## MINDAX MANAGING DIRECTOR'S PRESENTATION - AGM 19 NOVEMBER 2009 Mindax 公司董事总经理的回报 -2009 年 11 月 19 日召开的年度股东大会

## INTRODUCTION

简介

The past year has been an exciting time for Mindax:

过去的一年对于 Mindax 公司来说是非常振奋人心的一年:

- We have weathered the GFC in good shape with a healthy bank balance, a healthy share price and a significant Market Capitalization 我们以健康的银行存款,健康的股票价格和关键性的市场资本化使公司稳立于全球经济危机之中
- We have enhanced projects in iron, uranium and copper-gold 我们促进了铁矿,铀矿和铜矿等项目的发展
  - We have finally gained traction towards a drilling program to develop our outstanding iron resource at Mt Forrest
    我们终于朝开发我们弗里斯特山杰出的铁矿资源勘探计划迈进了脚步;
  - We have identified significant uranium mineralisation at Mukinbudin (Yilgarn-Avon JV area), and
    我们已经探明了 Mukinbudin (伊尔干-埃文合作区域)的大型铀矿化;
  - We have some great geophysical anomalies at Centre Forrest 我们在弗里斯特中部地区测出非常明显的地球物理异常;
- Finally we have transcended most of the permitting (Heritage) issues that have dogged us for the last two years and some serious drilling is about to begin on three very good prospects 最后,我们已经解决了在过去两年中妨碍我们工作的大部分许可(遗迹)申请问题,而且将开始在三个非常好的远景区进行深度钻探工作;
- We expect to take the Company to a new level in 2010 我们展望在 2010 年把公司提升到一个崭新的阶段。

It is appropriate to refer back to this time last year and consider the *raison d'être* that was presented there:

我们应适当地与去年同期相比,得出出现当时情况的理由:

Mindax is an exploration company. That is where our expertise lies but it is also where we have chosen to start in the resources sector. It is the reason why people have invested capital or have become shareholders. We are not in property development or retail. The resources and expertise we have available to apply, have always been limited and carefully husbanded.... We have chosen the high risk-high reward strategy of exploration beginning with our IPO four years ago. Exploration and discovery is the foundation of Mindax and we believe it is our future.

Mindax 是一家勘探公司。勘探是我们的所长,也是我们在资源业中选择的起步点。这是人们向我们投入资金成为我们股东的原因所在。我们的经营范围不在地产开发或零售业。我们现有的资源和专业知识一直都是有限度和谨慎积累的。我们从四年以前公开募股以来选择了高风险高回报的勘探策略。我们深信勘探和发现矿藏是 Mindax 公司的宗旨,也是我们的将来。

I believe that this past year has seen us move increasingly and confidently down that path. 过去的一年当中我们已经朝着这个方向大步昂首迈进。

I shall now take you through our more exciting projects, so that you can see how we are progressing and then address some of the other issues that face Mindax as the company moves forward.

首先,我为您介绍我们振奋人心的项目,您可以看看我们的进程,可以在公司发展过程中对 Mindax 面临的其他问题发表意见。

Mindax current hold interests in 43 tenements or applications covering 5,025 sq km, all in WA. Mindax 公司现持有 43 个区的探矿权,面积 5,025 平方公里,全部在西澳洲范围内。

Our most advanced project is iron ore at Mt Forrest, in the Richardson Ranges, 150 km northeast of Menzies and the railway line which connects with the Port of Esperance. Mt Forrest is around 800 km northeast of Perth.

我们最先进的项目是在弗里斯特山的铁矿项目,该项目位于离 Menzies 市和连接 Esperance 铁路 线以东北 150 公里的 Richardson Ranges。弗里斯特山位于离珀斯东北 800 公里处。

The Mt Forrest Mining Leases cover 50 sq km and are very much dominated by the Mt Forrest – Richardson Ranges. These are multiple ironstone ridges rising to around 100m above the surrounding country and within our leases extend over 17 km folded in the shape of a north pointing arrow.

弗里斯特采矿权区面积为 50 平方公里,主要位于弗里斯特山- Richardson Ranges 区域。这些是上升到离周边国家大概 100 米、在我们的矿权范围内延伸超过 17 公里、褶皱成朝北的箭头形状的多重铁矿石山脊。

The ironstones occur as discontinuous parallel units and are dominantly magnetite and silica. From surface mapping and sampling, we are targeting around 10 million tonnes per vertical metre of this material averaging 40% iron. Substantial zones of richer hematite material, possibly making up 10 to 15 percent of this ironstone inventory, offer the potential for commercially attractive direct shipping ores. No definitive drilling of this iron mineralisation has yet been carried out and any commercial potential is at this time conceptual.

