

1. Who is the CEO of Chesapeake Energy?
Aubrey McClendon is founder and Robert D Lawler as a CEO
Headquarter is in Oklahoma
2. Who is the CEO of Chevron?
John Watson
3. Which oil company has the highest oil production?
Saudi Aramco
4. Top 5 oil producing companies
Saudi Aramco, Gazprom, National Iranian Oil Company, ExxonMobil, PetroChina
5. List current total world oil reserves
1.652 trillion barrels
6. Founder and CEO of Hilcorp
Jeff Hildebrand
7. What are 5 assumptions behind Darcy flow?
Re < 1, Newtonian, No-slip boundary conditions, single phase flow, no chemical interaction between rock and fluid
8. What is the formula for effective porosity?
 $\text{Volume}(\text{interconnected}) / \text{Volume}(\text{total})$
9. Which country has the largest amount of natural gas reserves?
Iran
Russia-47.6 trillion cubic feet
Qatar
10. Top 5 oil producing countries
USA, Saudi Arabia, Russia, Iran, and China
11. Who invented the earliest form of ESP?
Armais Arutunoff born in Georgia
12. To what state did Arutunoff relocate his ESP project?
Oklahoma
13. Where was the first successful ESP implementation?
Kansas
14. Who was the first woman SPE president?
DeAnn Craig, 1998
15. Define formation volume factor
Reservoir volume/standard volume
16. Which two main types of boundary conditions are normally used to represent reservoir fluid production and injection?
Bottom hole pressure specified and production rate specified
17. What is the Dietz method used for, and which assumptions are made for this method?
Stable displacement in inclined systems
Assumptions Vertical equilibrium Piston displacement Negligible capillary pressure
18. Define formation volume factor
Reservoir volume/standard volume
19. What does the term “diffuse flow” mean and which factors determine this flow condition?
Bottom hole pressure specified and production rate specified
20. Name 3 kill operations in a well control situation
Stable displacement in inclined systems

Assumptions Vertical equilibrium Piston displacement Negligible capillary pressure

21. Define formation volume factor

Reservoir volume/standard volume

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Bottom hole pressure specified and production rate specified

32. Which log provides a good measurement of the Hydrogen in the formation?

Neutron

33. What are the three elements used as the source of natural gamma rays in sedimentary rocks?

Thorium, Uranium, and Potassium

34. What is the physical law that gives the pressure drop in a fluid across a cylindrical tube? It assumes that the flow is laminar, viscous and incompressible. It also assumes that the flow traveled is longer than the diameter of the cross-sectional area?

Hagen-Poiseuille Equation, $\Delta P = 8\mu LQ/(\pi r^4)$

35. Define the tortuosity.

The ratio between the length of the curve to the distance between the end points

36. Define kinematic viscosity

Apparent viscosity divided by density of the fluid

37. What is a top kill operation?

Heavy mud is pumped from the well head down to the bottom, forcing oil and gas to back flow to the formation.

38. If a water-wet rock saturated with oil is displaced in water, will it imbibe water into the smallest or largest

est pores displacing oil first?

Smallest

39. A fluid flow process in which the saturation of the wetting phase increases and the nonwetting phase saturation decrease is known as what?

imbibitions

40. Primary and waterflood oil recovery is affected by the wettability of the system. Which wettability will exhibit greater primary oil recovery?

Water-wet

41. In structural geology, what is the name for a fold that is convex up and has its oldest beds at its core?

anticline

42. What is the term for any geological fold that is convex up?

antiform and concave down is synform...

43. In structural geology, what is the name of a downward-curving fold with layers that dip toward the center of the structure?

syncline

44. What is the most common type of cement, in general use around the world because it is a basic ingredient of concrete, mortar, stucco and non-specialty grout?

Portland cement

45. What are the 3 types of structural traps?

Anticline, fault, salt dome

46. What are the types of secondary porosity in carbonate rocks?

Fenestral porosity (algal mats), Shelter porosity, intracrystalline porosity, moldic porosity, Vuggy or fracture porosity.

47. What assumptions do you have to make about irreducible saturations in the bundle of tubes model?

There is no residual water or oil saturation

48. What are the types of reserve groups?

Proved developed, proved undeveloped, unproved probable, unproved possible

49. Which type of reservoirs does the SEC allow oil companies to report?

Proved

50. What does the acronym SCSSV stand for?

Surface controlled subsurface safety valve

What does the acronym FPSO stand for?

Floating Production Storage and Offloading

51. What is the term for a higher perm layer above or beneath multiple lower perm layers?

Thief Zones

52. What is the apparatus used to measure mud filtrate volume and mud cake thickness?

API filter press

53. What apparatus measures the viscosity of a fluid?

Rheometer viscometer

54. Does cement fracture easier under tension or compression? By what factor do these values differ?

Tension, factor of 10

55. Which is higher in sand with dispersed shale, brine or air permeability?

Air permeability

56. Name the geologic periods in order from oldest to most recent.

Precambrian, Cambrian, Ordovician, Silurian, Devonian, Mississippian, Pennsylvanian, Permian, Triassic, Jurassic, Cretaceous, Tertiary, Quaternary

57. Name the three stages of flow and the pressure and flow rate profiles associated with each.
Infinite-acting: constant rate, non-linear pressure decline.
Pseudo-steady-state: constant rate, linear pressure decline.
Depletion flow: non-linear rate, constant pressure
58. What is a stripper well?
well that strips less than 10 bbl/day of crude oil or 60 MCFD of gas
59. Name four types of naturally occurring hydrocarbons
Paraffins, Napthenes (cycloparaffins), Aromatics, Asphalts
60. What does a Dykstra-Parsons coefficient of 1 imply about a reservoir?
heterogeneous reservoir
61. What is the principle of Corresponding States and how is it used?
Fluid properties can be related to a fluid's critical temperature and pressure. Can be used to calculate z-factors.
62. What are two fluid sampling methods?
Separator/surface sample, bottomhole/subsurface sample
63. What are some fluid characteristics of black oil?
GOR < 2000 scf/STB API gravity below 45 deg API Formation Volume Factor < 2 RB/STB C7+ higher than 20%
64. What is the molecular weight of air?
29 g/gmol
65. What is the standard temperature across the United States?
60 degrees Fahrenheit
66. What is the standard pressure across the United States?
14.7 psia
67. What is the primary function of solvent in the EOR process?
Decreases the interfacial tension between the oil and the other phases
68. What are the units of fugacity?
Pressure
69. Name the equation of states that are used when describing the PVT behavior of crude oil.
Peng-Robinson and SKR
70. What fluid is commonly used in carbonate reservoir simulation?
Carbonic Acid
71. What is the primary purpose of polymer injection?
Improve sweep efficiency
72. What is the term for global rise and fall of sea level?
Eustasy
73. What are two types of common polymer flooding?
Alkaline flooding, Micellar-polymer flooding
74. What operating pressure differentiates matrix acidizing from fracture acidizing?
Injection Pressure
75. What piece of common production facility equipment is used to remove any free water in the produced oil?
free-water knockout
76. Name 4 types of well logs.
SP, Gamma Ray, Resistivity, Sonic, Density, Dipmeter, Microlog
77. Name two types of resistivity logs.

Induction, Lateral

78. Give the equation of Cumulative Oil Recovery in 3D.

$N_{pd} = E_a E_d E_i$ (Soi-Sor)

79. To have maximum flow in a well bore which condition is needed? What is it specifically called?

well flowing pressure = 0, Absolute Open Flow Potential

80. When the wellbore pressure goes below the bubble point pressure, what equation should be used to calculate the productivity?

Vogel's Equation for two phases

81. Define two types of perforating guns.

Casing gun (Hollow Carrier), Tubing Gun (Expendable Carrier)

82. If the API gravity of an oil is 40 degrees, what's the density of the oil in lbm/cu. Ft?

Density = 51.5 lbm/ cu. Ft

83. Name the famous fundamental theory used in fractional flow of immiscible fluids.

Buckley-Leverette Theory

84. What is the most common swelling clay?

Smectite

85. What is the oilfield term for a mixture of HF and HCL used as the main fluid in a sandstone matrix acidizing treatment?

