

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

Form C-103
Revised July 18, 2013

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

WELL API NO. 30-007-20234
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 B
8. Well Number 023
9. OGRID Number 300097
10. Pool name or Wildcat Castle Rock Park - Vermejo Gas
11. Elevation (Show whether DR, RKB, RT, GR, etc.) GL 7782

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 O-30 : 304 feet from the FSL line and 2084 feet from the FEL line
Section 30 Township 30N Range 19E NMPM SE/160 County Colfax

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 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

File new C104 & C105 before returning to production. Include new & existing Reefs.

Spud Date: 3/13/2001

Rig Release Date: Not Applicable

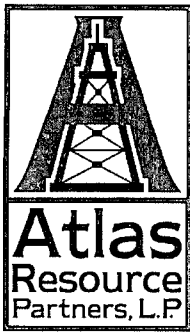
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

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: Chuck Stern TITLE SUPERVISOR DISTRICT #3 DATE AUG 15 2014
Conditions of Approval (if any): AC



ARP Production Company, LLC
Vermejo Park Ranch B-023
Colfax County, NM
Recomplete Raton Coals

7/17/14

WELL DATA:

FORMATION: Raton Coal

CASING: 8-5/8", 24# set @ 306'

CASING: 5-1/2", 15.5# set @ 2241'

TOC: 50' (CBL)

PERFORATE:

798' – 802'	4'	16 holes
854' – 856'	2'	8 holes
877' – 883'	6'	24 holes
1530' – 1532'	2'	8 holes
1543' – 1546'	3'	12 holes
1581' – 1583'	2'	8 holes
1588' – 1590'	2'	8 holes
1592' – 1596'	4'	16 holes

TD/PBTD: 2286' / 2241'

CURRENT STATUS: Active producer – 330 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 and Lower Raton coals as value adding with a combined 422 MMSCF Rec GIP. These coals will be perfed and stimulated with nitrogen foam and sand. All zones are above existing perfs. 17.1 total feet of coal will be stimulated.

Vermejo Park Ranch B-023

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 @ 2241'. POOH. If more rathole is needed, clean out well to original TD @ 2286'. POOH. RDMO.
3. Install frac valve and frac head.
4. Set flow through BP @ +/- 1650' 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' – 1532'	2'	8 holes
1543' – 1546'	3'	12 holes
1581' – 1583'	2'	8 holes
1588' – 1590'	2'	8 holes
1592' – 1596'	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' – 1596' with 31,400 gallons of 70Q N₂ foam and **71,200** 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. 49,309 gallons.
7. Set flow through BP @ +/- 950'.

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:

798' – 802'	4'	16 holes
854' – 856'	2'	8 holes
877' – 883'	6'	24 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 @ 798' – 883' with 29,050 gallons of 70Q N₂ foam and **65,600** 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. 41,296 gallons.

Vermejo Park Ranch B-023

10. RDMO Basic Energy Services & the wireline unit.
11. Shut the well in for 2 hrs and flow to the pit to clean up on 12 to 16/64th choke.
12. MIRU workover rig.
13. 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.
14. RD workover rig.
15. 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 B 23

