

MERIDIAN OIL INC.

BLACK DIAMOND COM 8 #1
CASE #10844

OCTOBER 7, 1993

- EXHIBIT 1: APPLICATION
- EXHIBIT 2: OFFSET OPERATOR'S PLAT
- EXHIBIT 3: DIRECTIONAL WELL PLAN
- EXHIBIT 4: BLOCK DIAGRAM
- EXHIBIT 5: STUCTURE MAP
NET PAY ISOPACH
- EXHIBIT 6: WELL PLAN

EXHIBIT 1

KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW

EL PATIO BUILDING

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RECOGNIZED SPECIALIST IN THE AREA OF
NATURAL RESOURCES-OIL AND GAS LAW

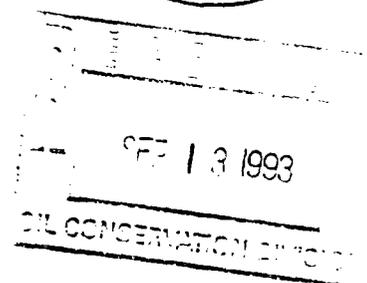
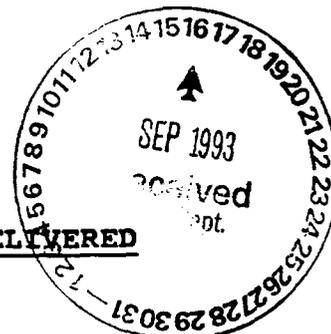
JASON KELLAHIN (RETIRED 1991)

September 13, 1992

Mr. William J. LeMay
Oil Conservation Division
State Land Office Building
310 Old Santa Fe Trail, 2nd Floor
Santa Fe, New Mexico 87501

Re: Black Diamond Com. 8 No. 1 Well
Application of Meridian Oil Inc.
for a High Angle/Horizontal Direction
Drilling Pilot Project, Special
Operating Rules Therefor, including
A Non-Standard Oil Proration Unit,
and An Unorthodox Oil Well Location,
and A Special Project Allowable,
San Juan County, New Mexico

HAND DELIVERED



Dear Mr. LeMay:

On behalf of Meridian Oil Inc., please find enclosed our Application for a High Angle/Horizontal Direction Drilling Pilot Project as referenced above, which we request be set for hearing on the next available Examiner's docket now scheduled for October 7, 1993.

By copy of this letter and application, sent certified mail, we are notifying all interested parties within a 1/2 mile radius of the subject well of their right to appear at the hearing and participate in this case, including the right to present evidence either in support of or in opposition to the application and failure to appear at the hearing may preclude them from any involvement in this case at a later date.

Mr. William J. LeMay
September 13, 1993
Page Two

Pursuant to the Division's Memorandum 2-90, all parties are hereby informed that if they appear in this case, then they are requested to file a Pre-Hearing Statement with the Division not later than 4:00 PM on Friday, August 27, 1993, with a copy delivered to the undersigned.

Very truly yours,



W. Thomas Kellahin

WTK/mg
Enclosure

cc: Mr. John Zent
Meridian Oil Inc.
Post Office Box 4289
Farmington, New Mexico 87499-4289

By Certified Mail - Return Receipt
All Parties Listed on Exhibit "C" of Application

PROPOSED ADVERTISEMENT

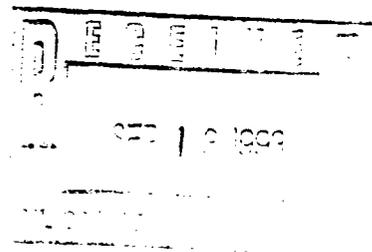
CASE _____ Application of Meridian Oil Inc. for a high angle/horizontal directional drilling pilot project and special operating rules therefor, San Juan County, New Mexico. Applicant seeks to initiate a horizontal drilling project in the Gallup formation, Horseshoe Gallup Oil Pool, underlying the W/2 of Section 8, T30N, R15W. Applicant proposes to drill its Black Diamond Com 18 No 1 Well by commencing at a standard well location in Unit D of Section 8, then kicking-off from vertical in a southeasterly direction commencing to build angle at an appropriate rate to vertically and horizontally traverse the proposed producing area. Applicant further seeks the adoption of special operating provisions and rules within the project area including the designation of a target window such that the horizontal or producing portion of the wellbore shall be no closer than 330 feet to any boundary of a non-standard spacing and proration unit consisting of the W/2 of said Section 8, and for a special project allowable. Said project is located approximately 5-1/2 miles north-northeast from Waterflow, New Mexico.

