



PHOENIX
TECHNOLOGY SERVICES

August 7, 2017

Oil Conservation Division
State of New Mexico
811 S. First St.
Artesia, New Mexico 88210

Dear District 2 - Artesia

Re: EOG Resources
Nickson BM No. 5 H
Eddy Co., NM
API #30-015-41725
Job No. 61577

NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 09 2017

RECEIVED

Run before plugging well.

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 606018). Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Oscar Velasquez	5H	0	2,100	7/23/17	7/23/17	Gyro

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Brittany Carley

Brittany Carley
Operations Administrator

SURVEY CERTIFICATION FORM

3610 Elkins Road Midland, TX 79705 t:432-684-0057 f: 432-686-7964



Company: EOG

Job #: 61577

Well Name: Nickson BM No.5-H

County/State: Eddy Co., N.M.

Survey Instrument Type: North Seek Rate Gyro

API # 30-015-41725

TIE-IN DATA

Measure Depth (ft)	Vertical Depth (ft)	Inclination (°)	Azimuth (°)	N-S Coordinates	E-W Coordinates	Data Source
0	0	0	0	0	0	Surface

First Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
7/23/2017	0	0	0

Last Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
7/23/2017	2100	0.48	54.21

Projected TD Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
0	0	0	0

Grid Correction
0.4

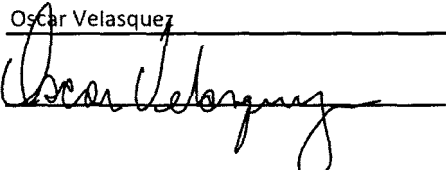
Gyro Operator: Phoenix Technology Services USA Ltd.

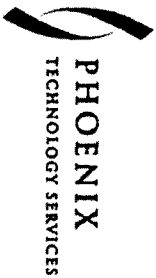
Gyro Supervisor: Angel Guebara

To the best of my knowledge I certify this survey data to be correct and true

Date: 7/25/2017

Print Name: Oscar Velasquez

Signature: 



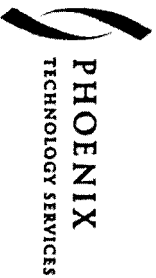
PHOENIX
TECHNOLOGY SERVICES

Company: EOG
Well: Nickson BM No.5-H
Location: Eddy Co., New Mexico
Rig: Pulling Unit

Job Number: 61577
Grid Corr.: 0.04
Lat: 32.724578
Long: -104.413542
Grid Ref: NAD 83

Date: 07-25-17
Calculation Method: Minimum Curvature
Proposed Azimuth: Ground
RKB - MSL in feet: Surface
Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)					
FIELD COPY, NON-DEFINITIVE													
TIE IN	0			0	0	0	0	0					
Gyro	0.00	0.00	0.00	0	0.00	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	100.00	0.36	245.64	100	100.00	-0.13	0.13 S	0.29 W	0.31	245.64	0.36	0.36	245.64
	125.00	0.21	179.16	25	125.00	-0.21	0.21 S	0.36 W	0.41	239.80	1.35	-0.60	-265.92
	150.00	0.15	176.63	25	150.00	-0.29	0.29 S	0.35 W	0.46	231.08	0.24	-0.24	-10.12
	175.00	0.43	271.89	25	175.00	-0.32	0.32 S	0.45 W	0.55	234.71	1.87	1.12	381.04
	200.00	0.60	296.79	25	200.00	-0.25	0.25 S	0.66 W	0.70	248.88	1.11	0.68	99.60
	225.00	0.63	265.61	25	225.00	-0.21	0.21 S	0.91 W	0.93	257.30	1.33	0.12	-124.72
	250.00	0.62	245.26	25	249.99	-0.27	0.27 S	1.17 W	1.20	256.90	0.88	-0.04	-81.40
	275.00	0.31	220.03	25	274.99	-0.38	0.38 S	1.34 W	1.39	254.10	1.46	-1.24	-100.92
	300.00	0.06	143.98	25	299.99	-0.44	0.44 S	1.37 W	1.44	252.11	1.20	-1.00	-304.20
	325.00	0.25	320.74	25	324.99	-0.41	0.41 S	1.40 W	1.46	253.62	1.24	0.76	707.04
	350.00	0.51	292.21	25	349.99	-0.33	0.33 S	1.54 W	1.57	257.98	1.26	1.04	-114.12
	375.00	0.44	259.05	25	374.99	-0.30	0.30 S	1.73 W	1.76	260.08	1.12	-0.28	-132.64
	400.00	0.25	193.31	25	399.99	-0.37	0.37 S	1.84 W	1.88	258.50	1.63	-0.76	-262.96
	425.00	0.14	175.34	25	424.99	-0.46	0.46 S	1.85 W	1.91	256.10	0.50	-0.44	-71.88
	450.00	0.16	126	25	449.99	-0.45	0.45 S	1.85 W	1.90	256.20	1.20	0.08	-696.32
	475.00	0.28	330.06	25	474.99	-0.37	0.37 S	1.88 W	1.91	258.97	0.66	0.48	1315.20
	500.00	0.30	272.71	25	499.99	-0.31	0.31 S	1.97 W	2.00	261.08	1.12	0.08	-229.40
	525.00	0.31	224.57	25	524.99	-0.36	0.36 S	2.09 W	2.12	260.34	1.00	0.04	-192.56
	550.00	0.34	174.23	25	549.99	-0.48	0.48 S	2.13 W	2.18	257.36	1.11	0.12	-201.36
	575.00	0.27	26.23	25	574.99	-0.50	0.50 S	2.09 W	2.15	256.62	2.35	-0.28	-592.00
	600.00	0.11	167.36	25	599.99	-0.47	0.47 S	2.06 W	2.11	257.20	1.45	-0.64	564.52
	625.00	0.20	288.34	25	624.99	-0.48	0.48 S	2.10 W	2.15	257.16	1.09	0.36	483.92
	650.00	0.43	135	25	649.99	-0.37	0.37 S	2.14 W	2.17	260.16	1.67	0.92	-1147.96
	675.00	0.20	127.64	25	674.99	-0.30	0.30 S	2.10 W	2.12	261.78	2.29	-0.92	505.16
	700.00	0.27	173.97	25	699.99	-0.39	0.39 S	2.06 W	2.10	259.31	0.78	0.28	185.32
	725.00	0.46	141.76	25	724.99	-0.53	0.53 S	1.99 W	2.06	255.20	1.09	0.76	-128.84
	750.00	0.25	350.08	25	749.99	-0.55	0.55 S	1.94 W	2.02	254.13	2.76	-0.84	833.28
	775.00	0.20	127.21	25	774.99	-0.52	0.52 S	1.91 W	1.98	254.68	1.68	-0.20	-891.48
	800.00	0.23	294.99	25	799.99	-0.53	0.53 S	1.92 W	2.00	254.62	1.71	0.12	671.12
	825.00	0.44	244.50	25	824.99	-0.55	0.55 S	2.06 W	2.13	255.04	1.37	0.84	-201.96



