

# ASX ANNOUNCEMENT

19 August 2009

## Iron Ore Activities Report – No 28

Pilbara Project - Western Australia

Tenements E47/882 (Blacksmith) and E47/1560 (Anvil)

Flinders Mines Limited (FMS) 100%

### highlights

FLINDERS

MINES

- FMS board approves commencement of Pre-feasibility study based on positive Scoping study
- Global Inferred Resource increased to 511 Mt at 55.4% Fe
- Bedded Iron Deposit (BED) intersections well outside current resource
- Drilling to JORC Indicated status at Delta and drill sampling for metallurgical testwork planned for December Quarter, 2009
- \$19.0M cash in the bank

● Hamersley

WESTERN  
AUSTRALIA

### Scoping Study

A Scoping study has been completed by AMC Consultants Pty Ltd (AMC) to determine whether it is economically justified to proceed to the next evaluation stage of FMS's Pilbara Iron Ore Project (Project). The study included a review of the mining, beneficiation, transport and sale options available to FMS for the development of the project.

The study was at a high-level, and was directed towards identification and assessment of possible development options. By its nature a Scoping study has many assumptions. AMC concluded that, given the size of the resource, FMS's Pilbara Iron Ore Project has the potential to be mined economically over a long period.



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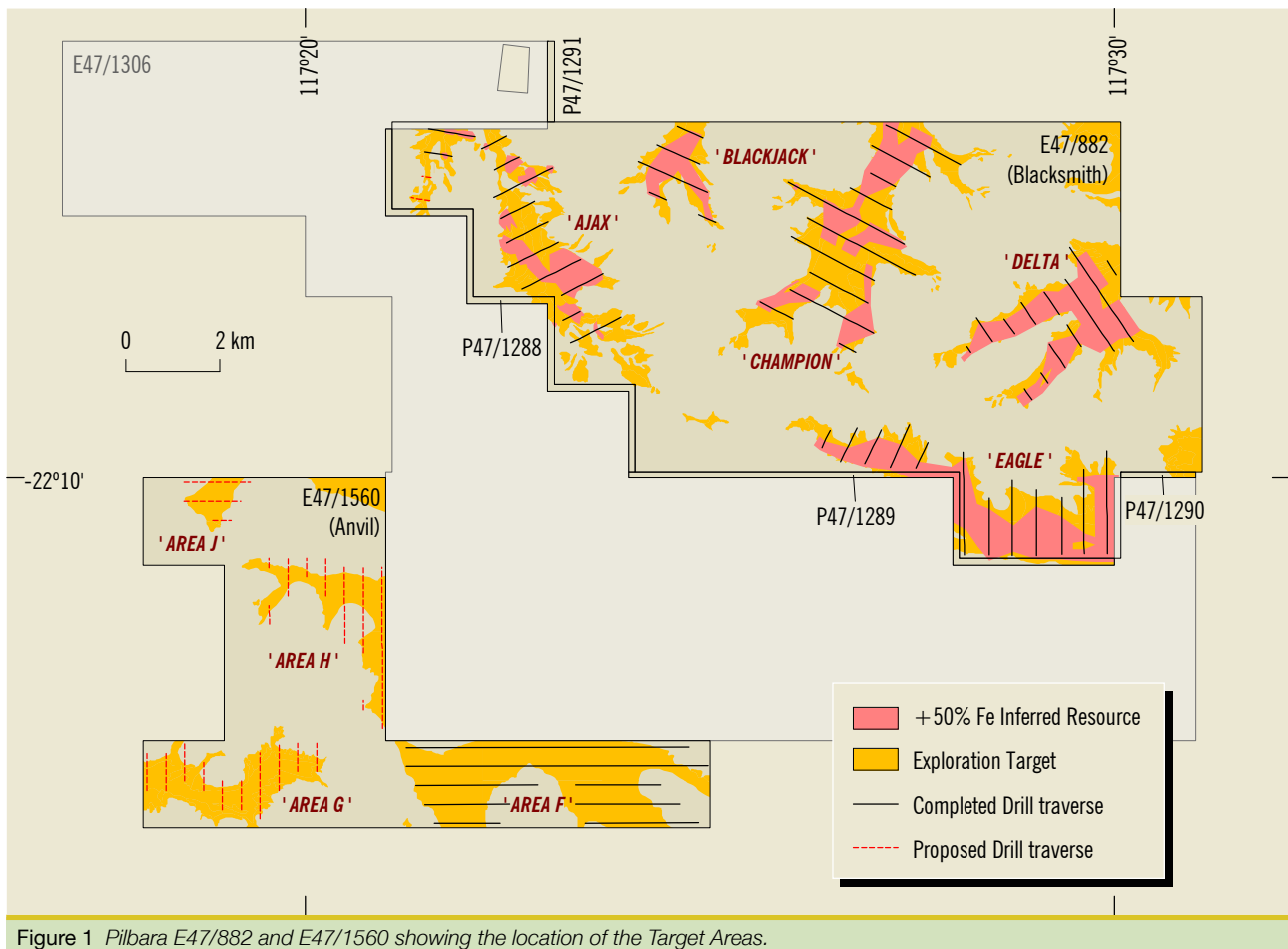


