TEST RESULTS FOR HALLMARK JV FURTHER VALIDATES LWP'S LOW-COST FLY-ASH BASED PROPPANTS

- **Test results completed by German laboratory for proppants made from Indian fly-ash for Pune plant**
- **Test work conducted on behalf of LWP and Hallmark JV as part of proposed plant upgrade and commissioning in Pune, India**
- **Results point to significant reduction in manufacturing costs at Pune plant**
- **Plant upgrade equipment evaluation program is progressing and ongoing**
- **Global marketing initiatives of LWP technology licensees are ongoing**

ASX ANNOUNCEMENT **13 March 2017**

Energy technology company, LWP Technologies Limited (ASX: LWP) ("LWP" "the Company") is pleased to provide an update on the completion of lab testing results of the Company's patented fly-ash based proppants on behalf of the joint venture between LWP and Hallmark (Hallmark JV) ahead of the proposed manufacturing of proppants at the Pune plant in India.

The test work was conducted on newly developed proppants made primarily of Indian fly-ash and clay.

A number of raw materials have been tested, in order to ascertain the optimal mix design and raw material inputs with the joint goals of minimizing manufacturing costs, while maximizing compressive strength.

The tests were conducted using systems from Retsch Technology, a world-leading provider of neutral-to-analysis sample preparation equipment. The testing results achieved are a significant and important step, which adds momentum to the Hallmark JV. A full report of the testing results accompanies this ASX release.

In summary, the test results demonstrate that:

- The multiple raw material feedstocks that are available in near proximity to the Pune plant are able to be utilized to manufacture excellent quality, light weight, low-cost, high-strength proppants at the Pune plant;
- Bauxite is no longer required in the optimal mix design, thereby significantly reducing raw material costs, as bauxite was formerly the most expensive raw material input;
- Fly-ash content of the optimal mix design is markedly higher than previous mix designs, and as fly-ash is the lowest cost raw material input, this further minimizes raw material input costs;
- The bulk density of 1.28 [g/cm^3], and specific density of 2.56 [g/cm^3] is the lightest weight proppant that LWP has ever produced, and compares favourably to white sand proppants bulk density of 1.48-1.60 [g/cm^3], and specific density of 2.65 [g/cm^3].

- The Ultra light weight of LWP proppants reflects the high percentage of flyash in the mix design and the elimination of bauxite. LWP is not aware of any clay based or bauxite based proppants that can compare to LWP in terms of light-weight;

- The 11,000 Psi (pounds per square inch) compressive strength achieved in these tests was unexpected (but most welcome), as traditional industry knowledge/experience is that compressive strength increases are usually attributable / proportionate to the increased addition of bauxite into the mix design. That this increase in compressive strength for LWP's low cost proppants was achieved without any bauxite at all is remarkable;

- The lowering of the sintering temperature for this latest mix design, indicates savings in energy costs are likely for the Pune plant.

These test results should lead to increased interest in LWP low-cost proppants from oil and gas companies and contractors in India and around the world.

LWP also confirms that equipment evaluation for the Pune plant upgrade has almost been completed, save for third party expert evaluation regarding the estimated maximum annual output capacity of the primary sintering kiln at Pune, which is anticipated to be received within the next 30 days.

These latest developments come on top of the United States Patent and Trademark Office (USPTO) recently issued patent protecting the intellectual property surrounding LWP's lightweight flyash based proppants (Refer ASX announcement 8 March).

Management Commentary

LWP CEO Americas Dr. David Henson said: "These are very positive results and further validate the potential commercial appeal and cost competitiveness of proppants that can be produced at the Hallmark JV facility."

LWP Chairman Siegfried Konig added: "The receipt of these latest test results is an important step for advancing the Hallmark JV and a necessary precursor to the upgrade and plant design. We are satisfied with the progress being made on the Hallmark JV, and continue to move forward with a number of key initiatives.

The recent decision by the USPTO to award LWP key patents covering our fly-ash proppant technology, coupled with demonstrations that we can deliver our products in a cost-effective manner, puts LWP in a stronger position to commercialize our revolutionary innovations.

