

# Quarterly Activities Report December 2016

# **Highlights**

## **Juruena Gold Project**

- JORC mineral resource estimates for Querosene and Dona Maria prospects updated totaling **436kt at 14.7 g/t Au for 206koz** of gold, comprising:
  - O Querosene prospect 220kt at 16.7 g/t Au for 118koz of gold; and
  - o Dona Maria prospect 216kt at 12.7 g/t Au for 88koz of gold
- Updated JORC compliant mineral resource estimates for Querosene and Dona Maria include 100kt @ 18.3 g/t Au for 58,300oz of gold in the Indicated category. At Querosene, significant portion of the resource main zone was converted into indicated resources, estimated at 31kt @ 28.4 g/t Au for 28,500oz of gold
- Overall grade increase of 36% for Querosene to 16.7 g/t Au (from 12.3 g/t Au)
- 7 Both Querosene and Dona Maria are open at depth and along strike
- Preliminary metallurgical testwork for both Querosene and Dona Maria have returned excellent (>90%) recoveries, additional testing is underway
- Scoping study work underway with optimisation work on the updated resources to consider both open pit and underground development options
- New mineralised zone drilled at Tatu NE (within the Juruena Gold Project) intercepts broad new zone of shallow mineralisation;
  - o 37m<sup>1</sup> @ 3.71 g/t Au from 132m in hole TD-06, including 2m @ 47.67 g/t Au from 138m and 2m @ 15.44 g/t Au from 166m downhole
- 7 Tatu is favourably located between the existing JORC resources at Dona Maria and Querosene and provides potential additional high-grade feed to Juruena mining scenario
- Primary crushing plant with maximum capacity of 100 t/h acquired from Brazilian equipment supplier and foundry, GNA for ~\$800,000 in deferred payments

## **Borborema Gold Project**

- Metallurgical test work continued on six tonnes of samples from Borborema
- Results indicate the ore is suited to SAG milling and requires lower than average energy demands reducing capital cost as well as providing a simplified comminution circuit
- 7 Final mining licence (called a LA or adaption licence) anticipated early 2017

<sup>1</sup> Not true width. Tatu NE mineralisation is interpreted to be dipping sub-parallel to the drill hole TD-06. True width is estimated at ~15m



#### Posse Iron Ore Mine

→ Gross profit of \$75k for the quarter

## Corporate

- **↗** Crusader is now debt free after final \$3.5 million outstanding on debt facility with Macquarie Bank repaid
- Brazilian gold mining team strengthened with appointment of highly experienced mineral process engineer and senior geologist

Commenting on the quarterly results, Managing Director Rob Smakman said:

"The December quarter was an outstanding period for the company which was highlighted by the announcement of an upgraded high-grade resource for Querosene and Dona Maria prospects as a result of the spectacular drilling we reported throughout 2016."

"There is significant upside at both Querosene and Dona Maria as both are open at depth and along strike. What is also important to note is the resource doesn't take into account the new mineralised zone at Tatu and Tatu NE where drilling during the quarter intercepted a brand new, broad and shallow, high-grade mineralisation.

"Our focus is now on completing the Scoping Study for Juruena which is expected in early 2017.

"We also made two key appointments during the quarter with the appointment of Mr Fonseca and Mr Navarro, who bring over 70 years of experience in the mineral processing and evaluation of mining projects in Brazil.

"The purchase of a primary crushing plant at Juruena, along with the two appointments is further evidence that we are getting the team and infrastructure in place to quickly ramp up to gold production.

"On the corporate front, Crusader is debt free and possesses a strong balance sheet after paying off the outstanding debt on its facility with Macquarie Bank during the quarter."

# Juruena Gold Project - Mato Grosso State, Brazil (100% Crusader)

### **JORC Mineral Resource Estimate Update**

During the quarter ended December 2016, Crusader announced an updated JORC compliant mineral resource estimate for Juruena which delivered a significant increase in grade at the Querosene and Dona Maria prospects.

Total combined JORC compliant Indicated and Inferred resources for Querosene, Dona Maria and Crentes are now estimated at 1.28mt at 6.3g/t Au for 260,900oz of gold. The updated mineral resource estimates for Querosene and Dona Maria include 100,000t @ 18.3 g/t Au for 58,300oz of gold in the Indicated category.

Crusader's second drilling program at Juruena has successfully increased confidence, contained gold grades and overall ounces at both the Querosene and Dona Maria prospects. A full table of the updated resources is provided below.



Prospect Name	Resource Category	Lower cut- off applied	Metric Tonnes	Resource Gold Grade (g/t)	Ounces of Gold
	Indicated		67,800	13.7	29,800
Dona Maria	Inferred	2.5 g/t cutoff	148,500	12.2	58,200
	sub-total		216,300	12.7	88,000
4	Indicated		31,200	28.4	28,500
Querosene	Inferred	2.5 g/t cutoff	188,700	14.7	89,300
	sub-total		219,900	16.7	117,800
Total Indicated			99,000	18.3	58,300
Total Inferred			337,200	13.6	147,500
Total high-grade	ounces		436,200	14.7	205,800
Crentes	Inferred	1.0 g/t cutoff	846,450	2.0	55,100
<b>Total Combined</b>			1,282,650	6.3	260,900

Table 1: JORC (2012) compliant mineral resource estimate for Juruena Project, December 2016.

