



# Dalton 3D Proposal

Great Bear Petroleum Operating LLC  
Dalton 3D  
North Slope Borough, Alaska

October 22, 2012

Mr Ed Duncan  
Great Bear Petroleum Operating LLC  
601 W 5<sup>th</sup> Avenue, Suite 505  
Anchorage, Alaska 99501

Dear Mr Duncan,

Thank you for the opportunity to submit a bid on your proposed seismic program in Alaska as follows:

Program Name:	Dalton 3D
Program Area:	North Slope Borough, Alaska
Proposed Size:	Phase 1: not greater than 203.80 sq. /mi Phase 2: not greater than 173.14 sq. /mi
Source:	Conventional Vibroseis – utilizing the Emphaseis Sweep

CGGVeritas Land (U.S.) Inc. is pleased to offer for your consideration the following 24-bit Acquisition System recording crew with equipment, personnel and rates as outlined in the accompanying schedules:

This proposal is offered subject to crew availability and execution of our Master Service Agreement along with this Job Supplement. The total expenditure for this project will consist of the quoted "Daily Rate", plus all "Excluded" and "Third-party" costs.

This quotation will remain in effect for ten (10) days. If after 10 days Great Bear Petroleum Operating LLC has not accepted this bid, CGGVeritas Land (U.S.) Inc. withholds the right to cancel or renegotiate this proposal.

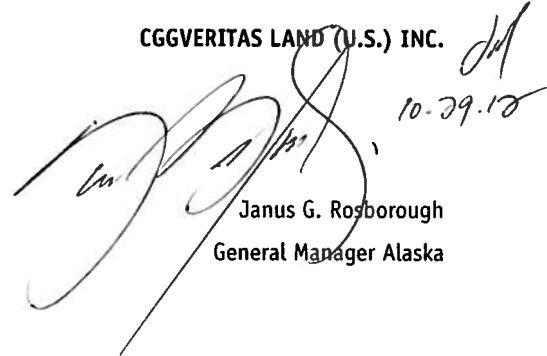
CGGVeritas Land (U.S.) Inc. is committed to the physical well-being of its employees, subcontractors, Great Bear Petroleum Operating LLC, general public and the environment. We follow strict safety and environmental programs, which meet or exceed the IAGC International Standards.

CGGVeritas Land (U.S.) Inc. is submitting two options representing two phases in this proposal. The two (2) phases are distinguished by a varied total program square mileage.

I would like to thank Great Bear Petroleum Operating LLC for considering CGGVeritas Land (U.S.) Inc. for its proposed seismic recording requirements. If you have any questions about this bid or would like information about our seismic data processing services, please do not hesitate to call me at (907) 346-5303.

Sincerely,

CGGVERITAS LAND (U.S.) INC.

A large, stylized handwritten signature in black ink, likely belonging to Janus G. Rosborough. To the right of the signature, there is a date '10-29-12' and a small mark that looks like 'JA'.

Janus G. Rosborough  
General Manager Alaska

**Table of contents**

1	SCHEDULE "A" EQUIPMENT AND PERSONNEL .....	5
2	SCHEDULE "B" RECORDING PARAMETERS .....	6
2.1	Program Area Outline Only .....	6
2.2	Program Area Outline Grid .....	7
3	SCHEDULE "C" TURNKEY RATE.....	9
3.1	Phase 1.....	9
3.2	Phase 2.....	9
3.3	Mobilization .....	9
3.4	Demobilization.....	9
4	SCHEDULE "D" INCLUDED IN THE TURNKEY RATE .....	10
4.1	INCLUDED OTHER.....	10
5	SCHEDULE "E" EXCLUDED IN THE TURNKEY RATE.....	11
5.1	EXCLUDED OTHER.....	11
6	SCHEDULE "F" STAND BY CHARGES .....	12
7	SCHEDULE "G" LIABILITIES AND EQUIPMENT DAMAGES .....	12
7.1	LIABILITIES.....	12
7.2	EQUIPMENT DAMAGES.....	13
8	SCHEDULE "H" PAYMENT SCHEDULE.....	13

**Figures**

Figure 1 – Phases 1 & 2 outline depictions .....	6
--	---

## 1 SCHEDULE "A" EQUIPMENT AND PERSONNEL

### Acquisition Crew:

24 Bit Sercel Recording System.

Geophones (3 per string, 10 Hz.) close tolerance.

