

**TEE Engineering Company, Inc.**  
 520 Cotton Hill Court  
 Lexington, KY 40509  
 (859) 263-3330  
 Fax (859) 263-3345

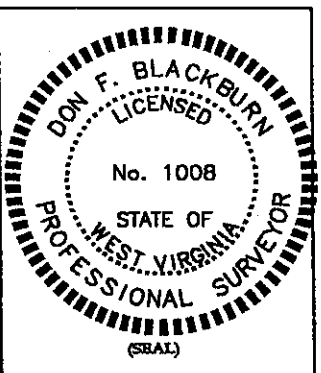
**GeoMet Operating Company, Inc.**  
**Well No. Hall South 112-102-146**

FILE NO. 1883-08/2004 WELLS  
 DRAWING NO. WELL HALL SOUTH 146 PLAT  
 SCALE: 1" = 2,000'  
 MIN. DEGREE OF ACCURACY 1 : 2,500  
 PROVEN SOURCE OF ELEVATION  
GPS STATION TEC-1 (ELEV. 2406.60)

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.

*Don F. Blackburn*  
 (SIGNATURE)

R.P.E. \_\_\_\_\_ R.P.S. 1008



**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OFFICE OF OIL AND GAS**

DATE JULY 8, 2004  
 OPERATOR'S WELL NO. HALL SOUTH 112-102-146

API WELL NO. 47 - 047 - 019430  
 NO. STATB - COUNTY PERMIT

WELL TYPE: OIL \_\_\_\_\_ GAS X CBM LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS") PRODUCTION X STORAGE DEEP \_\_\_\_\_ SHALLOW \_\_\_\_\_

LOCATION: ELEVATION 2,216.57' NORTHING 102958.66 EASTING 1781056.11  
 DISTRICT BIG CREEK WATER SHED STRAIGHT FORK OF LITTLE SLATE CREEK  
 QUADRANGLE BRADSHAW COUNTY McDOWELL

SURFACE OWNER HALL MINING COMPANY et al ACREAGE 339.95  
 CBM ROYALTY OWNER HALL MINING COMPANY et al LEASE ACREAGE 339.95

LEASE NO. \_\_\_\_\_ RECORDING IN PROGRESS \_\_\_\_\_

PROPOSED WORK: DRILL X CONVERT DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR  
 STIMULATE X PLUG OFF OLD FORMATION \_\_\_\_\_ PEFORATE NEW  
 FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_

TARGET FORMATION NEW RIVER AND POCAHONTAS COALS ESTIMATED DEPTH 1,862'  
 WELL OPERATOR GEOMET OPERATING COMPANY, INC. DESIGNATED AGENT KERRY HILL  
 ADDRESS 5336 STADIUM TRACE PARKWAY SUITE 206 ADDRESS 330 HARPER PARK DRIVE SUITE A  
BIRMINGHAM, ALABAMA 35244 BECKLEY, WV 25801

6-6 BRADSHAW (270)

JUL 8 2004

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State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

*Mit*

Well Operator's Report of Well Work

FARM NAME: Hall Mining Company, et al OPERATOR WELL NO.: Hall Mining 112-102-146

LOCATION:

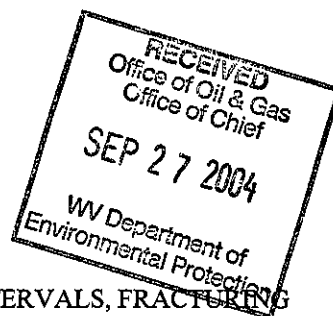
Elevation: 2,216.57' Quadrangle: War Bradshaw  
District: Big Creek County: McDowell  
Latitude: 712' Feet South of 37 Deg. 17 Min. 30 Sec.  
Longitude: 4.138' Feet West of 81 Deg. 45 Min. 30 Sec.

