



# SUN RESOURCES NL

ABN 69 009 196 810  
(INCORPORATED IN WESTERN AUSTRALIA)

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Monday, 24 July 2006

Australian Stock Exchange Limited  
Company Announcements  
Level 4, 20 Bridge Street  
SYDNEY NSW 2000

Dear Sir/Madam

**RE: JUNE 2006 QUARTERLY REPORT**

Please find attached the June 2006 Quarterly Report for release.

Yours sincerely  
**SUN RESOURCES NL**

A P Woods  
**Director/Company Secretary**

Copy: ASX Directors



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## **QUARTERLY REPORT FOR THE PERIOD** **ENDING 30 JUNE 2006**

24 July 2006

## HIGHLIGHTS

➤ **Eagle North #1, Eagle Oil/Gas Development Project, California, USA (10% interest)**

The Eagle North #1 well is targeting a stratigraphic trap containing 34 million barrels of oil and 58 billion cubic feet of gas (P<sub>10</sub> recoverable estimate). Drilling was terminated at 4,386 metres measured depth at the end of May to carry out production testing operations with a deep work over rig. These operations should commence late July and occupy the first half of August. Production testing is planned over 177 metres of indicated lower Gatchell oil sand from 4,209 to 4,386 metres measured depth in the horizontal leg of the well with completion of the well if confirmed as a producer.

➤ **Flour Bluff Gas Development Project , Texas, USA (20.000 to 24.167% interest)**

The Phase 2 development program, involving an 8 to 9 well program over 16-18 months, targeting 40.9 BCFe of 3P recoverable reserves delayed as a consequence of a back up in the Contractor's deep rig scheduling is due to commence end of September 2006 with the drilling of the FB #1 well on West Flour Bluff.

➤ **Project Margarita, Wandoo Joint Venture, Onshore Gulf Coast, Texas, USA (37.5% interest)**

Project Margarita, is the first specific project of the Wandoo Joint Venture consummated in December 2005. 25 leads and prospects have been recognised in prospective stratigraphic / structural settings at various depths ranging from 1,000 to 4,000 metres in 530 km<sup>2</sup> of onshore Gulf Coast, 3D seismic. Historic production and plays in the project area and environs are Frio and Vicksburg sands at <1,800 meters depth. Deeper Yegua and Wilcox sands between 1,800 and 4,000 metres are under explored and only 4 wells >2,400 metres have been drilled in the area of seismic coverage and were drilled pre 3D seismic. A number of the deeper targets are high impact Wilcox sands targets with 60 to 200 BCF gas potential.

During the quarter acquisition of the land underlain by shallow prospects by leasing and further reprocessing of the 3D seismic to high grade the current deep prospect inventory continued. Current emphasis is on commencement of up to a six well back to back drilling program of shallow Frio and Vicksburg prospects with an 8 to 10 BCF outcome in December quarter 2006. This will be a precursor to commencement of a drilling program on the more substantial individual deep 60 to 200 BCF potential prospects in mid 2007.

➤ **Malta Joint Venture**

Significant progress was made in March quarter 2006 on resolution of the maritime border between Malta and Tunisia. An Agreement between Malta and Tunisia was signed on 27<sup>th</sup> February 2006 for joint oil and gas exploration and exploitation in zones of the Continental Shelf located between Malta and Tunisia, which in part encompasses the western area of the ESA in Area 5. The exact coverage of the joint exploration and exploitation zone between Malta and Tunisia is being determined by a joint expert group with a deadline to present their conclusions to the two respective Ministers of Foreign Affairs by June 2006. Similar discussions between Malta and Libya are current on resolving the southern boundary issue in the southern area of the ESA, and it is hoped that a similar agreement will be forthcoming in the very near future to allow resumption of seismic activity before the onset of the winter season in the Mediterranean Sea in October 2006. In anticipation that matters will be resolved before the winter season Anadarko has been pro-active in seeking tenders for the seismic survey late September – early October 2006 on a seismic boat passing by basis.

➤ **Drilling Activity September Quarter 2006**

- Eagle North #1, California - testing of horizontal well for production end of July
- FB #1, Flour Bluff, Texas - development well West Flour Bluff end September 2006

## A. OIL AND GAS EXPLORATION

Sun Resources NL (“Sun Resources”) continued its active exploration/development programs during the quarter in mainly USA and Australia, with activity accelerating in the USA as a consequence of its cornerstone production investment in the Flour Bluff Gas Project in Texas which should generate significant cash flow in the future to fund the Company’s activities once the next development phase has been completed.

