Form 3160-3 (July 1992)	DEPARTMEN	TED STATES T OF THE I	NTERIOR	rev	instructions on verse side)	OMB N OMB N Expires: F 5. LEASE DEGIGNAT	APPROVED D. 1004-0136 sbreary 28, 1995
APPLI	CATION FOR P	ERMIT TO	DRiver	PEER	E 84		TTES OR TRIBE NAME
18 TYPE OF WORK		DEEPEN	Artesi	a, NM	88210-283	A 7. UNIT AGEREMEN N/A	T NAME
	ELL X OTHER		SINGLE ZONE			8. FARM OR LEASE NAM Horseshoe 1	N
3. ADDRESS AND TELEPHONE NO.	ER EXPLORATION		148381			9. AN WELL NO. 30-0 10. FIELD AND POO	
1331 Lam 4. LOCATION OF WELL (R At surface	ar, Suite 1455, eport location clearly and	Houston, 1	Cexas 770 th any State re	10-3039 quirements.	• }	Wildcat; M	OTTOW
1980' FSL & At proposed prod. zon	1980' FEL of S	ection 18				Section 18	T16S-R30E
14. DISTANCE IN MILES		REST TOWN OR POS			<u> </u>	12. COUNTY OR PAR	ISH 13. STATE
15. DISTANCE FROM PROPO LOCATION TO NEAREST PROPERTY OF LEASE L	INE, FT.	Village of	16. NO. OF A	<u>11s, NM</u> CRES IN LEA ntized		Eddy of Acres Assigned this Well 312.83	<u>New Maxi</u>
(Also to nearest drig 15. DISTANCE FROM FROM TO NEAREST WELL, D OR APPLIED FOR, ON TH	OSED LOCATION* RILLING, COMPLETED.	4500'	19. реорозер 110			CARY OR CABLE TOOLS	
21. ELEVATIONS (Show who	ether DF, RT, GR, etc.)	3758'				22. APPROX. DATI 12/0	WORE WILL START*
23.		PROPOSED CASI	NG AND CEMI	INTING PR	OGRAM		
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER F	00T S	ETTING DEPT		QUANTITY OF C	MENT
20"	20"	48#		40_ 400		Driven	
<u>17-1/2"</u> 11" 7-7/8"	<u>13-3/8"</u> 8-5/8" 5-1/2"	32# 17#		3000 11015	' 1150	cu.ft. (650 cu.ft. (550	sx.)
to a tot If a dry and Stat Drilling Surface Certific	er Exploration al depth of 11, hole Bellwether e Regulations. Plan attached Use Plan attach ation attached. attached.	015' will plug ed			wellbore		123A5678
IN ABOVE SPACE DESCRIB deepen directionally, give perti- 24.					a prevenue program	ed new productive zone. n, if any.	
(This space for a ede	TAL UT SLALE VILLE UNE		* 8000	VAL DATE			
PERMIT NO.			APPROT		subject lease which y	would entitle the applicant	to conduct operations ther
Application approval does n		plicant holds legal or ec	doitable nne to nio	se rights in the	inte Mane (5.2.r.	•

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes 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.

District I
1625 N. French Dr., Hobbs, NM 88246
District II
811 South First, Artenia, NM 88210
District III
1000 Rio Brazos Rd., Astoc, NM 87410

2040 South Pachece, Sonta Fe, NM 87505

District IV

State of New Mexico Energy, Minerals & Natural Resources

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

API Number	³ Pool Code ³ Pool Nam		
		Wildcat; Morrow	
* Property Code	[•] Property Name Horseshoe 18 Fed Com		"Well Number
	Horseshoe 1	18 Fed ÇXÔm,	1
'OGRID No.	¹ Operator		'Elevation
48381	Bellwether Expl	3758	

UL or lot no,	Section	Township	Range	Lot Ida	Fort from the	North/South line	Feet from the	East/West line	County
J	18	16S	30E]	1980	South	1980	East	Eddy
L	*		11 Ro	Hom Hol	e Location If	Different Fron	n Surface		

Boutom Hole Location in Different From Surface									
UL or let no.	Section 7	l'ownehip	Range	Lot Idn	Feet from the	North/South line	Fest from the	East/West line	County
¹² Dedicated Acres	¹⁰ Joint or	Infil "C	Consolidation	Code ¹⁴ Or	der No.	L	l	l	
312.83	N		С						