Figure 1 Pilbara E47/882 and E47/1560 showing the location of the Target Areas.

Other conclusions were:

- Mining of high-grade resources first will allow early cash flows to be maximised – the Delta deposit presents the best grade opportunities and a good stripping ratio so it should be the focus for future studies for initial mining.
- Studies will be further enhanced by metallurgical beneficiation test work and a study into the marketing and economic impacts of possible products.
- Significant potential exists to reduce capital expenditure through third-party involvement.

FMS is already addressing these and other issues through its aggressive exploration and development campaign. Drilling at Delta to define an Indicated Resource is planned in the fourth quarter of 2009. Extensive diamond drilling will commence in September to provide representative samples for metallurgical testing and consequent ore characterisation.

The Company's Corporate Development Committee has considered the Study and recommended to the Board to commence a Pre-feasibility study. The Board has resolved to proceed with this recommendation. The Pre-feasibility study will review the range of alternate production scenarios and result in the selection of a preferred development option.

Table 1: Pilbara Project Resource Table

Resource	JORC Classification	Tonnage Mt	Fe %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P %	LOI %
Ajax	Inferred (+50% cutoff)	35	54.9	10.3	4.9	0.06	5.4
Blackjack, Champion, Delta & Eagle	Inferred (+50% cutoff)	476	55.4	9.8	4.6	0.07	5.7
<b>E47/882 Total</b>	<b>Inferred (+50% cutoff)</b>	<b>511</b>	<b>55.4</b>	<b>9.8</b>	<b>4.6</b>	<b>0.07</b>	<b>5.7</b>

The Pilbara Project Resource Model has been constructed by Golder Associates Pty Ltd using Ordinary Kriging within geological constraint domains. Drill spacing is 100m to 300m along lines spaced 500m apart. An average density of 2.7 was used for all ore types based on densities measured from diamond core. All material within the resource is classified as Inferred under the JORC Classification.

