

RESUME



SCANNED

Operator: Union Pacific Resources Company

Well Name and Number: #1 Vicksburg 31-21

Prospect: Vicksburg

Location: Section 21, 660' FNL, 1980' FEL; T-13S, R-47W

County and State: Cheyenne, Colorado

Elevation: KB: 4369', GL: 4359

Spud Date: May 21, 1992

Completion Date: May 29, 1992

Hole Sizes: 12 1/4": 0-500'; 7 7/8": 500-5570'

Casing Data: 8 5/8" set at 497'

Logging Data: DIL/GR, CNL/LDT/GR, BHC/GR, Schlumberger, Ft. Morgan

Exploration Geologist: Daniel K. Tarkington

Drilling Foreman: Ed Martin, Jack Parrott

Wellsite Geologist: John C. Lamb

Contractor: Murfin, Rig 14

Tool Pusher: Jim Renner, Greg Unruh

Mud Type: Gel-Chemical

Mud Company: Service Mud, Tony Maestas

Drilling Days: 9

Rotating Hours: 138 1/4

Bottom Formation: Mississippian Spergen

Status: Dry & Abandoned

# FORMATION TOPS AND CORRELATION

	UPRC #1 Vicksburg 21-13S-47W KB 4369	Mull 1-16 State Hines 16-13S-47W KB 4380
DAKOTA	1861(2508)	No Log
CHEYENNE	2176(2193)	No Log
BLAINE SALT	2929(1448)	No Log
STONE CORRAL	3180(1189)	No Log
NEVA	3804(565)	3820(560)
FORAKER	3877(492)	3896(484)
SHAWNEE	4165(204)	4186(194)
HEEBNER	4399(-30)	4418(-38)
TORONTO	4428(-59)	4449(-60)
LANSING	4448(-79)	4469(-89)
MARMATON	4824(-455)	4822(-442)
PAWNEE MEMBER	4878(-509)	4875(-495)
Ft. SCOTT MEMBER	4905(-536)	4905(-525)
CHEROKEE	4954(-585)	4962(-582)
ATOKA	5124(-755)	5131(-751)
MORROW SHALE	5256(-887)	5277(-897)
V5 SAND	5344(-975)	5354(-974)
V7 SAND	Not Deposited	5416(-1036)
L. MORROW LS	5459(-1090)	5476(-1096)
Possible Mississippian	5484(-1118)	No Pick
SPERGEN	5505(-1136)	5510(-1130)
TD	5578(-1209)	5560(-1180)

## BIT RECORD

BIT #	SIZE	TYPE	IN	OUT	FOOTAGE	HOURS
1	12 1/4"	S33SF	0'	500'	500'	10 3/4
2	7 7/8"	S82F	500'	3969'	3469'	59 3/4
3	7 7/8"	S85F	3969'	5570'	1601'	67 3/4

## SURVEYS

127 3/4	395 1	1504 3/4	3014 1	4461 1
219 3/4	500 1	2009 1	3518 1 1/8	4966 1
307 3/4	1000 7/8	2512 7/8	3969 7/8	5570 2

## DAILY CHRONOLOGY

DAYS OVER HOLE	DATE	8AM CST DEPTH	24 HOUR FOOTAGE	DAILY ACTIVITY
1	May 21	0'	0'	MIRU, spud, drlg
2	May 22	500'	500'	Drlg, run & cement casing, WOC, NU, drlg
3	May 23	1200'	700'	Drlg, TF hole in DP, drlg
4	May 24	2760'	1560'	Drlg
5	May 25	3780'	1020'	Drlg, TFB, washed & reamed 80', drlg
6	May 26	4310'	530'	Drlg, displaced mud system at 4120', Drlg
7	May 27	4890'	570'	Drlg, CFS at 4890, drlg, TF hole in DP
8	May 28	5250'	360'	TIH, drlg, LC, drlg
9	May 29	5570"	320'	Drlg, prep for logs, LC, prep & logging

