PELANGIO EXPLORATION INC.

FORM 51-102F3

MATERIAL CHANGE REPORT

Item 1. Name and Address of Company

Pelangio Exploration Inc.
440 Harrop Drive, 2nd Floor
Milton, Ontario L9T 3H2

Item 2. Date of Material Change

October 7, 2010.

Item 3. News Release

Pelangio Exploration Inc. ("Pelangio" or the "Company") disseminated a press release (the "Press Release") on October 7, 2010 via *Marketwire—Toronto, Ontario*.

Item 4. Summary of Material Change

Pelangio announced drill results from the first five holes drilled at the Pokukrom East prospect on the Company's Manfo property in Ghana, including an intersection of 24.7 grams per tonne (g/t) gold over 5 metres in drill hole SPDD-088.

Item 5. Full Description of Material Change

A complete description of the material change is set out in the Press Release, attached hereto as Schedule A.

Item 6. Reliance on subsection 7.1(2) or (3) of National Instrument 51-102

Not applicable

Item 7. Omitted Information

No information has been omitted in respect of the material change.

Item 8. Executive Officer

Brendan Cahill, Vice President Corporate Development, 905-875-3828.

Item 9. Date of Report

October 7, 2010.

SCHEDULE A

(see attached)

Pelangio Exploration Inc.
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NEWS RELEASE

PELANGIO EXPLORATION ANNOUNCES THIRD GOLD DISCOVERY AT THE MANFO PROPERTY – 24.7 G/T OVER 5 METRES

Intersects near-surface, high-grade gold mineralization at Pokukrom East; potential bulk tonnage zones also identified

TORONTO, Ontario, (October 7, 2010) – Pelangio Exploration Inc. (PX:TSX-V) ("Pelangio" or the "Company") is pleased to announce a third gold discovery at the Manfo Property in Ghana, including further near-surface, high-grade drill results from Pokukrom East. Highlights of the five diamond drill holes totaling 881 metres reported today include:

- **24.7 grams per tonne (g/t) gold (or 13.24 g/t cut to 30 g/t) over 5 metres** (SPDD-088) starting from 35 metres;
- **1.64 g/t gold over 33 metres** (SPDD-085) starting from 98 metres, 215 metres north of SPDD-088;
- **1.03 g/t gold over 46 metres** (SPDD-089) starting from 56 metres, 505 metres north of SPDD-088;
- Today's results are approximately 500 metres east of the 8.6 g/t over 12 metres (SPDD-084) intersection reported from Pokukrom West and four kilometres northeast of the 1.5 g/t over 61 metres intersection (SPDD-079) reported from Nfante West (see press releases dated September 16th and September 7th, 2010, respectively);
- Assays pending on five further holes from Pokukrom West and Nfante East.

"Our recent drilling at the Manfo Property suggests that we are in a major gold bearing system similar to those hosting Sefwi Belt mines such as Newmont's Ahafo and Kinross' Chirano," stated Warren Bates, Senior Vice President Exploration. "Each of those mines is composed of numerous deposits of varying size and grade spread over a considerable strike length. Today's results include exceptional gold grades and widths and I am particularly pleased to have hit near-surface, high-grade gold on two widely spaced targets, Pokukrom West and now Pokukrom East. Additionally, our drilling indicates bulk tonnage potential along a minimum 500-metre strike length of the 1,300-metre long Pokukrom East anomaly. We are still in the early stages of our exploration program, but with separate yet geologically-related discoveries and another 5,000 metres of drilling starting shortly, we are eager to realize the full potential of the Manfo Property."

"We now have three discoveries to pursue on the Manfo Property," added Ingrid Hibbard, President and Chief Executive Officer. "We have drilled tremendous intersections at Nfante West, Pokukrom West and Pokukrom East, with yet further assays pending from our fourth target at Nfante East. We look forward to more great results through the remainder of the year and into 2011."

