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I. P. SENDER NOTES

JOB No. 1633 AREA Ruby-(Idaho)

LINE 0, HALF NW, SP. 1, DATE 5/5/83

PAGE 1

HEINRICHS GEOEX

SEND	Cal	~~5-6~~	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	1-2	0-2NW	→	2-4NW	→	→	4-6NW	→	→	→
RANGE 100	X10	200X10	200X10	200X10	200X10	200X10	200X10	200X10	200X10	200X10
VOLTAGE	120	160	170	240	160	170	440	240	160	170
CURRENT	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW	→	→	→	→	8-10NW	→	→	→	→
RANGE	200X10	→	→	→	→	→	→	→	→	→
VOLTAGE	360	440	240	160	170	250	360	440	240	160-170
CURRENT	2.0	2.0	2.0	2.0	2.0					

FREQUENCIES 0.3-3.0

SENDER No. 9662-S | POWER UNIT ID

OPERATOR HIRT

RECEIVER No. | HOURS RUN

OPERATOR ANDERS

COMMENTS:

Cal, -3.0-0.3-3.0

" 1.0-0.1-1.0

Send 6-7, rec. 4-6NW 170V 0.1-1.0 HZ 2.0a

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 0, HALF NW SE, SP. 1, DATE 5-5-83

PAGE 2

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	8-10NW	10-12NW	→	→	→	→	12-14NW	→	→	→
RANGE	200x10	→	→	→	→	→	→	→	→	→
VOLTAGE	170	250	360	440	240	160	250	360	430	240
CURRENT	2.0	→	→	→	→	→	→	→	→	→
SEND	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	1-2	2-3
RECEIVE	0-2SE	2-4SE	4-6SE	6-8SE	→	→	→	→	8-10SE	→
RANGE	200x10	→	→	→	→	→	→	→	→	→
VOLTAGE	245	425	240	245	355	420	235	160	245	355
CURRENT	2.0	→	→	→	→	→	→	→	→	→

FREQUENCIES 0.3-3.0 Hz

SENDER No. 9662-S POWER UNIT ID

OPERATOR HIRT

RECEIVER No. HOURS RUN

OPERATOR ANDERS

COMMENTS: Send 3-4 Rec. 10-12 NW 2.25a 3Hz 480v (amps. deviated at 2.37a)
Send ~~3-4~~ 5-6 Rec. 10-12 NW 2.0a 0.1Hz 160v

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 0, HALF SE, SP. 1, DATE 5-5-83

PAGE 3

HEINRICHS GEOEX

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	3-4
RECEIVE	8-10SE	→	→	→	10-12SE	→	→	→	→	12-14SE
RANGE	200X10	→	→	→	→	→	→	→	→	→
VOLTAGE	420	235	160	170	355	420	235	160	170	420
CURRENT	2.0	→	→	→	→	→	→	→	→	→
SEND	4-5	5-6	6-7	Cal						
RECEIVE	12-14SE	→	→	1-2						
RANGE	200X10	→	→	100X10						
VOLTAGE	235	160	170	110						
CURRENT	2.0	→	→	1.0						

FREQUENCIES 0.3-3 Hz

SENDER No. 9662-5 POWER UNIT ID

OPERATOR HIRT

RECEIVER No. HOURS RUN

OPERATOR ANDERS

COMMENTS:

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 4SW, HALF NW, SP. 1, DATE 5-6-83

PAGE 1

HEINRICHS GEOEX

SEND	Cal. 1-2	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	~~0-2NW~~	0-2NW	—	2-4NW	—	—	4-6NW	—	—	—
RANGE	100X10	200X10	—	—	—	—	—	—	—	—
VOLTAGE	355	270	465	190	265	460	120	190	265	460
CURRENT	1.0	2.0	—	—	—	—	—	—	—	—
SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW	—	—	—	—	8-10NW	—	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	200	120	185	260	460	660	200	120	185	260
CURRENT	2.0	—	—	—	—	—	—	—	—	—

FREQUENCIES 0.3-3.0 Hz

SENDER No. 9662-S | POWER UNIT ID

OPERATOR HIRT

RECEIVER No. | HOURS RUN

OPERATOR ANDERS

COMMENTS: Used 4B for sending on all electrodes except 1-2 and 6-7 where 2B was necessary to maintain proper V+I

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 45W, HALF NW SE, SP. 1, DATE May 6, 1983, May 9, 1983

PAGE 2

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5*
RECEIVE	8-10NW	10-12NW	—	—	—	—	12-14NW	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	460	660	200	125	185	260	660	200	125	185
CURRENT	2.0	—	—	—	—	—	—	—	—	—
SEND	cal. 1-2	1-2	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6
RECEIVE		cal	0-2SE	2-4SE	4-6SE	6-8SE	—	—	—	—
RANGE	100X10	100X10	200X10	—	—	—				
VOLTAGE	340	335	660	120	180	660	200	120	180	280
CURRENT	1.0	1.0	2.0	—	—	—	—	—	—	—

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-S

POWER UNIT ID

OPERATOR HIRT

RECEIVER No.

HOURS RUN

OPERATOR ANDERS

COMMENTS:

* also used 0.1-1.0 Hz; got 185 V

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 4SW, HALF SE, SP. 1, DATE May 9, 1983

PAGE 3

HEINRICHS GEOEX

SEND	1-2	2-3	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6
RECEIVE	8-10SE	—	—	—	—	—	10-12SE	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	655	200	120	180	280	460	200	120	180	280
CURRENT	2.0	—	—	—	—	—	—	—	—	—
SEND	6-7	3-4	4-5	5-6	6-7	1-2				
RECEIVE	—	12-14SE	—	—	—	cal				
RANGE	—	—	—	—	—	100X10				
VOLTAGE	460	120	180	280	460	340				
CURRENT	—	—	—	—	—	1.0				

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-5 POWER UNIT ID

OPERATOR HIRT

RECEIVER No. HOURS RUN

OPERATOR

COMMENTS:

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 4NE, HALF NW, SP. 1, DATE May 10, 1983

PAGE 1

HEINRICHS GEOEX

SEND	1-2	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	cal	0-2NW	—	2-4NW	—	—	4-6NW	—	—	—
RANGE	100X10	200X10	—	—	—	—	—	—	—	—
VOLTAGE	210	210	660	330	210	660	465	330	210	660
CURRENT	1.0	2.0	—	—	—	—	—	—	—	—
SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW	—	—	—	—	8-10NW	—	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	405	465	330	205	660	400	405	460	325	205
CURRENT	2.0	—	—	—	—	—	—	—	—	—

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-S POWER UNIT ID

OPERATOR HIRT

RECEIVER No. HOURS RUN

OPERATOR

COMMENTS: Sender settings on 4B for sending on all dipoles except 3-4, 6-7 where I used 2B for proper Ac voltage + DC amps.

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 4NE, HALF NW SE, SP. 1, DATE May 10, 1983

PAGE 2

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	8-10NW	10-12NW	—	—	—	—	12-14NW	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	660	400	405	460	325	205	400	405	460	325
CURRENT	2.0	—	—	—	—	—	—	—	—	—
SEND	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	1-2	2-3*
RECEIVE	0-2SE	2-4SE	4-6SE	6-8SE	—	—	—	—	8-10SE	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	400	460	320	400	400	460	320	200	400	400
CURRENT	2.0	—	—	—	—	—	—	—	—	—

FREQUENCIES 0.3-3 Hz

SENDER No. 9662-S POWER UNIT ID

OPERATOR HIRT

RECEIVER No. HOURS RUN

OPERATOR

COMMENTS:

* Had to use 2B

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz.- Idaho Mine

LINE 4NE, HALF SE, SP. 1, DATE May 10, 1983

PAGE 3

HEINRICHS GEOEX

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	4-5
RECEIVE	8-10SE	—	—	—	10-12SE	—	—	—	—	12-14SE
RANGE	200X10	—	—	—	—	—	—	—	100X10	200X10
VOLTAGE	460	320	200	640	400	455	320	200	325	320
CURRENT	2.0	—	—	—	—	—	—	—	1.0	2.0
SEND	3-4	4-5	5-6	6-7	1-2					
RECEIVE	—	—	—	—	C91					
RANGE	200X10	—	—	—	100X10					
VOLTAGE	450	320	200	635	200					
CURRENT	2.0	—	—	—	1.0					

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-5 POWER UNIT ID

OPERATOR HIRT

RECEIVER No. HOURS RUN

OPERATOR

COMMENTS:

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby-(Idaho)

LINE 0, HALF NW, SP. 1, DATE 5/5/83

PAGE 1

HEINRICHS GEOEX

SEND	Cal	5-10	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	1-2	0-2NW	→	2-4NW	→	→	4-6NW	→	→	→
RANGE 100	x10	200x10	200x10	200x10	200x10	200x10	200x10	200x10	200x10	200x10
VOLTAGE	120	160	170	240	160	170	440	240	160	170
CURRENT	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW	→	→	→	→	8-10NW	→	→	→	→
RANGE	200x10	→	→	→	→	→	→	→	→	→
VOLTAGE	360	440	240	160	170	250	360	440	240	160
CURRENT	2.0	2.0	2.0	2.0	2.0					

FREQUENCIES 0.3-3.0

SENDER No. 9662-S | POWER UNIT ID

OPERATOR HIRT

RECEIVER No. | HOURS RUN

OPERATOR ANDERS

COMMENTS:

Cal, 3.0-0, 3-3.0

" 1.0-0, 1-1.0

Send 6-7, rec. 4-6NW 170V 0.1-1.0 2.0

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 0, HALF NW SE, SP. 1, DATE 5-5-83

PAGE 2

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	8-10NW	10-12NW	→	→	→	→	12-14NW	→	→	→
RANGE	200x10	→	→	→	→	→	→	→	→	→
VOLTAGE	170	250	360	440	240	160	250	360	430	240
CURRENT	2.0									
SEND	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	1-2	2-3
RECEIVE	0-2SE	2-4SE	4-6SE	6-8SE	→	→	→	→	8-10SE	→
RANGE	200x10	→	→	→	→	→	→	→	→	→
VOLTAGE	245	425	240	245	355	420	235	160	245	355
CURRENT	2.0									

FREQUENCIES 0.3-3.0 HZ

SENDER No. 9662-S	POWER UNIT ID
OPERATOR HIRT	
RECEIVER No.	HOURS RUN
OPERATOR ANDERS	

COMMENTS: Send 3-4 Rec. 10-12NW 2.25a 3HZ 480V (amps. deviated at 2.37a)
Send ~~3-4~~ 5-6 Rec. 10-12NW 2.0a 0.1HZ 160V

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 0, HALF SE, SP. 1, DATE 5-5-83

PAGE 3

HEINRICHS GEOEX

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	3-4
RECEIVE	8-10SE	→	→	→	10-12SE	→	→	→	→	12-14SE
RANGE	200X10	→	→	→	→	→	→	→	→	→
VOLTAGE	420	235	160	170	355	420	235	160	170	420
CURRENT	2.0	→	→	→	→	→	→	→	→	→
SEND	4-5	5-6	6-7	Cal						
RECEIVE	12-14SE	→	→	1-2						
RANGE	200X10	→	→	100X10						
VOLTAGE	235	160	170	110						
CURRENT	2.0	→	→	1.0						

FREQUENCIES 0.3-3 Hz

SENDER No. 9662-S

POWER UNIT ID

OPERATOR HIRT

RECEIVER No.

HOURS RUN

OPERATOR ANDERS

COMMENTS:

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 4SW, HALF NW, SP. 1, DATE 5-6-83

PAGE 1

HEINRICHS GEOEX

SEND	Cal. 1-2	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	~~0-2NW~~	0-2NW	—	2-4NW	—	—	4-6NW	—	—	—
RANGE	100X10	200X10	—	—	—	—	—	—	—	—
VOLTAGE	355	270	465	190	265	460	120	190	265	460
CURRENT	1.0	2.0	—	—	—	—	—	—	—	—
SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW	—	—	—	—	8-10NW	—	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	200	120	185	260	460	660	200	120	185	260
CURRENT	2.0	—	—	—	—	—	—	—	—	—

FREQUENCIES 0.3-3.0 Hz

SENDER No. 9662-S | POWER UNIT ID

OPERATOR HIRT

RECEIVER No. | HOURS RUN

OPERATOR ANDERS

COMMENTS: Used 4B for sending on all electrodes except 1-2 and 6-7 where 2B was necessary to maintain proper V+I

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 45W, HALF NW SE, SP. 1, DATE May 6, 1983, May 9, 1983

PAGE 2

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5*
RECEIVE	8-10NW	10-12NW	—	—	—	—	12-14NW	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	460	660	200	125	185	260	660	200	125	185
CURRENT	2.0	—	—	—	—	—	—	—	—	—
SEND	cal. 1-2	1-2	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6
RECEIVE		cal 1983	0-2SE	2-4SE	4-6SE	6-8SE	—	—	—	—
RANGE	100X10	100X10	200X10	—	—	—				
VOLTAGE	340	335	660	120	180	660	200	120	180	280
CURRENT	1.0	1.0	2.0	—	—	—	—	—	—	—

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-S POWER UNIT ID

OPERATOR HIRT

RECEIVER No. HOURS RUN

OPERATOR ANDERS

COMMENTS:

* also used 0.1-1.0 Hz; got 185 V

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 4SW, HALF SE, SP. 1, DATE May 9, 1983

PAGE 3

HEINRICHS GEOEX

SEND	1-2	2-3	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6
RECEIVE	8-10SE	—	—	—	—	—	10-12SE	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	655	200	120	180	280	460	200	120	180	280
CURRENT	2.0	—	—	—	—	—	—	—	—	—
SEND	6-7	3-4	4-5	5-6	6-7	1-2				
RECEIVE	—	12-14SE	—	—	—	CGI				
RANGE	—	—	—	—	—	100X10				
VOLTAGE	460	120	180	280	460	340				
CURRENT	—	—	—	—	—	1.0				

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-5 POWER UNIT ID

OPERATOR HIRT

RECEIVER No. HOURS RUN

OPERATOR

COMMENTS:

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 4NE, HALF NW, SP. 1, DATE May 10, 1983

PAGE 1

HEINRICHS GEOEX

SEND	1-2	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	cal	0-2NW	—	2-4NW	—	—	4-6NW	—	—	—
RANGE	100X10	200X10	—	—	—	—	—	—	—	—
VOLTAGE	210	210	660	330	210	660	465	330	210	660
CURRENT	1.0	2.0	—	—	—	—	—	—	—	—
SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW	—	—	—	—	8-10NW	—	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	405	465	330	205	660	400	405	460	325	205
CURRENT	2.0	—	—	—	—	—	—	—	—	—

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-5 POWER UNIT ID

OPERATOR HIRT

RECEIVER No. HOURS RUN

OPERATOR

COMMENTS: Sender settings on 4B for sending on all dipoles except 3-4, 6-7 where I used 2B for proper AC voltage + DC amps.

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz. - Idaho Mine

LINE 4NE, HALF NW SE, SP. 1, DATE May 10, 1983

PAGE 2

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	8-10NW	10-12NW	—	—	—	—	12-14NW	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	660	400	405	460	325	205	400	405	460	325
CURRENT	2.0	—	—	—	—	—	—	—	—	—
SEND	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	1-2	2-3*
RECEIVE	0-2SE	2-4SE	4-6SE	6-8SE	—	—	—	—	8-10SE	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	400	460	320	400	400	460	320	200	400	400
CURRENT	2.0	—	—	—	—	—	—	—	—	—

FREQUENCIES 0.3-3 Hz

SENDER No. 9662-S	POWER UNIT ID
OPERATOR HIRT	
RECEIVER No.	HOURS RUN
OPERATOR	

COMMENTS:

* Had to use 2B

I. P. SENDER NOTES

JOB No. 1633 AREA Ruby, Ariz.- Idaho Mine

LINE 4NE, HALF SE, SP. 1, DATE May 10, 1983

PAGE 3

HEINRICHS GEOEX

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	4-5
RECEIVE	8-10SE	—	—	—	10-12SE	—	—	—	—	12-14SE
RANGE	200X10	—	—	—	—	—	—	—	100X10	200X10
VOLTAGE	460	320	200	640	400	455	320	200	325	320
CURRENT	2.0	—	—	—	—	—	—	—	1.0	2.0
SEND	3-4	4-5	5-6	6-7	1-2					
RECEIVE	—	—	—	—	C91					
RANGE	200X10	—	—	—	100X10					
VOLTAGE	450	320	200	635	200					
CURRENT	2.0	—	—	—	1.0					

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-5 POWER UNIT ID

OPERATOR HIRT

RECEIVER No. HOURS RUN

OPERATOR

COMMENTS:

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 4SW, HALF NW, SP. 1, a = 200, BEARING N 30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-6-83

PAGE 1

HEINRICHS GEOEX

SEND	CAI	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	0-2NW	0-2NW	—	2-4NW	—	—	4-6NW			
MULTIPLIER	1.0	10	1.0	10	1.0	1.0	10	1.0	1.0	0.1
PFE	0.0	+0.7	+1.1	+0.5	+0.7	+0.7	+0.5	+0.8	0.6	+0.7
CUR. (AMPS)	1.0	2.0					2.0			
POINT No.										
SEP. (n)		1	2	1	2	3	1	2	3	4
H. F. MV	96.9	177	65.5	204	115.4	23.5	177	36.5	13.5	2.68
DRIFT	1mv	0	1mv	0	0	0	1mv	0	0	0
1.0 PFE K_n/1000										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	53.1	53.1	78.6	61.2	54.5	70.5	53.1	43.6	41.0	46.7
DRIFT MCF	13.2	13.2	14.0	8.2	12.8	9.9	9.4	18.3	14.7	15
S. P.		-1.3	+73.2				-0.1			
NOISE										
POT RES.		(ok)								
CULT & CMTS							wire Spick ~ 3.1 Ex			

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby-Idaho

LINE 11SW, HALF NW, SP. 1, a = 300, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-6-83

PAGE 2

HEINRICHS GEOEX

SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW	→	→	→	→	8-10NW	→	→	→	→
MULTIPLIER	10	10	1.0	1.0	0.1	10	1.0	1.0	0.1	0.1
PFE	+0.5	+0.9	1.0	1.0	1.0	+0.9	.09	1.1	1.0	1.0
CUR. (AMPS)	2.0									
POINT NO.										
SEP. (n)	1	2	3	4	5	1	2	3	4	5
H. F. MV	550	127	38.5	16.7	10.8	193	590	229	9.70	5.03
DRIFT	0	low	0	0	0	low	0	0	0	0
1.0 PFE K_n/1000										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_C										
3.0 MV $\rho/2\pi$	165	152	110	100	111	58	71	84	58	57.9
DRIFT MCF	3.0	5.9	9.1	10	9	15.5	12.7	13.1	17.7	18.9
S. P.	+3.0					+10.5				
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby

LINE 4NW, HALF NW, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-6-83

PAGE 3

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	8-10NW	10-12NW					12-14NW			
MULTIPLIER	0.1	1.0	1.0	1.0	0.1	0.1	1.0	0.1	0.1	0.1
PFE	1.1	0.7	0.4	0.9	0.8	0.9	0.8	0.6	0.8	0.8
CUR. (AMPS)										
POINT NO.										
SEP. (n)	6	2	3	4	5	6	3	4	5	6
H. F. MV	3.47	21.6	21.4	13.5	5.37	3.16	15.0	9.79	7.15	3.17
DRIFT	0	0	0	0	0	0	0	0	0	0
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	58.3	49.9	64.2	81	56.9	53.1	45	58.7	75.1	92.3
DRIFT MCF	10.9	14.0	6.7	11.1	14.2	17	17.8	10.2	10.7	15.0
S. P.		+32.4					-7.9			
NOISE										
POT RES.										
CULT & CMTS										

CAL 1.0 96.8 mv, PFE = 0 dr. PF = 0

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby

LINE 4SW, HALF SE, SR 1, a = 20', BEARING N 30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-9-83

PAGE 4

HEINRICHS GEOEX

SEND		1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	1-2	2-3
RECEIVE		0-2SE	2-4SE	4-6SE	6-8SE	—	—	—	—	8-10SE	—
MULTIPLIER		1.0	10	10	0.1	1.0	1.0	1.0	10	0.1	0.1
PFE		0.9	0.8	0.7	0.8	0.8	0.9	0.9	0.9	1.3	0.7
CUR. (AMPS)		2	—	—	—	2	2	2	2	2	2
POINT NO.											
SEP. (n)		2	1	1	5	4	3	2	1	6	5
H. F. MV		34.2	170	297	581	13.0	24.9	53.0	159	3.07	6.61
DRIFT		1mv	0	0	0	0	0	0	0	1mv	0
1.0 PFE	K_n/1000										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	41.0	51	89.1	61.0	78	74.7	63.6	47.7	51.6	66.9
DRIFT	MCF	21.9	15.7	7.9	13.1	10.2	12.0	14.2	18.9	25.2	10.1
S. P.		-9.5	+9.7	-2.5	-6.4					-16.7	
NOISE										1.3mv	
POT RES.			wet on ground		good					OK	
CULT & CMTS			at N 35E		road - 5SW						

CA/ 97.6 mv, PEF = 0, drift = 0

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby

LINE 4SW, HALF SE, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-9-83

PAGE 5

HEINRICHS GEOEX

SEND		3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	2-4
RECEIVE		8-10SS	—	—	—	10-12SS	—	—	—	—	12-14SS
MULTIPLIER		1.0	1.0	1.0	10	0.1	0.1	0.1	1.0	1.0	1.1
PFE		0.9	0.9	0.9	0.8	0.7	0.7	0.6	1.0	1.0	0.1
CUR. (AMPS)		2	2	2	2	2	2	2	2	2	
POINT NO.											
SEP. (n)		4	3	2	1	6	5	4	3	2	6
H. F. MV		11.9	19.9	40.2	268	3.58	5.98	8.81	16.3	71.0	6.60
DRIFT		0	0	0	0	0	1mv	1mv	0	0	1mv
1.0 PFE	K_n/1000										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_C										
3.0 MV	$\rho/2\pi$	1.4	59.7	48.3	80.1	60.1	62.8	53.2	48.9	85.6	110.1
DRIFT	MCF	12.6	15.1	18.7	10.0	11.6	11.1	11.3	20.4	11.7	9.9
S. P.						+3.7					-0.6
NOISE						±3mv		±5mv			
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby - Idaho

LINE 4SW, HALF SP, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 6, DATE 5-9-83

PAGE 6

HEINRICHS GEOEX

SEND		4-5	5-6	6-7	CA						
RECEIVE		12-14 SP	—	—							
MULTIPLIER		0.1	1.0	1.0	1.0						
PFE		0.9	1.2	1.1	0						
CUR. (AMPS)		2	2	2							
POINT NO.											
SEP. (n)		5	4	3							
H. F. MV		9.0	15.5	53.4	97.2						
DRIFT		0	0	0	0						
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	14.5	93	160							
DRIFT	MCF	9.5	12.9	6.9							
S. P.											
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby - Idaho

LINE 4 NR, HALF NW, SP. 1, a = 200, BEARING N30W

SENDER STA. 258 = ELECTRODE NO. 5, DATE ~~N10W~~ 5-10-63

PAGE 1

HEINRICHS GEOEX

SEND	CAL	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE		0-2NW	—	2-4NW	—	—	4-6NW	—	—	—
MULTIPLIER	1.0	10	1.0	10	1.0	1.0	10	1.0	1.0	0.1
PFE	0.1	1.0	1.6	1.6	0.9	1.1	1.3	1.3	0.8	1.9
CUR. (AMPS)		2								
POINT NO.										
SEP. (n)		1	2	1	2	3	1	2	3	4
H. F. MV	97.7	186	47.4	570	58.4	2.2	239	250	13.9	8.9
DRIFT		1NW	0	0	0	0	0	0	1.6	
1.0 PFE K_n/1000										
0.3 PFE P_{CAL}										
0.1 PFE PFE_c										
3.0 MV $P/2\pi$		55.8	56.0	171	70.1	86.6	71.7	9.0	41.7	52.7
DRIFT MCF		17.9	28.1	9.4	12.8	13.5	18.1	14.4	19.2	26.5
S. P.		-33.6		+11.7			-1.7			
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Roby - Idaho

LINE HNE, HALF NW, SR. 1, a = 200, BEARING N30W

SENDER STA. _____ = ELECTRODE NO. _____, DATE 5-10-83

PAGE 2

HEINRICHS GEOEX

SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW					8-10NW				
MULTIPLIER	10	1.0	1.0	0.1	0.1	10	1.0	1.0	1.0	0.1
PFE	1.2	1.2	0.9	0.5	0.9	0.1	0.8	1.1	0.7	0.5
CUR. (AMPS)	2									2
POINT NO.										
SEP. (n)	1	2	3	4	5	1	2	3	4	5
H. F. MV	60.8	99.1	40.9	9.20	7.21	31.7	82.6	26.2	14.8	4.2
DRIFT	0	0	0	0	0	0	0	0	0	0
1.0 PFE K_n/1000										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	182	113	123	55.6	25.7	65.1	105	23.6	88.8	44.1
DRIFT MCF	6.6	10.6	7.3	9.0	11.9	13.8	7.6	14	7.9	11.3
S. P.	+9.0					+4.5				
NOISE										
POT RES.										
CULT & CMTS	Fence at 690'									

I. P. RECEIVER NOTES, JOB No. 1632, AREA Ruby - Idaho

LINE 4NE, HALF NW, SR. 1, a = 200, BEARING N30W

SENDER STA. _____ = ELECTRODE No. _____, DATE 5-10-83

HEINRICHS GEOEX

PAGE 3

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	8-10 NW	10-12NW					12-14NW			
MULTIPLIER	0.1	1.0	1.0	1.0	0.1	0.1	1.0	1.0	1.0	0.1
PFE	1.0	1.0	0.7	0.9	0.6	0.5	1.3	1.1	1.3	1.0
CUR. (AMPS)										
POINT No.										
SEP. (n)	6	2	3	4	5	6	3	4	5	6
H. F. MV	3.96	77.4	49.5	17.8	10.90	3.44	44.2	33.1	12.8	8.26
DRIFT	0	low	0	0	0	0	low	0	0	0
1.0 PFE K_n/1000										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	66.5	92.9	149	107	118	57.2	133	199	134	129
DRIFT MCF	15.0	10.8	4.7	8.4	5.2	8.7	9.8	5.5	9.7	7.9
S. P.		-4.9					+14.8			
NOISE										
POT RES.		(ok)								
CULT & CMTS										

WIRE ON GROUND AT ~ 1250

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 4NE, HALF SE, SP. 1, a = 200, BEARING N30W

SENDER STA. _____ = ELECTRODE No. _____, DATE 5-10-83

PAGE 4

HEINRICHS GEOEX

SEND	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	6-7	7-8
RECEIVE	0-2SE	2-4SE	4-6SE	6-8SE					8-10SE	
MULTIPLIER	1.0	10	10	0.1	10	1.0	1.0	10	0.1	0.1
PFE	1.3	1.0	10	1.2	1.3	1.7	1.4	0.9	1.4	1.2
CUR. (AMPS)	2	2	2	2						
POINT No.										
SEP. (n)	2	1	1	5	4	3	2	1	6	5
H. F. MV	73.2	189	259	8.47	17.5	24	85.7	308	2.37	2.83
DRIFT	0	0	1.0	1mv	0	0	0	0	1mv	0
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	87.8	56.7	77.7	67.8	165	77	103	92	57	87.1
DRIFT MCF	14.8	17.6	12.9	17.7	12.4	23.6	13.0	8.7	24.6	14.6
S. P.	-0.8	+15.7	0	+3.6					+4.7	
NOISE				±7mv	±3mv				±4mv	±1mv
POT RES.										
CULT & CMTS										

FANCE AL 9006E

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Elko-Idaho

LINE HNT, HALF GF, SP. 1, a = 200, BEARING N 30 W

SENDER STA. _____ = ELECTRODE NO. _____, DATE 5-10-83

PAGE 5

HEINRICHS GEOEX

SEND		3-4	4-5	5-6	6-7	7-8	8-9	9-10	5-6	6-7	7-8
RECEIVE		8-13SF				10-13SF					11-13SF
MULTIPLIER		0.1	1.0	1.0	1.0	0.1	0.1	1.0	1.0	10.0	0.1
PFE		1.2	1.2	1.4	1.1	1.2	1.3	1.3	1.4	1.8	1.0
CUR. (AMPS)		2	2	2	2	2	2	2	2	1	
POINT NO.											
SEP. (n)		4	3	2	1	6	5	4	3	2	6
H. F. MV		140	28.3	7.0	3.2	1.4	1.6	170	25.2	35	2.7
DRIFT		0	0	0	0	0	0	0	0	0	0
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	4.1	8.6	1.5	2.7	1.2	1.2	1.2	10.0	27.1	0.9
DRIFT	MCF	20.2	14.7	15.2	6.0	13.0	27.5	17.7	13.3	5.6	10.4
S. P.						+2.4H1					-13.2
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB NO._____, AREA_____

LINE_____, HALF_____, SP._____, a = _____, BEARING_____

SENDER STA._____ = ELECTRODE NO._____, DATE_____

PAGE 6

HEINRICHS GEOEX

SEND	4-5	5-6	6-7		6A1					
RECEIVE	12-14 SE	—								
MULTIPLIER	1.0	1.0	1.0		1.0					
PFE	1.0	1.3	1.5		0					
CUR. (AMPS)	2	2	2							
POINT NO.										
SEP. (n)	5	4	3							
H. F. MV	14.0	24.3	14.9		97.3					
DRIFT	0	0	0		0					
1.0 PFE K_n/1000										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	14.7	14.9	44.7							
DRIFT MCF	6.8	8.7	3.4							
S. P.										
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 1632, AREA Ruby - Idaho

LINE 0, HALF NW, SR. 1, a = 200, BEARING N 30 W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 9-5-83

PAGE 1

HEINRICHS GEOEX

SEND	0-1	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE		0-2 NW	—	2-9 NW	—	—	11-6 NW	—	—	—
MULTIPLIER		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
PFE	[illegible]	[illegible]	[illegible]	+1.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CUR. (AMPS)		2	2	2	2	2	2	2	2	
POINT NO.										
SEP. (n)		1	2	1	2	3	1	2	3	4
H. F. MV	[illegible]	[illegible]	[illegible]	[illegible]	72.4	24.5	21	7.4	[illegible]	[illegible]
DRIFT	0	0	0	0	0	0	0	0	0	
1.0 PFE K_n/1000										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_C										
3.0 MV $\rho/2\pi$		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DRIFT MCF		10.5	16.5	9.3	6.4	12.2	9.5	11.2	9.4	14.1
S. P.		+18.8		+5.4			-7.8			
NOISE										
POT RES.							[illegible]			
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby - Idaho

LINE P, HALF NW, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-5-83

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HEINRICHS GEOEX

SEND		2-3	3-4	4-5	5-6	6-7	1-7	2-3	3-4	4-5	5-6
RECEIVE		6-8 NW	—	—	—	—	8-10 NW	—	—	—	—
MULTIPLIER		1.0	1.0	1.0	1.0	0.1	10	10	1.0	1.0	1.0
PFE		+0.7	+0.8	+0.1	+0.8	+0.8	+0.6	+0.6	+0.7	+1.0	+0.7
CUR. (AMPS)		2	2	2	2	2	2	2	2	2	2
POINT NO.											
SEP. (n)		1	2	3	4	5	1	2	3	4	5
H. F. MV		257	527	265	153	61.3	310	116	50.8	19.3	6.6
DRIFT		0	0	0	0	0	0	0	0	1.4	0
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	107	69.7	85.5	91.0	64.1	116	137	92.4	110	82
DRIFT	MCF	6.5	11.6	12.9	8.7	12.5	5.7	4.3	7.6	9.1	5.7
S. P.		+8.0					+10.7				
NOISE											
POT RES.		52									
CULT & CMTS							Fence at ~925'				

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby, Idaho

LINE 0, HALF NW, SR. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-5-83

PAGE 3

HEINRICHS GEOEX

SEND		6-7	1-2	2-3	3-4	4-5	5-6	1-7	2-8	3-4	6-5
RECEIVE		8-10 NW	10-12W	—	—	—	—	12-14W	—	—	
MULTIPLIER		0.1	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1
PFE		0.9	+1.8	+1.2	+1.4	1.8	+1.3	+1.1	1.0	+1.1	1.0.9
CUR. (AMPS)		2	2	2	2						
POINT NO.											
SEP. (n)		6	2	3	4	5	6	3	4	5	6
H. F. MV		5.05	74.4	33.7	11.8	7.17	5.09	22.7	17.1	6.11	4.20
DRIFT		2mv	1mv	2mv	2mv	1mv		1mv	1mv	0	2mv
1.0 PFE	K_n/1000										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	24.8	89.8	101	70.5	22.9	85.5	99.1	103	67.3	72.2
DRIFT	MCF	10.6	13.4	11.9	19.8	23.4	15.2	11.2	9.7	16.3	12.3
S. P.			+5.8					-5.3			
NOISE		±3mv		±7mv	±8mv	±3mv					±3mv
POT RES.											
CULT & CMTS											

cong. 2003

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby - Idaho

LINE 0, HALF SE, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-5-83

HEINRICHS GEOEX

PAGE 4

SEND		0-1	2-1	4-5	1-2	2-3	3-4	4-5	5-6	1-7	2-3
RECEIVE		0-2SE	2-4SE	4-6SE	6-8SE	—	—	—	—	8-10SE	—
MULTIPLIER		1.0	1.0	1.0	0.1	1.0	1.0	1.0	1.0	0.1	1.0
PFE		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
CUR. (AMPS)		2									
POINT NO.											
SEP. (n)		2	1	1	5	4	3	2	1	6	5
H. F. MV		75.0	26.5	16.2	91.2	15.5	23.0	47.0	14.4	8.75	17.9
DRIFT		0	0	0	0	0	0	0	0	0	0
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	30.7	7.5	45.6	96.7	93	69	50.4	50.7	139.8	135
DRIFT	MCF	12.2	10.1	14.4	8.3	9.7	14.5	21.9	19.7	9.7	7.4
S. P.		+21.6	+8.5	+9.2	-5.0					+8.6	
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby - Idaho

LINE 0, HALF 5%, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-5-83

PAGE 5

HEINRICHS GEOEX

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	3-4
RECEIVE	3-10 SE	—	—	—	10-12 SE	—	—	—	—	17-14 SE
MULTIPLIER	1.0	1.0	1.0	10	0.1	0.1	0.1	1.0	1.0	0.1
PFE	1.1	1.2	1.3	1.1	0.7	0.9	1.1	1.1	1.1	1.0
CUR. (AMPS)	2									
POINT NO.										
SEP. (n)	4	3	2	1	6	5	4	3	2	6
H. F. MV	17.1	27.3	76.0	7.01	4.54	5.12	2.77	2.18	44.5	3.53
DRIFT	0	0	0	0	0	0	0	0	0	0
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	103	91.9	88.8	62.3	76.3	60.7	52.6	65.4	53.4	59.3
DRIFT MCF	10.7	14.7	14.6	18.2	9.2	14.8	20.9	16.8	20.8	16.8
S. P.					+21.4					+19.5
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby - Idaho

LINE 0, HALF SW, SR. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-5-83

HEINRICHS GEOEX

PAGE 6

SEND		4-5	5-6	6-7							
RECEIVE		12-14E	—	—	cal						
MULTIPLIER		0.1	1.0	1.0	1.0						
PFE		1.2	1.8	1.3	[illegible]						
CUR. (AMPS)											
POINT NO.											
SEP. (n)		5	4	3							
H. F. MV		5.13	11.9	20.6	97.0						
DRIFT		10+	0								
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	53.9	77.4	61.8							
DRIFT	MCF	22.3	16.8	21.0							
S. P.											
NOISE											
POT RES.											
CULT & CMTS											

I. P. SENDER NOTES

JOB No. 1633 AREA Idaho Mine, Ruby, Ariz.

