

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

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. I-149-IND-8470	
3. ADDRESS OF OPERATOR P.O. Box 3280 - Casper, Wyoming 82602						6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1,520' FNL & 1,400' FWL (SE/NW) At top prod. interval reported below At total depth						7. UNIT AGREEMENT NAME Gallegos Canyon Unit	
14. PERMIT NO. _____ DATE ISSUED _____ U. S. GEOLOGICAL SURVEY WASHINGTON, D. C.						8. FARM OR LEASE NAME Pinon Fruitland	
15. DATE SPUDDED 4-12-81						9. WELL NO. 319	
16. DATE T.D. REACHED 4-14-81						10. FIELD AND POOL, OR WILDCAT Sec. 30-T28N-R12W	
17. DATE COMPL. (Ready to produce) 8-13-81						11. SEC., T. R., M., OR BLOCK AND SURVEY OR AREA San Juan New Mexico	
18. ELEVATIONS (DE, RES, RT, GR, ETC.)* 5,776' KB (GR + 2')						12. COUNTY OR PARISH San Juan	
19. ELEV. CASINGHEAD -----						13. STATE New Mexico	
20. TOTAL DEPTH, MD & TVD 1,595' KB						21. PLUG, BACK T.D., MD & TVD 1,545' KB	
22. IF MULTIPLE COMPLEMENTS, HOW MANY* NA						23. INTERVALS DRILLED BY 0-TD	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP BOTTOM, NAME (MD AND TVD)* Fruitland - 1,162'-1,170'						25. WAS DIRECTIONAL SURVEY MADE NO	
26. TYPE ELECTRIC AND OTHER LOGS RUN Induction/Comp. Neutron-Form. Density						27. WAS WELL CORED NO	
28. CASING RECORD (Report all strings set in well)							
CASING SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE	
7" OD		17#		122' KB		9-7/8"	
4-1/2" OD		10.5#		1,585' KB		6-1/4"	
						CEMENTING RECORD	
						65 sx 'B' w/2% CaCl ₂ +	
						1/4# Flocele/sk	
						250 sx 50-50 Pozmix w/2%	
						Gel, 0.5% D-31 & 1/4# Flocele/sk	
29. LINER RECORD							
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*	
				None			
						SCREEN (MD)	
						2-3/8"	
						DEPTH SET (MD)	
						1,161' KB	
						PACKER SET (MD)	
						None	
30. TUBING RECORD							
31. PERFORATION RECORD (Interval, size and number) 1,162'-1,170' w/1 JSPF (9 perfs)							
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.							
DEPTH INTERVAL (MD)				AMOUNT AND KIND OF MATERIAL USED			
1,162'-1,170'				BD w/500 gals 7-1/2% MCA.			
				Frac'd w/25,000 gals 70% Quality			
				Foam w/34,000# 10-20 sand.			
33. PRODUCTION							
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in) SI	
DATE OF TEST 8-13-81		HOURS TESTED 24		CHOKE SIZE 3/8"		PROD'N. FOR TEST PERIOD →	
				OIL—BBL. NA		GAS—MCF. 89	
				WATER—BBL. 0		GAS-OIL RATIO NA	
FLOW. TUBING PRESS. SI 130 psi		CASING PRESSURE 24-HOUR RATE →		OIL—BBL. NA		GAS—MCF. 89	
				WATER—BBL. 0		OIL GRAVITY-API (CORR.) NA	
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 <u>R. Wagner</u>		TITLE <u>Production Engineer - RMD</u>				DATE <u>8-21-81</u>	

*(See Instructions and Spaces for Additional Data on Reverse Side) 5mm

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			38. GEOLOGIC MARKERS			
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TOP TRUE VERT. DEPTH
No DST's			Sample Description Attached	Log Tops		
				Ojo Alamo	Surface	
				Kirtland	235'	
				Fruitland	925'	
				Pictured Cliffs	1,442'	
				TD Logger	1,594'	
				TD Driller	1,595'	

SAMPLE DESCRIPTION

130-40 80% Ss: clear, wht, cs-g, sbrnd-sbang, loose, vy poros, NS
20% Chert: creme, lt. orange, vy dk brn, lt green, cs-xln,
ang, loose

140-50 70% Ss: AA
30% Chert: AA

150-60 60% Ss: clear, wht, cs-g, sbrnd-sbang, loose, vy poros, NS
40% Chert: creme, lt. orange, pink, grn, cs-xln, ang, loose
Trace Pyrite

