

Am. Hunter EXHIBIT NO. 1

CASE NO. 10534

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☒ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval ☐ Yes ☐ No
- II. Operator: American Hunter Exploration
Address: 410 Seventeenth St., Suite 1200 Denver, CO 80202
Contact party: Jim Artindale Phone: (403) 260-1981
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- * VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Jim Artindale Title: Chief Exploitation Engineer
Signature: Jim Artindale Date: July 24, 1992

- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

AMERICAN HUNTER WEST PUERTO CHIQUITO
MANCOS GAS INJECTION SCHEME

APPLICATION FOR AUTHORIZATION TO INJECT
DATA SUPPORTING OCD FORM C-108

- I. Purpose: Pressure Maintenance
Application qualifies for administrative approval? No
- II. Operator: American Hunter Exploration
Address: 410 Seventeenth St., Suite 1200, Denver, CO, 80202
Contact Party: Jim Artindale Phone: (403) 260-1981
- III. Well Data (see also Injection Well Data Sheet)

Lease Name: Jicarilla 2A (Serial No. 701-90-0001)
Well Number: #1 (API No. 30-039-25118)
Location: Sec. 2, T27N R1W
Footage Location: refer to Injection Well Data Sheet

Surface Casing Size: 10 3/4" K-55
Surface Casing Weight: 40.5 lb/ft
Surface Casing Depth: 250'
Surface Casing Hole Size: 13 3/4"
Surface Casing Top of Cement: Surface
Top Determined By: Full Returns

Production Casing Size: 7 5/8" L-80
Production Casing Weight: 26.4 & 29.7 lb/ft
Production Casing Depth: 4569' MD
Production Casing Hole Size: 9 7/8"
Production Casing Top of Cement: 330'
Top Determined By: Temperature Log

Liner Size: 5 1/2"
Top of Liner: 4218' MD
Bottom of Liner: 6625' MD

Liner Top of Cement: Was Not Cemented

Tubing Size: 2 7/8"

Tubing Depth Set: 5739' MD

Tubing Lining Material: L-80 tubing-no added lining

Packer Set Depth: Tubing anchor set at 3975'MD

Name of Injection Formation: Niobrara Member of the Mancos

Pool: West Puerto Chiquito

Injection Interval: 5324'MD (4542'TVD) to 6632'MD (4854'TVD)
372'FNL 2032'FEL to 620'FNL 3277'FEL

Preperforated liner, uncemented

Proposed injection well was drilled as a test of the fractured Niobrara interval. The well is currently an uneconomic well.

There are no other perforated intervals for other formations in the wellbore of the proposed injection well.

There are no other Stratigraphically deeper or shallower oil and gas producing formations in the area. The 'C' zone of the Niobrara is a minor contributor to the production of the Boulder Field to the North.

IV. Is this an expansion of an existing project? NO

V. A map which identifies all wells and leases within two miles of the proposed injection well and "area of review" is attached.

VI. The only well within the area of review is the proposed injection well. A well summary sheet and an injection well data sheet are attached for this well.

VII Proposed Operations

Fluid to be injected: Solution Gas from the Mancos

Average Daily Rate: 600 to 800 mcf/d

Maximum Daily Rate: 1500 mcf/d

The system is a closed system.

Average injection Pressure: 600 to 800 psia
Maximum injection pressure: 1200 psia

The injection fluid will be solution gas from a offsetting well producing from the same formation.

VIII Geologic Data

Lithology: Fractured, calcareous very fine grained sandstone interbedded with calcareous shales.

Geologic Name: Niobrara Member of the Mancos Formation

Gross Reservoir Thickness: Approximately 110' vertically

Depth of Reservoir: MPP 5470'MD or 4570'TVD

To the best of the operators knowledge, there are no known wells which supply drinking water within the area of review. Additionally, the operator is unaware of any shallower or deeper water aquifers present within the regional area. The operator believes that the overlying Upper Mancos shale serves as a seal for both the oil present in the reservoir and any gas injected into the reservoir.

IX. No stimulation program is planned at this time.

X. Logging Information: Previously submitted
Test Data: Copies of pressure tests are attached.

American Hunter Exploration: Jicarilla 2A
 OPERATOR LAST

Surface: 442' FNL 1177' FEL
 #1 Top Injection Zone: 372' FNL 2,032' FEL
 SECTION T27N R1W
 TOWNSHIP RANGE
 WELL NO. 1007001 LOCATION

Schematic

Tabular Data

Surface Casing

Size 10 3/4" Cemented with 350 sx.
 10C At Surface Feet determined by Full Returns
 Hole size 14 3/4"

Intermediate Casing

Size 7 5/8" Cemented with 1242 sx.
 10C 330 MD Feet determined by Temp. Log
 Hole size 9 7/8"

Long string Liner

Size 5 1/2" Cemented with Not Cemented x.
 10C 4218' MD Feet determined by Survey/Pipe Tally
 Hole size 6 3/4"
 Total depth 6632' MD

Injection interval

5324 MD feet to 6632 MD feet
 (perforated or open-hole, indicate which)

WELL SUMMARY
AMERICAN HUNTER EXPLORATION LTD.
JICARILLA 2-A #1
ne ne section 2 T27N R1W

Surface Location:

- 442' FNL 1177' FEL

Bottomhole Location:

- 620' FNL 3277' FEL

Spud Date:

- 09/29/91

Surface Casing:

- Drilled 14 $\frac{3}{4}$ " hole to 250'.
- Set 10 $\frac{3}{4}$ " surface casing on 09/30/91.

Intermediate Drilling History:

- Drilled 9 $\frac{7}{8}$ " hole to 3796' MD (KOP) (3784'TVD) and ran Dual Induction, L.S. Sonic - G.R. logs.
- Drilled ahead with 9 $\frac{7}{8}$ " hole to 4569' MD (4415'TVD) and ran 7 $\frac{5}{8}$ " intermediate casing on 10/14/91.

Final Drilling History:

- Drilled 6 $\frac{3}{4}$ " hole to 5324' MD (4542'TVD) (372'FNL, 2,032'FEL), began to lose oil, experienced bit torque and temporarily lost sample returns.
- Continued drilling to 6632' MD (4854'TVD) through several more zones of bit torques and losses of oil to the formation.
- TD'd well on 10/28/91 at 6632' MD (620'FNL, 3,277'FEL).

Completion History:

- Ran pre-perforated 5 1/2" liner to TD 6632' MD (4854'TVD) on 10/28/91.
- Placed alternating pre-perf'd/blank liner with perfs beginning at 4559' MD to TD 6625' MD (Gross Interval).
- Moved in completion rig on 11/07/91.
- Begin swabbing on 11/09/91. SITP 0 psi. SICP 15 psi.
- Ran Amerada pressure recorders with 360 hour clocks and shut in for build-up tests on 11/20/91.
- Rigged up pumping unit from 11/24/91 to 11/26/91.
- Began pumping well on 12/12/91.
- Continue pumping well. First new oil pumped on 02/02/92, corresponding to date of completion.
- Pumped until 02/10/92, when weather forced shut-in.
- Pumped for three day test 05/20/92 to 05/23/92. Shut-in well again due to road conditions.
- Began OCD-authorized commerciality and reservoir test at 0600 hrs. on 06/27/92. Began by running bottomhole pressure buildup.
- Pump well to 07/17/92.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1. TYPE OF WELL OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER ☐		2. NAME OF OPERATOR American Hunter Exploration Ltd.		3. ADDRESS OF OPERATOR 410 17th Street, Suite 1220, Denver, CO 80202		4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At surface 442'FNL, 1177'FEL At top prod. interval reported below 372'FNL, 2,032'FEL At total depth (BHL) 620'FNL, 3277'FEL		5. PERMIT NO. DATE ISSUED		6. COUNTY OR PARISH Rio Arriba		7. STATE New Mexico			
13. DATE SPUDDING 09/29/91		14. DATE T.D. REACHED 10/28/91		15. DATE COMPL. (Ready to prod.) 02/02/92 (new oil)		16. ELEVATIONS (OF, AMS, AT, OR, ETC.) 7236'KB 7217'G.L.		17. ELEV. CASINGHEAD		18. IF INDIAN, ALLOTTEE OR TRIBE NAME Jicarilla Apache		19. UNIT AGREEMENT NAME N/A			
20. TOTAL DEPTH, MD & TVD 6632'MD 4854'TVD		21. PLUG BACK T.D., MD & TVD 6632'MD 4854'TVD		22. IF MULTIPLE COMPL., HOW MANY		23. INTERVALS DRILLED BY		24. ROTARY TOOLS X		25. CABLE TOOLS		26. WAS DIRECTIONAL SURVEY MADE Yes			
27. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD) Mancos Nichitara "A" 5324'MD (4542'TVD) to 6632'MD (4854'TVD)										28. TYPE ELECTRIC AND OTHER LOGS RUN Dual Induction, LS Sonic-G.R. from KOP 3796' to surface				29. WAS WELL CORED No	
30. CASING RECORD (Report all strings set in well)															
CASING SIZE		WEIGHT, LB/FT.		DEPTH SET (MD)		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED					
10 3/4" K-55		40.5		250'		13 3/4"		Surface 350 Sacks							
7 5/8" L-80		26.4 & 29.7		4569'		9 7/8"		330', Temp. Log 1242 Sacks							
31. LINER RECORD															
SIZE		TOP (MD)		BOTTOM (MD)		JACKS CEMENT		SCREEN (MD)		SIZE		DEPTH SET (MD)			
5 1/2"		4218'		6625'		Not Cemented				2 7/8"		5739'			
32. TUBING RECORD															
SIZE		TOP (MD)		BOTTOM (MD)		JACKS CEMENT		SCREEN (MD)		SIZE		DEPTH SET (MD)			
5 1/2"		4218'		6625'		Not Cemented				2 7/8"		5739'			
33. PRODUCTION															
DATE FIRST PRODUCTION 02/02/92		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Pumping						WELL STATUS (Producing or Shut-in) Producing							
DATE OF TEST 02/03/92		HOURS TESTED 24		CHOKER SIZE N/A		PROD'N. FOR TEST PERIOD 45		OIL—BBL 140		GAS—MCF 20		WATER—BBL 3111			
FLOW, TUBING PRESSURE N/A		CASING PRESSURE 30 psi		CALCULATED 24-HOUR RATE 45		OIL—BBL 140		GAS—MCF 20		WATER—BBL 36		OIL GRAVITY-API (CORR.)			
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Used for fuel and vented.										35. TEST WITNESSED BY Mr. Doyle Post					
36. LIST OF ATTACHMENTS															

