RIG CONTRACTORS -A Changing Risk

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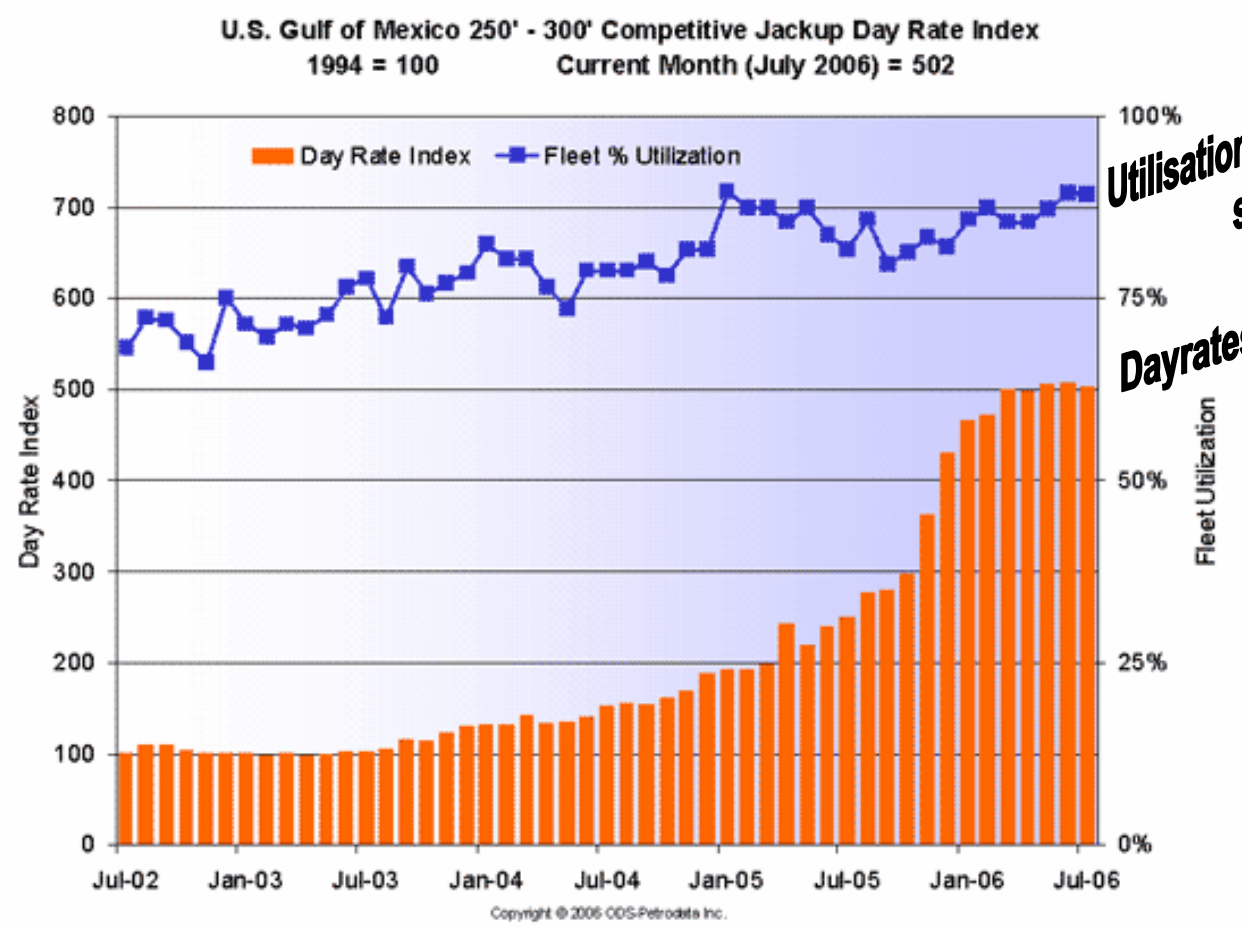
Agenda – Rig contractors - a changing risk

- An overheated rig market – setting the scene
- A changing risk - insurance implications
- Factors increasing loss cost
- Factors increasing loss frequency
- Summary

