HALLIBURTON

Sperry Drilling

Surface Data Logging End of Well Report

Posey 6912
OCS-Y-2321 #001

Client: Shell Gulf of Mexico, Inc.
Field: Chukchi Sea
Rig: Polar Pioneer
Date: September 29, 2015

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GENERAL WELL INFORMATION

Company:	Shell Gulf of Mexico Inc.
Rig:	Polar Pioneer
Well:	OCS-Y-2321 Burger J #001
Field:	Posey 6912
Borough:	Chukchi Sea
State:	Alaska
Country:	United States
API Number:	55-352-00004-00
Sperry Job Number:	AK-XX-0901604700
Job Start Date:	25 July 2015
Spud Date:	30 July 2015
Total Depth:	6800’ MD, 6795’ TVD
North Reference:	True
Declination:	12.39°
Dip Angle:	80.3240°
Total Field Strength:	57374.43359 nT
Date Of Magnetic Data:	25 July 2015
Wellhead Coordinates N:	North 71° 10’ 24.03”
Wellhead Coordinates W:	West 163° 28’ 18.52“
Drill Floor Elevation	76.00’
Ground Elevation:	0.00’
Permanent Datum:	Mean Sea Level
SDL Data Engineers:	Craig Amos, Leigh Ann Rasher, Andrew Bongard, Justin Carter
SDL Mudloggers:	Rebecca Mulkey, Ryan Lenberg, Eli Callan
SDL Eagle Technicans:	Kyle Millican, Robert Greig, Matt Wavra
Company Geologist:	Robert Scheidemann
Company Representatives:	Scott Lapine, Matt Casalet, Jason Hartung, Doug Sloan

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DAILY SUMMARY

07/25/2015
Arrive on location and begin deploying anchors.
Data Engineers: Craig Amos

07/26/2015
Continue anchor deployment. Begin to pick up drill pipe and racking back. Begin to pick up BHA #1.
Data Engineers: Craig Amos

07/27/2015
Complete picking up BHA # 1. Bring on brine and chemicals to make mud.
Data Engineers: Craig Amos

07/28/2015
Continue rig maintenance and repairing Barite system. Pick up dumb iron BHA to tag bottom and check water depth.
Data Engineers: Craig Amos

07/29/2015
Water depth checked to 146' MD. Complete rig repairs on Barite tanks, build kill mud and sweeps. Begin picking up 8.5" pilot hole BHA.
Data Engineers: Craig Amos

07/30/2015
Troubleshoot MWD tools and complete making up BHA #1. Trip in hole to sea floor, shallow pulse test and begin drilling 8.5" section as of 17:02 hours.
Data Engineers: Craig Amos/Leigh Ann Rasher
Fluids: No sweeps pumped.
Geology: No samples collected for surface section.

07/31/2015
Continue to drill ahead from 438' MD to 1005' MD.
Data Engineers: Craig Amos/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water and pumped 20 bbl hi-vis sweeps every stand.
Geology: Lithology has consisted of mainly siltstone with beds of coal, sandstone, and claystone based off of MWD data.

08/01/2015
Continue to drill ahead from 1005' MD to pilot hole section TD of 1512' MD. Circulate bottoms up twice and flow check the well. Pull out of the hole, lay down BHA #1 and service the rig.
Data Engineers: Craig Amos/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water and pumped 20 bbl hi-vis sweeps every stand.
Geology: Lithology has consisted of mainly siltstone with beds of coal, sandstone, and claystone based off of MWD data.

08/02/2015
Pick up 36” hole opener BHA. Drill ahead from 222’MD to 384’ MD. Circulate bottoms up, pump sweep and circulate bottoms up. Pull out of hole and lay down BHA #2.
Data Engineers: Craig Amos/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water and pumped 20 bbl hi-vis sweeps every stand.

08/03/2015
Pick up mud line cellar and mud line cellar bit. Wait for the weather to stabilize before running in the hole.
Data Engineers: Craig Amos/Leigh Ann Rasher

08/04/2015
Continue to wait on weather. Prepare to run in the hole with mud line cellar. Perform maintenance on the kelly hose.
Data Engineers: Andrew Bongard/Leigh Ann Rasher

08/05/2015
Continue repair the kelly hose. Run in the hole with mud line cellar and drill ahead from 222’ MD to 230’ MD.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water.

08/06/2015
Drill ahead from 230’ MD to 241’ MD with mud line cellar. Pull off bottom to inspect mud line cellar bit.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water.

08/07/2015
Pull out of the hole with mud line cellar. Inspect mud line cellar bit and clean off.
Data Engineers: Andrew Bongard/Leigh Ann Rasher

08/08/2015
Continue to clean off mud line cellar bit. Run in with mud line cellar bit and tag bottom of the hole. Rig performed maintenance on pump.
Data Engineers: Andrew Bongard/Leigh Ann Rasher

08/09/2015
Finish rig maintenance on pump. Drill ahead with mud line cellar bit from 241’ MD to 257’ MD and pull off bottom. Circulate and clean out hole.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water.

08/10/2015
Pull out of hole with mud line cellar bit. Clean off mud line cellar bit, rig down mud line cellar equipment and prepare rig floor for 42” hole opener BHA. Perform rig maintenance on pumps.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water.

08/11/2015
Continue to rig down mud line cellar equipment. Pick up BHA #3 and run in hole. Drill ahead from 257' MD to 287' MD with 42" hole opener.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water.

08/12/2015
Drill ahead from 287' MD to 393' MD with 42" hole opener. Displace well with well bore stability fluid. Pull out of hole and lay down BHA #3. Begin to rig up 36" conductor casing equipment.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water, and high viscosity sweeps.

08/13/2015
Rig up casing equipment in preparation for running the 36" conductor. Run in hole with 36" conductor.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water.

08/14/2015
Pull out of hole with 36" conductor after failing to get casing to bottom. Pick up 36" x 42" BHA, and run in hole to wash and ream the hole clean.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water.

08/15/2015
Pull out of hole and lay down 36" x 42" BHA. Pick up 36" casing and run in hole. Land 36" casing at 375' MD. Rig up cement equipment and pressure test cement lines.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water, and high viscosity sweeps.

08/16/2015
Pump cement. Wait on cement.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 130 bbls 8.6 ppg seawater followed by 20 bbls of 8.6 seawater with green die, and 240 bbls of permafrost cement. Displace with 44 bbls of 8.6 ppg seawater.

08/17/2015
Continue to wait on cement. Decision made to re-cement 36" casing. Pump cement and wait on cement. Rig down cement equipment and pick up 26" clean out BHA.
Data Engineers: Andrew Bongard/Leigh Ann Rasher

08/18/2015
Run in hole with 26" clean out BHA. Clean out cement and drill new hole to 425' MD. Pull out of hole and lay down 26" clean out BHA. Pick up drilling BHA (with Sperry tools) and run in hole.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water and high viscosity sweeps as needed**.**

08/19/2015
Drill ahead from 425' MD to 1245' MD with 26" hole opener BHA. Pump sweeps every 45 feet.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water and high viscosity sweeps every 45 feet.

08/20/2015
Drill ahead from 1245' MD to TD of 1512' MD with 26" hole opener BHA. Pump sweeps every 45 feet. Short trip 3 stands and run in hole to 1512' MD. Circulate bottoms up and displace to 10.5 ppg well bore stability fluid. Trip out of hole and lay down 26" BHA. Clean rig floor and rig up 22" casing equipment.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water and high viscosity sweeps every 45 feet.

08/21/2015
Continue to rig up 22" casing equip. Run in hole with 22" casing.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water.

08/22/2015
Continue to run in hole with 22" casing to 1475' MD. Rig up cement equipment and cement 22" casing. Prepare to set BOP.
Data Engineers: Andrew Bongard/Leigh Ann Rasher
Fluids: Pumped 8.55 ppg sea water, 519 bbls of lead cement and 206 bbls of tail cement.

08/23/2015
Pull out of hole with 5" inner string and rig down all temporary piping from cement job. Perform rig maintenance and skid rig 200' off well center for BOP deployment. Assist subsea with changing the choke stab on the KT ring. Rig up marine riser equipment and function test. Pick up and run marine riser to 105' and assist with changing the choke stab on the KT ring.
Data Engineers: Andrew Bongard/Leigh Ann Rasher

08/24/2015
Continue to assist subsea with changing choke stab on the KT ring. Remove boost stab and install blank flange. Install chokes and kill drape hoses on the KT ring. Scope out pod line tensioners, tie back the BOP tensioner guideline and transport BOP to well center. Attach the cobra head to rugger and install beacons on BOP stack. Lower riser and land on BOP. Install guide line cables in BOP guide line guides and wait on Nordica to deploy HFL due to weather.
Data Engineers: Andrew Bongard/Leigh Ann Rasher

08/25/2015
Continue to wait on weather to deploy HFL. Nordica deploys HFL skid and attempt to install on subsea mud matte with assistance from ROV. Wait on weather to deploy BOP.
Data Engineers: Andrew Bongard/Leigh Ann Rasher

08/26/2015
Continue to wait on weather.
Data Engineers: Andrew Bongard/Leigh Ann Rasher

08/27/2015
Continue to wait on weather.
Data Engineers: Andrew Bongard/Leigh Ann Rasher

08/28/2015
Continue to wait on weather.
Data Engineers: Andrew Bongard/Leigh Ann Rasher

08/29/2015
Waited on weather to deploy BOP. Splash and run BOPs. Test choke and kill lines, good tests. Moved rig to well center. Installed guidelines and applied required tension.
Data Engineers: Andrew Bongard/Justin Carter
Eagle Techs: Kyle Millican

08/30/2015
ROV washed and cleaned wellhead with thrusters. Attempted to pressure test Choke and Kill line with Halliburton cement unit, pressure test good on 250 low and bleeding down at 10k. Bleed down to zero after no success. Troubleshoot and test choke and kill lines separately; good tests. Landed out BOP on well head. Function and latch wellhead connector; good latch and good tests. With Halliburton cement unit conduct pressure tests on BSRs and CSG. Close LBSRs and pressure test to 250 Psi 5 min low while coming up to 1500 psi high. Pressured back up to 1250 psi and started bleeding off, unable to perform test. Begin scoping out slip joint.
Data Engineers: Andrew Bongard/Justin Carter
Eagle Techs: Kyle Millican

08/31/2015
Test BOPs.
Data Engineers: Andrew Bongard/Justin Carter
Eagle Techs: Kyle Millican

09/01/2015
Test BOPs. Test valves, unseat FMC test plug and flow check the well. Pull out of hole with test plug to 250' MD and pull bushing and diverter insert packer. Lay down testing tools and equipment. Function test diverter and fail. Run in hole with FMC shear ram test plug to 624' MD, land and release test plug. Pull out of the hole and function test diverter and fail. Begin to test choke manifold.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/ Robert Greig

09/02/2015
Continue to pressure test lines, valves and shear rams with cement unit. Rig down cement hose and begin to pick up BHA with Sperry tools and lay down on deck. Perform rig maintenance and pull out of hole with test plug from 619' MD to 562' MD. Space out and function test middle pipe ram with ROV/SAM.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/ Robert Greig

09/03/2015
Pull out of hole with test plug and make up wash assembly and wash wellhead. Make up bore protector assembly from 245' MD to 390' MD and run in hole. Install diverter packer and continue to run in hole with 5" drill pipe to 629' MD. Set bore protector at 250' MD and continue to run in hole to 1207' MD and conduct FOSV and Gray valve test. Pull out of hole while monitoring well on trip tank. Rig up heave indicator and tensioner and continue to make up 17.5" BHA with Sperry tools.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/ Robert Greig

09/04/2015
Continue to pick up BHA #5. Run in hole and shallow hole test MWD tools. Begin to wash and ream in hole and tag shoe at 1469' MD. Displace well from seawater to 10.0 ppg water based mud. Drill out 22" shoe and 10' of new formation and circulate two bottoms up. Perform formation integrity test to 12.6 EMW. Trip to bottom of hole and begin to drill 17.5" hole from 1522' MD to 1535' MD as of midnight.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/Robert Greig
Gas: Max gas was 15 units at 1535' MD with an average background gas of 12 units.
Fluids: No down hole losses reported.
Geology: Samples consisted of 100% light gray to gray siltstone from 1512' MD to 1530' MD and 100% gray, soft claystone from 1530' MD to 1535' MD.

09/05/2015
Continue drilling 17.5" section from 1535' MD to 2740' MD. Experienced Insite computer malfunction at 02:20 hours, real-time data was only affected for a short period of time and fluid monitoring was re-established quickly. Depth based gas data was affected by a loss of lag table configuration. This was affected between 1724' MD and 1892' MD, 2 Isotube samples were missed due to the lack of lag (1770' MD and 1860' MD) and 2 cuttings samples were missed. The chromatograph was recalibrated after the event and communication with all systems re-established.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/Robert Greig
Gas: Max gas was 100 units at 1999' MD with an average background gas of 15 units.
Fluids: No down hole losses reported.
Geology: Samples consisted of mostly medium to light gray claystone with interbeds of siltstone. Small amounts of limestone seen in samples from 2010' MD to 2070' MD.

09/06/2015
Continue drilling ahead through 17.5" intermediate section from 2740' MD to TD o 2963' MD at 06:08 hours. Circulate bottoms up and collect samples. Pump 51 bbls hi vis sweep, circulate hole clean. Begin to pull out of hole from 2963' MD to 2473' MD and encounter tight spot at 2923' MD. Spot 15 bbls of 14.5 ppg rat hole mud and continue to pull out of hole to 1461' MD. Run in hole from 1461' MD to 2914' MD and wash down from 2914' MD to 2961' MD. Tagged fill at 2956' MD, circulate bottoms up and flow check well. Spot 8 bbls of 14.5 rat hole mud pill on bottom, circulate above pill while troubleshooting gyro and begin to pull out of hole.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/Robert Greig
Gas: Max gas was 57 units at 2940' MD with an average background gas of 11 units. Max trip gas was 63 units.
Fluids: No down hole losses reported.
Geology: Samples consisted of 80% siltstone and 20% claystone from 2740' MD to 2760'MD and 100% claystone from 2760' MD to section TD of 2963' MD.

09/07/2015
Continue to pull out of hole and lay down BHA and download Sperry tools. Run in hole with bore protector pulling tool and wash BOP and wellhead. Pull out of hole with bore protector and rig up cement head stand. Rig up to run 14" casing and begin to run in hole with 14" casing.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/Robert Greig
Gas: No recordable gas.
Fluids: No down hole losses reported.

