

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT2725470

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
VITRUVIAN EXPLORATION, LLC	11/29/2013
RECEIVING PARTY DATA	
Name:	EFFECTIVE EXPLORATION LLC
Street Address:	8117 PRESTON ROAD, SUITE 300
City:	DALLAS
State/Country:	TEXAS
Postal Code:	75225
PROPERTY NUMBERS Total: 102	
Property Type	Number
Patent Number:	7134494
Patent Number:	6964308
Patent Number:	6280000
Patent Number:	6561288
Patent Number:	6732792
Patent Number:	6688388
Patent Number:	6668918
Patent Number:	6478085
Patent Number:	8316966
Patent Number:	8297350
Patent Number:	8376052
Patent Number:	6679322
Patent Number:	6964298
Patent Number:	8434568
Patent Number:	8511372

Patent Number:	8479812
Patent Number:	6439320
Patent Number:	6598686
Patent Number:	7025154
Patent Number:	6976533
Patent Number:	8297377
Patent Number:	8464784
Patent Number:	8505620
Application Number:	13965002
Patent Number:	8376039
Patent Number:	8371399
Patent Number:	8469119
Patent Number:	8291974
Patent Number:	6357523
Patent Number:	6988548
Patent Number:	7073595
Patent Number:	6708764
Patent Number:	6962216
Patent Number:	6604580
Patent Number:	6988566
Patent Number:	7048049
Patent Number:	6681855
Patent Number:	6662870
Patent Number:	6425448
Patent Number:	6454000
Patent Number:	6575235
Patent Number:	6848508
Patent Number:	7036584
Patent Number:	6986388
Patent Number:	6991047
Patent Number:	6991048
Patent Number:	8333245
Patent Number:	6953088
Patent Number:	7360595
Patent Number:	7100687

	6722452
Patent Number:	7025137
Patent Number:	6942030
Patent Number:	7090009
Patent Number:	6604910
Patent Number:	6945755
Patent Number:	6497556
Patent Number:	6412556
Application Number:	10188159
Patent Number:	7213644
Patent Number:	7434620
Patent Number:	7163063
Patent Number:	7419223
Patent Number:	7086470
Patent Number:	7207395
Patent Number:	6851479
Patent Number:	7007758
Patent Number:	7264048
Application Number:	10882025
Patent Number:	7174959
Patent Number:	7222670
Patent Number:	7207390
Patent Number:	6976547
Patent Number:	7178611
Patent Number:	6725922
Patent Number:	6595302
Patent Number:	6575255
Patent Number:	6644422
Patent Number:	6591922
Patent Number:	6595301
Patent Number:	7373984
Patent Number:	7299864
Patent Number:	7182157
Patent Number:	7225872
Patent Number:	7353877

	7311150
Application Number:	11963416
Patent Number:	7571771
Application Number:	60695918
Application Number:	60697638
Application Number:	60950321
Patent Number:	8033337
Application Number:	11312041
Application Number:	10227057
Application Number:	11141458
Application Number:	11141459
Application Number:	10813183
Application Number:	10896838
Application Number:	11020444
Application Number:	11484239
Application Number:	13269455
Application Number:	12100751

**CORRESPONDENCE DATA**

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NAME OF SUBMITTER:	M. VANESSAH MELTON
Signature:	/M. Vanessah Melton/
Date:	02/12/2014

**Total Attachments: 10**

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**ASSIGNMENT UNITED STATES PATENTS**

WHEREAS, Vitruvian Exploration, LLC, a Delaware limited liability company, having a principal place of business at 4 Waterway Square, Suite 400, The Woodlands, TX 77380 (hereafter called "ASSIGNOR"), is the owner of the entire right, title, and interest in and to the Patents (as defined below);

AND WHEREAS, Effective Exploration LLC, a Texas corporation having a principal place of business at 8117 Preston Road, Suite 300, Dallas, Texas 75225 (hereafter called "ASSIGNEE") wants to acquire the entire right, title and interest in and to said Patents.