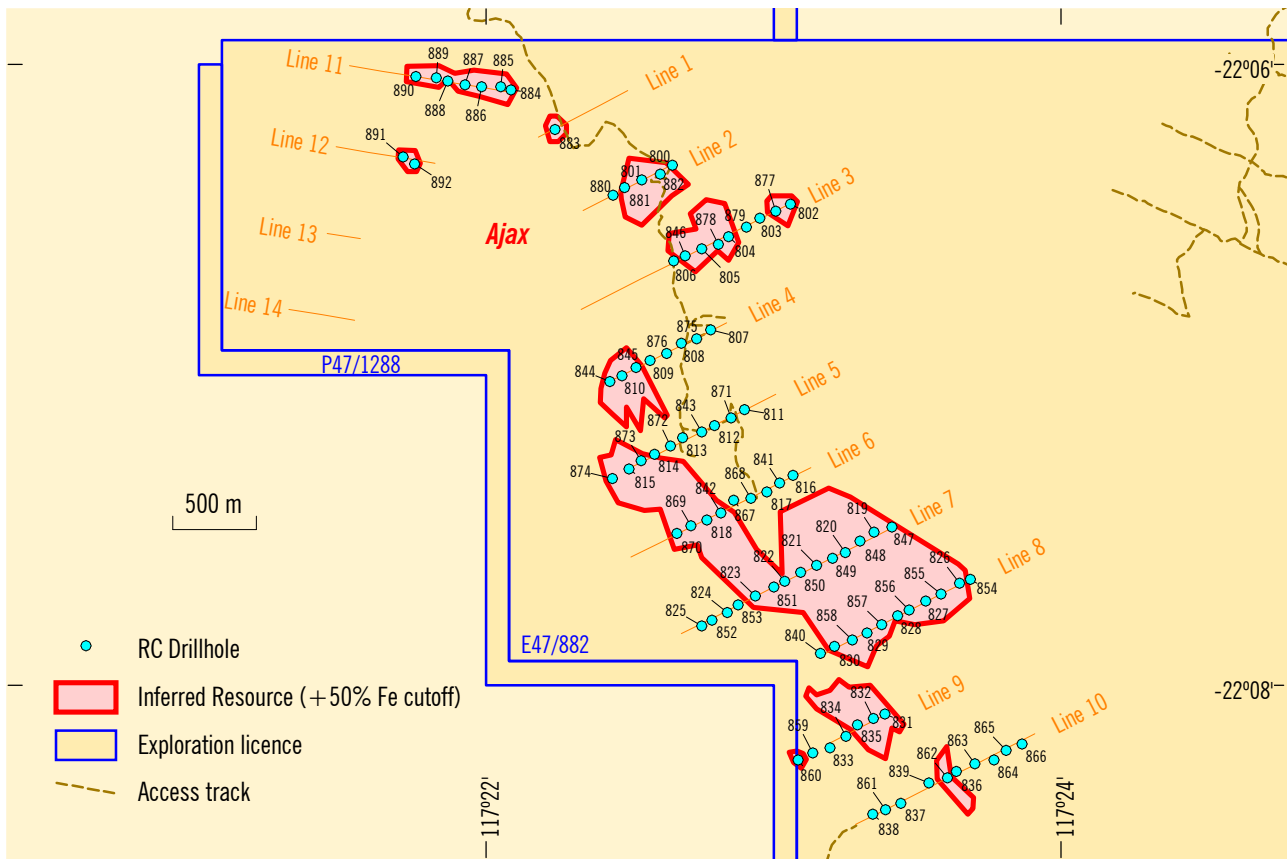


Figure 2 Completed RC drilling in Ajax.

### Increase in Inferred Resource

A JORC compliant Inferred Resource has been calculated for Ajax of 35 Mt @ 54.9% Fe, 10.3% SiO<sub>2</sub>, 4.9% Al<sub>2</sub>O<sub>3</sub>, 0.06% P, 5.4% LOI based on a +50% iron cut-off (refer Figure 2 and Table 1). This brings the global Inferred Mineral Resource to 511 Mt @ 55.4% Fe, 9.8% SiO<sub>2</sub>, 4.6% Al<sub>2</sub>O<sub>3</sub>, 0.07% P, 5.7% LOI based on a +50% iron cut-off.

Whilst the Inferred Resource has increased overall at the Ajax deposit, it is less than its Exploration Target\* of

96 to 103 Mt at 50% to 65% Fe. In comparison to the other deposits on Blacksmith (E47/882), Ajax has been eroded, removing a proportion of the mineralisation from the top of the deposit. As a result of the erosion much of the mineralisation is at or near surface. The target estimation did not take into account a thinner depth of mineralisation and a lack of continuity of above cutoff grade mineralisation. In addition, BID mineralisation does not appear to be as extensive as the other deposits on the Blacksmith EL.

Table 2: Comparison between Blacksmith Exploration Targets\* and Inferred Resources.

