

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

2006 OCT 11 AM 8 23

1a Type of Work

DRILL ☒

DEEPEN ☐

b Type of Well

Oil Well ☐

Gas Well ☒

Other ☐

Single Well ☒

Multiple Zone ☐

2 Name of Operator

Merrion Oil & Gas Corporation

3 Address and Telephone No.

610 Reilly Ave Farmington NM 87401
ph: (505) 327-9801

4 Location of Well (Footages)

At Surface 1974' fsl & 799' fwl (nw sw)

At proposed prod. zone

Same

5 Lease Designation and Serial No
SF-078213

6 If Indian, Allottee or Tribe Name

7 If Unit or CA, Agreement Designation

8 Well Name and No.

Piedra Vista No. 12

9 API Well No

30-045-33997

10 Field and Pool, or Exploratory Area
Basin Dakota

11 Sec., T., R., M., or BLK.
and Survey or Area

Section 25, T30N, R13W

14 Distance in Miles and Directions from Nearest Town or Post Office

On the northern city limits of Farmington, NM

12 County or Parish
San Juan

13 State
NM

15 Distance from Proposed (Also to nearest drlg. unit line, if any)

Location to Nearest
Property or Lease Line, Ft 670'

16 No. of Acres in Lease

320 acres

17 No. of Acres Assigned to This Well

320 160 acres

18 Distance from Proposed Location
To Nearest Well Drilling, Completed,
Or Applied for, on this Lease, FT 1059'

19 Proposed Depth

-6525'

20 Rotary or Cable Tools

Rotary

21 Elevations (Show whether DF, RT, GR, etc)

5688' GR, 5700' RKB

22 Approximate Date Work will Start

November 2006

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE & GRADE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8" J55	24 ppf	~320' KB	~278 cuft (100% excess)
7 7/8"	4 1/2" J55	11.6 ppf	~6525' KB	~2059 cuft

Merrion proposes to drill 12 1/4" hole with spud mud to ~320' and set 8 5/8" 24# J55 surface casing, cement to surface with ~201 sx, 278 cuft (100% excess)
Will drill 7 7/8" hole to ~6525' KB with low solids non-dispersed mud system. May run open-hole surveys.

Will set 4 1/2" 11 6 ppf J55 production casing from ~6525' KB to surface and cement in two stages. Will cement with 10 bbls of mud cleaner, 5 bbls of H₂O,
followed by ~244sx (484 cuft) Premium Lite High Strength and tail in with ~102sx (141 cuft) Type III cement to fill up to DV tool at ±4494'. Second stage will cement w/
506sx (1001 cu ft) Premium Lite High Strength and tail in w/ 314sx (433 cuft) Type III cement to surface

Top of Cement should circulate to surface (will adjust volumes based upon caliper log if available). If cement does not reach surface, a temperature log or
cement bond log will be run to determine top of cement. A cementing chronology will be recorded and submitted to the BLM after completion of the job.

Will test Dakota through perforated casing. Will fracture stimulate and put on for production test. Drilling operations below surface casing will be conducted
with a double ram BOP with a rotating head for air drilling in place, minimum working pressure 2000 psig. Additional drilling technical details attached

Gas sales tie-in will be on lease by laying line to nearest existing sales point at the Panther No. 1 location. No off-lease ROW is required for this project

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM If proposal to deepen, give present productive zone and proposed new productive zone

COPIES: BLM+4, WELL FILE+1

24 I hereby certify that the foregoing is true and correct

Signed

Connie S. Dinning

Title Production Engineer

Date October 2, 2006

(This space for Federal or State office use)

Permit No

Approval Date

Application approval does not warrant or certify that applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon
Conditions of approval, if any

