Ͻϒ·ϴϤϒϧͺϭϘ ϽͿ·ʹϷϹʹͰϹʹϹϤʹϷʹϽϽϷ ϴͶϹͶ·ϒϴ·ϓ ϽͿ·ʹϷϹʹϒϹʹϒϹʹϒϴʹϒʹϽͿʹ ϶ϽϧʹϹϹ ϶ϓϴͿʹϒ

TGS NOPEC Geophysical Company ASA, Petroleum GeoServices and Multi Klient Invest AS-d^c

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ΔΛʹͽϭΠΡϞʹͽ: ΡαͽάͿυϞ? ϷͰ<σΡϞ ἀασια ϶ιν Λοια ͼν κοια εν κ

ႭጔႭΔ⁶dCPσd⁶LC CሲP⁴ Δ⁶በ⁶bC P⁶bV⁶σα, δ⁶b⁶b⁶c Δ⁶c Δ⁶c (D⁶b⁶CP⁶c), >⁶c⁶በ/L⁶b⁶c (P⁶b⁶b)CPc (P⁶b⁶b)CPc (P⁶b)CPc (P⁶b)C

 4Λ የቃሰቦትላየቱ: የቃውበቦ (Δ /Lc-PንበP/Lt-Johnander (Δ /Boundarder (Δ /Boundarde

 4Λ የቃባበኦላየ። የሴው ሴ¹L[®]ቦናጋበJና ላ⁶ጋል/Lσየbሮናσላየሩና (ለርሲላህላΓና)

ΡΡΥΤΟΡΑΘΕ ΚΕΛΑΨΉΤΕ ΦΡΟΘΕΡΙΕΤΟΔΘαΛΑΊΘΙΤΟΡΑ ΑΥΡΓΊΘΙΕ ΤΟ ΤΕΙΕΡΡΑΙ ΕΡΙΕΡΑΝ ΑΕ ΑΡΕΡΙΝΟ ΤΟ ΡΕΘΙΘΕ ΑΕ ΕΡΙΕΡΑΝ ΑΕ ΑΡΕΡΑΝ ΑΕ

ላለጐሰበኦላጐ: ▷ናьኦለጐካሴ CLጋጌጐ ጋኣጐCኦኄናርንቈኒσፈናና?

የኦኣብኦላጐ: Δ΄, ጋኣኦጐCኦኄታርናσፈናLC Cጐዊ CL˙σʹ>Jና. ለ፫ሊፈናቴጐበኦላԺጐ ለኦላብናቴጐበኦጐጋC

CL˙σʹϽͿና Δ፫ሊፈቫቴΔቈፚንLላፐጐ ዾ፞፞፞፞፞ፚጐቴክበሶጐጋውና ኦናቴናቴበናቴጐለLላLጐጋር ፈተLጏ

ላለጐዕለጐላሊታናላኈውኑ, Δለ፟፟፟L፟ጏበናቴናልቦታናላዻው፦ ፈተLጏ ΔለLσሲታናላጐውት ለ፫ሺፈገና.

ለ፫ሺፈናቴጐበኦላና ርጎለፐጐሁ ዾዉ፫ኦላታናቦኦውት ለ፫ሺፈናቴክበናቴሮንĽተLC CLናፔጐ

ΔϧϟͼνΟνλLσ·ʹϧϲʹ϶ϲʹͼͿʹͻՐና.

ላለጭd∩⊳ላጭ: ቦቴሳና ለ⊏ሲላህላ୮୭ ሶዉ⊳ኑናd∩ናቴጭበናላት⊳ペና? የ▷ኦላ∩⊳ላጭ: Multi Klient Invest-dና Ċኁረ୮ኄሁ ለ⊏ሲላህላ୮୭ ሶዉ⊳ኑናdበናቴጭበናላት⊳ላና. የዉ⊳ኑበJና ΔЬላጭС⊳ረLናጋበ୭ ዉጭΓσናd∩ቦኑ⊳ላσና Petroleum GeoServices-d⁰σና (▷ና»ረላጋ»∖⊏ሊት⊳ላσና).

