

ROBERT M. DAHLGREN
1080 69th Street
Boulder, Colorado 80303
499-2616

RECEIVED
MAR 30 1977
COLO. OIL & GAS CONS. COMM.



00247170

GEOLOGICAL REPORT

Rex Monahan
#1 Sonnenberg
660' SNL, 112' WEL NW/4
Section 33-T8N-R52W
Logan County, Colorado

DVR	
FJP	
HHM	<input checked="" type="checkbox"/>
JAM	<input checked="" type="checkbox"/>
JJD	<input checked="" type="checkbox"/>
GCM	
CGM	

By: Robert M. Dahlgren

WELL DATA SUMMARY

OPERATOR: Rex Monahan

WELL: #1 Sonnenberg

LOCATION: 660' SNL, 112' WEL NW/4 Section 33-T8N-R52W
Logan Co., Colorado

ELEVATION: 3926 GL, 3933 KB

CASING: 1. 103' of 8-5/8" set @ 110' KB w/cement.

SPUD: 12-10-76

COMPLETED: 12-14-76

DRILL STEM TESTS: 1. 4320' - 4343'
2. 4320' - 4332'

CORES: None

MUD: Macobar, gel & chemicals

ELECTRIC LOGS: 1. Schlumberger Induction - Electrical Log
from 4554 to 105'.
2. Schlumberger Compensated Formation Density
Log from 4553' to 4200'.

RIG: National T32, double derrick

CONTRACTOR: Gear Drilling Co., rig #2

PUSHER: Gene Malaby

TOTAL DEPTH: 4555 Driller, 4555 Schlumberger

SAMPLES: Discarded

STATUS: D & A, top of 25 sack cement plug at 300', plate
over top of casing as per instructions from Mr.
Frank Piro of the Colorado Oil & Gas Conservation
Commission.

CHRONOLOGICAL SUMMARY

12-9-76 Commence rig up 3:00 PM.
 12-10-76 Finish rig up, spud, set surface, plug down 10:15 AM, W.O.C., rig up to drill 1:00 PM.
 12-11-76 Drilling at 2580' 7:00 AM, mud up.
 12-12-76 Drilling at 3995' 7:00 AM, trip for bit #2, drilling.
 12-13-76 Tripping at 4490' for bit #3, circulate 1 hour for samples prior to trip, drilling, reached 4555' TD at 1:30 PM, circ. 45" for log, start out for loggers at 2:15 PM, on bank at 4:00 PM, commence logging, finished logging 7:30 PM, started in hole w/DST #1.
 12-14-76 4555' TD, breaking down test tool completed at 7:15 AM, finished laying down test tool, in hole w/DST #2, pulled loose at 1:00 PM, tool broke down at 3:30 PM. Plugging orders obtained from Frank Piro, 25 sack plug from 300' and thread protector on surface pipe box.

BIT RECORD

<u>RUN NO.</u>	<u>SIZE</u>	<u>MAKE</u>	<u>TYPE</u>	<u>DEPTH OUT</u>	<u>FTGE</u>	<u>HRS.</u>
1	7-7/8"	Smith	DTJ	3995'	3885'	33 $\frac{1}{4}$
2	7-7/8"	Sec.	S3J	4490'	495'	17 $\frac{1}{2}$
3	7-7/8"	Sec.	S3J	4555'	65'	7 $\frac{1}{2}$

DEVIATION

	<u>DEPTH</u>	<u>DRIFT</u>
BEST IMAGE	510'	0°
AVAILABLE	1033'	0°
	1500'	1 $\frac{1}{4}$ °
	1997'	1 $\frac{1}{2}$ °
	2522'	3 $\frac{1}{4}$ °
	3020'	1 $\frac{1}{4}$ °
	3510'	1 $\frac{1}{4}$ °
	3995'	1 $\frac{1}{2}$ °

SCHLUMBERGER ELECTRIC LOG TOPS

<u>FORMATION</u>	<u>DEPTH</u>	<u>DATUM</u>
Niobrara	3505'	
Fort Hays	3851'	
Carlile	3897'	
Greenhorn	4082'	
"X" Bentonite	4224'	
"D" Sand	4318'	
"J" Sand	4425'	
Total Depth	4555'	

