District I 1625 N. French Drive, Ho

State of New Mexico

Form C-107A Revised June 10, 2003

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

Energy, Minerals and Natural Resources Department

**Oil Conservation Division** 

1220 South St. Francis Dr.

APPLICATION TYPE X Single Well

000 Rio Brazos Road, Aztec, NM 87410 District TV	Santa Fe, N	Establish Pre-Approved Pools EXISTING WELLBORE			
120 S. St. Francis Dr., Santa Fe, NM 87505	APPLICATION FOR DO	X Yes No			
E.G.L. Resources, Inc.					
Operator Baldridge Federal Com.	Add 1 Unit J, Secti	Eddy			
ease	Well No. Unit Letter-	Section-Township-Range	County		
OGRID No. 173413 Property Cod	de <u>024789</u> API No. <u>30-0</u>	15-23970 Lease Type:	X Federal State Fee		
DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE		
Pool Name	Mosley Canyon		Baldridge Canyon		
Pool Code	81470		71420		
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	9,824' to 9,838'		10,953' to 10,959'		
Method of Production (Flowing or Artificial Lift)	Flowing	RECEIVED	Flowing		
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	1,441 psia	OCD-ARTESIA	2,596 psia		
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1,043		1,022		
Producing, Shut-In or New Zone	Producing		Shut-in under packer		
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: July 1-25, 2004 avg Rates: 0 BOPD / 644 MCFPD / 0 BWPD @ 618 PSIG Line Pressure	Date: January 2000 avg Rates: 0 BOPD / 217 MCFPD / 0 BWPD @ 517 PSIG Line Pressure			
Fixed Allocation Percentage (Note: If allocation is based upon something other	Oil Gas	Oil Gas	Oil Gas		
than current or past production, supporting data or explanation will be required.)	75% 75%	% %	25% 25%		
	ADDITIO	NAL DATA			
Are all working, royalty and overriding If not, have all working, royalty and ov			Yes X No		
Are all produced fluids from all commi	ingled zones compatible with each	other?	YesX No		
Will commingling decrease the value of	of production?		YesNoX		
If this well is on, or communitized with or the United States Bureau of Land M			Yes <u>X</u> No		
NMOCD Reference Case No. applicab	ole to this well:		<del></del>		
Attachments:  C-102 for each zone to be commin Production curve for each zone for For zones with no production histo Data to support allocation method Notification list of working, royalt Any additional statements, data or	at least one year. (If not available ory, estimated production rates and or formula. y and overriding royalty interests	e, attach explanation.) supporting data. for uncommon interest cases.			
	PRE-APPR	OVED POOLS			
If application is	s to establish Pre-Approved Pools,	the following additional information	n will be required:		
List of other orders approving downlook List of all operators within the propose Proof that all operators within the propose Bottomhole pressure data.	ed Pre-Approved Pools	-			
I hereby certify that the information SIGNATURE		Affice best of my knowledge and betroleum Engineer	pelief.  DATE August 3, 2004		

Langhoff

E-MAIL ADDRESS johnl@eglresources.com

TELEPHONE NO. ( 432

# BALDRIDGE FEDERAL NO. 1 2050' FSL & 1490' FEL SEC. 14, TWP. 24-S, RGE. 24-E EDDY COUNTY, NEW MEXICO

# ATTACHMENT TO APPLICATION FOR DOWNHOLE COMMINGLING

Application is being made to downhole commingle production from the Baldridge Canyon (Morrow) field and the Mosley Canyon (Strawn) field within the Baldridge Federal No. 1 wellbore. The following explanation and attachments are submitted as justification for the downhole commingling of production.

# Baldridge Canyon (Morrow) Field

The Baldridge Federal No. 1 was drilled in 1982 and completed in the Morrow "E" sand. The well produced from the Morrow formation until February 2000 with a cumulative production of approximately 2.66 BCFG.

The initial reservoir pressure was 4,330 psi. A pressure buildup test performed in August 1999 indicated the Morrow "E" sand pressure was 2,596 psi prior to the well being recompleted to the Strawn formation. The pressure data indicates that the Morrow formation has a minimum of 2 BCFG recoverable reserves remaining in place.

Prior to recompleting to the Strawn formation, the Morrow formation was producing approximately 217 MCFPD with 517 psig flowing tubing pressure. The flowrate was insufficient to continuously lift fluids from the well and the completion was experiencing liquid loading.

