

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.															
3. ADDRESS OF OPERATOR P.O. Box 3280 - Casper, Wyoming 82602															
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At surface 1,850' FSL & 820' FEL (NE/SE) At top prod. interval reported below At total depth															
14. PERMIT NO. 82602 DATE ISSUED JUN 30 1981															
5. LEASE DESIGNATION AND SERIAL NO. I-149-IND-8470															
6. IF INDIAN, ALLOTTEE OR TRIBE NAME Allotted															
7. UNIT AGREEMENT NAME Gallegos Canyon Unit															
8. FARM OR LEASE NAME															
9. WELL NO. 320															
10. FIELD AND POOL, OR WILDCAT West Kutz Pictured Cliffs															
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 30-T28N-R12W															
12. COUNTY OR PARISH San Juan				13. STATE New Mexico											
15. DATE SPUDDED 4-4-81		16. DATE T.D. REACHED -4-7-81		17. DATE COMPL. (Ready to prod.) 6-23-81		18. ELEVATIONS (DF, REB, RT, GR, ETC.)* GL 5,631'; KB 5,633'		19. ELEV. CASINGHEAD -----							
20. TOTAL DEPTH, MD & TVD. 1,440' K.B.		21. PLUG, BACK T.D., MD & TVD 1,390' K.B.		22. IF MULTIPLE COMPL., HOW MANY* NA		23. INTERVALS DRILLED BY 0-TD		ROTARY TOOLS CABLE TOOLS -----							
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 1,301'-1,319' Pictured Cliffs								25. WAS DIRECTIONAL SURVEY MADE NO							
26. TYPE ELECTRIC AND OTHER LOGS RUN Induction; Comp. Neutron-Formation 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		CEMENTING RECORD		AMOUNT PULLED					
7" OD		17#		125' KB		9-7/8"		65 sx 'B' w/2% CaCl ₂ & 1/4# Flocele/sk		-0-					
4-1/2" OD		10.5#		1,429' KB		6-1/4"		See Back of Page		-0-					
29. LINER RECORD										30. TUBING RECORD					
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*		SCREEN (MD)		SIZE		DEPTH SET (MD)		PACKER SET (MD)	
				None						2-3/8"		1,320'			
31. PERFORATION RECORD (Interval, size and number) 1,301'-1,312', 1,315'-1,319' w/1 JSPF (17 perfs)										32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.					
										DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED			
										1,301'-1,319'		BD w/500 gal 7-1/2% Spearhead Acid + additives & 22 ball sealers Frac'd w/30,000 gal 70% Quality Foam w/30,000# 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 6-23-81		HOURS TESTED 24		CHOKE SIZE 3/8"		PROD'N. FOR TEST PERIOD 0		OIL—BBL. 0		GAS—MCF. 235		WATER—BBL. 45		GAS-OIL RATIO NA	
FLOW. TUBING PRESS. 90 psi		CASING PRESSURE SI 155 psi		CALCULATED 24-HOUR RATE 0		OIL—BBL. 0		GAS—MCF. 235		WATER—BBL. 45		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>P. Wagner</u> TITLE Production Engineer - RMD DATE 6-25-81 JUL 1 1981					

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

NMOC

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.), formation 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 DOWN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	38.	GEOLOGIC MARKERS		
					NAME	MEAS. DEPTH	TRUE VERT. DEPTH
			<u>Sample Description Attached</u> Cont'd from front of page: 4-1/2" csg cementing - Cemented w/200 sx of 50-50 Pozmix w/2% Gel & 1/4# Celloflake/sx & 0.5% D-65.		<u>Log Tops</u> Ojo Alamo Kirtland Fruitland Pictured Cliffs T.D. Logger T.D. Driller	Surface 120' 986' 1,290' 1,432' 1,440'	

SAMPLE DESCRIPTION

130-40 100% Sh: grnsh gry, brn, plty, soft-vy soft

140-50 60% Ss: wht, f-g, sbrnd, glauc, sme carb incl, mod-vy
clyflld, soft, vy sl. poros, NS
30% Sh: AA
10% Chert: clear, cs-xln, sbang-sbrnd, loose
Trace Clyst: wht, plty, amber incl, vy soft