**Note:** Appropriate rounding applied. Table includes updated mineral resource estimates for Querosene and Dona Maria, Crentes remains the same as per the 2015 resource estimate. For further information, please see the section at the end of this report: "Summary of Resource Estimate and Reporting Criteria"

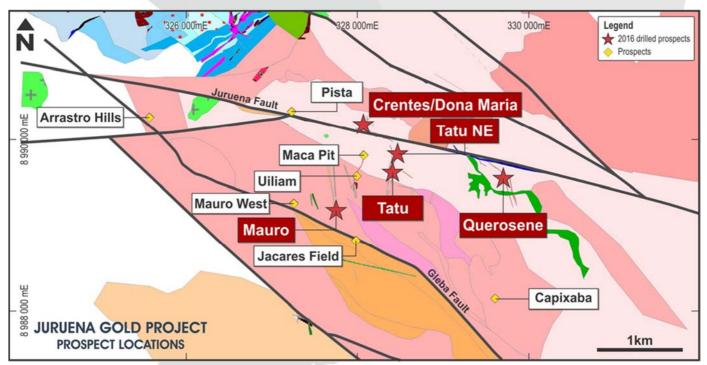


Figure 1: Crusader's Juruena Gold Project with 2016 drilled prospects highlighted



## Querosene Prospect

The Querosene prospect is located on the eastern end of the Juruena project area (see Figure 1) and was the first prospect targeted in the Crusader drilling program due to consistent high-grade drilling results from previous explorers.

The updated mineral resource estimate for the Querosene prospect was completed following successful drilling during 2016, targeting infill and resource extension. A significant portion of the resource main zone was able to be converted into indicated resources, estimated at 31kt @ 28.4 g/t Au for 28,500oz of gold. Inferred resources at Querosene total 189kt @ 14.7 g/t Au for 89,300oz of gold. The total (Indicated plus Inferred) resource at Querosene was estimated at 219kt @ 16.7g/t Au for 117,800oz of gold at a 2.5g/t cut-off, reflecting a grade increase of 36% versus the 2015 estimate (from 12.3 g/t Au).

Mineralisation is divided into four main zones (see Figures 2 & 3), with the majority of the higher grades and ounces contained in the Main Zone. The Main Zone also contains all of the Indicated resources. Mineralisation at Querosene is open at depth, with several areas on the Main Zone and SE Zone presenting obvious drilling targets which could have immediate and significant impact.

The mineralisation is associated with alteration along narrow shear zones, quartz veins and minor sulphides. Mineralisation intercepts (downhole) normally vary between 1-4m in width, with narrow, non-magnetic dolerite dykes often associated. The interpretation of the mineralisation at Querosene was little changed from the original modelling completed in 2015.

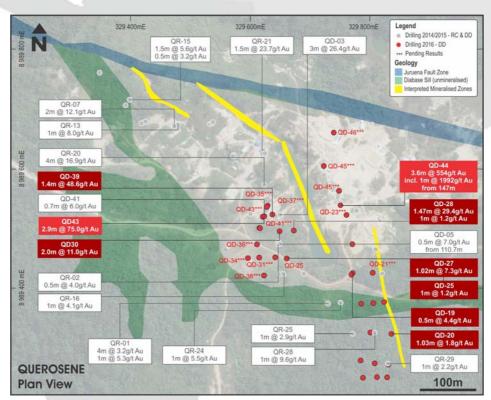


Figure 2: Querosene drill plan with interpreted mineralised zones

Results for metallurgical testing on samples from the Querosene prospect indicate recoveries of > 90% for both gold and silver using standard leaching (see ASX release 1 July 2015). Results also indicate the gold and silver are free milling and well distributed within the ore. Additional composite samples from the 2016 drilling campaign have recently been submitted for more extensive metallurgical testing.



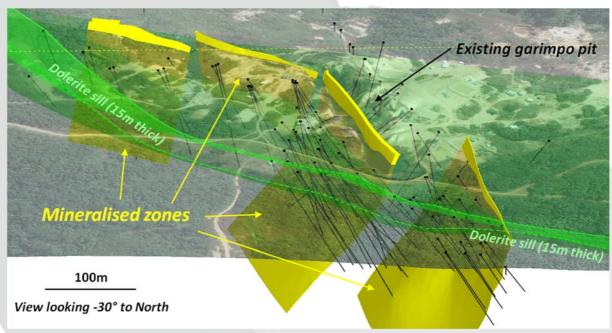


Figure 3: Querosene 3D model showing the interpreted ore zones and drilling

#### Dona Maria Prospect

Dona Maria is located adjacent to the Crentes prospect, approximately 1 kilometre along the Juruena fault zone from Querosene (see Figure 1).