## LOST CIRCULATION INTERVALS

5540': 175 bbl; 5570': 125 bbl



## MUD REPORTS

Date	May 26	May 27	May 28	May 29
Depth	4126'	4817'	5180'	5570
Weight	8.7	9.2	9.2	9.1
Funnel Viscosity	38	54	41	54
Plastic Viscosity	11	14	12	16
Yield Point	14	17	14	18
Gel Strengths	7/13	12/28	8/16	12/26
Water Loss	16.0	8.0	8.0	8.0
Filter Cake	1/32	1/32	1/32	1/32
Solids	2.8	6.4	6.4	5.6
Sand	TR	TR	TR	TR
pH	10.0	10.0	10.0	9.5
Alkalinity Mf	.6	.7	.7	.5
Calcium	40	80	40	40
Chlorides	600	600	600	600
LCM lb/gal	TR			7

## SUMMARY

The #1 Vicksburg 31-21 was drilled on the Vicksburg Prospect. The location was drilled as an offset to the west and south of the Eureka Creek discovery well (MDC 1-16 State-Hines), which produces oil with associated water from the Pawnee Member of the Marmaton Formation.

The primary objective was the Morrow V7 Sandstone. Secondary objectives included the aforementioned Marmaton interval, V5 Sandstone, Lower Morrow Limestone and Spergen Dolomite.

Total Morrow Clastic Interval was 203' thick. The V7 Sandstone which was 8' thick in the Mull 1-16 State-Hines well was not present in the #1 Vicksburg. The V5 Sandstone was which also was in the 1-16 State-Hines, was poorly developed and tight with no shows being recorded.

The oil productive facies of fossil moldic porosity within the Pawnee Member of the Marmaton was not encountered. The following sample description was lagged to the correlative interval: Limestone brown to light grey, fine to very fine crystalline, dense, very oolitic grading to oolite Wackestone, generally slightly to moderately argillaceous; trace light brown, fine crystalline, with poor to very poor intercrystalline porosity, dull gold fluorescence; poor, slow sub steaming to milky greenish gold cut, no odor.

The Lower Morrow Limestone was significantly different than the offsetting well, in that the lower bench was 24' thick in the Vicksburg (13' in the State-Hines) and contained weak shows associated with poor intercrystalline porosity. This lower bench (5484-5506)' is most likely the stratigraphic equivalent of the oil productive Lower Morrow Limestone to the south and east in the Mount Pearl Field.

Weak shows of little significance were recorded within the Lansing and Cherokee Formations. No shows were noted in the Spergen.

## SAMPLE DESCRIPTIONS

### Unlagged Sample Depths and Log Tops

4110 Sh red-gy gn  
4120 Sh red gy gn  
4130 Sh red /freq Anhy & Gyp incl Ls tr buf-gysh vfxl Ss incr uncon cg  
4140 Ls lrg incr buf-off wh vfxl mod sparry brit sme gysh & sli arg Sh decr Ss incr  
4150 Ls sli decr amts & bec pred gysh & sli arg  
4160 Ls cont'd amt gen lt gysh-buf vfxl dns brit-sft Sh red-gy Ss sli decr  
4170 Ls incr & chng: lt gysh fxl-vfxl sft occ sb chky /rthy txt freq fos  
4180 Ls lt gysh bn vfxl dns brit lt gy fxl-sb chky frm-sft

### SHAWNEE 4165'

4190 Ls lt gy-gysh bn-off wh fxl-vfxl gen dns non fos /freq fos & sparry  
4200 Ls cont'd amt & bec incrly arg  
4210 Ls lt gy-buf fxl-sb chky occ bnsh vfxl sparry & fos  
4220 Ls lt gy cont'd Sh pos incr gy  
4230 Sh def sm incr m-dk gy sli carb  
4240 Dol sm amt wh-off wh mxl fri sli calc pr intxl poro NSOC  
4250 Dol cont'd sm amt AA Sh incr gy red gn & bn  
4260 Ls lt gy-off wh vfxl-fxl dns brit-sft Sh sli decr  
4270 Ls chng: off wh fxl fri-brit-sft fos & sparry i.p. freq dolie & grds to calc Dol i.p.  
4280 Dol sm incr wh-off wh mxl dns-vfri pr intxl poro NSOC dull mar flor Ls incr amts micxl-vfxl sparry & vfos dns  
4290 No sample



