

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
*Do not use this form for proposals to drill or to re-enter an
abandoned well. Use Form 3160-3 (APD) for such proposals.*

SUBMIT IN TRIPLICATE - Other Instructions on page 2.

1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other	FEB 28 2011
2. Name of Operator Black Hills Exploration & Production	
3a. Address 3200 N 1st Street Bloomfield, NM 87413	3b. Phone No. (include area code) (505) 634-1111
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Surface: 665' FNL & 2400' FWL NE/NW (Unit C) Section 29 T30N R3W	

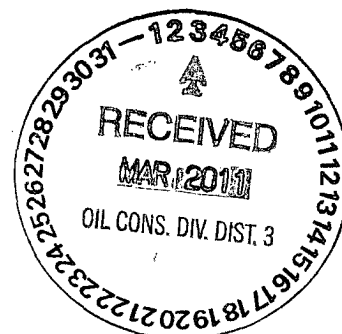
5. Lease Serial No. Contract 464
6. If Indian, Allottee, or Tribe Name Jicarilla Apache Tribe
7. If Unit or CA. Agreement Name and/or No.
8. Well Name and No. 29 Jicarilla 464-26 #716
9. API Well No. 30-039-29888
10. Field and Pool, or Exploratory Area Basin Mancos
11. County or Parish, State Rio Arriba 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	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-off
☒ Subsequent Report	☐ Altering Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Submitting Gyro Survey
	☐ Change Plans	☐ Plug and abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug back	☐ Water Disposal	

13. Describe Proposed or Completed Operation Clearly state all pertinent details including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will performed or provide the Bond No. on file with the BLM/ BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notice shall be filed only after all requirements, including reclamantion, have been completed, and the operator has determined that the site is ready for final inspection.)

BHGR is submitting the attached Gyro Survey that was ran on 12/17/2010 during plug back.



14. I hereby certify that the foregoing is true and correct. Name (Printed/ Typed)

Daniel Manus

Regulatory Technician

Title

Signature

Date

2/28/11

ACCEPTED FOR RECORD

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

FEB 28 2011

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

Office

BLM FIELD OFFICE

Title 18 U.S.C. Section 1001 AND Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

NMOCD

BLACK HILLS GAS RESOURCES

Jicarilla

Rio Arriba, NM

Jicarilla 464-29 #716

VH - Job #32K1210195

Survey: Actual

SDI Standard Survey Report

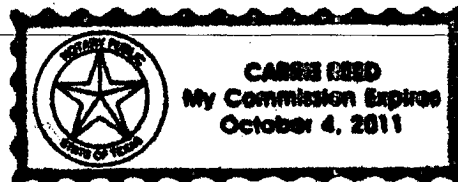
This survey is correct to the best of my knowledge and is supported by actual field data.

Richard

Notarized this date 17th of January, 2011.

Carrs Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.
SDI Standard Survey Report

Company:	BLACK HILLS GAS RESOURCES	Local Co-ordinate Reference:	Well Jicarilla 464-29 #716
Project:	Jicarilla	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Rio Arriba, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Jicarilla 464-29 #716	North Reference:	Grid
Wellbore:	VH - Job #32K1210195	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1210195	Database:	EDM-Regulatory

Project		Jicarilla	
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site		Rio Arriba, NM			
Site Position:		Northing:	2,107,040.99 usft	Latitude:	36° 47' 19.644 N
From:	Lat/Long	Easting:	692,751.55 usft	Longitude:	107° 10' 30.288 W
Position Uncertainty:	0.0 usft	Slot Radius:	0"	Grid Convergence:	0.39 °

Well	Jicarilla 464-29 #716					
Well Position	+N/-S	0.0 usft	Northing:	2,107,040.99 usft	Latitude:	36° 47' 19.644 N
	+E/-W	0.0 usft	Easting:	692,751.55 usft	Longitude:	107° 10' 30.288 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	0.0 usft

Wellbore	VH - Job #32K1210195				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	12/16/2010	9.71	63.66	50,938

Design	VH - Job #32K1210195				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	177.15	

Survey Program		Date	1/13/2011		
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
100.0	7,980.0	Actual (VH - Job #32K1210195)	Keeper	Keeper Gyro	

