

**ATTACHMENT 2**  
**ACTIVE WELL AND PLUGGING REPORTS**

OCT 28 2014

## STATUS OF ACTIVE AND PLUGGED WELLS WITHIN THE ZIA AGI WELLS AREA OF INTEREST

### Wells within the 30-Year Calculated Injection Area Using 100% Safety Factor

For the purposes of this evaluation, the calculated areas of injection influence (0.37 mile radius) are based on the highly conservative injection rate of two times the base design rate over 30 years.

Active well 3002520122 (Figure 2-1) was completed in the Strawn and Morrow in February 1963. The surface casing (850') and the intermediate casing (4,506') were cemented to the surface. The production casing's top of cement was measured at 9,800'. This well lies just inside the east boundary of the outer edge of the calculated 100% safety-factor injection area of Zia AGI #2, and should not be influenced by any anticipated injection activities.

Plugged well 3002520247 (Figure 2-2) was drilled in 1963 and completed in the Strawn at 12,554'. This well is inside the inner (7.5 MMSCFD 30-year radius) area. In October 1971 the well was plugged back to 8,819' and was perforated from 8,822 to 8,824 to test the Bone Springs. The test was unsuccessful, and the well was plugged and abandoned in October 1971. The injection zone is protected, since the well bore is plugged with cement plugs at 6,600' and 4,364'.

Well 3002520876 (Figure 2-3) is also an active well, and lies inside the inner (7.5 MMSCFD 30-year radius) area. Originally completed in the Strawn in 1961, the well was plugged and abandoned in October 1971. The well was re-entered in June of 1981 and completed in the Yates. As seen in Figure 22, the injection zone is isolated by cement plugs set at 3,760' and 7,560'.

Well 3002534573 (Figure 2-4) is an active well inside the inner (7.5 MMSCFD 30-year radius) area. The proposed injection zone (5,500' to 6,100') is well protected because the 5 1/2" production casing is cemented from the total depth (12,540') to a depth of 4,200'. This places the top of the cement at 300' below the base (4,500') of the intermediate casing. The intermediate casing and the surface casing (830') are cemented to the surface.

Active well 3002535291 (Figure 2-5) inside the inner (7.5 MMSCFD 30-year radius) area also protects the injection zone because the 5 1/2" production casing was cemented from total depth (12,718') to the surface.

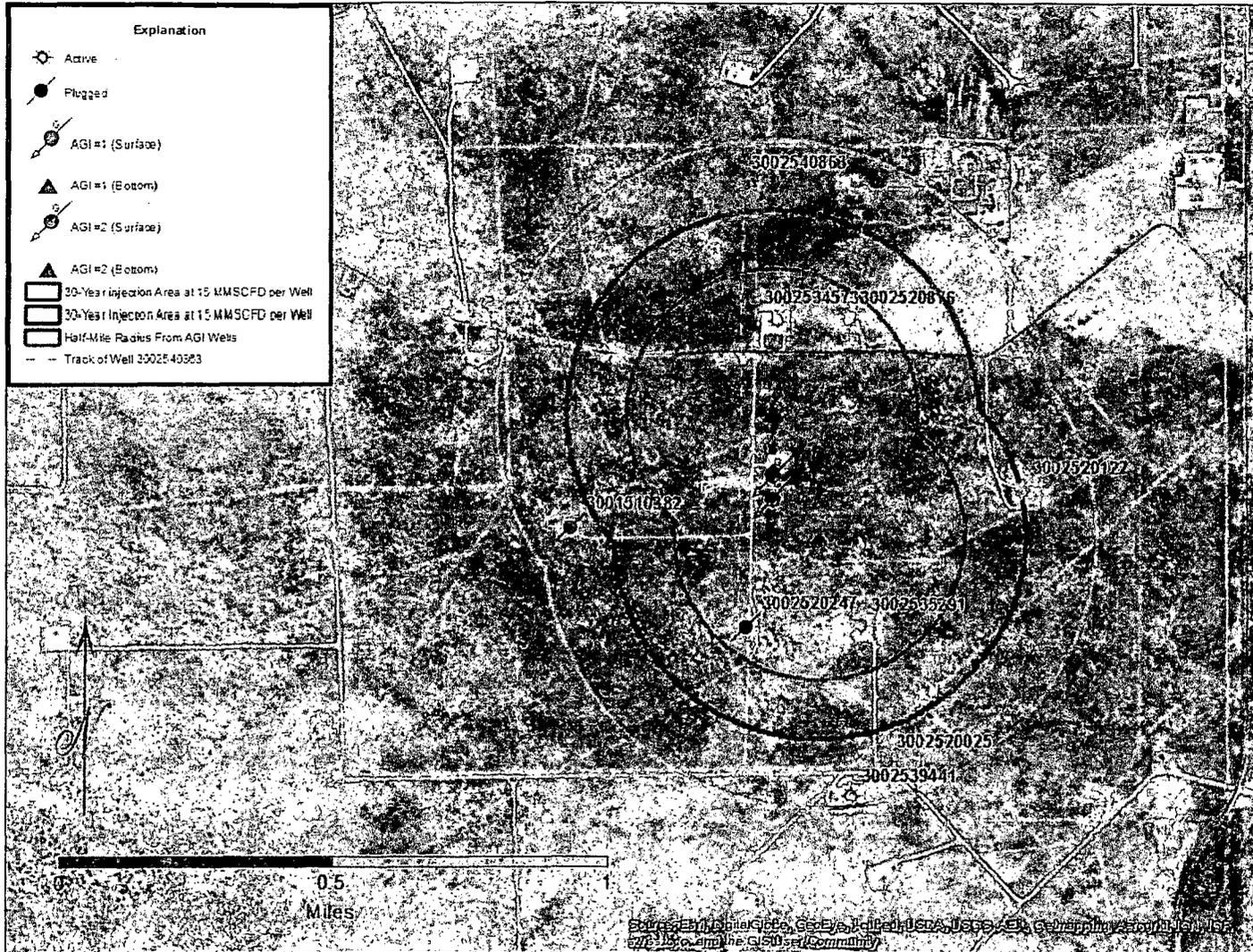
### Wells outside the 30-Year Calculated Injection Area Using 100% Safety Factor

