

LOCATE WELL CORRECTLY



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

U. S. LAND OFFICE Santa Fe, N.M.
SERIAL NUMBER S.F.081160-F
LEASE OR PERMIT TO PROSPECT _____

LOG OF OIL OR GAS WELL

Company C.B. Harvey Address 439 Camino Del Monte Del Santa Fe, N.M.
Lessor or Tract _____ Field Wildcat State New Mexico
Well No. 4 A Sec. 21 T. 10N R. 3W Meridian NM County Sandoval
Location 1691 ft. N. of S Line and 1701 ft. E. of East Line of Section 21 Elevation 6604.8
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Date August 22, 1962 Signed Francis A. Harvey Title Operator

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

Commenced drilling July 24, 1962 Finished drilling August 6, 1962, 1962

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 514 to 516 No. 4, from _____ to _____
 No. 2, from 584 to 589 No. 5, from _____ to _____
 No. 3, from 906 to 926 No. 6, from _____ to _____

IMPORTANT WATER SANDS

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

CASING RECORD

[illegible]

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
7-5/8"	Surface	10 Sacks	Pumped		
4-1/2"	0-906'	20 Sacks	Pumped		

PLUGS AND ADAPTERS

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

SHOOTING RECORD

[illegible]

TOOLS USED

Rotary tools were used from ~~5-10~~ _____ feet to _____ feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

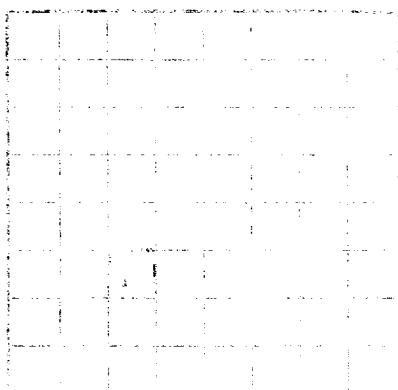
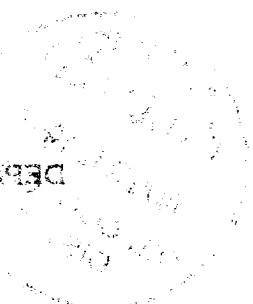
-----, 19----- Put to producing ~~August 19~~-----, 19-42

The production for the first 24 hours was 18 barrels of fluid of which 17.00% was oil; 1.55% 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. _____

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7. 7759303-10-W 37A20.4

14-00000

1. The first step is to identify the variables involved in the problem. In this case, the variables are the number of hours worked (H) and the number of hours of leisure (L). The total number of hours available is 24 hours per day.

2. The second step is to write down the objective function, which is the function that we want to maximize or minimize. In this case, the objective function is the total utility (U), which is a function of the number of hours worked (H) and the number of hours of leisure (L).

3. The third step is to write down the constraints, which are the conditions that must be satisfied. In this case, the constraints are:

- The total number of hours worked (H) must be less than or equal to 24 hours.
- The total number of hours of leisure (L) must be less than or equal to 24 hours.
- The total number of hours worked (H) plus the total number of hours of leisure (L) must be equal to 24 hours.

4. The fourth step is to solve the problem using the method of Lagrange multipliers. This involves writing down the Lagrangian function, which is a function of the variables H and L, and the Lagrange multipliers λ_1 and λ_2 . The Lagrangian function is:

$$\mathcal{L}(H, L, \lambda_1, \lambda_2) = U(H, L) - \lambda_1(H - 24) - \lambda_2(L - 24)$$

5. The fifth step is to find the first-order conditions, which are the conditions that must be satisfied for the Lagrangian function to be at a maximum. These conditions are:

$$\frac{\partial \mathcal{L}}{\partial H} = 0, \quad \frac{\partial \mathcal{L}}{\partial L} = 0, \quad \frac{\partial \mathcal{L}}{\partial \lambda_1} = 0, \quad \frac{\partial \mathcal{L}}{\partial \lambda_2} = 0$$

6. The sixth step is to solve these equations for the variables H and L. This gives us the optimal number of hours worked (H*) and the optimal number of hours of leisure (L*).

7. The seventh step is to check the second-order conditions, which are the conditions that must be satisfied for the solution to be a maximum. In this case, the second-order conditions are satisfied.

8. The final step is to write down the optimal solution. The optimal number of hours worked (H*) is 16 hours, and the optimal number of hours of leisure (L*) is 8 hours.

1. The Commission has been informed that the following information was received from the Ministry of the Interior of the Republic of Armenia:

2007 2008 2009 2010 2011

11. *Chlorophyll a* and *Chlorophyll b*

2025 RELEASE UNDER E.O. 14176

.....	at	mod, 3, 6d		of	mod, 1, 2f
.....	d	mod, 4, 9f		of	mod, 3, 8f

1980000 160000

[illegible]

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.

HISTORY OF OIL OR GAS WELL

10-43094-2 U. S. GOVERNMENT PRINTING OFFICE

MIDDLETOWN AND REMITTING RECORD			
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