



# THE EVER EXPANDING HSE ROLE OF THE CLIENT REPRESENTATIVE

IECO SEMINAR  
HQS WELLINGTON  
24 MARCH 2009

**By Rod Thonger (RPS Energy)**

**with help from**

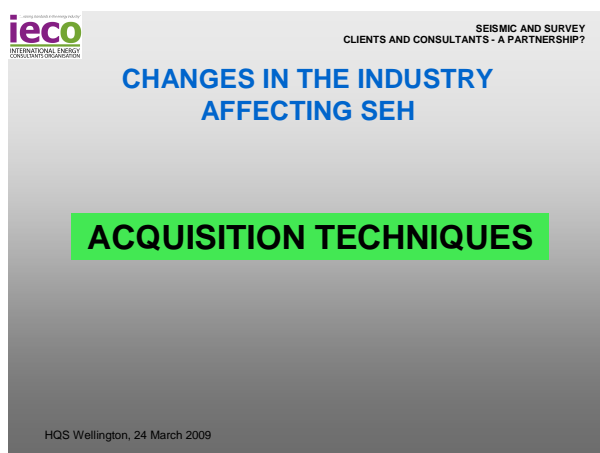
**Richard Llewellyn (Benchmark Geophysical)**

**THIS PAPER IS ABOUT THE GROWTH OF HEALTH SAFETY AND ENVIRONMENT AS BASIC INPUTS TO THE EXPLORATION END OF THE OIL INDUSTRY, AND HOW CHANGES IN THE WORLD AND IN THE INDUSTRY HAVE IMPACTED THAT IN MANY DIFFERENT WAYS.**

**SAFETY IN SEISMIC FIRST STARTED TO ACHIEVE HIGH PROMINENCE IN OPERATIONS IN THE MID 80S WITH AN INVITATION TO CONTRACTORS FROM SHELL MANAGEMENT TO MEET THEM IN THE HAGUE . A REVOLUTION WAS UNDERWAY, AND I'M A BIT CONCERNED TO REMEMBER THAT I WAS THERE, AND THERE ARE OTHERS IN THIS ROOM WHO HAVE BEEN AROUND EVEN LONGER! A GOOD EXAMPLE OF THE INDUSTRY DEMOGRAPHICS, WHICH WAS THE MAIN DRIVER FOR THIS CONFERENCE. SINCE THAT TIME WE HAVE HAD PIPER ALPHA, THE EXXON VALDEZ, THE E&P FORUM AND OGP, IAGC, IMCA, STEP CHANGE, MARINE MAMMALS, TREE PRESERVATION AND A SCORE OF INITIATIVES TO KEEP WHAT IS NOW SEH (IN ORDER OF ATTENTION PAID) NEAR THE TOP OF THE AGENDA IN THE PROCESS OF EXPLORING FOR OIL AND GAS.**

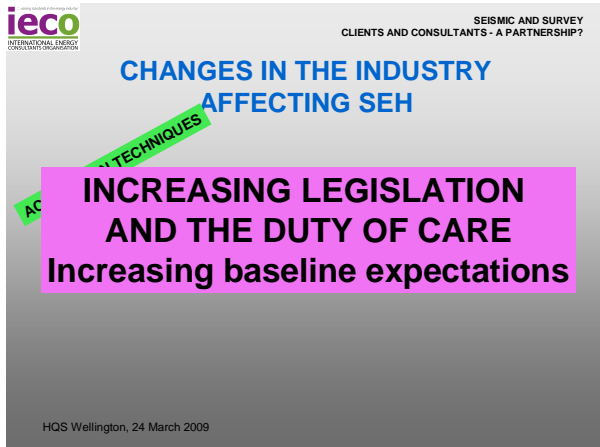
**FOR THE MAJOR OIL COMPANIES, AND MANY OF THE SMALLER ONES, EAGER TO BE EFFICIENT AND TO KEEP THEIR REPUTATIONS INTACT, THIS HAS MEANT A CONSIDERABLE INCREASE IN THE RESOURCES REQUIRED.**

