

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT

1a. TYPE OF WELL:		OIL WELL ☐	GAS WELL ☒	DRY ☐	Other ☐		
b. TYPE OF COMPLETION:		NEW WELL ☒	WORK OVER ☐	DEEP-EN ☐	PLUG BACK ☐	DIFF. RESVR. ☐	Other ☐
2. NAME OF OPERATOR Energy Reserves Group, Inc.						5. LEASE DESIGNATION AND SERIAL NO. NM-03153	
3. ADDRESS OF OPERATOR P.O. Box 3280 - Casper, Wyoming 82602						6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At surface 1,520' FNL & 1,520' FWL (SE/NW) At top prod. interval reported below At total depth						UNIT AGREEMENT NAME	
14. PERMIT NO.						7. FARM OR LEASE NAME O.H. Randel	
15. DATE SPUDDED 2-14-81						8. WELL NO. #3-E-8	
16. DATE T.D. REACHED 2-22-81						9. FIELD AND POOL, OR WILDCAT Gallegos Gallup	
17. DATE COMPL. (Ready to prod.) 6-2-81						10. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 9-T26N-R11W	
18. ELEVATIONS (DF, REB, RT, GR, ETC.)* 6,338' G.L.; 6,351' K.B.						11. COUNTY OR PARISH San Juan	
19. ELEV. CASINGHEAD						12. STATE New Mexico	
20. TOTAL DEPTH, MD & TVD 6,350'		21. PLUG, BACK T.D., MD & TVD 6,305'		22. IF MULTIPLE COMPL., HOW MANY* NA		23. INTERVALS DRILLED BY ROTARY TOOLS 0-TD	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 5,421'-5,589' Gallup						25. WAS DIRECTIONAL SURVEY MADE NO	
26. TYPE ELECTRIC AND OTHER LOGS RUN Dual Induction, Formation Density - Corp. Neutron						27. WAS WELL CORED NO	
29. CASING RECORD (Report all strings set in well)						AMOUNT PULLED	
CASING SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE	
8-5/8" O.D.		24#		914'		12-1/4"	
4-1/2" O.D.		10.5#		6,348'		7-7/8"	
CEMENTING RECORD		600 sx "B" w/2% CaCl ₂ & 1/4# Flocele/sx See Back of Page					
29. LINER RECORD		30. TUBING RECORD					
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*	
				None			
31. PERFORATION RECORD (Interval, size and number) 5,421'-23', 5,434'-36', 5,549'-50', 5,553'-54', 5,583' 84', 5,587'-89' w/1 .JSPF (15 perfs)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.		AMOUNT AND KIND OF MATERIAL USED			
		DEPTH INTERVAL (MD)		BD w/500 gal 7-1/2% Acid & 23 ball sealers.			
		5,421'-5,589'		Frac'd w/32,000 gal 70% Quality Foamed oil w/52,500# 20-40 sand.			
33.* PRODUCTION						WELL STATUS (Producing or shut-in) Producing	
DATE FIRST PRODUCTION 6-2-81		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Pumping				GAS-OIL RATIO 1700	
DATE OF TEST 6-2-81		HOURS TESTED 24		CHOKE SIZE -----		OIL—BBL. 10	
FLOW. TUBING PRESS.		CASING PRESSURE		CALCULATED 24-HOUR RATE -----		GAS—MCF. 17	
						WATER—BBL. 0	
						OIL GRAVITY-API (CORR.) 39.0	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) VENTED DURING TEST						TEST WITNESSED BY T.C. DURHAM	
35. LIST OF ATTACHMENTS SAMPLE DESCRIPTION							
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records							
SIGNED P. Wagner		TITLE Production Engineer-RMD				DATE 6-23-81	

*(See Instructions and Spaces for Additional Data on Reverse Side)