Mud Acid

86. What piece of equipment is commonly used to dehydrate produced gas?

Glycol Tower

87. What is the generic equation for inflow performance relation?

$J = q_o / (p_e - p_{wf})$

88. Name the common practice in compositional reservoir simulation to reduce the number of components modeled.

Component Lumping, Pseudo-Components

89. What are the three types of commonly recognized decline curves?

Exponential, Hyperbolic, Harmonic

90. Which measure of project profitability is the discount (interest) rate at which the net present value equals 0?

rate of return, internal rate of return

91. What is commonly the first step in producing a coal-bed methane field?

Dewatering the field

92. What method converts natural gas to clean diesel?

gas-to-liquid

93. What type of petroleum reservoir is easily identified by the occurrence of retrograde condensation?

gas condensate

94. In terms of spatial distribution in the pore space, what are the three classifications for clays?

Dispersed, Structural, Laminated

95. In non-compositional simulation what is the most common fluid model used?

Black-oil

96. The capillary pressure curves for rock samples from the same reservoir having different permeabilities will be different. What function is used to average these curves to create a single Capillary Pressure curve?

Leverett J-Function

97. Which method of heavy oil production aims to upgrade the oil in-situ?

in-situ-combustion

98. Define interfacial tension.

Work done per unit area in expanding the surface of a liquid in contact with another phase

99. Define surface tension.

work done per unit area in expanding surface of a liquid against its own vapor phase

100. Name three ways to estimate gas in place.

P/z plots, Material Balance, Volumetrics

101. What is the original, unaltered water found deep within a reservoir called?

Connate, Virgin

102. Name two types of traps for oil.

Structural, Stratigraphic, stratified

103. What conditions are required for Darcy's Law to be valid?

Laminar flow, steady state, non-compressible fluid, complete segregation (non-interacting fluid)

104. Name 4 points on a binary phase diagram.

Critical Point, Bubble Point, Dew Point, Cricondentherm, Cricondenbar

105. What is a cricondentherm?

Maximum temperature at which two phases can exist

106. What is a cricondenbar

Maximum pressure at which two phases can exist

107. The concept of peak oil is named after what noted geophysicist?

Dr. M King Hubbert

108. Who is the current Saudi oil minister?

Ali al-Naimi

109. What large Australian gas field is being developed by a joint venture of Chevron, Exxon, and Shell with Chevron as the operator?

Gorgon gas field

110. What is the second largest oil and gas company in Brazil?

OGX

111. What Brazilian mining billionaire began this company in 2007?

Eike Batista

112. What is the largest field in Venezuela?

Bolivar Coastal Field on Lake Maracaibo discovered 1917

113. What year was Petrobras formed?

1953.0

114. What recent Brazilian discovery could be the third largest oilfield in the world?

Sugarloaf

Country Brazil

Region Santos Basin

Operator Petrobras

Partners Petrobras

Galp Energia

BG Group

Discovery 2007

Production

Estimated oil in place 25,000 million barrels ($\sim 3.4 \times 10^9$ t)

Producing formations pre-salt Ap

115. In what basin were the giant Tupi and Jupiter fields discovered in? And Lula

Santos Basin (sub-salt)

116. What is the national oil company of Ecuador?

Petroecuador

117. What US company had a joint venture with Petroecuador for 20 years beginning in 1964 and was sued for environmental damage?

Texaco (Chevron Texaco is being sued)

118. Which 4 major U.S. companies have leased land in Poland in the new shale gas play there?

ConocoPhillips, Exxon Mobil, Chevron, and Marathon Oil

119. Which company leased a million acres in Poland?

Chevron

120. What is the name of Poland's gas monopoly?

PGNiG (Polskie Górnictwo Naftowe i Gazownictwo)

121. Who is the EU energy commissioner?

Maroš Šefčovič

122. Hungary's MOL oil and gas company has entered into a partnership with which two non-European companies to develop the gas deposits in Hungary's Mako Trough?

ExxonMobil of the United States and Falcon Oil & Gas of British Columbia, Canada

123. Who drilled the UK's first shale gas well?

Cuadrilla Resources

124. Who drilled the first shale gas discovery well in Bulgaria?

Direct Petroleum Exploration (from Denver, CO)

125. Which major company announced plans with ENI to build the first coalbed methane liquefaction plant?

BP

126. Which company is planning to exploit French shale gas following a \$2.3 billion joint venture with Chesapeake?

Total

127. Which company partnered with Tereos Resources to develop a shale gas play in Paris Basin?

Hess

128. What is the name of the field of the BP oil spill?

Macondo

129. What is the name of the well of the BP oil spill?

MC252: Mississippi Canyon 252

130. What was the date of the BP blowout?

April 22, 2010

131. What is the name of the rig that blew out and subsequently sunk in the ocean during the BP blowout?

Deepwater horizon

132. What service company owned Deepwater Horizon?

Transocean

133. What service was Halliburton providing during the BP explosion?

Cementing

134. How many workers died during the BP accident?

11.0

135. Approximately what was the water depth of the MC252 wellhead?
5000 ft
136. On what date did the work of the first relief well commence after the BP accident?
May 2, 2010
137. What convicted terrorist's release has been linked to a BP oil deal with Libya?
The Lockerbie bomber (abdel Basset Al-Megrahi)
138. Which country has the most proved oil reserves in Africa?
Libya
139. What company has just started producing the Arcadia field in Egypt?
ENI
140. Which famous Nigerian playwright and activist was executed in 1995 and brought international light to the corruption in their oil industry?
Ken Saro-Wiwa
141. What company discovered oil in Angola?
Petrofina
142. What was the name of the largest oilfield in Gabon?
Rabi-Kounga
143. Who operates the Rabi-Kounga field?
Shell
144. What company is the largest foreign producer of oil in Algeria?
Anadarko
145. What two companies have a joint venture with Sonatrach in the In Salah and In Amenas gas fields?
BP and StatoilHydro
146. What company's concessions in Congo did the Congolese president refuse to ratify?
Tullow Oil
147. What was the name of the rig used to drill the relief well after the BP incident?
Development Driller III
148. What companies are the two other partners with BP in the accident's block?
Anadarko Petroleum Corporation and MOEX Offshore 2007
149. What are the shares of BPs partners in the Macondo project?
Anadarko: 25% and MOEX: 10%
150. Who is BP Americas CEO?
John Minge succeeded Lamar McKay in 2013
151. According to BPs CEO, initially what was the flowing rate?
5,000 bbl/day
152. Who was appointed as new BP CEO?
Bob Dudley
153. In what year was Exxon-Valdez spill?
March 24, 1989
154. Besides the recent spill in the Gulf, which is the largest oil spill in history?
Kuwait, 1991. Wells blown by Saddam Hussein's army.
155. What were the top four oil consuming economies in 2009? Vh
United States, China, Japan, India
156. What is the largest onshore oilfield in Europe?
Patos Marinzas in Albania
157. Which of the seven sisters did T. Boone Pickens attempt to takeover? Who bought them?

- Pickens attempted to take over Gulf and Chevron ended up buying them
158. What was the name of the failed field in Alaska?
Mukluk
159. Who sued who over the sale of Getty Oil?
Pennzoil sued Texaco
160. What was the original name of Nymex?
Butter and Cheese Exchange
161. Who bought Conoco in the 1980s?
Dupont
162. Who was the first general secretary of OPEC?
Faud Rouhani (Iran)
163. Who was the President of Conoco who made them into an international powerhouse?
Leonard McCollum
164. What actor appeared regularly on Texaco Star Theater?
Milton Berle
165. What is the longest pipeline in Europe also known as the “friendship pipeline?”
Druzhba Pipeline that goes from Russia to Germany and is about 4000 km in length
166. What is Exxon’s slogan?
Put a tiger in your tank
167. What year was Britain’s clean air act passed?
1957.0
168. What significant conflict in an oil country occurred at the same time as the six day war?
Civil war in Nigeria
169. What octogenarian U.S. oil man went to jail for his role in the fuel for food scandal?
Oscar Wyatt
170. Who has drilled the deepest oil well to date?
BP, 35055 ft offshore GOM
171. What is the largest oil field in the North Sea by reserves?
Forties
172. What does AGIP stand for?
Azienda Generale Italiana Petroli
173. What does ENI stand for?
Ente Nazionale Idrocarburi
174. What company recently made a large discovery in 20 ft of water off the Louisiana coast?
McMoran
175. What is the largest oilfield in North America?
Prudhoe Bay
176. Top 4 oil importing countries in the world
USA , China , Japan , India ,South Korea , Germany , Italy .
177. What were the top 4 oil exporting countries in 2015.
Saudi Arabia , Russia , Iran , Iraq ,Nigeria , UAE.
178. What is the top four natural gas exporting countries
Russia , Qatar , Norway , Canada , Netherlands .
179. Top four gas importing countries in the world
Japan , USA , Germany ,Italy , China.
180. What are the top 4 producing states in U.S.