# Mosley Canyon (Strawn) Field

The Baldridge Federal No. 1 was re-completed to the Strawn formation in February 2000 and has produced approximately 2.08 BCFG.

Pressure data obtained in April 2000 indicated the Strawn reservoir pressure was initially 3,327 psi. A pressure buildup test run in April 2004 found that the reservoir pressure had declined to 1,441 psi. Volumetric pressure analysis indicates that the Strawn formation has remaining recoverable reserves of 0.9 BCFG.

In April 2004, gas flow rate had declined to 940 MCFPD at 575 psig flowing tubing pressure, which is approximately the critical rate to continuously transport liquid from the wellbore. The well is beginning to experience liquid loading as exhibited by production rates sharply declining from 940 MCFPD to 340 MCFPD over a 16 day period. The average gas rate was 644 MCFPD at 618 psig for the first 25 days in July 2004.

# **Commingling Justification**

The primary reason to commingle production from the Morrow and Strawn formations is to increase gas deliverability of the well allowing liquid to be efficiently transported from the well, improving operations, lowering bottomhole pressure, and maximizing reserve recovery.

As noted above, the Strawn reserves are 0.9 BCFG and the Morrow reserves are greater than 2.0 BCFG. The time to recover the remaining Strawn reserves is 7 years when calculated using historical production decline rate. The time to recover the remaining Morrow reserves is estimated to be in excess of 40 years. The mechanical life of the wellbore starts to come into question when discussing lengthy production lives. Commingling production from the Strawn and Morrow formation will reduce the number of years required to recover reserves and aid reserve recovery.

Additional drilling in this lease has been restricted due to its' close proximity to the Carlsbad Caverns area. Should this well experience mechanical problems warranting abandonment, it is unlikely that a replacement well will be drilled to recover remaining reserves. Efficient utilization of the Baldridge Federal No. 1 well is necessary to recover gas reserves from the Strawn and Morrow formations.

# Fixed Allocation Percentage

The most recent data available for each zone was utilized to allocate the gas production rate. The data supports a gas allocation of 75% to the Mosley Canyon (Strawn) and 25% to the Baldridge Canyon (Morrow). Condensate production has not been associated with this well, however, should there be any condensate production it will be allocated at the same percentages as the gas production.

# **Summary**

In order to prevent waste and maximize oil and gas recovery, E.G.L. Resources, Inc. proposes to commingle production from the Baldridge Canyon (Morrow) and the Mosley Canyon (Strawn) fields within the Baldridge Federal No. 1 well.

Attachments: C-102 for Mosley Canyon Strawn (Gas)

C-102 for Baldridge Canyon Morrow (Gas)
Well Data Sheet (Current Completion)
Well Proposal Sheet (Proposed Completion)
Baldridge Canyon (Morrow) Rate/Time Graph
Baldridge Canyon (Morrow) Pressure/Time Graph
Baldridge Canyon (Morrow) Pressure/Cum Graph

Baldridge Canyon (Morrow) Custom Graph (Rate & Pressure/Cum Graph) Mosley Canyon (Strawn) Daily Rate & Flowing Tbg Pressure/Time Graph

Mosley Canyon (Strawn) Daily Rate/Cum Graph

District I

1625 N. French Dr., Hobbs, NM 88240

State of New Mexico Energy, Minerals & Natural Resources **Department**  Form C-102 Revised March 17, 1999

District II

811 South First, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

# OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe, NM 87505

Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

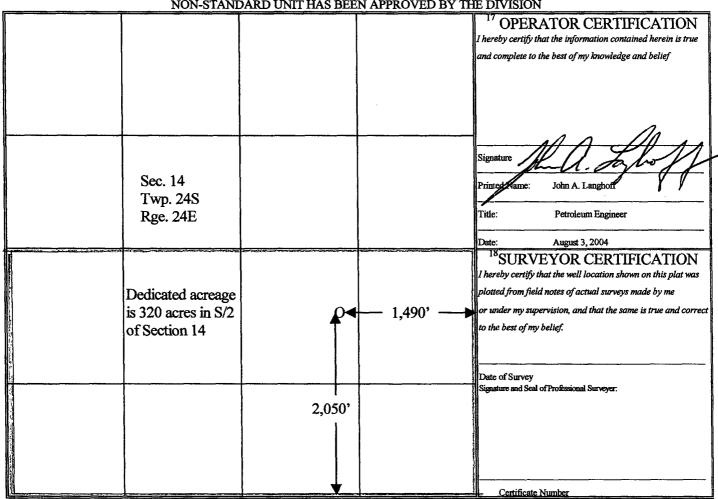
AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

