

[illegible]

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3          Black Hills Gas Resources                               3
3                                                                 3
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Well Number	:	Jicarilla 457-10 #708	
Well Location	:	Rio Arrabi, NM	
Job Number	:	32K0107030	5
Location Latitude	:	36.826	
Survey Date	:	12-JAN-2007	
S.D.C. Personnel	:	K.Newlen	BA
Length Units	:	Feet	M
North Reference	:	TRUE North	T
Grid Correction	:	0.00 Degrees	
Survey Depth Zero	:	KB	
Proposal Direction	:		
Calculation Method	:	Minimum Curvature	

Surface
2410/5 1515/w
BAL 2355/5 1716/w
md 8164
Tvd 8152

Remarks : The INRUN Survey will be called definitive
Survey ran in 2-3/8 tbg from 0-8164'
Well flowing very hard throughout survey!!!

[illegible]

Inrun Survey

for

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Black Hills Gas Resources

Well No.: Jicarilla 457-10 #708

Date : 12-JAN-2007

Job No. : 32K0107030

TRUE

Proposal : 0.00

Depth	T.V.D.	V.S.	Inc	Azimuth	Latitude	Departure	D-leg
(Feet)	(Feet)	(Feet)	Deg.	Deg.	(Feet)	(Feet)	/100

[illegible]

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	99.99	0.43	1.32	291.90	0.43	-1.07	1.32
200.00	199.96	1.59	1.49	303.93	1.59	-3.22	0.34
300.00	299.92	3.22	1.64	309.16	3.22	-5.41	0.20
400.00	399.88	4.94	1.60	306.07	4.94	-7.65	0.10
500.00	499.85	6.53	1.36	309.76	6.53	-9.69	0.25
600.00	599.83	8.01	1.15	316.00	8.01	-11.30	0.26
700.00	699.81	9.37	1.03	315.26	9.37	-12.63	0.12
800.00	799.79	10.46	0.95	303.31	10.46	-13.96	0.22
900.00	899.78	11.27	0.92	296.45	11.27	-15.37	0.11
1000.00	999.77	11.99	0.93	296.57	11.99	-16.81	0.01
1100.00	1099.75	12.62	0.88	290.14	12.62	-18.26	0.11
1200.00	1199.74	12.87	0.65	268.53	12.87	-19.55	0.36
1300.00	1299.74	12.71	0.68	255.53	12.71	-20.69	0.15
1400.00	1399.73	12.46	0.63	258.90	12.46	-21.81	0.06
1500.00	1499.73	12.32	0.59	266.70	12.32	-22.86	0.09
1600.00	1599.72	12.34	0.56	275.38	12.34	-23.86	0.09
1700.00	1699.72	12.51	0.43	290.00	12.51	-24.70	0.18
1800.00	1799.71	12.81	0.42	297.77	12.81	-25.38	0.06
1900.00	1899.71	13.26	0.46	313.36	13.26	-26.00	0.13
2000.00	1999.71	13.74	0.47	299.87	13.74	-26.64	0.11
2100.00	2099.70	14.07	0.31	298.11	14.07	-27.24	0.16
2200.00	2199.70	14.26	0.20	290.14	14.26	-27.65	0.12
2300.00	2299.70	14.22	0.17	224.83	14.22	-27.91	0.20
2400.00	2399.70	13.86	0.30	192.68	13.86	-28.08	0.18
2500.00	2499.70	13.14	0.53	174.20	13.14	-28.09	0.27
2600.00	2599.70	12.14	0.62	171.98	12.14	-27.96	0.09
2700.00	2699.69	10.98	0.71	180.00	10.98	-27.89	0.13
2800.00	2799.68	9.75	0.71	188.59	9.75	-27.98	0.11
2900.00	2899.67	8.59	0.70	206.14	8.59	-28.34	0.22
3000.00	2999.66	7.47	0.77	212.95	7.47	-28.98	0.12
3100.00	3099.66	6.33	0.82	215.74	6.33	-29.76	0.06
3200.00	3199.64	5.14	0.91	220.05	5.14	-30.69	0.11
3300.00	3299.63	3.90	0.88	214.07	3.90	-31.63	0.10
3400.00	3399.62	2.75	0.69	210.64	2.75	-32.36	0.20
3500.00	3499.62	1.84	0.49	203.68	1.84	-32.84	0.21
3600.00	3599.61	1.24	0.29	144.42	1.24	-32.86	0.42
3700.00	3699.61	1.23	0.38	54.87	1.23	-32.44	0.48
3800.00	3799.61	1.72	0.38	25.96	1.72	-32.02	0.19
3900.00	3899.61	2.33	0.52	47.23	2.33	-31.54	0.22