Texas, North Dakota, Alaska, California?

181. What company just made the largest discovery in California in the last 35 years?

Occidental

182. What Texas oil man donated a large part of his wealth to the University of Houston?

Roy Cullen

183. What Texas oil man started the company Southern Union Gas?

Clint Murchison

184. What Texas oil man is the great uncle to the Basses of Ft. Worth?

Sid Richardson

185. What Texas oil man invented the rock bit?

Howard Hughes Sr.

186. What Texas oil man spent part of his life trying to find the Sasquatch?

Tom Slick

187. What Texas oil man owned the Dallas cowboys?

Clint Murchison Jr.

188. What Texas oil man made his fortune after buying up leases in the East Texas Field including some from Dad Joiner?

H. L. Hunt

189. What Texas oil man got his Libyan concession taken away and then lost a good part of his fortune trying to corner the silver market with his brother?

Bunker Hunt

190. What Texas oil heir owned the Kansas City Chiefs?

Lamar Hunt

191. What Texas oilman was the character Jett Rink loosely based on?

Glen McCarthy

192. What was the name of Glen McCarthy's hotel in Houston?

Shamrock (bought by Hilton)

193. What was the name of the discovery well in the East Texas field?

Daisy Bradford No. 3

194. What was the name of the discovery well in West Texas?

Santa Rita No. 1

195. What Texas oil man was an early player in the North Sea, Yemen, and Peru?

Ray Hunt

196. What are the top 5 exporting European countries?

Norway, United Kingdom, Netherlands, Belgium, Italy

197. The Ammott index measures what property of a rock?

Wettability

198. When did Petrobowl start?

2002.0

199. Name all the champions of Petrobowl.

University of Texas (2009), University of Oklahoma (2008 & 2007), Colorado School of Mines (2006), Texas A&M (2005 & 2003) Montana Tech (2004), Texas Tech (2002)

200. What two teams won Petrobowl twice?

University of Oklahoma and Texas A&M

201. In 2009, Petrobowl had what milestone(s)

Largest Petrobowl, Largest international participation, First MVP (most valuable player) award present

ed

202. Who organizes the questions for Petrobowl?

SPE Gulf Coast section young professionals board

203. What 4 schools have gone to every Petrobowl?

Texas A&M, Louisiana State University, Montana Tech, Texas Tech

204. Where will ATCE be held in the next two years?

San Antonio (2011), Denver (2012), New Orleans Louisiana USA (2013), Netherlands 2014

205. Where were the last 3 ATCE held?

New Orleans (2009), Denver (2008), Anaheim (2007)

206. Who is sponsoring the 2010 ATCE?

ENI

207. Who sponsored last year's Petrobowl? (2010)

Petroskills and Encana

208. Who are the biggest oilfield service companies (top 5)?

Schlumberger Limited, Halliburton, Saipem, Transocean Ltd., Baker Hughes

209. What is the largest merger in American History?

Exxon + Mobil

210. What is the largest oil spill?

Gulf War oil spill, oil tankers, January 21, 1991

211. Where was the first over-water oil well drilled?

Caddo Lake, Gulf Oil 1911

212. Which three countries did the Adriatic section comprise from 1987-1991?

Italy, Yugoslavia, and Austria

213. When did the Adriatic section change its name to the Italian Section?

1995.0

214. What is the oldest Italian oil company?

SPI

Società Petrolifera Italiana - is more than 99% owned by Eni. Founded in 1905, it is the oldest Italian company

215. What oil-bearing formation in Montana, North Dakota, and Saskatchewan is produced with horizontal wells and hydraulic fracturing?

The Bakken formation

216. How much recoverable oil does the USGS estimate is in the Bakken Formation?

3.65 billion barrels

217. Name 5 shale gas plays in the United States.

Antrim, Barnett, Caney, Floyd, Gothic, Haynesville, New Albany, Utica, Woodford.

218. How much shale gas was produced in the United States in 2008?

2.02 TCF

219. Who regulates the reserves reporting requirements?

SEC

220. Under what price were reserves booked under the old rules?

Year-End

221. Under what price are reserves booked under the new rules/

Average

222. When were the SEC reporting requirements last amended?

1982.0

223. Were unconventional reserves “bookable” under the previous SEC reporting requirements?

No

224. When did the new SEC rules take effect?

January 1 2010

225. In what decade was Ghawar discovered?

1940s (1948)

226. What are the two most productive operating areas in Ghawar, and where are they located in the field?

Ain Dar, Shedgum

227. What is the name of the most productive carbonate formation (not field) in Saudi Arabia?

Arab D Zone 2-B

228. What are the three largest oilfields in Saudi Arabia?

Ghawar, Abqaiq, Shaybah

229. What is the world’s largest offshore field?

Safaniya

230. Name the five largest oilfields in the world.

Ghawar, Burgan, Cantarell, Daqing, Kirkuk

231. What is the second largest oilfield in the United States and where is it located?

Kuparuk River, North Slope

232. What is the largest oilfield in Iraq and when was it discovered?

Kirkuk, 1927

233. When did United States oil production peak?

Early 1970

234. What was the peak United States oil production?

10.2 MMbbl/day

235. The Society of Petroleum Engineers began as part of which organization?

American Institute of Mining Engineers

236. What year was SPE formed?

1957.0

237. Who was the first president of SPE?

John Hammond

238. Who is the 2010 SPE president?

Behrooz Fattahi

239. Who is the 2011 SPE president?

Alain LeBastie

240. How many SPE members were recorded at the end of 2009?

92100.0

241. How many countries have SPE organizations?

117.0

242. Who was the first chairman of the SPE Italy section?

Umberto Sugny

243. Who is the 2010 chairman of the SPE Italy section?

Maurizio Rampoldi

244. Who was the first and only Italian SPE president?

Giovanni Paccaloni

245. What is a whipstock?

- An angle to build off
246. What is a bent sub?
- A tool to build an angle
247. Who is the 2010 ENI chief executive?
- Paolo Scaroni
248. What is the name of the Iranian field that ENI has recently to pull out of?
- Darkhovin Oil Field
249. Who is the current CEO and chairman of Chevron?
- John Watson
250. Chevron was originally known as which of the dissolved company of Standard Oil Trust?
- Standard Oil of California
251. When was Pacific Coast Oil Company founded?
- 1879.0
252. SoCal took the name Chevron in 1984 when it merged with which company?
- Gulf Oil
253. Chevron acquired two companies in the past ten years. Name these companies.
- Texaco and Unocal
254. Texaco can trace its roots to which company formed in Beaumont, TX in 1901?
- Texas Fuel Company
255. Chevron markets fuel under several brand names. What are these?
- Chevron, Standard Oil, Texaco, Caltex, Gulf Oil, Unocal
256. What SPE journal presents authoritative briefs and features on E&P technology advancements, oil and gas industry issues, and news about SPE and its members?
- Journal of Petroleum Technology
257. Who was the first female president of SPE?
- Deann Craig (1998)
258. Who was the first non-American SPE president?
- Jacques Bosio (1993)
259. In what year was the first offshore Technology Conference held?
- 1969.0
260. In what year was the first issue of SPE Journal published?
- 1961.0
261. In 1986, SPE launched four discipline-specific technical journals. Name these.
- Drilling Engineering, Production Engineering, Formation Evaluation, Reservoir Engineering
262. What SPE journal is designed specifically for young professionals?
- The Way Ahead
263. What were the names of the two Schlumberger brothers?
- Conrad, Marcel
264. What year did Schlumberger first open for business?
- 1920.0
265. Where was Schlumberger's first office located?
- Paris, France
266. In 1940 Schlumberger's headquarters was relocated, to where?
- Houston, Texas
267. In 1999, the world's largest drilling fluids company was created through a joint venture between Schlumberger and which other service company?

Smith International

268. What year was the gamma-ray log introduced?

1939.0

269. What year was Exxon Mobil founded?

1999 (through a merger)

270. Which country is the largest consumer of natural gas?

United States

271. Who developed the first electrical log

The Schlumberger Brothers

272. What company merged to create Baker Hughes?

Baker International and Hughes Tool Company

273. Who is the founder of Smith International?

Herman C. Smith

274. What year was Baker Hughes Company founded?

1987.0

275. What invention is the Hughes Tool Company most known for?

first rotary drill bit

276. In 1970, Ruben C. Baker invented the Baker Casing Shoe. How did this invention improve oil production?

it allowed for uninterrupted flow of oil through a well

277. In the New York Stock Exchange what is Halliburton's sticker symbol?

HAL

278. What year did Halliburton go public?

1948.0

279. In 1995, who was named President, chairman and CEO of Halliburton?

Dick Cheney

280. Where is Weatherford International's headquarters located?

Houston, Texas

281. What year was the first offshore oil platform built?

1938.0

282. What company constructed the first offshore oil platform?

Superior Oil

283. What oil company owns the largest oil platform?

Petrobras

284. What was the date of the highest price of oil per barrel occur?

39630.0

285. What is the name of the Schlumberger researcher that developed the SP log?

Henri Doll

286. What company introduced the gamma ray log?

Well Surveys Inc.