Rig market - Oil prices driving the industry

Rig market - Day rate and utilization - J/U USGoM



Utilisation increased by 25% since 2004

Dayrates increased +500% since 2004

Source: ODS Petrodata

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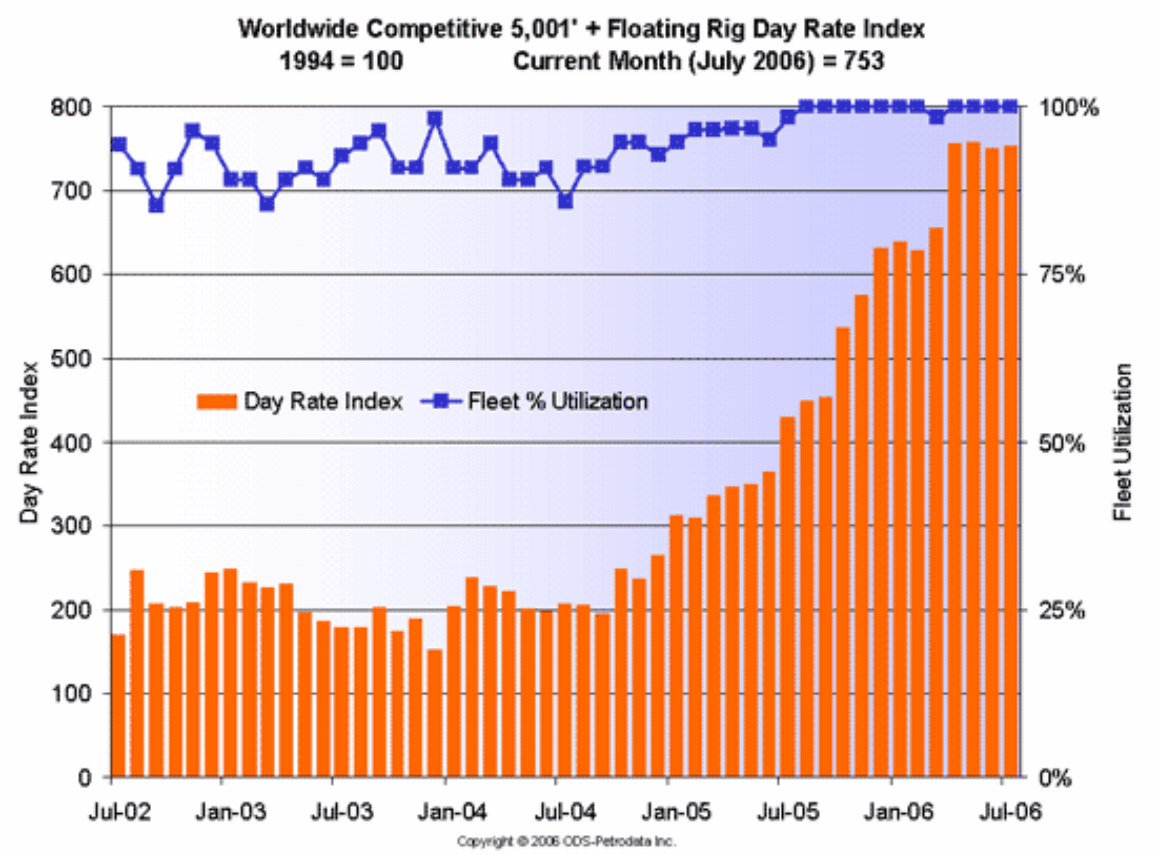
Rig Market - Day rate and utilization - Deep water rigs

