

Gandy Corporation
Proposed SWD Well - Julia Culp #2



Re-Entry and Wellbore Construction Plans

The well will be re-entered using a workover rig. The surface and intermediate casing strings will be tied-back to the surface and a new bradenhead will be installed. The P&A cement plugs will be drilled out down to the level of the cut-off in the 5.50" casing. Prior to tie-back of the 5.50" casing to the surface the 9.625" casing will be pressure tested to insure mechanical integrity. Following the 5.50" casing tie-back the well will be cleaned out to 13945' by drilling the remaining cement plugs and cast iron bridge plugs. The San Andres/Glorieta zones may need to be cemented better since the original cement bond log showed the top of cement well-below those horizons. This would be done prior to drilling out the plug at 8211' in the 5.50" casing. The Devonian formation will be perforated from 13865-85' using a large diameter casing gun for maximum perforation penetration and hole size.

If injection rates do not prove to be favorable the well will be stimulated with acid. If a further increase in injectivity is needed additional Devonian section may be drilled down to the maximum requested injection interval of 14500'. No open-hole logging is anticipated during this re-entry operation.

The nearest oil/gas zone immediately above the intended injection target is the Mississippian interval. Bridge Oil drill stem tested this zone as non-productive during the original drilling of this well in 1990. The Ellenburger lies below the Devonian in this area. No Ellenburger oil/gas production has been established (nor is it expected to be productive) anywhere nearby.

Injection Operations

The source of fluids to be injected into this disposal well will originate from nearby oil and gas operations. The fluids will typically be produced saltwater and workover and drilling fluids. The system will be a "closed" one utilizing welded steel tanks for holding after being offloaded by transport trucks. The applicant will utilize their existing facility covered by permit SWD 836 to handle the injection fluids. The well that served as the SWD well for that facility (Gandy-State T #2) has been shut in recently. Once approved, this new Devonian well will replace the State T #2. Water will be pumped from that facility overland approximately 1-mile to the northeast to the Julia Culp #2 for disposal. The anticipated injection operating parameters are summarized in the table below.

Parameter	Maximum	Average
Injection Rate (bbl/day)	5000	2500
Injection Pressure (psig)	2500	1500

