



00250270

WELL SUMMARY

OPERATOR: Sun Oil Company

WELL: # 1 W. W. McWilliams "A"

LOCATION: C NE S31-T8N-R9OW

ELEVATION: 6620' Gr. 6629' KB

SPUDED: June 14, 1969

FINISHED DRILLING: June 20, 1969

CONTRACTOR: Drieling Drilling Co., Denver, Colorado

CASING: 8-5/8" @ 327' W/140 Sx.

CORES: None

DRILL STEM TESTS: One - 3337-3427 (See Details)

LOGGING SERVICES: Dresser-Atlas: IES 328-3426
BHC-AL 2400-3423

SAMPLES: Not Saved

TOTAL DEPTH: 3427' Driller 3430 Logger

STATUS: D & A

PLUGGING PROCEDURE: Plug # 1 3272-3340 20 Sx.
" # 2 274-328 20 "
10 sack plug in top of surface pipe,
Wheat Field - No Dry Hole Marker.

FORMATION TOPS: Lance 2080 (4549)
Lewis 2982 (3647)
Lewis Sand 3334 (3295)

CHRONOLOGICAL LOG

June 14, Spud @ 1:00 P.M.

" Drilled 0-143 12 $\frac{1}{4}$ " Hole

" 15, " 143-340
Ran 10 joints, 318', of 8-5/8", 24# casing, landed
at 327' KB - cemented with 140 sacks regular cement,
2% CC - good returns - plug down at 4:30 P.M.

" 16, WOC - nipple up - pressure to 500# on casing.
Drilled plug at 3:00 P. M.
Drilled 340-838 - 7-7/8" Hole

" 17, " 838-1785 SHT 1050' - 1 $\frac{1}{2}$ ^o
1677' - 3 $\frac{3}{4}$ ^o

" 18, " 1785-2606 2090' - 1-3/4^o

" 19, " 2606-3180 2606' - 2 $\frac{1}{2}$ ^o
3180 - 2-3/4^o

" 20, " 3180-3427 Coming out of hole to run logs

" 21, IES Sonde would not go below 2960' - went in hole
with bit - mixed mud, conditioned hole.

Ran Dresser-Atlas Ies and Acustilog.

" 22, Ran DST # 1 Johnson Testers - 2 packers
3337-3427 - GTS in 12" at rate of 129 MCFGPD
See details of DST.

Plugged and Abandoned

Rig released @ 7:00 P. M.

SAMPLE DESCRIPTION

- 1000-1090 Shale, light gray to greenish-gray to light green, blocky, trace siltstone. Trace coal.
- 1090-1120 Sandstone, light gray, fine grained, salt & pepper, friable but generally clay-filled.
- 1120-1150 Shale, light gray to greenish-gray, blocky, locally silty.
- 1150-1180 Sandstone, light gray, fine grained grading to siltstone, salt & pepper - considerable coal.
- 1180-1300 Shale, light gray to greenish-gray, locally silty, some coal, some siltstone.
- 1300-1390 Sandstone, light gray, fine grained, salt & pepper, some shale as above.
- 1390-1420 Shale, light gray to greenish-gray to light green, blocky, locally silty, some slightly carbonaceous.
- 1420-1450 Siltstone, fairly soft, salt & pepper.
- 1450-1510 Shale, light gray to greenish-gray, soft, blocky, locally carbonaceous.
- 1510-1720 Sandstone, light gray, medium to coarse grained, sub-rounded to sub-angular, nearly all free-drilled.
- 1720-1780 Siltstone, light gray, salt & pepper and grades to sandy shale - some coal.
- 1780-2065 No Samples Caught.
- 2065-2095 Coal, sub-bituminous.
- 2095-2110 Skip - no samples caught.
- 2110-2220 Shale & Sandstone, shale is light gray to greenish-gray, blocky, locally slightly carbonaceous; sandstone is light gray, fine to medium grained, friable, salt and pepper, mostly free-drilled.
- 2220-2270 Sandstone, light gray, fine grained, salt & pepper, tight.
- 2270-2460 Sandstone & Shael, sandstone as above; shale is light gray to greenish-gray, some green, blocky, locally slightly carbonaceous.

