Cassville -Bowlby (068)

DEC 04 1989

tate of West Birginia DEPARTMENT OF ENERGY Gil und Cas Bivision

| Date November | 30, | 1989 | | |
|-------------------------------------|------|-------------|-----|-------|
| Operator's Well No. <u>Rider</u> | nour | #4 | | |
| Farm Ridenour | W11 | llard | & | Carol |
| API No. 47 - | 061 | - 03 | 303 | } |

DIVISION OF OIL & GAS
DEPARTMENT OF LIVERGY WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

| (If "Gas," Production X / Undergrou | / Wast ind Storag | e Disposa e/ Deep | l/ p/ Sha | llowX_/) | | | |
|---|-------------------------|----------------------|---------------|---------------------------------|------------------------------|--|------|
| LOCATION: Elevation: 1120' Watershed Mo | nongahela | River | | | | | |
| District: Union County Monon | | | e Morganto | own North, WV | -PA | | |
| | <u></u> | | - | | | | |
| | | | | | | | |
| COMPANY Noumenon Corporation | | | | | | • | |
| ADDRESS P.O. Box 842, Morgantown, WV 26505 | Casing | Used in | Left | Cement | | | |
| DESIGNATED AGENT Stephen K. Shuman, Pres. | Tubing | Drilling | in Well | fill up Cu. ft. | · | | |
| ADDRESS 256 High St., Morgantown, WV 26505 | Size | | | | | | |
| SURFACE OWNER Willard W. & Carol Ridenour | 20-1616" Cond. | 19' | 19' | | | | |
| ADDRESSRt. 4. Box 287-A. Morgantown, WV 26505 | 111,3/4" | 441 | . 441 | | | | |
| MINERAL RIGHTS CWIERWILLARD W. & Carol Ridenour | 9 5/8 | | | · | nazalina su naza y laturan n | e e de la composition della co | ₩ N |
| ADDRESSRt.4, Box 287-A, Morgantown, WV 26505 | 8 5/8" | 1107' | 1107' | cts(275sks) | \ | | |
| OIL AND GAS INSPECTOR FOR THIS WORK 2604 Crabapple Lane | 7 | 220, | | T CO (E) SOMO | , | | |
| Donald Ellis ADDRESS Fairmont, WV 26554 | 5 1/2 | | | | | | |
| PERMIT ISSUED 12-14-88 | 4 1/2" | | 2614' | 246 sks | | | |
| DRILLING COMMENCED 12-17-88 | 3 | | | 240 323 | | | |
| DRILLING COMPLETED: 12-22-88 | 2 | | | | | | |
| IF APPLICABLE: PLUGGING OF DRY HOLE ON | | | | | | | |
| CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED | Liners used | | | | | | |
| CN N/A | | | | | | | |
| GEOLOGICAL TARGET FORMATION Bayard | | Dept | h 2680 | feet | | | |
| Depth of completed well 2680 feet Ro | otary X | _/ Cable | Tools_ | | | | |
| Water strata depth: Fresh 56, 974 feet; | Salt | feet | | | | | |
| Coal seam depths: 630', 700', 882' | Is coal b | eing mine | d in the | area?NO | | | |
| OPEN FLOW DATA | | | | | | | |
| Producing formation Big Injun, Squaw | Pay | zone dept | | Injun=1484' aw=167 5' | | | |
| Gas: Initial open flow 0 Mcf/d (| Dil: Init | ial open | flow | Bb1/d | | | |
| Final open flow 65 Mcf/d | Fina | ul open fl | .cw | Bb1/d | | | |
| Time of open flow between initia | al and fir | al tests_ | 36 hou | rs | | | |
| Static rock pressure 425 psig(surface | measureme | ent) after | 24 hou | rs shut in | | | |
| (If applicable due to multiple completion- | -) | | top Gor | don = 2197' | | | |
| Second producing formationGordon, Fifth, Baya | rd Pay | zone dept | h top Fif | th & Bayard | = 2455 ' | | |
| Gas: Initial open flow Mcf/d (| Dil: Init | cial open | flow | Bb1/d | | | |
| Final open flow Mcf/d | Dil: Fina | ıl open fl | ои <u></u> | Bb1/d | | | |
| Time of open flow between initia | al and fir | al tests_ | hou | ırs | nne | 081 | 1000 |
| Static rock pressure psig(surface r | measuremer f all pay | t) after zones. | hour | s shut in | DEC | U O I | 1303 |