NMOCC

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formations and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	38. GEOLOGIC MARKERS		
				NAME	MEAS. DEPTH	TRUE VERT. DEPTH
			Sample Description Attached Cont'd from other page: 4-1/2" csg. cemented 1st stage w/175 sx 50-50 Pozmix w/2% Gel & 1/4# Flocele /sk. Then 200 sx "B" w/10% Salt & 1/4# Flocele/sk. Cemented 2nd stage w/450 sx HOWCO Lite & 10# Gilsonite /sk. Then 615 sx 50-50 Pozmix w/2% Gel & 12-1/2# Gilsonite/sk. Squeezed DV Tool @ 4,609' w/75 sx "B" w/ additives.	LOG TOPS Ojo Alamo Kirtland Fruitland Pictured Cliffs Lewis Mesa Verde Menefee Point Lookout Mancos Gallup Gallup Base Sanostee Greenhorn Graneros Dakota Dakota Pay Base Pay T.D. Logger T.D. Driller	650' 850' 1,475' 1,716' 2,032' 2,582' 3,305' 4,158' 4,520' 5,279' 5,592' 5,748' 6,103' 6,180' 6,234' 6,270' 6,318' 6,353' 6,350'	

1050-60 90% Sh: AA w/minor carb incls
10% Clyst: AA

60-70 20% Ss: wht, lt. gry, f-m-g, sbrnd, sme clyflld, sme
loose, pyritic incls, ark, friable, sl. por, N-S
80% Sh: lt. gry, blk, pyritic incls and ctngs, most
cherty, sme slty, sme wxy, firm-soft
Trace Pyrite

70-80 100% Sh: AA
Trace Chert: AA
Trace Calcite: Clr, v-cvs-xln, sbang, loose

1080-90 100% Sh: AA
Trace Ss: Clr, yel, sbrnd, all loose, N-S

90-1100 AA

1100-10 10% Ss: Wht, m-g, sbrnd, v-clyffld, w/srtd, ark, friable,
poss. sl. por, N-S
80% Sh: AA
10% Clyst: brn, blk, chert incls, v. soft, swelling

10-20 10% Ss: AA w/mafic incls.
90% Sh: lt. gry, grn-gry, blk, sme wxy, pyritic incls,
v. sl. carb, sme cherty, sme slty, sme hard, most
soft

20-30 20% Ss: AA, also glauc and calc
80% Sh: AA
Trace Chert: yel, AA

30-40 10% Ss: AA
90% Sh: AA, also sme brn, carb lams
Trace Chert

40-50 30% Ss: lt. gry, grn, f-m-g, sbrnd-sbang, clyflld, calc,
ark, carb, clauc, friable, sl. por, N-S
70% Sh: AA, sme cly incls.

1050-60 10% Ss: AA
90% Sh: grn, lt. gry, brn, blk, carb, most bent and
cherty, sme wxy, firm
Trace Coal: blk, vit, blk, hard

1160-70 10% Ss: AA
90% Sh: AA, sme pyritic ctngs
Trace Coal: AA



70-80 90% Sh: grn, gry, brn, blk, sme slty, carb, sme swelling,
bent, cherty, sl. soft
10% Coal: blk, vit, blk, cly incls.

80-90 100% Sh: AA
Trace Coal: AA

90-1200 10% Ss: wht, clr, f-m g, sl. clyfl, carb, ark, calc,
cly incls. friable, sl. por, N-S
90% Sh: AA

1200-10 100% Sh: Dk. gry, lt. gry, brn, blk, sme slty, carb
firm
Trace Ss: AA
Trace Coal: AA

10-20 100% Sh: AA

20-30 100% Sh: AA, also sme plty, sme sl swelling

30-40 10% Ss: AA
90% Sh: AA
Trace Coal
Trace Calcite

40-50 10% Ss: Clr, wht, m-g, sbrnd, sl. clyflld, calc, carb,
friable, good por., N-S
90% Sh: grn, gry, brn, blk-plty, sme slty, sme cherty
and bent, most firm, sme hard

1250-60 10% Ss: wht, brn, f-m g, sbrnd, clyflld to sl. clyflld,
glauc, carb, most friable, sme hard, sl. pale gold
fluor. w/ v. wk. cut
90% Sh: AA
Trace Pyrite

