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JOB 444 LINE 3 SPREAD 2

LOOKING NW DATE Aug 19 A= 1000

CENTER -90.0 LABEL SW/SW FREQ. 3.0 0.1

COUPLING No



HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 444
LINE 3 HALF SW SP. 2 DATE 8/19

P A G E

1

[illegible]

HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT
LINE 3

444

HALF SW SP. 2 DATE 8/19

PAGE

2

8/19

[illegible]



HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 44W JohnsonLINE 3 HALF S.W. SP. 2 DATE 8/19

PAGE

2

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	9-10	10-11	→	11-12	→	→	12-13	→	→	→
RANGE	166x30	300x30	200x30	300x30	300x30	200x30	200x30	200x30	300x30	200x30
VOLTAGE	480	340	500	280	340	500	380	280	340	500
CURRENT	5.0A	9.0A	6.0A	9.0A	9.0A	6.0A	6.0A	6.0A	9.0A	6.0A
SEND	1-2	2-3	3-4	1-2	2-3			Cal. 3-4	Cal. 1-2	
RECEIVE	13-14	→	→	14-15	→					
RANGE	200x30	300x30	300x30	166x30	300x30			200x10	200x10	
VOLTAGE	360	280	240	300	280			70	120	
CURRENT	6.0A	9.0A	9.0A	5.0A	9.0A			2A	2A	

FREQUENCIES 3A1

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS :

↑



3

HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Johnson 444
LINE B HALF NE SP. 2 DATE 8/19

[illegible]



HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT

LINE

HALF

NE

SP-2

DATE _____

PAGE

4

5/19

SEND	Cal B-4	Cal 4-5	Cal 23-3
RECEIVE			
RANGE	0.3	0.3	0.3
DC 1	2.07	207	2.08
DC 2	2.07	207	2.08
DC 3			
DC 4			
DC 5			
DC 6			
DC 7			
DC 8			
DC AVG.			
AC 1	1.96	194.	1.95
AC 2	1.96	194.	1.95
AC AVG.			
S.P.		↑	
AC NOISE			
POT RES.			



HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PAGE

1

PROJECT

444 Johnson

LINE

3

HALF

N.E

SP.

2

DATE

8-19

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	-1-2
RECEIVE	9-8	8-7	→	7-6	→	→	6-5	→	→	→
RANGE	200X30	200X30	200X30	300X30	200X30	200X30	200X30	300X30	300X30	200X30
VOLTAGE	360	180	360	340	180	360	540	340	280	360
CURRENT	6.0A	6.0A	6.0A	9.0A	6.0A	6.0A	6.0A	9.0A	9.0A	6.0A
SEND							Cal	Cal		
RECEIVE							2-3	4-5		
RANGE							200X10	200X10		
VOLTAGE							60	400		
CURRENT							2.0A	2.0A		

FREQUENCIES 3.0 0.1

SENDER NO. 6644.5

OPERATOR 23

RECEIVER NO.

OPERATOR

COMMENTS:

91

5.000	9.000	6.000	9.000	9.000	6.000	6.000	9.000	6.000	6.000	9.000	6.000	9.000	6.000	9.000	5.000	9.000	9.000	9.000	9.000	9.000	2.000	
167	639	760	299	756	169	265	721	379	93	DC	699	435	194	318	273	207	LEFT					
164	655	655	295	842	142	261	661	462	106		740	338	190	202	217	207	SIDE					
168	638	768	299	755	163	265	722	376	96		700	439	194	320	275							
164	655	655	293	844	143	261	661	465	105		745	303	189	199	214							
169		762	299	750	164	265	723	375	94		690	437	195	325	276							
164		658	294	842	141	261	661	470	107		750	330	187	195	215							
		763		753	166		725	376	94		695	438	187	326	281							
		650		843	135		658	470	106		748	327	198	190	210							
				752	172			375	95		685	438	185	325	283							
				843	136			470	107		755	330	198	190	208							
				750	171			373	93		690	439	185	328	274							
				843	134			469	109		754	325	199	191	210							
				756	173				93		689	439	184	325	280							
				842	134				107		758	330	200	190	211							
				748	173				94		683	438	183	332	282							
				843	134				107		760	328		189	212							

[illegible][illegible]

	1	2	3	4	5	6
166.1	646.7	70.94	296.5	79.75	15.32	263.0
						69.18
						42.15
						10.040
						DCA
						72.08
						38.22
						19.14
						0.000
						25.94
						24.52
						0.000
						0.000
						207.0

170.0	622.0	67.50	285.0	76.20	14.40	255.0	65.90	39.80	9.400	AC1	67.80	35.90	17.60	0.000	24.20	22.60	0.000	0.000	204.0
159.0	623.0	67.50	283.0	76.10	14.40	255.0	65.90	39.80	9.300	AC2	67.80	35.80	17.70	0.000	24.00	22.60	0.000	0.000	204.0
164.5	622.5	67.50	284.0	76.15	14.40	255.0	65.90	39.80	9.350	ACA	67.80	35.85	17.65	0.000	24.10	22.60	0.000	0.000	204.0
96.29	208.3	137.1	95.49	102.7	74.03	127.1	133.7	135.7	97.00	RH0	139.3	123.1	123.3	*000.0	83.55	158.0	*000.0	*000.0	.966 DC CAL
2.7	2.4	3.6	2.9	3.2	4.9	1.6	3.5	4.4	5.8	PFE	4.8	5.1	6.9	*000.0	6.1	6.9	*000.0	*000.0	.986 AC CAL
5	11	26	30	31	66	13	26	32	60	MCF	34	41	56	*0000	73	44	*00000	*00000	

[illegible]

1	2	3	4	5	6	7	8	9	10	PT.	11	12	13	14	15	16	17	18
843	426	1482	650	1239	698	611	245	1088	470	DC								
844	427	1483	651	1225	696	612	245	1089	468	SUMS								
845	427	1483	651	1232	697	612	245	1092	475									
846	427	1480	650	1235	698	612	245	1091	471									
	426	1485	650	1233	695	612	245	1083	471									
	426	1488	652	1232	698	611		1086	476									
	427	1484	654	1237	693	610		1086	476									
				1242	700			1086	470									
				1230	707			1084	463									
				1226	697			1084	460									
				1235	697			1084	454									
				1230	710			1086	460									
				1240	703			1086	469									
				1243	695			1083	465									
				1238	701			1083	470									

414

Sam Long 2/1/

	DC	DEVS
2	5	0.0
1	3	0
0	5	1.5
1	7	0.7
1	7	0.7
1	3	0.7
1	0	1.7
1	0	1.7
1	0	0.5
1	2	1.0

-0.7	-0.3	-0.2	-1.7
0.0	-0.3	-0.2	-3.0
-0.4	1.6	-0.0	-1.7
0.4	0.6	-0.0	0.2
0.7	-0.6	-0.3	-0.6
0.3	0.3	-0.3	0.5

[illegible]

JOB 494 LINE 3 SPREAD 1

LOOKING NW DATE Aug 18 A= 1000

CENTER -30.0 LABEL SW/NE FREQ. 3.0 - 0.1

COUPLING NO

HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT
LINE 3

444

Johnson

LINE 3

3

HALF

5W

SP. 1

DATE _____

PAGE

1

8/8

[illegible]



HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT
LINE 3

Johnson 444
HALF SW SP. 1

DATE 8/18

PAGE
2

SEND	1-2	2-3	3-4	1-2	2-3			Cal 2-3	Cal 3-4	Cal 1-2
RECEIVE	7 8									
RANGE	01	003	001	003	001				03	
DC 1	540	202 195	630 630 580	245 255	860 830				209	209
DC 2	600	206 212	910 890 860	207 199	990 100				210	209
DC 3	540	196 194	640 580 620	250 256	850 830				209	209
DC 4	610	209 210	850 860 940	205 195	990				210	209
DC 5	540	199 194	600 600 550	250 256	850					
DC 6	610	207 215	890 890 900	205 195	990					
DC 7	540	196 192	610 600 570	255 260	830					
DC 8	610	214 214	880 890 910	200 196	100					
DC AVG.										
AC 1	533	18.6	6.80	205	8.05				204	198
AC 2	535	18.6	6.80	203	8.05				204	198
AC AVG.										
S.P.	-38.0			710.4						
AC NOISE										
POT RES.	20N 21W									12-30

AT 1



HEINRICH'S GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 444 JohnsonLINE 3 HALF S.W SP. 1 DATE 8/17PAGE
1

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	3-4	4-5	→	5-6	→	→	6-7	→	→	→
RANGE	166X30	166X30	166X30	166X30	166X30	166X30	166X30	166X30	166X30	166X30
VOLTAGE	440	420	440	360	420	440	440	360	420	440
CURRENT	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A
SEND	1-2	2-3	3-4	1-2	2-3	1-2	Col. 3-4	Col. 1-2	C	
RECEIVE	7-8	→	→	8-9	→		200X10			
RANGE	166X30	166X30	166X30	166X30	166X30		200X10	200X10		
VOLTAGE	460	360	420	460	360			180		
CURRENT	5.0A	5.0A	5.0A	5.0A	5.0A		2.0	2.0		

FREQUENCIES 3.0 0.1SENDER NO. 6644-SOPERATOR 23

RECEIVER NO.

