

WELL HISTORY
WESTERN DRILLING COMPANY OF LONGVIEW
GULF FEDERAL NO. 1

Date;

February 2, 1960 Moved in and rigged up rotary rig. Spudded 12 $\frac{1}{4}$ " surface hole at 5:00 P. M. Texas Time. Drilled 182' - Red Clay, Sand & Surface Rock. Drilled w/clear water.

3 Drilled to 367' TD surface hole - Sand & Shale; $\frac{1}{4}$ degree @ 245'; ran 11 jts. of 8-5/8" J-55 24# R-2 8 Rd. Thd. Casing & 1' Texas Pattern Shoe set at 352'. Cemented w/235 sax regular neat cement by HOWCO - Plug down at 2:00 P. M. - Cement circulated.

4 W.O.C. - Backed out landing joint & nipped up; drilled out cement - tested cement 500# pressure - O. K.; drilled to 825' in Shale & Red Bed - $\frac{1}{2}$ degree at 700'.

5 2223' - drilled ahead in Red Bed, Shells, Shale & Sand - $\frac{1}{4}$ degree at 2143' - Mud Wt. 8.6 - Viscosity 36.

6 2973' - drilling ahead in Anhydrite, Red Bed, Shells & Gyp; 1 degree at 2845' - Mud Wt. 10 - Viscosity 34.

7 3582' - drilling ahead in Anhydrite, Gyp & Salt Streaks; 1 degree at 3329' - Mud Wt. 10.4 - Viscosity 33.

8 4046' - drilling ahead in Anhydrite, Lime & Gyp; $\frac{1}{2}$ degree at 3805' - Mud Wt. 10.2 - Viscosity 31.

9 4208' - Anhydrite, Gyp & Shale; 0 degrees at 4100'; Mud Wt. 10.5 - Viscosity 34; started making trip for bit - stuck pipe at 1851'.

10 Working stuck pipe - spotted 50 bbls. lease oil at 1851' - pipe loose @ 9:00 A. M.; finished pulling out of hole - drilled to 4270' in Anhydrite, Gyp & Shale; $\frac{1}{4}$ degree at 4200' - Mud Wt. 10.1 - Viscosity 38.

11 4417' - drilling ahead in Lime, Anhydrite & Shale; $\frac{1}{2}$ degree at 4396' - Mud Wt. 9.4 - Viscosity 40.

12 4608' - drilling ahead in Lime and Dolomite - Mud Wt. 9.4 - Viscosity 36.

13 4781' - drilling ahead in Lime; reamed and washed 45' to bottom - Mud Wt. 9.5 - Viscosity 37.

14 4895' - Lime - circulated to core - pulled out of hole - layed down drill collars - picked up & made up core bbl. and started in hole to core.

15 Core #1 - 4895' - 4919' - Core bbl. jammed - Recovered 24' Lime; Core #2 4919' - 4950' - core bbl. jammed - Recovered 31' Dolomite & Lime; dressed core bbl. and started in hole to Core #3.

16 Core #3 - 4950' - 4974' - Recovered 24' Lime; Core #4 - 4974' - 5000' Recovered 26' Lime & Dolomite; Coring on Core #5.

17 Core #5 - 5000' - 5025' - Recovered 25' Lime & Dolomite - Total Depth 5025' Circulated - came out of hole to run logs - rigged up & ran Lane Wells Focus Log from 5025' to 4000'; ran Gamma Ray Neutron 5025' to 100'; ran Acoustic Log 5025' to 4000'; rig down Lane Wells.

18 Circulated, layed down drill pipe & drill collars; removed 8-5/8" swage; ran 152 jts. 5 $\frac{1}{2}$ " 14# casing (5031.83, float & shoe) - 5034'33 set at 5024'; cemented w/250 sax neat & 100 sax Latex - plug 12' off bottom; ran 5 HOWCO Centralizers spaced from 4880' to Total Depth; squeezed out 2 bbls. cement - W.O.C. - tearing down rotary tools. Rig released at 3:00 P. M.

