

10 January 2011

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Castle Minerals (CDT)

West African Gold Exploration Play

Recommendation

Spec Buy

Price

\$0.40

Target (12 months)

\$0.75

CDT is an established gold explorer in Ghana where it has been operating for 5 years, making discoveries and defining initial resources. It is very well placed to emulate the success achieved by its ASX listed neighbours operating in West Africa. Our target price of \$0.75 represents modest exploration success but this could be far exceeded upon a major discovery. We initiate coverage with a Spec Buy recommendation.

Expected Return

Capital growth **88%**

Dividend yield **0%**

Total expected return **88%**

Company Data & Ratios

Enterprise value **\$32.4m**

Market cap **\$38.9m**

Issued capital **97.3m**

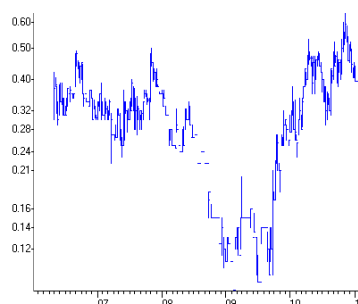
Free float **80%**

12 month price range
\$0.23-\$0.64

GICS sector

Materials

Absolute Price



SOURCE: IRESS

Quality exploration position in Ghana

CDT's small but highly experienced management team has built an effective operating presence in Ghana since listing 5 years ago. CDT currently has six exploration projects covering more than 12,000 km² including prime Birimian greenstone belt locations.

Considerable early exploration work has been carried out, properties turned over, discoveries made and mineral resources defined amounting to 158koz at Wa (102koz) in the north and Akoko (56koz) in the south.

CDT has commenced a +40,000m drilling program on the Wa licence area, a large, underexplored region of the prolific Birimian greenstone belt.

As indicated by the nearby deposits of others and work done by CDT, Wa has the potential for a large +1.0moz discovery.

Recommend Spec Buy

We assign a 12 months target price of \$0.75, anticipating value to be created as exploration and possible development activities progress. The target is based on our estimate of a resource of 500koz and an EV/resource oz of \$150/oz, which is in line with the West African sub sector ratings. However, risks in achieving this target exist, including exploration, commodity and market risks.

Disclosure: SCE acted as lead manager in the placement of 13.157m CDT shares at \$0.38 per share in May 2010 and in the placement of 7.0m shares at a price of \$0.25 per share raising \$1.75m in December 2009, for which it received fees.

Investment Summary

Investment highlights

- **Largest land holding in Ghana;** CDT has over 12,000km² of exploration ground, the largest holding in West Africa.
- **Gold resources of 158koz** at Akoko (102koz) and Julie West (Wa project, 56koz), greenfield discoveries with resource growth potential.
- **Best address in West Africa.** Ghana has a well established mining industry with +110moz resources and produces 3moz Au per annum.
- **40,000m drill program** ahead to June 2011. Assay results in January.
- **Neighbouring success.** Neighbours to the west and north, Ampella (AMX) and Azumah (AZM) have a combined 2.5moz Au resources.
- **Well funded.** Hold \$6m in cash with no debt.
- **Experienced** management and personnel headed by Executive Chairman and MD, Mike Ivey.
- **Target price \$0.75**, based on our assumption of a 500koz resource at \$150/resource oz.

Valuation considerations

The value of CDT lies in its potential to add to existing resources and to move closer to production. The company has progressed a long way already in identifying a resource of 158koz and establishing the right operating capability and assets. The current market cap (or EV of \$200/resource oz) undervalues the exploration success this company has the ability to generate.

This 'exploration potential' is difficult to ascertain but it could range from a modest resource and reserve position to a major +1 million ounce discovery.

On the basis of a resource of 500koz and an EV/resource oz of \$150/oz we estimate a 12 month target price of \$0.75 per share. We believe a resource of this size is possible in the time frame, considering the existing resource of 158koz, the number/quality of the targets and the active work program planned. The assigned EV rating is subjective but is below the average for the sub sector of ASX listed gold companies in West Africa of \$208/oz (refer Appendix).

Just as its licence neighbouring licence holders have done, we believe CDT is well placed to deliver even further upside, which they have demonstrated could relate to a 4x increase in share price.

Risks

- **Exploration and geology** are uncertain and unpredictable. Our target price assumes certain positive outcomes that may not eventuate.
- **Financial risk.** Until operations are established, there will be no internal cash flow. Funding requirements for ongoing exploration are likely to be from new equity.
- **Commodity price volatility** in gold and currencies.
- **Country risk** is relatively low.

