Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised August 1, 2011

WELL API NO.
30-015-21447

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
B-10456

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
ARTESIA STATE UNIT

1. Type of Well: Oil Well ☐ Gas Well ☐ Other Injection Well ☒

8. Well Number 502

2. Name of Operator
Alamo Permian Resources. LLC

9. OGRID Number
274841

3. Address of Operator
415 W. Wall Street, Suite 500, Midland, TX 79701

10. Pool name or Wildcat
Artesia; Queen-Grayburg-San Andres

4. Well Location
Unit Letter I : 2630 feet from the S line and 10 feet from the E line
Section 14 Township 18S Range 27E NMPM County EDDY

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
OTHER: CLEAN OUT, ADD PERFS, ACIDIZE ☒		OTHER: ☐	

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.

SEE ATTACHED

NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 21 2014
RECEIVED

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

SIGNATURE Carie Stoker TITLE **Regulatory Affairs Coordinator** DATE 08/18/2014

Type or print name **CARIE STOKER** E-mail address: **carie@stokeroilfield.com** PHONE: **432.664.7659**

APPROVED BY: [signature] TITLE DIST II Supervisor DATE 8-21-2014
Conditions of Approval (if any):

ALAMO PERMIAN RESOURCES, LLC

ARTESIA STATE UNIT #502 WIW
CLEAN-OUT, ADD PERFS, & ACIDIZE PROCEDURE

1. MIRU PU & BOP's. Be sure well is dead and blown down. If well tries to flow back – flow well back either into water truck(s) if flowback is weak, or via temporary poly line to Artesia State Unit Water Station inlet tank, if flowback appears to be strong. In either case, take flowback to Artesia State Unit Water Station inlet water tank.

2. **THIS WELL HAS 4-1/2" 10.5# J-55 PRODUCTION CASING.**
We will need to use the 2-3/8" workstring for this workover.

We have never pulled this well since its acquisition from CBS Operating Corp. in 2010.
We are currently unable to inject water into this WIW due to excessive pressures. Based on the Artesia State Unit #201 WIW - Expect to find the wellbore full of scale, sand, paraffin, iron sulfide, salt, etc.

The last record I could find regarding well work on this well was a pulling job by CBS Operating in October 2010. A new Baker Model AD-1 packer was set in the well with 18,000# tension at an unknown depth (I would estimate around 1,160'). I would assume the tubing is 2-3/8" 4.7# EUE IPC tubing.

PROVIDE A DETAILED TALLY & DESCRIPTION OF TUBING, INJECTION PACKER AND ANY OTHER DOWNHOLE EQUIPMENT PULLED FROM THIS WELL IN THE MORNING REPORT FOR OUR RECORDS.

Visually inspect Injection Tubing & Injection Packer coming out of hole. Send Injection Packer in for Repair/Replacement depending on condition.

Current Perforations:	1,709' – 1,892' (183' Overall interval) – 31' of perforations (62 holes).
Planned New Perforations:	**1,452' – 1,892' (440' Overall interval) – 51' of perforations (102 holes).**
Total Perfs after W/O:	**1,452' – 1,892' (440' Overall Interval) – 51' of perforations (164 holes).**

See Wellbore Diagram for perforations detail – updated 08/12/2014.

3. Run in hole with a 3-1/2" mill tooth skirted rock bit and 4-1/2" rotating casing scraper on 2-3/8" workstring and clean out wellbore to PBTD at +/- 1,970'. Catch samples of any material recovered from well and send to Tech Management for analysis. Note any bridges or hard streaks in report. While at TD, circulate hole clean using clean produced water from Artesia State Unit or WAGU Water Injection Station. POOH with bit and scraper.

REMEMBER: Paraffin has been encountered in offset wells. If excessive paraffin is encountered, pour 10 gal of diesel down tubing and cut paraffin from tubing string with paraffin knife – pouring additional 5 gal diesel down tubing every knife run, or circulate well with hot water & paraffin solvent chemicals to clean paraffin out of tubing string. Paraffin, iron sulfide, sand, rust, and scale have been recovered in many of these old wells while cleaning out to bottom.

