Form 9-331
Dec. 1973

5 BLM 1 McHugh 1 File

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

RECEIVED
JUL 23 1984
OIL CON. DIV.
DIST. 3

1. oil well [X] gas well [ ] other

2. NAME OF OPERATOR
Jerome P. McHugh

3. ADDRESS OF OPERATOR
P O Box 208, Farmington, NM 87499

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 980' FSL - 1730' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

5. LEASE
NM 23039

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Full Sail

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Gavilan Mancos

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 29 T25N R2W, NMPM

12. COUNTY OR PARISH
Rio Arriba

13. STATE
NM

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)
7107' GL; 7119' RKB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	[ ]	[ ]
FRACTURE TREAT	[ ]	[ ]
SHOOT OR ACIDIZE	[ ]	[ ]
REPAIR WELL	[ ]	[ ]
PULL OR ALTER CASING	[ ]	[ ]
MULTIPLE COMPLETE	[ ]	[ ]
CHANGE ZONES	[ ]	[ ]
ABANDON*	[ ]	[ ]

RECEIVED
JUL 19 1984
BUREAU OF LAND MANAGEMENT
FARMINGTON RESOURCE AREA

(NOTE: Report results of multiple complet on or zone change on Form 9-330.)

(other) Response to BLM letter of 7-5-84 - Ref. #3100(016) - requesting verification of cement top behind 5½" casing.

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

As indicated on the completion report a total of 2737 cf of cement slurry was utilized to cement the 5½" casing at 8130' in 3 stages, representing an overall 50% excess from surface to TD. The 3rd stage DV tool was placed at 3514' (92' below the Lewis top and 444' below the top of the Ojo Alamo) and the 3rd stage cemented by the Western Co. with 10 bbl. mud flush followed by 500 sx 65/35 B-Poz w/ 12% gel & ¼# celloflakes/sk mixed at 11.8 lb./gal. to yield 2.22 cf/sk followed by 135 sacks of 50/50 B-Poz with 2% gel & ¼# celloflakes/sk mixed at 14.8lb./gal. to yield 1.28 cf/sk. Total slurry for 3rd stage was 1282.8 cf (1110 cf of 65/35/12 and 172.8 cf of 50/50/2). Full circulation existed during the entire job and the closing plug was bumped to 2500 psi with the displacement. Upon releasing the pressure the DV tool held with no back flow and the annulus remained static.

(Continued on attached sheet)

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED John Rue for JLJ TITLE Geologist DATE 7-18-84
Jim L. Jacobs

(This space for Federal or State office use)

ACCEPTED FOR RECORD

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

JUL 20 1984

NMOCC

FARMINGTON RESOURCE AREA

BY Smm

*See Instructions on Reverse Side

Summary of Hole Volume Requirements Utilized

Interval	Ft.	CF Vol.	Total Vol.	Ave. CF/ft.	% of Gauge Hole	Remarks
3514-3443'	71'	32	32	.451	178%	Estimated - 10-5/8" hole
3443-3100'	343'	140	172	.408	162%	From CDL caliper
3100-2760'	340'	170	342	.500	198%	From CDL caliper
2760-2406'	354'	120	462	.339	134%	From CDL caliper
2406-225'	2181'	770	1232	.353	140%	Estimated 9-3/4" hole
225-surface	225'	38	1270	.169	100%	8-5/8" - 36# x 5-1/2" annulus

From the above hole volume calculations, the top of the 50/50/2 cement is indicated to be at 3100' or 30' below the top of the Ojo Alamo. Also, the volume of 65/35/12 cement was calculated to circulate to surface. We had been successful in circulating cement on other wells in the area and were confident that cement would circulate or come very close to circulating as designed. The approved APD stipulated that cement was to cover the Ojo Alamo at approx. 2998'. Based upon our prior experience in the area, the close proximity of our 3rd stage DV tool to the top of the Ojo Alamo (within 444') and our confidence that our cement job was designed to circulate, a temperature log was not run to verify the cement top upon not circulating cement. As can be seen, we have a caliper log up to 2406' and the hole volume as measured between the DV tool at 3514' and 2406' was 462 cubic feet. The balance of our 1282.8 cf of slurry should have circulated approximately 12.8 cf of cement or approximately 2.28 bbl. of cement. Due to the fact that cement was not circulated, we reported an artibrary top of cement at ±1000' as being a very conservative number, but much more than adequate to cover the Ojo Alamo at 3070'. Should our cement top actually be as low as 1000', the hole volume between 2406' and 225' would have to average .584 cf/ft. (820.8/1406') or 231% of gauge. Summarized below is a tabulation of estimated cement tops assuming various hole volumes over the interval 2406 to 225':