A story of value creation

Floated in 2006 to explore in Ghana

In 2006 three founding directors floated CDT on the ASX with the objective of bringing value to the company by exploring and developing the areas it had already obtained in Ghana and by pursuing other areas and opportunities. Mike Ivey, an experienced geologist with 20 years prior involvement in WA mostly with Croesus Mining, was joined by another ex-Croesus director and Chartered Accountant Campbell Ansell and Michael Ashforth, who at the time was MD of Gresham Advisory Partners where he had been for 13 years (now ED of Macquarie Capital Advisers in Perth).

Highly experienced management team

Michael Fowler (Geologist, MSc Mineral Exploration, UWA), CDT's Exploration Manager, has been advising the company since the beginning. He has 25 years experience in Australia, Africa and South America.

These key personnel had the experience and expertise to identify the prospective ground and embark on exploration programs. They are now assisted by up to eight geologists and 50 Ghanaian field staff.

Six project areas currently held

Six project areas had been secured before listing and the most prospective were chosen for the initial work, with a modest budget of \$2-3mpa. Early stage exploration was carried out including soil sampling, pitting, trenching and RC drilling. New areas were acquired with the choice Wa area secured in 2008 giving the company the largest ground position in Ghana.

Active exploration with initial success

CDT was quick to get exploration activities under way. In the first two years after listing 17,000m of drilling had been completed, which increased to 22,500m after three years along with geochemical sampling involving the collection of over 20,000 soil samples. Discoveries were made and initial JORC resources were established in 2008 at Akoko (102koz at 1.6g/t) and Julie West (56koz at 4.2g/t) in the Wa area.

In April 2010 a large area of previously unknown artisanal gold workings was discovered at Kandia, Wa, with strike extensions found by follow up RC drilling. Kandia is considered highly prospective by the company. The largest drilling campaign to date began in October (35km RC) in Wa's four gold corridor zones.

Early production possibilities

Management has looked at early production possibilities from the deposits already identified. It was estimated that heap leaching of the high grade (4.3g/t) 56koz Julie West deposit could be done at a low cost of US\$400/oz, which would provide the basis for wide margins. Toll treatment of the lower grade Akoko North pit estimated a US\$17m gross surplus at US\$950/oz, which we infer would double to \$34m at US\$1,250/oz.

Should attract higher rating

With a market cap of \$11.5m at the time of the IPO, which raised \$3.75m, CDT had modest beginnings. In the 4 ½ years since the IPO, CDT has risen to a current market cap of \$40m, having reached a high of \$61m (\$0.63 per share) in November 2010.

CDT is in the best position it has been in as an established explorer in Ghana:

- It knows Ghana well;
- Has built a quality asset position in Ghana;
- Existing ground has excellent exploration potential;
- Is conducting an active drilling program, with 40,000m yet to drill;
- Has early production options.

Considering these factors, CDT should be attracting a greater market rating.

Exploration activities

Ghana focus

CDT has six exploration projects covering more than 12,000 km² in Ghana. All projects are either 100% owned or CDT has the right to acquire a 100% interest (subject to the government’s free carried 10% interest). The focus of activity is on the Wa project, the largest area under licence and a part of the prolific Birimian greenstone belt that is underexplored. Akoko is also a high priority area.

The other projects are Antubia, Banso, Bondaye and Opon Mansi (under application).

This season’s drilling commenced in October with about 10,000m completed to date, both RAB and RC, at Akoko and Kandia, Wa. 40,000m is planned through to mid 2011 of augur, RAB and RC drilling. RC drilling is to be completed at Kandia before the rig moves to Julie West, while a second auger is due to arrive at Batie West trend mid January. Flexibility will be retained in the program to allow for response to ongoing results.

