

1838
HOBBBS
MEX.5-18308
1-Mill Dallas
1-Smith Odessa
1-FileBudget Bureau No. 42-R355.4.
Approval expires 12-31-60.

COPY TO O. C. C.

U. S. LAND OFFICE

SERIAL NUMBER **10-030187**

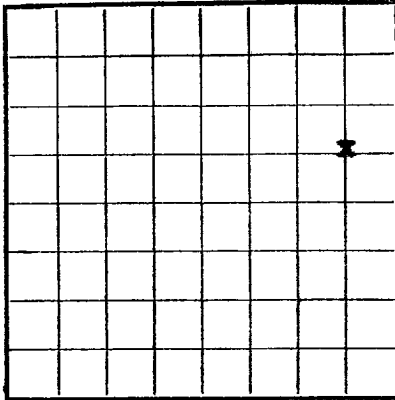
LEASE OR PERMIT TO PROSPECT

HOBBBS

UNITED STATES

DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY



LOCATE WELL CORRECTLY

Sec. 21

1650' fr N &
330' fr E

LOG OF OIL OR GAS WELL

Company **J. C. MAN, JR. & JOHN H. MILL** Address **c/o Oil Reports Box 763 Hobbs, N. M.**Lessor or Tract **La Mayon Federal** Field **Langlie-Mattix** State **New Mexico**Well No. **4** Sec. **21** T. **23** R. **37** Meridian **NPM** County **Lea**Location **1650** ft. **XX** of **N** Line and **330** ft. **XX** of **E** Line of **Sec. 21** Elevation **3200** ft. (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

Date **September 9, 1959**Title **Agent**

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

Commenced drilling **8/10/59**, 19____ Finished drilling **8/20/59**, 19____

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from **3488** to **3530** 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		Purpose
							From—	To—	
10-3/4"	32.75	6		316'					Surface
5-1/2"	14	6		3565'					316' to 3565'
2-3/8"	11.2	6		3565'					3565' to 3565'

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
10-3/4"	330'	225	P&P		
5-1/2"	3565'	300	"	Chem	

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 **0** feet to **TD 3602** feet, and from **3565'** feet to **3565'** feet

Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

Sept. 9, 1959, 19____ Put to producing **8/24/59**, 19____The production for the first 24 hours was **37** barrels of fluid of which **100** % 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. _____

EMPLOYEES

J. B. Clark, Driller _____, Driller

S. H. Gibson, Driller _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	165		Shaley Sand
165	805		Red Bed
805	1150		" and Anky
1150	1713		Salt & Anky
1713	2053		Salt, anky & gyp
2053	2350		" " shale
2350	3212		Anky & Gyp
3212	3289		Anky
3289	3400		" & Gyp
3400	3444		Dolo
3444	3475		Dolo & Anky
3475	3563		Dolo
3563	3602 TD		Dolo & Lime

2 copies 2 logs attached

Tops:

Rustler-1022

Y-2510

SR-2840

Qa-3362

Top of Pay 3488 (Pan-rose)

History- No change in casing program as reported, well perf w/ 4 1/2" JSPP 34883520
SF/15,000 gal 10,000 gal ref & 5,000 gal ls crude at inj rate 27.7 bpm
Well flowed 37 HND 24 hrs 9/64" Ch 8/24/59 THM Pipe Line

LOG OF OIL OR GAS WELL

A blank sheet of graph paper with a grid pattern. The grid consists of horizontal and vertical lines forming squares. There are approximately 10 columns and 8 rows visible. A small dark mark or smudge is present near the top left corner of the grid area.

LOCAL IS WELL CORRECTLY

[illegible]

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED
DATE 01-11-2001 BY 60322 UCBAW/STP