4. RU Logging Company and run GRN/CCL log for perforating correlation from PBTD at +/- 1,970' to base of Surface Casing at 288'.

Log should show porosity based on Sandstone Matrix, Dolomite Matrix, & Limestone Matrix.

Email log directly from wellsite to Pat Seale at pseale@alamoresources.com and Tom Fekete at jordanrubicon@msn.com.

We will review GRN/CCL log and perfs for correlation to old GRN/CCL log run on 03/01-1075, prior to perforating.

5. Perforate the ARTESIA STATE UNIT #201 WIW well over the following **11 intervals** using 3-1/8" Hollow-Carrier slick perforating guns with 19-grain charges:

Interval No.	Perf Interval Top	Bottom	No. of Ft	SPF	No. of Perfs	Zone
1	1,452'	1,462'	10'	2	20	**QN – Penrose SS**
2	1,709'	1,714'	5'	2	10	**QN – Loco Hills**
3	1,722'	1,725'	3'	2	6	**QN – Loco Hills**
4	1,784'	1,787'	3'	2	6	**GB – Upper Grayburg**
5	1,814'	1,817'	3'	2	6	**GB – Metex**
6	1,824'	1,833'	9'	2	18	**GB – Metex**
7	1,842'	1,846'	4'	2	8	**GB – Metex**
8	1,857'	1,861'	4'	2	8	**GB – Metex**
9	1,874'	1,878'	4'	2	8	**GB – Metex**
10	1,884'	1,886'	2'	2	4	**GB – Metex**
11	1,888'	1,892'	4'	2	8	**GB – Metex**
TOTALS			**51'**		**102 Perfs**	

6. **Acidize LOCO HILLS, GRAYBURG, & METEX Perforated Intervals from 1,709'- 1,892':**
   - **183' Overall;**
   - **41' of perforations**
   - **144 perforations**

   in 4 Stages using Rock Salt for Diversion of acid during Job.

   Acid Job Total:
   - **7,200 gal 15% NEFE HCl (171.4 Bbls)**
   - **175.6 gal/ft of perfs**
   - **50.0 gal/perf)**

   with acid booster, anti-sludge, paraffin solvent, scale inhibitor, and demulsifiers, **pumped at 5.0-6.0 BPM.**

   - Run in hole with Treating Packer on 2-3/8" workstring with Retrievable Bridge Plug setting tool and RBP below packer.
   - Set Retrievable Bridge Plug at approximately **1,940'**.
   - Set Treating Packer at approximately **1,670'**.

   Acidize the perforations in 4 Stages using Rock Salt as diverting agent between Stages:

STAGE 1: **SPOT 130 gal 15% NEFE HCl (3.1 bbls)** across Perfs from 1,709'-1,892' (183') inside the 4-1/2" 10.5# production casing in the well.

Pick up Retrievable Packer and Set at approx. **1,670'**.

ACIDIZE STAGE 1 with a total of 2,800 gal 15% NEFE HCl (66.7 bbls) + additives, increasing pump rate after breakdown to 5.0-6.0 BPM.

PUMP 400# ROCK SALT in Artesia State Unit or WAGU produced water as Diverting Agent between Stage 1 and Stage 2.

STAGE 2: **PUMP 2,200 gal 15% NEFE HCl ACID (52.4 bbls) + additives at 5.0-6.0 BPM.**

PUMP 400# ROCK SALT in Artesia State Unit or WAGU produced water as Diverting Agent between Stage 2 and Stage 3.

STAGE 3: **PUMP 1,100 gal 15% NEFE HCl ACID (26.2 bbls) + additives at 5.0-6.0 BPM.**

PUMP 400# ROCK SALT in Artesia State Unit or WAGU produced water as Diverting Agent between Stage 3 and Stage 4.

STAGE 4: **PUMP 1,100 gal 15% NEFE HCl ACID (26.2 bbls) + additives at 5.0-6.0 BPM.**

Pump +/- 10.0 Bbls **Fresh Water** to displace acid to bottom of perforations at 1,950'.

Shut-in well and record Shut-In Pressures: Initial Shut-in; 5-minute S/I; 10-minute S/I; & 15-minute S/I.