Figure 1 - CDT project areas



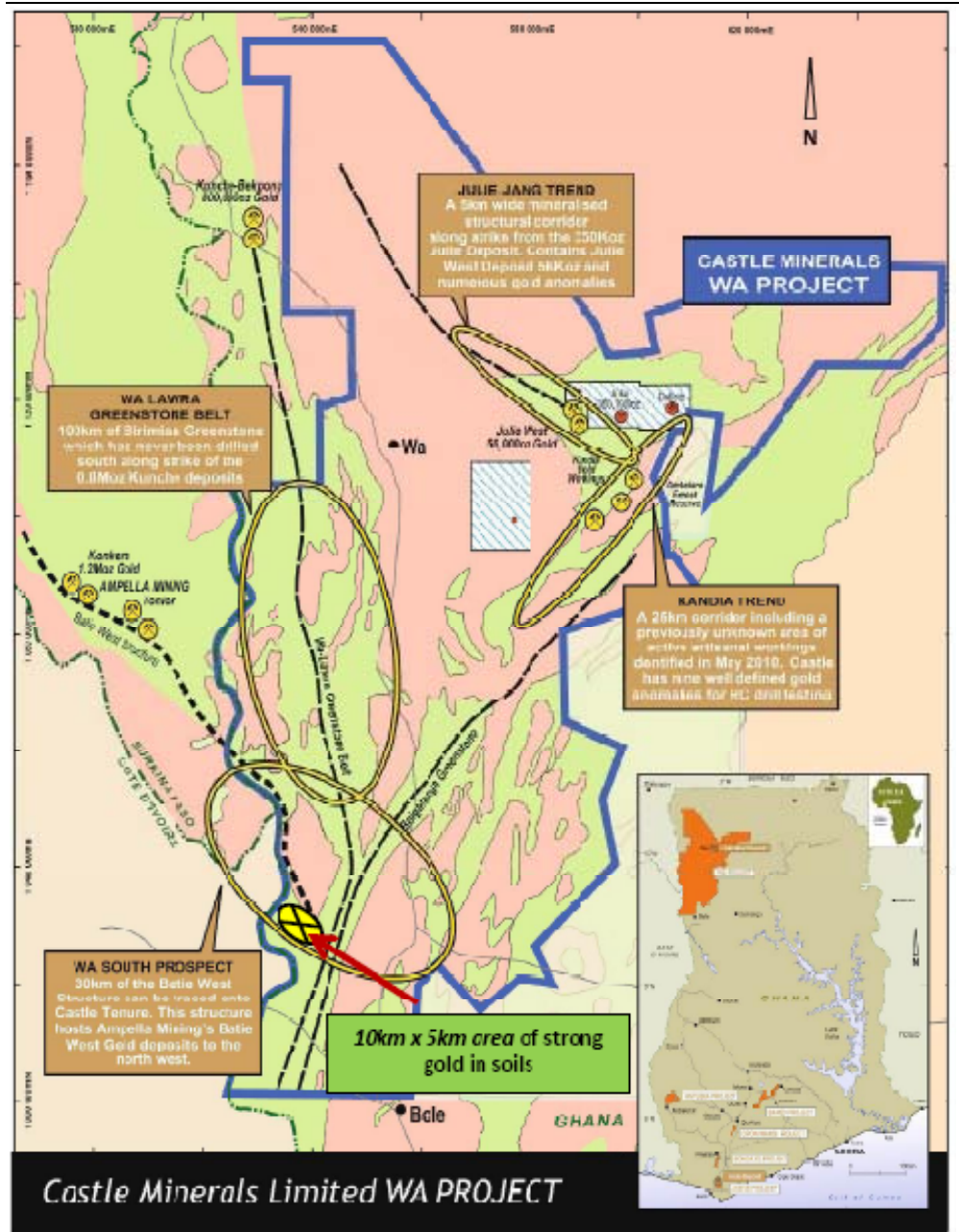
SOURCE: COMPANY

Wa Project

The Wa project covers approximately 12,000km² in NW Ghana on the border with Burkina Faso, adjoining AZM's ground and along strike of the 0.5moz Kunche deposit. It consists of four regional prospective gold corridors known as:

- Julie-Jang Trend - 50km long trend containing the 56koz Julie West resource;
- Kandia - new 30km corridor of anomalous gold in soils including newly found artisanal workings;
- Wa South - 60km long corridor along trend from Batie West;
- Wa - Lawra - 80km of untested greenstone along strike of the Kunche deposit.

Figure 2 - Map of Wa's 12 sq km project area



SOURCE: COMPANY

Julie -Jang trend

This corridor is being targeted for high grade vein style mineralisation and is being soil sampled in detail. The Julie West, high grade, quartz vein deposit has an initial resource of 56koz (415,000 tonnes at 4.2g/t) close to surface and open ended. RC drilling in the September quarter 2010 tested a geochemical anomaly returning 20m @ 1.79g/t including 6m @ 5.0g/t from 44m in a different host rock (mafic volcanic). The area also contains the Koda Hill surface anomaly.

Kandia

The Kandia artisanal gold workings were discovered in April 2010 over 600m of strike and the first RC drilling program was completed shortly after. Gold mineralisation was found in 19 of the 28 holes, including composite sample results of 5m @ 1.43g/t from 25m, 5m @ 0.89g/t from 45m, 10m @ 1.19g/t from surface and 16m @ 1.09g/t Au from 50m.