### 1. USA

Sun Resources increasing presence in the USA is due to excellent investment opportunities offered to small companies by virtue of the country’s voracious and ever increasing energy consumption, infrastructure, prolific hydrocarbon bearing basins and importantly energy pricing. Notwithstanding oil is priced at prevailing world prices (US\$70+ per barrel), gas prices per unit to the producer have been up to four to five fold flat Australian prices (US\$11-12 compared with \$US2.00-2.25) in December quarter 2005. Gas prices have come off considerably since that time to around the \$6 level reflecting seasonal demand. Notwithstanding this, it is expected future gas prices will continue to hold at high levels probably in the range US\$7-8 rather than at the extreme highs seen in December quarter 2005. Gas price is a reflection of the current (and growing) 4 trillion cubic feet pa gas imports over 19 trillion cubic feet pa gas production (23 trillion cubic feet pa gas consumption) that is being underpinned by the prospect of increased importation of liquefied natural gas (“LNG”) to satisfy demand.

Sun Resources current exploration and production emphasis is on both oil and gas in conventional geological settings, principally located in Texas (Flour Bluff Gas Project and Project Margarita on the Gulf Coast) and California (Eagle Oil/Gas Development Project in the San Joaquin Basin).

#### 1.1 FLOUR BLUFF GAS PROJECT, GULF COAST, TEXAS – 20.00 to 24.1667%

The Flour Bluff Gas Project is a substantial gas project involving the redevelopment of a near depleted giant gas field complex at Flour Bluff, on the outskirts of Corpus Christi, Gulf Coast Texas on 10,400 acres of leasehold land. This field has seen 1.3 trillion cubic feet of gas (“TCF”) production with 64 million barrels of oil (“MMBO”) over the last 65 years with past production coming from 40 separate reservoirs at shallow and moderate depths above 2,400 metres. These shallow reservoirs are now largely depleted, but significant reserves are present (to 210 billion cubic feet of gas equivalent (“BCFe)) in virtually undeveloped deeper reservoirs between 2,750 to 3,600 metres depth. It is these reserves that are being targeted in the redevelopment of Flour Bluff. Any produced hydrocarbons can be fed into the existing extensive project infrastructure for immediate delivery to customers under the prevailing high oil and gas price market existing in the USA. Sun Resources’ interests in the various fields comprising the project are now;

West Flour Bluff Gas Field	20.0000%
Pita Island Gas Field	20.0000%
East Flour Bluff Gas Field	24.1667%

#### Phase 1 of the Development Program

Phase 1 of the development program was completed mid March quarter 2006 and production equated to 5 million cubic feet of gas equivalent per day. This outcome dropped during the June quarter to just above 3 million cubic feet per day gas equivalent due to unexpected problems with two wells and disruptions caused by repairs to pipelines to the central gas processing plant. This production is still ahead of the independent expert Ryder Scott development plan schedule for the project and the project low of 1.9 million cubic feet /day production in June quarter 2005.

#### Phase 2 of the Development Program

Phase 2 of the development program was scheduled to commence in February 2006 with focus on where the reserves lie in the fields ie in the deep Frio J and K sands in both the East and West Flour Bluff Gas Fields. This program involves 8 new wells and a work over of a well over a 16 to 18 month period, targeting 40.9

BCFe of 3P recoverable reserves. Regrettably it has been delayed due to deep rig availability as a consequence of a back up in the Contractor's well scheduling. The start date is now on a first available rig basis, but with a firm commencement in late September 2006 on FB #1, the first well in the program.

Phase 2 of the Development Program will involve four new wells on the West Flour Bluff Gas Field (FB #1 to 4) and are essentially step outs from BG Webb #1 targeting Frio J and K sands. Four new wells on the East Flour Bluff Gas Field (D-23, D-26, D-27 and D-28) have different targets. D-26 and D-27 are essentially step outs from D-24 targeting Frio J sands. D-23 and D-28 are follow up of promising indications of remaining shallow potential from mud logs and wireline logs of D-24; ie D-23 targets the 2,500 - 2,600' sands, and D-28 targets the 8,000' sands. The Phase 2 program is within the 3P (Proved, Probable, Possible) reserve envelopes for both fields as verified by the independent expert Ryder Scott. Expected individual well reserve outcomes range from 4 to 7 BCFe. As per the outcome of the first development phase, success on the program will see an upward movement of Possible and Probable reserve categories into Proved and those in Proved Undeveloped into Proved Producing and Proved Behind Pipe. As previously mentioned the total 3P recoverable well reserves targeted in the program are 40.9 BCFe (36.5 BCF gas and 723,700 barrels of oil).

