

Submit To Appropriate District Office

State Lease - 6 copies

Fee Lease - 5 copies

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Oil Conservation Division

220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-105

Revised March 25, 1999

WELL API NO.

30-015-32324

5. Indicate Type of Lease

STATE ☐ FEE ☒

State Oil & Gas Lease No.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:

OIL WELL ☐ GAS WELL ☐ DRY ☐ OTHER CLASS II Injection

b. Type of Completion:

NEW ☒ WORK ☐ DEEPEN ☐ PLUG ☐ DIFF.
WELL OVER BACK RESVR. ☐ OTHER

2. Name of Operator

DUKE ENERGY FIELD SERVICES, LP

3. Address of Operator

3300 NORTH A ST., LDG. 7, MIDLAND, TX 79705

4. Well Location

Unit Letter Ø: 1232 Feet From The SOUTH Line and 1927 Feet From The EAST LineSection 7 Township 18S Range 28E NMPM EDDY County

10. Date Spudded

8/14/02

11. Date T.D. Reached

9/22/02

12. Date Compl. (Ready to Prod.)

7/10/03

13. Elevations (DF& RKB, RT, GR, etc.)

RKB 3628.5/64 3611

14. Elev. Casinghead

3ft B6L

15. Total Depth

11,520

16. Plug Back T.D.

11,472

17. If Multiple Compl. How Many Zones?

-

18. Intervals Drilled By

Rotary Tools

11,520

Cable Tools

-

19. Producing Interval(s) of this completion - Top, Bottom, Name

Injection 11,207 - 11,412 DEUNIAN

20. Was Directional Survey Made

No

21. Type Electric and Other Logs Run

DLL-LDT-GR (TD), DLL-LSS (Int), CBL

22. Was Well Cored

No

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
20"	94	45 ft	24"	Full Returns	
13 5/8"	48	530	17 1/2"	Full Returns	
9 5/8"	40	4200	12 1/4"	Full Returns	
7"	26	11,520	8 3/4"	2 STAGE	

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

25. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 7/8"	11,158	11,122

26. Perforation record (interval, size, and number)

11,207 - 11,260, 1/2", 265 shots (53' @ 5 spf)
11,326 - 11,412, 1/2", 695 shots (135' @ 5 spf)

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED

11,207 - 11,412 40,000 gal 15% SXE (ACID FRAC)

28

PRODUCTION

Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)			Well Status (Prod. or Shut-in)		
Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.)	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Test Witnessed By

30. List Attachments

E-Logs (1) DLL-LSS (2) DLL-LDT-GR (3) CBL (4) Well Schematic (5) DST1 (6) DST2

31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief

Signature

Printed Name

KARIN KIMURA Title SR. ENV. SPECIALIST Date 07/22/03

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon <u>8412</u> 8412	T. Ojo Alamo	T. Penn. "B"
T. Salt	T. Strawn <u>9024</u> 9024	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	T. Atoka <u>9680</u> 9680	T. Pictured Cliffs	T. Penn. "D"
T. Yates	T. Miss <u>10587</u> 10587	T. Cliff House	T. Leadville
T. 7 Rivers	T. Devonian <u>11152</u> 11152	T. Menefee	T. Madison
T. Queen <u>1430</u> 1430	T. Silurian	T. Point Lookout	T. Elbert
T. Grayburg <u>1935</u> 1935	T. Montoya	T. Mancos	T. McCracken
T. San Andres <u>2230</u> 2230	T. Simpson	T. Gallup	T. Ignacio Otzte
T. Glorieta <u>3860</u> 3860	T. McKee	Base Greenhorn	T. Granite
T. Paddock	T. Ellenburger	T. Dakota	T.
T. Blinebry	T. Gr. Wash	T. Morrison	T.
T. Tubb <u>5050</u> 5050	T. Delaware Sand	T. Todilto	T.
T. Drinkard	T. Bone Springs	T. Entrada	T.
T. Abo <u>6172</u> 6172	T.	T. Wingate	T.
T. Wolfcamp <u>7196</u> 7196	T.	T. Chinle	T.
T. Penn	T.	T. Permian	T.
T. Cisco (Bough C) <u>7850</u> 7850	T.	T. Penn "A"	T.