09/08/2015
SDL recalibrate fast gas system while rig continues running in hole with 14" casing. Troubleshoot and repair casing handling equipment.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/Robert Greig
Gas: No recordable gas.
Fluids: No down hole losses reported.

09/09/2015
Continue running in hole with 14" casing to 2672' MD. Rig down casing running equipment and pick up 14" casing hanger. Run in hole with 5" landing string from 2703' MD to 2933' MD. Make up cement head and circulate bottoms up 1.5 times. Cement casing with 100 bbls of 12.0 ppg spacer, 168 bbls of 13.5 ppg lead, 78 bbls of 15.6 ppg tail, 10 bbls of 12 ppg spacer then displaced cement with 383 bbls of 10.6 ppg mud. Bump plug 1000 psi over, bleed off psi and close IBOP and begin to test BOPs.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/Robert Greig
Gas: Max trip gas was 6 units.
Fluids: 47 bbls water based mud gained from down hole on cement job, this was due to foaming of the cement fluid and was reduced after cement job was complete.

09/10/2015
Test BOPs and begin to pick up BHA.
Data Engineer: Craig Amos/Justin Carter
Mud loggers; Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/ Robert Greig
Gas: No recordable gas.
Fluids: No down hole losses reported.

09/11/2015
Pick up BHA and shallow hole test tools. Trip in seal assembly, couldn't shear seal assembly, and trip out. Troubleshoot seal assembly, trip back in and set seal assembly. Trip in hole and tag cement at 2846' MD and drill out cement and 11' of new formation to 2963' MD. Perform formation integrity test to 14.0 EMW. Pump hi-vis sweep and circulate and condition mud. Drill ahead from 2963' MD to 2974' MD.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/Robert Greig

Gas: Max gas was 21 units at 2964’ MD with an average background gas of 8 units. Max trip gas was 38 units.
Fluids: No down hole losses reported.
Geology: Samples consisted of 100% claystone.

09/12/2015
Drill ahead from 2974’ MD to 4320‘ MD. Pump 50 bbl sweeps as directed.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/Robert Greig
Gas: Max gas was 387 units at 3387’ MD with an average background gas of 40 units.
Fluids: No down hole losses reported.
Geology: Samples consisted of medium to dark gray, friable to firm claystone with interbeds of 10% to 20% siltstone and sandstone.

09/13/2015
Drill ahead from 4320‘ MD to TD of 5423' MD at 16:35 hours. Circulate hole clean and begin pull out of hole. Pump sweeps to clean hole, circulate to monitor ECD's.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/Robert Greig
Gas: Max gas was 142 units at 4609’ MD with an average background gas of 30 units.
Fluids: No down hole losses reported.
Geology: Samples consisted of mostly 100% medium to dark gray, friable to moderately firm claystone with interbeds of 10% siltstone or sandstone.

09/14/2015
Continue to pull out of hole while circulating and pumping sweeps to clean and monitor ECD's. Short trip to shoe to circulate and condition mud. Trip in hole to 4969' MD and begin to wash and ream to bottom. Displace open hole drill pipe with new mud.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/Robert Greig
Gas: Max trip gas was 201 units.
Fluids: No down hole losses reported.

09/15/2015
Continue to circulate and condition mud. Pull out of hole and repair hydraulic hose on elevators. Continue to pull out of hole and lay down BHA.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/Matt Warva
Gas: Max trip gas was 68 units.
Fluids: No down hole losses reported.

09/16/2015
Rig up casing equipment and begin running in hole with 9 5/8" liner to 2755' MD. Pick up liner hanger and continue to run in hole to casing shoe at 2933' MD. Circulate 1.5 times bottoms up and continue to run 9 5/8" liner in hole with 5" heavy weight drill pipe.
Data Engineer: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/ Matt Warva
Gas: Max trip gas was 2 units.
Fluids: No down hole losses reported.

09/17/2015
Continue to run in hole with 9 5/8" liner and land liner at 5411' MD. Begin circulating and take losses of 71 bbls while attempting to circulate. Perform slow pump rates and re-establish low levels of circulation. Begin cement job and pump 60 bbls of 13.0 ppg spacer, 50 bbls of lead cement, 148 bbls of tail cement, and 10 bbls of spacer. Set liner hanger and pull up to reverse circulate cement out of the hole. Could not reverse circulate, forward circulate 1.5 times bottoms up and observe no cement or spacer at surface.
Data Engineer: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/ Matt Warva
Gas: Max trip gas was 147 units.
Fluids: Loss of 71 bbls while running liner and 79 bbls while pumping cement.

09/18/2015
Pull out of hole and rack back pipe. Pick up test string and run in to test BOP's. Continue to test BOP's while attempting to read MWD tools from Run 600.SDL recalibrate Sperry fast gas system.
Data Engineer: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Ryan Lenberg
Eagle Techs: Kyle Millican/ Matt Warva
Gas: No recordable gas.
Fluids: No down hole losses reported.

09/19/2015
Complete BOP test and pressure test choke manifold and kill. Begin picking up 8.5" BHA and single in 56 joints of drill pipe.
Data Engineer: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Eli Callan
Eagle Techs: Kyle Millican/ Matt Warva
Gas: No recordable gas.
Fluids: No down hole losses reported.

09/20/2015
Continue running in hole with 8.5" BHA. Tag cement and drill out casing shoe and 10' of new formation. Perform formation integrity test to 15.28 EMW. Begin to drill ahead from 5423' MD to 5852' MD while diluting mud system heavily for solids control.
Data Engineer: Craig Amos/Justin Carter
Mud loggers; Becky Mulkey/Eli Callan
Eagle Techs: Kyle Millican/ Matt Warva
Gas: Max gas was 24 units at 5562' MD with an average background gas of 8 units.
Fluids: No down hole losses reported.

Geology: Samples consisted of medium to dark gray, firm claystone with 10% to 30% shale and 10% siltstone from 5423' MD to 5520' MD. From 5520' MD to 5820' MD samples consisted of light to medium gray, soft to moderately firm claystone with 10% to 40% siltstone and 10% to 30% sandstone. From 5820' MD to 5852' MD samples consisted of 50% light brown to brown, very soft claystone, 40% sandstone and 10% siltstone.

09/21/2015
Continue drilling from 5852' MD to TD of 6800' MD at 22:18. Circulate while reciprocating pipe to clean the hole.
Data Engineers: Craig Amos/Justin Carter
Mud loggers: Becky Mulkey/Eli Callan
Eagle Techs: Kyle Millican/ Matt Wavra
Gas: Max gas was 47 units at 5924' MD with an average background gas of 5 units.
Fluids: No down hole losses reported.
Geology: Samples consisted of 50% to 90% translucent to transparent, very fine to fine grained, well sorted sandstone with 10% to 50% claystone from 5852' MD to 6080' MD. From 6080' MD to 6480' MD samples consisted of mostly light to medium gray, soft to firm claystone with 10% to 20% siltstone. From 6480' MD to 6800' MD samples consisted of mostly 50 % to 60% claystone and siltstone with interbeds of 10% to 60% light grey to transparent, very fine to fine grained, unconsolidated sandstone.

09/22/2015
Circulate, reciprocate pipe and pull out of hole. Rack back BHA # 7 and begin to rig up wireline.
Data Engineers: Craig Amos/Leigh Ann Rasher
Mud loggers: Becky Mulkey/Eli Callan
Eagle Techs: Kyle Millican/ Matt Wavra
Gas: Max trip gas was 19 units.
Fluids: Loss of 47 bbls while tripping out of hole.

09/23/2015
Continue to rig up wireline and run in hole. Perform wireline run #1 with MDT and Gamma Ray tool.
Data Engineers: Craig Amos/Leigh Ann Rasher
Mud loggers: Eli Callan
Eagle Techs: Matt Wavra
Gas: No recordable gas.
Fluids: No down hole losses reported.

09/24/2015
Pull out of hole with first wireline tool and lay down. Rig up second wireline tool, run in hole and perform FMI, SS, GR and HRLA wireline test. Pull out of hole and rig up side core wireline tool. Run in hole and perform side core wireline.
Data Engineers: Craig Amos/Leigh Ann Rasher
Mud loggers: Eli Callan
Eagle Techs: Matt Wavra
Gas: No recordable gas.
Fluids: No down hole losses reported.

09/25/2015
Continue rigging up core tubing wireline run #3. Complete 3rd wireline run and lay down core tubing, remove and package wireline cores. Begin rigging up to run cementing stinger in hole.
Data Engineers: Craig Amos/Leigh Ann Rasher
Mud loggers: Eli Callan
Eagle Techs: Matt Wavra
Gas: No recordable gas.
Fluids: No down hole losses reported.

09/26/2015
Run in hole with 2 7/8" cement stinger and 5" drill pipe. Circulate bottoms up and pick up cement assembly. Pressure test cement lines and line up to pump cement plug. Pump 16 bbls of spacer, 48 bbls of cement and 9 bbls of spacer. Displace with rig pumps 12.0 ppg mud. Rig down cement hose and lay done cement head on skate. Pull out of hole to 6073' MD and circulate bottoms up. Make up cement head for plug 2 and pump 16 bbls of spacer, 51 bbls of cement and 7 bbls of spacer. Displace with rig pumps 12.0 ppg mud. Pull out of hole to 5500' MD and circulate. Make up cement head for plug 3 and pump 14 bbls of spacer, 49 bbls of cement and 7 bbls of spacer. Displace with rig pumps, pull out of the hole to 4867' MD and circulate.
Data Engineers: Craig Amos/Leigh Ann Rasher
Gas: Max gas was 116 units while circulating.
Fluids: No down hole losses reported.

09/27/2015
Continue to circulate hole clean. Pull out of hole and lay down 2 7/8" tubing. Make up BHA with bit sub and bit, run in hole and tag cement at 4860' MD. Monitor well, static. Pull out of hole and lay down bit and bit sub. Pressure test cement plug to 1600 psi for 15 minutes. Run in hole with 9 5/8" cast iron bridge plug with 5" drill pipe.
Data Engineers: Craig Amos/Leigh Ann Rasher
Gas: No recordable gas.
Fluids: No down hole losses reported.

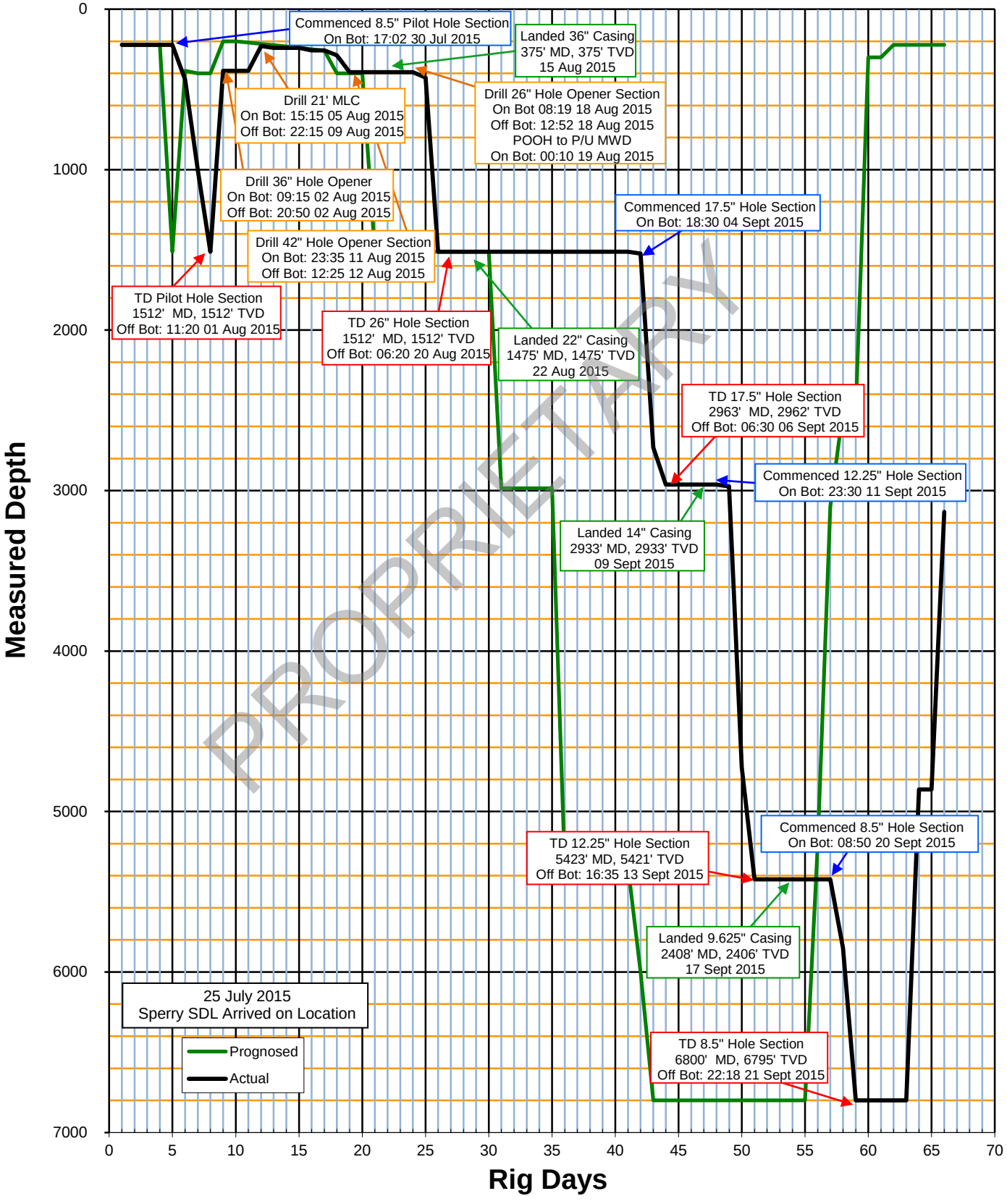
09/28/2015
Continue tripping in hole with 2 7/8" tubing. Swtich to 5" DP and trip in to 3133' MD and set 66 bbl cement plug. Rack back 8 stands and wash in hole to top of cement. POOH and lay down 5" and 2 7/8" DP and tubing.
Data Engineers: Craig Amos/Leigh Ann Rasher
Gas: No recordable gas.
Fluids: No down hole losses reported.

