

WHITENESS TEST OF BARITE SAMPLE FROM DORISVALE AREA N.T.

Project Number: IG0106

Summary Report

4 December 2013

Report presented by International Geoscience



Whiteness Test of Barite Sample form Dorisvale Area NT.

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EXECUTIVE SUMMARY

Field surveys near Dorisvale in the Northern Territory located high grade barite mineralisation on the Exploration Licence of Consolidated Global Investments Pty Ltd

A sample of this the barite was crushed and tested for whiteness to evaluate potential for sale as paint filler.

The whiteness test gave a value of around 59%. A minimum of 94% is considered acceptable for paint filler.

Niton XRF tests indicated that the sample is contaminated by various other metals but principally Mn and Fe. It may be possible to remove these elements to arrive at a better whiteness.

The Niton test also indicated high gold concentration in the sample. Given the very high barium concentration, this is probably due to a minor peak of Barium coinciding with the gold peak in the XRF spectrum. However, given that gold and barium can occur in association it is worthwhile submitting a sample for fire assay.



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1 INTRODUCTION

Field surveys near Dorisvale in the Northern Territory located high grade barite mineralisation on the Exploration Licence of Consolidated Global Investments Pty Ltd (Figure 1).

A sample of this the barite was crushed and tested for whiteness to evaluate potential for sale as paint filler.



Figure 1: Location of CGI's tenement with respect to several barite outcrop samples.



1 BARITE MINERAL

Barite is a mineral composed of barium sulphate ($BaSO_4$). It receives its name from the Greek word "barys" which means "heavy." This name is in response to barite's high specific gravity of 4.5, which is exceptional for a non-metallic mineral. The high specific gravity of barite makes it suitable for a wide range of industrial, medical and manufacturing uses. Barite also serves as the principal ore of barium.

Barytes is the term usually given to commercial barite prepared for drilling muds and/or filler in paint and plastics.



2 PHYSICAL PROPERTIES

Barite is generally easy to identify. It is one of just a few non-metallic minerals with a specific gravity of four or higher. Combine that with its low Moh's hardness (2.5 to 3.5) and its three directions of right angle cleavage and the mineral can usually be reliably identified with just three observations.

Table 1 Physical properties of Barite

Physical Properties of Barite Chemical sulphate Classification colourless, white, light blue, Colour light yellow, light red, light green Streak white Lustre vitreous to pearly Diaphaneity transparent to translucent Cleavage very good, basal, prismatic Moh's Hardness 2.5 to 3.5 Specific Gravity 4.5 high specific gravity, three Diagnostic cleavage directions at right Properties angles Chemical barium sulphate, BaSO₄ Composition Crystal System orthorhombic



3 BARITE PRODUCTION

Table 2; World barite production in 2011.

2011 Barite Production								
Country Thousand Metric Tons								
Algeria	40							
China	4,100							
Germany	70							
India	1,350							
Iran	350							
Kazakhstan	200							
Mexico	157							
Morocco	600							
Pakistan	58							
Peru	87							
Russia	62							
Turkey	230							
United Kingdom	50							
Vietnam	85							
United States	710							
Other Countries	220							



4 USE OF BARITE

4.1 Drilling Mud

The oil and gas industry is the primary user (around 77%) of barite worldwide. There it is used as a weighting agent in drilling mud. This is a growth industry, as global demand for oil and natural gas has been on a long-term increase. In addition, the long-term drilling trend is more feet of drilling per barrel of oil produced.

Barite used for drilling petroleum wells can be black, blue, brown or grey depending on the ore body. The barite is finely ground so that at least 97% of the material, by weight, can pass through a 200-mesh (75- μ m) screen, and no more than 30%, by weight, can be less than 6 μ m diameter. The ground barite also must be dense enough so that its specific gravity is 4.2 or greater, soft enough to not damage the bearings of a tricone drill bit, chemically inert, and containing no more than 250 milligrams per kilogram of soluble alkaline salts

Barite has increased in price in recent years due to drilling activity. Price levels during 2012 were between 10% and 20% higher than 2011 in many important markets. The typical price of drilling mud barite is about \$150 per metric ton at the mine.