A significant portion of the Dona Maria resource was able to be converted into indicated resources, estimated at **68kt** @ **13.7** g/t Au for **29,800oz** of gold. Inferred resources at Dona Maria totalled **149kt** @ **12.2** g/t Au for **58,200oz** of gold. The total (indicated plus inferred) resource at Dona Maria was estimated at **216kt** @ **12.7**g/t Au for **88,000oz** of gold at a 2.5g/t cut-off.

Mineralisation at Dona Maria appears to 'splay away' from the main Crentes trend (WNW) toward the NNW (see Figures 4 & 5). There is a broad, relatively shallow garimpo working over the mineralised trend and historical intercepts indicate both very high-grade narrower intercepts and broad, moderate grade disseminated intervals.

Drilling in 2016 has allowed a clearer definition of the mineralised zones at Dona Maria, resulting in a significantly different interpretation to the previous estimate completed in 2015. The main difference is the interpretation of multiple subparallel zones forming a stacked sequence of ore zones extending along the NNW trend (see Figures 4 & 5). Also interpreted is a single, short cross cutting zone which may represent a fault or cross cutting shear zone. This zone is subparallel to the Crentes trend (~60m to the south). This zone includes ~3% of the overall Dona Maria resource.



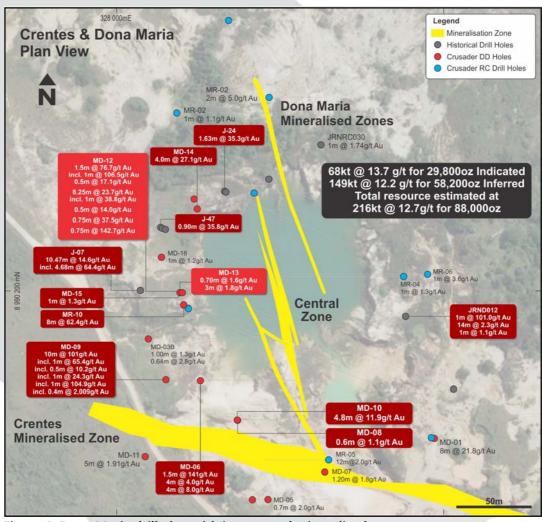


Figure 4: Dona Maria drill plan with interpreted mineralised zones





Figure 5: Dona Maria 3D model showing the interpreted ore zones and drilling

## Tatu and Tatu NE Prospect

The Tatu prospect is located approximately 400m to the south of Dona Maria and 700m west of Querosene while the Tatu NE prospect lies along strike to the northeast of Tatu (see Figure 1).

During the quarter, drilling intersected multiple zones of mineralisation at Tatu and Tatu NE prospects (formerly known as the Tomate prospect). Seven holes (for 947m) were completed into the Tatu and Tatu NE zones which have previously been mined as both an open pit and underground operation.

Drilling at Tatu returned high-grade results including **0.5m @ 14g/t Au** from 92m, **1.16m @ 14.99g/t Au** from 94m and **0.5m @ 31.12g/t Au** from 117m.

At Tatu NE, a broad new zone of shallow mineralisation was intercepted with results including 37<sup>2</sup>m @ 3.71g/t Au from 132m, including 2m @ 47.67g/t Au from 94m and 2m @ 15.44g/t from 166m downhole.

The Tatu and Tatu NE results were not included in the updated JORC-compliant mineral resource estimate.

Tatu provides potential additional high-grade feed to the Juruena mining scenario. Crusader will look to evaluate potential additional resources that may be included in the current estimate early in 2017.

<sup>&</sup>lt;sup>2</sup> Not true width. Tatu NE mineralisation is interpreted to be dipping sub-parallel to the drill hole TD-06. True width is estimated at ~15m

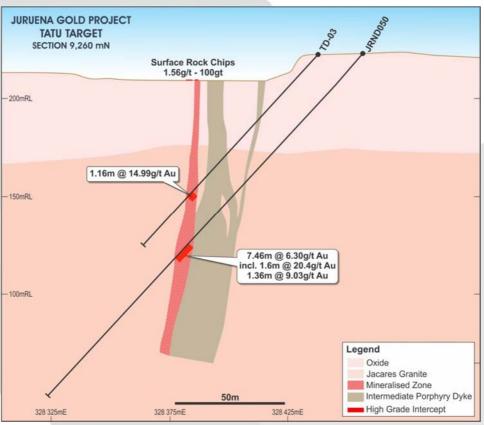


Figure 6: Tatu cross section 9,260mN

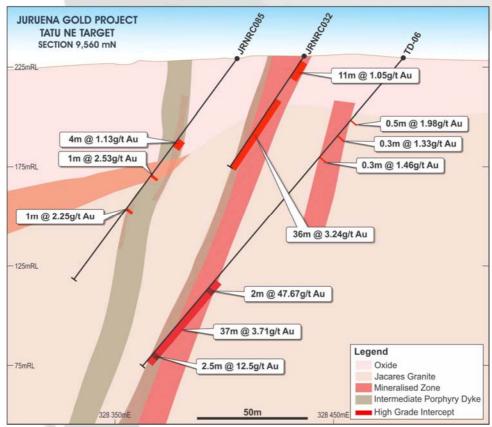


Figure 7: Tatu NE cross section 9,560mN



# **Primary Crushing Plant**

During the quarter, Crusader acquired a primary crushing plant from Brazilian equipment supplier and foundry GNA (Minerals equipmentos e Acos Especiais Ltda) for Juruena.