4300 Dol decr Ls pred off wh-vlt gysh wh fxl-vfxl occ rthy txt decrly fos Sh pos incr m-dk gy sli carb  
 4310 Ls def chng: wh-off wh sb chky-fxl vfos sft  
 4320 Sh def incr gy's fn txt bdd?  
 4330 Sh cont'd gy's /hvy tr blk vcarb  
 4340 Sh incr blk carb Ls bn-gy vfxl dns fos arg-sli mrly i.p.  
 4350 Ls chng: bec sli sdy i.p. Ss lt gysh wh vfg-slt calc cem Sh cont'd gy & blk  
 4360 Sh decr Ls off wh-lt gysh sh vfxl-fxl dns gen fos  
 4370 Ls chng: bec lt bnsh vfxl sli ool sli arg  
 4380 Sh incr m-dk gy & bn sli carb i.p.  
 4390 Ls chng: lt gysh wh arg-sli mrly app Sh incr vdk gy mod carb  
 4400 Ls chng: off wh-vlt gysh wh fxl-sb chky i.p. rthy txt fos

#### HEEBNER 4399'

4410 Sh lrg incr blk carb  
 4420 Sh sli decr Ls off wh-gy vfxl dns mod ool sparry i.p.

#### TORONTO 4428'

4430 Ls chng: incr bn micxl vdns frm-hd Dol hvy tr amt bnsh mxl spotty tarry bn carb stn pred wh mxl-fxl cln sli calc brit-fri  
 4440 Dol sli incr AA Ls off wh-buf fxl-vfxl freq rthy txt  
 4450 Sh pos incr blk vcarb Dol cont'd sm incr AA

#### LANSING 4448'

4460 Ls off wh-lt gysh wh vfxl freq fos & mod sparry occ vsdy grd to Ss Sh cont'd red gy /sme blk  
 4470 Ls off wh-wh-lt gysh wh AA /sme sb chky /rthy app Sh AA  
 4480 Ls pos chng: incr amts sdy /sme gysh ool sli arg Sh cont'd amt  
 4490 Sh decr Ls incr amts ool /sme sparry-vsparry  
 4500 Ls wh-buf vfxl-fxl ool-voool gen cln app sparry i.p.  
 4510 Ls pos chng: cont'd cln app bec decrly ool  
 4520 Ls off wh-vlt gysh vfxl-fxl pred non ool & mod cln app  
 4530 Ls cont'd /sm amt lt gy arg  
 4540 Ls chng: pred lt-m gy fxl dns arg Sh incr vdk gy & blk carb  
 4550 Ls chng: vlt gysh bn vfxl-fxl tr frag pred fos Wkst gen dns /sparry-rthy txt occ ool tr's pr intxl poro  
 4560 Ls chng: off wh-vlt gysh wh vfxl-fxl-micxl def decr fos Sh sme dk gy-blk carb i.p.  
 4570 Ls chng: off wh-lt gysh bn vfxl-fxl pred rthy txt sme vdns hd-brit gen sli fos  
 4580 Ls chng: sli mot gysh wh fxl-mxl-micxl vfri-fri brit indist ool ? fos freq fr intxl fr-pr moldic poro /dull gd mnrl flor NSOC Ss sm amt lt gysh wh vfg calc cem  
 4590 Ls cont'd fos Wkst /pr-fr moldic poro bec incrly dns /decr intxl poro  
 4600 Sh sm incr blk carb Ls chng: def decr fos AA bec gysh bn vfxl dns sli fos  
 4610 Ls chng: incr gy arg sme & frag /rip ups Sh cont'd sm amt blk /sme gy's  
 4620 Sh incr m-dk gy occ blk carb Ls chng: decrly arg & incr sli fos /cln app



