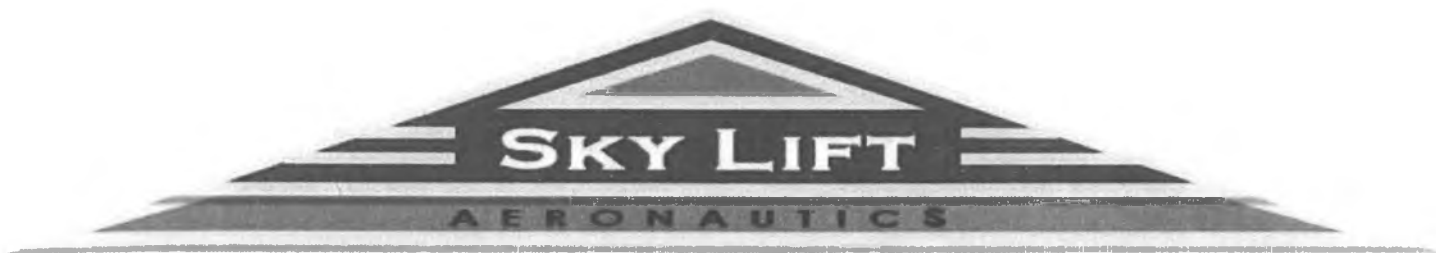
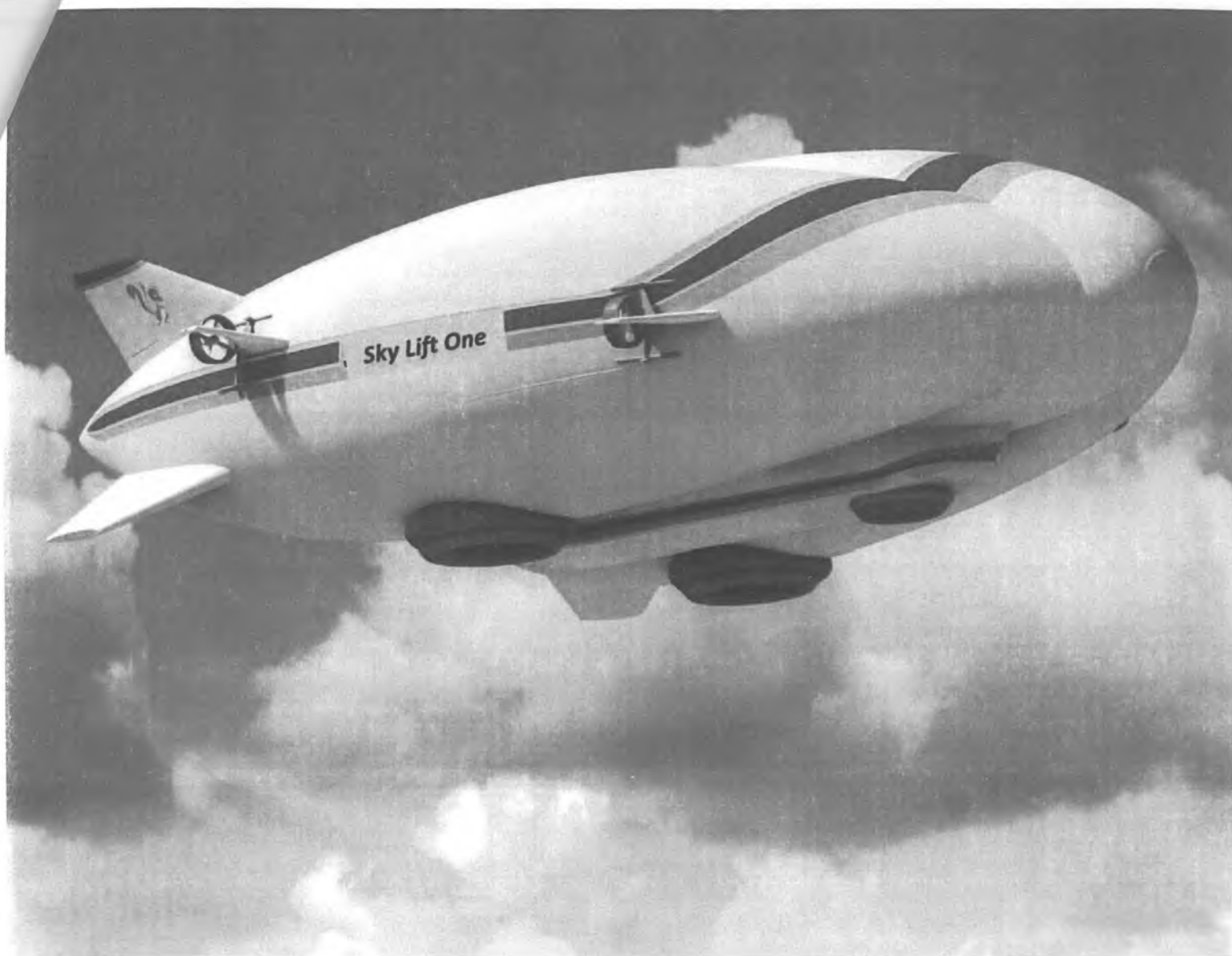


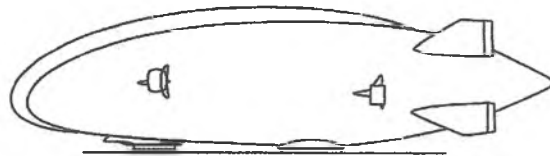
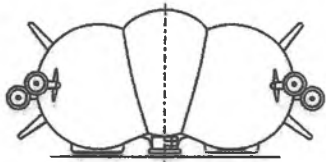
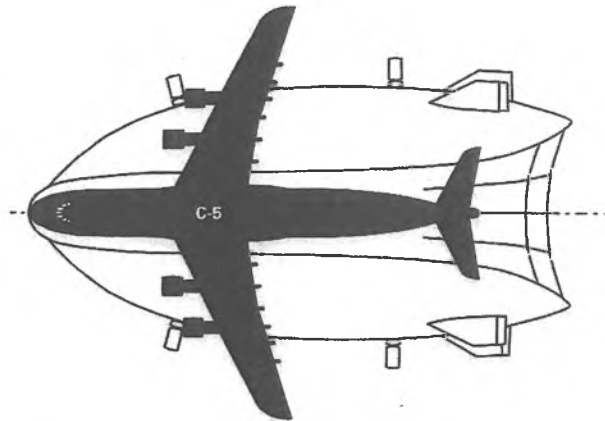
**03/04/14  
PRESENTATION:  
TRANSFORMING  
ALASKA WITH  
AIRSHIPS BY  
SKYLIFT  
AERONAUTICS**

<TARGET><BILL></BILL><SUBJECT>03-04-14 PRESENTATION  
TRANSFORMING ALASKA WITH AIRSHIPS BY SKYLIFT  
AERONAUTICS</SUBJECT><COMM>HTRA28</COMM></TARGET>



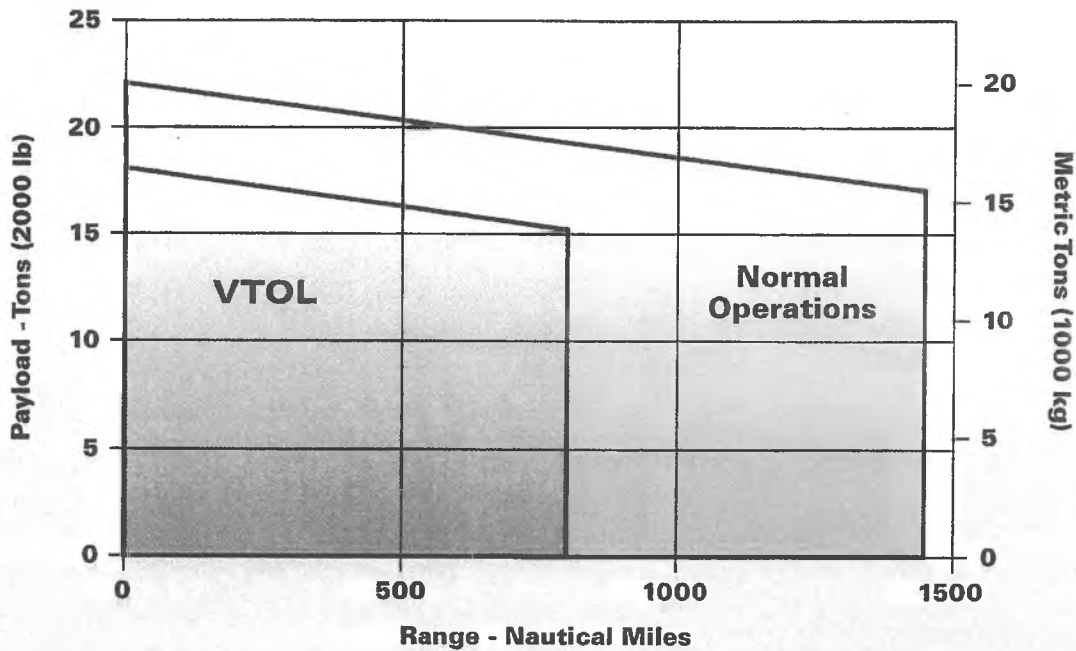
## HYBRID SMALL

<b>Dimensions</b>	276' x 157' x 75'
<b>Speed</b>	60 kt
<b>Range</b>	1,400 nm
<b>Payload</b>	15-22 tons @ 5K' msl
<b>Service Ceiling</b>	10,000' msl
<b>Modes</b>	Standard Take-off, VTOL, Sling Load
<b>Surfaces</b>	Austere field, water, snow, sand



