Form 9-330

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

U. S. Land Office Santa Fe
Serial Number 079058-B
Lease or Permit to Prospect Sandoval

RECEIVED
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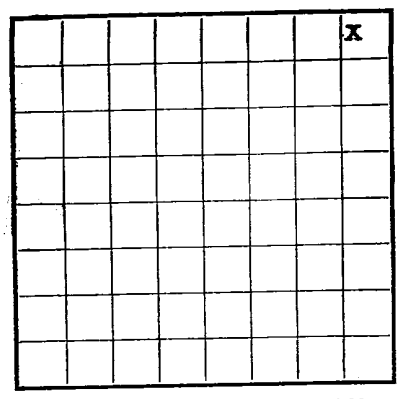
U. S. GEOLOGICAL SURVEY
FARMINGTON, NEW MEXICO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



LOCATE WELL CORRECTLY

LOG OF OIL OR GAS WELL

Company BENSON-MONTIN-GREER DRILLING CORP. Address 405½ W. Broadway, Farmington, N.M.

Lessor or Tract Sandoval Field Wildcat State New Mexico

Well No. 1 Sec. 14 T. 21N R. 7W Meridian N.M.P.M. County Sandoval

Location 660 ft. [N.] of N Line and 530 ft. [E.] of E Line of Sec. 14 Elevation 6756
(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 Albert L. Greer

Date September 24th, 1957 Title Vice-President

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

Commenced drilling August 17th, 1957 Finished drilling September 20th, 1957

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from None to ____ 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	J-55	169'	-	-	-	-	Surface

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8-5/8"	182	125	Pump & Plug		

PLUGS AND ADAPTERS

Heaving plug—Material None Length ____ Depth set ____

Adapters—Material None Size ____

SHOOTING RECORD

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

TOOLS USED

Rotary tools were used from Surface feet to 5480 feet, and from ____ feet to ____ feet

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

DATES

Plugged and abandoned September 22nd, 1957

Put to producing ____, 19____

The production for the first 24 hours was 0 barrels of fluid of which ____% was oil; ____% emulsion; ____% water; and ____% sediment.

Gravity, °Bé. ____

If gas well, cu. ft. per 24 hours 0 Gallons gasoline per 1,000 cu. ft. of gas ____

Rock pressure, lbs. per sq. in. ____

EMPLOYEES

Company tools, Driller ____, Driller

____, Driller ____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
			TOPS:
			PICTURED CLIFFS 740'
			LEWIS 952'
			POINT LOOKOUT 3090'
			MANCOS 3220'
			GALLUP 4000'
			SANASTEE 4925'
			GREENHORN 5022'
			GRANEROS 5070'
			DAKOTA 5182'

FORMATION RECORD—Continued

FROM—	TO—	TOTAL FEET	FORMATION

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.

8-15-57 Commenced moving in rotary.

8-17-57 Spudded.

8-18-57 TD 182' RKB. Set 6 joints 169' of 8-5/8" OD 24# J-55 casing at 182' RKB with 125 sacks cement, 2% calcium chloride, circulated.

8-19-57 Pressured up on casing to 1000#. No pressure decrease in 30 minutes.

9- 2-57 Drilled to TD 4104'. Commenced coring. Cored 4104' to 4170'. CORE DESCRIPTION ATTACHED.

9-14-57 Drilled to 5185'. Commenced coring. Cored 5185' to 5378'. CORE DESCRIPTION ATTACHED.

9-22-57 TD 5480'. Ran electric log. Spotted cement plugs as follows:

30 sacks from 5260' to 5350'
30 sacks from 3210' to 3300'
25 sacks from 930' to 1000'
35 sacks from 350' to 450'

15-sack plug in bottom of 8-5/8" surface casing and 10-sack plug in top of 8-5/8" surface casing, which was left in the hole.

LOG OF OIL OR GAS WELL

BENSON-MONTIN-GREER DRILLING CORP.

#1 SANDOVAL

CORE DESCRIPTIONS

CORE #1	4104' to 4154'.	Recovered 49'.
	4104' to 4106'	Shale with very fine grained silty sand laminations to 1/4" thick. Small fracture. No stain, no odor, no show. Approximately 50% shale, 50% silty sand.
	4106' to 4115'	Shale with very fine grained sand laminations, slightly fossiliferous. No stain, no odor, no show. Approximately 60% shale, 40% silty sand.
	4115' to 4128'	Shale with minor fine grained irregular sand laminations, mostly shale, slightly fossiliferous. No stain, no odor, no show. Approximately 70% shale, 30% silty sand.
	4128' to 4140'	Shale with minor fine grained very irregular sand laminations, slightly fossiliferous. No stain, no odor, no show. Approximately 80% shale, 20% silty sand.
	4140' to 4153'	Shale with very few irregular fine grained silty sand laminations. Approximately 90% shale, 10% silty sand.
CORE #2	4220' to 4268'.	Recovered 48'.
	4220' to 4243'	Dark grey shale with occasional fine grained sand striations. No fluorescence or stain.
	4243' to 4268'	Fine grained sand striations alternating with occasional shale laminations. Fluorescence and stain in sand.
CORE #3	4268' to 4318'.	Recovered 49'.
	4269' to 4273'	Fine grained sand, good fluorescence and stain, interbedded with dark grey sandy shale.
	4273' to 4278'	Dark grey shale.
	4278' to 4285'	70% sand interbedded with thin sand stringers. Sand stringers generally non-continuous. No fluorescence or stain.