A review of the Phase 1 completion program on the BG Webb #1, Petty #2 and D-24 wells is being undertaken by the Operator during the current drilling hiatus with the work expected to be completed in August 2006. The aim of the program is to substantially improve flow outcomes from fracture stimulations of reservoirs in uncompleted reserves in these wells and future step out development wells, ie obtaining sustained 2 to 3 fold increases in flow outcomes (3 to 5 million cubic feet per day) from single and multiple completions of reservoirs. The Operator has suggested gross project production may get to 18 to 20,000,000 million cubic feet /day at end of Phase 2 with considerable upside to these projections if this program is successful.

## **1.2 PROJECT MARGARITA, ONSHORE GULF COAST, TEXAS (37.5%)**

Sun Resources strengthened its exploration activities in Texas, USA, on the highly prolific oil and gas prospective onshore Texas Gulf Coast through a ground floor Joint Venture with Wandoo Energy, LLC ("Wandoo") on an extensive 2D and 3D seismic data base covering portions of four main producing trends on the onshore Texas Gulf Coast in the December 2005 quarter.

It is difficult to work up plays and test new concepts in the USA without ready access to basic data, particularly seismic, the main tool used in oil and gas exploration. Generally this means a junior explorer must carry out his own speculative seismic surveys, usually 2D rather than the more expensive and superior 3D, or buy or licence seismic data from seismic brokers. The resulting consequence means exploration is expensive, restrictive and importantly the opportunity to generate worthwhile prospects and manage risk is extremely limited. Wandoo is an experienced, successful group of Houston based Gulf Coast geologists who have exclusive access to an extensive 2D and 3D seismic data base currently comprising 140 3D seismic data sets (16,300 km<sup>2</sup>) and 161,000 line kilometres of 2D seismic. Interests in the Joint Venture are Sun Resources 37.5%, Victoria Petroleum NL ("Victoria Petroleum") 37.5% and Wandoo 25%.

The Wandoo Joint Venture exposes Sun Resources to a choice of drillable prospects of various risked size potential on a ground floor basis. The Company can mitigate the drilling risk by farming out a portion of its current 37.5% working interest and its further right to an additional working interest in prospects. Importantly, conditional on performance of the Joint Venture in the coming six months and by mutual agreement with Wandoo, Sun Resources will have the right but not the obligation to participate in further joint ventures with Wandoo on other Wandoo deemed prospective onshore or offshore 3D and / or 2D seismic data sets in the Texas Area of Mutual Interest.

The first specific project in the Wandoo Joint Venture is Project Margarita where 25 leads and prospects have been recognised in prospective stratigraphic/structural settings at various depths ranging from 1,000 to 4,000 metres in 428 km<sup>2</sup> of 3D seismic. Historic production and plays in the project area and environs are Frio and Vicksburg sands at <1,800 meters depth. Deeper Yegua and Wilcox sands between 1,800 and 4,000 metres are under explored and only 4 wells >2,400 metres have been drilled in the project area and were

drilled pre 3D seismic. A number of the deeper high impact Wilcox targets to 208 BCF gas potential have been recognised.

During the quarter land acquisition by leasing and further reprocessing of the 3D seismic to high grade the current prospect inventory continued. Current emphasis is on commencement of up to a six well back to back drilling program of shallow gas prospects with an 8 to 10 BCF outcome in the December quarter 2006. This will be a precursor to commencement of a drilling program on the more substantial individual deep 60 to 200 BCF potential prospects from mid 2007.

### **1.3 SAN JOAQUIN BASIN, CALIFORNIA**

#### **1.3.1 EAGLE OIL/GAS DEVELOPMENT – 10.0% INTEREST**

The Eagle Oil/Gas Development Project is targeting a stratigraphic trap containing 34 million barrels of oil and 58 billion cubic feet of gas (P<sub>10</sub> recoverable estimate) in the Eocene age Upper and Lower Gatchell Sandstone through the drilling and testing of Eagle North #1.

Current activity on Eagle North #1 is awaiting the arrival of a deep work over rig with necessary equipment to carry out production testing operations over an indicated 177 metres of oil bearing sand from 4,209 to 4,386 metres measured depth (“MD”); ie 72 metres behind a 4 ½” liner from 4,209 to 4,281 metres MD and 105 metres of open hole lower Gatchell oil sand from 4,281 to 4,386 metres MD which will be tested as a barefoot completion out of the base of the 4 ½” liner at 4,281 metres MD. If testing is positive the well will be completed for production. This work should be carried out in the first half of August. Hopefully after a well fraught with mechanical and equipment problems the joint venture will have a successful outcome, ie confirmation of a commercial oil pool.

