

Submit 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

Form C-103
Revised July 18, 2013

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

WELL API NO. 30-007-20580
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name VPR D
8. Well Number 180
9. OGRID Number 300097
10. Pool name or Wildcat Castle Rock Park - Vermejo Gas

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.)

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

2. Name of Operator
ARP Production Company, LLC

3. Address of Operator
Park Place Corporate Center One, 4th fl, 1000 Commerce Drive, Pittsburgh PA 15275

4. Well Location
Unit Letter F-20 : 2473 feet from the FNL line and 1560 feet from the FWL line
Section 20 Township 30N Range 19E NMPM NW/160 County Colfax

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
GL 7570

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: RECOMPLETION ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

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 Recompletion Procedure for description of work proposed. Well bore diagram attached. Anticipated start of work between August 18 and August 30, 2014 dependent upon vendor availability.

OIL CONS. DIV DIST. 3

JUL 22 2014

File C104 & C105 for approval to include new

Spud Date: 3/30/2005

Rig Release Date: Not Applicable

perfs
before
returning
to production

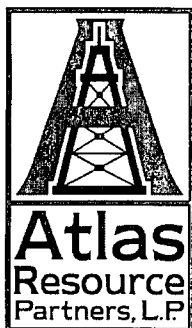
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Carla L. Suszkowski TITLE Dir. Of Environmental and Regulatory Affairs DATE 7/17/14

Type or print name Carla L. Suszkowski E-mail address: csuszkowski@atlasenergy.com PHONE: 412.489.0311

For State Use Only

APPROVED BY: Charlie Herrin TITLE SUPERVISOR DISTRICT # 3 DATE AUG 01 2014
Conditions of Approval (if any): AV



ARP Production Company, LLC
Vermejo Park Ranch D-180
Colfax County, NM
Recomplete Raton Coals

7/17/14

WELL DATA:

FORMATION: Raton Coal

CASING: 8-5/8", 24# set @ 315'.

CASING: 5-1/2", 15.5# set @ 1899'.

TOC: 60' (CBL)

PERFORATE:

1106' – 1112'	6'	24 holes
1132' – 1134'	2'	8 holes
1146' – 1150'	4'	16 holes
1184' – 1186'	2'	8 holes
1194' – 1196'	2'	8 holes
1246' – 1248'	2'	8 holes
1258' – 1262'	4'	16 holes
1288' – 1290'	2'	8 holes
1337' – 1340'	3'	12 holes
1530' – 1534'	4'	16 holes
1556' – 1560'	4'	16 holes

TD/PBTD: 2015' / 1886"

CURRENT STATUS: Active producer – 135 mcf/d + 25 bwpd (July 2014)

OBJECTIVE: Complete Raton coal intervals with nitrogen foam-

NOTES:

This well was drilled and completed in the Vermejo coals. Additional coal seams have been identified in the Upper Vermejo and Lower Raton coals as value adding with a combined 481 MMSCF Rec GIP. These coals will be perfed and stimulated with nitrogen foam and sand. All zones are above existing perms. 18.2 total feet of coal will be stimulated.

Vermejo Park Ranch D-180

PROCEDURE:

1. Test anchors. MIRU pulling unit. Pull rods and pump. ND wellhead. NU BOPs.
2. POOH and stand back tubing in derrick. PU bit and scraper on 2-7/8" tubing. RIH to PBTD @ 1886'. POOH. If more rathole is needed, clean out well to original TD @ 2015'. POOH. RDMO.
3. Install frac valve and frac head.
4. Set flow through BP @ +/- 1610' to isolate lower completed zones.

1st Stage

5. MIRU perforators. MU 3-1/8" or 4" perf gun with 23 gram charges, .56 dia., and 120° phasing. RIH with gun and CCL-GR log. Correlate depths to CBL. Perforate the target coal intervals as follows:

1530' – 1534'	4'	16 holes
1556' – 1560'	4'	16 holes

POOH and LD perforating gun.

6. MIRU Basic Energy Services. Lay injection lines and pressure test to 1000 psi above maximum anticipated pressure. Hold safety meeting. Establish injection rate down 5-1/2" casing, then acidize interval with 500 gallons of 7.5% HCl acid. Flush with 1000 gallons clean fluid. Frac target interval @ 1530' – 1560' with 12,200 gallons of 70Q N₂ foam and **25,600** lbs of 16/30 proppant. Treat at 20 - 35 bpm. Max sand concentration at 4 ppg. Flush to top perf, then overflush by 0.5-2 bbls of water. See frac proposal for details – approx. 22,309 gallons.
7. Set flow through BP @ +/- 1400'.

2nd Stage

8. RU perforators. MU 3-1/8" or 4" perf gun with 19 gram charges and 120° phasing. RIH with gun and CCL-GR log. Correlate depths to CBL. Perforate the target coal intervals as follows:

1246' – 1248'	2'	8 holes
1258' - 1262'	4'	16 holes
1288' – 1290'	2'	8 holes
1337' – 1340'	3'	12 holes

POOH and LD perforating gun.

