

# VANSPAR MINING LTD.

斯帕顿钒业有限公司

BUILDING A MAJOR  
CHINA VANADIUM  
COMPANY

建立一家主要  
中国钒业公司



# FORWARD LOOKING STATEMENTS

This presentation contains “forward-looking statements”, within the meaning of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities legislation, concerning the business, operations and financial performance and condition of Sparton Resources Inc. (“Sparton”). Forward-looking statements include, but are not limited to, statements with respect to the future price and estimation of mineral reserves and resources, the realization of mineral reserve estimates, the timing and amount of estimated future production, costs of production, capital expenditures, costs and timing of the development of new deposits, success of exploration activities, permitting timelines, hedging practices, currency exchange rate fluctuations, requirements for additional capital, government regulation of mining operations, environmental risks, unanticipated reclamation expenses, timing and possible outcome of pending litigation, title disputes or claims and limitations on insurance coverage. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as “plans”, “expects” or “does not expect”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates” or “does not anticipate”, “believes” or variations of such words and phrases or statements that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “occur” or “be achieved”. Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Sparton to be materially different from those expressed or implied by such forward-looking statements, including but not limited to: risks related to the integration of acquisitions; risks related to international operations; risks related to joint venture operations; actual results of current exploration activities; actual results of current reclamation activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of resources; possible variations in ore reserves, grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accidents, labour disputes; delays in obtaining governmental approvals or financing or in the completion of development or construction activities and other risks of the mining industry. Although Sparton has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements. Sparton does not undertake to update any forward-looking statements that are included in this document, except in accordance with applicable securities laws. All amounts are in U.S. dollars, unless otherwise stated.

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**VANSPAR MINING LTD.**

**斯帕顿钒业有限公司**

**Building the World's largest  
China-based Vanadium Mining  
and Production Company**

**建立世界上最大的立足中国的  
钒业开采和生产公司**

# ***VANSPAR MINING LTD. (BVI)***

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## ***OVERVIEW***

### **DEVELOPMENT OF ADVANCED-STAGE VANADIUM MINES AND PRODUCTION FACILITY IN CHINA**

- THREE LATE – STAGE VANADIUM PROJECTS CURRENTLY UNDER ACQUISITION
- EXCLUSIVE RIGHT TO ACQUIRE A NEW, 2,200,000lb/p.a. V<sub>2</sub>O<sub>5</sub> PRODUCTION PLANT AND RELATED INFRASTRUCTURE
- EXCLUSIVE MANDATE WITH LOCAL GOVERNMENT FOR THE RIGHT TO CONSOLIDATE ALL OTHER VANADIUM PROJECTS IN THE LOCAL COUNTY
- CURRENT PROJECT'S HOST IN EXCESS OF 220,000 METRIC TONNES OF HIGH GRADE VANADIUM PENTOXIDE (V<sub>2</sub>O<sub>5</sub>) WITH AN *IN SITU* VALUE OF >USD3 BILLION
- ADVANCED, PATENTED CLEAN TECHNOLOGY FOR VANADIUM EXTRACTION FROM SHALE HOSTED DEPOSITS

# 斯帕顿钒业有限公司 (英属维尔京群岛)

## 概况

### 发展位于中国的高级阶段钒矿和生产设施

- 目前正在收购三个后期钒矿项目
- 收购年产量2,200,000磅V<sub>2</sub>O<sub>5</sub>新兴工厂及相关基础设施的专有权
- 当地政府独家授权可整合当地县的所有其它钒项目
- 目前的项目拥有超过220,000公吨的高品位五氧化二钒(V<sub>2</sub>O<sub>5</sub>), 实时价格>30亿美元 (约合210亿人民币)
- 从页岩型矿床中提取钒的先进专利清洁技术

# DIRECTORS/MANAGEMENT

## 董事/管理层

### Lee Barker (Chairman) 董事长

- Professional Engineer and Geologist over 45 years of successful project generation and development
- 专业工程师和地质学家，超过45年项目开发和发展成功经验
- 1990-2002 involved in Canada's second diamond mine discovery
- 1990-2002年，参与加拿大第二个钻石矿的发现探索

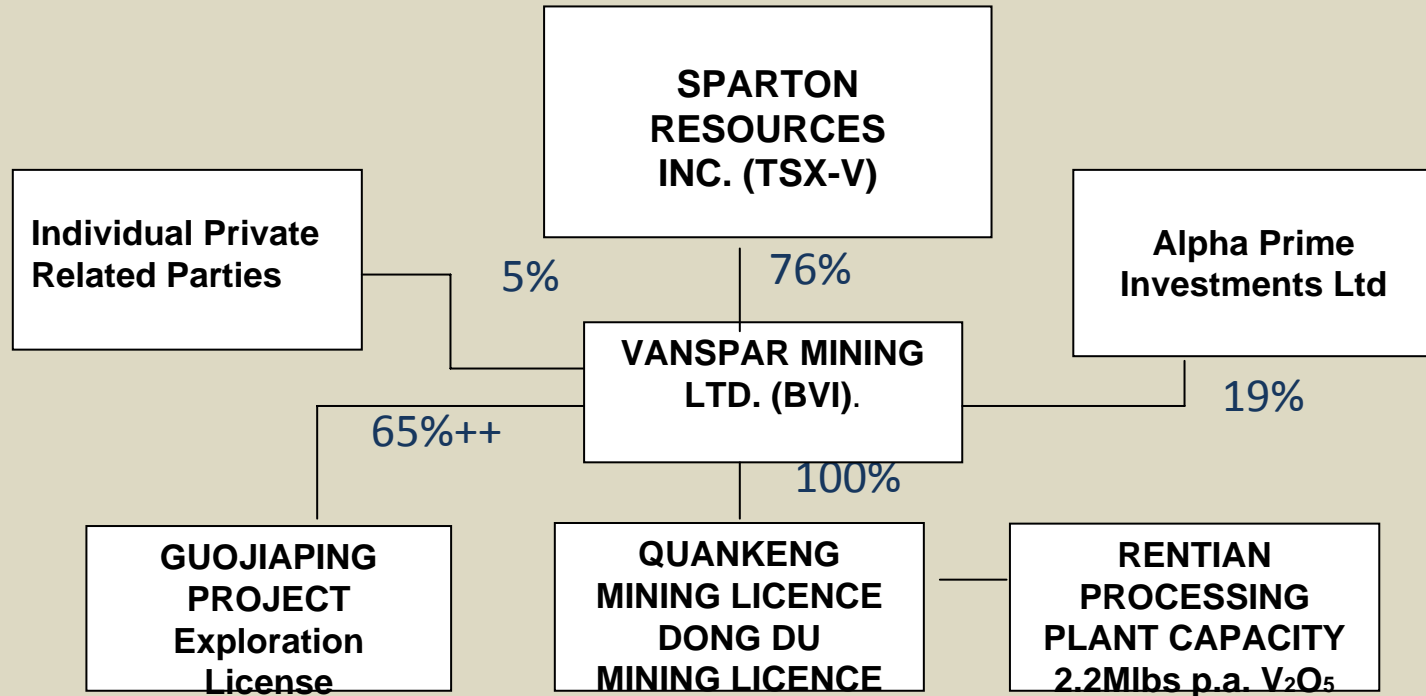
### Adrian Lungan (President & CEO) 总裁兼首席执行官