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

16					¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief
					Signation AMUT K. Salli Printed Name Nancy K. Gatti
					Tile Regulatory Coordinator Des 9-18-00
Lot 3 36.4 ac	40ac		40ac	40 ac	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
Lse∦ BLM	NM 7724			1980'	or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey Segments and Sectors
Lot 4 36.43 ac	40 ac	1980 '	40 ac	40 ac	BB75 BB75 BB75 BB75 BB75 BB75 BB75 BB75



NAME: FILAUTOCAD/STD-DVGS/VELLGRID.dwg DATE: JUL 27, 1999 TIME: 410 PM SCALE:

LEASE INFORMATION Horseshoe 18 Fed Com #1 T16S-R30E, Section 18

T16S-R30E, Section 18 312.83 Acres Dedicated Lay-down S/2 Eddy County, New Mexico

Owner Name	BLM NM 7724 S/2 Sec 18
Bellwether Exploration Company	50.000000%
Pure Energy Group, Inc.	50.000000%
	100.000000%

APPLICATION FOR PERMIT TO DRILL WORKSHEET

(Based on the requirements contained in Onshore Oil and Gas Order Nos. 1 & 2)

All forms and information must be filed in triplicate

TORCH OPERATING COMPANY

HORSESHOE 18 FEDERAL COM, WELL NO. 1

1980' FSL & 1980' FEL OF SECTION 18, T16S, R30E

EDDY COUNTY, NEW MEXICO

A. FILE APPLICATION FOR PERMIT TO DRILL (FORM 3160-3)

B. <u>LOCATION</u>

Attach plat showing well location in feet from nearest section line or for areas not surveyed according to the rectangular system, by such means as is normal for the area, prepared and sealed or certified by a registered surveyor.

C. DRILLING PROGRAM

1. ESTIMATED GEOLOGICAL TOPS

Give estimated tops of important geological marker horizons, including geologic name of the surface formation:

FORMATION	<u>DEPTH</u>
Queen	1,930'
San Andres	2,695'
Wolfcamp Lime	7,475'
U. Strawn	9,635'
L. Strawn	10,000'
Atoka	10,135'
Morrow	10,550'
L. Morrow	10,585'
Chester	10,915'
TD	11,015'

Page 2

2. DEPTH OF ANTICIPATED WATER, OIL, GAS, ETC.

All fresh water and prospectively valuable minerals (as described by Bureau of Land Management) encountered during drilling, will be recorded by depth and adequately protected. All oil and gas shows will be evaluated to determine commercial potential.

The primary objective is the Morrow formation(s) estimated to be at 10,550' MD. The secondary objective is the Atoka formation(s) estimated to be at 10,135' MD.

3. PRESSURE CONTROL PROGRAM

A double gate hydraulic BOP, 13-5/8", 5000 psi WP with pipe rams and blind rams will be installed on the 8-5/8" casinghead. The BOP stack will be tested to 2000 psi prior to drilling below surface casing and as follows. Operational checks will be made daily or on trips.

CASING STRING	REQUIREMENTS	<u>TEST PRESSURE, psi</u>
SURFACE	1 ANNULAR	250/1000
	1 BLIND RAM	250/2000
	1 PIPE RAM	250/2000
INTERMEDIATE	1 ANNULAR	250/3500
& PRODUCTION	1 BLIND RAM	250/5000
	1 PIPE RAM	250/5000
DOD TECTDIC WILL	DE DONIE EVERY 14	DAVE

BOP TESTING WILL BE DONE EVERY 14 DAYS.

SCHEMATIC ATTACHED AS EXHIBIT "A"

The BOP system will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventor controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventors will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

The following is a list of Auxiliary Equipment:

- 1. Upper Kelly Valve
- 2. Lower Kelly Valve
- 3. Drill Pipe Inside BOP

Page 3

DEPTH

400'

...