Leave well Shut-in for 4 hours for acid to spend.

Flow back well into vacuum trucks until it lays down and dies. If well flows back more than 2 truck loads of water – hook up well to line and flowback to Artesia State Unit Water Station until it dies.

Release Treating Packer and unseat Retrievable Bridge Plug.

Set Retrievable Bridge Plug at approximately **1,490'**.

7. **Acidize new PENROSE SANDSTONE perfs from 1,452' – 1,462':**

- **10' Overall;**
- **10' of perforations**
- **20 perfs**

Acid Job Total:

- **1,300 gal 15% NEFE HCl (31.0 Bbls)**
- **130.0 gal/ft of perfs**
- **65.0 gal/perf)**

with acid booster, anti-sludge, paraffin solvent, scale inhibitor, and demulsifiers, **pumped at 5.0-6.0 BPM.**

Re-Set Retrievable Bridge Plug at approximately **1,490'**.

Set Treating Packer at approximately **1,400'**.

Pump **1,300 gal 15% NEFE HCl plus additives** down tubing at **5-6 BPM** after acid is on perfs and perfs have broken down.

Pump +/- 6.5 Bbls **Fresh Water** to displace acid to bottom of perforations at 1,462'.

Shut-in well and record Shut-In Pressures: Initial Shut-in; 5-minute S/I; 10-minute S/I; & 15-minute S/I.

Shut well in 4 hours for acid to spend.

8. Open well up to flow back into vacuum trucks on location initially. Take the first 2 truckloads of flow back to commercial disposal site. If well should continue to flow back – tie well in to flow back to the Artesia State Unit Water Station inlet tank until it dies. May need to put pulling unit rig on standby during these flowback times in order to keep workover costs down.

9. Release Retrievable Treating Packer, go down and retrieve RBP & POOH with RBP, packer, and workstring. Have water truck on hand to kill well if it tries to come in during trip.

10. Trip in hole with 2-3/8" workstring with muleshoe on bottom & tag for fill to PBTD. Circulate hole clean with water truck using **Fresh Water** at least at least 2 times around in order to dissolve rock salt. POOH with workstring and muleshoe.

11. Run in hole with 2-3/8" internally plastic-coated injection tubing & 4-1/2" Baker Model AD-1 tension Injection Packer.

    Pressure test tubing to 5,000 psig while going in hole.

12. Pump & circulate approx. 50 Bbls of packer fluid into tbg/csg annulus – get clear returns.

    Set Baker Model AD-1 tension Injection Packer at approximately **1,400'.**

    PACKER MUST BE SET WITHIN 100' OF THE TOP INJECTION PERF AT 1,452' – NMOCD RULES.

13. ND BOP and NU injection wellhead.

14. Pressure up on annulus to 500 psig with pressure recorder chart on pump truck. Hold and record pressure for 30 minutes for MIT. Have NMOCD REPRESENTATIVE on-site as a WITNESS for the MIT IF POSSIBLE. If not available, have chart to send to NMOCD.

15. Run Injection Test on well using produced water from Artesia State Unit or WAGU Water Station and pump truck. Have pressure chart recorder on truck for test. Pump 10 Bbls produced water into well at each of the following rates, allowing pump in pressure to stabilize before going to next rate. Record pump-in rates, volumes pumped, initial pressure, and final pressure for each Test Rate. DO NOT EXCEED 1,500 psig pumping pressure during test – if 1,500 psig is reached do not attempt next rate.

    Test Rates:
    - 0.25 BPM
    - 0.50 BPM
    - 0.75 BPM
    - 1.00 BPM
    - 1.50 BPM
    - 2.00 BPM

16. Once NMOCD approves MIT test run, hook well up to injection line and begin water injection.

H. Patrick Seale
August 12, 2014

ALAMO PERMIAN RESOURCES, LLC
WELLBORE DIAGRAM

Lease/Well No.: **ARTESIA STATE UNIT #502 WIW** ELEVATION, GL: 3,525 ft

Location: 2,630' FSL & 10' FEL
UL: I, SEC: 14, T: 18-S, R:27-E FIELD: **ARTESIA: QN-GB-SA**
EDDY County, NM

