Modified Acid Base Accounting

Parameter	Unit	Overall Comp CN95/96	Overall Comp CN95/96	Overall Comp CN95/96 Dup.	Overall Comp CND2 (-200 Mesh)	Overall Comp CND2 (-200 Mesh)	Overall Comp CND2 (-200 Mesh) Dup.	GT Residue	GT Residue dup1	GT Residue dup2	Average Grade Ore Overall Comp	Average Grade Ore Overall Comp dup1	Average Grade Ore Overall Comp dup2
LIMS		10401-DEC07	10429-MAY08	10429-MAY08	10401-DEC07	10429-MAY08	10429-MAY08	10518-MAR08	10518-MAR08	10518-MAR08	10485-MAR08	10485-MAR08	10485-MAR08
Paste pH	units	10.00	8.60	8.77	9.72	8.68	8.64	9.06	9.05	9.02	9.83	9.81	9.58
Fizz Rate	---	2	3	3	2	3	3	3	3	3	3	3	3
Sample	weight(g)	2.02	1.99	1.98	2.00	1.98	2.00	1.99	2.02	1.97	2.01	2.04	2.00
HCl added	mL	49.10	33.70	34.35	50.00	35.10	34.30	28.60	29.50	28.60	30.80	30.90	30.90
HCl	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to	pH=8.3 mL	23.20	12.30	13.60	21.10	11.05	10.80	11.20	12.30	11.30	10.90	10.30	10.80
Final pH	units	2.17	1.30	1.80	2.00	1.92	2.00	1.75	1.69	1.70	1.82	1.83	1.76
NP[1]	t $CaCO_3$/1000 t	64.1	53.8	52.4	72.2	60.7	58.8	43.7	42.6	43.9	49.5	50.5	50.2
AP	t $CaCO_3$/1000 t	39.4	49.1	45.4	37.0	33.7	37.7	41.4	39.4	41.2	35.5	32.2	34.2
Net NP	t $CaCO_3$/1000 t	24.7	4.71	6.96	35.2	27.0	21.1	2.31	3.20	2.72	14.0	18.3	16.0
NP/AP	ratio	1.63	1.10	1.15	1.95	1.80	1.56	1.06	1.08	1.07	1.40	1.57	1.47
S	%	1.60	1.92	1.79	1.32	1.55	1.60	1.39	1.42	1.38	1.40	1.33	1.34
SO_4	%	0.35	0.35	0.34	0.13	0.47	0.40	0.07	0.16	0.06	0.27	0.30	0.24
Sulphide	%	1.26	1.57	1.45	1.18	1.08	1.21	1.32	1.26	1.32	1.14	1.03	1.09
C	%	0.631	0.586	0.596	0.728	0.734	0.723	0.566	0.484	0.484	0.552	0.558	0.562
Carbonate	%	1.30	1.82	1.74	1.89	2.28	2.23	2.03	2.06	2.06	2.33	2.33	2.31
CO_3 NP[2]	t $CaCO_3$/1000 t	21.6	30.2	28.9	31.4	37.8	37.0	33.7	34.2	34.2	38.7	38.7	38.3
CO_3 Net NP	t $CaCO_3$/1000 t	-17.8	-18.9	-16.5	-5.6	4.1	-0.7	-7.7	-5.2	-7.0	3.2	6.5	4.1
CO_3 NP/AP	Ratio	0.55	0.62	0.64	0.85	1.12	0.98	0.81	0.87	0.83	1.09	1.20	1.12
Classification	based on ABA NP[1]	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain
Classification	based on CO_3 NP[2]	PAG	PAG	PAG	PAG	uncertain	PAG	PAG	PAG	PAG	uncertain	uncertain	uncertain