这些铁矿石呈间断平行单位,主要是磁铁矿和硅。从地面划图和采样工作看来,我们的目标为此种材料 1000 万吨/垂直米,平均品位为含铁 40%。含有更集中的赤铁矿物质的广阔地区提供了非常具有商业价值的直接运输铁矿,这些赤铁矿物质可能占总铁矿石的百分之 10-15。并未进行对此铁矿化的决定性钻探,此时任何商业潜力只是概念性的。

If our business plan is correct, then there is the opportunity to establish a significant enterprise up to a scale similar to the Cliffs-Portman mine at Koolyanobbing to the south of Mt Forrest.

如果我们的商业计划是正确的,就意味着我们将有机会建立相当于弗里斯特以南 Koolyanobbing 的 Cliffs-Portman 矿山规模的大型企业。

I am sure all shareholders are aware of the aboriginal heritage issues that have delayed the drilling necessary to quantify the resource potential. There has been a particular frustration that this problem has been encountered at such an early stage in the exploration process. However, the only way it can be dealt with in a sustainable way, is through process and with sensitivity to the cultural issues that lie behind it. That has been our approach.

我相信所有股东都知道关于原住居民的遗迹问题,这些问题妨碍了为增加资源潜力所必要进行的 钻探。在勘探过程的早期就遇到这个问题是特别棘手的。但是解决这个问题的唯一方法是要觉察 其背景文化问题的敏感性,持之以恒地逐步解决,也就是我们所采取的解决方法。

While we may receive little credit for the way we have handled it, we believe in the project, we believe that it has the potential to make a big difference economically to the Goldfields region and that everyone – the investors, the local stakeholders and community, the government, the tax payers - can all benefit from that. We believe it is worth the pain of many small steps to get it going rather than jeopardise the longer term stakeholder relationships. We believe we are now at a position where drilling can commence during December and are fully focussed on that objective.

虽然我们可能在处理这个问题的方法上并没有得到特别的好处,但我们对这个项目非常有信心,我们相信它将大大改变金田(Goldfields)地区的经济,而且所有人都可以从中得益,包括投资者、本地各界人士和社区、政府以及纳税人等。我们认为应该以小步推进,而不至于僵化长期的股东关系。我们相信项目已经到了可以开始进行钻探的阶段,现正集中精力准备 12 月开钻。

Preparing for that event has indeed been very much the focus of the last year. We have spent this time refining our knowledge of the area geologically and developing a view of how the project might develop. We have completed mapping the surface (13.8 sq km) at a very detailed scale of 1:1000 (on paper 1mm represents 1m on the ground). We have carried out extensive rock chip sampling (2,900 samples) over the prospective haematites. While this approach is viewed as unconventional by miners, it does provide us as explorers with a very confident way of discriminating first pass drilling targets. This will substantially improve the efficacy of the drilling. This is a uniquely valuable piece of work that is expected to continue to add value to the project well beyond the drilling phase. We are particularly indebted to the geologists that carried it through.

我们去年的工作就是为了为集中准备开始钻探进行的。我们花了整整一年的时间来整理该地区所得的地质资料,形成该项目将可能如何发展的观点。我们完成了 1:1000 的非常详细的地面(13.8

平方公里)制图工作(图上的 1 毫米表示实际地面的 1 米长度)。我们也对推测的赤铁矿进行了广泛的岩屑采样工作(2,900 个采样),以此将极大提高钻探的力度。这部分工作是十分宝贵的,因为它能不断增加项目的价值,一直把项目带到超越勘探阶段。我们非常感谢完成此工作的地质学家们。

The drilling program once started can progress quickly because of this mapping. The initial work will aim at establishing the substance of targets derived from mapping. We are looking particularly at the depth persistence of mineralisation with a notional limit of 50m below the surface. The second phase will test the continuity of mineralisation along strike and at depth and will provide the basis of a foundation JORC resource. It will provide a gauge of the overall tonnage potential and facilitate the fast tracking into feasibility if successful.