**BUOYANT LIFT + AERODYNAMIC LIFT + DIRECT LIFT = HYBRID LIFT**

- 80% Lift from Buoyancy
- 20% Lift from Aerodynamics or Direct Lift

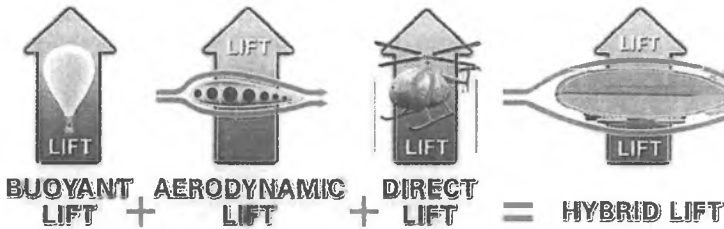
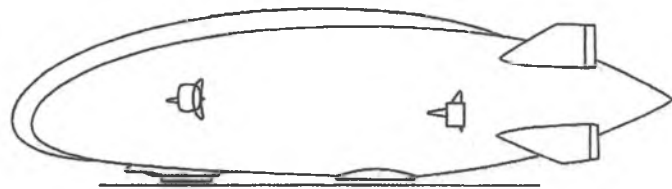
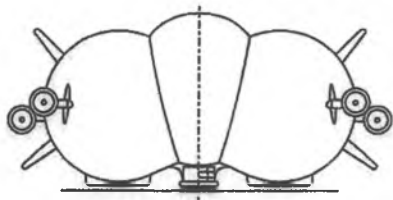
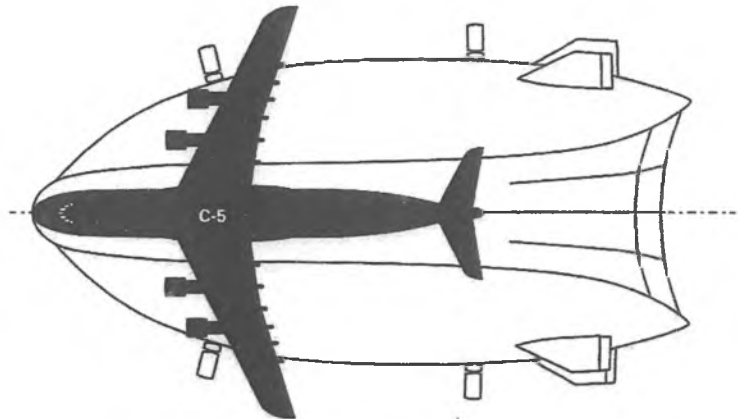


## 20 Ton Hybrid Specifications

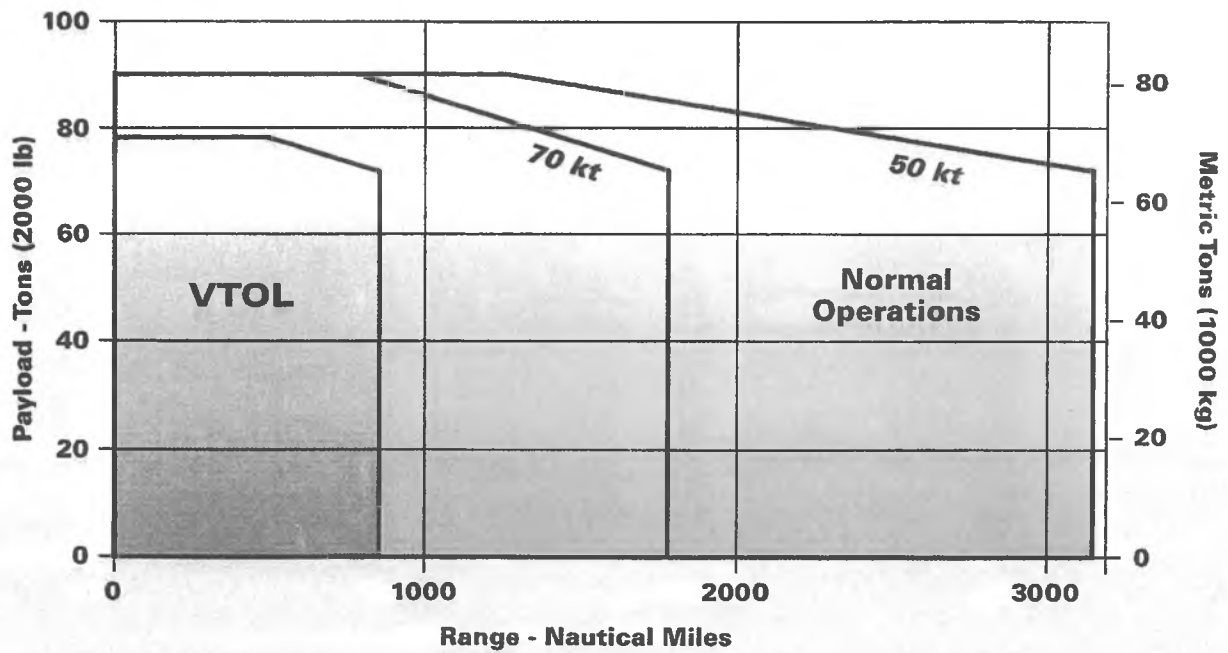
Feature	Specification Values
<b>Cargo Capacity</b>	40,000 lbs
<b>Cargo Bay Length</b>	55 feet
<b>Cargo Bay Height</b>	10 feet
<b>Cargo Bay Width</b>	10 feet
<b>Cargo Bay Volume</b>	5500 ft <sup>3</sup>
<b>Dedicated Diesel Fuel Tank Transport Capacity</b>	30,000 lbs (4400 US Gallons)
<b>Crew Member Seating</b>	2
<b>Passenger Seating</b>	8
<b>Engines</b>	4 x 306 HP Diesel
<b>Maximum Aircraft Fuel Capacity</b>	10,000 lbs (1470 US Gallons)
<b>Maximum Range</b>	1,500 nm
<b>Maximum Altitude</b>	10,000 feet density Alt.
<b>Cruise Speed</b>	60 knots
<b>Length</b>	276'-11"
<b>Span</b>	157'-2"
<b>Height</b>	75'-2"
<b>Envelope Volume</b>	1,285,000 ft <sup>3</sup>
<b>Max VTOL Capability</b>	30,000 lbs cargo
<b>Sling Load Capability</b>	Yes
<b>Maximum Takeoff Distance</b>	2,500 feet
<b>Minimum Temperature</b>	-40°F
<b>Maximum Temperature</b>	122°F
<b>Landing Surfaces</b>	Pavement, dirt, grass, snow, water, gravel, sand
<b>Operating Conditions</b>	VFR/IFR

## HYBRID MEDIUM

Dimensions	423' x 185' x 117'
Speed	80 kt
Range	3,200 nm
Payload	40-90 tons @ 5K' msl
Service Ceiling	10,000' msl
Modes	Standard Take-off, VTOL, Sling Load
Surfaces	Austere field, water, snow, sand



- 80% Lift from Buoyancy
- 20% Lift from Aerodynamics or Direct Lift

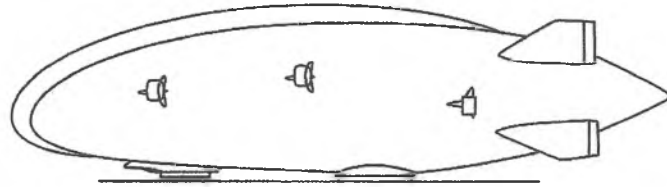
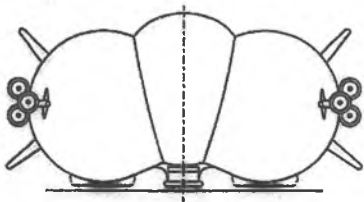
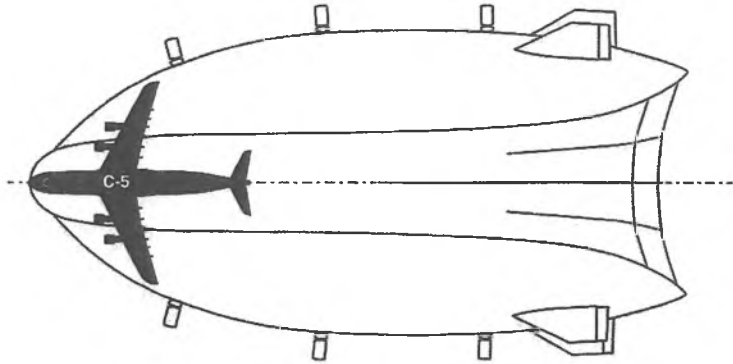


## 50/70 Ton Hybrid Specifications

Characteristic	Description50/70T
Payload	50/70 ton
Passenger load	400
Crew size	2
Cargo box size <u>Floor</u> strength	140' x 20'w x 10'h
Range (unrefueled)	2,000/1,300 nm
Range-payload curve	
Range-speed-payload curve	
Combat radius	
Max Speed	70 kt
Cruise Speed	60 kt
Length	400'
Wingspan	160'
Maximum take-off weight	245,000 lb
Minimum take-off runway length	500' VTOL, 1000' CTOL *
Minimum landing runway length	1000' *
Minimum runway width	200' *
CBR	0
Load time	<1 hr
Off-load time	<1 hr
Operating altitude	5000'
Max altitude	10000'
Utilization rate	
Fuel burn rate (lbs/hr)	1400 lb/hr
Air refuelable (yes/no)	No
Fuel type	Jet A
Ballast type	Water
Air/sea interface	
MHE / ground handling	