+ 5000 feet water depth



Source: ODS Petrodata

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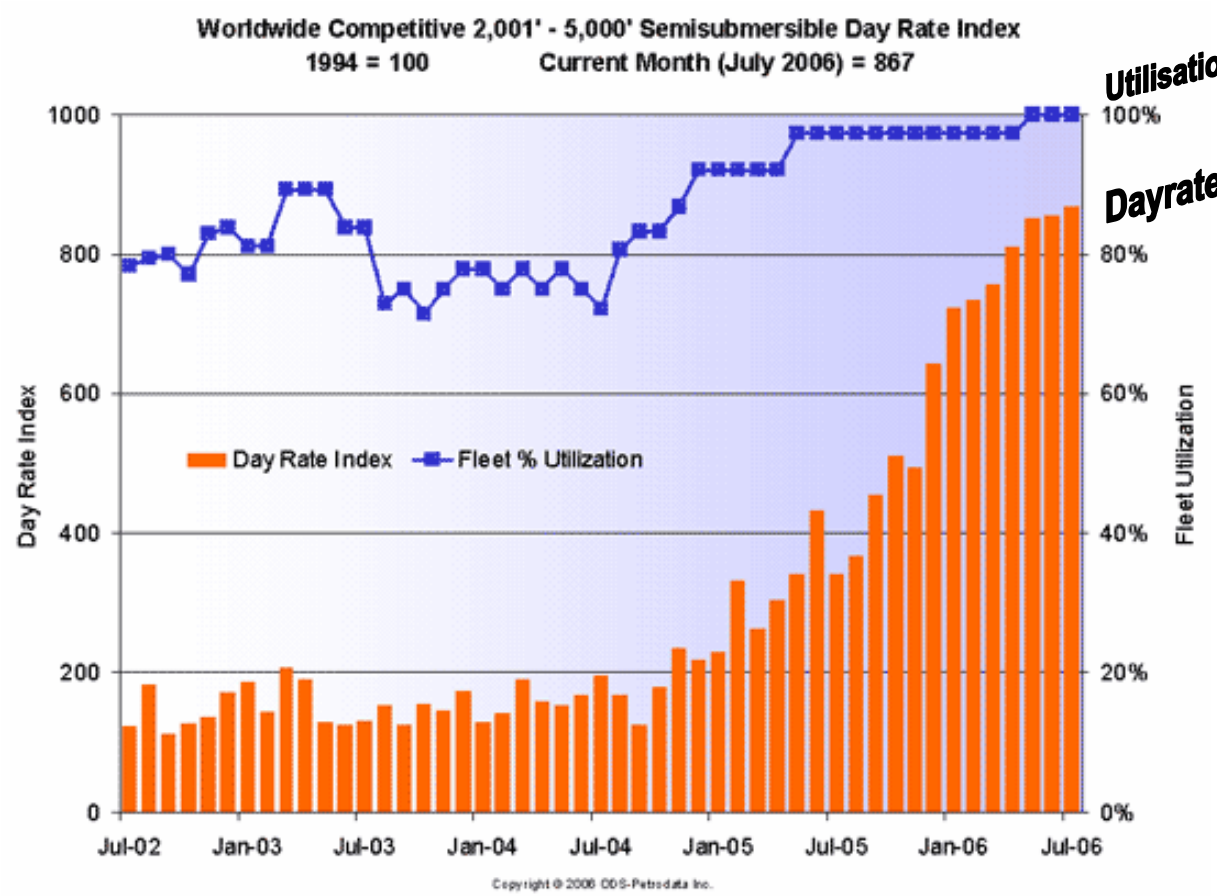
Rig market - Day rate and utilization - Semi submersible