287. What is the capital of Venezuela?

Caracas

288. What is the capital of Qatar?

Doha

289. What is the capital of Ecuador?

Quito

290. What is the capital of Libya?
Tripoli
291. What is the capital of Nigeria?
Abuja
292. What year did Saudi and Aramco come to a 50/50 Deal?
1950.0
293. What did Enrico Mattei do in the 1930s?
Manager at a chemical plant
294. Who introduced Alfonzo and Tariki?
Wanda Jablonski
295. What was the name of the precursor agreement to the formation of OPEC? What five countries were involved?
Gentlemen's Agreement. Iran, Iraq, Venezuela, Saudi Arabia, Kuwait
296. Where did the Japanese consortium Arabian oil get their concession?
Offshore Neutral Zone
297. What American company broke the 50/50 agreement in Iran after ENI?
Standard Oil of Indiana
298. What was the Brownsville U-Turn?
Mexico had no pipelines so they shipped oil to Brownsville and then drove it across the border and then back to the U.S. to take an advantage of tariff breaks for overland shipped oil
299. Who replaced Tariki as the Saudi Oil minister?
Answer: Ahmed Zaki Yamani
300. Name the five original countries in OPEC.
Iran, Iraq, Venezuela, Saudi Arabia, Kuwait
301. How did Enrico Mattei die?
Plane crash with the Time Magazine Rome Bureau chief
302. When did Standard Oil antitrust break up?
1911.0
303. What did Standard of Oil of New York turn into?
SOCONOY ☐ Mobil ☐ Exxon Mobil
304. Who made up ARAMCO?
Jersey, SOCONY, Texaco, and Standard Oil of California
305. Who was Anglo-Iranian's CEO?
Sir William Fraser
306. How did the Shah come to power?
Allies put him in place of his Nazi-sympathizing dad
307. Who was the leader of Operation AJAX?
Kermit Roosevelt
308. What ends up happening to the Justice department's antitrust case?
Downstream only affected, STANVAC pulled apart.
309. What year did the oil lift take place?
1956.0
310. Who was the leader of Egypt who nationalized the Suez?
Gamal Abdel Nasser
311. Who built the Suez Canal?
Ferdinand de Lesseps

312. When was the Suez Canal finished?
1869.0
313. Name the oil man who drilled the first well in the United States.
Colonell Drake
314. Where and when was the first well drilled in the United States?
Titusville, Pennsylvania, 1859
315. How deep was the first well drilled in the United States?
69 ft deep
316. Name the promoter who organized an investor group for Silliman's study of "Rock Oil."
George Bissel
317. Who invented and patented "Kerosene?"
Abraham Gesner
318. When and where the first flowing well was drilled in the United States?
On 1861, at the rate of 3000 bbl/day in the Western Pennsylvania
319. When was the peak oil production in Western Pennsylvania and what was the production rate?
1862, 3 million bbl/day
320. When, where and for what price did John Rockefeller buy his first refinery?
1865, Cleveland, Ohio. Rockefeller won in private auction one of the city's biggest oil refineries for \$72,500 against Maurice Clark
321. Who owned the world's largest refinery at the end of the 1860s?
J.D. Rockefeller
322. Name the closest partner of John Rockefeller who run oil transportation arrangements as well as founded Miami and Palm Beach and developed the state of Florida?
Henry Flagler
323. When and where was Standard Oil founded?
Founded in 1870, by five men led by Rockefeller on 26 Broadway, NYC
324. Name the world's first long distance pipeline and the date it was built.
Tidewater, 1879
325. Name the sulfur rich oil field discovered at the mid of 1880s which soon gave one third of American oil production?
Lima-Indiana field, Ohio state
326. Nowadays majority of oil companies are vertically integrated. Name the person who founded this type of corporate management?
John Rockefeller
327. When was the first well drilled in Baku?
1871/1872
328. Later this person was called oil king of Baku, this person who established Nobel's Brother's Petroleum Company. Who was he?
Ludwig Nobel
329. When did the Russian oil production reach 4/5 of the US production and how much was it?
1886, 23 million bbl/day
330. Name the company of jewish family and the date it was established
BNITO, 1886 (Caspian and Black Sea Petroleum Company)
331. Which company established a new branch in Britain 24 days after BNITO, also give the name of the company.
1888 – Standard Oil established its first foreign affiliate – Anglo-American Company 24 days after the

Rothschilds, becoming true Multinational enterprise

332. Describe the revolutionary trip of Marcus Samuel.

1892- Marcus Samuel's Coupe: Murex – Marus Samuel's tanker sailed from West Hartlepool to Batum in Caspian region, where it was filled with BNITO's kerosene, then went to Singapore and later arrived to final destination—Bangkok

333. When did Edison invent incandescent light bulb?

1878.0

334. According to The Prize, give the years of the Kerosene Age.

1859-1900

335. When and where was the first start of Californian oil boom?

1870s – oil boom in Ventura County and in San Fernando Valley, North of Los Angeles

336. Which company in California was the dominant producer before Socal?

Union Oil of California

337. When was SOcal founded?

1907.0

338. When and where was Rotary Drilling technique first pioneered and used?

1900—Corsicana, TX used in Spindletop

339. By what event was Texas Oil Boom started and when was it?

Well Lucas 1 – Spindletop gusher (75,000 bbl/day) in 1901

340. Give the year of the start of the Oklahoma oil boom.

1901.0

341. Which oil field in OK made the state a leading oil producer?

Glen Pool, Tulsa, Oklahoma

342. When and by whom Gulf Oil was founded?

1907 by Mellons

343. This person was a pioneer of the Texan oil industry by founding a new oil company. Name the person, his company and the date it was founded.

Joseph (Buckskin Joe) Cullinan, an aggressive Texas oil developer, Texaco, 1906

344. Name the date of Rockefeller's retirement and his successor.

1897, John D. Archibold

345. Name the author and date of publication of the book, The History of Standard Oil Company.

Ida Tarbell, 1904

346. Name the president who caused Standard's break up and his year of election.

Theodore Roosevelt

347. When did Standard oil break up? Name the companies it formed.

1911

Standard Oil of New Jersey –

Exxon Standard Oil of New York –

Mobil Standard Oil of California –

Chevron Standard Oil of Ohio –

Sohio Standard Oil of Indiana –

Amoco Continental Oil –

Conoco Atlantic

348. When did the first gusher start in Borneo and what was it called?

1898, called Black Spot, oil was unsuitable for kerosene, but good for fuel oil

349. This person was called "Napoleon of Oil," he also led a new combination of two companies – competit

ors of Standard, name him and the combination he led.

Henri Deterding, "British Dutch"

350. Name the company, created by Rothschilds at the beginning of 20th century.

Asiatic Petroleum Company

351. When and how was Royal Dutch Shell Group formed, its primary share holders?

1907 – Royal Dutch/Shell Group (RDSG) was created by purchase of Royal Dutch 25% shares of Shell
Royal Dutch and Shell became holding companies, with the former holding 60% of the stock in the operating subsidiaries and the latter 40%

352. When and how RDSG became an important player in Russia?

1912 – the Rothschilds sold their interests to RDSG, instantly making it a major economic force in Russia, with 20% control of its total oil production

353. Who formed the European Petroleum Union?

Nobels, Rothschilds, Deutsche Bank

354. When was the European Petroleum Union formed?

1906.0

355. Name the Persian diplomat who made important connections to develop Persian oil industry.

Antonie Kitabgi

356. This person made a very important contribution to Persian oil industry, organized first drilling operations and led the British Concession syndicate to develop oil industry in Persia. Who is this person?

Knox D'Arcy

357. Name the location and date of the first gusher in Persia.

Neutral Zone in 1908

358. Give the name of the reorganized name of the British Concession.

Anglo-Persian Oil Company (APOC)

359. Which company in England started the Persian oil industry development by investing on D'Arcy's operations in Persia?

