Initiation of Coverage

De Grey Mining

Tier 1 gold discovery in the west

Equities

Australia
Mining

12-month rating	**Buy**
	Prior : No Rating
12m price target	**A$1.20**
	Prior :
Price (14 Jun 2022)	**A$0.96**

RIC: DEG.AX **BBG:** DEG AU

Trading data and key metrics

52-wk range	A$1.44-0.93
Market cap.	A$1.26b/US$0.87b
Shares o/s	1,313m (ORD)
Free float	80%
Avg. daily volume ('000)	6,126
Avg. daily value (m)	A$7.3
Common s/h equity (06/22E)	0.27b
P/BV (06/22E)	4.9x
Net debt to EBITDA (06/22E)	3.3x

EPS (UBS, diluted) (A$)

	From	To	% ch	Cons.
06/22E	-	(0.02)	-	(0.01)
06/23E	-	(0.03)	-	(0.01)
06/24E	-	(0.03)	-	0.00

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Hemi is Tier 1 and strategic

We initiate coverage on De Grey Mining (DEG) with an A$1.20/sh price target and a Buy rating. De Grey's Mallina project is well on its way to defining 10moz of reserves and a project capable of producing at rates up to 500kozpa. Hemi's potential inventory scale and production rate puts it in *'rare air'* and makes it one of the most exciting gold discoveries globally in recent years, in our view. With the rate of material greenfield discoveries declining and gold miners' ageing portfolios struggling to replace reserves, we believe Hemi has significant strategic value and Tier 1 credentials.

Mallina first gold in CY26 producing nearly 500kozpa for first 10 yrs

Ahead of the Pre-Feasibility Study in Sept-22, we model a significantly enhanced project to the 2021 Scoping Study. We assume the same 10mtpa open pit, processing through a float, POX and CIL circuit but model more gold from higher grades and longer life on the back of the increased resource and continued exploration prospectivity. We use ~A $1.1bn real capex, up ~23% from the Scoping Study and see production of ~490ozpa for the first 10 yrs (~15% higher than the Scoping Study) with an average AISC US$985/oz real (~7% higher than the Scoping Study) for the first 10 yrs. We note the risks presented by both the complexity of the semi-refractory mineralogy and project scale, especially in a tight WA labour and inflationary market. The high mass pull, >18 mths until construction and location (~60km from Port Hedland) help reduce risks.

Strategic value is clear with a 1,500km2 holding there's likely more to find

Rigs currently drilling have reduced to 10, the first 15 mths of results grew the Hemi resource at ~450koz/mth. Total inventory now stands at 10.6moz, with 8.5moz (213mt at 1.2g/t) at Hemi and 2.2moz (37.5 at 1.8g/t) at the combined regional Withnell and Wigina mining centres. So far resources are almost entirely constrained to open-pit depths of 370m and at a 0.3g/t cutoff. For our modelling we have assumed closer to the 1.5g/t average from the 0.5g/t cutoff. There is more to be found and as a new discovery in a low risk jurisdiction it already presents clear strategic value. Corporately, we note GOR (Buy rated $1.95/sh PT) has moved to 41.9% of DGO Gold (DGO) as part of its recommended takeover offer. DGO holds a 14.4% share of DEG.

Valuation: Initiate with a Buy rating; A$1.20/sh PT

Our price target is based on 1x NPV using a 6% WACC, the gold forward curve, a long term price of US$1,500/oz and long term 0.75 AUD:USD. As a large long life project it is highly sensitive to gold price and production (+10% to either adds 45cps to fair value).

Highlights (A$m)	06/19	06/20	06/21	06/22E	06/23E	06/24E	06/25E	06/26E
Revenues	0	0	1	0	0	0	0	588
EBIT (UBS)	0	(4)	(5)	(24)	(36)	(27)	(28)	147
Net earnings (UBS)	0	(4)	(5)	(23)	(48)	(53)	(54)	73
EPS (UBS, diluted) (A$)	0.00	0.00	0.00	(0.02)	(0.03)	(0.03)	(0.03)	0.04
DPS (net) (A$)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net (debt) / cash	0	28	71	76	500	417	(285)	(794)

Profitability/valuation	06/19	06/20	06/21	06/22E	06/23E	06/24E	06/25E	06/26E
EBIT (UBS) margin %	-	<-500	<-500	<-500	-	-	-	25.0
ROIC (EBIT) %	-	-	-	-	-	-	-	-
EV/EBITDA (UBS core) x	-	NM	NM	NM	NM	NM	NM	6.5
P/E (UBS, diluted) x	0.0	(43.0)	NM	(57.9)	(37.7)	(34.4)	(33.3)	24.8
Equity FCF (UBS) yield %	0.0	(9.3)	(3.4)	(9.7)	(8.6)	(6.6)	(55.9)	(40.4)
Dividend yield (net) %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Company accounts, Thomson Reuters, UBS estimates. Metrics marked as (UBS) have had analyst adjustments applied. Valuations: based on an average share price that year, (E): based on a share price of A$ 0.96 on 14-Jun-2022 12:12:25 AEST

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UBS Research THESIS MAP a guide to our thinking and what´s where in this report

PIVOTAL QUESTIONS

Q: Will Mallina mining inventory reach >10moz?
Likely. Current project resources stand at 10.6moz with 64% already in the Measured & Indicated (M&I) category and of the 8.5moz at Hemi, 85% are already in M&I. With more drilling, the resource inventory will continue to grow, be converted to M&I and then reserves. 10moz in mineable reserves would put Mallina in rare air, and in our view underlines the strategic value in the project.

Q: Can Mallina produce at 500kozpa?
Again likely. We model Mallina ramping up to ~518kozpa in FY30 and holding >500kozpa for 3 yrs. We model an average production rate of ~490kozpa for the first 10 yrs based on a 10mtpa processing rate, 93% recovery and optimised mining schedule/grade profile starting with ~1.6g/t in Brolga before moving into Duicon and Aquila etc.

Q: How would gold equities perform in a stagflationary environment?
Strongly. Gold continues to hold up relatively well as rates rise, underpinning its role as a defensive asset and as a diversifier. We would expect it to continue to attract safe-haven and diversification flows in a stagflationary environment and this be reflected in mining equities' relative performance.

UBS VIEW

We see the potential of a Tier-1 asset in Mallina. The 10.6moz project in WA's north has the ounces and characteristics to produce a mine life average ~470kozpa for 20 yrs. We anticipate further discovery and resource conversion to provide mine life extensions beyond DEG's Scoping Study.

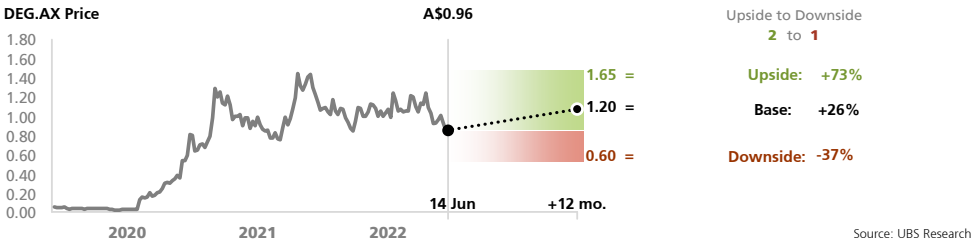
EVIDENCE

Our analysis is based on 1) Mallina Scoping Study; 2) resource & reserve statements; 3) exploration updates; and 4) our updated gold price deck.

WHAT´S PRICED IN?

Based on our modelling DEG is pricing in a US$1,440/oz real gold price indefinitely, or US$1,490/oz with no exploration upside. At spot (US$1,820/oz) our valuation lifts ~111% to A$2.53/sh fair value. Or, cut another way, the market is paying A$169/oz of (current) gold resource across the entire Mallina project.

UPSIDE/DOWNSIDE SPECTRUM



Value drivers	Catalyst	Gold price	Exploration upside
A$1.65/sh upside	Inflation hedge/ geopolitical risk	UBSe +10%	Base case
A$1.20/sh base	UBSe base	Gold forward curve with US$1,500/oz LT	Base case (A$300m valuation)
A$0.60/sh downside	Reduced inflation hedge/ geopolitical risk	UBSe - 10%	No exploration upside

Source: UBSe

COMPANY DESCRIPTION

De Grey Mining (DEG) is a West Australian gold explorer and developer. Its flagship Mallina Gold Project is fortunately located ~60km from Port Hedland in WA. Since discovery, it has quickly grown the Hemi resource to 8.6moz, bringing the total project resource to 10.6moz making it one of the largest new gold discoveries in recent years. It continues to drill at the project while completing studies. Early indications are that Mallina could underpin a long life project of up to 500kozpa with first production from late 2026.