**THE USE OF CLIENTS' REPRESENTATIVES TO OVERSEE FIELD OPERATIONS STARTED IN THE EARLY 70s AND HAS NOW DEVELOPED TO THE STAGE WHERE IT IS EXTREMELY UNUSUAL FOR AN OPERATOR TO NOT HAVE SOMEONE WORKING ON THEIR BEHALF ON SITE. THE ROLE HAS USUALLY INVOLVED CHECKING ON TECHNICAL SPECIFICATIONS, ENSURING THAT THE INVOICES REFLECTED THE WORK THAT HAD BEEN DONE, AND TO SEE THAT THERE WAS ADEQUATE PLANNING FOR THE NEXT DAY'S WORK. AS ATTENTION TO SAFETY GATHERED PACE, THE SAFETY ISSUE BECAME PART OF THE FIELD REPRESENTATIVE'S BUSINESS ALSO.**



**I SAID EARLIER THAT BOTH TECHNICAL AND INTERNATIONAL EVENTS HAD LED TO CHANGES IN THE WORLD OF EXPLORATION. THE 80S ALSO SAW GREAT LEAPS FORWARD IN THE TECHNIQUES USED, SUCH AS 3D USING MULTIPLE STREAMERS AND BOATS AT SEA AND NEW GEOPHONE LAYOUTS, EXPLOSIVES PATTERNS AND VIBRATOR VARIATIONS ON LAND.**

**ALL THIS ADDED TO THE WORK LOAD OF THE TECHNICALLY EXPERIENCED REPRESENTATIVES, AND MANY OF THEM FELT THAT PROVIDING ASSURANCE OF THE SEH STANDARDS ON EACH OPERATION AS WELL WAS GOING BEYOND THEIR EXPERTISE. THE PERCEPTION WAS INCREASING THROUGHOUT THE INDUSTRY THAT SEH WAS INCLUDED AS STANDARD, AND THAT STANDARD WAS INCREASING. AND WERE THEY LIABLE FOR SHE AS WELL AS TECHNICAL QUALITY?**

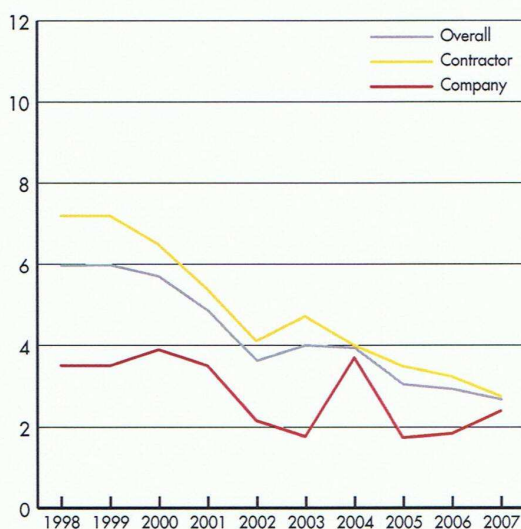


THE DIRECTION OF LEGISLATION WAS INCREASINGLY BEING SUMMED UP UNDER THE PHRASE 'THE DUTY OF CARE'. THIS 'DUTY OF CARE' IS NORMALLY USED IN A LEGAL SENSE, AND OF COURSE MUCH OF OUR WORK IS OUTSIDE UK, EUROPE, US LEGISLATION. ALSO, IN MANY OF OUR COMPANIES, WE HAVE SELF-EMPLOYED CONSULTANTS RATHER THAN EMPLOYEES SO THE LEVEL OF RESPONSIBILITY COULD BE SAID TO BE REDUCED. NEVERTHELESS, I

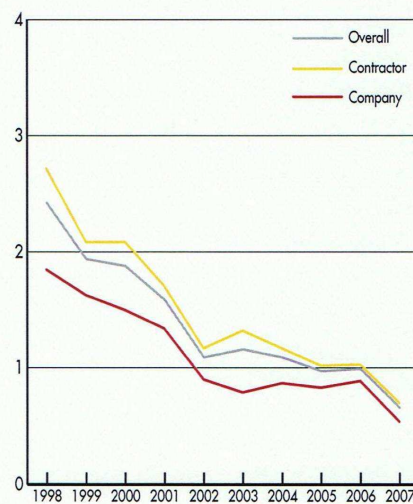
BELIEVE WE MUST HAVE A 'DUTY OF CARE', IT IS THE MEANS BY WHICH WE PROTECT OUR GREATEST ASSETS, OUR PEOPLE. MOSTLY WE DON'T ACTUALLY HAVE ANY OTHER ASSETS, SO THEY ARE TRULY OUR 'MOST IMPORTANT'.