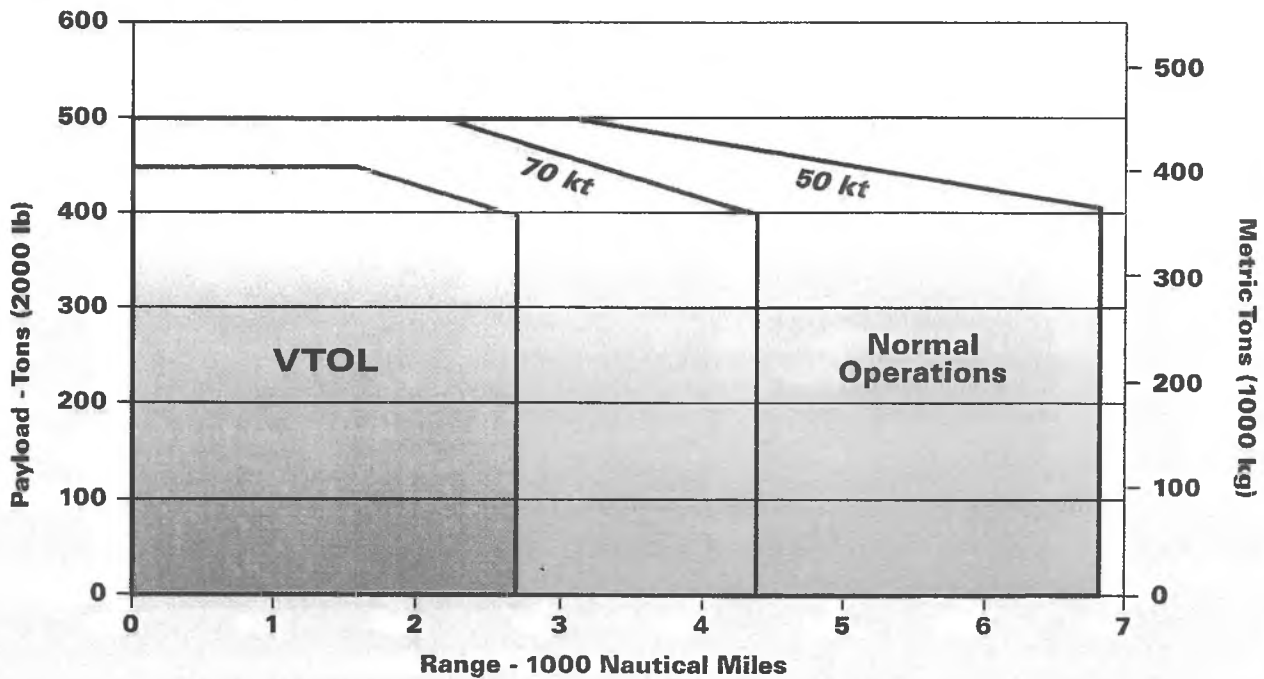
## HYBRID LARGE

Dimensions	742' x 394' x 202'
Speed	100 kt
Range	6,800 nm
Payload	400-500 tons @ 5K' msl
Service Ceiling	10,000' msl
Modes	Standard Take-off, VTOL
Surfaces	Austere field, water, snow, sand



**BUOYANT LIFT** + **AERODYNAMIC LIFT** + **DIRECT LIFT** = **HYBRID LIFT**

- 80% Lift from Buoyancy
- 20% Lift from Aerodynamics or Direct Lift



## 500 Ton Hybrid Specifications

Characteristic	Description 500 Ton
Payload	500 ton
Passenger load	2.200
Crew size	2
Cargo box size <u>Floor</u>	290' x 48'w x 20'h
Range (unrefueled)	5,000 nm
Range-payload curve	
Range-speed-payload curve	
Combat radius	
Max Speed	80 kt
Cruise Speed	70 kt
Length	790'
Wingspan	420'
Maximum take-off weight	2,240,000 lb
Minimum take-off runway length	1200' VTOL, 2000' CTOL *
Minimum landing runway length	1500' *
Minimum runway width	500' *
CBR	0
Load time	<1 hr
Off-load time	<1 hr
Operating altitude	5000'
Max altitude	10000'
Utilization rate	
Fuel burn rate (lbs/hr)	4800 lb/hr
Air refuelable (yes/no)	No
Fuel type	Jet A
Ballast type	Water
Air/sea interface	
MHE / ground handling	

# TRANSFORMING ALASKA

THROUGH INOVATIVE TECHNOLOGIES IN:  
AVIATION, RE ENERGY, SUSTAINABLE FOOD,  
CLEAN WATER, BIO FUELS AND  
HARDENED DATA CENTERS



# BENNEFITS TO ALASKA

- \* **ECONOMIC GROWTH**
- \* **LOWER OPERATING COSTS Vs FIXED WING**
- \* **MORE PRODUCTIVITY**
- \* **NEW JOBS**
- \* **SAFER TRANSPORTATION**
- \* **EXPANDED COMMERCE DOMESTIC & INTERNATIONAL**
- \* **CLEANER ENVIRONMENT**



# ECONOMICS

- \* **MINING**
- \* **ALTERNATIVE SHIPPING**
- \* **OIL AND GAS**
- \* **ALTERNATE TRANSPORTATION**
- \* **SURVEILLANCE AND MAPPING**
- \* **ON THE SPOT MEDICAL RESPONSE**



# ECONOMICS

- \* **TOURISM INDUSTRY**
- \* **DISASTER RELIEF**
- \* **SEARCH AND RESCUE**
- \* **FISHING**
- \* **FIRE FIGHTING CAPABILITIES**
- \* **TIMBER / LOGGING INDUSTRY**



# MINING



## Infrastructure Costs

- Roads
- Rails
- Power
- Equipment
- Trucks
- Earth movers



# SHIPPING - TRANSPORT



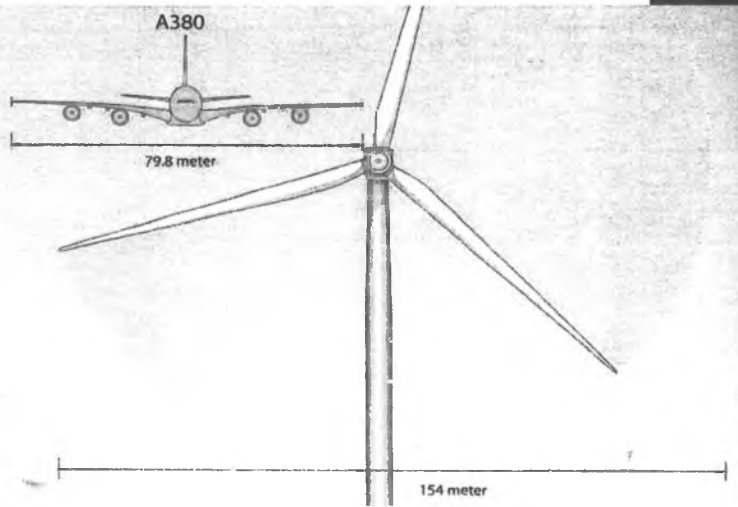
# ICE ROAD TRUCKING

Ice roads are a common feature across Alaska & Canada, and are typically the only way to access the most remote communities via ground transport.



# SPECIALTY TRANSPORT

B75 Quantum Blades are solid one-piece and 187 ft. long!



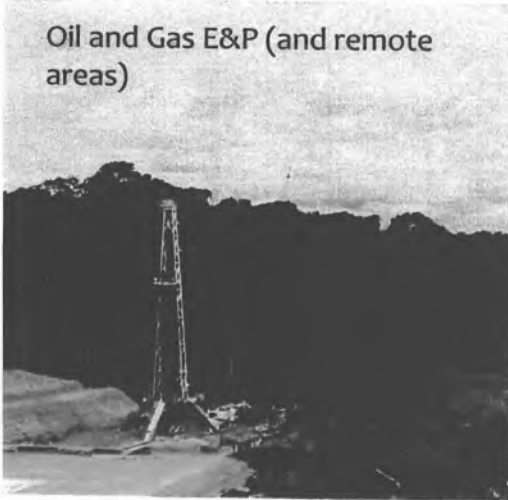
Each blade weighs about 25 tons



# IT'S ABOUT THE PAYLOAD, AS WELL AS THE PLATFORM



Transportation

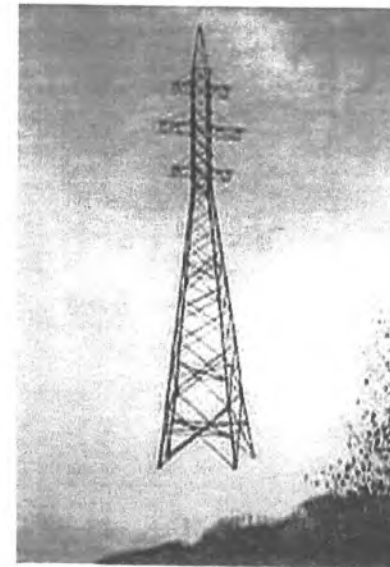


Oil and Gas E&P (and remote areas)

Mining



Power Grid/Cell Towers



# Alaskan North Slope Oil & Gas Potential Production & Today's Market Value

## ALASKA FACTS

- **First Major Oil Discovery:** 1957.
- **Industry Investment:** \$50B+ to date.<sup>1</sup>
- **State Production:** 16+ billion barrels of oil (bbo).<sup>1</sup>
- **North Slope Oil Fields:** 4 of 10 largest in US; 12+ currently producing.<sup>1</sup>
- **North Slope Estimates:** ultimate recoverable oil reserves of 22.2 bbo; up to 124 trillion cubic feet (tcf) of natural gas.<sup>1</sup>
- **Prudhoe Bay Field:** 1,000+ wells; largest oil field in North America & largest producing US oil field; site of large natural gas processing plant.<sup>2</sup>
- **Prudhoe Bay Estimate:** 2.5 billion barrels of recoverable oil & 426 million barrels in reserves.<sup>1</sup>
- **Pipeline Infrastructure:** 800-mile Trans-Alaska Pipeline System (TAPS); 1.5+ million barrels per day of spare capacity; supplying American energy to Americans without environmental risks or 'dirty oil' associated with Keystone Pipeline.
- **Ongoing Development:** major operators such as Exxon Mobil (NYSE:XOM | Market Cap: \$410.84B), BP (NYSE:BP | \$139.96B) and ConocoPhillips (NYSE:COP | \$71.86B) investing heavily in oil and gas-related projects.