- 30 years of experience in mining in Australia, Asia, Africa, China, America and international projects
- 30年澳大利亚、亚洲、非洲采矿经验，中国、美国和国际项目经验
- Seasoned mining executive with many successes including African Gold, Uramin Inc. and CCEC. Ltd (China).
- 经验丰富的采矿执行者，成功经验包括African Gold公司、Uramin公司和CCEC(中国)有限公司

### Charles Ge, Director (PRC GM) 葛启明，董事（中国区总经理）

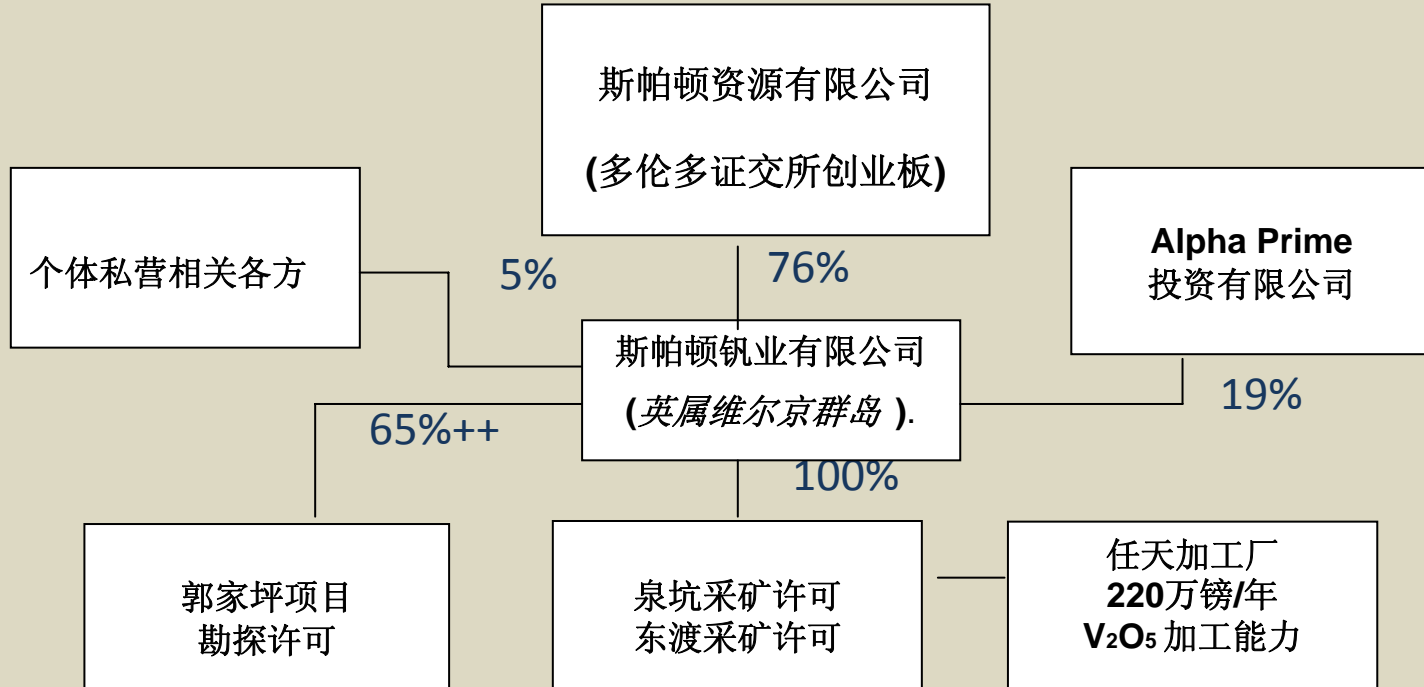
- Law Degree from Beijing University 北京大学法学学士学位
- 4 successful JV 's for Gold Projects in China 中国金矿项目4个合资企业的成功经验
- Former President of Quam Securities, China (HKSE: 0952) 中国华富嘉洛证券（香港证交所：0952）前总裁

# CORPORATE STRUCTURE





# 企业架构



# VANADIUM

Barrack Obama recently championed “multi-megawatt vanadium redox fuel cells” for mass-storage batteries as “one of the coolest things I’ve ever said out loud” (Cleveland, Feb 2011)



USES: Steel Industry & Alloys 85%

Major growth opportunities in large storage batteries for solar/wind energy as well as electric and hybrid vehicles

Commercial Aviation  
Aerospace  
Tools  
Marine  
Batteries(VRB)

Buildings  
Bridges  
Pipelines  
Airports  
Subways/Rail  
Nuclear Facilities

# 钒

奥巴马总统最近支持大容量储能电池采用“多兆瓦全钒氧化还原液流电池关键材料”，称其为“我曾大声说出的最酷的事情之一”。 (克利夫兰, 2011年2月)

用途: 85%用于钢铁和合金工业

太阳能/风能以及电动车和混合动力车应用的大型蓄电池中的主要增长机遇

商业航空  
航空航天  
工具  
船舶  
电池

(全钒液流储能电池)