OPERATOR

COMMENTS:





HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 444
LINE 3 HALF N/E SP. 1 DATE 1/1

PAGE

3

SEND	1	2	2	3	1	2	3	4	2	3	1	2	4	5	3	4	2	3	1	2
RECEIVE	2	3	1	2			0	1		1				-1	0					
RANGE	-3		-1		003		-1		003		010		-100		001		0018		0003	
DC 1	118		935		176	172	830		136	140	580	560	630		800	760	30	340	230	245
DC 2	116		945		202	205	830		126	121	640	660	660		725	760	260	230	200	180
DC 3	118		935		175	172	830		137	142	570	550	630		790	765	315	330	200	225
DC 4	116		945		202	205	830		124	119	645	670	660		730	760	245	240	195	150
DC 5			935		174	172			138	143	570	555	625		790	760	315	335	225	305
DC 6			945		203	205			124	119	650	670	665		730	760	250	225	220	155
DC 7					173	172			140	144	560	540	625		775		330	340	225	260
DC 8					204	205			123	117	655	675	665		750		220	225	170	165
DC AVG.																				
AC 1	110.		88.0		17.6		78.5		12.4		5.70		61.0		7.20		2.72		2.03	
AC 2	110.		88.0		17.6		78.5		12.4		5.75		61.0		7.20		2.70		2.04	
AC AVG.																				
S.P.	00		100				19.7							+12.1						
AC NOISE														0002						
POT RES.																				

VP



HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT
LINE 3

HALF Wt SP. 1 DATE 18

PAGE

4

SEND								QAL		
RECEIVE								27	3	4
RANGE										
DC 1								208	207	207
DC 2								208	207	207
DC 3								208	207	207
DC 4								208	207	207
DC 5										
DC 6										
DC 7										
DC 8										
DC AVG.										
AC 1								196	196	200
AC 2								197	197	
AC AVG.										
S.P.										
AC NOISE										
POT RES.								20m	20m	



HEINRICHS GEOEXPLORATION CO.
I. P. SENDER NOTES

PROJECT

444 Johnson

LINE 3

HALF N.E. SP. 1

DATE 2/18

PAGE

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	3-2	2-1	2 →	1-0	→	→	0-1	→	→	→
RANGE	166x30	166x30	166x30	166x30	166x30	166x30	166x30	166x30	166x30	166x30
VOLTAGE	460	240	460	420	350	460	440	420	360	460
CURRENT	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A
SEND								Cal 3-4	Cal 2-5	Cal 4-5
RECEIVE										
RANGE								200x10	200x10	200x10
VOLTAGE								160	140	160
CURRENT								2A	2A	2A

FREQUENCIES 30 0.1

SENDER NO. 6644-5

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS :



[illegible]

376	263	1215	1510	570	455
377	261	1220	1520	570	465
377	263	1210	1525	560	405
377	261	1220	1525	570	375
377	262	1225	1520	575	455
377	262	1225		560	440
377	263	1210		565	395
377	261	1215		565	425

0.0	-.4	.3	0.0	-.1	.3	.1	.4	-1.1	.7	0.0
0.0	-.4	.0	0.0	.3	-.5	.1	-.3	1.5	.7	0.0
0.0	.6	.0	0.0	-.5	-.1	.1	.1	-1.1	-.5	0.0
	.6	.2		-.1	-.1	-.3	.1	-1.1	-1.6	
	-.4	.0		.7	.3	.1	.1	2.4	4.2	
		.2		.3	-.1	.1	.4	-1.1	-7.5	
		.0		.3	.3	.1	.6	.6	6.6	
		.0		.5	-.5	.1	.1	.6	8.9	
		.0		.3	.3	.4	.4	-1.1	-5.2	
		.0		.1	.3	.4	.4	.6	-12.2	
		.0		.1	.7	.1	.1	1.5	6.6	
		.0		.3	.7	.1	.1	-1.1	3.0	
		.0		.5	.5			-.2	-7.5	
		.0		.1	-.1			-.2	-.5	

DC
DEVS

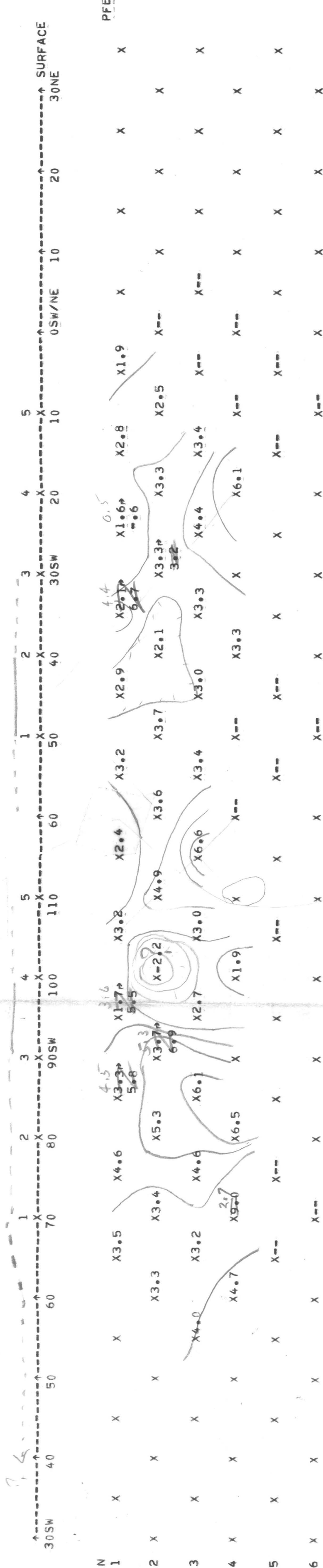
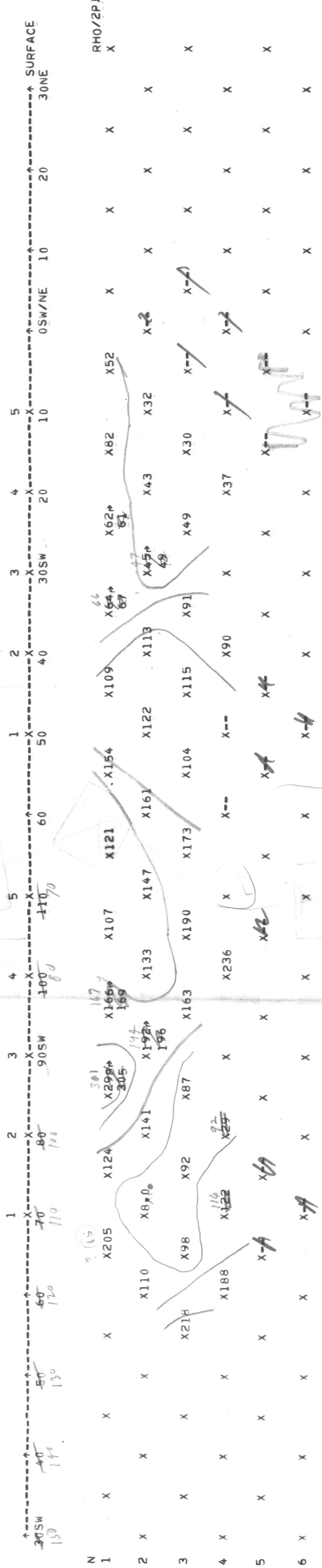
1	1	2	1	2	3	1	2	3	4	N	2	3	4	5	3	4	5	6
117.0	94.40	18.84	83.00	13.11	6.082	64.46	7.596	2.832	2.135	DCA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	207.0
110.0	88.00	17.60	78.50	12.40	5.700	61.00	7.200	2.720	2.030	AC1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	196.0
110.0	88.00	17.60	78.50	12.40	5.750	61.00	7.200	2.700	2.040	AC2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	197.0
110.0	88.00	17.60	78.50	12.40	5.725	61.00	7.200	2.710	2.035	ACA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	196.5
67.83	54.72	43.69	48.12	30.40	35.26	37.37	17.61	16.42	24.75	RHO	*000.0*000.0*000.0*000.0*000.0*000.0*000.0*000.0							.966 DC CAL
1.0	1.8	1.6	.4	.4	.8	.3	.1	-.8	-.4	PFE	*000.0*000.0*000.0*000.0*000.0*000.0*000.0*000.0							.949 AC CAL
14	33	37	8	12	24	9	8	-49	-16	MCF	*00000*00000*00000*00000*00000*00000*00000*00000							

```

*LINE NO.28
ERROR NUMBER      0078
CALLED FROM INPUTC
CALLED FROM STATION
CALLED FROM IPDATA

ERROR SUMMARY
ERROR
0078
TIMES
0001

