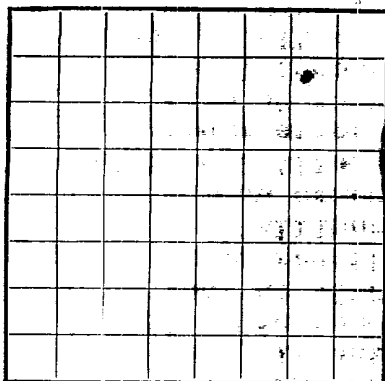




LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

U. S. LAND OFFICE Santa Fe

SERIAL NUMBER 101 09547

LEASE OR PERMIT TO PROSPECT

LOG OF OIL OR GAS WELL

Company Caulkins Oil Company Address Box 967, Farmington, New MexicoLessor or Tract Federal Field South Plains State New MexicoWell No. 110-8 Sec. 34 T. 27N R. 6E Meridian 113N County Rio ArribaLocation 990 ft. S. of N. Line and 990 ft. W. of E. Line of Section 34 Elevation 6616
(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 Frank GrayDate May 26, 1959Title Oil Supervision

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

Commenced drilling February 25, 1959 Finished drilling March 21, 1959

TOPS OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from Dakota to 7516 No. 4, from Cliff House to 4844No. 2, from Graneros to 7392 No. 5, from Pictured Cliffs to 3180No. 3, from Point Lookout to 5374 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	8	4-40	1-15'	Reg.				Surface
8 1/2"	21.40	8	4-40	6-40'	Reg.				Production
7 7/8"	15.50	8	4-40	2-40'	Reg.				Production

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
10 3/4"	147'	125	Plu		
8 1/2"	4650'	425	Plu		
7 7/8"	7749'	306	Plu	11.000	

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 7749' feet, and from _____ feet to _____ feet

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

DATES

_____ 19____ Put to producing 3915 _____ 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 _____ Gallons gasoline per 1,000 cu. ft. of gas _____

Rock pressure, lbs. per sq. in. _____

EMPLOYEES

_____, Driller _____, Driller

_____, Driller _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	147	147	Surface
147	750	603	Sand and Shale
750	1230	580	Sandy Shale
1230	1690	550	Sand and Shale
1690	2149	269	Sandy Shale
2149	2268	119	Sand and Shale
2268	2543	275	Sandy Shale and Shells
2543	4632	2089	Sand and Shale
4632	4650	18	Sand
4650	4660	10	Sand and Shale
4660	7749	3089	as Drilled. See logs for formation information

FORMATION TOPS:

Dakota	7516
Graneros	7392
Point Lookout	5374
Cliff House	4844
Pictured Cliffs	3180

*See Well History for description of operations in:

FORMATION RECORD—Continued[illegible]

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.

Spudde: at 2:10 P., 2-5-59

Erased to 21 147'

Cemented 124' of 10 3/4" 32.75 lb/ft 8 rods. Short coupling casing
at 127' with 123 sacks 24 calcium chloride. Cement circulated.

Plus down 1:30 AM, 2-26-59. Uned basin 1/100% for 30 minutes.
It held 0.

3-11-59 - Drilled to 4668', then 7 5/8" 2' .10 , J-55, 8rd casing

to 4652'. wide shoe at 4662'. load collar at 4642'. DV loc
at 3300'. Centerbars at 4407'. 4312'. 4420'. 3333'. 3266'.

