

WELL REPORT  
ANDERSON OIL COMPANY  
SCHRAM-HANSON FEDERAL #2  
SAN JUAN COUNTY, NEW MEXICO



## WELL REPORT

ANDERSON OIL COMPANY: SCHRAM-HANSON FEDERAL #2

SAN JUAN COUNTY, NEW MEXICO

### LOCATION

660' from the south line and 1980' from the east line, Section 18,  
Township 21 North, Range 8 West, NMPM.

### ELEVATION

6542' Ground: 6554' Kelley Bushing

### CONTRACTOR

Young Drilling Company, Rig #1, Ideco Rambler, Rotary Tools.

### SPUD AND COMPLETION DATA

Well commenced: January 21, 1972.

Well completed: January 30, 1972, Plugged and Abandoned

Total Depth 4707' Driller: 4702' Logger

#### Plugging Program:

Surface	- 10 sacks
1150' - 1300'	- 55 sacks
2275' - 2400'	- 50 sacks
4200' - 4350'	- 55 sacks

### CASING

8 5/8" @ 73' with 60 sacks

### ELECTRICAL SURVEYS

Schlumberger - Dual Induction-Laterolog - 78' to 4702'

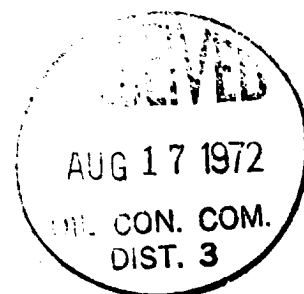
Schlumberger - Formation Density Log - 78' to 4701'

Schlumberger - Sonic Log - 1800' to 2550': 3450' to 3750':  
4300' to 4696'

Schlumberger - Neutron Log - 78' to 2700': 3400' to 3900':  
4250' to 4701'

### FORMATION TOPS

<u>Cretaceous</u>	<u>Depth</u>	<u>KB Datum</u>
Fruitland (Kf)	Surface	+6554
Pictured Cliffs (Kpc)	208'	+6346
Lewis (Kl)	252'	+6302
Cliff House (Kch)	1286'	+5268
Menefee (Kmf)	1340'	+5214
Point Lookout (Kpl)	2391'	+4163
Upper Mancos (Kmu)	2503'	+4051



FORMATION TOPS - CONTINUED

<u>Cretaceous</u>	<u>Depth</u>	<u>KB Datum</u>
Gallup (Kg)	3476'	+3078
Gallup Sand (Kgs)	3530'	+3024
Lower Mancos (Kml)	3684'	+2870
Sanastee (Kms)	3980'	+2574
Greenhorn (Kgh)	4310'	+2244
Graneros (Kgr)	4360'	+2194
Dakota "A" (Kda)	4380'	+2174
Dakota "B" (Kdb)	4498'	+2056
Dakota "D" (Kdd)	4586'	+1968
Dakota Burro Canyon (Kdbc)	4646'	+1908
Total Depth (Logger)	4702'	+1852
Total Depth (Driller)	4707'	+1847

WELL CUTTINGS

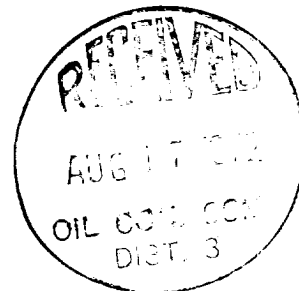
30' samples from 120' to 3500'

10' samples from 3500' to 4707' (Driller TD)

Samples described below from 4200' to 4707' (Driller TD)

SAMPLE DESCRIPTION

4200-10	100% sh, dk gy, gy brn, carb in part: Tr sltstn, gy, hd, calc: Tr ls, brn, f-xln
4210-20	100% sh, as above, bcm sdy & silty in part: Tr sltstn, as above
4220-30	90% sh, as above: 10% sltstn, as above: Tr ls, gy, ds shy
4230-40	60% sh, as above: 40% sltstn, as above, bcm sdy in part, shy in part
4240-50	90% sh, as above: 10% sltstn, as above: Tr ls, as above: Tr bentonite
4250-70	70% sh, as above: 30% sltstn, as above
4270-80	60% sh, as above: 40% sltstn, as above
4280-90	80% sh, as above: 20% sltstn, as above
4290-4300	60% sltstn, as above: 40% sh, as above
<u>TOP GREENHORN 4310' LOGS</u>	
4300-20	80% sh, as above: 20% sltstn, as above