Plugged well 3001510382 (Figure 2-6) was completed in the Strawn in 1964. The well was plugged and abandoned in October 1994. This well lies approximately 300' west of the outer edge of the calculated injection area of Zia AGI #2. The injection zone is further protected by cement plugs in the well bore at 6,908' and 4,325'.

Active well 3002520025 (Figure 2-7) was completed in the Strawn in February 1963 at a total depth of 11,400 feet. Its location is approximately 300 feet south of the outside the safety-factor area. Surface casing (507') was cemented to the surface, as was the intermediate casing (4,050'). The production casing was cemented to 8,300 feet, and was later squeezed at 6,058 feet.

Active well 3002539411 (Figure 2-8) was completed in the Bone Springs at 9,580 feet in June 2009. The well is located approximately 400 feet south of the calculated injection area of Zia AGI #2. The surface casing (839') was cemented to the surface, and the intermediate casing (4,158') was cemented to 100 feet. The intermediate casing was cemented to 1,800 feet, well inside the intermediate.

Active well 3002540863 (Figure 2-9) is a horizontal well completed in the Bone Springs. The well was drilled vertically to approximately 8,700 feet, and then achieved a horizontal path at approximately 9,700'. As seen in Figure 21, the subsurface path of the well trends north-south for approximately 4,600', passing under the injection zone. The surface, intermediate and production casing strings were cemented to the surface, protecting the injection zone. The production zone of the well is at approximately 9,300', over 3,000' below the proposed injection zone.



## Wells Penetrating the Injection Zone Located Within One Half Mile of the Proposed AGI Wells

(Circles Show Anticipated Rate of 7.5 MMSCFD and 100% Safety Factor Injection Rate 15.0 MMSCFD)