DE GREY MINING SUMMARY

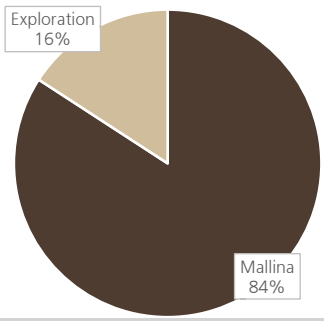
De Grey Mining owns 100% of the Mallina gold project in Western Australia ~60km south of Port Hedland. Total resources currently stand at 10.6moz within the deposit, with the Hemi project area having grown 25% over the past year to 8.5moz. The original Oct-21 Scoping Study outlined a 10 yr operation producing an average ~427kozpa at AISC US$917/oz real. Based on the larger and higher grade resource and with expectations of finding more we model a ~20 yr project, producing at rates of up to 500kozpa. We estimate total development capex of A$1.1bn (2022 real) up from the A $893m outlined in the 2021 Scoping Study. We model AISC at an average of US$985/oz real over the first 10 yrs and US$1,101/oz real thereafter. We could see first gold by early CY26 based off the Pre-Feasibility Study due in Sept 22 and the Definitive Feasibility Study in June 23, with and an expected 2 yr construction period.

Figure 1: SOTP valuation summary (Jun-23e)

Valuation Summary		
Share price last close	0.96	
PT premium/(discount) to last close	24%	
	A$m	A$/sh
Mallina	1,595	0.85
Exploration	300	0.16
Total Assets	**1,895**	**1.00**
Corporate	-223	-0.12
Net Cash / (Debt)	561	0.30
Equity Value	2,232	1.18
Price Target	**$**	**1.20**

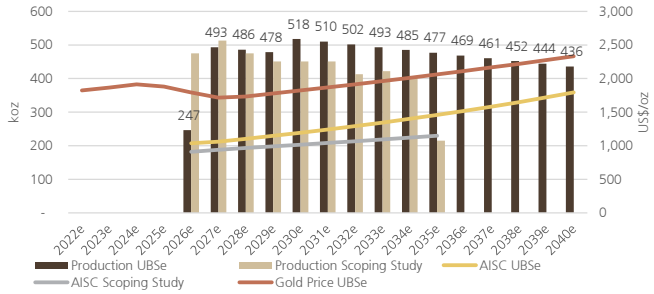
Source: DEG, UBSe

Figure 2: Asset valuation summary



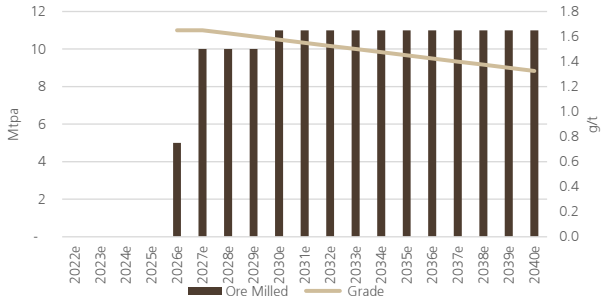
Source: DEG, UBSe

Figure 3: UBSe vs DEG Scoping Study



Source: DEG, UBSe

Figure 4: Ore milled and grade



Source: DEG, UBSe

Figure 5: UBSe vs DEG June 21 Scoping Study

		Scoping Study	UBSe	Variance
Mining Physicals				
Ore Tonnage	Mt	111	211	90%
Grade (yr 1- 10)	g/t	1.4	1.5	8%
Grade (>10yr)	g/t		1.3	
Total Gold Produced	Moz	4.3	9.1	114%
Plant Throughput	Mtpa	10.0	10.8	8%
Strip Ratio	:	4.8	4.8	0%
Recovery	%	93%	93%	0%
Gold Production (yr 1 - 10)	kozpa	427	492	15%
Gold Production (>10yr)	kozpa		443	
Mine Life	yrs	10.0	19.5	95%
Costs				
AISC (yr 1 - 10)	US$/oz real	917	985	-7%
AISC (>10yr)	US$/oz real		1,101	
Mining Unit Cost	A$/ore mined	4.4	4.8	-10%
Processing Unit Costs	A$/ore mined	26.0	28.6	-10%
G&A Unit Costs	A$/ore mined	1.4	1.5	-10%
Total Capex	A$m real	893	1,100	-23%

Source: DEG, UBSe

PIVOTAL QUESTIONS

Q: Will Mallina mining inventory reach >10moz?

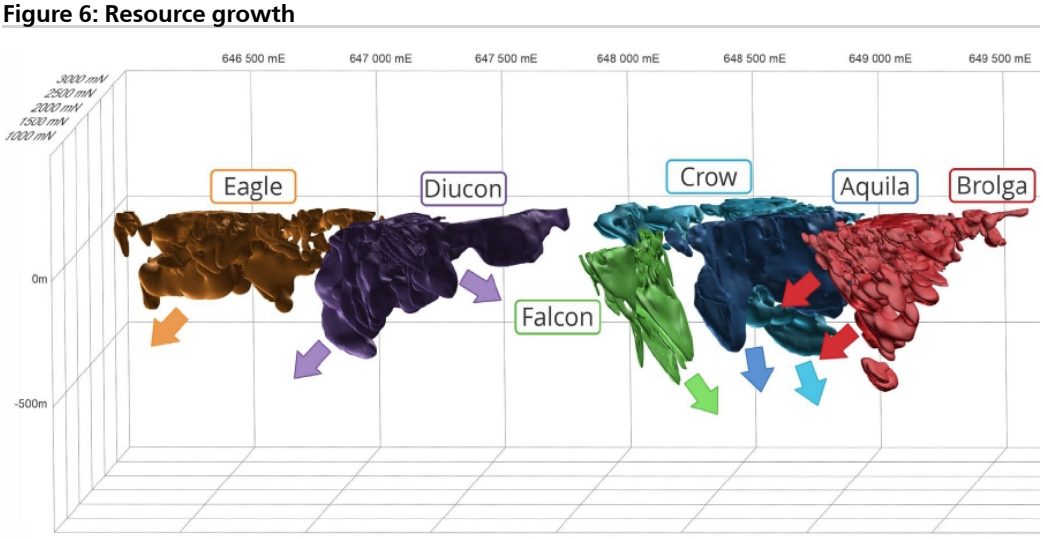
UBS VIEW

Likely. Current project resources stand at 10.6moz with 64% already in the Measured & Indicated (M&I) category and of the 8.5moz at Hemi, 85% are already in M&I. With more drilling the resource inventory will continue to grow, be converted to M&I and then reserves. 10moz in mineable reserves would put Mallina in rare air, and in our view underlines the strategic value in the project.

EVIDENCE

All Hemi deposits remain open along strike and at depth. Of the 8.5moz resource at Hemi, only 400koz has been defined below a depth of 370m. High ounces per vertical metre (Brolga 6,700, Duicon 4,700 etc) and the proven prospectivity of the region, give us confidence the resource will continue to grow. In the first 15 mths of drilling since 2019, the Hemi resource grew at ~450koz/mth and while the number of rigs has reduced from 16 to 10 as focus moves towards studies, there remains considerable momentum and "*low hanging fruit*" to add to the inventory which will ultimately convert to reserves.

Figure 6: Resource growth



Source: DEG

WHAT'S PRICED IN?

On our modelling, the market is paying A$193/resource oz for the Mallina project. We note Inferred Resource discovery cost of $10/oz and additional conversion cost to Indicated Resource of $7/oz.

PIVOTAL QUESTIONS

Q: Can Mallina produce at 500kozpa?

UBS VIEW

Again likely. We model Mallina ramping up to ~518kozpa in FY30 and holding >500kozpa for 3 yrs. We model an average production rate of ~490kozpa for the first 10 yrs based on a 10mtpa processing rate, 93% recovery and optimised mining schedule/grade profile starting with ~1.6g/t in Brolga before moving into Duicon and Aquila etc.

