



***NORTHROP GRUMMAN***

DEFINING THE FUTURE

# U.S. Dept of Agriculture 1-m Orthophotography

2008 NAIP Post-Mortem Meeting  
19 November 2008

**Bart Bailey**

Chief Executive Officer, 3001  
contact: 703.385.3001; bbailey@3001inc.com

**Peter Briere**

Senior Program Manager, 3001  
contact: 352.328.7079; pbriere@3001inc.com

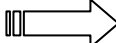
**3001**  
a Northrop Grumman company

- **2008 Project Review (Task Award Number 3-08-1)**
  - 2008 Project Summary
  - 2008 Performance Statistics (CT, MA, NH, OK, RI, VT)
  - 2008 Lessons Learned
  - 2009 Capacity



# Discussion Topics



- Project Team  3001, DAS, Pixxures

STATE	ACQ TYPE	REQT'S	QTY	UNIT	ACQ Window End	Delivery DOQQs
CT	ADS40-II	4B & REL	413	DOQQ	08/31/08	10/15/08
MA	ADS40-II	3B & REL	740	DOQQ	08/31/08	10/15/08
NH	ADS40-II	3B & ABS	769	DOQQ	08/31/08	10/15/08
OK	ADS40-II	3B, Rel, s	4,815	DOQQ	07/15/08	08/29/08
RI	ADS40-II	4B & REL	115	DOQQ	08/31/08	10/15/08
VT	ADS40-II	4B & ABS	813	DOQQ	08/31/08	10/15/08
<b>TOTALS</b>			<b>7,664</b>			

# Connecticut Schedule



USDA NAIP 2008 - CT

3001 Inc.

**Product Deadlines by County**

**Updated: 11/10/2008**

<b>County</b>	<b>CCM Due Date</b>	<b>CCM Delivered Date ver 1</b>	<b>CCM Delivered Date ver 2</b>	<b>DOQQ Due Date</b>	<b>DOQQ Delivered Date</b>
Fairfield	30-Sep-08	10-Sep-08	29-Sep-08	15-Oct-08	29-Sep-08
Hartford	30-Sep-08	29-Sep-08		15-Oct-08	29-Sep-08
Litchfield	30-Sep-08	29-Sep-08		15-Oct-08	29-Sep-08
Middlesex	30-Sep-08	5-Sep-08	29-Sep-08	15-Oct-08	29-Sep-08
New Haven	30-Sep-08	10-Sep-08	29-Sep-08	15-Oct-08	29-Sep-08
New London	30-Sep-08	5-Sep-08	29-Sep-08	15-Oct-08	29-Sep-08
Tolland	30-Sep-08	29-Sep-08		15-Oct-08	29-Sep-08
Windham	30-Sep-08	10-Sep-08	29-Sep-08	15-Oct-08	29-Sep-08