OIL OR GAS SANDS
OR ZONES

No. 1, from.....to.....
No. 2, from.....to.....
No. 3, from.....to.....
No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
No. 2, from.....to.....feet.....
No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology
0	1430	1430	Interbedded sand, shale salt + anhydrite	10428	10587	159'	Limestone becoming more shaly with depth
1430	2230	800'	Sand, shale & dolomite	10587	11134	547'	MASSIVE Limestone
2230	5050	2820'	Dolomite - sandy dolomite to limestone	11134	11152	18'	Black Cherty shale
5050	5300	250'	shaly sandstone	11152	11504	352'	Cherty Dolomite
5300	6172	872'	Dolomite to sandy dolomite				
6172	7000	828'	Dolomite - limestone				
7000	7196	196'	Interbedded - Dolomitic sandstone				
7196	9680	2490'	Limestone with shale interbeds -				
9680	9960	280'	Interbedded limestone and shale				
9960	10428	468'	Interbedded limestone, shale + sandstone				

Clear

REPORT NO.

8979323

PAGE NO. 1

TEST DATE:

24-Sep-02

STAR

Schlumberger

Schlumberger Transient Analysis Report

RECEIVED

Based on Model Verified Interpretation
Of Well Test Data

JUL 22 2003

Duke Energy

COMPANY : DUKE ENERGY

WELL: DUKE AGI -1

Environmental Health & Safety

TEST IDENTIFICATION

Test Type DRILL STEM TEST
 Test No. ONE
 Formation DEVONIAN
 Test Interval (ft) 11,270-11,520

WELL LOCATION

Field ARTESIA
 County EDDY
 State NEW MEXICO
 Location

SAMPLE CHAMBER DATA

Recovered Gas (c.f.) 0.03
 Recovered Oil (c.c.) 0
 Recovered Water (c.c.) 4,800
 Recovered Mud (c.c.) 0
 Sample Chamber Pressure (psig) . 46
 Rec. Mud Filtrate
 Rec. Water Filtrate
 Assumed SC Gas Gravity 0.65

COMPLETION CONFIGURATION

Casing / Liner Size (in)
 Open Hole Size (in) 7.875
 Gauge Depth (ft) 11,297
 DC Length (ft)/I.D. (in) 210 / 2.25
 DP Length Size (in) 11,037 / 4.5

TEST CONDITIONS

Tbg / Wellhead Pressure (psi)

INTERPRETATION RESULTS

Model of Behavior HOMOGENEOUS
 Fluid Type Used for Analysis WATER
 Ext. Reservoir Pressure (psi) 4,967 @ GAUGE
 Transmissibility (md.ft/cp) 310
 Effective Permeability (md) 1.9
 Skin 18
 Pressure Drop (skin, psi) 2,964
 Pressure @ Delta t=0 (psi) 1,081
 Radius of Investigation (ft) 135
 Permeability Thickness (md.ft) .. 114

ROCK / FLUID / WELLBORE PROPERTIES

Water Density (lb/gal) 9.53
 Viscosity (cp) 0.3673
 Total Compressibility (1/psi) 6.01E-06
 Porosity (%) 8
 Reservoir Temperature (F) 169
 Water Cut (%) 100
 Water Saturation (%) 100
 Net Pay (ft) 60

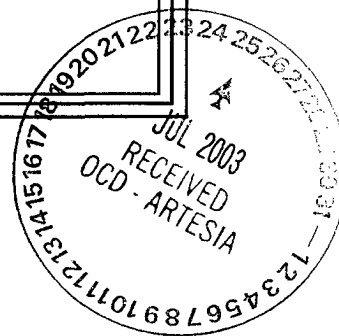
PRODUCTION RATE DURING TEST: 358 BPD

SUMMARY:

This report contains the analysis of the data acquired during a Drill Stem Test of the Devonian zone conducted on the Duke Energy AGI -1 well in Eddy County, New Mexico. This test was performed by Schlumberger's Hobbs New Mexico testing district (505 393 3835). The zone was isolated from 11,270 feet to 11,520 feet with drill stem test tools and the data was acquired using tandem electronic pressure gauges.

The data was modeled using a limited entry reservoir model with changing wellbore storage and skin. The buildup was not long enough to acquire data during the radial flow regime, therefore, only log log type curve matching techniques could be used to interpret this data. Pressure history matching was used to confirm this analysis. The permeability to water was calculated to be 1.9 md, using a thickness of 60 feet. The skin was calculated to be positive 18, causing a near wellbore pressure drop of 2,964 psi. The reservoir pressure was extrapolated from the type curve to be 4,967 psi at gauge depth.