Summary of Results

The following table summarizes significant assay results reported herein:

Area	DHID	From (metre)	To (metre)	Interval (metres)[1]	Au (g/t)	Hole Length (metres)
Pokukrom East	SPDD-085	98	131	**33**	**1.64**	246
	including	116	129	**13**	**3.37**	
	SPDD-086	2	59	**57**	**0.60**	180
	including	2	20	**18**	**1.11**	
	SPDD-087	15	93	**78**	**0.44**	170
	SPDD-088	1	8	**7**	**1.06**	144
	and	35	40	**5**	**24.7** [2]	
	including	38	40	**2**	**58.6**	
	and	40	54	**14**	**0.70**	
	SPDD-089	56	102	**46**	**1.03**	141

1 Intervals are core length. True width is unknown at this time.

2 13.24 g/t over 5 metres if high-grade intersections are cut to 30 g/t.

The five holes reported today were drilled on three sections over a strike length of approximately 500 metres. Each hole was drilled at azimuth 117° and a -50° dip, other than SPDD-089, which was drilled at a -45° dip. Holes SPDD-085 and -086 were drilled in the central portion of the 1,300-metre long Pokukrom East anomaly, with a 290-metre step-out to the north (hole SPDD-089) and 215 metre step-outs to the south (holes SPDD-087 and -088) along a north-northeast axis. Holes SPDD-085 and -087 were spotted as 50-metre step-backs from holes SPDD-086 and -088, respectively.

Significant gold mineralization at broad intervals was intersected on each of the sections along strike. Each section indicates bulk tonnage potential, with holes SPDD-087 and -088 being the most immediately compelling as hole -088 collared in 7 metres of 1.06 g/t gold that appears to be related to the mineralization in hole -087, suggesting down-dip continuity of the mineralized zone. The mineralization is hosted in pyritic quartz-sericite schist, similar to the unit intersected in holes SPDD-083 and -084 at Pokukrom West. The sericitic unit is hosted in a mafic volcanic intruded by small granitoid bodies. Mineralization in the five metre high-grade section of SPDD-088 is hosted in a quartz-pyrite vein stockwork in quartz-sericite pyrite schist.

Pelangio's exploration on the Manfo Property to date has focused on four targets in an approximately 10 square kilometre area, though many other targets have been identified or are currently being delineated elsewhere on the property. The Sika North target, for example, located approximately 3.5 kilometres north of Pokukrom West, comprises three separate anomalies measuring 200, 400 and 375 metres along strike, respectively, and is contourable at up to 100 ppb gold. Additionally, the Company has interpreted a 10 kilometre trend of widely spaced anomalies from geochemical and geophysical surveying, approximately two kilometres northwest of the drilling completed to date. Geochemical samples were collected on the trend at 800-metre intervals and appear to be related along strike. Further surveying at tighter spacing will be conducted in the near future to define the target anomalies for drilling in upcoming programs.

Drill Program Progress

Pelangio has completed an initial 16-hole drill program totaling 2,379-metres on the Manfo Property. Assays are pending on five holes totaling 690.50 metres from the Pokukrom West (three holes, 346.50 metres, including one hole abandoned at 51.5 metres due to poor ground conditions) and Nfante East (two holes, 344 metres) areas. The encouraging drilling results encountered to date have enhanced the Company's planning of the second phase, 5,000-metre drill program, which is now expected to commence in mid-October.

Quality Assurance/Quality Control and Qualified Person

The drill holes reported in this press release were drilled using HQ (63.5 mm) and NQ (47.6 mm) sized diamond drill bits. Company security is provided at the drill site. Contractors working for Pelangio conducted all logging and sampling. The core was logged, marked up for sampling using standard lengths of one metre, then split into equal portions using a diamond saw. One half of the core was left in the original core box and stored in a secure location at the Pelangio compound in Tepa, Ghana. The other half was sampled, placed into sealed bags and securely stored at the site until it was shipped to the ALS Chemex laboratory in Kumasi, Ghana. The core was dried and crushed by ALS Chemex and a 150-gram pulp was prepared from the coarse crushed material. ALS Chemex conducted routine gold analysis using a 50 gram charge and fire assaying with atomic absorption finish. Quality control procedures included the systematic insertion of blanks, duplicates and sample standards into the sample stream at the rate of one per every 20 samples. In addition, ALS Chemex inserted one preparation blank and certified reference material for every 20 samples, and ran one duplicate analysis every 20 samples.

The exploration program at the Manfo Property is overseen by Warren Bates, P. Geo. (Ontario), a Qualified Person within the meaning of National Instrument 43-101. Mr. Bates has verified and approved the data disclosed in this release, including the sampling, analytical and test data underlying the information.

