State of New Mexico Energy, Minerals and Natural Resources	Form C-103 Revised July 18, 2013					
OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505	WELL API NO.         30-025-43470         5. Indicate Type of Lease BLM         STATE       FEE         6. State Oil & Gas Lease No.					
·	NA					
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A	7. Lease Name or Unit Agreement Name Monument AGI D					
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	8. Well Number #2					
1. Type of Well: Oil Well       Gas Well       Other: Acid Gas Injection Well         2. Name of Operator	9. OGRID Number					
Targa Midstream Services, LLC	24650					
3. Address of Operator	10. Pool name or Wildcat					
1000 Louisiana, Houston, TX 77002	AGI: Devonian					
4. Well Location Surface						
Unit Letter <u>O</u> : <u>685</u> feet from the SOUTH line and <u>2</u> ,	<u>362</u> feet from the EAST line					
Section 36 Township 19S Range 36E NMPM County Lea						
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3,384 (GR)						

#### 12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE C	F IN	TENTION TO:	SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WOR	Κ 🗌	PLUG AND ABANDON		REMEDIAL WORK		
TEMPORARILY ABANDON		CHANGE PLANS		COMMENCE DRILLING OPNS. P AND A		
PULL OR ALTER CASING		MULTIPLE COMPL		CASING/CEMENT JOB		
DOWNHOLE COMMINGLE						
CLOSED-LOOP SYSTEM						
OTHER:				OTHER: Annual 2021 Summary Injection Data Report		

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion. Well bore Diagrams attached.

#### MONUMENT AGI D #2 MAOP 3000 psig NMOCC Administrative Order SWD-1654.

#### Annual Summary Injection Data Report updated through 2021 Pursuant to NMOCC Administrative Order SWD-1654.

This report includes the data and analysis of surface injection pressure, TAG temperature, casing annular pressures as well as downhole injection pressure, temperature and annular pressure (i.e. injection parameters) for the Monument AGI D #2 for 2017 through end of 2021. Based on data for surface injection/annular pressure, the well continues to show excellent integrity. One major data loss occurred in October -November 2021 due to a server and hard drive failure. However, this server was replaced and the correct data was reported for the entire month of December and was consistent with values observed prior to the data loss. For 2021, the values for injection parameters are generally stable and yielded the following results, which are provided in detail in attached Table 1 and Figures 1 and 2. The following average values represent the operational condition of the well for 2021:

**Surface Measurements**: Average TAG Injection Pressure: 1,698 psig, Average Tag Temperature: 105 °F, Average TAG injection rate: 2,027 MSCFD, Average Annular Pressure 364 psig, Average Differential Pressure 1,334 psig.

Downhole Measurements: Average bottom-hole pressure 4,617 psig, Average bottom-hole Temperature: 118° F.

The data gathered throughout normal operations in 2021 continue to demonstrate the correlative behavior of the annular pressure with the flowrate, injection pressure and temperature, and show the sensitive and correlative response of the annular pressure confirming that the well has good integrity and is functioning appropriately within the requirements of the NMOCC order. The data for 2021 when compared to the entire period show that the reservoir is continuing to respond favorably to the TAG injection resulting in slightly lower surface and bottom hole pressures when compared to the entire operating period since 2017. This is in part due also to a reduction in average injection rate for 2021 of approximately 5% (2027 vs. 2119 MSCFD) when compared to the entire operating period. The Monument AGI D #2 well displays excellent reservoir characteristics easily accommodating the required volumes of TAG from the facility. Furthermore, the well operation has been excellent with great temperature and pressure control even during startups after upset events. Based on this annual report Targa requests that immediate notification parameters for the facility remain the same for 2022 as for 2021.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE	TITLE <u>Consultant to Targa Midstream S</u>	ervices, LLC DATE <u>1/12/2022</u>
Type or print name: <u>Alberto A Gutiérrez, RG</u> For State Use Only	E-mail address: aag@geolex.com	PHONE: <u>505-842-8000</u>
APPROVED BY: Conditions of Approval (if any):	_TITLE	DATE

