

(+) DENOTES LOCATION OF WELL ON 7.5' TOPOGRAPHIC MAP

**PROPOSED PMC SOUTH 111-105-085**

S 45° 24' E 104.01' to 10° SWEET GUM  
 S 15° 15' E 123.58' to 12° POPLAR

REFERENCES	SCALE 1"=100'
WELL COORDINATES WV STATE PLANE SOUTH ZONE NAD 1927 N. 106731.02 E. 1779453.65	

7.5' LOC.

**TEE Engineering Company, Inc.**  
 320 Collins Hill Court  
 Lexington, KY 40509  
 (606) 263-5350  
 Fax (606) 263-5345

**GeoMet Operating Company, Inc.**  
 Well No. PMC South 111-105-085

FILE NO. 1883-08/2003 WELLS  
 DRAWING NO. WELL PMC SOUTH 85 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. 8643 R.P.S.

(SEAL)

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

DATE FEBRUARY 7, 2003  
 OPERATOR'S WELL NO. PMC SOUTH 111-105-085  
 API WELL NO. 47 - 047 - 017710  
 STATE - COUNTY - PERMIT

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

LOCATION: ELEVATION 1,610.25' NORTHING 108731.02 EASTING 1779453.65  
 DISTRICT BIG CREEK WATER SHED LAUREL FORK OF LITTLE SLATE CREEK  
 QUADRANGLE BRADSHAW COUNTY McDOWELL

SURFACE OWNER POCAHONTAS MINING, LLC. ACREAGE 1,108  
 CBM ROYALTY OWNER POCAHONTAS MINING, LLC. LEASE ACREAGE 1,108  
 LEASE NO. RECORDING IN PROGRESS

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR  
 STIMULATE  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 2,042'  
 WELL OPERATOR GEOMET OPERATING COMPANY, INC. DESIGNATED AGENT KERRY HILL  
 ADDRESS 5336 STADIUM TRACE PARKWAY SUITE 3206 ADDRESS 330 HARPER PARK DRIVE SUITE A  
BIRMINGHAM, ALABAMA 35244 BECKLEY, WV 25801

MCDOWELL 1771C

6-6(0) Bradshaw (270) APR 07 2003



*ACF*

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

Well Operator's Report of Well Work

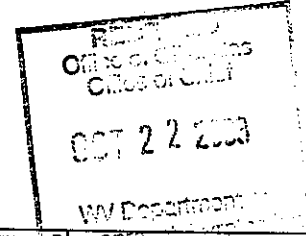
FARM NAME: Pocahontas Mining, LLC

OPERATOR WELL NO.: 111-105-085

LOCATION:

Elevation: 1,610.25'      Quadrangle: Bradshaw

District: Big Creek      County: McDowell  
Latitude: 2,361' Feet South of 37 Deg. 20 Min. 00 Sec.  
Longitude: 13,549' Feet West of 81 Deg. 45 Min. 00 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>27'</u>	<u>27'</u>	
Agent: <u>Gregg Cleary</u>				
Inspector: <u>Ronnie Scott</u>	<u>8-5/8"</u>	<u>329'</u>	<u>329'</u>	<u>74/Pumped 120</u>
Date Permit Issued: <u>April 10, 2003</u>				
Date Well Work Commenced: <u>June 9, 2003</u>	<u>5-1/2"</u>	<u>1462'</u>	<u>1462'</u>	<u>253/Pumped 293</u>
Date Well Work Completed: <u>June 19, 2003</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <u>XXXX</u> Cable Rig				
Total Depth (feet): <u>1940'</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): 339, 348, 357, 369, 371, 377, 457, 487, 489, 521, 543, 562, 580, 609, 611, 675, 766, 796, 838, 839, 880, 905, 920, 969, 1034, 1039, 1161, 1487.