1. $\lim_{x \rightarrow 0} \frac{\sin x}{x} = 1$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{\cos x}{1} = 1$)
 2. $\lim_{x \rightarrow 0} \frac{e^x - 1}{x} = 1$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{e^x}{1} = 1$)
 3. $\lim_{x \rightarrow 0} \frac{\ln(1+x)}{x} = 1$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{1/(1+x)}{1} = 1$)
 4. $\lim_{x \rightarrow 0} \frac{x^2 \sin(1/x)}{x} = 0$ (Squeeze Theorem: $-\frac{x^2}{x} \leq x \sin(1/x) \leq \frac{x^2}{x}$)
 5. $\lim_{x \rightarrow 0} \frac{1 - \cos x}{x^2} = \frac{1}{2}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{\sin x}{2x} = \frac{1}{2}$)
 6. $\lim_{x \rightarrow 0} \frac{\cos x - 1}{x^2} = -\frac{1}{2}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{-\sin x}{2x} = -\frac{1}{2}$)
 7. $\lim_{x \rightarrow 0} \frac{\tan x}{x} = 1$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{\sec^2 x}{1} = 1$)
 8. $\lim_{x \rightarrow 0} \frac{x - \sin x}{x^3} = \frac{1}{6}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{1 - \cos x}{3x^2} = \frac{1}{6}$)
 9. $\lim_{x \rightarrow 0} \frac{\sin x - x}{x^3} = -\frac{1}{6}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{\cos x - 1}{3x^2} = -\frac{1}{6}$)
 10. $\lim_{x \rightarrow 0} \frac{e^x - 1 - x}{x^2} = \frac{1}{2}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{e^x - 1}{2x} = \frac{1}{2}$)
 11. $\lim_{x \rightarrow 0} \frac{e^x - 1 - x - \frac{x^2}{2}}{x^3} = \frac{1}{6}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{e^x - 1 - x}{6x^2} = \frac{1}{6}$)
 12. $\lim_{x \rightarrow 0} \frac{\ln(1+x) - x + \frac{x^2}{2}}{x^3} = -\frac{1}{6}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{1/(1+x) - 1 + x}{6x^2} = -\frac{1}{6}$)
 13. $\lim_{x \rightarrow 0} \frac{1 - \cos x - \frac{x^2}{2}}{x^4} = \frac{1}{24}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{\sin x - x}{4x^3} = \frac{1}{24}$)
 14. $\lim_{x \rightarrow 0} \frac{\cos x - 1 + \frac{x^2}{2}}{x^4} = -\frac{1}{24}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{-\sin x + x}{4x^3} = -\frac{1}{24}$)
 15. $\lim_{x \rightarrow 0} \frac{e^x - 1 - x - \frac{x^2}{2} - \frac{x^3}{6}}{x^4} = \frac{1}{24}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{e^x - 1 - x - \frac{x^2}{2}}{24x^3} = \frac{1}{24}$)
 16. $\lim_{x \rightarrow 0} \frac{\ln(1+x) - x + \frac{x^2}{2} + \frac{x^3}{3}}{x^4} = -\frac{1}{24}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{1/(1+x) - 1 + x + \frac{x^2}{2}}{24x^3} = -\frac{1}{24}$)
 17. $\lim_{x \rightarrow 0} \frac{1 - \cos x - \frac{x^2}{2} - \frac{x^4}{24}}{x^6} = \frac{1}{720}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{\sin x - x + \frac{x^3}{6}}{36x^5} = \frac{1}{720}$)
 18. $\lim_{x \rightarrow 0} \frac{\cos x - 1 + \frac{x^2}{2} + \frac{x^4}{24}}{x^6} = -\frac{1}{720}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{-\sin x + x - \frac{x^3}{6}}{36x^5} = -\frac{1}{720}$)
 19. $\lim_{x \rightarrow 0} \frac{e^x - 1 - x - \frac{x^2}{2} - \frac{x^3}{6} - \frac{x^4}{24}}{x^5} = \frac{1}{120}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{e^x - 1 - x - \frac{x^2}{2} - \frac{x^3}{6}}{120x^4} = \frac{1}{120}$)
 20. $\lim_{x \rightarrow 0} \frac{\ln(1+x) - x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4}}{x^5} = -\frac{1}{120}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{1/(1+x) - 1 + x + \frac{x^2}{2} + \frac{x^3}{3}}{120x^4} = -\frac{1}{120}$)