A summary of the well’s progress from reported progress in the March 2006 quarterly to date is as follows. The well at the end of March quarter 2006 had landed in the target Gatchell lower oil sands at 4,255 metres MD and had run horizontally for 30 metres in good oil show sands and had stopped to case off the overlying formations. Planned operations were to continue drilling a further 320 metre horizontal well bore in the target Gatchell lower oil sands in 3 ¾” hole in balance using a 9ppg KCL-Clarizan mud system after which a 2 7/8” slotted liner would be run and the whole 350 metre horizontal section tested. After casing off, the horizontal was advanced in balance, but major problems were experienced again with the sensor in the measurement while drilling tool (“MWD”) including a back up replacement sensor (no signal or very weak signal to surface) and the well was stopped after running 30 metres. Notwithstanding the sensor problems, in part due to string packing around one of the sensors, the well had tracked up out of the oil sand into the overlying seal due to the real angle of the bit at casing point in the assumed near horizontal hole being greater than the reported 3 degrees reading from the MWD located 13 metres behind the bit. Continuation of the hole at the greater angle resulted in penetration of the overlying seal.

A second sidetrack was thus made by pulling back to casing point at 4,285 metres MD and advancing around the abandoned hole at a new angle. The well bore left the oil sands in the sidetrack and re-entered them at 4,297 metres MD and ran on 6 metres (4,303 metres MD) where drilling was stopped by packing off of sand cuttings around the bit caused by the marked increase in drilling rate from 8 to 70 ft per hour on entering the reservoir sand (indicating a good friable, porous reservoir sand). The mud weight also needed to be raised to 10.2ppg from 9ppg by addition of fine calcium carbonate to counter and balance the recorded inflow of oil (high gravity crude with strong petrol odour accompanied by solution gas) into the well bore. At this point the well bore was at an angle of 0.3 degrees from horizontal. The horizontal continued with problems again from the MWD resulting in further stoppages until Tuesday 2 May when drilling ceased at 4,386 metres MD because of frequent sticking of drill pipe by back up of cuttings due to running sands within the interpreted oil bearing section. At this point the bottom hole assembly (“BHA”) of the drill pipe had to be pumped out and back reamed to casing point as the horizontal well in front of the drill bit “flowed” sand. The BHA was subsequently reamed in and out from casing point, washing and clearing sand to 4,313 metres MD where the operation was stopped as it was decided to set slotted production liner to this point only and ignore the previously drilled 80 metres ahead which had tight spots and flowing sand sources with oil. The BHA was then pulled out of hole to change over to pipe only to run back in with pipe and liner to wash in and case.

However what was noticed was the mud motor with bit had screwed off and the bad news was it was possibly in the horizontal section of the 4 ½” liner and thus it was an effective plug to the zones behind liner and to be lined to test unless retrieved by fishing.

On the assumption fishing was successful forward operations were to wash down to 4,313 metres MD to set the 2 3/8” slotted production liner (slotted for sand control) from casing point at 4,285 metres to 4,313 metres MD to test the estimated 95 metres of net pay; ie the 23 metres of net pay behind the 2 3/8” production liner previous set and the 72 metres behind the to be perforated 4 1/2” liner.

Fishing operations were aborted after the pipe kept tracking into the abandoned first horizontal hole and could not be coaxed into the new second horizontal hole. However, the good news was the lost mud motor and bit assembly were in the second horizontal hole not in the cased precursor horizontal hole. A decision was taken to carry out production testing operations over 177 metres of indicated oil bearing sand; ie after first perforating the 72 metres behind the 4 ½” liner from 4,209 to 4,281 metres MD and barefoot completing out of the base of the 4 ½” liner at 4,281 metres MD the 105 metres of open hole lower Gatchell oil sand from 4,281 to 4,386 metres MD.

The casing was perforated to induce flow, but mechanical problems occurred resulting in the decision to curtail testing operations. At this point, on the 8<sup>th</sup> June, it was decided to release the deep drilling rig and continue the production testing operations in a more cost effective and technically efficient manner, through using both a coiled tubing unit rig and a deep completion rig.

