

"ADDENDUM"

irm 3160-5
unc 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	5. Lease Designation and Serial No. Contract 701-90-0001
2. Name of Operator American Hunter Exploration Ltd.	6. If Indian, Allottee or Tribe Name Jicarilla Apache
3. Address and Telephone No. Suite 1220, 410 - 17th Street Denver, Colorado 80202	7. If Unit or CA, Agreement Designation N/A
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 606' FNL & 1240' FEL (NENE) Section 2-T27N-R1W	8. Well Name and No. Jicarilla 2A-1
	9. API Well No.
	10. Field and Pool, or Exploratory Area Wildcat
	11. County or Parish, State Rio Arriba County, New Mexico

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent ☒ Subsequent Report ☐ Final Abandonment Notice	☐ Abandonment ☐ Recompletion ☐ Plugging Back ☐ Casing Repair ☐ Altering Casing ☒ Other <u>Addendum cement report</u>	☐ Change of Plans ☐ New Construction ☐ Non-Routine Fracturing ☐ Water Shut-Off ☐ Conversion to Injection ☐ Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Ran and cemented 4569 feet of 7-5/8 casing cemented with a total of 375 bbls of cement slurry when displacing pump 134 bbls then lost 75% return for remainder of displacement, no cement returns to surface. Did not establish an annular cement top.

Please supply a wire line log to show the cement top.

ACCEPTED FOR RECORD

MAR 24 1992

FARMINGTON RESOURCE AREA

BY *[Signature]*

RECEIVED
BLM
92 MAR 16 AM 11:17
119 FARMINGTON, N.M.

14. I hereby certify that the foregoing is true and correct

Signed *[Signature]* Title Senior Drilling Superintendent Date March 12, 1992

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

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

*See instruction on Reverse Side

"ADDENDUM" PRIVATE AND CONFIDENTIAL

Form 3160-5
(June 1990)

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1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
American Hunter Exploration Ltd.

3. Address and Telephone No.
410 17th St., Suite 1220; Denver, CO 80202 (303) 825-5212

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Surf. Loc. 442'FNL, 1177'FEL
BHL 620'FNL, 3277'FEL

5. Lease Designation and Serial No.

701-90-0001

6. If Indian, Allottee or Tribe Name

Jicarilla Apache

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Jicarilla #2A-1

9. API Well No.

30-039-25118

10. Field and Pool, or Exploratory Area

West Puerto Chiquito Manco

11. County or Parish, State

Rio Arriba, New Mexico

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☐ Notice of Intent

☒ Subsequent Report

☐ Final Abandonment Notice

☐ Abandonment

☐ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

☒ Other Addendum Cement Report

☐ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

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☐ Conversion to Injection

☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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Ran and cemented 4569 feet of 7-5/8 casing cemented with a total of 375 bbls of cement slurry when displacing pump 134 bbls then lost 75% return for remainder of displacement, no cement returns to surface. Did not establish an annular cement top.

4569'MD (4416'TVD); 297'FNL, 1295'FEL

RECEIVED
JUN 22 1992
OIL CON. DIV.
DIST. 3

RECEIVED
BLM
JUN 12 PM 1:35
019 FARMINGTON N.M.

14. I hereby certify that the foregoing is true and correct

(Signed)

Title Senior Geologist

Date June 9, 1992

(This space for Federal or State office use)

Approved by

Title

Conditions of approval, if any:

ACCEPTED FOR RECORD

Date

JUN 14 1992

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.

*See Instruction on Reverse Side

BY

SAW

"ADDENDUM"

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2. Name of Operator
American Hunter Exploration Ltd.

3. Address and Telephone No.
Suite 1220, 410 - 17th Street Den

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
606' FNL & 1240' FEL (NENE)
Section 2-T27N-R1W

NMOCD copies returned
for your disposition

5. Lease Designation and Serial No.
Contract 701-90-0001

6. If Indian, Allottee or Tribe Name
Jicarilla Apache

7. If Unit or CA, Agreement Designation
N/A

8. Well Name and No.
Jicarilla 2A-1

9. API Well No.

10. Field and Pool, or Exploratory Area
Wildcat

11. County or Parish, State
Rio Arriba County,
New Mexico

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☒ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Addendum cement report	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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Please supply & wire line log to show the cement top.

ACCEPTED FOR RECORD

MAR 20 1992

FARMINGTON RESOURCE AREA

BY 929

RECEIVED
BLM
92 MAR 12 PM 1:05
92 MAR 16 AM 11:17
FARMINGTON, N.M.

14. I hereby certify that the foregoing is true and correct

Signed

Title Senior Drilling Superintendent

Date March 12, 1992

(This space for Federal or State office use)

Approved by
Conditions of approval, if any:

Title

Date

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NMOCD

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(June 1990)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**CONFIDENTIAL**FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993**SUNDRY NOTICES AND REPORTS ON WELLS**Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
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- ☒
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- ☐
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-
- ☐
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-
- ☒
- Other
- Addendum cement report
-
- ☐
- Change of Plans
-
- ☐
- New Construction
-
- ☐
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ACCEPTED FOR RECORD

MAR 20 1992

FARMINGTON RESOURCE AREA

BY [Signature]

FARMINGTON, N.M.

92 MAR 16 PM 1:35

RECEIVED

RECEIVED

92 MAR 16 AM 11:17

FARMINGTON, N.M.

14. I hereby certify that the foregoing is true and correct

Signed [Signature]Title Senior Drilling SuperintendentDate March 12, 1992

(This space for Federal or State office use)

Approved by _____

Title _____

Date _____

Conditions of approval, if any: _____

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ACCEPTED FOR RECORD

MAR 24 1992

FARMINGTON RESOURCE AREA

BY *[Signature]*

RECEIVED
BLM
JUN 12 PM 5:52
MAR 16 AM 11:17
FARMINGTON, N.M.

14. I hereby certify that the foregoing is true and correct

Signed *[Signature]*

Title Senior Drilling Superintendent

Date March 12, 1992

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*See Instruction on Reverse Side

0002477

10/15/91

09:54

303 825 0534

A H E L

--- CHEL DRILLING

010

CASING SUMMARY

Well Name BHEL Ticarillo 2A-1 KB to CSg. Bowl Flg. _____
 Purpose of Casing Extended Size 7 7/8 Date 91-10-14

No. Joints	Description (Size, wt, grade, make, rge, threads)	Measured Length	KB Depth
1	Float shoe 7 7/8, L-80	1.45	4567.55
1	7 7/8, 26.4", L80, LTTC, Bcd.	42.50	4525.05
1	Float Collar 7 7/8, L80	1.32	4523.73
66	7 7/8 26.4", L80, LTTC, Bcd.	2837.41	1686.32
39	7 7/8 29.7", L80, LTTC, Bcd.	1696.46	

PRIVATE AND CONFIDENTIAL

Weld/Thread Lock (No. Jts.) 2TOTAL STRING 4579.14KB to Casing Top 10'Centralizers 1-2-3-4-5-6-7-8-9-10-11-12Landed Depth, KB 4569 ft KB.13-14-15-16-17-18-19-20-23-26-29-32.Scratchers NILCementing Company DowellOperator A.W. C. Ledge

Job Details:

Stage #1

Stage #2

Circ. Time before Cement 1 hrPreflush - Volume & Type 20 bbl. waterCement - Slurry Volume 318 bbls, 35-65 Poz + 4% Poz + 3% Si + 1/4% S

- Cmt. & Additives Tail 47 bbls 6" + 5% Poz + 4% Poz + 3% Si
+ 25% Poz.

