

GOLDPHYRE RESOURCES LTD (GPH)

Lake Wells maiden drainable resource 18.4Mt of SOP

Goldphyre (GPH) has released a solid maiden inferred sulphate of phosphate (SOP) brine resource for its 100%-owned/controlled Lake Wells Potash Project in WA. The resource will form the basis of a scoping development study, which is now underway with the installation of test production bores and initial evaporation trials (both in the field and in the lab).

Based on total porosity, the Company's total in-situ resource is **70Mt at 8.05kg/m³ SOP**, including a high-grade western zone containing **40Mt at 9.03kg/m³ SOP**. Though lower than the Company's initial exploration target range, it still compares very well to peers, in particular to neighbour Salt Lake Potash (SO4), which has a total porosity resource of 85Mt at 8.74kg/m³ SOP, but is more than double (~2.5x) the current market capitalisation of GPH.

Using specific yield (or drainable porosity), which better reflects the likely recoverable SOP, provided an inferred resource of **18.4Mt at 8.05kg/m³ SOP**, of which the high-grade western zone consists of **10.5Mt at 9.03kg/m³ SOP**. The maiden drainable resource is the mid-point of the Company's initial exploration target for 6-37Mt SOP. Currently, the only other ASX peer that has released a drainable resource is Agrimin (AMN), which has a shallow brine resource of 23.2Mt at 8.25kg/m³ SOP at Lake Mackay, WA. Agrimin's trenching (<6m) zone drainable resource is 9.7Mt at 8.31kg/m³ SOP, which is lower than GPH's western zone drainable resource in both size and grade. AMN currently trades at ~3x the market capitalisation of GPH, although it is slightly more advanced (with higher category resources).

Scoping development towards being a SOP brine producer

The maiden SOP resource based on specific yield is within expectations, be it at a SOP grade slightly lower than anticipated. Importantly the resource estimate contains a high-grade zone occupying the western part of the Lake Wells system which contains over 57% of the drainable SOP, at an improved grade (+9kg/m³ SOP). This zone will be the subject of test production bores with a view to establishing bore yields from the upper and basal aquifers.

The release of the initial resource for GPH's Lake Wells Potash Project is the key enabler for future development studies. GPH has aspirations of being a SOP brine producer and in our speculative modelling we assume a brine operation which can initially supply ~75-100Ktpa SOP into the domestic market. Australia currently imports 100% of its potassium fertiliser requirements, and the low chloride and high sulphate content of SOP makes it an ideal and preferred form of potassium (fertiliser) for farmers. At the current targeted production rates a large mine life (+50 years) can be assumed, which could provide opportunities to lift operating rates over time.

Increased mine life; Improved price target to 27cps; Still Cheap

Our preliminary price target is developed through comparison to the current trading ranges of ASX peers with SOP resources, and modelling simulation for small-scale SOP operation. This assumes capex of less than A\$100m, mine gate operating costs of ~A\$250/t, mine life of over 20 years.

We maintain our Speculative Buy recommendation on GPH, with a 12-month price target of 27cps (up from 23cps). GPH is still cheap on peer metrics and should continue to be re-rated as the project is derisked by development studies.

29 Jun 2016

Share Price (last): \$0.115
12Mth Price Target \$0.27

Brief Business Description

Potash (SOP) and gold, base metal explorer

Hartleys Brief Investment Conclusion

100%-owned potash project at Lake Wells WA. Targeting brine SOP production for the domestic market. High-grade SOP at significant thickness and depths confirmed. Maiden SOP resource released.

Issued Capital	146.9m
- issued + ITM diluted	223.9m
- issued + fully diluted	241.3m
Market Cap	\$16.9m
- issued + ITM diluted	\$25.7m
- issued + fully diluted	\$27.8m
Cash -est	\$1.4m
Debt -est	\$0.0m
EV	\$15.5m
- issued + ITM diluted	\$18.4m
- issued + fully diluted	\$17.6m

WA Projects

<i>Lake Wells Potash</i>	SOP (K)
<i>Laverton Downs</i>	Au, Base metals
<i>Great Central</i>	Au, Base metals
<i>Mailman Hill</i>	Au, Base metals