1100' - 1200' 1200' - 1300' 1300' - 1400' 1400' - 1500' 1500' - 1600' 1600' - 1700' 1700' - 1800' 1800' - 1900' 1900' - 2000' 2000' - 2100' 2100' - 2200' 2200' - 2300' 2300' - 2400' 2400' - 2500' 2500' - 2600' 2600' - 2700' 2700' - 2800' 2800' - 2900' 2900' - 3000' 3000' - 3100' 3100' - 3200' 3200' - 3300' 3300' - 3400' 3400' - 3500' 3500' - 3600' 3600' - 3700' 3700' - 3800' 3800' - 3900' 3900' - 4000' 4000' - 4100' 4100' - 4200' 4200' - 4300' 4300' - 4400' 4400' - 4500' 4500' - 4600' 4600' - 4700' 4700' - 4800' 4800' - 4900' 4900' - 5000' 5000' - 5100' 5100' - 5200' 5200' - 5300' 5300' - 5400' 5400' - 5500' 5500' - 5600' 5600' - 5700' 5700' - 5800' 5800' - 5900' 5900' - 6000' 6000' - 6100' 6100' - 6200' 6200' - 6300' 6300' - 6400' 6400' - 6500' 6500' - 6600' 6600' - 6700' 6700' - 6800' 6800' - 6900' 6900' - 7000' 7000' - 7100' 7100' - 7200' 7200' - 7300' 7300' - 7400' 7400' - 7500' 7500' - 7600' 7600' - 7700' 7700' - 7800' 7800' - 7900' 7900' - 8000' 8000' - 8100' 8100' - 8200' 8200' - 8300' 8300' - 8400' 8400' - 8500' 8500' - 8600' 8600' - 8700' 8700' - 8800' 8800' - 8900' 8900' - 9000' 9000' - 9100' 9100' - 9200' 9200' - 9300' 9300' - 9400' 9400' - 9500' 9500' - 9600' 9600' - 9700' 9700' - 9800' 9800' - 9900' 9900' - 10000'

Plur down 2130 PM. 3-11-59.

Cemented and placed in place by hand. The concrete was 200' with 150 sand.

Blue cover 4-13-62 2-11-62

Brillat 10 3 = 7739'

2-55 east - from 6 to 6715'. Saw one dove with a white star

monter at 392' and one at 494' and generalizers spaced two joints apart starting with bottom joint and 15 generalizers spaced

two joints apart from 5821 up. One brown cement basket se
124 cemented through 5804. The spots contain cement vi

only for the purpose of

3-26-59 - Could not open multiple space computer at 5823

4-30-59 - Drilled out multiple stage cement at 5325'.
4-30-59 - Cut 8" off at 5300'. Cut 12" string off at 5280' and pulled

it out.

at 5927' with 4 inches. Van Halliburton 11 Squeese Packer at 5756' and squeeze with 66 sacks Desmir. 21 Bentonite containing

860 Alsonite, final pressure 4000, temperature survey which showed a questionable top of oil.

ment at 1620'. Cement placement by pumping into casing. Hole took fluid 1641' to 1650'.

Set Halliburton "B" Lucas Packard 4 1/2" presented with 50 shots

4-5-59 - Drilled out cement retainers and lined casing with 3500 whs of

with 50 sacks ~~spoon pump~~. final pressure 4000'. Reverse

4-7-59 - Drilled but stuck in 15' liner. Yes, top of liner

4-2-59 - Drilled out liner at 4910' and cement to 4970'. See:

case; and found hole would take fluid at rate of 20 bbls per minute at 1300 pressure. Log shown remaining on tubing to 4800' and

squeeze: 110 lbs. final pressure: 100 . (Continued)