Mixing Times (from - to) 0327 - 0434Displ. Fluid - Volume & Type Oil 212.8Displ. Times (from - to) 0437 - 05:22Lead Plug Type Rubber

Tail Plug Type _____

Plug Bumped? NoFull Returns? No

Make of Stage Tool _____

Remarks Lost to returns after 124 bbls displacement.Pumped 8 bbls over displacement, did not bump plug.Company Representative J. O'Brien

Note: Attach casing tally sheets.

AMERICAN HUNTER EXPLORATION

PRIVATE AND CONFIDENTIAL SHEET

Page 1 of 2

WELL NAME AHEL Ticacilla 2A-1SIZE 7 7/8 WT. 24.29.7 GRADE 180 COUPLING STC THRD 8rdJOINTS ON LOCATION 108 DATE 91-10-13

Note: Indicate which joints not run by"

JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH
1	42.50	1	42.65	1	43.54	1	42.50	1	41.05
2	43.98	2	42.37	2	40.95	2	43.47	2	44.70
3	43.70	3	43.85	3	43.74	3	43.68	3	44.26
4	43.50	4	43.41	4	44.30	4	43.82	4	44.63
5	43.95	5	43.35	5	43.54	5	43.55	5	44.78
6	42.94	6	43.47	6	43.92	6	42.75	6	42.65
7	43.81	7	43.37	7	43.52	7	43.35	7	41.55
8	42.70	8	39.65	8	44.10	8	44.61	8	44.73
9	41.07	9	42.14	9	40. -	9	44.73	9	42.80
10	41.74	30	43.43	50	41.09	70	38.75	90	43.48
A	433.39	C	427.71	E	428.70	G	431.21	I	434.63
1	43.87	1	43.72	1	35.61	1	44.52	1	43.65
2	41.97	2	43.60	2	43.60	2	41.78	2	38.25
3	43.55	3	43.55	3	40.40	3	41.88	3	41.08
4	42.50	4	43.90	4	43.55	4	44.75	4	44.72
5	43.80	5	43.38	5	41.18	5	44.63	5	43.55
6	43.39	6	43.61	6	43.74	6	44.53	6	43.93
7	43.54	7	43.54	7	43.45	7	41.65	7	44.68
8	41.40	8	43.57	8	43.92	8	43.38	8	44.65
9	41.21	9	43.45	9	43.94	9	40.48	9	44.83
20	42.15	40	43.55	60	43.42	80	44.78	100	44.73
B	428.38	D	435.80	F	422.81	H	432.38	J	437.01

A	433.39
B	428.38
C	427.71
D	435.80
E	428.70
F	422.81
G	431.21
H	432.38
I	434.63
J	437.01
TOTAL	

PAGE TOTAL _____

BROUGHT FORWARD _____

GRAND TOTAL _____

REMARKS: _____

COMPANY REPRESENTATIVE _____

JOINTS	LENGTH
100	4312.02

AMERICAN HUNTER EXPLORATION

PRIVATE AND CONFIDENTIAL

TALLY SHEET

Page 2 of 2

WELL NAME AHEL Disacilla 2A-1

SIZE 1 5/8 WT. 26.4-29.7 GRADE 1-80 COUPLING LTC THRD Std

JOINTS ON LOCATION 108 DATE 91-10-13

Note: Indicate which joints not run by:

JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH
1	44 78	1		1		1		1	
2	43 80	2		2		2		2	
3	42 02*	3		3		3		3	
4	44 42	4		4		4		4	
5	42 06*	5		5		5		5	
6	43 25	6		6		6		6	
7	44 44	7		7		7		7	
8	43 60	8		8		8		8	
9		9		9		9		9	
10		30		50		70		90	
A	3'10" 72	C		C		C		I	
1		1		1		1		1	
2		2		2		2		2	
3		3		3		3		3	
4		4		4		4		4	
5		5		5		5		5	
6		6		6		6		6	
7		7		7		7		7	
8		8		8		8		8	
9		9		9		9		9	
20		40		60		80		100	
B		D		F		H		J	

A	348	43
B		
C		
D		
E		
F		
G		
H		
I		
J		
TOTAL		

PAGE TOTAL _____
BROUGHT FORWARD _____
GRAND TOTAL _____

JOINTS	LENGTH
8	348.43
100	4312.02
108	4660.45

REMARKS:

COMPANY REPRESENTATIVE _____

007

303 025 0534 PAGE.007



LTR



Job separation sheet

OK (9)

RECEIVED

STATUTORY DECLARATION

I, Bruce Thistle, solemnly declare that the following are photocopies of the original notarized surveys from the survey company, and I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath.

JICARILLA 2A-1

A-2-27N-1W

B. Thistle

Bruce Thistle

American Hunter Exploration Ltd.

Declared before me at the City of Calgary, in the Province of Alberta, this 30th day of April, A.D. 1992.

Kathy Trofin

KATHY M. TROFIN

Notary Public in and for the
Province of Alberta, Canada

My Appointment Expires December 31, 1994.

Address: American Hunter Exploration Ltd.
2000, 605 - 5th Avenue S.W.
Calgary, Alberta
T2P 3H5

RECEIVED

MAY 26 1992

OIL CON. DIV.
DIST. 3

AMERICAN HUNTER EXPLORATION LTD.
 AHEL JICARILLA #2A-1
 SEC 2-T27N-R01W
 RIO ARriba COUNTY, NEW MEXICO

CONFIDENTIAL

File Name: AHL2A1S2

RECORD OF SURVEY
 Calculated by Smith International's CADDs System

Radius of Curvature Method
 All Angles are Decimal
 Vertical Section Plane: 270.00 Degs

