



PHOENIX
TECHNOLOGY SERVICES

November 29, 2017

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

NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 12 2017

RECEIVED

Dear District 2 - Artesia

Re: EOG Resources
Irish Hills KW State #1Y
Eddy Co., New Mexico
API #30-015-22887
Job No. 62079

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	
Leo Garza	1Y	0	2,080	11/28/17	11/28/17	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 Resources

Job #: 62079

Well Name: Irish Hills KW State #1Y

County/State: Eddy Co., New Mexico

Survey Instrument Type: North Seek Rate Gyro

API # 30-015-22887

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 (°)
2017-11-28	0	0	0

Last Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
2017-11-28	2080	0.66	320.01

Projected TD Survey

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

Grid Correction
0.12

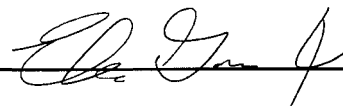
Gyro Operator: Phoenix Technology Services USA Ltd.

Gyro Supervisor: Angel Guebara

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

Date: 2017-11-28

Print Name: Leo Garza

Signature: 



PHOENIX

TECHNOLOGY SERVICES

Company: EOG Resources
Well: Irish Hills KW State #1Y
Location: Eddy Co., New Mexico
Rig: Pulling Unit

Job Number: 62079
Grid Corr.: 0.12
Lat: 32.68
Long: -104.55

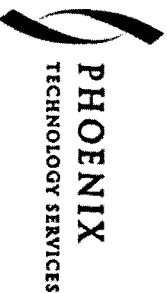
Date: 11-28-17
Calculation Method: Minimum Curvature
Proposed Azimuth:
RKB - MSL in feet: Ground
Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
------------------	-------------------	--------------------	---------------	--------------------	--------------------------	-----------------------	----------------------	----------	-----------------------	---------------------	--------------------------	---------------------	--------------------

Enter Tie-In Survey on Line 10

FIELD COPY, NON-DEFINITIVE

TIE IN	0			0	0	0	0	0					
Gyro	100.00	0.40	141.37	100	100.00	-0.27	0.27 S	0.22 E	0.35	141.37	0.40	0.40	141.37
	125.00	0.38	131.77	25	125.00	-0.40	0.40 S	0.33 E	0.52	139.84	0.27	-0.08	-38.40
	150.00	0.38	146.58	25	150.00	-0.52	0.52 S	0.44 E	0.68	139.68	0.39	0.00	59.24
	175.00	0.21	247.65	25	175.00	-0.61	0.61 S	0.45 E	0.75	143.76	1.87	-0.68	404.28
	200.00	0.16	277.06	25	200.00	-0.62	0.62 S	0.37 E	0.72	149.32	0.42	-0.20	117.64
	225.00	0.20	275.05	25	225.00	-0.61	0.61 S	0.29 E	0.68	154.66	0.16	0.16	-8.04
	250.00	0.17	250.88	25	250.00	-0.62	0.62 S	0.21 E	0.66	161.19	0.33	-0.12	-96.68
	275.00	0.16	6.39	25	275.00	-0.60	0.60 S	0.18 E	0.62	163.23	1.12	-0.04	-977.96
	300.00	0.14	273.53	25	300.00	-0.56	0.56 S	0.15 E	0.58	164.69	0.87	-0.08	1068.56
	325.00	0.17	259.01	25	325.00	-0.57	0.57 S	0.09 E	0.57	171.30	0.20	0.12	-58.08
	350.00	0.17	309.25	25	350.00	-0.55	0.55 S	0.02 E	0.55	177.75	0.58	0.00	200.96
	375.00	0.20	250.73	25	375.00	-0.54	0.54 S	0.05 W	0.54	185.10	0.73	0.12	-234.08
	400.00	0.24	251.98	25	400.00	-0.57	0.57 S	0.14 W	0.59	193.69	0.16	0.16	5.00
	425.00	0.24	217.76	25	425.00	-0.63	0.63 S	0.22 W	0.67	199.36	0.56	0.00	-136.88
	450.00	0.32	263.97	25	450.00	-0.68	0.68 S	0.32 W	0.75	205.45	0.93	0.32	184.84
	475.00	0.36	275.75	25	475.00	-0.68	0.68 S	0.47 W	0.82	214.76	0.32	0.16	47.12
	500.00	0.53	287.15	25	500.00	-0.64	0.64 S	0.66 W	0.92	226.03	0.76	0.68	45.60
	525.00	0.68	297.45	25	524.99	-0.53	0.53 S	0.90 W	1.05	239.39	0.74	0.60	41.20
	550.00	0.66	303.70	25	549.99	-0.38	0.38 S	1.15 W	1.21	251.54	0.30	-0.08	25.00
	575.00	0.79	306.35	25	574.99	-0.20	0.20 S	1.41 W	1.43	261.83	0.54	0.52	10.60
	600.00	0.95	307.14	25	599.99	0.02	0.02 N	1.72 W	1.72	270.82	0.64	0.64	3.16
	625.00	1.07	311.87	25	624.98	0.31	0.31 N	2.05 W	2.08	278.46	0.58	0.48	18.92
	650.00	1.13	310.87	25	649.98	0.62	0.62 N	2.41 W	2.49	284.46	0.25	0.24	-4.00
	675.00	1.16	313.42	25	674.97	0.96	0.96 N	2.78 W	2.94	288.98	0.24	0.12	10.20
	700.00	1.16	310.83	25	699.97	1.30	1.30 N	3.16 W	3.42	292.32	0.21	0.00	-10.36
	725.00	1.31	316.22	25	724.96	1.67	1.67 N	3.55 W	3.92	295.19	0.76	0.60	21.56
	750.00	1.25	306.62	25	749.96	2.04	2.04 N	3.97 W	4.46	297.20	0.89	-0.24	-38.40