I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Paul C. [Signature] TITLE Senior Geologist DATE 06/22/92

*(See Instructions and Spaces for Additional Data 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.

WELL IDENTIFICATION NO. 27210

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cased intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Mancos Niobrara A	5324' MD	5641' MD	Fractured silts, very fine grained sandstones and shales. No Cores or DST's

38. GEOLOGIC MARKERS	NAME	MEAS. DEPTH	TOP	TRUE VERT. DEPTH
	Point Lookout	2932'		2932'
	Mancos	3155'		3155'
	Niobrara A	4348'		4286'
	Niobrara B	4520'		4399'
	Niobrara B	4920'		4480'
	Niobrara A Sand	5668'		4609'

27210

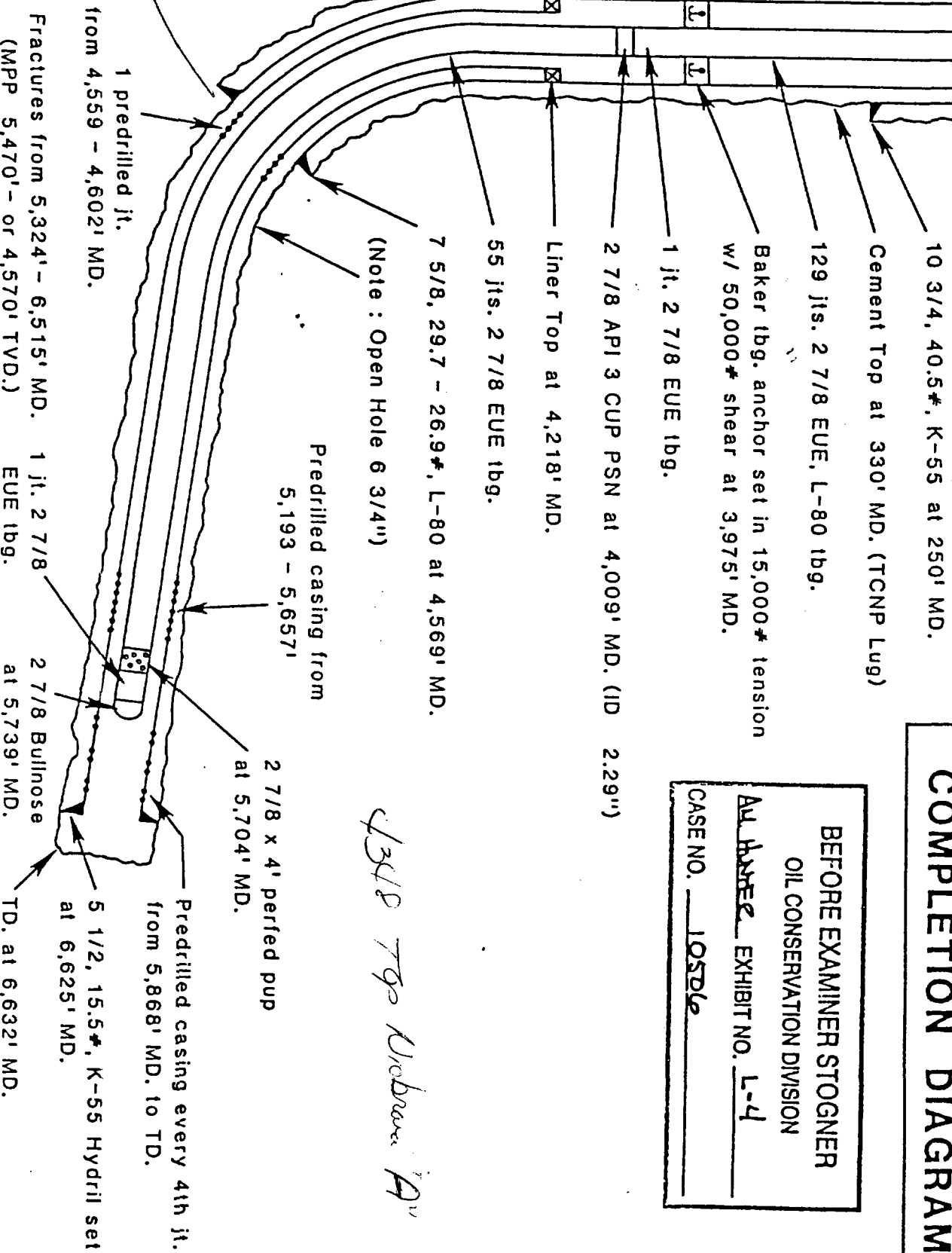
#13

AHEL JICARILLA 2A - 1 COMPLETION DIAGRAM

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

ALL HOLE EXHIBIT NO. L-4

CASE NO. 10526



4348 Top Anderson A"

Submittal & Copies
Appropriate District Office
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

State of New Mexico
Energy, Minerals and Natural Resources Dept.

Form 1-1981
Revised 11-82
See Instructions
at Bottom of Page

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT III
1000 Rio Arriba Rd., Aztec, NM 87410

**REQUEST FOR ALLOWABLE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS**

#13

Operator American Hunter Exploration, Ltd.		Well API No. 30-039-25118
Address 410 17th Street, Suite 1220, Denver, CO 80202		
Reason(s) for Filing (Check proper box) ☐ Other (Please explain)		
New Well ☒	Change in Transporter of:	
Recompletion ☐	Oil ☐	Dry Gas ☐
Change in Operator ☐	Casinghead Gas ☐	Condensate ☐

If change of operator give name and address of previous operator _____

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II. DESCRIPTION OF WELL AND LEASE

Lease Name Jicarilla 2A	Well No. //1	Pool Name, including Formation West Puerto Chiquito Mancos	Kind of Lease State, Federal or XXX	Lease No. 701-90-0001
Location Surface Location: 412' FNL, 1177' FEL				
Bottom Hole Location: Unit Center A : 620 Feet From The North Line and 3277 Feet From The East Line				
Section 2 Township 27N Range 1W , NMPM Rio Arriba County				

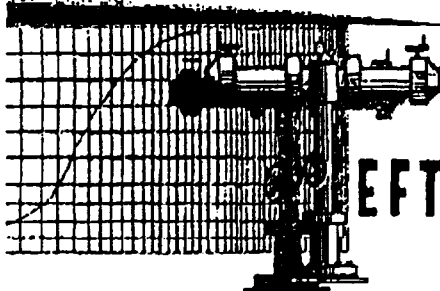
III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil ☒ or Condensate ☐ Gary-Williams Energy Corp.	Address (Give address to which approved copy of this form is to be sent) P.O. Box 159; Bloomfield, NM 87413					
Name of Authorized Transporter of Casinghead Gas ☐ or Dry Gas ☐	Address (Give address to which approved copy of this form is to be sent)					
If well produces oil or liquids, give location of tanks.	Unit A	Sec. 2	Twp. 27N	Rge. 1W	Is gas actually connected? No	When?