On completion of the Eagle North #1 well equities in the project development will be Empyreum (38.5%), Victoria Petroleum (20%), First Australian Resources Ltd (“First Australian”) (15%), Lakes Oil NL (15%), Sun Resources (10%) and a USA private investor (1.5%).

## **2. OFFSHORE MALTA, SOUTHERN MEDITERRANEAN SEA – 20% INTEREST**

Anadarko International Energy Company (“Anadarko”), a subsidiary of Anadarko Petroleum Corporation (NYSE:APC), concluded a Participation (Farmin) Agreement in June 2005 with the then Malta Joint Venture comprising Sun Resources (20%) and Pancontinental Oil & Gas NL (“Pancontinental”) (80%). This agreement provides for Anadarko to earn an interest in the Malta Project by funding agreed activities on two contiguous permit areas (ESA Area 4, Block 3 and ESA Area 5) totalling 14,800 square kilometres on the Pelagian Platform in southern Maltese waters abutting Tunisia and Libya. These activities are further infill 2D seismic on ESA Area 5 leading to Anadarko at its option to enter into a Production Sharing Contract with Sun Resources, Pancontinental and the Government of Malta to drill up to two wells on either or both the very large Chianti and Limoncello Prospects. These prospects, delineated in 2004 by Sun Resources and Pancontinental in ESA Area 5, have large speculative reserve potential, ranging from a mean 455 million barrels recoverable oil potential (Chianti) to a mean 968 million barrels recoverable oil potential (Limoncello). The potential estimates are based on current seismic mapping and using representative reservoir parameters from neighbouring commercial field analogues in Libyan and Tunisian waters. Anadarko, under the Agreement, has options to earn a 65% interest in the Production Sharing Contract on completion of one well, and to increase its interest to 75% by again drilling a further well at no cost to Sun Resources and Pancontinental.

At the end of June 2005 Anadarko was tendering for a seismic vessel for the 2D infill seismic program in ESA Area 5 that was expected to take four weeks in September 2005. However, at the Maltese Government’s request, the Joint Venture suspended the seismic survey to assist the government in facilitating the resolution of the maritime border issues it has with both Tunisia and Libya. These border issues affect the western and southern boundaries of ESA Area 5. The 2004 seismic survey was conducted within undisputed Maltese waters away from these unresolved border areas and it was this seismic survey that revealed a number of significant world class prospects and leads in undisputed Maltese waters which motivated Anadarko to conclude a Participation (Farmin) Agreement with Sun Resources and Pancontinental.

Significant progress continues to be made on resolution of the maritime borders, particularly between Malta and Tunisia. An Agreement between Malta and Tunisia was signed on 27<sup>th</sup> February 2006 for joint oil and gas exploration and exploitation in zones of the Continental Shelf located between Malta and Tunisia which in part encompasses the western area of the ESA in Area 5. Since the agreement, Malta and Tunisia, through a joint expert committee reporting to the two country's Ministers of Foreign Affairs, Dr Frendo (Malta) and H.E. Abdallah (Tunisia), have been working on the determination of the exact coverage of the joint exploration and exploitation zone between the two countries. A report on this determination was due to be presented by the joint committee to the two country's Ministers of Foreign Affairs, Dr Frendo (Malta) and H.E. Abdallah (Tunisia), in June 2006. Similar discussions between Malta and Libya are current on resolving the southern boundary issue in the southern area of the ESA, and it is hoped that a similar agreement will be forthcoming in the very near future.

Hopefully, matters between all parties, ie Malta and Tunisia and Malta and Libya, can be resolved and concluded before the end of September 2006 as seismic activity will be curtailed until March 2007 because of the winter season in the Mediterranean Sea. In anticipation that matters will be resolved before the winter season Anadarko has been pro-active in seeking tenders for the seismic survey late September – early October 2006 on a seismic boat passing by to other work basis.

### **3. CARNARVON BASIN, WESTERN AUSTRALIA**

Sun Resources is part of various consortiums of companies exploring at March quarter end four permits in the Dampier Sub-Basin (WA-254-P, WA-257-P, WA-261-P and WA-340-P). The greater Carnarvon Basin has become Australia's richest oil and gas province since Bass Strait, with reserves in excess of nine billion barrels of oil equivalent. It is probable from developments outlined below that 4 to 6 wells will be drilled on these permits in the next few years commencing second half 2007.