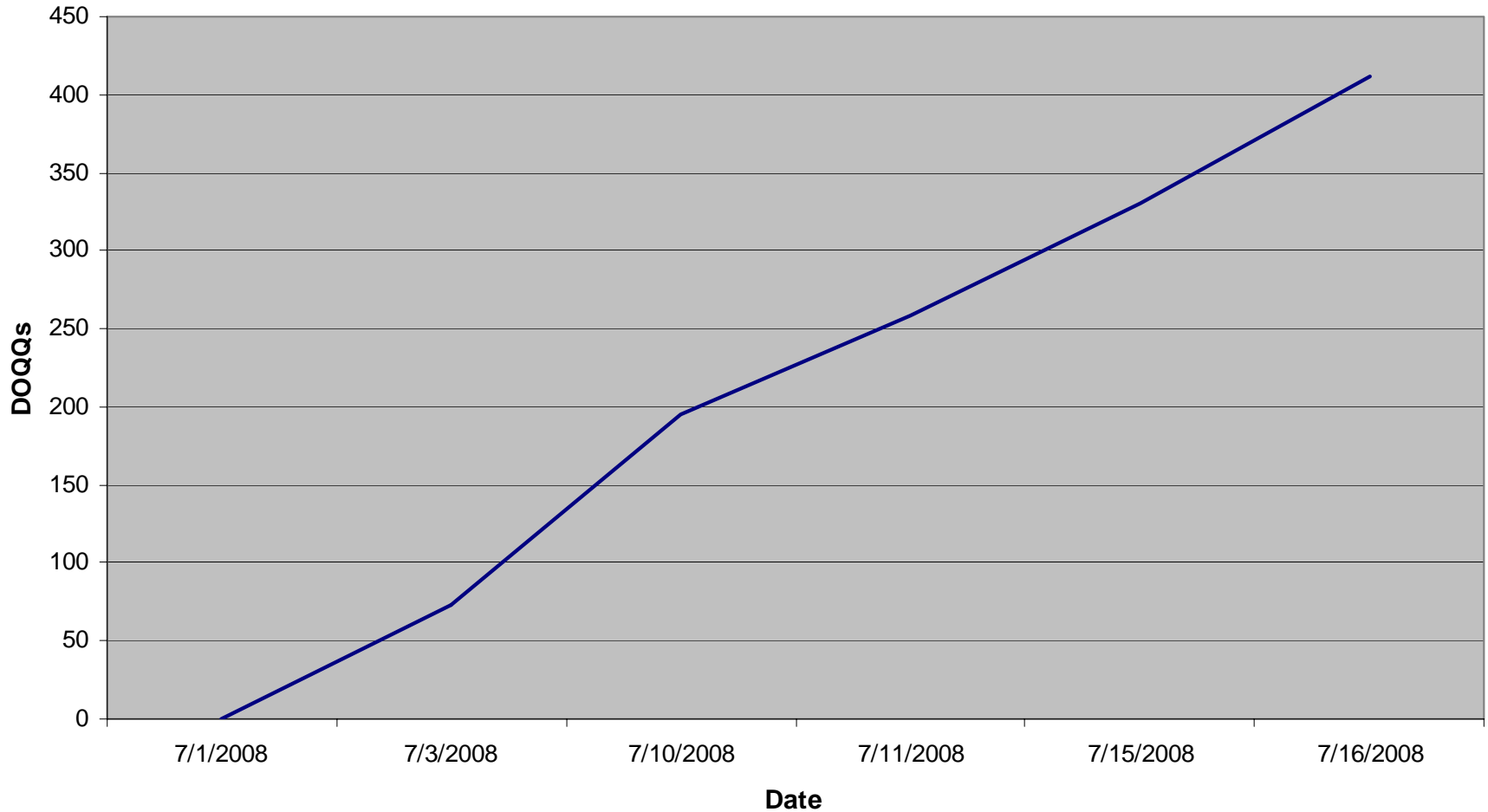


	CT / RI
Planes in Project Area	1
Flight Window	07/01/08 - 08/31/08
Date Completed	7/16/2008
Days Flown	5
Total ADS40 Collection (hrs)	12
Avg. Hrs / Flying Day	2.4
Avg. Line Miles / Flying Day	531

# CT Acquisition



2008 CT NAIP - DOQQ Acquisition - 412 DOQQs







USDA NAIP 2008 - MA

3001 Inc.

**Product Deadlines by County**

**Updated: 11/10/2008**

County	CCM Due Date	CCM Delivered Date ver 1	CCM Delivered Date ver 2	DOQQ Due Date	DOQQ Delivered Date
Barnstable	30-Sep-08	5-Sep-08		15-Oct-08	29-Sep-08
Berkshire	30-Sep-08	29-Sep-08		15-Oct-08	29-Sep-08
Bristol	30-Sep-08	5-Sep-08		15-Oct-08	29-Sep-08
Dukes	30-Sep-08	5-Sep-08		15-Oct-08	29-Sep-08
Essex	30-Sep-08	5-Sep-08		15-Oct-08	29-Sep-08