4630 Ls chng: lt gysh tn vfxl-fxl indist ool ? fos sli arg /tr's pr moldic poro  
 4640 Ls lt tn-lt gysh vfxl dns sli arg Sh decr  
 4650 Sh sm incr vdk gy & blk Ls chng: lt tn-lt gy vdns hd-frm sli fos  
 4660 Sh sli decr Ls AA  
 4670 Ls lt-m gy dns-vdns bec sli ool Sh sm amt AA  
 4680 Ls chng: off wh fxl-sb chky gen /rthy txt cln  
 4690 Ls chng: vlt tn-lt bnsh tn fri ddic pr intxl poro vlt bn oil stn dull gn-gnsh gd flor fr mod  
 f sb stmg gnsh ct Dol sm amt lt tn-lt bnsh tn fxl-mxl vfri pr-fr intxl poro  
 4700 Sh vlrg incr blk vcarb Ls cont'd  
 4710 No sample  
 4720 Sh def decr Ls chng: lt-m bn micxl-vfxl dns-vdns brit sli-mod fos gen arg  
 4730 Sh def sm incr blk carb Ls cont'd bec sli cln'r i.p.  
 4740 Ls chng: lt gy-lt tn vfxl dns frm-brit Sh decr  
 4750 Ls lt gy-lt tn vfxl dns sli arg fos  
 4760 Ls chng: gen vfos /sme lt tn mxl-cxl vfri pr-fr intxl poro NSOC  
 4770 Ls lt tn- lt bn incrly dns & cont'd fos Sh incr red bd's & Kniob cvngs  
 4780 Ls chng: bec off wh fxl rthy txt gen cln Sh AA /sm amt blk  
 4790 Ls cont'd  
 4800 Ls chng: lt gy vfxl dns sli arg Sh sm incr gy's decr cvngs  
 4810 Ls lt gy-lt bnsh tn vfxl-micxl dns sli arg Sh sm amt blk & gy  
 4820 Ls cont'd lt gy-lt bnsh tn dns-vdns sli fos sli arg Ss lt gy slty arg grds to sh

#### MARMATON 4824'

4830 Sh lt gy vsdy slty grds to Sltst Ls lt gysh tn vfxl fos sdy i.p. arg  
 4840 Ls chng: lt gysh vfxl dns hd-frm ool Wkst mod sparry i.p. Sh vsm incr blk carb  
 4850 Sh blk vcarb lt gnsh gy blkgy vfn txt Ls vlt gy-buf vfxl dns sli fos occ fxl-vfxl less dns brit  
 4860 Ls chng: lt tn fxl ool vsm amt pr-fr intxl poro pr slo sb stmg gnsh gd ct Sh decr  
 4870 Ls chng: off wh-vlt gy vfxl-fxl occ rthy txt pred vool occ grdg to Wkst dns Sh sm amt m-  
 dk gy & blk  
 4880 Sh incr blk & gy Ls cont'd ool AA sme vsdy & non ool  
 4890 Sh lrg incr red gy cvngs ?  
 Circulating at 4890'

#### Pawnee Member 4878'

+15min Ls chng: sli mot lt gy-off wh pred vool freq sparry  
 +30min Ls chng: bn-lt gy fxl-vfxl dns vool grds to Wkst gen sli-mod arg tr fxl /pr-fr intxl poro  
 dull gd flor pr slo sb stmg-mlky gnsh gd ct  
 +45min Ls lt bn-lt gy sli mot vfxl-fxl dns frm-hd vool grds to Wkst gen arg occ micxl & mod  
 vsparry  
 +60min Ls chng: decrly fos bec bnsh micxl-vfxl vdns-brit sli fos  
 4900 No sample  
 4910 Ls bn-dk bn vfxl-micxl dns sli fos sme ool Sh prob incr m-dk gy-blk carb i.p.  
 4920 Ls def chng: wh-off wh fxl-chky frm-sft /buf vfxl-micxl dns all vcln app Sh cont'd



Ft. Scott Member 4905'

4930 Ls chng: bec lt bnsh-bnsh buf micxl-lith vdns brit Sh decr  
4940 Ls bnsh-gy micxl-lith vdns incrly arg & sli fos i.p. scat chty loc pyr  
4950 Ls gy-gysh bn micxl-vfxl vdns-dns cont'd arg freq less dns /rthy txt  
4960 Ls cont'd gy dns incrly arg

