MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

FLOW CALCULATIONS Coefficient	Pool	Undesig	nated		Fo	rmation	Da	kota		_County	San J	ian		
### B Sec. 3 Twp. 298 Rge. 13W Furchaser	Initi	al <u> </u>		Annu	al		Spec	ial		_Date of	Te s t	11560		
## Wt. 1 10 1.D. Set at 6281 Ferf. 6160 To 6200 woing 2 1/8" Wt. 1.7 1.D. Set at 6100 Ferf. 6096 To 6100 as Fay: From 6074 To 6200 L xG .420 GL Bar.Press. roducing Thru: Casing Tubing I Type Well Single Cas. ### Completion: Jan. 1, 1960 Facker Single-Bradenhead-D. G. or G.O. Dual atte of Completion: Jan. 1, 1960 Facker Single-Bradenhead-D. G. or G.O. Dual Reservoir Temp. **OBSERVED DATA** **Steed Through (Frover) (Choke) (Meter) Tubing Data Casing Data **Completion: Choke) (Press. Diff. Temp. Press. Temp. Press. Temp. Of Flow Size Size Paig Pr. Paig Pr. Hr. **Line Orifice Size Paig Press. Diff. Temp. Press. Temp. Press. Temp. Of Flow Size Size Paig Pr. Paig Pr. Hr. **Line O.500											1 No	1-1		
## Wt. 1 10 1.D. Set at 6281 Ferf. 6160 To 6200 woing 2 1/8" Wt. 1.7 1.D. Set at 6100 Ferf. 6096 To 6100 as Fay: From 6074 To 6200 L xG .420 GL Bar.Press. roducing Thru: Casing Tubing I Type Well Single Cas. ### Completion: Jan. 1, 1960 Facker Single-Bradenhead-D. G. or G.O. Dual atte of Completion: Jan. 1, 1960 Facker Single-Bradenhead-D. G. or G.O. Dual Reservoir Temp. **OBSERVED DATA** **Steed Through (Frover) (Choke) (Meter) Tubing Data Casing Data **Completion: Choke) (Press. Diff. Temp. Press. Temp. Press. Temp. Of Flow Size Size Paig Pr. Paig Pr. Hr. **Line Orifice Size Paig Press. Diff. Temp. Press. Temp. Press. Temp. Of Flow Size Size Paig Pr. Paig Pr. Hr. **Line O.500	Jnit	B S	ec	3 Tw	p2	91 Rg	e. <u>13W</u>	Purc	haser	785		(A		
as Pay: Prom 6074 To 6200 L xG .450 TGL Bar.Press. roducing Thru: Casing Tubing I Type Well Single Gas Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. OBSERVED DATA OBSERVED DATA OBSERVED DATA OBSERVED DATA OF Type Taps Flow Data Tubing Data Casing Data (Prover) (Choke) Press. Diff. Temp. Press. Temp. Press. Temp. Of Flow Size Size psig hw CF. psig CF. psig F. Hr. O.500 932 1267 3 hrs. FLOW CALCULATIONS FLOW CALCULATIONS FLOW CALCULATIONS FLOW CALCULATIONS FLOW CALCULATIONS FLOW CALCULATIONS FRESSURE CALCULATIONS Specific Gravity Separator Gas Specific Gravity Flowing Fluid For 2010 FG 6040 Pressure Gas Fressure Calculations FRE	Casin	g 53" W	t. <u>14</u>	1b I	.D	Se	t at 62	61 Pe	rf. 61	.60	To 620	<u>x</u>	,	
Type Well Single Gas Single-Bradenhead-G. G. or G.O. Dual	'u bin	g 2 3/8" W	t. 4.	I	.D	Se	t at_ 61	00 Pe	rf. 60	96	To6	100		
Single-fraged-field of Growth Completion: Nam. 1, 1960 Packer Beservoir Temp. OBSERVED DATA Seted Through (Prover) (Choke) (Meter) Type Taps (Prover) (Choke) Press. Diff. Temp. Press. Temp. Press. Temp. Of Flow (Line) (Orifice) Size Size psig hw Op. psig Op. Hr. 1995 1998 Hr. O.500 952 1267 3.hrs PLON CALCULATIONS PLON CALCULATIONS Factor Fac	as P	ay: From_	6074	_To_6	200	L	x	G <u>.65</u>	<u> </u>		Bar.Pre	ess	 -	