建筑  
桥梁  
管道  
机场  
地铁/火车  
核设施



# VANADIUM – “THERE JUST ISN’T ENOUGH”

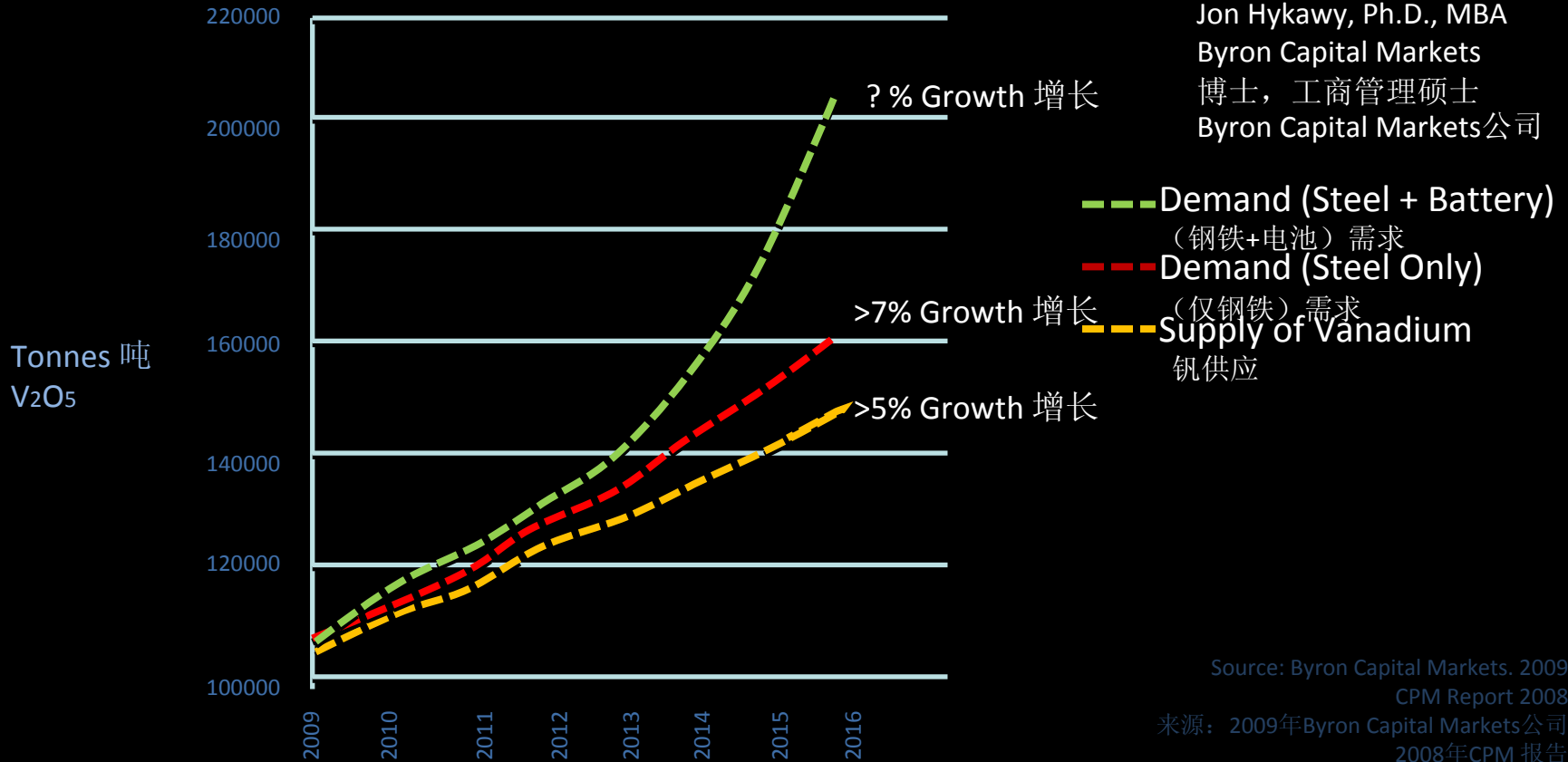
## 钒—“远远不够”

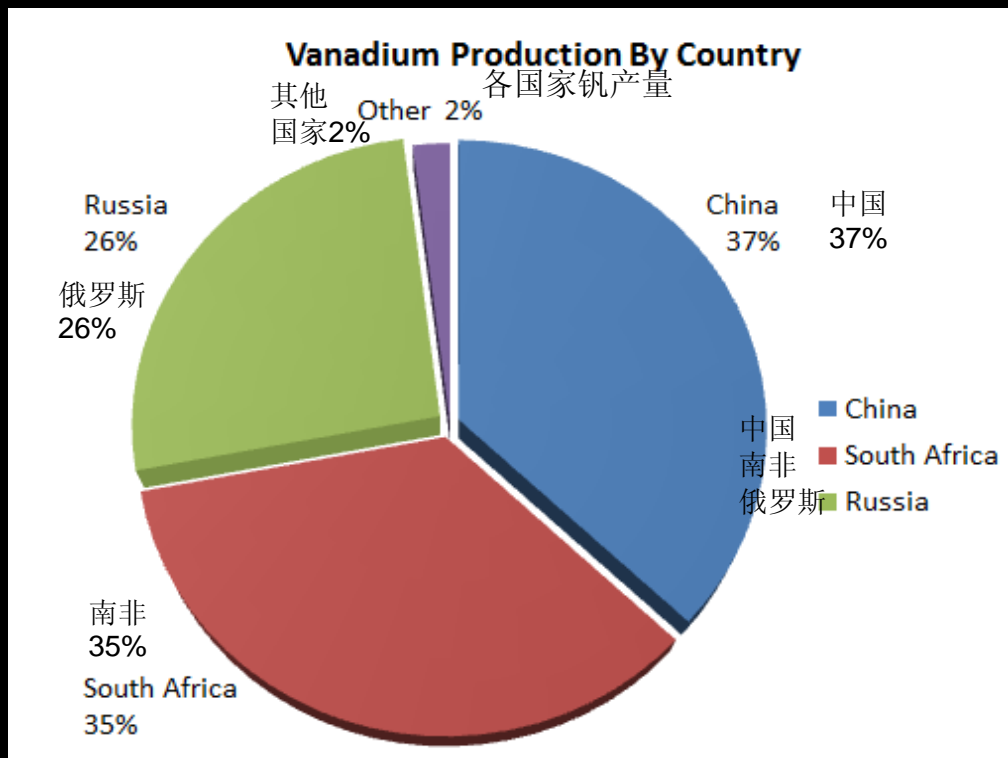
“Vanadium demand is growing because of steel.

We will add battery demand, both small and large scale.”