Telemetry units with batteries

Phase 1: Maximum of 4,000 channels for Vibroseis proposal

Phase 2: Maximum of 4,000 channels for Vibroseis proposal

All necessary support and spare equipment to maintain normal and efficient operations. Please contact CGGVeritas Land (U.S.) Inc. for technical specifications on equipment and availability for certain equipment configurations.

All CGGVeritas vehicles and field office are equipped with VHF radios for infield communications.

### Medical Support:

Certified for the State of Alaska, an EMT/Paramedic or equivalent

### Personnel:

All necessary personnel to support and maintain normal and efficient operations.

## 2 SCHEDULE "B" RECORDING PARAMETERS

### 2.1 Program Area Outline Only

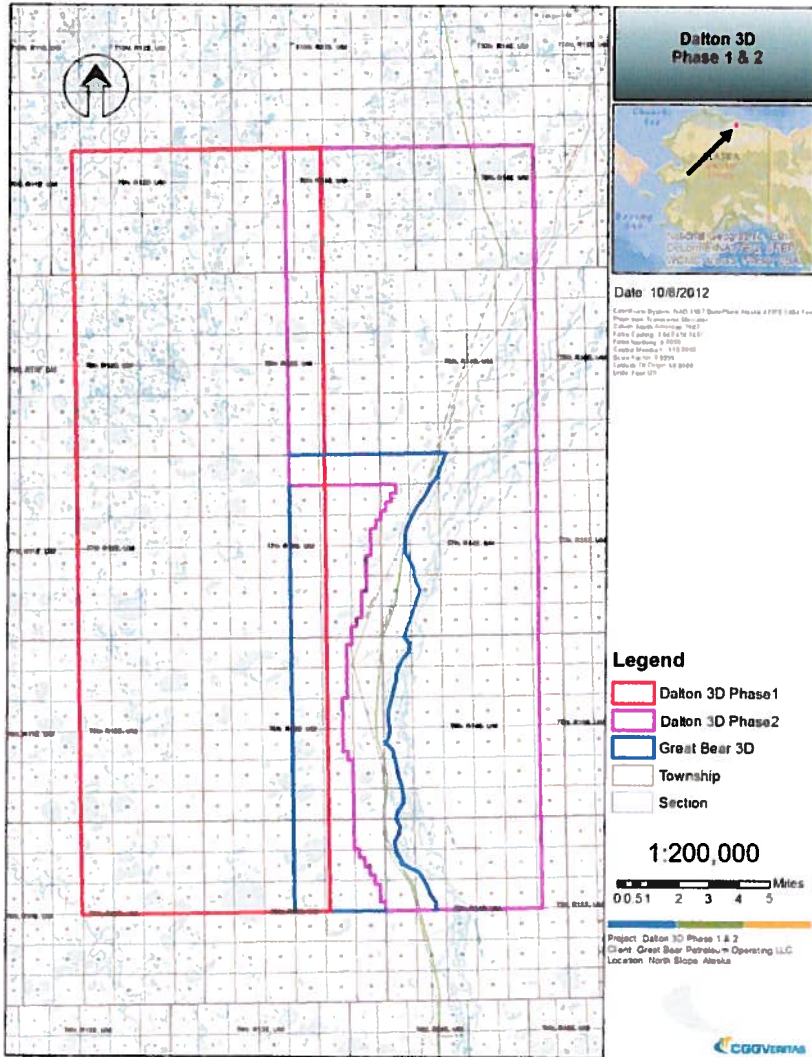


Figure 1 – Phases 1 & 2 outline depictions



## 2.2 Program Area Outline Grid

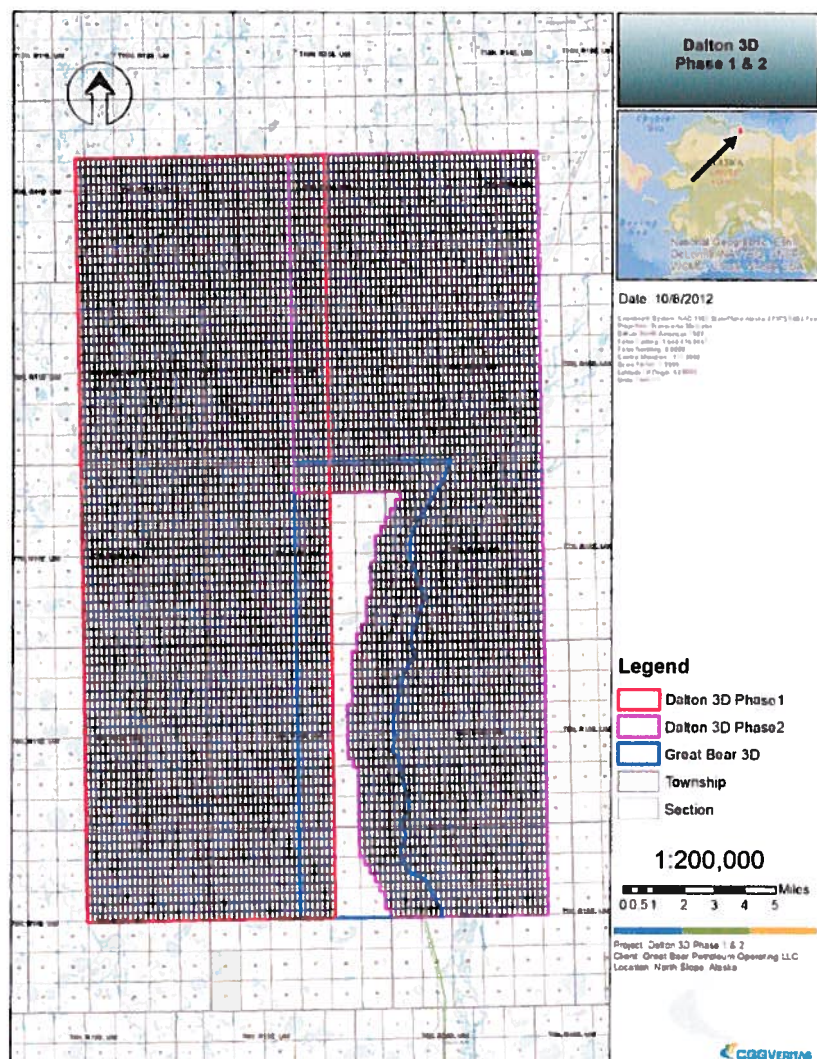


Figure 2 – Phases 1 & 2 outline grid depictions

	Phase 1	Phase 2
Program Size:	203.80 square miles	173.14 square miles
Receiver Spacing:	220 feet for both phases	
Receiver Line Spacing:	1,540 feet for both phases	
Total Number of Receivers:	17,052	14,500
Geophone Array:	3 over TBA for both phases	
VP Spacing:	220 feet for both phases	
Source Line Spacing:	880 feet for both phases	
Total Number of VP's:	30,100	25,557
Sweep Length:	4 seconds for both phases	
# of Sweeps:	4 sweeps for both phases	
# of Vibrators per VP:	4 Vibrators per VP for both phases	
Record Length:	4 seconds for both phases	
