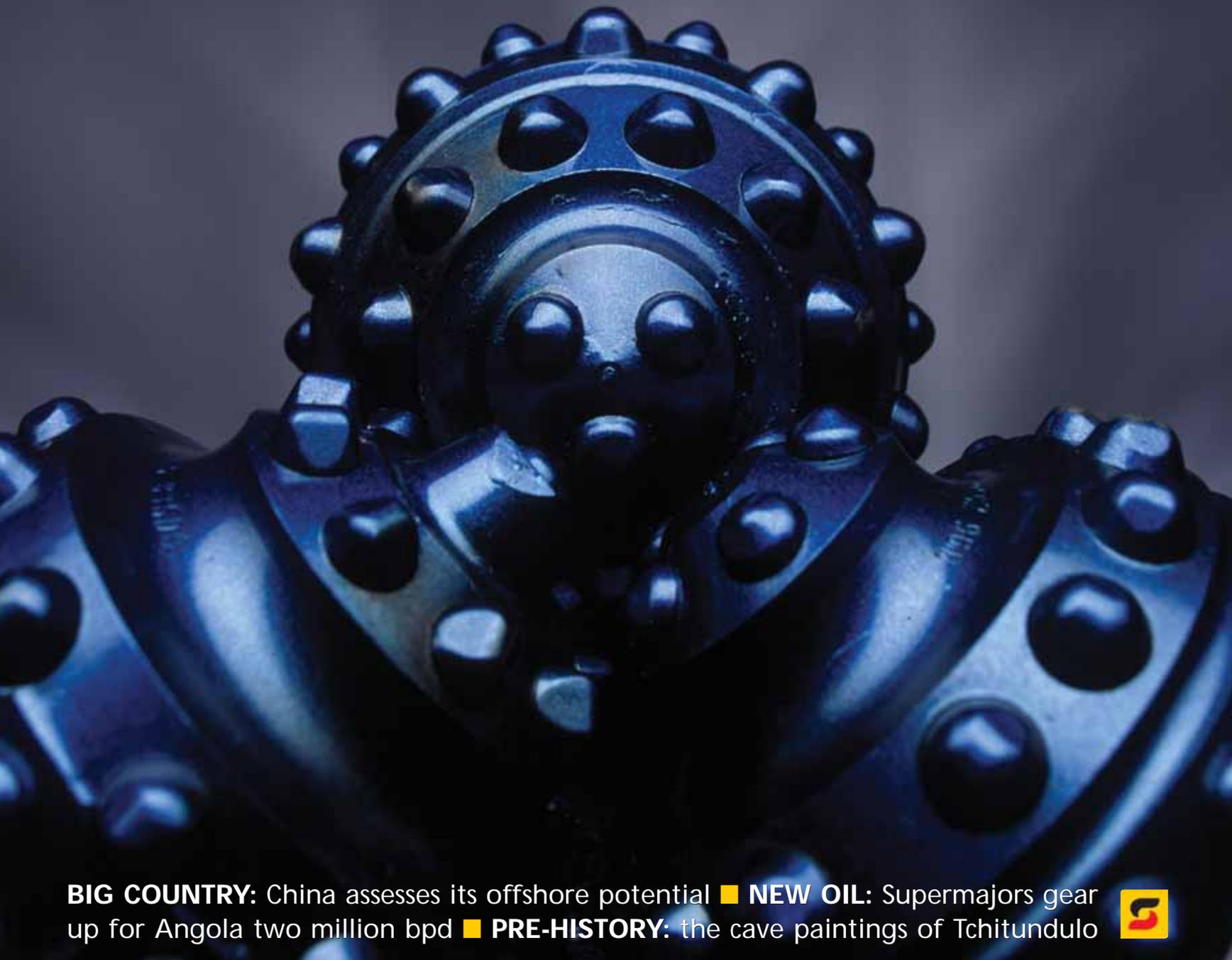


Sonangol

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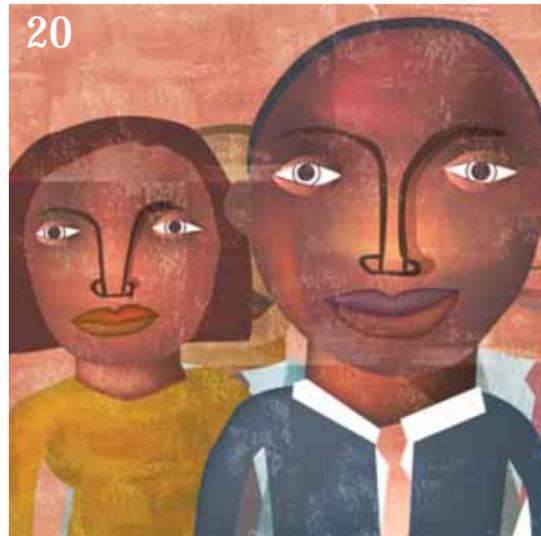
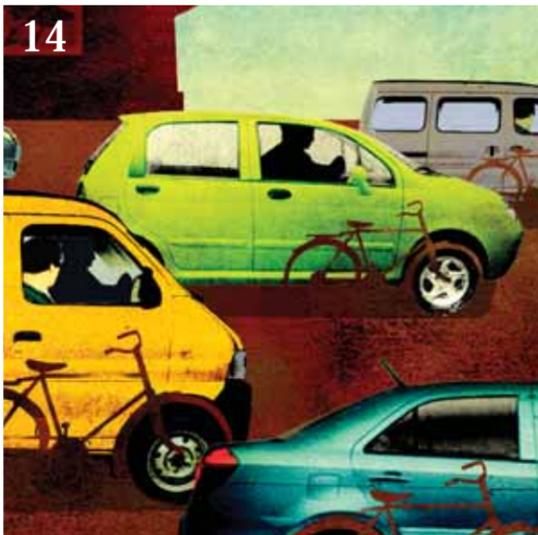
ISSUE 12 WINTER 2006



BIG COUNTRY: China assesses its offshore potential ■ **NEW OIL:** Supermajors gear up for Angola two million bpd ■ **PRE-HISTORY:** the cave paintings of Tchitundulo