NOW, THEREFORE, effective on December 3, 2013 and for good and valuable consideration the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR hereby assigns to ASSIGNEE all of its right, title and interest in and to the United States patents and patent applications listed in Exhibit A1 and all continuations, continuations--in-part, divisionals, extensions, renewals, reissues and re-examinations thereof in the United States, including without limitation, all rights to claim priority on the basis thereof, all rights to sue for past, present and future infringement, including the right to collect and receive any damages, royalties, or settlements for such infringements, and all rights to sue for injunctive or other equitable relief (collectively, the "United States Patents").

IN TESTIMONY WHEREOF, I hereunto set my hand this 29 day of November, 2013.

Vitruvian Exploration, LLC (Assignor)

By: [Signature]

Name: Ed Donahue

Title: Authorized Person

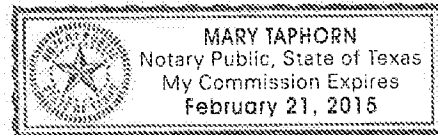
STATE OF TEXAS )

COUNTY OF HARRIS )

On 11/29 / 2013, before me, MARY TAPHORN, Notary Public, personally appeared EDWIN B DONAHUE, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of TEXAS that the foregoing paragraph is true and correct. WITNESS my hand and official seal.

Signature of Notary: [Signature]



**EXHIBIT A1****U.S. PATENTS & APPLICATIONS**

<b>US Patent / Publication No.</b>	<b>US Appl. No.</b>	<b>Filing Date</b>	<b>Issue Date</b>	<b>Title</b>	<b>Status</b>
7134494	10/457103	6/5/2003	11/14/2006	Method And System For Recirculating Fluid In A Well System	Abandoned
6964308	10/267426	10/8/2002	11/15/2005	Method Of Drilling Lateral Wellbores From A Slant Well Without Utilizing A Whipstock	Issued
6280000	09/197687	11/20/1998	8/28/2001	Method For Production Of Gas From A Coal Seam Using Intersecting Well Bores	Issued
6561288	09/885219	6/20/2001	5/13/2003	Method And System For Accessing Subterranean Deposits From The Surface	Issued
6732792	09/788897	2/20/2001	5/11/2004	Multi-Well Structure For Accessing Subterranean Deposits	Issued
6688388	10/165625	6/7/2002	2/10/2004	Method For Accessing Subterranean Deposits From The Surface	Issued
6668918	10/165627	6/7/2002	12/30/2003	Method And System For Accessing Subterranean Deposits From The Surface	Issued
6478085	09/789956	2/20/2001	11/12/2002	Method And System For Accessing Subterranean Deposits From The Surface	Issued
2006-0096755	11/312041	12/20/2005	N/A	Method And System For Accessing Subterranean Deposits From The Surface	Abandoned
8316966	11/982086	10/31/2007	11/27/2012	Method And System For Accessing Subterranean Deposits From The Surface And Tools Therefor	Issued
8297350	11/982232	10/31/2007	10/30/2012	Method And System For Accessing Subterranean Deposits From The Surface	Issued
8376052	10/003917	11/1/2001	2/19/2013	Method And System For Surface Production Of Gas From A Subterranean Zone	Issued
6679322	10/256412	9/26/2002	1/20/2004	Method And System For Accessing Subterranean Deposits From The Surface	Issued

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**PATENT**  
**REEL: 032263 FRAME: 0671**



