IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 997
Roswell, New Mexico

Duplicate Copies

April 1, 1952

Magnolia Petroleum Company
P. O. Box 633
Midland, Texas

Attention: Mr. R. T. German
Division Superintendent

Re: Lease Las Cruces 064354

Gentlemen:

Receipt is acknowledged of your "Notice of Intention to Drill" dated March 31, 1952, covering your well No. 1 Burt on the subject leasehold in the SE¼SE¼ sec. 5, T. 8 S., R. 30 E., N.M.P.M., Chaves County, New Mexico.

Your proposed work is hereby approved subject to compliance with the provisions of the "Oil and Gas Operating Regulations", revised May 25, 1942, copy enclosed, and subject to the attached sheet for general conditions of approval.

Very truly yours,

H. A. DuPont

H. A. DuPont
District Engineer

Attachments

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APR 3 1952
RECEIVED

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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

[illegible]

Attention is called to the following general and specific requirements most likely to be overlooked by operators on Federal Oil and Gas Leases. Suspension of field operations may be required by the District Engineer for failure to comply with the Operating Regulations, the conditions of drilling approval and these requirements.

General:

1. All drilling and producing wells shall be permanently marked at the company name place with the name of operator, lease name, serial number of lease, well number and location. Necessary precautions must be taken to preserve such signs.

2. Any desired change of drilling plan or condition of approval must have written approval of the District Engineer BEFORE the change is made.

3. Unless otherwise specified in the approval to drill, the production casing of casing must be set at the top of the pay zone. Low completion results with a reasonable pay-off ratio.

4. Before work is started, written approval must be obtained unless other acceptable arrangements are made in advance with the District Engineer and after work is completed results must be reported to the U. S. Geological Survey by submitting complete information in triplicate on Form 9-331a. Such work includes:

   a. Making or deepening, including proposed hole or method of testing water shut-off.
   b. Drill-stem tests or perforating.
   c. Casing alterations, packer setting, or repairs of any kind.
   d. Shooting, acid treatment, deepening or plugging back.
   e. Gas-lift installation.
   f. Drilling of water wells.

5. Monthly report of operations in duplicate on form 9-329, must be submitted promptly each month beginning with spudding of the first well on a lease and continuing until approved abandonment of all drilling and producing operations.

6. Logs in quadruplicate on form 9-330 must be submitted within 30 days of completing temporary or permanent drilling test. Duplicate copies of electrical logs, mud-cutting logs, drilling-action logs and any other well information not given on the standard form also should be filed.

7. Separate applications to drill any water well on Indian land is required, and special procedure is necessary for abandonment of any well having potential water supply.

8. All wells and lease premises should be maintained in first class condition with the regard to safety, conservation, appearance, and refuse disposal.

9. The notice of intention to drill may then be cancelled without further notice if drilling is not started within 30 days of approval.

10. Consent must be obtained to set a minimum of [illegible] of conductor pipe prior to drilling the plug, except for modification provided by the Director's order dated March [illegible], 1951, a copy of which will be furnished upon request.

[illegible]

Budget Bureau 42-R358.2.
Approval expires 12-31-52.

Form 9-331a
(Feb. 1951)

Land Office Las Cruces
Lease No. 064354
Unit Burt-Federal

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	X	SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Midland, Texas March 31, 1952

Burt-Federal

Well No. 1 is located 660 ft. from {N/S} line and 660 ft. from {E/W} line of sec. 5

SE/4 SW/4 Sec. 5 (¼ Sec. and Sec. No.) T-8-S (Twp.) R-30-E (Range) N.M. P.M. (Meridian)

Lightcap Area (Field) Chaves (County or Subdivision) New Mexico (State or Territory)

The elevation of the derrick floor above sea level is ? ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

March 31, 1952

It is proposed to drill the above well with a Power Rotary Rig and test the Devonian section. Total depth of this well will be approximately 8100'. The following casing program will be used:

Set & cement approx. 750' of 10-3/4" Surface Casing
Set & cement approx. 4800' of 7-5/8" Intermediate Casing
Set & cement 5½" liner for production string.

Casing will be cemented from top to bottom, and any zones that may appear productive will be tested.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Magnolia Petroleum Company

Address P.O.Box 633
Midland, Texas

By R. T. German
R. T. German
Title Division Superintendent

U. S. GOVERNMENT PRINTING OFFICE 16-8437-4

11-51

Form X-1313

Lightcap Area

Magnolia Petroleum Company

PRODUCING DEPARTMENT

Location made Feb. 26 th, 19 52

Burt - Federal Well No. 1

Kermit District

Lease NM-1884-B, acres 560.41, Sec. 5, T 8 S, R 30 E { District / Township

Chaves County, New Mexico

Scale 1" = 500'

N S E W

Mag. | Mag. | Magnolia Pet. Co. | Mag.