RATON FIELD

2 STAGE: ALL STAGES ABOVE EXISTING PERFS

July 12, 2014

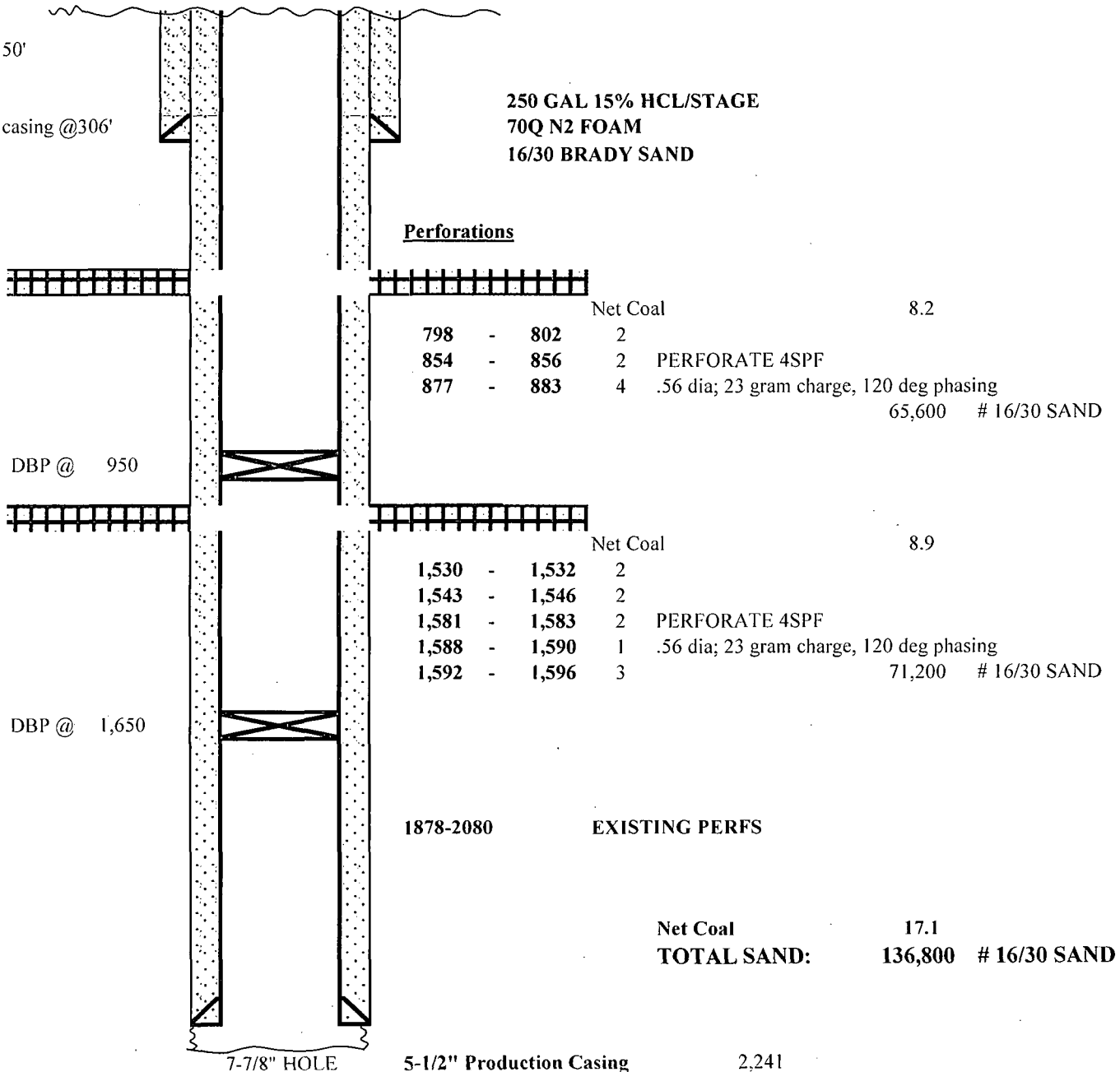
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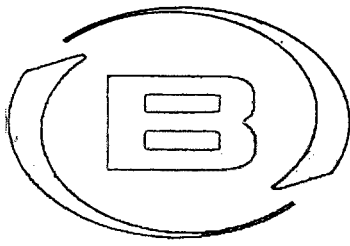
TOC: 50'

8-5/8" casing @306'

250 GAL 15% HCL/STAGE
70Q N2 FOAM
16/30 BRADY SAND

Perforations





BASICSM
ENERGY SERVICES

ATLAS ENERGY
VPR B-23
RATON, NM

2 STAGE 138,000 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
Formation:	COAL	COAL
Packer/ EOT Depth:		
TVD:		
Perf. Top:	1530	798
Perf. Btm:	1596	883
SPF:	4	4
Total Shots:	52	48
Perf Diam:	0.42	0.42
Bht (deg F)	80	80
Frac Gradient:	0.75	0.75

Treatment Summary

Primary Fluid SpGr:	0.4	0.4
Treat Via:	Casing	Casing
Primary Fluid Type:	MavFoam 70	MavFoam 70
CO2 (y/n):	No	No
Estimated Treat psi:	1,030	550
Estimated Perf Fric (psi):	18	21
Acid Volume (gls):	250	250
Total Clean Fluid/Foam (gls):	47,780	40,498
Pad Volume (gls):	14,600	10,400
SLF Volume (gls):	31,400	29,050
Estimated Flush Volume (gls):	1,529	798
Proppant Volume (lbs):	71,200	65,600
Estimated Pump Time (min):	38.4	32.1