Company: <u>GeoMet Operating Company</u>	Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. Ft.
Address: <u>5336 Stadium Trace Parkway, Suite 206 Birmingham, Alabama 35244</u>	<u>13-3/8"</u>	<u>26'</u>	<u>26'</u>	
Agent: <u>Gregg Cleary</u>				
Inspector: <u>Carlos Hively</u>	<u>8-5/8"</u>	<u>332'</u>	<u>332'</u>	<u>84/Pumped 120</u>
Date Permit Issued: <u>July 30, 2004</u>				
Date Well Work Commenced: <u>August 9, 2004</u>	<u>5-1/2"</u>	<u>1865'</u>	<u>1865'</u>	<u>323/Pumped 356</u>
Date Well Work Completed: <u>September 14, 2004</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <u>XXXX</u> Cable <u>      </u> Rig <u>      </u>				
Total Depth (feet): <u>1870.86'</u>				
Fresh Water Depth (feet): <u>Unknown</u>				
Salt Water Depth (feet): <u>Unknown</u>				
Is coal being mined in area (N/Y)? <u>No</u>				

Coal Depths (feet): 650, 716, 755, 1033, 1045, 1082, 1097, 1119, 1148, 1277, 1310, 1335, 1375, 1415, 1507, 1518, 1720, 1728

OPEN FLOW DATA

Producing formation All Zones Commingled Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial Open Flow 9 MCF/d Oil: Initial Open Flow \_\_\_\_\_ Bbl/d  
Final Open Flow \_\_\_\_\_ MCF/d Final Open Flow \_\_\_\_\_ Bbl/d  
Time of Open Flow between initial and final tests \_\_\_\_\_ Hours  
Static Rock Pressure 115 psig (surface pressure) after 96 Hours



NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

SIGNED: \_\_\_\_\_  
BY: Karen Rye  
DATE: 9-21-04

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PAGE 2  
 GEOMET OPERATING CO  
 HALL MINING SOUTH 146

FROM	TO	FT.	DESCRIPTION
960	990	30	SANDY SHALE / SAND / SANDY SHALE
990	1020	30	SANDY SHALE
1020	1050	30	SAND / SANDY SHALE / COAL / SANDY SHALE / COAL / SHALE
1050	1080	30	SANDY SHALE / COAL / SANDY SHALE
1080	1110	30	SANDY SHALE / SAND / COAL / SANDY SHALE
1110	1140	30	SANDY SHALE / COAL / SANDY SHALE
1140	1170	30	SANDY SHALE / SAND
1170	1200	30	SAND / SANDY SHALE / COAL / SANDY SHALE
1200	1230	30	SANDY SHALE / SAND
1230	1260	30	SANDY SHALE
1260	1290	30	SANDY SHALE / SAND
1290	1320	30	SAND
1320	1350	30	SAND / COAL / SAND
1350	1380	30	SAND / SANDY SHALE / COAL / SANDY SHALE
1380	1410	30	SANDY SHALE / SAND
1410	1470	60	SAND
1470	1500	30	SAND / SANDY SHALE
1500	1530	30	SANDY SHALE
1530	1620	90	SANDY SHALE
1620	1650	30	SANDY SHALE / COAL / SAND
1650	1680	30	SAND
1680	1710	30	SAND / SANDY SHALE
1710	1740	30	SANDY SHALE / SAND / SANDY SHALE
1740	1770	30	SANDY SHALE / SAND
1770	1800	30	SAND STONE / SANDY SHALE
1800	1830	30	SANDY SHALE / SAND STONE / SANDY SHALE
1830	1865	35	SANDY SHALE / STR SAND STONE / SANDY SHALE 1865' W/ 5 1/2" CASING TD 7 7/8" HOLE

1865.00 FT. TOTAL DEPTH  
 25.85 FT. OF 13 3/8" CASING  
 332.50 FT. OF 8 5/8" CASING  
 1865.00 FT. OF 5 1/2" CASING

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DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC

COMPANY: GEOMET

HOLE #: HMS-146

LOCATION: BUG HURLEY

DRILL RIG #: 94

DATE STARTED: 08-05-04

DATED COMPLETED: 08-10-04

ELECTRIC LOGGED: YES

GROUTED: YES

DEPTH		THICKNESS	STRATA	REMARKS
FROM	TO	FT	DESCRIPTION, VOIDS ETC	
0	1	1	OVERBURDEN	
1	26	25	SHALE / COAL / SOFT SAND / SANDY SHALE 25.85' W/ 13 3/8" CASING	
26	30	4	SANDY SHALE	
30	61	31	SANDY SHALE / COAL / SAND STONE	
61	92	31	SANDS TONE / SANDY SHALE / COAL STR	
92	123	31	SANDY SHALE / COAL	
123	154	31	SANDY SHALE / SAND STONE / POSS COAL STR	
154	185	31	SAND STONE STR / SANDY SHALE	
185	245	60	SAND / SANDY SHALE	
245	275	30	SAND / SANDY SHALE / COAL / SANDY SHALE	
275	305	30	SANDY SHALE / SAND	
305	345	40	SAND 332.5' W/ 8 5/8" CASING	
345	360	15	SAND STONE / SANDY SHALE STR	
360	390	30	SAND STONE / SANDY SHALE	
390	420	30	SANDY SHALE / COAL STR	
420	450	30	SANDY SHALE / COAL / SAND STONE	
450	480	30	SAND STONE / COAL / SANDY SHALE	
480	510	30	SAND STONE / SANDY SHALE / SAND STONE	
510	570	60	SANDY SHLAE / COAL / SAND STONE	
570	600	30	COAL / SANDY SHALE / COAL STR	
600	630	30	SAND STONE / SANDY SHALE	
630	660	30	SANDY SHALE / COAL / SAND STONE STR	
660	690	30	SANDY SHALE / SAND STONE / COAL STR	
690	720	30	SAND STONE STR / SANDY SHALE / 2 COAL STR	
720	750	30	SANDY SHALE / COAL STR / SAND STONE	
750	780	30	COAL / SAND STONE / SANDY SHALE	
780	810	30	SANDY SHALE	
810	840	30	SAND / SANDY SHALE	
840	870	30	SANDY SHALE / SAND	
870	900	30	SANDY SHALE	
900	930	30	SANDY SHALE / SAND	
930	960	30	SAND / COAL / SANDY SHALE	

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## GeoMet Operating Company, Inc. Perforation and Frac Volume Specification

Well Name Hall Mining 146 PBTB 1865'

### Zone and Perforation Table

Frac	1719	1721	Ball Out	Bridge Plug Set @	Est Sand Weight	Actual Sand Weight
Stage 1 Interval	1,727	1729				
N2 Scf	159,000				15,000	3,500
Acid	250	15%				
Gel Volume	4,660	GAL	1540'			
ISIP	2,726					
ATP	3726					
AIR	18	BPM				
Stage 2 Interval	1,505	1509			35,000	36,500
N2 Scf	488,000					
Acid	250	15%				
Gel Volume	9,760	GAL	1516' - 1519' 24 Balls on Plug @ 1440'			
ISIP	1,570					
ATP	3,167					
AIR	40	BPM				
Stage 3 Interval	1,374	1376			27,500	28,500
N2 Scf	323,000					
Acid	500	7.5%				
Gel Volume	9,060	GAL	1414' - 1416' B/O 36 Balls on Plug @ 1360			
ISIP	1,383					
ATP	2,962					
AIR	32	BPM				
Stage 4 Interval	1,276	1278			30,000	30,000
N2 Scf	311,000					
Acid	500	15%				
Gel Volume	7,230	GAL	1309' - 1311'/1334' - 1336' B/O 48 Balls on Plug @ 1180			
ISIP	1,112					
ATP	2,418					
AIR	35	BPM				
Stage 5 Interval	1,081	1083			35,000	26,000
N2 Scf	550,000					
Acid	500	15%				
Gel Volume	13,077		1096' - 1098'/1118' - 1120' 1147' - 1149' B/O 1160'			
ISIP	1,072					
ATP	2,888					
AIR	38	BPM				

Well Name Hall Mining 146

PBTD

1865'

**Zone and Perforation Table**

	Ball Out		Bridge Plug Set @	Est Sand Weight	Actual Sand Weight
Stage 6 Interval	1,032	1,034			
N2 Scf	297,000		1044' - 1046' No Plug	25,000	26,000
Acid	250	15%			
Gel Volume	6,570				
ISIP	1,392				
ATP	2,793				
AIR	35	BPM			
Stage 7 Interval					
N2 Scf					
Acid					
Gel Volume					
ISIP					
ATP					
AIR		BPM			
Stage 8 Interval					
N2 Scf					
Acid					
Gel Volume					
ISIP					
ATP					
AIR		BPM			
Stage 9 Interval					
N2 Scf					
Acid					
Gel Volume					
ISIP					
ATP					
AIR		BPM			
Stage 10 Interval					
N2 Scf					
Acid					
Gel Volume					
ISIP					
ATP					
AIR					

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