CHEROKEE 4954'

4970 Sh vsm incr blk vcarb dism pyr Ls chng: freq lt tn fxl-vfxl less dns brit sli dolie occ lt  
bnsh fxl vsft brit pr-vpr intxl poro vdull gnsh gd flor vfnt gnsh gd ring ct  
4980 Ls lt tn-off wh-lt gy fxl-vfxl brit & fri to sft Sh decr  
4990 Sh lrg incr blk-bnsh blk vcarb dism pyr Ls chng: lt bnsh mod sparry ool Wkst-Pkst pred  
vdns micxl-lith tr's /blkgy spar infil vfri dull mnrl flor  
5000 Ls def chng: lt bnsh wh vfxl-fxl abdt fos frags Sh decr Ss sli tr lt gy l.fg arg calc cem  
5010 Ls gy-bn dns arg sli fos sme vfos cln'r /freq wh-off wh fxl-sb chky vcln tr lse calc Sh sm  
amt m gy-blk  
5020 Sh def incr blkcarb Ls cont'd dns & sli fos  
5030 Ls chng: bec lt'r col vfxl-fxl brit-sft bec ool /tr sparry ool Wkst Sh decr  
5040 Ls chng: bec fos /sm amt ool Sh def incr blk vcarb  
5050 Ls bn-gy vfxl dns frm gen sli fos & arg sme off wh fxl-vfxl cln'r app Sh decr blk /sme  
gy & gn freq red bds  
5060 Sh incr blk vcarb Ls def chng: wh-off wh fxl-sb chky gen /rthy txt  
5070 Sh cont'd incr blk Ls def chng: bec lt bn vfxl-micxl vdns brit sli fos  
5080 Ls lt bn AA bec incrly fos /sme incr wh-off wh fxl-sb chky Sh decr  
5090 Ls chng: bn-gy dns arg fos tr bn fxl frm dull gn flor fnt mlky gn ct Sh incr blk /sme gysh  
gn vfn txt  
5100 Ls decr Mdst /incr vlt gy-crm fxl frm-sft fos grds to Wkst Sh incr blk  
5110 Ls crm-tn vfxl-fxl sli-mod fos /gy Mdst Sh decr blk /cont'd gy's  
5120 Ls chng: gy-bn micxl-vfxl sli fos sparry /cont'd crm-tn fxl /rthy txt i.p.  
5130 Sh incr dk gy-blk Cht sm amt bn opq fos Ls decr lt'r col incrly arg

ATOKA 5124'

5140 Ls cont'd incr dk'r col's pred vdns grds to Mdst freq crm-tn fxl rthy txt Sh incr vdk gy  
& blk Cht vsm amt AA  
5150 Ls lt tn-lt gy-lt bn vfxl dns brit sli fos sme vfos Sh decr AA /incr red bd's  
5160 Sh incr dk gy & blk sme lt gy & lt gn sdy i.p. incr red bds Ls crm-tn-gy AA Cht sm amt  
5170 Ls chng: incr lt'r col's sme buf-crm vfxl vsparry ool Pkst /sli mot dk gy vfxl grds to Mdst  
5180 Ls chng: decr lt col Sh m-dk gy /incr red bd's  
5190 Ls chng: crm-off wh-lt tn vfxl-fxl /pred lt gy Mdst Sh hvy amt red & gn /sme gyp  
5200 Ls crm-lt tn-lt gy less arg /abdt m-dk gy Sh cont'd red & blk  
5210 Ls cont'd less arg /chng: bec ool sme vsparry ool Wkst Sh incr blk & vdk gy /hvy amt  
red  
5220 Sh decr blk Ls pred lt-m gy fxl-vfxl arg  
5230 Sh incr blk /cont'd vhyv amt red bds Ls pos chng: sm incr wh-off wh fxl vcln app  
5240 Ls cont'd incr wh /vcln app