1. Resource Development Council for Alaska (website), Oct. 18, 2012.

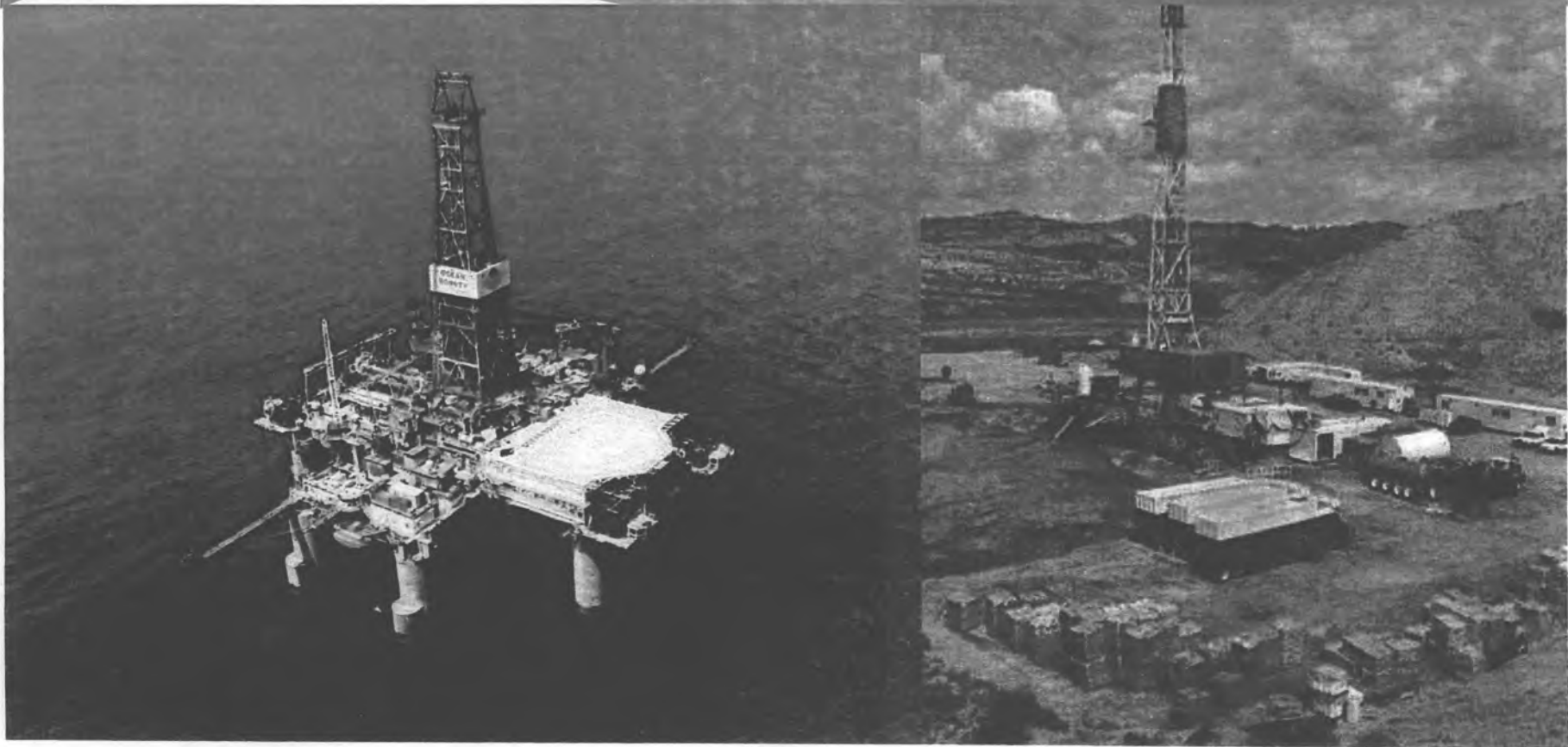
2. ConocoPhillips (website), Oct. 18, 2012.

**Today's Estimated North Slope Oil Reserves of up to 22.2 billion barrels of oil are valued at \$2.3 trillion at today's prices**

**Today's Estimated North Slope Natural Gas Reserves of 123 Trillion Cubic Feet (TCF) are valued at \$459 billion at today's prices**



# OIL AND GAS - 1



# OIL AND GAS - 2

## MACONDO INCIDENT

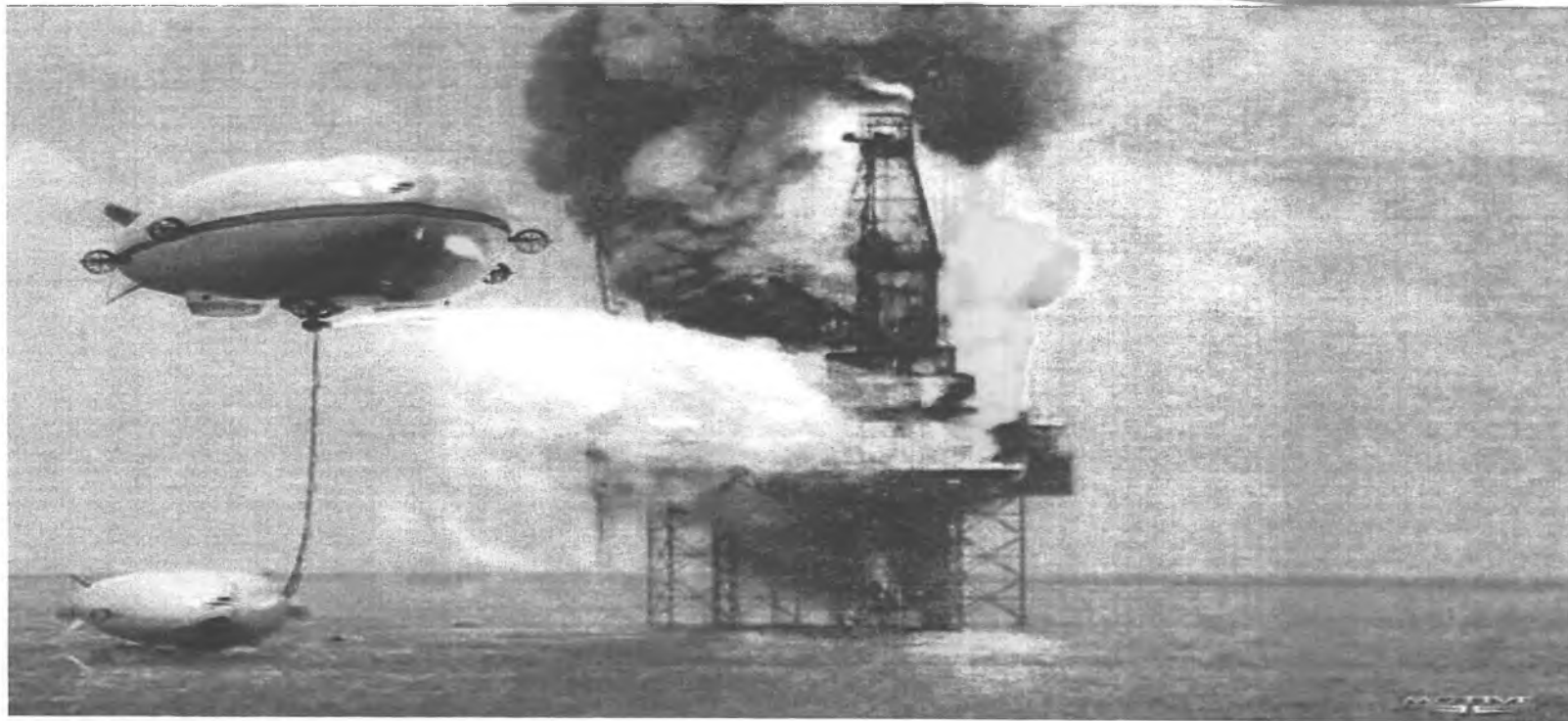
**It is critical to get a craft onsite as quickly as possible for command & control, well control, SAR, firefighting/suppression, oil spill containment & collection**

98% of water used  
in firefighting is  
wasted.  
Until Now!