#### **3.1 WA-254-P – 7.86% TO 9.25% INTEREST**

Summary status of prospects, Duomonte, Dr Zeus, Janus revisited, Helly Belly, Jayasuriya and Little Joe is outlined below from work carried out in the 2005 permit year. On going work in the remainder of 2006 is being directed towards maturing the first three prospects for drilling particularly as new deeper levels of interest in structures are indicated in new seismic reprocessing. From developments outlined below 2 to 3 wells will be drilled in 2007 and onwards in the last term of the permit which was granted renewal in the March quarter.

The Apache peer group prognosis on the Duomonte Prospect has confirmed progression to drilling, but now in 2007 rather than in 2006 because of the now recognised potential of deeper formations from a quick scan of recently acquired reprocessed seismic data (Panaeus refresh data) and the need to integrate this information into the prospect data base. The Duomonte Prospect consists of two similar sized lobes, one in WA-254-P the other in adjacent WA-1-P. WA-254-P potential ranges from 20 (mean) to 44 million barrels of oil recoverable ( $P_{10}$ ) with primary target formation (pre recent seismic developments) being shallower Legendre Formation sands at approximately 2,500 metres depth. A nearby well Janus #1 targeted Legendre sands at a shallower depth than Duomonte and these sands were found to be water wet with oil shows. A re-look at the seismic data suggests the younger and shallower Calypso Formation sands is also a secondary target, but could be gas prone. New (Panaeus refresh) seismic data deeper seismic events in structure now also need assessment at North Rankin and Mungaroo levels for a Caribou gas (oil) target before Duomonte can be drilled.

A new prospect Dr Zeus (formerly Lead Z) is now a highlight of the prospect and lead inventory. The prospect is a mid *M Australis* (Saffron Sand equivalent) stratigraphic trap with some structural closure outlined by a prominent amplitude anomaly. Prospect potential ranges from 23 (mean recovered) to 52 million barrels of oil recoverable ( $P_{10}$ ). An internal Apache peer group has also reviewed and approved the prospect for drilling. However, again from the Operator's scan of new Panaeus refresh data, deeper events, particularly at Angel Formation level, need assessment in the light of the reassessment of the Janus #1 well as it is in faulted juxta position to Eliassen Formation sands with probable by passed oil pay. As with

Duomonte the Operator suggests drilling costs have risen from A\$4.5 million a couple of years ago to now A\$7 to \$7.5 million to include deeper targets in a well evaluation of the prospect.

The Janus #1 well was drilled by the joint venture in late 1997 and the target Legendre Formation sands in a structure were found to be water wet with oil shows. The higher Eliassen sands in the well had some shows which were unexpected at the time and were not followed up. The target potential of the Eliassen sands has recently been recognised and as a result have been re-examined in Janus #1 by a detailed petro-physical study. The results of this study suggest the presence of by passed pay in the well. It has been estimated that 11.5 metres of net pay is present from 39.5 metres of gross pay with an oil-water contact at 1,926 metres MDRT in the well. The size of the accumulation has not yet been estimated, but depends on mapping the down dip leg of the inferred accumulation in ongoing work this year.

Miscellaneous prospects Little Joe, Helly Belly (Lower Cretaceous / Angel Formation sands in structural closure in a buttress trap) and Jayasuriya (Eliassen sands stratigraphic pinch out on the basin slope) require more interpretative work, especially as the new Paneus refresh seismic data is now available to determine if they are drilling candidate. Little Joe Prospect straddling the WA-254-P and WA-208-P northern boundary was slated for September quarter 2005 drilling by Santos, but has yet to be drilled by the WA-208-P joint venture. Potential on the Santos web site has been given as 50 million barrels of oil recoverable equivalent with 35% of the prospect lying in WA-254-P.

Participants in WA-254-P are Sun Resources (7.86% to 9.25%), Operator Apache (47.89% to 47.90%), Woodside Energy Limited (17.06% to 24.38%), First Australian (10.71% to 11.25%), Victoria Petroleum (6.17% to 9.30%) and New Zealand Oil and Gas NL (2.99% to 5.23%). The latter larger interests of the junior participants reflect the interests of the junior participants in the graticular block containing the stranded Sage Oilfield. Sage is currently waiting for a nearby discovery to be made to move forward by sharing development costs.

### **3.2 WA-257-P – 9.64% INTEREST**

Operator, Apache, has focused on bringing two structural – stratigraphic traps to drill status in the last 12 months. These are the previously known up to 100 (P<sub>10</sub>) million barrels of oil recoverable *W Spectabilis* sands Hekla Prospect, and the new *P iehiense* (Angel Formation) sands Sextant Prospect.