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE:

APPLICATION OF MERIDIAN OIL INC.
FOR A HIGH ANGLE/HORIZONTAL DIRECTION
DRILLING PILOT PROJECT, SPECIAL
OPERATING RULES THEREFOR, INCLUDING
A NON-STANDARD OIL PRORATION UNIT,
AN UNORTHODOX OIL WELL LOCATION,
AND A SPECIAL PROJECT ALLOWABLE,
SAN JUAN COUNTY, NEW MEXICO



A P P L I C A T I O N

Comes now Meridian Oil Inc., by and through its attorneys, Kellahin and Kellahin, and applies to the New Mexico Oil Conservation Division for approval for a High Angle/Horizontal Direction Drilling Pilot Project, special operating rules therefor, including a non-standard oil proration unit, and an unorthodox oil well location and a special project allowable for its Black Diamond Com 8 No 1 Well to be drilled at a standard surface well location 1065 feet FNL and 330 feet FWL (Unit D) of Section 8, T30N, R15W, within the Horseshoe

Application of Meridian Oil Inc.

Page 2

Gallup Oil Pool, San Juan County, New Mexico and in support thereof states:

(1) Applicant is the proposed operator for this well in Section 8, T30N, R15W, NMPM, San Juan County, New Mexico.

(2) Applicant proposes to drill a high angle/horizontal directional well commencing at a standard surface location in Unit D of Section 8 estimated to be 1065 feet FNL and 330 feet FWL of said Section 8 and drilled vertically to a total depth of approximately 3670 feet (+ or - 100 feet) at which point the applicant will kick the well off in a southeastern direction as approximated on Exhibit A, attached.

(3) Applicant will dedicate the W/2 of Section 8 to the well.

(4) The kickoff point for the well is estimated to be 3670 feet, at which point applicant will commence to build an angle of 17 ^{degrees} per 100 feet to approximately

80 degrees and penetrate the Horseshoe Gallup Oil Pool at an estimated total vertical depth of 4090 feet, and then to continue to build angle to 90 degrees and thence drilling horizontally in a lateral distance not closer than 330 feet to the outer boundaries of the 320-acre spacing and proration unit. See Exhibits "A," and "B."

(5) Applicant proposes that this project be subject to Special Rules and Regulations as follows:

(a) Pool Name: Horseshoe Gallup Oil Pool,

(b) Spacing/Proration Unit: 320 acres being a non-standard unit consisting of the W/2 of Section 8 described above, and

(c) Special Allowable based upon the number of 40-acre tracts contacted by the wellbore as determined from directional surveys.

(6) The Waterflow interval of the Gallup is believed to be the potential productive zone at this location in the Horseshoe Gallup Oil Pool. This interval produces through intergranular permeability.

(7) Past experience in said pool has shown that unless a conventionally drilled (vertical) well intersects natural fractures, the chance of obtaining commercial production is severely curtailed.

(8) By drilling a high angle/horizontal wellbore, the applicant is attempting to increase the probability of encountering several of these fractures, which may ultimately result in the recovery of a greater amount of gas and oil, thereby preventing waste.

(9) In as much as the exact distance and direction of the lateral portion of the wellbore is not known at this time, the Applicant seeks approval to be allowed to drill and produce said lateral portion anywhere within an area designated a target window as follows: commencing at a distance not closer than 330 feet from any of the side boundaries of the proposed spacing unit so that within the drilling window no portion of the wellbore open for production shall be closer than 330 feet to the outer boundary of the spacing unit.

(10) As required, notice is provided to those offsetting operators as listed on Exhibit "C."

(11) The granting of this Application will be in the best interest of conservation, the prevention of waste and the protection of correlative rights.

WHEREFORE, Applicant requests that this matter be set for hearing on October 7, 1993 before a duly appointed Examiner of the Oil Conservation Division and, after notice and hearing as required by law, the Division enter its Order granting this application.

Respectfully submitted,

KELLAHIN and KELLAHIN

By: 