INSIDE SONANGOL



8. Welded to the Future

The striking silhouettes that fill the skyline of the Sonamet fabrication yard at Lobito give little hint of the groundbreaking technologies and engineering expertise that that is creating them

14. China Syndrome

China's thirst for hydrocarbons is impacting on production areas such as Angola, but as its own potential supply catches up with domestic requirements, import adjustments will inevitably occur

20. After-hours Masterclass

Thanks to a unique global network, Angola's petroleum community enjoys an inside track to up-to-the-minute oil and gas technology from American and European centres of excellence

24. Big Five

Every visitor to southern Africa has heard of the Big Five – and offshore Angola, the world's "big five" oil-majors stalk their prey at ever greater depths

INSIDE ANGOLA



32. Into Africa

Ravishing country, spectacular waterfalls, a phalanx of giant boulders and welcoming people are just part of the promise of Malange

38. A Peep into Prehistory

As Angola focuses on building its future, it is also important that the country takes care to preserve the fascinating and beautiful remnants of its past

42. Up, Up and Away

A groundbreaking loan package brokered by Angola's banking institutions is set to transform the national airline and pave the way for a new, wide-bodied fleet

46. A Sporting Chance

Once a recreation available only to Luanda's elite, tennis now offers a bright future for kids from the capital's backstreets, thanks to an innovative training scheme

50. Safe Haven

Following the initiative of a Luanda community-based project, the Angolan government is investing in an ambitious programme to set up crèches in eleven provinces

Future Promise

One day, there will be no more oil beneath the waters offshore Angola. The wonders of engineering created to extract it will have sailed away or been dismantled, and the technology turned to other projects.

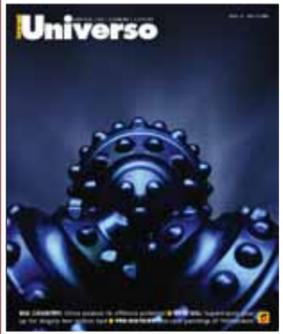
For the moment, this quest to draw the hydrocarbons from the depths is focused not just on financial gain, but to invest in skills, training and expertise that will leave a permanent heritage for the people of Angola.

In this issue we focus on the increasing scale of the programmes for fabrication of offshore structures on Angolan soil, and the sharing of know-how by the exploration companies and their contractors.

This is a two-way process because the international service companies appreciate the talents of their Angolan workforce which comprises a growing proportion of local skilled labour, working to the highest standards demanded by the industry while employers are becoming more involved in training initiatives to bridge the skills-gap with locally-qualified staff.

Away from the pressures of the oil industry, Angola continually holds the ability to surprise. The breathtaking Calandula Falls and the Stones of Pungo Andongo in Malange Province are attractions that elsewhere would draw a throng of tourists, but here they exist to be enjoyed in a serene uncommercialised, setting, along with Angola's unique indigenous pre-history, which itself constitutes a timeless gift to the future.

--The Editor



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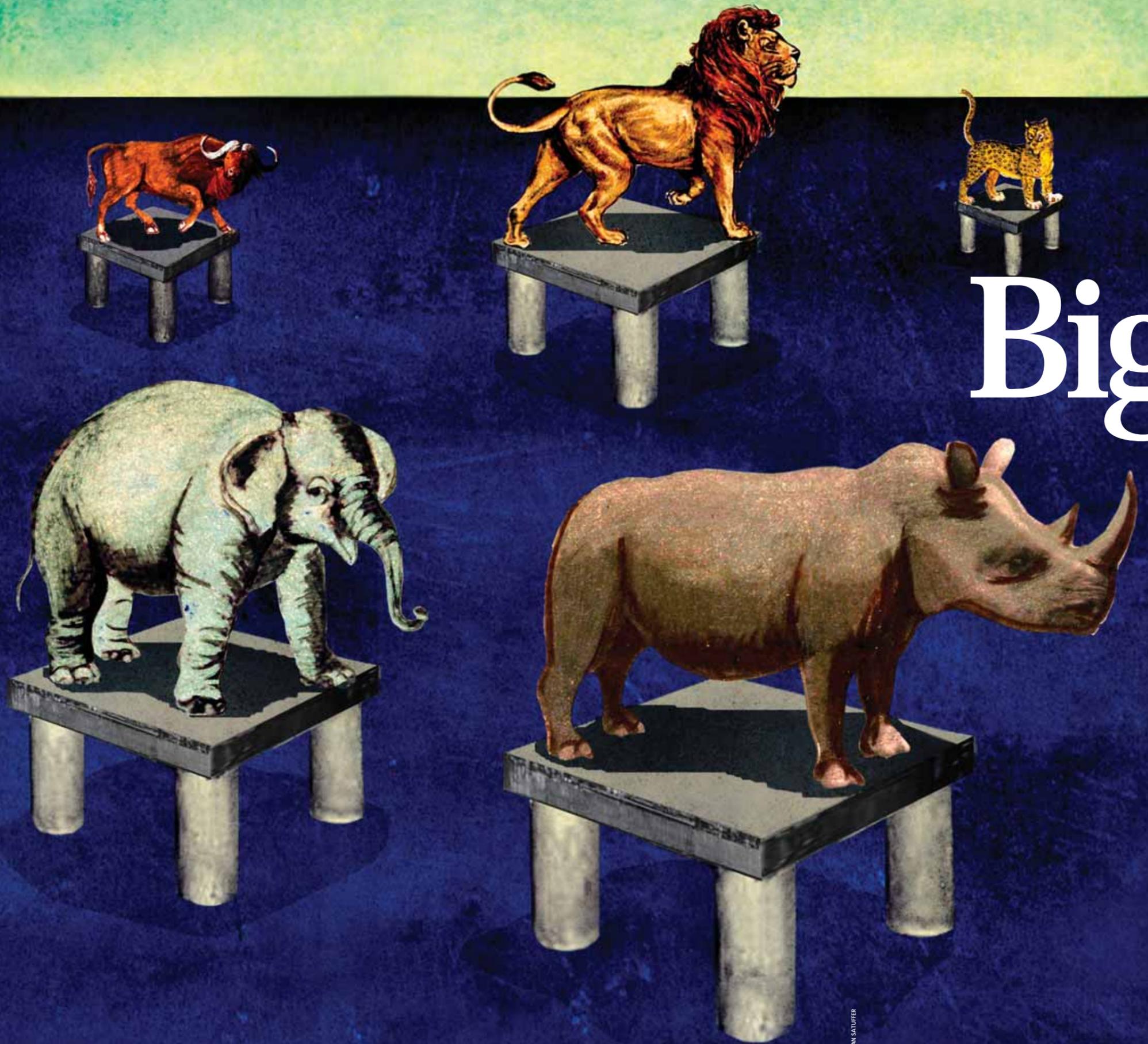