If this production is commingled with that from any other lease or pool, give commingling order number: _____

IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well X	Gas Well	New Well X	Workover	Deepen	Plug Back	Same Res'v	Diff Res'v
Date Spudded 9/29/91	Date Compl. Ready to Prod. 2/02/92		Total Depth 6632' MD (4854' TVD)		P.B.T.D. 6632' MD (4854' TVD)			
Elevations (DF, RKB, RT, GR, etc.) 7236' RB 7217' G.L.	Name of Producing Formation Mancos		Top Oil/Gas Pay 5324' MD (4542' TVD)		Tubing Depth 5739' MD (4627' TVD)			
Perforations Open hole completion with pre-perforated liner. Liner perforated from 4559' MD to 6625' MD (TD).					Depth Casing Shoe 6625' MD (4852' TVD)			
TUBING, CASING AND CEMENTING RECORD								
HOLE SIZE 13 3/4"	CASING & TUBING SIZE 10 3/4"		DEPTH SET 250' MD		SACKS CEMENT 350 sacks			
			4569' MD		1242 Sacks			

**TEFTELLER, INC.**

reservoir engineering data

FARMINGTON, NEW MEXICO / MIDLAND, TEXAS
GRAND JUNCTION, COLORADOP. O. Box 1198
Farmington, New Mexico 87499
(505) 325-1731Farmington Fax (505) 325-1148
Midland Fax (915) 682-5329
Grand Junction Fax (303) 241-7634

June 30, 1992

American Hunter Exploration, Ltd.
410 17th, Suite 1220
Denver, CO 80202

Attention: Mr. Jim Lister

Subject: Pressure Observation
Jicarilla 2A No. 1
Rio Arriba County, New Mexico
Our File No. 2-23839-O

Dear Mr. Lister:

Attached hereto are the results of a bottomhole pressure observation which was conducted on the above captioned well June 27 through June 28, 1992.

The data presented are in tabular and graphical form.

It has been our pleasure to have conducted this service for you. If we may be of further assistance, please do not hesitate to contact us.

Sincerely,

TEFTELLER, INC.

Neil Tefteller

NT/lw

1cc: Mr. Norm Schonhoffer
American Hunter Exploration, Ltd.
435 4th Ave. SW
Calgary, Alberta T2P 3A8*Serving the Rocky Mountain Area & Permian Basin Area*

TEFTELLER, INC.

RESERVOIR ENGINEERING DATA AND PRODUCTIVITY ENHANCEMENT SERVICES
MIDLAND, TEXAS • FARMINGTON, NEW MEXICO • GRAND JUNCTION, COLORADO

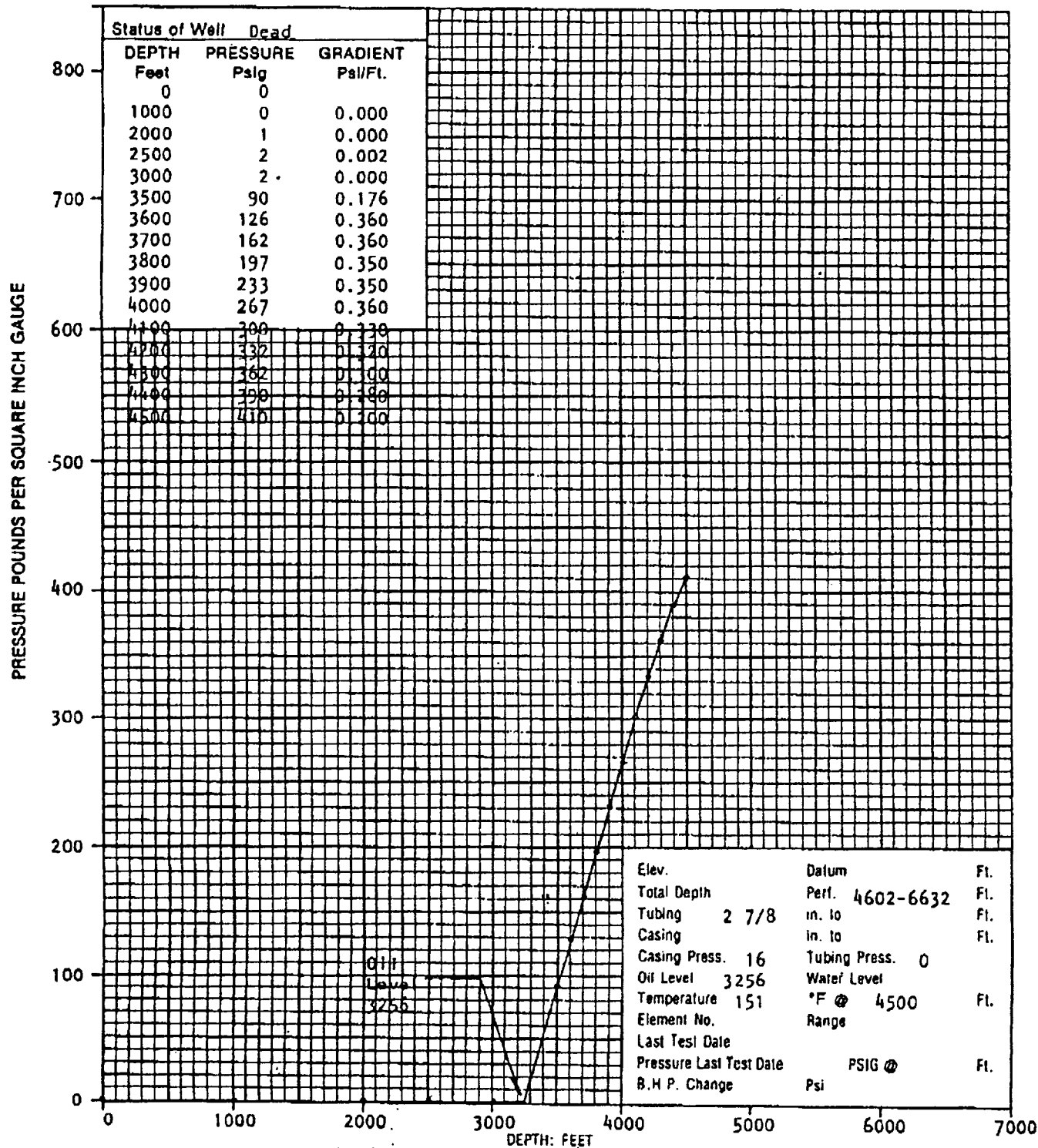
CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1992 DATE	STATUS OF WELL	TIME	ELAPSED TIME		WELLHEAD PRESSURE		BHP @ 4500' PSIG
			HRS	MIN	TBG	CSG	
6-27	Arrived on location, casing and tubing open	13:30					
	Rigged up tandem instruments						
	Master valve leaking (replaced)	13:45					
	Shut well in	14:00					
	Instrument in lubricator	14:00					
	Gradient traverse to 4500' making 20 minute stops				0	16	
	Instrument @ 4500'	19:00					410.0
		19:30	0	30			410.0
		20:00	1	00			410.5
		20:30	1	30			411.0
		21:00	2	00			411.0
		22:00	3	00			411.5
		23:00	4	00			412.0
	6-28	00:00	5	00			412.4
		01:00	6	00			412.4
		02:00	7	00			413.0
		03:00	8	00			413.0
		04:00	9	00			413.5
		05:00	10	00			414.0
		06:00	11	00			415.0
		07:00	12	00			415.5
		08:00	13	00	TSTM	175	415.5
		Instrument off bottom					



Page 2 of 2
File 2-23839-0

Company AMERICAN HUNTER EXPLORATION LTD Lease JICARILLA 2-A Well No. 1
Field _____ County RIO ARriba State NEW MEXICO
Formation MANCUS Test Date JUNE 27, 1992



2A-1
JUNE 28, 1992

MD	TVD	PRESS (psig)	CORRECTED TVD GRAD psi/ft
1000'	1000'	0	0
2000	1998	1	.001
2500	2497	2	.002
3000	2993	2	.0
3500	3490	90	.177
3600	3590	126	.360
3700	3689	162	.364
3800	3788	197	.353
3900	3888	233	.360
4000	3987	267	.343
4100	4083	300	.343
4200	4173	332	.356
4300	4257	362	.357
4400	4332	390	.373
4500	4389	410	.350

