

RUM JUNGLE PHASE 3 EVAPORATION - EVAPORITE XRD SUMMARY

Mineral phase	SAMPLE DATE							
	170111	200111	220111	270111	280111	310111	20211	
	Concentration (%)							
Halite (NaCl)	99	99	89	79	82	73	82	
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	0.14	0.06	9					
Blodite (Na <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> •4H <sub>2</sub> O)	0.48	0.29	2	18	17	9		
Sodium Potassium Chloride (Na <sub>0.1002</sub> K <sub>0.8998</sub> Cl) <sup>1</sup> AND /	0.1	0.05 (total)						
Sodium Potassium Chloride (Na <sub>0.6990</sub> K <sub>0.3010</sub> Cl) <sup>1</sup>								
Syngenite (K <sub>2</sub> Ca(SO <sub>4</sub> ) <sub>2</sub> (H <sub>2</sub> O))	0.06	0.06						
Hydroglauberite (Na <sub>10</sub> Ca <sub>3</sub> (SO <sub>4</sub> ) <sub>8</sub> •6H <sub>2</sub> O)	0.12							
Leonite, syn (K <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> (H <sub>2</sub> O) <sub>4</sub> )	0.05			2		17	28	
Picromerite (K <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> •6H <sub>2</sub> O)		0.09		1.2	1			
Kainite (KMg(SO <sub>4</sub> )Cl(H <sub>2</sub> O) <sub>2,75</sub> )					0.3	0.4		
Magnesium Chloride Hydrate (MgCl <sub>2</sub> •H <sub>2</sub> O)						0.2	1.4	
Sodium Potassium Chloride (Na <sub>0.6990</sub> K <sub>0.3010</sub> Cl)						0.1		
Magnesium Sulphate Hydrate (MgSO <sub>4</sub> (H <sub>2</sub> O) <sub>6</sub> )							0.2	
Magnesium Sulphate (MgSO <sub>4</sub> )							0.2	
Sylvite, syn (KCl)							2	
Sodium Carbonate (Na <sub>2</sub> (CO <sub>3</sub> ))							0.1	
Calcium Carbonate (CaCO <sub>3</sub> )							0.4	

RUM JUNGLE PHASE 3 EVAPORATION - EVAPORITE XRD SUMMARY

T600 RJ PH3 XTAL 170111

Mineral phase	Concentration (%)	ICDD match probability
Halite (NaCl)	99	Good
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	0.14	Good
Blodite (Na <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> •4H <sub>2</sub> O)	0.48	Good
Sodium Potassium Chloride (Na <sub>0.6990</sub> K <sub>0.3010</sub> Cl)	0.1	Low
Syngenite (K <sub>2</sub> Ca(SO <sub>4</sub> ) <sub>2</sub> (H <sub>2</sub> O))	0.06	Medium
Hydroglauberite (Na <sub>10</sub> Ca <sub>3</sub> (SO <sub>4</sub> ) <sub>8</sub> •6H <sub>2</sub> O)	0.12	Low
Leonite, syn (K <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> (H <sub>2</sub> O) <sub>4</sub> )	0.05	Low

T600 RJ PH3 XTAL 200111

Mineral phase	Concentration (%)	ICDD match probability
Halite (NaCl)	99	Good
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	0.06	Good
Blodite (Na <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> •4H <sub>2</sub> O)	0.29	Good
Picromerite (K <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> •6H <sub>2</sub> O)	0.09	Good
Sodium Potassium Chloride (Na <sub>0.1002</sub> K <sub>0.8998</sub> Cl) <sup>†</sup> AND / Sodium Potassium Chloride (Na <sub>0.6990</sub> K <sub>0.3010</sub> Cl) <sup>†</sup>	0.05 (total)	Low
Syngenite (K <sub>2</sub> Ca(SO <sub>4</sub> ) <sub>2</sub> (H <sub>2</sub> O))	0.06	Medium

T600 RJ PH3 XTAL 220111

Mineral phase	Concentration (%)	ICDD match probability
Halite (NaCl)	89	Good
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	9	Good
Blodite (Na <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> •4H <sub>2</sub> O)	2	Good

T600 RJ PH3 XTAL 270111

Mineral phase	Concentration (%)	ICDD match probability
Halite (NaCl)	79	Good
Blodite (Na <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> •4H <sub>2</sub> O)	18	Good
Leonite, syn (K <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> (H <sub>2</sub> O) <sub>4</sub> )	2	Good
Picromerite (K <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> •6H <sub>2</sub> O)	1.2	Good

T600 RJ PH3 XTAL 280111

Mineral phase	Concentration (%)	ICDD match probability
Halite (NaCl)	82	Good
Blodite (Na <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> •4H <sub>2</sub> O)	17	Good
Picromerite (K <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> •6H <sub>2</sub> O)	1	Good
Kainite (KMg(SO <sub>4</sub> )Cl(H <sub>2</sub> O) <sub>2.75</sub> )	0.3	Good

T600 RJ PH3 XTAL 310111

Mineral phase	Concentration (%)	ICDD match probability
Halite (NaCl)	73	Good
Leonite, syn (K <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> (H <sub>2</sub> O) <sub>4</sub> )	17	Medium
Blodite (Na <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> •4H <sub>2</sub> O)	9	Good
Kainite (KMg(SO <sub>4</sub> )Cl(H <sub>2</sub> O) <sub>2.75</sub> )	0.4	Good
Magnesium Chloride Hydrate (MgCl <sub>2</sub> •H <sub>2</sub> O)	0.2	Low
Sodium Potassium Chloride (Na <sub>0.6990</sub> K <sub>0.3010</sub> Cl)	0.1	Low

T600 RJ PH3 XTAL 020211

Mineral phase	Concentration (%)	ICDD match probability
Halite (NaCl)	82	Good
Leonite, syn (K <sub>2</sub> Mg(SO <sub>4</sub> ) <sub>2</sub> (H <sub>2</sub> O) <sub>4</sub> )	28	Good
Sylvite, syn (KCl)	2	Medium
Sodium Carbonate (Na <sub>2</sub> CO <sub>3</sub> )	0.1	Low
Calcium Carbonate (CaCO <sub>3</sub> )	0.4	Low
Magnesium Chloride Hydrate (MgCl <sub>2</sub> •H <sub>2</sub> O)	1.4	Low
Magnesium Sulphate Hydrate (MgSO <sub>4</sub> •6H <sub>2</sub> O)	0.2	Low
Magnesium Sulphate (MgSO <sub>4</sub> )	0.2	Low