W. Thomas Kellahin
Post Office Box 2265
Santa Fe, New Mexico 87504
(505) 982-4285
Attorneys for Applicant

BLACK DIAMOND COM #8-1 NW/NW 8-T30N-R15W

Exhibit A

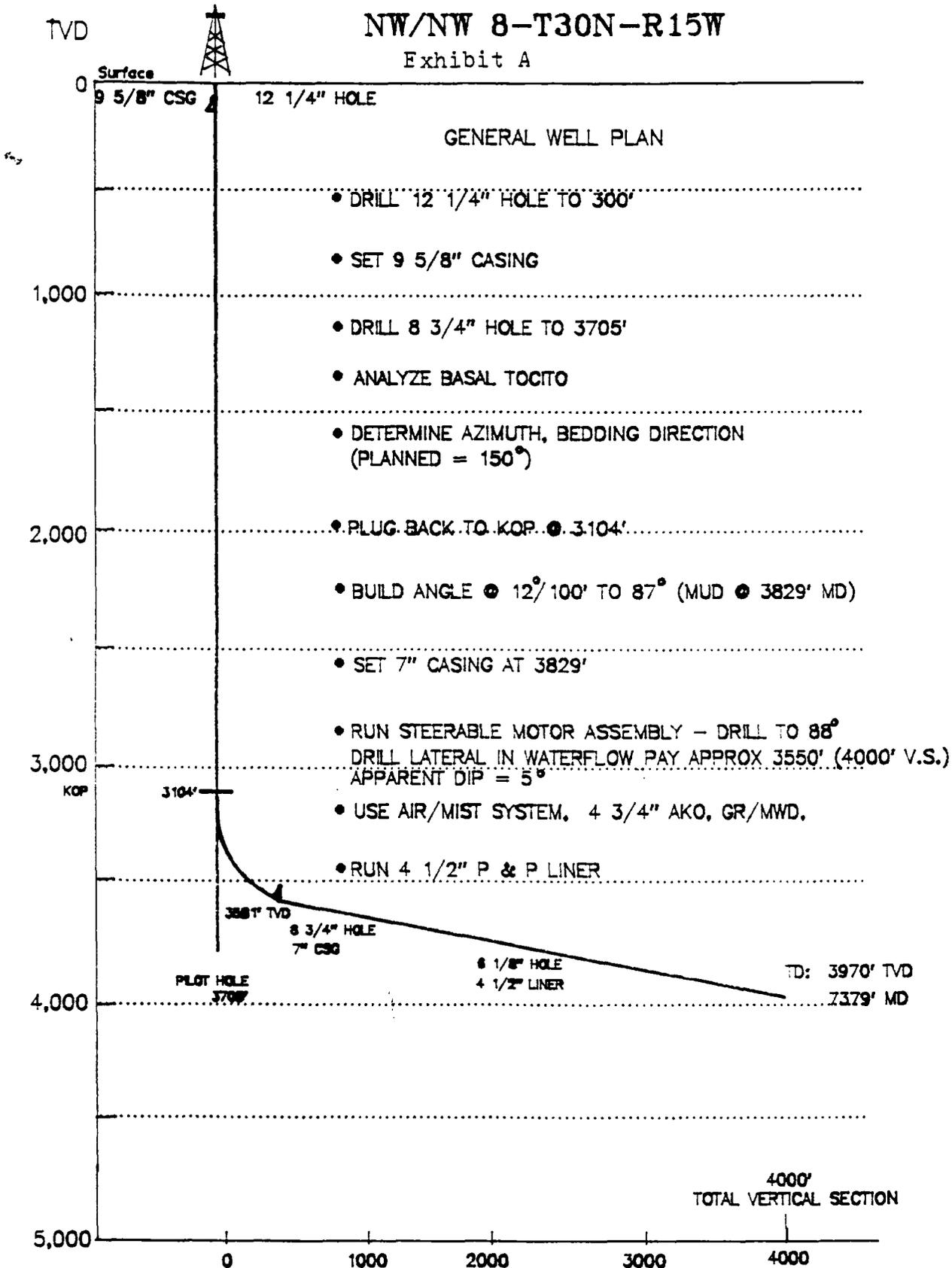
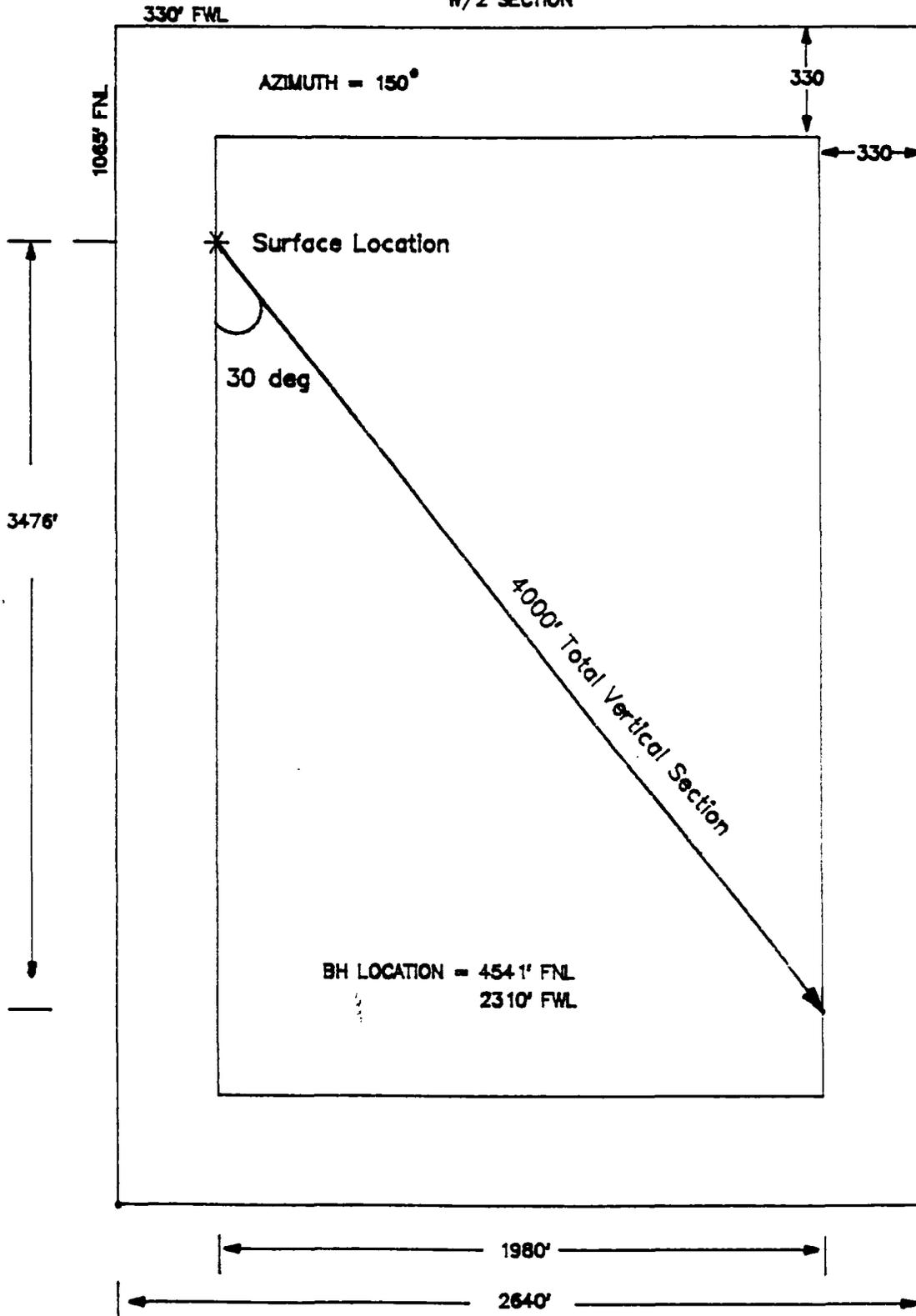