LINE 8NE, HALF NW, SP. 1, DATE May 13, 1983

PAGE 1

HEINRICHS GEOEX

SEND	1-2	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	cal	0-2NW	—	2-4NW	—	—	4-6NW	—	—	—
RANGE	100X10	200X10	—	—	—	—	—	—	—	—
VOLTAGE	205	120	370	150	120	370	310	150	120	370
CURRENT	1.0	2.0	—	—	—	—				
SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW	—	—	—	—	8-10NW	—	—	—	—
RANGE	—	—	—	—	—	—	—	—	—	—
VOLTAGE	380	310	150	120	370	380	380	305	145	110
CURRENT	2.0	—	—	—	—	—	—	—	—	—

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-S

POWER UNIT ID

OPERATOR HIRT

RECEIVER No.

HOURS RUN

OPERATOR

COMMENTS: When sending on 5-6 DC μa deviated 125 - 150 μa to right of 0; then the unit would not send on 6-7 until the power unit control was turned off for a minute or so.

I. P. SENDER NOTES

JOB No. 1633 AREA Idaho Mine, Ruby, Ariz.

LINE 8NE, HALF NW, SE, SP. 1, DATE May 13, 1983

PAGE 2

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	8-10NW	10-12NW	—	—	—	—	12-14NW	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	370	380	370	300	145	110	380	370	300	145
CURRENT	2.0	—	—	—	—	—	—	—	—	—
SEND	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	1-2	2-3
RECEIVE	0-2SE	2-4SE	4-6SE	6-8SE	—	—	—	—	8-10SE	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	370	300	140	370	360	300	140	110	370	360
CURRENT	2.0	—	—	—	—	—	—	—	—	—

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-S

POWER UNIT ID

OPERATOR HIRT

RECEIVER No.

HOURS RUN

OPERATOR

COMMENTS:

I. P. SENDER NOTES

JOB No. 1633 AREA Idaho Mine, Ruby, Ariz.

LINE 6NE, HALF SE, SP. 1, DATE May 13, 1983

PAGE 3

HEINRICHS GEOEX

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	3-4
RECEIVE	8-10SE	—	—	—	10-12SE	—	—	—	—	12-14SE
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	300	140	110	345	360	300	140	110	350	300
CURRENT	2.0	—	—	—	—	—	—	—	—	—
SEND	4-5	5-6	6-7	1-2						
RECEIVE	12-14SE	—	—	cal						
RANGE	200X10	—	—	100X10						
VOLTAGE	140	110	350	195						
CURRENT	2.0	—	—	1.0						

FREQUENCIES 0.3-3.0 Hz

SENDER No. 9662-S

POWER UNIT ID

OPERATOR HIRT

RECEIVER No.

HOURS RUN

OPERATOR

COMMENTS:

I. P. SENDER NOTES

JOB No. 1633 AREA Idaho Mine, Ruby, Ariz.

LINE 8NE, HALF NW, SP. 1, DATE May 13, 1983

PAGE 1

HEINRICHS GEOEX

SEND	1-2	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	cal	0-2NW	—	2-4NW	—	—	4-6NW	—	—	—
RANGE	100x10	200x10	—	—	—	—	—	—	—	—
VOLTAGE	205	120	370	150	120	370	310	150	120	370
CURRENT	1.0	2.0	—	—	—	—				
SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW	—	—	—	—	8-10NW	—	—	—	—
RANGE	—	—	—	—	—	—	—	—	—	—
VOLTAGE	380	310	150	120	370	380	380	305	145	110
CURRENT	2.0	—	—	—	—	—	—	—	—	—

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-S

POWER UNIT ID

OPERATOR HIRT

RECEIVER No.

HOURS RUN

OPERATOR

COMMENTS:
When sending on 5-6 DC μa deviated 125 - 150 μa to right of 0; then the unit would not send on 6-7 until the power unit control was turned off for a minute or so.

I. P. SENDER NOTES

JOB No. 1633 AREA Idaho Mine, Ruby, Ariz.

LINE 8NE, HALF NW,SE, SP. 1, DATE May 13, 1983

PAGE 2

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	8-10NW	10-12NW	—	—	—	—	12-14NW	—	—	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	370	380	370	300	145	110	380	370	300	145
CURRENT	2.0	—	—	—	—	—	—	—	—	—
SEND	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	1-2	2-3
RECEIVE	0-2SE	2-4SE	4-6SE	6-8SE	—	—	—	—	8-10SE	—
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	370	300	140	370	360	300	140	110	370	360
CURRENT	2.0	—	—	—	—	—	—	—	—	—

FREQUENCIES 0.3 - 3.0 Hz

SENDER No. 9662-5 POWER UNIT ID

OPERATOR HIRT

RECEIVER No. HOURS RUN

OPERATOR

COMMENTS:

I. P. SENDER NOTES

JOB No. 1633 AREA Idaho Mine, Ruby, Ariz.

LINE 6NE, HALF SE, SP. 1, DATE May 13, 1983

PAGE 3

HEINRICHS GEOEX

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	3-4
RECEIVE	8-10SE	—	—	—	10-12SE	—	—	—	—	12-14SE
RANGE	200X10	—	—	—	—	—	—	—	—	—
VOLTAGE	300	140	110	345	360	300	140	110	350	300
CURRENT	2.0	—	—	—	—	—	—	—	—	—
SEND	4-5	5-6	6-7	1-2						
RECEIVE	12-14SE	—	—	cal						
RANGE	200X10	—	—	100X10						
VOLTAGE	140	110	350	195						
CURRENT	2.0	—	—	1.0						

FREQUENCIES 0.3-3.0 Hz

SENDER No. 9662-S

POWER UNIT ID

OPERATOR HIRT

RECEIVER No.

HOURS RUN

OPERATOR

COMMENTS:

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby-Idaho

LINE 6NB, HALF NW, SR. _____, a = 200, BEARING N 30 W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-13-83

PAGE 1

HEINRICHS GEOEX

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	CAL
RECEIVE	0-2 NW	—	2-4 NW	—	—	4-6 NW	—	—	—	
MULTIPLIER	1.0	1.0	10	1.0	1.0	10	1.0	1.0	1.0	1.0
PFE	0.6	1.2	0.9	0.9	1.7	0.9	1.0	0.9	1.3	+0.1
CUR. (AMPS)	2									
POINT NO.										
SEP. (n)	1	2	1	2	3	1	2	3	4	97.4
H. F. MV	92.7	73.6	23.4	39.1	45.1	19.9	53.1	13.1	20.1	
DRIFT	0	0	0	0	0	0	0	0	0	
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	27.8	88.3	70.2	46.9	135	59.7	63.7	39.3	120.6	X
DRIFT MCF	21.6	13.6	12.8	19.2	12.6	15.1	15.7	22.9	10.8	X
S. P.	-1.3		+18.0			-3.3				
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby- Idaho

LINE 6NE, HALF NW, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE N30W

PAGE 2

HEINRICHS GEOEX

SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8 NW	—	—	—	—	8-10 NW	—	—	—	—
MULTIPLIER	10	1.0	1.0	0.1	0.1	10	1.0	1.0	0.1	0.1
PFE	1.3	1.2	1.2	0.8	1.2	0.8	0.8	0.8	1.1	0.4
CUR. (AMPS)	2	—	—	—	—	2	2	2	2	2
POINT No.										
SEP. (n)	1	2	3	4	5	1	2	3	4	5
H. F. MV	411	52.1	19.7	5.12	10.52	239	70.6	16.3	7.24	2.84
DRIFT	1mv	0	0	0	0	0	0	0	OK	
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	123	62.5	59.1	30.7	111	71.7	84.7	48.9	43.4	29.8
DRIFT MCF	10.5	19.2	20.3	26.0	10.9	11.2	9.4	16.4	25.3	13.4
S. P.	+30.3					+1.7				
NOISE								±2mv		
POT RES.										
CULT & CMTS	680 ~	Fence or ground								

LONG-

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby - Idaho

LINE 6NE, HALF NW, SP. 1, a = 200, BEARING N 30 W

SENDER STA. 6 = ELECTRODE NO. 4, DATE 5-13-83

PAGE 3

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	8-10NW	10-12NW	—	—	—	—	12-14NE	—	—	—
MULTIPLIER	0.1	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1
PFE	1.2	1.0	1.0	0.8	0.6	0.7	1.1	1.2	1.0	0.6
CUR. (AMPS)										
POINT NO.										
SEP. (n)	6	2	3	4	5	6	3	4	5	6
H. F. MV	5.69	82.2	39.9	10.5	5.03	1.84	36.2	21.4	5.55	2.76
DRIFT	0	1mV	1mV	0	0	1mV	0	0	0	0
1.0 PFE $K_n/1000$										
0.3 PFE P_{CAL}										
0.1 PFE PFE_c										
3.0 MV $P/2\pi$	95.6	98.6	120	63	52.8	30.9	109	128	58.3	46.4
DRIFT MCF	12.6	10.1	8.4	12.7	11.4	22.6	10.1	9.3	17.2	12.9
S. P.		+0.5					+3.3			
NOISE										
POT RES.					±2m	±2m		FAULT	at 1300'	
CULT & CMTS										

(VOLCANIC + CONG

FAULT

BASE Pt

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 6NE, HALF SR, SR. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-13-83

PAGE 4

HEINRICHS GEOEX

SEND	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	1-2	2-3
RECEIVE	0-2SR	2-4SR	4-6SR	6-8SR	—	—	—	—	8-10SR	—
MULTIPLIER	1.0	1.0	10	0.1	1.0	1.0	1.0	10	0.1	0.1
PFE	1.0	0.7	0.8	1.3	1.5	1.2	1.2	1.0	1.4	1.6
CUR. (AMPS)	2	2	2	2	2	2	2	2		
POINT NO.										
SEP. (n)	2	1	1	5	4	3	2	1	6	5
H. F. MV	48.8	89.5	302	8.28	18.5	25.0	71.1	305	5.31	10.94
DRIFT	0	0	0	0	0	0	0	0	0	0
1.0 PFE K_n/1000										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	58.6	26.6	90.6	86.9	111	75	85.3	91.5	89.2	115
DRIFT MCF	17.1	26.4	8.8	15.0	13.5	16	14.1	10.9	15.7	13.9
S. P.	-07.3	+6.4	+26.2	+11.6					+1.7	
NOISE										
POT RES.										
CULT & CMTS				FENCE	AT ~ 750'					

ROAD AT 210'

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby- Idaho

LINE 6NE, HALF SE, SR. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-13-83

HEINRICHS GEOEX

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	3-4
RECEIVE	8-10SE	—	—	—	10-12SE	—	—	—	—	12-14SE
MULTIPLIER	1.0	1.0	1.0	10	0.1	0.1	1.0	1.0	10	0.1
PFE	1.2	1.3	1.3	1.7	1.2	1.1	1.3	1.4	1.8	0.8
CUR. (AMPS)	2	2	2	2	2	2	2	2	2	2
POINT NO.										
SEP. (n)	4	3	2	1	6	5	4	3	2	6
H. F. MV	13.8	33.2	94.7	84.9	8.25	9.59	21.3	52.2	353	6.92
DRIFT	0	0	0	0	0	0	0	0	0	0
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	82.8	99.6	114	255	139	101	128	157	424	116
DRIFT MCF	14.5	13.1	11.4	6.7	8.7	10.9	10.2	8.9	4.2	6.9
S. P.					+2.5					+15.8
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 6NR, HALF SE, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-13-83

PAGE 6

HEINRICHS GEOEX

SEND		4-5	5-6	6-7		CA1					
RECEIVE		12-14SR	—	—							
MULTIPLIER		1.0	1.0	10		1.0					
PFE		1.0	1.2	1.8		0					
CUR. (AMPS)		2	2	2							
POINT No.											
SEP. (n)		5	4	3							
H. F. Mv		13.9	30.5	177		97.4					
DRIFT		0	0	0		0					
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	146	183	531							
DRIFT	MCF	6.9	6.6	3.4							
S. P.											
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB NO. 6033, AREA Ruby-Idaho

LINE BNB, HALF NW, SR. _____, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-13-83

PAGE 1

HEINRICHS GEOEX

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	6-1	
RECEIVE	0-2NW	—	2-4NW	—	—	4-6NW	—	—	—	—	
MULTIPLIER	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
PFE	4.6	1.7	0.9	0.9	1.7	0.9	1.0	0.9	1.7	3.1	
CUR. (AMPS)	2										
POINT NO.											
SEP. (n)	1	2	1	2	3	1	2	3	4	97.4	
H. F. MV	927	726	238	381	451	199	531	131	201		
DRIFT	0	0	0	0	0	0	0	0	0		
1.0 PFE / K_n/1000											
0.3 PFE / ρ_{CAL}											
0.1 PFE / PFE_c											
3.0 MV / $\rho/2\pi$	27.3	89.3	72.2	16.9	35	59.7	63.7	33.3	16.6	28.5	
DRIFT / MCF	21.6	13.0	12.8	19.2	12.6	15.1	15.7	22.9	10.8	[illegible]	
S. P.	-1.3		+18.0			-3.3					
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby-Idaho

LINE 6NE, HALF NW, SR. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE N30W

PAGE 2

HEINRICHS GEOEX

SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8 NW					8-10 NW				
MULTIPLIER	10	1.0	1.0	0.1	0.1	10	1.0	1.0	0.1	0.1
PFE	1.3	1.2	1.2	0.8	1.2	0.8	0.8	0.8	1.1	0.9
CUR. (AMPS)	2					2	2	2	2	2
POINT NO.										
SEP. (n)	1	2	3	4	5	1	2	3	4	5
H. F. MV	4.10	52.1	19.7	5.12	10.52	2.39	70.6	16.3	7.24	2.41
DRIFT	1mV	0	0	0	0	0	0	0	OK	
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	123	62.5	39.1	30.7	111	71.7	84.7	48.0	43.4	29.8
DRIFT MCF	10.5	19.2	20.3	26.0	10.9	11.2	9.4	16.4	25.3	13.4
S. P.	+30.3					+1.7				
NOISE								±2mV		
POT RES.										
CULT & CMTS	680 ~ Fence & on ground									

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby - Idaho

LINE 6NE, HALF NW, SR. 1, a = 200, BEARING N 30 W

SENDER STA. 6 = ELECTRODE NO. 4, DATE 5-13-83

PAGE 3

HEINRICHS GEOEX

SEND		6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE		8-10NW	10-12NW					12-14NE			
MULTIPLIER		0.1	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1
PFE		1.2	1.0	1.0	0.8	0.6	0.8	1.1	1.2	1.0	0.5
CUR. (AMPS)											
POINT NO.											
SEP. (n)		6	2	3	4	5	6	3	4	5	6
H. F. MV		5.69	[illegible]	39.9	10.5	5.03	1.84	36.2	21.4	56.5	2.76
DRIFT		0	1mV	1mV	0	0	1.1	0	0	0	0
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	95.6	96.6	120	63	52.8	30.9	109	128	58.3	46.4
DRIFT	MCF	12.6	10.1	8.4	12.7	11.4	27.6	10.1	9.3	17.2	12.9
S. P.			+0.5					+3.3			
NOISE											
POT RES.						±7n	±7n		Fence at 1300'		
CULT & CMTS											

FOR 5

Base Pt

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 6NE, HALF SP, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-13-83

PAGE 4

HEINRICHS GEOEX

SEND	1-2	3-4	4-5	1-3	2-3	3-4	4-5	5-6	1-2	2-3
RECEIVE	0-2SE	2-4SE	4-6SE	6-8SE					8-10SE	
MULTIPLIER	1.0	1.0	1.0	0.1	1.0	1.0	1.0	1.0	0.1	0.1
PFE	0.0	0.7	0.8	1.0	1.5	1.7	1.7	1.0	1.4	1.6
CUR. (AMPS)	2	2	4	2	2	2	2	2		
POINT No.										
SEP. (n)	2	1	1	5	4	3	2	1	4	5
H. F. MV	40.8	89.5	30.8	8.28	145	250	71.1	30.5	53.4	10.91
DRIFT	0	0	0	0	0	0	0	0	0	0
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	58.8	26.6	20.0	86.9	41	75	83.3	91.5	89.7	115
DRIFT MCF	17.1	26.4	8.8	10	13.5	16	14.1	10.9	15.7	13.9
S. P.	-87.3	+84	126.7	+11.6					11.7	
NOISE										
POT RES.										
CULT & CMTS				FENCE at ≈ 750'						

Road at 210'

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby - Idaho

LINE GNE, HALF SE, SR. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-13-83

PAGE 5

HEINRICHS GEOEX

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	3-4
RECEIVE	8-10 SE				10-12 SE					12-14 SE
MULTIPLIER	1.0	1.0	1.0	10	0.1	0.1	1.0	1.0	10	0.1
PFE	1.2	1.3	1.3	1.7	1.2	1.1	1.3	1.4	1.8	0.8
CUR. (AMPS)	2	2	2	2	2	2	2	2	2	2
POINT NO.										
SEP. (n)	4	3	2	1	8	5	4	3	2	6
H. F. MV	13.8	33.2	94.7	84.9	3.25	9.59	71.3	52.2	35.3	6.97
DRIFT	0	0	0	0	0	0	0	0	0	0
1.0 PFE K_n/1000										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	82.8	79.0	114	255	139	101	128	137	474	116
DRIFT MCF	14.5	13.1	11.4	6.7	8.7	10.9	10.2	8.9	4.2	6.9
S. P.					+7.5					+15.8
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby - Idaho

LINE 6NE, HALF SE, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-13-83

PAGE 6

HEINRICHS GEOEX

SEND		4-5	5-6	6-7		CA1					
RECEIVE		2-14SE	—	—							
MULTIPLIER		1.0	1.0	1.0		1.0					
PFE		1.0	1.2	1.8		0					
CUR. (AMPS)		2	2	2							
POINT NO.											
SEP. (n)		5	4	3							
H. F. MV		13.9	30.5	177		97.4					
DRIFT		0	0	0		0					
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	146	183	531							
DRIFT	MCF	6.9	6.6	3.4							
S. P.											
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 0, HALF NW, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 9 5-5-83

PAGE 1

HEINRICHS GEOEX

SEND		CA 1	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE			0-2 NW	—	2-4 NW	—	—	4-6 NW	—	—	—
MULTIPLIER			10	1.0	10	1.0	1.0	10	1.0	1.0	1.0
PFE		~0.1 | -0.3	+0.8	+1.0	+1.0	+0.6	+0.9	+0.6	+1.0	+0.8	+1.0 | +0.8
CUR. (AMPS)			2	2	2	2	2	2	2	2	
POINT No.											
SEP. (n)			1	2	1	2	3	1	2	3	4
H. F. Mv		97.3 | 97.3	254	50.65	359	78.4	24.5	211	74.4	31.6	11.8
DRIFT		0 | 0	0	0	10	0	0	0	0	0	0
1.0 PFE	K_n/1000										
0.3 PFE	P_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$P/2\pi$		76.2	60.8	108	94.1	73.5	63.3	89.3	94.8	70.8
DRIFT	MCF		10.5	16.5	9.3	6.4	12.2	9.5	11.2	8.4	14.1
S. P.			+18.8		+5.4			-2.8			
NOISE											
POT RES.								55 mv			
CULT & CMTS											

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 8, HALF NW, SR. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-5-83

PAGE 2

HEINRICHS GEOEX

SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8 NW	—	—	—	—	8-10 NW	—	—	—	—
MULTIPLIER	10	1.0	1.0	1.0	0.1	10	10	1.0	1.0	1.0
PFE	+0.7	+0.8	+1.1	+0.8	+0.8	+0.6	+0.6	+0.7	+1.0	+0.7
CUR. (AMPS)	2	2	2	2	2	2	2	2	2	2
POINT No.										
SEP. (n)	1	2	3	4	5	1	2	3	4	5
H. F. MV	357	57.7	28.5	15.3	6.13	386	116	30.8	18.3	11.6
DRIFT	0	0	0	0	0	0	0	0	1mv	0
1.0 PFE K_n/1000										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	107	69.2	85.5	91.8	64.4	116	139	92.4	110	122
DRIFT MCF	6.5	11.6	12.9	8.7	12.5	5.2	4.3	7.6	9.1	5.7
S. P.	+8.0					+10.2				
NOISE										
POT RES.	52									
CULT & CMTS						FENCE	at ~925',			

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 0, HALF NW, SR. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-5-83

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HEINRICHS GEOEX

SEND		6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE		8-10 NW	10-12 W	—	—	—	—	12-14 W	—	—	—
MULTIPLIER		0.1	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1
PFE		0.9	+1.2	+1.2	+1.4	+1.8	+1.3 | 1.1	+1.1	1.0	+1.1	+0.9
CUR. (AMPS)		2	2	2	2						
POINT No.											
SEP. (n)		6	2	3	4	5	6	3	4	5	6
H. F. MV		5.05	74.4	33.7	11.8	7.42	5.09 | 5.14	32.7	17.1	6.41	4.36
DRIFT		2mV	1mV	2mV	2mV	1mV		1mV	1mV	0	2mV
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	84.8	89.3	101	70.8	77.9	85.5	98.1	103	67.3	73.8
DRIFT	MCF	10.6	13.4	11.9	19.8	23.1	15.2	11.2	9.7	16.3	12.3
S. P.			+5.8					-5.3			
NOISE		±3mV		±2mV	±3mV	±3mV					±3mV
POT RES.											
CULT & CMTS											

CONT. FOR 1

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 0, HALF SE, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-5-83

PAGE 4

HEINRICHS GEOEX

SEND	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	1-2	2-3
RECEIVE	0-2SE	2-4SE	4-6SE	6-8SE	—	—	—	—	8-10SE	—
MULTIPLIER	1.0	10	10	0.1	1.0	1.0	1.0	10	0.1	1.0
PFE	+1.1	+0.8	+0.7	+0.8	+0.9	1.0	1.1	1.0	1.2	1.0
CUR. (AMPS)	2									
POINT NO.										
SEP. (n)	2	1	1	5	4	3	2	1	6	5
H. F. MV	75.0	26.5	16.2	9.23	15.5	23.0	42.0	16.9	8.25	12.9
DRIFT	0	0	0	0	0	0	0	0	0	0
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	90.0	79.5	48.6	96.9	93	69	50.4	50.7	139.0	135
DRIFT MCF	12.2	10.1	14.4	8.3	9.7	14.5	21.8	19.7	8.7	7.4
S. P.	+21.6	+8.5	+9.2	-5.0					+8.6	
NOISE										
POT RES.										
CULT & CMTS										

RES PFE

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 0, HALF SE, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-5-83

PAGE 5

HEINRICHS GEOEX

SEND		3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	3-4
RECEIVE		8-10 SE	—	—	—	10-12 SE	—	—	—	—	12-14 SE
MULTIPLIER		1.0	1.0	1.0	10	0.1	0.1	0.1	1.0	1.0	0.1
PFE		1.1	1.2	1.3	1.1	0.7	0.9	1.1	1.1	1.1	1.0
CUR. (AMPS)		2									
POINT No.											
SEP. (n)		4	3	2	1	6	5	4	3	2	6
H. F. Mv		17.1	27.3	74.0	201	4.54	5.78	8.77	21.8	44.5	3.53
DRIFT		0	0	0	0	0	0	0	0	0	0
1.0 PFE	K_n/1000										
0.3 PFE	P_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	103	81.9	88.8	60.3	76.3	60.7	52.6	65.4	53.4	59.3
DRIFT	MCF	10.7	14.7	14.6	18.2	9.2	14.8	20.9	16.8	20.6	16.8
S. P.						+21.4					+19.5
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 0, HALF SW, SR. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-5-83

PAGE 6

HEINRICHS GEOEX

SEND		4-5	5-6	6-7							
RECEIVE		12-14E	—	—	CAL						
MULTIPLIER		0.1	1.0	1.0	1.0						
PFE		1.2	1.2	1.3	0.0						
CUR. (AMPS)											
POINT NO.											
SEP. (n)		5	4	3							
H. F. MV		5.13	11.9	20.6	97.0						
DRIFT		1.04 mv	0								
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	53.9	71.4	61.8							
DRIFT	MCF	22.3	16.8	21.0							
S. P.											
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 4SW, HALF NW, SR. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-6-83

PAGE 1

HEINRICHS GEOEX

SEND	CAI	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE	0-2NW	0-2NW	—	2-4NW	—	—	4-6NW			
MULTIPLIER	1.0	10	1.0	10	1.0	1.0	10	1.0	1.0	0.1
PFE	0.0	+0.7	+1.1	+0.5	+0.7	+0.7	+0.5	+0.8	0.6	+0.7
CUR. (AMPS)	1.0	2.0					2.0			
POINT No.										
SEP. (n)		1	2	1	2	3	1	2	3	4
H. F. MV	96.9	177	65.5	204	45.4	23.5	177	36.35	13.65	7.78
DRIFT	1mV	0	1mV	0	0	0	1mV	0	0	0
1.0 PFE K_n/1000										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$		53.1	78.6	61.2	54.5	70.5	53.1	43.6	41	46.7
DRIFT MCF	13.2	13.2	14.0	8.2	12.8	9.9	9.4	18.3	14.7	15
S. P.		-1.3	+23.2				-0.1			
NOISE										
POT RES.		Good								
CULT & CMTS							Wire fence ~ 20' From E1			

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby-Idaho

LINE 4SW, HALF NW, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-6-83

PAGE 2

HEINRICHS GEOEX

SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW	→	→	→	→	8-10NW	—	—	—	—
MULTIPLIER	10	10	1.0	1.0	0.1	10	1.0	1.0	0.1	0.1
PFE	+0.5	+0.9	1.0	1.0	1.0	+0.9	0.9	1.1	1.0	1.0
CUR. (AMPS)	2.0									
POINT No.										
SEP. (n)	1	2	3	4	5	1	2	3	4	5
H. F. MV	550	127	36.5	16.7	10.58	193	59.0	27.9	9.70	5.03
DRIFT	0	1mv	0	0	0	1mv	0	0	0	0
1.0 PFE K_n/1000										
0.3 PFE P_{CAL}										
0.1 PFE PFE_c										
3.0 MV $P/2\pi$	165	152	110	100	111	58	71	84	58	52.8
DRIFT MCF	3.0	5.9	9.1	10	9	15.5	12.7	13.1	17.2	18.9
S. P.	+3.0					+10.5				
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby

LINE 48W, HALF NW, SR. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE NO. 4, DATE 5-6-83

PAGE 3

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	8-10NW	10-12NW	—	—	—	—	12-14NW	—	—	—
MULTIPLIER	0.1	1.0	1.0	1.0	0.1	0.1	1.0	0.1	0.1	0.1
PFE	1.1	0.7	0.4	0.9	0.8	0.9	0.8	0.6	0.8	0.8
CUR. (AMPS)										
POINT NO.										
SEP. (n)	6	2	3	4	5	6	3	4	5	6
H. F. MV	3.47	21.6	21.4	13.5	5.37	3.16	15.0	9.79	7.15	3.17
DRIFT	0	0	0	0	0	0	0	0	1mv	0
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	58.3	49.9	64.2	81	56.4	53.1	45	58.7	75.1	53.3
DRIFT MCF	18.9	14.0	6.2	11.1	14.2	17	17.8	10.2	10.7	15.0
S. P.		+32.4					-2.9			
NOISE										
POT RES.										
CULT & CMTS										

CAL 1.0, 96.8 mv, PFE = 0, drift = 0

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby

LINE 4SW, HALF SE, SP. 1, a = 200, BEARING N 30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-9-83

PAGE 4

HEINRICHS GEOEX

SEND	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	1-2	2-3
RECEIVE	0-2SE	2-4SE	4-6SE	6-8SE	—	—	—	—	8-10SE	—
MULTIPLIER	1.0	10	10	0.1	1.0	1.0	1.0	10	0.1	0.1
PFE	+0.9	0.8	0.7	0.8	0.8	0.9	0.9	0.9	1.3	0.7
CUR. (AMPS)	2	—	—	—	2	2	2	2	2	2
POINT NO.										
SEP. (n)	2	1	1	5	4	3	2	1	6	5
H. F. MV	34.2	170	297	5.81	13.0	24.9	53.0	159	3.07	6.61
DRIFT	1mv	0	0	0	0	0	0	0	1mv	0
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	41.0	51	89.1	61.0	78	74.7	63.6	47.7	51.6	69.4
DRIFT MCF	21.9	15.7	7.9	13.1	10.2	12.0	14.2	18.9	25.2	10.1
S. P.	-9.5	+9.2	-2.5	-6.4					-16.2	
NOISE									±3mv	
POT RES.		WIRE ON GROUND		Good					OK	
CULT & CMTS		AT N 35E		ROAD - 5SW						