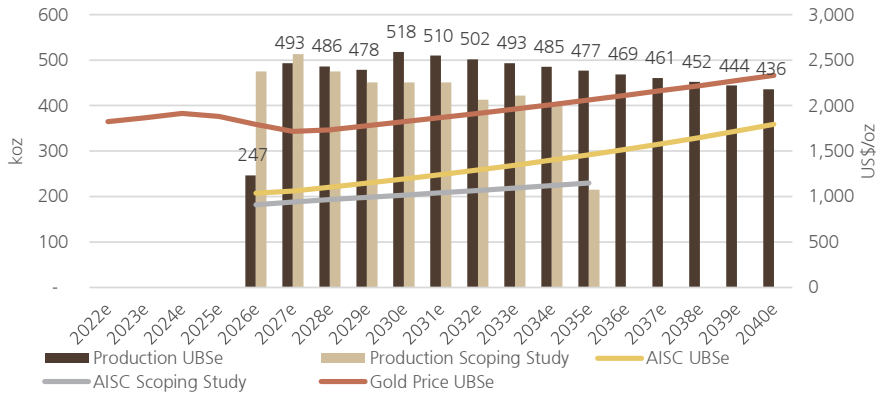
EVIDENCE

The Scoping Study outlined average production of ~427kozpa at real AISC of US $917/oz over 10 yrs with A$893m capex. Since then the resource inventory has increased 25% to 10.6moz and it continues to grow. We have based our modelling off the 0.5g/t resource at Hemi which shows an average grade of 1.5g/t up from the 1.2g/t at 0.3g/t. From this inventory we expect mining to commence from a starter pit at Brolga (highest oz/per vertical metre and 2.4moz at 1.2g/t), move onto Duicon (1.6moz at 1.3g/t), Aquila (921koz at 1.4g/t) and blend high grades from the Withnell (1.6moz at 2.0g/t) and Wingall (538koz at 1.4g/t) mining centres. By mining above the processing rate, higher grades of 1.5-1.6g/t could be preferentially fed to the plant sustaining a ~500kozpa output rate. As with most new processing plants it is also likely there will be latent capacity in the processing infrastructure that will be able to be de-bottlenecked as/before grades decline.

WHAT'S PRICED IN?

For such an early stage project it is difficult to sense what value the market is placing on a project versus the exploration 'blue sky'. On our forecast production and cost profile the market is valuing the project at US$1,510/oz real gold price with no exploration/regional upside. At spot gold (US$1,875/oz) indefinitely the market is only paying for a mine life until Dec-33 at Hemi and nothing for additional resources and exploration.

Figure 7: UBSe vs DEG Scoping Study



Source: DEG, UBSe

PIVOTAL QUESTIONS

Q: How would gold equities perform in a stagflationary environment?

UBS VIEW

Strongly. Gold continues to hold up relatively well as rates rise, underpinning its role as a safe haven asset and as a diversifier. We would expect it to continue to attract safe-haven and diversification flows in a stagflationary environment and this be reflected in mining equities' relative performance.

EVIDENCE

The historic relationship between gold prices and USD 10yr rates has broken in CY22 likely due to the US Fed's particular hawkish tone in the context of a 41yr high in US y/y inflation and prospects of stagflation (link) and risks to real growth (link). Gold's initial reaction to a sharp, broad-based risk sell-off could be lower where risk assets are sold across the board. Gold positions could also be sold as investors seek liquidity not least in order to meet margin calls. That said, gold should perform better than other assets on the move down and ultimately recover faster as investors take advantage of the price dip to build safe-haven positions. Monetary policy easing aimed at supporting growth thereafter should create a constructive backdrop for a sustained gold price rally.

UBS's Australian Equity Strategy team recently studied how sectors perform under varying growth and inflation conditions (note). Analysis since 1973 highlights gold miners as one of the best performing sectors under a high inflation and low growth = stagflation environment.

WHAT'S PRICED IN?

On our forecast production and cost profile the market is valuing the Hemi project at US$1,440/oz real gold price indefinitely, or US$1,490/oz with no exploration upside. Spot gold (US$1,820/oz) indefinitely would imply the market is only paying for a 7 yr mine life, or 8 yrs excluding exploration upside.

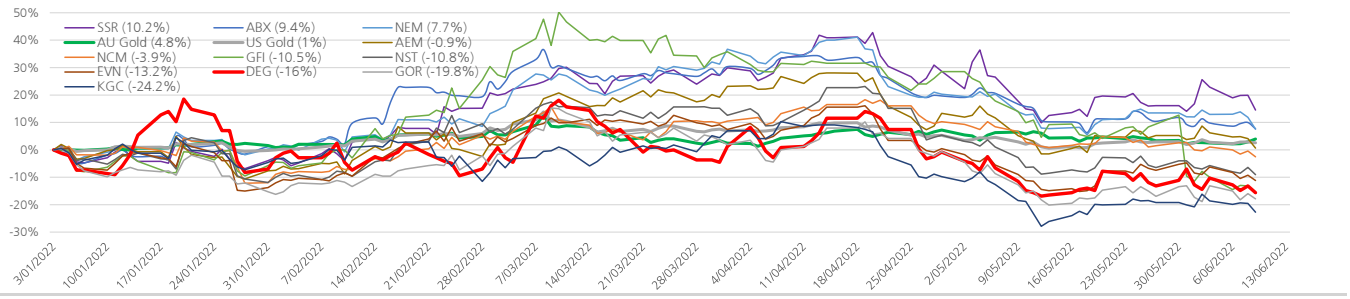
Figure 8: Average monthly sector returns since 1973 in low growth environment

Low Growth	Low Inflation (CPI<2%)		Medium Inflation		High Inflation (CPI>4%)	
	# of months: 42		# of months: 39		# of months: 105	
	ASX	1.5%	ASX	1.0%	ASX	0.1%
	TMT	2.3%	ENERGY	2.2%	TMT	2.3%
	CONSUMER DISC	2.0%	INDUSTRIALS	1.6%	GOLD MINING	2.1%
	GENERAL MINING	1.9%	GENERAL MINING	1.6%	INDUSTRIALS	1.5%
	HEALTH CARE	1.6%	GAMING / LEISURE*	1.5%	CONSUMER STAP	1.5%
	CONSTRUCTION / MATS	1.4%	CONSUMER DISC	1.2%	CONSTRUCTION / MATS	1.1%
	GAMING / LEISURE*	1.1%	TMT	1.2%	HEALTH CARE	0.9%
	INDUSTRIALS	1.1%	REAL ESTATE	1.1%	REAL ESTATE	0.8%
	REAL ESTATE	0.8%	HEALTH CARE	1.0%	CONSUMER DISC	0.6%
	CONSUMER STAP	0.5%	BANKS	0.9%	INSURANCE	0.2%
	ENERGY	0.5%	CONSTRUCTION / MATS	0.8%	GENERAL MINING	0.0%
	BANKS	0.2%	CONSUMER STAP	0.3%	ENERGY	-0.3%
	GOLD MINING	-0.1%	GOLD MINING	0.1%	BANKS	-0.5%
	INSURANCE	-0.1%	INSURANCE	-0.3%	GAMING / LEISURE*	-1.0%

Source: Refinitiv

WHAT'S PRICED IN?

Figure 9: Total returns (net dividends) since Jan-22



Source: Bloomberg

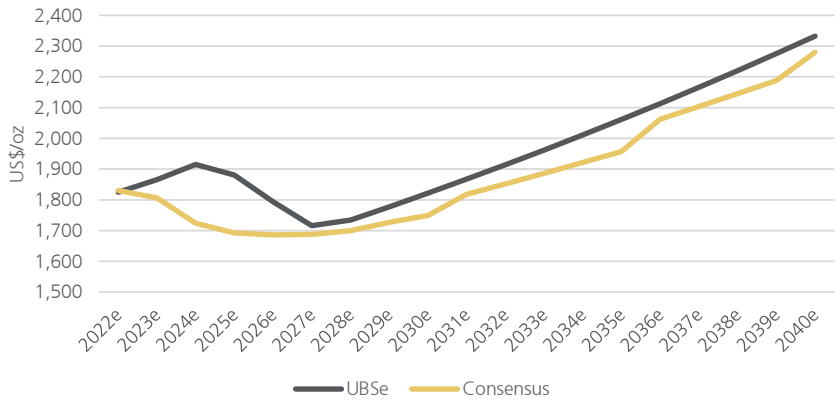
After the initial positive sentiment around discovery, DEG has returned ~-16% since Jan-22, underperforming most gold peers, the US$ and A$ gold price and US gold equities.

Based on our modelling:

- DEG share price trades on a 25% discount to our valuation, or at our price target assuming 50% additional Hemi capex beyond our A$1.1bn real modelled
- DEG is pricing in a US$1,440/oz real gold price indefinitely, or US$1,490/oz with no exploration upside
- Spot gold (US$1,820/oz) indefinitely would imply a lift to our valuation ~111% to a fair value of A$2.53/sh
- Spot gold (US$1,820/oz) indefinitely would imply the market is only paying for a 7 yr mine life, or 8 yrs excluding exploration upside
- The market is paying A$169/oz of (current) gold resource across the entire Mallina project

Our gold price forecast uses the gold forward curve for the near term and a US$1,500/oz long term. It appears in-line with consensus in FY22 and marginally above thereafter.

