## Appendix 4

List of minable ore reserves for each ore block in the Rakah deposit

그 그 그리고 얼마 나는 뭐 그는 그는 그는 물 물들이 되었다고 하는 그는 그를 가는 그는 것이다. 그는 그 그는 그는 그를 가는 것이다.	
子。《萨萨斯·斯·斯·斯·斯·斯·斯·斯·斯·斯·斯·斯·斯·斯·斯·斯·斯·斯·斯	٠,
그는 아무렇게, 아이는 왜 없이는 그리는 그리고 하는 것 같아 있었다. 이 사람이 그리는 바	
그 사는 사람들이 가는 그리고 되는 것 같은 사람들은 사람들이 가를 보고 있다. 그런 그는 사람들은 가는 것은 사람들이 가지 않는 것이다.	
어른 어머니는 이 원모에서 하는 소문을 가면 되었다. 이렇다는 사회의 시원을 가려다면 한 수 없어 하는 바로 하는 것 같다. 그	
하는 요요 살이 하나를 하는 말이 나는 가지 않는 것 같아. 하는 사람들에 하는데 얼마 바다 하다 살아야다.	
그는 눈도 우신들도 보고, 강의 과도 아내가 그 그는 일본 아이들은 생생하는 생각 보고 말을 하는 것이 말을 하는 것이다.	٠.
그는 그는 경험을 받는 것을 하는 것을 들고 있었다. 하지만 하고 말 그들은 하고 없는 사람들이 살아 있다.	
그 아이는 영화중로 나타나는 하는 것도 그렇게 그렇게 들었다면서 그릇이 하다고 못하다. 살아들 살아들 못했다.	1
그는 항상물로 속을 시민들의 이번 이웃 때문에는 이번 이번 제공에 된 시간에 살아서 있었다면서 보였다.	
그 얼마님, 학과 생생님, 인수 없는 그는 사람이 하게 되니? 사람들의 모내가 그렇게 살을 가고 있다고 있는 수 있다면 하다.	
그는 그 전문은 이렇게 한말을 보고 통했다. 그 하고 말을 내려가 되는 것 같은 그를 모양하고 있습니다. 그는 이 사람	
그리고 시작하다면 시작되는 이글로 가게 이 있는데 이 사이들이 오른 아이를 하다면 들은 것은 이를 들어 모습니다.	
나는 소문에는 대학자들의 하지만 살아 아이들을 다 하는데 화고를 보고 하는데 하는데 살아갔다.	4
가지 않는 사람들이 많은 사람들이 하는 사람들이 없었다. 그리는 사람들이 가장하는 것이 가장 되었다.	
어떤 시간 그는 사람들은 지수 있는 동안 이 사람들이 가는 사람들이 되었다. 그는 사람들이 되었다면 하는데 되었다.	
어머니까지 되었는 손에서 한 사람들에는 유로나갔다면 어린 동생의 사람이 대부가 되는 것들이 그리고 나를 다	
그런 그가 선생님 여러 회사들은 그는 전 그들을 때문에 가장 하지 않는데 물에들을 반입되는 하는 모양이 함	1,5
그는 사람들은 사람들이 하는데, 사람들은 사람들이 되었다. 그는 사람들이 아니라 하는데 보고 있는데, 사람들은 사람들이 되었다. 그런데 그를 하는데 걸음이 살다. 	
그 이 그 아들은 이번 그리고 있다고 하고를 모르고를 통해를 받는데 있어 있다. 그리고 하는데 하는데 모든데	
	; *
그 일으로 있다는 그릇에 가는 말을 모두 하기도 그들아서 있는데 모두 가는 한 경우를 되었다. 함께 열심다 결혼한 보다 이 이	
그런 그 네 이 어머니는 얼마들은 얼마나 그리고 있는데 그는 이 그리고 있다는 그녀는 경우를 하게 가장 살아 살아 먹었다.	
그는 이 그 왕이들이라고 마다가장 그들은 원래 하는 것은 사람들은 생활이 받아 하셨다면서 그렇게 되었다.	
그렇다고 하는 사람이 그렇게 그리고야 하는 바람이 오른 병원에서 가까 그런데 되고 한 밤에 되어요 하는 하는 사람은	4
	•
는 사람이 되는 것 같아 하는 것도 있는데, 목욕이 되었다. 고급통에는 그는 사람들이 하는데, 사람들이 가장 하는데, 사람들이 되었다. 그는 것을 하는데, 그는 것을 하는데, 그는 것을 하는데, 그 	
그는 이 아이들이 보고 있다면서 그는 모든 모든 모든 사람들이 보여지고 이를 잘 먹는데 다음이 되었다.	H
그 그런 그 네 그림 그 아이는 동생은 장소의 그의 그리고 있다는 것이 없다는 집에 얼마를 모르겠다. 점점	
는 등 참여하면, 보고 있는 사람이 발표되었다. 그는 그는 그리고 하고 사용하는 사람이 되었다. 등 하는 그리고 말하는 것 같 	
그는 사람이 되는 이 경화했다. 이 이 회사는 사람들은 사람들은 사람들이 되었다. 그는 사람들은 사람들은 사람들이 가는 것이 나를 보고 있는 것이 되는 것이다.	
그림 이번 한 지난 시민 이번 그 바람이라는 것 같다. 아닌 그리나라는 그리나라 그리다 그리나 가는 그리나 없다.	
그렇게 이 경에 보면 가지 하는 이 보고 이웃는 것이 되지 않는데 없지 못 하면 뭐하네. 그렇게 살아서 그는 것은	4 -
그리다 하다 그는 사람들은 얼마를 하는데 하는데 보다를 했다. 하다 그리를 들어가 하는데 보면 되다.	
그런 사람들은 그 아들이는 아름이 되었는데 하는 이름이 그는 아름다는데 이번 사람들이 가득하게 하는데 하는데 이렇게 다른데 하는데 하는데 하는데 하는데 하는데 하는데 하는데 하는데 하는데 하는	
그는 사용하는 사회를 들어야 하는 장악에 하는 요즘 보다는 그들은 말이 느껴지었다면서 가장이 하셨다면요요.	
그 하는 하는 하는 사람들이 되었다. 이번 생각하는 이 이 아는 모든 사람이 되는 모든 사람이 되었다. 이 나는	
그 경에 그리다 가장이 그리고 하는데 되는데 하는데 그리고 그리는 경찰의 그림 그는 어린 살을 보다.	
그는 보고 하고싶다. 이 이 강에 되어 보여 보는 보고 있는 것 같아 그는 사람이 되었다. 그는 생각이 되었다. 그는 사람이 없는 사람이 없는 사람이 없는 사람이 없는 사람이 없는 사람이 없다. 그는 사람이 없는 사람이 없는 사람이 없는 사람이 없는 사람이 없는 사람이 없는 것이다.	
그리는 하고 있는 그 사람들이 되는 일 때 하는 집 사람들이 되는 사람들이 하는 것이 하는 것이 없다는 것이다. 그는 경	i .
그는 불통하게 하는 마이에 하게 되지 않는 것은 일반 하는 생각 내가 하는 것은 이 때로 가는 데 살을 수	i i
그렇게 되었다. 이 사람이라고 하셨다. 그 사용을 보고 있는 글라고 하셨다는 근로 하는데 있다고 말했다.	
그런 하는 동독 가는데, 와그리고의 빨리를 들고 있죠? 하는 나를 맞춰있는 게 하는 다음 생긴 그 것을 하는 것 같다.	. Se
그림 사람이 함께 되는 것이 많은 사람이 되는 것이 없는 사람들이 되는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이다.	
그리아의 한테 그리다면 이번 리바로 다른 사람이 아르아 하다고 말하다. 사람이 나는 사람이 되었다.	
그리고 발매하다 보고 소프리트리트 불러 있는데 보고 있는데 이 그 모모가 보고 있는데 병호생활을 받아 보다는 말했다.	
그렇게 하고 있는 현실에는 그 수학이 얼마나 가를 보고 가지하고 한 그를 하는 데이 있는 그를 하는 수 있다. 그를 하는 것이 없는 것이 없는 것이 없는 것이 없는 것이다.	
그는 생산하다는 그리지 마음 눈을 하는 하는 하는 어떻게 하는 모양이 모양하는 그에게 살빛이 말하고 되었다.	
그리고 있다는 하고 하는 살아서 그는 이번 수 있는 그는 그를 그리는 그리는 그를 만든 것으로 뭐 돼. 이를 되는데 그를 다했다.	
이 경험도 많은 그는 생기는 생님에게 환경 마음이가 불러왔습니다. 이 그리고 하는 생님들 경인 모양생이 걸어 가지 않는다.	
- 사용하는 경기는 경기는 경기를 가장하는 것이 되었다. 그는 그는 사람들이 되었다는 것이 되었다. - 사용하는 사용하는 사용하는 사용하는 사용하는 것이 되었다. 그는 사용하는 사용하는 사용하는 것이 되었다. - 사용하는 사용하는 사용하는 사용하는 사용하는 사용하는 사용하는 사용하는	

: 650 m

************		•	000 111	
Cut-off	grade	:	0.35 Cu	ı

						C		. <sub></sub> 2		A		A	
	<u> </u>		(m3)	(t/m3)	(ton)	grade (%)	content (ton)	grade (%)	content (ton)		content (kg)	grade (g/t)	
1	457270	2618690	2000	2.86	5719	. 77	44.04	. 12	6. 86	1. 32	7. 55	6. 00	34
2	457270	2618710	2800	2.88	8060	. 88	70, 93	. 08	6, 45	1. 25	10. 07	4. 86	39
3	457270	2618730	152	2.82	429	. 49	2. 10	. 04	. 17	. 62	. 27	4. 95	2
4	457290	2618670		2.85	5700	67	38, 19	. 19	10.83	. 92	5, 24	4, 47	25
5	457290	2618690	4000	2.88	11514	. 90	103.63	. 22	25, 33	. 92	10. 59	3, 52	40
6	457290	2618710	4000	2, 88	11514	. 90	103, 63	. 12	13, 82	. 99	11, 40	2.62	31
7	457290	2618730	628	2. 94	1849	1.35	24. 97	. 02	. 37	1, 83	3. 38	2. 18	
8	457310	2618670	3000	2.89	8664	. 92	79. 71	. 27	23. 39	. 86	7. 45	3. 11	2
9	457310	2618690	3204	2. 93	9375	1.21	113.44	. 40	37. 50	. 84	7. 87	2.44	2
10	457310	2618710	4000	2.83	11324	55	62.28	. 02	2. 26	. 62	7. 02	2.06	2
11	457310	2618730	400	2.89	1155	97	11.21	. 02	. 23	1.28	1. 48	2.62	,
12	457330	2618670	3000	2. 94	8807	1. 25	110.08	. 31	27. 30	. 82	7. 22	2. 49	. 2
13	457330	2618690	4000	2. 90	11590	1.00	115.90	. 25	28. 97	.77	8. 92	2.30	- 2
14	457330	2618710	2800	2.87	8033	82	65, 87	, 10	8.03	. 8,1	6. 51	2.30	. 13
15	457350	2618670	3000	3.01	9035	1.88	169.85	. 23	20. 78	. 84		2. 25	21
, 16	457350	2618690	2400	2. 97	7136	1. 59	113.47	. 19	13, 56	. 82		2.27	, 10
. 17	457350		1000		2945	1. 38	40.64	. 13	3. 83	. 97	2. 86	2. 53	
18	457370	2618630	1000	3. 15	3154	2.91	1 2 3 4 7 7 7	. 15	4. 73	. 96	3. 03	2.48	
. 19	457370	2618650	2400	3. 15	7570	2.91	220.28	. 17	12.87	. 94	7. 12	2.34	. 1
20	457370	2618670	2000	3, 13	6251	2.65	165.65	. 18	11. 25	. 91	5. 69	2. 24	1.
21	457390	2618570		2. 84	4545	65	29. 54	. 06	2. 73	. 96	4, 36	2. 46	i
22	457390	2618630	2800	3. 18	8911	3. 13	278.91	. 13	11, 58	. 98	8. 73	2.45	2
23	457390	2618650		3. 24	5183		182.97	, 15	4.0	, 97	5. 03	2. 38	1
24	457410	2618630	2400	3. 17	7615	3. 07	233. 79	. 13	9, 90	. 97	7. 39	2.45	11
	2112 B		56184	4 	166078		2472.86		290. 51		152. 62		46
Cut-  No	off grade  X(E)	: 0. Y (N)	35 Cu Volume	s. G.	Tonnage	C	 lu			A		A	 9
			Volume	s.G. (t/m3)	Tonnage (ton)	grade	content	grade	n content (ton)	grade (	content	grade (	con
			Volume	(t/m3)		grade	content	grade	content (ton)	grade (	content (kg)	grade (	con
No	X (E)	Y (N)	Volume (m3)	(t/m3)	(ton)	grade (%)	content (ton) 18, 75	grade (%)	content (ton)	grade (9/t) .83	(kg)	grade ( (g/t)	con 1
No 1	X (E) 457270	Y (N) 2618690	Volume (m3) 1000 (136	(t/m3) 2.84 2.83	(ton) 2841	grade (%)′ .66	content (ton) 18.75 18.01	grade (%) , 28	7. 95 4. 18	grade (9/t) .83	(kg) 2.36	grade (g/t) 6.05	1 2
No 1 2	X (E) 457270 457270	Y (N) 2618690 2618710	Volume (m3) 1000 (136 1688	(t/m3) 2.84 2.83	(ton) 2841 3216	grade (%)′ .66	content (ton) 18.75 18.01	(%) . 28 . 13	7. 95 4. 18	9rade (9/t) .83	2.36 1.48 3.01	9rade (9/t) 6,05 6,25	1 2 3
No 1 2 3	X (E) 457270 457270 457270	Y (N) 2618690 2618710 2618730	Volume (m3) 1000 (136 1688 500	(t/m3) 2.84 2.83 2.88	(ton) 2841 3216 4859	grade (%)' . 66 . 56 . 89	(ton) 18. 75 18. 01 43. 24	(%) . 28 . 13	7. 95 4. 18 2. 92 7. 81	(9/t) .83 .46	2.36 1.48 3.01	9rade (9/t) 6.05 6.25 6.44 4.45	1 2 3
1 2 3 4	X (E) 457270 457270 457270 457270	Y (N) 2618690 2618710 2618730 2618670	Volume (m3) 1000 (136 1688 500	(t/m3) 2.84 2.83 2.88 2.84	(ton) 2841 3216 4859 1420	9rade (%) .66 .56 .89	content (ton) 18. 75 18. 01 43. 24 9. 23 68. 17	grade (%) . 28 . 13 . 06 . 55	7. 95 4. 18 2. 92 7. 81	(9/t) . 83 . 46 . 62	2. 36 1. 48 3. 01 1. 19 8. 41	9rade (9/t) 6.05 6.25 6.44 4.45	1 2 3
No 1 2 3 4 5	X (E) 457270 457270 457270 457290 457290	Y (N)  2618690 2618710 2618730 2618670 2618690	(m3) 1000 1136 1688 500 4000	(t/m3) 2.84 2.83 2.88 2.84 2.84 2.83	(ton) 2841 3216 4859 1420 11362	9rade (%) .66 .56 .89 .65 .60 .57	content (ton) 18. 75 18. 01 43. 24 9. 23 68. 17	. 28 . 13 . 06 . 55 . 47	7. 95 4. 18 2. 92 7. 81 53. 40	9rade (9/t) .83 .46 .62 .84 .74	2.36 1.48 3.01 1.19 8.41	9rade (9/t) 6.05 6.25 6.44 4.45	1 2 3 5
No 1 2 3 4 5 6	X (E) 457270 457270 457270 457290 457290 457290	Y (N)  2618690 2618710 2618730 2618670 2618690 2618710	Volume (m3) 1000 (136 1688 500 4000 4000 800	(t/m3) 2.84 2.83 2.88 2.84 2.84 2.83	(ton)  2841 3216 4859 1420 11362 11324	9rade (%) . 66 . 56 . 89 . 65 . 60	content (ton) 18. 75 18. 01 43. 24 9. 23 68. 17 64. 55	. 28 . 13 . 06 . 55 . 47	7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91	9rade (9/t) .83 .45 .62 .84 .74 .71	2.36 1.48 3.01 1.19 8.41	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26	1 2 3 5
No 1 2 3 4 5 6 7	X (E) 457270 457270 457270 457290 457290 457290 457310	Y (N)  2618690 2618710 2618730 2618670 2618690 2618710 2618670	Volume (m3) 1000 (136 1688 500 4000 4000 800 4000	(t/m3)  2.84 2.83 2.88 2.84 2.84 2.83 2.85	(ton)  2841 3216 4859 1420 11362 11324 2280	9rade (%) .66 .56 .89 .65 .60 .57	content (ton) 18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96	. 28 . 13 . 06 . 55 . 47 . 28	7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91	9rade (9/t) .83 .46 .62 .84 .74 .71 .84	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04	9rade (9/t) 6.05 6.25 6.44 4.45 4.94 3.26 3.09	1 2 3 5 5
No 1 2 3 4 5 6 7 8	X (E) 457270 457270 457270 457290 457290 457290 457310 457310	Y (N)  2618690 2618710 2618730 2618670 2618690 2618710 2618670 2618690	Volume (m3) 1000 (136 1688 500 4000 4000 800 4000	(t/m3) 2.84 2.83 2.88 2.84 2.84 2.83 2.85 2.85	(ton)  2841 3216 4859 1420 11362 11324 2280 11400	grade (%) . 66 . 56 . 89 . 65 . 60 . 57 . 70 . 69	content (ton) 18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66	9rade (%) . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72	7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75	9rade (9/t)  .83 .46 .62 .84 .71 .84 .99	2.36 1.48 3.01 1.19 8.41 8.04 1.92	grade (g/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66	1 2 3 5 5
No 1 2 3 4 5 6 7 8 9	X (E) 457270 457270 457270 457290 457290 457290 457310 457310	Y (N) 2618690 2618710 2618730 2618670 2618690 2618710 2618690 2618711	Volume (m3) 1000 (136 1688 500 4000 4000 4000 4000 2800	(t/m3) 2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.86	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438	9rade (%) . 66 . 56 . 89 . 65 . 60 . 57 . 70 . 69	content (ton) 18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 96. 93	9rade (%) . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40	7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56	9rade (9/t)  .83 .46 .62 .84 .71 .84 .99	2.36 1.48 3.01 1.19 8.41 8.04 1.92 11.29 8.12 5.90	grade (g/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66	1 2 3 5 5
No 1 2 3 4 5 6 7 8 9 10	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310	Y (N)  2618690 2618710 2618670 2618690 2618710 2618690 2618710 2618730	Volume (m3) 1000 (136 1688 500 4000 4000 4000 4000 2800	(t/m3)  2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.85 2.86 2.89 2.99	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086	9rade (%) .66.56.89.65.60.57.70.69.76.96	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 96. 93 77. 63	grade (%)  .28 .13 .06 .55 .47 .28 .61 .72 .40 .18	7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56	9rade (9/t)  .83 .46 .62 .84 .71 .84 .99 .71	2.36 1.48 3.01 1.19 8.41 8.04 1.92 11.29 8.12 5.90	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32	1 2 3 5 5 4 4
No 1 2 3 4 5 6 7 8 9 10 11	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310 457310	Y (N)  2618690 2618710 2618730 2618670 2618710 2618670 2618770 2618730 2618750	Volume (m3) 1000 (136 1688 500 4000 4000 4000 2800 36 1600	(t/m3)  2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.85 2.86 2.89 2.99	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108	9rade (%) . 66 . 56 . 89 . 65 . 60 . 57 . 70 . 69 . 76 . 96 1. 68	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 96. 93 77. 63 1. 81	grade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49 . 44	7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99	9rade (9/t) . 83 . 46 . 62 . 84 . 74 . 71 . 84 . 99 . 71 . 73 . 31	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 .03	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94	1 2 3 5 5 5 4 4 1
No 1 2 3 4 5 6 7 8 9 10 11 12	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310 457310 457330	Y (N)  2618690 2618710 2618730 2618670 2618670 2618670 2618730 2618750 2618670	Volume (m3) 1000 (136 1688 500 4000 4000 800 4000 2800 36 1600 4000 4000	(t/m3)  2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.85 2.89 2.89 2.89 2.89 2.89	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621	9rade (%) . 66 . 56 . 89 . 65 . 60 . 57 . 70 . 69 . 76 . 96 . 1. 68 . 94	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 86. 93 77. 63 1. 81 43. 44 73. 85	grade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49	7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99	9rade (9/t) .83 .46 .62 .84 .74 .71 .84 .99 .71 .73 .31	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 .03 3. 19	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38	1 2 3 5 5 4 4 4 1 2
No 1 2 3 4 5 6 7 8 9 10 11 12 13	X (E)  457270 457270 457270 457290 457290 457310 457310 457310 457310 457330 457330	Y (N)  2618690 2618710 2618730 2618670 2618670 2618670 2618730 2618750 2618670 2618670	Volume (m3) 1000 (136 1688 500 4000 4000 800 4000 2800 36 1600 4000 4000	(t/m3)  2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.85 2.86 2.89 2.89 2.89	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621 11362	9rade (%) .66.56 .89.65 .60.57 .70.69 .76.96 .1.68	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 86. 93 77. 63 1. 81 43. 44 73. 85	grade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49 . 44	7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99	9rade (9/t) . 83 . 46 . 62 . 84 . 74 . 71 . 84 . 99 . 71 . 73 . 31 . 69 . 61	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 .03 3. 19 6. 93 5. 70	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38	1 2 3 5 5 5 4 4 4 2 2
No 1 2 3 4 5 6 7 7 8 9 10 31 12 13 14	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310 457330 457330 457330	Y (N)  2618690 2618710 2618670 2618670 2618670 2618670 2618730 2618750 2618670 2618670 2618670 2618670	Volume (m3)  1000 (136 1688 500 4000 4000 2800 36 1600 4000 4000 800	(t/m3)  2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.85 2.89 2.89 2.89 2.89 2.89 2.89 2.89	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621 11362 11400	9rade (%) .66.56 .89.65 .60.57 .70.69 .76.96 .1.68 .94	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 96. 93 77. 63 1. 81 43. 44 73. 85 80. 94	grade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49 . 44 . 31 . 20	7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99 35. 34	9rade (9/t) .83 .46 .62 .84 .74 .71 .84 .99 .71 .73 .31 .69 .61	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 03 3. 19 6. 93 5. 70	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38 1.90 2.14	1 2 3 5 5 4 4 4 1 2 2
No 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	X (E)  457270 457270 457270 457290 457290 457310 457310 457310 457330 457330 457330 457330	Y (N)  2618690 2618710 2618670 2618670 2618670 2618670 2618730 2618730 2618750 2618670 2618670 2618730	Volume (m3) 1000 (136 1688 500 4000 4000 2800 36 1600 4000 4000 2400	(t/m3)  2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.85 2.89 2.89 2.89 2.89 2.89 2.89 2.89	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621 11362 11400 2318	9rade (%) .66.56 .89.65 .60.57 .70.69 .76.96 .68.94 .65.71	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 96. 93 77. 63 1. 81 43. 44 73. 85 80. 94 23. 41	grade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49 . 44 . 31 . 20	7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99 35. 34 4. 64	9rade (9/t) .83 .46 .62 .84 .74 .71 .84 .99 .71 .73 .31 .69 .61 .50	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 03 3. 19 6. 93 5. 70 .88 3. 49	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38 1.90 2.14 3.40	1 2 3 5 5 4 4 1 2 2 1
No 1 2 3 4 5 6 7 8 9 10 31 12 13 14 15 16	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310 457330 457330 457330 457330 457330	Y (N)  2618690 2618710 2618670 2618670 2618670 2618670 2618730 2618750 2618670 2618750 26187690 2618770 2618670	Volume (m3) 1000 (136 1688 500 4000 4000 2800 36 1600 4000 4000 2400	(t/m3)  2.84 2.83 2.84 2.84 2.85 2.85 2.85 2.86 2.89 2.89 2.89 2.84 2.85 2.90 2.96	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621 11362 11400 2318 7114	9rade (%) .666689 .6560 .57 .70 .69 .769668 .94 .6571 1.01	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 96. 93 77. 63 1. 81 43. 44 73. 85 80. 94 23. 41 107. 42 69. 31	grade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49 . 44 . 31 . 20 . 29	7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99 35. 34 4. 64 20. 63	9rade (9/t) .83 .46 .62 .84 .71 .84 .99 .71 .73 .31 .69 .61 .50 .38 .49	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 03 3. 19 6. 93 5. 70 .88 3. 49	9rade (9/t) 6.05 6.25 6.44 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38 1.90 2.14 3.40 1.93	1 2 3 5 5 5 4 4 1 2 2 2 1 1
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No 1 2 3 4 5 6 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310 457310 457330 457330 457330 457350 457350 457350 457370 457370	Y (N)  2618690 2618710 2618670 2618690 2618710 2618670 2618730 2618730 2618730 2618730 2618730 2618730 2618670 2618730 2618670 2618690 2618730 2618690 2618750	Volume (m3) 1000 (136 1688 500 4000 4000 2800 36 1600 4000 2400 4000 2120 800 1000 2000	(t/m3)  2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.85 2.89 2.89 2.89 2.89 2.89 2.84 2.85 2.90 2.96 2.84 2.87 3.49 3.23	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621 11362 11400 2318 7114 11362 5982 2295 3487 6460	9rade (%) . 66 . 56 . 89 . 65 . 60 . 57 . 70 . 69 . 76 . 96 . 68 . 94 . 65 . 71 . 1. 51 . 61 . 48 . 79 4. 73 3. 42 1. 39	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 96. 93 77. 63 1. 81 43. 44 73. 85 80. 94 107. 42 69. 31 128. 71 18. 13 164. 91 220. 93 163. 74	grade (%)  .28 .13 .06 .55 .47 .28 .61 .72 .40 .18 .11 .49 .44 .31 .20 .29 .25 .16 .17 .21	content (ton)  7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99 35. 34 4. 64 20. 63 28. 40 9. 57 3. 90 7. 32 10. 34	9rade (9/t) .83 .46 .62 .84 .71 .84 .99 .71 .73 .31 .69 .61 .50 .38 .49 .32 .17 .40 .78 .65 .49	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 03 3. 19 6. 93 5. 70 .88 3. 49 3. 64 1. 02 .92 2. 72 4. 20	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38 1.90 2.14 3.40 1.93 1.38 1.08 2.35 3.37 2.92	1 2 3 5 5 5 3 4 4 4 1 2 2 1 1 1 2 2 1 1 2 2
No 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310 457330 457330 457330 457350 457350 457350 457350 457370 457370	Y (N)  2618690 2618710 2618670 2618670 2618670 2618710 2618730 2618730 2618730 2618670 2618730 2618670 2618670 2618670 2618670	Volume (m3)  1000 (136 1688 500 4000 4000 2800 36 1600 4000 2000 4000 2120 800 1000 2000 4000	(t/m3)  2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.85 2.89 2.89 2.89 2.89 2.89 2.81 2.85 2.90 2.96 2.84 2.87 3.49 3.23 2.94	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621 11362 11400 2318 7114 11362 5982 2295 3487 6460 11780	9rade (%) .66.56 .89.65 .60.57 .70.69 .76.96 .68.94 .65.71 .01 .51.61 .48.79 4.73 3.42	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 86. 93 77. 63 1. 81 43. 44 73. 85 80. 94 107. 42 69. 31 128. 71 18. 13 164. 91 220. 93 163. 74 61. 15	9rade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49 . 44 . 31 . 20 . 25 . 16 . 17 . 21 . 16 . 14 . 18	content (ton)  7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99 35. 34 4. 64 20. 63 28. 40 9. 57 3. 90 7. 32 10. 34 16. 49	9rade (9/t) .83 .46 .62 .84 .71 .84 .99 .71 .73 .31 .69 .61 .50 .38 .49 .32 .17 .40 .78 .65	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 03 3. 19 6. 93 5. 70 .88 3. 49 3. 64 1. 02 .92 2. 72 4. 20 5. 77	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38 1.90 2.14 3.40 1.93 1.38 1.08 2.35 3.37 2.92 2.24	1 2 3 5 5 5 3 4 4 4 1 2 2 1 1 1 2 1
