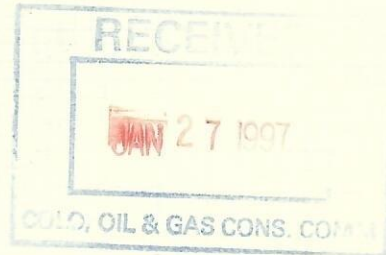


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Christopher P. Gough

Petroleum Geologist



Wellsite Geological Consulting & Well Logging

Geological Well Report

Western Operating Company

MADDERN #1-1

SW SE NE

2310' FNL, 990' FEL

Section 22- Township 3 South - Range 58 West

Adams County, Colorado

January 20, 1997

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TABLE OF CONTENTS

RESUME	1
DAILY DRILLING CHRONOLOGY.....	2
FORMATION TOPS.....	3
BIT RECORD.....	4
DEVIATION RECORD.....	4
MUD PROPERTIES.....	5
REFERENCED WELLS AND DST'S.....	5
ZONES OF INTEREST.....	6
E-LOGS---DAKOTA SECTION COMP.NEUTRON/DENSITY E-LOG.....	7
DUAL INDUCTION GUARD LOG.....	8
SUMMARY&CONCLUSIONS.....	9

RESUME

OPERATOR:	Western Operating Company
WELL NAME:	Maddern # 1-1
LOCATION:	2310' FNL-990' FSL Section 22-3s-58w Adams County, Colorado.
CONTRACTOR:	Ashby Drilling Rig #2
COMPANY PERSONNEL:	Steve James - owner
SPUD DATE:	1-8-97
COMPLETION DATE:	1-14-97
WELLSITE GEOLOGIST:	Chris Gough
L.T.D. / RTD	5882' /5870' w/ srtap corr. 5880'
TESTING:	One Test Was Taken in "J2" sand
DRILLING FLUID/ ENGINEER:	Quality Drilling Fluids Inc/ Fred Rothauge
SURFACE CASING:	8 5/8" Set @ 304'
ELECTRIC LOGS:	Phonix Surveys Inc, Dual induction guard log, Compensated Density Neutron.
TOTAL DEPTH FORMATION:	"J3" sand
SAMPLES SAVED:	None
SAMPLES EXAMINED:	5400' - 5882'
SAMPLES:	None
ELEVATIONS:	G.L. 4964' K.B. 4975'
WELL STATUS:	Dry and Abandoned.

DAILY DRILLING CHRONOLOGY

1-4-97 Building location

1-8-97 Spud well 9:30 pm and drilled 12-1/4" to 320' and ran 7 jts of 20# 8 5/8" surf. csg. set at 304' / 315 KB. cemented with 186 sxs.

1-9-97 Plug down at 10:30 am Begin drilling under surface casing at 304'.

1-10-97 7:00 am drilling at 2500', made 2180' in 14.5 hrs. Drilling with water, ran dev. surv. at 844', 1342, 1870 and 2368'.

1-11-97 7:00am drilling ahead at 4375', made 1875' in 24 hrs. Ran surv. at 2985', 3483 and 4375. Geologist on location.

1-12-97 7:00am drilling ahead at 5700', made 1325' in 24 hrs. Ran surv. at 4559'
Cut the "D" sand and then made trip for a bit change. Drilled to 5755' and cir. 75//min. for samples in "J1" sand, no shows reported. Drilled "J2" sand and cir. 75/min. for samples at 5790'. Weather very cold and snowing. MW 8.0 VIS 44 WL 7.8 PH 9.0 NIT. 40

1-13-97 7:00am reached T.D. at 5880', made 180' in 24 hrs. TOO H for logs. Slow going due to air lines freezing in sub zero weather. First logs on bottom at 11:30 am. MW 9.0 VIS 65. Finish logging @ 2:30 pm. Call testers for a straddle test of "J2" sand. Pick Testing on location @ 4:15 pm.

1-14-97 7:00 am at T.D. 5882 (LTD), TOO H w/ DST#1, Rec. 241' MCW. Tester off location at 5:30 am. Call operator with test results and give drilling contractor plugging orders.