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0
100.0	0.52	308.29	100.0	0.3	-0.4	308.29	0.5
200.0	0.37	303.07	200.0	0.7	-1.0	306.92	1.2
300.0	0.32	293.10	300.0	1.0	-1.5	304.14	1.8
400.0	0.42	312.36	400.0	1.4	-2.0	304.12	2.5
500.0	0.48	307.62	500.0	1.9	-2.6	305.50	3.2
600.0	0.27	315.40	600.0	2.3	-3.1	306.32	3.9
700.0	0.13	71.83	700.0	2.5	-3.2	308.15	4.1
800.0	0.48	164.85	800.0	2.1	-3.0	305.71	3.7
900.0	0.78	168.54	900.0	1.1	-2.7	291.37	2.9
1,000.0	0.71	147.08	1,000.0	-0.1	-2.3	267.03	2.3
1,100.0	0.62	148.15	1,100.0	-1.1	-1.6	236.21	2.0

Scientific Drilling International, Inc.

SDI Standard Survey Report

Company:	BLACK HILLS GAS RESOURCES	Local Co-ordinate Reference:	Well Jicarilla 464-29 #716
Project:	Jicarilla	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Rio Arriba, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Jicarilla 464-29 #716	North Reference:	Grid
Wellbore:	VH - Job #32K1210195	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1210195	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
1,200.0	0.29	179.45	1,200.0	-1.8	-1.4	216.75	2.3
1,300.0	0.59	196.24	1,300.0	-2.6	-1.5	210.28	3.0
1,400.0	0.50	181.54	1,400.0	-3.5	-1.6	205.30	3.9
1,500.0	0.89	152.91	1,499.9	-4.6	-1.3	195.81	4.8
1,600.0	1.84	185.54	1,599.9	-6.9	-1.1	189.12	7.0
1,700.0	2.17	190.09	1,699.9	-10.4	-1.6	188.75	10.5
1,800.0	2.49	186.14	1,799.8	-14.4	-2.2	188.53	14.6
1,900.0	2.45	184.69	1,899.7	-18.7	-2.6	187.82	18.9
2,000.0	2.46	199.78	1,999.6	-22.8	-3.5	188.63	23.1
2,100.0	2.16	207.63	2,099.5	-26.5	-5.1	190.82	27.0
2,200.0	2.01	201.06	2,199.4	-29.8	-6.6	192.43	30.5
2,300.0	1.93	190.47	2,299.4	-33.1	-7.5	192.77	34.0
2,400.0	1.77	179.39	2,399.3	-36.3	-7.8	192.12	37.1
2,500.0	1.34	183.90	2,499.3	-39.0	-7.9	191.39	39.8
2,600.0	1.20	170.38	2,599.3	-41.2	-7.8	190.67	42.0
2,700.0	0.90	183.14	2,699.3	-43.0	-7.6	190.06	43.7
2,800.0	0.50	172.29	2,799.2	-44.3	-7.6	189.76	44.9
2,900.0	0.08	183.38	2,899.2	-44.8	-7.6	189.59	45.4
3,000.0	0.01	276.61	2,999.2	-44.8	-7.6	189.59	45.5
3,100.0	0.27	262.35	3,099.2	-44.9	-7.8	189.89	45.5
3,200.0	0.18	294.39	3,199.2	-44.8	-8.2	190.36	45.6
3,300.0	0.13	166.50	3,299.2	-44.9	-8.3	190.49	45.6
3,400.0	0.33	197.55	3,399.2	-45.3	-8.4	190.48	46.0
3,500.0	0.26	273.59	3,499.2	-45.5	-8.7	190.80	46.3
3,600.0	0.21	285.73	3,599.2	-45.5	-9.1	191.31	46.4
3,700.0	0.11	231.76	3,699.2	-45.5	-9.3	191.61	46.4
3,800.0	0.34	167.62	3,799.2	-45.8	-9.4	191.54	46.8
3,900.0	0.23	182.56	3,899.2	-46.3	-9.3	191.35	47.2
4,000.0	0.21	345.10	3,999.2	-46.3	-9.4	191.41	47.3
4,100.0	0.44	13.51	4,099.2	-45.8	-9.3	191.50	46.7
4,200.0	0.69	17.29	4,199.2	-44.8	-9.0	191.40	45.7
4,300.0	0.36	53.94	4,299.2	-44.1	-8.6	191.05	44.9
4,400.0	0.36	87.82	4,399.2	-43.9	-8.0	190.39	44.6
4,500.0	0.50	105.11	4,499.2	-44.0	-7.3	189.43	44.6
4,600.0	0.32	94.72	4,599.2	-44.1	-6.6	188.52	44.6
4,700.0	0.52	119.00	4,699.2	-44.4	-5.9	187.62	44.7
4,800.0	0.31	62.63	4,799.2	-44.4	-5.3	186.79	44.8
4,900.0	0.53	35.95	4,899.2	-44.0	-4.8	186.21	44.2
5,000.0	0.45	38.85	4,999.2	-43.3	-4.3	185.63	43.5
5,100.0	0.48	23.65	5,099.2	-42.6	-3.8	185.17	42.8
5,200.0	0.73	4.87	5,199.2	-41.6	-3.6	184.99	41.7
5,300.0	0.33	85.02	5,299.2	-40.9	-3.3	184.59	41.0
5,400.0	1.18	137.86	5,399.2	-41.6	-2.3	183.17	41.7
5,500.0	0.79	141.02	5,499.2	-42.9	-1.2	181.58	43.0

