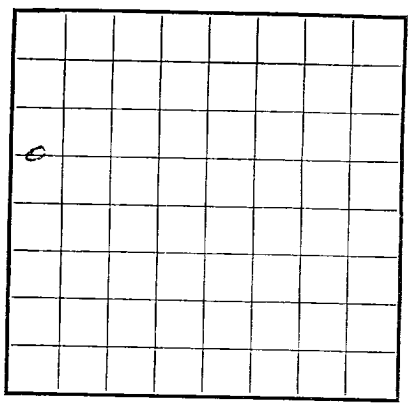
Form 9-330

...get Bureau No. 42-R355.4.
Approval expires 12-31-60.

U. S. LAND OFFICE Santa Fe
SERIAL NUMBER NM-025559
LEASE OR PERMIT TO PROSPECT Federal 1-13



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
JAN 5 1961
O. C. C.
ARTESIA, OFFICE

LOG OF OIL OR GAS WELL

Company E.A. CULBERTSON & WALLACE W. IRWIN & SOUTHERN CALIF. PET. CORP. Address Box 1071, Midland, Texas
Lessor or Tract Federal Field East Benson-Yates Pool State New Mexico
Well No. 1-13 Sec. 13 T. 19S R. 30E Meridian N.M.P.M. County Eddy
Location 1980 ft. {N.} of N. Line and 330 ft. {E.} of W. Line of Section 13 Elevation 3376 gr.
(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.

Signed [signature]

Date December 28, 1960 Title Joint owner

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

Commenced drilling 10-25, 19 60 Finished drilling 11-13, 19 60

OIL OR GAS SANDS OR ZONES

(*Denote gas by G*)

No. 1, from 2098 to 2121 No. 4, from ____ to ____
No. 2, from ____ to ____ No. 5, from ____ to ____
No. 3, from ____ to ____ 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

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
8-5/8"	24	8	Used	560	T.P.				Surface
5½"	14	8	New	2215	Float				Oil string

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8-5/8"	560	100	Halliburton		50 sax ahead of cmt.
5½	2215	100	"		80 " " "

PLUGS AND ADAPTERS

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

SHOOTING RECORD

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

TOOLS USED

Rotary tools were used from ____ feet to ____ feet, and from ____ feet to ____ feet
Cable tools were used from 0 feet to 2216 feet, and from ____ feet to ____ feet

DATES

____, 19____ Put to producing December 23, 19 60

The production for the first 24 hours was 70 barrels of fluid of which 98 % was oil; ____ % emulsion; 2 % water; and ____ % sediment. Gravity, °Bé. 33

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

Rock pressure, lbs. per sq. in. ____

EMPLOYEES

J. O. Crow, Driller B. T. Nester, Driller
Chas. Lamb, Driller John O'Brien, Pusher, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	35	35	Caliche
35	105	70	Shale
105	190	85	Red shale
190	240	50	" "
240	310	70	Anhydrite
310	315	5	Sand
315	350	35	Lime
350	470	120	Anhydrite
470	475	5	Red bed
475	495	20	Shale & anhydrite
495	550	55	Red shale
550	635	85	Salt
635	670	35	Salt & potash
670	725	55	Salt & anhydrite
725	795	70	Salt
795	860	65	Salt & potash
860	930	70	Salt
930	990	60	Salt & potash
990	1012	22	Salt
1012	1026	14	Anhydrite
1026	1115	89	Salt
1115	1175	60	Salt & potash
1175	1300	125	Salt
1300	1360	60	Salt & potash
1360	1500	140	Salt & anhydrite

(OVER)

16—43094-4

AT THE END OF COMPLETE DRILLER'S LOG, ADD GEOLOGIC TOPS. STATE WHETHER FROM EL OR SAMPLES

FOLD | MARK

FORMATION RECORD—Continued

FROM—	TO—	TOTAL FEET	FORMATION
1500	1540	40	Anhydrite
1540	1585	45	Salt
1585	1640	55	Salt & poly.
1640	1675	35	Broken salt
1675	1700	25	Salt & poly.
1700	1725	25	Anhydrite
1725	1750	25	Anhydrite & pink lime
1750	1775	25	Broken anhydrite
1775	1860	85	Anhydrite
1860	1885	25	Lime & anhydrite
1885	1915	30	Anhydrite
1915	1955	40	Broken anhydrite
1955	1980	25	Sand
1980	2080	100	Lime & anhydrite
2080	2086	6	Broken sandy lime
2086	2098	12	Gray lime
2098	2100	2	Lime & sand - show oil
2100	2120	20	Sand - tested 16 gal. O.P.H.
2120	2130	10	Gray lime
2130	2151	21	Lime & sand
2151	2162	11	Grey lime
2162	2187	25	Gray lime & sandy shale
2187	2216	29	White lime. Slight show water 2111-2116

T.D. 2216

Tops by Samples:

Top of Anhydrite	230'
Top of Salt	560'
Base of Salt	1700'
Top of Tansill	1735'
Top of Yates	1885'
Top of Seven Rivers	2187'

11/16/60 Checked cement plug in 5" oil string @ 2215' w/Halliburton line. Pressured up to 1400# and held for 1 hour - test OK. Perforated Yates sand with 4 shots/foot: 2098-2100', 2102-2121'.
11/17 Acidized w/500 gal. acid & swabbed dry.
11/18 Started "Frac" job & after 6,000 gal. had been pumped, cement around oil string channeled.
11/19-11/27 Testing casing & swabbing.
11/28 Recemented thru perfs. @ 2098-2100', 2102-21', w/ 50 sax.
11/30 Drilled plug.
12/1 Pressured up - cement job OK.
12/4 Frac. w/total of 12,000 gal. lease oil & 24,000# sand. Dropped 20 balls after first 6,000 gal. Max. treating press. 2550#. Ave. fluid pumped per minute 24.1.
12/5 Flowed & swabbed 141 bbls. load oil.
12/5-12/14 S.I. Installing pumping unit.
12/15 Started pumping load oil.
12/22 Load oil recovered.
12/22-12/23 Taking potential test. Made 70 bbls. fluid, being 98% oil, 2% water.

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HISTORY OF OIL OR GAS WELL

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.