For further discussion of this analysis, please refer to the interpretation discussion on page two of this report. If you have any questions, please call Marc Percy at 405 840 2781.



Duke Energy AGI -1 Interpretation Discussion:

This report contains the analysis of the data acquired during a Drill Stem Test of the Devonian zone conducted on the Duke Energy AGI -1 well in Eddy County, New Mexico. This test was performed by Schlumberger's Hobbs New Mexico testing district (505 393 3835).

The data was taken using drill pipe conveyed, electronic pressure gauges. The zone was isolated from 11,270 feet to 11,520 feet with drill stem test tools and a standard drill stem test procedure was followed consisting of two flow periods and two shut in periods.

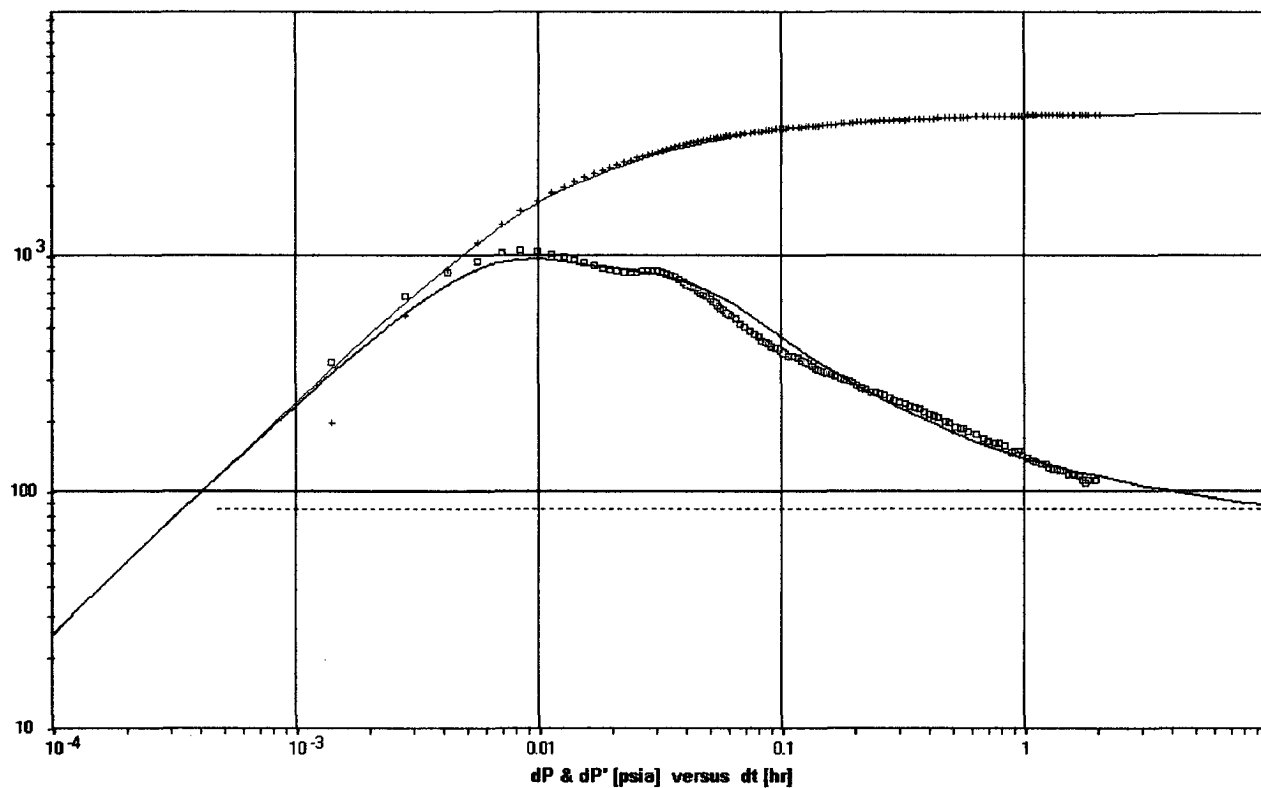
The data was modeled using a homogeneous reservoir model with changing wellbore storage and skin. The radial flow regime was masked by wellbore storage. The radial flow regime is indicated by the constant pressure derivative on the plot of log-log pressure and pressure derivative versus shut in time (using the pseudopressure function). No semi log analysis could be done, only log log type curve matching techniques were used to interpret this data. At the time the test was terminated, the data was in the transition from wellbore storage to radial flow.