Burmah Oil in 1904

360. What did Churchill learn about oil from Frisher?

it does not deteriorate It can be stored up in vast, defensible tanks that which was east of Suez was cheaper than coal

361. When Churchill agreed to convert entire navy to oil?

1912.0

362. In an effort to integrate, Anglo-Persian purchased one of the largest pipeline networks in the United Kingdom. What was the name of the company that owned the pipeline?

British Petroleum

363. Used as an essential ingredient for TNT, it was generated from coal until able to extract from Shell's Borneo crude. What was his ingredient?

Toluol

364. Of the many tankers sunk by German submarines in WWI, give the name of one lost by Standard Oil of New Jersey and Shell.

Standard Oil of New Jersey lost the John D. Archibald and Shell Lost the Murex

365. Within 5 % give the percentage of petroleum supplied by the United States to Allied Forces in WWI.

0.8

366. State the purpose and chairman of the National Petroleum War Service Committee during WWI.

It pooled the American oil supplies for Europe. Alfred Bedford, president of Standard Oil of New Jersey

367. The “golden lane” is located in which country?
Mexico
368. Located in Venezuela, what region led to the country’s oil boom?
Lake Maracaibo Basin
369. The barroso well owned by Shell in the Lake Maracaibo Basin started the Venezuelan boom, what was its initial production rate and what was the name of the field?
100,000 bbls/day and La Rosa Field
370. What type of drilling method brought Jersey off the sidelines and into the game in 1928?
Underwater Drilling
371. What was the name of the field that brought the boom to East Texas?
The Black Giant
372. Name the well in 1930 that brought attention to the Black Giant and its initial production.
Daisy Bradford # 3, 340,000 bbl/day
373. This entity was called in to stop the over-production in the Texas fields.
Texas Railroad Commission
374. This contraband oil became the problem with getting the oil industry back to stability by undercutting the already low prices.
Hot Oil
375. Name the agreement between states that helped stabilize the industry by voluntary quotas.
Interstate Oil Compact
376. How many barrels of oil did Japan accidentally destroy during the bombing of Pearl Harbor?
4.5 million bbl
377. Before WWII, who were the three largest oil companies in Asia?
Rising Sun, Standard Vacuum, Japanese Affiliates of Royal Dutch Company
378. Who was Japan’s largest importer of petroleum before WWII?
United States of America
379. Name 2 of the 3 powers the “Petroleum Industry Act” of 1934 gave to the United States government?
Set Market Quotas, Fix Prices, Control imports/exports of petroleum
380. What grade of oil did the United States ban from exports to Japan with the “National Defense Act?”
Aviation Fuel (87+)
381. What was I.G. Farben?
Largest German synthetic fuel chemical company
382. Who is Friederich Bergius?
First man to successfully extract liquid from coal
383. Who is Walter Teagle?
President of Standard Oil of New Jersey (1926).
384. Who was Frank Howard?
Head of Research for Standard Oil of New Jersey in 1926
385. Who was Carl Bosch?
Chairman of I.G. Farben
386. Who was Albert Speer?
Minister of Armament and War Production.
387. What is hydrogenation?
the process of extracting liquid from coal.
388. At the start of WWII, which company led Germany’s synthetic fuel industry?
I.G. Farben

389. In which American state did Standard Oil of New Jersey build a hydrogenation plant?
Louisiana
390. Before the beginning of WWII, what percentage of Germany's total energy imports did the United States account for?
0.9
391. Name the three main Caucasian Oil fields Hitler desired.
Baku, Maikop, Grzony
392. Which oil field did Japan capture apart from Hawaii?
Borneo
393. In 1945 which country invaded Manchuria?
Soviet Union
394. When Did Japan run out of oil completely?
1944.0
395. What did the Japanese call the oil rich region in which Borneo and Sumaria are located?
The Southern Zone
396. In 1943, what was the name of the largest oil field between California and the Middle East?
Minas
397. What oil field was Japan's only wildcat well drilled during WWII?
Minas
398. H.C. Jansen desired to create a great oil center in the south pacific. What country did he want to place it?
Borneo
399. Who pioneered the development of seismograph..

He was known as "the founder of applied geophysics in the petroleum industry
Everette Lee DeGolyer
400. To within 5%, what percentage of oil used by the Allies in WWII was produced by the United States?
0.9
401. Everette DeGolyer was the first American to estimate the oil reserves in the Middle East. How much were the reserves that DeGoyler estimate?
25.0
402. The California-Arabian Standard Oil Company (CASOC) was the partnership between which two American oil companies?
Socal and Texaco
403. Signed on August 8, 1944, the Anglo-American Petroleum Agreement was collaboration between the U.S. and Britain to establish the 8-member International Petroleum Commission. What were the two primary duties of the Commission?
Prepare estimates of global oil demand and allocate suggested production quotas to various countries
404. Name four of the six members of the Iraq Petroleum Company in 1946?
Jersey, Socony, Shell, Anglo-Iranian, CFP, Participants & Investments
405. In 1947, Aramco merged with Jersey and Socony. What percentage of the company did each new partner receive?
Jersey – 30%, Socony – 10%
406. What agreement in the original Iranian Petroleum Company contract was the major stumbling block to the Aramco merger with Jersey and Socony?
The Red Line Agreement

407. Which two companies had a unique purchase-and-sale agreement to get Kuwaiti oil to European markets?
Gulf and Dutch/Shell Group
408. In 1947, which company was the first to successfully drill for oil in the offshore Gulf of Mexico?
Kerr-McGee
409. In 1947, Los Angeles was hooked up by large-diameter pipe to the gas fields of New Mexico and West Texas. What was the name of this pipeline, and who was its owner?
Biggest Inch; El Paso Natural gas
410. The first successful well in the Neutral Zone was drilled in March 1953. Who originally identified the geologic structure where the well was drilled?
Paul Walton
411. The Saudi Arabian Neutral Zone concession was won in 1948 for \$9.5 million upfront, a guaranteed \$1 million/year and 55¢/bbl royalty. What company won this concession and who was the company's owner?
Pacific Western, J.P. Getty
412. In 1947, Aminoil, a consortium including Phillips, Ashland, and Sinclair, won the concession to which Middle East oil field for \$7.5 million in cash, minimum \$625,000/year royalty and 15% of the profits?
Kuwait Neutral Zone concession
413. Which country was the first to adopt the 50/50 principle?
Venezuela
414. During the 1950s, three other countries reworked their concession agreements to include the 50/50 principle. Name these three countries.
Saudi Arabia, Kuwait, Iraq
415. What program was initiated in late 1956 to address limited oil supply to Western Europe during the Suez crisis?
Oil Lift
416. Which country seized control of the Suez Canal in July 1956 starting the Suez Crisis?
Egypt
417. Which oil industry technical improvement was a direct result of the Suez Crisis?
Super-Tankers
418. In September 1954, an agreement was signed between a new consortium of nine Western companies and the National Iranian Oil Company. Name these nine companies.
Anglo-Iranian, Jersey, Socony, Texaco, Standard Oil of California, Gulf, Shell, CFP, and Iricon
419. When did the Iranian government pass a resolution to nationalize their oil industry?
March 1951
420. Who was the Iranian Prime Minister who had to be deposed before an agreement between Anglo-Iranian and the NIOC would be reached because of his bitter hatred of Anglo-Iranian?
Mohammed Mossadegh (Old Mossy)
421. Name the seven sisters.
Jersey, Socony-Vacuum, Standard Oil of California, Texaco, Gulf, Royal Dutch-Shell, BP
422. Following the Italian's agreement with the National Iranian Oil Company in which Iran received 75% of the profits, which two other companies made agreements with Middle Eastern countries that did not follow the standard 50/50 principle.
Arabian Oil Company & Standard of Indiana
423. The Gentleman's Agreement, signed during the 1959 Arab Oil Congress, is seen as the beginning of the alliance that would develop into OPEC. Name the five countries present at this preliminary meeting.

Venezuela, Saudi Arabia, Kuwait, Iran and Iraq

424. Who are the five founding countries of OPEC?

Saudi Arabia, Venezuela, Iraq, Iran, Kuwait

425. Significant oil deposits were discovered in four African countries during the 1950s. Name these four countries.

Gabon, Algeria, Nigeria, Libya

426. Which company hit big at Zelten in Libya in April 1959?

Jersey

427. The Mandatory Oil Import Program put into effect on March 10, 1959, restricted oil imports to the United States to what percentage of consumption?