LWP is also pleased to confirm that we are increasing our marketing efforts, as commercial negotiations with licensees and oil and gas contractors continue across a number of markets, primarily in the United States. The increased stability in oil and gas prices is driving greater inquiry and accordingly, we are stepping up our business development efforts in North America.

We look forward to updating shareholders on our progress in India and the United States as we progress key operational and corporate activities. We confirm that LWP is 100% committed to commercialising its proppants technologies."

– ENDS –

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About LWP Technologies

LWP Technologies Limited (LWP) is an Australian oil and gas technology company focused on commercialising next generation, fly-ash based, proppants for use in hydraulic fracturing of oil and gas wells globally. LWP is seeking to commercialise its proppants as a cost effective, superior alternative to bauxite and clay based ceramic proppants, typically used in hydraulic fracturing operations currently. The Company commenced proppant production from its pilot scale proppant manufacturing plant in Queensland, Australia, in Q3, 2015. LWP is seeking joint venture partners and/or licensees to commercialise its proppant product, and deliver significant returns to shareholders.

About Proppants

Proppants are a sand-like commodity used to 'prop' open fractures in shale rocks which allows oil and gas to flow. Proppants are often the single largest cost item in the fracking process and represent a multi-billion dollar global market annually. Traditional ceramic proppants are made from clay and/or bauxite. LWP Technologies ceramic proppants are majority manufactured from fly-ash, a by-product of coal fired power plants. The Company is of the view that its unique proppant product has the potential to lead the industry due to:

- the widespread abundant availability of fly-ash, often near to oil and gas shale resources;
- the ultra-light weight of LWP fly-ash proppants; and
- the ability of LWP proppants to withstand the very high pressures and heat of deep wells.

LWP proppants have been certified by Independent Experts to meet or exceed both the American Petroleum Institute standards and the ISO standards.

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[redacted]

Internal Report

Titel:	**Preliminary Results Hallmark Pune**	Autor:	[redacted]	Zeichen:	End
		Telefon:	0049(0)173[redacted]		
Datum:	**2017-03-10**	File:			
Verteiler:	**D. Henson, S. Konig (LWP)**	Seite:	1 von 3		
		Anhang:			

[redacted] has completed the preliminary ISO 13503-2:2006/API RP19C:2008 evaluations requested on the developed proppants made of Indian Flyash and Indian clay delivered from Pune / India.

The sieve analysis results for the samples are provided in Table 1 as well as the sphericity and roundness (Krumbein Shape Factor). These tests were performed using a Retsch Camsizer.

Bulk density, apparent density and crush results for the samples are provided in Table 2

The procedures followed are as stated in ISO 13503-2:2006/API RP19C:2008

Conclusion	
ISO 13503-2 Analyses	
Does Sample meet ISO 13503-2 requirements for commercial grade fracturing proppants?	
	meet ISO Requirements
Roundness & Sphericity	YES
Acid Solubility	NOT DETERMINED
Turbidity	YES
Particle Distribution	YES
K-Factor	11K

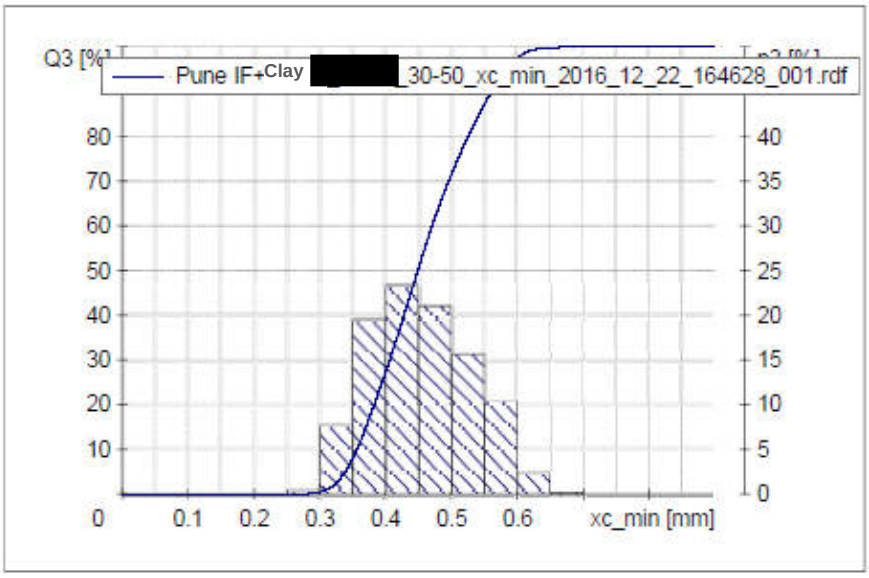
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CAMSIZER® Retsch® TECHNOLOGY