The permeability to water was calculated to be 1.9 md, using a thickness of 60 feet. The skin was calculated to be positive 18, causing a near wellbore pressure drop of 2,964 psi. Of the calculated skin, 13.5 is caused by limited entry effects, convergence. The remaining 4.5 is a traditional pressure drop near the wellbore. The reservoir pressure was extrapolated from the type curve to be 4,967 psi at a gauge depth of 11,297 feet.

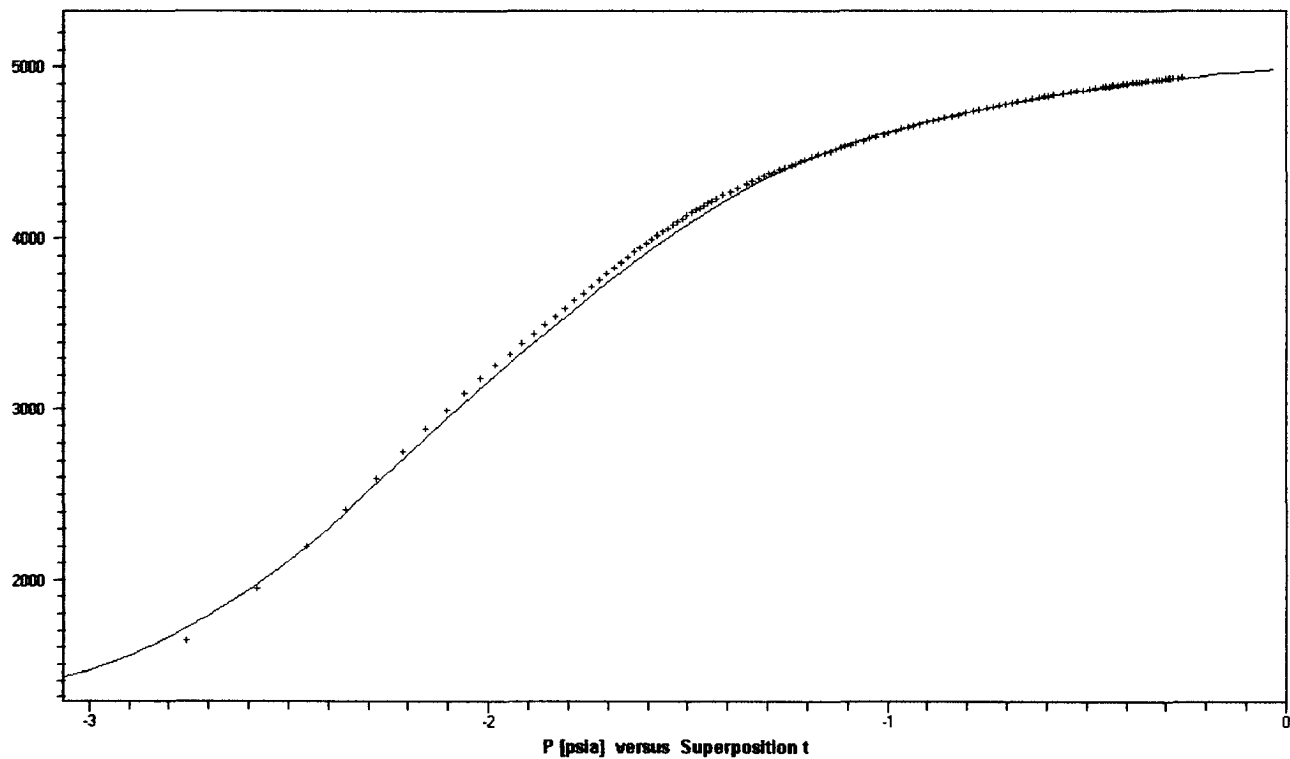
In order to validate the results of this analysis, a simulation of the test sequence was made using the model constructed from this interpretation. The measured data was then plotted on the same scale as the simulated data. Agreement between the measured data and simulated data is adequate. This plot is presented in the body of this report.