“钒需求随钢铁工业发展而增加。

而我们将小型和大型电池需求同样纳入增长考虑之中。”





## PRICING Vanadium Pentoxide ( $V_2O_5$ ) US\$6.50-7 /lb

### 五氧化二钒( $V_2O_5$ )定价 6.50-7美元/磅

- Post Financial Crisis - pricing has been volatile. 金融危机之后 — 价格一直起伏不定。
- China imports 1/3 of its annual demand. 中国年需求量1/3 需进口。
- China Peoples Party Congress (Mar 2011) stated that Vanadium development is one of China's priorities. 中国人民代表大会(2011年3月)指出，钒的发展是中国目前优先任务之一。
- With steel production in China increasing by 15% p.a. and increased demand from VRB development, both the price and demand are on the rise. 随着中国钢铁产量每年增加15%和全钒液流储能电池开发，钒价格和需求都在上升。

# Vanadium Project Location Jiangxi Province

钒项目位置  
江西省



# PROJECT STATUS 项目状态

AGREEMENTS IN PLACE TO ACQUIRE TWO MAJOR VANADIUM PROJECTS  
收购两大主要钒项目的协议已到位

## MILESTONES – OBJECTIVES 里程碑—目标

- QUANKENG MINING LICENCE 泉坑采矿许可
- 100% purchase with government support 政府支持下100%购买权
- Mining License: projected over > 200Mlbs of contained V<sub>2</sub>O<sub>5</sub> (1100 metres drilling completed more planned)
- 采矿许可：预期 超过2亿磅V<sub>2</sub>O<sub>5</sub> (已完成1100米钻探,计划更多钻探)
- Advanced metallurgical testing planned 计划进行先进的冶金测试
- Independent NI 43-101 Technical reports underway 独立的NI 43-101技术报告正在进行中

## RENTIAN COMPANY INFRASTRUCTURE 任天公司基础设施

- Shut in Processing Plant Completed 2010: Capacity 1000t.p.a. of V<sub>2</sub>O<sub>5</sub> powder.
- 2010年完成加工厂建设：每年可加工1000吨V<sub>2</sub>O<sub>5</sub>粉末
- Distressed asset sale or debt restructure with government support
- 政府支持下的不良资产出售或债务重组

## DONG DU MINING LICENCE 东渡采矿许可

- Two Priority V<sub>2</sub>O<sub>5</sub> projects under evaluation
- 两项优先的V<sub>2</sub>O<sub>5</sub>项目正在评估中
- JV partnership negotiations ongoing with Government for additional projects
- 正与政府谈判追加项目的合资企业合作

## GUOJIAPING EXPLORATION LICENCE: 郭家坪勘探许可:

- Equity 65:35 JV with government exploration group.
- 斯帕顿与政府勘探集团分别拥有65:35权益的合资企业。
- Exploration License – NI-43-101 report with compliant potential resource target of >300Mlbs of contained V<sub>2</sub>O<sub>5</sub>.
- 勘探许可— NI-43-101报告显示了超过3亿磅V<sub>2</sub>O<sub>5</sub>的潜在资源目标。
- Additional drilling, metallurgical testing planned to increase resources, complete Mining Licence application and organize licence conversion to vanadium only.
- 已计划额外的钻探、冶金测试以增加资源，完成采矿许可证申请并组织仅针对钒的许可证转换。



# GUO JIA PING PROJECT



## Resources



18 Mt of ore hosting >300 Million Pounds V<sub>2</sub>O<sub>5</sub> (min.) – (NI-43-101 potential target )



In situ value of contained V<sub>2</sub>O<sub>5</sub> > US\$1.5 Billion



Potential to double this resource



## Mining & Metallurgy



Low Cost Open Pit Mining, consistent Flat Lying Zones, 5 - 15 Metres Thick



Average Grades 0.8-1.1% V<sub>2</sub>O<sub>5</sub>



Very Low Initial Stripping Ratio 1:1



12 year mine-life at 1.5Mt per annum (5000tpd) mining rate



Full Local Infrastructure in place (labour, power, transport)



70 - 90% Recoveries in initial metallurgical testing, newly patented technology



Low Capital Cost Estimates for Startup



# 郭家坪项目

## 资源

- 1800万吨矿石含有 >3亿磅V<sub>2</sub>O<sub>5</sub> (最小值) - (NI 43 - 101 潜在目标)
- 所包含的V<sub>2</sub>O<sub>5</sub>实时价格 > 15亿美元
- 有潜力使该资源量翻倍

## 采矿&冶金

- 低成本露天开采，5 - 15米厚，连续的平伏区
- V<sub>2</sub>O<sub>5</sub>平均品位0.8%-1.1%
- 极低的初步剥采比1:1
- 每年150万吨（5000吨/天）开采速度，12年矿山寿命
- 地方基础设施全部到位(劳动力、电力、交通)
- 初步冶金测试70 - 90%回收率，新进获专利的技术
- 启动时低资本成本估算