	API Number 0-015-239			<sup>2</sup> Pool Code 81470		<sup>3</sup> Pool Name Mosley Canyon Strawn (Gas)				
<sup>4</sup> Property 02478		<sup>5</sup> Property Name Baldridge Federal Com.						<sup>6</sup> Well Number 1		
<sup>7</sup> ogrid 17341				E.G	8 Operator Na L. Resources, I		i i	<sup>9</sup> Elevation 4518' GL		
<del></del>				· · · · · · · · · · · · · · · · · · ·	<sup>10</sup> Surface L	ocation				
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
J	14	248	24E	24E 2050 South 1490					Eddy	
	<u> </u>		<sup>11</sup> Bot	tom Hole	e Location If	Different From	Surface			

UL or lot no. Section Township Lot Idn Feet from the North/South line East/West line County Feet from the Range 12 Dedicated Acres <sup>3</sup> Joint or Infill 4 Consolidation Code <sup>15</sup> Order No. 320 N C

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



District I

1625 N. French Dr., Hobbs, NM 88240

811 South First, Artesia, NM 88210

<sup>4</sup> Property Code

024789

7 OGRID No.

173413

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

<sup>1</sup> API Number

30-015-23970

# State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised March 17, 1999

OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe. NM 87505

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

AMENDED REPORT

<sup>9</sup> Elevation

4518' GL

### WELL LOCATION AND ACREAGE DEDICATION PLAT <sup>3</sup> Pool Name <sup>2</sup> Pool Code 71420 Baldridge Canyon Morrow (Gas) <sup>5</sup> Property Name <sup>6</sup> Well Number Baldridge Federal Com-

E.G.L. Resources, Incorporated <sup>10</sup> Surface Location

<sup>8</sup> Operator Name

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
J	14	24S	24E		2050	South	1490	East	Eddy	

11 Bottom Hole Location If Different From Surface

Dottom flore Location in Different from Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres 320	<sup>13</sup> Joint o	r Infill 14	Consolidation	Code 15 O	rder No.				

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A

NON-STANI	DARD UNIT HAS BEE	N APPROVED BY TH	
			<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief
Sec. 14 Twp. 24S Rge. 24E			Signature  Printed Name: John A. Langkoff  Title: Petroleum Engineer  Date: August 3, 2004
Dedicated acreage is 320 acres in S/2 of Section 14	<b>P</b> 4	— 1,490° — <b>▶</b>	18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief:  Date of Survey
	2,050'		Signature and Seal of Professional Surveyer:
	CONTROL COMMUNICATION CONTROL VIOLENT		Certificate Number

# **WELL DATA SHEET**

FIELD: Mosley Canyon

WELL NAME: Baldridge Fed. No. 1

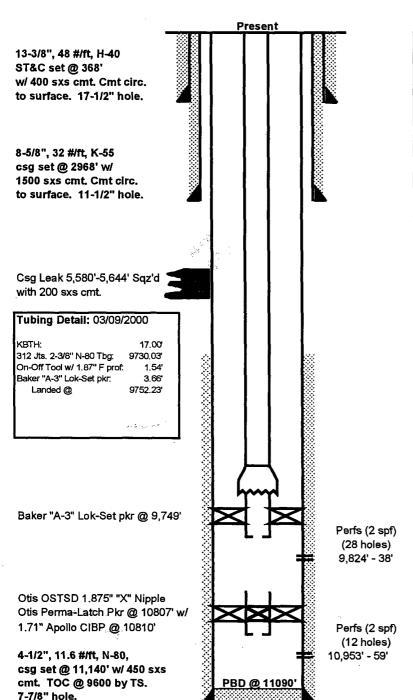
FORMATION: Strawn

LOC: 2050' FSL & 1490' FEL SEC: 14 TWP: 24S RGE: 24E

FILE: BALFED\_1.XLS JAL 03-28-2000 COUNTY: EDDY STATE: NM

GL: 4518' KB to GL: 17.0' **CURRENT STATUS: Producer** 

API NO: 30-015-23970



TD @ 11140'

Date Completed: 5/12/1982

Initial Production: 0 BOPD / 0 BWPD / 2458 MCFGPD

FLOWING WITH 2404 PSIG FTP.