Net Acid Generation

Parameter	Unit	Overall Comp CN95/96	Overall Comp CN95/96 Dup. 1	Overall Comp CN95/96 Dup. 2	Overall Comp CND2 (-200 Mesh)	Overall Comp CND2 (-200 Mesh) Dup. 1	Overall Comp CND2 (-200 Mesh) Dup. 2	GT Residue	GT Residue dup1	GT Residue dup2	Average Grade Ore Overall Comp	Average Grade Ore Overall Comp dup1	Average Grade Ore Overall Comp dup2
LIMS		10430-MAY08	10430-MAY08	10430-MAY08	10430-MAY08	10430-MAY08	10430-MAY08	10519-APR08	10519-APR08	10519-APR08	10884-MAY08	10884-MAY08	10884-MAY08
Sample weight	g	1.49	1.51	1.54	1.54	1.54	1.52	2.52	2.49	2.48	1.48	1.49	1.49
Volume H_2O_2	mL	150	150	150	150	150	150	250	250	250	150	150	150
Final pH	units	10.13	10.14	10.12	8.93	9.61	9.73	10.84	10.89	10.86	10.39	10.5	10.55
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Vol NaOH to pH 4.5	mL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vol NaOH to pH 7.0	mL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NAG @pH4.5	kg H_2SO_4/tonne	0	0	0	0	0	0	0	0	0	0	0	0
NAG @pH7.0	kg H_2SO_4/tonne	0	0	0	0	0	0	0	0	0	0	0	0

[1] *measured in ABA test*

[2] *theoretical, based on CO_3 content alone.*

Green highlighting indicates Net NP values less than 20.

Orange highlighting indicates NP/AP ratios less than 3.

PAG - Potentially Acid Generating based on interpretation of ABA test data alone.

PAN - Potentially Acid Neutralizing based on interpretation of ABA test data alone.

uncertain - acid generation potential is uncertain based on interpretation of ABA test data alone.

Modified Acid Base Accounting

Parameter	Unit	Average Grade Ore Overall Comp -200m	Average Grade Ore Overall Comp -200m dup1	Average Grade Ore Overall Comp -200m dup2	Average Grade Overall Comp +200m	Average Grade Overall Comp +200m dup1	Average Grade Overall Comp +200m dup2	Low Grade Ore Overall Comp	Low Grade Ore Overall Comp dup1	Low Grade Ore Overall Comp dup2	Low Grade Ore Overall Comp -200m	Low Grade Ore Overall Comp -200m dup1	Low Grade Ore Overall Comp -200m dup2
LIMS		10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08
Paste pH	units	9.62	9.53	9.61	9.90	9.88	9.98	10.1	10.0	10.0	9.89	9.80	9.81
Fizz Rate	---	3	3	3	3	3	3	3	3	3	3	3	3
Sample	weight(g)	2.01	2.04	2.01	1.98	2.01	1.97	1.95	1.96	1.98	2.01	1.95	1.97
HCl added	mL	37.80	39.00	37.20	28.10	30.60	27.80	27.60	27.50	28.40	31.80	31.50	31.60
HCl	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to	pH=8.3 mL	10.60	11.50	10.20	12.50	14.55	12.10	12.80	12.90	13.30	10.40	10.80	10.90
Final pH	units	1.81	1.84	1.90	1.61	1.55	1.60	1.64	1.63	1.65	1.76	1.74	1.72
NP[1]	t $CaCO_3$/1000 t	67.7	67.4	67.2	39.4	39.90	39.8	37.9	37.2	38.1	53.2	53.1	52.5
AP	t $CaCO_3$/1000 t	31.5	35.6	27.7	32.9	29.0	34.1	22.3	21.5	20.7	17.4	15.7	18.2
Net NP	t $CaCO_3$/1000 t	36.2	31.8	39.5	6.47	10.8	5.68	15.6	15.7	17.4	35.8	37.4	34.3
NP/AP	ratio	2.15	1.89	2.42	1.20	1.37	1.17	1.70	1.73	1.84	3.06	3.38	2.89
S	%	1.24	1.19	1.25	1.50	1.47	1.44	0.900	0.959	0.911	0.881	0.851	0.866
SO_4	%	0.23	0.05	0.36	0.45	0.54	0.35	0.19	0.27	0.25	0.32	0.35	0.28
Sulphide	%	1.01	1.14	0.89	1.05	0.93	1.09	0.71	0.69	0.66	0.56	0.50	0.58
C	%	0.778	0.769	0.764	0.409	0.420	0.392	0.372	0.370	0.370	0.588	0.587	0.578
Carbonate	%	3.49	3.49	3.23	1.50	1.48	1.44	1.29	1.27	1.27	2.49	2.52	2.51
CO_3 NP[2]	t $CaCO_3$/1000 t	57.9	57.9	53.6	24.9	24.6	23.9	21.4	21.1	21.1	41.3	41.8	41.7
CO_3 Net NP	t $CaCO_3$/1000 t	26.4	22.3	25.9	-8.0	-4.4	-10.2	-0.9	-0.4	0.4	23.9	26.1	23.5
CO_3 NP/AP	Ratio	1.84	1.63	1.94	0.76	0.85	0.70	0.96	0.98	1.02	2.38	2.66	2.29
Classification	based on ABA NP[1]	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	PAN	PAN	uncertain
Classification	based on CO_3 NP[2]	uncertain	uncertain	uncertain	**PAG**	**PAG**	**PAG**	PAG	PAG	uncertain	uncertain	uncertain	uncertain