Bridge Oil
Julia Culp #2
API# 30-025-30879

Spud May 1990
Drilled and Abandoned
3955' GL, Ref: KB 3975' AGL

Current Configuration
P&A'd Jan 1991

17-1/2" hole
13-3/8" 61#
at 415'
cmt 450 sx, CTS

12-1/4" hole to 2986'
11" hole to 4788'
8-5/8" 32# 4788'
Cmt 1850 sx, CTS

TOC 9280' by CBL

Perf 11710-20, 11878-90, 11990-98

4 SPF

Acdz 2500 gal 15% HCl

Not Productive

Perf 12270-77, 12300-08, 12380-88

4 SPF

Acdz 2000 gal 15% HCl

Not Productive

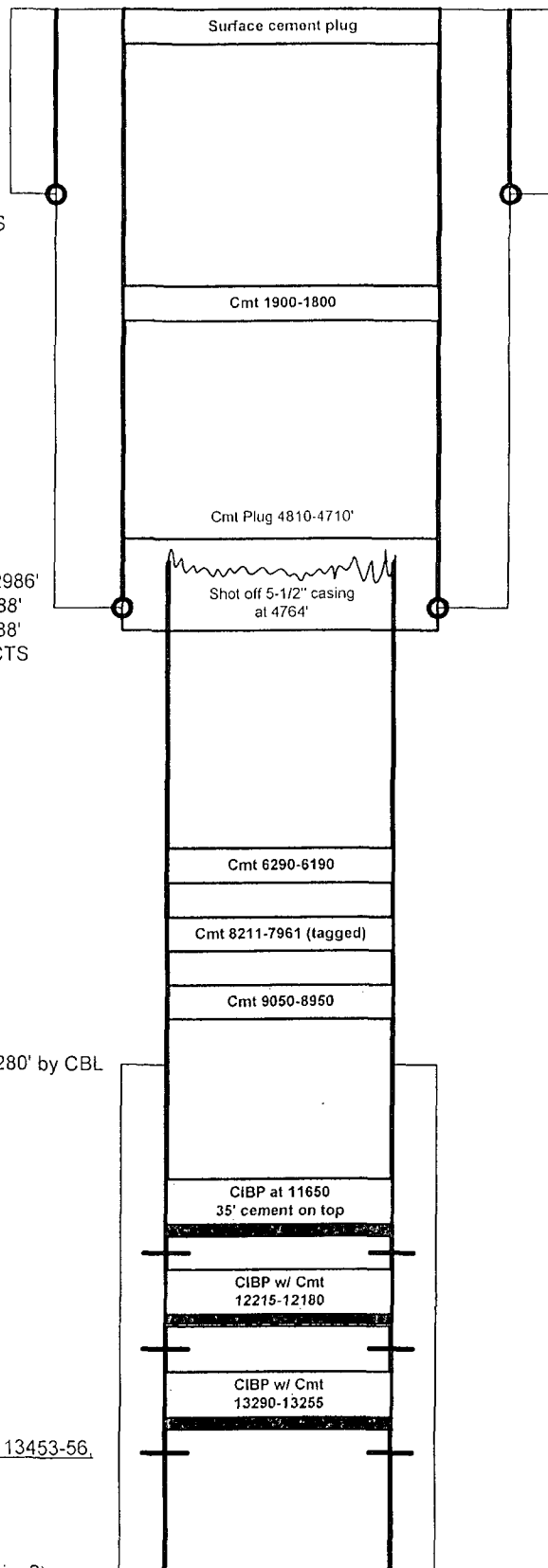
Perf 13391, 13400-08, 13439-44, 13446, 13453-56,
13461-68, 13508-22

1 SPF

Acdz 4500 gal 20% HCl

Flwd 1.8 Mmcf, 73 BO, 6 BW

ISBHP 6420 psi, FSBHP 5824 psi (depletion?)