SAMPLE DESCRIPTION - CONTINUED

4320-30 50% sltstn, as above: 50% sh, as above  
4330-50 80% sh, as above: 10% sltstn, as above: 10% ls, gy-  
gy brn, ds, shy  
4350-60 70% sh, dk gy, platy: 20% ls, as above: 10% sltstn,  
as above

TOP GRANEROS 4360' LOGS

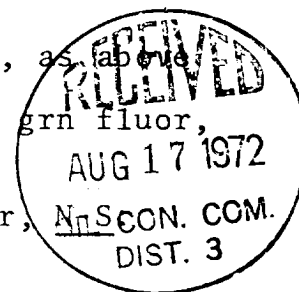
4360-80 80% sh, as above: 20% ls, as above: Tr sltstn,  
as above

TOP DAKOTA "A" 4380' LOGS

4380-90 100% sh, as above, bcm silty & sdy in part: Tr ls,  
as above: Tr sltstn, as above  
4390-4400 90% sh, as above: 10% ss, wht, f-m-g, SA-SR, arkosic,  
glauc, v/calc, tite, dull gold fluor, no cut (excell  
cut when broken), Tr bentonite  
4400-20 100% sh, as above: Tr ss, as above  
4420-30 90% sh, as above: 10% sltstn, gy, hd, calc: Tr ss,  
as above  
4430-50 80% ss, lt gy, f-g, SR, arkosic, por & friable, N-S:  
20% sh, as above  
4450-70 70% sh, as above: 30% ss, as above, bcm shy, calc &  
tite, N-S  
4470-80 100% sh, as above: Tr ss, as above  
4480-90 80% ss, dk gy, v-f-g, SR, arkosic, shy, calc, tite,  
Tr bright gold fluor, No Cut: 20% sh, as above

TOP DAKOTA "B" 4498' LOGS

4490-4500 50% ss, as above, Tr fluor, as above: 50% sh, as above  
4500-30 90% ss, gy-dk gy, v-f-f-g, as above, Tr blue grn fluor,  
No Cut: 10% sh, as above  
4530-40 50% ss, lt gy, f-g, arkosic, SR, calc, Tr por, N-S CON. COM.  
50% sh, as above DIST. 3  
4540-50 90% ss, as above, N-S: 10% sh, as above  
4550-60 70% ss, as above, bcm shy in part: 30% sh, as above  
4560-70 50% ss, as above: 50% sh, as above  
4570-80 80% sh, as above, bcm silty & sdy in part: 20% ss, as  
above



SAMPLE DESCRIPTION - CONTINUED

TOP DAKOTA "D" 4586' LOGS

4580-88 100% sh, as above: Tr ss, as above  
Core #1 4588-4640 cut 52', recovered 47.5'

TOP DAKOTA BURRO CANYON 4646' LOGS

4640-50 100% sh, gy, gy brn, dk gy, carb  
4650-60 100% sh, as above: Tr ss, lt gy, f-g, SR, arkosic,  
por & friable, N-S: Tr sltstn, gy, hd, calc  
4660-70 100% sh, as above: Tr sltstn, as above: Tr ss, gy,  
f-m-g, domin f-g, SA-SR, hd, tite, carb inclus, N-S  
4670-80 90% sh, as above: 10% ss, uncons, f-c-g, congl, N-S:  
Tr diss pyrite  
4680-4707 70% sh, as above: 30% ss, as above, N-S  
4707 TD Driller

DRILLING TIME

Five foot drilling time from 4200' to 4707' (Driller TD) is listed below.