Net Acid Generation

Parameter	Unit	Average Grade Ore Overall Comp -200m	Average Grade Ore Overall Comp -200m dup1	Average Grade Ore Overall Comp -200m dup2	Average Grade Overall Comp +200m	Average Grade Overall Comp +200m dup1	Average Grade Overall Comp +200m dup2	Low Grade Ore Overall Comp	Low Grade Ore Overall Comp dup1	Low Grade Ore Overall Comp dup2	Low Grade Ore Overall Comp -200m	Low Grade Ore Overall Comp -200m dup1	Low Grade Ore Overall Comp -200m dup2
LIMS		10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08
Sample weight	g	1.47	1.49	1.51	1.47	1.54	1.54	1.49	1.5	1.49	1.54	1.47	1.47
Volume H_2O_2	mL	150	150	150	150	150	150	150	150	150	150	150	150
Final pH	units	10.95	10.84	10.85	3.3	3.22	3.41	9.68	10.28	10.29	10.65	10.55	10.47
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Vol NaOH to pH 4.5	mL	0.00	0.00	0.00	0.90	1.05	0.75	0.00	0.00	0.00	0.00	0.00	0.00
Vol NaOH to pH 7.0	mL	0.00	0.00	0.00	2.15	2.02	2.00	0.00	0.00	0.00	0.00	0.00	0.00
NAG @pH4.5	kg H_2SO_4/tonne	0	0	0	3	3	2	0	0	0	0	0	0
NAG @pH7.0	kg H_2SO_4/tonne	0	0	0	7	6	6	0	0	0	0	0	0

[1] *measured in ABA test*

[2] *theoretical, based on CO3 content alone.*

Green highlighting indicates Net NP values less than 20.

Orange highlighting indicates NP/AP ratios less than 3.

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uncertain - acid generation potential is uncertain based on interpretation of ABA test data alone.

Modified Acid Base Accounting

Parameter	Unit	High Sulphide Ore Overall Comp	High Sulphide Ore Overall Comp dup1	High Sulphide Ore Overall Comp dup2	High Sulphide Ore Overall Comp -200m	High Sulphide Ore Overall Comp -200m dup1	High Sulphide Ore Overall Comp -200m dup2	Average Grade Ore PO Comp	Average Grade Ore PO Comp dup1	Average Grade Ore PO Comp dup2	Average Grade Ore GR Comp	Average Grade Ore GR Comp dup1	Average Grade Ore GR Comp dup2
LIMS		10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08
Paste pH	units	10.0	10.0	9.97	9.78	9.76	9.77	9.87	9.89	9.88	9.94	9.95	9.98
Fizz Rate	---	3	3	3	3	3	3	3	3	3	3	3	3
Sample	weight(g)	2.03	1.96	2.02	1.96	2.02	1.97	2.00	1.98	2.00	1.98	1.98	1.98
HCl added	mL	34.15	33.60	33.70	49.85	50.70	49.80	32.10	31.70	31.80	31.90	32.60	31.90
HCl	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to	pH=8.3 mL	11.80	11.90	11.70	19.60	19.90	19.90	11.60	11.40	11.70	11.50	11.70	11.10
Final pH	units	1.76	1.71	1.78	1.61	1.60	1.61	1.71	1.71	1.71	1.80	1.77	1.83
NP[1]	t $CaCO_3$/1000 t	55.0	55.4	54.5	77.2	76.2	75.9	51.2	51.3	50.2	51.5	52.8	52.5
AP	t $CaCO_3$/1000 t	50.3	55.6	53.1	44.6	40.6	43.7	27.7	26.3	25.3	34.7	33.4	40.8
Net NP	t $CaCO_3$/1000 t	4.70	-0.20	1.37	32.6	35.6	32.2	23.5	25	24.9	16.8	19.4	11.7
NP/AP	ratio	1.09	1.00	1.03	1.73	1.88	1.74	1.85	1.95	1.98	1.48	1.58	1.29
S	%	2.09	2.10	2.11	1.65	1.68	1.61	1.16	1.11	1.07	1.55	1.51	1.48
SO_4	%	0.48	0.32	0.41	0.22	0.38	0.21	0.27	0.26	0.26	0.44	0.44	0.18
Sulphide	%	1.61	1.78	1.70	1.43	1.30	1.40	0.89	0.84	0.81	1.11	1.07	1.31
C	%	0.627	0.613	0.626	0.919	0.904	0.91	0.552	0.548	0.551	0.586	0.581	0.576
Carbonate	%	2.16	2.23	2.27	3.95	3.95	3.77	1.95	1.83	2.07	2.07	2.17	1.98
CO_3 NP[2]	t $CaCO_3$/1000 t	35.9	37.0	37.7	65.6	65.6	62.6	32.4	30.4	34.4	34.4	36.0	32.9
CO_3 Net NP	t $CaCO_3$/1000 t	-14.4	-18.6	-15.4	21.0	25.0	18.9	4.7	4.1	9.1	-0.3	2.6	-7.9
CO_3 NP/AP	Ratio	0.71	0.67	0.71	1.47	1.62	1.43	1.17	1.16	1.36	0.99	1.08	0.81
Classification	based on ABA NP[1]	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain
Classification	based on CO_3 NP[2]	PAG	PAG	PAG	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	PAG	uncertain	PAG