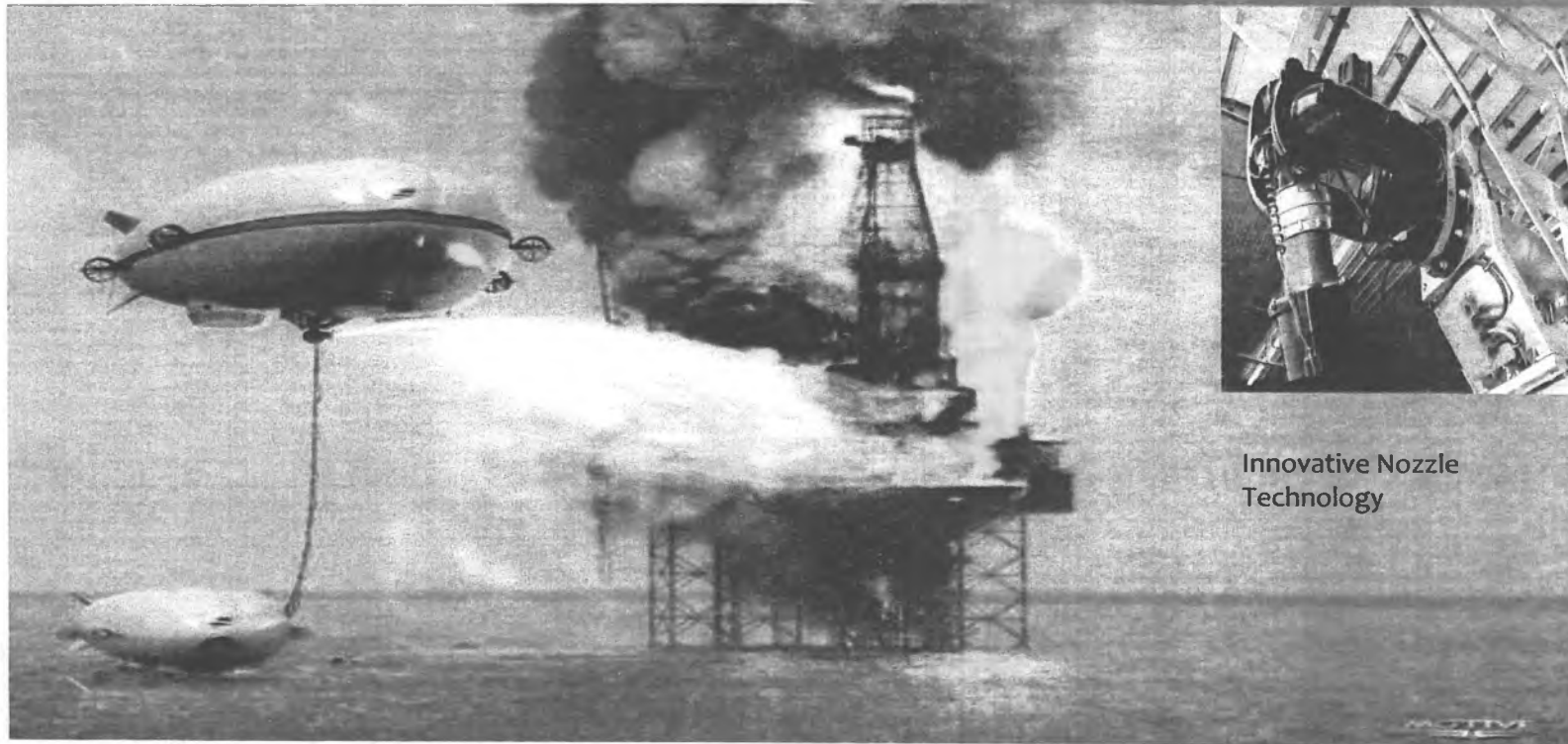
# APPLICATIONS OIL & GAS RAPID EMERGENCY RESPONSE

**Emergency Response, Firefighting, Containment, Collection, Search & Rescue (Could have be on scene at Macondo Incident in 1 1/2 hours)**



# APPLICATIONS OIL & GAS RAPID EMERGENCY RESponse

Emergency Response, Firefighting, Containment,

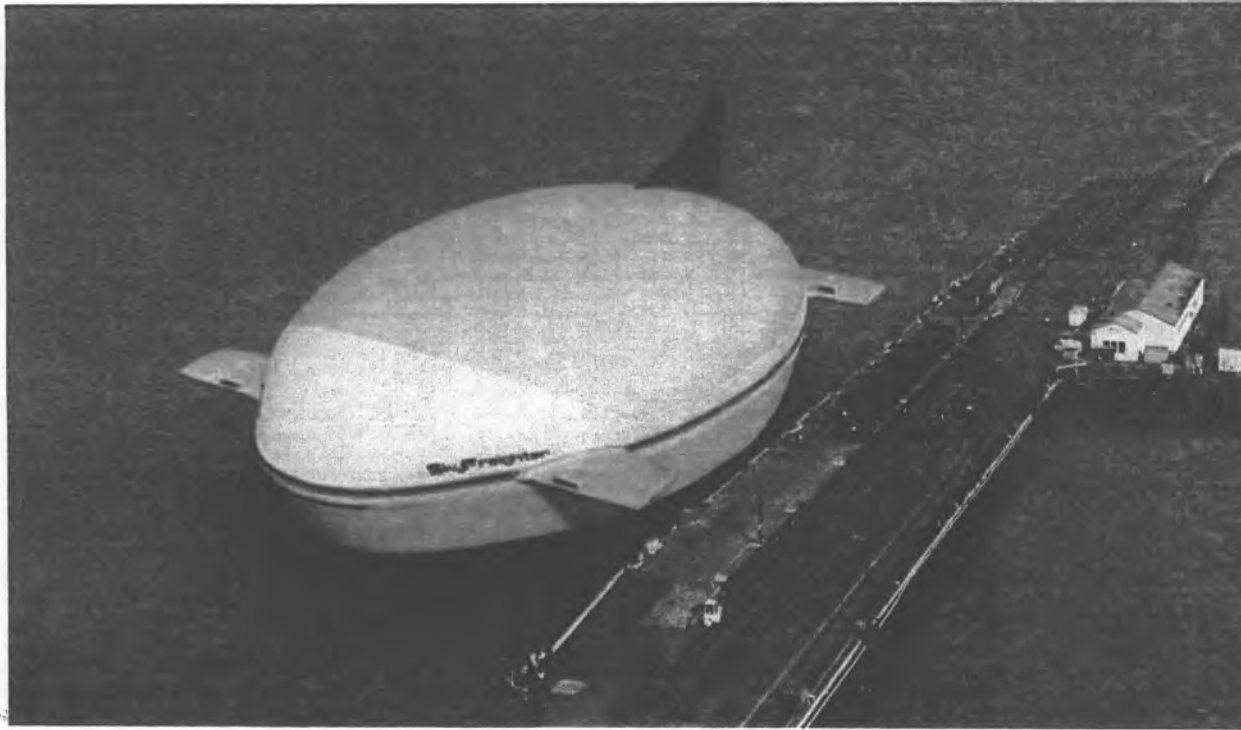


Innovative Nozzle  
Technology

New technology to lift & apply modified seawater



# LNG TRANSPORT



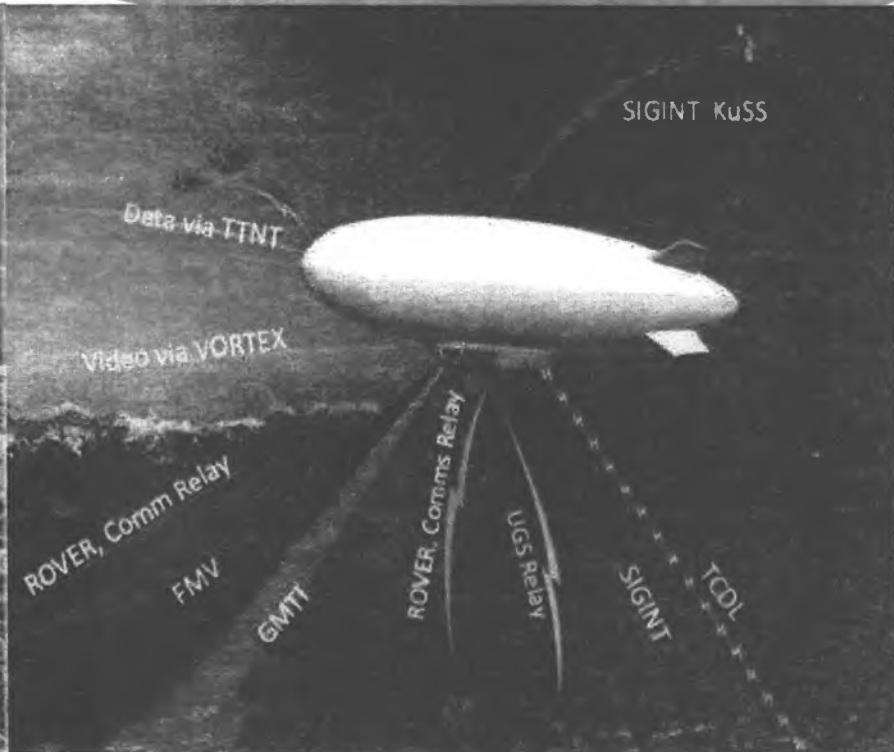
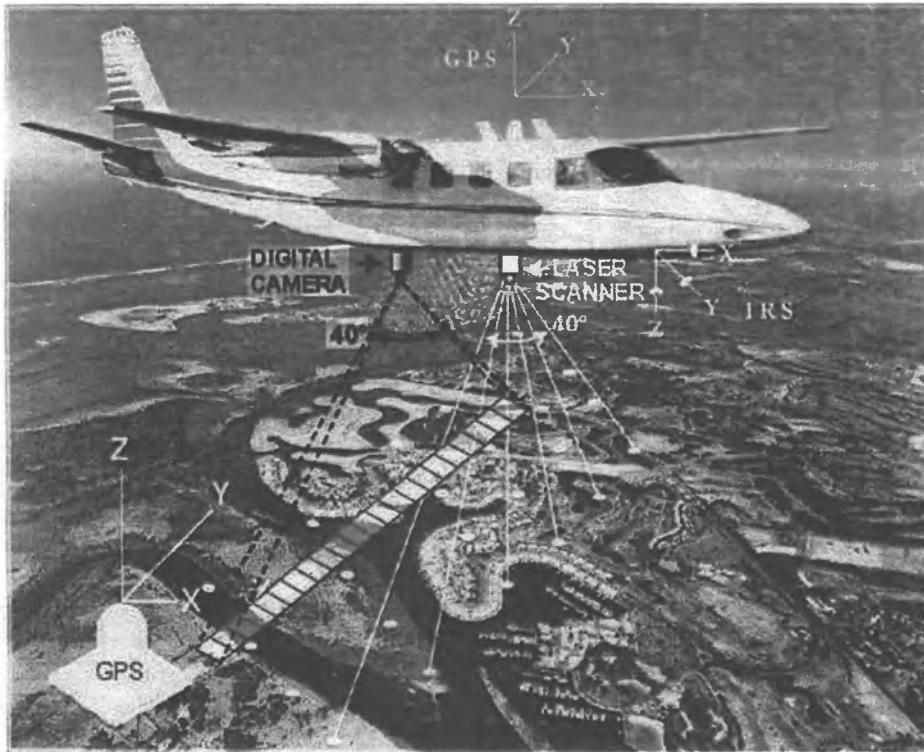
LNG GAS IS QUICKLY BECOMING A HIGHLY NEEDED COMMODITY BUT BEING ABLE TO DELIVER IT QUICKLY AND BE COST EFFECTIVE HAS BEEN AN ISSUE. ITS NOW POSSIBLE WITH THE SKYLIFT TANKER TO LOAD FROM ANY LOCATION AND DELIVER EASILY TO ALMOST ANYWHERE, MAKING THE USE OF LNG MORE PRACTICE AND ECONOMICAL.



