

A blank 10x10 grid for graphing, consisting of 10 columns and 10 rows of squares. The grid is used for plotting the graph of the function $y = \sin(x)$ for $0 \leq x \leq 2\pi$.

LOG OF OIL OR GAS WELL

The summary on this page is for the condition of the well at above date.

Commenced drilling January 21, 1963, 1963 Finished drilling January 30, 1963, 1963

(Denote gas by G)

No. 1, from 3788 to 4632 No. 4, from _____ to _____
No. 2, from _____ to _____ No. 5, from _____ to _____
No. 3, from _____ to _____ No. 6, from _____ to _____

No. 1, from _____ to _____ No. 3, from _____ to _____
No. 2, from _____ to _____ No. 4, from _____ to _____

[illegible]

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
2-5/8"	394	125 sacks 31 Gal	25 sacks rag,	all w/21 calcium chloride-	cement circulated
1-1/2"	4681	175 sacks Pozmix			Top of cement at 4680'

Heaving plug—Material ----- Length ----- Depth set -----
Adapters—Material ----- Size -----

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

Rotary tools were used from ~~surface~~ feet to ~~1682~~ feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

....., 19..... Put to producing , 19.....
The production for the first 24 hours was barrels of fluid of which% was oil;%
emulsion;% water; and% sediment. Gravity, °Bé.

If gas well, cu. ft. per 24 hours Gallons gasoline per 1,000 cu. ft. of gas

Rock pressure, lbs. per sq. in. _____

_____, Driller _____, Driller
Verna Drilling Company _____, Driller
 _____, Driller _____, Driller

FROM—	TO—	TOTAL FEET	FORMATION
0	133	133	Sand, Saliche & Shells
133	500	367	Red Bed
500	1410	910	Shale & Red Bed
1410	2140	730	Red Bed
2140	2220	80	Anhydrite
2220	2610	390	Shale & anhydrite
2610	2826	216	Anhydrite and Salt Stringers
2826	3172	346	Anhydrite and salt
3172	3810	638	Anhydrite and shale
3861	3991	131	Lime and anhydrite
3991	4682	691	Lime
Geologic Tops - Electric Log			
	TOPS		
Rustler	2153		
Fates	2613		
Queen	3300		
San Andres	3738		
Porosity	4518		

FORMATION RECORD—Continued

FROM—	TO—	TOTAL FEET	FORMATION

HISTORY OF OIL OR GAS WELL

10 **1999-01-01** **U.S. - Government - National Defense**

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

Spaced 12-1/4" hole January 21, 1963. Drilled to total depth of 396'- Red Red. Ran 12 joints 4-5/8" OD 3rd. thread 2 1/2" J-55 Sals R-2 5740 casing. Total casing less threads 384.21. Set at 394. Cemented with 125 sacks 8 1/2 gal and 75 sacks regular oil w/2% calcium chloride. Cement circulated. Tested casing w/700# for 30 minutes. No loss in 30 mins. Resumed drilling 7-7/8" hole. Reached total depth of 7-7/8" hole January 30, 1963. Ran Schlumberger Laterolog, Microlaterolog and Sonic log. Ran casing: Ran 3 pup joints as shoe joint, total including Halliburton shoe 26' with Halliburton insert float valve in top collar. Next joint is full joint of casing - 32'. Ran 6- 2' pup joints with one Dowell Permeator installed in middle of each pup joint total of 12.50'. Installed one centralizer in middle of shoe joint, one each above and below permeators section and one each on next two collars above permeators section. Ran total of 147 1/2 joints 4 1/2" OD 3rd. thread 11.5" J-55 Sals R-2 5740 casing, plus 3 pup joints as shoe joint and 6 pup joints in permeator section. Ran Gamma Ray and collar locator correlation log and positioned permeators one each at 4610, 4612, 4614, 4616, 4618 and 4620. Gasin set at 4631. Total casing less threads 4673.05. Cemented with 170 sacks 50-50 poxmix w/4/10 of 1% of Dowell T.I.C. per sack. Tested casing with 2500# for 30 mins. no loss. Ran temperature survey found top of cement at 4600' Ran tlg. with packer. Reversed water out of hole with oil. Treatment of 2000 gallons regular 15% non emulsion acid at 3 bbls. per minute at 3100#. Ran 8 balls to check permeators. Permeators not open. Ran junk basket to recover balls. Hole clean. Jet perforated 6 - 3/8" holes one each at 4610, 4612, 4614, 4616, 4618 and 4620. Acidized perforations w/2000 gallons regular 15% non emulsion acid. Well swab dry. Pulled tubing and packer. Fraced with 20,000 gallons refined oil with one pound sand per gallon. Initial injection rate 13 bbls per minute at 3600#. Fraced at 11.8 bbls. per minute at 3100#. Shut down pressure 2500#, 5 minute shut in pressure 22.50#, 10 minute shut in pressure 2400#, 15 minute shut in pressure 2300#. Well flowing back. Ran tubing: 1- sand anchor orange peeled, 3' perforated nipple, 1- 1' seating nipple, 146 joints 2-3/8" J-55 tubing. Total less threads 4572.85. Set at 4606.85. Perforations 4572-75. Seating nipple 4571-72. Swabbed well to natural flow. Well flowing.

SECRET