OPEN FLOW DATA

Producing formation All Zones Commingled Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial Open Flow N/A MCF/d      Oil: Initial Open Flow \_\_\_\_\_ Bbl/d  
Final Open Flow N/A MCF/d      Final Open Flow \_\_\_\_\_ Bbl/d  
Time of Open Flow between initial and final tests N/A Hours  
Static Rock Pressure 10 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: Dundrea Smith  
DATE: \_\_\_\_\_

*McDow 1771*

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

Well Name PMC South 085 PBTD 1457'

**Zone and Perforation Table**

Frac			Ball Out	Bridge Plug Set @	Est Sand Weight	Actual Sand Weight
Stage 1 Interval	1158	1161				
N2 Scf	232,000		966-969			8,300
Acid	100					
Gel Volume	15,848					
ISIP	2,070					
ATP	2,942					
AIR	26.5	BPM				
Stage 2 Interval	878	881				
N2 Scf	298,000		860'			
Acid						
Gel Volume	22,829					
ISIP	742					
ATP	2,862					
AIR	25.8	BPM				
Stage 3 Interval	837	840				
N2 Scf	270,000		820'			
Acid	200					
Gel Volume	23,095					
ISIP	2,867					
ATP	2,323					
AIR	24	BPM				
Stage 4 Interval	794	797				
N2 Scf			600'			
Acid						
Gel Volume						
ISIP	3,799					
ATP	2,410					
AIR	22.1	BPM				
					Screened Out	
Stage 5 Interval	608	611				30,900
N2 Scf	258,000		580'			
Acid	400					
Gel Volume	24,802					
ISIP	2,927					
ATP	2,067					
AIR	25.4	BPM				

Well Name PMC South 085

PBTD

1457'

**Zone and Perforation Table**

	542	544	Ball Out	Bridge Plug Set @	Est Sand Weight	Actual Sand Weight
Stage 6 Interval	542	544				
N2 Scf	242,000					41,700
Acid	450			561-563		
Gel Volume	26,689			578-580		
ISIP	3,488			Ball Out		
ATP	1,699					
AIR	26.3	BPM				
Stage 7 Interval	486	489				41,800
N2 Scf	312,000					
Acid						
Gel Volume	25,791					
ISIP	2,684					
ATP	2,563					
AIR	23.3	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						

M-Daw 1771

NOV 14 2003

# DRILL DATA HOLE - NOAH HORN WELL DRILLING, INC.

COMPANY: GEO-MET

HOLE NO. PMC SOUTH-085

LOCATION: BUG HURLEY HOLLOW

DRILL: RIG 23

DATE STARTED: 06-09-03

ELECTRIC LOGGED: YES

DATE COMPLETED: 06-11-03

GROUTED: YES

DEPTH		THICKNESS	STRATA	REMARKS
FROM	TO	FT.	DESCRIPTION	VOIDS, ETC
0	20	20.00	OVERBURDEN	
20	27	7.00	SAND/SANDY SHALE STRKS	26.65' OF 13-3/8" CASING
27	30	3.00	SANDSTONE	
30	61	31.00	SANDSTONE/SANDY SHALE/COAL STRKS./ SANDY SHALE/SANDSTONE	
61	92	31.00	SANDSTONE/SANDY SHALE/COAL/ SANDSTONE	
92	123	31.00	SANDY SHALE/COAL	
123	154	31.00	SANDY SHALE/SAND	
154	185	31.00	SANDY SHALE	
185	215	30.00	SANDY SHALE/SANDSTONE/SHALE/ SANDSTONE	
215	245	30.00	SANDSTONE/SANDY SHALE	
245	275	30.00	SANDY SHALE	
275	305	30.00	SAND STRKS/SANDY SHALE	
305	335	30.00	SANDY SHALE	329.35' OF 8-5/8" CASING
335	360	25.00	SANDY SHALE/COAL/SANDSTONE	
360	390	30.00	SANDSTONE/COAL/SANDY SHALE	
390	420	30.00	SANDSTONE/SANDSTONE STRKS.	
420	450	30.00	SANDSTONE/SANDY SHALE/COAL	
450	480	30.00	SANDY SHALE/SANDSTONE/SANDY SHALE	
480	510	30.00	SANDY SHALE/COAL/SANDSTONE/ SANDY SHALE	
510	540	30.00	SANDY SHALE/SANDSTONE STRKS/COAL	
540	600	60.00	SANDY SHALE/COAL	
600	630	30.00	SANDY SHALE/COAL/SANDY SHALE/ SANDSTONE	
630	645	15.00	SANDSTONE/COAL/SANDSTONE	
645	660	15.00	SANDSTONE	
660	690	30.00	SANDSTONE/SANDY SHALE/SANDSTONE	
690	720	30.00	SANDSTONE	
720	750	30.00	SAND/SANDY SHALE/COAL	
750	780	30.00	SANDY SHALE/COAL STRKS.	
780	810	30.00	SAND/SANDY SHALE	
810	840	30.00	SANDY SHALE/SAND/COAL/SHALE	
840	870	30.00	SANDY SHALE	

