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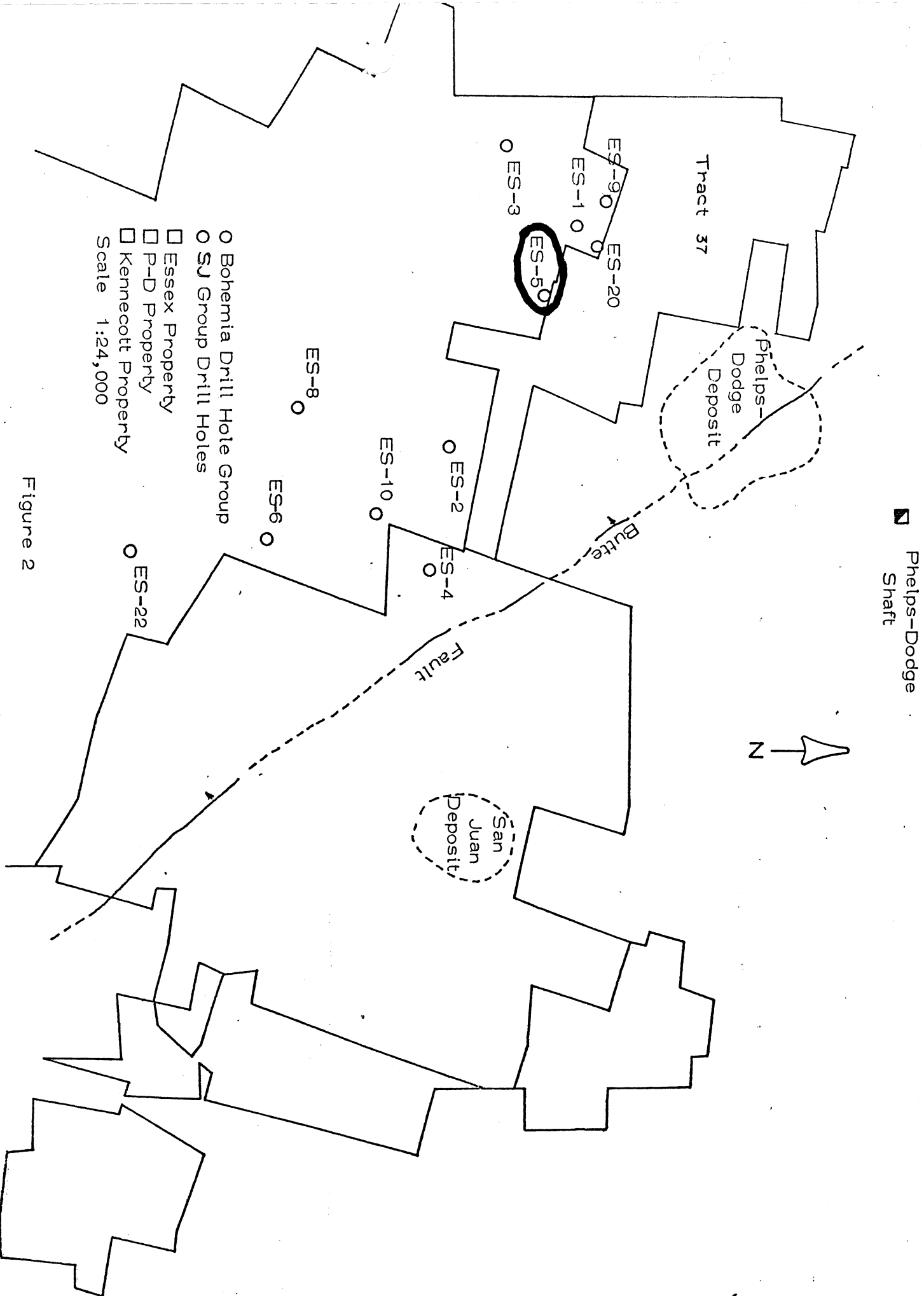
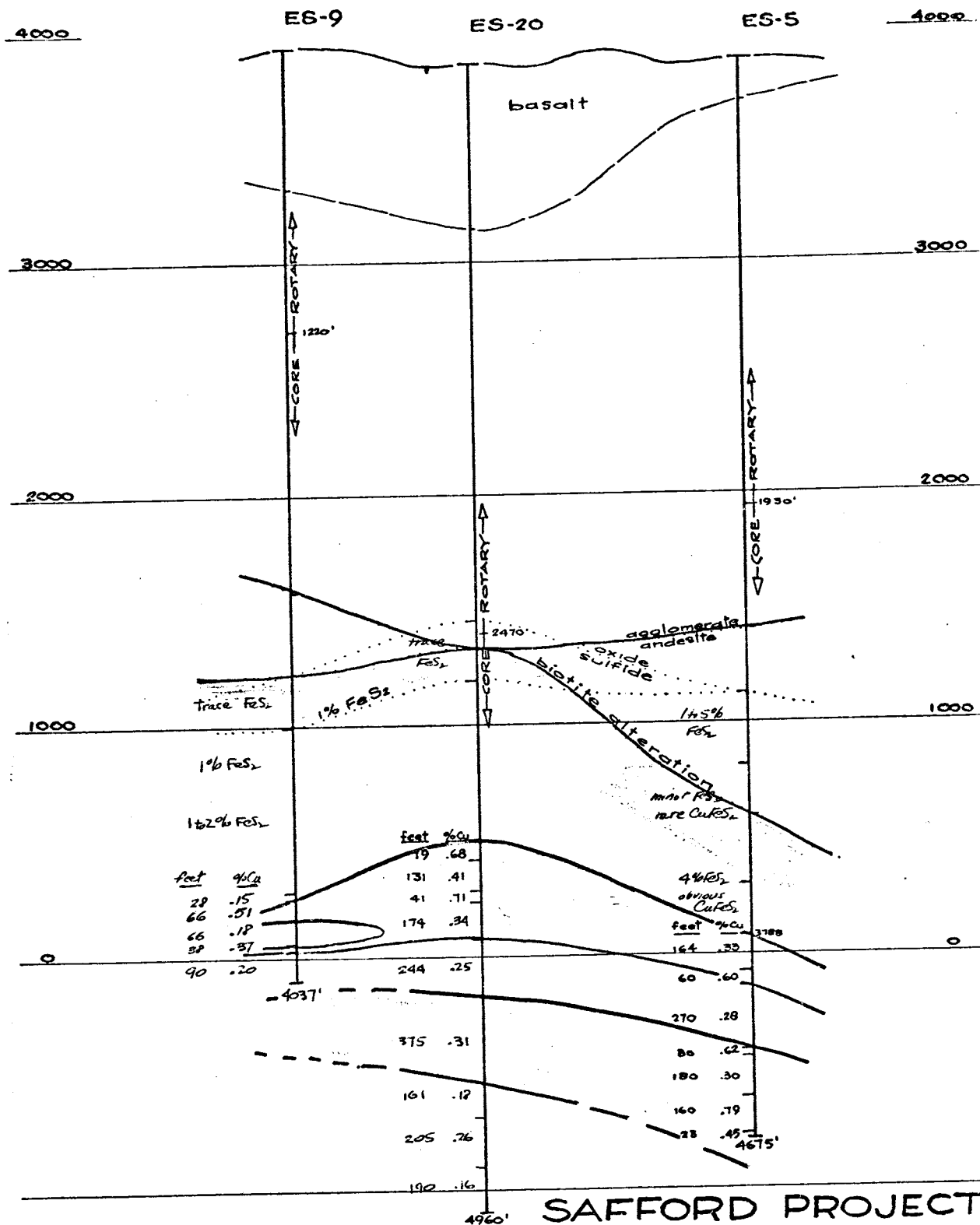


Figure 2



SAFFORD PROJECT
 CROSS SECTION
 LOOKING NORTHERLY
 SCALE: 1 inch = 500 feet

Stiles, Mrs.

COMPLETED: 11-25-72

DATE		DEPTH	MUD	DRILL	PORTLAND CEMENT	CNC	H ₂ -SEAL	FIBERTEX	KWIK SEAL	CC-16	SODA ASH	CALCIUM CHLORIDE	PENETRIX 400	MND SEAL	PLASTER	GEL	FRA	CEMENTING WATER	COMMENTS
9-1	D	7-10																4	
9-2	D	7-10-140																1	
9-3	D	7-10-145																1	
9-4	D	7-10-145																1	
9-5	D	7-10-145																1	
9-6	D	7-10-145																1	
9-7	D	7-10-145																1	
9-8	D	7-10-145																1	
9-9	D	7-10-145																1	
9-10	D	7-10-145																1	
9-11	D	7-10-145																1	
9-12	D	7-10-145																1	
9-13	D	7-10-145																1	
9-14	D	7-10-145																1	
9-15	D	7-10-145																1	
9-16	D	7-10-145																1	
9-17	D	7-10-145																1	
9-18	D	7-10-145																1	
9-19	D	7-10-145																1	
9-20	D	7-10-145																1	
9-21	D	7-10-145																1	
9-22	D	7-10-145																1	
9-23	D	7-10-145																1	
9-24	D	7-10-145																1	
9-25	D	7-10-145																1	
9-26	D	7-10-145																1	
9-27	D	7-10-145																1	
9-28	D	7-10-145																1	
9-29	D	7-10-145																1	
9-30	D	7-10-145																1	
9-31	D	7-10-145																1	
9-32	D	7-10-145																1	
9-33	D	7-10-145																1	
9-34	D	7-10-145																1	
9-35	D	7-10-145																1	
9-36	D	7-10-145																1	
9-37	D	7-10-145																1	
9-38	D	7-10-145																1	
9-39	D	7-10-145																1	
9-40	D	7-10-145																1	
9-41	D	7-10-145																1	
9-42	D	7-10-145																1	
9-43	D	7-10-145																1	
9-44	D	7-10-145																1	
9-45	D	7-10-145																1	
9-46	D	7-10-145																1	
9-47	D	7-10-145																1	
9-48	D	7-10-145																1	
9-49	D	7-10-145																1	
9-50	D	7-10-145																1	
9-51	D	7-10-145																1	
9-52	D	7-10-145																1	
9-53	D	7-10-145																1	
9-54	D	7-10-145																1	
9-55	D	7-10-145																1	
9-56	D	7-10-145																1	
9-57	D	7-10-145																1	
9-58	D	7-10-145																1	
9-59	D	7-10-145																1	
9-60	D	7-10-145																1	
9-61	D	7-10-145																1	
9-62	D	7-10-145																1	
9-63	D	7-10-145																1	
9-64	D	7-10-145																1	
9-65	D	7-10-145																1	
9-66	D	7-10-145																1	
9-67	D	7-10-145																1	
9-68	D	7-10-145																1	
9-69	D	7-10-145																1	
9-70	D	7-10-145																1	
9-71	D	7-10-145																1	
9-72	D	7-10-145																1	
9-73	D	7-10-145																1	
9-74	D	7-10-145																1	
9-75	D	7-10-145																1	
9-76	D	7-10-145																1	
9-77	D	7-10-145																1	
9-78	D	7-10-145																1	
9-79	D	7-10-145																1	
9-80	D	7-10-145																1	
9-81	D	7-10-145																1	
9-82	D	7-10-145																1	
9-83	D	7-10-145																1	
9-84	D	7-10-145																1	
9-85	D	7-10-145																1	
9-86	D	7-10-145																1	
9-87	D	7-10-145																1	
9-88	D	7-10-145																1	
9-89	D	7-10-145																1	
9-90	D	7-10-145																1	
9-91	D	7-10-145																1	
9-92	D	7-10-145																1	
9-93	D	7-10-145																1	
9-94	D	7-10-145																1	
9-95	D	7-10-145																1	
9-96	D	7-10-145																1	
9-97	D	7-10-145																1	
9-98	D	7-10-145																1	
9-99	D	7-10-145																1	
9-100	D	7-10-145																1	
9-101	D	7-10-145																1	
9-102	D	7-10-145																1	
9-103	D	7-10-145																1	
9-104	D	7-10-145																1	
9-105	D	7-10-145																1	
9-106	D	7-10-145																1	
9-107	D	7-10-145																1	
9-108	D	7-10-145																1	
9-109	D	7-10-145																1	
9-110	D	7-10-145																1	
9-111	D	7-10-145																1	
9-112	D	7-10-145																1	
9-113	D	7-10-145																1	
9-114	D	7-10-145																1	
9-115	D	7-10-145																1	
9-116	D	7-10-145																1	
9-117	D	7-10-145																1	
9-118	D	7-10-145																1	
9-119	D	7-10-145																1	
9-120	D	7-10-145																1	
9-121	D	7-10-145																1</	

6/2

[illegible]

6. ~~6~~

[illegible]

ES-5

4/5

DATE	DEPTH	MUD	2QG	QUICK FOAM	PORTLAND CMT.	CMC	HY SEAL	FIBERTEX	KWIK SEAL	CC-16	SODA ASH	CALCIUM CHLORIDE	TENEQUI 460	FONDU	MUD SEAL	PLASTER	CAUSTIC SODA	CEMENTING WATER	COMMENTS
10/24	D 3151 -																		PUT NEW LINE ON, WENT BACK IN HOLE
	S 3151 - 3153																		COULD NOT PULL TUBE, TRIPPED RODS
	N 3153 -																		RUNNING IN RODS, WASHING TO BOTTOM
10/25	D 3153 - 3175																		
	S 3175 - 3210																		
	N 3210 - 3240																		
10/26	D 3240 - 3270																		
	S 3270 - 3300																		
	N 3300 - 3330																		
10/27	D 3330 - 3360																		
	S 3360 - 3375																		
	N 3375 -																		
10/28	D 3375 - 3398																		
	S 3398 - 3425																		
	N 3425 - 3433																		
10/30	D 3433 - 3448																		
	S 3448 - 3476																		
10/31	D 3476 - 3520																		
	S 3520 - 3560																		
11/1	D 3560 - 3596																		
	S 3596																		
11/2	D 3596 - 3616																		
	S 3616 - 3676																		
11/3	D 3676 - 3716																		
	S 3716 - 3761																		
11/4	D 3761 - 3779																		
	S 3779 - 3802																		
11/6	D 3802 - 3848																		
	S 3848 - 3870																		
11/7	D 3870 - 3884																		
	S 3884 - 3896																		
11/8	D 3896 - 3920																		
	S 3920 -																		
11/9	D 3920 - 3946																		
	S 3946 - 3990																		

COMMENTS

PUT NEW LINE ON, WENT BACK IN HOLE

COULD NOT PULL TUBE, TRIPPED RODS

RUNNING IN RODS, WASHING TO BOTTOM

RODSTEN:

1

MAGFAC
(2-15 gal drums)

PULLING RODS FOR BIT CHANGE

" " " WASHED 40'

CHANGE OIL ON BEHN 25"

PULLING RODS

TRIP RODS IN 4' DEEPER CORE

TRIPPED RODS, CLEARED CORE THEN CORE ANNUL, 4 1/2" SAND, TUBE RIPPED HERE ANNUL

Replace Spectator on wireline hoist. (12 HOUR SHIFT)

12 HOUR SHIFT

TRIP FOR BIT CHANGE - WIRELINE BROKE - HAVE FISHING TOOL JOBS

REPAIRED WIRE LINE

PULLED RODS FOR BIT

PUT RODS IN TO BOTTOM OF CASING

LOWERED TO BOTTOM

LOST SOME CIRCULATION AT 3848

ROUND TRIP

2

2

1

2

3/5

[illegible]

Sample No. ES-5 2020

Thin section texture: Fine to medium grained porphyritic variable phenocryst/groundmass ratio in different areas in thin section.

Mineralogy

plagioclase
epidote
chlorite
quartz
hematite
sericite
glass (?)
orthoclase

Plagioclase-Subhedral phenocrysts with maximum length of 2mm, mostly smaller. Alteration to epidote, clay minerals and sericite in a few cases.

Epidote-Alteration product of plagioclase. Also occurs in clusters up to 4mm in diameter. Associated with chlorite in these clusters.

Chlorite-Fine to medium grained scattered throughout rock. Intergrown with epidote in some areas.

Glass (?) -Groundmass in some areas is cloudy with low irregular birefringence. Probably devitrified glass. Preparations of groundmass and phenocrysts are variable in different areas of the thin section (top to bottom of core).

Quartz-Not abundant.

Orthoclase-Staining rock slab indicates moderate amounts of potassium feldspar are present. Difficult to recognize in thin section.

Rock is composed mostly of plagioclase, orthoclase epidote, chlorite and devitrified glass(?). Distinct grains in the devitrified glass have low birefringence probably feldspars and/or quartz.

Sample No. ES-5 2855

Thin section Texture: Porphyritic.

Mineralogy

plagioclase
epidote
quartz
chlorite
sericite(?)
pyrite
glass

Plagioclase-Phenocrysts. Moderate to strong epidote replacement.
In areas not replaced by epidote, the plagioclase is very cloudy
(clay minerals?).

Epidote-Alteration product of plagioclase.

Quartz-Fine grained in groundmass and small veinlets.

Groundmass-Mostly very fine grained. In some areas fine grained
chlorite is present sometimes associated with a colorless micaceous
mineral with higher birefringence (sericite?). Some glass appears
to be present.

Sample No. ES-5 3125

Thin section texture: Porphyritic, fine grained, suggestion of flow structures.

Mineralogy

plagioclase
hornblende
epidote
biotite
chlorite
quartz
calcite
magnetite

Plagioclase-Subhedral phenocrysts with maximum length of about 3mm mostly smaller. A very rough subparallel alignment appears to be present. Minor epidote alteration and slight clay(?) alteration. Mostly fairly fresh.

Hornblende-Subhedral phenocrysts about 1mm in size. Margins slightly altered(?) containing very fine grained opaque material.

Epidote-Mostly as clusters of smaller crystals. Clusters are up to 3mm in diameter. Some present as alteration product of plagioclase.

Biotite-The groundmass contains large amounts of a very fine grained greenish yellow mineral with moderate birefringence. The material is pervasive throughout most of the groundmass although it is absent in a few small areas. Some occurs along fractures in plagioclase phenocrysts. In areas where biotite is absent the groundmass consists of very fine grained minerals with low birefringence and magnetite.

Chlorite-Occurs in small patches throughout.

Quartz-Very fine grained in groundmass and in a few small veinlets cutting the rock.

Magnetite-Very fine grained, scattered throughout the groundmass.

Sample No. ES-5 3321

Texture: Porphyritic, fine-grained groundmass.

Mineralogy

Plagioclase	40-50
Hornblende	10-15
Biotite	25-30
Epidote	
Magnetite	

Plagioclase occurs as laths mostly less than 1mm in length. Some epidote replacement and some fine-grained biotite in plagioclase sites. Hornblende phenocrysts are up to 3mm in length. The groundmass is almost completely made up of fine-grained greenish-brown biotite. Fine-grained magnetite is fairly abundant in the groundmass.

Rock name: Andesite

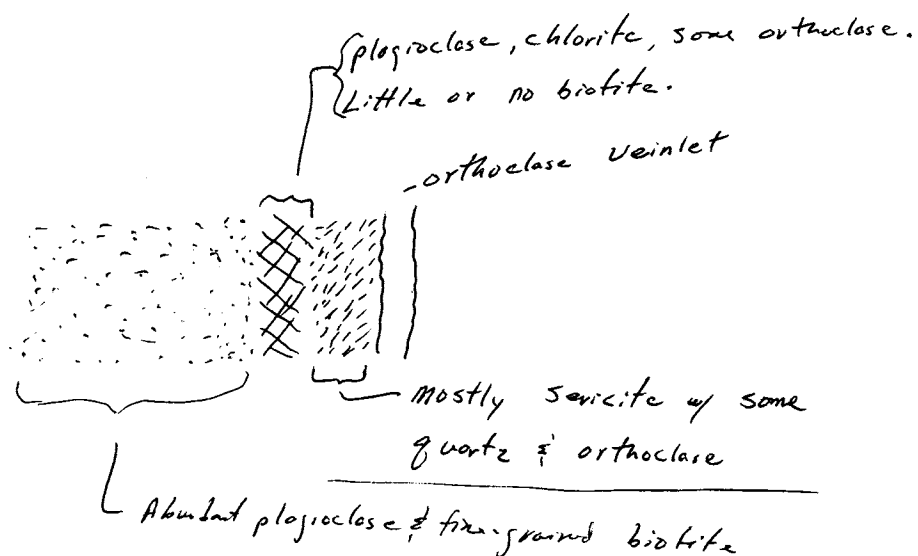
Sample No. ES-5 3859

Texture: Fine-grained microporphyritic

Mineralogy

Plagioclase
Epidote
Chlorite
Biotite
Sericite
Orthoclase
Calcite
Quartz
Sphene
Magnetite

Plagioclase laths mostly less than 1mm make up about 50% of the rock. The groundmass in most areas is composed mostly of fine grained biotite. (some fairly coarse grained). Clusters of epidote are present but not very abundant. Sericite is abundant adjacent to an orthoclase veinlet. Chlorite is present in the groundmass in some areas.



ES-5 COLLARED: 9-1-72 COMPLETED: 11-25-72 TD 4675'

ROTARY: 0 - 1930'

DIAMOND: 1930' - 4675'

ROTARY: 1930'

NUMBER OF SHIFTS:	57
COST PER SHIFT :	\$339.30 398.55
AVG FOOTAGE PER SHIFT :	33
COST PER FOOT :	\$10.02 11.77 *22,717.87
TOTAL COST:	\$19,340.37

DIAMOND: 2745' NX

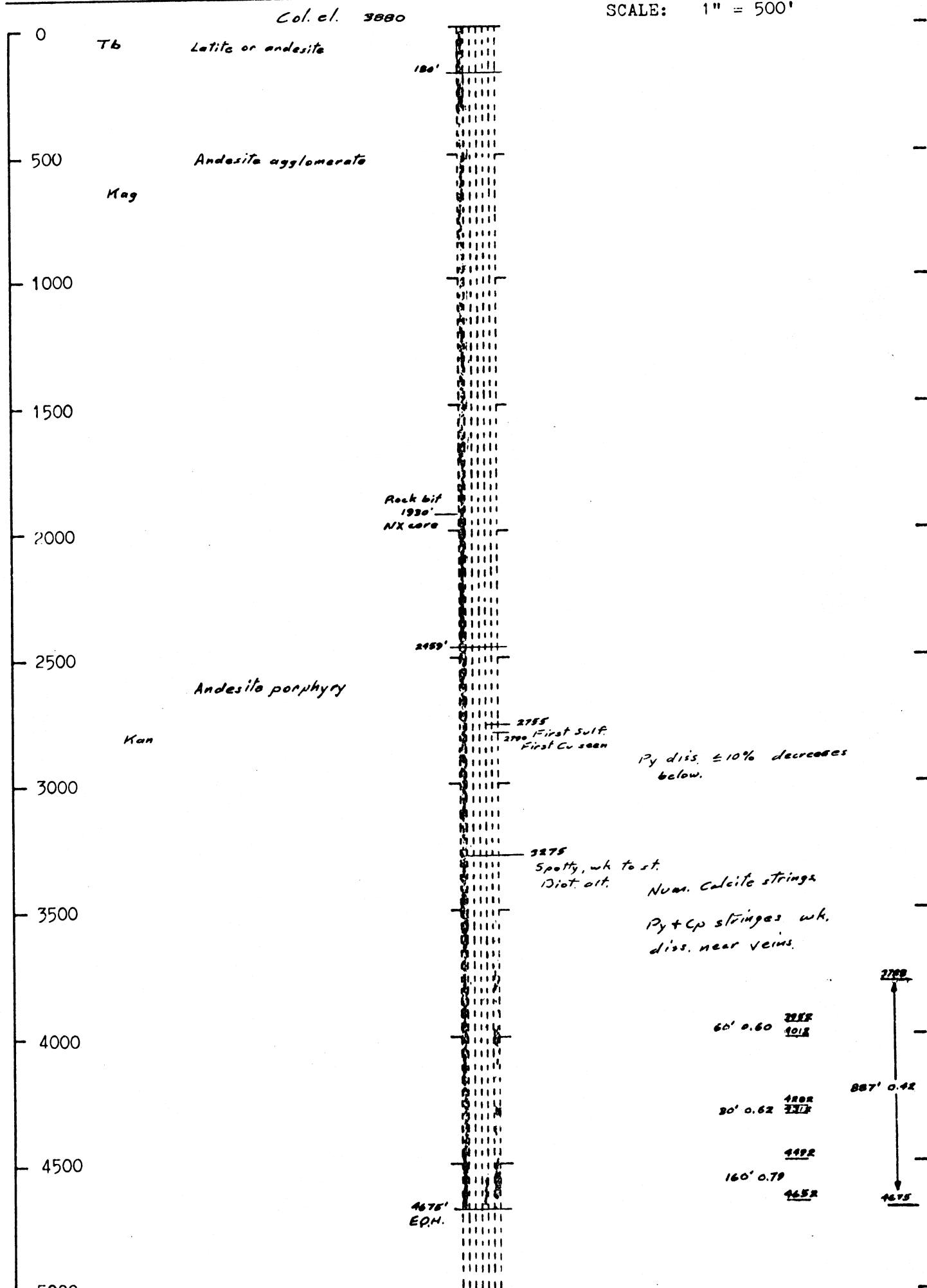
NUMBER OF SHIFTS :	107
COST PER SHIFT :	\$409.21
AVG FOOTAGE PER SHIFT :	25
COST PER FOOT :	\$15.95
TOTAL COST:	\$43,786.25

COMPLETE HOLE 4675'

NUMBER OF SHIFTS :	164
COST PER SHIFT :	\$384.91 405.51
AVG. FOOTAGE PER SHIFT :	28
COST PER FOOT :	\$13.50 14.22 *66,504.12
TOTAL COST:	\$43,126.62

* INCLUDES 1930 FEET OF CASING @ \$1.75/FT NOT CHARGED ON BILLING.

SCALE: 1" = 500'



PROPERTY				DISTRICT		COUNTY		STATE		COUNTRY			
				SAFED		GRAHAM		ARIZONA					
HOLE NO.		CONTRACTOR		COLLAR COORD		COLLAR ELEV.							
ES-5		BRYAN PARR		N E		7860							
BEARING		INCLINATION		DEPTH		STARTED		STOPPED					
VERTICAL				1930		7-1-72							
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT	ASSAYS						REMARKS
		FEET	%	FROM	TO		Grain						
				0	10								gray to tan latite or andesite, younger volcanics
				10	20								"
				20	30								"
				30	40								"
				40	50								"
				50	60								"
				60	70								"
				70	80								"
				80	90								"
				90	100								"
				100	110								"
				110	120								"
				120	130								"
				130	140								"
				140	150								"
				150	160								"
				160	170								"
				170	180	Tb							a few red baked chips from basal zone
				180	190	Kag							mixed zone st latite, baked red chips agglomerate
				190	200								Kag, agglomerate - sericite, propylitic alteration
				200	210								with malabarite sericite, green color
				210	220								"
				220	230								"
				230	240								"
				240	250								"
				250	260								"
				260	270								"
				270	280								"
				280	290								"
				290	300								"
SD44				300	310	.02							only 20% Kag, rest are qtz + gold goethite
SD85				310	320	.02							x qtz + red hematite (+ cuprite?)
SD86				320	330	.02							510-370 more abundant purple fragments w/
SD57				330	340	.01							strong dissem. red oxides (hematite or cuprite?)
SD88				340	350	.01							probably limonite + hematite
SD59				350	360	.02							mixture Kag + mineralized rock
SD12				360	370	.05							Kag propylitic alteration plus good sericite
				370	380								" "
				380	390								" "
				390	400								50% limonite-hematite-sericite vein material
				410	420								90% vein material
				420	430								altered Fe stained agglom next to vein
				430	440								" " "
				440	450								" " "
				450	460								predominantly agglomerate, a few Fe stained chips
				460	470								" propylitic alteration
				470	480								" moderate sericite alteration
				480	490								agglomerate, propylitic - sericite alteration
				490	500								" quartz sericite alteration
				500	510								" "
				510	520								" "
				520	530								" "
				530	540								more Fe stained chips
				540	550								50% Fe-limonite - stained
				550	560								25% " "
				560	570								traces " "
				570	580								Kag agglomerate, propylitic, weak sericite alter
				580	590								" "
				590	600								" "
				600	610								" "
				610	620								" "
				620	630								" "
				630	640								" "
				640	650								strong epidote

DRILL HOLE SAMPLES														PAGE	OF
PROPERTY				DISTRICT		COUNTY	STATE		COUNTRY						
HOLE NO				CONTRACTOR			COLLAR COORD		COLLAR ELEV.						
BEARING				INCLINATION			DEPTH		STARTED		STOPPED				
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT	ASSAYS						REMARKS		
		FEET	%	FROM	TO										
1643		5	100	3147	3952	5	.31								
1644				3152	3957		.51								
1645				3157	3962		.45								
1646				3162	3967		1.24								
1647				3167	3972		.43								
1648				3172	3977		.29		3952	4012	60'	200	3000		
1649				3177	3982		.33								
1650				3182	3987		.12								
2069				3187	3992		.32								
2070				3192	3997		1.21								
2071				3197	4002		.63								
2072				4002	4007		.39								
2073				4007	4012		1.29								
2074				4012	4017		.36								
2075				4017	4022		.28		4012	4052	20'	204			
2076				4022	4027		.12								
2077				4027	4032		.18								
2078				4032	4037		.40								
2079				4037	4042		.50		4032	4052	20'	204			
2080				4042	4047		.37								
2081				4047	4052		.49								
2082				4052	4057		.13								
2083				4057	4062		.40								
2084				4062	4067		.10								
2085				4067	4072		.18								
2086				4072	4077		.16								
2087				4077	4082		.47								
2088				4082	4087		.16								
2089				4087	4092		.40								
2090				4092	4097		.24		4052	4142	70'	220			
2091				4097	4102		.30								
2092				4102	4107		.33								
2093				4107	4112		.19								
2094				4112	4117		.41								
2095				4117	4122		.29								
2096				4122	4127		.45								
2097				4127	4132		.32								
2098				4132	4137		.46								
2099				4137	4142		.13								
2100				4142	4147		.67		4142	4152	10'	214			
6359				4147	4152		.81								
6360				4152	4157		.33								
6361				4157	4162		.41								
6362				4162	4167		.34								
6363				4167	4172		.17		4152	4187	35'	232			
6364				4172	4177		.29								
6365				4177	4182		.47								
6366				4182	4187		.24								
6367				4187	4192		.10								
6368				4192	4197		.15		4157	4257	20'	214			
6369				4197	4202		.20								
6370				4202	4207		.09								
6371				4207	4212		.39								
6372				4212	4217		.19								
6373				4217	4222		.14								
6374				4222	4227		.19								
6375				4227	4232		.36								
6376				4232	4237		.20								
6377				4237	4242		.21								
6378				4242	4247		.29								
6379				4247	4252		.25								
6380				4252	4257		.48								
6381				4257	4262		.15								

DRILL HOLE SAMPLES															PAGE	OF		
PROPERTY SAFFORD															DISTRICT	COUNTY	STATE	COUNTRY
HOLE NO. ES-5			CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.							
BEARING			INCLINATION				DEPTH				STARTED		STOPPED					
SAMPLE NUMBER	BIT SIZE	RECOVERY FEET %	DRILL RUN FROM TO		INT	ASSAYS								REMARKS				
6382	"	5 100	4262	4267	5													
6383	"	"	4267	4272	"													
6389	"	"	4272	4277	"													
6385	"	"	4277	4282	"													
6386	"	"	4282	4287	"													
6387	"	"	4287	4292	"													
6388	"	"	4292	4297	"													
6389	"	"	4297	4302	"													
6390	"	"	4302	4307	"													
6391	"	"	4307	4312	"													
6392	"	"	4312	4317	"													
6393	"	"	4317	4322	"													
6394	"	"	4322	4327	"													
6395	"	"	4327	4332	"													
6396	"	"	4332	4337	"													
6397	"	"	4337	4342	"													
6398	"	"	4342	4347	"													
6399	"	"	4347	4352	"													
6400	"	"	4352	4357	"													
6406	"	"	4357	4362	"													
6407	"	"	4362	4367	"													
6408	"	"	4367	4372	"													
6409	"	"	4372	4377	"													
6410	"	"	4377	4382	"													
6411	"	"	4382	4387	"													
6412	"	"	4387	4392	"													
6413	"	"	4392	4397	"													
6414	"	"	4397	4402	"													
6415	"	"	4402	4407	"													
6416	"	"	4407	4412	"													
6417	"	"	4412	4417	"													
6418	"	"	4417	4422	"													
6419	"	"	4422	4427	"													
6420	"	"	4427	4432	"													
6421	"	"	4432	4437	"													
6422	"	"	4437	4442	"													
6423	"	"	4442	4447	"													
6424	"	"	4447	4452	"													
6425	"	"	4452	4457	"													
6426	"	"	4457	4462	"													
6427	"	"	4462	4467	"													
6428	"	"	4467	4472	"													
6429	"	"	4472	4477	"													
6430	"	"	4477	4482	"													
6431	"	"	4482	4487	"													
6450	"	"	4487	4492	"													
6451	"	"	4492	4497	"													
6492	"	"	4497	4502	"													
6453	"	"	4502	4507	"													
6454	"	"	4507	4512	"													
6455	"	"	4512	4517	"													
6456	"	"	4517	4522	"													
6457	"	"	4522	4527	"													
6458	"	"	4527	4532	"													
6459	"	"	4532	4537	"													
6460	"	"	4537	4542	"													
6461	"	"	4542	4547	"													
6462	"	"	4547	4552	"													
6463	"	"	4552	4557	"													
6464	"	"	4557	4562	"													
6465	"	"	4562	4567	"													
6466	"	"	4567	4572	"													
6467	"	"	4572	4577	"													
6468	"	"	4577	4582	"													

642 - 4492
6441 - 6.33

16' - 4.72

DRILL HOLE SAMPLES														PAGE	OF	
PROPERTY				DISTRICT		COUNTY		STATE		COUNTRY						
SAFFORD																
HOLE NO.				CONTRACTOR				COLLAR COORD.				COLLAR ELEV.				
ES-5								N E								
BEARING				INCLINATION				DEPTH				STARTED STOPPED				
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS								REMARKS	
		FEET	%	FROM	TO											
6470		5	100	4582	4587	5										
6471		4	100	4587	4591	4										
6469		5	100	4591	4596	5										
6472		6	100	4596	4602	6										
6473		5	"	4602	4607	5										
6479		"	"	4607	4612	"										
6475		"	"	4612	4617	"										
6476		"	"	4617	4622	"										
6477		"	"	4622	4627	"										
6478		"	"	4627	4632	"										
6479		"	"	4632	4637	"										
6480		"	"	4637	4642	"										
6481		"	"	4642	4647	"										
6482		"	"	4647	4652	"										
6483		"	"	4652	4657	"										
6484		"	"	4657	4662	"										
6485		"	"	4662	4667	"										
6486		"	"	4667	4672	"										
6487		3	100	4672	4675	3										

6488 - 4675
6489 - 4675

SAFFORD PROJECT

HOLE CONDITION SUMMARY

ES 5, 9, 20

Sept. 13, 1973

All holes are mudded in

ES-5

Nx Casing 0-1930 feet
Drilled Nx to 4675
Hole later tested with deadweight 4/19/73
and appeared to be closed at
approximately 2200 feet.