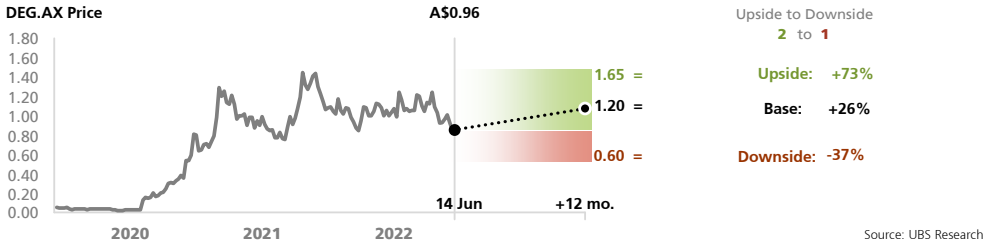
Figure 10: Gold price assumption



Source: Visible Alpha, UBSe *Note: No DEG Visible Alpha data. Average of NCM & NST data used.*

UPSIDE/DOWNSIDE SPECTRUM

De Grey is trading at $0.96/sh (on 14 Jun 22)



Source: UBS Research

Value drivers	Catalyst	Gold price	Exploration upside
A$1.65/sh upside	Inflation hedge/ geopolitical risk	UBSe +10%	Base case
A$1.20/sh base	UBSe base	Gold forward curve with US$1,500/oz LT	Base case (A$300m valuation)
A$0.60/sh downside	Reduced inflation hedge/geopolitical risk	UBSe -10%	No exploration upside

Source: UBSe

Risk to the current share price is skewed to the upside at 2 to 1.

UPSIDE (A$1.65/sh): Our upside scenario assumes 10% higher gold prices under a (continued) heightened geopolitical risk scenario. It also assumes an identical exploration and expansion profile as our base case.

BASE (A$1.20/sh): Our base case assumes a long term US$1,500/oz gold price, gold forward curve at a 75c AUD:USD long term. We include a A$300m valuation for exploration upside considering resource discovery, reserve conversion and optionality for mine expansion (including underground optionality).

DOWNSIDE (A$0.60/sh): Similar to the upside case, our downside scenario applies a -10% adjustment to our gold price deck. Our downside case also assumes no exploration upside across DEG tenements beyond mine plan conversion for a 20 yr life.

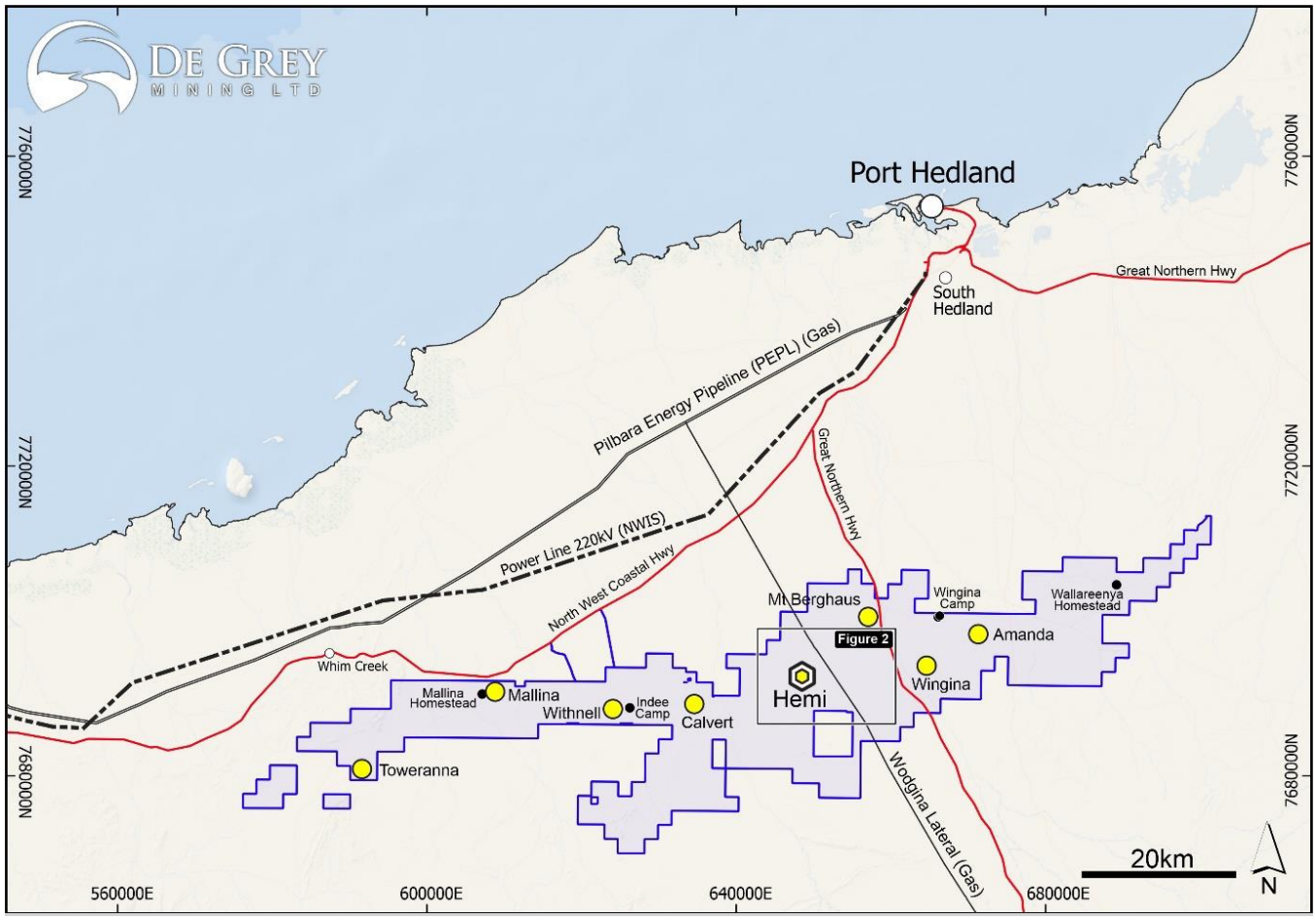
MALLINA PROJECT

Location and Infrastructure

The 100% owned Mallina Gold Project covers 1,500km2 in northern Western Australia, ~60km from Port Hedland. In late 2019, a large scale near surface gold discovery at Hemi was announced to complement the existing regional ~2moz resource base at Withnell and Wingina mining centres.

The project's proximity to Port Hedland offers pre-existing infrastructure and services for the project including: 1) plentiful water; 2) bitumen highways; 3) gas pipelines; 4) 220kV power transmission line; 5) bulk export facility at Port Hedland; 6) domestic and international airport at Port Hedland; and 7) mobile/wireless and optic facilities for communications.

Figure 11: Mallina project location



Source: DEG

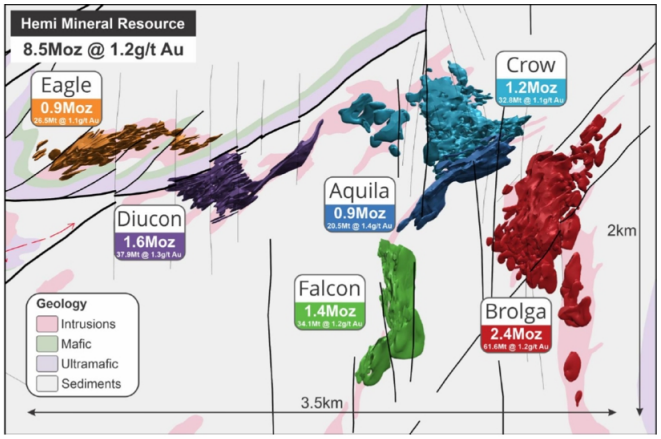
Geology and resources

The Hemi discovery is an intrusion-hosted form of gold mineralisation new to the Pilbara region, and shows a scale of mineralisation not previously encountered in the Mallina Basin. Gold mineralisation is hosted in a series of intrusions associated with stringer and disseminated sulphide rich zones. The maiden 192Mt resource grading 1.1g/t for 6.8moz gold began to outline the potential Tier-1 scale of the project and the Oct-21 Scoping Study of ~427kozpa over 10 yrs.

The May-22 updated resource lifted grade, added ounces across known deposits, included maiden estimates for Diucon and Eagle and lifted confidence doubling the size of the Measured & Indicated (M&I) portion. The total resource now stands at 213mt at 1.2g/t for 8.5moz of gold at at 0.3g/t cut-off.

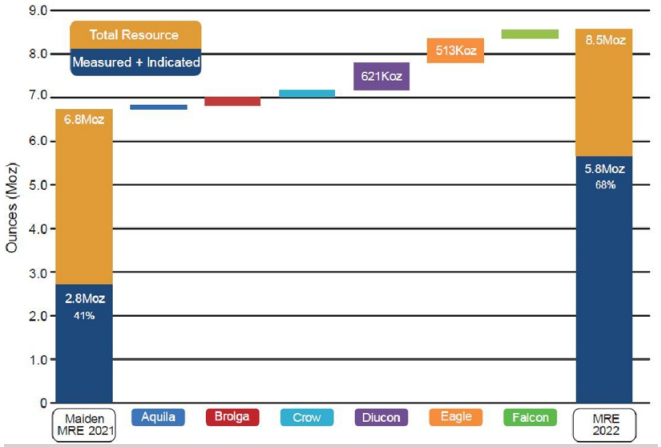
The regional Withnell resource stands at 25.6mt at 2.0g/t for 1.6moz and Wingina 11.9mt at 1.4g/t for 0.5moz bringing the total resource to >10moz already.

