

# OX MOUNTAINS GOLD PROJECT

## COUNTY SLIGO, REPUBLIC OF IRELAND

### 1. SUMMARY

Bowpark Exploration Ltd is a private company owned by veteran exploration geologists Andy Bowden and Rick Parker. The Ox Mountains area is an unexplored section of a geological structure that elsewhere hosts commercial gold deposits and prospects including Curraghinalt and Cavanacaw in Northern Ireland, Cononish in Scotland and Cregganbaun and Leckanvey in Co Mayo.

In 2010 Bowpark was awarded sixteen prospecting licences covering a 60 kilometre strike section of the Ox Mountains and carried out grass-roots prospecting. The results of that work identified gold mineralisation in boulders at two localities with a maximum of 9.68 g/t Au. Bowpark has now reduced its groundholdings to three prospecting licences covering the two areas of anomalous boulders.

**Bowpark believes that these results represent an exciting and significant discovery since they are located within the same major geological structure as the multi-million ounce Curraghinalt deposit in an almost totally unexplored area of 60 kilometres strike length. Bowpark's present groundholding covers 20 kilometres strike length and it is well poised as first mover to evaluate other targets in the Ox Mountains.**

Bowpark has planned an exploration programme comprising geochemistry, prospecting, geological mapping and trenching directed towards locating the source of the mineralised boulders and identifying drill targets.

### 2. THE COMPANY

Bowpark is a private Irish company formed by Andy Bowden and Rick Parker in 2011 in order to develop the Ox Mountains project and identify other exploration opportunities.

### 3. THE PEOPLE

Andy Bowden (age 67) is a graduate of the University of Leicester (BSc Geology, 1969) and the University of Leeds (MSc Geochemistry, 1970). He has over 40 years' experience in exploration, mainly in Ireland, searching for a wide variety of metals but concentrating on zinc, and was responsible for the discovery of the Galmoy R-zone. Andy is a founding member of the IAEG, he served on the council for seven years and was President in 1988 and he is currently on the Board of the Institute of Geologists of Ireland. He is married with three sons and lives in Thomastown, Co. Kilkenny, Ireland.

Rick Parker (age 66) has over 40 years experience as a mineral exploration geologist in which he has directed exploration programmes for gold, uranium and base metals, resulting in the discovery of the Cononish gold deposit (Scotland) and the Tatestown zinc deposit (Ireland). He now works as a consultant providing exploration project management, ore reserve estimation, mineral property appraisals and acquisitions, independent project reviews and audits for loan funding and Stock Exchange listings. He has worked in over forty countries.

#### 4. PROJECT BACKGROUND

Gold has been identified and worked in Scotland and Ireland since prehistoric times, however this was all derived from alluvial sources. The application of modern exploration methods in the last thirty years led initially to the discovery of hard rock gold deposits at Curraghinalt and Cavanacaw in Northern Ireland followed by Cononish in Scotland and Leckanvey, Cregganbaun and Clontibret in the Republic of Ireland. Table 1 below lists the present status of resources and development of the deposits.

TABLE 1: GOLD DEPOSITS IN SCOTLAND AND IRELAND						
Deposit, Location	Company	Resource category	tonnes	grade g/t Au	Resource Ounces Gold	Status
Cavanacaw, Co Tyrone	Galantas Gold Corp	Measured	15,250	6.52	3,197	Production around 8,000 oz per year
		Indicated	411,600	4.01	53,065	
		Inferred	839,000	8.53	230,092	
				total	286,354	
Cononish Perthshire	Scotgold Resources Ltd	Measured	60,000	12.7	24,499	Permitting sought
		Indicated	72,000	11.8	27,315	
		Inferred	431,000	8.9	123,327	
				total	175,141	
Clontibret Co Monaghan	Conroy Diamonds and Gold	Indicated	11,000,000	1.24	440,000	exploration, Scoping study
		Inferred	14,000,000	1.32	590,000	
				total	1,030,000	
Curraghinalt Co Tyrone	Dalradian Gold Ltd	Measured	20,000	21.51	13,831	Active drill programme to increase resource
		Indicated	1,110,000	12.84	458,225	
		Inferred	5,450,000	12.74	2,232,321	
				total	2,704,377	