ES-9

Nx casing 0-1220 feet
Bx casing to 3884 feet
Bx casing cut at 3440 feet
612 feet Bx rods, etc. left in hole
below approximately 3400 feet
Hole very bad!
Total depth Ax to 4047 feet

ES-20

Nx casing to 0-2465 feet
Drilled Nx to 4960 feet
Electrode placed on bottom 3/29/73
Hole condition good!

DIAMOND DRILL LOG

SCALE 1"=100' STARTED _____ STOPPED _____ NOTES BY DAHDEPTH 4675
BEARING _____ INCLINATION VERTICALHOLE No. ES-5SHEET 1OF 28PROPERTY _____
COUNTY GRAHAM
COLLAR COORD. N. _____
COLLAR ELEV. 3860STATE AZ

E. _____

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
			1930						
		36							
			1941						
		60							
		95	1946						
			1950						
		100							
			1960						
		100							
			1965						
		90							
			1973						
		100							
			1980						
		100							
			1990						
		100							
			2000						

scattered zones of
brick red hematite-
goethite after pyrite,
disseminated and on
fr

propylitic - weak
matrices altered
to chlorite + epidote
plagioclase to epidote
+ weak sericite
clots of epidote
common up to 2"

weak magnetite

Kag - andesite
agglomerate;
fragmental 7 pieces
up to 2-3 inches
light greenish-gray
color w/ some pinkish
tinges

1967
Hematite-goethite
brick red

1973
1974 - 2002
brick red hematite-
goethite after pyrite
upto 5% dissem

DIAMOND DRILL LOG

HOLE No. ES-5 SHEET 2 OF 28SCALE _____ STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____PROPERTY _____
COUNTY _____ STATE _____
COLLAR COORD. N. _____ E. _____
COLLAR ELEV. _____

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
			100					same	same
			2010						
			100						
			2020						
			90						
			2025						
			?						
			2040						
			100				2043-2046 dissem Fe inter pyrite		
			2049					rare calcite stringers	
			100						
			2055						
			100						
			2072						
			100						
			2078						
			85						
			2084						
			100						
			2093						

DIAMOND DRILL LOG

SCALE _____

STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____HOLE No. ES-5 SHEET 3 OF 28PROPERTY _____
COUNTY _____ STATE _____
COLLAR COORD. N. _____ E. _____
COLLAR ELEV. _____

ASSAYS			%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU		RECOV.							
			100							
			2104							
			100							
			2110							
			90							
			2120							
			100							
			2128							
			100							
			2137							
			100							
			2143							
			100							
			2150							
		45	100							
			2159							
			100							
			2169							
			80							
			2175							
			80							
			2186							
			100							
			2195							

*moderate
fracturing*

DIAMOND DRILL LOG

HOLE No. ES-5 SHEET 4 OF 28SCALE _____ STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____PROPERTY _____
COUNTY _____ STATE _____
COLLAR COORD. N. _____ E. _____
COLLAR ELEV. _____

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
		100							
		2204							
		100							
		2213							
		2215							
		100							
		2221							
		90							
		2226							
		80							
		2233							
		90							
		2243							
	46	100							
		2250							
		100							
		2260							
		100							
		2270							
		100							
		2280							
	45	100							
		2290							
		100							
		2300							

2257-2261
brick red limonite
zone w/ 1 ft. of
clay gouge

color more purple
and gray than
green

DIAMOND DRILL LOG

SCALE _____

STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____HOLE No. ES-5SHEET 5OF 28

PROPERTY _____

COUNTY _____

COLLAR COORD. N. _____

COLLAR ELEV. _____

STATE _____
E. _____

ASSAYS			%	DEPTH	Graph	COL	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU		RECOV.							
				100					Same	Same
				2306						
				90						
				2316						
				90						
				2325						
				90						
				2334						
				95						
				2340						
				90						
				2350						
				95						
				2355						
				100						
				2365						
		8		100						
				2375						
		7 1/2		100						
				2385						
				95						
				2395						

DIAMOND DRILL LOG

HOLE No. ES-5 SHEET 6 OF 28

SCALE _____

STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____PROPERTY _____
COUNTY _____
COLLAR COORD. N. _____
COLLAR ELEV. _____
STATE _____
E. _____

ASSAYS			%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU		RECOV.							
			100						Same	Same
			2405							
			100							
			2415							
			100							
			2425							
			100							
			2435							
			100							
			2445							
			100							
			2455							
			100							
			2461							
		9	90							
			2471							
			85							
			2478							
			100							
			2488							
			100							
			2497							
			100							
			2498							

weak reddish
brown limonite
on most txs

propylitic
matrix totally
altered to chlorite;
epidote common as
small clumps up
to 1/4 inch and as
alteration product
of plagioclase;
plagioclase cloudy
but shiny and hard
possibly some
silicification,
pretty hard

2459
approximate
contact upper
agglomerate unit
and lower finer
grained andesite
K an
grayish green
occasionally purplish
due to dissem Fe
oxides
abundant small
plagioclase phenocrysts
in aphanitic matrix
weak disseminated
magnetite

DIAMOND DRILL LOG

HOLE No. ES-5SHEET 7OF 28

SCALE _____

STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____

PROPERTY _____

COUNTY _____

COLLAR COORD. N. _____

COLLAR ELEV. _____

STATE _____

E. _____

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
			100						
			2508						
			100				2511 small vein of brown limonite after pyrite in center, 1/8-1/4" bleached hole probably of some quartz		
			2516						
			100						
			2526						
			100						
			2535						
			100						
			2543						
			100						
			2554						
			100						
			2563						
			95						
			2573						
			100						
			2583			2583-86 gold limonite on top and flooding			
			95						
			2592						
			100						
			2599						

DIAMOND DRILL LOG

HOLE No. ES-5SHEET 8OF 28

SCALE _____

STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____PROPERTY _____
COUNTY _____
COLLAR COORD. N. _____
COLLAR ELEV. _____STATE _____
E. _____

ASSAYS			%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU		RECOV.							
				25					Same	Same
				2610						
				70						
				2615			2615-2667			
				100			good dark red			
				2623			limonite on fgs to			
				100			2642 with flooding			
				2632			below			
				90			fissure vein mineralization			
				2639			+ alteration @ 2665			
				90						
				2647						
				100						
				2654						
				100						
				2664						
				100						
				2666						
				2676			strong clay-sericite(?)			
				100			2673-74 strong		pretty consistent	
				2685			flooding gld + dark		epidote forming	
				100			red limonite		from plagioclase	
				2695						
				100						
				2695						
							weak disseminated			
							red limonite 2693-			
							2695			

DIAMOND DRILL LOG

HOLE No. ES-5SHEET 9OF 28

SCALE _____

STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____

PROPERTY _____

COUNTY _____

COLLAR COORD. N. _____

COLLAR ELEV. _____

STATE _____

E. _____

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
			100			2693-2705 dislocation zone of strong white clay(?) on fxs of moderate dark red limonite; fair gouge zone x 2701			
			2705						
			90			also several inches of gouge 2711			
			2711						
			100						
			2718						
			85						
			2725			2724-2731 strong dislocation zone		2731-2753 original rock fabric obscure, alteration appears stronger of some bleaching but mineralogy is same	
	.06		80						
			2735			local short intervals of intense limonite flooding - dark red to orange red			
			100						
			2745						
			100						
			2753				first dissemin pyrite @ 2755		
			100			2758-2764 brown and gold limonite flooding related to fissure vein			
			2761					2761-2770 silicification and intermittent bleaching related to fissure vein	
			100				2765 dissemin pyrite 3-4% but dies out by 2773; sulfides related to fissure vein		
			2769					2770 some black vfg material suggesting traces biotite alteration	
			90					in this area there is perceptible decrease in amount of epidote related to plagioclase	
	.07		2777						
			100						
			2786						
			90				2790 dissemin pyrite 3-4% traces chalcopyrite		
			2793						
			100			2796-2800 interval of apparent fragmented structure, good dissemin pyrite, also in veinlets and small clumps			

DIAMOND DRILL LOG

HOLE No. ES-5 SHEET 10 OF 28

SCALE _____ STARTED _____ STOPPED _____ NOTES BY _____

DEPTH _____ BEARING _____ INCLINATION _____

PROPERTY _____ COUNTY _____ STATE _____ COLLAR COORD. N. _____ E. _____ COLLAR ELEV. _____

ASSAYS			% RECOV.	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU									
				2802				below 2800 very little pyrite	Same	Same
				100						
				2806						
				100						
				2812						
		2815		90						
	.02			2818						
		2820		100						
				2828						
				100						
				2837						
		2842		100						
	.30			2847						
		2847		100						
				2854						
				95						
				2861						
				100						
				2871						
				95						
				2880						
				100						
				2890						
				100						
				2897						

2830 start of zone of strong sericite alteration and sulfide mineralization; core is blotchy in appearance due to bleached sericitized areas; sulfides disseminated 6-10% also in veinlets, appreciable amounts of chalcocite, perhaps locally .3-.4% copper, with traces bornite partial oxidation of pyrite to reddish + brownish limonite lower part of zone has less copper much of zone has pink cast due to strong secondary orthoclase

lower contact gradational into andesite described above
2866

pyrite veinlets typically have halo of bleached sericitized

3-5% disseminated pyrite

2885-2898
andesite dike

2889 3/4 inch wide zone related to veinlets contains strong dissem chalcocite w/ streaks + disseminations of bornite; weaker chalcocite zone ~ 2 inches wide

DIAMOND DRILL LOG

HOLE No. ES-5 SHEET 11 OF 28

SCALE _____ STARTED _____ STOPPED _____ NOTES BY _____

DEPTH _____ BEARING _____ INCLINATION _____

PROPERTY _____ COUNTY _____ STATE _____ COLLAR COORD. N. _____ E. _____ COLLAR ELEV. _____

ASSAYS		% RECOV.	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU								
		2902	100				dissem pyrite 2-5%, average 2+%	good chlorite and epidote,	Kan - fine grained andesite porphyry
.12		2907	100				sulfide veinlets 7 rare chalcopyrite, bornite very unusual	weak sericite generally but intense in halo zones around veinlets	
		2917	90			reddish brown or purplish limonites	partial oxidation to brown limonite on veinlets		
		2925	100						
		2935	100						
		2945	100						
		2950	100						
.09		2954	100						2948 fragmental interval
		2963	100						
		2972	100						
		2980	100						
		2986	100			2983 ~ 2994, moderately broken strong oxidation on ls + veinlets to purplish red limonite			
		2994							

DIAMOND DRILL LOG

SCALE _____

STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____HOLE No. ES-5 SHEET 12 OF 28PROPERTY _____
COUNTY _____ STATE _____
COLLAR COORD. N. _____ E. _____
COLLAR ELEV. _____

ASSAYS			% RECOV.	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU									
		3000		100				weak disseminated	Same	Same
	.01			3004				pyrite $\leq 1\%$		
		3005		100						
				3011						
				100						
				3014						
				7						
				3027						
				100						coarse fragmental
				3036				marked decrease in pyrite veinlets and disseminations below 3034	also fairly distinct decrease in epidote	rock ends at 3034
				90						fine-grained andesite
				3044						
				95						
	.03			3052						
				100						
				3055						
				100						
				3064						
				100						
				3074						rock beginning to look more gray than green
				100						
				3084						
				100						
				3094						
				100						

DIAMOND DRILL LOG

HOLE No. ES-5 SHEET 13 OF 28

SCALE _____

STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____PROPERTY _____
COUNTY _____ STATE _____
COLLAR COORD. N. _____ E. _____
COLLAR ELEV. _____

ASSAYS			%	DEPTH	Graph	COL	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU		RECOV.							
	.01			3104				traces disseminated sulfides	about 3100 it appears there is some weak or incipient biotite alteration, groundmass dark green to dark gray or black; plagioclase shiny and hard, clear to slightly cloudy	Same
				100						
				3114						
				100						
				3124						
				100						
				3134						
				100						
				3143						
				35						
				3153						
	.03			60 3155						
				100				scattered thin pyrite stringers w/ chlorite selvage; no diss. pyrite	weak to mod chlorite, 2% magnetite	-3158 dark gray very dense fine grained andesite possibly a dike
				3165						
				100						
				3175						
				100						
				3185						
				100						
				3195						

DIAMOND DRILL LOG

HOLE No.

ES-5

SHEET

14

OF

28

SCALE

STARTED
STOPPED
NOTES BYDEPTH
BEARING
INCLINATIONPROPERTY
COUNTY
COLLAR COORD. N.
COLLAR ELEV.STATE
E.

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
			100					same	same
			3205						
	.02		100						
	.09		3215			cpy - bor vein			
			100						
			3225						
			100			pyrite veinlets 1/16 to 1/8 inch, veinlets sparse; very little locally diss. pyrite rare cpy	strong chlorite with moderate epidote	3225 gradational contact back to fragmental fine-grained andesite greenish gray	
			3235						
			100						
			3245						
			100						
			3255						
	.01		100						
			3265						
			100						
			3275						
			100					picking up biotite alteration	rock turning red to dark gray
			3285					weak biotite	
			100						
			3295						

DIAMOND DRILL LOG

HOLE No. ES-5 SHEET 15 OF 28

SCALE _____

STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____

PROPERTY _____

COUNTY _____

COLLAR COORD. N. _____

COLLAR ELEV. _____

STATE _____

E. _____

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
	.04		100					Same	Same
			3305				no diss. sulfides		
			100					biotite varies from weak to strong, e.g. 3321	
			3315						
			100						
			3325					essentially no biotite below 3325	
			100						
			3335						
			100						
			3345						
	.03		100						
			3355						
			100						
			3365						
			100						
			3375						
			100						
			3380						
			3381						
			100					erratic distribution of biotite	
			3390						
			100						
			3392						
			100						
			3397						

DIAMOND DRILL LOG

SCALE _____

STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____HOLE No. ES-5SHEET 16OF 28

PROPERTY _____

COUNTY _____

COLLAR COORD. N. _____

COLLAR ELEV. _____

STATE _____

E. _____

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
			90					Same	Same
	.07		3405				many pyrite veinlets contain calcite in center, bleached hubs followed thin biotite hubs		
			100				cpy + bor occasionally present only traces dissem. sulfides		
			3415						
	11		100						
			3423						
			100						
			3433					biotite pretty persistent throughout, calcite common on fxs + veinlets	
			100						
			3442						fragments are more rare and poorly defined similar in texture to matrix
			100						
			3448						
	.05		100						
			3452						
			90					moderate biotite alteration well established	
			3462						
			95						
			3471						
			80						
			3478						
			100						
			3488						
			100						
			3498						

DIAMOND DRILL LOG

HOLE No.

ES-5

SHEET

17

OF

28

SCALE

STARTED
STOPPED
NOTES BYDEPTH
BEARING
INCLINATIONPROPERTY
COUNTY
COLLAR COORD. N.
COLLAR ELEV.STATE
E.

ASSAYS		%	DEPTH	Graph	COL	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
	.03		100				Same	Same	Same
			3508						Kan
			100						
			3518						
			100						
			3525						
			80						
			3531						
			100						
			3535						
			90						
			3546						
	.16		90						
			3550				perhaps getting more dissem. sulfide through here		
			100						
			3560						
			100						
			3570						
			100						
			3577						
			90						
			3583						
			100						
			3586						
			100						
			3596				traces cpy with pyrite	biotite + chlorite alteration	
						3594 trace moly in pyrite vein	total sulfides ≈ 2-6% all in veins usually less than 1/8 in but up to 1/4		

DIAMOND DRILL LOG

HOLE No.

ES-5

SHEET

18

OF

28

SCALE

STARTED
STOPPED
NOTES BYDEPTH
BEARING
INCLINATION

PROPERTY

COUNTY

TOLLAR COORD. N.

TOLLAR ELEV.

STATE
E.

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
			100						Kan fine grained andesite flows, clasts of similar composition common
.04			3606						
			3609						
			100						
			3619					general alteration is moderate to strong biotite although in small local areas the biotite may be very weak in preference to chlorite	
			100						
			3628						
.19			100				cpy occurs more frequently in veins, typical vein has pyrite core w/ minor chlorite-calcite, bleached halo due to quartz-sericite?		
			3638					plagioclase clear to cloudy but shiny and hard	
			100				calcite also present in small amounts in groundmass		
			3648			3641-3647 strong pyrite vein up to 3/4 of some cpy; at 3646 1/2" of cpy, traces bornite		magnetite ubiquitous and may be very strong	
.07			100						
			3658					very minor amounts of epidote	
			100						
			3668					Some calcite veinlets are cross cutting sulfide veinlets	
			100						
			3678						
.26			100						
.53			100						
			3688			3685-6 good cpy and bornite			
.28			100						
			3698						

DIAMOND DRILL LOG

HOLE No.

ES-5

SHEET

19

OF

28

SCALE

STARTED
STOPPED
NOTES BYDEPTH
BEARING
INCLINATIONPROPERTY
COUNTY
TOLLAR COORD. N.
TOLLAR ELEV.STATE
E.

ASSAYS			%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU		RECOV.							
				100				Same	Same	Same
				3700				frequency and amount of cpy increasing;		Kan
				100				bornite also increased but still minor relative to cpy		
				3718						
				100				no disseminated sulfides except very locally adjacent to veins		
				3728				total sulfides varies considerably and tough to estimate but perhaps 4-6%		
				100						
				3738						
				90						
				3847						
	.08			100						
				3757						
				100						
				3761						
				100						
				3769			started splitting			
	.13			100						
	.14									
				3679						
	.07									
				85						
	.11									
				3788						
	.41			95						
				3792						
	.55			100						

DIAMOND DRILL LOG

HOLE No.

ES-5

SHEET

20

OF

28

SCALE

STARTED
STOPPED
NOTES BYDEPTH
BEARING
INCLINATIONPROPERTY
COUNTY
TOLLAR COORD. N.
TOLLAR ELEV.STATE
E.

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
.31			3802				Same	Same	Same
.32			100						Ken
.38			3812						
.32			100						
.17			3822						
.44			100						
.28			3832						
.14			100						
.09			3841				a few quartz veins present with chlorite halo extending 1/8" to 1/4" into otherwise biotized rock		
.28			100						
.17			3848						
.22			90						
.71			3857						
.42			7						
.20			3870						
			3871			3871 - 8 inch gauge zone rock fr on either side			
			100						
.05			95						
.08			3881						
			50						
.11			3884						
			100						
.12			3889						
			50						
.22			3897						

DIAMOND DRILL LOG

HOLE No.

E5-5

SHEET 21

OF 28

SCALE

STARTED
STOPPED
NOTES BYDEPTH
BEARING
INCLINATION

PROPERTY

COUNTY

TOLLAR COORD. N.

TOLLAR ELEV.

STATE
E.

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
		100						Same	Kan
.10		3905					pyrite - chalcopyrite -qtz veins with traces chl - calcite bornite - mostly very thin w/ no alteration halo		Same
.44		90							
.34		3914							
		100					local cpy dissem. but related to veins		
.13		3920					2-3% Cu		
.10		100							
		3927							
.13							cpy/py $\approx 3/2$ or $2/1$ total sulfides $\approx 2\%$		
		100							
.18									
		3937							
.29									
		100							
.20									
		3946							
.31									
		100							
.51									
		3956							
.45									
		100							
1.24									
		3964							
		100							
.43									
		3972							
.29									
		100							
.33									
		3982							
.12									
		100							
		3987							
.32									
		100							
		3990							
1.21									
		100							
.63									
		4000							

DIAMOND DRILL LOG

HOLE No.

ES-5

SHEET

22

OF

28

SCALE

STARTED
STOPPED
NOTES BYDEPTH
BEARING
INCLINATIONPROPERTY
COUNTY
TOLLAR COORD. N.
TOLLAR ELEV.STATE
E.

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
							Same	Same	Kan same
.39		100					occasional open enrichment of calate crystals ± cpy		
1.29		4010							
.36		100							
.28		4020							
.12		100							
.18		4030					some barren calate or cal-gtz veins are later than sulfide veins, others contemporaneous		
.40		100							
.50		4040				4042 trace MoS ₂			
.37		100							
		4047							
.49		100							
.13		4054							
.40		100							
.10		4064					some veins show two periods of mineralization; also a few of the bigger veins (1/8") show an alteration halo consisting of a bleached-silicified zone w/ a thin chlorite zone outside the bleached zone		
.18		100							
.16		4074							
		100							
.47		4081							
.16		100							
.40		4090				4090-4097 zone of mod. dissemin. pyrite 2-4%			
.24		100							
.30		4099							

DIAMOND DRILL LOG

HOLE No. ES-5 SHEET 23 OF 28

SCALE _____

STARTED
STOPPED
NOTES BY _____DEPTH
BEARING
INCLINATION _____

PROPERTY _____

COUNTY _____

TOLLAR COORD. N. _____

TOLLAR ELEV. _____

STATE _____

E. _____

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
							Same	Same	Same
.33		100							
.19			4109						
.41		100							
.29			4119						
.45		100						4122 - 4127 distorted zone with strong calcite - chlorite	
.32			4129						
.46		100						weak calcite & chlor. in groundmass	
.13			4139					qtz-calcite common on tx and in veinlets ± sulfides;	
.67		100						tiny veinlets 1/6 biotite or chlorite rare	
.81			4149						
.33		100							
.41			4159						
.34		100							
.17			4169						
.29		100							
.47			4179						
.24		100							
.10			4189						
.15		100							
.20			4199						

≤ 1% total sulfides
.2% Cu

4175
THIN
SECTION

DIAMOND DRILL LOG

HOLE No.

ES-5

SHEET 23

OF 28

SCALE

STARTED
STOPPED
NOTES BYDEPTH
BEARING
INCLINATION

PROPERTY

COUNTY

TOWNSHIP COORD. N.

TOWNSHIP ELEV.

STATE

E.

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
							Same	Same	Kan Same
.09		100							
.39			4209					4209-4219 strong calcite-chlor veins	
.19		100							
.14			4219						
.14		100							
.38			4229						
.20		100							
.21			4239						
.29		100							
.25			4248						
.48		100				4255 good vein w/ cpy-trace born- hematite-chlor	bright red hematite noted at 4255 has been seen before in various places		
.15			4258						
.09		100							
.15			4268						
.25		100							
.27			4278						
1.02		100				4283 good 4 FT zone of multiple veins .6 % Cu			
.39			4288						
.64		100							
.64			4298						

SCALE

STARTED _____
STOPPED _____
NOTES BY _____

DEPTH _____
BEARING _____
INCLINATION _____

HOLE No.

ES-5

SHEET

24

OF 28

PROPERTY

COUNTY

OLLAR COORD. N.

COLLAR ELEV.

STATE

E.

ASSAYS		% RECOV.	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU								
.63		100				4302-4310 zone of stronger veining .6-.8% Cu	primarily chalcoppyrite in thin veins cpy/py = 2/1 or 3/1	strong biotite, some silicification plagioclase cloudy but hard	Kan andesite porphyry
.43			4308				essentially no dissem sulfides except locally closely related to veins	veinlets vary from no alteration (only sulfides) to those of a core of sulfide	dark gray very weakly porphyritic w/ phenocrysts ≤ 1 mm.
.21		100					best developed and most abundant veins are parallel to subparallel the core axis, conjugate sets also occur at approximately 45° to core axis	quartz-chlorite \pm calcite \pm epidote alteration halo varies from nil to a bleached zone w/ chlorite approx equal vein width on either side;	definite indications of very fine clastic structure, possibly a lithic tuff
.25			4318					vein width generally 1/16 inch or less rarely 1/4 inch	local short intervals have better developed phenocrysts
.16		100				.2-.3% Cu average			
.27			4328				bright red specular hematite scattered around in some veins		
.41		100							
.21			4338				dissem magnetite probably 2-3% but difficult to pick out of the biotite		
.30		100							
.42			4348						
.11		100							
.35			4358						
.27		98							
.17			4368						
.59		100							
.36			4378						
.50		100							
.15			4388						
.22		90							
.30			4396						

DIAMOND DRILL LOG

HOLE No.

ES-5

SHEET

25

OF

28

SCALE

STARTED
STOPPED
NOTES BYDEPTH
BEARING
INCLINATIONPROPERTY
COUNTY
TOLLAR COORD. N.
TOLLAR ELEV.STATE
E.

