FORM PTO-1619A Expires 06/30/99 OMB 0651-0027

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TO: The Commissioner of Patents and Tradema	PAIENIS UNLY arks: Please record the attached original document(s) or copy(ies).
Submission Type	Conveyance Type
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Resubmission (Non-Recordation) Document ID#	License Change of Name
Correction of PTO Error Reel # Frame # Corrective Document Reel # Frame #	Merger U.S. Government (For Use ONLY by U.S. Government Agencies) Departmental File Secret File
Conveying Party(ies)	Mark if additional names of conveying parties attached Execution Date
Name(line1) Jonathan Sidney E	Month Day Year delson 12/14/200
Name (line 2)	
Second Party	Execution Date Month Day Year
Name (line 1)	
Name (line 2)	
Receiving Party	Mark if additional names of receiving parties attached
Name (line 1) Borealis Technica	1 Limited X If document to be reco
Traine (inte 1)	is an assignment and receiving party is not
Name (line 2)	domiciled in the United States, an appointmen
Address (line 1) Suite 3 C. Centre	of a domestic representative is attack
Suite 3 C, Centre	(Designation must be a separate document fro
Address (line 2) Horse Barrack Lan	
Address (line 3)	Gibraltar
City	State/Country Zip Code
Domestic Representative Name and A	Address Enter for the first Receiving Party only.
Name Borealis Explora	tion Incorporated
Address (line 1) 23545 NW Skyline	PlwA
Address (line 1) 23545 NW Skyline	: P14d
Address (line 2) North Plains, OR	97133-9204
Address (line 3)	
Address (line 4)	
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Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to domplete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0851-0027), Washington, D.C. 20303. See OMB Information Collection Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

Mail documents to be recorded with required cover sheet(s) information to: Commissioner of Patents and Trademarks, Box Assignments , Washington, D.C. 20231

FORM PTO- Expires 06/30/99 OMB 0651-0027	-1619B	Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT
Corresponde	ent Name and Address	Area Code and Telephone Numb	er 503-621-3286
Name [Robert L. Flye		
Address (line 1)	Borealis Explorat	tion Incorporation	
Address (line 2)	23545 NW Skyline	Blvd	
Address (line 3)	North Plains, OR	97133-9204	
Address (line 4)			
Pages	Enter the total number of pa including any attachments.	ages of the attached conveyance do	cument # 3
	Number(s) or Patent Nun	` '	rk if additional numbers attached
	e Patent Application Number or the I ent Application Number(s)	Patent Number (DO NOT ENTER BOTH numl	tent Number(s)
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	being filed together with a new Pate named executing inventor.	ent Application, enter the date the patent appl	ication was Month Day Year
Enter only	eration Treaty (PCT) PCT application number if a U.S. Application Number not been assigned.	PCT	PCT PCT
Number of P	roperties Enter the to	tal number of properties involved.	# 1
Fee Amount	Fee Amount	for Properties Listed (37 CFR 3.41)	s: \$ 40.00
Method o Deposit A	of Payment: Enclo	osed X Deposit Account	
	ayment by deposit account or if add	litional fees can be charged to the account.) Deposit Account Number:	#
		Authorization to charge additional fees:	Yes No
Statement an	id Signature		
attached		elief, the foregoing information is tro original document. Charges to depo	
	Sidney Edelson	form hyan	March 2, 2001
Name o	of Person Signing	Signature	Date

PATENT REEL: 11596 FRAME: 0648

912

ASSIGNMENT

WHEREAS, I, Jonathan Sidney Edelson residing at Cambridge, Massachusetts, have invented certain new and useful improvements in and to the subject matter of:

THERMIONIC GENERATOR

described in an application for United States Letters Patent filed on November 30, 1999, and accorded Application No. 09/451,509:

AND, WHEREAS, Borealis Technical Limited, a corporation organized and existing under the laws of Gibraltar, and having offices at Suite 3C, Centre Plaza, P.O. Box 926, Horse Barrack Lane, Gibraltar (hereinafter "ASSIGNEE"), is desirous of acquiring certain rights thereunder;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration, receipt of which is hereby acknowledged, I do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, my entire right, title and interest in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto in and to said improvements, said United States application, any other United States applications, including provisional, divisional, renewal, substitute, continuation, reexamination and reissue applications, based in whole or in part on said United States application or in whole or in part on said improvements, any foreign applications, including international and regional applications, based in whole or in part on any of the aforesaid United States applications or in whole or in part on said improvements, and in and to any and all letters patent, including extensions thereof, of any country which have been or may be granted on any of the aforesaid applications or on said improvements or any parts thereof;

AND I hereby agree for myself and my heirs, executors and administrators to execute without further consideration any further documents and instruments which may be necessary, lawful and proper in the prosecution of said above-named application or in the preparation or prosecution of any continuing, substitute, divisional, renewal, reexamination or reissue application or in any amendments, extensions or interference proceedings, or other applications for patents of any region or country, that may be necessary to secure to ASSIGNEE its interest and title in and to said improvements or any parts thereof, and in and to said several patents or any of them;

AND I hereby covenant for myself and my legal representatives, and agree with said ASSIGNEE, its successors and assigns, that I have granted no right or license to make, use or sell said improvements, to anyone except said ASSIGNEE, that prior to the execution of this deed, my right, title and interest in said improvements had not been otherwise encumbered, and that I have not and will not execute any instrument in conflict therewith;

Proprietary and Confidential, Property of Borealis Technical Limited **ASSIGNMENT** of US Patent Application Number 09/451,509 filed 11/30/99 Titled: **THERMIONIC GENERATOR**Jonathan Sidney Edelson - Page 1 of 2

PATENT REEL: 11596 FRAME: 0649 AND I do hereby authorize and request the United States Commissioner of Patents and Trademarks to issue any and all letters patent which may be granted upon said United States applications, or upon said improvements or any parts thereof when granted, to said ASSIGNEE.