No 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310 457310 457330 457330 457330 457350 457350 457350 457350 457370 457370 457370	Y (N)  2618690 2618710 2618670 2618670 2618670 2618730 2618750 2618750 26187690 2618710 2618730 2618690 2618710 2618690 26187690 2618690 261870 2618690 2618690	Volume (m3) 1000 (136 1688 500 4000 4000 2000 4000 2400 4000 2120 800 2120 800 4000 2000 4000 2000	(t/m3)  2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.85 2.89 2.89 2.89 2.89 2.86 2.87 3.49 3.23 2.94 2.83	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621 11362 11400 2318 7114 11362 5982 2295 3487 6460 11780 11324	9rade (%) . 66 . 56 . 89 . 65 . 60 . 57 . 70 . 69 . 76 . 96 . 1. 68 . 94 . 65 . 71 . 1. 51 . 61 . 48 . 79 4. 73 3. 42 1. 39 . 54	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 86. 93 77. 63 1. 81 43. 44 73. 85 80. 94 107. 42 69. 31 128. 71 18. 13 164. 91 220. 93 163. 74 61. 15	9rade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49 . 44 . 31 . 20 . 25 . 16 . 17 . 16 . 14 . 18 . 20	content (ton)  7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99 35. 34 4. 64 20. 63 28. 40 9. 57 3. 90 7. 32 10. 34 16. 49 20. 38	9rade (9/t) .83 .46 .62 .84 .71 .84 .99 .71 .73 .31 .69 .61 .50 .38 .49 .32 .17 .40 .78 .65 .49 .22	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 .03 3. 19 6. 93 5. 70 .88 3. 49 3. 64 1. 02 2. 72 4. 20 5. 77 2. 49 1. 13	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38 1.90 2.14 3.1,38 1.08 2.35 3.37 2.92 2.41	1 2 3 5 5 5 3 4 4 4 1 2 2 2 1 1 1 2 1 1 1 1 1 1 1 1 1
No 1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310 457310 457330 457330 457330 457350 457350 457350 457370 457370 457370 457370	Y (N)  2618690 2618710 2618670 2618670 2618670 2618730 2618750 2618750 26187690 2618710 2618690 2618710 2618690 2618730 2618690 2618730 2618690 2618670 2618690 2618670	Volume (m3) 1000 (136 1688 500 4000 4000 2000 4000 2400 4000 2120 800 2120 800 4000 2000 4000 2000 500	(t/m3)  2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.89 2.89 2.89 2.89 2.89 2.89 2.89 2.89	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621 11362 11400 2318 7114 11362 5982 2295 3487 6460 11780 11324 5643	9rade (%) . 66 . 56 . 89 . 65 . 60 . 57 . 70 . 69 . 76 . 96 . 68 . 94 . 65 . 71 . 1. 51 . 61 . 48 . 79 4. 73 3. 42 1. 39 . 54 . 48 . 59	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 96. 93 77. 63 1. 81 43. 44 73. 85 80. 94 107. 42 69. 31 18. 13 164. 91 220. 93 163. 74 61. 15 27. 09 8. 38	9rade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49 . 44 . 31 . 20 . 25 . 16 . 14 . 18 . 20 . 18	content (ton)  7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99 35. 34 4. 64 20. 63 28. 40 9. 57 3. 90 7. 32 10. 34 16. 49 20. 38 11. 29 2. 56	9rade (9/t) .83 .46 .62 .84 .71 .84 .99 .71 .73 .31 .69 .61 .50 .38 .49 .32 .17 .40 .78 .65 .49 .22 .20	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 03 3. 19 6. 93 5. 70 8. 88 3. 49 1. 02 2. 72 4. 20 5. 77 2. 49 1. 13	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38 1.90 2.14 3.40 1.93 1.38 1.08 2.35 3.37 2.92 2.4 1.37 1.45 2.09	1 2 3 5 5 5 3 4 4 1 2 2 1 1 1 2 1 1 2 1 1 1 2 1 1 1 1
No 1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310 457310 457330 457330 457330 457350 457350 457350 457370 457370 457370 457370 457370	Y (N)  2618690 2618710 2618670 2618670 2618670 2618670 2618730 2618750 26187690 2618710 2618690 2618710 2618690 2618710 2618690 2618710 2618690 2618730 2618670 2618670 2618670	Volume (m3) 1000 (136 1688 500 4000 4000 2000 4000 2120 800 2120 800 2120 4000 2000 4000 2000 1000	(t/m3)  2.84 2.83 2.84 2.84 2.85 2.85 2.85 2.89 2.89 2.89 2.89 2.89 2.89 2.89 2.89	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621 11362 11400 2318 7114 11362 5982 2295 3487 6460 11780 11324 5643 1420 3639	9rade (%) . 66 . 56 . 89 . 65 . 60 . 57 . 70 . 69 . 76 . 96 . 1. 68 . 94 . 65 . 71 . 1. 11 . 61 . 48 . 79 4. 73 3. 42 1. 39 . 54 . 48 . 59 5. 71	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 86. 93 77. 63 1. 81 43. 44 73. 85 80. 94 107. 42 69. 31 128. 71 18. 13 164. 91 220. 93 163. 74 61. 15 27. 09 8. 38 207. 76	9rade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49 . 44 . 31 . 20 . 25 . 16 . 14 . 18 . 20 . 18 . 20	content (ton)  7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99 35. 34 4. 64 20. 63 28. 40 9. 57 3. 90 7. 32 10. 34 16. 49 20. 38 11. 29 2. 56 7. 28	9rade (9/t) .83 .46 .62 .84 .71 .84 .99 .71 .73 .31 .69 .61 .50 .38 .49 .32 .17 .40 .78 .65 .49 .22 .20 .33 .80	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 0.3 3. 19 6. 93 5. 70 8. 88 3. 49 1. 02 2. 72 4. 20 5. 77 2. 49 1. 13 47 2. 91	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38 1.90 2.14 3.40 1.93 1.38 1.08 2.35 3.37 2.92 2.4 1.37 1.45 2.09 3.67	1 2 3 5 5 5 3 4 4 4 1 2 2 1 1 1 1 2 1 1 1 1 1 1 1 1 1
No 1 2 3 4 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310 457310 457330 457330 457330 457350 457350 457350 457370 457370 457370 457370 457370 457370 457370 457370 457370	Y (N)  2618690 2618710 2618670 2618670 2618670 2618670 2618730 2618750 2618750 26187690 2618710 2618690 2618710 2618690 2618710 2618690 2618730 2618670 2618670 2618670	Volume (m3) 1000 (136 1688 500 4000 4000 2000 4000 2400 4000 2120 800 2120 800 4000 2000 4000 2000 500	(t/m3)  2.84 2.83 2.84 2.84 2.85 2.85 2.85 2.89 2.89 2.89 2.89 2.89 2.89 2.89 2.89	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621 11362 11400 2318 7114 11362 5982 2295 3487 6460 11780 11324 5643	9rade (%) . 66 . 56 . 89 . 65 . 60 . 57 . 70 . 69 . 76 . 96 . 68 . 94 . 65 . 71 . 1. 51 . 61 . 48 . 79 4. 73 3. 42 1. 39 . 54 . 48 . 59	content (ton)  18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 96. 93 77. 63 1. 81 43. 44 73. 85 80. 94 107. 42 69. 31 28. 71 18. 13 164. 91 220. 93 163. 74 61. 15 27. 09 8. 38 207. 76 469. 22	9rade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49 . 44 . 31 . 20 . 25 . 16 . 14 . 18 . 20 . 18 . 20 . 19	content (ton)  7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 93 35. 34 4. 64 20. 63 28. 40 9. 57 3. 90 7. 32 10. 34 16. 49 20. 38 11. 29 2. 56 7. 28 24. 76	9rade (9/t) .83 .46 .62 .84 .71 .84 .99 .71 .73 .31 .69 .61 .50 .38 .49 .22 .20 .33 .80 .72	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 .03 3. 19 6. 93 5. 70 .88 3. 49 1. 02 2. 72 4. 20 5. 77 2. 49 1. 13 .47 2. 91	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38 1.90 2.14 3.40 1.93 1.38 1.08 2.35 3.37 2.92 2.4 1.37 1.45 2.09 3.67 3.29	1 2 3 5 5 5 5 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1
No 1 2 3 4 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	X (E)  457270 457270 457270 457290 457290 457290 457310 457310 457310 457330 457330 457330 457330 457350 457350 457370 457370 457370 457370 457370 457370 457370 457370 457370 457390 457390	Y (N)  2618690 2618710 2618670 2618670 2618670 2618670 2618730 2618750 2618750 26187690 2618710 2618690 2618710 2618690 2618710 2618690 2618710 2618630 2618670 2618670 2618650	Volume (m3) 1000 (136 1688 500 4000 4000 2000 4000 2120 800 2120 800 2120 4000 2000 4000 2000 4000 4000 40	(t/m3)  2.84 2.83 2.88 2.84 2.83 2.85 2.85 2.89 2.89 2.89 2.89 2.89 2.89 2.89 2.89	(ton)  2841 3216 4859 1420 11362 11324 2280 11400 11438 8086 108 4621 11362 11400 2318 7114 11362 2295 3487 6460 11780 11324 5643 1420 3639 13034	9rade (%) . 66 . 56 . 89 . 65 . 60 . 57 . 70 . 69 . 76 . 96 . 68 . 94 . 65 . 71 . 1. 51 . 61 . 48 . 79 4. 73 3. 42 1. 39 . 54 . 48 . 59 5. 71 3. 60	18. 75 18. 01 43. 24 9. 23 68. 17 64. 55 15. 96 78. 66 86. 93 77. 63 1. 81 43. 44 73. 85 80. 94 107. 42 69. 31 128. 71 18. 13 164. 91 220. 93 163. 74 61. 15 27. 09 8. 38 207. 76	9rade (%)  . 28 . 13 . 06 . 55 . 47 . 28 . 61 . 72 . 40 . 18 . 11 . 49 . 44 . 31 . 20 . 25 . 16 . 14 . 18 . 20 . 18 . 20	content (ton)  7. 95 4. 18 2. 92 7. 81 53. 40 31. 71 13. 91 82. 08 45. 75 14. 56 . 12 22. 64 49. 99 35. 34 4. 64 20. 63 28. 40 9. 57 3. 90 7. 32 10. 34 16. 49 20. 38 11. 29 2. 56 7. 28	9rade (9/t) .83 .46 .62 .84 .71 .84 .99 .71 .73 .31 .69 .61 .50 .38 .49 .32 .17 .40 .78 .65 .49 .22 .20 .33 .80	2. 36 1. 48 3. 01 1. 19 8. 41 8. 04 1. 92 11. 29 8. 12 5. 90 0.3 3. 19 6. 93 5. 70 8. 88 3. 49 1. 02 2. 72 4. 20 5. 77 2. 49 1. 13 47 2. 91	9rade (9/t) 6.05 6.25 6.44 4.45 4.45 4.94 3.26 3.09 3.66 5.32 7.94 2.38 1.90 2.14 3.40 1.93 1.38 1.08 2.35 3.37 2.92 2.4 1.37 1.45 2.09 3.67	1 24 3 56 55 4 4 5 1 2

No	X (E)	Y (N)	Volume	s. G.	Tonnage	C	u	. :	Zn	A	u	·4 : A	9
	17 1		(m3)	(t/m3)	(ton)	grade (%)		grade (%)	content (ton)	grade (g/t)		grade (g/t)	
31	457410	2618650	4000	3, 27	13072	3. 72	486, 28	. 35	45, 75	.69	9. 02	3, 33	43, 53
32	457410	2618670	2800	2, 98	8352	1.66	138.65	. 29	1.00	. 56			23, 80
33	457430	2618630	2500	3. 22	8051	3.39	272, 94	. 28	22. 54	. 70	5. 64	3, 48	28. 02
34	457430	2618650	4000	3, 14	12578	2.82	354. 70	. 32			8, 05		
35	457430	2618670	2200	3.01	6625	1.84	121.91	. 34	22.53	49			19.81
36	457450	2618630	1000	3.09	3087	2.37	73, 17	. 26	8.03	. 67	grade the second	3.36	10.37
37	457450	2618650	4000	3.06	12236	2.23	272.86	. 29	47 4	. 59	7, 22	4	39.40
38	457450	2618670	56	3. 02	169	1. 92	3. 25	, 28	. 47	. 47	1997	1000	
39	457470	2618650	3400	3. 02	10271	1. 94	199, 27	. 28	28. 76			3. 14	
40	457470	2618670	400	3.01	1205	1, 82	21. 92			, .	. 67		3. 73
			92160		275104		4772. 42		811.75		163, 89		853.86

Rakah Cut-off grade : 630 m

Cut-off grade : 0.35 Cu

Ко	X (E)	Y (N)	Volume	S.G.	Tonnage		Cu	45 a.u.	Zn		\u		g
1.* 1.3			(m3)	(t/m3)	(ton)	grade (%)	content (ton)	grade (%)	content (ton)	grade (g/t)	in the state of	grade (g/t)	content (kg)
1	457250	2618730	500	3.00	1501	1.80	27. 02		1, 35	1. 78	2. 67	3. 65	5, 48
2 '	457250	2618750	1600	3 04	4864	2.01	97. 77	. 11	5. 35	2. 29	11. 14	4. 22	20. 53
3	457250	2618770	4000	3.03	12122	1. 96	237. 59	. 11	13. 33	2.87	34, 79	4. 38	53.09
4	457270	2618710	1000	2. 92	2916	1. 14	33. 25	5.5		1, 15	3, 35	3, 01	8. 78
5	457270	2618730	3500	2. 97	10407	1. 59	165. 48	. 08	8. 33	1.31	13. 63		34. 14
6	457270	2618750	4000	3. 13	12540	2, 71	339. 83	1.6		1.82	22. 82	3, 90	48. 91
7	457270	2618770	4000 .	3.00	12008	1. 72	206. 54	. 23		2. 73	32. 78	4. 90	58.84
8	457290	2618690	1600	2.87		. 83	38. 10	. 10		1.03	4. 73	2, 46	11. 29
9	457290	2618710	4000	2.88	11514	. 90	103.63	. 09		85	9. 79	2.66	30.63
10	457290	2618730	4000	2.82	11286	. 49	55. 30	. 08		. 59	6, 66	2, 80	31,60
11	457290	2618750	4000	2. 97	11894	1. 55	184, 36			1. 20	14. 27	3, 69	43, 89
12	457290	2618770	4000	2.96	11856	1.47	174. 28	. 29	34. 38	1.88	22. 29	4. 98	59. 04
13	457290	2618790	1348	2.86	3855	. 71	27. 37	. 48		1, 77	6. 82	5. 60	21, 59
14	457310	2618670	668	2.85	1904	. 66	12. 57	. 11		. 99	1. 88	2.00	3, 81
15	457310	2618690	4000	2.85	11400	. 65	74. 10	. 10	11.40	1. 13	12.88	2. 10	23, 94
16	457310	2618710	4000	2. 92	11666	1, 17	136. 49	. 12	14.00	62	7. 23	2. 28	26, 60
17	457310	2618730	4000	2.91	11628	1. 10	127. 91	. 12	13. 95	62	7, 21	2. 73	31, 74
18	457310	2618750	2400	2.98	7159	1.62	115.98	. 15	10.74	. 70	5.01	3, 38	24, 20
19	457310	2618770	2000	2. 94	5871	1. 25	73. 39	. 29	17. 03	1, 14	6. 69	4, 21	24, 72
20	457310	2618790	668	2.88	1923	. 88	16. 92	. 43	8. 27	1, 63	3, 13	5. 02	9, 65
21	457330	2618670	2000	2.85	5700	. 54	36. 48	. 13	7, 41	. 73	4. 16	1, 70	9, 69
22	457330	2618690	4000	2.86	11438	. 76	86. 93	. 14	16.01	. 64	7. 32	1.69	19, 33
23	457330	2618710	4000	2.88	11514	. 86	99. 02	. 14	16. 12	. 49	5. 64	1.81	20.84
24	457330	2618730	2800	2. 90	8113	1.03	83. 56	. 15	12. 17	. 48	3. 89	2, 23	18. 09
25	457350	2618670	3332	2.85	9496	. 67	63. 62	. 16	15. 19	. 45	4. 27	1, 49	14, 15
26	457350	2618690	4000	2.85	11400	. 69	78.66	. 16	18. 24	. 30	3. 42	1, 43	16, 30
27	457350	2618710	4000	2.84	11362	59	67.04	. 18	20. 45	. 16	1, 82	1.37	15, 57
28	457350	2618730	2000	2.83	5662	. 57	32.27	. 16	9.06	. 36	2.04	1, 80	10, 19
29	457370	2618650	2000	2.83	5662	59	33. 41	1.17	9. 63	. 39	2, 21	1.37	7. 76
30	457370	2618670	4000	2.87	11476	. 88	100. 99	, 17	19. 51	. 29	3, 33	1. 35	15. 49
31	457370	2618690	4000	2.86	11438	69	78. 92	. 16	18, 30	17	1. 94	1.35	15.44
32	457370	2618710	4000	2.81	11248	. 41	46. 12	. 15	16.87	. 19	2. 14	1, 46	16.42
33	457390	2618650	2400	2.88	6908	1.59	109.84	. 16	11.05	. 28	1. 93	1, 27	8.77
34	457390	2618670	4000	2. 91	11628	1.11	129.07	. 17	19. 77	. 22	2. 56	1.31	15, 23
35	457390	2618690	4000	2.85	11400	72	82.08	. 12	13, 68	. 16	1. 82	1. 38	15. 73
36	457410	2618630	600	2.86	1716	1.73	29.68	. 14	2. 40	. 23	. 39	1. 11	1, 90
37	457410	2618650	4000	3.02	12084	4, 35	525. 65	, 14	16, 92	. 21	2. 54	1. 20	14. 50
38	457410	2618670	4000	2.92	11666	1.88	219.32	. 13	15, 17	. 16	1.87	1. 27	14.82
39	457410	2618690	1440	2.82	4063	46	18. 69	. 05	2.03	16	. 65	1. 36	5. 53
40	457410	2618710	1200	2.81	3374	35	11.81	10	3.37	. 22	. 74	1. 56	5, 26

No	X (E)	Y (N)	Volume	S. G.	Tonnage		Cu		Zn	A	u		9
			(m3)	(t/m3)	(ton)	(%	e content ) (ton)	(%)	content (ton)			grade (g/t)	
41	457430	2618630			100				1. 71	, 17	. 24	1.04	1, 48
42	457430	2618650	4000	2, 93	11704	2. 2	8 266, 85	. 15	17, 56	. 16	1.87	1. 14	13. 34
43	457430	2618670	4000	2. 92	11666	1.8	0 - 209, 99	, 14	16, 33	. 13	1. 52	1. 23	14, 35
44	457430	2618690	4000	2.85	11400	. 7	7 87, 78	. 12	13.68	. 13	1.48	1.33	15. 16
45	457450	2618650	3500	2.88	10075	1. 2	9 129, 96	. 16	16, 12	. 10	1.01	1.08	10.88
46	457450	2618670	4000	2. 92	11666	1.4	7 - 136, 49	. 22	25, 67	. 08	. 93	1. 16	13, 53
47	457450	2618690	1600	2,86	4575	. 7	8 35,69	15	6, 86	07	. 32	1, 25	5. 72
48	457470	2618650	2500	2.84	7101	. 7	1 50, 42	. 15	10.65	.01	. 07	99	7. 03
49	457470	2618670	4000	2.87	11476	. 8	2 94, 10	. 16	18. 36	.00	.00	1,05	12, 05
50	457470	2618690	1200	2.84	3409	. 6	1 20, 79	. 13	4, 43	. 00	. 00	1. 15	3, 92
51	457490	2618670		2.81	7502	. 4	3 32.26	, .11	8, 25	.00	. 00	. 85	6. 38
			149024		432251		5268, 74		643.49		291.89		937. 32

Rakah : 620 m Cut-off grade : 0.35 Cu

Νo	X (E)	Y (N)	Volume	s.G.	Tonnage		100		Zn		Αu	Α.	•
	100		(m3)	[+ /m3]	) (ton)				content (ton)			grade (g/t)	content (kg)
~~~							((()))			(9/ 1	(69)		(K9)
1	457270	2618750	3000	2. 82	8465	. 48	40. 63	. 23	19. 47	. 63	5. 33	6.65	56. 29
2	457270	2618770	600	2.88	1727	.87	15, 03	. 20	3, 45	1,41	2.44	6.38	11.02
3	457270	261879	4000	2. 93	11704	1. 22	142. 79	. 20	23, 41	1,85	21.65	6. 14	71.86
4	457290	2618750	4000	2.85	11400	. 66	75. 24	. 16	18. 24	. 58	6.61	4, 49	51. 19
5	457290	2618770	4000	2.89	11552	94	108. 59	. 21	24. 26	76	8. 78	4,00	46.21
6	457290	261879	4000	2.94	11742	1. 29	151.47	. 26	30.53	1. 10	12, 92	3.49	40.98
7	457310	261873	4000	2.82	11286	47	53.04	. 12	13. 54	. 47	5, 30	3. 33	37. 58
8	457310	261875	4000	2, 92	11666	1. 13	131.83	13	15. 17	31	3.62	3. 38	39. 43
9	457310	2618770	3500	2.85	9975	. 69	68. 83	. 20	19, 95	. 59	5.89	3. 26	32. 52
- 10	457310	2618790	2500	2.84	7101	63	44. 74	. 24	17. 04	. 77	5. 47	3.37	23. 93
11.	457330	261869	1500	2.84	4261	. 62	26, 42	. 12	5. 11	. 44	1.87	2. 28	9.71
12	457330	2618710	4000	2.84	11362	. 63	71.58	. 14	15. 91	. 46	5. 23	2.36	26.81
- 13	457330	2618730	0 4000	2.83	11324	. 57	64, 55	. 15	16. 99	. 44	4, 98	2, 52	28. 54
14	457350	2618670	332	2. 91	965	1, 11	. 10.71	. 20	1. 93	. 34	. 33	1. 79	1. 73
15	457350	2618690	2000	2.91	5814	1.11	64. 54	17	9.88	43	2. 50	1. 98	11. 51
16	457350	2618710	4000	2. 92	11666	1. 17	136, 49	. 18	21.00	44	5. 13	2. 14	24.97
17	457350	2618730	4000	2.83	11324	56	63.41	17	19. 25	. 53	6.00	2. 23	25. 82
18	457370	2618670	2668	2. 98	7959	1.64	130, 52	. 24	· 19. 10	28	2. 23	1, 45	11, 54
19	457370	261869	4000	2. 95	11856	1. 52	180. 21	. 20	23. 71	. 37	4, 39	1. 76	20.87
.20	457370	2618710	4000	2.89	11552	. 97	112.05	. 17	19. 64	. 52	6.01	2.00	23. 10
21	457370	2618730	3332	2.82	9401	. 48	45. 13	. 16	15.04	. 69	6. 49	2. 16	20.31
22	457390	2618650	1000	2.89	2888	. 93	26. 86	. 24	6. 93	. 17	. 49	, 99	2.86
23	457390	2618670	0 4000	3.08	12312	2.32	285, 64	. 26	32.01	24	2. 95	1. 28	15, 76
24	457390	2618690	0 4000	2.95	11818	1.45	171.36	. 19	22.45	. 32	3. 78	- 1, 51	17.85
25	457390	2618710	4000	2.88	11514	. 89	102, 47	. 15	17. 27	. 46	5. 30	l. 74	20.03
26	457390	2618730	2000	2.83	5662	. 55	31. 14	. 15	8. 49	60	3, 40	1. 93	10. 93
27	457410	2618670	4000	2. 90	11590	1.02	118. 22	. 18	20, 86	. 21	2. 43	1. 22	14. 14
28	457410	2618690	0 4000	2.90	11590	1.02	118.22	. 13	15. 07	. 24	2. 78	1. 36	15. 76
29	457410	2618710	0 4000	2.87	11476	81	92. 96	. 13	14. 92	. 36	4. 13	1. 54	17.67
30	457410	2618730	668	2.83	1891	. 56	10. 59	. 13	2. 46	. 49	. 93	1. 78	3.37
3,1	457430	2618650	1000	2.81	2812	. 43	12.09	:: .21	5.91	. 17	. 48	1. 02	2.87
32	457430	2618670	4000	2.84	11362	64	72, 72	. 20	22. 72	. 22	2, 50	1, 25	14. 20
33	457430	2618690	4000	2.86	11438	. 78	89. 22	. 16	18, 30	. 27	3.09	1, 38	15. 78
34	457430	1.0	2800	2.83	7927			. 10	7. 93	. 32	2.54	1, 49	11.81
35	457450		***							. 18	. 51	1.07	3. 03
36	457450		4000				86. 93	. 30	34.31	. 22	2. 52	1, 23	14.07
- 37	457450	2618690	4000	2.85	11400	. 67	76. 38	. 18	20. 52	. 27	3. 08	1, 39	15, 85
38	457450			2.84	5681	61	34. 65	. 12	6. 82	. 34	1. 93	1.49	8. 46
39	457470			2.83							. 32	1. 12	1, 90
40	457470	2618670	4000	2.84	11362	. 63	71, 58	. 22	25, 00	. 23	2.61	1, 23	13. 98

No	X (E)	Y (N)	Volume	s. G.	Tonnage		Cu		Zn		 lu		
2									 content				
			(m3)	(t/m3)	(ton)		(ton)			(9/t)			
41	457470	2618690	4000.	2. 84	11362	62	70. 44		17.04	28	3 18	1, 33	15. 11
42	457470	26.18710			3397		19. 36		2. 72		1, 16		4. 99
43	457490	2618670		2.81	2812		12.09	. 15	4. 22		. 65		3. 32
44	457490	2618690			7266			. 09	6, 54			1.30	9.45
45	457490	2618710	•	2,83	1189		6. 30				. 39	1.38	1,64
			131704	. <b></b>	378819		3347, 88	*******	676, 75	<del></del>		11 1- 1-	070 76
	:,		101104	17.	010015		3347,00		010, 15		176. 35		870. 75
		. * · · · · ·			. :								
Rakah	h		10 m				. :		and the second		4		
Cut-c	off grade	: 0	. 35 Cu										
No	X (E)	Y (N)	Volume	s. G.	Tonnage	100	Cu	. :	Zn		ių.	A	9
						grade	content	grade	content	grade	content	grade	content
			(m3)	(t/m3)	(ton)	(%)	(ton)	(%)	(ton)	(g/t)	(kg)	(9/t)	(kg)
1	457290	2618750	4000	3.06	12236	5. 00	611, 80	. 98	119.91	6.06	74. 15	15. 29	187.09
2	457290	2618770	1200	2.81	3374	. 39	13, 16	. 32	10.80	1. 92		10, 86	36, 65
3	457290	2618790	1300	2.83	3680	. 55	20. 24	. 33	12. 14	69	2.54	7. 97	29, 33
4	457310	2618770	4000	2.81	11248	. 51	57. 36	. 22	24.75	1, 42	15. 97	5. 79	65. 13
5	457310	2618790	<b>4000</b>	2.81	11248	37	41.62	. 28	31.49	. 76	8. 55	4. 19	47. 13
δ	457330	2618710	2000	3.00	6004	3, 39	203. 54	. 73	43.83	3. 18	19.09	6. 95	41.73
7	457330	2618730	4000	2.94	11780	2. 62	308.64	53	62, 43	3.08	36. 28	6, 68	78.69
- 8	457330	2618770	4000	2.81	11248	. 41	46. 12	. 13	14.62	. 10	1, 12	1.40	15. 75
9	457330	2618790	4000	2.81	11248	. 38	42. 74	. 26	29. 24	. 69	7.76	2.63	29.58
10	457350	2618690	800	2.92	2333	1, 46	34.06	. 42	9. 80	1.03	2, 40	3.01	7.02
.11	457350	2618710	4000	2.87	11476	. 82	94. 10	. 42	48. 20	64	7. 34	2. 19	25, 13
12	457350	2618730	4000	2.89	11552	1. 15	132. 85	. 31	35. 81	81	9, 36	2.50	28, 88
13	457350	2618750	4000	2.84	11362	. 72	81.81	. 18	20. 45	. 45	5, 11	1, 73	19.66
14	457370	2618610	3356	2. 93	9820		118, 82	1 .	13. 75	. 54	5. 30	1.51	14.83
15	457370	2618630	500	2.93	1463	1.25	18, 29	. 12	1.76	. 55	. 80	1, 15	1.68
16	457370	2618670	400	2. 96	1186		17. 43	. 24	2. 85	. 74	. 88	1. 91	2. 26
17	457370	2618690	4000	2.94		1. 32	155. 50			50	5. 89	1. 78	20.97
18	457370	2618710	4000	2. 92			134. 16		32.66	55	6. 42	1.81	21, 12
. 19	457370	2618730	4000	2.94	11742		156. 17	. 23	27.01	. 62	7. 28	1. 59	18, 67
20	457370	2618750	1600	2.87	4590	82	37. 64	. 19	8. 72	. 50	2.30	1. 28	5.88
21	457390	2618610	4000	2.90	11590	4.05	121.69	. 5.11	12. 75	. 53	6. 14	1. 12	12. 98
22	457390	2618630	3500	2. 93	10241		130.06	. 04	4. 10	57	5, 84	. 74	7. 58
. 23	457390	2618650		2.94	1468	1. 28	18. 79			. 50	. 73	1.05	1. 54
24	457390	2618670	800	3.02	2417	1.89	45. 68	. 23	5. 56	46	1.11	1. 38	3.34
25	457390	The second second			11894			4.4.					