Franklin	30-Sep-08	10-Sep-08		15-Oct-08	29-Sep-08
Hampden	30-Sep-08	29-Sep-08		15-Oct-08	29-Sep-08
Hampshire	30-Sep-08	29-Sep-08		15-Oct-08	29-Sep-08
Middlesex	30-Sep-08	5-Sep-08		15-Oct-08	29-Sep-08
Nantucket	30-Sep-08	5-Sep-08		15-Oct-08	29-Sep-08
Norfolk	30-Sep-08	5-Sep-08		15-Oct-08	29-Sep-08
Plymouth	30-Sep-08	5-Sep-08		15-Oct-08	29-Sep-08
Suffolk	30-Sep-08	5-Sep-08		15-Oct-08	29-Sep-08
Worcester	30-Sep-08	10-Sep-08		15-Oct-08	29-Sep-08

# MA Acquisition



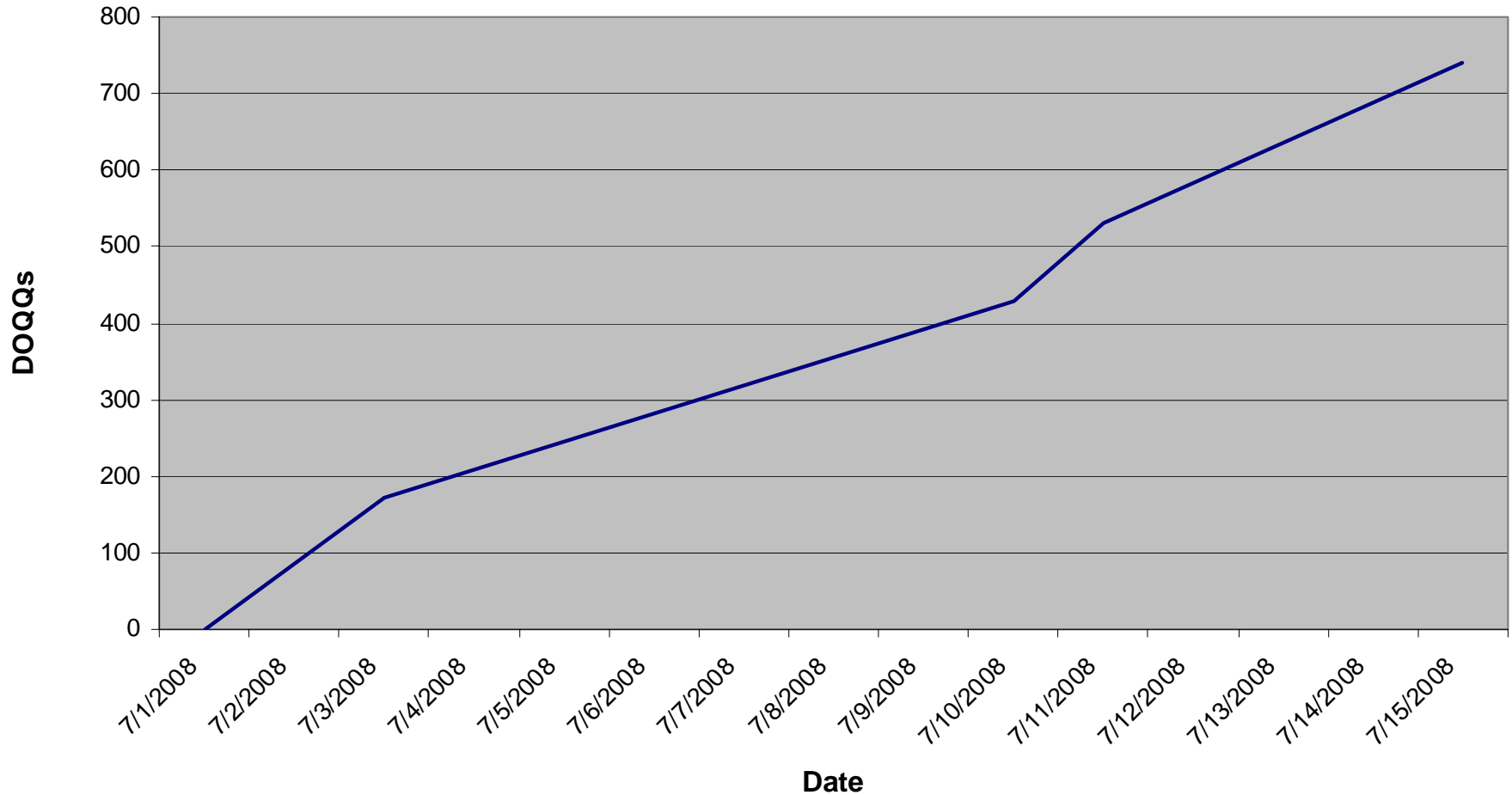
	<b>MA</b>
Planes in Project Area	1
Flight Window	06/15/08 - 08/31/08
Date Completed	7/16/2008
Days Flown	4
Total ADS40 Collection (hrs)	10
Avg. Hrs / Flying Day	2.5
Avg. Line Miles / Flying Day	757