This assignment is effective on November 30, 1999.

IN WITNESS WHEREOF, I have hereunto set my hand and seal.

14 December 2000 Date	Jonathan Sidney Edelson
Jonathan Sidney Edelson, known	of <u>December</u> , 2000 before me, personally appeared Mr. to me to be the person of that name, who signed and sealed the eledged the same to be of his free act and deed.
Printed/T	Syped Name: Robert L Flye
On behalf of said ASSIGNEE: 19 December 2000 Date	Address: 2020 SE 87 Av Po, Hond OR 07216 BOREAUS TECHNICAL LIMITED Rodney T. Cox
WITNESSED BY: 	Chairman of the Board/CEO Pouise M. Janicki ouise M. Janicki
Printed/Typed Name:	ouise M. Janicki

Proprietary and Confidential, Property of Borealis Technical Limited **ASSIGNMENT** of US Patent Application Number 09/451,509 filed 11/30/99 Titled: **THERMIONIC GENERATOR**

Scappoose OR

Jonathan Sidney Edelson - Page 2 of 2

Address:

Approved for use through 10/31/2002. OMB 0651-0032 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT

(\$) 40.00

Complete if Known			
Application Number	09/451,509		
Filing Date	11/30/1999		
First Named Inventor	EDELSON		
Examiner Name	PARSONS		
Group Art Unit	1741		
Attorney Docket No.			

METHOD OF PAYMENT	FEE CALCULATION (continued)				
The Commissioner is hereby authorized to charge	3. ADDITIONAL FEES				
indicated fees and credit any overpayments to: Deposit	Large Small				
Account Number	Entity Entity Fee Fee Fee Fee Fee Description	Fee Paid			
Deposit	Code (\$) Code (\$)	ree Falu			
Account Name	105 130 205 65 Surcharge - late filing fee or oath				
Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17	127 50 227 25 Surcharge - late provisional filing fee or cover sheet				
Applicant claims small entity status.	139 130 139 130 Non-English specification				
See 37 CFR 1.27	147 2,520 147 2,520 For filing a request for ex parte reexamination				
2. X Payment Enclosed:	112 920* 112 920* Requesting publication of SIR prior to				
X Check Credit card Money Other	Examiner action				
FEE CALCULATION	113 1,840* 113 1,840* Requesting publication of SIR after Examiner action				
1. BASIC FILING FEE	115 110 215 55 Extension for reply within first month				
Large Entity Small Entity	116 390 216 195 Extension for reply within second month				
Fee Fee Fee Fee Description Code (\$) Code (\$) Fee Paid	117 890 217 445 Extension for reply within third month				
101 710 201 355 Utility filing fee	118 1,390 218 695 Extension for reply within fourth month				
106 320 206 160 Design filing fee	128 1,890 228 945 Extension for reply within fifth month				
107 490 207 245 Plant filing fee	119 310 219 155 Notice of Appeal				
108 710 208 355 Reissue filing fee	120 310 220 155 Filing a brief in support of an appeal				
114 150 214 75 Provisional filing fee	121 270 221 135 Request for oral hearing				
	138 1,510 138 1,510 Petition to institute a public use proceeding				
SUBTOTAL (1) (\$)	140 110 240 55 Petition to revive - unavoidable				
2. EXTRA CLAIM FEES	141 1,240 241 620 Petition to revive - unintentional				
Fee from Ext <u>ra Claims below</u> Fee Paid	142 1,240 242 620 Utility issue fee (or reissue)				
Total Claims20** = X =	143 440 243 220 Design issue fee				
Independent Claims - 3** = X = =	144 600 244 300 Plant issue fee				
Multiple Dependent	122 130 122 130 Petitions to the Commissioner				
	123 50 123 50 Processing fee under 37 CFR 1.17(q)				
Large Entity Small Entity Fee Fee Fee Fee Fee Description	126 180 126 180 Submission of Information Disclosure Stmt				
Code (\$) Code (\$) 103 18 203 9 Claims in excess of 20	581 40 581 40 Recording each patent assignment per property (times number of properties)	40			
102 80 202 40 Independent claims in excess of 3	146 710 246 355 Filing a submission after final rejection				
104 270 204 135 Multiple dependent claim, if not paid	(37 CFR § 1.129(a))				
109 80 209 40 ** Reissue independent claims over original patent	149 710 249 355 For each additional invention to be examined (37 CFR § 1.129(b))				
110 18 210 9 ** Reissue claims in excess of 20	179 710 279 355 Request for Continued Examination (RCE)				
and over original patent	169 900 169 900 Request for expedited examination				
SUBTOTAL (2)	of a design application Other fee (specify)				
**or number previously paid, if greater; For Reissues, see above *Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) 40.00					
SUBMITTED BY Complete (if applicable)					

SUBMITTED BY			Complete (if applicable)	
Name (Print/Type)	Jonathan S. Edelson Registration No. (Attorney/Agent)	Telephone	5036213286	
Signature	Gomes Les	Date	03/02/2001	

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PATENT REEL: 11596 FRAME: 0651