AT THE END OF THE 80S AND THROUGH THE 90S, THE INDUSTRY SAW THE ARRIVAL OF SEISMIC SEH SPECIALIST COMPANIES. INITIALLY THERE WAS CONCERN AT THE INCREASING COSTS, BUT THE BENEFITS OF EFFICIENCY AND REPUTATION GAINED GREATER CREDENCE AND SOON IT BECAME COMMON, FIRST TO DO AUDITS, AND THEN TO PROVIDE ADDITIONAL FULL-TIME SUPPORT WORKING ALONGSIDE THE TECHNICAL QC. NOT ONLY SAFETY, BUT SURVEY AND INSTRUMENTATION SPECIALISTS BECAME COMMON ALSO.

Total recordable injury rate – company & contractors  
 per million hours worked



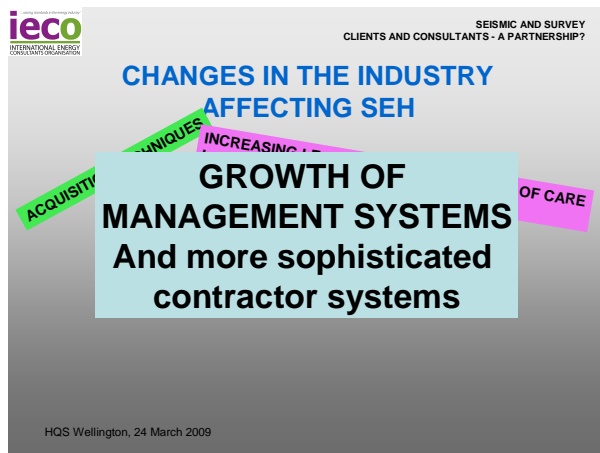
Lost time injury frequency – company & contractors  
 per million hours worked



THE COMPANIES RECEIVED ENCOURAGEMENT IN THIS APPROACH, PARTICULARLY FOR BETTER SAFETY, BY THE CONTINUALLY IMPROVING STATISTICS ISSUED BY E&P FORUM/OGP. THE 2008 STATISTICS BY THE WAY SHOULD BE AVAILABLE IN JUNE. AS

**YOU CAN SEE HERE, WE HAVE THE LOST TIME INJURY FREQUENCY FOR THE LAST TEN YEARS, AND HERE IS THE TOTAL RECORDABLE INJURY RATE.**

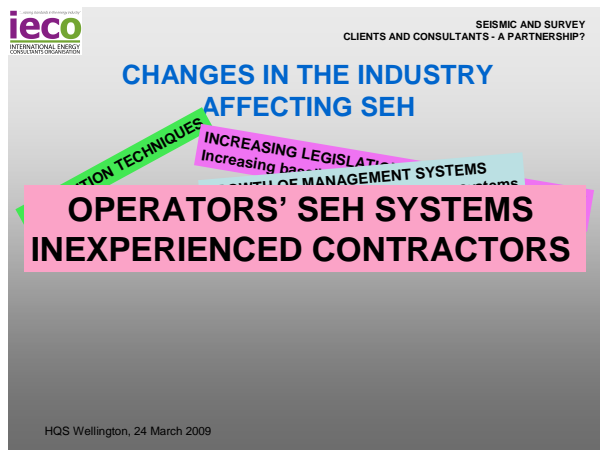
**THERE WAS NO DOUBT THAT INCLUDING THE SAFETY IN THE EXPECTATIONS OF THE TECHNICAL REPRESENTATIVES WAS BECOMING A STRAIN. A MAJOR PART OF THE SEH WAS THE COLLECTION OF STATISTICS, AND MANY OF THESE REPRESENTATIVES WERE FINDING BOTH THAT THEIR TIME WAS TAKEN UP WITH THIS DAILY, MONTHLY AND FINAL REPORTING, BUT ALSO LONGER DAILY CONVERSATIONS WITH THEIR OPERATIONS MANAGERS.**



**IN FACT, MORE OF THESE REPRESENTATIVES WERE BECOMING CONCERNED THAT THEY WERE NOT QUALIFIED TO PRONOUNCE ON MANAGEMENT SYSTEMS, PROPER ACCIDENT INVESTIGATION AND REPORTING, AUDITS AND RISK ANALYSIS. THEIR COMPETENCE AND FUTURE EMPLOYMENT WAS BECOMING A CONCERN TO THEM. IN ADDITION, THE CONTRACTORS WERE MAKING GREAT**