160-70 70% Ss: AA
30% Chert: AA

170-80 60% Ss: AA
40% Chert: AA

180-90 60% Ss: clear, wht, cs-g, sbrnd-sbang, vy poros, NS
40% Chert: pink, orange, lt brn, grn, cs-xln, ang, loose

190-200 70% Ss: AA
30% Chert: AA

200-10 60% Ss: clear, wht, cs-g, sbrnd-sbang, loose, vy poros, NS
40% Chert: lt brn, lt red, lt orange, cs-xln, ang, loose
Trace Pyrite

210-20 50% Ss: AA
40% Chert: AA
10% Calcite: wht, transl, cs-xln, vy calc
Trace Pyrite

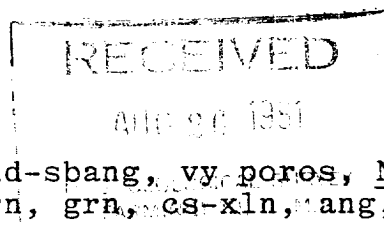
220-30 60% Ss: AA
40% Chert: AA
Trace Pyrite

230-40 70% Ss: AA
30% Chert: AA
Trace Calcite: AA

240-50 80% Ss: AA
20% Chert :AA
Trace Pyrite

250-60 30% Ss: AA
70% Chert: Clear, lt pink, lt orange, brn, red, cs-xln, ang,
loose
Trace Pyrite

260-70 20% Ss: AA
50% Chert: AA
30% Sh: grnsh gry, plty-blky, clyey, soft



270-80 20% Ss: AA
40% Chert: AA w/mstly lt pink
40% Sh: AA

280-90 40% Ss: AA
40% Chert: AA
20% Sh: AA w/sme brn

290-300 30% Ss: AA
40% Chert: AA
30% Sh: AA
Trace Pyrite

300-10 50% Ss: Clear, cs-g, sbrnd, loose, vy poros, NS
30% Sh: grnsh gry, brn, blk, clyey, vy soft
20% Chert: AA

310-20 20% Ss: AA
60% Sh: grnsh gry, gry, brn, blk, sm carb frags, soft,
vy sl. calc
20% Chert: creme, green, lt yellow, lt brn, cs-xln, ang, loose
Trace Calcite: wht, transl, cs-xln, sbrnd

320-30 30% Ss: clr, cs-fn-g, sbrnd, loose, vy poros, NS
50% Sh: AA
20% Chert: AA

230-40 20% Ss: AA
60% Sh: AA
20% Chert: AA

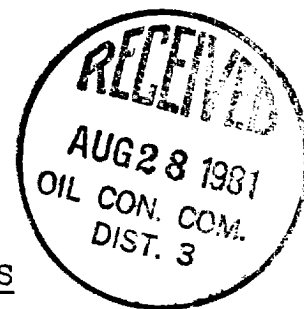
340-50 30% Ss: AA
10% Sh: AA
60% Chert: AA

350-60 20% Ss: wht, lt grn, f-g, sbrnd, mod clyflld, soft, vy calc,
tite, NS
70% Sh: grnsh gry, gry, blk, vy sm carb frags, clyey, vy soft
10% Chert: AA

360-70 10% Ss: AA
90% Sh: AA w/mstly grnsh gry

370-80 50% Ss: wht, f-g, sbrnd, amber incl, sme glauc, vy clyflld,
sl. calc, vy soft, tite, NS
50% Sh: AA
Trace Pyrite

400-10 20% Ss: wht, f-g, sbrnd, amber and glauc incl, vy clyflld,
soft, tite, NS
70% Sh: grnsh gry, blk, sl. slty, firm
10% Pyrite



410-20 20% Ss: AA
80% Sh: AA
Trace Calcite: AA
Trace Pyrite

420-30 30% Ss: wht, f-g, sbrnd, glauc and amber incl, sl. clyflld,
firm, sl. poros, NS
70% Sh: grnsh gry, blk, firm
Trace Calcite: AA

430-40 10% Ss: AA
90% Sh: AA w/sme gry, sl slty, vy sm. carb frags, soft

440-50 10% Ss: AA w/sme carb incl and frags
90% Sh: AA
Trace Pyrite
Trace Calcite: AA

450-60 10% Ss: wht, clear, f-g, sbrnd, sl. clyflld, firm, vy sl.
calc, sl. poros, NS
90% Chert: pink, lt orange, dk gry, grn, cs-xln, ang-sbang,
loose