RECEIVED
 MAY 26 1992
 OIL CON. DIV.]
 DIST. 3

MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T AZIMUTH (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	C L O S U R E DISTANCE (FT)	AZIMUTH (DEG)	DOGLEG SEVERITY (DEG/100')
				3732.80	77.60 N	219.80 E	-219.80	233.10	70.55	0.00
3744.00	7.02	65.65	0.00	3760.59	79.14 N	222.88 E	-222.88	236.52	70.45	1.97
3772.00	7.12	61.25	28.00	3792.40	81.07 N	225.77 E	-225.77	239.89	70.25	6.42
3804.00	5.37	51.25	32.00							
				3822.30	82.90 N	227.22 E	-227.22	241.87	69.96	8.73
3834.00	3.62	25.67	30.00	3854.24	84.84 N	227.16 E	-227.16	242.48	69.52	10.47
3866.00	3.62	330.50	32.00	3886.14	86.84 N	225.66 E	-225.66	241.79	68.95	6.51
3898.00	5.37	315.75	32.00							
				3917.94	89.20 N	222.96 E	-222.96	240.15	68.19	7.35
3930.00	7.50	306.75	32.00	3948.61	91.47 N	219.15 E	-219.15	237.47	67.34	7.34
3961.00	9.00	294.75	31.00	3980.11	93.87 N	214.06 E	-214.06	233.74	66.32	7.05
3993.00	11.25	295.75	32.00							
				4010.38	96.64 N	207.99 E	-207.99	229.34	65.08	7.84
4024.00	13.62	293.25	31.00	4040.33	99.58 N	200.53 E	-200.53	223.89	63.59	9.34
4055.00	16.37	289.75	31.00	4070.76	102.83 N	191.20 E	-191.20	217.10	61.73	10.08
4087.00	19.58	288.75	32.00							
				4098.73	106.31 N	180.95 E	-180.95	209.87	59.56	10.57
4117.00	22.75	288.75	30.00	4126.95	110.38 N	168.79 E	-168.79	201.68	56.82	10.89
4148.00	26.12	288.25	31.00	4155.33	114.89 N	154.72 E	-154.72	192.71	53.40	8.71
4180.00	28.87	287.25	32.00							
				4183.24	118.74 N	139.55 E	-139.55	183.23	49.61	9.58
4212.00	29.75	281.25	32.00	4202.30	120.46 N	128.70 E	-128.70	176.28	46.90	10.34
4234.00	30.12	276.75	22.00	4210.08	120.95 N	124.21 E	-124.21	173.37	45.76	5.77
4243.00	30.25	275.75	9.00							
				4237.33	122.56 N	107.51 E	-107.51	163.03	41.26	8.63
4275.00	33.00	275.25	32.00							

CONFIDENTIAL

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AMERICAN HUNTER EXPLORATION LTD.
AHEL JICARILLA #2A-1SEC 2-T27N-R01W
RIO ARriba COUNTY, NEW MEXICO

MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T AZIMUTH (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	C L O S U R E DISTANCE (FT)		DOGLEG SEVERITY (DEG/100')
4305.00	36.62	274.25	30.00	4261.96	123.98 N	90.44 E	-90.44	153.46	36.11	12.22
4336.00	40.12	275.75	31.00	4286.26	125.65 N	71.28 E	-71.28	144.46	29.56	11.68
4367.00	44.25	277.75	31.00	4309.22	128.10 N	50.61 E	-50.61	137.73	21.56	14.01
4398.00	47.87	278.25	31.00	4330.73	131.21 N	28.51 E	-28.51	134.27	12.26	11.73
4429.00	52.00	277.75	31.00	4350.68	134.51 N	5.02 E	-5.02	134.60	2.14	13.38
4461.00	56.62	277.25	32.00	4369.34	137.90 N	20.74 W	20.74	139.45	351.45	14.49
4492.00	61.12	275.75	31.00	4385.36	140.90 N	47.10 W	47.10	148.56	341.52	15.09
4522.00	65.75	274.75	30.00	4398.78	143.36 N	73.81 W	73.81	161.24	332.76	15.72
4609.00	72.25	269.75	87.00	4429.94	146.54 N	154.90 W	154.90	213.23	313.41	9.20
4639.00	73.25	269.75	30.00	4438.83	146.42 N	183.55 W	183.55	234.80	308.58	3.33
4670.00	76.12	269.25	31.00	4447.02	146.16 N	213.45 W	213.45	258.69	304.40	9.39
4702.00	79.37	268.25	32.00	4453.81	145.47 N	244.71 W	244.71	284.68	300.73	10.61
4732.00	81.37	266.75	30.00	4458.83	144.18 N	274.25 W	274.25	309.84	297.73	8.29
4748.00	81.88	266.75	16.00	4461.16	143.29 N	290.06 W	290.06	323.52	296.29	3.19
4778.00	82.62	265.25	30.00	4465.21	141.21 N	319.71 W	319.71	349.51	293.83	5.53
4811.00	82.75	264.75	33.00	4469.41	138.36 N	352.32 W	352.32	378.51	291.44	1.55
4842.00	83.00	264.25	31.00	4473.25	135.41 N	382.93 W	382.93	406.17	289.47	1.79
4873.00	83.50	263.75	31.00	4476.90	132.19 N	413.55 W	413.55	434.16	287.73	2.27
4904.00	83.75	263.75	31.00	4480.34	128.84 N	444.18 W	444.18	462.48	286.18	.81
4935.00	83.75	263.25	31.00	4483.71	125.35 N	474.79 W	474.79	491.06	284.79	1.60
4966.00	83.75	263.25	31.00	4487.09	121.73 N	505.40 W	505.40	519.85	283.54	0.00
4995.00	84.00	263.25	29.00	4490.18	118.34 N	534.03 W	534.03	546.98	282.49	.86
5026.00	83.75	262.75	31.00	4493.49	114.58 N	564.62 W	564.62	576.13	281.47	1.80
5056.00	83.50	262.25	30.00	4496.82	110.69 N	594.18 W	594.18	604.41	280.55	1.85
5087.00	82.87	261.75	31.00	4500.50	106.41 N	624.66 W	624.66	633.66	279.67	2.59
5117.00	82.12	261.75	30.00	4504.42	102.14 N	654.10 W	654.10	662.03	278.88	2.50
5148.00	81.37	261.75	31.00	4508.87	97.74 N	684.46 W	684.46	691.40	278.13	2.42
5177.00	80.12	261.25	29.00	4513.53	93.51 N	712.77 W	712.77	718.87	277.47	4.63
5209.00	79.12	260.25	32.00	4519.30	88.45 N	743.83 W	743.83	749.07	276.78	4.38
5240.00	78.50	261.25	31.00	4525.32	83.56 N	773.85 W	773.85	778.35	276.16	3.74
5270.00	78.12	260.75	30.00	4531.39	78.96 N	802.86 W	802.86	806.74	275.62	2.07
5300.00	78.37	260.75	30.00	4537.51	74.24 N	831.85 W	831.85	835.16	275.10	.83