CAL, 97.6 mv, PEF = 0, drift = 0

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby

LINE 45W, HALF SE, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-9-83

PAGE 5

HEINRICHS GEOEX

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	3-4
RECEIVE	8-10SE	—	—	—	10-12SE	—	—	—	—	12-14SE
MULTIPLIER	1.0	1.0	1.0	10	0.1	0.1	0.1	1.0	1.0	0.1
PFE	0.9	0.9	0.9	0.8	0.7	0.7	0.6	1.0	1.0	0.1
CUR. (AMPS)	2	2	2	2	2	2	2	2	2	
POINT No.										
SEP. (n)	4	3	2	1	6	5	4	3	2	6
H. F. MV	11.9	19.9	40.2	268	3.58	5.98	8.87	16.3	71.0	6.60
DRIFT	0	0	0	0	0	1mv	1mv	0	0	1mv
1.0 PFE / K_n/1000										
0.3 PFE / P_{CAL}										
0.1 PFE / PFE_c										
3.0 MV / $P/2\pi$	71.4	59.7	48.2	80.4	60.1	62.8	53.2	48.9	85.2	110.9
DRIFT / MCF	12.6	15.1	18.7	10.0	11.6	11.1	11.3	20.4	11.7	9.9
S. P.					+3.2					-0.6
NOISE					±3mv		±5mv			
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 4SW, HALF SR, SP. 1, a = 200, BEARING N30W

SENDER STA. 0 = ELECTRODE No. 4, DATE 5-9-83

PAGE 6

HEINRICHS GEOEX

SEND		4-5	5-6	6-7	CA1						
RECEIVE		12-14 SR	—	—							
MULTIPLIER		0.1	1.0	1.0	1.0						
PFE		0.9	1.2	1.1	0						
CUR. (AMPS)		2	2	2							
POINT No.											
SEP. (n)		5	4	3							
H. F. MV		9.0	15.5	53.4	97.2						
DRIFT		0	0	0	0						
1.0 PFE	$K_n/1000$										
0.3 PFE	ρ_{CAL}										
0.1 PFE	PFE_c										
3.0 MV	$\rho/2\pi$	94.5	93	160							
DRIFT	MCF	9.5	12.9	6.9							
S. P.											
NOISE											
POT RES.											
CULT & CMTS											

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 4 NE, HALF NW, SR. 1, a = 200, BEARING N30W

SENDER STA. 25E = ELECTRODE No. 5, DATE ~~N10W~~ 5-10-83

PAGE 1

HEINRICHS GEOEX

SEND	CAL	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7
RECEIVE		0-2NW	—	2-4NW	—	—	4-6NW	—	—	—
MULTIPLIER	1.0	10	1.0	10	1.0	1.0	10	1.0	1.0	0.1
PFE	0.1	1.0	1.6	1.6	0.9	1.1	1.3	1.3	0.8	1.4
CUR. (AMPS)		2								
POINT No.										
SEP. (n)		1	2	1	2	3	1	2	3	4
H. F. MV	97.7	186	47.4	570	58.4	27.2	239	75.0	13.9	8.79
DRIFT		1mv	0	0	0	0	0	0	1mv	
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$		55.8	56.9	171	70.1	81.6	71.7	90	41.7	52.7
DRIFT MCF		17.9	28.1	9.4	12.8	13.5	18.1	14.4	19.2	26.5
S. P.		-33.6		+11.7			-1.7			
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby - Idaho

LINE 4NE, HALF NW, SP. 1, a = 200, BEARING N30W

SENDER STA. _____ = ELECTRODE NO. _____, DATE 5-10-83

PAGE 2

HEINRICHS GEOEX

SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	6-8NW	—	—	—	—	8-10NW	—	—	—	—
MULTIPLIER	10	1.0	1.0	0.1	0.1	10	1.0	1.0	1.0	0.1
PFE	1.2	1.2	0.9	0.5	0.9	0.9	0.8	1.1	0.7	0.5
CUR. (AMPS)	2	—	—	—	—	—	—	—	—	2
POINT NO.										
SEP. (n)	1	2	3	4	5	1	2	3	4	5
H. F. MV	608	94.1	40.9	9.26	7.21	217	87.6	26.2	14.8	4.2
DRIFT	0	0	0	0	0	0	0	0	0	0
1.0 PFE $K_n/1000$										
0.3 PFE P_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	182	113	123	55.6	75.7	65.1	105	78.6	88.8	44.1
DRIFT MCF	6.6	10.6	7.3	9.0	11.9	13.8	7.6	14	7.9	11.3
S. P.	+9.0					+4.5				
NOISE										
POT RES.										
CULT & CMTS	FENCE AT 690' partially on ground									

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby - Idaho

LINE 4NE, HALF NW, SR 1, a = 200, BEARING N30W

SENDER STA. _____ = ELECTRODE No. _____, DATE 5-10-83

PAGE 3

HEINRICHS GEOEX

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	8-10 NW	10-12NW	—	—	—	—	12-14NW	—	—	—
MULTIPLIER	0.1	1.0	1.0	1.0	0.1	0.1	1.0	1.0	1.0	0.1
PFE	1.0	1.0	0.7	0.9	0.6	0.5	1.3	1.1	1.3	1.1
CUR. (AMPS)										
POINT No.										
SEP. (n)	6	2	3	4	5	6	3	4	5	6
H. F. MV	3.96	77.4	49.5	17.8	10.90	3.44	44.2	33.1	12.8	8.26
DRIFT	0	1mv	0	0	0	0	1mv	0	0	0
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	66.5	92.9	149	107	115	57.8	133	199	134	139
DRIFT MCF	15.0	10.8	4.7	8.4	5.2	8.7	9.8	5.5	9.7	7.9
S. P.		-4.9					+14.8			
NOISE										
POT RES.		Good								
CULT & CMTS										

WATER ON GROUND AT ~ 1250

I. P. RECEIVER NOTES, JOB No. 1633, AREA Ruby- Idaho

LINE 4 NE, HALF SE, SR. 1, a = 200, BEARING N30W

SENDER STA. _____ = ELECTRODE No. _____, DATE 5-10-83

PAGE 4

HEINRICHS GEOEX

SEND	1-2	3-4	4-5	1-2	2-3	3-4	4-5	5-6	1-2	2-3
RECEIVE	0-2SE	2-4SE	4-6SE	6-8SE	—	—	—	—	8-10SE	—
MULTIPLIER	1.0	10	10	0.1	1.0	1.0	1.0	10	0.1	0.1
PFE	1.3	1.0	1.0	1.2	1.3	1.7	1.4	0.8	1.4	1.2
CUR. (AMPS)	2	2	2	2	—	—	—	—	—	—
POINT NO.										
SEP. (n)	2	1	1	5	4	3	2	1	6	5
H. F. MV	73.2	189	259	6.47	17.5	24	85.7	308	3.39	7.83
DRIFT	0	0	1mv	1mv	0	0	0	0	1mv	0
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	87.8	56.7	77.7	67.9	105	72	103	92	57	82.2
DRIFT MCF	14.8	17.6	12.9	17.7	12.4	23.6	13.6	8.7	24.6	14.6
S. P.	-0.8	+15.7	0	+3.6					+4.2	
NOISE				±2mV	±2mV				±4mV	±1mV
POT RES.										
CULT & CMTS										

FENCE AT ~ 900 SE

I. P. RECEIVER NOTES, JOB NO. 1633, AREA Ruby-Idaho

LINE 4NR, HALF SR, SR. 1, a = 200, BEARING N 30W

SENDER STA. _____ = ELECTRODE NO. _____, DATE 5-10-83

PAGE 5

HEINRICHS GEOEX

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	3-4
RECEIVE	8-10SR				10-12SR					12-14SR
MULTIPLIER	0.1	1.0	1.0	10	0.1	0.1	1.0	1.0	10D	0.1
PFE	1.2	1.3	1.4	1.4	1.2	1.5	1.3	1.4	1.8	1.0
CUR. (AMPS)	2	2	2	2	2	2	2	2	1	
POINT NO.										
SEP. (n)	4	3	2	1	6	5	4	3	2	6
H. F. MV	9.90	29.5	74.1	782	5.47	6.36	17.0	35.2	135	5.70
DRIFT	0	0	0	0	0	0	0	0	0	0
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	59.4	88.5	89	235	91.9	66.8	102	106	324	95.8
DRIFT MCF	20.2	14.7	15.7	6.0	13.0	22.5	12.7	13.3	5.6	10.4
S. P.					+30.1					-13.3
NOISE										
POT RES.										
CULT & CMTS										

I. P. RECEIVER NOTES, JOB NO._____, AREA_____

LINE_____, HALF_____, SR._____, a = _____, BEARING_____

SENDER STA._____ = ELECTRODE NO._____, DATE_____

PAGE 6

HEINRICHS GEOEX

SEND	4-5	5-6	6-7		CAL					
RECEIVE	12-14SE	—	—							
MULTIPLIER	1.0	1.0	10		1.0					
PFE	1.0	1.3	1.5		0					
CUR. (AMPS)	2	2	2							
POINT NO.										
SEP. (n)	5	4	3							
H. F. MV	14.0	24.8	149		97.3					
DRIFT	0	0	0		0					
1.0 PFE $K_n/1000$										
0.3 PFE ρ_{CAL}										
0.1 PFE PFE_c										
3.0 MV $\rho/2\pi$	147	149	447							
DRIFT MCF	6.8	8.7	3.4							
S. P.										
NOISE										
POT RES.										
CULT & CMTS										

Ruby IP Job

day 1	56,575		5:00 Am	
	56,745	170	9:30 Pm	16½ hr
day 2	56,764		6:30 Am	
	56,916	152	7:15 Pm	12 3/4 hr.
Saturday		Books – ½ hr		
		data red – 2 hr		
Sunday		data Plot + contour	2 hr	
Monday	56,833		6:30	
	57,000	167	7:30	13 hr
		1½ hr. data red.		11½ hr
Tuesday	57,019	out	6:30 am	
	57,170	In	6:00 pm	11½ hr
	151 mi	Office – ½ hr		½ hr
		data Red – 1 hr		1 hr
Wed.		8:45	7 3/4	
		4:30		

Week Ending Apr. 9 → 37 3/4

Vehicle 170+152 = 322 x .4 = 128.80

Week Ending May 14 → 59.50

Vehicle 167+151+157 = 475 = 190.00

thur

Fri 57,325 14 1/2 hrs
57,482

tue - Fri 28 hrs

190
128
318

Jan 1987

22 January 1987

THE PHOENIX ENTERPRISE REVIEW

STRUCTURE AND MINERALIZATION OF THE ORO BLANCO MINING DISTRICT, SANTA CRUZ COUNTY, ARIZONA

by

Louis Harold Knight, Jr.

The Antevs Reading Room
DEPARTMENT OF GEOSCIENCES
UNIVERSITY OF ARIZONA

A Dissertation Submitted to the Faculty of the

DEPARTMENT OF GEOLOGY

In Partial Fulfillment of the Requirements
For the Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

THE UNIVERSITY OF ARIZONA

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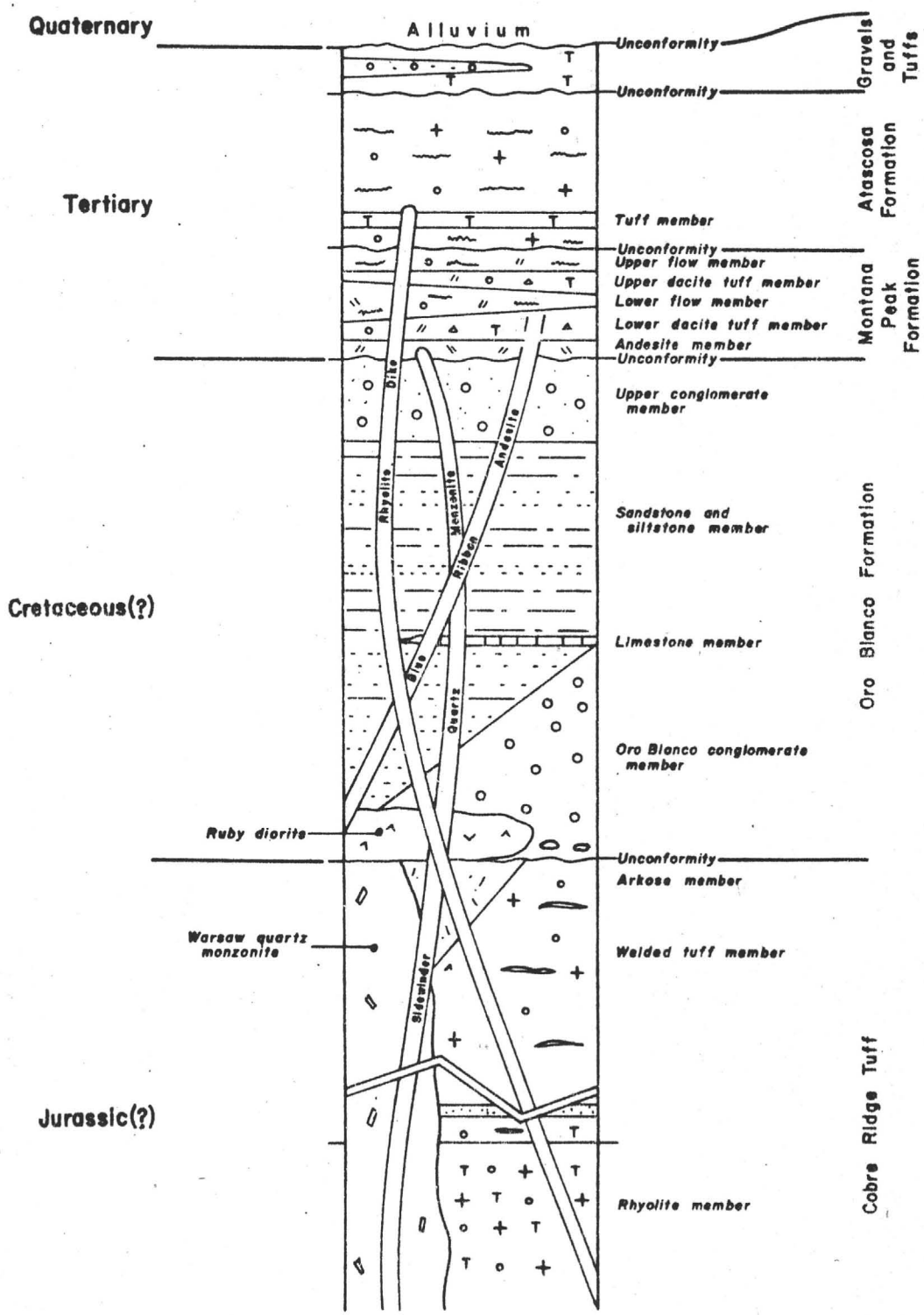

Figure 2. Stratigraphic Column

sections but seems to replace both chalcopyrite and galena. Warren and Loofbourow(1932) noted that at least part of the tetrahedrite is older than the galena.

Many of the veins have undergone a certain amount of supergene enrichment. The principal minerals formed here are chalcocite, covellite, native silver, and the halides of silver.

Montana Mine. The Montana mine is the only property in the Oro Blanco district which has had a significant production over a period of several years. From 1928 to May 1940 the Eagle-Picher Lead Company milled a total of 773,197 tons of ore from the Montana mine averaging .06 oz/ton gold, 5.4 oz/ton in silver, 3.9% zinc, and 4.0% lead (private report). The ore contained values in copper as well, but no figures are available for this amount. Except for Eagle-Picher no one has produced a significant amount from this property.

The outcrop of the Montana vein was located in the early 1870's and gold was extracted from shallow workings. It was not until the advent of flotation that successful treatment of the complex sulfide ores was possible.

The Montana vein has been developed to a depth of 750 feet by a vertical shaft and nine levels that total an estimated 10,000 feet of workings. In addition a raise connects the surface with the 585 level which was used for back-filling of the stopes. Stoping has been from the tunnel level to the 660 level of the Montana vein and from the 300 to the 400 level of the Rough and Ready vein, a faulted

PRELIMINARY RECONNAISSANCE
INDUCED POLARIZATION, RESISTIVITY
and
SELF POTENTIAL
GEOPHYSICAL SURVEY
of the
Idaho Mine Claims Area
with brief random
Magnetic and Radiometric Testing
over
the eastern extension area of the Brick Mine
and
the western extension area of the Montana Mine

Santa Cruz County, Arizona

May 1983

by

Heinrichs GEOEXploration Company, (Inc.)
810 West Grant Road
P.O. Box 5964
Tucson, AZ 85703

C O N T E N T S

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Four Sectional Data Sheets:	
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Line 0	"
Line 4NE	"
Line 6NE	"
Supplemental Work Proposal	Separate

Introduction

At the request of Mr. Duane Arnold, Engineer for Ord Silver Mines Ltd., a wholly owned subsidiary of Arivaca Silver Mines Ltd., of Vancouver, Canada, Heinrichs GEOEXploration Company conducted a four line preliminary reconnaissance induced polarization (IP), resistivity, and self-potential (SP) survey of a portion of claims embracing the Idaho Mine, located about 700' north of section 5 of T.23S., R.11E. and including portions of T.22S., R.11E., Santa Cruz County, Arizona, as mapped on the U.S.G.S. 7.5 minute Ruby Quadrangle, approximately 70 miles southwest of Tucson, Arizona. The area elevation ranges from 4200' to over 5,000 feet, with rough terrain. Soil development is poor and surface conditions dry. Floral cover was moderate and consisted mostly of mesquite, brush and cactus. Four wheel drive access is generally poor. See plan map appended to this report.

Field work was done during the interim May 5 through May 13, 1983, with Mark E. Anders, geophysicist-geologist as crew chief, assisted by William C. Hirt, geological engineer, Barbara Howie, geologist and supervised by Walter E. Heinrichs Jr., registered professional geological engineer - geophysicist.

Original objective of the work was to hopefully find definite ore anomalism or at least strong indications of possible ore targets for drilling and warranting making a pending option payment required to maintain control of the property. Usually, IP will delineate subsurface geology, and with particular emphasis on the identification, existence, strength, character and distribution of any possible sulfides.

Procedures

GEOEX multiple frequency IP equipment involving a 4 ampere Mark 7 transmitter S/N 9662-S and Mark 4-C Receiver S/N 18691-R was employed. Transmitter was powered by a 8 HP Briggs gasoline engine, driving a 400 Hz-120V, 3KVA GE alternator. A transmitting frequency pair of 3.0 and 0.3 was employed. Spectral frequency tests (utilizing a lower frequency pair, i.e. 1.0 and 0.1) done at the beginning of the survey indicated little adverse coupling effects. The collinear dipole-dipole electrode array was used with "spreads" of seven transmitting electrodes each and dipole lengths of 200 feet. Each spread was expanded out to six dipole increments or to 6n and consisted of over fifty data points extending out to 900' in each direction from the center of the spread which was positioned near the mapped surface expression of the presumed Idaho Vein. This resulted in "processing" a block of ground roughly 1800' long by 1400' wide to a depth no greater than 400'.

Data results from each line or spread are presented on a "sectional" data sheet, showing successively from top to bottom: the apparent resistivity ($\rho a/2\pi$) in units of ohm-feet, the percent frequency effect (PFE) - (dimensionless) and the metal conduction factor (MCF) - all contoured in "sectional" form. It should be stated that these sectional presentations are conventional diagramatic representations and are not cross sections as such. For this reason, they are sometimes called pseudosections. Indirectly, of course, they do relate to the subsurface geometry and geology, but the relationships are complex and not always intuitive. (See basis of IP Method appended to this report).

Self Potential (SP) readings, taken in conjunction with the IP work are presented at the bottom of the sectional data sheets in profile form.

Interpretation

Of the four lines run, three show definite resistivity contrasts, which indicate formational changes or in this case a geologic structure such as a fault. These generally tend to correspond with the geologic map by Louis H. Knight, Jr., in Ph.D dissertation for the University of Arizona in 1970.

Line 4SW -- Shows the resistivities as being fairly constant across the line.

Line 0 -- A small resistivity high is beginning to show up on the far northwestern end of the line.

Line 4NE -- Resistivity contrast interface at approximately station 6SW. Between station 3SE and station 2NW a gradual increase in resistivities is indicated.

Line 6NE -- A definite resistivity contrast occurs at approximately 5SW with higher resistivities the southwest. A zone of lower resistivities occurs between 2NE and 3SW, with increasing resistivities on either side of this zone.

As opposed to the resistivities the PFEs show little or no contrast on both lines. The general PFE background is also quite low (0.5-0.8) which indicates very small and/or weak concentrations of sulfides and/or low or nil sulfide content overall, at least down to a depth of about 400 feet.

Line 4SW shows a very minor PFE contrast. This is seen as a very weak increase of PFE with depth in the center portion of the line. Line 0 indicates, while still minor, a slightly larger increase of PFEs on the far

southeastern and northwestern edge of the line and a very minor high located beneath station 6NW. Line 4NE shows a very minor IP high centered about station 3SE, and is fairly shallow in depth.

Line 6NE shows a minor IP anomaly centered about station 2SW and at depth of approximately 150-200 feet. This line as well as lines 0 and 4NE appear to give minor anomalism about a fault structure that occurs along the road in this area (the main Ruby-Arivaca road).

Self potential data on line 4SW shows a small, fairly broad low that is centered near station 10SE, while line 0 shows a low centered at station 0. Line 4NE shows a fairly steep low centered at station 2NW, while line 6NE gives a large broad SP low that is centered about 2NE. SP lows can relate to actively oxidizing sulfides which have established a weak potential or "battery" effect in the subsurface - usually across a conducting and interconnecting zone of oxide and sulfide lying respectively both above and below the water table.

Conclusions and Recommendations

No strong geophysical indications of major sulfide concentrations and especially disseminated sulfide were encountered within the zone of survey coverage. That zone extends to a maximum distance of 200' to 400' laterally on either side of each line and a similar distance to depth. The probable mean survey depth is about 300', ± 100' between the two farthest separated data points on each of the four lines i.e. 9NE and 9SW respectively.

Definite resistivity contrasts were noted along with minor very weak PFE responses. In part, these seem to very weakly correlate with two parallel mapped faults,one which closely follows the main Ruby-Arivaca road, also possibly with mineralization along or near the apparent surface trend of the Idaho vein as mapped by Ord personnel and others.

On line 4SW the resistivities are fairly constant across the line, with an average value of 60 ohm-feet. Although the line crosses the main fault at approximately station 500SW there are no major changes in the resistivity. This may be due to insufficient coverage far enough to the south to have encountered the effects in a definite or recognizable fashion.

The SP data indicate a weak low trend which roughly follows the Idaho vein surface mapping. Further significance of these results will require more detailed SP coverage with closer station and line spacing. Detail across one or more of the existing lows as delineated during the IP work, on 25 to 50 foot station spacing, should be done first. If response from this work appears sufficiently definitive, then closer spaced lines would also be worth considering.

Based on the above, nothing was encountered that indicated definite delineation of ore or of any <u>prime</u> drill targets. Reportedly, workings on

one of the deeper levels of the Montana mine, 500' to 700' (?), extended northward in ore to the southern boundary of the Idaho claims. Even if the geometric dimensions and associated physical contrasts with the host rocks of that ore were large enough to be detected at those depths, the maximum penetration depth of this survey was at most 400' below the surface. If additional IP coverage is ever obtained, it may be desirable to consider running a test line over this area with an array using longer dipoles - say, 400 or 500 feet long instead of 200 feet long.

If the Idaho option is exercised or extended, we recommend consideration be given to one such 400' to 500' dipole IP line along with the additional SP coverage suggested above. Also, a minimum program of two or three test lines each of geochemical prospecting, magnetics and electromagnetics (EM) should be tried before any drilling is done. Such work would cost about $10,000 but would certainly help get the most out of any drilling done. Geochem sampling on 200 to 300 foot stations with lines 400' to 500' apart and no longer than 2000 feet long would be about right. Ideally the magnetic lines should be 1500 to 2000 feet long on 100' stations or less, if so indicated as the readings are being taken on the line. The EM and SP lines could probably be as short as 1000 feet long and run on the same line control as the magnetics and geochem.

Part of such a program as this would be to test the applicability of the various methods to the district. If in fact no appreciable additional ore remains to be found on the Idaho property, then of course this kind of work would be better invested elsewhere - hopefully, somewhere where ore is definitely known and at least roughly positioned and delineated such as at the Brick or perhaps somewhere on the Montana structure.

However, even if such work as the above program were done on the Idaho and the work yielded uniformly negative results, one still shouldn't necessarily walk away without at least considering some drilling. Right now, one of the better known drilling targets based on the results of the geophysical work just completed and covered in this report, is at station 3NW on line 6NE where a very weak PFE and MCF anomaly was recorded along with noting some interesting surface gossan float. In-place source of this float should be further investigated first, by additional geology, and then by geochem or geophysics work or both, if so indicated, and finally by drilling if all of the prior results correlate well enough and give favorable indications.

The only other present geophysically inferred possible alternative drill target, if any, is at station 1 Northwest on line Zero. Both of these tentative drill sites assume northerly dip on the vein and would require holes programmed for 300' to 400' vertical or 200' to 250' if angled southeasterly. (See also "Comments on Drilling IP Targets" appended herewith).

A few random magnetometer readings were taken mostly over the hanging wall zone of the westward extension of the Montana vein. These showed 100 gammas of magnetic relief which suggests that magnetic coverage will at least help delineate subsurface structure and lithology to some extent. This could be directly helpful in guiding drilling and indirectly helpful in finding ore.

Mobile scintillation traverses were run over the Ruby-Montana tailings, along and across part of the Montana and Brick hanging wall structures. Definite anomalism about two to three times mean background was noted on the eastward extension of the Brick structure where the access road crosses the creek bed just below the Ruby-Arivaca road. Technical and economic significance of this scintillation anomaly if any is unknown at this time but, the fact that the Montana tailings traverses gave a very weak sub-background response, suggests that the method may not be universally applicable in the district for direct base and precious metals prospecting. However, the method may still have indirect uses of merit as well as in certain special applications.

As mentioned verbally before, a suite of a dozen or so selected fist-size hand samples of rock which is representative of the mean and extremes of known ore, host rocks and country rocks of the immediate areas of interest in the district, will usually benefit the most successful application and interpretation of any geophysical methods used. Most base metal ores when successfully detected by artificial controlled source electrical geophysical methods, such as IP and EM, often depend on the ore or at least the ore associated protore structures being much better conductors than their surrounding host rocks. Many precious metals ores however are associated with high silica or quartz and relatively lower sulfides which may or may not contrast significantly enough with their host rocks to be detectable by these particular electrical methods. So far, the work on the Idaho is inconclusive in this regard. Suffice to say that the published geologic descriptions of the district ores speak of high silica, while the consistent presence or absence of significant pyrite, in massive form as disseminated halos, or some combination of both, seems uncertain to date. Nevertheless, if some minimum program of careful testing is done as suggested and if it proves to be at all successful then prudent application together with proper geology and drilling stand a reasonable chance of discovering more ore. The district seems to be well mineralized and production to date does not appear to be entirely consistent with the evidenced intensity of mineralization. Certainly more ore must remain to be discovered.

Respectfully submitted,

Heinrichs GEOEXploration Company (Inc.)

Mark E. Anders, Geophysicist - Geologist

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Geol. Engr. - Geophysicist, P.E. & C.P.G.S.