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
			100				Same	Same	Same
.22			4405			4403-4420 stronger calcite zone			Kan
			100						
.22			4412						
.31			100			4417-4418 small ship, granular qtz-calcite clay traces cpy			
.15			4421						
.68			100						
.26			4432			4432 traces bar and conellite on cpy	.2-.25% Cu overall higher grade intervals only 2- 3 feet long		
.48			100						
.13			4440						
.57			100						
.36			4450						
.27			100						
.20			4460						
.30			100			4465-4471 moderate clay-calcite on fxs			
			4468						
.34			100						
			4471						
.39			85						
.30			4480						
.48			90						
.26			4490						
.83			95				starting at about 45-90 the vein thickness increases so that 1/8 inch veins are common and 1/4 to 1/2 inch veins are seen; the		
.60			4500						

DIAMOND DRILL LOG

HOLE No. ES-5 SHEET 26 OF 28

SCALE _____

STARTED _____
STOPPED _____
NOTES BY _____DEPTH _____
BEARING _____
INCLINATION _____PROPERTY _____
COUNTY _____
TOLLAR COORD. N. _____
TOLLAR ELEV. _____STATE _____
E. _____

ASSAYS		%	DEPTH	Graph	COL.	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
							Same	Same	Same
.39		100					vein frequency appears unchanged or even diminished		Kan
.98			4510						fragmental nature of rock still apparent
.26		100					no disseminated sulfides; traces covellite and bornite seen in veins		
.98			4520						
1.22		100							
.95			4530						
1.59		100							
1.10			4540						
.49		100							
.92			4550						
.38		100							
.40			4560						
.73		100							
.56			4570						
.44		100							
.83			4580						
.57		100							
.91			4590						
.56		100							
1.29			4598						

DIAMOND DRILL LOG

HOLE No. ES-5 SHEET 27 OF 28

SCALE _____

DEPTH _____
BEARING _____
INCLINATION _____

PROPERTY _____
COUNTY _____ STATE _____
COLLAR COORD. N. _____ E. _____
COLLAR ELEV. _____

ASSAYS		%	DEPTH	Graph	COL	DETAIL	MINERALIZATION	ALTERATION	ROCK TYPE
% MO	% CU	RECOV.							
			100				same	same	same
.70									Kan
			4608						
.59									
			100				minor amounts bornite-covellite		
1.08									
			4618						
.70									
			100						
.64									
			4628						
.60									
			100				less pyrite with depth		
.42									
			4635						
1.19									
			100						
1.39						4645 below here slight decrease in thickness + frequency of cpy veins			
			4645						
.72									
			100						
.41									
			4655						
.43									
			95						
.55									
			4665						
.56									
			100						
.20									
			4675						

in epikote; suggestion of weak biotite
3100 but no definitely identified until
thereafter biotite distribution is erratic and
varies from weak to locally strong but
overall is definitely subordinate to chlorite

biotite 3600 - 4675 biotite alteration of mafics and
groundmass; vein minerals are quartz, calcite,
chlorite, sulfides

no sulfides

2755 - 3000 first sulfides are disseminated pyrite at
2755, thereafter in disseminations and up to 8%
and in veinlets, total sulfides probably average 3%
traces chalcopryite and bornite; good disseminated
sulfide zone 2830 - 2866 assay 0.3% Cu over
five foot interval

3000 - 3158 traces sulfides disseminated and in veins
dissem + veins 3158

Veins 3158 - 3619 total pyrite varies 2-6%, averages
2-3% and virtually all in veins; traces
of chalcopryite

3619 - 4675 sulfides predominantly in veins and average
varies 2-4%; chalcopryite frequency
increase noticeably at 3619 and continues
to increase until $cpy/py \approx 3/2$ at
3900 and $2/1$ or $3/1$ at 4300, ten foot

ES-5

DRILL HOLE SUMMARY

0-180 Tb, post-ore Tertiary volcanics

180-2459 Kag; andesite agglomerate, green or gray green with locally shades of pink or purple; propylitic alteration with chlorite, epidote, and generally moderate sericite; limonite stain commonly but only very locally strong, generally bright red or brick red, infrequently gold in color, rarely in disseminated form;

300-370 fissure vein, quartz-sericite alteration with strong red limonite

2459-4675 Kan; andesite porphyry; grayish green to dark gray depending upon type of alteration; abundant small plagioclase phenocrysts in aphanitic matrix; coarse fragmental and tuffaceous intervals common but subordinate to porphyry;

2459-3034 propylitic alteration; local silicification and bleaching related to fissure veins; ~~2830~~
2830-2866 zone of strong sericite alteration and irregular bleaching

biot. chlorite

3034-3600 chlorite alteration zone; obvious decrease

DRILL HOLE SAMPLES

PAGE3OF7

PROPERTY		DISTRICT		COUNTY	STATE	COUNTRY		
HOLE NO. ES-5		CONTRACTOR		COLLAR COORD.		COLLAR ELEV.		
BEARING		INCLINATION		DEPTH		STARTED STOPPED		
SAMPLE NUMBER	BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS	REMARKS

				1300	1310			"		"		"	
				1310	1320			"		"		"	15% Fe stained
				1320	1330			"		"		"	less Fe stained
				1330	1340			"		"		"	
				1340	1350			"		"		"	
				1350	1360			"		"		"	
				1360	1370			"		"		"	
				1370	1380			"		"		"	
				1380	1390			"		"		"	
				1390	1400			"		"		"	
				1400	1410			"		"		"	
				1410	1420			"		"		"	
				1420	1430			"		"		"	
				1430	1440			"		"		"	
				1440	1450			"		"		"	
				1450	1460			"		"		"	
				1460	1470			"		"		"	
				1470	1480			"		"		"	
				1480	1490			"		"		"	
				1490	1500			"		"		"	
				1500	1510			"		"		"	
				1510	1520			"		"		"	
				1520	1530			"		"		"	
				1530	1540			"		"		"	
				1540	1550			"		"		"	
				1550	1560			"		"		"	
				1560	1570			"		"		"	
				1570	1580			"		"		"	
				1580	1590			"		"		"	
				1590	1600			"		"		"	
				1600	1610			"		"		"	
				1610	1620			"		"		"	
				1620	1630			"		"		"	
				1630	1640			"		"		"	
				1640	1650			"		"		"	
				1650	1660			"		"		"	
				1660	1670			"		"		"	
				1670	1680			"		"		"	
				1680	1690			"		"		"	
				1690	1700			"		"		"	
				1700	1710			"		"		"	
				1710	1720			"		"		"	
				1720	1730			"		"		"	
				1730	1740			"		"		"	
				1740	1750			"		"		"	
				1750	1760			"		"		"	
				1760	1770			"		"		"	
				1770	1780			"		"		"	
				1780	1790			"		"		"	
				1790	1800			"		"		"	
				1800	1810			"		"		"	
				1810	1820			"		"		"	
				1820	1830			"		"		"	
				1830	1840			"		"		"	
				1840	1850			"		"		"	some increase in
				1850	1860			"		"		"	Fe stain red + yellow
				1860	1870			"		"		"	"
				1870	1880			"		"		"	"
				1880	1890			"		"		"	"
				1890	1900			"		"		"	"
				1900	1910			"		"		"	"
				1910	1920			"		"		"	"
				1920	1930			"		"		"	"

DRILL HOLE SAMPLES										PAGE	OF	
PROPERTY					DISTRICT		COUNTY	STATE	COUNTRY			
					SAFFORD		GRAHAM	ARIZONA				
HOLE NO.		CONTRACTOR			COLLAR COORD.			COLLAR ELEV.				
ES-5		BOYLES Bros.			N E			3860				
BEARING		INCLINATION			DEPTH			STARTED		STOPPED		
VERTICAL					1930			9-1-72				
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS					REMARKS
		FEET	%	FROM	TO		% Cu					
				0	10							gray to tan latite or andesite, younger volcan
				10	20							"
				20	30							"
				30	40							"
				40	50							"
				50	60							"
				60	70							"
				70	80							"
				80	90							"
				90	100							"
				100	110							"
				110	120							"
				120	130							"
				130	140							"
				140	150							"
				150	160							"
				160	170							"
				170	180							"
				180	190							"
				190	200							"
				200	210							"
				210	220							"
				220	230							"
				230	240							"
				240	250							"
				250	260							"
				260	270							"
				270	280							"
				280	290							"
				290	300							"
				300	310							"
				310	320							"
				320	330							"
				330	340							"
				340	350							"
				350	360							"
				360	370							"
				370	380							"
				380	390							"
				390	400							"
				400	410							"
				410	420							"
				420	430							"
				430	440							"
				440	450							"
				450	460							"
				460	470							"
				470	480							"
				480	490							"
				490	500							"
				500	510							"
				510	520							"
				520	530							"
				530	540							"
				540	550							"
				550	560							"
				560	570							"
				570	580							"
				580	590							"
				590	600							"
				600	610							"
				610	620							"
				620	630							"
				630	640							"
				640	650							"
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DRILL HOLE SAMPLES														PAGE 6		OF 7	
PROPERTY SAFFORD					DISTRICT		COUNTY		STATE		COUNTRY						
HOLE NO. ES-5				CONTRACTOR			COLLAR COORD. N E				COLLAR ELEV.						
BEARING				INCLINATION			DEPTH				STARTED STOPPED						
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS								REMARKS		
		FEET	%	FROM	TO		%										
6382		5	100	4262	4267	5	.20										
6383		"	"	4267	4272	"	.18										
6384		"	"	4272	4277	"	.18										
6385		"	"	4277	4282	"	.21										
6386		"	"	4282	4287	"	.102										
6387		"	"	4287	4292	"	.33										
6388		"	"	4292	4297	"	.15		4292	4297	20	2.62					
6389		"	"	4297	4302	"	.18										
6390		"	"	4302	4307	"	.13										
6391		"	"	4307	4312	"	.43										
6392		"	"	4312	4317	"	.12										
6393		"	"	4317	4322	"	.24										
6394		"	"	4322	4327	"	.18										
6395		"	"	4327	4332	"	.27										
6396		"	"	4332	4337	"	.41										
6397		"	"	4337	4342	"	.21										
6398		"	"	4342	4347	"	.30										
6399		"	"	4347	4352	"	.42		4347	4352	40	1.10					
6400		"	"	4352	4357	"	.11										
6406		"	"	4357	4362	"	.13										
6407		"	"	4362	4367	"	.17										
6408		"	"	4367	4372	"	.17										
6409		"	"	4372	4377	"	.53										
6410		"	"	4377	4382	"	.36		4377	4382	10	0.40					
6411		"	"	4382	4387	"	.10										
6412		"	"	4387	4392	"	.15										
6413		"	"	4392	4397	"	.22										
6414		"	"	4397	4402	"	.30		4397	4402	10	1.22					
6415		"	"	4402	4407	"	.22										
6416		"	"	4407	4412	"	.21										
6417		"	"	4412	4417	"	.31										
6418		"	"	4417	4422	"	.15										
6419		"	"	4422	4427	"	.65										
6420		"	"	4427	4432	"	.16										
6421		"	"	4432	4437	"	.13										
6422		"	"	4437	4442	"	.13										
6423		"	"	4442	4447	"	.57		4442	4447	10	1.22					
6424		"	"	4447	4452	"	.36										
6425		"	"	4452	4457	"	.27										
6426		"	"	4457	4462	"	.20										
6427		"	"	4462	4467	"	.30										
6428		"	"	4467	4472	"	.14										
6429		"	"	4472	4477	"	.32										
6430		"	"	4477	4482	"	.30										
6431		"	"	4482	4487	"	.43										
6450		"	"	4487	4492	"	.26										
6451		"	"	4492	4497	"	.10										
6492		"	"	4497	4502	"	.67										
6453		"	"	4502	4507	"	.12		4502	4507	20	1.27					
6454		"	"	4507	4512	"	.13										
6455		"	"	4512	4517	"	.26										
6456		"	"	4517	4522	"	.19										
6457		"	"	4522	4527	"	.122										
6458		"	"	4527	4532	"	.35		4527	4532	20	1.12					
6459		"	"	4532	4537	"	.53										
6460		"	"	4537	4542	"	.10										
6461		"	"	4542	4547	"	.43										
6462		"	"	4547	4552	"	.12		4547	4552	20	1.12					
6463		"	"	4552	4557	"	.33										
6464		"	"	4557	4562	"	.17										
6465		"	"	4562	4567	"	.13										
6466		"	"	4567	4572	"	.16										
6467		"	"	4572	4577	"	.17										
6468		"	"	4577	4582	"	.17										

DRILL HOLE SAMPLES													PAGE	OF		
PROPERTY SAFFORD													DISTRICT	COUNTY	STATE	COUNTRY
HOLE NO. ES-5			CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.					
BEARING			INCLINATION				DEPTH				STARTED		STOPPED			
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS			
		FEET	%	FROM	TO											
1643		5	100	3947	3952	5	.31	}	3952	4012	60'	0.60 %Cu				
1644				3952	3957	"	.51									
1645				3957	3962	"	.45									
1646				3962	3967	"	1.24									
1647				3967	3972	"	.43									
1648				3972	3977	"	.29									
1649				3977	3982	"	.33									
1650				3982	3987	"	.12									
2069				3987	3992	"	.32									
2070				3992	3997	"	1.21									
2071				3997	4002	"	.63	}	4012	4032	20'	0.24				
2072				4002	4007	"	.39									
2073				4007	4012	"	1.29									
2074				4012	4017	"	.36									
2075				4017	4022	"	.28									
2076				4022	4027	"	.12									
2077				4027	4032	"	.18									
2078				4032	4037	"	.40									
2079				4037	4042	"	.50									
2080				4042	4047	"	.37									
2081				4047	4052	"	.49	}	4032	4052	20'	0.44				
2082				4052	4057	"	.13									
2083				4057	4062	"	.40									
2084				4062	4067	"	.10									
2085				4067	4072	"	.18									
2086				4072	4077	"	.16									
2087				4077	4082	"	.47									
2088				4082	4087	"	.16									
2089				4087	4092	"	.40									
2090				4092	4097	"	.24									
2091				4097	4102	"	.30	}	4052	4142	90'	0.25				
2092				4102	4107	"	.33									
2093				4107	4112	"	.19									
2094				4112	4117	"	.41									
2095				4117	4122	"	.29									
2096				4122	4127	"	.45									
2097				4127	4132	"	.32									
2098				4132	4137	"	.46									
2099				4137	4142	"	.13									
2100				4142	4147	"	.67									
6359				4147	4152	"	.81	}	4142	4152	10'	0.74				
6360				4152	4157	"	.33									
6361				4157	4162	"	.41									
6362				4162	4167	"	.34									
6363				4167	4172	"	.17									
6364				4172	4177	"	.29									
6365				4177	4182	"	.47									
6366				4182	4187	"	.24									
6367				4187	4192	"	.10									
6368				4192	4197	"	.15									
6369				4197	4202	"	.20	}	4187	4207	20'	0.14				
6370				4202	4207	"	.09									
6371				4207	4212	"	.39									
6372				4212	4217	"	.19									
6373				4217	4222	"	.14									
6374				4222	4227	"	.14									
6375				4227	4232	"	.38									
6376				4232	4237	"	.20									
6377				4237	4242	"	.21									
6378				4242	4247	"	.29									
6379				4247	4252	"	.25	}	4207	4252	15'	0.22				
6380				4252	4257	"	.48									
6381				4257	4262	"	.15									

DRILL HOLE SAMPLES													PAGE	OF		
PROPERTY SAFFORD													DISTRICT	COUNTY	STATE	COUNTRY
HOLE NO. ES-5			CONTRACTOR				COLLAR COORD. N				COLLAR ELEV. E					
BEARING			INCLINATION				DEPTH				STARTED		STOPPED			
SAMPLE NUMBER	BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS						REMARKS			
6401	5	100		2725	2730	5	.06									
6402	5	100		2777	2782	5	.07									
6403	5	100		2815	2820	5	.02									
6409	5	100		2842	2847	5	.30									
6319	5	100		2902	2907	5	.12									
6320	5	100		2950	2955	5	.09									
6321	5	100		3000	3005	5	.01									
6322	5	100		3048	3053	5	.03									
6323	5	100		3102	3107	5	.01									
6324	5	100		3153	3158	5	.03									
6325	5	100		3205	3210	5	.02									
6326	5	100		3210	3215	5	.09									
6327	5	100		3255	3260	5	.01									
6328	5	100		3300	3305	5	.04									
6338	5	100		3348	3353	5	.03									
6339	5	100		3401	3406	5	.07									
6350	5	100		3449	3454	5	.05									
6351	5	100		3498	3503	5	.04									
6352	5	100		3545	3550	5	.16									
6353	5	100		3603	3608	5	.04									
6357	5	100		3634	3639	5	.19									
6359	5	100		3650	3655	5	.07									
1627	5	100		3678	3683	5	.26									
6358	5	100		3683	3688	5	.53									
1628	5	100		3688	3693	5	.28									
6355	5	100		3698	3703	5	.21									
6356	5	100		3748	3753	5	.08									
1606	4	80		3769	3774	5	.13									
1607	4	100		3774	3778	4	.19									
1608	5	100		3778	3783	5	.07									
1609	5	100		3783	3788	5	.11									
1610	5	100		3788	3793	5	.41									
1611	4	80		3793	3798	5	.55									
1612	4	100		3798	3802	4	.31									
1613	5	100		3802	3807	5	.32									
1614	5	100		3807	3812	5	.38		3788	3827	31'	0.36	%Cu			
1615	5	100		3812	3817	5	.32									
1616	5	100		3817	3822	5	.17									
1617	5	100		3822	3827	5	.44									
1618	5	100		3827	3832	5	.28									
1619	5	100		3832	3837	5	.14									
1620	5	100		3837	3842	5	.09									
1621	5	100		3842	3847	5	.28		3827	3857	30'	0.20				
1622	5	100		3847	3852	5	.17									
1623	4	80		3852	3857	5	.22									
1624	4	80		3857	3862	5	.71		3857	3867	10'	0.57				
1625	5	100		3862	3867	5	.42									
1626	5	71		3867	3874	7	.20									
1629	5	100		3879	3879	5	.05									
1630	4	80		3879	3884	5	.08									
1631	5	100		3884	3889	5	.11		3867	3907	40'	0.09				
1632	4	50		3889	3897	8	.12									
1633	5	100		3897	3902	5	.22									
1634	4	80		3902	3907	5	.10									
1635	5	100		3907	3912	5	.44		3907	3917	10'	0.39				
1636	5	100		3912	3917	5	.39									
1637	5	100		3917	3922	5	.13									
1638	5	100		3922	3927	5	.10		3917	3937	20'	0.14				
1639	5	100		3927	3932	5	.13									
1640	5	100		3932	3937	5	.18									
1641	5	100		3937	3942	5	.29									
1642	5	100		3942	3947	5	.20		3937	3952	15'	0.27				

DRILL HOLE SAMPLES														PAGE 7		OF 7	
PROPERTY SAFFORD				DISTRICT		COUNTY		STATE		COUNTRY							
HOLE NO. ES-5				CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.					
BEARING				INCLINATION				DEPTH				STARTED STOPPED					
SAMPLE NUMBER		BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS								REMARKS	
6470			5 100		4582 4587		5										
6471			4 100		4587 4591		4										
6469			5 100		4591 4596		5										
6472			6 100		4596 4602		6										
6473			5 "		4602 4607		5										
6479			" "		4607 4612		"										
6475			" "		4612 4617		"										
6476			" "		4617 4622		"										
6477			" "		4622 4627		"										
6478			" "		4627 4632		"										
6479			" "		4632 4637		"										
6480			" "		4637 4642		"										
6481			" "		4642 4647		"										
6482			" "		4647 4652		"										
6483			" "		4652 4657		"										
6484			" "		4657 4662		"										
6485			" "		4662 4667		"										
6486			" "		4667 4672		"										
6487			3 100		4672 4675		3										
														3180 - 4675			
														251' 1.22			

DRILL HOLE SAMPLES													PAGE 1	OF 4
PROPERTY SAFFORD				DISTRICT		COUNTY		STATE		COUNTRY				
HOLE NO. ES-5		CONTRACTOR			COLLAR COORD. N E			COLLAR ELEV.						
BEARING		INCLINATION			DEPTH			STARTED		STOPPED				
SAMPLE NUMBER	BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS					REMARKS		
6401	5	100	2725	2730	5	.06								
6402	5	100	2777	2782	5	.07								
6403	5	100	2815	2820	5	.02								
6404	5	100	2842	2847	5	.30								
6319	5	100	2902	2907	5	.12								
6320	5	100	2950	2955	5	.09								
6321	5	100	3000	3005	5	.01								
6322	5	100	3048	3053	5	.03								
6323	5	100	3102	3107	5	.01								
6324	5	100	3153	3158	5	.03								
6325	5	100	3205	3210	5	.02								
6326	5	100	3210	3215	5	.09								
6327	5	100	3255	3260	5	.01								
6328	5	100	3300	3305	5	.04								
6338	5	100	3348	3353	5	.03								
6339	5	100	3401	3406	5	.07								
6350	5	100	3449	3454	5	.05								
6351	5	100	3498	3503	5	.04								
6352	5	100	3545	3550	5	.16								
6353	5	100	3603	3608	5	.04								
6357	5	100	3634	3639	5	.19								
6354	5	100	3650	3655	5	.07								
1627	5	100	3678	3683	5	.26								
6358	5	100	3683	3688	5	.53								
1628	5	100	3688	3693	5	.28								
6355	5	100	3698	3703	5	.21								
6356	5	100	3748	3753	5	.08								
1606	4	80	3769	3774	5	.13								
1607	4	100	3774	3778	4	.14								
1608	5	100	3778	3783	5	.07								
1609	5	100	3783	3788	5	.11								
1610	5	100	3788	3793	5	.41								
1611	4	80	3793	3798	5	.55								
1612	4	100	3798	3802	4	.31								
1613	5	100	3802	3807	5	.32								
1614	5	100	3807	3812	5	.38								
1615	5	100	3812	3817	5	.32								
1616	5	100	3817	3822	5	.17								
1617	5	100	3822	3827	5	.44								
1618	5	100	3827	3832	5	.28						3788-3952		
1619	5	100	3832	3837	5	.14								
1620	5	100	3837	3842	5	.09						164' 0.33		
1621	5	100	3842	3847	5	.28								
1622	5	100	3847	3852	5	.17								
1623	4	80	3852	3857	5	.22								
1624	4	80	3857	3862	5	.71								
1625	5	100	3862	3867	5	.42								
1626	5	71	3867	3874	7	.20								
1629	5	100	3874	3879	5	.05								
1630	4	80	3879	3884	5	.08								
1631	5	100	3884	3889	5	.11								
1632	4	50	3889	3897	8	.12								
1633	5	100	3897	3902	5	.22								
1634	4	80	3902	3907	5	.10								
1635	5	100	3907	3912	5	.44								
1636	5	100	3912	3917	5	.39								
1637	5	100	3917	3922	5	.13								
1638	5	100	3922	3927	5	.10								
1639	5	100	3927	3932	5	.13								
1640	5	100	3932	3937	5	.18								
1641	5	100	3937	3942	5	.29								
1642	5	100	3942	3947	5	.20								

DRILL HOLE SAMPLES													PAGE	OF		
PROPERTY SAFFORD													DISTRICT	COUNTY	STATE	COUNTRY
HOLE NO. ES-5		CONTRACTOR					COLLAR COORD. N E			COLLAR ELEV.						
BEARING		INCLINATION					DEPTH			STARTED STOPPED						
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS			
		FEET	%	FROM	TO		%Cu									
1643		5	100	3947	3952	5	.31	}								
1644		"	"	3952	3957	"	.51									
1645		"	"	3957	3962	"	.45									
1646		"	"	3962	3967	"	1.24									
1647		"	"	3967	3972	"	.43									
1648		"	"	3972	3977	"	.29	}	3952	4012	60'	0.60	%Cu			
1649		"	"	3977	3982	"	.33									
1650		"	"	3982	3987	"	.12									
2069		"	"	3987	3992	"	.32									
2070		"	"	3992	3997	"	1.21		92							
2071		"	"	3997	4002	"	.63	}								
2072		"	"	4002	4007	"	.39									
2073		"	"	4007	4012	"	1.29									
2074		"	"	4012	4017	"	.36									
2075		"	"	4017	4022	"	.28			4012	4032	20'	0.24			
2076		"	"	4022	4027	"	.12	}								
2077		"	"	4027	4032	"	.18									
2078		"	"	4032	4037	"	.40									
2079		"	"	4037	4042	"	.50			4032	4052	20'	0.44			
2080		"	"	4042	4047	"	.37									
2081		"	"	4047	4052	"	.49	}								
2082		"	"	4052	4057	"	.13									
2083		"	"	4057	4062	"	.40									
2084		"	"	4062	4067	"	.10									
2085		"	"	4067	4072	"	.18							4012-4282		
2086		"	"	4072	4077	"	.16	}								
2087		"	"	4077	4082	"	.47							270' 0.20		
2088		"	"	4082	4087	"	.16									
2089		"	"	4087	4092	"	.40									
2090		"	"	4092	4097	"	.24			4052	4142	90'	0.28			
2091		"	"	4097	4102	"	.30	}								
2092		"	"	4102	4107	"	.33									
2093		"	"	4107	4112	"	.19									
2094		"	"	4112	4117	"	.41									
2095		"	"	4117	4122	"	.29									
2096		"	"	4122	4127	"	.45	}								
2097		"	"	4127	4132	"	.32									
2098		"	"	4132	4137	"	.46									
2099		"	"	4137	4142	"	.13									
2100		"	"	4142	4147	"	.67			4142	4152	10'	0.74			
6359		"	"	4147	4152	"	.81	}								
6360		"	"	4152	4157	"	.33									
6361		"	"	4157	4162	"	.41									
6362		"	"	4162	4167	"	.34									
6363		"	"	4167	4172	"	.17			4152	4187	35'	0.32			
6364		"	"	4172	4177	"	.29	}								
6365		"	"	4177	4182	"	.47									
6366		"	"	4182	4187	"	.24									
6367		"	"	4187	4192	"	.10									
6368		"	"	4192	4197	"	.15			4187	4207	20'	0.14			
6369		"	"	4197	4202	"	.20	}								
6370		"	"	4202	4207	"	.09									
6371		"	"	4207	4212	"	.39									
6372		"	"	4212	4217	"	.19									
6373		"	"	4217	4222	"	.14									
6374		"	"	4222	4227	"	.14	}								
6375		"	"	4227	4232	"	.38									
6376		"	"	4232	4237	"	.20									
6377		"	"	4237	4242	"	.21									
6378		"	"	4242	4247	"	.29			4207	4282	75'	0.24			
6379		"	"	4247	4252	"	.25	}								
6380		"	"	4252	4257	"	.48									
6381		"	"	4257	4262	"	.15									

DRILL HOLE SAMPLES										PAGE 3 OF 4			
PROPERTY SAFFORD				DISTRICT		COUNTY		STATE		COUNTRY			
HOLE NO. ES-5		CONTRACTOR		COLLAR COORD. N E				COLLAR ELEV.					
BEARING		INCLINATION		DEPTH				STARTED		STOPPED			
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS
		FEET	%	FROM	TO		%CU						
6382	5	100		4262	4267	5	.09						
6383	"	"		4267	4272	"	.15						
6384	"	"		4272	4277	"	.25						
6385	"	"		4277	4282	"	.27						
6386	"	"		4282	4287	"	1.02						
6387	"	"		4287	4292	"	.39						
6388	"	"		4292	4297	"	.64		4282	4312	30'	0.62	
6389	"	"		4297	4302	"	.64						
6390	"	"		4302	4307	"	.63						
6391	"	"		4307	4312	"	.43						
6392	"	"		4312	4317	"	.21						
6393	"	"		4317	4322	"	.25						
6394	"	"		4322	4327	"	.16						
6395	"	"		4327	4332	"	.27						
6396	"	"		4332	4337	"	.41						
6397	"	"		4337	4342	"	.21						
6398	"	"		4342	4347	"	.30						
6399	"	"		4347	4352	"	.42		4312	4372	60'	0.26	
6400	"	"		4352	4357	"	.11						
6406	"	"		4357	4362	"	.35						
6407	"	"		4362	4367	"	.27						
6408	"	"		4367	4372	"	.17						
6409	"	"		4372	4377	"	.59						4312 - 4492
6410	"	"		4377	4382	"	.36		4372	4387	15'	0.48	
6411	"	"		4382	4387	"	.50						180' 0.30
6412	"	"		4387	4392	"	.15						
6413	"	"		4392	4397	"	.22						
6414	"	"		4397	4402	"	.30		4387	4422	35'	0.22	
6415	"	"		4402	4407	"	.22						
6416	"	"		4407	4412	"	.22						
6417	"	"		4412	4417	"	.31						
6418	"	"		4417	4422	"	.15						
6419	"	"		4422	4427	"	.68						
6420	"	"		4427	4432	"	.26						
6421	"	"		4432	4437	"	.48						
6422	"	"		4437	4442	"	.13						
6423	"	"		4442	4447	"	.57		4422	4492	70'	0.36	
6424	"	"		4447	4452	"	.36						
6425	"	"		4452	4457	"	.27						
6426	"	"		4457	4462	"	.20						
6427	"	"		4462	4467	"	.30						
6428	"	"		4467	4472	"	.34						3768 - 4492
6429	"	"		4472	4477	"	.39						704' 0.33
6430	"	"		4477	4482	"	.30						
6431	"	"		4482	4487	"	.48						
6450	"	"		4487	4492	"	.26						
6451	"	"		4492	4497	"	.83						
6452	"	"		4497	4502	"	.60						
6453	"	"		4502	4507	"	.39		4492	4522	30'	0.67	
6454	"	"		4507	4512	"	.98						
6455	"	"		4512	4517	"	.26						
6456	"	"		4517	4522	"	.98						
6457	"	"		4522	4527	"	1.22						
6458	"	"		4527	4532	"	.95		4522	4542	20'	1.22	
6459	"	"		4532	4537	"	1.59						
6460	"	"		4537	4542	"	1.10						
6461	"	"		4542	4547	"	.49						
6462	"	"		4547	4552	"	.92		4542	4562	20'	0.55	
6463	"	"		4552	4557	"	.38						
6464	"	"		4557	4562	"	.40						
6465	"	"		4562	4567	"	.73				4492 4652	160'	0.79
6466	"	"		4567	4572	"	.56						
6467	"	"		4572	4577	"	.44						
6468	"	"		4577	4582	"	.83		4562	4596	34'	0.65	

DRILL HOLE SAMPLES										PAGE 4		OF 4			
PROPERTY SAFFORD				DISTRICT		COUNTY		STATE		COUNTRY					
HOLE NO. ES-5			CONTRACTOR			COLLAR COORD. N E				COLLAR ELEV.					
BEARING			INCLINATION			DEPTH				STARTED		STOPPED			
SAMPLE NUMBER		BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS						REMARKS	

6470		5	100	4582	4587	5	.57								
6471		4	100	4587	4591	4	.91								
6469		5	100	4591	4596	5	.56								
6472		6	100	4596	4602	6	1.29								
6473		5	"	4602	4607	5	.70								
6474		"		4607	4612	"	.59								
6475		"		4612	4617	"	1.08								
6476		"		4617	4622	"	.70		4596	4652	56'	0.86			
6477		"		4622	4627	"	.64								
6478		"		4627	4632	"	.60								
6479		"		4632	4637	"	.42								
6480		"		4637	4642	"	1.19								
6481		"		4642	4647	"	1.39								
6482		"		4647	4652	"	.72								
6483		"		4652	4657	"	.41								
6484		"		4657	4662	"	.43		4652	4675	23'	0.45			
6485		"		4662	4667	"	.55								
6486		"		4667	4672	"	.56								
6487		3	100	4672	4675	3	.20								

3788 - 4675
887' 0.42

DRILL HOLE SAMPLES				Bohemia 3 claim				PAGE 1	OF 3	
PROPERTY				DISTRICT		COUNTY	STATE	COUNTRY		
				SAFFORD		GRAHAM	ARIZONA			
HOLE NO.		CONTRACTOR		COLLAR COORD.		COLLAR ELEV.				
ES-5		BOYLES BROS.		N E		3860				
BEARING		INCLINATION		DEPTH		STARTED		STOPPED		
VERTICAL				1930		9-1-72		11-25-72		
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS			REMARKS
		FEET	%	FROM	TO		% Cu			