Substitutes for barite in drilling mud include: celestite, ilmenite, iron ore and synthetic hematite. None of these substitutes have been effective at displacing barite in any major market area. They are too expensive or do not perform competitively. China and India are the leading producers of barite and they also have the largest reserves. The United States does not produce enough barite to supply its domestic needs. In 2011 the United States produced about 700,000 metric tons of barite and imported about 2,300,000 metric tons.

Most barite produced is used as a weighting agent in drilling muds. These high-density muds are pumped down the drill stem, exit through the cutting bit and return to the surface between the drill stem and the wall of the well. This flow of fluid does two things: 1) it cools the drill bit; and, 2) the high-density barite mud suspends the rock cuttings produced by the drill and carries them up to the surface.

4.2 Barytes as a paint filler

Barytes (Barite) are a range of products manufactured using a crystalline natural barium sulphate raw material which is more commonly known as barytes. LKAB Minerals supply finely ground white barytes that are of exceptionally high quality.

Barytes have been traditionally used as a white extender that both increases specific gravity and improves the chemical resistance as it is chemically inert and normally insoluble in water, organic solvents, acids and alkali solutions.

Products of barytes must have <u>high whiteness</u>, low carbon content and high specific gravity. Barytes is widely used in the surface coatings industry in automotive and anticorrosive paints, industrial primers and undercoats and with the finer products powder coatings. As a filler and extender in paints barytes increases the water and corrosion resistance as well as reducing the requirement for white pigments (barytes increase pigment dispersion). The brightness of white paint will be enhanced and both the application and paint handling is improved with the incorporation of barytes.

When used in polyester resins barytes enables a faster cure rate to be achieved. Polyurethane (PU) foams see an improvement in their load bearing properties when they contain barytes.



Table 3: Typical Specifications for Barytes

Specific gravity	4.35 min
BaSO4	97% min
SrSO4	2% max
SiO2	1% max
Fe2O3	0.3% max
CaCO3	0.5% max
Brightness	94% min (Hunter L), 2% Max (Hunter B)
Cadmium	3.00 ppm max
Mercury	1.00 ppm max
Moisture	1% max
Size	0-200mm

Barite with high whiteness (>94%) sells for around \$450/tonne



5 OCCURRENCE

Barite often occurs as concretions and void-filling crystals in sediments and sedimentary rocks. It is especially common as concretions and vein fillings in limestone and dolostone. Where these carbonate rock units have been heavily weathered, large accumulations of barite are sometimes found at the soil-bedrock contact. Many of the commercial barite mines produce from these residual deposits.

Barite is also found as concretions in sand and sandstone. These concretions grow as barite crystallizes within the interstitial spaces between sand grains.

Barite is also a common mineral in hydrothermal veins and is a gangue mineral associated with sulphide ore veins. It is found in association with ores of antimony, cobalt, copper, lead, manganese and silver. In a few locations barite is deposited as a sinter at hot springs.

5.1 Deposit Types

Barite deposits are most commonly classified into bedded (stratiform) deposits, veins and cavity fillings and residual deposits. Bedded barite is most common commercial deposit due to scale and amenability to modern large scale mining operations.

5.1.1 Bedded (Stratiform) Deposits

Barite occurs in bedded deposits either as a principal mineral or cementing agent, or associated with stratiform massive sulphide deposits. Most bedded deposits occur in sequences of sedimentary rocks characterised by abundant chert and black siliceous shale and siltstone, known as 'black bedded barite'. They range in age from Precambrian to Tertiary, but are usually early to mid-Palaeozoic. Individual beds are massive to laminated, fine-grained and may contain from 50% to 95% barite that can be used with little or no treatment other than grinding. Bedded barite deposits can be divided into five types.