# ALTERNATE TRANSPORT



# SURVEILLANCE AND MAPPING



courtesy: U.S. Air Force



# ON THE SPOT MEDICAL RESPONSE

100 TON VARIANT

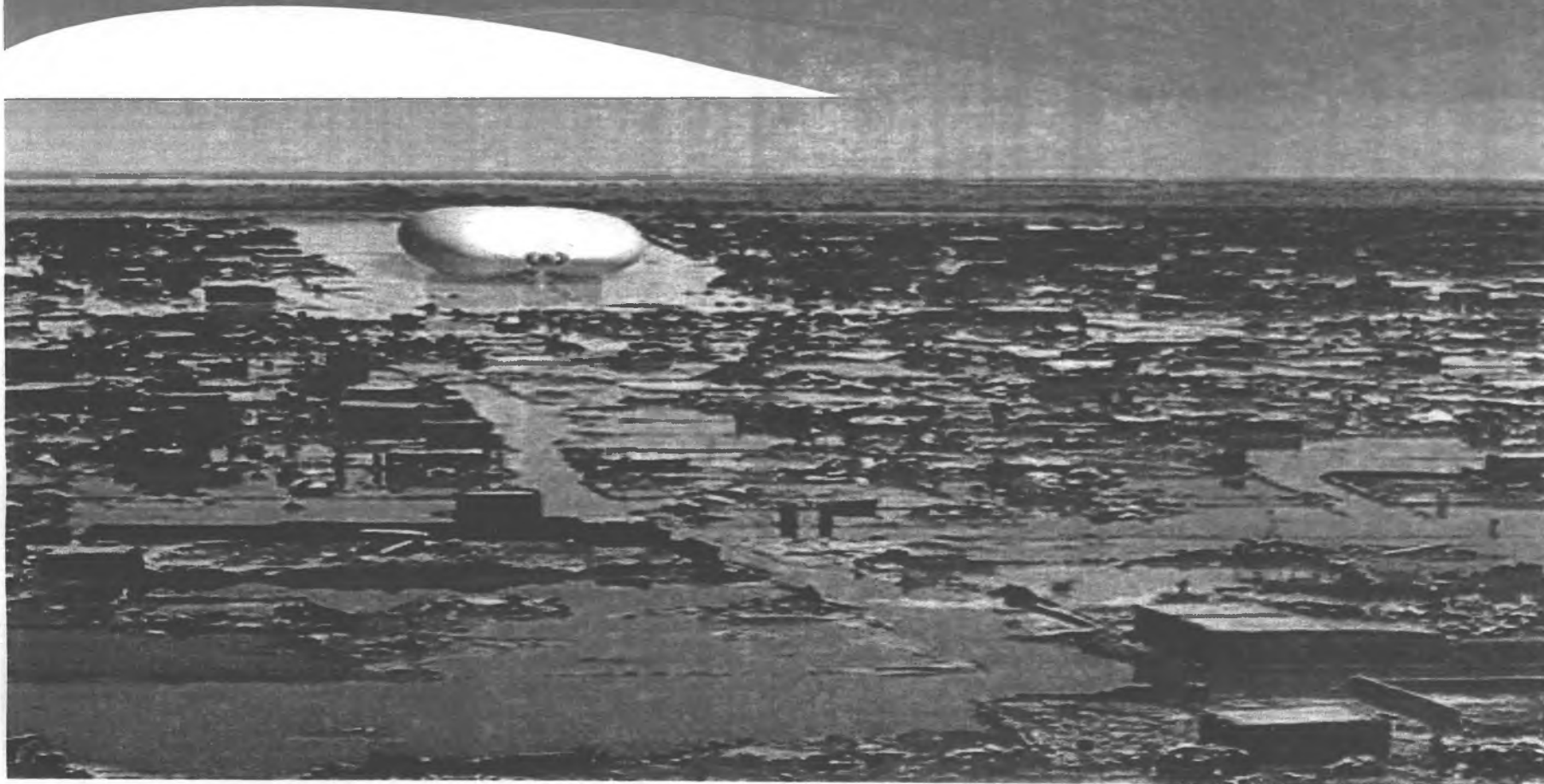
WHEN TIME IS NOT AN OPTION



# TOURISM



# DISASTER RELIEF



# DISASTER RELIEF

## Hurricane Katrina

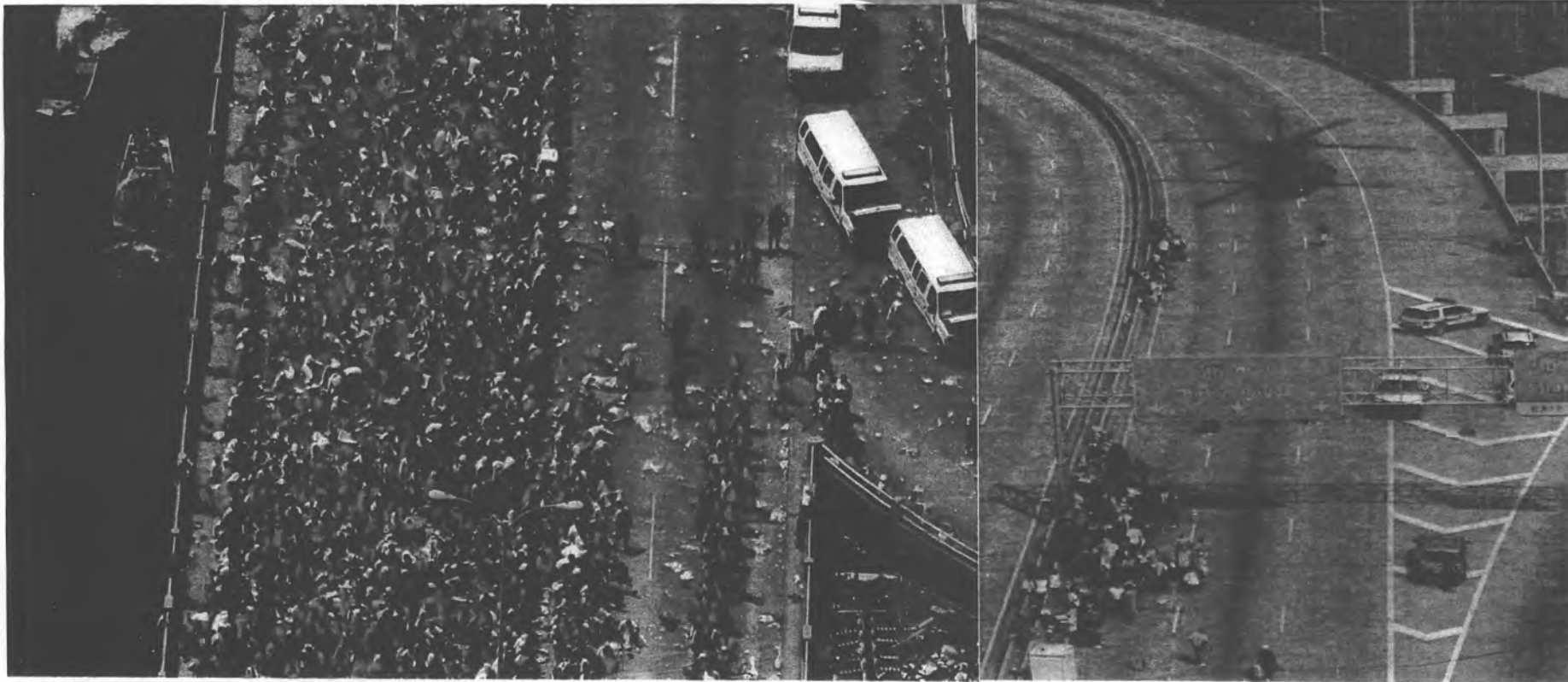


- 1,836 people died in the hurricane and
- An estimated \$90 billion worth of damage.



# DISASTER RELIEF

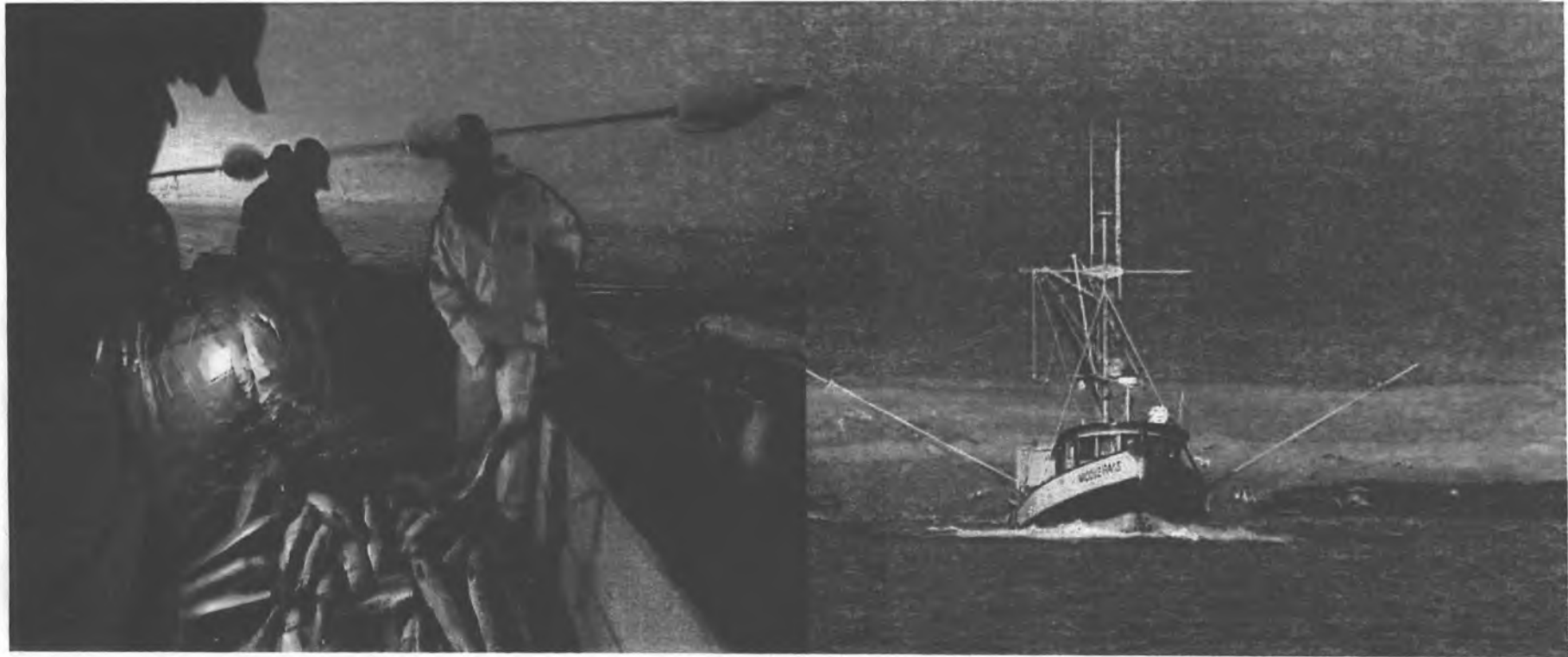
Hurricane Katrina – A few people at a time by helicopter