#### 5. REGIONAL GEOLOGY AND MINERALISATION

All the deposits listed in Table 1, with the exception of Clontibret, are hosted by rocks of the Dalradian Supergroup, a Neoproterozoic back-arc volcanosedimentary sequence. Gold vein mineralisation was developed in the waning stages of the Caledonian orogeny probably driven by thermal gradients surrounding granite intrusives of Devonian age. The gold mineralisation was developed in proximity to major structures such as the Highland Boundary Fault, the Fair Head Clew Bay Lineament and the Omagh Thrust (see figure 1). The vein mineralisation is typically developed within minor, brittle structures lying close to the major structures and probably developed as conjugate shears. The veins are developed in diverse directions including NNE (Cononish) WNW (Curraghinalt) and N-S (Cavanacaw). Mineralogically all of the deposits are developed as quartz-sulphide veins with dominant pyrite and subsidiary content of galena, chalcopyrite and arsenopyrite. Wallrocks are Middle Dalradian semi-pelites and pelites of amphibolite grade or lower, which are subject to varying degrees of propylitic and sericitic alteration. The Dalradian gold deposits belong to the orogenic class of gold deposits that is developed in orogenic belts worldwide.

## 5.1. OX MOUNTAINS GEOLOGY AND MINERALISATION

As a topographic feature the Ox Mountains extend from just east of Foxford in Co. Mayo to Lough Gill in Co. Sligo but as a geological feature the Ox Mountain inlier extends for 104km from near Newport in Co. Mayo to beyond Manorhamilton in Co. Leitrim. It is a very narrow east-northeast trending inlier faulted against the Carboniferous to the north and unconformably overlain by the Carboniferous to the south.

The Ox Mountains inlier is renowned as structurally complex and is composed of rocks of various ages including possibly some of the oldest rocks in Ireland within the highly metamorphosed Slieve Donard Division, which forms the northeast of the inlier. Within the Slieve Donard Division there are small serpentine and metabasite bodies and the Ballygawley Tonalitic Gneiss. The remainder of the inlier is mainly composed of Dalradian meta-sediments ranging from psammites through semi-pelites to pelites. The Dalradian is a name given to a group of originally sedimentary rocks formed on the continental shelf of Laurentia at the edge of the Iapetus ocean. The Dalradian is best developed in Scotland. Apparently overlying the Dalradian but almost certainly faulted into position is the Callow Formation, formed of metasediments and basic volcanics, and the Cloonygowan Formation. These have in the past been thought to be part of the Dalradian but more recently they have been thought to belong to be 'Highland Border Complex' equivalents. Intruded into the Dalradian are Caledonian igneous intrusions, principally the Ox Mountain Granodiorite but also the Lough Talt and Easky Adamellites.

As was noted above, the Ox Mountains is renowned as structurally complex. Many of the rocks exhibit strong schistosity that has been refolded; isoclinal folds are commonly evident in pelitic rocks; and mapping by the GSI indicates that some of the major groups were thrust, or moved as 'slides' into juxtaposition. The North Ox Mountain Fault (NOMF) and the Ox Mountain-Pettigoe Fault (OMPF) that form the northern edge of the inlier clearly were active in late or post Carboniferous times. However, the general trend of the inlier is Caledonian and it is most likely that the NOMF and OMPF followed older faults. Numerous cross faults are also recorded by the GSI mapping. The GSI also notes that the inlier is obliquely crossed by the Fair Head Clew Bay Lineament (FHCBL). Newmont Overseas Exploration Ltd in their 1990 report on the area state that the Ox mountains inlier lies on the Highland Boundary Fault. From a regional perspective this appears quite reasonable but according to the GSI Memoir 'Geology of Sligo-Leitrim' it is now postulated that it is a late Ordovician splay from the Highland Boundary Fault.

The Dalradian is host to economic gold mineralization at Curraghinalt and Cavanacaw in County Tyrone and at Cononish in Scotland. The Ox Mountains have a Caledonian trend and that trend strikes north-northeast towards Curraghinalt, as does the FHCBL. To the southwest broadly on Caledonian strike are the gold occurrences at Lecanvey, Croagh Patrick and less directly at Cregganbaun.

It was the regional setting of the Ox Mountains inlier coupled with geology that attracted Bowpark to this area. Despite the favourable geological setting there were no records of gold or base metal mineralisation in the Ox Mountains prior to 2012. Bowpark believes that this was due to lack of modern exploration rather than absence of mineralisation.