460-70 30% Ss: wht, f-g, sbrnd, well srted, sl ark, sl. clyflld,
firm, fair poros, NS
60% Sh: grnsh gry, gry, blk=plty, vy sm. carb frags, firm
Trace Pyrite

470-80 10% Ss: AA
90% Sh: AA

480-90 20% Ss: wht, f-g, sbrnd, well srted, vy sl. clyflld, clean,
soft-friable, good poros, NS
80% Sh: AA
Trace Pyrite

490-500 30% Ss: AA w/sl. ark, mod clyflld, soft, tite, NS
70% Sh: AA

500-10 30% Ss: wht, f-g, sbrnd, sl ark, glauc incl, sl. clyflld, soft,
sl. poros, NS
70% Sh: grnsh gry, blk, vy sm carb frags, soft
Trace Calcite: AA

510-20 10% Ss: AA
80% Sh: AA
10% Calcite; wht, transl, cs-xln, ang-sbang, loose

520-30 20% Ss: wht-vy lt grn, f-g, sbrnd, well srted, glauc incl,
mod clyflld, firm, sl. poros, NS
80% Sh: AA w/sme gry

530-40 10% Ss: AA
90% Sh: grnsh gry, gry, plty-blk, vy sl. slty, firm

540-50 100% Sh:AA

550-60 10% Ss: lt grn, f-g, sbrnd, sl. ark, clean, friable, good
poros, NS
90% Sh: grnsh gry, blkly-plty, sl. slty, firm

560-70 50% Ss: AA w/fairly sorted, sme mod-vy clyflld
50% Sh:AA

570-80 100% Sh: grnsh gry, plty, firm

580-90 100% Sh: AA
Trace Ss: AA

590-600 40% Ss: wht-grn, f-g, sbrnd, fairly sortd, glauc incl, mod-
vy clyflld, firm - vy soft, tite, NS
60% Sh: AA

600-10 40% Ss: wht, f-g, sbrnd, well srtd, amber and glauc incl,
sl. clyflld, soft and fair poros, NS
60% Sh: grnsh gry, gry, blkly, vy sm carb incl, soft
Trace Calcite

610-20 50% Ss: AA w/ wht-lt grn
50% Sh:AA
Trace calcite: AA

620-30 40% Ss: wht, f-g, sbrnd, sl ark, glauc and carb incl, clean,
friable, good poros, NS
60% Sh: grnsh gry, gry, blkly-plty, carb frags, firm-vy soft
Trace Pyrite

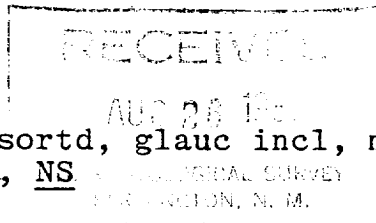
630-40 60% Ss: AA w/sme calc
40% Sh: AA
Trace L.S.: brn, dense, sbrnd
Trace Pyrite

640-50 60% Ss: AA w/incr. amount of carb material
30% Sh: AA
10% Pyrite

650-60 10% Ss: lt gry, vf-g, sbrnd, well srtd, glauc and amber incl,
vy sl. clyflld, firm and sl. poros, NS
90% Sh:AA

660-70 100% Sh: gry, grnsh gry, blkly, sm carb frags, sl. slty, firm
Trace Ss: lt grn-lt gry, f-g, sbrnd, sl. ark, sme red
staining, firm, sl. poros, NS

670-80 20% Ss: wht-lt gry, vf-fg, sbrnd, poorly srtd, sm sl. ark
w/glauc inc., sl clyflld, firm, sl poros, NS
80% Sh: AA



680-90 20% Ss: AA
80% Sh: AA
Trace Pyrite

690-700 20% Ss: wht, blue grn, f-g, sbrnd, glauc incl, sme red staining,
firm, sl. poros, NS
80% Sh: AA

700-10 30% Ss: wht-grn, f-g, sbrnd, well srted, glauc incl, sl. clyfll,
firm, sl. poros, NS
70% Sh: grnsh gry, gry, dk brn, blk, sl slty, sm carb frags,
firm-soft
Trace Pyrite

710-20 30% Ss: AA
70% Sh: AA

720-30 No Sample

730-40 10% Ss: lt gry, grn, f-g, sbrnd, sl. ark, glauc and carb inc.,
firm, vy calc, tite, NS
90% Sh: grnsh gry, gry, blk, sl. slty, sm. carb frags, firm
Trace Pyrite