9. RU Basic Energy Services. Establish injection rate down 5-1/2" casing, then acidize interval with 500 gallons of 7.5% HCl acid. Flush with 1000 gallons clean fluid. Frac target interval @ 1246' – 1340' with 21,100 gallons of 70Q N₂ foam and **48,000** lbs of 16/30 proppant. Treat at 20-35 bpm. Max sand concentration at 4 ppg. Flush to top perf, then overflush by 0.5-2 bbls of water. See frac proposal for details – approx. 34,702 gallons.
10. Set flow through BP @ +/- 1225'.

Vermejo Park Ranch D-180

3rd Stage

11. RU perforators. MU 3-1/8" or 4" perf gun with 19 gram charges and 120° phasing. RIH with gun and CCL-GR log. Correlate depths to CBL. Perforate the target coal intervals as follows:

1106' – 1112'	6'	24 holes
1132' – 1134'	2'	8 holes
1146' – 1150'	4'	16 holes
1184' – 1186'	2'	8 holes
1194' – 1196'	2'	8 holes

POOH and LD perforating gun.

12. RU Basic Energy Services. Establish injection rate down 5-1/2" casing, then acidize interval with 500 gallons of 7.5% HCl acid. Flush with 1000 gallons clean fluid. Frac target interval @ 1106' – 1196' with 32,000 gallons of 70Q N₂ foam and **72,000** lbs of 16/30 proppant. Treat at 20-35 bpm. Max sand concentration at 4 ppg. Flush to top perf, then overflush by 0.5-2 bbls of water. See frac proposal for details – approx. 48,762 gallons.
13. RDMO Basic Energy Services & the wireline unit.
14. Shut the well in for 2 hrs and flow to the pit to clean up on 12 to 16/64th choke.
15. MIRU workover rig.
16. PU bit on 2-7/8" tbg. Drill out plugs and clean out hole to PBTD. POOH and LD bit. TIH and land 2-7/8" production tbg approx. 70' below perfs (or deeper if possible). Run 1.75" pump and rods.
17. RD workover rig.
18. Put well on pump. Pump to pit until water de-foams. Vent gas to pit until clean to send to sales.