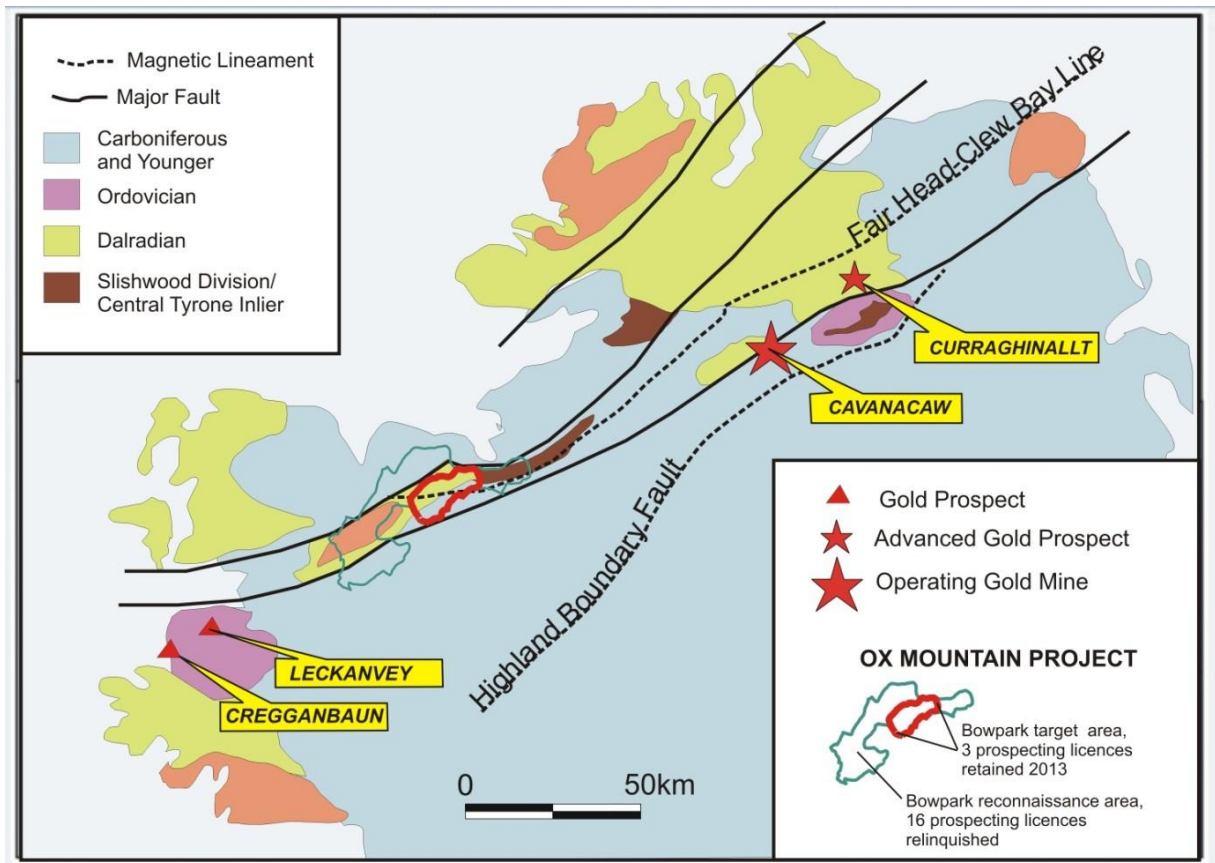
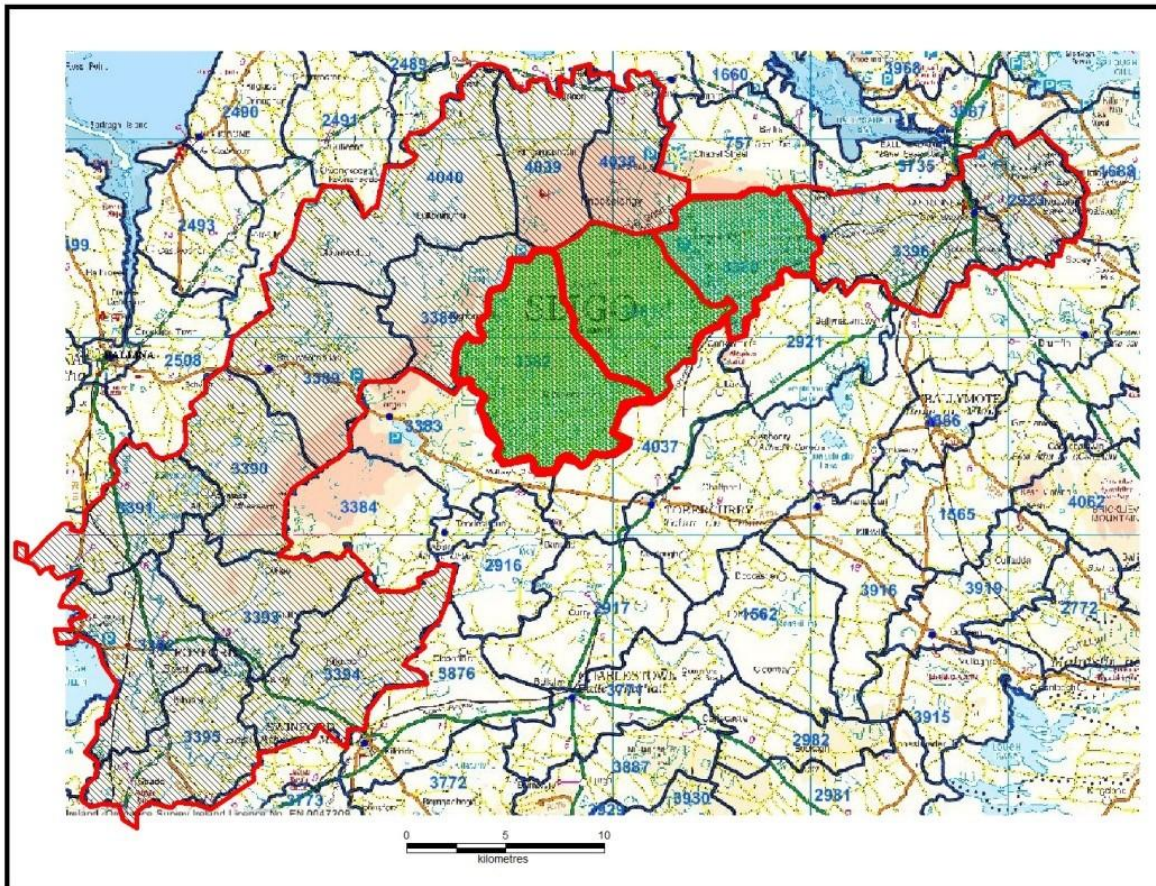


