

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

5a. Indicate Type of Lease
State ☒ Fee ☐
5. State Oil & Gas Lease No.
E-2447

1a. TYPE OF WELL
OIL WELL ☐ GAS WELL ☒ DRY ☐ OTHER ☐
b. TYPE OF COMPLETION
NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER ☐

7. Unit Agreement Name
Gallegos Canyon Unit
8. Farm or Lease Name
9. Well No.
324
10. Field and Pool, or Wildcat
West Kutz Pictured Cliffs

2. Name of Operator
Energy Reserves Group, Inc.
3. Address of Operator
P.O. Box 3280 - Casper, Wyoming 82602

4. Location of Well
UNIT LETTER G LOCATED 1590 FEET FROM THE North LINE AND 1450 FEET FROM

THE East LINE OF SEC. 32 TWP. 29N RGE. 12W NMPM

12. County
San Juan

15. Date Spudded 3-16-81 16. Date T.D. Reached 3-22-81 17. Date Compl. (Ready to Prod.) 6-10-81 18. Elevations (DF, RKB, RT, GR, etc.) GL 5,472'; KB 5,474' 19. Elev. Casinghead

20. Total Depth 1,466' 21. Plug Back T.D. 1,422' 22. If Multiple Compl., How Many NA 23. Intervals Drilled By Rotary Tools 0-TD Cable Tools

24. Producing Interval(s), of this completion - Top, Bottom, Name
1,361'-66'; 1,371'-78' Pictured Cliffs 25. Was Directional Survey Made NO

26. Type Electric and Other Logs Run
Induction; Neutron - Comp-Density 27. Was Well Cored NO

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
7" OD	17#	132'	9-7/8"	60 sx 'B' w/2% CaCl ₂ & 1/4# Celloflake/sx.	-0-
4-1/2" OD	10.5#	1,461'	6-1/4"	See back of page	-0-

29. LINER RECORD 30. TUBING RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
		None			2-3/8"	1,367'	

31. Perforation Record (Interval, size and number)
1,361'-66'; 1,371'-78' w/1 JSPF (15 perfs)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
1,361'-1,378'	BD w/500 gal 7-1/2% MCA w/additives & 20 ball sealers.
	Frac - See Back of Page

33. PRODUCTION

Date First Production Production Method (Flowing, gas lift, pumping - Size and type pump) Well Status (Prod. or Shut-in) SI

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
6-11-81	24	3/8"		0	765	4	NA

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)
225 psi	SI 285 psi		0	765	4	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 ATTACHED

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED P. Wagner TITLE PRODUCTION ENGINEER - RMD DATE 6-23-81

INSTRUCTIONS

This form is to be filled with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 20 through 34 shall be reported for each zone. The form is to be filed in quadruplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy _____	T. Canyon _____	T. Ojo Alamo <u>Surface</u>	T. Penn. "B" _____
T. Salt _____	T. Strawn _____	T. Kirtland-Fruitland <u>174'</u>	T. Penn. "C" _____
B. Salt _____	T. Atoka _____	T. Pictured Cliffs <u>1,355'</u>	T. Penn. "D" _____
T. Yates _____	T. Miss _____	T. Cliff House _____	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee _____	T. Madison _____
T. Queen _____	T. Silurian _____	T. Point Lookout _____	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos _____	T. McCracken _____
T. San Andres _____	T. Simpson _____	T. Gallup _____	T. Ignacio Qtzite _____
T. Glorieta _____	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____	T. <u>T.D. Driller 1,471'</u>
T. Blinbry _____	T. Gr. Wash _____	T. Morrison _____	T. <u>T.D. Logger 1,466'</u>
T. Tubb _____	T. Granite _____	T. Todilto _____	T. _____
T. Drinkard _____	T. Delaware Sand _____	T. Entrada _____	T. _____
T. Abo _____	T. Bone Springs _____	T. Wingate _____	T. _____
T. Wolfcamp _____	T. _____	T. Chinle _____	T. _____
T. Penn. _____	T. _____	T. Permian _____	T. _____
T. Cisco (Bough C) _____	T. _____	T. Penn. "A" _____	T. _____