CONFIDENTIALAMERICAN HUNTER EXPLORATION LTD.
AHEL JICARILLA #2A-1SEC 2-T27N-R01W
RIO ARriba COUNTY, NEW MEXICO

MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T AZIMUTH (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	C L O S U R E DISTANCE (FT) AZIMUTH (DEG)		DOGLEG SEVERITY (DEG/100')
5331.00	78.37	260.75	31.00	4543.76	69.36 N	861.82 W	861.82	864.61	274.60	0.00
5362.00	78.37	260.75	31.00	4550.00	64.48 N	891.79 W	891.79	894.12	274.14	0.00
5393.00	78.50	260.75	31.00	4556.22	59.60 N	921.77 W	921.77	923.69	273.70	.42
5424.00	78.25	260.75	31.00	4562.47	54.72 N	951.74 W	951.74	953.31	273.29	.81
5451.00	78.37	260.25	27.00	4567.94	50.36 N	977.81 W	977.81	979.11	272.95	1.87
5485.00	78.50	261.25	34.00	4574.75	45.00 N	1010.69 W	1010.69	1011.69	272.55	2.91
5514.00	78.00	260.75	29.00	4580.66	40.56 N	1038.73 W	1038.73	1039.52	272.24	2.41
5545.00	77.50	260.75	31.00	4587.24	35.69 N	1068.63 W	1068.63	1069.23	271.91	1.61
5576.00	78.37	260.75	31.00	4593.72	30.82 N	1098.55 W	1098.55	1098.98	271.61	2.81
5607.00	79.12	260.75	31.00	4599.77	25.93 N	1128.56 W	1128.56	1128.86	271.32	2.42
5638.00	79.75	260.75	31.00	4605.45	21.03 N	1158.64 W	1158.64	1158.83	271.04	2.03
5668.00	78.37	260.25	30.00	4611.14	16.17 N	1187.69 W	1187.69	1187.80	270.78	4.88
5730.00	76.75	259.75	62.00	4624.50	5.66 N	1247.31 W	1247.31	1247.32	270.26	2.73
5760.00	76.12	259.25	30.00	4631.53	.34 N	1275.99 W	1275.99	1275.99	270.02	2.65
5790.00	76.25	258.75	30.00	4638.70	5.22 S	1304.58 W	1304.58	1304.59	269.77	1.68
5821.00	76.00	258.25	31.00	4646.13	11.22 S	1334.07 W	1334.07	1334.12	269.52	1.76
5851.00	76.00	258.75	30.00	4653.39	17.02 S	1362.60 W	1362.60	1362.70	269.28	1.62
5881.00	75.50	258.25	30.00	4660.77	22.82 S	1391.09 W	1391.09	1391.28	269.06	2.32
5910.00	75.12	258.75	29.00	4668.13	28.41 S	1418.58 W	1418.58	1418.86	268.85	2.12
5941.00	74.62	258.25	31.00	4676.22	34.37 S	1447.90 W	1447.90	1448.31	268.64	2.24
5971.00	73.62	258.25	30.00	4684.43	40.25 S	1476.15 W	1476.15	1476.70	268.44	3.33
6002.00	74.12	258.25	31.00	4693.04	46.32 S	1505.31 W	1505.31	1506.02	268.24	1.61
6032.00	74.50	257.75	30.00	4701.15	52.32 S	1533.56 W	1533.56	1534.45	268.05	2.04
6063.00	74.87	257.75	31.00	4709.34	58.66 S	1562.78 W	1562.78	1563.88	267.85	1.19
6094.00	75.00	257.75	31.00	4717.40	65.02 S	1592.03 W	1592.03	1593.36	267.66	.42
6124.00	75.00	258.25	30.00	4725.16	71.04 S	1620.38 W	1620.38	1621.93	267.49	1.61
6155.00	76.00	258.25	31.00	4732.93	77.15 S	1649.76 W	1649.76	1651.56	267.32	3.23
6185.00	76.12	257.75	30.00	4740.15	83.21 S	1678.24 W	1678.24	1680.30	267.16	1.67
6216.00	76.37	258.25	31.00	4747.52	89.47 S	1707.69 W	1707.69	1710.03	267.00	1.76
6247.00	77.00	258.25	31.00	4754.66	95.61 S	1737.23 W	1737.23	1739.86	266.85	2.03
6277.00	77.00	258.25	30.00	4761.41	101.56 S	1765.85 W	1765.85	1768.76	266.71	0.00
6308.00	76.37	258.25	31.00	4768.55	107.71 S	1795.38 W	1795.38	1798.61	266.57	2.03
6339.00	76.12	257.75	31.00	4775.92	113.97 S	1824.83 W	1824.83	1828.39	266.43	1.76

CONFIDENTIAL

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AMERICAN HUNTER EXPLORATION LTD.
AHEL JICARILLA #2A-1

SEC 2-T27N-R01W
RIO ARRIBA COUNTY, NEW MEXICO

MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T AZIMUTH (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	C L O S U R E DISTANCE (FT)		DOGLEG SEVERITY (DEG/100')
6400.00	75.12	257.75	61.00	4791.07	126.50 S	1882.58 W	1882.58	1886.82	266.16	1.64
6431.00	74.37	257.25	31.00	4799.23	132.98 S	1911.77 W	1911.77	1916.39	266.02	2.88
6461.00	74.62	257.25	30.00	4807.25	139.36 S	1939.97 W	1939.97	1944.97	265.89	.83
6491.00	74.25	256.75	30.00	4815.30	145.86 S	1968.13 W	1968.13	1973.53	265.76	2.02
6523.00	74.12	256.75	32.00	4824.02	152.91 S	1998.10 W	1998.10	2003.94	265.62	.41
6552.00	74.00	256.25	29.00	4831.98	159.42 S	2025.21 W	2025.21	2031.48	265.50	1.71
6585.00	73.87	256.25	33.00	4841.11	166.96 S	2056.01 W	2056.01	2062.78	265.36	.39
6632.00	73.87	256.25	47.00	4854.17	177.69 S	2099.87 W	2099.87	2107.37	265.16	0.00

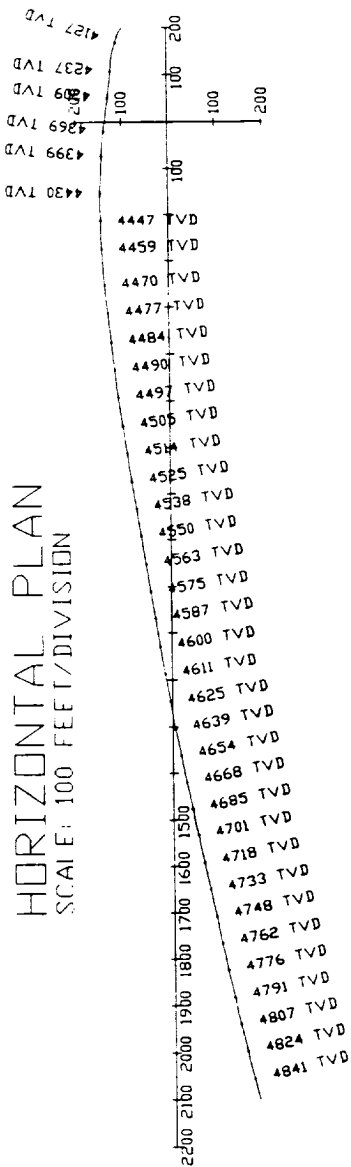
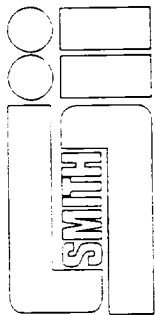
BOTTOM HOLE CLOSURE: 2107.37 Feet at 265.16 Degrees

AMERICAN HUNTER EXPLORATION LTD.