Press. @ 4600' TVD = (4600-4389) .36 + 415.5 = 491.5 PSIG

G-1

DWIGHT'S HOTLINE - Drilling History

27-28N-1W

#1

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Original Dr-111

SW NE

Issued: 01/01/78

State: NEW MEXICO

Permit: H-8-960552-0

County: RIO ARriba

Operator: TAYLOR LLOYD B

Field: BOULDER MAN

DC# 12/08/62

DD

DRY

Well: FOUNT & BURSUM #1

Permit: 10/03/62

Least Infor: 05/22/63

Fig: 1650 Tol 1980 Tol

Obj: 5500 test

API 30-039

Prod Well:

Lease:

Elev: 7307 DF

Spud: 10/02/62

Cont:

PG: 5791

TD: 6110

AA State Records AA

Elev: 7307 DF

PZone: 5679-5718

Log Tops

Calc

5742-5747

5752-5762

Depth

5784-5788

5676

1631

Perfo: 5679-5788 W/2 SPF - frac W/2HOD bbls 0

Cone: None

Loge: CR-I - DL

Casing: 9 5/8 @ 135 - 7 @ 4856 W/150 - 4 1/2 in Lnr 4706-5791

Tubing: 2 3/8 @ 5780

Journal: PCA - 10/20/64

aa Shell Oil Date aa

Casing: 9 5/8 ctd @ 120 W/150, 7 ctd @ 4856 W/150, 4 liner @ 4706-5791 packer @ 5679

Journal: 10/03/62 Loc. 10/10/62 3155 Dr-18, 10/17/62 4750 Dr-18, 10/22/62 6117

Preparing to run liner, 10/20/62 6117 Preparing to run liner. Hole

Bridging, 11/06/62 6117 Cleaning out, 4 in liner 4706-5791 ft.

Packer 5679 ft on liner. Check jet perfs, 5679-5718 ft. 5742-47 ft.

5752-62 ft. 5764-88 ft. Oil fractured 5679-5788 ft with 91,000

gallons oil. Breakdown pressure 0 lb. Injection rate 47 barrels per

min. Flowing through casing, 11/20/62 6117 Putting on pump.

11/27/62 6117 Putting on pump, 12/05/62 6117 Ripping pump, 12/19/62

6117 Testing on pump. Recovered all load oil. 05/06/63 6117 Shut in.

05/01/63 6117 Preparing to sub - 3000 ft oil in hole. 05/09/63

6117 Snubbing. Fluid level 1800 ft in hole. Snubbed 50 barrels load

oil in 12 hrs. 05/14/63 6117 Shut in. Re-oil fractured 5679-5788 ft

with 16,800 gallons oil. Breakdown pressure 400-0 lb. 06/03/63 6117

Pumping 5 barrels oil/day. 07/16/63 6117 Shut in. Pulled rock and

Printed 12/30/89 TBN 15965 NM -- continued -- Page 1

G-2

DWIGHT'S HOTLINE - Drilling History

27-28N-1W

#1

Copyright 1989

Original Dr-111

SW NE

State: NEW MEXICO

Permit: H-8-960552-0

County: RIO ARriba

Operator: TAYLOR LLOYD B

Field: BOULDER MAN

DC# 12/08/62

DD

DRY

Well: FOUNT & BURSUM #1

Permit: 10/03/62

Least Infor: 05/22/63

Fig: 1650 Tol 1980 Tol

Obj: 5500 test

API 30-039

Prod Well:

Lease:

Elev: 7307 DF

Spud: 10/02/62

Cont:

PG: 5791

TD: 6110

tubing. 10/03/63 6117 Preparing to abandon.

Printed 12/30/89 TBN 15965 NM Page 2

F-23

26-28N-1W

#9

DWIGHT'S HOTLINE - Drilling History

Copyright 1989 Original Drill ne ne

State : NEW MEXICO NM Perid HW R-594886-0 Issued: 01/01/78

County: RIO ARriba Oper: STANARD OIL PROD CO

Field : BOULDER MAN Compl: 11/28/62 DO OIL

Well: JTCADILLA 4-26 46 Last Info: 06/25/88

Fig: 490 Fnl 1980 Fnl Permit: 09/27/62 API 30-039

Obj: 41730 Gallup Lease: Elev: 7262 DF

Prod well: Lease: Elev: 7262 DF

Spud: 10/31/62 Contr: PG: 4645

ID: 4656

Op Ad : P.O. Box 460609, Houston TX 77056-8609

AA State Records AA

IP : 25 80PD grew 32, 20 BUPD Elev: 7262 DF

Perfo : 4400-4601 w/1 SPF - frac w/1475 Log Tops Calc

Ceasing: 9 5/8 @ 129 w/90 - 7 @ 4217 Point Lookout Depth Datum

Journal: Dev OK, Channon Oil Co. /JIC Tr-lbal 240 46, /JIC 4-26 46

IP : P 26 bole oil - 20 bole wtr 24 Log Tops Calc

PZone : 4217-4645 (Gallup) Hencos Depth Datum

Ceasing: 5/8 catd @ 126 w/90, 7 catd @ 4217 w/150, 5 liner @ 4143-4645, set.

Journal: 09/26/62 Loc. 10/30/62 2680 Dr-lg. Spud 10-3-62, 4200 Running Logs.

10/22/62 4650 Prepare to fracture. Stopped drilling at 4365 ft. Mist

drilled to rd. - back jet perforated 2 shots/foot at 4365 ft. Mist

11/06/62 4650 15. Plug 4645 ft. Testing on pump. Oil fractured 4217-

4645 (open hole) with 60,340 gallons oil. Breakdown pressure 0.

Injection rate 45 barrels/min. COMPLETE 11-26-62. I.P. pumped 26

barrels oil - 20 barrels wtr/day based on 24 hr test, gravity 32.5

ndgrees. Producing through open hole at Gallup formation. Interval

4217-4645 ft.

G-23

F-24

27-28N-1W

#2

DWIGHT'S HOTLINE - Drilling History

Copyright 1989 Original Drill ne ne

State : NEW MEXICO NM Perid HW R-960551-0 Issued: 01/01/78

County: RIO ARriba Oper: FOUTZ & BURSAH CONSTRUCT

Field : BOULDER MAN Compl: 07/24/61 DO OIL

Well: BARESS-ATGWH #1 Last Info: 12/28/88

Fig: 330 Fnl 330 Fnl Permit: 06/30/61 API 30-039-01251

Obj: 5000 Gallup Lease: Elev: 7190 DF

Prod well: Lease: Elev: 7190 DF

Spud: 06/30/61 Contr: PG: 5264

ID: 5264

AA State Records AA

IP : 120 80PD Grew 36 Elev: 7190 DF

PZone : 5203-5264 Log Tops Calc

Perfo : 4720-5004 w/2 SPF - frac w/1500 bole crude Depth Datum

Ceasing: 10 3/4 @ 100 w/50 - 7 @ 3860 w/50 - 4 1/2 @ 5168 w/65

Journal: PCA - 9/3/66 S/L 11/22/68

IP : P 120 bole oil/24 hrs grew 37 Sample Top Depth Datum

PZone : 5168-5264 (Gallup) Hencos Depth Datum

Ceasing: 10 3/4 catd @ 100 w/100, 7 catd @ 3862 w/40, 4 1/2 catd @ 5168 w/65

Journal: 07/05/61 700 Dr-lg. 07/12/61 2618 Dr-lg. 07/19/61 3862 Waiting on

cement. 07/26/61 5264 Waiting on cement. Show of oil at 5210 ft.

Estimated 500 ft fillup. 08/02/61 5264 Putting on pump. I.P. pumped

120 barrels oil/day based on a 24-hr test. Gravity 31 deg.

Producing through open hole opposite Gallup formation. Interval

5168-5264 ft. C9/13/61 5264 Pumping load oil. Re-spud 8-4-61.

Pulled rods and tubing. 5d oil fractured open hole 5168-5264 ft.

With 38,000 gallons oil. 26,000 lb ed. Pressing pressure 2000 lb. I.

10/04/61 5264 Testing on pump. Pumped 134 barrels oil in 24 hrs.

Testing. Recovered all load oil. Pumped 90 barrels oil in 24 hrs.

10/04/61 5264 Testing on pump. Pumped 90 barrels oil in 24 hrs.

Testing. Producing through open hole opposite Gallup formation. Interval

5168-5264 ft.