				0	10				gray to tan latite or andesite; younger volcanics	
				10	20				"	
				20	30				"	
				30	40				"	
				40	50				"	
				50	60				"	
				60	70				"	
				70	80				"	
				80	90				"	
				90	100				"	
				100	110				"	
				110	120				"	
				120	130				"	
				130	140				"	
				140	150				"	
				150	160				"	
				160	170	Tb			"	
				170	180				a few red baked chips from basal zone	
				180	190	Kag			mixed zone of latite, baked red chips & agglomerate	
				190	200				Kag, agglomerate-andesite, propylitic alteration	
				200	210				with (moderate) sericite, green color	
				210	220				"	
				220	230				"	
				230	240				"	
				240	250				"	
				250	260				"	
				260	270				"	
				270	280				"	
				280	290				"	
				290	300				"	
5084				300	310	.02	300-310		only 20% Kag, rest are qtz + gold goethite	
5085				310	320	.02	70		or qtz + red hematite (+ cuprite?)	
5086				320	330	.02	102-240		310-370 more abundant purple fragments	
5087				330	340	.01			strong dissem. red oxides (hematite or cuprite?)	
5088				340	350	.01			probably limonite + hematite	
5089				350	360	.02			mixture Kag + mineralized rock	
5090				360	370	.05			Kag propylitic alteration plus good sericite	
				370	380				"	
				380	390				"	
				390	400				"	
				400	410				30% limonite-hematite-sericite vein material	
				410	420				90% vein material	
				420	430				altered + Fe stained agglom. next to vein	
				430	440				"	
				440	450				"	
				450	460				predominantly agglomerate, a few Fe stained chips	
				460	470				"	
				470	480				propylitic alteration	
				480	490				moderate sericite alteration	
				490	500				agglomerate, propylitic-sericite alteration	
				500	510				quartz sericite alteration	
				510	520				"	
				520	530				"	
				530	540				"	
				540	550				more Fe stained chips	
				550	560				50% Fe-limonite-stained	
				560	570				25% "	
				570	580				traces "	
				580	590				Kag agglomerate, propylitic, weak sericite alter.	
				590	600				"	
				600	610				"	
				610	620				"	
				620	630				"	
				630	640				"	
				640	650				"	strong epidote

DRILL HOLE SAMPLES										PAGE 2	OF 3	
PROPERTY				DISTRICT		COUNTY		STATE		COUNTRY		
HOLE NO. ES-5		CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.		
BEARING		INCLINATION				DEPTH				STARTED STOPPED		
SAMPLE NUMBER	BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS					REMARKS
				650	660							Kag andesite agglomerate, ^{weird Fe staining} pyritic alt, wk sericite
				660	670							" " " "
				670	680							" " " "
				680	690							" " " "
				690	700							" " " "
				700	710							" " " "
				710	720							" " " "
				720	730							" " " "
				730	740							" " " "
				740	750							" " " "
				750	760							" " " "
				760	770							" " " "
				770	780							" " " "
				780	790							" " " "
				790	800							" " " "
				800	810							" " " "
				810	820							" " " "
				820	830							" " " "
				830	840							" " " "
				840	850							~20% are pinkish agglomerate ?
				850	860							much less
				860	870							traces pinkish agglomerate
				870	880							" " " "
				880	890							" " " "
				890	900							" " " "
				900	910							Kag andesite agglomerate, green, pyritic, wk sericite
				910	920							" " " "
				920	930							" " " "
				930	940							" " " "
				940	950							" " " "
				950	960							" " " "
				960	970							" " " "
				970	980							" " " "
				980	990							" " " "
				990	1000							" " " "
				1000	1010							" " " "
				1010	1020							" " " "
				1020	1030							" " " "
				1030	1040							" " " "
				1040	1050							" " " "
				1050	1060							20% orange limonite stained
				1060	1070							limonite chips very minor
				1070	1080							" " " "
				1080	1090							" " " "
				1090	1100							" " " "
				1100	1110							" " " "
				1110	1120							" " " "
				1120	1130							" " " "
				1130	1140							" " " "
				1140	1150							" " sericite weakening
				1150	1160							" " slightly w/ depth
				1160	1170							" " " "
				1170	1180							50% orange Fe stained
				1180	1190							" " " "
				1190	1200							" " " "
				1200	1210							" " " "
				1210	1220							Fe stain drops off markedly
				1220	1230							to 10%
				1230	1240							even less Fe
				1240	1250							" " " "
				1250	1260							" " " "
				1260	1270							" " " "
				1270	1280							" " " "
				1280	1290							" " " "
				1290	1300							" " " "

DRILL HOLE SAMPLES										Work Sheet 7										PAGE		OF																											
PROPERTY										DISTRICT										COUNTY										STATE										COUNTRY									
HOLE NO. ES-5										CONTRACTOR										COLLAR COORD. N E										COLLAR ELEV.																			
BEARING										INCLINATION										DEPTH										STARTED										STOPPED									
SAMPLE		BIT		RECOVERY		DRILL		RUN		INT.		ASSAYS										REMARKS																											
NUMBER		SIZE		FEET %		FROM		TO																																									
6401		5		100		2777		2785		5																																							
6402		5		100		2777		2782		5																																							
6403		5		100		2815		2820		5																																							
6404		5		100		2892		2897		5																																							
6405		5		100		2902		2907		5																																							
6338		5		"		3348		3353		5																																							
6339		5		"		3401		3406		5																																							
6350		5		"		3449		3454		5																																							
6351		5		"		3498		3503		5																																							
6352		5		"		3545		3550		5																																							
6353		5		"		3603		3608		5																																							
6354		5		"		3650		3655		5																																							
6355		5		"		3698		3703		5																																							
6356		5		"		3748		3753		5																																							
6357		5		"		3634		3639		5																																							
6358		5		"		3683		3688		5																																							
1606		4		80		3769		3774		5																																							
1607		4		100		3774		3778		4												3769 3874 0.29																											
1608		5		100		3778		3783		5																																							
1609		5		100		3783		3788		5																																							
1610		5		100		3788		3793		5																																							
1611		4		80		3793		3798		5																																							
1612		4		100		3798		3802		4																																							
1613		5		100		3802		3807		5																																							
1614		5		100		3807		3812		5																																							
1615		5		100		3812		3817		5																																							
1616		5		100		3817		3822		5																																							
1617		5		100		3822		3827		5																																							
1618		5		100		3827		3832		5																																							
1619		5		100		3832		3837		5																																							
1620		5		100		3837		3842		5																																							
1621		5		100		3842		3847		5																																							
1622		5		100		3847		3852		5																																							
1623		4		80		3852		3857		5																																							
1624		4		80		3857		3862		5																																							
1625		5		100		3862		3867		5																																							
1626		5		71		3867		3874		7																																							
1627		5		100		3678		3683		5																																							
1628		5		100		3688		3693		5																																							
1629		5		100		3874		3879		5																																							
1630		4		80		3879		3884		5												40' 0.09																											
1631		5		100		3884		3889		5																																							
1632		4		50		3889		3894		8																																							
1633		5		100		3897		3902		5																																							
1634		4		80		3902		3907		5																																							
1635		5		100		3907		3912		5												10' 0.39																											
1636		5		100		3912		3917		5																																							
1637		5		100		3917		3922		5																																							
1638		5		100		3922		3927		5												20' 0.14																											
1639		5		100		3927		3932		5																																							
1640		5		100		3932		3937		5																																							
1641		5		100		3937		3942		5												15' 0.27																											
1642		5		100		3942		3947		5																																							

DRILL HOLE SAMPLES

WORK SHEET

PROPERTY				DISTRICT		COUNTY		STATE		COUNTRY			
HOLE NO.		CONTRACTOR				COLLAR COORD.				COLLAR ELEV.			
BEARING		INCLINATION				DEPTH				STARTED STOPPED			
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS
		FEET	%	FROM	TO								
1643		5	100	3947	3952	5	.31						
1644		5	100	3952	3957	5	.51						
1645		5	100	3957	3962	5	.45						
1646		5	100	3962	3967	5	1.24						
1647		5	100	3967	3972	5	.43						
1648		5	100	3972	3977	5	.29			3952 - 4012	60'	0.60%	
1649		5	100	3977	3982	5	.33						
1650		5	100	3982	3987	5	.12						
2069		5	100	3987	3992	5	.32						
2070		5	100	3992	3997	5	1.21						
2071		5	100	3997	4002	5	.63						
2072		5	100	4002	4007	5	.39						
2073		5	100	4007	4012	5	1.29						
2074		5	100	4012	4017	5	.36						
2075		5	100	4017	4022	5	.28				20'	0.24	3788 - 4207
2076		5	100	4022	4027	5	.12						
2077		5	100	4027	4032	5	.18						439' 0.32%
2078		5	100	4032	4037	5	.40						
2079		5	100	4037	4042	5	.50				20'	0.44	
2080		5	100	4042	4047	5	.37						
2081		5	100	4047	4052	5	.49						
2082		5	100	4052	4057	5	.13						
2083		5	100	4057	4062	5	.40						
2084		5	100	4062	4067	5	.10						
2085		5	100	4067	4072	5	.18						
2086		5	100	4072	4077	5	.16						
2087		5	100	4077	4082	5	.47						
2088		5	100	4082	4087	5	.16						
2089		5	100	4087	4092	5	.40			4052 - 4142	90'	0.28	
2090		5	100	4092	4097	5	.24						
2091		5	100	4097	4102	5	.30						
2092		5	100	4102	4107	5	.33						
2093		5	100	4107	4112	5	.19						
2094		5	100	4112	4117	5	.41						
2095		5	100	4117	4122	5	.29						439'
2096		5	100	4122	4127	5	.45						
2097		5	100	4127	4132	5	.32						
2098		5	100	4132	4137	5	.46						
2099		5	100	4137	4142	5	.13						
2100		5	100	4142	4147	5	.67			4142 - 4152	10'	0.74	
6359		5	100	4147	4152	5	.81						
6360		5	100	4152	4157	5	.33						
6361		5	100	4157	4162	5	.41						
6362		5	100	4162	4167	5	.34						
6363		5	100	4167	4172	5	.17			4152 - 4187	35'	0.32	
6364		5	100	4172	4177	5	.29						
6365		5	100	4177	4182	5	.47						
6366		5	100	4182	4187	5	.24						
6367		5	100	4187	4192	5	.10						
6368		5	100	4192	4197	5	.15			4187 - 4207	20'	0.14	
6369		5	100	4197	4202	5	.20						
6370		5	100	4202	4207	5	.09						
6371		5	100	4207	4212	5	.39						
6372		5	100	4212	4217	5	.19						
6373		5	100	4217	4222	5	.14						
6374		5	100	4222	4227	5	.14						
6375		5	100	4227	4232	5	.38						
6376		5	100	4232	4237	5	.20						
6377		5	100	4237	4242	5	.21						
6378		5	100	4242	4247	5	.29						
6379		5	100	4247	4252	5	.25						
6380		5	100	4252	4257	5	.48						
6381		5	100	4257	4262	5	.15						

DRILL HOLE SAMPLES														PAGE	OF
PROPERTY				DISTRICT		COUNTY		STATE		COUNTRY					
HOLE NO. ES 5			CONTRACTOR			COLLAR COORD. N E			COLLAR ELEV.						
BEARING			INCLINATION			DEPTH			STARTED STOPPED						
SAMPLE NUMBER	BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS						REMARKS		
6450	5	100	4487	4492	5										
6451	5	100	4492	4497	5										
6452	5	100	4497	4502	5										
6453	5	100	4502	4507	5										
6454	5	100	4507	4512	5										
6455	5	100	4512	4517	5										
6456	5	100	4517	4522	5										
6457	5	100	4522	4527	5										
6458	5	100	4527	4532	5										
6459	5	100	4532	4537	5										
6460	5	100	4537	4542	5										
6461	5	100	4542	4547	5										
6462	5	100	4547	4552	5										
6463	5	100	4552	4557	5										
6464	5	100	4557	4562	5										
6465	5	100	4562	4567	5										
6466	5	100	4567	4572	5										
6467	5	100	4572	4577	5										
6468	5	100	4577	4582	5										
6469	5	100	4582	4587	5										
6470	5	100	4587	4592	5										
6471	5	100	4592	4597	5										
6472	6	100	4597	4602	6										
6473	5	100	4602	4607	5										
6474	5	100	4607	4612	5										
6475	5	100	4612	4617	5										
6476	5	100	4617	4622	5										
6477	5	100	4622	4627	5										
6478	5	100	4627	4632	5										
6479	5	100	4632	4637	5										
6480	5	100	4637	4642	5										
6481	5	100	4642	4647	5										
6482	5	100	4647	4652	5										
6483	5	100	4652	4657	5										
6484	5	100	4657	4662	5										
6485	5	100	4662	4667	5										
6486	5	100	4667	4672	5										
6487	5	100	4672	4675	3										

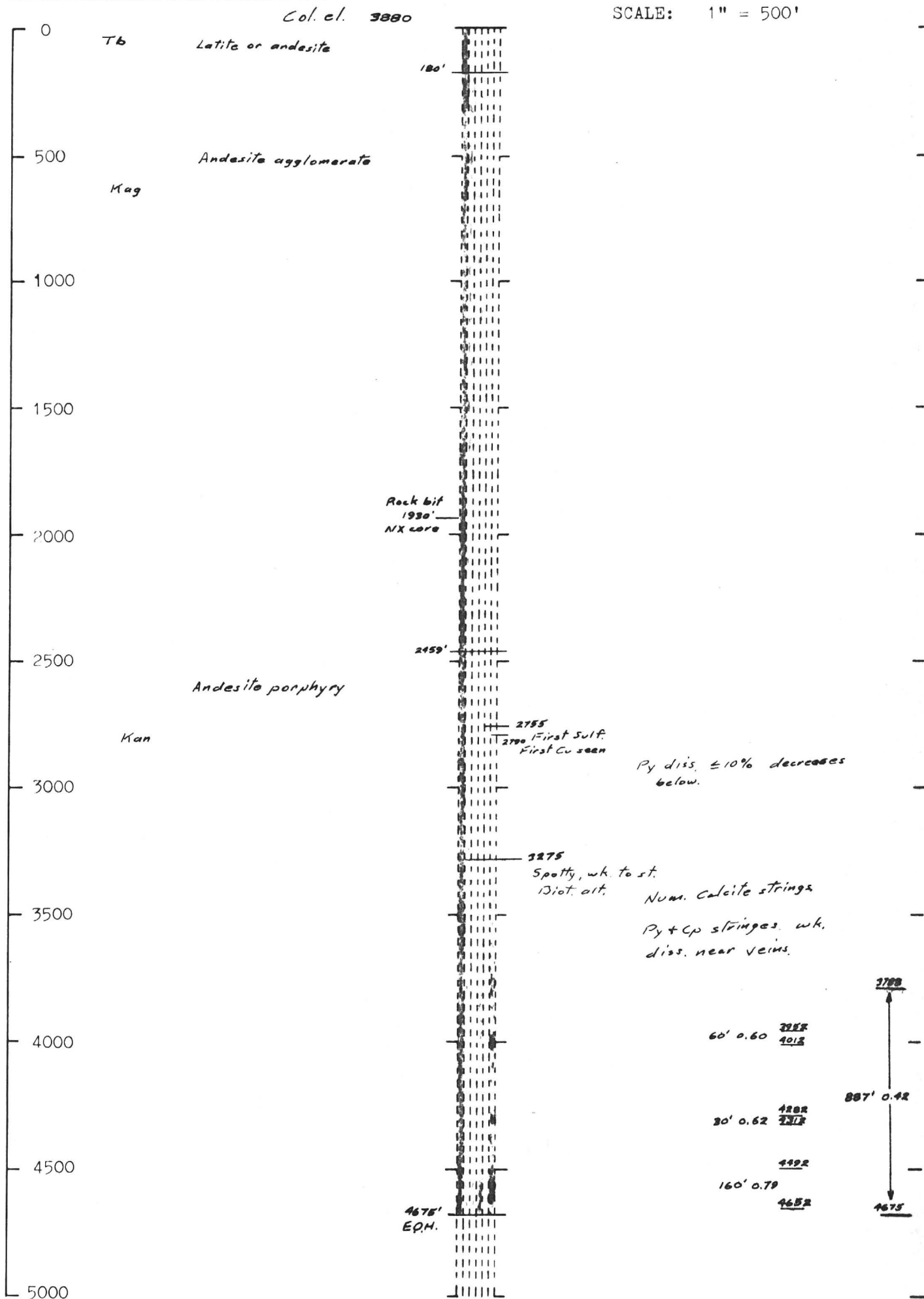
DRILL HOLE SAMPLES														PAGE		OF			
PROPERTY				DISTRICT				COUNTY				STATE				COUNTRY			
HOLE NO. ES-5				CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.							
BEARING				INCLINATION				DEPTH				STARTED				STOPPED			
SAMPLE NUMBER		BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS								REMARKS			
6382		5	100		4262 4267		5												
6383		5	100		4267 4272		5												
6384		5	100		4272 4277		5												
6385		5	100		4277 4282		5												
6386		5	100		4282 4287		5												
6387		5	100		4287 4292		5												
6388		5	100		4292 4297		5												
6389		5	100		4297 4302		5												
6390		5	100		4302 4307		5												
6391		5	100		4307 4312		5												
6392		5	100		4312 4317		5												
6393		5	100		4317 4322		5												
6394		5	100		4322 4327		5												
6395		5	100		4327 4332		5												
6396		5	100		4332 4337		5												
6397		5	100		4337 4342		5												
6398		5	100		4342 4347		5												
6399		5	100		4347 4352		5												
6400		5	100		4352 4357		5												
6406		5	100		4357 4362		5												
6407		5	100		4362 4367		5												
6408		5	100		4367 4372		5												
6409		5	100		4372 4377		5												
6410		5	100		4377 4382		5												
6411		5	100		4382 4387		5												
6412		5	100		4387 4392		5												
6413		5	100		4392 4397		5												
6414		5	100		4397 4402		5												
6415		5	100		4402 4407		5												
6416		5	100		4407 4412		5												
6417		5	100		4412 4417		5												
6418		5	100		4417 4422		5												
6419		5	100		4422 4427		5												
6420		5	100		4427 4432		5												
6421		5	100		4432 4437		5												
6422		5	100		4437 4442		5												
6423		5	100		4442 4447		5												
6424		5	100		4447 4452		5												
6425		5	100		4452 4457		5												
6426		5	100		4457 4462		5												
6427		5	100		4462 4467		5												
6428		5	100		4467 4472		5												
6429		5	100		4472 4477		5												
6430		5	100		4477 4482		5												
6431		5	100		4482 4487		5												

DRILL HOLE SAMPLES														WORK SHEET										PAGE		OF			
PROPERTY														DISTRICT				COUNTY				STATE				COUNTRY			
HOLE NO. ES-5				CONTRACTOR						COLLAR COORD. N E						COLLAR ELEV.													
BEARING				INCLINATION						DEPTH						STARTED						STOPPED							
SAMPLE NUMBER		BIT SIZE		RECOVERY FEET %		DRILL RUN FROM TO		INT.		ASSAYS								REMARKS											
1643				5 100		3947 3952		5		.31																			
1644				5 100		3952 3957		5		.51																			
1645				5 100		3957 3962		5		.45																			
1646				5 100		3962 3967		5		1.24																			
1647				5 100		3967 3972		5		.43																			
1648				5 100		3972 3977		5		.29																			
1649				5 100		3977 3982		5		.33																			
1650				5 100		3982 3987		5		.12																			
15W 2069				5 100		3987 3992		5		.32																			
2070				5 100		3992 3997		5		1.21																			
2071				5 100		3997 4002		5		.63																			
2072				5 100		4002 4007		5		.39																			
2073				5 100		4007 4012		5		1.29																			
2074				5 100		4012 4017		5		.36																			
2075				5 100		4017 4022		5		.28																			
2076				5 100		4022 4027		5		.12																			
2077				5 100		4027 4032		5		.18																			
2078				5 100		4032 4037		5		.40																			
2079				5 100		4037 4042		5		.50																			
2080				5 100		4042 4047		5		.37																			
2081				5 100		4047 4052		5		.49																			
2082				5 100		4052 4057		5		.13																			
2083				5 100		4057 4062		5		.40																			
2084				5 100		4062 4067		5		.10																			
2085				5 100		4067 4072		5		.18																			
2086				5 100		4072 4077		5		.16																			
2087				5 100		4077 4082		5		.47																			
2088				5 100		4082 4087		5		.16																			
2089				5 100		4087 4092		5		.40																			
2090				5 100		4092 4097		5		.24																			
2091				5 100		4097 4102		5		.30																			
2092				5 100		4102 4107		5		.33																			
2093				5 100		4107 4112		5		.19																			
2094				5 100		4112 4117		5		.41																			
2095				5 100		4117 4122		5		.29																			
2096				5 100		4122 4127		5		.45																			
2097				5 100		4127 4132		5		.32																			
2098				5 100		4132 4137		5		.46																			
2099				5 100		4137 4142		5		.13																			
2100				5 100		4142 4147		5		.67																			
NEW BOOK 6359				5 100		4147 4152		5		.81																			
6360				5 100		4152 4157		5		.33																			
6361				5 100		4157 4162		5		.41																			
6362				5 100		4162 4167		5		.34																			
6363				5 100		4167 4172		5		.17																			
6364				5 100		4172 4177		5		.29																			
6365				5 100		4177 4182		5		.47																			
6366				5 100		4182 4187		5		.24																			
6367				5 100		4187 4192		5		.10																			
6368				5 100		4192 4197		5		.15																			
6369				5 100		4197 4202		5		.20																			
6370				5 100		4202 4207		5		.09																			
6371				5 100		4207 4212		5		.39																			
6372				5 100		4212 4217		5		.19																			
6373				5 100		4217 4222		5		.14																			
6374				5 100		4222 4227		5		.14																			
6375				5 100		4227 4232		5		.38																			
6376				5 100		4232 4237		5		.20																			
6377				5 100		4237 4242		5		.21																			
6378				5 100		4242 4247		5		.29																			
6379				5 100		4247 4252		5		.25																			
6380				5 100		4252 4257		5		.48																			
6381				5 100		4257 4262		5		.15																			

DRILL HOLE SAMPLES													PAGE	OF
PROPERTY				DISTRICT		COUNTY		STATE		COUNTRY				
HOLE NO.		CONTRACTOR				COLLAR COORD.				COLLAR ELEV.				
BEARING		INCLINATION				DEPTH				STARTED		STOPPED		
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS	
		FEET	%	FROM	TO									
Work Sheet														
6401	5	100	2735	2738	5	.06	BREA K, LEAVES SPACE							
6402	5	100	2777	2782	5	.07								
6403	5	100	2815	2820	5	.02								
6404	5	100	2842	2847	5	.30								
6405	5	100	2902	2907	5									
6319	5	100	2992	2997	5	.12								
6320	5	100	2992	2995	5	.02								
6321	5	100	3000	3005	5	.01								
6322	5	100	3098	3093	5	.03								
6323	5	100	3102	3107	5	.01								
6324	5	100	3153	3158	5	.03								
6329	5	100	3205	3210	5	.03								
6330	5	100	3210	3215	5	.02								
6331	5	100	3255	3260	5	.01								
6332	5	100	3300	3305	5	.04								
6338	5	"	3348	3353	5	.03								
6339	5	"	3401	3406	5	.07								
6350	5	"	3449	3454	5	.05								
6351	5	"	3498	3503	5	.05								
6352	5	"	3545	3550	5	.16								
6353	5	"	3603	3608	5	.05								
6354	5	"	3650	3655	5	.07								
6355	5	"	3698	3703	5	.21								
6356	5	"	3748	3753	5	.08								
6357	5	"	3834	3839	5	.19								
6358	5	"	3883	3888	5	.53								
1606	4	80	3769	3774	5	.13								
1607	4	100	3774	3778	4	.14							3769 3874 105' 0.29	
1608	5	100	3778	3783	5	.07								
1609	5	100	3783	3788	5	.11								
1610	5	100	3788	3793	5	.41								
1611	4	80	3793	3798	5	.55								
1612	4	100	3798	3802	4	.31	3788 3827 39' 0.36							
1613	5	100	3802	3807	5	.32								
1614	5	100	3807	3812	5	.38								
1615	5	100	3812	3817	5	.32								
1616	5	100	3817	3822	5	.17							7150	
1617	5	100	3822	3827	5	.44								
1618	5	100	3827	3832	5	.28								
1619	5	100	3832	3837	5	.14								
1620	5	100	3837	3842	5	.09								
1621	5	100	3842	3847	5	.28								
1622	5	100	3847	3852	5	.17								
1623	4	80	3852	3857	5	.22								
1624	4	80	3857	3862	5	.71								
1625	5	100	3862	3867	5	.42								
1626	5	71	3867	3874	7	.20								
1627	5	100	3874	3878	5	.26								
1628	5	100	3878	3883	5	.28								
1629	5	100	3874	3879	5	.05								
1630	4	80	3879	3884	5	.08								
1631	5	100	3884	3889	5	.11								
1632	4	50	3889	3894	8	.12								
1633	5	100	3897	3902	5	.22								
1634	4	80	3902	3907	5	.10								
1635	5	100	3907	3912	5	.44								
1636	5	100	3912	3917	5	.34								
1637	5	100	3917	3922	5	.13								
1638	5	100	3922	3927	5	.10								
1639	5	100	3927	3932	5	.13								
1640	5	100	3932	3937	5	.18								
1641	5	100	3937	3942	5	.29								
1642	5	100	3942	3947	5	.20								

[illegible]

SCALE: 1" = 500'



DRILL HOLE SAMPLES										PAGE	OF
PROPERTY					DISTRICT		COUNTY	STATE	COUNTRY		
					SAFFORD		GRAHAM	ARIZONA			
HOLE NO.		CONTRACTOR			COLLAR COORD.			COLLAR ELEV.			
ES-5		BOYLES BROS.			N E			3860			
BEARING		INCLINATION			DEPTH			STARTED			
VERTICAL					1930			9-1-72			
SAMPLE		BIT		RECOVERY		DRILL RUN		ASSAYS		REMARKS	
NUMBER		SIZE		FEET %		FROM TO		INT. % Cu			
						0	10			gray to tan latite or andesite, younger volcanic	
						10	20			"	
						20	30			"	
						30	40			"	
						40	50			"	
						50	60			"	
						60	70			"	
						70	80			"	
						80	90			"	
						90	100			"	
						100	110			"	
						110	120			"	
						120	130			"	
						130	140			"	
						140	150			"	
						150	160			"	
						160	170			"	
						170	180			"	
						180	190			"	
						190	200			"	
						200	210			"	
						210	220			"	
						220	230			"	
						230	240			"	
						240	250			"	
						250	260			"	
						260	270			"	
						270	280			"	
						280	290			"	
						290	300			"	
5084						300	310	.02		only 20% Kag, rest are qtz + gold goethite	
5085						310	320	.02		or qtz + red hematite (+ cuprite?)	
5086						320	330	.02		310-320 more abundant purple fragments	
5087						330	340	.01		strong dissem. red oxides (hematite or cuprite?)	
5088						340	350	.01		probably limonite + hematite	
5089						350	360	.02			
5090						360	370	.05		mixture Kag + mineralized rock	
						370	380			Kag propylitic alteration plus good sericite	
						380	390			"	
						390	400			"	
						400	410			30% limonite-hematite-sericite vein material	
						410	420			90% vein material	
						420	430			altered + Fe stained agglom. next to vein	
						430	440			"	
						440	450			"	
						450	460			predominantly agglomerate, a few Fe stained chips	
						460	470			"	
						470	480			propylitic alteration	
						480	490			moderate sericite alteration	
						490	500			agglomerate, propylitic-sericite alteration	
						500	510			quartz sericite alteration	
						510	520			"	
						520	530			"	
						530	540			"	
						540	550			more Fe stained chips	
						550	560			50% Fe-limonite-stained	
						560	570			25% "	
						570	580			traces "	
						580	590			Kag agglomerate, propylitic, weak sericite alter	
						590	600			"	
						600	610			"	
						610	620			"	
						620	630			"	
						630	640			"	
						640	650			strong epidote	

Tb
Kag

a few red baked chips from basal zone
mixed zone of latite, baked red chips & agglomerate
Kag, agglomerate-andesite, propylitic alteration
with (malesite) sericite, green color

only 20% Kag, rest are qtz + gold goethite
or qtz + red hematite (+ cuprite?)
310-320 more abundant purple fragments
strong dissem. red oxides (hematite or cuprite?)
probably limonite + hematite
mixture Kag + mineralized rock
Kag propylitic alteration plus good sericite

fault-vein

DRILL HOLE SAMPLES

PAGE
22

OF
7

PROPERTY

DISTRICT

COUNTY

STATE

COUNTRY

HOLE NO. *FS-5*

CONTRACTOR

COLLAR COORD.

COLLAR ELEV.

BEARING

INCLINATION

DEPTH	TEMP.	WIND	WAVE	WEATHER	REMARKS
0	20.0	10	1	100	100
10	18.0	10	1	100	100
20	16.0	10	1	100	100
30	14.0	10	1	100	100
40	12.0	10	1	100	100
50	10.0	10	1	100	100
60	8.0	10	1	100	100
70	6.0	10	1	100	100
80	4.0	10	1	100	100
90	2.0	10	1	100	100
100	0.0	10	1	100	100

STARTED

STOPPED

SAMPLE
NUMBER

BIT
SIZE

RECOVERY	
FEET	%

DRILL RUN	
FROM	TO

INT.