5

Mag. | Mag.

I, R. G. Watts, Registered Professional Engineer and Land Surveyor in and for the State of New Mexico, do hereby certify that the above location and the measurements shown thereon were made by an actual survey upon the ground and that this plat correctly reflects the conditions found thereon.

Signed: R. G. Watts

Registered Professional Engineer and Land Surveyor No. 361

Mag.

40 Ac. Allocated to well #1

N 1°01' E

Elev. 4030' #1 660'

N 44°25' W 927'

660'

Burt - Federal

N 89°50' W 2649.7'

Mag. | Mag.

1" G.I.P. & Rk. Mound Brass Cap Mkd.

1/4 5-5 / 5-8 1939

2" G.I.P. & Rk. Mound Brass Cap Mkd.

T-8-S R-30-E 5-3 | 5-4 / 5-8 | 5-9 1939

Reserve None

Special instructions Permit depth - 9100 ft.

Magnolia Petroleum Company
PRODUCING DEPARTMENT

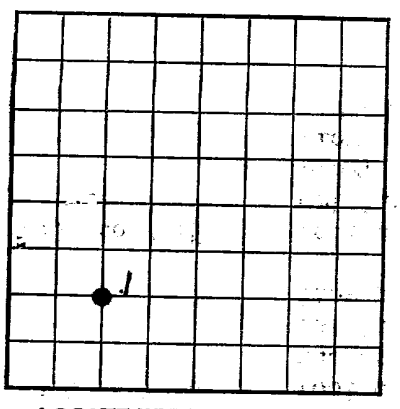
Location for Well No._____

_____

File No._____

Budget Bureau No. 42-R355.2.
Approval expires 12-31-52.

U. S. LAND OFFICE LAS CRUCES
SERIAL NUMBER 064354
LEASE OR PERMIT TO PROSPECT



LOCATE WELL CORRECTLY

occ ✓

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
SEP 25 1952
U. S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

LOG OF OIL OR GAS WELL

Company MAGNOLIA PETROLEUM COMPANY Address BOX 633 MIDLAND, TEXAS
Lessor or Tract BURT FEDERAL Field LIGHTCAP State NEW MEXICO
Well No. #1 Sec. 5 T. 8-S R. 30-E Meridian N.M.P.M. County LEA
Location 660 ft. {N.} of S Line and 660 ft. {E.} of E Line of Sec. 5 T-8-S R-30-E Elevation 4030
(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 R. V. Sumner

Date SEPT. 17, 1952 Title Division Sup't.

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

Commenced drilling 4-24-52, 19 52 Finished drilling 8-8-52, 19 52

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from ____ to ____ No. 4, from ____ to ____
No. 2, from NONE (See DST & Core Record) to ____ No. 5, from ____ to ____
No. 3, from ____ to ____ No. 6, from ____ to ____

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
RECEIVED
NOV 10 1952

IMPORTANT WATER SANDS

No. 1, from NONE 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
10-3/4	32.75	8 VT	GR - B	26 J. 636'					
7-5/8	26.40	8 RD	Spang	33 J. 973'					
7-5/8	26.00	8 RD	J & L	59 J. 2381'					
			H-40						

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
10-3/4	@ 636'	W/600 sks. Neat	Plug & Pump		
7-5/8	@ 4374'	W/1175 6% Gel	"		
		150 sks Signalite			
		200 sks. Neat			

PLUGS AND ADAPTERS

Heaving plug—Material None Length ____ Depth set ____
Adapters—Material ____ Size ____

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out
NONE						

TOOLS USED

Rotary tools were used from 0 feet to 8015 feet, and from ____ feet to ____ feet
Cable tools were used from None feet to ____ feet, and from ____ feet to ____ feet

DATES

PLUGGED & ABANDONED 8-10-52
____, 19____ Put to producing Not Producing, 19____

The production for the first 24 hours was None barrels of fluid of which None % was oil; None % emulsion; None % water; and None % sediment. Gravity, °Bé. None

If gas well, cu. ft. per 24 hours None Gallons gasoline per 1,000 cu. ft. of gas None