**GUO JIA PING**

郭家坪

**Drill Hole Locations**

钻孔位置

Zk-4804

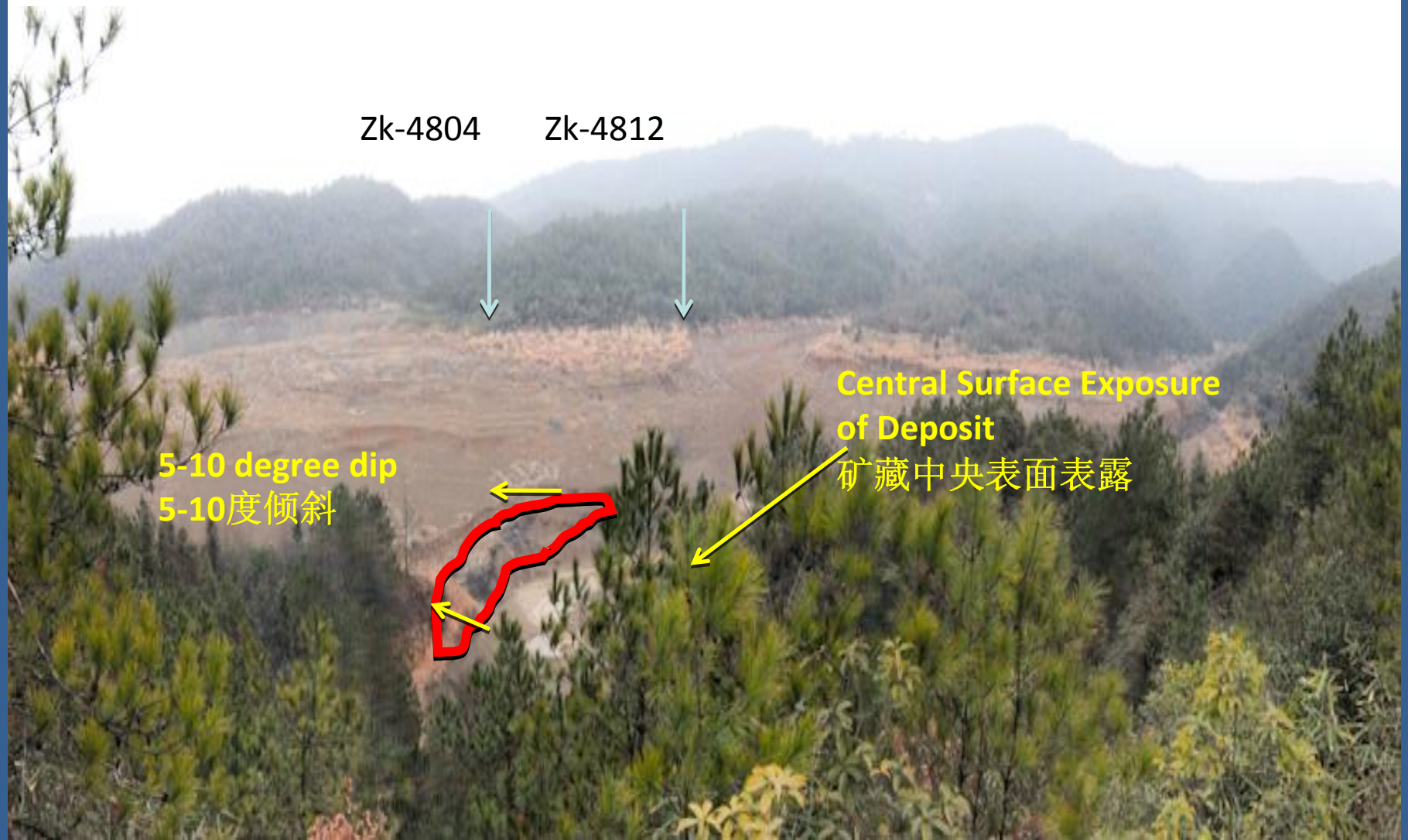
Zk-4812



5-10 degree dip  
5-10度倾斜

Central Surface Exposure  
of Deposit

矿藏中央表面表露



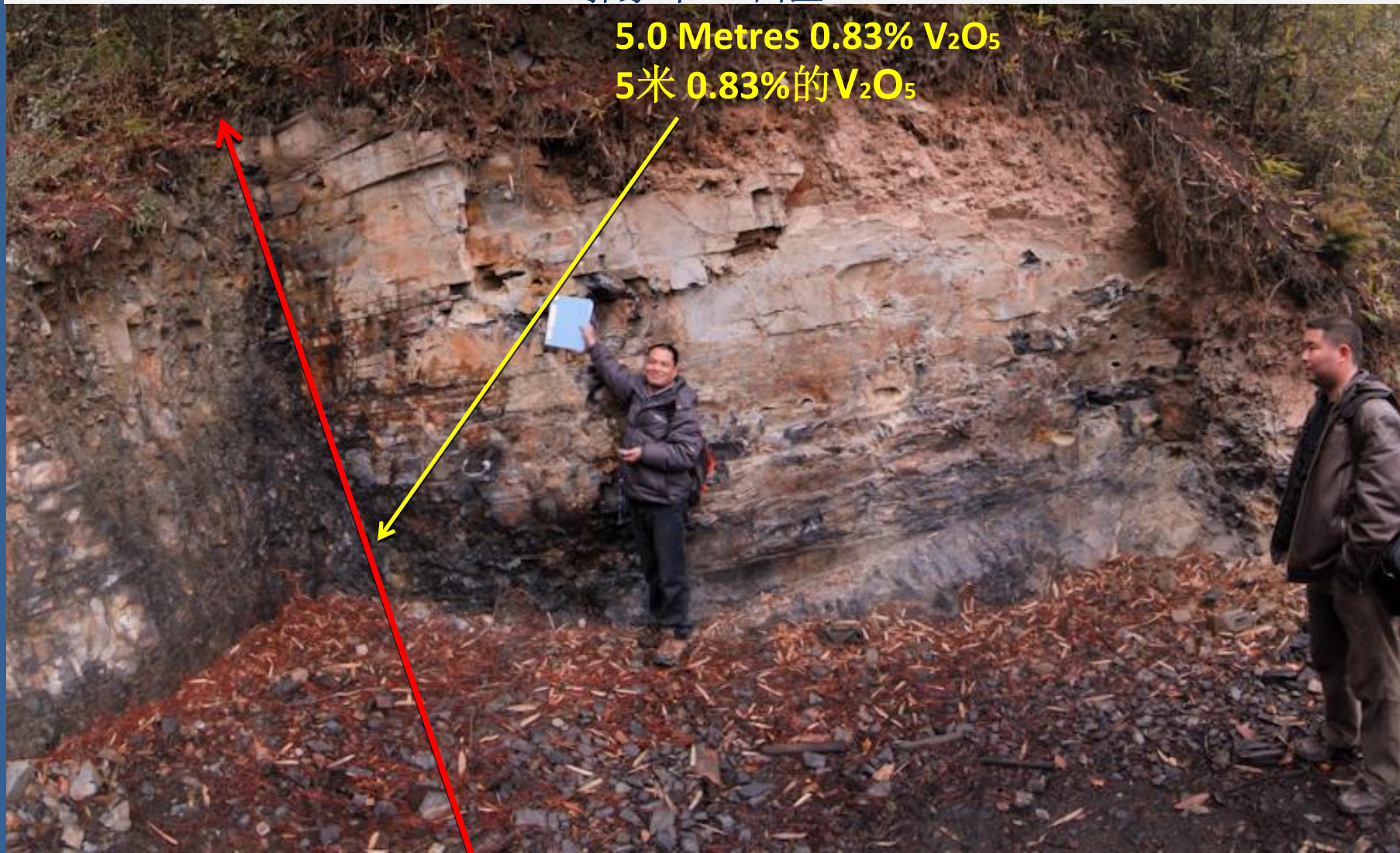


**Drill Hole Site ZK-0004**  
**Guo Jia Ping - West Zone**

ZK-0004钻孔地  
郭家坪—西区







5.0 Metres 0.83%  $V_2O_5$

5米 0.83%的 $V_2O_5$








# RENTIAN PROJECT

## ORE DEPOSIT/RESOURCES

-  Active mapping, sampling and drilling program indicates significant vanadium potential for resources in excess of 200M.lbs. V<sub>2</sub>O<sub>5</sub>.
-  Identical Geology as Guo Jia Ping with consistent Flat –Lying Ore Zones (5 m- 15m thick)
-  Low Cost Open Pit Mining with very low initial strip ratio,
-  High grade ore deposit: Average surface grades of 0.9% - >2.0% V<sub>2</sub>O<sub>5</sub>
-  New discovery of high grade copper mineralized zone with the vanadium mineralization
-  Full Local Infrastructure in place.

