

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. 30-007-20409
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 "A"
8. Well Number 111
9. OGRID Number 300097
10. Pool name or Wildcat Stubblefield Cnyn Raton-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 <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/>	
2. Name of Operator ARP Production Company, LLC	
3. Address of Operator Park Place Corporate Center One, 4 th fl, 1000 Commerce Drive, Pittsburgh, PA 15275	
4. Well Location Unit Letter <u>B-22</u> : <u>1060</u> feet from the <u>FNL</u> line and <u>1734</u> feet from the <u>FEL</u> line Section <u>22</u> Township <u>31N</u> Range <u>19E</u> NMPM <u>NE/160</u> County <u>Colfax</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) GL 8168	

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: <input type="checkbox"/>	RECOMPLETION <input checked="" type="checkbox"/>	OTHER: <input type="checkbox"/>	

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 new C104 & C105 before returning to production
Include new & existing perms

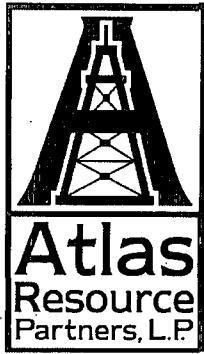
Spud Date: 5/18/2003

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: Chal TITLE SUPERVISOR DISTRICT #3 DATE AUG 15 2014
Conditions of Approval (if any): AV



**ARP Production Company, LLC
Vermejo Park Ranch A-111
Colfax County, NM
Recomplete Raton Coals**

7/17/14

WELL DATA:

FORMATION: Raton Coal

CASING: 8-5/8", 24# set @ 337'.

CASING: 5-1/2", 15.5# set @ 2450'.

TOC: 50' (CBL)

PERFORATE:

727' – 732'	5'	20 holes
775' – 777'	2'	8 holes
790' – 802'	12'	48 holes
830' – 834'	4'	16 holes
874' – 878'	4'	16 holes

TD/PBTD: 2480' / 2439'

CURRENT STATUS: Active producer – 200 mcf + 65 bwpd (July 2014)

OBJECTIVE: Complete Raton coal intervals with nitrogen foam

NOTES:

This well was drilled and completed in the Vermejo and Lower Raton coals. Additional coal seams have been identified in the Upper Raton coals as value adding with a combined 831 MMSCF GIP. These coals will be perfed and stimulated with nitrogen foam and sand. All zones are above existing perfs. 20.0 total feet of coal will be stimulated.

Vermejo Park Ranch A-111

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 @ 2439'. POOH. If more rathole is needed, clean out well to original TD @ 2480'. POOH. RDMO.
3. Install frac valve and frac head.
4. Set flow through BP @ +/- 930' 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:

830' - 824'	4'	4 SPF	16 holes
874' - 878'	4'	4 SPF	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 @ 830' - 878' with 23,000 gallons of 70Q N₂ foam and **52,000** 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. 35,360 gallons.
7. Set flow through BP @ +/- 810'.

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:

727' - 732'	5'	4 SPF	20 holes
775' - 777'	2'	4 SPF	8 holes
790' - 802'	12'	4 SPF	48 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 @ 727' - 802' with 47,800 gallons of 70Q N₂ foam and **108,000** 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. 70,852 gallons.

Vermejo Park Ranch A-111

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.

