Drilling Risks Perception

Do we all perceive risk in the same way? Or is the risk perception and identification something related to ... cultural influence? Experts in risk and organizational behavior claim "yes" that corporate culture influences risk perception. Bringing this back to the focus we, in SPE and the O&G drilling community have been on ad infinitum, it has been suggested and perhaps proved that by putting a drilling team under a business unit manager (focus on costs and budget) the focus from that line manager to the engineering team below becomes "commercial" risk. Now "commercial" risk is money related. For instance, there is a 20% chance that this design that costs $500,000 will fail and an additional cost of $1,000,000 will be required for the other option that can be forgone 80% of the time. A skilled "commercial risk" analyst (a drilling engineer becomes solely a commercial risk analyst in this organization structure) does the math: .2 x $1,000,000 = $200,000 + $500,000 = $700,000 < $1,000,000 and therefore chooses the cheaper option. Now the effect of this choice is not explicitly assessed from the perspective of process safety even if the engineer does consider the risk or even have a conversation about it. That option may add process safety risk while lowering “commercial” risk and yet this added risk is not formally represented and broadcast to the team, in most cases, in a way in which service companies and “line of sight” employees can make plans for added risk nor employ heightened awareness. We need a formalized process safety risk assessment. Most drilling organizations have not gotten this right and most still do not. In order to get this right BOTH need to be accounted for. A question at a talk on this last week was "do you do this in your projects?". The answer to that will be if the company has this formalized as a standard although behind the scenes I do this. It is sad that an engineer would have to keep process safety risk assessments a secret and not have them formally accepted and yet in the most rigid environments a manager might not want an engineer to be developing formalities that he/she should have already been focused on and the worst managers (corrupted from being under a budget unit) would see this as a threat. Especially if the engineer is constantly focused on drilling process safety and they are not. This is not unique to drilling a major hazard is public's perception of risks to drinking water, reservoir subsidence and earthquakes, etc. Does your job require you to assess those risks? Does sustainability get thrown to the wind?

If anyone reading this still thinks we are doing all we can or that this doesn't or cannot be developed in a way that will actually result in real process safety improvements that will save lives and environmental destruction then consider this. If you had asked people at BP or other organizations before Macondo if everything is safe and everything that could be done was being done they would answer "yes". People trained in spotting deception might notice the slight "nod" no while saying yes with a "duping" grin 90% of the time while the rest will be duped. When we combine the science of recognizing deception with the art of looking/listening we exempt ourselves from collaborating in the lie. We start up

that path of being a little more explicit. Integrity matters and we should be more explicit in our moral code. If we say, "My world/our world, is going to be one where truth is strengthened and falsehood is recognized and marginalized" then the base of safety in our business is going to shift just a little bit in the right direction and the progress will be seen in less incidents and engineers that can openly engage in assessing both commercial and process safety risk assessments in everyday duties.

Why hasn't this happened already? There are likely many reasons and yet one of the most significant is likely the fact that blowouts are rare and because of that people think because they are in an exceptional company doing everything they can to prevent them when in fact they simply are lucky and in the statistical majority. Any additional work in the form of formally assessing blowout risk is seen as “red tape” and more work with little reward since these events are so rare. A drilling process safety risk assessment done correctly takes very little time compared to the commercial risk assessments we fret over ever so diligently and painstakingly in peer reviews. I think in every SPE discipline, reservoir, production, drilling and completions, there is a need to separate "commercial" risk assessments from major hazards risk assessments and you know what I'm talking about.

“You need to give your people the freedom to get creative, to come up with their own ideas and run with them. Your company should act as a springboard for ambitious employees, not a set of shackles.” -- Richard Branson

Once drilling process safety is recognized and formalized and a normal part of a company's drilling plan it will be developed fully and result in many advances that are not possible as it is not formally discussed. Once this is recognized based on its merit and value to a company not only for "sustainability" issues and yet because process safety, if mitigated, will actually have "commercial" value as these events, blowouts, shut-in blowouts, and kicks, cost time and money, and will occur less often. Mitigations in the past have not been focused on since these are low incident events, the driver in process safety is different and yet once this is accepted as a corporate value the mitigations will be developed by creative employees and heretofore unforeseen commercial value will appear as a result of this accepted and encouraged, formal corporate value. This doesn't "shackle" us with red tape yet frees us to focus on issues that matter so we may mitigate them, and done properly we should be able to move toward elimination of many of the regulations that are proved less effective than this new focus.

Let’s also recognize dimensions of influence that may alter a person’s perceptions of risks or of failures such as a kick:

Personality (Reaction), Character (Response), Mood (Capacity), Competence (Capability), Environment (Complexity)

Let's recognize that personality diversity indicators and systems such as E Colors are good at helping people know their personality so that they can train to respond to crisis appropriately rather than react only according to their particular personality traits that may not be best for any given situation.

Let's also acknowledge that unlike personal safety, in drilling process safety, individual risks may not be significant nor understood until they are summed dynamically into a system that accounts for cumulative risks. It is difficult for all team member on a project to perceive the sum of all of these individual risk indicators unless this is broadcast in a persistent and universal manner. The BROAD system will be explained in another essay as achieving all of these necessary objectives.