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# GEOLEX\*



### ANALYSIS OF ANNUAL TRENDS AND REQUEST TO CONTINUE WITH APPROVED IMMEDIATE NOTIFICATION PARAMETERS FOR OPERATION OF MONUMENT AGI D#2 (API #30-025-43470) UNDER NMOCC SWD-1654

This document presents the results from the analyses of the injection parameter data collected from the Monument D#2 Well, which serves Targa's Monument Gas Processing Facility in Lea County, NM. Data have been collected continuously since commissioning of the Monument AGI D#2 (March 23, 2017) and have been analyzed monthly by Geolex and transmitted to Targa for reporting to NMOCD on a quarterly basis as per the NMOCC order referenced above. The AGI D#2 well was completed in the Devonian through the Montoya section as a near vertical well approximately 300 feet from the plugged AGI#1.

Bottom hole sensors for AGI D#2 provide the ability to monitor real-time reservoir conditions in the deeper Devonian reservoir by providing reliable bottom hole pressure and temperature data. In addition, surface data from the well is being collected relative to the following parameters:

- Treated Acid Gas (TAG) surface injection pressure,
- TAG injection temperature,
- Annular pressure,
- Bottom Hole pressure and temperature
- TAG flow rate from compressors

The above are the key parameters which are currently being measured in the well in order to monitor the operations of the well, prevent hydrate formation and reduce corrosion potential. Since these parameters are useful indicators and predictors of potential operational or mechanical problems in the well, various levels of alarms have been established for each of these parameters. These parameters include three which are measured directly (TAG injection pressure, TAG injection temperature and annular pressure) and one (differential pressure) which is a calculated value (the difference between the two measured parameters of injection and annular pressure). The analyses of the long-term trends in these values have been useful in smoothing out shorter-term variations which can be observed from detailed inspection of hourly data and in the development of appropriate alarm bands for each parameter. These data are included as Table 1.

The well at Monument is equipped with bottom hole (just at top of packer) P/T measurement capability inside the tubing. The monitoring of these additional parameters will also aid significantly in determining the appropriate immediate notification parameters which are required by the NMOCC order for AGI D#2. In general, the immediate notification parameters for the well were developed from this long-term analysis of the injection data. When the average values for 2021 are compared to 2020 values, it is clear that the reservoir is responding well to the TAG injection with average pressures both at the surface and in the bottom hole decreasing in 2021. This effect is observed despite consideration of a reduction in average injection rate of approximately 5% for 2021 values compared to values over the entire operational life of the well. A significant data loss occurred in 2021 from mid-October through November when all surface injection parameter data was lost due to a hard drive and server failure. This server was replaced and backup systems modified to prevent the reoccurrence of a similar data loss.





However, when data collection and storage was reestablished in December, the data for the month were consistent with pre data loss periods Q1 through Q3.

The NMOCD also requires that immediate notification parameters and levels be discussed and agreed upon with the agency, and that these be periodically reviewed and updated as needed based on operational or regulatory changes. The immediate notification parameters for the well have been approved by NMOCD, and Targa requests no changes in these approved values. With this requirement in mind and for the purpose of protecting the mechanical integrity and safety of the well and the overall AGI facility, Geolex monitors these data under contract to TARGA to prevent damage to the wells or violation of regulatory requirements or permit constraints.

After analyzing the performance of the well on a continuous basis, Geolex has assembled the data and has analyzed observed trends for the 2017 through 2021 timeframe as can be seen in Figures 1 and 2.

Given the observations of the trends in the graphs and the significantly different behavior of the well as compared to AGI#1, the well demonstrates good mechanical integrity. There is no indication of the reservoir currently being used by AGI D#2 being pressured-up to any significant degree. Furthermore, the temperature and pressure control at this well are handled very well and are stable facilitating startups after any upset events.

Upon startup from any shutdown that lasts more than 6-8 hours it is critical to inject methanol along with the TAG for the initial startup period to prevent the formation of hydrates. It is also critical to maintain the temperature control on the injected TAG and to avoid rapid temperature or pressure fluctuations during periods when power failures or other mechanical failures may occur. The trends observed in AGI D#2 are shown in Figures 1 and 2 for the entire period.