History Continued -

- 4-10-59 - Drilled cement retainer @ 4892'. Tested casing. Could pump 2 1/2 bbls per minute at 2000# pressure into formation. Ran cement retainer to 4924' and squeezed with 50 sacks. Final pressure 4400#.
- 4-11-59 - Drilled cement retainer at 4924'. Tested casing. Would not hold. Ran cement retainer to 4920' and squeezed with 50 sacks. Final pressure 4500#.
- 4-16-59 - Drilled retainer at 4920' and cement to 4970'. Casing tested OK. with 3500#.
- 4-20-59 - Drilled out cement retainers to 5756'. Drilled cement 5756' to 5827' and tested casing with 3500# pressure. Held OK.
- 4-21-59 - Cleaned out to 7672'.
- 4-22-59 - Ran Cometon Survey. Found cement indicated as follows: 4620' to 4888', 4958' to 5394', 5474' to 5838', 6160' to 7522'. Perforated 7640' to 7642 with 8 holes.
- 4-23-59 - Ran Halliburton DM Squeeze Packer to 7632'. Squeezed with 50 sacks common cement. Breakdown pressure 3000# to 1800#. Final squeeze pressure 4200#. Perforated Dakota as follows with 2 shaped charges per foot: 7590 to 7614', 7566' to 7584', 7516' to 7540'.
- 4-24-59 - Fractured Dakota sand with 80,000# 40-60 sand and 73,056 gal. water; flushed with 13,146 gallons. BD pressure 2000# to 875#; treating pressure 2400# to 2550#, pressure when pumps stopped 1600#, after 37 minutes pressure was 1350#. Average injection rate 46 BPM. Set bridge plug at 7461'. Perforated Graneros with 4 shaped charges per foot from 7392' to 7404' and 7416 to 7430'. Fractured with 60,000# 40-60 sand and 38,345 gal. water; flushed with 13,146 gal. water. BDP 2200#-1800#. Treating pressure 2650 to 3000#. Pressure when pumps stopped was 1800#. After 1 3/4 hours pressure was 1250#. Average injection rate 42 BPM. Set bridge plug at 7346'. Perforated Point Lookout with 2 shaped charges per foot as follows: 7374' to 5464', 5472' to 5480', 5505' to 5511, 5523' to 5527'.
- 4-25-59 - Fractured Point Lookout with 60,000# 20-40 sand and 41,980 gal. water. Flushed with 11,000 gal. water. Dropped 70 rubber balls after 20,000#, dropped 70 rubber balls after 40,000#, dropped 20 rubber balls after 50,000#. BDP zero. Treating pressure 800# to 1400#. Pressure immediately after stopping pump was 350#. Average injection rate 76 BPM. Ran a bridge plug to 5360'. Perforated Cliff House as follows: with 2 shaped charges per foot: 4844' to 4850', 4872' to 4912', 4941' to 4945', 4948' to 4962'. Fractured Cliff House with 60,000# 40-60 sand and 48,675 gal. water. Flushed with 11,000 gal. water. Dropped 44 rubber balls after 20,000# and 44 more after 40,000#. BDP 1600#-1000#. Treating pressure 1000# to 1650#. Average rate of injection was 70.7 BPM. Pressure immediately after pump stopped was 900#. Set bridge plug at 4810'. Perforated Pictured Cliffs with 2 shaped charges per foot, as follows: 3180' to 3192', 3198' to 3224'. Fractured with 40,000# 10-20 sand and 24,104 gal. water. Flushed with 7300 gal. water. BDP after pumps stopped was 800#. Average rate of injection 66 BPM. Dropped 35 rubber balls after 15,000#.
- 5-2-59 - Finished drilling bridge plugs and started blowing well to clean up.
- 5-13-59 - Ran 5 1/2" scraper to 7380' and 7 5/8" scraper to top of liner at 4620'.
- 5-14-59 - Set 5 1/2" Baker Model "D" Production Packer at 7370'. Set Baker 7 5/8" Model FA Production Packer at 4600'.
- 5-16-59 - Ran and set 2" tubing. Dakota tubing perforations 7374' to 7386'. Seal nipples through Model "D" Production Packer at 7370'. 2 3/8" OD RUE Hardy-Griffin thd. J-55 tubing 5431' to 4609'. Parallel flow tube latched in Model FA Packer at 4600' with 3 1/2" smsl tubing suspended on base of parallel flow tube 4608' to 5365'. 2 3/8" OD RUE J-55 tubing 4600' to surface. Landed on Cameron tubing segment with 2000# stretch over suspended weight of tubing. Baker latch on parallel flow tube should unscrew with the tubing in this position at such time as it is necessary to pull tubing.
- 5-17-59 - Ran and set 1 1/2" 2.40# J-55 RUE tubing in top of packer at 4600'. Landed on segment with 5000# below suspended weight of tubing. Ran 3/4" RUE tubing to 3157' and landed on segment.

(Continued)

- 5-13-59 - Shut in pressures: Pictured Cliffs 1153#, Mesa Verde 755#, Dakota 2224#.
- 5-20-59 - Shut in pressures: Pictured Cliffs 680#, Mesa Verde 868#, Dakota 2256#.
- 5-21-59 - Shut in pressures: Pictured Cliffs 723#, Mesa Verde 830#, Dakota 2384#.
- 5-24-59 - Shut in pressures BWT - Pictured Cliffs 751#, Mesa Verde 844#, Dakota 2364#. Mesa Verde opened 3 hours through 3/4" choke. Rate of flow 1,609 MCF, AGI 2787 MCF. Dakota opened three hours through 3/4" choke. Rate of flow 2,667 MCF, AGI 3713 MCF. Pictured Cliffs opened three hours through 3/4" choke. Rate of flow 1230 MCF, AGI 1244 MCF.