APPROVED BY

TITLE

DATE

7-25-07
BH

NMOCD 7/25

7/25/07

State of New Mexico
Energy, Minerals & Mining Resources Department

Form C - 102

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

☐ AMENDED REPORT

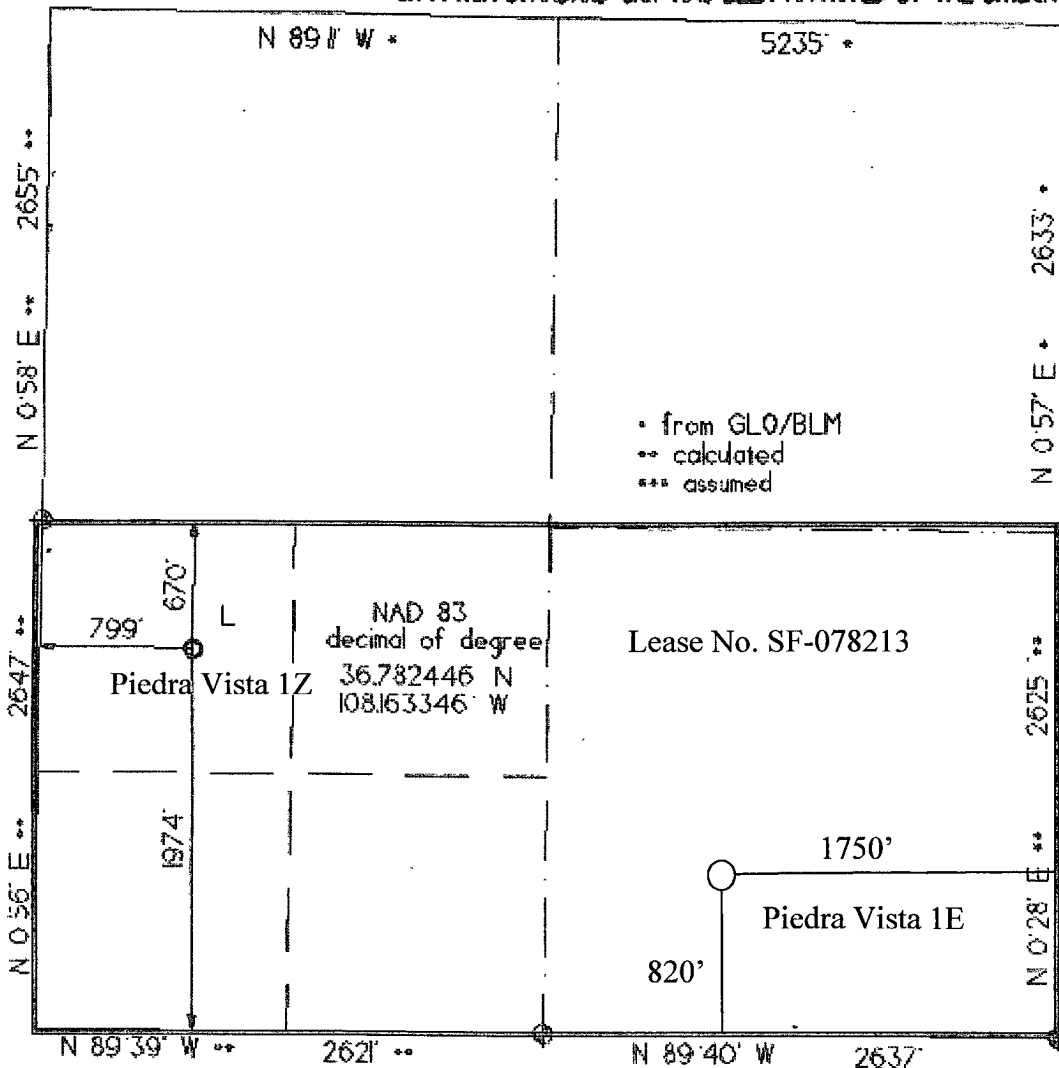
WELL LOCATION AND ACREAGE DEDICATION PLAT

APA Number 30-045-33997	Pool Code 71599	RECEIVED 070 Basin Dakota NM
Property Code 22/39	Property Name PIEDRA VISTA	Well Number 1Z
GRID No. 14634	Operator Name MERRION OIL & GAS	Elevation 5688'

Surface Location									
UL or Lot L	Sec. 25	Twp. 30 N	Rge. 13 W	Lot Id.	Feet from >	North/South	Feet from >	East/West	County SAN JUAN
					1974'	SOUTH	799'	WEST	

Bottom Hole Location if Different From Surface									
UL or Lot	Sec.	Twp.	Rge.	Lot Id.	Feet from >	North/South	Feet from >	East/West	County
Dedication 320 Ac	Joint ?	Consolidation			Order No.				

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



OPERATOR CERTIFICATION

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

Signature

Printed Name Connie S. Dinning

Title Production Engineer

Date September 11, 2006

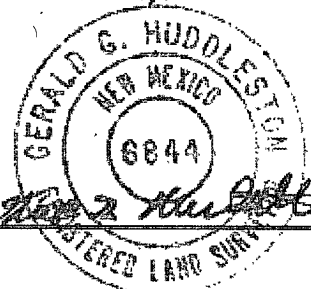
SURVEYOR CERTIFICATION

I hereby certify that the well location 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

rev: 08/10/06

Signature and Seal of Professional Surveyor



Submit 3 Copies To Appropriate District
Office
District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

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

WELL API NO. 30-045-33997	
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/> FED <input type="checkbox"/>	
6. State Oil & Gas Lease No. SF-078213	
7. Lease Name or Unit Agreement Name Piedra Vista	
8. Well Number	1Z
9. OGRID Number	014634
10. Pool name or Wildcat Basin Dakota	