05-10-15-20-25-30-35-40-45-50-55-60-65-70-75-80-85-90-95-100

4200-4300	13-14-14-12- 9-10-10-11-11-12-13-13-14-11-12-13-14-11-12-12
4300-4400	12-12-12-15-16-12-16-14-14-13-16-17-11-13-12-11-11-10-12-14
4400-4500	16-13- 7- 6- 8- 8-11-14- 9- 9-13-14-14-17-17-18-22-21-21-22
4500-4600	14- 9- 7- 8- 8- 8-14-21-23-28-24-24-20-25-25-24-24- Core #1
4600-4700	Core #1 17-12- 5-10-10-24-15-12- 4-12- 3- 6
4700	21

CHRONOLOGICAL LOG

1-22-72 RURT  
8 5/8" @ 73' w/60 sacks  
1-23-72 ø 1845' w/Bit #2  
Bit #1: OSC-3 - 1511' - 11 1/4 hrs  
Dev. 1/20 @ 500'  
1/20 @ 1000'  
3/40 @ 1584'

Drlg (13 3/4 hrs) Trips (2 hrs) Rig service (1/4 hrs)  
ø out 3:00 P.M. 1-22-72



CHRONOLOGICAL LOG - CONTINUED

1-24-72 ø 3122' w/Bit #3  
Bit #2: OSCIG - 996' - 11 1/2 hrs

Dev. 1° @ 2050'  
1° @ 2580'

Drlg (20 1/2 hrs) Trips (2 3/4 hrs) Rig service (1/4 hr)  
Rig repair (1/2 hr)

1-25-72 ø 3755' w/Bit #5  
Bit #3: OSCIG - 645' - 13 3/4 hrs  
Bit #4: OSCIG - 415' - 13 hrs

Dev. 1/2° @ 3225'  
1° @ 3640'

Drlg (18 1/2 hrs) Trips (5 1/4 hrs) Survey (1/4 hr)

1-26-72 ø 4320' w/Bit #6  
Bit #5: S4T - 562' - 16 3/4 hrs

Dev. 1° @ 4202'

Mud Properties: Wt 9.1, Vis 34

Drlg (18 3/4 hrs) Trips (5 hrs) Rig service (1/4 hr)

1-27-72 ø 4588'  
Bit #6: S-86 - 386' - 19 1/2 hrs

Dev. 3/4° @ 4588'

Mud Properties: Wt 9.5, Vis 60, WL 8.2

Drlg (14 1/4 hrs) Trips (5 1/4 hrs) Rig service (1/4 hr)  
Cond Mud & Circ (3 1/4 hrs) Pick up core bbl (1 hr)

1-28-72 ø 4705' w/Bit #8  
Cored 4588-4640' - 52' - 10 3/4 hrs

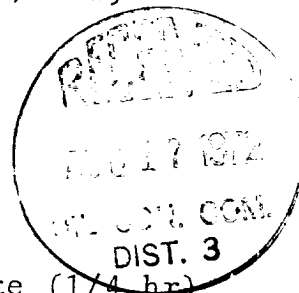
Mud Properties: Wt 9.8, Vis 55, WL 6

Drlg (3 1/2 hrs) Trips (3 1/2 hrs) Rig service (1/4 hr)  
Rig repair (3 hrs) Coring (10 3/4 hrs) WOO (2 hrs)  
Lay down core bbl (1 hr)

1-29-72 TD 4707' WOO  
Bit #8: S-86 - 67' - 4 hrs

Drlg (1/2 hr) Trips (6 1/2 hrs) Cond mud & Circ (3 3/4 hrs)  
Logging (12 3/4 hrs) WOO (1/2 hr)

1-30-72 TD 4707' P & A



BIT RECORD

<u>No.</u>	<u>Make</u>	<u>Size</u>	<u>Type</u>	<u>From</u>	<u>To</u>	<u>Footage</u>	<u>Hours Run</u>
1	Hughes	7 7/8	OSC-3	73'	1584'	1511'	11 1/4
2	Hughes	7 7/8	OSCIG	1584'	2580'	996'	11 1/2
3	Hughes	7 7/8	OSCIG	2580'	3225'	645'	13 3/4
4	Hughes	7 7/8	OSCIG	3225'	3640'	415'	13
5	Security	7 7/8	S4T	3640'	4202'	562'	16 3/4
6	Security	7 7/8	S-86	4202'	4588'	386'	19 1/2
7	Christensen		Diamond	4588'	4640'	52'	10 3/4
8	Security	7 7/8	S-86(RR)	4640'	4707'	67'	4