0.09

428. Continental Oil Company, later Conoco, formed as a result of a merger between which two companies in 1929?

Rocky Mountain Marketing Company, OK-based Crude Producer and Refiner

429. Henry Darcy began his work on fluid flow while designing the fountains of this French city?

Dijon, 1856

430. The Forties pipeline needed to be shut in on August 1, 2011 to fix what problem?

Removing a nearby unexploded WWII mine

431. Chevron and Gulf Oil Merged when?

1984.0

432. When the standard trust broke up in 1911, what was the Chevron Branch called

Socal

433. Where is Saudi Aramco headquartered

Dhahran, Saudi Arabia

434. Largest oil field in the world?

Ghawar Field

435. What company was first granted concessions in Saudi Arabia?

SOCAL

436. Royal Dutch Shell's HQ?

The Hague, Netherlands

437. When was the tricone bit invented?

1933.0

438. What year did NYMEX start trading oil futures?

30376.0

439. Who arranged the meeting of Juan Pablo Alfonzo and Abdullah Tariki at the 1959 Cairo Oil Congress?

Wanda Jablonski

440. This is the term for a section of earth raised between two faults.

Horst

441. This term or unit represents the hydrogen-ion concentration in a substance.

pH

442. What country was the first to start a "50-50" agreement between a foreign operator and the national government?

Venezuela

443. This is the name of a contract signed in July 1928 between several major oil companies (including Royal Dutch and Anglo-Persian) and that created a oil cartel in ex-Ottoman Empire territory.

Red Line Agreement

444. This commonly used temperature scale in the industry named after a Scottish engineer has absolute zero set at 0 degrees while using Fahrenheit as its incremental degree.

Rankine

445. This term describes the apparent weight loss of an object immersed in fluid.

Buoyancy

446. Name two assumptions for Lamé's equation.

Linearly elastic, homogeneous, isotropic, and 2-D

447. This is constant when experiencing a Joule-Thomson effect.

Enthalpy

448. This well log makes a record of the borehole diameter, which is usually constantly changing.

Caliper Log

449. This is a type of sedimentary rock similar to limestone but rich in magnesium carbonate. It can also be a reservoir rock for petroleum sources.

Dolomite or $\text{CaMg}(\text{CO}_3)_2$

450. This is the name for a wellbore completion that enables production from two separate zones.

Dual Completion

451. This is the most common form of Artificial Lift used for offshore purposes.

Gas Lift

452. This is the name for the classification system used for carbonate sedimentary rocks developed in 1946.

Dunham classification, Robert J. Dunham

453. Name the 6 types of reservoirs by the type of fluid produced.

Dead (Heavy) Oil, Black Oil, Volatile Oil, RCG, Wet Gas, Dry Gas

454. ExxonMobil drilled the deepest producing oil well in the world in Russia. What is the name of the oilfield and how deep is it in feet?

Chayvo, 40604 feet

455. What is the current US rig count?

1754 rigs

456. Who believed the Middle East to be the "greatest prize in history" due to its oil reservoirs, and the inspiration for Daniel Yergin's book *The Prize*?

Everett Lee DeGolyer

457. This German company conducted research on synthetic fuels for Germany's war effort during WWII.

I.G. Farben

458. This is the name given to permanently frozen soil or earth that can often cause problems for industry operations.

Permafrost

459. Oil and Gas are considered to be organic because they have this.

Carbon

460. What event was most responsible for the increased oil prices in 1974?

Arab Oil Embargo

461. The functional segments Exploration and Production, or E&P, can also be referred to by this one word commonly used in the industry.

Upstream

462. Drilled solids in mud act to increase what two characteristics of the mud?

Density and Viscosity

463. On a drilling rig, the fast line and the static line through the blocks have the same force only in this situation concerning the drilling blocks.

Blocks are stationary

464. Name a common reservoir production model that can be used below the bubble point of the reservoir.

Vogel's Equation

465. This is a clay commonly used in salt water applications that is a fiber-like clay that builds viscosity with agitation

Attapulgite

466. What is the recommended pressure (psi) used for a standard API filtration test?

100 psi

467. Name two positive displacement pumps.

PCP and Beam Lift (Rod Pump)

468. If a lower permeability sand was present at the same depth, would the water saturation in that sand be higher, lower or the same as in Sand A?

higher

469. Calculation: The capillary pressure for Sand A is measured to be 10 psi at a S_w of 0.4. The density of water is 62 lbm/ft³ and the density of oil is 50 lb/ft³. At what height above the water table is the water saturation going to be 0.4.

120 Ft

470. Name 2 types of well tests I can conduct to construct an Inflow Performance Relation, or IPR.

Flowing Test, Gas Lift, Swab, Jet, Pump Assisted Test

471. When someone mentions a 2:1 clay mineral such as smectite, what do the "2" and the "1" represent.

2 is number of tetrahedral sheets, 1 is number of octahedral sheets

472. Calculation: The permeability of two rocks is measured to be 1 md and 144 md respectively. If the average pore size of the high permeability rock is 24 microns, estimate the average pore size of the lower permeability rock (porosity is constant)

2 microns

473. As the number of rotor and stator lobes increases (i.e. 9:10 compared to a 3:4), what happens to torque and rotational speed?

Torque goes up, Speed goes down.

474. A gear box on a beam pump reduces these two things.

Torque, speed

475. A water-wet solid surface is characterized by a contact angle of ?

$\theta < 90$ degrees

476. What drainage shape has the largest shape factor CA of 31.62?

Cylinder

477. This k-factor often used in reservoir engineering applications relates particle energy to temperature and is named after this Austrian physicist.

Ludwig Boltzmann

478. This diagram or relation commonly used in the industry to assess rod life and rod failure for artificial lift applications is named after this English scientist.

Goodman

479. This mathematical and engineering object is characterized as a geometric object that has a magnitude and direction.

480. Calculation: I have a reservoir characterized by exponential decline that has a decline rate of -0.01 1/day with an initial production of 5000 barrels/day. The field is currently producing 3000 barrels/day. What is the predicted ultimate recovery?

200,000 barrels

481. Wellbore breakout occurs along the azimuth of which principal stress?
Shmax
482. When using an ultrasonic televiewer image, what mathematical shape describes the image of a fracture that slices the wellbore at an angle?
Sinusoid, Sinusoidal
483. When the rate of sediment deposition is greater than the rate of escape of fluids in the reservoir, this will result in a overburden pressure gradient > 1 psi/ft. What type of reservoir is this?
Overpressured
484. This type of decline curve is characterized by a b-factor of 1.
Harmonic
485. Calculation: I hold a 2 kg object 5 meters off the ground. How much potential energy does the object have in joules?
100 J
486. This thermodynamic principle mentioned by Van der Waals indicates that all fluids at the same reduced temperature and pressure have the same compressibility factor and deviate from ideal gas behavior to the same degree.
Principle of corresponding states
487. This thermodynamic variable is equal to the pressure of an ideal gas that has the same chemical potential as the real gas. In other words, it becomes equal to the pressure of the fluid at pressures low enough that the fluid approaches ideal gas state.
Fugacity
488. What is the maximum number of coexisting phases at equilibrium for a pure fluid?
Three, 3
489. Above ice's melting point, does the specific volume of the substance increase or decrease?
decreases
490. This cycle developed by a French engineer demonstrates the most efficient cycle for converting thermal energy into work, or extracting the most work from a given flow of heat between two temperature baths.
Carnot cycle
491. If I treat my drilling mud with lignosulfonate, I likely have this type of problem or issue.
Flocculation
492. Why would an operator choose to conduct a Methylene blue test on drilling mud?
Determine CEC or bentonite clay content of the mud
493. During drilling, if the shale formation has an activity of 0.7 and the shale starts to fracture and I see a reduced mud weight, what is a reasonable value for the activity of the drilling mud?
0.7
494. An ExxonMobil pipeline carrying oil from the Wabasca oil field in Canada had a leak on March 29, 2013. What is the name of the Arkansas town affected by the spill?
Mayflower, Arkansas
495. What Las Colinas, Dallas based oil company is traded on the NYSE under the symbol "PXD"?
Pioneer Natural Resources
496. What is the name of the SPE International chapter that New Orleans is a part of?
SPE Delta Chapter, Delta
497. Who is the president of the SPE Delta chapter?
Paul Morphy III, Shell Offshore, Inc.
498. What is the name of this New Orleans-based oil company founded in 1984 whose CEO is Mr. J. Luis B

aSos?

ORX Resources, private

499. In what year did SPE's first female president serve and what is her name?

1998, DeAnn Craig

500. Name the last five SPE Presidents (2009-2013)

Roodhart, Fattahi, Labastie, Thakur, Imomoh

501. This Calgary-based oil company became a subsidiary of this Chinese-based oil company on February 25, 2013. Name both companies.