- 2460-2500 Sandstone, light gray, fine to medium grained, mostly free-drilled - some shale as above.
- 2500-2620 Shale, light gray to greenish-gray to light green, blocky, locally slightly carbonaceous; sand is light gray, fine grained, salt & pepper, dirty, tight.
- 2620-2690 Sandstone, light gray, fine grained, salt & pepper with flecks of carbonaceous material, dirty, tight, much clay-filling.
- 2690-2720 Shale, medium gray to light gray, some greenish-gray, with considerable light gray, fine grained, dirty, tight sandstone.
- 2720-2740 Sandstone & Shale, as above in about equal amounts, also abundant sub-bituminous coal.
- 2740-2750 Skip
- 2750-2790 Sandstone, light gray, fine to medium grained, friable, mostly free-drilled - few clusters suggest clay-filling.
- 2790-2830 Shale, medium gray to light gray to greenish-gray, blocky, locally carbonaceous - some sandstone as above.
- 2830-2860 Sandstone, light gray, fine grained, salt & pepper, friable but clay-filled tight.
- 2860-2930 Shale, medium gray to greenish-gray to light green, blocky, locally carbonaceous and silty.
- 2930-2940 Sandstone, light gray, fine grained, salt & pepper, friable but much clay-filling - some of sand is very fine grained and silty. No stain or fluorescence.
- 2940-2970 Sandstone & Shale, sandstone as above; shale is mostly medium gray, blocky, carbonaceous.
- 2970-2980 Sandstone, light gray, fine grained, friable, salt & pepper, mostly free-drilled, but few clusters suggest considerable clay filling - appears to be very low effective porosity. No stain or fluorescence.
- 2980-3200 Shale, mostly medium gray, some dark gray, blocky to fissile, trace of carbonaceous material locally.
- 3200-3260 Shale, as above - sample quality not good due to up-hole cave material.

- 3260-3280 Shale, as above predominant, much light gray, salt & pepper siltstone.
- 3280-3330 Shale, medium gray to dark gray, blocky to fissile.
- 3330-3350 Sandstone, light gray, fine to very fine grained, fairly friable but very tight due to clay filling interstices, much shale as above. No stain or fluorescence.
- 3350-3370 Sandstone, light gray, fine grained, friable, salt & pepper, much free-drilled, but clusters suggest much clay-filling. Sand appears to have little effective porosity - No stain or fluorescence.
- 3370-3390 Sandstone, light gray, fine to very fine grained and grading to siltstone - no effective porosity noted - no stain or fluorescence.
- 3390-3427 Shale, mostly dark gray, blocky to fissile - locally sandy.

Note: Samples start at 1000'

30' samples 1000' to 2600'

10' " 2600' to T.D.

DRILL STEM TESTDST # 1 3337-3427 (Double packer) $\frac{1}{2}$ " & 15/16" Chokes

Initial Shut-In Period - 60 minutes

Flow Period 120 "

Final Shut-in Period 60 "

Tool opened with strong blow - Gas to surface in 12 minutes

Tested at rate of 129 MCFGPD

Recovery: 90' GCM

IFP 58#

FFP 64#

ISIP 1331#

FSIP 1172#

IHP 1689#

FHP 1672#

BHT 98°

BIT RECORD

Bit No.	Make	Size	Type	Depth Out	Footage	Hours
1	Reed	12 $\frac{1}{4}$	YT3AJ	314	314	19
2	"	"	"	340	26	1-3/4
1	HTC	7-7/8"	OSC3A	1050	710	10-3/4
2	"	"	"	1677	627	8
3	Reed	"	YT3A	2090	413	9 $\frac{1}{2}$
4	HTC	"	OSC3A	2606	516	13
5	"	"	"	3246	640	22-3/4
6	"	"	OSC3	3427	181	8-3/4

GEOLOGIC NOTES

The # 1 McWilliams "A" well was designed as an edge, in-fill well, in the North Craig Gas Field.

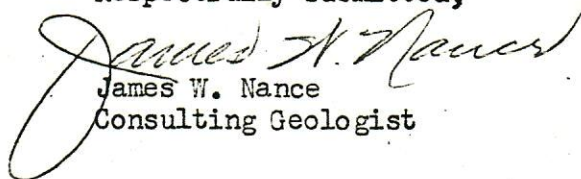
The location is 3/4 mile northwest of the 2-32 Carpenter well, one-half mile southeast of the # 1-30 Fox well, and about one-half mile south of the Carter Oil Company # 1 Unit well.

Both the Fox and Carpenter wells produce gas from the Lewis Sand, but each well produces from separate sand bodies. The sand in the Carpenter well appears to be developed at a point approximately 150' higher stratigraphically than the sand found in the Fox well. Neither of these sands were developed in the Carter well. These vagaries of deposition presented several possibilities that might be anticipated at the McWilliams location in that either, neither, or both of the sands might be developed.

It was found however, that the lower sand, correlative with the sand in the Fox well, was rather poorly developed at the McWilliams location. Although sample examination suggested sand to be very tight as a result of clay-filling, Acustilog suggested possibly 5 or 6 feet of porosity.

After DST of total sand body yielded gas at a maximum rate of 129 MCF per day, it was decided that the well did not have commercial gas producing capabilities and consequently was plugged and abandoned.

Respectfully submitted,


James W. Nance
Consulting Geologist

Denver, Colorado
June 23, 1969