钻探计划就是因为有了这些测图才得以迅速开展。前期工作的目标为识别测图中得出靶区中的物质。尤其是要探明地面以下 50 米概念深度的深度矿化延续性。第二阶段将测试走向的矿化延续性,以此为计算符合澳大利亚联合矿储委员会标准的资源量提供基础,而且如果测试成功,将可作为总资源吨数的度量标准,加快可行性研究的步伐。

We are committed to carry out this work in a responsible way. There will be continuing frustrations – more small steps. The critical role of government is far from satisfactory in spite of the rhetoric. We have however strived to build relationships and trust and we are hopeful that that capital will continue to ease our path.

我们承诺以负责任的态度来开展这项工作。预计将不断出现棘手的情况-进行更多小步工作。政府 扮演的关键角色总是夸张而未尽人意的,但是我们正努力建立关系和信任,而且有望资金能够持 续为我们通路。

The Yilgarn-Avon joint venture with equal partner Quasar Resources is another exciting project and one that provides a particular level of satisfaction to us as a team and as scientists. Again it is a story of persistence. High levels of uranium in water led us into the search for uranium in a hither to unprospected area. Our focus became the ancient palaeochannels now hidden beneath the sand plains of the South West of WA. This year we have been able to demonstrate the presence of uranium mineralisation at a tenor well equal to those much touted resources elsewhere in the state. Our ongoing exploration is well placed to identify economic positions and through our partner we have the expertise to bring these to production and in a way that is particularly sensitive to the environment.

伊尔干-埃文合作公司和平等合作伙伴 Quasar Resources 公司合作的项目是又一能够为我们作为一个团队或者作为科学家们带来极大满足感的振奋人心的项目。同样,这也需要毅力。水中高层的铀金属带领我们进入了附近非保护区找寻铀金属。我们的焦点转为对藏在西澳洲以西南的沙原之下的古河道的研究。今年我们可以展示的铀矿化量已经能够与洲中其他更重要的资源量相等。我们的持续勘探工作已经准备就绪,将协助探明我们的经济方位,而且我们的合作伙伴将能够利用其专业知识以环保的方式把项目带到生产阶段。

This was our fourth year of exploration in the area. A large part of this time has been taken up with securing title, getting surface access to private land and permits to work. This is now very much part of

the modern exploration experience. It is expensive and it is slow and eats into the hard gained risk capital that should be going into the ground. Poorly conceived regulation is the major risk to junior explorers and ultimately the survival of a resources industry in Western Australia.

今年是我们在此地区进行勘探的第四年。在此期间的大部分时间是花在获取所有权、私人土地地面施工许可等工作上。这部分工作是现代勘探中必不可少的一部分。这些工作不仅价格昂贵,而且进度非常缓慢,占去了艰苦获得的风险投资资金的很大一部分,而这部分资金本应投入到开展地面工作中。对于年轻的勘探公司来说,差劲的规章制度成为主要的风险,也危及到西澳洲整个资源工业的生存。

Last year we saw our first signs of mineralisation in the Yilgarn-Avon program. This year we have mounted a concerted scout drilling campaign and have identified undeniably substantial mineralisation at Jindarra in the upper reaches of the palaeochannel. Along the way we have learned a great deal about the geology and geochemistry of the palaeochannel which will have wide value to the local community well beyond our exploration.

去年我们在伊尔干-埃文工程地区看到了首个矿化标志。今年我们已经为协同钻探进行了融资,而且已经在古河道上游地区的 Jindarra 探明了无可否认的大面积矿化。在前进的道路上我们获得了关于古河道的大量地质和地球化学知识,这些知识不仅对我们的勘探工作,也对当地社区来说是非常有价值的。

The palaeochannels are thought to have their origins some 50 million years ago. At that time the topography of the area was probably relatively flat because of its age and exposure. The climate was wet and humid in contrast to the present aridity. The Yilgarn River was a substantial if lazy watercourse meandering to the south, not dissimilar to the Amazon perhaps. Its low gradient made for frequent heavily forested swampy ground. The climate was one inductive to deep weathering of the rocks, leaching out the minerals and metals and further flattening the terrain. The sediments were dominantly fine sands. The basement rocks were mostly granites, some with very high uranium backgrounds perhaps up to and beyond 80 ppm U.