# SEARCH AND RESCUE



# FISHING ENHANCEMENT



# FIRE FIGHTING

## Wildfire Air Tanker Concept

An average of 50 Tankers are needed, but only 7 are operating\*  
Wildfire fighting experts agree 50 additional planes are needed  
to complement ground crews overwhelmed by the number and  
intensity of wildfires during the fire season.

The Cost of putting out wildfires is over \$1.65 billion/year.

\*July 3, 2012 Disaster Relief & Reuters, 2012



# HYBRID AIRCRAFT WILDFIRE AIR TANKER CONCEPT



NOT JUST A TANKER! A New Disruptive Firefighting System



# FOREST MANAGEMENT



# TIMBER AND LOGGING



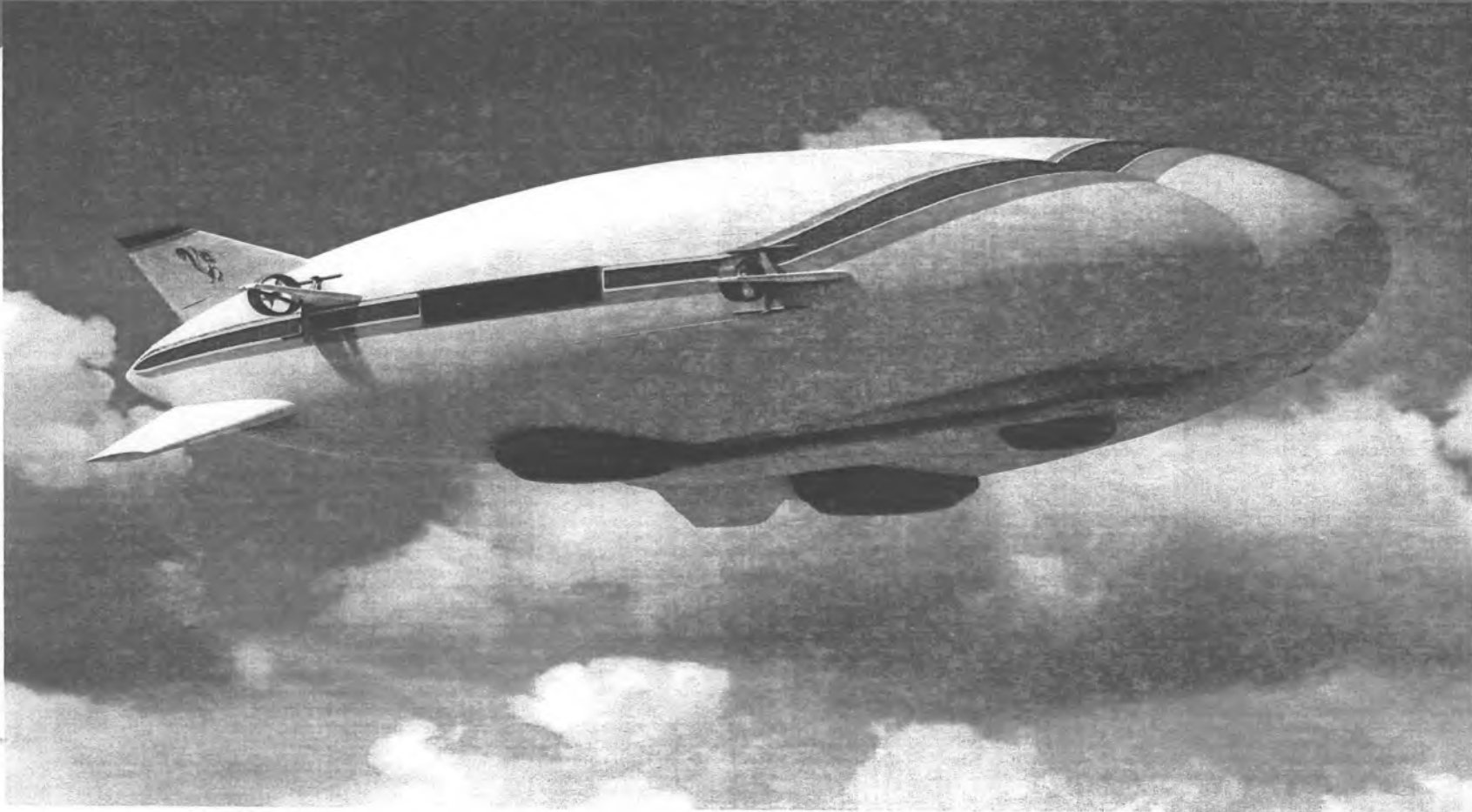
*© Alaska Forest Association*

*Don Finney Collection © Alaska Forest Association*

*Don Finney Collection*

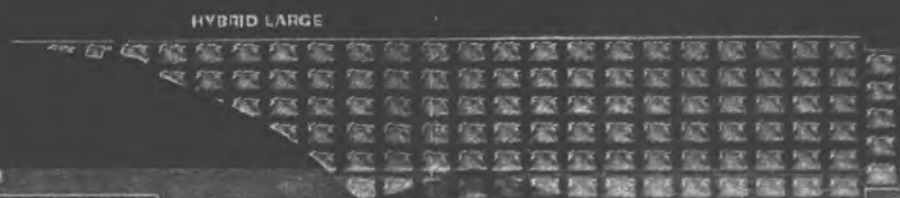


# SKYLIFT HYBRID AIRCRAFT



CARGO BAY COMPARISONS