About Pelangio

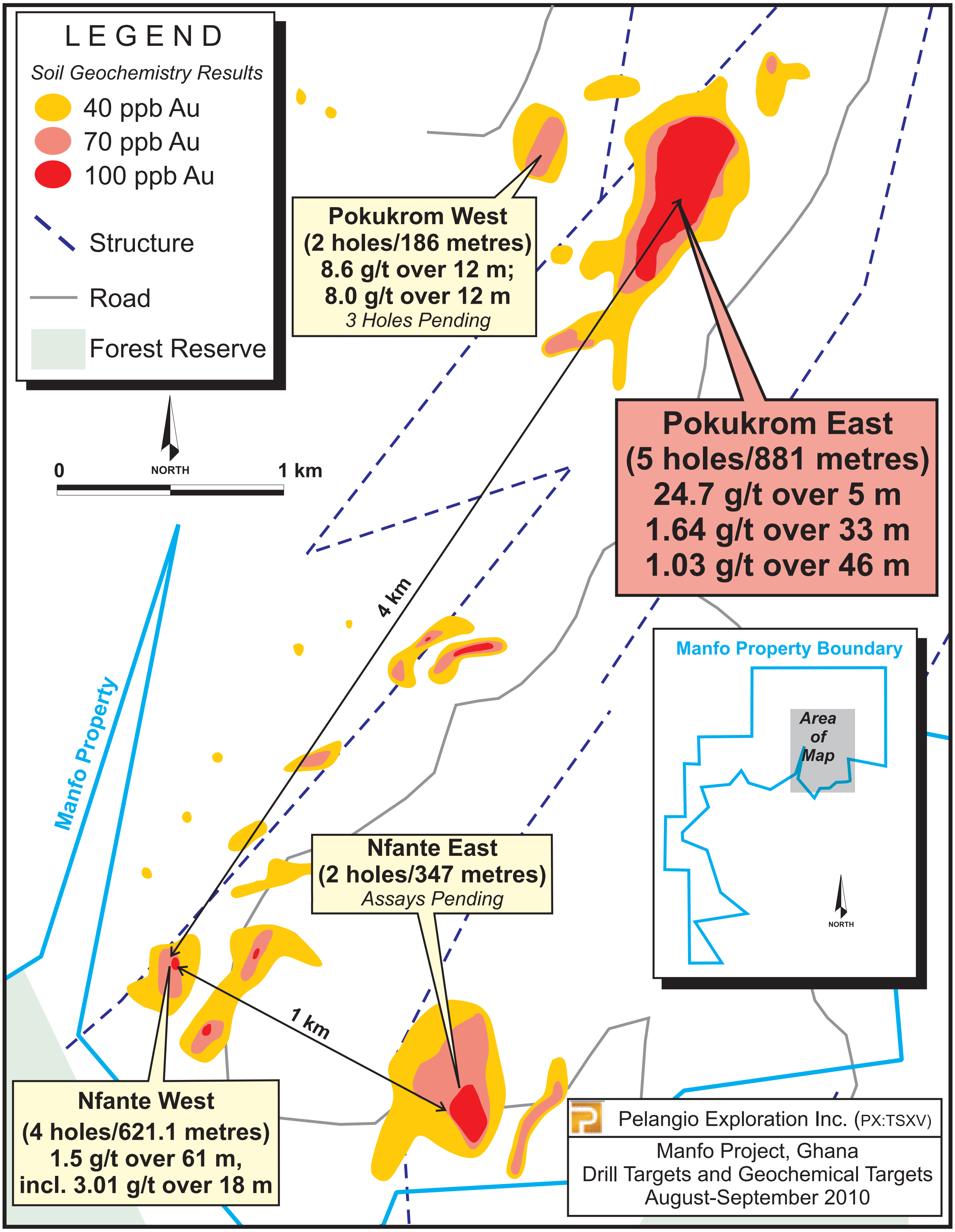
Pelangio is a junior gold exploration company that acquires and explores camp-sized land packages in world-class gold belts, while using innovative corporate restructuring to maximize shareholder value. Pelangio's recently optioned 100 square kilometre Manfo Property, which lies on the Sefwi greenstone belt between the Ahafo and Chirano mines, respectively operated by Newmont and Kinross, boasts near-term potential for the discovery of significant gold deposits as ongoing drilling has confirmed. The Company is also actively exploring its 290 square kilometre Obuasi Property, located on strike and adjacent to AngloGold Ashanti's Obuasi mine, which has produced over 30 million ounces of gold since 1897.

