

**RigNet SatCom, Inc.**  
**Call Sign E980235**  
**File No. SES-MOD-20131112-00965**

**NOTIFICATION CONCERNING COMPLETION OF C-BAND  
ESV COORDINATION NOBLE DISCOVERER, ALASKA**

April 30, 2015

RigNet SatCom, Inc. ("RigNet") hereby submits, pursuant to Section 25.221(a)(12) of the Commission's rules, 47 C.F.R. 25.221(a)(12), this notification of successfully completed C-band earth stations on vessel ("ESV") frequency coordination. As specified in the Commission's Public Notice DA 05-1671 released June 15, 2005, the following information is provided so that this notification may be placed on Public Notice:

1. Name and contact information of the frequency coordinator:
  - a. Jeff Cowles, Comsearch, 19700 Janelia Farm Boulevard, Ashburn, VA 20147 / Phone: (703) 726-5500 / Email: jcowles@comsearch.com
2. Reference identification, date, and duration (if relevant) of the coordination report:
  - a. Job Number 150422COMSJC02 / April 30, 2015
3. Frequency coordination method used:
  - a. Coordination Contour method
4. Interference criteria used:
  - a. Long Term: -156.0 dBW/MHz 20% / Short Term: -146.0 dBW/MHz 0.01% (Rx)
  - b. Long Term: -154.0 dBw/4 kHz 20% / Short Term: -131.0 dBw/4 kHz 0.0025% (Tx)
5. Speed of coordinated vessel, if relevant:
  - a. Not applicable (stationary rig).
6. Center frequencies, bandwidths, and total spectrum coordinated per satellite:
  - a. Rx: 3700.0-4200.0 MHz; 692 kHz to 2 MHz; 500 megahertz.
  - b. Tx: 5925.0-6425.0 MHz; 692 kHz to 2 MHz; 500 megahertz.  
Total spectrum coordinated – Full band, Permitted List arc  
(Note: current operations limited to IS-18 at 180E, Transponder: NH1C; less than 10 MHz in each direction of transmission.)
7. Name of satellite(s) and transponder(s) being used:
  - a. Permitted Space Station List (IS-18 at 180E, Transponder: NH1C).
  - b. Transponder Frequency Range: 5934-6006 MHz (Tx) / 3709-3781 MHz (Rx)  
(Note: current operations limited to less than 10 MHz in each direction of transmission.)

8. Textual description and scaled map of the geographic area(s) coordinated:
  - a. Noble Discoverer rig in Alaska (71°18'30.9" N, 163°12'43.2" W). *See also* Area of Operations Exhibit.  
(Note: Rig operates only at the single, specified location in the Area of Operations)
9. 24/7 contact information for the ESV operator:
  - a. Alexi Vederko, 1880 S. Dairy Ashford, Suite 300, Houston, TX 77077 / Phone: (832) 270-0764 / Email [alex.vederko@rig.net](mailto:alex.vederko@rig.net).
10. Call sign of the hub station if independently license:
  - a. E980235.
11. Statement indicating that as of the date of this notification there are no unresolved coordination requests which would result in an exceedance of the maximum 180 megahertz of coordinated spectrum for all ESV operations in the coordination area in Section 25.202(a)(8):
  - a. The frequency coordinator advises that there are no unresolved coordination requests which would result in an exceedance of the maximum 180 megahertz of coordinated spectrum for all ESV operations in the coordination area in the 5925-6425 MHz band. Although the coordinator has confirmed that operations may be conducted throughout the C-band at the specified location, operations are currently limited to less the 10 MHz of spectrum in each direction of transmission on the specified satellite transponder. RigNet will provide a further notification to the Commission should circumstances warrant.

RigNet respectfully requests that this notification of successfully completed frequency coordination be placed on Public Notice. Any further questions with respect to this matter should be directed to Carlos Nalda, LMI Advisors, at (571) 332-5626.

# FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

**RigNet SatCom, Inc.  
Noble Discoverer, Alaska  
(Oil Platform)**

**Satellite Earth Station**

Prepared By:  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, Virginia 20147  
April 30, 2015

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## **1. CONCLUSIONS**

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

## 2. SUMMARY OF RESULTS

A number of great circle interference cases were identified during the interference study of the proposed earth station. Each of the cases, which exceeded the interference objective on a line-of-sight basis, was profiled and the propagation losses estimated using NBS TN101 (Revised) techniques. The losses were found to be sufficient to reduce the signal levels to acceptable magnitudes in every case.