The Sextant Prospect is a truncation sub crop play at the *P iehiense* (Angel Formation) level and is an extrapolated analogue to the Mutineer / Exeter oil discoveries in the southern Carnarvon Basin off Exmouth which are being brought into production. It overlaps into eastern adjacent WA-246-P and the prospect style is repeated along strike as another prospect called Windlass. Target potential for Sextant ranges from 50 (mean) to 130 (P<sub>10</sub>) million barrels of oil recoverable with two thirds of the potential falling in WA-257-P. Sextant #1 is now a conditional well on the Operator's drilling schedule for 2007 as the prospect has been shown to have less structural risk than the Hekla Prospect. However, a firm well recommendation from the Operator is pending the outcome of a nearby Apache well to be drilled in the near future that will reveal more information on the *P iehiense* (Angel Formation) reservoir.

Participants in WA-257-P are Sun Resources (9.64%), Operator Apache (51.78%) and Kufpec Australia Pty Ltd (38.58%).

### **3.3 WA-261-P – 6.15% INTEREST**

A Joint Venture meeting was held with the Operator, Apache, in December 2005, to discuss the 2006 work program and the summary post mortem of Gats 1 drilled in August 2005 and implications from the *C halosa* sand encountered in Gats 1 on the as yet drilled Hestia prospect which from developments outlined below will be drilled in 2007. On going work in the remainder of 2006 is thus being directed towards fully maturing the Hestia prospect for drilling particular deeper levels now indicated in new seismic reprocessing.

The Hestia Prospect is a result of the observations of excellent oil shows in good reservoir sands in principally the *C halosa* and *N gracilus* of the Athol Formation in Ceres 1. The buttress-stratigraphic trap

lies southward of the Ceres 1 location and south westwards of Gats. The *C halosa* sand only is targeted in the prospect at 780 meters MDRT. Prospect size ranges from 11.5 (mean) to 23.2 (P<sub>10</sub>) million barrels of oil recoverable. If drilling of the Hestia Prospect is successful the Chamois oil accumulation 2.4 (mean) to 3.9 (P<sub>10</sub>) million barrels of oil recoverable 8 kilometres to the southwest could also be developed to tie back to the nearby Stag Oilfield.

The largest risk for the Hestia Prospect is seal at the reservoir sub crop interface with the basal Cretaceous unconformity. However from Gats 1 tight indurated sand is prognosticated. Induration (2-4m) was present in the sandy facies on the basal Cretaceous unconformity in the Gats well and was so tight it could not be cored and hence should be an effective seal to the reservoir.

Before Hestia can be drilled a new deeper target needs to be examined from observations made by the Operator from the recently received Panaeus refresh seismic data. This target is Mungaroo Formation sands below the Athol Formations sands in the buttress trap. This setting is analogous to the Tusk oil accumulation to the northwest in nearby WA-246-P. If this potential is confirmed the overall prospect target will be considerably larger with upside to 40-50 million barrels of oil recoverable, but the well cost will be higher approximating A\$3 million for a 1,200-1,300m deep well.

Participants in WA-261-P are Sun Resources (6.15%), Apache (Operator) (45.12%), Strike Oil NL ("Strike") (16.22%), Tap Oil Limited (10.00%), Victoria Petroleum (12.50%) and Bow Energy NL (10.0%).

### **3.4 WA-340-P – 20% INTEREST**

Operator Strike continued seismic studies on the permit to upgrade four Jurassic to Cretaceous age structural stratigraphic leads. Reprocessed old seismic data was received during the quarter and integrated with the seismic carried out in November-December 2005 over the adjacent Sherlock 28 (mean) million barrels of oil recoverable) and Peawah 12 (mean) million barrels of oil recoverable) prospects and interpretation of the merged data set is expected to be completed in early September 2006 quarter to allow a decision on possible drilling in the next year.

Permit participants are Strike as Operator (40.00%), Victoria Petroleum (20.00%), Pancontinental (20.00%) and Sun Resources (20.00%).

## **4 SYDNEY BASIN, ILLAWARRA CSM/CMM PROJECTS**

Sun Resources and unlisted Apex Energy NL ('Apex Energy') as Operator are joint venture partners in the Wollongong CSM and CMM project comprising granted Petroleum Exploration Licences PEL 442 and PEL 444, access to Helensburgh Coal Pty Ltd's Metropolitan Mine Coal Concession Leases CCL 703 and CCL 379 ("Metropolitan") and PSPA-10 (currently being transitioned to PEL78). The project has two main attributes for success; the presence of large amounts of gas above the water table and a doorstep market of large population bases at Wollongong – Port Kembla and Sydney.