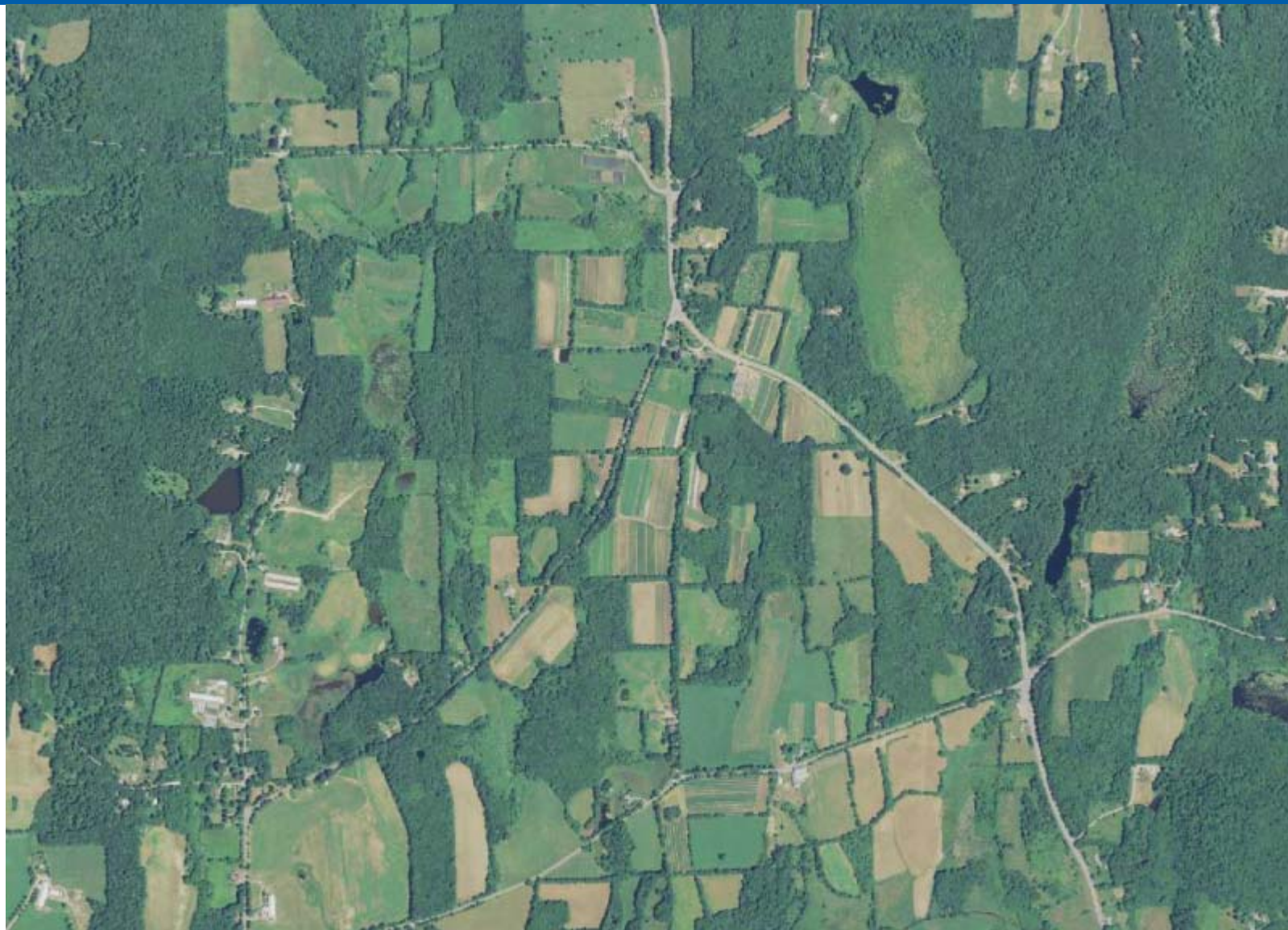
# MA Acquisition



### 2008 MA NAIP - DOQQ Acquisition - 740 DOQQs



# MA Sample



# New Hampshire Schedule



USDA NAIP 2008 - NH

3001 Inc.

**Product Deadlines by County**

**Updated: 11/10/2008**

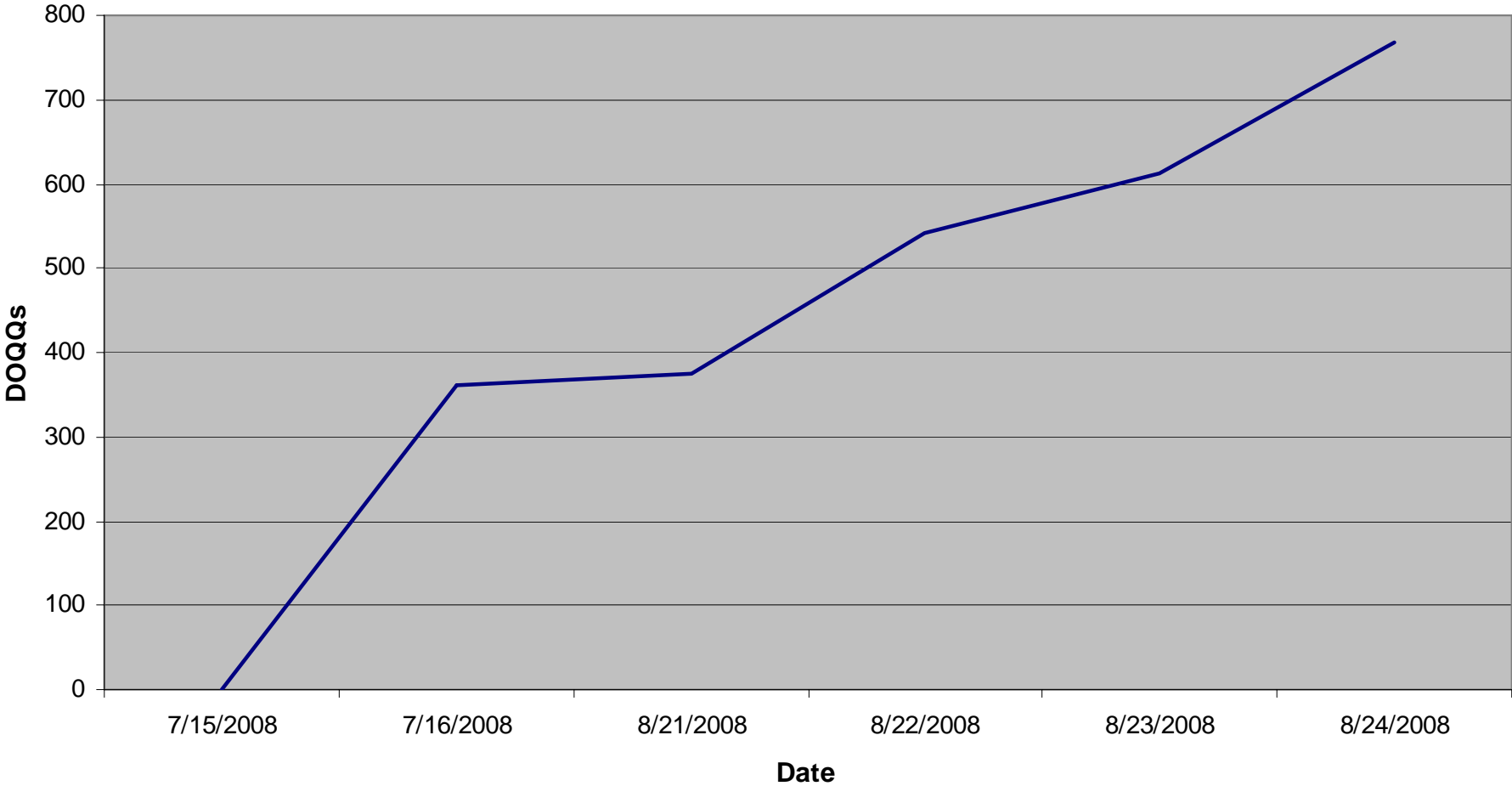
County	CCM Due Date	CCM Delivered Date ver 1	CCM Delivered Date ver 2	DOQQ Due Date	DOQQ Delivered Date
Belknap	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Carroll	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Cheshire	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Coos	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Grafton	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Hillsborough	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Merrimack	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Rockingham	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Strafford	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Sullivan	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08



	<b>NH / VT</b>
Planes in Project Area	1
Flight Window	07/01/08 - 08/31/08
Date Completed	8/24/2008
Days Flown	5
Total ADS40 Collection (hrs)	17
Avg. Hrs / Flying Day	3.4
Avg. Line Miles / Flying Day	1051