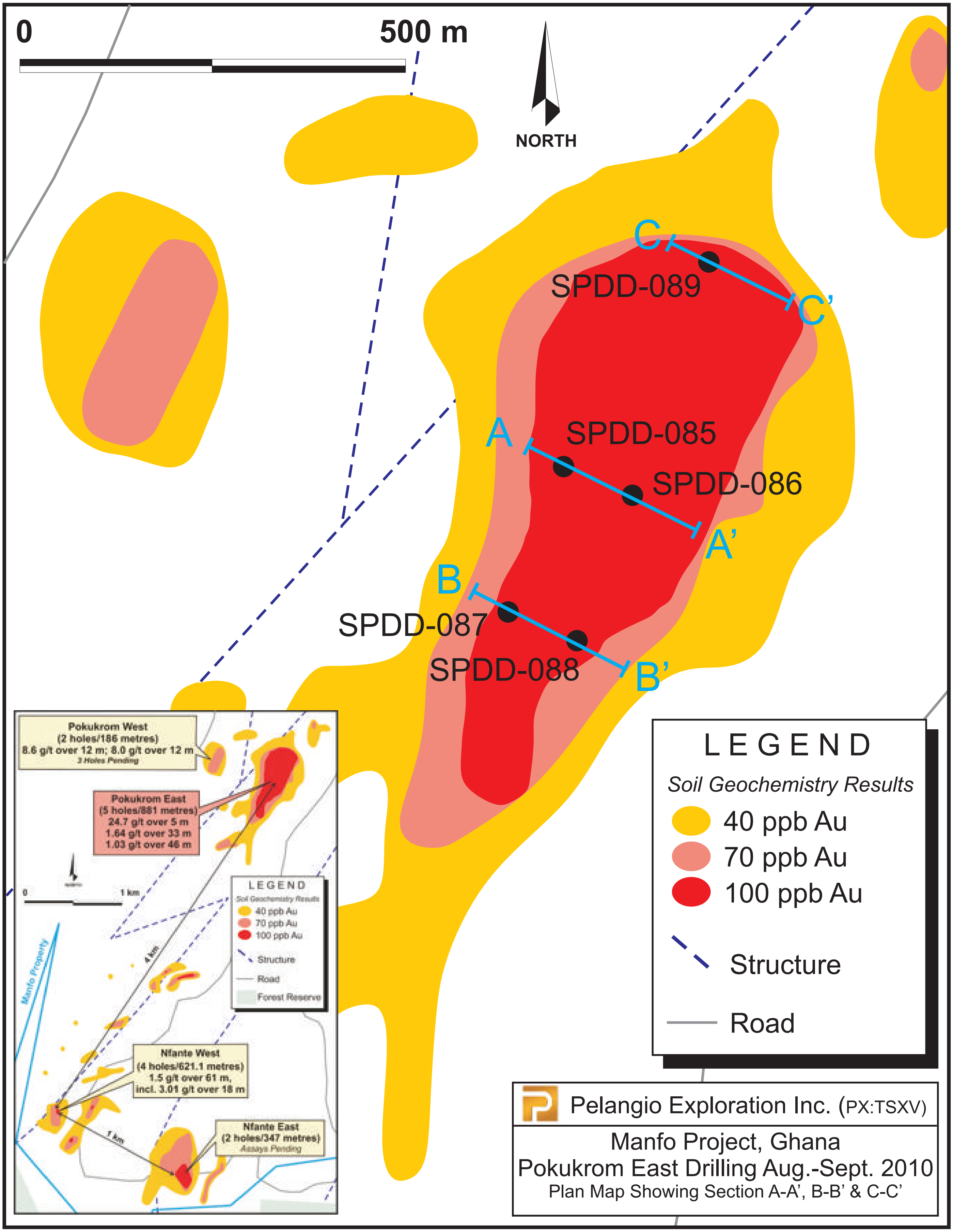
For additional information, please visit our website at www.pelangio.com or contact:

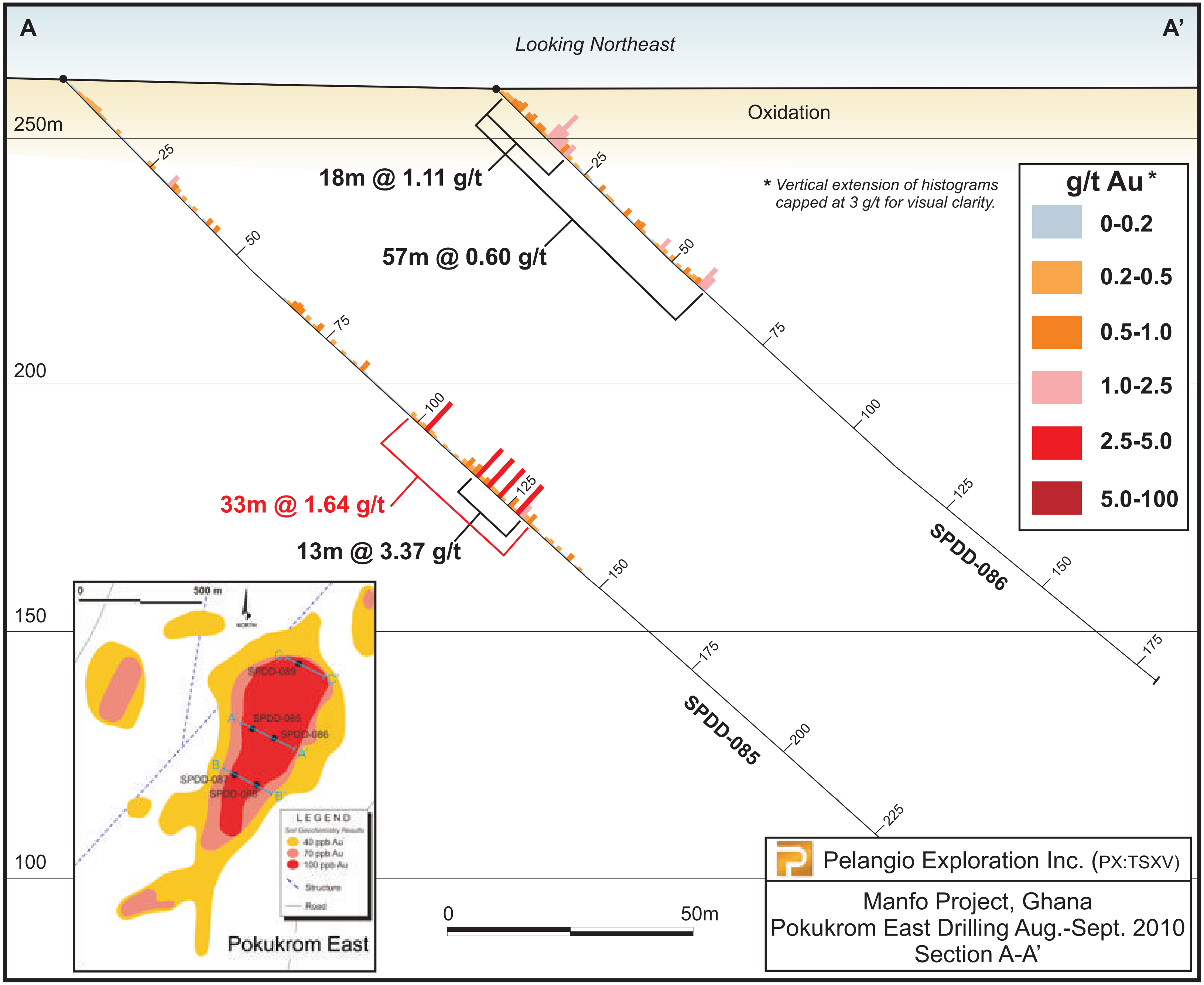
Ingrid Hibbard, President & CEO or
Warren Bates, Senior Vice President Exploration
Tel: 905-875-3828 / Toll-free: 1-877-746-1632 / Email: info@pelangio.com