Sample Rate:	2 milliseconds for both phases	
Bin Size:	110.00 feet X 110.00 feet for both phases	
Patch Dimensions:	14 lines X 120 channels for both phases	
Live Channels:	1,680 for both phases	



Roll On/Off:

Yes, for both phases

### 3 SCHEDULE "C" TURNKEY RATE

The turnkey rate utilizing the parameters listed in Schedule B 2.1 is as follows:

#### 3.1 Phase 1

ACQUISITION: \$281,000.00 PER day – Estimated Total Recording bid price is \$9,019,369.00  
EXPECTED DURATION: 32.10 DAYS

#### 3.2 Phase 2

ACQUISITION: \$281,000.00 PER day – Estimated Total Recording bid price is \$7,742,385.00  
EXPECTED DURATION: 27.55 DAYS

#### 3.3 Mobilization

\$2,560,000.00 – mobilization price is for both phases

#### 3.4 Demobilization

\$1,440,000.00 – demobilization price is for both phases

Price is dependent on approval of surface/mineral permits and upon any restrictive operating conditions that surface owners or tenants may impose. CGGVeritas Land (U.S.) Inc. plans to conduct operations on a 7-day workweek, with recording field operations being conducted for a maximum 13.5 hours each day and prices are calculated as such. Any conditions which cause CGGVeritas Land (U.S.) Inc. to not be able to operate per this plan may result in stand-by charges or price change. Crew availability cannot be confirmed until CGGVeritas Land (U.S.) Inc. has assessed the conditions and progress of the permitting process.