CUPL PL449Uc

ΔΛ¹⁰4ΠΡ²¹⁰: Ͻϒ¹⁰4ΡΠ¹ΠσΡ² (ΔΡΡ¹⁰ΠσΡ²) Δ¹⁰Δ²Ισ¹⁰σ¹⁰σ² CπΡΓ ΡΓ²Ε²Δ²

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ላለኈዛበ⊳ላኈ: ὑιጐና ፐላውሲኑኦኖልኈιናር ላዊበቦኑኈι <ኖልጎኈርኦለL፫ናውላኈ< ዕ°ዉ ለ፫ሲላህላኈ ለኦሲኈርኦለL፫ኈ<ና?

ΡΡΥΤΟΡΥΨ: ব৾৽৬ ড়ρλισραθισσαψεύ Τόμα ὑἰὰς Γασανραθυίς Δυασ αιιυ υινοιρος ἀντοιρος ὰντοιρος ἀντοιρος ἀντοιρος ἀντοιρος ἀντοιρος ὰντοιρος ἀντοιρος ἀντοιρος ἀντοιρος ὰντοιρος ὰντοιρος ἀντοιρος ὰντοιρος ὰντοιρος ὰντοιρος ὰντοιρος ὰντοιρος ὰντοιρος ὰντοιρος ὰντοιρος ὰντοιρος ὰ

᠘ᠸ᠊᠋᠋ᢆᢑ᠐᠘ᡴᠻᠨᠣ᠌ᢂᡩᡆᡥ᠌᠑ᢅᡫᠸᠲᡉᢂ᠈ᢞᡴᠥᡈ᠌᠌᠌᠌᠌᠘᠘ᢣᠣᡑ᠕ᠸᡙ᠌᠌᠌ᠬᡆᡈ᠐᠘ᠳ᠘ᢛ᠐ᠮ ᠙ᡰᡄᡃᢐᡥᠬᢗᢣ᠘ᡶᡃᡆᡟ᠋᠋᠆ᡗᡕ,᠕ᠸᡙ᠋᠌ᡆᡃᢐᡰᠬᠪᠵᡲ᠂ᡏ᠐ᡄᡥᠬᠻᡪ᠘᠘ᠸᡆᡏᡈ᠑ᠻ᠂ᠪ᠘᠘᠘ᡩᡅᡳ᠒ᡶᡔᡣᡈ ᠯᡥ᠋᠙ᡎ᠋ᢓ᠒ᡈᡪ᠖ᡶᡠᠯᡆ᠂ᠪ᠘᠘᠘ᡩ᠙ᡴᠻᠬᠳᡲ᠘ᠮ᠂ᢤᢛ᠙ᡎ᠘ᢓ᠒ᡈᡳ᠘᠘᠘ᡩᢐᢀᠵ᠐᠘ᠮᠣᠻᠨᡗᠣ TGS NOPEC Geophysical Company ASA, Petroleum GeoServices and Multi Klient Invest AS-dና bሏርውና Pኖርው ኦPኦጭርጭጋ∿სσ LናንΔሮ∿ህላበJና ጋጎጭ∖⊳በናበσናቴጭጋበኑ (ፈዋኦጭበናበና_ጋበኑ) የቴኦኦኒናውኦረና

 4Λ የቃdበኦላየቱ: የቃውቱ የቦር ጋሀልና ርልLኦታ የቦታቱ የኦኦኒ የናርናትናናትር >ልላL የቦበጎ ጋቦና? የኦኦተበኦላየቱ: ልር የር የኦኦኒ የወቅጋና ኦላበርኦሲበቱ ጋኒ የቴኒኦበና በታቀፋ ሲኦናት የጋንበታቱ ላጋ የሩኒር, ኦርላናተር ልቦኒትና የር ታርቱር የቴኒኒትር ልኒኦና ልጋላታ ጋኒ ተዲሲር የሰርኦ ጋስቱ. ልኒኦና ልጋላታ ጋኒ ተለበና, ጋኒ ተለበቱ አር ላህ ተረና ልኒኦና ልጋላታ ላጋ የርኦ ተካን ነተ የር የርጋሀልና የኦኦኒ የር ኦላበርኦሲበቱ ጋኒ የቴኒኦኒር የርጋሀልና የኦኦኒ የዕንቱር ኦላበርኦሲበቱ ጋኒ የቴኒኦኒር የርጋሀልና የኦኦኒ የዕንቱር የላጋቱር የላጋቱር የላይ የለርሊላህ ተረ