G-24

F-25

DWIGHT'S HOTLINE - Drilling History 27-28N-1W

#3

Copyright 1989 Original Drill
State: NEW MEXICO NM Permit HW R-960553-D Issued: 01/01/78

County: RIO ARriba Oper: FOUTZ & BURSLEY CONSTRUCT

Field: BOLDER MAN Comp: 01/26/62 DO OIL

Well: BATTLESS-WIGWAM #2 Last Info: 12/28/88

Test: 1650 gal 450 ft Perfor: 10/10/61 API 30-039-07250

Prod Well: 5800 Gallup Lease: Elev: 7250 DF

Spud: 10/23/61 Cont: THOMAS WIGWAM PG:

IP: 76 BOPD Grav 35.1 BOPD Elev: 7250 DF Calc

PZone: 4340-4350 Log Tops Formation Record

5006-5020 3896 Depth Datum

5050-5060 3490 3170

5060-5090 4460 2770

5310-5315

Perf: 4820-5106

Coaling: 9 5/8 @ 100 W/100 - 5 1/2 @ 484 W/300

Journal: PCA - 8/29/68 SL 11/22/68

AA Shell Oil Date: AA

IP: 76 BOPD Grav 35.5 deg

PZone: 4885-5370 (Gallup) Log Tops

Coaling: 9 5/8 cmt @ 100 W/100, 5 1/2

cmt @ 4885 W/100, 4 1/2 liner

@ 467-5370, 2 @ 8000

Journal: 10/13/61 Loc: 10/25/61 609 Dr-19, 11/01/61 2901 Dr-19 with mud.

11/08/61 4601 Dr-19. Run logs at 4450 ft. Lost circulation at 4450

ft. 11/15/61 5370 Dr-19. Preparing to fracture. 11/29/61 5370 Testing on

pump. Oil fractured at 4885-5370 ft (open hole) with 84,000 gallons

oil. IP 1900-2050 lb. IR 37 barrels per min. Pumped 60 barrels load

oil/day 12/13/61 5370 Testing on pump. Recovered load oil. Pumped

45-50 barrels oil/day. I.P. pumped 76 barrels oil/day based on 24

hr test. Gravity 35.5 deg. Producing through open hole. Gallup

formation. Interval 4885-5370 ft. Re-Spud 10-15-62. BP 5200 ft Cret

G-25

G-3

DWIGHT'S HOTLINE - Drilling History 27-28N-1W

#4

Copyright 1989 Original Drilling ne se
State : NEW MEXICO M1 Merid H# R-960554-0 Issued: 01/01/72

County: RIO ARriba Oper: FOUTZ & BURSUM CONSTRUCT

Field : BOULDER MAN DCA: 11/30/62 DO DRY

Well/VL #1
Figs: 2310 fsl 990 fsl Permit: 10/24/62 AP1 30-039
Dbl: 5400 Gallup Lease: Elev: 7333 DF

Prod Well: Spd: 10/24/62 Contri: PBI: 5454

IP : 22 BOPD
PZone : 5321-5363 Log Top Formation Record
5380-5368 Fractured Cliffs Depth Datum
5425-5431 Levels 1380 5953

Perfo : 5321-5431 W/2 SPF - frac W/2137
bbls crude Point Lookout 1510 5623
Hercos 3720 5728
Gallup 4000 3613
4196 3133
4818 2515

Coaling: 9 5/8 cmtd @ 115 W/100, 7 cmtd @ 4476 W/150, 4 1/2 @ 4458-5459
W/150

Journal PCA - 6/5/64
AA Shell Oil Data AA Elev: 7333 DF
IP : P 22 bbls oil 24 hr test Grav 32 Log Top Depth Datum
689 Gallup 5020 2313

PZone : 5250-5459 (Gallup)
Coaling: 9 5/8 cmtd @ 115 W/100, 7 cmtd @ 4476 W/150, 4 1/2 @ 4458-5459
W/150

Journal: 10/24/62 Spd 10-23-62, 10/30/62 2447 D-10, 11/06/62 3550 D-10,
11/14/62 5393 D-10, 011 show at 5393 ft. 11/20/62 5459 (Running
bottom hole pressure test) Open hole pecker at 5250 ft. 11/27/62
2068, 4 1/2 at 2312, 5 at 2312, 5 1/2 at 2390, 6 at 2550, 6 1/2 at
2633, 7 at 2810, 7 1/2 at 2930, 8 at 3210, 9 1/4 at 3690, 10 1/4 at
4103, 11 1/2 at 4900, 12 1/2 5400, 13 at 5331. Fractured with
89,755 gallons crude oil at 4476-5470 ft. Breakdown pressure 2400,
shut in pressure 1000. Injection rate 42 1/2 barrels/min. Rigging
up pump. 12/12/62 Pumped 80 barrels load oil. 24 hrs. 01/09/63 Oil
fractured 5250-5454. Open hole pecker at 5459 ft. 01/23/63 Pumped
estimated 20 barrels oil. no mtr. Recovered load oil. 02/06/63 Shut
down. weather. 03/05/63 Testing on pump. pumped 15 barrels oil/day.

H-3

G-4

DWIGHT'S HOTLINE - Drilling History 27-28N-1W

Copyright 1989 Original Drilling ne se
State : NEW MEXICO M1 Merid H# R-960554-0 Issued: 01/01/78

County: RIO ARriba Oper: FOUTZ & BURSUM CONSTRUCT

Field : BOULDER MAN DCA: 11/30/62 DO DRY

Well/VL #1
Figs: 2310 fsl 990 fsl Permit: 10/24/62 AP1 30-039
Dbl: 5400 Gallup Lease: Elev: 7333 DF

Prod Well: Spd: 10/24/62 Contri: PBI: 5454

IP : 22 BOPD
PZone : 5321-5363 Log Top Formation Record
5380-5368 Fractured Cliffs Depth Datum
5425-5431 Levels 1380 5953

Perfo : 5321-5431 W/2 SPF - frac W/2137
bbls crude Point Lookout 1510 5623
Hercos 3720 5728
Gallup 4000 3613
4196 3133
4818 2515

Coaling: 9 5/8 cmtd @ 115 W/100, 7 cmtd @ 4476 W/150, 4 1/2 @ 4458-5459
W/150

Journal PCA - 6/5/64
AA Shell Oil Data AA Elev: 7333 DF
IP : P 22 bbls oil 24 hr test Grav 32 Log Top Depth Datum
689 Gallup 5020 2313

PZone : 5250-5459 (Gallup)
Coaling: 9 5/8 cmtd @ 115 W/100, 7 cmtd @ 4476 W/150, 4 1/2 @ 4458-5459
W/150

Journal: 10/24/62 Spd 10-23-62, 10/30/62 2447 D-10, 11/06/62 3550 D-10,
11/14/62 5393 D-10, 011 show at 5393 ft. 11/20/62 5459 (Running
bottom hole pressure test) Open hole pecker at 5250 ft. 11/27/62
2068, 4 1/2 at 2312, 5 at 2312, 5 1/2 at 2390, 6 at 2550, 6 1/2 at
2633, 7 at 2810, 7 1/2 at 2930, 8 at 3210, 9 1/4 at 3690, 10 1/4 at
4103, 11 1/2 at 4900, 12 1/2 5400, 13 at 5331. Fractured with
89,755 gallons crude oil at 4476-5470 ft. Breakdown pressure 2400,
shut in pressure 1000. Injection rate 42 1/2 barrels/min. Rigging
up pump. 12/12/62 Pumped 80 barrels load oil. 24 hrs. 01/09/63 Oil
fractured 5250-5454. Open hole pecker at 5459 ft. 01/23/63 Pumped
estimated 20 barrels oil. no mtr. Recovered load oil. 02/06/63 Shut
down. weather. 03/05/63 Testing on pump. pumped 15 barrels oil/day.

H-4

F-17

DWIGHT'S HOTLINE - Drilling History

26-28N-1W

#1

Copyright 1989

Original Drill

nm

State: NEW MEXICO

Perm: H-954802-0

Issued: 01/01/78

County: RIO ARriba

Operator: STANDARD OIL PROD CO

Field: BOLDER MAN

Comp: 07/18/62

DO

Well: JICARILLA APACHE 42

Permit: 07/05/62

Leat Info: 06/25/86

Fig: 660 TRL 2310 TRL

Lease: 07/05/62

API 30-039

Elev: 7148 DF

Prod Well:

Lease: 07/05/62

API 30-039

Elev: 7148 DF

Spud: 07/01/62

Contr: 3950

PB: 3950

Op Ad: P.O. Box 460609, Houston TX 77056-8609

AA State Records AA

IP: 80 BOPD Grav 32

Elev: 7148 DF

Formation Record

PZone: 3568-3951

Log Type

Depth

Calc

Perfo: 3734-3808

Point Lookout

206

6942

Coaling: 9 5/8 @ 136 W/100 - 5 1/2 @ 3502 W/175 - 4 @ 3550

Journal: Chevron Oil Co. /Jicarilla Tribal. Shut in gas well. A To Recomp- 9/27/74. Memo A 9/14/71

AA Shell Oil Data AA

Elev: 7148 DF

Formation Record

IP: P 256 bbls oil/day based on 80 bbls oil/1 1/2 hrs gravity 32

Log Type

Depth

Calc

PZone: 3502-3951 (Gallup)

Point Lookout

2350

4198

Coaling: 9 5/8 catd @ 137 W/100, 5 1/2 catd @ 3502 W/175, 4 1/2 liner @ 3332-3950, set. Alotted 3740-3801 2 @ 3725, set

Journal: 07/11/62 Loc. 07/18/62 3710 D-19. Spud 7-2-62. Stopped drilling at 3568 ft in Gallup. Blow section 40 bbls oil/hr. Flow estimated. 350-1000 barrels @ 1 1/15 hrs. 07/25/62 3951 having on rotary tools. 08/01/62 3951 to shut in. Deviation 10 degrees at 68. CORRECTED 7-31-62. I.P. Pumped 256 barrels oil/day based on 80 barrels oil/1 1/2 hrs. Gravity 32 degrees. Producing through open hole at Gallup formation. Interval 3502-3951.