26	457390		100		11742								
27		2618730		4					22. 09				
28	and the second	2618750					1 1		1. 71				
29		2618630			and the second								
30	457410	2618650	2000	2.86	5719	. 74	42. 32	. 16	9. 15	. 50	2.86	1.07	6. 12
31	457410	2618670	800	2. 93				. 14	3. 28	. 44	1.03	1. 38	3. 23
32	457410	2618690	4000	2. 98	11932				10. 74		4. 77		
33	457410	2618710	4000	2.92	11666	1. 18	137. 66	. 13	15. 17	. 45	5, 25	1.60	18.67
34	457410	2618730	2400	2.88	6908				11.05	53	3. 66	1.41	9.74
35	457430	2618630	500	2.81	1406				1. 27			. 98	
36	457430	2618650			4514								
37		2618670			2280			. 08	1. 82	. 43	. 98	1.42	3. 24
38	457430	2618690							9. 18				
39	457430				11362						4. 89	1. 58	17. 95
40	457430				2280						1, 16		3. 24
41	457450	2618690	2000	2.80	5605	. 38	21.30	06	3, 36				
42	457450	2618710			9875		50.36		8. 89	. 47	4. 64	1. 55	15.31
			112488		· ·				776.09				
		10 mm								•	_55.05		

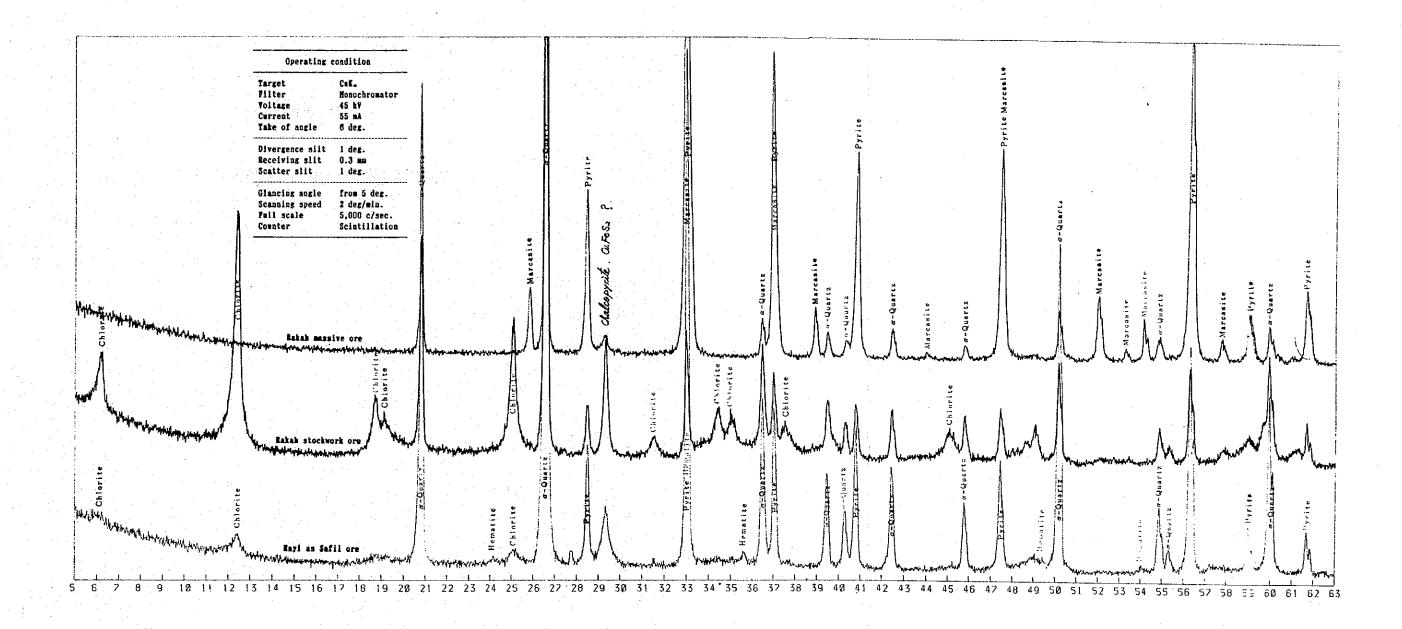
Rakah : 600 m Cut-off grade : 0.35 Cu

	X (E)	Y (N)	Volume	. S. G.	Tonnage		Content		n content	AL orade o		Arada 4	
		•	(m3)	(t/m3)	(ton)		(ton)	9rade (%)	(ton)	(g/t)		(9/t)	(kg
1	457310	2618770	3500	2.87	10042	. 84	84, 35	. 15	15.06	, 72	7, 23	3, 56	35, 7
2	457310	2618790	2500	2.89	7220	. 94	67. 87	. 22	15, 88	. 98	7, 08	2.62	18, 95
3	457330	2618730		2.84	5681	. 62	35. 22	. 25	14. 20	. 51	2.90	2.04	11, 5
4	457330	2618750	40.00	2.84	-11362	. 62	70.44	. 08	9, 09	. 31	3. 52	2. 26	25.6
- 5	457330	2618770		3.01	12046	1, 82	219.24		22, 89	. 39	4, 70	2. 45	29, 5
6	457330	2618790	*		11590		114.74	21	24. 34	74	8. 58	2, 25	26.0
7 8	457350	2618710		2.88	2879	. 88	25.33	. 44	12.67	. 67	1, 93	1. 24	3, 5
9	457350 457350	2618730 2618750	4000 4000	2.88 2.87	11514	. 87	100. 17	40	46.06	. 50	5, 76	1. 55	17.8
10	457350	2618790	2000	2.86	5719	. 79 . 73	90, 86 41, 75	, 30	34, 43	. 39	4, 48	2.07	23. 7
11	457370	2618690	500	2.85	1425	. 72	10. 26	, 22	12. 58 4. 42	. 66 . 44	3, 77	2. 25 . 95	12.8
12	457370	2618710			10141	1.06	107. 50	, 45	45. 64	. 52	5. 27	1. 18	11.9
13	457370	2618730		2. 92	11666	1, 18	137.66	. 63	73. 50	. 50	5. 83	1. 43	16.6
14	457370	2618750		2.86	11438	. 77	88. 07	, 44	50.33	. 43	4. 92	1.69	19. 3
15	457370	2618770	1332	2.83	3771	. 51	19. 23		10.94	48	1.81	1. 93	7. 2
16	457390	2618650		2.80	1872	. 40	7, 49	. 10	1.87	. 15	. 28	. 42	. 7:
17	457390	2618690		2.89	4043	. 97		. 20	8.09	. 25	1, 01	. 75	3. 0
18	457390	2618710			11856		180. 21	. 33	39. 12	. 34	4.03	. 98	11.6
19.	457390	2618730	4000	2. 95	11818		172, 54	47	55. 54	. 38	4. 49	1. 22	14. 4
20	457390	2618750	2000	2.93	5852	1. 22	71.39	. 43	25. 16	. 43	2. 52	1.38	8.0
21	457410	2618630	3200	2.81	8998	. 46	41.39	. 04	3. 60	. 12	1.08	. 33	2. 9
22	457410	2618650	2500	2.86	7149	. 78	55. 76	. 05	3. 57	12	. 86	. 43	3.0
23	457410	2618690	1800	2.97	5352	1. 60	85.64	. 05	3. 21	. 10	. 54	. 60	3. 2
24	457410	2618710	2400	3.07	7364	2. 24	164.96	. 19	13, 99	. 20	1.47	. 79	5.8
25	457410	2618730	4000	3.09	12350	2.38	293.93	. 29	35, 81	. 32	3. 95	1.06	13.0
26	457410	2618750	600	3, 02	1813	1, 93	34. 98	. 30	5, 44	. 41	. 74	1.24	2.2
27	457430	2618650	2800	2.80	7847	, 44	34. 53	. 04	3, 14	. 10	. 78	. 45	3. 5
28	457430	2618690	1000	2.99	2993	· 1. 75	52. 37	. 07	2.09	. 11	. 33	. 64	1. 9
29	457430	2618710	3180	3. 26	10362	3.61	374.07	. 11	11.40	. 16	1.66	. 74	7. 6
30	457430	2618730	4000	3. 16	12654	2.95	373. 29	. 16	20. 25	. 26	3. 29	. 93	11.7
31	457450	2618710			12236	2. 19	267. 97	.09	11.01	. 15	1.84	- 80	9. 7
32	457450	2618730	4000		12502	2. 66	332, 55	. 12	15, 00	25	3. 13	. 91	11.38
33 34	457470 457470	2618710 2618730		2.89 2.94	5776 11780		57. 76 161. 39	. 09	5. 20 11. 78	. 17	. 98 2. 83	. 80 . 88	4, 6; 10, 3
			·				~				<b>-</b>		
≀aka		ar Armi	95880		282587		4013.93		667. 30		104. 22		391. 59
	n off grade		90 m ,35 Cu			A. Server							٠
							<b>-</b>				·		
No	X (E)	Y (N)	Volume	S. G.	Tonnage		ù .		în	AL	<b>'</b> :	A	3
						grade	content	grade	content	grade d	ontent		conten
			(m3)	(t/m3)	(ton)	grade (%)	content (ton)		content (ton)		ontent (kg)		
 1	457330	2618730				(%)	(ton)	(%)	(ton)	(g/t)	(kg)	grade ( (g/t)	(kg
1 2	457330 457330	2618730 2618770	1600	2.84	4545	(%) . 66	(ton) 30,00	(%) 18	(ton) 8. 18	(9/t) .79	(kg) 3, 59	grade ( (g/t) 1,67	(kg 7, 5
1 2 3	457330	2618770	1600 2920	2.84 2.83	4545 8267	. 66 . 53	(ton) 30, 00 43, 81	. 18 . 07	(ton) 8. 18 5. 79	(g/t) . 79 . 20	(kg) 3, 59 1, 65	9rade ( (9/t) 1,67 1,60	(kg 7, 5 13, 2
2 3	457330 457350	2618770 2618710	1600 2920 480	2.84 2.83 2.88	4545 8267 1382	. 66 . 53 . 92	(ton) 30, 00 43, 81 12, 71	. 18 . 07 . 20	8. 18 5. 79 2. 76	(9/t) . 79 . 20 . 44	(kg) 3, 59 1, 65 , 61	9rade ( (9/t) 1.67 1.60 1.24	7, 5 13, 2 1, 7
2 3 4	457330 457350 457350	2618770 2618710 2618730	1600 2920 480 4000	2.84 2.83 2.88 2.88	4545 8267 1382 11514	. 66 . 53 . 92 . 87	30,00 43.81 12.71 100,17	. 18 . 07 . 20 . 27	8. 18 5. 79 2. 76 31. 09	79 . 20 . 44 . 36	(kg) 3, 59 1, 65 , 61 4, 15	9rade ( (9/t) 1, 67 1, 60 1, 24 1, 25	7, 5 13, 2 1, 7 14, 3
2 3	457330 457350	2618770 2618710	1600 2920 480 4000 4000	2.84 2.83 2.88	4545 8267 1382 1.1514 1.1514	. 66 . 53 . 92 . 87	(ton) 30,00 43,81 12,71 100,17 101,32	. 18 . 07 . 20 . 27 . 21	8. 18 5. 79 2. 76 31. 09 24. 18	.79 .20 .44 .36	3, 59 1, 65 , 61 4, 15 2, 53	9rade ( (9/t) 1. 67 1. 60 1. 24 1. 25 1. 43	7, 5 13, 2 1, 7 14, 3 16, 4
3 4 5	457330 457350 457350 457350 457350	2618770 2618710 2618730 2618750 2618770	1600 2920 480 4000 4000	2.84 2.83 2.88 2.88 2.88 2.93	4545 8267 1382 11514 11514	. 66 . 53 . 92 . 87 . 88 1. 20	30,00 43,81 12,71 100,17 101,32 140,45	. 18 . 07 . 20 . 27 . 21	8. 18 5. 79 2. 76 31. 09 24. 18 12. 87	. 79 . 20 . 44 . 36 . 22 . 18	(kg) 3, 59 1, 65 , 61 4, 15 2, 53 2, 11	9rade ( (9/t) 1, 67 1, 60 1, 24 1, 25 1, 43 1, 72	7, 5 13, 2 1, 7 14, 3 16, 4 20, 1
2 3 4 5 6	457330 457350 457350 457350	2618770 2618710 2618730 2618750	1600 2920 480 4000 4000 4000 1200	2.84 2.83 2.88 2.88 2.88 2.88 2.88	4545 8267 1382 11514 11514 11704 3466	. 66 . 53 . 92 . 87 . 88 1. 20	30, 00 43, 81 12, 71 100, 17 101, 32 140, 45 33, 27	. 18 . 07 . 20 . 27 . 21 . 11 . 33	8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44	(9/t) .79 .20 .44 .36 .22 .18	3, 59 1, 65 , 61 4, 15 2, 53 2, 11 1, 39	1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20	7, 5 13, 2 1, 7 14, 3 16, 4 20, 1
2 3 4 5 6 7	457330 457350 457350 457350 457350 457370	2618770 2618710 2618730 2618750 2618770 2618710	1600 2920 480 4000 4000 4000 1200 4000	2.84 2.83 2.88 2.88 2.88 2.93	4545 8267 1382 11514 11514 11704 3466 11780	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38	30,00 43,81 12,71 100,17 101,32 140,45	. 18 . 07 . 20 . 27 . 21	8. 18 5. 79 2. 76 31. 09 24. 18 12. 87	(9/t) .79 .20 .44 .36 .22 .18	3, 59 1, 65 , 61 4, 15 2, 53 2, 11 1, 39 3, 77	9rade (9/t)  1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25	7, 5 13, 2 1, 7 14, 3 16, 4 20, 1 4, 1
2 3 4 5 6 7 8 9	457330 457350 457350 457350 457350 457370 457370	2618770 2618710 2618730 2618750 2618770 2618710 2618730	1600 2920 480 4000 4000 4000 1200 4000	2.84 2.83 2.88 2.88 2.88 2.88 2.93 2.94	4545 8267 1382 11514 11514 11704 3466 11780	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18	(ton) 30.00 43.81 12.71 100.17 101.32 140.45 33.27 162.56	. 18 . 07 . 20 . 27 . 21 . 11 . 33 . 45	8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 0)	(9/t) .79 .20 .44 .36 .22 .18 .40	3, 59 1, 65 , 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33	1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20	7, 5 13, 2 1, 7 14, 3 16, 4 20, 1 4, 1 14, 7
2 3 4 5 6 7 8 9	457330 457350 457350 457350 457350 457370 457370 457370	2618770 2618710 2618730 2618750 2618770 2618710 2618730 2618750	1600 2920 480 4000 4000 4000 1200 4000 1200	2.84 2.83 2.88 2.88 2.93 2.94 2.94 2.92 2.88	4545 8267 1382 11514 11514 11704 3466 11780	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18	(ton)  30.00 43.81 12.71 100.17 101.32 140.45 33.27 162.56 137.66	. 18 . 07 . 20 . 27 . 21 . 11 . 33 . 45 . 29	8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83	. 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32	3, 59 1, 65 , 61 4, 15 2, 53 2, 11 1, 39 3, 77	9rade (9/t)  1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25 1. 32	(kg 7, 5 13, 2 1, 7 14, 3 16, 4 20, 1 4, 1 14, 7 15, 4 3, 7
2 3 4 5 6 7 8 9 10	457330 457350 457350 457350 457350 457370 457370 457370 457390	2618770 2618710 2618730 2618750 2618770 2618770 2618730 2618750 2618710	1600 2920 480 4000 4000 1200 4000 1200 4000	2.84 2.83 2.88 2.88 2.93 2.94 2.94 2.92 2.88	4545 8267 1382 11514 11514 11704 3466 11780 11666 3454	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18	(ton) 30, 00 43, 81 12, 71 100, 17 101, 32 140, 45 33, 27 162, 56 137, 66 30, 74	. 18 . 07 . 20 . 27 . 21 . 11 . 33 . 45 . 29	8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83 12. 09	(g/t) . 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32 . 20 . 31	3, 59 1, 65 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33 1, 07	9rade (9/t)  1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25 1. 32 1. 09	7, 5 13, 2 1, 7 14, 3 16, 4 20, 1 4, 1 14, 7 15, 4 3, 7 14, 7
2 3 4 5 6 7 8 9 10 11	457330 457350 457350 457350 457350 457370 457370 457370 457390 457390	2618770 2618710 2618730 2618750 2618770 2618770 2618730 2618750 2618730	1600 2920 480 4000 4000 1200 4000 1200 4000 4000	2. 84 2. 83 2. 88 2. 88 2. 93 2. 89 2. 94 2. 92 2. 88 2. 92	4545 8267 1382 11514 11514 11704 3466 11780 11666 3454 11666	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18 . 89 1. 15	(ton)  30, 00  43, 81  12, 71  100, 17  101, 32  140, 45  33, 27  162, 56  137, 66  30, 74  134, 16	(%)  . 18 . 07 . 20 . 27 . 21 . 11 . 33 . 45 . 29 . 35 . 37	(ton)  8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83 12. 09 43. 16	(9/t) . 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32 . 20 . 31 . 26	3, 59 1, 65 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33 1, 07 3, 03	9rade (9/t) 1.67 1.60 1.24 1.25 1.43 1.72 1.20 1.25 1.32 1.09 1.26	7. 5 13. 2 1. 7 14. 3 16. 4 20. 1 4. 1 14. 7 15. 4 3. 7 14. 7 6. 2
2 3 4 5 6 7 8 9 10 11 12 13	457330 457350 457350 457350 457350 457370 457370 457370 457390 457390 457410	2618770 2618710 2618730 2618750 2618770 2618730 2618750 2618750 2618730 2618650	1600 2920 480 4000 4000 1200 4000 1200 4000 4000	2.84 2.83 2.88 2.88 2.93 2.99 2.94 2.92 2.88 2.92 2.85	4545 8267 1382 11514 11514 11704 3466 11780 11666 3454 11666 11400	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18 . 89 1. 15	(ton)  30, 00  43, 81  12, 71  100, 17  101, 32  140, 45  33, 27  162, 56  137, 66  30, 74  134, 16  75, 24  28, 82	(%)  .18 .07 .20 .27 .21 .11 .33 .45 .29 .35 .37 .03	(ton)  8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83 12. 09 43. 16 3. 42	(9/t) . 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32 . 20 . 31 . 26 . 23	(kg) 3, 59 1, 65 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33 1, 07 3, 03 2, 62	9rade (9/t) 1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25 1. 32 1. 09 1. 26 . 55 . 74	7. 5 13. 2 1. 7 14. 3 16. 4 20. 1 4. 1 14. 7 15. 4 3. 7 14. 7 6. 2 5. 2
2 3 4 5 6 7 8 9 10 11 12 13	457330 457350 457350 457350 457350 457370 457370 457370 457390 457410 457410	2618770 2618710 2618730 2618750 2618770 2618730 2618750 2618750 2618730 2618650 2618670	1600 2920 480 4000 4000 1200 4000 1200 4000 4000 2500 800	2. 84 2. 83 2. 88 2. 88 2. 93 2. 94 2. 92 2. 88 2. 92 2. 85 2. 81	4545 8267 1382 11514 11514 11704 3466 11780 11666 3454 11666 11400 7030	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18 . 89 1. 15 . 66 . 41	(ton)  30, 00  43, 81  12, 71  100, 17  101, 32  140, 45  33, 27  162, 56  137, 66  30, 74  134, 16  75, 24  28, 82	(%)  .18 .07 .20 .27 .21 .11 .33 .45 .29 .35 .37 .03	(ton)  8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83 12. 09 43. 16 3. 42 14. 76	(9/t) . 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32 . 20 . 31 . 26 . 23 . 26	(kg) 3, 59 1, 65 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33 1, 07 3, 03 2, 62 1, 83	9rade (9/t) 1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25 1. 32 1. 09 1. 26 . 55 . 74	7, 5 13, 2 1, 7 14, 3 16, 4 20, 1 4, 1 14, 7 15, 4 3, 7 6, 2 5, 2
2 3 4 5 6 7 8 9 10 11 12 13 14 15	457330 457350 457350 457350 457350 457370 457370 457370 457390 457410 457410 457410	2618770 2618710 2618730 2618750 2618770 2618730 2618750 2618750 2618750 2618650 2618670 2618710	1600 2920 480 4000 4000 1200 4000 1200 4000 4000 2500 800	2. 84 2. 83 2. 88 2. 88 2. 93 2. 94 2. 92 2. 88 2. 92 2. 85 2. 81 2. 86	4545 8267 1382 11514 11514 11704 3466 11780 11666 3454 11666 11400 7030 2288	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18 . 89 1. 15 . 66 . 41	(ton)  30, 00  43, 81  12, 71  100, 17  101, 32  140, 45  33, 27  162, 56  137, 66  30, 74  134, 16  75, 24  28, 82  16, 93	(%)  . 18 . 07 . 20 . 27 . 21 . 11 . 33 . 45 . 29 . 35 . 37 . 03 . 21 . 30	(ton)  8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83 12. 09 43. 16 3. 42 14. 76 6. 86	(9/t) . 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32 . 20 . 31 . 26 . 23 . 26 . 25	(kg) 3, 59 1, 65 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33 1, 07 3, 03 2, 62 1, 83 57 2, 65	9rade (9/t) 1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25 1. 32 1. 09 1. 26 . 55 . 74 1. 08	7, 5 13, 2 1, 7 14, 3 16, 4 20, 1 4, 1 14, 7 15, 4 3, 7 6, 2 5, 2 2, 4