## PROCESS PLANT

-  New (1000tpa) V<sub>2</sub>O<sub>5</sub> processing plant (12 months old)
-  Independent technical audit of Process Plant- completed
-  Metallurgical Testwork – completed, new technology patent applications accepted by PRC Patent Bureau.
-  Process Plant - upgrade design completed & budgeted
-  Local market for waste generated from V<sub>2</sub>O<sub>5</sub> Plant – (selling for USD\$20/t)

# 任天项目

## 矿床/资源

- 进行中的测绘、采样和钻探计划显示超过2亿磅 $V_2O_5$ 的重大钒资源潜力
- 与郭家坪相同的地质情况，连续平伏矿带(5 - 15米厚)
- 初步剥采比极低的低成本露天开采
- 高品位矿藏:  $V_2O_5$ 平均表层品位0.9% — >2.0%
- 最新发现伴随钒矿化的高品位铜矿化带
- 当地基础设施全部到位

## 加工厂

- 新兴(1000吨/年) $V_2O_5$ 加工厂(建成12个月)
- 加工厂独立技术审核 — 已完成
- 冶金测试 - 已完成, 中国专利局已接受新技术专利申请
- 加工厂 — 已完成升级设计和相应预算
- 供 $V_2O_5$ 厂处理生产废料的当地市场 - (以20美元/吨价格售出)





5 METERS  
5米

1%  $V_2O_5$ , 0.5% COPPER 铜



RENTIAN VANADIUM DEPOSIT VANADIUM OXIDE AND COPPER MINERALIZATION

任天钒矿 氧化钒和铜矿化



# RENTIAN VANADIUM PROCESSING PLANT

任天 钒加工厂







**RENTIAN VANADIUM ORE PROCESSING PLANT**

DECEMBER 2010

任天 钒矿石加工厂

2010年12月

# WHY VANSPAR & CHINA VANADIUM?

## General

- Project has both National and Local Government support - (Recent National Congress designated Development of Vanadium as being in the Nation's Interest)
- Project Location: On the doorstep of the world's largest consumer of Vanadium (importer of 1/3 of its annual consumption).
- Low Mining Costs: (US\$2/t) Ore bodies can be mined by open cut methods and are both high grade and have a low strip ratio.
- Environmentally friendly patented processing: Local market for waste from production plant. No tailings disposal.

## Simple metallurgical characteristics:

- Ore is relatively soft and requires minimal grinding.
- Simple low cost mineral beneficiation/extraction process.
- Low Production Cost: projected at USD\$3.40/lb.V<sub>2</sub>O<sub>5</sub> (mining and extraction)

## Established Plant and infrastructure:

- Fully permitted Processing and Production Facility in Place
- Infrastructure in place - Highway and Road and rail access.
- All Utilities in place – Electricity / Water
- Low Capital development costs & predicted short payback period:

# 为什么选择斯帕顿钒业和中国钒矿？

## 概况:

- 项目拥有国家和当地政府双重支持 - (近期的全国代表大会指明钒业发展是为国家利益)。
- 项目位置: 位于世界最大钒消费国的门阶上 (钒年消费量的1/3需进口)。
- 低开采成本: (2美元/吨) 矿体可露天开采且全是高品位、低采剥比矿体。
- 环保专利加工: 供工厂处理生产废料的当地市场。无尾矿处理。

## 简单的冶金特性:

- 矿石较软，只需最低程度打磨。
- 简单的低成本选矿/提取工艺。
- 低生产成本: 预期  $V_2O_5$  (开采和提取) 3.40美元/镑。

## 建成的工厂和基础设施:

- 允许齐全的加工和生产工厂到位
- 基础设施到位 - 公路、道路和铁路通道
- 所有公用事业到位 - 电 / 水
- 低资本开发成本和预测的短还本期

# ONGOING DEVELOPMENT PROGRAMME

- Complete resource definition drilling Guo Jia Ping and Rentian (USD\$600k)
- Establish Industry-Compliant V<sub>2</sub>O<sub>5</sub> reserves / resources and complete Feasibility Study to build a centralized V<sub>2</sub>O<sub>5</sub> production plant (10,000t.p.a. V<sub>2</sub>O<sub>5</sub> production).
- Rentian Plant – upgrade and re-start Rentian Plant Upgrade (USD\$4M & 6 months) and re-start production (initial 2,200,000lbs of V<sub>2</sub>O<sub>5</sub> per annum)
- Complete acquisition program of additional Vanadium projects, all with existing license and PRC nomenclature indicated resources to establish largest Vanadium reserve / resource base of any company in China / World.
- Establish strategic partnerships with end product V<sub>2</sub>O<sub>5</sub> users.
- Planned listing on Hong Kong Stock Exchange within 12 months.