这条古河道被认为起源于 5 亿年之前,鉴于其年龄和开敞程度,当时改地区的地形可能相对平坦。那时的气候和现在干燥气候对比起来是潮湿的。如果缓慢的水道向南弯曲,伊尔干河当时可能成为与亚马逊河类似的重要河道。其低梯度常常使其形成茂密森林中的沼泽地。当时的气候使岩石深度风化,致使其中的矿物质和金属被浸滤出来,进一步填平了该地域。沉积的主要物质是细沙。基岩主要为花岗岩,一些花岗岩具有达可能超过 80 ppm 非常高的铀含量。

In time the river changed its course more to the west and into the Perth Basin. This was probably to do with the separation of the Antarctic continent from southern WA. With ever present climate change, the area became more arid. Swampy areas turned to peats and then coals. The river sediments became more clay rich and the water became more saline. These changes began around 5 million years ago.

过了一段时期,河流改变了其走向,更偏向西边并进入到珀斯盆地。这可能是和从西澳州南部的南极洲板块迁移有关。在现今日益变换的气候中,此地区变得非常干燥。沼泽地区变为泥炭块,之后便为焦炭。河床的沉积变为含有丰富的粘土,而河水也受到盐化。

Also at this time, seismic uplift commenced west of the Meckering line. The river still maintained the strength to push through this and empty into the Perth Basin but east of this the groundwater became even more saline and also more acid and the uranium minerals already oxidised under tropical conditions, were taken into solution and started to move down the channel until trapped by coals and other reducing chemical environments. Here the uranium re-precipitated as "roll front", "redox" or "sedimentary" uranium.

与此同时,在 Meckering 线以西的地震活动开始频繁。该河流仍然有足够的力量经受此打击,河水大部分冲入珀斯盆地,但是更加深了这些地面水东部的岩化程度,也浓缩了河流的酸度,已经氧化的铀矿物质在热带环境下被溶解后开始流入河道,直到被焦煤或其他还原化学环境拦截,经过再次沉淀形成现有的"卷状"、"氧化还原"或者"沉积型"铀矿。

These types of uranium deposit are a significant style of mineralisation around the world making up to 18% of global uranium resources. Individual deposits range up to 50,000 tonnes contained  $U_3O_8$  but they occur often in clusters aggregating as much as 500,000 tonnes contained  $U_3O_8$  at grades ranging up to 0.4%. Unlike most mineralisation uranium, it is quite mobile – it migrates down the channels as the acid groundwaters press forward. Uranium precipitates, redissolves and precipitates again with time. This kind of deposit is often particularly suitable for 'in situ' recovery because the aquifers they exploit are constrained by impervious clays. A slight change of acidity induced in the mineralised environment, brings uranium back into solution. It can then be taken out of the stream with bores. There is negligible disturbance of the surface, no dust pollution and only transient disturbance of the hydro geochemical environment at depth. As the waters are enriched in a wide range of other metals and minerals, it may also be possible to extract other useful commodities from the stream.

这些类型的铀矿含量占世界铀矿资源中的 18%,是一种非常重要的类型。个别的矿藏一般可达 5 万吨资源量,含有氧化铀,但是通常成簇状,氧化铀品位达 0.4%,集合起来资源量达 50 万吨。与其它铀矿化不同,此铀矿化的流动性非常大 - 它随着地面酸性流的移动迁移到河床下游。铀矿化能随着时间经过沉淀,再溶解,再沉淀。由于开发的蓄水层受制于不透水粘土层,这类型的矿藏特别适合原地回收。在矿化环境中只要稍微改变其酸度,就能把铀溶解成溶液,然后可以用钻孔器从水流中提取出来,这样对地面的侵扰是非常低的,不造成尘污,而且只有深度的水文地质化学得到了瞬变。由于水中含有其他丰富的金属和矿物,也许可以从水中提取其它有用的商品。

In 2010 we intend to push on with the scout drilling campaign. We have 170 km of channel still to test. We have a general idea of where the channel contains mobile uranium and where it appears depleted but we need to be clearer on that. We intend to drill test the Jindarra area in much more detail (traverses are 2000m apart). With good luck, the close of 2010 may see MDX with a second advanced project moving towards production.

**2010** 年我们打算为钻探进行融资。我们仍然有 **170** 公里之长的河道未被测试。我们已经对河床具有流动铀矿的位置、以及铀矿衰竭的位置有大概的了解,但是我们必须清楚确定这些位置。我们打算在 Jindarra 地区进行更深入的钻探测试(横切线为 **2000** 米之长)。如果我们的运气好,**2010** 年终将可以看到 Mindax 公司的第二个高级项目向生产阶段迈进。

The third project is also within the YAJV. The Mortlock copper and gold project (in addition with Sipa Resources) is only 100 km or so from Perth. Sipa Resources discovered copper gold mineralisation in 2000 at Centre Forrest. Much earlier Billiton had drilled copper some 7 km south at Southern Brook. A now substantial body of regolith geochemistry indicates widespread copper anomalism between the two prospects. Geophysical data points to continuity of the geology and now a series of EM conductors have been identified by the YAJV along this target horizon and generally coincident with the geochemistry.