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Every visitor to southern Africa has heard of the Big Five – and offshore Angola, five of the world's oil-majors stalk their prey at ever greater depths

Big Five



The sobriquet coined by big game hunters to describe their five most sought after quarries: the lion, elephant, buffalo, leopard and the black rhinoceros is the Big Five.

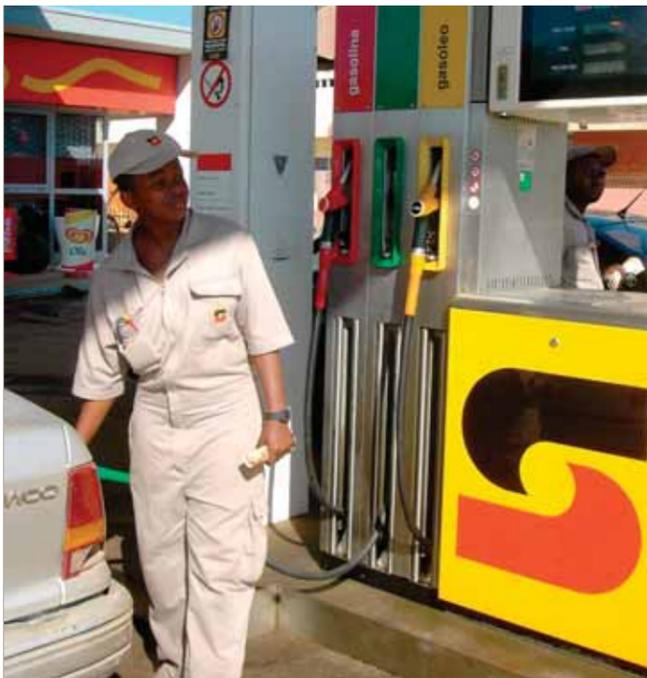
Angola's "big five", the oil majors Sonangol, BP, Chevron, Esso and Total, are equally potent in their appeal as they repeatedly overcome new frontiers of technology, probing the country's offshore oil provinces to extract the riches from far beneath the ocean bed.

For each one, the last 12 months has been significant in the shape of projects advanced and aims achieved on the way to hitting the two million barrels of oil per day (bpd) goal that is now clearly on the horizon.

Events such as the epic bonuses offered during the highly-public bidding round earlier this year, and the arrival on the scene of China as Angola's biggest oil customer, give notice that Angola is a leading player on the world oil stage, while the scientific and engineering breakthroughs involved with exploration and construction to access the deep water are bringing untold benefits of technical expertise.

Led by the big five, the exploration and oil service companies also contribute generously to the development of Angola, contributing millions of dollars for social and infrastructure projects, providing jobs and giving personal commitment to improving the lot of people across the country.

BRIAN SATUTTER



SONANGOL

For a visitor arriving on an oil platform or other installation 30 years ago, probably the last person likely to welcome them would have been an Angolan engineer or technician.

Today Sonangol, Angola's national oil company, is a major force in the country's offshore fields, with shares in some 12 blocks and the operatorship of one of them through its subsidiary Sonangol P&P.

In addition to its exploration and extraction activities, the company markets its oil worldwide through sales offices in Asia, London and Houston. It owns a tanker fleet and an airline, and through a family of more than 20 subsidiaries and joint venture enterprises in Angola is involved in oilfield services, fabrication, logistics, product distribution, marketing and engineering.

Established in the early days of independence, Sonangol had to balance these activities with the role of concessionaire, but now that has changed and the company is free to be a bona fide oil operator, and a genuine player in upstream activities.

From its beginnings, the company focused on forming strategic relationships with other entities to facilitate the transfer of skills and education, urgently needed to foster the development of Angolans in the early days following independence. Now Sonangol administers a

comprehensive scholarship programme that enables hundreds of young Angolans to attend universities and specialist training establishments all over the world.

As its new prestige headquarters rises on the Luanda skyline, Sonangol can look forward to an increasing stature on Angola's oil scene.

BP

As a comparative latecomer operator in Angola's equatorial waters, BP has yet to produce its first oil. Though already a partner in blocks 15 and 17, it was through the acquisition of Amoco's interest in Block 18 that the oil super-major recognised the potential of Angola's deep water.

Following in the footsteps of Amoco, BP initiated a new campaign in Block 18 which yielded a total of eight oil and gas discoveries of commercial interest – and the fantastic promise of Greater Plutónio was revealed.

Covering almost 5,000sq.km in the southwest corner of Block 18 at depths varying from 500 to 1,500 metres, this was a major find that demanded a huge commitment of expertise and resources.

Together with partners SonangolSinopec International, BP as operator has run an impeccable programme to develop the asset, which involves a single floating production, storage and offloading vessel (FPSO) drawing

crude oil and gas from wells spread over an area the size of Greater London.

Built by Hyundai Heavy Industries, the 55,000 deadweight tonnes monster which is 310m long and 58m wide is designed to process 240,000bpd and store 2 million barrels. It is expected on station in February 2007, to receive first oil due to flow that year.

The company is committed to using local suppliers and service industries, and a feature of this project is the amount and type of work that has been executed in Angola, where international and local contractors have been gratified by the high standards achieved.

BP is one of the world's most experienced upstream companies and Greater Plutónio one of the biggest finds offshore Angola in recent years. But as the momentum builds towards flowing first oil, its big sister, Block 31, and further development in the western area of Block 18, could see the company become one of the country's largest producers.