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Design:	VH - Job #32K1210195	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,600.0	0.53	137.42	5,599.2	-43.8	-0.4	180.57	43.8
5,700.0	0.35	134.05	5,699.2	-44.4	0.1	179.88	44.4
5,800.0	0.28	150.97	5,799.2	-44.8	0.4	179.45	44.8
5,900.0	0.33	136.43	5,899.2	-45.2	0.8	179.05	45.2
6,000.0	0.22	320.14	5,999.2	-45.3	0.8	178.96	45.3
6,100.0	0.62	289.20	6,099.2	-45.0	0.2	179.76	45.0
6,200.0	0.46	310.37	6,199.2	-44.5	-0.6	180.80	44.5
6,300.0	0.25	5.08	6,299.2	-44.0	-0.9	181.19	44.0
6,400.0	0.57	27.59	6,399.1	-43.4	-0.7	180.87	43.4
6,500.0	0.45	17.00	6,499.1	-42.6	-0.3	180.43	42.6
6,600.0	0.54	25.68	6,599.1	-41.8	0.0	180.00	41.8
6,700.0	0.79	74.40	6,699.1	-41.2	0.9	178.79	41.2
6,800.0	0.76	105.68	6,799.1	-41.1	2.2	176.98	41.2
6,900.0	0.64	119.19	6,899.1	-41.6	3.3	175.47	41.7
7,000.0	0.18	111.67	6,999.1	-41.9	3.9	174.64	42.1
7,100.0	0.26	246.85	7,099.1	-42.1	3.9	174.75	42.3
7,200.0	0.28	294.52	7,199.1	-42.1	3.4	175.33	42.2
7,300.0	0.51	289.68	7,299.1	-41.8	2.8	176.17	41.9
7,400.0	0.33	257.78	7,399.1	-41.7	2.1	177.12	41.8
7,500.0	0.36	223.27	7,499.1	-42.0	1.6	177.82	42.0
7,600.0	0.34	97.74	7,599.1	-42.3	1.7	177.73	42.3
7,700.0	0.23	304.36	7,699.1	-42.2	1.8	177.55	42.2
7,800.0	0.10	312.42	7,799.1	-42.0	1.6	177.85	42.1
7,900.0	0.09	70.61	7,899.1	-42.0	1.6	177.83	42.0
7,980.0	0.65	71.64	7,979.1	-41.8	2.1	177.15	41.8



Project: Jicarilla
Rio Arriba, NM
Well: Jicarilla 464-29 #716
Wellbore: VH - Job #32K1210195
Design: VH - Job #32K1210195