FIGURE #1

BLACK DIAMOND COM 8-1
SEC 8, T30N-R15W

Exhibit B

W/2 SECTION



W/2 TOWNSHIP 30 NORTH, RANGE 15 WEST

San Juan County, New Mexico

EXHIBIT C

Black Diamond Com 8 #1

5	7	7	7	5	5	5	5	3	3	3	3
5	7	7	7	5	5	5	5	3	3	3	3
5	5	6	7	5	5	5	4	2	3	4	3
7	7	7	7	5	5	4	5	2	3	3	3
2	2	2	3	3	3	3	6	6	3	3	3
2	2	7	2	3	3	3	6	6	3	3	3
2	3	2	3	3	2	2	2	3	1	9	3
2	3	2	3	2	2	2	2	3	1	3	
2	2	2	2	1			1				
2	2	2	2								
1	1	18	1			17				16	
1	1	1	1	1			1				

- 1.) Meridian Oil Inc., P.O. Box 4289, Farmington, NM 87499-4289
- 2.) Yates et al, P.O. Box 818, Artesia, NM 88211-0818
- 3.) EP Operating Company, 4849 Greenville, Ave., Suite 1200, Dallas, TX 75206
- 4.) Ray O. Graham, 1320 Morelia, Santa Fe, NM 87505
- 5.) Unleased Federal, BLM, P.O. Box 27115, Santa Fe, NM 87502-7115
- 6.) Richard M. Shiersoke, 505 Vaguero Road, Arcadia, CA 91006
- Amoco Production Company, P.O. Box 800, Denver, CO 80202
- Hattie M. McClure Trust, 2608 Arch Lane, Farmington, NM 87401
- Dorothy Clifton Maloy, 4609 West Desert Crest Drive, Glendale, AZ 85301
- Helen Hayes, P.R. of the Mary Hodgson, Deceased, 1817 South Butler, Ave., Farmington, NM 87401
- Deborah E. Foulk & Silla L. Von Foulk, 31 Concord St., South Portland, ME 04106
- George J. Head Trust, c/o Lyle K. Head, 2030 Airfield Av., Kingman, AZ 86401
- Mable Head, c/o Agnes Head Palmer 2600 Arch Lane, Farmington, NM 87401
- Barbara Couture, 311 10th Street, Alamosa, CO 81101
- Frederick J. Head & Opal Naomi Head, 3116 Lac Palomac, Clovis, NM 88101
- Betty Clifton, 1122 West Locust Drive, Blue Springs, MO 64015
- Mildred Clifton Foutz & Doug Foutz, 606 South Miller Av, Farmington, NM 87401
- Stella Dell Head, 1824 South Butler, Farmington, NM 87401
- Harry P. Head, Jr., 1208 Camina Conteta, Farmington, NM 87401
- Evelyn Ferguson, 8914 50th St. SE, Snohomish, WA 98290
- Jerry Ronald Head, 5400 Montgomery NE, #2128, Albuquerque, NM 87109
- Martha A. Head, 1824 South Butler, Farmington, NM 87401
- Patricia Kilpsch, 505 Concho dr, Farmington, NM 87401
- Donald Head, 1801 South Butler, Farmington, NM 87401
- Joan Winters, 603 Leighton, Farmington, NM 87401
- Shirley P. Roberts, P.O. Box 932, Farmington, NM 87499