A 15,000m RC drill program has commenced to test nine strong geochemical anomalies along a 12km strike. The potential of Kandia lies in its substantial strike length and proximity to surface.

South Wa (Batie West trend)

Augur drilling commenced at the end of the wet season in October 2010 and is targeting both the Wa-Lawra and Bolgatanga greenstone belts. Positive results were reported in November with discrete high grade sample anomalies within a broader, 3km zone. A second augur will be introduced in January 2011 to test this large 10 x 15km target.

Wa-Lawra Greenstone Belt

This exploration corridor represents the Birimian age greenstone rocks that extend from the Kunche/Bepkong gold deposits 25km to the north. Transported cover 3-10m thick has rendered limited soil sampling in the area largely ineffective. Augur drilling is the first known drilling on the prospect.

Figure 3 - Akoko project, south west Ghana

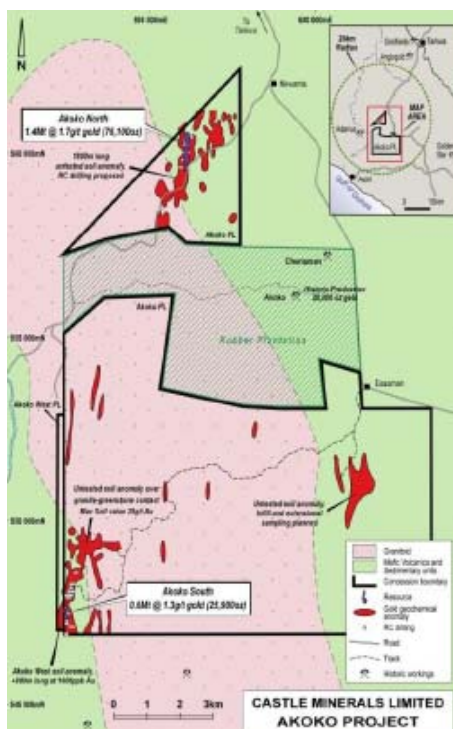
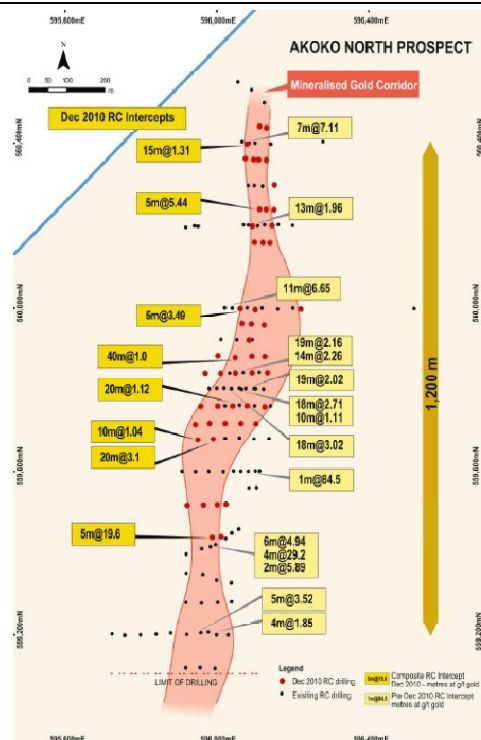


Figure 4 - North Akoko prospect



Akoko

The Akoko Project is located in south west Ghana on the prolific Ashanti belt, 25km south of the Tarkwa gold mine, Ghana’s largest at 750kozpa. CDT first discovered gold here in late 2007 and since then has defined substantial oxide gold mineralisation. Resource estimates for the Akoko South and Akoko North gold deposits of 102koz combined are highly likely to be increased. There is potential for additional oxide mineralisation along strike of each deposit and testing for primary mineralisation has yet to be undertaken.

A 3,500m RC drilling program recently tested for extensions of the Akoko North deposit. Targets were shallow oxides and strike extensions. Assay results are expected in this month.

Antubia

Antubia is located approximately 370km west-northwest of Accra, in the Sefwi gold belt, approximately 90km southwest of Newmont’s Ahafo gold mine. Work by CDT has included soil sampling, pitting, trenching and geophysical interpretation as well as RC drilling a large geochemical anomaly.