150-60 30% Ss: wht, lt grn, f-g, sbrnd, glauc, mod clyfll, soft,
vy sl. poros, NS
40% Sh: gry, grnsh gry, blk-y-plty, sme sl. slty, soft
20% Clyst: AA
10% Chert: AA

160-70 80% Sh: AA
10% Clyst: AA
10% Chert: AA
Trace Ss: wht, f-g, sbrnd, sl. clyfll, sl. poros, NS

170-80 50% Ss: wht, f-g, sbrnd, well sorted, glauc, occ. carb
incl, vy sl. cly fll, friable, good poros, NS
30% Chert: clear, orange, lt. yellow, cs-xln, ang, loose
20% Sh: gry, brn, blk-y-plty, soft

180-90 30% Ss: wht, lt. grn, f-g, sbrnd, fairly sorted, glauc &
carb. incl, mod clyfll, soft, vy sl. poros, NS
60% Sh: AA
10% Chert: AA

190-200 30% Ss: AA w/mstly wht
60% Sh: AA
10% Chert: AA

200-10 100% Sh: grnsh gry, plty, sl. slty, soft

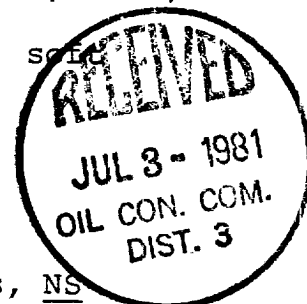
210-20 100% Sh: AA

220-30 100% Sh: AA
trace Ss: wht, f-g, sbrnd, well sorted sl. clyfll, fair
poros, NS

230-40 50% Ss: wht, f-g, sbrnd, glauc, cherty, mod clyfll, soft
sl. poros, NS
50% Sh: gry, grnsh gry, blk-y, soft

240-50 40% Ss: AA
20% Sh: AA
40% Chert: clear, lt. brn, lt. orange, Ang, cs-xln, loose

250-60 100% Sh: grnsh gry, plty, sme mod slty, soft



260-70 100% Sh: AA
Trace Clyst: wht, blkyl-pty, smooth, vy soft

270-80 30% Ss: wht, grnsh gry, vf-fg, sbrnd, mod clyfll, glauc,
soft-vy soft
70% Sh: AA

280-90 40% Ss: wht, grnsh gry, vf-g, sbrnd, mod clyfll, carb
incl, soft
50% Sh: AA w/sme gray
10% Chert: AA

290-300 100% Sh: gry, grnsh gry, grn, blkyl, slty, soft
Trace: Pyrite

300-10 10% Ss: wht, f-g, sbrnd, glauc & carb incl, sl-mod clyfll
soft, sl. poros, NS
90% Sh: grnsh gry, gry, blkyl-pty, sl. slty, soft

310-20 20% Ss: AA
80% Sh: AA
Trace: Pyrite

320-30 60% Ss: wht, f-g, sbrnd, glauc & amber incl, vy clyfllld, vy
soft, tite, NS
40% Sh: AA

330-40 40% Ss: AA
40% Sh: grnsh gry, blkyl, soft
20% Chert: wht, clear, red, lt. brn, cs-xln, Ang, loose

340-50 30% Ss: wht, f-g, sbrnd, glauc, mod clyfll, soft, vy sl. poros,
NS
60% Sh: AA
10% Chert: wht, cs-xln, Ang, loose

350-60 30% Ss: wht, gry, f-g, sbrnd, glauc & chert incl, mod
clyfllld, firm, tite, NS
70% Sh: grnsh gry, brn, pty, sl. slty, soft

360-70 20% Ss: wht, vf-g, sbrnd, vy clyfllld, vy soft, tite, NS
80% Sh: AA

370-80 NS

380-90 100% Sh: AA

390-400 NS

400-10 40% Ss: grn, f-g, sbrnd, glauc, mod clyfll, soft,
vy sl. poros, NS
60% Sh: grnsh gry, blkyl-pty, soft

