CYANAMID

139957

INTEROFFICE CORRESPONDENCE

Piney River, Va. - April 29, 1971

OFFICE BLDG/TUBE RM# DATE

TO: Piney River Office

ATT'N. OF: Mr. J. F. Hopkins

COPY TO: Mr. J. J. Fitzgerald -NA
Mr. Emil Hladky -NA
Dr. C. P. Priesing -NA

SUBJECT: COPPERAS "DUMP"

REFERENCE:

The Piney River Plant started stockpiling copperas July, 1949. Since that time all copperas not sold was hauled to the copperas "dump". The top of the present dump contains 4.5 acres.

The dump has been surveyed and drilled to determine the quality and quantity of copperas contained.

It has been estimated that the area contains approximately 200,000 tons of material. Analysis taken at various depths from ten drill holes show that the material contains from 7.8 to 36.0% total acid as H_2SO_4 (water soluble). The percent insoluble material calculated as $FeSO_4$ varies from 1.32 to 77.47%. X-ray diffraction analysis show the "pile" to contain $FeSO_4$, $FeSO_4 \cdot H_2O$, $FeSO_4 \cdot 4\ H_2O$ and $FeSO_4 \cdot 7H_2O$.

Attached are tables containing the analysis of the drill samples, the results of the x-ray analysis and a map of the pile showing the area and elevations.

Stephen A. Lamanna

Stephen A. Lamanna

SAL/jes

Attachments

200104

NA 1128 REV. 9-69 9-69

COPPERAS DUMP "AS IS"

Sample No.	Hole No.	Depth Ft.	Total Acid As % H_2SO_4 Water Sol.	Water Sol. As % $FeSO_4$	Total Iron As $FeSO_4$	Insol. Iron As $FeSO_4$	% Insol. $FeSO_4$ Basis	Insol. Iron As % Fe_2O_3
1	1	10	28.2	43.74	53.3	9.56	17.94	5.03
2	1	15	29.4	45.6	48.9	3.3	6.75	1.74
3	2	10 wet	36.0	55.84	53.7	-	-	-
4	2	12 W	17.4	26.99	54.2	27.21	50.2	14.32
5	3	10	32.4	50.26	53.7	3.44	6.41	1.81
6	3	20 W	18.0	27.92	47.4	19.48	41.1	10.25
7	4	10	34.8	53.98	54.7	0.72	1.32	0.38
8	4	15 W	32.4	50.26	38.1	-	-	-
9	5	10	12.0	18.61	52.8	34.19	64.75	17.99
10	5	15 W	32.4	50.26	61.1	10.84	17.74	5.71
11	6	10	32.4	50.26	53.7	3.44	6.41	1.81
12	6	15 W	22.2	34.43	64.4	29.97	46.54	15.77
13	6	20 W	8.4	13.03	52.8	39.77	75.32	20.93
14	7	10	7.8	12.1	53.7	41.6	77.47	21.89
15	7	15 W	21.6	33.5	65.1	31.6	48.54	16.63
16	7	20 W	18.6	28.85	71.8	42.95	59.82	22.6
17	8	10	33.0	51.19	54.6	3.41	6.25	1.79
18	8	20	34.2	53.05	54.6	1.55	2.84	0.82
19	8	25	25.8	40.02	49.8	9.78	19.64	5.15
20	8	30 W	22.8	35.37	45.9	10.53	22.94	5.54
21	9	10	32.4	50.26	53.1	2.84	5.35	1.49
22	9	20	33.0	51.19	53.1	1.91	3.6	1.0
23	9	30	32.4	50.26	53.1	2.84	5.35	1.49
24	9	35	30.6	47.46	52.6	5.14	9.77	2.71
25	9	40 W	21.0	32.57	42.9	10.33	24.08	5.44
26	10	10	30.0	46.53	54.1	7.57	13.99	3.98
27	10	20	30.0	46.53	48.8	2.27	4.65	1.19
28	10	30	34.2	53.05	52.6	-	-	-
29	10	40 W	28.2	43.74	51.3	7.56	14.74	3.98