#### REVIEW OF STATISTICAL ANALYSIS OF INJECTION PARAMETERS, DEVELOPMENT OF AND REQUEST TO CONTINUE WITH APPROVED IMMEDIATE NOTIFICATION PARAMETERS MONUMENT AGI D#2 (API #30-025-43470) UNDER NMOCC SWD-1654

The statistical analyses of the injection parameter data were initially conducted for the purpose of establishing normal operating levels for these parameters which are automatically monitored. Several data filtering steps were accomplished to take the hourly data which forms the basis of the analysis in order to smooth out variability due to normal operations. Since the commissioning of the AGI D#2, only that well has been operated at the site since the AGI#1 was plugged and abandoned pursuant to OCD requirements and approvals. The bottom hole PT sensors in AGI D#2 have provided excellent reservoir condition data for the well.

All the data are summarized in Table 1. Based on the analysis of trends, the immediate notification parameters which were approved for AGI D#2 remain appropriate.

The approved immediate notification parameters for the Monument AGI D#2 are summarized below:

- 1. Exceedance of the approved MAOP of 3000 psig surface for a period greater than two hours.
- 2. Failure of a mechanical integrity test (MIT) of the well.
- 3. Confirmation of any condition that indicates a tubing, packer or casing leak.
- 4. Any increase of the annular pressure to a value that is more than 80% of the injection pressure.

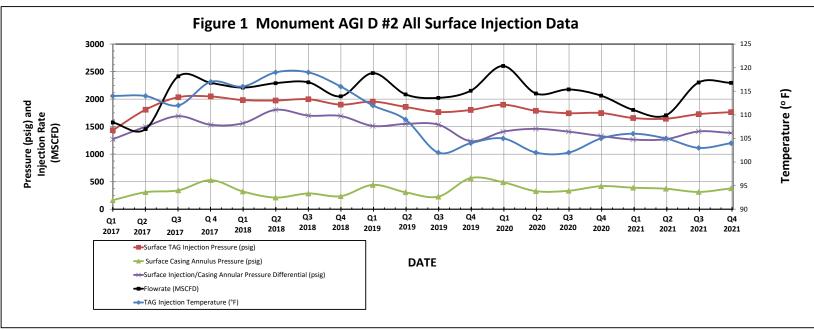




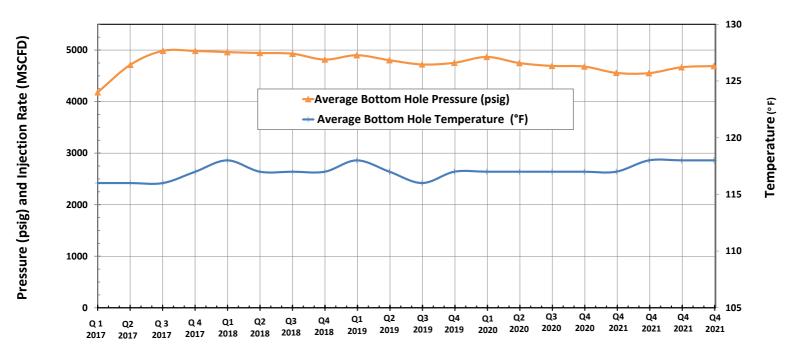
- 5. Any release of H<sub>2</sub>S at the well which results in an activation of the facility's approved Rule 11 H<sub>2</sub>S contingency plan.
- 6. Any workover or maintenance activity that requires intrusive work in the well. Based on these analyses and quarterly monitoring of well injection parameters, Targa hereby requests no change to the currently-approved immediate notification parameters.