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Tucson, AZ 85703

SELECTED REFERENCES

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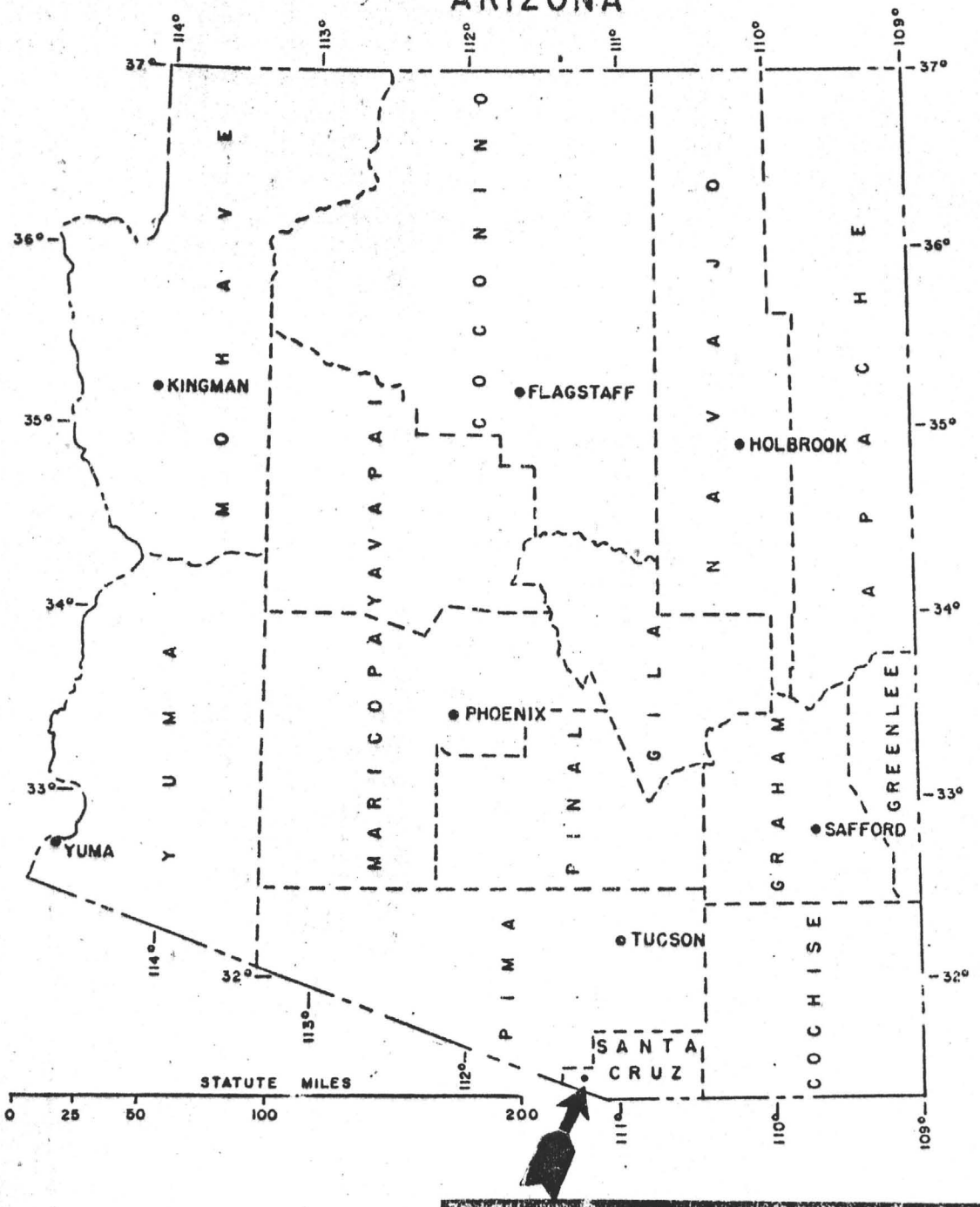
GENERAL LOCATION OF

IDAHO MINE AREA

Oro Blanco District

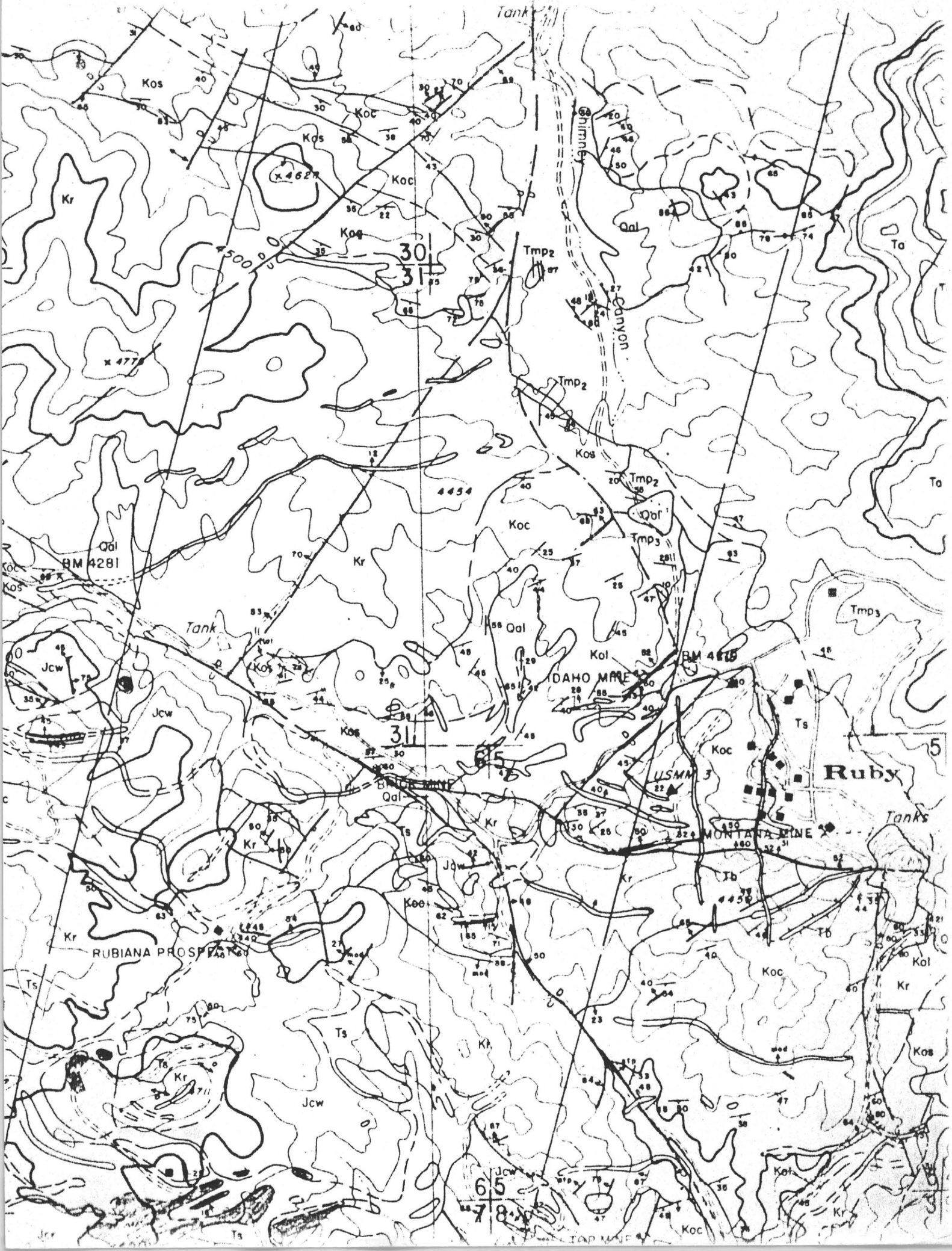
Santa Cruz County, Arizona

ARIZONA



GEOEX JOB #1633

GEOEXPLORATION COMPANY
806 W. GRANT RD., P.O. BOX 5964 TUCSON, ARIZ 85703 PH (602) 623-0578


Tank
Kos
Koc
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30
31
4500
Tmp2
Chimney
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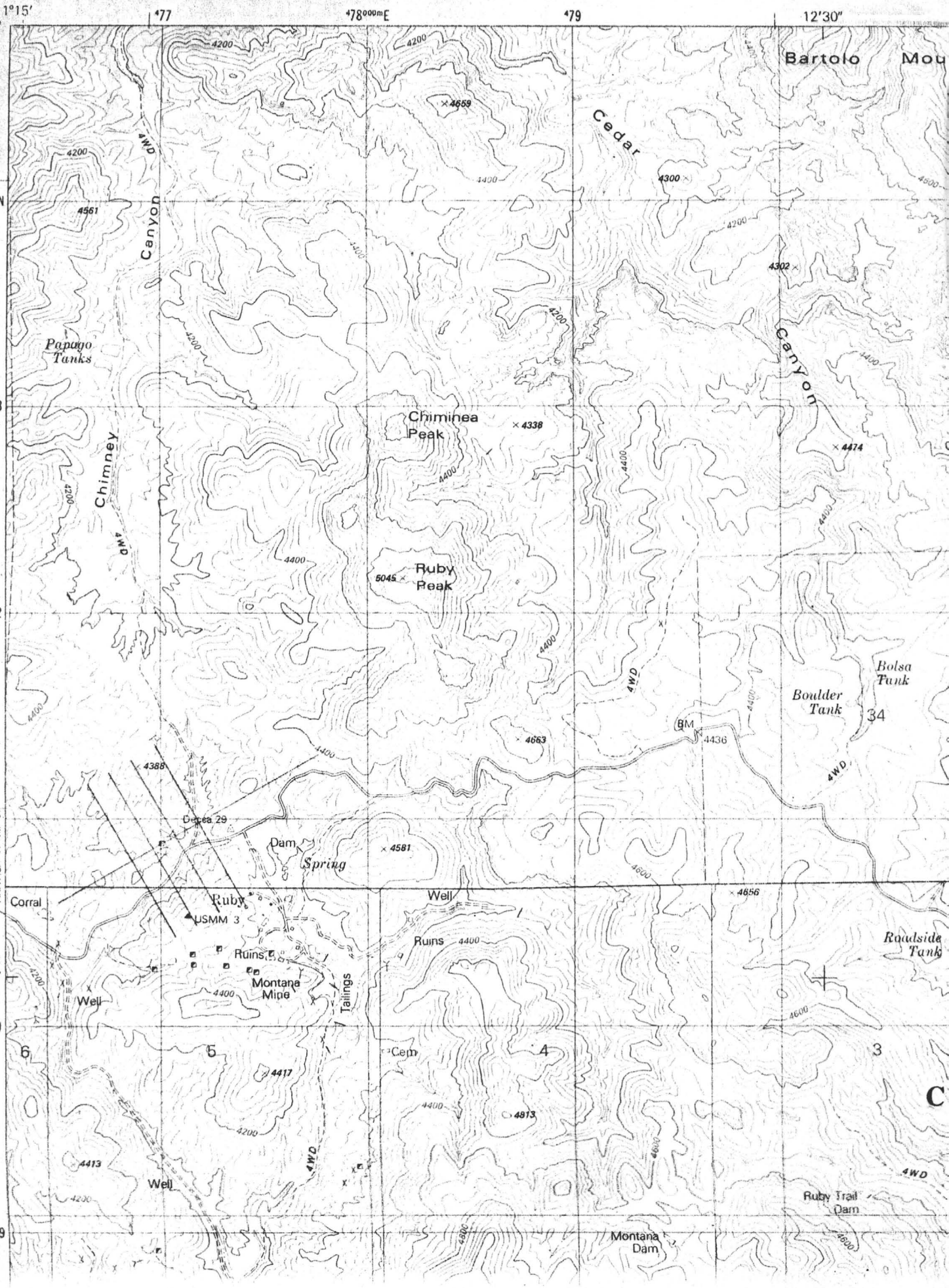
Qal
Ta
Tmp2
Kos
Tmp2
Qal
Tmp3
Ta
4454
Koc
Qal
BM 4281
Kr
Tmp3
Tank
Qal
Kol
BM 4475
DAHO MINE
Jcw
Kos
Jcw
Kos
31
65
Koc
Ts
5
Ruby
USMM 3
BANCR MINE
Qal
Tanks
Kr
Ts
MONTANA MINE
Kr
Jcw
Tb
Koc
Tb
RUBIANA PROSPECT
Koc
Kol
Kr
Ts
Ts
Kr
Kos
Kr
Jcw
Jcw
65
78
Koc
Kol
Kr
Ts
TOP MINE

SP Line 6 NE

NW		SE	
0	0	0	0
2	-1.3	2	-7.3
4	16.7	4	-0.9
6	13.4	6	25.3
8	43.7	8	36.9
10	45.4	10	38.6
12	45.9	12	41.1
14	49.2	14	56.9

3747 III SE (ARIVACA)

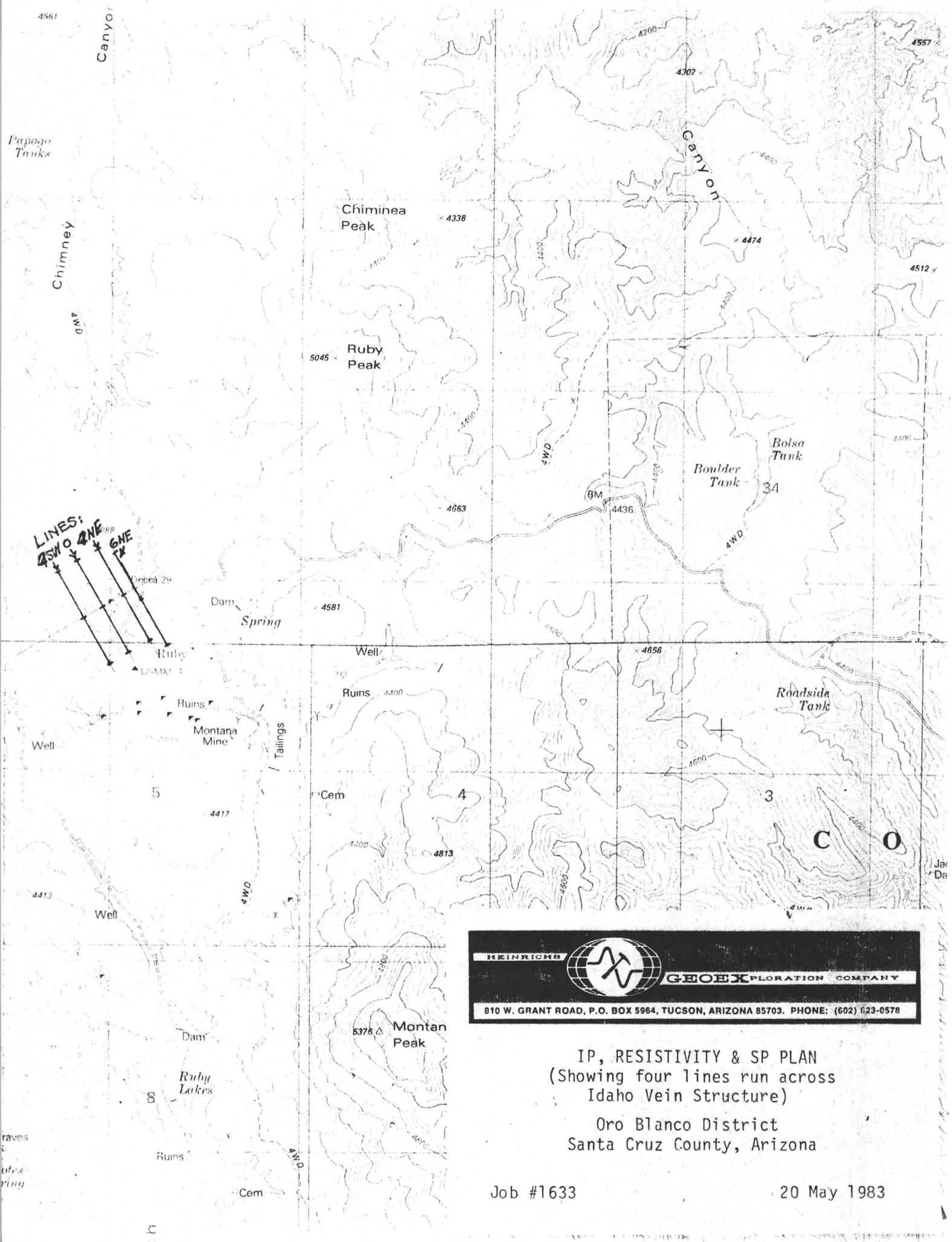
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

3747 III SE (ARIVACA)

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



IP, RESISTIVITY & SP PLAN
(Showing four lines run across
Idaho Vein Structure)

Oro Blanco District
Santa Cruz County, Arizona

Job #1633 20 May 1983

HEINRICHS GEOEXPLORATION CO.

THE NAME OF THE AREA IS: RUBY-IDAHO

LINE NUMBER	PAGE NUMBER	BEARING	A SPACING
6NE	1-6	N30W	200

VOLTAGE(MV)	CURRENT(A)	N	RESISTIVITY	PFE	MCF
92.7	2	1	27.81	.6	21.574973
73.6	2	2	88.32	1.2	13.5869565
234	2	1	70.2	.9	12.8205128
39.1	2	2	46.92	.9	19.1815857
45.1	2	3	135.3	1.7	12.5646711
199	2	1	59.7	.9	15.0753769
53.1	2	2	63.72	1	15.6936598
13.1	2	3	39.3	.9	22.9007634
20.1	2	4	120.6	1.3	10.7794362
411	2	1	123.3	1.3	10.5433901
52.1	2	2	62.52	1.2	19.193858
19.7	2	3	59.1	1.2	20.3045685
5.12	2	4	30.72	.8	26.0416667
10.52	2	5	110.46	1.2	10.8636611
239	2	1	71.7	.8	11.1576011
70.6	2	2	84.72	.8	9.44287063
16.3	2	3	48.9	.8	16.3599182
7.24	2	4	43.44	1.1	25.3222836
2.84	2	5	29.82	.4	13.4138162
5.69	2	6	95.59200001		
1.2	12.5533517				
82.2	2	2	98.64	1	10.1378751
39.9	2	3	119.7	1	8.35421888
10.5	2	4	63	.8	12.6984127
5.03	2	5	52.815	.6	11.360409
1.84	2	6	30.912	.7	22.6449275
36.2	2	3	108.6	1.1	10.1289134
21.4	2	4	128.4	1.2	9.3457944
5.55	2	5	58.275	1	17.1600172
2.76	2	6	46.368	.6	12.9399586
48.8	2	2	58.56	1	17.0765027
88.5	2	1	26.55	.7	26.3653484
302	2	1	90.6	.8	8.83002208
8.28	2	5	86.94000001		
1.3	14.952841				
18.5	2	4	111	1.5	13.5135135
25	2	3	75	1.2	16
71.1	2	2	85.32	1.2	14.0646976
305	2	1	91.5	1	10.9289618
5.31	2	6	89.208	1.4	15.6936598
10.94	2	5	114.87	1.6	13.9287891
13.8	2	4	82.8	1.2	14.4927536
33.2	2	3	99.6	1.3	13.0522088
94.7	2	2	113.64	1.3	11.4396339
849	2	1	254.7	1.7	6.67451904
8.25	2	6	138.6	1.2	8.65800867
9.59	2	5	100.695	1.1	10.9240777
21.3	2	4	127.8	1.3	10.172144
52.2	2	3	156.6	1.4	8.93997445
353	2	2	423.6	1.8	4.24929179
6.92	2	6	116.256	.8	6.88136527
13.9	2	5	145.95	1	6.85166153
30.5	2	4	183	1.2	6.55737705
177	2	3	531	1.8	3.38983051

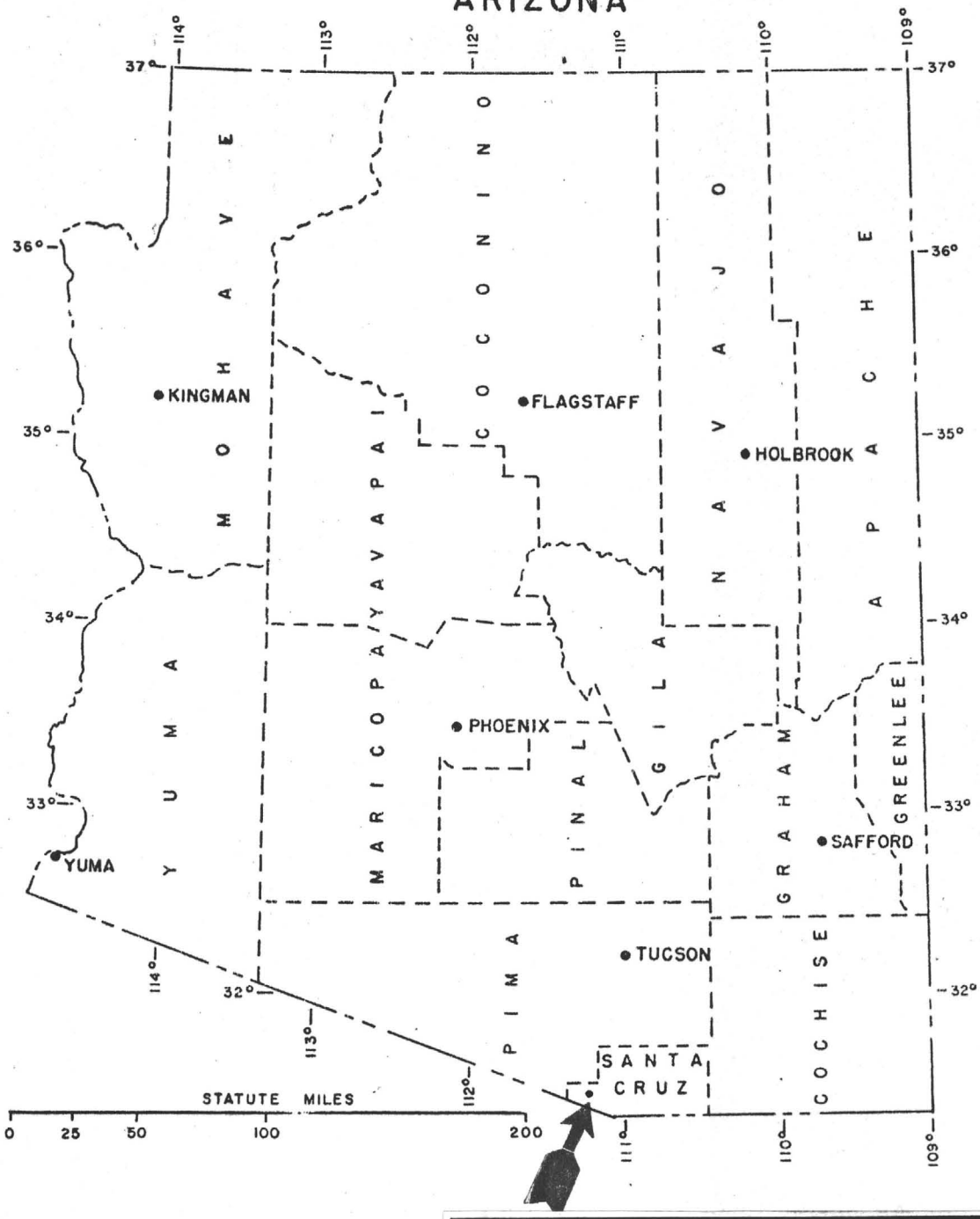
GENERAL LOCATION OF

IDAHO MINE AREA

Oro Blanco District

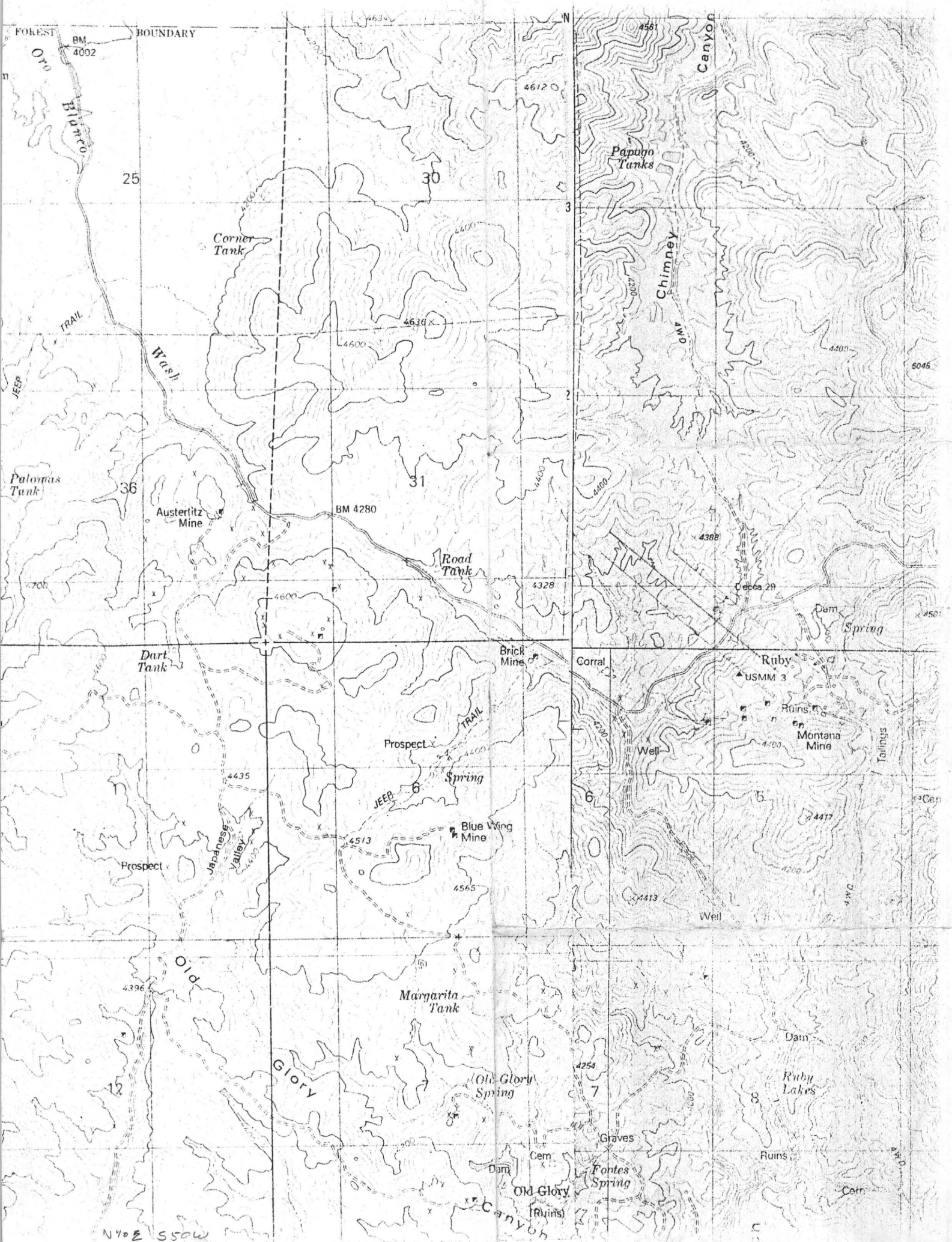
Santa Cruz County, Arizona

ARIZONA

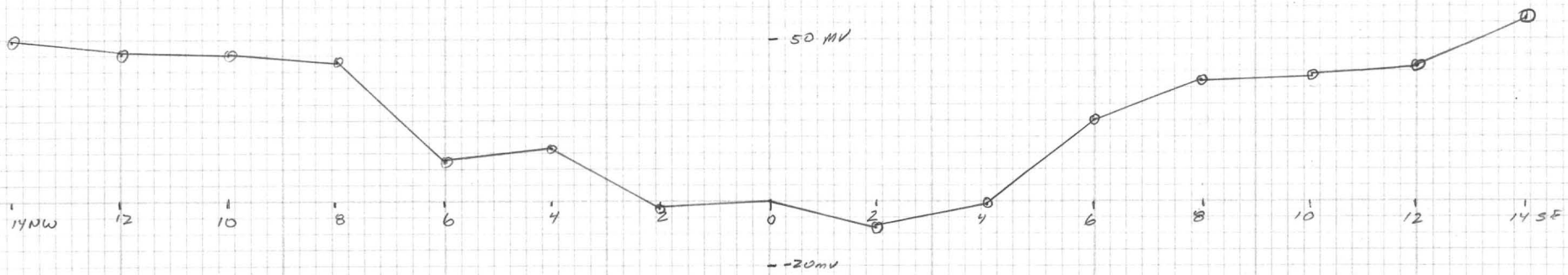


GEOEX JOB #1633

HEINRICHS GEOEXPLORATION COMPANY
810 W. GRANT ROAD, P.O. BOX 5964, TUCSON, ARIZONA 85703. PHONE: (602) 623-0578


FOREST BOUNDARY
BM 4002
Oro Blanco
25
30
Corner Tank
TRAIL
JEEP
Wash
Palomas Tank
36
31
Austerlitz Mine
BM 4280
Road Tank
Dart Tank
Brick Mine
Prospect
TRAIL
Spring
JEEP
6
Blue Wing Mine
Japanese Valley
Prospect
Old Glory
Margarita Tank
Old Glory Spring
Canyon
Cem
Dam
Old Glory (Ruins)
Fontes Spring
Graves
Ruins
Cem
Ruby Lakes
Dam
Ruins
Montana Mine
Tailings
Well
Corral
Ruby
USMM 3
Decca 29
Dam
Spring
Chimney
Canyon
Papago Tanks
4WD
N
3
2
5
7
8
12
4612
4636
4328
4388
4435
4513
4565
4396
4254
4413
4417
4561
5045
N40E 550W

SP Line 6 NE



Econ. Geol. vol. 27 (1932)

Re: Job #1636

GHOST
MAY 12, 1983
BOX 5964 TUCSON, ARIZONA 85703
Phone: (AREA 602) 623-0578

REPORT ON THE AUSTERLITZ MINE
Oro Blanco Mining District
Santa Cruz County, Arizona

INTRODUCTION

The Austerlitz Mine was brought to the attention of in March 1974 by Lyall Lichty who had sampled the property in 1963. At that earlier date persistent gold and silver values were encountered but the grade was too low at 1963 prices to justify continued interest. Lichty showed the property to Paul Eimon and J.K. Jones, and was asked by Eimon to investigate the possibility of an option. On March 26, 1974 an option was signed on the three patented and eight unpatented claims owned by Horton Noon, a rancher in the area. Surrounding land appeared to be open for location so an eight-man crew was mobilized and in two days, March 28 and 29, located 28 claims. An unusually high gold assay was obtained near the edge of the new claims and on April 6 four additional claims were located to protect this discovery. Evidence of other ownership was found in the area and is being investigated.

Five days were spent by J.K. Jones mapping geology and taking additional samples. John Wilson conducted a reconnaissance investigation of other mineral occurrences and a photo-anomaly south of the Austerlitz property.

LOCATION

The property is located in the Oro Blanco Mining District in Santa Cruz County, Arizona, about five miles north of the border with Mexico. The nearest town is the small ranch community of Arivaca in Pima County 10 miles to the northwest by graded dirt road. Nogales lies 35 miles to the southeast by way of a very slow mountain road, and Tucson is 65 miles to the north. Most of the claim group falls in Section 36, T.22S., R.10E., but some claims extend into adjacent sections on the north, east, and south. Elevations range from 4050 feet to 4801 feet.

PROPERTY

Horton E. Noon of Nogales, Arizona owns three patented and eight unpatented mining claims covering approximately 220 acres. Noon has signed an option with Lyall Lichty containing the following provisions.

1. Rent and Royalty. A seven month free period is granted after which payments of $500 per month are required. After Jan. 1, 1976 monthly payments increase to $1,000. All monthly payments are credited against royalties. A royalty of 10% of net smelter returns will be paid on any ore or concentrate shipped to a smelter. In the event gold and/or silver bullion is produced a royalty of 5% will be paid.

2. Work Obligations. Lessee will perform annual assessment work of $800 beginning with the current year. Prior to seven months after signing the contract drilling will be commenced and 1000 feet of hole will be completed in the 12 month period following the initial seven month period. By January 1, 1976, a total of 2500 feet of rotary or core drilling will have been completed.

3. Option to Purchase. Lessee can purchase the property for $1,000,000 by making a down payment of not less than $100,000 or more than 29% of the total remaining after deducting prior payments and royalties, and paying the balance remaining in 10 equal installments.

The lease and option with Noon was obtained by Lyall Lichty in his name in order to simplify the negotiations and take advantage of a prior relationship. Lichty will transfer the lease and option to at no cost.

HISTORY, PRODUCTION

In the 1936 Arizona Metal Production bulletin a total of $90,000 production is credited to the Austerlitz Mine. It seems likely that some early production has not been recorded, and several shipments are known to have been made after 1936.

In 1963 Platoro Corporation drilled, blasted, and shipped five 50-ton samples to the ASARCO smelter at Hayden, Arizona. Results from these samples are listed below.

	Gold oz/ton		Silver oz/ton		Copper %	
Number	Jacobs	ASARCO	Jacobs	ASARCO	Jacobs	ASARCO
1	0.020	0.003	1.05	1.11	0.15	0.09
2	0.015	0.005	1.00	0.91	0.10	0.03
3	0.025	0.045	1.65	1.45	0.26	0.09
4	0.035	0.025	3.15	3.71	1.07	0.90
5	0.030	0.015	1.10	0.82	0.16	0.09
Average:	0.025	0.019	1.59	1.60	0.35	0.24

At 1963 prices this grade was not attractive and Platoro dropped their option on the property. However, at present prices, which for the sake of simplicity are being considered $150.00 per ounce for gold and $5.00 per ounce for silver, the precious metal content of the samples would have a value of from $10.85 to $11.70 depending on which of the two assays are used.

GEOLOGY

Geology of the area is complex and will require more detailed study in order to fully evaluate the features controlling gold-silver-copper mineralization. However, geologic observations and sampling by and other references on the area provide a general geologic picture and some details on the ore occurrences.

Host rock to the mineralization is a metamorphosed rhyolite or dacite volcanic rock that appears to strike northwesterly and dip moderately to the northeast. This volcanic rock is thought to be of Jurassic age and is cut by three distinct, younger intrusive rocks. Oldest of the intrusives is a Jurassic quartz monzonite which occurs as several elongate bodies 1000 to 2000 feet west and southwest of the old mines. About 1000 feet south of the mineralized area is a diorite intrusive one-half mile in diameter that is considered to be Cretaceous in age. A series of west to northwest trending irregular quartz diorite porphyry to quartz monzonite porphyry dikes and plugs of Laramide or early Tertiary age are closely associated with mineralization although no mineralization is known to occur in this rock type. One of the most prominent geologic features is a strong northwest trending, northeast dipping fault situated only a few hundred feet north of the mineralized area and separating the volcanic and intrusive rocks on the south from Cretaceous sedimentary rocks and diorite intrusives on the north. No mineralization is known north of the fault in the Austerlitz Mine area, but two miles to the east on the north side of the fault is the Montana Mine at Ruby, Arizona, which through June 1938 had produced the metals listed below.

oz. Gold	oz. Silver	lb. Copper	lb. Lead	lb. Zinc
36,715	3,058,168	3,529,114	46,022,953	38,976,238

If produced at present prices this metal would have a possible value of about $44,000,000.

In the vicinity of the Austerlitz Mine workings is a northwest trending band of irregular dike and plug-like bodies of quartz monzonite to quartz diorite porphyry about 4000 feet in length and up to 800 feet wide. Mineralization occurs in the altered volcanic rocks immediately adjacent to the intrusives and consists of numerous small irregular quartz veinlets accompanied by variable but generally weak quantities of iron oxides,

pyrite, and locally chalcopyrite, tetrahedrite and galena. Most mining has taken place in localities where this type of mineralization is comparatively intense with the host volcanic rock being brecciated and largely replaced by hydrothermal quartz. Mineralization as exposed at surface is irregular and discontinuous and may be controlled by irregularities in the intrusive contacts. Four of the Platoro 50 ton samples are from this zone and average 0.023 ounces gold, 1.2 ounces silver, and 0.17% copper. At an assumed price of $150 per ounce for gold and $5 per ounce for silver the precious metal contained in this material would have a gross value of $9.45 per ton. Eight hand samples taken during the recent examination representing the same general locus, but with considerable care taken to select only portions of the mineralized zone exhibiting weaker mineralization than in the Platoro samples, average 0.013 ounces gold and 1.14 ounces silver with a value of $7.65 per ton. A conservative estimate of the quantity of this character of material is in the range of 40,000 tons for each foot of depth, although much more detailed mapping and sampling will be required for confirmation.

Several other loci of mineralization occur to the west and northwest of the area of known mineralization, but only a few of the available assays from these zones contain substantial gold and silver values. Copper sulfides and oxides are seen, but mineralization and geologic features do not suggest a porphyry copper environment. Oxidation appears to be shallow except on a few narrow fracture zones, but most surface samples have been leached of any original copper content. It is possible that the gold-silver mineralization will be accompanied by 0.10 to 0.26% copper as indicated by Platoro samples, and that this copper would add significantly to the value of the ore.