```



JOB 444 LINE 2 SPREAD 2

LOOKING NW DATE Aug 15 A= 1000

CENTER -90.0 LABEL SW / ~~NE~~ FREQ. 3.0 0.1

COUPLING NO ms

[illegible]



HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 444
LINE 2 HALF SW SP. 2 DATE 8/15

PAGE

4

[illegible]



HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 444LINE 2 HALF SW SP. 2 DATE 8/15

PAGE

2

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	9-10	10-11	→	11-12	→	→	12-13	→	→	→
RANGE	133x30	200x30	133x30	300x30	200x30	133x30	300x30	300x30	200x30	133x30
VOLTAGE	460	450	460	280	450	460	440	220	460	450
CURRENT	4.0A	6.0A	4.0A	9.0A	6.0A	4.0A	9.0A	9.0A	6.0A	4.0A
SEND	1-2	2-3	3-4	1-2	2-3			Cal/3-4	Cal/2-3	Cal/1-2
RECEIVE	13-14	→	→	14-15	→					
RANGE	300x30	300x30	200x30	300x30	300x30			200x10	200x10	200x10
VOLTAGE	430	280	460	430	280			140	60	100
CURRENT	9.0A	9.0A	6.0A	9.0A	9.0A			2A	2A	2A

FREQUENCIES 3.0 0.1SENDER NO. 6644.5

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

↑ use

[illegible]



HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 444
LINE 2 HALF NE SP. 2 DATE 8/15

PAGE

2

SEND									Cal 2-3	Cal 3-4	Cal 4-5
RECEIVE											
RANGE									0.3		0.3
DC 1									2.07		2.08
DC 2									2.07		2.08
DC 3											
DC 4											
DC 5											
DC 6											
DC 7											
DC 8											
DC AVG.											
AC 1									1.95.		1.94.
AC 2									1.95.		1.94.
AC AVG.											
S.P.											
AC NOISE											
POT RES.											

↑
USE



HEINRICHS GEOEXPLORATION CO.
I. P. SENDER NOTES

PROJECT 444

LINE 2 HALF N.E SP. 2 DATE 8/15

PAGE

1

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	9-8	8-7	→	7-6	→	→	6-5	→	→	→
RANGE	300X30	300X30	300X30	200X30	300X30	300X30	133X30	200X30	300X30	300X30
VOLTAGE	440	280	440	480	280	440	480	480	280	440
CURRENT	9.0 A	9.0 A	9.0 A	6.0 A	9.0 A	9.0 A	4.0 A	6.0 A	9.0 A	9.0 A
SEND								Ca/ 2-3	Ca/ 4-5	
RECEIVE										
RANGE								200X10	200X10	
VOLTAGE								60	320	
CURRENT								2.0 A	2.0 A	

FREQUENCIES 3.0 0.1

SENDER NO. 6644-S

OPERATOR 23

RECEIVER NO.

OPERATOR

COMMENTS :

↑
100

4.000	6.000	4.000	9.000	6.000	4.000	4.000	9.000	6.000	9.000	9.000	I	9.000	9.000	6.000	6.000	9.000	9.000 2.000
226	621	630	379	720	112	281	635	213	518	856	DC	280	115	639	262	204	LEFT
233	623	698	380	716	126	278	590	163	376	825		320	121	695	310	204	SIDE
227	621	638	379	721	110	280	636	213	520	858		279	116	640	263		
232	624	698	379	716	127	278	589	161	370	824		321	120	695	312		
226	621	633	378	722	112	280	637	214	523	858		278	117	639	262		
	624	698	379	716	126	279	590	160	359	823		321	211	697	309		
	621	630			110	280	636	215	550	859		279	116	639	265		
	624	700			127	278	590	159	330	823		322	116	699	310		
									570				120		269		
									318				116		310		
									578				119				
									318				118				
									575				119				
									312				118				
									590				118				
									300				117				

1	2	3	4	5	6	7	8	9	10	PT.	11	12	13	14	15	16	17 18
459	1244	1328	759	1436	238	559	1225	376	894	DC	1681	600	236	1334	572	408	
460	1244	1336	759	1437	236	558	1226	376	896	SUMS	1683	599	237	1335	573		
459	1245	1336	758	1437	237	558	1225	374	890		1682	600	236	1335	575		
458	1245	1331	757	1438	239	558	1226	375	893		1682	599	237	1334	574		
	1245	1331	757		238	559	1227	374	882		1681	600	328	1336	571		
	1245	1328			236	559	1226	375	909		1682	600	327	1336	574		
	1245	1330			237	558	1226	374	880		1682	601	236	1338	575		
									900				236		579		
									888				235				
									896				237				
									896				236				
									893				237				
									887				237				
									902				236				
									890				235				

0.0	-0.1	-0.3	.1	-0.1	.3	.1	-0.1	.3	.1	DC	-0.1	.0	-5.0	-0.1	-5.5	0.0	
.2	-0.1	.3	.1	-0.0	-0.1	-0.1	.0	.3	.3	DEVS	.1	-0.1	-4.6	-0.0	-0.3		
0.0	.0	.3	0.0	-0.0	-0.1	-0.1	-0.1	-0.2	-0.3		.0	.0	-5.0	-0.1	.1		
-0.2	.0	-0.0	-0.1	.1	.7	.1	.0	.0	-0.0		-0.1	-0.1	-4.6	-0.1	-0.1		
	.0	-0.3	-0.1	.1	.3	.1	.1	-0.2	-1.2		.0	.0	32.0	.0	-0.6		
	.0	-0.1	-0.1		-0.5	.1	.0	.0	1.8		.0	.0	31.6	.0	-0.1		
					-0.1	-0.1	.0	-0.2	-1.5		.0	.2	-5.0	.2	.1		
									.8				-5.0		.8		
									.6				-5.4		.8		
									.3				-4.6				
									.3				-5.0				
									.0				-4.6				
									.7				-4.6				
									1.0				-5.0				
									-0.3				-5.4				

229.5 622.4 66.57 379.0 71.86 11.86 279.2 6.129 18.74 4.465 DCA 84.09 29.99 12.42 0.000 66.77 28.73 0.000 0.000 204.0

JOB 444 LINE 2 SPREAD 1

LOOKING NW DATE Aug 15 A= 1000

CENTER -30.0 LABEL SW/NE FREQ. 3.0 - 0.1

COUPLING 1/0



HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 444
LINE 2 HALF SW SP. 2 DATE 11/15

[illegible]

[illegible]



HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 444LINE 2 HALF SW SP. 1 DATE 8/15

PAGE

2

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	3-4	4-5	→	5-6	→	→	6-7	→	→	→
RANGE	166X30	166X30	166X30	166X30	166X30	166X30	166X30	166X30	166X30	166X30
VOLTAGE	300	380	300	500	380	300	540	500	380	300
CURRENT	5A	5A	5A	5A	5A	5A	5A	5A	5A	5A
SEND	1-2	2-3	3-4	1-2	2-3	1-2	2-3	Cal. 2-3	Cal. 3-4	Cal. 1-2
RECEIVE	7-8	→	→	8-9				7		
RANGE	166X30	166X30	166X30	166X30	166X30			200X10	200X10	200X10
VOLTAGE	520	500	820	540	500			200	180	210
CURRENT	5A	5A	5A	5A	5A			2A	2A	2A

FREQUENCIES 3.0 0.1SENDER NO. 6644-5

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS: CA2 AT 11.151
1050



HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT LINE _____

PROJECT 444
LINE 2 HALF NE SP 1 DATE 8/15

DATE 8/15[illegible]



HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT
LINE

444

2

HALF

NE

SP. 1

DATE

8/15

PAGE
2

SEND								CAL	CAL	CAL
RECEIVE								2-3	34	45
RANGE								0.3		
DC 1								207	207	207
DC 2								207	207	207
DC 3										
DC 4										
DC 5										
DC 6										
DC 7										
DC 8										
DC AVG.										
AC 1								205	205	203
AC 2								205	205	203
AC AVG.										
S.P.										
AC NOISE										
POT RES.								8:30 AM	=	10 AM



HEINRICHS GEOEXPLORATION CO.
I. P. SENDER NOTES

PROJECT 444

LINE 2 HALF NE SP. 1 DATE 8/15

PAGE

1

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	3-2	2-1	→	1-0	→	→	0-1	→	→	→
RANGE	166X30	166X30	166X30	166X30	166X30	166X30	166X30	166X30	166X30	166X30
VOLTAGE	560	520	550	400	520	550	300	400	520	550
CURRENT	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A	5.0A
SEND								Cal. 3-4	Cal. 2-3	Cal. 4-5
RECEIVE										
RANGE										200X10
VOLTAGE										120
CURRENT								2.0	2.0	2.0

FREQUENCIES 3.0 0.1

SENDER NO. 6644-2

OPERATOR 23

RECEIVER NO.

