1.0	0.1
DC 1	2.3	2.7	3.1	2.4	2.6	2.7	2.9	2.7	2.7	2.7
DC 2										
DC 3 Em	3	3	2	3	3	3	3	2	3	3
DC 4 #	18	19	20	21	22	23	24	25	26	27
DC 5 n	4	5	6	3	4	5	6	4	5	6
DC 6										
DC 7 Kn	30	52.5	84	15	30	52.5	84	30	52.5	84
DC 8 ℓ	132	169	152	146	192	217	286	258	234	263
DC AVG.										
AC 1	12.6	9.21	3.44	27.8	18.1	11.8	9.72	16.4	12.7	8.92
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.				+20.8				-8.4		
AC NOISE										
POT RES.				3k				2k		

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 4597
LINE 2 HALF E SP. / DATE 12-27-2

SEND	6-7	5-6	6-7							
RECEIVE	40-45	→	45-50							
RANGE	0.1	0.1								
DC 1	2.6	2.7								
DC 2										
DC 3 Em	2	3								
DC 4 #	28	29								
DC 5 n	5	6								
DC 6										
DC 7 K_a	52.5	84								
DC 8 ρ	223	203								
DC AVG.										
AC 1	8.10	6.89								
AC 2	0.0	0.0								
AC AVG.										
S.P.	+11.3		−23.5							
AC NOISE										
POT RES.	3K		3K							

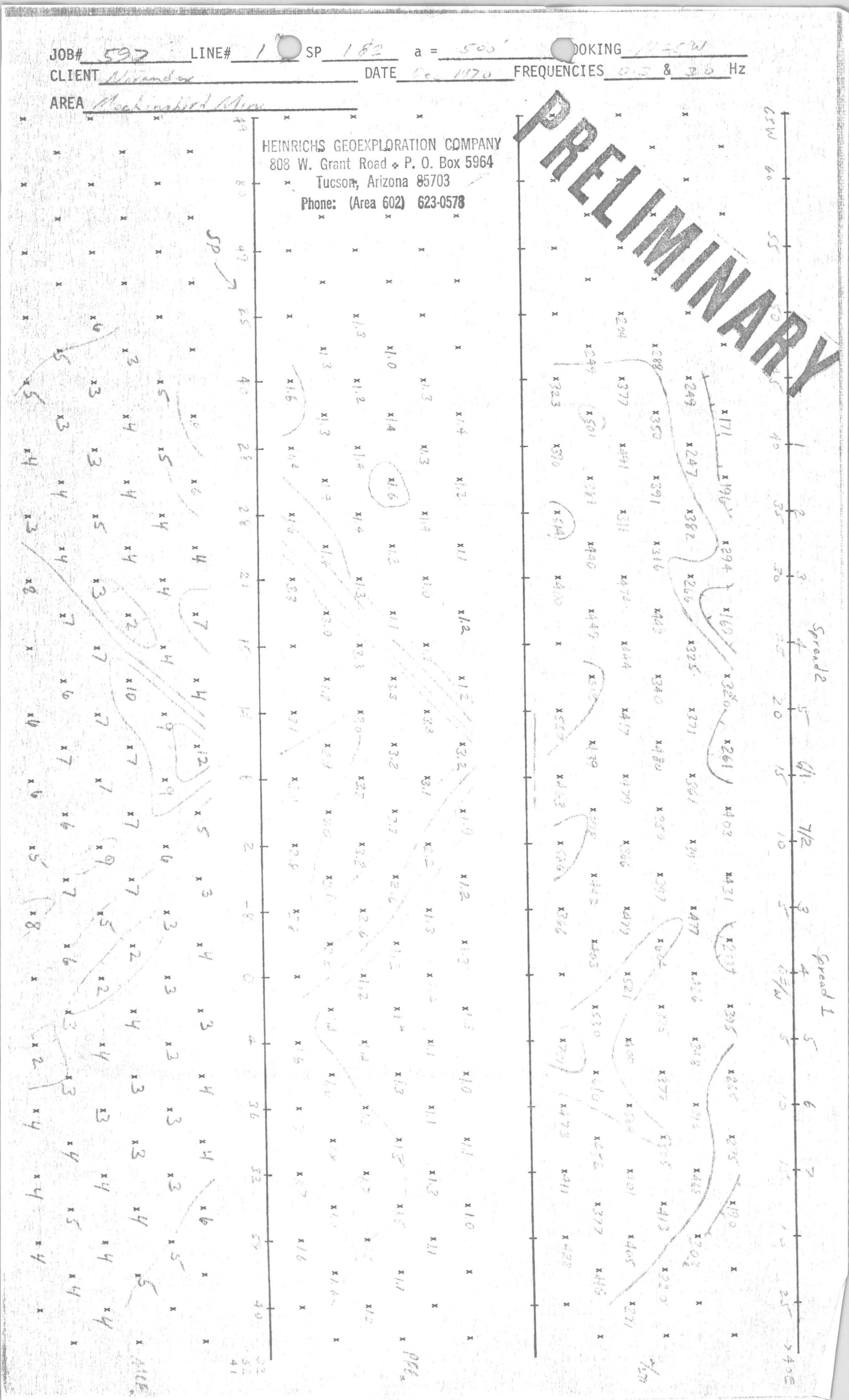
JOB# 597 LINE# 1 SP 182 a = 500' LOOKING N-5W