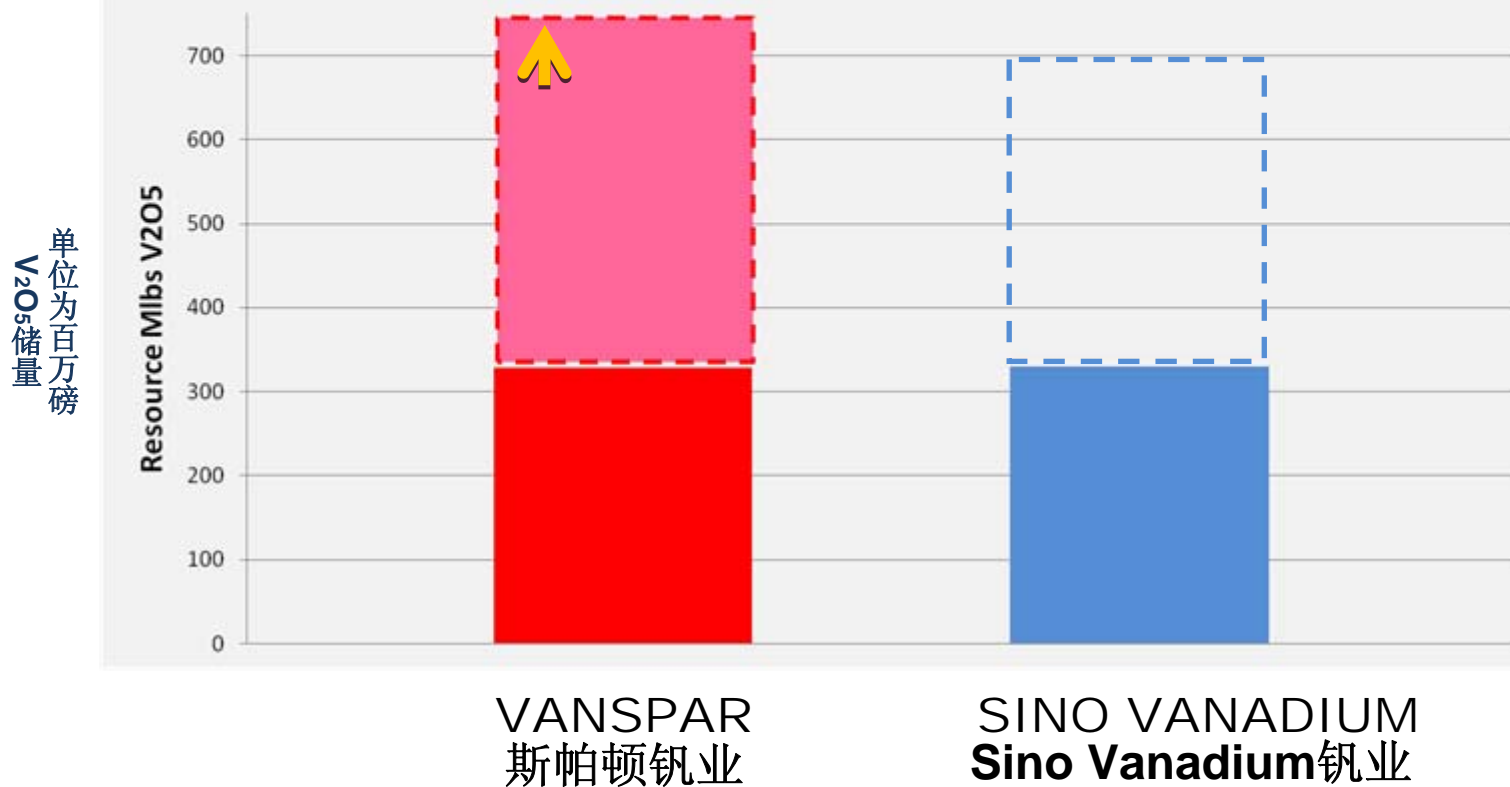
# 持续的开发计划

- 完成郭家坪和任天的资源定义钻探(60万美元)
- 建立符合行业标准的V<sub>2</sub>O<sub>5</sub>储量/资源并完成可行性研究以建立一个集中的V<sub>2</sub>O<sub>5</sub>生产工厂(每年生产V<sub>2</sub>O<sub>5</sub> 10,000吨)
- 任天工厂 - 升级并重新启动任天工厂升级 (400万美元 & 6个月) 并重新启动生产(V<sub>2</sub>O<sub>5</sub>初始生产2,200,000磅 / 年)
- 完成追加的钒项目收购计划，所有项目都有现成许可证和中国术语指示资源，以建立拥有中国/世界最大钒储量/资源基础的公司
- 与最终产品V<sub>2</sub>O<sub>5</sub>使用商建立战略合作关系
- 计划12个月内在香港证交所上市

# 与Sino Vanadium钒业公司V<sub>2</sub>O<sub>5</sub>总储量比较

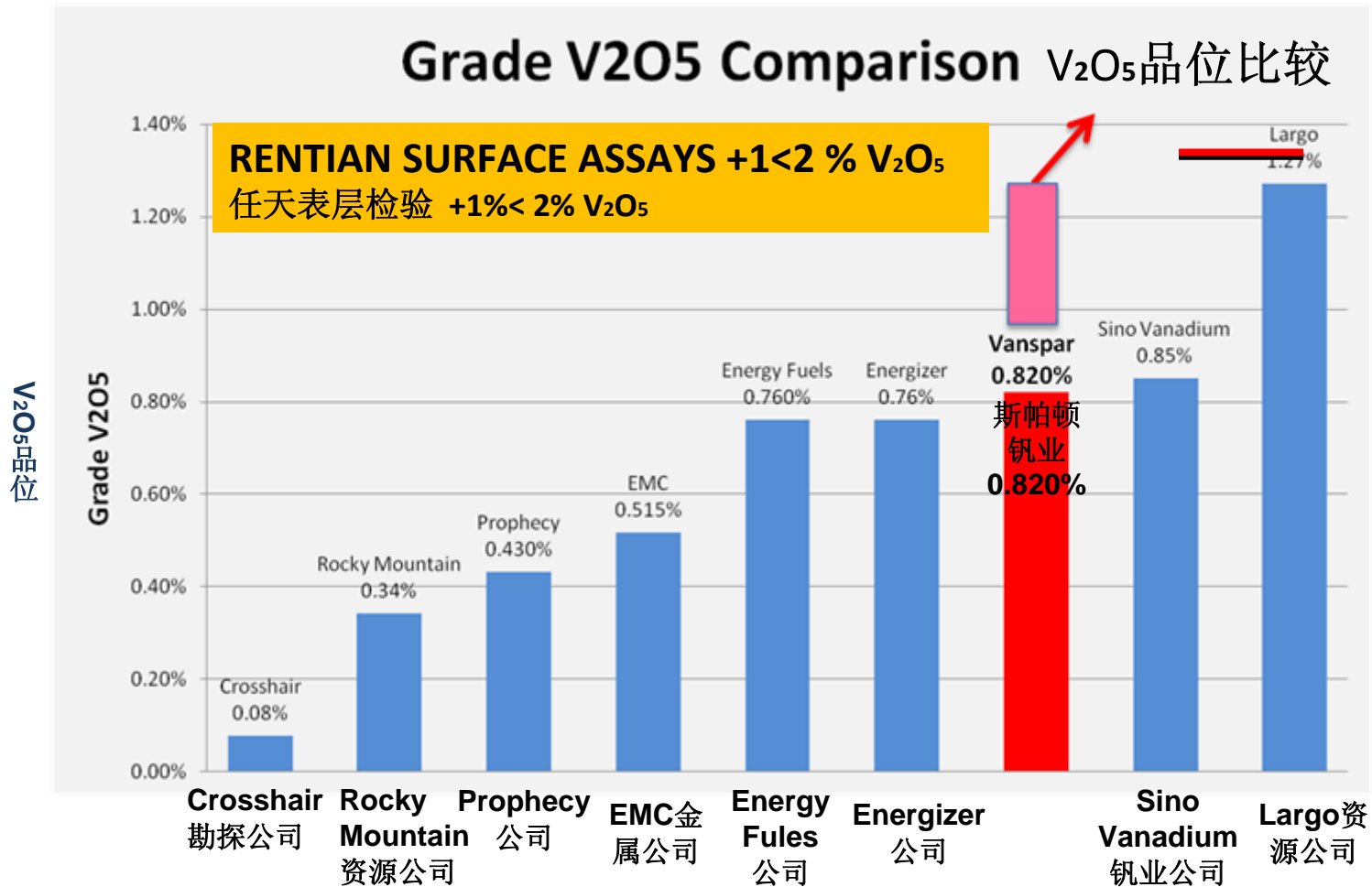
单位为百万磅 (2011年4月)