OIL OR GAS SANDS OR ZONES

No. 1, from _____ to _____	No. 4, from _____ to _____
No. 2, from _____ to _____	No. 5, from _____ to _____
No. 3, from _____ to _____	No. 6, from _____ to _____

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

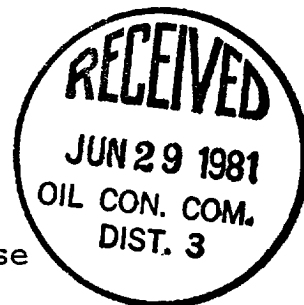
No. 1, from _____ to _____	feet. _____
No. 2, from _____ to _____	feet. _____
No. 3, from _____ to _____	feet. _____
No. 4, from _____ to _____	feet. _____

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
			Sample Description				
			Attached	174'	1097'	923	Kirtland
			Cont'd from front page:	1097'	1355'	258	Fruitland
			4-1/2" cementing- cemented	1355'	TD		Pictured Cliffs
			w/200 sx of 50-50 Pozmix				
			w/2% Gel & 1/4# Celloflake				
			/sk. + .5% CFR-2.				
			Squeeze'd 7" x 4-1/2"				
			annulus w/50 sx 50-50 Poz				
			mix w/2% Gel & 2% CaCl ₂ .				
			Frac Job - 20,000 gal 70%				
			Quality Foam w/22,500#				
			10-20 sand.				

LITH FOR GC PC #324

- 130-40 100% Clyst: grnsh gry, blk, rnded, smooth, vy soft,
Trace Pyrite
- 140-50 10% Ss: clear, vy cs-g, sbrnd, loose
90% Clyst: AA
- 150-60 10% Ss: AA
20% Sh: grysh brn, blk, clyey, soft,
40% Clyst: AA
30% Chert: creme, clear, cs-xln, ang-sbang, loose
- 160-70 10% Ss: AA
20% Sh: AA
30% Clyst: AA
40% Chert: dk brn, lt yellow, orange, clear, cs-xln, ang,
loost
- 170-80 70% Ss: blue grn, cs-g, sbrnd-sbang, glauc, cherty, vy
clyflld, soft
10% Sh: AA, plty
10% Clyst: AA
10% Chert: AA w/mstly clear
- 180-90 80% Ss: wht, blue grn, cs-fg, sbrnd, glauc, cherty, vy-
mod. clyflld, soft
20% Sh: grysh brn, grnsh gry, blk, soft
- 190-200 50% Ss: wht, m-g, sbrnd, vy clyflld, cherty, soft
20% Sh: AA
30% Chert: AA w/mstly creme-lt orange
- 200-10 90% Sh: dk brn, blk-plty, sandy, soft
10% Chert: AA
- 210-20 10% Ss: wht, m-g, sbrnd, glauc, sl ark, vy clyflld, soft,
sl calc
70% Sh: AA
10% Clyst: grnsh gry, plty, vy soft
10% Chert: AA
Trace Pyrite
- 220-30 80% Ss: AA
20% Sh: dk brn, plty, sl slty, soft
Trace Clyst: AA
- 230-40 90% Ss: AA w/ lg siliceous shly frags
10% Sh: AA



240-50 60% Ss: wht, m-g, sbrnd, vy clyflld, soft w/sme loose
40% Sh: dk brn, grnsh gry, blk, soft, w/sme sl. slty

250-60 10% Ss: AA
70% Sh: grnsh gry, blk-plty, soft
20% Chert: AA

260-70 80% Ss: wht, f-g, sbrnd, glauc, sl. ark, vy clyflld, soft
w/sme loose
10% Sh: AA w/sme dk brn
10% Chert :AA

270-80 70% Ss: AA
20% Sh: grnsh gry, dk brn, blk, soft
10% Chert: clear, lt brn, ang, loose

280-90 70% Ss: wht, m-f-g, sbrnd, sl. ark, glauc, vy clyflld,
soft w/sme loose
20% Sh: AA w/med dk brn, sl. sandy, soft
10% Chert: AA