The plant will have a one-year warranty and is expected to take 60 days to construct once the go ahead has been received by the board.

Crusader has had a long association with GNA as crushing, screening and wear part supplier for the Posse Iron Ore Mine.









Figure 8: Refurbished Plant – GNA Warehouse – Belo Horizonte, Brazil 2016

## **Development Update Juruena Project**

Crusader has been working closely with experienced mining consultancy Global Resource Engineering (GRE) to assist with conceptual mine and project planning. With the new resource model now updated, GRE is working with Crusader to prepare a Scoping Study into the overall project development. Both open-pit and underground development scenarios are being considered as well as a standalone Carbon-in-Leach (CIL) processing plant. GRE have extensive experience in Brazil and bring a low overhead approach to the project team.



# Borborema Gold Project, Rio Grande do Norte, Brazil (100% Crusader)

During the December quarter, metallurgical sampling continued on six tonnes of samples from Borborema which will form the basis of an updated resource and reserve statement (currently JORC 2004) progressing into a new Feasibility Study into the development of the project. Results are expected early this year from the metallurgical sampling.

Ongoing comminution tests on Borborema ore have included a complete suite of JK and SMC SAG milling comminution testing combined with typical work index determinations. The results of the JK/SMC work indicate the ore is suited to SAG milling and requires lower than average energy demands compared to the JK ore data base. Additional comminution testing is progressing and the outcomes will allow a final comminution circuit to be chosen. A SAG milling circuit is preferred as this option will reduce capital cost as well as providing a simplified comminution circuit.

Borborema has Proven and Probable Reserves of 42Mt @ 1.2 g/t Au for 1.6Moz Au and is in the final stages of upgrading its existing operating licence to allow for Carbon-in-Leach (CIL) processing.

Borborema was previously mined as a heap leach operation in the 1980s. The project has exceptional access to infrastructure and local community support along with 95,000m of drilling completed making it one of the more advanced development opportunities for gold in Brazil.

# Posse Iron Ore Mine – Minas Gerais, Brazil (100% Crusader)

The Posse mine achieved a gross profit of \$75k for the December quarter (compared to \$282k in September 2016 quarter, unaudited).

This result was impacted by wet weather conditions in December which resulted in two short shutdowns whilst the infrastructure was restored. There was also a planned, two-week maintenance shutdown over the Christmas period which allowed for staff holidays and additional access to new ore areas.

Over the quarter, average production costs increased to \$14.87/t compared to \$13.42/t for the September 2016 quarter (see Figure 9 below). This was a result of the low production achieved in December.

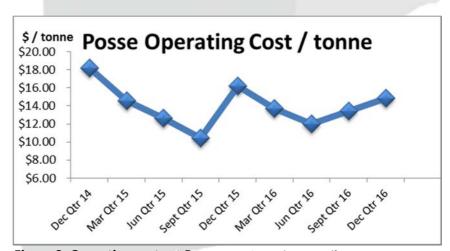


Figure 9: Operating costs at Posse Iron Ore Mine, Brazil

Crusader maintains an optimistic outlook for the first half of 2017 and anticipates the mine will improve in profitability.



# Corporate

## **Debt Facility**

In December 2016, Crusader repaid the final \$3.5 million outstanding on its general purpose debt facility with Macquarie Bank Limited, originally a \$20 million facility put in place on 26 March 2013.

Crusader is now debt free and possesses a much stronger balance sheet. Crusader has no other encumbrances over any of the assets of the company.

## **Appointments**

The Company appointed highly experienced **mineral process engineer Carlos Fonseca** as an engineering consultant to Crusader. In his role, Mr. Fonseca will work on operating and capital cost estimates for the Juruena Gold Project as well as provide strategic advice for the Borborema Gold Project.

Mr. Fonseca has over 40 years' experience in the gold sector in Brazil and across a vast array of gold projects including design for Kinross Gold Corporation's Paracatu Mineracão project, processing and equipment sizing at Luna Gold's Aurizona gold plant, Yamana's Fazenda Brasileira and the Amapari gold project (now owned by ASX listed Beadell Resources), amongst many others.

Mr. Fonseca's professional experience also includes process engineering, ore processing manager and technical specialist services across a number of Brazilian mines. He has an MBA in project management and MSc in Minerals Engineering.