## TABLE 1 MONUMENT AGI D#2 CUMMULATIVE INJECTION DATA (April 2017-December 2021)

	TABLE I MONOMILITI AGI D#2 COMMOLATIVE INSECTION DATA (April 2017-December 2021)									
			TAG Injection Temperature ( <sup>°</sup> F)	Surface TAG Injection Pressure (psig)	Surface Casing Annulus Pressure (psig)	Surface Injection/Casing Annular Pressure Differential (psig)	Flowrate (MSCFD)	Average Bottom Hole Pressure (psig)	Average Bottom Hole Temperature (°F)	
										Notes
										AGI D #2 was brought online on March 23, 2017. First Quarter
Q #1 2017	January thru March 2017	3/30/2017	114	1435	165	1271	1575	4180	116	Data is 3-23 through 3-31.
Q #2 2017	April thru June	6/30/2017	114	1808	309	1499	1455	4715	116	
Q #3 2017	July thru September	9/30/2017	112	2035	343	1691	2415	4985	116	
Q #4 2017	October thru December	12/30/2017	117	2048	528	1534	2296	4983	117	
Q #1 2018	January thru March	3/30/2018	116	1983	323	1561	2210	4960	118	
Q #2 2018	April thru June	6/30/2018	119	1975	212	1806	2290	4943	117	
Q #3 2018	July thru September	9/30/2018	119	1998	286	1701	2306	4929	117	
Q #4 2018	October thru December	12/30/2018	116	1900	237	1693	2051	4815	117	
Q #1 2019	January thru March	3/30/2019	112	1955	442	1513	2473	4900	118	
Q #2 2019	April thru June	6/30/2019	109	1858	308	1550	2086	4803	117	
Q #3 2019	July thru September	9/30/2019	102	1766	229	1537	2023	4721	116	
Q #4 2019	October thru December	12/30/2019	104	1803	566	1237	2152	4753	117	
Q #1 2020	January thru March	3/30/2020	105	1898	490	1408	2602	4867	117	
Q #2 2020	April thru June	6/30/2020	102	1788	328	1460	2102	4748	117	
Q #3 2020	July thru September	9/30/2020	102	1744	335	1409	2176	4692	117	
Q #4 2020	October thru December	12/30/2020	105	1748	419	1329	2063	4680	117	
Q #1 2021	January thru March	3/30/2021	106	1657	391	1266	1804	4557	117	
Q #2 2021	April thru June	6/30/2021	105	1644	372	1272	1706	4552	118	
Q #3 2021	July thru September	9/30/2021	103	1727	314	1413	2303	4667	118	
Q #4 2021	October thru December	12/30/2021	104	1764	379	1385	2296	4690	118	
Average for 2021			105	1698	364	1334	2027	4617	118	
Standard Deviation 202	1		1	49	30	66	274	63	0	
Average for Entire Perio	od		109	1827	349	1477	2119	4757	117	
Standard Deviation Enti	ire Period		6	149	101	159	287	185	1	