OPERATOR

COMMENTS:

Two

5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	2.000	

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103	113	196	195	460	192	275	570	196	730		670	175	332				
110	119	232	184	519	124	261	490	205	830		739	187	270				
103	112	195	195	462	193	275	571	196	738		665	175	338				
120	120	233	194	520	123	261	488	206	840		740	188	270				
112	112	194	194	463	194	274	573	195	738		662	174	332				
233	233	194	194	518	122	274	488	206	839		742	192	269				
194	194	233	194	462	193	274	572	195	738		660	173	338				

1	2	3	4	5	6	7	8	9	10	PT.	11	12	13	14	15	16	17	18
213	233	426	379	980	317	536	1063	400	1572	DC	1408	363			595			
213	232	428	379	979	316	536	1060	401	1560	SUMS	1409	362			602			418
213	231	427	379	981	317	536	1061	401	1568		1404	362			608			
	232	428		982	316	536	1059	402	1578		1405	363			608			
	232	427		983	317	535	1061	401	1578		1402	362			602			
		427		981	316		1061	401	1577		1404	366			601			
		427		980	315		1060	401	1577		1402	365			607			

0.0	.4	.3	0.0	.1	.2	.0	.2	.2	.1	DC	.2	.1					
0.0	0.0	.2	0.0	.2	.1	.0	.1	0.0	.8	DEVS	.3	.4					
0.0	.4	.0	0.0	.0	.2	.0	.2	.0	.3		.3	.3					
0.0	0.0	.2	0.0	.1	.2	.1	.2	.0	.3		.3	.3					
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0.0	0.0	.0	0.0	.1	.0	.1	.1	.0	.3		.3	.3					
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109	105	188	142	188	860	885	150	475	400
112	109	202	141	185	840	895	126	555	210
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112		203		186	840	895	126	560	195
		187		187	865	880		470	440
		203		186	840	895		565	375
		187						460	460
		202						575	160
								450	470
								580	140
								440	485
								590	115
								430	505
								605	105
									305
									315
									300
									345
									275
									360
									260
									375
									240

1	2	3	4	5	6	7	8	9	10	PT.	11	12	13	14	15	16	17	18
220	213	391	283	373	1705	1780	276	1030	595	DC								
221	213	389	283	373	1700	1780	276	1025	630	SUMS								
221	214	390	283	373	1700	1780	276	1030	610									
221		389		372	1700	1775	276	1025	630									
221		390		373	1700	1775	276	1030	615									
		390		373	1705	1775		1030	635									
		390		373	1705	1775		1035	815									
		390		373	1705	1775		1025	835									
		389						1035	620									
								1025	630									
								1030	610									
								1020	625									
								1030	600									
								1020	620									
								1035	610									
									620									
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									620									
									635									
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									615									

414

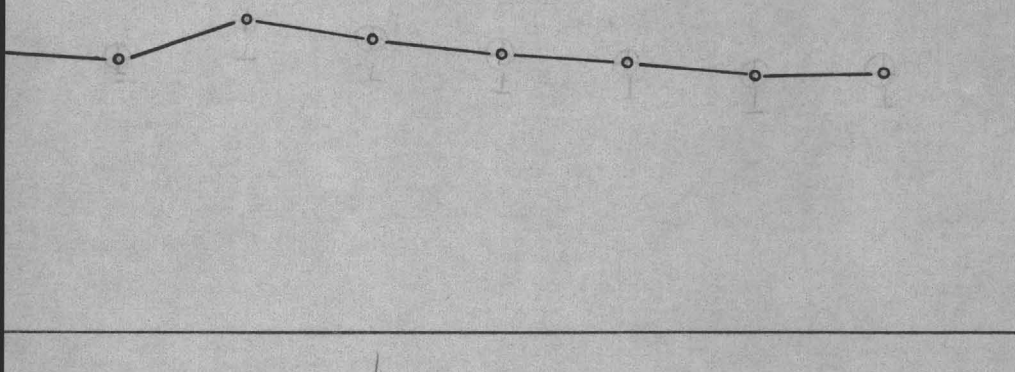
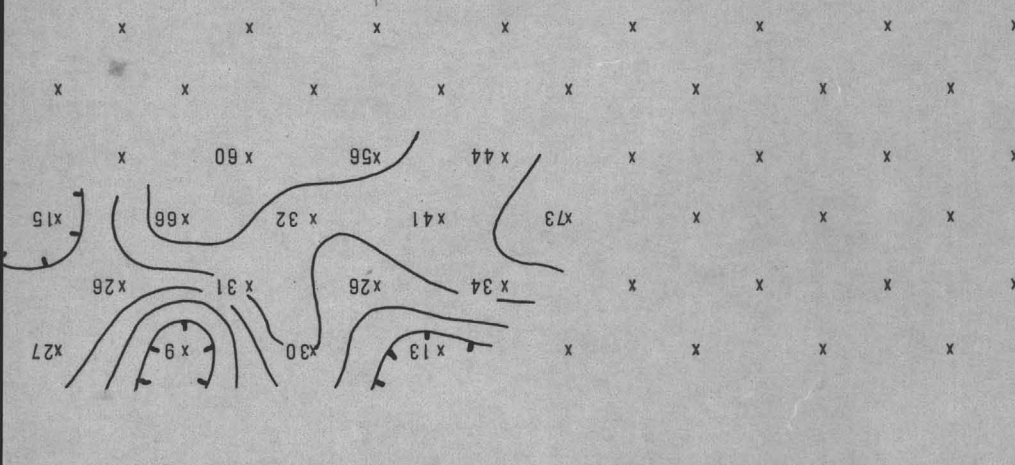
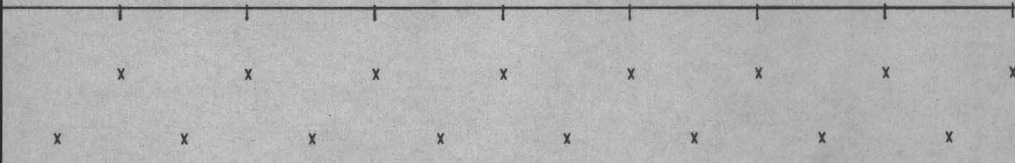
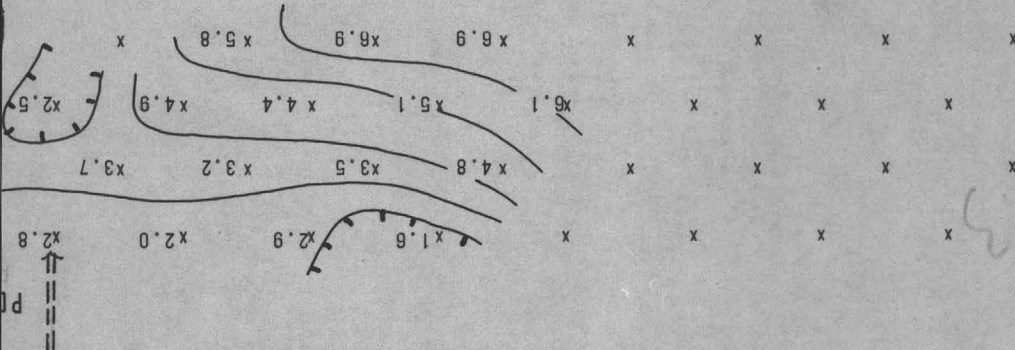
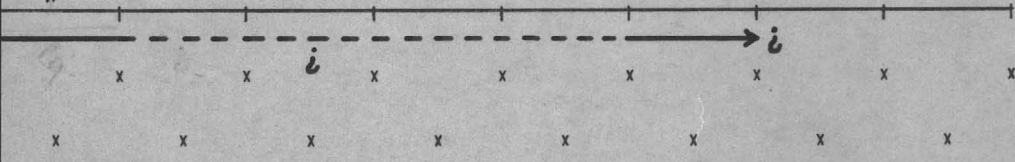
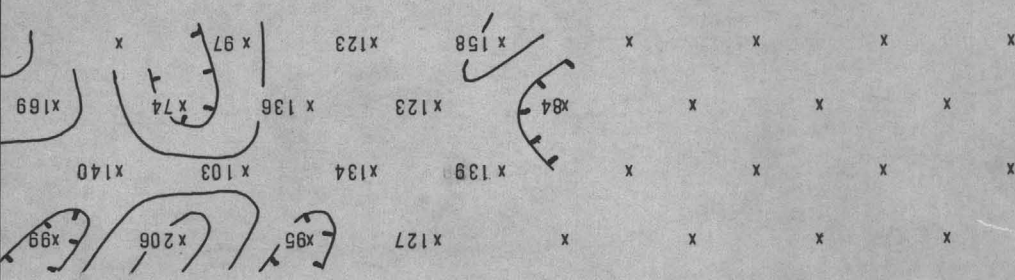
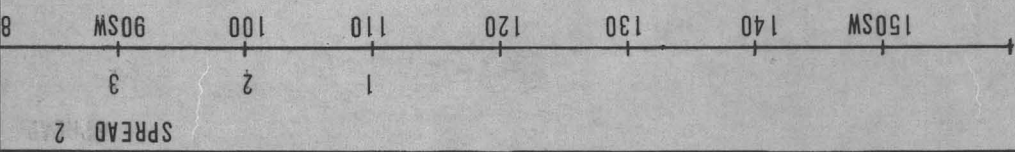
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220	213	391	283	373	1705	1780	276	1030	595	DC								
221	213	389	283	373	1700	1780	276	1025	630	DEVS								
221	214	390	283	373	1700	1780	276	1030	610									
221		389		372	1700	1775	276	1025	630									
221		390		373	1700	1775	276	1030	615									
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								1035	610									
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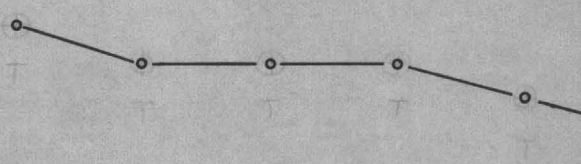
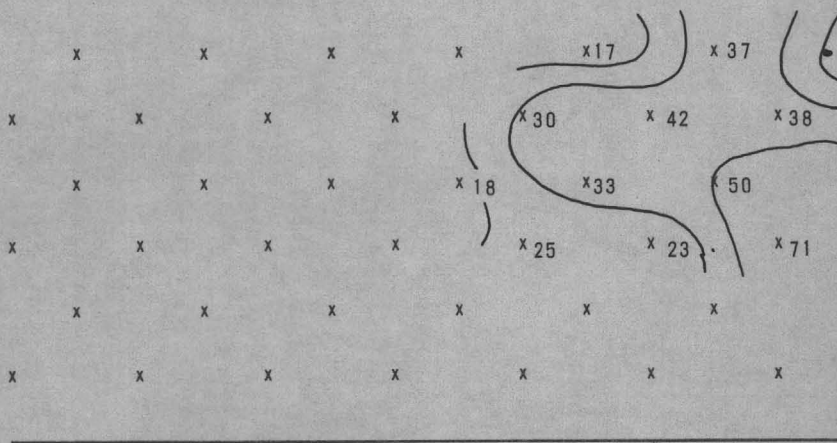
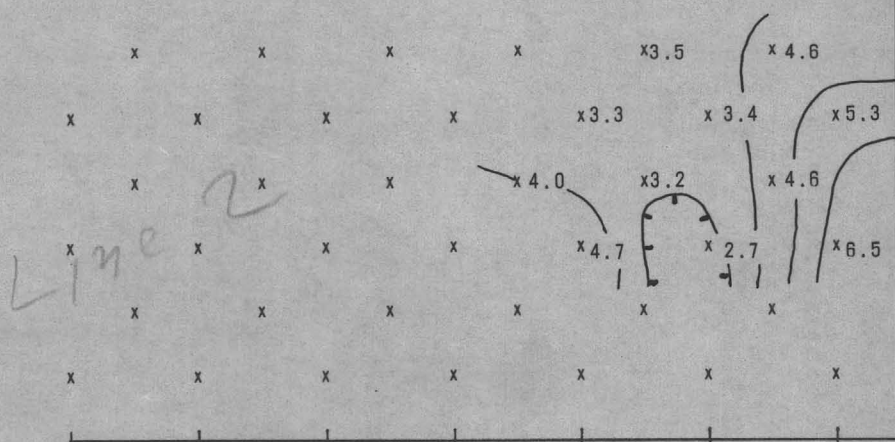
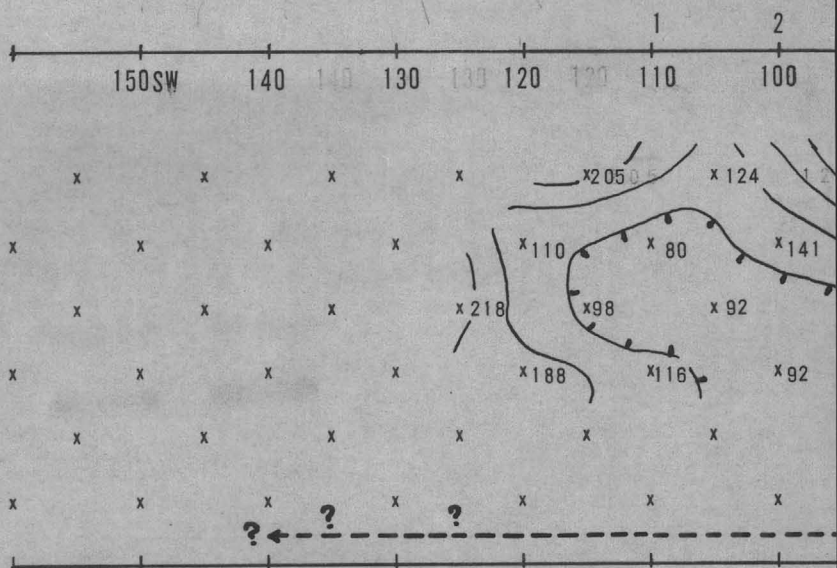
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30.8