Net Acid Generation

Parameter	Unit	High Sulphide Ore Overall Comp	High Sulphide Ore Overall Comp dup1	High Sulphide Ore Overall Comp dup2	High Sulphide Ore Overall Comp -200m	High Sulphide Ore Overall Comp -200m dup1	High Sulphide Ore Overall Comp -200m dup2	Average Grade Ore PO Comp	Average Grade Ore PO Comp dup1	Average Grade Ore PO Comp dup2	Average Grade Ore GR Comp	Average Grade Ore GR Comp dup1	Average Grade Ore GR Comp dup2
LIMS		10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08
Sample weight	g	1.53	1.45	1.52	1.53	1.49	1.52	1.52	1.46	1.54	1.51	1.48	1.48
Volume H_2O_2	mL	150	150	150	150	150	150	150	150	150	150	150	150
Final pH	units	7.85	8.26	8.7	10.25	10.34	10.69	10.68	10.59	10.43	10.42	10.23	10.48
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Vol NaOH to pH 4.5	mL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vol NaOH to pH 7.0	mL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NAG @pH4.5	kg H_2SO_4/tonne	0	0	0	0	0	0	0	0	0	0	0	0
NAG @pH7.0	kg H_2SO_4/tonne	0	0	0	0	0	0	0	0	0	0	0	0

[1] *measured in ABA test*

[2] *theoretical, based on CO_3 content alone.*

Green highlighting indicates Net NP values less than 20.

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Modified Acid Base Accounting