290-300 100% Ss: wht, med dk gry, vf-fg, sbrnd, vy clyflld, soft

300-10 30% Ss: wht, grn, f-g, sbrnd, sme sl. ark, glauc, mod-vy
clyflld, firm-soft
70% Sh: grnsh gry, dk brn, plty-blk, sme sl. silicified,
firm
Trace Chert: AA

310-20 50% Ss: AA
50% Sh: AA w/sme carb frags
Trace Chert: AA

320-30 40% Ss: wht, grn, f-g, sbrnd-sbang, sme sl ark, mod-vy
clyflld, firm-soft
40% Sh: AA
20% Chert: clear, creme, lt. orange, cs-xln, ang, loose

330-40 70% Ss: wht, grn, m-fg, sbrnd, sl. ark, glauc, vy clyflld,
soft w/sme loose
10% Sh: AA
20% Chert: clear, creme, orange, red, cs-xln, ang-sbang,
loose

340-50 60% Ss: AA w/mstly wht. w/carb incl. s.
10% Sh: AA
30% Chert: AA

350-60 20% Ss: wht, grn, m-vfg, sbrnd, glauc, sl. ark, vy clyflld,
soft-firm
60% Sh: AA
20% Chert: AA

360-70 40% Ss: AA
50% Sh: grnsh, gry, gry, blk, sl. slty, soft
10% Chert: AA

370-80 60% Ss: wht, f-g, sbrnd, glauc, sl. ark, vy clyflld, firm,
40% Sh: AA w/carb frags

380-90 80% Ss: AA
20% Sh: grnsh gry, blk, sl-mod, slty, clyey, vy soft

390-400 90% Ss: wht, grn, grn, m-fg, sbrnd, sme sl. ark, sme shly
w/carb frags, firm, mod-vy clyflld,
10% Sh: AA

400-10 10% Ss: wht, fg, sbrnd, sl. ark, mod-vy clyflld, firm-soft
90% Sh: grn, grnsh, gry, blk, sl. slty, sme carb frags,
soft

410-20 20% Ss: AA w/sme glauc
80% Sh: AA

420-30 20% Ss: wht, grn, f-g, sbrnd, glauc, sl. ark, sl-mod
clyflld, firm-soft
70% Sh: grnsh gry, blk, sl. silicic, firm
10% Chert: AA

430-40 20% Ss: wht, f-g, sbrnd, sl. clyflld, glauc, firm, vy calc.
70% Sh: AA
10% Chert: wht, creme, cs-xln, ang-sbang, loose

440-50 10% Ss: AA
80% Sh: grnsh gry, gry, grn, blk, sl. slty, firm
10% Chert: AA

450-60 80% Ss: wht, grn, f-vfg, sbrnd, sme sl. ark, glauc, vy
clyflld, firm-vy soft
20% Sh: AA

460-70 70% Ss: AA
30% Sh: AA

470-80 10% Ss: grn, vf-g, sbrnd, gauconitic, vy clyflld, soft
90% Sh: gry, grn, blk, sl-mod, slty, soft

480-90 10% Ss: wht, f-g, sbrnd, sl. ark, mod clyflld, firm, vy calc
90% Sh: AA w/carb frags

490-500 20% Ss: wht, grn, f-g, sbrnd, sl. ark, sme bentonitic,
mod. clyflld, soft
80% Sh: AA