Utilisation increased by 25% since 2004

Dayrates increased +600% since 2004

Source: ODS Petrodata

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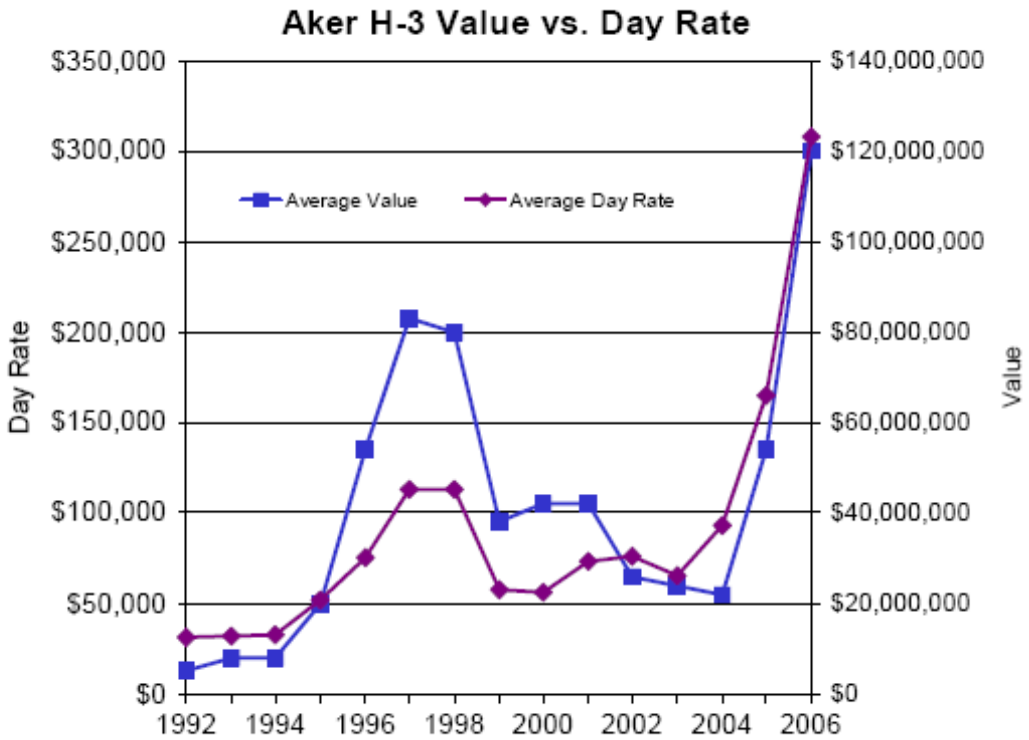
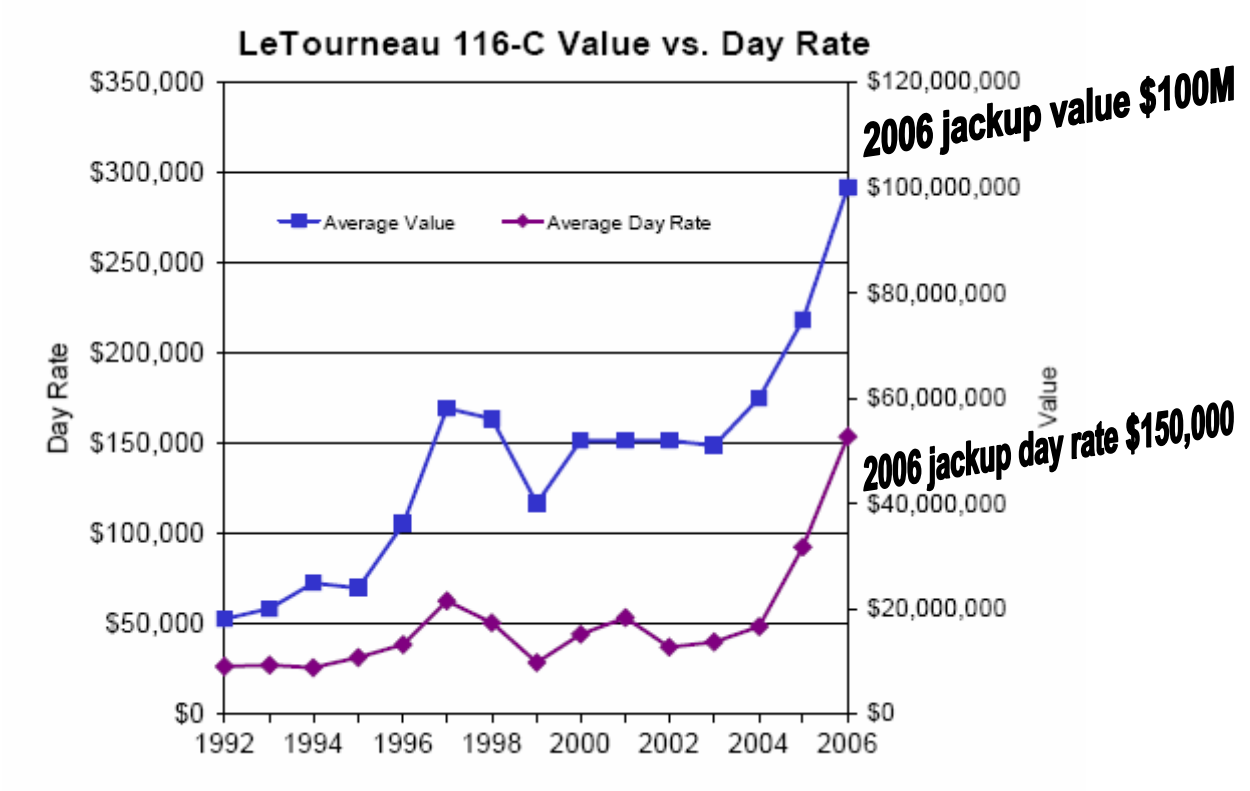
Rig market – Aker H-3 – Semi-sub



Source: ODS Petrodata

Rig market – LeTourneau 116-C - Jackup



Source: ODS Petrodata

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Rig market – Status of rigs

- World wide utilization rates is close to 100%
- Many old rigs have come out of "cold stacked"
- 2004 Cold Stacked vs today