LEASE No.: State B-10456 Spudded: 2/25/1975

API No. : **30-015-21447** Drlg Stopped: 3/1/1975

Completed: 8/29/1975

ROTARY DRLG RIG LAT:

LONG:

12-1/4" HOLE

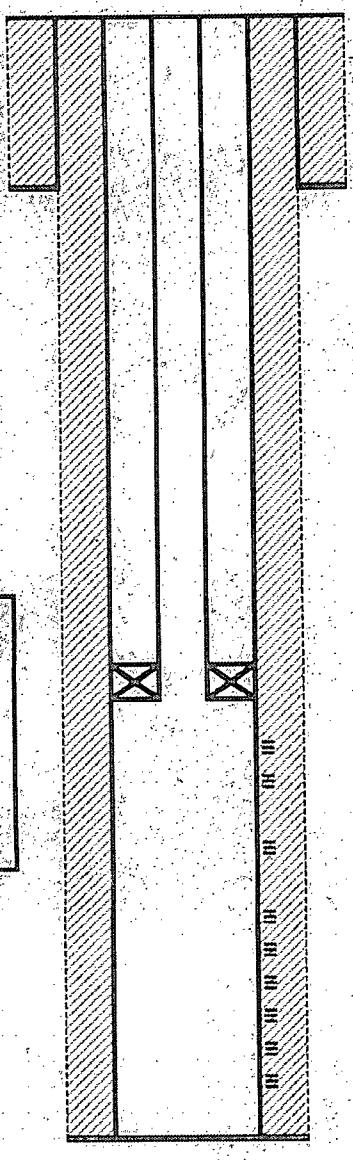
Surface Csg:
8-5/8" 24# J-55
Csg Set @ 288'
Cmt'd w/ 210 sx

TOC @ Surface
Circulated 77 sx

288' Csg

TOC @ Surface
Circulated 55 sx

7-7/8" HOLE



TOPS (TEF)	DEPTH, ft
YATES	
SEVEN RIVERS	
PENROSE	1,442
LOCO HILLS	1,708
GRAYBURG	1,731
METEX	1,812
PREMIER	1,932
SAN ANDRES	1,980

HAVE NO RECORD of TUBING Setting Depth in Well. Packer is Baker Model AD-1 Set at approx 1,660' *- 18,000# Tension* **on 10/04/2010.**

PERFS:	Zone	SPF - # Holes	Date
1709 - 1714'	QB - Loco Hills	5' 2 spf - 10 holes	08/29/75
1722 - 1725'	QB - Loco Hills	3' 2 spf - 6 holes	08/29/75
1784 - 1787'	GB - Upper GB	3' 2 spf - 6 holes	08/29/75
1814 - 1817'	GB - Metex	3' 2 spf - 6 holes	08/29/75
1824 - 1829'	GB - Metex	5' 2 spf - 10 holes	08/29/75
1842 - 1845'	GB - Metex	3' 2 spf - 6 holes	08/29/75
1857 - 1860'	GB - Metex	3' 2 spf - 6 holes	08/29/75
1884 - 1886'	GB - Metex	2' 2 spf - 4 holes	08/29/75
1888 - 1892'	GB - Metex	4' 2 spf - 8 holes	08/29/75
2,000' Csg	*TOTALS:*	*31' -- 62 holes*	
2,000' PBTD			
2,010' TD			

Production Csg:
4-1/2" 10.5# J-55
Csg Set @ 2,000'
Cmt'd w/ 575 sx

Cumulative Prod. (05/31/14):

OIL	0.517	MBO
GAS	0.000	MMCF
WATER	1.520	MBW
INJECT.	41.377*	MBW

Drilled by ANADARKO PROD. CO. as the Artesia State Unit Tract 5 Well #2 WIW.
02/09/2010: Welded patch on surf csg hole just below wellhead above ground level.