- 500-10 50% Ss: wht, grn, f-g, sbrnd, sl. ark, glauc, carb incl.
mod clyfll, firm, sl. poros, NS.
40% Sh: grnsh gry, plty, sme slty-sandy, firm
10% Chert: lt. orange, clear, cs-xln, ang, loose
- 510-20 40% Ss: wht, grn, f-g, sbrnd, sl ark, bentonitic, glauc,
sl. clyfll, firm, sl. poros, NS
50% Sh: AA
10% Cert: AA
- 520-30 20% Ss: AA NS
40% Sh: AA
40% Chert: AA w/ mstly lt. Orange
- 530-40 20% Ss: wht, f-g, sbrnd, sl. ark, glauc, mod clyfll, firm,
sl. poros, NS
60% Sh: AA
20% Chert: AA
- 540-50 20% Ss: AA
70% Sh: grnsh gry, gry, blk, sl. slty, carb incl. firm
10% Chert: clear, cs-xln, ang-sbang, loose
- 550-60 20% Ss: wht, lt. grn, grn, f-g, sbrnd, sl. ark, glauc, fair sort,
sl. clyfll, vy calc, firm, tite
70% Sh: AA
10% Chert: AA
Trace Calcite: wht, cs-xln, sbang, poss fract fill
- 560-70 20% ss: AA
70% Sh: gry, grnsh gry, grn, blk-plty, sme sandy, carb
incl, firm
10% Chert: AA
- 570-80 10% Ss: lt grn, f-g, sbrnd, vy clyfll, glauc, vy soft,
tite, NS
70% Sh: AA
20% Chert: lt yellow, orange, cs-xln, ang, loose
- 580-90 20% Ss: wht, lt gry, f-g, sbrnd, fair sort, sl. ark,
glauc, sl. clyfll, calc, tite
70% Sh: AA
10% Chert: wht, clear, cs-xln, ang-sbang, loose
- 590-600 30% ss: wht, lt grn, vf-g, sbrnd, sl. clyfll, firm, fair
poros; NS
70% Sh: grnsh gry, gry, blk, slty-sl sandy, clyey, soft
- 600-10 10% Ss: wht, f-g, sbrnd, occ. glauc, sl. clyfll, firm, fair
poros, NS
80% Sh: grnsh gry, grn, blk-plty, mod slty-sandy, firm
10% Chert: creme, lt. orange, cs-xln, sbang, loose
Trace Clyst: wht, w/qtz xls, vy soft

610-20 80% Sh: AA
20% Chert: AA
Trace Clyst: AA

620-30 20% Ss: grn, vf-fg, sbrnd-sbang, clyfll, firm, sl. poros, NS
60% Sh: grnsh gry, dk brn, plty, sl. slty, firm
20% Chert: AA

630-40 50% Ss: AA w/mod clyfll
30% Sh: AA
20% Chert: AA

640-50 50% Ss: grn, bluish grn, vf-g, sbrnd, vy sl clyfll, friable-
soft, fair poros, NS
30% Sh: AA
20% Chert: wht, clear, creme, dk brn, cs-xln, ang, loose

650-60 50% Ss: wht, ~~vf~~-fg, sbrnd, sl. ark, glauc, sl-mod clyfll,
firm, sl poros, NS
30% Sh: AA
20% Chert: AA

660-70 50% Ss: wht, gry, f-g, sbrnd, sl. ark, glauc, mod clyfll,
firm, sl. poros, NS
40% Sh: grnsh gry, dk gry, plty-blky, sme sl slty, firm
10% Chert: AA

670-80 40% Ss: AA, w/good poros and bright gold fluor w/vy wk cut
50% Sh: AA
10% Chert: AA

680-90 50% Ss: wht, grn, f-g, sbrnd, mod-clyfll, firm, sl. poros, NS
40% Sh: AA
10% Chert: clear, wht, creme, cs-xln, ang, loose

690-700 30% Ss: AA
50% Sh: gry, grnsh gry, blky-plty, firm
20% Chert: AA
Trace Pyrite

700-10 50% Ss: wht, grn, vf-fg, sbrnd-sbang, glauc, sl. arkosic,
sl. clyfll, sme vy calc, sl. poros, NS
40% Sh: AA
10% Chert :AA

710-20 10% Ss: wht, f-g sbrnd, glauc, sl. ark, sl. clyfll, firm,
fair poros, NS
50% Sh: grnsh gry, gry, plty, sl slty, firm
40% Chert: clear, creme, orange, red, cs-xln, ang, loose
Trace Pyrite

720-30 10% Ss: AA w/sme grn
30% Sh: AA
60% Chert: AA

730-40 10% Ss: wht, f-g, sbrnd, well sorted, mod clyfll, firm,
vy clyfll, vy calc, tite, NS
50% Sh: AA
40% Chert: AA
Trace Pyrite