Firma:	[redacted]
Benutzer:	
Ergebnisdatei:	L:\...ry\CAMDAT\Installation\Pune IF+Clay [redacted] _30-50_xc_min_2016_12_22_164628_001.rdf
Messaufgabe:	C:\Camsizer\CAMSYS\Proppants_30-50.afg
Zeit:	22.12.2016, 16:46, Dauer 10 min 51 s bei 0.3 % Flächendichte , Bildrate 1:1und 60 mm Rinne
Größendefinition:	xc_min
Formeinstellungen:	kugelförmige Partikel
Partikelanzahl:	CCD-B = 1318973 , CCD-Z = 77645
Anpassung:	nein
Material:	IF+Clay [redacted]

Größenklasse	[mm]	p3 [%]	Q3 [%]	RDNS_C3	SPHT_K3	PDN
0.000	0.200	0.00	0.00		0.557	9436
0.200	0.250	0.01	0.01	0.445	0.434	230
0.250	0.300	0.43	0.44	0.840	0.644	11668
0.300	0.350	7.61	8.05	0.814	0.816	200594
0.350	0.400	19.41	27.46	0.821	0.871	393796
0.400	0.450	23.22	50.68	0.894	0.889	335326
0.450	0.500	20.96	71.64	0.895	0.900	207812
0.500	0.550	15.62	87.26	0.897	0.901	114807
0.550	0.600	10.29	97.55	0.905	0.911	59840
0.600	0.650	2.27	99.82	0.897	0.933	10463
0.650	0.700	0.17	99.99	0.824	0.849	390
> 0.700		0.01	100.00	0.369	0.798	27



Kenngrößen

Q3 [%]	x [mm]
10.0	0.356
50.0	0.449
90.0	0.561

Mv3(x) = 0.454 mm
Sigma3(x) = 0.076 mm

Sv = 13.329 / mm

Comb3 = 34.462 %

Mittelwert RDNS_C3 = 0.874
Mittelwert SPHT_K3 = 0.879

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[redacted]

Table 2

Project:	Hallmark Pune
Sample ID:	IF+ clay [redacted] [30/50]
Date:	March 2017

Measurement of Properties of Proppants

ISO 13503-2: "Proppant Sphericity and Roundness"

Tests performed with Retsch Camsizer

Sphericity:	0,87
Roundness:	0,88
Clusters:	None observed

Recommended Sphericity and Roundness for high strength proppants= 0,7 or greater

ISO13503-2: "Acid Solubility"

means of 3 analyses

Acid Sol. Percent:	not determined

Recommended Maximum Acid Solubility for ceramic proppants=7,0 Ma.%

ISO13503-2: "Turbidity Test"

means of 3 analyses

NTU:	128

Method 1: Turbidity, suggested maximum proppant turbidity = equal or less than 250 NTU (ISO/DIS 13503-2/Amd.1:2009)

ISO13503-2: "Procedures for Determined Proppant Bulk Density, Apparent Density"

means of 3 analyses

Bulk Density:	1,28	[g/cm³]
Bulk Density:	79,91	[lb/ft³]
Apparent Density (H_2O)	2,56	[g/cm³]

ISO13503-2: "Proppant Crush Resitance Test"

Stresses Tested (psi)	**% Fines -30+50 crush prep**
9000	3,4
10000	6,7
11000	9,7
K-Factor	**11K**