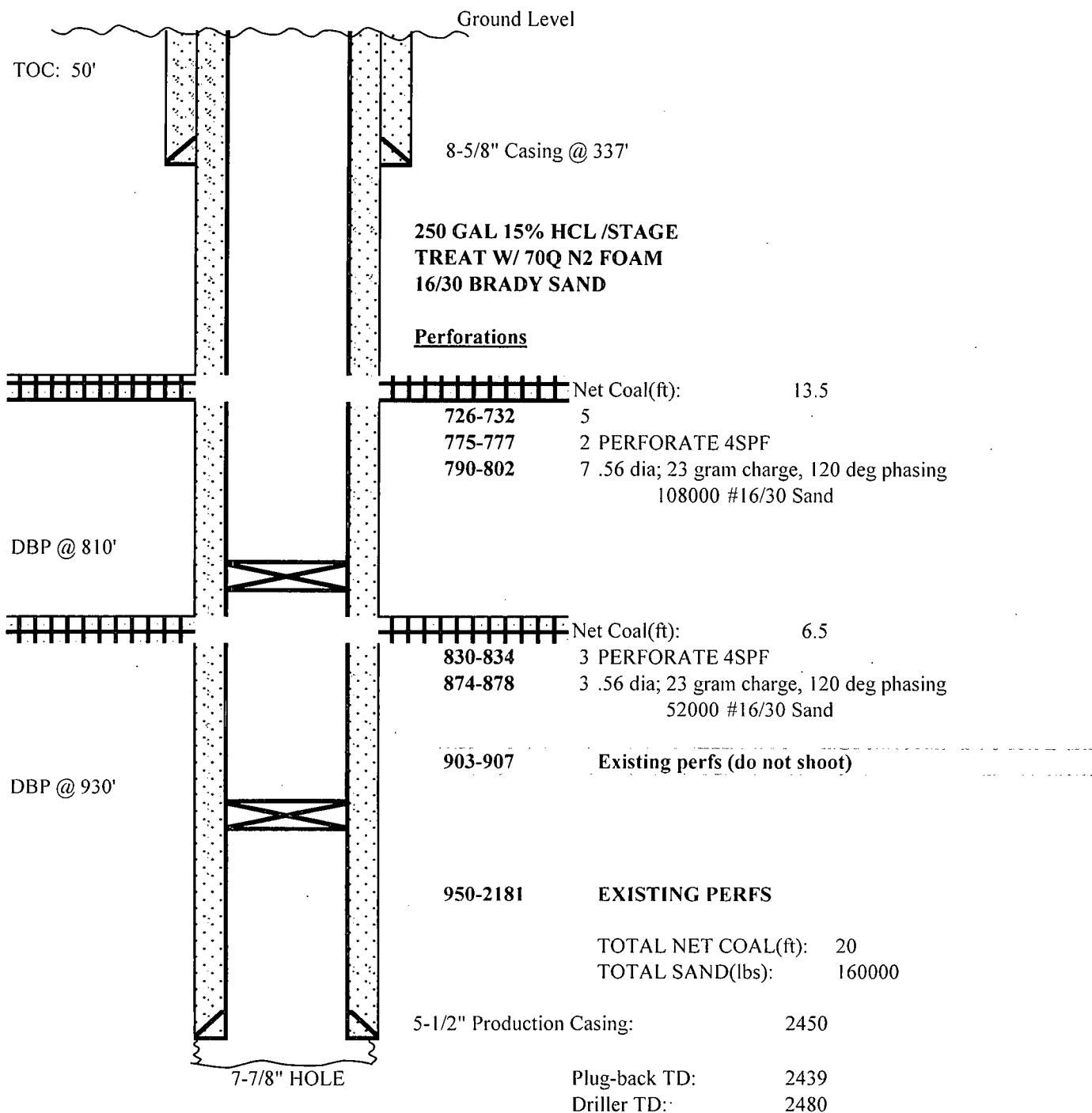
ARP Production Company, LLC

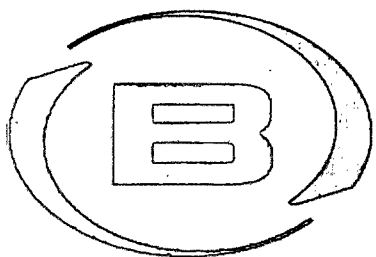
VPR A-111

RATON FIELD

2 STAGE: BOTH STAGES ABOVE EXISTING PERFS

July 12, 2014





BASICSM
ENERGY SERVICES

ATLAS ENERGY
VPR A-111
RATON, NM

2 STAGE 160,000 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 submit 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:	830	726
Perf. Btm:	907	802
SPF:	4	4
Total Shots:	48	80
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:	530	490
Estimated Perf Fric (psi):	11	8
Acid Volume (gls):	250	250
Total Clean Fluid/Foam (gls):	34,530	70,126
Pad Volume (gls):	10,450	21,350
SLF Volume (gls):	23,000	47,800
Estimated Flush Volume (gls):	830	726
Proppant Volume (lbs):	52,000	108,000
Estimated Pump Time (min):	37.4	53.5

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

15-Jul-14
ATLAS ENERGY
VPR A-111
STG 1

[illegible]