AHEL JICARILLA #2A-1

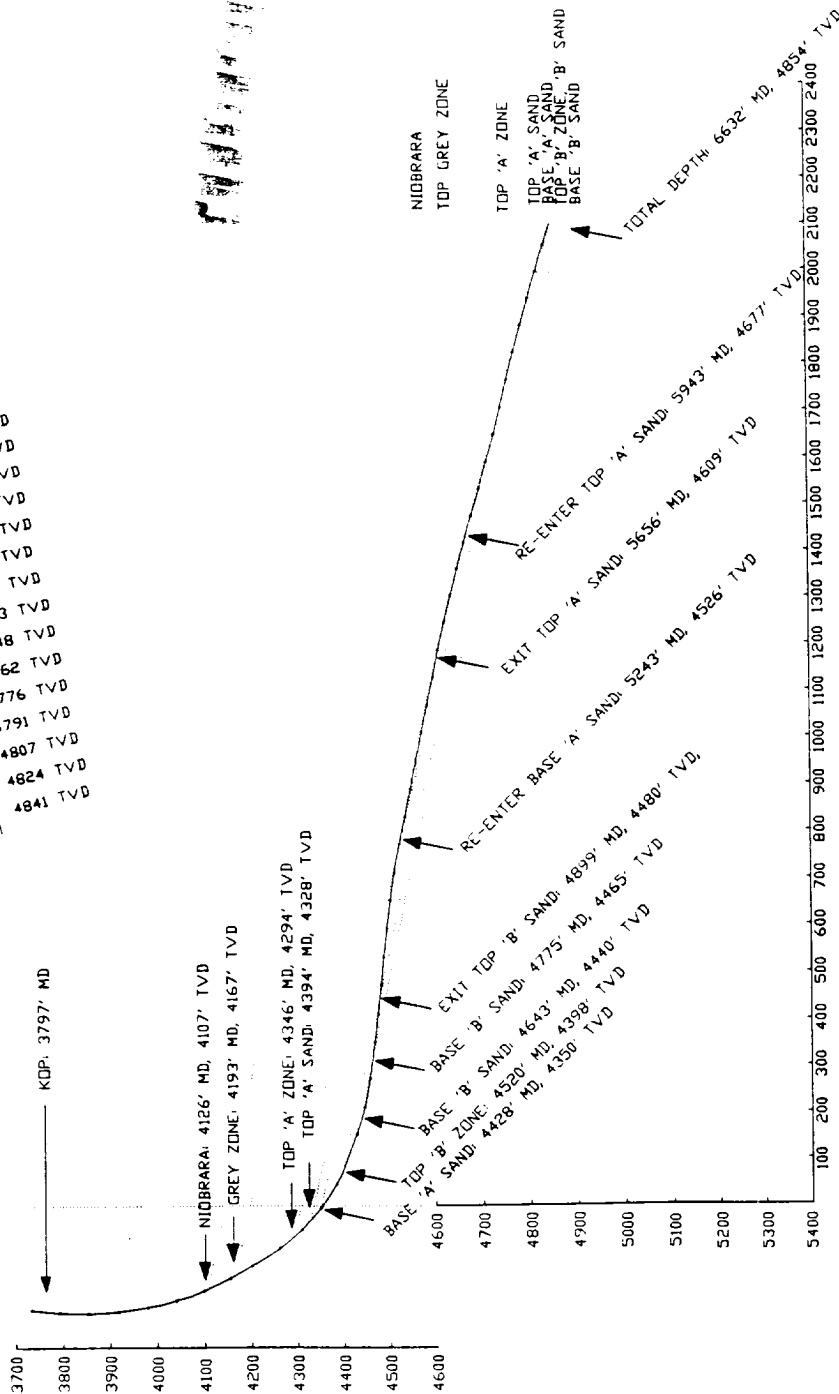
SEC 2-T27N-R01W

RIO ARriba COUNTY, NEW MEXICO



VERTICAL SECTION

SCALE: 100 FEET/DIVISION



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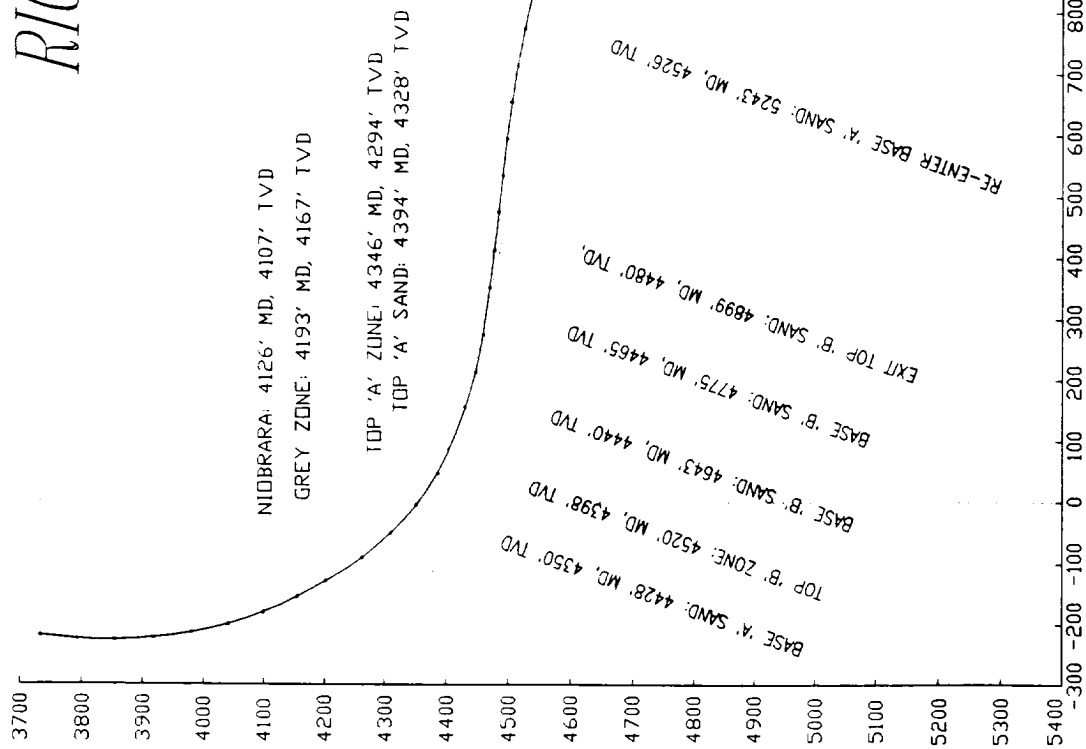
AMERICAN HUNTER EXPLORATION LTD.

AHEL JICARILLA #2A-1

SEC 2-T27N-R01W

RIO ARriba COUNTY, NEW MEXICO

VERTICAL PLANE
SCALE: 100 FEET/DIVISION



VERTICAL SECTION PLANE: 270.00 DEG.

WELL SUMMARY

1132 FEET IN "A" SAND
251 FEET IN MAIN "B" SAND
2100 FEET HORIZONTAL SECTION DRILLED
TOTAL FLUID LOSS OVER SEISMIC ANOMALY: 2235 BO
PRODUCTION ZONE: "A" SAND, 5324' - 5615' MD
WELL STATUS: PRODUCING

CONFIDENTIAL

14902 Henry Rd. • Houston, TX 77060
Telex 792699 • Fax 713-820-9341
Tel. 713-820-5508

Geoservices, Inc.