Parameter	Unit	Low Grade Ore PO Comp	Low Grade Ore PO Comp dup1	Low Grade Ore PO Comp dup2	Low Grade Ore GR Comp	Low Grade Ore GR Comp dup1	Low Grade Ore GR Comp dup2	High Sulphide Ore PO Comp	High Sulphide Ore PO Comp dup1	High Sulphide Ore PO Comp dup2	High Sulphide Ore GR Comp	High Sulphide Ore GR Comp dup1	High Sulphide Ore GR Comp dup2
LIMS		10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08
Paste pH	units	10.1	10.2	10.2	9.98	9.95	9.94	10.0	10.0	10.0	10.0	9.98	10.0
Fizz Rate	---	3	3	3	3	3	3	3	3	3	3	3	3
Sample	weight(g)	1.96	2.00	1.97	1.96	1.96	1.98	1.97	2.02	1.97	1.97	2.02	2.05
HCl added	mL	20.00	20.00	20.00	28.60	29.50	29.10	29.20	29.05	28.80	33.20	34.30	33.80
HCl	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to	pH=8.3 mL	8.90	8.80	8.90	12.55	13.40	13.60	12.00	12.40	11.90	9.10	9.60	9.20
Final pH	units	1.63	1.68	1.67	1.65	1.61	1.69	1.63	1.66	1.63	1.93	1.95	2.01
NP[1]	t $CaCO_3$/1000 t	28.3	28.0	28.2	40.9	41.1	39.1	43.7	41.2	42.9	61.2	61.1	60.0
AP	t $CaCO_3$/1000 t	11.1	9.15	9.73	39.1	36.8	33.5	23.1	23.2	23.7	59.4	58.0	61.6
Net NP	t $CaCO_3$/1000 t	17.2	18.8	18.5	1.85	4.31	5.59	20.6	18.0	19.2	1.76	3.08	-1.63
NP/AP	ratio	2.56	3.06	2.90	1.05	1.12	1.17	1.89	1.78	1.81	1.03	1.05	0.97
S	%	0.380	0.419	0.408	1.28	1.20	1.23	0.863	0.909	0.838	2.25	2.30	2.19
SO_4	%	0.03	0.13	0.10	0.03	0.02	0.16	0.12	0.17	0.08	0.34	0.45	0.22
Sulphide	%	0.35	0.29	0.31	1.25	1.18	1.07	0.74	0.74	0.76	1.90	1.86	1.97
C	%	0.292	0.287	0.284	0.434	0.420	0.419	0.453	0.460	0.450	0.715	0.716	0.714
Carbonate	%	0.985	0.951	0.971	1.46	1.45	1.45	1.58	1.63	1.68	2.32	2.49	2.58
CO_3 NP[2]	t $CaCO_3$/1000 t	16.4	15.8	16.1	24.2	24.1	24.1	26.2	27.1	27.9	38.5	41.3	42.8
CO_3 Net NP	t $CaCO_3$/1000 t	5.3	6.6	6.4	-14.9	-12.7	-9.4	3.1	3.9	4.2	-20.9	-16.7	-18.8
CO_3 NP/AP	Ratio	1.47	1.73	1.66	0.62	0.65	0.72	1.14	1.17	1.18	0.65	0.71	0.70
Classification	based on ABA NP[1]	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	uncertain	PAG
Classification	based on CO_3 NP[2]	uncertain	uncertain	uncertain	PAG	PAG	PAG	uncertain	uncertain	uncertain	PAG	PAG	PAG

Net Acid Generation

Parameter	Unit	Low Grade Ore PO Comp	Low Grade Ore PO Comp dup1	Low Grade Ore PO Comp dup2	Low Grade Ore GR Comp	Low Grade Ore GR Comp dup1	Low Grade Ore GR Comp dup2	High Sulphide Ore PO Comp	High Sulphide Ore PO Comp dup1	High Sulphide Ore PO Comp dup2	High Sulphide Ore GR Comp	High Sulphide Ore GR Comp dup1	High Sulphide Ore GR Comp dup2
LIMS		10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08
Sample weight	g	1.47	1.54	1.51	1.54	1.49	1.52	1.5	1.47	1.48	1.53	1.52	1.55
Volume H_2O_2	mL	150	150	150	150	150	150	150	150	150	150	150	150
Final pH	units	10.19	9.65	9.83	9.84	9.52	10.02	10.34	10.52	10.26	9.97	10.08	9.89
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Vol NaOH to pH 4.5	mL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vol NaOH to pH 7.0	mL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NAG @pH4.5	kg H_2SO_4/tonne	0	0	0	0	0	0	0	0	0	0	0	0
NAG @pH7.0	kg H_2SO_4/tonne	0	0	0	0	0	0	0	0	0	0	0	0

[1] *measured in ABA test*

[2] *theoretical, based on CO_3 content alone.*

Green highlighting indicates Net NP values less than 20.

Orange highlighting indicates NP/AP ratios less than 3.

PAG - Potentially Acid Generating based on interpretation of ABA test data alone.

PAN - Potentially Acid Neutralizing based on interpretation of ABA test data alone.

uncertain - acid generation potential is uncertain based on interpretation of ABA test data alone.