*** ACTUAL CUM WI 05/31/2014 = 827.500 MBWI (NMOCD WELL HISTORY).**

HPS: 08/12/2014

ARTESIA STATE UNIT #502 WIW

WELL PERFORATION, ACID JOB, FRAC JOB, & WELL TEST DETAILS

PERFS			ACID JOB(S)			FRAC JOB(S)						INITIAL POTENTIAL TEST			
TOP	BOTTOM	ZONE	DATE	ACID GALS	ACID TYPE	DATE	FRAC FLUID GALS	FLUID TYPE	SAND LBS	SAND SIZE	REMARKS	TEST DATE	OIL BOPD	GAS MCFD	WATER BWPD
1,709	1,714	QN-Loco Hills	8/29/1975	504	15% HCl						16 perfs				
1,722	1,725	QN-Loco Hills									*31.5 gal/perf*				
											8 ft of perfs				
											63.0 gal/ft				
1,784	1,787	GB-Upper GB	8/29/1975	252	15% HCl						6 perfs				
											42.0 gal/perf				
											3 ft of perfs				
											84.0 gal/ft				
1,814	1,817	GB-Metex	8/29/1975	1,008	15% HCl						28 perfs				
1,824	1,829	GB-Metex									*36.0 gal/perf*				
1,842	1,845	GB-Metex									14 ft of perfs				
1,857	1,860	GB-Metex									*72.0 gal/ft*				
1,884	1,886	GB-Metex	8/29/1975	252	15% HCl						12 perfs				
1,888	1,892	GB-Metex									*21.0 gal/perf*				
											6 ft of perfs				
											42.0 gal/ft				

CBS OPERATING CORP.

DAILY WELL SERVICE LOG ARTESIA STATE UNIT #502 WIW

LEASE & WELL NO.	DATE:
Artesia St 5-2	10/4/2010
Hole in Tubing	Mayo Marrs

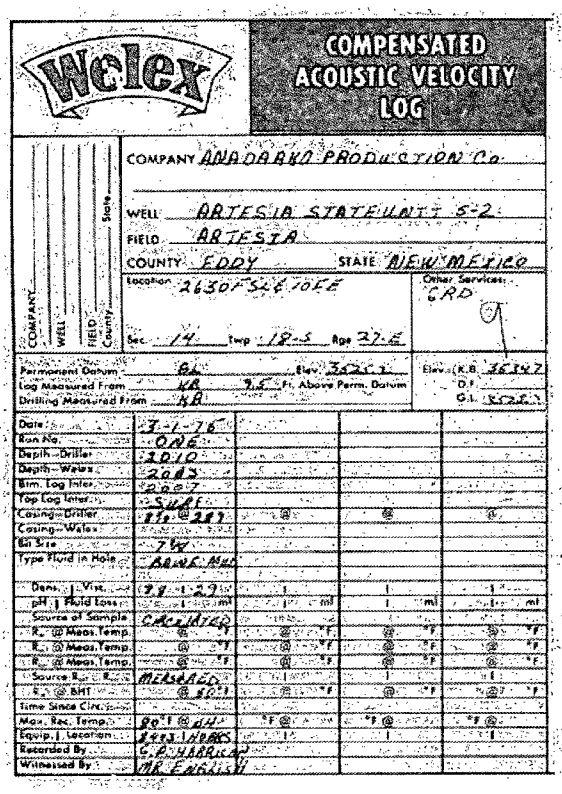
9/30/2010	MI & RU Mayo Marrs. Unset packer and POH with tubing. Shut down for week end.
10/1/2010	Removed BOP and old wellhead. Welder cut off old bell nipple and installed new bell nipple and wellhead. Installed BOP. Tested tubing to 2800 psi, found one bad joint (top joint). POH with tubing. Installed new 4-1/2" AD-1 packer. RIH with tubing. Pumped 25 bbls. fresh water and packer fluid down casing and circulated well. Set packer with 18,000 psi. Tested casing to 580 psi and dropped to 50 psi. Returned well to injection.
10/4/2010	Rigged down and moved out.

→ LAST TIME WELL WAS PULLED.