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANCE, ETC.

| | | | Fluid | Sand | Treating | |
|--------------|---------------------|----------------|-------------|--------|----------------|---|
| Stage | Producing Formation | Interval | (Bbls.) | (Lbs.) | Pressure (PSI) | |
| First Stage | Bayard & Fifth Sand | 2564-2573 | 211 | 3,000 | 2780-311 | |
| | _ | & 2455–2467 | <i>.</i> *. | | | 1 |
| Second Stage | Gordon Sand | 2197-2201 | 442 | 4,100 | 3590-3719 | |
| Third Stage | Squaw | 1687-1699 | 473 🦜 | 25,000 | 2780 | |
| | | 1688⁴1675 | | | | |
| Fourth Stage | Big Injun Sand | 1507-1515 | 578 | 45,000 | 3920-3400 | |
| | | & 1484-1495 | | • | | |

| | | | • |
|------------------------------|----------|-------------|---|
| FORMATION COLOR HARD OR SOFT | TOP FEET | BOTTOM FEET | REMARKS Including indication of all fresh and salt water, coal, oil and gas |
| Sandstone | Surface | 122 | ½" stream fresh water @ 56' |
| Shale & Sandstone | 122 | 511 | |
| Sandstone | 511 | 555 | |
| Shale | 555 | 573 | 19 3. U.S. W. A. I |
| Sandstone | 573 | 613 | |
| Shale | 613 | 630 | DEC 04 1989 |
| Coal-Upper Freeport | 630 | 633 | DE0 0 \$ 1303 - |
| Shale & Sandstone | 633 | 700 | DIVISION OF DIL & TAS |
| Coal-Lower Freeport | 700 | 701 | DEPARTMENT OF THERE |
| Shale & Sandstone | 701 | 832 | |
| Coal-M. Kittanning | 882 | 883 | |
| Shale & Sandstone | 883 | 947 | |
| Sandstone-Homewood | 947 | 1070 | 1" stream fresh water @ 974' |
| Shale | 1070 | 1276 | |
| Little Lime | 1276 | 1288 | ` |
| Shale & Sandstone | 1288 | 1323 | |
| Big Lime | 1323 | 1415 | |
| Big Injun | 1415 | 1585 | |
| Shale | 1585 | 1628 | |
| Squaw Sand | 1628 | 1740 | • |
| Shale | 1740 | 1896 | |
| Berea | 1896 | 1910 | · |
| Shale & Sandstone | 1910 | 2195 | |
| Gordon | 2195 | 2202 | |
| Shale & Sandstone | 2202 | 2443 | |
| Fifth Sand | 2443 | 2501 | |
| Shale | 2501 | 2532 | |
| Sandstone & Shale | 2532 | 2580 | , |
| Shale | 2580 | 2680 | TD |

(Attach separate sheets as necessary)

| ^ | LOUMENON CORPORATION | |
|-------|----------------------|------|
| Wel | 1 Operator | |
| Ву: | Stat MI | PRES |
| Date: | 11-30-89 | |

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including wa!, encountered in the drilling of a well."

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061-0893 Doned 12/14/85 Expres Page 3 OF 7 12/14/91

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS WELL WORK PERMIT APPLICATION