CONCLUSIONS

Preliminary investigation indicates the potential for development of 40,000 tons per vertical foot of gold-silver ore containing between $7.65 and $9.45 per ton in gold and silver at a price of $150 per ounce gold and $5 per ounce silver. Copper content may be sufficient to increase the gross value of this ore by $1 or more. If this material can be proven to a depth of 100 feet a total of 4 million tons would be developed which could support a 1000 ton per day open pit operation for about 10 years. Some chance exists for developing much larger tonnages, but this involves high risk and considerable exploration time and expense. A logical first step at the Austerlitz property would be to confirm the suggested 40,000 tons per vertical foot by road building and extensive bulk sampling followed by a minimum amount of drilling for exploration at depth. Such a program would cost about $26,000 and require three months for completion. If results were favorable a much more extensive drilling program costing in the range of $75,000 to $90,000 would be required to prove ore at depth.

This prospect represents a good exploration target for a medium sized, low grade, open pit gold, silver, copper operation that can be tested at relatively low cost.

J.K. Jones

April 19, 1974

JKJ:td

SUGGESTED AUSTERLITZ EXPLORATION COSTS

1.	Road and Drill Site Construction 120 hours bulldozer time plus supplies, transportation, subsistence, $55.50 per hour	$ 6,660
2.	Sampling Reynaldo Sanchez, contractor @ $30 per day, helper @ $20, equipment rental @ $40, supplies @ $30, workmans compensation @ $5 Total $125 per day for 30 days	3,750
3.	Assaying 250 samples for gold, silver, & copper using 3 assay ton basis @ $7.50 each = $1875 Sample bags and other equipment $325	2,200
4.	Claim Validation 32 claims @ $125 each	4,000
5.	Drilling 800 feet rotary drilling @ $6 plus $400 mobilization	5,200
6.	Surveying Supplies and equipment	800
7.	Air Photos Large scale photography, 1" = 100'	1,000
8.	Camp Expense Trailer rental and space in Arivaca @ $300 per month	900
9.	Vehicle Rental 3 months @ $600 per month	1,800
	Total	$26,310

RECOMMENDED AUSTERLITZ PROGRAM

1. Approve $500 expenditure to ~~of~~ obtain large scale air photos that can be enlarged to a scale of 1 inch to 100 feet. John Wilson and J.K. Jones will use these photos to obtain greater geologic detail in order to define size and shape of mineralized bodies.

2. Preliminary metallurgical tests on two 200 pound samples, No. 1197 from site of old bulk sample 3 and 1198 from site of bulk sample 5, are being completed.

3. All samples important to ore reserve determination are being run on a 3 assay ton basis in order to provide more accurate assays in the low grade ranges being encountered. An additional 50 to 100 samples will be taken. ~~and~~ Analysis will cost $250 to $500

4. ~~[illegible]~~ The 32 mining claims staked by Essex ~~will have to~~ should be validated. This work should start no later than June 1 and will cost about $3500. Claim corners also must be erected and ~~[illegible]~~ This can be done by the ~~personnel~~ survey crew.

5. Most of the above suggested work will be completed by the end of June and will provide the ~~necessary~~ information necessary to justify submitting an RFA. This RFA may differ somewhat from the $26,300 estimate previously made as more detailed geologic study and sampling in the interim ~~[illegible]~~ probably will result in a somewhat lessened need for bulk surface samples and an increased need for drill holes.

J.K. Jones
May 3, 1974

FROM WORKSHEET

FLOTATION TEST REPORT

NUMBER: 2126-3

DATE: 5-3-74 SAMPLE NUMBER: AUSTERLITZ 1198

CONDITIONS AND REAGENTS

	Time Mins	% Solids	pH			REAGENTS - LBS PER TON									OBSERVATIONS
						AF25	B#4	PAX	$CuSO_4$						
Grind	22.5	67	6.2			.02	.08								
Conditioner	1.0					.10		.10							
Rougher	1.5														
Scavenger	9.0							.10							Test should be repeated with more
															B#4 and $CuSO_4$

Grind - 62.7% minus 200 mesh - - - Green oxide of copper visible in heads

METALLURGICAL RESULTS

SAMPLE NO.	PRODUCT	WEIGHT		ANALYSES				METAL BALANCE				% DISTRIBUTION			
		GMS	%	% Cu	Au oz/T	Ag oz/T		Cu	Au	Ag		Cu	Au	Ag	
2126-3	Conc.	20.8	2.1	.31	0.91	30.2		.651	1.911	63.42		20.4	73.6	65.6	
2126-3	Tails	977.7	97.9	.026	0.007	.34		2.545	.685	33.29		79.6	26.4	34.4	
Calc.	Heads	998.5	100.0	.032	.026	.97		3.196	2.596	96.71		100.0	100.0	100.0	

FROM WORKSHEET

FLOTATION TEST REPORT

NUMBER: 2126-3

DATE: 5-3-74 SAMPLE NUMBER: AUSTERLITZ 1198

CONDITIONS AND REAGENTS

	Time Mins	% Solids	pH			REAGENTS - LBS PER TON AF25	B#4	PAX	$CuSO_4$						OBSERVATIONS
Grind	22.5	67	6.2			.02	.08								
Conditioner	1.0					.10		.10							
Rougher	1.5														
Scavenger	9.0							.10							Test should be repeated with more
															B#4 and $CuSO_4$

Grind - 62.7% minus 200 mesh - - - Green oxide of copper visible in heads

METALLURGICAL RESULTS

SAMPLE NO.	PRODUCT	WEIGHT GMS	WEIGHT %	ANALYSES % Cu	ANALYSES Au oz/T	ANALYSES Ag oz/T		METAL BALANCE Cu	METAL BALANCE Au	METAL BALANCE Ag		% DISTRIBUTION Cu	% DISTRIBUTION Au	% DISTRIBUTION Ag	
2126-3	Conc.	20.8	2.1	.31	0.91	30.2		.651	1.911	63.42		20.4	73.6	65.6	
2126-3	Tails	977.7	97.9	.026	0.007	.34		2.545	.685	33.29		79.6	26.4	34.4	
Calc.	Heads	998.5	100.0	.032	.026	.97		3.196	2.596	96.71		100.0	100.0	100.0	

FROM WORKSHEET

FLOTATION TEST REPORT

NUMBER: 2126-2

DATE: 5-3-74 SAMPLE NUMBER: AUSTERLITZ 1197

CONDITIONS AND REAGENTS

	Time Mins	% Solids	pH			REAGENTS - LBS PER TON									OBSERVATIONS
						AF25	B#4	PAX	$CuSO_4$						
Grind	27.5	67	6.1			.02	.08								
Conditioner	3.0								0.5						
Rougher	1.5					.10		.10							
Scavenger	9.0							.10							B#4 should be doubled to 0.16#/T.

Grind - 64.1% minus 200 mesh

No visible copper oxide minerals

METALLURGICAL RESULTS

SAMPLE NO.	PRODUCT	WEIGHT		ANALYSES				METAL BALANCE				% DISTRIBUTION			
		GMS	%	% Cu	Au oz/T	Ag oz/T		Cu	Au	Ag		Cu	Au	Ag	
2126-2	Conc.	31.3	3.1	1.95	1.27	39.31		6.045	3.937	121.86		83.9	87.1	75.9	
2126-2	Tails	968.8	96.9	0.012	.006	0.40		1.163	.581	38.76		16.1	12.9	24.1	
Calc.	Heads	1000.1	100.0	0.072	.045	1.61		7.208	4.518	160.62		100.0	100.0	100.0	

FROM WORKSHEET

FLOTATION TEST REPORT

NUMBER: 2126-2

DATE: 5-3-74 SAMPLE NUMBER: AUSTERLITZ 1197

CONDITIONS AND REAGENTS

	Time Mins	% Solids	pH			REAGENTS - LBS PER TON									OBSERVATIONS
						AF25	B#4	PAX	$CuSO_4$						
Grind	27.5	67	6.1			.02	.08								
Conditioner	3.0								0.5						
Rougher	1.5					.10		.10							
Scavenger	9.0							.10							B#4 should be doubled to 0.16#/T.

Grind - 64.1% minus 200 mesh

No visible copper oxide minerals

METALLURGICAL RESULTS

SAMPLE NO.	PRODUCT	WEIGHT		ANALYSES				METAL BALANCE				% DISTRIBUTION			
		GMS	%	% Cu	Au oz/T	Ag oz/T		Cu	Au	Ag		Cu	Au	Ag	
2126-2	Conc.	31.3	3.1	1.95	1.27	39.31		6.045	3.937	121.86		83.9	87.1	75.9	
2126-2	Tails	968.8	96.9	0.012	.006	0.40		1.163	.581	38.76		16.1	12.9	24.1	
Calc.	Heads	1000.1	100.0	0.072	.045	1.61		7.208	4.518	160.62		100.0	100.0	100.0	

Sample Number	Description	Oz. Gold	Oz. Silver	% Copper	Value per ton gold @ $150	Value per ton silver @ $5	Gross Value	Comment
1	50 ton bulk sample	0.020	1.05	0.15	$ 3.00	$ 5.25	$ 8.25	
2	" " " "	0.015	1.00	0.10	2.25	5.00	7.25	
3	" " " "	0.025	1.65	0.26	3.75	8.25	12.00	Samples taken by Platoro Co
4	" " " "	0.035	3.15	1.07	5.25	15.75	21.00	and shipped to ASARCO's Ha
5	" " " "	0.030	1.10	0.16	4.50	5.50	10.00	
1151	Specimens from small stockpile	0.59	5.0		88.50	25.00	113.50	High grade ore on dump of H
1153	Chip sample of small outcrop	trace	0.1		-0-	0.50	0.50	Weak manganese stain.
1154	5.0 ft chip of outcrop	0.17	0.7		25.50	3.50	29.00	Good iron oxide.
1155	Grab	0.06	0.6	0.02	9.00	3.00	12.00	Altered volcanics north of st
1156	"	0.03	0.5	0.02	4.50	2.50	7.00	" " " "
1157	"	0.03	0.5	0.09	4.50	2.50	7.00	Iron stained mine dump, som
1163	Chip of 10 ft square outcrop	0.02	0.7		3.00	3.50	6.50	Weak quartz veinlets and iro
1164	Chip of 3 ft square outcrop	0.02	0.5		3.00	2.50	5.50	" " " " "
1165	3.0 ft chip of outcrop	0.005	0.8		0.75	4.00	4.75	Fair quartz veinlets, weak ir
1166	5.0 ft " " "	0.01	1.0		1.50	5.00	6.50	Represents at least 100 ft. w
1167	Chip of 2 ft by 3 ft outcrop	0.02	1.4		3.00	7.00	10.00	
1168	Grab of est. 5 ton stockpile	0.22	7.3		33.00	36.50	69.50	Breccia, abundant iron oxide
1169	Grab of est. 25 ton stockpile	0.02	1.4		3.00	7.00	10.00	Massive white quartz, some
1170	4.0 ft vertical chip of outcrop	0.01	0.7		1.50	3.50	5.00	May represent 50 to 100 ft. t
1171	Grab of outcrop	0.01	0.8		1.50	4.00	5.50	Abundant quartz veinlets, litt
1172	Grab of dump of shaft	0.01	3.2		1.50	16.00	17.50	Very weak quartz and pyrite.
1173	Grab of outcrop in gulch	trace	0.25		-0-	1.25	1.25	Moderate iron oxides.
1174	" " " " "	0.005	0.15		0.75	0.75	1.50	Altered volcanics, fair iron c
1175	5.0 ft chip sample	0.005	0.35		0.75	1.75	2.50	Iron stained bank exposed in
1176	4.0 ft chip sample	trace	0.20		-0-	1.00	1.00	Fair iron oxides and quartz v
1177	7.0 ft chip sample	0.05	5.35		7.50	26.75	34.25	South wall of bulk sample loc
1178	5.0 ft chip sample of outcrop	trace	0.15		-0-	0.75	0.75	Strong quartz veinlets, very
1179	Grab of dump of tunnel	trace	0.30		-0-	1.50	1.50	Minor quartz veinlets and pyr
1180	7.0 ft horizontal chip sample	0.005	0.35		0.75	1.75	2.50	Good iron oxides, traces copp
1181	5.0 ft chip sample of outcrop	0.005	0.15		0.75	0.75	1.50	Broken, weak iron oxides.
1182	3.5 ft vertical chip	0.03	0.20		4.50	1.00	5.50	Good quartz veinlets and iron
1183	4.0 ft vertical chip	0.01	0.15		1.50	0.75	2.25	Moderate quartz, iron oxides
1184	6.0 ft vertical chip of outcrop	trace	0.10		-0-	0.50	0.50	Weak to moderate iron oxides
1185	Grab of 6 ft high outcrop	trace	0.15		-0-	0.75	0.75	Weak quartz and iron oxides.
1186	4.5 ft chip of outcrop	0.005	0.20		0.75	1.00	1.75	Iron stained, dark colored ou

SP Plot

LINE 4NE

0 —	0	0 —	0
ZNW —	-33.6	ZSE	-0.8
4	-21.9	4	14.9
6	-23.6	6	14.9
8	-14.6	8	18.5
10	-10.1	10	22.7
12	-15.0	12	52.8
14	-0.2	14	39.5

LINE 4SW

0 —	0	0 —	0
ZNW	-1.3	ZSE	-9.5
4	21.9	4	-0.3
6	21.8	6	-2.8
8	24.8	8	-9.2
10	35.3	10	-25.4
12	67.7	12	-22.2
14	64.8	14	-22.8

LINE 0

0 —	0	0 —	0
Z NW	18.8	Z SE	21.6
4	24.2	4	30.1
6	21.2	6	39.3
8	29.4	8	34.3
10	39.6	10	42.9
12	45.4	12	64.3
14	40.1	14	83.8

MAY - 8 1983
GEOEX #1633

HEINRICHS GEOEXPLORATION CO.
THE NAME OF THE AREA IS: RUBY-IDAHO

LINE NUMBER	PAGE NUMBER	BEARING	A SPACING
Ø	1	N3ØW	2ØØ

VOLTAGE(MV)	CURRENT(A)	N
254	2	1
5Ø.65	2	2
359	2	1
78.4	2	2
24.5	2	3
211	2	1
74.4	2	2
31.6	2	3
11.8	2	4

RESISTIVTY	PFE	MCF
76.2	.8	1Ø.4986877
6Ø.78	1	16.4527ØØ5
1Ø7.7	1	9.28ØØ5ØØ7
94.ØØ8	.6	6.37755ØØ2
73.5	.9	12.244898
63.3	.6	9.47867298
89.28	1	11.2ØØ7168
94.8	.8	8.43881856
7Ø.8	1	14.1242938

HEINRICHS GEOEXPLORATION CO.

THE NAME OF THE AREA IS: RUBY-IDAHO

MAY - 8 1983

GEOEX #1033

LINE NUMBER	PAGE NUMBER	BEARING	A SPACING
Ø	2 AND 3	N3ØW	2ØØ

VOLTAGE(MV)	CURRENT(A)	N
357	2	1
57.7	2	2
28.5	2	3
15.3	2	4
6.13	2	5
386	2	1
116	2	2
3Ø.8	2	3
18.3	2	4
11.6	2	5
5.Ø5	2	6
74.4	2	2
33.7	2	3
11.8	2	4
7.42	2	5
5.Ø9	2	6
32.7	2	3
17.1	2	4
6.41	2	5
4.36	2	6

RESISTIVTY	PFE	MCF
1Ø7.1	.7	6.53594771
69.24	.8	11.554Ø15
85.5	1.1	12.8654971
91.8	.8	8.71459696
64.365	.8	12.4291152
115.8	.6	5.18134715
139.2	.6	4.31Ø34483
92.4	.7	7.57575758
1Ø9.8	1	9.1Ø746813
121.8	.7	5.74712644
84.84	.9	1Ø.6Ø82Ø37
89.28	1.2	13.44Ø86Ø2
1Ø1.1	1.2	11.8694362
7Ø.8	1.4	19.774Ø113
77.91	1.8	23.1Ø35811
85.512ØØØ1	1.3	15.2Ø25447
98.1	1.1	11.213Ø479
1Ø2.6	1	9.7465887
67.3Ø5	1.1	16.3435Ø9
73.248	.9	12.287Ø249

HEINRICHS GEOEXPLORATION CO.

THE NAME OF THE AREA IS: RUBY-IDAHO

MAY - 8 1983

GEOEX #1633

LINE NUMBER	PAGE NUMBER	BEARING	A SPACING
Ø	4, 5, and 6	N3ØW	2ØØ

VOLTAGE(MV)	CURRENT(A)	N
75	2	2
265	2	1
162	2	1
9.23	2	5
15.5	2	4
23	2	3
42	2	2
169	2	1
8.25	2	6
12.9	2	5
17.1	2	4
27.3	2	3
74	2	2
2Ø1	2	1
4.54	2	6
5.78	2	5
8.77	2	4
21.8	2	3
44.5	2	2
3.53	2	6
5.13	2	5
11.9	2	4
2Ø.6	2	3

RESISTIVTY	PFE	MCF
9Ø	1.1	12.2222222
79.5	.8	1Ø.Ø628931
48.6	.7	14.4Ø32922
96.915	.8	8.25465615
93	.9	9.67741936
69	1	14.4927536
5Ø.4	1.1	21.8253968
5Ø.7	1	19.7238659
138.6	1.2	8.658ØØ867
135.45	1	7.38279Ø9
1Ø2.6	1.1	1Ø.7212476
81.9	1.2	14.652Ø147
88.8	1.3	14.6396396
6Ø.3	1.1	18.2421227
76.272ØØØ1	.7	9.17767988
6Ø.69	.9	14.8294612
52.62	1.1	2Ø.9Ø4599
65.4	1.1	16.8195719
53.4	1.1	2Ø.5992519
59.3Ø4	1	16.862269
53.865	1.2	22.277917
71.4	1.2	16.8Ø67227
61.8	1.3	21.Ø355987

HEINRICHS GEOEXPLORATION CO.

THE NAME OF THE AREA IS: RUBY-IDAHO

LINE NUMBER	PAGE NUMBER	BEARING	A SPACING
4SW	1-6	N30W	200

VOLTAGE(MV)	CURRENT(A)	N	RESISTIVITY	PFE	MCF
177	2	1	53.1	.7	13.1826742
65.5	2	2	78.6	1.1	13.99491009
204	2	1	61.2	.5	8.16993464
45.4	2	2	54.48	.7	12.8487518
23.5	2	3	70.5	.7	9.92907802
177	2	1	53.1	.5	9.41619586
36.35	2	2	43.62	.8	18.34021009
13.65	2	3	40.95	.6	14.6520147
7.78	2	4	46.68	.7	14.9957155
550	2	1	165	.5	3.03030303
127	2	2	152.4	.9	5.90551181
36.5	2	3	109.5	1	9.13242009
16.7	2	4	100.2	1	9.98003992
10.58	2	5	111.09	1	9.00171033
193	2	1	57.9	.9	15.5440414
59	2	2	70.8	.9	12.7118644
27.9	2	3	83.7	1.1	13.1421744
9.7	2	4	58.2	1	17.1821306
5.03	2	5	52.815	1	18.934015
3.47	2	6	58.296	1.1	18.8692192
41.6	2	2	49.92	.7	14.0224359
21.4	2	3	64.2	.4	6.2305296
13.5	2	4	81	.9	11.1111111
5.37	2	5	56.385	.8	14.1881706
3.16	2	6	53.088	.9	16.9529837
15	2	3	45	.8	17.7777778
9.79	2	4	58.74	.6	10.2145046
7.15	2	5	75.075	.8	10.6560107
3.17	2	6	53.256	.8	15.0217816
34.2	2	2	41.04	.9	21.9298246
170	2	1	51	.8	15.6862745
297	2	1	89.1	.7	7.85634119
5.81	2	5	61.005	.8	13.1136792
13	2	4	78	.8	10.2564103
24.9	2	3	74.7	.9	12.0481928
53	2	2	63.6	.9	14.1509434
159	2	1	47.7	.9	18.8679245
3.07	2	6	51.576	1.3	25.2055219
6.61	2	5	69.405	.7	10.0857287
11.9	2	4	71.4	.9	12.605042
19.9	2	3	59.7	.9	15.0753769
40.2	2	2	48.24	.9	18.6567164
268	2	1	80.4	.8	9.95024876
3.58	2	6	60.144	.7	11.6387337
5.98	2	5	62.79	.7	11.148272
8.87	2	4	53.22	.6	11.2739572
16.3	2	3	48.9	1	20.4498978
71	2	2	85.2	1	11.7370892
6.6	2	6	110.88	1.1	9.92063493
9	2	5	94.5	.9	9.52380953
15.5	2	4	93	1.2	12.9032258
53.4	2	3	160.2	1.1	6.86641698

HEINRICHS GEOEXPLORATION CO.

THE NAME OF THE AREA IS: RUBY-IDAHO

LINE NUMBER	PAGE NUMBER	BEARING	A SPACING
4NE	1-6	N30W	200

VOLTAGE(MV)	CURRENT(A)	N	RESISTIVITY	PFE	MCF
186	2	1	55.8	1	17.921147
47.4	2	2	56.88	1.6	28.1293952
570	2	1	171	1.6	9.35672514
58.4	2	2	70.08	.9	12.8424657
27.2	2	3	81.6	1.1	13.4803922
239	2	1	71.7	1.3	18.1311018
75	2	2	90	1.3	14.4444444
13.9	2	3	41.7	.8	19.1846523
8.79	2	4	52.74	1.4	26.5453166
608	2	1	182.4	1.2	6.57894737
94.1	2	2	112.92	1.2	10.6269926
40.9	2	3	122.7	.9	7.33496332
9.26	2	4	55.56	.5	8.99928006
7.21	2	5	75.705	.9	11.8882505
217	2	1	65.1	.9	13.8248848
87.6	2	2	105.12	.8	7.61035008
26.2	2	3	78.6	1.1	13.9949109
14.8	2	4	88.8	.7	7.88288288
4.2	2	5	44.1	.5	11.3378685
3.96	2	6	66.528	1	15.031265
77.4	2	2	92.88	1	10.7665805
49.5	2	3	148.5	.7	4.71380472
17.8	2	4	106.8	.9	8.4269663
10.9	2	5	114.45	.6	5.24246396
3.44	2	6	57.792	.5	8.6517165
44.2	2	3	132.6	1.3	9.80392157
33.1	2	4	198.6	1.1	5.5387714
12.8	2	5	134.4	1.3	9.67261904
8.26	2	6	138.768	1.1	7.92689958
73.2	2	2	87.84	1.3	14.7996357
189	2	1	56.7	1	17.6366843
259	2	1	77.7	1	12.8700129
6.47	2	5	67.935	1.2	17.6639435
17.5	2	4	105	1.3	12.3809524
24	2	3	72	1.7	23.6111111
85.7	2	2	102.84	1.4	13.61338
308	2	1	92.4	.8	8.65800867
3.39	2	6	56.952	1.4	24.5821042
7.83	2	5	82.215	1.2	14.5958767
9.9	2	4	59.4	1.2	20.2020202
29.5	2	3	88.5	1.3	14.6892655
74.1	2	2	88.92	1.4	15.7444894
782	2	1	234.6	1.4	5.96760443
5.47	2	6	91.896	1.2	13.0582397
6.36	2	5	66.78	1.5	22.4618149
17	2	4	102	1.3	12.745098
35.2	2	3	105.6	1.4	13.2575758
135	1	2	324	1.8	5.55555556
5.7	2	6	95.76	1	10.4427736
14	2	5	147	1	6.80272109
24.8	2	4	148.8	1.3	8.73655914
149	2	3	447	1.5	3.3557047

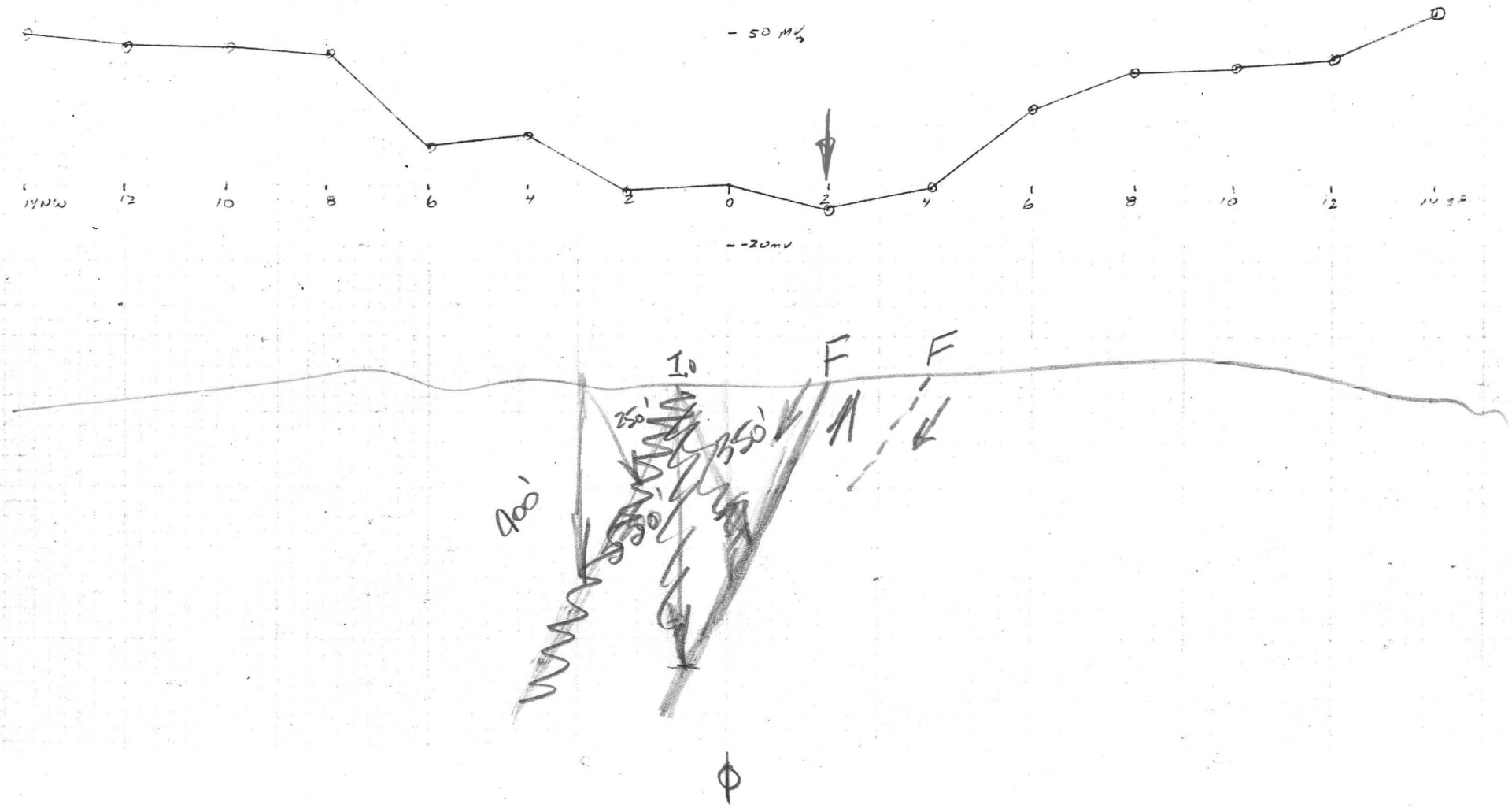
HEINRICHS GEOEXPLORATION CO.

THE NAME OF THE AREA IS: RUBY-IDAHO

LINE NUMBER	PAGE NUMBER	BEARING	A SPACING
4NE	1-6	N30W	200

VOLTAGE(MV)	CURRENT(A)	N	RESISTIVITY	PFE	MCF
186	2	1	55.8	1	17.921147
47.4	2	2	56.88	1.6	28.1293952
570	2	1	171	1.6	9.35672514
58.4	2	2	70.08	.9	12.8424657
27.2	2	3	81.6	1.1	13.4803922
239	2	1	71.7	1.3	18.1311018
75	2	2	90	1.3	14.4444444
13.9	2	3	41.7	.8	19.1846523
8.79	2	4	52.74	1.4	26.5453166
608	2	1	182.4	1.2	6.57894737
94.1	2	2	112.92	1.2	10.6269926
40.9	2	3	122.7	.9	7.33496332
9.26	2	4	55.56	.5	8.99928006
7.21	2	5	75.705	.9	11.8882505
217	2	1	65.1	.9	13.8248848
87.6	2	2	105.12	.8	7.61035008
26.2	2	3	78.6	1.1	13.9949109
14.8	2	4	88.8	.7	7.88288288
4.2	2	5	44.1	.5	11.3378685
3.96	2	6	66.528	1	15.031265
77.4	2	2	92.88	1	10.7665805
49.5	2	3	148.5	.7	4.71380472
17.8	2	4	106.8	.9	8.4269663
10.9	2	5	114.45	.6	5.24246396
3.44	2	6	57.792	.5	8.6517165
44.2	2	3	132.6	1.3	9.80392157
33.1	2	4	198.6	1.1	5.5387714
12.8	2	5	134.4	1.3	9.67261904
8.26	2	6	138.768	1.1	7.92689958
73.2	2	2	87.84	1.3	14.7996357
189	2	1	56.7	1	17.6366843
259	2	1	77.7	1	12.8700129
6.47	2	5	67.935	1.2	17.6639435
17.5	2	4	105	1.3	12.3809524
24	2	3	72	1.7	23.6111111
85.7	2	2	102.84	1.4	13.61338
308	2	1	92.4	.8	8.65800867
3.39	2	6	56.952	1.4	24.5821042
7.83	2	5	82.215	1.2	14.5958767
9.9	2	4	59.4	1.2	20.2020202
29.5	2	3	88.5	1.3	14.6892655
74.1	2	2	88.92	1.4	15.7444894
782	2	1	234.6	1.4	5.96760443
5.47	2	6	91.896	1.2	13.0582397
6.36	2	5	66.78	1.5	22.4618149
17	2	4	102	1.3	12.745098
35.2	2	3	105.6	1.4	13.2575758
135	1	2	324	1.8	5.55555556
5.7	2	6	95.76	1	10.4427736
14	2	5	147	1	6.80272109
24.8	2	4	148.8	1.3	8.73655914
149	2	3	447	1.5	3.3557047

SP LINE 6 NE



HEINRICHS GEOEXPLORATION COMPANY

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

May 19, 1983

Ord Silver Mines, Ltd.
Arivaca Silver Mines Ltd.
P.O. Box 305
Arivaca AZ 85601

Attention: Mr. Duane Arnold
Mine Engineer

Supplemental Work Proposal
GEOEX #1641, Proposed exploration method test program Ruby-Brick mine areas and vicinity
Santa Cruz County, Arizona

Gentlemen:

At the request made by Mr. Robert Moore during the meeting held in our office on 13 May 1983, we submit the following proposal:

Subject to our work load at the time, and within approximately two to three weeks or less after your request for us to proceed, GEOEX will supply all necessary personnel and equipment and conduct a test survey of certain selected methods over known ore mineralization at the Brick mine and the Montana mine.

This work would be almost identical to that discussed in our report of the IP-Resistivity and SP work just completed on the Idaho mine which assumed that more work might immediately be required there - even though such work en toto, being solely done on the Idaho, was not our primary recommendation. Actually, our primary recommendation is to do such work over known ore primarily.

Because the exact scope of the work will be somewhat dependent on the results as we go along, it is difficult to estimate exact costs but, we believe we can conduct an adequate and definitive test of a preliminary nature for about $7500.00, including magnetic, EM and geochem traverses, and some SP more detailed than that already done on the Idaho but, not including any IP. IP costs can be gauged from the work just completed which is roughly $4,000 per profile mile of plotted subsurface data and that amount should be about right for one spread each over the Montana and the Brick. At this point we need more detailed information and consideration to decide the dipole spacing on these two spreads but they would be no less than 100' (at the Brick) and no more than 500' (at the Montana).