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"/> Other	
2. Name of Operator Merrion Oil & Gas Corp.	
3. Address of Operator 610 Reilly Ave., Farmington, NM 87401	
4. Well Location Unit Letter <u>L</u> : <u>1974'</u> feet from the <u>south</u> line and <u>799'</u> feet from the <u>west</u> line Section <u>25</u> Township <u>30N</u> Range <u>13W</u> NMPM County <u>San Juan</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5688' GL	
Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/>	
Pit type <u>drilling</u> Depth to Groundwater <u>>100'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u>>100'</u>	
Pit Liner Thickness: <u>12</u> mil Below-Grade Tank: Volume _____ bbls; Construction Material _____	

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 ☐

OTHER: pit construction ☒

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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Merrion Oil & Gas proposes to construct a lined earthen pit to contain fluids used to drill the subject well.

RCVD JUL 18 '07
OIL CONS. DIV.
DIST. 3

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Denise Merilatt TITLE Engineering Tech DATE 7/17/07

Type or print name Denise Merilatt E-mail address: dmerilatt@merrion.bz Telephone No. 505.324.5335

For State Use Only

APPROVED BY: Branch Roll TITLE Deputy Oil & Gas Inspector, District #3 DATE JUL 25 2007
Conditions of Approval (if any):

MERRION OIL & GAS CORPORATION

DRILLING TECHNICAL PROGRAM

(Attachment to Form 3160-3)

Piedra Vista No. 1Z

1974' fsl & 799' fwl (nw sw)
Section 25, T30N, R13W, NMPM
San Juan County, New Mexico

1. **ESTIMATED FORMATION TOPS:**

<u>Formation</u>	<u>Depth-MD</u>	<u>Formation</u>	<u>Depth-MD</u>
Undiff. Tertiary	Surface	Point Lookout	4074'
Fruitland	1442'	Mancos	4444'
Pictured Cliffs	1717'	Gallup	5364'
Lewis	1859'	Greenhorn	6111'
Cliffhouse	3132'	Dakota	6277'
Menefee	3237'	Total Depth	6525'

2. **WELL CONTROL SYSTEM**

- A. Proposed blowout preventer system (schematic drawing follows) is a double-ram type preventer, and will be used in 2000 psi service.
- B. Minimum required working pressure rating for BOP stack is 2000 psi. Maximum anticipated bottomhole pressure = 1892 psi. Well Control Anticipated Surface Pressure (ASP) = $1892 \text{ psi} - (0.22 * 6525') = 457 \text{ psi}$, assuming a partially gas cut column per BLM guidelines.
- C. BOP pressure testing will be conducted at time of installation and prior to drillout of surface casing shoe. Ram type preventer will be tested to 2000 psi. The BOPs will be activated on each trip for a bit and recorded in the driller's log. A choke manifold will be installed (Refer to the enclosed schematic drawing). Working pressure for choke manifold is greater than 2000 psi. In addition, a kill line from the mud pump will be installed.
- D. Stabbing valves for drill pipe and drill collars will be available on the rig floor. A Kelly cock valve will be installed.
- E. Anticipated formation pressures average 0.29 psi/ft gradient and formation fracture initiation pressures are anticipated to exceed the maximum mud weight of 9.2 ppg.

3. **DRILLING MUD PROGRAM**

- A. A 12 1/4" surface hole will be drilled with fresh water system, lime and gel added to provide viscosity as needed.
- B. A 7" hole will be drilled to ~ 6525' utilizing a low solids non-dispersed mud system. Additives such as starch, cmc, and others will be used to control mud characteristics as necessary. No materials of a hazardous nature will be added to the drilling fluid in hazardous quantities.

Lost circulation materials will be stored on location.

Mud weighting materials will be stored on location.

<u>INTERVAL</u>	<u>MUD SYSTEM</u>	<u>WEIGHT #/GAL</u>	<u>VISCOSITY SEC/QT</u>	<u>WATER LOSS CC</u>
0 – 320'	Native	< 9.0	35-55	NA
320' – 6525'±	LSND	8.6-9.2	28-45	NA

Maximum anticipated mud weight is 9.2 lb/gal (0.48 psi/ft).

C. Mud trip monitoring will be done visually.

4. **HAZARDS**

- A. Abnormal Pressure is not expected to be a problem in this area.
- B. Lost circulation is not expected to be a problem in this area . Lost circulation materials will be stored on location and mud weights will be controlled.
- C. No H₂S is expected. However, should H₂S be found during drilling, detection and warning equipment will be installed.
- D. Unintentional hole deviation is not expected to be a problem. Single shot surveys giving hole inclination will be run a minimum of every 500 feet.

5. **LOGGING AND TESTING**

- A. An induction, neutron-density log will be run from total depth across zones of interest.
- B. Drill stem tests will not be run.
- C. No coring is anticipated.
- D. A mud logging unit may be used during drilling.