Figure 1: REGIONAL GEOLOGY AND GOLD DEPOSITS

## 6. BOWPARK GROUNDHOLDINGS

Bowpark was granted 16 prospecting licences in 2011 covering an area of 679 square kilometres over the Ox Mountains in Counties Mayo and Sligo. (see figures 1 and 2)

Reconnaissance exploration in 2012 identified significant gold values on two Prospecting licences (3380 and 3382). Bowpark elected to renew these licences and the intervening licence 3381, an area of 139 square kilometres. Reconnaissance exploration over the remaining 13 licences returned negative results and these licences were therefore relinquished.



**Figure 2: Bowpark Licences: Green=Retained, Grey Hatch=Relinquished**

## **7. PREVIOUS EXPLORATION**

Prospecting Licences covering most of the Ox Mountains Inlier were held by Newmont Overseas Exploration Ltd from May 1988 to November 1990. They were interested primarily in the potential for gold. They carried out a stream sediment survey and outlined several weak anomalies. In May 1990 they thought that these anomalies were significant enough to warrant holding the licences but by November 1990 had decided that the results were not encouraging enough and surrendered the licences. There is no record of any additional work done in the intervening six months or in the time since then.

## **8. EXPLORATION PROGRAMME 2011-2012**

Bowpark carried out a reconnaissance exploration programme over its entire licence holding between September 2011 and September 2012. The programme took the form of visual prospecting of boulders and outcrops exposed along road and stream traverses. This method was adopted because it was the prime method of discovery of the Cononish and Curraghinalt deposits and had not been applied to the Ox Mountains. It was therefore considered as more appropriate than geochemical or geophysical methods as an initial reconnaissance method.

During the period 2010-2012 prospecting traverses were carried out along most of the roads within the licence areas crossing areas underlain by Pre-Cambrian rocks. Areas underlain by Carboniferous

rocks were not covered by this programme since they were considered to hold no significant gold potential. Traverses performed are indicated by green lines on figure 2. The field work was carried out by Andy Bowden and Rick Parker.