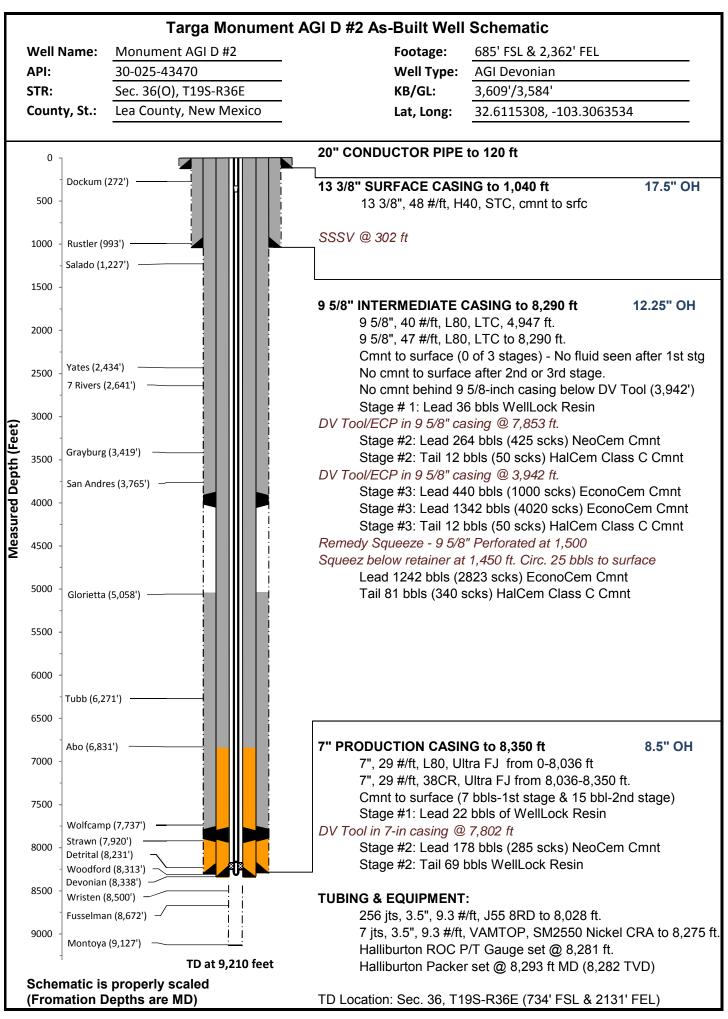


## Figure 2 Monument AGI D #2 Bottomhole Data



## WELL AND TUBING SCHEMATIC

Monument AGI D #2 API# 30-025-43470





		HA	LLIBU rgy se	RTON	TARGA Company Rep.		
Final Installation					MONUMENT AGI D2 Tool Specialist LEA COUNTY, NEW MEXICO	Office	WALTON ODESSA
Installation Length Depth			-	Denth	3/21/17 Description	SAP No.	903856682
1—			25.00		KB CORRECTION		U
- 2—	<b>I→</b> □		0.50		TUBING HANGER		
3—	<b>└→┓</b>	1	0.62	27.49	3.5" 9.3# J55 8RD DOUBLE PIN ADAPTER	3.500	2.992
		2	<b>28.75</b>	28.11	1 JOINTS 3.5" 9.3# J55 8RD TUBING	3.500	2.670
		3			3.5" 9.3# J55 8RD TUBING SUBS(10.05 - 6.05)		
		4			7 JOINTS 3.5" 9.3# J55 8RD TUBING	3.500	2.670
4—					3.5" 9.3# J55 8RD TUBING SUB X OVER 3.5" 9.3# 8RD BOX X 3.5# 12.7# VAMTOP PIN	3.550 4.000	2.670 2.750
			4.08		HALLIBURTON TUBING RETRIEVABLE SAFETY VALVE	4.000	2.750
			4.00	502.25	NICKLE ALLOY 925 15,000# PRESSURE RATING 750 PSI CLOSING	5.010	2.502
5_					781HRE25224 101757100 SN 0003747503-1 3.5" 12.7# VAMTOP B X P		
6—	┝┝┫				2300 PSI OPENING 2.562 'X' PROFILE IN TOP OF VALVE.		
7 —	┝┝┣	8	3 <b>2.16</b>	306.31	X-OVER 3.5" 12.7# VAMTOP BOX X 3.5" 9.3# 8RD PIN	4.070	2.750
		Ş	0.01		3.5" 9.3# J55 8RD TUBING SUB	3.550	2.670
_		10			248 JOINTS 3.5" 9.3# J55 8RD TUBING	3.500	2.670
8 -		11		· ·	X-OVER 3.5" 9.3# 8RD BOX X 3.5" 9.2# VAMTOP PIN	3.970	2.980
9—		12		· ·	7 JOINTS 3.5" 9.2# VAMTOP SM2550 NICKELTUBING	3.500	2.992
1 <del>0</del> -		13		· ·	3.5" 9.2# VAMTOP BOX X PIN SUB HALLIBURTON ROC GAUGE MANDREL 3.5" VAMTOP BXP	3.530 4.670	2.992 2.950
10		14	4.00	0,200.45	102329817 SN-464192	4.070	2.950
					ROC GAUGE ROC16K175C 101863926 WD#9381-6034		
					ADDRESS 126 SN-ROC004483		
		15	5 <b>0.96</b>	8,284.53	X-OVER SUB 3.5" 9.2# VAMTOP BOX X 2.875" 6.5# VAMTOP PIN	3.930	2.441
		16	6 <b>.09</b>	8,285.49	X-OVER SUB 2.875" 6.5# VAMTOP BOX X PIN	2.900	2.441
		17	<b>′</b> 1.11	8,291.58	2.313" 'X' NIPPLE 2.875" 6.4# VAMTOP BOX X PIN	3.240	2.313
		A			HALLIBURTON SEAL ASSEMBLY		
		a-1	1.73	8,292.69	STRAIGHT SLOT LOCATOR 2.875" VAMTOP BOX X 2.875 NU 10	3.950	2.431
			4.00		INCOLOY 925 (212S3270-D)(102582273)(SN-0003781099-1)	0.000	0.000