第三个项目也是位于伊尔干-埃文合作区域。莫特洛克金铜项目(加上 Sipa Resources 公司)只距离珀斯约 100 公里。Sipa Resources 于 2000 年在弗里斯特中心发现金铜矿化。更早之前,必和必拓在 Southern Brook 地区以南进行了长达 7 公里的铜矿钻探。现今风化层地球化学的重要主体显示在两个项目之间具有宽广的铜异常。地球物理数据指出了地质的延续性,而且现今识别了伊尔干-埃文合作区域中沿着此靶区区域的一些系列的电磁导体,与该区的地球化学相一致。

Drilling by Sipa identified low grade copper and gold mineralisation but over good widths, particularly in the regolith. The basement rocks are high grade metamorphic rocks: gneisses, granites, mafic dykes but aeromagnetics enable some resolution of fabrics and discontinuities. Radiometrics also aid geological discrimination but it is difficult to see the critical relationships of the mineralisation. The overprint of that seismic activity that prevails between the Darling Escarpment and the Meckering Line further complicates the picture.

Sipa 公司的钻探探明了地品位的金铜矿化,但是范围很广,特别是风化层的范围。基岩为高品位变质岩:片麻岩,花岗岩,镁铁岩等,但是航磁测量含有岩组织分层和不间断性等弊病。放射测量也有助于地质辨析,但是要明了矿化之间的关系仍然比较困难。当时的地震活动发生在 Darling Escarpment 和 Meckering 线之间,使得情况更为复杂。

The surface environment is also very complex – weathered profiles, stripped profiles, and remnants of much younger rocks (probably related to the events described above) and of course the agricultural history makes it difficult to interpret surface geochemistry.

该区表面的环境也非常错综复杂-经过风化的剖面,剥落的剖面,加上更为年轻的岩石的遗迹(可能和以上提及的事件有关),而且还有其农业历史也使得解释其表面的地理化学变得非常困难。

The YAJV has developed an extensive coverage of airborne EM data through the area. This is designed principally to identify basement conductors such as copper sulphides. The technique does however map geology by differentiating the natural conductivity variability. It should also recognise supergene mineralisation, the copper oxides for example that will lie above deeper sulphides.

伊尔干-埃文合作区域已经取得了该区广泛的航磁数据资料。这主要是为探明基岩导体性质而设计,例如是铜硫化物性质等。但这些技术也能以分辨自然导电变化的方式制作地质图,而且能够识别表生矿化,例如是赋予更深部硫化物的铜氧化物等。

This data has been integrated against our other data sets and a range of targets have been identified. The most significant of these appear to be those developed along the line of mineralisation that extends

between Centre Forrest and Southern Brook where there is good geochemical support. This is a significant advance in the knowledge of the area.

我们已经对照其它的数据组合对这些数据进行了解释,而且已经识别了一系列的靶区。这些数据 当中最关键的部分为在弗里斯特中心和 Southern Brook 地区之间延伸的矿化线,该地区的地球化 学良好。这是该区所知道的一项非常重大的进步

Drilling is programmed for early 2010 to take advantage of the intermission between harvest and sowing.

钻探将在 2010 年年初进行,也就是播种和收割之间的停耕期优选时间段。

I have focussed on the key projects as we see them at present. I believe it is a formidable selection for a small company like Mindax. Our philosophy is to maintain a wide exploration watch. We have programs directed to support our existing projects or to move us into new areas or commodities. We look for opportunities that will enable us to add value with our expertise. Our primary goal remains on establishing resources and continuing to build Mindax.

我已经把我们现今主要项目的情况作出了讲解。我认为这些项目是对 Mindax 公司这样的小公司来说极其强劲的选择项目。我们的哲学是要保持广泛的勘探视察。我们已经设计了能够直接支持现有的项目,或者是转移到新的领域或商品的计划,主要目标仍然是识别资源,继续 Mindax 公司的扩大经营。

Thankyou. 谢谢。

Greg Bromely 格雷格·布罗摩里 Managing Director 董事总经理