Board & Management

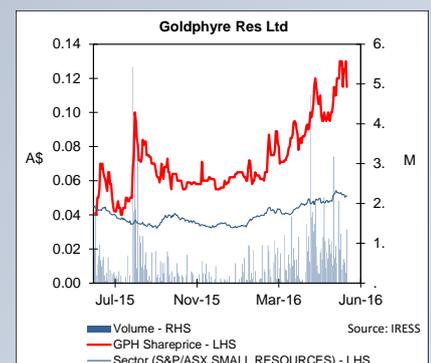
Matt Shackleton (Executive Chairman)
Brenton Siggs (Technical Director)
Dean Goodwin (Non-Executive Director)

Top Shareholders (est)

Yandal Investments (Creasy)	19.9%
Board and Management	9.1%

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Hartleys has completed a capital raising in the past 12 months for Goldphyre Resources Limited ("Goldphyre") for which it has earned fees. Hartleys has provided corporate advice to Goldphyre within the past 12 months and continues to provide corporate advice, for which it will earn fees.

SUMMARY MODEL

Goldphyre Resources Ltd GPH		Share Price \$0.115		Jun-16 Speculative Buy	
Key Market Information			Directors		
Share Price		\$0.115	Company Details		
Market Capitalisation (current)		\$16.9m	Matt Shackleton (Executive Chairman) 20 Kings Park Road		
Market Capitalisation (+ ITM options)		\$25.7m	Brenton Siggs (Technical Director) West Perth WA 6005		
Market Capitalisation (+ fully diluted options)		\$27.8m	Dean Goodwin (Non-Executive Director) +61 (0)8 9389 2111		
Cash (est)		\$1.4m	John Ribbons (Company Secretary) www.goldphyre.com.au		
Debt		\$0.0m			
Issued Capital (current)		146.9m			
Options	95.43m @ A\$0.0922				
Issued Capital (+ new equity + fully diluted options)		241.3m			
EV (current)		\$15.5m	Top Shareholders (est)		
EV (+ ITM options)		\$18.1m		m shs	%
EV (+ fully diluted options)		\$17.6m	Yandal Investments (Creasy)	29.1	19.9%
Valuation		\$0.25	Board and Management	13.2	9.1%
12Mth Price Target		\$0.27			
Projects			Investment Summary		
	Interest	Location	Commodity	100%-owned potash project at Lake Wells WA. Brine hosted SOP aiming to supply fertiliser products into the domestic market. Maiden SOP resource released, development studies underway.	
Lake Wells Potash	100% owned/controlled	NE Laverton WA	SOP (K2SO4)		
Laverton Downs	100%	Laverton WA	Au, Base metals		
Great Central	100%	NE Laverton WA	Au, Base metals		
Mailman Hill	100%	E Leonora WA	Au, Base metals		
Resources			Newsflow		
	Mt	Grade	Metal	Attr.	Project
Potash Resource - Lake Wells					
Total Porosity	70Mt	8.05kg/m3	SOP	100%	
Specific Yield	18.4Mt	8.05kg/m3	SOP	100%	
P&L			FY2015A	FY2016F	FY2017F
Net Revenue		0.005	na	na	
Total Costs		-0.671	na	na	
EBITDA		-0.666	na	na	
Deprec/Amort		-0.001	na	na	
EBIT		-0.666	na	na	
Net Interest		0.012	na	na	
Pre-Tax Profit		-0.654	na	na	
Tax Expense		0.000	na	na	
NPAT		-0.654	loss	loss	
Abnormal Items		0.000	na	na	
Reported Profit		-0.654	loss	loss	
			Unpaid Capital		
			No (m)	\$ (m)	Ave Pr
					% (new equity)
			Options		
			30-Jun-17	74.57	5.97
			30-Jun-18	9.00	1.35
			30-Jun-19	5.00	0.63
			30-Jun-21	6.86	0.86
			Total	95.43	8.80
				0.092	39%
			Comments		
			Early stage exploration company with no production assets, ongoing funding will be required (we dilute for new equity, required in the short-term). Leveraged to exploration success/improved market sentiment.		
Analyst: Mike Millikan Phone: +61 8 9268 2805			Last Updated: 29/06/2016		
Sources: IRESS, Company Information, Hartleys Research					

Fig. 1: GPH's Lake Wells SOP Resource – Specific Yield (Drainable Porosity)