EXHIBIT 2

W/2 TOWNSHIP 30 NORTH, RANGE 15 WEST
San Juan County, New Mexico

Black Diamond Com 8 #1

5	7	7	7	5	5	5	5	3	3	3	3		
5	7	7	7	5	5	5	5	3	3	3	3		
5	5	6	7	7	5	5	5	4	4	2	3	3	3
7	7	7	7	5	5	4	5	2	3	3	3		
2	2	2	3	3	3	3	6	6	3	3	3		
2	2	2	3	3	3	3	6	6	3	3	3		
2	3	2	3	2	2	2	2	3	1	3	3		
2	3	2	3	2	2	2	2	3	1	3			
2	2	2	2	1			1						
2	2	2	2										
1	1	18	1	2			17				16		
1	1	1	1	1			1						

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- Shirley P. roberts, P.O. Box 932 Farmington, NM 87400

EXHIBIT 3

BLACK DIAMOND COM 8-1
SEC 8, T30N-R15W

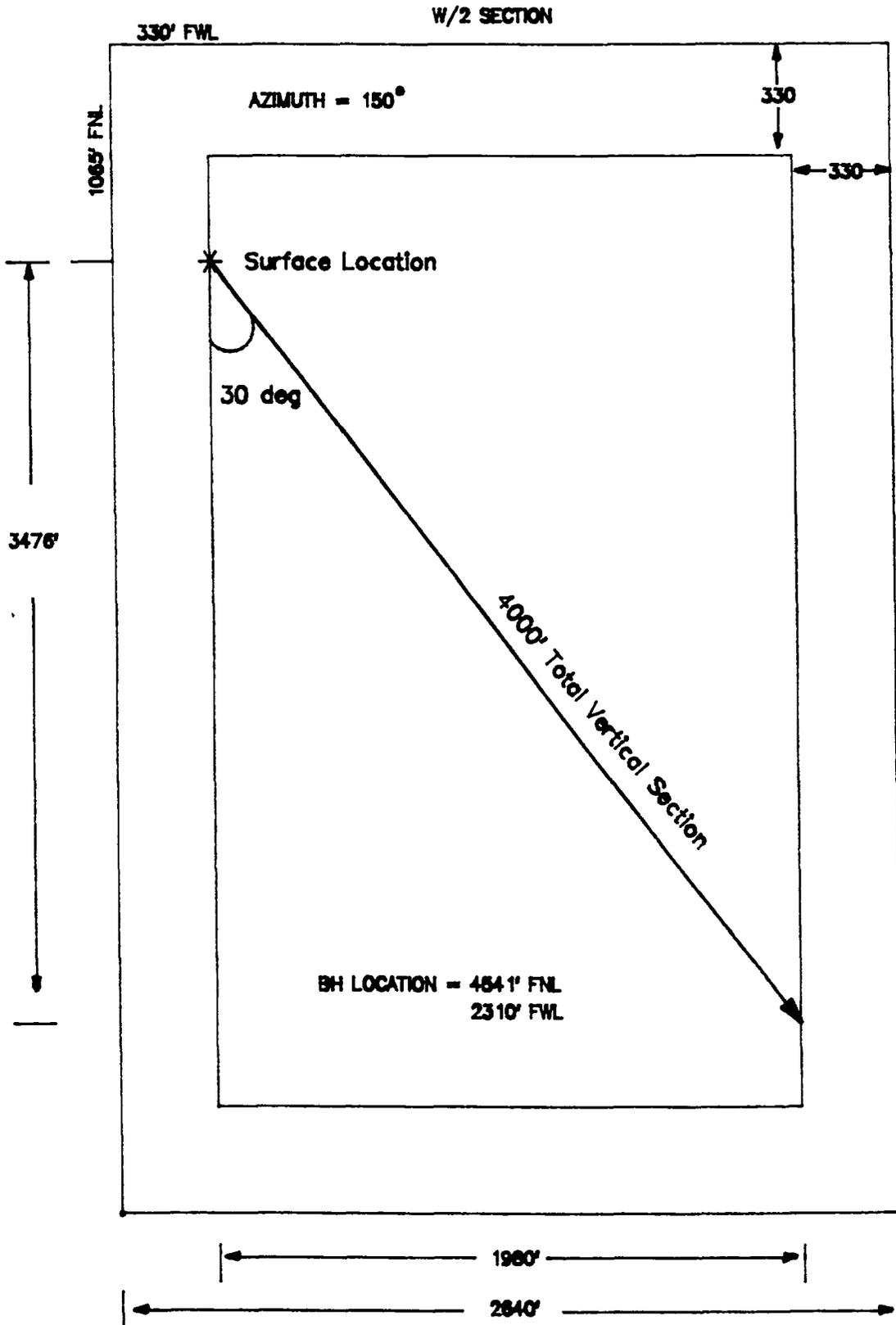
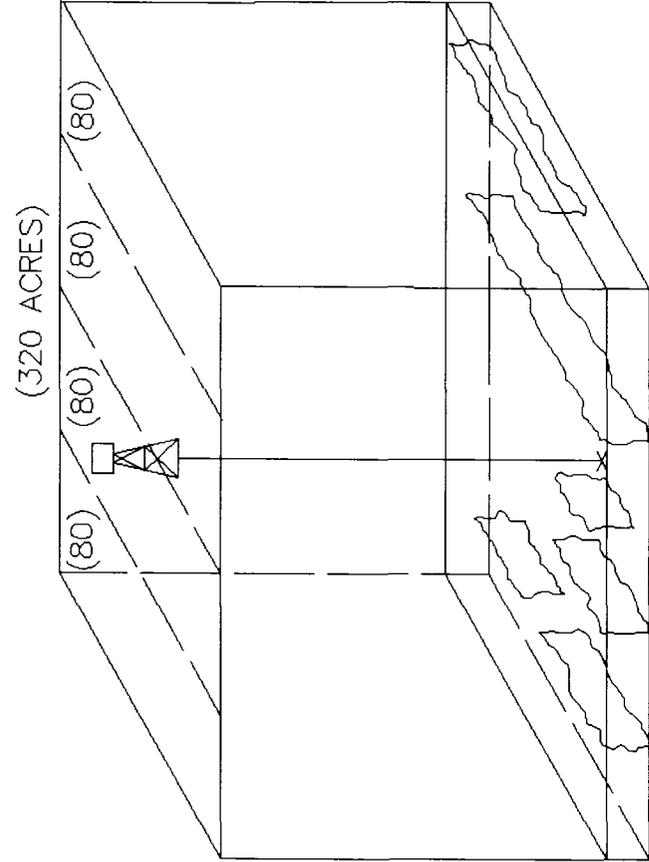