Traverses were conducted principally by examination of available outcrop and float, with the latter occurring most readily in stone walls and as cobbles in streams. These were examined visually for evidence of mineralisation, primarily in the form of limonite staining (generally indicative of primary pyrite and possibly other sulphides), and quartz veining. These features are generally associated with gold mineralisation elsewhere in the Caledonides.

Mineralised boulders and outcrops recognised on the basis of these features were sampled, with the following procedure adopted for each sample:

- Sample location was recorded in Irish Grid format using GPS
- Sample number marked by aluminium tag concealed beneath broken sample rejects
- Sample and site photographed
- 1-2kg of broken sample material collected in a plastic sample bag.

Figures 4 and 5 show typical samples as collected at site.

A total of 70 rock chip samples were collected during the programme of prospecting traverses and submitted for gold analysis at ALS Laboratory, Loughrea (formerly OMAC) which is a well established laboratory certified to international standards.

## **8.1. EXPLORATION RESULTS**

Significant gold values ( $>0.1$  g/t Au) were returned in 7 of the 70 reconnaissance samples, as listed in table 2 appended.

The anomalous gold results were derived from samples in two areas, Cabragh and Cloonacool as shown on figure 3, located on PLs 3380 and 3382.

In general the distribution of quartz-pyrite float observed during reconnaissance traverses was sparse. The majority of apparently mineralised float comprised quartz vein boulders and cobbles containing minor amounts of pyrite. Galena was also noted in minor quantities in a number of quartz vein samples.

The locations of the samples and corresponding analytical results are shown in Figure 2 and listed in Table 2 appended.