Figure 12: Hemi deposits



Source: DEG

Figure 13: May-22 resource update



Source: DEG

Figure 14: May-22 Hemi resource by deposit

Deposit	Indicated			Inferred			Total		
	Mt	Au g/t	Koz	Mt	Au g/t	Koz	Mt	Au g/t	Koz
Aquila	12.9	1.5	610	7.6	1.3	311	20.5	1.4	921
Brolga	37.3	1.3	1,611	24.2	1.1	821	61.6	1.2	2,432
Crow	20.3	1.1	700	12.5	1.2	474	32.8	1.1	1,174
Diucon	29.4	1.4	1,311	8.6	1.2	325	37.9	1.3	1,635
Eagle	16.6	1.2	636	9.9	1.0	312	26.5	1.1	948
Falcon	22.7	1.3	937	11.4	1.2	422	34.1	1.2	1,359
Total Hemi	139.1	1.3	5,804	74.1	1.1	2,666	213.3	1.2	8,470

Source: DEG

Note: 0.3g/t Au cut-off grade applied above 370m depth and 1.5g/t Au below 370m depth.

Metallurgy and processing

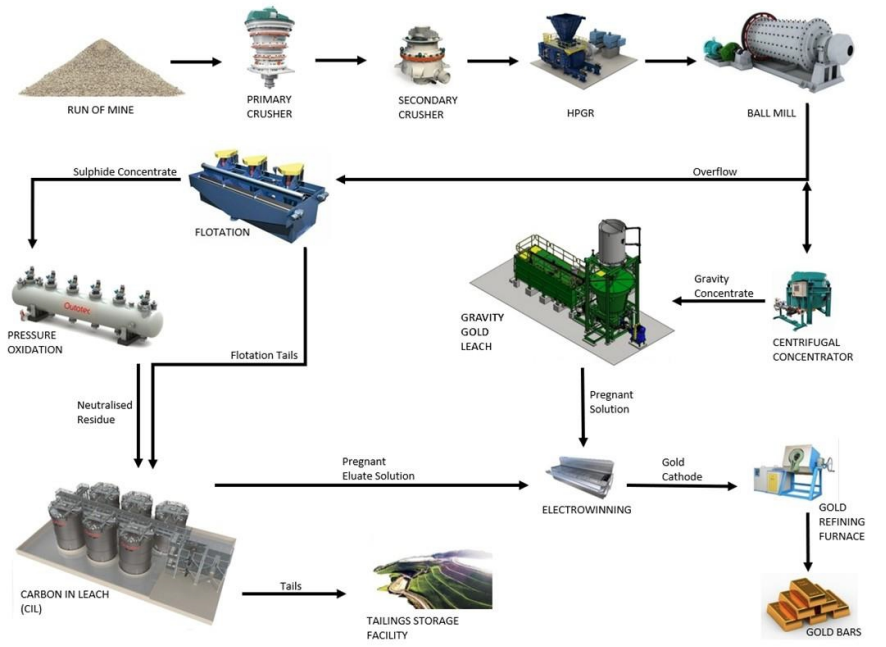
The mineralogy of the Hemi deposit is semi-refractory while the regional deposits at Withnell and Wingina mining centres are free milling and can be treated through a conventional CIL circuit. The Mallina Scoping Study considered three sulphide oxidation methods for Hemi: 1) Autoclave pressure oxidation (POX); 2) bacterial/biological oxidation (BIOX); and 3) atmospheric oxidation (Albion) however, it appears certain that it will be progressed as a POX project.

Metallurgical testwork continues to return strong results; 93-95% recoveries of oxide mineralisation with CIL and 93-95% of primary mineralisation using floatation, POX and CIL. Importantly the gold shows good recoveries into a float concentrate and with only a ~7% mass pull the oxidation circuit will be ~14x smaller than the front end of the plant. This significantly reduces capex and risk.

While POX is a little different for our market, it is well understood technology and the concentrate float, POX ,CIL flow sheet, as opposed to whole of ore (Copler & Pueblo Viejo) , is similar to that used at Lihir. However, Hemi has the advantage a much higher mass pull potentially reducing the POX plant to 10% the size of Lihir (combined capacity).

Continued testwork through the studies phase is a item we are monitoring.

Figure 15: Hemi flowsheet



Source: DEG

Mineable reserves and studies

The Oct 21 Scoping Study outlined a 10 yr project producing an average ~427kozpa at AISC US$917/oz real. This was based on the M&I portion of the 6.8moz resource base. The upcoming Pre-Feasibility Study (due Sept 22) will be based on the most recent resource of 8.6moz at Hemi (85% indicated) and the 2.1moz in the Withnell and Wingina regional centres.

DEG continues to drill and will add ounces an improve the confidence category of the existing inventory. It will also progress permitting and focus on environment, geotechnical, mining, infrastructure, hydrogeology, geochemistry and energy studies before the Definitive Feasibility Study (DFS) and potential FID in Jun-Q 23.

While the table below shows the resource has limited sensitivity to cut off grade, overall we believe the initial open pit mining inventory (reserve) will most closely align with the resource between 0-370m depths on a 0.5g/t cut-off. This resource currently stands at 166mt at 1.5g/t for 7.9moz gold and will continue to grow.

Figure 16: May-22 Hemi cut-off grades

Cut-off Grade 0 – 370m (Au g/t)	Indicated			Inferred			Total		
	Mt	Au g/t	Koz	Mt	Au g/t	Koz	Mt	Au g/t	Koz
0.3	139.1	1.3	5,804	74.1	1.1	2,666	213.3	1.2	8,470
0.4	124.7	1.4	5,642	63.8	1.2	2,549	188.4	1.4	8,191
0.5	111.0	1.5	5,444	54.8	1.4	2,420	165.8	1.5	7,864
0.6	98.7	1.6	5,227	47.4	1.5	2,289	146.1	1.6	7,516
0.7	87.9	1.8	5,001	41.2	1.6	2,159	129.0	1.7	7,160

Source: DEG

Note: Cut-off grades are from resource within 370m of surface.

Consistent with the Scoping Study, we model a 10mtpa open pit operation with a 4.8:1 strip ratio. Mining will likely start at Brolga (2.4moz) for higher grade and lower strip, before moving into Duicon and Aquila pits and working its way through nearby orebodies. The 2.1moz at regional deposits, Withnell and Wingina, should be pushed toward the end of life accepting any high grades that may be trucked and preferentially treated. We assume processing of the semi refractive ore is via flotation, pressure oxidation (POX) and a CIL circuit and 93% recovery. Importantly, we see significant scope for grade optimisation and for a much longer mine life on the larger resource base. At 10mtpa throughput and 93% recovery, head grades of ~1.55g/t see production rates of 500kozpa, making Hemi one of Australia's largest gold mines.

Figure 17: UBSe vs DEG June 21 Scoping Study

		Scoping Study	UBSe	Variance
Mining Physicals				
Ore Tonnage	Mt	111	211	90%
Grade (yr 1- 10)	g/t	1.4	1.5	8%
Grade (>10yr)	g/t		1.3	
Total Gold Produced	Moz	4.3	9.1	114%
Plant Throughput	Mtpa	10.0	10.8	8%
Strip Ratio	:	4.8	4.8	0%
Recovery	%	93%	93%	0%
Gold Production (yr 1 - 10)	kozpa	427	492	15%
Gold Production (>10yr)	kozpa		443	
Mine Life	yrs	10.0	19.5	95%
Costs				
AISC (yr 1 - 10)	US$/oz real	917	985	-7%
AISC (>10yr)	US$/oz real		1,101	
Mining Unit Cost	A$/ore mined	4.4	4.8	-10%
Processing Unit Costs	A$/ore mined	26.0	28.6	-10%
G&A Unit Costs	A$/ore mined	1.4	1.5	-10%
Total Capex	A$m real	893	1,100	-23%

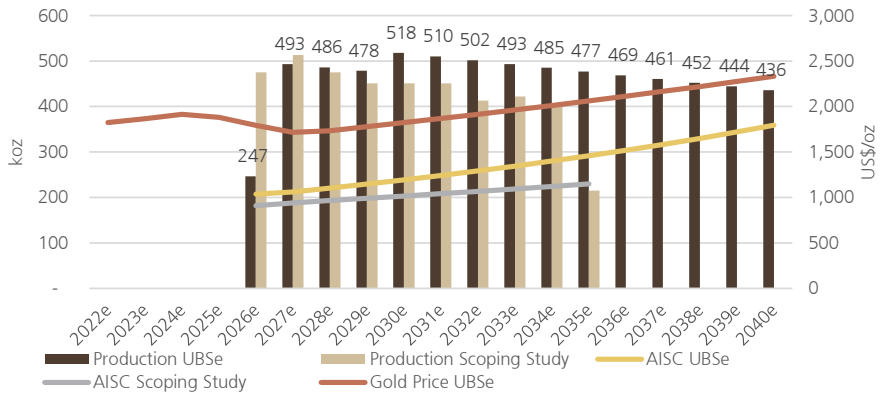
Source: DEG, UBSe

Given the prospectivity of the tenure and rate of inventory increase, we are confident in modelling higher production rates and a longer life than the Scoping Study. This allows for the increased conversion to M&I and extensions/future discoveries. It equates to 100% of the current resource and is close to a 20 yr mine life with production averaging ~490kozpa for the first 10 years and ~445kozpa for the next 10.