HALLIBURTON
Sperry Drilling

Days vs. Depth

WELL NAME: OCS-Y-2321 #001
OPERATOR: Shell Gulf of Mexico Inc.
MUD CO: MI Swaco
RIG: Polar Pioneer
SPERRY JOB: AK-XX-0901604700

LOCATION: Posey 6912
AREA: Chukchi Sea
STATE: Alaska
SPUD: 30-Jul-2015
TD: 21-Sep-2015



HALLIBURTON
Sperry Drilling

Surface Data Logging
After Action Review

WELL NAME:	OCS-Y-2321 #001	**LOCATION:**	Carlile, Tacoma WA
OPERATOR:	Shell Gulf of Mexico Inc.	**AREA:**	Port of Seattle
SPERRY JOB:	AK-XX-0901604700	**STATE:**	Alaska
RIG:	Polar Pioneer	**HOLE SECTION**	Mobilization
EMPLOYEE NAME:	Beverly Hur	**DATE:**	7-Aug-2015

What went as, or better than, planned:

Many of the necessary supplies were in Tacoma when we arrived. This included the conex, the gas racks and the Eagle system. Access to the Shell mobile unit as a work area helped to facilitate timely and convenient communications with the Anchorage office, Carlile personnel and Shell Logistics. Moving supplies from the lot to the ports was timely, thanks to Carlile and Shell Logistics on the lot.

Difficulties experienced:

Load times at the rig site often took days. This resulted in lost work time as our mudloggers didn't have the needed supplies and equipment to complete the job.

Recommendations:

Having all supplies loaded and ready for lift to the rig at the earliest possible date will eliminate NPT in the future. Because the crane could only make 8-9 lifts a day, having all supplies consolidated and at the port early in the project will allow maximum use of time during rig-up.

Innovations and/or cost savings:

A spreadsheet detailing the vendor, items, order date, tracking information, extensive mailing lists, and expected delivery date will allow anyone to check on a package. This will also eliminate lost packages, prevent double ordering and save money. All supplies and equipment are loaded onto in cargo baskets. Supplies and equipment could be loaded into cargo baskets in Anchorage, shipped to port and loaded directly onto the rig without intermediary steps. A separate cargo basket (AMF's) could also be filled with geo supplies and shipped to each rig as well. These steps would save money by reducing the time it takes to receive supplies on location, lost/missing/double ordered supplies, and make our supplies easy to locate and access on the rig. This would also be attractive to our customer as we would be ready for lift when our baskets arrive on location.

HALLIBURTON
Sperry Drilling

Surface Data Logging
After Action Review

WELL NAME:	OCS-Y-2321 #001	**LOCATION:**	Posey 6912
OPERATOR:	Shell Gulf of Mexico Inc.	**AREA:**	Chukchi Sea
SPERRY JOB:	AK-XX-0901604700	**STATE:**	Alaska
RIG:	Polar Pioneer	**HOLE SECTION:**	17.50
EMPLOYEE NAME:	Craig Amos	**DATE:**	1-Oct-2015

What went as, or better than, planned:

At first the drilling speed was in excess of 100 fph, which made sampling difficult, once speeds had been reduced to below 100 fph sampling was made easier and all samples were collected accurately. The Calcimetry and Steam Still samples were processed after the run and data was collected in a good manner.

Difficulties experienced:

Once drilling commenced the Iris data collection system had corrupted files, this required the system to be rebooted and some calibrations to be reentered. The eagle gas system had a problem with the heater, the mud being used continued polymers that when heated stuck together and caused a blockage. The vacuum for drying samples was also problematic, it didn't have enough air flow and when used for extended periods of time would overheat.

Recommendations:

Installing a drying oven in the unit with the current air extraction would prevent having to use the vacuum drier. Keeping copies of the calibration files on the desk top to easily replace any corrupted files. The mud process or a better process of cleaning out the Eagle system is going to need to be implemented to prevent blockages in the heater.

Innovations and/or cost savings:

Developing new techniques to keep the eagle heater flowing could prevent failures in the future.

HALLIBURTON
Sperry Drilling

Surface Data Logging
After Action Review

WELL NAME:	OCS-Y-2321 #001	**LOCATION:**	Posey 6912
OPERATOR:	Shell Gulf of Mexico Inc.	**AREA:**	Chukchi Sea
SPERRY JOB:	AK-XX-0901604700	**STATE:**	Alaska
RIG:	Polar Pioneer	**HOLE SECTION:**	12.25"
EMPLOYEE NAME:	Ryan Lenberg	**DATE:**	7-Sep-2015

What went as, or better than, planned:

A contingency plan was set in place for the Eagle heater to avoid any further blockages. The back up Eagle heater was installed with no issues and worked well throughtout the entire section.

Difficulties experienced:

Vacuum sample dryer box (QWEX 1000) motor failed because it was in an insulated box without an exhaust. Also the seives clog up quickly while trying to dry clay and overworked the vacuum causing further overheating and poor drying performance. Also it limits productivity as we can only dry one sample at a time.

Recommendations:

Develop a different system for air drying fan, possibly using a fan so that more than one sample can be dried at one time.

Innovations and/or cost savings:

N/A

HALLIBURTON
Sperry Drilling

Surface Data Logging
After Action Review

WELL NAME:	OCS-Y-2321 #001	**LOCATION:**	Posey 6912
OPERATOR:	Shell Gulf of Mexico Inc.	**AREA:**	Chukchi Sea
SPERRY JOB:	AK-XX-0901604700	**STATE:**	Alaska
RIG:	Polar Pioneer	**HOLE SECTION:**	8.5"
EMPLOYEE NAME:	Justin Carter	**DATE:**	22-Sep-2015

What went as, or better than, planned:
No problems with EAGLE or gas data.

Difficulties experienced:
No major problems were experianced during the drilling section.

Recommendations:
Update WITS back up files more frequently or upon mapping changes. Shut down all INSIGHT sub-programs before closing down or rebooting MADI computer.

Innovations and/or cost savings:
N/A

HALLIBURTON
Sperry Drilling

Formation Tops

WELL NAME: OCS-Y-2321 #001
OPERATOR: Shell Gulf of Mexico Inc.
MUD CO: MI Swaco
RIG: Polar Pioneer
SPERRY JOB: AK-XX-0901604700

LOCATION: Posey 6912
AREA: Chukchi Sea
STATE: Alaska
SPUD: 30-Jul-2015
TD: 21-Sep-2015

Marker	MD	INC	AZ	TVD	TVDSS
Top Torok	2,760.0	0.70	74.08	2,760.0	**-2,684.0**
Torok Gas Sand	3,729.0	0.77	27.36	3,279.0	**-2,857.0**
Top HRZ	5,024.0	3.28	37.85	5,023.0	**-3,203.0**
Top Pebble Shale	5,539.0	3.73	45.18	5,536.0	**-5,460.0**
Top Kuparuk C	5,837.0	3.48	42.48	5,871.0	**-5,795.0**
Top Kuparuk A	5,968.0	3.42	42.67	5,965.0	**-5,889.0**
Top Kuparuk D	6,451.0	3.99	34.54	6,447.0	**-6,371.0**

HALLIBURTON

Zone of Interest Report

Report # 1

Well Name: OCS-Y-2321 BURGER J #001
Location: Posey 6912
Operator: Shell Gulf of Mexico Inc.
Report Prepared By: Jessica Moen
Report Delivered To: Shell Gulf of Mexico Inc.

Depth (MD) 3300 **to** 3385 **ft**
(TVD) 3300 **to** 3385 **ft**
Formation: Torok
Date: 9/11/2015

Zone Production Analysis (From Steam-Still PPM Ratios)

The production of this zone is deemed to be **Gas/Oil**. At approximately **3300** feet, there is a **gas** / **oil** contact (and a **NA** / **NA** contact at approximately **NA** feet) for a total of **85** feet of **Gas/Oil** show (and **NA** feet of **NA** show).

1

Depth **3301** ft Gas Units **317** Mud Chlorides (1000's) = **133000**

	Flowline ppm		Background ppm		Show ppm
C1	26523	-	868	=	25655
C2	734	-	62	=	672
C3	387	-	41	=	346
C4	146	-	14	=	132
C5	49	-	0	=	49

Hydrocarbon Ratios

C1/C2 =	38
C1/C3 =	74
C1/C4 =	194
C1/C5 =	524

Production Analysis [x] Gas [ ] Oil [ ] Water [ ] Non-Producible Hydrocarbons

2

Depth **3387** ft Gas Units **385** Mud Chlorides (1000's) = **133000**

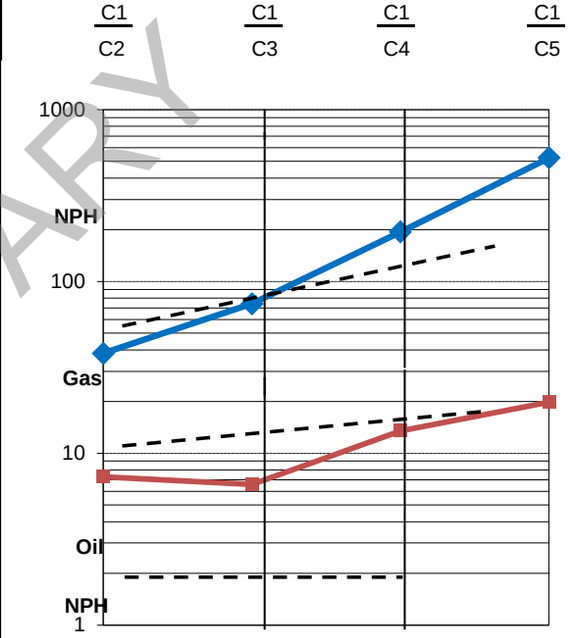
	Flowline ppm		Background ppm		Show ppm
C1	15271	-	9496	=	5775
C2	1125	-	333	=	792
C3	1101	-	222	=	879
C4	534	-	106	=	428
C5	338	-	47	=	291

Hydrocarbon Ratios

C1/C2 =	7
C1/C3 =	7
C1/C4 =	13
C1/C5 =	20

Production Analysis [ ] Gas [x] Oil [ ] Water [ ] Non-Producible Hydrocarbons

Hydrocarbon Ratios



Formation Data

At *Max Gas,* the visual sample percentages were: **80** % **CLYST**, **10** % **SST**, **10** % **SLTST**, ____ % ____.
The reservoir rock was a **med grey to drk grey** -colored **claystone**. The grain size was **N/A** and the grain shape was **N/A**. Approximate visual porosity was **N/A** % and the visual permeability was **N/A**. Grain sorting was **N/A** and the rock cement was **N/A**. The porosity type was **N/A** and the secondary components in the rock fragments were: **sandstone and siltstone**.
The rock hardness was **firm** and the sample contamination was **N/A**.

Liquid Hydrocarbon Data

The liquid hydrocarbon was first detected at **N/A** feet and continued through **N/A** feet. The liquid phase of the mud was **N/A**.
The liquid hydrocarbon occurred in the form of N/A and was present in the **N/A**. When the **N/A** were studied in the UV box, the liquid hydrocarbon covered **N/A** % of the surface of the sample.
The oil was **N/A** in color, exhibited a **N/A** fluorescence and had an approximate API gravity of **N/A**; odor was **NA** and staining was present. The cuttings exhibited a **N/A** cut that was **N/A** in color with a **N/A** fluorescence.

Logger's Opinion of the Show Interval

Total gas climbed to a peak of 317 units at 3301' MD over 26 units of background gas at 3220' - 3250' MD Gas again climbed to a peak of 385 units at 3387' MD over 138 units of background gas at 3365' MD Formational fluid trended from a gas to possible wet gas. Lack of flourensence indicates a lack of liquid hydrocarbon present in the formation.

HALLIBURTON

Zone of Interest Report

Report # 2

Well Name: OCS-Y-2321 BURGER J #001
Location: Posey 6912
Operator: Shell Gulf of Mexico Inc.
Report Prepared By: Jessica Moen
Report Delivered To: Shell Gulf of Mexico Inc.

Depth (MD) 5860 **to** 6050 **ft**
(TVD) 5857 **to** 6047 **ft**
Formation: Top Kuparuk C
Date: 9/20/2015

Zone Production Analysis (From Steam-Still PPM Ratios)

The production of this zone is deemed to be **Gas**. At approximately **5860** feet, there is a **N/A** / **N/A** contact (and a **NA** / **NA** contact at approximately **NA** feet) for a total of **190** feet of **Gas** show (and **NA** feet of **NA** show).

1

Depth **5924** ft Gas Units **47** Mud Chlorides (1000's) = **133000**

	Flowline ppm	-	Background ppm	=	Show ppm
C1	2877	-	774	=	2103
C2	186	-	40	=	146
C3	98	-	19	=	79
C4	41	-	0	=	41
C5	3	-	0	=	3

Hydrocarbon Ratios

C1/C2 =	14
C1/C3 =	27
C1/C4 =	51
C1/C5 =	701

Production Analysis [X] Gas [ ] Oil [ ] Water [ ] Non-Producible Hydrocarbons

2

Depth **6053** ft Gas Units **12** Mud Chlorides (1000's) = **133000**

	Flowline ppm	-	Background ppm	=	Show ppm
C1	656	-	588	=	68
C2	34	-	30	=	4
C3	15	-	14	=	1
C4	0	-	0	=	0
C5	0	-	0	=	0

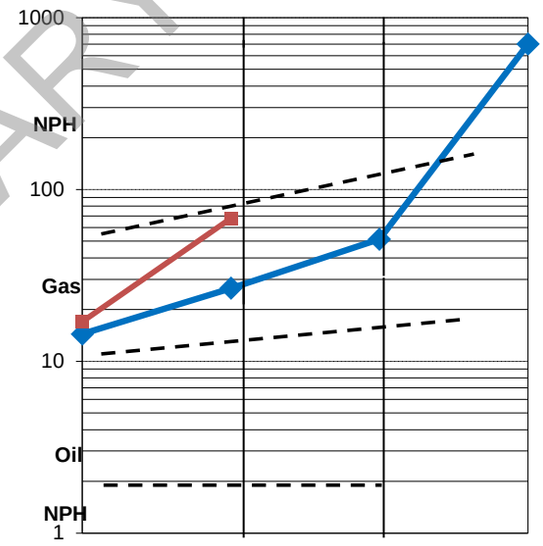
Hydrocarbon Ratios

C1/C2 =	17
C1/C3 =	68
C1/C4 =	#DIV/0!
C1/C5 =	#DIV/0!