Crusader also appointed **experienced geologist Luis Navarro** to the position of exploration manager at Crusader. Mr. Navarro has over 32 years' experience as a geologist working for a number of gold companies including Canadian-based Yamana Gold, Gold Fields do Brasil Ltda (a subsidiary of Gold Fields South Africa) and Western Mining Corporation (Mara Rosa gold mine).

Most recently, Mr Navarro has worked as an independent consultant for both Yamana Gold and Aura Minerals at the Ernesto/Pau-a-Pique Project in Brazil.

# **Health & Safety**

There were no lost time accidents recorded at Posse, Juruena, Borborema or Manga projects during the quarter.

## **ENDS**

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Table 2: Relevant Drill Intercepts for Querosene and Dona Maria Resource Estimates

					FINAL						DOWHOLE	TRUE	
DEPOSIT	HOLEID	EAST	NORTH	RL	DEPTH	DIP	AZIMUTH	DOMAIN	FROM	то	INTERSECTION	THICKNESS	Au (ppm)
Dona Maria	CR-04/2015	328111.1	8990049.7	232.0	125.00	-55	0	1	110	114	4	1.7	0.2
Dona Maria	CR-04/2015	328111.1	8990049.7	232.0	125.00	-55	0	2	122	125	3	0.6	0.2
Dona Maria	CR-14/2015	328120.7	8990077.0	230.2	68.00	-55	0	1	42.5	45	2.5	0.8	0.3
Dona Maria	J-05	328206.2	8990139.8	229.1	205.98	-45	292	4	158.18	159.59	1.41	0.8	0.9
Dona Maria	J-05	328206.2	8990139.8	229.1	205.98	-45	292	2	166.79	169.93	3.14	1.6	2.1
Dona Maria	J-07	328014.9	8990200.2	227.8	220.90	-45	112	1	108.66	109.62	0.96	0.5	7.9
Dona Maria	J-07	328014.9	8990200.2	227.8	220.90	-45	112	6	112.5	119.12	6.62	1.1	22.7
Dona Maria	J-07	328014.9	8990200.2	227.8	220.90	-45	112	2	124.72	129.4	4.68	2.9	186.6
Dona Maria	J-21	328014.9	8990200.2	227.8	210.30	-62	112	1	142.37	142.8	0.43	0.2	0.3
Dona Maria	J-21	328014.9	8990200.2	227.8	210.30	-62	112	6	166.35	167.45	1.1	0.2	0.1
Dona Maria	J-21	328014.9	8990200.2	227.8	210.30	-62	112	2	183.34	184.48	1.14	0.5	0.6
Dona Maria	J-24	328066.3	8990260.7	225.7	202.80	-62	113	5	76.37	78	1.63	0.8	28.3
Dona Maria	J-40	328035.1	8990024.5	230.4	204.25	-45	54	1	152.72	156.2	3.48	3.2	44.5
Dona Maria	J-42	328035.1	8990024.5	230.4	207.65	-62	54	1	198.5	200.5	2	1.2	7.1
Dona Maria	J-47	328027.1	8990239.0	226.9	200.15	-62	113	4	155.75	159.54	3.79	1.6	13.9
Dona Maria	J-61	328018.3	8990157.6	229.2	193.85	-45	111	1	128.24	129.16	0.92	0.5	12.2
Dona Maria	J-61	328018.3	8990157.6	229.2	193.85	-45	111	2	139.55	140.44	0.89	0.6	0.6
Dona Maria	JRND012	328176.8	8990184.5	224.8	204.40	-49	262	4	105	109	4	2.2	8.1
Dona Maria	JRND012	328176.8	8990184.5	224.8	204.40	-49	262	2	113	119	6	4.0	9.8
Dona Maria	JRND012	328176.8	8990184.5	224.8	204.40	-49	262	6	140	141	1	0.4	0.5
Dona Maria	JRND012	328176.8	8990184.5	224.8	204.40	-49	262	1	152	154	2	1.0	0.6
Dona Maria	JRNRC068	328089.3	8990260.7	225.4	63.00	-55	115	5	23	24	1	0.4	0.1
Dona Maria	MD-01/2015	328190.6	8990104.9	229.3	199.78	-60	270	1	179	187	8	2.2	47.9
Dona Maria	MD-02/2015	328042.7	8990251.6	226.1	167.13	-55	105	4	84	87	3	1.4	1.3
Dona Maria	MD-03/2016	328024.3	8990167.0	227.3	143.70	-57	90	1	110	111	1	0.6	0.2
Dona Maria	MD-03/2016	328024.3	8990167.0	227.3	143.70	-57	90	6	129	130	1	0.5	0.3
Dona Maria	MD-03/2016	328024.3	8990167.0	227.3	143.70	-57	90	2	135.9	138	2.1	1.3	6.4
Dona Maria	MD-03B/2016	328023.7	8990167.1	227.2	173.00	-57	90	1	112	114	2	1.1	1.2
Dona Maria	MD-03B/2016	328023.7	8990167.1	227.2	173.00	-57	90	2	136	137.16	1.16	0.7	1.3
Dona Maria	MD-06/2016	328051.5	8990144.9	226.0	109.40	-55	90	1	77	81	4	2.0	8.0