We have inflated operating costs 10% for 2022$ and have increased capex ~31% to A $1.1bn real including contingency noting tight WA labour markets and supply chains but that heavier expenditures remain 18-24 mths out.

Our average AISC for the front 10 yrs are ~7% higher than the Scoping Study (2021) at US$985/oz real and US$1,101/oz beyond. Higher production helps contain increased throughput costs on our modelling.

Figure 18: UBSe vs DEG Scoping Study



Source: DEG, UBSe

Funding

As at Mar-22, DEG had $97m cash on hand. We assume the required funding of ~A $1.2bn is funded 40:60 debt equity and that the equity component is raised at $1.10/sh.

Upside

The two most obvious levers are:

1. **Throughput.** New plants like this can see up to an extra 20% throughput squeezed through as the infrastructure is debottlenecked (eg Tropicana and Gruyere). Adding 10%/1mtpa to throughput adds 915koz life of mine at reserve grade and lifts ours valuation ~25%.
2. **Underground.** We have only considered the open pit portion of known resources here. In time large scale bulk underground mining could potentially extend operational life. Adding an extra 2 yrs (beyond FY45) add 5cps/4% to our price target.

Ultimately bulk underground mining may also be considered at all deposits.

Sensitivity analysis

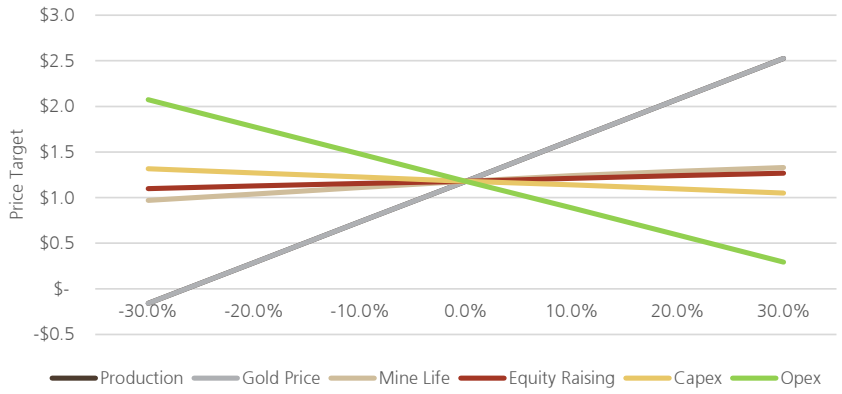
The Mallina project is most sensitive to gold price, production and opex.

Figure 19: Sensitivity analysis

	-30.0%	-20.0%	-10.0%	0.0%	10.0%	20.0%	30.0%
Production	-$ 0.159	$ 0.288	$ 0.736	$ 1.180	$ 1.631	$ 2.078	$ 2.526
Gold Price	-$ 0.159	$ 0.288	$ 0.736	$ 1.180	$ 1.631	$ 2.078	$ 2.526
Mine Life	$ 0.970	$ 1.040	$ 1.110	$ 1.180	$ 1.240	$ 1.290	$ 1.330
Equity Raising	$ 1.099	$ 1.127	$ 1.155	$ 1.180	$ 1.212	$ 1.240	$ 1.268
Capex	$ 1.317	$ 1.272	$ 1.228	$ 1.180	$ 1.139	$ 1.095	$ 1.050
Opex	$ 2.074	$ 1.777	$ 1.480	$ 1.180	$ 0.887	$ 0.590	$ 0.293

Source: DEG, UBSe

Figure 20: Sensitivity analysis spider

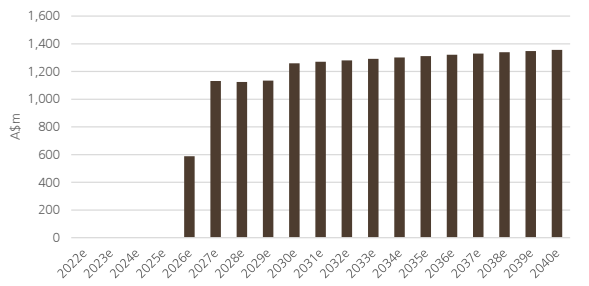


Source: DEG, UBSe

COMPANY DESCRIPTION

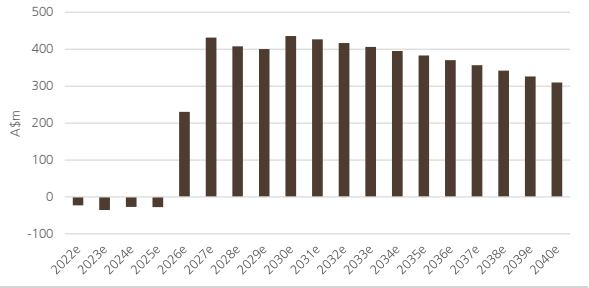
De Grey Mining (DEG) is a West Australian gold explorer and developer. Its flagship Mallina Gold Project is fortunately located ~60km from Port Hedland in WA. Since discovery, it has quickly grown the Hemi resource to 8.6moz, bringing the total project resource to 10.6moz making it one of the largest new gold discoveries in recent years. It continues to drill at the project while completing studies. Early indications are that Mallina could underpin a long life project of up to 500kozpa with first production from late 2026.

Total revenue



Source: DEG, UBSe

Total EBITDA



Source: DEG, UBSe

De Grey Mining (DEG.AX)

Income Statement (A$m)	06/19	06/20	06/21	06/22E	%ch	06/23E	%ch	06/24E	06/25E	06/26E
Revenues	**0**	**0**	**1**	**0**	*-96.9*	**0**	*-*	**0**	**0**	**588**
Gross profit	0	0	1	0	*-96.9*	0	*-*	0	0	273
EBITDA (UBS)	**0**	**(4)**	**(5)**	**(23)**	*NM*	**(36)**	*-56.3*	**(27)**	**(28)**	**230**
Depreciation & amortisation	0	0	(1)	(1)	*-31.4*	0	*-*	0	0	(83)
EBIT (UBS)	**0**	**(4)**	**(5)**	**(24)**	*-357.6*	**(36)**	*-50.7*	**(27)**	**(28)**	**147**
Associates & investment income	0	0	0	0	*-*	0	*-*	0	0	0
Other non-operating income	0	0	0	0	*-*	0	*-*	0	0	0
Net interest	0	0	0	0	*-*	(12)	*-*	(26)	(27)	(31)
Exceptionals (incl goodwill)	0	0	0	0	*-*	0	*-*	0	0	0
Pre-tax profit	**0**	**(4)**	**(5)**	**(23)**	*-342.5*	**(48)**	*-106.1*	**(53)**	**(54)**	**116**
Tax	0	0	0	0	*-*	0	*-*	0	0	(43)
Profit after tax	**0**	**(4)**	**(5)**	**(23)**	*-342.5*	**(48)**	*-106.1*	**(53)**	**(54)**	**73**
Preference dividends	0	0	0	0	*-*	0	*-*	0	0	0
Minorities	0	0	0	0	*-*	0	*-*	0	0	0
Extraordinary items	0	0	0	0	*-*	0	*-*	0	0	0
Net earnings (local GAAP)	**0**	**(4)**	**(5)**	**(23)**	*-342.5*	**(48)**	*-106.1*	**(53)**	**(54)**	**73**
Net earnings (UBS)	**0**	**(4)**	**(5)**	**(23)**	*-342.5*	**(48)**	*-106.1*	**(53)**	**(54)**	**73**
Tax rate (%)	0.0	0.0	0.0	0.0	*-*	0.0	*-*	0.0	0.0	37.4