Rock pressure, lbs. per sq. in. ____

EMPLOYEES

Magnolia Petroleum Co. Tools, Driller ____, Driller
Rotary Rig # 4, Driller ____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	25	25	Red Bed
25	710	685	Red Bed & Red Rock
710	830	120	Red Bed Shells
830	1100	270	Red Rock, Shells, sand
1100	1119	19	Red Bed & Red Rock
1119	1287	168	Salt, Red Bed, Shells
1287	1425	138	Shells, Red Bed, & Gre nShale
1425	1573	148	Red bed & Shells
1573	1880	307	Red Bed, salt & Anhy
1880	1981	101	Anhydrite & Salt
1981	2096	115	Anhydrite, Red bed & shells
2096	2195	99	Anhydrite & shale
2195	2248	53	Anhydrite and salt
2248	2371	123	Anhydrite and shale
2371	2401	30	Anhydrite
2401	2426	25	Anhydrite and Lime
2426	2580	154	Lime
2580	2598	18	Lime Gyp
2598	2632	34	Lime
2632	2882	250	Anhydirte & Lime
2882	3002	120	Lime
3002	3018	16	Anhydrite & Lime
3018	3021	3	Lime & Gyp
3021	3053	32	Lime
3053	3066	13	Sandy Lime
3066	3095	29	Dolomite & Shale

TOTAL FEET

(OVER)

16—43094-2

FOLD | MARK

FORMATION RECORD—Continued

FROM—	TO—	TOTAL FEET	FORMATION
3095	3118	23	Lime
3118	3189	71	Dolomite
3189	3465	276	Lime
3465	3501	36	Sandy Lime
3501	3555	54	Lime
3555	3715	160	Lime
3715	3739	24	Shale, sandy lime, & gyp
3739	3787	48	Lime
3787	3817	30	Lime & Shale
3817	3873	56	Lime
3873	3900	27	Shale & Lime
3900	3956	56	Dolomite, anhydrite, & Lime
3956	3978	22	Lime
3978	4020	42	Shale, lime & gyp
4020	4050	30	Anhydrite, dolomite, & shale
4050	4099	49	Lime
4099	4147	48	Dolomite, anhydrite, & shale
4147	4149	2	" " Lime
4149	4201	52	Lime
4201	4262	61	Anhydrite & Dolomite
4262	4344	82	Lime
4344	4358	14	Red Shale
4358	4415	57	Lime & Shale
4415	4443	28	Dolomite
4443	4743	300	Lime
4743	4822	79	Lime, shale, & salt
4822	5156	334	Lime
5156	5236	80	Lime & shale
5236	5322	86	Lime, shale, & salt
5322	5488	166	Lime
5488	5564	76	Salt & shale
5564	5622	58	Lime
5622	5684	62	Lime & shale
5684	5884	200	Lime
5884	5899	15	Shale
5899	5911	12	Abo
5911	5923	12	Abo shale
5923	5977	54	Shale
5977	6020	43	Red shale
6020	6046	26	Jumpy shale
6046	6079	33	Shale, Gre y & red (Heaving)
6079	6090	11	Abo shale
6090	6112	22	Shale
6112	6131	19	Lime & shale
6131	6142	11	Red shale & Lime
6142	6161	19	Shale & Lime
6161	6338	177	Shale
6338	6355	17	Shale & Lime
6355	6377	22	Dolomite, shale, & Lime
6377	6378	1	" " "
6378	6528	150	Shale
6528	6575	47	Chert & Lime
6575	6631	56	Lime
6631	6643	12	Lime & chert
6643	6672	29	Lime & Dolomite
6672	6698	26	Lime
6698	6814	116	Lime & Dolomite
6814	6821	07	Lime & shale
6821	6826	5	Lime & chert
6826	6846	20	Sandy Lime
6846	6890	44	Lime
6890	6909	19	Lime & shale
6909	6925	16	Dolomite & shale
6925	6974	49	Lime & Shale

16—43094-1 U. S. GOVERNMENT PRINTING OFFICE

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.

3118 to 3228 San Andres — Tool open 1 hour & a half, 5/8" x 1" choke, Rec. 270' gas cut mud with sulphur water. Initial Flow pressure 55#, Final flow pressure 110#, S-I 15 minutes, Closed pressure 1055#.

7105 to 7130 Permo Penn. — Tool open 2 hours, 5/8" x 1" choke, Rec. 90' gas cut drilling mud. No gas to surface, good flow air throughout test. Initial flow pressure 0#, Final flow pressure 0#, S-I 15 minutes, Closed in pressure 230#.