 21. $\lim_{x \rightarrow 0} \frac{1 - \cos x - \frac{x^2}{2} - \frac{x^4}{24} - \frac{x^6}{720}}{x^8} = \frac{1}{5040}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{\sin x - x + \frac{x^3}{6} - \frac{x^5}{120}}{360x^7} = \frac{1}{5040}$)
 22. $\lim_{x \rightarrow 0} \frac{\cos x - 1 + \frac{x^2}{2} + \frac{x^4}{24} + \frac{x^6}{720}}{x^8} = -\frac{1}{5040}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{-\sin x + x - \frac{x^3}{6} + \frac{x^5}{120}}{360x^7} = -\frac{1}{5040}$)
 23. $\lim_{x \rightarrow 0} \frac{e^x - 1 - x - \frac{x^2}{2} - \frac{x^3}{6} - \frac{x^4}{24} - \frac{x^5}{120}}{x^6} = \frac{1}{720}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{e^x - 1 - x - \frac{x^2}{2} - \frac{x^3}{6} - \frac{x^4}{24}}{720x^5} = \frac{1}{720}$)
 24. $\lim_{x \rightarrow 0} \frac{\ln(1+x) - x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + \frac{x^5}{5}}{x^6} = -\frac{1}{720}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{1/(1+x) - 1 + x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4}}{720x^5} = -\frac{1}{720}$)
 25. $\lim_{x \rightarrow 0} \frac{1 - \cos x - \frac{x^2}{2} - \frac{x^4}{24} - \frac{x^6}{720} - \frac{x^8}{40320}}{x^{10}} = \frac{1}{362880}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{\sin x - x + \frac{x^3}{6} - \frac{x^5}{120} + \frac{x^7}{5040}}{181440x^9} = \frac{1}{362880}$)
 26. $\lim_{x \rightarrow 0} \frac{\cos x - 1 + \frac{x^2}{2} + \frac{x^4}{24} + \frac{x^6}{720} + \frac{x^8}{40320}}{x^{10}} = -\frac{1}{362880}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{-\sin x + x - \frac{x^3}{6} + \frac{x^5}{120} - \frac{x^7}{5040}}{181440x^9} = -\frac{1}{362880}$)
 27. $\lim_{x \rightarrow 0} \frac{e^x - 1 - x - \frac{x^2}{2} - \frac{x^3}{6} - \frac{x^4}{24} - \frac{x^5}{120} - \frac{x^6}{720}}{x^7} = \frac{1}{5040}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{e^x - 1 - x - \frac{x^2}{2} - \frac{x^3}{6} - \frac{x^4}{24} - \frac{x^5}{120}}{5040x^6} = \frac{1}{5040}$)
 28. $\lim_{x \rightarrow 0} \frac{\ln(1+x) - x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + \frac{x^5}{5} + \frac{x^6}{6}}{x^7} = -\frac{1}{5040}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{1/(1+x) - 1 + x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + \frac{x^5}{5}}{5040x^6} = -\frac{1}{5040}$)
 29. $\lim_{x \rightarrow 0} \frac{1 - \cos x - \frac{x^2}{2} - \frac{x^4}{24} - \frac{x^6}{720} - \frac{x^8}{40320} - \frac{x^{10}}{362880}}{x^{12}} = \frac{1}{645120}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{\sin x - x + \frac{x^3}{6} - \frac{x^5}{120} + \frac{x^7}{5040} - \frac{x^9}{362880}}{1282560x^{11}} = \frac{1}{645120}$)
 30. $\lim_{x \rightarrow 0} \frac{\cos x - 1 + \frac{x^2}{2} + \frac{x^4}{24} + \frac{x^6}{720} + \frac{x^8}{40320} + \frac{x^{10}}{362880}}{x^{12}} = -\frac{1}{645120}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{-\sin x + x - \frac{x^3}{6} + \frac{x^5}{120} - \frac{x^7}{5040} + \frac{x^9}{362880}}{1282560x^{11}} = -\frac{1}{645120}$)
 31. $\lim_{x \rightarrow 0} \frac{e^x - 1 - x - \frac{x^2}{2} - \frac{x^3}{6} - \frac{x^4}{24} - \frac{x^5}{120} - \frac{x^6}{720} - \frac{x^7}{5040}}{x^9} = \frac{1}{362880}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{e^x - 1 - x - \frac{x^2}{2} - \frac{x^3}{6} - \frac{x^4}{24} - \frac{x^5}{120} - \frac{x^6}{720}}{362880x^8} = \frac{1}{362880}$)
 32. $\lim_{x \rightarrow 0} \frac{\ln(1+x) - x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + \frac{x^5}{5} + \frac{x^6}{6} + \frac{x^7}{7}}{x^9} = -\frac{1}{362880}$ (L'Hôpital's Rule: $\lim_{x \rightarrow 0} \frac{1/(1+x) - 1 + x + \frac{x^2}{2} + \frac{x^3}{3} + \frac$