2008 NH NAIP - DOQQ Acquisition - 769 DOQQs





# NH Sample



# Oklahoma Schedule



County	CCM Due Date	CCM Delivered Date ver 1	CCM Delivered Date ver 2	DOQQ Due Date	DOQQ Delivered Date
Adair	14-Aug-08	30-Jun-08		29-Aug-08	30-Jun-08
Alfalfa	14-Aug-08	13-Aug-08		29-Aug-08	16-Aug-08
Atoka	14-Aug-08	21-Jun-08		29-Aug-08	30-Jun-08
Beaver	14-Aug-08	30-Jun-08		29-Aug-08	30-Jun-08
Beckham	14-Aug-08	22-Jul-08		29-Aug-08	22-Jul-08
Blaine	14-Aug-08	13-Aug-08		29-Aug-08	16-Aug-08
Bryan	14-Aug-08	21-Jun-08		29-Aug-08	30-Jun-08
Caddo	14-Aug-08	13-Aug-08		29-Aug-08	16-Aug-08
Canadian	14-Aug-08	16-Aug-08		29-Aug-08	18-Aug-08
Carter	14-Aug-08	5-Aug-08		29-Aug-08	6-Aug-08
Cherokee	14-Aug-08	2-Jul-08		29-Aug-08	2-Jul-08
Choctaw	14-Aug-08	21-Jun-08		29-Aug-08	30-Jun-08
Cimarron	14-Aug-08	2-Jul-08		29-Aug-08	2-Jul-08
Cleveland	14-Aug-08	16-Aug-08		29-Aug-08	18-Aug-08
Coal	14-Aug-08	2-Jul-08		29-Aug-08	2-Jul-08
Comanche	14-Aug-08	15-Jul-08		29-Aug-08	15-Jul-08
Cotton	14-Aug-08	15-Jul-08		29-Aug-08	15-Jul-08
Craig	14-Aug-08	30-Jun-08		29-Aug-08	30-Jun-08



# Oklahoma Schedule (2)



County	CCM Due Date	CCM Delivered Date ver 1	CCM Delivered Date ver 2	DOQQ Due Date	DOQQ Delivered Date
Creek	14-Aug-08	15-Jul-08		29-Aug-08	15-Jul-08
Custer	14-Aug-08	5-Aug-08		29-Aug-08	6-Aug-08
Delaware	14-Aug-08	2-Jul-08		29-Aug-08	2-Jul-08
Dewey	14-Aug-08	5-Aug-08		29-Aug-08	6-Aug-08
Ellis	14-Aug-08	22-Jul-08		29-Aug-08	22-Jul-08
Garfield	14-Aug-08	13-Aug-08		29-Aug-08	16-Aug-08
Garvin	14-Aug-08	5-Aug-08		29-Aug-08	6-Aug-08
Grady	14-Aug-08	16-Aug-08		29-Aug-08	18-Aug-08
Grant	14-Aug-08	13-Aug-08		29-Aug-08	16-Aug-08
Greer	14-Aug-08	31-May-08		29-Aug-08	31-May-08
Harmon	14-Aug-08	31-May-08		29-Aug-08	31-May-08
Harper	14-Aug-08	22-Jul-08		29-Aug-08	22-Jul-08
Haskell	14-Aug-08	30-Jun-08		29-Aug-08	30-Jun-08
Hughes	14-Aug-08	15-Jul-08		29-Aug-08	15-Jul-08
Jackson	14-Aug-08	31-May-08		29-Aug-08	31-May-08
Jefferson	14-Aug-08	22-Jul-08		29-Aug-08	22-Jul-08
Johnston	14-Aug-08	5-Aug-08		29-Aug-08	6-Aug-08
Kay	14-Aug-08	13-Aug-08		29-Aug-08	16-Aug-08

# Oklahoma Schedule (3)



County	CCM Due Date	CCM Delivered Date ver 1	CCM Delivered Date ver 2	DOQQ Due Date	DOQQ Delivered Date
Kingfisher	14-Aug-08	13-Aug-08		29-Aug-08	16-Aug-08
Kiowa	14-Aug-08	31-May-08		29-Aug-08	31-May-08
Latimer	14-Aug-08	30-Jun-08		29-Aug-08	2-Jul-08
Le Flore	14-Aug-08	21-Jun-08		29-Aug-08	30-Jun-08
Lincoln	14-Aug-08	16-Aug-08		29-Aug-08	18-Aug-08
Logan	14-Aug-08	16-Aug-08		29-Aug-08	18-Aug-08
Love	14-Aug-08	22-Jul-08		29-Aug-08	22-Jul-08
Major	14-Aug-08	13-Aug-08		29-Aug-08	16-Aug-08
Marshall	14-Aug-08	5-Aug-08		29-Aug-08	6-Aug-08
Mayes	14-Aug-08	2-Jul-08		29-Aug-08	2-Jul-08
McClain	14-Aug-08	13-Aug-08		29-Aug-08	16-Aug-08
McCurtain	14-Aug-08	21-Jun-08		29-Aug-08	30-Jun-08
McIntosh	14-Aug-08	22-Jul-08		29-Aug-08	22-Jul-08
Murray	14-Aug-08	5-Aug-08		29-Aug-08	6-Aug-08
Muskogee	14-Aug-08	30-Jun-08		29-Aug-08	30-Jun-08
Noble	14-Aug-08	13-Aug-08		29-Aug-08	16-Aug-08
Nowata	14-Aug-08	30-Jun-08		29-Aug-08	30-Jun-08
Okfuskee	14-Aug-08	15-Jul-08		29-Aug-08	15-Jul-08