2 3 4 5 6 7 8 9 10 11 12 13 14 15	457330 457350 457350 457350 457350 457370 457370 457370 457390 457410 457410 457410	2618770 2618710 2618730 2618750 2618770 2618730 2618750 2618750 2618750 2618650 2618670 2618730	1600 2920 480 4000 4000 1200 4000 1200 4000 4000 2500 800 4000	2.84 2.83 2.88 2.88 2.93 2.94 2.92 2.88 2.92 2.85 2.81 2.86 2.88	4545 8267 1382 11514 11514 11704 3466 11780 11666 3454 11666 11400 7030 2288 11514	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18 . 89 1. 15 . 66 . 41 . 74	(ton)  30, 00  43, 81  12, 71  100, 17  101, 32  140, 45  33, 27  162, 56  137, 66  30, 74  134, 16  75, 24  28, 82  16, 93  103, 63	(%)  . 18 . 07 . 20 . 27 . 21 . 11 . 33 . 45 . 29 . 35 . 37 . 03 . 21 . 30 . 31	(ton)  8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83 12. 09 43. 16 3. 42 14. 76 6. 86 35. 59	(9/t) . 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32 . 20 . 31 . 26 . 23 . 26 . 25 . 23	(kg) 3, 59 1, 65 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33 1, 07 3, 03 2, 62 1, 83 57 2, 65	9rade (9/t) 1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25 1. 32 1. 09 1. 26 . 55 . 74 1. 08 1. 22	7, 5 13, 2 1, 7 14, 3 16, 4 20, 1 4, 1 14, 7 15, 4 3, 7 14, 7 6, 2 2, 4 14, 0 7, 1
2 3 4 5 6 7 8 9 10 11 12 13 14 15	457330 457350 457350 457350 457350 457370 457370 457370 457390 457410 457410 457410 457430	2618770 2618710 2618730 2618750 2618770 2618730 2618750 2618750 2618750 2618670 2618770 2618730 2618730 2618650	1600 2920 480 4000 4000 1200 4000 1200 4000 4000 2500 800 4000	2.84 2.83 2.88 2.88 2.93 2.94 2.92 2.88 2.92 2.85 2.81 2.86 2.82 2.81	4545 8267 1382 11514 11514 11704 3466 11780 11666 3454 11666 11400 7030 2288 11514 11286	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18 . 89 1. 15 . 66 . 41 . 74 . 90	(ton)  30, 00  43, 81  12, 71  100, 17  101, 32  140, 45  33, 27  162, 56  137, 66  30, 74  134, 16  75, 24  28, 82  16, 93  103, 63  51, 92	(%)  . 18 . 07 . 20 . 27 . 21 . 11 . 33 . 45 . 29 . 35 . 37 . 03 . 21 . 30 . 31 . 12	(ton)  8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83 12. 09 43. 16 3. 42 14. 76 6. 86 35. 59 13. 54	(9/t) . 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32 . 20 . 31 . 26 . 23 . 26 . 25 . 23 . 23	(kg) 3, 59 1, 65 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33 1, 07 3, 03 2, 62 1, 83 57 2, 65 2, 60	9rade (9/t) 1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25 1. 32 1. 09 1. 26 . 55 . 74 1. 08 1. 22 . 63	7, 5 13, 2 1, 7 14, 3 16, 4 20, 1 4, 1 14, 7 15, 4 3, 7 14, 7 6, 2 2, 4 14, 0 7, 6 7, 6
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	457330 457350 457350 457350 457350 457370 457370 457370 457390 457410 457410 457410 457430 457430	2618770 2618710 2618730 2618750 2618770 2618730 2618750 2618750 2618750 2618670 2618730 2618650 2618650 2618650	1600 2920 480 4000 4000 1200 4000 1200 4000 2500 800 4000 4000 3500 500	2.84 2.83 2.88 2.88 2.93 2.94 2.92 2.85 2.92 2.85 2.86 2.88 2.82 2.81	4545 8267 1382 11514 11514 11704 3466 11780 11666 3454 11666 11400 7030 2288 11514 11286 9842	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18 . 89 1. 15 . 66 . 41 . 74 . 90 . 46	(ton)  30, 00  43, 81  12, 71  100, 17  101, 32  140, 45  33, 27  162, 56  137, 66  30, 74  134, 16  75, 24  28, 82  16, 93  103, 63  51, 92  44, 29	(%)  . 18 . 07 . 20 . 27 . 21 . 11 . 33 . 45 . 29 . 35 . 37 . 03 . 21 . 30 . 31 . 12 . 17	(ton)  8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83 12. 09 43. 16 3. 42 14. 76 6. 86 35. 59 13. 54 16. 73	(9/t) . 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32 . 20 . 31 . 26 . 23 . 26 . 25 . 23 . 23	(kg) 3, 59 1, 65 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33 1, 07 3, 03 2, 62 1, 83 57 2, 65 2, 60 2, 36	9rade (9/t) 1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25 1. 32 1. 09 1. 26 . 55 . 74 1. 08 1. 22 . 63 . 78	(kg 7, 5 13, 2 1, 7 14, 3 16, 4 20, 1 4, 1 14, 7 15, 4 3, 7 14, 7 6, 2 2, 4 14, 0 7, 1 7, 6 1, 5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	457330 457350 457350 457350 457350 457370 457370 457370 457390 457410 457410 457410 457430 457430 457430	2618770 2618710 2618730 2618770 2618770 2618730 2618750 2618750 2618750 2618670 2618730 2618650 2618670 2618670 2618710	1600 2920 480 4000 4000 1200 4000 1200 4000 2500 800 4000 4000 3500 500	2.84 2.83 2.88 2.88 2.93 2.94 2.92 2.85 2.85 2.81 2.86 2.82 2.81 2.84	4545 8267 1382 11514 11514 11704 3466 11780 11666 3454 11666 11400 7030 2288 11514 11286 9842 1420	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18 . 89 1. 15 . 66 . 41 . 74 . 90 . 46 . 45 . 61	(ton)  30, 00  43, 81  12, 71  100, 17  101, 32  140, 45  33, 27  162, 56  137, 66  30, 74  134, 16  75, 24  28, 82  16, 93  103, 63  51, 92  44, 29  8, 66	(%)  . 18 . 07 . 20 . 27 . 21 . 11 . 33 . 45 . 29 . 35 . 37 . 03 . 21 . 30 . 31 . 12 . 17 . 24	(ton)  8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83 12. 09 43. 16 3. 42 14. 76 6. 86 35. 59 13. 54 16. 73 3. 41	(9/t) . 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32 . 20 . 31 . 26 . 23 . 26 . 25 . 23 . 24 . 21	(kg) 3, 59 1, 65 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33 1, 07 3, 03 2, 62 1, 83 57 2, 65 2, 60 2, 36 30 1, 48	9rade (9/t) 1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25 1. 32 1. 09 1. 26 . 55 . 74 1. 08 1. 22 . 63 . 78 1. 06	(kg 7, 5 13, 2 1, 7 14, 3 16, 4 20, 1 14, 7 15, 4 3, 7 14, 7 6, 2 2, 4 14, 0 7, 1 7, 66 1, 5 4, 78
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	457330 457350 457350 457350 457370 457370 457370 457390 457410 457410 457410 457430 457430 457430 457430	2618770 2618710 2618730 2618770 2618770 2618730 2618750 2618750 2618750 2618670 2618730 2618650 2618670 2618670 2618710 2618670	1600 2920 480 4000 4000 1200 4000 1200 4000 2500 800 4000 4000 3500 500 2400	2.84 2.83 2.88 2.88 2.93 2.94 2.92 2.85 2.85 2.81 2.86 2.82 2.81 2.84 2.80	4545 8267 1382 11514 11514 11704 3466 11780 11666 3454 11666 11400 7030 2288 11514 11286 9842 1420 6726	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18 . 89 1. 15 . 66 . 41 . 74 . 90 . 46 . 45 . 61 . 37	(ton)  30, 00  43, 81  12, 71  100, 17  101, 32  140, 45  33, 27  162, 56  137, 66  30, 74  134, 16  75, 24  28, 82  16, 93  103, 63  51, 92  44, 29  8, 66  24, 89	(%)  . 18 . 07 . 20 . 27 . 21 . 11 . 33 . 45 . 29 . 35 . 37 . 03 . 21 . 30 . 31 . 12 . 17 . 24 . 16	(ton)  8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83 12. 09 43. 16 3. 42 14. 76 6. 86 35. 59 13. 54 16. 73 3. 41 10. 76	(9/t) . 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32 . 20 . 31 . 26 . 23 . 26 . 25 . 23 . 24 . 21 . 22	(kg) 3, 59 1, 65 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33 1, 07 3, 03 2, 62 1, 83 57 2, 65 2, 60 2, 36 30 1, 48	9rade (9/t) 1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25 1. 32 1. 09 1. 26 . 55 . 74 1. 08 1. 22 . 63 . 78 1. 06 . 71	(kg 7, 5, 13, 2, 14, 3, 16, 4, 10, 14, 7, 15, 46, 2, 14, 10, 17, 16, 2, 14, 16, 17, 16, 17, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	457330 457350 457350 457350 457370 457370 457370 457390 457410 457410 457410 457430 457430 457430 457430 457450	2618770 2618710 2618730 2618770 2618770 2618770 2618750 2618750 2618770 2618770 2618770 2618770 2618650 2618670 2618670 2618670 2618650 2618650 2618650	1600 2920 480 4000 4000 1200 4000 1200 4000 2500 800 4000 4000 3500 500 2400 600	2.84 2.83 2.88 2.88 2.93 2.94 2.92 2.85 2.92 2.85 2.81 2.86 2.82 2.81 2.84 2.80 2.80	4545 8267 1382 11514 11514 11704 3466 11780 11666 3454 11666 11400 7030 2288 11514 11286 9842 1420 6726 1682	. 66 . 53 . 92 . 87 . 88 1. 20 . 96 1. 38 1. 18 . 89 1. 15 . 66 . 41 . 74 . 90 . 46 . 45 . 61 . 37	(ton)  30, 00  43, 81  12, 71  100, 17  101, 32  140, 45  33, 27  162, 56  137, 66  30, 74  134, 16  75, 24  28, 82  16, 93  103, 63  51, 92  44, 29  8, 66  24, 89  6, 73	(%)  . 18 . 07 . 20 . 27 . 21 . 11 . 33 . 45 . 29 . 35 . 37 . 03 . 21 . 30 . 31 . 12 . 17 . 24 . 16 . 19	(ton)  8. 18 5. 79 2. 76 31. 09 24. 18 12. 87 11. 44 53. 01 33. 83 12. 09 43. 16 3. 42 14. 76 6. 86 35. 59 13. 54 16. 73 3. 41 10. 76 3. 19	(g/t) . 79 . 20 . 44 . 36 . 22 . 18 . 40 . 32 . 20 . 31 . 26 . 23 . 26 . 25 . 23 . 24 . 21 . 22 . 21	(kg) 3, 59 1, 65 61 4, 15 2, 53 2, 11 1, 39 3, 77 2, 33 1, 07 3, 03 2, 62 1, 83 57 2, 65 2, 60 2, 36 30 1, 48 35	9rade (9/t)  1. 67 1. 60 1. 24 1. 25 1. 43 1. 72 1. 20 1. 25 1. 32 1. 09 1. 26 . 55 . 74 1. 08 1. 22 . 63 . 78 1. 06 . 71 . 97	7, 5, 13, 2, 1, 7, 14, 3, 16, 4, 20, 1;

Rakah Cut-of	f grade		80 m J. 35 Cu											
No :	X (E)	Y (N)	Volume	S. G.	Tonnage		¢	) u		Zn	Α	u	A:	)
			(m3)	(t/m3)	(ton)			content (ton)	grade (%)	content (ton)	grade (g/t)		grade ( (g/t)	content (kg)
1	457370	2618690	2000	2.81	5624		37	20.81	. 20	11. 25	2. 16	12. 15	1. 25	7.03
2	457390	2618730	4000	2.82	11286		45	50.79	13	14. 67	1, 21	13, 66	1.25	14. 11
3	457410	2618730	1600	2, 80	4484		36	16. 14	, 14	6. 28	71	3. 18	1. 25	5. 61
			7600		21394			87. 74		32.20		28. 99		26. 75
					-		:				:			171
		:	<u> </u>			1:							1.1	
Rakah Cut-of	if grade		570 m 0.35 Cu									9 ( V) 9 ( )		
No	X (E)	Y (N)	Volume	s. G.	Tonnage		(	 Cu		Zn	******		A	
			(m3)	(t/m3	) (ton)	gr	ade (%)	content (ton)	grade (%)	content (ton)	grade	content	grade	content
1 :	457390	2618690	2000	2.80	5605	7	. 39	21.86	. 19	10.65	. 53	2. 97	1. 50	8. 41
			2000		5605			21.86	 :	10, 65		2. 97		8, 41
		200		1.5		47.1					4.4			
n - 1 - 1					. :	.*	i			47 4				
Rakah Cut-of	fgrade		560 m D.35 Cu		-			14.1° 2		1.1			19.5	
							<i>:</i>							<del>.</del>
No	X (E)	Y (N)	Volume	S. G.	Tonnage			Cu	<sup>1</sup> * .	Zn		u	A	g
into.	$A_{i+1}$	100								content				content
			(m3)	(t/m3)	(ton)		(%)	(ton)	(%)	(ton)	(g/t)	(kg)	(g/t)	(kg)
1	457390	2618690	4000	2.87	11476		. 86	98. 69	. 12	13, 77	 . 52	5. 97	98	11. 25
. 2 : .	457390	2618710	4000	2.87				96. 40			. 56			10.67
. 3	457410	2618690	3480	2. 94	10216			135.87			. 53	5. 41	1.01	10, 32
4	457410	2618710	4000	2.87	11476	٠.	82	94. 10	08		. 66	7. 57		11,71
5	457430	2618690		2.86	11438	٠. ,	. 78	89. 22	. 06	6. 86	. 63	7. 21	1, 05	12.01
6	457450	2618690	4000	2.85	11400			4 19			. 78	8.89	1. 11	12. 65
7	457470	2618690	4000	2.88	11514		90	103.63	. 06	6. 91	. 91	10.48	1, 17	13. 47
			27480		78996			696. 57		59. 00		51.96		82.08

## Appendix 5

X-ray diffraction pattern of head samples



## Appendix 6

Details and results of flotation tests

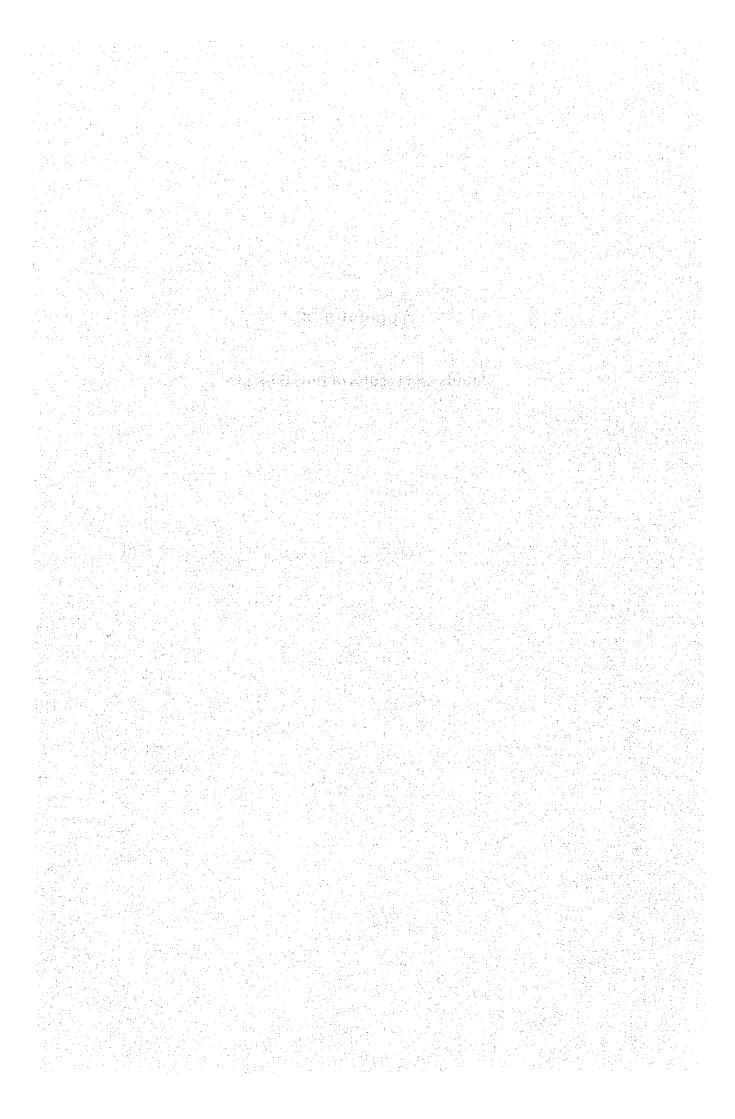


Table 1 Flotation Test Results of Hayl as Safil Ore

TES	Ω,	:				COND	CONDITIONS	n da			80	WEIGHT		ASSAY		Id	SIRIBULI	č
	ATION	TimeP min.	- %	Size %	Temp လ	- 00	KAX g/T	AF65 g/T	pH IntialF	inal	UCIS	%	™%	er %	ω%		۳. %	ω %
	GRINDING	,	100									0.0		5.	4. د.	G	Ο.	0.0
r=1,	ROUGHER SCAVEN-	0,50	35	50	22	2000	လ က	27.9	75.	2.5	$\frac{c-1}{2}$	25.99 5.34	4.02	36.93 34.67	42.22	91.34 2.56	61.03 $11.77$	დ. <del>ლ</del>
	RED	1									ers :	ထ	-	6.2	2.0	2 4 1	7	მ
	-		0.9			1				1 K	C. Head	0		6.1	4.5	0	0.0	0.0
~:	ROUGHER SCAVEN-	25	က္သ	00	25	2000	တ္တက	27.9	0.0	89	ບ່ວ	16.03 1.31	6.58 4.0	36.58 31.65	40.65 31.75	90.51 1.58	36.52 2.58	44.69 2.86
:	Ken		:								Tail	င္သ	~- <b>!</b>	I. 8	9.2	:00	o. O	-CH
ı	GRINDING	l .	09									0.00		1	5	0	0	0
က	ROUGHER SCAVEN-	ဥက	က	70	56	2000	ဗ္ဗဏ	27.9	12.1	8.0 HH	C-5	12.45	8.37 1.56	35.04 33.41	38.47	8 8 8		32.98 3.50
:	CER		• 1 • .								. ro	0	Ξ.	ст 	0.7	rol	U)	L)
<del> </del>	GRINDING		8.0								C. Head	1	-	0.9	4.3	0 0	0	0
বা	ROUGHER SCAVEN-	<u> </u>	ري م	80	25	2000	တ္တ	27.9	17.0	3.6	22	11.11 1.86	9.30 1.43	34.16 34.79	38.26 35.73	89.42 2.30	23.58 4.03	S 4
	ਲਜ਼ਰ		***********								Tail		<b>-</b>	დ ლ	0.8	7	7	•

Table 2 Flotation Test Results of Hail as Safil Ore - Effect of KAX on copper selective flotation varying pH value -

		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00 882 289	00 8831 8811 8811	000 740 674
1 6	∞%	100 143 144	100. ( 30. E 11. S	100.( 24.: 55.8 69.8	100.( 29.7 85.6
STRIBUTI	т % 9	100.00 34.87 12.15 52.98	106.00 25.30 9.76 64.94	100.00 20.01 4.92 75.07	100.00 23.68 4.03 72.29
D13		100.00 80.14 10.98 8.88	100 00 81.33 9.35 9.31	100.00 82.27 5.60 12.13	100.00 89.42 2.30 8.29
	ω%	14.66 41.31 41.30	14.62 36.44 40.51 10.05	14.67 35.90 35.52 11.69	14.31 38.26 35.73 10.80
ASSAY	e.%	15.81 35.92 36.42 10.55	16.57 33.91 37.68 12.91	16.08 32.40 33.03 13.77	16.03 34.16 34.79 13.31
	%	1.16 6.07 2.42 0.13	7.56 2.54 0.13	1.16 9.58 2.70 0.16	1.16 9.30 1.43 0.11
WEIGHT	%	100 00 15 34 5 27 79 38	100.00 12.36 4.29 83.35	100.00 9.93 2.40 87.67	100.00 11.11 1.86 87.03
	UCIS	C. Head C-1 Tall	C. Head C-1 C-2 Tail	C.Head C-1 C-2 Tail	C.Head C-1 C-2 Tail
	H Final	8.8 4.1	0.00 0.1-	9.7	11.6
	Intial	8.8 2.2	თ.ი თ.ი	10.8	12.0 11.6
	AF65 g/T	27.9	27.9 9.3	27.9	27.9 9.3
SKOITI	KAX 8/T	တို့ ၁၈	30 5	30 5	ကို
CONDIT	Lime. g/T	860	1100	1500	2000
	Temp	23	28	28	25
	Size %	80	80	80	80
	ne P. D.	35 35	60 35	35 35	320 320
	Time min.	(2) (2) (2) (3)	အင္ကာဏ	90 E	44 600
6	ATION	GRINDING ROUGHER SCAVEN- GER	GRINDING ROUGHER SCAVEN- GER	GRINDING ROUGHER SCAVEN- GER	GRINDING ROUGHER SCAVEN- GER
TESI	No.	រោ	ယ	7	41

Table 3 Flotation Test Results of Hail as Safil Ore - Effect of AP3501 on copper selective flotation varying pH value -

OPER TimeP.D	G. dia			Size	Tem D	CON	CONDITIONS ine AP3501		d		PROD	WEIGHT	η	ASSAY	ω	DI	SIRIBUII	ON
min. % % °C g/I	. % % °C 8/T	% % °C 8/I	1/3 .2°	8/1	g/T	8/		1/2	Intial	Final		%	%	%	%	%	%	%
GRINDING 16 60 ROUGHER 10 35 80 27 800 46.	16 60 10 35 80 27 800 46	0 5 80 27 800 46	27 800 46	800 46	46	4.6	~ء	27.9	 &	9	C. Head C-1	100.00	1.18	16.90 36.69	14.92 39.74	100.00 75.68	100.00	100.00
	ro,	in)	ທ	رب س	ທີ	ທ		က တ	2.0	ထ	2	2.0	4	2.7	3.4	က	4	Δ.