Forward Looking Statements

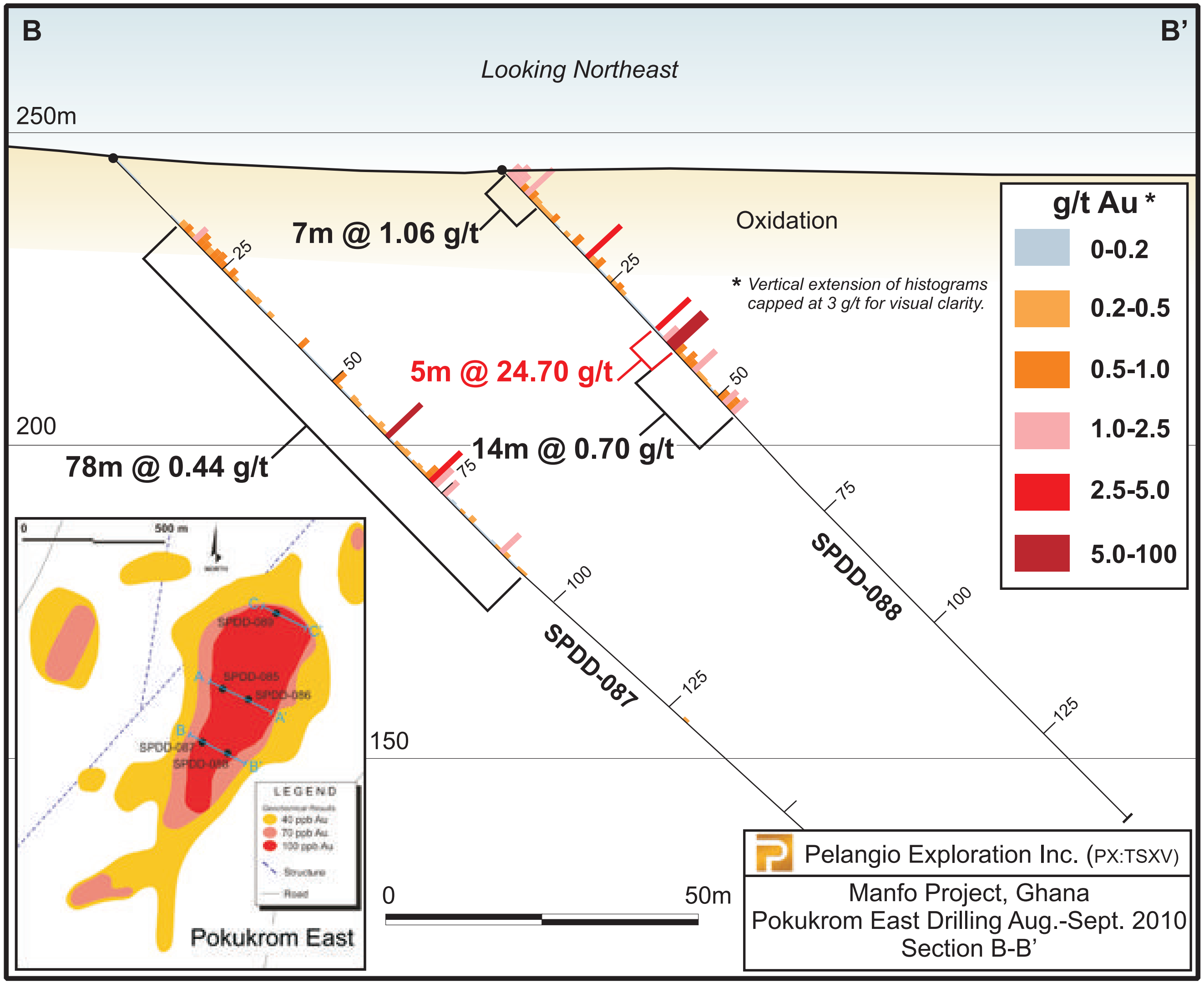
Certain statements herein may contain forward-looking statements and forward-looking information within the meaning of applicable securities laws. Forward-looking statements or information appear in a number of places and can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate" *or "believes" or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved. With respect to forward-looking statements and information contained herein, we have made numerous assumptions. Forward-looking statements and information include statements regarding the Company's exploration plans and exploration results with respect to the Obuasi Property and the Manfo Property, and are subject to forward-looking risks, uncertainties and other factors which may cause the Company's actual results, performance or achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statement or information. Such risks include gold price volatility, changes in equity markets, political developments in Ghana, increases in costs, exchange rate fluctuations and other risks involved in the gold exploration industry. See the Company's annual and quarterly financial statements and management's discussion and analysis for additional information on risks and uncertainties relating to the forward-looking statement and information. There can be no assurance that a forward-looking statement or information referenced herein will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements or information. Also, many of the factors are beyond the control of the Company. Accordingly, readers should not place undue reliance on forward-looking statements or information. We undertake no obligation to reissue or update any forward-looking statements or information except as required by law. All forward-looking statements and information herein are qualified by this cautionary statement.*

