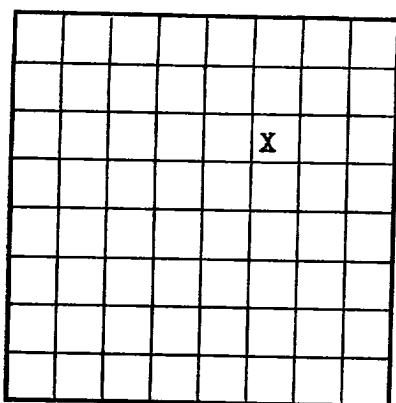




LOCATE WELL CORRECTLY

U. S. LAND OFFICE **Santa Fe**
SERIAL NUMBER **078387**
LEASE OR PERMIT TO PROSPECTUNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company San Juan Production Company Address P.O. Box 997, Farmington, New Mexico
Lessor or Tract Howell Field Wildcat State New Mexico
Well No. 3-D Sec. 31 T. 31N R. 8W Meridian N. M. P. M. County San Juan
Location 1650 ft. (S.) of N. Line and 1650 ft. (W.) of E. Line of Section 31 Elevation 6390
(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 ORIGINAL SIGNED E. J. COELDate September 28, 1951Title Petroleum Engineer

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

Commenced drilling August 2, 1951 Finished drilling September 17, 1951

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 4927 to 5030 (G) No. 4, from _____ to _____
No. 2, from 5030 to 5450 (G) No. 5, from _____ to _____
No. 3, from 5450 to 5592 (G) No. 6, from _____ to _____

IMPORTANT WATER SANDS

No. 1, from 340 to 365 No. 3, from 690 to 710
No. 2, from 390 to 415 No. 4, from 870 to 915

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From—	To—	
9-5/8	279	8	Young	150					
7	479	8	Young	300					
2-1/2	4.7	8	Young	5556					Prod. Tubing

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
9-5/8	279	150	Circulated		
7	479	300	Single Stage		

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
Qts.	Reg.	O.W.B.	1060	9-17	5045-5605	5605

TOOLS USED

Rotary tools were used from 0 feet to 4874 feet, and from 4874 feet to 5605 feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

September 24, 1951 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 11,000,000 Gallons gasoline per 1,000 cu. ft. of gas _____

Rock pressure, lbs. per sq. in. 1090 Casing Pressure _____

EMPLOYEES

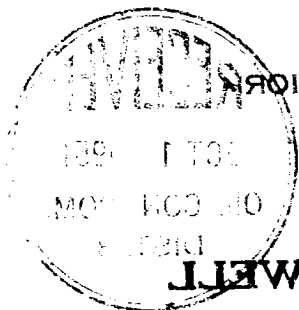
_____, Driller _____, Driller
_____, Driller _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	915	915	Tan, coarse grained ss w/thin shale breaks.
915	1590	675	Varieg. shales w/thin ss breaks.
1590	1945	355	Tan to gray coarse grained ss. interbedded w/shal
1945	2600	655	Ojo Alamo sandstone; white, coarse-grained water sand.
2600	2905	305	Kirtland Formation; gray shales interbedded w/
2905	3215	310	tight, gray, fine-grained ss.
3215	3280	65	Fruitland Formation; gray carb. shales, scattered coals and gray, tight, fine-grained sand.
3280	4010	730	Pictured Cliffs Formation; gray, very fine, very dense, silty argill. ss. Top Pictured Cliffs 3215.
4010	4927	917	Upper Lewis Formation; gray shale.
4927	5030	103	Lower Lewis Formation; gray to white, very dense sil. to shaly ss.
5030	5450	420	Cliff House Sandstone; gray, fine, very dense, sil. ss. Top Cliff House 4927.
5450	5592	142	Menefee Formation; gray, fine-grained, porous sand, carb. shales, and coals. Top Menefee 5030.
5592	5605 TD	13	Point Lookout Formation; gray, very fine, sl. porous, sil. ss w/frequent shale breaks. Top Point Lookout 5450.
			Gray carbonaceous Mancos shale.

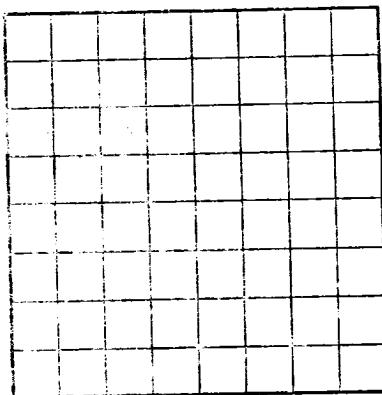
FORMATION RECORD—Continued

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



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL



LOCATE WELL CORRECTLY

Company _____
Lessor or Tract _____
Well No. _____
Location _____
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.