Nexen Energy, CNOOC Energy.

502. What is the total membership of SPE (professional and students)

104762.0

503. According to the 2012 BP Statistical Review, name the top 5 Gas Producers in South America from High to Low

Trinidad & Tobago, Argentina, Venezuela, Brazil, Bolivia

504. According to the 2012 BP Statistical Review, what is worldwide oil production?

83.576 MMBO/day

505. According to the 2012 BP Statistical Review, what are US natural gas reserves?

300 TCF

506. You may know Sheikh Khalifa Bin Zayed Al Nahyan as the head of the Supreme Petroleum Council and the head of this major national oil company.

ADNOC, Abu Dhabi NOC

507. This Canadian-based pipeline and transportation company has been lobbying hard for the Keystone XL pipeline, which would transport heavy oils from Canada oil sands to the Gulf Coast.

TransCanada

508. What is the price of WTI crude oil?

\$92.64/bbl

509. This former CEO for a well-known Oklahoma-based gas producer was recently voted by shareholders to no longer return to his position and retire.

Aubrey McClendon

510. This is a Pulitzer Prize winning American author who is the chairman of Cambridge Energy Research Associates.

Daniel Yergin

511. In October 2011, this American energy company bought El Paso Corporation in a 21.2 billion deal that made the company the biggest U.S. Pipeline operator.

Kinder Morgan Inc.

512. The US Strategic Petroleum Reserve is the largest emergency oil supply in the world with the capacity to hold up to how many million barrels of oil?

727 million

513. On a F vs E_o, or total withdrawal vs oil expansion graph, a reservoir will be linear under this condition.

No water influx, no aquifer

514. I am producing a dry gas reservoir and create a P/z plot for the reservoir and extrapolate my data until I hit a cumulative gas estimate of 50 BCF. If I later realize my reservoir is under a natural water drive, will my new cumulative gas estimate be higher or lower than 50 BCF?

Lower

515. How many isomers does Pentane have?

Three, 3

516.Regarding phase behavior, this is the point where 3 phases coexist in equilibrium.

Triple Point

517.On a phase diagram, this is the term given to a line of highest temperature where a mixture can exist in two phases.

Cricondentherm

518.Name the two most common elements in the Earth's crust?

Oxygen, Silicon

519.This is the name of a vessel that breaks oil-water emulsions so that oil can be accepted by pipeline or for transport

Heater Treater

520.This commonly used solids carrier for fracture treatments undergoes frequent price swings as most of the material comes from farms in India.

Guar Gum

521.Calculation: in psi/ft, what is the pressure gradient for 11 ppm mud?

0.572 psi/ft

522.The tensile strength of standard cement is roughly _____ times less than the compressive strength?

10-12x

523.The main difference between the Driller's Method and the Wait and Weight method of killing a well is?

Number of mud circulations, driller's is 2, W&W is 1.

524.In a meeting, someone mentions a C228D model pumping unit. What does the "228" stand for?

228K or 228000 in-lbs torque rating on the gear box.

525.Where is the SPE Offshore Technology Conference, or OTC, held every year?

Houston, Texas

526.Concerning geostatistical or other statistical analysis, what relationship do standard deviation and variance have?

$SD = \sqrt{\text{variance}}$ or $\text{Variance} = SD^2$

527.Who is the CEO for Petrobras?

Maria das Gracas Foster

528.In 1923, this Texas company developed the industry's first enclosed, geared pumping unit.

Lufkin

529.In 2007, two countries joined OPEC and are its newest members. Name one.

Angola, Ecuador.

530.What is the equation for the minimum porosity in a dispersed shale?

$\text{Porosity} = \text{sand porosity} * \text{shale porosity}$

531.This is the name where molecules of natural gas, usually methane, are trapped in ice molecules.

Methane Hydrate, Clathrate

532.This is a device run during drilling with a smaller initial outside diameter that expands to seal the wellbore. They often use flexible, elastic elements to expand.

Packers

533.Calculation: What is the NPV of receiving \$500,000 in 5 years with a discount factor of 10%. Assume no costs. On J55 casing, what does the "55" stand for?

55,000 psi minimum yield strength

534.What year was the first petrobowl held and who won it?

2002, Texas Tech

535.What is the only school to have won petrobowl 3 times?

OU

536.What type of faulting regime has S_v at its largest principal stress and S_{hmin} as the smallest?

Normal

537.What is the name of the commonly used correlation to estimate fracture pressure?

Eaton's Correlation

538.A Marsh funnel is used on a rig to determine this.

Viscosity

539.What equation represents Boyle's Law?

$PV_1 = PV_2$.

540.This company received the first post-moratorium drilling permit in the Gulf of Mexico on February 28, 2011.

Noble Energy

541.With an estimated recoverable 9 billion bbls of recoverable oil, this Chevron-operated field is located in Kazakhstan. This field is also one of the deepest onshore producing fields, what is its name?

Tengiz

542.The derrick received its name from Thomas Derrick, a 17th century Englishman that invented a system of ropes and pulleys for his occupation that would later become the inspiration for a drilling derrick. What is his occupation?

Executioner, Hangman

543.At what level or percentage of sulfur content is crude oil considered to be sour crude oil?

0.0050

544.Name the process of physical, chemical, or biological alteration of sediments during or after they have been deposited.

Diagenesis

545.What percentage of SPE membership is comprised of students?

0.29

546.This Cajun-inspired term is used to describe the soft and sticky formation encountered when drilling that plugs up drilling tools, piping, and shale shaker screens.

Gumbo

547.This material is a solid that begins to form on catalysts used on cracking processes and refineries.

Coke

548.In what decade was the first horizontal well drilled in Texas, Texas?

1920s (1929)

549.Name 4 components of an ESP, or electric submersible pump.

Rotor, stator, motor, diffuser, impeller

550.In May 2012, this US state became the first to ban hydraulic fracturing, or fracking.

Vermont

551.Name the year the petroleum branch of AIME became a full-fledged professional society that would become SPE.

1957.0

552.Name the country that is the world's leading LNG exporter that has received recent publicity for hosting the 2022 FIFA world cup.

Qatar

553.Name the first European country to ban the use of hydraulic fracturing.

France

554.Name the first place winner of the 2011 International student paper contest held at the undergraduate division.

Parag Bandyopadhyay

555. What is the name for the chemical that is frequently used to alter mud pH levels while drilling.

Lime

556. This sand from St. Peters sandstone is used as proppant in hydraulic fracturing in the USA and gets its name from this city in Illinois. Name the city.

Ottawa

557. This class of cement, according to API, is intended for use at depths of 10000-14000 feet at high temperatures and pressures. Name the class.

Class G cement

558. In the US, under what flow is an oil or gas well classified as a stripper well? (oil and gas rate)

60 MCF, 10 BBL/day

559. Compaction drive is defined as the expulsion of fluids due to the dynamic reduction of what reservoir property?

Porosity

560. When a source rock is examined under a reflectance microscope, the amount of light reflected by this plant organic matter helps define the maturity of the source rock. Name this organic matter.

Vitrinite

561. Name 2 components of a traditional pumping unit.

Etc, etc

562. What was the original name of the NYMEX, the world's largest physical commodity exchange, where billions of dollars in energy products and metal are bought and sold every day?

The Butter and Cheese Exchange

563. What country is the number one source of U.S. oil imports, providing around 25% of US oil imports.

Canada

564. What former scientist became the first world leader to give a major policy speech on climate change in 1988?

Margaret Thatcher

565. How many times has UT won Petrobowl?

twice, 2x

566. Carbonate sedimentary rock composed of mostly calcite is what

limestone

567. What equation relates capillary pressure to interfacial tension?

Young-LaPlace

568. Identify the aspect of logging that employs an electrical cable to lower tools into the borehole and is distinct from measurements while drilling and well logging

Wireline

569. In the early 1800s, saltmakers frequently hit oil or gas in their drilling. These byproducts were considered a nuisance. In this state, so much oil was diverted to the Kanawha River by salt manufacturers that it was known as "Old Greasy" to boatmen.

West Virginia

570. This company is publically traded under both the Toronto Stock Exchange and the New York Stock Exchange with a ticker of TSX

TransCanada

571. The underground process of "diagenetic override" leads to a reservoir characterized as?

tight

572. The world's first attempt at a long-distance pipeline would successfully connect the Oil Regions with th

e Pennsylvania and Reading Railroad. What name was this pipeline given?