**STRIDES FORWARD IN THE SOPHISTICATION OF THEIR SYSTEMS AND TRAINING OF THEIR PERSONNEL, WHICH THEY FELT UNABLE TO CHALLENGE. OF COURSE, MANY OF THESE REPRESENTATIVES WERE ABLE TO HANDLE THE ISSUES, ESPECIALLY ON THE SIMPLER CREWS, BUT NEVERTHELESS THE USE OF SEH SPECIALISTS CONTINUED TO INCREASE**

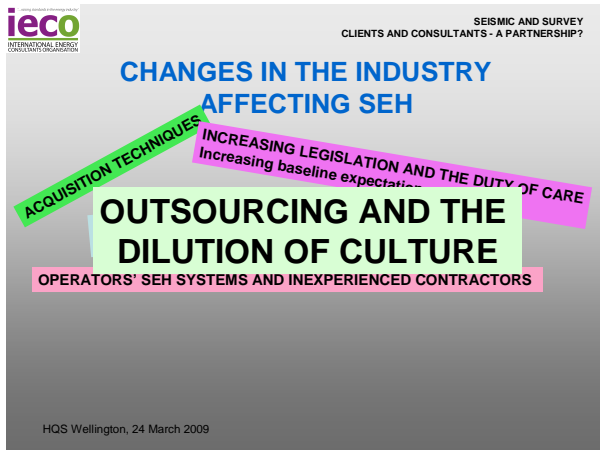
**ALONGSIDE IMPROVED TRAINING FOR THE REPRESENTATIVES.**



**AS THE OPERATORS' REQUIREMENTS GREW, SO THEY OFTEN CREATED THEIR OWN MANAGEMENT SYSTEMS AND THERE BECAME A DANGER OF THEM TRYING TO IMPOSE THEIR SYSTEMS ON THOSE OF THE CONTRACTORS. THIS LED TO THE SITUATION OF CONTRACTORS, KEEN TO DO WHATEVER THEIR CLIENTS WANTED, OPERATING TO NEW SYSTEMS ON EACH CONTRACT. THIS WAS NOT A GOOD**

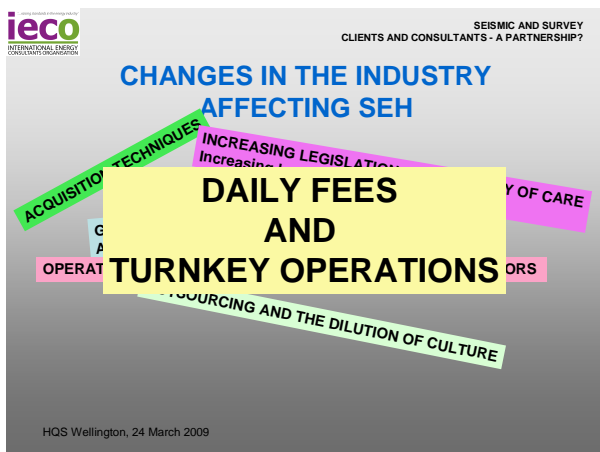
**WAY FOR THEM TO BUILD THEIR OWN SYSTEMS AND GAIN CONFIDENCE IN TRAINING AND APPLYING THEM TO THEIR PERSONNEL.**



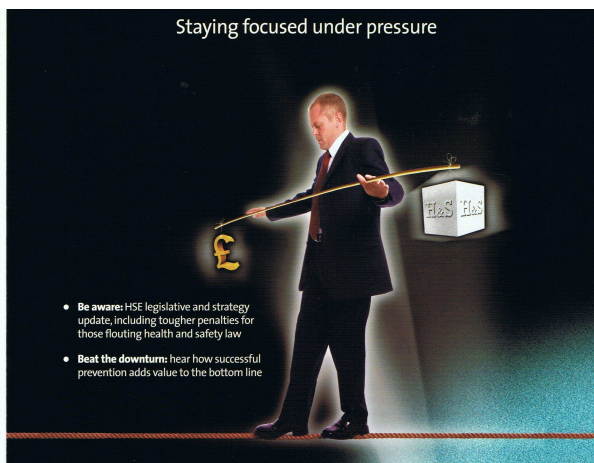


ONE OF THE THINGS WHICH WE DISCUSS REGARDING THE SUCCESS OF SAFETY PROGRAMMES IS THE SAFETY CULTURE OF A COMPANY. BY WHICH WE MEAN ATTITUDES AND BEHAVIOURS, AND SHARED PERCEPTIONS OF RISK. AN ORGANISATIONAL CHANGE WE HAVE SEEN OVER THE YEARS HAS BEEN THE SHEDDING OF IN-HOUSE EXPERIENCE IN FAVOUR OF OUTSOURCING THE WHOLE PROCESS OF COLLECTING SEISMIC DATA.