- 1. With base metal sulphides (cratonic rift type);
- Associated with alkali volcanic rocks, e.g. Meggen and Rammelsberg, Germany; Ballynoe and Silvermines, Ireland; Selwyn Basin, Canada; and Red Dog, Alaska, USA;
- 3. Without base metal sulphides (continental margin type), e.g. Arkansas and Nevada, USA; Quinling District, China;
- 4. In volcanic sequences, e.g. Kuroko, Japan. Stratiform barite deposits, e.g. Sardinia, Italy; Andhra Pradesh, India; and
- 5. Exogenetic barite deposits, e.g. Krakow area, Poland.

5.1.2 Veins and Cavity Fillings

Barite deposited from hydrothermal fluids or deep-seated brines occurs in faults, joints, bedding planes, breccia zones, solution channels and cavities. The resulting veins are characterised by sharp contacts, extensive pinching and swelling, and extreme variations in length, depth and attitude. Because of complex geometry, mining vein deposits can be difficult and expensive. These deposits are generally smaller than the stratiform deposits. Vein barite is usually extracted as a by- or co-product of lead–zinc mining — as in Sardinia, Italy, and the United Kingdom. Dorisvale is probably this type of deposit.

5.1.3 Residual Deposits

Residual barite occurs in surficial deposits in which the barite is present as loose fragments embedded in residual clay. The barite and the clay are derived from weathering of the



underlying rock, generally dolomite. Barite fragments range in size from sand size to lumps weighing 100 kg or more. Residual deposits of commercial grade are found in the USA (in Georgia and Missouri).



6 MAIN AUSTRALIAN DEPOSITS OF BARITE

Australia is not a major source of barite, although it has been mined in small quantities in most states. Most production is currently from vein deposits in the Proterozoic Wilpena Group in the Flinders Ranges of South Australia. A large barite resource at North Pole, Western Australia, consists of barite originally deposited in sedimentary rocks of Achaean age. The barite has been mobilised and injected into fractures in an overlying series of volcanic rocks domed by a granite pluton.

6.1.4 New South Wales

Known occurrences of barite in New South Wales are restricted almost entirely to the eastern portion of the Lachlan Orogen, particularly in association with Late Silurian felsic volcanic sequences. Barite occurrences in the Lachlan Orogen are bedded and vein types.

Barite is associated with base metal sulphides in stratiform (bedded) deposits within Late Silurian felsic volcanic sequences at the following localities:

- Kempfield (in the Kangaloolah Volcanics)
- Gurrunda (Wet Lagoon Volcanics)
- Jerangle and Captains Flat (Kohinoor Volcanics)
- South Barite Gossan or Black Springs, Junction Point and Dinner Hill near Peelwood (volcanic rocks within the Campbells Group)
- Bredbo, Chakola, Billilingra, Dartmoor and Harnett deposits near Cooma (Colinton Volcanics and Rothlyn Formation)
- Numerous locations in the Jackalass Slate and Blowering Formation of the Tumut Trough east of Mudgee (Dungeree Volcanics).

The Kempfield silver–lead–zinc–barite deposit occurs about 25 km south of Bathurst. It is contained within a large volcanogenic massive sulphide system occurring over a strike length of more than 3 km. Barite is present in small lenticular bedded units, consisting of fine-grained greyish barite with lenses of chert and minor disseminated sulphides. The host sequence includes siltstone, felsic volcanic rocks, volcanic-derived sandstone, and minor limestone, chert and quartz porphyry. This sequence is within the Late Silurian Kangaloolah Volcanics, which is part of the Campbells Group. These rocks have been deformed by two periods of folding and have undergone mid-greenschist facies metamorphism.

Recent exploration has identified resources of 3.72 Mt at 26% barite (60 g/t silver cut-off in a lead–zinc–silver–barite deposit). Historically, the Kempfield deposits produced a total of about 65,000 tonnes of barite (about 70% of the state's production) in the period 1918 to 2000. Production ceased around 2001 to allow for investigation and development of the resource. Golden Cross Resources Ltd has yet to mine the barite resource.