ORIGINAL SIGNED E. J. COLE

Date _____
The summary on this page is for the condition of the well at the date _____
Commenced drilling _____

OIL OR GAS SANDS OR CORES

(Describe per ft.)

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

IMPORTANT WATER SANDS

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

CASING RECORD

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 "backed" 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 the test for water, state kind of material used, position, and results of pumping or testing.

HISTORY OF OIL OR GAS WELL

MUDDING AND CEMENTING RECORD

TOOLS AND ADAPTERS

SHOOTING RECORD

TOOLS USED

RATES

EMPLOYEES

FORMATION RECORD

FROM-	TO-	TOTAL FEET	FORMATION
0	200	200	Gravelly sandstone, coarse-grained, very hard, blue-gray to black, with thin layers of shale.
200	300	100	Shale, gray, fine-grained, with thin layers of sandstone.
300	400	100	Shale, gray, fine-grained, with thin layers of sandstone.
400	500	100	Shale, gray, fine-grained, with thin layers of sandstone.
500	600	100	Shale, gray, fine-grained, with thin layers of sandstone.
600	700	100	Shale, gray, fine-grained, with thin layers of sandstone.
700	800	100	Shale, gray, fine-grained, with thin layers of sandstone.
800	900	100	Shale, gray, fine-grained, with thin layers of sandstone.
900	1000	100	Shale, gray, fine-grained, with thin layers of sandstone.
1000	1100	100	Shale, gray, fine-grained, with thin layers of sandstone.
1100	1200	100	Shale, gray, fine-grained, with thin layers of sandstone.
1200	1300	100	Shale, gray, fine-grained, with thin layers of sandstone.
1300	1400	100	Shale, gray, fine-grained, with thin layers of sandstone.
1400	1500	100	Shale, gray, fine-grained, with thin layers of sandstone.
1500	1600	100	Shale, gray, fine-grained, with thin layers of sandstone.
1600	1700	100	Shale, gray, fine-grained, with thin layers of sandstone.
1700	1800	100	Shale, gray, fine-grained, with thin layers of sandstone.
1800	1900	100	Shale, gray, fine-grained, with thin layers of sandstone.
1900	2000	100	Shale, gray, fine-grained, with thin layers of sandstone.
2000	2100	100	Shale, gray, fine-grained, with thin layers of sandstone.
2100	2200	100	Shale, gray, fine-grained, with thin layers of sandstone.
2200	2300	100	Shale, gray, fine-grained, with thin layers of sandstone.
2300	2400	100	Shale, gray, fine-grained, with thin layers of sandstone.
2400	2500	100	Shale, gray, fine-grained, with thin layers of sandstone.
2500	2600	100	Shale, gray, fine-grained, with thin layers of sandstone.
2600	2700	100	Shale, gray, fine-grained, with thin layers of sandstone.
2700	2800	100	Shale, gray, fine-grained, with thin layers of sandstone.
2800	2900	100	Shale, gray, fine-grained, with thin layers of sandstone.
2900	3000	100	Shale, gray, fine-grained, with thin layers of sandstone.
3000	3100	100	Shale, gray, fine-grained, with thin layers of sandstone.
3100	3200	100	Shale, gray, fine-grained, with thin layers of sandstone.
3200	3300	100	Shale, gray, fine-grained, with thin layers of sandstone.
3300	3400	100	Shale, gray, fine-grained, with thin layers of sandstone.
3400	3500	100	Shale, gray, fine-grained, with thin layers of sandstone.
3500	3600	100	Shale, gray, fine-grained, with thin layers of sandstone.
3600	3700	100	Shale, gray, fine-grained, with thin layers of sandstone.
3700	3800	100	Shale, gray, fine-grained, with thin layers of sandstone.
3800	3900	100	Shale, gray, fine-grained, with thin layers of sandstone.
3900	4000	100	Shale, gray, fine-grained, with thin layers of sandstone.
4000	4100	100	Shale, gray, fine-grained, with thin layers of sandstone.
4100	4200	100	Shale, gray, fine-grained, with thin layers of sandstone.
4200	4300	100	Shale, gray, fine-grained, with thin layers of sandstone.
4300	4400	100	Shale, gray, fine-grained, with thin layers of sandstone.
4400	4500	100	Shale, gray, fine-grained, with thin layers of sandstone.