The following companies reported potential great circle interference conflicts that did not meet the objectives on a line-of-sight basis. When over-the-horizon losses are considered on the interfering paths, sufficient blockage exists to negate harmful interference from occurring with the proposed transmit-receive earth station.

Company

None

No carriers reported potential interference cases.

### 3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Expedited coordination data for this earth station was emailed and sent to the below listed carriers with a letter dated April 22, 2015.

Company

Comsearch

## **4. EARTH STATION COORDINATION DATA**

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

# COMSEARCH

## Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5500 <http://www.comsearch.com>

Date: 04/30/2015  
Job Number: 150422COMSJC02

### Administrative Information

Status: ENGINEER PROPOSAL  
Call Sign:  
Licensee Code: RIGNET  
Licensee Name: RigNet SatCom, Inc.

### Site Information NOBLE DISCOVERER, ALASKA

Venue Name:  
Latitude (NAD 83): 71° 18' 30.9" N  
Longitude (NAD 83): 163° 12' 43.2" W  
Climate Zone: B  
Rain Zone: 2  
Ground Elevation (AMSL): 0.0 m / 0.0 ft

### Link Information

Satellite Type: Geostationary  
Mode: TR - Transmit-Receive  
Modulation: Digital  
Satellite Arc: 128° W to 198° West Longitude  
Azimuth Range: 143.3° to 216.3°  
Corresponding Elevation Angles: 6.5° / 6.6°  
Antenna Centerline (AGL): 30.48 m / 100.0 ft

### Antenna Information

#### Receive

Manufacturer: Sea Tel  
Model: 9797  
Gain / Diameter: 38.5 dBi / 2.4 m  
3-dB / 15-dB Beamwidth: 2.05° / 9.90°

#### Transmit

Sea Tel  
9797  
41.7 dBi / 2.4 m  
1.43° / 2.68°

692KG7W and 2M34G7W

|                          |             |                |       |                  |         |
|--------------------------|-------------|----------------|-------|------------------|---------|
| Max Available RF Power   | (dBW/4 kHz) | -7.6           | -13.7 |                  |         |
|                          | (dBW/MHz)   | 16.4           | 10.3  |                  |         |
| Maximum EIRP             | (dBW/4 kHz) | 34.1           | 28.0  |                  |         |
|                          | (dBW/MHz)   | 58.1           | 52.0  |                  |         |
|                          | (dBW)       | 56.5           | 55.7  |                  |         |
| Interference Objectives: | Long Term   | -156.0 dBW/MHz | 20%   | -154.0 dBW/4 kHz | 20%     |
|                          | Short Term  | -146.0 dBW/MHz | 0.01% | -131.0 dBW/4 kHz | 0.0025% |

### Frequency Information

#### Receive 4.0 GHz

Emission / Frequency Range (MHz): 692KG7W - 2M34G7W / 3700.0 - 4200.0

#### Transmit 6.1 GHz

692KG7W - 2M34G7W / 5925.0 - 6425.0

|                                        |                     |                     |
|----------------------------------------|---------------------|---------------------|
| Max Great Circle Coordination Distance | 774.4 km / 481.1 mi | 313.4 km / 194.7 mi |
| Precipitation Scatter Contour Radius   | 615.1 km / 382.1 mi | 100.0 km / 62.1 mi  |

# COMSEARCH

## Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5500 <http://www.comsearch.com>