ASSAYS

REMARKS

650	660
660	670
670	680
680	690
690	700
700	710
710	720
720	730
730	740
740	750
750	760
760	770
770	780
780	790
790	800
800	810
810	820
820	830
830	840
840	850
850	860
860	870
870	880
880	890
890	900
900	910
910	920
920	930
930	940
940	950
950	960
960	970
970	980
980	990
990	1000
1000	1010
1010	1020
1020	1030
1030	1040
1040	1050
1050	1060
1060	1070
1070	1080
1080	1090
1090	1100
1100	1110
1110	1120
1120	1130
1130	1140
1140	1150
1150	1160
1160	1170
1170	1180
1180	1190
1190	1200
1200	1210
1210	1220
1220	1230
1230	1240
1240	1250
1250	1260
1260	1270
1270	1280
1280	1290
1290	1300

[illegible]

PAGE 3	OF 7
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PROPERTY				DISTRICT		COUNTY		STATE		COUNTRY			
HOLE NO.		CONTRACTOR				COLLAR COORD.				COLLAR ELEV.			
BEARING		INCLINATION				DEPTH				STARTED STOPPED			
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS
		FEET	%	FROM	TO								
				1300	1310				"		"		
				1310	1320				"		"		15% Fe stained
				1320	1330				"		"		less Fe stained
				1330	1340				"		"		
				1340	1350				"		"		
				1350	1360				"		"		
				1360	1370				"		"		
				1370	1380				"		"		
				1380	1390				"		"		
				1390	1400				"		"		
				1400	1410				"		"		
				1410	1420				"		"		
				1420	1430				"		"		
				1430	1440				"		"		
				1440	1450				"		"		
				1450	1460				"		"		
				1460	1470				"		"		
				1470	1480				"		"		
				1480	1490				"		"		
				1490	1500				"		"		
				1500	1510				"		"		
				1510	1520				"		"		
				1520	1530				"		"		
				1530	1540				"		"		
				1540	1550				"		"		
				1550	1560				"		"		
				1560	1570				"		"		
				1570	1580				"		"		
				1580	1590				"		"		
				1590	1600				"		"		
				1600	1610				"		"		
				1610	1620				"		"		
				1620	1630				"		"		
				1630	1640				"		"		
				1640	1650				"		"		
				1650	1660				"		"		
				1660	1670				"		"		
				1670	1680				"		"		
				1680	1690				"		"		
				1690	1700				"		"		
				1700	1710				"		"		
				1710	1720				"		"		
				1720	1730				"		"		
				1730	1740				"		"		
				1740	1750				"		"		
				1750	1760				"		"		
				1760	1770				"		"		
				1770	1780				"		"		
				1780	1790				"		"		
				1790	1800				"		"		
				1800	1810				"		"		
				181									

DRILL HOLE SAMPLES											PAGE	OF
PROPERTY SAFFORD					DISTRICT		COUNTY		STATE		COUNTRY	
HOLE NO. ES-5			CONTRACTOR				COLLAR COORD. N E			COLLAR ELEV.		
BEARING			INCLINATION				DEPTH			STARTED STOPPED		
SAMPLE NUMBER	BIT SIZE	RECOVERY FEET %	DRILL RUN FROM TO		INT.	ASSAYS						REMARKS
6401	5	100	2725	2730	5	.06						
6402	5	100	2777	2782	5	.07						
6403	5	100	2815	2820	5	.02						
6404	5	100	2842	2847	5	.30						
6319	5	100	2902	2907	5	.12						
6320	5	100	2950	2955	5	.09						
6321	5	100	3000	3005	5	.01						
6322	5	100	3048	3053	5	.03						
6323	5	100	3102	3107	5	.01						
6324	5	100	3153	3158	5	.03						
6325	5	100	3205	3210	5	.02						
6326	5	100	3210	3215	5	.09						
6327	5	100	3255	3260	5	.01						
6328	5	100	3300	3305	5	.04						
6338	5	100	3348	3353	5	.03						
6339	5	100	3401	3406	5	.07						
6350	5	100	3449	3454	5	.05						
6351	5	100	3498	3503	5	.04						
6352	5	100	3545	3550	5	.16						
6353	5	100	3603	3608	5	.04						
6357	5	100	3634	3639	5	.19						
6359	5	100	3650	3655	5	.07						
1627	5	100	3678	3683	5	.26						
6358	5	100	3683	3688	5	.53						
1628	5	100	3688	3693	5	.28						
6355	5	100	3698	3703	5	.21						
6356	5	100	3748	3753	5	.08						
1606	4	80	3769	3774	5	.13						
1607	4	100	3774	3778	4	.19						
1608	5	100	3778	3783	5	.07						
1609	5	100	3783	3788	5	.11						
1610	5	100	3788	3793	5	.41						
1611	4	80	3793	3798	5	.55						
1612	4	100	3798	3802	4	.31						
1613	5	100	3802	3807	5	.32						
1614	5	100	3807	3812	5	.38	3795	3827	39'	0.36%	cu	
1615	5	100	3812	3817	5	.32						
1616	5	100	3817	3822	5	.17						
1617	5	100	3822	3827	5	.44						
1618	5	100	3827	3832	5	.28						
1619	5	100	3832	3837	5	.14						
1620	5	100	3837	3842	5	.09						
1621	5	100	3842	3847	5	.28	3827	3857	30'	0.20		
1622	5	100	3847	3852	5	.17						
1623	4	80	3852	3857	5	.22						
1624	4	80	3857	3862	5	.71						
1625	5	100	3862	3867	5	.42	3857	3867	10'	0.57		
1626	5	71	3867	3874	7	.20						
1629	5	100	3874	3879	5	.05						
1630	4	80	3879	3884	5	.08						
1631	5	100	3884	3889	5	.11						
1632	4	50	3889	3897	8	.12	3867	3907	40'	0.09		
1633	5	100	3897	3902	5	.22						
1634	4	80	3902	3907	5	.10						
1635	5	100	3907	3912	5	.44						
1636	5	100	3912	3917	5	.34	3907	3917	10'	0.39		
1637	5	100	3917	3922	5	.13						
1638	5	100	3922	3927	5	.10						
1639	5	100	3927	3932	5	.13	3917	3937	20'	0.14		
1640	5	100	3932	3937	5	.18						
1641	5	100	3937	3942	5	.24						
1642	5	100	3942	3947	5	.20	3937	3952	15'	0.27		

DRILL HOLE SAMPLES														PAGE 5		OF 7	
PROPERTY SAFFORD						DISTRICT		COUNTY		STATE		COUNTRY					
HOLE NO. ES-5				CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.					
BEARING				INCLINATION				DEPTH				STARTED		STOPPED			
SAMPLE NUMBER		BIT SIZE		RECOVERY FEET %		DRILL RUN FROM TO		INT.		ASSAYS						REMARKS	
1643		5		100		3947 3952		5		.31							
1644						3952 3957				.51							
1645						3957 3962				.45							
1646						3962 3967				1.24							
1647						3967 3972				.43							
1648						3972 3977				.29		3952 4012		60'		0.60 %Cu	
1649						3977 3982				.33							
1650						3982 3987				.12							
2069						3987 3992				.32							
2070						3992 3997				1.21		.32					
2071						3997 4002				.63							
2072						4002 4007				.39							
2073						4007 4012				1.29							
2074						4012 4017				.36							
2075						4017 4022				.28		4012 4032		20'		0.24	
2076						4022 4027				.12							
2077						4027 4032				.18							
2078						4032 4037				.40							
2079						4037 4042				.50		4032 4052		20'		0.44	
2080						4042 4047				.37							
2081						4047 4052				.49							
2082						4052 4057				.13							
2083						4057 4062				.40							
2084						4062 4067				.10							
2085						4067 4072				.18							
2086						4072 4077				.16							
2087						4077 4082				.47							
2088						4082 4087				.16							
2089						4087 4092				.40							
2090						4092 4097				.24		4052 4142		90'		0.28	
2091						4097 4102				.30							
2092						4102 4107				.33							
2093						4107 4112				.19							
2094						4112 4117				.41							
2095						4117 4122				.29							
2096						4122 4127				.45							
2097						4127 4132				.32							
2098						4132 4137				.46							
2099						4137 4142				.13							
2100						4142 4147				.67		4142 4152		10'		0.74	
6359						4147 4152				.81							
6360						4152 4157				.33							
6361						4157 4162				.41							
6362						4162 4167				.34							
6363						4167 4172				.17		4152 4187		35'		0.32	
6364						4172 4177				.29							
6365						4177 4182				.47							
6366						4182 4187				.24							
6367						4187 4192				.10							
6368						4192 4197				.15		4187 4207		20'		0.14	
6369						4197 4202				.20							
6370						4202 4207				.09							
6371						4207 4212				.39							
6372						4212 4217				.19							
6373						4217 4222				.14							
6374						4222 4227				.14							
6375						4227 4232				.38							
6376						4232 4237				.20							
6377						4237 4242				.21							
6378						4242 4247				.29		4237 4282		12'		0.34	
6379						4247 4252				.25							
6380						4252 4257				.48							
6381						4257 4262				.15							

DRILL HOLE SAMPLES

PROPERTY				DISTRICT		COUNTY		STATE		COUNTRY			
SAFFORD													
HOLE NO. ES-5				CONTRACTOR			COLLAR COORD. N E			COLLAR ELEV.			
BEARING				INCLINATION			DEPTH			STARTED STOPPED			
SAMPLE NUMBER	BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT	ASSAYS						REMARKS
6382	5	100		4262	4267	5	.22						
6383	"	"		4267	4272	"	.18						
6389	"	"		4272	4277	"	.18						
6385	"	"		4277	4282	"	.18						
6386	"	"		4282	4287	"	.102						
6387	"	"		4287	4292	"	.33						
6388	"	"		4292	4297	"	.15						
6389	"	"		4297	4302	"	.102						
6390	"	"		4302	4307	"	.15						
6391	"	"		4307	4312	"	.15						
6392	"	"		4312	4317	"	.15						
6393	"	"		4317	4322	"	.25						
6399	"	"		4322	4327	"	.15						
6395	"	"		4327	4332	"	.27						
6396	"	"		4332	4337	"	.41						
6397	"	"		4337	4342	"	.21						
6398	"	"		4342	4347	"	.30						
6399	"	"		4347	4352	"	.45						
6400	"	"		4352	4357	"	.16						
6406	"	"		4357	4362	"	.35						
6407	"	"		4362	4367	"	.27						
6408	"	"		4367	4372	"	.17						
6409	"	"		4372	4377	"	.52						
6410	"	"		4377	4382	"	.36						
6411	"	"		4382	4387	"	.50						
6412	"	"		4387	4392	"	.15						
6413	"	"		4392	4397	"	.22						
6414	"	"		4397	4402	"	.30						
6415	"	"		4402	4407	"	.22						
6416	"	"		4407	4412	"	.21						
6417	"	"		4412	4417	"	.31						
6418	"	"		4417	4422	"	.15						
6419	"	"		4422	4427	"	.66						
6420	"	"		4427	4432	"	.26						
6421	"	"		4432	4437	"	.48						
6422	"	"		4437	4442	"	.13						
6423	"	"		4442	4447	"	.57						
6424	"	"		4447	4452	"	.26						
6425	"	"		4452	4457	"	.27						
6426	"	"		4457	4462	"	.20						
6427	"	"		4462	4467	"	.30						
6428	"	"		4467	4472	"	.24						
6429	"	"		4472	4477	"	.32						
6430	"	"		4477	4482	"	.30						
6431	"	"		4482	4487	"	.48						
6450	"	"		4487	4492	"	.26						
6451	"	"		4492	4497	"	.23						
6492	"	"		4497	4502	"	.62						
6453	"	"		4502	4507	"	.39						
6454	"	"		4507	4512	"	.43						
6455	"	"		4512	4517	"	.26						
6456	"	"		4517	4522	"	.29						
6457	"	"		4522	4527	"	.22						
6458	"	"		4527	4532	"	.35						
6459	"	"		4532	4537	"	.53						
6460	"	"		4537	4542	"	.10						
6461	"	"		4542	4547	"	.42						
6462	"	"		4547	4552	"	.23						
6463	"	"		4552	4557	"	.23						
6464	"	"		4557	4562	"	.49						
6465	"	"		4562	4567	"	.48						
6466	"	"		4567	4572	"	.16						
6467	"	"		4572	4577	"	.23						
6468	"	"		4577	4582	"	.23						

DRILL HOLE SAMPLES													PAGE	OF						
PROPERTY SAFFORD													DISTRICT		COUNTY		STATE		COUNTRY	
HOLE NO. ES-5			CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.									
BEARING			INCLINATION				DEPTH				STARTED STOPPED									
SAMPLE NUMBER		BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS								REMARKS				
6470		5	100		4582 4587		5													
6471		4	100		4587 4591		4													
6469		5	100		4591 4596		5													
6472		6	100		4596 4602		6													
6473		5	"		4602 4607		5													
6479		"	"		4607 4612		"													
6475		"	"		4612 4617		"													
6476		"	"		4617 4622		"													
6477		"	"		4622 4627		"													
6478		"	"		4627 4632		"													
6479		"	"		4632 4637		"													
6480		"	"		4637 4642		"													
6481		"	"		4642 4647		"													
6482		"	"		4647 4652		"													
6483		"	"		4652 4657		"													
6484		"	"		4657 4662		"													
6485		"	"		4662 4667		"													
6486		"	"		4667 4672		"													
6487		3	100		4672 4675		3													
															6488 - 4675					
															6489 - 4675					

ES-5
DRILL HOLE SUMMARY

0-180 Tb, post-ore Tertiary volcanics

180-2459 Kag; andesite agglomerate, green or gray green with locally shades of pink or purple; propylitic alteration with chlorite, epidote, and generally moderate sericite; limonite stain commonly but only very locally strong, generally bright red or brick red, infrequently gold in color; rarely in disseminated form;
300-370 fissure vein, quartz-sericite alteration with strong red limonite.

2459-4675 Kan; andesite porphyry; grayish green to dark gray depending upon type of alteration; abundant small plagioclase phenocrysts in aphanitic matrix; coarse fragmental and tuffaceous intervals common but subordinate to porphyry;

2459-3034 propylitic alteration; local silicification and bleaching related to fissure veins; ~~28-30~~
2830-2866 zone of strong sericite alteration and irregular bleaching

3034-3600 chlorite alteration zone; obvious decrease

in epidote; suggestion of weak biotite at 3100 but no definitely identified until 3275; thereafter biotite distribution is erratic and varies from weak to locally strong but overall is definitely subordinate to chlorite

3600 - 4675 biotite alteration of mafics and groundmass; vein minerals are quartz, calcite, chlorite, sulfides

2755 ~~3000~~ first sulfides are disseminated pyrite at ~~2755~~ 2755, thereafter in disseminations ~~and~~ up to 8% and in veinlets, total sulfides probably average 3%; traces chalcopyrite and bornite; good disseminated sulfide zone 2830-2866 assay 0.3% Cu over five foot interval

3000 - 3158 traces sulfides disseminated and in veins

3158 - 3619 total pyrite varies 2-6%, averages 2-3% ~~at~~ virtually all in veins; traces of chalcopyrite

3619 - 4675 sulfides predominantly in veins and average varies 2-4%; chalcopyrite frequency increase noticeably at 3619 and continues to increase until $cpy/py \approx 3/2$ at 3900 and $2/1$ or $3/1$ at 4300, ten foot assays up to 1.29% Cu

SUMMARY LOG ~~ES~~
DRILL HOLE ES-20

0 - 250 Qal, gravel, mixed basalt - andesite

250 - 720 Tb, post-ore Tertiary basalt flows

720 - 2532 Kag, pre-ore andesite agglomerate, some interbedding with andesite porphyry at base, contact placed at bottom of last good agglomerate interval;

720 - 1950 typical propylitic alteration

1950 - 2532 possible chloritic alteration, darker green color, stronger chlorite, weaker epidote, traces biotite in andesite porphyry chips below 2200; weak pyrite starts at 2420

2532 - 4960 Kan, pre-ore andesite porphyry; generally gray color but locally with green tones due to stronger chlorite; structure varies widely from totally aphanitic tuff composed of very small angular fragments to weak agglomerate structure with sub-angular to rounded fragments of porphyry up to 3-4 inches or more in a porphyry matrix to massive flow units of porphyry; percent of plagioclase phenocryst in the porphyry varies from 30-70 and phenocryst sizes varies from 1-3 mm; the few hornblende(?) phenocrysts originally present have been totally replaced by biotite or chlorite;

2532 - 3660 biotite - chlorite alteration, mafics altered to chlorite, type of alteration definitely related to rock structure i.e. in the aphanitic tuffs(?) alteration is predominantly chlorite but in the porphyry units biotite is much stronger; weak epidote may be present where chlorite is stronger; plagioclase phenocrysts are clear, shiny and hard; chlorite + clay is typical on fractures; veining is pyrite - chlorite center \pm calcite \pm quartz; ~~with a bleached halo~~ bleached halos to the veins are absent or weak until about 2900 where they become typical;

2532 - 2680 ~~at~~ less than 1% pyrite and only in veins $\frac{1}{16}$ - $\frac{1}{8}$ inch with traces chalcopyrite and covellite, weak to strong oxidation to brown limonite; 2680 - 3000 pyrite varies 1-3% in veins, only traces disseminated adjacent to veins, traces chalcopyrite and covellite; 3000 - 3245 average probably less than 1% pyrite, traces copper sulfides; 3245 - 3360 averages about 2% disseminated pyrite plus vein pyrite, traces chalcopyrite; 3360 marks abrupt change in total sulfides, both vein and disseminated, and also the start of significant ^{chalcopyrite} ~~copper sulfide~~ mineralization; ~~in the form of chalcopyrite~~ from 3360 - 3660 total sulfide content varies widely from 1% to 8% perhaps averaging 3% and at least half the sulfides are disseminated;

~~copper is the~~
chalcopyrite is the copper mineral, traces of molybdenite are present; ~~intense biotite alteration~~ significant disseminated sulfide mineralization ceases at 3660 ~~which~~ where the strong biotite alteration zone begins

~~3660 - 4260~~ 3660-4960 predominantly ^{gray} aphanitic andesite with plagioclase phenocrysts locally moderate in amount but very small, less than 1 mm.; although many of the fragments are good porphyry the fragmental structure on a megascopic scale is weakly developed; alteration is strong biotite; 3660-4715 vein minerals are quartz-sulfides - calcite \pm chlorite - traces K-feldspar, alteration halo to veins weak or nil, calcite veins increase gradually to 4715 where K-feldspar becomes the dominant vein mineral; sulfide mineralization is vein type, predominantly chalcopyrite, traces covellite, rare veins with good bornite, molybdenite occurs throughout interval in chalcopyrite-quartz-K-feldspar veins but never in significant amounts; disseminated magnetite is ubiquitous from 2-5%, below approximately 4600 magnetite is common in veins; at 4509 a one foot dike of quartz diorite(?) contains disseminated chalcopyrite, for several feet on either side of the dike thin white veins display good bleached haloes ^{probably} ~~possibly~~

due to K-feldspar flooding.

ES-20

ES-20
Capsule Comments (Separate page)

Lithology 0-250 Gal, gravel

250-720 Tb, post-ore flows

720-2532 Kq, pre-ore andesite agglomerate

2532-4960 Kan, pre-ore andesite porphyry

Alteration 720-1950 propylitic alteration

1950-3660 chlorite - biotite alteration

3860-4960 biotite alteration, below 4715

K-feldspar replaces calcite ~~in~~ veins

Mineralization

2420 first pyrite

2420-2680 less than 1% sulfides, traces copper

2680-3245 1-3% pyrite in veins, traces copper

3245-3360 averages about 2% disseminated pyrite plus vein sulfides, traces copper

3360-3660 vein sulfides 1-2% , disseminated sulfides 2-10%,
significant chalcopyrite disseminated and in veins;
pyrite about equal chalcopyrite

3660-4960 mineralization chalcopyrite in veins and fracture coatings; pyrite very minor, disseminated sulfides very minor; traces covellite, bornite; molybdenite veins \pm chalcopyrite very obvious but not common; total sulfide content 1-3%.

657
700

65

-50

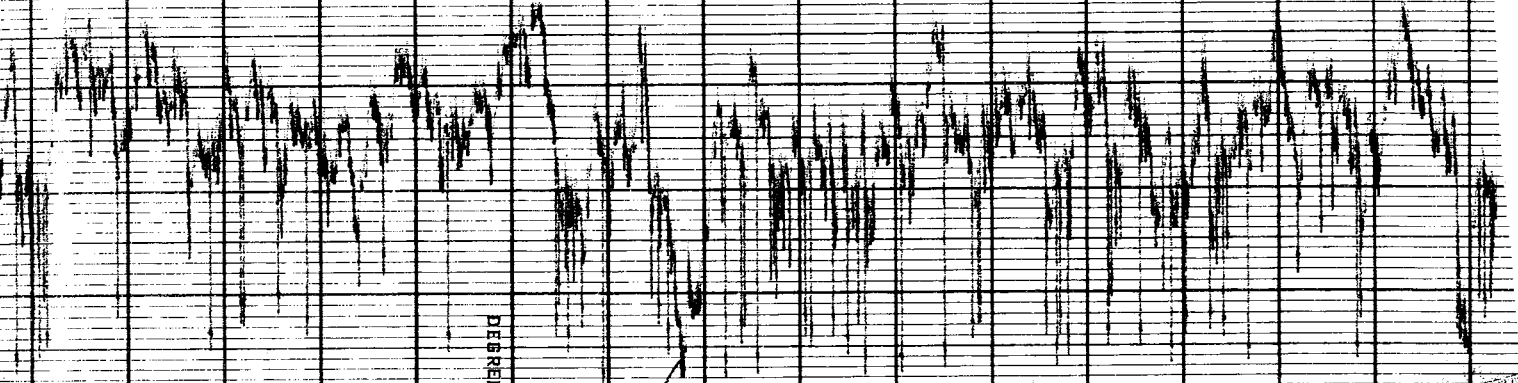
DEGREES FAHR.

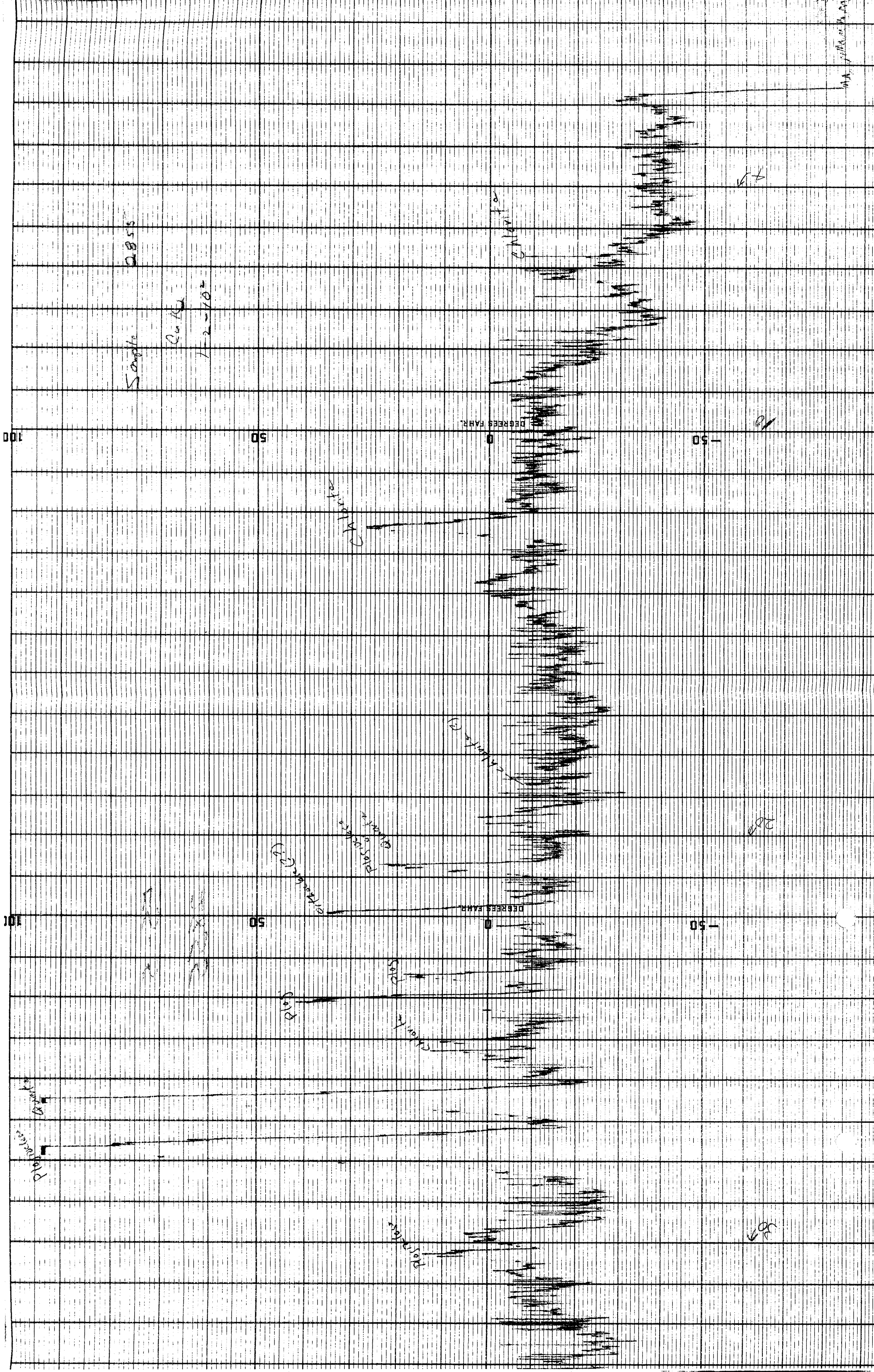
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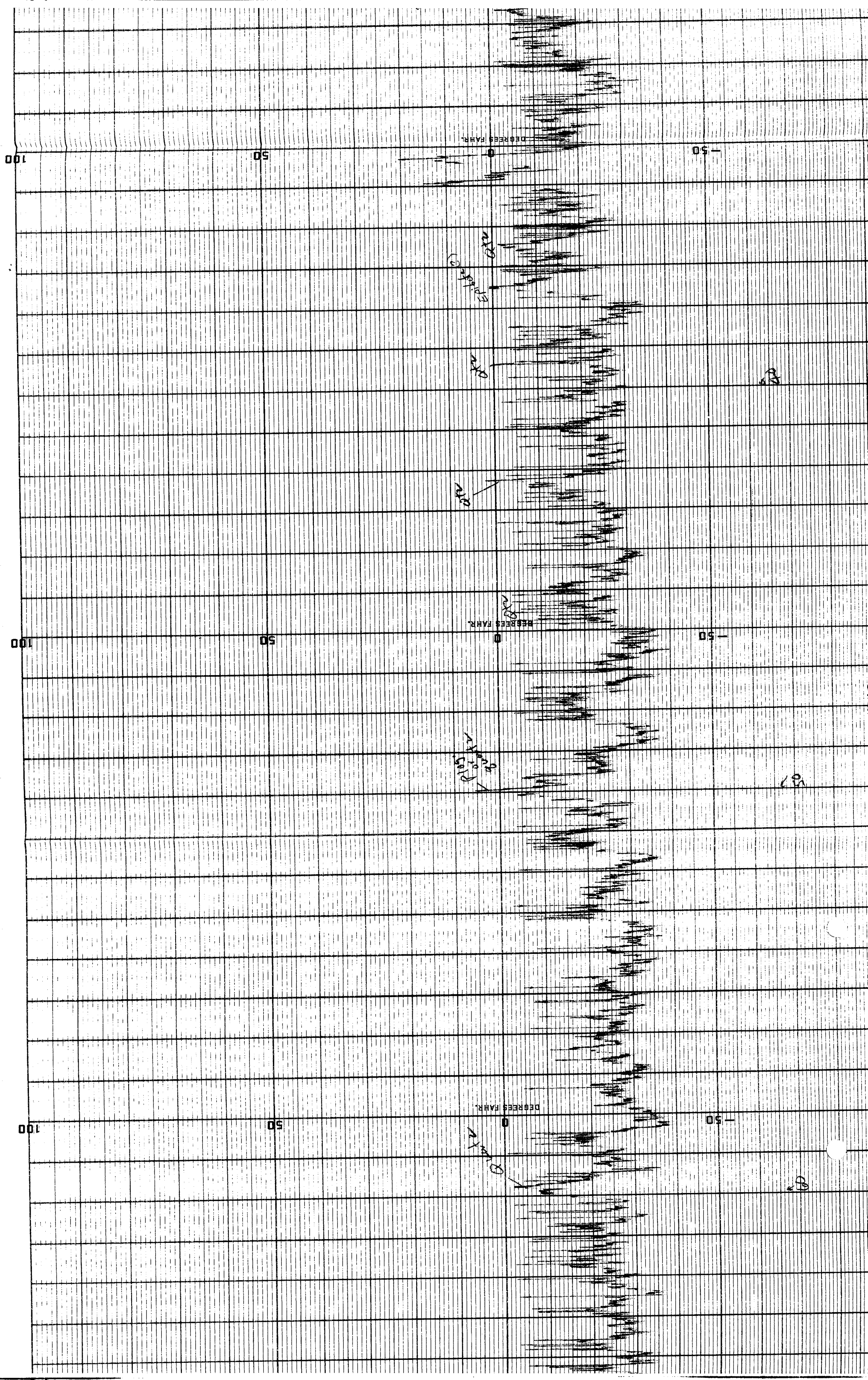
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50

100







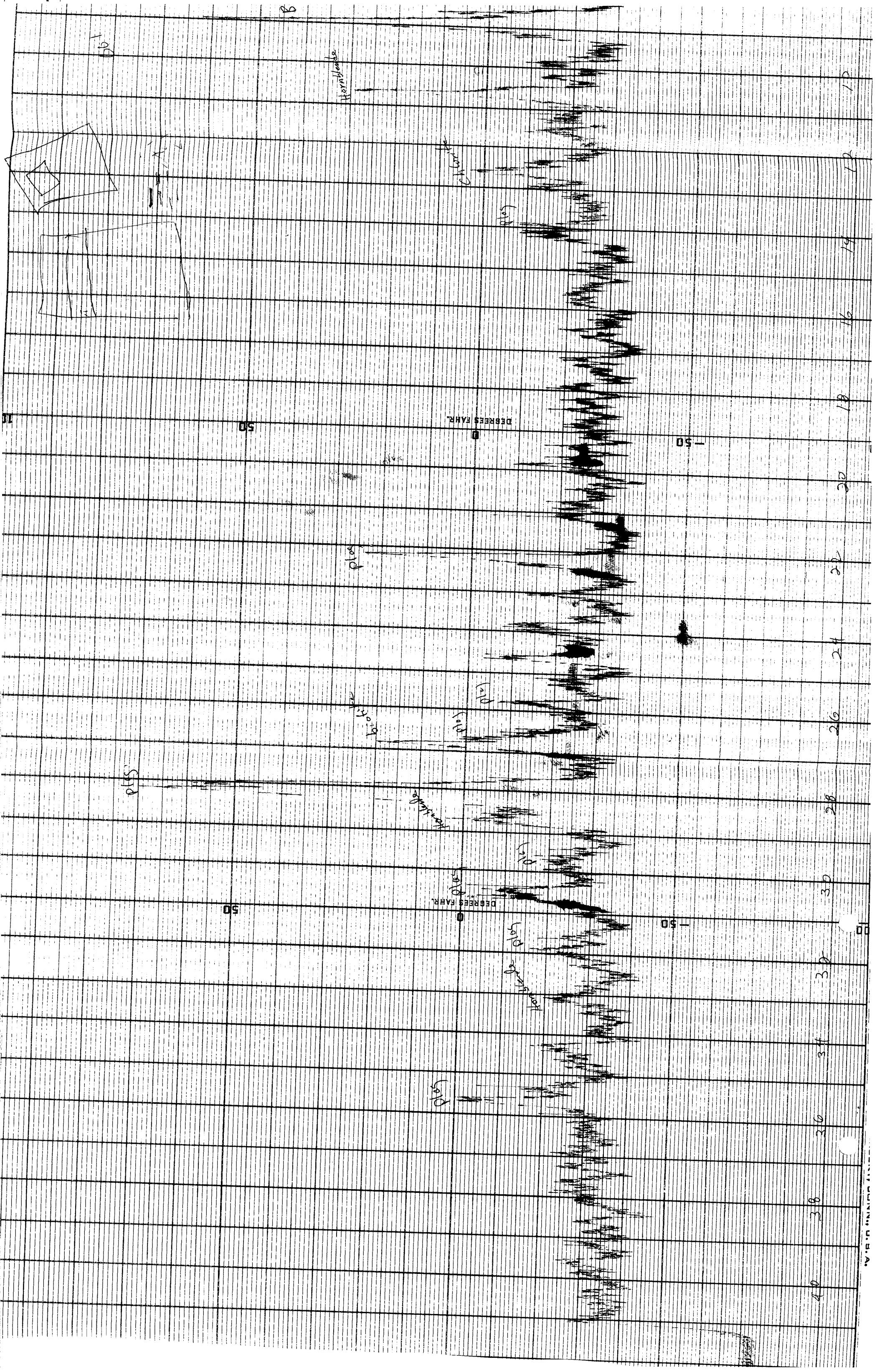
5000

Playo loco

50-

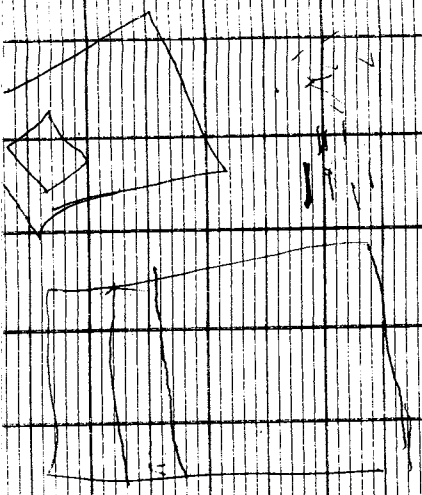
1000

34



3.3466

3.3466



Side

50

Biotite

Hornblende

DEGREES FAHR.