Initial Formation: Morrow From: 10953' To: 10959'

### Completion Data:

Completed to flow up 2-3/8" tubing with packer set at 10844'. Well was acidized w/ 1,000 gal 7-1/2% spearhead acid w/ ball sealers. Broke down @ 2,200#, balled out @ 6,000#, surge balls & finish pumping 13 bbls flush. Fracture stimulated w/ 10,000 gal MS, 5,000 gal CO2, 8,000# 20-40 sand, & 2,000# 20 40 bauxite. Treating rate was 8.6 BPM at average pressure of 6,800#. ISIP 2,200#, 10" 2,100#, 15" 2,000#. Original BHP from DST data 4,254#.

### Wellbore History:

9/97 Repaired leak in tubing.

8/99 Run pressure buildup. Max pressure 2,128#.

2/00 Set CIBP in pkr @ 10,807'. POOH w/ tbg. Locate csg leak f/ 5580'-5644' and cmt sqz w/ 200 sxs. Drill out & test to 500 psi. Perf Strawn f/ 9824'-38'. Run prod. equip. Swab well in to flow 2.7 MMCFPD w/ 1200 psig FTP.

### Additional Data:

DST #1 - 9780'-9860' (Strawn sand). Op 30", SI 1', Op 2', & SI 4'. GTS 8" FARO 3,050 MCFPD on preflow. FARO 4,205 MCFPD on reg. flow on 3/4" ck. Rec. 200' GCDM. SC/R @ 1450# was 10 CFG + 400 cc 40 deg. cond. 30" FP 504#, 1' ISIP 3938#, 2' FP 630#, and 4' FSIP 3938#.

DST#2 - 10227'-10267' (Strawn sand). Op 30", SI 1', Op 2', & SI 4'. GTS 14" FARO 758 MCFPD on preflow. Reg. flow of 1,600 MCFPD on 1/2" ck declining to 1,200 MCFPD at end of test. Rec. 98' GC & CCDM. SC/R @ 350# was 200 cc GC&MC cond. 30" FP 693#. 1' ISIP 4,003#, 2' FP 305#, 4' FSIP 2488# (depletion severe on test).

DST.#3 - 10616'-10706'. Op 30", SI 1', Op 65", & SI 2'. Rec. 5350' GIDP & 120' DM. SC/R @ 120# was 3 CFG + 1500 cc DM. 30" FP 140#. 1' ISIP 1117#, 65" FP 140#, 2' FSIP 3931#.

DST #4 - 10725'-10786'. Op 30'', SI 1', Op 1', & SI 2'. GTS 3" into reg. flow period - TSTM. Rec. 468' GCDM which was cut w/ formation wtr. SC/R @ 135# was 4 CFG + 1800 cc DM. 30" FP 84#, 1' ISIP 3347#, 1' FP 139#, and 2' FSIP 3403#.

DST.#5 - 10900'-10950'. Op 30", SI 1', Op 1', & SI 2'. GTS 14" into reg. flow period ARO 60 MCFPD. Rec. 168' GCDM. SC/R @ 90# was 0.5 CFG + 2500 cc DM. 30" FP 56#, 1' ISIP 3958#, 1' FP 84#, and 2' FSIP 3956#.

# **WELL PROPOSAL SHEET**

FIELD: Baldridge Canyon FIELD: Mosley Canyon

WELL NAME: Baldridge Fed. No. 1

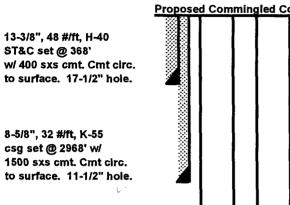
FORMATION: Morrow FORMATION: Strawn

LOC: 2050' FSL & 1490' FEL SEC: 14 TWP: 24S RGE: 24E COUNTY: EDDY

STATE: NM

GL: 4518' KB to GL: 17.0' **CURRENT STATUS: Producer** 

API NO: 30-015-23970



Csg Leak 5,580'-5,644' Sqz'd with 200 sxs cmt.