PHOENIX
TECHNOLOGY SERVICES

Company: EOG
Well: Nickson BM No.5-H
Location: Eddy Co., New Mexico
Rig: Pulling Unit

Job Number: 61577
Grid Corr.: 0.04
Lat: 32.724578
Long: -104.413542
Grid Ref: NAD 83

Calculation Method: Minimum Curvature
Proposed Azimuth: RKB - MSL in feet:
Tie Into: Ground
Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure	Dogleg	Build	Walk
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)	Severity (d/100')	Rate (d/100')
	850.00	0.66	64.28	25	849.99	-0.53	0.53 S	2.01 W	2.08	255.30	4.40	0.88
	875.00	0.56	211.58	25	874.99	-0.57	0.57 S	1.95 W	2.03	253.69	4.68	-0.40
	900.00	0.90	72.56	25	899.99	-0.61	0.61 S	1.82 W	1.92	251.37	5.49	1.36
	925.00	0.79	69.36	25	924.98	-0.50	0.50 S	1.48 W	1.56	251.44	0.48	-0.44
	950.00	0.87	64.68	25	949.98	-0.35	0.35 S	1.14 W	1.20	252.81	0.42	0.32
	975.00	0.31	199.35	25	974.98	-0.34	0.34 S	0.99 W	1.05	251.31	4.44	-2.24
	1000.00	0.48	59.35	25	999.98	-0.35	0.35 S	0.93 W	0.99	249.48	2.98	0.68
	1025.00	0.83	82.60	25	1024.98	-0.27	0.27 S	0.66 W	0.71	247.64	1.73	1.40
	1050.00	0.66	38.68	25	1049.98	-0.13	0.13 S	0.39 W	0.41	250.87	2.32	-0.68
	1075.00	1.05	326.60	25	1074.97	0.17	0.17 N	0.42 W	0.46	291.87	4.22	1.56
	1100.00	0.91	72.25	25	1099.97	0.42	0.42 N	0.36 W	0.55	319.53	6.26	-0.56
	1125.00	0.81	43.09	25	1124.97	0.61	0.61 N	0.05 W	0.61	355.35	1.77	-0.40
	1150.00	0.62	77.87	25	1149.97	0.77	0.77 N	0.20 E	0.79	14.81	1.86	-0.76
	1175.00	0.30	352.78	25	1174.97	0.86	0.86 N	0.33 E	0.92	20.79	2.66	-1.28
	1200.00	0.95	91.69	25	1199.97	0.92	0.92 N	0.53 E	1.06	29.75	4.16	2.60
	1225.00	0.86	81.58	25	1224.96	0.94	0.94 N	0.92 E	1.32	44.29	0.73	-0.36
	1250.00	0.96	77.34	25	1249.96	1.02	1.02 N	1.31 E	1.66	52.20	0.48	0.40
	1275.00	0.51	76.74	25	1274.96	1.09	1.09 N	1.62 E	1.95	56.17	1.80	-1.80
	1300.00	0.32	269.62	25	1299.96	1.11	1.11 N	1.66 E	2.00	56.19	3.30	-0.76
	1325.00	0.49	106.84	25	1324.96	1.08	1.08 N	1.69 E	2.01	57.45	3.21	0.68
	1350.00	0.62	106.06	25	1349.96	1.01	1.01 N	1.92 E	2.17	62.27	0.52	0.52
	1375.00	0.72	21.84	25	1374.95	1.12	1.12 N	2.11 E	2.39	62.07	3.61	0.40
	1400.00	0.37	48.31	25	1399.95	1.32	1.32 N	2.23 E	2.59	59.40	1.69	-1.40
	1425.00	0.74	99.78	25	1424.95	1.35	1.35 N	2.45 E	2.80	61.23	2.34	1.48
	1450.00	0.93	76.08	25	1449.95	1.37	1.37 N	2.81 E	3.12	64.03	1.56	0.76
	1475.00	0.30	155.39	25	1474.95	1.36	1.36 N	3.03 E	3.32	65.89	3.69	-2.52
	1500.00	0.64	106.15	25	1499.95	1.26	1.26 N	3.19 E	3.43	68.49	2.00	1.36
	1525.00	0.98	318.52	25	1524.95	1.38	1.38 N	3.19 E	3.47	66.58	6.23	1.36
	1550.00	0.40	314.32	25	1549.94	1.60	1.60 N	2.98 E	3.38	61.76	2.33	-2.32
	1575.00	0.40	189.05	25	1574.94	1.58	1.58 N	2.91 E	3.31	61.53	2.84	0.00
	1600.00	0.72	79.35	25	1599.94	1.52	1.52 N	3.05 E	3.40	63.50	3.74	1.28
	1625.00	0.63	132.16	25	1624.94	1.46	1.46 N	3.30 E	3.61	66.21	2.42	-0.36
	1650.00	0.37	193.71	25	1649.94	1.28	1.28 N	3.38 E	3.62	69.22	2.23	-1.04
	1675.00	0.83	50.83	25	1674.94	1.32	1.32 N	3.51 E	3.75	69.36	4.59	1.84