# Completion and Plugging Diagrams

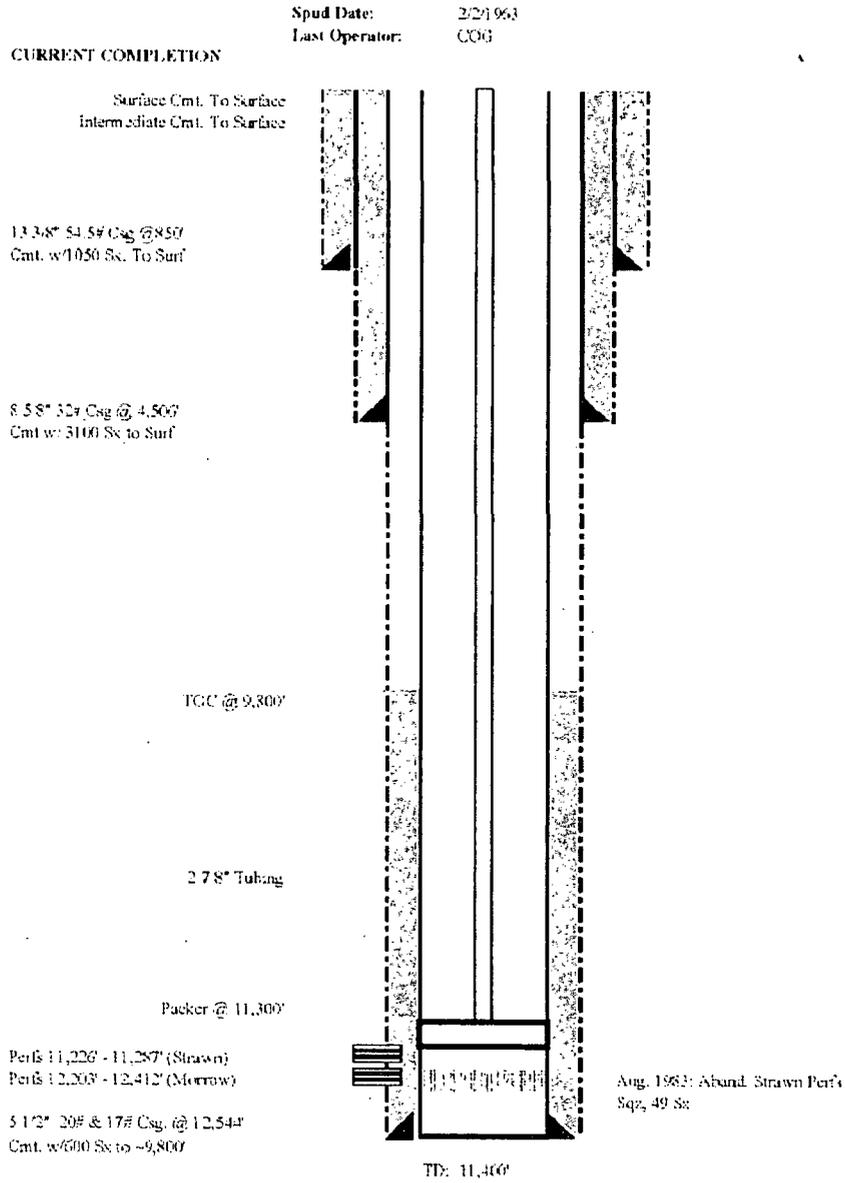


Figure 2-1: Lusk Deep Unit A 005 Schematic

Spud Date: 12/16/1963  
 Plug Date: 10/25/1971  
 Last Operator: El Paso Products

INITIAL COMPLETION

FINAL PLUGGING

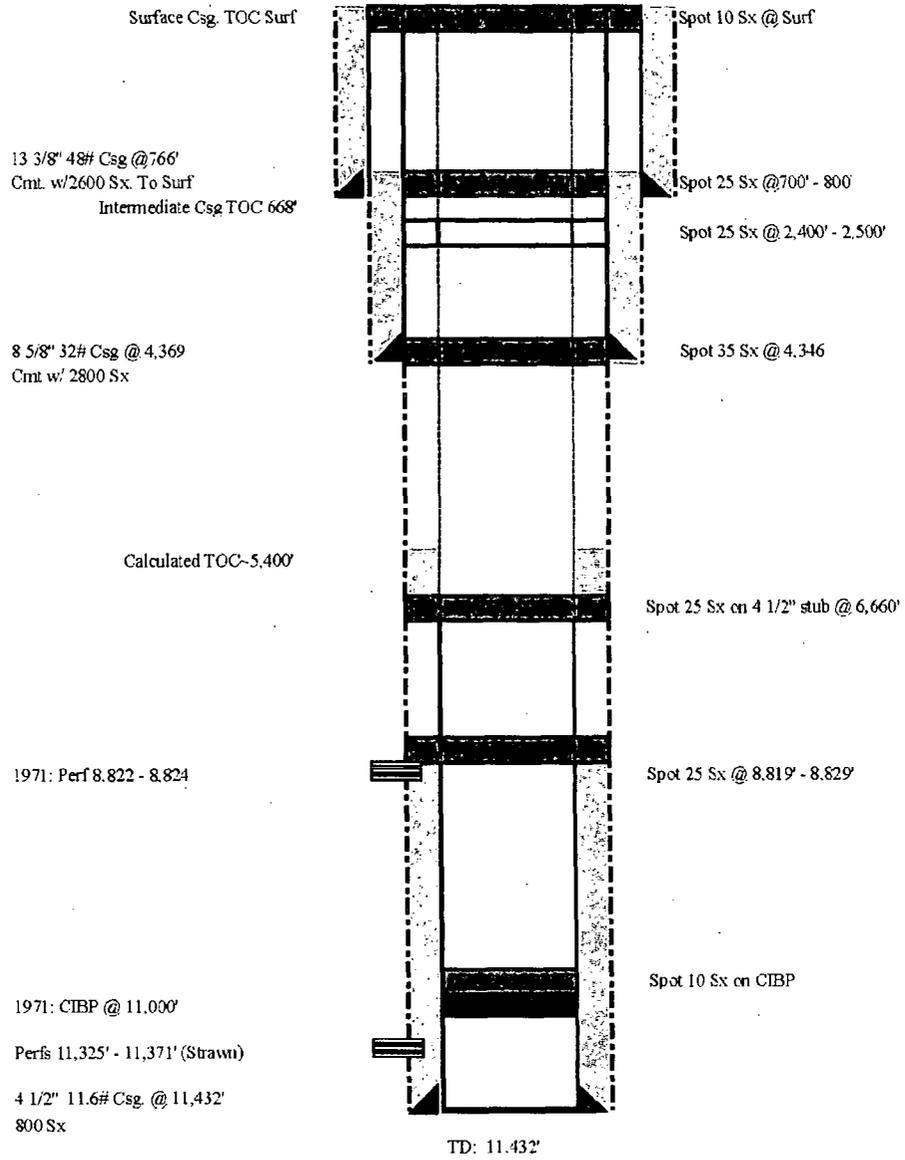


Figure 2-2: Lusk Deep Unit 006 Schematic



GULF FEDERAL 003 (3002520876)  
WELL SCHEMATIC



Location: 1950 FNL & 1678 FWL  
STR S19-T19S-R32E  
County, St.: LEA COUNTY, NEW MEXICO

