

MINERAL RESOURCES OF BICOL REGION *

PROVINCE/MUNICIPALITY BARANGAY	MINERAL COMMODITY	ESTIMATED RESERVES (In MT)	GRADE ANALYSIS
ALBAY			
1. Rapu-Rapu Island			
Acal, Batan Island	Iron	17,500	43.33% Fe
Binosowan & Balenod	Gold, Copper, Silver	3,000,000 (Geologic Reserve)	Massive Sulfide Ore 1.18% Cu; 2.66% Zn; 2.00gAu/MT; 34.00 g Ag/MT
Sitio Minaroso, Villahermosa	Phosphate Rock	74	25.98% P ₂ O ₅ , 0.38% N, 0.82% K ₂ O
Mancao	Guano	48	5.06% P ₂ O ₅ , 0.31% N, 0.34% K ₂ O
	Phosphate Rock	79	30.41% P ₂ O ₅ , 0.40% N, 1.50% K ₂ O
Sitio Pututan, Manila	Guano	10	3.34% P ₂ O ₅ , 0.26% N, 0.52% K ₂ O
Carogcog	Gold, Silver	1,058,000	2.04 g Au/MT; 14.16 g Ag/MT
	Pyrite	5,304,500	42.5% FeS ₂ (by product)
2. Legazpi City			
Taysan	Perlite	1,648,800	
Puro	Perlite	412,800	
Lamba & Maslog	Perlite	7,591,600	
	Kaolin	109,000	
	Red Clay	8,210,737	
Estanza	Perlite	19,200	
Homapon	Bentonite	386,775	
	Bentonitic Clay	9,525	
	Kaolinitic/ Bentonitic Clay	31,016	
3. Tiwi			
Putsan & Bolo	Red Clay	3,276,000	
	"Baras" (Sandy Additive)	2,274,000	
Bisibis	Red Clay	20,000	
4. Guinobatan			
Sitio Ticao, Agpay	Guano	5	27.57% P ₂ O ₅ , 0.16% N, 0.47% K ₂ O
Sitio Panal, Agpay	Guano	12	2.22% P ₂ O ₅ , 0.20% N, 2.44% K ₂ O
Sitio Cabanog, Mapaco	Guano	20	7.40% P ₂ O ₅ , 0.05% N, 0.27%K ₂ O
Sitio Kalangaton, Mapaco	Guano	29	28.76% P ₂ O ₅ , 0.56% N, 0.21% K ₂ O
	Phosphate Rock	50	30.75% P ₂ O ₅ , 0.33% N, 0.67% K ₂ O
Sitio Manamu, Mapaco	Guano	125	2.41% P ₂ O ₅ , 0.87% N, 1.07% K ₂ O
Malipo	Phosphate Rock	865	24.88% P ₂ O ₅ , 0.26% N, 0.30% K ₂ O