Production Analysis [X] Gas [ ] Oil [ ] Water [ ] Non-Producible Hydrocarbons

Hydrocarbon Ratios

C1/C2 C1/C3 C1/C4 C1/C5



Formation Data

At *Max Gas,* the visual sample percentages were: **90** % **SST**, **10** % **CLYST**, ____ % ____, ____ % ____. The reservoir rock was a **transl to transp** -colored **sandstone**. The grain size was **very fine to fine** and the grain shape was **sub angular to round**. Approximate visual porosity was **N/A** % and the visual permeability was **N/A**. Grain sorting was **well** and the rock cement was **unconsolidated**. The porosity type was **N/A** and the secondary components in the rock fragments were: **glauc and carb materials**. The rock hardness was **N/A** and the sample contamination was **N/A**.

Liquid Hydrocarbon Data

The liquid hydrocarbon was first detected at **N/A** feet and continued through **N/A** feet. The liquid phase of the mud was **N/A**. The liquid hydrocarbon occurred in the form of N/A and was present in the **N/A**. When the **N/A** were studied in the UV box, the liquid hydrocarbon covered **N/A** % of the surface of the sample. The oil was **N/A** in color, exhibited a **N/A** fluorescence and had an approximate API gravity of **N/A**; odor was **NA** and staining was present. The cuttings exhibited a **N/A** cut that was **N/A** in color with a **N/A** fluorescence.

Logger's Opinion of the Show Interval

Gas climbed to a peak of 47 units at 5924' MD over 9 units of background gas at 5860' - 5885' MD Samples changed to sandstone. Lack of heavier hydrocarbons and flourensence indicating dry gas present with no associated liquid hydrocarbons.

HALLIBURTON

Zone of Interest Report

Report # 3

Well Name: OCS-Y-2321 BURGER J #001
Location: Posey 6912
Operator: Shell Gulf of Mexico Inc.
Report Prepared By: Jessica Moen
Report Delivered To: Shell Gulf of Mexico Inc.

Depth (MD) 6450 **to** 6600 **ft**
(TVD) 6446 **to** 6595 **ft**
Formation: Top Kuparuk D
Date: 9/21/2015

Zone Production Analysis (From Steam-Still PPM Ratios)

The production of this zone is deemed to be **Gas/NPH**. At approximately **6450** feet, there is a **gas** / **NPH** contact (and a **NA** / **NA** contact at approximately **NA** feet) for a total of **150** feet of **Gas/NPH** show (and **NA** feet of **NA** show).

1

Depth **6495** ft Gas Units **36** Mud Chlorides (1000's) = **145000**

	Flowline ppm		Background ppm		Show ppm
C1	2310	-	680	=	1630
C2	119	-	29	=	90
C3	84	-	17	=	67
C4	45	-	0	=	45
C5	0	-	0	=	0

Hydrocarbon Ratios

C1/C2 =	18
C1/C3 =	24
C1/C4 =	36
C1/C5 =	#DIV/0!

Production Analysis [x] Gas [ ] Oil [ ] Water [ ] Non-Producible Hydrocarbons

2

Depth **6580** ft Gas Units **19** Mud Chlorides (1000's) = **145000**

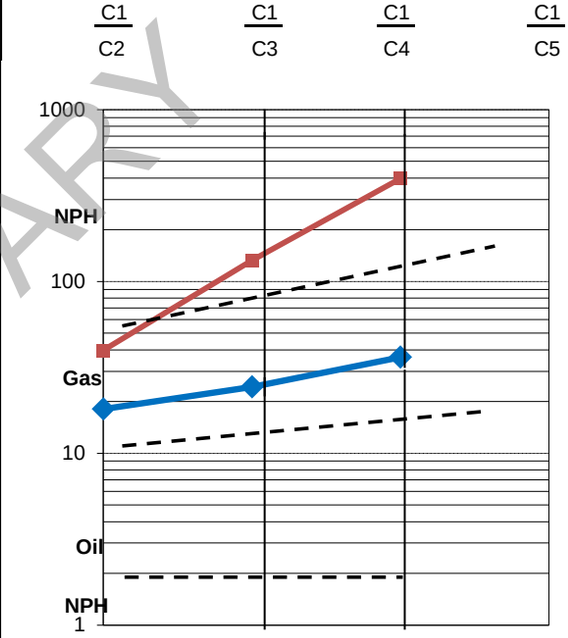
	Flowline ppm		Background ppm		Show ppm
C1	1194	-	797	=	397
C2	57	-	47	=	10
C3	40	-	37	=	3
C4	17	-	16	=	1
C5	0	-	0	=	0

Hydrocarbon Ratios

C1/C2 =	40
C1/C3 =	132
C1/C4 =	397
C1/C5 =	#DIV/0!

Production Analysis [ ] Gas [ ] Oil [ ] Water [x] Non-Producible Hydrocarbons

Hydrocarbon Ratios



Formation Data

At *Max Gas,* the visual sample percentages were: **40** % **SST**, **40** % **CLYST**, **20** % **SLTST**, ____ % ____. The reservoir rock was a **lt gry to med gry, transl** -colored **sandstone**. The grain size was **v fine to fine** and the grain shape was **sb angular to round**. Approximate visual porosity was **N/A** % and the visual permeability was **N/A**. Grain sorting was **poor** and the rock cement was **uncons**. The porosity type was **N/A** and the secondary components in the rock fragments were: **claystone and siltstone**. The rock hardness was **firm** and the sample contamination was **N/A**.

Liquid Hydrocarbon Data

The liquid hydrocarbon was first detected at **N/A** feet and continued through **N/A** feet. The liquid phase of the mud was **N/A**. The liquid hydrocarbon occurred in the form of N/A and was present in the **N/A**. When the **N/A** were studied in the UV box, the liquid hydrocarbon covered **N/A** % of the surface of the sample. The oil was **N/A** in color, exhibited a **N/A** fluorescence and had an approximate API gravity of **N/A**; odor was **NA** and staining was present. The cuttings exhibited a **N/A** cut that was **N/A** in color with a **N/A** fluorescence.

Logger's Opinion of the Show Interval

Gas climbed to a peak of 36 units at 6495' MD over 11 units of background gas at 6448' MD. Samples changed to partially sandstone with a dull yellow fluorescence, a slow dull yellow crush cut fluorescence, and a dull yellow residual fluorescence. The lack of heavier hydrocarbons with fluorescence indicates a non-productive hydrocarbon or heavy hydrocarbon with no associated gas is present.

WELL NAME: OCS-Y-2321 #001
OPERATOR: Shell Gulf of Mexico Inc.
MUD CO: MI Swaco
RIG: Polar Pioneer
SPERRY JOB: AK-XX-0901604700

LOCATION: Posey 6912
AREA: Chukchi Sea
STATE: Alaska
SPUD: 30-Jul-2015
TD: 21-Sep-2015

Date	Depth	Wt	Vis	PV	YP	Gels	Filt	R600/R300/R200/R100/ R6/R3	Cake	Solids	Oil/Water	Sd	Pm	pH	MBT	Pf/Mf	Chlor	Hard	Remarks
	ft - MD	ppg	sec		lb/100	lb/100ft2	m/30m	Rheometer	32nds	%	%	%			ppb Eqv		mg/l	Ca++	
28-Aug	222	8.55																	Using Sea Water - No Report
29-Aug	222	8.55																	Using Sea Water - No Report
30-Aug	1512	10.2	67	15	16	8/9/10	4.0	46/31/25/18/9/5	1/1	12.0	0/88	0.00	0.80	8.5	5.0	0.1/1.4	145000	800	Building Surface Mud
31-Aug	1512	10.20	65	16	18	9/11/12	4.0	50/34/26/19/12/9	1/0	10	0/90	0.00	1.5	9.2	5	0.4/1.8	123000	600	Test BOPs
1-Sep	1512	10.10	63	17	19	16/31/38	6.0	76/56/47/36/17/15	1/0	9	0/91	0.00	0.4	8.9	15	0.2/0.6	18000	960	Test BOPs
2-Sep	1512	10.10	61	17	19	7/8/8	3.7	57/38/31/22/6/5	1/0	8	0/92	0.00	0.7	8.9	0	0.2/1.3	140000	600	Test BOPs
3-Sep	1512	10.05	60	19	20	7/8/8	3.7	58/39/32/22/7/6	1/0	8	0/92	0.00	0.8	8.9	0	0.2/1.3	140000	600	Pick Up BHA
4-Sep	1523	10.00	56	17	17	6/7/7	3.5	51/34/27/20/6/6	1/0	8	0/92	0.00	1.4	9.5	0	1/1.9	119000	960	Switch to Water Based Mud
5-Sep	2907	10.45	88	18	28	10/11/13	3.2	64/46/38/28/11/9	1/0	13	0/87	2.50	0.8	9.1	5	0.6/1.5	130000	960	Drill 17.5" Section
6-Sep	2963	10.60	56	20	27	10/12/12	3.2	67/47/40/28/12/10	1/0	14.0	0/86	2.50	0.90	9.1	5.0	0.7/1.4	130000	880	TD intermediate 1 section
7-Sep	2963	10.60	58	20	27	10/12/12	3.3	67/47/40/28/12/10	1/0	14.0	0/86	2.50	1.00	9.1	5.0	0.7/1.4	130000	880	Tripping out of hole
8-Sep	2963	10.65	66	15	27	9/9/10	3.4	57/42/35/26/10/9	1/0	13.0	0/87	1.50	0.60	8.8	6.3	0.3/1.2	130000	1120	Casing
9-Sep	2963	10.65	120	16	26	9/9/10	3.3	62/42/36/26/11/9	1/0	13.0	0/87	1.50	0.80	9.0	6.3	0.5/1.3	130000	840	Cement
10-Sep	2963	10.7	120	19	29	9/11/12	2.9	67/48/39/29/9/8	1/0	13	0/87	2	0.8	9	6.25	0.6/1.4	131000	840	TIH with BHA 600
11-Sep	2974	10.75	120	19	30	10/11/12	2.1	68/49/41/30/10/3	1/0	13	0/87	2	0.3	8.2	6.25	0.2/1.5	134000	720	Drilling Intermediate 2
12-Sep	4726	11.00	120	24	38	11/17/18	3.3	89/64/54/40/14/11	1/0	15	0/85	1.5	1.4	8.9	8.75	0.6/1.8	121000	480	Drilling Intermediate 2
13-Sep	5423	11.4	120	32	33	13/15/17	4.7	98/65/55/40/16/13	1/0	18	0/82	1	0.1	8.01	8.75	0.1/1.3	110000	280	TD intermediate 1 section
14-Sep	5423	11.4	120	32	33	13/15/17	4.7	98/65/55/40/16/13	1/0	18	0/82	1	0.1	8.01	8.75	0.1/1.3	110000	280	TD intermediate 1 section
15-Sep	5423	11.40	120	19	29	9/13/14	4.5	67/48/37/26/10/9	1/0	16	0/84	0.5	1.1	9.1	7.5	1.3/3	136000	440	TOOH
16-Sep	5423	11.55	120	24	34	9/13/14	3.9	80/56/47/34/11/9	1/2	16	0/84	0.5	1	9	7.5	0.6/2.3	130000	400	Rig Up Cement
17-Sep	5423	11.5	120	20	31	9/11/14	3.7	71/51/44/32/10/9	1/2	16	0/84	0.5	1	9	7.5	0.7/2	133000	440	TIH With Casing
18-Sep	5423	12.00	120	18	36	8/10/2016	3.5	72/54/44/32/9/8	1/2	18	0/82	0.5	0.9	9	7.5	0.7/2.4	134000	480	Cement Casing
19-Sep	5423	12	120	23	33	9/12/2014	3.8	79/56/46/34/10/9	1/2	18	0/82	0.5	1.4	9.3	7.5	1.2/3	130000	400	Pick Up BHA
20-Sep	5852	12.05	120	23	30	7/16/2022	6.5	76/53/43/31/9/7	1/2	21	0/79	0.5	2.6	9.3	6.5	2.4/4	130000	760	Begin 8.5" Hole Section
21-Sep	6800	12.05	120	22	26	6/9/2010	4.9	70/48/39/28/5/5	1/2	21.5	0/78.5	0.10	1.2	9	8.75	1.1/2.3	145000	480	TD 8.5" Hole Section
22-Sep	6800	12	120	35	32	8/9/10	2.5	102/67/52/33/7/6	1/2	19.5	0/80.5	0.20	1.1	9	5	1.6/3.5	141000	400	Rig UP Wireline
23-Sep	6800	12.00	60	35	34	8/9/10	2.2	104/69/52/34/7/5	1/1	19.3	0/80.8	0.20	1.00	9.0	5.0	1.7/3.4	140000	400	Wireline
24-Sep	6800	12.1	57	30	32	9/10/11	1.8	92/62/47/31/12/7	1/1	19.0	0/81	0.10	0.90	8.8	5.0	1.5/3	143000	440	Wireline
25-Sep	6800	12	79	33	34	6/7/8	2.0	100/67/53/33/8/5	1/1	18.0	0/82	0.20	0.80	8.8	5.0	0.8/1.4	140000	360	RIH w/ Cmt Stinger
26-Sep	6800	12.05	79	35	40	18/20/24	9.0	110/75/61/44/16/12	1/1	19.5	0/80.5	0.20	4.50	9.0	10.0	3/4.3	145000	2400	Circulating
27-Sep	6800	12.05	69	23	29	12/14/30	11.0	75/52/43/33/15/10	2/2	19	0/81	0.20	8.4	10.6	7.5	6.3/7.8	142000	2240	Setting Bridge Plug
28-Sep	6800	12	84	26	27	12/13/14	13.0	79/53/41/29/20/12	1/2	18	0/82	0.20	6	10.6	5	8/9.2	123000	1,600	L/D 2 7/8" tbg

Casing Record

36" Conductor @ 375' MD, 375'TVD
22" Casing @ 1475' MD, 1475'TVD
14" Casing @ 2933' MD, 2933'TVD
9.625" Casing @ 5408' MD, 5406'TVD

HALLIBURTON
Sperry Drilling

Water and Oil Based Mud Record

WELL NAME: OCS-Y-2321 #001
OPERATOR: Shell Gulf of Mexico Inc.
MUD CO: MI Swaco
RIG: Polar Pioneer
SPERRY JOB: AK-XX-0901604700

LOCATION: Posey 6912
AREA: Chukchi Sea
STATE: Alaska
SPUD: 30-Jul-2015
TD: 21-Sep-2015

HALLIBURTON
Sperry Drilling

Bit Record

BHA#	SDL RUN #	Bit #	Bit Type	Bit Size	Depth In	Depth Out	Footage	Bit Hours	TFA	AVG ROP	WOB (max)	RPM (max)	SPP (max)	FLOW GPM (max)	Bit Grade	Comments
1	100	1	Mill Tooth	8.50	222	1512	1290	27.89	0.668	46.0	15	106	1263	505	1-1-NO-A-E-IN-NO-TD	8.5" Pilot Hole BHA
2	200	2	Mill Tooth	36.00	222	384	162	9.97	1.117	60.0	2	46	1509	1191	1-1-NO-A-E-IN-NO-BHA	36" Hole Opener
3	300	2rr1	Mill Tooth	36.00	257	372	115	10.67	1.117	28.2	2	86	899	1340	1-1-NO-A-E-IN-NO-TD	42" Hole Opener
4	400a	3	Mill Tooth	26.00	393	425	32	10.84	1.117	60.0	5	60	590	750	0-0-NO-A-E-I-NO-BHA	26" Hole Opener
4	401	3rr1	Mill Tooth	26.00	425	1512	1087	31.16	1.117	60.0	15	120	2850	1200	1-1-WT-A-E-I-NO-TD	26" Section
5	500	4	PDC T6065	17.50	1512	2963	1451	20.58	0.755	71.0	11	100	2710	900	1-2-BT-N-X-I-NO-TD	17.5" Intermediate 1
6	600	5	PDC T6065	12.25	2963	5423	2460	29.05	0.994	84.6	20	100	3500	850	1-1-BT-C-X-I-WT*-TD	12.25" Intermeidate 2
7	700	6	HDBS PDC MM55	8.50	5423	6800	1377	30.37	0.552	45.4	14	100	4020	600	1-1-BT-N-X-I-NO-TD	8.5" Main Object Interval

HALLIBURTON
Sperry Drilling

Morning Report

Report # 1

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	0'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	0'
Area:	Chucki Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Pre Spud	**Date:**	25-Jul-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.23 @ 96%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Arrive on location and begin deploying Anchors.