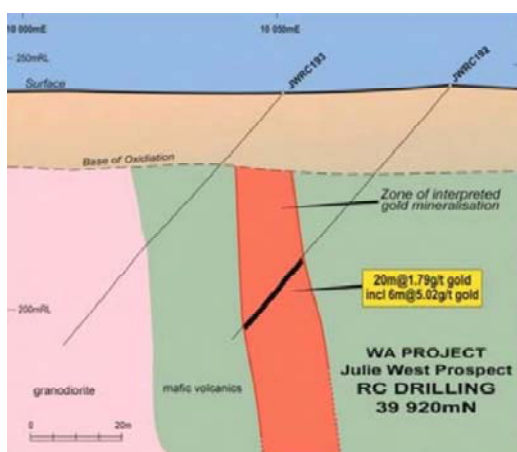
Banso

Banso is located 180km northwest of Accra, in the Ashanti gold belt, 20km west of Newmont’s Akyem gold mine and 10km east of AngloGold Ashanti’s Obuasi gold mine. The Banso project consists of four granted prospecting licences known as Fereso, Anweaso, Banso and Dwendwenase. It lies near the intersection of two major shear zones within the Ashanti belt. RC drilling by CDT has given significant results to follow up.

Opon Mansi

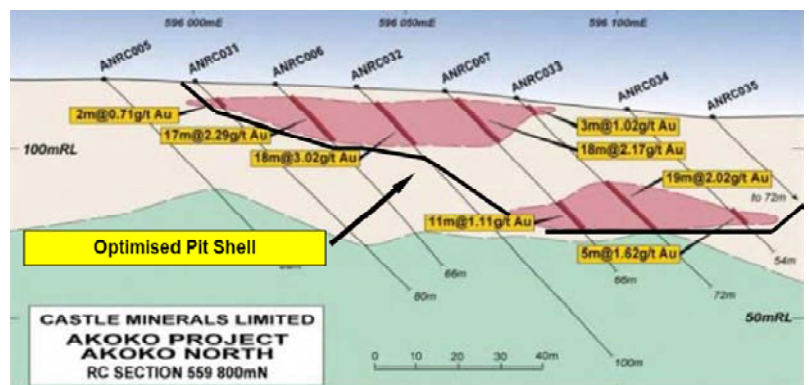
The Opon Mansi project is an iron ore deposit discovered in the 1960’s of, 150mt at 43-56% Fe. It has the potential to be upgraded to DSO for early shipment via nearby rail. It is located 260km west of Accra, consisting of one prospecting licence application contained wholly within a forest reserve. CDT is pursuing permission to re-enter the reserve to undertake sampling for metallurgical test work.

Figure 5 - Julie West prospect section



SOURCE: COMPANY

Figure 6 – Akoko North section



SOURCE: COMPANY

Good neighbours

CDT's project areas are in world class mineral districts, close to a number of significant mines or known deposits. A number of companies exploring neighbouring ground, in particular the ASX listed Ampella, Adamus and Azumah have had great success in the field and consequently on the bourse.

WA PROVINCE

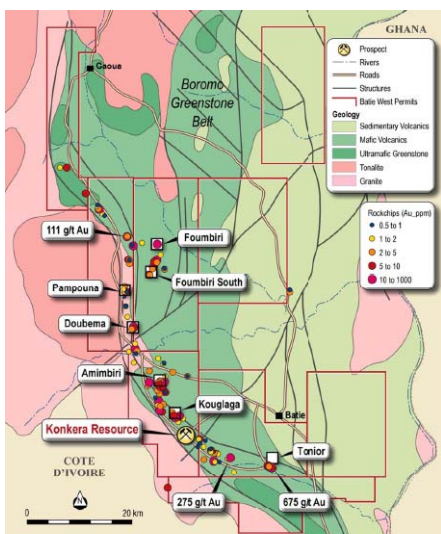
Ampella Mining (ASX: AMX) has been highly successful in establishing a substantial resource on its Batie West tenements in Burkina Faso, adjoining CDT's Wa permits. AMX reported a 1.2moz maiden JORC Inferred Resource at the Konkera prospect in early 2010 and has had drilling success in many other prospects along the Batie Shear. These include Kouglaga to the north west, Konkera East and, closest to CDT, the Tonior respect (12m at 6.4 g/t, 9m at 2.5 g/t).

In early November 2010, CDT reported gold anomalies in soil samples on the Batie West trend some 50km south east of Tonior. Within a wide 10 x 5km zone five separate anomalies were found.

AMX boasts 13 virgin gold discoveries to date, a new gold province and multi-million ounce potential. An ongoing aggressive exploration program is expected to lead to substantial resource upgrades early 2011.