Great Bear Petroleum Operating LLC will be directly responsible for payment to permittees (landowners, tenants, government agencies, etc.) as required for this project. If Great Bear Petroleum Operating LLC would prefer that CGGVeritas Land (U.S.) Inc. pay the permit fees; we will do so only after receipt of a pre-payment from Great Bear Petroleum Operating LLC for permit fees invoiced by CGGVeritas Land (U.S.) Inc. based on a preliminary estimate of actual permit fees. A five percent (5%) handling fee will be added to permit fees paid by CGGVeritas Land (U.S.) Inc.

Any changes to the program must be approved by CGGVeritas Land (U.S.) Inc. and will be subject to renegotiation of the price. Changes in total program size or total number of receiver points than original bid may require price negotiation.

In the event program cannot be shot on the mutually agreed scheduled dates, all advance services such as surveying, line clearance, drilling and accessing, are billable to Great Bear Petroleum Operating LLC and due upon receipt of invoice.

This bid is based on crew operations meeting CGGVeritas Land (U.S.) Inc.'s technical specs as outlined in the CGGVeritas Land (U.S.) Inc. Technical Operations Manual.

## 4 SCHEDULE "D" INCLUDED IN THE TURNKEY RATE

### 4.1 INCLUDED OTHER

*Cost for the rotation of personnel and equipment.*

*Cost of fuel, per diems, and lodging for personnel, included subcontractors, and rolling stock*

*Cost of trucking equipment to the Great Bear Petroleum Operating LLC 3D*

*Cost of a Project Manager & HSE Advisor during recording operations.*

*Cost of Advance Project Manager for the purpose of supervising front-end operations, (i.e. line clearing, surveying, program preparation, etc.) up to and including the arrival day of the recording crew at a rate of \$975.00 per day.*

*Cost of Advance HSE Advisor for the purpose of auditing and monitoring front-end operations, (i.e. line clearing, surveying, camp preparation, etc.) up to and including the arrival day of the recording crew at a rate of \$875.00 per day.*

*Cost of summer 2013 program required state inspection and clean-up costs associated with normal line trash belonging to the Dalton 3D program*

*Cost of one (2) qualified medical staff for 24hr operation and crew composition*

*Cost of all surveying and hazard/access survey and related expenses.*

*Cost of all food and lodging for the personnel in Schedule "A".*

*Cost of all expendable recording including costs of their shipping and storage.*

*Telephone, data transmissions and long distance charges*

*All freight and data shipment charges from crew to processing department.*

*Support from CGGVeritas Land (U.S.) Inc.'s technical services group located in Houston.*

## 5 SCHEDULE “E” EXCLUDED IN THE TURNKEY RATE

### 5.1 EXCLUDED OTHER

*Cost of any line clearing, brush cutting, erosion control, snow removal, snow bridge construction and cleanup over and above normal line trashing that may be required.*

*Cost of mobilization and demobilization as noted in 3.3 and 3.4.*

*Cost of testing for parameter selection or noise analysis at a rate of \$13,450.00 per hour.*

*Cost of Peak Particle Velocity Monitoring – for the purpose of establishing set back distances from pipelines, wells, dwellings or structures*

*Cost of all landowner and lessee permit fees/damages, project specific governmental agency required bonds/permits and any archeological/biological studies required.*

*Cost of Contract Permit Agents if CGGVeritas Land (U.S.) Inc. is requested to handle the permitting, over and above our current structure of permit and regulatory control personnel.*

*Cost of applicable city, borough and/or state taxes.*

*Cost of any erosion control, cleanup, reclamation, seeding required unless attributable to CGGVeritas by way of negligence*

*All incremental costs, including stand-by, incurred as a result of a force majeure event.*

*A five percent (5%) handling and administrative fee will apply to all third party charges paid by CGGVeritas Land (U.S.) Inc.*

*All other cost not specifically identified under Schedule D.*

## 6 SCHEDULE "F" STAND BY CHARGES

Great Bear Petroleum Operating LLC shall pay for stand-by costs including but not limited to the following events: Crew stand-by at Great Bear Petroleum Operating LLC's request and all other lost recording time not attributable to CGGVeritas Land (U.S.) Inc., such as lack of program assignment, permit related standby, program changes (additional pickup or layout time) resulting in lost recording time, weather or conditions related to or caused by weather, safety reasons and Force Majeure. Such stand-by costs shall be charged per hour (in addition to any recording time recognized) with a maximum of twenty-four (24) hours chargeable per day during initial layout and final pickup, at a rate of \$12,500.00 per hour.