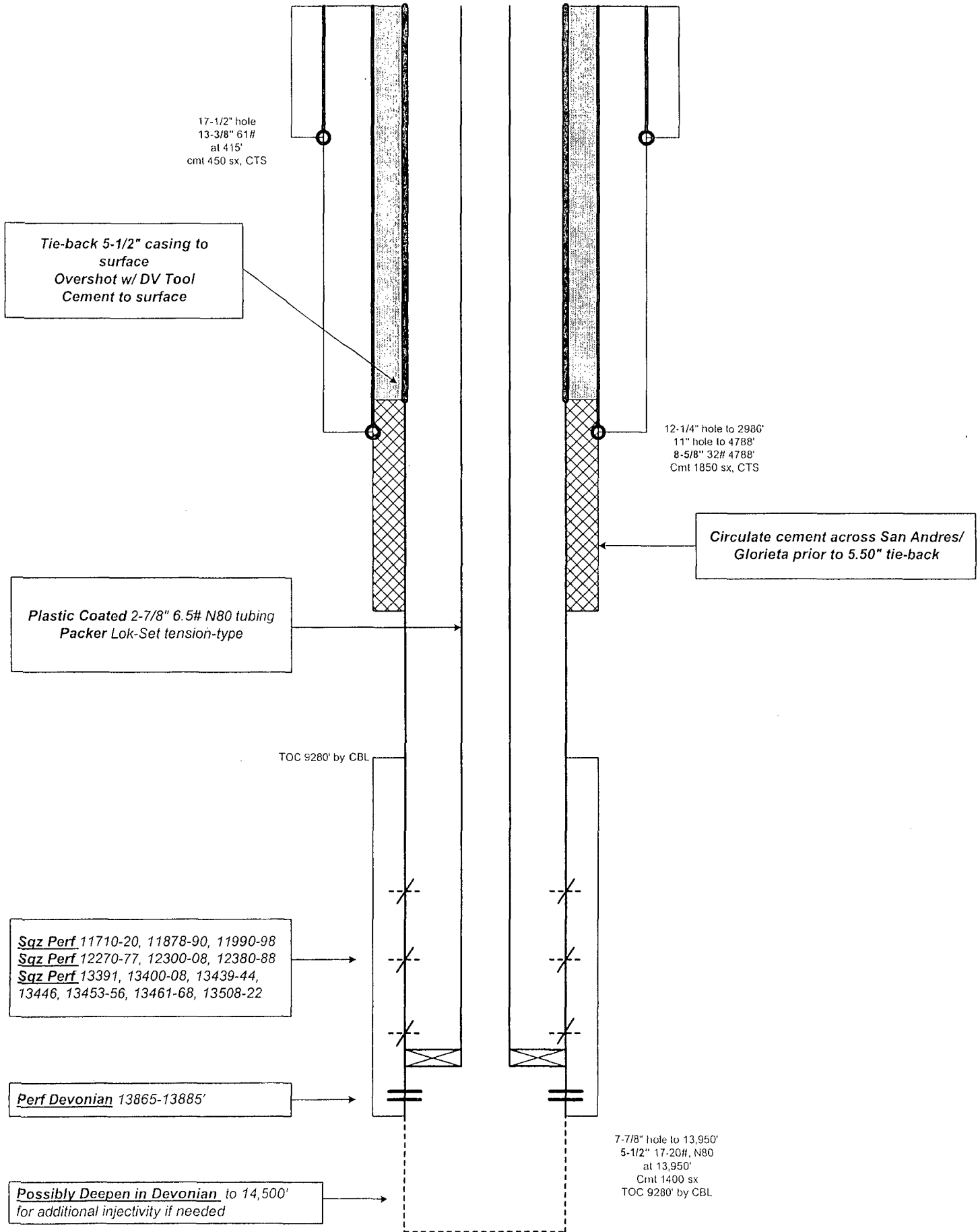


7-7/8" hole to 13,950'
5-1/2" 17-20#, N80
at 13,950'
Cmt 1400 sx
TOC 9280' by CBL

Gandy Corporation
Julia Culp #2
API# 30-025-30879

Spud May 1990
Drilled and Abandoned
3955' GL, Ref: KB 3975' AGL

Proposed SWD Configuration



INJECTION WELL DATA SHEET (PROPOSED WELL)

ITEM III

Operator:	Gandy Corporation			
Well Name:	Julia Culp #2		API#:	30-025-30879
Well Location:	Footage	Unit Letter	Section	Range
	2310' FNL 660' FEL	H	34	15S 35E

WELL CONSTRUCTION DATA

SURFACE CASING			
Hole Size:	17.50	Casing Size:	13.375" 61# at 415'
# Sacks Cement:	450		
Top of Cement:	Surf	Determined by:	Circ

INTERMEDIATE CASING			
Hole Size:	12.25 & 11.00	Casing Size:	8.625" 32# at 4788'
# Sacks Cement:	1850		
Top of Cement:	Surf	Determined by:	Circ

PRODUCTION CASING			
Hole Size:	7.875	Casing Size:	5.50" 17-20# at 13950'
# Sacks Cement:	1400		
Top of Cement:	9280'	Determined by:	Cement Bond Log

PROPOSED INJECTION INTERVAL		
Completion Type:	Combination of perforated cased hole & open hole	
Top:	13865	Bottom: 14500

INJECTION WELL DATA SHEET (PROPOSED WELL)

ITEM III

TUBING AND PACKER		
Tubing Size:	2.875" 4.7# N80	Lining Material: Composite-type
Type of Packer:	Lok-set type tension packer	
Other Information:		

ADDITIONAL DATA		
Will this be a new well?		No, it will be a re-entry
If NO, for what purposed was the well originally drilled?		Oil & gas exploration
Name of Injection Formations:		Devonian
Name of Field or Pool:		No nearby Devonian prod.

PREVIOUSLY PERFORATED ZONES		
Formation Name	Perfs	Cement Squeeze Details
Devonian	13865-13900	Openhole DST: recovered saltwater only
Mississippian	13391-13522 overall	CIBP 13290' + cmt 13255-13290' - not sqzd
Atoka	12270-12388 overall	CIBP 12215' + cmt 12180-12215' - not sqzd
Atoka	11710-11998 overall	CIBP 11650' = cmt 35' - not sqzd

FORMATIONS ADJACENT TO PROPOSED INJECTION ZONE	
Above Injection Zone:	Mississippian
Below Injection Zone:	Ellenburger

Gandy Corporation

Proposed SWD Well - Julia Culp #2

Historical Information

API# 30-025-30879

Location: Section 34, T15S, R35E, Unit Letter H, 2310' FNL and 660' FEL

Drilled by Bridge Oil USA, Inc. as an oil and gas exploration well

Spud Date: May 1990

Drilled 17.50" hole to 415'

Ran 13.375" 61# 415', cmtd 450 sx, circ to surface

Drilled 12.25" hole to 2968'

Drilled 11" hole to 4788'

