24 September 2010 Ryan Chouest Status Report, Cruise 17 – Days 1-2.

Cruise operations summary

The Ryan Chouest left Port in Theodore at 0030 on 23 September and transited to a location 17.5 NM NE (MC126-01) of the wellhead to begin Cruise 17 survey operations. Weather conditions during the 23 September were not suitable for safe deployment of the CTD carousel (wave height with swell to 7 ft). The Ryan Chouest therefore ran weather patterns adjacent to location MC294-01 located 7.5 NM SW (MC294-01) of the wellhead. No contacts were observed on the echosounder during the overnight reconnaissance of possible seep sites so it was decided to focus survey efforts on recently reoccupied sites located during Cruise 16 in order to provide further characterization of these sites. The Ryan Chouest therefore returned to location MC118-1. A summary of operations for is provided in Table 1.

Table 1. Summary of Cruise 16 Operations

Date	Day	Summary
23 Sep 10	1	Ryan Chouest ran weather patterns collecting echosounder data. Wave height 6ft. No casts deployed.
24 Sep 10	2	Location MC 118-1 investigated. Seep relocated. Casts at Station **RC007, RC008 and RC009.**

Weather and sea conditions

The day was overcast with squally showers. The winds weakened to 8 kts during the day with occasionally squally gusts to 17kts. Seas were between 3-5ft feet wave height.

Today's weather conditions are summarized in Table 2, below.

Table 2 – Summary of the Weather for 24th September 2010

Time	Wind	Sea	Weather
1200	10 kts N	4-6 ft	Overcast
1500	8 kts E	3 ft	Showers
1800	8 kts E	3 ft	Showers

Sample locations and Fluorescence, DO and methane Traces.

The objective of Cruise 17 is to re-occupy sites which have been identified as being possible natural hydrocarbon seeps and to acquire water samples from within the vicinity of the seeps for chemical analysis. The general location of these potential seeps was primarily based upon echosounder contact information from previous Ryan Chouest Cruises 10, 11, 12, 13, 14 and 16. In order to relocate the seeps the vessel transited initially to the coordinates of these previous contacts and carried out a 'cloverleaf' pattern echosounder survey to relocate and

characterize the seep prior to performing CTD casts. If the location of the potential seep could not be reoccupied no CTD cast was performed.

Location MC118-01 was the only site to be investigated. It is located 9.65 NM NW of the well head. Three casts were performed at distances of 50m from one another, in order to maximize the chance of successfully positioning the CTD carousel within the plume of the possible seep feature identified on the echosounder. Station RC008 at N28° 51.1428 W088° 29.5321 in a water depth of 886m, Station RC009 at N28° 51.1279 W088° 29.5012 in a water depth of 887m and RC010 at N28° 51.128 W88° 29.506 in a water depth of 888m.There was no fluorescence or methane signal or dip in dissolved oxygen during any of the three casts. Water samples for RC008 were collected at 876m, 826m 753m and 438m and for RC010 at 877m, 826m, 777m and 440m.

The locations and results of the CTD casts conducted today are summarized in Table 3 and Figure 1, below.

Table 3 – Station Summary for 24 September 2010

Station	Sampling Location	Fluorescence Signal	Signal Depth	DO Depression	Depression Depth	Methane Signal	Signal Depth
RC008	**MC118-01 Lat: N28°51.1428 Long: W88°29.5321 Cast duration: 1217-1313**	**No**	**-**	**No**	**-**	**No**	**-**
RC009	**MC 118-01 Lat: N28°51.1279 Long: W88°29.5012 Cast duration: 1506-1600**	**No**	**-**	**No**	**-**	**No**	**-**
RC010	**MC 118-01 Lat: N28°51.1131 Long: W88°29.5236 Cast duration: 1713-1759**	**No**	**-**	**No**	**-**	**No**	**-**

Figure 1 – Sampling Effort for Cruise 17 from 24 September 2010.