# Oklahoma Schedule (4)



County	CCM Due Date	CCM Delivered Date ver 1	CCM Delivered Date ver 2	DOQQ Due Date	DOQQ Delivered Date
Oklahoma	14-Aug-08	16-Aug-08		29-Aug-08	18-Aug-08
Okmulgee	14-Aug-08	15-Jul-08		29-Aug-08	15-Jul-08
Osage	14-Aug-08	16-Aug-08		29-Aug-08	16-Aug-08
Ottawa	14-Aug-08	30-Jun-08		29-Aug-08	30-Jun-08
Pawnee	14-Aug-08	13-Aug-08		29-Aug-08	16-Aug-08
Payne	14-Aug-08	16-Aug-08		29-Aug-08	18-Aug-08
Pittsburg	14-Aug-08	15-Jul-08		29-Aug-08	15-Jul-08
Pontotoc	14-Aug-08	6-Aug-08		29-Aug-08	16-Aug-08
Pottawatomie	14-Aug-08	16-Aug-08		29-Aug-08	18-Aug-08
Pushmataha	14-Aug-08	21-Jun-08		29-Aug-08	30-Jun-08
Roger Mills	14-Aug-08	22-Jul-08	5-Aug-08	29-Aug-08	22-Jul-08
Rogers	14-Aug-08	2-Jul-08		29-Aug-08	2-Jul-08
Seminole	14-Aug-08	15-Jul-08		29-Aug-08	15-Jul-08
Sequoyah	14-Aug-08	21-Jun-08		29-Aug-08	30-Jun-08
Stephens	14-Aug-08	5-Aug-08		29-Aug-08	6-Aug-08
Texas	14-Aug-08	30-Jun-08		29-Aug-08	30-Jun-08
Tillman	14-Aug-08	31-May-08		29-Aug-08	31-May-08
Tulsa	14-Aug-08	15-Jul-08		29-Aug-08	15-Jul-08
Wagoner	14-Aug-08	15-Jul-08		29-Aug-08	15-Jul-08

# Oklahoma Schedule (5)

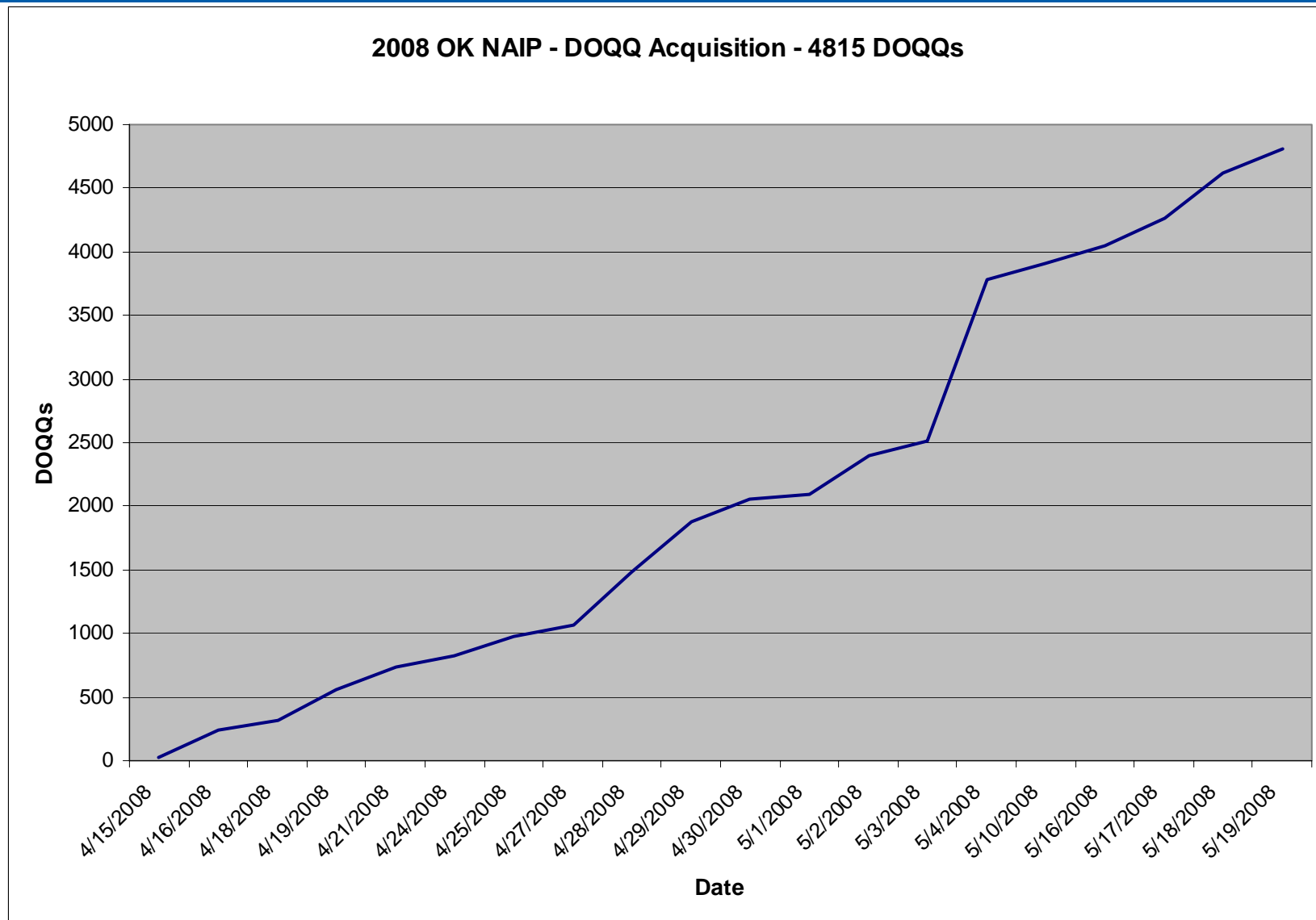


<b>County</b>	<b>CCM Due Date</b>	<b>CCM Delivered Date ver 1</b>	<b>CCM Delivered Date ver 2</b>	<b>DOQQ Due Date</b>	<b>DOQQ Delivered Date</b>
Washington	14-Aug-08	15-Jul-08		29-Aug-08	15-Jul-08
Washita	14-Aug-08	6-Aug-08		29-Aug-08	6-Aug-08
Woods	14-Aug-08	6-Aug-08		29-Aug-08	6-Aug-08
Woodward	14-Aug-08	6-Aug-08		29-Aug-08	6-Aug-08