FORMATION TOPS:

FORMATION	SAMPLE TOP	E-LOG TOP	E-LOG DATUM	DIFF. TO REF.WELL "A"
NIOBRARA		4790	+185	+ 3
GREENHORN		5355	-380	+ 8
"X" BENTONITE	5588	5586	-611	+ 6
"D" SAND	5683	5682	-707	+ 5
"J1" SAND	5725	5731	-756	+4
"J2" SAND	5752	5765	-791	+6
"J2" CLEAN SD.		5772	-798	- 1
"J3" SAND	5774	5780	-805	+8
RTD	5770		-795	
RTD W/ 10'	5880			
down hole strap				
LTD		5882	-907	

BIT RECORD:

NUMBER	SIZE	MAKE	TYPE	DEPTH-OUT	FOOTAGE
1	12 1/4"	SEC. R R	S-33	320	320'
2	7 7/8"	RTC	HP-11	2985	2665'
3	7 7/8"	RTC	HP-11	5700	2715'
4	7 7/8"	RTC	HP51XRR	5882	182'

DEVIATION RECORD:

DATE	SURVEY DEPTH	DEVIATION (degrees)
1-10-97	844'	.25
1-10-97	1342'	.50
1-10-97	1870'	.50
1-10-97	2368'	.75
1-11-97	2985'	1.0
1-11-97	3483'	.75
1-11-97	4375'	1.0
1-12-97	4559'	1.25
1-13-97	5710'	1.5

MUD PROPERTIES:

DATE	DEPTH	WT. lbs.	VISCOSITY	FILTRATE	PH	CHLOR.	NIT.	CAL.
1-10-97	2500'	Drilling with water.						
1-11-97	4375'	Drilling with water.						
	mud-up	@ 4750'						
1-12-97	5640'	8.8	37	7.8	9.0	250	40	80
1-12-97	5700'	8.0	44	7.0	9.0	250	40	80
1-13-97	5880'	9.0	65					
1-14-97	5880'	9.0	65					

REFERENCED WELLS:

REFERENCED WELL "A" : NCRA MADDERN # 3

NE SE

SECTION 22-T3s-R58w

Adams County, Colorado.

K.B. 4965'

T.D. 5852'

Status: OIL "J2" Sand

DRILL STEM TESTS:

DST #1 5768 - 5776' (Staddle) "J2" SAND 15-45-60-90

No blow due to ice plug in last joint of pipe

Recovery: 241' sli. muddy water. Sample chamber 2100 cc water.

IFP 102-102# FFP 117-176#

ISIP 1093# FSIP 1093#

ZONES OF INTEREST

Lithologic and show Descriptions:

DAKOTA GROUP

"D" SANDSTONE: E-log depth 5682-5890'

Sandstone, white to light gray with a small amount of individual grains, very fine to fine grained, moderate to poorly sorted, firm small to medium sized grain clusters, fair - poor visual intergrainular porosity, sub angular to sub rounded grains, moderately dense, slightly friable i.p. Moderately well cemented with calcareous cement, abundant fine clay filled matrix. A small amount of pyrite was observed. No stain, no fluorescence, and no cut was observed in this sandstone.

"J1" SAND E-log depth 5731-5755'

Sandstone, white to clear to light gray, moderate - well sorted, fine to medium grained clusters, very slightly argillaceous, tight with a fair amount of calcareous cement, fair- poor intergrainular porosity, small amount of pyrite. A few grain clusters contained a dark black Asphaltic dead oil stain, very slight - no. fluorescence, and no cut was observed.

Sand returns were only about 10-12% of the sample. This sand was circulated at 5755'.

"J2" SAND E-log depth 5765 - 5778'

Sandstone, white to clear, medium grain size, well sorted, mod. - well rounded, small amount of calcareous cement, slightly friable i.p., fair - good visual porosity, occasionally argillaceous i.p. A very few pieces with a dark black dead oil stain very weak light yellow fluoresces and no cut was observed in this sand section. Sandstone returns consisted of only about 15% of the sample. This sand was circulated at 5790'

"J3" SAND E-log depth 5780 - 5842'

Sandstone/Siltstone, white- lt. gray- brown, very fine grained, with a moderate to abundant amounts of argillaceous matrix material. Fair to poor intergrainular porosity, mod. dense, occ. pyritic. No stain, no fluorescence and no cut was observed in this sandstone. Several feet of this silty sandstone developed at the bottom of this well down to 5842'.