Modified Acid Base Accounting

Parameter	Unit	Average Waste PO Comp	Average Waste PO Comp dup1	Average Waste PO Comp dup2	Average Waste GR Comp	Average Waste GR Comp dup1	Average Waste GR Comp dup2	Average Waste Overall Comp	Average Waste Overall Comp dup1	Average Waste Overall Comp dup2	High Sulphide Waste PO Comp	High Sulphide Waste PO Comp dup1	High Sulphide Waste PO Comp dup2
LIMS		10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08
Paste pH	units	10.0	10.1	10.0	10.0	9.99	9.97	10.1	10.2	10.2	10.2	10.2	10.2
Fizz Rate	---	3	3	3	3	3	3	3	3	3	3	3	3
Sample	weight(g)	1.98	1.96	1.97	2.00	2.01	2.01	2.00	2.01	1.98	1.97	1.99	1.97
HCl added	mL	20.00	20.00	20.00	27.70	27.60	27.20	20.00	20.00	20.00	29.95	30.10	29.90
HCl	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to	pH=8.3 mL	4.90	4.90	5.00	13.20	12.90	12.60	6.30	6.00	6.40	12.95	12.65	12.70
Final pH	units	1.98	1.93	1.86	1.48	1.55	1.51	1.98	1.99	1.99	1.70	1.70	1.67
NP[1]	t $CaCO_3$/1000 t	38.1	38.5	38.1	36.2	36.6	36.3	34.2	34.8	34.3	43.1	43.8	43.7
AP	t $CaCO_3$/1000 t	11.7	8.61	8.87	50.2	52.3	55.5	37.0	33.2	34.4	30.7	28.0	30.5
Net NP	t $CaCO_3$/1000 t	26.4	29.9	29.2	-14.04	-15.66	-19.18	-2.85	1.61	-0.07	12.4	15.8	13.2
NP/AP	ratio	3.26	4.47	4.29	0.72	0.70	0.65	0.92	1.05	1.00	1.40	1.56	1.43
S	%	0.525	0.453	0.474	1.82	1.80	1.79	1.38	1.4	1.36	1.29	1.20	1.29
SO_4	%	0.15	0.18	0.19	0.22	0.13	0.02	0.20	0.34	0.26	0.31	0.31	0.31
Sulphide	%	0.37	0.28	0.28	1.61	1.67	1.78	1.19	1.06	1.10	0.98	0.90	0.98
C	%	0.399	0.404	0.399	0.368	0.367	0.334	0.376	0.358	0.374	0.456	0.449	0.450
Carbonate	%	1.39	1.53	1.57	1.15	1.19	1.17	1.23	1.31	1.30	1.60	1.64	1.49
CO_3 NP[2]	t $CaCO_3$/1000 t	23.1	25.4	26.1	19.1	19.8	19.4	20.4	21.7	21.6	26.6	27.2	24.7
CO_3 Net NP	t $CaCO_3$/1000 t	11.4	16.8	17.2	-31.1	-32.5	-36.1	-16.6	-11.5	-12.8	-4.1	-0.8	-5.8
CO_3 NP/AP	Ratio	1.97	2.95	2.94	0.38	0.38	0.35	0.55	0.66	0.63	0.87	0.97	0.81
Classification	based on ABA NP[1]	PAN	PAN	PAN	PAG	PAG	PAG	PAG	uncertain	uncertain	uncertain	uncertain	uncertain
Classification	based on CO_3 NP[2]	uncertain	uncertain	uncertain	PAG	PAG	PAG	PAG	PAG	PAG	PAG	PAG	PAG

Net Acid Generation

Parameter	Unit	Average Waste PO Comp	Average Waste PO Comp dup1	Average Waste PO Comp dup2	Average Waste GR Comp	Average Waste GR Comp dup1	Average Waste GR Comp dup2	Average Waste Overall Comp	Average Waste Overall Comp dup1	Average Waste Overall Comp dup2	High Sulphide Waste PO Comp	High Sulphide Waste PO Comp dup1	High Sulphide Waste PO Comp dup2
LIMS		10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08
Sample weight	g	1.53	1.53	1.53	1.48	1.47	1.46	1.55	1.5	1.46	1.53	1.53	1.54
Volume H_2O_2	mL	150	150	150	150	150	150	150	150	150	150	150	150
Final pH	units	10.1	10.27	10.37	9.01	8.84	9.39	9.49	9.71	9.51	9.86	10.1	10.01
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Vol NaOH to pH 4.5	mL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vol NaOH to pH 7.0	mL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NAG @pH4.5	kg H_2SO_4/tonne	0	0	0	0	0	0	0	0	0	0	0	0
NAG @pH7.0	kg H_2SO_4/tonne	0	0	0	0	0	0	0	0	0	0	0	0

[1] *measured in ABA test*

[2] *theoretical, based on CO_3 content alone.*

Green highlighting indicates Net NP values less than 20.