If you have any questions, please call Marc Pearcy at 405 840 2781.

LOG LOG DIAGNOSTIC PLOT



SEMI LOG PLOT



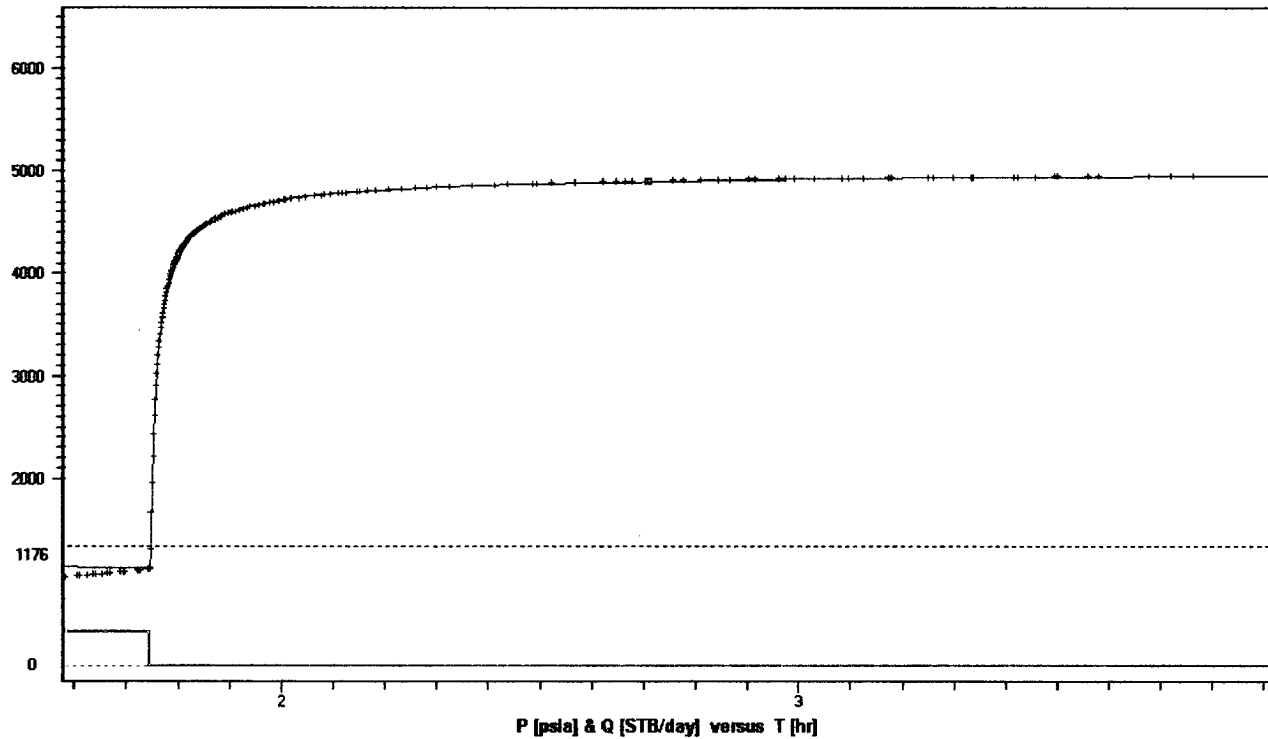
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INTERPRETATION PLOTS
CONTINUED