PENSON-MONTIN-DRAKE DRILLING CO'P.

#1 SANDOVAL

CORE DESCRIPTIONS

CORE #1	4104' to 4125'.	Recovered 21'.
	4104' to 4106'	Shale with very fine grained silty sand laminations to 1/4" thick. Small fracture. No stain, no odor, no show. Approximately 50% shale, 50% silty sand.
	4106' to 4112'	Shale with very fine grained sand laminations, slightly fossiliferous. No stain, no odor, no show. Approximately 60% shale, 40% silty sand
	4112' to 4128'	Shale with minor fine grained irregular sand laminations, mostly shale, slightly fossiliferous. No stain, no odor, no show. Approximately 70% shale, 30% silty sand.
	4128' to 4140'	Shale with minor fine grained very irregular sand laminations, slightly fossiliferous. No stain, no odor, no show. Approximately 80% shale, 20% silty sand.
	4140' to 4152'	Shale with very few irregular fine grained silty sand laminations. Approximately 90% shale, 10% silty sand.
CORE #2	4220' to 4248'.	Recovered 28'.
	4220' to 4242'	Dark grey shale with occasional fine grained sand striations. No fluorescence or stain.
	4242' to 4268'	Fine grained sand striations alternating with occasional shale laminations. Fluorescence and stain in sand.
CORE #3	4268' to 4318'.	Recovered 49'.
	4269' to 4273'	Fine grained sand, good fluorescence and stain. Interbedded with dark grey sandy shale.
	4273' to 4278'	Dark grey shale.
	4278' to 4295'	70% sand interbedded with thin sand stringers. Sand stringers generally non-continuous. No fluorescence or stain.

CORE #4	4318' to 4370'.	Recovered 51'.
	4318' to 4327'	60% fine light grey fine grained sand, slightly shaly, with dark grey sandy shale. laminations. No fluorescence, trace stain.
	4327' to 4358'	Dark grey shaly sand with fine grey sand stringers. No fluorescence, no stain.
	4358' to 4370'	Dark grey sandy shale. No fluorescence, no stain.
CORE #5	5185' to 5235'.	Recovered 47'.
	5185' to 5195'	Fine light grey sand, trace fluorescence, no stain.
	5195' to 5211'	Alternating dark grey shale with very fine grey sand stringers.
	5211' to 5235'	21' of dark grey shale with occasional very fine thin sand stringers.
CORE #6	5235' to 5285'.	Recovered 52' (2' of shale from Core #5).
	5235' to 5258'	Dark grey shale with very fine thin sand stringers.
	5258' to 5271'	Dark grey and light grey very fine hard shaly siltstone.
	5271' to 5285'	Medium to light tan sand, trace fluorescence.
CORE #7	5285' to 5328'.	Recovered 42'.
	5286' to 5292'	Medium to coarse grained grey sandstone with dark grey shale stringers with vertical fracture 5287-90'.
	5292' to 5305'	Fine to medium grained sandy shale with vertical fracture at 5299'.
	5305' to 5328'	Dark grey to black fissel shale with pyrite inclusions.
CORE #8	5328' to 5378'.	Recovered 50'.
	5328' to 5340'	Black carbonaceous slightly sandy shale.
	5340' to 5367'	Very fine carbonaceous sand.
	5367' to 5378'	Medium to coarse grained light grey clean sand. No fluorescence, no stain.

CORE #8	5328' to 5374'.	Recovered 50'.
	5328' to 5340'	Black carbonaceous slightly sandy shale.
	5340 to 5367'	Very fine carbonaceous sand.
	5367' to 5370'	Medium to coarse grained light grey clean sand. No fluorescence, no stain.
	5372' to 5385'	Dark grey to black flaked shale with pyrite inclusions.
	5385' to 5392'	Fine to medium grained sandy shale with vertical fracture at 5393'.
	5392' to 5396'	Medium to coarse grained grey sandstone with dark grey shale stringers with vertical fracture 5395-96'.
CORE #7	5385' to 5388'.	Recovered 42'.
	5386' to 5424'	Medium to coarse grained grey sandstone with dark grey shale stringers with vertical fracture 5395-96'.
	5424' to 5427'	Dark grey and light grey very fine hard shaly siltstone.
	5427' to 5435'	Medium to light tan sand, trace fluorescence.
CORE #6	5435' to 5438'.	Recovered 52' (4' of shale from Core #5).
	5435' to 5458'	Dark grey shale with very fine thin sand stringers.
	5458' to 5471'	21' of dark grey shale with occasional very fine thin sand stringers.
	5471' to 5485'	Alternating dark grey shale with grey fine sand stringers.
	5485' to 5495'	Fine light grey sand, trace fluorescence, no stain.
CORE #5	5485' to 5488'.	Recovered 4'.
	4358' to 4370'	Dark grey sandy shale. No fluorescence, no stain.
	4358' to 4387'	Dark grey sandy sand with fine grey sand stringers. No fluorescence, no stain.
	4387' to 4398'	Dark grey sandy shale. With dark grey sandy shale laminations. No fluorescence, trace stain.
	4398' to 4427'	60% fine light grey fine grained sand, slightly shaly with dark grey sandy shale.
CORE #4	4398' to 4410'.	Recovered 9'.