A little time, about $2500 worth,should also be spent with the colored aerial photos and in other concurrent geological matters which have already come up and will continue to arise. This includes such things as following up

the significance of the gossan float noted while running the easternmost IP spread on the Idaho. In terms of total efficiency and maximum benefit to the project, our experience indicates that we can usually handle such geological matters with our own personnel better than any other way. This is because we are used to successfully bridging the correlating interfaces between geology, geophysics and geochemistry which always enhances the chances of success of the ore finding process.

Such consulting work would be done at the rate of $25.00 per hour per person, plus expenses as outlined in our previous proposal letter to you of 2 May 1983. Otherwise, charges would be on the same basis as presented in that letter.

Depending on the total anticipated cost of the next assignment you authorize, an advance of one-third to one-half the amount will serve as our notice from you to proceed accordingly.

If this proposal correctly reflects the understanding between us and meets with your approval, for our mutual convenience such may be indicated by executing as provided below on the duplicate provided and returning same to us.

Heinrichs GEOEXploration Co. Inc.

Walter E. Heinrichs, Jr., Pres.
Geological Engr. - Geophysicist
P.E. & C.P.G.S.

Approved and accepted _____
Date

For: Arivaca Silver Mines, Ltd.
Ord Silver Mines, Ltd.

By: _____
Signature

_____
Title

WEH:mt

HEINRICHS GEOEXPLORATION COMPANY

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

May 2, 1983

Ord Silver Mines, Inc.
Arivaca Silver Mines Ltd.
P.O. Box 305
Arivaca, AZ 85601

Re: GEOEX #1633 Proposed Preliminary Geophysical Survey - Idaho Mine and vicinity - Santa Cruz County, ARIZONA

Attention: Mr. Duane Arnold, Engineer

Gentlemen:

Per the conference held with your Mr. Arnold and consulting geologist David C. Mathewson in our Tucson office on 29 April we have been requested by Mr. Arnold to furnish complete personnel and equipment and to conduct a preliminary reconnaissance Induced Polarization (I.P.) survey across the Idaho Vein structure which you presently hold under a short term option.

A minimum of three lines utilizing 200' dipoles to achieve a maximum theoretical penetration depth of 400 feet at 6n separation will be run. Seven sending electrode collinear arrays will be initially employed using GEOEX Mark 7 multiple frequency or equivalent instrumentation. A minimum three man field crew will be required and one vehicle. The crew may commute or utilize motel facilities in Nogales. Travel time from Tucson to job site is estimated at 1.75 hours one way.

Normally, GEOEX standard policy relates to an average 50 hour week consisting of five ten hour days. However, on short assignments like this one the crew will work Saturday and may work Sunday on occasions.

Charges are based on a basic three man crew including complete instruments and accessories at $55.00 per crew working hour up to 40 hours per seven day period from Sunday through Saturday. An additional 30% per hour will be charged for crew work over 40 hours in any given week.

Vehicles are charged at $40.00 per day and $0.40 per mile per vehicle.

Data compilation, reduction, drafting, etc., are charged at $20.00 per man hour. Supervision, interpretation and report are $35.00 per man hour. Directly job incidental expenses are extra and such directly incidental expendable supplies and expenses are charged at 120% of our invoiced or payroll cost except for per diem.

Per diem charges for personnel when not commuting to and from Tucson each day are $40.00 per man day or at cost whichever is greater.

Approximately four days field work are estimated to be required to run the three spreads and at least one week additional for a final finished report. Preliminary field data plots are usually available within a day or two after field work conclusion. Such data plots are also commonly available periodically as the field work progresses and as may be needed for planning purposes. This production estimate is based on reported vehicle accessibility to each line, that each line will be marked along a designated base line and no brushing will be needed.

Total cost of this preliminary phase is estimated about $4500.00 including final report. Data will include resistivity and self potential as well as I.P. Although you have not requested it, we do recommend that you consider some test scintillation and magnetic readings being taken along the IP profiles. Reasoning for this is that some of the Montana Mine zinc ore reportedly was radioactive, usually magnetics will give at least some broad rock type and/or sub-surface structural data and both methods are relatively inexpensive.

Customarily, we request an advance of one-half the estimated total costs on short jobs - in this case $2250.00. A statement in this amount is herewith submitted. This will be allocated against a subsequent detailed billing or interim billings to be submitted periodically and/or at time of final report. Receipt of this amount will serve as your notice to us to proceed.

Today we received underground geological maps of the Brick Idaho mines, a surface geology of the Idaho mine vein structure (all black line prints) and five U.S.G.S. 7½ minute quadrangle maps of the area. These will be used for base map purposes for the geophysical work.

If this proposal correctly reflects the understanding between us and meets with your approval, for our mutual convenience such may be indicated by executing as provided below on the duplicate provided and returning same to us.

Approved and accepted: 5/4/83
Date

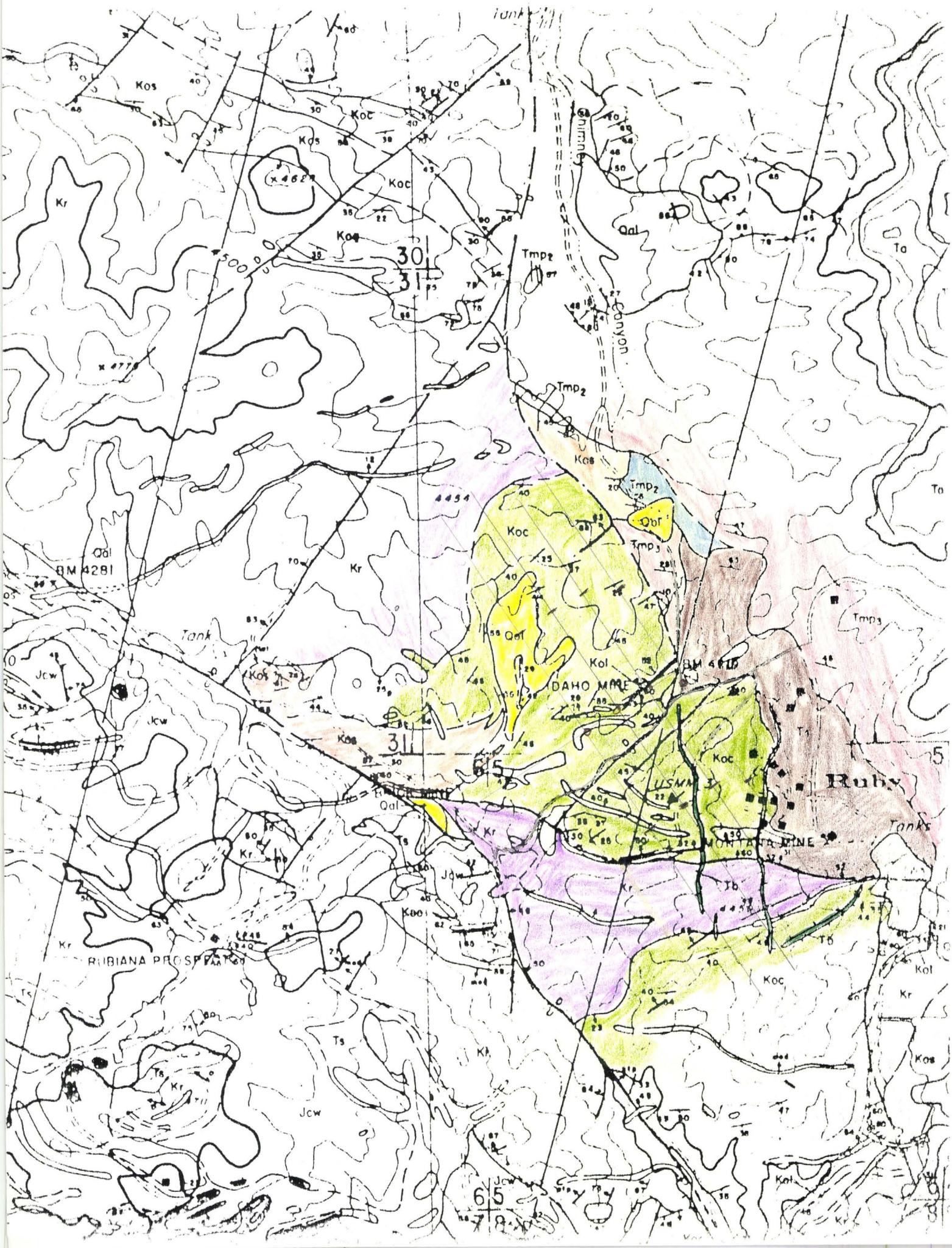
For: Arivaca Silver Mines Ltd.
Ord Silver Mines, Inc.

By: Duane D. Renoel
Title: mine Engineer

Heinrichs GEOExploration Co., Inc.

Walter E. Heinrichs, Jr., Pres.
Geological Engr. - Geophysicist
P.E. & C.P.G.

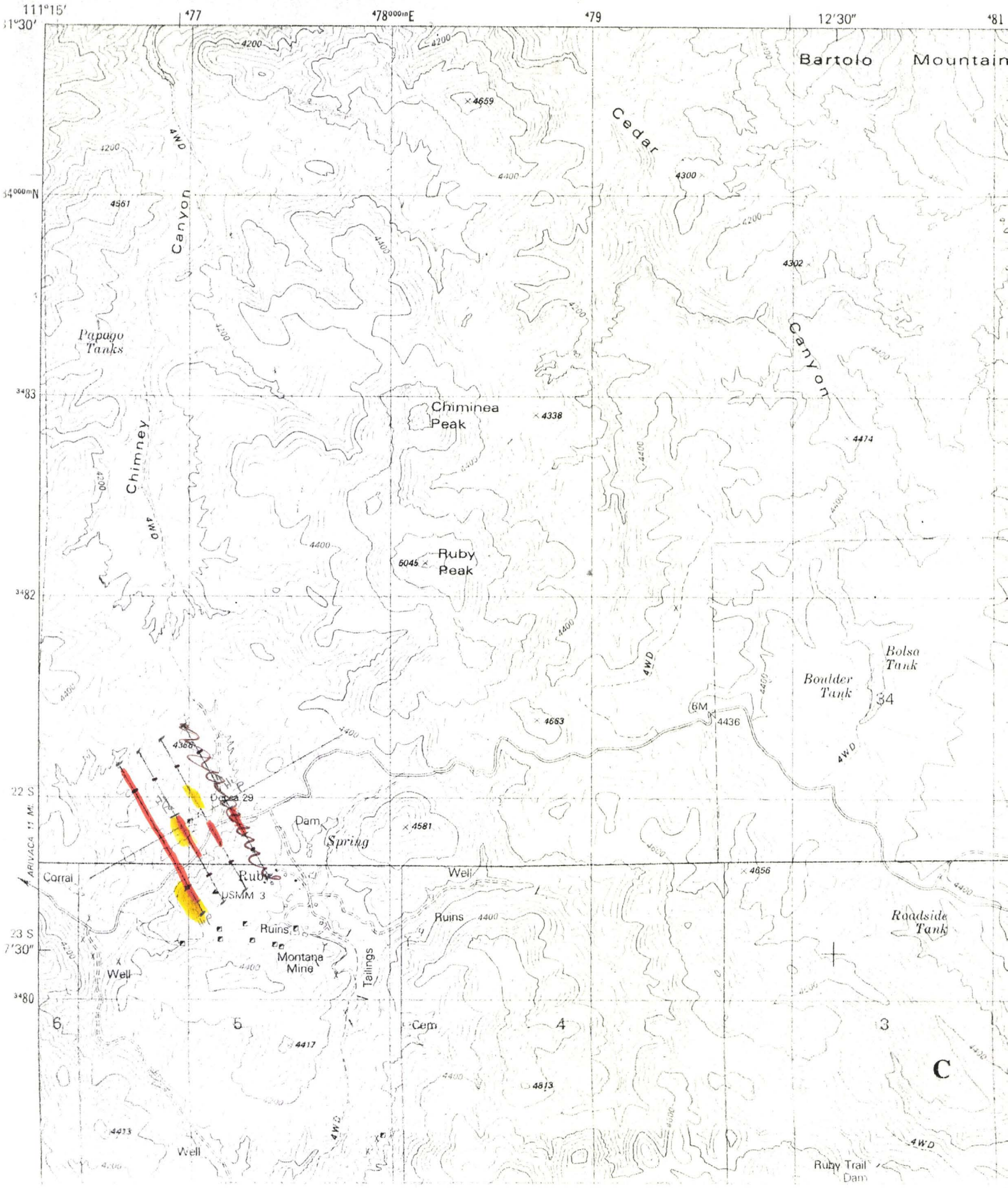
WEH:mt
Enclosures: 2


Tank
Kos
Koc
Kos
Koc
Kos
Kr
Qal
Tmp2
Canyon
Tmp2
Kos
Tmp2
Qbr
Tmp3
Koc
Kr
Qal
BM 4281
Tank
Qal
Kol
DAHO MINE
BM 4
Tmp3
Jcw
Kos
Koc
USMN
Ruby
Tanks
Qal
MONTANA MINE
Ts
Kr
Jcw
Koc
Tb
Kr
RUBIANA PROSPECT
Koc
Kol
Kr
Ts
Kr
Jcw
Kos
Kol
Kr

sp low

Pa low

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



HEINRICHS GEOEXPLORATION COMPANY

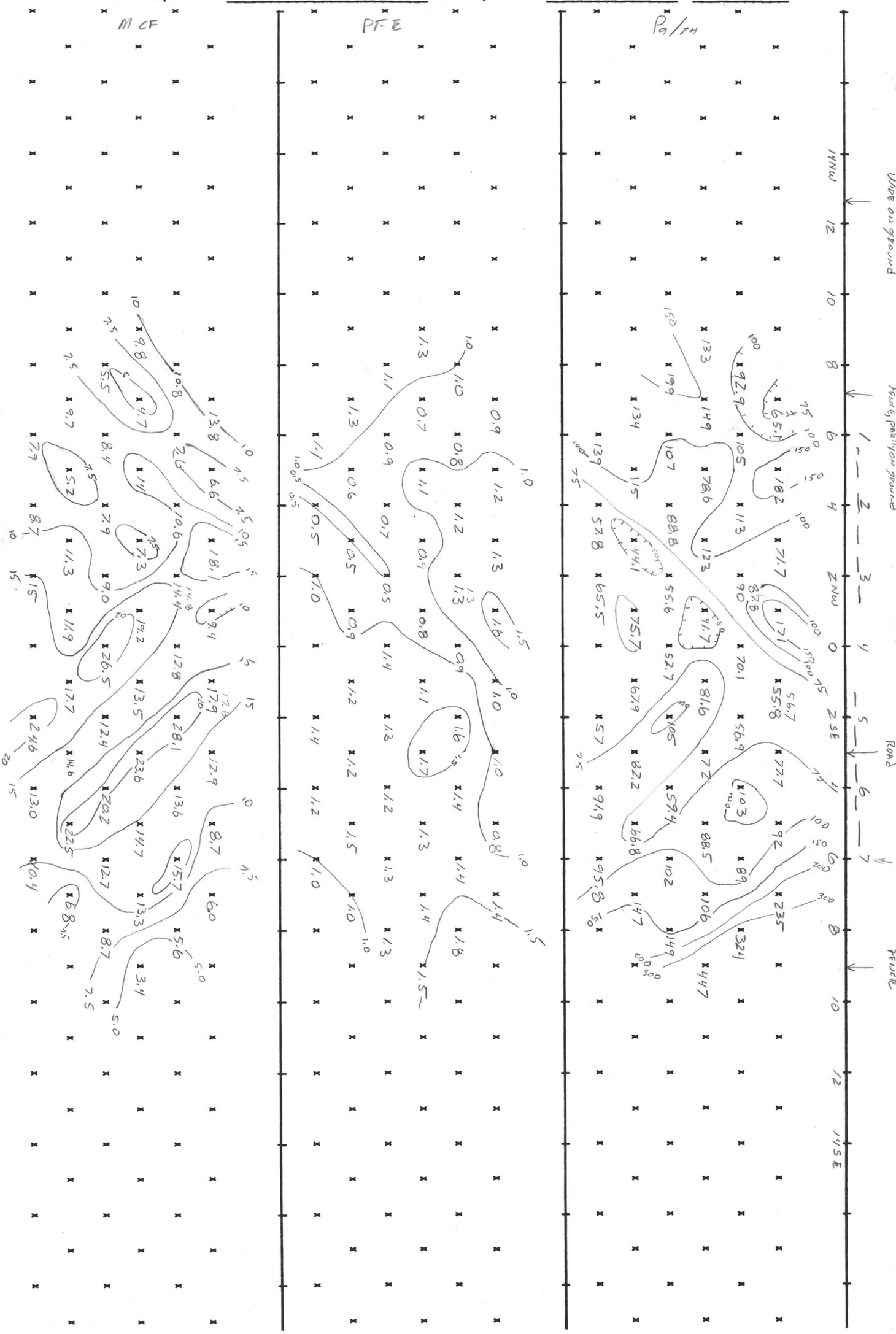
806 W. GRANT RD., P.O. BOX 5964 TUCSON, ARIZ. 85703. PH: (602) 623-0578

JOB # 1633 CLIENT

DATE 5-11-83 AREA Ruby Idaho

LINE# 4 N E SP 1 a= 200 BEARING N 30W

RESISTIVITY FREQUENCIES FREQUENCIES 3.0 & 0.3 Hz



HEINRICHS GEOEXPLORATION COMPANY

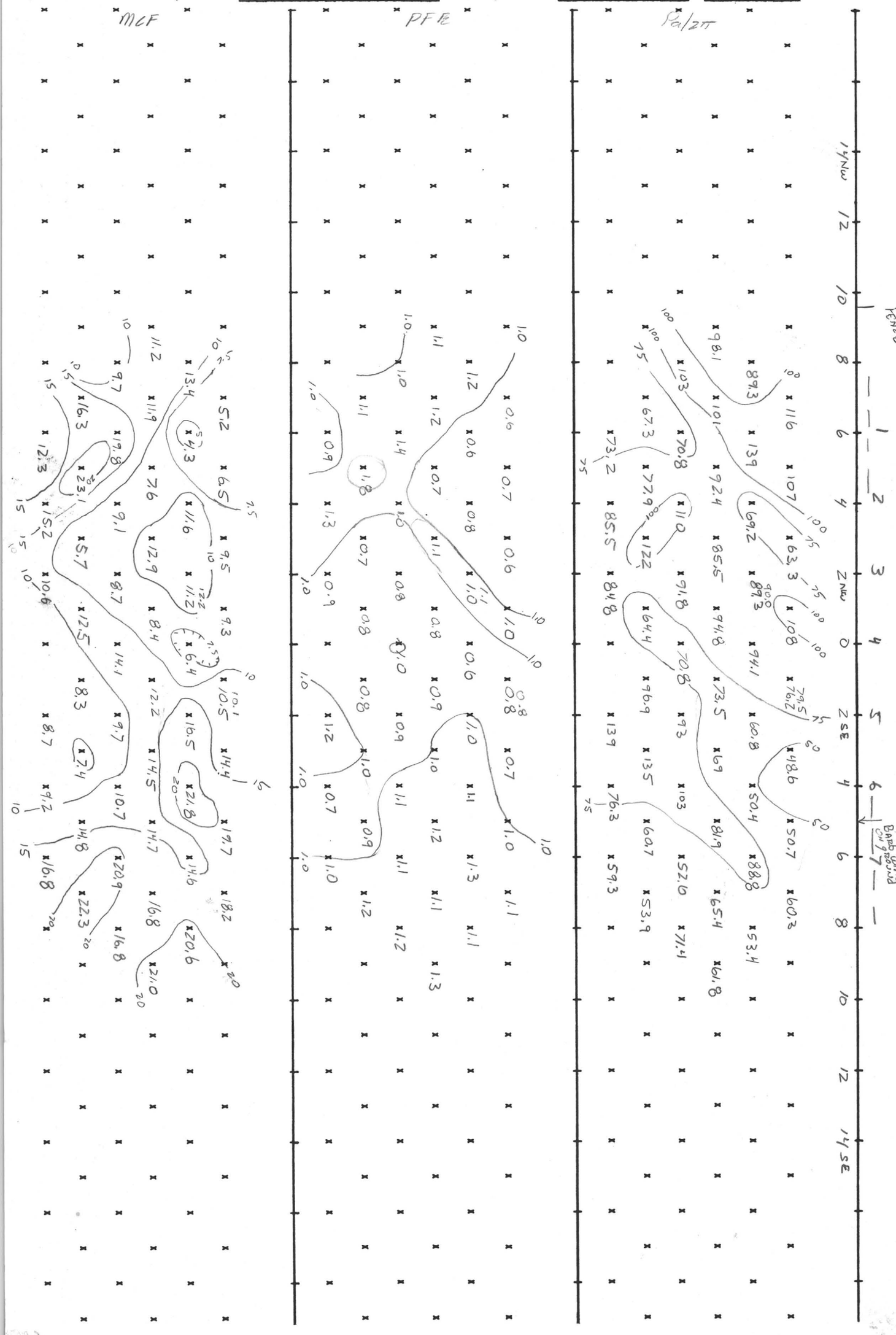
806 W. GRANT RD., P.O. BOX 5964 TUCSON, ARIZ. 85703. PH: (602) 623-0578

JOB # 1633 CLIENT

DATE 5/8/83 AREA Ruby - Idaho

LINE# 0 SP 1 a= 200 BEARING N 30 W

RESISTIVITY FREQUENCIES FREQUENCIES 3.0 & 0.3 Hz



HEINRICHS GEOEXPLORATION COMPANY

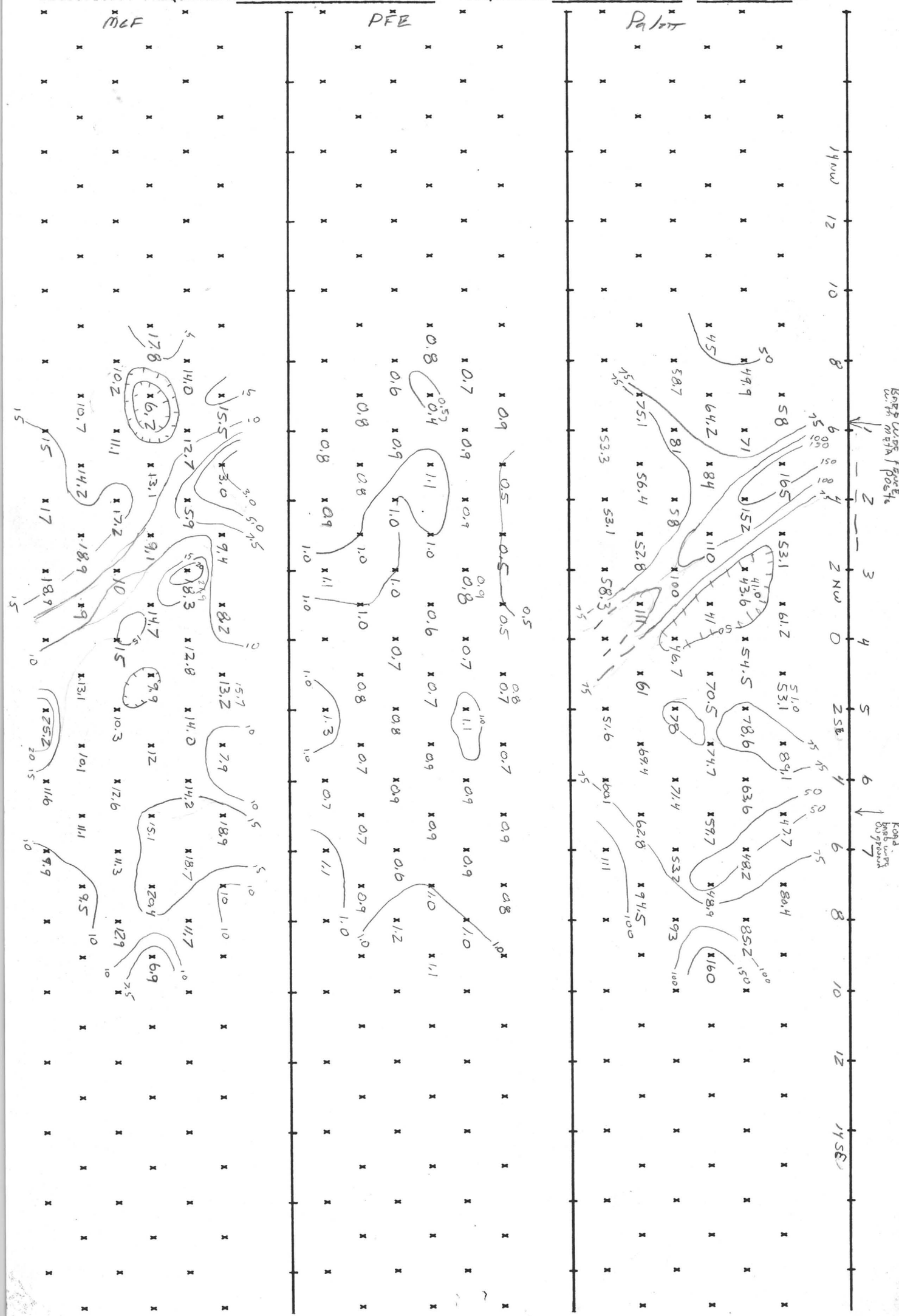
806 W. GRANT RD., P.O. BOX 5964 TUCSON, ARIZ. 85703. PH: (602) 623-0578

JOB # 1633 CLIENT

DATE 5/8/83 AREA Ruby - Idaho

LINE# 45W SP 1 a= 200 BEARING N30W

RESISTIVITY FREQUENCIES FREQUENCIES 3.0 & 0.3 Hz



HEINRICHS GEOEXPLORATION COMPANY

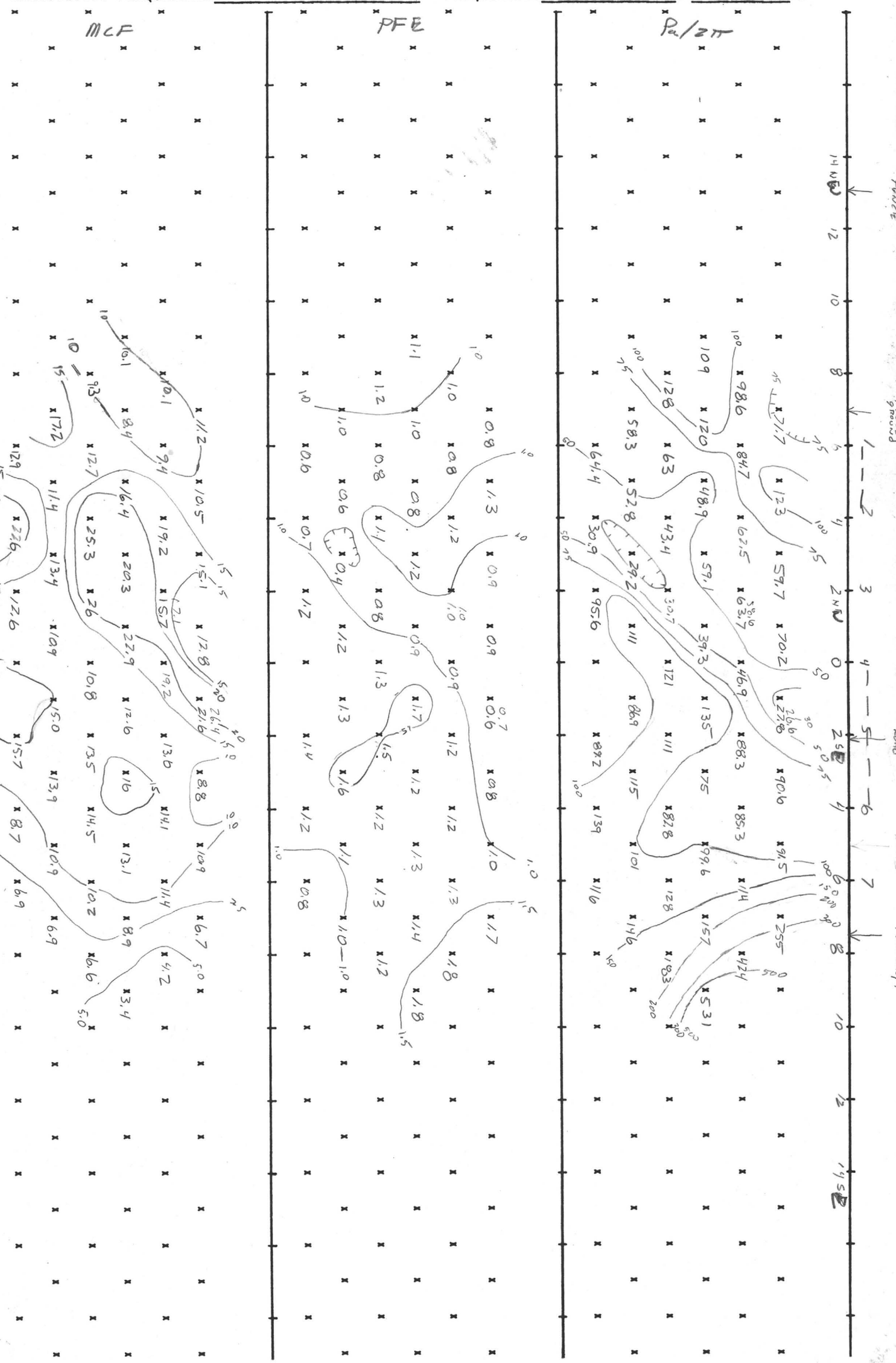
806 W. GRANT RD., P.O. BOX 5964 TUCSON, ARIZ. 85703. PH: (602) 623-0578