Spud Date: 11/6/1964  
Last Operator: Tom R. Cone

CURRENT COMPLETION

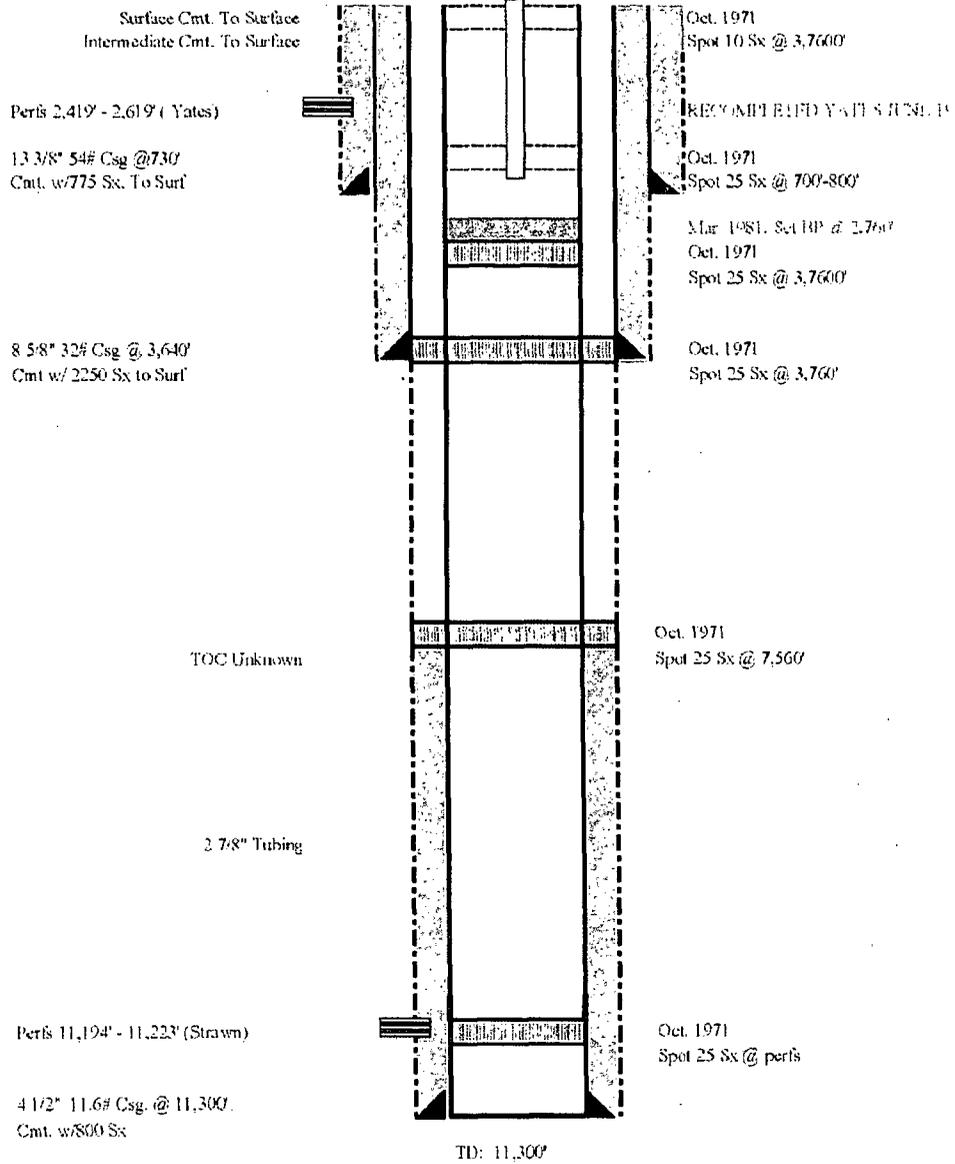


Figure 2-3: Gulf Federal 003 Schematic

16. David Stone testified that the proposed Zia II Gas Plant will have a capacity to process up to 200 MMSCF of sour gas per day and that the design and operation of the Zia II Gas Plant is dependent on the approval of the proposed AGI wells to dispose of the residual acid gas. The AGI wells will have a combined injection capacity of 15.0 MMSCF per day to dispose of the resulting TAG stream.

17. The proposed Zia II Gas Plant and two AGI wells are necessary to help meet growing production demand for sour gas processing and waste disposal, will replace some out-dated DCP facilities, will increase processing reliability, and will result in a net reduction of air emissions.

18. DCP is prepared to commit nearly \$500 million to the construction of the Zia II Gas Plant, the AGI wells and associated facilities and infrastructure, the construction and operation all of which are dependent on a permit that approves operations for thirty-plus years.

19. DCP intends to begin construction of the Zia II Gas Plant and AGI wells to commence operations in the summer 2015, but requests authority to initiate injection for up to three years from entry of an order to accommodate variables and long lead times necessary for obtaining the required permits and construction associated with the plant.

20. DCP technical witness Alberto Gutiérrez, RG, testified that injection of TAG through the proposed AGI wells will be at a maximum rate of 15.0 MMSCF per day, or about 7.5 MMSCF per day for each well, and at a maximum operating surface pressure of 2,233 pounds per square inch gauge.