CHEVRON

In a sense, Chevron is Angola's "oldest kid on the block", having begun its relationship with the country in the 1930s when its heritage group Texaco began selling its own branded products here.

In 1966, the first oil was discovered in the legendary Block 0 by the Cabinda Gulf Oil Company (Cabgoc). During more than 40

years, the company has consolidated its position with the discovery in 1997 of the Kuito Field in Block 14, and no less than nine other commercial fields since then.

In 2000, Chevron began work on the concept of Angola's first liquefied natural gas project: Angola LNG. The new plant will be built at Soyo on the mouth of the Congo River. It will process gas from Chevron-operated blocks 0 and 14, as well as from areas operated by others in blocks 15, 17 and 18, from which up to 30 million cubic metres of associated and non-associated gas per day will be fed by pipeline to the plant.

Construction is due to start in 2007, and the first processing train will have a production capacity of some 5 million tonnes per year, destined for Atlantic basin markets and for development of the domestic market in the Soyo area.

Sonangol and Chevron are the co-leaders of this project, for which construction and fabrication contractors will include local companies. Another Chevron flare-eliminating initiative is the \$1.9 billion Sanha Condensate Project. Based around one of the world's largest FPSOs, the aim is to recover condensate and process liquid petroleum gas (LPG) for export and to inject LNG back into the reservoirs to maintain pressure and increase ultimate recoveries.

The Sanha FPSO carries the largest distillation column ever mounted on a ship, and the



Waiting in the Wings

Angola's 2006 bidding round brought several newcomers onto its offshore stage, and one significant entrance was made by Sonangol's transatlantic cousin, Petrobras.

In fact, Petrobras began its operation in Angola in 1979, almost 30 years ago, and has continued to be involved in the development of the country's oil industry through ongoing exploration and production contracts in shallow-water oil extraction on Block 2 in the Lower Congo Basin and its 30 per cent share in the exploration of Block 34.

This last block is close to areas in which significant discoveries have already been made, thus encouraging the company's continuing search, with two exploration wells already drilled.

In the recent licensing round, Petrobras booked four blocks, three of them as operator in partnership with Sonangol: Block 6/06 (40 per cent), Block 15/06 (5 per cent in partnership with Eni as operator), Block 18/06 (30 per cent) and Block 26 (80 per cent). On Block 15/06, Petrobras has a 5 per cent share in partnership with Eni as the operator.

As part of the deal, Petrobras and its partners will contribute approximately \$265 million for social projects, as well as university scholarships from contractor groups.



Sanha platform gas compression totals 198,000hp. This one project will eliminate around 41 per cent of Block 0 gas flaring compared with 2003 flared volumes.

In 2005, Chevron completed the first phase of its Benguela-Belize, Lobito-Tomboco project, which includes a 512-metre compliant tower drilling and production platform – among the top-ten tallest man-made structures in the world.

First oil from phase 2 was delivered in June 2007, and ultimately the field will handle a production of approximately 200,000 bpd with zero water discharge and no routine gas flaring. Chevron is now moving forward with its next mega-project at Tombua Landana.

Several key components for the projects were fabricated by Sonamet, including the Bomboco platform topsides and portions of the Lobito compliant tower. In addition, 130km of subsea pipelines were fabricated by Sevenseas Angola at its new spoolbase at the Sonils facility in Luanda.

ESSO

In 2004, Esso's Kizomba A tension leg platform (TLP) arrived in Luanda Bay, en route to Block 15. It was the first twin component of the company's design-one-build-two strategy which duly saw her sister delivered to start production in the Kizomba B field in July 2005.

Now Esso Exploration Angola, as operator, together with Sonangol and co-venturers BP, ENI and Statoil, have begun construction of the Kizomba C deepwater project – the next significant stage of development of Block 15.

Block 15's reservoirs lie some 500 to 2,000 metres below the ocean floor in water depths ranging from 700m to 1,500m, approximately 370km north west of Luanda.

Kizomba C will develop the Mondo and Saxi/Batuque fields which are estimated to generate new production of 200,000 bpd, utilising two external-turret moored FPSOs that are able to weathervane subject to current conditions and climate.

The Mondo field, consisting of three oil reservoirs to be developed with ten production wells and seven water or gas injection wells, will be first on line. Batuque has two oil reservoirs that will be developed with four producing wells and four water injection wells. The Saxi field is a single reservoir that will have five production and six injection wells.

Much of the umbilical fabrication will be done by Angoflex at their facility in Lobito, while manifold fabrication will be undertaken by Sonamet, also in Lobito.

Flowlines will be fabricated at the SevenSeas Angola reelbase at Sonils, and a new facility will be developed there for flowline end terminations. Petromar in Soyo will fabricate the FPSO suction anchors as well as some of the modules.

These FPSO turrets will be the first fabricated in Angola at Sonamet. End-to-end, the massive, turreted FPSOs will stretch about three football fields, and from keel to their top-most reaches to a height of a ten-storey building. The FPSOs will each be able to receive and process oil at 100,000 bpd, and will have a storage capacity of almost 2 million barrels.

The project will operate jointly with Sonangol, with priority given to training and staffing with Angolan workers – important because these production facilities offer an excellent base for developing the skills of local

engineers. For the next two years, up to 70 Angolan employees will have the opportunity to learn new construction/fabrication skills as part of the initiative

Kizomba C represents the highest local fabrication content of any offshore Angolan project operated by Esso to date.

TOTAL

Total can boast a truly special connection with Angola's oil history. Its forebear, PetroFina, was instrumental in making the country's first significant hydrocarbon strikes in the Kwanza Basin in 1952 – in what is now a southern suburb Luanda. Six year later in 1958, Fina opened the Luanda Oil Refinery to the north of the capital.

In the period 1996 to 2002, Total came through with a series of 15 discoveries in the deep offshore Block 17 – and the ocean bloomed with a group of fields which the company chose to name after flowers: Tulipa, Jasmim, Orquidea and the prolific Girassol.

Total's commitment to Angola has endured through political, economic and social upheavals, combining technological excellence with a capacity for managing large-scale projects which trod the very edge of known technology of the day, as it advanced into the ever deeper waters offshore Angola.