## Oklahoma

Planes in Project Area	3
Flight Window	04/15/08 - 07/15/08
Date Completed	5/19/2008
Days Flown	19
Total ADS40 Collection (hrs)	49
Avg. Hrs / Flying Day	2.6
Avg. Line Miles / Flying Day	942

# OK Acquisition



# OK Sample







USDA NAIP 2008 - RI

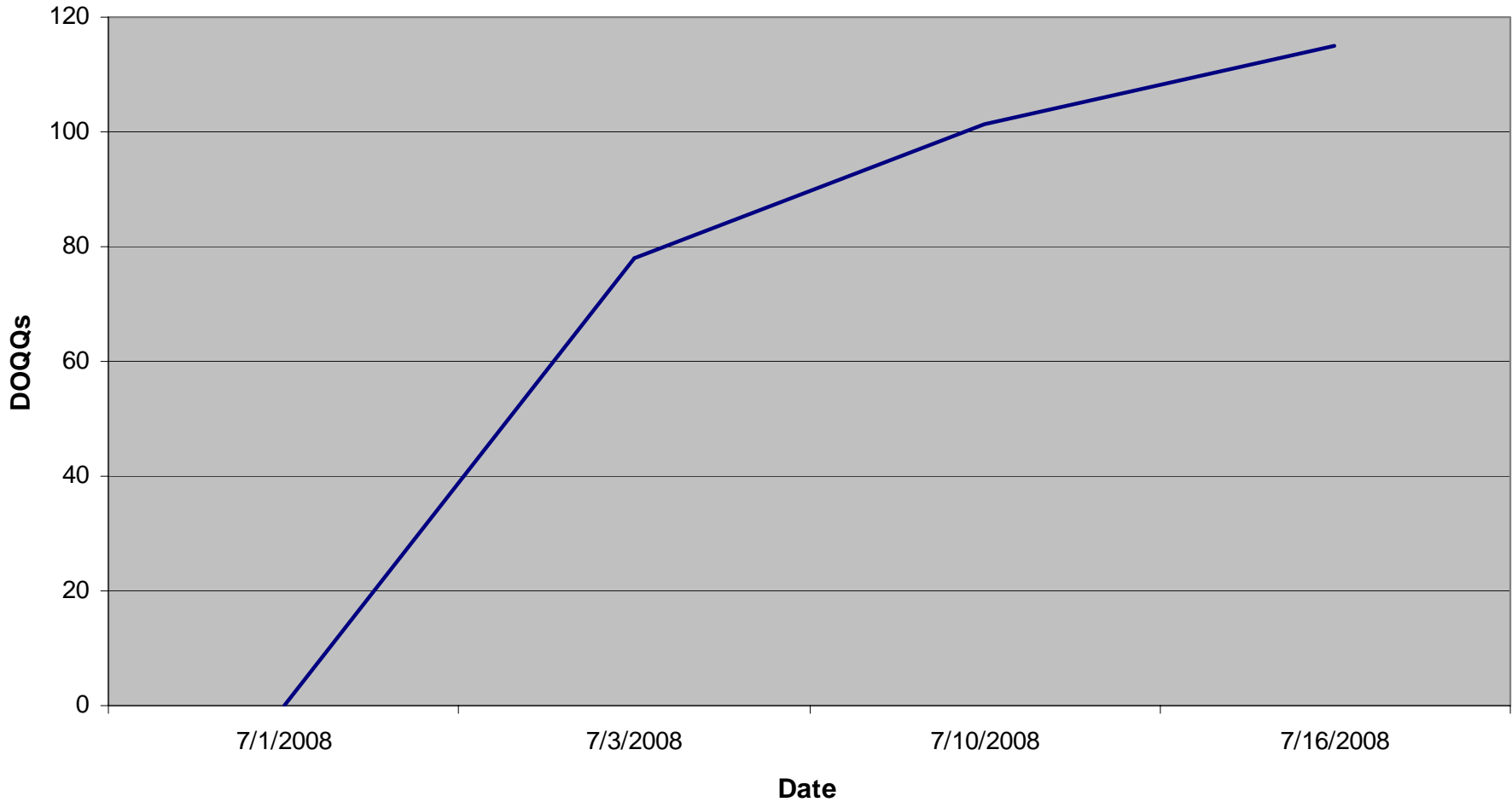
3001 Inc.

**Product Deadlines by County**

**Updated: 11/10/2008**

County	CCM Due Date	CCM Delivered Date ver 1	CCM Delivered Date ver 2	DOQQ Due Date	DOQQ Delivered Date
Bristol	30-Sep-08	5-Sep-08	29-Sep-08	15-Oct-08	29-Sep-08
Kent	30-Sep-08	5-Sep-08	29-Sep-08	15-Oct-08	29-Sep-08
Newport	30-Sep-08	5-Sep-08	29-Sep-08	15-Oct-08	29-Sep-08
Providence	30-Sep-08	5-Sep-08	29-Sep-08	15-Oct-08	29-Sep-08
Washington	30-Sep-08	5-Sep-08	29-Sep-08	15-Oct-08	29-Sep-08