South of Kempfield, at the Gurrunda deposit, west of Goulburn, an exploration program in 1970 outlined reserves of 202,700 tonnes containing 74.9% BaSO4 and a possible further 95,000 tonnes at 75.6% BaSO4. The hosts are sedimentary rocks and rhyolitic to rhyodacitic volcanic rocks of the Wet Lagoon Volcanics of the Campbells Group. Barite veins occur in a wide variety of rocks. Granitoids, andesites and felsic volcanic rocks are common hosts, but many deposits have no obvious relationship to granitic intrusions. Included in the vein category are more diffuse deposits which could be described as lodes and disseminations. Veins consisting essentially of barite with minor base metal sulphides occur within felsic volcanic sequences at Tullamore, Mitta Mitta near Junee, Back Creek south of Bathurst, Tarago, Reedy Creek south of Boorowa, Wyelba–Sapling Point near Yass, and Dripstone near Wellington. Minor amounts of barite occur either within or very close to Devonian granites at Harolds Cross, Round Hill, Braidwood, Cobargo, Tantawanglo Mountain,



Paupong and Currowidgin. The barite is present mainly as veins or veinlets. Andesitic volcanic rocks host occurrences of barite in the central west of New South Wales near Wellington, Cowra and Blayney (Steam Engine Prospect), Peak Hill, and near Tumut (Basin Creek and Mooney Mooney).

6.1.5 Victoria

There are several small barite deposits in Victoria. Total production to date from all operations is about 1,000 tonnes. The largest barite deposits in Victoria are found in rocks known as the Lower Devonian Snowy River Volcanics. The barite occurs with quartz–sulphide mineralisation and probably formed near the end of episodes of volcanic activity.

The three largest barite deposits that have been mined in Victoria are the Glen Shiel and Kanni Creek (both in felsic volcanic rocks) and the Boulder Flat deposit (in Errinundra Group rocks). The barite produced from shallow open cuts in the Boulder Flat area in the early to mid-1980s was used mainly for drilling muds in the Bass Strait oilfield.

Several hundred tonnes of barite were probably mined from the Kanni Creek area north of Nowa Nowa, but there is no record of production details. The remaining barite at Kanni Creek appears to be iron-stained, which makes it unattractive to further exploitation or exploration.

Rocks of Cambrian age in the Dookie area contain minor amounts of barite, but no economically viable deposits have been identified to date. The most notable occurrence in this area is in a shallow pit at Mount Major, where bedded barium sulphate has replaced beds of chert. Cambrian greenstones along the northern margin of the Melbourne Trough also contain minor amounts of barite.

Barite is also found as a gangue mineral in quartz–sulphide veins in many gold and base metal deposits.

6.1.6 South Australia

Over 160 barite deposits or occurrences have been documented in South Australia, with a total recorded production of 690,000 t. All but a few of these are of the open-fracture infill type hosted by Adelaide Geosyncline rocks in the Mount Lofty and Flinders Ranges. Deposits generally comprise steeply dipping tabular bodies up to 5 m wide which crosscut the enclosing sediments and metasediments.

6.1.6.1 Flinders Ranges

Many deposits in the Flinders Ranges are spatially related to diapirs, either as veins infilling fractures along steeply dipping diapir - country rock contacts or radiating from diapirs. Over 400,000 t of barite have been produced from the dozen or so individual deposits associated with the Oraparinna Diapir including the only South Australian mines in current production at Oraparinna and Dunbar.

6.1.6.2 Oraparinna

Production commenced at Oraparinna, 500 km north of Adelaide, in 1940. Normandy Industrial Minerals, which operated the deposit from 1984, transferred the mine to Unimin Australia Ltd in 2000, continuing the mine's long history as Australia's largest supplier of industrial-grade barite. The mine, comprising seven underground levels, works a system of 1-2 m wide veins which have developed in tensional fractures within Adelaidean Wilpena Group sediments in a graben structure extending from the north-eastern corner of the Oraparinna Diapir. Ore is trucked 160 km to a treatment plant at Quorn where three industrial grades of barite - A, Standard and B - depending on colour, are produced for use in surface coatings, plastics fillers and mould coatings at Olympic Dam. Some A and



Standard grade material is trucked to Gillman in suburban Adelaide for fine milling. 2002 production of 5,248 tonnes is the largest since 1996.