21. With a safety factor of 100 percent, or 15.0 MMSCF per day per well, the radius of influence for each well after injecting for thirty years will be approximately 0.37 miles. The actual radius of influence for each well, based on the actual injection volumes, will be approximately 0.26 miles after thirty years of injection.

22. The data used to model the reservoir characteristics and conditions was derived from more than 30 wells which penetrate the injection zone and are located within approximately two miles of the proposed injection points.

23. Twenty-nine wells penetrate the proposed injection zone within a one-mile radius of each proposed AGI well. Within one-half mile of the injection points, nine wells penetrate the injection zone, of which seven are active wells and two wells are plugged and abandoned.

24. The proposed injection zone is laterally extensive with a high porosity, indicating that it will adequately contain the injected TAG within the target injection zone and within the half-mile area of review.

25. The proposed injection zone provides a sufficient geologic seal to contain the injected TAG and prevent its migration into other zones. The injection zone is

sufficiently isolated from any protectable groundwater sources and there is no evidence injection will impair existing or potential hydrocarbon production in the area. Nor are there any faulting or other geologic or manmade conduits that will allow the treated injected acid gas to migrate out of the injection zone.

26. Freshwater will be protected by surface casing, which will extend to approximately 1,025 feet below the surface. The Capitan Aquifer will be completely isolated by the intermediate casing, set at approximately 4,600 feet below the surface. All casing strings will be cemented to the surface, pressure tested and verified using 360-degree cement bond logs. The casing and cement program will meet all Bureau of Land Management guidelines and requirements, in addition to all Oil Conservation Division requirements.

27. The entire production tubing in both AGI wells will be lined with fiberglass to prevent corrosion. Approximately 250 feet of corrosion-resistant production casing will be installed between approximately 5,400 feet to 5,650 feet below the surface to protect the packer and packer seat.

28. The annular space will be filled with corrosion-inhibited diesel fuel that also contains a biocide.

29. Surface TAG injection pressures, temperatures and flow rates will be continuously monitored and recorded, as will surface annular pressure, and bottom-hole temperatures and pressures in the tubing and annulus of each well.

30. Injection of the proposed TAG stream will protect the environment and human health, and will not cause waste or impair correlative rights.

31. Phillip Goetze, the Division's witness, presented testimony that the Division proposed several conditions of approval in its Prehearing Statement and that the Division and DCP had reached agreement on the proposed conditions.

32. DCP and the Division reached agreement on the conditions of approval proposed by the Division, as follows:

- a. DCP agrees to conduct a mechanical integrity test ("MIT") on both proposed AGI wells every year.
- b. DCP agrees to conduct continuous monitoring of surface TAG injection pressure, temperature and rate, surface annular pressure and bottom-hole temperatures and pressures inside the tubing and annulus.
- c. DCP agrees to keep a maintenance log of its diesel replacement activities in the annulus of the wells.

**GEOLEX**  
INCORPORATED

LUSK DEEP UNIT A 014 (3002534573)  
WELL SCHEMATIC

**dcp**  
Midstream.

Location: 1650 FNL & 990 FWL  
STR S19-T19S-R32E  
County, St.: LEA COUNTY, NEW MEXICO