Stage	HCl%/ Prop Mesh	% Cln Fluid	Downhole		Constant Internal Phase	Blndr Conc ppg	Proppant			N2 Stage scf	CO2 Stage tons	Time Stage min	DH Foam Slurry St bbls
			Clean Foam/ Clean Fluid gals	Prop Conc ppg			Rate lb/min	Total lbs	Stage lbs				
PAD		100.0%	950									2.3	
HCL	15	100.0%	250									1.2	
PAD		100.0%	9,500		70.0%					85,997		9.0	2
SAND	16/30	98.9%	2,000	0.5	70.7%	1.67	513	1,000	1,000	18,105		1.9	
SAND	16/30	97.8%	4,000	1	71.3%	3.33	1,005	5,000	4,000	36,209		4.0	
SAND	16/30	95.7%	7,000	2	72.5%	6.67	1,926	19,000	14,000	63,366		7.3	1
SAND	16/30	93.6%	7,000	3	73.6%	10.00	2,774	40,000	21,000	63,366		7.6	1
SAND	16/30	91.7%	3,000	4	74.6%	13.33	3,557	52,000	12,000	27,157		3.4	1
FLUSH		100.0%	830					52,000				0.8	
								52,000	<< === Totals === >>			37.4	

Bottomhole Treating Pressure: 1500 psi
Bottomhole Temp: 90.0 deg. F
Calculated N2 Volume Factor: 543 scf/bbl
Bottomhole CO2 Volume Factor: 3060.0 scf/bbl
Proppant Specific Gravity: 2.65

Est.													
Stage	HCl%/ Prop Mesh	gel ppg	Downhole (design)						Surface (calc)				N2 scf
			Clean Foam/ Clean Fluid gals	Prop Conc ppg		Rate bpm	N2%	CO2%	N2 Rate scfm	CO2 Rate bpm	Slurry Rate bpm	Clean Rate bpm	
PAD		0	850			10.0			-	-	10.0	10.0	
HCL	15		250			5.0			-	-	5.0	5.0	
PAD		28	20,500			35.0	70%		8,112	-	10.5	10.5	113,
SAND	16/30	28	4,000	0.5		35.0	70%		7,933	-	11.0	10.3	135,
SAND	16/30	28	8,500	1.0		35.0	70%		7,761	-	11.6	10.0	182,
SAND	16/30	28	14,600	2.0		35.0	70%		7,440	-	12.5	9.6	262,
SAND	16/30	28	14,500	3.0		35.0	70%		7,144	-	13.4	9.2	342,
SAND	16/30	28	6,200	4.0		35.0	70%		6,870	-	14.3	8.9	376,
FLUSH		0	726			35.0			-	-	35.0	35.0	
									-	-	-	-	
									-	-	-	-	
									-	-	-	-	
									-	-	-	-	
									-	-	-	-	
			70,126					<< === Totals === >>			-	-	376,

Stage	HCl%/ Prop Mesh	% Cln Fluid	Downhole		Constant Internal Phase	Blndr Conc ppg	Proppant			N2 Stage scf	CO2 Stage tons	Time Stage min	DH Foam Slurry St bbls
			Clean Foam/ Clean Fluid gals	Prop Conc ppg			Rate lb/min	Total lbs	Stage lbs				
PAD		100.0%	850									2.0	
HCL	15	100.0%	250									1.2	
PAD		100.0%	20,500		70.0%					113,131		13.9	4
SAND	16/30	98.9%	4,000	0.5	70.7%	1.67	719	2,000	2,000	22,074		2.8	
SAND	16/30	97.8%	8,500	1	71.3%	3.33	1,406	10,500	8,500	46,908		6.0	2
SAND	16/30	95.7%	14,600	2	72.5%	6.67	2,696	39,700	29,200	80,571		10.8	3
SAND	16/30	93.6%	14,500	3	73.6%	10.00	3,883	83,200	43,500	80,019		11.2	3
SAND	16/30	91.7%	6,200	4	74.6%	13.33	4,980	108,000	24,800	34,215		5.0	1
FLUSH		100.0%	726					108,000				0.5	
								108,000	<< === Totals === >>			53.5	

Bottomhole Treating Pressure: 900 psi
Bottomhole Temp: 90.0 deg. F
Calculated N2 Volume Factor: 331 scf/bbl
Bottomhole CO2 Volume Factor: 3060.0 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			30,240 Gallons
Additives:					
	0%				
RM2003	28 ppt	GEL-100, Cmhpg 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):	30,240	Gallons
	720	Bbls
Tank Bottoms:	60	Bbls
Total Fluid Required:	780	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	671,120	Scf
Nitrogen Cooldown	100,000	Scf
Total Nitrogen Required:	771,120	Scf

PROPPANT REQUIREMENTS

SAND	16/30	Texas Gold	160,000	lbs
Total:			160,000	lbs