740-50 40% Ss: wht, f-g, sbrnd, sl. clyfll, carb incl, firm, vy calc,
tite, NS
60% Sh: AA

750-60 10% Ss: AA
90% Sh: grnsh gry, blk-plty, firm
Trace Clyst: vy lt grn, waxy, plty, vy soft

760-70 50% Ss: wht-lt gry, f-g, sbrnd, well srted, carb incl, sl. ark,
mod clyfll, firm and vy calc, tite, NS
50% Sh: AA

770-80 20% Ss: AA
80% Sh: grnsh gry, blk, sm carb frags, firm and sme red
staining.
Trace Calcite: AA

780-90 10% Ss: lt grnsh gry, f-g, sbrnd, glauc incl, sl clyfll, vy
calc, tite, NS
90% Sh: AA

790-800 20% Ss: lt gry, f-g, sbrnd, sl. ark, glauc incl, sl. clyfll,
firm, fair poros, NS
80% Sh: AA

800-10 20% Ss: lt gry, vf-fg, sbrnd, carb incl, sl. clyfll, firm,
fair poros, NS
80% Sh: grnsh gry, gry, blk, soft

810-20 20% Ss: AA w/mstly calc
80% Sh: AA w/sme slty

820-30 30% Ss: AA
70% Sh: grnsh gry, brn, blk, carb frags, sl. slty, firm
Trace Pyrite

830-40 40% Ss: wht, vy lt grn, f-g, sbrnd, well srted, sl. ark, carb
and glauc incl, sl clyflld, firm, fair poros, NS
60% Sh: AA

840-50 20% Ss:AA
80% Sh:AA
Trace Pyrite

850-60 40% Ss: vy lt grn, f-g, sbrnd, glauc incl, sl. clyflld, firm,
fair poros, NS
60% Sh: AA

860-70 30% Ss: wht, lt grn, vy lt grn, f-g, sbrnd, well srted, sl.
ark, glauc incl, sl clyflld, firm, fair poros, NS
70% Sh: grnsh gry, brn, blk, sl. slty, carb frags, firm
Trace Pyrite
Trace Calcite: AA

870-80 10% Ss: AA
90% Sh: grnsh gry, blk-plty, soft

880-90 30% Ss: lt gry, f-g, sbrnd, sl. ar, carb incl, sl. clyflld,
soft, sl. poros, NS
70% Sh: grnsh gry, brn, blk, carb incl, sl. slty, soft

890-900 100% Sh: AA

900-10 100% Sh: grnsh gry, blk, sme carb frags, soft

910-20 10% Ss: wht, f-g sbrnd, sl ark carb and glauc incl, sl. clyflld,
firm, fair poros, NS
90% Sh: AA

920-30 20% Ss: AA w/mod clyflld, firm, sme vy calc, tite, NS
80% Sh: grnsh gry, dk gry, blk, sl. slty, occ. carb stringers,
soft

930-40 20% Ss: wht, f-g sbrnd, well srted, shly incl, firm, vy calc,
tite, NS
80% Sh: AA

940-50 20% Ss: AA/wlt brn, sl ark, vy calc
80% Sh: AA

950-60 20% Ss: wht, bluish grn, f-g, sbrnd, sl. clyflld, firm, vy
calc, tite, NS
80% Sh: grnsh gry, gry, blk, sl. slty, sm carb frags, soft

960-70 30% Ss: AA
70% Sh: AA

970-80 30% Ss: wht, vf-fg, sbrnd, shly incl, sl clyfll, firm, fair
poros, NS
70% Sh: grnsh gry, brn, gry, blk, sl. slty, carb frags, firm-
soft

980-90 10% Ss: AA
90% Sh: AA
Trace Pyrite

990-1000 100% Sh: grnsh gry, gry, blk-plty, sl. slty, firm

1000-10 10% Ss: wht-lt gry, f-g, sbrnd, well srted, glauc incl, sl.
clyfll, firm, fair poros, NS
90% Sh: AA
Trace Pyrite

1010-20 100% Sh: grnsh gry, blk, waxy, soft
Trace Ss: AA

1020-30 20% Ss: wht-vy lt grn, f-g sbrnd, sl. ark, well srted, vy clyfll, d,
vy soft, tite, NS
80% Sh: AA

1030-40 100% Sh: grnsh gry, blk, waxy, soft
Trace Ss: AA

1040-50 20% Ss: wht, lt brn, f-g, sbrnd, sl ark, mod clyfll, soft,
tite, NS
80% Sh: AA

