

## TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

ETAS ID: TM370810

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT		
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST		
<b>CONVEYING PARTY DATA</b>			
<b>Name</b>	<b>Formerly</b>	<b>Execution Date</b>	<b>Entity Type</b>
TGS-NOPEC GEOPHYSICAL COMPANY		01/22/2016	CORPORATION: DELAWARE
<b>RECEIVING PARTY DATA</b>			
<b>Name:</b>	JPMORGAN CHASE BANK, N.A.,		
<b>Street Address:</b>	707 Travis Street, 7th Floor		
<b>City:</b>	Houston		
<b>State/Country:</b>	TEXAS		
<b>Postal Code:</b>	77002		
<b>Entity Type:</b>	NATIONAL ASSOCIATION: UNITED STATES		
<b>PROPERTY NUMBERS Total: 1</b>			
<b>Property Type</b>	<b>Number</b>	<b>Word Mark</b>	
<b>Registration Number:</b>	4470711	PRIMA	
<b>CORRESPONDENCE DATA</b>			
<b>Fax Number:</b>	7132387161		
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>			
<b>Email:</b>	annesullivan@andrewskurth.com		
<b>Correspondent Name:</b>	ANDREWS KURTH LLP		
<b>Address Line 1:</b>	600 Travis, Suite 4200		
<b>Address Line 4:</b>	Houston, TEXAS 77002		
<b>ATTORNEY DOCKET NUMBER:</b>	226941		
<b>NAME OF SUBMITTER:</b>	Anne Sullivan		
<b>SIGNATURE:</b>	/Anne Sullivan/		
<b>DATE SIGNED:</b>	01/28/2016		
<b>Total Attachments: 5</b>			
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**AMENDMENT AND RESTATED  
GRANT OF TRADEMARK SECURITY INTEREST**

**WHEREAS**, TGS-NOPEC GEOPHYSICAL COMPANY, a Delaware corporation and A2D TECHNOLOGIES, INC., a Texas corporation (individually and collectively, "Grantor"), owns and uses in its business, and will in the future adopt and so use, various intangible assets, including the Trademark Collateral (as defined below); and

**WHEREAS**, pursuant to that certain Amended and Restated Credit Agreement, dated as of January 22, 2016 (as amended, supplemented or otherwise modified from time to time, the "Credit Agreement"), among TGS-NOPEC Geophysical Company, a Delaware corporation (the "Borrower"), the Guarantors party thereto (the "Guarantors"), the Lenders party thereto (the "Lenders") and JPMorgan Chase Bank, N.A., as Administrative Agent, the Lenders have agreed to make Loans to and make other extensions of credit on behalf of the Borrower (capitalized terms used but not defined herein have the respective meanings assigned to them in the Credit Agreement); and

**WHEREAS**, pursuant to the terms of the Amended and Restated Security and Pledge Agreement dated as of even date with the Credit Agreement (as amended, supplemented or otherwise modified from time to time, the "Security Agreement"), among the Borrower, the Guarantors from time to time party thereto, and JPMorgan Chase Bank, N.A., as collateral agent for each of the Secured Parties (as defined in the Security Agreement) (in such capacity, the "Administrative Agent"), Grantor has agreed to grant in favor of the Administrative Agent a perfected security interest in, and the Administrative Agent has agreed to become a secured creditor with respect to, the Trademark Collateral;

**NOW, THEREFORE**, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, subject to the terms and conditions of the Security Agreement, as collateral security for the prompt payment in full when due (whether at stated maturity, by acceleration or otherwise) and performance of the Secured Obligations (as defined in the Security Agreement), Grantor hereby grants to the Administrative Agent a security interest in all of Grantor's right, title and interest in and to the following, in each case whether now or hereafter existing or in which Grantor now has or hereafter acquires an interest and wherever the same may be located (the "Trademark Collateral"):

- (i) all trade names, trademarks and service marks, logos, trademark and service mark registrations, and applications for trademark and service mark registrations, including but not limited to those registrations and applications listed on Schedule A;
- (ii) all renewals of trademark and service mark registrations;
- (iii) all rights, licenses and goodwill arising out of the foregoing, now existing or hereafter coming into existence, (A) to all income, royalties, damages and other payments (including in respect of all past, present and future infringements) with respect to any of the foregoing, (B) to sue for all past, present and future infringements thereof, and (C) otherwise accruing under or pertaining to any of the foregoing, together, in each

case, with the product lines and goodwill of the business connected with the use of, and symbolized by, each such trade name, trademark and service mark;

(iv) all licenses or user or other agreements granted to Grantor with respect to any of the foregoing, in each case whether now or hereafter owned or used; and

(v) all causes of action, claims and warranties now or hereafter owned or acquired by Grantor in respect of any of the items listed above.