EXHIBIT 4

BLACK DIAMOND # 8-1

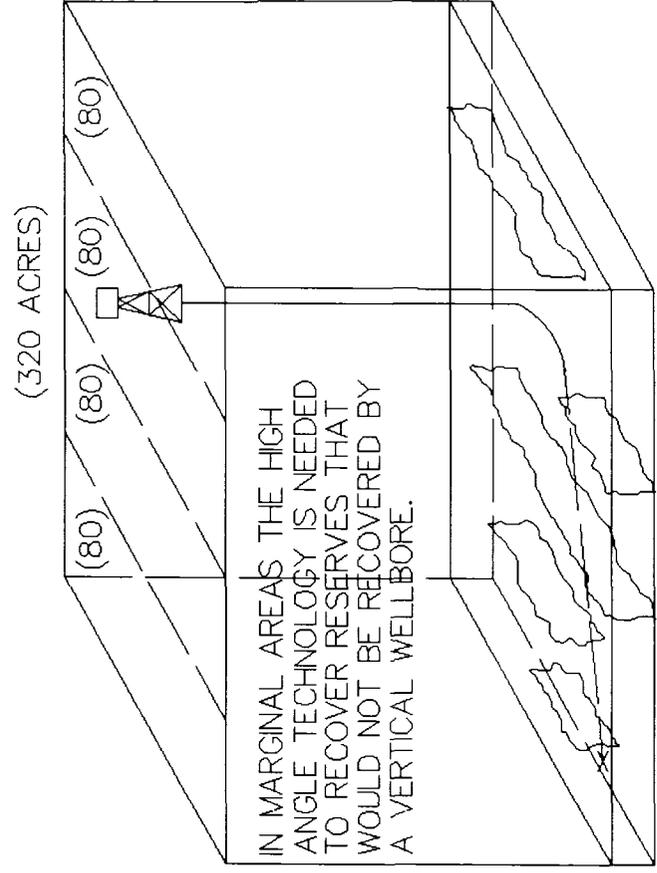
HORIZONTAL NIORARA
NW/NW SEC 8, T30N-R15W
SAN JUAN CO. NM

TYPICAL VERTICAL WELL



ESTIMATED COST - \$ 500,000 - 600,000

HI ANGLE WELL



ESTIMATED COST - \$ 850,000 - 1,400,000

TYPICAL VERTICAL WELL

Horseshoe Gallup Pool Allowables

Top Gas Allowable (40 acres):

Ag = 2000 SCF/STBO

Top Oil Allowable (40 acres):