GEO-MET OPERATIONS  
 HOLE #PMC-SOUTH-085  
 PAGE 2

870	900	30.00	SANDY SHALE/COAL/SANDY SHALE
900	930	30.00	COAL/SANDSTONE/SANDY SHALE
930	960	30.00	SAND/SANDY SHALE STRKS.
960	990	30.00	COAL/SANDY SHALE
990	1020	30.00	SAND/SANDY SHALE
1020	1050	30.00	SHALE/COAL/SANDY SHALE
1050	1080	30.00	SANDY SHALE/SAND
1080	1110	30.00	SAND/SANDY SHALE/SANDSTONE
1110	1140	30.00	SANDSTONE
1140	1170	30.00	SANDSTONE/COAL/SANDY SHALE
1170	1200	30.00	SANDY SHALE
1200	1230	30.00	SAND/SANDY SHALE
1230	1260	30.00	SANDY SHALE/SAND STRKS.
1260	1290	30.00	SANDSTONE
1290	1320	30.00	SANDSTONE/SANDY SHALE
1320	1350	30.00	SANDY SHALE/SANDSTONE STRKS.
1350	1380	30.00	SANDY SHALE
1380	1410	30.00	SANDY SHALE/RED SHALE/SANDSTONE RED SHALE
1410	1440	30.00	SANDY SHALE/RED SHALE
1440	1470	30.00	RED SHALE/SANDY SHALE
1470	1500	30.00	SHALE/SANDY SHALE

TOTAL DEPTH: 1500  
 26.65' OF 13-3/8" CASING  
 329.35' OF 8-5/8" CASING

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

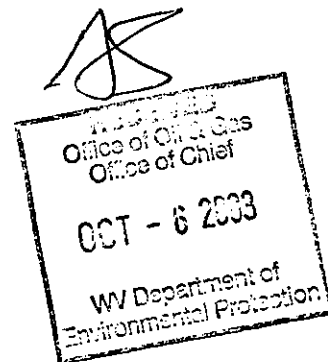
Well Operator's Report of Well Work

FARM NAME: Pocahontas Mining, LLC OPERATOR WELL NO.: 111-105-085

LOCATION:

Elevation: 1,610.25' Quadrangle: Bradshaw

District: Big Creek County: McDowell  
Latitude: 2,361' Feet South of 37 Deg. 20 Min. 00 Sec.  
Longitude: 13,549' Feet West of 81 Deg. 45 Min. 00 Sec.



Company: <u>GeoMet Operating Company</u>	Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. Ft.
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Date Well Work Completed: <u>June 19, 2003</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <u>XXXX</u> Cable <u>        </u> Rig				
Total Depth (feet): <u>1940' 1500'</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): 339, 348, 357, 369, 371, 377, 457, 487, 489, 521, 543, 562, 580, 609, 611, 675, 766, 796, 838, 839, 880, 905, 920, 969, 1034, 1039, 1161, 1487.

OPEN FLOW DATA

Producing formation All Zones Commingled Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial Open Flow N/A MCF/d Oil: Initial Open Flow \_\_\_\_\_ Bbl/d  
Final Open Flow N/A MCF/d Final Open Flow \_\_\_\_\_ Bbl/d  
Time of Open Flow between initial and final tests N/A Hours  
Static Rock Pressure 10 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:

Andrea Smith

DATE:

\_\_\_\_\_

OCT 10 2003

McDow 1771



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

Well Name PMC South 085 PBTB 1457'

**Zone and Perforation Table**

Frac			Ball Out	Bridge Plug Set @	Est Sand Weight	Actual Sand Weight
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ISIP	3,799					
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Stage 5 Interval	608	611				
N2 Scf	258,000		580'			
Acid	400					
Gel Volume	24,802					
ISIP	2,927					
ATP	2,067					
AIR	25.4	BPM				

