

ASX RELEASE 18 December 2013 Completion of geochemical analysis.

# 150 out of 723 samples have identified high to

# medium gravity oil seeps and gas anomalies.

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#### Issued Capital:

261.8 million shares 27 million options (WOFO) 174 million options (WOFOA) 11.2 million unlisted options

ASX Code: WOF, WOFO, WOFOA The Company is extremely pleased to announce the results

of geochemical analysis on seismic shot hole sediments.

# **Highlights:**

- Log Propane (C3) Concentration. (Figure 1.)
  80 out of 723 samples contain anomalous amount of propane gas.
- Methane (C1)/Ethane (C2) ratio. (Figure 2.) The propane (C3) gas in the samples was derived from an oil rather than wet gas source.
- Gas Wetness ratio (C2+/C1+). (Figure 3.) Anomalous gas wetness is found in samples over Toson Tolgoi Basin.
- High gravity oil microseeps. (Figure 8 & 9.) 100 out of 723 samples have high gravity oil microseeps.
- Medium gravity oil microseeps. (Figure 10 & 11.) 50 out of 723 samples have medium gravity oil microseeps.

The Company has collected over 7,500 samples from the bottom of seismic shot holes and analysed a total of 723 samples (batches 1, 2 and 3). The geochemical analysis has confirmed the potential for the presence of oil in the Toson Tolgoi and Talbulag Basins.



## Figure 1: Log Propane (C3) Concentration

(80 of the 723 samples - ~11% contain anomalous amounts of propane gas).



# Figure 2: Methane (C1)/Ethane (C2) ratio.

C1/C2 ratio is between 2 and 15 for samples with anomalous levels of propane. Based on the Pixler Plot on Figure 2, this range of C1/C2 ratios means that the **propane (C3) gas in the samples was derived from an oil rather than wet gas source.** 





## Figure 3: Gas Wetness ratio (C2+/C1+).

The relative amount of heavier (C2+) to lighter (C1+) hydrocarbons and therefore represents

the "wetness" of the gas in the microseeps.





#### Figure 4 & 5. Alkane/Alkene ratios.

Bubble plots of ethane/ethylene and propane/propylene ratios are presented in Figures 4 & 5.

High alkane/alkene ratios in microseeps could reflect the surface expression of faults.





# Figures 6 & 7: Light (C1-C5) and Heavier (C6-C7) Factor Scores.

Factor analysis was performed on the acid-extractable C1-C7 data. The data grouped into two light (C1-C5) and heavier (C6-C7) factors. This means that methane (C1), ethane (C2), Propane (C3) butane (C4) and pentane (C5) are correlated in the first factor and hexane (C6) and hep-tanes (C7) are correlated in the second factor.





## Figures 8 & 9: High Gravity Oil Microseeps.

100 out of 723 samples ~14% have high gravity oil microseeps. The seeps are likely migrating up faults as these are the best conduits for the upward ascent of liquid hydrocarbons.

There is some spatial correlation of the oil microseeps and anomalous ethane/ethylene and

propane/propylene ratios, which may reflect the surface expression of faults.





# Figures 10 & 11: Medium Gravity Oil Microseeps.

50 out of 723 samples ~7% have medium gravity oil microseeps. Medium gravity oil microseeps have more fluorescence intensity at longer wavelengths (

reflecting a higher abundance of heavier aromatic hydrocarbons.





# These results further confirm the significant potential of Toson Tolgoi and Talbulag Basins

The gas and liquid hydrocarbon seeps are generally located on the margins of the basins suggesting migration upwards and outwards of the basins. The correlation of the hydrocarbon seeps and faults will be determined from an evaluation of hydrocarbon profiles over the seismic sections in the coming weeks.

The Company is working towards opening a data room for potential investors and farmout partners early in 2014.

Bataa Tumur-Ochir Chief Executive Officer

Wolf Petroleum Limited Unlocking Mongolia's Multi Billion Barrel Oil Potential.



#### About Wolf Petroleum.

Wolf Petroleum is an ASX listed company with the largest petroleum acreage in Mongolia. Wolf has one production and two exploration blocks covering over 74,400 km<sup>2</sup> (more than 18 million acres) proximal to multibillion barrel oil fields in Mongolia operated by PetroChina.



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