1050-60 10% Ss: wht, vf-fg, sbrnd, sl ark, glauc incl, firm, vy calc,
tite, NS
90% Sh: grnsh gry, dk grnsh gry, blk-plty, soft

1060-70 100% Sh: grnsh gry, dk grnsh gry, brn, blk-plty, sme slty w/sm
carb frags, firm-soft

1070-80 10% Ss: wht, f-g sbrnd, well srted, amber incl, sl. clyfll, d,
soft, vy sl. poros, NS
90% Sh: AA

1080-90 20% Ss: AA
80% Sh: grnsh gry, dk grnsh gry, brn, blk, sme sl. slty w/
carb frags, firm-soft
Trace Pyrite

1090-1100 10% Ss: wht, lt grn, lt gry, f-g, sbrnd, sme sl. ark, mod
clyfll, firm, sl. poros, NS
90% Sh: AA

1100-1110 100% Sh: dk gry, dk brn, dk grnsh gry, grnsh gry, blk-plty,
sme sl. slty w/carb frags, soft

1110-20 100% Sh: AA

- 1120-30 10% Ss: bluish grn, vf-g, sbrnd, mod clyflld, soft
90% Sh: AA
Trace Pyrite
- 1130-40 100% Sh: dk brn, dk bry, grnsh gry, dk brnsh gry, blk, sm
sl. slty w/ sm carb frags
Trace Ss: AA
- 1140-50 40% Ss: wht-lt gry, vf-fg, sbrnd, carb incl, vy sl. clyflld,
firm, mod calc, vy sl. poros, NS
60% Sh: AA
Trace Pyrite
- 1150-60 50% Ss: AA w/ vy calc
50% Sh: AA
- 1160-70 40% Ss: wht-lt gry, vf-fg, sbrnd, carb incl, mod. clyflld,
firm, vy calc, tite, NS
60% Sh: dk gry, brnsh blk, dk brnsh gry, blk-plty, soft
Trace Calcite: wht, cs-xln, sbang, loose
Trace Coal: blk, vitr, blk-ang, firm
- 1170-80 100% Sh: grnsh gry, brn, blk-plty, many carb frags and stringers,
soft
Trace Coal: AA
- 1180-90 100% Sh: AA
- 1190-1200 100% Sh: AA
- 1200-10 100% Sh: grnsh gry, gry, plty, waxy, soft
- 1210-20 100% Sh: AA w/brn, carb frags and stringers, soft
- 1220-30 30% Ss: gry, f-g sbrnd, well sorted, carb incl, firm, vy calc,
tite, NS
70% Sh: AA
- 1230-40 10% Ss: AA
90% Sh: grnsh gry, brn, dk grnsh gry, blk-plty, sm carb frags,
firm
- 1240-50 10% Ss: AA
60% Sh: AA
30% Coal: blk, vitr, ang-blk, pyrite fract, fill, firm
- 1250-60 10% Ss: lt gry, f-g, sbrnd, well sorted, carb and glauc incl,
vy sl. clyflld, firm, mod calc, sl. poros, NS
70% Sh: AA
20% Coal: AA
- 1260-70 100% Sh: brn, grnsh gry, plty, waxy, sme sl slty w/carb frags, soft
Trace Ss: AA

- 1270-80 20% Ss: wht, lt gry, f-g, sbrnd, sl. ark, carb incl, vy
sl. clyflld, firm, vy calc, tite, NS
70% Sh: AA w/numerous carb frags and stringers
10% L. S.: Tan-lt brn, dense, ang, vy calc
- 1280-90 50% Ss: AA
20% Sh: AA
20% L.S.: AA
10% Coal: AA
- 1290-1300 20% Ss:wht, f-g, sbrnd, well srted, carb incl, firm, vy calc,
tite, NS
70% Sh: brn, grnsh gry, blk, sme slty w/ carb frags and stringers,
firm-soft
10% L.S.: AA
Trace Pyrite
- 1300-10 10% Ss: wht, f-g, sbrnd, well sorted, carb incl, clean, firm,
mod-vy calc, tite, NS
90% Sh: grnsh gry, gy, blk-plty, sm carb frags and occ.
stringers, soft
- 1310-20 20% Ss: AA w/larger and more numerous carb incl.
70% Sh: AA
10% L. S.: tan-lt brn, dense, waxy, hard, vy calc,
Trace Pyrite
- 1320-30 20% Ss: wht, f-g, sbrnd, fairly sorted, carb and glauc incl,
clean, mod calc, firm, tite, NS
70% Sh: AA
10% L.S.: AA w/sme buff
- 1330-40 10% Ss: AA
80% Sh: grnsh gry, gry, dk gry, blk, soft and sme blk,
lignitic
10% L.S.: AA
Trace Clyst: wht, plty-blk, waxy, vy soft
- 1340-50 10% Ss: wht, vy lt grn, f-g, sbrnd, sm carb incl, sl. clyflld,
soft, sl. poros, NS
80% Sh: AA
10% L. S. : AA
- 1350-60 10% Ss: wht, f-g, sbrnd, sl-mod clyflld, glauc incl, soft,
tite, NS
90% Sh: grnsh gry, gry, vy dk brn, blk-plty, occ. carb frag,
sme lignitic
- 1360-70 100% Sh: AA
Trace Ss: AA
Trace L.S.: AA
Trace Pyrite