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, location, 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

10-43084-2 U. S. GOVERNMENT PRINTING OFFICE

FROM-	TO-	TOTAL FEET	FORMATION
0-10	10-20	10	SANDSTONE
10-20	20-30	10	SANDSTONE
20-30	30-40	10	SANDSTONE
30-40	40-50	10	SANDSTONE
40-50	50-60	10	SANDSTONE
50-60	60-70	10	SANDSTONE
60-70	70-80	10	SANDSTONE
70-80	80-90	10	SANDSTONE
80-90	90-100	10	SANDSTONE
90-100	100-110	10	SANDSTONE
100-110	110-120	10	SANDSTONE
110-120	120-130	10	SANDSTONE
120-130	130-140	10	SANDSTONE
130-140	140-150	10	SANDSTONE
140-150	150-160	10	SANDSTONE
150-160	160-170	10	SANDSTONE
160-170	170-180	10	SANDSTONE
170-180	180-190	10	SANDSTONE
180-190	190-200	10	SANDSTONE
190-200	200-210	10	SANDSTONE
200-210	210-220	10	SANDSTONE
210-220	220-230	10	SANDSTONE
220-230	230-240	10	SANDSTONE
230-240	240-250	10	SANDSTONE
240-250	250-260	10	SANDSTONE
250-260	260-270	10	SANDSTONE
260-270	270-280	10	SANDSTONE
270-280	280-290	10	SANDSTONE
280-290	290-300	10	SANDSTONE
290-300	300-310	10	SANDSTONE
300-310	310-320	10	SANDSTONE
310-320	320-330	10	SANDSTONE
320-330	330-340	10	SANDSTONE
330-340	340-350	10	SANDSTONE
340-350	350-360	10	SANDSTONE
350-360	360-370	10	SANDSTONE
360-370	370-380	10	SANDSTONE
370-380	380-390	10	SANDSTONE
380-390	390-400	10	SANDSTONE
390-400	400-410	10	SANDSTONE
400-410	410-420	10	SANDSTONE
410-420	420-430	10	SANDSTONE
420-430	430-440	10	SANDSTONE
430-440	440-450	10	SANDSTONE
440-450	450-460	10	SANDSTONE
450-460	460-470	10	SANDSTONE
460-470	470-480	10	SANDSTONE
470-480	480-490	10	SANDSTONE
480-490	490-500	10	SANDSTONE
490-500	500-510	10	SANDSTONE
500-510	510-520	10	SANDSTONE
510-520	520-530	10	SANDSTONE
520-530	530-540	10	SANDSTONE
530-540	540-550	10	SANDSTONE
540-550	550-560	10	SANDSTONE
550-560	560-570	10	SANDSTONE
560-570	570-580	10	SANDSTONE
570-580	580-590	10	SANDSTONE
580-590	590-600	10	SANDSTONE
590-600	600-610	10	SANDSTONE
600-610	610-620	10	SANDSTONE
610-620	620-630	10	SANDSTONE
620-630	630-640	10	SANDSTONE
630-640	640-650	10	SANDSTONE
640-650	650-660	10	SANDSTONE
650-660	660-670	10	SANDSTONE
660-670	670-680	10	SANDSTONE
670-680	680-690	10	SANDSTONE
680-690	690-700	10	SANDSTONE
690-700	700-710	10	SANDSTONE
700-710	710-720	10	SANDSTONE
710-720	720-730	10	SANDSTONE
720-730	730-740	10	SANDSTONE
730-740	740-750	10	SANDSTONE
740-750	750-760	10	SANDSTONE
750-760	760-770	10	SANDSTONE
760-770	770-780	10	SANDSTONE
770-780	780-790	10	SANDSTONE
780-790	790-800	10	SANDSTONE
790-800	800-810	10	SANDSTONE
800-810	810-820	10	SANDSTONE
810-820	820-830	10	SANDSTONE
820-830	830-840	10	SANDSTONE
830-840	840-850	10	SANDSTONE
840-850	850-860	10	SANDSTONE
850-860	860-870	10	SANDSTONE
860-870	870-880	10	SANDSTONE
870-880	880-890	10	SANDSTONE
880-890	890-900	10	SANDSTONE
890-900	900-910	10	SANDSTONE
900-910	910-920	10	SANDSTONE
910-920	920-930	10	SANDSTONE
920-930	930-940	10	SAND