PHOENIX

TECHNOLOGY SERVICES

Company: EOG Resources
Well: Irish Hills KW State #1Y
Location: Eddy Co., New Mexico
Rig: Pulling Unit

Job Number: 62079
Grid Corr.: 0.12
Lat: 32.68
Long: -104.55

Calculation Method: Minimum Curvature
Proposed Azimuth:
RKB - MSL in feet: Ground
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		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
	775.00	1.35	309.43	25	774.95	2.39	2.39 N	4.41 W	5.02	298.42	0.47	0.40	11.24
	800.00	1.41	303.56	25	799.94	2.74	2.74 N	4.90 W	5.61	299.28	0.61	0.24	-23.48
	825.00	1.28	303.23	25	824.94	3.07	3.07 N	5.39 W	6.20	299.67	0.52	-0.52	-1.32
	850.00	1.45	308.10	25	849.93	3.42	3.42 N	5.87 W	6.79	300.21	0.82	0.68	19.48
	875.00	1.38	305.33	25	874.92	3.79	3.79 N	6.36 W	7.40	300.75	0.39	-0.28	-11.08
	900.00	1.38	302.88	25	899.91	4.12	4.12 N	6.86 W	8.00	301.00	0.24	0.00	-9.80
	925.00	1.33	304.32	25	924.91	4.45	4.45 N	7.35 W	8.59	301.18	0.24	-0.20	5.76
	950.00	1.36	310.85	25	949.90	4.81	4.81 N	7.82 W	9.18	301.59	0.62	0.12	26.12
	975.00	1.31	311.94	25	974.89	5.19	5.19 N	8.25 W	9.75	302.17	0.22	-0.20	4.36
	1000.00	1.32	313.72	25	999.89	5.58	5.58 N	8.68 W	10.32	302.76	0.17	0.04	7.12
	1025.00	1.36	316.30	25	1024.88	6.00	6.00 N	9.09 W	10.89	303.42	0.29	0.16	10.32
	1050.00	1.38	321.00	25	1049.87	6.44	6.44 N	9.48 W	11.47	304.20	0.46	0.08	18.80
	1075.00	1.41	322.51	25	1074.87	6.92	6.92 N	9.86 W	12.05	305.07	0.19	0.12	6.04
	1100.00	1.47	326.89	25	1099.86	7.44	7.44 N	10.22 W	12.64	306.03	0.50	0.24	17.52
	1125.00	1.50	326.85	25	1124.85	7.98	7.98 N	10.58 W	13.25	307.03	0.12	0.12	-0.16
	1150.00	1.53	330.26	25	1149.84	8.54	8.54 N	10.92 W	13.86	308.03	0.38	0.12	13.64
	1175.00	1.54	327.71	25	1174.83	9.12	9.12 N	11.27 W	14.49	308.98	0.28	0.04	-10.20
	1200.00	1.52	327.63	25	1199.82	9.68	9.68 N	11.62 W	15.12	309.79	0.08	-0.08	-0.32
	1225.00	1.55	327.53	25	1224.81	10.24	10.24 N	11.98 W	15.76	310.53	0.12	0.12	-0.40
	1250.00	1.50	325.70	25	1249.80	10.80	10.80 N	12.35 W	16.40	311.18	0.28	-0.20	-7.32
	1275.00	1.48	324.45	25	1274.80	11.33	11.33 N	12.72 W	17.04	311.70	0.15	-0.08	-5.00
	1300.00	1.51	323.60	25	1299.79	11.86	11.86 N	13.10 W	17.67	312.15	0.15	0.12	-3.40
	1325.00	1.52	325.21	25	1324.78	12.40	12.40 N	13.49 W	18.32	312.59	0.17	0.04	6.44
	1350.00	1.49	319.83	25	1349.77	12.92	12.92 N	13.89 W	18.97	312.93	0.58	-0.12	-21.52
	1375.00	1.46	312.41	25	1374.76	13.38	13.38 N	14.33 W	19.61	313.04	0.77	-0.12	-29.68
	1400.00	1.56	311.22	25	1399.75	13.82	13.82 N	14.82 W	20.27	313.00	0.42	0.40	-4.76
	1425.00	1.56	309.88	25	1424.74	14.26	14.26 N	15.34 W	20.95	312.92	0.15	0.00	-5.36
	1450.00	1.60	306.23	25	1449.73	14.69	14.69 N	15.88 W	21.63	312.76	0.43	0.16	-14.60
	1475.00	1.62	305.48	25	1474.72	15.10	15.10 N	16.45 W	22.33	312.55	0.12	0.08	-3.00
	1500.00	1.55	303.81	25	1499.71	15.49	15.49 N	17.02 W	23.02	312.31	0.34	-0.28	-6.68