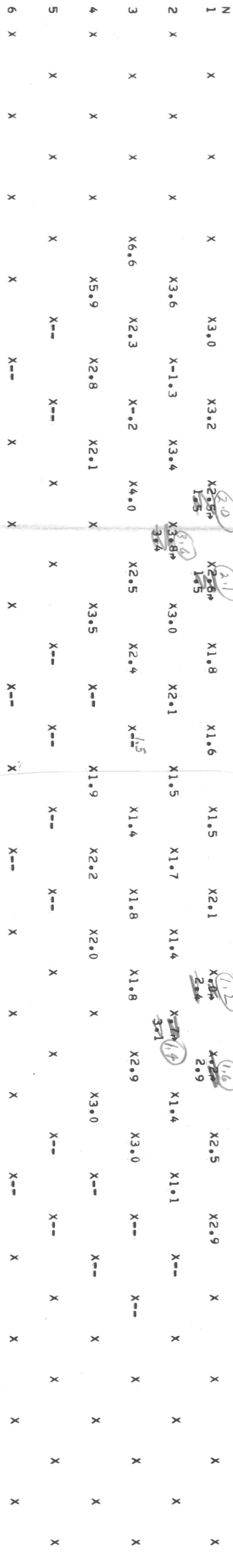
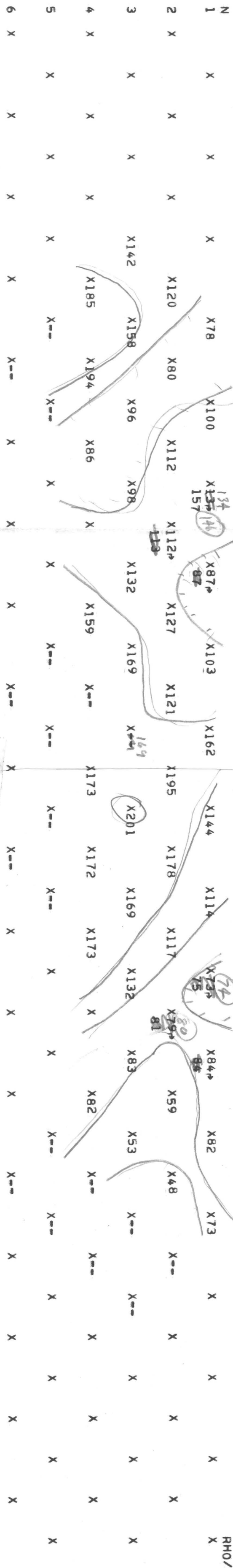
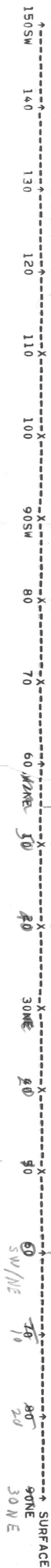
9.8

1	1	2	1	3	1	2	3	4	N	2	3	4	5	6		
110.4	106.7	19.49	141.5	18.64	8.511	88.86	13.80	5.142	3.192	DCA	0.000	0.000	0.000	0.000	0.000	207.0
106.0	103.0	18.50	135.0	17.70	7.990	85.50	13.20	4.850	2.950	AC1	0.000	0.000	0.000	0.000	0.000	203.0
106.0	103.0	18.50	135.0	17.70	8.000	85.50	13.20	4.900	2.950	AC2	0.000	0.000	0.000	0.000	0.000	203.0
106.0	103.0	18.50	135.0	17.70	7.995	85.50	13.20	4.875	2.950	ACA	0.000	0.000	0.000	0.000	0.000	203.0
64.00	61.84	45.19	82.03	43.23	49.34	51.51	32.00	29.81	37.01	RHO	*000.0*000.0*000.0*000.0*000.0*000.0	*000.0*000.0	*000.0*000.0	*000.0	*966	DC CAL
2.1	1.6	3.3	2.8	3.3	4.4	1.9	2.5	3.4	6.1	PFE	*000.0*000.0*000.0*000.0*000.0*000.0	*000.0*000.0	*000.0*000.0	*000.0	*981	AC CAL
33	25	73	34	76	89	37	79	115	165	MCF	*00000*00000*00000*00000*00000*00000*00000	*00000*00000	*00000*00000	*00000*00000	*00000	