200 C											Tall	3.6	7	3	0.5	(a)	۹ ا	د.
	16 6	.09									ж.	0.0	pr.al	6.5	د. دی	0	0	0
0 0 0 0	10 35 80 28 1000 46. 5 5 5	5 80 28 1000 46. 5.	28 1000 46.	1000 46.	<del>გ</del> დ დ	• •		27.9	တ ထ လ ထ	ထထ	í	12.10 2.23	ж Н С	35.04 34.04	37.32 $34.75$		IC) W	3 5
						-				i	Τa	5.6	r-t	3.5	0	~	ω	iO.
16 60	16 60	0									ω	0.00	1.1	7.4	4	0	0 0	0
O 10	10 35 80 28 1500 5	5 80 28 1500	28   1500	1500		46 50 70		23 23 20	C	10.2 9.8	C-1 C-2	9.82 2.43	10.35 1.84	32.66 35.17	35.22	86.48 3.81	18.41 4.92	23 57
											Tail		Η.	5.2	r-4	<u></u>	ပ	<b>c</b> c
16 60	16 60										===	0.0	=	6.5	4.	0.0	0	0.0
ROUGHER 10 35 80 29 2000 46.7 3 SCAVEN- 5 5.8	10 35 80 29 2000 46.7 5 5.8	80 29 2000 46.7	29 2000 46.7 5.8	2000 46.7	46.7 5.8			27 9 0	8 <del>1</del>	4.1.	C-1 C-2	∞~	12.16	32.53 35.80	35.09 37.52	86.84 3.45	16.75 4.76	
											ď	7	-	5	-0	~	4	Ŋ
							**************************************											

Table 4 Flotation Test Results of Hayl as Safil Ore - Effect of AP3418 on copper selective flotation varying pH value -

	1 6						03/04-11-1				) r	11 0 1 11		5		⊢	1 1 1 1 1	
1 63 1 No.	ATION	TimeP min.	13%	SizeTem		Lime g/T	LUMDILIUNS 1me AP3418 /T g/T	AF65 8/1	IntialF	inal	UCIS	%Eluni	%	жээн г Fe %	ω%	Cu %	Fe Fe	% %
12	GRINDING ROUGHER SCAVEN- GER	2 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	90 32	80	28	980	46.4	27.9	. 88 0.8	88.0	C.Head C-1 C-2 Tail	100.00 10.59 1.58 87.84	7.71 3.87 0.33	16.05 35.83 32.00 13.38	14.53 40.23 32.73 11.10	100.00 69.93 5.23 24.84	100.00 23.63 3.15 73.22	100.00 29.32 3.56 87.12
13	GRINDING ROUGHER SCAVEN- GER	10 10 2	35 35	80	29	1140	46.4	27.9	9.2	88.7 G	C. Head C-1 C-2 Tall	100.00 8.10 2.00 89.90	1.18 9.78 4.47 0.33	16.42 33.32 14.53	14.73 36.67 34.05 12.32	100.00 67.25 7.58 25.17	100.00 16.44 4.01 79.54	100.00 20.18 4.62 75.20
14	GRINDING ROUGHER SCAVEN- GER	116	35 35	80	28	1400	46.4	27.9	10.7	10.0	C.Head C-1 C-2 Tail	100.00 10.31 2.40 87.28	1.17 9.51 2.36 0.15	16.31 33.88 35.59 13.70	14.54 37.54 38.03 11.18	100.00 83.94 4.86 11.20	100.00 21.43 5.25 73.32	100.00 26.62 6.29 67.09
15	GRINDING ROUGHER SCAVEN- GER	60 to	35 35	80	30	2520	46.4	27.9	11.8	11.2	C.Head C-1 C-2 Tail	100.00 12.84 2.90 84.27	1.15 8.03 1.30 0.10	15.65 32.43 34.46 12.45	14.62 38.68 37.71 10.16	100.00 89.42 3.27 7.31	100.00 26.59 6.38 67.02	100.00 33.96 7.48 58.56

Table 5 Flotation Test Results of Hayl as Safil Ore - Effect of AP404 on copper selective flotation varying pH value -

FVL	נוני																:	
_	ロアガド					CONDITI	GNS				PROD	WEIGHT		SSA		DI	STRIBUTI	CN
	ATION	Time min.	°. ∪%	Size %	Temp CC	Lime 8/I	AP404 g/T	AF65 g/T	pH IntialF	inal	CI	\0	2%	5.%	ω%	ე% შ	ге %	∾ %
C	RINDING		80			8 3 - 13 2 13 		14 T			Ξ	100.0	gand a	5.9	8	0.0	0.0	0
DIV	ROUGHER	9"	35	80	28	740	54.1	27.9	∞r ⊶o	ر د د د د	7. 1.1	ωι	9 12	33.83 31.34	39.03 34.12	66.13 8.94	17.71	21
)	REE	>					•	• • .*	•		, nd	9	C	က	2.2	O)	(0)	ιC
_ (5	RINDING	4 4 5	09								( 32	100.		8 8	8.4	0	0.0	0.0
P4 (2)	ROUGHER SCAVEN-	25	35	80	28	1000	54.7	27.9	o, ∞ o, ∞	8 8 8 8	0-1 1-1		5.75	30.60 32.84	35.35 36.21	71.76	12.70	
ŀ	H H H H H H H H H H H H H H H H H H H						•			•	! at		~	ಣ	2 - 3	2 9	4	9
ו כי	RINDING	ł	60								He H	100.0		5	8	0.0	0	0.0
P4 (2)	ROUGHER SCAVEN-	ဥပ	ည	80	28	1400	54.1	27.9	10.8	10.0	C-1		12.01 2.99	30.72 34.20	35.84	82.19 4.66		
ı	GER							•		g in	ro	2		4.2	2.5	,	တ	
1 65	RINDING	16	90								E.	100.0		5.4	က	0	0.0	0.0
20	ROUGHER SCAVEN-		35	8	တ က	2980	54.1	27.9	0.4	4.5	0-1		11.66 2.80	29.21 32.07	34.94	83.29 4.20	15.60 3.60	9 4
	GER	· ·						,		i v	) (	0	-	က		liu)	∞.	ထ

Table 6 Flotation Test Results of Hayl as Safil Ore - Recovery as a function of flotation time on copper selective flotation varying KAX dosage -

EST						COND	CONDITIONS	  -  -			PROD	WEIGHT		ASSAY			III	NO	
<b>≪</b> ⊂ :	TION	Тіме. Піп.	⇒%	% %	EBD CBD	Lime g/T	KAX 8/T	8/1	Intial	h Final	ar on	%	3%	% av %		2%	., %		
<u>ري</u>	GRINDING	9	90		, N					. 1 1.	C. Head	100.00		15.83	:	100.00	100.00		
80	-	25 c 2	က်	 0		2080	30	18.5	17.6	1	rsi	<u>ن</u>	က ၊ က ၊	، س		(	es e		
	त्य		*****		•	-				<u>.</u>	C-2	ထ	<u>ا</u>	<i>ا</i> د		ر عن	o) (		
	က					200		ლ თ	11.6	_i	က	4,	မှ	62 CD		~	$\circ$		
i.	-31					ß		ი ი	ä	, ,	-	φ.	ત્ય	<del></del>		7	(C)		
÷	ĽΩ			,		S		დ. დ.		٠,	ر- 5	4	6	0.7		۲.	ယ		
• ; •	ю	10	÷	*****	-	200	ιΩ	က တ	11.6	11.0	9 <del>-</del> 5	2,5	ف	3.7		īÜ	4		
					٠.						Tail	4	1	3.2		4	C		
: 1																			
83	RINDING	16	Ç		<del></del> -		·				C. Head	100.	r-1	ι,		0	0		
80	UGHER1	က		80	30	2050	40	18.5	11.6		[ <u>-</u> ]	Ì	8.28	33.79		78.99	23.03		
Ė.	<b>₹</b> √	ເນ	••••							. •	C-2	2	7	2.7		7º	رب رب		
	က	<b>-</b>			:	100		დ დ	, 	ᅼ	င္ပ		G.	0.5		ď	ς,		
	4	Ŋ			<u>· .</u>	100		6.3		11.0	C-4		3	7.5		ις	က		
	क	ĸ				100		თ	, . 	.:.•	က		တ	λ. 		$\sim$			
12	<u> </u>	10		•		100	Ŋ	6.3		1	ပ	ď	'n	0.5		ત્ર,	ω,		
	.,			· · · · · ·				:			Tail		0	<del>ار</del> .			~~~		
		·	:* .							:									

Table 7 Flotation Test Results of Hayl as Safil Ore - Effect of feed size on bulk flotation -

·ĺ																		
0	ER	14.5		:		COND	CONDITIONS				PROD	WEIGHT		ASSAY		1.1	 :::	NOI
ΗŢ	ION	Time min.	ъ. С. С.	Size %	SizeTemp % °C	Lime g/T	KAX g/I	8/T	Intial	H Final	ucis	%	ր %	F.e.	∾%	ςn %	F. %	s %
RI OU CA	GRINDING ROUGHER SCAVEN- GER	5 TO 22 CO 2	38. 35.	50	29	620	30	37.2	7.2	7.7	C. Head C-1 Tail	32.74 32.74 3.17 64.08	1.16 2.99 0.16	15.99 20.71 5.51	15.55 20.45 1.80	100.00 84.45 6.71 8.84	100.00 73.81 4.11 22.08	100.00 88.42 4.17 7.41
RICA	ND INC	ною нн э с	990 32	60	29	880	0 8 5	37 18.5	7.2	7.4	C. Head C-1 C-1 Tail	100.00 29.51 3.87 66.61	1.18 3.16 0.22	15.97 36.91 23.14 6.28	15.47 43.02 22.66 2.84	100 00 78.83 8.78 12.39	100.00 68.20 5.61 26.19	100.00 82.09 5.68 12.23

Table 8 Flotation Test Results of Hayl as Safil Ore - Effect of pH value on bulk flotation -

40	ATION TIMEP	GRINDING 8 6 4 ROUGHER 10 3 SCAVEN- 5	GRINDING 8 6 ROUGHER 10 3 SCAVEN- 5	GRINDING 8 6 SCAVEN- 5 SCAVEN- 5	GRINDING 8 6 ROUGHER 10 3 SCAVEN- 5	GRINDING 8 61 ROUGHER 10 3 SCAVEN- 5
	.D.Siz % %	35 50 35 50	30 35 50	50 35 50	50 50	5 50
•	e C	) 28	29	26	***************************************	25
CONI	to	112S0 443	620	480	1000	2000
CONDITIONS	KAX g/T	30	30 5	30 5	30 5	၁ ၁၁ ၁၁
	AF65 g/T	27.9 9.3	37.2 9.3	27.9	27.9 9.3	27.9
	IntialF	44 0.4	7.2	8.0	10.0	22. 2.2.
	Final	44.	7.4	9.7	യ യ	7-9 FF
RO	UCIS	C. Head C-1 C-2 Tail	C.Head C-1 C-2 Tail	C.Head C-1 C-2 Tail	C. Head C-1 C-2 Tail	C. Head C-1 C-2 Tail
WEIGHT	; %	100.00 30.59 5.15 64.27	100.00 32.74 3.17 64.08	100.00 29.03 2.77 68.21	100.00 17.54 5.66 76.80	100.00 25.99 5.34 68.67
	Z%	1.12 2.93 2.97 0.11	1.16 2.99 2.45 0.16	1.16 3.32 2.89 0.17	1.20 1.52 0.25	1.14 4.02 0.57 0.10
ASSAY	e %	16.21 39.13 18.09 5.12	15.99 36.05 20.71 5.51	16.26 39.44 25.12 6.03	16.45 39.69 39.44 9.45	15 36.93 34.67 6.23
	ω %	14.58 42.77 18.53 0.81	15.56 42.01 20.45 1.80	15.26 44.34 25.31 2.47	15.51 44.66 43.07 6.82	14.33 42.22 36.93 2.02
DI		100.00 80.03 13.65 6.31	100.00 84.45 6.71 8.84	100.00 83.11 6.89 10.00	100.00 76.45 7.52 16.04	100.00 91.34 2.56 5.00
STRIBUTI	a.%	100.00 73.96 5.74 20.30	100.00 73.81 4.11 22.08	100.00 70.43 4.27 25.30	100.00 42.31 13.57 44.12	100.00 61.03 11.77 27.20
NO	ω %	100.00 89.74 6.68 3.57	100.00 88.42 4.17 7.41	100.00 84.37 4.59 11.04	100.00 50.50 15.73 33.78	100.00 76.56 13.76 9.58

- Recovery as a function of flotation time on bulk flotation varying KAX dosage -

1	.				~	1			m		~.	٠.
	ω <i>≫</i>	0	 	~	<u>Ω</u>		0.00					
NO.		10(	(D)	1	٠,		10(	~	H			
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RIBU	7 %		9:				0.0					
ISI		,	••••		•		r{					
Ω	%.c	C):	ल (१)	•	$\overline{}$			٠.	୍	ιť		
	C) 6/	100	( O	7	3		100	ထ	ထ		C.D	
		က	22	က	7		64	e co	တ	<u>.</u>	ယ္	
	w %		42.					ر ا		~`	$\prec$	
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	⇒ \c		. 02				•	•	٠	9.4		٠.
1.2%	% 5%		খা (	0	0	1		က	0	0	0	4.
H	. [	00	66	34	2.9		00	22	82	75	22	
E1G	%	00	25	L,	63		0	(V	∞.	က	61.	
3=				_	<u> </u>		ਰ	!		<del>- , .</del>		
PROD	ICIS	-	,				Hea		7.	င် ၁	[ail]	,
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		٠	2	à				02	c	2		
	H Final		11.7	}				•	10.7	•		
	pH ialFinal		1:	11.				.6 10.	.4 10.	.3 10.		1
	PH alif		Ξ;	1.7				.6 10.	.4 10.	10		
	65 pH T IntialF		2.1 11.	11.7	·			11.6 10.	.3 11.4 10.	.6 11.3 10.		
	IntialF		12.1	11.7	·			11.6 10.	11.4 10.	.6 11.3 10.		
IONS	65 pH T IntialF		12.1	11.7	·			11.6 10.	0 9.3 11.4 10.	.6 11.3 10.		
IONS	65 pH T IntialF		12.1	11.7	·			40 37.2 11.6 10.	10 9.3 11.4 10.	0 18.6 11.3 10.		
	e KAX AF65 ntialF		12.1	11.7	·			00 40 37.2 11.6 10.	00 10 9.3 11.4 10.	00 10 18.6 11.3 10.		
IONS	e KAX AF65 ntialF		12.1	11.7	·			00 40 37.2 11.6 10.	0 10 9.3 11.4 10.	00 10 18.6 11.3 10.		
IONS	e KAX AF65 ntialF		12.1	11.7	·			32 2000 40 37.2 11.6 10.	00 10 9.3 11.4 10.	00 10 18.6 11.3 10.		
IONS	ime KAX AF65 pH /T g/T g/T IntialF		12.1	11.7	·			2 2000 40 37.2 11.6 10.	00 10 9.3 11.4 10.	00 10 18.6 11.3 10.		
IONS	e KAX AF65 ntialF		12.1	11.7	·			32 2000 40 37.2 11.6 10.	00 10 9.3 11.4 10.	00 10 18.6 11.3 10.		
IONS	eP.D.SizeTemp Lime KAX AF65 pH . % % °C g/T g/T IntialF		12.1	11.7	·			5 50 32 2000 40 37.2 11.6 10.	00 10 9.3 11.4 10.	00 10 18.6 11.3 10.		
CONDITIONS	TimeP.D.SizeTemp Lime KAX AF65 pH min. % % °C g/T g/T IntialF		12.1	11.7			8 60	10 35 50 32 2000 40 37.2 11.6 10.	10 200 10 9.3 11.4 10.	10 10 10 10 10 18.6 11.3 10.		
CONDITIONS	TimeP.D.SizeTemp Lime KAX AF65 pH min. % % °C g/T g/T IntialF		12.1	11.7	·		8 60	10 35 50 32 2000 40 37.2 11.6 10.	10 200 10 9.3 11.4 10.	10 10 10 10 10 18.6 11.3 10.		
OPER	TimeP.D.SizeTemp Lime KAX AF65 pH min. % % °C g/T g/T IntialF		12.1	11.7			RINDING 8 60	OUGHER 10 35 50 32 2000 40 37.2 11.6 10.	10 200 10 9.3 11.4 10.	CAV'ERZ 10 11.3 10.		
CONDITIONS	TimeP.D.SizeTemp Lime KAX AF65 pH min. % % °C g/T g/T IntialF		12.1	11.7			GRINDING 8 60	OUGHER 10 35 50 32 2000 40 37.2 11.6 10.	SCAV ER1 10 200 10 9.3 11.4 10.	CAV'ERZ 10 11.3 10.		

- Effect of pH value and KAX dosage on bulk rougher/cleaner flotation -

	n e p	S	60	2	CONDI	TONS	12.	Δ.	丰	PRODUCIS	HE IGHT	Cu	ASSAY	Ø	D.I.	STRIBUTI	ŏ
100	Li.	%		90		$\sim$	<b>5</b> →	Intial	lFinal		%	%	%	%	%	%	%
( )	တင္က	ဝက	50		400	09	65.	11.6	0.1.	a C	000	4	27.0	4.00	000	100 81.8	တယ္ဖ
er and the second	ne ne	ကလ	90 2	വയ	200 50	2		10.6	დ. - დ	2000 1000 1000 1000 1000 1000 1000 1000	22.65 13.90 3.01	00.00 00.00 00.00 00.00 00.00	24.15 380.35 17.16	24.7.4 4.7.4.9 20.05	20.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	38.35.7 7.25.7 25.57	8.00.00 00.00 00.00
	20	-								<b>7</b>	1000	<b>&gt;</b>    -	r 4	2 4	2 0	0 0	0 0
က	က ကြေ	ED ED	30	0 5	300	0.9	65.1	11.6	11.0	10-01 10-01	14.6	4.	200	in in c	83.75 83.15 15	36.2	0.00 0.00 0.00 0.00
EANER EANER	ਨਿ <b>ਟਾ</b> ਜਜ	മ	20 2	ယ္ထ	300	7		44.	11.0	COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY COUNTY CO	10.88 3.76	3.5.6 3.5.4 1.0.6 1.0.6 1.0.6	39.67	44.31	13.70 72.04 11.11	27.03	34.32
										5	0	.	-	•	-	•	?
က္	ထင္က	55 5	0	2 2	400	09	74.4	-d	10.9	C. Head R-C 1C-C	100 100 100	1.12 2.62 9.61	31.60 35.41	14.57 34.46 42.52	000 1000	100.00 82.52 21.98	100.00 98.28 28.82
	ਜਜ ਯਵਾ	9 1	2 2	2 2 6	000	7		12.3	12.2 12.2	1 154 1	  	4.2.0	0 4 1- 4 10 0	22 P	2.48 1.25	o 44 ℃	သတ္လ 4တ္လ
										al	58.4	0.	4.7	0.4	2.8	7.4	·
ന	න ග ග	ည	90	ස 2	0.09	09	55. 8	11.6	10.9	#:1 C) (	100 30 60	2.82 9.89	222 222 24 26 26 26 26 26	36.01 42.79	100.00 96.87 83.66	047	100.00 98.14 28.72
	HO TO	ъ- о	22	8 7 1	200 600	7		12.0	11.8	200 C	ກ ເ≻ — ເ ກ ເວັດກ ເ	ဂဏဏ	a.c.	~ 0.0 c	2004c	27.72	20 20 20 4. 100

Table 11 Flotation Test Results of Rakah Stockwork Ore - Effect of feed size on copper selective flotation -

EST OPER
TOPER TIMEP.D.SIZETEMP NIME. B. S.
TOPER TIMEP.D.SIZETEMP SCAVEN- 5 SCA
T OPER T ATION

Table 12 Flotation Test Results of Rakah Stockwork Ore - Effect of KAX on copper selective flotation varying pH value -

	0 0 4 0 0 0 11 12	00 72 76 52	00 00 00 00 00 00 00 00 00 00 00 00 00	00 53 74 73
S %	100 80 7 11	100 72 6 5 5 20	100 100 80 100 100 100 100 100 100 100 1	100 53 43
SIRIBUT Fe %	100 00 37.29 4.19 58.52	100.00 33.62 3.67 52.71	100.00 26.51 2.71 70.78	100.00 23.93 1.56 74.51
% DI	100.00 94.63 1.38 3.99	100.00 95.03 1.42 3.54	100.00 94.04 1.28 4.70	100.00 93.58 1.59 4.84
s.%	9.40 38.13 26.03 1.45	9.32 37.64 27.88 2.40	9.71 39.60 28.90 4.26	9.41 39.06 24.92 4.78
ASSAY Fe	20.07 37.68 31.27 15.17	19.92 37.18 32.40 15.67	20.05 37.20 33.38 16.88	19.96 37.05 30.02 17.28
%Ca	1.36 6.48 0.70 0.07	1.35 7.12 0.85 0.06	1.25 8.24 0.97	1.25 9.04 1.91 0.07
HEIGHT	100.00 19.86 2.69 77.45	10.0.00 18.01 2.26 79.73	100.00 14.29 1.63 84.08	100.00 12.89 1.03 86.07
PROD	C. Head C-1 C-2 Tail	C.Head C-1 C-2 Tail	C.Head C-1 C-2 Tail	C.Head C-1 C-2 Tail
H. Final	8.8	8.8 .7	თ. <b>თ</b> .	10.9
Intial	8.7	φ.σ. σ.α	0.0 0.0 0.0	11.4
AF65	27.9	27.9 9.3	27.9	27.9
CONDITIONS Ime KAX / R 8/T	22 20 20 20 20 20 20 20 20 20 20 20 20 2	25 5	25 35	25 5
$\Box$			*************************	
CON Lime g/T	1000	1500	2000	4000
T P	0	27 1500	27 2000	27 4000
1Zelemp L	100	150	<del></del>	
.D.SizeTemp L	0 27 100	150	0 27	0 27
SizeTemp L	16 60 10 35 80 27 100	16 60 10 35 80 27 150 5	16 60 10 35 80 27 5	16 60 10 35 80 27 5
meP.D.SizeTemp L	80 27 100 35 80 27	6 60 9 35 80 27 150 5	6 60 0 35 80 27 5	6 60 0 35 80 27 5

Table 13 Flotation Test Results of Rakah Stockwork Ore - Effect of AP3501 on copper selective flotation varying pH value -

1	1 4 1			
ON S	100.00 71.60 8.60 21.80	100.00 53.20 7.48 39.31	100.00 36.35 6.71 55.95	
SIRIBUII Fe	32.28 32.28 3.48 64.24	100.00 29.85 4.95 65.20	100.00 17.30 3.56 79.14	
DIS %	100 93.54 1.37 5.08	100.00 92.49 2.10 5.41	100.00 92.87 2.24 4.89	
s %	9.45 38.36 28.80 2.57	9.59 37.61 28.59 4.49	9.56 31.88 30.62 6.25	1 froth
ASSAY Fe	20.12 36.82 32.34 16.12	16.27 35.82 32.09 12.64	20.11 31.90 34.16 18.29	t contr
n%	0.00 0.80 0.80	1.24 8.47 1.04 0.08	1.25 10.61 1.33 0.07	can no
WEIGHT	100.00 17.64 2.17 80.19	100.00 13.56 2.51 83.93	100.00 10.90 2.09 87.00	
PROD UCIS	C.Head C-1 C-2 Tail	C.Head C-1 C-2 Iail	C.Head C-1 C-2 Tail	C.Head C-1 C-2 Tail
inal	7.7		დი ფ.4.	11.8 11.6
ntialF	.∺∞	ου κο 4- κο	10.6 9.8	12.2 11.8
AF65 8/I	1 - t~- on.	1 8 8 9 9	18.6 9.3	ლ ო თ თ
CONDITIONS ine AP3501 /T 8/T	4.0 .0 .0 .0	40.9 5.8	40.9 5.8	40.9 5.8
CONI Line g/T	620	1500	2000	4000
C eTemp	27	29	29	29
Size %	80	80	80	80
eP. D.	အဝ အဝ	95 35	99 35	35 35
Tine min.		2000	20 C	10 10 5
OPER	GRINDING ROUGHER SCAVEN- GER	GRINDING ROUGHER SCAVEN- GER	GRINDING ROUGHER SCAVEN- GER	GRINDING ROUGHER SCAVEN- GER
TEST No.	်တ	40	41	42

Table 14 Flotation Test Results of Rakah Stockwork Ore - Effect of AP3418 on copper selective flotation varying pH value -

TEST	OP	-				COND	ITIONS				$\alpha$	HEIGHT		ASSAY		Id	hunt	NO
No.	ATION	TimeP.	L-%	.S12e	izeTemp % °C	Lime g/T	ime AP3418 //T g/T	AF65 8/I	Intial	H Final	UCIS	%	3%	۳% ۳%	w%	2%	o %	% N
<b>4</b> 8	GRINDING ROUGHER SCAVEN- GER	11 C	80 35	80	28	1500	38.7	27.9 9.3	ωα 4.α		C.Head C-1 C-2 Tail	160.00 16.49 4.24 79.27	1.26 7.14 0.73 0.06	20.29 36.32 37.81 16.02	9.73 38.39 38.06 2.25	100.00 93.75 2.47 3.79	100.00 29.52 7.91 62.58	100.00 65.07 16.60 18.33
44	GRINDING ROUGHER SCAVEN- GER	10 10	35 35	80	29	2000	38.7	27.9	10.3 9.6	0.00 4.	C.Head C-1 C-2 Tail	100.00 13.09 2.90 84.01	1.26 9.09 0.58 0.06	21.23 34.18 36.54 18.68	9.46 34.77 34.49 4.65	100.00 94.65 1.34 4.01	100.00 21.07 5.00 73.93	100.00 48.11 10.59 41.31
45	GRINDING ROUGHER SCAVEN- GER	16 10 5	350 35	80	27	3400	38.7	18.5 9.3	12.0 11.6	11.6	C.Head C-1 C-2 Tail	100.00 9.14 0.90 89.95	1.24 12.89 1.41 0.06	19.57 28.71 28.51 18.55	9.67 28.90 22.60 7.59	100.00 94.64 1.02 4.34	100.00 13.41 1.32 85.28	100.00 27.30 2.11 70.59
46	GRINDING ROUGHER SCAVEN- GER	10 10 2	35 35	80	29	2000	30.9	27.9	10. 9.8	თ თ თ თ	C.Head C-1 C-2 Tail	100.00 12.38 2.60 85.02	1.27 9.58 0.58 0.08	21.53 35.42 40.07 18.94	9.55 35.39 37.94 4.92	100.00 93.45 1.19 5.36	100.00 20.36 4.84 74.80	100.00 45.87 10.33 43.81

Table 15 Flotation Test Results of Rakah Stockwork Ore - Effect of AP404 on copper selective flotation varying pH value -

	N %	0.00 6.45 1.67	0.00 3.67 7.36 8.97	0.00 3.29 0.83	0.00 6.01 9.42 9.56
NOIL		0 10 15 1 2 1 2 2	0 2 2 4 4 4 4	0 10 2 2 3 9 7	0 10 0 2 7 6
STRIBUT	L 01	100.0 30.8 6.1 63.0	100.0 20.1 3.8 76.0	100.0 11.6 2.0 86.2	100.0 13.3 2.4. 84.2
10		100.00 92.72 2.27 5.01	100.00 93.02 1.44 5.54	100.00 91.33 2.15 6.52	100.00 91.26 2.27 6.47
	s%	10.09 40.43 33.79 2.76	33.63 33.63 5.55	9.87 32.89 29.93 7.67	9.36 28.82 26.23 7.24
ASSAY	æ%	19.55 36.39 34.50 15.42	19.59 33.83 34.84 17.29	19.50 29.85 31.84 18.46	20.11 31.65 31.02 18.84
1000	2%	1.28 7.14 0.83	1.24 9.94 0.84 0.08	1.26 15.14 2.11 0.09	1.25 13.52 0.09
WEIGHT	%	100.00 16.58 3.49 79.94	100.00 11.65 2.14 86.21	100.00 7.59 1.28 91.13	100.00 8.45 1.58 89.97
80	ucis	C.Head C-1 Tail	C.Head C-1 C-2 Tail	C. Head C-1 C-2 Tail	C.Head C-1 C-2 Tail
	H Final	7.7	88.7 8.6	10.2 9.9	10 9.0
	Intial	8.0	9.3	11.0	11 0.0 0.0
	AF65 g/T	18 9.6 3.6	27.9	23.3	27.9
SNOITIONS	. D. 30	38.7	38.7	38.7	30.9
CONDI	1 00	820	1500	2620	2000
	ze Temp	28	29	28	29
	S126	80	80	88	80
	ер Ж		က်တ	350 350	35 35
	Time min		100 100 100	80s	မ္မင္မက
9	ATION	GRINDING ROUGHER SCAVEN- GER	GRINDING ROUGHER SCAVEN- GER	GRINDING ROUGHER SCAVEN- GER	GRINDING ROUGHER SCAVEN- GER
TEST	NO.	47	Δ53 8	49	20

Table 16 Flotation Test Results of Rakah Stockwork Ore - Recovery as a function of flotation time on copper selective flotation varying KAX dosage -

							,		. ,							
NO												:				
UTI	%		ສຸດ ຜູ້ແ	1.4.1	တ	٠,	1.2	75.21	0	30.3	2.4	1.02	ເດ	3	о С	~
DĬ	%Ca	0.0	.~ α	, 		Ç,	۰,	<b>(</b>	0	n)	'n	1.38	πż	~	4	~
			i.													