PHOENIX

TECHNOLOGY SERVICES

Company: EOG Resources
Well: Irish Hills KW State #1Y
Location: Eddy Co., New Mexico
Rig: Pulling Unit

Job Number: 62079
Grid Corr.: 0.12
Lat: 32.68
Long: -104.55

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 Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)					
	1525.00	1.59	303.63	25	1524.71	15.87	15.87 N	17.59 W	23.69	312.06	0.16	0.16	-0.72
	1550.00	1.40	298.23	25	1549.70	16.21	16.21 N	18.15 W	24.33	311.77	0.95	-0.76	-21.60
	1575.00	1.40	299.31	25	1574.69	16.50	16.50 N	18.68 W	24.93	311.46	0.11	0.00	4.32
	1600.00	1.34	298.71	25	1599.68	16.79	16.79 N	19.21 W	25.51	311.17	0.25	-0.24	-2.40
	1625.00	1.32	297.39	25	1624.68	17.07	17.07 N	19.72 W	26.08	310.88	0.15	-0.08	-5.28
	1650.00	1.34	295.82	25	1649.67	17.33	17.33 N	20.24 W	26.64	310.57	0.17	0.08	-6.28
	1675.00	1.18	303.43	25	1674.66	17.60	17.60 N	20.71 W	27.18	310.35	0.92	-0.64	30.44
	1700.00	1.22	304.06	25	1699.66	17.89	17.89 N	21.15 W	27.70	310.22	0.17	0.16	2.52
	1725.00	1.15	294.89	25	1724.65	18.14	18.14 N	21.60 W	28.21	310.03	0.81	-0.28	-36.68
	1750.00	1.11	299.05	25	1749.65	18.36	18.36 N	22.04 W	28.69	309.81	0.36	-0.16	16.64
	1775.00	1.09	297.13	25	1774.64	18.59	18.59 N	22.46 W	29.16	309.61	0.17	-0.08	-7.68
	1800.00	1.08	303.30	25	1799.64	18.83	18.83 N	22.87 W	29.62	309.46	0.47	-0.04	24.68
	1825.00	0.96	310.06	25	1824.63	19.09	19.09 N	23.23 W	30.07	309.42	0.68	-0.48	27.04
	1850.00	1.01	317.16	25	1849.63	19.39	19.39 N	23.54 W	30.49	309.48	0.53	0.20	28.40
	1875.00	0.99	318.18	25	1874.63	19.71	19.71 N	23.83 W	30.93	309.60	0.11	-0.08	4.08
	1900.00	0.96	316.69	25	1899.62	20.02	20.02 N	24.12 W	31.35	309.70	0.16	-0.12	-5.96
	1925.00	1.03	321.98	25	1924.62	20.35	20.35 N	24.40 W	31.77	309.83	0.46	0.28	21.16
	1950.00	0.99	318.75	25	1949.62	20.69	20.69 N	24.68 W	32.21	309.98	0.28	-0.16	-12.92
	1975.00	0.95	319.45	25	1974.61	21.01	21.01 N	24.96 W	32.63	310.10	0.17	-0.16	2.80
	2000.00	0.90	318.19	25	1999.61	21.32	21.32 N	25.22 W	33.02	310.20	0.22	-0.20	-5.04
	2025.00	0.80	316.63	25	2024.61	21.59	21.59 N	25.47 W	33.39	310.28	0.41	-0.40	-6.24
	2050.00	0.73	316.65	25	2049.60	21.83	21.83 N	25.70 W	33.72	310.35	0.28	-0.28	0.08
	2075.00	0.69	316.28	25	2074.60	22.06	22.06 N	25.92 W	34.03	310.40	0.16	-0.16	-1.48
	2080.00	0.66	320.01	5	2079.60	22.10	22.10 N	25.96 W	34.09	310.41	1.06	-0.60	74.60