410-20 20% Ss: AA
 80% Sh: AA

420-30 100% Sh: grnsh gry, blk, vy slty, clyflld, firm-soft

430-50 No Sample

450-60 No Sample

460-70 20% Ss: wht, f-g, sbrnd, glauc & carb incl, sl. clyfl, friable, good poros, NS
 80% Sh: grnsh gry, plty, sme sl. slty, soft

470-80 30% Ss: grnsh gry, vf-g, sbrnd, glauc incl, sl. clyfl, soft, vy sl. poros, NS
 70% Sh: AA

480-90 70% Ss: wht, f-g, sbrnd, well sorted, glauc incl, vy sl. ark, vy sl. clyfl, firm, sl. poros, NS
 30% Sh: AA

490-500 50% Ss: AA
 40% Sh: AA
 10% Chert: wht, cs-xln, Ang, loose
 Trace: Pyrite

500-10 100% Sh: grnsh gry, plty, sme slty, soft

510-20 40% Ss: wht, lt. grn, vf-g, sbrnd, fairly sorted glauc incl, sl. ark, mod clyflld, vy soft, tite, NS
 60% Sh: AA

520-30 40% Ss: AA
 60% Sh: grnsh gry, brn, plty-blk, sl. slty
 Trace: Pyrite

530-40 60% Ss: wht, f-g, sbrnd, well sorted, glauc & carb incl, sl. ark, mod clyflld, firm, sl. poros, NS
 40% Sh: AA

540-50 30% Ss: AA
 70% Sh: grnsh gry, blk-plty, sl. slty, soft
 Trace: Pyrite
 Trace: Calcite

550-60 20% Ss: wht, lt. grn, vf-fg, sbrnd, glauc incl, cherty, mod clyfl, soft, sl. poros, NS
 70% Sh: AA
 10% Chert: clear, cs-xln, Ang, loose
 Trace: Pyrite

- 560-70 40% Ss: wht, lt. grn, f-g, sbrnd, glauc incl, mod-vy
 clyflld, firm-soft, sl. poros, NS
 50% Sh: grnsh gry, blkylt, soft
 10% Chert: AA
 Trace: Pyrite
 Trace Clyst: creme, plty, vy soft
- 570-80 60% Ss: wht, lt grn, vf-fg, sbrnd, poorly sorted, glauc,
 mod-vy slyflld, soft, tite, NS
 40% Sh: AA
- 580-90 80% Ss: wht, lt. gry, f-g, sbrnd, well sorted, glauc &
 carb incl, sl. ark, sl. clyflld, firm, fair, poros,
NS
 20% Sh: AA
- 590-600 40% Ss: AA
 60% Sh: AA
- 600-10 20% Ss: wht, blue grn, vf-fg, sbrnd, mst bentonite and
 mod clyflld: few w/sl. clyflld, firm, vy sl. poros, NS
 80% Sh: gry, grnsh gry, blkylt, firm
 Trace Chert: red, vy lt. yellow, cs-xln, Ang-sbang, loose
- 610-20 60% Ss: AA
 30% Sh: AA
 10% Chert: clear, cs-xln, Ang-sbang, loose
 Trace Pyrite
- 620-30 60% Ss: wht, lt. grn, f-g, sbrnd, well sorted, glauc incl,
 sl. ark, mod clyflld, firm vy sl. poros, NS
 30% Sh: grnsh gry, blkylt, firm
 10% Chert: AA
 Trace Pyrite
- 630-40 40% Ss: AA
 50% Sh: AA
 10% Chert: AA w/ lt. yellow
 Trace Pyrite
- 640-50 20% Ss: blue grn-grn, vf-g, sbrnd, bentonite, mod clyflld,
 firm, sl. poros, NS
 30% Sh: AA
 50% Chert: lt. yellow, clear, orange, cs-xln, Ang, loose
- 650-60 40% Ss: wht, grn, vf-g, sbrnd, well srted, sl. ark, glauc
 incl, mod clyflld, firm sl. poros, NS
 40% Sh: grnsh gry, blkylt, firm
 20% Chert: AA
- 650-60 40% Ss: wht, grn, vf-g, sbrnd, well srted, sl. ark, glauc
 incl, mod clyflld, firm sl. poros, NS
 40% Sh: grnsh gry, blkylt, firm
 20% Chert: AA