4500	4600	100	Shale, gray, fine-grained, with thin layers of sandstone.
4600	4700	100	Shale, gray, fine-grained, with thin layers of sandstone.
4700	4800	100	Shale, gray, fine-grained, with thin layers of sandstone.
4800	4900	100	Shale, gray, fine-grained, with thin layers of sandstone.
4900	5000	100	Shale, gray, fine-grained, with thin layers of sandstone.
5000	5100	100	Shale, gray, fine-grained, with thin layers of sandstone.
5100	5200	100	Shale, gray, fine-grained, with thin layers of sandstone.
5200	5300	100	Shale, gray, fine-grained, with thin layers of sandstone.
5300	5400	100	Shale, gray, fine-grained, with thin layers of sandstone.
5400	5500	100	Shale, gray, fine-grained, with thin layers of sandstone.
5500	5600	100	Shale, gray, fine-grained, with thin layers of sandstone.
5600	5700	100	Shale, gray, fine-grained, with thin layers of sandstone.
5700	5800	100	Shale, gray, fine-grained, with thin layers of sandstone.
5800	5900	100	Shale, gray, fine-grained, with thin layers of sandstone.
5900	6000	100	Shale, gray, fine-grained, with thin layers of sandstone.
6000	6100	100	Shale, gray, fine-grained, with thin layers of sandstone.
6100	6200	100	Shale, gray, fine-grained, with thin layers of sandstone.
6200	6300	100	Shale, gray, fine-grained, with thin layers of sandstone.
6300	6400	100	Shale, gray, fine-grained, with thin layers of sandstone.
6400	6500	100	Shale, gray, fine-grained, with thin layers of sandstone.
6500	6600	100	Shale, gray, fine-grained, with thin layers of sandstone.
6600	6700	100	Shale, gray, fine-grained, with thin layers of sandstone.
6700	6800	100	Shale, gray, fine-grained, with thin layers of sandstone.
6800	6900	100	Shale, gray, fine-grained, with thin layers of sandstone.
6900	7000	100	Shale, gray, fine-grained, with thin layers of sandstone.
7000	7100	100	Shale, gray, fine-grained, with thin layers of sandstone.
7100	7200	100	Shale, gray, fine-grained, with thin layers of sandstone.
7200	7300	100	Shale, gray, fine-grained, with thin layers of sandstone.
7300	7400	100	Shale, gray, fine-grained, with thin layers of sandstone.
7400	7500	100	Shale, gray, fine-grained, with thin layers of sandstone.
7500	7600	100	Shale, gray, fine-grained, with thin layers of sandstone.
7600	7700	100	Shale, gray, fine-grained, with thin layers of sandstone.
7700	7800	100	Shale, gray, fine-grained, with thin layers of sandstone.
7800	7900	100	Shale, gray, fine-grained, with thin layers of sandstone.
7900	8000	100	Shale, gray, fine-grained, with thin layers of sandstone.
8000	8100	100	Shale, gray, fine-grained, with thin layers of sandstone.
8100	8200	100	Shale, gray, fine-grained, with thin layers of sandstone.
8200	8300	100	Shale, gray, fine-grained, with thin layers of sandstone.
8300	8400	100	Shale, gray, fine-grained, with thin layers of sandstone.
8400	8500	100	Shale, gray, fine-grained, with thin layers of sandstone.
8500	8600	100	Shale, gray, fine-grained, with thin layers of sandstone.
8600	8700	100	Shale, gray, fine-grained, with thin layers of sandstone.
8700	8800	100	Shale, gray, fine-grained, with thin layers of sandstone.
8800	8900	100	Shale, gray, fine-grained, with thin layers of sandstone.
8900	9000	100	Shale, gray, fine-grained, with thin layers of sandstone.
9000	9100	100	Shale, gray, fine-grained, with thin layers of sandstone.
9100	9200	100	Shale, gray, fine-grained, with thin layers of sandstone.
9200	9300	100	Shale, gray, fine-grained, with thin layers of sandstone.
9300	9400	100	Shale, gray, fine-grained, with thin layers of sandstone.
9400	9500	100	Shale, gray, fine-grained, with thin layers of sandstone.
9500	9600	100	Shale, gray, fine-grained, with thin layers of sandstone.
9600	9700	100	Shale, gray, fine-grained, with thin layers of sandstone.
9700	9800	100	Shale, gray, fine-grained, with thin layers of sandstone.
9800	9900	100	Shale, gray, fine-grained, with thin layers of sandstone.
9900	10000	100	Shale, gray, fine-grained, with thin layers of sandstone.