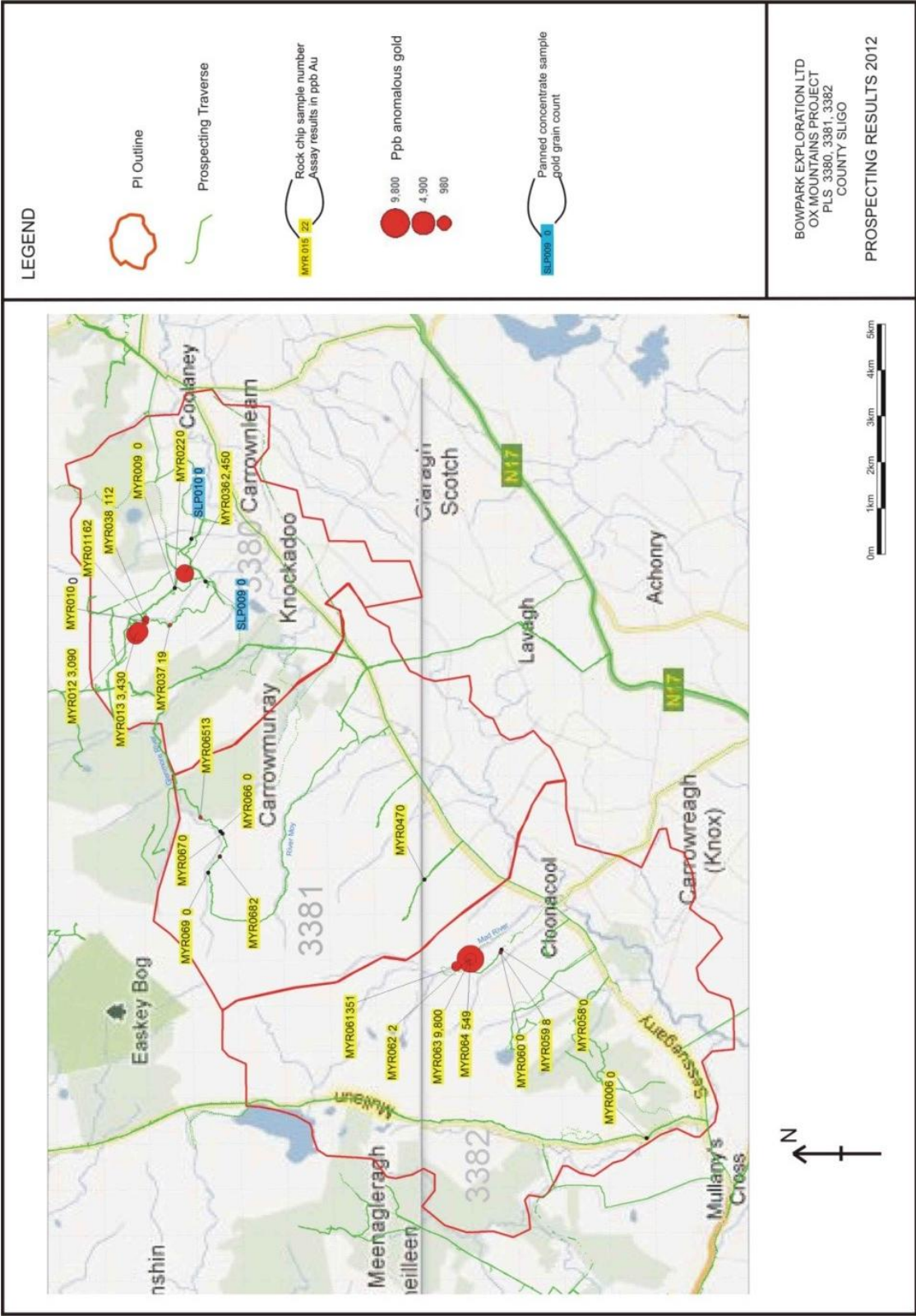


Figure 3: Anomalous sample locations and gold assays

## 8.2. PL 3380 RESULTS

The analytical results returned significant gold values in three samples taken on Cabragh Townland, MYR 012 (3.09 g/t Au), MYR 013 (3.43 g/t Au), MYR 036 (2.45 g/t Au). Figure 4, below is indicative of the style of mineralisation identified in boulders at Cabragh.

These samples lie along a 1.75 km NW trend parallel to the mapped foliation, structure and lithological boundaries. It is surmised that this trend represents a splay from a major structure, possibly between the Dalradian and Slieve Donard Division.



**Figure 4: sample MYR12, 3.09 g/t Au, Cabragh Townland, PL3380**

## 8.3. PL 3381 RESULTS

In general the distribution of quartz-pyrite float observed during reconnaissance traverses was sparse. The majority of apparently mineralised float comprised quartz vein boulders and cobbles containing minor amounts of pyrite. Galena was also noted in minor quantities in samples MYR065, 66 and 69.

The analytical results returned uniformly low gold assays, with a maximum of 13 ppb Au in sample MYR065. The remaining samples returned gold values of less than 10ppb, with the majority below the minimum detection limit of 2ppb.



#### **8.4. PL 3382 RESULTS**

The analytical results returned significant gold values in three rock chip samples of boulders taken on the Mad River, Cloonacool Townland; MYR 061 (0.35 g/t Au), MYR 063 (9.80 g/t Au), MYR 064 (0.55 g/t Au).

Sample MYR 063 (9.80 g/t Au), was taken from a 30cm boulder of grey quartz containing fine and coarse grained pyrite and cross-cut by later white quartz. This type of mineralisation is commonly developed within Dalradian-hosted economic gold deposits.

Figure 5 below is indicative of the style of mineralisation identified in boulders.



**Figure 5: sample MYR063, 9.80 g/t Au, Cloonacool Townland, PL 3382**

## 9. CONCLUSIONS

Reconnaissance prospecting of PLs 3380, 3381 & 3382 has provided exciting evidence of gold mineralisation in float boulders overlying an area **with the same major geological structure as the multi-million ounce Curraghinalt deposit in an almost totally unexplored area of 60 kilometres strike length. Bowpark's present groundholding covers 20 kilometres strike length and it is well poised as first mover to evaluate other targets in the Ox Mountains that may emerge.**

Whilst this work cannot be regarded as conclusive on account of uneven and partial coverage, the results are interpreted as indicating a high potential for economic gold mineralisation within the Prospecting Licences surveyed.

Bowpark Exploration Ltd is therefore proposing further work in these areas.

## 10. PROPOSED EXPLORATION PROGRAMME 2013

The objective of the initial phase of exploration will be to locate the source of the gold-rich boulders and identify drill targets.