660-70 20% Ss: wht, grn, vf-fg, sbrnd, well srtd, sl. ark,
 mod clyfll, firm, sl. poros, NS
 70% Sh: AA
 10% Chert: AA

670-80 10% Ss: wht, f-g, sbrnd, sl. clyfll, firm, sl. poros,
 NS
 70% Sh: grnsh gry, blk, firm
 10% Chert: AA
 10% Coal: blk, vitr, blk, firm

680-90 60% Ss: wht, f-g, sbrnd, well srtd, sl. clyfll, firm,
 fair poros, NS
 30% Sh: AA
 10% Prite
 Trace Coal: AA
 Trace Clyst: creme, plty, waxy, vy soft

690-700 30% Ss: AA w/ lt. grn
 60% Sh: grnsh gry, gry, blk, soft
 10% Chert: AA
 Trace Clyst: AA

700-10 30% Ss: wht, lt. grn, vf-g, sbrnd, glauc & carb incl,
 sl. clyfll, soft, fair poros, NS
 70% Sh: grnsh gry, blk-plty, firm
 Trace Chert: AA

710-20 20% Ss: wht, vf-fg, sbrnd, glauc incl, sl. clyfll,
 firm, fair poros, NS
 80% Sh: AA

720-30 90% Sh: grnsh gry, gry, blk-plty, soft
 10% Clyst: creme, plty, waxy, soft

730-40 90% Sh: AA
 10% Clyst: AA
 Trace Coal: blk vitr, blk, firm

740-50 50% Ss: lt. grn, vf-g, sbrnd, well sorted, mod clyfll,
 soft, sl. poros, NS

750-60 20% Ss: AA, sl. poros, NS
 80% Sh: grnsh gry, plty, waxy, soft

760-70 50% Ss: wht lt. gry, vf-fg, sbrnd, glauc incl. sl. ark,
 mod clyfll, soft, sl. poros, NS
 50% Sh: AA

770-80 30% Ss: AA, sl. poros, NS
 70% Sh: AA
 Trace Clyst: wht, plty, waxy, vy. soft

780-90 20% Ss: AA w/sme med gry
 70% Sh: AA
 10% Chert: lt. yellow, cs-xln, Ang-sbang, loose

790-800 40% Ss: wht, f-g, sbrnd, glauc & carb incl. sl. ark,
 mod. clyfll, sloft, sl. poros, NS
 60% Sh: AA

800-10 50% Ss: AA w/vy clyfll, soft, tite, NS
 50% Sh: AA
 Trace Pyrite

810-20 40% Ss: wht, f-g, sbrnd, glauc incl, well sorted, vy
 clyflld, soft tite, NS
 60% Sh: grnsh gry, blk, waxy, soft, occ carb stringers

820-30 30% Ss: AA w/fair poros, NS
 70% Sh: gry, grnsh gry, blk, vy sl. slty, soft
 Trace Pyrite

830-40 100% sh: grnsh gry, blk, sl. slty, soft
 Trace Clyst: AA

840-50 100% Sh: AA w/sme Calcite fracture fill

850-60 100% Sh: grnsh gry, blk, waxy, soft
 Trace Coal: blk, vitr, blk-splintery, soft

860-70 10% Ss: wht, f-g, sbrnd, vy clyflld, soft, tite, NS
 90% Sh: AA

870-80 10% Ss: AA, tite, NS
 90% Sh: grnsh gry, brn, blk-plty, waxy, soft
 Trace Pyrite

880-90 10% Ss: wht, f-g, sbrnd, glauc incl, well sorted, mod-vy
 clyflld, firm, tite, NS
 90% Sh: AA
 Trace Pyrite

890-900 100% Sh: grnsh gry, blk-plty, soft; calcite as Poss.
 fract. fill
 Trace Ss: AA

900-10 10% Ss: blue grn, vf-g, sbrnd, well sorted, glauc incl,
 vy sl. clyfll, friable, good poros, NS
 90% Sh: AA