Spud Date: 12/17/1999  
Last Operator: COG

CURRENT COMPLETION

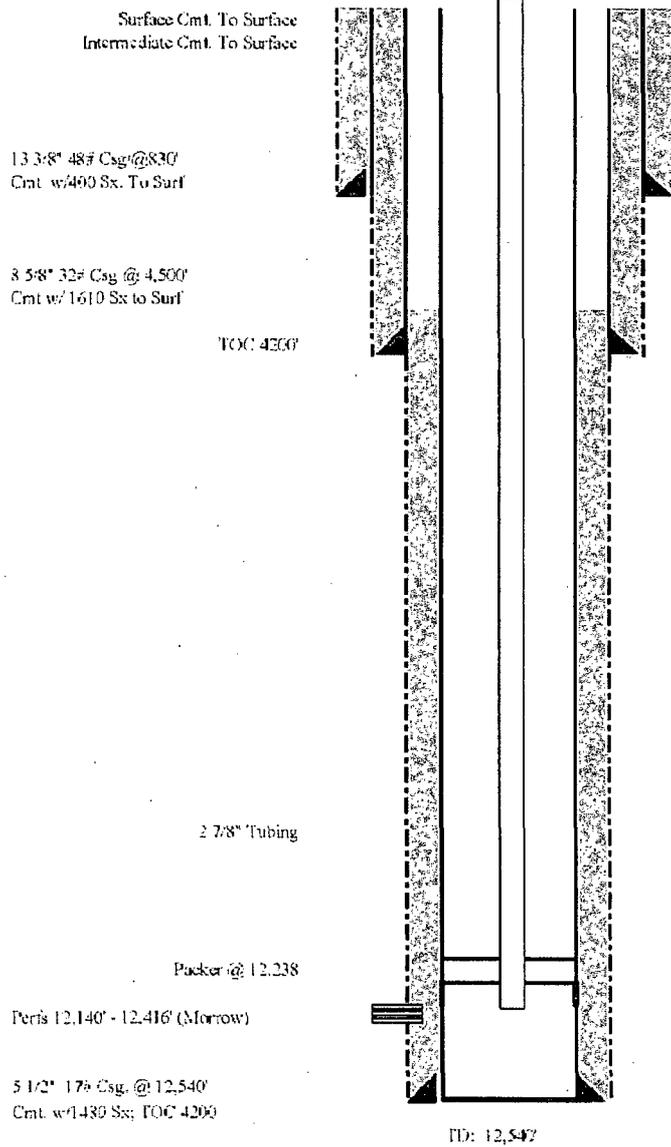


Figure 2-4: Lusk Deep Unit A 014 Schematic

Spud Date: 4/24/2001  
Last Operator: COG

CURRENT COMPLETION

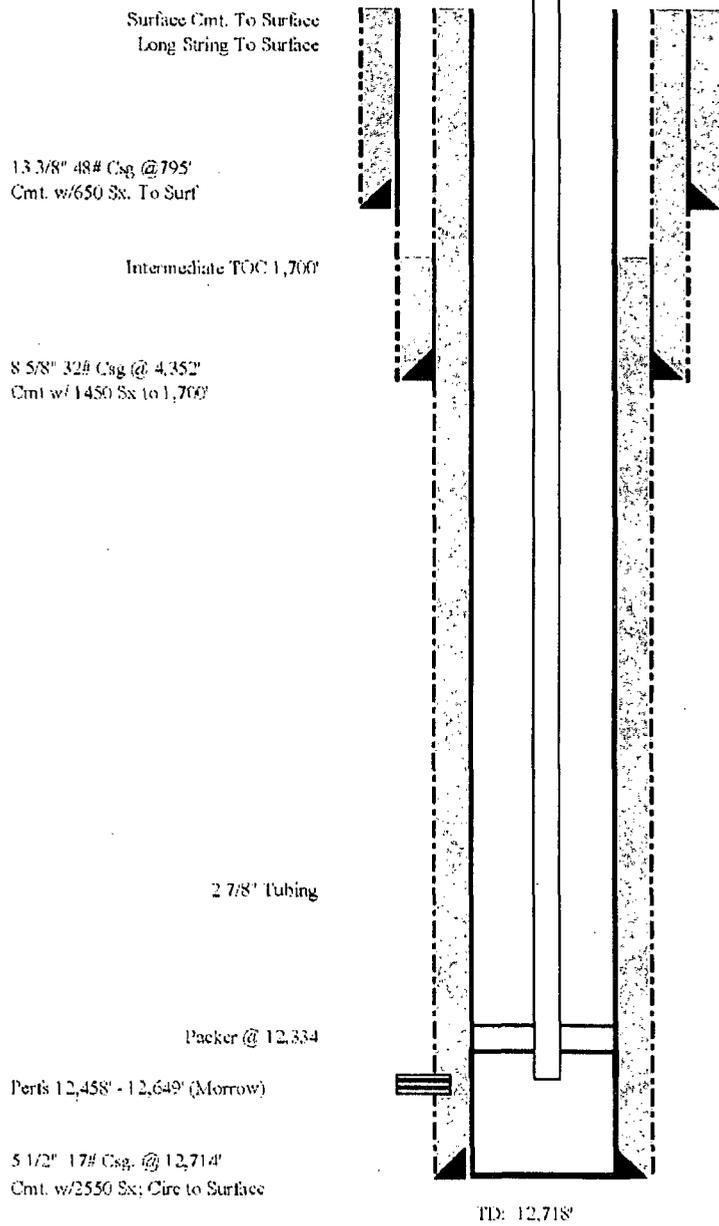


Figure 2-5: Lusk Deep Unit A 021 Schematic

Spud Date: 4/26/1964  
 Plug Date: 10/17/1994  
 Last. Operator: Phillips Petroleum