## Total Reserve M Lbs V<sub>2</sub>O<sub>5</sub> Comparison to SINO VANADIUM (April 2011)



# GRADE COMPARISON vs OTHER VANADIUM PROJECTS/COMPANIES

## 与其它钒矿项目/公司的品位比较

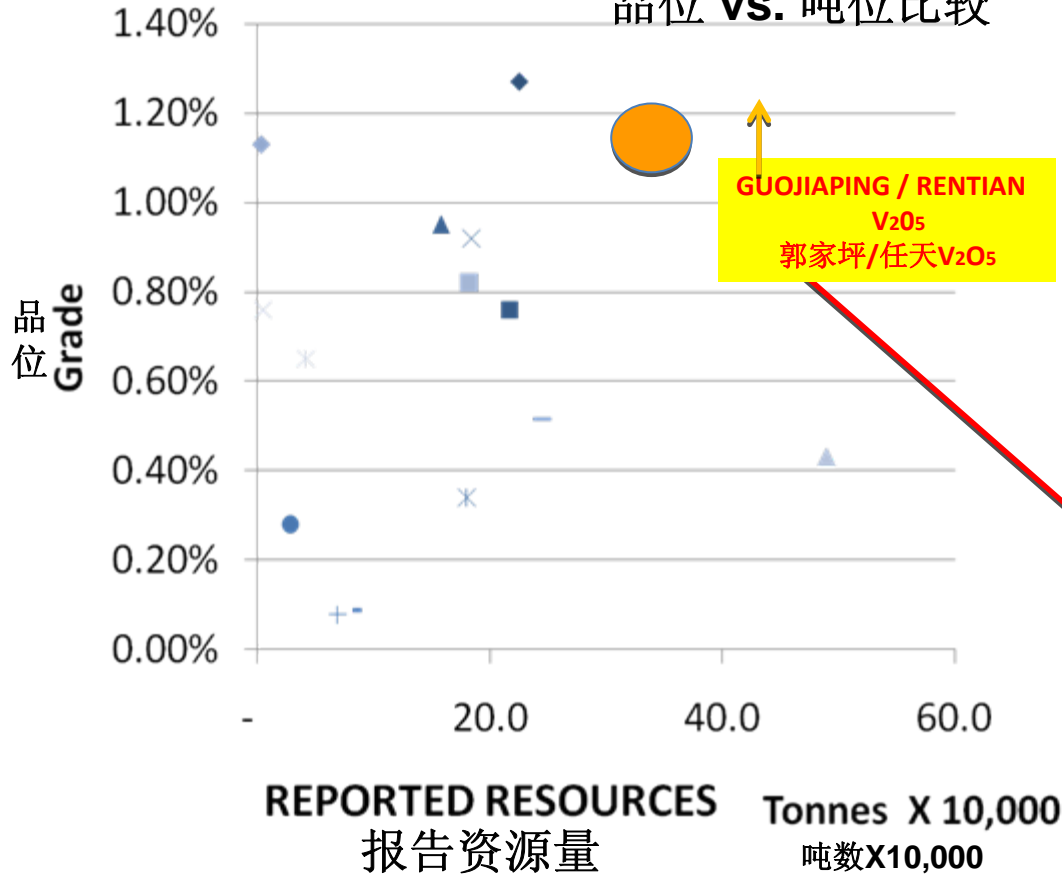


# GUO JIA PING/RENTIAN vs. INTERNATIONAL VANADIUM PROJECTS

## 郭家坪/任天 vs. 国际钒矿项目

### Grade vs Tonnage Comparison

### 品位 vs. 吨位比较



- ◆ Largo Resources  
Largo资源公司
- ▲ Sino Vanadium  
Sino Vanadium钒业公司
- × Sino Vanadium  
Sino Vanadium钒业公司
- × Rocky Mountain Resources  
Rocky Mountain资源公司
- Rocky Mountain Resources
- + Rocky Mountain资源公司
- + Crosshair Exploration  
Crosshair勘探公司
- Crosshair Exploration  
Crosshair勘探公司
- Crosshair勘探公司
- EMC Metal  
EMC金属公司
- VANSPAR MINING**  
斯帕顿钒业



# WHY VANSPAR?

## 为什么选择斯帕顿钒业?

- **UNIQUE EAST-WEST PARTNERSHIP**  
独特的东西方合作关系
- **MANAGEMENT TEAM WITH A PROVEN TRACK RECORD**  
拥有可靠工作业绩的管理团队
- **ACCESS TO WORLD CLASS HIGH GRADE VANADIUM DEPOSITS**  
有权开发世界级高品位钒矿
- **DEPOSITS ARE NEAR SURFACE, HIGH GRADE, OPEN PITTABLE AND ONLY 40% EXPLORED**  
矿床近地表，品位高，可露天开采且仅勘探了40%
- **NEAR TERM (6 MONTHS) PRODUCTION INITIAL 2,200,000 lbs. V<sub>2</sub>O<sub>5</sub> p.a.**  
近期生产(6个月)，初始2,200,000磅/年V<sub>2</sub>O<sub>5</sub>
- **GEOGRAPHY – SUPPLY/DEMAND – CHINA THE WORLD'S MAJOR CONSUMER OF VANADIUM**  
地理位置 — 供应/需求 — 中国，世界主要钒消费国

# VANSPAR CHINA VANADIUM OBJECTIVES

## 斯帕顿钒业中国钒目标

- SUSTAINED DEVELOPMENT PROGRAMME OVER THE NEXT 5 YEARS WILL CREATE ONE OF THE LARGEST VANADIUM COMPANYS IN THE WORLD.
- 未来5年的可持续发展计划将建立世界最大钒业公司之一
- High-value product with demand increasing annually.
- 高价值产品，需求逐年增加
- Close proximity to the World's major markets.
- 紧靠世界主要市场
- Large Robust Vanadium Resources.
- 大量的钒资源
- Proven effective Metallurgical Process.
- 行之有效的冶金过程
- Established infrastructure.
- 完善的基础设施
- Low environmental impact.
- 低环境影响
- Low capital cost and low operating costs.
- 较低的资本成本和生产费用
- Vanspar can be a near-term producer of Vanadium (last quarter of 2011).
- 斯帕顿钒业可成为近期钒生产商(2011年第四季度)



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**VANSPAR**  
斯帕顿钒业

CHINA VANADIUM  
中国钒业