### Coordination Values

### NOBLE DISCOVERER, AK

Licensee Name RigNet SatCom, Inc.  
Latitude (NAD 83) 71° 18' 30.9" N  
Longitude (NAD 83) 163° 12' 43.2" W  
Ground Elevation (AMSL) 0.0 m / 0.0 ft  
Antenna Centerline (AGL) 30.48 m / 100.0 ft  
Antenna Model Sea Tel 9797 2.4 Meter  
Antenna Mode Receive 4.0 GHz Transmit 6.1 GHz  
Interference Objectives: Long Term -156.0 dBW/MHz 20% -154.0 dBW/4 kHz 20%  
Short Term -146.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%  
Max Available RF Power -7.6 (dBW/4 kHz)

| Azimuth (°) | Horizon<br>Elevation (°) | Antenna<br>Discrimination (°) | Receive 4.0 GHz       |                               | Transmit 6.1 GHz      |                               |
|-------------|--------------------------|-------------------------------|-----------------------|-------------------------------|-----------------------|-------------------------------|
|             |                          |                               | Horizon<br>Gain (dBi) | Coordination<br>Distance (km) | Horizon<br>Gain (dBi) | Coordination<br>Distance (km) |
| 0           | 0.00                     | 142.82                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 5           | 0.00                     | 137.90                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 10          | 0.00                     | 132.97                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 15          | 0.00                     | 128.02                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 20          | 0.00                     | 123.07                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 25          | 0.00                     | 118.12                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 30          | 0.00                     | 113.16                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 35          | 0.00                     | 108.19                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 40          | 0.00                     | 103.23                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 45          | 0.00                     | 98.26                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 50          | 0.00                     | 93.29                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 55          | 0.00                     | 88.33                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 60          | 0.00                     | 83.36                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 65          | 0.00                     | 78.39                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 70          | 0.00                     | 73.43                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 75          | 0.00                     | 68.46                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 80          | 0.00                     | 63.50                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 85          | 0.00                     | 58.55                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 90          | 0.00                     | 53.59                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 95          | 0.00                     | 48.65                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 100         | 0.00                     | 43.71                         | -9.01                 | 424.62                        | -9.01                 | 179.22                        |
| 105         | 0.00                     | 38.78                         | -7.72                 | 441.56                        | -7.72                 | 185.98                        |
| 110         | 0.00                     | 33.88                         | -6.25                 | 461.54                        | -6.25                 | 193.94                        |
| 115         | 0.00                     | 29.00                         | -4.56                 | 485.01                        | -4.56                 | 203.87                        |
| 120         | 0.00                     | 24.17                         | -2.58                 | 514.89                        | -2.58                 | 215.55                        |
| 125         | 0.00                     | 19.41                         | -0.20                 | 553.14                        | -0.20                 | 230.27                        |
| 130         | 0.00                     | 14.81                         | 2.74                  | 603.88                        | 2.74                  | 249.45                        |
| 135         | 0.00                     | 10.56                         | 6.40                  | 672.19                        | 6.40                  | 273.68                        |
| 140         | 0.00                     | 7.33                          | 10.38                 | 754.40                        | 10.38                 | 305.50                        |
| 145         | 0.00                     | 6.75                          | 11.27                 | 773.91                        | 11.27                 | 313.19                        |
| 150         | 0.00                     | 7.62                          | 9.95                  | 745.28                        | 9.95                  | 301.92                        |
| 155         | 0.00                     | 8.37                          | 8.93                  | 723.62                        | 8.93                  | 293.47                        |
| 160         | 0.00                     | 8.99                          | 8.15                  | 707.36                        | 8.15                  | 287.16                        |
| 165         | 0.00                     | 9.49                          | 7.57                  | 695.51                        | 7.57                  | 282.60                        |
| 170         | 0.00                     | 9.84                          | 7.17                  | 687.42                        | 7.17                  | 279.50                        |
| 175         | 0.00                     | 10.06                         | 6.94                  | 682.71                        | 6.94                  | 277.69                        |
| 180         | 0.00                     | 10.13                         | 6.86                  | 681.16                        | 6.86                  | 277.10                        |

# COMSEARCH

## Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
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### Coordination Values