PRESSURE SIMULATION

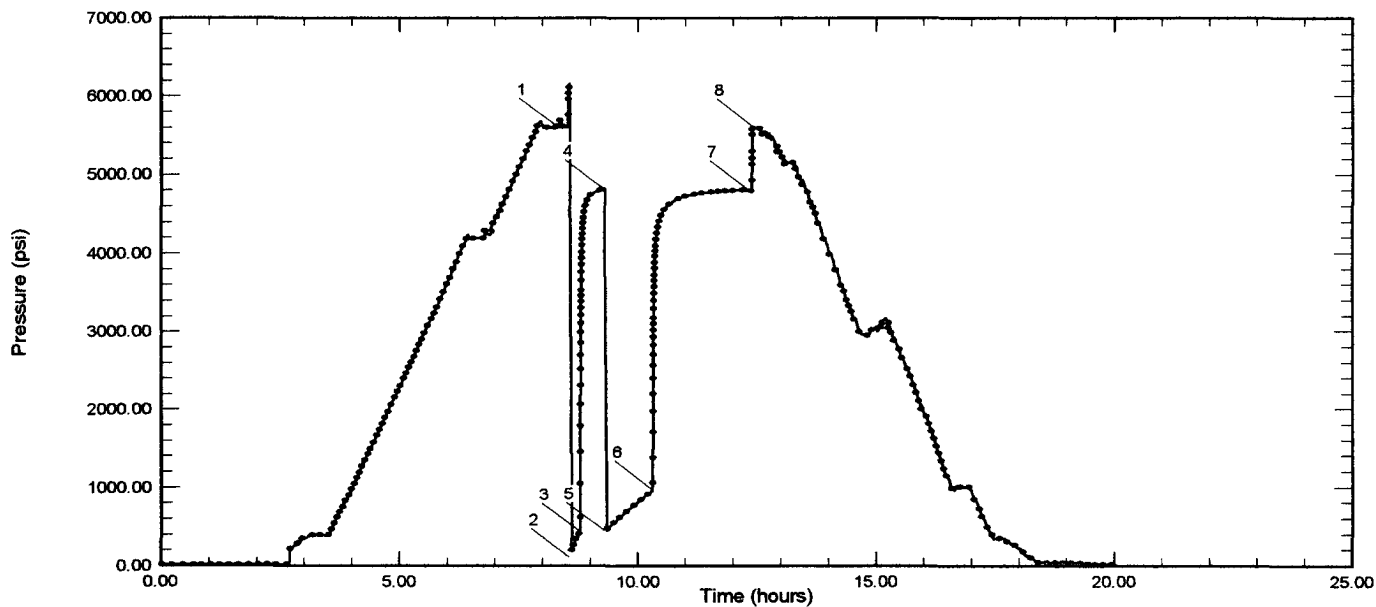


Schlumberger

Label Point Data Duke Energy Openhole DST

Duke AGI 1
Artesia

8979323
24-Sep-02



Label Point / Comments	Date (dd-mmm-yy)	Time (hh:mm:ss)	Gauge ET (hours)	BHP (psia)	Rate (0)
Label Point Summary					
1) Hydrostatic Pressure	24-Sep-02	7:23:32	8.309	5601.16	0
2) Start Flow	24-Sep-02	7:39:02	8.567	100.35	1
3) End Flow & Start Shut-in	24-Sep-02	7:51:57	8.783	426.46	0
4) End Shut-in	24-Sep-02	8:21:07	9.269	4808.80	0
5) Start Flow	24-Sep-02	8:22:52	9.298	435.63	1
6) End Flow & Start Shut-in	24-Sep-02	9:23:22	10.306	964.77	0
7) End Shut-in	24-Sep-02	11:23:32	12.309	4806.17	0
8) Hydrostatic Pressure	24-Sep-02	11:32:02	12.451	5592.75	0

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FLOWRATE HISTORY

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**Flow Period
Duration (hrs)**