60-70 70% Ss: Wht, m-crs-g, sbrnd, most clyflld, sme cl. cln.
pyritic incls, v. calc, v. sl. ark, hard, sl. por.,
N-S
30% Sh: AA

70-80 10% Ss: AA
80% Sh: lt. gry, dk gry, blk-plty, sl. carb, soft
10% Calcite: clr, wht, v-crs-xln, sbang, twinned, trans-
lucent, loose

80-90 100% Sh: AA
Trace Ss: AA
Many Inoceramus Frags

90-1300 90% Sh: AA, sme sndy
10% Calcite: AA
Trace Inoceramus Frags

1300-10 90% Sh: AA, w/sme pyrite ctngs
10% Calcite: AA
Trace Ss: AA

10-20 30% Ss: Wht, lt. gry, lt. brn, f-m-g, sbrnd, most v.
clyflld, carb, sl. ark, friable, poss sl. por.,
N-S
70% Sh: AA
Trace Coal: blk, vit, blk, hard

1320-30 40% Ss: AA
60% Sh: lt. gry, dk. gry, blk, firm
Trace Calcite: AA

30-40 30% Ss: wht, lt. gry, f-m g, sbrnd, sl. clyflld to v.
clyflld and shly, pyritic ctngs, sl. clauc, sl.
carb, sme calc, soft, tite, sme sl. por, N-S
70% Sh: AA
Trace Calcite: AA
Trace Coal: AA

40-50 30% Ss: AA, pale gld fluor w/vy. wk cut
60% Sh: AA
10% Calcite: AA
Trace Coal: AA

1350-60 10% Ss: wht, m g, sbrnd, sl. clyflld, sl. carb, friable,
calc, sl. por, N-S
90% Sh: lt. gry, lt. brn, pyritic incls, blk, sme sndy,
soft

60-70 20% Ss: AA, but sme clean, N-S
80% Sh: AA

70-80 20% Ss: AA N-S
80% Sh: AA
Trace Pyrite

80-90 40% Ss: Wht, m-g, sbrnd, v. clyflld, v. sl. carb, v.
calc, soft, tite, N-S
60% Sh: AA w/sme grn, cherty, bent

1390-1400 20% Ss: AA N-S
80% Sh: AA

1400-10 AA N-S

- 10-20 30% Ss: Wht, vf-m g, sbrnd, v. sl. clyflld to v. clyflld, ark, calc, sl. carb, soft, poss. sl. por., N-S
70% Sh: lt. -dk-gry, brn, blk-pty, carb incls. and lams, sme slty, soft
- 20-30 30% Ss: AA N-S
60% Sh: AA, sme sl. swlng
10% Clyst: buff, blk, v. soft, swlng
Trace Calcite: AA
Trace Inoceramus Frags
- 30-40 20% Ss: wht, m g, v. clyflld, most soft, sme firm, tite, N-S
80% Sh: AA, also dk brn, sme vy slty, sme wxy
- 40-50 10% Ss: AA, sme shly N-S
90% Sh: AA
- 1450-1580 No Samples
- 1580-90 10% Ss: syt, m g, sbrnd, v. clyflld, sl. clauc, carb, v. soft, tite, N-S
70% Sh: lt. gry, dk. gry, dk. brn, blk, cly incls, sme wxy, firm
20% Coal: blk, blk, most vit., sme earthy, sme cly incls, most hard
- 90-1600 VPS 10% Ss: AA
90% Sh: AA, sme sndy
- 1600-10 20% Ss: Clr, wht, vf-m g, sbrnd, -sbang, sl. to vy. clyflld, calc, carb, sl. ark, soft, poss. sl. por., N-S
50% Sh: lt-dk-gry, dk brn, pty, carb incls and laminations, sme sl. swlng, soft
20% Clyst: lt. gry, buff, pty, carb, v. soft, swlng
10% Coal: blk, vit, blk, sme cly incls.
- 10-20 60% Ss: AA, v. calc
40% Sh: AA
Trace Calcite: AA
- 20-30 40% Ss: AA, vy. clyflld to shly, N-S
50% Sh: AA
10% Coal: AA
- 30-40 20% Ss: wht, clr, m-crs-g, sbrnd, vy clyflld to sl. clean, carb, calc, friable, good por. N-S
50% Sh: AA
30% Coal: blk, vit, blk, hard