### 2008 RI NAIP - DOQQ Acquisition - 115 DOQQs



# Rhode Island Sample



*Newport, RI*

# Vermont Schedule



USDA NAIP 2008 - VT

3001 Inc.

**Product Deadlines by County**

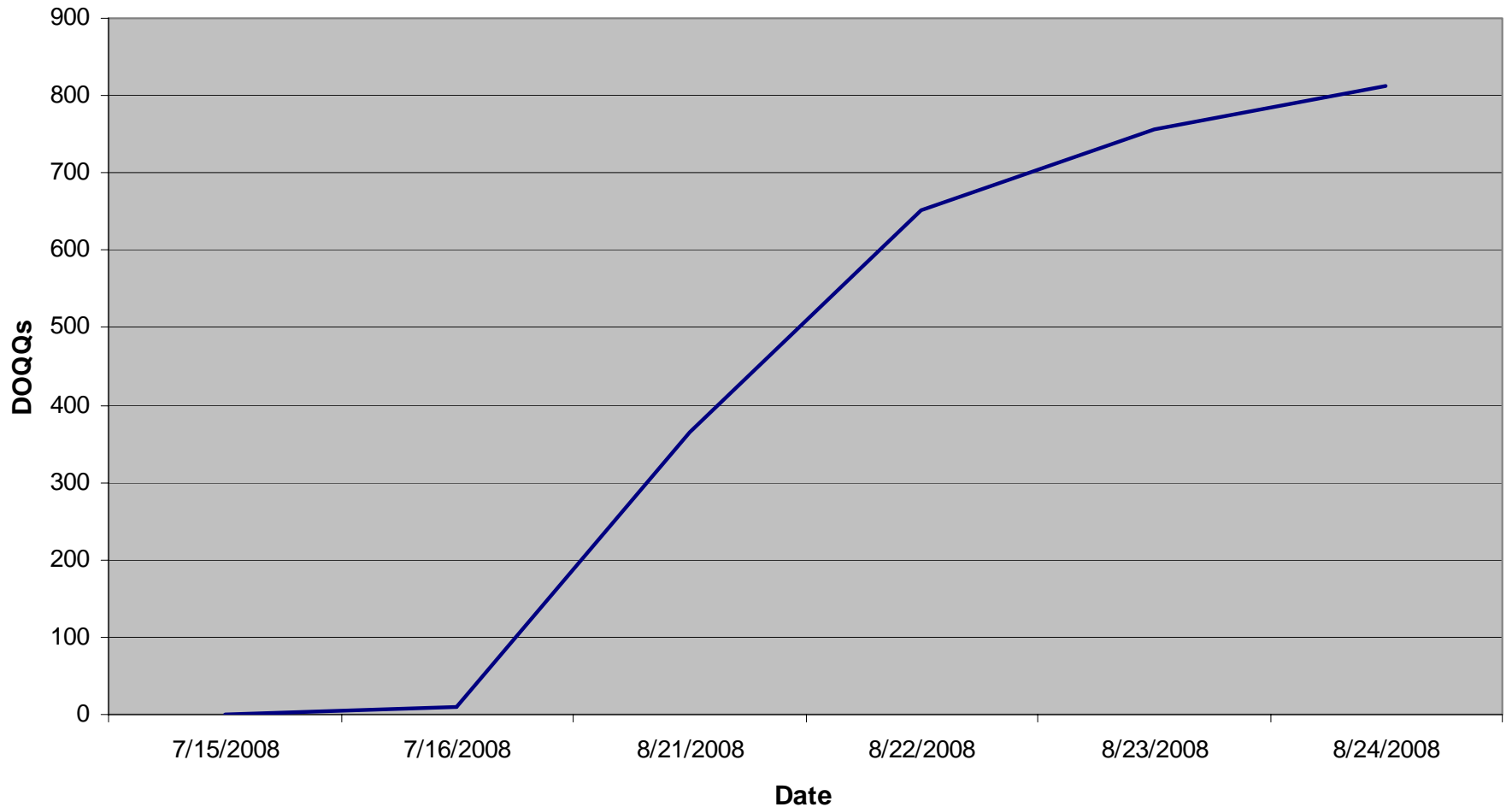
**Updated: 11/10/2008**

County	CCM Due Date	CCM Delivered Date ver 1	CCM Delivered Date ver 2	DOQQ Due Date	DOQQ Delivered Date
Addison	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Bennington	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Caledonia	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Chittenden	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Essex	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Franklin	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Grand Isle	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Lamoille	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Orange	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Orleans	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Rutland	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Washington	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Windham	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08
Windsor	30-Sep-08	29-Sep-08		15-Oct-08	2-Oct-08

# Vermont Acquisition



### 2008 VT NAIP - DOQQ Acquisition - 813 DOQQs





# Vermont Sample



- **Compression**

- GeoExpress solution for JPG2000 was used predominately and these products seem consistent on 3001 and APFO systems. ERMapper was used when GeoExpress was not to overcome mosaic size limits in GeoExpress, and these products seem inconsistent on 3001 and APFO systems.. We are troubleshooting root causes of this discrepancy. We did not modify these software for use internally.

- **Tone**

- Oklahoma, some highways which otherwise would be neutral were found to have red/orange dust cover. Other features were searched for in these quads to identify neutral features for radiometry checks.

- **Seamlines**

- Our clipping and prep of seamlines for delivery w/ CCMs results in our CCM deliveries for seamline state to lag versus non-seamline states.

- **Weather**

- Detailed weather records compiled. NH/VT weather more challenging than anticipated in 2008.





- **2008**
  - Used 3 ADS40-II for 7,664 DOQQs. 2 DMCs also available.
- **2009 anticipated**
  - Acquisition: 3-5 ADS40-II available and 2 DMCs also available. 7,600 – 15,000 DOQQs depending on acquisition windows.
  - Production: Capacity to support max collection efforts.

***NORTHROP GRUMMAN***

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DEFINING THE FUTURE

**3001**

*a Northrop Grumman company*