November 1, 1991

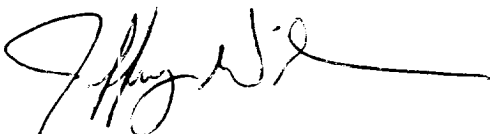
Mr. Steve Matthews
Canadian Hunter Exploration, Ltd.
435 - 4th Ave. S.W.
Calgary, Alberta
T2P 3A8

RECEIVED
MAR 5 1992
OIL CON. DIV.
\ DIST. 3

Dear Mr. Matthews:

Please find enclosed a notarized copy of the surveys from your Jicarilla #2A-1 well. If you require any additional copies or information, please feel free to call.

Yours truly,
GEOSERVICES, INC.



Jeffrey Wilson
Operations Manager

JW/m

enclosure

Geoservices-Directional

Deviation report

Well : JICARILLA #2A-1
 Field : WILDCAT
 Company : AMERICAN HUNTER

Coordinates

Well head : Target : Impact :
 X = 0.0 X = 0.0 X = 0.0
 Y = 0.0 Y = 0.0 Y = 0.0
 Z = 0.0 Z = 0.0 Z = 0.0

Horizontal displacement 2101.00 ft
 Total vertical depth 4852.60 ft Kick off point 3796.00 ft
 Magnetic declination 12.25 deg Convergence 0.00 deg
 Horizontal projection computed in azimuth North 270.00 deg. (SW 90.00)

Surv no	Measured depth feet	Drift angle degree	Azimut magnt. degree	Azimut geogr. degree	Vertical depth feet	Horizntl prjction feet	Horizntl displcmt feet	Average Az(geo) degree	.Relative East/West feet	Coordinates. Nor/South feet	Dog leg /100f
Computation method :			Radius of curvature								
1	250.0	0.03	347.75	360.00	250.0	-0.0	0.0	90.00	0.0 E	0.0 N	0.0
2	297.0	0.45	355.39	7.64	297.0	-0.0	0.2	3.82	0.0 E	0.2 N	1.0
3	388.0	0.42	19.87	32.12	388.0	-0.3	0.9	16.47	0.2 E	0.8 N	0.2
4	479.0	0.85	328.57	340.82	479.0	-0.4	1.8	11.20	0.4 E	1.8 N	0.7
5	572.0	0.31	4.35	16.60	572.0	-0.3	2.8	7.04	0.3 E	2.7 N	0.7
6	665.0	0.68	44.17	56.42	665.0	-0.8	3.5	13.46	0.8 E	3.4 N	0.5
7	759.0	0.61	330.96	343.21	759.0	-1.2	4.4	14.87	1.1 E	4.3 N	0.8
8	852.0	0.45	335.01	347.26	852.0	-1.0	5.2	10.18	0.9 E	5.1 N	0.2
9	945.0	0.04	297.10	309.35	945.0	-0.8	5.5	7.47	0.7 E	5.5 N	0.4
10	1038.0	0.79	113.35	125.60	1038.0	-1.2	5.9	9.60	1.0 E	5.8 N	0.9
11	1132.0	0.93	172.19	184.44	1132.0	-1.8	4.8	18.70	1.6 E	4.6 N	0.9
12	1225.0	0.80	119.36	131.61	1224.9	-2.3	3.9	31.74	2.1 E	3.3 N	0.8
13	1318.0	2.21	73.99	86.24	1317.9	-4.6	5.0	59.31	4.3 E	2.6 N	1.9
14	1412.0	3.34	72.01	84.26	1411.8	-9.1	9.3	71.64	8.8 E	2.9 N	1.2
15	1505.0	3.66	65.54	77.79	1504.6	-14.7	14.9	75.19	14.5 E	3.8 N	0.5
16	1598.0	4.72	63.91	76.16	1597.4	-21.4	21.7	75.75	21.1 E	5.4 N	1.1
17	1691.0	4.99	59.90	72.15	1690.0	-28.9	29.6	75.32	28.6 E	7.5 N	0.5
18	1785.0	5.92	65.06	77.31	1783.6	-37.5	38.5	75.19	37.3 E	9.9 N	1.1
19	1878.0	5.16	57.22	69.47	1876.2	-46.2	47.5	74.85	45.9 E	12.4 N	1.2
20	1971.0	4.99	56.34	68.59	1968.8	-53.8	55.7	73.99	53.5 E	15.4 N	0.2
21	2064.0	5.11	57.16	69.41	2061.5	-61.5	63.9	73.35	61.2 E	18.3 N	0.1
22	2158.0	4.44	62.56	74.81	2155.1	-68.9	71.7	73.22	68.6 E	20.7 N	0.9
23	2251.0	4.78	62.84	75.09	2247.8	-76.1	79.1	73.38	75.8 E	22.6 N	0.4
24	2344.0	5.02	58.25	70.50	2340.5	-83.7	87.1	73.33	83.4 E	25.0 N	0.5
25	2438.0	6.09	61.26	73.51	2434.0	-92.4	96.2	73.20	92.1 E	27.8 N	1.2
26	2531.0	5.67	58.70	70.95	2526.6	-101.5	105.7	73.11	101.2 E	30.7 N	0.5
27	2624.0	6.46	58.02	70.27	2619.0	-110.7	115.5	72.90	110.4 E	34.0 N	0.8
28	2717.0	6.25	60.86	73.11	2711.5	-120.5	125.8	72.80	120.2 E	37.2 N	0.4
29	2811.0	5.65	56.72	68.97	2805.0	-129.7	135.6	72.67	129.4 E	40.4 N	0.8
30	2904.0	6.09	53.78	66.03	2897.5	-138.5	145.0	72.34	138.2 E	44.0 N	0.6
31	2997.0	5.75	62.83	75.08	2990.0	-147.5	154.6	72.23	147.2 E	47.2 N	1.1
32	3091.0	5.26	57.09	69.34	3083.5	-156.1	163.6	72.22	155.8 E	50.0 N	0.8
33	3184.0	5.46	59.60	71.85	3176.1	-164.3	172.3	72.14	164.0 E	52.8 N	0.3
34	3277.0	5.84	53.91	66.16	3268.7	-172.9	181.4	71.98	172.6 E	56.1 N	0.7
35	3370.0	6.23	54.16	66.41	3361.2	-181.8	191.2	71.69	181.5 E	60.0 N	0.4