740-50 30% Ss: wht, lt grn, vf-fg, sbrnd, mod clyfll, sme glauc,
vy calc, tite, NS
40% Chert: AA w/mstly clear

750-60 10% Ss: wht, f-g, sbrnd, mod clyfll, soft, sl. poros, NS
60% Sh: AA
30% Chert: wht, creme, orange, reddsh brn, cs-xln, ang-
sbang, loose

760-70 30% Ss: wht, gry, f-g, sbrnd, sl. clyfll, firm, fair poros,
NS
40% Sh: AA
30% Chert: AA

770-80 20% Ss: grn, f-g, sbrnd, mod clyfll, firm, sl. poros, NS
70% Sh: grnsh gry, gry, blk, soft
10% Chert: AA

780-800 No Sample

800-10 80% Sh: grnsh gry, grn, plty-blky, firm
20% Chert: clear, red, orange, lt yellow, cs-xln, ang-sbang,
loose

810-20 70% Sh: AA w/brn, blk
30% Chert: AA

820-30 20% Ss: wht, f-g, sbrnd, sme glauc, mod clyfll, firm,
sl. poros, NS
50% Sh: AA
30% Chert: AA
Trace Pyrite

830-40 20% Ss: AA
70% Sh: grnsh gry, bluish gry, plty-blky, sme glauc, firm
10% Chert: AA
Trace Pyrite

840-50 70% Sh: grnsh gry, bluish gry, gry, plty-blky, sme sandy,
carb stringers and frags, firm-soft
30% Chert: AA

850-60 10% Ss: wht, grn, f-g, sbrnd, glauc incl, mod clyfll, firm,
sl poros, NS
70% Sh: AA
20% Chert: AA

860-70 80% Sh: grnsh gry, grn, gry, blk-y-plty, sme slty, w/carb
frags and stringers, firm.
20% Chert: AA w/ wstly clear

870-80 100% Sh: AA
Trace Ss: wht, f-g, sbrnd, sl clyfll, firm

880-90 80% Sh: grnsh gry, gry, grn, dk gry, plty-blky, sl. slty,
firm-soft
20% Chert: wht, clear, orange, red, cs-xln, ang-sbang, loose

890-900 10% Ss: wht, f-g, sbrnd, sl. ark, glauc incl, vy sl. clyfll, d,
friable, good poros, NS
70% Sh: AA
20% Chert: AA

900-10 100% Sh: grnsh gry, gry, grn, plty-blky, sl. sucrosic, soft

910-20 100% Sh: AA

920-30 10% Ss: wht, gry, f-g, sbrnd, vy sl. clyfll, soft-friable,
fair poros, NS
90% Sh: AA

930-40 100% Sh: grn, vy lt grn, dk gry, gry, grnsh gry, plty-blky,
vy small carb frags, clyey, vy soft

940-50 100% Sh: AA
Trace Ss: wht, f-g, sbrnd, sl. clyfll, vy calc, tite, NS
Trace Calcite: wht, opaque, cs-xln, sbang-sbrnd, loose

950-60 10% Ss: wht, grn, vf-fg, sbrnd, sl. clyfll, mod-vy clyfll,
firm, sl. poros, NS
90% Sh: AA
Trace Pyrite

960-70 10% Ss: AA
80% Sh: gry, grnsh gry, grn, blk-y, sme carb frags and
stringers, soft
10% Pyrite
Trace Coal: blk, vitr, ang-blky, firm

970-80 90% Sh: AA
10% Pyrite
Trace Sc: wht, f-g, sbrnd, glauc, firm, sl clyfll, sl poros, NS

980-90 10% Ss: wht, vf-fg, sbrnd, glauc incl, vy clyflld, vy
calc, tite, NS
90% Sh: AA

990-1000 10% Ss: AA
90% Sh: AA

1000-10 10% Ss: wht, f-g, sbrnd, glauc incl, sl. ark, friable, good
poros, NS
90% Sh: grn, grnsh gry, gry, blue grn, blkly-plty, sl.
sucrosic, soft
Trace Pyrite