Tidewater Pipeline

573. On October 6, 1957, the first Board of Directors meeting was held in Dallas, Texas, with President John H. Hammond presiding. To what organization did this meeting belong to?

The Society of Petroleum Engineers - of AIME

574. On March 31, 2012, this oil rig owned by Shell ran aground off the coast of Alaska.

The Kulluk

575. What 3 states account for over half of all domestic refining capacity?

Texas, Louisiana, California

576. The Texas Company, started by Joseph Cullinan, would change its name in 1906 to?

Texaco

577. Type 3 kerogens usually form from what type of organic material and tend to produce what type of hydrocarbons?

terrestrial plant material, natural gas

578. A joint of C75 casing has the following characteristics: an OD of 4.5 inches, an ID of 3.92 in, 13.5 lbs/ft. Calculate wall thickness, and minimum yield strength, in PSI of this casing.

0.29 and 1575000 psi

579. This diagram can be used to determine the overall, vapor phase, and liquid phase compositions of 3 separate components at one temperature and pressure.

Ternary Diagram

580. This isotherm is required in the modeling of coalbed methane production. It represents the amount of material bound at the surface as a function of the material present in the solution.

Sorption or adsorption

581. A multiphase-fluid flow regime characterized by a series of liquid plugs separated by relatively large gas pockets.

slug flow

582. The coefficient of isothermal compressibility has the unit of inverse psi, more commonly known as what in the industry?

psi

583. An important area for Gazprom because it produces 95% of Russia's Natural Gas. Name this region that is often associated with tundra.

Siberia

584. This ULCC supertanker held the record of longest ship ever built and largest capacity of any ship. Give just one of her names.

Seawise Giant, Happy Giant, Jahre Viking, Knock Nevis

585. What important additive addition could be made to a Portland cementation to improve its high-pressure / high-temperature (HPHT) stability

Sand/Silica Flour

586. A laboratory device used to measure the way in which a slurry flows in response to applied forces.

rheometer

587. The color of petroleum is determined largely by what two components?

Resins and Asphaltenes

588. This refined product is publically traded through the NYMEX with the trading symbol of RB reformulated gasoline blendstock for oxygen blending

589. Before allowing futures trading of Oil & Gas, NYMEX was well known for its futures trading on what crop?

Potato

590. When a material is compressed in one direction, it usually tends to expand in the other two directions perpendicular to the direction of compression. This phenomenon is called the

Poisson effect

591. The act of drilling with the mud pressure greater than the formation pressure is known as

Overbalanced Drilling

592. Above what Reynolds number does flow in a porous medium become non-Darcy flow?

Order of 1

593. What is the primary disadvantage of using explicit time-stepping in a reservoir simulator?

Numerical instability or limited time-step duration

594. A Naval Petroleum Reserve is an area with probable or proven oil reserves in the U.S. that was withdrawn from oil exploration by Congress in 1923 for defense purposes. Name two locations of such reserves.

North Slope of Alaska, Elk Hills and Buena Vista, CA, Teapot Dome, Wyoming

595. In reservoir simulation, Peaceman's correction is used to model what part of the reservoir?

Near-well region

596. A positive displacement motor that is used in drilling a deviated hole that has more than one angular deflection point in the motor housing.

multibend motor

597. This instrument determines the amount of oil, water, and solids in drilling mud.

Mud Retort

598. What are the 3 data transmission methods used for MWD?

Mud pulse telemetry, Electromagnetic telemetry, Wired Drill Pipe

599. This modern day company began as The Ohio Oil Company in 1887 before being bought by Standard Oil in 1889 and later by United States Steel in 1982.

Marathon Oil Company

600. Calculate the mass of methane gas contained at 1000 psia and 68°F in a cylinder with volume of 3.2 ft³. Assume that methane is an ideal gas.

m=9.1 lb

601. Turbidite deposits would most likely be found in which systems tract of the classic sequence stratigraphic model?

lowstand systems tract

602. A procedure for calibration of permeability data obtained from a minipermeameter device. This is usually done when the pore space approaches the mean free path of the gas.

Klinkenberg Correction

603. This man used the phrase "the Great Game"—the struggle to accomplish and build, and the drive to make money, both for its own sake and as a register of achievement. Who was he?

John D. Rockefeller

604. If the size of the grains of a beadpack were double, how much would the permeability change (all else being equal)?

It would be 4 times larger

605. In the subsurface, is the total compressibility of a dry steam reservoir (single phase, no liquid water present) higher, lower, or about the same as a saturated (two-phase steam and water) reservoir at the same pressure?

It is much lower.

606. A semi-log plot produced during pressure buildup analysis is known as

Horner plot

607. This French engineer was working as the Inspector General of Bridges and Highways in Paris when he modified the Prony Equation into the well-known form we use today.

Henry Darcy

608. a sweet-tasting synthetic ingredient used in toothpaste and other products -- is a petrochemical derived from oil.

Glycerin

609. Name the two largest conventional oil fields in the world, and their location

Ghawar Field in Saudi Arabia and Burgan Field in Kuwait

610. In a normal faulting regime (with isotropic horizontal stress), which of the following faults is more likely to slip in response to an increase in pressure? Vertical fault, fault dipping 60 degrees, fault dipping 45 degrees?

Fault dipping 60 degrees

611. Name 3 of the mainland central american countries with no proven reserves of crude oil, as of Jan 1st, 2011.

El Salvador, Honduras, Costa Rica, Panama

612. Arrange the following minerals in order from densest to least dense: quartz, dolomite, calcite
dolomite, calcite, quartz

613. This SPE award is given to outstanding faculty of Petroleum Engineering and has been awarded to such Professors as Dr. Sharma, Dr. Pope, Dr. Caudle, and Dr. Lake.

Distinguished Achievement Award for Petroleum Engineering Faculty

614. Determine the number of barrels of water weighing 8 ppg required to reduce 100 bbl of 14 ppg mud to 12 ppg mud

54.5 bbl

615. Home to some of the world's largest recent oil discoveries, Brazil is an important Latin American power. Name the President of Brazil.

Dilma Rousseff

616. Soft sediment deformation is most typical in which facies of deltaic deposits?

delta front facies

617. What is the D/t ("D over t ratio") in casing design and how does it affect it?

D/t stand for casing diameter over wall thickness and affects burst and collapse design

618. A water pump and a steam compressor operate with the same inlet pressure and outlet pressure at the same mass flow rate. Which one requires greater power input?

Compressor

619. This physical characteristic is the temperature at which wax begins to solidify and is identified by the onset of turbidity as the temperature is lowered

Cloud Point

620. What is the name given for the 1D water flood problem that has an analytical solution?

Bulkley-Leverette

621. List two common types of pressure transient analysis?

Buildup and drawdown tests

622. This type of motion is the presumably random moving of particles suspended in a fluid (liquid or gas) resulting from their bombardment by the fast-moving atoms in the gas or liquid.

Brownian Motion

623. Uncontrolled discharge of formation fluid out of the wellbore is known as

Blowout

624. The equation that relates chemical reaction rates to the temperature and includes such terms as Activation Energy, Temperature, and the universal gas constant.

Arrhenius Equation

625. Name the first well surveying tool to be used

Acid Bottle

626. What is a semivariogram?

A statistical tool that measures the spatial correlation or continuity in geophysical data

627. One bbl of oil accounts for approximately how many gallons of diesel fuel?

9.21 gallons

628. What is the approximate pressure at the bottom of an open tank 10 ft in height and 2 ft in diameter that contains water at STP?

4.33 psia

629. In petrophysics, what is Stone's model used to predict?

3-phase relative permeability

630. What is the standard length of drill pipe?

30 Ft

631. The US has approximately how many miles of oil pipelines within its borders?

200,000 miles

632. Laboratory analysis of a typical black oil will indicate an initial oil formation volume factor of

2.0 res bbl/STB

633. If pore diameter in a rock is reduced by half, how much does the capillary entry pressure increase according to the Washburn equation?

2 times

634. Flowrate of a 1 cP fluid in a 1 m pipe is 1 cm³/s at a pressure drop of 10 psi. If the radius is doubled, what is the new flowrate?

16 m³/s

635. This temperature window allows for the creation of crude oil from organic matter in sedimentary rocks.

What are these values?

150-300F

636. A sandstone with 25% porosity completely saturated with water of resistivity of 0.05 ohms has a measured resistivity of 0.8 ohms. What would the measured resistivity be if the water resistivity is 0.1 ohms?

1.6 ohms

637. The recovery of mobile oil directly related to the degree of compartmentalization or complexity of a reservoir is known as the

Beg Analysis