

RECEIVED

NOV 2 1959

Sample Description

Alex N. Campbell
Rudman Gov't No. 1

U. S. GEOLOGICAL SURVEY
FARMINGTON, NEW MEXICO

4100-4110	95% SHALE, dark gray, silty to clayey, soft, waxy. 5% SANDSTONE, light gray, glassy, fine to medium grained, argillaceous, soft. No shows. Trace of COAL.
4110-4120	40% COAL 60% SHALE, as above.
4120-4150	5% SANDSTONE, lt. gray, fine grained, argillaceous, soft, tight. 95% SHALE, light to dark gray, soft, waxy, clayey. Trace of COAL
4150-4160	10% SANDSTONE, as above. 25% COAL 65% SHALE, as above.
4160-4170	50% COAL 50% SHALE, as above.
4170-4180	10% SANDSTONE, light gray, fine to very fine grained, silty, argillaceous, soft, tight. 10% COAL 80% SHALE, as above.
4180-4190	30% SANDSTONE, light gray, fine to medium grained, glauconitic, argillaceous. No shows. 70% SHALE, gray, clayey, soft.
4190-4200	40% SANDSTONE, as above 10% COAL 50% SHALE, as above.
4200-4230	60% SANDSTONE, as above. Abundant bent. 40% SHALE, as above.
4230-4250	100% SANDSTONE, light gray, "salt and pepper", glauconitic, fine to medium grained grading from argillaceous and tight to fairly clean and porous. No shows.
4250-4260	60% SANDSTONE, as above. 40% SHALE, gray, clayey, soft.
4260-4270	100% SHALE
4270-4280	60% SANDSTONE, light gray, fine to med. grain, salt & pepper, fairly clean, porous. Approx. 50% good fluor & cut. 40% SHALE, as above.
4280-4290	100% SANDSTONE, as above. 5% fluorescent.



Harrell Budd

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

4290-4300	60% SANDSTONE, light gray, fine to med. grained, argill., bent., tight, soft. Trace of fluorescence.
	40% SHALE, gray, clayey.
4300-4350	100% SANDSTONE, as above
4350-4400	100% SANDSTONE, as above.
4400-4410	75% SANDSTONE, light gray, glauconitic, salt & pepper, argillaceous, dense, tight.
	25% SHALE, gray, silty to clayey.
4410-4420	100% SANDSTONE, as above
4420-4430	40% SANDSTONE, dark gray, silty, dense, tight.
	60% SHALE, as above.
4430-4440	80% SANDSTONE, as above.
	20% SHALE, as above.
4440-4450	50% SANDSTONE, as above.
	50% SHALE, as above.
4450-4460	25% SANDSTONE, as above
	75% SHALE, as above.
4460-4480	40% SANDSTONE, light gray, fine to very fine grained, silty, argillaceous, tight. No shows.
	60% SHALE, light to dark gray, silty to clayey.
4480-4500	20% SANDSTONE, as above.
	80% SHALE, as above.
4500-4510	25% SILTSTONE, light gray, sandy, argill., dense, tight.
	75% SHALE, dark gray, splintery, slightly carb.
4510-4520	35% SILTSTONE, as above.
	65% SHALE, as above
4520-4530	15% SANDSTONE, light gray, fine to medium grained, silty, argill., tight. No shows.
	25% SILTSTONE, gray, sandy, argillaceous, dense, tight.
	65% SHALE, as above.
4530-4540	35% SILTSTONE, as above.
	65% SHALE, as above.
4540-4560	10% SILTSTONE, as above.
	90% SHALE
4560-4600	100% SHALE, gray to dark gray, hard silty to soft clayey, slightly carbonaceous.
4600-4700	100% SHALE, light gray, silty and hard to dark gray, carbonaceous.
4700-4800	100% SHALE, as above.
4800-4900	100% SHALE, dark gray to black, slight clayey, slightly carbonaceous.
4900-5000	100% SHALE, as above.
5000-5100	100% SHALE, as above.
5100-5200	100% SHALE, light gray, silty, dark gray to black, carbonaceous
5200-5300	100% SHALE, dark gray to black, silty to carbonaceous.
5300-5340	100% SHALE, light gray, silty to dark gray, carbonaceous.