INITIAL COMPLETION

FINAL PLUGGING

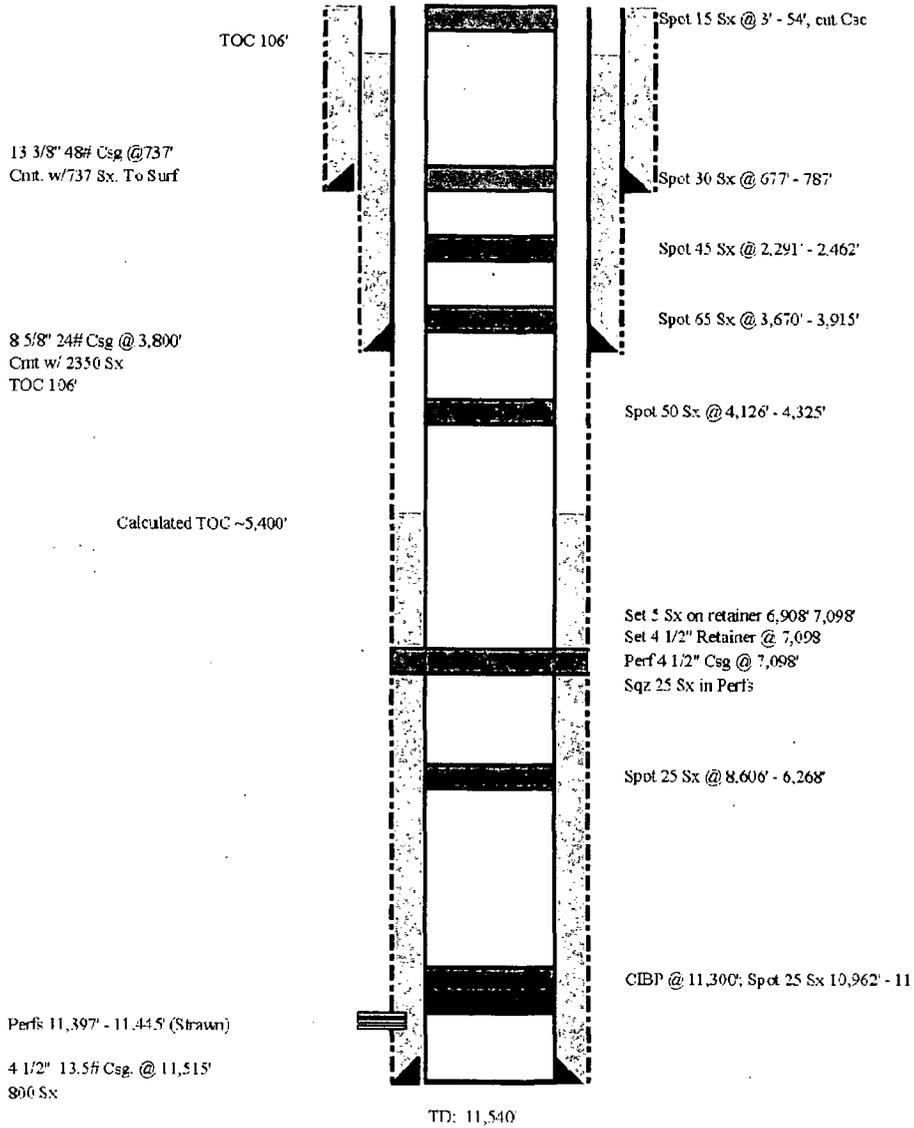


Figure 2-6: Lusk Deep Unit 008 Schematic

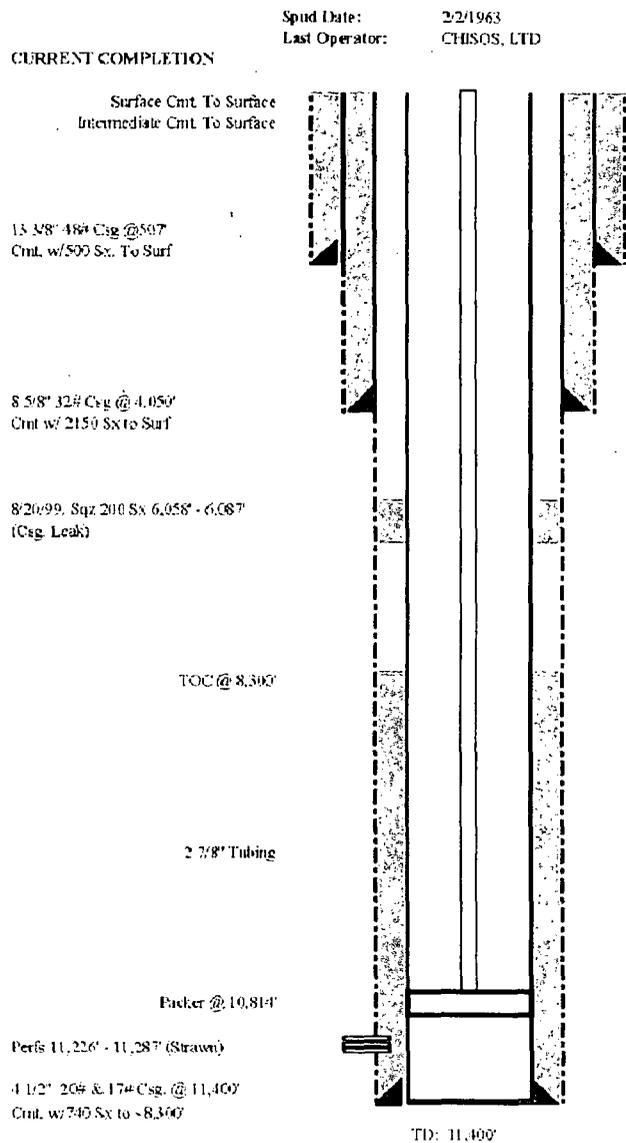


Figure 2-7: Delhi Federal 001 Schematic

