

ASX Release

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# Drilling Underway on Rend Lake Oil Prospect

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Tamaska Oil and Gas Limited (ASX:TMK) is pleased to announce that the Lawrence Farms Well #1 has spudded and is currently drilling ahead. The well is testing the high impact Rend Lake Prospect and has the potential to contain over 200 million barrels of oil in place with an estimate of 67.5 million barrels potentially recoverable (13.5 million barrels net to TMK). The Rend Lake Prospect is located in Franklin County, Illinois, USA and Tamaska holds a 20% working interest.

The well is expected to take approximately 30 days to drill and is being operated by Anschutz Exploration Corporation (Anschutz) who acquired 50% of the project in August 2013 and are the Operator. Anschutz are a privately held E&P company based in Denver, Colorado, and have been a leader in the natural resources industry for more than 75 years.

### Well Highlights

- Exploration well: Lawrence Farms Well #1
- Target size: potentially over 200MMbbls STOIIP / 67.5 MMbbls recoverable in the event of success.
- Target Reservoir Structure: Hydrothrermal leached dolomite reservoir in Trenton Black River formation.
- Well Total Depth: 6,500ft
- Spud date: 22<sup>nd</sup> November 2013
- Anticipated drilling time is 30 days on a dry hole trouble free basis.
- TMK 20% working interest



## Analogue Field: Albion-Scorpio 130 MMbbls Produced to Date

Hydrothermal Dolomite Fields are generally prolific producers due to the vuggy and sometimes cavernous permeability which develops in the reservoir. The Albion-Scipio field in Michigan, USA, is a well-documented analogue (Figure 2). Albion-Scipio was discovered in 1957 and has produced over 130MMbbls to date. The field extends for 22 miles with an oil column of up to 210ft. Due to the technology available at the time, the field was developed with vertical wells with approximately 20 acre spacing (Figure 4). Initial production rates from wells were several thousand barrels per day. The surrounding 'host' rock that provides lateral seal has porosity in the 2-5% range and typically permeability of 0.01mD.



### **Project Details**

The Rend Lake Prospect is situated in Southern Illinois and has the potential to contain a zone of high permeability hydrothermal dolomite which will be tested by the drilling of the Lawrence Farms Well #1, exploration well by Operator, Anschutz Exploration Corporation (Anschutz). The prospect is covered by five leases, Tamaska has a 20% working interest in each, with between 15% and 15.4% overall net revenue interest.

The exploration well is expected to cost approximately US\$1.5 million (dry hole basis). The well cost is above that originally anticipated by Jupiter and consequently, Tamaska and Jupiter have executed an amendment to the Participation Agreement with Anschutz. The amendment is such that Anschutz will combine the free carry on the first and second wells (\$500,000) to now free carry Tamaska and Jupiter through US\$1 million (100% cost) on the first well after which Tamaska pays 20%.

The target prospect is at a depth of approximately 6,500ft and runs North-South for approximately 10 miles extending under Rend Lake to the North. The core area of the prospect is expected to be in the order of 400-600m wide, where permeability may be enhanced through hydrothermal leaching (Figure 1). A surrounding "halo" of partially dolomitized surrounding "Country Rock" or fractured carbonate may contribute to the overall reserve potential. The lateral seal is provided by the surrounding host (non-dolomitised) rock. The prospect will initially be tested with a vertical well (Lawrence Farms #1) drilled to the south of the reservoir as marked in Figure 1. In the event of a discovery, the field will be apprised and delineated with 3D seismic and further appraisal drilling, likely to include horizontal drilling technology from pad locations south and west of Rend Lake.