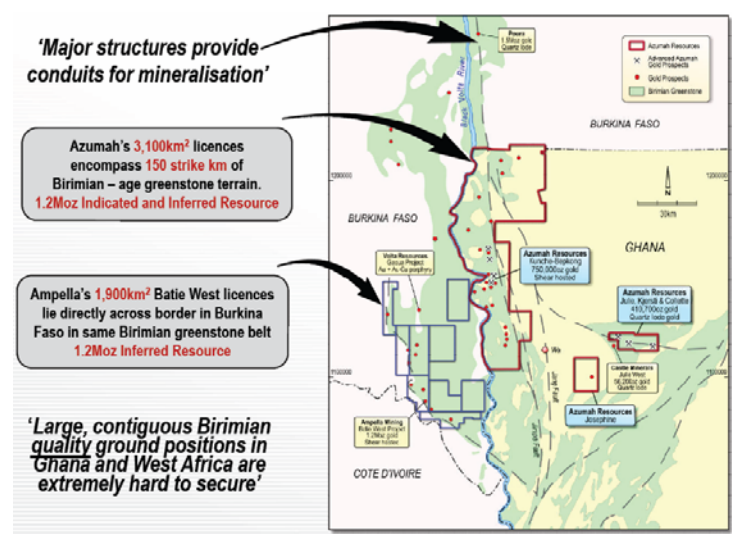
Azumah Resources (ASX:AZM) has ground immediately to the north of CDT's Wa licence as well as isolated tenements surrounded by CDT. AZM has explored and identified a resource of 1.17moz (18.0mt at 2.0g/t) in six deposits close to the surface, the largest being Kunche (516koz), Julie (350koz) and Bepong (212koz). The company is planning rapid development to production of 70kozpa from multi open pits and the project has been given a major boost by the Ghana Government's intention to upgrade the existing power transmission infrastructure.

Figure 7 – Ampella’s licences and prospects, Burkina Faso



SOURCE: AMPELLA

Figure 8 – Azumah’s licences and prospects, Wa.

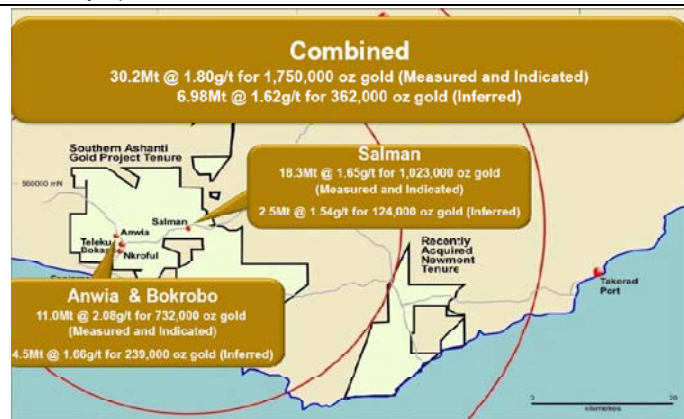


SOURCE: AZUMAH

AKOKO

Adamus Resources (ASX:ADU) is developing the Nzema Gold project in the far south as a 100kozpa, 10 year gold producer. Project reserves are contained in the Salman and the Anwai open pit deposits predominantly oxide ores at shallow depths to around 75m. Resources at the two deposits amount to 2.0moz and reserves 1.0moz. These deposits are some 30km apart, within economic trucking distance. A 2.1mtpa processing plant is being built located only 20km from CDT’s Akoko deposit.