Single-fraged-field of Growth Completion: Nam. 1, 1960 Packer Beservoir Temp. OBSERVED DATA Seted Through (Prover) (Choke) (Meter) Type Taps (Prover) (Choke) Press. Diff. Temp. Press. Temp. Press. Temp. Of Flow (Line) (Orifice) Size Size psig hw Op. psig Op. Hr. 1995 1998 Hr. O.500 952 1267 3.hrs PLON CALCULATIONS PLON CALCULATIONS Factor Fac	rodu	cing Thru:	Cas	sing		<u> </u>	bing	X	Type We	11 Sing	le Cas	7 O Dec 1		
Flow Data Flow Data Flow Data Flow Casing Data Cline) (Orifice) Size Size psig hw Op. psig Op. psig Op. psig Op. psig Op. psig Op. Op. psig Op. Duration of Flow Data FLOW CALCULATIONS Flow Temp. Gravity Compress. Rate of Flow Pactor Factor Facto								Sin	gie-brade	nnead-G.	u. or (1.O. Dual		
Flow Data Flow Cancer (Choke) Press. Diff. Temp. Press. Temp. Press. Temp. Duration of Flow Size Size psig hw OF, psig OF, psig OF, psig OF, psig OF, Press. Temp. OF 1995 1996 Hr.							OBSERV	ED DATA						
Choke) (Choke) (Choke) (Choke) (Chifice) (Chif	este	d Through	(Prov	<u>ver) (</u>	Choke)	(Meter)				Type Tap	s	· · · · · · · · · · · · · · · · · · ·		
Size Size psig hw OF. psig OF.			F	rlow Da	ata	· · · · · · · · · · · · · · · · · · ·		Tubing	Data	Casing D	ąta	ata T		
Size Size psig hw of psig of p	0.					Diff.	Temp.	Press.	Temp.	Press.	Temp.	1		
FLOW CALCULATIONS Coefficient	1					h _w	°F.	psig	°F.	psig	[⊃] F•	1		
FLOW CALCULATIONS Coefficient (24-Hour) (34-Hour) (24-Hour) (34-Hour) (I							1995		1998			· ·	
FLOW CALCULATIONS Coefficient Pressure Flow Temp. Gravity Compress. Rate of Flow Temp. (24-Hour) hwpf			0.5	500				952		1267		3 hrs		
FLOW CALCULATIONS Coefficient Factor Factor Factor Factor Factor Factor Factor Factor Factor Forward Factor Forward Forward Compress. Rate of Flow Compress. Factor Factor Factor Factor Forward Forward Forward Compress. Factor Factor Forward Forward Forward Forward Compress. Factor Forward Forw	•													
Coefficient (24-Hour) \(\begin{array}{c ccccccccccccccccccccccccccccccccccc														
PRESSURE CALCUIATIONS See attached Form C-122-B PRESSURE CALCUIATIONS St. Liquid Hydrocarbon Ratio cf/bbl. Specific Gravity Separator Gas Specific Gravity Flowing Fluid Pc 2010 Pc 4040 O. Pw Pt (psia) Ft FcQ (FcQ) ² (FcQ) ² (FcQ) ² Pw ² Pc-Fw Fc Pt (1-e-s) Pt (1-e-s) Pw Pt (1-e-s) Pw Pc Pc Pc Pc Pc Pw Pc Pc Pc Pw Pc		Cooffici		 	D.					Compre	ee 1	Pate of H	71 OW	
PRESSURE CALCUIATIONS See attached Form C-122-B PRESSURE CALCUIATIONS Satisfy of Liquid Hydrocarbon Ratio	lo .		Coefficient				Fac	Factor		Factor Facto		r Q-MCFPD		
PRESSURE CALCULATIONS s Liquid Hydrocarbon Ratio cf/bbl. Specific Gravity Separator Gas Avity of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid Pc 2010 Pc 4040 p. Pw Pt (psia) Pt FcQ (FcQ)2 (FcQ)2 Pw2 Pc-Pw Pc	_	$(24-Hour) \sqrt{h_{W}p_{f}}$		P _f	psia F _t			Fg	Fpv	@ 15.025 psia				
PRESSURE CALCULATIONS s Liquid Hydrocarbon Ratio cf/bbl. Specific Gravity Separator Gas Avity of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid Pc 2010 Pc 4040 p. Pw Pt (psia) Pt FcQ (FcQ)2 (FcQ)2 Pw2 Pc-Pw Pc	2.			M	sured	red w/pitet tube				5501				