G-17

F-18

DWIGHT'S HOTLINE - Drilling History

26-28N-1W

#5

Copyright 1989

Original Drill

nm

State: NEW MEXICO

Perm: H-954803-0

Issued: 01/01/78

County: RIO ARriba

Operator: STANDARD OIL PROD CO

Field: BOLDER MAN

Comp: 03/05/63

DO

Well: JICARILLA 4-26 #1

Permit: 01/08/62

Leat Info: 06/25/86

Fig: 660 TRL 330 TRL

Lease: 01/08/62

API 30-039

Elev: 7242 DF

Prod Well:

Lease: 01/08/62

API 30-039

Elev: 7242 DF

Spud: 02/04/62

Contr: ASPEN DRUG

PB: 4552

Op Ad: P.O. Box 460609, Houston TX 77056-8609

AA State Records AA

IP: 9 BOPD Grav 32, 3 BOPD

Elev: 7242 DF

Formation Record

PZone: 3635-4668

Log Type

Depth

Calc

Perfo: 4668-4798

Point Lookout

883

6339

Coaling: 4 5/8 @ 4550 W/1 SPF - free w/1400 bbls 0

Core: 4 5/8 @ 4668

Coaling: 8 5/8 @ 110 W/110 - 5 1/2 @ 4400 W/200 - 4 in liner 4510-4534

Tubing: 2 3/8 @ 4401

Journal: A To Recomp. 10/4/74. TA. 5/27/66. Memo A HQ to repair Well-4/15/82 9-14-71. /Chevron Oil Co.

AA Shell Oil Data AA

Elev: 7242 DF

Formation Record

IP: P 9 bbls oil - 3 bbls wtr 24 hr 32 deg Grav

Log Type

Depth

Calc

PZone: 4400-4510 (Gallup)

Point Lookout

883

6339

Coaling: 8 5/8 catd @ 110 W/100, 5 1/2 catd @ 4400 W/200, 4 L @ 4330 - 4510 Alotted W/354-4510, set. 2 @ 4401, set

Journal: 01/10/62 Loc. 02/07/62 110 waiting on cement. Spud 2-4-62. 02/19/62 1900 D-19. 02/21/62 3100 D-19. 2 deg deviation at 3100 ft. 02/28/62 4201 D-19. 03/01/62 4555 Prepare to core. 03/14/62 4582 Crg. Core at 4560-86. Recovered 3 ft sh. prite. good cut. trace fluorescence.

G-18

F-19

DWIGHT'S HOTLINE - Drilling History

26-28N-1W

#5

Copyright 1989 Original Drill M M
 State : NEW MEXICO M Merid M R-354863-0 Issued: 01/01/78
 County: RIO ARriba Oper: STANDARD OIL PROD CO
 Field : BOLDER MAN Compl: 01/05/63 DO OIL
 Well: JICARILLA 4-26 #1 Last Info: 06/25/88
 Fgr: 660 Fnl 330 Fnl API 30-039
 Obj: 4540 Gallup Elev: 7242 OF
 Prod well: Leesei
 Spud: 02/04/62 Cont: ASPEN DRILG P: 4552
 TD: 4798

Core #2 4566-95. Recovered 28.3 ft sh. dark grey, scattered fossils. Vertical fractured at 4571 ft. bled oil at 4578-81. 03/21/52 4798 Running liner. Core #3 4596-4625. Recovered 3 ft sh. dark grey, micaceous siltstone with oil. Fair cut. Core #4 4625-38. Recovered 13 ft sh. dark grey, dull, very broken. Vertical fractured. Core #5 4638-66. Recovered 12 ft sh. dark grey, micaceous. Vertical fractured. Oil seeped on fractures. 03/28/62 4798 Waiting on cable tools. 900 ft fluid with both oil and mtr. 04/25/62 4798 Running rods. 05/02/62 4798 1d. Testing on pump. Pumped 54 barrels mtr/24 hrs. Pumped 35 barrels oil. 17 barrels mtr/24 hrs. Pumped 3 barrels oil. 26 barrels mtr/24 hrs. Pumped 10 barrels oil. 20 barrels mtr/24 hrs. Pumped 2 barrels oil. 15 barrels mtr/24 hrs. Pumped 3 barrels oil. 15 barrels mtr/24 hrs. Pumped 2 1/2 barrels oil. 18 barrels mtr/24 hrs. Prepare to fracture. 05/23/62 4798 1d. Pumping load oil. 011 fractured open hole at 4400 - 4798 with 38,640 gallons oil. No breakdown. treating pressure 2000 lb. Injection rate 24.1 barrels/min. Pumped 35 barrels load oil/day. 06/06/62 Pumping load oil. Pumped 10 barrels load oil. 20 barrels mtr/24 hrs. 06/20/62 Cleaning out. Pumped 8 barrels load oil. 13 barrels mtr/24 hrs. Pulled pump. Caved. Pulled liner. 09/12/62 Plug 4481 ft. Fishing. 09/19/62 Fishing. 09/26/62 Plug 4590 ft. Cleaned out to 4590 ft. 10/10/62 Plug 4510 ft. Set bridge plug at 4552 ft. Crack Jet 2 shots/foot at 4504-4550. Caved 4491-4510 with 63,000 gallons oil. 011 fractured open hole 4491-4510 with 63,000 gallons oil. 10/30/62 Testing on pump. Pumped 25 barrels load oil/24 hrs. Pumped 10 barrels load oil. 20 barrels mtr/day. 02/21/63 Plug 4510 ft. Shut down liner. Recovered all load oil. Pumped 3 barrels oil/48 hrs. COMPLETED 3-1-63. 1 P. Pumped 9 barrels oil. 3 barrels mtr/day based on 24 hr test. 32 deg Gravity. Producing through open hole at Gallup formation. Interval 4400-4510 ft.

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DWIGHT'S HOTLINE - Drilling History

28-28N-2W

F-20

DWIGHT'S HOTLINE - Drilling History

26-28N-1W

#6

Copyright 1989 Original Drill M M
 State : NEW MEXICO M Merid M R-354864-0 Issued: 01/01/78
 County: RIO ARriba Oper: STANDARD OIL CO
 Field : BOLDER Compl: 09/29/62 DO OIL
 Well: JICARILLA AP 4240 Last Info: 06/25/88
 Fgr: 185 Fnl 1840 Fnl API 30-039
 Obj: 4400 Gallup Elev: 7215 OF
 Prod well: Leesei
 Spud: 09/03/62 Cont: P: 4312
 TD: 4325

AA State Records AA
 IP : 343 BORO grav 32 Elev: 7215 OF
 Pzone : 3196-4158 Log Tops Formation Record
 Perf: w/1 SPC Elev: sh Depth Calc
 Point Lookout 497 6718
 3196 4497
 4158 4019
 3057
 Cooling : 5/28 @ 139 W/100 - 5 1/2 @ 3605
 W/125 - 4 in lin 4093-4681
 Tubing : 2 3/8 @ 4086

Journal: Chevron Oil Co. J/Lic Tr-l-bal 240 4M. I-R - 2409 for Pressure Interference test allow frame, equality 42 & 43 J/Lic. 4-26. 7A-10/24/74. NIT-Repr. 8/19/79. Memo A 9-14-71. J/Lic 4-26. NFO 43-112. Further notice.