Per Share (A$)	06/19	06/20	06/21	06/22E	%ch	06/23E	%ch	06/24E	06/25E	06/26E
EPS (UBS, diluted)	0.00	0.00	0.00	(0.02)	*-306.0*	(0.03)	*-53.4*	(0.03)	(0.03)	0.04
EPS (local GAAP, diluted)	0.00	0.00	0.00	(0.02)	*-306.0*	(0.03)	*-53.4*	(0.03)	(0.03)	0.04
EPS (UBS, basic)	0.00	0.00	0.00	(0.02)	*-306.0*	(0.03)	*-53.4*	(0.03)	(0.03)	0.04
DPS (net) (A$)	0.00	0.00	0.00	0.00	*-*	0.00	*-*	0.00	0.00	0.00
Cash EPS (UBS, diluted) [1]	0.00	0.00	0.00	(0.02)	*-345.4*	(0.03)	*-59.2*	(0.03)	(0.03)	0.08
Book value per share	0.00	0.06	0.13	0.19	*45.6*	0.40	*106.3*	0.37	0.35	0.38
Average shares (diluted)	470	1,028	1,288	1,404	*9.0*	1,886	*34.3*	1,886	1,886	1,886

Balance Sheet (A$m)	06/19	06/20	06/21	06/22E	%ch	06/23E	%ch	06/24E	06/25E	06/26E
Cash and equivalents	0	28	71	76	*6.9*	1,299	*NM*	1,216	513	55
Other current assets	0	1	3	2	*-30.2*	2	*0.0*	2	2	2
Total current assets	**0**	**29**	**74**	**78**	*5.6*	**1,301**	*NM*	**1,218**	**515**	**57**
Net tangible fixed assets	0	1	7	13	*100.7*	23	*77.3*	34	662	1,223
Net intangible fixed assets	0	49	114	193	*68.8*	243	*25.9*	263	283	303
Investments / other assets	0	1	2	2	*-8.1*	2	*0.0*	2	2	2
Total assets	**0**	**80**	**197**	**286**	*45.3*	**1,569**	*NM*	**1,517**	**1,462**	**1,585**
Trade payables & other ST liabilities	0	3	18	10	*-46.3*	10	*0.0*	10	10	10
Short term debt	0	0	0	0	*-*	0	*-*	0	0	0
Total current liabilities	**0**	**3**	**18**	**10**	*-46.3*	**10**	*0.0*	**10**	**10**	**10**
Long term debt	0	0	0	0	*-*	799	*-*	799	799	849
Other long term liabilities	0	1	3	3	*-5.2*	3	*0.0*	3	3	3
Preferred shares	0	0	0	0	*-*	0	*-*	0	0	0
Total liabilities (incl pref shares)	**0**	**5**	**21**	**13**	*-40.6*	**811**	*NM*	**811**	**811**	**861**
Common s/h equity	**0**	**75**	**176**	**274**	*55.7*	**758**	*177.2*	**705**	**651**	**724**
Minority interests	0	0	0	0	*-*	0	*-*	0	0	0
Total liabilities & equity	**0**	**80**	**197**	**286**	*45.3*	**1,569**	*NM*	**1,517**	**1,462**	**1,585**

Cash Flow (A$m)	06/19	06/20	06/21	06/22E	%ch	06/23E	%ch	06/24E	06/25E	06/26E
Net income (before pref divs)	0	(4)	(5)	(23)	*-342.5*	(48)	*-106.1*	(53)	(54)	73
Depreciation & amortisation	0	0	1	1	*31.4*	0	*-*	0	0	83
Net change in working capital	0	2	13	(8)	*-*	0	*-*	0	0	0
Other operating	0	0	1	1	*-26.2*	0	*-*	0	0	0
Operating cash flow	**0**	**(1)**	**9**	**(30)**	*-*	**(48)**	*-60.3*	**(53)**	**(54)**	**155**
Tangible capital expenditure	0	(1)	(6)	(7)	*-23.2*	(10)	*-39.9*	(10)	(628)	(644)
Intangible capital expenditure	0	(15)	(51)	(85)	*-67.4*	(50)	*41.3*	(20)	(20)	(20)
Net (acquisitions) & disposals	0	0	0	0	*-*	0	*-*	0	0	0
Other investing	0	(10)	0	0	*-*	0	*-*	0	0	0
Investing cash flow	**0**	**(26)**	**(57)**	**(92)**	*-61.5*	**(60)**	*34.9*	**(30)**	**(648)**	**(664)**
Equity dividends paid	0	0	0	0	*-*	0	*-*	0	0	0
Share issues / (buybacks)	0	56	104	120	*14.9*	532	*344.4*	0	0	0
Other financing	0	0	0	0	*-38.5*	0	*-*	0	0	0
Change in debt & pref shares	0	0	0	0	*-*	799	*-*	0	0	50
Financing cash flow	**0**	**55**	**104**	**120**	*14.8*	**1,331**	*NM*	**0**	**0**	**50**
Cash flow inc/(dec) in cash	**0**	**28**	**56**	**(3)**	*-*	**1,223**	*-*	**(83)**	**(702)**	**(458)**
FX / non cash items	-	-	-	-	*-*	-	*-*	-	-	-
Balance sheet inc/(dec) in cash	**-**	**-**	**-**	**-**	*-*	**-**	*-*	**-**	**-**	**-**

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.[1] Cash EPS (UBS, diluted) is calculated using UBS net income adding back depreciation and amortization.

De Grey Mining (DEG.AX)

Valuation (x)	06/19	06/20	06/21	06/22E	06/23E	06/24E	06/25E	06/26E
P/E (local GAAP, diluted)	0.0	NM	NM	NM	NM	NM	NM	26.5
P/E (UBS, diluted)	0.0	(43.0)	NM	(61.7)	(40.2)	(36.6)	(35.4)	26.5
P/CEPS	0.0	NM	NM	NM	NM	NM	NM	12.4
Equity FCF (UBS) yield %	0.0	(9.3)	(3.4)	(9.1)	(8.1)	(6.2)	(52.4)	(38.0)
Dividend yield (net) %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P/BV	0.0	2.8	8.4	5.2	2.5	2.7	3.0	2.7
EV/revenues (core)	-	NM	NM	NM	-	-	-	2.7
EV/EBITDA (UBS core)	-	NM	NM	NM	NM	NM	NM	6.9
EV/EBIT (core)	-	NM	NM	NM	NM	NM	NM	10.7
EV/OpFCF (core)	-	NM	NM	NM	NM	NM	NM	6.9
EV/op. invested capital	-	7.3	17.6	7.3	3.3	2.1	1.6	1.3

Enterprise value (A$m)	06/19	06/20	06/21	06/22E	06/23E	06/24E	06/25E	06/26E
Market cap.	50	186	1,385	1,339	1,339	1,339	1,339	1,339
Net debt (cash)	0	(14)	(50)	(73)	(288)	(459)	(66)	539
Buy out of minorities	0	0	0	0	0	0	0	0
Pension provisions/other	0	0	0	0	0	0	0	0
Total enterprise value	**50**	**172**	**1,336**	**1,266**	**1,051**	**881**	**1,273**	**1,879**
Non core assets	0	0	0	(155)	(300)	(300)	(300)	(300)
Core enterprise value	**50**	**172**	**1,336**	**1,111**	**751**	**581**	**973**	**1,579**

Growth (%)	06/19	06/20	06/21	06/22E	06/23E	06/24E	06/25E	06/26E
Revenue	-	-	-	-	-	-	-	-
EBITDA (UBS)	-	-	-	-	-	-	-	-
EBIT (UBS)	-	-	-	-	-	-	-	-
EPS (UBS, diluted)	-	-	-	-	-	-	-	-
Net DPS	-	-	-	-	-	-	-	-

Margins & Profitability (%)	06/19	06/20	06/21	06/22E	06/23E	06/24E	06/25E	06/26E
Gross profit margin	-	NM	NM	NM	-	-	-	46.4
EBITDA margin	-	NM	NM	NM	-	-	-	39.1
EBIT (UBS) margin	-	<-500	<-500	<-500	-	-	-	25.0
Net earnings (UBS) margin	-	NM	NM	NM	-	-	-	12.4
ROIC (EBIT)	-	-	-	-	-	-	-	-
ROIC post tax	-	-	-	-	-	-	-	-
ROE (UBS)	-	-	-	-	-	-	-	-

Capital structure & Coverage (x)	06/19	06/20	06/21	06/22E	06/23E	06/24E	06/25E	06/26E
Net debt / EBITDA	-	7.6	15.7	3.3	14.1	15.4	(10.4)	3.4
Net debt / total equity %	-	(37.4)	(40.4)	(27.7)	(66.0)	(59.1)	43.8	109.6
Net debt / (net debt + total equity) %	-	(59.8)	(67.8)	(38.4)	NM	NM	30.5	52.3
Net debt/EV %	0.0	(8.2)	(3.7)	(5.8)	(27.4)	(52.1)	(5.2)	28.7
Capex / depreciation %	-	178.5	NM	NM	-	-	-	NM
Capex / revenue %	-	NM	NM	NM	-	-	-	NM
EBIT / net interest	-	-	-	-	-	-	-	4.7
Dividend cover (UBS)	-	-	-	-	-	-	-	-
Div. payout ratio (UBS) %	-	-	-	-	-	-	-	-

Revenues by division (A$m)	06/19	06/20	06/21	06/22E	06/23E	06/24E	06/25E	06/26E
Others	0	0	1	0	0	0	0	588
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**588**

EBIT (UBS) by division (A$m)	06/19	06/20	06/21	06/22E	06/23E	06/24E	06/25E	06/26E
Others	0	(4)	(5)	(24)	(36)	(27)	(28)	147
Total	**0**	**(4)**	**(5)**	**(24)**	**(36)**	**(27)**	**(28)**	**147**

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.

