


This application form is for activities regulated under the <i>Water Act</i> .			
Check one or more of the following to indicate type of application			
Licence for Diversion of Water	<input checked="" type="checkbox"/>	Renewal of Diversion Licence	<input type="checkbox"/>
Licence Amendment	<input type="checkbox"/>	Approval Amendment	<input type="checkbox"/>
Approval for Constructing Works		<input type="checkbox"/>	
Preliminary Certificate Amendment		<input type="checkbox"/>	
Water Act File No. (if applicable)			
Applicant			
Name or Business Name:	Grizzly Oil Sands ULC	Business Contact:	John Eubank
Address: (include city, province and postal code)	Suite 2700, 605 - 5 Avenue SW Calgary Alberta Canada T2P 3H5	Cell No.:	
		Phone No.:	403-930-6457
		Fax No.:	
		E-mail:	john.eubank@grizzlyoilsands.com
Are you the owner of the land or undertaking?		<input type="radio"/> Yes <input checked="" type="radio"/> No	
If no, please attach a copy of the written consent of the owner of the land or the undertaking. If working in the 'public land' administered by Alberta Sustainable Resource Development, include the disposition number obtained to undertake the activity.		Consent attached? <input type="radio"/> Yes <input checked="" type="radio"/> No	
Disposition No.		MSL 043171	
Authorized Representative*		<input checked="" type="checkbox"/> Same as Applicant	
Project Description			
Tentative Construction Start Date:	01-Jul-2015	Duration of Construction:	2 years
Tentative Water Diversion Start Date:	01-Oct-2016	Duration of Water Diversion/Use:	37 years
Provide a detailed description, including location of works and activities, relating to the project and attach plans:			
Grizzly is applying to obtain groundwater from the Quaternary aged Empress Formation in Township 77 and Range 09 W4M for the May River SAGD Project. A maximum water allocation of 1,228 m ³ /d (448,220 m ³ on an annual basis) is required in the first two years of steaming operations, which declines to a steady state of 750 m ³ /d (273,750 m ³ on an annual basis) thereafter. The Project water demand is summarized in Table 4.2-3 of the Application for Approval of the May River SAGD Project. The total source water requirements are the sum of the process makeup water and non-process makeup water as specified in Table 4.2-3.			

Application under the *Water Act* for Approvals and/or Licences

Water Sources (Location of Works and Activities):													
<input type="radio"/> Surface Water <input checked="" type="radio"/> Groundwater													
Groundwater - Point of Diversion													
+	Well Id (if known)	Date Well Drilled	Well Location					Purpose	Annual Volume of Water Required (cubic metres)	Maximum Pumping Rate (show units)	Production Intervals		Total Depth (metres)
	1/4	Sec	Twp	Rge	M	Top (metres)	Bottom (metres)						
X	1435145	14-Oct-2005	NE	12	77	9	4	Industrial	448,220	1,228 m3/d			
Plan/Block/Lot			UTM Coordinates				Zone 12U	Easting (m)	483928	Northing (m)		6168240	
Indicate if a 'Drillers Report' is attached? <input checked="" type="radio"/> Yes <input type="radio"/> No													
+ - add additional row x - remove current row To locate a well id, please search http://www.eninfo.gov.ab.ca/GroundWater/ .													
Indicate the 'Point of Use' if different than the 'Water Diversion Location(s)'										<input checked="" type="checkbox"/> same location as source(s)			
To ensure your application is complete, please refer to the 'Guidelines for Licensing Water Diversion Projects' http://environment.alberta.ca/03222.html .													
Statement of Confirmation:													
The information given on this form is true to the best of my knowledge.													
If you wish to sign the form with an electronic signature you are bound with the same force as though you had a fixed signature on paper.													
			<i>Dec 10, 2013</i>			<i>John Kubank</i>			<i>Grizzly Oil Sands LLC</i>				
Signature			Date of Signing			Printed Name			Company Name				

Application under the *Water Act* for Approvals and/or Licences

Return the completed form to the Alberta Environment Regulatory Approvals Centre:

<p>Regulatory Approvals Centre Main Floor Oxbridge Place 9820 106 Street Edmonton Alberta T5K 2J6 Telephone: 780-427-6311 Fax: 780-422-0154</p>	<p>Northern Region E-mail address AENV.NorthWaterApprovals@gov.ab.ca Central Region E-mail address AENV.CentralWaterApprovals@gov.ab.ca Southern Region E-mail address AENV.SouthWaterApprovals@gov.ab.ca</p>	<p style="text-align: center;"> <input type="button" value="Submit application for Northern Region"/> <input type="button" value="Submit application for Central Region"/> <input type="button" value="Submit application for Southern Region"/> </p>
<p>PERSONAL INFORMATION COLLECTION AND USE NOTIFICATION</p> <p><i>Personal information on this form is collected under the authority of section 33(c) of the Freedom of Information and Protection of Privacy (FOIP) Act and will be used to administer the Water Act and its associated regulations. This form is a public record and is available to anyone. All information contained on this form (including personal information) is disclosed by Alberta Environment and Water to anyone requesting a copy in accordance with Section 15(1)(a) of the Water (Ministerial) Regulation. For further information about the collection and use of this information, please contact Alberta Environment and Water's Regulatory Approvals Centre at RAC.Environment@gov.ab.ca or call (780) 427-6311.</i></p>		
<p>WATER (MINISTERIAL) REGULATION - REQUEST FOR CONFIDENTIALITY</p> <p>As identified in Section 15(4) of the <i>Water (Ministerial) Regulation</i>, If the applicant wishes that a trade secret, process or technical information in the application be kept confidential, the applicant may make a written request to the Director within 30 days after the information is submitted, identifying the information, and requesting that the information be kept confidential and not be disclosed. The written request must identify the specifics of the information to be kept confidential and not to be disclosed. Ultimately, it is the Director who makes the decision regarding the confidentiality of the identified information.</p> <p>If you are submitting a request to assure confidentiality of certain information such as a trade secret, process or technical information for the Directors consideration, submit this information in a separate attachment to the application form.</p>		
<input type="button" value="Protect Fields"/>		

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 1435145
 GoA Well Tag No.
 Drilling Company Well ID
 Date Report Received

Well Identification and Location										Measurement in Metric
Owner Name WHITESANDS INSITU		Address 2600, 240 - 4 AVE SW			Town CALGARY		Province AB	Country CA	Postal Code T2P 4H4	
Location	<i>1/4 or LSD</i> 10	<i>SEC</i> 12	<i>TWP</i> 077	<i>RGE</i> 09	<i>W of MER</i> 4	<i>Lot</i>	<i>Block</i>	<i>Plan</i>	<i>Additional Description</i>	
Measured from Boundary of _____ m from _____ _____ m from _____					GPS Coordinates in Decimal Degrees (NAD 83) Latitude <u>55.658990</u> Longitude <u>-111.255810</u>			Elevation _____ m		
					How Location Obtained Not Verified			How Elevation Obtained Not Obtained		

Drilling Information	
Method of Drilling Rotary	Type of Work New Well
Proposed Well Use Industrial	

Formation Log			Measurement in Metric
Depth from ground level (m)	Water Bearing	Lithology Description	
160.32		Unknown	
167.64		Gray See Comments	
171.60		Gray Sand	
177.70		Dark Gray Sand	
180.75		See Comments Sand	
182.88		Gray Shale	
183.79		See Comments Shale & Sandstone	

Yield Test Summary			Measurement in Metric
<i>Recommended Pump Rate</i> _____ L/min			
Test Date	Water Removal Rate (L/min)	Static Water Level (m)	
2005/10/14			

Well Completion				Measurement in Metric
<i>Total Depth Drilled</i>	<i>Finished Well Depth</i>	<i>Start Date</i>	<i>End Date</i>	
183.79 m		2005/10/13	2005/10/14	
Borehole				
Diameter (cm)		From (m)	To (m)	
Surface Casing (if applicable)			Well Casing/Liner	
Steel			Unknown	
Size OD : <u>21.91 cm</u>		Size OD : <u>15.24 cm</u>		
Wall Thickness : <u>0.671 cm</u>		Wall Thickness : _____ cm		
Bottom at : <u>160.32 m</u>		Top at : <u>157.58 m</u>		
		Bottom at : <u>176.17 m</u>		
Perforations				
		Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
From (m)	To (m)			
Perforated by Unknown				
Annular Seal Cement/Grout				
Placed from <u>0.00 m</u> to <u>160.32 m</u>				
Amount _____				
Other Seals				
Type				At (m)
Screen Type Stainless Steel				
Size OD : <u>15.24 cm</u>				
From (m)		To (m)		Slot Size (cm)
176.17		180.75		0.038
Attachment <u>Attached To Casing</u>				
Top Fittings <u>Packer</u>		Bottom Fittings <u>Bail</u>		
Pack				
Type <u>Natural</u>		Grain Size _____		
Amount _____		Unknown		