910-20 10% Ss: wht, f-g, sbrnd, glauc incl, mod clyfll, vy soft,
 tite, NS
 90% Sh: gry, grnsh gry, blk-plty, sl. slty, soft

920-30 10% Ss: AA, tite, NS
90% Sh: gry, grnsh gry, blk-y-plty, sme slty, soft
Trace Clyst: wht-creme, plty, waxy, vy soft

930-40 20% Ss: wht, lt. gry, f-g, sbrnd, glauc & amber incl,
sl. clyfll, firm, sl. poros, NS
80% Sh: AA

940-50 10% Ss: AA
80% Sh: AA
10% Calcite: wht, cs-xln, Ang, loose, vy calc

950-60 100% Sh: grnsh sgry, gry, brn, blk-y, sme slty, vy clyey,
soft
Trace Pyrite
Trace Chert: lt. yellow, cs-xln, Ang-sbang, loose

960-70 80% Sh: AA
20% Chert: AA

970-80 10% Ss: wht-pinkish, gry, f-g, sbrnd, glauc & carb incl,
mod-vy clyfll, firm-vy soft, sl. poros NS
90% Sh: AA w/ carb stringers
Trace Pyrite
Trace Chert

980-90 100% Sh: Grnsh gry, gry, blk-y-plty, sme sl. slty soft
Trace Ss: AA
Trace Calcite

990-1000 20% Ss: wht, gry, vf-fg, carb, & glauc incl, vy clyfll, vy soft, tite NS
80% Sh: AA

1000-10 40% Ss: wht, vf-g, sbrnd, glauc & carb incl, vy clyfll, firm, vy calc, tite, NS
60% Sh: gry, grnsh gry, blk-y, waxy, soft

1010-20 40% Ss: AA w/lt. grn, vy soft, non-calc, tite, NS
60% Sh: AA w/mstly gry
Trace Chert: clear, lt. yellow, cs-xln, Ang-sbang, loose

1020-30 30% Ss: AA
70% Sh: grnsh sry, gry, blk-y, sme slty, soft
Trace Chert: AA

1030-40 30% Ss: AA
70% Sh: AA w/mstly gry, slty
Trace Pyrite

1040-50 20% Ss: AA
80% Sh: gry, brn, grnsh gry, blk-y, sl. slty, carb stringers, soft
Trace Chert: AA

1050-60 30% Ss: wht, f-g, sbrnd, well sorted, glauc & carb incl,
 mod clyfll, vy clyfll, tite, NS
 70% Sh: gry, grnsh gry, dk gry, blk~~y~~-plty, soft
 Trace Coal: blk, vitr, blk~~y~~, calc fract fill, firm

1060-70 40% Ss: AA
 50% Sh: AA
 10% LS: brn, cs-xln, dense, vy calc

1070-80 60% Ss: wht, f-g, sbrnd, well sorted, glauc & carb incl,
 mod clyfll, vy calc, tite, NS
 40% Sh: AA
 Trace Pyrite

1080-90 10% Ss: wht, lt. gry, vf-fg, sbrnd, mod clyfll, sme sl.
 ark, w/carb incl, non-calc, firm, sl. poros, NS
 90% Sh: AA
 Trace Calcite: wht, cs-xln, rhomb, Ang, loose
 Trace Coal: AA

1090-1100 10% Ss: AA
 80% Sh: AA
 10% Coal: AA w/o fract. fill

1100-10 20% Ss: wht, f-g, sbrnd, sl. ark, glauc & amber incl,
 sl. clyfll, firm, vy calc, tite, NS
 70% Sh: AA
 10% Chert: AA
 Trace Clyst: wht, plty, waxy, vy soft

1110-20 30% Ss: wht, f-g, sbrnd, well sorted, carb & amber incl,
 sl. clyfll, firm vy calc, tite, NS
 70% Sh: gry, grnsh gry, vy dk gry, blk~~y~~-plty, carb stringers
 sme sl. slty, soft
 Trace Chert: AA
 Trace Clyst: AA