US Patent / Publication No.	US Appl. No.	Filing Date	Issue Date	Title	Status
6964298	10/761629	1/20/2004	11/15/2005	Method And System For Accessing Subterranean Deposits From The Surface	Issued
8,434,568	11/188250	7/22/2005	5/7/2013	Method And System For Circulating Fluid In A Well System	Issued
8,511,372	11/981939	10/31/2007	8/20/2013	Method And System For Accessing Subterranean Deposits From The Surface	Issued
8,479,812	11/982181	10/31/2007	7/9/2013	Method And System For Accessing Subterranean Deposits From The Surface And Tools Therefor	Issued
6439320	09/791033	2/20/2001	8/27/2002	Wellbore Pattern For Uniform Access To Subterranean Deposits	Issued
6598686	09/769098	1/24/2001	7/29/2003	Method And System For Enhanced Access To A Subterranean Zone	Issued
7025154	10/323192	12/18/2002	4/11/2006	Method And System For Circulating Fluid In A Well System	Issued
6976533	10/641856	8/15/2003	12/20/2005	Method And System For Accessing Subterranean Deposits From The Surface	Issued
8297377	10/630345	7/29/2003	10/30/2012	Method And System For Accessing Subterranean Deposits From The Surface And Tools Therefor	Issued
8,464,784	11/981971	10/31/2007	6/18/2013	Method And System For Accessing Subterranean Deposits From The Surface And Tools Therefor	Issued
8,505,620	11/982249	10/31/2007	8/13/2013	Method And System For Accessing Subterranean Deposits From The Surface And Tools Therefor	Issued
	13/965,002	8/12/2013		Method And System For Accessing Subterranean Deposits From The Surface And Tools Therefor	Pending
8376039	12/313652	11/21/2008	02/19/2013	Method And System For Accessing Subterranean Deposits From The Surface And Tools Therefor	Issued
8371399	11/982191	10/31/2007	2/12/2013	Method And System For Accessing Subterranean Deposits From The Surface And Tools Therefor	Issued

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PATENT  
REEL: 032263 FRAME: 0672

US Patent / Publication No.	US Appl. No.	Filing Date	Issue Date	Title	Status
8,469,119	11/982182	10/31/2007	6/25/2013	Method And System For Accessing Subterranean Deposits From The Surface And Tools Therefor	Issued
8291974	11/982015	10/31/2007	10/23/2012	Method And System For Accessing Subterranean Deposits From The Surface And Tools Therefor	Issued
6357523	09/444029	11/19/1999	3/19/2002	Drainage Pattern With Intersecting Wells Drilled From Surface	Issued
6988548	10/264535	10/3/2002	1/24/2006	Method And System For Removing Fluid From A Subterranean Zone Using An Enlarged Cavity	Issued
7073595	10/244082	9/12/2002	7/11/2006	Method And System For Controlling Pressure In A Dual Well System	Issued
2004-0035582	10/227057	8/22/2002	N/A	System And Method For Subterranean Access	Abandoned
6708764	10/194366	7/12/2002	3/23/2004	Undulating Well Bore	Issued
6962216	10/160425	5/31/2002	11/8/2005	Wedge Activated Underreamer	Issued
6604580	10/123561	4/15/2002	8/12/2003	Method And System For Accessing Subterranean Zones From A Limited Surface Area	Issued
6988566	10/079794	2/19/2002	1/24/2006	Acoustic Position Measurement System For Well Bore Formation	Abandoned
7048049	10/004316	10/30/2001	5/23/2006	Slant Entry Well System And Method	Abandoned
6681855	10/046001	10/19/2001	1/27/2004	Method And System For Management Of By-Products From Subterranean Zones	Issued
6662870	09/774996	1/30/2001	12/16/2003	Method And System For Accessing Subterranean Zones From A Limited Surface Area	Issued

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PATENT  
REEL: 032263 FRAME: 0673