60-70 50% Ss: AA
40% Sh: AA
10% Calcite: clr, brn, wht, v-crs-xln, AA

70-80 60% Ss: AA
40% Sh: AA, sme grn and bent

1880-90 50% Ss: AA
30% Sh: AA
20% Clyst: wht, blk, wxy, v. soft

90-1900 40% Ss: lt. gry, f-m-g, sbrnd, clyflld, clauc, carb,
calc, ~~akn~~ soft, tite, N-S
60% Sh: AA
Trace Clyst: AA

1900-3200 No Sample

3200-10 80% Sh: gry, brn, wht, carb, plty, sme sl. slty, metallic
incls, v. soft, sme swelling
10% Coal: blk, vit, blk, hard
10% Calcite: Wht, v-crs-xln, sbang, loose

10-20 60% Sh: AA
20% Clyst: wht, plty, v. soft
10% Coal: AA
10% Calcite

20-30 AA
Trace Pyrite

30-40 AA (but no pyrite)

40-50 70% Sh: AA
20% Clyst: AA
10% Calcite: AA
Trace Coal

3250-60 90% Sh: brn, lt. gry, plty, carb, cly incls, cme sl.
slty, soft
10% Clyst: wht, buff, AA
Trace Coal

3260-70 80% Sh: AA
10% Clyst: AA
10% Calcite: AA
Trace Coal: AA

70-80 60% Sh: AA
20% Clyst: AA
10% Calcite: AA
10% Coal: AA
Trace SS: lt. gry, vf-g, sbrnd, vy clyflld, soft, tite, N-S

40-50 30% Ss: clr, wht, m-crs-g, sbrnd, vy to sl. clyflld,
 carb. sl. ark, calc, sl. glauc, most soft and tite,
 sme sl. por, N-S
 60% Sh: AA
 10% Clyst: AA
 Trace Coal: AA

1750-60 30% Ss: AA, sme pyritic ctngs
 60% Sh: lt-dk gry, brn, most plty, sme blkly, sme slty,
 carb, soft, sme wxy
 10% Clyst: AA

60-70 50% Ss: wht, clr, m-crs-g, sbrnd-sbang, clean to clyflld,
 v. calc, ark, carb, fri, sme good por, N-S
 50% Sh: lt-dk-gry, brn, plty, sl. carb, soft

70-80 AA
 Trace Pyrite

80-90 30% Ss: wht, m-g, sbrnd, most clyflld, sme sl clyflld,
 ark, v. calc, carb, soft, tite, N-S
 70% Sh: AA, sme slty

90-1800 30% Ss: AA, sme sl. shly
 70% Sh: AA

1800-10 60% Ss: wht, lt. gry, vf-m-g, sbrnd, clyflld, most loose,
 carb, ark, fri, good por, N-S
 40% Sh: dk gry, buff, grn, blkly-plty, carb, sme wxy,
 sme bent, firm

10-20 70% Ss: AA, w/a few pyritic inccls, pale yel fluor w/no cut
 30% Sh: AA

20-30 40% Ss: AA, sme sl. glauc
 50% Sh: AA
 10% clyst: AA

30-40 40% Ss: wht, lt. gry, f-m-g, sbrnd, most clyflld to
 vy clyflld, calc, few small loose grains, sl. carb,
 most hard, tite, N-S
 60% Sh: brn, lt. gry, blkly, carb, sme v. slty, v. soft

40-50 30% Ss: AA
 70% Sh: AA

1850-60 50% Ss: AA, but sme clean, sme sl. clyflld, sme sl.
 glauc, sl. por, N-S
 50% Sh: AA, but blkly-plty