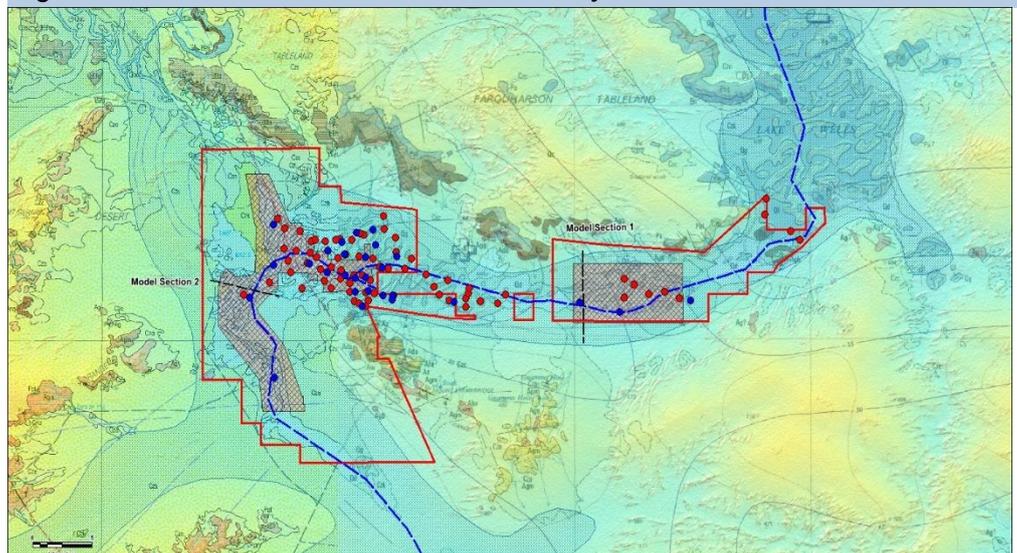
Inferred Resource for GPH Lake Wells Potash Brine						
Hydrogeological Unit	Volume of Aquifer	Specific Yield	Drainable Brine Volume	K Concentration (mg/L)	SOP Grade (mg/L) (K * 2.23)	SOP Resource
	Mm ³	Mean	Mm ³	Weighted Mean Value	Weighted Mean Value	Mt
Western High Grade Zone						
Surficial Aquifer	5,207	16%	833	3842	8568	7.1
Clay Aquitard	4,947	6%	297	4,244	9464	2.8
Basal Sand Aquifer	222	23%	51	4,539	10121	0.5
Sub Total (Mm³/Mt)	10,376		1181	4049	9028	10.5
Eastern Zone						
Surficial Aquifer	3,435	16%	550	3428	7644	4.2
Clay Aquitard	2,833	6%	170	3,329	7423	1.3
Basal Sand Aquifer	231	23%	53	3,330	7426	0.4
Sub Total (Mm³/Mt)	6,499		773	3381	7540	5.9
Southern Zone						
Surficial Aquifer	1,296	16%	207	2742	6115	1.3
Clay Aquitard	1,901	6%	114	2,620	5842	0.7
Basal Sand Aquifer	82	23%	19	2,871	6401	0.1
Sub Total (Mm³/Mt)	3,279		340	2674	5963	2.1
Total						
Surficial Aquifer	9,937	16%	1383	3555	7929	12.6
Clay Aquitard	9,682	6%	467	3657	8155	4.7
Basal Sand Aquifer	535	23%	123	3761	8387	1.0
Total (Mm³/Mt)	20,154		1972	3610	8050	18.4

