

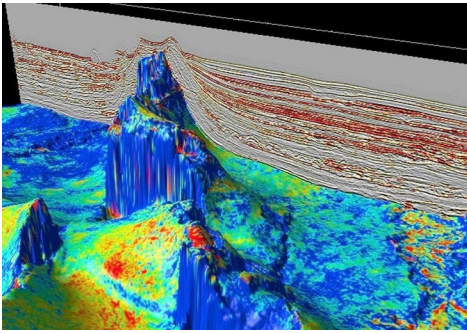
Intshayelelo ngobuChwepheshe beNyikima yaselwandle bePetroleum kunye negesi yendlalo

Iplanethi yoMhlaba. Ukuba ujonge kufutshane, uya kubona ukuba kukho elinye ihlabathi elingaphantsi komhlaba nolwandle. Iingqilimba zezakhiwo zamatye zingena nzulu kuqweqwe loMhlaba ngeekhilomitha. Uvateleko phakathi kwezi zakhiwo, kunye nolunye uhlelo kunye nezinto eziqinileyo, ziidiphozithi zepetroleum kunye negesi yendalo, ezimbini yeyona mithombo ibalulekileyo yezamandla ehlabathi.

Xa, uyifumana njani into efihlwe ngokupheleleyo phantsi komhlaba nangaphantsi kwamanzi? Ngaphezu kwesiqingatha senkulungwane, ishishini lepetroleum kunye negesi yendalo lisebenzise uphando lwenyikima.



Umfanekiso wangoku wenyikima wehlisa ingozi ngokwenyusa okunokwenzeka amaqula entando angabetha ngempumelelo iihydrocarbons kwaye kunciphise inani lamaqula adinga sidingo sokwembiwa kulo ndawo. Uvavanyo lenziwe ngokuthumela amaza e-acoustic kumatye amaninzi angcwabekileyo ngaphantsi kolwandle kunye noshicilelo lwexesha lokubetha kweliza elilithathayo ukubuyela ngoku ilinganisa izinto ezahlukeneyo.



Umngeni Ngaphantsi kolwandle

Kuba phantse isinye kwisithathu sonke se-petroleum eveliswayo namhlanje iphuma kumaqula akude nonxweme kwaye uninzi lwehlabathi engasetyenziswanga i-petroleum oovimba kubume bamanzi anzulu, ixesha elizayo kwaye ifumanisa uphuhliso ngokusondeleyo ibotshelwe kwinyikima yedatha ukufumana kwaye ukuqhubeka iteknoloji, leyo unako Nceda thina zombini zikhulisa imveliso kwaye zikhusela okusingqongileyo.

Kunciphisa ingozi kwaye kukhulisa imveliso efaka umceli-mngeni ulwandle iindawo ezingqongileyo, ishishini lepetroleum negesi yendalo lifuna olona phawu luchanekileyo yokuma kwangaphantsi komhlaba. Ngethamsanqa, kule mihla imifanekiso ebonakala kakhulu eyenziwa ngovavanyo lwenyikima yimiyalelo yobukhulu obusebenza ngakumbi kuneendlela zemveli ezifana nokugrumba okuphononongayo.

Isixhobo sokuLawula okusiNgqongileyo

Akukho ngamaqula kuphela. Uvavanyo lwenyikima lunako ukusetyenziswa kwiinkcukacha zombobho wepaseji zemephu, leyo inikeza idatha ebalulekileyo ekrwada ukunciphisa imingcipheko ngokwendalo kuyilo kwaye ukufakela ngaphantsi kolwandle i-petroleum yendalo kunye nemibhobho yegesi. Uvavanyo lwenyikima kananjalo lusetyenzisiwe ukuya esweni amadama njengoko bona bekhuphela leyo ivumela imisebenzi ukuya ngokufanelekileyo kwindawo ezongezelelweyo amaqula okususwa ngokupheleleyo kwehydrocarbon. Ubuchwephesha obunjalo buvumela imveliso esebenzayo ngakumbi ukusuka kumadama asele ekhona, anokuthi asondele ekudinweni kusetyenziswa iteknoloji endala.

Uvavanyo lwenyikima lunciphisa ukhuseleko kunye nemingcipheko yokusingqongileyo kwaye kuko konke ukuhlola. Umzekelo, uvavanyo lwenyikima lunceda ukuchonga umthwalo othwaliweyo ongazinzanga kunye noko kwenza oko, njengokubakhona uxinzelelo oluphezulu, igesi ebanzi, okanye ufako lwegesi yendalo. Zikwanceda ulawula kakuhle lendawo egqunywe kakuhle kwaye ziqikelele uxinzelelo lokuthela, apho ezi zombini zincipha ulawulo lwemveliso. Zingasetyenziswa ukuqaphela indawo engaphumeleliyo ukukhetha indawo zemida, kwaye zibonise ukwenzeka yenzele utsalo lufune imifula embalwa kodwa zivelise lukhulu.