Ao = 80 BOPD

HORIZONTAL WELL

Horseshoe Gallup Extension

1xAg = Standard Pool Allowable for Gas

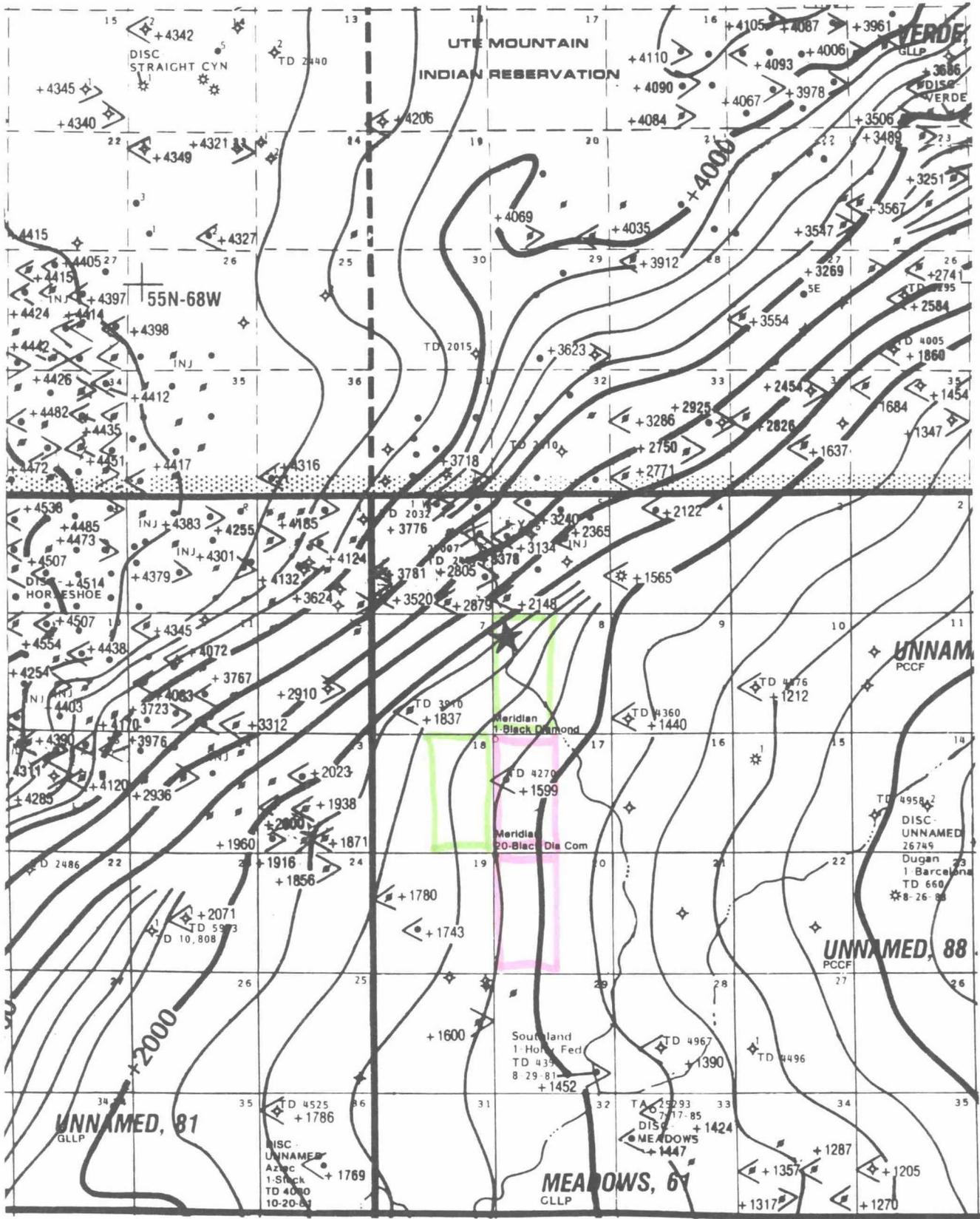
Ag = 2000 SCF/STBO

5xAo = Number of 40's Cut Times the
Pool Allowable for Oil

= 400 BOPD