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					FINAL						DOWHOLE	TRUE	
DEPOSIT	HOLEID	EAST	NORTH	RL	DEPTH	DIP	AZIMUTH	DOMAIN	FROM	то	INTERSECTION	THICKNESS	Au (ppm)
Dona Maria	MD-06/2016	328051.5	8990144.9	226.0	109.40	-55	90	2	96	100	4	2.5	20.0
Dona Maria	MD-08/2016	328078.4	8990117.8	226.7	80.00	-61	90	1	72	73	1	0.5	0.4
Dona Maria	MD-09/2016	328034.8	8990141.6	228.4	170.00	-58	90	1	125	128	3	1.7	41.2
Dona Maria	MD-09/2016	328034.8	8990141.6	228.4	170.00	-58	90	2	131	135	4	2.1	492.6
Dona Maria	MD-10/2016	328074.1	8990117.8	226.6	141.00	-71	90	1	101	104	3	1.2	22.2
Dona Maria	MD-11/2016	328018.1	8990095.1	231.0	160.00	-52	90	1	145	148.5	3.5	2.1	9.1
Dona Maria	MD-12/2016	328041.4	8990187.9	227.5	110.00	-45	106	6	78	79.5	1.5	0.4	26.8
Dona Maria	MD-12/2016	328041.4	8990187.9	227.5	110.00	-45	106	2	89	95	6	3.8	122.6
Dona Maria	MD-13/2016	328039.2	8990195.5	227.7	108.80	-49	90	2	82	84	2	1.2	1.1
Dona Maria	MD-13/2016	328039.2	8990195.5	227.7	108.80	-49	90	4	95	98	3	1.8	3.1
Dona Maria	MD-14/2016	328049.4	8990246.2	225.9	130.00	-62	90	4	84	88	4	1.7	46.1
Dona Maria	MD-15/2016	328040.5	8990195.4	227.6	200.00	-71	90	2	148	150	2	0.8	0.7
Dona Maria	MD-16/2016	328027.8	8990217.2	228.2	156.00	-51	90	4	107	109	2	1.2	0.9
Dona Maria	MR-01/2015	328079.8	8990255.6	225.1	63.00	-55	90	5	41	41.5	0.5	0.3	0.3
Dona Maria	MR-02/2015	328088.9	8990314.0	226.6	66.00	-60	90	5	2	4	2	1.3	6.5
Dona Maria	MR-04/2015	328171.6	8990204.5	225.3	132.00	-55	270	4	122	125	3	1.6	1.2
Dona Maria	MR-08/2015	328032.4	8990304.3	226.5	128.50	-55	90	5	76	77	1	0.7	0.7
Dona Maria	MR-10/2015	328044.2	8990189.3	227.7	112.00	-55	110	1	75	76	1	0.4	0.1
Dona Maria	MR-10/2015	328044.2	8990189.3	227.7	112.00	-55	110	6	80	81	1	0.3	0.1
Dona Maria	MR-10/2015	328044.2	8990189.3	227.7	112.00	-55	110	2	101	109	8	6.0	374.4
Querosene	JRNAD-062	329850.0	8989306.1	246.9	10.00	-90	0	9	2	4	2	0.3	1.2
Querosene	JRND018	329671.4	8989470.2	245.5	170.00	-49	78	8	65	69	4	3.5	113.6
Querosene	JRND018	329671.4	8989470.2	245.5	170.00	-49	78	9	136	139	3	1.6	20.3
Querosene	JRND020	329624.6	8989514.0	247.0	400.00	-50	24	8	122	123	1	0.8	49.8
Querosene	JRND022	329572.2	8989638.0	242.0	340.00	-49	25	8	69	71	2	1.8	84.8
Querosene	JRND028	329609.8	8989541.2	243.4	301.40	-50	82	8	104	105	1	1.0	4.3
Querosene	JRNRC037	329786.1	8989376.7	243.9	60.00	-55	45	9	53	55	2	0.8	0.3
Querosene	QD-02/2015	329621.4	8989629.3	243.5	185.34	-72	90	8	84	85	1	0.8	4.2
Querosene	QD-05/2015	329650.0	8989476.7	246.7	200.45	-55	90	8	88.46	89.49	1.03	0.9	52.4
Querosene	QD-06/2015	329537.3	8989678.3	236.7	177.70	-68	25	8	70.99	72.09	1.1	0.9	1.3
Querosene	QD-07/2015	329648.9	8989477.3	246.7	191.30	-63	90	8	97.41	98.71	1.3	1.0	0.9