CLIENT Nirandex DATE Dec 1970 FREQUENCIES 0.5 & 3.0 Hz

AREA Mackinaw Mine

HEINRICHS GEOEXPLORATION COMPANY
808 W. Grant Road • P. O. Box 5964
Tucson, Arizona 85703
Phone: (Area 602) 623-0578

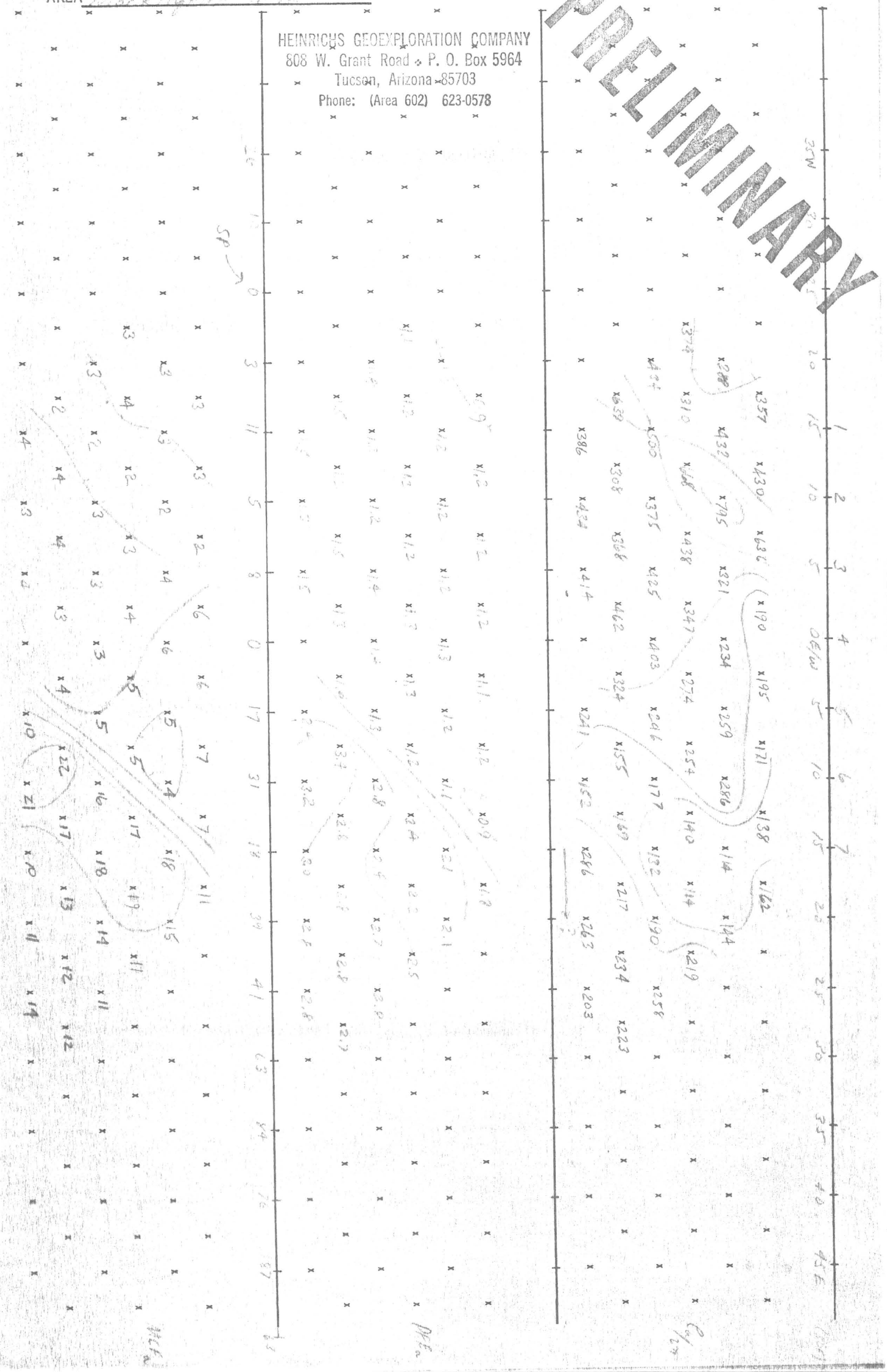
PRELIMINARY



JOB# 597 LINE# 2 SP 1 a = 500' LOOKING N25°W

CLIENT [illegible] DATE [illegible] FREQUENCIES [illegible] & [illegible] Hz

AREA [illegible]

HEINRICHS GEOEXPLORATION COMPANY
808 W. Grant Road • P. O. Box 5964
Tucson, Arizona 85703
Phone: (Area 602) 623-0578

PRELIMINARY