ASSAY	r. %	တ		24.23	4.2	67 67	7	1.2	0	S	2.2	23.37	1.9	8	2	က
	ក ដ%	~~	ώc	2.06	ω,		က	0	2	0		2.05	4	თ.	۲,	0
WEIGHT	%		•	- e  			•	84.44	0.0	~	1.5	0.83	4.	ω,	0	_
PROD	ucts	C. Head	 	ာ က 1 မ	C4	100	မ ပ	Tail	يسلسو		- 1	C-3	- 1		- 1	: 10
	H Final	nach Philip		r Θ 7 Θ		٠	٠			*- :	٠	10.0	တ	. ·		
	Intial		10.6		10.4	٠ د	•			10.5		· ·	10.0	ु	္ပဲ	
	AF65 8/T	(	18. 28.	9	က တ	က ( တ	ტ ტ	:		18.6	ص د	9.3	6.3		თ	
CONDITIONS	KAX g/T		25				Ŋ	· ·		က					ιΩ	
CONI	Lime g/T		2240	200	100	200	0	:		2320		200			200	:
	Temp CC:		<u>ာ</u>							3.			-			:
	Size %		00					:		80						
	ت ت%	09	ည						09	3						
	Time min.	φ,	(r) (r	) <del>(2</del> 1	C)	ιΩ (	0		16	က	(,)	ゼ	ĸ	က	01	- 1
OPER	ATION	GRINDING	-	100	ক।	<u></u>	۵.		GRINDING	ROUGHER1	ਨ <b>ਾ</b>	ers.	'ਦਾ	ഹ	9	
	0			5								52				

Table 17 Flotation Test Results of Rakah Stockwork Ore

, H	OPER		ta i				CONDITIONS				PROD	HEIGHT		ASSAY		- 1	. t	ION
***	TION	Ilme min.	леР. D.	SizeTemp % °C	Temp	Lime 8/T	KAX 8/T	AF65 g/T	Intial	H Final	ncis	%	ր %	r. %	v %	3%	r % o %	N %
_ 22 % X	GRINDING ROUGHER SCAVEN-	0 O W	35	50	27	420	25	27.9	7.0	7.1	C. Head C-1 C-2	100.00 24.59 2.29	1.20	20.20 36.93 23.49	10.28 35.72 14.04	100.00 93.28 1.86	100.00 44.96 2.66	100.00 85.49 3.13
	GER	<u> </u>	***********								Tail	73.12	0.08			4.86		11.38
<u> </u>	ZINDING	H	09								C. Head	100.00		က		100.00	100	100.00
<u>\$</u> \$	CAVEN	52	သိ	9	56	0.99	25	27.9	7.0	7.2	C-1 C-2	20.64 3.49	5.52 1.29	36.57 $27.11$	37.54 19.70	90.95 3.59		82.10 7.29
	GEN							· · · · · · · · · · · · · · · · · · ·			Tail	75.87		О,		5.45	E)	10.61
_										_								

Table 18 Flotation Test Results of Rakah Stockwork Ore - Effect of pH value on bulk flotation -

IBUTION Fe S	0.00 5.00 2.12 2.29	0.00 100.00 4.96 85.49 2.66 3.13 2.38 11.38	0.00 100.00 2.31 84.82 2.43 3.11 5.26 12.07	0.00 100.00 1.06 84.98 3.90 5.61 5.04 9.42	0.00 100.00 8.13 82.98 4.32 7.66 7.55 9.37
DISTR %	00 3-1 00 7-0 7-0 5	100.00 93.28 1.86 4.86	100.00 100 91.55 4 2.07 6.38 5	100 00 10 90.41 4 3.24 4 6.35 5	100.00 10 92.48 3 2.62 4.89
23%	33.74 33.74 0.67	10.28 35.72 14.04 1.60	10.27 36.64 16.30 1.67	9.80 37.00 17.99 1.24	9.62 38.37 26.31 1.18
ASSAY Fe	20.15 35.17 20.85 14.67	20.20 36.93 23.49 14.47	19.98 35.54 24.74 14.87	19.77 36.05 25.25 14.62	19.89 30.44 14.98
D %	1.22 1.137 0.08	0.088 0.088	1.28 1.35 0.11	1.29 5.18 1.37 0.11	1.25 5.55 1.17 0.08
WEIGHT	10 2	100 00 24 59 2 29 73 12	100.00 23.78 1.96 74.25	100.00 22.51 3.05 74.43	100.00 20.81 2.80 76.39
PROD	C. Head C-1 C-2 Tail	C. Head C-1 C-2 Tail	C. Head C-1 C-2 Tail	C. Head C-1 C-2 Tail	C.Head C-1 C-2 Tail
P.H.	44	7.7	7.7	88 .5	10.0
Intia	6.4 9.7	7.0	8.0	9.8 8.6	10.8
50	<del></del>				
AF	0 co	27.9	27.9	27.9	27.9
NO X AF	25 27.9 5 9.3	25 27.9 5 9.3		, ,	
CONDITIONS Lime KAX AF	H2SO4 25 27.9	22 0	5 27. 5 9.	5 27. 5 9.	5 27.
CONDITIONS STEMP Lime KAX AF	28 701 25 27.9 5 9.3	25 27. 55 9.	0 25 27. 5 9.	25 27. 5 9.	25 27. 5 9.
CONDITIONS STEMP Lime KAX AF	28 701 25 27.9 5 9.3	7 420 25 27. 5 9.	6 740 25 27. 5 9.	6 1000 25 27. 5 9.	2000 25 27.
CONDITIONS D.SizeTemp Lime KAX AF	50 35 50 28 701 25 27.9 5 9.3	0 27 420 25 27.	0 26 740 25 27. 5 9.	0 26 1000 25 27. 5 9.	0 27 2000 25 27.
CONDITIONS SizeTemp Lime KAX AF	9 60 10 35 50 28 701 25 27.9 5 9.3	9 60 10 35 50 27 420 25 27. 5	10 35 50 26 740 25 27. 5	9 60 10 35 50 26 1000 25 27. 5	10 35 50 27 2000 25 27. 5
CONDITIONS D.SizeTemp Lime KAX AF	50 35 50 28 701 25 27.9 5 9.3	60 35 50 27 420 25 27.	9 60 0 35 50 26 740 25 27. 5	9 60 0 35 50 26 1000 25 27. 5	9 60 0 35 50 27 2000 25 27. 5

Table 19 Flotation Test Results of Rakah Stockwork Ore - Recovery as a function of flotation time on bulk flotation varying KAX dosage -

TES	I OPER	,				COND	ITIONS			ı	PROD	WEIGHT		ASSAY		IO	UTI	ON
NO.	ATION	Time min.	ت ت%	S128 %	Ten Cap	Lime g/T	KAX g/T	AF55 8/T	p IntialF	H Final	(C)	%	n%	Fe %	ω%	% %	ч. % ө. %	∾ <i>%</i>
	IND	G)	09								C.Head		1.25	8	•		100.00	100.00
32	CHE	<u>ე</u> ო	ည	20 0	2.7	2000		2.0	0.0	0.0		20.81	5.55 -7	36.44 30.70	38.37 26.31	92.48	38.13 4.32	82.68 7.65
							)	,	•		Tail	.: .	• •	O)			57.55	9.37
	GRINDI	ۍ د	80								C. Head			9.1	တ		100.00	
58		07	င္သ	50	32		က	27.9	0.0	თ თ დ დ	1,1	23.33	5.21	33.71 25.10	35.92	93.70	41.06	87.67 4.32
	, E	207				200	) KÖ	18.6			ာ ပ			20	C.		2.01	
										· · · ·	Tail	72.57	•	4.2	<u>.</u>		53.83	
	_																	

table 20 Flotation Test Results of Rakah Stockwork Ore Effect of pH value and KAX dosage on bulk rougher/cleaner flotation -

8	500 500 500 500 500 500 500 500 500 500	900.00 54.96 54.96 40.29 5.05	000 000 38.00 57.64 29.24 4.01 4.01	000000 34.30 61.31 4.83 4.87
BUTION	0 8 4 4 0 8 H	00 100 114 114 25 25	100 100 100 100 100 100 100 100 100 100	925520 9255300 9355300
ISTRIB Fe	100 225 23 100 50	100 200 4 380 4 380 4	100 221 23 33 33	100 000 004 000 000 000 000 000 000 000
Gu D	100 97.19 88.60 8.58 85.10 2.50 2.50	100.00 887.89 87.89 82.13 3.71 871	100.00 87.83 87.93 76.82 11.12	100 82.00 14.11 79.50 3.41
v.%	9.71 29.39 42.51 20.57 33.57 0.68	9.53 41.54 42.33 96.20 0.70	9.79 38.86 22.69 39.46 0.60	27.96 40.70 40.70 40.70 60.55
ASSAY Fe	19.27 31.17 26.78 33.67 13.97	22.22 24.24 38.54 24.54 34.54 14.0 24.54	15.62 34.23 28.65 34.04 35.04	1932.62 332.62 331.54 35.04 14.07
5% 2%	0.0800000000000000000000000000000000000	1600040 2700040 4004066	13.23 11.22 11.22 13.05 0.06	1.25 4.10 12.62 0.83 14.18 3.21 0.06
жетент %	100.00 30.82 13.24 17.58 12.16 1.08 69.18	100.00 31.46 12.54 18.92 10.96 68.54	100.00 34.52 9.66 24.87 7.25 7.25 65.48	100.00 29.31 8.14 21.17 6.98 70.69
PROD	C. Head R-C 1C-C 1C-M Conc 2C-M Tail	C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	C C C C C C C C C C C C C C C C C C C	CC 2C 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
H Final	10 10 10 . 2	10.0 11.2 11.0	10.3 12.0	10.6 11.9 12.1
Intial	10.0 10.0 10.2 10.4	0.01 11.1 4.1 4.2	10.6 12.2 12.1	10.8 12.2 12.0
AF65 8/T	<b>92</b>	65.1	74.4	 
ITIONS KAX 8/T	্ ন ক হ	45 1.4	1.4	1.4
COND Lime	2600 250 50	2740 600 100	2660 1600 350	2440 1400 450
e Temp	31 26 26	31 26 27	32 27 28	32 27 27
\$12	90	90 80 80	5.0 9.0	9 2 0 0 2
₽ 0.%	080 177 177	950 113 13	860 113 11	60 35 12 19
Time	004 R4	യറ്ഷ സ്ക	30.9	ର ଉଚ୍ଚ ଦ4
T OPER ATION	GRINDING ROUGHER REGRIND- ICLEANER 2CLEANER	GRINDING ROUGHER REGRIND- ICLEANER 2CLEANER	GRINDING ROUGHER REGRIND- ING 1CLEANER 2CLEANER	GRINDING ROUGHER REGRIND- ING 1CLEANER 2CLEANER
TES1	က္	_ A58_	6.1	62

Table 21 Flotation Test Results of Rakah Massive Ore - Preliminary tests on copper selective flotation -

TEST   OPER   Name   Descriptions   Name   Descriptions   Descri										-									
CHAINN There Designation Line KAX Are for this pline 1 UCIS	SS	OPE					COND	ITION				R0	E I GH		SSA		DI	TRIBUTI	
SCAW'RE   5   50   60   28   11100   200   46 4   11   11   10   6   6   6   6   6   6   6   6   6	0	ATION	E L	$\Box > c$	126	Te∏ a	Li 8/	KA 8/8	F6 /T	tial	na	ដ	%	1	۳% % و	w %		F.e.	!!
Chicago   Control   Cont		RINDING OUGHER CAV'ER1 CAV'ER2 CAV'ER3	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				10 25 25 25	0	i	0HH 	000	CC H CC - 1 C - 2 CC - 4 CC - 4	4 2 2 3 3 4 8 3 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	024820	3.00.2 3.00.1 3.00.2		00 0 23.4 8.6 7.1 9.7	00 4 00 2 2 2 0 00 2 2 2 2 2 2 2 2 2 2 2 2 2	
GRINDING 16 50 94 27 14850 200 69.6 11.1 C. Head 100.00 1.66 36.49 100.00 100.00 1.00 1.00 1.00 1.00 1.00		RINDING COUTHER CAV'ERI CAV'ERZ CAV'ERZ	00000				2 2 2 2 5 5 5	0 2	დ <del>-</del> ი	 	000	H C - 1 C - 2 C - 3 C - 3	000 841 554 600 1000 1000 1000 1000	ယတ္တက္မတ	900100		10.00 10.03 10.34 11.30 13.00	21 25 25 43 25 43 45 45 45	
GRINDING 16 50 94 29 5625 200 46.4 11.0 6-1 30.96 1.54 44.23 49.49 29.29 36.84 36.8	65	RINDIN CAV'ER CAV'ER CAV'ER	10 10 10 10			7	485 255 255	ဝ ဂ	o . ⊢.c		000	T 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	000.0 27.7 24.9 2.7 14.0 50.4	က်လူလူထင္ကမ	4.740 81.1 4.740 81.1		00.00 21.78 10.65 6.52 17.24	100 32.5 15.8 43.2	
		RINDIN OUGHER CAV'ER CAV'ER				6	250 562 25 25 25	0 2	9 11	1.2	00	. Hea C-1 C-3 C-3	000 300 44.3 14.3 14.3 14.3	1200H2	7.7.2.2.2.2.2.0.0.0.0.0.0.0.0.0.0.0.0.0.	11-21 € 12 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	00 00 0 29 2 2 9 2 2 9 2 1 2 2 9 2 1 2 2 9 2 1 2 2 9 3 5 5 8 8 3 5 5 8 8 9 5 6 9 6 9 6 9 6 9 6 9 6 9 6 9 6 9 6 9	000 000 000 000 000 000 000 000 000 00	3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

Table 22 Flotation Test Results of Rakah Massive Ore - Effect of feed size on copper selective flotation -

DISTRIBUTION	% % % % % % % % % % % % % % % % % % %	70.00 100.00 100.00 37.62 19.44 20.17 9.21 6.24 6.06 11.67 13.17 13.40 11.50 51.15 60.35	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	00.00 100.00 100.00 45.06 25.52 26.38 10.01 8.60 8.30 12.32 23.43 23.14 32.60 42.45 42.18	00.00 100.00 100.00 44.20 24.67 24.83 12.66 8.27 8.15 15.89 29.48 29.57 27.25 37.58 37.45
ASSAY	% % % %	36.36 42.09 10 39.83 47.85 3 40.31 45.28 40.55 47.77 1 34.31 39.20 4	36.21 41.87 1 41.75 47.29 40.07 45.73 41.87 47.98 32.27 37.87	36.09 41.61 10 40.91 47.79 39.83 45.17 41.75 48.14 31.91 36.60	35.86 41.16 1( 40.07 47.53 40.67 45.08 41.99 47.59 30.71 35.02	36.45 42.41 10 41.51 48.62 4 41.39 47.49 42.95 50.12 29.75 34.50
	3%	1.61 3.41 1.53 1.03	2.30 2.46 1.23	1.73 3.06 2.32 1.17 1.16	1.67 3.30 2.21 1.03 1.10	1.62 1.82 1.03 1.03 0.98
WEIGHT	%	100.00 17.75 5.63 11.81 84.81	100.00 22.01 6.25 14.23 57.52	100.00 25.26 7.52 13.35 53.86	d 100.00 22.84 7.58 20.01 49.57	d 100.00 21.66 7.28 25.02 46.04
PROD	5	C. Hea C-1 C-3 Tail	СС ПССС 1132 1111	C. Hea C-1 C-2 C-3 Tail	C. Hea C-1 C-3 Iail	C. Heac C-1 C-2 T-3 Tail
H.	IntialFinal	11.2 10.8	11.2 10.2 11.3- 10.8	11.2 11.3- 10.8 11.0-8	11.2 11.3- 10.8 10.8	11.2 10.8 11.2 10.8
\( \frac{1}{2} \)	8/T	46.4 11.6 34.8	4-1-60 4-1-4-4-6-6-4-6-6-6-6-6-6-6-6-6-6-6-6-6-	46.4 11.6 23.2	34.8 23.2 23.2	34.8 34.8 34.8
TI	RAA 8/T	150	150	150	150	150
COND	8/1 8/	. 53 S	ເກ ເກ	. LD LD	വവ	மம
COND	1 8/1 8/	7500 1175 150 500 5	7500 1075 250 500 5	7500 1250 500 5	8750 800 500 250	0000 1175 250 500 5
COND	% C 8/1 8/	17500 1175 250 500 5	17500 1075 250 500 5	17500 1250 500 5	18750 8 800 500 250 5	20000- 20000- 1175-15 250 500-5
COND GIP N Strong 1 mo	. % % % C 8/1 8/	50 50 28 17500 15 15 250 5	50 60 29 1075 15 250 50 550 5	50 70 29 1250 15 500 5	50 80 28 800 15 500 550 5	4 32 20000 15 250 5
COND COND	% % C 8/1 8/	64.5 50 50 28 17500 15 15 15 15 15 15 10 20 50 50 50 500 5	0 60 29 17500 250 500 5	0 70 29 17500 15 0 70 29 1250 15 500 5	11 50 80 28 800 15 500 15 500 15 500 500 500 500 500	16 50 94 32 2000 10 20 94 32 1175 15 1 10 500 5
COND COND	nilon limer.D.Sizelemp Lime An min. % % °C g/I g/	4.5 50 28 17500 10 20 50 28 1175 15 10 50 50 500 5	6.5 50 60 29 17500 15 15 10 10 10 250 500 5	8.5 50 17500 15 10 20 70 29 1250 15 10 500 5	1 50 80 28 800 15 0 20 80 28 800 15 0 250 5	6 50 0 20 84 32 1175 15 0 550 5

Table 23 Flotation Test Results of Rakah Massive Ore - Effect of KAX dosage on copper selective flotation -

		0 8 8 4 7 9 0 7 4 5 4 6	00 83 15 45	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11 11 12 12 13 13 14 15 15 16 16 16 16 16 16 16 16 16 16 16 16 16
ON	N 96	30 300	100. 24. 8. 29. 37.	100. 11. 5. 56.	100. 3. 79.