JOB # 1633 CLIENT

DATE May 17, 1983 AREA Ruby - Idaho

LINE# 6NE SP 1 a= 200 BEARING N30W

RESISTIVITY FREQUENCIES FREQUENCIES 3.0 & 0.3 Hz



HEINRICHS GEOEXPLORATION COMPANY

806 W. GRANT RD., P.O. BOX 5964 TUCSON, ARIZ. 85703. PH: (602) 623-0378

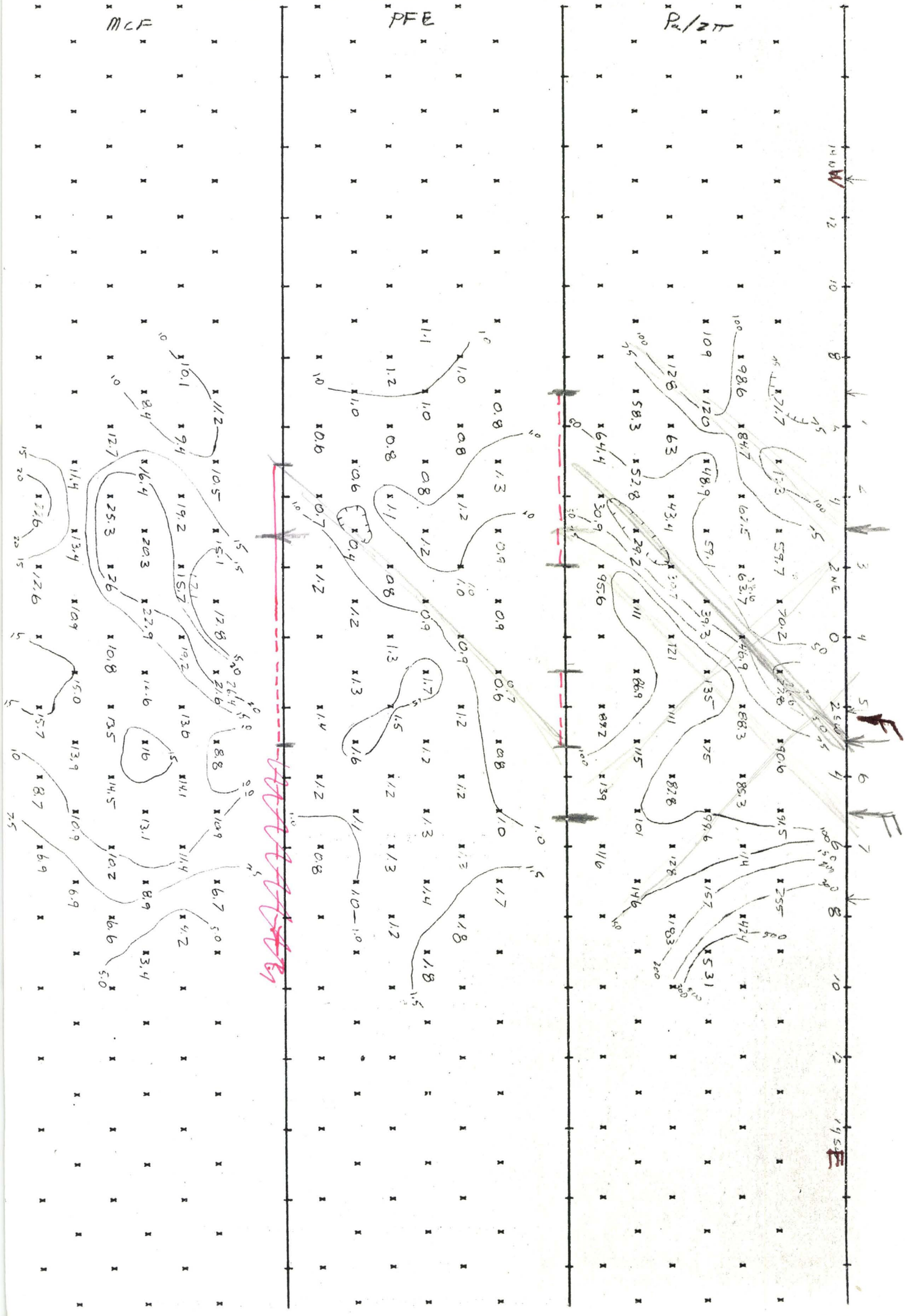
JOB # 1633 CLIENT

DATE May 17, 1983 AREA Ruby - Idaho

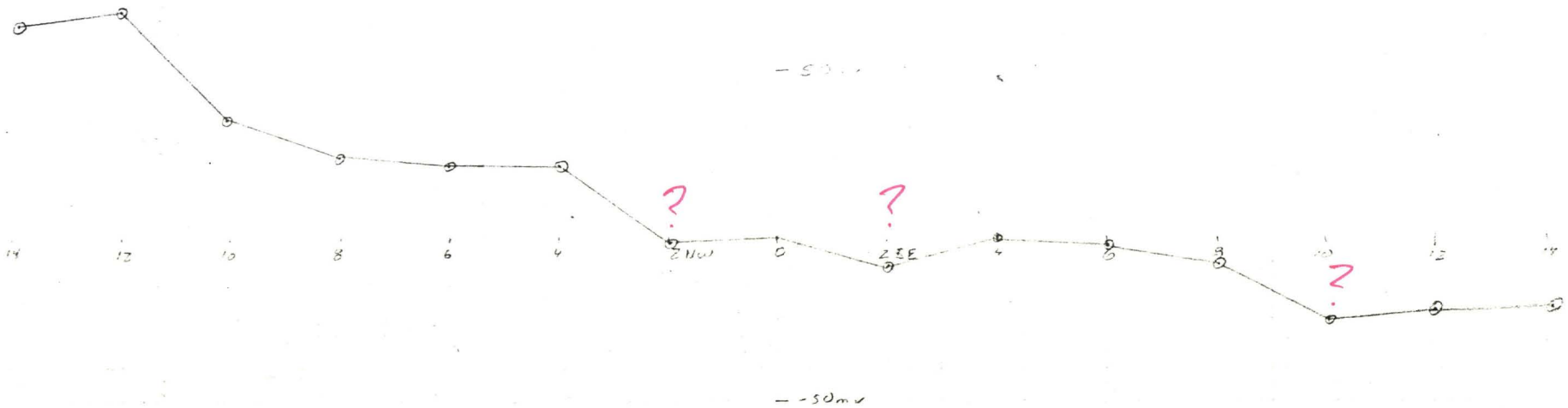
LINE# 6NE SP 1 a= 200 BEARING N30W

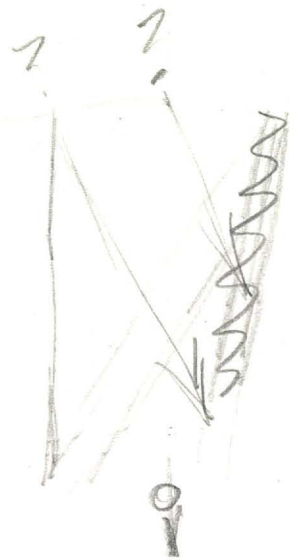
RESISTIVITY FREQUENCIES

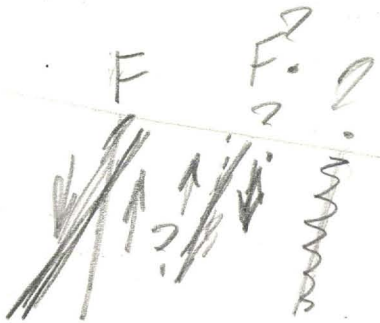
FREQUENCIES 3.0 & 0.3 Hz



SP Plot 75W







HEINRICHS GEOEXPLORATION COMPANY

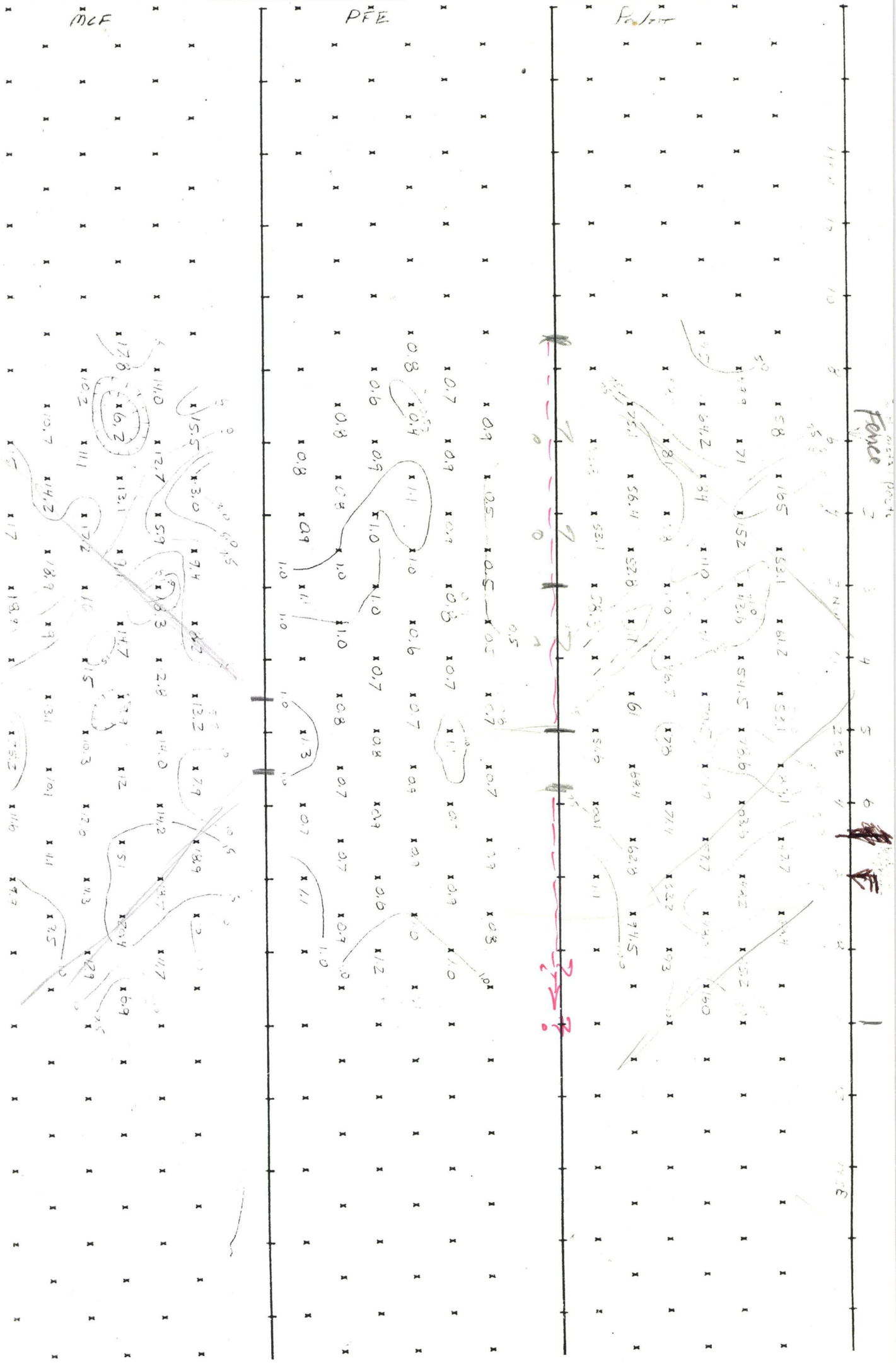
806 W. GRANT RD., P.O. BOX 5964 TUCSON, ARIZ. 85703. PH: (602) 623-0578

JOB # 1633 CLIENT

DATE 5/8/83 AREA Ruby - Idaho

LINE# 4SW SP 1 a= 200 BEARING N30W

RESISTIVITY FREQUENCIES FREQUENCIES 3.0 & 0.3 Hz



SP Plot Line 2

HEINRICHS GEOEXPLORATION COMPANY

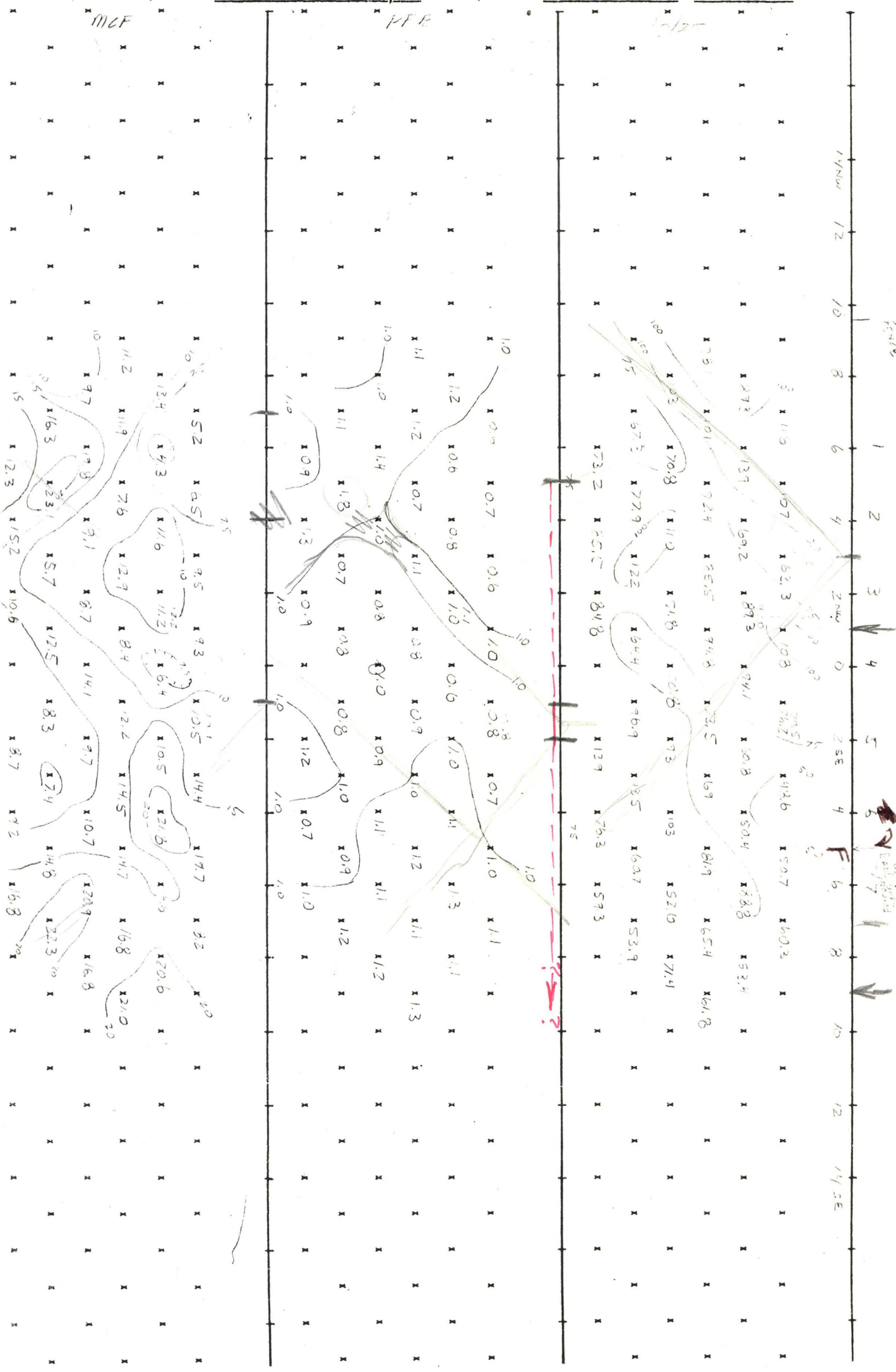
606 W. GRANT RD., P.O. BOX 5964 TUCSON, ARIZ. 85703. PH: (602) 623-0578

JOB # 1633 CLIENT

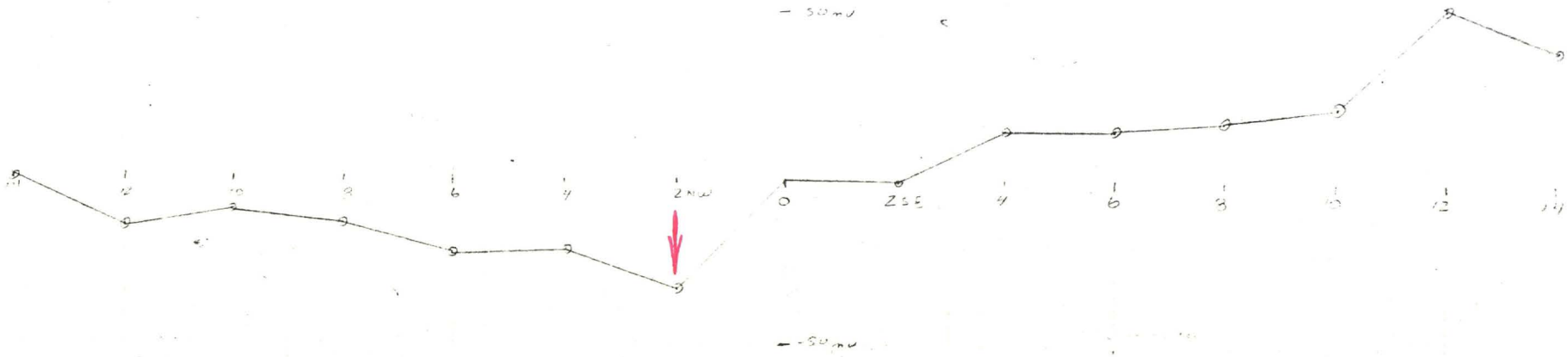
DATE 5/8/83 AREA Ruby - Idaho

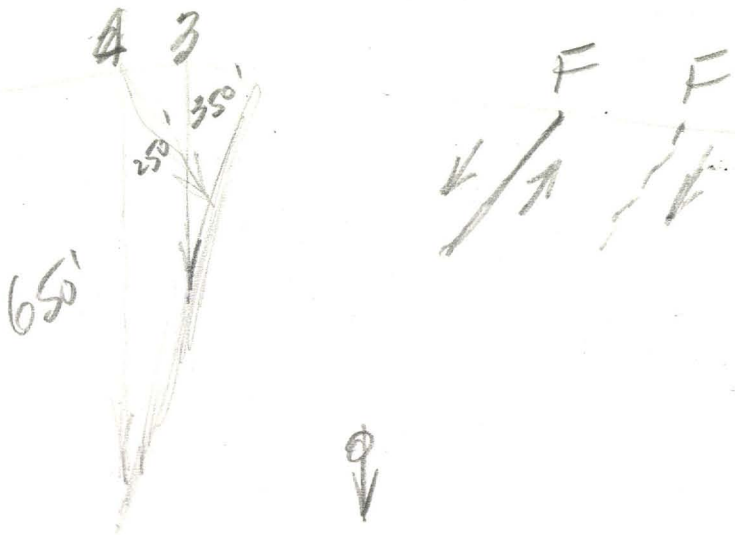
LINE# 0 SP 1 a= 200 BEARING N 30 W

RESISTIVITY FREQUENCIES / FREQUENCIES 3.0 & 0.3 Hz



SP Plot Line 1NE





HEINRICHS GEOEXPLORATION COMPANY

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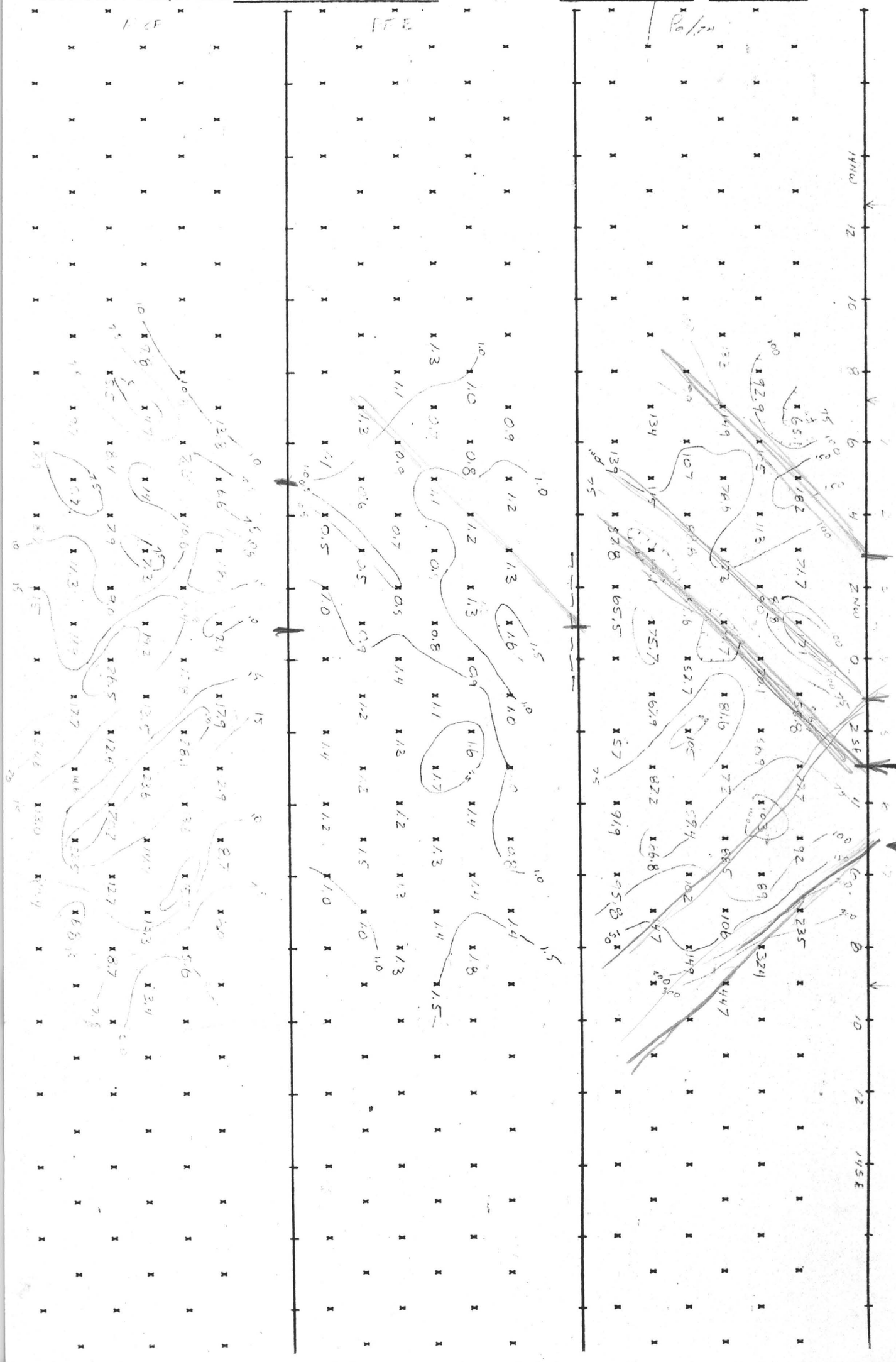
JOB # 1633 CLIENT

DATE 5-11-83 AREA Ruby Idaho

LINE# 4 N E SP 1 a= 200 BEARING N 30W

RESISTIVITY FREQUENCIES

FREQUENCIES 3.0 & 0.3 Hz



HEINRICHS GEOEXPLORATION COMPANY

806 W. GRANT RD., P.O. BOX 5964 TUCSON, ARIZ. 85703. PH: (602) 623-0578

JOB # 1633 CLIENT ORD - Ariraca Silver

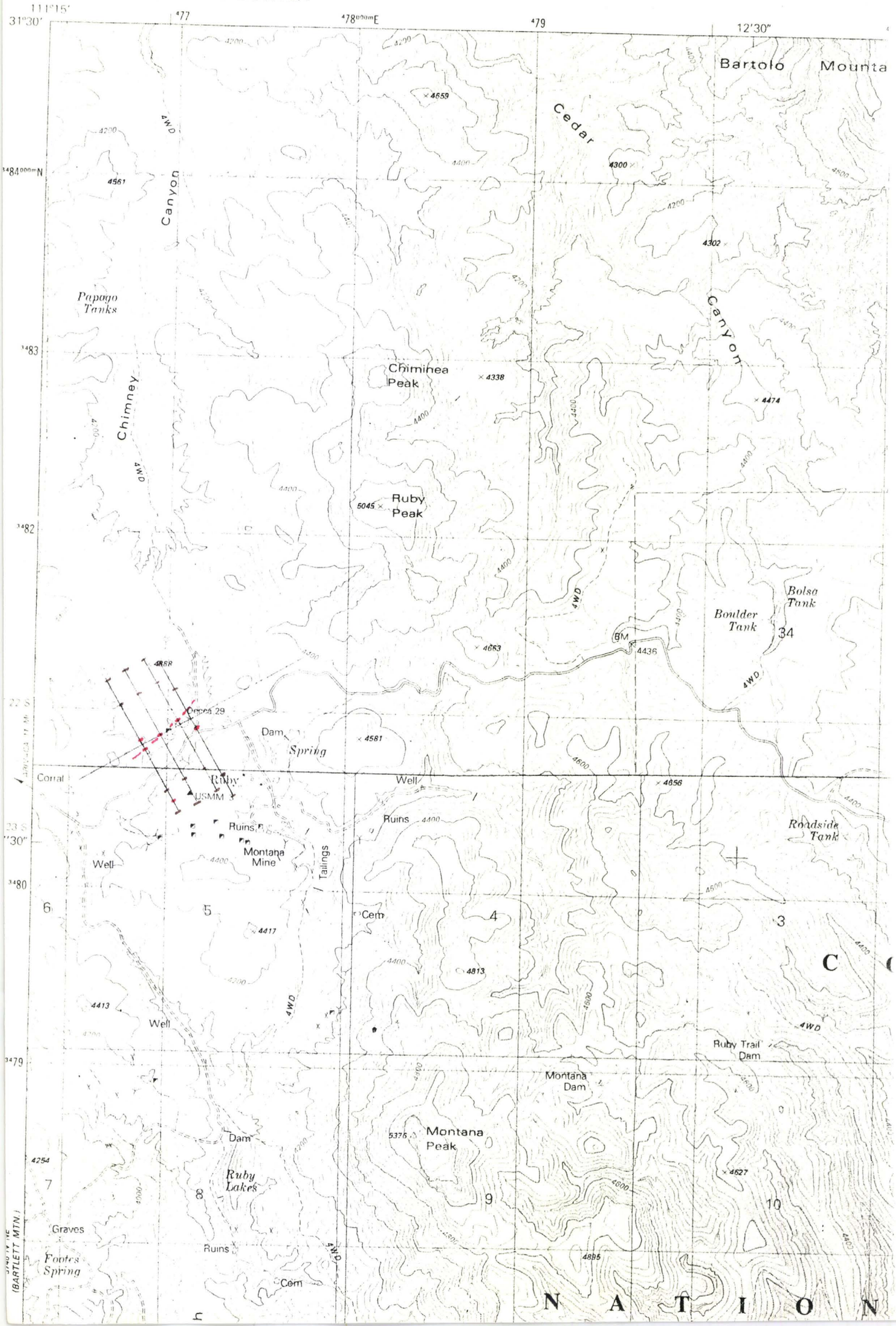
DATE _____ AREA Oro Blanco - Sta Cruz

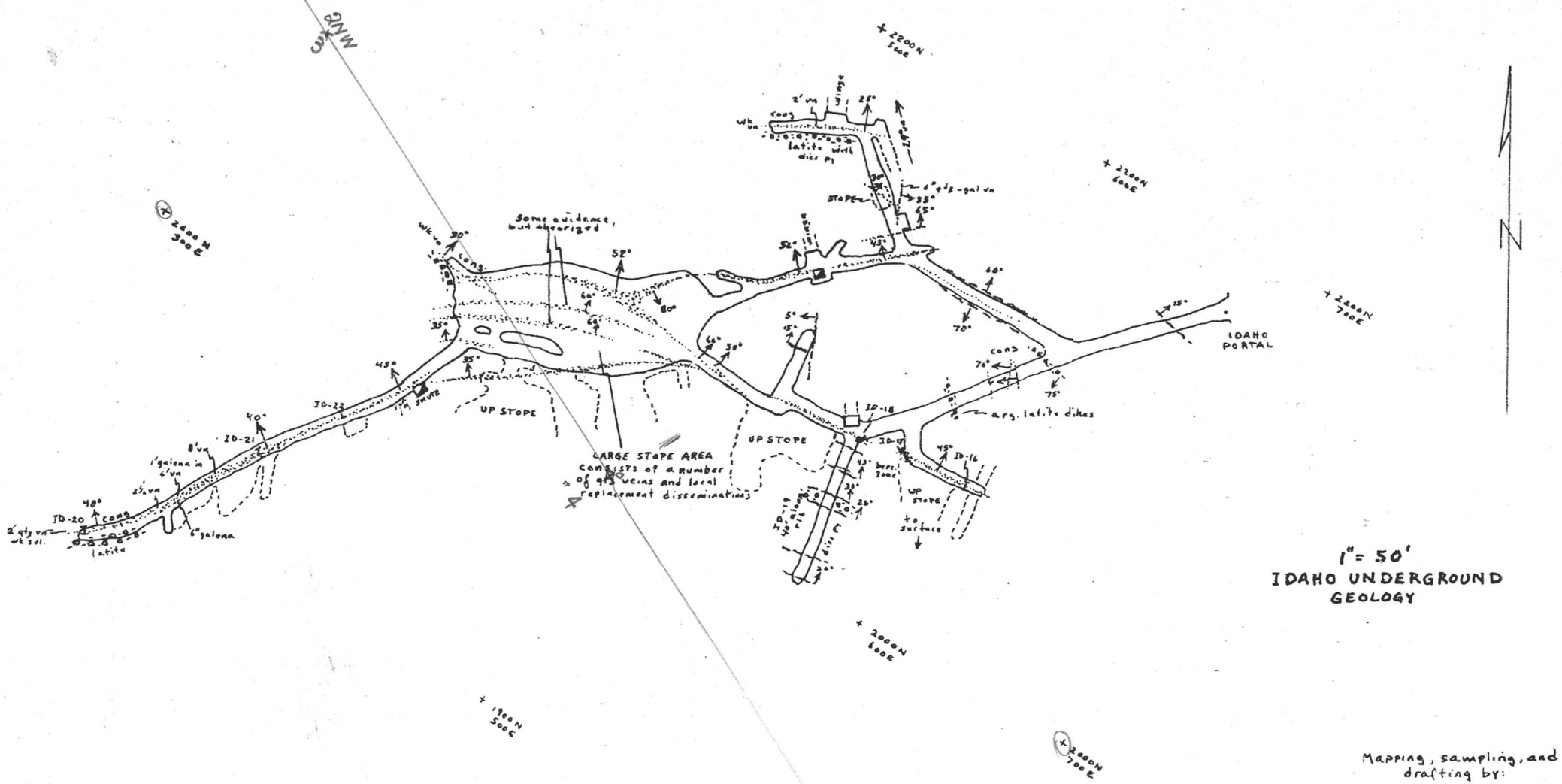
LINE# _____ SP _____ a= 200' BEARING _____

RESISTIVITY FREQUENCIES _____ FREQUENCIES _____ & _____ Hz

+ 148 / 188 /

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY





1" = 50'
IDAHO UNDERGROUND
GEOLOGY

Mapping, sampling, and drafting by:
DAVID C. MATHEWSON
4/83

GEOLOGY
IDAHO UNDERGROUND
1" = 20'
DAVID C. WAKEMAN
Mapping, Consulting, Geo.
LARGE STONE AREA
UP STONE
UP STONE
IDAHO
PORTAL

HEINRICHS GEOEXPLORATION COMPANY
810 W. GRANT ROAD, P.O. BOX 5964, TUCSON, ARIZONA 85703. PHONE: (602) 623-0578

IP, RESISTIVITY & SP PLAN
(Showing four lines run across Idaho Vein Structure)

Oro Blanco District
Santa Cruz County, Arizona

Job #1633

20 May 1983

LINE NO.
4NE
SPREAD(S)
1
BEARING
N30W

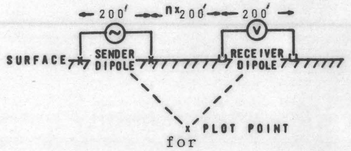
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET of

IDAHO MINE AREA
ORO BLANCO DISTRICT
SANTA CRUZ COUNTY, ARIZONA

RELATIVE ANOMALY STRENGTH

VERY WEAK | WEAK | MODERATE | STRONG

DIPOLE-DIPOLE ELECTRODE ARRAY



for

Arivaca Silver Mines Ltd.

F ↓ Fault

↓ Anomaly

DATE

May 19, 1983

Job # 1633

HEINRICHS GEOEXPLORATION COMPANY
806 W. GRANT ROAD, POST OFFICE BOX 5964, TUCSON, ARIZ., 85703, PHONE: (602)623-0578

INDUCED POLARIZATION TRAVERSE
SECTIONAL DATA SHEET
of

IDAHO MINE AREA
ORO BLANCO DISTRICT
SANTA CRUZ COUNTY, ARIZONA

RELATIVE ANOMALY STRENGTH

VERY WEAK | WEAK | MODERATE | STRONG

DIPOLE-DIPOLE ELECTRODE ARRAY

for

Arivaca Silver Mines Ltd.