- 1370--80 100% Sh: brn, grnsh gry, dk brn, blk, carb frags and stringers, soft
Trace Ss: blue grn, f-g, sbrnd, firm, sl. poros, NS
- 1380-90 100% Sh: AA
- 1390-1400 10% Ss: wht, f-g, sbrnd, well srted, sl. clyflld, firm, vy calc, tite, NS
90% Sh: brn, grnsh gry, dk brn, blk, occ carb frags and stringers, soft
- 1400-10 100% Sh: AA
Trace Ss: AA, NS
- 1410-20 100% Sh: brn, grnsh gry, gry, blk, carb frags and stringers, sme sl slty, soft
- 1420-30 30% Ss: wht, vf-fg, sbrnd, carb incl, occ. glauc, sl. clyflld, firm, vy calc, tite, NS
70% Sh: AA w/incr. amts of carb material
- 1430-40 60% Sh: AA
40% Coal: blk, dull-vitr, blk-ang, soft
- 1440-50 30% Ss: grn, lt brn, gry, f-g, sbrnd, -rnd, firm, fair poros, NS
70% Sh: gry, grnsh gry, dk brn, blk-plty, carb frags and stringers, soft
- 1450-60 30% Ss: wht, f-g sbrnd, mod clyflld, sl ark, carb incl, firm, sl. poros, NS
60% Sh: grnsh gry, gry, vy dk brn, blk, carb frags, soft
10% L.S.: AA
Trace Coal: AA w/ disseminated Pyrite grains
Trace Clyst: wht, plty, vy soft
Trace Calcite: wht, transl, cs-xln, poss. fract fill
- 1460-70 40% Ss: AA w/glauc incl, mod-vy clyflld, also sme orange stained grains
60% Sh: AA
- 1470-80 40% Ss: wht, rddsh brn, f-g, sbrnd, sme mod clyflld, sme clean, sl. ark, glauc incl, firm, sl-fair poros, NS
60% Sh: AA
- 1480-90 50% Ss: AA
50% Sh: AA w/sme sl slty
- 1490-1500 60% Ss: AA w/mstly wht
40% Sh: AA w/incr silty-ness
Trace Coal: AA w/dissemin pyrite grains
- 1500-10 60% Ss: wht, f-g, sbrnd well sorted, glauc and carb incl, mod. clyflld, soft, sl. poros, NS
40% Sh: gry, grnsh gry, blk, soft

1510-20 50% Ss: AA
 50% Sh: AA

1520-30 50% Ss: AA w/mod-vy clyfll
 50% Sh: AA
 Trace L.S.: lt brn, dense, ang, hard, vy calc

1530-40 50% Ss: AA
 50% Sh: AA w/carb frags
 Trace L.S.: flesh, dense, sbang, vy calc

1540-50 50% Ss: AA, sl poros, NS
 50% Sh: AA

1550-60 60% Ss: wht, lt gry, f-g, sbrnd, well sorted, glauc and carb
 incl, sl. clyfll, sl ark, gry is vy calc, borth firm,
 sl-tite poros, NS
 40% Sh: AA

1560-70 40% Ss: wht, lt gry, f-g sbrnd, well sorted, glauc and carb
 incl, sl. ark, sl. clyfll, firm, fair poros
 60% Sh: AA

1570-80 50% Ss: AA w/vy calc, tite, NS
 50% Sh: AA

1580-90 60% Ss: AA
 40% Sh: brn, grnsh gry, dk grnsh gry, blk, sl. slty, carb
 frags and stringers, soft

1590-95 50% Ss: AA
 50% Sh: AA