0

-50

100

50

DEGREES FAHR.

0

-50

100

plagioclase

plagioclase

plagioclase

Hornblende

4

6

8

10

12

14

16

18

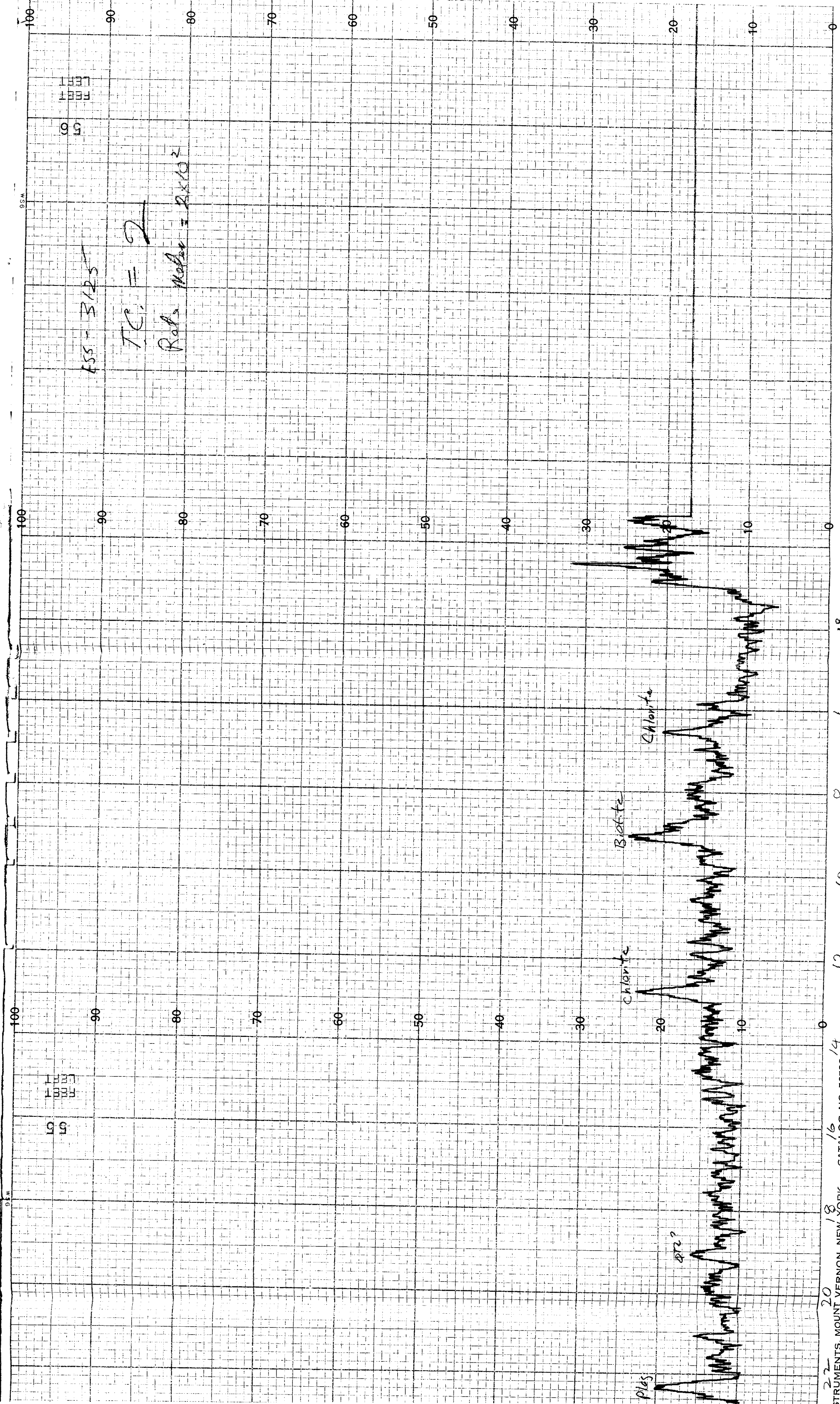
20

22

24

26

28



$TC = 2$
 $Rate\ meter = 2 \times 10^2$
 $ESS - 1176\ Ground\ mass$

74
 100
 100

plas

plas

Biomite

qtz?

on

plas?

plas

plas

chlorite plas

qtz?

Chlorite

Biomite

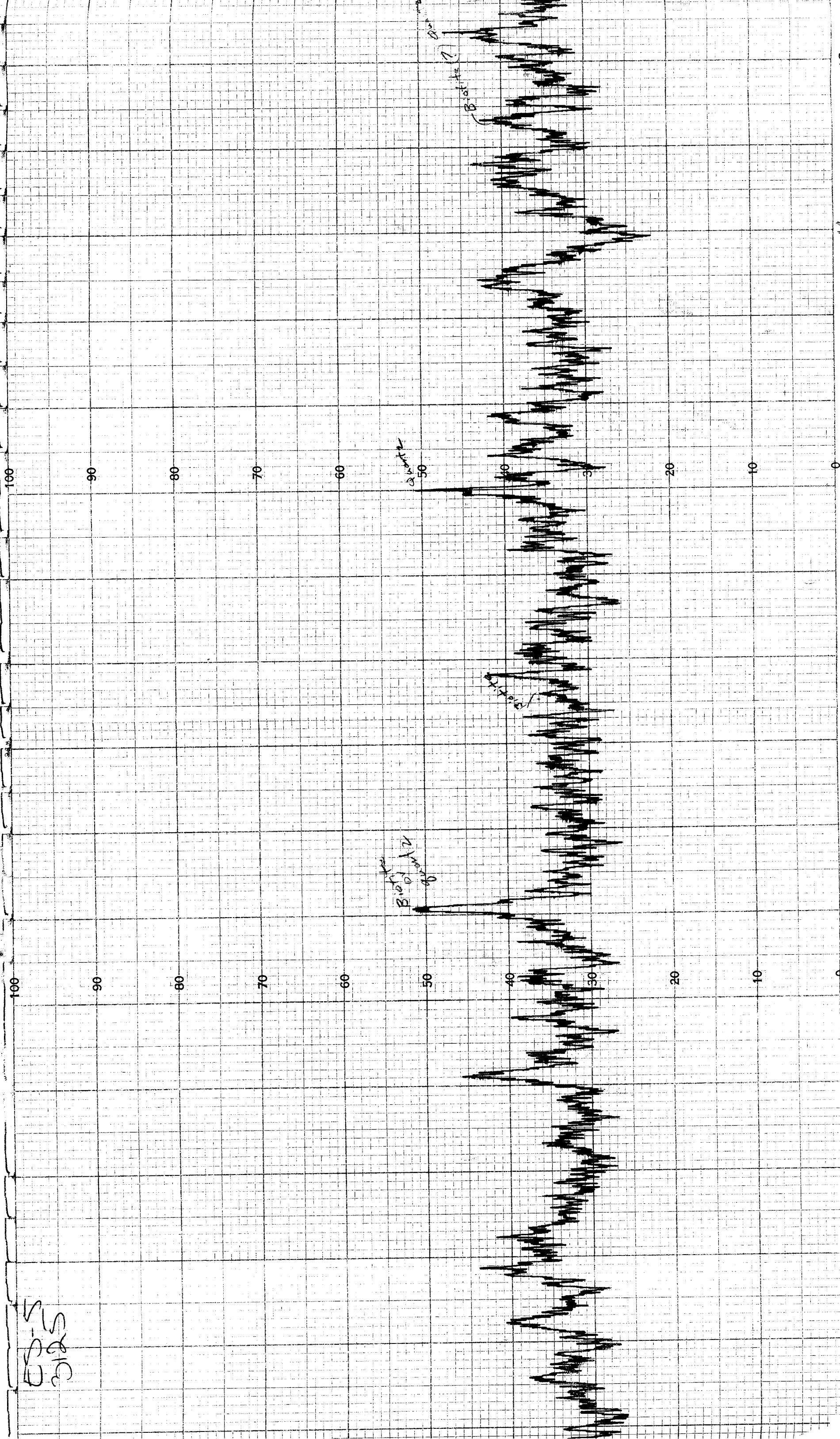
Chlorite

Mont

Mont

strongest
Mont peak

55-5
3125



40

44

50 CATALOG NO. 52533 MADE IN U.S.A.

54

58

60

62

64

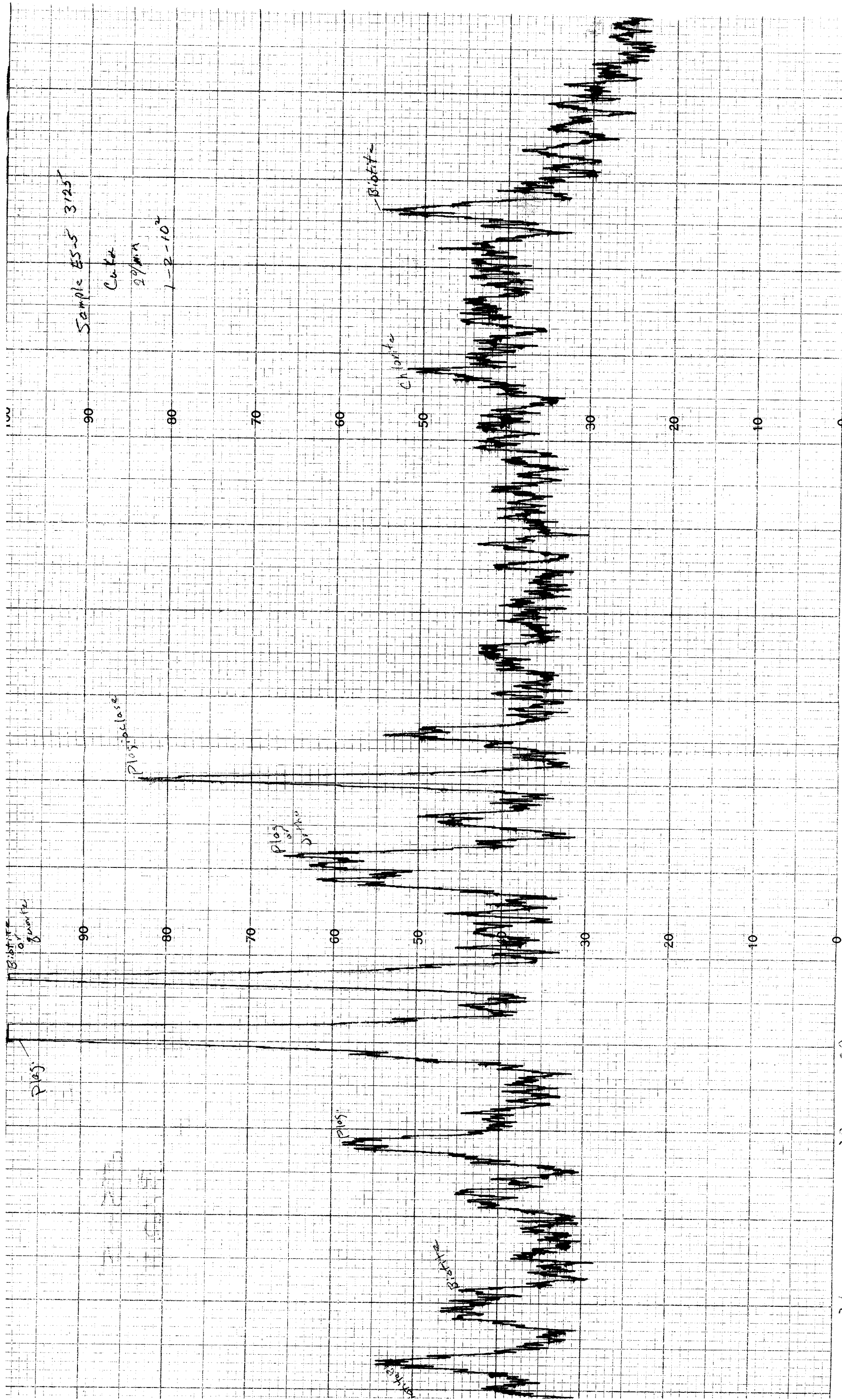
66

68

70

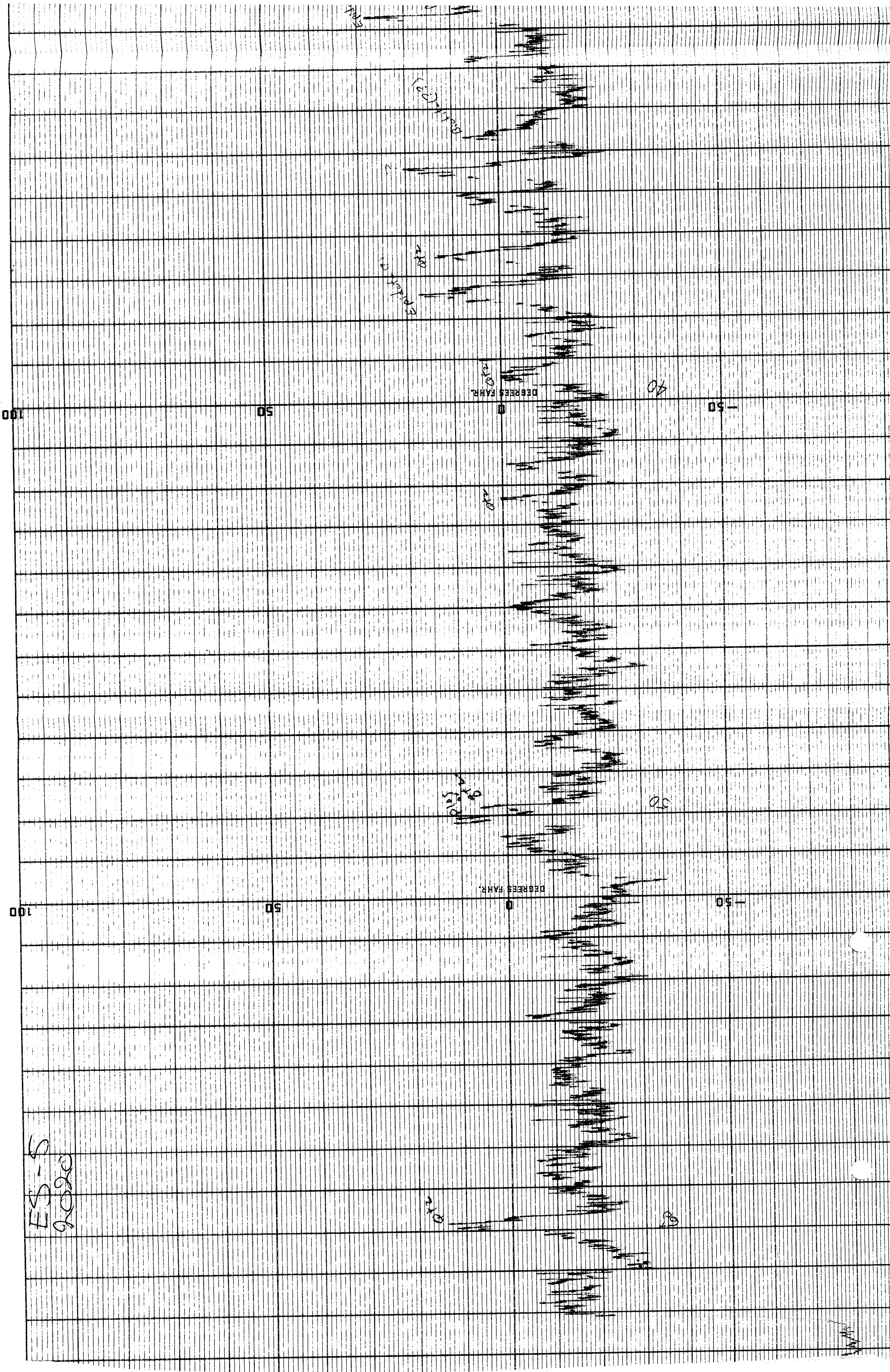
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74



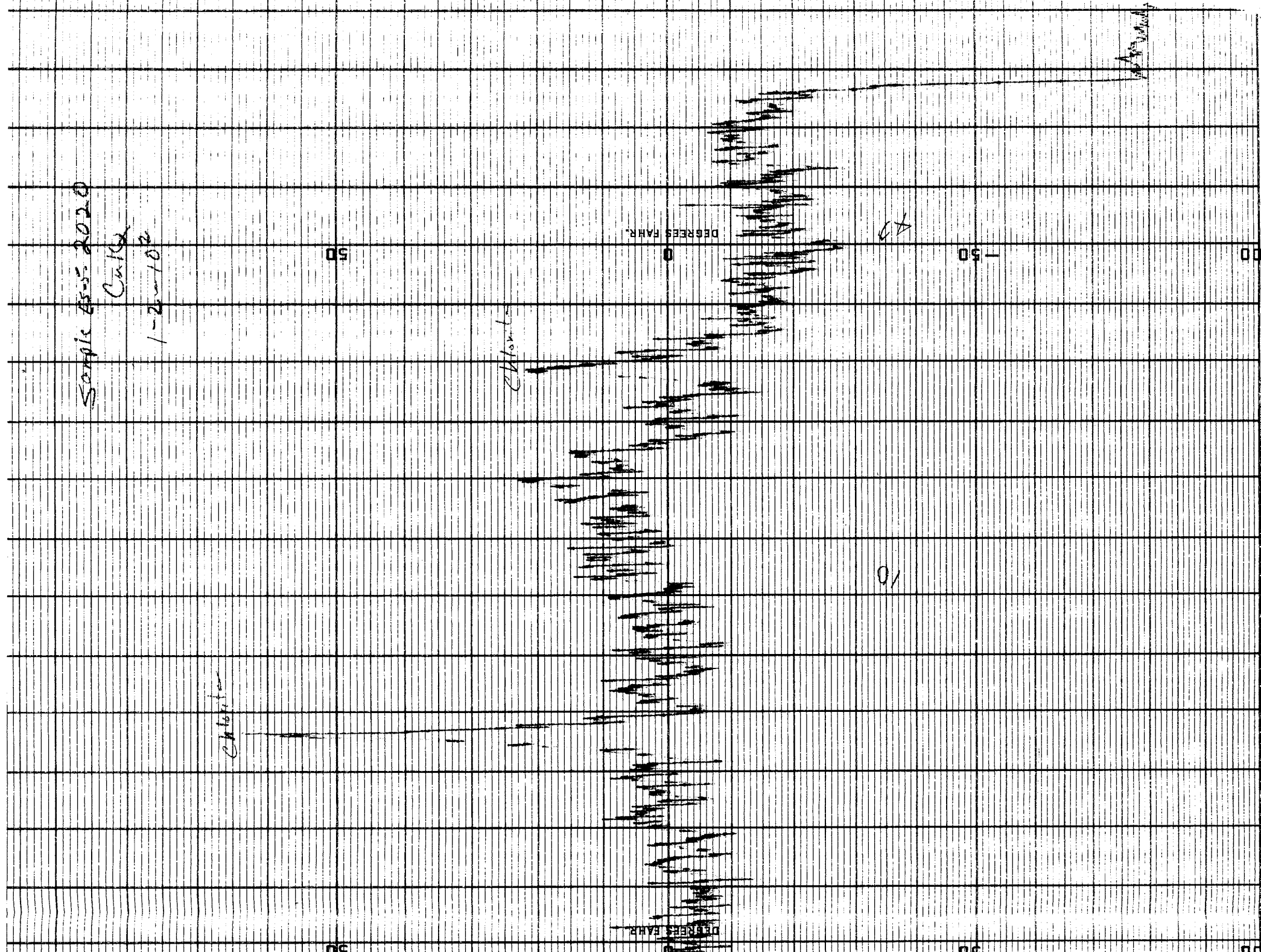
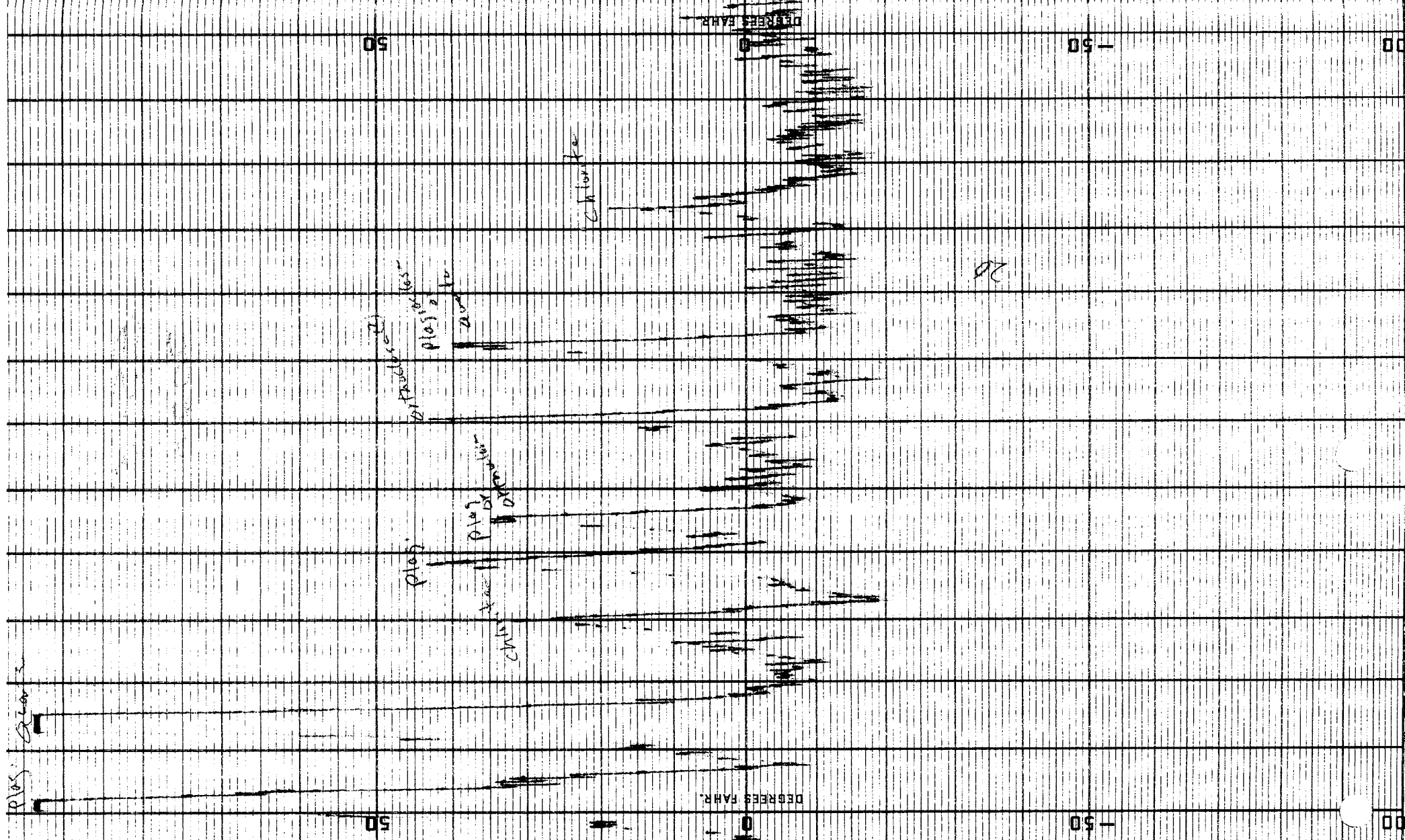
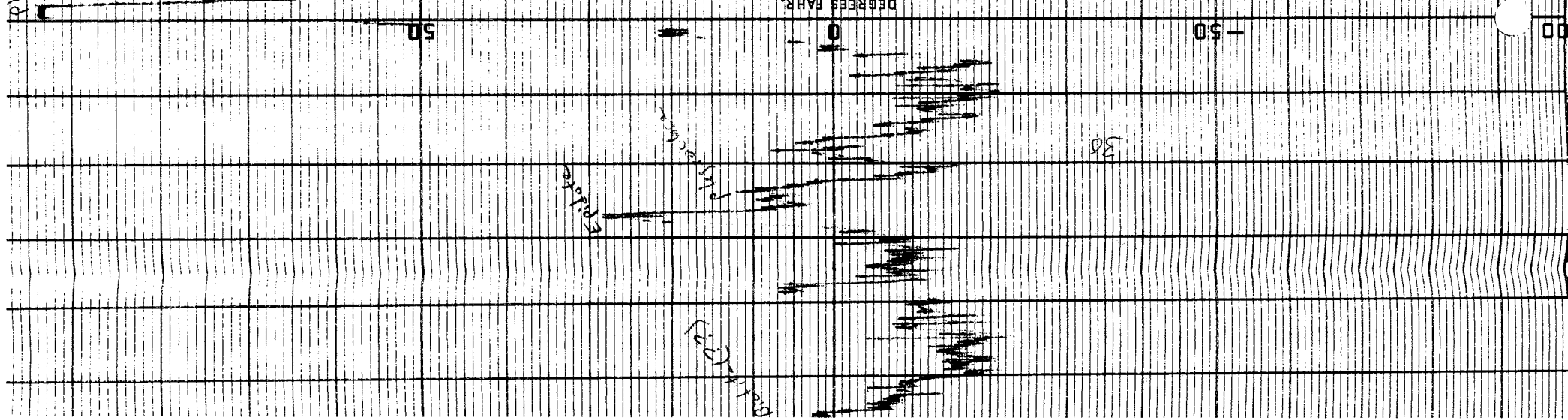
Sample 85-5 3125
CuKa
29/10/11
1-2-10²

Plagioclase
Biotite
Chlorite
Biotite

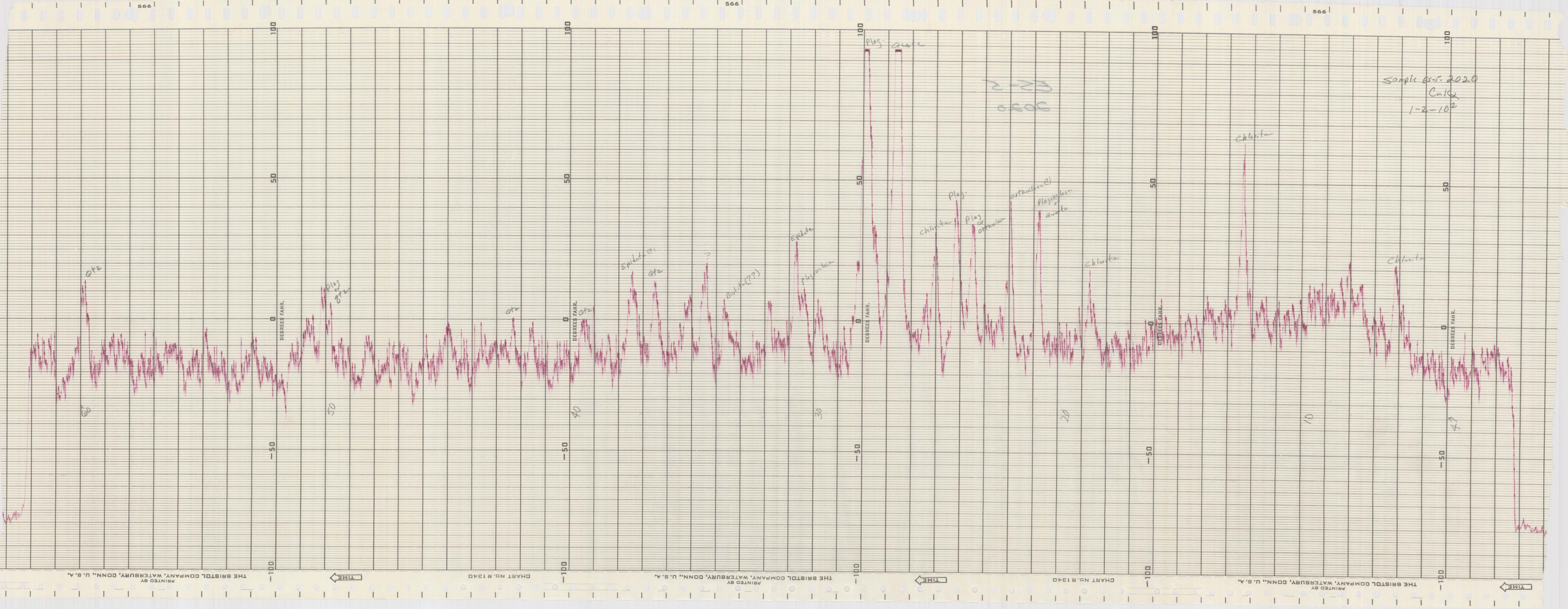


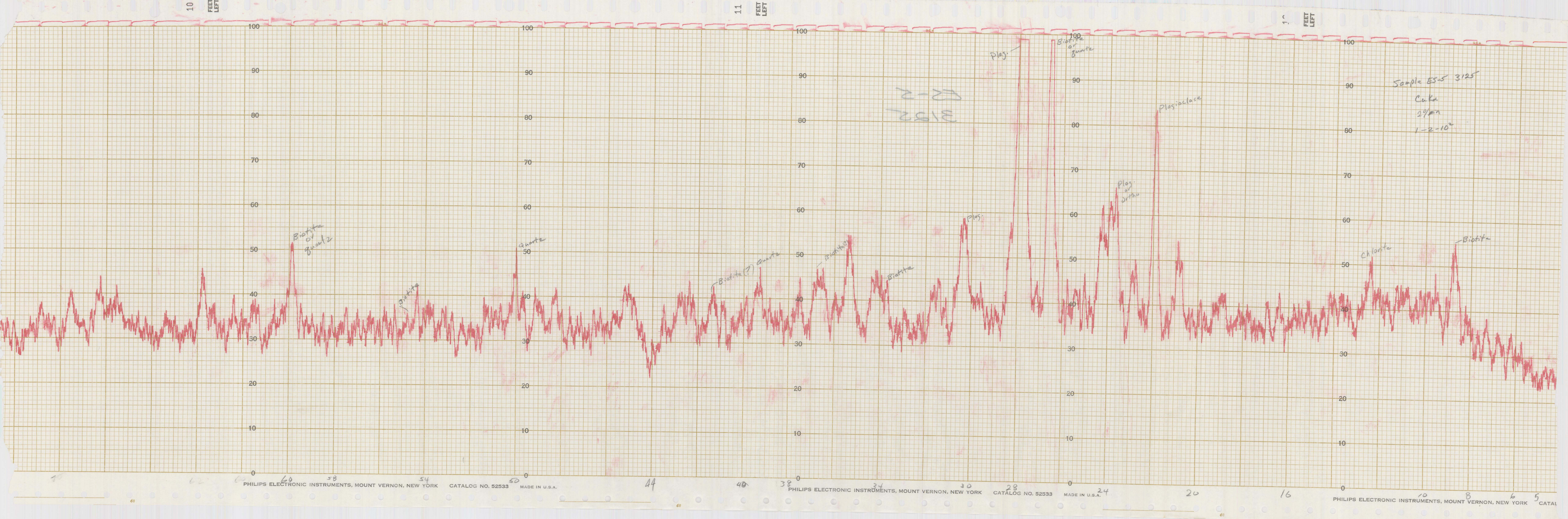
ES-5
2020

100° 00'



Sample 85-20-2020
Cu/Co
1-2-102







TC = 2

Rate meter = 2×10^2

ESB-1176 Ground mass

plas

plas

Biotite
Qtz?
Plas?

