

NEVIS ENERGY SERVICES**Survey Report**

1724-S Townhurst Dr, Houston, Tx 77043
(713) 827-8302
www.nevisenergy.com

OPERATOR: Black Hills E & P

WELL: Jica 457-09 #1

LOCATION: Rio Arriba Co., NM

30-039-25902

START: 06/29/05
FINISH: 07/09/05

Surf Acc 1150/S 1191/E Sec 9
BHL Begin 1139/S 1002/E Sec 9
BHL End 739/S 1321/W Sec 10

PROPOSED DIRECTION: 97.38

MIN. CURVATURE CALCULATIONS

SUR NUM	MD ft	INCL. °	AZM. °	TVD ft	N-S ft	E-W ft	SECT. ft	DLS %/100 ft	Gamma Ct.
55	5505.0	90.10	101.6	3761.3	-234.4	1695.9	1712.0	2.26	
56	5537.0	90.50	101.9	3761.2	-240.9	1727.2	1743.9	1.56	
57	5568.0	90.70	102.4	3760.8	-247.5	1757.5	1774.7	1.74	
58	5600.0	90.90	103.2	3760.4	-254.6	1788.7	1806.6	2.58	
59	5631.0	91.50	104.2	3759.7	-261.9	1818.8	1837.4	3.76	
60	5694.0	91.40	103.9	3758.1	-277.2	1879.9	1900.0	0.50	
61	5725.0	91.30	103.8	3757.4	-284.6	1910.0	1930.8	0.46	
62	5757.0	91.50	104.2	3756.6	-292.3	1941.1	1962.5	1.40	
63	5788.0	92.00	104.7	3755.7	-300.1	1971.1	1993.3	2.28	
64	5820.0	90.40	103.2	3755.0	-307.8	2002.1	2025.1	6.85	
65	5851.0	90.70	103.9	3754.7	-315.1	2032.2	2055.9	2.46	
66	5882.0	91.10	103.2	3754.2	-322.3	2062.4	2086.7	2.60	
67	5914.0	90.30	101.3	3753.8	-329.1	2093.6	2118.6	6.44	
68	5945.0	90.40	100.8	3753.7	-335.0	2124.1	2149.5	1.64	
69	5976.0	90.40	100.8	3753.4	-340.9	2154.5	2180.5	0.00	
70	6008.0	90.60	100.2	3753.2	-346.7	2186.0	2212.4	1.98	
71	6039.0	89.90	100.2	3753.0	-352.2	2216.5	2243.4	2.26	
72	6071.0	88.60	100.9	3753.4	-358.0	2247.9	2275.3	4.61	
73	6103.0	88.40	100.4	3754.3	-363.9	2279.4	2307.3	1.68	
74	6134.0	88.40	101.6	3755.1	-369.9	2309.8	2338.2	3.87	
75	6165.0	88.10	101.9	3756.1	-376.2	2340.1	2369.1	1.37	
76	6197.0	88.00	101.4	3757.2	-382.6	2371.5	2401.0	1.59	
77	6228.0	88.10	101.0	3758.2	-388.6	2401.9	2431.9	1.33	
78	6259.0	87.50	100.7	3759.4	-394.5	2432.3	2462.8	2.16	
79	6291.0	87.80	101.9	3760.7	-400.7	2463.6	2494.7	3.86	
bit	6340.0	87.90	102.0	3762.6	-410.9	2511.5	2543.5	0.29	

457-9 #1

1150' FS
-411' FS
739' FS

1191' FE
2512' FE
3703'
5284'
1581' FW



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27	4566.0	89.80	98.7	3778.2	-78.3	770.9	774.6	2.77	
28	4598.0	89.50	98.5	3778.4	-83.1	802.6	806.6	1.13	
29	4629.0	89.50	98.5	3778.7	-87.7	833.2	837.6	0.00	
30	4722.0	87.80	97.8	3780.9	-100.9	925.3	930.6	1.98	
31	4753.0	87.70	98.4	3782.1	-105.3	955.9	961.5	1.96	
32	4784.0	89.70	97.8	3782.8	-109.6	986.6	992.5	6.74	
33	4815.0	89.80	98.3	3782.9	-114.0	1017.3	1023.5	1.64	
34	4847.0	90.60	98.2	3782.8	-118.6	1049.0	1055.5	2.52	
35	4878.0	91.60	98.0	3782.2	-122.9	1079.7	1086.5	3.29	
36	4910.0	91.70	98.4	3781.3	-127.5	1111.3	1118.5	1.29	
37	4941.0	91.80	98.7	3780.3	-132.1	1142.0	1149.5	1.02	
38	4972.0	91.80	98.9	3779.4	-136.8	1172.6	1180.4	0.64	
39	5004.0	92.50	98.6	3778.2	-141.7	1204.2	1212.4	2.38	
40	5035.0	93.50	99.3	3776.5	-146.5	1234.8	1243.4	3.94	
41	5066.0	94.40	99.4	3774.4	-151.5	1265.3	1274.3	2.92	
42	5097.0	94.40	99.6	3772.0	-156.6	1295.8	1305.2	0.64	
43	5129.0	92.80	99.9	3770.0	-162.0	1327.2	1337.1	5.09	
44	5160.0	93.00	99.7	3768.5	-167.3	1357.8	1368.0	0.91	
45	5191.0	93.40	100.1	3766.7	-172.6	1388.2	1398.9	1.82	
46	5222.0	93.90	100.4	3764.7	-178.1	1418.7	1429.8	1.88	
47	5254.0	92.90	100.7	3762.8	-184.0	1450.1	1461.7	3.26	
48	5285.0	92.40	100.7	3761.4	-189.7	1480.5	1492.6	1.61	
49	5316.0	91.50	101.1	3760.4	-195.6	1510.9	1523.5	3.18	
50	5348.0	90.50	101.4	3759.8	-201.8	1542.3	1555.5	3.26	
51	5380.0	89.70	102.0	3759.7	-208.3	1573.7	1587.4	3.12	
52	5412.0	89.00	102.3	3760.1	-215.1	1604.9	1619.3	2.38	
53	5443.0	88.80	102.5	3760.7	-221.7	1635.2	1650.1	0.91	
54	5474.0	89.40	101.6	3761.2	-228.2	1665.5	1681.0	3.49	