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION AT

Form C-102
 Supersedes C-128
 Effective 1-1-65

All distances must be from the outer boundaries of the Section.

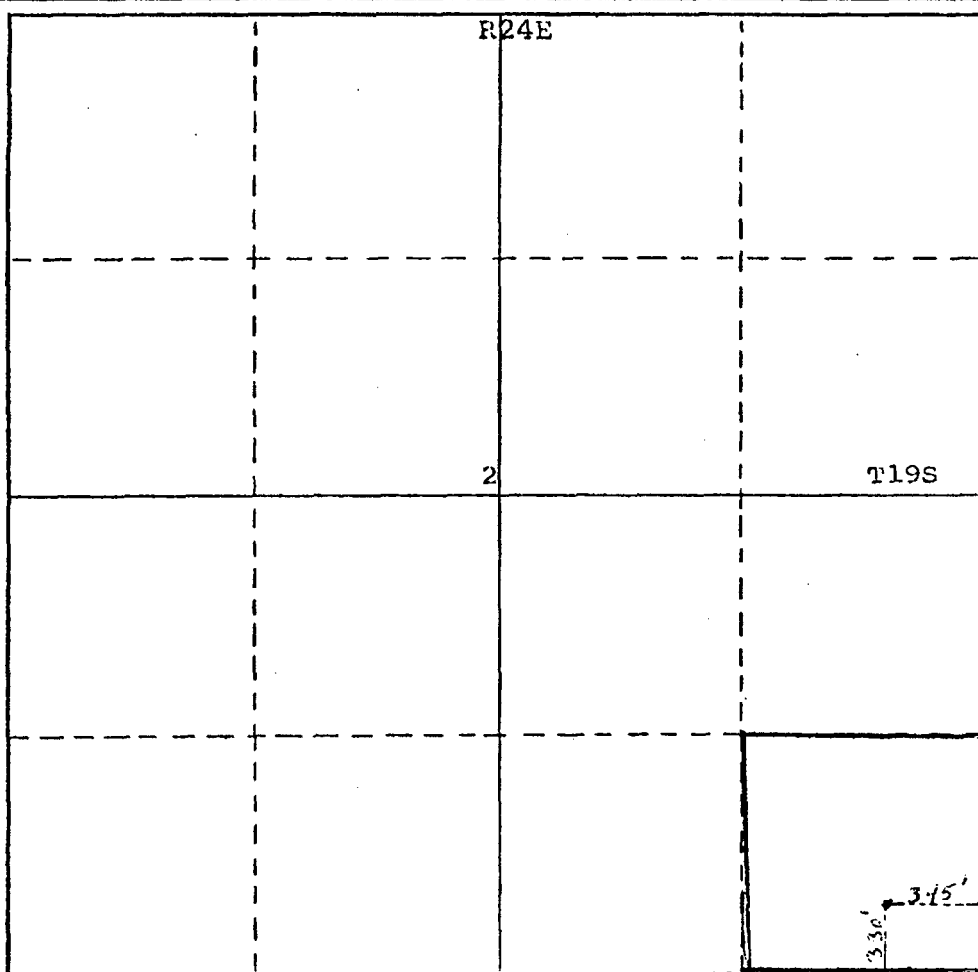
Operator Yates Petroleum Corporation			Lease Irish Hill KW State		Well No. 1-4
Unit Letter P	Section 2	Township 19S	Range 24E	County Eddy	
Actual Footage Location of Well: 330 feet from the South line and 345' feet from the East line					
Ground Level Elev. 3652'	Producing Formation Yeso		Pool Undesignated Penasco Draw Yeso SA		Dedicated Acreage: 40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Eddie M. Mahfood
 Name

Eddie M. Mahfood

Position
Engineer

Company
Yates Petroleum Corp

Date
3-15-79

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 knowledge and belief.

Refer to Original Plat

Date Surveyed
Dated 3-14-79

Registered Professional Engineer
 and/or Land Surveyor

Certificate No.