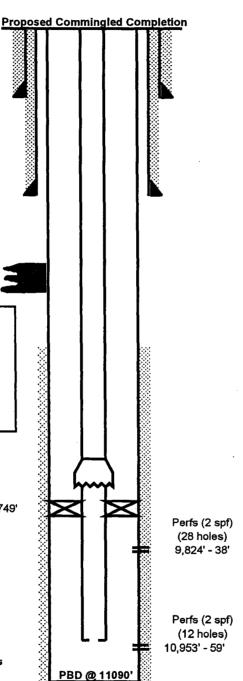
Tubing Detail: 03/09/2000

# KBTH: 17.00' 312 Jts. 2-3/8" N-80 Tbg: 9730.03' On-Off Tool w/ 1.87" F prof: 1.54' Baker "A-3" Lok-Set pkr. 3.66' Landed @ 9752.23'

Baker "A-3" Lok-Set pkr @ 9,749'

4-1/2", 11.6 #/ft, N-80, csg set @ 11,140' w/ 450 sxs cmt. TOC @ 9600 by TS. 7-7/8" hole.

FILE: BALFED\_1.XLS JAL 07-28-2004



TD @ 11140'

# Proposed Commingle Procedure:

- 1. Test casing prior to MIRU.
- 2. MIRU workover unit.
- 3. Set plug in On-Off tool.
- 4. ND wh. Rise On/Off tool. NU BOP.
- 5. Swb down csg to 6000'
- 6. Latch On/Off tool. Rise pkr & POOH.
- 7. RIH w/ ported sub & On/Off tool skirt.
- 8. Latch On/Off tool @ +/-10,807'. Rise pkr & POOH.
- 9. RIH w/ tailpipe, pkr, On/Off tool, & tbg.
- 10. Set pkr @ +/- 9,750' & tailpipe @ +/-10,950'.
- 11. ND BOP. NU wellhead.
- 12. Swb well in to flowing completion.
- 13. RD workover unit & clean location, MOL.

Date: 6/1/2004 Time: 11:20 AM

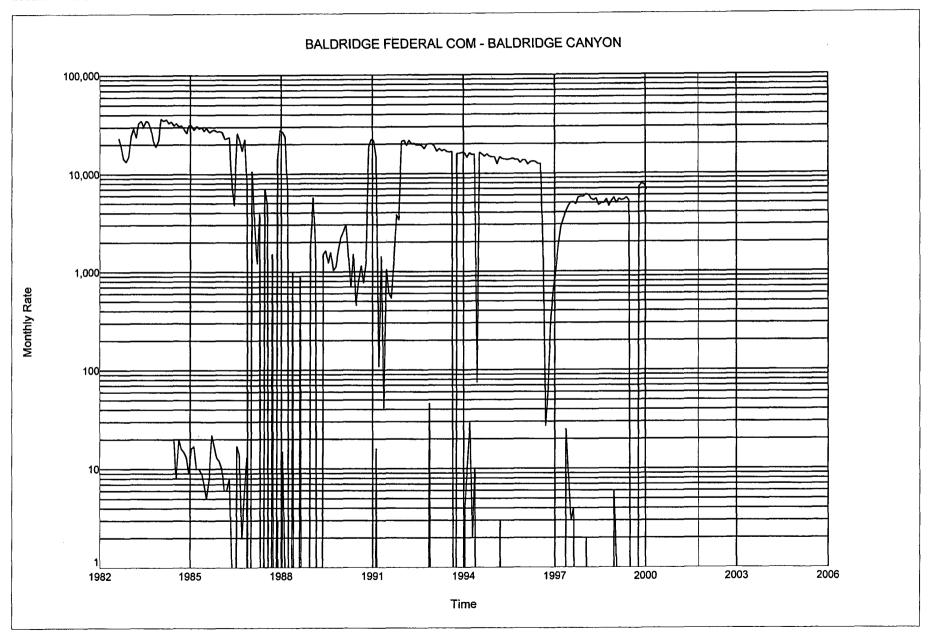
Lease Name: BALDRIDGE FEDERAL COM (1)