UTI		0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	67 2.27 5.8	00 852 151 151	002 003 003
ISTR		100 350 370 370	100 24 28 29 37	100 100 53 22	100 3 7 7 7 7
	<u>3</u> %	00 00 29.29 9.18 7.27 7.27 36.85	12.66 17.25 27.25	00.00 30.24 12.57 7.05 31.78	00 10 00 10 00 10 10 10 10 10 10 10 10 1
-		U 00 6 7 80 80	1 2 5 2 0		E 1 2 4 9 1 1
	ω%	444446 406-000 040000	4.24 2.05 4.05 4.05 4.05 1.05	44446 402288 907088	24444 200.444 200.100.1
SSAY		7.1.7 2.4.23 0.75 0.05	67 - 20 - 20 - 20 - 20 - 20 - 20 - 20 - 2	32 - 79 - 79 - 79 - 79 - 79 - 79 - 79 - 7	6.00 6.00 7.7.00 7.7.00 7.7.00 7.7.00
480		644446 644446	24440 84440	HO0H76	900000 000000
	3%	ш. 	0 1 2 3 B		□44440 05000
CHI	1	8 8 8 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 . 6 6 7 . 2 8 5 . 0 2 6 . 0 4	00 100 83 83	. 64 4.9 4.9
1 E		001 300	10 2	100 99 193 61	100 3 3 8 8 8
RO	UCTS	C. Head C-1 C-3 C-4 Tall	C. Head C-1 C-2 C-3 Tail	C. Head C-1 C-2 C-3 C-4 Tail	C C C C C C C C C C C C C C C C C C C
	inal	10.8 10.9	10.8	10.8	10.8
	pH ialF	07	4.2	20	. 2
	Int		H H		,
	AF65 g/T	46.4 11.6 11.6	34.8 34.8	46.4 11.6 23.2	23.2 23.2 23.2
SNOILI	KAX g/T	200	150	100	100
COND		25500 2500 250 250 250	1175 1175 250 500	7500 700 250 250	0000 900 250 500
	emp Co	7 53	32 24	78 7	27 20
	12e] %	ი 4	94	9.4 4.	න ග
	.D.S	200	20	20	20 20 20
	д	00550 00550	100 100 100	20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	င္တဝကက <b>္</b>
	- part - part			1 Control of the c	1
24	L E	ERN BRZ 322	ERNG ERNG ERNG	ER2 ER3	ERRI ERRI SR21
PF	T.E	NNNNN 32m G	Z2040404	*****	<b>22200</b>

Table 24 Flotation Test Results of Rakah Massive Ore

TES No.	T OPER ATION	Time!	eP.D.SizeTe	S12e %	Temp	CONDI	DITIONS KAX K/T	AF65	pH IntialFin	H Final	PROD	WEIGHT	Au g/t	A S E/t	ASSAY Cu	т. 9 %	s %	Au %	A %	SIRIBUTIO Cu	ON Fe	w %
74	GRINDING ROUGHER SCAVEN- GER	1070	20	ಕ್ ರ	28	O P	100 50	69.6 23.2	 8 8	ထထ	C. Head C-1 C-2 C-2	100.00 40.80 39.24 19.96		6.52 5.07 4.10 14.23	1.64 1.14 1.85	37.00 42.05 43.05 14.77	41.86 48.27 48.57 15.56	100.00 47.71 42.07 10.22	100.00 31.74 24.68 43.58	100.00 50.10 27.33 22.56	100.00 46.37 45.56	100.00 47.05 45.53
- A62-	GRINDIN ROUGHER SCAVEN- GE	G 16 20 10 R	50 20	34	29	17500	100	11.6	၉ဝ တော	O 69	C. Head C-1 C-2 Tail	100.00 13.78 11.48 74.73	10.28 13.44 16.12 8.80	4.23 7.00 3.38	1.62 3.54 0.99	36.67 40.30 35.67	42.02 43.40 46.01 41.15	100.00 18.02 18.01 63.97	100.00 21.23 19.01 59.75	100.00 29.44 25.02 45.54	100.00 14.68 12.62 72.70	100.00 14.24 12.57 73.19
18	GRINDING ROUGHER SCAV'ER1 SCAV'ER2	5 18 10 10 10	20 20	94	31	20000	100	46.4 11.6 23.2	10.4 10.2	10.3 10.2 10.0	C. Head C-1 C-2 C-3 Tail	100.00 18.09 4.66 17.29 59.97	13.77 12.88 7.87	7.90 5.89 6.09 3.16 10.02	1.65 1.23 0.97 0.97	35 40 31 32 40 31 32 42	42.76 47.77 47.63 50.60 38.61	100.00 26.28 6.34 17.59 49.80	100.00 13.48 3.59 6.91 75.02	100.00 41.96 9.29 13.51 35.24	100.00 19.99 5.25 20.50 54.27	100 00 20 20 5 18 26 46 54 15
72	GRINDING ROUGHER SCAV'ERI SCAV'ER2	9000 1000 1000	20 20	94	28	17500 700 500	100	46.4 11.6 23.2	11.0	10.9	C.Head C-1 C-2 C-3 Tail	100.00 9.97 8.71 19.50 61.83	10.60 18.38 14.71 10.93	2.35 4.65 2.58 4.81 8.81 8.81	1.61 3.64 1.52 0.83	35.74 399.79 33.79 33.78	41.91 45.70 38.45	100.00 17.27 12.08 20.10 50.55	100.00 18.82 16.55 20.33 44.29	100.00 30.24 19.63 18.36 31.78	100.00 10.85 9.48 22.51 57.15	100.00 11.10 9.53 22.65 56.72

S d L	d C					COND	SKULLI				PPON	THULEN			ASSAV				10	STRIBUTIO	NO	
No.	ATION	Time min.	л О%	S12e %	Ten C	Lime 8/T	1 P 3 5 0 8 / I	AF65 g/T	pH ntialF	ınal	UCTS	%	Au g/t	A.g.	2%	ъ. 9%	ω%	Au %		5% 5%	9.%	S %
77	CRINDING ROUGHER SCAVEN- GER	7000	200 200	46	53	15000 575	153.3 51.1	34.6 8.8	6.c	7.7	7. Head C-1 C-2 Tall	100.00 44.74 34.77 20.49	11.67 14.08 11.31 7.04	4.48 3.86 2.65 8.93	1.56 1.12 1.74	36.60 41.55 42.43 15.89	42.07 48.22 48.93 16.89	100.00 53.96 33.68 12.36	100.00 38.57 20.58 40.86	100.00 55.03 23.48 21.49	100,00 50,80 40.31 8,90	100.00 51.29 40.48 8.23
.82	GRINDING ROUGHER SCAVEN- GER	3 16 20 10	50	94	28	15000 1975 125	153.3 51.1	69.6 46.4	හ හ ඇ හ	0: 0: 1: 6: 6:	C. Head C-1 C-2 Tall	100.00 18.54 19.19 62.28	10.09 13.77 13.77 13.77	4 30 6 74 6 09 3.51	1.63 2.28 2.37 1.21	36.50 41.67 41.93 33.29	43.77 49.67 51.06 39.77	100.00 25.30 26.19 48.51	100.00 20.46 27.20 52.34	100.00 25.92 27.88 46.20	100.00 21.15 22.04 56.80	100.00 21.04 22.38 56.58
7.9	GRINDING ROUGHER SCAVEN- GER	G 15 20 10 R	5.0 2.0	94	28	17590 800 376	153.3 51.1	46.4	10.2	9.9 10.1	C-1 C-1 C-2 Tail	106.00 20.93 9.15 69.93	10.80 17.41 11.99 8.67	3.64 6.09 5.19 2.71	3.72 2.34 0.94	35.86 38.80 40.17 34.42	43.38 47.83 47.76 41.48	100.00 33.73 10.15 56.12	100.00 34.97 13.03 52.00	100.00 47.18 12.97 39.84	100.00 22.64 10.24 87.12	100.00 23.07 10.07 66.86
08	GRINDING ROUGHER SCAVEN- GER	16 20 10	20	94	29	20000 1625 250	153.3 51.1	46.4	11.2	11.1	7. Head C-1 C-2 Tail	100.00 22.24 7.57 70.19	10.70 17.82 13.20 8.18	4.35 7.67 5.64 3.16	1.63 3.72 2.36 0.89	36.32 39.30 40.55 34.92	43.79 48.29 48.36 41.87	100.00 37.02 9.34 53.64	100 00 39 20 9 82 50 98	100.00 50.73 10.96 38.31	100.00 24.06 8.46 67.48	100.00 24.52 8.36 67.11
81	GRINDING ROUGHER SCAV'ERI SCAV'ERI	9000	20	94	31	20000 1075 250 500	102.2 51.1	34.8 34.8	11.4	10.8 11.2	T 000 H BB B	100.00 11.99 8.30 7.3.13	6.53 11.68 6.66 4.29	2.98 5.83 8.628 1.89	1.62 4.67 3.10 2.40 0.90	000000 000004 000000 000000 000000		100.00 31.93 11.25 8.75 48.06	100.00 27.88 12.44 13.30 46.38	100.00 34.57 12.07 12.71 40.64	100.00 12.95 6.91 70.76	

Table 26 Flotation lest Results of Rakah Massive Ore - Effect of AP3418 on copper selective flotation varying pH value -

× %	0 100.00 2 57.84 0 29.30 8 12.86	0 100.00 8 32.40 1 20.65 1 46.95	0 100.00 1 19.26 7 12.36 2 68.38	0 100.00 1 31.66 8 11.76 1 56.58	0 7 5 7
TON Fe	100.0 57.9 28.8 13.2	100.0 32.2 20.5 47.2	100.0 19.8 12.6 67.5	100,00 31,01 11,58 57,41	100 0 15 6 7 0 8 7
STRIBUT Cu	100 00 54.07 21.81 24.12	100.00 44.13 25.01 30.87	100.00 40.53 17.51 41.95	100.00 53.81 11.96 34.23	100.00 38.76 11.11 38.75
D1 %	100.00 43.05 18.50 38.44	100.00 33.32 22.66 44.03	100.00 25.37 15.06 59.57	100.00 31.28 9.34 59.38	100.00 24.56 10.78 13.42 51.24
, A	100.00 56.69 28.45 14.86	100.00 31.12 22.15 46.73	100.00 29.70 14.17 56.13	100.00 41.91 11.27 46.82	100.00 17.21 8.03 6.62 6.62
8%	42.22 48.68 48.41 22.35	41 96 48 44 48 30 36 49	41.98 45.45 46.18	42.39 48.74 48.50 38.57	
n %	36 85 41 55 20 15	36.35 41.80 41.55 31.79	35.40 39.42 39.92 33.67	35.79 40.30 33.04	25.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00
ASSAY Cu	1.65 1.78 1.41 1.64	1.40 2.20 1.95 0.80	1.62 3.70 2.53 0.95	1.62 1.88 0.89	1.63 2.22 2.12 0.90 9.00
A A C	3.65 2.65 5.79	3.34 2.48	2.69 3.84 3.61 2.5	4.51 4.51	2.83 4.83 2.41 10
Au g/t	10.90 12.32 12.14 6.67	10.28 11.40 12.69 8.90	10.43 17.42 13.16 8.25	11.08 15.86 12.14 8.34	10.23 10.23 10.88 15.58 14.4
WEIGHT	100.00 50.16 25.55 24.29	100.00 28.07 17.94 53.99	106.00 17.79 11.24 70.98	100.00 27.53 10.28 62.18	100.00 14.63 6.42 8.75 70.20
PROD	C.Read C-1 C-2 Tail	C. Head C-1 C-2 Tail	C. Head C-1 C-2 Tail	C.Head C-1 C-2 Tail	C. Head C-1 C-2 C-3 Tail
pH 1Final	7.6	80 80 6. 60	න හ න හ	11.0	10.8
Intia	7.4	9.4	10.2 10.4	11.2	11.4
AF65 8/T	46.4	58 23.2	58 23.2	46.4 23.2	34.8 34.8 34.8
AP3418	154 48.3	154.6 48.3	154.6 48.3	154.6 48.3	106.3 48.3
CONDI P Lime A	15000 500	15000 1975 250	17500 1325 375	20000 1500 250	2000 800 250 250 250
e Temp	29	28	23	30	30
812	<b>4</b> 6	<b>5</b>	<b>7</b> 5	7-6	<b>\$</b>
meP.D		50	20	50 20	200
nin min	100 100 100 100 100	18 10 10	20 20 10 10	20 10 10	27 TO
T OPER ATION	GRINDIN ROUGHER SCAVEN- GE	GRINDIN ROUGHER SCAVEN- GE	GRINDIN ROUGHER SCAVEN- GE	GRINDING ROUGHER SCAVEN-	GRINDING ROUGHER SCAV'ERI SCAV'ERZ
N O N	82	ස ස	84	. 85 85	98

Table 27 Flotation Test Results of Rakah Massive Ore Sffect of AP404 on copper selective flotation varying pH value -

ES SS	T OPER					CONE	CONDITIONS			:	PROD	WEIGHT			ASSAY				IQ	STRIBUTI	NO	
20	ATION	TimeP min	C 8	S1267	Tego Ego	Lime g/T	AP404 8/T	AF65 8/T	pi Intial	pH IFinal	UCIS	%	Au g/t	1/8 8/1	2 %	e %	ω%	7°	æ% æ%	2%	₽.% ⊕.%	ω <i>%</i>
87	GRINDING ROUGHER SCAVEN- GER	18 20 10	20	4.6	29	15000	154.6 48.3	45.4 23.2	2.2	7.5	C. Head C-1 C-2 Tail	100.00 14.99 5.92 79.09	10.43 12.51 15.66 9.64	4.35 6.27 3.86	1.82 3.25 3.16 1.20	36.96 39.80 36.30	41.97 45.51 46.15	100.00 17.99 8.89 73.12	100.00 21.40 9.11 68.49	100.00 30.02 11.52 58.46	100.00 16.15 5.45 77.40	100.00 16.26 6.51 77.23
80 80	GRINDING ROUGHER SCAVEN- GER	22°C	200	ಕ 5	29 1	15000 1125 250	154.6 48.3	58 23.2	0.0 6.4	დდ დდ	H G-1 G-2 I a 1 1	100.00 11.27 7.62 81.11	11 71 14.83 17.33 10.75	3 6 63 3 8 7 3 8	400-1 640-7 744-1	36.68 39.67 35.30	4444 1460 4460 460	100.00 14.27 11.28 74.45	106.00 17.43 12.26 70.31	100.00 23.88 15.88 60.44	100,00 12,19 79,43	100.00 11.99 79.45
83	GRINDING ROUGHER SCAVEN- GER	16 10 10	200	94	32	20000 1425 500	154.6 48.3	46.4	11.2	10.8	Head C-1 C-2 Tail	100 00 14.28 77.95	11.60 17.42 17.72 19.92	2.45 4.96 4.29 1.81	1.61 4.34 3.67 0.90	37.05 38.92 39.92 36.42	41.39 44.64 46.07 41.10	100.00 21.44 11.91 68.65	100.00 28.88 13.58 57.53	100.00 38.59 17.74 43.67	100.00 15.00 8.37 75.53	190.00 15.18 8.52 76.30
30	GRINDING ROUGHER SCAV'ER1 SCAV'ER2	16 10 10 10	50	<b>7</b> 6	30 [2	20000 1375 250 375	106.3	34.8 23.2 23.2	11.4	0.8 11.0	C. Head C-1 C-2 C-3 Tail	100.00 4.78 2.16 5.27 87.79	5.40 17.10 13.53 11.16 4.22	3.47 5.883 3.51 3.15	1.60 3.97 5.61 1.17	35.45 37.20 35.77 38.39 35.17		100.00 15.13 5.42 10.88 68.58	100.00 6.66 3.67 9.89 79.78	100.00 12.16 5.35 18.43 64.06	100.00 5.01 2.18 5.71 87.10	

Table 28 Flotation lest Results of Rakah Massive Ore Recovery as a function of flotation time on copper selective flotation

DISTRIBUTION	Cu Fe S % % %	100.00 100.	0 3.60 9.	2 4.52 4.	8 6.62 6.	8 5.61 5.	00 '9 9	8 6.16 6.	4.59 11.75 11.72	8 30,45 30,5	1 19.29 19.
DI	A.8 %	100		4	4	ری		~	es.	7	60.3
	Au %					·-			5.38		
	۰,%								49.32		
	e %	35.74	38.03	37.19	38.87	40.07	39.83	40.91	42.59	43.55	23.04
ASSAY	°a %	1.63	4.89	5.05	3.67	2.57	1.78	1.33	0.76	0.45	0.89
:	1/8 1/8		7.35	•		•	2.73		2.10		12.01
	Au g/t	έØ	10.59	13	7		4.37	•	4.37		6.20
WEIGHT	%	100.00	9.02	4.34	60.9		5,38		9.86		
PROD	UCTS	C. Head	급 -	C-2	C-3	C-4	<u>ال</u>	ဖ ပ	ر-،	C-8	19.7
	pH IntialFinal		11.3			11.4- 10.8				11.0	
SN	AF65 8/I		0 34.8	11.6	0 23.2	0 23.2	0 23.2	0 11.6	0 11.5	0 34.8	
DITIONO	me KAX T g/T	0.0	00 10	00	50 2	50	20	00	50 2	30	
Ċ	Size Femp Li % C 8/	200	94 32 11	ري	~	2			2	ιc)	
	fimeP D	16 50	1.0 2.0	10	10	01	10	10	10	10	• .
	NO	DING	CHERL	~	ল	4	വ	S	F~	<b>c</b> 0	
OPER	AII	RIN	no								•

Table 29 Flotation Test Results of Rakah Massive Ore - Effect of feed size and pH value on bulk flotation -

able 30 Fiotation Test Results of Rakah Massive Ore

RISIO	S Au Ag Cu Fe S % % % % % %	.37 100.00 100.00 100.00 100.00	47.38 90.49 69.53 87.32 96.44 95.91	.01 34.99 25.02 38.24 31.59 33.	.12 55.50 44.51 49.08 64.84 63.	.18 15.42 13.22 18.19 12.64	63 40.08 31.29 30.89 52.20 51.	.61 17.74 12.60 24.23 11.55	25 17.25 12.42 14.01 20.04 20.	.33 10.91 6.75 15.99 5.47 5.	.87 6.83 5.85 8.24 6.08 6.	.32 9.51 30.47 12.68 3.56 3.
SAY	cu %	.60 36.	1.65 41.22	24 41.	37 40.	64 41.	07 40.	76 40.	32 42.	14 39.	47 41.	32
AS	AE C	4.45	3.66	4.07	3.46		3.01	5.43	3.25	6.03	4.87	8.81
	84 8/t	гO	1 5.50	w	**		4	∞	5.23	11.27	ဖ	ຕ
WEIGH	%	100.	84.61									
PROD	NCIS	C. Head	<u>ب</u>	ပ	z C	10S-C	ICS-I	2C-C	2C-1K	Conc	3C-3K	Iail
	5   pH IntialFinal		8 9.1 8.8			2   12.2   12.0	6 12.0 12.0	12.3 12.3	12.3 12.3	-		
SNOI	AX AF6 /T E/T		300 127.			4 23.	4 11				-	
CONDIT	Lime K g/T g	15000	4375	-		44.75		30.00	2000			
	zelenp % °C	:	5			53		26	26			
	).S12 %		70			260				<u>-</u>		
	ineP.L	5 5(	30 2(			~	01	ريا د	٠, ح			
OPER	ATION T	GRINDINGS.	ROUGHER	REGRIND-	בים	1CL EANER	ICL-SCAV 1	2 CL EANER	3CL EANER	:		
IES I	No.		68		-		96					

Table 31 Flotation Test Results of Hayl as Safil Ore and Rakah Stockwork Ore - Scalp rougher/cleaner flotation -

000		~~	: CO 'C	T) (O)	$r \sim c c$	~ ~	*** C	10 C	m m	3.40 0.94	. O M W	2 2	4.ru ⊢i q	ស្រុ	ກຸຕຸ	m> 44	ြင	) <del>- 1</del> 0	JAK	100		0.00 100 100 100 100 100 100 100 100 100
NOI		(5)			, , ,		ļ			ļ <u>.</u>	111		40			~	1	ļ	ļ	) to c		
SIRIBUT Fe	0.0	30.9	2.5	ນ ເບ ວ 44	∾ –	80 6	ထင	co. 4.	w 0	2.60		-	22.28	7.	ა. 4.დ	200	3.6	3	2.84	2.51	2 2	88 89 80 80 81 81 81 81 81
DJ %	9.	1.7	°.	4,70	ကတ	0.4	∞ ~	3.5	38	15.55 2.48	0146		95.04	r-t (	0.7 0.0	20.4	(C) C	11.	10 r	27.12		100 100 100 100 100 100
8%	8	9.0	4.	⊃ ധ 4. ഗ	7.3	60	1 2 8	<b>—</b> —	2.5	42.35	000	, 6	28.44	C	8 S	7.7		200	່ຕຸແ	) (c) 4		25.84 8.12
(r. %	6.1	33.0	٠. د	25	v	200	കര	4 2 6 7	3.5	33.25	044		30.16	0.4	20 20	0 0	000	- O t	-coπ o.eq.α	ာတင ကေ		18.45 80.45
ASSAY Cu		∞⊸	တ	သမ	OC	ω~	0 4 5 2	1.5	2.8	13.98 8.50	ເມດເ	، ر	7 94	י פיז פ	7 0 0 7	ယမ	200	1 co -	-رد، α	) Q 4	, ,	4.0 0.13 0.12
Ag 97+			17.16		3.97					15.07				6.49	. Je	3.71				6.95		000
Au 9/4			3.10		1.14					2.57				4.62		1.68				3.58	. <	200
WEIGHT	100.0	15.0	2.9	ئے نی	0.	1-15	(O 4	ဝဖ	3	1.26	2-14		4.0 4.0	2.7	00	TO IC	4 -		າໝາ	100	4 6	92.22 93.22 93.22
82	िल	0	7	جن	$\circ$	جب	حب	ပ <sub>ဲ</sub> ဆ		° 2 3€	ပသ I	l - c	9 I	1.0	ڃ∵	ပႌ	≠ن	(ပ <b>×</b>	, בט	, Z	2 :	י⊨ אַכ
PRO UCT	=	+04	F C	32	SS	202	000	ಉಲ	(0,0	50	무료	4	· 02	: O:		0	100	500	2020	200	); F	
PR	C.H.	24.7	! F\$10	100	2.8 1CS 2.8 1CS	202	8. 30. 30.	ಉಲ	2.8 50	2.8 Con		<u></u>	10.4 R. R.	: O:		2.9 10	100	1 es e	2020	2.7 Conc	200	3-2- <u>-</u> 2
n u u	C. H	1.2 R,R R-	1.1 Con	100	2.8 12.8 1CS 2.8 12.8 1CS	202 202 202 203	2.8 12.8 3C	ಉಲ	2.9 12.8 50	2.8 12.8 Con 2.8 12.9 6C	22.8 22.8 111L		4. 7.05	0.5	-	2.8 12.9 10 2.9 12.8 10	222	)	2020	2.8 12.7 Conc	2.8 12.8	2.8 2.8 111.
