Tutorial Answers – BP Project Case Study

Q1 Answers:

1. *Cement did not seal reservoir from well casing - Allowed for initial influx of hydrocarbons into lower well casing section.*

2. *Cement effected the operation of mechanical isolation barriers – Allowed for initial influx of hydrocarbon into lower well casing section*

3. *Well test incorrectly accepted – normal procedures continued allowing for hydrocarbons to continue to flow into well*

4. *Hydrocarbon influx not noticed for 40 minutes – allowed hydrocarbon influx to become uncontrollable once realised.*

5. *Normal procedure not followed on recognition of hydrocarbon influx – allowed for hydrocarbon to flow up riser to drilling rig*

6. *Hydrocarbons not diverted overboard – hydrocarbon spill onto deck*

7. *Fire and gas system did not prevent hydrocarbon ignition – caused explosions leading to communication failure with blow out preventer. (Fire and gas system meant to emergency stop all possible ignition sources)*

8. *BOP emergency automatic seal failed (control pod battery and solenoid) – allowed for fire to be continually fed on Deepwater Horizon, the eventual sinking and then the spill.*

Q2 Answers:

1. *Key findings 1 & 2 Cement barrier – Quality assurance, technical assurance, communication between customer and contractor.*

2. *Key findings 3 to 6 and 8 – Risk management, mitigation and ensuring contingencies will work as specified, ensuring rig personnel have required technical competencies, communication between customer and contractor*

Q3 Answers:

$32 billion, 45,000 trained personnel and volunteers, 7000 vessels and 120 aircraft.

Allowed for effective control of the amount of resources that were made available.

1. *Well Sealing – stop the leak*
2. *Ocean Clean Up – minimise amount of oil that reached the beaches*
3. *Beach Clean Up – effectice and efficient clean up of oil that reached beaches*
4. *Wildlife – Rehabilitation of wildlife rescued*
5. *Environmental restoration – understand the effects the spill had on Gulf coast habitats*
6. *Economic invest – aid and rebuild tourist industry and local business effected by spill*

Q4 Answers:

Make effective comparison showing were the response project succeeded over the exploration project.

Key words that should form basis of answer, back up with examples from further reading as well as case study:

- *Iron triangle and defining how a project is measured i.e. quality, cost and time.*
- *Risk Management and mitigation*
- *Communication and training*
- *Technical and quality assurance*