County, ST: EDDY, NM

Location: 14J 24S 24E NE NW SE

Operator: E G L RESOURCES

Field Name: BALDRIDGE CANYON MORROW



# Pressure/Time Graph

Project: C:\JAL\_FILE\Programs\IHS Energy\PowerTools v5.0\Projects\bal\_fed1.mdb

Date: 6/1/2004 Time: 11:21 AM

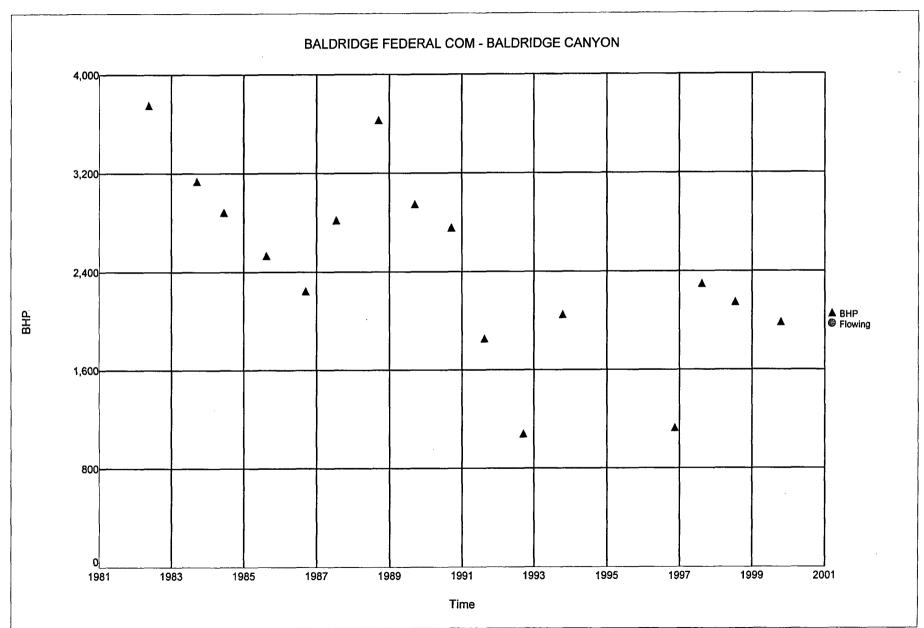
Lease Name: BALDRIDGE FEDERAL COM (1)

County, ST: EDDY, NM

Location: 14J 24S 24E NE NW SE

Operator: E G L RESOURCES

Field Name: BALDRIDGE CANYON MORROW



Date: 6/1/2004 Time: 11:21 AM

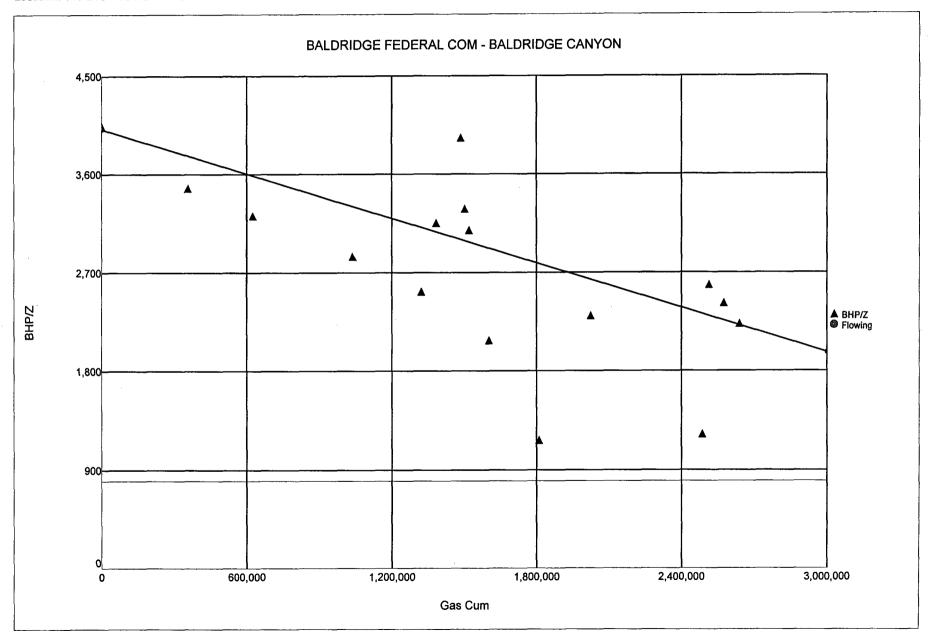
Lease Name: BALDRIDGE FEDERAL COM (1)