Source: Goldphyre Resources Ltd

Fig. 2: GPH's Lake Wells Potash Project – Drill Positions

50 drill holes for over 3,020m used in the resource estimate

Western High-grade Zone the key target zone



Source: Goldphyre Resources Ltd

Lake Wells – Targeting Domestic SOP Production

*Project located
~500km NE of
Kalgoorlie, WA*

*Potash as a high
value bulk commodity,
requires access to
infrastructure*

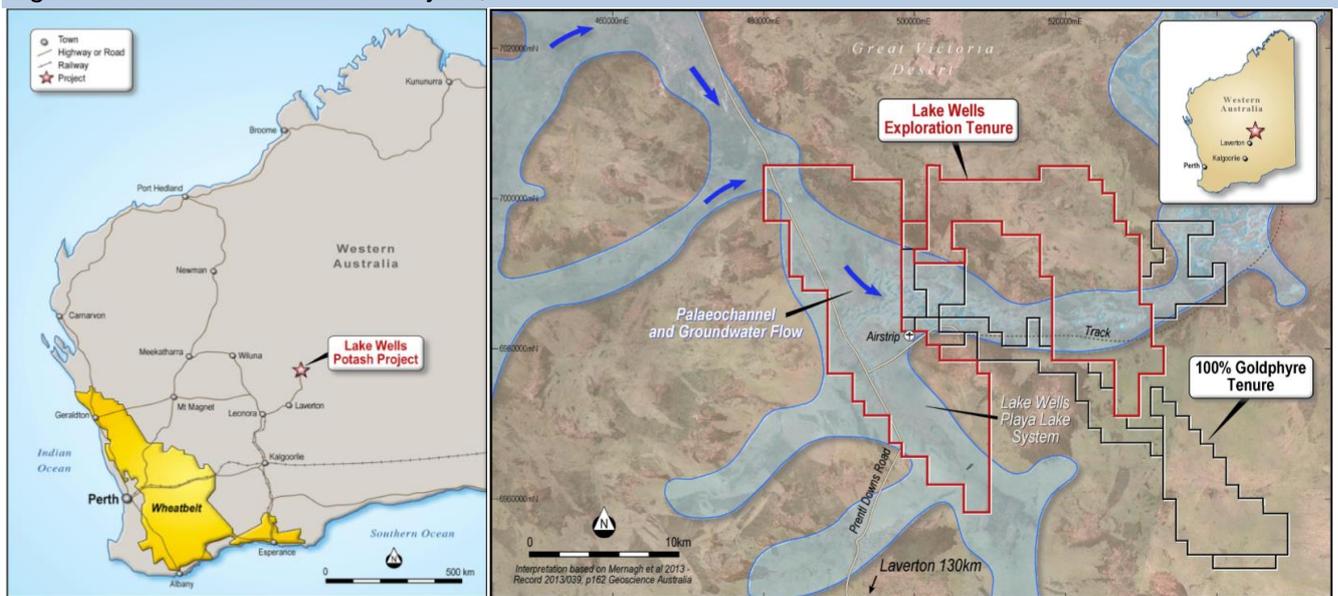
*Brine SOP projects
generally occupy the
lower end of
production cost curve
and have lower capital
hurdles than rock
potash projects*

The Lake Wells Potash Project is located ~180km north-east of Laverton, ~500km north-east of Kalgoorlie in WA. The project area consists of exploration tenure, which covers ~1,500km² and GPH has 100% potash rights. Access to the project is via the Great Central (~90km sealed/unsealed road) and Lake Wells (~90km unsealed) roads.

Lake Wells has been identified as a high-grade SOP brine salt lake, confirmed both at the salt lake surface and at depth. GPH has now delivered a maiden potash (SOP) resource. The project is located ~300km from a bulk rail terminal at Leonora, connected by a network of roads (sealed and unsealed). The climate for the project area is highly conducive to evaporation and receives good annual rainfall (for aquifer recharging). The Company is targeting an initial brine operation of ~75-100Ktpa SOP for supply into the domestic market.

Australia currently imports 100% of its potassium fertiliser requirements, and the low chloride and high sulphate content of SOP makes it an ideal and preferred form of potassium (fertiliser) for Australian farmers. SOP attracts a superior price to muriate of potash (MOP), and is underpinned by limited brine supply (only 3 evaporative operations globally) and increasing demand (forecast growth of 4%). Australia currently has no potash production, but appears well positioned to commercialise a number of its salt lake systems.

Fig. 3: Lake Wells Potash Project, WA



Source: Goldphyre Resources Ltd

*The hydrogeological
sequence has been
confirmed to be over
170 m thick in parts*

The hydrogeological model for the Lake Wells Potash Project comprises three main units: a surficial aquifer (moderate potential); a clay aquiclude with little potential for direct abstraction, but with potential for the long-term drainage of brine from this unit into the underlying aquifer; and a basal sand aquifer which regionally, has good aquifer and brine-storage potential. Drilling has confirmed thick basal sands with high SOP content and an upper coarse sand layer also conducive for additional brines (confirmed high grade SOP in parts). The hydrogeological sequence has been confirmed to be over 170 m thick in parts.