80-90 AA

3290-3300 No Sample

3300-10 10% Ss: wht, m-g, sbrnd, sl. clyflld, sl. carb, hard,
sl. por., ark, v. calc, grn fluor w/wk-no cut
80% Sh: lt-dk gry-brn, plty, sme bent, sme chrty, sl.
carb, most soft
10% Calcite: wht, clr, v-crs-xln, translucent, loose

10-20 20% Ss: AA, N-S
50% Sh: AA, also buff
10% Clyst: wht, plty, carb, v. soft, swelling
10% Calcite: AA
10% Coal: blk, vit, blk, hard

3320-30 10% Ss: wht, clr, f-m-g, sbrnd, v. sl. to v. clyflld,
ark, calc, sme friable, sme soft and tite, poss.
sl. por., N-S
70% Sh: AA, sme w/cly incls.
10% Clyst: AA
10% Coal: AA
Trace Calcite

30-40 70% Sh: lt-dk gry, brn, plty, sl. carb, sme slty, sme
calc, soft
10% Clyst: AA, sme lt. grn
10% Calcite: AA
10% Coal: AA
Trace Ss: AA

40-50 80% Sh: AA
10% Clyst: AA
10% Calcite: AA
Trace Coal: AA

3350-60 70% Sh: AA, w/many cly incls.
10% Clyst: AA
10% Calcite: AA
10% Coal: AA

60-70 10% Ss: Wht, f-g, sbrnd, v. clyflld, ark, calc,
calc, soft, tite, N-S
70% Sh: AA
10% Clyst: wht, plty, carb, v. soft, swelling
10% Coal: AA, w/sme cly incls

3370-80 AA

- 3380-90 20% Ss: wht, vf-f-g, sbrnd, v. clyflld, sl. carb., soft, tite, N-S
80% Sh: brn, gry, plty, carb, cly inclcs, sme slty, sme calc, soft
- 3390-3400 10% Ss: AA
90% Sh: AA
- 3400-4100 No Samples
- 4100-10 30% Ss: Wht, m-g, sbrnd, v. sl. clyflld, sl. carb, calc, sme pyritic inclcs., most friable, sl. por, N-S
70% Sh: lt-dk gry, blk-y-plty, sme wxy, firm
Trace Coal: blk, earthy-vit, blk-y, brittle
- 10-20 40% Ss: AA, sme crs-g, v. sl. clyflld to clyflld, sme sl. glauc
40% Sh: AA
20% Clyst: buff, wht, blk-y, carb, firm, calc
- 20-30 40% Ss: AA
50% Sh: AA w/sme pyrite ctngs
10% Clyst: wht, plty, carb, soft, swelling
- 30-40 30% Ss: Wht, f-m-g, sbang to sbrnd, v. clyflld to sme only sl. clyflld, v. calc, friable, sme sl. por., N-S
40% Sh: lt gry-lt. brn, blk-y, sme slty, sme swing, soft
20% Clyst: buff, brn, wht, blk-y-plty, v. carb, v. soft, sswling
10% Coal: blk, vit, blk-y
- 40-50 20% Ss: AA, also ark, mafic inclcs
60% Sh: AA
20% Clyst: AA
Trace Coal: AA w/sme cly inclcs.
- 4150-60 20% Ss: AA, sme sl glauc
60% Sh: brn, lt.-dk gry, blk-y, plty, sme slty, carb, most firm
20% Coal: AA
- 4160-70 20% Ss: wht, m0g, sbrnd, v. clyflld to clean, sl. carb, clauc, sme good por, lt. yel. fluor. w/strong yellow cut
70% Sh: AA
10% Clyst: AA
Trace Coal :AA
- 70-80 20% Ss: wht, brn-yel, m-g, sl. clyflld to most clyflld, sl. carb, sme sl. por., lt. yel fluor w/ streaming yel. cut
80% Sh: brn, gry, v. plty, sme slty, carb, firm to sme soft
Trace Coal: blk, vit, blk-y, cly inclcs.