Line 3





	150SW	140	130	120	110	100	90SW	80	70	60 W/NE	10	20	30NE	40	50	60	70	80	90NE	SURFACE	MCF
N																					
1	X	X	X	X38	X32	X190 ¹⁴	X30 ²⁴	X17	X10	X10	X18	X0 ¹⁶	X30 ¹⁸	X39	X	X	X	X	X		
2	X	X	X	X30	X-16	X30	X34 ²⁰	X24	X17	X8	X9	X12	X8 ²¹	X23	X22	X--	X	X	X		
3	X	X	X47	X15	X-2	X41	X19	X14	X-2	X7	X11	X13	X35	X56	X--	X--	X	X	X		
4	X	X	X	X32	X14	X24	X	X22	X--	X11	X13	X11	X	X37	X--	X--	X	X	X		
5	X	X	X	X--	X--	X	X	X--	X--	X--	X--	X	X	X--	X--	X	X	X	X		
6	X	X	X	X	X--	X	X	X	X--	X	X--	X	X	X	X--	X	X	X	X		

H { 624
 { 2129
F { 2094 }

JOB 444 LINE 1 SPREAD 2

LOOKING NW DATE Aug 12 A= 1000

CENTER -90.0 LABEL SW/SW FREQ. 3.0 - 0.1

COUPLING N/O



HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT
LINE 1

JOHN SOW

HALF SW SP. 2 DATE 8/13

P A G E

6

8/13

[illegible]



HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT
LINE 1

Johnson

HALF 2W SP. 2 DATE 9/13

PAGE

2

[illegible]



HEINRICHS GEOEXPLORATION CO.
I. P. SENDER NOTES

PROJECT 444

LINE 1 HALF SW SP. 2 DATE 8/13

PAGE

1

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	9-10	10-11	→	11-12	→	→	12-13	→	→	→
RANGE	200X30	200X30	200X30	166X30	200X30	200X30	200X30	166X30	200X30	300X30
VOLTAGE	220	440	220	490	440	220	460	490	440	350
CURRENT	6.0A	6.0A	6.0A	5.0A	6.0A	6.0A	6.0A	5.0A	6.0A	9.0A
SEND	1-2	2-3	3-4	1-2	2-3		Ca 1.2-3	Ca 1.2-3	Ca 1.3-4	Ca 1.4-2
RECEIVE	13-14	→	→	14-15	→		Ca 1.4-2			
RANGE	200X30	166X30	200X30	200X30	166.6X30			200X10	200X10	200X10
VOLTAGE	460	490	440	460	490			190	140	150
CURRENT	6.0A	5.0A	6.0A	6.0A	5.0A			2.0A	2.0A	2.0A

FREQUENCIES 3.0 0.1

SENDER NO. 6644-S

OPERATOR 19

RECEIVER NO.

OPERATOR

COMMENTS:

USE

HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Johnson 444
LINE 1 HALF NE SP. 2 DATE 8/13

[illegible]



HEINRICHS GEOEXPLORATION CO.
I. P. SENDER NOTES

PROJECT 444

LINE 2 HALF NE SP. 2 DATE 8/13

PAGE
3

SEND	1 2	2 3	1 2	3 4	2 3	1 2	4 5	2 4	2 3	1 2
RECEIVE	9 8	8 7	→	7 6	→	→	6 5			
RANGE	200X30	166X30	200X30	200X30	166X30	200X30	300X30	200X30	10X300	30X200
VOLTAGE	450	500	450	500	550	450	340	500	320	450
CURRENT	6.0	5.0A	6.0A	6.0A	5.0A	6.0A	9.00A	6.0A	3.0	6
SEND	3 4				CPA-530 PM			CA2	CA2	CA2
RECEIVE	6 5				2-3			3-4	2 3	4 5
RANGE	166X30				90X200			200X10	200X10	200X16
VOLTAGE	420				750			330	380	120
CURRENT	5.0				2.			2.0	2.0	2.0

FREQUENCIES 3 01

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS: Sender acting upon 3-4 (6-5) ↑
2 3 (6-5) use

6.000	5.000	6.000	5.000	6.000	6.000	6.000	5.000	6.000	9.000	I	6.000	5.000	6.000	6.000	6.000	5.000	5.000	2.000	2.000	
183	270	595	173	590	215	165	355	200	130	DC	620	276	210	280	165	208	LEFT			
178	275	580	174	575	195	160	335	198	138		630	276	198	310	158	208	SIDE			
183	270	595	173	590	216	165	355	202	132		625	274	205	280	165	208				
178	275	585	174	575	193	160	335	197	137		630	274	200	310	158	208				
		590		590	217		355	202	130		625	274	205	280	163					
		585		575	192		335	197	137		635	275	200	310	160					
		590			217			204	131		620	274	205		156					
		585			193			195	138		635	274	200		161					
					214			203	130		620	274	205		158					
					194			195	137		630	274	202		163					
					218			203	131		620	274	200		158					
					190			197	137		630	274	205		164					
					221			202	130		620	274	205		160					
					187			195	137		630	274	205		162					
					220			206	128			274	203		158					
					191			193	140			274	203		165					

1	2	3	4	5	6	7	8	9	10	PT.	11	12	13	14	15	16	17	18	
361	545	1175	347	1165	410	325	690	398	268	DC	1250	552	408		590	323			416
361	545	1175	347	1165	411	325	690	400	270	SUMS	1255	550	403		590	323			416
361	545	1180	347	1165	409	325	690	399	269		1255	548	405		590	323			416
		1175		1165	410		690	399	267		1255	548	405		590	321			
		1175		1165	409			399	267		1260	549	405			323			
		1175			409			401	268		1255		405			316			
					410			399	269		1255		405			317			
					407			398	268		1255		405			319			
					408			398	267		1250		407			321			
					412			398	268		1250		402			321			
					408			400	268		1250		405			322			
					411			399	267		1250		403			324			
					408			397	267		1250		403			322			
					407			401	265				403			320			
					411			399	268				401			323			

1	2	3	4	5	6	7	8	9	10	PT.	11	12	13	14	15	16	17	18	
0.0	0.0	-0.1	0.0	0.0	.2	0.0	0.0	-.3	.1	DC	-.2	.5	.9		0.0	.6			0.0
0.0	0.0	-0.1	0.0	0.0	.4	0.0	0.0	.3	.8	DEVS	.2	.1	.3		0.0	.6			0.0
0.0	0.0	.4	0.0	0.0	-.1	0.0	0.0	0.0	.5		.2	.2	.2		0.0	.6			0.0
		-0.1		0.0	.2			0.0	-.3		.2	.2	.2			.1			
		-0.1			-.1			0.0	-.3		.6	.1	.2			.6			
		-0.1			.2			.5	.1		.2	.1	.2			.6			
		-0.1			.2			0.0	.5		.2	.2	.2			.6			
		.2			-.6			-.3	.1		.2	.2	.2			.6			
		-.6			-.3			-.3	.1		.2	.2	.2			.6			
		-.7			-.3			-.3	.1		.2	.2	.2			.6			
		.4			.7			.3	.1		.2	.2	.2			.6			
		-.3			-.3			.3	.1		.2	.2	.2			.6			
		.4			.4			0.0	.3		.2	.2	.2			.6			
		-.3			-.3			-.5	-.3		.2	.2	.2			.6			
		-.6			-.6			.5	-1.0		.2	.2	.2			.6			
		.4			.4			0.0	.1		.2	.2	.2			.6			

1	2	3	4	5	6	7	8	9	10	PT.	11	12	13	14	15	16	17	18	
180.5	272.5	58.79	173.5	58.25	20.47	162.5	34.50	19.95	13.39	DCA	62.65	27.47	20.22	0.000	29.50	16.06	0.000	0.000	208.0

[illegible]

[illegible]

JOB 444 LINE 1 SPREAD 1

LOOKING NW DATE Aug 12 A= 1000

CENTER -30.0 LABEL SW / NE FREQ. 3.0 - 0.1

COUPLING ~~yes~~ NO



HEINRICHS GEOEXPLORATION CO. I.P. RECEIVER NOTES

PROJECT JOHNSON 444
LINE 1 HALF SW SP. 1 DATE 8/12

PAGE
3

SEND	4	5	3	4	4	5	2	3	3	4	4	5	1	2	2	3	3	4	4	5
RECEIVE	2	4	4	5			5	6					6	7						
RANGE	.3		.3		.1		.10		.1		.03		.3		.3		.1		.03	
DC 1	170		179		H80	470	275		725	725	205	202	246	247	108		405		204	198
DC 2	174		180		490	485	270		675	685	245	246	247	246	105		405		216	215
DC 3	170		180		H80	H80	275		730	710	206	210	245		108		405		195	204
DC 4	174		178		H85	490	270		680	700	250	243	247		105		405		214	212
DC 5			180		480		275		710	700	200	202	246		108				202	207
DC 6			180		485		270		700	700	257	256	247		105				213	212
DC 7					480				710	715	195	192	246						205	202
DC 8					490				690	685	254	261	246						214	212
DC AVG.																				
AC 1	166.		174.		46.5		265.		68.5		22.0		241.		104.		39.5		20.2	
AC 2	166.		174.		46.5		265.		69.0		22.0		241.		104.		39.5		20.2	
AC AVG.																				
S.P.	+12.1		-14.2		-		+15.7						+8.8							
AC NOISE	.0002				.0003															
POT RES.																				