	2004	2006 Now active	
Drillship	9		9
Jackup	18	13	3
Semisubmersible	20	5	15

Source: ODS Petrodata

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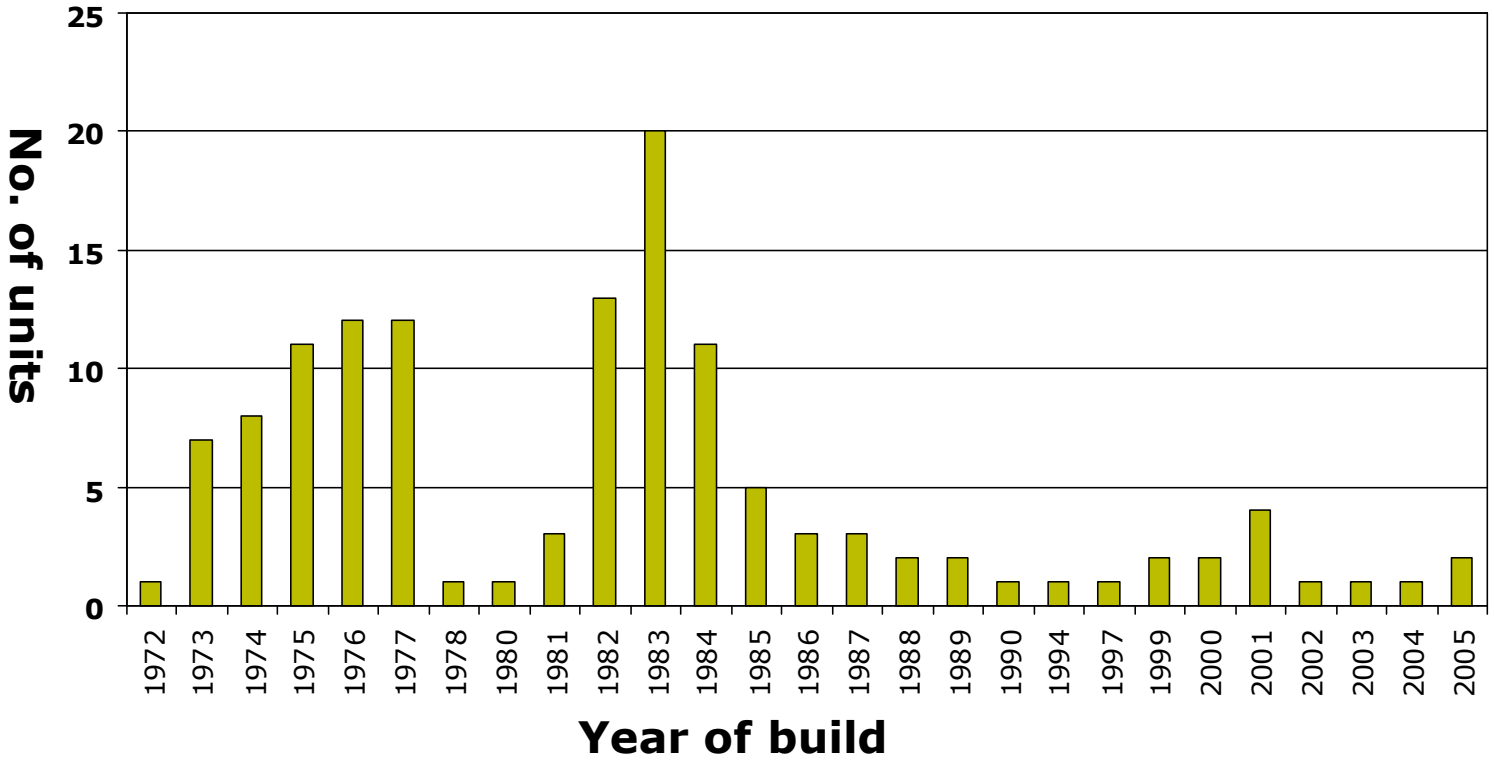
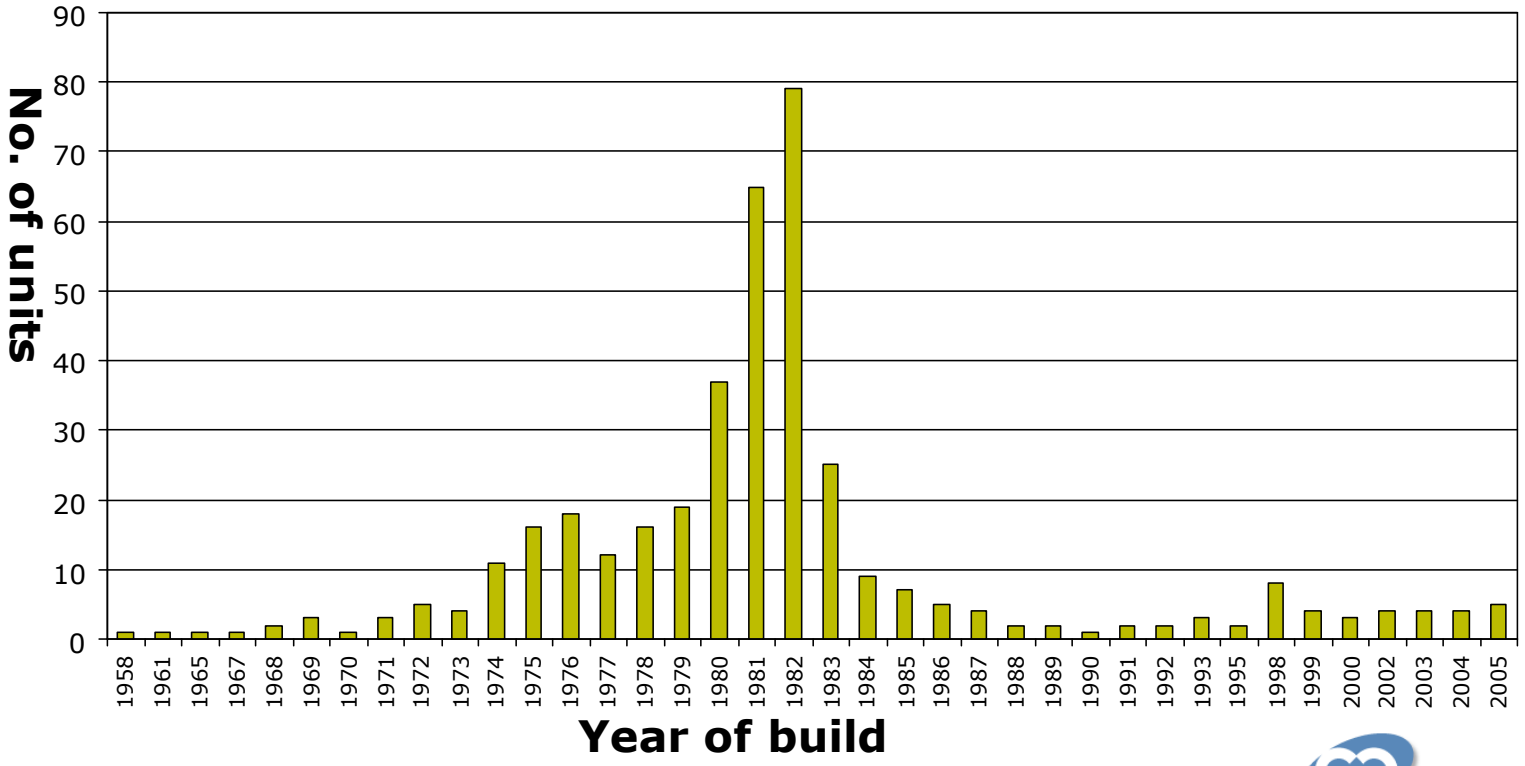
Rig market – Age profile Semi Submersibles