AREA	Exploration Targets (Mt) (Nov 2008* estimates @ 50-65%Fe grade)		Inferred Resource (Mt)
	MAX	MIN	
Ajax	103	96	35
Blackjack	40	37	37
Champion	166	154	103
Delta	136	126	148
Eagle	170	158	188
<b>Total</b>	<b>615</b>	<b>571</b>	<b>511</b>

A comparison between the Exploration Targets\* and the Inferred Resources on Blacksmith is shown in Table 2. The current combined Inferred Resource at Blacksmith of 511Mt is a little lower than the combined Exploration Target\* of 571 to 615Mt. Based on the recent extensions to BID mineralisation outside the existing resources it is likely that additional tonnes will be added to the combined Inferred Resource. Consequently, the final combined Inferred Resource at Blacksmith

\*Note: These exploration targets are reported according to Clause 18 of the JORC Code. This means that the potential quantity and grade is conceptual in nature and that considerable further exploration, particularly drilling, is necessary before any Identified Mineral Resource can be reported. It is uncertain if further exploration will lead to a larger, smaller or any Mineral Resource.

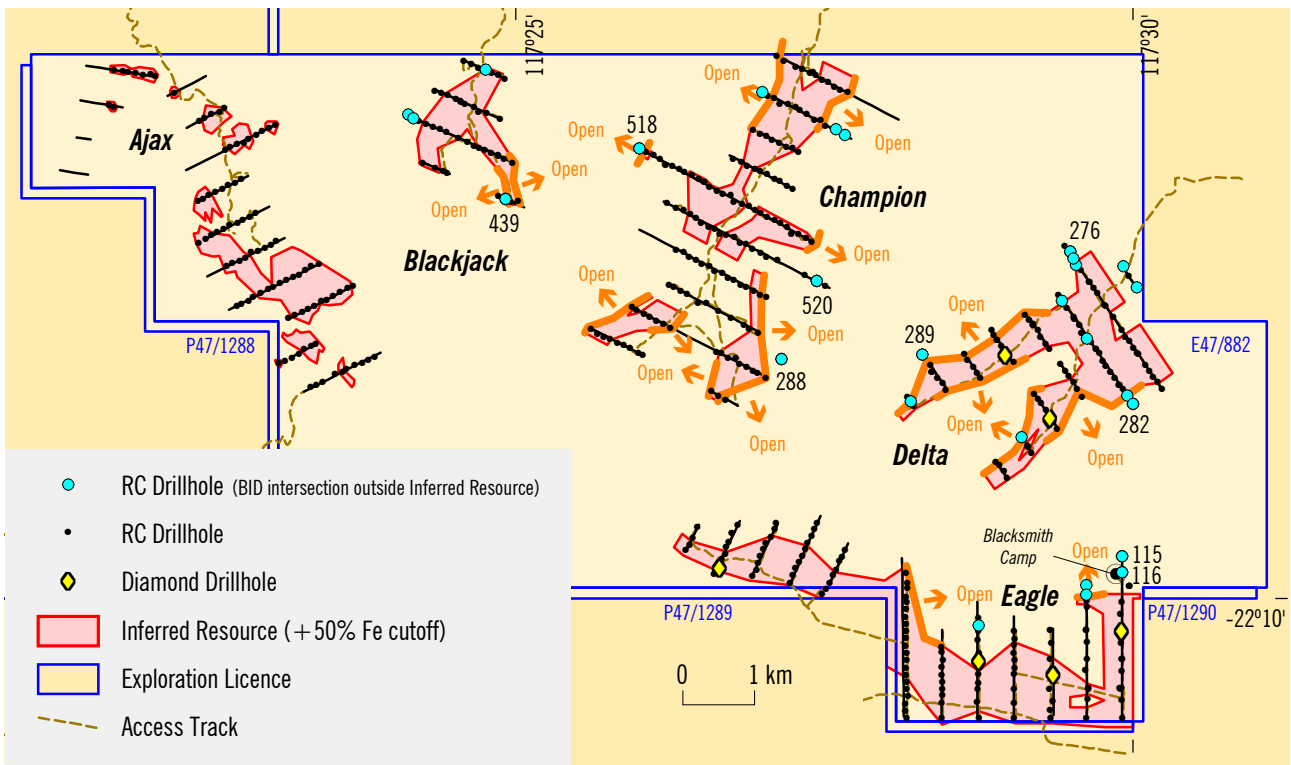


Figure 3 Significant BID intersections outside current inferred resource.

is likely to compare favourably with the combined Exploration Target.

