



## **Sakhalin Energy Investment Company Ltd. Сахалин Энерджи Инвестмент Компани Лтд.**

35 Dzerzhinskogo str., Yuzhno-Sakhalinsk, 693020, Russia  
ул. Дзержинского, 35, Южно-Сахалинск, 693020, Россия  
Tel./Тел.: (+7 4242) 66 2000  
Fax/Факс: (+7 4242) 66 2012  
[www.sakhalinenergy.com](http://www.sakhalinenergy.com)  
[www.sakhalinenergy.ru](http://www.sakhalinenergy.ru)

25 April 2017

Dear Alexander,

During the period Aug-2015 – Apr-2017, PetroTrace carried out extensive 3D and 4D processing, incorporating data vintages from 1997, 2010 and 2015, for all three fields operated by Sakhalin Energy Investment Company Ltd. This processing consisted of pre-stack time and depth migrations, and included building and updating anisotropic velocity models. The focus was on dedicated 4D processing, and the 4D results were delivered within budget. The results have already made a critical impact on drilling and field development decisions, and impacted the decision to continue future 4D-seismic reservoir surveillance.

This was the first dedicated 4D-processing project by PetroTrace. As anticipated, this required climbing a steep learning curve, but ultimately PetroTrace delivered good results. Particular strengths were the enthusiasm of the project staff and their willingness to learn, their flexibility to incorporate changes, to execute additional tests, or to accommodate additional client requests, and their ability to quickly develop or modify 4D-specific processing algorithms during the project. It was a very good experience working with them, also via several face-to-face visits to the PetroTrace Moscow office and weekly telecoms.

A point to consider for improvement would be to provide more realistic time estimates for delivery of products. 4D processing was initially new territory, so estimating time was difficult for everyone, but required time continued to be underestimated, possibly in part just to not disappoint the client during providing the estimate. Another point may be that at times there was a somewhat “awaiting orders” attitude, even at moments where PetroTrace staff were the best qualified people to pro-actively provide recommendations or specify their needs upfront, for instance during some velocity-model building steps. I realize, though, that such an attitude may be perceived differently by different clients.

Overall, it was a pleasure working with PetroTrace and I would gladly do so again. And PetroTrace should get a lot of credit for building dedicated 4D-processing capability that will hopefully be applied in many future projects for many different clients!

Best regards,

Bastian Blonk

Chief Geophysicist,

Sakhalin Energy Investment Company Ltd