submitted in lieu of Form 3160-5

#### UNITED STATES

# DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

	ry Notices and Reports on Wel	.TS	
	200 (	20 10 PH 1: 93	Lease Number NMSF-077085
. Type of Well GAS	070	Famington, NM	If Indian, All. or Tribe Name
		7.	Unit Agreement Name
Name of Operator BURLINGTON			
RESOURCES OIL	& GAS COMPANY LP	8.	Well Name & Number
PO Box 4289. Farmington	<b>Operator</b> on, NM 87499 (505) 326-9700	9.	Omler #4 API Well No.
• •	·	-	30-045-07080
955'FNL, 1650'FEL, Sec	age, Sec., T, R, M .36, T-28-N, R-10-W, NMPM	10.	Field and Pool Basin Fruitland Coal Fulcher Kutz PC
		11.	County and State San Juan Co, NM
Subsequent Rep	Casing Repair	New Construction Non-Routine Water Shut of Conversion	Fracturing
-	r Completed Operations eepen the subject well to app	oroximately 2200	o' according to the
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#### **PROJECT OBJECTIVE:**

The subject well is a 1954 Pictured Cliffs open-hole completion through 5-1/2" casing with the Fruitland Coal completed and commingled in 1992. The open-hole interval will be re-entered, deepened, & cleaned-out to 2200' using air-mist and 2-7/8" work string string. Next, 2-7/8" tubing will be RIH & landed at 2200'. The 2-7/8" casing string will be cemented in place and the pay interval will be logged. The Pictured Cliffs will then be perforated and stimulated with a 70Q N2 foamed 20# linear guar gel and 100,000# 20/40 mesh sand. The Fruitland Coal will then be perforated and the well cleaned-up and returned to production.

Deliver to location following equipment:

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1.	One (1) 5-1/2", 14.0#/' tubing set RBP	
2.	2700' of 2-7/8" 6.5# J55 EUE 8rd work string/production casing	$\neg$
3.	4-3/4" tooth bit and bit sub	
4.	Six (6) 3-1/8" drill collars	$\neg$
5.	One (1) 2-7/8" 6.5# J55 EUE 8rd marker joint	
6.	One (1) Omega latch down baffle and plug	
7.	New, independent tubing head	

#### **DEEPENING PROCEDURE:**

- 1. Change pipe rams and handling tools to 2-3/8", kill the well down the annulus (if necessary), back out jam nuts and strip out tubing hanger. POOH laying down tubing string. Tubing is set at 2018'.
- Change handling equipment and pipe rams to 2-7/8", Tally 2-7/8" 6.5# J-55 EUE 8rd work string. PU & TIH with 5-1/2" RBP and 2 jts of 2-7/8" work string/production casing. Set bridge plug at +/- 60'. TOOH.
- 3. ND BOP and relief lines. Cut off old tubing head and NU new independent tubing head as required. Some Rector-type tubing heads may be reusable. NU BOP & relief lines. Test BOP.
- 4. TIH with retrieving tool to bridge plug at +/- 60'. Release bridge plug and TOOH.
- 5. PU & TIH with 4-3/4" bit, float sub, six (6) 3-1/8" drill collars, x-over, 1 jt 2-7/8" work string & profile nipple on 2-7/8" work string. CO open-hole section from 2001'-2042' with air-mist. Circulate & CO as needed until hole stabilizes. Drill 158' of new hole from 2042'-2200' with air-mist. Drill extra hole as necessary to fit pipe tally. Circulate at total depth until returns are stabilized and hole is clean. Once clean, POOH & stand back 2-7/8" work string.
- 6. Tally and RIH with notched collar, 4' shoe joint, Omega latch down baffle, 8 joints 2-7/8" 6.5# J-55 STC casing, 2-7/8" marker joint (above PC top), and 2-7/8" 6.5# J-55 casing to surface. Circulate casing to setting depth at 2200' with air-mist until clean. Land casing. ND BOP.
- 7. RU cementing company. Use both pumps during cementing operations. One pump is for cementing and the other is for displacement. Pump job in the following order:

<u>Fluid</u>
10 bbls gelled water w/ red dye additive
10 bbls gelled water
3 bbls fresh water
165 sx Premium Lite High Strength FM Cement w/ additives
Displacement volume

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Cement slurry should consist of or be equivalent to Premium Lite High Strength FM with 0.25 lbs/sack Cello Fake (lost circulation), 0.2% bwoc CD-32 (dispersant), 5 lbs/sack LCM (lost circulation, slurry extender), 0.7% bwoc FL-52 (fluid loss), 2% bwow Potassium Chloride and 100.7% Fresh Water. Slurry Weight is 12.5 ppg. Yield is 2.01 ft<sup>3</sup>/sk.