The JORC compliant Inferred Resource estimate (Table 1) was prepared by independent geological consultants, Golder Associates Pty Ltd (Golder), based on data collated and interpreted by Flinders personnel. The resource was estimated in accordance with the guidelines of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2004, refer to Competent Persons Statement, Page 6).

### BID Extensions

The BID mineralisation, also known as Brockman-style, is a high-grade, high quality mineralisation that is considered to be amongst the most valuable type of mineralisation in the Pilbara. Drilling in 2008 targeted channel iron deposit (CID), however significant quantities of BID were discovered late in the drilling season. The location of BID mineralisation is not controlled by the location of the channels and many intersections of BID mineralisation were not closed off during 2008.

Drilling of BID extensions on the margins of the channels has proved successful at Blackjack, Champion, Delta and Eagle. BID has been intersected outside the current

## Drilling Intersections

Table 3: Selected list of BID intersections from reverse circulation drilling.

Hole ID	From (m)	To (m)	Interval (m)	Fe (%)	SiO2 (%)	Al2O3 (%)	P (%)	LOI (%)	Target Area
HRC115	0	18	18	57.8	4.1	2.7	0.14	9.6	Eagle
HRC116	26	36	10	61.4	2.6	1.8	0.11	6.5	Eagle
HRC276	32	40	8	62.5	3.3	2.5	0.09	3.6	Delta
HRC280	50	60	10	59.5	2.4	1.3	0.16	10.1	Delta
HRC282	10	26	16	59.6	2.3	2.6	0.10	9.2	Delta
HRC288	10	22	12	60.1	4.4	1.1	0.12	7.7	Delta
HRC289	4	30	26	55.7	6.4	3.0	0.11	10.2	Delta
HRC439	0	16	16	56.8	6.6	2.7	0.09	8.7	Blackjack
HRC441	44	52	8	60.2	5.4	1.7	0.17	5.6	Blackjack
HRC518	4	8	4	61.9	3.6	1.3	0.12	4.8	Champion
HRC520	4	14	10	60.3	7.7	1.6	0.06	3.5	Champion

NB: These intersections are based on an Fe cut-off grade of 50% and a 3% Al<sub>2</sub>O<sub>3</sub> top cut, and a maximum internal dilution of 2m. Analysis via XRF fusion at Ultratrace Laboratories. LOI = Loss of ignition.

resource (Figure 3), with some of these results shown in Table 3.

Many of these intersections have been made at least 200m outside the current resource, which has the potential to add significant tonnes to the current higher grade resource. In particular, HRC268 in Delta and HRC115 in Eagle intersected BID mineralisation greater than 500m outside the current resource.

New BID targets\* are being generated through geological interpretation. These targets will be assessed during the latter part of 2009, with the intention of drill testing early in the 2010 drilling season for inclusion within the Global Inferred Resource.

## **FUTURE PROGRAM**

### **Ongoing Exploration and Resource Drilling**

Drilling is current on Anvil (E47/1560) and is due for completion early in the fourth quarter 2009. This will enable an Inferred Resource to be estimated for Anvil, leading to the global Inferred Resource for the entire Project.

Drilling will then be carried out at Delta to define an Indicated Resource for the Pre-feasibility study. As soon as approvals are received from the Department of Mines and Petroleum a second reverse circulation drill rig will be mobilised to site to facilitate the completion of this drilling prior to the end of 2009.

Delta contains the highest tonnage of BID material of all the deposits identified on the Project and has the highest upside potential for increasing the BID resource. Drill testing of the BID extensions and additional BID targets will form an integral part of the drilling campaign to define an Indicated Resource at Delta.

### **Hematite BID Targets**

BID mineralisation can take two forms; a goethite rich type of BID resulting from near surface (supergene) weathering and a hematite rich type of BID resulting from hydrothermal (hypogene) alteration, although there is much conjecture on this issue. The BID mineralisation intersected to date at Blacksmith is the goethite type. The hematite BID is the most highly prized in the Pilbara due to its very high iron grades and very low contaminant levels. During the normal course of geological interpretation, exploration has been carried out for the hematite BID, targeting structural features. An initial investigation of some structural targets has located hematite rich rocks which may be associated with hematite BID. These investigations are highly encouraging, however are very conceptual at this stage and further exploration may or may not confirm their presence. Should further exploration for hematite BID prove positive, an effort will be made to drill test one or more of the targets by the end of 2009 which if successful, will be added to the Global Inferred Resource.