Isebenza Njani Inyikima Yovavanyo

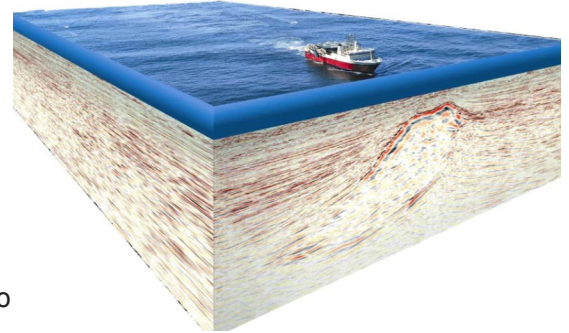
Uvavanyo lwenyikima lolwethutyana kwaye luyadlula kunye nendlela encinci edlulayo kwaye neyona isebenza kakhulu ekuqondeni apho ipetroleum ephinde ifumanike kunye neegesi zendalo ezinokubakhona. Uvavanyo lwenyikima lwangoku lufana nemeshini yokumamela isandi ubuchwepheshe obungafane bunwenwe bokujonga imephu eyakhelwe ngaphezulu kwesandi esilula seliza. Ukwenza olu vavanyo, inqanawe eyenza uvavanyo lisebenzisa izibane ze acoustic, ezifana neseti ecinezelweyo yomoya gumbi, ukwenza ukubetha kwenyikima. Izibane ze acoustic ezitsalwa ngemva kwinqanawe yovavanyo

Iwenyikima kwaye likhuphe umoya ongamandla woxinzelelo emanzini. Ukubetha kuyakhutshwa kwiminweba yelitye ngaphatsi komgangatho wolwandle. Isandi sokubuyela samaza siyafunyaniswa kwaye sishicilelwe ngeehydrophones ukuba zahluliwe ngeentambo ezininzi ezitsalwa ngemva kwinqanawa yovavanyo okanye iindawo zokuhlala ezibekwe phantsi elwandle ngeeROVs .

Emva koko izazi ngenyikima ziyihlalutya le nkcazelo, zisebenzisa iikhompyutha, ukuze zibe nomfanekiso-ngqondweni wezinto ezenza umgangatho ongaphantsi komhlaba womgangatho wolwandle. Zombini ii-dimensional nezintathu iindimensional zovavanyo zisetyenziswa kushishino. Nje ukuba idatha iqhutywe, i-geophysicists iyitolika kwaye idibanise olunye ulwazi lwe-geoscientific ukwenza uhlolo lwendawo yepetroleum.

kwaye indalo igesi amadama UCanzibe kuba qokelelwe. Imveliso epheleleyo yalo msebenzi wonke kunye netekhnoloji ngumzobo we2D okanye Umboniso we-3D womhlaba ongaphantsi wesakhiwo sejoloji. Ngokusekelwe ubukhulu becala kwi nzululwazi, ukuhlola iinkampani iya kuthatha isigqibo apho (okanye ukuba) ukugrumbela i-petroleum kunye negesi yendalo.

Ulawulo lokusingqongileyo lishishini elinexabiso nelibalulekile. Sibonise amandla ethu okuqhuba imisebenzi yokuhlola inyikima ngendlela ekhusela ubomi baselwandle. Imizekelo ibandakanya ukuthintelwa kweendawo ezibalulekileyo zokutya kunye neendawo ezizalela kuzo, iindawo zokungabandakanywa ezijikeleze imisebenzi yenyikima, ethambileyo iqala (ngokuthe ngcembe ukujikeleza phezulu nesandi somthobo wenyikima isandi) kunye nomzimba we-acoustic ukubeka esweni ngokomsebenzi abawuqeqeshelweyo elwandle babakhi-mkhanyo bezilwanyana ezincancisayo (MMOs) kunye nabakhi-mkhanyo beentlobo ezikhuselweyo (PSOs).



Ngaphezulu kwamashumi amathathu eminyaka amava ehlabathi jikelele okuvavanya inyikima kunye namaphononongo ahlukeneyo ophando zibonisa ukuba umngcipheko ukwenzakala ngokuthe ngqo emzimbeni ukuya elwandle kwizilwanyana ezincancisayo ngokugqithisileyo phantsi. Okwangoku akukho bungqina bozenzululwazi obubonisa ngokwebhayoloji ebalulekileyo ifuthe elibi kwizidalwa ezincancisayo zaselwandle.

Imizekelo

1. Inyikima kunye neNdawo yaseLwandle:

https://energyinformationaustralia.com.au/wp-content/uploads/2022/04/Seismic_and_the_Marine_Environment.pdf