1010-20 10% Ss: wht, f-g, sbrnd, glauc incl, sl. ark, firm, fair
poros, NS
90% Sh: AA w/dk brn, brn, carb frags, sl. slty

1020-30 100% Sh: AA
Trace Ss: wht, vf-g, sbrnd, sl clyflld, firm, tite, NS

1030-40 100% Sh: vy lt grn, grn, dk brn, gry, blkly-plty, carb frags,
sme sl. slty, soft

1040-50 100% Sh: AA

1050-60 100% Sh: grn, grnsh gry, dk brn, lt grn, blkly, sl. slty,
carb frags, firm-soft
Trace Ss: wht, f-g, sbrnd, glauc incl, vy clyflld, sl. calc,
tite, NS
Trace Pyrite

1060-70 100% Sh: AA
Trace Pyrite: w/carb partial coatings and frags

1070-80 100% Sh: dk brn, dk gry, grnsh gry, blkly, sme sl. carb,
soft
Trace Pyrite

1080-90 20% Ss: wht, grn, vf-fg, sbrnd, sme sl ark, glauc and carb
incl, sl. clyflld, vy calc, tite, NS
70% Sh: AA
10% Pyrite

1090-1100 90% Sh: AA w/plty
10% Pyrtie, w/partial carb coatings & small frags

1100-10 10% Ss: wht, vy lt gry, vf-g, sbrnd, carb incl, firm,
sl poros, NS
90% Sh: grn, gry, grnsh gry, blkly, sme vy sl. slty, soft,
carb frags
Trace Pyrite

- 1110-20 10% Ss: lt gry, f-g, sbrnd, sl clyfll, carb incl, sl.
clyfll, firm, vy calc, tite, NS
90% Sh: AA w/dk gry, dk brn
- 1120-30 10% Ss: AA
90% Sh: AA w/mstly dk brn, dk gry
Trace Calcite: wht, cs-xln, ang-sbang, loose
- 1130-40 100% Sh: grnsh gry, dk brown, dk gry, blkly-plty, sme sl.
slty, clyey, carb stringers and frags, firm-soft
- 1140-50 20% Ss: lt gry, vyf-g, sbrnd, carb incl, sl. clyfll, vy
calc, tite, NS
80% Sh: AA
- 1050 60 40% Ss: lt gry, grn, vf-g, sbrnd, sme carb incl, glauc
incl, sl-mod clyfll, sme mod-vy calc, firm, sl. poros, NS
60% Sh: AA
Trace Pyrite
Trace Calcite: AA
- 1160-70 40% Ss: wht, lt gry, grn, vf-fg, sbrnd, sme sl. ark, carb
incl, sl-mod clyfll, firm-soft, sl-vy calc, sl. poros, NS
60% Sh: AA
- 1170-80 20% Ss: AA
80% Sh: grnsh gry, dk gry, dk brn, blkly-plty, soft
Trace Pyrite
- 1180-90 50% Ss: lt gry, f-g, sbrnd, sl ark, glauc and carb incl,
mod clyfll, firm, vy calc, tite, NS
50% Sh: AA
- 1190-1200 30% Ss: wht, grn, lt gry, f-g, sbrnd, glauc incl, mod
clyfll, firm, vy calc, tite, NS
70% Sh: grnsh gry, gry, dk brn, blkly, firm-soft
- 1200-10 10% Ss: wht, lt gry, vf-g, sbrnd, glauc and carb incl, vy
firm, sl. clyfll, vy sl. poros, NS
80% Sh: grnsh gry, dk gry, dk brn, blkly, sme sl. slty,
clyey, carb frags, soft-vy soft
10% Clyst: wht, blkly, vy soft
Trace Calcite: creme, cs-xln, ang, loose, poss fract fill
- 1210-20 10% Ss: AA, NS
90% Sh: AA