ASX RELEASE

31 Jan 2017

					FINAL						DOWHOLE	TRUE		
DEPOSIT	HOLEID	EAST	NORTH	RL	DEPTH	DIP	AZIMUTH	DOMAIN	FROM	то	INTERSECTION	THICKNESS	Au (ppm)	
Querosene	QD-12/2016	329803.7	8989370.1	243.0	69.85	-60	90	9	29.35	30	0.65	0.5	0.5	
Querosene	QD-15/2016	329782.0	8989370.0	244.0	76.20	-60	90	9	57.8	58.8	1	0.8	0.9	
Querosene	QD-16/2016	329804.6	8989270.1	247.0	77.70	-60	90	9	71	71.34	0.34	0.3	1.4	
Querosene	QD-17/2016	329826.5	8989270.3	245.8	53.00	-60	90	9	47	47.75	0.75	0.6	0.2	
Querosene	QD-18/2016	329797.9	8989322.3	248.9	77.60	-60	90	9	61	62.55	1.55	1.2	0.2	
Querosene	QD-19/2016	329768.0	8989419.5	243.4	72.40	-60	90	9	52	53	1	0.8	2.3	
Querosene	QD-20/2016	329835.5	8989319.8	245.3	35.05	-60	90	9	16.1	18.15	2.05	1.5	1.0	
Querosene	QD-22/2016	329766.2	8989419.5	243.4	90.23	-73	90	9	62.55	63	0.45	0.3	8.0	
Querosene	QD-25/2016	329663.6	8989446.8	246.0	161.02	-56	90	9	147	149	2	1.5	0.7	
Querosene	QD-27/2016	329663.6	8989446.8	246.0	164.60	-60	90	8	109.4	110	0.6	0.5	0.1	
Querosene	QD-27/2016	329663.6	8989446.8	246.0	164.60	-60	90	9	155.12	157.1	1.98	1.5	4.0	
Querosene	QD-28/2016	329676.5	8989494.2	245.5	169.90	-72	90	8	57.18	58.65	1.47	1.0	29.4	
Querosene	QD-28/2016	329676.5	8989494.2	245.5	169.90	-72	90	9	154.4	155.95	1.55	1.2	1.0	
Querosene	QD-29/2016	329644.9	8989446.7	247.0	145.65	-64	94	8	137.2	138.2	1	0.9	0.4	
Querosene	QD-30/2016	329651.1	8989495.1	247.6	111.60	-67	92	8	86.1	87.1	1	0.7	0.1	
Querosene	QD-32/2016	329617.2	8989496.4	246.6	140.00	-62	91	8	113.9	115.9	2	1.6	17.7	
Querosene	QD-33/2016	329617.2	8989496.4	246.6	160.00	-73	93	8	125.7	126.3	0.6	0.5	0.0	
Querosene	QD-35/2016	329630.5	8989537.1	247.0	130.00	-69	93	8	99.75	100.55	0.8	0.7	0.0	
Querosene	QD-36/2016	329612.3	8989472.0	247.0	170.00	-60	91	8	130	131	1	0.9	0.1	
Querosene	QD-37/2016	329629.4	8989536.8	247.0	145.00	-80	89	8	117.1	117.5	0.4	0.3	0.0	
Querosene	QD-39/2016	329638.8	8989523.0	247.0	185.00	-60	91	8	84	85.4	1.4	1.3	63.2	
Querosene	QD-41/2016	329622.3	8989518.3	247.0	135.00	-62	91	8	102	102.7	0.7	0.7	3.9	
Querosene	QD-43/2016	329622.3	8989518.3	247.0	146.70	-72	95	8	112.8	115.7	2.9	2.4	184.0	
Querosene	QD-44/2016	329751.1	8989573.0	242.0	182.05	-45	270	8	147	154	7	1.6	456.3	
Querosene	QD-45/2016	329736.1	8989602.2	245.1	176.45	-47	270	8	157	170	13	1.7	0.4	
Querosene	QD-46/2016	329741.1	8989623.2	244.2	181.90	-45	270	8	180	181.9	1.9	1.2	3.2	
Querosene	QR-01/2014	329732.8	8989373.9	244.9	120.00	-55	90	9	113	114	1	0.8	5.3	
Querosene	QR-03/2014	329651.9	8989523.5	247.0	100.00	-55	90	8	73	76	3	2.5	65.9	
Querosene	QR-16/2014	329656.8	8989424.7	244.4	160.00	-55	90	9	157	158	1	0.8	4.1	
Querosene	QR-20/2015	329625.7	8989574.0	243.6	120.00	-55	90	8	82	84	2	1.6	52.7	
Querosene	QR-21/2015	329624.2	8989628.6	243.8	107.00	-72	90	8	84	85.5	1.5	0.9	21.3	