5250 Sh def incr blk Ls decr lt'r col's /incr m-dk gy vfxl-mnrly  
5260 Sh decr blk /sli decr red Ls lt-m gy-off wh vfxl cln-sli mnrly  
5270 Ls sli mot lt-m gy vfxl dns sli pyr  
5280 Ls chng: bec bnsh incr arg Sh def incr vdk gy & blk tr mot gy gn splty wxy

#### MORROW SHALE 5256'

5290 Sh sm amt lt gy plty hvy tr coaly plnt-wood debr Ls chng: bec lt'r col cln'r app  
5300 Sh def incr lt-m-dk gy fn txt carb i.p. /tr's bn-gysh bn splty-sb blkly vfn-sb wxy txt  
5305 Sh incr lt'r col vfn txt occ fos sme mot lt-dk gy & pyr

#### UPPER MORROW LIMESTONE 5292'

5310 Sh decr? Ls incr amt pred lt tn-lt bn vfxl-micxl dns indist fos /freq wh-off wh fxl-sb chky  
5315 Sh sli incr amts lt-m-dk gy fn txt /vlt gn & gnsh gy vfn txt occ sli sdy sli-mod pyr i.p.  
5320 Sh def incr m-dk gy fn txt occ fos /freq amt lt gn & lt gy blkly sb wxy-vfn txt  
5325 Sh cont'd incr admixture AA  
5330 Sh incr lt-m gy & gysh gn fn txt occ sli pyr

#### Non Marine 5318'

5335 Sh def chng: vlt bn-lt gysh bn blkly wxy fn carb debr Ss tr's uncon u.mg & l. cg brkn out  
of Shale? tr coaly wood debr

#### Weathered Marine 5324'

5340 Sh pos decr lt'r col wxy AA /incr lt gn flky tr sdy tr withd app mot gn-dk gy  
5345 Sh admixture lt gn & lt-m-dk gy all fn txt /decr vlt col /wxy txt Ss tr shrdy trnsf fg glau  
sil cem

#### V5 MARKER 5330'

5350 Sh lt gn lt-m-dk gy tr's lse shell frags sme m gy blkly /crs carb debr tr Ss lt gy vfg-slt-l.fg  
calc & sil cem sli glau  
5355 Ls pos incr lt bn vfxl-micxl dns sparry sli fos Ss def sm incr trnsf mg-l.cg uncon & 2 grn  
clus /sil cem Sh lt gn & lt-m-dk gy

#### V5 SANDSTONE 5343'

5360 Ss lrg'r clus: trnsf cg-fg sb ang vprly srted fri-sli hd mod-vhily sil cem sli cly fld i.p. gen  
tite app tr's ass Clyst all NSFOC  
5365 Ss incr amt clus AA /chng: incr grn size incrly shrdy app tr /Kspar grns sli tr carb debr

#### Possible Paleosol & Weathered Marine 5354'

5370 Ss def decr Sh def incr m-dk gy /tr flky varigtd red gn gy poss Paleosol  
5375 Sh incr m-dk gy plty-flky Ss cont'd decr  
5380 Sh lt gn & lt-m-dk gy flky-plty Ss decr amt  
5385 Sh lt gn & m-dk gy fn txt sme bn blkly sli rgh txt /sm amt lt bn splty wxy vitr debr  
5390 Sh incr lt gn & m-dk gy tr chnks vitr carb debr Ss sli tr uncon trnsf mg-l.cg sil cem



Non Marine 5375'

- 5395 Sh chng: vlt gn sb wxy & bn flky sb wxy Ss def incr amt (5%) uncon clr-trnsl u.mg-l.cg  
occ shrdy pred sb ang  
5400 Sh pred m-dk gy fn txt lt gn flky sb wxy sli rgh txt pyr tr dk bn blkly vcarb Ss pos decr  
5405 Sh lt gn & m-dk gy sm amt bn blkly-flky Ss prob sli decr amt

Marine 5392'

- 5410 Sh lt-m gn vfn sb wxy txt sli incr gysh bn blkly sli rgh txt tr coaly plnt or wood debr Ss  
decr

Possible Non Marine 5396'