By 2006, Total was responsible for the first five discoveries in the ultra-deep Block 32 in depths beyond 1,500 metres, just as two more fields flowered with the names of Dalia and Rosa in Block 17

The four main reservoirs of the \$3.6 million Dalia field, buried some 800 metres below the seabed, were formed more than 25 million years ago by the outpouring of sediment from the Congo River.

Total and its Block 17 partners, including Sonangol, have designed one of the largest deep-offshore developments in the world, and when the drilling campaign is finally completed, 67 highly deviated wells (some almost horizontal) will have been drilled. Dalia's 300-metre long FPSO will eventually deliver up to 240,000 bpd, boosting Total's total Angola output to around 500,000 bpd.

Girassol and Dalia have spurred major technological innovation, not least in the extraction of the viscous oil from the relatively low temperature turbiditic reservoirs, and all the projects lift Angola as a world reference for deep offshore prospecting.

The lasting benefits to Angola will be realised in the creation of a solid, in-depth and well-informed industrial and scientifically experienced community that can thereby enjoy the security of a soundly-based social and economic structure. ❖



Big Five Shares

	Block	Share
BP		
	15	26.67
	17	16.67
	18	50
	31	26.67
Chevron		
	0	39.2
	2	20
	14	31
	Soyo onshore	16.33
Esso		
	15	40
	17	20
	31	25
	32	15
	33	45
Total		
	0	10
	2	27.5
	3/85-91	50
	14	20
	17	40
	31	25
	32	15
	33	15
	Soyo onshore	32.67
	Soyo onshore	49
Sonangol		
	0	41
	2/05	100
	2/85	25
	3 Canuku	100
	3/05	25
	4	50
	10	20
	14	20
	18	50
	19	20
	20	20
	24	20
	31	20
	32	20
	33	20
	34	20
	Cabinda North onshore	20
	Cabinda Central onshore	20
	Cabinda South onshore	20
	Soyo onshore	51

Bold denotes Operator

INSIDE ANGOLA



With the coming of summer, Luandans begin to cast longing eyes across the bay to the Ilha. Together with the cooling sea breezes from the Atlantic Ocean, its shady umbrellas offer the chance escape the heat of the city, to gossip at beach bars and restaurants and listen to the gentle slap of the waves upon sand. But for others, the countryside beckons with blue skies, distant horizons, exotic flora, wildlife and the ubiquitous baobab, which as the years of peace roll by, all seem slowly to be returning to reclaim the streams and bush.



Ravishing country, spectacular waterfalls, a phalanx of giant boulders and welcoming people are just part of the promise of Malange

As far as one can see, the undulating terrain is golden brown, that special shade of demerara sugar. Scattered across the landscape, the acacia and baobab trees add a splash of bright green, the latter with its fruit dangling on pendulous stems. Here and there bright orange flecks at the base of languid ribbons of smoke mark the seat of fires – either spontaneous combustion of the dry bush or maybe lit by farmers to keep the snakes at bay.

This is Malange province, the low scrub toasted by long sunny days and the roads cratered with potholes that could swallow a car. But that is not a fear of our small group as we head east across the high plain with the afternoon sun sinking behind us and our sturdy four-wheel drive ploughs on towards the important regional capital, Malange city.

Into Africa



From a distance of 50km, the gigantic Stones of Pungo Andongo, some rising to 1,200m out of the featureless plain, look like a row of black misshapen teeth.



PHOTOS: PMP GLOBAL

Having departed Luanda in the mist of the early morning, we are now some 250km from Angola's Atlantic coast and climbing steadily into the interior. Eastwards, the heartland of southern Africa stretches 3,000km or more to the Indian Ocean. Not that we are going that far today.

Our three-day excursion is more modest: Malange city, the Calandula Falls and the 1,000m escarpments that loom over the Cuango River valley. Mario Pinto, our leader and director of the Luanda-based tour organisers EcoTur, spent much of his childhood in this western part of the province.

"Before Independence and the upheavals that followed, almost all of this area was under cultivation," he says, waving at the wild country that nature has clearly reclaimed as its own. "The railway to Malange was the main transportation link for people and freight, and to deliver the produce of the plantations and farms to the port of Luanda." This would have been mainly cotton and coffee, the latter then being Angola's principal export, making the country the world's second largest single producer of this commodity.

Today, Malange is best known as the home of the *palanca negra*, the Calandula Falls, and the Kapanda Dam. The province is rich in agricultural history and potential, and though the centre of the Portuguese cotton industry in colonial times, the resettled communities are now focusing on food crops such as cassava, maize, sweet potato and groundnut.

Many of the country's best-loved native fruits are abundant here, such as *Maboque* and *Jinguenga*, and the province also boasts an extension of diamond mines for which the neighbouring provinces of Lunda Norte and Lunda Sul are best known.

For Angolans, the popular expression about the people from here is "*Malanjinhos não pagam renda*" (people from Malange don't pay the rent) – implying that those from Malange are either irresponsible or too poor to pay rent. However, an expanded Maljinho version of the expression goes: "*Malajinhos não pagam renda, constroem*" (people from Malange don't pay the rent – they build).

As we bump and jolt along the baked road, the only crops we can see are manioc, cultivated by the local people, and bananas that grow all year round in this climate.

We stop at the edge of a small village, which seemed to suddenly spring from the surrounding bush. Small children smile and wave, small

goats and even smaller pigs scatter between the low mud huts. We sip a cool *Cuca* (the local beer).

After the roar of the car engine, the silence now is deafening – and even the ball of dust that is gradually metamorphosing into a truck several kilometres in the distance as yet has no sound.

Two men are walking along the road towards us: José and António on their way home after a day collecting wood for their charcoal pit in the bush. Their hands are rough and deeply pitted.

"We've got a big pile burning today," says José. "It will make good money when the truck comes to collect next week." We give them both a beer as they go happily on their way. Life is far from easy in these parts, but the people almost always wear a smile and are ready to talk.

The first night sleeping in the open African bush is an intense personal experience. This vast landscape with its strange sounds and unfamiliar scents seems to belong just to you.