TOTAL ROTATING HOURS - 100 1/2

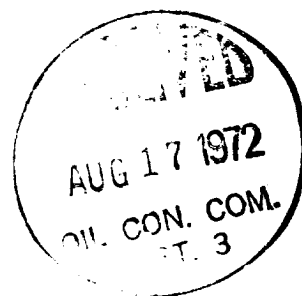
DEVIATION RECORD

<u>No.</u>	<u>Degree</u>	<u>Depth</u>	<u>Date</u>
1	1/2°	500'	1-23-72
2	1/2°	1000'	1-23-72
3	3/4°	1584'	1-23-72
4	1 °	2050'	1-24-72
5	1 °	2580'	1-24-72
6	1/2°	3225'	1-25-72
7	1 °	3640'	1-25-72
8	1 °	4202'	1-26-72
9	3/4°	4588'	1-27-72

ELECTRICAL SURVEY CALCULATIONS

<u>Formation</u>	<u>Depth</u>	<u>Rt</u>	<u>ø<sub>s</sub></u>	<u>ø<sub>n</sub></u>	<u>ø<sub>d</sub></u>	<u>R<sub>w</sub></u>	<u>W<sub>s</sub></u>	<u>Q</u>
Dakota Burro Canyon	4630-4701	7	28		22	.75	100%	.21
Dakota Burro Canyon	4647-56	12	22	22	15	.75	100%	.32
Dakota "D"	4623-35	50	8	10	4	.75	100%	.55
Dakota "D"	4605-12	20	19	20	15	.75	100%	.21
Dakota "D"	4588-92	20	13	13	9	.75	100%	.31
Dakota "B"	4504-10	9	18	20	13	.3	100%	.32
Dakota "A"	4410-20	6	18	18	14	.3	100%	.22
Dakota "A"	4380-90	20	12	12	4	.3	100%	.6

Rw's calculated



# CORE RECORD

Core #1: 4588-4640 cut 52', recovered 47.5(4587-4639 adjusted to logs)

<u>Feet</u>	<u>Depth</u>	<u>Description</u>
1.0	4588-89	ss, lt gy, v-f-f-g, SR, sl/arkosic, hd, tite, w/40% dk gy sh lamin: <u>N-S</u>
1.0	4589-90	ss, lt gy, f-g, SA-SR, sl/arkosic, v/sl calc, porous, <u>N-S</u>
1.0	4590-91	ss, as above, v/frac, <u>N-S</u>
1.0	4591-92	ss, med gy, f-g, SA-SR, sl/arkosic, intstl clay, shy, sl/por, <u>N-S</u>
1.0	4592-93	ss, lt gy, v-f-f-g, SR, sl/arkosic, intstl clay por, <u>N-S</u> : Tr carb inclus
2.5	4593-95.5	sh, dk gy, carb
3.5	4595.5-99	ss, lt gy, v-f-f-g, intstl clay, as above, w/hairline carb lamin, <u>N-S</u>
.5	4599-99.5	sh, dk gy, carb
4.5	4599.5-4604	ss, lt gy, v-f-f-g, SR, sl/arkosic, por, v/sl calc, <u>N-S</u>
8.5	4604-12.5	ss, lt gy, f-g, as above, carb inclus, <u>N-S</u>
2.5	4612.5-15	sh, dk gy, carb, w/tite ss blebs, <u>N-S</u>
4.5	4615-19.5	ss, buff, f-m-g, domin f-g, SA-SR, sl/arkosic, por, sl/calc, lt stn, no fluor, no odor
2.5	4619.5-22	sh, dk gy, carb
1.5	4622-23.5	ss, lt gy, v-f-f-g, SR, sl/arkosic, intstl clay, sl/porous, random carb lamin & inclus, <u>N-S</u>
1.5	4623.5-25	ss, lt gy, v-f-f-g, as above, hd, tite, w/hairline sh lamin, <u>N-S</u>
7.5	4625-32.5	ss, as above, calc, <u>N-S</u>
<u>3.0</u>	4632.5-35.5	sh, dk gy, carb
47.5		



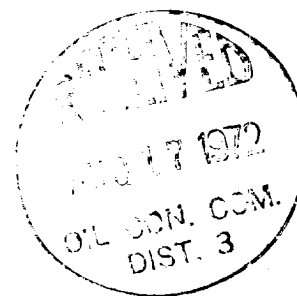


# CORING TIME

4580-90 9-20  
 4590-4600 29-13- 9- 7-13-13- 8- 5- 4- 8  
 4600-10 5- 5-10-14-14-10- 7- 7- 7- 9  
 4610-20 8- 9-11-14-21-24-20-10-11-11  
 4620-30 12- 9-14- 6- 5- 6- 8- 7-13-11  
 4630-40 17- 9- 6-10-11-15-16-18-15-24