7127 to 7145 Permo Penn. — Tool open 3 hours, 5/8" x 1" choke, Rec. 380' slightly gas cut drilling mud. and salt water. Nothing to surface. Initial flow pressure 0#, Final flow pressure 0#, S-I 15 minutes, Closed in pressure 2475#.

7143 to 7175 Permo Penn. — Tool open 2 hours, 5/8" x 1" choke, Rec. 720' salt water, 30' salt water cut mud. Nothing to surface. Initial flow pressure 0#, Final flow pressure 320#, S-I 15 minutes, Closed in pressure 2940#.

7194 to 7214 Permo Penn. — Tool open 2 hours, 5/8" x 1" choke, Rec. 180' Drilling mud. Nothing to surface. Open with weak blow air, lasted throughout. No shows. Initial flow pressure 105#, Final flow pressure 105#, S-I 15 minutes, Closed in pressure 2201#.

7929 to 7975 Permo Penn. — Tool open 2 hours, 5/8" x 1" choke, Rec. 510' slightly gas and mud cut salt water. Open hole with fair blow of air and decreased steadly through test. Initial flow pressure 125#, final flow pressure 233#, S-I 15 minutes, Closed in pressure 538#.

7965 to 7984 — Tool open 2 hours, 5/8" x 1" choke, Rec. 30' heavy gas cut drilling mud and 6770' gas cut salt water. Open tool with good blow air, gas to surface in 40 minutes. Initial flow pressure 712#, Final flow pressure 3026#, S-I 15 minutes, closed in pressure 3135#.

7985 to 8015 — Tool open 1 hour, 5/8" x 1" choke, Rec. 360' highly gas cut drilling mud and 6360' gas cut salt water. Opened tool with strong blow, gas to surface in 42 minutes, no fluid to surface. Initial flow pressure 1985#, closed in flow pressure 3058#, S-I 15 minutes, Closed in pressure 3025#.

TOP OF OIL OR GAS WELL
BEFORE THE DEVELOPMENT OF THE WELL

CORE RECORD

4090 to 4092 — Rec. 1' Maroon & Green shale w/limestone, inclusions.

7095 to 7120 — Rec. 22-1/2' 4'5" Maroon & Green shale w/Lt. Gray lime. 10'7" ely Crystalline brown lime w/ shaley laminationsm,,

crystalline brown lime w/small vuggy edge & inner cr stalline porosity, 20% blue flour & good odor. 2'1" Medium to Crystalline brown line w/trace of small scattered vuggy porosity, trace light blue flour. 5" Fine to course Crystalline brown lime w/small vuggy & Cavernous porosity, 20% blue Flour. 3'6" fine to course crystalline tam lime.

7120 to 7130	Rec. 10'	Fine & medium crystalline light brown lime w/thin streaks gray shale.
7130 to 7145	Rec. 13'8"	2½' Fine to medium crystalline gray limestone w/small vuggy porosity, 10-20% blue Flour. Fair odor. 9'3" fine crystalline tan & gray limestone w/thin shale partings. 2½' fine crystalline tam limestone w/fair interfossel porosity. Good odor, trace Blue and yellow Flour.
7145 to 7175	Rec. 27'3"	12' fine to course grained lime w/good vuggy porosity, slight odor and good flour. bleeding salt water. 11'5" Finely crystalline tan lime. 4' finely dark gray lime w/abundant fossils & black shale partings.
7178 to 7214	Rec. 36'	3' Black shale. 5½' Finely crystalline tan & brown limestone w/shale partings. 16½' finely crystalline gray tan lime. 6½' finely crystalline gray lime, fair vuggy porosity slight odor and light stain. 6" finely crystalline gray lime.
7214 to 7224	Rec. 8½'	4½' finely crystalline gray tan lime. 4' finely crystalline brown lime w/shale partings.
7930 to 7945	Rec. 15'	4' finely crystalline brown lime w/no dules of chert and fossils. 5½' dark gray salty shale. 1' medium crystalline dark dolonite w/pyrite incl. 4½' dark gray shale, no porosity.
7945 to 7960	Rec. 15'	15' dark gray silt shale.
7960 to 7975	Rec. 14½'	5' dark gray salty shale w/pyrite Incl. 9½' medium crystalline to cr stalline tan dolomite w/fair vertical fracture, porosity poor to fair, inner crystalline porosity and scattered vuggy porosity, 20% Bluish Flour, no oil or gas visible.
7975 to 7979	Rec. 1'	Jammed Rec. 1' medium crystalline highly fracturious dolomite, slight bleeding gas, a good odor.
7984 to 7986		No recovery, core barrel jammed.