F

Fault

Anomaly

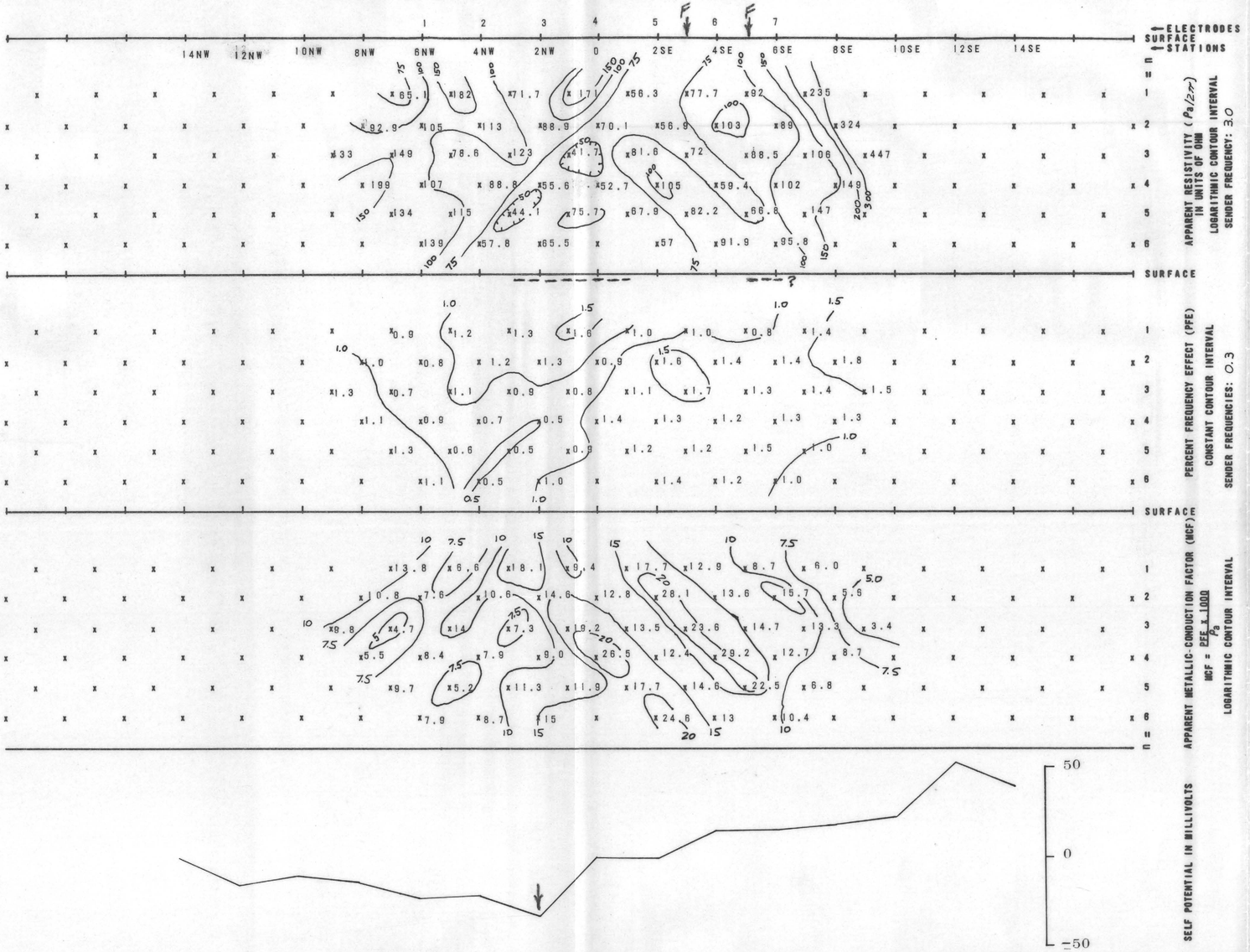
DATE

May 19, 1983

Job # 1633

808 W. GRANT ROAD, POST OFFICE BOX 5984, TUCSON, ARIZ., 85703, PHONE: (602)623-0578

LINE NO.
4NS
SPREAD(S)
1
BEARING
N30W



LINE NO.
4NE
SPREAD(S)
1
BEARING
N30W

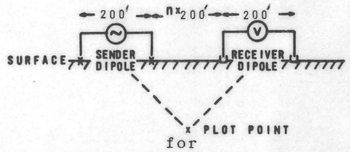
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET of

IDAHO MINE AREA
ORO BLANCO DISTRICT
SANTA CRUZ COUNTY, ARIZONA

RELATIVE ANOMALY STRENGTH

VERY WEAK | WEAK | MODERATE | STRONG

DIPOLE-DIPOLE ELECTRODE ARRAY



for

Arivaca Silver Mines Ltd.

F
↓ Fault

↓ Anomaly

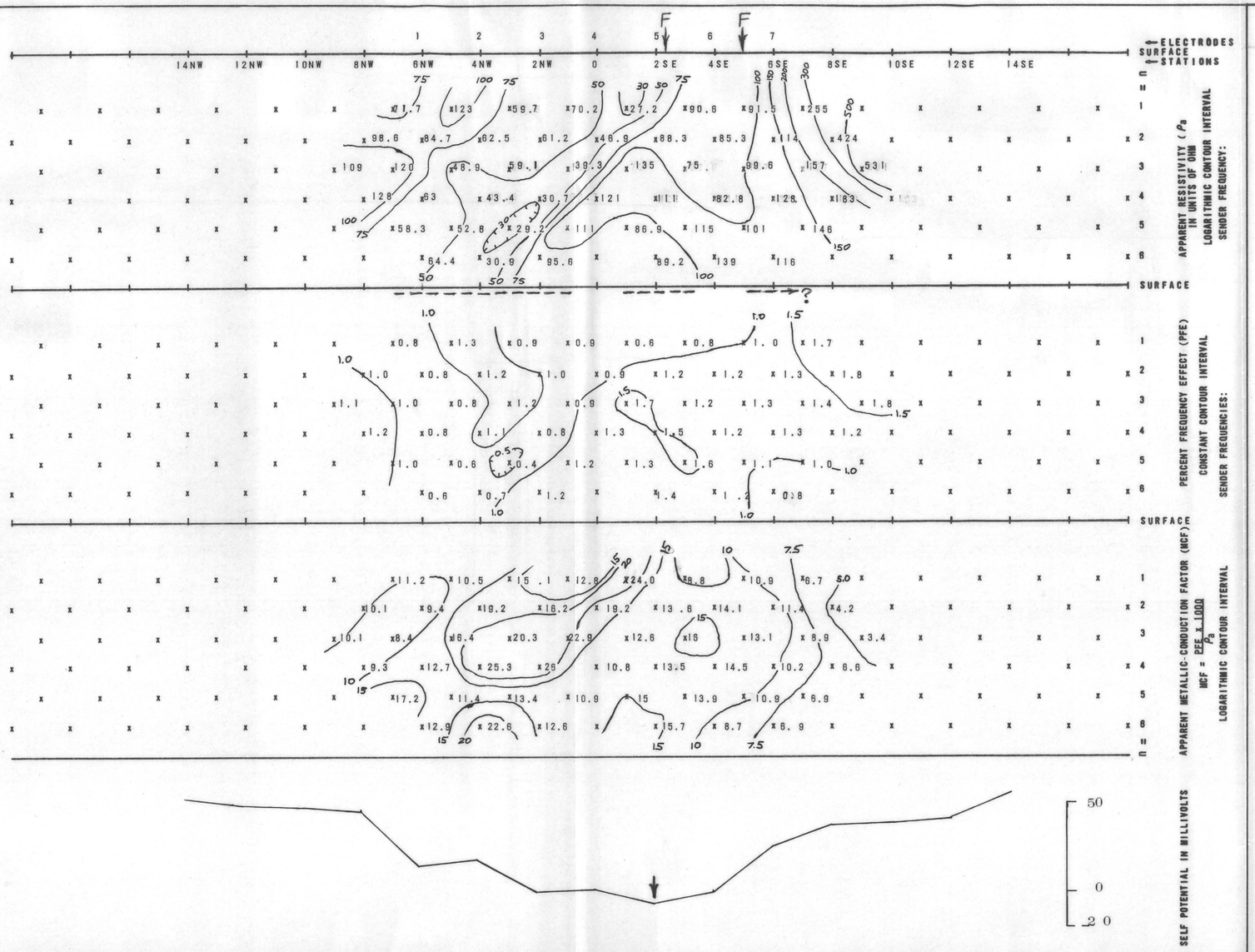
DATE

May 19, 1983

Job # 1633

HEINRICHS GEOEXPLORATION COMPANY

806 W. GRANT ROAD, POST OFFICE BOX 5964, TUCSON, ARIZ., 85703, PHONE: (602)623-0578



INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET of

IDAHO MINE AREA

ORO BLANCO DISTRICT

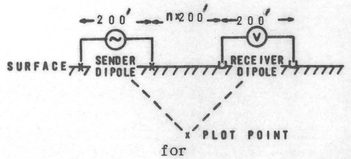
SANTA CRUZ COUNTY, ARIZONA

LINE NO.
6NE
SPREAD(S)
1
BEARING
N30W

RELATIVE ANOMALY STRENGTH

VERY WEAK | WEAK | MODERATE | STRONG

DIPOLE-DIPOLE ELECTRODE ARRAY



for

Arivaca Silver Mines Ltd.

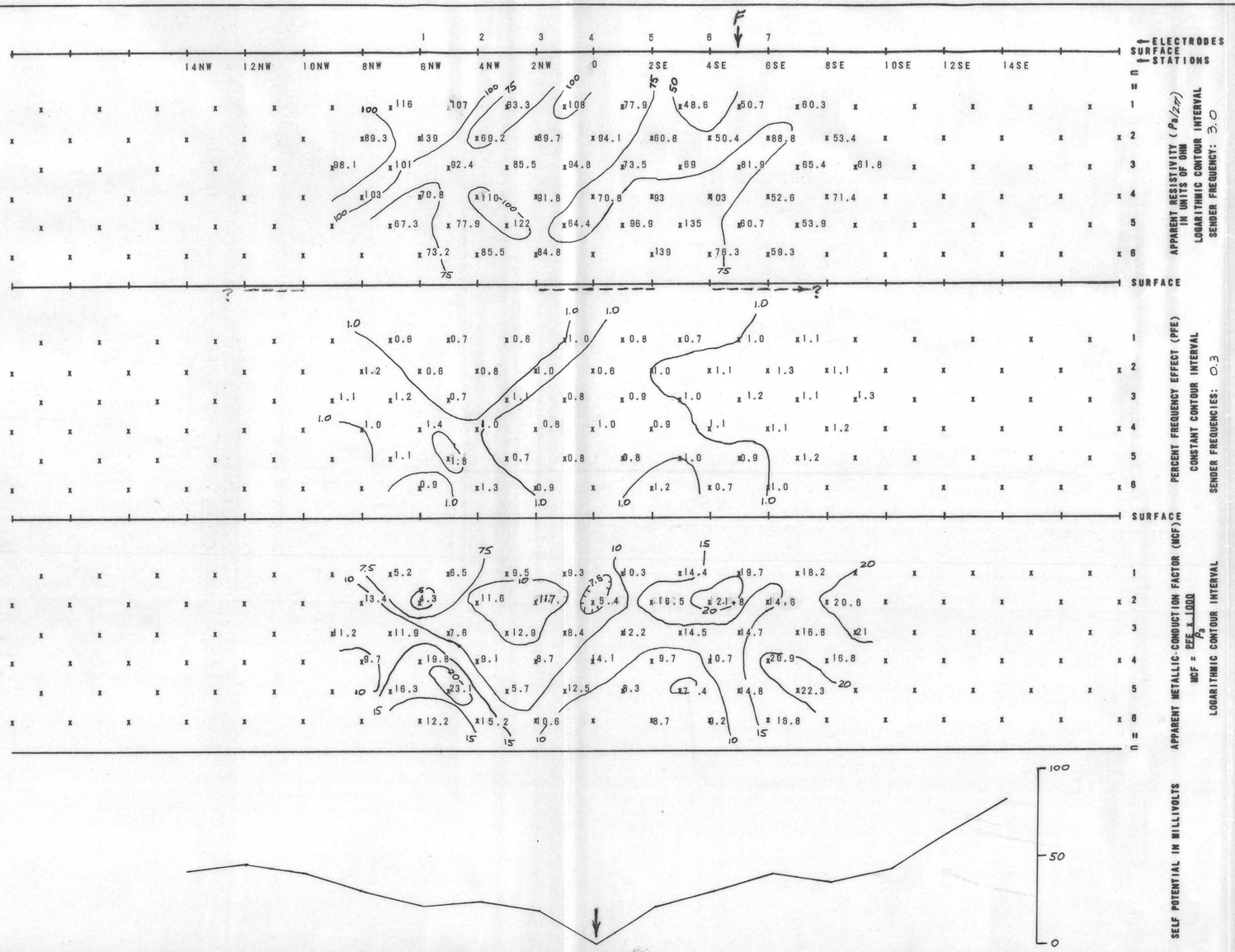
F Fault

Anomaly

DATE
May 19, 1983

Job # 1633

HEINRICHS GEOEXPLORATION COMPANY
806 W. GRANT ROAD, POST OFFICE BOX 5964, TUCSON, ARIZ., 85703, PHONE: (602)623-0578



LINE NO.
0
SPREAD(S)
1
BEARING
N30W

INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET of

IDAHO MINE AREA

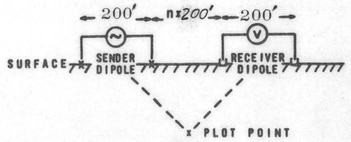
ORO BLANCO DISTRICT

SANTA CRUZ COUNTY, ARIZONA

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

DIPOLE-DIPOLE ELECTRODE ARRAY



for

Arivaca Silver Mines Ltd.

F Fault

Anomaly

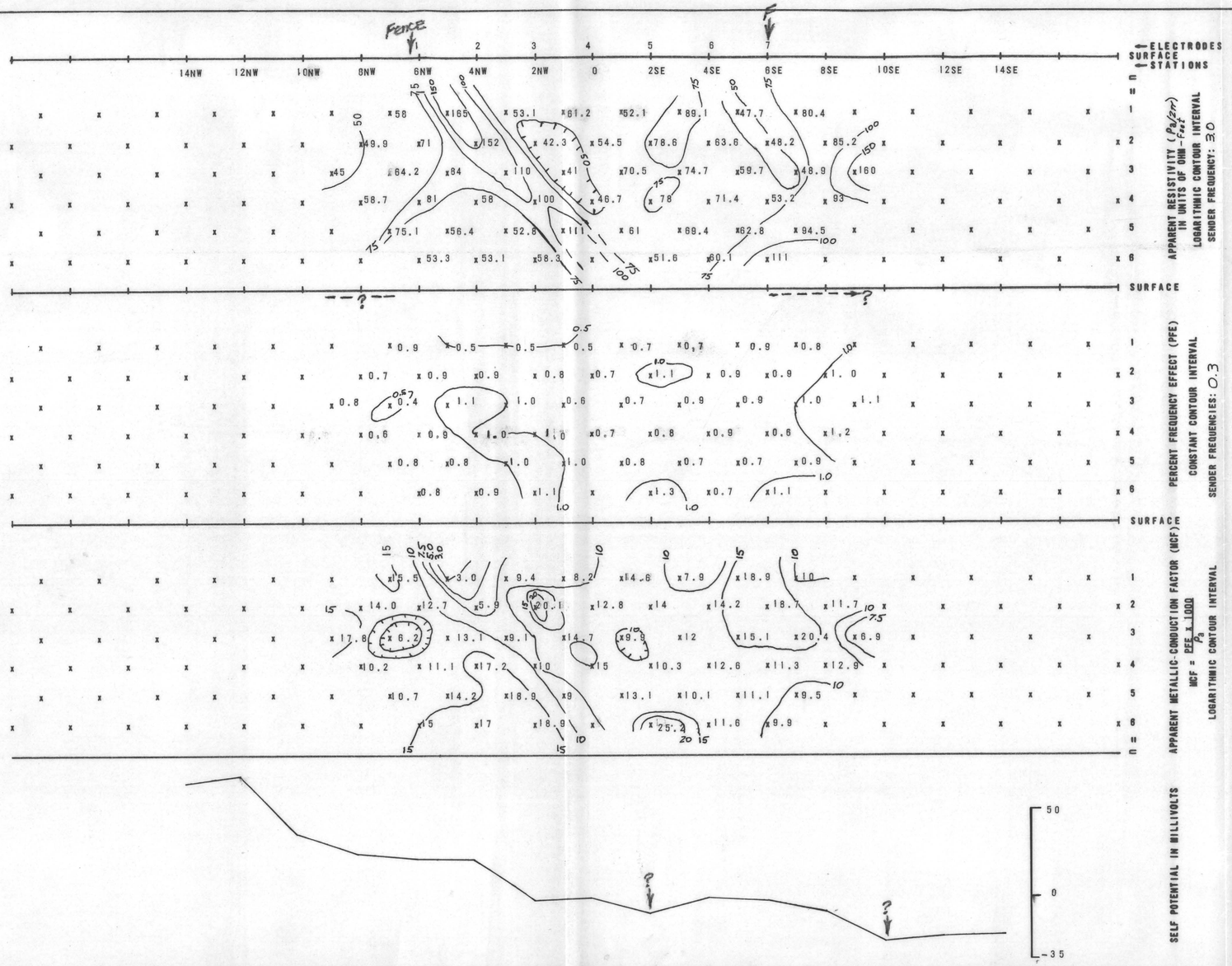
DATE

May 19, 1983

Job # 1633

HEINRICHS GEOEXPLORATION COMPANY

806 W. GRANT ROAD, POST OFFICE BOX 5964, TUCSON, ARIZ., 85703, PHONE: (602)623-0578



LINE NO.
4SW
SPREAD(S)
I
BEARING
N30W

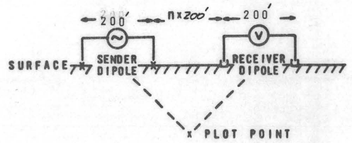
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET of

IDAHO MINE AREA
ORO BLANCO DISTRICT
SANTA CRUZ COUNTY, ARIZONA

RELATIVE ANOMALY STRENGTH

VERY WEAK | WEAK | MODERATE | STRONG

DIPOLE-DIPOLE ELECTRODE ARRAY



for

Arivaca Silver Mines Ltd.

F
↓ Fault

↓ Anomaly

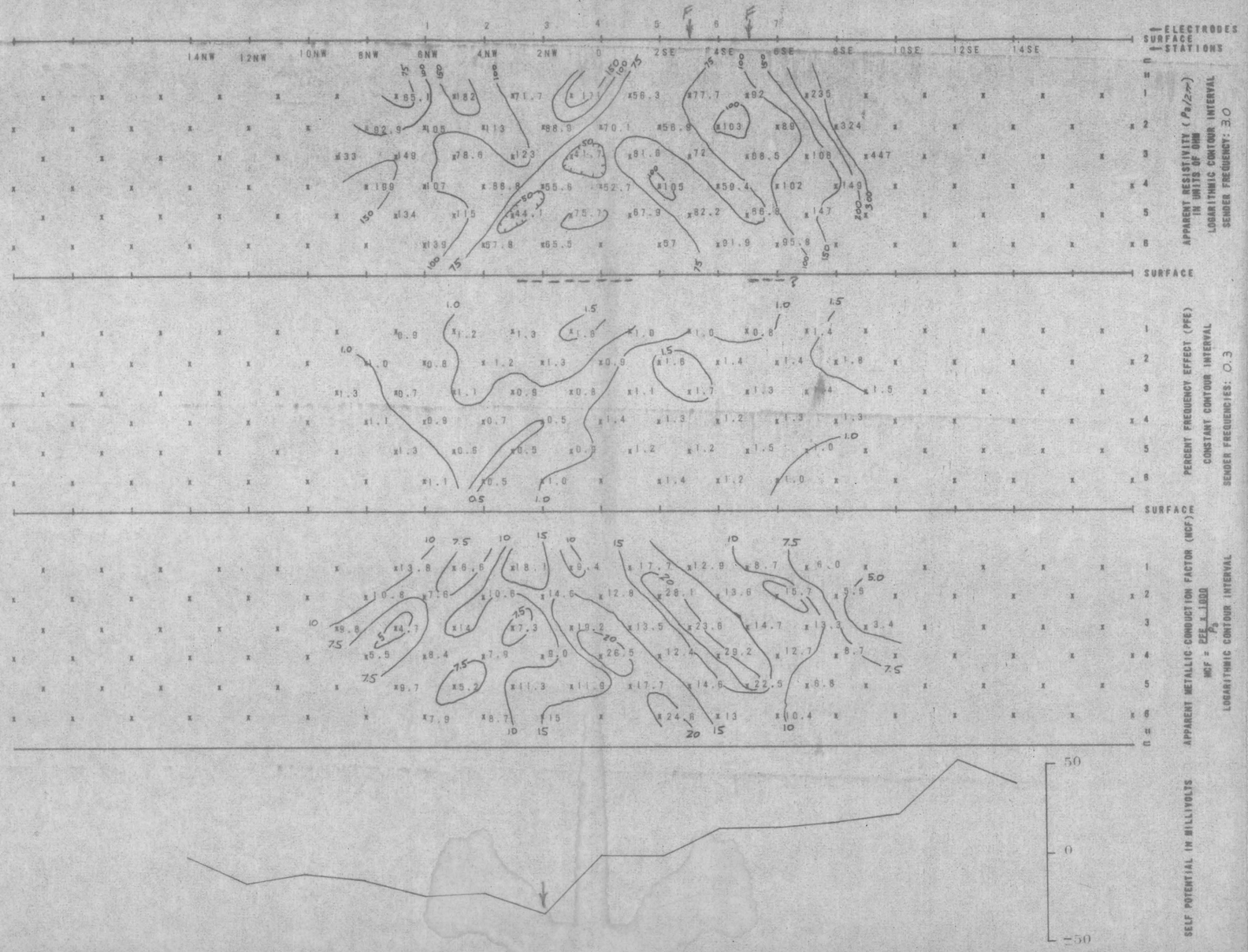
DATE

MAY 18, 1983

HEINRICHS GEOEXPLORATION COMPANY

806 W. GRANT ROAD, POST OFFICE BOX 5964, TUCSON, ARIZ., 85703, PHONE: (602)623-0578

Job # 1633



LINE NO.
4NE
SPREAD(S)
1
BEARING
N80W

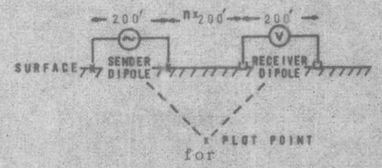
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET of

IDAHO MINE AREA
ORO BLANCO DISTRICT
SANTA CRUZ COUNTY, ARIZONA

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

DIPOLE-DIPOLE ELECTRODE ARRAY



for

Arivaca Silver Mines Ltd.

F
Fault

Anomaly

DATE

May 19, 1983

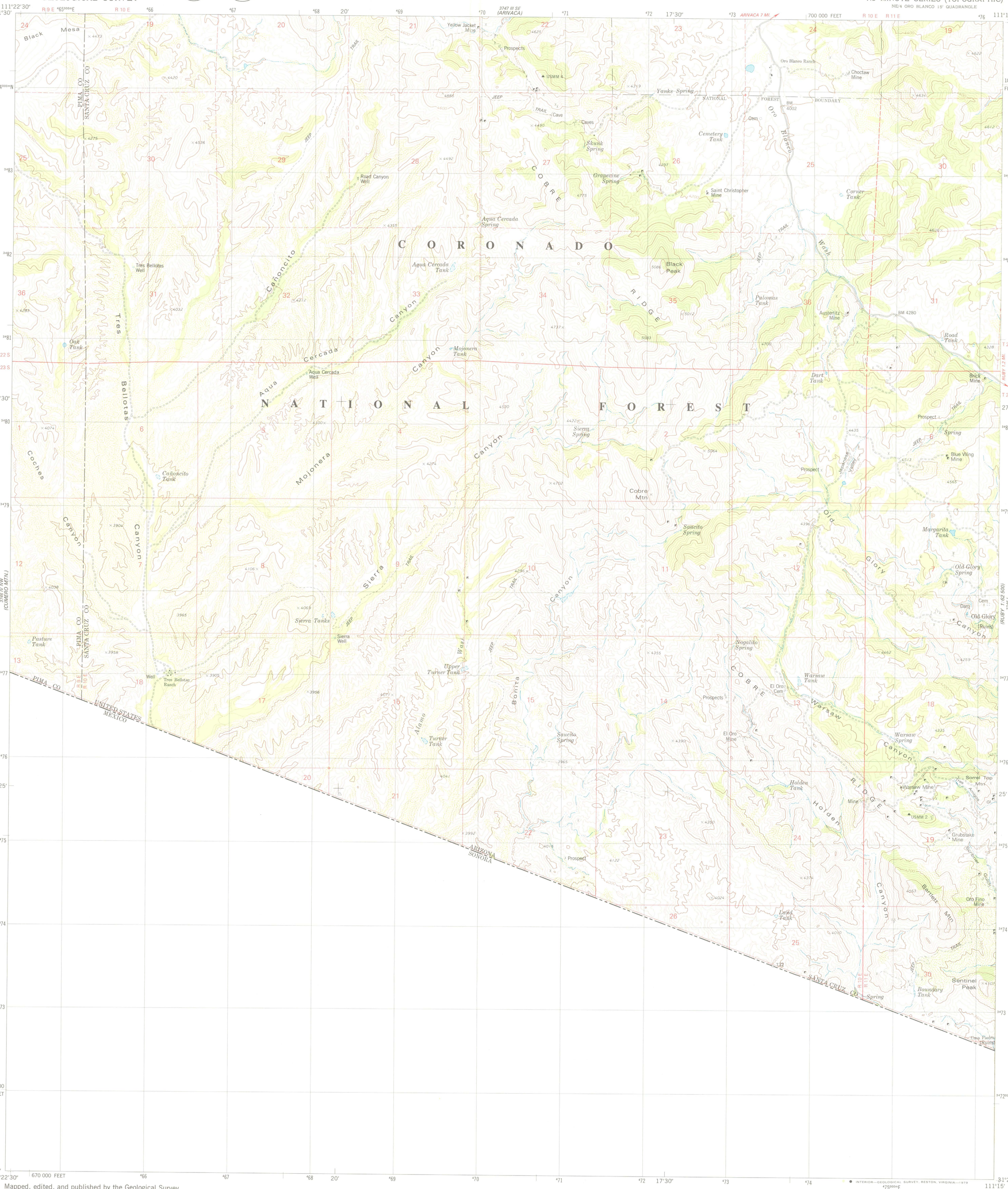
Job # 1633

HEINRICHS GEOEXPLORATION COMPANY

806 W. GRANT ROAD, POST OFFICE BOX 5964, TUCSON, ARIZ., 85703, PHONE: (602)623-0578

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BARTLETT MTN. QUADRANGLE
ARIZONA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NE/4 ORO BLANCO 15' QUADRANGLE



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1974. Field checked 1975
Map edited 1979

Projection and 10,000-foot grid ticks: Arizona coordinate system, central zone (transverse Mercator)
1000-meter Universal Transverse Mercator grid, zone 12
1927 North American Datum

To place on the predicted North American Datum 1983 move the projection lines 9 meters south and 63 meters east as shown by dashed corner ticks

There may be private inholdings within the boundaries of the National or State reservations shown on this map

UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
GN MN 0°10' 3 MILS 12½° 222 MILS

SCALE 1:24 000
1 ½ 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ARIZONA
QUADRANGLE LOCATION

ROAD CLASSIFICATION
Primary highway, hard surface
Light-duty road, hard or improved surface
Secondary highway, hard surface
Unimproved road
Interstate Route
U. S. Route
State Route

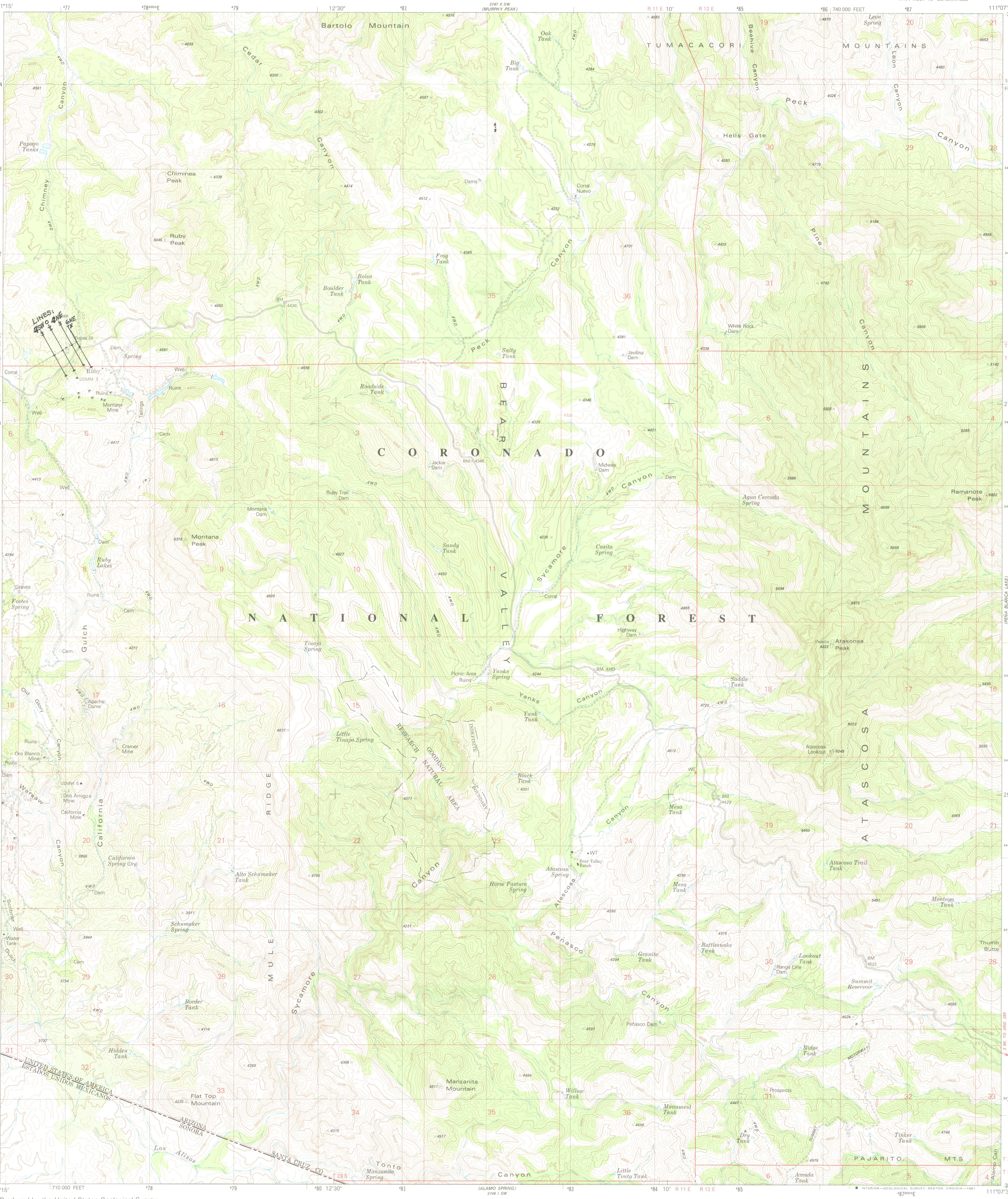
BARTLETT MTN., ARIZ.
NE/4 ORO BLANCO 15' QUADRANGLE
N3122.5—W11115/7.5
1979
DMA 3746 IV NE—SERIES V898

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1979

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RUBY QUADRANGLE

ARIZONA—SONORA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 RUBY 15' QUADRANGLE



Produced by the United States Geological Survey

Control by USGS, NOS/NOAA, International Boundary and Water Commission, and Dirección General de Geografia del Territorio Nacional (DIGETENAL)

U.S. portion compiled by photogrammetric methods from aerial photographs taken 1975. Field checked 1976. Map edited 1981
Mexico portion copied from DIGETENAL 1:50 000-scale map, La Bellotosa H12A39 dated 1979

Projection and 10,000-foot grid ticks: Arizona coordinate system, central zone (transverse Mercator)
1000-meter Universal Transverse Mercator grid, zone 12
1927 North American Datum
To place on the predicted North American Datum 1983 move the projection lines 9 meters south and 63 meters east as shown by dashed corner ticks

Certain land lines are omitted because of insufficient data

There may be private inholdings within the boundaries of the National or State reservations shown on this map

UTM GRID AND 1981 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 40 FEET IN THE UNITED STATES
NATIONAL GEODETIC VERTICAL DATUM OF 1929
CONTOUR INTERVAL 20 METERS IN MEXICO
DATUM IS MEAN SEA LEVEL

THE U.S. PORTION OF THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
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AND BY CENTRO DE ASESORIA Y VENTA DE INFORMACIÓN ESTADÍSTICA Y CARTOGRÁFICA
BALDERAS #71, MEZZANINE, MEXICO 1, D.F.
A FOLDER DESCRIBING U.S. TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE FROM USGS

ARIZONA
QUADRANGLE LOCATION

ROAD CLASSIFICATION

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Light-duty road, hard or improved surface
Secondary highway, hard surface
Unimproved road
Interstate Route
U. S. Route
State Route
Mexico Routes

RUBY, ARIZ.—SONORA
NW/4 RUBY 15' QUADRANGLE
N3122.5—W11107.5/7.5

1981

DMA 3746 I NW—SERIES V898