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ጋ\"\ÞԺ" Δ°Γ٬ናዊ'፫ፈዊ°ፚ\ Þጐሁ/ፆጋJፈናፚጭ\Þዲተር ΔLÞ‹ Δጋፈው /፫ጋΔ°ሲΓኦጐሁፚና.
ጋ\"\ÞԺÞধና ፈ/ጐቦ°ፚና ÞΓፈናፚና ፈተጔ 'ቴቃል‹ሩዮፚኦታንቴናፚና, ሖናጋ \ধ‹ለጎፎዮፚኦላና
ጋ\Þጐ\Þፚቴቴሶ-ኒር ርሲቅጋቃርፐ. ርርዮሲ ፈርΔ°ሲጭጋላፐፆ ጋ\ጐ\ÞፚÞላፆን፡

CΔLÞ፟ጐጕቦ°ሲÞታ፡ጐሩተር ርሲቅመ ላተጋ 'የ፫ጋሁልና ጋ\ጐ\ÞፚÞላፐና ሥንቦቅበ/ርፚቴው፦ጋበፆ
σ'፫ፈናቴበሶ°ፚሲላፆርጐቦ" 'ቴርΔ°ፚጭ\Þ፫፡ጐጋበፆ ጋ\ጐ\ÞፚÞላሮን ፈናኂናነርና
ቴኦት/ርሲፈ୮ፆ 'ቴቃኔዮ /፫ርሷና Δጐዮናናፚቴናትሲላፆ\ጐሁፚና ጋ\ጐ\ÞጠርÞላፐጐሁምሪናና

ጋ₆ህው ₅ር₆ ታ₆ አየነርር

- Boertmann, D., Tougaard, J., Johansen, K. & Mosbech, A. (2009). Guidelines to environmental impact assessment of seismic activities in Greenland waters. National Environmental Research Institute, Aarhus University, Denmark. NERI Technical Report no. 723.
- Cummings, Jim. (2003). Seismic Surveys: What We Don't Know Can Hurt. (The Acoustic Ecology Institute and Greenpeace). Retrieved from: http://www.acousticecology.org/oceanairgunexecsumm.html
- Klinck, H., Nieukirk, S.L., Mellinger, D.K., Klinck, K., Matsumoto, H., & Dziak R.P. (2012). Seasonal presence of cetaceans and ambient noise levels in polar waters of the North Atlantic. Journal of the Acoustical Society of America. 132 (3), p. EL176-EL181.
- McCauley, R. D., Fewtrell, J., Duncan, A. J., Jenner, C., Jenner, M-N., Penrose, J., Prince, R. I. T., Adhitya, A., Murdoch, J., and McCabe, K. (2000). Marine seismic surveys a study of environmental implications. *Australian Petroleum Production and Exploration Association Journal*, p. 692–705.
- Parvin S J, Nedwell J R, Harland E. (2007) Lethal and physical injury of marine mammals, and requirements for Passive Acoustic Monitoring. Subacoustech Report Reference: 565R0212, February 2007, To UK Government Department of Business, Enterprise and Regulatory Reform. Retrieved from: http://www.atlanticdisarray.org.uk/wordpress/wp-content/uploads/2012/01/Lethal-physical-injury-of-marine-mammals.pdf
- Popper A., & Hastings, M.C. (2009). The effects of human-generated sound on fish. *Integrative Zoology*, 4, p. 43-52.
- Richardson WJ, Miller GW, Greene CR. (1999). Displacement of migrating bowhead whales by sounds from seismic surveys in shallow waters of the Beaufort Sea. *Journal of the Acoustical Society of America*, 106, p. 2281-2281.
- Weilgart, L. (2007). The impacts of anthropogenic ocean noise on cetaceans and implications for management. Canadian Journal of Zoology, 85, p. 1091-1116.