Hole Size	Hole Vol. CF/ft.	% of Gauge	Calc. Cement Top-ft.	Remarks
9-3/4"	.353	140%	Surface	Design criteria used - 12.8 cf circulated
10"	.380	150%	246'	
9-5/8"	.340	135%	Surface	Circ. approx. 41.2 cf of cement - average hole volume 2406-2760'
10-1/2"	.436	173%	523'	Approx. average of calliper 2406-3514'
11"	.495	196%	748'	Very unlikely
11-1/2"	.556	220%	930'	Very unlikely
12"	.620	245%	1082'	Very unlikely

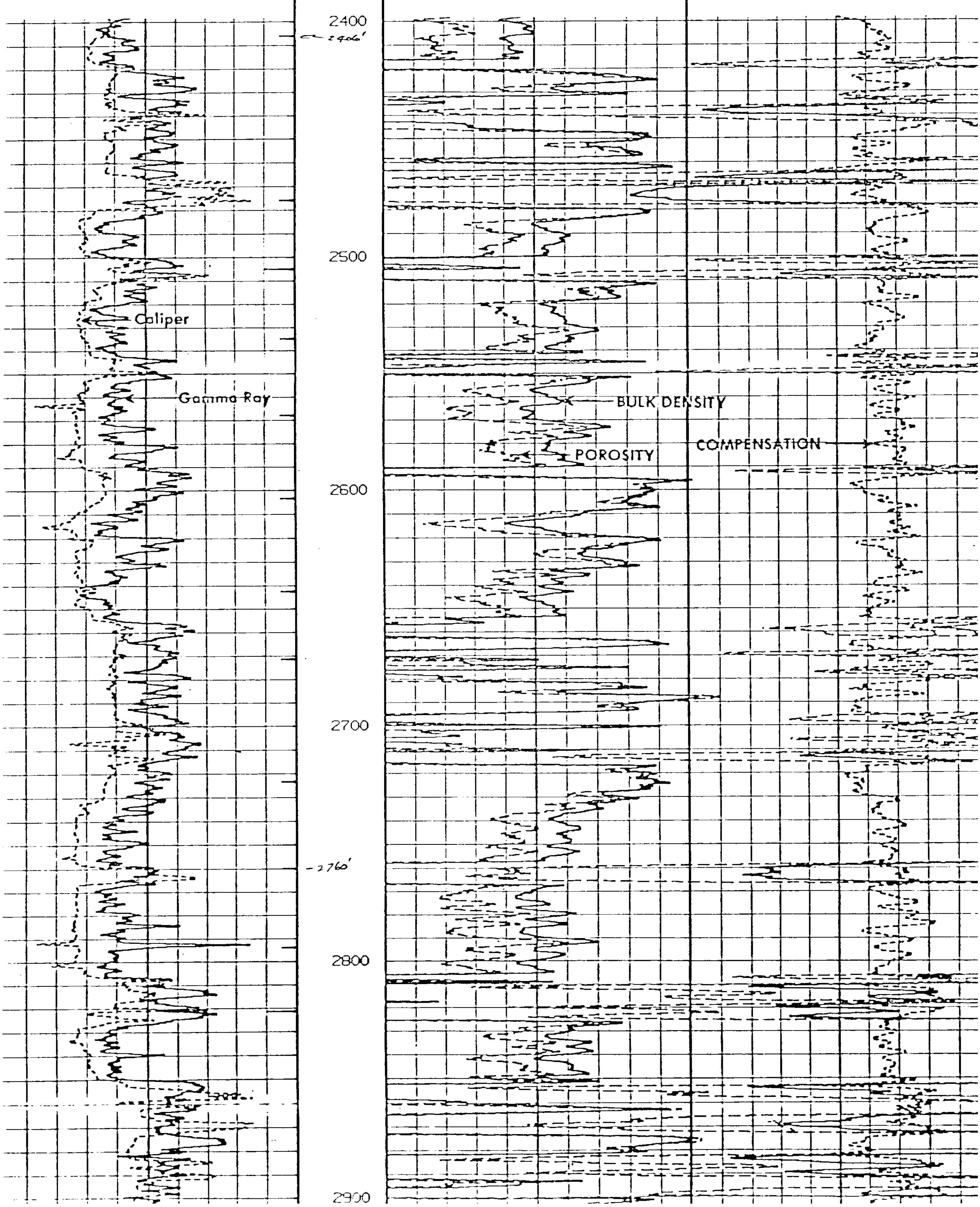
Considering that we had no hole problems while drilling, did not have any trouble getting our logging tools down, had no lost circulation while drilling, had full circulation while cementing all 3 stages and upon completing our 3rd stage, the hole did not go on a vacuum on the back side, we can say with a great deal of confidence that the top of our cement is at 1000' or higher and is very likely at approx. 250'.