Logging Engineers: Craig Amos Report By: Craig Amos Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 2

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	0'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	0'
Area:	Chucki Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Pre Spud	**Date:**	26-Jul-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.23 @ 96%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Continue Anchor deployment, begin picking up pipe and racking back, begin picking up BHA.

Logging Engineers: Craig Amos Report By: Craig Amos Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 3

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	0'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	0'
Area:	Chucki Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Pre Spud	**Date:**	27-Jul-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.23 @ 96%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Complete picking up BHA, bring on Brine and chemicals to make mud.

Logging Engineers: Craig Amos Report By: Craig Amos Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 4

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	0'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	0'
Area:	Chucki Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Pre Spud	**Date:**	28-Jul-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.23 @ 96%

MWD Summary	Depth		Tools	ECD (ppg)	Avg	Min	Max
		to					

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Continue rig maintenance and repairing Barite system, pick up dumb iron BHA to tag bottom and check water depth.

Logging Engineers: Craig Amos Report By: Craig Amos Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 5

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	0'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	0'
Area:	Chucki Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Pre Spud	**Date:**	29-Jul-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Water depth checked to 146' MD, complete rig repairs on Barite tanks, build kill mud and sweeps. Begin Picking up 8.5' pilot hole BHA.

Logging Engineers: Craig Amos Report By: Craig Amos Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 6

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	222'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	438'
Area:	Chucki Sea	**Total Charges:**		**24 Hour Progress:**	216'
Location:	Alaska	**Rig Activity:**	Pre Spud	**Date:**	30-Jul-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	0.0	54.1	201.7	254'	Flow In (gpm)	457	SPP (psi)	888
					Flow In (spm)	92	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD	Avg	Min	Max
	222'	to	438'	DGR, PWD, XBAT, ADR, CTN, ALD, MRIL	(ppg)	6.80	5.78	8.16

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
438'	SeaWater	8.55	8.55								

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Milltooth	6.75			222'					

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	5	0.78	4.22	0	36	1

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Troubleshoot MWD tools, begin picking up BHA, complete BHA pick up and TIH to sea floor, shallow pulse test and begin drilling the the 8.5' section as 17:02 pm 07/30/2015. No sweeps pumped.

Logging Engineers: Craig Amos/ Leigh Ann Rasher Report By: Craig Amos/ Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 7

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	438'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1005'
Area:	Chucki Sea	**Total Charges:**		**24 Hour Progress:**	567'
Location:	Alaska	**Rig Activity:**	Drill 8.5" Section	**Date:**	31-Jul-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	64.6	64.6	196.7	450'	Flow In (gpm)	456	SPP (psi)	999
					Flow In (spm)	92	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD	Avg	Min	Max
	438'	to	1005'	DGR, PWD, XBAT, ADR, CTN, ALD, MRIL	(ppg)	10.07	9.38	11.73

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1005'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Milltooth	8.5	0.668		222'					

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	39.9	9.15	30.76	0	275	4 min

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Continue to drill from 438' MD to 1005' MD. Pump 20 bbl sweeps every stand. Lithology has consisted of mainly silt w/ beds of coal, sand, and clay based off MWD data.

Logging Engineers: Craig Amos/ Leigh Ann Rasher Report By: Craig Amos/ Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 8

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1005'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chucki Sea	**Total Charges:**		**24 Hour Progress:**	507'
Location:	Alaska	**Rig Activity:**	TD 8.5" Section	**Date:**	1-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)		57.8	244.4	1079'	Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to				9.73	9.29	10.69

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1005'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Milltooth	8.5	0.668	27.93	222'	1512'	1290'	15.0	100.0	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	106.11					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Continue to drill from 1005' MD to 1512' MD, TD Pilot Hole section at 1512' MD, pump 20 bbl sweeps every stand. POOH & L/D BHA #1.

Logging Engineers: Craig Amos/ Leigh Ann Rasher Report By: Craig Amos/ Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 9

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	222'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	384'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	162'
Location:	Alaska	**Rig Activity:**	POOH w/ 36" Bit	**Date:**	2-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)		64.1	215.4	274'	Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1005'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Milltooth	8.5	0.668	27.93	222'	1512'	1290'	15.0	100.0	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	203.95					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: P/U BHA #2 & drill ahead f/ 222' MD to 384' MD w/ 36" hole opener. POOH & begin to L/D BHA #2.

Logging Engineers: Craig Amos/ Leigh Ann Rasher Report By: Craig Amos/ Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 10

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	384'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	384'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Wait on weather	**Date:**	3-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1005'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Mill Tooth	8.5	0.668	27.93	222'	1512'	1290'	15.0	100.0	1-1-NO-A-E-IN-NO-TD
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	203.95					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: P/U MLC. Wait on weather.

Logging Engineers: Craig Amos/ Leigh Ann Rasher Report By: Craig Amos/ Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 11

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	384'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	384'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Rig Maintenance	**Date:**	4-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	**Current**	**Avg**	**24 hr Max**	**Max @ ft**	**Current Pump & Flow Data:**			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	**Depth**			**Tools**	**ECD** (ppg)	**Avg**	**Min**	**Max**
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1005'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Mill Tooth	8.5	0.668	27.93	222'	1512'	1290'	15.0	100.0	1-1-NO-A-E-IN-NO-TD
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	203.95					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Cont to wait on weather. Prep to to RIH w/ MLC. Perform maintenance on standpipe.

Logging Engineers: Craig Amos/ Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 12

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	222'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	230'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	8'
Location:	Alaska	**Rig Activity:**	RIH w/ MLC	**Date:**	5-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	0.0	0.6	2.1	225'	Flow In (gpm)	1372	SPP (psi)	2750
					Flow In (spm)	293	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1005'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Mill Tooth	8.5	0.668	27.93	222'	1512'	1290'	15.0	100.0	1-1-NO-A-E-IN-NO-TD
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	239.73					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Cont repair kelly hose. RIH w/ MLC & drill ahead f/ 222' MD to 230' MD.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 13

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	230'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	241'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	11'
Location:	Alaska	**Rig Activity:**	Inspecting MLCB	**Date:**	6-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)		0.7	1.1	236'	Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
241'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Mill Tooth	8.5	0.668	27.93	222'	1512'	1290'	15.0	100.0	1-1-NO-A-E-IN-NO-TD
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	1107.89					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Drill ahead f/ 230' MD to 241' MD w/ MLCB. Pull off bottom to inspect MLCB.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 14

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	241'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	241'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Cleaning MLCB	**Date:**	7-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
241'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Mill Tooth	8.5	0.668	27.93	222'	1512'	1290'	15.0	100.0	1-1-NO-A-E-IN-NO-TD
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	1107.89					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: POOH w/ MLCB. Inspect MLCB & clean off.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 15

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	241'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	241'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Repair Pump	**Date:**	8-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
241'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Mill Tooth	8.5	0.668	27.93	222'	1512'	1290'	15.0	100.0	1-1-NO-A-E-IN-NO-TD
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	1107.89					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Cont to clean off MLCB. RIH w/ MLC & tag bottom. Rig maintenance on pump.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 16

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	241'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	257'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	16'
Location:	Alaska	**Rig Activity:**	Clean Out Hole	**Date:**	9-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	0.0	1.1	1.9	257'	Flow In (gpm)	1428	SPP (psi)	2971
					Flow In (spm)	303	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth		Tools	ECD (ppg)	Avg	Min	Max
		to					

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
257'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Mill Tooth	8.5	0.668	27.93	222'	1512'	1290'	15.0	100.0	1-1-NO-A-E-IN-NO-TD
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2040.84					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Finish rig maintenance on pump. Drill ahead w/ MLCB f/ 241' MD to 257' MD. Circ & clean out hole.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 17

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	257'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	257'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	R/D MLC Equip	**Date:**	10-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
257'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
1	Mill Tooth	8.5	0.668	27.93	222'	1512'	1290'	15.0	100.0	1-1-NO-A-E-IN-NO-TD
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2040.84					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: TOOH w/ MLCB. Clean off MLCB & prepare rig floor for 42" hole opener. Perform rig maintenance on pumps.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 18

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	257'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	287'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	30'
Location:	Alaska	**Rig Activity:**	Drill w/ 42" Hole Opener	**Date:**	11-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	31.4	75.6	149.2	267'	Flow In (gpm)	1062	SPP (psi)	608
					Flow In (spm)	255	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
287'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA
3	Mill Tooth	36	1.117		257'					

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2078.61	0.51	2065.34	0	20736	82

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: R/D MLC equip. P/U BHA #3. RIH w/ BHA #3 & drill ahead f/ 257' MD to 287' MD w/ 42" hole opener.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 19

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	287'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	393'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	106'
Location:	Alaska	**Rig Activity:**	R/U 36" Csg Equip	**Date:**	12-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)		17.5	53.7	317'	Flow In (gpm)		SPP (psi)		
					Flow In (spm)		Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
287'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA
3	Mill Tooth	36	1.117		257'					

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2078.61					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Drill ahead f/ 287' MD to 393' MD w/ 42" hole opener. Displace well with WBSF. POOH & L/D BHA #3. Begin to R/U 36" conductor csg equip.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 20

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	393'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	393'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	RIH w/ 36" Conductor	**Date:**	13-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)		SPP (psi)		
					Flow In (spm)		Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
393'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA
3	Mill Tooth	36	1.117		257'					

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2095.01		2095		21020	

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ Trip (max) _____ Connection (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: R/U equip to RIH w/ 36" conductor. RIH w/ conductor.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 21

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	393'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	393'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Clean out Hole	**Date:**	14-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)	1273	SPP (psi)	891
					Flow In (spm)	305	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
393'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2254.6		2253.2		22621	

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: POOH w/ conductor & P/U BHA. RIH w/ BHA & wash hole clean.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 22

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	393'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	393'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Pressure Test Cmt Lines	**Date:**	15-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)		SPP (psi)		
					Flow In (spm)		Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
393'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"					Conductor

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2333.17	123.73	2209.44		22168	

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: POOH w/ BHA & L/D. P/U 36" csg & RIH. R/U to cmt csg. Pressure test cmt lines.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 23

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	393'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	393'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Wait on Cmt	**Date:**	16-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)		SPP (psi)		
					Flow In (spm)		Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
393'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
2	Mill Tooth	36	1.117	9.97	222'	384'	162'	2	46	1-1-NO-A-E-IN-NO-BHA
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	375'				Conductor

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2333.17	123.73	2209.44		22168	

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Pump cmt. Wait on cmt.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 24

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	375'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	375'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	P/U clean out BHA	**Date:**	17-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)		SPP (psi)		
					Flow In (spm)		Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
375'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	10.67	375'					

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	375'				Conductor

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	132.67					

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Cont to wait on cmt. Decision made to re-cmt 36" csg. Pump cmt & wait on cmt. R/D cmt equip and P/U clean out BHA.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 25

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	375'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	425'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	50'
Location:	Alaska	**Rig Activity:**	Drill 26" Section	**Date:**	18-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)		62.1	258.8	390'	Flow In (gpm)	800	SPP (psi)	1073
					Flow In (spm)	190	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	425'	to	425'	DIR, PWD				

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
425'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117		375'					

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	375'				Conductor

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	157.23		155.39	N/A	1578	8 min

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: RIH w/ 26" clean out BHA. Clean out hole and drill new hole to 425' MD. POOH & L/D BHA. Pick up drilling BHA & RIH.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 26

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	425'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1245'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	820'
Location:	Alaska	**Rig Activity:**	Drill 26" Section	**Date:**	19-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	86.5	60.8	405.7	1093'	Flow In (gpm)	1192	SPP (psi)	2751
					Flow In (spm)	284	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	425'	to	1245'	DIR, PWD		8.75	8.09	9.15

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
425'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117		375'					

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	375'				Conductor

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	672.54	12.13	660.4	N/A	6626	8 min

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Drill ahead f/ 425' MD to 1245' MD w/ 26" hole opener. Pump sweeps every 45'.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 27

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1245'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	267'
Location:	Alaska	**Rig Activity:**	R/U 22" Csg Equip	**Date:**	20-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)		57.1	137.1	1380'	Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	1245'	to	1512'	DIR, PWD		8.82	8.56	10.05

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117		375'	1512'				

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2668.19			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Drill ahead f/ 1245' MD to TD of 1512' MD w/ 26" hole opener. Pump sweeps every 45'. Short trip 3 stnds & RIH to 1512' MD. CBU & displace to 10.5 ppg WBSF. TOOH & L/D BHA. Clean rig floor & R/U 22" csg equip.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 28

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	RIH 22" Csg	**Date:**	21-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)		SPP (psi)		
					Flow In (spm)		Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117		375'	1512'				

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2668.19			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Cont to R/U 22" csg equip. RIH w/ 22" csg.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 29

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Prep to set BOP	**Date:**	22-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)		SPP (psi)		
					Flow In (spm)		Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Cont to RIH w/ 22" csg & set at 1475' MD. R/U cmt equip & cmt 22" csg. Prepare to set BOP.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 30

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Change seals on KT ring	**Date:**	23-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Pull out of hole with 5" inner string and rig down all temporary piping from cement job. Perform rig maintenance and skid rig 200' off well center for BOP deployment. Assist subsea with changing the choke stab on the KT ring. Rig up marine riser equipment and function test. Pick up and run marine riser to 105' and assist with changing the choke stab on the KT ring.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 31

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Wait on weather	**Date:**	24-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Assist subsea with changing choke stab seals on KT ring , remove boost stab and install blank flange. Install choke and kill drape hoses on KT ring. Scope out pod line tensioners, tie back the COP tensioner guideline and transport BOP to well center. Attache the cobra head to tugger and install beacons on BOP stack. Lower riser and land on BOP. Install guide line cables in BOP guide line guides. Wait on Nordica to deploy HFL due to weather.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 32

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Wait on weather	**Date:**	25-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)		SPP (psi)		
					Flow In (spm)		Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Continue to wait on weather to deploy HFL. Nordica deploy HFL skid and attempt to install on subsea mud matte with assistance from ROV. Wait on weather to deploy BOP.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 33

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Wait on weather	**Date:**	26-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Continue to wait on weather.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 34

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Wait on weather	**Date:**	27-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Continue to wait on weather.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 35

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Skid rig	**Date:**	28-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Continue to wait on weather. Begin to skid rig.