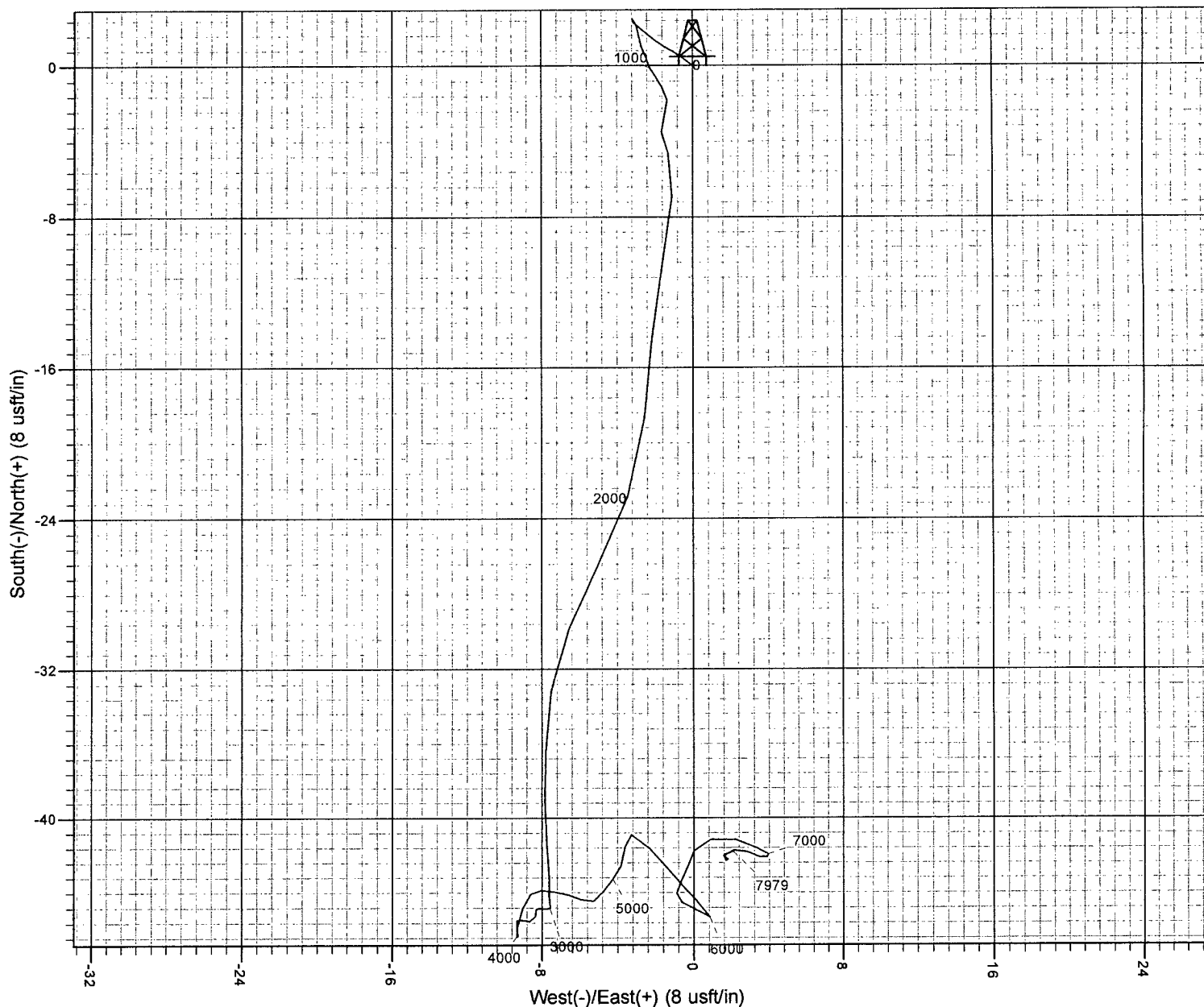


Azimuths to Grid North
True North: -0.39°
Magnetic North: 9.31°

Magnetic Field
Strength: 50938.1snT
Dip Angle: 63.66°
Date: 12/16/2010
Model: BGGM2010

WELL DETAILS: Jicarilla 464-29 #716
WELL @ 0.0usft (Original Well Elev)
Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	2107040.99	692751.55	36° 47' 19.644 N	107° 10' 30.288 W	



PROJECT DETAILS: Jicarilla
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico West 3003
System Datum: Mean Sea Level

SITE DETAILS: Rio Arriba, NM
 Site Centre Latitude: 36° 47' 19.644 N
 Longitude: 107° 10' 30.288 W
 Positional Uncertainty: 0.0
 Convergence: 0.39
 Local North: Grid