Artesia State #5-2

30-015-21447

T-18-S, R-27-E, Sec. 14
2630' FSL & 10' FEL
Reference Elevation = 3635'

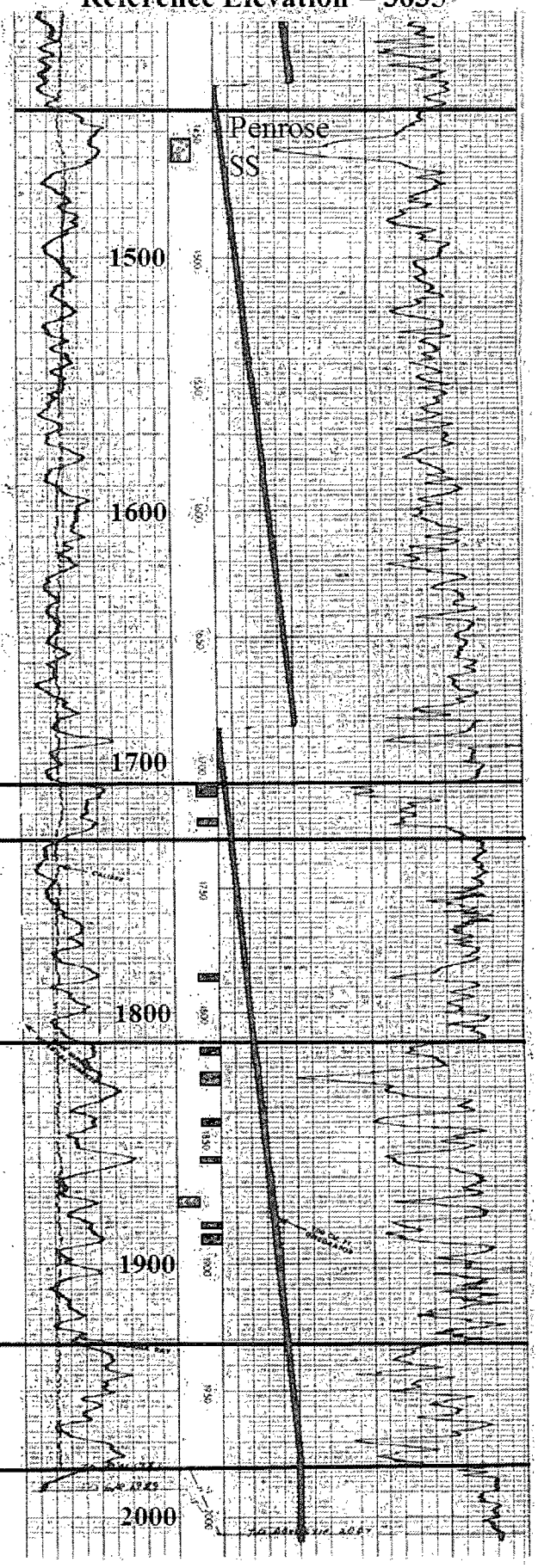


Welex

COMPENSATED ACOUSTIC VELOCITY LOG

COMPANY ANADARKO PRODUCTION Co.
WELL ARTESIA STATE UNIT 5-2
FIELD ARTESIA
COUNTY EDDY STATE NEW MEXICO
Location 2630' FSL & 10' FEL
Other Services: GRD
Sec. 14 Twp. 18-S Rge. 27-E
Permanent Datum GL Elev. 3626'
Log Measured From KB 9.5 Ft. Above Perm. Datum
Drilling Measured From KB
Elev.: K.B. 3635'
D.F.
G.L. 3626'

Date	3-1-76			
Run No.	ONE			
Depth—Driller	3010			
Depth—Welex	2983			
Btm. Log Inter.	2967			
Top Log Inter.	SURF			
Casing—Driller	11¾ @ 281	@	@	@
Casing—Welex				
Bit Size	7¾			
Type Fluid in Hole	BRINE MUD			
Dens. | Visc.	9.8 | 27	|	|	|
pH | Fluid Loss	| ml	| ml	| ml	| ml
Source of Sample	CIRC. WATER			
R_m @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F
R_mf @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F
R_mc @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F
Source R_m | R_mf	MEASURED	|	|	|
R_m @ BHT	@ 80°F	@ °F	@ °F	@ °F
Time Since Circ.				
Max. Rec. Temp.	80°F @ 2H	°F @	°F @	°F @
Equip. | Location	2993 | HOBBS	|	|	|
Recorded By	C.P. HARRIS			
Witnessed By	MR. ENGLISH			