		a-2	2 1.00	8,294.42	SEAL UNIT 212MSF32500-D 102666617 SN 0003779766-5	3.200	2.380
11-	<b>╶</b>	a-3	6.06	9 205 42	2.875" NU 10 RD INCOLOY 925 3 EXTENSIONS 2.875 NU 10 RD 2.06' EACHNICKEL ALLOY 925	3.200	2.347
		a-0	0.00	0,295.42	(212X32500-D) (120056337)(SN-0003777400-1)	3.200	2.347
12-	$\rightarrow$	a-4	4.00	8.301.48	4 -SEAL UNITS 3.250" X 2.875" NU 10RD NICKEL ALLOY 925	3.200	2.380
				0,001110	1 EA- (212MSF32500-D)(102666617)(SN 0003779766-3	0.200	
13	┢╘┓┯╢				3-EA (212MSA3200-D)(102666512)(SN 0003779766-1		
14					0003779766-4 0003779766-2		
15		a-5			(FLOUREL SEALS SAP# 100014586 AFLAS SEALS SAP# 100006529)		
16			0.52	8,305.48	MULE SHOE GUIDE 2.875" NU 10RD NICKEL ALLOY 925	3.200	2.380
17\					(812G32500-D) (10143327)(SN-0003777382-1)		
A~		71			LAND HANGER WITH 26,000# COMPRESSION		
18	1	5			PUTS 20,000# COMPRESSION ON PACKER PICK UP WEIGHT IS 68,000# SLACK OFF IS 64,000#		
10					HALLIBURTON PACKER ASSEMBLY		
		<u>ال</u>	3.99	8.292.69	HALLIBURTON 7" 23-38# BWD PERMANENT PACKER WITH	5.690	3.250
19-	┢╸▁┦			-,	3.250" BORE, 4" 8UN BOX THREAD, INCOLOY 925		
					(212BWD7007-D)(101302623)		
					WAS RUN ON W/L AND TOP @ 8292.69' ELEMENTS @ 8294'		
20-		19	9.47	8,296.68	SEAL BORE EXTENSION INCOLOY 925 4" 8UN PXP	4.750	3.250
<u>.</u>					(PN212N11584)(101468460)(SN-0003744131-1)		
21–	╏╸┫	20	<b>0.56</b>	8,306.15	X-OVER 4" 8UN BOX X 2.875" 6.5# 8RD INCOLOY 925	5.000	2.430
22-		21	8.10	8 306 71	(212N9343)(101159929-A)(SN-0003777396-1) PUP JOINT 2.875" 6.5# EU 8RD INCOLOY 925	2.880	2.380
22-		22			HALLIBURTON 2.188"'R' LANDING NIPPLE INCOLOY 925	3.670	2.380
23–	<b>↓</b> ↓	~~		3,517.01	(811R21807-D) (102362504) ( SN- 0003777399-2) NICKEL ALLOY 925	5.070	2.100
		23	8.09	8,316.02	PUP JOINT 2.875" 7.9# EU 8RD INCOLOY 925	2.880	2.290
24	<b>┟<b>→</b><u></u><u></u></b>	24			HALLIBURTON 2.125" 'R' LANDING NIPPLE	3.940	2.125
25-					(811R21286) (102667285) ( SN- 0003781497-1) NICKEL ALLOY 925		
26-		25			PUP JOINT 2.875" 6.5# EU 8RD INCOLOY 925	2.880	2.380
		26	6 <b>0.58</b>		WIRELINE RE-ENTRY GUIDE 2." 9.3# VAM INCOLOY 925	3.950	2.441
				8,330.10	BOTTOM OF ASSEMBLY		
					EOC @ 8348'		
					TD @ 9210'		
					DIESEL USED FOR PACKER FLUID		
	>>	$\leq$			Filename:		