D sand
5682-707

5700

Ji 5721
-756

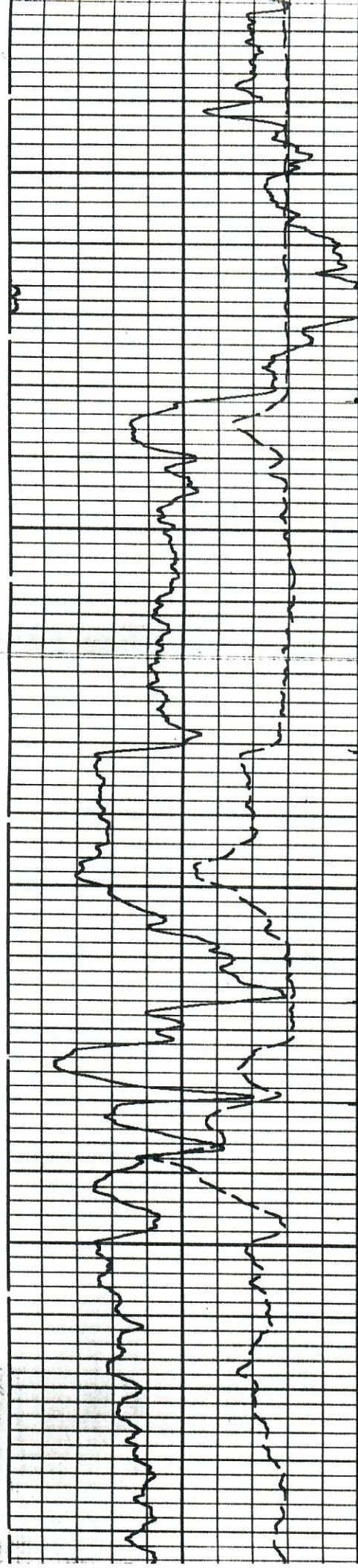
Rec 241 mcs

Ji 5766-782

Cl sd -798

Ji sd
5780-805

5800



D sand

5682-707

5700

J1 sand

5731-756

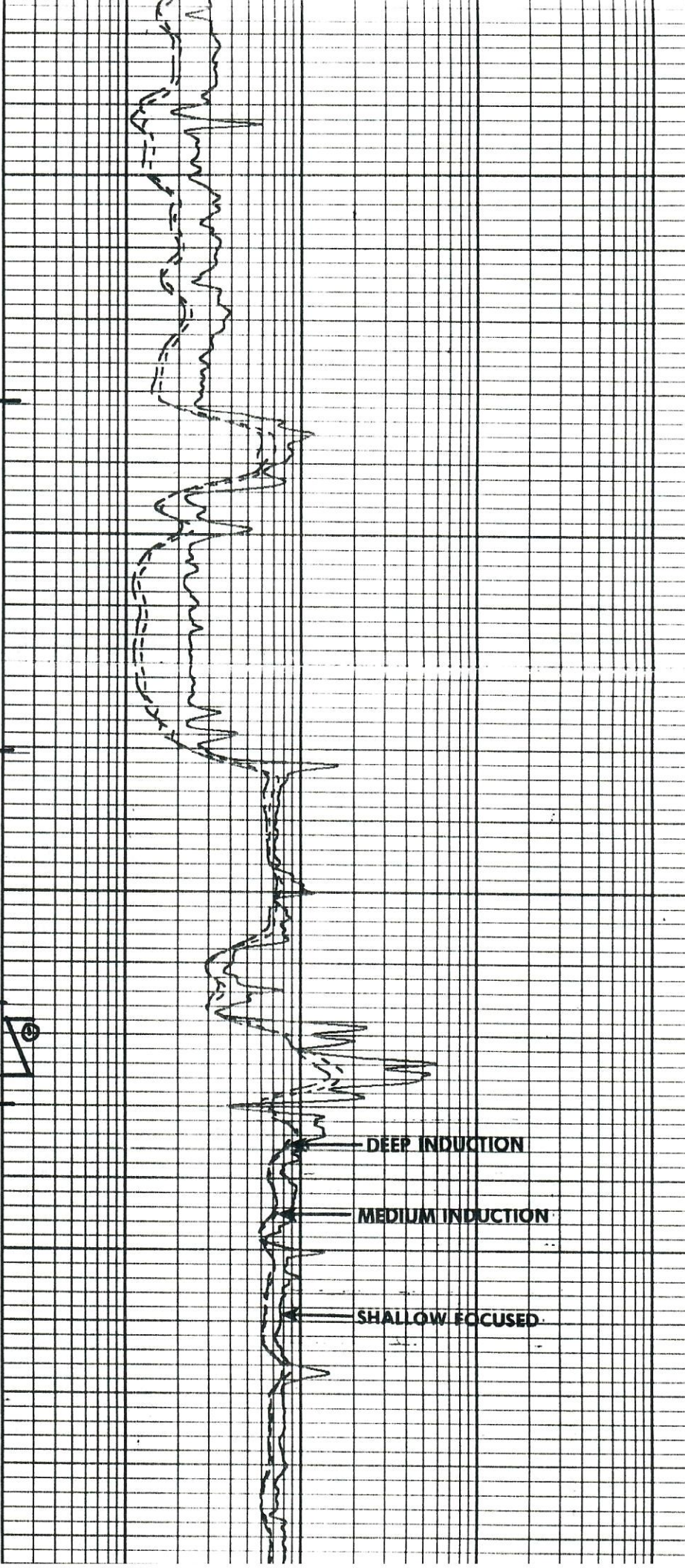
J2 sand

5765-791

J3 sand

5780-805

5800



DEEP INDUCTION

MEDIUM INDUCTION

SHALLOW FOCUSED

SUMMARY & CONCLUSIONS

The Maddern #1-1 was commenced on 1-8-97 and drilled to a total depth of 5882'(L.T.D.), and plugged as a dry hole on 1-14-97.

The main objective of this test well was Cretaceous age "J1 & J2" sands, in an attempt to revive the plugged-out Roman Nose North Field. This field contained two productive wells. The NCRA Maddern #1 produced oil and gas from the "J1" sand and the Maddern #2 produced oil from the "J2" sand. A secondary objective was the Cretaceous age "D" sand. The Maddern #1-1 is located in eastern Adams County, Colorado, approximately 21 miles north-east of the town of Byers.

The well most used for correlation in the drilling of the Maddern #1-1 was the NCRA Maddern #3 located in the NE SE of section 22 -3s -58w approximately 1550' to the southeast of the drillsite. This well had an I.P. of 102 BOPD & 19 MCFGPD from 5764-5770 in the "J2" sand. The NCRA Maddern #1 located to the southwest of the drillsite was productive from the "J1" sand and had an I.P.F of 223 BOPD & 141 MCFGPD from 5756-5760' in the upper portion of the "J1" sand. This well contained a clean porous sand bench in the top 8' of "J1" sand. This sand appeared tight in the samples and on the electric logs of the Maddern #1-1. There were no sample shows reported and it was not tested. Structurally the Maddern #1-1 ran 9' high to the NCRA Maddern #1 discovery well.

The "J2" sand in this well ran structurally 6' high to the NCRA Maddern #3 well yet contained 6-7' of tight clay filled dirty sand in the upper portion of this sand bench. The lower 6' of "J2" sand from 5772-5778' contained a porous white medium grained sandstone with only very minor oil staining and a weak light yellow fluorescence. Electric logs across this interval indicated 17% density porosity and 17 ohms guard resistivity. This zone calculated a 65% water saturation using a .25 RW and was straddle tested after logging. A drill stem test was run from 5768-5776' and recovered 241' of sli. mud cut water. Due to the upper 6' of this sand being tight., the porous sand developed 1-2' low to the productive sand in the NCRA Maddern #3 and consequently tested wet.

Due to the lack of any significant sample shows and negative test results, this well was plugged and abandoned on 1-14-97.