But as we pitch our camp above the falls, complete with camp fire, it has a distinctly clichéd atmosphere, reminiscent of a hundred Hollywood movies, with the thunder of tumbling water drowning even the noise of cicadas. Looking up from the tent entrance into the clearest of skies, the Milky Way and the Southern Cross dipping towards the horizon is almost within arm's reach.

Sunrise reveals the crescent-shaped Calandula Falls in all its sparkling glory. A fine mist, accompanied by its permanent rainbow, is bright in the early sun. In contrast to the shrivelled bushes around our camp, the gorge into which the water of the Lucala River is tumbling more than 300 metres is emerald-green with an abundance of plants and mosses nourished by the flying moisture.

From a primitive viewing point our eyes follow the river into the distance on its way to join the Kwanza River some 200km westwards. There are no other people here – our group is the only human presence, with this superb spectacle all to ourselves.

"It's amazing," says one member, well travelled to many world tourist destinations. "Anywhere else there would be other visitors and the facilities to cater for them."

Eventually, leaving the falls to themselves, we head towards Malange city, passing by the imposing mission at the small town of

Calandula, which was built by the Portuguese in 1958. At the time, this was a thriving agricultural community but now many of the buildings in the main street, including a former cinema, are deserted shells, abandoned as the population fled the hostilities for the comparative safety of Malange city.

This major regional centre has also seen better days. While much of the attractive Portuguese colonial architecture is more or less intact, many public buildings are much in need of refurbishment, which is now being put in hand – to judge from the many properties surrounded by builders' hoardings.

One gleaming exception is the *Palacio Regina Hotel* – a stylish establishment that has only recently opened its doors to welcome the growing band of businessmen and other executives who are travelling to this expanding commercial centre. Restored to good 4-star standard, the Regina is one of two new hotels in the city.

"Malange is the gateway to Lunda Sul province," explains Tania Martinho, the youthful hotel director. "The city is roughly mid-way between Luanda and Saurimo [capital of Lunda Sul]. The airport is well served by flights from all over the country and, when it reopens next year, the railroad will give a direct connection to our capital."

At present, the city serves as a well-placed meeting point for the trade in diamonds coming down from the north east, where they are either mined from "pipes" or dug from riverbeds. Buying and selling diamonds is carefully supervised by the Angolan government, but dealers routinely travel as far as

◀ POSTCARDS FROM MALANGE

The stones of Pungo Andongo: A smiling welcome from the villagers of Caculama

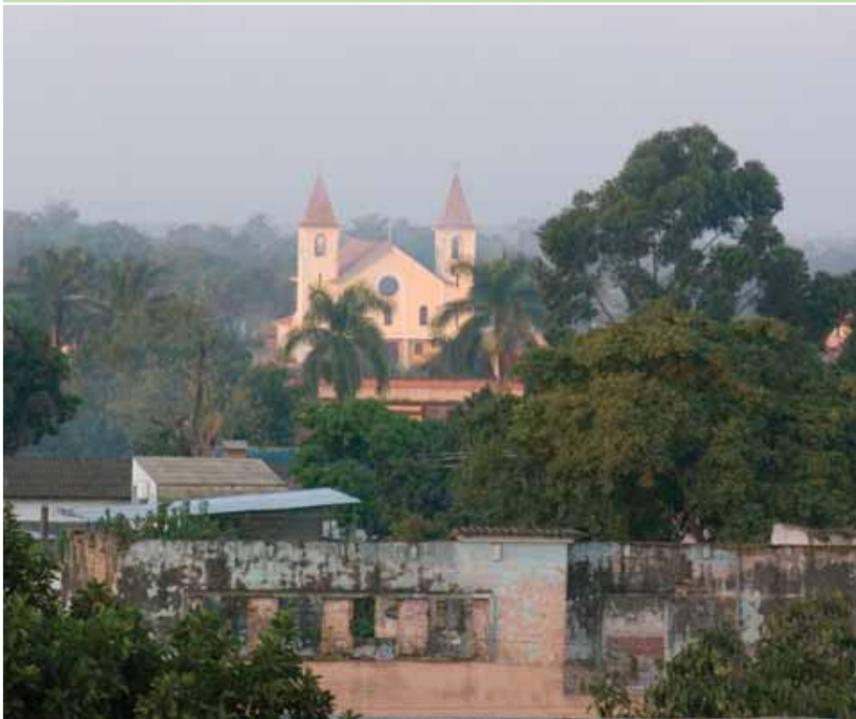
▽ The *Palacio Regina Hotel*, Malange city





“The real turning point will come with the reopening of the rail link, which will mean easier transport of materials from the port of Luanda – and local produce from Malange to the capital!”

Manuel Lopes Teixeira, Manager, Banco Africano de Investimenti



Malange to meet traders coming from the diamond fields.

“Travel in that direction has its problems, especially in the rainy season, so Malange is a very convenient place to meet and do business,” says Ms Martinho.

Many parts of the city bear sad witness to the recent civil war, but with the coming of peace things are definitely looking up again. New paint is much in evidence along the once drab facades of the main street, while between the trees of the suburbs the occasional architectural jewel can also be glimpsed.

“The new airport hotel is a strong indication of how things are improving,” says Ms Martinho, who trained in hotel management in Europe. “More hotel rooms will encourage more visitors, though there are still problems in getting even simple building work done due to the transport infrastructure,” she adds.

Water distribution is a problem, though it is clean, while basic materials such as sand often have to be brought all the way from the coast by road. But another sure sign that things are getting better is the return of the banking system. The Banco Africano de Investimenti (BAI), Banco de Formento Angola, and Banco de Comercio e Industria have all recently opened branches in Malange.

“Business has boomed beyond all expectations,” says Manuel Lopes Teixeira, the newly arrived BAI manager. “Right now we are doing a lot of trade with the retail sector: shops, restaurants and the like – but our target is the construction industry and the regeneration of agriculture.

“The real turning point will come with the reopening of the rail link, which will mean easier transport of materials from the port of Luanda and the return delivery of agricultural and other produce to the capital. Malange could develop as a significant logistics hub,” he points out.

Another long-time absentee, Mateus da Costa, has also returned after 22 years to open an industrial bakery. “It’s simple: whatever you bring here will sell,” he says. “All we need is reliable transport. For me, a dependable supply of flour is absolutely key.”