PR PR CUC	D H.	1.8 11.2 R.R	1.6 11.1 Con	100	2.8 12.8 1CS 2.8 12.8 1CS	2.8 12.8 20 2.8 12.8 20	2.8 12.8 3C	ಉಲ	.3 12.9 12.8 5C	2.8 12.8 Con 2.8 12.9 6C	2.8 12.8 III. 2.8 12.8 III. 2.8 12.8 III.		0.8 10.4 R.	.0 10.5 Ca	-	2.8 12.9 10 2.9 12.8 10	2 9 12 9 2	)	2020	2.8 12.7 Conc	12.8	2.9 12.8 TIL 2.8 12.8 TIL
ITIONS FEET PH DR COL OF AFES THE PR	3501 C.H	KAX RAX RAX	10 32.6 11.6 11.1 Con	30	2.8 12.8 1CS 2.8 12.8 1CS	12.8 12.8 20 12.8 12.8 20	2.8 12.8 3C	ಉಲ	.3 12.9 12.8 5C	.7 12.8 12.8 Con	12.8 12.8 11L 12.9 12.8 11L 12.8 11L		.6 10.8 10.4 R;	10 37.2 11.0 10.5 0	-	2.8 12.9 10 2.9 12.8 10	2 9 12 9 2	)	2020	1 4.7 12.8 12.7 Conc	12.8	2.9 12.8 TIL 2.8 12.8 TIL
TIONS PROJECT PROJECT DE UC	000 AP3501 C.H	KAX RAX RAX	10 32.6 11.6 11.1 Con	E LO	00 12.8 108 00 00 00 00 00 00 00 00 00 00 00 00 0	12.8 12.8 20 00 12.8 12.8 20	2.8 12.8 3C	ROTH	200 KAX 9.3 12.9 12.8 50	00 12.8 12.8 CON 12.8 L2.9 6C	12.8 12.8 11L 12.9 12.8 11L 12.8 11L		40.9 18.6 10.8 10.4 R.	10 37.2 11.0 10.5 0	ROTH	12.8 12.9 10	500	000	ROTH VAV	1 4.7 12.8 12.7 Conc	12.8 12.8	2.9 12.8 TIL 2.8 12.8 TIL
CONDITIONS  Temp Line col on AF65   PR UC	2000 AP3501	030 46.7 27.9 11.8 11.2 R.R.	75 10 32.6 11.6 11.1 Con	ER FROTH	25 2000 12.8 12.8 10S 25 400 12.8 12.8 1CS	12.8 12.8 20 00 12.8 12.8 20	4 600 12.8 12.8 3C	SR FROTH	6 200 KAX 9.3 12.9 12.8 50	5 700 4.7 12.8 12.8 Con	000 000 000 000 000 000 000 000 000 00		520 40.9 18.6 10.8 10.4 R.	50 10 37.2 11.0 10.5 C	ER FROTH	25 1900 12.8 12.9 10 24 100 12.9 10	500	1000	ER FROTH	00 12.7 12.8 12.7 Conc	4 800	12.9 12.8 17L
CONDITIONS FEET PH UC.	2000 AP3501	80 31 1030 46.7 27.9 11.8 11.2 R.R.	75 10 32.6 11.6 11.1 Con	ROUGER FROTH	25 2000 12.8 12.8 10S 25 400 12.8 12.8 10S	5 800 12.8 12.8 2C 2C 800 12.8 2C	4 600 12.8 12.8 3C	ROUG'ER FROTH	26 200 KAX 9.3 12.9 12.8 5C	5 700 4.7 12.8 12.8 Con	5 400 12.8 12.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17		80 30 1620 40.9 18.6 10.8 10.4 R.	50 10 37.2 11.0 10.5 C	ROUG ER FROIH	25 1900 12.8 12.9 10 24 100 12.9 10	3 500	1000	ROUG'ER FROTH AC	5 200 M1 4.7 12.8 12.7 Conc	4 800	4 400 12:9 12:9 12:0 11:0 4 400 12:0 12:0 12:0 12:0 12:0 12:0 12:0 12
CONDITIONS PR PR Line color AF65 PH UC	6 60 2000 AP3501 C.H	0 35 80 31 1030 46.7 27.9 11.8 11.2 R.R.	0 375 10 32.6 11.6 11.1 Con	FIST ROUGER FROTH	9 25 2000 12.8 12.8 10S	5 800 12.8 12.8 2C 2C 800 12.8 2C	24 600 1000 3C	F 2ND ROUG ER FROTH	5 26 200 KAX 9.3 12.9 12.8 5C	4.7 12.8 12.8 Con	25 400 12.8 12.8 12.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17		0 35 80 30 1620 40.9 18.6 10.8 10.4 R.	50 10 37.2 11.0 10.5 C	F IST ROUG'EN FROTH	25 1900 12.8 12.9 10 24 100 12.8 10	3 500	1000	F 2ND ROUG ER FROTH 4C-	25 200 1 4.7 12.8 12.7 Conc	24 800 12.8 12.9	4 400 12:9 12:9 12:0 11:0 4 400 12:0 12:0 12:0 12:0 12:0 12:0 12:0 12
TimeP.D.SizeTemp_Lime colon AF65 pH UC	NG 16 60 2000 AP3501	R 10 35 80 31 1030 46.7 27.9 11.8 11.2 R.R.	R- 20 375 10 32.6 11.6 11.1 Con	NG OF IST ROUGER FROTH	ER 9 12.8 12.8 108	ER 5 25 800 12.8 12.8 12.8 20 ER 5	ER 4 600 12.8 12.8 3C	G OF 2ND ROUG'ER FROTH	ER 15 26 200 KAX 9.3 12.9 12.8 5C	CA 10 4.7 12.8 12.8 Con ER 14	ER 3 25 400 12.8 12.8 12.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17	CO C	R 10 35 80 30 1620 40.9 18.6 10.8 10.4 R	R- 20 11.0 10.5 Cg	CO OF IST ROUGER FROTH	58 6 12.8 12.9 10 12.8 12.9 10 12.8 12.9 10 10 12.9 10 10 10 10 10 10 10 10 10 10 10 10 10	23 500 12 9 12 9 2 1	1000	NG OF 2ND ROUG'ER FROTH CAN	ER 15 25 200 11 4.7 12.8 12.7 Conc	EX 14 24 800 12.8 12.8 12.8 12.8 17.9 13.8 12.8 12.8 12.8 12.8 12.8 12.8 12.8 12	ER 3 24 400 12.8 12.8 17L
CONDITIONS CONDITIONS CONDITIONS The PR CONDITIONS COND	ING 16 60 2000 AP350.1	OUGHER 10 35 80 31 1030 46.7 27.9 11.8 11.2 R.R.	G.ER 20 375 10 32.6 11.6 11.1 Con	SOUND OF IST ROUGER FROTH	1-CL, ER 9 25 2000 12.8 12.8 108 2-CL, ER 7 25 400 12.8 12.8 108	-01, ER 5 24 800 12.8 12.8 12.8 20	R 4 12.8 12.8 3C	CANING OF 2ND ROUG ER FROTH	CL. ER 15 26 200 KAX 9.3 12.9 12.8 5C	CL-SCA 10 12.8 12.8 CD 4.7 12.8 12.8 CON 12.9 60	ER 3 25 400 12.8 12.8 12.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17		10 35 80 30 1620 RAY	1.ER 20 10.5 D	EANING OF IST ROUG'ER FROTH	-CL'ER 6 12.8 12.9 12.9 10 12.8 12.9 10 12.9 10 12.9 10 12 12 12 12 12 12 12 12 12 12 12 12 12	3-CL, ER 5	GRIND 3.5	CLEANING OF 2ND ROUG'ER FROTH XXX	-CL'ER 15 25 200 11 4.7 12.8 12.7 Conc.	-CL ER 14 24 800 12.8 12.8 12.8 12.8 12.8 12.8 12.8 12.8	ER 3 24 400 12.8 12.8 17L

Table 32 Flotation Test Results of Rakah Massive Ore – Effect of mixing ratio of Rakah massive ore on bulk flotation of composite ore –

	N %	-	100 81.83 3.583 3.883 8.883 8.883	100.00 84.26 3.09 6.01 5.63	100.00 91.30 1.21 5.13	100.00 89.74 1.39 1.48 7.39	100.00 82.75 1.78 2.04 13.44
Ä	Fe %	100.00 61.35 3.35 32.98	100 57.54 6.95 30.58	100.00 61.76 2.75 5.35 30.12	100-00 70-99 1-47 1-79 25-75	100.00 73.50 1.49 1.79 23.12	100.00 70.84 1.84 2.23 25.03
STRIBITION	ς Σπ	100.00 93.96 1.67 1.23 3.14	100.00 90.03 3.39 2.28 4.24	100.00 88.46 3.65 3.65 4.62	100 00 87.37 3.78 2.93 5.92	100.00 82.79 5.15 4.08 7.98	100 766.00 76.00 75.501 10.551
10	A 8		100.00 62.58 14.20 12.44 10.78	100.00 56.80 5.70 14.92 22.58	100.00 63.05 4.49 6.77 25.69	100.00 48.09 8.13 8.26 35.52	100.00 36.56 4.15 4.03 55.28
	Au %		100.00 77.95 10.03 6.05 5.26	100 74.59 4.59 10.92	100.00 79.40 3.07 3.71 13.81	100.00 81.18 2.85 3.08 12.89	100 00 76.52 3.13 3.13 17.20
	s.%		14.58 42.04 30.64 0.88	15.79 42.21 23.15 1.68	19.07 45.20 14.64 13.64 2.01	21.82 19.08 15.78 3.01	25.22 48.00 24.31 22.16 6.47
	#.%	17.03 35.29 21.40 15.64 8.61	17.66 35.79 29.03 22.03 8.51	18.34 35.92 23.92 24.40 8.86	20.51 197.80 19.02 18.90 9.11	22 85 39 30 21 28 20 02 9 86	24.65 40.17 24.53 11.81
ACCAV	5%	1.25 0.78 0.61 0.06	0.00 0.00 0.00 0.00 0.00	1.22 3.41 2.10 0.99 0.09	1.27 2.89 3.05 1.92 0.13	1.34 4.34 2.68 0.20	1.38 2.47 3.29 0.29
	A & 4		2.00 4.41 6.72 6.30 0.34	2.10 3.78 5.67 7.77	2.44 3.99 6.93 8.48 1.08	3.12 3.51 15.92 12.61 2.07	3.09 83.10 8.27 8.9 8.9
	Au g/t		0 0 0 0 0 0 0 0 0 0	1.48 3.51 3.22 3.65 0.26	1.80 3.51 3.51 0.44	3.28 5.23 5.87 4.94 0.79	2000
1 1 1		22.67 2.52 2.52	0 8 4 6 6 0 6 7 6 4 0 6 6 6 4	0.00 1.53 2.11 2.33	00000 00000 0000000000000000000000000	2 00 00 00 00 00 00 00 00 00 00 00 00 00	00.48 % 22.7 22.7
3	;	10	10	10 3	100 38 1 1	10 4 3	100
an uoa	;	C. Head 10 C-1 C-2 C-3 Tail 6	0.01	ဝက ဖ	တက က	೦.ಈ ಮ	⇔ <del> </del>
an uoa	H vcrs 5	Head 10 C-1 2 C-3 C-3 Tail 6	C.Head 10 C-1 C-2 11.1 C-3 11.1 Tail 6	C. Head 10 C-1 10.6 C-2 11.0 C-3 Tail 6	7 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Head 10 C-2 C-2 C-3 Tail 5	Tail 5
an uoa	inal UCIS	C. Head 10 0.6 G-2 1.1 C-3 1 Tail 6	C.Head 10 C-1 C-2 1.1 C-3 1.1 Tail 6	C.Head 10 C-1 30.6 C-2 1.0 C-3	C. Head 10 C-1 3 1.0 C-3 1.0 Tail 5	C.Head 10 C-1 4 0.8 C-2 0.8 C-3 Tail 5	C. Head 10 0.8 C-1 0.8 C-3 0.8 Tail 5
un un de	AP65 pH UCTS g/T IntialFinal	1.4 C. Head 10 1.4 10.6 G-2 1.1 C-3	11.4 C. Head 10 C-1 2 11.3 10.5 C-2 C-2 11.1 C-3	1.4 C.Head 10 1.4-10.6 C-1 11.0 C-3	1.4- 10.8 C-1 7-2 11.0 C-3 11.0 C-3	1.4 C.Head 10 1.2 10.8 C-2 1.2 10.8 C-3 10.8 C-3	1.4 C.Head 10 1.2-10.8 G-1 4 10.8 C-3 10.8 Tail 5
EN COAC	KAX AP65 pH UCTS 8/T g/T IntialFinal	7.2 11.4 C.Head 10 9.3 11.4-10.6 C-2 8.6 11.4-11.1 C-3	7.2 11.4 C.Head 10 5.3 11.3-10.5 C-1 8.6 11.1 C-3	7.2 11.4 C.Head 10 9.3 11.4- 10.6 C-2 8.5 11.4- 11.0 C-3	7.9 11.4 C. Head 10 9.3 11.4 10.8 C-2 8.6 11.0 C-3	7.9 11.4 C.Head 10 9.3 11.2 10.8 C-2 8.5 11.2 10.8 C-2 10.8 E-3	7.9 11.4 C. Head 10 9.3 11.2-10.8 C-1 4 8.6 11.2-10.8 C-3 10.8 C-3
UNA COAC	Lime KAX AP65 DH UCTS SZI SZI INTIANSI	5 37.2 11.4 C.Head 10 5 9.3 11.4- 10.6 C-1 2 5 18.6 11.1 C-3	5 37.2 11.4 C.Head 10 5 9.3 11.3 10.5 C-1 5 18.6 11.3 11.1 C-3	0 37.2 11.4 10.6 C-1 5 18.6 11.4 11.0 C-2 5 18.6 11.6 11.0 C-3	0 27.9 11.4 C.Head 10 5 9.3 11.4 10.8 C-2 5 18.6 11.0 C-3	10 27.9 11.4 C. Head 10 5 9.3 11.2 10.8 C-2 5 18.6 10.8 C-3	10 27.9 11.4 C. Head 10 4 5 18.6 11.2 10.8 C-1 4 5 18.6 11.2 10.8 C-2 7 10.8 C-3 1 10.8
aw doad	Ine KAX AP65 PH UCIS	200 35 37.2 11.4 C.Head 10 200 5 9.3 11.4 10.6 C-1 2 400 5 18.6 11.1 C-3	900 45 37.2 11.4 C.Head 10 200 5 9.3 11.3 10.5 C-1 200 5 18.6 11.3 10.5 C-2 1 13.6 11.1 C-3	820 50 37.2 11.4 0.6 C-1 3 200 5 18.6 11.4 11.0 C-2 C-3	240 80 27.9 11.4 C. Head 10 200 5 9.3 11.4 16.8 C-2 200 5 18.6 11.0 C-3	800 110 27.9 11.4 C.Head 10 200 5 9.3 11.2- 10.8 C-2 200 5 18.6 11.2- 10.8 C-2 Tail 5	500 110 27.9 11.4 C. Head 10 200 5 9.3 11.2 10.8 C-1 4 200 5 18.6 11.2 10.8 C-3 10.8 C-3
aw doad	eP.D.Size Lime KAX AP65 pH UCIS % % % g/I g/I IntialFinal	8 2200 35 37.2 11.4 C.Head 10 200 5 9.3 11.4 10.6 C-1 2 2 400 5 18.6 11.4 11.1 C-3	8 2900 45 37.2 11.4 C.Head 10 200 5 5.3 11.3 10.5 C-1 200 5 18.6 11.1 C-3 13.1 C-3	8 3820 50 37.2 11.4 C. Head 10 200 5 9.3 11.4 10.6 C-1 200 5 18.6 11.9 C-3 Tail 6	8 5240 80 27.9 11.4 C.Head 10 200 5 18.6 11.4 11.0 C-2 5 18.6 11.6 C-3 Tail 5	8 6800 110 27.9 11.4 C.Head 10 200 5 9.3 11.2-10.8 C-2 200 5 18.6 10.8 C-2 18.6 Tail 5	8 7600 110 27.9 11.4 C. Head 10 200 5 18.6 11.2 10.8 C-1 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
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the composite ore was prepared by mixing Hayl as Safil ore with Rakah stockwork ore in the ratio 1.85 to 1.  $R^\star$ : Percent of Rakah massive ore

Table 33 Flotation Test Results of Composite Ore - Bulk and copper selective rougher/cleaner flotation -

	ω%	100 37.48 2.54	721.95 1.05.95 1.07.95 1.13.48 1.13.48 1.13.48 1.13.48 1.13.48 1.13.48	12.19 16.05 71.76	100 56.52 43.48	12 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4	200 0000
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1 2	۲, %	100 97.46 2.54	4748 11986 725 1986 80412 805 105 1086 005 00 15 10 10 10 10 10 10 10 10 10 10 10 10 10	39.82 19.45 10.73 2	100 9.07 0.93	20 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	98.52.74 52.27.78 52.27.78 98.69 98.69
	A.8	100 94.54 5.46	2 2 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	33.72 6 19.87 1	100 35 100 100 100 100	60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	25.25 3.24 1.80 1.28 0.18
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	۳.% %	6.81 9.64 8.09	2.00.00.00.00.00.00.00.00.00.00.00.00.00	1.06 5.46 3.07	7 33 1 5 20 3 3 06	46484016 667860 1461076 66666464	50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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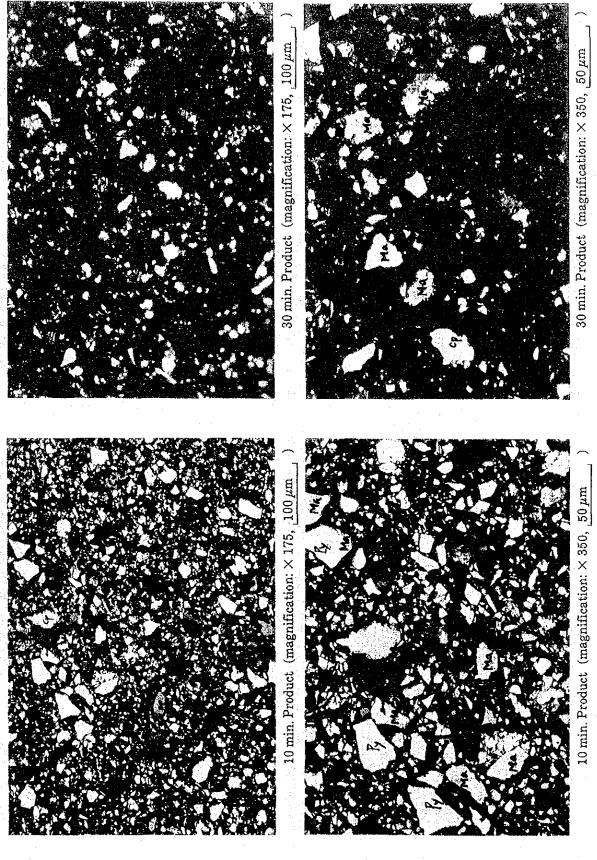
Table 34 Flotation Test Results of Composite Ore - Scalp rougher/cleaner flotation -

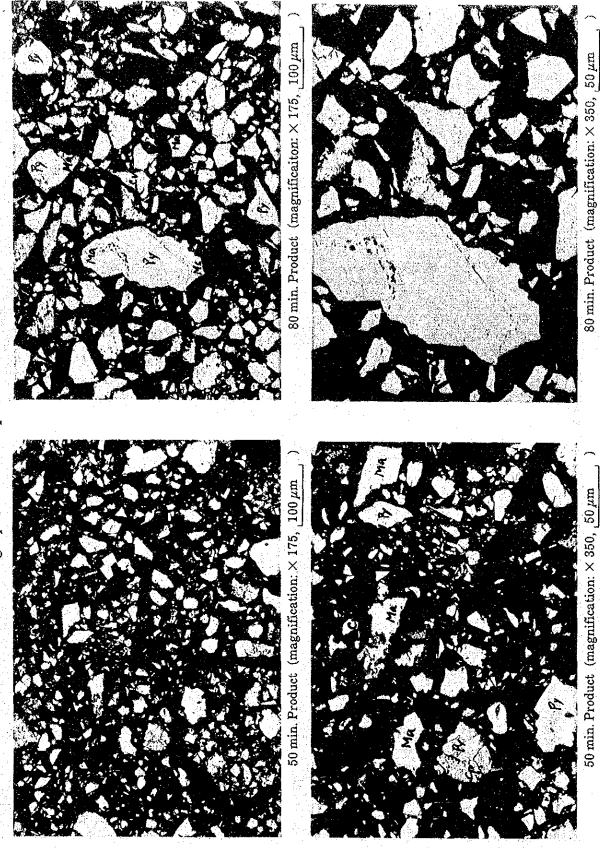
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PROD WEI  CONDITIONS  P.D. SizeTemp Line col or AF65 PH UCIS  % % °C g/T g/T g/T g/T IntialFinal	31 1100 46.7 23.3 11.6 11.2 C.Head 100 46.5 11.6 10.9 CONC. 1 8. E.T. 8 10.9 CONC. 1	000'ER FROTH 12.8 12.9 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 105-7 1	4 400 9.3 12.8 12.7 6C-M 4 400 12.8 12.8 17L-C 12.8 12.8 17L-C 12.8 12.8 17L-T 4 450 12.9 12.8 17L-T 4 450 12.8 17L-T	0 29 960 AP3501 18.6 11.7 11.4 R.RS-U 10 KAX 10 AS K 11.4 11.4 R.RS-U 10 AS K 11.4 I K R. I B	000 ER FROTH 12.9 12.8 10.5 10.5 23 450 12.8 12.8 12.8 20.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5	000°ER FROIH KAX 4 7 12 0 12 2 40 00 00 00 00 00 00 00 00 00 00 00 00	4 400 12.9 12.8 50-K 4 400 12.9 12.8 50-K 4 400 12.9 12.8 50-K 12.9 12.8 50-K 4 500 12.8 12.8 50-K	4 500 12.8 12.8 6CS1-N 1.12.8 12.9 6CS2-C 0.12.8 12.9 6CS2-C 0.12.9 12.9 6CS2-K 0.12.9 12.9 6CS2-K 0.12.9 6CS2-K 0	-CL 30.0 8/1 IIIK 3 1 IIIK 3 1 -CL 7.5 2.1
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ON TimeP.D. SizeTemp Line col or AF65 pH UCIS min. % % °C g/T g/T g/T IntialFinal 9	DING 16 60 80 31 1100 46.7 23.3 11.6 11.2 R.RS-C 10.9 (FR-C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ING OF LST ROUG'ER FROTH  ER 6  12.8  12.8  12.9  12.5  12.8  12.9  12.5  12.8  12.9  12.6  12.8  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9  12.9	SCM 10 12.8 12.7 5C-N 12.8 12.8 12.8 12.8 12.8 12.8 17L-C 12.8 12.8 17L-C 12.8 12.8 17L-C 12.8 12.8 17L-T 12.9 12.8 17L-T 12.9 12.8 17L-T 12.9 12.8 17L-T 12.9 12.8 17L-T	DING 16 60 29 260 AP3501 18.6 11.7 11.4 RAS-U 18.6 11.7 11.7 RAS-U 18.6 11.7 11.7 RAS-U 18.6 RAS-U	A TEN 2 12.8 12.8 12.8 10.5 15.	ND 3.5 ING OF 2ND ROUG ER FROTH FFR 15	SCA 10 SCA 10 SCA 10 SCA 10 SCA 10 SCA 11 SCA 12 SCA 11 SCA 11 SCA 11 SCA 11 SCA 11 SCA 11 SCA 11 SCA 12 SCA 12 SCA 11 SCA 12 SCA 13 SCA 13 SCA 13 SCA 14 SCA 14	SV1 2 6 500 12.8 12.8 12.8 6CS1-M 1 12.8 12.9 6CS2-C 0. SV2 6 6 5 5 5 6 5 5 6 5 6 5 6 6 6 6 6 6 6	-CL 30.0 8/1 IIIK 3 1 IIIK 3 1 -CL 7.5 2.1
R TimeP. D.SizeTemp Lime colfor AF65 pH UCIS WEI	ING 16 60 2000 AP3501 23.3 11.6 11.2 C.Head 100 ER 5 35 80 31 1100 46.7 23.3 11.6 11.2 R.KS-C 1 B ER 25 600 XAX 46.5 11.6 10.9 CONC. 1 8 ER 25	EANING OF 1ST ROUG'ER FROTH  -CL'ER 9 -CL'ER 5 -CL'ER 12.8 -CL'	ER 14 25 400 9.3 12.8 12.7 6C-M ER 13 24 400 12.8 12.8 TIL-G ER 1 12.8 12.8 TIL-G ER 3 24 450 12.8 TIL-Y ER 3 24 450 12.8 TIL-Y ER 3 12.8 TIL-Y	NDING 16 60 60 29 260 AP3501 8.6 11.7 11.4 R.RS-U 16 16 16 17 11.4 R.RS-U 17 17 17 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	SCA ER 2 10-C 15 1 10-C 15 1 12.8 12.8 105-T 15.5 15.5 15.5 15.5 15.5 15.5 15.5 15.	RIND 3.5 ANING OF 2ND ROUG ER FROIH 3.5-N	EM 10 EM 10 EM 13 EM 13 EM 11 EM 11 EM 11 EM 10 EM	12.8 12.8 6CS1-M 1. 12.8 12.8 6CS2-C 0. 12.8 12.9 6CS2-C 0. 12.8 12.9 6CS2-C 0. 12.8 12.9 6CS2-C 0. 12.9 6CS2-K	-CL 30.0 8/1 IIIK 3 1 IIIK 3 1 -CL 7.5 2.1

## Appendix 7

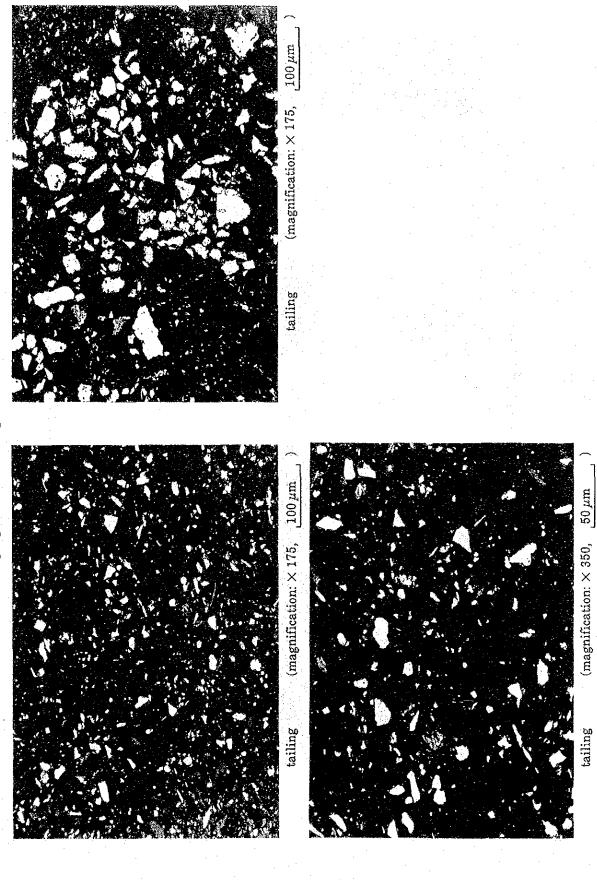
SEM and microprobe images of test samples

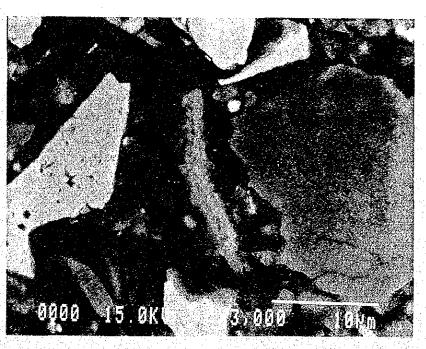
	그런 크기에 된 그의 아버스 보는 사고 사고를 걸릴 수 있을 말해	
10 50 50 50 50 50 50 50 50 50 50 50 50 50		
	도 경우 강성 : 경우는 가입다. 그런 경우 및 제근 첫 및 경기하다.	
	하는 사용을 보고 있는 것이다. 있는 사람들은 기계를 보고 있는데 기계를 받는다.	
마시아 등 하게 하는 사람들이 하는 것이 없다. 		
		가 마련 수 등 회사들은 등 하게 되었다. 하늘()는 학교 등 등 하는 것이 있는데 ()
	기를 들었습니다. 요즘 문제되는 전 기록하는 것으로	일본 등의 16일 등 등의 교통이 보고 (1) 등 등 기계 등의 기계 중요한 중요한 등의 등의
		학 마음의 발시 등의 문화로 시간으로 있다. 보통하고 있었다. 이 등은 연방 전략 등을 보다.
맛이 돌아보다 생각 내려보다. 휴가를 들고 보는 그 중요한 편	현실하다. 현실 1개 중요 12년 교육 1일 전 1일	
2017 - 122 - 122   123   123   124   123   123   123   123   123   123   123   123   123   123   123   123   123   123   123   123   123   123   12		
		그는 그 1000년 전략 전략하였다. 현다. 1885년 - 전투에 참고하고 1885년 -





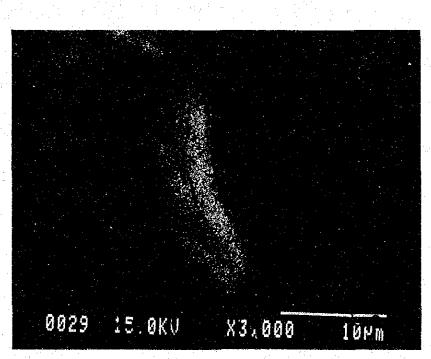
Photomicrograph 3 Flotation products of Rakah massive ore





Back scattered electron image

Kil Xx



X-ray images of tailing by EPMA analysis