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

		Downhole (design)				Surface (calc)				Cumulative				
HClW/ Prop Mesh	gel ppg	Clean Foam/ Clean Fluid gals	Prop Conc ppg	Rate bpm	N2%	CO2%	N2 Rate scfm	CO2 Rate bpm	Slurry Rate bpm	Clean Rate bpm	N2 scf	CO2 Tons	Slurr bbls	Slurr Clean bbls
PAD	0	1,600		10.0			-	-	10.0	10.0	-	-	38	38
HCL	15	250		5.0	70%		-	-	5.0	5.0	-	-	44	44
PAD	28	13,000		35.0	70%		15,827	35.0	10.5	10.5	139,963	-	137	137
SAND	16/20	2,600	0.5	35.0	70%		15,477	35.0	11.0	10.3	187,956	-	157	155
SAND	16/20	5,500	1.0	35.0	70%		15,142	35.0	11.6	10.0	227,171	-	202	192
SAND	16/20	9,600	2.0	35.0	70%		14,514	35.0	12.5	9.6	330,528	-	291	283
SAND	16/20	28	3.0	35.0	70%		13,637	35.0	13.4	9.2	433,885	-	391	332
SAND	16/20	28	4.0	35.0	70%		13,403	35.0	14.3	8.9	478,028	-	438	361
FLUSH	0	1,530		35.0		-	-	-	35.0	35.0	-	-	474	398
<< == Totals == >>														
477,780														
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478,028														
474														
398														

Stage	HClW/ Prop Mesh	% Clean Fluid	Downhole		Constant Internal Phase	Blind Conc ppg	Rate lb/min	Proppant		N2 Stage scf	CO2 Stage tons	Time Stage min	Stage		
			Clean Foam/ Clean Fluid gals	Prop Conc ppg				Total lbs	Stage lbs				DH Foam Slurr Stage bbls	Slurr Slurry bbls	Slurr Clean bbls
PAD	15	100.0%	1,600		70.0%							3.6	38.1	38.1	38.1
HCL		100.0%	250			1.67	718					1.2	6.0	6.0	6.0
PAD	28	100.0%	13,000	0.5	70.7%	3.33	1,408	1,300	1,300	139,963		4.6	30.5	92.9	67.8
SAND	16/20	97.8%	2,600	1	71.3%	6.67	2,696	6,600	5,390	59,715		3.9	136.9	45.2	16.6
SAND	16/20	95.7%	5,500	2	72.0%	10.00	3,683	26,600	19,200	103,357		7.1	249.2	89.2	69.4
SAND	16/20	93.6%	9,600	3	72.6%	13.33	4,880	54,600	28,800	103,357		14	299.6	49.6	39.3
SAND	16/20	91.7%	4,100	4	74.6%			16,400	16,400	44,142		3.3	115.3	38.4	38.4
FLUSH		100.0%	1,530					71,200				1.0	38.4	38.4	38.4
<< == Totals == >>															
71,200															
<< == Totals == >>															
38.4															
474															
398															

Bottomhole Trailing Pressure: 1890 psi
Bottomhole Temp: 89.0 deg F
Calculated N2 Volume Factor: 646 scf/lb
Bottomhole CO2 Volume Factor: 3090.0 scf/lb
Proppant Specific Gravity: 2.65



BASIC
ENERGY SERVICES

<< == Totals == >>

65,600	<<=== Totals ===>>
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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			24,885 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	110 gpt	SI-1, Scale Inhibitor			

Fluid Required (Not Including Tank Bottoms):	24,885 Gallons
	593 Bbls
Tank Bottoms:	60 Bbls
Total Fluid Required:	653 Bbls

ACID REQUIREMENTS

Acid Requirements:			
Acid 1:	15 %	HCL	500 Gallons
Additives:			
RM303	4 gpt	Acid Inhib-3, Acid Inhibitor (Moderate Temp)	

CO2 AND N2 REQUIREMENTS

Nitrogen	690,770	Scf
Nitrogen Cooldown	100,000	Scf
Total Nitrogen Required:	790,770	Scf

PROPPANT REQUIREMENTS

SAND	16/30	Texas Gold	136,800	lbs
		Total:	136,800	lbs