6.1.6.3 Dunbar

This deposit, formerly known as "Linke's Lode", is ~15 km southwest of the Oraparinna Mine and is worked by an open cut on a 30 m wide subparallel vein system ~500 m in length. Individual veins are up to 9 m wide. The ore is enclosed in a raft of Adelaidean sediments within the Oraparinna Diapir. Most Dunbar ore is used in the production of oil-drilling grades of barite, but some is used to feed a magnetic separation plant at Quorn which produces a super-white AA industrial grade. Production has been historically high since 1997, totalling 11,254 tonnes in 2002.

6.1.6.4 Other Deposits

Other smaller barite deposits which have been worked in the Flinders Ranges include those at Appealinna, Artipena, Carey Hill, Martin's Well and Mount John in the Blinman area, Mount Coffin (10 km east of Leigh Creek) and Mount James (30 km northwest of Beltana).

6.1.6.5 Mount Lofty Ranges

Numerous mines have been worked in the past but are now abandoned, such as at Julia Creek (72 km northeast of Adelaide) where 10,500 t of barite were produced from a number of small mines between 1925 and 1974.

The largest deposits were located in the Brachina Formation in an area 3 km south of Noarlunga. A total of 57,000 t were produced from four main workings between 1918 and 1961.

Small tonnages of high-quality barite were obtained from Woodside during 1978.

Other barite mines which have been worked out or abandoned include those near Athelstone, Uraidla, Prairie and Birdwood; two of the oldest mines are at Aldgate and Williamstown.

6.1.6.6 Olary District

Large, low-grade deposits in the Olary district occur at the same stratigraphic level within a banded iron formation in metamorphic rocks of the Willyama Supergroup. The deposits are conformable with bedding of the country rock and are considered to be of sedimentary origin. The barite is of drilling grade due to the presence of silica and iron oxide. The largest deposits are at Mount Mulga (21 km north of Olary) which produced 14,000 t of oil drilling grade between 1962 and 1980, and Walparuta (11 km northeast of Weekeroo Station) which produced 54 t between 1946 and 1954. Other occurrences are at Dome Rock, Waukaloo, Ameroo Hill and Meningie Well.

6.1.6.7 Eyre Peninsula

Mount Whyalla barite mine, 24 km northwest of Whyalla, was selectively worked over a distance of 1 km from a series of vertical lenses in the Pandurra Formation. Similar veins occur in the Moonabie Formation at Mount Laura overlooking Whyalla, and in the Burkitt Granite and Corunna Conglomerate at Corunna, 15 km northwest of Iron Knob.

A deposit of high-grade barite crops out adjacent to the manganese deposits on the floor of Pernatty Lagoon near the western shore. It forms a rise elevated 0.3 m above the general lake level over an area 6-12 m wide and is traceable for 500 m as a succession of patches forming a long, narrow lode.



6.1.7 Northern Territory

There is little record available of Barite deposits in Northern Territory.

The Dorisvale Deposit appears to minimal documentation although a thorough literature search has not been carried out.

Inte3rnational Geoscience has found barite deposits on Victoria River Downs station as blades of cream barite in weathered gangue minerals.