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SUR NUM	MD ft	INCL. °	AZM. °	TVD ft	N-S ft	E-W ft	SECT. ft	DLS %/100 ft	Gamma Ct.
Tie in	3739.0	1.33	71.8	3738.8	7.1	6.5	5.6	0.00	
1	3779.0	21.80	109.4	3777.8	4.7	14.1	13.3	51.90	
2	3810.0	44.20	102.4	3803.7	0.4	30.3	30.0	73.19	
3	3842.0	68.10	97.5	3821.4	-4.0	56.3	56.3	75.73	
4	3855.0	77.20	94.7	3825.3	-5.3	68.6	68.7	72.95	
5	3883.0	93.40	89.5	3827.5	-6.3	96.4	96.4	60.73	
6	3914.0	100.60	90.0	3823.8	-6.1	127.1	126.9	23.28	
7	3946.0	102.30	94.7	3817.4	-7.4	158.5	158.1	15.34	
8	3977.0	101.40	97.7	3811.0	-10.7	188.6	188.4	9.91	
9	4009.0	100.50	97.9	3805.0	-15.0	219.7	219.8	2.88	
10	4040.0	100.20	97.5	3799.4	-19.1	250.0	250.3	1.60	
11	4072.0	100.30	96.2	3793.7	-22.8	281.2	281.8	4.01	
12	4103.0	100.60	95.6	3788.1	-25.9	311.5	312.3	2.14	
13	4134.0	97.00	96.5	3783.3	-29.2	342.0	342.9	11.96	
14	4165.0	92.80	97.4	3780.7	-32.9	372.7	373.8	13.85	
15	4197.0	92.10	96.6	3779.3	-36.8	404.4	405.8	3.32	
16	4228.0	91.50	95.9	3778.3	-40.2	435.2	436.7	2.97	
17	4259.0	91.50	95.9	3777.5	-43.4	466.0	467.7	0.00	
18	4291.0	91.30	96.2	3776.8	-46.7	497.8	499.7	1.13	
19	4322.0	91.10	96.5	3776.1	-50.2	528.6	530.7	1.16	
20	4353.0	91.10	96.4	3775.5	-53.6	559.4	561.7	0.32	
21	4385.0	89.20	96.5	3775.4	-57.2	591.2	593.7	5.95	
22	4416.0	89.00	95.9	3775.9	-60.6	622.0	624.7	2.04	
23	4442.0	89.00	95.7	3776.4	-63.2	647.9	650.7	0.77	
24	4472.0	89.00	96.1	3776.9	-66.3	677.7	680.6	1.33	
25	4503.0	88.90	96.7	3777.5	-69.8	708.5	711.6	1.96	
26	4535.0	89.30	98.0	3778.0	-73.8	740.3	743.6	4.25	

Begin Lat.
3958

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-25902		² Pool Code 72400		³ Pool Name East Blanco Pictured Cliffs	
⁴ Property Code 23335		⁵ Property Name Jicarilla 457-09			⁶ Well Number 1
⁷ OGRID No. 013925		⁸ Operator Name Black Hills Gas Resources, Inc.			⁹ Elevation 7238' GL

¹⁰ Surface Location

UL or lot no. P	Section 9	Township 30-N	Range 3-W	Lot Idn	Feet from the 1150'	North/South line South	Feet from the 1191'	East/West line East	County Rio Arriba
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. N	Section 10	Township 30-N	Range 3-W	Lot Idn	Feet from the 739'	North/South line South	Feet from the 1321'	East/West line West	County Rio Arriba
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¹² Dedicated Acres 160-SE/4-9 160-SW/4-10	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶ 	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <u>Mike Pippin</u> Date: <u>7-14-06</u> Printed Name: <u>Mike Pippin</u>	
	¹⁰ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey: _____ Signature and Seal of Professional Surveyor: _____ Certificate Number: _____	