Work on the project during the June 2006 quarter was again extremely limited and is still waiting on Apex Energy's flotation on the ASX and in particular finalisation of a Development Agreement to supply gas to a generator and separately the grant of PELA 78 to conduct drilling to ascertain the presence of significant methane gas accumulations in sealed stope targets in abandoned coal mines in the Burrangorang Valley.

### **4.1 WOLLONGONG CSM/CMM PROJECT - 20% INTEREST**

The Wollongong CSM and CMM project, comprising granted Petroleum Exploration Licences PEL 442 and PEL 444 and access to Helensburgh Coal Pty Ltd's Metropolitan Mine Coal Concession Leases CCL 703 and CCL 379 ("Metropolitan"), lies between Port Kembla and Helensburgh .

The joint venture is investigating the economic potential of both CSM and CMM in the licences, especially CSM of all Permian age gassy coal seams. Data from current programs is being used to increase confidence in present Most Likely P<sub>50</sub> (128 billion cubic feet) in place gas estimates for all the leases and to advance

local power generation schemes within the leases using both CSM and in particular CMM, as per the February 2004 Darkes Forest 1 discovery made by the joint venture in PEL 444 which flowed 1.2 million cubic feet of gas per day. The first of these power schemes is being planned on the Metropolitan Mine site using initially part of the 4.7 million cubic feet of gas per day currently being drained from the Bulli Seam ahead of mining. The concept of supplying both CMM and CSM to a local at or near site power generator is well proven locally on a far larger scale than what is currently contemplated by the Sun Resources-Apex Energy study. Abutting to the west of the joint venture's leases lies the Westcliff-Appin-Tower colliery complex of BHP-Billiton Limited. Some 7 billion cubic feet of CSM gas per annum drained from the Bulli Coal Seam ahead of long wall mining is supplied to two local power stations owned by Energy Developments Limited having a total 96.8 MW of generating capacity.

#### **4.2 PELA 78 (FORMER PSPA 10) – 14% INTEREST**

During the December 2005 quarter, the joint venture, comprising Apex Energy (56%) as Operator, Australian Coalbed Methane Pty Ltd (30%) and Sun Resources (14%), made an application over the more prospective portion of the former PSPA 10 area for a PEL (PELA 78) to test sealed stope targets in abandoned coal mines in the Burragorang Valley by keyhole drilling to ascertain the presence of significant methane gas accumulations.

PELA 78 lies in the south western margins of the Sydney Basin, inland from Wollongong in the Illawarra. Very little work has been done on CSM in this part of the Sydney Basin as it now lies within the Sydney Water Catchment, and all activities are subject to authorisation by the Catchment Authority.

Part of the former area of PSAP 10, now PELA 78, offers potential for shallow biogenic methane resources generated by bacteria which have entered both the coal seams with groundwater and the abandoned coal mine workings (goaf) within the licence area. The deeply incised topography of much of this region results in extensive exposure of coal seams which in turn facilitates the entry of water and bacteria. It is quite possible for methane gas generated by biogenic activity to attain potentially commercial accumulations in the goafs in the decade or so since the cessation of all mining activities in the region. Based on recent carbon isotope determinations by CSIRO, methane gas from the Burragorang Valley mines in PELA 78 have an extremely strong biogenic signature. The detailed 12 months assessment of former PSPA 10 in 2005 showed that there is little opportunity to monitor mine gas accumulation without resort to drilling which can only be done under a PEL.

#### **B. MINERAL EXPLORATION/INVESTMENT**

The Joint Venture on the vestigial mineral interest of the Butterfly gold tenement in the North Coolgardie Mineral Field, Western Australia in which the Company has a 5% NPI interest remains current with Barmenco Limited a successful underground mining contractor and Atlantic Gold Limited.

#### **C. NEW PROJECT DEVELOPMENT**

During the quarter Sun Resources continued its involvement in new project generation and development to the benefit of its Shareholders as outlined above.

#### **BY ORDER OF THE BOARD**



**B L FARRELL**  
**EXECUTIVE CHAIRMAN**

This quarterly report is lodged on the Company's website, [www.sunres.com.au](http://www.sunres.com.au).

Information contained in this report was compiled by the Executive Chairman of Sun Resources, Dr B. L. Farrell, PhD, MSc, BSc (Hons Eco.Geol), FAIMM, MIMM, MPESA, who has had 37 years experience in the practice of geology and more than 5 years experience in petroleum geology.