Bright though the future may be, the signs of the military action that ravaged this fiercely contested area are not hard to find. The once idyllic and prosperous estate of the *Missão Evangelica Metodista do Quessua* is now derelict. There were fields of corn, peanuts and sweet potatoes and groves of orange, lemon

and tangerine trees – as well as a hospital and theological college. All that remains is the mission church and school.

The nearby *Casa do Gaiato*, a Catholic orphanage presided over by Padre Telmo, is in a happier position. Having been rehabilitated, it is now home to some 200 boys. Education up to primary level is undertaken by the older children who themselves aim to leave with a practical trade.

“The estate covers some 20,000ha [about 49,420 acres],” the padre explains. “We have an artificial lake and grow crops of cotton, maize, beans and sunflowers, as well as some coffee for our own use.” A feature of the property is a magnificent avenue of avocado trees that leads from the main entrance to the central square, where children play spirited games of football.

Leaving the city behind we travel east to the town of Caculama, which takes its name from a local river, along which fields of cotton and sunflower were the municipal bounty under the Portuguese but are today smaller plots where farmers plant what they eat: beans, groundnuts, cassava, maize and sweet potato.

The Cuango River is a tributary of the Congo, which it joins at Bandundo city in the Democratic Republic of the Congo, some 800km to the north of the escarpment from which we look down into its wide valley, just to the east of Caculama. Gazing out over a panorama that must stretch more than 100km, our vantage point also overlooks the village where in 1974 an atrocity that took the lives of

more than 600 people was one of the sparks set to the tinder of Angola’s revolution.

Turning finally to retrace our route to Luanda, one more wonder is waiting: the Stones of Pungo Andongo. From a distance of 50km, this freak geological formation of gigantic boulders, some rising to 1,200m out of the featureless surrounding plain, look like a row of black misshapen teeth.

As we approach, Mario Pinto carefully follows the track that leads through a steep pass, and we find ourselves in a natural amphitheatre over half a kilometre across and completely enclosed by the huge rocks.

“This was once a Portuguese regional HQ,” he explains. “In fact, my uncle was the local governor for a while, and I spent many childhood holidays here.” The governor’s residence, still inhabited, stands in the shadow of one of the giant rocks, surrounded by its small community. “Only one road leads through here, and the rest of the world just might as well not exist,” Mario reflects.

As we picnic in the shade of a spreading avocado tree, once again we are conscious that the place is devoid of any other visitors, though according to Mario it was once filled with the sound of families and their caravans coming here for a weekend away from their urban lifestyle.

For just four days our expedition enjoyed what is now a rare pleasure: to have to ourselves a place of such scenic beauty offers a potent hint of what could be possible for a future tourism industry. ❖

◀ Casa do Gaiato Orphanage: the early sun picks out the delicate lines of a Malange church