PRESSURE CALCULATIONS s Liquid Hydrocarbon Ratio cf/bbl. Specific Gravity Separator Gas Avity of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid (1-e-s) P _c 2010 P _c 4040 p. P _w P _t F _c Q (F _c Q) ² (F _c Q) ² P _w 2 P _c ² -P _w ² Cal. P _w P _c P _c P _c P _w P _c 1279 1636 2404 1.680 bosolute Potential: 8114 MCFPD; n .75 1.475 DOMPANY Sunshine Boyalty Co. DEENT and TITLE 7. 1. Dagan, Consulting Engineer LINESSED COMPANY REMARKS	,			S	ee atta	ched For	rm C-122	-В						
S Liquid Hydrocarbon Ratio of bl. Specific Gravity Separator Gas Specific Gravity Flowing Fluid Pc 2010 Pc 4040 OF Pw Pt (psia) Pt FcQ (FcQ)2 (FcQ)2 Pw2 Pc-Pw Pc														
Specific Gravity Flowing Fluid P _C 2010 P _C 4040 Specific Gravity Flowing Fluid P _C 4040 Specific Gravity Flowing Flui						PR.	ESSURE C	ALCULATI	ONS					
Specific Gravity Flowing Fluid P _C 2010 P _C 4040 O. P _W Pt (psia) P _t F _C Q (F _C Q) ² (F _C Q) ² (P _C Q) ² P _W P _C P _C P _W Cal. P _W P _C OMPANY Sunshine Royalty Co. OMPANY Sunshine Royalty Co. GENT and TITLE T. A. Dagan, Consulting Engineer INNESSED OMPANY REMARKS Specific Gravity Flowing Fluid P _C 2010 P _C 4040 A040 Fig. 2010 P _C 4040 F	s Li	quid Hydro	carbor	n Ratio	0		cf/bbl.		Speci	fic Gravi	ty Sepa	arator Gás	3	
P _W Pt (psia) P	ravity of Liquid Hydrocarbons_			ons	deg.			Specific Gravity Flowing Fluid						
Pt (psia)				(1 - e - <u>/</u> _				- c	SOTO	c	AUAU		
Disolute Potential: 8114 MCFPD; n .75 1.475 OMPANY Sumshine Royalty Co. DDRESS Box 5669, Roswell, N.M. GENT and TITLE T. A. Bugan, Consulting Engineer ITNESSED OMPANY REMARKS		Pw	DZ	2 5	9	(F 0)2	(5	0)2	p 2	_p 2_ _D 2	۲,	al P	·	
bsolute Potential: 8114 MCFPD; n75 1.475 OMPANY Sumshine Royalty Co. DDRESS Box 5669, Roswell, N.M. GENT and TITLE Y. A. Bugan, Consulting Engineer ITNESSED OMPANY REMARKS		Pt (psia)	¹ t		c*	(1.Ges)	(1	_e_s)		, c_, w		P _C	<u> </u>	
bsolute Potential: 8114 MCFPD; n75 1.475 OMPANY Sumshine Royalty Co. DDRESS Box 5669, Roswell, N.M. GENT and TITLE Y. A. Bugan, Consulting Engineer ITNESSED OMPANY REMARKS	:													
bsolute Potential: 8114 MCFPD; n75 1.475 OMPANY Sumshine Royalty Co. DDRESS Box 5669, Roswell, N.M. GENT and TITLE Y. A. Bugan, Consulting Engineer ITNESSED OMPANY REMARKS		1279							1636	2404		1.6	80	
OMPANY Sunshine Royalty Co. DDRESS Box 5669, Roswell, I.M. GENT and TITLE Y. A. Bugan, Consulting Engineer ITNESSED OMPANY REMARKS														
DDRESS Box 5669, Roswell, N.M. GENT and TITLE Y. A. Bugan, Consulting Regiment ITNESSED OMPANY REMARKS AN 2 8 1000							MCFPD;	n_ .75 _	1.475					
GENT and TITLE T. A. Bugan, Consulting Engineer ITNESSED OMPANY REMARKS AND REMARKS	DDRE	SS Box	t 5669	. Roi	well.	N.M.				0				
OMPANY REMARKS JAN 2 B 1000	GENT	and TITLE	Y.	A. Du	ran, Co	asulting	Engine	r	2.4.6	luga		FOR		
JAN 2 B 1000							Λ ¹ (Λ) .				/R		T	
VAIV 2 6 1960		in the second se	erm. 3 de n			garantan da sa	REM	ARKS			1	No -	3 /	
Well produced 17.78 bbls. distillate during test.		ورد فق <mark>کچ</mark> ی	Well	produc	ed 17.	78 bbl s	distill	ata duri	ng test		OU	N 2 6 1960)	
Well produced 17.78 bbls. distillate during test. OIL CON. COM. DIST. 3							, ——— — Fillioli ul				/ "	CON. CON	1. /	