**Flow Period
Production Rate (BPD)**

0.22084

1176

0.51111

0

1.01389

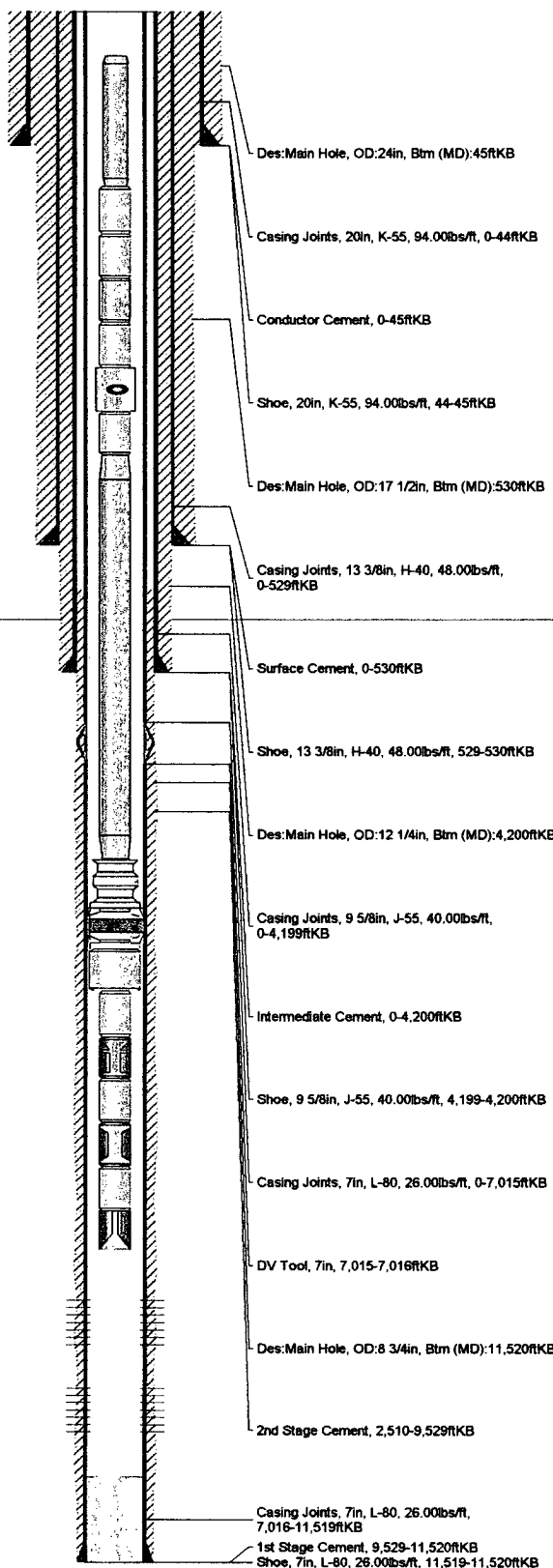
358

2

0

Duke AGI #1

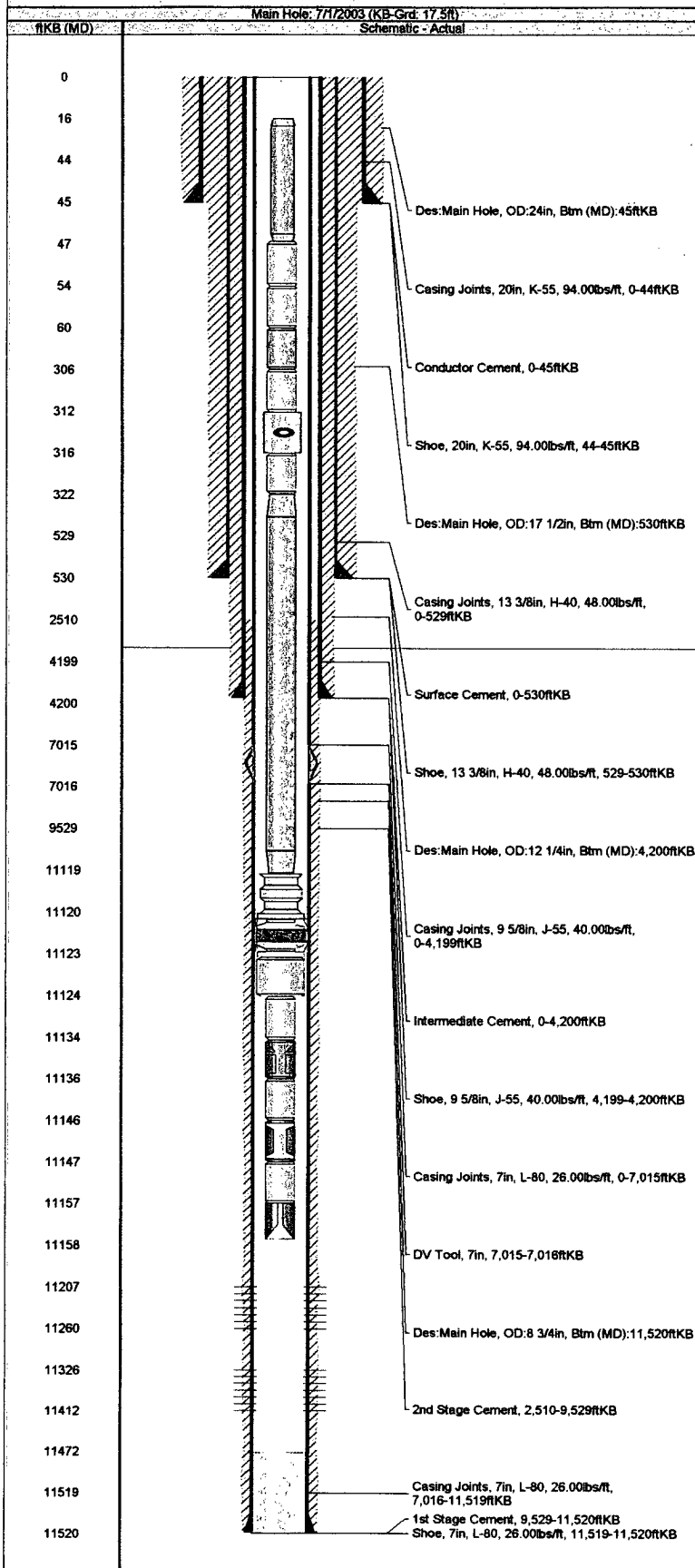
Cement: Production, casing, 9/27/2002 00:00						
Cementing Company		Evaluation Method Cement Bond Log		Cement Evaluation Results		
Stg No	Description			Top (ft/KB)	Btm (ft/KB)	Full Return
1	1st Stage Cement			9,529.0	11,520.0	Yes
Type	Class	Am't (sacks)	Yield (ft/sack)	Mix H2O Ratio (gal/sack)	V (bbl)	Fluid Des