Figure 9 - ADU’s Nzema project

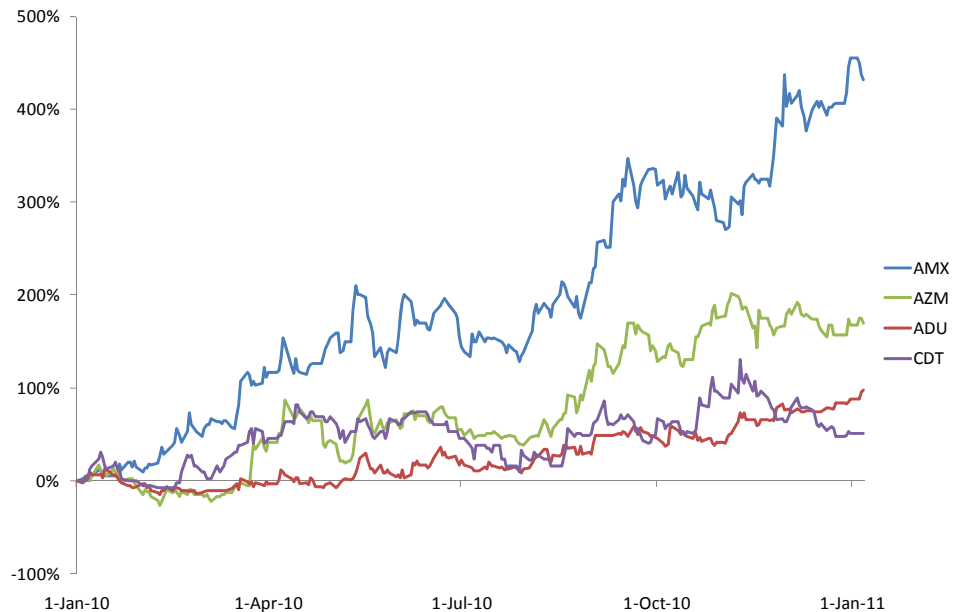


SOURCE: ADAMUS

SHARE PRICE PERFORMANCES

AMX, AZM and ADU are close neighbours to CDT’s exploration ground in Ghana and their success to date is an indication of what could follow for CDT.

Figure 10 - Neighbours’ share price performances 2010



SOURCE: IRESS

Ghana –The best address in West Africa

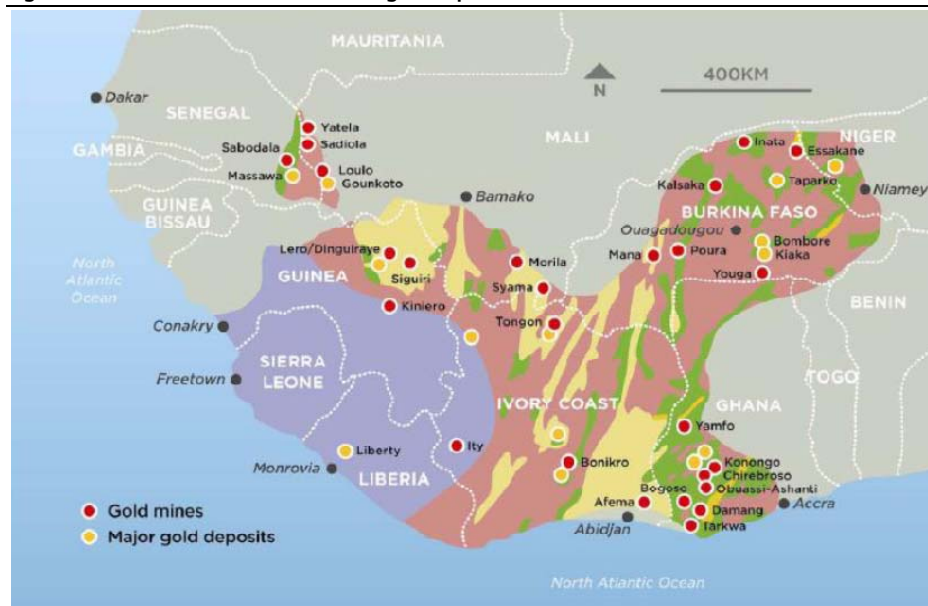
Ghana is the world’s 9th largest gold producer and the second largest behind South Africa on the African continent. Ghana produces over 80 tonnes of gold pa, predominantly from the Ashanti Belt in the south.

The gold producing regions of Ghana are located on the southeast edge of the West African Craton. The Birimian Supergroup of the Man Shield is the most important in Ghana, hosting the largest gold deposits of the Ashanti Belt, the richest gold province in West Africa.

Politically, Ghana is regarded as one of the most stable countries in West Africa. It has a well established democratic system, an English based legal system and English as the official language. Traditional religions are practised by approximately 20% of the population, Christianity 60%, and Muslim beliefs by about 16%.

Ghana’s largest mine is Gold Fields’ Tarkwa mine in the south-west, situated 25km from CDT’s Akoko prospect. It has a Mineral Resource of 15.3moz and production estimated for FY11 of 750kozpa. Newmont Mining’s Ahafo mine produces over 500kozpa. Other major gold mines are Obuasi (400kozpa), Damang (240kozpa), Iduapriem (200kozpa), Bogoso/Presteas’ (200kozpa).

Figure 11 - West African Countries and gold deposits



SOURCE: COMPANY DATA

Castle Minerals (CDT)

History

Castle Minerals listed on the ASX in 2006 with the objective of exploration and development of its five gold projects in Ghana; and acquisition and exploration of other mineral resource opportunities, particularly in West Africa. It became the largest landholder in Ghana after securing the Wa licence areas in 2008. CDT made two greenfields gold discoveries in 2008, Akoko and Julie West, and defined an initial gold resource in 2009.