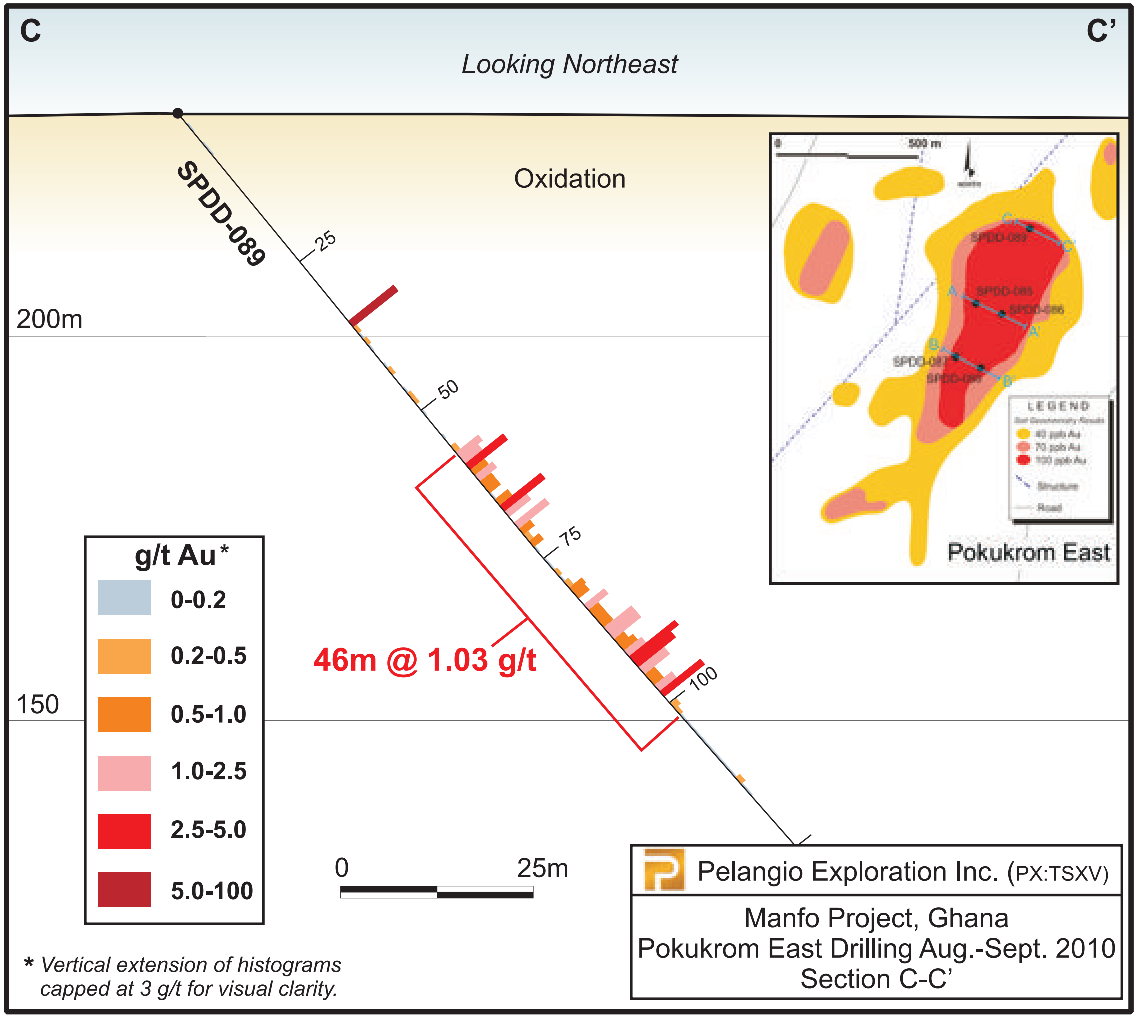

LEGEND
Soil Geochemistry Results
40 ppb Au
70 ppb Au
100 ppb Au
Structure
Road
Forest Reserve
0
NORTH
1 km
Pokukrom West
(2 holes/186 metres)
8.6 g/t over 12 m;
8.0 g/t over 12 m
3 Holes Pending
Pokukrom East
(5 holes/881 metres)
24.7 g/t over 5 m
1.64 g/t over 33 m
1.03 g/t over 46 m
4 km
Manfo Property
Manfo Property Boundary
Area
of
Map
NORTH
Nfante East
(2 holes/347 metres)
Assays Pending
1 km
Nfante West
(4 holes/621.1 metres)
1.5 g/t over 61 m,
incl. 3.01 g/t over 18 m
Pelangio Exploration Inc. (PX:TSXV)
Manfo Project, Ghana
Drill Targets and Geochemical Targets
August-September 2010


0
500 m
NORTH
C
C'
SPDD-089
A
SPDD-085
SPDD-086
A'
B
SPDD-087
SPDD-088
B'
Pokukrom West
(2 holes/186 metres)
8.6 g/t over 12 m; 8.0 g/t over 12 m
3 Holes Pending
Pokukrom East
(5 holes/881 metres)
24.7 g/t over 5 m
1.64 g/t over 33 m
1.03 g/t over 46 m
0
1 km
LEGEND
Soil Geochemistry Results
40 ppb Au
70 ppb Au
100 ppb Au
Structure
Road
Forest Reserve
Manfo Property
4 km
Nfante West
(4 holes/621.1 metres)
1.5 g/t over 61 m,
incl. 3.01 g/t over 18 m
1 km
Nfante East
(2 holes/347 metres)
Assays Pending
LEGEND
Soil Geochemistry Results
40 ppb Au
70 ppb Au
100 ppb Au
Structure
Road
Pelangio Exploration Inc. (PX:TSXV)
Manfo Project, Ghana
Pokukrom East Drilling Aug.-Sept. 2010
Plan Map Showing Section A-A', B-B' & C-C'



A
A'