IP : P 343 bble oil 24 hr gravity 32. Elev: 7215 OF
 5 deg Log Tops Formation Record
 Pzone : 3605-4324 (Gallup) Calc
 Cooling : 8 5/8 catd @ 137 W/100! 5 1/2 catd @ 3605 W/140. 4 liner @ 3735-4312 set. allotted 4093-4155 and 4219-4281 2 @ 4280. set

Journal: 08/29/62 Loc. 09/12/62 3281 D-19. Spud 9-2-62. 09/19/62 4250 Running 1302 Oil. Shutting at 4095 ft. show of oil. 09/26/62 4325 1d. Plug 4312 ft. Having in rotary tools. Down hole crack Jet 2 shots/foot at 4094-4324 hole caved. 10/10/62 Flowing. Oil fractured open hole at 3605-4312 with 63,000 gallons oil. Injection rate 21 barrels/min. Flowed 240 barrels load oil. 11 hrs. Pumped 61 barrels load oil/day. Recovered load oil. COMPLETED 10-29-62. 1 P. Pumped 34 barrels oil/day based on 24 hr test. gravity 32.5 degrees. Producing through open hole at Gallup formation. Interval 3605-4324 ft.

Printed 12/30/89 TBN 15939 M

Page 1

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DWIGHT'S HOTLINE - Drilling History

32-28N-2W

F-21

#8 ON 105/104

#10

DWIGHT'S HOTLINE - Drilling History 26-28N-1W

Copyright 1989 Original Drill M 92

State : NEW MEXICO M1 Merid H# R-954885-0 Issued: 01/01/78

County: RIO ARriba Oper: STANDARD OIL PROD CO

Field : BOULDER MAN Compl: 08/19/62 DO OIL

Well: JICARILLA 4-26 43 Lett Infor 06/25/88

Fig: 2310 P#1 2310 P#1 Permit: 07/25/62 API 30-019

Prod well: Lease: Elev: 7242 CL

Spud: 07/29/62 Cont: GREAT WESTERN P#1

ID: 4120

Op Ad : P.O. Box 460609, Houston TX 77056-8609

AA State Records AA Elev: 7242 CL

IP : 120 BOPD grav 32 Log Tops Depth Calc

PZone : 3862-4120 Point Lookout 2505 4737

Perfo : 3872-4058 perf'd liner - none

Ceasing: 9 5/8 @ 136 w/100 - 5 1/2 @ 3460 w/175 - 4 in liner 3372-4058

Journal: Chevron Oil Co. /JIC Tribal 240 43. JIC 4-26 43

AA Shell Oil Data AA Elev: 7242 CL

IP : 540 bbls oil/day based on 130 Log Tops Depth Calc

PZone : 3460-4120 (Gallup) Point Lookout 2505 4737

Ceasing: 9 5/8 cat'd @ 136 w/125, 5 1/8 cat'd @ 3460 w/175, 4 1/2 slotted liner

Journal: 07/25/62 Loc. 08/31/62 1379 D-19. Spud 7-18-62. 08/08/62 2762 D-19.

Lost circulation. 08/15/62 3400 D-19. 08/22/62 4120 waiting on

cable tools. Stopped during at 3662 ft. Flow oil estimated 10

barrels/hr at 3662 ft. Drilled with air below 3460 ft. COMPLETED @-

27-62. I.P. flowed 540 barrels oil/day based on 130 barrels oil/4

1/2 hrs 24/4 in ch. gravity 32 degrees. GOR 355. FIP 120 lb

Producing through open hole at Gallup formation. Interval 3460-4120.

G-21

F-22

#10

DWIGHT'S HOTLINE - Drilling History 26-28N-1W

Copyright 1989 Original Drill M 92

State : NEW MEXICO M1 Merid H# R-954887-0 Issued: 01/01/78

County: RIO ARriba Oper: STANDARD OIL CO

Field : BOULDER Compl: 09/08/62 DG GAS

Well: JICARILLA APACHE 45 Lett Infor 07/11/85

Fig: 3000 P#1 3000 P#1 Permit: 08/27/62 API 30-019

Prod well: Lease: Elev: 7196 CL

Spud: 08/25/62 Cont: P#1

ID: 3533

Notes : (Plugged & abandoned June 1985)

AA State Records AA Elev: 7196 CL

IP : 8 MCF/D Log Tops Depth Calc

PZone : 3711-3928 Point Lookout 2245 4971

Ceasing: 9 5/4 @ 137 w/100-7 @ 3464 w/150 2245 4971

Tubing: 2 3/8 @ 3594 3117 3465

Journal: NE to repair Well 4/15/62. Shut in gas well. Memo A 9/14/71. /Chevron

Oil Co. Elev: 7196 CL

AA Shell Oil Data AA Formation Record

IP : 3000 MCF STIP 680 Log Tops Depth Calc

Ceasing: 9 5/8 cat'd @ 137 w/100, 7 cat'd @ 3464 w/150 2120 4976

Journal: 08/29/62 1230 D-19. Spud 8-25-62. 09/05/62 3464 waiting on cement.

09/12/62 3964 hoving in rotary tools. Stopped during at 3593 ft.

good gas show. 09/19/62 3964 ft. waiting on rig. Gaged 2.4 MCF

3/4 in ch. 10/10/62 Testing. Gaged 3000 MCF

10/22/62 Shut in. STIP 680. 02/27/63 Shut in. Shut in gas cap well

shut in indefinitely. COMPLETED 1-1-63. Shut in gas well. gas cap

in Boulder field. Gaged 3000 MCF. STIP 680

G-22

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other _____

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PIPE BACK ☐ DIFF. REMOVL. ☐ Other _____

2. NAME OF OPERATOR

American Hunter Exploration Ltd.

3. ADDRESS OF OPERATOR

410 17th St. Suite 1220; Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 1845'FNL 1900'FWL

At top prod. interval reported below 1759'FNL 2038'FWL

At total depth 1686'FNL 1,138'FWL

14. PERMIT NO.

DATE ISSUED

11/20/91

13. DATE SPUDDED

11/28/91

16. DATE T.D. REACHED

01/02/92

17. DATE COMPL. (Ready to prod.)

02/24/92

18. ELEVATIONS (DP, AMS, RT, GR, ETC.)*

7318'Gr.; 7337'KB

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD

7862'MD; 6688'TVD

21. PLUG. BACK T.D., MD & TVD

7837'MD; 6686'TVD

22. IF MULTIPLE COMPL. HOW MANY*

23. INTERVALS DRILLED BY

0'-TD

ROTARY TOOLS

CABLE TOOLS

24. PRODUCING INTERVAL(S). OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

Mancos Niobrara 'B' 6952'MD(6587'TVD) - 7862'MD(6688'TVD)

25. WAS DIRECTIONAL SURVEY MADE

Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN

DIL - SFL - SP, BHC Sonic - G.R. - CAL., Dipmeter

27. WAS WELL COILED

No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
10 3/4"	40.5	375'	14 3/4"	365 sx	None
7 5/8"	26.4-29.7	6729'	9 7/8"	786sx (sta.1)+1027sx(Sta.2)	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	BACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
5 1/2"	6582'	7837'	None		2 7/8"	7819'	N/A

31. PERFORATION RECORD (Interval, size and number)

Pre-perforated 5 1/2" liner was run :
(uncemented) as above with holes from
6917'MD to 7837'MD

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
N/A	

33. PRODUCTION

DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
02/24/92		Pumping (2½" x 2" RWAC)				Producing	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BSL.	GAS—MCF.	WATER—BSL.	GAS-OIL RATIO
03/02/92	24	N/A	→	323	TSTM	0	0
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BSL.	GAS—MCF.	WATER—BSL.	OIL GRAVITY-API (CORR.)	
20	20	→	323	TSTM	0	36°	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Used for fuel/vented

TEST WITNESSED BY

Doyle Post

35. LIST OF ATTACHMENTS

Directional Survey

I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

TITLE Senior Exploration Geologist DATE 07/01/92

*(See Instructions and Spaces for Additional Data on Reverse Side)

G. H. E. L. 3F-1

3-27 m-1 m

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
Mancos Niobrara 'B'	6952' MD	7862' MD	Fractured siltstone, very fine grained sandstones and shale	Point Lookout Mancos Niobrara 'A' Niobrara 'B'	5166' 5338' 6670' 6952'	5102' 5271' 6479' 6587'

#12

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE

FOR APPROVED
OMB NO. 1004-0137
Expires: December 31, 1991

5. LEASE DESIGNATION AND SERIAL NO.

Contract 701-90-0001

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

JICARILLA APACHE

7. UNIT AGREEMENT NAME

n/a

8. FARM OR LEASE NAME, WELL NO.

JICARILLA 6A-1

9. API WELL NO.

30-039-25131

10. FIELD AND POOL, OR WILDCAT

WILDCAT

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Section 6-T27N-R1E

12. COUNTY OR PARISH

RIO ARriba

13. STATE

NEW MEXICO

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other _____

1b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ REPAIR ☐ PLUG BACK ☐ DIFF. CEMENT ☐ Other _____

2. NAME OF OPERATOR

AMERICAN HUNTER EXPLORATION LTD.