US Patent / Publication No.	US Appl. No.	Filing Date	Issue Date	Title	Status
6425448	09/773217	1/30/2001	7/30/2002	Method And System For Accessing Subterranean Zones From A Limited Surface Area	Issued
6454000	09/696338	10/24/2000	9/24/2002	Cavity Well Positioning System And Method	Abandoned
6575235	10/123556	4/15/2002	6/10/2003	Subterranean Drainage Pattern	Issued
6848508	10/749884	12/31/2003	2/1/2005	Slant Entry Well System And Method	Issued
7036584	10/188141	7/1/2002	5/2/2006	Method And System For Accessing A Subterranean Zone From A Limited Surface Area	Issued
6986388	10/406037	4/2/2003	1/17/2006	Method And System For Accessing A Subterranean Zone From A Limited Surface Area	Issued
6991047	10/194368	7/12/2002	1/31/2006	Wellbore Sealing System And Method	Abandoned
6991048	10/194422	7/12/2002	1/31/2006	Wellbore Plug System And Method	Abandoned
8333245	10/246052	9/17/2002	12/18/2012	Accelerated Production Of Gas From A Subterranean Zone	Issued
6953088	10/328408	12/23/2002	10/11/2005	Method And System For Controlling The Production Rate Of Fluid From A Subterranean Zone To Maintain Production Bore Stability In The Zone	Issued
7360595	10/142817	5/8/2002	4/22/2008	Method And System For Underground Treatment Of Materials	Issued

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**PATENT**  
**REEL: 032263 FRAME: 0674**

US Patent / Publication No.	US Appl. No.	Filing Date	Issue Date	Title	Status
7100687	10/715300	11/17/2003	9/5/2006	Multi-Purpose Well Bores And Method For Accessing A Subterranean Zone From The Surface	Issued
6722452	10/079444	2/19/2002	4/20/2004	Pantograph Underreamer	Issued
7025137	10/244083	9/12/2002	4/11/2006	Three-Dimensional Well System For Accessing Subterranean Zones	Abandoned
6942030	10/777503	2/11/2004	9/13/2005	Three-Dimensional Well System For Accessing Subterranean Zones	Issued
7090009	11/057546	2/14/2005	8/15/2006	Three-Dimensional Well System For Accessing Subterranean Zones	Abandoned
6604910	09/841773	4/24/2001	8/12/2003	Fluid Controlled Pumping System And Method	Abandoned
6945755	10/627551	7/25/2003	9/20/2005	Fluid Controlled Pumping System And Method	Issued
6497556	09/841748	4/24/2001	12/24/2002	Fluid Level Control For A Downhole Well Pumping System	Abandoned
6412556	09/632273	8/3/2000	7/2/2002	Cavity Positioning Tool And Method	Abandoned
N/A	10/188159	7/1/2002	N/A	Cavity Positioning Tool And Method	Abandoned
7213644	10/687362	10/14/2003	5/8/2007	Cavity Positioning Tool And Method	Abandoned
7434620	11/692036	3/27/2007	10/14/2008	Cavity Positioning Tool And Method	Issued
7163063	10/723322	11/26/2003	1/16/2007	Method And System For Extraction Of Resources From A Subterranean Well Bore	Abandoned

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PATENT  
REEL: 032263 FRAME: 0675

US Patent / Publication No.	US Appl. No.	Filing Date	Issue Date	Title	Status
7419223	11/035537	1/14/2005	9/2/2008	System And Method For Enhancing Permeability Of A Subterranean Zone At A Horizontal Well Bore	Issued
2006-0201714	11/141458	5/31/2005	N/A	Well Bore Cleaning	Abandoned
2006-0201715	11/141459	5/31/2005	N/A	Drilling Normally To Sub-Normally Pressured Formations	Abandoned
2008-0185149	12/100751	4/10/2008	N/A	System And Method For Enhancing Permeability Of A Subterranean Zone At A Horizontal Well Bore	Abandoned
7086470	10/764192	1/23/2004	8/8/2006	System And Method For Wellbore Clearing	Abandoned
7207395	10/769221	1/30/2004	4/24/2007	Method And System For Testing A Partially Formed Hydrocarbon Well For Evaluation And Well Planning Refinement	Abandoned
6851479	10/197121	7/17/2002	2/8/2005	Cavity Positioning Tool And Method	Issued, (Erroneously indicated as expired, petition to withdraw expiration filed 3/28/13)
7007758	11/052664	2/7/2005	3/7/2006	Cavity Positioning Tool And Method	Abandoned
7264048	10/419529	4/21/2003	9/4/2007	Non-Cylindrical Cavity For Intersecting Well Bores	Issued
N/A	10/882025	6/30/2004	N/A	Method And System For Determining Discontinuities In A Coal Or Other Carbonaceous Formation	Abandoned
7174959	10/824087	4/14/2004	2/13/2007	Downhole Separator System And Method	Abandoned
7222670	10/788694	2/27/2004	5/29/2007	System And Method For Multiple Wells From A Common Surface Location	Issued
7207390	10/772841	2/5/2004	4/24/2007	Method And System For Lining Multilateral Wells	Abandoned