| 1) | Well | Ope | rator: | Noumenon | Corporation | 347/ | 0 7 | 483 |
|---------------|---|-------------|---------------|---------------|--------------------|-----------------------|------------------------|----------------------|
| 2) | Opera | ator | 's Well | Number:_ | Ridenour # 4 | 1 | 3) El | evation:1120 |
| 4) | Well | type | e: (a) | 0il_/ | or Gas | 5 <u>X</u> / | | |
| | | | (b) | If Gas: | Production Deep | n <u>X</u> / Underg | round Storag Shallo | |
| 5) | Prop | osed | Target | Formatio | n(s): Big I | njun, Squaw, | Gordon, Bayard | |
| 6) | | | | Depth: | | feet | | |
| 7) | Appr | oxima | ate fre | sh water | strata depi | hs: 715' & | 946' (320) | |
| 8) | | | | | | N/A Assible | | |
| 9) | | | | | | , 812', 892' - | | |
| 10) | | | | | | | | es/ No_x_/ |
| 11) | | | | | | | ropriate forma | |
| 12) | | | ī | | | | , | |
| . • | | | | CASI | NG AND TUB | NG PROGRAM | | • |
| TYPE | | | | SPECIFICA | TIONS | FOOTAGE II | NTERVALS | CEMENT |
| | | | Size | Grade | Weight per ft. | For drilling | Left in well | Fill-up (cu. ft.) |
| Cond | uctor | | 11 3/4 | | 42 | 40' | AA=- | |
| Fres | h Wat | er | ** | | | 1 | | |
| Coal | | | | | | Don | | 38CSR1811.3 |
| Inte | rmedi | ate | 8 5/8 | J55 | 23 | 1095 | 1095 | CTS |
| Prod | uctio | n l | 4 1/2 | K55 | 10.5 | | 2680 | 39C3R18-11 |
| Tubi | ng | | | | | | | |
| Line | rs | | | | | | (m) = 1 | |
| PACKERS: Kind | | | | | | | | |
| 000 | | Size Dep | es ths set | | | | D | EC 14 1988 |
| 900 | DIVISION OF OIL & GAS DIVISION OF OIL & GAS DIVISION OF OIL & GAS DEPARTMENT OF ENERGY | | | | | | | |
| 14 | Fee(s) paid: Well Work Permit Reclamation Fund WPCP | | | | | | | |
| | Plat | | WW-S | JET WW | -2B (1) E | Bond SABU | mpet | Agent |
| | | | | \mathscr{U} | \mathcal{U} | • | - ' ' | |

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DIVISION OF OIL & GAS 3) DEPARTMENT OF ENERGY

| Date: December 12, 1988 | | |
|-------------------------|---|--------|
| Operator's well number | | |
| Ridenour # 4 | | |
| API Well No: 47 - 061 | _ | 0893 |
| State - County | _ | Permit |

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

| 4) | Surface Owner(s) to be ser (a) Name <u>Willard Wayne & Card</u> Address <u>Route 4, Box 287A</u> | ol Ridenour Name N/A |
|----------------------|--|---|
| | Morgantown, WV 2650 | 5 |
| | (b) Name | (b) Coal Owner(s) with Declaration |
| | Address | Name N/A |
| | (c) Name | Address |
| | Address | Name |
| | | NameAddress |
| | | Add1638 |
| 6) | Inspector | (c) Coal Lessee with Declaration |
| | Address | Name N/A |
| | | |
| | Telephone (304)- | |
| | | |
| | TO THE PERSON(S) | NAMED ABOVE TAKE NOTICE THAT: |
| Sect | racts by which I hold the racts by which I hold the raction 8(d) of the Code of West I certify that as required every served copies of this not companying documents pages 1 Personal Service (Affice Certified Mail (Postmann) Publication (Notice of Control of Contr | under Chapter 22B of the West Virginia Code tice and application, a location plat, and through on the above named parties, by: idavit attached) arked postal receipt attached) of Publication attached) |
| fami atta resp | the terms and conditions of I certify under penalty of liar with the information such chments, and that based on | Chapter 22B and 38 CSR 11-18, and I agree any permit issued under this application. law that I have personally examined and am submitted on this application form and all my inquiry of those individuals immediately information, I believe that the information |
| ' | I am aware that there are | significant penalties for submitting false |
| info | ermation, including the poss | ibility of fine and imprisonment. |
| | Well 0 | perator Noumenon Corporation |
| | By: | perator Noumenon Corporation |
| • | Its: _ | President |
| | Addres | S 256 High Street |
| | | Morgantown, WV 26505 |
| C b - | Teleph | one (304) 292-8488 |
| a u DS | occided and sworn before me | this 12th day of December , 1988 |
| | | Vauline a- Walker Notary Public |
| My c | | 16, 1990 NOTALY PUBLIC |
| | | |