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

- Q Tactual rate of flow at end of flow period at W. H. working pressure (P_W) . MCF/da. @ 15.025 psia and 60° F.
- P_c 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater. psia
- PwT Static wellhead working pressure as determined at the end of flow period. (Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- Pt Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia
- P_f Meter pressure, psia.
- hw Differential meter pressure, inches water.
- $F_g = Gravity$ correction factor.
- Ft Flowing temperature correction factor.
- F_{nv} Supercompressability factor.
- n I Slope of back pressure curve.
- Note: If $P_{\rm W}$ cannot be taken because of manner of completion or condition of well, then $P_{\rm W}$ must be calculated by adding the pressure drop due to friction within the flow string to $P_{\rm t}$.

O'L CONSERVA	TION COMMI	SSICIT						
AZTEC DISTRICT OFFICE								
No. Copies Received 2								
DISTRIBUTION .								
	NO.							
Operator								
Senta Fe								
Proration Office								
State Land Office								
U. S. G. S.								
Transporter		THE STATE OF						

NEW MEXICO OIL CONSERVATION COMMISSION INITIAL POTENTIAL TEST-DATA SHEET

This form must be used for reporting all pitot tube tests made in the State. It is particularly important that it be used for reporting Initial Potential Tests in the San Juan Basin as prescribed by Order No. R-333 and by the New Mexico Oil Conservation Commission Manual of Tables and Procedure for Initial Potential (Pitot Tube) Tests.

POOL	Undesignat	ed	F	ORMATION_	Dakot	9.		
COUNTY	San Juan		DATE	WELL TES	TED Ja	mary 1	5, 1960	
Operator_	Sunshine	Royalty Co.	Lease	E.M. E111	ott Unit		Well No	#1-B
1/4 Section	on my net	Unit Letter_1	SecSec	3	Twp ,	29N	Rge. 13W	
		_"O,D, Set A						
Pay Zone:	From_60	74 to 6	200	Gas Gravi	ty: Me	as	Est	
Tested Th	rough: C	asing		Tubin	g_ X			
		1.1			Used]	ionomet	er (Monom	eter)
		<u>C</u>	BSERVED	DATA				
Shut In P	ressure:	Casing 1	998	_Tubing:_	1995	_s.i.	Period 8	days
Time Well	Opened:_	11:00 A.M.		_Time Wel:	1 Gauge	d: 210	00 P.M.	
Impact Pro	essure	27" Hg - 3" 1	ine					
Volume (Ta	able I).	• • . •	• • • •	• • • •			5085	<u>(</u> a)
Multiplie	r for Pip	e or Casing	(Table I	1)	s • •		1,046	(b)
Multiplie	r for Flo	wing Temp. (Table II	I) 28 ⁶			1.0323	(c)
Multiplie	r for SP.	Gravity (Ta	ble IV).	. 650	0	a ., •	1.000	<u>(</u> d)
ve. Baron	meter Pre	ssure at Wel	lhead (T	able V).			12.0	·
ultiplie	r for Bar	ometric Pres	sure (Ta	ble VI) .			1.000	<u>(</u> e)
itial Po	otential,	Mcf/24 hrs.	(a) x (b) x (c) 2	x (d) x	(e) =	5501	
nessed	by Leon C	ornelius	Teste	d by:	T. A. Du	lgan		
nany:	SUESHINE RO	YALITY COMPANY	Compa	ny:	7.A.A	ugan		
»: <u> </u>	· · · · · · · · · · · · · · · · · · ·		Title	•	Consulti	ng Engi	neer	