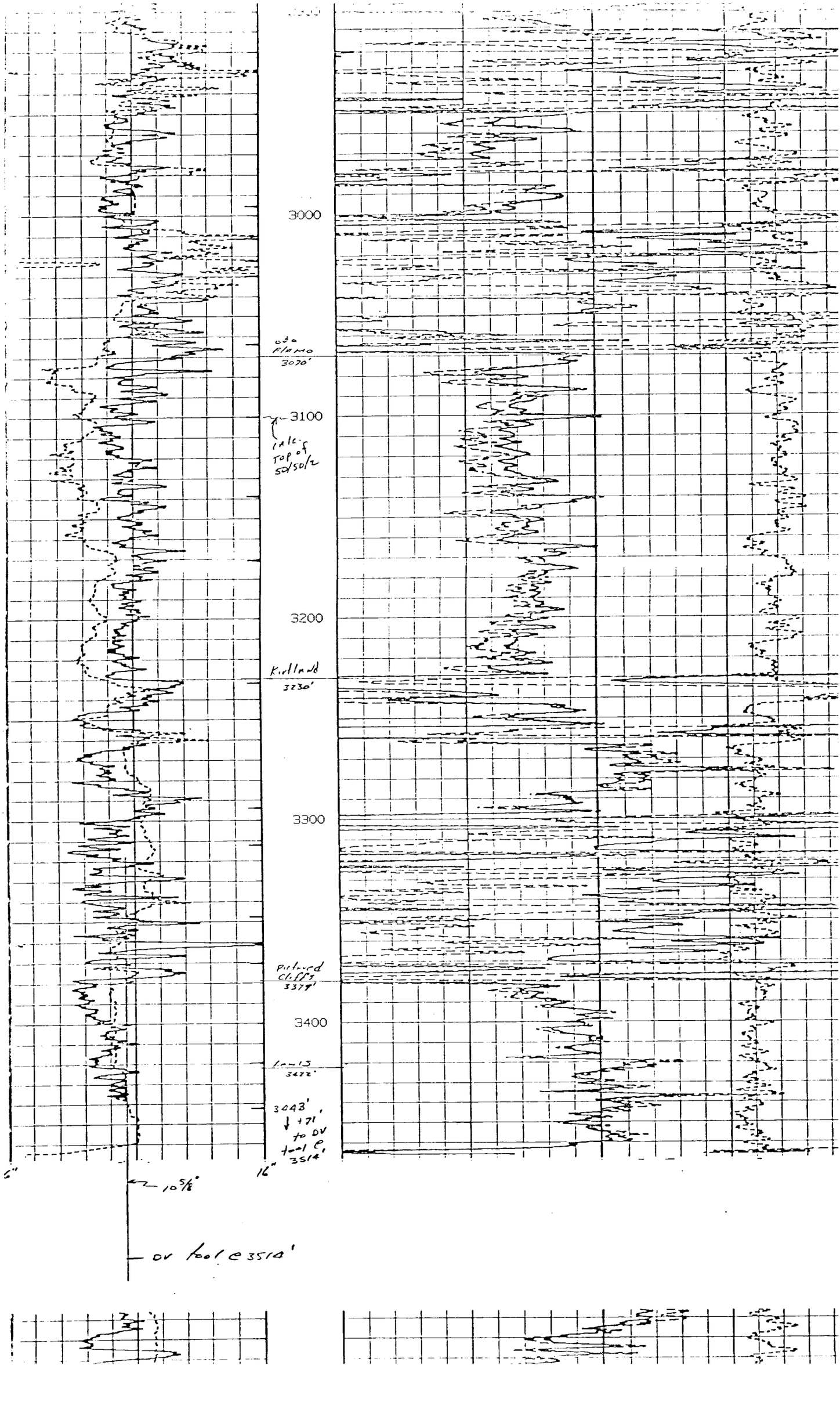
For reference, a Xerox copy of the 2" caliper log is attached. A full set of logs have previously been sent to BLM.

Jerome P. McHugh
Full Sail No 1

SW SE 29-25N-2W

0 GAMMA 200. API	2. BULK DENSITY 3. GM/CC
6 CALIPER 16. INCH	30. DENSITY POROSITY -10. % MATRIX=2.65 FLUID=1.
ANNULAR VOLUME CUBFT for 5½" casing	-0.25 CORRECTION 0.25 GM/CC




3000
Ojo Alamo 3070'
3100
TALC. Top of 50/50/2
3200
Kirtland 3230'
3300
Pictured Cliffs 3379'
3400
Lewis 3422'
3043', ↓ +71' to DV tool @ 3514'
6"
16"
10 5/8"
ov tool @ 3514'