3. ADDRESS AND TELEPHONE NO.

410 - 17th Street; Suite 1220; Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 460' FNL & 650' FEL (NENE) Section 6-T27N-R1E

At top prod. interval reported below

At total depth
485.5' FNL & 3358.4' FEL
NWNW Section 6-T27N-R1E

14. PERMIT NO.

DATE ISSUED

10/28/91

15. DATE SPUDDED

11/04/91

16. DATE T.D. REACHED

11/24/91

17. DATE COMPL. (Ready to prod.)

n/a

18. ELEVATIONS (DP, RKB, ST. CR, ETC.)*

7177GR, 7196KB

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD

5026MD, 2728TVD

21. PLUG. BACK T.D., MD & TVD

1700TVD

22. IF MULTIPLE COMPL., HOW MANY*

23. INTERVALS DRILLED BY

ROTARY TOOLS

0-T.D.

CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

n/a

25. WAS DIRECTIONAL SURVEY MADE

YES

26. TYPE ELECTRIC AND OTHER LOGS RUN

DUAL INDUCTION, SONIC, GAMMA RAY, CALIPER

27. WAS WELL CORED

NO

28. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
10 3/4"	40.5	329	14 3/4"	TO SURFACE	NONE
7 5/8"	29	2426	9 7/8"	560sx 65/35 POZMIX	NONE
				225sx 'G'	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	BACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PREPARATION RECORD (Interval, size and number)

OPEN HOLE FROM 2426' to 5026'MD.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33. PRODUCTION

DATE FIRST PRODUCTION _____ PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) _____ WELL STATUS (Producing or shut-in) _____

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BSL.	GAS—MCF.	WATER—BSL.	GAS-OIL RATIO
FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BSL.	GAS—MCF.	WATER—BSL.	OIL GRAVITY-API (CORR.)	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

ACCEPTED FOR RECORD

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.
SIGNED B. Thistle B. THISTLE TITLE DRILLING TECHNOLOGIST DATE APR 24 1992
April 9, 1992

*(See Instructions and Spaces for Additional Data 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.

OPERATOR

26.

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

AHEL 6A-1 6-27n-1e

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
CLIFF HOUSE	668	713	33% Ø
MENEFEE	713	903	31% Ø
POINT LOOKOUT	903	1118	24% Ø

CONFIDENTIAL

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
LEWIS	SURFACE	SURFACE
CLIFF HOUSE	668'	671'
MENEFEE	713'	716'
POINT LOOKOUT	903'	908'
MANCOS	1118'	1124'
KOP	1719'	1732'
NIORARA	2140'	2107'
GRAY ZONE	2218'	2170'
A ZONE	2426'	2302'
B ZONE	2582'	2397'
TOTAL DEPTH	5026'	2727'

#14

H-21

DWIGHT'S HOTLINE - Drilling History

7-27N-1E

#16

Copyright 1989 Original Drilling History
State : NEW MEXICO IN Permit No R-9512793-0 Issued: 01/01/78
County: RIO ARriba Oper: BENSON MONTIN GREEN DRUG
Field : PUERTO CHICUITO MAN TA: 10/19/84 DO SUSPENDED
Well: PACIFIC #16-7 Permit: 08/30/63 Last Info: 05/22/83
Ft: 660 Rel 660 Rel APT 30-039 Elev: 7192 KB
Obj: 3000 Gallup Lease: Elev: 7192 KB
Prod well: Elev: 7192 KB
Spud: 08/28/63 Cont: OAN PB:
TD: 3612
Op Ad : 221 Petroleum Center Bldg., Farmington NM 87401
as State Records as
Log : IGR Log Tops
Casing: 10 3/4 100 W/100 - 7 250M Cliff House
W/150 Mancos 1370 58.2
Gallup 1795 5397
Sanstee 2825 4367
Elev: 7192 KB
aa Shell Oil Data as
Casing: 10 3/4 cmtd 100 W/100, 7 cmtd 8
280M W/150
Log Tops
Journal: 09/03/63 Loc: 09/09/63 2087 Drig. Mancos
Spud 8-28-63. 10-3/4 in cmtd
at 100 ft with 100 sacks.
09/17/63 2087 waiting on cable
tools. 7 in cmtd at 280M ft with 150
sacks. Changed well number from P-7.
cable tools. 11/20/63 3350 Drig with cable tools. 12/17/63 3612 TD.
Shut down. Waiting on orders. No cores. Logs or DST's. Shut down
from 10-19-64 to J-1-67 at TD of 3612 ft.

I-21

DWIGHT'S HOTLINE - Drilling History

28-27N-1E

Copyright 1989 Original Drilling History
State : NEW MEXICO IN Permit No R-9512793-0 Issued: 01/01/78

H-22

DWIGHT'S HOTLINE - Drilling History

11-27N-1E

Copyright 1989 Original Drilling History
State : NEW MEXICO IN Permit No R-401557-0 Issued: 10/31/86
County: RIO ARriba Oper: DAWSEY A L
Field : PUERTO CHICUITO E MAN TA: 03/16/87 DO SUSPENDED
Well: EL VADO #2 970 Rel Permit: 07/23/86 Last Info: 09/02/86
Ft: 1170 Rel 970 Rel APT 30-039-2-055
Obj: 1500 Mancos Lease: Elev: 7157 KB
Prod well: Elev: 7157 KB
Spud: 1310 Cont: Stan PB:
TD: 1310
Notes : (Unable to collect further information from operator or State office)
Journal: 11/9/86 UOCT.
02/22/86 UOCT.
6/14/87 drilled.
5/11/88 state office has not been able to get information from
operator.
4/14/88 UOCT since October 1986.
5/5/88 UOCT since October 1986.
9/2/88 operations suspended. no further information available.

I-22

DWIGHT'S HOTLINE - Drilling History

28-27N-1E

Copyright 1989 Original Drilling History
State : NEW MEXICO IN Permit No R-9512793-0 Issued: 01/01/78

K-4 Cum 2 MBS

DWIGHT'S HOTLINE - Drilling History 13-27N-1W

#18

Copyright 1989 Original Dr-111
State : NEW MEXICO M-1 Merid N-13-27N-1W
County: RIO ARriba Oper: BENSON MONTIN GREER DRG

Field : PUERTO CHICUITO E 14N Comp: 06/12/67 DO GAS

Well: JICARILLA 215 #1 Last Info: 04/07/88
Figs: 825 Feb 1985 Feb 1985
Prod well: Lease: APT 30-039 Elev: 7132 GR

Squid: 08/23/66 Contn: PBI 3956

Op Ad : 321 Petroleum Center Bldg., Farmington M 87401

AA State Records as Formation Record

IP : P 11 BOPD Grav M, 3 MCGPD, 20

PZone : 3873-3943 (Hanco)

Log Type	Depth	Calc
ICLiff House	2530	4602
Hanco	2935	4197
ICallup	3375	3757
ISemitee	4395	2737
ICreenhorn	4720	2412
ICerote	4933	2199

Core : None

Log : ICS

Coaling: 10 3/4 @ 175 W/150 - 7 @ 3999 W/500 - 3 1/2 in Lnr 4610-4988 - 5 1/2

Tubing: 2 7/8 @ 3793

Journal: J/C 235 #1

Reported to have
water problems

L-4

K-5 Cum 91 MBS

DWIGHT'S HOTLINE - Drilling History 16-27N-1W

#17

Copyright 1989 Original Dr-111
State : NEW MEXICO M-1 Merid N-16-27N-1W
County: RIO ARriba Oper: BENSON MONTIN GREER DRG

Field : PUERTO CHICUITO W 14N P-1, 04/24/67 DO

Well: JICARILLA 202 #1 O-16 Last Info: 04/07/88
Figs: 1085 Feb 2052 Feb 1985
Prod well: Lease: APT 30-039-20012 Elev: 7804 GR

Squid: 03/24/67 Contn: LORLAND BROS DRG CO PBI 7200

Op Ad : 321 Petroleum Center Bldg., Farmington M 87401

AA State Records as Formation Record

IP : 11 BOPD Grav 38

PZone : 6959-7021 - SHF

Log Type	Depth	Calc
ICLiff House	5432	2312
Hanco	5877	1927
ICallup	6440	1364
ICerote	7133	671
ISemitee	7448	356
ICerote	7525	279

Core : None

Log : ICS

Coaling: 13 3/8 @ 315 W/450 - 7 5/8 @ 6849 W/400

Journal: J/C 262 #1

Journal: 03/22/67 Loc. 04/12/67 6020 Dr-1. 04/25/67 7626 TD. Preparing to

abandon. No cores on DST's run.

L-5