Rig market – Age profile Jack Ups



Rig market - Rigs under construction and at shipyards

Status	Rig type	Dec. 2005	Aug. 2006
Newbuild option	Drillship	n/a	2
	Jackup	n/a	5
	Semisubmersible	n/a	8
	Tender	n/a	1
Newbuild option Total			16
Shipyard	Drillship	6	10
	Jackup	30	30
Being repaired, classification, and upgrades (cold stacked unit)	Semisubmersible	16	21
	Submersible	4	
	Tender		1
Shipyard Total		56	62
Under Construction	Drillship	1	7
	Jackup	40	54
	Semisubmersible	10	20
	Tender		2
Under Construction Total		51	83
Grand Total		**107**	**161**

As per September 2006 "Under Construction" units now 100 , as options taken up

World rig forecast Jackup/Semi/Ships	Aug. 2006	Nov. 2006	Feb. 2007
Supply	562	565	572
Demand	526	556	590

No slowdown in the offshore drilling market is expected before 2009

Source: ODS Petrodata

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World Rig contractor market - today

- High oil prices
  - Oil companies replace reservoir reserves
  - Oil companies maximizing the upside by higher production rates
  - Smaller and aging fields have become economically viable
  - Hence, demand for drilling rigs increase world wide
- World wide rig forecasts predicts that demand will exceed supply for the near future
- Demand has increased day rates substantially
- Increased values of offshore rigs
- Demand has stimulated not only a large 'newbuild' order book but also encourage refurbishing of old units
- New companies are being formed

A changing risk – insurance implications

- Rig demand creates a large newbuild order, yard prices go up
- Increased day rates and focus on potential loss of revenue create larger values for Loss of Hire insurance
- Rig companies revalue their fleets values upwards creating higher risk severity. However, not increased at same rate as market values ??
- High rig activity means higher rig- move frequency (insurance claims will increase)
- Shortage of experienced crew on drilling units an area of concern