- 1220-30 10% Ss: lt gry, vf-g, sbrnd, carb incl, sl. clyfll, firm,
vy calc, tite, NS
80% Sh: AA
10% Coal: blk, vitr, blk-sbrnd, firm
Trace Pyrite
- 1230-40 30% Ss: wht, lt gry, grn, f-g, sbrnd, carb incl, vy firm,
vy calc, vy sl. clyfll, sl. poros, NS
70% Sh: AA
Trace Pyrite
Trace Calcite: creme, cs-xln, ang, loose
- 1240-50 10% Ss: lt gry, vf-g, sbrnd, carb incl, vy sl. clyfll,
friable, vy calc, fair poros, NS
90% Sh: AA
- 1250-60 10% Ss: AA
90% Sh: grnsh gry, dk gry, dk brn, blk-plty, sme carb
frags, firm-soft
- 1260-70 100% Sh: AA
- 1270-80 20% Ss: lt gry, grn, vf-g, sbrnd, vy sl. clyfll, carb frags,
firm, sl. calc, vy firm, tite, NS
70% Sh: AA
10% Coal: AA
- 1280-90 30% Ss: lt gry, wht, grn, vf-fg, sbrnd, sl. ark, sl. clyfll,
vy calc, tite, NS
60% Sh: AA
10% Coal: blk, vitr, ang, firm
Trace Pyrite: As coatings on coal.
- 1290-1300 50% Sh: wht, lt gry, grn, vf-fg, sbrnd, carb incl, sl. clyfll,
firm, vy calc, tite, NS
40% Sh: AA
10% Coal: AA
- 1300-10 30% Ss: AA w/sme carb stringers
60% Sh: AA
10% Coal: AA
- 1310-20 40% Ss: wht, lt gry, grn, vf-fg, sbrnd, carb incl, sl-mod
clyfll, firm-soft, tite, NS
50% Sh: gry, grnsh gry, brn, dk gry, blk-plty, carb frags,
soft
10% Coal: AA
- 1320-30 20% Ss: lt gry, f-g, sbrnd, carb incl, sl. clyfll, soft-
vy soft, sl. poros, NS
70% Sh: AA
10% Coal: AA

1330-40 20% Ss: AA w/firm, sl. poros, NS
70% Sh: AA
10% Coal: AA

1340-50 10% Ss: lt gry, f-g, sbrnd, carb incl, mod clyfll, firm,
vy calc, tite, NS
90% Sh: grnsh gry, dk brn, gry, blk, sme sl slty, firm-soft
Trace Pyrite

1350-60 20% Ss: wht, lt gry, f-mg, sbrnd, sl. ark, sl. clyfll, carb
incl, firm, vy calc, tite, NS
80% Sh: AA

1360-90 NS

1390-1400 20% Ss: AA w/sme glauc, incl, NS
70% Sh: AA w/mstly dk brn-dk gry, carb incl, soft
10% Calcite: AA
Trace Pyrite

1400-10 30% Ss: wht, lt gry, f-g, sbrnd, sl. ark, glauc incl, sme
carb incl, sl. clyfll, firm, sl-vy calc, tite, NS
60% Sh: dk gry, dk brn, grnsh gry, blk-plty, sme carb frags,
soft- vy soft
10% Pyrite
Trace Calcite: wht, cs-xln, ang-sbang, loose

1410-20 40% Ss: AA w/sl-mod clyfll
50% Sh: AA
10% Coal: blk, vitr, blk, firm
Trace Calcite: AA

1420-30 50% Ss: wht, m-g, sbrnd, sl. ark, sl. clyfll, firm, fair poros
30% Sh: AA w/ dk brn-gry poss lignitic
10% Calcite: AA
10% Pyrite

1430-40 30% Ss: AA w/sme grn, glauc incl, firm
60% Sh: AA
10% Calcite: AA
Trace Coal: AA

1440-50 50% Ss: lt, gry, f-g, sbrnd, sl. ark, glauc and carb incl,
sl-mod clyfll, firm, vy clyfll, tite, NS
40% Sh: AA
10% Coal: AA

1450-60 70% Ss: AA
20% Sh: AA
10% Coal: AA

1460-70 50% Ss: lt gry, f-g, sbrnd, sl ark, glauc and carb incl,
mod clyfll, soft, tite, NS
40% Sh: grnsh gry, dk brn, dk gry, blkyl-pty, sme carb-
lignitic, soft
10% Coal: AA

To 1471 @ 2:20 PM