Well Name PMC South 085

PBTD

1547'

**Zone and Perforation Table**

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Stage 6 Interval	542	544				
N2 Scf	242,000		561-563 578-580 Ball Out			41,700
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N2 Scf						
Acid						
Gel Volume						
ISIP						
ATP						
AIR		BPM				
Stage 10 Interval						
N2 Scf						
Acid						
Gel Volume						
ISIP						
ATP						
AIR						

McDow 1771

# DRILL DATA HOLE - NOAH HORN WELL DRILLING, INC.

COMPANY: GEO-MET

HOLE NO. PMC SOUTH-085

LOCATION: BUG HURLEY HOLLOW

DRILL: RIG 23

DATE STARTED: 06-09-03

ELECTRIC LOGGED: YES

DATE COMPLETED: 06-11-03

GROUTED: YES

DEPTH		THICKNESS	STRATA	REMARKS
FROM	TO	FT.	DESCRIPTION	VOIDS, ETC
0	20	20.00	OVERBURDEN	
20	27	7.00	SAND/SANDY SHALE STRKS	26.65'
				OF 13-3/8" CASING
27	30	3.00	SANDSTONE	
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61	92	31.00	SANDSTONE/SANDY SHALE/COAL/ SANDSTONE	
92	123	31.00	SANDY SHALE/COAL	
123	154	31.00	SANDY SHALE/SAND	
154	185	31.00	SANDY SHALE	
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750	780	30.00	SANDY SHALE/COAL STRKS.	
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840	870	30.00	SANDY SHALE	

GEO-MET OPERATIONS  
HOLE #PMC-SOUTH-085  
PAGE 2

870	900	30.00	SANDY SHALE/COAL/SANDY SHALE
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Mc Dow 1771

OCT 10 2003

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

*Mr P*

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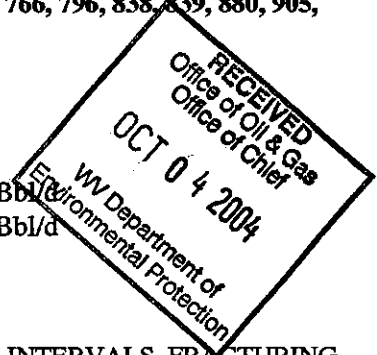
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SIGNED: \_\_\_\_\_  
BY: Allen Rye  
DATE: 9-29-04

McDow 1771

✓

**DRILL DATA HOLE - NOAH HORN WELL DRILLING, INC.**

COMPANY: GEO-MET

HOLE NO. PMC SOUTH-085

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DRILL: RIG 23

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20	27	7.00	SAND/SANDY SHALE STRKS	26.65' OF 13-3/8" CASING
27	30	3.00	SANDSTONE	
30	61	31.00	SANDSTONE/SANDY SHALE/COAL STRKS/ SANDY SHALE/SANDSTONE	
61	92	31.00	SANDSTONE/SANDY SHALE/COAL/ SANDSTONE	
92	123	31.00	SANDY SHALE/COAL	
123	154	31.00	SANDY SHALE/SAND	
154	185	31.00	SANDY SHALE	
185	215	30.00	SANDY SHALE/SANDSTONE/SHALE/ SANDSTONE	
215	245	30.00	SANDSTONE/SANDY SHALE	
245	275	30.00	SANDY SHALE	
275	305	30.00	SAND STRKS/SANDY SHALE	
305	335	30.00	SANDY SHALE	329.35' OF 8-5/8" CASING
335	360	25.00	SANDY SHALE/COAL/SANDSTONE	
360	390	30.00	SANDSTONE/COAL/SANDY SHALE	
390	420	30.00	SANDSTONE/SANDSTONE STRKS.	
420	450	30.00	SANDSTONE/SANDY SHALE/COAL	
450	480	30.00	SANDY SHALE/SANDSTONE/SANDY SHALE	
480	510	30.00	SANDY SHALE/COAL/SANDSTONE/ SANDY SHALE	
510	540	30.00	SANDY SHALE/SANDSTONE STRKS/COAL	
540	600	60.00	SANDY SHALE/COAL	
600	630	30.00	SANDY SHALE/COAL/SANDY SHALE/ SANDSTONE	
630	645	15.00	SANDSTONE/COAL/SANDSTONE	
645	660	15.00	SANDSTONE	
660	690	30.00	SANDSTONE/SANDY SHALE/SANDSTONE	
690	720	30.00	SANDSTONE	
720	750	30.00	SAND/SANDY SHALE/COAL	
750	780	30.00	SANDY SHALE/COAL STRKS.	
780	810	30.00	SAND/SANDY SHALE	
810	840	30.00	SANDY SHALE/SAND/COAL/SHALE	
840	870	30.00	SANDY SHALE	