PHOENIX

TECHNOLOGY SERVICES

Company: EOG
Well: Nickson BM No.5-H
Location: Eddy Co., New Mexico
Rig: Pulling Unit

Job Number: 61577
Grid Corr.: 0.04
Lat: 32.724578
Long: -104.413542
Grid Ref: NAD 83

Calculation Method: Minimum Curvature
Proposed Azimuth: Ground
RKB - MSL in feet: Surface
Tie Into: _____

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
	1700.00	0.21	177.85	25	1699.94	1.39	1.39 N	3.65 E	3.90	69.15	3.88	-2.48	508.08
	1725.00	0.54	136.53	25	1724.94	1.26	1.26 N	3.73 E	3.94	71.37	1.63	1.32	-165.28
	1750.00	0.73	82.75	25	1749.94	1.19	1.19 N	3.97 E	4.15	73.28	2.40	0.76	-215.12
	1775.00	0.56	140.94	25	1774.94	1.12	1.12 N	4.20 E	4.35	75.11	2.58	-0.68	232.76
	1800.00	0.85	76.75	25	1799.93	1.07	1.07 N	4.46 E	4.59	76.57	3.15	1.16	-256.76
	1825.00	0.49	100.80	25	1824.93	1.09	1.09 N	4.75 E	4.87	77.09	1.80	-1.44	96.20
	1850.00	0.93	97.36	25	1849.93	1.04	1.04 N	5.05 E	5.16	78.35	1.77	1.76	-13.76
	1875.00	1.05	15.75	25	1874.93	1.24	1.24 N	5.32 E	5.46	76.91	5.19	0.48	-326.44
	1900.00	0.91	294.53	25	1899.93	1.54	1.54 N	5.20 E	5.42	73.51	5.12	-0.56	1115.12
	1925.00	0.50	14.72	25	1924.92	1.73	1.73 N	5.05 E	5.33	71.11	3.84	-1.64	-1119.24
	1950.00	0.81	61.38	25	1949.92	1.92	1.92 N	5.23 E	5.57	69.86	2.37	1.24	186.64
	1975.00	0.78	91.63	25	1974.92	2.00	2.00 N	5.55 E	5.90	70.22	1.66	-0.12	121.00
	2000.00	1.29	77.14	25	1999.92	2.05	2.05 N	6.00 E	6.34	71.09	2.28	2.04	-57.96
	2025.00	1.20	56.63	25	2024.91	2.26	2.26 N	6.49 E	6.87	70.79	1.81	-0.36	-82.04
	2050.00	1.05	58.12	25	2049.91	2.53	2.53 N	6.90 E	7.35	69.90	0.61	-0.60	5.96
	2075.00	1.03	51.81	25	2074.90	2.79	2.79 N	7.28 E	7.79	69.05	0.46	-0.08	-25.24
	2100.00	0.48	54.21	25	2099.90	2.99	2.99 N	7.54 E	8.11	68.39	2.20	-2.20	9.60