80-90 30% Ss: wht, buff, m-g, sbrnd, v. sl. clyflld to v. clyflld, sl. carb. sme sl. por, bright yel fluor w/streaming yel. cut
70% Sh: AA

90-4200 30% Ss: AA, pale yel fluor w/ wk. cut
70% Sh: AA

4200-10 30% Ss: wht, buff, brn (stained?), m-crs-g, sme sl. clean, sme clyflld, sbrnd, carb, ark, calc, glauc, friable, good por, yel fluor w/gd cut
70% Sh: lt-dk bry, brn, red-brn, grn, plty-blky, carb, sme slty, sme bent, soft
10% Coal: AA

10-20 40% Ss: AA, brght yel. fluor. w/strmg yel. cut
60% Sh: AA
Trace Coal

4220-30 20% Ss: Wht, buff, f-crs-g, sbrnd, sme sl. cln, sl. to v. clyflld, carb, blauc, sme friable, most firm, fair por, bright yel fluor w/strmg yel. cut

4230-40 AA, yel. fluor. w/ gd cut

4240-50 20% Ss: AA, w/most clyflld, yel fluor w/gd cut
80% Sh: AA

4250-60 20% Ss: wht, brn, f-m0g, sbrnd, f-srt, sme clean, sme mod. clyflld, vy sl carb, sl. ark, calc, firm-hard-sl friable, some w/fair porosity yel. fluor w/strmg yel. cut
60% Sh: lt gry-dk gry, brn, grn, plty, sl. carb, sme bent, firm-soft
10% Clyst: AA, sme swllng, not all
10% Coal: AA
Trace Chert

60-70 20% Ss: AA, but vf-m-g-, yel. fluor w/strmg yel. cut
80% Sh: AA
Trace Clyst: wht, plty-plky, v. soft, sme swllng

70-80 20% Ss: AA pale yel fluor w/gd cut
70% Sh: AA
10% Clyst: AA

80-90 10% Ss: wht, buff, m-g, wl. srted, clyflld to v. clyflld, hard, poss sl. por, pale yel. fluor. w/wk cut
90% Sh: AA
Trace Clyst: AA
Trace Coal: AA

90-4300 20% Ss: AA, but sme sl carb, v. sl. ark, sme rnded,
vy pale yel fluor w/gd cut
 70% Sh: AA
 10% Clyst: AA

4300-10 10% Ss: clr, wht, lt. gry, vf-m-g, sbrnd, v. sl. to
 mod. clyfll, sl. carb, hard, sme friable, poss.
 sl. poro, N-S
 60% Sh: lt gry-dk gry-grn, brn, carb, plty-blky, sme
 slty, soft
 20% Clyst: wht, buff, blky-plty, carb, soft, sme swing
 10% Coal: blk, vit, blky, cly incls, hard

10-20 10% Ss: AA v. pl. yel fluor w/vy wk cut
 50% Sh: AA, w/sme bent
 30% Clyst: AA
 10% Coal: AA

20-30 10% Ss: wht, brn, m-g, sbrnd, sl. to mod. clyfll, v.
 sl. glauc, sl. carb, sl. ark, calc, hard, poss.
 sl. por, v. pl. yel. fluor w/ vy. wk cut
 50% Sh: AA
 30% Clyst: AA
 10% Coal: AA, w/sme pyrite ctngs

30-40 AA, vy pl. yel. fluor w/vy wk cut
 Trace Calcite: wht, v-crs-xln, sbang, translucent, loose

4340-50 No Sample

4350-60 70% Sh: lt gry, dk. gry, brn, grn, plty-blky, carb,
 sme wxy, sme slty, firm, v.pl. gld fluor w/fair cut
 20% Clyst: wht, buff, carb, blky-plty, v. soft, sme
 swing
 10% Coal: AA
 Trace Ss: AA
 Trace Inoceramus Frags

4360-70 70% Sh: AA v.pl. yel. fluor w/fair cut
 20% Clyst: AA
 10% Coal: AA
 Trace Ss: AA