Contractor Certification	
<i>Name of Journeyman responsible for drilling/construction of well</i> BOB GROVE	<i>Certification No</i> 26857A
<i>Company Name</i> LARSON'S WATERWELL SERVICING LTD.	<i>Copy of Well report provided to owner</i> <i>Date approval holder signed</i>

GIC Well ID 1435145
 GoA Well Tag No.
 Drilling Company Well ID
 Date Report Received

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

Well Identification and Location										Measurement in Metric
Owner Name WHITESANDS INSITU		Address 2600, 240 - 4 AVE SW			Town CALGARY		Province AB	Country CA	Postal Code T2P 4H4	
Location	<i>1/4 or LSD</i> 10	<i>SEC</i> 12	<i>TWP</i> 077	<i>RGE</i> 09	<i>W of MER</i> 4	<i>Lot</i>	<i>Block</i>	<i>Plan</i>	<i>Additional Description</i>	
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)					
_____ m from _____					Latitude <u>55.658990</u> Longitude <u>-111.255810</u>			Elevation _____ m		
_____ m from _____					How Location Obtained Not Verified			How Elevation Obtained Not Obtained		

Additional Information										Measurement in Metric
<i>Distance From Top of Casing to Ground Level</i> _____ cm					<i>Is Flow Control Installed</i> _____					
<i>Is Artesian Flow</i> _____					<i>Describe</i> _____					
<i>Rate</i> _____ L/min										
<i>Recommended Pump Rate</i> _____ L/min			<i>Pump Installed</i> _____		<i>Depth</i> _____ m					
<i>Recommended Pump Intake Depth (From TOC)</i> _____ m			<i>Type</i> _____		<i>Make</i> _____	<i>H.P.</i> _____	<i>Model (Output Rating)</i> _____			
<i>Did you Encounter Saline Water (>4000 ppm TDS)</i> _____			<i>Depth</i> _____ m		<i>Well Disinfected Upon Completion</i> _____					
<i>Gas</i> _____			<i>Depth</i> _____ m		<i>Geophysical Log Taken</i> _____					
					<i>Submitted to ESRD</i> _____					
<i>Additional Comments on Well</i>					<i>Sample Collected for Potability</i> _____			<i>Submitted to ESRD</i> _____		
PROPOSED WELL USE - RIG, 526' - 550' GRAY CLAY/CEMENT, 583' - 593' MED LIGHT GRAY SAND, 600' - 603' SHALE/SOME SANDSTONE MIXED, 6" RISER PIPE FROM 517' - 578',										

Yield Test			Taken From Ground Level	Measurement in Metric
			<i>Depth to water level</i>	
<i>Test Date</i> 2005/10/14	<i>Start Time</i> 12:00 AM	<i>Static Water Level</i> _____ m		
			Drawdown (m)	Elapsed Time Minutes:Sec
			_____	_____
			_____	_____
Method of Water Removal				
<i>Type</i> <u>Unknown</u>				
<i>Removal Rate</i> _____ L/min				
<i>Depth Withdrawn From</i> _____ m				
<i>If water removal period was < 2 hours, explain why</i>				
PUMP TEST DATA TAKEN BY WESTWATER ENRIRON				

Water Diverted for Drilling		
<i>Water Source</i>	<i>Amount Taken</i> _____ L	<i>Diversion Date & Time</i>

Contractor Certification	
<i>Name of Journeyman responsible for drilling/construction of well</i> BOB GROVE	<i>Certification No</i> 26857A
<i>Company Name</i> LARSON'S WATERWELL SERVICING LTD.	<i>Copy of Well report provided to owner</i> _____ <i>Date approval holder signed</i> _____