PROVINCE/MUNICIPALITY BARANGAY	MINERAL COMMODITY	ESTIMATED RESERVES (In MT)	GRADE ANALYSIS
ALBAY			
Sitio Guyuran, Malipo	Guano	626	8.18% P ₂ O ₅ , 0.18% N, 0.28% K ₂ O
	Phosphate Rock	674	19.11% P ₂ O ₅ , 0.13% N, 0.69% K ₂ O
Malobago	Guano	3,919	3.53% P ₂ O ₅ , 0.19% N, 0.42% K ₂ O
	Phosphate Rock	2,791	18.1% P ₂ O ₅ , 0.06% N, 1.10% K ₂ O
5. Camalig			
Tagaytay & Camalig	Phosphate Rock	320,000	97.32% CaCO ₃
Tula-Tula & Caguiba	Limestone	107,000,000	54.62% CaO, 0.11% MgO
Taloto	Guano	1,065	6.16% P ₂ O ₅ , 0.99% N, 1.02% K ₂ O
	Phosphate Rock	670	24.94% P ₂ O ₅ , 1.00% N, .19% K ₂ O
Quintenday	Guano	691	4.84% P ₂ O ₅ , 0.24% N, 0.19% K ₂ O
	Phosphate Rock	382	16.89% P ₂ O ₅ , 0.15% N, 0.27% K ₂ O
Parian	Guano	245	14.30% P ₂ O ₅ , 0.43% N, 1.23% K ₂ O
	Phosphate Rock	964	22.94% P ₂ O ₅ , 0.20% N, 1.19% K ₂ O
Binanderahan	Phosphate Rock	2,349	21.86% P ₂ O ₅ , 0.21% N, 0.18% K ₂ O
Tagaytay	Guano	162	22.57% P ₂ O ₅ , 1.53% N, 0.18% K ₂ O
	Phosphate Rock	430	33.73% P ₂ O ₅ , 1.05% N, 0.26% K ₂ O
Libod	Phosphate Rock	546	5.22% P ₂ O ₅ , 0.68% N, 1.78% K ₂ O
Solong	Guano	362	9.40% P ₂ O ₅ , 1.08% N, 0.37% K ₂ O
	Phosphate Rock	412	18.26% P ₂ O ₅ , 1.12% N, 2.20% K ₂ O
Caguiba	Guano	75	7.56% P ₂ O ₅ , 0.90% N, 0.26% K ₂ O
Cotmon	Guano	99	14.76% P ₂ O ₅ , 1.46% N, 1.12% K ₂ O
	Phosphate Rock	35	12.33% P ₂ O ₅ , 1.07% N, 0.15% K ₂ O
Tula-Tula	Guano	18	10.43% P ₂ O ₅ , 1.17% N, 0.36% K ₂ O
6. Libon			
Sitio Pumapayong, Tambo	Guano	32	20.78% P ₂ O ₅ , 0.86% N, 0.65% K ₂ O
	Phosphate Rock	12	30.54% P ₂ O ₅ , 0.47% N, 0.17% K ₂ O

PROVINCE/MUNICIPALITY BARANGAY	MINERAL COMMODITY	ESTIMATED RESERVES (In MT)	GRADE ANALYSIS
ALBAY			
Sitio Malancao, San Ramon	Guano	50	9.65% P ₂ O ₅ , 0.13% N, 0.41% K ₂ O
	Phosphate Rock	69	7.68% P ₂ O ₅ , 0.38% N, 0.24% K ₂ O
7. Ligao			
Paulog	Guano	10	1.86% P ₂ O ₅ , 0.77% N, 1.16% K ₂ O
Sitio Omadma, Cavasi	Phosphate Rock	51	23.26% P ₂ O ₅ , 0.54% N, 0.45% K ₂ O
	Guano	109	2.75% P ₂ O ₅ , 0.40% N,
8. Oas			
Tapil	Gypsum	58	
9. Jovellar			
Tangke	Guano	2,423	11.96% P ₂ O ₅ , 0.18% N, 1.96% K ₂ O
	Phosphate Rock	2,892	14.94% P ₂ O ₅ , 0.11% N, 0.35% K ₂ O
Sitio Quintenday, Cabbaran	Guano	61	6.23% P ₂ O ₅ , 0.13% N, 0.22% K ₂ O
	Phosphate Rock	178	37.62% P ₂ O ₅ , 0.21% N, 0.16% K ₂ O
Salvacion	Guano	3,360	6.11% P ₂ O ₅ , 0.23% N, 0.58% K ₂ O
	Phosphate Rock	3,408	11.32% P ₂ O ₅ , 0.16% N, 0.41% K ₂ O
Cabbaran Grande	Phosphate Rock	10	33.11% P ₂ O ₅ , 0.32% N, 0.28% K ₂ O
Florista	Guano	60	1.87% P ₂ O ₅ , 0.30% N, 0.58% K ₂ O
10. Bacacay			
Sitio Boton, Cagbulacao	Phosphate Rock	12	19.00% P ₂ O ₅ , 0.26% N, 0.40% K ₂ O
Misibis	Guano	130	1.49% P ₂ O ₅ , 0.24% N, 0.21% K ₂ O
	Phosphate Rock	264	30.66% P ₂ O ₅ , 0.20% N, 0.33% K ₂ O
Misibis-Cagbulacao, Cagraray Island	Marble	123,553,920 cu.m. Geologic reserve 18,983,088 cu.m. mineable reserve	
Sula-Mataas, Cagraray Island	Marble	20,000,000 cu.m. geologic reserve 3,000,000 cu.m. mineable reserve	
Mataas	Guano	9	1.24% P ₂ O ₅ , 0.14% N, 0.44% K ₂ O

* source: Mineral Resources of the Bicol Region, August 1990