Chlonte plas

plas

plas

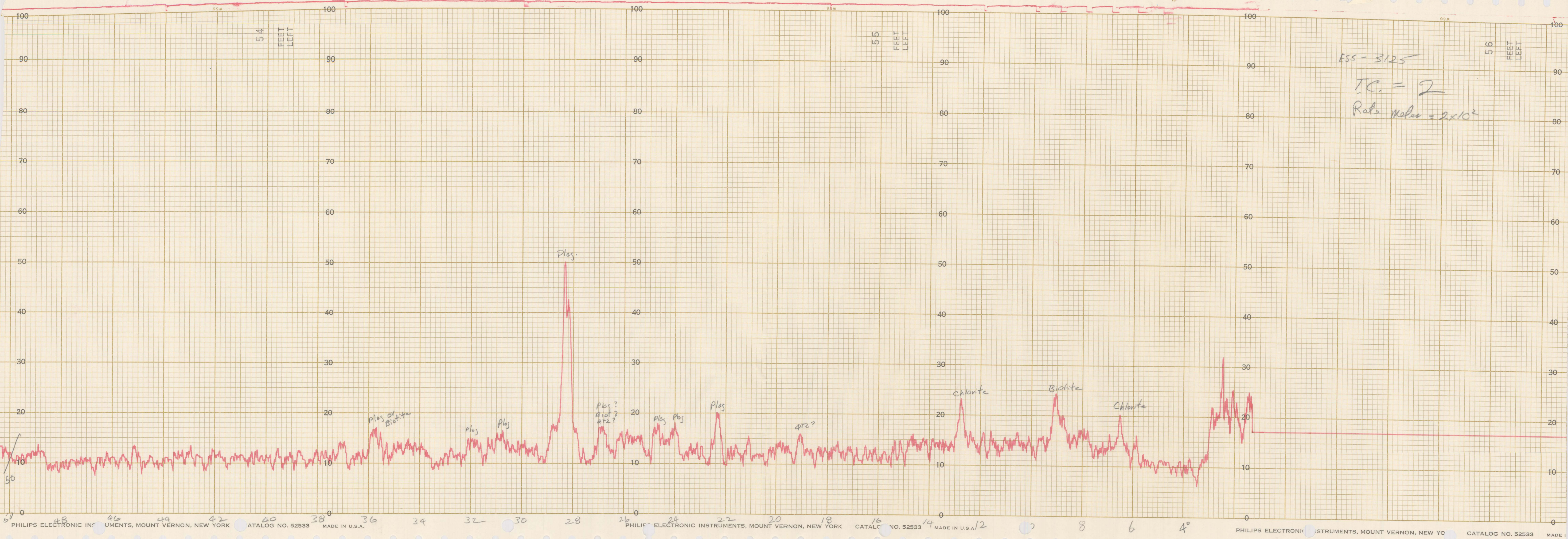
Qtz?

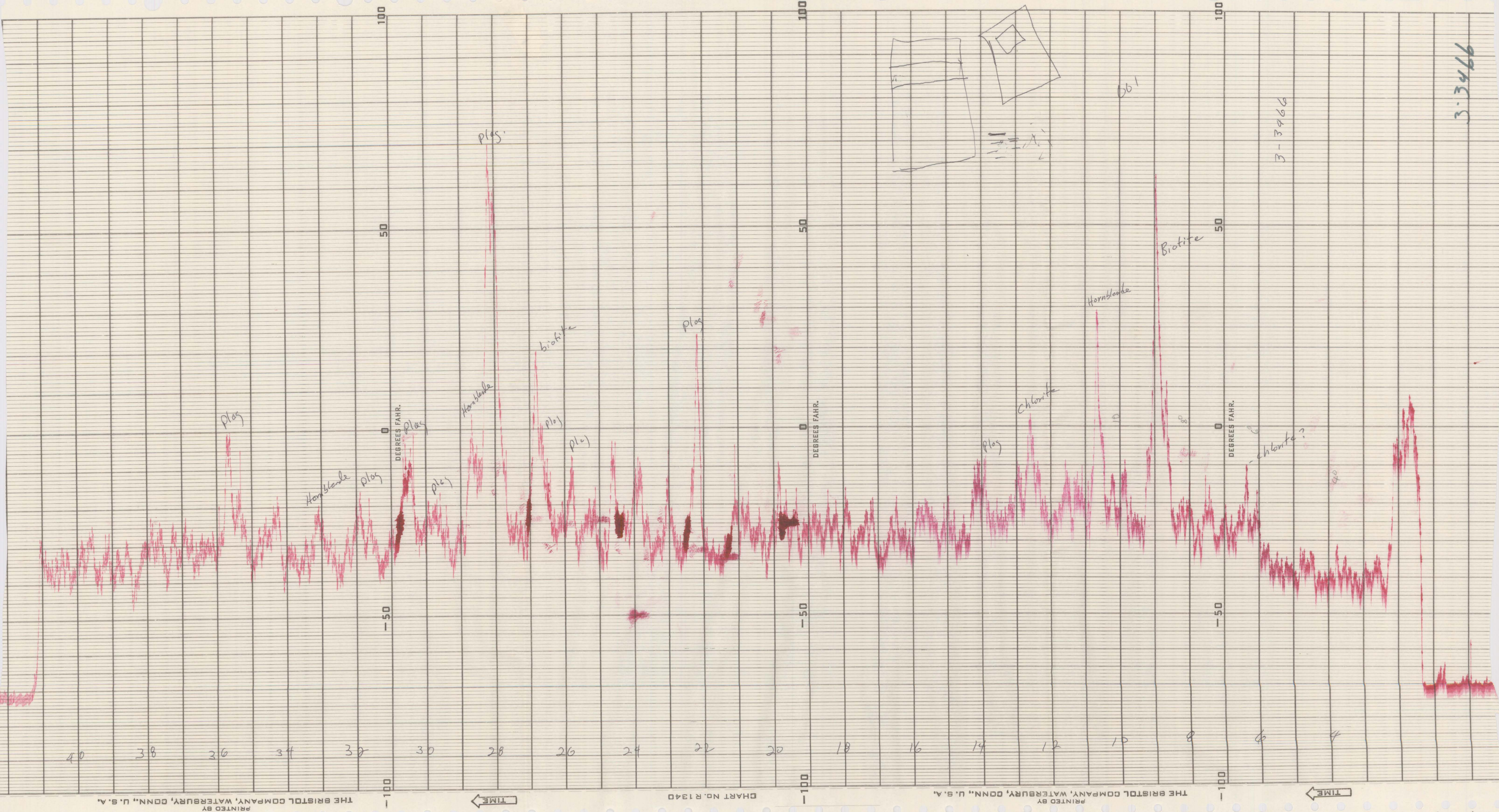
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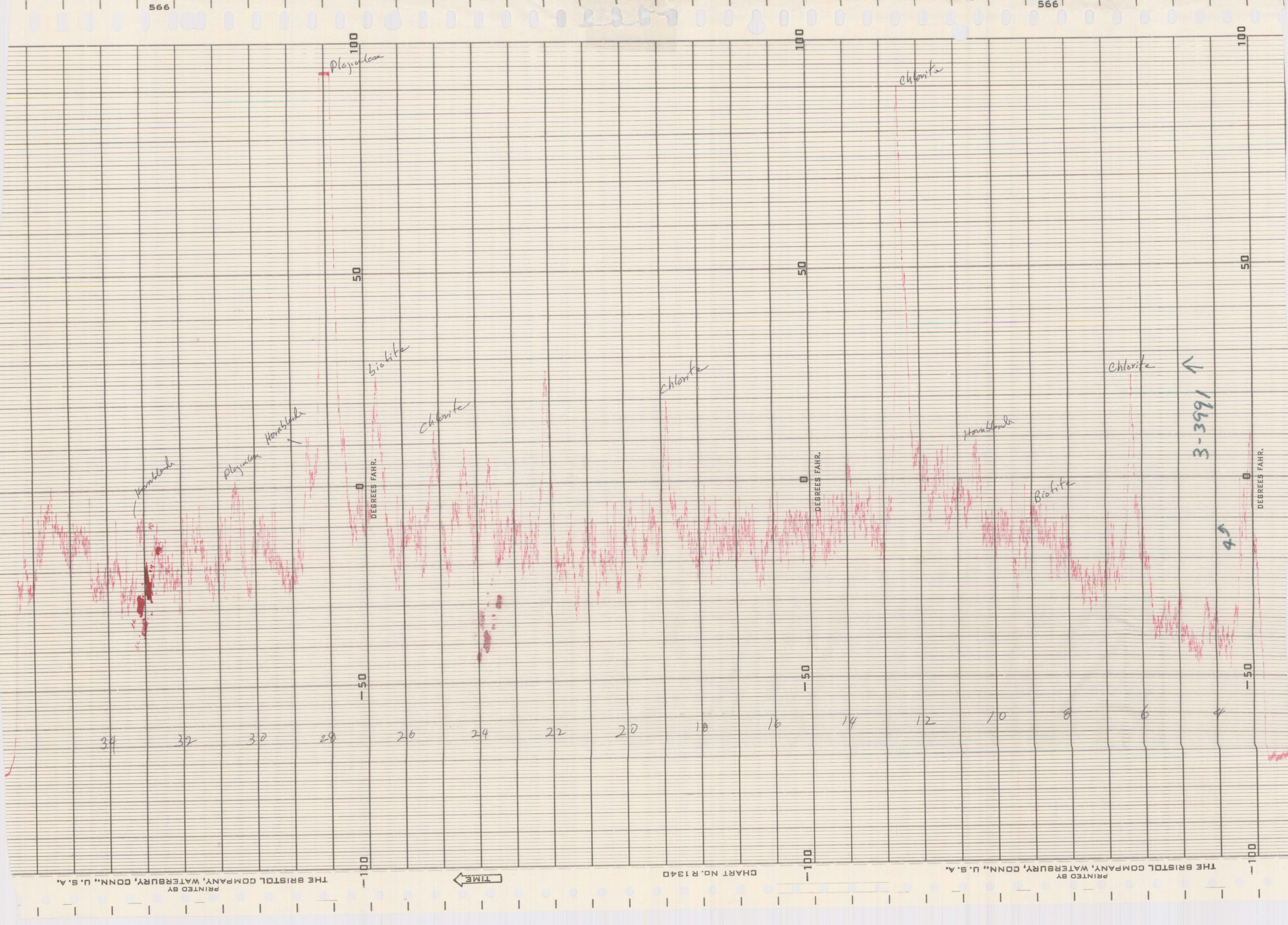
Biotite

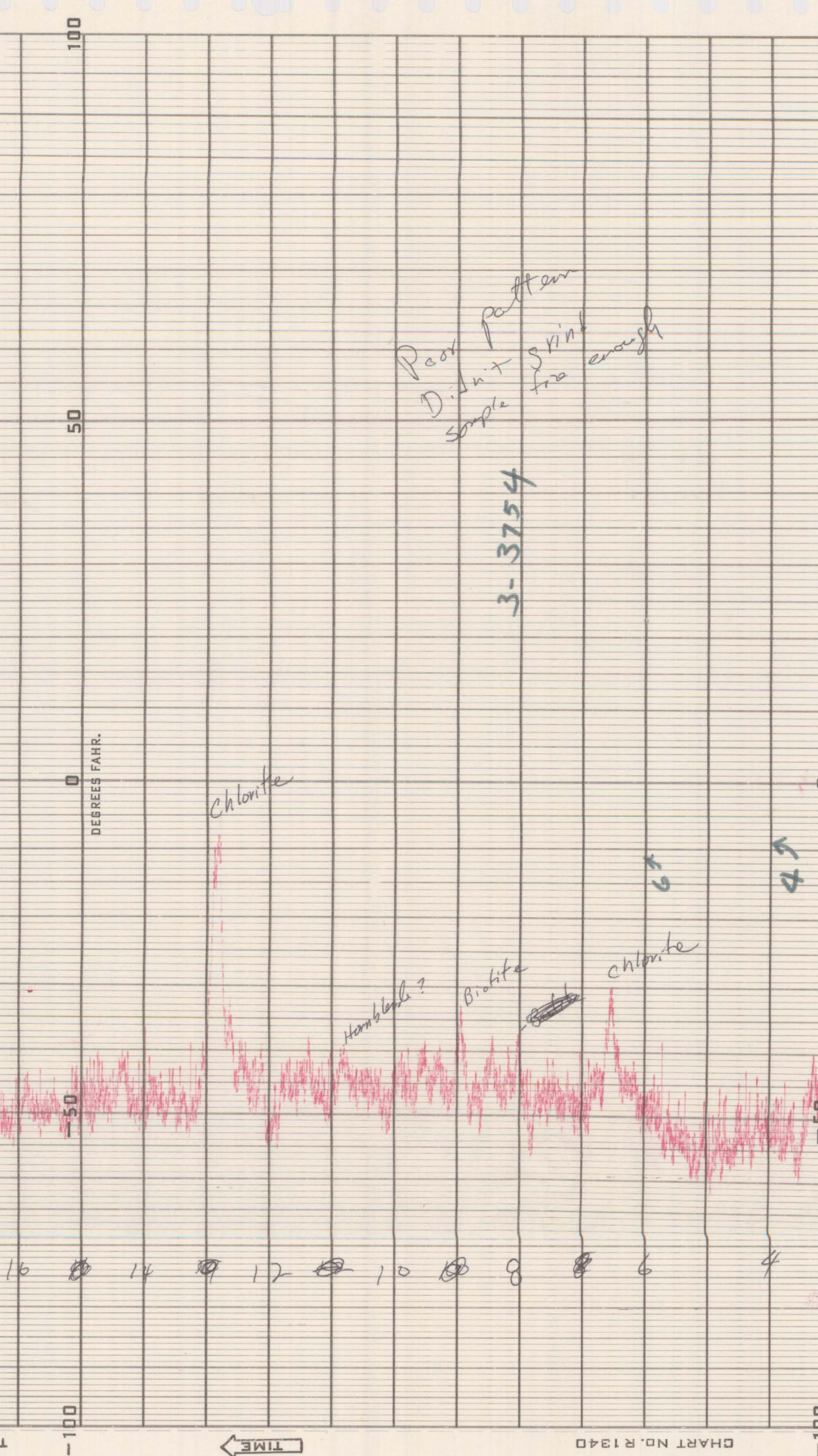
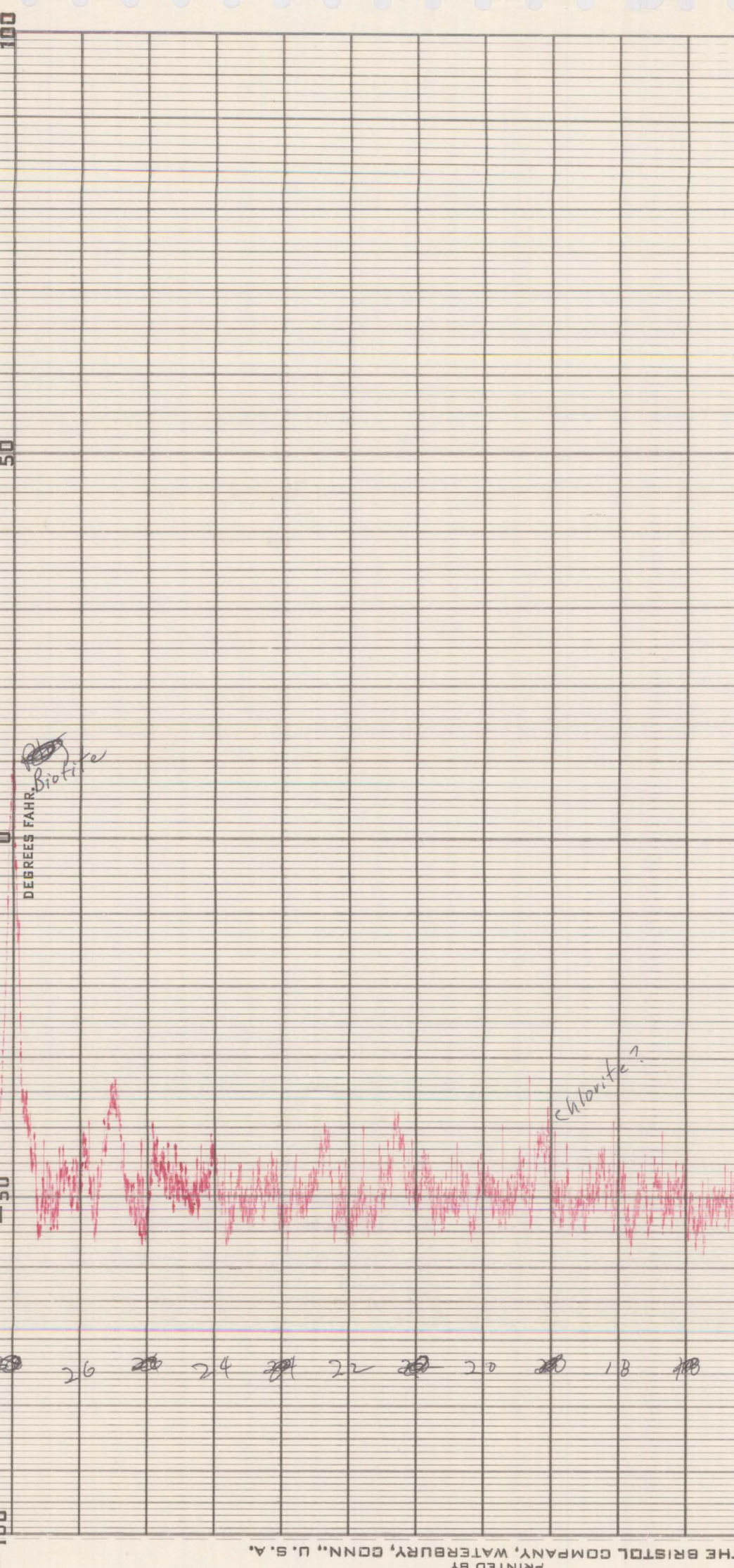
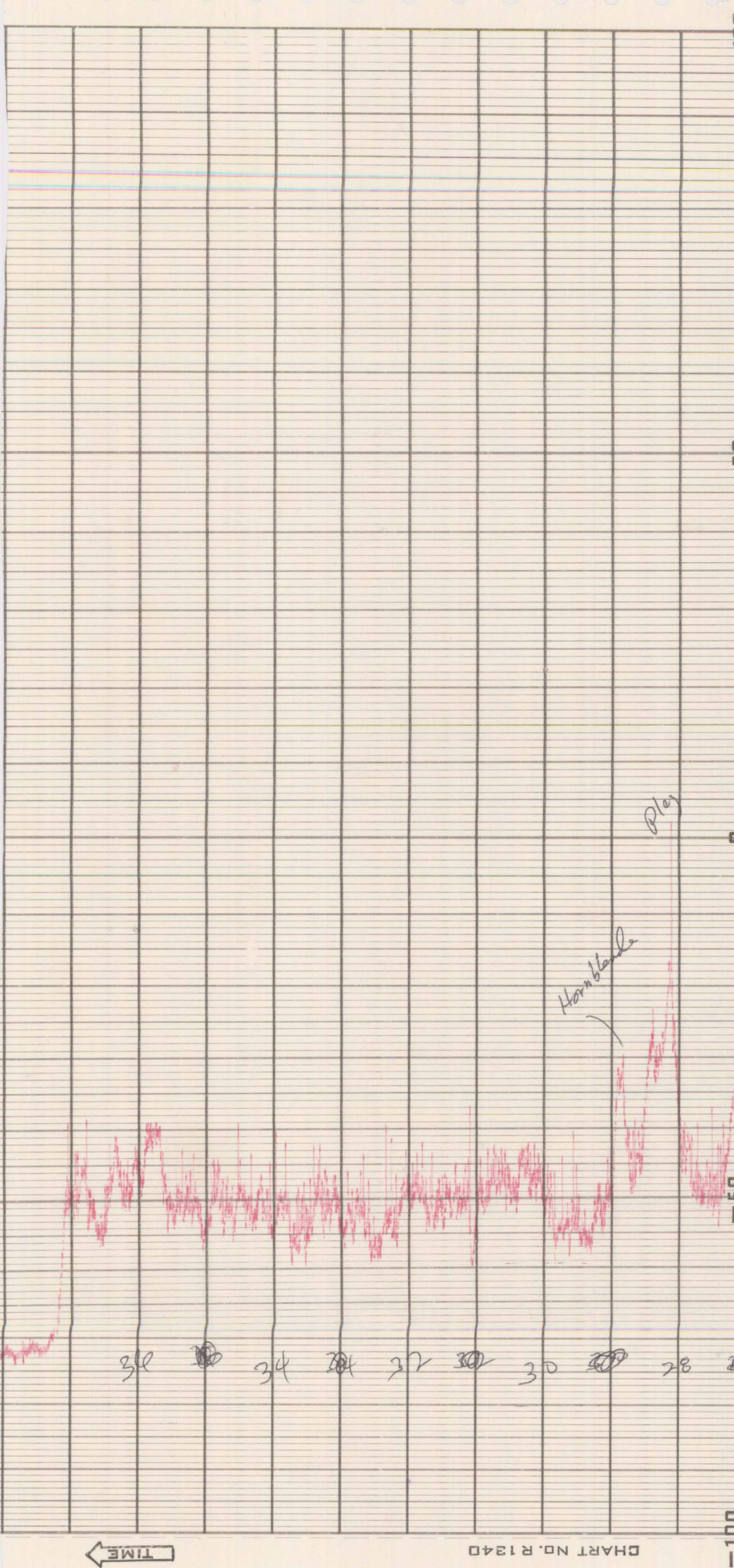
Chlonte

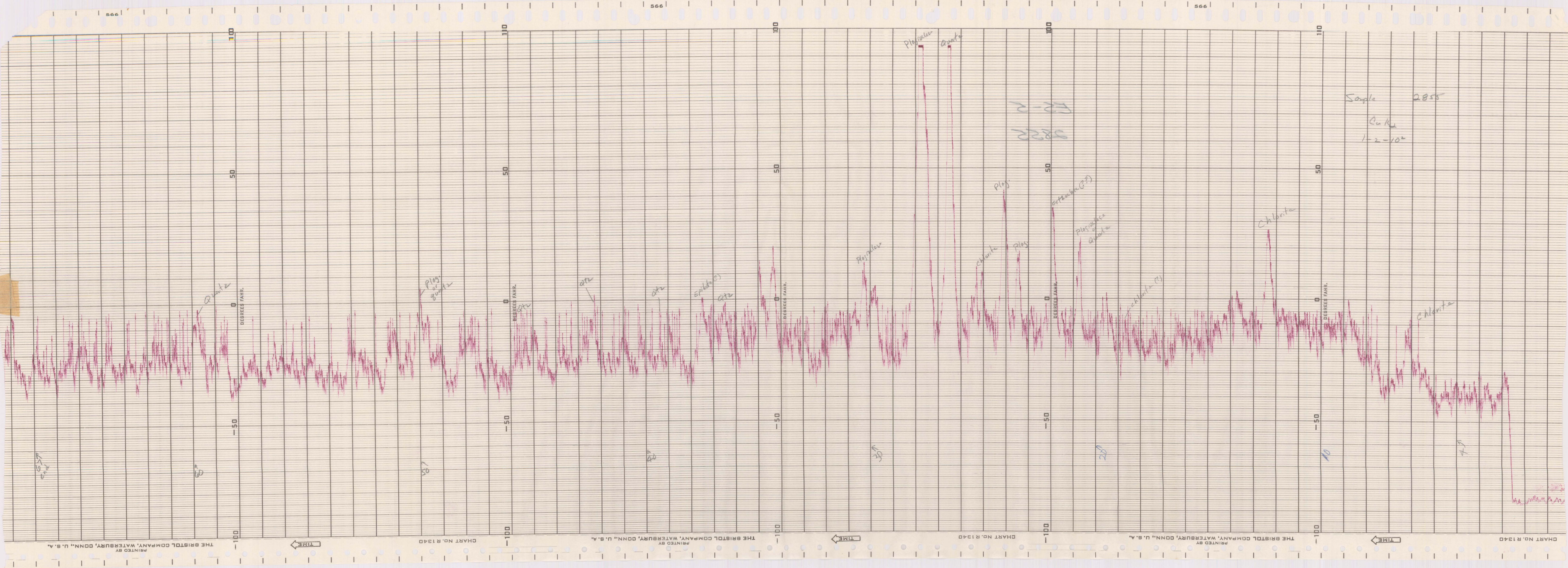
strongest
Mont. peak











DRILL HOLE SAMPLES														PAGE	OF		
PROPERTY														DISTRICT	COUNTY	STATE	COUNTRY
SAFFORD																	
HOLE NO.				CONTRACTOR				COLLAR COORD.				COLLAR ELEV.					
ES-5								N E									
BEARING				INCLINATION				DEPTH				STARTED STOPPED					
SAMPLE		BIT	RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS			
NUMBER	SIZE	FEET	%	FROM	TO	%CU											
6382		5	100	4262	4267	5	.09	}									
6383		"	"	4267	4272	"	.15										
6384		"	"	4272	4277	"	.25										
6385		"	"	4277	4282	"	.27										
6386		"	"	4282	4287	"	1.02										
6387		"	"	4287	4292	"	.39	}									
6388		"	"	4292	4297	"	.64		4282	4312	30'	0.62					
6389		"	"	4297	4302	"	.64										
6390		"	"	4302	4307	"	.63										
6391		"	"	4307	4312	"	.43										
6392		"	"	4312	4317	"	.21	}									
6393		"	"	4317	4322	"	.25										
6394		"	"	4322	4327	"	.16										
6395		"	"	4327	4332	"	.27										
6396		"	"	4332	4337	"	.41										
6397		"	"	4337	4342	"	.21	}									
6398		"	"	4342	4347	"	.30										
6399		"	"	4347	4352	"	.42		4312	4372	60'	0.26					
6400		"	"	4352	4357	"	.11										
6406		"	"	4357	4362	"	.35										
6407		"	"	4362	4367	"	.27	}									
6408		"	"	4367	4372	"	.17										
6409		"	"	4372	4377	"	.59							4312 - 4492			
6410		"	"	4377	4382	"	.36		4372	4387	15'	0.48					
6411		"	"	4382	4387	"	.50							180' 0.30			
6412		"	"	4387	4392	"	.15	}									
6413		"	"	4392	4397	"	.22										
6414		"	"	4397	4402	"	.30		4387	4422	35'	0.22					
6415		"	"	4402	4407	"	.22										
6416		"	"	4407	4412	"	.22										
6417		"	"	4412	4417	"	.31	}									
6418		"	"	4417	4422	"	.15										
6419		"	"	4422	4427	"	.68										
6420		"	"	4427	4432	"	.26										
6421		"	"	4432	4437	"	.48										
6422		"	"	4437	4442	"	.13	}									
6423		"	"	4442	4447	"	.57		4422	4492	70'	0.36					
6424		"	"	4447	4452	"	.36										
6425		"	"	4452	4457	"	.27										
6426		"	"	4457	4462	"	.20										
6427		"	"	4462	4467	"	.30	}									
6428		"	"	4467	4472	"	.34							3783 - 4492			
6429		"	"	4472	4477	"	.39							704' 0.33			
6430		"	"	4477	4482	"	.30										
6431		"	"	4482	4487	"	.48										
6450		"	"	4487	4492	"	.26	}									
6451		"	"	4492	4497	"	.83										
6452		"	"	4497	4502	"	.60										
6453		"	"	4502	4507	"	.39		4492	4522	30'	0.67					
6454		"	"	4507	4512	"	.98										
6455		"	"	4512	4517	"	.26	}									
6456		"	"	4517	4522	"	.98										
6457		"	"	4522	4527	"	1.22										
6458		"	"	4527	4532	"	.95		4522	4542	20'	1.22					
6459		"	"	4532	4537	"	1.59										
6460		"	"	4537	4542	"	1.10	}									
6461		"	"	4542	4547	"	.49										
6462		"	"	4547	4552	"	.92		4542	4562	20'	0.55					
6463		"	"	4552	4557	"	.38										
6464		"	"	4557	4562	"	.40										
6465		"	"	4562	4567	"	.73	}				4492 4652	160' 0.79				
6466		"	"	4567	4572	"	.56										
6467		"	"	4572	4577	"	.44										
6468		"	"	4577	4582	"	.83		4562	4596	34'	0.65					