▽ The dusty road to Malange city

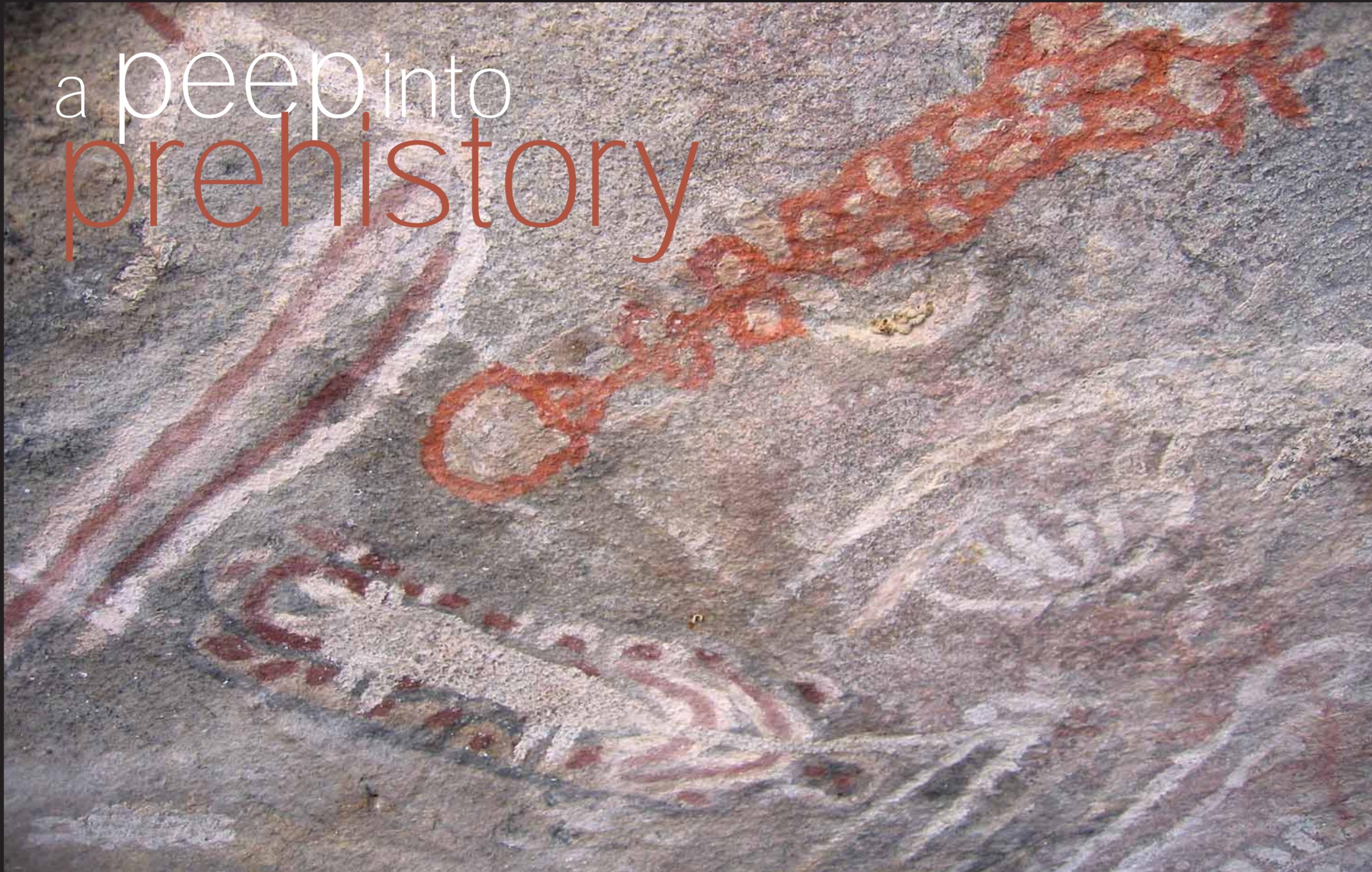


José do Telhado

In a field not far from Caculama is the monument and resting place of José do Telhado who was exiled to Angola from Portugal in 1861 as a prisoner, convicted of murder and robbery. Having served as a military sergeant he had become a revolutionary and eventually took command of a band of thieves – and is said by legend to have extended his efforts to correct injustices in the society around him, in particular, robbing the rich and giving to the poor.

Zé do Telhado (literally, Zé of the Rooftop, a possible referral to his tactic for entry into wealthier homes) ended his days in Malange as a trader in rubber, ivory, and beeswax, settling down with an Angolan wife by whom he had three children before he died in 1875.





a peep into prehistory

As Angola focuses on building its future, it is also important that the country takes care to preserve the fascinating and beautiful remnants of its past

Somewhere at the foot of a steep rock face, hidden away within the depths of the landscape of dry shrubs and vast planes of southern Angola, there is a treasure which tells tales of long ago.

But the red, brown and white markings on the ceiling of a deep grotto, depicting creatures some of which are extinct today, leave even the experts guessing who might have created these images and exactly what they mean.

These are the rock paintings of Angola's south-western Namibe province which, along with the engravings marked out on the rock just a few kilometres away, are considered to be among Africa's most important archaeological legacies.

Few experts have visited the site, but radiocarbon tests carried out by Portuguese and South African researchers put the images at more than 20,000 years old.

"These rock paintings and engravings are of absolutely prime importance, and they are the subject of great interest for a whole host of reasons," enthuses Alcides Gomes Cabral, provincial director of industry, commerce and tourism in Namibe. "They are of interest for cultural purposes, for



SET IN STONE

Enigmatic images send their message from the stone age

researchers, for anthropologists and for those fascinated by or researching social history in Africa," he adds.

The only way to get to the site is in a four-wheel drive, and with an expert guide who can find his way through the lunar landscape, craggy rocks and dusty tracks that count for roads in this part of Angola.

In fact, the rock paintings would be easy to miss if it were not for the rusty railings and small stone plaque that flag the entrance to this cultural and historic place.

Some of the illustrations are astonishingly pristine in their depiction of animal life, with turtles, antelopes and other mammals clearly visible. Visitors can take an educated guess

about the other paintings which stretch from one side of the cave to the other and almost cover the ceiling.

Those who have seen other rock paintings on the continent and further afield are often astounded by the clarity of these Angolan specimens.

"I've seen rock paintings elsewhere in Africa, and in some cases you really have to strain to make out anything at all," says one of the few tourists to have visited the site. "But these illustrations are incredibly well-preserved. They look almost new and it is easy to make out some of the animals."

Clarity, however, does not necessarily tell the full story. While tourists are kept guessing, locals are calling for more experts to make the long journey into this remote part of Angola's interior, to take a look and tell them more.

"We would really like researchers to invest more time in finding out about the communities who lived here all those years ago," says Mr Gomes Cabral.

"This is vital to learning more about our cultural history and identity, but it is also potentially important as the province develops its tourism industry," he adds, clearly passionate about this special place.

The same goes for the engravings, situated in their scores on a sloping rock face a short drive away from the paintings.

The searing dry heat absorbed and generated by the stone underfoot makes it difficult to walk up the hill at more than a snail's pace. But it is well worth the effort, as examples of the primitive artwork soon come into view.

From swirling symmetrical patterns and squiggles to more elaborate designs, the further up the hill one goes, the more of these engravings there seem to be and, at some stages, the rocks appear to be almost awash with them.

But locals say this is potentially just a small example of what might be found, with the province believed by some to be full of such treasures. "I'm sure there are a lot more engravings and paintings in this area that haven't been discovered yet," says tour guide and keen conservationist Alvaro Baptista, who often comes to view the art.

"I'd really like to take the time out to look around, but I'd have to spend several days here, camping, to really explore the hills properly," he adds.

As one of the people who know these sites best, Mr Baptista has also discovered what he



"I'm sure there are a lot more engravings and paintings in this area that haven't been discovered yet."

*Alvaro Baptista,
guide and conservationist
(left)*

believes to be the remains of an ancient village high up on the hillside. It does not take a lot of imagination to visualise a hamlet of four or five houses out of the piles of rocks and rubble in several circular formations, and the location certainly makes sense.

"This would have been an ideal spot for a hunting community to set up a base," he says, pointing to the view for miles around. "From here, they would have been able to see wild animals as they wandered around down below. They could have just sat in the shade of one of these boulders and waited for their dinner to come to them."

Ambling back down towards the foot of the hill, yet more of these captivating engravings appear, with areas so abundant that it is very easy to tread on them without realising. This openness is perhaps what is most wonderful about the way this ancient art is displayed, but it is also a serious concern.

Namibe's ancient rock paintings and engravings are unprotected and there for everyone to see, tread on and, unfortunately, potentially to steal. Souvenir-hunters and heavy feet have already damaged some of the engravings, and conservationists fear their very existence could be under threat.

"Of course, it is great to be able to get so close to our heritage. But bits of the engravings have already gone missing and it can't be good for their protection if people continue to walk all over them," says Mr Baptista.

The authorities recognise this is a serious

issue, and moves are afoot to designate this unique example of prehistoric art and life into a world heritage site on a par with other great treasures.

"This is art, but it is also about the history of man so it is absolutely essential that we create mechanisms to get it protected. The government would like to see Unesco register these paintings and engravings," says Mr Gomes Cabral. "It is absolutely vital for their long-term survival that protection measures are put in place." ♦