THE OPERATORS' CULTURE WAS BEING DILUTED, AND IT HAS TO BE SAID THAT THE USE OF SEVERAL DIFFERENT QC PROVIDERS HAS LED FROM TIME TO TIME TO COMPETITION BETWEEN THE PARTIES. IT IS NOTABLE THAT THIS HAS BEEN RECOGNISED BY SEVERAL OF THE COMPANIES AND PROPER BRIEFINGS ARE NOW MORE FREQUENT IN ADVANCE OF OPERATIONS.



THE COMMON CHANGE FROM EARNING DAILY FEES TO THAT OF TURNKEY CONTRACTS, WHERE FEES WERE EARNED BY PRODUCTION ACHIEVED, ALSO LED TO A MISALIGNMENT OF OBJECTIVES. THE OPERATOR WANTED SAFE PRODUCTION, THE CONTRACTOR WANTED AS MUCH PRODUCTION AS POSSIBLE.

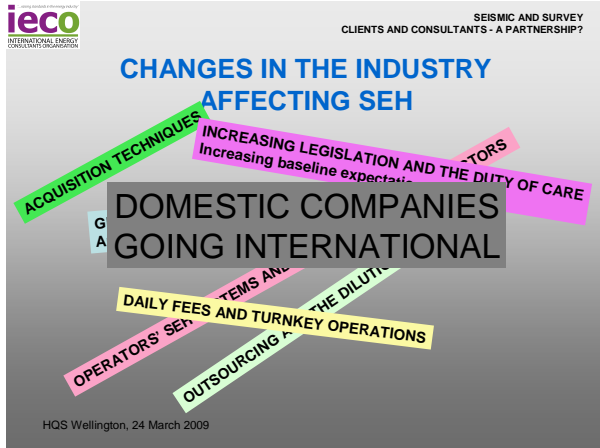


THIS SLIDE WAS PART OF AN ADVERTISEMENT FOR A CONFERENCE HOSTED BY ROSPA. IT LOOKS RATHER CLEVER. ANY COMMENT?

OF COURSE THE EDUCATED BELIEVER WOULD SAY THAT THE TWO, PRODUCTION AND SAFETY, GO HAND IN HAND BUT THIS WAS NOT ALWAYS UNDERSTOOD IN THE FIELD, AND IT BECOMES EVEN MORE OF AN ISSUE WHEN MUCH OF THE FIELD WORK IS CARRIED OUT BY SUB-

CONTRACTORS. EVERY VARIATION OF EARNING MONEY FOR WORK DONE, RIGHT

THROUGH THE CONTRACTING PROCESS, CAN BE SEEN, AND THE MANAGEMENT OF SUB-CONTRACTORS CONTINUES TO BE A MAJOR INDUSTRY ISSUE.

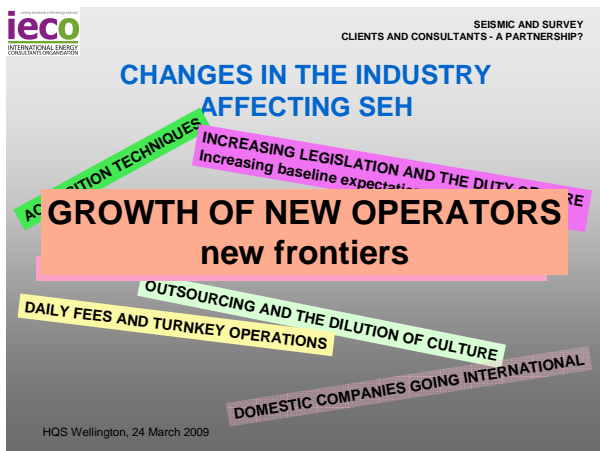
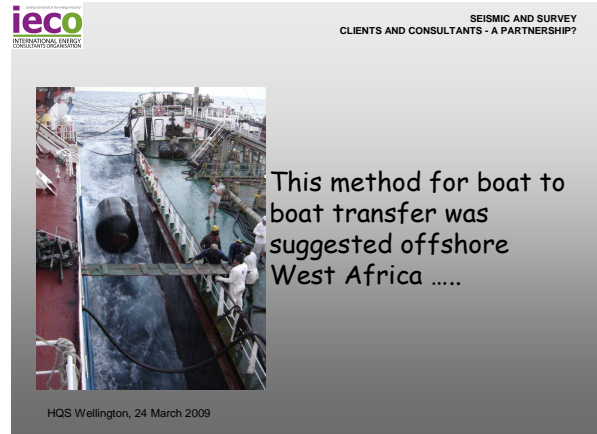