Geoservices-Directional

Deviation report

Well : JICARILLA #2A-1
 Field : WILDCAT
 Company : AMERICAN HUNTER

Surv no	Measured depth feet	Drift: angle degree	Azimuth magnt. degree	Azimuth geogr. degree	Vertical depth feet	Horizontl prjction feet	Horizontl displcmt feet	Average Az(geo) degree	.Relative East/West feet	Coordinates. Nor/South feet	Dog leg /100f
Computation method :			Radius of curvature								
36	3464.0	5.66	53.15	65.40	3454.7	-190.7	200.9	71.41	190.4 E	64.0 N	0.6
37	3557.0	6.37	56.65	68.90	3547.1	-199.7	210.6	71.22	199.4 E	67.8 N	0.8
38	3650.0	7.21	49.45	61.70	3639.5	-209.7	221.5	70.92	209.4 E	72.4 N	1.3
39	3744.0	7.02	53.40	65.65	3732.8	-220.1	233.1	70.56	219.8 E	77.6 N	0.6
40	3772.0	7.12	49.00	61.25	3760.6	-223.2	236.5	70.46	222.9 E	79.1 N	2.0
41	3804.0	5.37	39.00	51.25	3792.4	-226.1	239.9	70.26	225.8 E	81.0 N	6.4
42	3834.0	3.62	13.50	25.75	3822.3	-227.6	241.8	69.96	227.2 E	82.9 N	8.7
43	3866.0	3.62	330.50	342.75	3854.2	-227.7	242.7	69.54	227.4 E	84.8 N	8.3
44	3898.0	5.33	303.50	315.75	3886.1	-226.4	242.2	68.96	226.1 E	87.0 N	8.4
45	3930.0	7.50	294.50	306.75	3917.9	-223.7	240.6	68.20	223.4 E	89.3 N	7.3
46	3961.0	9.00	282.50	294.75	3948.6	-219.9	237.9	67.36	219.6 E	91.6 N	7.3
47	3993.0	11.25	283.50	295.75	3980.1	-214.8	234.2	66.33	214.5 E	94.0 N	7.0
48	4024.0	13.62	281.00	293.25	4010.4	-208.7	229.8	65.09	208.4 E	96.8 N	7.8
49	4055.0	16.37	277.50	289.75	4040.3	-201.3	224.3	63.61	201.0 E	99.7 N	9.3
50	4087.0	19.50	276.50	288.75	4070.7	-192.0	217.6	61.76	191.6 E	103.0 N	9.8
51	4117.0	22.75	276.50	288.75	4098.7	-181.7	210.3	59.60	181.4 E	106.4 N	10.8
52	4148.0	26.12	276.00	288.25	4126.9	-169.6	202.1	56.86	169.3 E	110.5 N	10.9
53	4180.0	28.87	275.00	287.25	4155.3	-155.5	193.2	53.46	155.2 E	115.0 N	8.7
54	4212.0	29.75	269.00	281.25	4183.2	-140.3	183.7	49.67	140.0 E	118.9 N	9.6
55	4234.0	30.12	264.50	276.75	4202.3	-129.5	176.7	46.97	129.2 E	120.6 N	10.3
56	4243.0	30.25	263.50	275.75	4210.1	-125.0	173.8	45.84	124.7 E	121.1 N	5.7
57	4275.0	33.00	263.00	275.25	4237.3	-108.3	163.4	41.35	108.0 E	122.7 N	8.6
58	4306.0	36.62	262.00	274.25	4262.8	-90.7	153.5	36.04	90.3 E	124.1 N	11.8
59	4336.0	40.12	263.50	275.75	4286.3	-72.1	144.8	29.72	71.8 E	125.8 N	12.1
60	4367.0	44.25	265.50	277.75	4309.2	-51.4	138.0	21.74	51.1 E	128.2 N	14.0
61	4398.0	47.87	266.00	278.25	4330.7	-29.3	134.5	12.46	29.0 E	131.3 N	11.7
62	4429.0	52.00	265.50	277.75	4350.7	-5.9	134.7	2.35	5.5 E	134.6 N	13.4
63	4461.0	56.62	265.00	277.25	4369.4	19.9	139.5	351.66	20.2 W	138.0 N	14.5
64	4492.0	61.12	263.50	275.75	4385.4	46.3	148.5	341.72	46.6 W	141.0 N	15.1
65	4522.0	65.75	262.50	274.75	4398.8	73.0	161.1	332.94	73.3 W	143.5 N	15.7
66	4609.0	72.25	257.00	269.25	4430.0	154.1	212.7	313.46	154.4 W	146.3 N	9.5
67	4639.0	73.25	257.50	269.75	4438.9	182.8	234.2	308.58	183.0 W	146.0 N	3.7
68	4670.0	76.12	257.00	269.25	4447.0	212.7	258.1	304.40	212.9 W	145.8 N	9.4
69	4702.0	79.38	256.00	268.25	4453.8	243.9	284.1	300.72	244.2 W	145.1 N	10.6
70	4732.0	81.37	254.50	266.75	4458.8	273.5	309.2	297.71	273.7 W	143.8 N	8.2
71	4748.0	81.50	254.50	266.75	4461.2	289.3	322.9	296.27	289.5 W	142.9 N	0.8
72	4778.0	82.62	253.00	265.25	4465.4	318.9	348.9	293.81	319.2 W	140.8 N	6.2
73	4811.0	82.75	252.50	264.75	4469.6	351.5	377.9	291.42	351.8 W	138.0 N	1.5
74	4842.0	83.00	252.00	264.25	4473.4	382.1	405.6	289.45	382.4 W	135.0 N	1.8
75	4873.0	83.50	251.50	263.75	4477.1	412.7	433.5	287.70	413.0 W	131.8 N	2.3
76	4904.0	83.75	251.50	263.75	4480.5	443.4	461.9	286.15	443.6 W	128.5 N	0.8
77	4935.0	83.75	251.00	263.25	4483.9	474.0	490.5	284.76	474.3 W	125.0 N	1.6
78	4966.0	83.75	251.00	263.25	4487.3	504.6	519.2	283.52	504.9 W	121.4 N	0.0

Geoservices-Directional

Deviation report

Well :
Field :
Company :