DRILL STEM TESTS

Drill Stem Test #1 4320'-4343', open 15", shut in 45", open 60", shut in 45", initial open weak increased to 5#, open flow weak increased to 5# in 10", GTS in 20" of second flow period, gas gauged at 30,000 cu. ft. per day after surfacing and 33,000 cu. ft. per day at end of flow period. Recovered 180' of W.C.M. and 792' of G.C.W. Field Pressures: IHP 2223#, IFP₁ 163#, FFP₁ 218#, ISIP 1160#, ITP₂ 259#, FFP₂ 473#, FSIP 1160#, FHP 2205#.

Fluid Sample Data

Sampler pressure 100 PSIG @ surface
Recovery: cu. ft. gas - .356
 cc. oil - 0
 cc. wtr. - 1400
Res. recovered water 1.18 at 32°F, 4000 PPM
Res. mud pit sample 9.0 @ 60°, 300 PPM
Res. mud filtrate 9.3 @ 60°, 250 PPM

Drill Stem Test #2, open 105", shut in 60", initial open weak, increased to 9" of water, decreased to 2" water in 20", 1/2" water in 60" to nearly dead in 105", N.G.T.S., recovered 150' MW. Field Pressures: IHP 2523#, IFP 55#, FFP 109#, SIP 1142#, FHP 2488#.

Fluid Sample Data

Sampler pressure 25 PSIG @ surface
Recovery: cu. ft. gas - 0
 cc. oil - 0
 cc. wtr. - 1600
Res. recovered water 1.02 @ 52°F, 6000 PPM
Res. mud pit sample 9.00 @ 60°F, 300 PPM
Res. mud filtrate 9.3 @ 60°F, 250 PPM

BEST IMAGE
AVAILABLE

SAMPLE DESCRIPTIONS

Ditch samples were collected at 30' intervals from 3980' to 4340', and 5' intervals from 4340' to 4355'. The samples were examined under the microscope and blacklight to determine fluid content, reservoir quality and rock type. Sample depths are adjusted to correspond with electrical log measurements.

3980 - 4080'	Sh, dk. gray.
4080 - 4090'	Ls., brn., m. xln..
4090 - 4320'	Sh., dk. gr., some siltst. gray, some bent. beds.
4320 - 4335'	Sdst., wht-tan fg., consid. cf., sr., no vis. stn., bright yellow fl., sli cut after crushing.
4335 - 4340'	Sdst., wht-tan, mg., sr., cln., fair vis. poro., vis. stn., bright yellow fl., sli. cut.
4340 - 4345'	Sh., dk. gr., sdy., silty, no shows.
4345 - 4355'	Sdst., wht-tan, fg., cf. in pt., low vis. poro., bright yellow fl., sli cut in 40% of sdst.
4355 - 4430'	Sh., dk. gr..
4430 - 4440'	Sdst., tan-wht., mottled, mg., sr., cf., shly., no vis. poro., no shows.

4440 - 4445' Sdst., tan-wht., mg., sr., cln. to cf., low to fair vis. poro.,
stn., faint yellow fl. & sli cut in 10% of sdst..
4445 - 4460' Sdst., tan-wht., mg., sr., cln. to cf., low to fair vis. poro.,
no shows.
4460 - 4485' Sdst., tan, mg., sr., q'tzitic to cf., low to no vis. poro.,
no shows, thin interbeds of sh., dk. gr..
4485 - 4530' Sh., dk. gr..
4530 - 4540' Sdst., gray, mg., sr., cf., shly, no vis. poro., no shows.
4540 - 4555' Sh., dk. gr..

REMARKS

The Monahan 1 Sonnenberg encountered non-commercial shows in the "D" and "J" Sands, consequently was plugged and abandoned in accordance with rules of the Colorado Oil & Gas Conservation Commission.

Robert M. Dahlgren
Robert M. Dahlgren (by perm)

BEST IMAGE
AVAILABLE