AND THEN ALONG CAME THE DISSOLUTION OF THE SOVIET UNION AND THE GROWTH OF PRIVATISATION. SINCE THEN, MANY DOMESTIC SEISMIC CONTRACTORS HAVE BEEN ENCOURAGED TO GO INTERNATIONAL, OFFERING THEIR SERVICES AT SIGNIFICANTLY LOWER RATES THAN THOSE OF THE ESTABLISHED

INTERNATIONAL CONTRACTORS.

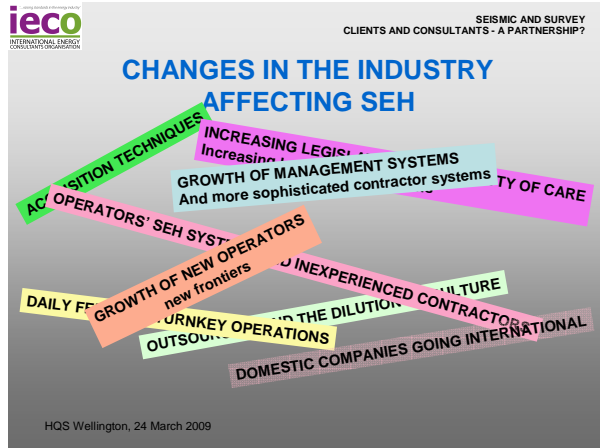
WHILE THEIR TECHNICAL ABILITIES HAVE BEEN GOOD, THEIR KNOWLEDGE OF THE SEH EXPECTATIONS OF MODERN SEISMIC, BOTH AT HOME AND OUTSIDE THEIR OWN BORDERS, HAS BEEN BADLY LACKING. THE RESULTS HAVE BEEN SEEN ONLY TOO CLEARLY IN TERMS OF POOR PERFORMANCE AND ACCIDENTS. AS WELL AS THESE WELL ESTABLISHED BUT 'NEW'

CONTRACTORS ARRIVING ON THE SCENE, THEY WERE ALSO JOINED BY REALLY NEW CONTRACTORS ENCOURAGED BY THE OIL PRICE AND THE AMOUNT OF WORK AVAILABLE.



I HAVE SPOKEN SO FAR MOSTLY OF THE MAJOR COMPANIES AND WELL ESTABLISHED SECONDARY COMPANIES, AND I INCLUDE MANY HONOURABLE SMALL ONES, PARTICULARLY AS COMMITTED OPERATIONS PERSONNEL HAVE MOVED BETWEEN COMPANIES. HOWEVER WITH THE MASSIVE INCREASE IN OIL PRICES, THERE CAME A GROWTH OF NEW COMPANIES WITH FINANCE AND A FEW PERSONNEL, OFTEN OPERATING IN

**THE MORE CHALLENGING COUNTRIES AND WITHOUT ANY INFRASTRUCTURE TO SUPPORT THEIR OPERATIONS. EVEN IF THE WILL WAS THERE, THE PRACTICAL INPUT WAS DILUTED.**



**SO SUMMARISING ALL THESE POINTS, WHERE DOES THIS LEAVE US IN THESE DAYS OF MUCH REDUCED PRICE OF OIL AND ITS EFFECT ON BUDGETS. ONE ALWAYS LOOKS AT THE COST/BENEFIT CASE. I HAVE A VESTED INTEREST IN SAYING THAT THERE OUGHT TO BE SHE ADVISORS ON EVERY OPERATION, SO I WON'T. BUT I DON'T HAVE TO, THE CASE MAKES ITSELF, AND MY MAIN OBJECTIVE IN THIS PAPER IS JUST TO SHOW YOU HOW**