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Modified Acid Base Accounting

Parameter	Unit	High Sulphide Waste GR Comp	High Sulphide Waste GR Comp dup1	High Sulphide Waste GR Comp dup2	High Sulphide Waste Overall Comp	High Sulphide Waste Overall Comp dup1	High Sulphide Waste Overall Comp dup2	C2 Comp	C2 Comp Dup 1	C2 Comp Dup 2
LIMS		10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10485-MAR08	10583-AUG08	10583-AUG08	10583-AUG08
Paste pH	units	10.3	10.3	10.3	10.3	10.3	10.3	9.20	9.41	9.46
Fizz Rate	---	3	3	3	3	3	3	3	3	3
Sample	weight(g)	2.00	1.99	2.02	1.96	2.02	2.01	2.04	1.99	2
HCl added	mL	32.20	32.60	32.50	32.20	31.80	31.80	40.00	40.00	40.00
HCl	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to	pH=8.3 mL	10.50	10.60	10.45	11.30	10.5	10.80	17.60	18.40	18.30
Final pH	units	1.70	1.76	1.75	1.64	1.71	1.70	1.59	1.6	1.64
NP[1]	t $CaCO_3$/1000 t	54.2	55.3	54.6	53.3	52.7	52.2	54.9	54.3	54.2
AP	t $CaCO_3$/1000 t	71.1	71.4	79.7	60.1	53.3	63.0	32.5	33.1	34.2
Net NP	t $CaCO_3$/1000 t	-16.88	-16.15	-25.07	-6.78	-0.62	-10.79	22.4	21.2	20.0
NP/AP	ratio	0.76	0.77	0.69	0.89	0.99	0.83	1.69	1.64	1.58
S	%	2.68	2.70	2.82	2.22	2.04	2.13	1.51	1.47	1.48
SO_4	%	0.40	0.42	0.27	0.30	0.34	0.11	0.47	0.41	0.38
Sulphide	%	2.27	2.29	2.55	1.92	1.71	2.02	1.04	1.06	1.10
C	%	0.610	0.625	0.627	0.57	0.571	0.575	0.554	0.572	0.556
Carbonate	%	2.18	2.17	2.21	2.06	1.83	2.03	1.81	1.79	1.77
CO_3 NP[2]	t $CaCO_3$/1000 t	36.2	36.0	36.7	34.2	30.4	33.7	30.0	29.7	29.4
CO_3 Net NP	t $CaCO_3$/1000 t	-34.9	-35.4	-43.0	-25.9	-22.9	-29.3	-2.5	-3.4	-4.8
CO_3 NP/AP	Ratio	0.51	0.50	0.46	0.57	0.57	0.53	0.924	0.898	0.859
Classification	based on ABA NP[1]	**PAG**	**PAG**	**PAG**	**PAG**	**PAG**	**PAG**	uncertain	uncertain	uncertain
Classification	based on CO_3 NP[2]	PAG	PAG	PAG	PAG	PAG	PAG	PAG	PAG	PAG

Net Acid Generation

Parameter	Unit	High Sulphide Waste GR Comp	High Sulphide Waste GR Comp dup1	High Sulphide Waste GR Comp dup2	High Sulphide Waste Overall Comp	High Sulphide Waste Overall Comp dup1	High Sulphide Waste Overall Comp dup2	C2 Comp	C2 Comp Dup1	C2 Comp Dup2
LIMS		10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10884-MAY08	10582-AUG08	10582-AUG08	10582-AUG08
Sample weight	g	1.47	1.52	1.48	1.48	1.48	1.50	1.51	1.52	1.46
Volume H_2O_2	mL	150	150	150	150	150	150	151	152	146
Final pH	units	2.67	2.54	2.64	2.91	2.91	2.91	10.41	10.25	10.31
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Vol NaOH to pH 4.5	mL	4.80	4.80	4.65	2.20	2.70	2.90	0.00	0.00	0.00
Vol NaOH to pH 7.0	mL	6.70	7.00	7.00	4.70	4.90	4.60	0.00	0.00	0.00
NAG @pH4.5	kg H_2SO_4/tonne	16	15	15	7	9	9	0	0	0
NAG @pH7.0	kg H_2SO_4/tonne	22	23	23	16	16	15	0	0	0

[1] *measured in ABA test*

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