						FINAL						DOWHOLE	TRUE	
	DEPOSIT	HOLEID	EAST	NORTH	RL	DEPTH	DIP	AZIMUTH	DOMAIN	FROM	то	INTERSECTION	THICKNESS	Au (ppm)
ſ	Querosene	QR-22/2015	329624.2	8989631.5	243.7	122.50	-76	25	8	76	80	4	1.2	0.1
	Querosene	QR-24/2015	329753.6	8989374.5	244.0	96.00	-55	90	9	87	88	1	0.8	5.5
	Querosene	QR-25/2015	329774.3	8989322.8	249.5	90.00	-55	90	9	86	87	1	0.8	2.8
	Querosene	QR-26/2015	329813.1	8989464.3	237.4	105.00	-55	270	9	4	8	4	1.2	0.1
_1	Querosene	QR-27/2015	329824.3	8989423.8	245.0	84.00	-55	270	9	18	22	4	1.2	1.2
	Querosene	QR-28/2015	329811.4	8989323.7	247.0	54.00	-55	90	9	48.5	50	1.5	1.1	12.4
	Querosene	QR-29/2015	329832.2	8989273.3	245.0	75.00	-55	90	9	30	31	1	0.8	2.3



#### **About Crusader**

Crusader Resources Limited (ASX:CAS) is a minerals exploration and mining company listed on the Australian Securities Exchange. Its major focus is Brazil; a country Crusader believes is vastly underexplored and which offers high potential for the discovery of world class mineral deposits. Crusader has three key assets:

#### Juruena Gold

The Juruena Gold Project is located in the highly prospective Juruena-Alta Floresta Gold Belt, which stretches east-west for >400km and has historically produced more than 7Moz of gold from 40 known gold deposits.

The Juruena Project has been worked extensively by artisanal miners (garimpeiros) since the 1980s, producing ~500koz in that time. Historically there is a database of more than 30,000 meters of drilling and extensive geological data.

#### **Posse Iron Ore**

The Posse Iron Ore Mine is located 30km from Belo Horizonte, a city acknowledged as the mining capital of Brazil and the capital of Minas Gerais state. The project had an indicated and inferred Mineral Resource estimate of 36Mt @ 43.5% Fe when mining began in March 2013. Posse is currently selling DSO into the domestic market. With an experienced mining workforce amongst a population of over 2.5 million people, the infrastructure and access to the domestic steel market around the Posse Project is excellent.

#### **Borborema Gold**

The Borborema Gold Project is in the Seridó area of the Borborema province in north-eastern Brazil. It is 100% owned by Crusader and consists of three mining leases covering a total area of 29 km² including freehold title over the main prospect area.

The Borborema Gold Project benefits from a favourable taxation regime, existing on-site facilities and excellent infrastructure such as buildings, grid power, water, sealed roads and is close to major cities and regional centres. The project's Ore Reserve includes Proven and Probable Ore Reserves of 1.61Moz of mineable gold from 42.4Mt @ 1.18g/t (0.4 & 0.5g/t cut-offs for oxide & fresh).

The measured, indicated and inferred Mineral Resource Estimate of 2.43Moz @ 1.10g/t gold, remains open in all directions.

#### **Competent Person Statement**

The information in this report that relates to Juruena Gold Project exploration results, Posse Iron Ore Project exploration results and Borborema Gold Project exploration results released after 1 December 2013, is based on information compiled or reviewed by Mr. Robert Smakman who is a full time employee of the company and is a Fellow of the Australasian Institute of Mining and Metallurgy. The information in this report that relates to Mineral Resources at the Juruena Gold Project is based on information compiled or reviewed by Mr. Lauritz Barnes and Mr. Aidan Platel who are independent consultants to the company and Members of the Australasian Institute of Mining and Metallurgy. Each of Mr. Smakman, Mr. Barnes and Mr. Platel have sufficient experience that is relevant to the type of mineralisation and type of deposits under consideration to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Smakman, Mr. Barnes and Mr. Platel consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to:

- a) Borborema Gold Project and Posse Iron Ore Project Exploration Results released prior to 1 December 2013 is based on information compiled or reviewed by Mr. Robert Smakman who is a full time employee of the company;
- b) Borborema Gold Mineral Resources is based on information compiled by Mr. Lauritz Barnes and Mr. Brett Gossage, independent consultants to the company;
- c) Borborema Gold Ore Reserves is based on information compiled by Mr. Linton Kirk, independent consultant to the company;
- d) Posse Fe Mineral Resources is based on and accurately reflects, information compiled by Mr. Bernardo Viana who was a full time employee of Coffey Mining Pty Ltd,

and who are all Members of the Australasian Institute of Mining and Metallurgy (Rob Smakman and Linton Kirk being Fellows), and who all have sufficient experience that is relevant to the type of mineralisation and type of deposit under consideration, and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Each of Mr. Smakman, Mr. Barnes, Mr. Kirk, Mr. Viana, and Mr. Brett Gossage consent to the inclusion in the report of the matters based on their information in the form and context in which it appears. The information was prepared and disclosed under the JORC Code 2004. It has not been updated since to comply with JORC Code 2012 on the basis that the information has not materially changed since it was last reported.