# CORE ANALYSIS

<u>Depth</u>	<u>K</u>	<u>φ</u>	<u>Os</u>	<u>Ws</u>
4588-89	0.23	10.5	4.8	73.2
90	3.5	13.9	0.0	62.5
91	0.23	7.6	0.0	42.1
4592-93	0.21	16.7	0.0	76.6
4596-97	0.16	17.2	1.2	76.7
98	0.33	15.8	1.3	67.7
99	0.73	15.7	0.0	67.5
4600	2.1	15.8	0.0	69.0
01	5.0	12.7	0.0	89.0
02	8.4	16.3	0.0	84.6
03	2.1	16.8	0.0	67.2
04	1.2	14.0	0.0	65.6
05	0.18	10.3	0.0	71.8
06	15.0	20.7	1.0	84.0
07	26.0	20.7	1.0	80.6
08	33.0	22.7	0.0	75.3
09	31.0	20.7	0.0	85.9
10	24.0	19.9	0.0	85.9
11	9.2	18.0	0.0	86.2
12	15.0	19.4	0.0	84.0
13	10.0	17.1	0.0	90.6
14	3.7	10.0	7.0	71.0
15	1.6	11.3	1.8	69.0
16	11.0	16.8	0.0	79.1
17	42.0	19.0	0.0	77.9
18	43.0	17.4	0.0	82.1
19	27.0	17.5	0.0	86.2
20	5.3	13.0	0.0	67.6
4622-23	0.65	19.3	0.0	67.9
24	0.73	16.7	0.0	72.4
25	0.12	13.3	1.5	75.1
26	1.2	11.1	0.0	62.1
27	0.83	11.4	0.0	68.4
4629-30	0.01	6.5	0.0	72.2



DRILLSTEM TEST RECORD

SP DST #1: 4602-22 (Dakota "D")

Open 15 minutes: strong blow air  
Shut In 30 minutes:  
Open 60 minutes: strong blow thru out

Recovered: 1571' water  
Rw 2.15 @ 65°F  
Chlorides 4000 ppm

Bottom Hole Sampler: 2200 cc 95 psi  
Temp 145°F

Initial hydrostatic pressure	2555 psi
Final hydrostatic pressure	2546 psi
Initial flow pressure (1)	77 psi
Final flow pressure (1)	310 psi
Initial flow pressure (2)	362 psi
Final flow pressure (2)	722 psi
Initial shut in pressure	1903 psi
Final shut in pressure	1877 psi

Bottom Hole Temperature - 145°F



## SUMMATION

This well was spudded January 21, 1972, and plugged and abandoned January 30, 1972. The well was drilled to a total depth of 4702' Logger: 4707' Driller in the Dakota formation of Cretaceous age. A total of 100 1/2 rotating hours were required for the drilling of this test.

All formations from 4200' to 4707' (Driller TD) were evaluated by (1) careful examination of rotary cuttings by a geologist in the field; (2) the entire stratigraphic section was evaluated by quantitative and qualitative analysis of the electrical surveys. A core was cut in the Dakota "D" zone 4588'-4640'. No show of hydrocarbons was noted during examination of the core. A drillstem test was run 4602-22' in the Dakota "D" zone. Recovery was 1571' of water. The pressures and detailed drillstem test data are recorded in the text of the report. The other prospective zones in the well calculated water or high clay content from the electrical surveys.

The well ran structurally 6' higher than the Anderson Oil Company: El Norte #2, located in Section 17, Township 21 North, Range 8 West, San Juan County, New Mexico, on top of the Dakota "D" zone.

Rotary samples were saved from 120' to total depth and shipped to the Four Corners Sample Cut in Farmington, New Mexico. The core was analyzed by Core Lab and a preliminary report is included in the text of the report. A Dual Induction-Laterolog and Formation Density Log were run from surface to total depth. A Neutron Log and Sonic Log were run over selected intervals.

*Dave M. Thomas, Jr.*

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CPG 914