A changing risk – insurance implications

- **Annual Rig Claims = Average Claim cost x Frequency(no. of Claims)**

- **Factors increasing Claim cost:**
  - **Are Claims increasing in value, if so …..what are the driving forces?**
- **Factors increasing claims frequency**
  - **Are Claims frequency (per unit) increasing , if so… why ?**

Factors increasing loss cost - lead times

BOP stack	2+ years
Riser	2+ years
Jacking systems	1+ year
Mud pumps	14-16 months
Drawworks	16 months
Top drives	12-18 months
Derrick	8-12+ months
Diesel engines	2+ years
Deck cranes (Seatrax)	14 months
High Tensile steel	6 months

Such equipment +20% cost increase last 12 months

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Factors increasing loss cost – other increases

- Steel prices increased about 50% since 2003
- Rig Yards fully committed with New builds until 2009
- AHTS and Ocean-going tugs have increased day-rates up to USD 100,000 per day , +200 % from 2004. Not always available.
- Dry transport vessels “fully” booked for next 12months,

  a dry transport from Singapore to Africa can cost USD 5 million
- Crane barge rates +200 to 300% past 2 years

Summary – increased costs and increased repair time

- **Jackup Rig claim – Leg damage, punch through**
- **Policy deductible USD 1 million , LOH 45 days**

	2004	2006
Demobilisation/tow/mobilisation	USD 560,000 (14days)	1,440.000 (18days)
Waiting for Tug/AHTS	3 days	10 days
Yard costs	USD 4,000,000	USD 6,000,000
Yard time	60 days	180 days
Net PD claim	**USD 3,360,000**	**USD 6,440,000**
Days off hire	74 days	208 days
LOH daily amount	USD 30,000	USD 60,000
Net days	29 days	163 days
Net LOH claim	**USD 870,000**	**USD 9,780,000**

Factors increasing loss frequency

- More frequent rig moves (jackups), more Ocean transits
- Local rig moves (punch through)
- Quality Warranty Surveys are essential

Willis database,1994-2004 excluding named windstorm:

Jackup indexed claims = $1,138 million

Leg punch through =$252 million

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Factors increasing loss frequency

- More frequent rig moves (particularly jackups)
- Ocean/Regional relocation, even dry transport has its problems

Willis database,1994-2004 excluding named windstorm:

Jackup indexed claims = $1,138 million

Transit/Heavy weather =$184 million

Factors increasing loss frequency

- High drilling activity - correlation with increased blow-out frequency

Willis database,1994-2004 excluding named windstorm:

Jackup indexed claims = $1,138 million

Blow-out damage = $ 349 million

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Factors increasing loss frequency – human error

- The rig industry has identified a shortage in drill crews including specialist crews such as Jack Forman, sub-sea engineers, rig movers & barge masters.

Rig market – rigs under construction + options

	Number of Units	Key Persons Per Unit	Est. Value USD Millions	Demand for Key Rig Personnel
Jackup	59	62	9,440	3,658
Semisubmersible	28	76	14,000	2,128
Drillships	9	80	6,300	720
Total	**96**	**218**	**29,740**	**6,506**

Source: various

Rig utilization

	August 2004 Nr of Units (Utilized)	August 2006 Nr of Units (Utilized)	Rig Increase (Utilized)	Demand Increase for Key Rig Personnel
Jackup	288	314	26	1,618
Semisubmersible	120	150	30	2,297
Drillships	24	34	10	775
Total	**432**	**498**	**66**	**4,690**