Looking Northeast
Oxidation
250m
200
150
100
18m @ 1.11 g/t
57m @ 0.60 g/t
33m @ 1.64 g/t
13m @ 3.37 g/t
* Vertical extension of histograms capped at 3 g/t for visual clarity.
g/t Au *
0-0.2
0.2-0.5
0.5-1.0
1.0-2.5
2.5-5.0
5.0-100
SPDD-085
SPDD-086
25
50
75
100
125
150
175
200
225
0
50m
500 m
NORTH
SPDD-089
SPDD-085
SPDD-086
SPDD-087
SPDD-088
LEGEND
Soil Geochemistry Results
40 ppb Au
70 ppb Au
100 ppb Au
Structure
Road
Pokukrom East
Pelangio Exploration Inc. (PX:TSXV)
Manfo Project, Ghana
Pokukrom East Drilling Aug.-Sept. 2010
Section A-A'


B
B’
Looking Northeast
250m
200
150
Oxidation
7m @ 1.06 g/t
5m @ 24.70 g/t
14m @ 0.70 g/t
78m @ 0.44 g/t
25
50
75
100
125
SPDD-087
SPDD-088
* Vertical extension of histograms capped at 3 g/t for visual clarity.
g/t Au *
0-0.2
0.2-0.5
0.5-1.0
1.0-2.5
2.5-5.0
5.0-100
0
50m
Pokukrom East
LEGEND
40 ppb Au
70 ppb Au
100 ppb Au
Structure
Road
Pelangio Exploration Inc. (PX:TSXV)
Manfo Project, Ghana
Pokukrom East Drilling Aug.-Sept. 2010
Section B-B’


C
C'
Looking Northeast
Oxidation
SPDD-089
25
50
75
100
200m
150
46m @ 1.03 g/t
g/t Au*
0-0.2
0.2-0.5
0.5-1.0
1.0-2.5
2.5-5.0
5.0-100
0
25m
* Vertical extension of histograms capped at 3 g/t for visual clarity.
500 m
SPDD-089
SPDD-085
SPDD-086
SPDD-087
SPDD-088
LEGEND
Pokukrom East
Pelangio Exploration Inc. (PX:TSXV)
Manfo Project, Ghana
Pokukrom East Drilling Aug.-Sept. 2010
Section C-C'