

| structure | Uses | advantages | disadvantages |
|---------------------------------|---|--|--|
| Fixed structure | | | |
| Jack up | 1.drilling 2.production(few) 3.shallow water 4. 90-140(m) | 1.mobile 2.stable when elevated 3.low cost 4.commen | 1. no storage 2.for placement depend to whether 3. Seafloor scour 4.restricted to shallow area |
| Barrage (submersible) | 1 .Drilling 2. Use for inland, shallow water (lake ,swamp ,rivers) 3. 20 meter | 1. large 2. Floating platform 3. Suitable for shallow water | 1. towed from location to location 2.not able to withstand in the water movement |
| Jacket(fixed) structure | 1.Production 2.drilling 3. Less than 300 meter | 1 .support large deck loads 2. May be constructed in sections and transported 3.supported many number of wells 4.good stability | 1. cost increase exponentially with depth 2.high initial and maintenance cost 3.not reusable 4.problem of corrosion for steel structure 5.no storage |
| Compliant tower | 1. drilling 2. Production 3.535 to 1000(m) | 1.low cost(than steel jacket) 2.good stability 3.possible reuse 4.large pay load | 1. high maintenance cost 2.small field only 3. Cost increase exponentially with depth 4. Difficult mooring 5.no storage |
| Gravity structure | 1 .drilling 2. Production 3. mediumup to 350m | 1. support large deck load 2.possible ruse 3.larg field, long term of production 4. large storage of capacity 5.very heavy and more stable | 1. cost increase exponentially with depth 2.foundation settlement 3.may require more steel than steel jacket structure |
| Floating structures | | | |
| Semi-submersible | 1.drilling 2. production 3. 90- 1800m(6000ft) | 1.mobile with high transient speed(10~kts) 2.more stable 3. large deck area | 1.high initial and operating costs 2.limit deck load(low reserve buoyancy) 3.structual fatigue 4.expensive to move large distance 5.difficult to handle mooring system and land BOP stack &riser in rough seas |
| Drill ship | 1. Drilling 2. Production(FPS) 3. deep...2500m or grater | 1.mobile with high speed transient (up to 16~kts) 2.deck load and total load grater than jack up & semi-submersible 3.low mobilization cost 4.low initial & operating costs 5.able to pass through suez & panama | 1.poor stability in rough seas 2. minimum deck area 3.low free board 4.difficult to handle mooring system and land BOP stack & riser in rough sea |
| TLP (tension leg platform) | 1.drilling 2.production 3. shallow to deep 120-1500m | 1.mobile & reusable 2.stable-minimal vertical motion 3.low cost increase with depth increase 4.deep water capability 5.low maintenance cost | 1.high initial cost 2.high subsea cost 3.fatigue of tension leg 4.difficult maintenance of subsea system 5.little or no storage |
| Spar | 1.drilling 2.production 3.good for up to 1000m | 1.good stability 2.cost don't very increase with increasing depth 3.using in high depth | |
| FPS(floating production system) | 1.small field production 2. 200.- 2500 m | 1. low cost (small) 2.mobile & reusable 3.good in ice berg prone area 4.similar to semi- submersible | 1. limited to small fields 2. low deck load capacity 3.damage to riser due to motion 4.little oil storage capability |