Ran 8.625" 32# 4788, cmtd 1850 sx, circ to surface

Drilled 7.875" hole to 13950'

DST of Devonian 13865-13900' recovered 3500' of water blanket and 3500' of saltwater

DST of Mississippian 13386-471' recovered 3500' WCB and 270' GCM

Ran 5.50" 17-20# N80 to 13950', cmtd 1400 sx, TOC 9280' by CBL

Original Completion, July 1990

Perforated Mississippian 13391, 13400-08, 13439-44, 13446, 13453-56, 13461-68, 13508-22 all 1 spf

Acidized w/ 4500 gal 20% HCl

Unload, flow test on choke w/ pressure bomb in hole

Initial BHP 6420 psi, Final BHP 5824 psi after flowing 1.8 MMcf, 73 BO, 6 BW

Produced for several months in this zone: recovered 508 BO, 29 MMcf

Recomplete and test Lower Atoka, December 1990

Set CIBP 13290', spotted cement 13255-13290'

Perforated 12270-77, 12300-08, 12380-88' 4 spf

Acidized w/ 2000 gal 15% HCl + 160 BS, tested non-productive

Recomplete and test Upper Atoka, January 1991

Set CIBP 12215', spotted cement 12180-215'

Perforated 11710-20', 11878-90', 11990-98' 4 spf

Acidized w/ 2500 gal 15% HCl + 200 BS, tested non-productive

Plug & Abandon well, January 1991

Set CIBP 11650' w/ 35' cmt on top

Spot 20 sx 8950-9050'

Spot 60 sx 7950-8211', tagged 7961'

Spot 30 sx 6190-6290'

Shot-off and pulled 5.50" casing at 4764'

Spot 30 sx 4710-4810', tag at 4800', spot additional 35 sx

Spot 30 sx 1800-1900'

Spot 10 sx at surface

Cut-off wellhead and casing below ground surface, place steel marker

Note: left abandoned hole full w/ 10 ppg salt gel between all cement plugs

PI/Dwights PLUS on CD Well Summary Report

General Information					
State	:	NEW MEXICO	Final Status	:	GAS
County	:	LEA	Drill Total Depth	:	13950
Field	:	BIG DOG	Log Total Depth	:	
Operator Name	:	BRIDGE OIL U S A INC	True Vertical Depth	:	
Lease Name	:	CULP JULIA			
Well Number	:	2	Spud Date	:	MAY 06, 1990
API Number	:	30025308790000	Comp Date	:	JUL 11, 1990
Regulatory API	:				
Init Lahee Class	:	WD	Hole Direction	:	VERTICAL
Final Lahee Class	:	WDD	Reference Elevation	:	3975 KB
Permit Number	:		Ground Elevation	:	3955
Geologic Province	:	PERMIAN BASIN	KB Elevation	:	3975
Formation at TD	:	309DVNN			
Oldest Age Pen	:	309			
Producing Formation	:	359MSSP			
Township	:	15 S	Section	:	34 SEC
Range	:	35 E	Spot	:	SE NE
Base Meridian	:	NEW MEXICO			

Additional Location Information			
Footage Location	:	2310 FNL 660 FEL CONGRESS SECTION	
Latitude	:		Latitude (Bot) :
Longitude	:		Longitude (Bot) :
Lat./Long. Source	:		
Location Narrative	:	Type	Remark
		LOCATION	9 MI SE HILLBURN CITY, NM 1/4 MI S/10600 (WFMP) OIL PROD IN CHAMBERS FLD

Initial Potential Tests												
Test	Top Form	Base Form	Top Depth	Base Depth	Choke	GOR	Oil Grav	Prod Method	Test Method			
001	359MSSP	359MSSP	13391	13522	19/64	228	63.2	PERF	FLOWING			
IP Volume												
Test	Amount	Oil Unit	Desc	Amount	Unit	Desc	Amount	Unit	Desc	Amount	Unit	Desc
001				44	BPD		6878	MCFD				
IP Pressure												
Test	FTP	SITP	FCP	SICP								
001	3067	4204										
IP Bottom Hole												
Test	Press	Temp	Depth	Time								
001		207	13330									
IP Perforation												
Test	Top	Base	Type	Method	Top Form	Base Form	Status	Count	Density	Per		
001	13391	13522		PERF	359MSSP	359MSSP		37				