5340-5360	5% SILTSTONE, light gray, shaly, dense, tight w/shale laminations. 95% SHALE, gray silty to carbonaceous.
5360-5390	100% SHALE, gray to black, silty to carbonaceous. Trace of SILTSTONE.
5390-5400	10% SILTSTONE, light gray to light tan, sandy, shaly, laminated, dense, tight, slightly carbonaceous.
5400-5410	90% SHALE, gray to black, silty to carbonaceous. 20% SILTSTONE, tan, shaly, dense, tight, with faint oil stain and dull yellow fluorescence.
5410-5430	10% SILTSTONE, as above. 90% SHALE, as above.
5430-5440	5% SILTSTONE, as above 95% SHALE, as above.
5440-5450	15% SILTSTONE, as above (in laminations in shale) 85% SHALE, as above.
5450-5470	10% SILTSTONE, light gray to light tan, sandy, shaly, laminated, dense, tight with dull yellow fluorescence and very faint cut. 90% SHALE, dark gray to black, silty to carbonaceous.
5470-5480	5% SILTSTONE, as above. 95% SHALE, as above.
5480-5490	10% SILTSTONE, as above. 90% SHALE, as above.
5490-5500	15% SILTSTONE, as above 85% SHALE, as above.
5500-5510	10% SILTSTONE, tan-gray, laminated, shaly, dense, tight, hard. Dull yellow fluor., very faint cut. 90% SHALE, gray to black, silty to carbonaceous.
5510-5530	5% SILTSTONE, as above. 95% SHALE, as above.
5530-5565	TR SILTSTONE, as above. 100% SHALE, as above. Abundant bentonite.
5565-5580	100% SHALE, gray silty to black, carb. Trace SILTSTONE.
5580-5610	100% SHALE, as above w/traces of white, silty SANDSTONE.
5610-5630	100% SHALE, gray to black, silty to carbonaceous, abundant bentonite, traces of white, glauconitic, fine grained, argillaceous sandstone.
5630-5660	100% SHALE, as above w/traces of SANDSTONE.
5660-5800	100% SHALE, light gray to black, some silty, some clayey and bentonitic, some carbonaceous.
5800-5850	100% SHALE, light to dark gray, silty to carbonaceous. Abundant fluorescent bentonite.
5850-5900	95% SHALE, as above. No bentonite. 5% LIMESTONE, tan, earthy, argillaceous.
5900-5920	10% LIMESTONE, tan to light gray, xlyn, dense, tight. 90% SHALE, gray to black, silty to carbonaceous.
5920-6010	100% SHALE, as above.
6010-6100	100% SHALE, black, splintery, brittle, carbonaceous. Trace of light gray, fluorescent bentonite.

6100-6120 5% SANDSTONE, white-light gray, fine grained, dense, tight, calc.
 95% SHALE, black, carbonaceous.
 6120-6150 100% SHALE, as above w/traces of light gray, fluorescent bentonite.
 6150-6200 5% LIMESTONE, mottled, dark brown, dense, argillaceous, tight.
 95% SHALE, as above.
 6200-6220 100% SHALE, black, splintery, carbonaceous with traces of fluorescent bentonite.
 6220-6230 100% SHALE, as above with abundant fluorescent bentonite.
 6230-6275 100% SHALE, black, carbonaceous.
 6275-6285 100% SHALE, as above. Trace tan xlyn LIMESTONE.
 6285-6305 100% SHALE, black, carbonaceous, w/abundant bentonite.
 6305-6310 75% SHALE, as above.
 25% SANDSTONE, white, f. to medium grained, clean, porous, no et or fluor.

6310 = 6315 Depth Correction

Core #1	6315-6348	Recovered 33'
Core #2	6348-6385	Recovered 29'

6385-6390 100% SHALE, black, carbonaceous.
 6390-6395 25% SANDSTONE, light gray, fine to med. grained, fairly clean, glassy, fair porosity. No shows.
 75% SHALE, black carbonaceous.
 6395- Circulating sample
 40% SANDSTONE, as above.
 About 10% fluorescent.
 60% SHALE, as above.

Core #3	6396-6417	Recovered 12.4'
Core #4	6417-6470	Recovered 53'
Core #5	6470-6495	Recovered 24.2'

6495-6500 25% SANDSTONE, white, coarse grained, glassy, clean, porous, hard, dense.
 75% SHALE, black, carb.
 6500-6520 10% SANDSTONE, as above.
 90% SHALE, as above.
 6520-6525 10% SHALE, green, hard, silicious.
 10% SANDSTONE, as above.
 80% SHALE, as above.
 6525-6528 20% SHALE, green.
 80% SHALE, black

TD 6528 in Morrison formation