4. CASING PROGRAM

Conductor		20" will be set approximately 40' below ground level (BGL).					
Surface Casing:		13-3/8" casing will be set at approximately 400'.					
Intermediate Casing:		8-5/8" casing will be set at approximately 3,000'.					
Production Casing:		5-1/2" casing will be set if the well is productive by log measurements.					
<u>SIZE</u>	GRAD	<u>E</u>	<u>WEIGHT</u>	<u>THREAD</u>	<u>CONDITION</u>		
13	-3/8"	H-40	48#	ST&	C New		

3,000'	8-5/8"	K-55	32#	ST&C	New
11,015'	5-1/2"	N-80	17#	LT&C	New

5. <u>CEMENT PROGRAM</u>

SURFACE CASING: 13-3/8" @ 400'

- TOTAL: 550 CU FT / 280 SX (ASSUMING 100% EXCESS)
- SLURRY: 35/65 POZ CLASS "C" + 2% CaCl + 6% BENTONITE GEL + .25% #/SX CELLOFLAKES MIXED WITH 10.75 GPS FRESH WATER @ 12.5 PPG AND YIELD 1.97 CU FT/SX.

CALCULATED TOP OF CEMENT: CIRCULATED TO SURFACE CALCULATED CEMENT FILL: 400'

INTERMEDIATE CASING: 8-5/8" @ 3,000'

LEAD:	950 CU FT / 500 SX
TAIL:	200 CU FT / 150 SX
TOTAL:	1150 CU FT / 650 SX (ASSUMING 50% EXCESS)

Page 4

- 5. CEMENT PROGRAM, (continued)
 - LEAD: 35/65 POZ CLASS "C" + 1% CaCl + 6% BENTONITE GEL + 4 #/SX GILSONITE MIXED WITH 9.65 GPS FRESH WATER @ 12.7 PPG AND YIELD 1.87 CU FT/SX.
 - TAIL:CLASS "C" + 1% CaCl MIXED WITH 6.34 GPS FRESH WATER @14.8 PPG AND YIELD 1.34 CU FT/SX

CALCULATED TOP OF CEMENT: CIRCULATED TO SURFACE CALCULATED CEMENT FILL: 3,000' (2,500' LEAD AND 500' TAIL)

PRODUCTION CASING: 5-1/2" @ 11,015'

LEAD:	400 CU FT / 250 SX
TAIL:	400 CU FT / 300 SX
TOTAL:	800 CU FT / 550 SX (ASSUMING 25% EXCESS)

- LEAD: 15/61/11 POZ CLASS "C" CSE + 8 #/SK GILSONITE + .5% FL25 + .5% FL52 MIXED WITH 7.14 GPS FRESH WATER @ 13.2 PPG AND YIELD 1.57 CU FT.SX
- TAIL:CLASS "C" + .7% FL25 MIXED WITH 6.29 GPS FRESH WATER @14.8 PPG AND YIELD 1.33 CU FT/SX

CALCULATED TOP OF CEMENT: 7,015' CALCULATED CEMENT FILL: 4,000' (2,000' LEAD AND 2,000' TAIL)

Additional additives will be used to either/or retard cement, accelerate the cement, control loss circulation and control fluid loss. All cementing will be done in accordance with API cementing practices.

Anticipated cement tops will be reported as to depth, not the expected number of sacks of cement to be used. Torch Operating Company will notify the District Office, with sufficient lead time, in order to have a BLM representative on location while running all casing strings and cementing.

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6. CIRCULATING MEDIA PROGRAM

A. Torch proposes to utilize the following mud system which will be visually monitored.

	MW(PPG)	<u>VISC.</u>	<u>PV</u>	<u>YP</u>	<u>PH</u>	FLUID LOSS
0' - 400'	8.6 - 9.2	32-35	5-10	15-25	NC	NC
400' - 3,000'	9.9 - 10.1	28-29	5-10	15-25	9.0 - 10.0	NC
3,000' - 9,000'	8.3 - 9.5	28-29	4-8	5-10	9.0 - 10.0	20 - 25
9,000' - 11,015'	9.5 - 10.5	31-36	6-12	4-8	9.0 - 10.0	6-8

B. Air Drilling - Include the following information:

- 1. Length and location of blooie line, including automatic igniter or continuous pilot light.
- 2. Location of compressor equipment, including safety devices, and the distance from the wellbore.
- 3. Schematics showing deduster equipment and rotating head.
- 4. Amounts, types and characteristics of stand-by mud and circulating equipment.