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Inrun Survey

for

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Black Hills Gas Resources

Well No.: Jicarilla 457-10 #708

Date : 12-JAN-2007

Job No. : 32K0107030

TRUE

Proposal : 0.00

Depth (Feet)	T.V.D. (Feet)	V.S. (Feet)	Inc Deg.	Azimuth Deg.	Latitude (Feet)	Departure (Feet)	D-leg /100
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[illegible]

4000.00	3999.60	3.02	0.99	63.81	3.02	-30.43	0.51
4100.00	4099.57	3.79	1.46	72.16	3.79	-28.45	0.50
4200.00	4199.52	4.68	2.15	74.38	4.68	-25.44	0.69
4300.00	4299.43	5.60	2.74	80.00	5.60	-21.28	0.64
4400.00	4399.30	6.36	3.08	82.60	6.36	-16.27	0.36

4500.00	4499.16	6.88	3.13	86.35	6.88	-10.88	0.21
4600.00	4598.99	7.07	3.42	89.73	7.07	-5.18	0.36
4700.00	4698.78	6.99	3.99	91.53	6.99	1.29	0.58
4800.00	4798.53	6.71	4.11	92.94	6.71	8.35	0.15
4900.00	4898.25	6.17	4.49	95.20	6.17	15.83	0.42

5000.00	4997.91	5.35	5.01	96.14	5.35	24.07	0.53
5100.00	5097.51	4.40	5.27	96.03	4.40	32.98	0.26
5200.00	5197.06	3.32	5.49	97.21	3.32	42.29	0.25
5300.00	5296.58	2.04	5.78	97.75	2.04	52.02	0.29
5400.00	5396.06	0.59	5.97	98.51	0.59	62.15	0.21

5500.00	5495.52	-1.00	5.93	99.14	-1.00	72.40	0.08
5600.00	5595.03	-2.88	5.38	103.08	-2.88	82.07	0.67
5700.00	5694.64	-5.08	4.75	106.00	-5.08	90.62	0.69
5800.00	5794.31	-7.53	4.59	109.03	-7.53	98.38	0.29
5900.00	5893.97	-10.22	4.80	109.35	-10.22	106.11	0.21

6000.00	5993.61	-12.98	4.90	108.81	-12.98	114.10	0.11
6100.00	6093.24	-15.75	4.98	108.64	-15.75	122.25	0.08
6200.00	6192.90	-18.30	4.42	107.59	-18.30	130.04	0.56
6300.00	6292.64	-20.27	3.89	103.84	-20.27	137.01	0.60
6400.00	6392.42	-21.68	3.71	100.61	-21.68	143.49	0.28

6500.00	6492.23	-22.34	3.33	91.14	-22.34	149.56	0.70
6600.00	6592.07	-21.92	3.14	80.14	-21.92	155.16	0.65
6700.00	6691.93	-20.82	3.04	76.25	-20.82	160.44	0.23
6800.00	6791.78	-19.52	3.27	76.21	-19.52	165.78	0.23
6900.00	6891.59	-18.09	3.66	76.40	-18.09	171.65	0.39

7000.00	6991.38	-16.57	3.88	76.93	-16.57	178.04	0.22
7100.00	7091.13	-15.17	4.15	79.87	-15.17	184.90	0.34
7200.00	7190.86	-14.01	4.34	82.10	-14.01	192.21	0.26
7300.00	7290.56	-13.08	4.43	83.85	-13.08	199.80	0.16
7400.00	7390.25	-12.45	4.72	86.95	-12.45	207.75	0.38

7500.00	7489.89	-12.25	4.89	90.30	-12.25	216.12	0.33
7600.00	7589.53	-12.52	4.92	93.27	-12.52	224.66	0.26
7700.00	7689.19	-13.21	4.42	96.77	-13.21	232.76	0.57
7800.00	7788.92	-14.44	4.03	102.66	-14.44	240.02	0.59
7900.00	7888.70	-16.56	3.74	114.44	-16.56	246.42	0.85

[illegible]

Inrun Survey
for

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Black Hills Gas Resources

Well No.: Jicarilla 457-10 #708

Date : 12-JAN-2007

Job No. : 32K0107030

TRUE

Proposal : 0.00

Depth (Feet)	T.V.D. (Feet)	V.S. (Feet)	Inc Deg.	Azimuth Deg.	Latitude (Feet)	Departure (Feet)	D-leg /100
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[illegible]

8000.00	7988.48	-19.67	3.80	122.05	-19.67	252.19	0.50
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8100.00	8088.28	-23.15	3.38	125.94	-23.15	257.39	0.49
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8164.00	8152.18	-25.04	3.29	114.96	-25.04	260.58	1.01
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The Horizontal Displacement (in Feet) at

Measured Depth 8164.00 is 261.78 in a Direction of 95.49 Degrees

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