6.1.8 NSW

The eastern Lachlan Orogen has potential for large, high-purity barite deposits (Figure 2). Although many occurrences of barite are known, there has been little systematic exploration. Barite occurrences are rare in the New England Orogen. One hundred and thirty barite occurrences are recorded in New South Wales. These are mainly associated with volcanichosted massive sulphide mineralisation, an association strongly evident in Late Silurian felsic volcanic rocks in the eastern Lachlan Orogen. Demand for barite is primarily driven by its use in drilling deep boreholes for petroleum exploration and development. The largest barite deposit in New South Wales is the volcanic-sedimentary silver-lead-zinc-barite deposit at Kempfield, south of Bathurst, in the eastern Lachlan Orogen. Kempfield hosts significant silver, barite, lead and zinc resources along a 3 km strike length in the Late Silurian Kangaloolah Volcanics. Exploration has identified a barite resource of 3.72 Mt at 26% BaSO4 (60 g/t silver cut-off) within a much larger potential resource (Golden Cross Resources Ltd 2002). At Gurrunda, about 100 km south of the Kempfield deposit, resources of about 300,000 tonnes have been identified. The Kempfield–Gurrunda zone is considered the most prospective part of the eastern Lachlan Orogen for barite and the prospective Late Silurian felsic volcanic-sedimentary rocks may occur over a much larger area than previously recorded.



7 BARITE SAMPLE FROM DORISVALE BARITE DEPOSIT

The Dorisvale Barite Deposit is held by Micronised Mineral Solutions. It contains high grade barite but has not been mined for some years. They report that there tenements hold approximately 1 million tonnes of barite. Further deposits of barite occur to northwest on CGIs exploration tenements.

On a field visit to the area International Geoscience sampled the barite on CGIs tenements. In hand specimen it has very similar appearance to material around the Dorisvale mine.

The samples were subjected to a whiteness test at a Chinese laboratory. This was chosen because the most likely market for the material would be through China.

Below (Figure 1) is the whiteness report showing only 59% whiteness compared to around 94% needed for paint grade barite.

To investigate the cause of low whiteness hand specimens were analysed using a handled Niton XRF.

Table 1 shows the results of multiple analysis using "Test All Geo" and Mining settings on the XRF.

The principle contributors to poor whiteness appear to be manganese (Mn) and iron (Fe).

Both are in low concentrations Fe =average 0.7% and Mn average 1.2%. It may be possible to remove these elements in processing.

Note also that the Niton returned an average of 234gms/tonne gold. This is probably due to an error in calculation due to very high barium values. However as barium can be associated with gold it would be worth running a fire assay analysis on the samples.



441	精美检测 IINMEN TESTING		科学的眼睛 质量的标尺 The Eyes Of Schweizer The Scale Of Quality 严谨 科賞 公子 求实
(J)			Rigorous Science Fair Realistic
		检测报告 TEST REPORT	●●第一页, 共一页管
报告纳	高号 P/O NO.	: 1308-26-49	检测专用章
		AME : International Geoscience	
	电话(传真)FAX	: +61 415679688	
样品打		: 矿石 ore IVED : 2013.08.26	
作 m f			
		ARED : 2013.08.31	
执行林		: GB/T4734-1996 GB/T5	950-2008
检验约	结果见下表 REPORT		
	名称	项目	检验结果
MA	TERIAL REFERENCE NO.	ANALYSIS REQUIRED	RESULTS
(MI	矿石 ore	Burnt whiteness 烧白度 FW	59.40%
P	10 /⊐ ore	Sintering shrinkage 烧成收缩 FS	3.52%
	备注:	检测样品为 20UM 以下的矿粉。	C.
1:本 TH 2:未 A_ co	经本实验室书面同意,不 consent in writing shall be ; pies. 托单位若对检验结果有异 品保留一周。 any dispute shall arise co	l only incur liability for all articles n 得对此报告全部或部分复制; approved by The JinMei Assay Offi 议,请在三日内提出复查要求, oncerning the results in any analyti Solid sample shall be kept for a mo	ce in order to make any report 固体样品保留一个月,液态 tical service,please demand a
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Figure 2 Whiteness report from Jinmen testing showing whiteness of ground sample to be 59%.



Table 4. Results of Niton XRF test of samples of barite from CGIs tenements.