**THE CLIENT REPRESENTATIVES' JOB HAS DEVELOPED.**

**I BELIEVE THE INCLUSION OF STRONG ATTENTION TO SAFETY ENVIRONMENT AND HEALTH INTO THE DAY TO DAY OPERATIONS OF SEISMIC ACQUISITION IS FIRMLY ESTABLISHED. THE BENEFITS HAVE BEEN CLEARLY SHOWN, AND I DON'T SEE THAT WE WILL BE GOING BACK TO THE DAYS WHEN IT WAS CONSIDERED WE WERE IN A DANGEROUS INDUSTRY AND ACCIDENTS WERE ONLY TO BE EXPECTED.**

**NEVERTHELESS THERE WILL ALWAYS BE THE TEMPTATION TO SQUEEZE THE QUART INTO THE PINT POT AND EXPECT ONE PERSON, THE TECHNICAL QC AND CLIENT FIELD REPRESENTATIVE, TO BE RESPONSIBLE FOR ALL ASPECTS. APART FROM THE SHEER TIME CONSUMING REQUIREMENT TO REPORT ON DAILY PRODUCTION, THE APPLICATION OF THE CONTRACT, THE SAFETY CONCERNS, THE POTENTIAL ENVIRONMENTAL SCARES AND HEALTH OF THE CREW, PLUS SECURITY IN MORE PLACES AS WE MOVE INTO AND WORK IN AREAS SUCH AS SOMALIA, THE NIGERIAN DELTA, SUDAN AND A DOZEN OTHERS. THE WORLD OF FIELD PROJECT MANAGEMENT IS CHANGING, AND THERE IS THE VERY VALUABLE NEED TO BOTH PRACTICALLY EXAMINE THE TECHNIQUES OF THE CONTRACTORS AND LOOK AHEAD TO TOMORROW'S ISSUES.**

**REPORTS FROM THE FIELD INDICATE THAT THESE STILL INCLUDE THE GROWTH OF NEW INTERNATIONAL CONTRACTORS WITH LITTLE BACKGROUND IN THE EXPECTATIONS OF THEIR CLIENTS, AND THE MIXED AMOUNT OF EFFORT DEMONSTRATED BY CHIEF EXECUTIVES WHICH PROVIDES THAT ALL ELUSIVE CULTURE! NOTHING NEW THERE.**

**SEISMIC ACQUISITION REMAINS ONE OF THE MOST INTERESTING AND EXCITING JOBS FOR ANYBODY ANYWHERE, BUT LETS ENSURE THAT WE HAVE THE TOOLS FOR THE JOB.**

**ieco** SEISMIC AND SURVEY  
INTERNATIONAL ENERGY CONSULTANTS ORGANISATION CLIENTS AND CONSULTANTS - A PARTNERSHIP?

## CHANGES IN THE INDUSTRY AFFECTING SEH

- ACQUISITION TECHNIQUES
- INCREASING LEGISLATION AND THE DUTY OF CARE  
Increasing baseline expectations
- GROWTH OF MANAGEMENT SYSTEMS  
And more sophisticated contractor systems
- OPERATORS' SEH SYSTEMS AND INEXPERIENCED CONTRACTORS
- OUTSOURCING AND THE DILUTION OF CULTURE
- DAILY FEES AND TURNKEY OPERATIONS
- DOMESTIC COMPANIES GOING INTERNATIONAL
- GROWTH OF NEW OPERATORS  
new frontiers

HQS Wellington, 24 March 2009

**AND FINALLY, YOU MAY THINK THAT SLIDE LOOKS A BIT OF A MESS. I SAID I WASN'T HERE TO MAKE THE CASE FOR MORE CONSULTANTS ON CREWS, BUT I CAN'T RESIST SAYING THAT BY GETTING THE RIGHT GUYS, YOU SHOULD ACTUALLY GO FROM THAT TO THIS!**

**ieco** SEISMIC AND SURVEY  
INTERNATIONAL ENERGY CONSULTANTS ORGANISATION CLIENTS AND CONSULTANTS - A PARTNERSHIP?

THE EVER EXPANDING HSE ROLE OF THE CLIENT REPRESENTATIVE

- THANK YOU -

HQS Wellington, 24 March 2009