WellView®

Complete Well Summary

Duke AGI #1



Type	Class	Amt (sacks)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)	V (bbl)	Fluid Des	
Tail	HL	600	1.62			Lap-1 H2S Resistant Cmt	
Stg No.	Description				Top (ftKB)	Btm (ftKB)	Full Return
2	2nd Stage Cement				2,510.0	9,529.0	No
Type	Class	Amt (sacks)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)	V (bbl)	Fluid Des	
Lead	HLP	800	1.94				
Tail	HLP	100	1.18				

Perforations

Date	Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)	Shot Total	Chg Sz (g)	Current Status
11/11/2002	11,207.0	11,260.0		5.0			
11/11/2002	11,326.0	11,412.0		5.0			

Tubing: Tubing - Production set at 11,158.0ftKB on 7/1/2003 00:00

OD (in)	Item Des	Top (ftKB)	Len (ft)	ID (in)	Wt (lbs/ft)	Grade	Top Thread
2 7/8	Tubing	18.2	30.65	2.441	6.50	L-80	Hydrill 533
3.6	Tubing Pup Joint	46.8	7.70	2.441	6.40	L-80	Hydrill 533
3.6	Tubing Pup Joint	54.5	5.70	2.441	6.40	L-80	Hydrill 533
3.6	Tubing	60.2	245.87	2.441	6.40	L-80	Hydrill 533
3.6	Tubing Pup Joint	306.1	5.70	2.441	6.40	L-80	Hydrill 533
4.62	Safety valve	311.8	3.94				Hydrill 533
3.6	Tubing Pup Joint	315.7	5.70	2.441	6.40	L-80	Hydrill 533
3.6	Tubing	321.4	10797.45	2.441	6.40	L-80	Hydrill 533
5.2	Anchor Latch Seal Assembly	11,118.9	1.00				Hydrill 533
5 7/8	Schlum QL 7x4 Packer	11,119.9	2.95				Hydrill 533
5 7/8	Tail Pipe Adaptor	11,122.8	1.35	2.441	6.40	L-80	Hydrill 533
3.6	Tubing Pup Joint	11,124.2	10.12	2.441	6.40	L-80	Hydrill 533
3.6	Profile Nipple	11,134.3	1.25	2.313			Hydrill 533
3.6	Tubing Pup Joint	11,135.5	10.10	2.441	6.40	L-80	Hydrill 533
3.6	Seating Nipple	11,145.6	1.37	2.205			Hydrill 533
3.6	Tubing Pup Joint	11,147.0	10.00	2.441			Hydrill 533
3.6	Wireline Guide	11,157.0	1.00				Hydrill 533

Other in Hole

OD (in)	Des	Top (ftKB)	Btm (ftKB)	ID (in)	Make	Model
7	PBTD	11,472.0	11,520.0	6.000		

RECEIVED

JUL 22 2003

Duke Energy
Environmental Health & Safety

Data last updated on 7/21/2003 8:51 PM GMT
Printed on Monday, July 21, 2003

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