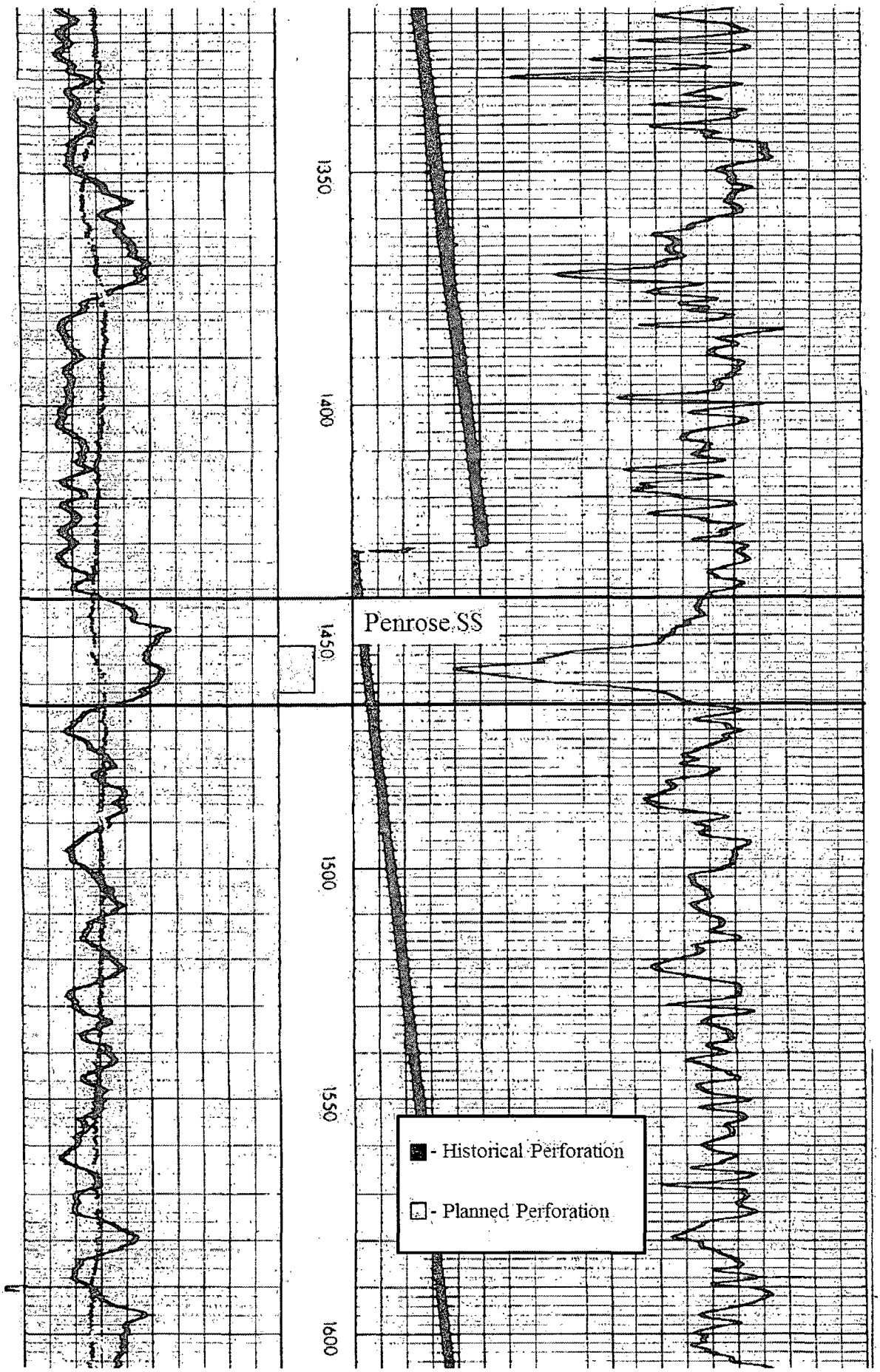


■ - Historical Perforation

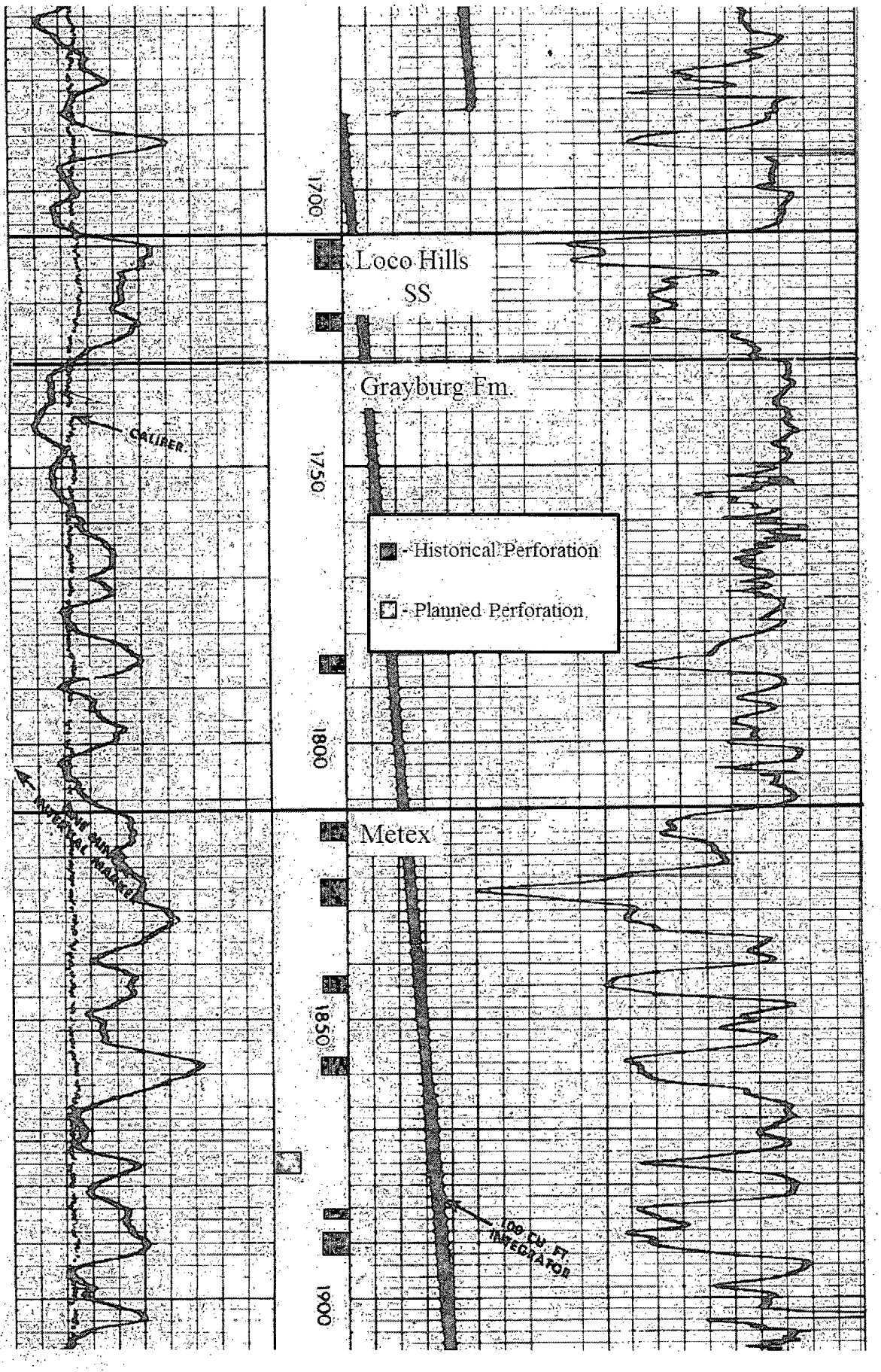
▣ - Planned Perforation

(7/7/2014)

Artesia State #5-2



Artesia State #5-2



Artesia State #5-2