- 5415 Sh gn & gysh bn AA /pos incr buf-lt gy vfn sb wxy Ss pos sli incr cg uncon & sli tr clus  
lt gy vfg varg vsft tr coaly wood debr  
5420 Sh incr lt bn blkly wxy occ /carb debr Ss tr's uncon  
5425 Sh cont'd admixture lt & dk col's Ss prob decr tr's Ls pos incr buf-vlt gysh micxl-vfxl  
indist fos  
5430 Ls sm amt bn Sh cont'd lt'r col's AA /pos incr wthd mot dk gy & gn Ss sm amt uncon  
clr mg sb rnd  
5435 Sh pos chng: lt gy plty wthd /pred lt gn vfn txt plty-flky occ sdy sme bn & gy /carb debr  
5440 Sh lt-m-dk fn txt lt gn vfn-sb wxy txt  
5445 Sh prob incr m-dk gy  
5450 Sh lt-m-dk gy Ls cont'd sm amt bn micxl dns brit

Possible Non Marine 5440'

- 5455 Sh pos chng: sm amt bnsh buf-bn blkly-flky wxy txt Ls pos sli incr amt bn AA tr lse fos  
frags  
5460 Sh pred m-dk gy fn txt gysh gn-gn vfn sb wxy txt decr bnsh Ls sm amt bn & gysh bn

LOWER MORROW LIMESTONE 5459'

- 5465 Ls chng & incr wh vfxl-micxl sparry & fos  
5470 Ls fr incr wh vfxl-micxl fos sparry vcln app  
5475 Ls sli incr wh fos cln app AA /sme bnsh sli fos sli arg  
5480 Ls cont'd incr cln app crm-lt tn-lt bnsh vfxl-fxl-micxl vfrm-sft gen dns freq rthy txt non-fos  
occ blkly spar xl  
5485 Ls cont'd /sme gysh bn arg Sh pos incr gnsh gy flky fos  
5490 Ls gysh bn vfxl-micxl dns brit sli arg /cont'd cln wh vfos

Possible MISSISSIPPIAN 5484'

- 5495 Ls chng: pos incr wh fxl-mxl vool i.p. freq blkly spar xl's tr mod-vsparry  
5500 Ls def chng: wh mod-vsparry vool & grds to Wkst i.p. sme vfxl-fxl  
5505 Ls off wh-crm vfxl-fxl occ blkly spar xl's vcln app pred indist fos ool  
5510 Ls cont'd AA /sli decr amt & chng: dk bn vfxl dns arg Sh prob incr gn & gy  
5515 Ls pred off wh-crm vfxl-fxl vcln app fos i.p. & ool i.p. /chng: bec sdy vsli glau tr's fr-pr  
intxl & pr vug poro /spotty bri yel-gd flor vslo vpr mlky gnsh ct



SPERGEN 5505'

5520 Ls AA /cont'd sm amt vpr show Dol vsli tr lt tn vlt gysh fxl calc

5525 Dol lt bn-gysh bn vfxl dns arg fos lt-m bn fxl /tr vfny gran all gen vdns tite app NSFOC

Ls wh cln app AA

5530 Dol lt gysh bn-lt gy vfxl-mxl-vfny gran i.p. gen dns & tite app /sme vpr poro NSFOC

5535 Dol lt bn-lt gy-lt bnsh gy fxl-vfxl occ vfny gran frm-fri i.p. occ cxl vfri all NSFOC

5540 Dol gysh bn fxl-vfxl pred dns-vdns arg fos occ bn vfn-crs gran vfri all NSFOC

5545 Dol lt bn sli cln'r app vfny gran fri-brit /gysh bn dns arg

5550 Dol AA Sh incr Morrow cvngs

5555 Dol chng: sme lt gysh bn-lt bn fnly-crs gran /tr sb suc vfri pr poro NSFOC Sh hvy tr amt

Morrow cvngs

5560 Dol incrly dns & arg /decr gran-sb suc

5565 Dol cont'd gysh bn & dns /incr Morrow cvngs

5570 Dol decr Ls incr off wh-lt gysh wh fxl-sb chky

Circulating at TD

+60min Sh lrg incr Morrow cvngs