### **Metallurgy**

Phase 1 of a Metallurgical test work program will commence in September, with a series of between 35 and 40 diamond drill holes designed to provide representative samples of the various ore types for metallurgical test work. The initial program will focus on the physical properties of the ore types and possible beneficiation routes for their upgrade, and will continue until the first quarter of 2010. Mineral Engineering Technical Services Pty Ltd (METS) have been appointed to manage this program of test work. The results of this program will also assist with establishing the marketing opportunities for the likely range of products and for the estimation of Indicated Resources and Probable Ore Reserves.



2009 drilling at Flinders Mines Pilbara Project.

## Pre-feasibility Study

A scope of work for the Pre-feasibility study is currently being developed, with a view to determining the most appropriate development option for the Pilbara Iron Ore Project. The Study will incorporate all aspects of establishing an iron ore operation in the Pilbara region. A review of relevant consultants to assist with this study has commenced, with a target completion date for the study in the second quarter of 2010. Based on a successful result from the Pre-feasibility study it is intended that the Bankable Feasibility study commence in the third quarter of 2010.

Below (Figure 4) is an outline of the timeline for the Pilbara Iron Ore Project. By definition it is conceptual, and as our knowledge develops through the Pre-feasibility study the timeline will be modified to reflect our improved understanding of the project.



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Figure 4 *Conceptual Project Timeline*

	Conceptual Project Timeline Pilbara Iron Ore Project	2009		2010				2011				2012				2013				2014	
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	Scoping Study Complete	◆																			
2	Prefeasibility Study	■																			
3	Bankable Feasibility Study					■															
4	Design / Construct											■									
5	Operate																			◆	

1. Scoping study – a high level study based on limited information, used to define the potential of a project, eliminate those options that are unlikely to eventuate, and determine at a broad level whether it is economically justified to proceed to the next project stage.
2. Pre-feasibility study - to select the preferred operating configuration from the shortlist defined by the scoping study, and to provide a case for progressing the project to the next stage. Shortlisted options resulting from the Scoping study are evaluated in the Pre-feasibility study, with the objective of carrying one option to the Bankable Feasibility study.
3. Bankable Feasibility study - defines in detail the selected option resulting from the Pre-feasibility stage. The output of this study provides the basis for a decision on whether the project is worth pursuing, and under what conditions.
4. Design/Construct – once the project is approved, this phase completes detailed design, procurement and construction management.
5. Operation – Construction is complete, the operation is now commissioned and functions as an operating mine.

## JORC STATEMENT

The information relating to the terms “iron ore” and “exploration target” should not be misunderstood or misconstrued as an estimate of Mineral Resources and Reserves as defined by the JORC Code (2004) and therefore the terms have not been used in this context. It is uncertain if further exploration or feasibility studies will result in the determination of a Mineral Resource or Mining Reserve.

The information that relates to the drilling data and geological interpretations is based on information compiled Dr K J A Wills who is a Fellow of the Australasian Institute of Mining and Metallurgy and by Mr Nick Corlis who is a Member of The Australian Institute of Geoscientists and Exploration Manager of the Company. The section of this report relating to the Pilbara Project Resource Estimate has been compiled by Mr Stephen Godfrey of Golder Associates Pty Ltd. Mr Godfrey is a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Dr Wills, Mr Godfrey and Mr Corlis have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that they are undertaking to qualify as a Competent Persons as defined in the 2004 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Dr Wills, Mr Corlis and Mr Godfrey consent to the inclusion of information in this report in the form and context in which it appears.

This release may include forward-looking statements. These forward-looking statements are based on Flinders Mines Limited’s expectations concerning future events. Forward-looking statements are subject to risks, uncertainties and other factors, many of which are outside the control of Flinders Mines Limited and the Company makes no undertaking to subsequently update or revise the forward-looking statements made in this release to reflect events or circumstances after the date of this release.