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PATENT  
REEL: 032263 FRAME: 0676

US Patent / Publication No.	US Appl. No.	Filing Date	Issue Date	Title	Status
6976547	10/196042	7/16/2002	12/20/2005	Actuator Underreamer	Abandoned
7178611	10/811118	3/25/2004	2/20/2007	System And Method For Directional Drilling Utilizing Clutch Assembly	Abandoned
2005-0211471	10/813183	3/29/2004	N/A	System And Method For Controlling Drill Motor Rotational Speed	Abandoned
6725922	10/194367	7/12/2002	4/27/2004	Ramping Well Bores	Issued
6595302	09/932487	8/17/2001	7/22/2003	Multi-Blade Underreamer	Abandoned
6575255	09/929551	8/13/2001	6/10/2003	Pantograph Underreamer	Abandoned
6644422	09/929175	8/13/2001	11/11/2003	Pantograph Underreamer	Issued
6591922	09/929568	8/13/2001	7/15/2003	Pantograph Underreamer And Method For Forming A Well Bore Cavity	Abandoned
6595301	09/932482	8/17/2001	7/22/2003	Single-Blade Underreamer	Abandoned
2006-0020390	10/896838	7/22/2004	N/A	Method And System For Determining Change In Geologic Formations Being Drilled	Abandoned
7373984	11/020374	12/22/2004	5/20/2008	Lining Well Bore Junctions	Issued
7299864	11/021055	12/22/2004	11/27/2007	Adjustable Window Liner	Issued
7182157	11/019694	12/21/2004	2/27/2007	Enlarging Well Bores Having Tubing Therein	Abandoned
7225872	11/019748	12/21/2004	6/5/2007	Perforating Tubulars	Abandoned
7353877	11/019757	12/21/2004	4/8/2008	Accessing Subterranean Resources By Formation	Issued

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PATENT  
REEL: 032263 FRAME: 0677

US Patent / Publication No.	US Appl. No.	Filing Date	Issue Date	Title	Status
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2006-0131025	11/020444	12/22/2004	N/A	Method And System For Producing A Reservoir Through A Boundary Layer	Abandoned
7311150	11/018775	12/21/2004	12/25/2007	Method And System For Cleaning A Well Bore	Issued
N/A	11/963416	12/21/2007	N/A	Method And System For Cleaning A Well Bore	Abandoned
7571771	11/141335	5/31/2005	8/11/2009	Cavity Well System	Abandoned
N/A	60/695918	7/2/2005	N/A	Locating Subterranean Well System Features	Abandoned
N/A	60/697638	7/8/2005	N/A	Whipstock Liner	Expired
2007-0034384	11/484239	7/10/2006	N/A	Whipstock Liner	Abandoned
N/A	60/950321	7/17/2007	N/A	Method And System For Plugging A Well	Expired
8033337	12/109277	4/24/2008	10/11/2011	Plugging A Mined-Through Well	Issued
2012-0199348	13/269455	10/7/2011	N/A	Plugging A Mined-Through Well	Published

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