County, ST: EDDY, NM

Location: 14J 24S 24E NE NW SE

Operator: E G L RESOURCES

Field Name: BALDRIDGE CANYON MORROW



**Custom Graph** 

Project: C:\JAL\_FILE\Programs\IHS Energy\PowerTools v5.0\Projects\bal\_fed1.mdb

Date: 6/1/2004 Time: 11:22 AM

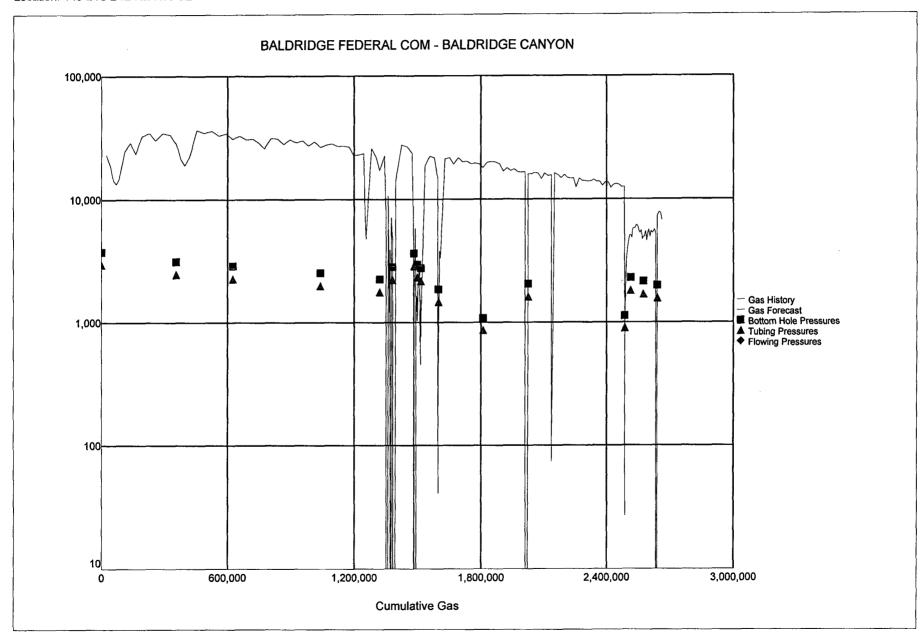
Lease Name: BALDRIDGE FEDERAL COM (1)