1120-30 40% Ss: AA w/sme lg carb frags
 60% Sh: AA

1130-40 20% Ss: AA w/o lg frags.
 80% Sh: brn, gry, grnsh gry, blk~~y~~, sl. slty, soft
 Trace Clyst: Creme, plty, waxy, vy soft
 Trace Pyrite

1140-50 20% Ss: wht, lt. gry, f-g, sbrnd, mod clyfll, glauc, &
 carb incl, firm, vy calc, tite, NS
 80% Sh: AA w/carb frags & Stringers
 Trace Chert: lt. yellow, cs-xln, Ang, loose
 Trace Coal: blk, vitr, blk~~y~~, soft

1150-60 10% Ss: AA
 90% Sh: AA
 Trace Chert: AA
 Trace Pyrite

- 1160-70 20% Ss: wht, f-g, sbrnd, fairly sortd, glauc, amber &
 carb incl, sl. clyflld, firm, non-calc, fair poros, NS
 80% Sh: AA w/sme slty
 Trace Chert: clear, cs-xln, Ang, loose
- 1170-80 30% Ss: wht, f-g, sbrnd, well srted, carb incl, mod clyflld,
 soft, sl. poros, NS
 70% Sh: grnsh gry, dk gry, blkylt, carb frags, soft
 Trace Clyst: creme plty, waxy, vy soft
- 1180-90 20% Ss: AA
 80% Sh: gry, grnsh gry, vu dk gry, blkylt, sm. carb
 frags, soft
- 1190-1200 30% Ss: wht, gry, f-g, sbrnd, sl. ark, carb incl, vy
 clyflld, firm, tite, NS
 70% Sh: AA
- 1200-10 20% Ss: lt. gry, f-g, sbrnd, well sorted, sl. ark, carb
 incl, sl. clyflld, firm, vy calc, tite NS
 80% Sh: grnsh gry, gry, dk gry, plty carb stringers, soft
 Trace Clyst: wht, plty, vy soft
- 1210-20 30% Ss: wht-lt. gry, f-g, sbrnd, glauc & amber incl, sl.
 ark, mod clyflld, firm, non-calc, fair poros, NS
 70% Sh: grnsh gry, gry, lt. gry, blkylt, sl. slty, soft
 Trace Chert: clear, cs-xln, Ang, loose
- 1220-30 30% Ss: AA w/sme blue green, f-g, firm
 70% Sh: AA w/sme lignitic
 Trace Pyrite
- 1230-40 50% Ss: wht, lt. gry, f-g, sbrnd, well sorted, mod clyflld,
 glauc & carb incl, firm, vy calc, tite, NS
 40% Sh: AA
 10% Chert: AA
- 1240-50 40% Ss: lt. gry, f-g, sbrnd, well sorted, carb incl,
 sl. clyflld, firm, vy calc, tite, NS
 60% Sh: AA
 Trace Calcite: wht, transl, cs-xln, Ang, loose
- 1250-60 20% Ss: wht. lt. gry, f-g, sbrnd, well sorted, glauc incl,
 vy sl. clyflld, firm, fair poros, NS
 80% Sh: grnsh gry, gry, vy dk gry, plty-blky, sl. slty
 carb incl, soft
- 1260-70 30% Ss: wht, lt. gry, AA w/vy calc, tite, NS
 70% Sh: AA
- 1270-80 20% Ss: AA
 80% Sh: AA

1390-1400 30% Ss: wht, f-g, sbrnd, well srt'd, glauc & carb incl,
 sl. clyfll, firm, vy calc, sl. poros, NS
 70% Sh: grnsh gry, gry, blk, sm. carb frags, soft
 Trace Calcite: wht, transl, cs-xln, hexag, loose, vy calc

1400-10 20% Ss: AA
 80% Sh: lt. brn, gry, plty-blk, sm carb frags, calc,
 soft

1410-20 60% Ss: wht, f-g, sbrnd, well srt'd, glauc & carb incl,
 vy sl. clyfll, firm, vy calc, sl. poros, NS
 40% Sh: AA

1420-30 40% Ss: AA
 60% Sh: AA

1430-40 20% Ss: AA
 80% Sh: AA