Production Tests												
Test	Top Form	Base Form	Top Depth	Base Depth	Choke	GOR	Oil Grav	Prod Method	Test Method			
001	359MSSP	359MSSP	13391	13522	19/64			PERF	FLOWING			
Production Volume												
Test	Amount	Oil Unit	Desc	Amount	Unit	Desc	Amount	Unit	Desc	Amount	Unit	Desc
001	73	BBL					1830	MCFD		6	BBL	

PI/Dwights PLUS on CD Well Summary Report

Test	F1P	SITP	FCP	SICP
001				

Test	Press	Temp	Depth	Time
001	5824		13950	

Test	Top	Base	Volume	Meas	Amount	T/P	PSI	Inj	Type	Nbr	Agent	Add
001	13391	13522	4500	GAL					ACID			

Test	Top	Base	Type	Method	Top Form	Base Form	Status	Count	Density	Per
001	13391	13391		PERF	359MSSP	359MSSP	A	5		
001	13400	13408		PERF	359MSSP	359MSSP	A	5		
001	13439	13444		PERF	359MSSP	359MSSP	A	5		
001	13446	13446		PERF	359MSSP	359MSSP	A	5		
001	13453	13456		PERF	359MSSP	359MSSP	A	5		
001	13461	13468		PERF	359MSSP	359MSSP	A	5		
001	13508	13522		PERF	359MSSP	359MSSP	A	5		

Formations

Form Code	Form Name	Top Depth	Top TVD	Base Depth	Base TVD	Source	Lithology
453YTES	YATES	3040				LOG	
453QUEN	QUEEN	3900				LOG	
453SADRD	SAN ANDRES D	4733				LOG	
453GLRT	GLORIETA	6368				LOG	
452TUBBS	TUBB /SD/	7572				LOG	
452ABO	ABO /SH/	8306				LOG	
451WFMP	WOLFCAMP	9700				LOG	
404STRN	STRAWN	11500				LOG	
403ATOK	ATOKA	11688				LOG	
359MSSP	MISSISSIPPIAN	12992				LOG	
309DVNN	DEVONIAN	13860				LOG	

Formation Tests

Test	Type	Top Depth	Base Depth	Top Form	Top Choke	Bottom Choke	Show
001	DST	11080	11127	451WFMP			
002	DST	11500	11568	404STRN			S
003	DST	11690	11744	403ATOK			S
004	DST	11850	11950	403ATOK			
005	DST	13386	13471	359MSSP			S
006	DST	13865	13900	309DVNN			

Pressure and Time

Test	Init	Hydro Final	Init Flow	Final Flow	Shut-in	Open Time	Shut-in Time
			Init	Final	Init	Final	Init
001			52		511	1125	10
002			400	377	3755	3481	10
003			503		3507	3820	10
004							
miss. 005			1161		6229	6703	10
006			1732		5216		10

PI/Dwights PLUS on CD Well Summary Report**Cushion**

Test	Length	Type
002	1000	WTR
006	3500	WTR

Pipe Recovery

Test	Amount	Unit	Desc	Rec Type	Rec Method
001	60	FT	M		PIPE
002	1000	FT	GCWB		PIPE
002	130	FT	GCM		PIPE
003	1045	FT	GO&WB		PIPE
003	155	FT	G&OCM		PIPE
005	3000	FT	GCWB		PIPE
005	50	FT	GCM		PIPE
006	3500	FT	WB		PIPE
006	270	FT	WCM		PIPE
006	3500	FT	ZW		PIPE

Material to Surface

Test	Amount	Unit	Fluid Type	Time
002			GAS	102
003			GAS	137
005	150	MCFD	GAS	58

Log Data

Run No	Log Type	Top	Base	Log MD	Max Temp
01	ILD				
01	ML				
01	NECL				
01	DN				
01	NE				

Casing Data

Size	Base Depth	Cement	Unit
13 3/8 IN	415	450	SACK
8 5/8 IN	4788	1850	SACK
5 1/2 IN	13950	1400	SACK

Tubing Data

Size	Base Depth	Mixed String
2 7/8 IN	13330	

Dwights Energydata Narrative

Accumulated through 1997

IP: F 44 BCPD grav 63.2; 6878 MCFGPD on 19/64 ck; FTP 4204

Perfs: 13391-13522 (Mississippian)

Perfs: w/1 SPF 37 holes total - no treatment rptd

Dwights number: T4325660