EXHIBIT 5

BLACK DIAMOND COM #8-1



T 31 N

T 30 N

R 16 W

R 15 W

STRUCTURE: TOP OF GALLUP

EXHIBIT 6

BLACK DIAMOND COM #8-1 NW/NW 8-T30N-R15W

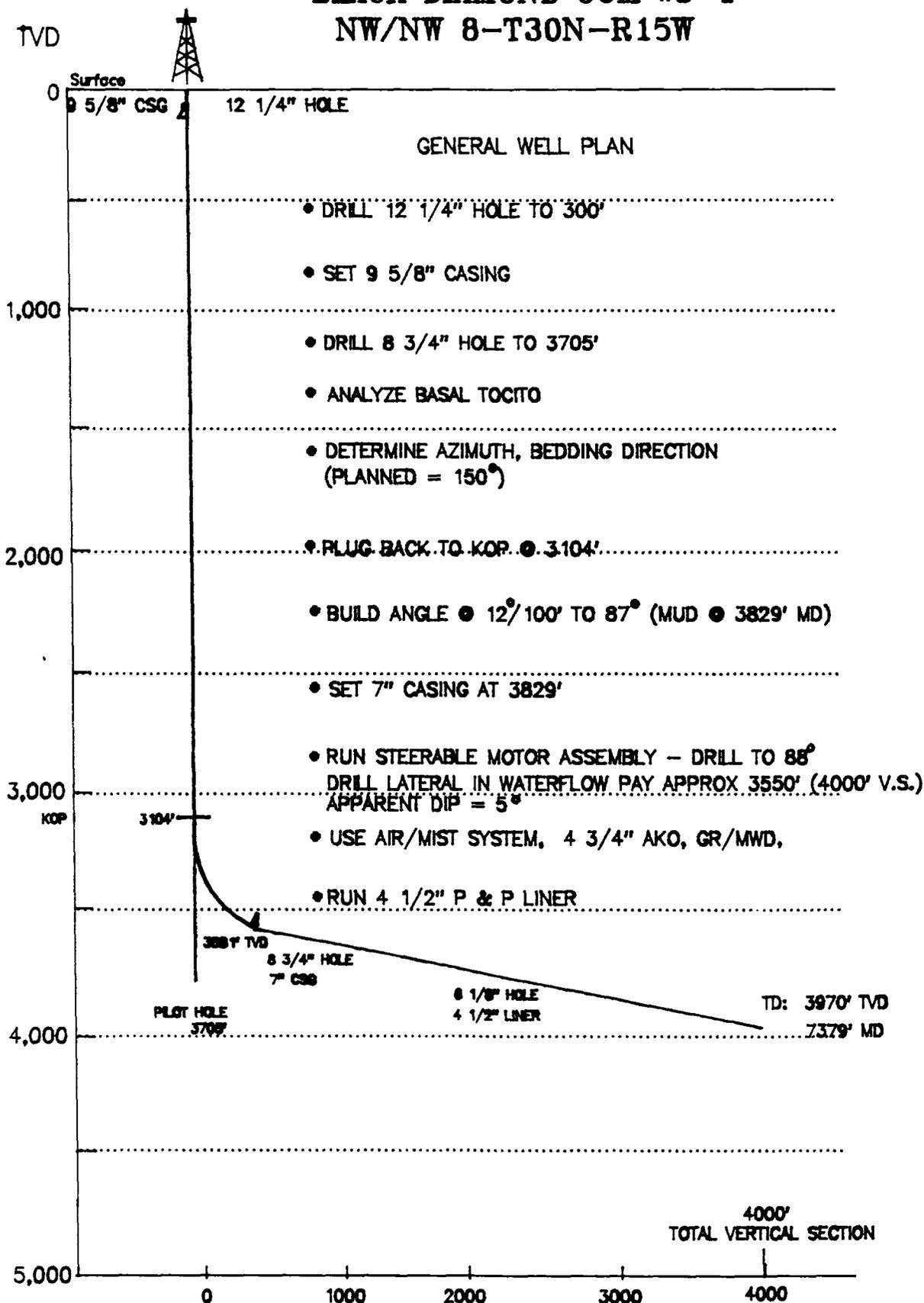


FIGURE #1

EXHIBIT 7

EXHIBIT 8