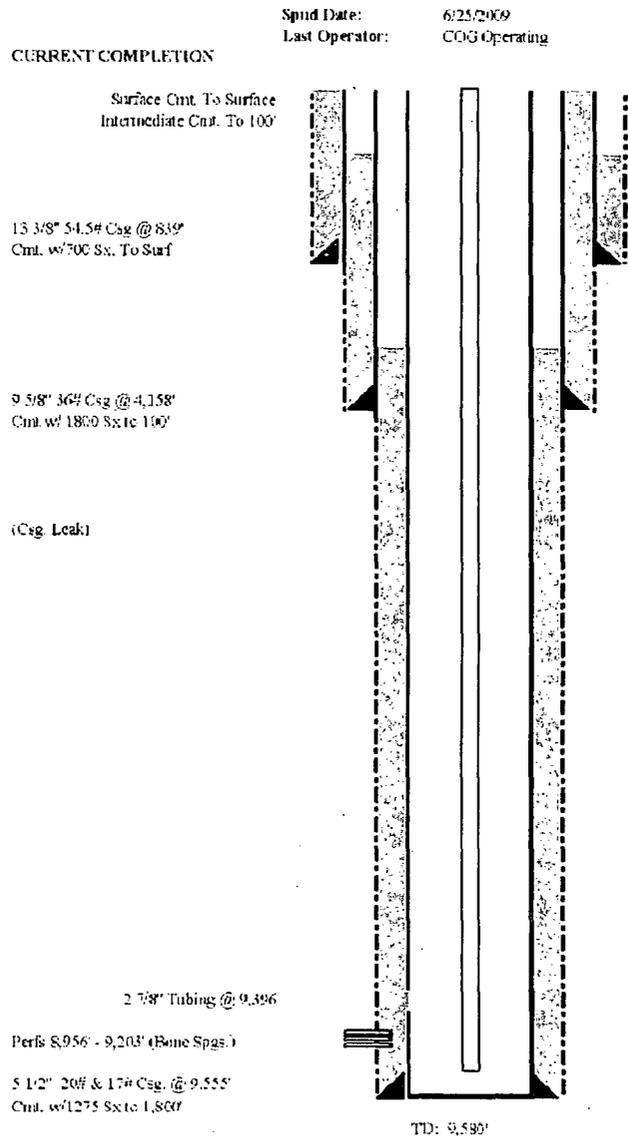


Figure 2-8: SL Deep Federal 003 Schematic

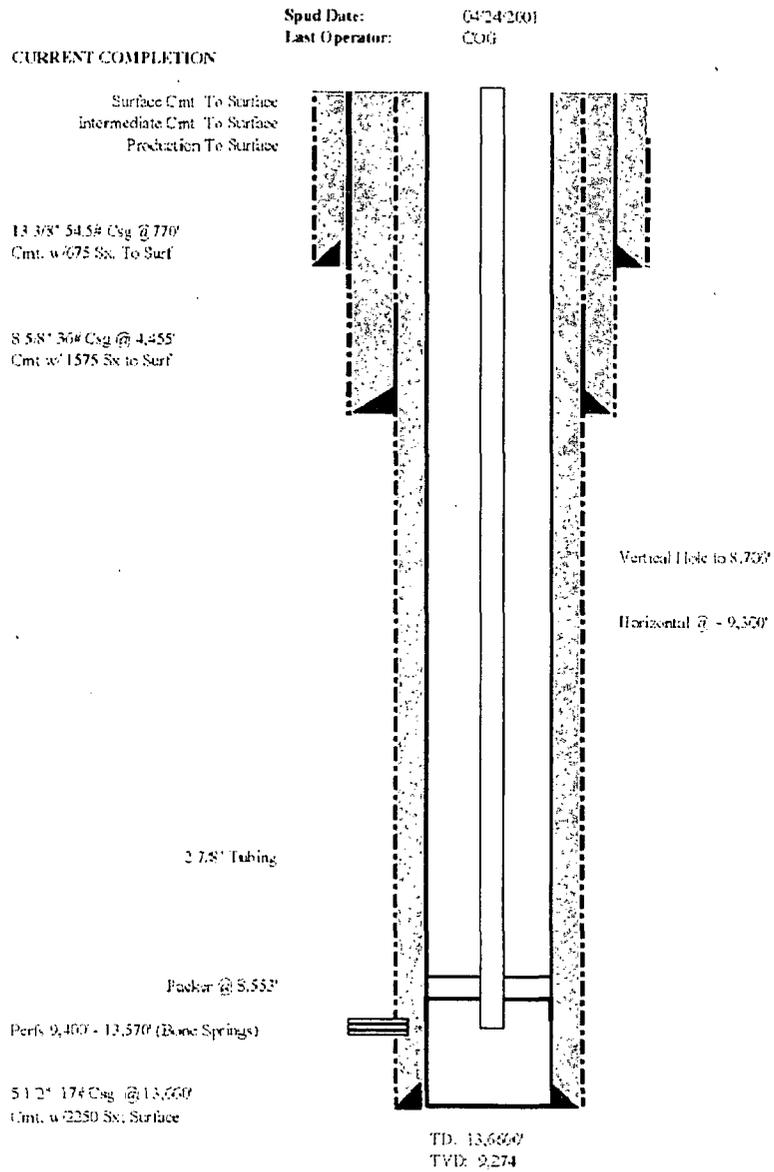


Figure 2-9: Lusk Deep Unit A 024H Schematic