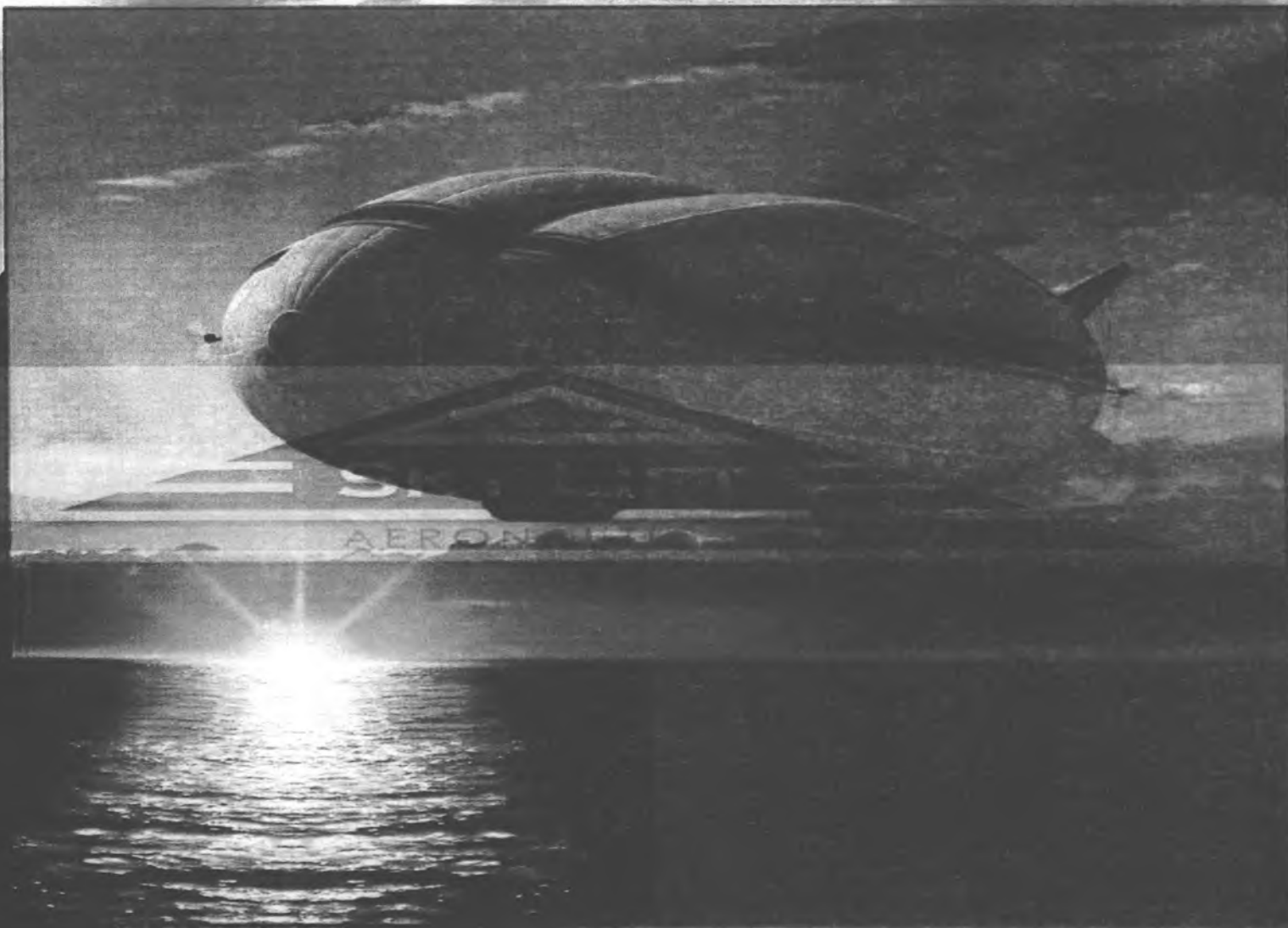
# HYBRID MATTERS



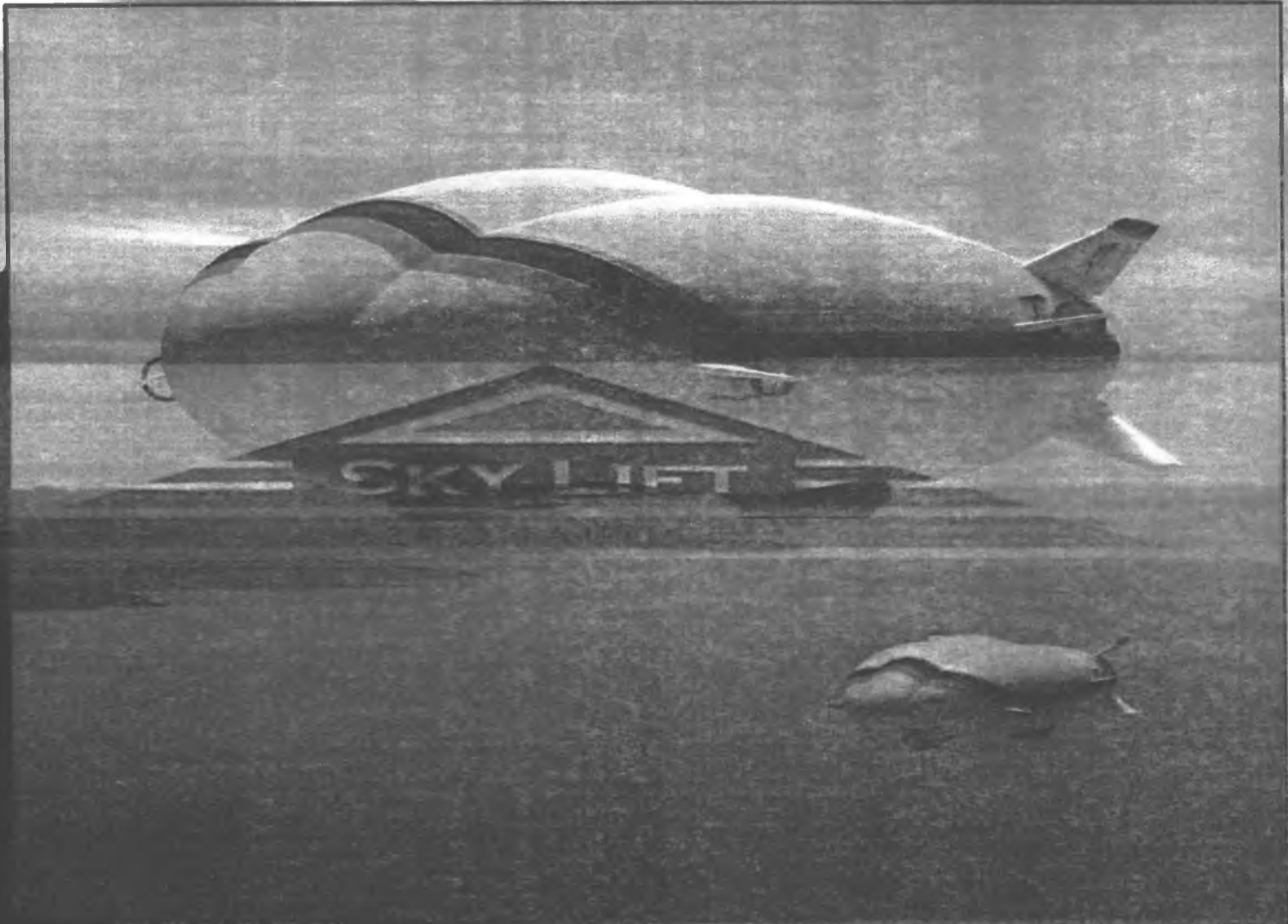
FLEXIBLE . AFFORDABLE . RELIABLE



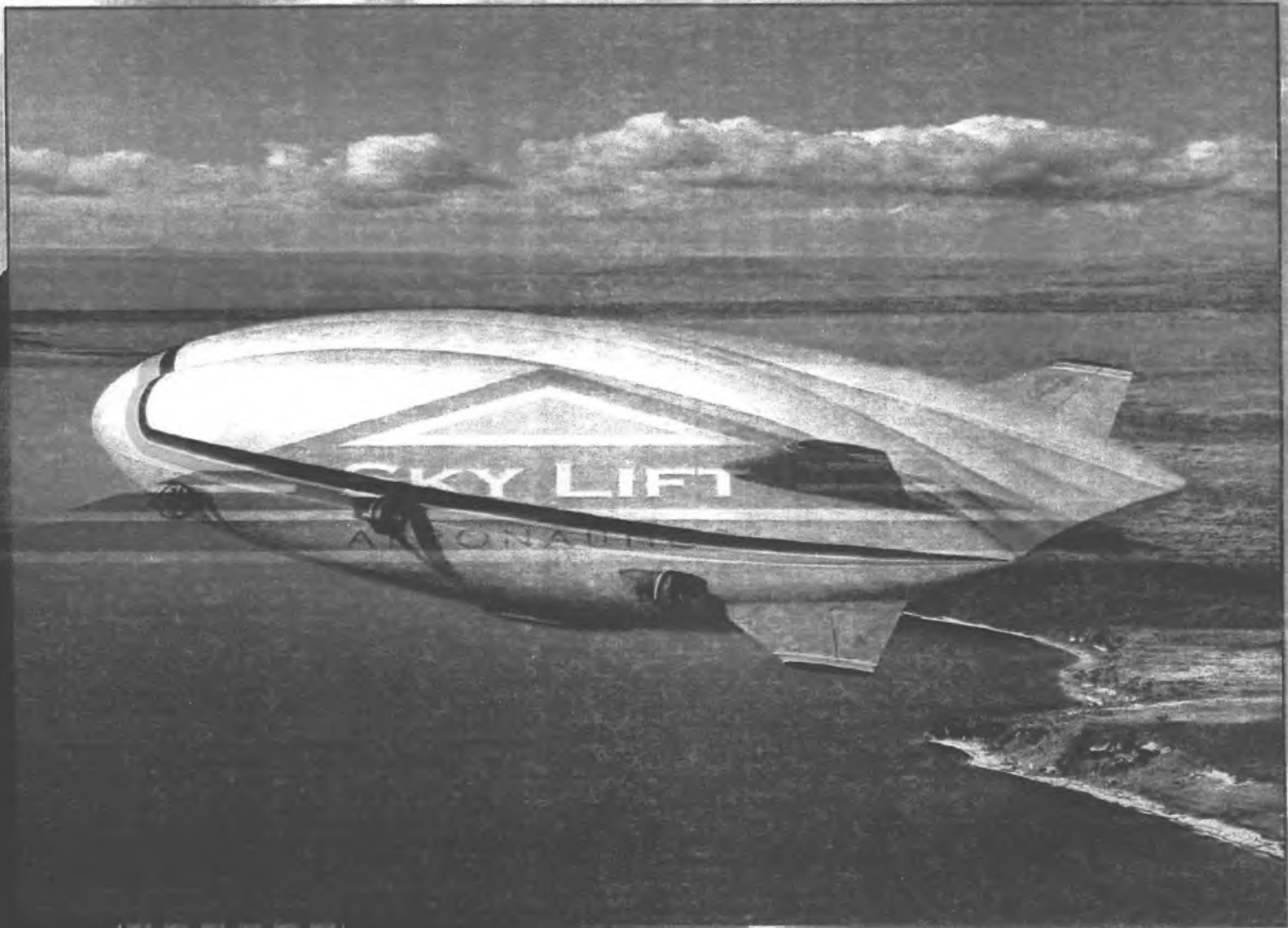
# HYBRID SMALL



# HYBRID MEDIUM



**HYBRID LARGE**



# 4 Proven Technologies Merged Into 1 Transformational Technology



**Helicopter**

**Vertical  
Airlift**



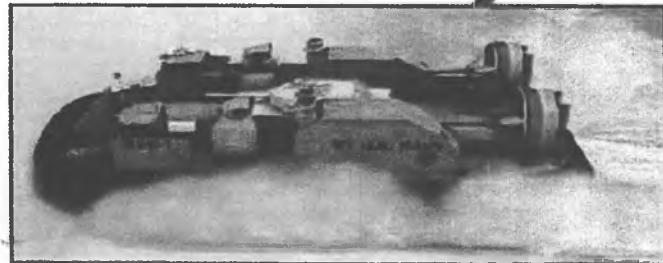
**Cargo Airplane**

**Deltoid Shape  
Aerodynamic Lift**

**Hybrid Aircraft**



**Vectored  
Thrust**



**Hover Craft**

**Air  
Cushion  
Landing  
System  
(ACLS)**

**Helium  
Filled  
Envelope  
Up to 80%  
Vertical lift**



**Airship (Blimp)**



# FOR MORE INFORMATION

## ON HOW TO ORDER THE AIRCRAFT AND OR SPECIFICATIONS

### HYBRID VARIANTS

20 TON CAPACITY  
100 TON CAPACITY  
500 TON CAPACITY

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1 702 232 9029