JICARILLA #2A-1
WILDCAT
AMERICAN HUNTER

Surv no	Measured depth feet	Drift angle degree	Azimut magnt. degree	Azimut geogr. degree	Vertical depth feet	Horizntl prjction feet	Horizntl displcmt feet	Average Az(geo) degree	.Relative East/West feet	Coordinates. Nor/South feet	Dog leg /100f
Computation method :			Radius of curvature								
79	4995.0	84.00	251.00	263.25	4490.3	533.2	546.4	282.47	533.5 W	118.0 N	0.9
80	5026.0	83.75	250.50	262.75	4493.7	563.8	575.5	281.45	564.1 W	114.2 N	1.8
81	5056.0	83.50	250.00	262.25	4497.0	593.4	603.8	280.53	593.7 W	110.3 N	1.8
82	5087.0	82.87	249.50	261.75	4500.7	623.9	633.1	279.64	624.1 W	106.0 N	2.6
83	5117.0	82.12	249.50	261.75	4504.6	653.3	661.4	278.85	653.6 W	101.8 N	2.5
84	5148.0	81.37	249.50	261.75	4509.0	683.6	690.8	278.10	683.9 W	97.4 N	2.4
85	5177.0	80.12	249.00	261.25	4513.7	712.0	718.3	277.45	712.2 W	93.1 N	4.6
86	5209.0	79.12	249.00	261.25	4519.5	743.1	748.6	276.78	743.3 W	88.3 N	3.1
87	5240.0	78.50	249.00	261.25	4525.5	773.1	777.9	276.18	773.4 W	83.7 N	2.0
88	5270.0	78.12	248.50	260.75	4531.6	802.1	806.3	275.63	802.4 W	79.1 N	2.0
89	5300.0	78.37	248.50	260.75	4537.7	831.1	834.7	275.11	831.4 W	74.4 N	0.8
90	5331.0	78.37	248.50	260.75	4543.9	861.1	864.2	274.61	861.4 W	69.5 N	0.0
91	5362.0	78.37	248.50	260.75	4550.2	891.1	893.7	274.15	891.3 W	64.6 N	0.0
92	5393.0	78.50	248.50	260.75	4556.4	921.0	923.3	273.71	921.3 W	59.8 N	0.4
93	5424.0	78.25	248.50	260.75	4562.6	951.0	952.9	273.30	951.3 W	54.9 N	0.8
94	5451.0	78.37	249.00	261.25	4568.1	977.1	978.7	272.97	977.4 W	50.7 N	1.9
95	5485.0	78.50	249.00	261.25	4574.9	1010.0	1011.4	272.59	1010.3 W	45.7 N	0.4
96	5514.0	78.00	248.50	260.75	4580.8	1038.1	1039.2	272.27	1038.4 W	41.2 N	2.4
97	5545.0	77.50	248.50	260.75	4587.4	1068.0	1068.9	271.95	1068.3 W	36.4 N	1.6
98	5576.0	78.37	248.50	260.75	4593.9	1097.9	1098.6	271.64	1098.2 W	31.5 N	2.8
99	5607.0	79.12	248.50	260.75	4599.9	1127.9	1128.5	271.35	1128.2 W	26.6 N	2.4
100	5638.0	79.75	248.50	260.75	4605.6	1158.0	1158.5	271.07	1158.3 W	21.7 N	2.0
101	5668.0	78.37	248.00	260.25	4611.3	1187.0	1187.4	270.81	1187.3 W	16.8 N	4.9
102	5730.0	76.75	247.50	259.75	4624.7	1246.7	1247.0	270.29	1247.0 W	6.3 N	2.7
103	5760.0	76.12	247.00	259.25	4631.7	1275.3	1275.6	270.05	1275.6 W	1.0 N	2.6
104	5790.0	76.25	246.50	258.75	4638.9	1303.9	1304.2	269.80	1304.2 W	4.5 S	1.7
105	5823.0	76.00	246.00	258.25	4646.8	1335.3	1335.7	269.53	1335.6 W	10.9 S	1.6
106	5851.0	76.00	246.50	258.75	4653.6	1362.0	1362.3	269.31	1362.2 W	16.3 S	1.7
107	5881.0	75.50	246.00	258.25	4660.9	1390.5	1390.9	269.09	1390.7 W	22.1 S	2.3
108	5910.0	75.12	246.50	258.75	4668.3	1417.9	1418.5	268.88	1418.2 W	27.7 S	2.1
109	5941.0	74.52	246.00	258.25	4676.4	1447.3	1447.9	268.67	1447.5 W	33.7 S	2.2
110	5971.0	73.62	246.00	258.25	4684.6	1475.5	1476.3	268.46	1475.8 W	39.6 S	3.3
111	6002.0	74.12	246.00	258.25	4693.2	1504.7	1505.6	268.26	1505.0 W	45.6 S	1.6
112	6032.0	74.50	245.50	257.75	4701.3	1532.9	1534.1	268.07	1533.2 W	51.6 S	2.0
113	6063.0	74.87	245.50	257.75	4709.5	1562.1	1563.5	267.87	1562.4 W	58.0 S	1.2
114	6094.0	75.00	245.50	257.75	4717.6	1591.4	1593.0	267.69	1591.7 W	64.3 S	0.4
115	6124.6	75.00	246.00	258.25	4725.5	1620.3	1622.1	267.51	1620.6 W	70.5 S	1.6
116	6155.0	76.00	246.00	258.25	4733.1	1649.1	1651.2	267.35	1649.4 W	76.5 S	3.3
117	6185.0	76.12	245.50	257.75	4740.3	1677.6	1679.9	267.18	1677.9 W	82.5 S	1.7
118	6216.0	76.37	246.00	258.25	4747.7	1707.1	1709.6	267.02	1707.3 W	88.8 S	1.7
119	6247.0	77.00	246.00	258.25	4754.8	1736.6	1739.5	266.87	1736.9 W	94.9 S	2.0
120	6277.0	77.00	246.00	258.25	4761.6	1765.2	1768.4	266.73	1765.5 W	100.9 S	0.0
121	6308.0	76.37	246.00	258.25	4768.7	1794.7	1798.2	266.59	1795.0 W	107.0 S	2.0

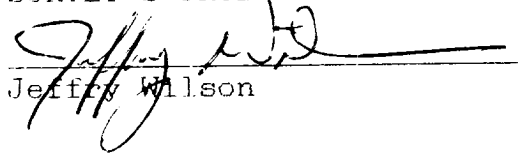
Geoservices-Directional

Deviation report

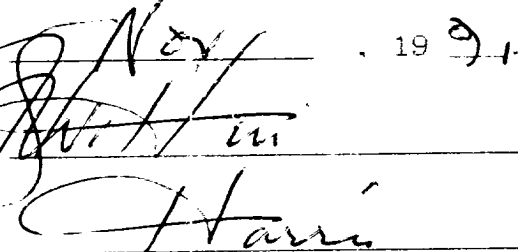
Well : JICARILLA #2A-1
Field : WILDCAT
Company : AMERICAN HUNTER

Surv no	Measured depth feet	Drift angle degree	Azimuth magnt. degree	Azimuth geogr. degree	Vertical depth feet	Horizntl prjction feet	Horizntl displcmt feet	Average Az(geo) degree	Relative Coordinates East/West feet	Coordinates Nor/South feet	Dog leg /100f
Computation method :			Radius of curvature								
122	6339.0	76.12	245.50	257.75	4776.1	1824.2	1828.0	266.45	1824.5 W	113.3 S	1.7
123	6400.0	75.12	245.50	257.75	4791.2	1881.9	1886.4	266.18	1882.2 W	125.8 S	1.6
124	6431.0	74.37	245.00	257.25	4799.4	1911.1	1916.0	266.04	1911.4 W	132.3 S	2.9
125	6461.0	74.62	245.00	257.25	4807.4	1939.3	1944.6	265.91	1939.6 W	138.7 S	0.8
126	6491.0	74.25	244.50	256.75	4815.5	1967.5	1973.1	265.78	1967.8 W	145.2 S	2.0
127	6523.0	74.12	244.50	256.75	4824.2	1997.5	2003.5	265.64	1997.7 W	152.2 S	0.4
128	6552.0	74.00	244.00	256.25	4832.2	2024.6	2031.1	265.52	2024.9 W	158.8 S	1.7
129	6585.0	73.87	244.00	256.25	4841.3	2055.4	2062.4	265.38	2055.7 W	166.3 S	0.4
130	6632.0	73.68	244.00	256.25	4854.4	2099.2	2106.9	265.18	2099.5 W	177.0 S	0.4

SURVEY'S TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE


Jeffrey Wilson

SUBSCRIBED AND SWORN TO BEFORE ME THIS 15 DAY OF

Nov, 19 91.

Harris

NOTARY PUBLIC

COUNTY, TEXAS