TORCH OPERATING COMPANY DOES NOT PROPOSE TO DRILL THE HORSESHOE 18 FEDERAL COM WELL NO. 1 BY THE AIR METHOD.

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7. CORING, LOGGING AND TESTING PROGRAM

- A. DIL/Sonic/GR;
 Azimuth Laterolog
 Litho-Density-Neutron/Microlog/GR
 CBL, if production casing is run.
 Dipmeter Stand-By
 Drill Sidewall Cores Stand-By
- B. Possible DSTs in the Atoka and/or Morrow formations as needed.

8. POTENTIAL HAZARDS (IF NONE, SO STATE)

A. Expected bottom-hole pressures and any anticipated abnormal pressure zones.

NONE

B. Expected temperature or bottom-hole temperature and any abnormal temperature zones.

NONE

C. Expected potential hazards (i.e., H₂S, lost circulation zones).

Possible encounter with CO₂.

D. Discuss plans for mitigation of any of the potential hazards defined above.

9. ADDITIONAL INFORMATION

Any other facets of the proposed operation you wish to include for Bureau of Land Managements's consideration of the application.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

BELLWETHER EXPLORATION COMPANY

Horseshoe 18 Fed. Com. #1 Section 18 , T-16S, R-30E 1980' FSL-1980'FEL Eddy County, New Mexico USA OGLse.#NM-7724

This plan is submitted with the application for permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operation.

1. EXISTING ROADS:

A. <u>Exhibit "B"</u> is a portion of a road map showing the location of the proposed well as staked. The well is approximately 6.75 miles Northwest of the Village of Loco Hills, N.M.

B. <u>Directions</u>: As reflected on map Exhibit "B", follow State Highway 82 East from Artesia, New Mexico for approximately 25 miles to Loco Hills, turn North on County Road 217, thence North 7.75 miles to Kayjay Southwest Henshaw Lease Sign, thence West 1.5 miles, thence South 3000 feet to location.

2. PLANNED ACCESS ROAD:

The planned access road is indicated on Exhibit "B" and Exhibit "C" with a yellow coloration.

A. <u>Length and Width</u>: There is 10,700 feet of existing access road back to county road 217. This Well is located on the pad of an existing plugged well.

B. <u>Surfacing Materials</u>: The road will be flat bladed and crowned with 6 " of compacted caliche if needed.

C. <u>Turnouts</u>: None

D. Maximum Grade: No more than 1% at any given point en route to location.

E. <u>Drainage Design</u>: Road will have drainage ditches on both sides and a crowned top, with culverts and/or low water crossings as necessary. The existing access road does not presently appear to have or need any low water crossings.

F. <u>Culverts</u>: None necessary.

- G. Cut and Fill: A maximum of 1 foot will be necessary at any given point along access.
- H. Gates, Cattleguards: None
- I. <u>Top Soil</u>: Access road had predominately migrating sand as top soil.

3. LOCATION OF EXISTING WELLS WITHIN ONE MILE RADIUS:

A. A map indicating the location of adjacent wells within a one mile radius is attached as Exhibit "D".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. <u>See Exhibit "D"</u> for location of existing lease wells. If the well is commercial, production facilities and tank battery will be constructed.

B. <u>Cuts and Fills</u>: The well site is an existing plugged well site that has previously been leveled.

C. <u>Top Soil</u>: Any top soil which can sustain plant vegetation will be bladed and piled for future rehabilitation at location shown on Exhibit "E". The location is predominately covered with migrating sand.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. Location of water supply is yet to be determined. Once located will apply through Sundry Notice.

6. SOURCE OF CONSTRUCTION MATERIALS:

A. Location of caliche material is yet to be determined. Once located will apply through Sundry Notice.

7. METHODS OF HANDLING WASTE DISPOSAL:

A. The reserve pit will be lined with a 12 mil plastic liner to prevent ground water contamination. Drill cuttings will be disposed of in the drilling pits.

B. Drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.

C. Water produced during test will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.

D. Current laws and regulations pertaining to the disposal of human waste will be complied with.

E. Trash, waste paper, garbage, and junk will be contained within a trash or burn cage. After completion of the Well will be removed and disposed of in a approved sanitary landfill.