Forecast returns

Forecast price appreciation	+25.3%
Forecast dividend yield	0.0%
Forecast stock return	+25.3%
Market return assumption	7.6%
Forecast excess return	+17.7%

Company Description

De Grey Mining (DEG) is a West Australian gold explorer and developer. Its flagship Mallina Gold Project is fortunately located ~60km from Port Hedland in WA. Since discovery, it has quickly grown its Hemi resource to 8.6moz, bringing the total project resources to 10.6moz, making it one of the largest new gold discoveries in recent years. It continues to drill at the project while completing studies. Early indications are that Mallina could underpin a long-life project of up to 500kozpa, with first production as of late 2026.

Valuation Method and Risk Statement

We value De Grey Mining (DEG) using a Discounted Cash Flow (DCF) approach. Our price target is set based on the forward curve for gold, a US$1,500/oz long term gold price and a long term 75c AUD:USD with a 6% discount rate.

Investment risk inherent in the resource sector includes, but it is not limited to, movements in commodity price and currency which may differ materially from the assumption used in this report. Furthermore, the sector is subject to political, financial and operational risks, each of which has the potential to significantly impact company/industry performance. De Grey Mining does not currently produce gold and is yet to construct its Mallina project, adding added delivery and Feasibility Study risk to the mining project. The company is also exposed to a sole asset, the Mallina Project, in Western Australia, which adds single operation and location risk.

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12-Month Rating	Definition	Coverage[1]	IB Services[2]
Buy	FSR is > 6% above the MRA.	56%	32%
Neutral	FSR is between -6% and 6% of the MRA.	35%	28%
Sell	FSR is > 6% below the MRA.	8%	22%
Short-Term Rating	**Definition**	**Coverage[3]**	**IB Services[4]**
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%

Source: UBS. Rating allocations are as of 31 March 2022.
1:Percentage of companies under coverage globally within the 12-month rating category.
2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.
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UBS Securities Australia Ltd: Dim Ariyasinghe, George Eadie, Justin Raja, Lachlan Shaw, Levi Spry.

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Company Name	Reuters	12-month rating	Price	Price date
De Grey Mining[13]	DEG.AX	No Rating	A$1.02	10 Jun 2022
Gold Road Resources	GOR.AX	Buy	A$1.26	10 Jun 2022

Source: UBS. All prices as of local market close. Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date.

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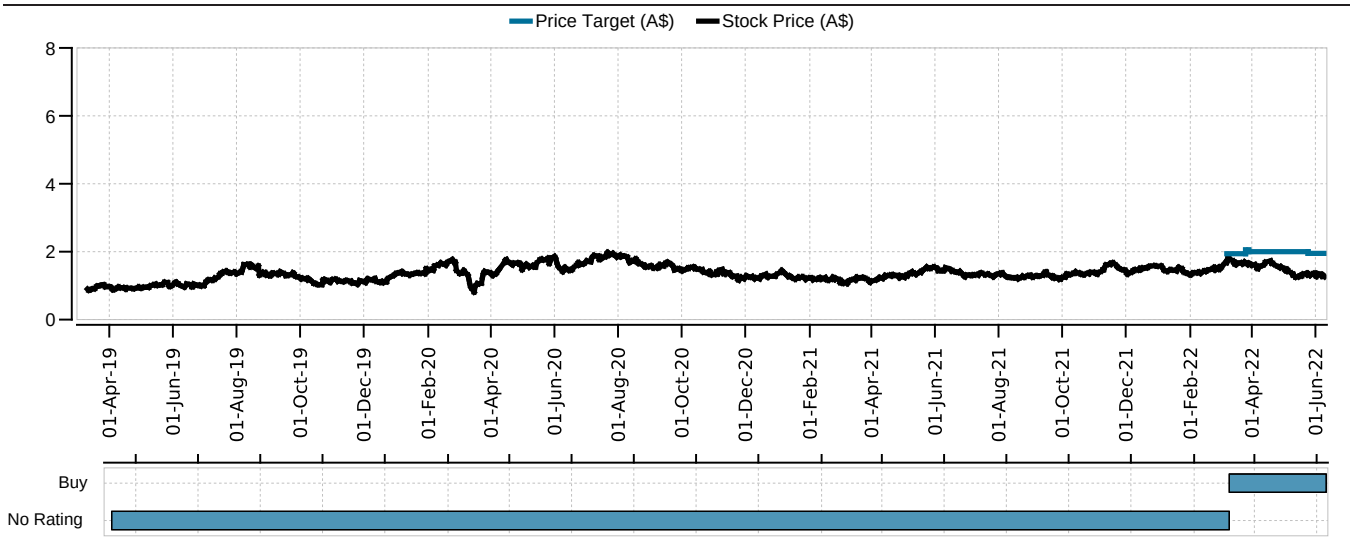
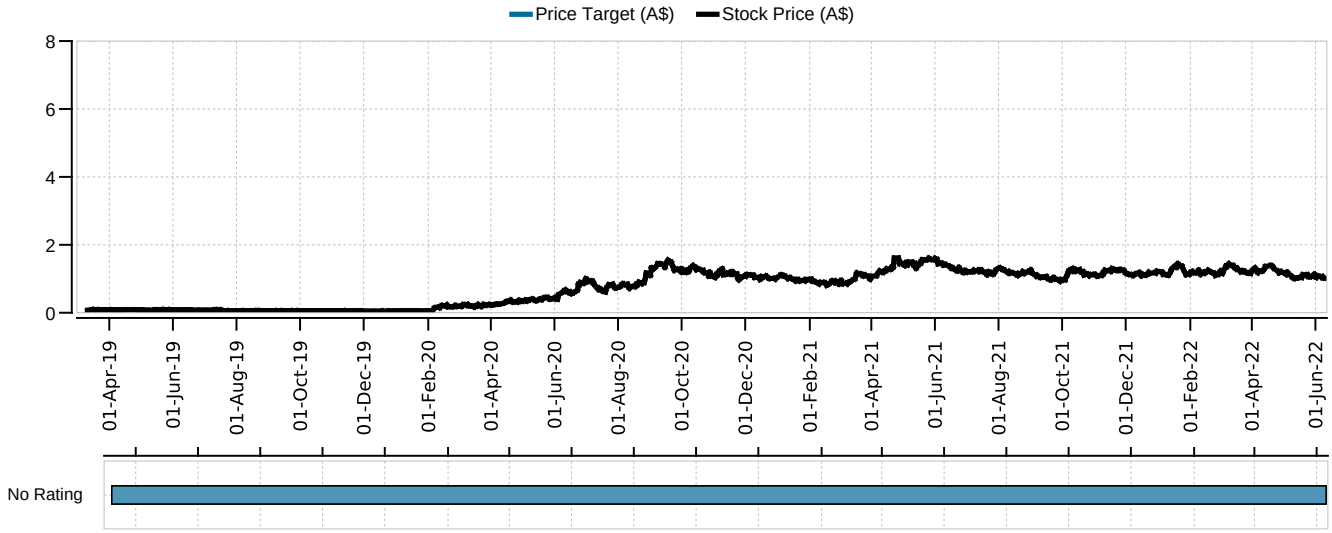
Gold Road Resources (A$)



Date	Stock Price (A$)	Price Target (A$)	Rating
2019-03-08	0.87	-	No Rating
2022-03-07	1.70	1.94	Buy
2022-03-25	1.70	2.05	Buy
2022-03-28	1.62	2.00	Buy
2022-05-24	1.32	1.95	Buy

Source: UBS;as of 10-Jun-2022. All prices as of local market close. Ratings as of date shown.

De Grey Mining (A$)



Date	Stock Price (A$)	Price Target (A$)	Rating
2019-03-08	0.08	-	No Rating

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