Logging Engineers: Andrew Bongard/Leigh Ann Rasher Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 36

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Washing well head	**Date:**	29-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft
ROP (ft/hr)				

Current Pump & Flow Data:			
Flow In (gpm)		SPP (psi)	
Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Waited on Weather to deploy BOP. Splash and run BOPs. Test chok and kill lines, good tests. Moved rig to well center. Installed guidelines and applied required tension.

Logging Engineers: Andrew Bongard/Justin Carter Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 37

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	scoping out slip joint	**Date:**	30-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: ROV washed and cleaned wellhead with thrusters. Attempted to pressure tested Choke and Kill line with Halliburton cement unit, pressure test good on 250 low and bleeding down at 10k. Bleed down to zero after no success. Troubleshoot and test choke and kill lines separately; good tests. Landed out BOP on well head. Function and latch wellhead connector; good latch and good tests. With Halliburton cement unit conduct pressure tests on BSRs and CSG. Close LBSRs and test T/250 Psi 5 min low while coming up to 1500 psi high @ 1600 psi pressure dropped 134 psi and was bled off. Pressured back up to 1250 psi and started bleeding off, unable to perform test. Begin scoping out slip joint.

Logging Engineers: Andrew Bongard/Justin Carter Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 38

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	BOP Tests	**Date:**	31-Aug-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Conducting BOP Tests.

Logging Engineers: Andrew Bongard/Justin Carter Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 39

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	BOP Tests	**Date:**	1-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Conducting pressure tests on BOPs and Choke/Kill manifold.

Logging Engineers: Justin Carter Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 40

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Trip in w/ Wash Sub	**Date:**	2-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Complete surface tests. Pick up MWD, test and download. Trip in with wash sub.

Logging Engineers: Justin Carter Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 41

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1512'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Pick up BHA	**Date:**	3-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	SeaWater	8.55									

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
3	Mill Tooth	36	1.117	10.67	257'	393'	136'	2	86	1-1-NO-A-E-IN-NO-TD
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Wash trhu BOPs and wellhead. POOH with was sub. Pick up and rack back drill pipe. Begin picking up BHA.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 42

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1512'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	1716'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	204'
Location:	Alaska	**Rig Activity:**	Drilling Ahead	**Date:**	4-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	143.0	105.0	256.0	1694'	Flow In (gpm)	832	SPP (psi)	1901
					Flow In (spm)	199	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	1512'	to	1716'	Directional / PWD		10.49	10.33	10.80

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	($lb/100ft^2$)	ml/30min		mg/l	%
1512'	SeaWater	10.00	10.00	62	N/A	22	24	3.7	9.20	140000.00	8.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD
5	PDC	17.5	0.755	2.62	1512'		204'	4	100	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
						100						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3			N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum	79	1635'	7749	0	0	0	0	0	0
Minimum	4	1512'	49	0	0	0	0	0	0
Average	28		2006	0	0	0	0	0	0

Background (current) 23 — **Trip** (max) — **Connection** (max) —

* 10,000 Units = 100% Gas In Air

24 hr Recap: Pick up BHA. Shallow pulse test MWD. Wash and ream; tag shoe at 1469'. Displaced well from seawater to 10.0ppg WBM. Drillout 22" shoe and 10' of new formation; circulate two well volumes. Perform FIT; 208 psi, 12.72 ppg. Trip to bottom and drill ahead.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 43

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	1716'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	2740'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	1024'
Location:	Alaska	**Rig Activity:**	Drilling Ahead	**Date:**	5-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	40.6	102.0	276.0	1817'	Flow In (gpm)	896	SPP (psi)	2567
					Flow In (spm)	214	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	1716'	to	2740'	Directional / PWD		10.82	10.55	11.07

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
1512'	WBM	10.00	10.00	66	N/A	17	17	3.5	9.50	139000.00	8.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD
5	PDC	17.5	0.755	2.62	1512'		204'	4	100	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
						100						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3	54	954	N/A	9574	45

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum	100	1999'	6787	0	0	0	0	0	0
Minimum	6	2430'	49	0	0	0	0	0	0
Average	26		1565	0	0	0	0	0	0

Background (current) 15 — **Trip** (max) — **Connection** (max) —

* 10,000 Units = 100% Gas In Air

24 hr Recap: Drilling 17.5 hole section. Circulate and condition mud while MWD calibrated depth tracking. Drilling/sliding as per Directional Driller. Weight up to 10.3 ppg at 2360'. Continue drilling ahead.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 44

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	2740'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	2963'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	223'
Location:	Alaska	**Rig Activity:**	POOH	**Date:**	6-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)		52.4	111.0	2833'	Flow In (gpm)	0	SPP (psi)	0
					Flow In (spm)	0	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	2740'	to	2963'	Directional / PWD		11.02	10.80	11.25

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
2963'	WBM	10.30	10.40	88	5.0	15	28	3.4	9.00	140000.00	14.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD
5	PDC	17.5	0.755	2.62	1512'	2963'	1451'	7	98	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
						100						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	2494.3	54	954	N/A	9574	45

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum	57	2954'	3518	130	83	17	25	10	7
Minimum	6	2869'	16	0	0	0	0	0	0
Average	33		1864	79	44	11	12	5	2

Background (current) 11 — **Trip** (max) 63 — **Connection** (max)

* 10,000 Units = 100% Gas In Air

24 hr Recap: Drilling 17.5 hole section to 2963' with 10.5ppg WBM. Pump 51 bbls hi vis sweep, circulate hole clean and weight up to 10.6 ppg. Short trip to shoe. Function rams. Trip back to bottom. Circulate two bottoms ups. Pump pill. Circulate above pill while trouble shooting Gyro. POOH.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 45

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	2963'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	2963'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	POOH	**Date:**	7-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)	0	SPP (psi)	0
					Flow In (spm)	0	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to		Directional / PWD				

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
2963'	WBM	10.60	10.60	88	5.0	18	28	3.2	9.10	130000.00	13.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD
5	PDC	17.5	0.755	2.62	1512'	2963'	1451'	7	98	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
						100						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
				N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: POOH. Lay down BHA. Plug in and read MWD tools. Retrieve bore protector. Rig up to run casing. Begin run casing.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 46

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	2963'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	2963'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Running Casing	**Date:**	8-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)	0	SPP (psi)	0
					Flow In (spm)	0	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to		Directional / PWD				

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
2963'	WBM	10.60	10.60	88	5.0	18	28	3.2	9.10	130000.00	13.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD
5	PDC	17.5	0.755	2.62	1512'	2963'	1451'	7	98	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
						100						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
				N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Run casing. Troubleshoot casing running equipment. Resume running casing.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 47

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	2963'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	2963'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Waiting on cement	**Date:**	9-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)	0	SPP (psi)	0	
					Flow In (spm)	0	Gallons/stroke	4.19	@ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to		Directional / PWD				

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
2963'	WBM	10.60	10.60	88	5.0	18	28	3.2	9.10	130000.00	13.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
4	Mill Tooth	26	1.117	31.16	375'	1512'	1119'	15	120	1-1-WT-A-E-I-NO-TD
5	PDC	17.5	0.755	2.62	1512'	2963'	1451'	7	98	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
						100						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
				N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Finish running casing. Cement casing. Unlatch from casing pull out running string.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 48

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	2963'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	2963'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	P/U BHA	**Date:**	10-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft
ROP (ft/hr)				

Current Pump & Flow Data:			
Flow In (gpm)	0	SPP (psi)	0
Flow In (spm)	0	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to		Directional / PWD				

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
2963'	WBM	10.70	10.65	69	6.3	16	26	3.4	9.00	130000.00	13.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	17.5	0.755	2.62	1512'	2963'	1451'	7	98	1-2-BT-N-X-I-NO-TD
6	PDC	17.5	-	-	2963'	-	-	-	-	New

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
						100						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
				N/A		

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Continue to RIH with 14" Casing. Rig down casing equipment. Rig up cement head, Circulate 1.5 casing volume. Cement casing with 100 bbls 12 ppg spacer/168 bbls 13.5 ppg lead/78 bbls 15.6 ppg tail/10 bbls 12 ppg spacer, then displaced cement with 383 bbls of 10.6 ppg mud. Picking up drill pipe and rack back. Pick up BHA and surface test tools.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 49

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	2963'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	2974'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	11'
Location:	Alaska	**Rig Activity:**	R/U F.I.T.	**Date:**	10-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	-	40.0	52.0	2964'	Flow In (gpm)	697	SPP (psi)	872
					Flow In (spm)	166	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	2963'	to	2974'	Quad Combo				

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	($lb/100ft^2$)	ml/30min		mg/l	%
2963'	WBM	10.70	10.80	78	6.3	19	30	2.4	8.20	135000.00	13.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	17.5	0.755	2.62	1512'	2963'	1451'	7	98	1-2-BT-N-X-I-NO-TD
6	PDC	12.25	-	-	2963'	-	-	-	-	New

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
						100						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	495.81	45.56	401.68	N/A	4030	30

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Pick up BHA and shallow hole test tools. Trip in seal assembly, couldn't shear seal assembly, and trip out. Troubleshoot seal assembly, trip back in, and set seal assembly. Trip in hole tag cement at 2846' MD, drill cement, and 11' of formation. Conduct F.I.T.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 50

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	2974'
Well:	Burger J	**Daily Charges:**		**Current Depth:**	4412'
Area:	Chukchi Sea	**Total Charges:**		**24 Hour Progress:**	1438'
Location:	Alaska	**Rig Activity:**	Drilling Ahead	**Date:**	10-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	126.1	96.6	184.2	3624'	Flow In (gpm)	835	SPP (psi)	3287
					Flow In (spm)	200	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	2974'	to	4412'	Quad Combo		11.53	11.10	11.86

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
2974'	WBM	10.60	10.60	73	6.3	18	32	3.5	9.30	133000.00	13.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	17.5	0.755	2.62	1512'	2963'	1451'	7	98	1-2-BT-N-X-I-NO-TD
6	PDC	12.25	0.994	-	2963'	-	-	10	100	New

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
						100						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	709	71.61	580.67	N/A	5817	30

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum	387	3387'	15271	1125	1101	179	355	166	171
Minimum	2	4398'	16	0	0	0	0	0	0
Average	69		2426	123	99	18	40	19	18

Background (current) 40 **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Drill ahead. Current depth 4412'. Pump 50 bbl sweeps as directed.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 51

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	4412'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	5423'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	1011'
Location:	Alaska	**Rig Activity:**	Wash/Ream Hole	**Date:**	14-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	-	94.6	226.6	4734'	Flow In (gpm)	0	SPP (psi)	41
					Flow In (spm)	0	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	4412'	to	5423'	Quad Combo		11.85	11.63	12.11

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
4225'	WBM	10.95	11.00	62	8.8	25	39	3.3	8.80	121000.00	15.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	17.5	0.755	2.62	1512'	2963'	1451'	7	98	1-2-BT-N-X-I-NO-TD
6	PDC	12.25	0.994	-	2963'	5423'	2460'	11	97	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
	10%			10%		80%						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	652.3	71.6	580.7	N/A	6123	35

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum	142	5423'	9111	1125	1101	179	355	166	171
Minimum	0	4398'	18	0	0	0	0	0	0
Average	29		1435	75	40	3	12	5	5
Background (current)	30	**Trip** (max)		**Connection** (max)					

* 10,000 Units = 100% Gas In Air

24 hr Recap: Drill ahead to TD at 5423' MD. Circulate hole clean and begin pull out of hole. Pump sweeps to clean hole, circulate to monitor ECD's.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 52

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	5423'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	5423'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Wash/Ream Hole	**Date:**	14-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)	752	SPP (psi)	2703
					Flow In (spm)	179	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	4412'	to	5423'	Quad Combo		11.70	11.04	12.28

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
5423'	WBM	11.40	11.45	64	8.8	25	39	4.5	8.80	110000.00	18.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	17.5	0.755	2.62	1512'	2963'	1451'	7	98	1-2-BT-N-X-I-NO-TD
6	PDC	12.25	0.994	-	2963'	5423'	2460'	11	97	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
	10%			10%		80%						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	652.3	71.6	580.7	N/A	6991	44

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum	201	CIRC	22284	386	113	14	21	7	0
Minimum	0								
Average	22								
Background (current)	5	**Trip** (max)		**Connection** (max)					

* 10,000 Units = 100% Gas In Air

24 hr Recap: Pump out of hole, circulated and pump sweeps to clean, and monitor ECD's. Short trip to shoe, circulate, condition mud. Trip in to 4969' MD. Wash and ream to bottom. Continue circulating, pumping sweeps, and monitoring returns at report time.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 53

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	5423'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	5423'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	L/D BHA	**Date:**	15-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)	-				Flow In (gpm)	0	SPP (psi)		
					Flow In (spm)	0	Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
5423'	WBM	11.45	11.40	54	6.9	18	25	3.5	8.70	140000.00	16.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	17.5	0.755	16.84	1512'	2963'	1451'	7	98	1-2-BT-N-X-I-NO-TD
6	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
	10%			10%		80%						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	652.3	71.6	580.7	N/A	6123	35

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Complete rig repairs. Short trip five stands then back to bottom. Circulate bottoms up, max gas 63 units. POOH. Lay down BHA.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 54