The Rend Lake Prospect was identified through the mapping of an extensive 'sag' in the overlying Pennsylvanian coal section identified during underground mining. The occurrence of sags in overlying sedimentary sections are commonly associated with hydrothermal dolomite development. It is proposed that the sag is a result of solution collapse in underlying Ordovician-Devonian Carbonates caused by the migration of hot brines from the deep Illinois basin along the Rend Lake Fault Zone (Hydrothermal Dolomite Development Figure 3). Evidence for hydrothermal dolomite development occurs regionally within the basin. Thermal modelling confirms that hot fluids were likely expelled from the deep Cambrian section during Pennsylvanian and early Permian periods. The hot brine is hypothesized to have migrated along the Rend Fault system leaching into the overlying carbonate layers and enhancing the permeability. Extensive research and data control shows that the timing of the sag is likely related to deep-seated basement structuring and hydrothermal dolomite reservoir development appears to have formed prior to hydrocarbon migration.

Based on analogue fields and the geological interpretation undertaken to date, the prospect has the potential to contain over 200MMbbls of oil, of which it is currently estimated that 67.5MMbls (unrisked) could be ultimately recoverable in the event of exploration success.



#### Jupiter Oil & Gas Inc JV Participant & Anschutz Exploration Corporation (Operator)

Jupiter Oil & Gas Inc (Jupiter Inc) is a private company incorporated in Illinois as a special purpose vehicle to evaluate and acquire the leases that cover the Rend Lake Prospect. The major shareholders of Jupiter Inc include Charles Morgan (Chairman of Tamaska) and Craig Burton (a major shareholder of Tamaska with approximately 18%). The Jupiter prospect was identified by Bob Cluff, founder and principal of the Discovery Group Inc, a Denver based Geoscience Consultancy that has provided technical support to various oil and gas projects of Mr Morgan and Mr Burton who have been co-investing for over a decade. Anschutz farmed in to the project as Operator in August 2013 for a cash payment and a carry through one firm well and one contingent well to a cap of \$500,000 on each well. The agreement has been amended to combine the carry to \$1,000,000 on the initial well only. Anschutz is an established Operator in North America and its experience adds considerable value to the Rend Lake Project and to Tamaska's investment.

The Anschutz Corporation (parent company) is a privately held E&P company based in Denver, Colorado, and has been a leader in the natural resources industry for more than 75 years. Today the diversified company has worldwide investments in energy exploration, production and delivery; real estate, ranching and agriculture; lodging, transportation and telecommunications; newspaper and internet publishing; and entertainment including music, sports, film production and movie theaters.

Commenting on the news, Alex Parks CEO of Tamaska said "The Rend Lake Prospect is a fantastic opportunity for the Company and its shareholders to participate in a very large, conventional onshore oil exploration project, which offers potentially over 12MMbbls net to Tamaska in the event of success".

For and on behalf of the Board

Alexander Parks Chief Executive Officer Tamaska Oil & Gas Limited





Figure 2 - Prospect Location Map



Davies & Smith, 2006, AAPG Bull 90, n 11

Figure 3 - Hydrothermal Dolomite Development Model







Lawrence Farms Well # 1 Details		
Location	0330N 0666E SWe NW NE Sec 10 TWP 06S RGE 02E Franklin County, Illinois USA	
Illinois Permit Number	063239	
Lessor	Illinois Minerals	
Well Type	Vertical exploration well	
Primary Target	Hydrothermal Dolomite Reservoir in the Trenton Black River Formation	
Secondary Targets	There is not anticipated to be any secondary targets in the well and the JV participants do not have the mineral rights to the shallower section	
Water Depth	Onshore	
Planned total depth	Approximately 6,500 ft (1,980 metres)	
Spud Date / Duration	Spud 22 <sup>nd</sup> November 2013 anticipated to take approximately 30 days (assuming dry hole and well is plugged and abandoned)	
Progress Reporting	Tamaska will provide weekly updates on the drilling	

Joint Venture Participant	Working Interest
Anschutz Exploration Corporation	50%
Jupiter Oil and Gas Inc	30%
Tamaska Oil and Gas Illinois LLC	20%

#### Competent Persons Statement

The Reserve, Contingent and Prospective Resource estimates outlined in this announcement have been compiled by Mr Robert Cluff. Mr Cluff is the President of The Discovery Group. Mr Cluff is a geologist and petrophysicist with over 35 years of relevant experience and is qualified in accordance with ASX listing rule 5.11. Mr Cluff has consented to the form and context that this statement appears.