County, ST: EDDY, NM

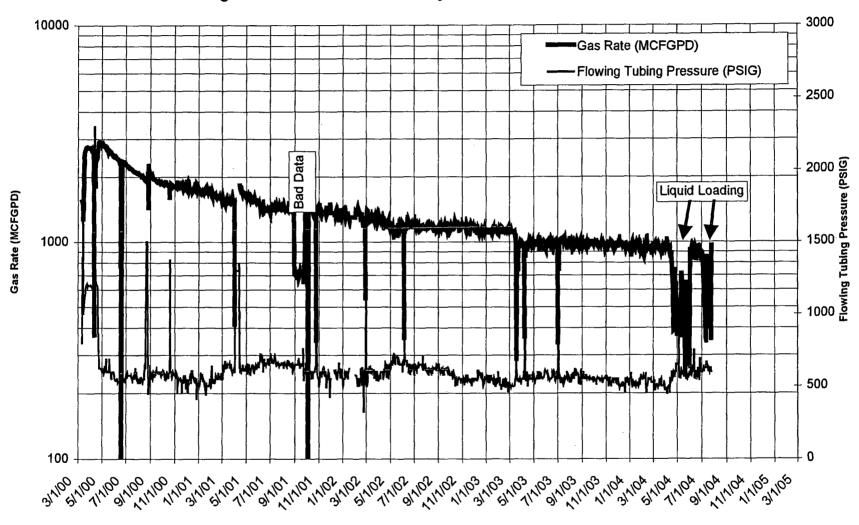
Location: 14J 24S 24E NE NW SE

Operator: E G L RESOURCES

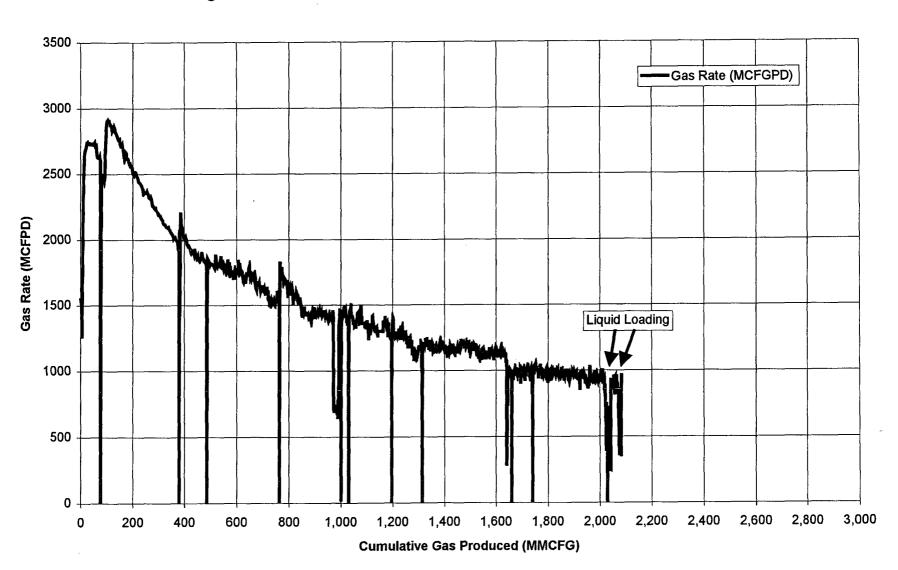
Field Name: BALDRIDGE CANYON MORKOW



Baldridge Federal No. 1 - Strawn Daily Production Data 3/1/00 to 7/25/04



3



N.M. Oil Cons. DIV-Dist. 2

UNITED STATES W. Grand Avenue
DEPARTMENT OF THE INTERIOR NAME OF THE INT

FORM APPROVED OM B No. 1004-0137 Expires: March 31, 2007

rom	3100-3
(April	2004)

Bi	UREAU OF LAND MAN	NINI LEMENS	1 88210	5. Lease Ser	ial No
	NOTICES AND REP			NM292	
Do not use thi	s form for proposals to II. Use Form 3160-3 (A	o drill or to re-	enter an	6. If India	n, Allottee or Tribe Name
	PLICATE- Other instr	ructions on reve	erse side CEIVED	7. If Unit o	or CA/Agreement, Name and/or No.
1. Type of Well Oil Well	Gas Well Other	•	16 1 9 2004		ame and No.
2. Name of Operator E.G.L. Resour	ces, Inc.	A	PARTERIA	9. APIW	idge Federal Com. No. 1
3a. Address		3b. Phone No. (inclu	de area code)	1 * *	5-23970
PO Box 10886, Midland, TX 79	<del></del>	432-687-6560		<del>-</del>	nd Pool, or Exploratory Area
4. Location of Well (Footage, Sec., T.	., R., M., or Survey Description)			<u> </u>	y Canyon Strawn (Gas)  or Parish, State
2,050' FSL & 1,490' FEL Sec. 14, Twp. 24-S, Rge. 24-E					County, New Mexico
12. CHECK AP	PROPRIATE BOX(ES) TO	INDICATE NATU	RE OF NOTICE, R	EPORT, O	R OTHER DATA
TYPE OF SUBMISSION		T	PE OF ACTION		
Notice of Intent Subsequent Report Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injection	Deepen Fracture Treat New Construction Plug and Abandon Plug Back	Production (St Reclamation Recomplete Temporarily A	bandon	Water Shut-Off Well Integrity Other Application filed to downhole commingle
following completion of the inventesting has been completed. Findetermined that the site is ready  Please note that E.G.L. Res	olved operations. If the operation al Abandonment Notices shall be for final inspection.) sources, Inc. has made applic by Canyon Strawn (Gas) pool	results in a multiple cor filed only after all requi ation with the New N	npletion or recompletion rements, including reclan Mexico Oil Conservati	in a new intervaluation, have be on Division t	reports shall be filed within 30 days val, a Form 3160-4 shall be filed once the completed, and the operator has to downhole commingle to filed with the
SUBJECT LIKE APPI BY STATE		IA.	PROVEL  JG 10 2004  LES BABYAK  OLEUM ENGINE		
14. I hereby certify that the foreg Name (Printed/Typed) John A. Langhof	1	Title	Petroleum Engineer		
Signature John	Tashof	Date		08/03/2004	
	THIS SPACE BOR	FEDERAL OR		USE	
Approved by			Title		Date
Conditions of approval, if any, are a certify that the applicant holds legal which would entitle the applicant to	or equitable title to those rights		Office		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.