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	5423'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	5423'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Run Liner	**Date:**	15-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)	-				Flow In (gpm)	0	SPP (psi)		
					Flow In (spm)	0	Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
5423'	WBM	11.45	11.40	54	6.9	18	25	3.5	8.70	140000.00	16.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	17.5	0.755	16.84	1512'	2963'	1451'	7	98	1-2-BT-N-X-I-NO-TD
6	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
	10%			10%		80%						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	637.1	215.1	422	N/A	3069	

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) _____

* 10,000 Units = 100% Gas In Air

24 hr Recap: Rig up liner running tools, run liner. Rig up to run heavy weight drill pipe and currently running heavy weight at report time.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 55

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	5423'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	5423'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Cement	**Date:**	15-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)	0	SPP (psi)		
					Flow In (spm)	0	Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
5423'	WBM	11.55	11.55	67	7.5	24	32	3.9	9.00	130000.00	16.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
4	PDC	17.5	0.755	16.84	1512'	2963'	1451'	7	98	1-2-BT-N-X-I-NO-TD
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	36"	374'				Conductor
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing

Lithology (%)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
(current)	10%			10%		80%						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	427.89	39.96	387.9	N/A	5034	

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum	147	CIRC	12271	156	52	0	0	0	0
Minimum									
Average									
Background (current)	10	**Trip** (max)		**Connection** (max)					

* 10,000 Units = 100% Gas In Air

24 hr Recap: Complete running liner assembly in hole and pump cement.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 56

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	5423'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	5423'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Test BOP	**Date:**	18-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)	0	SPP (psi)		
					Flow In (spm)	0	Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
5423'	WBM	11.55	11.55	65	7.5	20	31	3.7	9.00	133000.00	16.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
4	PDC	17.5	0.755	16.84	1512'	2963'	1451'	7	98	1-2-BT-N-X-I-NO-TD
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing
	9 5/8"	2933'				Liner

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
	10%			10%		80%						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	427.89	39.96	387.9	N/A	5034	

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) 0 **Trip** (max) **Connection** (max)

* 10,000 Units = 100% Gas In Air

24 hr Recap: Rig up to test BOP and testing BOP at report time.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 57

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	5423'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	5423'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Trip In Hole	**Date:**	19-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)	0	SPP (psi)		
					Flow In (spm)	0	Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
5423'	WBM	11.55	11.55	65	7.5	20	31	3.7	9.00	133000.00	16.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
4	PDC	17.5	0.755	16.84	1512'	2963'	1451'	7	98	1-2-BT-N-X-I-NO-TD
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing
	9 5/8"	2933'				Liner

Lithology (%)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
(current)	10%			10%		80%						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	427.89	39.96	387.9	N/A	5034	

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) 0 **Trip** (max) **Connection** (max)

* 10,000 Units = 100% Gas In Air

24 hr Recap: Complete BOP testing. Pressure test choke and kill. Pick up BHA and RIH.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 58

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	5423'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	5859'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	436'
Location:	Alaska	**Rig Activity:**	Drilling Ahead	**Date:**	20-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	52.0	46.9	119.0	5574'	Flow In (gpm)	600	SPP (psi)	3960
					Flow In (spm)	145	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	5423'	to	5859'	Penta Combo		13.18	12.85	13.76

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
5423'	WBM	12.00	12.00	67	7.5	23	33	3.8	9.30	130000.00	18.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD
6	PDC	8.5	0.552		5423'			9	98	new

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing
	9 5/8"	2933'				Liner

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
	10%			20%		70%						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	676	94.9	519.3	N/A	5204	36

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum	24	5562'	1701	79	24	0	0	0	0
Minimum	5	5425'	375	14	0	0	0	0	0
Average	15		1028	51	18	0	0	0	0

Background (current) 8 — **Trip** (max) none — **Connection** (max) none

* 10,000 Units = 100% Gas In Air

24 hr Recap: Pick up BHA and RIH. Drill cement and 10' of new formation, perform FIT, 907 psi, 15.8 ppg. Drill ahead while diluting mud system heavily for solids control.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 59

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	5859'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	6800'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	941'
Location:	Alaska	**Rig Activity:**	Circulating	**Date:**	21-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)	0.0	51.0	110.0	6472'	Flow In (gpm)	585	SPP (psi)	3920
					Flow In (spm)	140	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
	5859'	to	6800'	Penta Combo		12.88	12.66	13.24

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
5735'	WBM	12.00	12.00	55	6.5	23	30	4.7	9.30	130000.00	21.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD
6	PDC	8.5	0.552	30.40	5423'	6800'	1377'	4	99	new

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing
	9 5/8"	2933'				Liner

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement
	30%			20%		50%						

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	673	111	562	N/A	5626	40

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum	47	5924'	2889	187	99	13	28	7	0
Minimum	2	6746'	641	33	20	0	3	0	0
Average	13		812	42	25	1	6	0	0

Background (current) 5 — **Trip** (max) none — **Connection** (max) none

* 10,000 Units = 100% Gas In Air

24 hr Recap: Drill to TD @ 6800'. Circulate while recprocating.

Logging Engineers: Justin Carter / Craig Amos Report By: Justin Carter Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 60

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	6800'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	6800'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	R/U wireline	**Date:**	22-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)		SPP (psi)		
					Flow In (spm)		Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
6800'	WBM	12.00	12.00	58	5.0	35	32	2.5	9.00	141000.00	19.5

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD
6	PDC	8.5	0.552	30.40	5423'	6800'	1377'	4	99	new

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing
	9 5/8"	2933'				Liner

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	743.6	N/A	N/A	N/A	N/A	N/A

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ 19 **Connection** (max) _____ none

* 10,000 Units = 100% Gas In Air

24 hr Recap: Circulate, recprocating pipe & POOH. Rack back BHA.Begin to R/U wireline. Max gas observed the past 24 hrs was 19u.

Logging Engineers: Leigh Ann Rasher / Craig Amos Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 61

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	6800'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	6800'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Perform wireline	**Date:**	23-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
6800'	WBM	12.00	12.00	60	5.0	35	34	2.2	9.00	140000.00	19.3

Bit #	Bit Type	Size	TFA	Hours	Depth in	Depth out	Footage	WOB	RPM	Condition
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD
6	PDC	8.5	0.552	30.40	5423'	6800'	1377'	4	99	1-1-BT-N-X-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing
	9 5/8"	2933'				Liner

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	743.6	N/A	N/A	N/A	N/A	N/A

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) none

* 10,000 Units = 100% Gas In Air

24 hr Recap: Cont to R/U wireline & RIH. Perform wireline run #1.

Logging Engineers: Leigh Ann Rasher / Craig Amos Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 62

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	6800'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	6800'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Perform wireline	**Date:**	24-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:				
ROP (ft/hr)					Flow In (gpm)		SPP (psi)		
					Flow In (spm)		Gallons/stroke	4.19 @	95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
6800'	WBM	12.10	12.10	57	5.0	30	32	1.8	8.80	143000.00	19.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD
6	PDC	8.5	0.552	30.40	5423'	6800'	1377'	4	99	1-1-BT-N-X-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing
	9 5/8"	2933'				Liner

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	743.6	N/A	N/A	N/A	N/A	N/A

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) none

* 10,000 Units = 100% Gas In Air

24 hr Recap: Cont to POOH w/ wireline tool & L/D. R/U FMI, SS, GR & HRLA wireline tool. Perform wireline run #2 & POOH. R/U side core wireline & RIH.

Logging Engineers: Leigh Ann Rasher / Craig Amos Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 63

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	6800'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	6800'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	RIH w/ cmt stinger	**Date:**	25-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
6800'	WBM	12.00	12.00	79	5.0	33	34	2.0	8.80	140000.00	18.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD
6	PDC	8.5	0.552	30.40	5423'	6800'	1377'	4	99	1-1-BT-N-X-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing
	9 5/8"	5408'				Liner

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	743.6	108.26	585.58	N/A	5875	N/A

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) none

* 10,000 Units = 100% Gas In Air

24 hr Recap: Perform side core wireline & POOH. L/D core tubing, remove and package cores. R/U cmt stinger & RIH.

Logging Engineers: Leigh Ann Rasher / Craig Amos Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 64

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	6800'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	6800'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Circulating	**Date:**	26-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft
ROP (ft/hr)				

Current Pump & Flow Data:			
Flow In (gpm)	352	SPP (psi)	872
Flow In (spm)	84	Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
6800'	WBM	12.05	12.05	79	10.0	35	40	9.0	9.00	145000.00	19.5

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD
6	PDC	8.5	0.552	30.40	5423'	6800'	1377'	4	99	1-1-BT-N-X-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing
	9 5/8"	5408'				Liner

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	743.6	108.26	585.58	N/A	5875	N/A

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current): _____ **Trip** (max): _____ **Connection** (max): _____

116 | none

* 10,000 Units = 100% Gas In Air

24 hr Recap: RIH w/ 2 7/8" cmt stinger and 5" DP. Circulate bottoms up & P/U cmt assembly. Pressure test cmt lines & line up to pump cmt plug. Pump 16 bbl spacer, 48 bbl of cement, and 9 bbl of spacer. Displace with rig pumps 12.0 ppg mud. R/D cmt hose & L/D cmt head on skate. POOH to 6073' MD & circulate bottoms up. M/U cmt head for plug 2 & pump 16 bbl spacer, 51 bbl of cement, and 7 bbl of spacer. Displace with rig pumps 12.0 ppg mud. POOH to 5500' MD & circulate. M/U cmt head for plug 3 & pump 14 bbls of spacer, 49 bbls of cement, and 7 bbls of spacer. Displace with rig pumps, POOH to 4867' MD and circulate. Max gas was 116 units while circulating.

Logging Engineers: Leigh Ann Rasher / Craig Amos Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 65

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	6800'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	6800'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	Set 4th Plug	**Date:**	27-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
6800'	WBM	12.05	12.05	69	7.5	23	29	11.0	10.60	142000.00	19.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD
6	PDC	8.5	0.552	30.40	5423'	6800'	1377'	4	99	1-1-BT-N-X-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing
	9 5/8"	5408'				Liner

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	743.6	108.26	585.58	N/A	5875	N/A

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) none

* 10,000 Units = 100% Gas In Air

24 hr Recap: Cont to circulate hole clean. POOH & L/D 2 7/8" tbg. M/U BHA w/ bit sub and bit, RIH and tag cmt @ 4860' MD. Monitor well, static. TOOH & L/D bit and bit sub. Pressure test cmt plug to 1600 psi for 15 min. RIH w/ 9 5/8" cast iron bridge plug with 5"DP & set plug.

Logging Engineers: Leigh Ann Rasher / Craig Amos Report By: Leigh Ann Rasher Unit Phone: 8322802055

HALLIBURTON
Sperry Drilling

Morning Report

Report # 66

Customer:	Shell Oil	**Job No.:**	AK-AM-0901604700	**Yesterday's Depth:**	6800'
Well:	Burger J	**Daily Charges:**	-	**Current Depth:**	6800'
Area:	Chukchi Sea	**Total Charges:**	-	**24 Hour Progress:**	0'
Location:	Alaska	**Rig Activity:**	POOH 2 7/8" tbg	**Date:**	28-Sep-2015
Rig:	Polar Pioneer	**Report For:**	Shell	**Time:**	12:00 AM

ROP	Current	Avg	24 hr Max	Max @ ft	Current Pump & Flow Data:			
ROP (ft/hr)					Flow In (gpm)		SPP (psi)	
					Flow In (spm)		Gallons/stroke	4.19 @ 95%

MWD Summary	Depth			Tools	ECD (ppg)	Avg	Min	Max
		to						

Mud Data		Density (ppg)		Viscosity	MBT	PV	YP	API FL	pH	Chlorides	Cor Solids
Depth	Mud Type	in	out	(sec/qt)	(ppb Eq)	cP	(lb/100ft^2)	ml/30min		mg/l	%
6800'	WBM	12.00	12.00	84	5.0	26	27	13.0	10.60	123000.00	18.0

Bit #	Bit Type	Size	TFA	Hours	Depth in / out		Footage	WOB	RPM	Condition
5	PDC	12.25	0.994	29.04	2963'	5423'	2460'	11	97	1-1-BT-C-X-I-WT-TD
6	PDC	8.5	0.552	30.40	5423'	6800'	1377'	4	99	1-1-BT-N-X-I-NO-TD

Casing Summary	Size	Set At	Type	Weight	Grade	Comments
	22"	1475'				Pilot Hole Casing
	14"	2933'				Casing
	9 5/8"	5408'				Liner

Lithology (%) (current)	Ss	Cht	Silt	Siltst	Cly	Clyst	Sh	Lst	Coal	Gvl	Tuff	Cement

Volumes	Hole Capacity (bbls)	Drillstring Capacity (bbls)	Annular Volume (bbls)	Lag Correction (bbls)	Bottoms Up Strokes	Bottoms Up Time
	743.6	108.26	585.58	N/A	5875	N/A

Gas Summary

	Units*	Depth	Chromatograph (ppm) C-1	C-2	C-3	C-4i	C-4n	C-5i	C-5n
Maximum									
Minimum									
Average									

Background (current) _____ **Trip** (max) _____ **Connection** (max) none

* 10,000 Units = 100% Gas In Air

24 hr Recap: Set 4th plug & POOH. P/U 2 7/8" tbg & RIH w/ 5" DP. Pump cmt & pressure test to 5000 psi. POOH, L/D 5"DP & 2 7/8" tbg.

Logging Engineers: Leigh Ann Rasher / Craig Amos Report By: Leigh Ann Rasher Unit Phone: 8322802055

Shell Gulf of Mexico Inc.