Reading No	Туре	Duration	Units	Pb	Au	Au Error	Zn	Cu	Ni	Fe	Mn	Bal	S	Ва	Si
82	TestAll Geo	120	ppm	199.52	263.98	23.55	234.65	445	1766.95	13091.82	14284.73	502142.4			
83	Mining	120	%	0.018	0.024	0.004	0.024	0.037	0.158	1.177	1.117	23.54	10.751	43.692	9.188
84	Mining	120	%	0.018	0.024	0.004	0.019	0.035	0.126	2.454	0.839	37.217	5.418	37.272	9.824
85	Mining	120	%	0.015	0.02	0.004	0.017	0.036	0.145	0.458	1.096	28.094	12.698	41.937	5.392
86	Mining	120	%	0.016	0.027	0.005	0.019	0.034	0.161	0.208	1.179	29.159	16.615	45.248	5.695
87	Mining	120	%	0.014	0.021	0.004	0.02	0.033	0.152	0.423	1.091	30.262	14.63	42.472	5.299
88	TestAll Geo	120	ppm	190.83	241.53	23.44	214.2	453.27	1765.22	12947.28	14364.97	491970.2			
89	TestAll Geo	120	ppm	159.37	254.42	24.93	204.45	385.5	1818.41	1313.73	14393.36	479438.8			
90	TestAll Geo	120	ppm	164.13	271.66	25.2	192.86	462.63	1711.66	1537.6	15219.99	462272.7			
91	Mining	120	%	0.015	0.021	0.004	0.016	0.028	0.126	0.119	1.032	32.385	16.274	43.306	5.936
92	Mining	120	%	0.017	0.023	0.004	0.017	0.029	0.153	0.127	1.025	30.894	15.119	42.755	8.95
93	Mining	120	%	0.019	0.023	0.004	0.019	0.031	0.163	0.136	1.06	41.249	13.103	36.673	6.731
94	Mining	120	%	0.021	0.022	0.002	0.017	0.038	0.134	1.735	1.066	57.959			
95	Mining	200	%	0.016	0.024	0.003	0.017	0.034	0.152	0.19	1.222	33.784	16.439	43.536	3.115
96	TestAll Geo	200	ppm	127.06	214.89	28.34	159.62	383.08	1455.73	5455.97	11034.64	284709.1	36360.12	400172.3	57045.91
97	TestAll Geo	200	ppm	183.22	204.08	29.13	174.16	370.79	1342.25	1209.96	10070.5	324734.5	34404.7	387145.7	83720.77



8 APPENDIX 1

Barium High whiteness examples



Details

Classification: Sulphate		Туре:	Barium Sulphate	CAS No.:	7727-43-7
Other Names:	baryte/blanc fixe	MF:	BaSO4	U	Hebei China (Mainland)
Grade Standard:	Industrial Grade	Purity:	98.5%/98%	Appearance:	white powder, powder
Application:	coating paint plastic rubber ink paper battery	Brand Name:	Baiyun	Model Number:	Precipitated Barium Sulfate
colour:			98.5%/98%	Whiteness:	96-98%
Volatility(105°C):	0.1	PH value(100g/l suspension):	6.5~8.5	Oil absorption(g/100g),%:	15-25





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Quick Details

Classification:	Sulphate	Type:	Barium Sulfate	CAS No.:	7727-43-7
Other Names:	barium sulfide	MF:	BaSo4		Hubei China (Mainland)
	Industrial Grade	Purity:	98%min	Appearance:	white powder
A nnii cation	painting, coating, etc.	Brand Name:	XINRU	colour:	white/gray
state:	powder				

Packaging & Delivery

Packaging Detail: N.W. 25kg,50kg, 1000kg in Plastic woven bags with lining or with pallet Delivery Detail: 2-3 weeks after confirmed reception of payment or L/C

Specifications

2013 factory high purity Natural barite powder 7727-43-7

1.Purity:98%, 2.Whiteness: 94%min 3.PH: 6-9 4.Density: 4.0-4.4