200105

X-RAY DIFFRACTION ANALYSIS

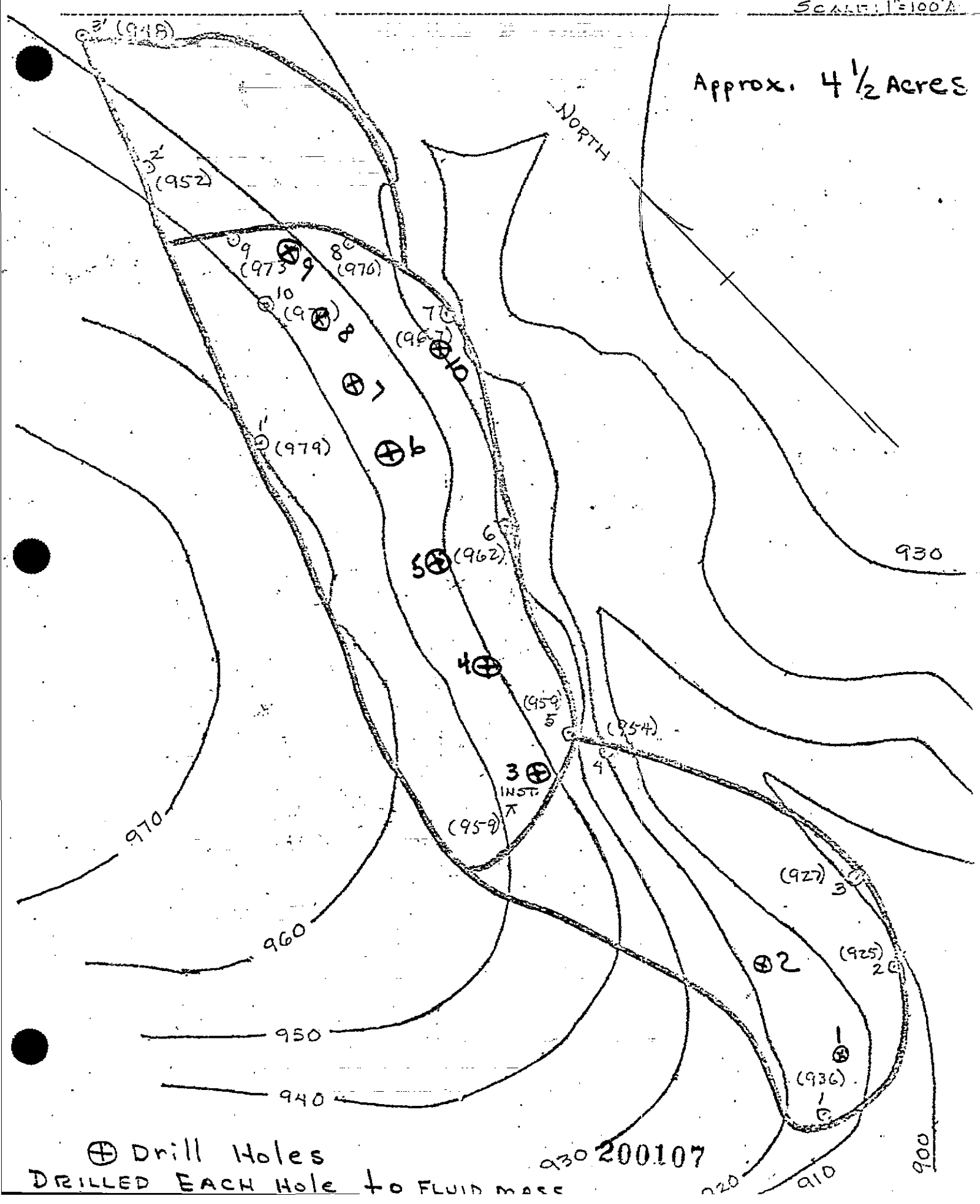
Hole No.	Depth Ft.	$FeSO_4$	$FeSO_4 \cdot H_2O$	$FeSO_4 \cdot 4H_2O$	$FeSO_4 \cdot 7H_2O$
1	15	little	little	little	mostly
2	10	little	little	little	mostly
3	10	little	little	little	mostly
4	10	little	little	some	some
5	10	little	some	some	lot
6	10	little	little	some	some
7	10	little	little	some	some
8	25	little	little	mostly	some
9	30	little	little	mostly	some
10	30	little	little	mostly	little or none

Any oxides present were in such small amounts that their major lines were obscured by the minor lines of the sulfates.

BY C.J.H. DATE 4-26-71 SUBJECT COTTERAS DUMP CONTOUR MAP SHEET NO. ____ OF ____

CHKD. BY ____ DATE ____ JOB NO. ____

SCALE: 1" = 100'



⊕ Drill Holes

DRILLED EACH Hole to FLUID MASS

200107