AMERICAN AIR
IN THE PACIFIC

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WELL HISTORY
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Date:

February 19, 1960 W. O. C.
20 W. O. C.
21 W. O. C.
22 W. O. C. 8 hrs. - Rig up Harrison swabbing unit - Lane Wells on location
9:30 A. M. - rigged up and prepared to perforate after running collar locator -
perforated from 4980' to 4988' - 4 shots per foot - 4946' to 4966' - run
tubing in hole W/HOWCO Packer W/1 jt. tubing 30' of Anchor below packer -
spotted bottom of Anchor at 4972' - spotted 500 gal. mud acid on formation
treated at 2100# - 5 min. shut in 400# - swabbed back acid water - tubing
load shut in at 9:00 P. M. - tubing pressure 850# - 30 min. - shut down from
9:30 P. M. to 8:30 A. M. 2/23/60 - 1575# on tubing.
23 Opened up and flowed well 3½ hrs. W/275,000 cu. ft. gas, small spray of oil -
tubing pressure 150# W/¾" choke - 1:30 to 2:30 5,000 gals. low surface tension
acid - 4.8 bbls. per minute injection at 3100# - 5 min. shut in 750# - flowed
back 41 bbls. of water - 1½ hrs. - 3:30 to 4:40 run swab 4 times, well kicked
off and flowing from 6:00 P. M. to 8:30 P. M. - 65 bbls. back - Shut in.
24 Open well - 1800# on tubing - flowing W/¾" choke - 100# on tubing - 22# back
pressure on separator W/2" orifice to 6:00 P. M. - 6:00 P. M. started test -
¾" choke - put gas meter on at 7:40 P. M. - 30# W/1½" orifice - gradually
increased from 30 - 38# - 15 hr. test ending at 9:00 A. M. 2/25/60 -
25 Flowed 66 33/100 bbls. - 18% BS - 6% water - 50 bbls. oil in 15 hrs. - 9:15 A.M.
unseated packer - dropped water and casing on formation - started out W/tubing
30 jts. out, well unloaded - 11:00 A.M. shut in, wait on salt water pump
truck - 6:30 P. M. pumped 134 bbls. salt water - well dead - shut in.
26 Shut down 12:00 A. M. to 8:30 A. M. - well trying to unload - hooked up tank
into casing head - work 33 bbls. salt water into tubing - unseated packer -
pull tubing from 10:00 A. M. to 1:00 P. M. - 1:00 to 2:00 P. M. broke down
packer - tightened well connections - 2:00 to 5:15 P. M. run 161 jts.
tubing in hole W/seating nipple on bottom - 5:15 hooked up well swab -
5:45 to 7:00 P. M. - shut down 7:00 P. M. to 8:00 A. M. 2/27/60.
27 Swabbing until 11:00 A. M. - well kicked off and flowing to pits until 7:00
P. M. - Well shut in.
28 Flowing acid water and oil to pits to clean up well.
29 Flowing acid water and oil to pits to clean up well.
March 1 Flowing acid water and oil to pits to clean up well.
2 Flowing acid water and oil to pits to clean up well.
3 Flowing to test tank 24 hrs. - total fluid 63 bbls. - cut 15%
4 Flowing to test tank 24 hrs. - total fluid 61 bbls. - cut 15% - 10/64 choke -
Tubing pressure 500# - casing pressure 600#
5 Flowing to test tank 24 hrs. - total fluid 60.72 bbls. - cut 15% - 10/64 choke
6 Started test - put well on test - 10/64 choke
7 Test 10/64 choke - tubing pressure 525# - casing pressure 600# - 60.60 bbls.
fluid - 15% water - 51.50 bbls. oil with a Gas Oil Ratio of approximately
33841 to 1 - Well shut in.
8 24 Hrs. shut in - tubing pressure 1575# - casing pressure 1450#.

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1. The first step in the process of the investigation is the identification of the problem. This is done by the investigator who is responsible for the study. The investigator must first identify the problem and then determine the scope of the study. The next step is to design the study. This involves determining the methods to be used and the data to be collected. The third step is to collect the data. This is done by the investigator who is responsible for the study. The fourth step is to analyze the data. This involves determining the results of the study and the conclusions to be drawn. The final step is to report the results of the study. This is done by the investigator who is responsible for the study.