DRILL HOLE SAMPLES														PAGE	OF		
PROPERTY SAFFORD														DISTRICT	COUNTY	STATE	COUNTRY
HOLE NO. ES-5		CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.							
BEARING		INCLINATION				DEPTH				STARTED		STOPPED					
SAMPLE NUMBER	BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS						REMARKS				
1643		5	100	3947	3952	5	.31	}									
1644	"	"	"	3952	3957	"	.51										
1645	"	"	"	3957	3962	"	.45										
1646	"	"	"	3962	3967	"	1.24										
1647	"	"	"	3967	3972	"	.43										
1648	"	"	"	3972	3977	"	.29			3952	4012	60'	0.60 %Cu				
1649	"	"	"	3977	3982	"	.33										
1650	"	"	"	3982	3987	"	.12										
2069	"	"	"	3987	3992	"	.32										
2070	"	"	"	3992	3997	"	1.21		.92								
2071	"	"	"	3997	4002	"	.63										
2072	"	"	"	4002	4007	"	.39	}									
2073	"	"	"	4007	4012	"	1.29										
2074	"	"	"	4012	4017	"	.36										
2075	"	"	"	4017	4022	"	.28			4012	4032	20'	0.24				
2076	"	"	"	4022	4027	"	.12										
2077	"	"	"	4027	4032	"	.18										
2078	"	"	"	4032	4037	"	.40										
2079	"	"	"	4037	4042	"	.50			4032	4052	20'	0.44				
2080	"	"	"	4042	4047	"	.37										
2081	"	"	"	4047	4052	"	.49										
2082	"	"	"	4052	4057	"	.13										
2083	"	"	"	4057	4062	"	.40										
2084	"	"	"	4062	4067	"	.10										
2085	"	"	"	4067	4072	"	.18						4012-4282				
2086	"	"	"	4072	4077	"	.16										
2087	"	"	"	4077	4082	"	.47						270' 0.28				
2088	"	"	"	4082	4087	"	.16										
2089	"	"	"	4087	4092	"	.40										
2090	"	"	"	4092	4097	"	.24	}	4052	4142	90'	0.28					
2091	"	"	"	4097	4102	"	.30										
2092	"	"	"	4102	4107	"	.33										
2093	"	"	"	4107	4112	"	.19										
2094	"	"	"	4112	4117	"	.41										
2095	"	"	"	4117	4122	"	.29										
2096	"	"	"	4122	4127	"	.45										
2097	"	"	"	4127	4132	"	.32										
2098	"	"	"	4132	4137	"	.46										
2099	"	"	"	4137	4142	"	.13										
2100	"	"	"	4142	4147	"	.67	}	4142	4152	10'	0.74					
6359	"	"	"	4147	4152	"	.81										
6360	"	"	"	4152	4157	"	.33										
6361	"	"	"	4157	4162	"	.41										
6362	"	"	"	4162	4167	"	.34										
6363	"	"	"	4167	4172	"	.17			4152	4187	35'	0.32				
6364	"	"	"	4172	4177	"	.29										
6365	"	"	"	4177	4182	"	.47										
6366	"	"	"	4182	4187	"	.24										
6367	"	"	"	4187	4192	"	.10										
6368	"	"	"	4192	4197	"	.15	}	4187	4207	20'	0.14					
6369	"	"	"	4197	4202	"	.20										
6370	"	"	"	4202	4207	"	.09										
6371	"	"	"	4207	4212	"	.39										
6372	"	"	"	4212	4217	"	.19										
6373	"	"	"	4217	4222	"	.14										
6374	"	"	"	4222	4227	"	.14										
6375	"	"	"	4227	4232	"	.38										
6376	"	"	"	4232	4237	"	.20										
6377	"	"	"	4237	4242	"	.21										
6378	"	"	"	4242	4247	"	.29	}	4207	4282	75'	0.24					
6379	"	"	"	4247	4252	"	.25										
6380	"	"	"	4252	4257	"	.48										
6381	"	"	"	4257	4262	"	.15										

DRILL HOLE SAMPLES														PAGE	OF		
PROPERTY SAFFORD														DISTRICT	COUNTY	STATE	COUNTRY
HOLE NO. ES-5				CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.					
BEARING				INCLINATION				DEPTH				STARTED		STOPPED			
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS				
		FEET	%	FROM	TO												
6401	5	5	100	2725	2730	5	.06										
6402	5	5	100	2777	2782	5	.07										
6403	5	5	100	2815	2820	5	.02										
6404	5	5	100	2842	2847	5	.30										
6319	5	5	100	2902	2907	5	.12										
6320	5	5	100	2950	2955	5	.09										
6321	5	5	100	3000	3005	5	.01										
6322	5	5	100	3048	3053	5	.03										
6323	5	5	100	3102	3107	5	.01										
6324	5	5	100	3153	3158	5	.03										
6325	5	5	100	3205	3210	5	.02										
6326	5	5	100	3210	3215	5	.09										
6327	5	5	100	3255	3260	5	.01										
6328	5	5	100	3300	3305	5	.04										
6338	5	5	100	3348	3353	5	.03										
6339	5	5	100	3401	3406	5	.07										
6350	5	5	100	3449	3454	5	.05										
6351	5	5	100	3498	3503	5	.04										
6352	5	5	100	3545	3550	5	.16										
6353	5	5	100	3603	3608	5	.04										
6357	5	5	100	3634	3639	5	.19										
6354	5	5	100	3650	3655	5	.07										
1627	5	5	100	3678	3683	5	.26	}	3678	3703	20'	0.32	%Cu				
6358	5	5	100	3683	3688	5	.53										
1628	5	5	100	3688	3693	5	.28										
6355	5	5	100	3698	3703	5	.21										
6356	5	5	100	3748	3753	5	.08										
1606	4	4	80	3769	3774	5	.13										
1607	4	4	100	3774	3778	4	.14										
1608	5	5	100	3778	3783	5	.07										
1609	5	5	100	3783	3788	5	.11										
1610	5	5	100	3788	3793	5	.41	}	3788	3827	39'	0.36	%Cu				
1611	4	4	80	3793	3798	5	.55										
1612	4	4	100	3798	3802	4	.31										
1613	5	5	100	3802	3807	5	.32										
1614	5	5	100	3807	3812	5	.38										
1615	5	5	100	3812	3817	5	.32										
1616	5	5	100	3817	3822	5	.17										
1617	5	5	100	3822	3827	5	.44										
1618	5	5	100	3827	3832	5	.28	}	3827	3857	30'	0.20		3788-3952			
1619	5	5	100	3832	3837	5	.14										
1620	5	5	100	3837	3842	5	.09										
1621	5	5	100	3842	3847	5	.28										
1622	5	5	100	3847	3852	5	.17										
1623	4	4	80	3852	3857	5	.22	}	3857	3867	10'	0.57					
1624	4	4	80	3857	3862	5	.71										
1625	5	5	100	3862	3867	5	.42										
1626	5	5	71	3867	3874	7	.20										
1629	5	5	100	3874	3879	5	.05										
1630	4	4	80	3879	3884	5	.08	}	3867	3907	40'	0.09					
1631	5	5	100	3884	3889	5	.11										
1632	4	4	50	3889	3897	8	.12										
1633	5	5	100	3897	3902	5	.22										
1634	4	4	80	3902	3907	5	.10										
1635	5	5	100	3907	3912	5	.44	}	3907	3917	10'	0.39					
1636	5	5	100	3912	3917	5	.39										
1637	5	5	100	3917	3922	5	.13										
1638	5	5	100	3922	3927	5	.10										
1639	5	5	100	3927	3932	5	.13										
1640	5	5	100	3932	3937	5	.18	}	3917	3937	20'	0.14					
1641	5	5	100	3937	3942	5	.29										
1642	5	5	100	3942	3947	5	.20										
									3907	3917	10'	0.39					
									3917	3937	20'	0.14					
									3937	3952	15'	0.27					

DRILL HOLE SAMPLES														PAGE	OF		
PROPERTY SAFFORD														DISTRICT	COUNTY	STATE	COUNTRY
HOLE NO. ES-5				CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.					
BEARING				INCLINATION				DEPTH				STARTED STOPPED					
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS				
		FEET	%	FROM	TO												
6470	5	100	4582	4587	5	.57											
6471	4	100	4587	4591	4	.91											
6469	5	100	4591	4596	5	.56											
6472	6	100	4596	4602	6	1.29											
6473	5	"	4602	4607	5	.70											
6479	"	"	4607	4612	"	.54											
6475	"	"	4612	4617	"	1.08											
6476	"	"	4617	4622	"	.70	4596	4652	56'	0.86							
6477	"	"	4622	4627	"	.64											
6478	"	"	4627	4632	"	.60											
6479	"	"	4632	4637	"	.72											
6480	"	"	4637	4642	"	1.19											
6481	"	"	4642	4647	"	1.39											
6482	"	"	4647	4652	"	.72											
6483	"	"	4652	4657	"	.41											
6484	"	"	4657	4662	"	.43	4652	4675	23'	0.45							
6485	"	"	4662	4667	"	.55											
6486	"	"	4667	4672	"	.56											
6487	3	100	4672	4675	3	.20											
													3788 - 4675				
													887' 0.42				

DRILL HOLE SAMPLES										PAGE		OF			
PROPERTY				DISTRICT		COUNTY		STATE		COUNTRY					
HOLE NO.			CONTRACTOR			COLLAR COORD.			COLLAR ELEV.						
						N			E						
BEARING			INCLINATION			DEPTH			STARTED		STOPPED				
SAMPLE		BIT		RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS
NUMBER	SIZE	FEET	%	FROM	TO										
6382		5	100	4262	4267	5									
6383		5	100	4267	4272	5									
6384		5	100	4272	4277	5									
6385		5	100	4277	4282	5									
6386		5	100	4282	4287	5									
6387		5	100	4287	4292	5									
6388		5	100	4292	4297	5									
6389		5	100	4297	4302	5									
6390		5	100	4302	4307	5									
6391		5	100	4307	4312	5									
6392		5	100	4312	4317	5									
6393		5	100	4317	4322	5									
6394		5	100	4322	4327	5									
6395		5	100	4327	4332	5									
6396		5	100	4332	4337	5									
6397		5	100	4337	4342	5									
6398		5	100	4342	4347	5									
6399		5	100	4347	4352	5									
6400		5	100	4352	4357	5									
6406		5	100	4357	4362	5									
6407		5	100	4362	4367	5									
6408		5	100	4367	4372	5									
6409		5	100	4372	4377	5									
6410		5	100	4377	4382	5									
6411		5	100	4382	4387	5									
6412		5	100	4387	4392	5									
6413		5	100	4392	4397	5									
6414		5	100	4397	4402	5									
6415		5	100	4402	4407	5									
6416		5	100	4407	4412	5									
6417		5	100	4412	4417	5									
6418		5	100	4417	4422	5									
6419		5	100	4422	4427	5									
6420		5	100	4427	4432	5									
6421		5	100	4432	4437	5									
6422		5	100	4437	4442	5									
6423		5	100	4442	4447	5									
6424		5	100	4447	4452	5									
6425		5	100	4452	4457	5									
6426		5	100	4457	4462	5									
6427		5	100	4462	4467	5									
6428		5	100	4467	4472	5									
6429		5	100	4472	4477	5									
6430		5	100	4477	4482	5									
6431		5	100	4482	4487	5									

DRILL HOLE SAMPLES												PAGE		OF					
PROPERTY												DISTRICT		COUNTY		STATE		COUNTRY	
HOLE NO. ES-5				CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.							
BEARING				INCLINATION				DEPTH				STARTED STOPPED							
SAMPLE NUMBER		BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS								REMARKS			
6401		5	100		2775 2780		5	.06											
6402		5	100		2777 2782		5	.07								BREAK, LEAVES SPACE			
6403		5	100		2815 2820		5	.02											
6404		5	100		2842 2847		5	.30											
6405		5	100		2902 2907		5												
6319		5	100		2902 2907		5	.12											
6320		5	100		2950 2955		5	.09											
6321		5	100		3000 3005		5	.01											
6322		5	100		3048 3053		5	.03											
6323		5	100		3102 3107		5	.01											
6324		5	100		3153 3158		5	.03											
6325		5	100		3205 3210		5	.02											
6326		5	100		3210 3215		5	.02											
6327		5	100		3255 3260		5	.01											
6328		5	100		3300 3305		5	.04											
6338		5	"		3348 3353		5	.03											
6339		5	"		3401 3406		5	.07											
6350		5	"		3449 3454		5	.05											
6351		5	"		3498 3503		5	.04											
6352		5	"		3545 3550		5	.16											
6353		5	"		3603 3608		5	.09											
6354		5	"		3650 3655		5	.07											
6355		5	"		3698 3703		5	.21											
6356		5	"		3748 3753		5	.08											
6357		5	"		3834 3839		5	.19											
6358		5	"		3883 3888		5	.53											
(11-8) 1606		4	80		3769 3774		5	.13											
1607		4	100		3774 3778		4	.14								3769 3874 105' 0.29			
1608		5	100		3778 3783		5	.07											
1609		5	100		3783 3788		5	.11											
1610		5	100		3788 3793		5	.71											
1611		4	80		3793 3798		5	.55											
1612		4	100		3798 3802		4	.31								3788 3827 39' 0.36			
1613		5	100		3802 3807		5	.32											
1614		5	100		3807 3812		5	.38											
1615		5	100		3812 3817		5	.32											
1616		5	100		3817 3822		5	.17								7150			
1617		5	100		3822 3827		5	.44											
1618		5	100		3827 3832		5	.28											
1619		5	100		3832 3837		5	.14											
1620		5	100		3837 3842		5	.09											
1621		5	100		3842 3847		5	.28											
1622		5	100		3847 3852		5	.17											
1623		4	80		3852 3857		5	.22											
1624		4	80		3857 3862		5	.71											
1625		5	100		3862 3867		5	.42											
1626		5	71		3867 3874		7	.20											
(11-9) 1627		5	100		3874 3878		5	.26											
1628		5	100		3878 3883		5	.28											
1629		5	100		3874 3879		5	.05											
1630		4	80		3879 3884		5	.08											
1631		5	100		3884 3889		5	.11											
1632		4	50		3889 3894		8	.12											
1633		5	100		3897 3902		5	.22											
1634		4	80		3902 3907		5	.10											
1635		5	100		3907 3912		5	.44											
1636		5	100		3912 3917		5	.34											
1637		5	100		3917 3922		5	.13											
1638		5	100		3922 3927		5	.10											
1639		5	100		3927 3932		5	.13											
1640		5	100		3932 3937		5	.18											
1641		5	100		3937 3942		5	.29											
1642		5	100		3942 3947		5	.20											

DRILL HOLE SAMPLES					WORK SHEET										PAGE		OF	
PROPERTY					DISTRICT			COUNTY			STATE			COUNTRY				
HOLE NO.		CONTRACTOR				COLLAR COORD.				COLLAR ELEV.								
BEARING		INCLINATION				DEPTH				STARTED		STOPPED						
SAMPLE NUMBER		BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS								REMARKS		
1643			5 100		3947 3952		5	.31										
1644			5 100		3952 3957		5	.51										
1645			5 100		3957 3962		5	.45										
1646			5 100		3962 3967		5	1.24										
1647			5 100		3967 3972		5	.43										
1648			5 100		3972 3977		5	.29										
1649			5 100		3977 3982		5	.33										
1650			5 100		3982 3987		5	.12										
2069			5 100		3987 3992		5	.32										
2070			5 100		3992 3997		5	1.21										
2071			5 100		3997 4002		5	.63										
2072			5 100		4002 4007		5	.39										
2073			5 100		4007 4012		5	1.29										
2074			5 100		4012 4017		5	.36										
2075			5 100		4017 4022		5	.28										
2076			5 100		4022 4027		5	.12										
2077			5 100		4027 4032		5	.18										
2078			5 100		4032 4037		5	.40										
2079			5 100		4037 4042		5	.50										
2080			5 100		4042 4047		5	.37										
2081			5 100		4047 4052		5	.49										
2082			5 100		4052 4057		5	.13										
2083			5 100		4057 4062		5	.40										
2084			5 100		4062 4067		5	.10										
2085			5 100		4067 4072		5	.18										
2086			5 100		4072 4077		5	.16										
2087			5 100		4077 4082		5	.47										
2088			5 100		4082 4087		5	.16										
2089			5 100		4087 4092		5	.40										
2090			5 100		4092 4097		5	.24										
2091			5 100		4097 4102		5	.30										
2092			5 100		4102 4107		5	.33										
2093			5 100		4107 4112		5	.19										
2094			5 100		4112 4117		5	.41										
2095			5 100		4117 4122		5	.29										
2096			5 100		4122 4127		5	.45										
2097			5 100		4127 4132		5	.32										
2098			5 100		4132 4137		5	.46										
2099			5 100		4137 4142		5	.13										
2100			5 100		4142 4147		5	.67										
6359			5 100		4147 4152		5	.81										
6360			5 100		4152 4157		5	.33										
6361			5 100		4157 4162		5	.41										
6362			5 100		4162 4167		5	.34										
6363			5 100		4167 4172		5	.17										
6364			5 100		4172 4177		5	.29										
6365			5 100		4177 4182		5	.47										
6366			5 100		4182 4187		5	.24										
6367			5 100		4187 4192		5	.10										
6368			5 100		4192 4197		5	.15										
6369			5 100		4197 4202		5	.20										
6370			5 100		4202 4207		5	.09										
6371			5 100		4207 4212		5	.39										
6372			5 100		4212 4217		5	.19										
6373			5 100		4217 4222		5	.14										
6374			5 100		4222 4227		5	.14										
6375			5 100		4227 4232		5	.38										
6376			5 100		4232 4237		5	.20										
6377			5 100		4237 4242		5	.21										
6378			5 100		4242 4247		5	.29										
6379			5 100		4247 4252		5	.25										
6380			5 100		4252 4257		5	.48										
6381			5 100		4257 4262		5	.15										

DRILL HOLE SAMPLES														PAGE	OF		
PROPERTY														DISTRICT	COUNTY	STATE	COUNTRY
SAFFORD																	
HOLE NO.		CONTRACTOR				COLLAR COORD.				COLLAR ELEV.							
ES-5						N E											
BEARING		INCLINATION				DEPTH				STARTED		STOPPED					
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS				
		FEET	%	FROM	TO		%Cu										
1643		5	100	3947	3952	5	.31	}									
1644		"	"	3952	3957	"	.51										
1645		"	"	3957	3962	"	.45										
1646		"	"	3962	3967	"	1.24										
1647		"	"	3967	3972	"	.43										
1648		"	"	3972	3977	"	.29			3952	4012	60'	0.60	%Cu			
1649		"	"	3977	3982	"	.33										
1650		"	"	3982	3987	"	.12										
2069		"	"	3987	3992	"	.32										
2070		"	"	3992	3997	"	1.21		92								
2071		"	"	3997	4002	"	.63	}									
2072		"	"	4002	4007	"	.39										
2073		"	"	4007	4012	"	1.29										
2074		"	"	4012	4017	"	.36										
2075		"	"	4017	4022	"	.28			4012	4032	20'	0.24				
2076		"	"	4022	4027	"	.12										
2077		"	"	4027	4032	"	.18										
2078		"	"	4032	4037	"	.40										
2079		"	"	4037	4042	"	.50			4032	4052	20'	0.44				
2080		"	"	4042	4047	"	.37										
2081		"	"	4047	4052	"	.49	}									
2082		"	"	4052	4057	"	.13										
2083		"	"	4057	4062	"	.40										
2084		"	"	4062	4067	"	.10										
2085		"	"	4067	4072	"	.18							4012-4282			
2086		"	"	4072	4077	"	.16										
2087		"	"	4077	4082	"	.47							270' 0.28			
2088		"	"	4082	4087	"	.16										
2089		"	"	4087	4092	"	.40										
2090		"	"	4092	4097	"	.24			4052	4142	90'	0.28				
2091		"	"	4097	4102	"	.30	}									
2092		"	"	4102	4107	"	.33										
2093		"	"	4107	4112	"	.19										
2094		"	"	4112	4117	"	.41										
2095		"	"	4117	4122	"	.29										
2096		"	"	4122	4127	"	.45										
2097		"	"	4127	4132	"	.32										
2098		"	"	4132	4137	"	.46										
2099		"	"	4137	4142	"	.13										
2100		"	"	4142	4147	"	.67			4142	4152	10'	0.74				
6359		"	"	4147	4152	"	.81	}									
6360		"	"	4152	4157	"	.33										
6361		"	"	4157	4162	"	.41										
6362		"	"	4162	4167	"	.34										
6363		"	"	4167	4172	"	.17			4152	4187	35'	0.32				
6364		"	"	4172	4177	"	.29										
6365		"	"	4177	4182	"	.47										
6366		"	"	4182	4187	"	.24										
6367		"	"	4187	4192	"	.10										
6368		"	"	4192	4197	"	.15			4187	4207	20'	0.14				
6369		"	"	4197	4202	"	.20	}									
6370		"	"	4202	4207	"	.09										
6371		"	"	4207	4212	"	.39										
6372		"	"	4212	4217	"	.19										
6373		"	"	4217	4222	"	.14										
6374		"	"	4222	4227	"	.14										
6375		"	"	4227	4232	"	.38										
6376		"	"	4232	4237	"	.20										
6377		"	"	4237	4242	"	.21										
6378		"	"	4242	4247	"	.24			4207	4282	75'	0.24				
6379		"	"	4247	4252	"	.25										
6380		"	"	4252	4257	"	.48										
6381		"	"	4257	4262	"	.15										

DRILL HOLE SAMPLES														PAGE	OF
PROPERTY				DISTRICT		COUNTY		STATE		COUNTRY		3	4		
SAFFORD															
HOLE NO.				CONTRACTOR		COLLAR COORD.		COLLAR ELEV.							
ES-5						N E									
BEARING				INCLINATION		DEPTH		STARTED		STOPPED					
SAMPLE		BIT		RECOVERY		DRILL RUN		INT.		ASSAYS		REMARKS			
NUMBER	SIZE	FEET	%	FROM	TO										
6382		5	100	4262	4267	5	.09								
6383		"	"	4267	4272	"	.15								
6389		"	"	4272	4277	"	.25								
6385		"	"	4277	4282	"	.27								
6386		"	"	4282	4287	"	1.02								
6387		"	"	4287	4292	"	.39								
6388		"	"	4292	4297	"	.64		4282	4312	30'	0.62			
6389		"	"	4297	4302	"	.64								
6390		"	"	4302	4307	"	.63								
6391		"	"	4307	4312	"	.43								
6392		"	"	4312	4317	"	.21								
6393		"	"	4317	4322	"	.25								
6399		"	"	4322	4327	"	.16								
6395		"	"	4327	4332	"	.27								
6396		"	"	4332	4337	"	.41								
6397		"	"	4337	4342	"	.21								
6398		"	"	4342	4347	"	.30								
6399		"	"	4347	4352	"	.42		4312	4372	60'	0.26			
6400		"	"	4352	4357	"	.11								
6406		"	"	4357	4362	"	.35								
6407		"	"	4362	4367	"	.27								
6408		"	"	4367	4372	"	.17								
6409		"	"	4372	4377	"	.59								
6410		"	"	4377	4382	"	.36		4372	4387	15'	0.48	4312 - 4492		
6411		"	"	4382	4387	"	.50								
6412		"	"	4387	4392	"	.15						180' 0.30		
6413		"	"	4392	4397	"	.22								
6414		"	"	4397	4402	"	.30								
6415		"	"	4402	4407	"	.22		4387	4422	35'	0.22			
6416		"	"	4407	4412	"	.21								
6417		"	"	4412	4417	"	.31								
6418		"	"	4417	4422	"	.15								
6419		"	"	4422	4427	"	.68								
6420		"	"	4427	4432	"	.26								
6421		"	"	4432	4437	"	.48								
6422		"	"	4437	4442	"	.13								
6423		"	"	4442	4447	"	.57		4422	4492	70'	0.36			
6424		"	"	4447	4452	"	.36								
6425		"	"	4452	4457	"	.27								
6426		"	"	4457	4462	"	.20								
6427		"	"	4462	4467	"	.30								
6428		"	"	4467	4472	"	.34								
6429		"	"	4472	4477	"	.39						3783 - 4492		
6430		"	"	4477	4482	"	.30						704' 0.33		
6431		"	"	4482	4487	"	.48								
6450		"	"	4487	4492	"	.26								
6451		"	"	4492	4497	"	.83								
6452		"	"	4497	4502	"	.60								
6453		"	"	4502	4507	"	.39		4492	4522	30'	0.67			
6454		"	"	4507	4512	"	.98								
6455		"	"	4512	4517	"	.26								
6456		"	"	4517	4522	"	.98								
6457		"	"	4522	4527	"	1.22								
6458		"	"	4527	4532	"	.95		4522	4542	20'	1.22			
6459		"	"	4532	4537	"	1.59								
6460		"	"	4537	4542	"	1.10								
6461		"	"	4542	4547	"	.49								
6462		"	"	4547	4552	"	.92		4542	4562	20'	0.55			
6463		"	"	4552	4557	"	.38								
6464		"	"	4557	4562	"	.40								
6465		"	"	4562	4567	"	.73								
6466		"	"	4567	4572	"	.56				4492	4652	160' 0.79		
6467		"	"	4572	4577	"	.44								
6468		"	"	4577	4582	"	.83		4562	4596	34'	0.65			

DRILL HOLE SAMPLES														PAGE 4		OF 4	
PROPERTY SAFFORD				DISTRICT		COUNTY		STATE		COUNTRY							
HOLE NO. ES-5				CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.					
BEARING				INCLINATION				DEPTH				STARTED STOPPED					
SAMPLE NUMBER		BIT SIZE	RECOVERY FEET %		DRILL RUN FROM TO		INT.	ASSAYS						REMARKS			
6470		5	100	4582	4587	5	.57										
6471		4	100	4587	4591	4	.91										
6469		5	100	4591	4596	5	.56										
6472		6	100	4596	4602	6	1.29										
6473		5	"	4602	4607	5	.70										
6479		"		4607	4612	"	.59										
6475		"		4612	4617	"	1.08										
6476		"		4617	4622	"	.70	4596	4652	56'	0.86						
6477		"		4622	4627	"	.64										
6478		"		4627	4632	"	.60										
6479		"		4632	4637	"	.72										
6480		"		4637	4642	"	1.19										
6481		"		4642	4647	"	1.39										
6482		"		4647	4652	"	.72										
6483		"		4652	4657	"	.41										
6484		"		4657	4662	"	.43	4652	4675	23'	0.45						
6485		"		4662	4667	"	.55										
6486		"		4667	4672	"	.56										
6487		3	100	4672	4675	3	.20										
														3788 - 4675			
														887' 0.42			

DRILL HOLE SAMPLES														PAGE	OF		
PROPERTY SAFFORD														DISTRICT	COUNTY	STATE	COUNTRY
HOLE NO. ES-5				CONTRACTOR				COLLAR COORD. N E				COLLAR ELEV.					
BEARING				INCLINATION				DEPTH				STARTED	STOPPED				
SAMPLE NUMBER	BIT SIZE	RECOVERY		DRILL RUN		INT.	ASSAYS						REMARKS				
		FEET	%	FROM	TO												
6401		5	100	2725	2730	5	.06										
6402		5	100	2777	2782	5	.07										
6403		5	100	2815	2820	5	.02										
6404		5	100	2842	2847	5	.30										
6319		5	100	2902	2907	5	.12										
6320		5	100	2950	2955	5	.09										
6321		5	100	3000	3005	5	.01										
6322		5	100	3048	3053	5	.03										
6323		5	100	3102	3107	5	.01										
6324		5	100	3153	3158	5	.03										
6325		5	100	3205	3210	5	.02										
6326		5	100	3210	3215	5	.09										
6327		5	100	3255	3260	5	.01										
6328		5	100	3300	3305	5	.04										
6338		5	100	3348	3353	5	.03										
6339		5	100	3401	3406	5	.07										
6350		5	100	3449	3454	5	.05										
6351		5	100	3498	3503	5	.04										
6352		5	100	3545	3550	5	.16										
6353		5	100	3603	3608	5	.04										
6357		5	100	3634	3639	5	.19										
6354		5	100	3650	3655	5	.07										
1627		5	100	3678	3683	5	.26										
6358		5	100	3683	3688	5	.53										
1628		5	100	3688	3693	5	.28	3678	3703	20'	0.32	%Cu					
6355		5	100	3698	3703	5	.21										
6356		5	100	3748	3753	5	.08										
1606		4	80	3769	3774	5	.13										
1607		4	100	3774	3778	4	.14										
1608		5	100	3778	3783	5	.07										
1609		5	100	3783	3788	5	.11										
1610		5	100	3788	3793	5	.41										
1611		4	80	3793	3798	5	.55										
1612		4	100	3798	3802	4	.31										
1613		5	100	3802	3807	5	.32										
1614		5	100	3807	3812	5	.38	3788	3827	39'	0.36	%Cu					
1615		5	100	3812	3817	5	.32										
1616		5	100	3817	3822	5	.17										
1617		5	100	3822	3827	5	.44										
1618		5	100	3827	3832	5	.28						3788-3952				
1619		5	100	3832	3837	5	.14										
1620		5	100	3837	3842	5	.09						164' 0.33				
1621		5	100	3842	3847	5	.28	3827	3857	30'	0.20						
1622		5	100	3847	3852	5	.17										
1623		4	80	3852	3857	5	.22										
1624		4	80	3857	3862	5	.71	3857	3867	10'	0.57						
1625		5	100	3862	3867	5	.42										
1626		5	71	3867	3874	7	.20										
1629		5	100	3874	3879	5	.05										
1630		4	80	3879	3884	5	.08										
1631		5	100	3884	3889	5	.11	3867	3907	40'	0.09						
1632		4	50	3889	3897	8	.12										
1633		5	100	3897	3902	5	.22										
1634		4	80	3902	3907	5	.10										
1635		5	100	3907	3912	5	.44	3907	3917	10'	0.39						
1636		5	100	3912	3917	5	.39										
1637		5	100	3917	3922	5	.13										
1638		5	100	3922	3927	5	.10	3917	3937	20'	0.14						
1639		5	100	3927	3932	5	.13										
1640		5	100	3932	3937	5	.18										
1641		5	100	3937	3942	5	.29										
1642		5	100	3942	3947	5	.20	3937	3952	15'	0.27						

ES-5

DRILL HOLE SUMMARY

0-180 T6, post-ore Tertiary volcanics

180-2459 Kag; andesite agglomerate, green or gray green with locally shades of pink or purple; propylitic alteration with chlorite, epidote, and generally moderate sericite; limonite stain commonly but only very locally strong, generally bright red or brick red, infrequently gold in color, rarely in disseminated form;

300-370 fissure vein, quartz-sericite alteration with strong red limonite

2459-4675 Kan; andesite porphyry; grayish green to dark gray depending upon type of alteration; abundant small plagioclase phenocrysts in aphanitic matrix; coarse fragmental and tuffaceous intervals common but subordinate to porphyry;

2459-3034 propylitic alteration; local silicification and bleaching related to fissure veins; ~~2830-30~~
2830-2866 zone of strong sericite alteration and irregular bleaching

biot. chlorite

3034-3600 chlorite alteration zone; obvious decrease

in epikote; suggestion of weak biotite at 3100 but no definitely identified until 327 thereafter biotite distribution is erratic and varies from weak to locally strong but overall is definitely subordinate to chlorite

biotite 3600 - 4675 biotite alteration of mafics and groundmass; vein minerals are quartz, calcite, chlorite, sulfides

no sulfides

----- 2755 - 3000 first sulfides are disseminated pyrite at 2755, thereafter in disseminations and up to 8% and in veinlets, total sulfides probably average 3% traces chalcopyrite and bornite; good disseminated sulfide zone 2830-2866 assay 0.3% Cu over five foot interval

3000 - 3158 traces sulfides disseminated and in veins
dissem + veins ----- 3158

veins 3158 - 3619 total pyrite varies 2-6%, averages 2-3% ~~at~~ virtually all in veins; traces of chalcopyrite

3619 - 4675 sulfides predominantly in veins and average varies 2-4%; chalcopyrite frequency increase noticeably at 3619 and continues to increase until $\text{cpy/py} \approx 3/2$ at 3900 and $2/1$ or $3/1$ at 4300, ten foot assays up to 1.29% Cu