+2000 ft
+2000 ft



HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT
LINE 1

JOHNSON 446

HALF SW SP. 1

DATE 5/12[illegible]



HEINRICHS GEOEXPLORATION CO.
I. P. SENDER NOTES

PROJECT 444

LINE 1 HALF SW SP. 1 DATE 8/10/69

PAGE

2

SEND	4-5	3-4	4-5	2-3	3-4	4-5	1-2	2-3	3-4	4-5
RECEIVE	3-4	4-5	→	5-6	→	→	6-7	→	→	→
RANGE	200x30	233.3x30	233.3x30	233.3x30	233.3x30	166.6x30	166.6x30	233.3x30	233.3x30	233.3x30
VOLTAGE	430	430	480	350	430	340	430	380	430	490
CURRENT	6.0A	7.0A	7.0A	7.0A	7.0A	5.0A	5.0A	7.0A	7.0A	7.0A
SEND	1-2	2-3	3-4	1-2	2-3		Cal	Also CAL 1-2 ↓		
RECEIVE	7-8	→	→	8-9	→		1-2	→		
RANGE	166.6x30	233.3x30	233.3x30	100x30	233.3x30		200x10	100x10		
VOLTAGE	430	360	430	250	400		340	170		
CURRENT	5.0A	7.0A	7.0A	3.0A	7.0A		2.0A	1.0A		

FREQUENCIES 3.0 0.1

SENDER NO. 6644-S

OPERATOR 19

RECEIVER NO.

OPERATOR

COMMENTS:





HEINRICH'S GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT
LINE 1

SHIRSON 444

LINE 1

HALF NE

SP. 1

DATE 8/12/69

[illegible]



HEINRICHS GEOEXPLORATION CO.
I. P. SENDER NOTES

PROJECT

444

LINE 1 HALF NE SP. 1 DATE 9/12/69

PAGE

1

SEND	1-2	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2
RECEIVE	3-2	2-1	→	1-0	→	0-1	→	→	→	→
RANGE	166.6x30	233.3x30	166.6x30	233.3x30	233.3x30	166.6x30	233.3x30	233.3x30	233.3x30	166.6x30
VOLTAGE	500	380	500	460	380	500	500	460	380	500
CURRENT	5.0 A	7.0 A	5.0 A	7.0 A	7.0 A	5.0 A	7.0 A	7.0 A	7.0 A	5.0 A
SEND	4-5	→	→	→	→	→	Cal	→	→	→
RECEIVE	→	→	→	→	→	→	4-5	→	→	→
RANGE	→	→	→	→	→	→	200x10	→	→	→
VOLTAGE	→	→	→	→	→	→	140	→	→	→
CURRENT	→	→	→	→	→	→	2.0 A	→	→	→

FREQUENCIES 3.0 0.1

SENDER NO. 6644-5

OPERATOR 19

RECEIVER NO.

OPERATOR

COMMENTS:

1. 6644-5

	6.000	7.000	7.000	7.000	7.000	5.000	5.000	7.000	7.000	7.000	7.000	5.000	7.000	7.000	7.000	3.000	7.000	7.000	2.000	2.000	
170	179	480	275	725	205	246	108	405	204	DC	845	435	176	165	220	205	LEFT				
174	180	490	270	675	245	247	105	405	216		820	540	230	185	195	206	SIDE				
170	180	480	275	730	206	245	108	405	195		850	435	180	162	220	205					
174	178	485	270	680	250	247	105	405	214		815	505	240	186	193	206					
	180	480	275	710	200	246	108		202		850	435	178	165	218						
	180	485	270	700	257	247	105		213		815	530	235	183	190						
		480		710	195	246			205		855	435	180	165	222						
		490		690	254	246			214		810	540	232	184	195						
		470		725	202	247			198		860	435	185	160	222						
		485		685	246	246			215		805	535	230	183	195						
		480		710	210				204		865	435	176	164	222						
		490		700	243				212		805	535	230	185	193						
		700		700	202				202		860		176	160	222						
		700		700	256				212		805		235	185	196						
		715		715	192				202		865		174	165	220						
		685			261				212		805		240	184	195						

	1	2	3	4	5	6	7	8	9	10	PT.	11	12	13	14	15	16	17	18
	344	359	970	545	1400	450	493	213	810	420	DC	1665	975	406		350	415		
	344	360	970	545	1405	451	492	213	810	411	SUMS	1670	975	410		347	415		411
	344	358	965	545	1410	456	492	213	810	409		1665	940	420		348	413		411
		358	965	545	1390	450	493	213		416		1665	940	418		351	411		
		360	965	545	1410	457	493	213		415		1665	965	413		348	408		
			965		1410	452	493			418		1670	965	415		348	412		
			970		1400	449	492			419		1665	975	412		349	417		
			960		1415	456	493			412		1670	975	417		344	417		
			955		1410	448	493			413		1665	970	415		343	417		
			965		1395	456				419		1670	970	406		347	417		
			970		1410	453				416		1670	970	406		349	415		
					1400	445				414		1665		406		345	415		
					1400	458				414		1665		411		345	418		
					1415	448				414		1670		409		350	416		
					1400	453				414		1670		414		349	415		
														416			415		
														411			415		

[illegible]

[illegible]

1	1	2	1	2	3	1	2	3	4	N	2	3	4	5	3	4	5	6
172.0	179.5	48.27	272.5	70.23	22.61	246.3	106.5	40.50	20.75	DCA	83.37	48.27	20.59	0.000	17.38	20.74	0.000	205.5
166.0	174.0	46.50	265.0	68.50	22.00	241.0	104.0	39.50	20.20	AC1	81.50	47.00	20.00	0.000	17.00	20.20	0.000	204.0
166.0	174.0	46.50	265.0	69.00	22.10	241.0	104.0	39.50	20.20	AC2	81.50	47.50	20.00	0.000	17.00	20.20	0.000	204.0
166.0	174.0	46.50	265.0	68.75	22.05	241.0	104.0	39.50	20.20	ACA	81.50	47.25	20.00	0.000	17.00	20.20	0.000	204.0
83.70	74.87	80.54	113.7	117.2	132.0	143.8	177.7	168.9	173.1	RHO	194.7	201.3	171.7	0.000	169.1	173.0	0.000	973 DC CAL
2.9	2.4	3.1	2.1	1.4	1.8	1.5	1.7	1.8	2.0	PFE	1.5	1.4	2.2	0.000	1.5	1.9	0.000	993 AC CAL
34	32	38	18	12	13	10	9	11	11	MCF	8	7	13	00000	9	11	00000	00000

CARD 13	POINT 14	176	235	174	240	176	235	173	240	172	236	174	240	\$	\$	MISSING AC READING
CARD 19	POINT 20				2.0									****	****	T00 HIGH PT. CNT., SET TO 18

[illegible]

1	2	3	4	5	6	7	8	9	10	PT.	11	12	13	14	15	16	17	18
254	410	690	399	630	290	359	590	255	1420	DC								419

254	410	695	399	735	290	359	590	259	1435	SUMS
254	411	690	399	735	290	359	590	260	1445	419
254	410	690	399	735	292	359	590	258	1440	
254	411	690	399	750	290	359	585	259	1400	
	410	695		750	286	360	585	257	1425	
	410	695		730	288		587	260	1460	
		695		730	288			262	1415	
		690			290			262	1400	
		695			289			261	1440	
		695			289			260	1470	
		690			289			259	1450	
		690			291			259	1450	
		690			292			260	1440	
		695			292			259	1430	

0.0	-.1	-.3	0.0	-13.1	.1	-.0	.3	-1.7	-1.0	0.0
0.0	-.1	.4	0.0	1.4	.1	-.0	.3	-.1	.0	0.0
0.0	.2	-.3	0.0	1.4	.1	-.0	.3	.3	.7	0.0
0.0	-.1	-.3	0.0	1.4	.8	-.0	.3	-.5	.4	
	.2	-.3		3.4	.1	-.0	-.5	-.1	-2.4	
	-.1	.4		.7	-1.3	.2	-.5	-.9	-.7	
	-.1	.4		.7	-.6	-.0	.3	.3	1.8	
		.4		.7	-.6			1.0	-1.4	
		.4		.7	.1			1.0	-2.4	
		.4			-.3			.6	.4	
		.4			-.3			.3	2.5	
		.3			-.3			-.1	1.1	
		-.3			.4			-.1	1.1	
		.4			.8			.3	.4	
		.4			.8			-.1	-.3	