Proposed initial work includes the following:

- Satellite imagery analysis of licence areas
- Stream sediment survey of licence areas.
- Reconnaissance geological mapping and prospecting of entire licence areas
- Detailed prospecting and geological mapping in the vicinity of the gold containing samples
- Soil geochemical survey in the areas of anomalous boulders

If warranted by results of the above work:

- Trenching and channel sampling of targets
- Geophysical surveying, possibly IP and resistivity, to define targets
- Diamond drilling

This report was prepared by Richard Parker and Andy Bowden, Principals of Bowpark. Richard Parker is a qualified person as defined by National Instrument 43-101 and he has reviewed and approved the contents of this report.

TABLE 2: BOWPARK EXPLORATION LTD: PLS 3380, 3381 AND 3382 SAMPLE DESCRIPTIONS AND ANALYTICAL RESULTS

sample Number	type	east IG	north IG	PL Number	Locality description	rock description	outcrop (R), boulder (B)	size, cm	estimated percent pyrite	estimated percent vein quartz	Au ppb
MYR009	rock chip	556152	825221	3380	wall	Quartz vein boulder, brecciated, grey and white clasts, pyrite, limonitic,	B	30	2	90	0
MYR010	rock chip	555420	825866	3380	ruin stream bank	Boulder of pelite/psammite, bleached, multi-phase quartz veinlets	B	40	0	20	0
MYR011	rock chip	555420	825864	3380	ruin stream bank	Boulder of pelite/psammite, multi-phase quartz veinlets, limonitic	B	40	0	50	62
MYR012	rock chip	555208	826022	3380	left stream bank	numerous quartz boulders, white opaque quartz, appears to be injected along foliation of graphitic schist	B	60	0	75	3090
MYR013	rock chip	555145	826088	3380	wall of ruin	numerous quartz boulders, white opaque quartz, sparse pyrite, rare galena	B	20	2	90	3430
MYR022	rock chip	556157	825221	3380	in wall,	Quartz vein boulder, vuggy, limonitic,	B	30	0	90	0
MYR036	rock chip	556474	824993	3380	in wall,	psammite boulder with net veined quartz, minor limonite	B	80	0	25	2450
MYR037	rock chip	555344	825342	3380	wall stream bank	graphitic pelite, pyrite, quartz, minor limonite, pyrite	B	25	1	25	19
MYR038	rock chip	555479	825864	3380	wall	Quartz boulder with pyrite laminae	B	25	0	90	112
MYR047	rock chip	549748	819901	3381	cobble roadfill	white milky quartz, rare pyrite	B	20	0.5	90	0
MYR065	rock chip	551135	824758	3381	stream	quartz vein cobble, vuggy, minor pyrite and galena	B	25	2	0	13
MYR066	rock chip	550828	824328	3381	stream	quartz vein cobble, vuggy, minor pyrite and rare galena	B	35	1	0	0
MYR067	rock chip	550780	824282	3381	stream	Quartz vein, minor pyrite, 110/60S	R	50	0.2	90	0
MYR068	rock chip	550281	824349	3381	stream	quartz vein boulder, limonitic, graphitic pelite partings, 'streaky bacon' texture	B	15	0	80	2
MYR069	rock chip	549927	824611	3381	stream	quartz vein boulder, limonitic, graphitic pelite partings, 'streaky bacon' texture, sparse py and cpy, rare gal	B	16	0.2	80	0
MYR006	rock chip	544065	815174	3382	wall	irregular quartz veinlets, minor Fe staining	B	30	0	90	0
MYR058	rock chip	548204	818256	3382	stream	pelite, bleached, sericitised, pink altered, minor fine and coarse pyrite, quartz veinlets	B	20	1	10	0
MYR059	rock chip	548147	818275	3382	stream	quartz vein boulder, limonitic, graphitic pelite partings, 'streaky bacon' texture	B	40	0	90	8
MYR060	rock chip	548150	818278	3382	stream	quartz vein cobble, white, opaque, with later quartz veining containing pyrite and galena	B	15	1	90	0
MYR061	rock chip	547849	819241	3382	stream	sheared silicified pelite, very hard, multiple quartz veinlets, brown alteration, disseminated fine grained pyrite.	B	120	1	60	351
MYR062	rock chip	547977	818993	3382	stream	quartz vein cobble, white, opaque, sparse pyrite and galena	B	20	1	80	2
MYR063	rock chip	548010	818935	3382	stream	quartz vein boulder, grey, dissem coarse and fine grained pyrite	B	30	1	80	9800
MYR064	rock chip	548010	818935	3382	stream	boulder of psammite cut by irregular white quartz vein, dissem pyrite, sericitised	B	50	3	25	549