Recording crew downtime caused as a result of mammal damage to the recording ground equipment will be charged at the stand-by rates shown above.

CGGVeritas Land (U.S.) Inc. will provide Great Bear Petroleum Operating LLC's field representative with notice of its intention to make a claim for stand-by costs on a daily basis, stating the reasons for the claim.

Subcontractor stand-by rates and exclusions will be applicable.

## 7 SCHEDULE "G" LIABILITIES AND EQUIPMENT DAMAGES

### 7.1 LIABILITIES

CGGVeritas Land (U.S.) Inc. and Great Bear Petroleum Operating LLC mutually agree that the liability for actual or alleged damage claims, due to the 3D seismic operations, while following provided guidelines (including but not limited to source offset distances, charge sizes, vibrator drive levels & location of source lines) will be assumed by Great Bear Petroleum Operating LLC. Great Bear Petroleum Operating LLC agrees to furnish a source offset distance chart to be utilized during the project for dynamite operations. Great Bear Petroleum Operating LLC will also hire an independent firm to monitor the operations and assist in setting the source offset distances and vibrator drive levels in the field for Vibroseis operations. Drive levels for vibrators and source offset distance from any structures are to be determined by the monitoring company during daily operations. This does not in any way release CGGVeritas Land (U.S.) Inc. of their responsibility of having liability insurance in effect for this project.

CGGVeritas Land (U.S.) Inc. shall not be liable for any mineral claims, which may arise from acquiring under shot subsurface coverage as a result of normal 3-D operations. Further, in those cases where CGGVeritas Land (U.S.) Inc., at Great Bear Petroleum Operating LLC's request, obtains permits to conduct operations, CGGVeritas Land (U.S.) Inc. shall not be liable for claims which may arise from failure to secure necessary or valid permits from proper persons, or any claims that are a result of a forced entry, unless CGGVeritas Land (U.S.) Inc. fails to exercise that standard of care normally expected of a prudent operator in determining the proper persons and in obtaining from such persons the permits required above and by the nature of the work to be performed. Great Bear Petroleum Operating LLC will have a company representative on site location during forced entry operations.

## 7.2 EQUIPMENT DAMAGES

CGGVeritas Land (U.S.) Inc. and Great Bear Petroleum Operating LLC mutually agree that any damages to (including but not limited to vandalism, or other items not under the control of either company) or theft of recording equipment (boxes, batteries, cables or geophones) that occur while operating within the North Slope Borough area will be chargeable at one hundred percent (100%) of replacement cost. Areas that are mutually agreed as hazardous will be addressed on a case-by-case basis, with equipment damage coverage to be defined and agreed to in writing. This does not apply to any damages due to negligence on the part of CGGVeritas Land (U.S.) Inc.

## 8 SCHEDULE "H" PAYMENT SCHEDULE

Unless otherwise agreed upon after financial review

<b>Mobilization Payment by December 15<sup>th</sup>, 2012 (either phase)</b>	<b>\$2,560,000.00</b>
<b>Earnest Payment by December 15<sup>th</sup>, 2012 (either phase)</b>	<b>\$4,440,000.00</b>
<b>Phase 1 Estimated Remaining Program Balance</b>	<b>\$4,579,369.00</b>
<b>Phase 2 Estimated Remaining Program Balance</b>	<b>\$3,302,385.00</b>
<i>The date and schedule of payments associated with the remaining program balance will be mutually agreed upon between CGGVeritas Land (U.S.) Inc. and Great Bear Petroleum Operating LLC</i>	
<b>Demobilization</b>	<b>\$1,440,000.00</b>
<i>Demobilization will be considered complete when CGGVeritas has acquired the program as agreed upon and has removed all personnel, equipment and assets from the program area.</i>	

PERCENTAGES QUOTED ABOVE SHOULD BE APPLIED TO THE TOTAL ESTIMATED PROGRAM COST

Third Party charges (i.e. peak particle velocity, environmental studies, etc.) will be invoiced twice monthly.

All invoices are due upon receipt unless other terms have been negotiated and/or agreed to. Late payment penalties will be applied at the rate of 1.5% per month, or the maximum rate allowed by law.