Off Shore Zone 3
Posey
OCS-Y-2321 #001 (Burger J)
OCS-Y-2321 #001
55-352-00004-00

Sperry Drilling

Definitive Survey Report

07 October, 2015

HALLIBURTON
Sperry Drilling

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Definitive Survey Report

Company:	Shell Gulf of Mexico Inc.	**Local Co-ordinate Reference:**	Well OCS-Y-2321 #001 (Burger J)
Project:	Off Shore Zone 3	**TVD Reference:**	Burger J @ 76.00usft (Polar Pioneer)
Site:	Posey	**MD Reference:**	Burger J @ 76.00usft (Polar Pioneer)
Well:	OCS-Y-2321 #001 (Burger J)	**North Reference:**	Grid
Wellbore:	OCS-Y-2321 #001 (Burger J)	**Survey Calculation Method:**	Minimum Curvature
Design:	Burger J	**Database:**	Sperry EDM - NORTH US + CANADA

Project	Off Shore Zone 3		
Map System:	Universal Transverse Mercator	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Zone 03N (168 W to 162 W)		Using geodetic scale factor

Well	OCS-Y-2321 #001 (Burger J), Exploration Well					
Well Position	**+N/-S**	0.00 usft	**Northing:**	7,897,425.31 m	**Latitude:**	71° 10' 24.059 N
	+E/-W	0.00 usft	**Easting:**	555,034.55 m	**Longitude:**	163° 28' 18.666 W
Position Uncertainty		0.00 usft	**Wellhead Depth:**	-76.00 usft	**Water Depth:**	146.00 usft

Wellbore	OCS-Y-2321 #001 (Burger J)				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2015	7/25/2015	12.40	80.32	57,374

Design	Burger J				
Audit Notes:					
Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	222.00
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	222.00	0.00	0.00	0.00	

Survey Program **Date** 10/7/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	Survey Date
320.88	1,378.50	Burger J Surveys (OCS-Y-2321 #001 (Bu	MWD+SC	Fixed:v2:standard dec & axial correction	09/30/2015
1,540.18	2,646.22	Burger J Surveys (OCS-Y-2321 #001 (Bu	MWD+SC	Fixed:v2:standard dec & axial correction	09/30/2015
2,743.03	5,364.19	Burger J Surveys (OCS-Y-2321 #001 (Bu	MWD+SC	Fixed:v2:standard dec & axial correction	09/30/2015
5,429.20	6,745.09	Burger J Surveys (OCS-Y-2321 #001 (Bu	MWD+SC	Fixed:v2:standard dec & axial correction	09/30/2015

Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (ft)	Map Easting (ft)	DLS (°/100')	Vertical Section (ft)	Survey Tool Name
222.00	0.00	0.00	222.00	146.00	0.00	0.00	7,897,425.31	555,034.55	0.00	0.00	UNDEFINED
320.88	0.51	129.60	320.88	244.88	-0.28	0.34	7,897,425.22	555,034.65	0.52	-0.28	MWD+SC (1)
406.77	0.31	89.93	406.77	330.77	-0.52	0.87	7,897,425.15	555,034.81	0.39	-0.52	MWD+SC (1)
495.25	0.99	122.22	495.24	419.24	-0.93	1.75	7,897,425.03	555,035.08	0.84	-0.93	MWD+SC (1)
590.43	0.31	82.72	590.41	514.41	-1.34	2.70	7,897,424.90	555,035.37	0.82	-1.34	MWD+SC (1)
684.05	0.64	327.24	684.03	608.03	-0.87	2.67	7,897,425.05	555,035.36	0.88	-0.86	MWD+SC (1)
866.10	0.28	101.20	866.08	790.08	-0.10	2.56	7,897,425.28	555,035.33	0.47	-0.10	MWD+SC (1)
957.99	0.00	269.46	957.97	881.97	-0.14	2.78	7,897,425.27	555,035.40	0.30	-0.14	MWD+SC (1)
1,051.65	0.14	176.72	1,051.63	975.63	-0.25	2.78	7,897,425.23	555,035.40	0.15	-0.25	MWD+SC (1)
1,144.54	0.26	120.65	1,144.52	1,068.52	-0.48	2.97	7,897,425.17	555,035.46	0.23	-0.47	MWD+SC (1)
1,235.66	0.41	134.11	1,235.64	1,159.64	-0.81	3.38	7,897,425.06	555,035.58	0.18	-0.81	MWD+SC (1)

Company:	Shell Gulf of Mexico Inc.	**Local Co-ordinate Reference:**	Well OCS-Y-2321 #001 (Burger J)
Project:	Off Shore Zone 3	**TVD Reference:**	Burger J @ 76.00usft (Polar Pioneer)
Site:	Posey	**MD Reference:**	Burger J @ 76.00usft (Polar Pioneer)
Well:	OCS-Y-2321 #001 (Burger J)	**North Reference:**	Grid
Wellbore:	OCS-Y-2321 #001 (Burger J)	**Survey Calculation Method:**	Minimum Curvature
Design:	Burger J	**Database:**	Sperry EDM - NORTH US + CANADA

Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (ft)	Map Easting (ft)	DLS (°/100')	Vertical Section (ft)	Survey Tool Name
1,328.60	0.51	59.75	1,328.57	1,252.57	-0.83	3.98	7,897,425.06	555,035.76	0.60	-0.83	MWD+SC (1)
1,378.50	0.25	111.62	1,378.47	1,302.47	-0.76	4.27	7,897,425.08	555,035.85	0.81	-0.76	MWD+SC (1)
1,540.18	0.12	50.83	1,540.15	1,464.15	-0.78	4.73	7,897,425.07	555,035.99	0.13	-0.78	MWD+SC (2)
1,723.74	0.39	34.99	1,723.71	1,647.71	-0.15	5.24	7,897,425.26	555,036.15	0.15	-0.15	MWD+SC (2)
1,818.58	0.58	50.01	1,818.55	1,742.55	0.42	5.79	7,897,425.44	555,036.31	0.24	0.42	MWD+SC (2)
2,003.18	1.06	39.81	2,003.13	1,927.13	2.34	7.60	7,897,426.02	555,036.87	0.27	2.34	MWD+SC (2)
2,095.93	0.87	35.51	2,095.86	2,019.86	3.57	8.56	7,897,426.40	555,037.16	0.22	3.57	MWD+SC (2)
2,186.15	0.69	72.12	2,186.08	2,110.08	4.29	9.47	7,897,426.62	555,037.44	0.58	4.29	MWD+SC (2)
2,373.34	0.75	76.36	2,373.25	2,297.25	4.93	11.74	7,897,426.81	555,038.13	0.04	4.93	MWD+SC (2)
2,463.93	0.78	75.65	2,463.83	2,387.83	5.22	12.91	7,897,426.90	555,038.48	0.03	5.22	MWD+SC (2)
2,555.30	0.79	70.25	2,555.20	2,479.20	5.59	14.11	7,897,427.01	555,038.85	0.08	5.59	MWD+SC (2)
2,646.22	0.79	76.51	2,646.11	2,570.11	5.95	15.31	7,897,427.12	555,039.21	0.09	5.95	MWD+SC (2)
2,743.03	0.70	74.08	2,742.91	2,666.91	6.26	16.52	7,897,427.22	555,039.58	0.10	6.27	MWD+SC (3)
2,837.42	0.74	67.59	2,837.29	2,761.29	6.65	17.64	7,897,427.34	555,039.93	0.10	6.66	MWD+SC (3)
2,875.38	0.64	69.95	2,875.25	2,799.25	6.82	18.07	7,897,427.39	555,040.06	0.27	6.82	MWD+SC (3)
2,978.31	0.74	64.69	2,978.17	2,902.17	7.30	19.21	7,897,427.53	555,040.40	0.11	7.30	MWD+SC (3)
3,074.55	0.58	52.33	3,074.40	2,998.40	7.86	20.16	7,897,427.71	555,040.69	0.22	7.87	MWD+SC (3)
3,169.04	0.67	47.05	3,168.89	3,092.89	8.53	20.94	7,897,427.91	555,040.93	0.11	8.54	MWD+SC (3)
3,258.93	0.77	27.36	3,258.77	3,182.77	9.43	21.60	7,897,428.18	555,041.13	0.30	9.43	MWD+SC (3)
3,351.80	0.94	33.05	3,351.63	3,275.63	10.62	22.30	7,897,428.55	555,041.35	0.20	10.62	MWD+SC (3)
3,445.40	0.89	33.34	3,445.22	3,369.22	11.87	23.12	7,897,428.93	555,041.59	0.05	11.87	MWD+SC (3)
3,537.90	0.88	39.68	3,537.71	3,461.71	13.02	23.97	7,897,429.28	555,041.85	0.11	13.02	MWD+SC (3)
3,630.29	0.86	29.57	3,630.09	3,554.09	14.17	24.77	7,897,429.63	555,042.10	0.17	14.17	MWD+SC (3)
3,724.13	1.05	46.97	3,723.91	3,647.92	15.37	25.74	7,897,429.99	555,042.39	0.37	15.37	MWD+SC (3)
3,815.47	1.16	37.46	3,815.24	3,739.24	16.67	26.92	7,897,430.39	555,042.75	0.23	16.67	MWD+SC (3)
3,909.95	1.11	27.77	3,909.70	3,833.70	18.24	27.92	7,897,430.87	555,043.06	0.21	18.24	MWD+SC (3)
4,001.96	1.54	18.87	4,001.68	3,925.68	20.20	28.74	7,897,431.46	555,043.31	0.52	20.20	MWD+SC (3)
4,095.18	1.55	21.22	4,094.87	4,018.87	22.56	29.60	7,897,432.18	555,043.57	0.07	22.56	MWD+SC (3)
4,189.17	1.52	19.27	4,188.83	4,112.83	24.92	30.47	7,897,432.90	555,043.83	0.06	24.92	MWD+SC (3)
4,280.67	1.73	13.84	4,280.29	4,204.29	27.41	31.20	7,897,433.66	555,044.06	0.28	27.41	MWD+SC (3)
4,373.26	2.11	22.24	4,372.83	4,296.83	30.34	32.18	7,897,434.56	555,044.36	0.51	30.35	MWD+SC (3)
4,465.71	1.69	19.56	4,465.23	4,389.23	33.20	33.28	7,897,435.43	555,044.69	0.46	33.21	MWD+SC (3)
4,559.04	2.02	19.56	4,558.51	4,482.51	36.05	34.29	7,897,436.29	555,045.00	0.35	36.05	MWD+SC (3)
4,651.17	2.19	23.91	4,650.58	4,574.58	39.19	35.55	7,897,437.25	555,045.38	0.25	39.19	MWD+SC (3)
4,743.27	2.64	25.07	4,742.59	4,666.59	42.72	37.16	7,897,438.33	555,045.87	0.49	42.72	MWD+SC (3)
4,836.87	3.09	32.03	4,836.08	4,760.08	46.81	39.41	7,897,439.57	555,046.56	0.61	46.81	MWD+SC (3)
4,929.20	3.15	34.87	4,928.27	4,852.27	51.00	42.18	7,897,440.85	555,047.40	0.18	51.00	MWD+SC (3)
5,021.52	3.28	37.85	5,020.45	4,944.45	55.17	45.26	7,897,442.12	555,048.34	0.23	55.17	MWD+SC (3)
5,113.59	3.34	39.69	5,112.36	5,036.36	59.31	48.58	7,897,443.38	555,049.35	0.13	59.32	MWD+SC (3)
5,206.14	3.59	47.76	5,204.74	5,128.74	63.33	52.45	7,897,444.61	555,050.53	0.59	63.34	MWD+SC (3)

Company:	Shell Gulf of Mexico Inc.	**Local Co-ordinate Reference:**	Well OCS-Y-2321 #001 (Burger J)
Project:	Off Shore Zone 3	**TVD Reference:**	Burger J @ 76.00usft (Polar Pioneer)
Site:	Posey	**MD Reference:**	Burger J @ 76.00usft (Polar Pioneer)
Well:	OCS-Y-2321 #001 (Burger J)	**North Reference:**	Grid
Wellbore:	OCS-Y-2321 #001 (Burger J)	**Survey Calculation Method:**	Minimum Curvature
Design:	Burger J	**Database:**	Sperry EDM - NORTH US + CANADA

Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (ft)	Map Easting (ft)	DLS (°/100')	Vertical Section (ft)	Survey Tool Name
5,299.05	3.70	48.27	5,297.46	5,221.47	67.28	56.84	7,897,445.81	555,051.87	0.12	67.29	MWD+SC (3)
5,364.19	3.45	52.11	5,362.48	5,286.48	69.89	59.96	7,897,446.60	555,052.82	0.53	69.89	MWD+SC (3)
5,429.81	3.65	46.91	5,427.97	5,351.97	72.53	63.04	7,897,447.41	555,053.76	0.58	72.53	MWD+SC (4)
5,518.31	3.73	45.18	5,516.29	5,440.29	76.48	67.14	7,897,448.61	555,055.01	0.15	76.49	MWD+SC (4)
5,612.70	3.58	42.26	5,610.49	5,534.49	80.83	71.30	7,897,449.94	555,056.27	0.25	80.83	MWD+SC (4)
5,704.09	3.56	42.97	5,701.70	5,625.70	85.01	75.15	7,897,451.21	555,057.45	0.05	85.02	MWD+SC (4)
5,795.19	3.47	41.51	5,792.63	5,716.63	89.15	78.91	7,897,452.47	555,058.59	0.14	89.15	MWD+SC (4)
5,889.32	3.48	42.48	5,886.59	5,810.59	93.39	82.72	7,897,453.76	555,059.76	0.06	93.39	MWD+SC (4)
5,980.70	3.42	42.67	5,977.80	5,901.80	97.44	86.44	7,897,455.00	555,060.89	0.07	97.44	MWD+SC (4)
6,075.07	3.43	41.69	6,072.00	5,996.00	101.61	90.23	7,897,456.27	555,062.04	0.06	101.62	MWD+SC (4)
6,167.81	3.55	39.12	6,164.57	6,088.57	105.91	93.89	7,897,457.58	555,063.16	0.21	105.92	MWD+SC (4)
6,259.59	3.53	39.52	6,256.17	6,180.17	110.30	97.48	7,897,458.92	555,064.25	0.03	110.31	MWD+SC (4)
6,346.61	3.75	37.26	6,343.02	6,267.02	114.63	100.91	7,897,460.24	555,065.29	0.30	114.64	MWD+SC (4)
6,445.34	3.99	34.54	6,441.52	6,365.52	120.03	104.81	7,897,461.88	555,066.48	0.31	120.04	MWD+SC (4)
6,536.48	3.96	35.37	6,532.44	6,456.44	125.21	108.43	7,897,463.46	555,067.59	0.07	125.22	MWD+SC (4)
6,628.63	3.92	37.01	6,624.38	6,548.38	130.32	112.17	7,897,465.02	555,068.73	0.13	130.33	MWD+SC (4)
6,721.62	3.89	35.41	6,717.15	6,641.15	135.43	115.91	7,897,466.57	555,069.87	0.12	135.44	MWD+SC (4)
6,745.05	3.99	35.86	6,740.53	6,664.53	136.73	116.84	7,897,466.97	555,070.15	0.45	136.74	MWD+SC (4)
6,800.00	3.99	35.86	6,795.34	6,719.34	139.83	119.08	7,897,467.92	555,070.83	0.00	139.84	PROJECTED to TD

Checked By: _____ Approved By: _____ Date: _____