1	1	2	1	2	3	1	2	3	4	N	2	3	4	5	3	4	5	6
127.0	205.1	34.62	199.5	36.25	14.49	179.6	29.41	12.97	7.173	DCA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	209.5
120.0	193.0	32.50	184.0	33.80	13.30	165.0	27.50	11.90	6.580	AC1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	198.0
120.0	194.0	32.50	184.0	33.80	13.30	165.0	27.50	11.90	6.580	AC2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	198.0
120.0	193.5	32.50	184.0	33.80	13.30	165.0	27.50	11.90	6.580	ACA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	198.0
72.74	83.93	79.31	81.62	59.32	82.98	73.47	48.13	53.05	82.18	RHO	*000.0*000.0*000.0*000.0*000.0*000.0*000.0*000.0							.955 DC CAL
.0	.2	.7	2.5	1.4	2.9	2.9	1.1	3.0	3.0	PFE	*000.0*000.0*000.0*000.0*000.0*000.0*000.0*000.0							.945 AC CAL
0	2	8	30	23	35	39	22	56	37	MCF	*00000*00000*00000*00000*00000*00000*00000*00000							

JOSEPH D. PEELER
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MELVIN D. WILSON
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ELVON MUSICK
1890-1968

LEROY A. GARRETT
1906-1963

MORTIMER A. KLINE
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MUSICK, PEELER & GARRETT

ATTORNEYS AT LAW

ONE WILSHIRE BOULEVARD

LOS ANGELES, CALIFORNIA 90017

TELEPHONE (213) 629-3322

CABLE "PEELGAR"

HEINRICH
GEOEX
GEOPHYSICAL ENGINEERS
TUCSON, ARIZONA



REC'D SEP 8 1969

BOX 5671 TUCSON, ARIZONA 85703

Phone: (AREA 602) 623-0578

August 29, 1969

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

Attn: Mr. Paul Head

RE: Heinrichs Service Contract --
Johnson Camp, Arizona

Gentlemen:

Enclosed for your files is a fully executed
copy of the subject Agreement.

Very truly yours,

Gerald G. Kelly
for MUSICK, PEELER & GARRETT

GGK:sr

Enclosure

File 999-49

CYPRUS MINES CORPORATION

523 WEST SIXTH STREET
LOS ANGELES, CALIFORNIA, 90014
TELEPHONE 629-5771

August 20, 1969

HEINRICH'S
GEOEX
GEOLOGICAL EXPLORATION
TUCSON, ARIZONA



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

REC'D AUG 25 1969

Attn: Mr. Paul A. Head

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

RE: Induced Polarization Survey -- Johnson
Camp, Cochise County, Arizona

Job #444-69

Gentlemen:

This letter sets forth our understanding of the terms and conditions under which HEINRICH'S GEOEXPLORATION COMPANY (hereinafter called "Contractor") agrees to perform an induced polarization survey for CYPRUS MINES CORPORATION (hereinafter called "Company") in the vicinity of Johnson Camp, Cochise County, Arizona commencing on or about August 11, 1969.

1. Contractor agrees to furnish induced polarization equipment and a three-man field crew, consisting of Mr. Tony Ivan Smith and two technicians, to operate said equipment, using conventional field procedures, over terrain to be specifically designated by officials of Company. Services of other personnel of Contractor's technical staff will be made available as mutually agreed upon by the parties should the need for such services arise. Company will not be required to furnish any field assistants.

2. Company agrees to pay Contractor for the services of the three-man field crew and for the use of the equipment furnished by Contractor, at the rate of \$350.00 per ten-hour day and at the rate of \$42.50 per hour for field services rendered in excess of ten hours each day. Said charges shall include the cost of the final report to be submitted by Contractor. Charges for the services of personnel in addition to the three-man field crew and for equipment beyond that specified in paragraph 1. above shall be at such rates as the parties may agree upon when the necessity for such additional personnel or equipment arises. No mobilization charge shall be made. Company further agrees to pay standby charges at the rate of \$125.00 per day for delays caused by inclement weather and for delays requested by Company.

Heinrichs Geoeexploration Company

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In the event that Contractor's equipment should be mechanically inoperable for a period exceeding one hour on any given day, Contractor may at his option either make up the time that is thereby lost or forfeit payment for the time that is thereby lost.

3. In addition to the services and charges described above, Contractor agrees to provide electronic data reduction, with electromagnetic coupling corrections, and Company agrees to pay for said services at the rate of \$10.00 per line mile.

4. Billings by Contractor may be submitted periodically and a final statement shall be submitted upon completion of the final report. Payments shall be due upon receipt of all billings.

5. Contractor represents that through the use of conventional field procedures production will be at the approximate rate of one to two line miles per day.

6. Any costs incurred by Contractor relating to property permits, brushing or liability for trespass shall be reimbursed by Company.

7. Contractor shall maintain strict security over all knowledge and information acquired or developed by it during the performance of this agreement. Contractor shall not divulge any such knowledge and information directly or indirectly to any person without prior written consent of Company.

8. Contractor shall at all times be acting as an independent contractor and shall in no way be considered an employee or agent of Company.

9. Company shall have the right to terminate this Agreement by giving ten (10) days written notice of such termination to the Contractor field crew and the Tucson office. Upon receipt of such notice of termination, Contractor shall immediately cause all work to stop and shall remove all equipment and personnel from the project as soon as possible.

10. All certificates, notices, affidavits or other documents prepared by Contractor in connection with the services performed pursuant to this Agreement shall be approved by Company prior to the delivery of such documents to any governmental agency or other third party.

11. Any notices permitted or required to be given hereunder shall be deemed to have been received if mailed by registered mail, postage prepaid and addressed as follows:

If to Company:

Cyprus Mines Corporation
523 West Sixth Street
Los Angeles, California 90014

If to Contractor:

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

12. Contractor shall be compensated for services rendered and reimbursed for expenses incurred in accordance with the rates set forth in this Agreement. No costs or expenses in excess of or in addition to those set forth in this Agreement shall be incurred by Contractor without the prior written consent of Company.

13. Contractor shall perform the services set forth in this Agreement pursuant to the direction and control of Company.

14. Contractor agrees to indemnify and save harmless Company against any and all loss and expense, including attorney's fees and other legal expenses, by reason of liability imposed or claimed to be imposed by law upon Company for damage because of bodily injury, including death at any time resulting therefrom, or on account of damage to property sustained by any person or persons arising out of or in consequence of the performance of the work, whether or not such bodily injuries or damage to property are due to or claimed to be due to any negligence or acts, including violation of any duty imposed by a statute, ordinance or regulation, of Contractor, the subcontractors, the employees or agents of any of them.

15. Contractor will obtain and continue in force, during the term of this Agreement, at its own expense, all insurance specified below. Contractor will not commence work nor allow any subcontractor to commence work until all insurance has been approved and accepted by Company.

The insurance to be obtained and continued in force by Contractor is the following:

(a) Workmen's Compensation and Occupational

Disease disability insurance as required by the laws of the state wherein the work is to be performed.

(b) Employer's liability insurance, unless the laws of the state in which the work is to be performed preclude an independent right of action by an employee against an employer under common law.

(c) Comprehensive Automobile Liability insurance with Bodily Injury limits of no less than \$50,000 each person and \$100,000 each accident and Property Damage with a limit of no less than \$25,000 each accident.

(d) Comprehensive General Liability and Property Damage insurance including Operation, Protective and Contractual Liability coverages with Bodily Injury limits of no less than \$50,000 each person and \$100,000 each occurrence; and Property Damage limits of no less than \$25,000 each occurrence, and \$100,000 aggregate operations, \$100,000 aggregate protective, \$100,000 aggregate contractual.

Contractor shall furnish Company with certificates of insurance which shall include the following statements:

(aa) At least ten (10) days prior to effective date of any material change or cancellation, written notice thereof will be sent by registered mail to Cyprus Mines Corporation, 523 West Sixth Street, Los Angeles, California 90014.

(bb) Contractual Liability insurance covers the liability of the insured assumed under the indemnity and insurance provisions of the Agreement entered into with Cyprus Mines Corporation under date of August 20, 1969.

If this letter correctly sets forth the terms and conditions of our Agreement, please indicate your acceptance by signing and returning this copy of the letter to us.

Very truly yours,
CYPRUS MINES CORPORATION

By Kenneth Fisher

Title: Senior Vice President

Heinrichs Geoexploration Company

-5-

ACCEPTED BY:

HEINRICHS GEOEXPLORATION COMPANY

E. Grover Heinrichs

By: 

Title: Vice Pres.

Dated: 8-25-69