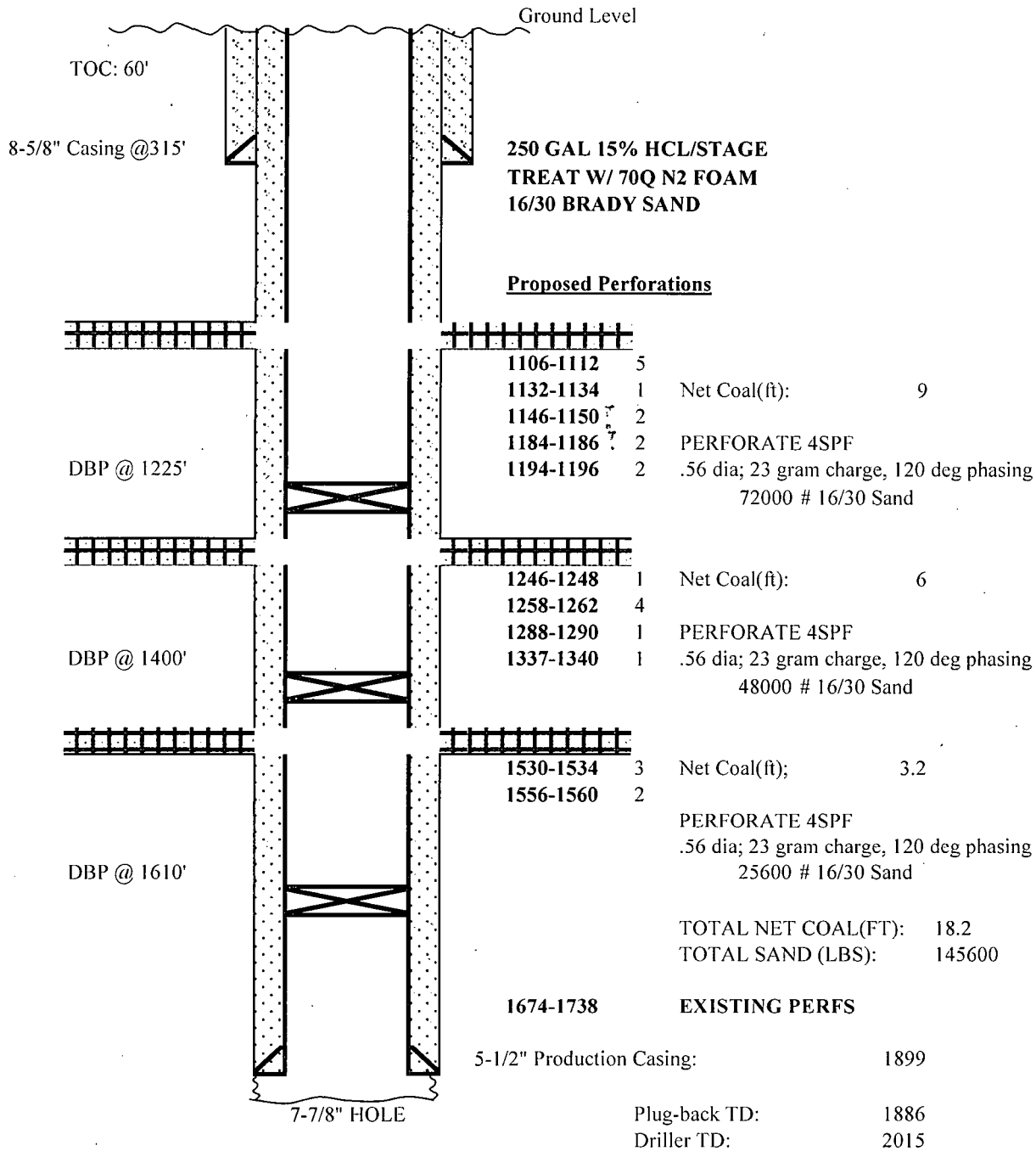
ARP Production Company, LLC

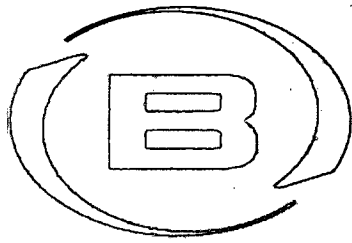
VPR D-180

RATON FIELD

3 STAGE: ALL STAGES ABOVE EXISTING PERFS

July 12, 2014





BASICSM
ENERGY SERVICES

ATLAS ENERGY
VPR D-180
RATON, NM

3 STAGE 145,600 LBS 16/30 BROWN SAND
70 QUALITY FOAM

Prepared for CELESTE HAGLER / MATT BERRY
309 SILVER
Raton, NM 87740
505.652.8275

Prepared by MATTHEW HOFFMAN
970.867.2766

Service Point - Ft Morgan, Colorado
Contact: Jake Cuckow
(970) 867-2766

7/15/2014

7/15/2014

Celeste Hagler / Matt Berry
Atlas Energy
309 Silver
Raton, Nm 87740

Thank you for the opportunity to present the following treatment proposal. This recommendation is submitted for your consideration.

Well Data

Casing: 5 1/2 in 15.5 lb/ft, N-80
Tubing: None

Stage Info	Stage 1	Stage 2	Stage 3
Formation:	COAL	COAL	COAL
Packer/ EOT Depth:			
TVD:			
Perf. Top:	1530	1246	1106
Perf. Btm:	1560	1340	1196
SPF:	4	4	4
Total Shots:	32	44	72
Perf Diam:	0.42	0.42	0.42
Bht (deg F)	90	85	80
Frac Gradient:	0.75	0.75	0.75

Treatment Summary

Primary Fluid SpGr:	0.4	0.4	0.4
Treat Via:	Casing	Casing	Casing
Primary Fluid Type:	MavFoam 70	MavFoam 70	MavFoam 70
CO2 (y/n):	No	No	No
Estimated Treat psi:	960	850	750
Estimated Perf Fric (psi):	18	24	9
Acid Volume (gls):	250	250	250
Total Clean Fluid/Foam (gls):	20,780	33,456	47,656
Pad Volume (gls):	6,800	10,860	14,300
SLF Volume (gls):	12,200	21,100	32,000
Estimated Flush Volume (gls):	1,529	1,246	1,106
Proppant Volume (lbs):	25,600	48,000	72,000
Estimated Pump Time (min):	26.7	27.6	37.9

*NOTE: Total clean fluid/foam volume does not include flush volume.

[illegible]

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Bottomhole Treating Pressure: 1500 psi
Bottomhole Temp: 90.0 deg. F
Calculated N2 Volume Factor: 543 scf/bbl
Bottomhole CO2 Volume Factor: 3069.0 scf/bbl
Proppant Specific Gravity: 2.65

FLUID SPECIFICATIONS AND REQUIREMENTS

Tank Requirements:	2	500 bbl tanks	Tank Bottoms:	30	bbl/tank
Fluid1:	28 lb	Gelled Water			27,900 Gallons
Additives:					
	0%				
RM2003	28 ppt	GEL-100, Cmhpq Gel			
RM141	0.05 qpt	BREAKER-503L, Liquid Enzyme Breaker			
RM142	0.3 ppt	GB-3, Oxidative Breaker			
RM323	2 gpt	S-3, Surfactant			
RM411	4 gpt	WF-1, Foamer			
RM582	0.15 ppt	BIO-II, Dry Biocide			
RM631	165 gpt	SI-1, Scale Inhibitor			

Fluid Required (Not Including Tank Bottoms):	27,900	Gallons
	664	Bbls
Tank Bottoms:	60	Bbls
Total Fluid Required:	724	Bbls

ACID REQUIREMENTS

Acid Requirements:			
Acid 1:	15 %	HCL	750 Gallons
Additives:			
RM303	4 gpt	Acid Inhib-3, Acid Inhibitor (Moderate Temp)	

CO2 AND N2 REQUIREMENTS

Nitrogen	943,590	Scf
Nitrogen Cooldown	100,000	Scf
Total Nitrogen Required:	1,043,590	Scf

PROPPANT REQUIREMENTS

SAND	16/30	Texas Gold	145,600	lbs
		Total:	145,600	lbs