ASX Listed Peers - GPH remains undervalued

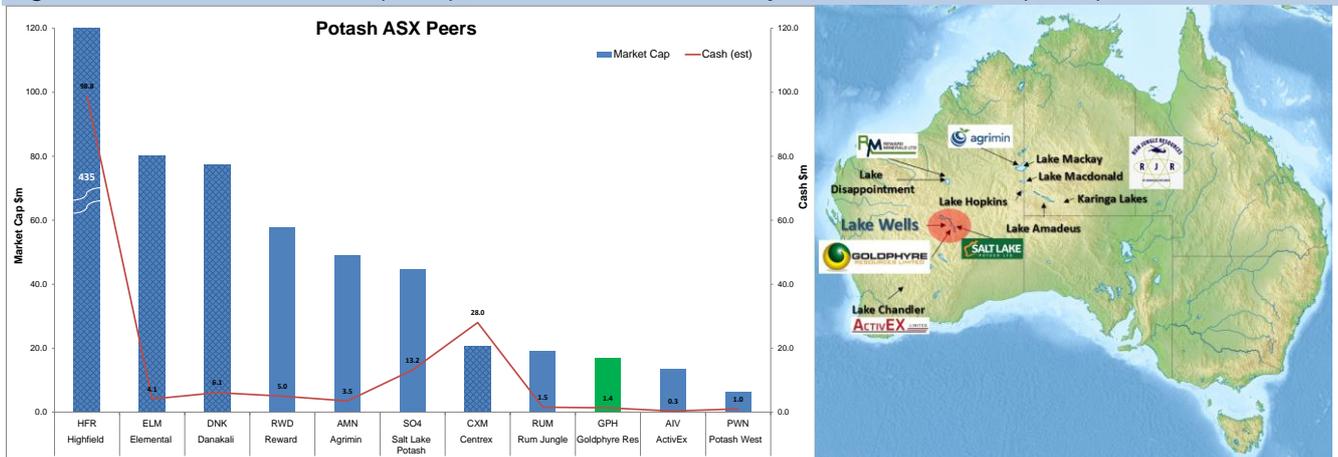
GPH's potash project is located at Lake Wells in WA

Goldphyre's (GPH) ASX peers are listed below, and includes some of the large rock potash companies, such as Highfield (HFR), Elemental (ELM) and Danakali (DNK); with advanced projects outside of Australia.

GPH's potash project is located at Lake Wells in WA. Salt Lake Potash (SO4) also has its main potash project located at Lake Wells and reports a current total porosity resource of 85Mt of SOP (grading ~8.74kg/m³ SOP) reported in early 2016. GPH's maiden total porosity resource is comparable at 70Mt at 8.05kg/m³ SOP.

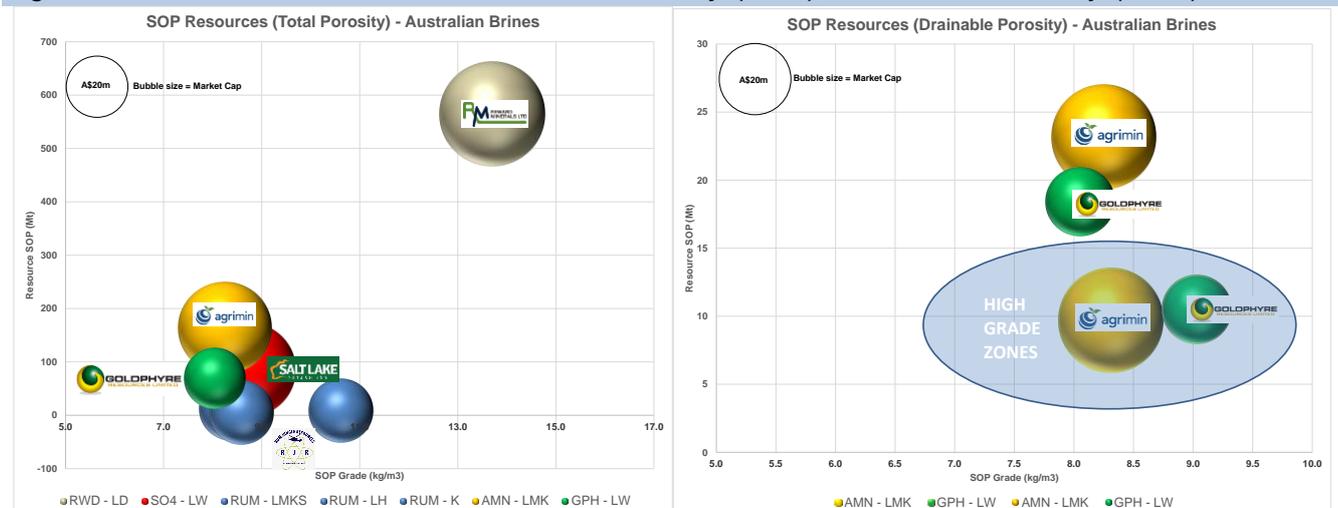
GPH's drainable porosity resource (which better reflects the likely recoverable SOP), is 18.4Mt at 8.05kg/m³ SOP, and includes a high-grade western zone containing 10.5Mt at 9.03kg/m³ SOP. Currently, the only other ASX peer that has released a drainable resource is Agrimin (AMN), which estimated a shallow brine resource of 23.2Mt at 8.25kg/m³ SOP at Lake Mackay, WA. Agrimin's trenching (<6m) zone drainable resource is 9.7Mt at 8.31kg/m³ SOP, which is lower than GPH's western zone drainable resource in both size and grade.