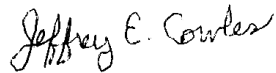
### NOBLE DISCOVERER, AK

|                                    |                        |       |                  |                  |         |
|------------------------------------|------------------------|-------|------------------|------------------|---------|
| Licensee Name                      | RigNet SatCom, Inc.    |       |                  |                  |         |
| Latitude (NAD 83)                  | 71° 18' 30.9" N        |       |                  |                  |         |
| Longitude (NAD 83)                 | 163° 12' 43.2" W       |       |                  |                  |         |
| Ground Elevation (AMSL)            | 0.0 m / 0.0 ft         |       |                  |                  |         |
| Antenna Centerline (AGL)           | 30.48 m / 100.0 ft     |       |                  |                  |         |
| Antenna Model                      | Sea Tel 9797 2.4 Meter |       |                  |                  |         |
| Antenna Mode                       | Receive 4.0 GHz        |       |                  |                  |         |
| Interference Objectives: Long Term | -156.0 dBW/MHz         | 20%   | Transmit 6.1 GHz | -154.0 dBW/4 kHz | 20%     |
| Short Term                         | -146.0 dBW/MHz         | 0.01% |                  | -131.0 dBW/4 kHz | 0.0025% |
| Max Available RF Power             |                        |       |                  | -7.6 (dBW/4 kHz) |         |

| Azimuth (°) | Horizon<br>Elevation (°) | Antenna<br>Discrimination (°) | Receive 4.0 GHz       |                               | Transmit 6.1 GHz      |                               |
|-------------|--------------------------|-------------------------------|-----------------------|-------------------------------|-----------------------|-------------------------------|
|             |                          |                               | Horizon<br>Gain (dBi) | Coordination<br>Distance (km) | Horizon<br>Gain (dBi) | Coordination<br>Distance (km) |
| 185         | 0.00                     | 10.06                         | 6.93                  | 682.70                        | 6.93                  | 277.69                        |
| 190         | 0.00                     | 9.85                          | 7.17                  | 687.40                        | 7.17                  | 279.49                        |
| 195         | 0.00                     | 9.49                          | 7.57                  | 695.48                        | 7.57                  | 282.59                        |
| 200         | 0.00                     | 8.99                          | 8.15                  | 707.36                        | 8.15                  | 287.16                        |
| 205         | 0.00                     | 8.37                          | 8.94                  | 723.68                        | 8.94                  | 293.49                        |
| 210         | 0.00                     | 7.61                          | 9.96                  | 745.47                        | 9.96                  | 302.00                        |
| 215         | 0.00                     | 6.74                          | 11.29                 | 774.38                        | 11.29                 | 313.38                        |
| 220         | 0.00                     | 7.60                          | 9.98                  | 745.75                        | 9.98                  | 302.10                        |
| 225         | 0.00                     | 10.95                         | 6.01                  | 664.46                        | 6.01                  | 270.75                        |
| 230         | 0.00                     | 15.23                         | 2.43                  | 598.43                        | 2.43                  | 247.40                        |
| 235         | 0.00                     | 19.84                         | -0.44                 | 549.18                        | -0.44                 | 228.75                        |
| 240         | 0.00                     | 24.60                         | -2.77                 | 511.89                        | -2.77                 | 214.39                        |
| 245         | 0.00                     | 29.44                         | -4.72                 | 482.64                        | -4.72                 | 202.94                        |
| 250         | 0.00                     | 34.31                         | -6.39                 | 459.61                        | -6.39                 | 193.17                        |
| 255         | 0.00                     | 39.22                         | -7.84                 | 439.95                        | -7.84                 | 185.33                        |
| 260         | 0.00                     | 44.14                         | -9.12                 | 423.24                        | -9.12                 | 178.68                        |
| 265         | 0.00                     | 49.08                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 270         | 0.00                     | 54.03                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 275         | 0.00                     | 58.98                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 280         | 0.00                     | 63.94                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 285         | 0.00                     | 68.90                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 290         | 0.00                     | 73.86                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 295         | 0.00                     | 78.82                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 300         | 0.00                     | 83.79                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 305         | 0.00                     | 88.76                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 310         | 0.00                     | 93.72                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 315         | 0.00                     | 98.69                         | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 320         | 0.00                     | 103.65                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 325         | 0.00                     | 108.62                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 330         | 0.00                     | 113.58                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 335         | 0.00                     | 118.54                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 340         | 0.00                     | 123.49                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 345         | 0.00                     | 128.44                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 350         | 0.00                     | 133.38                        | -10.00                | 412.20                        | -10.00                | 174.28                        |
| 355         | 0.00                     | 138.31                        | -10.00                | 412.20                        | -10.00                | 174.28                        |

## 5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Jeffrey E. Cowles  
Engineer III, Telecommunications  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, Va. 20147

DATED: April 30, 2015

## AREA OF OPERATIONS