F. All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

G. The following is a list of Hazardous Materials that may be used during operations -Gasoline, New and Used Oil, Diesel, Hydrochloric acid, A-2(corrosion inhibitor), liquid citric(iron sequestrant), NE-17(non-emulsifier), CL-33(clay stabilizer), CL- 55C (liquid KCL), Breaker E (water gel breaker), Class C Cement, Flocele, Calcium Chloride, Gilsonite(Gel), Bentonite(Gel), Poz Mix "A", Salt, Halad-322. All of the above materials will be contained in a manner that is considered by the BLM as environmentally safe. Upon completion of the well all of these materials will be taken from the location and disposed of in accordance with applicable local, state & federal Laws.

8. ANCILLARY FACILITIES:

A. Exhibit "E" indicates the proposed pad dimensions. Camp trailers housing personal and monitoring equipment will be present during drilling operations.

9. WELL SITE LAYOUT:

- A. <u>Exhibit "E"</u> indicates the relation location and dimensions of the well pad, mud pits, reserve pit and major rig equipment.
- B. As reflected on Exhibit "C", the terrain slopes slightly West from location.

C. The reserve pit will be lined with a 12 mil plastic liner to prevent loss of water and ground water contamination.

10. PLANS FOR RESTORATION OF THE SURFACE:

A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and the location cleaned of all trash and junk to leave the well site in an aesthetically pleasing condition as possible.

B. Any unguarded pits containing fluids will be fenced until they are filled.

C. If the well is non-productive or abandoned, the disturbed area will be rehabilitated using the preserved soil mentioned in 2. I. and 4. C.

11. OTHER INFORMATION:

A. <u>Topography</u>: The topography is a gradual slope to the West in the vicinity of the access road and West in the vicinity of the drill pad.

B. Soil: Predominantly sandy loam.

C. <u>Flora and Fauna</u>: The flora consists of typical desert vegetation, such as yucca, cactus and various grasses. Fauna consists of desert wildlife such as coyotes, rodents, snakes, deer and antelope.

D. Ponds or Streams: None in vicinity.

E. Residences and other Structures: No residence within 5 miles or more.

F. <u>Archaeological, Historical and Other Cultural Sites</u>: An Archaeological Survey was conducted by Archaeological Survey Consultants of Roswell, New Mexico. No significant archaeological resources were found in the survey area of the planned access road or of the proposed well site.

G. <u>Land Use</u>: Grazing Bogle LTD Company
P.O. Drawer 460
Dexter, New Mexico 88230

H. Surface Ownership: Well site - Bureau of Land Management

12. OPERATOR'S REPRESENTATIVE:

Name:	Rusty Ritz
Address:	Torch Operating Company 1221 Lamar, Suite 1600 Houston, Texas 77010-3039
Phone Nos.:	 (713) 756-1624 (office phone) (281) 728-9292 (cell phone) (713) 613-7975 (pager number)

ALTERNATE REPRESENTATIVE

Name:Mike AlbertsonAddress:Torch Operating Company
1221 Lamar, Suite 1600
Houston, Texas 77010-3039Phone Nos.:(713) 756-1755 (office phone)
(713) 201-3784 (cell phone)
(877) 391-7044 (pager number)

13. <u>CERTIFICATION</u>:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exists; that the statements made in this plan are, to the best of my knowledge true and correct; that the work associated with the operations proposed herein will be performed by Bellwether Exploration Company and its sub-contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to provisions of 18 USC 1001 for the filing of a false statement.

Mike Alberton for Signature Title: 27/00

Date

OPERATOR: ADDRESS: BELLWETHER EXPLORATION COMPANY 1331 Lamar, Suite 1455 Houston, Texas 77010-3039

Please be advised that Bellwether Exploration Company is considered to be the operator of the Horseshoe 18 Federal Com No. 1, located in NW/4SE/4 of Section 18. Township 16 South and Range 30 East, Eddy County, New Mexico, and is responsible under the terms and conditions of the lease (NM-7724) for the operations conducted upon the leased land. Bond coverage is provided by Reliance Insurance B2656947 (BLM# CA0296).

This Albertson Title: Date











EXHIBIT "E" Horseshoe 18 Fed Com #1 Section 18, T-16S, R-30E, NMPM Eddy County, New Mexico