Investment View

CDT is a gold explorer in Ghana with a 12,000km² land holding, the largest of any company in West Africa. The company is focussed on its Wa and Akoko projects. With a 12 months target price of \$0.75 per share, and greater upside with exploration potential, we recommend Spec Buy.

Wa and Akoko

The Wa gold project covers an area 180km long by 30-80km wide. The target geology is three Birimian aged greenstone belts and associated shears, of a type known to host gold in West Africa. The Akoko gold project is located in the Ashanti gold belt of southern Ghana, 10km east of the 2moz Salman/Anwia project and 25km south of the 22moz Tarkwa gold mine (Gold Fields). The project has a 102koz Resource divided between Akoko South and North which are about 12km apart.

Other prominent assets of CDT include the Antubia project, 370km west-northwest of Accra, in the Sefwi gold belt, the Bansa project – 180km northwest of Accra and the Opon Mansi project – 260km west of Accra.

Directors

Michael Ivey (Exec Chairman and MD), Michael Ashforth (Non Executive), Campbell Ansell (Non Executive), Dennis Wilkins (Secretary)

Cash at the end of September 2010 was \$6.5m and there are no borrowings. Exploration spending is at the rate of approximately \$3mpa.

Financial

Ordinary shares: 97.26m. Options: 5.85m 35c March 2011; 0.5m 25c March 2011; 3.5m 35c Dec 2011.

Majority shareholders

Lujeta P/L 6.8%, Seamans Capital 6.8%, Yandal Investments 6.3%, M Ivey 5.4%, Henry Wiechecki 5.4%, Bridgelane P/L 5.2%.

The Main Risks

Exploration and geology are uncertain and unpredictable. Our target price assumes certain positive outcomes in this area that may not eventuate.

Financial risk. Until operations are established, there will be no internal cash flow. Funding requirements for ongoing exploration are likely to be from new equity.

Commodity price volatility in gold and currencies.

Country risk is relatively low.

Appendix – Mineral Resources

CDT's current JORC code Mineral Resources

Figure 12 – CDT Resources

Julie West Deposit									
April 2009 OK Resource Estimate 1g/t cut-off									
Type	Indicated			Inferred			Total		
	Tonnes t	Au g/t	Au Ounces	Tonnes t	Au g/t	Au Ounces	Tonnes t	Au g/t	Au Ounces
Oxide									
Transitional	66,700	3.8	8,200	3,500	7.8	900	70,200	4.0	9,000
Fresh	316,200	4.3	43,900	28,400	3.5	3,200	344,600	4.3	47,100
Total	382,900	4.2	52,100	32,000	4.0	4,100	414,700	4.2	56,200

Akoko Project Total – Akoko North and South Deposits						
Deposit	Indicated		Inferred		Total	
	Tonnes t	Au g/t	Tonnes t	Au g/t	Tonnes t	Au ozs
Akoko South			610,300	1.3	610,300	25,900
Akoko North	358,000	1.8	1,076,000	1.6	1,434,000	76,100
Total Akoko Gold Project	358,000	1.8	1,686,300	1.5	2,044,300	102,000

SOURCE: COMPANY

Enterprise Value per Resources – ASX listed West African gold companies

The prominent ASX listed companies operating in West Africa are presented in the chart below (along with Chalice (CHN) in Eritrea), in terms of EV to Resource and EV/Reserve for those that have reserves. The average EV/Resource for this gold sub-group is \$200/oz and most of them as can be seen from the chart range from 130-\$200/oz. CDT is trading close to the average at \$210/oz.

Those with no Reserves are AZM, CDT, GRY, AMX, AQD, MDI. Those with no Resources are AQD and MDI, which have EVs of \$19m and \$24m respectively.

Figure 13 - EV/Resource and Reserve oz



SOURCE: COMPANY DATA

Recommendation structure

Spec Buy: Expect >30% total return on a 12 month view but carries significantly higher risk than its sector

Buy: Expect >15% total return on a 12 month view

Accumulate: Expect total return between 0% and +15% on a 12 month view

Reduce: Expect -15% and 0% total return on a 12 month view

Sell: Expect <-15% total return on a 12 month view

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Southern Cross Equities Ltd and its associates hold 1375000 shares in CDT as at the date of this report. This position is subject to change without notice. SCE acted as lead manager in the placement of 13.157m CDT shares at \$0.38 per share in May 2010 and in the placement of 7.0m shares at a price of \$0.25 per share raising \$1.75m in December 2009, for which it received fees.



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