Fig. 4: Potash ASX Peers (LHS); Main SOP Brine Projects in Australia (RHS)



Source: Hartleys Research; Checkered fills implies rock potash as opposed to brines; Cash positions at end MarQ

Fig. 5: ASX SOP Brine Resources – Total Porosity (LHS); Drainable Porosity (RHS)



Source: Hartleys Research from Company reports; LD = Lake Disappointment, LW = Lake Wells, LMKS = Lake Mackay South, LH = Lake Hopkins, K = Karinga Lakes, LMK = Lake Mackay

Updated Preliminary Price Target

Our GPH price target is considered highly speculative.

Our GPH price target is considered highly speculative

We consider Lake Wells Potash Project to be in the early stages of exploration, with confirmed strong potash (SOP) potential with some very high brine grades reported from completed drilling.

Goldphyre has now released a JORC-compliant resource for the Lake Wells Potash Project. The specific yield and total porosity resources have been used to update our preliminary model assumptions.

Our modelling simulation for a small scale SOP operation (~75-100Ktpa SOP), assumes capex of less than A\$100m, mine gate operating costs of ~A\$250/t, mine life of over 20 years. We assume existing infrastructure of roads and rail can be accessed and domestic SOP prices of A\$600/t and A\$750/t. Our price target for GPH is weighted for the different scenarios (as shown below) and includes reference to peer metrics.

Fig. 6: GPH Price Target Methodology

Price Target Methodology	Weighting	29/06/2016	12 Month
Peer Metric - ~70Mt SOP total porosity resource	20%	\$0.10	\$0.12
Peer Metric - ~18Mt SOP drainable resource	20%	\$0.15	\$0.17
Lake Wells - SOP Prod (NPV@14) - 75-100Ktpa SOP - A\$600/t SOP	30%	\$0.26	\$0.29
Lake Wells - SOP Prod (NPV@14) - 75-100Ktpa SOP - A\$750/t SOP	25%	\$0.48	\$0.53
Cash Backing	5%	\$0.01	\$0.01
Risk weighted composite		\$0.25	
12 Months Price Target		\$0.27	
Shareprice - Last		\$0.115	
12 mth total return (% to 12mth target + dividend)		139%	

Updated 12-month price target of 27cps (up from 23cps)

Source: Hartleys Estimates

Risks

Key risks for GPH are funding, and commodity prices. Hence we view GPH as high risk.

Fig. 7: Key assumptions and risks for valuation

Assumption	Risk of not realising assumption	Risk to valuation if assumption is incorrect	Comment
Model parameters for our preliminary GPH valuation and price target	Med	Meaningful	We have made a number of large assumptions in our GPH preliminary valuation, based on incomplete information (ie no reserves, or development studies). GPH has no production history. Any changes to our assumptions have both upside and downside risks.
Favourable commodity prices	Low	Meaningful	GPH remains sensitive to changes in commodity (potash) prices, exchange rates and market sentiment. Though with no current operations, direct impact from commodity prices is limited.
Funded for ongoing exploration	Med	Moderate	GPH's cash position is over A\$1m. As an explorer with no current production assets, ongoing funding will be required. We assume exploration success.

Conclusion

We have made significant assumptions but believe these are achievable.

Source: Hartleys Research

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Hartleys Recommendation Categories

Buy	Share price appreciation anticipated.
Accumulate	Share price appreciation anticipated but the risk/reward is not as attractive as a "Buy". Alternatively, for the share price to rise it may be contingent on the outcome of an uncertain or distant event. Analyst will often indicate a price level at which it may become a "Buy".
Neutral	Take no action. Upside & downside risk/reward is evenly balanced.
Reduce / Take profits	It is anticipated to be unlikely that there will be gains over the investment time horizon but there is a possibility of some price weakness over that period.
Sell	Significant price depreciation anticipated.
No Rating	No recommendation.
Speculative Buy	Share price could be volatile. While it is anticipated that, on a risk/reward basis, an investment is attractive, there is at least one identifiable risk that has a meaningful possibility of occurring, which, if it did occur, could lead to significant share price reduction. Consequently, the investment is considered high risk.

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