Source: Various

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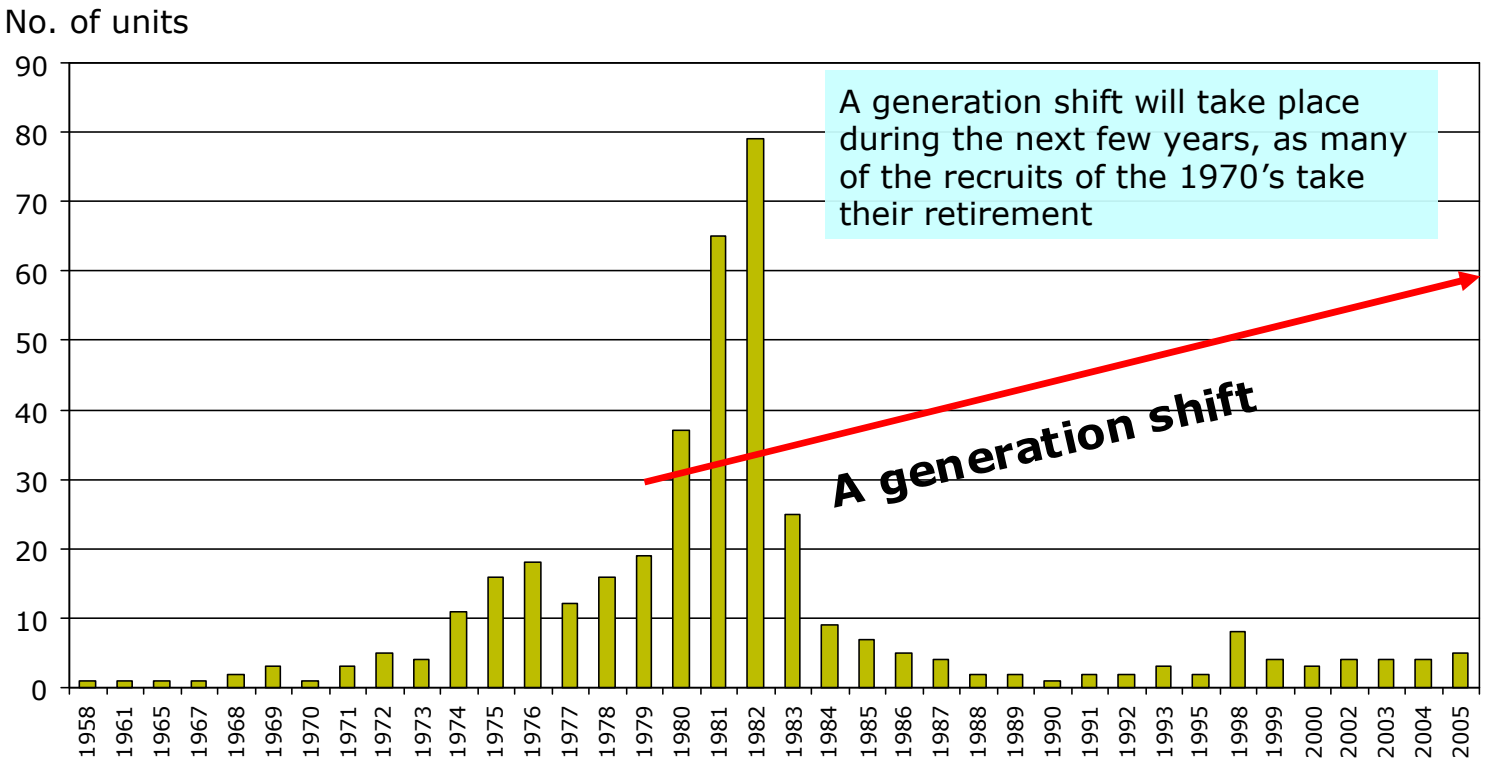
Rig market – Age profile of the drill crew on Jack Ups – The "good old boys" are going



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Factors increasing claims frequency – human error rig crew shortage

- **+10,000 new drill/rig crew need in a 5 year period**
- +Generation shift when drill crews of the late 1970's retire
- US rig contractor " We are re-hiring some of our pensioned righands on a 2 year deal"
- European contractor " Stealing from other companies is not the way to solve this issue. It only makes it worse"
- European contractor " We have a multi-year strategy for dealing with crew requirements based on an integrated recruitment plan

Claims development last 5 years

Year	Incidents	Average actual	Total Indexed	Average Indexed
2000	23	7,444,314	205,888,843	8,951,689
2001	20	12,400,968	298,088,698	14,904,435
2002	30	9,557,330	343,469,575	11,448,986
2003	13	7,770,940	119,090,628	9,160,818
2004	24	26,915,792	718,108,022	29,921,168
2005	69	19,213,275	1,325,716,000	19,213,275

Source: Willis Claims DB

- Estimated total premium between 100-150 million in 2000
- Estimated total premium between 250-300 million in 2005

- 2000-2004 period of low utilisation, hence less frequency

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Summary

- Rig values will remain high – loss severity increases
- Important rig parts such as Blowout Preventers will have a long lead time
- Tug / rig move costs will remain high.
- Quality warranty surveys
- Underwriters will have to pay higher repair costs, if deductibles do not increase
- Average periods under repair will increase significantly
- Underwriters will have much larger LOH claims if the waiting period/deductible does not increase
- THE BIG QUESTION IS …….

WILL CLAIMS FREQUENCY INCREASE ?

- Are the Rig Contractors able to handle the crewing shortage, recruit and train staff to keep their rigs in safe & experienced hands and to the same standard ?

  or

- Crew shortages = less experienced crews =Human error= higher claims frequency per unit = ?

  if so . . .

- What will be the annual claims in 2008?