6. **CASING PROGRAM**

A. Casing:

	<u>Description</u>	<u>Top</u>	<u>Bottom</u>
1	8 5/8" 24 ppf J55	Surface	320 ft ±
2	4 1/2" 11.6 ppf J55	Surface±	6525 ft ±

Estimated formation pore pressure gradient is ~0.29 psi/ft.

B. For a proposed wellbore schematic see the following page.

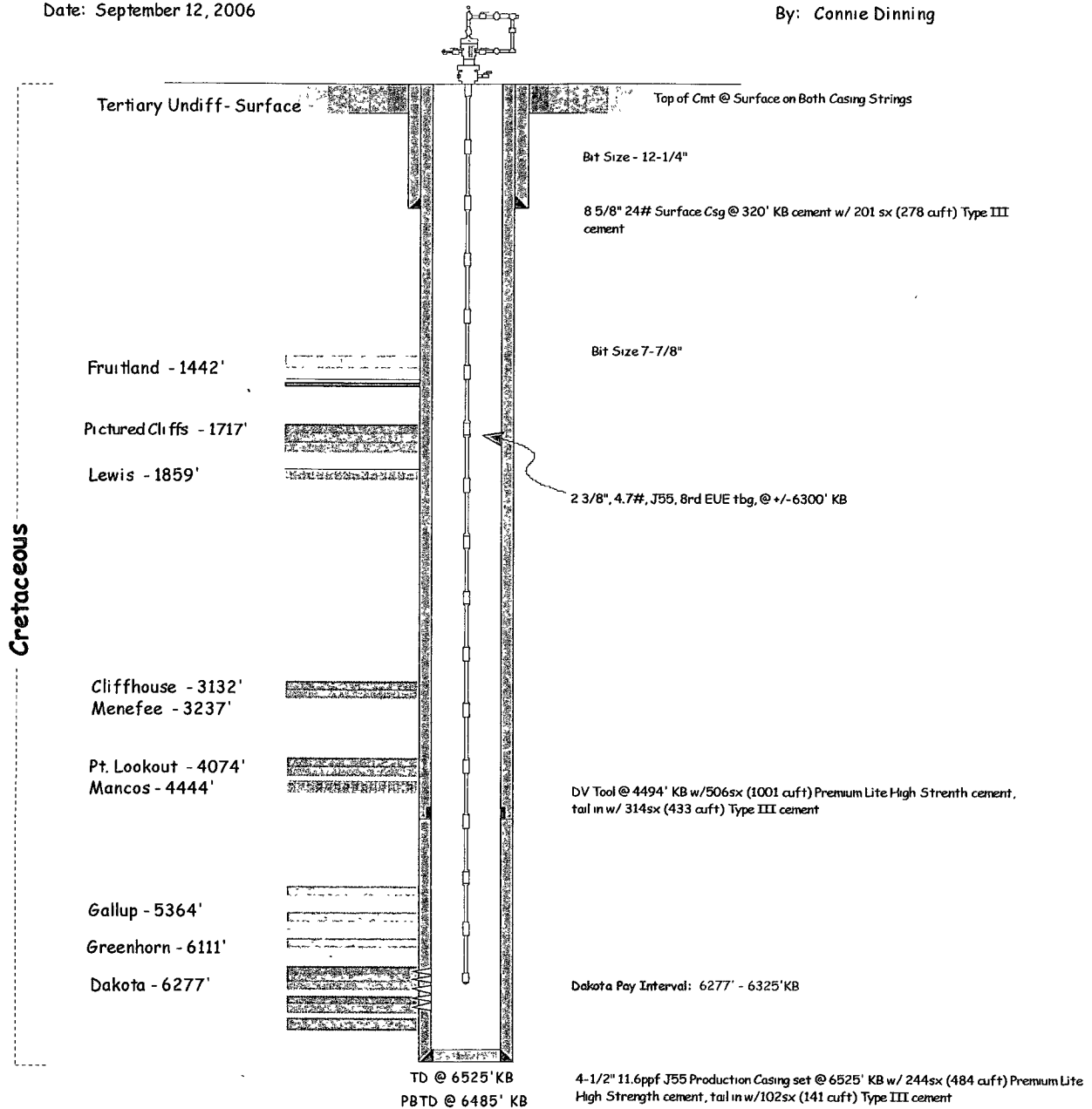
Merrion Oil & Gas Corporation
Wellbore Schematic
Piedra Vista No. 1Z
Proposed Wellbore Configuration

Location: 1974' fsl & 799' fwl (nw sw)
 Sec 25, T30N, R13W, NMPM
 San Juan Co, New Mexico

Elevation: 5688' GL
 6000' RKB

Date: September 12, 2006

By: Connie Dinning



Merrion Oil & Gas Corporation

Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