GEO-MET OPERATIONS  
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870	900	30.00	SANDY SHALE/COAL/SANDY SHALE
900	930	30.00	COAL/SANDSTONE/SANDY SHALE
930	960	30.00	SAND/SANDY SHALE STRKS.
960	990	30.00	COAL/SANDY SHALE
990	1020	30.00	SAND/SANDY SHALE
1020	1050	30.00	SHALE/COAL/SANDY SHALE
1050	1080	30.00	SANDY SHALE/SAND
1080	1110	30.00	SAND/SANDY SHALE/SANDSTONE
1110	1140	30.00	SANDSTONE
1140	1170	30.00	SANDSTONE/COAL/SANDY SHALE
1170	1200	30.00	SANDY SHALE
1200	1230	30.00	SAND/SANDY SHALE
1230	1260	30.00	SANDY SHALE/SAND STRKS.
1260	1290	30.00	SANDSTONE
1290	1320	30.00	SANDSTONE/SANDY SHALE
1320	1350	30.00	SANDY SHALE/SANDSTONE STRKS.
1350	1380	30.00	SANDY SHALE
1380	1410	30.00	SANDY SHALE/RED SHALE/SANDSTONE
			RED SHALE
1410	1440	30.00	SANDY SHALE/RED SHALE
1440	1470	30.00	RED SHALE/SANDY SHALE
1470	1500	30.00	SHALE/SANDY SHALE

TOTAL DEPTH: 1500  
 26.65' OF 13-3/8" CASING  
 329.35' OF 8-5/8" CASING

McDow 1771

Well Name PMC South 085

PBTD

1457'

**Zone and Perforation Table**

Stage Interval	542	544	Ball Out	Bridge Plug Set @	Est Sand Weight	Actual Sand Weight
Stage 6 Interval	542	544				
N2 Scf	242,000		561-563 578-580 Ball Out			41,700
Acid	450					
Gel Volume	26,689					
ISIP	3,488					
ATP	1,699					
AIR	26.3	BPM				
Stage 7 Interval	486	489				41,800
N2 Scf	312,000					
Acid						
Gel Volume	25,791					
ISIP	2,684					
ATP	2,563					
AIR	23.3	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						

Mc Dow 1771



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

Well Name PMC South 085 PBTB 1457'

**Zone and Perforation Table**

Frac Stage 1 Interval			Ball Out	Bridge Plug Set @	Est Sand Weight	Actual Sand Weight
	1158	1161				
N2 Scf	232,000		966-969			8,300
Acid	100					
Gel Volume	15,848					
ISIP	2,070					
ATP	2,942					
AIR	26.5	BPM				
Stage 2 Interval	878	881				
N2 Scf	298,000		860'			
Acid						
Gel Volume	22,829					
ISIP	742					
ATP	2,862					
AIR	25.8	BPM				
Stage 3 Interval	837	840				
N2 Scf	270,000		820'			
Acid	200					
Gel Volume	23,095					
ISIP	2,867					
ATP	2,323					
AIR	24	BPM				
Stage 4 Interval	794	797				
N2 Scf			600'			
Acid						
Gel Volume						
ISIP	3,799					
ATP	2,410					
AIR	22.1	BPM				
Stage 5 Interval	608	611				
N2 Scf	258,000		580'			
Acid	400					
Gel Volume	24,802					
ISIP	2,927					
ATP	2,067					
AIR	25.4	BPM				