Notwithstanding anything herein to the contrary, in no event shall the Trademark Collateral include, and Grantor shall not be deemed to have granted a security interest in, any of Grantor's rights or interests in any license, contract or agreement to which Grantor is a party or any of its rights or interests thereunder to the extent, but only to the extent, that such a grant would, under the terms of such license, contract or agreement or otherwise, result in a breach of the terms of, or constitute a default under, any license, contract or agreement to which Grantor is a party; provided, that immediately upon the ineffectiveness, lapse or termination of any such provision, the Trademark Collateral shall include, and Grantor shall be deemed to have granted a security interest in, all such rights and interests as if such provision had never been in effect.

This Amended and Restated Grant of Trademark Security Interest (this "Trademark Security Agreement") is an amendment and restatement of, and not a novation or extinguishment of, the Grantor's Grant of Trademark Security Interest dated as of December 18, 2014 (the "Prior Trademark Security Agreement") and supersedes the Prior Trademark Security Agreement in its entirety. Each party hereto acknowledges and agrees that all liens, security interests and assignments created and granted to the "Secured Party" (as defined in the Prior Trademark Security Agreement) under the Prior Trademark Security Agreement and encumbering the Trademark Collateral shall continue to exist, remain valid and subsisting, shall not be impaired, extinguished or released hereby, shall remain in full force and effect and are hereby ratified, renewed, brought forward, extended and rearranged as security for the Secured Obligations pursuant to this Trademark Security Agreement.

Grantor further acknowledges that the rights and remedies of the Administrative Agent with respect to the security interest in the Trademark Collateral granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. To the extent there are any conflicts or inconsistencies between this Trademark Security Agreement and the Credit Agreement, the provisions of the Credit Agreement shall control.

*[Remainder of page intentionally left blank.]*

IN WITNESS WHEREOF, Grantor has caused this Trademark Security Agreement to be duly executed and delivered by its duly authorized officer as of the 22<sup>nd</sup> day of January, 2016.

TGS-NOPEC GEOPHYSICAL COMPANY

By: Victor Marchon  
Name: Victor Marchon  
Title: Attorney In Fact

A2D TECHNOLOGIES, INC.

By: Victor Marchon  
Name: Victor Marchon  
Title: Attorney In Fact

Signature Page to Amended and Restated Trademark Security Agreement

TRADEMARK  
REEL: 005717 FRAME: 0877

**SCHEDULE A  
TO  
GRANT OF TRADEMARK SECURITY INTEREST**

<u>Registered Owner</u>	<u>Trademark/Service Mark</u>	<u>Registration or Serial Number</u>	<u>Registration or Filing Date</u>
TGS-NOPEC	TGS (EU)	006894943	05-10-2001
TGS-NOPEC	TGS logo (EU)	006898167	05-11-2009
TGS-NOPEC	TGS( NO)	249725	02-09-2009
TGS-NOPEC	TGS logo (NO)	249888	02-18-2009
TGS-NOPEC	PRIMA (US)	4470711	01-21-2014
TGS-NOPEC	PRIMA (AU)	1596631	12-12-2013
TGS-NOPEC	PRIMA (BR)	840743469	12-18-2013
TGS-NOPEC	PRIMA (CA)	898097	3-5-2015
TGS-NOPEC	PRIMA (UK)	UK00003051746	07-18-2014
TGS-NOPEC	PRIMA (MX)	1456689	05-23-2014
A2D	RILEY'S (US)	2023711	12-17-1996
A2D	LOG-LINE PLUS! (US)	2739067	07-15-2003
A2D	A2D (MX)	703157	06-20-2001
A2D	A2D (MX)	703158	06-20-2001

<u>Registered Owner</u>	<u>Trademark/Service Mark</u>	<u>Registration or Serial Number</u>	<u>Registration or Filing Date</u>
A2D	LOG-LINE (MX)	769327	11-22-2002
A2D	LOG-LINE (MX)	769328	11-22-2002
A2D	LOG-LINE (US)	2445431	04-24-2001
A2D	LOG-LINE PLUS! (MX)	776927	01-31-2003
A2D	LOG-LINE PLUS! (MX)	887614	06-23-2005
A2D	LOG-LINE PLUS! (US)	2765668	09-16-2003
A2D	SMARTRASTER (MX)	703156	06-20-2001
A2D	SMARTRASTER (US)	2327393	03-07-2000
A2D	A2D (US)	4431868	11-12-13
A2D	A2D (CA)	1643978	09-18-2013
A2D	A2D (MX)	1430885	01-29-2014
A2D	A2D (EU)	012106084	01-24-2014
A2D	A2D (NO)	273667	12-13-2013
A2D	TGS R360 (US)	86761124	09-18-2015
A2D	R360 (US)	86761116	09-18-2015