Slurry should include 100% excess over open-hole volume and 30% excess over cased-hole volume, plus 25 sxs excess to circulate to pit. Recalculate all cement and displacement volumes on location with Cement Company.

Start job by pumping 10 bbls of gelled water with red dye, followed by 10 bbls of gelled water, followed by 3 bbls of fresh water. Start production slurry. Shutdown. Swap pumps to displace plug. Start displacement. VERIFY THAT THE PLUG HAS LEFT THE HEAD. Bump Omega Plug; DO NOT UNDER DISPLACE PLUG. Check for Flow-back.

8. RD cementing company. RD and release rig. Wireline will run GR/CCL log after rig release and perforation work. Log will be submitted to Angela Ibara and perforations will be chosen. Perf depths will be provided to project supervisor.

### PC PERF AND STIMULATION

- 9. Set one (1) 400 bbl frac tank filled with 400 bbls of 2% KCL. Treat tank with biocide prior to filling. Heat gel tank to 60°F in winter.
- 10. NU 2-7/8", 5,000-psig full-bore frac valve. Check pressure ratings on complete wellhead to ensure all fittings are rated to at least 5,000-psig. Lay flowback line to pit for immediate flowback.
- 11. MIRU pump truck. Pressure test surface lines to 1000 psi above max treating pressure. Pressure test casing and frac valve to max treating pressure (5,000 psi) for 15 minutes. Record results. Ensure all personnel are clear of wellhead before pressure testing. Bleed off pressure. RD pump truck.
- 12. RU wireline company with packoff. Note: Well will be logged with GR/CCL prior to perforating.
- 13. Perforate PC with an Owen STP-1687-401NT 1-11/16" stripgun (9 gm) charges. Perforate under a packoff with collar locator above gun. RD wireline company. Perforation depths will be provided after well has been logged.
- 14. MIRU stimulation company to frac down 2-7/8" casing. Maximum treating pressure is 5000 psi. Hold pre-job safety meeting with all personnel on location. Pressure test surface lines to 6000 psi (1000# above maximum treating pressure) prior to stimulation.
- 15. Stimulate the PC w/ 100,000# 20/40 Arizona sand with 20# Linear Gel in 70Q Foam. Estimated surface treating pressure is 4500 psi. See attached frac schedule for details. Add 3 gal / 1000 foamer, 1 gal/1000 surface tension reducer throughout the job. Utilize breaker schedule noted on attached frac schedule. When sand is in hopper and the concentration begins to drop, call flush. Quick flush to 100 ft. above top perforation.

Always readjust nitrogen volumes/rates for actual frac gradient throughout job.

16. Open well to pit and begin to flow well back immediately after stimulation at **1-2 BBL/min of water** on a positive choke. Continue to **maintain 1 BBL/min of water**. (This should be somewhere between an 8/64" and 16/64" choke). Gradually increase choke size to 32/64 (max) as necessary to allow well

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to clean up. DO NOT SKIP MORE THAN 2 CHOKE SIZES. If choke plugs off, shut well in and remove obstruction from choke and return to flowback.

- 17. Monitor and record well pressure, and volumes of sand and fluid recovered throughout the flow back period. Continue cleaning well up until fluid returns are negligible. Take pitot gauges when possible.
- 18. MIRU wireline. Make 1-11/16" gauge run to below bottom PC perf. Bail sand if required. Perforate FC with an Owen STP-1687-401NT 1-11/16" stripgun (9 gm) charges at the following depths under a packoff with collar locator above gun.

	Perf Interval	Footage	Shot Density	Total Shots
Fruitland Coal	1980'-1994'	14	1 spf	15
	1974'-1976'	2	1 spf	3
	1898'-1924'	26	1 spf	27
	1870'-1884'	14	1 spf	15

- 19. RDMO wireline company.
- 20. Flowback well. Monitor and record well pressure. Continue cleaning well up until fluid returns are negligible. Take pitot gauges when possible.

## **WELLBORE CLEANOUT**

- 21. ND flowback line and frac valve. NU production valve with flow tee.
- 22. Call area foreman and inform him that the project is ready for production.
- 23. After several weeks of production a slickline unit will be used to determine if sand fill exists. If sand is tagged covering perfs, MI swabbing unit. Obtain and record all wellhead pressures. CO to PBTD with sand bailer. Take final pitot gauge. RD and release swabbing unit. Turn well over to production.

Important Safety Issue: During cleanout operations the reservoir may be charged with air. As a result of excess oxygen levels that may be in the reservoir and/or wellbore, call the Lease Operator to discuss the need for determining oxygen levels prior to returning the well to production.

	Name	Office	Home	Cellular
Engineer	Angela Ibara	326-9813	326-9184	320-1070
			Cellular	
Lease Operator	Robert Paddack		486-3331	
Specialist	Jim Jones		320-2631	
Foreman	Steve Florez	326-9560	320-0029	