70-80 10% Ss: wht, clr, m-g, sbrnd, sl. to v. clyfll, carb,
 friable, sme sl. por. v.pl.yel. fluor. w/fair cut
 40% Sh: Lt-dk gry, grn, brn, plty, carb, sme slty, sme
 bent, sme cly incls, sme bent, soft-firm
 30% Clyst: AA
 20% Coal: AA

80-90 AA N-S
 Trace Calcite: AA

4390-4400 No Sample

4400-10 90% Sh: AA
 10% Clyst: AA
 Trace Coal: AA

10-20 10% Ss: wht, m-g, sbrnd to rnd, v. clyflld, soft, tite, N-S
 70% Sh: AA, w/sme rd-brn
 20% Clyst: AA
 Trace Coal: AA

20-30 AA
 Trace Calcite: AA

30-40 80% Sh: AA
 10% Clyst: AA
 10% Coal: AA
 Trace Ss: AA

5300-10 10% Ss: lt gry, wht, m-g, sbrnd-rnd, mod. clyflld, sme
glauc, soft, tite N-S

5310-20 100% Sh: AA
Trace Ss: AA
Trace Clyst: AA

5320-30 100% Sh: AA w/sme blkly

5330-40 20% Ss: lt. gry, f-g, sbrnd, sl. arkosic, mod clyflld, sl.
calc, soft tite, N-S
80% Sh: lt. gry, dk brwn, lt. grn, plty, sl.-mod slty, soft

5340-50 10% Ss: AA w/vy clyflld, vy soft, sl. calc, tite, N-S
90% Sh: AA
Trace Coal: blk, vitr, plty, firm

5350-60 100% Sh: AA
Trace Ss: AA w/vy calc. N-S

5360-70 100% Sh: AA w/mstly blkly

5370-80 100% Sh: brn, lt. grn, blkly, mstly sl. slty, firm

5380-90 100% sh: AA w/sme vy slty
Trace Coal: blk, vitr, sbrnd-blky, shly, soft

5390-5400 100% Sh: AA

5400-10 10% Ss: lt. gry-brn, vf-g, sbang-sbrnd, sl. ark, vy sft,
vy calc, N-S

5410-20 100% Sh: lt. grn, lt. brn, dk gry, plty, sme vy slty,
sme carb frags, soft
Trace Ss: AA, sl. calc N-S

5420-30 10% Ss: AA w/vy calc and firm
90% Sh: AA
Trace Clyst: wht, plty, vy sft

5430-40 100% Sh: AA
Trace Calc: wht, cs-xln, hard-brittle, vy calc (poss.
fract. fill)

5440-50 100% Sh: lt-dk grn, brn, blk, sl-mod slty, firm
Tract Calcite: AA

5450-60 90% Sh: dk grn, plty, sl. slty, firm
10% Clyst: wht, plty, soft, floats
Trace Ss: wht, m-g, sbrnd, glauc, vy clyflld, soft, N-S

5460-70 30% Ss: wht, cs-g, sbrnd-rnd, transp., wht, m-g, sbrnd,
 vy clyflld, soft, N-S
 70% Sh: dk brn, grn, gry, plty-blky, sl.-mod. slty soft
 Trace Coal: blk, dull, blky-sbang, shaly, soft

5470-80 80% Sh: AA
 20% Chert: wht, opaque, cs-xln, sbrnd-rnd, hard
 LCM

5480-90 100% Sh: AA
 LCM

5490-5500 UPS-LCM

5500-10 AA

5510-20 AA

5520-5700 LCM

6200-30 100% Sh: gry, firm, calc, sandy in part
6230-50 100% Ss: gry, fn-g, sbrnd, calc, clyfilled, ark, firm,
poss. sl. porus, trace yel. fluor w/wk cut
6250-6290 Trace Ss: AA
100% Sh: AA
6290-6310 20% Ss: gry, fr-m-g, sbrnd, mod. clyfill, firm, sl.
porous, yel fluor w/fair cut
80% Sh: gry, splintery, calc, firm
6310-50 10% Ss: AA, becoming less porous w/depth w/show AA
90% Sh: AA

TD 6350'